

**SUPPLEMENT DATED JANUARY 28, 2019**  
to the  
**OFFICIAL STATEMENT DATED JANUARY 11, 2019**  
relating to

**\$1,763,565,000**  
**AIRPORT COMMISSION OF THE**  
**CITY AND COUNTY OF SAN FRANCISCO**  
**SAN FRANCISCO INTERNATIONAL AIRPORT**

**\$1,176,215,000**  
**Second Series Revenue Bonds**  
**Series 2019A**  
**(AMT)**

**\$91,280,000**  
**Second Series Revenue Bonds**  
**Series 2019B**  
**(Non-AMT/Governmental Purpose)**

**\$88,750,000**  
**Second Series Revenue Bonds**  
**Series 2019C**  
**(Federally Taxable)**

**\$407,320,000**  
**Second Series Revenue Refunding Bonds**  
**Series 2019D**  
**(Non-AMT/Private Activity)**

THIS SUPPLEMENT (THIS "SUPPLEMENT") ADDS THE FOLLOWING SECTION TO THE ABOVE-REFERENCED OFFICIAL STATEMENT (THE "OFFICIAL STATEMENT") AND SHOULD BE READ TOGETHER WITH THE OFFICIAL STATEMENT, WHICH OFFICIAL STATEMENT IS ATTACHED HERETO AND MADE A PART HEREOF. EXCEPT AS EXPRESSLY SET FORTH HEREIN, THIS SUPPLEMENT DOES NOT UPDATE, MODIFY OR REPLACE THE INFORMATION CONTAINED IN THE OFFICIAL STATEMENT, WHICH CONTAINS INFORMATION ONLY AS OF ITS DATE. TO THE EXTENT THE INFORMATION IN THIS SUPPLEMENT CONFLICTS WITH THE INFORMATION IN THE OFFICIAL STATEMENT, THIS SUPPLEMENT SHALL GOVERN. UNLESS OTHERWISE DEFINED IN THIS SUPPLEMENT, ALL TERMS USED HEREIN SHALL HAVE THE SAME MEANINGS AS THOSE TERMS HAVE IN THE OFFICIAL STATEMENT.

**Fiscal Year 2017-18 Annual Report**

The Continuing Disclosure Annual Report for Fiscal Year 2017-18 (including the audited financial statements attached thereto) (the "Annual Report") filed with EMMA on January 25, 2019, is incorporated by reference herein.

The Annual Report contains updates reflecting final Fiscal Year 2017-18 data to the following tables, which were also included in the Official Statement:

- Top Ten Sources of Revenue (Annual Report p. 9);
- Top Ten Sources of Airport Concession Revenues (Annual Report p. 8);
- PFC Collections Applied by the Commission for Payment of Debt Service on Outstanding Bonds (Annual Report p. 17);
- Summary of Payments Made by the Airport to the City (Annual Report p. 18); and
- Historical Debt Service Coverage (Annual Report p. 16).

**AIRPORT COMMISSION OF THE CITY**  
**AND COUNTY OF SAN FRANCISCO**

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# Official Statement

Airport Commission of the City and County of San Francisco  
San Francisco International Airport

Second Series Revenue Bonds  
Series 2019A/B/C

Second Series Revenue Refunding Bonds  
Series 2019D



San Francisco  
International  
Airport



Long-Term Parking

Rental Car Facility

Highway 101

Terminal 3

BART Station

Terminal 2

AirTrain System

International Terminal

Terminal 1



*In the opinion of Squire Patton Boggs (US) LLP and Amira Jackmon, Attorney at Law, Co-Bond Counsel to the Commission, under existing law (i) assuming continuing compliance with certain covenants and the accuracy of certain representations, interest on the Series 2019A Bonds, the Series 2019B Bonds and the Series 2019D Bonds is excluded from gross income for federal income tax purposes, except interest on any Series 2019A Bond or any Series 2019D Bond for any period during which that Bond is held by a "substantial user" of the facilities financed or a "related person," as those terms are used in Section 147(a) of the Internal Revenue Code of 1986, as amended, (ii) interest on the Series 2019A Bonds is an item of tax preference for purposes of the federal alternative minimum tax, (iii) interest on the Series 2019B Bonds and the Series 2019D Bonds is not an item of tax preference for purposes of the federal alternative minimum tax, and (iv) interest on the Series 2019A-D Bonds is exempt from State of California personal income taxes. Interest on the Series 2019A Bonds, the Series 2019B Bonds and the Series 2019D Bonds may be subject to certain federal taxes imposed only on certain corporations. INTEREST ON THE SERIES 2019C BONDS IS NOT EXCLUDED FROM GROSS INCOME FOR FEDERAL INCOME TAX PURPOSES. For a more complete discussion of the tax aspects, see "TAX MATTERS" herein.*

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**Second Series Revenue Refunding Bonds**  
**Series 2019D**  
**(Non-AMT/Private Activity)**

**Dated: Date of Delivery**

**Due: As shown on the inside cover**

The Airport Commission (the "Commission") of the City and County of San Francisco (the "City") will issue (i) \$1,176,215,000 principal amount of its San Francisco International Airport Second Series Revenue Bonds, Series 2019A (the "Series 2019A Bonds"), (ii) \$91,280,000 principal amount of its San Francisco International Airport Second Series Revenue Bonds, Series 2019B (the "Series 2019B Bonds"), (iii) \$88,750,000 principal amount of its San Francisco International Airport Second Series Revenue Bonds, Series 2019C (the "Series 2019C Bonds") and (iv) \$407,320,000 principal amount of its San Francisco International Airport Second Series Revenue Refunding Bonds, Series 2019D (the "Series 2019D Bonds," and together with the Series 2019A Bonds, the Series 2019B Bonds and the Series 2019C Bonds, the "Series 2019A-D Bonds"), pursuant to the terms of the 1991 Master Resolution.

The San Francisco International Airport (the "Airport") is an enterprise department of the City. The Bank of New York Mellon Trust Company, N.A. has been appointed by the Commission to act as Trustee for its Bonds, including the Series 2019A-D Bonds.

The Commission will use the proceeds of the Series 2019A-D Bonds to finance a portion of the costs of the Capital Improvement Plan; to repay certain Commercial Paper Notes issued to finance capital projects; to fund deposits to reserve accounts; to fund a deposit to the Contingency Account; to refund certain outstanding Bonds of the Commission; to pay capitalized interest on a portion of the Series 2019A Bonds, a portion of the Series 2019B Bonds and a portion of the 2019C Bonds; and to pay costs of issuance of the Series 2019A-D Bonds.

The Series 2019A-D Bonds will mature on the dates and bear interest at the rates shown on the inside cover of this Official Statement. Interest on the Series 2019A-D Bonds will be payable each May 1 and November 1, commencing May 1, 2019.

**The Series 2019A-D Bonds are subject to redemption prior to their stated maturity dates, as described herein.**

The Series 2019A-D Bonds will be issued only as fully registered bonds, registered in the name of Cede & Co., as registered owner and nominee of The Depository Trust Company ("DTC"). So long as Cede & Co. is the registered owner of any Series 2019A-D Bonds, payment of the principal of and interest on the Series 2019A-D Bonds will be made to Cede & Co. as nominee of DTC, which is required in turn to remit such principal and interest to the DTC Participants for subsequent disbursement to the Beneficial Owners.

**The Series 2019A-D Bonds are special, limited obligations of the Commission, payable as to principal and interest solely out of, and secured by a pledge of and lien on, the Net Revenues of the Airport and the funds and accounts provided for in the 1991 Master Resolution. Neither the credit nor taxing power of the City is pledged to the payment of the principal of or interest on the Series 2019A-D Bonds. No holder of a Series 2019A-D Bond shall have the right to compel the exercise of the taxing power of the City to pay the principal of or the interest on the Series 2019A-D Bonds. The Commission has no taxing power whatsoever.**

**Purchasers of the Series 2019A-D Bonds will be deemed to have consented to certain amendments to the 1991 Master Resolution. See "PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION" and APPENDIX H—"SUMMARY OF PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION."**

*The Series 2019A-D Bonds are offered when, as and if issued by the Commission and received by the Underwriters, subject to approval of validity by Squire Patton Boggs (US) LLP and Amira Jackmon, Attorney at Law, Co-Bond Counsel to the Commission, and certain other conditions. Certain legal matters will be passed upon for the Commission by Nixon Peabody LLP, Disclosure Counsel, and by the City Attorney, and for the Underwriters by their counsel, Hawkins Delafield Wood LLP. The Commission expects to deliver the Series 2019A-D Bonds through the facilities of DTC on or about February 7, 2019, against payment therefor.*

**J.P. Morgan**

**Goldman Sachs & Co. LLC**

**Barclays Capital**

**BofA Merrill Lynch**

**RBC Capital Markets**

**Morgan Stanley**

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**MATURITY SCHEDULE**

**\$1,176,215,000 Series 2019A Bonds**

Maturity Date (May 1)	Principal	Interest Rate	Yield	Price	CUSIP <sup>†</sup> No.
2034	\$38,870,000	5.000%	3.180% <sup>C</sup>	115.787 <sup>C</sup>	79766DLU1
2035	40,815,000	5.000	3.270 <sup>C</sup>	114.938 <sup>C</sup>	79766DLV9
2036	42,855,000	5.000	3.330 <sup>C</sup>	114.376 <sup>C</sup>	79766DLW7
2037	45,000,000	5.000	3.390 <sup>C</sup>	113.818 <sup>C</sup>	79766DLX5
2038	47,250,000	5.000	3.440 <sup>C</sup>	113.355 <sup>C</sup>	79766DLY3
2039	49,610,000	5.000	3.490 <sup>C</sup>	112.895 <sup>C</sup>	79766DLZ0

\$287,835,000 5.000% Series 2019A Term Bonds maturing May 1, 2044  
Yield 3.630%<sup>C</sup> Price 111.617<sup>C</sup> (CUSIP<sup>†</sup> No. 79766DMA4)

\$498,980,000 5.000% Series 2019A Term Bonds maturing May 1, 2049  
Yield 3.700%<sup>C</sup> Price 110.985<sup>C</sup> (CUSIP<sup>†</sup> No. 79766DMB2)

\$125,000,000 4.000% Series 2019A Term Bonds maturing May 1, 2049  
Yield 4.040% Price 99.300 (CUSIP<sup>†</sup> No. 79766DMC0)

**\$91,280,000 Series 2019B Bonds**

\$91,280,000 5.000% Series 2019B Term Bonds maturing May 1, 2049  
Yield 3.380%<sup>C</sup> Price 113.911<sup>C</sup> (CUSIP<sup>†</sup> No. 79766DMD8)

<sup>C</sup> Priced to par call on May 1, 2029.

<sup>†</sup> CUSIP® is a registered trademark of the American Bankers Association. CUSIP data herein is provided by CUSIP Global Services (CGS), which is managed on behalf of the American Bankers Association by S&P Global Market Intelligence. This information is not intended to create a database and does not serve in any way as a substitute for the CGS database. CUSIP numbers have been assigned by an independent company not affiliated with the Commission or the Underwriters and are included solely for the convenience of the registered owners of the applicable Series 2019A-D Bonds. Neither the Commission nor the Underwriters are responsible for the selection or uses of these CUSIP numbers, and no representation is made as to their correctness on the applicable Series 2019A-D Bonds or as included herein. The CUSIP number for a specific maturity is subject to being changed after the issuance of the Series 2019A-D Bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part or as a result of the procurement of secondary market portfolio insurance or other similar enhancement by investors that is applicable to all or a portion of certain maturities of the Series 2019A-D Bonds.

**\$88,750,000 Series 2019C Bonds**

<u>Maturity Date (May 1)</u>	<u>Principal</u>	<u>Interest Rate</u>	<u>Price</u>	<u>CUSIP<sup>†</sup> No.</u>
2020	\$13,830,000	2.901%	100.000	79766DLP2
2021	25,475,000	2.927	100.000	79766DLQ0
2022	27,990,000	3.046	100.000	79766DLR8
2023	13,445,000	3.146	100.000	79766DLS6
2029	8,010,000	3.514	100.000	79766DLT4

**\$407,320,000 Series 2019D Bonds**

<u>Maturity Date (May 1)</u>	<u>Principal</u>	<u>Interest Rate</u>	<u>Yield</u>	<u>Price</u>	<u>CUSIP<sup>†</sup> No.</u>
2023	\$ 5,205,000	5.000%	1.660%	113.596	79766DME6
2024	28,820,000	5.000	1.750	116.182	79766DMF3
2025	18,060,000	5.000	1.820	118.656	79766DMG1
2026	18,960,000	5.000	1.910	120.780	79766DMH9
2027	19,905,000	5.000	2.020	122.496	79766DMJ5
2028	20,900,000	5.000	2.140	123.843	79766DMK2
2029	21,945,000	5.000	2.270	124.801	79766DML0
2030	23,040,000	5.000	2.410 <sup>C</sup>	123.361 <sup>C</sup>	79766DMM8
2031	24,190,000	5.000	2.530 <sup>C</sup>	122.142 <sup>C</sup>	79766DMN6
2032	25,405,000	5.000	2.680 <sup>C</sup>	120.639 <sup>C</sup>	79766DMP1
2033	26,670,000	5.000	2.770 <sup>C</sup>	119.748 <sup>C</sup>	79766DMQ9
2034	28,005,000	5.000	2.870 <sup>C</sup>	118.767 <sup>C</sup>	79766DMR7
2035	29,410,000	5.000	2.950 <sup>C</sup>	117.989 <sup>C</sup>	79766DMS5
2036	30,880,000	5.000	3.030 <sup>C</sup>	117.217 <sup>C</sup>	79766DMT3
2037	32,420,000	5.000	3.090 <sup>C</sup>	116.643 <sup>C</sup>	79766DMU0
2038	34,040,000	5.000	3.140 <sup>C</sup>	116.166 <sup>C</sup>	79766DMV8
2039	19,465,000	5.000	3.190 <sup>C</sup>	115.692 <sup>C</sup>	79766DMW6

<sup>C</sup> Priced to par call on May 1, 2029.

<sup>†</sup> CUSIP® is a registered trademark of the American Bankers Association. CUSIP data herein is provided by CUSIP Global Services (CGS), which is managed on behalf of the American Bankers Association by S&P Global Market Intelligence. This information is not intended to create a database and does not serve in any way as a substitute for the CGS database. CUSIP numbers have been assigned by an independent company not affiliated with the Commission or the Underwriters and are included solely for the convenience of the registered owners of the applicable Series 2019A-D Bonds. Neither the Commission nor the Underwriters are responsible for the selection or uses of these CUSIP numbers, and no representation is made as to their correctness on the applicable Series 2019A-D Bonds or as included herein. The CUSIP number for a specific maturity is subject to being changed after the issuance of the Series 2019A-D Bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part or as a result of the procurement of secondary market portfolio insurance or other similar enhancement by investors that is applicable to all or a portion of certain maturities of the Series 2019A-D Bonds.

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**CITY AND COUNTY OF SAN FRANCISCO**

London Breed, *Mayor*  
Dennis J. Herrera, *City Attorney*  
Benjamin Rosenfield, *Controller*  
José Cisneros, *Treasurer*

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Larry Mazzola, *President*  
Linda S. Crayton, *Vice President*

Richard J. Guggenhime                      Eleanor Johns                      Peter A. Stern

Ivar C. Satero, *Airport Director*

**BOARD OF SUPERVISORS OF THE CITY AND COUNTY OF SAN FRANCISCO**

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Sandra Lee Fewer, *District 1*

Catherine Stefani, *District 2*

Aaron Peskin, *District 3*

Gordon Mar, *District 4*

Vallie Brown, *District 5*

Matt Haney, *District 6*

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VERIFICATION AGENT

Grant Thornton LLP

**Information Provided by the Commission and by Third Parties.** This Official Statement presents information with respect to the Commission and the Airport. The information contained herein has been obtained from officers, employees and records of the Commission and from other sources believed to be reliable.

**Limitations Regarding Offering.** No broker, dealer, salesperson or any other person has been authorized to give any information or to make any representations, other than those contained in this Official Statement, in connection with the offering of the Series 2019A-D Bonds, and if given or made, such information or representations must not be relied upon as having been authorized by the City or the Commission. This Official Statement does not constitute an offer to sell, or the solicitation from any person of an offer to buy, nor shall there be any sale of the Series 2019A-D Bonds by any person in any jurisdiction where such offer, solicitation or sale would be unlawful. The information set forth herein is subject to change without notice. The delivery of this Official Statement at any time does not imply that information herein is correct or complete as of any time subsequent to its date.

**Forward-Looking Statements.** This Official Statement contains forecasts, projections, estimates and other forward-looking statements that are based on current expectations. The words “expects,” “forecasts,” “projects,” “intends,” “anticipates,” “estimates,” “assumes” and analogous expressions are intended to identify forward-looking statements. Such forecasts, projections and estimates are not intended as representations of fact or guarantees of results. Any such forward-looking statements inherently are subject to a variety of risks and uncertainties that could cause actual results or performance to differ materially from those that have been forecast, estimated or projected. Such risks and uncertainties include, among others, changes in regional, domestic and international political, social and economic conditions, federal, state and local statutory and regulatory initiatives, litigation, population changes, financial conditions of individual air carriers and the airline industry, technological change, changes in the tourism industry, changes at other San Francisco Bay Area airports, seismic events, international agreements or regulations governing air travel, and various other events, conditions and circumstances, many of which are beyond the control of the Commission. These forward-looking statements speak only as of the date of this Official Statement. The Commission disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statement contained herein to reflect any changes in the Commission’s expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based.

**Underwriters’ Disclaimer.** The Underwriters have provided the following sentence for inclusion in this Official Statement: The Underwriters have reviewed the information in this Official Statement in accordance with, and as part of, their respective responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information.

**No Securities Registration.** The Series 2019A-D Bonds have not been registered under the Securities Act of 1933, as amended, in reliance upon an exemption from the registration requirements contained in such Act. The Series 2019A-D Bonds have not been registered or qualified under the securities laws of any state.

**Ratings of Other Parties.** This Official Statement contains information concerning the ratings assigned by Moody’s Investors Service, Inc., S&P Global Ratings and Fitch Ratings, Inc. for the Credit Providers, the Swap Counterparties and the Guarantors of the Swap Counterparties, if any (each as defined herein). Such ratings reflect only the view of the agency giving such rating and are provided for convenience of reference only. Such rating information has been obtained from sources believed to be reliable but has not been confirmed or re-verified by such rating agencies. None of the Commission, the City or any of the Underwriters takes any responsibility for the accuracy of such ratings, gives any assurance that such ratings will apply for any given period of time, or that such ratings will not be revised downward or withdrawn if, in the judgment of the agency providing such rating, circumstances so warrant.

**Web Sites Not Incorporated.** References to web site addresses presented herein are for informational purposes only and may be in the form of a hyperlink solely for the reader’s convenience. Unless specified otherwise, such web sites and the information or links contained therein are not incorporated into, and are not part of, this Official Statement. The Commission and the City each maintain a website and the information presented on those websites is *not* incorporated by reference as part of this Official Statement and should not be relied upon in making investment decisions with respect to the Series 2019A-D Bonds.

**TABLE OF CONTENTS**

	<u>Page</u>		<u>Page</u>
INTRODUCTION .....	1	Current and Possible Regulation Related to	
PROPOSED AMENDMENTS TO 1991		Climate Change .....	36
MASTER RESOLUTION .....	2	Cybersecurity .....	37
PLAN OF FINANCE AND REFUNDING .....	3	Credit Risk of Financial Institutions Providing	
Financing of Capital Projects .....	3	Credit Enhancement and Other Financial	
Deposit to Reserve Accounts .....	3	Products Relating to Airport Bonds .....	38
Deposit to Contingency Account .....	3	Limitation of Remedies .....	38
Refunding Plan for Refunded Bonds .....	3	Potential Effect of a City Bankruptcy .....	39
ESTIMATED SOURCES AND USES OF		Future Legislation and Regulation .....	40
FUNDS .....	4	Initiative, Referendum and Charter	
DESCRIPTION OF THE SERIES 2019A-D		Amendments .....	40
BONDS .....	4	Potential Limitation of Tax Exemption of	
General .....	4	Interest on Series 2019A-D Bonds .....	40
Redemption Provisions .....	5	Risk of Tax Audit .....	40
Transfer and Exchange .....	9	Income Taxation Risk Upon Defeasance of the	
Defeasance .....	9	Series 2019C Bonds .....	41
SECURITY FOR THE SERIES 2019A-D		SAN FRANCISCO INTERNATIONAL	
BONDS .....	10	AIRPORT .....	41
Authority for Issuance .....	10	Introduction .....	41
Pledge of Net Revenues; Source of Payment .....	10	Organization and Management .....	41
Rate Covenant .....	12	Airport Senior Management and Legal Counsel .....	42
Contingency Account .....	12	Current Airport Facilities .....	44
Flow of Funds .....	13	On-Time Performance .....	48
Flow of Funds Chart .....	15	Airport Security .....	48
Additional Bonds .....	16	Airline Service .....	49
Reserve Fund; Reserve Accounts; Credit		Passenger Traffic .....	52
Facilities .....	17	Cargo Traffic and Landed Weight .....	57
Contingent Payment Obligations .....	21	Competition .....	59
No Acceleration .....	21	Airline Agreements .....	61
Other Indebtedness .....	22	Certain Federal and State Laws and	
Rights of Bond Insurers .....	24	Regulations .....	64
CERTAIN RISK FACTORS .....	24	Employee Relations .....	67
Uncertainties of the Aviation Industry .....	24	Hazardous Material Management .....	67
Bankruptcy of Airlines Operating at the		CAPITAL PROJECTS AND PLANNING .....	68
Airport .....	25	The Capital Improvement Plan Process .....	68
Airline Concentration; Effect of Airline		The Capital Improvement Plan .....	68
Industry Consolidation .....	26	Airport Development Plan .....	72
Federal Funding .....	26	Federal Grants .....	73
Availability of PFCs .....	27	AIRPORT'S FINANCIAL AND RELATED	
Reduction in Federal Grants .....	27	INFORMATION .....	73
Additional Long-Term Debt .....	28	General .....	73
Capital Projects .....	29	Summary of Financial Statements .....	73
Competition .....	30	Operating Revenues .....	76
Uncertainties of Projections, Forecasts and		Principal Revenue Sources .....	77
Assumptions .....	30	Aviation Revenues .....	77
Technological Innovations in Ground		Ground Transportation Revenues .....	79
Transportation .....	31	Concessions Revenues .....	80
Airport Security .....	32	Top Ten Sources of Concession Revenues .....	82
Worldwide Health Concerns .....	32	Passenger Facility Charge .....	83
Seismic and Other Natural Disasters or		Operating Expenses .....	86
Emergencies .....	32	Payments to the City .....	86
Risks Associated with Global Climate Change .....	33	Budget Process .....	91

**TABLE OF CONTENTS**  
(continued)

	<u>Page</u>		<u>Page</u>
Risk Management and Insurance .....	92	Purchase of Series 2019A-D Bonds.....	103
Investment of Airport Funds .....	92	Retail Brokerage Arrangements.....	104
Currently Outstanding Bonds .....	95	CERTAIN RELATIONSHIPS .....	104
Credit Facilities.....	96	TAX MATTERS .....	105
Interest Rate Swaps.....	96	Tax-Exempt Bonds .....	105
Debt Service Requirements .....	98	Series 2019C Bonds (Taxable) .....	107
Historical Debt Service Coverage.....	100	VERIFICATION OF MATHEMATICAL	
SFOTEC .....	100	COMPUTATIONS .....	109
REPORT OF THE AIRPORT CONSULTANT....	100	APPROVAL OF LEGAL PROCEEDINGS.....	109
General.....	100	PROFESSIONALS INVOLVED IN THE	
Forecast of Debt Service Coverage.....	101	OFFERING .....	110
AIRLINE INFORMATION .....	102	FINANCIAL STATEMENTS.....	110
LITIGATION MATTERS.....	103	Delayed Audited Financial Statements .....	110
RATINGS.....	103	CONTINUING DISCLOSURE.....	111
UNDERWRITING .....	103	MISCELLANEOUS.....	112

**APPENDICES**

APPENDIX A – REPORT OF THE AIRPORT CONSULTANT .....	A-1
APPENDIX B – FINANCIAL STATEMENTS WITH SCHEDULE OF PASSENGER FACILITY CHARGE REVENUES AND EXPENDITURES JUNE 30, 2017 AND 2016 (WITH INDEPENDENT AUDITORS’ REPORT THEREON).....	B-1
APPENDIX C – INFORMATION REGARDING DTC AND THE BOOK-ENTRY ONLY SYSTEM.....	C-1
APPENDIX D – SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION.....	D-1
APPENDIX E – SUMMARY OF CERTAIN PROVISIONS OF THE LEASE AND USE AGREEMENTS .....	E-1
APPENDIX F – SUMMARY OF CERTAIN PROVISIONS OF THE CONTINUING DISCLOSURE CERTIFICATE .....	F-1
APPENDIX G – PROPOSED FORM OF OPINION OF CO-BOND COUNSEL.....	G-1
APPENDIX H – SUMMARY OF PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION .....	H-1
APPENDIX I – LIST OF REFUNDED BONDS .....	I-1

**INDEX OF TABLES**

	<u>Page</u>
Series 2019A-D Bonds Estimated Sources and Uses .....	4
Series 2019A Mandatory Sinking Fund Redemption (May 1, 2044 Term Bond) .....	7
Series 2019A Mandatory Sinking Fund Redemption (May 1, 2049 5.00% Term Bond).....	7
Series 2019A Mandatory Sinking Fund Redemption (May 1, 2049 4.00% Term Bond).....	8
Series 2019B Mandatory Sinking Fund Redemption .....	8
Flow of Funds Chart.....	15
Original Reserve Account Balance.....	18
2009 Reserve Account Balance .....	20
2017 Reserve Account Balance .....	20
Letters of Credit for Commercial Paper Notes .....	22
Current Members of the Commission.....	42
Air Carriers Reporting Air Traffic at the Airport .....	51
Passenger Traffic .....	52

**TABLE OF CONTENTS**  
(continued)

	<u>Page</u>
Total Enplanements by Airline.....	54
Domestic Enplanements by Airline.....	55
International Enplanements by Airline.....	56
International Enplanements by Destination.....	57
Air Cargo On and Off.....	58
Total Revenue Landed Weight by Airline.....	59
Comparison of Bay Area Airports Total Passenger Traffic.....	60
Comparison of Bay Area Airports Total Air Cargo.....	61
Capital Improvement Plan.....	69
Summary of Airport’s Statements of Net Position.....	75
Summary of Airport’s Statement of Revenues, Expenses, and Changes in Net Position.....	76
Top Ten Sources of Revenue.....	77
Airline Payments Per Enplaned Passenger.....	78
Historical and Current Landing Fees and Terminal Rentals.....	78
Top Ten Sources of Airport Concession Revenues.....	83
Summary of Airport PFC Applications.....	84
PFC Collections Applied by the Commission for Payment of Debt Service on Outstanding Bonds.....	85
Summary of Payments Made by the Airport to the City.....	87
City and County of San Francisco Employees’ Retirement System.....	88
Airport Contributions to the Retirement System.....	88
Airport Contributions to the Health Service System.....	89
Annual OPEB Allocation for the Airport.....	90
Investment Distribution of City Pooled Investment Fund.....	93
Book Value of Airport Funds in City Pooled Investment Fund.....	94
Currently Outstanding Bonds.....	95
Credit Facilities for Bonds.....	96
Summary of Interest Rate Swap Agreements.....	98
Debt Service Schedule.....	99
Historical Debt Service Coverage.....	100
Forecast of Debt Service Coverage.....	102

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**OFFICIAL STATEMENT**

**\$1,763,565,000**  
**AIRPORT COMMISSION OF THE**  
**CITY AND COUNTY OF SAN FRANCISCO**  
**SAN FRANCISCO INTERNATIONAL AIRPORT**

<b>\$1,176,215,000</b>	<b>\$91,280,000</b>
<b>Second Series Revenue Bonds</b>	<b>Second Series Revenue Bonds</b>
<b>Series 2019A</b>	<b>Series 2019B</b>
<b>(AMT)</b>	<b>(Non-AMT/Governmental Purpose)</b>
<b>\$88,750,000</b>	<b>\$407,320,000</b>
<b>Second Series Revenue Bonds</b>	<b>Second Series Revenue Refunding Bonds</b>
<b>Series 2019C</b>	<b>Series 2019D</b>
<b>(Federally Taxable)</b>	<b>(Non-AMT/Private Activity)</b>

**INTRODUCTION**

The Airport Commission (the “Commission”) of the City and County of San Francisco (the “City”) will issue (i) \$1,176,215,000 principal amount of its San Francisco International Airport Second Series Revenue Bonds, Series 2019A (the “Series 2019A Bonds”), (ii) \$91,280,000 principal amount of its San Francisco International Airport Second Series Revenue Bonds, Series 2019B (the “Series 2019B Bonds”), (iii) \$88,750,000 principal amount of its San Francisco International Airport Second Series Revenue Bonds, Series 2019C (the “Series 2019C Bonds”) and (iv) \$407,320,000 principal amount of its San Francisco International Airport Second Series Revenue Refunding Bonds, Series 2019D (the “Series 2019D Bonds,” and together with the Series 2019A Bonds, the Series 2019B Bonds and the Series 2019C Bonds, the “Series 2019A-D Bonds”), pursuant to the terms of the 1991 Master Resolution.

The Commission authorized the issuance and sale of the Series 2019A-D Bonds under Resolution No. 91-0210, which the Commission adopted on December 3, 1991, as supplemented and amended (the “1991 Master Resolution”). The Series 2019A-D Bonds, together with all bonds that the Commission has issued and will issue in the future pursuant to the 1991 Master Resolution, are referred to as the “Bonds.” For a summary of the Commission’s Outstanding Bonds, see “AIRPORT’S FINANCIAL AND RELATED INFORMATION—Currently Outstanding Bonds.” Capitalized terms used and not defined in this Official Statement have the meanings given those terms in the 1991 Master Resolution. The Commission has appointed The Bank of New York Mellon Trust Company, N.A. to act as trustee (the “Trustee”) for the Bonds, including the Series 2019A-D Bonds. See APPENDIX D—“SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION—Certain Definitions.”

The Commission will use the proceeds of the Series 2019A-D Bonds to finance a portion of the costs of its Capital Improvement Plan (described herein); to repay certain Commercial Paper Notes issued to finance capital projects; to fund deposits to the reserve accounts described herein; to fund a deposit to the Contingency Account described herein; to refund certain outstanding Bonds of the Commission; to pay capitalized interest on a portion of the Series 2019A Bonds, a portion of the Series 2019B Bonds and a portion of the Series 2019C Bonds; and to pay costs of issuance of the Series 2019A-D Bonds. See “PLAN OF FINANCE AND REFUNDING” and “ESTIMATED SOURCES AND USES OF FUNDS.”

The Series 2019A-D Bonds will mature on the dates, in the amounts and bear interest at the rates shown on the pages immediately following the front cover of this Official Statement.

The Commission will secure the Series 2019A-D Bonds with a pledge of, lien on and security interest in Net Revenues of the San Francisco International Airport (the “Airport”) on parity with the Commission’s other Outstanding Bonds, which, as of December 1, 2018, were outstanding in the amount of approximately \$6.2 billion, and any additional Bonds. See “SECURITY FOR THE SERIES 2019A-D BONDS” and “AIRPORT’S FINANCIAL AND RELATED INFORMATION—Currently Outstanding Bonds.” The proceeds of additional Bonds are expected to be a significant source of funding for the Commission’s Capital Improvement Plan. The Series 2019A Bonds and Series 2019C Bonds will be secured by the Original Reserve Account. The Series 2019B Bonds and the Series 2019D Bonds

will be secured by the 2017 Reserve Account. See “SECURITY FOR THE SERIES 2019A-D BONDS—Reserve Fund; Reserve Accounts; Credit Facilities—*Original Reserve Account*” and “—*2017 Reserve Account*.”

This Official Statement contains brief descriptions or summaries of, among other things, the Series 2019A-D Bonds, the 1991 Master Resolution, the Lease and Use Agreements, the Reserve Account Credit Facilities, the Swap Agreements and the Continuing Disclosure Certificate of the Commission. Any description or summary in this Official Statement of any such document is qualified in its entirety by reference to each such document.

On October 3, 2017, the Commission adopted a resolution (the “Twenty-First Supplemental Resolution”), which sets forth a number of amendments to the 1991 Master Resolution (the “Proposed Amendments”). The Proposed Amendments will become effective in the manner and on the dates as described under “PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION” and in Appendix H—“SUMMARY OF PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION.” **By their purchase of the Series 2019A-D Bonds, the purchasers of the Series 2019A-D Bonds consent to the Proposed Amendments and authorize the Trustee to take all actions necessary to evidence or effect such consent.**

### PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION

The Proposed Amendments include, among other amendments, changes to how Revenues, Annual Debt Service and Maximum Annual Debt Service are calculated, the required ratings on certain Permitted Investments, what investments are included in Permitted Investments, the required ratings of any Credit Facility that may be deposited to the Original Reserve Account in the future, and how amendments to the 1991 Master Resolution become effective. See Appendix H—“SUMMARY OF PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION” for a more detailed description of the Proposed Amendments.

The Proposed Amendments will become effective only upon the satisfaction of certain conditions, including (i) receipt by the Commission of the consent of the Holders of a majority in aggregate principal amount of all Outstanding Bonds, and/or in certain cases, Holders of a majority in aggregate principal amount of all Outstanding Bonds secured by the Original Reserve Account, and (ii) delivery of a certificate from the Airport Director (A) declaring that all other consents required for such amendments have been obtained (i.e., the applicable consents of the applicable Credit Providers), and (B) electing that such amendments shall be effective. As of December 1, 2018, approximately 32.6% of the Holders of the Outstanding Bonds have consented to the General Proposed Amendments (as defined in Appendix H), and approximately 27.0% of the Holders of the Outstanding Bonds secured by the Original Reserve Account have consented to the Original Reserve Proposed Amendments (as defined in Appendix H). On the date of issuance of the Series 2019A-D Bonds, it is expected that approximately 50.4% of the Holders of the then-Outstanding Bonds will have consented to the General Proposed Amendments, which will satisfy the Bondholder approval requirement for the General Proposed Amendments. On the date of issuance of the Series 2019A-D Bonds, it is expected that approximately 44.0% of the Holders of the then-Outstanding Bonds secured by the Original Reserve Account will have consented to the Original Reserve Proposed Amendments. If Bonds are issued at times and in amounts as assumed in the Report of the Airport Consultant attached as Appendix A, the Commission estimates that the Original Reserve Proposed Amendments would be approved by the required Bondholders in calendar year 2019. In making this estimate, the Commission has assumed that all future Bond issuances will be secured by the Original Reserve Account, which differs from past practice; the Commission has sometimes issued Bonds not secured by the Original Reserve Account. The Commission is also making several other assumptions such as no future refundings and other matters. The General Proposed Amendments will not be effective until other required consents are received and other conditions are met, as described above. The Original Reserve Proposed Amendments will not be effective until required Bondholder consent is obtained and other required consents are received and other conditions are met, as described above. The Proposed Amendments may become effective on different dates and not all amendments may become effective.

**By their purchase of the Series 2019A-D Bonds, the purchasers of the Series 2019A-D Bonds consent to the General Proposed Amendments (as defined in APPENDIX H) and authorize the Trustee to take all actions necessary to evidence or effect such consent. By their purchase of the Series 2019A Bonds and the Series 2019C Bonds, the purchasers of the Series 2019A Bonds and the Series 2019C Bonds consent to the Original Reserve Proposed Amendments (as defined in APPENDIX H) and authorize the Trustee to take all actions necessary to evidence or effect such consent.**

## PLAN OF FINANCE AND REFUNDING

The Commission will use the proceeds of the Series 2019A-D Bonds to finance a portion of the costs of the Capital Improvement Plan; to repay certain Commercial Paper Notes issued to finance capital projects; to fund deposits to reserve accounts; to fund a deposit to the Contingency Account; to refund certain outstanding Bonds of the Commission; to pay capitalized interest on a portion of the Series 2019A Bonds, a portion of the Series 2019B Bonds and a portion of the Series 2019C Bonds; and to pay costs of issuance of the Series 2019A-D Bonds.

### Financing of Capital Projects

A portion of the proceeds of the Series 2019A Bonds, the Series 2019B Bonds and the Series 2019C Bonds are expected to be used to finance and refinance a portion of the costs of the following projects, among others: redevelopment of Terminal 1; redevelopment of Terminal 3 West; renovation of the International Terminal departures level; gate capacity enhancements; security improvements; the Superbay renovation program; extension of AirTrain service to the long-term parking garages; and a new long-term parking garage. The Commission may ultimately apply proceeds of the Series 2019A Bonds, the Series 2019B Bonds and Series 2019C Bonds to additional or other projects. For further description of these projects, see “CAPITAL PROJECTS AND PLANNING—The Capital Improvement Plan” and APPENDIX A— “AIRPORT CAPITAL IMPROVEMENT PLAN AND FUNDING—Summary of the Capital Improvement Plan—Projects in the Capital Improvement Plan.”

A portion of the proceeds of the Series 2019A Bonds, Series 2019B Bonds, and Series 2019C Bonds will be used to repay approximately \$432 million in principal amount of the Commission’s Commercial Paper Notes within 90 days of the date of delivery of the Series 2019A-D Bonds. The proceeds of these Commercial Paper Notes were used to finance costs of projects in the Capital Improvement Plan.

A portion of the proceeds of the Series 2019A Bonds, Series 2019B Bonds and Series 2019C Bonds will be used to pay interest on a portion of such Bonds.

### Deposit to Reserve Accounts

A portion of the proceeds of the Series 2019A Bonds and Series 2019C Bonds will be used to make a deposit in the amount of \$18,704,494.84 into the Original Reserve Account. See “SECURITY FOR THE SERIES 2019A-D BONDS—Reserve Fund; Reserve Accounts; Credit Facilities—*Original Reserve Account*.”

A portion of the proceeds of the Series 2019B Bonds and the Series 2019D Bonds will be used to make a deposit in the amount of \$21,103,075.76 into the 2017 Reserve Account. See “SECURITY FOR THE SERIES 2019A-D BONDS—Reserve Fund; Reserve Accounts; Credit Facilities—*2017 Reserve Account*.”

### Deposit to Contingency Account

A portion of the proceeds of the Series 2019C Bonds will be used to make a deposit in the amount of \$20,000,000 into the Contingency Account. See “SECURITY FOR THE SERIES 2019A-D BONDS—Contingency Account.”

### Refunding Plan for Refunded Bonds

A portion of the proceeds of the Series 2019C Bonds and the Series 2019D Bonds, along with certain other available moneys, will be used to current refund and defease the Outstanding Bonds listed and identified as the Refunded Bonds on APPENDIX I – “LIST OF REFUNDED BONDS” (collectively, the “Refunded Bonds”). The Refunded Bonds will be redeemed on May 1, 2019 (the “Refunded Bonds Redemption Date”). Proceeds of the Series 2019C Bonds and Series 2019D Bonds, together with certain other available moneys, including certain amounts held pursuant to the 1991 Master Resolution, will be deposited with The Bank of New York Mellon Trust Company, N.A., as escrow agent (the “Escrow Agent”) pursuant to an Escrow Agreement (the “Escrow Agreement”), to be executed and delivered by the Commission and the Escrow Agent. The amount deposited with the Escrow Agent under the Escrow Agreement will be sufficient, together with investment earnings thereon, to pay the redemption price of the Refunded

Bonds (as set forth in Appendix I) and accrued interest on the Refunded Bonds on the Refunded Bonds Redemption Date. See also “VERIFICATION OF MATHEMATICAL COMPUTATIONS.”

### ESTIMATED SOURCES AND USES OF FUNDS

The following table sets forth the estimated sources and uses of funds for the Series 2019A-D Bonds.

#### Series 2019A-D Bonds Estimated Sources and Uses

	Series 2019A Bonds	Series 2019B Bonds	Series 2019C Bonds	Series 2019D Bonds	Total
<b>SOURCES OF FUNDS:</b>					
Principal Amount .....	\$1,176,215,000.00	\$ 91,280,000.00	\$88,750,000.00	\$407,320,000.00	\$1,763,565,000.00
<i>Plus:</i> Net Original Issue Premium .....	124,695,478.35	12,697,960.80	—	78,648,622.45	216,042,061.60
Other Funds of the Airport <sup>(1)</sup> .....	—	—	64,858.33	8,627,854.17	8,692,712.50
<b>TOTAL</b> .....	<b>\$1,300,910,478.35</b>	<b>\$103,977,960.80</b>	<b>\$88,814,858.33</b>	<b>\$494,596,476.62</b>	<b>\$1,988,299,774.10</b>
<b>USES OF FUNDS:</b>					
Deposit to Construction Accounts .....	\$ 853,325,000.00	\$ 32,150,000.00	\$ 6,000,000.00	\$ —	\$ 891,475,000.00
Commercial Paper Repayment .....	308,285,000.00	66,190,000.00	57,470,000.00	—	431,945,000.00
Capitalized Interest <sup>(2)</sup> .....	118,658,892.69	1,664,174.10	391,504.58	—	120,714,571.37
Deposit to Contingency Account .....	—	—	20,000,000.00	—	20,000,000.00
Deposit to Refunded Bonds Redemption Account .....	—	—	3,577,680.84	476,231,899.97	479,809,580.81
Deposit to Original Reserve Account .....	17,509,941.25	—	1,194,553.59	—	18,704,494.84
Deposit to 2017 Reserve Account .....	—	3,719,412.65	—	17,383,663.11	21,103,075.76
Underwriters’ Discount .....	2,214,396.09	172,210.20	89,381.41	700,640.35	3,176,628.05
Costs of Issuance <sup>(3)</sup> .....	917,248.32	82,163.85	91,737.91	280,273.19	1,371,423.27
<b>TOTAL</b> .....	<b>\$1,300,910,478.35</b>	<b>\$103,977,960.80</b>	<b>\$88,814,858.33</b>	<b>\$494,596,476.62</b>	<b>\$1,988,299,774.10</b>

<sup>(1)</sup> Includes funds from various funds and accounts related to the Refunded Bonds under the 1991 Master Resolution.

<sup>(2)</sup> Represents capitalized interest on a portion of the Series 2019A Bonds, a portion of the Series 2019B Bonds and a portion of the Series 2019C Bonds.

<sup>(3)</sup> Includes fees and expenses of Co-Bond Counsel, Disclosure Counsel, the Co-Financial Advisors, the Verification Agent, the Trustee and the Airport Consultant, printing costs, rating agency fees, and other miscellaneous costs associated with the issuance of the Series 2019A-D Bonds.

### DESCRIPTION OF THE SERIES 2019A-D BONDS

#### General

The Series 2019A-D Bonds will be dated their date of issuance. The Series 2019A-D Bonds will bear interest at the rates and mature in the amounts and on the dates shown on the pages immediately following the front cover of this Official Statement. Interest on the Series 2019A-D Bonds will be payable on May 1 and November 1 of each year, commencing May 1, 2019 (each an “Interest Payment Date”). Interest will be calculated on the basis of a 360-day year comprised of twelve 30-day months.

The Series 2019A-D Bonds will be issued as fully registered securities, without coupons, and will be registered in the name of Cede & Co. as registered owner and nominee of The Depository Trust Company (“DTC”). Beneficial ownership interests in the Series 2019A-D Bonds will be available in book-entry form only, in Authorized Denominations of \$5,000 and any integral multiple thereof. Purchasers of beneficial ownership interests in the Series 2019A-D Bonds (“Beneficial Owners”) will not receive certificates representing their interests in the Series 2019A-D Bonds purchased. While held in book-entry form, all payments of principal of and interest on the Series 2019A-D Bonds will be made by wire transfer to DTC or its nominee as the sole registered owner of the Series 2019A-D Bonds. Payments to Beneficial Owners are the sole responsibility of DTC and its Participants. See APPENDIX C—“INFORMATION REGARDING DTC AND THE BOOK-ENTRY ONLY SYSTEM.”

## Redemption Provisions

### *Optional Redemption of the Series 2019A Bonds, Series 2019B Bonds and Series 2019D Bonds (Par Call)*

The Series 2019A Bonds are subject to redemption prior to their respective stated maturity dates, at the option of the Commission, from any source of available funds (other than mandatory sinking fund payments), as a whole or in part, in Authorized Denominations, on any Business Day on or after May 1, 2029, at a redemption price equal to 100% of the principal amount of the Series 2019A Bonds called for redemption, together with accrued interest to the date fixed for redemption, without premium.

The Series 2019B Bonds are subject to redemption prior to their stated maturity date, at the option of the Commission, from any source of available funds (other than mandatory sinking fund payments), as a whole or in part, in Authorized Denominations, on any Business Day on or after May 1, 2029, at a redemption price equal to 100% of the principal amount of the Series 2019B Bonds called for redemption, together with accrued interest to the date fixed for redemption, without premium.

The Series 2019D Bonds maturing before May 1, 2030 are not subject to optional redemption. The Series 2019D Bonds maturing on or after May 1, 2030 are subject to redemption prior to their respective stated maturity dates, at the option of the Commission, from any source of available funds (other than mandatory sinking fund payments), as a whole or in part, in Authorized Denominations, on any Business Day on or after May 1, 2029, at a redemption price equal to 100% of the principal amount of the Series 2019D Bonds called for redemption, together with accrued interest to the date fixed for redemption, without premium.

Any notice of optional redemption for the Series 2019A Bonds, Series 2019B Bonds or the Series 2019D Bonds may be conditional and may be cancelled and annulled by the Commission for any reason on or prior to the date fixed for redemption. Such cancellation does not constitute an Event of Default under the 1991 Master Resolution.

### *Optional Redemption of the Series 2019C Bonds (Make-Whole Redemption)*

The Series 2019C Bonds are subject to redemption prior to their respective stated maturity dates, at the option of the Commission, from any source of available funds, as a whole or in part, in Authorized Denominations, on any Business Day at a redemption price equal to 100% of the principal amount of the Series 2019C Bonds called for redemption, plus the Make-Whole Premium (as defined below), if any, together with accrued interest to the date fixed for redemption. Any notice of optional redemption for the Series 2019C Bonds may be conditional and may be cancelled and annulled by the Commission for any reason on or prior to the date fixed for redemption. Such cancellation does not constitute an Event of Default under the 1991 Master Resolution.

For purposes of the foregoing paragraph, the following terms are defined as follows:

“Make-Whole Premium” means, with respect to any Series 2019C Bond to be redeemed, an amount calculated by an Independent Banking Institution (as defined below) equal to the positive difference, if any, between:

- (1) The sum of the present values, calculated as of the date fixed for redemption of:
  - (a) Each interest payment that, but for the redemption, would have been payable on the Series 2019C Bond or portion thereof being redeemed on each regularly scheduled Interest Payment Date occurring after the date fixed for redemption through the maturity date of such Series 2019C Bond (excluding any accrued interest for the period prior to the date fixed for redemption); plus
  - (b) The principal amount that, but for such redemption, would have been payable on the maturity date of the Series 2019C Bond or portion thereof being redeemed; minus

- (2) The principal amount of the Series 2019C Bond or portion thereof being redeemed.

The present values of the interest and principal payments referred to in (1) above will be determined by discounting the amount of each such interest and principal payment from the date that each such payment would have been payable but for the redemption to the date fixed for redemption on a semiannual basis (assuming a 360-day year consisting of twelve (12) 30-day months) at a discount rate equal to the Comparable Treasury Yield plus (i) ten (10) basis points for the Series 2019C Bonds maturing May 1, 2020 through May 1, 2023 and (ii) fifteen (15) basis points for the Series 2019C Bonds maturing May 1, 2029.

“Comparable Treasury Yield” means the yield which represents the weekly average yield to maturity for the preceding week appearing in the most recently published statistical release designated “H.15(519) Selected Interest Rates” under the heading “Treasury Constant Maturities,” or any successor publication selected by the Independent Banking Institution that is published weekly by the Board of Governors of the Federal Reserve System and that establishes yields on actively traded United States Treasury securities adjusted to constant maturity, for the maturity corresponding to the remaining term to maturity of the Series 2019C Bonds being redeemed. The Comparable Treasury Yield will be determined as of the 10th Business Day immediately preceding the applicable date fixed for redemption. If the H.15(519) statistical release sets forth a weekly average yield for United States Treasury securities that have a constant maturity that is the same as the remaining term to maturity of the Series 2019C Bonds being redeemed, then the Comparable Treasury Yield will be equal to such weekly average yield. In all other cases, the Comparable Treasury Yield will be calculated by interpolation on a straight-line basis, between the weekly average yields on the United States Treasury securities that have a constant maturity (a) closest to and greater than the remaining term to maturity of the Series 2019C Bonds being redeemed; and (b) closest to and less than the remaining term to maturity of the Series 2019C Bonds being redeemed. Any weekly average yields calculated by interpolation will be rounded to the nearest 1/100th of 1%, with any figure of 1/200th of 1% or above being rounded upward.

If, and only if, weekly average yields for United States Treasury securities for the preceding week are not available in the H.15(519) statistical release or any successor publication, then the Comparable Treasury Yield will be the rate of interest per annum equal to the semiannual equivalent yield to maturity of the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price (each as defined herein) as of the date fixed for redemption.

“Comparable Treasury Issue” means the United States Treasury security selected by the Independent Banking Institution as having a maturity comparable to the remaining term to maturity of the Series 2019C Bonds being redeemed that would be utilized, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities of comparable maturity to the remaining term to maturity of the Series 2019C Bonds being redeemed.

“Independent Banking Institution” means an investment banking institution of national standing which is a primary United States government securities dealer in the City of New York designated by the Commission (which may be one of the Underwriters). If the Commission fails to appoint an Independent Banking Institution at least 30 days prior to the date fixed for redemption, or if the Independent Banking Institution appointed by the Commission is unwilling or unable to determine the Comparable Treasury Yield, the Comparable Treasury Yield will be determined by an Independent Banking Institution designated by the Trustee in consultation with the Commission.

“Comparable Treasury Price” means, with respect to any date on which a Series 2019C Bond or portion thereof is being redeemed, either (a) the average of five Reference Treasury Dealer quotations for the date fixed for redemption, after excluding the highest and lowest such quotations, and (b) if the Independent Banking Institution is unable to obtain five such quotations, the average of the quotations that are obtained. The quotations will be the average, as determined by the Independent Banking Institution, of the bid and asked prices for the Comparable Treasury Issue (expressed in each case as a percentage of principal amount) quoted in writing to the Independent Banking Institution, at 5:00 p.m. New York City time on the 10th Business Day preceding the date fixed for redemption.

“Reference Treasury Dealer” means a primary United States Government securities dealer in the United States appointed by the Commission and reasonably acceptable to the Independent Banking Institution (which may be one of the Underwriters). If the Commission fails to select the Reference Treasury Dealers within a reasonable period of time, the Trustee will select the Reference Treasury Dealers in consultation with the Commission.

*Mandatory Sinking Fund Redemption*

The Series 2019A Bonds maturing on May 1, 2044 are subject to mandatory sinking fund redemption prior to their stated maturity date, in part, by lot, from mandatory sinking fund payments, at a redemption price equal to 100% of the principal amount thereof plus accrued interest thereon to the date of redemption, without premium, on the dates and in the amounts, as set forth below:

**Series 2019A Mandatory Sinking Fund Redemption  
(May 1, 2044 Term Bond)**

Mandatory Sinking Fund Redemption Date (May 1)	Mandatory Sinking Fund Payment
2040	\$52,090,000
2041	54,695,000
2042	57,430,000
2043	60,300,000
2044 <sup>†</sup>	63,320,000

<sup>†</sup> Maturity.

The Series 2019A Bonds maturing on May 1, 2049 and bearing interest at 5.00% are subject to mandatory sinking fund redemption prior to their stated maturity date, in part, by lot, from mandatory sinking fund payments, at a redemption price equal to 100% of the principal amount thereof plus accrued interest thereon to the date of redemption, without premium, on the dates and in the amounts, as set forth below:

**Series 2019A Mandatory Sinking Fund Redemption  
(May 1, 2049 5.00% Term Bond)**

Mandatory Sinking Fund Redemption Date (May 1)	Mandatory Sinking Fund Payment
2045	\$39,965,000
2046	41,875,000
2047	43,890,000
2048	45,990,000
2049 <sup>†</sup>	327,260,000

<sup>†</sup> Maturity.

The Series 2019A Bonds maturing on May 1, 2049 and bearing interest at 4.00% are subject to mandatory sinking fund redemption prior to their stated maturity date, in part, by lot, from mandatory sinking fund payments, at a redemption price equal to 100% of the principal amount thereof plus accrued interest thereon to the date of redemption, without premium, on the dates and in the amounts, as set forth below:

**Series 2019A Mandatory Sinking Fund Redemption  
(May 1, 2049 4.00% Term Bond)**

Mandatory Sinking Fund Redemption Date (May 1)	Mandatory Sinking Fund Payment
2045	\$10,000,000
2046	10,485,000
2047	10,990,000
2048	11,515,000
2049 <sup>†</sup>	82,010,000

<sup>†</sup> Maturity.

The Series 2019B Bonds maturing on May 1, 2049 are subject to mandatory sinking fund redemption prior to their stated maturity date, in part, by lot, from mandatory sinking fund payments, at a redemption price equal to 100% of the principal amount thereof plus accrued interest thereon to the date of redemption, without premium, on the dates and in the amounts, as set forth below:

**Series 2019B Mandatory Sinking Fund Redemption**

Mandatory Sinking Fund Redemption Date (May 1)	Mandatory Sinking Fund Payment
2045	\$16,520,000
2046	17,345,000
2047	18,210,000
2048	19,125,000
2049 <sup>†</sup>	20,080,000

<sup>†</sup> Maturity.

*Selection of Series 2019A-D Bonds for Redemption*

Series 2019A Bonds, Series 2019B Bonds and Series 2019D Bonds. The Commission shall select the maturities and specific interest rate of the Series 2019A Bonds, Series 2019B Bonds and the Series 2019D Bonds to be optionally redeemed.

Except as otherwise described in APPENDIX C—"INFORMATION REGARDING DTC AND THE BOOK-ENTRY ONLY SYSTEM," if less than all of a maturity of the Series 2019A Bonds, Series 2019B Bonds or the Series 2019D Bonds is to be optionally redeemed, the Series 2019A Bonds, Series 2019B Bonds or the Series 2019D Bonds, as applicable, to be optionally redeemed shall be selected by lot in such manner as the Trustee shall determine. If the Series 2019A Bonds, Series 2019B Bonds or Series 2019D Bonds to be optionally redeemed are Term Bonds, the Commission shall designate to the Trustee the mandatory sinking fund payment or payments against which the principal amount of the Series 2019A Bonds, Series 2019B Bonds or Series 2019D Bonds, as applicable, of the maturity optionally redeemed shall be credited.

Series 2019C Bonds. The Commission shall select the maturities of the Series 2019C Bonds to be optionally redeemed.

If less than all of the Series 2019C Bonds of a maturity are redeemed prior to their stated maturity date, the particular Series 2019C Bonds to be redeemed will be selected on a pro-rata pass-through distribution of principal basis in accordance with the rules and procedures of DTC. It is the Commission's intent that redemption allocations

made by DTC, the DTC participants or such other intermediaries that may exist between the Commission and the beneficial owners of the Series 2019C Bonds shall be made on a pro-rata pass-through distribution of principal basis. However, so long as the Series 2019C Bonds are in book-entry only form, the selection for redemption of such Series 2019C Bonds shall be made in accordance with the operational arrangements of DTC then in effect. Neither the Commission nor the Trustee shall provide any assurance or shall have any responsibility or obligation to ensure that DTC, the DTC participants or any other intermediaries allocate redemptions of the Series 2019C Bonds among beneficial owners on a pro-rata pass-through distribution of principal basis. If the DTC operational arrangements do not allow for the redemption of the Series 2019C Bonds on a pro-rata pass-through distribution of principal basis, the Series 2019C Bonds shall be selected for redemption, in accordance with DTC procedures, by lot.

#### *Notice of Redemption*

The Trustee is required to give notice of redemption by first-class mail or electronic means, at least 30 days but not more than 60 days prior to the redemption date, to the registered owners of the Series 2019A Bonds, the Series 2019B Bonds, the Series 2019C Bonds and the Series 2019D Bonds to be redeemed, all organizations registered with the Securities and Exchange Commission (the “SEC”) as securities depositories, and at least two information services of national recognition which disseminate redemption information with respect to municipal securities.

So long as the Series 2019A Bonds, the Series 2019B Bonds, the Series 2019C Bonds and the Series 2019D Bonds are in book-entry only form through the facilities of DTC, notice of redemption will be provided to Cede & Co., as the registered owner of the Series 2019A Bonds, the Series 2019B Bonds, the Series 2019C Bonds and the Series 2019D Bonds, and not directly to the Beneficial Owners.

Any notice of optional redemption may be cancelled and annulled by the Commission for any reason on or prior to the date fixed for redemption. Such cancellation would not constitute an Event of Default under the 1991 Master Resolution.

#### **Transfer and Exchange**

The Series 2019A-D Bonds will be issued only as fully registered securities, with the privilege of transfer or exchange in Authorized Denominations for Series 2019A-D Bonds of an equal aggregate principal amount, of the same series, bearing the same interest rate and having the same maturity date, as set forth in the 1991 Master Resolution. All such transfers and exchanges shall be without charge to the owner, with the exception of any taxes, fees or other governmental charges that are required to be paid to the Trustee as a condition to transfer or exchange. While the Series 2019A-D Bonds are in book-entry only form, beneficial ownership interests in the Series 2019A-D Bonds may only be transferred through Direct Participants and Indirect Participants as described in APPENDIX C–“INFORMATION REGARDING DTC AND THE BOOK-ENTRY ONLY SYSTEM.”

#### **Defeasance**

Upon deposit by the Commission with the Trustee, at or before maturity, of money or noncallable Government Obligations, Government Certificates or certain pre-funded municipal obligations described in the definition of Permitted Investments which, together with the earnings thereon, are sufficient to pay the principal amount or redemption price of any particular Series 2019A-D Bonds, or portions thereof, becoming due, together with all interest accruing thereon to the due date or redemption date, and if the Commission provides for any required notice of redemption prior to maturity, such Series 2019A-D Bonds (or portions thereof) will be deemed not to be Outstanding under the 1991 Master Resolution. This is referred to in this Official Statement as a “Defeasance.” Upon a Defeasance of Series 2019A-D Bonds, the Owner or Owners of such Series 2019A-D Bonds (or portions thereof) will be restricted exclusively to the money or securities so deposited, together with any earnings thereon, for payment of such Series 2019A-D Bonds. See APPENDIX D–“SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION–Defeasance.” See also “CERTAIN RISK FACTORS–Income Taxation Risk Upon Defeasance of the Series 2019C Bonds.”

## SECURITY FOR THE SERIES 2019A-D BONDS

### Authority for Issuance

The Series 2019A-D Bonds will be issued under the authority of, and in compliance with, the Charter of the City and County of San Francisco (the “Charter”), the 1991 Master Resolution, and the statutes of the State of California (the “State”) as made applicable to the City pursuant to the Charter.

### Pledge of Net Revenues; Source of Payment

#### *Pledge of Net Revenues*

The Series 2019A-D Bonds, together with all Bonds issued and to be issued pursuant to the 1991 Master Resolution, are referred to herein as the “Bonds.” The 1991 Master Resolution constitutes a contract between the Commission and the registered owners of the Bonds under which the Commission has irrevocably pledged the Net Revenues of the Airport to the payment of the principal of and interest on the Bonds. The payment of the principal and interest on the Series 2019A-D Bonds will be secured by a pledge of, lien on and security interest in the Net Revenues on a parity with the pledge, lien and security interest securing all previously issued Bonds and any additional Bonds issued in the future under the 1991 Master Resolution. For a description of the Airport’s revenues, see “AIRPORT’S FINANCIAL AND RELATED INFORMATION.”

Net Revenues are defined in the 1991 Master Resolution as “Revenues” less “Operation and Maintenance Expenses.” “Revenues,” in turn, are defined in the 1991 Master Resolution to include all revenues earned by the Commission with respect to the Airport, as determined in accordance with generally accepted accounting principles (“GAAP”). Revenues do not include: (a) investment income from moneys in (i) the Construction Fund, (ii) the Debt Service Fund which constitute capitalized interest, or (iii) the Reserve Fund if and to the extent there is any deficiency therein; (b) interest income on, and any profit realized from, the investment of the proceeds of any Special Facility Bonds; (c) Special Facility Revenues and any income realized from the investment thereof unless designated as Revenues by the Commission; (d) any passenger facility or similar charge levied by or on behalf of the Commission unless designated as Revenues by the Commission; (e) grants-in-aid, donations and bequests; (f) insurance proceeds not deemed to be Revenues in accordance with GAAP; (g) the proceeds of any condemnation award; (h) the proceeds of any sale of land, buildings or equipment; and (i) any money received by or for the account of the Commission from the levy or collection of taxes upon any property of the City. The Proposed Amendments would modify the definition of “Revenues.” See “PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION” and APPENDIX H–“SUMMARY OF PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION.”

“Operation and Maintenance Expenses” are defined in the 1991 Master Resolution to include all expenses of the Commission incurred for the operation and maintenance of the Airport, as determined in accordance with GAAP. Operation and Maintenance Expenses do not include: (a) the principal of, premium, if any, or interest on the Bonds or Subordinate Bonds (including Commercial Paper Notes); (b) any allowance for amortization, depreciation or obsolescence of the Airport; (c) any expense for which, or to the extent to which, the Commission will be paid or reimbursed from or through any source that is not included or includable as Revenues; (d) any extraordinary items arising from the early extinguishment of debt; (e) Annual Service Payments; (f) any costs, or charges made therefor, for capital additions, replacements or improvements to the Airport which, under GAAP, are properly chargeable to a capital account or reserve for depreciation; and (g) any losses from the sale, abandonment, reclassification, revaluation or other disposition of any Airport properties. Operating and Maintenance Expenses include the payment of pension charges and proportionate payments to such compensation and other insurance or outside reserve funds as the Commission may establish or the Board of Supervisors of the City (the “Board of Supervisors”) may require with respect to Commission employees.

Pursuant to Section 5450 *et seq.* of the California Government Code, the pledge of, lien on and security interest in Net Revenues and certain other funds granted by the 1991 Master Resolution is valid and binding in accordance with the terms thereof from the time of issuance of the Series 2019A-D Bonds; the Net Revenues and such other funds were immediately subject to such pledge; and such pledge constitutes a lien and security interest which immediately attaches to such Net Revenues and other funds and is effective, binding and enforceable against the Commission, its successors, creditors, and all others asserting rights therein to the extent set forth and in accordance

with the terms of the 1991 Master Resolution irrespective of whether those parties have notice of such pledge and without the need for any physical delivery, recordation, filing or other further act. Such pledge, lien and security interest are not subject to the provisions of Article 9 of the California Uniform Commercial Code.

*Certain Adjustments to “Revenues” and “Operation and Maintenance Expenses”*

PFCs as Revenues. The term “Revenues” as defined in the 1991 Master Resolution does not include any passenger facility charge (“PFC”) or similar charge levied by or on behalf of the Commission against passengers, unless all or a portion thereof are designated as such by the Commission by resolution. See “AIRPORT’S FINANCIAL AND RELATED INFORMATION–Passenger Facility Charge.”

The amounts of PFCs designated as “Revenues” under the 1991 Master Resolution and applied to pay debt service on the Bonds since Fiscal Year 2007-08 are described under “AIRPORT’S FINANCIAL AND RELATED INFORMATION–Passenger Facility Charge.” The Commission expects to continue to designate a substantial portion of PFCs as Revenues in each Fiscal Year during which such PFCs are authorized to be applied to pay debt service on the Bonds. In the absence of such PFCs or such designation, the Airport would have to increase its rates and fees, including landing fees and terminal rental rates, and/or reduce operating expenses in the aggregate by a corresponding amount. See “AIRPORT’S FINANCIAL AND RELATED INFORMATION–Passenger Facility Charge” and “CERTAIN RISK FACTORS–Availability of PFCs.”

Offsets Against Operating Expenses. The term “Operation and Maintenance Expenses” is defined in the 1991 Master Resolution to exclude, among other things, “any expense for which, or to the extent to which, the Commission is or will be paid or reimbursed from or through any source that is not included or includable as Revenues.” For example, if the Commission pays operating expenses from proceeds of borrowed money or from grant moneys rather than from current revenues, it can reduce “Operation and Maintenance Expenses” and thereby increase “Net Revenues” for purposes of satisfaction of the rate covenant and additional bonds tests under the 1991 Master Resolution. The Commission has done so in the past, but only in extraordinary circumstances.

Unearned Aviation Revenues. Because Revenues are determined on a modified accrual basis in accordance with GAAP, actual year-to-year receipts from terminal rentals and landing fees may differ materially from the amounts reported as “Revenues.” Terminal rental rates and landing fees must be established in advance for the upcoming Fiscal Year based on estimated revenues and expenses. Actual receipts in any given Fiscal Year are either more or less than estimated revenues, as are actual costs relative to estimated costs. Due to the residual nature of the Lease and Use Agreements, to the extent there is an over-collection in any year (that is, receipts from the airlines exceed net costs), that excess is not included in “Revenues.” This is due to the fact that those revenues have not yet been earned. The Airport’s cumulative unearned aviation revenues (previously referred to as deferred aviation revenues) increased from \$51.9 million in Fiscal Year 2012-13 to \$54.9 million in Fiscal Year 2016-17. The Commission is obligated to reduce future rates and charges by a corresponding amount. However, the cash-on-hand resulting from any such over-collection is available in the interim to pay operating expenses, debt service on Bonds or other amounts in the event that Revenues are unexpectedly low or expenses are unexpectedly high in the course of a given Fiscal Year.

Conversely, if there is an under-collection in any year, that shortfall will nonetheless be recognized as “Revenues,” as the Airport’s right to receive them has been earned (or “accrued”). The airlines are obligated under the Lease and Use Agreements to pay such deficiency from future rates and charges. Any under-collection would result in a corresponding reduction in liquidity available to the Airport for operating and other expenses. The Commission may also increase terminal rental rates and/or landing fees at any time during a Fiscal Year if the actual expenses (including debt service) in one or more applicable cost centers are projected to exceed by 10% or more the actual revenues from such cost center. See “SAN FRANCISCO INTERNATIONAL AIRPORT–Airline Agreements.”

*Special Limited Obligations*

The Series 2019A-D Bonds are special, limited obligations of the Commission, payable as to principal and interest solely out of, and secured by a pledge of and lien on, the Net Revenues of the Airport and the funds and accounts provided for in the 1991 Master Resolution. Neither the credit nor taxing power of the City is pledged to the payment of the principal of or interest on the Series 2019A-D Bonds. No holder of a Series 2019A-D Bond shall have

the right to compel the exercise of the taxing power of the City to pay the principal of the Series 2019A-D Bonds or the interest thereon. The Commission has no taxing power whatsoever.

### **Rate Covenant**

The Commission has covenanted that it will establish and at all times maintain rates, rentals, charges and fees for the use of the Airport and for services rendered by the Commission so that:

(a) Net Revenues in each Fiscal Year will be at least sufficient (i) to make all required debt service payments and deposits in such Fiscal Year with respect to the Bonds, any Subordinate Bonds and any general obligation bonds issued by the City for the benefit of the Airport (there have been no such general obligation bonds outstanding for more than 30 years), and (ii) to make the Annual Service Payment to the City as described under “AIRPORT’S FINANCIAL AND RELATED INFORMATION–Payments to the City–*Annual Service Payment*”; and

(b) Net Revenues, together with any Transfer from the Contingency Account to the Revenues Account, in each Fiscal Year will be at least equal to 125% of aggregate Annual Debt Service with respect to the Bonds for such Fiscal Year. See “–Contingency Account.”

In the event that Net Revenues for any Fiscal Year are less than the amount specified in clause (b) above, but the Commission has promptly taken all lawful measures to revise its schedule of rentals, rates, fees and charges as necessary to increase Net Revenues, together with any Transfer, to the amount specified, such deficiency will not constitute an Event of Default under the 1991 Master Resolution. Nevertheless, if, after taking such measures, Net Revenues in the next succeeding Fiscal Year are less than the amount specified in clause (b) above, such deficiency in Net Revenues will constitute an Event of Default under the 1991 Master Resolution. See APPENDIX D–“SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION–Certain Covenants–*Rate Covenant*.”

The Proposed Amendments would modify the definitions of Revenues and Annual Debt Service. See “PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION” and APPENDIX H–“SUMMARY OF PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION.”

### **Contingency Account**

The 1991 Master Resolution creates a Contingency Account within the Airport Revenue Fund held by the Treasurer of the City. Moneys in the Contingency Account may be applied upon the direction of the Commission to the payment of principal, interest, purchase price or premium payments on the Bonds, payment of Operation and Maintenance Expenses, and payment of costs related to any additions, improvements, repairs, renewals or replacements to the Airport, in each case only if and to the extent that moneys otherwise available to make such payments are insufficient therefor. The Commission is not obligated to maintain a particular balance in the Contingency Account or to replenish the Contingency Account in the event any amounts are withdrawn.

As of June 30, 2018, the balance in the Contingency Account available for transfer, as described below, was approximately \$130.8 million (estimated, see “FINANCIAL STATEMENTS – Delayed Audited Financial Statements”), excluding accrued but unpaid interest on investments and after making accounting adjustments. There have been no withdrawals from the Contingency Account since June 30, 2018. The Commission expects to make an additional deposit into the Contingency Account from the proceeds of the Series 2019C Bonds. See “PLAN OF FINANCE AND REFUNDING” and “ESTIMATED SOURCES AND USES OF FUNDS.”

Except for transfers to the Revenues Account described in the following paragraph, the Commission has maintained no less than approximately \$92 million in the Contingency Account for more than ten years. The Commission has never drawn on the Contingency Account to stabilize its finances, but it has used the balance in the Contingency Account to show compliance with the Rate Covenant described above.

Moneys in the Contingency Account are required to be deposited in the Revenues Account as of the last Business Day of each Fiscal Year, and thereby applied to satisfy the coverage requirement under the rate covenant

contained in the 1991 Master Resolution, unless and to the extent the Commission shall otherwise direct. See “–Rate Covenant” above. On the first Business Day of the following Fiscal Year, the deposited amount is required to be deposited back into the Contingency Account from the Revenues Account.

If the Commission withdraws funds from the Contingency Account for any purpose during any Fiscal Year and does not replenish the amounts withdrawn, this reduction in the amount on deposit in the Contingency Account may have an adverse effect on debt service coverage for such Fiscal Year and subsequent Fiscal Years. The Commission is not obligated to replenish the Contingency Account in the event amounts are withdrawn therefrom. See “–Rate Covenant.”

As of December 1, 2018, Maximum Annual Debt Service on the Bonds was approximately \$522 million. If the Commission were to maintain the Contingency Account at its current balance, such balance would be expected to be a lower percentage of Maximum Annual Debt Service in the future due to the anticipated issuance of additional Bonds in the future. The Commission expects to increase the balance in the Contingency Account in the future but is not obligated to do so. The Report of the Airport Consultant attached as Appendix A (the “Report of the Airport Consultant” or “Report”) assumes that the Commission will increase the balance in the Contingency Account as described in such Report.

### **Flow of Funds**

The application of Revenues is governed by relevant provisions of the Charter and of the 1991 Master Resolution. Under the Charter, the gross revenue of the Commission is to be deposited in a special fund in the City Treasury designated as the “Airport Revenue Fund.” These moneys are required to be held separate and apart from all other funds of the City and are required to be applied as follows:

*First*, to pay Airport Operation and Maintenance Expenses;

*Second*, to make required payments of pension charges and to compensation, insurance and outside reserve funds therefor;

*Third*, to pay the principal of, interest on, and other required payments to secure revenue bonds (including the Series 2019A-D Bonds);

*Fourth*, to pay principal of and interest on general obligation bonds of the City issued for Airport purposes (there are no general obligation bonds outstanding for Airport purposes, nor have there been for more than 30 years);

*Fifth*, to pay for necessary reconstruction and replacement of Airport facilities;

*Sixth*, to acquire real property for the construction or improvement of Airport facilities;

*Seventh*, to repay to the City’s General Fund any sums paid from tax moneys for principal of and interest on any general obligation bonds previously issued by the City for Airport purposes; and

*Eighth*, for any other lawful purpose of the Commission, including without limitation transfer to the City’s General Fund on an annual basis of up to 25% of the non-airline revenues as a return upon the City’s investment in the Airport. However, the Lease and Use Agreements further limit payments from the Airport Revenue Fund into the General Fund of the City to the greater of (i) 15% of “Concessions Revenues” (as defined in the Lease and Use Agreements) or (ii) \$5 million per year. The Annual Service Payment to the City includes the total transfer to the City’s General Fund contemplated by this Charter provision. See “AIRPORT’S FINANCIAL AND RELATED INFORMATION–Payments to the City.”

The 1991 Master Resolution establishes the following accounts within the Airport Revenue Fund: the Revenues Account, the Operation and Maintenance Account, the Revenue Bond Account, the General Obligation Bond Account, the General Purpose Account, and the Contingency Account. Under the 1991 Master Resolution, all

Revenues are required to be set aside and deposited by the Treasurer in the Revenues Account as received. Each month, moneys in the Revenues Account are set aside and applied as follows:

*First:* to the Operation and Maintenance Account, the amount required to pay Airport Operation and Maintenance Expenses;

*Second:* to the Revenue Bond Account, the amount required to make all payments and deposits required in that month for the Bonds and any Subordinate Bonds, including amounts necessary to make any parity Swap Payments to a Swap Counterparty (see “AIRPORT’S FINANCIAL AND RELATED INFORMATION–Interest Rate Swaps”);

*Third:* to the General Obligation Bond Account, the amount required to pay the principal of and interest on general obligation bonds of the City issued for Airport purposes (there are no general obligation bonds outstanding for Airport purposes, nor have there been for more than 30 years);

*Fourth:* to the General Purpose Account, the amount estimated to be needed to pay for any lawful purpose, including any subordinate Swap Payments payable in connection with the termination of the Swap Agreements (see “AIRPORT’S FINANCIAL AND RELATED INFORMATION–Interest Rate Swaps”); and

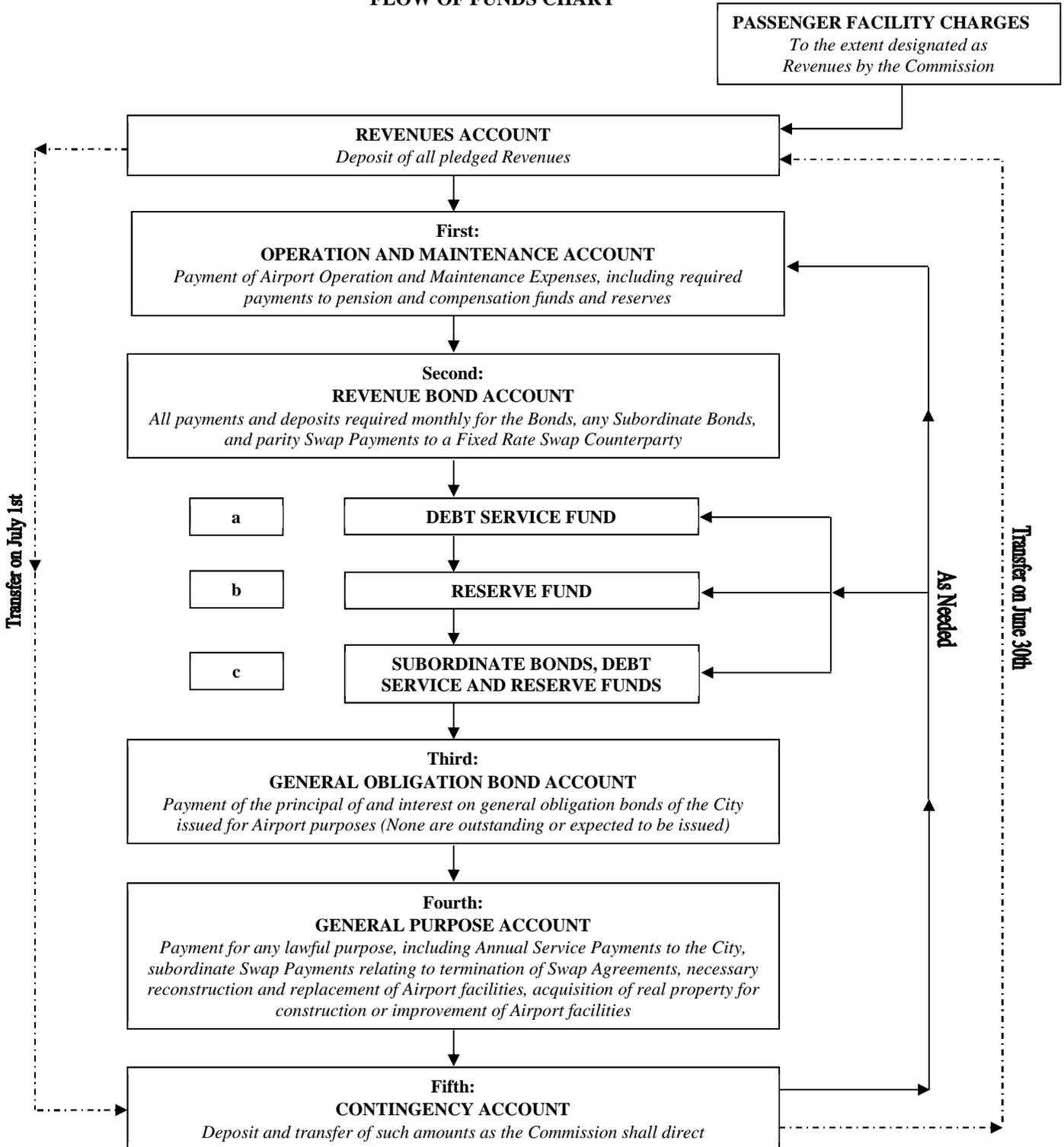
*Fifth:* to the Contingency Account, such amount, if any, as the Commission shall direct.

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**Flow of Funds Chart**

The Flow of Funds Chart below sets forth a simplified graphic presentation of the allocation of amounts on deposit in the Airport Revenue Fund each month as provided in both the Charter and the 1991 Master Resolution. The Commission is providing it solely for the convenience of the reader and the Commission qualifies it in its entirety by reference to the statements under the caption “–Flow of Funds.”

**FLOW OF FUNDS CHART**



For a detailed description of the transfers and deposits of Revenues, see APPENDIX D–“SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION–Revenue Fund; Allocation of Net Revenues.”

## **Additional Bonds**

### *General Requirements*

Additional Bonds that have a parity lien on Net Revenues with the Series 2019A-D Bonds and all previously issued Bonds may be issued by the Commission pursuant to the 1991 Master Resolution. The Commission has retained substantial flexibility as to the terms of any such additional Bonds. Such additional Bonds (which may include, without limitation, bonds, notes, bond anticipation notes, commercial paper, lease or installment purchase agreements or certificates of participation therein and Repayment Obligations to Credit Providers or Liquidity Providers) may mature on any date or dates over any period of time; bear interest at a fixed or variable rate; be payable in any currency or currencies; be in any denominations; be subject to additional events of default; have any interest and principal payment dates; be in any form (including registered, book-entry or coupon); include or exclude redemption provisions; be sold at a certain price or prices; be further secured by any separate and additional security; be subject to optional tender for purchase; and otherwise include such additional terms and provisions as the Commission may determine, subject to the then-applicable requirements and limitations imposed by the Charter.

Under the Charter, the issuance of Bonds authorized by the Commission must be approved by the Board of Supervisors.

The Commission may not issue any additional Bonds (other than refunding Bonds) under the 1991 Master Resolution unless the Trustee has been provided with either:

(a) a certificate of an Airport Consultant stating that:

(i) for the period, if any, from and including the first full Fiscal Year following the issuance of such additional Bonds through and including the last Fiscal Year during any part of which interest on such Bonds is expected to be paid from the proceeds thereof, projected Net Revenues, together with any Transfer from the Contingency Account, in each such Fiscal Year will be at least equal to 1.25 times Annual Debt Service; and

(ii) for the period from and including the first full Fiscal Year following the issuance of such Bonds during which no interest on such Bonds is expected to be paid from the proceeds thereof through and including the later of: (A) the fifth full Fiscal Year following the issuance of such Bonds, or (B) the third full Fiscal Year during which no interest on such Bonds is expected to be paid from the proceeds thereof, projected Net Revenues together with any Transfer from the Contingency Account, if applicable, in each such Fiscal Year will be at least sufficient to satisfy the rate covenants in the 1991 Master Resolution (see “–Rate Covenant”); or

(b) a certificate of an Independent Auditor stating that Net Revenues, together with any Transfer from the Contingency Account, in the most recently completed Fiscal Year were at least equal to 125% of the sum of (i) Annual Debt Service on the Bonds in such Fiscal Year, plus (ii) Maximum Annual Debt Service on the Bonds proposed to be issued.

Any Transfer from the Contingency Account taken into account for purposes of (a) or (b) above shall not exceed 25% of Maximum Annual Debt Service in such Fiscal Year. See APPENDIX D–“SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION–Issuance of Additional Series of Bonds.” The Commission anticipates that the certificate described in (a) above will be delivered by the Airport Consultant in connection with the issuance of the Series 2019A-D Bonds.

Proceeds of additional Bonds are expected to be a significant source of funding for the Commission’s Capital Improvement Plan. See “CERTAIN RISK FACTORS–Additional Long-Term Debt,” “CAPITAL PROJECTS AND PLANNING–The Capital Improvement Plan” and APPENDIX A– “FINANCIAL ANALYSIS – Annual Debt Service Requirements.”

The Commission may issue Bonds for the purpose of refunding any Bonds or Subordinate Bonds upon compliance with the requirements summarized above or upon delivery to the Trustee of evidence that aggregate Annual Debt Service in each Fiscal Year with respect to all Bonds to be outstanding after the issuance of the refunding Bonds will be less than aggregate Annual Debt Service in each such Fiscal Year in which Bonds are outstanding prior to the issuance of such refunding Bonds, and that Maximum Annual Debt Service with respect to all Bonds to be outstanding after the issuance of the refunding Bonds will not exceed Maximum Annual Debt Service with respect to all Bonds outstanding immediately prior to such issuance. See APPENDIX D–“SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION–Refunding Bonds.”

The Proposed Amendments include modifications that affect the tests for issuance of additional Bonds, including refunding Bonds. See “PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION” and APPENDIX H–“SUMMARY OF PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION.”

### *Repayment Obligations*

Under certain circumstances, Repayment Obligations may be accorded the status of Bonds. Repayment Obligations are defined under the 1991 Master Resolution to mean an obligation under a written agreement between the Commission and a Credit Provider or Liquidity Provider to reimburse the Credit Provider or Liquidity Provider for amounts paid under or pursuant to a “Credit Facility” (which is defined in the 1991 Master Resolution to include letters of credit, lines of credit, standby bond purchase agreements, municipal bond insurance policies, surety bonds or other financial instruments) or a “Liquidity Facility” (which is defined in the 1991 Master Resolution to include lines of credit, standby bond purchase agreements or other financial instruments that obligate a third party to pay or provide funds for the payment of the purchase price of any variable rate Bonds) for the payment of the principal or purchase price of and/or interest on any Bonds. See “AIRPORT’S FINANCIAL AND RELATED INFORMATION–Credit Facilities.” See APPENDIX D–“SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION–Repayment Obligations.”

### **Reserve Fund; Reserve Accounts; Credit Facilities**

The 1991 Master Resolution established the pooled “Issue 1 Reserve Account” (the “Original Reserve Account”) in the Reserve Fund as security for each series of Bonds (each, an “Original Reserve Series”) that is designated as being secured by the Original Reserve Account. All of the Bonds currently Outstanding under the 1991 Master Resolution have been designated as Original Reserve Series except for the Series 2009C, 2010A, 2010D, 2017C, 2017D, 2018A, 2018B and 2018C Bonds. **The Series 2019A Bonds and the Series 2019C Bonds will be designated as Original Reserve Series and will be secured by the Original Reserve Account. The Series 2019B Bonds and the Series 2019D Bonds will be designated as 2017 Reserve Series Bonds and will be secured by the 2017 Reserve Account.**

The 1991 Master Resolution also established the pooled “2009 Reserve Account” (the “2009 Reserve Account”) in the Reserve Fund as security for each series of Bonds (each, a “2009 Reserve Series”) that is designated as being secured by the 2009 Reserve Account. The Series 2009C Bonds and the Series 2010D Bonds are secured by the 2009 Reserve Account.

The 1991 Master Resolution also established the pooled “2017 Reserve Account” (the “2017 Reserve Account”) in the Reserve Fund as security for each series of Bonds (the “2017 Reserve Series Bonds”) that is designated as being secured by the 2017 Reserve Account. The Series 2017C Bonds, Series 2017D Bonds and Series 2018A Bonds are designated as 2017 Reserve Series Bonds.

As permitted under the 1991 Master Resolution, the Commission does not maintain a reserve account for the Series 2010A, 2018B or 2018C Bonds, all of which are secured by letters of credit.

Future Series of Bonds may be secured by the Original Reserve Account, the 2009 Reserve Account, the 2017 Reserve Account or a separate reserve account, or may not be secured by any debt service reserve account, as the Commission shall determine. A deficiency in any of the reserve accounts may require the Commission to apply Net Revenues to cure such deficiency and thereby reduce Net Revenues available to pay debt service on the Series 2019A-D Bonds.

*Original Reserve Account*

***The Series 2019A Bonds and Series 2019C Bonds will be designated as Original Reserve Series and will be secured by the Original Reserve Account.***

Amounts on deposit in the Original Reserve Account may be used solely for the purposes of (i) paying interest, principal or mandatory sinking fund payments on the Original Reserve Series Bonds whenever any moneys then credited to the debt service accounts with respect to such Original Reserve Series Bonds are insufficient for such purposes, and (ii) reimbursing the providers of any reserve policies or other credit facilities credited to the Original Reserve Account for any payments thereunder.

The reserve requirement for the Original Reserve Account (the “Original Reserve Requirement”) is an amount equal to Aggregate Maximum Annual Debt Service. Aggregate Maximum Annual Debt Service means the maximum amount of Annual Debt Service on all Outstanding Original Reserve Series Bonds in any Fiscal Year during the period from the date of calculation to the final scheduled maturity of such Bonds. The Original Reserve Requirement can be funded with cash, Permitted Investments and/or Credit Facilities.

The 1991 Master Resolution authorizes the Commission to obtain Credit Facilities, including surety bonds and insurance policies (“reserve policies”), in place of funding the Original Reserve Account with cash and Permitted Investments. The 1991 Master Resolution requires that the substitution of a Credit Facility for amounts on deposit in the Original Reserve Account not cause the then-current ratings on the Bonds to which such accounts are pledged to be downgraded or withdrawn. The Commission has previously deposited in the Original Reserve Account reserve policies in an aggregate amount of approximately \$56.9 million issued by (i) MBIA Insurance Corporation (“MBIA”) and (ii) Financial Guaranty Insurance Company (“FGIC”). The reserve policies from MBIA and FGIC were each subsequently reinsured by National Public Finance Guarantee Corporation (“National”). The 1991 Master Resolution requires that a reserve policy deposited in the Original Reserve Account must be from a credit provider rated in the highest rating category by at least two rating agencies at the time it is deposited. However, the 1991 Master Resolution does not require that those ratings be maintained after the date of deposit of such reserve policy to the Original Reserve Account. See APPENDIX D–“SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION–Debt Service and Reserve Funds–*Application and Valuation of Issue 1 Reserve Account and 2017 Reserve Account.*” As of December 1, 2018, Moody’s Investors Service, Inc. (“Moody’s”) rated the claims-paying ability and financial strength of National “Baa2” (stable). Information concerning National is available in reports and statements filed by National with the SEC. This information is available on the SEC’s website at <http://www.sec.gov>. The Commission does not have any current plans to obtain additional Credit Facilities for the Original Reserve Account.

As of December 1, 2018, the Original Reserve Requirement was approximately \$426.1 million and the balance in the Original Reserve Account was approximately \$486.9 million, including approximately \$430.0 million of cash and Permitted Investments (approximately 100.9% of the Original Reserve Requirement), as well as the reserve policies with a face value of approximately \$56.9 million.

Original Reserve Account Balance  
As of December 1, 2018

Cash and Permitted Investments	\$430.0 million
Reserve Policies	
National (FGIC) Reserve Policies	15.1 million
National (MBIA) Reserve Policies	41.8 million
SUBTOTAL RESERVE POLICIES	<u>\$56.9 million</u>
TOTAL	<u><u>\$486.9 million</u></u>

Following the issuance of the Series 2019A-D Bonds, the Original Reserve Requirement will be approximately \$448.8 million. The Commission expects to deposit approximately \$18.7 million from the proceeds of the Series 2019A Bonds and Series 2019C Bonds into the Original Reserve Account at the time of issuance of the Series 2019A-D Bonds. Immediately following the issuance of the Series 2019A-D Bonds, cash and Permitted

Investments in the Original Reserve Account is expected to equal approximately \$448.8 million, or 100% of the Original Reserve Requirement.

In the event that the balance in the Original Reserve Account is diminished below the Original Reserve Requirement, the Trustee is required to immediately notify the Commission of such deficiency and the Commission is required under the 1991 Master Resolution to replenish the Original Reserve Account by transfers of available Net Revenues over a period not to exceed 12 months from the date on which the Commission is notified of such deficiency. See APPENDIX D–“SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION–Debt Service and Reserve Funds–*Application and Valuation of Issue 1 Reserve Account and 2017 Reserve Account.*” Any amounts on deposit in the Original Reserve Account in excess of the Original Reserve Requirement may be withdrawn by the Commission.

The Proposed Amendments would modify the provisions relating to Credit Facilities in the Original Reserve Account and the definition of Permitted Investments. See “PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION” and in Appendix H–“SUMMARY OF PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION.”

#### *2009 Reserve Account*

#### ***The Series 2019A-D Bonds are NOT secured by the 2009 Reserve Account.***

Amounts on deposit in the 2009 Reserve Account may be used solely for the purposes of (i) paying interest, principal or mandatory sinking fund payments on any 2009 Reserve Series of Bonds whenever any moneys then credited to the debt service accounts with respect to such 2009 Reserve Series of Bonds are insufficient for such purposes, and (ii) reimbursing the providers of any reserve policies or other credit facilities credited to the 2009 Reserve Account for any payments thereunder.

The reserve requirement for each Series of 2009 Reserve Series Bonds is equal to the lesser of: (i) Maximum Annual Debt Service for such Series of 2009 Reserve Series Bonds, (ii) 125% of average Annual Debt Service for such Series of 2009 Reserve Series Bonds, and (iii) 10% of the outstanding principal amount of such Series of 2009 Reserve Series Bonds (or allocable issue price of such Series if such Series is sold with more than a de minimis (2%) amount of original issue discount), in each case as determined from time to time. The reserve requirement for all of the 2009 Reserve Series Bonds is the sum of such amounts for each individual Series (the “2009 Reserve Requirement”). The 2009 Reserve Requirement can be funded with cash, Permitted Investments and/or reserve policies, provided that no more than 40% of the 2009 Reserve Requirement may be satisfied with reserve policies.

The 1991 Master Resolution authorizes the Commission to obtain credit facilities, including reserve policies, in place of funding the 2009 Reserve Account with cash and Permitted Investments. The 1991 Master Resolution requires that a reserve policy deposited in the 2009 Reserve Account must be from a credit provider rated in the highest rating category by at least two rating agencies at the time it is deposited. The 1991 Master Resolution, however, does not require that those ratings be maintained after the date of deposit. See APPENDIX D–“SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION–Debt Service and Reserve Funds–*Application and Valuation of 2009 Reserve Account.*”

The Commission previously deposited in the 2009 Reserve Account a reserve policy issued by Financial Security Assurance Inc. (“FSA”), which was later acquired by an affiliate of Assured Guaranty Corporation (“Assured”) and renamed Assured Guaranty Municipal Corp. (“AGM”). As of December 1, 2018, Moody’s and S&P rated the claims-paying ability and financial strength of AGM “A2” (stable) and “AA” (stable), respectively.

As of December 1, 2018, the 2009 Reserve Requirement was approximately \$7.4 million and the balance in the 2009 Reserve Account was approximately \$23.4 million. The full amount of the 2009 Reserve Requirement is satisfied by the approximately \$20.0 million of cash and Permitted Investments held in the account (approximately 270.7% of the 2009 Reserve Requirement), as well as a reserve policy with a face value of approximately \$3.4 million.

2009 Reserve Account Balance  
As of December 1, 2018

Cash and Permitted Investments	\$20.0 million
AGM Reserve Policy	3.4 million <sup>†</sup>
<b>TOTAL</b>	<b><u>\$23.4 million</u></b>

<sup>†</sup> Under the terms of this AGM reserve policy, the value may be adjusted downward under certain circumstances and may have experienced a reduction in value.

*2017 Reserve Account*

***The Series 2019B Bonds and the Series 2019D Bonds are secured by the 2017 Reserve Account. The Series 2019A Bonds and the Series 2019C Bonds are NOT secured by the 2017 Reserve Account.***

Amounts on deposit in the 2017 Reserve Account may be used solely for the purposes of (i) paying interest, principal or mandatory sinking fund payments on any 2017 Reserve Series Bonds whenever any moneys then credited to the debt service accounts with respect to such 2017 Reserve Series Bonds are insufficient for such purposes, and (ii) reimbursing the providers of any reserve policies or other credit facilities credited to the 2017 Reserve Account for any payments thereunder.

The reserve requirement for the 2017 Reserve Account (the “2017 Reserve Requirement”) is equal to the lesser of: (i) 2017 Reserve Account Maximum Annual Debt Service (the maximum amount of aggregate Annual Debt Service for all 2017 Reserve Series Bonds in any Fiscal Year during the period from the date of calculation to the final scheduled maturity of the 2017 Reserve Series Bonds), (b) 10% of the outstanding aggregate principal amount of all 2017 Reserve Series Bonds (provided that the issue price of a Series of 2017 Reserve Series Bonds will be used in this calculation if such Series was sold with an original issue discount that exceeded 2% of the principal of such Series on its original date of sale), and (c) 125% of the average aggregate Annual Debt Service for all 2017 Reserve Series Bonds. The 2017 Reserve Requirement can be funded with cash, Permitted Investments and/or Credit Facilities.

The 1991 Master Resolution authorizes the Commission to obtain credit facilities, including reserve policies, in place of funding the 2017 Reserve Account with cash and permitted investments. The 1991 Master Resolution requires that a reserve policy deposited in the 2017 Reserve Account must be from a credit provider rated in the highest rating category by at least two rating agencies at the time it is deposited. The 1991 Master Resolution, however, does not require that those ratings be maintained after the date of deposit. See APPENDIX D–“SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION–Debt Service and Reserve Funds–*Application and Valuation of Issue 1 Reserve Account and 2017 Reserve Account.*”

As of December 1, 2018, the 2017 Reserve Requirement was approximately \$30.5 million and the balance in the 2017 Reserve Account was approximately \$31.0 million, all of which was held in the form of cash and Permitted Investments (approximately 101.4% of the 2017 Reserve Requirement).

2017 Reserve Account Balance  
As of December 1, 2018

Cash and Permitted Investments	\$31.0 million
<b>TOTAL</b>	<b><u>\$31.0 million</u></b>

Following the issuance of the Series 2019A-D Bonds, the 2017 Reserve Requirement will be approximately \$52.1 million. The Commission expects to deposit approximately \$21.1 million from the proceeds of the Series 2019B Bonds and the Series 2019D Bonds into the 2017 Reserve Account at the time of issuance of the Series 2019A-D Bonds. Immediately following the issuance of the Series 2019A-D Bonds, cash and Permitted Investments in the 2017 Reserve Account is expected to equal approximately \$52.1 million, or 100% of the 2017 Reserve Requirement.

In the event that the balance in the 2017 Reserve Account is diminished below the 2017 Reserve Requirement, the Trustee is required to immediately notify the Commission of such deficiency and the Commission is required under the 1991 Master Resolution to replenish the 2017 Reserve Account by transfers of available Net Revenues over a period not to exceed 12 months from the date on which the Commission is notified of such deficiency. See APPENDIX D—“SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION—Debt Service and Reserve Funds—*Application and Valuation of Issue 1 Reserve Account and 2017 Reserve Account.*” Any amounts on deposit in the 2017 Reserve Account in excess of the 2017 Reserve Requirement may be withdrawn by the Commission.

### **Contingent Payment Obligations**

The Commission has entered into, and may in the future enter into, contracts and agreements in the course of its business that include an obligation on the part of the Commission to make payments contingent upon the occurrence or non-occurrence of certain future events, including events that are beyond the direct control of the Commission. These agreements include interest rate swap and other similar agreements, investment agreements, including for the future delivery of specified securities, letter of credit and line of credit agreements for advances of funds to the Commission in connection with its Bonds and other obligations, and other agreements. See “—Other Indebtedness—*Subordinate Bonds*” and “AIRPORT’S FINANCIAL AND RELATED INFORMATION—*Credit Facilities*” for information about the Commission’s existing letters of credit. For summaries of the Interest Rate Swap Policy and certain swap agreements entered into by the Commission, see “AIRPORT’S FINANCIAL AND RELATED INFORMATION—*Interest Rate Swaps.*”

Such contracts and agreements may provide for contingent payments that may be conditioned upon the credit ratings of the Airport and/or of the other parties to the contract or agreement, maintenance by the Commission of specified financial ratios, the inability of the Commission to obtain long-term refinancing for short-term obligations or liquidity arrangements, and other factors. Such payments may be payable on a parity with debt service on the Bonds, including any “Swap Payments” to a Swap Counterparty as such term is defined in the 1991 Master Resolution.

The amount of any such contingent payments may be substantial. To the extent that the Commission did not have sufficient funds on hand to make any such payment, it is likely that the Commission would seek to borrow such amounts through the issuance of additional Bonds or Subordinate Bonds (including Commercial Paper Notes).

### **No Acceleration**

The Bonds are not subject to acceleration under any circumstances or for any reason, including without limitation upon the occurrence and continuance of an Event of Default under the 1991 Master Resolution. Moreover, the Bonds will not be subject to mandatory redemption or mandatory purchase or tender for purchase upon the occurrence and continuance of an Event of Default under the 1991 Master Resolution to the extent the redemption or purchase price is payable from Net Revenues. Bonds, however, may be subject to mandatory redemption or mandatory purchase or tender for purchase if the redemption or purchase price is payable from a source other than Net Revenues such as payments under a credit facility or liquidity facility. Amounts payable to reimburse a credit provider or liquidity provider pursuant to a credit facility or liquidity facility for amounts drawn thereunder to pay principal, interest or purchase price of Bonds, which reimbursement obligations are accorded the status of Repayment Obligations, can be subject to acceleration, but any such accelerated payments (other than certain amounts assumed to be amortized in that year under the 1991 Master Resolution) would be made from Net Revenues on a basis subordinate to the Bonds. See APPENDIX D—“SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION—*Repayment Obligations.*”

Upon the occurrence and continuance of an Event of Default under the 1991 Master Resolution, the Commission would be liable only for principal and interest payments on the Bonds as they became due. *The inability to accelerate the Bonds limits the remedies available to the Trustee and the Owners upon an Event of Default and could give rise to conflicting interests among Owners of earlier-maturing and later-maturing Bonds.* In the event of successive defaults in payment of the principal or interest on the Bonds, the Trustee likely would be required to seek a separate judgment for each such payment not made. Also see “CERTAIN RISK FACTORS—*Limitation of Remedies*” and “—*Potential Effect of a City Bankruptcy.*”

## Other Indebtedness

### *General*

In addition to the Series 2019A-D Bonds and the other Bonds that it may have Outstanding from time to time, the Commission has reserved the right under the 1991 Master Resolution to issue indebtedness (i) secured in whole or in part by a pledge of and lien on Net Revenues subordinate to the pledge and lien securing the Bonds (“Subordinate Bonds”), or (ii) secured by revenues from a Special Facility (defined herein) (“Special Facility Bonds”). Provisions of the 1991 Master Resolution governing the issuance of and security for Subordinate Bonds and Special Facility Bonds are described in “–*Special Facility Bonds*” and APPENDIX D–“SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION–Subordinate Bonds” and “–*Special Facility Bonds*.”

### *Subordinate Bonds*

The Commission has authorized, and the Board of Supervisors has approved, the issuance of up to \$500,000,000 principal amount outstanding at any one time of commercial paper notes (the “Commercial Paper Notes”), which constitute Subordinate Bonds. The Commercial Paper Notes are authorized pursuant to Resolution No. 97-0146 adopted by the Commission on May 20, 1997, as amended and supplemented (the “Subordinate Resolution”). The terms and provisions of the Subordinate Resolution are substantially similar to those of the 1991 Master Resolution, with the exception that the Subordinate Resolution provides that payment of the Commercial Paper Notes, and repayment of amounts drawn on the letters of credit with respect thereto, is secured by a lien on Net Revenues subordinate to the lien of the 1991 Master Resolution securing the Bonds. See “–Contingent Payment Obligations” and APPENDIX D–“SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION–Subordinate Bonds.”

The Commission has obtained four irrevocable direct-pay letters of credit totaling \$500 million in available principal amount to support the Commercial Paper Notes. These letters of credit are described in the following table.

#### LETTERS OF CREDIT FOR COMMERCIAL PAPER NOTES

	<b>Series A-1 Notes, Series B-1 Notes, Series C-1 Notes</b>	<b>Series A-2 Notes, Series B-2 Notes, Series C-2 Notes</b>	<b>Series A-3 Notes, Series B-3 Notes, Series C-3 Notes</b>	<b>Series A-4 Notes, Series B-4 Notes, Series C-4 Notes</b>
Principal Amount	\$100,000,000	\$100,000,000	\$200,000,000	\$100,000,000
Expiration Date	May 2, 2019	June 21, 2022	May 1, 2020	May 31, 2019
Credit Provider	State Street <sup>(1)</sup>	Sumitomo Mitsui Banking <sup>(2)</sup>	Royal Bank of Canada <sup>(3)</sup>	Wells Fargo <sup>(4)</sup>
Credit Provider Ratings <sup>(5)</sup>				
Short-Term	P-1/A-1+/F1+	P-1/A-1/F1	P-1/A-1+/F1+	P-1/A-1/F1+
Long-Term	Aa3/AA-/AA	A1/A/A	A2/AA-/AA	Aa2/A+/AA-

<sup>(1)</sup> State Street Bank and Trust Company.

<sup>(2)</sup> Sumitomo Mitsui Banking Corporation, acting through its New York Branch.

<sup>(3)</sup> Royal Bank of Canada, acting through a branch located at 200 Vesey Street, New York, New York.

<sup>(4)</sup> Wells Fargo Bank, National Association.

<sup>(5)</sup> As of December 1, 2018. Ratings are provided for convenience of reference only. Such rating information has been obtained from sources believed to be reliable but has not been confirmed or re-verified by the rating agencies. The Commission does not take any responsibility for the accuracy of such ratings, or give any assurance that such ratings will apply for any given period of time, or that such ratings will not be revised downward or withdrawn if, in the judgment of the agency providing such rating, circumstances so warrant. Reflects the ratings of the credit provider, not the rating on the related Commercial Paper Notes. Ratings on related Commercial Paper Notes may be different. Ratings for the credit providers are displayed as Moody’s/S&P/Fitch. The Long-Term ratings provided are Moody’s Issuer Rating, S&P’s Long-Term Local Issuer Credit Rating and Fitch’s Long-Term Issuer Default Rating. The Short-Term ratings provided are Moody’s Short Term Rating, S&P’s Short-Term Local Issuer Credit Rating and Fitch’s Short-Term Issuer Default Rating. These ratings were not provided by the above-referenced credit providers. None of the above-referenced credit providers has provided any information for inclusion in this Official Statement or has independently verified or reviewed, made any representation regarding, or accepts any responsibility for the accuracy or completeness of this Official Statement.

Source: Commission.

As of January 1, 2019, there was approximately \$436 million of Commercial Paper Notes outstanding. The Commission expects to repay approximately \$432 million of Commercial Paper Notes with a portion of the proceeds of the Series 2019A Bonds, Series 2019B Bonds and Series 2019C Bonds. The Commission expects to continue issuing Commercial Paper Notes from time to time in the future.

#### *Special Facility Bonds*

The Commission may (a) designate an existing or planned facility, structure, equipment or other property, real or personal, which is at the Airport or part of any facility or structure at the Airport as a Special Facility, (b) provide that revenues earned by the Commission from or with respect to such Special Facility shall constitute “Special Facility Revenues” and shall not be included as Revenues, and (c) issue Special Facility Bonds for the purpose of acquiring, constructing, renovating, or improving such Special Facility. The designation of an existing facility as a Special Facility therefore could result in a reduction in Revenues. Principal, purchase price, if any, redemption premium, if any, and interest with respect to Special Facility Bonds shall be payable from and secured by the Special Facility Revenues, and not from or by Net Revenues.

No Special Facility Bonds may be issued by the Commission unless an Airport Consultant has certified: (i) that the estimated Special Facility Revenues with respect to the proposed Special Facility will be at least sufficient to pay the principal, purchase price, interest, and all sinking fund, reserve fund and other payments required with respect to such Special Facility Bonds when due, and to pay all costs of operating and maintaining the Special Facility not paid by a party other than the Commission; (ii) that estimated Net Revenues calculated without including the Special Facility Revenues and without including any operation and maintenance expenses of the Special Facility as Operation and Maintenance Expenses will be sufficient so that the Commission will be in compliance with its rate covenant during each of the five Fiscal Years immediately following the issuance of the Special Facility Bonds; and (iii) no Event of Default under the 1991 Master Resolution exists.

#### *SFO Fuel Bonds*

The Commission has two outstanding issues of Special Facility Bonds which were issued to finance the construction of jet fuel distribution and related facilities at the Airport for the benefit of the airlines: its Special Facilities Lease Revenue Bonds (SFO FUEL COMPANY LLC), Series 1997A (AMT), of which \$52,865,000 was outstanding as of December 1, 2018; and its Special Facilities Lease Revenue Bonds (SFO FUEL COMPANY LLC), Series 2000A (AMT), of which \$9,965,000 was outstanding as of December 1, 2018 (collectively, the “SFO Fuel Bonds”). The SFO Fuel Bonds are payable from and secured by payments made by SFO FUEL COMPANY, LLC, a special purpose limited liability company (“SFO Fuel”), pursuant to a lease agreement between the Commission and SFO Fuel with respect to the jet fuel distribution facilities. SFO Fuel was formed by certain airlines operating at the Airport. The lease payments, and therefore the SFO Fuel Bonds, are payable from charges imposed by SFO Fuel on air carriers for into-plane fueling at the Airport, and are not payable from or secured by Net Revenues.

The Commission expects to issue approximately \$125,000,000 of Special Facility Bonds to finance capital improvements and to refund all of the currently outstanding SFO Fuel Bonds for SFO Fuel in late February 2019. The timing and size of the transaction, if any, may change. The proceeds of the new money bonds, if any, would be used to finance and reimburse SFO Fuel for the construction of two additional on-airport jet fuel storage tanks and to make other improvements to the Airport fuel system. For further discussion, see “SAN FRANCISCO INTERNATIONAL AIRPORT—Current Airport Facilities—*Jet Fuel Distribution System*.” Such proposed Special Facility Bonds are not being offered by this Official Statement.

#### *Airport Hotel Special Facility Revenue Bonds*

The Commission issued \$260 million of San Francisco International Airport Hotel Special Facility Revenue Bonds (the “Hotel Special Facility Bonds”) in June 2018 to finance and refinance (through the repayment of Commercial Paper Notes) the development and construction of a new Commission-owned hotel to be located at the Airport (the “On-Airport Hotel”), to fund capitalized interest on the Hotel Special Facility Bonds and to pay related costs. The On-Airport Hotel was designated as a Special Facility and the Hotel Special Facility Bonds are Special Facility Bonds. The Hotel Special Facility Bonds amortize over 40 years and bear interest at a rate of 3.0% per annum. The Hotel Special Facility Bonds are payable from On-Airport Hotel revenues. There are currently \$260 million of

the Hotel Special Facility Bonds outstanding. The On-Airport Hotel is expected to be managed as a Grand Hyatt in accordance with a long-term management agreement between the Commission and Hyatt Corporation and is expected to be a four-star hotel with 351 rooms. Construction of the On-Airport Hotel commenced in June 2017 and is expected to be completed in summer 2019. See “CAPITAL PROJECTS AND PLANNING–The Capital Improvement Plan.” The Hotel Special Facility Bonds were purchased by the Commission with the proceeds of its Second Series Revenue Bonds, Series 2018B and Series 2018C.

### **Rights of Bond Insurers**

The Commission has municipal bond insurance policies from AGM, Assured and National (each, a “Bond Insurer”) with respect to a small percentage (less than 2.0%) of its outstanding Bonds. The 1991 Master Resolution provides Bond Insurers with various affirmative rights in connection with the Bonds which they insure. These rights include, among others: (a) the right to consent to any amendment to the 1991 Master Resolution requiring the consent of Owners of the Bonds secured by the Bond Insurer’s bond insurance policy (“Insured Bonds”); (b) the right to consent to the deposit of a Credit Facility in lieu of cash in the reserve account which secures the Insured Bonds; (c) the right to be deemed to be the Owner of the Insured Bonds upon the occurrence of an Event of Default with respect to such Insured Bonds for purposes of any consent or direction, appointment, request or waiver to be provided; and (d) the right to institute any suit, action or proceeding under the same terms under the 1991 Master Resolution as an Owner of such Insured Bonds.

Under the terms of the 1991 Master Resolution, however, the foregoing rights remain in effect only for so long as, among other things: (i) the Bond Insurer’s bond insurance policy is in effect, (ii) the Bond Insurer is not in default under its policy, and (iii) the Bond Insurer is not Insolvent. For a definition of “Insolvent,” see APPENDIX D–“SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION–Certain Definitions.” The Commission makes no representation as to the respective rights of the Owners or the Bond Insurer of a Series of Insured Bonds in the event the Bond Insurer is Insolvent.

### **CERTAIN RISK FACTORS**

*This section provides a general overview of certain risk factors which should be considered, in addition to the other matters set forth in this Official Statement, in evaluating an investment in the Series 2019A-D Bonds. This section is not meant to be a comprehensive or definitive discussion of the risks associated with an investment in the Series 2019A-D Bonds, and the order in which this information is presented does not necessarily reflect the relative importance of various risks. Potential investors in the Series 2019A-D Bonds are advised to consider the following factors, among others, and to review this entire Official Statement to obtain information essential to the making of an informed investment decision. Any one or more of the risk factors discussed below, among others, could adversely affect the financial condition of the Airport or its ability to make scheduled payments on the Series 2019A-D Bonds. There can be no assurance that other risk factors not discussed herein will not become material in the future.*

### **Uncertainties of the Aviation Industry**

#### *Demand for Air Travel*

The Airport’s Revenues depend significantly on the level of aviation activity and passenger traffic at the Airport. The principal determinants of passenger demand at the Airport include the population and economy of the Airport service region; national and international economic conditions, including imposition of tariffs; political conditions, including wars, other hostilities and acts of terrorism; airfares and competition from surrounding airports; airline service and route networks; the capacity of the national air transportation system and the Airport; accidents involving commercial passenger aircraft; visa requirements and other limitations on the ability of foreign citizens to enter the United States; currency exchange rates; and the occurrence of pandemics and other natural and man-made disasters. Airfares and airline service are, in turn, affected by the financial condition of the airlines and regulatory requirements imposed on airlines, among other factors. See “–Bankruptcy of Airlines Operating at the Airport” and “–Competition” and “SAN FRANCISCO INTERNATIONAL AIRPORT–Airline Agreements–Potential Effects of an Airline Bankruptcy.”

In addition to revenues received from the airlines, the Commission derives a substantial portion of its revenues from parking, from permit fees paid by transportation network companies, and from concessionaires including merchandisers, car rental companies, restaurants and others. See “AIRPORT’S FINANCIAL AND RELATED INFORMATION—Principal Revenue Sources,” “—Ground Transportation Revenues” and “—Concessions Revenues.” Past declines in Airport passenger traffic have adversely affected, and future declines may adversely affect, parking revenues and the commercial operations of many of such concessionaires. In particular, declines in international passenger traffic, or declines in international traffic from particular regions, could adversely affect duty free revenues. Severe financial difficulties affecting a concessionaire could lead to a reduction in, or failure to pay, rent due under its agreement with the Airport or could lead to the cessation of operations of such concessionaire.

#### *Financial Condition of the Airlines*

The airline industry is cyclical and subject to competition and variable demand. Traffic volumes are responsive to economic circumstances and seasonal patterns. Other factors, such as fuel and regulatory costs, can also have a significant effect on the industry. As a result, airline financial performance can fluctuate dramatically from one reporting period to the next.

Fuel is a significant cost component of airline operations and continues to be an important and uncertain determinant of an air carrier’s operating economics. Historically, aviation fuel prices have been particularly sensitive to worldwide political instability. Continued or new hostilities in petroleum producing regions or affecting key shipping lanes could dramatically increase the price and adversely affect availability of aviation fuel. Economic expansion in emerging markets also contributes to higher aviation fuel prices. Natural disasters affecting refineries may also result in higher aviation fuel prices. See “KEY FACTORS AFFECTING FUTURE AIRLINE TRAFFIC—Availability and Price of Aviation Fuel” in APPENDIX A. Significant and prolonged increases in the cost of aviation fuel have had and are likely in the future to have an adverse effect on the air transportation industry by increasing airline operating costs and reducing airline profitability.

The ability of the Commission to derive revenues from its operations depends largely upon the financial health of the airlines serving the Airport and the airline industry as a whole. The financial results of the airline industry are subject to substantial volatility and, at times, many carriers have had overlapping, extended periods of unprofitability. Additional bankruptcy filings, mergers, consolidations and other major restructuring by airlines are possible. See “—Bankruptcy of Airlines Operating at the Airport,” “—Airline Concentration; Effect of Airline Industry Consolidation” and “SAN FRANCISCO INTERNATIONAL AIRPORT—Airline Agreements—*Potential Effects of an Airline Bankruptcy.*” Furthermore, even absent an airline bankruptcy filing, the Commission may encounter significant expenses, delays and potentially nonpayment of amounts owed should it be required to pursue legal action to enforce agreements with airlines, concessionaires and others.

#### **Bankruptcy of Airlines Operating at the Airport**

Airlines operating at the Airport have filed for bankruptcy in the past and may do so in the future. For example, Air Berlin filed for insolvency proceedings under German law on August 15, 2017. On August 18, 2017, Air Berlin commenced a proceeding under chapter 15 of title 11 of the United States Code seeking recognition of the foreign main proceeding under section 1517 of the Bankruptcy Code in the United States Bankruptcy Court for the Southern District of New York (the “Bankruptcy Court”). On September 18, 2017, the Bankruptcy Court entered its Order granting Air Berlin’s petition for recognition. Air Berlin discontinued its operations at the Airport in October 2017.

If a bankruptcy case is filed with respect to an airline operating at the Airport, the Lease and Use Agreement to which the debtor airline is a party will be treated as an executory contract or unexpired lease pursuant to Section 365 of the United States Bankruptcy Code (the “Bankruptcy Code”). Under Section 365, a trustee in bankruptcy or the airline as debtor-in-possession might reject the Lease and Use Agreement to which such airline is a party, in which case, among other things, the rights of that airline to continued possession of the facilities subject to the lease (including gates and boarding areas) would terminate. Such facilities could ultimately be leased by the Commission to other airlines. The Commission’s ability to lease such facilities to other airlines may depend on the state of the airline industry in general, on the nature and extent of the increased capacity at the Airport, if any, resulting from the airline’s bankruptcy, and on the need for such facilities by other airlines. The rejection of a Lease and Use Agreement

in connection with the bankruptcy of an airline operating at the Airport may result in the loss of Revenues to the Commission and a resulting increase in the costs per enplaned passenger for the other airlines at the Airport. In addition, in any airline bankruptcy the Commission may be required to repay landing fees, terminal rentals and other amounts paid by the airline to the Airport during the 90-day period prior to the date of the bankruptcy filing. Such payments are considered “preferential” and are avoidable in a bankruptcy case pursuant to Section 547 of the Bankruptcy Code. The Commission would, however, likely have defenses to any claims brought under Section 547 of the Bankruptcy Code, including that the subject payments were made in the ordinary course of business or that the Airport provided subsequent new value to the airline.

Also, under the Bankruptcy Code, any rejection of a Lease and Use Agreement could result in the Commission holding a claim for rents and other items that would have accrued in the future, which claim would rank as that of a general unsecured creditor of the airline, in addition to pre-bankruptcy amounts owed. For further discussion of the impact of an airline bankruptcy, see “SAN FRANCISCO INTERNATIONAL AIRPORT—Airline Agreements—*Potential Effects of an Airline Bankruptcy*.”

For a discussion of the effects of an airline bankruptcy on the collection of the passenger facility charge, see “AIRPORT’S FINANCIAL AND RELATED INFORMATION—Passenger Facility Charge—*Collection of PFCs in the Event of Airline Bankruptcy*.”

### **Airline Concentration; Effect of Airline Industry Consolidation**

United Airlines, together with United Express, was responsible for 44.6% of the Airport’s total enplanements and 41.3% of the Airport’s total revenue landed weight in Fiscal Year 2017-18. The Airport serves as a hub airport for United Airlines. If United Airlines were to reduce or cease connecting service at the Airport, such flights would not necessarily be replaced by other airlines. While historically when airlines have reduced or ceased operations at the Airport other airlines have absorbed the traffic with no significant adverse impact on Airport revenues, it is possible that were United Airlines or another airline to cease or significantly cut back operations at the Airport, Revenues, PFC collections and costs for other airlines serving the Airport could be adversely affected.

Alaska Air Group, Inc., the parent company of Alaska Airlines, and Virgin America, Inc. merged effective December 2016. The merged airline received a single operating certificate from the Federal Aviation Administration (the “FAA”) in January 2018. The merged airline moved to a single reservations system on April 25, 2018, and has announced that it will adopt Alaska’s name and logo and retire the Virgin America brand. Virgin America handled 8.0% of total enplaned passengers and Alaska Airlines handled 5.1% of total enplaned passengers in Fiscal Year 2017-18 (during a portion of which only Alaska Airlines was operational), as compared to a combined share of 13.2% in Fiscal Year 2016-17. In addition, since 2010, United Airlines and Continental Airlines; Southwest Airlines and AirTran Holdings, Inc.; and American Airlines and US Airways all have merged. Further airline consolidation remains possible.

Prior mergers have had little impact on the Commission. The Report of the Airport Consultant attached as Appendix A projects that Alaska Airlines will decrease seats at the Airport by approximately 11% in Fiscal Year 2018-19 as a result of the restructuring of the combined airline’s routes, and in the first five months of Fiscal Year 2018-19, Alaska Airlines had approximately 9.6% fewer enplanements than Alaska Airlines and Virgin America had together in the first five months of Fiscal Year 2017-18. See “SAN FRANCISCO INTERNATIONAL AIRPORT—Passenger Traffic—Enplanements” and Appendix A—“AIRLINE TRAFFIC AND ECONOMIC ANALYSIS—Airport Role – Low-Cost Carrier Airport” and “—Historical Airline Service and Traffic”. It is unclear what the longer term impact of the merger between Alaska Airlines and Virgin America will be on Airport traffic. Future mergers or alliances among airlines operating at the Airport may result in fewer flights or decreases in gate utilization by one or more airlines. Such decreases could result in reduced Revenues, reduced PFC collections, and increased costs for the other airlines serving the Airport.

### **Federal Funding**

The Airport is highly regulated by federal agencies including the FAA, the TSA and the Customs and Border Protection (“CBP”). Key aspects of Airport operations are managed by these agencies. For example, the FAA employs the nation’s air traffic controllers, the TSA provides security screening for outbound passengers, and CBP

provides federal inspection services for arriving international passengers. In addition, the Airport depends on federal employees working at these agencies to provide guidance, review grant and PFC applications, and take other actions that support Airport financial and operational activities. Federal funds must be appropriated to continue to pay the workforce of the federal agencies providing these services. From time to time, there may be a gap in appropriation authority due to Congressional or Presidential inaction. When this occurs, federal agencies must discontinue all non-essential, discretionary functions until new funding legislation is passed and signed into law. Essential services continue to function, as do mandatory spending programs. Essential federal employees have included air traffic controllers, TSA screeners and CBP agents providing services at airports throughout the nation. The federal government is currently experiencing a gap in appropriation authority, which has not had a significant impact on Airport finances or operations to date. Prior such gaps occurred in 1996 and 2013. It is possible that the current or a future gap in federal appropriation authority could result in significant operational or financial effects on the Airport, depending on the duration and severity of the circumstances.

### **Availability of PFCs**

The Commission has designated \$31.7 million and \$67.9 million of PFC collections to be included in “Revenues” in Fiscal Year 2017-18 and Fiscal Year 2018-19, respectively, and plans to continue designating PFCs in the future. Designated amounts may, but are not required to, be used to pay debt service on Bonds; in some years, lower amounts of PFCs are used to pay debt service than were designated. See “AIRPORT’S FINANCIAL AND RELATED INFORMATION–Passenger Facility Charge.” PFCs that are designated as Revenues are taken into account in determining whether the rate covenant as described under “SECURITY FOR THE SERIES 2019A-D BONDS–Rate Covenant” and the additional bonds test described under “SECURITY FOR THE SERIES 2019A-D BONDS–Additional Bonds” are satisfied. The Report of the Airport Consultant assumes that PFCs are designated as Revenues during the period covered by the Report. See “AIRPORT CAPITAL IMPROVEMENT PLAN AND FUNDING–Summary of Capital Improvement Plan Funding–Passenger Facility Charges” and “FINANCIAL ANALYSIS–Revenues–PFCs Designated and Applied as Revenues” in APPENDIX A.

The Commission’s receipt of PFC revenues is subject to several risks. First, the Commission’s current PFC authorization is estimated to expire on March 1, 2029, and the Commission expects that the authorized PFCs will be fully collected sooner (Fiscal Year 2024-25), as described under “AIRPORT’S FINANCIAL AND RELATED INFORMATION–Passenger Facility Charge.” Second, the amount of PFCs received by the Commission in future years depends on the actual number of PFC-eligible passenger enplanements at the Airport and the amount of PFC collection approved by FAA. If enplanements decline, so will the Commission’s annual PFC revenues. Third, the Commission’s authority to impose PFCs may be terminated (subject to procedural safeguards) for various reasons, including for a failure by the Commission to observe FAA requirements regarding use of these revenues. The Office of Inspector General (the “OIG”) of the U.S. Department of Transportation (the “U.S. DOT”) is currently auditing the FAA’s management of the Passenger Facility Charge program at the Airport and another airport, as well as several airlines. The OIG has stated it plans to review FAA’s oversight of (1) air carrier compliance with collection and remittance of PFC funds, and (2) airport operator compliance with the use of PFC funds. The audit is ongoing, and the Airport is unable to predict the outcome of the audit. Finally, the Commission could determine not to designate PFCs as Revenues as projected in the Report of Airport Consultant attached as APPENDIX A.

On October 3, 2018, the U.S. Senate passed the 2018 FAA Reauthorization Act of 2018 (the “2018 FAA Act”), which was signed into law by the President on October 5, 2018. The 2018 FAA Act retained the federal cap of PFCs at \$4.50 and eliminated the \$3.00 PFC. A shortfall in PFC revenues, as a result of the FAA or Congress reducing or terminating the Commission’s ability to impose and collect PFCs or as a result of any other actions, or a determination by the Commission not to designate PFCs to pay debt service on the Bonds in the amounts projected in the Report of the Airport Consultant, would likely require the Commission to increase rates and fees, including landing fees and terminal rentals, and/or reduce operating expenses, to pay debt service costs.

### **Reduction in Federal Grants**

The Commission uses grants from federal agencies to offset a portion of the costs of various capital projects at the Airport. The Capital Improvement Plan assumes \$129 million in grant funding, consisting of an estimated \$68 million in FAA Airport Improvement Program (“AIP”) grants (including an estimated \$31 million in FAA

discretionary grants), \$60 million in Transportation Security Administration (“TSA”) funding, and \$1 million in State grants.

The AIP provides federal capital grants to support airport infrastructure through entitlement grants, which are determined by formulas based on passenger, cargo and general aviation activity levels, and discretionary grants, which are allocated on the basis of specific set-asides and the national priority ranking system. When determining the distribution of discretionary grants, the FAA may consider, as a mitigating factor, whether the Airport uses its revenues for purposes other than capital or operating costs, when those revenues exceed the amount used by the Airport for such costs in the base year ending June 30, 1995 as adjusted for inflation. The Airport’s Annual Service Payment to the City’s General Fund for indirect services, management and facilities provided by the City to the Airport is considered to be a non-capital, non-operating cost for this purpose. For the past ten fiscal years, the Annual Service Payment has exceeded the base year payment when adjusted for inflation. See “SAN FRANCISCO INTERNATIONAL AIRPORT–Certain Federal and State Laws and Regulations–*Federal Law Prohibiting Revenue Diversion*” and “AIRPORT’S FINANCIAL AND RELATED INFORMATION–Payments to the City.”

The Commission received \$12.4 million in FAA discretionary grants in the federal fiscal year ended September 30, 2016, which is \$15.4 million less than the Commission requested, as a result of the amount of the Annual Service Payments. The Commission did not request or receive any FAA discretionary grants in the federal fiscal years ended September 30, 2017 or September 30, 2018. The FAA may reduce discretionary grants in the future. The reduction in discretionary grants awarded to the Airport increases by a corresponding amount the capital expenditures that the Commission needs to fund from other sources, including operating revenues, PFCs and Bond proceeds. Project costs are subject to audit by the funding agencies to ensure that the costs are allowable under the grant agreements. If any project costs are disallowed, amounts recorded as grants receivable will be reduced or refunded to the respective funding agencies. Also see “CAPITAL PROJECTS AND PLANNING–Federal Grants.”

The FAA currently disburses grant funds to the Airport through the AIP. The 2018 FAA Act authorized \$3.55 billion per year for AIP through federal fiscal year 2023, which is the same funding level as was in place for the preceding five years. Proposals to reduce or eliminate AIP funding may be made in the future. Further, AIP grants to airports are subject to passage of annual congressional appropriation bills and funding may be reduced or eliminated in any year. The Commission will continue to monitor federal budget and policy changes, but cannot at this time determine the financial impacts of any proposed federal policy changes.

Furthermore, the Commission is continuing to assess the potential material adverse changes in current and anticipated federal funding under the current presidential administration and Congress. These changes include, for example, potential withholding of federal grants or other funds flowing to “sanctuary jurisdictions” and suspension or termination of other federal grants for capital projects, which could potentially affect federal funding provided to the Airport. The scope and timing of such changes will not be known until the administration concretely proposes specific changes or Congress acts on such proposals, as applicable. As to potential withholding of funds for “sanctuary cities,” the City has challenged in federal court the Presidential Executive Order that would cut funding from “sanctuary jurisdictions.” The U.S. District Court for the Northern District of California issued a permanent injunction in November 2017, and in August 2018, the Ninth Circuit Court of Appeals affirmed, finding that the Executive Order was unconstitutional and upholding the injunction as to the City.

### **Additional Long-Term Debt**

The Commission’s current Capital Improvement Plan was approved by the Commission on September 5, 2017. The Capital Improvement Plan includes an aggregate of \$4.7 billion of future spending on projects through 2022-23 and an additional \$15 million of spending on projects in Fiscal Years 2023-24 through 2025-26, for an eight-year total of \$4.7 billion. The Report of the Airport Consultant attached as APPENDIX A hereto reflects the projected issuance of approximately \$3.7 billion of additional Bonds (in addition to the Series 2019A Bonds, Series 2019B Bonds and Series 2019C Bonds, and not including the Series 2019D Bonds, which are refunding Bonds) between Fiscal Year 2019-20 and Fiscal Year 2022-23 to finance projects in the Capital Improvement Plan and to fund additional deposits to the Contingency Account. Approximately \$1.6 billion of additional Bonds are assumed to be issued in Fiscal Year 2019-20. The Commission expects that it will experience an aggregate increase in debt service costs when it issues additional Bonds, which will increase landing fees and terminal rents at the Airport, thereby increasing the costs of the airlines serving the Airport, possibly making the Airport less competitive. On the other

hand, if the Commission does not make improvements, its facilities may be less attractive to passengers and airlines. The Commission continues to evaluate capital projects based on risk, passenger demand, asset condition, and the Commission's financial position. For further discussion of planned capital projects, see "CAPITAL PROJECTS AND PLANNING—The Capital Improvement Plan." The timing and amounts of additional Bonds may change depending on passenger and cargo demand, the availability of other funding sources, the timing of capital expenditures and market conditions. The Commission also may undertake additional capital projects during the period covered by the Capital Improvement Plan that are not presently included in the Capital Improvement Plan. The Commission is in the process of updating its Capital Improvement Plan, including the possible addition of new projects, which may result in the issuance of additional Bonds. See "CAPITAL PROJECTS AND PLANNING—The Capital Improvement Plan—*Updates to CIP.*"

## Capital Projects

Although the Commission uses a variety of strategies to mitigate risk associated with the implementation of its capital projects as described under "CAPITAL PROJECTS AND PLANNING—The Capital Improvement Plan—*Implementation of Capital Projects,*" project development could be delayed, and the cost of completing projects included in the Capital Improvement Plan could be higher than expected due to various factors, including but not limited to economic conditions; natural or manmade disasters; events such as the September 11, 2001 terrorist attacks; new or ongoing military hostilities; unexpected issues with integration into existing facilities; the inability to obtain, or delays in obtaining, regulatory approvals; the inability to comply with the conditions of regulatory approvals; inability to obtain, or delays in obtaining, federal approvals or federal funding; labor, bidding and contracting requirements; delays caused by the airline review process (see "SAN FRANCISCO INTERNATIONAL AIRPORT—Airline Agreements—*Lease and Use Agreements—Airline Review of Capital Improvements*"); weather; litigation; tariffs, cost overruns; casualty; strikes; unanticipated engineering, environmental or geological problems; shortages or increased costs of materials or labor; and financial difficulties of contractors. If costs are higher than projected, the Commission may have to delay or cancel projects and/or incur additional debt. Further, the Report of the Airport Consultant assumes that the projects in the Capital Improvement Plan will be completed as scheduled and for the amounts projected. Some of the projects in the Capital Improvement Plan may need to be completed as planned in order for the Airport to achieve the results projected in the Report of the Airport Consultant. The failure to complete certain projects could adversely affect the financial condition of the Airport.

Similarly, if funds are not available to finance the projects in the Capital Improvement Plan, projects may be delayed or cancelled. A bankruptcy filing by an airline or a rental car company that collects PFC revenues or transportation and facility fees, respectively, may also result in a reduction in the total amount collected by the Commission for the projects in the Capital Improvement Plan or a delay in collecting such amount. Furthermore, PFC revenues will not be available in the amounts and at the times currently forecasted if additional FAA approvals are not obtained or if there are fewer enplaned passengers than projected. See "—Availability of PFCs." The availability of Commercial Paper Note proceeds could also be reduced or eliminated if the letters of credit supporting such Commercial Paper Notes are terminated or expire and are not replaced. In addition, certain projects in the Capital Improvement Plan are assumed to be funded in part with federal and state grants, but the Commission cannot guarantee that such funds will be available or will be received in a timely manner. In most cases, grants are received only after the Commission has paid the costs of a project, and are subject to audit. Market conditions could adversely affect the ability of the Commission to issue additional Bonds or to obtain funding from other sources, including Commercial Paper Notes. The availability of cash in the Contingency Account could also be lower than assumed in the projections in the Report of the Airport Consultant in the event the Commission's market access is affected or if such funds are needed for other purposes.

The Airport is a capital intensive facility. It is probable that the Commission will undertake capital projects that are not included in the Capital Improvement Plan in the future, including during the period covered by the Report of the Airport Consultant. The Recommended Airport Development Plan, which is currently subject to the outcome of an ongoing environmental review and may be modified during that review, would result in the identification of a range of potential additional capital projects that could be added to the Airport's Capital Improvement Plan, See "CAPITAL PROJECTS AND PLANNING—Airport Development Plan." In addition, the Airport is currently in the process of updating its Capital Improvement Plan. Additional projects are currently under consideration that may add approximately \$380 million to the Capital Improvement Plan. In addition, previously approved projects in the Infrastructure Projects Plan may have budget increases, currently expected to be approximately \$20 million in total.

See “CAPITAL PROJECTS AND PLANNING—The Capital Improvement Plan—*Infrastructure Projects Plan - Major Capital Projects*” and “—*Updates to CIP.*” If additional capital projects are undertaken, the Commission may issue additional Bonds or additional Commercial Paper Notes to finance such projects. Depending on the timing of such projects, it may also be necessary to add appropriate personnel or other resources to manage such projects, resulting in increased expenses for the Commission.

## **Competition**

Metropolitan Oakland International Airport (the “Oakland Airport”) and Norman Y. Mineta San Jose International Airport (the “San Jose Airport”) are the other airports in the Bay Area that compete with the Airport for passengers and cargo traffic. In addition, the Airport competes with other West Coast airports, primarily Los Angeles International Airport and Seattle-Tacoma International Airport, for international passengers. Competition from these airports MAY affect passenger and cargo demand at the Airport. See “SAN FRANCISCO INTERNATIONAL AIRPORT—Competition.”

The California High-Speed Rail Authority (the “High-Speed Rail Authority”) is in the process of planning and constructing a high speed train service linking Southern California, the Sacramento San Joaquin Valley and the San Francisco Bay Area. Construction commenced in the San Joaquin Valley in 2014. The High-Speed Rail Authority’s 2018 business plan indicates that it could begin service between the San Joaquin Valley and San Jose by 2029. The regional Metropolitan Transportation Commission retained an aviation consulting firm to study the likely effect of high-speed rail on the airports in the San Francisco Bay Area. The consulting firm released a report in 2010 forecasting that by 2035, the San Jose Airport could lose 12% of its projected passengers, Oakland Airport could lose 9% and the Airport could lose 4% to a high-speed rail system. While passenger traffic at all three Bay Area airports has changed since 2010, there could be reductions in passenger traffic as a result of the high-speed rail system. The Commission is unable to predict when or whether a high-speed rail system will be completed, what areas of the State it will serve, or the effect that any such high-speed rail system would have on passenger traffic at and revenues of the Airport.

## **Uncertainties of Projections, Forecasts and Assumptions**

In its Report, the Airport Consultant, based on the assumptions contained in the Report, forecasts that the projected Revenues of the Commission will be sufficient to allow the Commission to comply with the rate covenant in the 1991 Master Resolution through June 30, 2025. See APPENDIX A—“REPORT OF THE AIRPORT CONSULTANT.” One of the principal assumptions on which the Airport Consultant relies in making its forecast is that passenger traffic will increase as a function of growth in the economy of the region served by the Airport and continued airline competition. Other assumptions, such as forecasted revenues and expenses, generally follow from assumed passenger traffic. Whether the forecasted passenger traffic materializes depends on a number of factors outside of the Commission’s control, such as economic growth of the United States and the Bay Area, airline financial condition, general costs of air travel, capacity of the national air traffic control system, operational decisions made by airlines, and other similar assumptions. In addition, the Airport Consultant makes assumptions about contract terms, passenger spending habits, growth of expenses including labor costs, interest rates and other matters as described in their Report. The Airport Consultant assumes the Commission will receive the necessary approvals to issue additional Bonds to increase the Contingency Account balance and issues such Bonds at the times and in the amounts assumed in the Report. The Airport Consultant also assumes that the Commission will designate PFCs as Revenues under the 1991 Master Resolution in the amounts and years set forth in the Report. In addition, the Airport Consultant assumes that the airlines and the Commission will enter into an agreement that has substantially the same terms as the current Lease and Use Agreement after its expiration in June 2021. The Report of the Airport Consultant also assumes that the projects in the Capital Improvement Plan will be completed as scheduled and at the costs projected (including the full use of the Ascent Program Reserve). Some of these projects in the Capital Improvement Plan may be necessary in order for the Airport to achieve the results projected in the Report of the Airport Consultant. The Report should be read in its entirety for an understanding of the forecasts and the underlying assumptions. As noted in the Report of the Airport Consultant, any financial forecast is subject to uncertainties.

Forecast financial information for the On-Airport Hotel (including forecast revenues and expenses associated with the operation of the On-Airport Hotel) are based upon assumptions made by Jones Lang LaSalle Inc. (“JLL”), the Commission’s hotel consultant, and are not assumptions made by the Airport Consultant. The On-Airport Hotel

financial forecast is documented in the report titled: “Hotel Market and Underwriting Study: Grand Hyatt at SFO”, dated May 2, 2018, which was prepared by JLL (the “Hotel Study”). The Hotel Study was prepared solely for use by the Commission, is not incorporated in this Official Statement by reference, and investors are not permitted to rely on the Hotel Study in making a decision whether to purchase the Series 2019A-D Bonds. The Hotel Study represents an opinion of the On-Airport Hotel’s projected financial performance over an assumed ten-year holding period, including forecasts of net income and is based on numerous assumptions. The Hotel Study is subject to many limitations and does not provide any form of assurance with respect to any of the information discussed or referred to therein. Any reader or recipient of the Hotel Study is deemed to understand and accept the scope and limitations of the Hotel Study.

The Hotel Study assumes no impending economic downturn and continued growth of the national economy during the forecast period. It also assumes that the On-Airport Hotel will be completed and open for business as scheduled, in the planned form, and that it will operate as a Grand Hyatt hotel under responsible ownership and competent property management. The Hotel Study assumes allocation of costs and responsibilities between the Commission and the operator consistent with the terms of the Hotel Management Agreement related to the On-Airport Hotel. The Hotel Study assumes an average inflation rate for operating costs of 2.9 percent, as provided by the California Economic Forecast. The Hotel Study assumes that the On-Airport Hotel remains the only full-service luxury hotel expected to enter the direct competitive set in the foreseeable future and that passenger traffic at the Airport will increase consistent with the assumptions in the report of the Airport Consultant. Legal, regulatory and zoning compliance are assumed. Actual results may vary from those forecast in the Hotel Study. JLL assumes no responsibility for economic factors that may affect or alter the forecast opinions in the Hotel Study if those economic factors were not present as of the date of the Hotel Study. The Hotel Study was prepared in connection with the issuance of the Hotel Special Facility Bonds in June 2018 and has not been updated since May 2, 2018.

Inevitably, some assumptions used to develop the forecasts will not be realized, and unanticipated events and circumstances may occur. The actual financial results achieved will vary from those forecasts, and the variations may be material. Also see “REPORT OF THE AIRPORT CONSULTANT” and APPENDIX A.

### **Technological Innovations in Ground Transportation**

One significant category of non-airline revenues is from ground transportation activity, including use of on-Airport parking garages; trip fees paid by taxi, limousine and transportation network companies (“TNCs”), such as Uber Technologies Inc., Lyft, Inc., and Tickengo, Inc. d/b/a/ Wingz; and rental car transactions by Airport passengers. While passenger levels are increasing, the relative market share of these sources of revenue is shifting. As one example, the popularity of TNCs has increased because of the increasing number of cities where TNCs operate, convenience of requesting a ride through a mobile application, the ability to pay for this service without providing cash or other payment to the hired driver, and competitive pricing. In Fiscal Year 2017-18, TNCs recorded nearly 9.1 million (estimated) Airport pick-ups/drop-offs resulting in \$34.5 million (estimated, see “FINANCIAL STATEMENTS – Delayed Audited Financial Statements”) in trip fee revenue for the Commission, compared to nearly 7.0 million Airport pickups/drop-offs and \$26.6 million in trip fee revenue in Fiscal Year 2016-17. See “AIRPORT’S FINANCIAL AND RELATED INFORMATION–Ground Transportation Revenues” and Table 22 under “FINANCIAL ANALYSIS–Revenues–Non-Airline Revenues” in APPENDIX A.

New technologies (such as autonomous vehicles and connected vehicles) and innovative business strategies in established markets such as commercial ground transportation and car rental may continue to occur and may result in further changes in Airport passengers’ choice of ground transportation mode. While the Commission makes every effort to anticipate demand shifts, there may be times when the Commission’s expectations differ from actual outcomes. In such event, revenue from one or more ground transportation modes may be lower than expected. The Commission cannot predict with certainty what impact these innovations in ground transportation will have over time on revenues from parking, other ground transportation services or rental cars. The Commission also cannot predict with certainty whether or to what extent it will collect non-airline revenues in connection with such new technologies or innovative business strategies.

For example, Turo, Inc. (f.k.a. RelayRides, Inc.) (“Turo”) is a web-based rental car company that operates at the Airport. Turo matches individual car owners with prospective renters at the Airport, and it advertises and markets itself as competing with traditional rental car companies at the Airport. For several years Turo held a valid off-Airport rental car permit, but on August 10, 2017, it voluntarily relinquished its permit, yet it continues to operate at the

Airport. In January 2018, the City Attorney in the name of the People of the State of California filed an action against Turo, Inc. for unfair competition. Turo filed a cross-complaint challenging the Airport's authority to charge the AirTrain Fee and impose permit requirements on Turo. Turo's cross-complaint claims that Turo is merely a technology platform and a car-sharing program – not a rental car company – and that it does not operate at the Airport. The case is in the discovery phase with trial currently scheduled for fall 2019.

### **Airport Security**

The September 11, 2001 terrorist attacks resulted in increased safety and security measures at the Airport mandated by the Aviation and Transportation Security Act passed by the U.S. Congress in November 2001 and by directives of the FAA. In addition, certain safety and security operations at the Airport have been assumed by the Transportation Security Administration. In spite of the increased security measures, additional acts of terrorism resulting in disruption to the North American air traffic system, increased passenger and flight delays, damage to the Airport, reductions in Airport passenger traffic and/or reductions in Airport Revenues, remain possible. See "SAN FRANCISCO INTERNATIONAL AIRPORT–Airport Security." The Airport maintains liability insurance coverage for war perils including but not limited to terrorism and hijacking, with \$100 million primary coverage and an additional \$150 million in excess coverage. See "AIRPORT'S FINANCIAL AND RELATED INFORMATION–Risk Management and Insurance." Such coverage might not be sufficient in the event of a catastrophic loss and the Commission cannot guarantee that insurers will pay in a timely manner. From time to time, the Commission may change the types of and deductibles and limits on the insurance it carries, subject to the 1991 Master Resolution requirements. See APPENDIX D–"SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION."

### **Worldwide Health Concerns**

Travel restrictions, as well as other public health measures, may be imposed to limit the spread of communicable diseases which may arise. In spring 2003, there was an outbreak of a serious strain of bird flu in Asia and Canada called "Severe Acute Respiratory Syndrome" or SARS. That, together with the outbreak of the war in Iraq and other factors at about the same time, resulted in a temporary but significant decline in passenger activity at the Airport of approximately 14% in the second quarter of Fiscal Year 2002-03, and approximately 7% for the year as a whole. In fall 2009, the World Health Organization and the U.S. Department of Health and Human Services (through the Secretary of the Department of Homeland Security) declared public health emergencies as the result of outbreaks of a serious strain of H1N1 influenza or "flu." The U.S. Centers for Disease Control and Prevention issued travel alerts in 2016 warning pregnant women to avoid travel to areas where outbreaks of the Zika virus, which has been linked to birth defects, were occurring.

Future outbreaks or pandemics may lead to a decrease in air traffic, at least for a temporary period, which in turn could cause a decrease in passenger activity at the Airport and a corresponding decline in Revenues. The Commission has plans and procedures in place that are intended to mitigate the potential impacts on the Airport of any such future pandemic. The Commission is unable to predict how serious the impact of any future pandemic may become, what effect it may have on air travel to and from the Airport, and whether any such effects will be material.

### **Seismic and Other Natural Disasters or Emergencies**

The Airport is located in a seismically active region. Active earthquake faults underlie both the City and the surrounding Bay Area, including the San Andreas Fault, which passes within about three miles of the City's border, and the Hayward Fault, which runs under Oakland, Berkeley and other cities on the east side of San Francisco Bay. Significant seismic events include the 1989 Loma Prieta earthquake, centered about 50 miles south of the Airport, which registered 6.9 on the Richter scale of earthquake intensity. That earthquake caused fires, building collapses, and structural damage to buildings and highways in the City and surrounding areas. The San Francisco-Oakland Bay Bridge, the only east-west vehicle access into the City, was closed for a month for repairs, and several highways in the City were permanently closed and eventually removed. There was no damage to the runways and no material structural damage to the terminal buildings at the Airport, and the Airport was fully operational within twelve hours of the event. On August 24, 2014, the San Francisco Bay Area experienced a 6.0 earthquake centered near Napa along the West Napa Fault. Neither the City nor the Airport suffered any material damage as a result of this earthquake. The effects of future seismic events may vary from the effects of past seismic events.

In March 2015, the Working Group on California Earthquake Probabilities (a collaborative effort of the U.S. Geological Survey (U.S.G.S.), the California Geological Survey, and the Southern California Earthquake Center) reported that there is a 72% chance that one or more quakes of about magnitude 6.7 or larger will occur in the San Francisco Bay Area before the year 2045. Such earthquakes may be very destructive.

The Commission has made and continues to make upgrades to the seismic stability of some of its facilities. See “SAN FRANCISCO INTERNATIONAL AIRPORT–Current Airport Facilities–*Seismic Design of Airport Facilities.*” Nevertheless, the Airport could sustain extensive damage to its facilities in a major earthquake from ground motion and possible liquefaction of underlying soils and resulting tidal surges. Damage could include pavement displacement (which could, in the worst case, necessitate the closing of one or more runways for extended periods of time), distortions of pavement grades, breaks in utilities, loss of water supply from the City’s Hetch Hetchy water system, damage to drainage and sewage lines, displacement or collapse of buildings, rupture of gas and fuel lines (including the common carrier pipelines under the San Francisco Bay that supply jet fuel to the Airport and PG&E lines under Airport property), and collapse of dikes at the Airport with consequential flooding.

Further, the Airport could sustain damage as a result of other events, such as terrorist attacks, extreme weather events and other natural occurrences, fires and explosions, spills of hazardous substances, strikes and lockouts, sabotage, wars, blockades and riots. Also see “–Airport Security” and “–Risks Associated with Global Climate Change.”

While the Commission has attempted to address the risk of loss through the purchase of insurance, certain of these events may not be covered. In particular, the Commission does not maintain insurance or self-insure against any risks due to land movement or seismic activity, and in some instances other events may not be covered. See “–Airport Security” and “AIRPORT’S FINANCIAL AND RELATED INFORMATION–Risk Management and Insurance.” Further, even for events that are covered by insurance, the Commission cannot guarantee that coverage will be sufficient or that insurers will pay claims in a timely manner. From time to time, the Commission may change the types of and limits and deductibles on the insurance coverage that it carries.

A major earthquake anywhere in the Bay Area may cause significant temporary and possibly long-term harm to the economy of one or more Bay Area cities or the entire region, which could in turn have a negative effect on passenger traffic and on Revenues, and such effect could be material.

### **Risks Associated with Global Climate Change**

Numerous scientific studies on global climate change show that, among other effects on the global ecosystem, sea levels will rise, extreme temperatures will become more common, and extreme weather events will become more frequent as a result of increasing global temperatures attributable to atmospheric pollution.

The Fourth *National Climate Assessment*, published by the U.S. Global Change Research Program in November 2018 (NCA4), finds that more frequent and intense extreme weather and climate-related events, as well as changes in average climate conditions, are expected to continue to damage infrastructure, ecosystems and social systems over the next 25 to 100 years. NCA4 states that rising temperatures, sea level rise, and changes in extreme events are expected to increasingly disrupt and damage critical infrastructure and property and regional economies and industries that depend on natural resources and favorable climate conditions. Disruptions could include more frequent and longer-lasting power outages, fuel shortages and service disruptions. NCA4 states that the continued increase in the frequency and extent of high-tide flooding due to sea level rise threatens coastal public infrastructure. NCA4 also states that expected increases in the severity and frequency of heavy precipitation events will affect inland infrastructure, including access to roads, the viability of bridges and the safety of pipelines. NCA4 finds that the Airport is vulnerable to effects of sea level rise, with flooding potentially exacerbated by storm surges and high tides.

Sea levels will continue to rise in the future due to the increasing temperature of the oceans causing thermal expansion and growing ocean volume from glaciers and ice caps melting into the ocean. Between 1854 and 2016, sea level rose about nine inches according to the tidal gauge at Fort Point, underneath the Golden Gate Bridge. Weather and tidal patterns, including 100-year or more storms and king tides, may exacerbate the effects of climate related sea level rise. Coastal areas like San Francisco are at risk of substantial flood damage over time, affecting private development and public infrastructure, including roads, utilities, emergency services, schools, and parks. As a result,

the City could lose considerable tax revenues and many residents, businesses, and governmental operations along the waterfront could be displaced, and the City, including the Commission, could be required to mitigate these effects at a potentially material cost. These effects, even if mitigated, could reduce demand for air travel to or from the Bay Area and therefore have a material adverse effect on the Airport's finances.

Adapting to sea level rise is a key component of the City's policies. The City and its enterprise departments, including the Airport, have been preparing for future sea level rise for many years and have issued a number of public reports. For example, in March 2016, the City released a report entitled "Sea Level Rise Action Plan," identifying geographic zones at risk of sea level rise and providing a framework for adaptation strategies to confront these risks. That study shows an upper range of end-of-century projections for permanent sea level rise, including the effects of temporary flooding due to a 100-year storm, of up to 108 inches above the 2015 average high tide. To implement this Plan, the Mayor's Sea Level Rise Coordinating Committee, co-chaired by the Planning Department and the Port of San Francisco, joined a number of other public agencies, including the Airport, to create "Adapt SF," which is now drafting a Citywide Sea Level Rise Vulnerability Assessment, a Citywide Sea Level Rise Risk Assessment, a Sea Level Rise Adaptation Plan, public maps and tools to communicate sea level rise impacts and implementation of near-term adaptation projects.

In April 2017, the Working Group of the California Ocean Protection Council Science Advisory Team (in collaboration with several state agencies, including the California Natural Resource Agency, the Governor's Office of Planning and Research, and the California Energy Commission) published a report, that was formally adopted in March 2018, entitled "Rising Seas in California: An Update on Sea Level Rise Science" (the "Sea Level Rise Report") to provide a new synthesis of the state of science regarding sea level rise. The Sea Level Rise Report provides the basis for State guidance to state and local agencies for incorporating sea level rise into design, planning, permitting, construction, investment and other decisions. Among many findings, the Sea Level Rise Report indicates that the effects of sea level rise are already being felt in coastal California with more extensive coastal flooding during storms, exacerbated tidal flooding, and increased coastal erosion. In addition, the report notes that the rate of ice sheet loss from Greenland and Antarctic ice sheets poses a particular risk of sea level rise for the California coastline.

Portions of the Airport and other portions of the San Francisco Bay Area, including the City, are built on fill that was placed over saturated silty clay known as "Bay Mud." This Bay Mud is soft and compressible, and the consolidation of the Bay Mud under the weight of the existing fill is ongoing. A report issued in March 2018 by researchers at UC Berkeley and the University of Arizona suggests that flooding risk from climate change could be exacerbated in the San Francisco Bay Area due to the sinking or settling of the ground surface, known as subsidence. The study claims that the risk of subsidence is more significant for certain parts of the City built on fill, including portions of the Airport. The Airport has experienced localized differential settlement which is mitigated through regular localized fill and repair. The Airport's runway rehabilitation and overlay program keeps the runways and taxiways in safe operation. The Airport has not, however, experienced the uniform consolidation that is described in this report.

The Airport is adjacent to the San Francisco Bay, which in turn opens onto the Pacific Ocean. The Airport has constructed various types of seawalls since the 1980s. Currently, more than six of the eight miles of shoreline are protected by engineered earthen berms, concrete seawalls, and vinyl sheet piles. However, there are gaps of variable lengths along the shoreline that may allow water to enter the airfield and the Airport, as well as occasional wave overtopping of some flood protection structures. That water is captured in the storm drain system and is pumped back out into the Bay. A report released by the San Francisco Bay Conservation Development Commission in 2011 suggested that 72% of the Airport would be at risk from a 16-inch sea level rise.

Close to half of the Airport's existing perimeter shoreline meets the Federal Emergency Management Agency ("FEMA") 100-year flood standards. However, a study conducted by the Airport identified deficiencies in the Airport's shoreline protection system. Most of these deficiencies occur in the more vulnerable portions of the system, such as near the Airport's Wastewater Treatment Plant, and along the reach owned by the federal government and operating as a U.S. Coast Guard facility.

In June 2014, the Airport's Director of Engineering and Construction Services issued a report to the Airport Commission, which estimated that to comply with FEMA requirements and address sea level rise in the longer term, necessary shoreline protection improvements would take 10 to 15 years at a cost of about \$200-\$300 million. Based

on information available at that time, the report predicted that these improvements would protect the Airport until approximately 2060. Utilizing the 2012 National Research Council Sea-Level Rise projections, the Commission proposed a \$58 million shoreline protection project (“Shoreline Protection Program”) in its Capital Improvement Plan. In December 2015, the Board of Supervisors made a determination required under the San Francisco Administrative Code that the Shoreline Protection Program is fiscally feasible and responsible.

As part of the National Flood Insurance Program (“NFIP”), a federal program that enables businesses and individuals in participating communities to purchase flood insurance backed by the federal government, FEMA is revising Flood Insurance Rate Maps (“FIRMs”) for San Francisco Bay Area communities. FIRMs identify special flood hazard areas (“SFHAs”) that are subject to inundation during a flood having a 1% chance of occurrence in a given year. The City participates in NFIP, and on November 12, 2015, FEMA issued a Preliminary FIRM for the City (the “Preliminary FIRM”). The Preliminary FIRM identifies the majority of the Airport as an SFHA, with zone designations generally of either AE (areas subject to inundation by the 1% annual chance flood event) or, in limited areas, VE (areas subject to inundation by the 1% annual chance flood event with additional hazards associated with storm-induced waves). The Airport anticipates that FEMA will issue a Letter of Final Determination regarding the final San Francisco FIRM in the second quarter of 2019, with subsequent adoption by the City of the final FIRM and conforming amendments to the City’s Floodplain Management Ordinance required within six months thereafter. If these AE and VE designations remain the same in the final FIRM, new buildings or substantial improvements to existing buildings will be required to be elevated above the floodplain, with additional building requirements in the AE zone. In light of the SFHAs identified on the Preliminary FIRM, the Airport has decided to begin applying the flood protection building standards that will be required under the zone designations in the final FIRM. The Airport is reviewing building permits for compliance with these standards. Compliance with the final FIRM will result in increases of the cost of some of the projects in the Airport’s Capital Improvement Plan and other capital projects.

Later, in March 2018, the State of California Ocean Protection Council issued an update to its Sea Level Rise Guidance document containing improved science and policy with a better understanding of risks quantified as probabilities. The Airport accordingly updated the proposed Shoreline Protection Program to respond to these more stringent criteria, bringing the updated Shoreline Protection Program to a new estimated cost of \$510 million. According to projections in the 2018 guidance document, the updated Shoreline Protection Program would protect the Airport assets and runways, with a 99.5% level of confidence, to approximately 2085. The Airport is preparing an updated feasibility study to present to the Board of Supervisors before initiating environmental review of the updated Shoreline Protection Program, as required by the California Environmental Quality Act and National Environmental Policy Act. If approved, the updated Shoreline Protection Program is estimated to begin in Fiscal Year 2024-25 and be implemented in phases over several years. The Airport is also in discussions with the U.S. Army Corps of Engineers about completing a Planning Assistance to States study to establish design and engineering criteria for the updated Shoreline Protection Program.

The original Shoreline Protection Program is included, in a significantly reduced size and scope, in the CIP projects assumed to be undertaken in the Report of the Airport Consultant and included in the CIP described in “CAPITAL PROJECTS AND PLANNING—The Capital Improvement Plan.” However, the updated Shoreline Protection Program is not currently in the Airport’s approved CIP, nor was it included in the CIP projects assumed to be undertaken in the Report of the Airport Consultant.

The City’s 2016 Sea Level Rise Action Plan states that one key missing piece of information is an understanding of the effects of climate change on precipitation. Certain City departments, including the Airport, are engaging a consultant team to model future storm events, quantify how climate change impacts extreme storms, and prepare an action plan for addressing climate change for use by the City departments. In addition to its coastal location and vulnerability to sea level rise and storm surges, the Airport also has obligations to provide sufficient drainage in its West of Bayshore property, which may be inundated by the surrounding hillsides in an extreme storm event. Heavy precipitation events and related flooding could also disrupt major roads that provide access to the Airport. The consultants’ study is expected to be completed in 2019.

Projections of the effects of global climate change on the City, the Airport and Airport tenants, and on Airport operations are complex and depend on many factors that are outside the Airport’s control. Climate change may affect Airport operations directly, as discussed at length above, or indirectly, such as by disrupting operations at other airports that have ripple effects in the air transportation system. The various scientific studies that forecast climate change and

its adverse effects, including sea level rise and flooding risk, are based on assumptions contained in such studies, but actual events may vary materially. Also, the scientific understanding of climate change and its effects continues to evolve. Accordingly, the Airport is unable to forecast when sea level rise or other adverse effects of climate change (e.g., the occurrence and frequency of 100-year storm events and king tides) will occur. In particular, the Airport cannot predict the timing or precise magnitude of adverse economic effects, including, without limitation, material adverse effects on the business operations or financial condition of the Airport and the local economy during the term of the Series 2019A-D Bonds. While the effects of climate change may be mitigated by the Airport's past and future investment in adaptation strategies, the Airport can give no assurance about the net effects of those strategies and whether the Airport will be required to take additional adaptive mitigation measures. If necessary, such additional measures could require significant capital resources.

In September 2017, the City filed a lawsuit against the five largest investor-owned oil companies seeking to have the companies pay into an equitable abatement fund to help fund investment in sea level rise adaptation infrastructure. In July 2018, the United States District Court, Northern District of California denied the plaintiffs' motion for remand to state court, and then dismissed the lawsuit. The City appealed these decisions to the United States Court of Appeals for the Ninth Circuit, which is pending. While the City believes that its claims are meritorious, the City can give no assurance regarding whether it will be successful and obtain the requested relief from the courts, or contributions to the abatement fund from the defendant oil companies.

### **Current and Possible Regulation Related to Climate Change**

Beyond the direct adverse material effect of global climate change itself, present, pending and possible regulations aimed at curbing the effects of climate change may directly or indirectly materially adversely affect the operations or financial condition of the Airport.

Of particular import are regulations pertaining to greenhouse gas ("GHG") emissions. According to the United States Environmental Protection Agency ("EPA"), aircraft account for 9 percent of all U.S. transportation GHG emissions and approximately 2.5 percent of total U.S. GHG emissions. While in 2016 the EPA finalized an endangerment finding that GHG emissions from "U.S. covered aircraft" cause or contribute to air pollution, triggering the Clean Air Act Section 231's requirement to regulate, aircraft GHG emission standards are not yet proposed and there has been no public EPA action in this area since December 2016. Regulations may be implemented in the future. In March 2017, the International Civil Aviation Organization ("ICAO"), a specialized agency within the United Nations, adopted GHG carbon neutral growth targets applicable to (i) new aircraft type designs as of 2020 and (ii) new deliveries of current in-production aircraft models from 2023. The global standard includes a cutoff date of 2028 for production of non-compliant aircraft. The ICAO also passed in October 2016 a market-based mechanism to curb emissions, the Carbon Offsetting and Reduction Scheme for International Aviation ("CORSIA"). CORSIA is comprised of 192 member countries and is designed to achieve carbon-neutral growth for international (but not domestic) civil aviation from 2020 onwards, via pilot, volunteer and mandatory phases. As of July 2, 2018, 73 nations representing 87.7% of international aviation activity, including the United States, indicated they will participate in the pilot and volunteer phases of CORSIA. However, on July 4, 2018, China withdrew from participation. As of November 2018, the remaining countries were negotiating the design of a global carbon market for airlines, with controversy regarding the extent of European Union control and the inclusion of credits created by the "Clean Development Mechanism" created under the Kyoto Protocol. It remains unclear whether CORSIA will have any impact, economically or on climate.

On a state level, California passed Assembly Bill 32, the "California Global Warming Solutions Act of 2006," which requires reduction of the Statewide level of GHGs to 1990 levels by 2020. In 2015, Governor Brown issued Executive Order B-30-15, calling for a reduction of the Statewide level of GHGs to 40 percent below 1990 levels by 2030. This order, which was the most aggressive benchmark enacted by any government in North America, was codified into law in Assembly Bill 32 (2016). The California Air Resources Board ("CARB") implemented the "California Cap-and-Trade Program" (the "Program") for certain entities emitting 25 billion metric tons of carbon dioxide equivalent per year or more, with non-covered entities allowed to voluntarily participate. The Program, and additional State and local regulations related to climate change (including CARB's Low Carbon Fuel Standard, California's State Implementation Plan, the Sustainable Freight Action Plan, and regional GHG Emissions Reduction Targets) may require the airlines serving the Airport, Airport tenants, and on-Airport operations to meet new compliance obligations that increase operational, utility and fuel costs. However, in some cases, these policies provide

financial incentives for GHG reduction or air quality improvements through expanded or improved infrastructure and/or vehicle electrification or alternative fuels replacement. Additional regulations on a State and local level are pending (including zero emissions standards for shuttle buses and ground service equipment) and foreseeable (including expanding emissions mitigation measures aimed at commercial airports).

Since 2008, the City's Ordinance No. 81-08, "Climate Change Goals and Action Plan," mandates certain GHG emission targets for each City department, as codified in Environment Code Section 902(a). There are multiple GHG-emission reduction/offset/mitigation measures in place or actively being implemented at the Airport through its Capital Improvement Plan, including energy and fuel efficiency measures, as outlined in the Airport's annual Departmental Climate Action Plan. In Fiscal Year 2015-16, the Airport reduced certain GHG emissions from Airport-controlled operations to 32% below the 1990 emission level, ahead of the 2017 mandate of 25% below the 1990 emission level. However, in Fiscal Year 2016-17, emissions rose to 11% below the 1990 emission level due to an accidental and one-time refrigerant leak that was repaired and is being actively monitored. The one-time event demonstrates the vulnerability of Airport infrastructure and the need for active emissions reduction strategies and capital projects to modernize aging assets, reduce energy use, improve efficiency, and switch to renewable energy sources. Despite this, the Airport remains on track to meet the City's goal of reducing emissions by 40% below 1990 emission levels by 2025, with concurrent goals set by the Commission of carbon neutrality by 2021 and reducing GHG emissions to 50% below 1990 levels by 2021. These goals exceed the state-wide goals under Executive Order B-30-15, codified as Senate Bill 32, of 40% below 1990 emission levels by 2030. The remaining City goal, which matches the Statewide goal under Executive Order S-3-05, is 80% below the 1990 emission level by 2050. The Airport's Carbon Neutral Strategy and Zero Net Energy and Distributed Energy Resource Strategy will be completed in 2019, to provide a roadmap for reaching these goals by their target date. It will also address Citywide goals adopted as part of the September 2018 Global Climate Action Summit, including reducing waste generation by 15% and landfill disposal by 50% by 2030, and switching all electricity to renewable sources by 2030.

As tenants have an active role to play in the Airport achieving its emissions reduction targets, the Commission also introduced the "SFO Green Business Program," an eco-concierge service reducing on-Airport energy and water use and waste generation and associated costs, and is exploring sustainable aviation fuel options. The Airport also reviews all commercial tenant design and construction projects for compliance with State and Airport sustainability and strategic requirements.

The Commission is unable to predict what additional laws and regulations with respect to GHG emissions or other environmental issues (including but not limited to air, water, hazardous substances and waste regulations) will be adopted, or what effects such laws and regulations will have on the Airport, airlines operating at the Airport, other Airport tenants, or the local economy. The effects, however, could be material.

## **Cybersecurity**

The Airport, like many other large public and private entities, relies on a large and complex technology environment to conduct its operations, and faces multiple cybersecurity threats including, but not limited to, hacking, phishing, viruses, malware and other attacks on its computing and other digital networks and systems (collectively, "Systems Technology"). As a recipient and provider of personal, private, or sensitive information, the Airport may be the target of cybersecurity incidents that could result in adverse consequences to the Airport's Systems Technology, requiring a response action to mitigate the consequences.

Cybersecurity incidents could result from unintentional events, or from deliberate attacks by unauthorized entities or individuals attempting to gain access to the Airport's Systems Technology for the purposes of misappropriating assets or information or causing operational disruption and damage. To mitigate the risk of business operations impact and/or damage from cybersecurity incidents or cyber-attacks, the Airport invests in multiple forms of cybersecurity and operational safeguards. In November 2016, the City adopted a City-wide Cyber Security Policy ("Cyber Policy") to support, maintain, and secure critical infrastructure and data systems. The objectives of the Cyber Policy include the protection of critical infrastructure and information, manage risk, improve cyber security event detection and remediation, and facilitate cyber awareness across all City departments, including the Airport. The City's Department of Technology has established a cybersecurity team to work across all City departments, including the Airport, to implement the Cyber Policy. The City's Cyber Policy is reviewed periodically.

The City has also appointed a City Chief Information Security Officer (“CCISO”), who is directly responsible for understanding the business and related cybersecurity needs of the City’s 54 departments, including the Airport. The CCISO is responsible for identifying, evaluating, responding, and reporting on information security risks in a manner that meets compliance and regulatory requirements, and aligns with and supports the risk posture of the City.

While Airport cybersecurity and operational safeguards are periodically tested, no assurances can be given by the Commission that such measures will ensure against other cybersecurity threats and attacks. Cybersecurity breaches could damage the Airport’s Systems Technology and cause material disruption to the Airport’s finances or operations. The costs of remedying any such damage or protecting against future attacks could be substantial. Further, cybersecurity breaches could expose the Airport to material litigation and other legal risks, which could cause the Airport to incur material costs related to such legal claims or proceedings.

The airlines serving the Airport and other Airport tenants also face cybersecurity threats that could affect their operations and finances.

### **Credit Risk of Financial Institutions Providing Credit Enhancement and Other Financial Products Relating to Airport Bonds**

The Commission has obtained a number of credit enhancement agreements from a variety of financial institutions relating to its outstanding variable rate Bonds and Commercial Paper Notes, including letters of credit from commercial banks and municipal bond insurance policies issued by bond insurance companies. Additionally, in connection with various variable rate Bonds, the Commission has entered into interest rate swap agreements with and/or guaranteed by various financial institutions. See “AIRPORT’S FINANCIAL AND RELATED INFORMATION–Interest Rate Swaps” and “–Credit Facilities” and “SECURITY FOR THE SERIES 2019A-D BONDS–Reserve Fund; Reserve Accounts; Credit Facilities” and “–Rights of Bond Insurers.”

During and following the U.S. recession in 2007-2009 each of the Rating Agencies downgraded the claims-paying ability and financial strength ratings of most of the nation’s monoline bond insurance companies and many commercial banks and other financial institutions, though many of the institutions have subsequently been upgraded. The Rating Agencies could announce downgrades of these entities in the future. Such adverse ratings developments with respect to credit providers or municipal bond insurers could have an adverse effect on the Commission, including significant increases in its debt service costs.

In addition, rating downgrades of swap counterparties could result in termination events or events of default under swap agreements. Payments required under these agreements in the event of any termination could be substantial and could have an adverse impact on the liquidity position of the Commission. See “AIRPORT’S FINANCIAL AND RELATED INFORMATION–Interest Rate Swaps.”

### **Limitation of Remedies**

Any remedies available to the Owners of the Bonds upon the occurrence of an Event of Default under the 1991 Master Resolution are in many respects dependent upon judicial actions which are in turn often subject to discretion and delay and could be both expensive and time-consuming to obtain. If the Commission fails to comply with its covenants under the 1991 Master Resolution including its covenant to pay principal of or interest on the Bonds, there can be no assurance that available remedies will be adequate to fully protect the interests of the Owners of the Bonds. The ability of the Commission to comply with its covenants under the 1991 Master Resolution and to generate Net Revenues sufficient to pay principal of and interest on the Bonds may be adversely affected by actions and events outside of the control of the Commission, or may be adversely affected by actions taken (or not taken) by voters or payers of fees and charges, among others. See “SAN FRANCISCO INTERNATIONAL AIRPORT–Certain Federal and State Laws and Regulations–*State Proposition 218*” and “–*State Proposition 26*.” Further, the rate covenant included in the 1991 Master Resolution provides that if the requirement that Net Revenues together with any Transfer equal at least 125% of aggregate Annual Debt Service with respect to the Bonds is not met, so long as the Commission is taking specified steps to meet the rate covenant, an Event of Default will not be triggered until after the following Fiscal Year. See “SECURITY FOR THE SERIES 2019A-D BONDS–Rate Covenant.” The ability of the Commission to increase its rates, fees and charges and to reduce its expenses will be limited by, among other things, existing contracts and federal law.

The Bonds are not subject to acceleration under any circumstances or for any reason, including without limitation upon the occurrence and continuance of an Event of Default under the 1991 Master Resolution. Moreover, the Bonds will not be subject to mandatory redemption or mandatory purchase or tender for purchase upon the occurrence and continuance of an Event of Default under the 1991 Master Resolution to the extent the redemption or purchase price is payable from Net Revenues. However, Bonds may be subject to mandatory redemption or mandatory purchase or tender for purchase if the redemption or purchase price is payable from a source other than Net Revenues such as a Credit Facility or Liquidity Facility.

In addition to the limitations on remedies contained in the 1991 Master Resolution, the rights and obligations under the 1991 Master Resolution may be subject to the limitations on legal remedies against charter cities and counties in the State, as well as applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting the enforcement of creditors' rights generally, now or hereafter in effect, the exercise by the United States of America of the powers delegated to it by the Constitution, the reasonable and necessary exercise, in certain exceptional situations, of the police powers inherent in the sovereignty of the State and its governmental bodies in the interest of serving a significant and legitimate public purpose, and to the application of general principles of equity, including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing and the possible unavailability of specific performance or injunctive relief, regardless of whether considered in a proceeding in equity or in law. Bankruptcy proceedings, if initiated, could subject the Owners of the Bonds to judicial discretion and interpretation of their rights in bankruptcy proceedings or otherwise, and consequently may entail risks of delay or limitation or modification of rights. The various legal opinions to be delivered with respect to the Series 2019A-D Bonds are expected to be qualified by reference to bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance or transfer, and other laws relating to or affecting the rights and remedies of creditors generally; to the application of equitable principles, whether considered in a proceeding at law or in equity; to the exercise of judicial discretion; and to limitations on legal remedies against charter cities and counties in California. In the event the Commission fails to comply with its covenants under the 1991 Master Resolution there can be no assurance that available remedies will be adequate to fully protect the interests of the holders of the Series 2019A-D Bonds.

### **Potential Effect of a City Bankruptcy**

The City is authorized under California law to file for bankruptcy protection under Chapter 9 of the Bankruptcy Code. However, third parties cannot bring involuntary bankruptcy proceedings against the City. The Airport, being a department of the City and not a separate legal entity, cannot itself file for bankruptcy protection.

Should the City become a debtor in a bankruptcy proceeding, the owners of the Series 2019A-D Bonds would continue to have a lien on Net Revenues after the commencement of the bankruptcy case so long as the Net Revenues constitute "special revenues" within the meaning of the Bankruptcy Code. "Special revenues" are defined under the Bankruptcy Code to include, among other things, receipts by local governments from the ownership, operation or disposition of projects or systems that are primarily used to provide transportation services. While the Net Revenues appear to be "special revenues," no assurance can be given that a court would not determine otherwise. Bankruptcy courts are courts of equity and as such have broad discretionary powers, and there is no binding judicial precedent dealing with the treatment in bankruptcy proceedings of airport revenues collected for the payment of bonds in California. If Net Revenues do not constitute "special revenues," there could be delays or reductions in payments by the Commission with respect to the Series 2019A-D Bonds.

Furthermore, although the automatic stay arising upon the filing of a bankruptcy petition under Chapter 9 has historically been understood not to stay the collection and application of special revenues to payment of bonds secured by such special revenues, if the City were to become a debtor in a proceeding under Chapter 9, the bankruptcy court could find that the automatic stay exception for special revenues does not apply, and the parties to the proceeding may thus be prohibited from taking any action to collect the Net Revenues, or to enforce any related obligation connected with the Series 2019A-D Bonds, without the bankruptcy court's permission.

Even if the Net Revenues are "special revenues," to enable continued operations of a municipal enterprise like the Airport the Bankruptcy Code provides that special revenues can be applied first to necessary operating expenses of the project or system from which the special revenues are derived, before they are applied to other obligations. This rule applies regardless of the provisions of the transaction documents. Thus, in a bankruptcy case of the City, the Net Revenues could be used to pay necessary operating expenses of the Airport, before the remaining

Net Revenues are turned over to the Trustee to pay amounts owed to the holders of the Series 2019A-D Bonds. It is not clear precisely which expenses would constitute necessary operating expenses of the Airport. In addition, there may be delays or reductions in payments on the Series 2019A-D Bonds in a Chapter 9 proceeding, especially if the City does not voluntarily pay Net Revenues in its possession to the Trustee.

Regardless of any specific determinations by a U.S. Bankruptcy Court in a City bankruptcy proceeding that may be adverse to the Airport or the Owners, the mere filing by the City for bankruptcy protection likely would have a material adverse effect on the marketability and market price of the Series 2019A-D Bonds.

Also see “–Limitation of Remedies” above.

### **Future Legislation and Regulation**

The Airport is subject to various laws, rules and regulations adopted by the local, State and federal governments and their agencies. The Airport is highly regulated by federal agencies including the FAA, the TSA, CBP and the U.S. Department of Health and Human Services. In the past, actions, rules and policies by these agencies (in particular the FAA, the TSA and CBP) have required the Airport to undertake additional capital and equipment expenditures, have affected passenger traffic, or both. The Commission is unable to predict the adoption or amendment of additional laws, rules or regulations, or their effect on the operations or financial condition of the Airport.

### **Initiative, Referendum and Charter Amendments**

The ability of the Commission to comply with its covenants under the 1991 Master Resolution, including to generate revenues sufficient to pay the principal of and interest on the Series 2019A-D Bonds, may be adversely affected by actions and events outside the control of the Commission, including without limitation by actions taken (or not taken) by voters. Under the State Constitution, the voters of the State have the ability to initiate legislation and require a public vote on legislation passed by the State Legislature through the powers of initiative and referendum, respectively. Under the Charter, the voters of the City can restrict or revise the powers of the Commission through the approval of a Charter amendment. The Commission is unable to predict whether any such initiatives might be submitted to or approved by the voters, the nature of such initiatives, or their potential impact on the Commission or the Airport.

### **Potential Limitation of Tax Exemption of Interest on Series 2019A-D Bonds**

From time to time, the President of the United States, the United States Congress and/or state legislatures have proposed and could propose in the future, legislation that, if enacted, could cause interest on the Series 2019A Bonds, the Series 2019B Bonds and the Series 2019D Bonds to be subject, directly or indirectly, to federal income taxation or could cause interest on the Series 2019A-D Bonds to be subject to or exempted from state income taxation, or otherwise prevent Beneficial Owners from realizing the full current benefit of the tax status of such interest. Clarifications of the Internal Revenue Code of 1986, as amended (the “Code”), or court decisions may also cause interest on the Series 2019A Bonds, the Series 2019B Bonds and the Series 2019D Bonds to be subject, directly or indirectly, to federal income taxation or may cause interest on the Series 2019A-D Bonds to be subject to or exempted from state income taxation. The introduction or enactment of any such legislative proposals or any clarification of the Code or court decisions may also affect the market price for, or marketability of, the Series 2019A Bonds, the Series 2019B Bonds and the Series 2019D Bonds. Prospective purchasers of the Series 2019A-D Bonds should consult their own tax advisors regarding any such pending or proposed federal or state tax legislation, regulations or litigation, as to which Co-Bond Counsel expresses no opinion. See “TAX MATTERS.”

### **Risk of Tax Audit**

The Internal Revenue Service (the “IRS”) includes a Tax Exempt and Government Entities Division (the “TE/GE Division”). The TE/GE Division has a subdivision that is specifically devoted to tax-exempt bond compliance. The number of tax-exempt bond examinations has increased significantly under the TE/GE Division. If the IRS undertook an examination of the Series 2019A Bonds, the Series 2019B Bonds, the Series 2019D Bonds, or other Bonds issued by the Commission as tax-exempt bonds, it may have a material adverse effect on the marketability

or the market value of the Series 2019A Bonds, the Series 2019B Bonds or the Series 2019D Bonds. The IRS has undertaken limited examinations of three prior issues of the Bonds. All three of those examinations were closed without the IRS taking any action. The Commission is not aware of any other IRS examination or investigation of its tax-exempt bonds. See “TAX MATTERS.”

### **Income Taxation Risk Upon Defeasance of the Series 2019C Bonds**

In the event the Commission were to defease all or a portion of the Series 2019C Bonds, for federal income tax purposes, the Series 2019C Bonds that are the subject of such a defeasance may be deemed to be retired and “reissued” as a result of the defeasance. In such an event, a bondholder who owns such a Series 2019C Bond may recognize a gain or loss on the Series 2019C Bond at the time of defeasance. Holders who own Series 2019C Bonds should consult their own tax advisors regarding the tax consequences of a defeasance of the Series 2019C Bonds. See “TAX MATTERS –Series 2019C Bonds (Taxable).”

## **SAN FRANCISCO INTERNATIONAL AIRPORT**

### **Introduction**

San Francisco International Airport, which is owned and operated by the City, is the principal commercial service airport for the San Francisco Bay Area. The Airport is located 14 miles south of downtown San Francisco in an unincorporated area of San Mateo County between the Bayshore Freeway (U.S. Highway 101) and the San Francisco Bay. According to data for calendar year 2017 from Airports Council International (“ACI”), the Airport ranked 7th in the United States in terms of passengers and 15th in the United States in terms of air cargo tonnage. According to Fiscal Year 2016-17 U.S. DOT statistics, the Airport is also a major origin and destination point (7th for domestic origin and destination traffic and 4th for overall origin and destination traffic in the United States). The Airport is also one of the nation’s principal gateways for Pacific traffic and serves as a domestic hub and Pacific gateway for United Airlines. Passenger enplanements and deplanements at the Airport have grown from approximately 36.5 million in Fiscal Year 2008-09 to approximately 57.7 million in Fiscal Year 2017-18.

### **Organization and Management**

Under the Charter, the Commission is responsible for the operation and management of the Airport, which is an enterprise department of the City. The Commission consists of five members appointed by the Mayor of the City for four-year overlapping terms. All appointments are subject to rejection by a two-thirds vote of the Board of Supervisors and any member may be removed by a three-fourths vote of the Board of Supervisors but only for official misconduct.

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The current members of the Commission and their respective occupations and terms are as follows:

**Current Members of the Commission**

<u>Member</u>	<u>Occupation</u>	<u>Term Ends August 31 of</u>
Larry Mazzola, <i>President</i>	Retired Business Manager and Financial Secretary/Treasurer, U.A. Local 38 (United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada)	2022
Linda S. Crayton, <i>Vice President</i>	Retired Senior Regional Director, Government Relations, Comcast Cable Communications	2020
Richard J. Guggenlime	Attorney (Senior Counsel), Perkins Coie LLP	2021
Eleanor Johns	Executive Director of the Willie L. Brown, Jr. Institute on Politics and Public Service	2019
Peter A. Stern	Senior Vice President of Corporate Development at Inception Corporation	2022

Under the Charter, the Commission is responsible for the “construction, management, supervision, maintenance, extension, operation, use and control of all property, as well as the real, personal and financial assets which are under the Commission’s jurisdiction.” The Commission has the exclusive authority to plan and issue revenue bonds for airport-related purposes, subject to the approval, amendment or rejection by the Board of Supervisors.

Under the City Administrative Code, the Commission also has exclusive power to fix and adjust Airport rates, fees and charges for services and facilities provided by the Airport.

The Commission’s budget and certain Commission contracts and leases (generally, those for a term of more than 10 years or involving revenue to the City of more than \$1,000,000 or expenditures of more than \$10,000,000), and modifications thereto, require approval of the Board of Supervisors. In addition, if any project is estimated to cost more than \$25 million, and more than \$1 million in predevelopment, planning or construction costs will be paid with City funds, then the Board of Supervisors is required to make a determination of fiscal feasibility prior to the commencement of environmental review, if any, on such project. Certain actions of the Board of Supervisors are also subject to approval by the Mayor.

Other City departments provide various services to the Commission, including the Police Department, the Fire Department, the Water Department, the Hetch Hetchy Power Division, the Department of Public Works, the City Controller, the Purchasing Department and the City Attorney. See “AIRPORT’S FINANCIAL AND RELATED INFORMATION–Payments to the City.”

**Airport Senior Management and Legal Counsel**

Senior management is led by the Airport Director (the “Director”), who has the authority to administer the affairs of the Commission as the chief executive officer thereof. Under the Charter, the Director is appointed by the Mayor from candidates submitted by the Commission. Once appointed by the Mayor, the Director serves at the pleasure of the Commission. The City Attorney serves as the legal advisor to the Commission.

The Airport Director has the authority to administer the affairs of the Commission as the chief executive officer thereof. The Airport has a Chief Operating Officer, a Chief Business and Finance Officer, a Chief Administration and Policy Officer, a Chief Development Officer and a Chief External Affairs Officer, all of whom report directly to the Airport Director. Divisions of Airport Services, Safety and Security Services, Guest Services, Airport Facilities, Information Technology and Telecommunications, and Museum report to the Chief Operating

Officer. The Division of Planning & Environmental Affairs reports to the Chief Development Officer. The Division of People, Performance and Development reports to the Chief Administration and Policy Officer.

Because the Commission believes that the financial and operational performance of the Airport depends in part on the strategies and principles that have been followed by senior management in recent years, it has adopted several policies with the objective of maintaining continuity and continuing to follow such strategies and principles. These policies include, among others, policies on shared use of systems, infrastructure, and services by multiple airline tenants, concessionaries and others; maintenance of ownership by the Airport of its data and digital assets; maintaining a level playing field for all air carriers; controlling, developing and financing the Airport's assets without use of public-private partnerships; and integrating collaborative, structured partnering into the Airport's development projects.

Brief biographies of the principal members of the senior management and legal counsel at the Airport are set forth below:

*Ivar C. Satero* was appointed as Director effective July 21, 2016. Prior to this, he served as Chief Operating Officer from April 2014 until his appointment as Director. Prior to that, he served as Deputy Airport Director-Design and Construction Division from December 2003. From February 2002 through November 2003, he served as the Administrator of the Bureau of Design and Construction and then as the Administrator of Airport Development. From February 1994 to February 2002, Mr. Satero was the Program Manager of transit projects for the Airport's Master Plan Program, including the AirTrain System and the BART extension to the Airport. Prior to joining the Airport in February 1994, Mr. Satero worked for the Public Utilities Commission of the City as Project Engineer/Project Manager for various municipal railway and Hetch Hetchy water system capital improvement projects.

*Leonardo "Leo" Fermin, Jr.* was appointed Deputy Airport Director, Business and Finance (subsequently renamed Chief Business and Finance Officer) in July 2003. From October 2002 until July 2003, he served as Acting Deputy Airport Director of Business and Finance. He has been with the Airport since July 1986, serving in a number of positions, including Finance Director. Prior to joining the Airport, Mr. Fermin served in a variety of finance and accounting capacities in the private sector. In October 2002, Mr. Fermin was nominated for the City's Public Managerial Excellence Award. He has been a member of the ACI World Economics Standing Committee since 2004, and served as Chair from 2007 to 2009.

*Julian Potter* was appointed Chief Administration and Policy Officer in February 2014. Ms. Potter joined the Airport staff in January 2008 as the Federal and Regional Government Affairs manager and became Chief of Staff in December 2013. Prior to joining the Airport, Ms. Potter was the Director of Public Policy for the Mayor's office in the City. Ms. Potter has an additional 15 years of public policy and administrative experience serving as a Deputy Assistant Secretary at the U.S. Department of Housing and Urban Development, Chief Operating Officer of a building and construction apprenticeship program and Special Assistant to the U.S. President.

*Jeff Littlefield* was appointed Chief Operating Officer in July 2016. Prior to this, he served as the Deputy Airport Director-Operations and Security from 2011 until taking on his new role, and as Deputy Airport Manager from 2008 to 2011. Prior to joining the Airport, Mr. Littlefield served 21 years for United Airlines in a variety of operational capacities, including nine years as General Manager at Oakland Airport.

*Geoffrey W. Neumayr* was appointed Chief Development Officer in July 2016. In that capacity he oversees both the Design and Construction and Planning divisions. Prior to this, he served as Deputy Director of Design and Construction beginning in 2014. Mr. Neumayr joined the Airport staff as Associate Deputy Airport Director of Design and Construction in August 2011. Prior to that, he was Vice President of Operations of the Allen Group, LLC for 15 years. With the Allen Group, LLC Mr. Neumayr served as the Project Manager for many of the Airport's construction projects. Prior to joining the Allen Group in 1995, Mr. Neumayr was an Associate with the architectural and engineering firm of the Watry Design Group where he served as a project manager. Mr. Neumayr is a licensed civil and structural engineer with over 30 years of experience in design and construction.

*Jon Ballesteros* was appointed Chief External Affairs Officer May 1, 2017. As Chief External Affairs Officer, Mr. Ballesteros oversees Government Affairs, Communications, Marketing, International Aviation Development, Reprographics, Protocol and International Trade and Commerce. In this capacity, Mr. Ballesteros focuses on ensuring governmental actions benefit the Airport, leads the team that concentrates on ensuring internal

and external stakeholders are well informed and helps drive the promotion of the Airport as a premier gateway to California and the United States. Prior to joining Airport staff, Mr. Ballesteros's professional experience includes positions with San Francisco Travel Association, Port of Oakland, Wells Fargo & Company, the City and County of San Francisco and the Bay Area Air Quality Management District.

*Sheryl L. Bregman* was appointed Airport General Counsel in April 2011. Ms. Bregman manages the on-site Airport Legal Division for the San Francisco City Attorney. The division provides a full range of in-house legal services to the Commission (leases and permits, environmental/land use regulations, construction, operations (security/safety), contracts, labor, municipal finance, litigation, and general government). Ms. Bregman joined the Office of the San Francisco City Attorney in 1995 as a Deputy City Attorney and advised San Francisco public agencies on public work design and construction projects and transactions, drafted legislation, prosecuted administrative enforcement actions, and litigated government contract cases. Prior to joining the Office of the San Francisco City Attorney, Ms. Bregman was in private practice.

## **Current Airport Facilities**

### *Airfield*

The Airport's runway and taxiway system occupies approximately 1,700 acres and includes four intersecting runways, three of which are equipped with instrument landing systems (an "ILS") for arrivals. The east-west runways are 11,870 and 11,381 feet long, respectively. The north-south runways are 8,650 and 7,650 feet long, respectively. The current runway system can accommodate the arrival and departure at maximum loads of all commercial aircraft currently in service, including the Airbus A380. The runways are built on bay tidelands that were filled during and after World War II. As a result, the runways continue to settle at various rates and require periodic repair and maintenance work.

### *Terminals*

International Terminal. The International Terminal Complex (the "ITC"), which was completed in 2000, is a 2.5 million square foot facility located directly above an entry roadway network and houses ticketing, Federal Inspection Service (Customs and Border Protection) ("FIS") facilities, baggage facilities, concessions, and airline offices. The approximately 1.7 million square foot terminal connects to Boarding Areas A and G, which have a combined space of approximately 869,000 square feet and 24 gates. The ITC includes an approximately 229,000 square foot FIS facility capable of processing 5,000 passengers per hour. The Airport owns and the airlines maintain the common-use baggage system that supports all airlines in the ITC.

Other Airport Terminals. In addition to the ITC, the Airport has three other terminal buildings (together with the ITC, the "Terminal Complex") consisting of a total of approximately 2.7 million square feet of space. Terminal 1: The Harvey B. Milk Terminal (the "Terminal 1"), Terminal 2 and Terminal 3 handle primarily domestic flights and flights to Canada and Mexico. Terminal 1 improvements are currently in various stages of design and construction. An interim boarding area has been constructed to provide adequate facilities during the demolition and construction of central Terminal 1 and Boarding Area B. The new Boarding Area B facility and the central section of Terminal 1 are expected to be completed in 2021 and 2022, respectively. Once completed, Terminal 1 is expected to have a total of 25 gates, three of which will be capable of handling both domestic and international arrivals. In April 2011, the Airport unveiled the renovated Terminal 2, which features 16 gates (including one remote bus gate) and an Airport-owned baggage system. Terminal 2 was the first airport terminal in the United States to achieve Gold Certification under the U.S. Green Building Council's Leadership in Energy and Environmental Designs (LEED™) program. Parts of Terminal 3 have also been renovated to the same standards as Terminal 2. Completed renovation projects include the ten-gate Boarding Area E Project, which opened in 2014, and three-gate Terminal 3 East Project, which opened in 2015. Additional Terminal 3 renovations are in progress. See "CAPITAL PROJECTS AND PLANNING – The Capital Improvement Plan – Major Ascent Program – Phase I Capital Projects – Terminals."

### *AirTrain System*

The AirTrain System provides elevated light rail transit service over a "terminal loop" to serve the Terminal Complex and over a "north corridor loop" to serve the rental car facility and other locations situated north of the

Terminal Complex. The AirTrain stations are located at the north and south sides of the ITC, Terminals 1, 2 and 3, at the two short-term ITC parking garages, on Lot “D” to serve the rental car facility, and on McDonnell Road to serve the West Field area of the Airport. The AirTrain runs 24 hours per day, 7 days per week. Currently, the AirTrain system is being extended and there are two AirTrain stations under construction, one at the On-Airport Hotel (which is also under construction) and the second between the existing long-term parking garage and a new long-term parking garage that is expected to open in February 2019. See “SAN FRANCISCO INTERNATIONAL AIRPORT – Current Airport Facilities – *Public Parking and Rental Car Facilities.*”

### *Gates*

The Airport has 92 operational gates, 42 of which can accommodate wide-body aircraft. Of these, 24 gates are located in the ITC, 18 in Terminal 1, 16 in Terminal 2, and 34 in Terminal 3. Terminal 1 and Terminal 2 each have one remote bus gate, where passengers are transported by bus between the terminal gate and an aircraft parking position located on the airfield. Each of these remote bus gates counts as an operational gate. The Commission expects that a remote bus gate will be operational in the ITC by the end of Fiscal Year 2018-19.

Generally, existing airport facilities in the United States are designed for aircraft having a maximum wingspan of 213 feet. New Large Aircraft (such as the Airbus A380) (“NLAs”) have a wingspan of approximately 262 feet. The Airport currently operates five gates in the ITC with sufficient clearance to accept NLAs.

From time to time, gates are taken out of service during periods of construction and renovation. The Airport opened the newly renovated Boarding Area E located in Terminal 3 in January 2014, adding a net total of ten gates to Terminal 3. Following its opening, the Airport removed from operation eleven gates in Terminal 1 and three gates in Terminal 3 East for boarding area renovations. Renovations for Terminal 3 East were completed in November 2015. The Commission expects to maintain at least 90 operational gates during ongoing terminal renovation projects.

Gates in the domestic terminals are used by airlines on a preferential or common-use basis, and gates in the ITC are used on a common or joint-use basis. Gates assigned to an airline for preferential use are allocated on an annual basis in accordance with a formula taking into account each airline’s scheduled seats. Gates can thus be recaptured by the Airport annually from airlines with decreasing traffic and allocated to other airlines with increasing traffic. Any preferential-use gate can also be used by any airline when it is not actively being used by the airline to which it is allocated. See “–Airline Agreements–*Lease and Use Agreements*” and APPENDIX E–“SUMMARY OF CERTAIN PROVISIONS OF THE LEASE AND USE AGREEMENTS.”

### *Air Traffic Control Tower*

Construction of a new 221-foot tall Air Traffic Control Tower was completed in August 2015. The FAA activated and commissioned the new Air Traffic Control Tower in October 2016. The Air Traffic Control Tower project also included an integrated building in the base of the tower, providing public space, public restrooms, and a secure connector linking Terminal 1 Boarding Area C with Terminal 2.

### *Jet Fuel Distribution System*

The Airport leases its on-Airport jet fuel receiving, storage, distribution and other related facilities (collectively, the “Fuel System”) to SFO Fuel. Airlines providing substantially all of the regularly-scheduled service to the Airport are members of SFO Fuel. Pursuant to an interline agreement governing the business relationship between SFO Fuel and its members, the members of SFO Fuel are jointly responsible, on a step-up basis, for all costs, liabilities and expenses of SFO Fuel. SFO Fuel is responsible for the management and operation of the Fuel System. Airlines and fuel suppliers are responsible for the procurement and delivery of jet fuel to the Fuel System. Operation and management of the Fuel System is performed by Aircraft Services International, Inc., a wholly owned subsidiary of Menzies Aviation Inc., pursuant to an operation and management agreement with SFO Fuel.

The Fuel System currently includes a pipeline distribution system consisting of two main distribution pipelines that provide redundancy in the event of a pipeline break, a fuel supply terminal loop around the Terminal Complex, and various hydrant systems from the pipeline loop to the gates, all of which are leased to SFO Fuel by the Airport; above-ground storage tanks owned by the Airport and leased to SFO Fuel with total working storage capacity

of approximately 134,000 barrels (representing approximately 1.8 days of operations based upon average consumption in 2018 through November), and above-ground storage tanks owned by SFO Fuel with total working storage capacity of approximately 147,500 barrels (representing approximately 2.0 days of operations based upon average consumption in 2018 through November), all of which storage tanks are located on land leased by SFO Fuel from the Airport; and other related facilities.

SFO Fuel has various arrangements with other entities to increase its off-Airport jet fuel storage capacity. SFO Fuel has an arrangement with an affiliate of Shell Oil for additional off-Airport jet fuel storage capacity of approximately 181,000 barrels of working storage capacity (representing approximately 2.4 days of operations based upon average consumption in 2018 through November) immediately adjacent to the Airport. In addition, SFO Fuel has an arrangement with Kinder Morgan for an additional approximately 150,000 barrels of working storage capacity (representing approximately 2 days of operations based upon average consumption in 2018 through November) of off-Airport jet fuel working storage capacity.

In the summer of 2016, a confluence of a major tank repair, high air travel activity, and current pipeline capacity resulted in decreased fuel stores. In the summer of 2017, high air travel activity and temporary pipeline capacity constraints had a similar result. To recover, SFO Fuel trucked fuel in, and implemented a tankering initiative, in which airlines serving the Airport were asked by SFO Fuel to reduce their fuel uptake at the Airport. During the summer of 2018, SFO Fuel requested that airlines not take on more fuel than necessary at the Airport and SFO Fuel also trucked in fuel. The Commission expects that SFO Fuel could employ the same strategies if the fuel supply to the Airport were to drop again. SFO Fuel, and not the Commission, is responsible for receipt, storage and distribution of jet fuel through the Fuel System at the Airport. The airlines and suppliers are responsible for supplying fuel to the Fuel System. Competitive into-plane service providers are responsible for delivery of jet fuel into-aircraft from the Fuel System. SFO Fuel anticipates constructing approximately 134,000 barrels of additional on-Airport working storage capacity to provide increased security of fuel supply as well as to satisfy recent and projected potential fuel demand increases. This project is expected to be financed with the proceeds of special facility lease revenue bonds that the Commission expects to issue in late February 2019. See “SECURITY FOR THE SERIES 2019A-D BONDS – Other Indebtedness – *SFO Fuel Bonds*.”

#### *Bay Area Rapid Transit (“BART”) Service to SFO*

BART has provided direct service to the Airport since 2003. This service provides a convenient connection between the Airport and the greater San Francisco Bay Area that is served by BART. According to BART statistics for Fiscal Year 2017-18, a weekday average of 6,302 riders exited at the SFO BART station. BART service to the Airport travels directly through San Francisco from various points in the East Bay. Additionally, an intermodal station in the City of Millbrae provides a direct link between BART and Caltrain offering additional transit options and connection to the southern parts of the Bay Area as well as San Francisco. BART pays the Airport \$2.5 million per year in rent for the BART station in the ITC, plus an additional amount (\$992,094 for Fiscal Year 2017-18) for custodial and electrical support services.

#### *Public Parking and Rental Car Facilities*

Public Parking. A 5,030 space hourly Domestic Parking Garage is connected to the three domestic terminals by seven pedestrian tunnels and three pedestrian bridges. The Domestic Parking Garage features ParkFAST, reserved covered parking with an automated entry and exit system, and ParkVALET, providing valet service to all terminals (domestic and international). Two public garages located near the ITC provide 2,023 spaces for short-term parking. Approximately 2,621 indoor covered spaces and 2,267 uncovered spaces are available for public long-term parking approximately 1.5 miles from the Terminal Complex. These figures reflect the temporary loss of spaces (net of spaces created by restriping) as a result of construction as described below.

A new long-term parking garage is expected to open in February 2019, at which point it will add 3,600 new paid public parking stalls. Travelers will be transported from the new garage to the terminals via the Airport’s existing shuttle bus service until the AirTrain extension to the long-term parking garages is completed (expected to occur in spring 2020).

During the construction of a new long-term parking garage, On-Airport Hotel and AirTrain extension described under “CAPITAL PROJECTS AND PLANNING—The Capital Improvement Plan—*Major Ascent Program – Phase I Capital Projects - Groundside*” the Commission expects to temporarily lose up to approximately 1,900 parking spaces. To mitigate parking constraints during the construction period, the Commission has been restriping parking lots to create approximately 550 additional parking spaces and encouraging Airport employees to take alternate modes of transportation to the Airport. In addition, the Commission raised parking rates in June 2016 to moderate demand. The new long-term parking garage is expected to open in February 2019.

Rental Car Facility. An approximately 5,000 space, full service rental car facility for all on-Airport rental car companies is located approximately one mile north of the Terminal Complex and is accessed from the terminals by the AirTrain.

Off-Airport Parking Facilities. Parking facilities located near the Airport and operated by private companies offer more than 8,000 public remote parking spaces for Airport patrons, including a 1,500 space parking garage that is located near the long-term parking facility owned by the Airport.

#### *Maintenance and Cargo Facilities*

Airlines have made various investments in facilities at the Airport. The United Airlines maintenance center, containing approximately three million square feet of building and hangar floor area, is one of the country’s largest private aircraft maintenance facilities. United Airlines also operates a large cargo facility at the Airport. Both of these facilities are owned by the Airport but leased to the airline. American Airlines also operates a major maintenance facility at the airport, and certain other airlines and aviation support companies lease and operate significant cargo, maintenance and other facilities at the Airport.

#### *Seismic Design of Airport Facilities*

The Airport’s facilities are assigned to Seismic Design Category (SDC) E or F under current building codes. An SDC is a classification assigned to a structure based on its occupancy and on the level of expected ground motion in the event of an earthquake. The SDCs range from Category A (corresponds to buildings that present a low hazard to human life located in areas with very small seismic vulnerability) to Category F (corresponds to essential facilities located near major active faults).

The ITC was designed as an “essential facility” (i.e., a facility that is immediately occupiable following a maximum credible seismic event), exceeding the minimum applicable design requirements for a building of its type. In addition, other buildings and facilities constructed by the Airport during the 1990s and early 2000s as part of the Airport’s Master Plan Expansion Program were designed to comply with, and in some cases exceed, the then-current seismic design standards. These facilities include the AirTrain System (guideway, stations, and maintenance building); the elevated circulation roads and inbound/outbound freeway ramps; international, long-term and employee parking garages; the Rental Car Center; the Communications Center located in a portion of the North Connector Building that links Terminal 2 to Terminal 3; and the on-Airport BART station and guideway. In the late 2000s, the Airport also completed a seismic retrofit of the Airport’s upper level viaduct, bringing it up to then-current seismic design standards.

As part of the Airport’s Terminal 2 Renovations program, the Terminal 2/Boarding Area D facility received a seismic upgrade which allowed the facility to meet then-current seismic standards.

The new Air Traffic Control Tower, which is located between Terminals 1 and 2, was activated in 2016, and was designed as an essential facility. The FAA has developed contingency plans for the operation of air traffic control functions from a temporary site in the event the Air Traffic Control Tower is rendered inoperable due to a seismic event. Such remote operations could result in a reduction in air traffic control service levels and capabilities, and may have a significant impact on the airspace system supporting the Airport.

Terminals 1 and 3 and certain boarding areas in these terminals do not meet current seismic requirements. The Airport has completed a first phase of the Terminal 3 improvement program, with improvements to Terminal 3 East and Boarding Area E that resulted in a complete seismic upgrade of the Boarding Area E facility, as well as a

seismic upgrade to the eastern half of Terminal 3. Boarding Area E was completed in 2014 and Terminal 3 East opened in 2015. This work is part of the Airport's longer-term strategy of upgrading the entire Terminal 3 facility, including Boarding Area F, to current seismic standards. See "CAPITAL PROJECTS AND PLANNING—The Capital Improvement Plan."

Terminal 1 improvements are currently in various stages of design and construction. An interim boarding area has been constructed to provide adequate facilities during the demolition and construction of central Terminal 1 and Boarding Area B. Ongoing and planned improvements include a complete replacement of Boarding Area B and a major renovation of Terminal 1. The new Boarding Area B facility and the central section of Terminal 1 are expected to be completed in 2021 and 2022, respectively. These improvements are expected to upgrade the entire Terminal 1 facility to current seismic code requirements upon completion.

See "CERTAIN RISK FACTORS—Seismic and Other Natural Disasters or Emergencies" for further discussion of the seismic risks facing the Airport.

### **On-Time Performance**

On-time flights are defined by the U.S. DOT as any flight that arrives or departs within 15 minutes of the scheduled arrival or departure time. Approximately 74% of domestic arrivals at the Airport were on time in the twelve-month period from July 2017 through June 2018, according to the U.S. DOT statistics. During the same time period, approximately 81% of domestic arrivals at Oakland Airport were on time, and approximately 82% of domestic arrivals at San Jose Airport were on time. Arrival on-time performance has been lower at the Airport than that of the two other Bay Area airports primarily due to the prevalence of low clouds and fog around the Airport during various times of the year.

The Commission has acquired and installed in 2004 an FAA Precision Runway Monitoring System (a "PRM") for its primary arrival runways. In good weather conditions (cloud ceiling of at least 3,600 feet), up to 60 planes per hour can land at the Airport. Prior to installation of the PRM, in adverse weather conditions (cloud ceiling of between 1,600 feet and 3,600 feet), 30 planes per hour were permitted to land at the Airport. The PRM, combined with the implementation of a Simultaneous Offset Instrument Approach flight procedure, allows as many as 40 planes per hour to land during adverse weather conditions. In addition, the FAA approved Closely Spaced Parallel Runway procedures for the Airport that increased dual runway availability beginning in 2013.

A runway "slot" is an authorization to either take-off or land at a particular airport on a particular day during a specified time period. "Slot control" involves imposing limits on planned aircraft operations, to limit scheduled air traffic at certain capacity constrained airports. It is a tool used in the United States and around the world to manage air traffic at airports which have been designated as Level 3.

Under the International Air Transport Association Worldwide Slot Guidelines, airports are designated at levels indicating their degree of congestion. Level 1 airports have sufficient capacity to meet demand. Level 2 airports have potential for congestion during some periods of the day, which can be managed through mutual cooperation of the carriers with a schedule facilitator. Level 3 airports have significant potential for delays and are under mandatory slot control, meaning that airlines must obtain advance approval to operate during slot controlled hours. In 2012, the FAA changed the Airport's designation to a Level 2 airport. If the FAA were to designate the Airport to be a Level 3 airport in the future, the FAA could cap airline operations at the Airport and airlines at the Airport could be subject to FAA-administered slot control, which could affect the Commission's ability to manage airline operations at the Airport.

### **Airport Security**

In the immediate aftermath of the events of September 11, 2001, the FAA mandated new safety and security requirements, which have been implemented by the Commission and the airlines serving the Airport. In addition, Congress passed the Aviation and Transportation Security Act (the "Aviation Act"), which imposed additional safety and security measures. Certain safety and security functions at the Airport were assumed by the TSA, which was established by the Aviation Act. Among other things, the Aviation Act required that (i) explosive detection screening be conducted for all checked baggage; (ii) all individuals, goods, property, vehicles and other equipment entering

secured areas of airports be screened; and (iii) security screeners be federal employees (with an exception for the Screening Partnership Program described in the following paragraph), United States citizens and satisfy other specified requirements. All of these requirements have been implemented at the Airport. The Airport continually evaluates its policies, processes and systems to reduce vulnerabilities and mitigate risk.

The TSA operates security checkpoints at the Airport. The Airport is one of approximately 22 airports in the nation at which the TSA operates security through its Screening Partnership Program. The Screening Partnership Program contracts security screening services at commercial airports to qualified private companies. The employees of the private security firm undergo the same training and are under the same TSA management as federal-employed security operating at other United States airports. The Screening Partnership Program at the Airport has been in operation since 2002. In 2018, United Airlines and TSA agreed that United Airlines would provide automated screening lanes (ASLs) for the main Terminal 3 security checkpoint. The two ASLs went online on November 2018 and are expected to expedite the passenger screening process.

## **Airline Service**

### *General*

For the first four months of Fiscal Year 2018-19 (July through October), the Airport was served by 56 passenger airlines and 5 cargo-only airlines. Domestic passenger air carriers provided non-stop service to 83 destinations and scheduled one-stop service to an additional 13 destinations in the United States. Passenger airlines provided non-stop scheduled passenger service to 49 international destinations and one-stop service to an additional 12 international destinations.

For Fiscal Year 2017-18, the Airport was served by 54 passenger airlines and 5 cargo-only airlines. Domestic passenger air carriers provided non-stop service to 84 destinations and scheduled one-stop service to an additional 11 destinations in the United States. Passenger airlines provided non-stop scheduled passenger service to 51 international destinations and one-stop service to an additional 11 international destinations.

During Fiscal Year 2017-18, United Airlines (including SkyWest Airlines/United Express) handled 44.6% of the total enplaned passengers at the Airport (an increase in market share of 0.4 percentage points compared to Fiscal Year 2016-17); Virgin America Airlines handled 8.0% of total enplaned passengers; and American Airlines (including Compass Airlines) handled 7.6% of total enplaned passengers.

Alaska Air Group, Inc., the parent company of Alaska Airlines, and Virgin America, Inc. merged effective December 2016. The merged airline received a single operating certificate from the FAA in January 2018. The merged airline moved to a single reservations system on April 25, 2018, and has announced that it will adopt Alaska's name and logo and retire the Virgin America brand. Virgin America handled 8.0% of total enplaned passengers and Alaska Airlines handled 5.1% of total enplaned passengers in Fiscal Year 2017-18 (during a portion of which only Alaska Airlines was operational), as compared to a combined share of 13.2% in Fiscal Year 2016-17. In Fiscal Year 2018-19, Alaska Airlines is expected to decrease seats at the Airport by approximately 11% as a result of the restructuring of the combined airline's routes, and in the first five months of Fiscal Year 2018-19, Alaska Airlines had approximately 9.6% fewer enplanements than Alaska Airlines and Virgin America had together in the first five months of Fiscal Year 2017-18. See "SAN FRANCISCO INTERNATIONAL AIRPORT—Passenger Traffic—Enplanements" and APPENDIX A—"AIRLINE TRAFFIC AND ECONOMIC ANALYSIS—Airport Role—Low-Cost Carrier Airport" and "—Historical Airline Service and Traffic". It is unclear what the impact of the merger between Alaska Airlines and Virgin America will be on Airport traffic.

Although United Airlines (including SkyWest Airlines/United Express) handled 44.2% of the Airport's total enplanements during Fiscal Year 2016-17, audited results for Fiscal Year 2016-17 indicate that payments by United Airlines accounted for 23.9% of the Airport's operating revenues. See "AIRPORT'S FINANCIAL AND RELATED INFORMATION—Principal Revenue Sources."

*Low-Cost Carriers*

During Fiscal Year 2017-18, approximately 24.1% of total domestic enplanements at the Airport were provided by low-cost carriers, down from 26.6% in Fiscal Year 2016-17. A “low-cost carrier” is an airline that operates under a generally recognized low-cost business model, which may include a single passenger class of service, use of standardized aircraft, fewer in-flight services, use of less expensive airports, and lower employee wages and benefits.

Prior to January 2018, Virgin America used the Airport as its home base, utilizing a substantial portion of the gates in Terminal 2. All operations of the merged carrier at the Airport have been recorded as Alaska Airlines operations since April 2018. Alaska Airlines is not a low-cost carrier and the Commission does not anticipate that it will become one as a result of the merger.

During the first four months of Fiscal Year 2018-19, the following low-cost carriers served the Airport:

- Domestic
  - Frontier Airlines
  - jetBlue Airways
  - Southwest Airlines
  - Sun Country Airlines
- International
  - Thomas Cook Airlines
  - WestJet
  - WOW air
  - Volaris
  - XL Airways

Domestic enplanements by low-cost carriers were approximately 83.5% of the domestic enplanements at Oakland Airport and 56.0% of the domestic enplanements at San Jose Airport in Fiscal Year 2017-18.

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The following table lists the air carriers reporting enplaned passengers and/or enplaned cargo at the Airport during the first four months of Fiscal Year 2018-19.

**AIR CARRIERS REPORTING AIR TRAFFIC AT THE AIRPORT  
(First Four Months of Fiscal Year 2018-19)**

**Domestic Passenger Air Carriers**

Alaska Airlines<sup>(1)(2)\*</sup>  
American Airlines\*  
Delta Air Lines\*  
Frontier Airlines\*  
Hawaiian Airlines\*  
jetBlue Airways\*  
Southwest Airlines\*  
Sun Country Airlines/MN Airlines\*  
United Airlines<sup>(1)\*</sup>

**Foreign Flag Carriers**

Aer Lingus\*  
Aeromexico  
Air Canada\*  
Air China (CAAC)\*  
Air France\*  
Air India\*  
Air New Zealand\*  
All Nippon Airways\*  
Asiana Airlines\*  
British Airways\*  
COPA Airlines\*  
Cathay Pacific Airways\*  
China Airlines\*  
China Eastern\*  
China Southern Airlines\*  
EVA Airways\*  
Emirates Airlines\*  
Fiji Airways\*  
FINNAIR  
French Bee  
Hong Kong Air\*  
Iberia<sup>(3)</sup>  
Icelandair  
Interjet

**Foreign Flag Carriers (continued)**

Japan Airlines\*  
KLM Royal Dutch Airlines\*  
Korean Air\*  
Lufthansa German Airlines\*  
Philippine Airlines\*  
Qantas Airways\*  
Scandinavian Airlines\*  
Singapore Airlines\*  
Swiss International\*  
TACA International Airlines\*  
Thomas Cook Group\*  
Turkish Airlines\*  
Virgin Atlantic Airlines\*  
Volaris Airlines  
WestJet Airlines\*  
WOW air  
XL Airways France

**Cargo-Only Carriers**

Atlas Air  
Federal Express\*  
Kalitta Air\*  
Nippon Cargo Airlines\*  
Redding Aero Enterprises\*

**Regional Affiliates<sup>(4)</sup>**

Compass Airlines (American Airlines and Delta Air Lines)  
Horizon Air (Alaska Airlines)  
Jazz Aviation (Air Canada)  
SkyWest Airlines (Alaska SkyWest, Delta Connection and United Express)

\* Indicates a Signatory Airline to a Lease and Use Agreement.

<sup>(1)</sup> Provides international and domestic air passenger service at the Airport.

<sup>(2)</sup> Alaska Air Group, Inc. and Virgin America, Inc. merged effective December 2016. The merged airline received a single operating certificate from the FAA in January 2018. The merged airline moved to a single reservations system on April 25, 2018, and has announced that it will adopt Alaska's name and logo and retire the Virgin America brand.

<sup>(3)</sup> Level Airlines has started operating under Iberia's permit.

<sup>(4)</sup> Airlines designated as affiliates by Signatory Airlines per the Lease and Use Agreement. Affiliates may (i) be a wholly-owned subsidiary of a Signatory Airline, (ii) be a subsidiary of the same corporate parent of the Signatory Airline, (iii) share flight codes with a Signatory Airline, or (iv) operate cargo feeder flights under the direction and control of a Signatory Airline. Affiliates do not sell their own seats or flights at the Airport.

Source: Commission.

## Passenger Traffic

### Overview

During Fiscal Year 2017-18, according to traffic reports submitted by the airlines, the Airport served approximately 58 million passengers (enplanements and deplanements, excluding passengers who fly into and out of the Airport on the same aircraft), and handled 474,387 total flight operations, including 459,900 scheduled passenger airline operations. Scheduled passenger aircraft arrivals and departures during Fiscal Year 2017-18 increased by 5.8%, domestic passenger traffic (enplanements and deplanements) increased by 7.0%, international passenger traffic increased by 6.9%, and total passenger traffic increased by 7.0% compared to Fiscal Year 2016-17. Passenger enplanements and deplanements have increased at a faster rate than scheduled passenger aircraft arrivals and departures because passenger airlines have increased the average size of aircraft serving the Airport, including by reducing the use of regional jets and eliminating the use of turboprops.

The Airport was ranked the 4<sup>th</sup> most active airport in the United States in terms of overall origin and destination passengers and the 7<sup>th</sup> most active airport in the United States in terms of domestic origin and destination passengers, according to Fiscal Year 2016-17 U.S. DOT statistics. For calendar year 2017, the Airport was ranked the 7<sup>th</sup> most active airport in the United States in terms of total passengers, according to data from ACI. The Airport accounted for approximately 68.3% of the total air passenger traffic at the three San Francisco Bay Area airports during Fiscal Year 2017-18.

Compared to the first four months (July through October) of Fiscal Year 2017-18, scheduled passenger aircraft arrivals and departures decreased 1.2%, domestic passenger traffic (enplanements and deplanements) decreased 0.5%, international passenger traffic increased 3.9% and total passenger traffic increased 0.5% during the first four months of Fiscal Year 2018-19. During the first five months (July through November) of Fiscal Year 2018-19, scheduled passenger aircraft arrivals and departures decreased 1.3%, domestic passenger traffic decreased 1.4%, international passenger traffic increased 5.0% and total passenger traffic increased 0.2% compared to the same period in the prior fiscal year. The reductions in aircraft arrivals and departures and the decrease in domestic traffic are primarily attributable to Alaska Airlines' post-merger restructuring of its routes. See “—Airline Service.”

Air traffic data for the past ten Fiscal Years and the first four months of Fiscal Years 2017-18 and 2018-19 is presented in the table below.

### PASSENGER TRAFFIC

Fiscal Year	Scheduled Passenger Aircraft Arrivals and Departures		Passenger Enplanements and Deplanements				Total	
	Total	% Change	Domestic	% Change	International	% Change	Total	% Change
<i>First Four Months 2018-19*</i>	158,905	(1.2)%	15,487,977	(0.5)%	5,235,005	3.9%	20,722,982	0.5%
<i>First Four Months 2017-18</i>	160,890	4.3	15,572,723	5.4	5,040,889	9.1	20,613,612	6.3
2017-18	459,900	5.8	43,926,851	7.0	13,820,335	6.9	57,747,186	7.0
2016-17	434,582	2.5	41,046,640	3.4	12,922,418	10.3	53,969,058	5.0
2015-16	423,813	2.7	39,697,866	5.6	11,711,366	10.2	51,409,232	6.6
2014-15	412,539	(0.5)	37,580,982	4.4	10,631,812	5.6	48,212,794	4.7
2013-14	414,452	2.3	35,985,757	2.7	10,072,231	5.1	46,057,988	3.3
2012-13	405,320	0.8	35,024,595	4.3	9,583,582	3.3	44,608,177	4.1
2011-12	402,131	6.7	33,588,149	9.3	9,275,507	3.1	42,863,656	7.9
2010-11	376,939	2.3	30,725,774	3.5	9,000,697	5.8	39,726,471	4.0
2009-10	368,638	1.5	29,697,949	5.9	8,506,012	0.7	38,203,961	4.7
2008-09	363,034	(2.0)	28,030,334	1.7	8,445,278	(7.7)	36,475,612	(0.6)

\* Preliminary.

Source: Commission.

Passenger traffic has grown at a compound annual growth rate of 4.6% over the last ten full Fiscal Years, with a 7.0% increase in Fiscal Year 2017-18. Passenger traffic was 0.2% higher during the first five months of Fiscal Year 2018-19 as compared to the first five months of Fiscal Year 2017-18. While the Commission expects traffic to continue to grow in future fiscal years after some adjustment in the latter part of Fiscal Year 2018-19 as a result of the Alaska Airlines route restructuring, such growth is likely to be at a more moderate pace than over the last few years.

During Fiscal Year 2017-18 an estimated 79% of the passenger traffic at the Airport was “origin and destination” traffic, where San Francisco is the beginning or end of a passenger’s trip. This relatively high percentage of origin and destination traffic pattern is in contrast to many other major airports which have a higher percentage of connecting passengers, largely as a result of airline hubbing practices. Historically, when airlines have reduced or ceased operations at the Airport, other airlines have absorbed the passenger demand with no significant adverse impact on Airport revenues. See “CERTAIN RISK FACTORS—Airline Concentration; Effect of Airline Industry Consolidation.”

### *Enplanements*

Total Enplanements. Total enplanements at the Airport increased 7.2% during Fiscal Year 2017-18 to 28,813,851 as compared to Fiscal Year 2016-17. The increase in total enplanements during Fiscal Year 2017-18 represents an increase of 1,942,439 passengers, 1,441,140 of which were domestic and the remaining 501,299 of which were international.

During the first four months of Fiscal Year 2018-19, the total enplanements increased by 30,527 (0.3%) compared to the first four months of Fiscal Year 2017-18. Total enplanements increased by 3.4% and 0.8%, respectively, in July and August 2018, and declined 3.1%, 0.4% and 2.4%, respectively, in September, October, and November 2018, as compared to the same months in 2017. Total enplanements for the first five months of Fiscal Year 2018-19 declined by 23,994 (0.2%) compared to the first five months of Fiscal Year 2017-18. The decrease in enplanements is primarily attributable to Alaska Airlines’ post-merger restructuring of its routes. See “—Airline Service.”

Total enplanements for the Airport’s 10 most active airlines for Fiscal Years 2013-14 through 2017-18, as well as total enplanements for Fiscal Year 2017-18’s most active airlines during the first four months of Fiscal Year 2017-18 and Fiscal Year 2018-19, are shown in the table below, ranked in the order of the results from Fiscal Year 2017-18. Enplanements for airlines include enplanements by affiliates.

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**TOTAL ENPLANEMENTS BY AIRLINE**  
(Fiscal Years)

Airline	2013-14	2014-15	2015-16	2016-17	2017-18	% of 2017-18 <sup>(1)</sup>	First Four Months (July through October)	
							2017-18	2018-19*
United Airlines	10,655,513	10,867,589	11,216,891	11,875,239	12,860,422	44.6%	4,593,463	4,707,145
Virgin America <sup>(2)</sup>	1,965,310	1,997,367	2,279,332	2,502,709	2,325,380	8.1	941,685	-
American Airlines <sup>(3)</sup>	1,464,378	1,476,862	2,119,968	2,204,111	2,198,766	7.6	757,453	767,908
Delta Air Lines <sup>(4)</sup>	1,843,363	2,023,216	2,105,573	2,080,821	2,157,886	7.5	810,871	835,100
Southwest Airlines <sup>(5)</sup>	1,567,768	1,682,298	1,722,390	1,794,989	1,907,453	6.6	662,265	655,860
Alaska Airlines <sup>(2)</sup>	663,557	725,137	742,284	792,496	1,464,505	5.1	327,870	1,151,531
jetBlue Airways	542,761	602,206	755,398	785,328	805,572	2.8	274,201	257,014
Air Canada	337,424	388,401	432,354	484,287	545,755	1.9	211,825	225,543
Cathay Pacific <sup>(6)</sup>	-	-	-	-	258,182	0.9	78,504	81,808
Lufthansa Airlines <sup>(7)</sup>	241,483	262,802	-	245,550	255,434	0.9	88,637	85,017
Frontier Airlines <sup>(8)</sup>	-	-	343,736	341,903	-	-	103,318	51,227
US Airways <sup>(3)</sup>	827,146	878,176	293,408	-	-	-	-	-
<b>SUBTOTAL</b>	<b>20,108,703</b>	<b>20,904,054</b>	<b>22,011,334</b>	<b>23,107,433</b>	<b>24,779,355</b>	<b>86.0</b>	<b>8,850,092</b>	<b>8,818,153</b>
All others	2,886,971	3,119,545	3,610,176	3,763,979	4,034,496	14.0	1,372,240	1,434,706
<b>TOTAL</b>	<b>22,995,674</b>	<b>24,023,599</b>	<b>25,621,510</b>	<b>26,871,412</b>	<b>28,813,851</b>	<b>100.0%</b>	<b>10,222,332</b>	<b>10,252,859</b>
Percentage Change	3.2%	4.5%	6.7%	4.9%	7.2%			0.3%

\* Preliminary.

<sup>(1)</sup> Figures do not total due to rounding.

<sup>(2)</sup> Alaska Air Group, Inc. and Virgin America, Inc. merged effective December 2016. The merged airline received a single operating certificate from the FAA in January 2018. The merged airline moved to a single reservations system on April 25, 2018, and has announced that it will adopt Alaska's name and logo and retire the Virgin America brand. All operations of the merged carrier at the Airport have been recorded as Alaska Airlines operations since April 2018.

<sup>(3)</sup> American Airlines filed for bankruptcy protection in November 2011 and exited from bankruptcy on December 9, 2013. On December 9, 2013, American Airlines and US Airways merged, although they continued to operate under separate FAA operating certificates until April 8, 2015, when American Airlines received a single operating certificate from the FAA. US Airways continued to report operations separately until October 2015.

<sup>(4)</sup> Delta Air Lines ceased its international service at the Airport in March 2014.

<sup>(5)</sup> In May 2011, Southwest Airlines acquired AirTran Holdings, Inc., the parent company of AirTran Airways. The airlines combined operating certificates in March 2012 but operated separately through November 2014. Since November 1, 2014, all flights have been operated as Southwest Airlines.

<sup>(6)</sup> Cathay Pacific served the Airport in Fiscal Years 2013-14 to 2016-17, but was not among the top 10 most active airlines in terms of total enplanements for those years.

<sup>(7)</sup> Lufthansa served the Airport in Fiscal Year 2015-16, but was not among the top 10 most active airlines in terms of total enplanements.

<sup>(8)</sup> Frontier Airlines served the Airport in Fiscal Years 2013-14, 2014-15 and 2017-18, but was not among the top 10 most active airlines in terms of total enplanements for those years.

Source: Commission.

Total enplanements have grown at a compound annual growth rate of 5.3% over the last five full Fiscal Years, with a 7.2% increase in Fiscal Year 2017-18. Total enplanements were 0.3% lower in the first five months of Fiscal Year 2018-19 as compared to the first five months of Fiscal Year 2017-18. While the Commission expects enplanements to continue to grow in future fiscal years after some continued adjustment in the latter part of Fiscal Year 2018-19 primarily as a result of Alaska Airlines' post-merger restructuring of its routes, such growth is likely to be at a more moderate pace than over the last few years.

Domestic Enplanements. During Fiscal Year 2017-18, total domestic passenger enplanements were 21,955,031, an increase of 7.0% compared to Fiscal Year 2016-17. During the first four months of Fiscal Year 2018-19, domestic enplanements decreased by 57,486 (0.7%) compared to the first four months of Fiscal Year 2017-18. Domestic enplanements increased by 3.3% and 0.4%, respectively, in July and August 2018, and declined 4.8%, 2.4% and 5.7%, respectively, in September, October, and November 2018, as compared to the same months in 2017. Domestic enplanements for the first five months of Fiscal Year 2018-19 declined by 160,923 (1.7%) compared to the first five months of Fiscal Year 2017-18. The decrease in domestic enplanements is primarily attributable to Alaska Airlines' post-merger restructuring of its routes. Additionally, domestic enplanements by low-cost carriers have declined. For further discussion, see "AIRLINE TRAFFIC AND ECONOMIC ANALYSIS—Airport Role—Low-Cost Carrier Airport" and "—Historical Airline Service and Traffic" in APPENDIX A and "—Airline Service."

Domestic enplanements for the 10 most active airlines for Fiscal Years 2013-14 through 2017-18, as well as domestic enplanements for the Fiscal Year 2017-18's active airlines during the first four months of Fiscal Year 2017-18 and 2018-19, ranked in the order of the results from Fiscal Year 2017-18, are shown in the table below. Enplanements for airlines include enplanements by affiliates.

**DOMESTIC ENPLANEMENTS BY AIRLINE  
(Fiscal Years)**

Airline	2013-14	2014-15	2015-16	2016-17	2017-18	% of 2017-18 <sup>(1)</sup>	First Four Months (July through October)	
							2017-18	2018-19*
United Airlines	8,849,198	9,016,438	9,353,580	9,884,799	10,755,903	49.0%	3,848,602	3,949,661
Virgin America <sup>(2)</sup>	1,918,610	1,954,493	2,224,959	2,449,044	2,264,806	10.3	928,279	-
American Airlines <sup>(3)</sup>	1,464,378	1,476,862	2,119,968	2,204,111	2,198,766	10.0	757,453	767,908
Delta Air Lines	1,804,080	2,023,216	2,105,573	2,080,821	2,157,886	9.8	810,871	835,100
Southwest Airlines <sup>(4)</sup>	1,567,768	1,682,298	1,722,390	1,794,989	1,907,453	8.7	662,265	655,860
Alaska Airlines <sup>(2)</sup>	583,892	658,480	670,884	701,785	1,363,302	6.2	287,768	1,109,574
jetBlue Airways	542,761	602,206	755,398	785,328	805,572	3.7	274,201	257,104
Frontier Airlines	195,353	229,093	343,736	341,903	223,728	1.0	103,318	51,227
Hawaiian Airlines	97,966	134,713	172,448	188,550	191,827	0.9	65,300	62,027
Sun Country Airlines	-	-	-	82,257	85,788	0.4	35,306	27,506
US Airways <sup>(3)</sup>	827,146	878,176	293,408	-	-	-	-	-
AirTran Airways <sup>(4)</sup>	-	-	-	-	-	-	-	-
<b>SUBTOTAL</b>	<b>17,851,152</b>	<b>18,655,975</b>	<b>19,762,344</b>	<b>20,513,587</b>	<b>21,955,031</b>	<b>100.0%</b>	<b>7,773,363</b>	<b>7,715,877</b>
All others	135,941	93,822	82,647	304	0	0	0	0
<b>TOTAL</b>	<b>17,987,093</b>	<b>18,749,797</b>	<b>19,844,991</b>	<b>20,513,891</b>	<b>21,955,031</b>	<b>100.0%</b>	<b>7,773,363</b>	<b>7,715,877</b>
Percentage Change	2.7%	4.2%	5.8%	3.4%	7.0%			(0.7%)

\* Preliminary.

<sup>(1)</sup> Figures do not total due to rounding.

<sup>(2)</sup> Alaska Air Group, Inc. and Virgin America, Inc. merged effective December 2016. The merged airline received a single operating certificate from the FAA in January 2018. The merged airline moved to a single reservations system on April 25, 2018, and has announced that it will adopt Alaska's name and logo and retire the Virgin America brand. All operations of the merged carrier at the Airport have been recorded as Alaska Airlines operations since April 2018.

<sup>(3)</sup> American Airlines filed for bankruptcy protection in November 2011 and exited from bankruptcy on December 9, 2013. On December 9, 2013, American Airlines and US Airways merged, although they continued to operate under separate FAA operating certificates until April 8, 2015, when American Airlines received a single operating certificate from the FAA. US Airways continued to report operations separately until October 2015.

<sup>(4)</sup> In May 2011, Southwest Airlines acquired AirTran Holdings, Inc., the parent company of AirTran Airways. The airlines combined operating certificates in March 2012 but operated separately through November 2014. Since November 1, 2014, all flights have been operated as Southwest Airlines. AirTran Airways was not one of the top ten airlines serving the Airport in terms of domestic enplanements in Fiscal Years 2013-14, 2014-15 or 2015-16.

Source: Commission.

**International Enplanements.** International enplanements during Fiscal Year 2017-18 totaled 6,858,820, an increase of 7.9% compared to Fiscal Year 2016-17. International enplanements during the first four months of Fiscal Year 2018-19 increased by 88,013 (3.6%) compared to the first four months of 2017-18. International enplanements increased by 3.8%, 2.2%, 2.4%, 6.2% and 9.8%, respectively, in July through November 2018, as compared to the same months in 2017. International enplanements for the first five months of Fiscal Year 2018-19 increased by 136,929 (4.6%) compared to the first five months of Fiscal Year 2017-18.

International enplanements for the 10 most active airlines for Fiscal Years 2013-14 through 2017-18, ranked in the order of the results from Fiscal Year 2017-18, as well as international enplanements for the Fiscal Year's 2017-18 most active airlines during the first four months of Fiscal Years 2017-18 and 2018-19, are shown in the table below. Enplanements for airlines include enplanements by affiliates.

**INTERNATIONAL ENPLANEMENTS BY AIRLINE  
(Fiscal Years)**

Airline	2013-14	2014-15	2015-16	2016-17	2017-18	% of 2017-18 <sup>(1)</sup>	First Four Months (July through October)	
							2017-18	2018-19*
United Airlines	1,806,315	1,851,151	1,863,311	1,990,440	2,104,519	30.7%	744,861	757,484
Air Canada	337,424	388,401	432,354	484,287	545,755	8.0	211,825	225,543
Cathay Pacific Airlines	210,445	205,483	227,845	241,381	258,182	3.8	78,504	81,808
Lufthansa Airlines	241,483	262,802	252,879	245,550	255,434	3.7	88,637	85,017
EVA Airways	168,930	192,962	198,194	201,606	239,811	3.5	65,487	92,957
British Airways	210,648	217,643	236,205	223,556	220,552	3.2	83,117	82,554
Air France	159,965	159,143	178,248	178,767	174,842	2.5	81,923	79,583
Korean Air Lines	-	-	-	-	163,173	2.4	56,734	56,581
Aeromexico <sup>(2)</sup>	-	132,009	-	150,137	162,642	2.4	57,398	47,826
Singapore Airlines	176,721	166,875	169,083	166,569	157,949	2.3	54,563	54,937
Virgin Atlantic Airways <sup>(3)</sup>	119,471	-	148,712	142,123	-	-	-	-
Emirates <sup>(4)</sup>	-	135,387	145,157	-	-	-	-	-
China Airlines <sup>(5)</sup>	119,365	-	-	-	-	-	-	-
<b>SUBTOTAL</b>	<b>3,550,767</b>	<b>3,711,856</b>	<b>3,851,988</b>	<b>4,024,416</b>	<b>4,282,859</b>	<b>62.4</b>	<b>1,523,049</b>	<b>1,561,290</b>
All others	1,457,814	1,561,946	1,924,531	2,333,105	2,575,961	37.6	925,920	975,692
<b>TOTAL</b>	<b>5,008,581</b>	<b>5,273,802</b>	<b>5,776,519</b>	<b>6,357,521</b>	<b>6,858,820</b>	<b>100.0%</b>	<b>2,448,969</b>	<b>2,536,982</b>
Percentage Change	5.3%	5.3%	9.5%	10.1%	7.9%			3.6%

\* Preliminary.

<sup>(1)</sup> Column does not total due to rounding.

<sup>(2)</sup> Aeromexico served the Airport in Fiscal Years 2013-14, and 2015-16, but was not among the top 10 most active airlines in terms of international enplanements for those years.

<sup>(3)</sup> Virgin Atlantic Airways served the Airport in Fiscal Year 2014-15 and Fiscal Year 2017-18, but was not among the top 10 most active airlines in terms of international enplanements during that year.

<sup>(4)</sup> Emirates served the Airport in Fiscal Years 2013-14, 2016-17 and Fiscal Year 2017-18, but was not among the top 10 most active airlines in terms of international enplanements for those periods.

<sup>(5)</sup> China Airlines served the Airport in Fiscal Years 2014-15 through Fiscal Year 2017-18, but was not among the top 10 most active airlines in terms of international enplanements for those periods.

Source: Commission.

In Fiscal Year 2017-18, enplanements to Asia and the Middle East increased by 7.7%; enplanements to Europe increased by 6.4%; enplanements to Canada increased by 9.5%; enplanements to Latin America increased by 9.8%; and enplanements to Australia and Oceania increased by 8.6%, all as compared to Fiscal Year 2016-17.

In the first four months of Fiscal Year 2018-19, enplanements to Asia and the Middle East increased by 2.6%; enplanements to Canada increased by 4.3%; enplanements to Europe increased by 6.9%; enplanements to Latin America decreased by 5.3%; and enplanements to Australia and Oceania increased by 9.5%, all as compared to the first four months of Fiscal Year 2017-18.

International enplanements by destination for Fiscal Years 2013-14 through 2017-18 and the first four months of Fiscal Years 2017-18 and 2018-19 are shown in the table on the following page.

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**INTERNATIONAL ENPLANEMENTS BY DESTINATION  
(Fiscal Years)**

Destination	2013-14	2014-15	2015-16	2016-17	2017-18	% of 2017-18 <sup>(1)</sup>		<i>First Four Months (July through October)</i>	
						International Enplanements	Total Enplanements	2017-18	2018-19*
Asia/Middle East	2,162,721	2,315,144	2,497,726	2,712,712	2,922,171	42.6%	10.1%	975,420	1,000,861
Europe	1,389,903	1,473,694	1,637,439	1,750,817	1,862,789	27.2	6.5	745,172	796,813
Canada	678,770	736,844	777,915	794,558	869,925	12.7	3.0	357,005	372,424
Latin America	563,870	555,266	636,359	790,072	867,883	12.7	3.0	268,218	253,975
Australia/Oceania	213,317	192,854	227,080	309,362	336,052	4.9	1.2	103,154	112,909
<b>TOTAL</b>	<b>5,008,581</b>	<b>5,273,802</b>	<b>5,776,519</b>	<b>6,357,521</b>	<b>6,858,820</b>	<b>100.0%</b>	<b>23.8%</b>	<b>2,448,969</b>	<b>2,536,982</b>
Percentage Change	5.3%	5.3%	9.5%	10.1%	7.9%				3.6%

\* Preliminary.

<sup>(1)</sup> Columns do not total due to rounding.

Source: Commission.

**Cargo Traffic and Landed Weight**

*Cargo Traffic*

In Fiscal Year 2017-18, according to traffic reports submitted by the airlines, Airport air cargo volume (on and off) was approximately 561,150 metric tons, including U.S. mail, freight and express shipments, an increase of 25,569 metric tons (4.8%) compared to reported cargo volume for Fiscal Year 2016-17. A total of approximately 352,991 metric tons of international cargo, mail, freight and express shipments were handled at the Airport during Fiscal Year 2017-18, compared to approximately 208,159 metric tons of domestic cargo, mail, freight and express shipments. The Airport was ranked 15<sup>th</sup> in the United States in terms of air cargo volume in calendar year 2017, according to data from ACI. Cargo volume can vary depending on a number of factors including, but not limited to, the local and global economies, fuel prices, tariffs on shipments, and labor issues at shipping ports.

Compared to Fiscal Year 2016-17, domestic cargo and mail traffic tonnage decreased 883 metric tons (0.4%) and international cargo and mail traffic tonnage increased 26,452 metric tons (8.1%) during Fiscal Year 2017-18. Compared with the first four months of Fiscal Year 2017-18, domestic cargo and mail traffic tonnage decreased 3,547 metric tons (4.8%), international cargo and mail traffic tonnage increased 8,211 metric tons (6.9%) and total cargo and mail traffic tonnage increased 4,664 metric tons (2.4%) during the first four months of Fiscal Year 2018-19. Compared with the first five months of Fiscal Year 2017-18, domestic cargo and mail traffic tonnage decreased 2,324 metric tons (2.5%), international cargo and mail tonnage increased 10,191 metric tons (6.9%) and total cargo and mail traffic tonnage increased 7,867 metric tons (3.3%) during the first five months of Fiscal Year 2018-19.

The following table provides combined domestic and international cargo traffic information for the Airport for the last five Fiscal Years and the first four months of Fiscal Years 2017-18 and 2018-19.

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**AIR CARGO ON AND OFF**  
**(in metric tons)**

<u>Fiscal Year</u>	<u>Freight and Express</u>	<u>U.S. and Foreign Mail</u>	<u>Total Cargo<sup>(1)</sup></u>	<u>Percent Change</u>
<i>First Four Months</i> 2018-19*	175,104	22,578	197,682	2.4%
<i>First Four Months</i> 2017-18	169,741	23,277	193,018	12.9
2017-18	488,526	72,624	561,150	4.8
2016-17	466,923	68,659	535,581	18.6
2015-16	383,305	68,196	451,501	2.2
2014-15	383,351	58,447	441,797	19.2
2013-14	328,828	41,697	370,525	0.1

\* Preliminary.

<sup>(1)</sup> Totals may not add due to rounding.

Source: Commission.

*Landed Weight*

For Fiscal Year 2017-18, total revenue landed weight at the Airport increased 1,937,794 thousand pounds (5.2%) when compared with Fiscal Year 2016-17. Total revenue landed weight at the Airport decreased 105,895 thousand pounds (0.8%) during the first four months of Fiscal Year 2018-19 as compared to the first four months of Fiscal Year 2017-18. Landed weight increased by 0.1% in July 2018 and declined 0.9%, 1.1%, 1.1% and 0.2%, respectively in August, September, October and November 2018, as compared to the same months in 2017. Landed weight for the first five months of Fiscal Year 2018-19 declined by 111,496 thousand pounds (0.6%) compared to the first five months of Fiscal Year 2017-18. The decrease in landed weight is primarily attributable to Alaska Airlines' post-merger restructuring of its routes. For further discussion, see “—Airline Service” and “AIRLINE TRAFFIC AND ECONOMIC ANALYSIS—Airport Role—Low-Cost Carrier Airport” and “—Historical Airline Service and Traffic” in APPENDIX A.

Landing fees paid by each airline are based on landed weights of aircraft operating at the Airport. The revenue landed weights for the 10 most active airlines operating at the Airport for Fiscal Years 2013-14 through 2017-18, ranked in the order of the results from Fiscal Year 2017-18, as well as the revenue landed weights for Fiscal Year 2017-18's most active airlines during the first four months of Fiscal Year 2017-18 and 2018-19, are shown in the table on the following page. Landed weights for airlines include landed weight of affiliates.

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**TOTAL REVENUE LANDED WEIGHT BY AIRLINE**  
(in thousands of pounds)  
(Fiscal Years)

Airline	2013-14	2014-15	2015-16	2016-17	2017-18	% of 2017-18 <sup>(1)</sup>	First Four Months (July through October)	
							2017-18	2018-19*
United Airlines	13,607,516	13,587,731	13,953,205	15,453,760	16,315,849	41.3%	5,950,797	5,870,141
Alaska Airlines <sup>(2)</sup>	734,442	827,323	874,199	930,717	2,694,093	6.8	384,622	1,368,271
Delta Air Lines <sup>(3)</sup>	2,230,034	2,350,648	2,567,319	2,525,718	2,579,834	6.5	952,876	957,311
American Airlines <sup>(4)</sup>	1,865,682	1,802,575	2,462,970	2,654,816	2,562,887	6.5	866,126	908,412
Southwest Airlines <sup>(5)</sup>	1,832,578	1,872,090	1,895,646	2,038,119	2,188,500	5.5	757,399	757,256
Virgin America <sup>(2)</sup>	2,494,821	2,424,728	2,757,501	2,996,660	1,787,582	4.5	1,104,903	-
jetBlue Airways	596,813	672,117	875,867	939,439	1,011,057	2.6	359,120	324,290
Air Canada <sup>(6)</sup>	-	492,160	546,720	640,396	700,161	1.8	277,763	309,615
Korean Air Lines <sup>(7)</sup>	-	-	-	542,308	648,994	1.6	218,014	219,882
Cathay Pacific <sup>(8)</sup>	-	-	-	-	523,947	1.3	162,583	186,647
Lufthansa Airlines	459,455	503,285	501,143	510,879	-	-	176,418	177,317
British Airways <sup>(9)</sup>	457,210	-	506,376	-	-	-	-	-
US Airways <sup>(3)</sup>	859,552	921,285	-	-	-	-	-	-
<b>SUBTOTAL</b>	<b>25,138,103</b>	<b>25,453,942</b>	<b>26,940,946</b>	<b>29,232,812</b>	<b>31,012,904</b>	<b>78.4</b>	<b>11,210,622</b>	<b>11,079,142</b>
All others	6,490,469	7,156,110	8,072,361	8,363,816	8,521,518	21.6	2,881,947	2,907,531
<b>TOTAL</b>	<b>31,628,572</b>	<b>32,610,052</b>	<b>35,012,485</b>	<b>37,596,628</b>	<b>39,534,422</b>	<b>100.0%</b>	<b>14,092,568</b>	<b>13,986,673</b>
Percentage Change	3.1%	3.1%	7.4%	7.4%	5.2%			-0.8%

\* Preliminary.

<sup>(1)</sup> Figures do not total due to rounding.

<sup>(2)</sup> Alaska Air Group, Inc. and Virgin America, Inc. merged effective December 2016. The merged airline received a single operating certificate from the FAA in January 2018. The merged airline moved to a single reservations system on April 25, 2018, and has announced that it will adopt Alaska's name and logo and retire the Virgin America brand. All operations of the merged carrier at the Airport have been recorded as Alaska Airlines operations since April 2018.

<sup>(3)</sup> Delta ceased its international service at the Airport in March 2014.

<sup>(4)</sup> American Airlines filed for bankruptcy protection in November 2011 and exited from bankruptcy on December 9, 2013. On December 9, 2013, American Airlines and US Airways merged, although they continued to operate under separate FAA operating certificates until April 8, 2015, when American Airlines received a single operating certificate from the FAA. US Airways continued to report operations separately until October 2015. US Airways served the Airport in Fiscal Year 2015-16, but was not among the top 10 most active airlines in terms of revenue landed weight.

<sup>(5)</sup> In May 2011, Southwest Airlines acquired AirTran Holdings, Inc., the parent company of AirTran Airways. The airlines combined operating certificates in March 2012 but operated separately through November 2014. Since November 1, 2014, all flights have been operated as Southwest Airlines.

<sup>(6)</sup> Air Canada served the Airport in Fiscal Year 2013-14, but was not among the top 10 most active airlines in terms of revenue landed weight for those years.

<sup>(7)</sup> Korean Air Lines served the Airport in Fiscal Years 2013-14 through 2015-16, but was not among the top 10 most active airlines in terms of revenue landed weight for those years.

<sup>(8)</sup> Cathay Pacific served the Airport in Fiscal Years 2013-14 through Fiscal Year 2016-17, but was not among the top 10 most active airlines in terms of revenue landed weight for those periods.

<sup>(9)</sup> British Airways served the Airport in Fiscal Years 2014-15, 2016-17 and 2017-18, but was not among the top 10 most active airlines in terms of revenue landed weight for those periods.

Source: Commission.

## Competition

### General

The Airport is the principal airport in the San Francisco Bay Area and one of three international gateways on the U.S. West Coast. The San Francisco Bay Area is also served by Metropolitan Oakland International Airport (OAK) and Norman Y. Mineta San Jose International Airport (SJC). The passenger traffic data with respect to LAX, OAK, and SJC discussed below was obtained from websites maintained by LAX, OAK, and SJC, respectively.

The Commission expects the Airport to continue to be the major air traffic center for the Bay Area based on air traffic projections, the substantial investment by a number of major airlines at the Airport, terminal facility improvements and passenger preferences stemming from the Airport's location, service and frequent flights to domestic and international destinations.

Substantially all of the international passenger traffic in the Bay Area is at the Airport. Thus, the primary competitor of the Airport on the West Coast for international passengers is LAX, rather than Oakland Airport or San Jose Airport. During Fiscal Year 2017-18, international passenger traffic (enplanements and deplanements) at the Airport totaled approximately 13.8 million (an increase of 6.9% over the prior Fiscal Year) compared to approximately 26.0 million at LAX (an increase of 6.6%). The choice by air carriers between the Airport and LAX for their international routes is affected by many factors, including the much larger population served by LAX, and the distance of each airport from various destinations.

In 2014, Delta Air Lines announced that the creation of an international gateway in Seattle was among its network strategies. By 2016, Delta Air Lines' Chief Executive Officer indicated that facility constraints at the Seattle-Tacoma International Airport (SEA) would limit growth until new facilities come online, notably a planned new international arrivals facility that is expected to be completed in 2020. According to statistics published by SEA, in Fiscal Year 2017-18 its international enplanements and deplanements totaled 5.3 million compared to 13.8 million at the Airport. Delta Air Lines ceased its international service at the Airport in March 2014.

### *Passenger Traffic*

According to traffic reports released by the three Bay Area airports for Fiscal Year 2017-18, the Airport accounted for approximately 63.7% of total domestic passenger traffic and approximately 88.3% of total international passenger traffic. The combined total passenger traffic increase at the three Bay Area airports during Fiscal Year 2017-18 was 6.5 million enplanements and deplanements (approximately 8.3%) higher than in Fiscal Year 2016-17. While the Airport's enplanements and deplanements increased by 7.0%, Oakland Airport increased by 6.1% and San Jose Airport increased by 17.2%, resulting in a slight decrease in market share for the Airport, from 69.1% in Fiscal Year 2016-17 to 68.3% in Fiscal Year 2017-18.

The following table summarizes comparative passenger traffic data at the three Bay Area airports for the last five Fiscal Years.

### **COMPARISON OF BAY AREA AIRPORTS TOTAL PASSENGER TRAFFIC (Enplanements and Deplanements) (Fiscal Years)**

Airport	2013-14	2014-15	2015-16	2016-17	2017-18	
					Number	% Change
San Francisco	46,057,988	48,212,794	51,409,232	53,969,058	57,747,186	7.0%
Oakland	9,890,271	10,754,556	11,614,845	12,593,371	13,356,803	6.1
San Jose	9,063,012	9,554,866	10,213,261	11,514,425	13,490,514	17.2
<b>TOTAL BAY AREA</b>	<b>65,011,272</b>	<b>68,522,216</b>	<b>73,237,338</b>	<b>78,076,854</b>	<b>84,594,503</b>	<b>8.3%</b>
Percentage Change	3.1%	5.4%	6.9%	6.6%	7.7%	

Sources: Commission, the Metropolitan Oakland International Airport and the Norman Y. Mineta San Jose International Airport.

### *Air Cargo*

During Fiscal Year 2017-18, the Airport accounted for approximately 46.2% of total air cargo at the three San Francisco Bay Area airports, compared with 47.5% in Fiscal Year 2016-17. Oakland Airport accounted for approximately 49.3% and San Jose accounted for approximately 4.6% of the total air cargo in the Bay Area during Fiscal Year 2017-18. The Airport handled approximately 26.4% of domestic loaded and unloaded cargo and approximately 82.7% of the Bay Area's international loaded and unloaded air cargo. Oakland Airport had the largest share of the domestic air cargo market (approximately 66.6% compared to approximately 65.5% during Fiscal Year 2016-17). This is attributable to its traffic in express package shipments, an activity that requires significant land area

that is not available at or in the vicinity of the Airport. The Airport experienced an increase in international cargo (including mail) of 26,452 tons (8.1%) compared to Fiscal Year 2016-17, and a decrease in domestic cargo (including mail) of 883 tons (0.4%) over the same period, resulting in an overall increase of 25,569 tons (4.8%). During Fiscal Year 2017-18, Oakland Airport experienced an increase in total cargo of 62,356 tons (11.6%) and San Jose Airport experienced an increase in total cargo of 105 tons (0.2%) each compared to Fiscal Year 2016-17. As a result, the Airport experienced a 1.3 percentage point decrease in cargo tonnage market share, while Oakland Airport had an increase in cargo tonnage market share of 1.7 percentage points and San Jose Airport had a decrease in cargo tonnage market share of 0.3 percentage points.

The following table summarizes comparative air cargo data at the three Bay Area airports for the last five Fiscal Years.

**COMPARISON OF BAY AREA AIRPORTS TOTAL AIR CARGO**  
(in metric tons)  
(Fiscal Years)

Airport	2013-14	2014-15	2015-16	2016-17	2017-18	
					Number	% Change
San Francisco	370,525	441,797	451,501	535,581	561,150	4.8
Oakland	520,486	539,030	543,880	536,826	599,182	11.6
San Jose	46,961	47,177	52,822	55,337	55,446	0.2
TOTAL BAY AREA*	<u>937,972</u>	<u>1,028,005</u>	<u>1,048,203</u>	<u>1,127,745</u>	<u>1,215,779</u>	<u>7.8%</u>
Percentage Change	3.9%	9.6%	2.0%	7.6%	7.8%	

Sources: Commission, the Metropolitan Oakland International Airport and the Norman Y. Mineta San Jose International Airport.

\* Totals may not add due to rounding.

### Airline Agreements

As of November 1, 2018, the City and 45 of the airlines that served the Airport in the first four months of Fiscal Year 2018-19 were party to Lease and Use Agreements that became effective on and after July 1, 2011 (the “Lease and Use Agreements”) following the expiration of prior lease and operating agreements with the airlines. The airlines that are party to a Lease and Use Agreement are referred to as “Signatory Airlines.” Non-signatory airlines operate at the Airport under month-to-month operating permits or on an itinerant basis. A brief description of certain major terms of the Lease and Use Agreements follows. For a more detailed summary of the Lease and Use Agreements, see APPENDIX E–“SUMMARY OF CERTAIN PROVISIONS OF THE LEASE AND USE AGREEMENTS.” For information on which airlines currently serving the Airport are party to the Lease and Use Agreements, see the table entitled “Air Carriers Reporting Air Traffic at the Airport” under “–Airline Service” above.

#### *Lease and Use Agreements*

**Signatories.** The Lease and Use Agreements took effect on July 1, 2011 and expire on June 30, 2021. Thirteen of the airlines that reported traffic on scheduled passenger flights in the first four months of Fiscal Year 2018-19 were non-signatory as of November 1, 2018. Four are affiliates that report traffic under their respective signatories. The remaining nine airlines’ passengers comprised less than 1.5% of the Airport’s total passengers in the month of October 2018. Airlines in addition to the current Signatory Airlines may sign the Lease and Use Agreement from time to time.

**Residual Methodology.** The Lease and Use Agreements govern the use of terminal, baggage claim, ticketing, ramp and gate areas. Under the Lease and Use Agreements, the Signatory Airlines pay terminal rents and landing fees under a residual rate-setting methodology tied to specified cost centers. This methodology is designed to provide revenues to the Commission sufficient to pay operating expenses and debt service costs. Under the residual rate-setting methodology, landing fees and terminal rentals are established each year to produce projected revenues from the airlines (“airline payments”) equal to the difference between (i) the Airport’s non-airline revenues and (ii) the Airport’s total costs, including without limitation operating expenses, debt service costs and the Annual Service Payment described under “AIRPORT’S FINANCIAL AND RELATED INFORMATION–Payments to the City–Annual Service

*Payment*” (“net costs”). In other words, rates and charges are established each year to produce projected airline payments equal to projected net costs. Thus, increases in non-airline revenues, such as parking and concession revenues, generally result in decreases in airline landing fees and terminal rental rates, and vice versa.

Differences between actual revenues and expenditures and amounts estimated in the calculation of airline fees and charges for any Fiscal Year result in adjustments of terminal rentals and landing fees in subsequent Fiscal Years. Such differences are recorded on the statements of net position in the financial statements of the Airport in the Fiscal Year to which such differences pertain. Net overcharges are recorded as liabilities and net undercharges are recorded as assets.

Annual Adjustment of Terminal Rentals and Landing Fees. The Commission may adjust terminal rental rates and landing fees each year for the next Fiscal Year based on each Signatory Airline’s proposed changes to its leased space, additions of new terminal space for lease, the forecast landed weight for the next Fiscal Year, and the Commission’s budgetary forecast of attributed non-airline revenues, operating expenses and debt service costs for the various Airport cost centers.

Mid-Year Adjustment of Terminal Rentals and Landing Fees. The Commission may increase terminal rental rates and/or landing fees at any time during the Fiscal Year if the actual expenses (including debt service) in one or more applicable cost centers are projected to exceed by 10% or more the actual revenues from such cost center. Prior to increasing terminal rental rates and/or landing fees, as applicable, the Commission must use commercially reasonable efforts to provide a 60-day notice to, and consult with, the Signatory Airlines. The Signatory Airlines are required to pay such increased terminal rentals and/or landing fees sufficient to cover the projected deficiency for the remaining months of the then-current Fiscal Year. The Airport has not made any such mid-year adjustments since Fiscal Year 2000-01.

Terminal Rentals and Landing Fees. Landing fees, consisting of minimum fees for fixed-wing and rotary aircraft and a rate based on landed weight, are imposed primarily with respect to Airfield Area and Airport Support Area net costs. Each Signatory Airline and other airlines and airfield users are required to pay landing fees, the principal component of which is based upon landed weight, that are established by the Commission to fully recover all Airfield and Airport Support Area net costs. Airlines that are not Signatory Airlines or an Affiliate Airline (as defined in the Lease and Use Agreements) of a Signatory Airline pay a 25% premium on landing fees. If a Signatory Airline ceases or substantially reduces its operations at the Airport, it remains liable for certain terminal rentals calculated each year on a residual basis. Any shortfall in landing fees payable to the Commission by the Signatory Airlines and other airlines and airfield users in any Fiscal Year as a result of actual landed weights being less than those projected are made up either from a mid-year rate adjustment, or from adjustments to landing fee rates in the succeeding Fiscal Years.

Funding of Capital Improvements. The Commission, subject to the limited exception described below, must use commercially reasonable efforts to finance all capital improvements through grants, TSA funding, PFCs or the issuance of Airport revenue bonds. However, the Commission may annually budget for capital improvements from current revenues up to \$4,200,000 in Fiscal Year 2008-09 dollars (\$4,795,945 in Fiscal Year 2018-19 dollars based on the Implicit Price Deflator), or a greater amount approved by a Majority-In-Interest of the Signatory Airlines (defined as more than 50% of the Signatory Airlines, which on the date of calculation represent more than 50% of the landed weight of such Signatory Airlines during the immediately preceding Fiscal Year).

Airline Review of Capital Improvements. The Commission is required to notify the Signatory Airlines in writing of proposed capital improvements. Within 45 days of the receipt of such notice, a Majority-In-Interest may require the Commission to defer a proposed capital improvement for up to six months in order for the airlines to present their views with respect to such capital improvement, after which time the Commission may proceed with the capital improvement. Capital improvements that are (i) required by a federal or state agency having jurisdiction over Airport operations, (ii) required by an emergency which, if the improvements are not made, would result in the closing of the Airport within 48 hours, or (iii) financed by the issuance of Special Revenue Bonds, are not subject to the airline review requirement. “Special Revenue Bonds” are obligations issued by the Commission or on behalf of the Airport, the debt service on which is payable from or secured in whole or substantial part by revenues other than Revenues, and include Special Facility Bonds. While some projects in the current Capital Improvement Plan will require airline review prior to expenditure of proceeds from the subject Bonds, the Commission has completed airline review of

outstanding qualifying projects well in excess of the proceeds of the proposed Series 2019A Bonds, Series 2019B Bonds and Series 2019C Bonds.

Joint Use of Space. Gates in the domestic terminals are used by airlines on a preferential or common-use basis while gates in the ITC are used on a common or joint use basis. Gates assigned to an airline for preferential use are allocated annually according to a formula taking into account each airline's actual seats in the preceding month of August. Gates can thus be recaptured by the Airport annually from airlines with decreasing traffic and allocated to other airlines with increasing traffic. Any preferential use gate can also be used by any airline when it is not actively being used by the airline to which it is allocated. With respect to the domestic terminals, the Airport may recapture unneeded support facilities from a Signatory Airline at any time if the number of preferential use gates allocated to such airline is reduced. These provisions allow the Airport to continue receiving terminal rentals on unused support facilities until they are needed by another airline. With respect to the ITC, most ITC gates, holdrooms, ticket counters and baggage systems (including the baggage system at domestic Terminal 2) are leased to a group of airlines on a joint use basis and allocated for use among the various airlines as needed during the day in accordance with management protocols. Rental charges for joint use facilities are based on a formula, with 80% of the charges allocated pro rata to the airlines based on passenger levels, and 20% shared equally by the airlines in the group. This arrangement facilitates the efficient use of the ITC facilities and enables the Airport to accommodate new domestic or international carriers or other market changes within the industry. A small number of domestic terminal and ITC gates and related facilities are designated for common use to accommodate itinerant airlines and overflow domestic departures and arrivals. Fees for common use facilities are charged on a per-turn basis.

Security Deposit. Each Signatory Airline is required to post security with the Commission to guaranty its performance and payment. Such security may consist of a surety bond, a letter of credit or another form of security acceptable to the Commission in an amount equal to two months of terminal area rentals, landing fees, and usage fees. Airlines operating at the Airport pursuant to ground leases or 30-day permits are required to post security bonds or letters of credit in an amount ranging from two to six months estimated rentals under such agreements.

Cross-Default Provisions. A Signatory Airline may have more than one agreement, lease or permit with the Airport. If a default occurs under any one of such other agreements, a cross-default is triggered under the Signatory Airline's Lease and Use Agreement. In addition, if a Signatory Airline is in default under its Lease and Use Agreement, the Airport may terminate any other agreement with such Signatory Airline.

Expiration of the Lease and Use Agreements. Upon the expiration of the Lease and Use Agreements on June 30, 2021, the Commission will have various options, including (a) extending the long-term agreements, (b) negotiating new long-term agreements, (c) entering into month-to-month agreements under the holdover provisions of the existing Lease and Use Agreements, or (d) not entering into new agreements and setting rates and charges by resolution. See "Holding Over" in APPENDIX E—"SUMMARY OF CERTAIN PROVISIONS OF THE LEASE AND USE AGREEMENTS." In any event, the Commission intends to continue to establish rates and charges that will comply with the requirements of the rate covenant under the 1991 Master Resolution and that will allow the continued safe and efficient operation of the Airport and additional capital investment. If the Commission and the airlines do not finalize new or extended agreements by the time the existing Lease and Use Agreements expire, the Commission intends to set cost-recovery based rates and charges by resolution that are consistent with the requirements of the 1991 Master Resolution and any applicable parameters established by the FAA and the U.S. DOT. The Commission cannot impose a residual rate-setting system without the agreement of the airlines. However, the Commission cannot predict what form any new agreements may take, whether the existing residual rate-setting system will be continued or whether the balance of risks and benefits between the Commission and the airlines will be the same as in the current Lease and Use Agreement. The Commission and the airlines have not commenced any discussions on this topic.

#### *Potential Effects of an Airline Bankruptcy*

In the event a bankruptcy case is filed with respect to an airline operating at the Airport, the lease or permit governing such airline's use of Airport space would constitute an executory contract or unexpired lease pursuant to the United States Bankruptcy Code. A trustee in bankruptcy or the airline as debtor in possession may reject any executory contracts or unexpired leases of non-residential real property. Among other things, rejection of an unexpired lease is deemed to be a default under the lease immediately before the date of the filing of the bankruptcy petition. Under the Bankruptcy Code, upon rejection of an unexpired lease, the airline debtor must surrender non-residential

real property to the lessor. As a result, rejection of an unexpired lease by an airline debtor may result in the Commission regaining control of the applicable facilities (including gates and boarding areas). The Commission could then lease or permit such facilities to other airlines. The Commission's ability to lease such facilities to other airlines may depend on the state of the airline industry in general, on the nature and extent of the increased capacity at the Airport resulting from the departure of the debtor airline, and on the need for such facilities. Alternatively, under the Bankruptcy Code an airline debtor can "assume" its executory contracts and unexpired leases. The Bankruptcy Code further provides for an airline debtor to assume and assign its executory contracts and leases, subject to certain conditions. If the bankruptcy trustee or the airline assumes its executory contracts or unexpired leases as part of a reorganization, the airline debtor must "cure" or provide adequate assurance that the airline debtor will promptly cure its prepetition defaults, including arrearages in amounts owed. Even if all such amounts owed are eventually paid, the Commission could experience delays of many months or more in collecting such amounts.

Amounts under a nonresidential lease arising from or after the bankruptcy petition must be paid when due unless the bankruptcy court extends the time for performance, but the court cannot extend such time more than 60 days from the date the petition is filed. Amounts accruing during the case generally have administrative expense priority, but such priority does not ensure that such amounts will be paid.

In Chapter 11 cases, the debtor in possession or a trustee, if one is appointed, has 120 days from the date of filing of the bankruptcy petition to decide whether to assume or reject a nonresidential lease, such as a Lease and Use Agreement. The 120-day period may be extended by court order for an additional 90 days for cause. Any additional extensions are prohibited unless the debtor airline or trustee obtains the Airport's consent and a court order.

Under the Bankruptcy Code, any rejection of a lease could result in a claim by the Airport for lease rejection damages against the debtor airline. Such claim would be in addition to all pre-bankruptcy amounts owed by the debtor airline. A rejection damages claim is for the rent coming due under the lease in the future and is capped under the Bankruptcy Code at the greater of one year, or 15%, not to exceed three years, of the remaining term of the lease. A rejection damages claim is generally treated as a general unsecured claim of the airline debtor. However, the Airport may have rights against any faithful performance bond or letter of credit required of an airline to secure its obligations under the Airport agreements or the right to set off against credits owed to the airline under the Airport agreements.

There can be no assurance that all claim amounts could be collected if an airline rejects its Lease and Use Agreement in connection with a bankruptcy proceeding. In addition, in the event an airline rejects its lease and use agreements, the Airport may be required to repay landing fees and terminal rentals paid by the airline in the 90-day period prior to the date of the bankruptcy filing, since such payments are treated as "preferential" and may be avoidable under the Bankruptcy Code. Such avoidance may be subject to defenses however, including payment in the ordinary course and subsequent new value.

Even if a debtor airline assumes its lease while in Chapter 11, a bankruptcy trustee could reject the assumed lease if the case were subsequently converted to a case under Chapter 7 of the Bankruptcy Code. In that event, the Airport's claim against the bankruptcy estate would be treated as an administrative expense claim limited to all sums due under the lease for the two-year period following the later of the rejection date or the date of the actual turnover of the premises. Any remaining amounts due under the lease would be treated as a general unsecured claim limited to the greater of one year of rent reserved under the lease or 15% of the rent for the remaining lease term, not to exceed three years of rent.

Also see "CERTAIN RISK FACTORS—Bankruptcy of Airlines Operating at the Airport."

## **Certain Federal and State Laws and Regulations**

### *Federal Law Prohibiting Revenue Diversion*

Federal law requires that all revenues generated by a public airport be expended for the capital or operating costs of the airport, the local airport system, or other local facilities which are owned or operated by the airport owner or operator and directly and substantially related to the air transportation of passengers or property. In February 1999, the FAA adopted its "*Policies and Procedures Concerning the Use of Airport Revenue*" (the "Final Policy") clarifying

the application of these principles to airport sponsors that receive federal grants for airport development from the FAA, including the Airport. The City is the “sponsor” of the Airport for purposes of these federal requirements.

Examples of unlawful revenue diversion include using airport revenues for: (1) land rental to, or use of land by, the sponsor for non-aeronautical purposes at less than the fair market rate; (2) impact fees assessed by any governmental body that exceed the value of services or facilities provided to the airport; or (3) direct subsidies of air carrier operations. An otherwise unlawful revenue diversion may be “grandfathered” if such use was instituted pursuant to a law controlling financing by the airport owner or operator, or a covenant or assurance in a debt obligation issued by the airport owner, prior to September 1982. The Final Policy acknowledges that the Commission’s Annual Service Payment to the City’s General Fund is “grandfathered” as a lawful revenue diversion. See “AIRPORT’S FINANCIAL AND RELATED INFORMATION—Payments to the City—*Annual Service Payment*” for further description of the Annual Service Payment. The U.S. Congress could revoke the “grandfathering” of the Annual Service Payment. Also see APPENDIX E—“SUMMARY OF CERTAIN PROVISIONS OF THE LEASE AND USE AGREEMENTS—Event of Default; Termination or Suspension of Lease and Use Agreement Provisions—*Commission’s Right to Suspend Part of Lease and Use Agreement.*”

The Commission makes substantial payments to the City, separate from and in addition to its Annual Service Payment, for direct services provided to the Airport by other City departments. The FAA has authority to audit the payments and to order the City to reimburse the Airport for any improper payments made to the City, and the OIG has authority to audit the FAA’s oversight of the payments. The FAA may also suspend or terminate pending FAA grants to the Airport and/or any then-existing PFC authorizations as a penalty for any violation of the revenue diversion rules. In addition, the U.S. DOT may also withhold non-aviation federal funds that would otherwise be made available to the City as a penalty for violation of the revenue diversion rules (for example, grants to the City’s municipal railway system). OIG recently concluded an audit to assess FAA’s oversight of “grandfathered” airports’ compliance with federal law related to airport revenue payments. The Airport was one of the airports included in this OIG audit. The OIG found inaccuracies in the FAA’s records, including that the FAA over-reported total grandfathered payments by the Commission. The audit included findings and recommendations to improve the accuracy of FAA’s data regarding grandfathered payments, and the FAA concurred in OIG’s recommendations. See also “AIRPORT’S FINANCIAL AND RELATED INFORMATION—Payments to the City” and “CERTAIN RISK FACTORS—Reduction in Federal Grants.”

On November 7, 2014, the FAA amended its 1999 *Policies and Procedures Concerning the Use of Airport Revenue* to confirm that state and local taxes on aviation fuel, whether part of a general sales tax or otherwise, and whether imposed by an airport operator or by state or local taxing authorities, are subject to the federal restrictions on the uses of airport revenue. These restrictions do not apply to taxes in effect on or before December 30, 1987. The FAA’s policy amendment became effective on December 8, 2014, but the FAA provided a three-year transition period for state and local governments to comply. The FAA’s policy amendment also requires the Airport to inform state and local taxing entities of these provisions and take reasonable actions within its power to influence state and local tax laws to conform to these requirements. The Airport has made the required notifications. Any sales taxes on aviation fuel sold at the Airport and received by state and local governments that cannot be grandfathered or used in accordance with the FAA’s revenue use policy, likely would be returned to the Airport, resulting in a modest amount of additional revenue that cannot be quantified at this time.

#### *Federal Accessibility Law*

The Office of Civil Rights of the FAA (“OCR”) periodically reviews airports’ compliance with federal civil rights laws and accessibility laws. OCR initiated a review of the Airport’s compliance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act in June 2017 and found certain areas of non-compliance. The Commission has responded to the OCR’s preliminary recommendations and has already implemented several of the recommendations. The Commission cannot predict the final outcome of the OCR audit but does not expect its implementation of the final recommendations to have a material financial or operational impact.

#### *State Tidelands Trusts*

A substantial portion of the land on which the Airport’s facilities are located is held in trust by the City and administered by the Commission pursuant to tidelands grants from the State. These grants, accomplished by special State legislation, date to 1943 and 1947. Generally, the use of this land is limited to Airport purposes under the terms

of the grants. The Commission may not transfer any of this land, nor lease it for periods of more than 50 years. There are also certain limitations on the use of funds generated from facilities located on this land. However, none of the various restrictions is expected to affect the operations or finances of the Airport. The grants may be subject to amendment or revocation by the State legislature, as grantor of the trust and as representative of the beneficiaries (the people of the State). Under the law, any such amendment or revocation could not impair the accomplishment of trust purposes, or abrogate the existing covenants and agreements between the City, acting by and through the Commission, as trustee, and the Airport's bondholders. The Commission does not anticipate that the State will revoke the tidelands grants.

#### *State Proposition 218*

In November 1996, the voters of the State approved Proposition 218, known as the "Right to Vote on Taxes Act." Proposition 218 adds Articles XIIC and XIID to the California Constitution, and contains a variety of interrelated provisions concerning the ability of local governments, including the City, to impose both existing and future taxes, assessments, fees and charges.

Article XIIC removes limitations on the initiative power in matters of local taxes, assessments, fees and charges. Consequently, the voters of the City could, by future initiative, seek to repeal, reduce, or prohibit the future imposition or increase of, any local tax, assessment, fee or charge. "Assessment," "fee," and "charge" are not defined in Article XIIC and it is unclear whether the definitions of such terms contained in Article XIID (which are generally property-related as described below) are so limited under Article XIIC.

Article XIID conditions the imposition of a new or increased "fee" or "charge" on either voter approval or the absence of a majority protest, depending upon the nature of the fee or charge. The terms "fee" and "charge" are defined to mean levies (other than ad valorem taxes, special taxes and assessments) imposed by a local government upon a parcel or upon a person as an incident of the ownership or tenancy of real property, including a user fee or charge for a "property-related service." No assurance can be given that the voters of the City will not, in the future, approve initiatives which seek to repeal, reduce, or prohibit the future imposition or increase of, assessments, fees, or charges, including the Commission's fees and charges, which are the source of Net Revenues pledged to the payment of debt service on the Bonds. The Commission believes that Article XIID does not apply to Airport fees and charges imposed by the Commission.

The interpretation and application of Proposition 218 will ultimately be determined by the courts or through implementing legislation. The Commission is unable to predict the outcome of any such litigation or legislation.

#### *State Proposition 26*

In November 2010, the voters of the State approved Proposition 26, known as the "Supermajority Vote to Pass New Taxes and Fees Act." Proposition 26, among other things, amended Article XIIC to the California Constitution principally to define what constitutes a "tax" under the limitations and requirements of that provision. Article XIIC imposes limitations on local governments like the City when imposing certain taxes, including a requirement that the local government submit certain taxes to the electorate for its approval. Before Proposition 26, Article XIIC did not define the term "tax" and the purpose of Proposition 26 is to broadly define what constitutes a tax under Article XIIC to include "any levy, charge, or exaction of any kind imposed by a local government." Proposition 26 lists several exceptions to the definition of "tax," which include (a) a charge for a specific benefit or privilege, which does not exceed the reasonable costs of providing the benefit or privilege, (b) a charge for a government service or product, which does not exceed the reasonable costs of providing the service or product, (c) a charge for the reasonable regulatory costs of issuing licenses and permits, performing investigations, inspections, and audits, and the administrative enforcement thereof, (d) a charge for entrance to or use of local government property, or the purchase, rental, or lease of local government property, and (e) a fine, penalty, or other monetary charge imposed as a result of a violation of law. If any of the Airport's fees and charges were determined to be "taxes" that are "imposed" under Article XIIC, the Airport may no longer be able to impose or adjust those fees and charges without voter approval.

## **Employee Relations**

The Commission budgeted 1,827 full-time equivalent positions for Fiscal Year 2018-19, as compared to 1,809 in Fiscal Year 2017-18. The Charter governs the Airport's employment policies. The Charter authorizes the San Francisco Civil Service Commission to establish rules and procedures to implement those policies.

There are presently 17 labor unions representing Airport employees. The Charter allows employee organizations representing City workers to negotiate wages, hours, benefits and other conditions of employment through collective bargaining. The decision to choose collective bargaining is irrevocable. All Airport employees now bargain collectively. Most Airport employee unions enter into new agreements with the City every three years; however, in 2017, most unions entered into rollover agreements with the City that expire June 30, 2019. Disagreements between the employees and the City in collective bargaining are resolved by an arbitrator whose decision is final. There have been no strikes by City employees (including Airport employees) since at least 1976, when an amendment to the City's Charter was approved which prohibits strikes and similar work actions by City employees.

For discussion of employee benefit plans, see "AIRPORT'S FINANCIAL AND RELATED INFORMATION—Payments to the City—*Employee Benefit Plans.*"

## **Hazardous Material Management**

### *Environmental Staff*

The Commission employs environmental staff responsible for management of hazardous materials and compliance with environmental regulations.

### *Remediation and Preventative Measures*

The Commission and certain Airport tenants have discovered and remediated or are engaged in the process of remediating and managing certain contamination on Airport property pursuant to current regulatory standards and requirements of the California Regional Water Quality Control Board, San Francisco Bay Region (the "Regional Board"). The contamination has primarily consisted of leaked fuel constituents that most likely resulted from fueling practices of the 1940s through the early 1960s, accidental spills of fuel hydrocarbons, or releases from leaky pipes or underground tanks. However, the Commission has instituted regulations establishing fueling practices and facilities requirements that are intended to prevent hazardous materials from being discharged into the environment. Remediation activities at the Airport in the majority of cases have consisted of removal and offsite disposal of contaminated soil and extraction and treatment of contaminated groundwater and the use of *in situ* remediation methods approved by the regulatory agencies with jurisdiction. Substantial hazardous material management work in connection with projects under the Airport's Master Plan has been completed and continues to be undertaken in connection with remaining Master Plan projects and other Airport Capital Improvement Plan projects.

Pursuant to requirements of the Regional Board, remediation activities have been and continue to be undertaken in specific locations at the Airport by tenants responsible for the contamination in those locations, and the Airport has cleaned up contamination, and expects to continue to clean up contamination, that it encounters during construction on Airport property. As a result of litigation initiated by the Commission in 1997 over contamination on Airport property, the Commission reached settlement agreements with a number of current and former tenants that require such tenants to pay a set percentage of future environmental clean-up costs incurred by the Airport to address any residual contamination caused by such tenants' activities. Since costs incurred by the Airport are not known until the Airport embarks on a construction project or undertakes operation and maintenance activities that encounter such residual contamination, the agreement with the settling tenants provides for compensation of relevant incurred expenses as the Airport incurs such costs. While the total clean-up costs that the Airport will incur are not presently known, the settlement agreements provide that the tenants' obligation terminates when clean-up costs exceed either \$75 million or \$98 million, depending on the tenant and the specific agreement. Some tenants' obligations also terminate after October 2048 regardless of the amount of incurred cost. In the event a settling tenant successfully

disputes an invoice, is no longer in business or is otherwise unable to pay its percentage share, the Commission may become responsible for the remediation costs attributable to that tenant.

## CAPITAL PROJECTS AND PLANNING

### The Capital Improvement Plan Process

The Airport's Capital Improvement Plan ("CIP") process is led by the Capital Project Review Committee (the "CPRC") and the Capital Improvement Program Working Group (the "CIP Working Group"). The CPRC is comprised of senior management, and the CIP Working Group is comprised of management staff. The CIP Working Group evaluates and ranks capital projects according to a set of objective criteria that reflect the Airport's strategic goals, which currently include nurturing a competitive and robust air service market, delivering exceptional business performance, revolutionizing the passenger experience, and being the industry leader in safety and security. The CPRC reviews the CIP Working Group's selection of projects for funding in a CIP. In reviewing the CIP, the CPRC considers available funding and the projected impact of capital projects on terminal rental rates and landing fees that the airlines at the Airport pay. The CPRC sends its recommendations to the Director who approves the final draft which is then sent to the Commission for approval. Generally, capital projects require the approval of the Commission and the Board of Supervisors, certain actions of which are subject to approval by the Mayor. In most cases, an airline review is also required (see "SAN FRANCISCO INTERNATIONAL AIRPORT–Airline Agreements"). The Airport's CIP is updated on an as-needed basis and an update of the CIP is currently in process.

### The Capital Improvement Plan

#### *Overview*

The CIP consists of 56 projects totaling \$7.4 billion, which includes \$7.38 billion of capital spending through Fiscal Year 2023 (including amounts spent prior to, and through, Fiscal Year 2017-18), with a further \$15 million in spending during the succeeding 3-year period from Fiscal Year 2024 to Fiscal Year 2026. The CIP has two components: (1) The Ascent Program – Phase I and (2) The Fiscal Year 2017-18 Infrastructure Projects Plan (the "Infrastructure Projects Plan"). The Infrastructure Projects Plan includes projects that address newly identified capital needs. The CIP was approved by the Commission on September 5, 2017. The Airport is currently in the process of updating the CIP (see "*–Updates to CIP*" below).

The CIP is designed to address several key objectives. The Commission's highest CIP priority objective is addressing passenger traffic growth and meeting demand-driven terminal gate needs. The Airport presently experiences gate constraints during peak periods. Passenger traffic has grown 58.1% over the last 10 full Fiscal Years and was 7.2% higher during Fiscal Year 2017-18 as compared to Fiscal Year 2016-17. The Commission expects traffic to continue to grow in future fiscal years after some continued adjustment in the latter part of Fiscal Year 2018-19 primarily as a result of Alaska Airlines' post-merger restructuring of its routes, though such growth is likely to be at a more moderate pace than over the last few years. See "SAN FRANCISCO INTERNATIONAL AIRPORT–Passenger Traffic." Other key CIP objectives include improving groundside access for passengers, enhancing safety and security, promoting sustainability, providing the information technology infrastructure necessary to meet passenger and tenant operational needs, improving the ambiance and customer experience at the Airport, and maintaining the Airport's competitive position compared to other international gateways with respect to capacity and cost.

#### *Anticipated Costs and Financing Sources*

The CIP includes an estimated \$4.7 billion in project spending over the five-year period of Fiscal Year 2018-19 through Fiscal Year 2022-23, of which \$4.5 billion is expected to be funded with the proceeds of the previously issued Bonds, the Series 2019A Bonds, the Series 2019B Bonds, the Series 2019C Bonds and additional Bonds expected to be issued in the future (see "CERTAIN RISK FACTORS–Additional Long-Term Debt"). In addition, \$129 million of the CIP is expected to be reimbursed with AIP funds and other grants, \$52 million is expected to be funded by SFO Fuel or by Special Facility Bonds payable by SFO Fuel, and \$25 million is expected to be funded with Airport operating funds. The CIP includes an aggregate of \$4.7 billion in project spending over the eight-year period from Fiscal Year 2018-19 through Fiscal Year 2025-26, and assumes full use of the Ascent Program Reserve (see "*–The Ascent Program – Phase I Overview*" below). The total project cost of the CIP is \$7.4 billion, including \$2.7 billion

that has already been funded. The timing and amounts of additional Bonds may change depending on the timing of capital expenditures and market conditions. The Commission bases its bond issuance needs on capital project cash flows, which are updated regularly.

### *Capital Projects*

The estimated capital project costs associated with the CIP are summarized in the table below. While the CIP total is unchanged since its approval on September 5, 2017, project costs for certain projects within the plan, as well as timing of development costs for some projects, have changed. The table below summarizes the CIP, and reflects information on costs, funding and implementation timing as of November 1, 2018.

#### **Capital Improvement Plan** (\$ in millions)

(\$ in millions)	Prior Funding	Future Funding through 2022-23 <sup>(1)</sup>	Fiscal Years 2023-24 through 2025-26	Future Funding through 2025-26	Total
Ascent Program - Phase I					
Project Costs	\$2,671	\$4,115	\$15	\$4,130	\$6,801
Program Reserve <sup>(2)</sup>	-	468	-	468	468
Subtotal – Ascent <sup>(3)</sup>	\$2,671	\$4,584	\$15	\$4,599	\$7,270
Infrastructure Projects Plan	9	113	-	113	122
<b>Total Capital Improvement Plan<sup>(3)</sup></b>	<b>\$2,680</b>	<b>\$4,697</b>	<b>\$15</b>	<b>\$4,712</b>	<b>\$7,392</b>

<sup>(1)</sup> Including from proceeds of Series 2019A Bonds, Series 2019B Bonds and the Series 2019C Bonds.

<sup>(2)</sup> Ascent Program Reserve has been and is expected to be used only after considering other cost mitigation efforts. As of November 1, 2018, a total of \$271 million of the \$739 million Ascent Program Reserve originally established has been applied to project costs, with approximately an additional \$65 million expected to be applied in the near future.

<sup>(3)</sup> Totals may not add due to rounding.

### *The Ascent Program – Phase I Overview*

The Ascent Program – Phase I consists of projects that were included in the Fiscal Year 2016-17 capital plan, representing \$7.3 billion of the \$7.4 billion CIP. Highlights of the Ascent Program – Phase I’s capital projects are provided in the following sections. Project budgets in these sections reflect total project budgets, which may include prior year funding.

The program included a \$739 million Ascent Program Reserve, which consisted of \$600 million in program reserves and \$139 million in previously existing project reserves. The Ascent Program Reserve has been used to address unanticipated needs of projects within the Ascent Program, as they have arisen. Only projects in the Ascent Program are eligible to receive program reserves. The Commission only utilizes the Ascent Program Reserve after consideration of other cost mitigation efforts. The Ascent Program Reserve can be increased to the extent that there are cost savings from Ascent projects. A net of \$271 million of the Ascent Program Reserve has been allocated to projects since the Commission approved the CIP on September 5, 2017, resulting in a remaining Ascent Program Reserve balance of \$468 million as of November 1, 2018. As of November 1, 2018, approximately \$65 million of Ascent Program Reserve was undergoing the approval process for transfer, and is expected to be transferred to individual projects, which would result in an Ascent Program Reserve balance of \$403 million. The Report of the Airport Consultant attached hereto as APPENDIX A assumes that the entire Ascent Program Reserve is used. If a portion of the Ascent Program Reserve is not utilized, the Commission may elect to apply to a potential subsequent phase of the Ascent Program.

While is no specific plan for a subsequent phase to the Ascent Program, in 2016 the Commission completed a recommended Airport Development Plan (“Recommended ADP”), which is currently undergoing environmental review. See “–Airport Development Plan.” The Recommended ADP, as modified during environmental review, will result in the identification of a range of potential additional capital projects, one or more of which may be designated

as the “Ascent Program – Phase II” (or similar title) and added to future versions of the Commission’s CIP, if and when the Commission deems that they are warranted to address traffic growth and other factors. The Recommended ADP is not included in the Ascent Program – Phase I or the CIP, nor is it reflected in the financial forecasts included in the Report of the Airport Consultant.

A brief description of the largest projects in the Ascent Program – Phase I follows below, organized by five Airport cost centers: Terminals, Groundside, Airport Support, Utilities, and Airfield. Note that some projects span multiple cost centers; in such cases project totals reflect only the total for that cost center. Project budgets are as of November 1, 2018. Some individual project budgets remain subject to change, but any changes within the Ascent Program are expected to be the overall \$7.3 billion Ascent Program – Phase I.

#### *Major Ascent Program – Phase I Capital Projects - Terminals*

The largest terminal project spending in the CIP is for the renovation of Terminal 1 (\$2.4 billion) and the renovation and reconfiguration of the eastern and western sides of Terminal 3 (\$1.2 billion). The planned Terminal 1 renovations include the construction of a new 25-gate Boarding Area B (19 replacement gates and 6 new gates), seismic and building systems improvements, construction of a new baggage handling system, renovation of the central and southern portions of the departures hall, construction of a consolidated security checkpoint, and construction of a post-security passenger connector and sterile connector from Terminal 1 to the International Terminal with enhanced passenger amenities. The reconfiguration and renovation of the western side of Terminal 3 is intended to increase gate flexibility, improve seismic stability, upgrade building and baggage handling systems, improve passenger flow, add a sterile connector to the International Terminal, and enhance passenger amenities.

Other major terminal spending in the CIP includes the International Terminal – Phase 1 project to upgrade and improve the operational efficiency within the departures level of the terminal and an International Terminal Phase II project, which has not entered the project pre-design phase (\$313 million); the Courtyard 3 Connector project which will construct a post-security passenger connector between Terminal 2 and Terminal 3 in conjunction with a multi-story office block for Commission and tenant use (\$254 million); the Gate Enhancement project to meet increased gate demands (\$98 million); the Terminal 2 Air Traffic Control Tower demolition and office tower, which will construct new office, concession, airline club space, and public amenities (\$92 million); and improvements to the International Terminal baggage handling system (\$89 million).

#### *Major Ascent Program – Phase I Capital Projects - Groundside*

The On-Airport Hotel (\$240 million) is the largest groundside project in the CIP. The On-Airport Hotel is anticipated to open during summer of 2019.

The Commission designated the planned hotel as a “Special Facility” under the 1991 Master Resolution, which allows the hotel revenues to be segregated from the Airport’s other revenues and used to pay hotel operating expenses and debt service on the Hotel Special Facility Bonds. In order to obtain the lowest cost of financing, the Commission purchased the Hotel Special Facility Bonds with a portion of the proceeds of the Series 2018B/C Bonds. The Commission issued the Hotel Special Facility Bonds and Series 2018 B/C Bonds in June 2018. See “SECURITY FOR THE SERIES 2019A-D BONDS – Other Indebtedness – *Special Facility Bonds*” and “– *Airport Hotel Special Facility Revenue Bonds*.”

Three major projects comprise the majority of the balance of the groundside improvement projects: the AirTrain Extension Project, which extends the AirTrain system to the new long-term parking garages and constructs a new station at the On-Airport Hotel (\$219 million); a new long-term parking garage (\$161 million); and a now-completed facility for the Airport’s Ground Transport Unit (\$40 million). The Airport has provided, and intends to continue to provide, replacement bus service during any construction-relate AirTrain closures, as it generally does during planned or unplanned AirTrain closures.

### *Major Ascent Program – Phase I Capital Projects - Airport Support*

Major airport support projects include: the Airport Security Infrastructure Project (\$166 million); renovation of the Superbay Hangar (\$113 million); technology improvements (\$79 million); and construction of the first phase of the Consolidated Administrative Campus (\$79 million).

### *Major Ascent Program Phase I Capital Projects - Utilities*

Major utilities-related CIP projects include: “net zero” energy use-related improvements to the terminals and other major Airport facilities and systems (\$176 million); waste water system improvements (\$126 million); and energy and efficiency improvements (\$32 million).

### *Major Ascent Program Phase I Capital Projects - Airfield*

Major airfield-related CIP projects include taxiway improvement projects (\$78 million); runway improvements (\$71 million); and South McDonnell Road Realignment (\$18 million).

### *Ascent Program – Phase I – Major Capital Project Deferrals*

A number of projects that were included in the prior capital plan (adopted in Fiscal Year 2016-17) have been deferred and are not included in the CIP. Notable deferrals include the consolidated rental car facility project and the related rental car center conversion to public parking (\$540 million). Airport staff and senior management determined the consolidated rental car facility project not to be a critical capital need at this time. Other notable deferrals include the Building 944 conversion to flight kitchen (\$26 million), and the renovation of Cargo Buildings 606 and 730 (\$25 million), which also were determined not to be critical capital needs at this time. Deferral of these projects helped offset increases in other Ascent Program project budgets, resulting from decisions to add scope elements to meet demand and/or to address the impact of construction cost escalation on project budgets, without increasing the total cost of the Ascent Program – Phase I. There have been other, less substantial, deferrals since the adoption of the CIP (the largest being the deferral of a \$5.5 million project) and the scope of some projects has been reduced, most notably the Shoreline Protection Program discussed under “CERTAIN RISK FACTORS–Risks Associated with Global Climate Change.”

### *Infrastructure Projects Plan - Major Capital Projects*

The Infrastructure Projects Plan consists of seven new infrastructure projects added to the CIP after Fiscal Year 2016-17. The Infrastructure Projects Plan has a total approved project cost of \$122 million. These projects are critical for meeting current safety and operational needs of the Airport. Major projects include the installation of new on-Airport jet fuel storage tanks (\$52 million), which is expected to be funded by special facility bonds issued by the Airport on behalf of SFO Fuel Company (see “SECURITY FOR THE SERIES 2019A-D BONDS – Other Indebtedness – SFO Fuel Bonds”); aircraft parking power and preconditioned air improvements at Plot 40/41 (\$25 million), which are expected to be partially grant funded; Federal Aviation Administration (FAA) Part 139 required airfield improvements (\$20 million), and the installation of a new computer based landing system to enhance landing efficiency and mitigate noise (\$10 million).

### *Updates to CIP*

The Commission is currently in the process of updating its CIP. Any new projects would be added to the Infrastructure Projects Plan. Additional projects are currently under consideration that may add approximately \$380 million to the Capital Improvement Plan. In addition, previously approved projects in the Infrastructure Projects Plan may have budget increases, currently expected to be approximately \$20 million in total. Any new projects or Infrastructure Plan project increases would be subject to the Airport’s CIP update process (see “—The Capital Improvement Plan Process” above).

### *Implementation of Capital Projects*

The Commission uses a variety of strategies to mitigate risk associated with the implementation of the projects in its CIP. The Commission has a Project Labor Agreement to minimize labor-related disruptions to project implementation. The Project Labor Agreement applies to most major Airport capital projects including Terminal 1 Center, Boarding Area B, and the post-security passenger connectors; and the construction of the Terminal 2 Office Tower); International Terminal and Boarding Area F checked baggage system modernization program; improvements to the International Terminal baggage handling system; the industrial waste treatment plant; the Airport hotel; the airport security infrastructure program; the new long-term parking garage; the first phase of the Airport-wide amenities program (the REACH project); the AirTrain extension; Terminal 3 West renovations; Boarding Area A gate enhancements; Plot 2 and South McDonnell Road realignment, the International Terminal Phase I and II projects, and the Courtyard 3 Connector. The Airport works closely with stakeholders, including airlines, on development and implementation of the CIP.

The Commission has also developed a number of approaches to anticipate and mitigate construction cost escalation. At each design phase, if engineers' estimates exceed budget, staff may utilize value engineering to identify opportunities to reduce costs. Airport project cost models include a variety of contingencies, including construction-escalation of 5% per year, to the mid-point of construction, applied to unawarded base bid scope (i.e., the estimated cost of trade bid packages, not including contingencies, that have not yet been awarded to a subcontractor). Other contingencies include a 0%-15% design contingency applied to base bid unawarded scope in a declining amount through final design, and a 5% bid contingency applied to unawarded base bid scope. The Commission also adds a budgeted Airport contingency equal to 7.5% of the total budget of the prime construction contract. Further, the Airport identifies 10% of discretionary scope in each project, as well as future projects that may be deferred or removed, if and as necessary, based on cost and demand considerations. Lastly, the Airport may use portions of the Ascent Program Reserve after other cost management techniques have been considered.

Nevertheless, project development could be delayed, or the cost of completing projects included in the CIP could be higher than expected, due to various factors. See "CERTAIN RISK FACTORS—Capital Projects."

As of October 1, 2018, 37% of the work, representing the cost of labor completed and materials purchased against project budgets, for the construction portion of the Ascent Program, which makes up \$7.1 billion of the \$7.3 billion Ascent Program, had been performed. In addition, the Airport had cost assurance on 66% of the construction portion of the Ascent Program, representing a portion of the current project budgets that have reached a guaranteed maximum price, are in contract, or have otherwise been committed.

### **Airport Development Plan**

The Airport completed the Recommended ADP in September 2016. The Recommended ADP defines a series of recommended projects that would accommodate potential growth up to approximately 71.1 million annual passengers, serve as a roadmap to guide long-term Airport development, and support the Airport's overarching strategic objectives. The Recommended ADP identifies potential projects that would meet future projected demand for gates, as well as ground-side capacity. These Recommended ADP projects include a new terminal concourse, replacement of the Central Garage, and improvements to the International Terminal Complex.

The Recommended ADP will first undergo required environmental review under the California Environmental Quality Act (CEQA), and then individual projects will undergo further review as described below. The Airport initiated the City's process to implement CEQA review when it submitted an application to the San Francisco Planning Department in July 2017. Development of the draft environmental impact report (EIR) is ongoing. The Airport expects to publish a notice of preparation of the EIR in the first half of 2019. This notice will initiate the public CEQA review process, which takes a minimum of 24 months, and may take much longer depending on the outcome of several required opportunities for public comment and appeal. Once CEQA review of the Recommended ADP is completed, the Commission then could consider approval of the individual Recommended ADP projects. Individual projects would still be subject to Board of Supervisors review, federal environmental review under the National Environmental Policy Act (NEPA), or both, where applicable, and further Commission review before they proceed. Projects included in the Recommended ADP will not necessarily be undertaken. Projects would be added

to future capital improvement plans when and as they are warranted by passenger growth. If projects are substantially refined in the future, further review under CEQA may be required before the projects could proceed.

## **Federal Grants**

The Airport receives federal funding from the FAA, the TSA, and other federal agencies. The FAA administers the Airport's AIP, and grants are made available to airport operators in the form of entitlement funds and discretionary funds. See "CERTAIN RISK FACTORS—Reduction in Federal Grants."

Federal grants receivable of \$15.2 million and \$5.1 million as of June 30, 2018 and 2017, respectively, were based on actual costs incurred, subject to federal reimbursement limits. The Commission expects that \$128 million of the costs of the CIP will be reimbursed with AIP funds and other federal grants.

Project costs are subject to audit by the funding agencies to ensure that the costs are allowable under the grant agreements. If any project costs are disallowed, amounts recorded as grants receivable will be reduced or refunded to the respective funding agencies.

Grants received by the Airport are audited from time to time. The Airport has been and continues to be audited by OIG and others with respect to grants, and PFCs. In the past, audits have resulted in repayments of grants and reductions of other grant reimbursement requests. In addition, audits have resulted in changes to the Airport's internal controls and procedures. While some of these audits remain pending and the Airport may be required to repay grants it has received or take other remedial measures, the Commission does not believe any required repayments will have any material adverse impact on the business operations or financial condition of the Airport.

In addition, OIG recently conducted an audit to assess the FAA's oversight of compliance by "grandfathered" airports (including the Airport) with federal law related to airport revenue payments and is conducting an audit to assess the FAA's management of the Passenger Facility Charge program at the Airport and another airport, as well as several airlines. See "SAN FRANCISCO INTERNATIONAL AIRPORT—Certain Federal and State Laws and Regulations—*Federal Law Prohibiting Revenue Diversion*" and "AIRPORT'S FINANCIAL AND RELATED INFORMATION—Payments to the City—*Annual Service Payment*." Also see "CERTAIN RISK FACTORS—Availability of PFCs" and "—Reduction in Federal Grants."

## **AIRPORT'S FINANCIAL AND RELATED INFORMATION**

### **General**

The Airport generates its operating revenues primarily from airline terminal rentals and landing fees, concession revenues, parking management revenues, trip fees and Passenger Facility Charges. The Airport operates as a "residual" airport, which means that the Signatory Airlines are obligated under the Lease and Use Agreements to pay all of the Airport's operating expenses and debt service costs less any non-airline revenues of the Airport. The Commission establishes terminal rental rates and landing fees in advance for each upcoming Fiscal Year based on the Airport's estimated revenues and expenses. Actual receipts and expenses in any Fiscal Year are either more or less than estimated revenues and expenses. Due to the residual nature of the Lease and Use Agreements, to the extent there is an over-collection in any year (that is, receipts from the airlines exceed the Airport's net costs), the Airport is obligated to reduce future terminal rentals and landing fees by a corresponding amount. Similarly, if there is an under-collection in any year, the Airlines are obligated under the Lease and Use Agreements to pay such deficiency from future rates and charges. For a description of the Lease and Use Agreements, see "SAN FRANCISCO INTERNATIONAL AIRPORT—Airline Agreements" and APPENDIX E. Also see "SECURITY FOR THE SERIES 2019A-D BONDS—Pledge of Net Revenues; Source of Payment—*Certain Adjustments to 'Revenues' and 'Operation and Maintenance Expenses'—Unearned Aviation Revenues*."

### **Summary of Financial Statements**

*Summary of Statements of Net Position.* A summary of the Airport's Statements of Net Position as reported in the Airport's annual financial statements for Fiscal Years 2012-13 through 2016-17 is shown in the table on the next page. See APPENDIX B—"FINANCIAL STATEMENTS WITH SCHEDULE OF PASSENGER FACILITY CHARGE REVENUES

AND EXPENDITURES JUNE 30, 2017 AND 2016 (WITH INDEPENDENT AUDITORS' REPORT THEREON)." Also see "FINANCIAL STATEMENTS—Delayed Audited Financial Statements" for a discussion of the status of Airport's Fiscal Year 2017-18 audited financial statements, which have not yet been finalized.

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**SUMMARY OF AIRPORT'S STATEMENTS OF NET POSITION**  
**(\$ in thousands)**  
**(Fiscal Years)**

	2012-13 <sup>(1)</sup> (Restated)	2013-14 (Restated) <sup>(7)</sup>	2014-15 (Restated) <sup>(6)(7)</sup>	2015-16	2016-17 <sup>(8)</sup>
<b>Assets:</b>					
Unrestricted current assets <sup>(2)(3)(4)</sup>	\$ 399,014	\$ 425,951	\$ 450,598	\$ 467,577	\$ 440,930
Restricted current assets	197,112	278,346	245,719	282,371	437,934
Restricted non-current assets	389,162	579,933	643,686	640,970	726,310
Capital assets, net	3,720,791	3,869,718	3,936,426	4,045,636	4,282,629
Total assets	<u>4,706,079</u>	<u>5,153,948</u>	<u>5,276,429</u>	<u>5,436,554</u>	<u>5,887,803</u>
<b>Deferred outflows of resources:</b>					
Unamortized loss on refunding of debt	108,581	92,147	78,388	68,100	76,789
Deferred outflows on derivative instruments	64,743	63,971	65,408	83,614	54,870
Deferred outflows on pensions	—	—	37,517	43,982	145,743
Total deferred outflows of resources	<u>173,324</u>	<u>155,938</u>	<u>181,313</u>	<u>195,696</u>	<u>277,402</u>
<b>Liabilities:</b>					
Current liabilities <sup>(4)</sup>	500,511	268,723	285,929	309,888	284,221
Current liabilities payable from restricted assets	295,698	410,087	154,611	494,128	356,535
Noncurrent liabilities <sup>(5)</sup>	3,729,562	4,285,257	4,608,523	4,372,604	5,033,314
Net pension liability	—	—	111,932	144,271	359,599
Derivative instruments	81,338	79,062	79,321	96,132	65,965
Total liabilities	<u>4,607,109</u>	<u>5,043,129</u>	<u>5,240,316</u>	<u>5,417,023</u>	<u>6,099,634</u>
<b>Deferred inflows of resources:</b>					
Deferred inflows related to pensions	—	—	100,290	48,154	15,402
Total deferred inflows of resources	<u>—</u>	<u>—</u>	<u>100,290</u>	<u>48,154</u>	<u>15,402</u>
<b>Net position:</b>					
Net investment in capital assets	(52,581)	(149,894)	(103,109)	(117,377)	(284,761)
Restricted for debt service	19,757	25,390	37,427	35,462	109,554
Restricted for capital projects	139,981	200,219	165,224	212,931	296,188
Unrestricted	165,137	191,042	17,594	36,057	(70,812)
Total net position	<u>\$ 272,294</u>	<u>\$ 266,757</u>	<u>\$ 117,136</u>	<u>\$ 167,073</u>	<u>\$ 50,169</u>

<sup>(1)</sup> The Airport implemented GASB Statement No. 65, *Items previously reported as Assets & Liabilities*, effective July 1, 2012. GASB 65 sets standards for accounting and reporting of deferred outflows of resources and deferred inflows of resources and reclassification of certain items that were previously reported as assets or liabilities. As a result, the Airport restated the beginning net position of Fiscal Year 2012-13 in the amount of \$24.5 million to write-off unamortized bond issuance cost previously classified as assets. The Airport has also reclassified \$108.6 million of unamortized loss on refunding of debt from a contra liability to a deferred outflow of resource.

<sup>(2)</sup> For a description of the cash and investments of the Airport, see “—Investment of Airport Funds.”

<sup>(3)</sup> Net of allowance for doubtful accounts (in thousands): 2017: \$1,807; 2016: \$1,214; 2015: \$633; 2014: \$547; 2013: \$384.

<sup>(4)</sup> Includes unearned aviation revenue (formerly referred to as deferred aviation revenue) of (in thousands): 2017: \$54,853; 2016: \$67,556; 2015: \$55,704; 2014: \$55,633; 2013: \$51,923. Unearned aviation revenues consist of the amount, in each Fiscal Year, that terminal rental rates and landing fees under the airline lease and use agreements exceed the Airport's net operating expenses. The Airport is obligated to reduce future rates and charges by a corresponding amount. See “SAN FRANCISCO INTERNATIONAL AIRPORT—Airline Agreements.”

<sup>(5)</sup> Amounts include compensated absences, accrued worker's compensation, claims payable and long-term debt outstanding.

<sup>(6)</sup> The Airport has adopted GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*. The July 1, 2014 beginning financial position has been restated for the retroactive application of this new accounting guidance. The cumulative effect of applying this statement is reported as a restatement of beginning net position as of July 1, 2014. The restatement resulted in the net position being reduced from \$266.8 million as of July 1, 2014, to \$61.0 million to record beginning net pension liability and beginning deferred outflows of resources.

<sup>(7)</sup> The Airport has adopted GASB Statement No. 72, *Fair Value Measurement and Application*, which changes how fair value is measured and provides guidance for applying fair value. As a result, the Airport restated its beginning deferred outflows on derivative instruments and derivative instruments liabilities for Fiscal Year 2013-14 and Fiscal Year 2014-15 in the amount of \$1.2 million and \$1.4 million, respectively.

<sup>(8)</sup> Net position decreased by \$116.9 million, primarily due to a significant increase in net pension liability related to the impact of changes in benefits, the updated citywide supplemental costs of living adjustments (COLA) assumptions and amortization of deferred outflows/inflows. See APPENDIX B—“FINANCIAL STATEMENTS WITH SCHEDULE OF PASSENGER FACILITY CHARGE REVENUES AND EXPENDITURES JUNE 30, 2017 AND 2016 (WITH INDEPENDENT AUDITORS' REPORT THEREON).”

Source: Commission.

Total unrestricted cash (including amounts in the Contingency Account) totaled \$410.4 million for Fiscal Year 2015-16, \$375.6 million in Fiscal Year 2016-17, and \$458.2 million (estimated, see “FINANCIAL STATEMENTS–Delayed Audited Financial Statements”) in Fiscal Year 2017-18.

*Summary of Statement of Revenues, Expenses, and Changes in Net Position.* A summary of the Airport’s Statements of Revenues, Expenses, and Changes in Net Position as reported in the Airport’s annual financial statements for Fiscal Years 2012-13 through 2016-17 is shown in the table below. See APPENDIX B–“FINANCIAL STATEMENTS WITH SCHEDULE OF PASSENGER FACILITY CHARGE REVENUES AND EXPENDITURES JUNE 30, 2017 AND 2016 (WITH INDEPENDENT AUDITORS’ REPORT THEREON).” Also see “FINANCIAL STATEMENTS– Delayed Audited Financial Statements” for a discussion of the status of Airport’s Fiscal Year 2017-18 audited financial statements, which have not yet been finalized.

**SUMMARY OF AIRPORT’S STATEMENT OF REVENUES,  
EXPENSES, AND CHANGES IN NET POSITION**  
(\$ in thousands)  
(Fiscal Years)

	2012-13 (Restated) <sup>(1)</sup>	2013-14	2014-15	2015-16	2016-17
Aviation Revenues	\$413,918	\$441,259	\$464,610	\$495,439	\$ 545,310
Concession Revenues <sup>(2)</sup>	243,096	253,290	269,868	283,615	300,245
Net Sales and Services	69,344	76,142	80,886	87,937	81,245
Total Operating Revenues	726,358	770,691	815,364	866,991	926,800
Total Operating Expenses <sup>(3)</sup>	(559,050)	(625,660)	(609,029)	(640,473)	(808,860)
Operating Income	167,308	145,031	206,335	226,518	117,940
Nonoperating Revenue (Expense) <sup>(4)</sup>	(190,587)	(203,598)	(141,826)	(144,463)	(201,020)
Income (Loss) Before Capital Contribution and Transfers	(23,279)	(58,567)	64,509	82,055	(83,080)
Capital Contributions <sup>(5)</sup>	65,958	91,024	32,119	10,424	11,212
Transfer to the City	(36,464)	(37,994)	(40,480)	(42,542)	(45,036)
<b>Changes in Net Position<sup>(6)</sup></b>	<b>\$ 6,215</b>	<b>\$ (5,537)</b>	<b>\$ 56,148</b>	<b>\$ 49,937</b>	<b>\$(116,904)</b>

<sup>(1)</sup> The Airport implemented GASB Statement No. 65, *Items previously reported as Assets & Liabilities*, effective July 1, 2012. GASB 65 sets standards for accounting and reporting of deferred outflows of resources and deferred inflows of resources and reclassification of certain items that were previously reported as assets or liabilities and retroactively restated Fiscal Year 2011-12.

<sup>(2)</sup> Also includes parking and transportation revenues.

<sup>(3)</sup> Includes depreciation expense in the amounts of \$176.5 million for Fiscal Year 2012-13, \$222.8 million for Fiscal Year 2013-14, \$216.1 for Fiscal Year 2014-15 and \$228.4 for Fiscal Year 2015-16 and \$265.8 million for Fiscal Year 2016-17.

<sup>(4)</sup> Includes interest expense in the amount of \$195.5 million for Fiscal Year 2012-13, \$202.0 million for Fiscal Year 2013-14, \$210.6 million for Fiscal Year 2014-15, \$208.6 million for Fiscal Year 2015-16 and \$210.4 million for Fiscal Year 2016-17.

<sup>(5)</sup> Represents federal and state grant funds.

<sup>(6)</sup> Net position decreased by \$116.9 million in Fiscal Year 2016-17, primarily due to a significant increase in net pension liability related to the impact of changes in benefits, the updated citywide supplemental costs of living adjustments (COLA) assumptions and amortization of deferred outflows/inflows. See APPENDIX B–“FINANCIAL STATEMENTS WITH SCHEDULE OF PASSENGER FACILITY CHARGE REVENUES AND EXPENDITURES JUNE 30, 2017 AND 2016 (WITH INDEPENDENT AUDITORS’ REPORT THEREON).”

Source: Commission.

### Operating Revenues

The Commission receives operating revenues primarily from aviation-related activities, ground transportation, and concessions. Each of these categories of revenues is described below. The Commission also receives revenues from net sales and services, which consist of revenues derived from utility services, telecommunication access fees, badge and permit fees, rental car facility fees and cost-based reimbursement of various services.

## Principal Revenue Sources

Set forth in the table below is a description of the Airport's principal revenue sources. No single tenant accounted for more than 24% of total operating revenue in Fiscal Year 2016-17. For the purpose of this table, the term "revenues" includes all amounts paid to the Airport by a company, including Concession Revenues, rent, utilities, etc.

<b>TOP TEN SOURCES OF REVENUE</b>				
Company/Source	Category	FY 2015-16	FY 2016-17 <sup>(1)</sup>	FY 2017-18 <sup>(2)</sup>
		Revenues (\$ in thousands)	Revenues (\$ in thousands)	Revenues (\$ in thousands)
United Airlines	Airline	\$206,153	\$218,231	\$239,071
On Airport Parking <sup>(3)</sup>	Public Parking	103,282	106,791	100,903
DFS Group, L.P.	Duty Free and General Merchandise	30,116	30,385	37,118
American Airlines <sup>(4)</sup>	Airline	33,622	36,515	35,750
Enterprise Rent-a-Car Rental, LLC (formerly EAN, LLC) <sup>(5)</sup>	Rental Car	35,196	35,644	35,573
Delta Air Lines	Airline	28,355	28,902	30,863
Virgin America <sup>(6)</sup>	Airline	29,512	31,409	26,306
The Hertz Corporation	Rental Car	30,243	27,065	24,932
Avis Budget Car Rental, LLC	Rental Car	27,500	26,783	24,459
Raiser CA LLC/Uber 032512	Ground Transportation	N/A	20,057	22,057
Southwest Airlines <sup>(7)</sup>	Airline	18,289	N/A	N/A
<b>Subtotal Ten Highest</b>		<b>\$542,267</b>	<b>\$561,781</b>	<b>\$577,032</b>
Other Operating Revenue		324,724	365,019	
<b>Total Operating Revenue</b>		<b>\$866,991</b>	<b>\$926,800</b>	
Other Revenue <sup>(8)</sup>		16,554	8,967	
PFC Collections		99,131	103,955	
<b>Total Airport Revenue</b>		<b>\$982,676</b>	<b>\$1,039,722</b>	

<sup>(1)</sup> Revenue is audited and includes operating and non-operating income and credit adjustments.

<sup>(2)</sup> Estimated. Does not include operating and non-operating income and credit adjustments. See "FINANCIAL STATEMENTS— Delayed Audited Financial Statements."

<sup>(3)</sup> New South Parking-California manages the Airport's public short-term garages and long-term parking facility and collects parking revenues on behalf of the Airport.

<sup>(4)</sup> American Airlines filed for bankruptcy protection in November 2011 and exited from bankruptcy on December 9, 2013. On December 9, 2013, American Airlines and US Airways merged, although they continued to operate under separate FAA operating certificates until April 8, 2015, when American Airlines received a single operating certificate from the FAA. US Airways continued to report operations separately until October 2015.

<sup>(5)</sup> Effective September 1, 2017, the EAN, LLC lease was reassigned to Enterprise Rent-a-Car Rental LLC.

<sup>(6)</sup> Alaska Air Group, Inc. and Virgin America, Inc. merged effective December 2016. The merged airline received a single operating certificate from the FAA in January 2018. The merged airline moved to a single reservations system on April 25, 2018, and has announced that it will adopt Alaska's name and logo and retire the Virgin America brand. The figures in this table include only Virgin America's revenues, not Alaska's, in the respective years.

<sup>(7)</sup> Southwest Airlines was not one of the top ten sources of revenues in Fiscal Year 2016-17.

<sup>(8)</sup> Includes interest and other non-operating revenue.

Source: Commission.

## Aviation Revenues

Under the Lease and Use Agreements, the Airport's operating budget and non-airline revenue sources are projected for each new Fiscal Year. Then, using a residual cost methodology, airline landing fees and terminal rental rates are set such that estimated total Airport revenues each Fiscal Year are equal to estimated total Airport operating costs, which include debt service and certain capital items as well as general operation and maintenance expenses. Increases in non-airline revenue sources generally result in decreases in airline landing fees and terminal rental rates. See "SAN FRANCISCO INTERNATIONAL AIRPORT—Airline Agreements—Lease and Use Agreements."

### *Terminal Rental Rates and Landing Fees*

For Fiscal Year 2018-19, annual terminal rental rates range from \$310.94 per square foot for Category I space (ticket counters and hold rooms) to \$31.09 per square foot for Category V space (unenclosed or covered areas at ramp level), with an average rate per square foot of \$179.21. For Fiscal Year 2017-18, annual terminal rental rates range from \$296.57 per square foot for Category I space to \$29.66 per square foot for Category V space, with an average rate per square foot of \$169.03.

The landing fee rate for Fiscal Year 2018-19 is \$5.54 per thousand pounds of landed weight compared to \$5.24 per thousand pounds of landed weight for Fiscal Year 2017-18. Operators without a lease or operating permit pay a landing fee charge of \$6.93 per thousand pounds of landed weight. For Fiscal Year 2018-19, the minimum landing fee for fixed wing aircraft is \$372 compared to \$350 for Fiscal Year 2017-18.

Because of the variety of methodologies used by different airports to calculate airline landing fee and terminal rental rates, such fees and rates are not directly comparable between airports. However, terminal rental rates and landing fees represent a small proportion of overall costs to the airlines per enplaned passenger at the Airport, and are not a primary consideration in the establishment and maintenance of routes and schedules. Instead of rates, airline payments per passenger (for landing fees and terminal rental rates) is an index commonly used to compare the costs to the airlines for their facilities at different airports. Airline payments per enplaned passenger at the Airport are set forth in the table below. Overall, costs to the airlines are expected to rise in the near term, primarily due to the issuance of additional Bonds to fund the construction of capital projects. See “CAPITAL PROJECTS AND PLANNING—The Capital Improvement Plan.” Also see Part 5 and Exhibit I in APPENDIX A.

#### **AIRLINE PAYMENTS PER ENPLANED PASSENGER**

<u>Fiscal Year</u>	<u>Amount</u>
2016-17	\$17.18
2015-16	16.29
2014-15	16.23
2013-14	15.85
2012-13	15.35

Source: Commission.

Terminal rental rates and landing fees are adjusted annually on July 1. The Lease and Use Agreements do not require the airlines, either individually or as a group, to maintain any minimum level of landed weight at the Airport. A summary of historical and current landing fees for scheduled aircraft with a lease or operating permit and average terminal rental rates for Fiscal Years 2014-15 through 2018-19 is set forth below.

#### **HISTORICAL AND CURRENT LANDING FEES AND TERMINAL RENTALS (Fiscal Years)**

	<u>2014-15</u>	<u>2015-16</u>	<u>2016-17</u>	<u>2017-18</u>	<u>2018-19</u>
Landing Fees (per 1,000 pounds)	\$4.57	\$4.87	\$4.99	\$5.24	\$5.54
Minimum Landing Fee (fixed wing)	220	245	285	350	372
Minimum Landing Fee (rotary)	110	123	143	175	186
Average Terminal Rental Rate (per square foot)	149.98	157.18	161.16	169.03	179.21

Source: Commission.

### *Airline Incentive and Stimulus Programs*

The Airport has successfully attracted several new international flights and air carriers with airline incentive and stimulus programs. Beginning in January 2012, the Commission implemented a new Air Carrier Incentive Program, which provides a 100% waiver of landing fees for twelve months for any new non-stop international route to or from the Airport (including Mexico and Canada) that is not currently served by an existing carrier. On May 21, 2013, the Program was revised to increase the time period of the landing fee waiver from 12 months to up to 24

months. As of November 1, 2018, the Incentive Program has resulted in fourteen new destinations offered by a combination of United Airlines and nine new carriers. These include: Aer Lingus service to Dublin (April 2014), United Airlines service to Chengdu (June 2014), Etihad Airways service to Abu Dhabi (November 2014), China Southern service to Wuhan (December 2014) and Guangzhou (June 2015), Turkish Airlines service to Istanbul (April 2015), COPA Airlines service to Panama City (September 2015), Air India service to New Delhi (December 2015), United Airlines service to Tel Aviv (March 2016), United Airlines service to Singapore (June 2016), WOW air service to Reykjavik (June 2016), China Eastern service to Qingdao (September 2016), Air Berlin service to Berlin (May 2017), French Bee to Papeete (May 2018) and Qantas to Melbourne (September 2018). Etihad Airways and Air Berlin discontinued service at the Airport in October 2017.

## **Ground Transportation Revenues**

The Commission derives revenues from parking, rental cars and TNCs and other ground transportation. TNCs and other ground transportation revenues includes fees collected from TNCs, taxis, limousines, shared-ride vans, hotel and off-airport parking shuttles, and other commercial modes of transportation. The Commission's total ground transportation revenue for Fiscal Year 2017-18 is estimated (see "FINANCIAL STATEMENTS–Delayed Audited Financial Statements") at \$201.0 million, down from \$202.6 million in Fiscal Year 2016-17. For further discussion, see "FINANCIAL ANALYSIS–Revenues–Nonairline Revenues" in APPENDIX A.

### *Rental Cars*

Currently, five on-Airport rental car companies representing nine brands operate at the consolidated rental car facility, which is located approximately one mile north of the Terminal Complex. The agreements with these companies were scheduled to expire on December 31, 2018. On October 16, 2018, the Commission approved new five-year agreements with two-year extension options, to be effective upon approval by the Board of Supervisors in 2019, with four companies that operate nine rental car brands. All brands would remain the same, except that Fox would be replaced by Sixt Rent a Car. Fox has filed a writ of mandate challenging the Commission's October 2018 action awarding the new agreements. The Commission plans to vigorously defend this litigation. The current agreements will continue on a month-to-month holdover basis until the new agreements are approved by the Board of Supervisors and fully executed. The aggregate MAG for the on-Airport rental car companies would be \$47.2 million under the new agreements.

The on-Airport rental car companies generated aggregate concession revenue to the Airport of approximately \$49.0 million in Fiscal Year 2016-17 and \$46.0 million (estimated, see "FINANCIAL STATEMENTS–Delayed Audited Financial Statements") in Fiscal Year 2017-18.

The aggregate rent (the total concession fees and building space rental) received from the on-Airport rental car companies for Fiscal Year 2016-17 was \$68.1 million and for Fiscal Year 2017-18 was \$65.9 million (estimated, see "FINANCIAL STATEMENTS – Delayed Audited Financial Statements").

### *SFO Transportation and Facility Fees*

The rental car companies collect a per rental contract fee (\$18.00 in Fiscal Year 2018-19) that is paid to the Commission for reimbursement of certain costs of operating and providing the AirTrain facilities between the Terminal Complex and the rental car facility located one mile north of the Terminal Complex.

### *Parking*

New South Parking-California, GP was selected by the Commission through a competitive process to provide management and operation services of the Airport's public and employee parking facilities, commencing July 1, 2018, for a term of five years. The guaranteed maximum price that the Airport will pay (the "GMP") under this contract is \$23.5 million for the first year of the five-year contract. GMPs are capped at a 3% increase from the previous year's GMP for subsequent years. New South Parking-California also had provided public and employee parking and management services for several years under a prior contract.

In Fiscal Year 2017-18, parking revenues declined by 5.5%, or \$5.9 million, to \$100.9 million (all estimated, see “FINANCIAL STATEMENTS–Delayed Audited Financial Statements”), as compared to \$106.8 million in Fiscal Year 2016-17. Parking transactions increased slightly by 0.8% in Fiscal Year 2017-18 as compared to the prior fiscal year while the average price per exit decreased by 5.9% from \$32.66 in Fiscal Year 2016-17 to \$30.74 in Fiscal Year 2017-18. Effective June 10, 2016, most public parking rates were increased to moderate parking demand. The Commission continues to periodically review and adjust parking rates. The Airport Commission’s Resolution approving rates and charges for Fiscal Year 2018-19 delegates authority to the Airport Director to adjust parking garage rates, ground transportation trip fees, and the curbside access fee paid by TNCs and limousines, subject in each case to a cap. It is possible that the Director will exercise such authority during the remainder of Fiscal Year 2018-19, although he has not announced any plans to do so.

The Airport expects to open a new long-term parking garage in February 2019, adding 3,600 new parking stalls. The new and existing long-term parking garages are expected to be connected to the terminals by an extension of the AirTrain beginning in the spring of 2020, until then the terminals will be accessible from the long-term parking garages by the existing shuttle service. The Commission believes that the AirTrain connection will make the long-term parking garages more attractive to potential customers.

See “SAN FRANCISCO INTERNATIONAL AIRPORT–Current Airport Facilities–*Public Parking and Rental Car Facilities*” for discussion of the anticipated reduction of available parking spaces during construction of a new long term parking garage, on-Airport hotel and AirTrain extension.

The Airport’s parking facilities compete with off-airport facilities located near the Airport that are operated by private companies. See “SAN FRANCISCO INTERNATIONAL AIRPORT–Current Airport Facilities–*Public Parking and Rental Car Facilities.*”

#### *TNCs and Other Ground Transportation*

Revenue from commercial ground transportation totaled \$50.7 million (estimated, see “FINANCIAL STATEMENTS–Delayed Audited Financial Statements”) in Fiscal Year 2017-18, an increase of \$7.1 million or 16.4%, mainly due to commercial vehicle trip fee rate increases of up to 20.0%, and the increased demand for transportation network company operations at the Airport which include Uber Technologies Inc., Lyft, Inc., and Tickengo, Inc. d/b/a/ Wingz. In Fiscal Year 2017-18, TNCs recorded nearly 9.1 million (estimated) Airport pick-ups/drop-offs resulting in \$34.5 million (estimated, see “FINANCIAL STATEMENTS–Delayed Audited Financial Statements”) in trip fee revenue as compared to 7.0 million Airport pick-ups/drop-offs and \$26.6 million in trip fee revenue in Fiscal Year 2016-17. With the exception of scheduled buses, which experienced an increase in trips of 4.7% in Fiscal Year 2017-18, all other commercial modes of transportation experienced decreases in trips in Fiscal Year 2017-18, including door-to-door pre-arranged vans (23.5%), shared-ride vans (19.4%), limousines (14.9%), taxis (13.9%), hotel shuttles (4.5%), off-airport parking vans (0.9%).

The current fee structure for TNCs and other commercial vehicles was implemented effective July 1, 2018. A per trip fee of \$3.60 was initiated for TNC trips as well as other commercial vehicle trips (excluding taxis) that do not access the terminal curbside. The fee covers both high occupancy vehicle trips (defined as 7 or more passengers) and low occupancy trips (including TNCs as well as limousines). TNCs and other low occupancy vehicle modes that access the terminal curbside are subject to additional curbside access premium fee of \$1.40 per trip. The updated fee structure was initiated by the Commission to alleviate roadway and terminal curbside congestion, giving low occupancy vehicles (except taxis) an option to use the 5<sup>th</sup> level of domestic parking garage for pick-ups and drop-offs at a reduced rate.

### **Concessions Revenues**

#### *Retail and Food and Beverage Program*

Since the reopening of Terminal 2 in April 2011, the Airport has been recognized with numerous concessions and travel industry awards and public accolades. The 22 restaurants and shops that comprise the concession offerings in Terminal 2 have become the model for future development of food and beverage and retail locations at the Airport. In Fiscal Year 2017-18, Terminal 2 passengers spent 20% more than the amount spent by passengers at the other

domestic terminals at the Airport as a whole on retail and food and beverage items, excluding duty free. Five retail leases and one food and beverage lease are currently under construction or are the subject of a request for proposals process. The new operations are expected to open during the third and fourth quarters of the 2019 calendar year.

Terminals 1 and 3 currently feature 37 food and beverage locations and 30 retail locations. Four of the food and beverage locations in these terminals are located in pre-security areas accessible to the general public. Terminals 1 and 3 are being renovated to improve the public space and concessions. Renovations for Terminal 1 include 19 retail locations, 20 food and beverage locations (including an innovative shared kitchen for pop-up food tenants), and a common use airport lounge. Renovations for Terminal 3 West concessions are in the planning phase. The leases for the majority of the retail locations in Terminal 1, Boarding Area C, and Terminal 3 expired or will expire between 2016 and 2019. Since 2017, nine stores and restaurants have been redeveloped. Sixteen additional re-leased and renovated stores and restaurants are expected to open between late 2018 and late 2019.

Fully renovated portions of Terminal 3 opened in January 2014 and November 2015. Additional renovations in the portion of Terminal 3 referred to as “Terminal 3 West” that will expand concessions footage from approximately 21,310 square feet to approximately 35,747 square feet are expected to commence in 2019 and to be completed in 2022.

A newly constructed portion of Terminal 1 referred to as Boarding Area B is expected to open in phases during calendar years 2019 through 2022. Lease extensions were granted to food and beverage and retail tenants operating six locations in this area to provide service between lease expirations and the opening of the newly constructed portion that is expected to open in July 2019. Overall concessions square footage is expected to grow from approximately 11,000 to 55,000 in concert with an increase in the number of gates (see “CAPITAL PROJECTS AND PLANNING–The Capital Improvement Plan–Major Ascent Program–Phase I Capital Projects–Terminals”) by the time all of Terminal 1 Boarding Area B opens in late 2022.

The ITC food and beverage program is intended to provide international and domestic passengers with a welcoming taste of the Bay Area culinary experience. The retail program in the ITC provides passengers the opportunity to shop for luxury fashion, beauty, and spirits brands. A comprehensive renovation of the ITC concessions program is underway. Eighteen new food and beverage concepts have opened and three more are expected to open between January 2019 and April 2019. Four new retail stores have opened and one more new retail store is expected to open by the end of February 2019. The duty free concession space is expected to grow from approximately 33,000 square feet to approximately 44,000 square feet by the end of 2019 with the first seven locations complete by the end of April 2019.

The majority of the Commission’s retail and food and beverage leases are structured for the Commission to receive a percentage of gross revenues or a minimum annual guarantee (“MAG”), whichever is higher. The MAG provides the Airport with a guaranteed amount of revenues paid on the first of each month, which amount is unaffected by customer sales activity. Tenants compute their percentage of rent due and report sales to the Airport on a monthly basis. If the figure calculated is greater than the MAG, as prorated for such month, the tenant will pay an additional percentage of rent to the Airport. The Airport’s concession agreements with tenants generally provide that the MAG is temporarily suspended, and the tenant is required to pay only the percentage rent, if monthly enplanements in the relevant boarding area of the Airport are less than 80% of the enplanements of the same month in the calendar year immediately prior to the year in which the concession is awarded (the “reference month”), and this shortfall continues for three consecutive months. The MAG is reinstated once monthly enplanements equal or exceed 80% of the enplanements of the reference month for two consecutive months.

In Fiscal Year 2017-18, food and beverage domestic terminal sales increased over the prior year by 5.8% and ITC sales increased over the prior year by 15.9%. In Fiscal Year 2017-18, food and beverage domestic terminal revenues to the Airport increased by 5.9% (estimated, see “FINANCIAL STATEMENTS–Delayed Audited Financial Statements”) over Fiscal Year 2016-17 and ITC revenues increased over the prior year by 18.2% (estimated, see “FINANCIAL STATEMENTS–Delayed Audited Financial Statements”). The increase in both sales and revenues is attributable to an increase in enplanements and deplanements at the Airport and for ITC, the renovation of the ITC concessions program, which commenced during Fiscal Year 2016-17 with 16 new restaurant openings and renovations to the ITC food court facilities. The difference between sales and revenue growth reflects how the Airport’s concessionaire leases are structured. Overall, the domestic terminal passenger food and beverage spend rate declined

by 4.4% in Fiscal Year 2017-18 over the prior Fiscal Year to \$9.23 from \$9.66 and the ITC food and beverage spend rate increased by 17.4% from \$7.23 to \$8.49. The overall passenger food and beverage spend rate at the Airport in Fiscal Year 2017-18 was \$9.04, a 0.9% increase from Fiscal Year 2016-17.

In Fiscal Year 2017-18, retail sales, excluding duty free, decreased 1.7% compared to the prior year, with a per passenger spend rate decrease of 8.4% to \$4.33 from \$4.72. In Fiscal Year 2017-18, rent from retail concessions increased 3.5% (estimated, see “FINANCIAL STATEMENTS–Delayed Audited Financial Statements”) due to minimum annual guarantee CPI adjustments and increased passenger activity.

#### *Duty Free Program*

On April 17, 2018, the Commission entered into a new concession agreement with DFS Group, L.P. The development term began on October 1, 2018 and will end in the fall of 2019 when construction is substantially complete. At this point the 14-year base term will commence. The new lease is for 12 stores covering about 46,000 square feet, primarily in the International Terminal, with one location in Terminal 1 anticipated to open sometime in 2022. The lease is exclusive for duty free sales and non-exclusive for duty paid sales. The lease will be automatically extended in the event the Airport opens a single consolidated security checkpoint in the International Terminal during the 14 year base term, by an amount of time sufficient to ensure that DFS will have five years of operation in the reconfigured retail plaza located past the single checkpoint. Once the refurbishment is complete, rent will be the greater of a minimum annual guaranteed rent of \$42.0 million (for duty free and duty paid) or rent calculated as a percentage of annual sales. Duty free construction will be phased with stores remaining open at all times; rent during this development period is 30% of gross revenues.

#### *Advertising Program*

Clear Channel Airports has held the advertising concession lease with the Commission since 2001. The Commission entered into a lease with Clear Channel commencing July 1, 2013 and ending December 31, 2022, which requires Clear Channel Airports to pay the Commission a fixed rent amount of \$10.0 million (as adjusted pursuant to the lease) per lease year. The fixed rent for calendar year 2019 is \$11,778,437.

### **Top Ten Sources of Concession Revenues**

In Fiscal Year 2017-18, concession revenues, including revenues for parking and other ground transportation, were approximately \$310.3 million (estimated, see “FINANCIAL STATEMENTS–Delayed Audited Financial Statements”), a 3.4% increase compared to the previous Fiscal Year’s revenues of approximately \$300.2 million.

The table below summarizes concession revenues for Fiscal Years 2015-16 through Fiscal Year 2017-18 attributable to the Airport’s largest concession revenue sources. For the purpose of this table, “Concession Revenue” is defined as fees and rentals collected by the Commission for: (i) the right to provide and operate restaurants, bars, car rental services, newsstands, gift shops, specialty shops, advertising displays, public telephones and other merchandising concessions and consumer services in the Terminal Area; (ii) the right to provide and operate courtesy vehicles, ground transportation services, hotels, service stations and other concessions and services in the groundside area; and (iii) other activities and services in the groundside area of the Terminals such as public automobile parking and traffic fines.

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## TOP TEN SOURCES OF AIRPORT CONCESSION REVENUES

Concessionaire/Manager	Concession Revenue Sources	Lease/Agreement Expiration Date	FY 2015-16 Concession Revenue (\$ in thousands)*	FY 2016-17 Concession Revenue (\$ in thousands)*	Estimated FY 2017-18 Concession Revenue (\$ in thousands)*
DFS Group, L.P.	Duty Free and General Merchandise	12/31/17 <sup>(1)</sup>	\$ 29,436	\$ 29,671	\$ 36,418
Enterprise Rent-a-Car Rental, LLC (formerly EAN, LLC) <sup>(2)</sup>	Rental Car	12/31/18 <sup>(3,4)</sup>	16,820	17,522	16,909
Avis Budget Rental Car, LLC	Rental Car	12/31/18 <sup>(3,5)</sup>	13,028	12,969	11,439
The Hertz Corporation	Rental Car	12/31/18 <sup>(3,6)</sup>	13,987	12,248	11,373
Clear Channel Airports	Advertising	12/31/22 <sup>(7)</sup>	10,307	10,802	11,139
Travelex America, Inc.	Currency Exchange	1/31/20 <sup>(8)</sup>	5,396	5,610	5,786
Tastes on the Fly San Francisco LLC	Food and Beverage	Various <sup>(9)</sup>	2,911	4,107	5,448
DTG Operations Rental Car	Rental Car	12/31/18 <sup>(3,10)</sup>	4,420	4,316	4,382
WDFG North America, LLC (Formerly Host International Inc.)	General Merchandise	Various <sup>(11)</sup>	3,509	3,376	3,045
Gotham Enterprises, LLC	Food and Beverage	Various <sup>(12)</sup>	N/A	2,776	2,424
D-Lew Enterprises	Food and Beverage	Various <sup>(13)</sup>	2,566	N/A	N/A
Sub Total			<b>\$102,380</b>	<b>\$103,397</b>	<b>\$108,363</b>
Other Revenue <sup>(14)</sup>			181,235	196,849	201,962
Total Concession Revenue			<b>\$283,615</b>	<b>\$300,246</b>	<b>\$310,325</b>

\* See also “–Concessions Revenues.” Fiscal Year 2017-18 results are estimated. See “FINANCIAL STATEMENTS–Delayed Audited Financial Statements”

<sup>(1)</sup> The minimum annual guaranteed rent for DFS Group, L.P. in Fiscal Year 2017-18 was \$27.0 million.

<sup>(2)</sup> Effective September 1, 2017, the EAN, LLC lease was reassigned to Enterprise Rent-a-Car Rental LLC.

<sup>(3)</sup> For each rental car company there are two leases: a concession lease and a facility lease. Revenue reflects only the concession lease.

<sup>(4)</sup> Doing business as Enterprise Rent-A-Car, Alamo Rent-A-Car and National Car Rental. The minimum annual guaranteed rent for Fiscal Year 2017-18 was \$14.6 million.

<sup>(5)</sup> Doing business as Avis Rent-A-Car and Budget Rent-A-Car. The minimum annual guaranteed rent for Fiscal Year 2017-18 was \$10.6 million.

<sup>(6)</sup> The minimum annual guaranteed rent for Hertz Corporation in Fiscal Year 2017-18 was \$10.7 million.

<sup>(7)</sup> The minimum annual guaranteed rent for Clear Channel in Fiscal Year 2017-18 was \$11.1 million.

<sup>(8)</sup> The minimum annual guaranteed rent for Travelex American Inc. in Fiscal Year 2017-18 was \$5.8 million.

<sup>(9)</sup> Tastes on the Fly operates various locations within the Airport, each with a different expiration date. The total minimum annual guaranteed rent for Fiscal Year 2017-18 was \$1.4 million. In January 2014, two leases under D-Lew Enterprises were reassigned to Tastes on the Fly San Francisco, LLC. In October 2015, a lease under J. Avery Enterprises was reassigned to Tastes on the Fly San Francisco, LLC.

<sup>(10)</sup> Doing business as Dollar Rent-A-Car and Thrifty Car Rental. The minimum annual guaranteed rent for Fiscal Year 2017-18 was \$3.7 million.

<sup>(11)</sup> WDFG North America, LLC (Formerly Host International Inc.) operates various locations within the Airport, each with a different expiration date. The total minimum annual guaranteed rent for Fiscal Year 2017-18 was \$2.3 million. In January 2014, WDFG of North America, LLC purchased the Retail unit of Host International Inc. and continues to operate its locations under the existing lease terms.

<sup>(12)</sup> Gotham Enterprises, LLC operates various locations within the Airport, each with a different expiration date. The total minimum annual guaranteed rent for Fiscal Year 2017-18 was \$0.2 million. Gotham Enterprises, LLC was not one of the top ten sources of concession revenues in Fiscal Year 2015-16.

<sup>(13)</sup> D-Lew Enterprises operates various locations within the Airport, each under lease agreements with a different expiration date. D-Lew Enterprises, LLC was not one of the top ten sources of concession revenues in Fiscal Year 2016-17. In January 2014, two leases under D-Lew Enterprises, LLC were reassigned to Tastes on the Fly San Francisco, LLC.

<sup>(14)</sup> Represents the aggregate concession revenue received from approximately 86 additional concessionaires operating 135 concessions, public parking and ground transportation operators at the Airport, including public parking revenues of approximately \$103.3 million in Fiscal Year 2015-16, approximately \$106.8 million in Fiscal Year 2016-17 and approximately \$100.9 million (estimated, see “FINANCIAL STATEMENTS – Delayed Audited Financial Statements”) in Fiscal Year 2017-18, and TNC trip fee revenues of approximately \$16.9 million in Fiscal Year 2015-16, approximately \$26.6 million in Fiscal Year 2016-17 and approximately \$34.5 million (estimated, see “FINANCIAL STATEMENTS–Delayed Audited Financial Statements”) in Fiscal Year 2017-18.

Source: Commission.

### Passenger Facility Charge

Prior to 2001, the Airport financed its capital program primarily through the issuance of revenue bonds and commercial paper secured by a pledge of the Net Revenues of the Airport, federal grants and Airport operating revenues. In 2001, the Airport received authorization from the FAA to commence collection and use of a PFC in the amount of \$4.50 per enplaning passenger to pay for certain eligible capital projects as approved by the FAA. The PFC revenues received by the Airport are subject to audit and final acceptance by the FAA and costs reimbursed with PFC revenues are subject to adjustment upon audit.

*PFC Applications*

The following is a summary of the Airport’s approved PFC applications through June 30, 2018.

**SUMMARY OF AIRPORT PFC APPLICATIONS**  
As of June 30, 2018

Application #	Date of Application	Date of FAA Approval	Original Amount (millions)	Revised Amount (millions)	Expiration Date <sup>(a)</sup>	Collected <sup>(b,g)</sup> (millions)	Remaining (millions)
1 <sup>(c)</sup>	March 2001	July 2001	\$113	\$ 0	June 2003 November	\$ 0	\$ 0
2	November 2001	March 2002	224	224	2005	224	0
3 <sup>(d)</sup>	July 2003	November 2003	539	609	January 2017	609	0
5 <sup>(e)</sup>	October 2010	October 2013	610	742	October 2024	461	281
6 <sup>(f)</sup>	July 2013	June 2015	141	217	March 2026	0	217
7 <sup>(f)</sup>	October 2016	May 2017	320	320	February 2030	0	320
TOTAL <sup>(h)</sup> :				<u>\$2,112<sup>(h)</sup></u>		<u>\$1,294<sup>(h)</sup></u>	<u>\$818<sup>(h)</sup></u>

<sup>(a)</sup> The Commission expects to complete collection of its current authorization in Fiscal Year 2024-25.

<sup>(b)</sup> Includes interest earnings on collections.

<sup>(c)</sup> The Airport suspended the project to be funded by PFC revenues under Application #1 in June 2003 and submitted an amendment to delete Application #1 in December 2003. The FAA approved this request in January 2004. The PFC collections under the original Application #1, totaling \$112.7 million, were applied toward Application #2. As such, the \$224.0 million of PFC collections under Application #2 includes \$112.7 million collected under Application #1.

<sup>(d)</sup> The Airport submitted, and later withdrew, PFC Application #4 for an authorization of \$70 million. The \$70 million was then included in the revised authorization amount under Application #3.

<sup>(e)</sup> On November 7, 2014, the FAA approved the Airport’s amendment to PFC Application #5 for an additional \$131.3 million with an extended collection period through October 1, 2024.

<sup>(f)</sup> On October 4, 2018, the FAA approved the Airport’s PFC Application #8, which combined PFC Application #6, as amended and PFC Application #7 for a new combined total of \$537 million of collection and spending authority, with an estimated expiration date of March 1, 2029. PFC Application #8 resulted in FAA administrative amendments for PFC Applications #6 and #7 to close out and transfer the collections and projects to PFC Application #8.

<sup>(g)</sup> Preliminary. Accrual basis.

<sup>(h)</sup> Totals may not add due to rounding.

Source: Commission.

In October 2018, the FAA approved PFC Application #8, which combined PFC Application #6, as amended and PFC Application #7 for a new total combined total of \$537 million of collection and spending authority for PFC Application #8 with an estimated charge expiration date of March 1, 2029. PFC Applications #6 and #7 were closed, and the projects and collections in those applications were transferred to PFC Application #8. The Commission expects that its current PFC authorization will be fully collected in Fiscal Year 2024-25. The Commission intends to submit further PFC applications and application amendment requests to the FAA that would permit it to continue collecting PFCs at a \$4.50 rate and provide for increased PFC collection and use authority in the future, including requests for authorization to use PFC revenues to pay debt service associated with the Terminal 1 and Terminal 3 redevelopment projects.

*Designation of PFC Collections as Revenues*

PFC collections are not included in the definition of “Revenues” under the 1991 Master Resolution. The Commission, however, has the ability but not the obligation under the 1991 Master Resolution to designate some portion or all of such collections as “Revenues” for a given Fiscal Year. These amounts so designated thus contribute to the Airport’s calculation of debt service coverage for purposes of its rate covenant. The actual amount of PFC collections to be designated as “Revenues” and used to pay debt service is dependent, in part, upon the amounts permitted for such use by PFC regulations and the Airport’s PFC applications. To date, the Commission has determined the amount to be designated as Revenues prior to the start of each Fiscal Year. The amount may later be adjusted downward, depending upon actual PFC collections during the Fiscal Year, Airport net revenues relative to

budget, and other factors. PFC collections that are not applied as “Revenues” and used to pay debt service on related Bonds are deposited and retained in a separate account and are available to be applied for such purposes in future Fiscal Years. As of June 30, 2018, the Airport reported to the FAA a balance of \$386.1 million in such account, which may be used to pay debt service on related Bonds or for other purposes. Set forth in the table below is a summary of Airport PFC collections and amounts applied to pay debt service for the current and the ten most recent Fiscal Years.

**PFC COLLECTIONS APPLIED BY THE COMMISSION  
FOR PAYMENT OF DEBT SERVICE ON OUTSTANDING BONDS**

Applicable Fiscal Year	PFC Collections (millions) <sup>(1)</sup>	PFC Designated as Revenues (millions) <sup>(2)</sup>	Amount Applied to Pay Debt Service (millions) <sup>(3)</sup>
2018-19	N/A <sup>(4)</sup>	\$67.9	N/A <sup>(4)</sup>
2017-18	\$115.1 <sup>(5)</sup>	31.7	\$ 4.1 <sup>(5)</sup>
2016-17	105.9	44.9	23.4
2015-16	100.2	58.1	43.1
2014-15	93.2	62.6	47.6
2013-14	88.0	60.2	35.7
2012-13	85.1	51.5	45.0
2011-12	82.3	88.5	73.0
2010-11	77.9	87.2	87.2
2009-10	75.0	61.0	61.0
2008-09	70.3	51.0	51.0
2007-08	71.5	54.4	54.4

<sup>(1)</sup> Includes PFC collections and related interest earned for the year. Based on Audited Financial Statements for Fiscal Years 2007-08 through 2016-17. Fiscal Year 2017-18 estimated based on 12-month data. See “FINANCIAL STATEMENTS—Delayed Audited Financial Statements.”

<sup>(2)</sup> Amount designated as Revenues to be applied to pay debt service. Accumulated PFCs from prior years can be designated in future years.

<sup>(3)</sup> Amount actually applied to pay debt service. Accumulated PFCs from prior years can be applied to pay debt service in future years.

<sup>(4)</sup> Final numbers not available.

<sup>(5)</sup> Estimated. See “FINANCIAL STATEMENTS—Delayed Audited Financial Statements.”

Source: Commission.

The Commission’s receipt of PFC revenues is subject to certain risks. See “CERTAIN RISK FACTORS—Availability of PFCs.” A shortfall in PFC revenues or a decision by the Commission not to designate PFCs as Revenues may require the Commission to increase landing fees and terminal rentals to pay its debt service on the Bonds.

*Collection of PFCs in the Event of Airline Bankruptcy*

In order to ensure continuation of the PFC program, including the trust fund status of collected PFCs, Congress amended the PFC enabling legislation effective December 12, 2003, to provide additional specific obligations for an air carrier operating under bankruptcy protection in Chapter 7 or Chapter 11. The statute provides that (i) the air carrier must segregate in a separate account an amount of PFCs equal to its average monthly liability, (ii) PFCs are funds held in trust for each airport regardless of the ability to identify or trace precise funds, (iii) the air carrier may not pledge the PFCs to a third party, (iv) an airport is entitled to recover costs for enforcing an air carrier’s compliance with the statute, (v) the air carrier may keep any interest income earned on the segregated PFCs if it is in compliance with the PFC enabling legislation, and (vi) PFCs may not be commingled with other air carrier revenues.

While the PFC enabling legislation provides that PFCs are trust funds both before and after an air carrier files for bankruptcy protection, there can be no assurance that, in the event of a bankruptcy, the air carrier will have collected, retained, segregated or properly accounted for its PFCs, or that the Airport would be able to collect from the air carrier the PFCs that the airline collected prior to the bankruptcy filing, or that any such collection would be timely.

## Operating Expenses

Fiscal Year 2016-17 operating expenses increased \$168.4 million (26.3%) to \$808.9 million from \$640.5 million in Fiscal Year 2015-16. This increase in operating expenses is primarily attributable to a \$123.6 million (51.3%) increase in personnel expenses due to a significant pension costs increase, cost of living adjustments, and additional positions added in Fiscal Year 2016-17. Contractual service expenses also increased \$5.8 million (8.6%), primarily due to higher software licensing costs and the expansion of information booth services. Light, heat and power expenses increased \$0.2 million (0.7%), primarily due to an increase in rates and higher consumption. Repairs and maintenance decreased \$0.9 million (2.7%), primarily due to lower spending on facilities maintenance projects. General and administrative expenses increased \$0.7 million (18.0%), primarily due to the increase in estimated bad debt expense. Environmental remediation costs increased \$0.1 million (3.5%) primarily due to an increase in remediation costs related to capital improvement projects. Depreciation increased \$37.4 million (16.4%), primarily due to the addition of completed capital improvement projects such as Terminal 1 Temporary Boarding Area B, Fire House #3 and South Field Checkpoint Relocation, and Terminal 1 Center. Services provided by other City departments increased by \$1.7 million (8.3%), primarily due to costs associated with the implementation of the City's new financial management software system. Materials and supplies expenses decreased \$0.2 million (1.6%), due to lower spending on electrical supplies.

### *Review and Adjustment to Operating Expenditures*

Each quarter, the Airport produces a financial forecast for the operating budget. If this forecast were to project that the operating budget would be in a deficit by the end of the Fiscal Year, Airport management likely would implement cost control measures. These cost control measures have included, but are not limited to, workforce reductions or hiring freezes on positions except those that have a direct impact on safety and security, and cuts in discretionary expenditures, such as professional service contracts.

## Payments to the City

### *Annual Service Payment*

Under the Lease and Use Agreements, the Commission makes an "Annual Service Payment" to the City to compensate the City for certain indirect services and facilities that it provides to the Airport and the Commission. See "SAN FRANCISCO INTERNATIONAL AIRPORT—Airline Agreements—*Lease and Use Agreements*" and "Payments from Commission to City" in APPENDIX E. The Annual Service Payment is equal to the greater of (i) \$5 million or (ii) 15% of "Concession Revenues" (as defined in APPENDIX E—"SUMMARY OF CERTAIN PROVISIONS OF THE LEASE AND USE AGREEMENTS—Payments from Commission to City"), and is paid by the Commission in quarterly installments based on estimates and reconciled at year-end. The Annual Service Payment is made only after the payment of Operation and Maintenance Expenses and debt service on outstanding revenue bonds of the Commission, including the Bonds, and certain other expenditures. See "SECURITY FOR THE SERIES 2019A-D BONDS—Flow of Funds." The amount of Annual Service Payment for each of Fiscal Years 2012-13 through 2017-18 is set forth below.

The Annual Service Payment has been grandfathered under the FAA's 1999 *Policies and Procedures Concerning the Use of Airport Revenue*. However, the grandfathered status may not continue indefinitely. The FAA or new federal legislation may change or revoke this status. The 2018 FAA Act included a provision that would require the Comptroller General of the United States to initiate within 180 days of enactment of the Act a study of (1) the legal and financial challenges related to repealing such "grandfathering" for the Airport and other airports the FAA has identified as "grandfathered"; and (2) measures that may be taken to mitigate the impact of repealing the exception. See "SAN FRANCISCO INTERNATIONAL AIRPORT—Certain Federal and State Laws and Regulations—*Federal Law Prohibiting Revenue Diversion*." Also see "CERTAIN RISK FACTORS—Reduction in Federal Grants" and APPENDIX E—"SUMMARY OF CERTAIN PROVISIONS OF THE LEASE AND USE AGREEMENTS—Event of Default; Termination or Suspension of Lease and Use Agreement Provisions—Commission's Right to Suspend Part of Lease and Use Agreement."

*Payments for Direct Services*

In addition to the Annual Service Payment, the Lease and Use Agreements permit the Commission to reimburse the City’s General Fund for the cost of direct services provided by other City departments to the Airport, such as those provided by the Police Department, the Fire Department, the City Attorney, the City Treasurer, the City Controller, the City Purchasing Agent and other City departments. Set forth in the table below is a summary of the payments made by the Airport to the City for Fiscal Years 2012-13 through 2017-18. The Commission is otherwise prohibited under the Lease and Use Agreements from making any payments to the City, directly or indirectly. See “SAN FRANCISCO INTERNATIONAL AIRPORT–Airline Agreements–*Lease and Use Agreements*” and APPENDIX E. Also see “SAN FRANCISCO INTERNATIONAL AIRPORT–Certain Federal and State Laws and Regulations–*Federal Law Prohibiting Revenue Diversion.*”

**SUMMARY OF PAYMENTS MADE BY THE AIRPORT TO THE CITY**  
**(\$ in millions)**

Fiscal Year	Annual Service Payment	Reimbursement for Direct Services					Subtotal	Total
		Police	Fire	Other <sup>(1)</sup>	Utility Costs			
2017-18 <sup>(2)</sup>	\$46.5	\$56.1	\$24.1	\$26.4	\$49.7 <sup>(3)</sup>	\$156.3	\$202.8	
2016-17	45.0	52.2	22.4	23.7	49.1 <sup>(4)</sup>	147.4	192.4	
2015-16	42.5	49.6	20.9	22.4	47.8 <sup>(5)</sup>	140.7	183.2	
2014-15	40.5	47.4	20.7	21.1	46.6 <sup>(6)</sup>	135.8	176.3	
2013-14	38.0	45.7	20.6	20.8	44.2 <sup>(7)</sup>	131.3	169.3	
2012-13	36.5	44.8	18.9	16.7	37.9 <sup>(8)</sup>	118.3	154.8	

<sup>(1)</sup> Represents costs of direct services provided by the City Attorney, City Treasurer, City Controller, City Purchasing Agent and other City departments.

<sup>(2)</sup> Estimated. See “FINANCIAL STATEMENTS–Delayed Audited Financial Statements.”

<sup>(3)</sup> Approximately \$22.9 million (estimated) in utility costs were recovered from Airport tenants.

<sup>(4)</sup> Approximately \$22.3 million in utility costs were recovered from Airport tenants.

<sup>(5)</sup> Approximately \$21.7 million in utility costs were recovered from Airport tenants.

<sup>(6)</sup> Approximately \$21.7 million in utility costs were recovered from Airport tenants.

<sup>(7)</sup> Approximately \$20.6 million in utility costs were recovered from Airport tenants.

<sup>(8)</sup> Approximately \$16.1 million in utility costs were recovered from Airport tenants.

Source: Commission.

*Employee Benefit Plans*

**Retirement System.** All of the employees of the Airport are members of the San Francisco City and County Employees’ Retirement System (the “Retirement System”), which is charged with administering a defined benefit pension plan (the “Fund”) and an individual account deferred compensation plan (the “Deferred Compensation Plan”). These two plans are separate and distinct legal entities, with trust funds independent of each other. The Fund was initially established in the late 1880s and was constituted in its current form by the 1932 City Charter. It continues to exist and operate under the Charter. The Charter provisions governing the Retirement System may be revised only by a Charter amendment, which requires an affirmative public vote at a duly called election. The Retirement System is administered by the Retirement Board consisting of seven members, three appointed by the Mayor, three elected from among the members of the Retirement System and a member of the Board of Supervisors appointed by the President of the Board of Supervisors. There may not be more than one retired person on the Retirement Board.

The table on the next page shows Fund contributions for Fiscal Years 2012-13 through 2016-17. “Market Value of Assets” reflects the fair market value of assets held in trust for payment of pension benefits. “Actuarial Value of Assets” refers to the value of assets held in trust adjusted according to the Fund’s actuarial methods. The “Percent Funded” column is determined by dividing the actuarial value of assets by the actuarial liability. “Employer and Employee Contributions” reflects the total of mandated employee contributions and employer Actuarial Retirement Contributions received by the Retirement System for Fiscal Years 2012-13 through 2016-17. The Fund’s last actuarial valuation was as of July 1, 2017 and was issued in February 2018.

**CITY AND COUNTY OF SAN FRANCISCO EMPLOYEES' RETIREMENT SYSTEM**  
**Fiscal Years 2012-13 through 2016-17**  
**(\$ in thousands)**

Fiscal Year	Market Value of Assets	Actuarial Value of Assets	Actuarial Liability	Percent Funded	Employee and Employer Contribution	Employer Contribution Rates <sup>†</sup>
2016-17	\$22,410,350	\$22,185,244	\$25,706,090	86.3%	\$868,653	21.40%
2015-16	20,154,503	20,654,703	24,403,882	84.6	849,569	22.80
2014-15	20,428,069	19,653,338	22,970,892	85.6	894,325	26.76
2013-14	19,920,607	18,012,088	21,122,567	85.3	821,902	24.82
2012-13	17,011,545	16,303,397	20,224,777	80.6	701,596	20.71

<sup>†</sup> Employer contribution rates are shown before required employer/employee cost-sharing first effective for Fiscal Year 2012-13.  
Source: Retirement System Actuarial Valuation reports as of July 1, 2013, July 1, 2014, July 1, 2015, July 1, 2016 and July 1, 2017.

The Airport is required to contribute at the actuarially recommended rate of contribution. The Airport's required contributions for Fiscal Years 2011-12 through 2018-19 are set forth below.

**AIRPORT CONTRIBUTIONS TO THE RETIREMENT SYSTEM**

Fiscal Year	Contribution Rate	Airport Contribution
2018-19	23.31%	\$ 37.6 million <sup>†</sup>
2017-18	23.46	38.3 million*
2016-17	21.40	34.1 million
2015-16	22.80	33.0 million
2014-15	26.76	37.5 million
2013-14	24.82	33.7 million
2012-13	20.71	28.1 million
2011-12	18.09	25.8 million

<sup>†</sup> Budgeted.

\* Estimated. See "FINANCIAL STATEMENTS—Delayed Audited Financial Statements."

Sources: Retirement System Actuarial Valuation Reports and Commission.

**Medical Benefits.** Medical benefits for eligible active Airport and City employees and eligible dependents, for retired Airport and City employees and eligible dependents, and for surviving spouses and domestic partners of covered City employees (the "City Beneficiaries") are administered by the City's Health Service System (the "Health Service System") pursuant to Charter Sections 12.200 et seq. and A8.420 et seq. Pursuant to such Charter Sections, the Health Service System also administers medical benefits to active and retired employees of the San Francisco Unified School District, San Francisco Community College District and the San Francisco Superior Court (collectively the "System's Other Beneficiaries"). However, the City is not required to fund medical benefits for the System's Other Beneficiaries and therefore this section focuses on the funding by the City of medical benefits for City Beneficiaries. The contributions for health care benefits made by the Airport for Fiscal Years 2012-13 through 2016-17 and budgeted for Fiscal Year 2017-18 and Fiscal Year 2018-19 are set forth in the table on the next page:

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**AIRPORT CONTRIBUTIONS TO THE HEALTH SERVICE SYSTEM<sup>(1)</sup>**  
(\$ in millions)

<u>Fiscal Year</u>	<u>Active Employees</u>	<u>Retirees</u>	<u>Total</u>
2018-19	\$29.2 <sup>(2)</sup>	\$13.7 <sup>(2)</sup>	\$42.9 <sup>(2)</sup>
2017-18	27.8 <sup>(2)</sup>	13.1 <sup>(2)</sup>	40.9 <sup>(2)</sup>
2016-17	28.8	10.9	39.7
2015-16	26.3	10.3	36.7
2014-15	24.2	9.4	33.6
2013-14	24.0	10.8	34.8
2012-13	24.4	10.4	34.8

<sup>(1)</sup> Historical information has been restated to capture an updated comprehensive allocation of Health Service System costs, including contributions made for Fire and Police personnel allocable to the Airport, and to apply an updated methodology identifying direct and allocable costs prorated between active employees and retirees for each Fiscal Year.

<sup>(2)</sup> Budgeted.

Source: Commission.

The Health Service System is overseen by the City’s Health Service Board (the “Health Service Board”). The seven member Health Service Board is composed of one member of the City’s Board of Supervisors, appointed by the Board President; an individual who regularly consults in the health care field, appointed by the Mayor; a doctor of medicine, appointed by the Mayor; one member nominated by the City Controller; and three members of the Health Service System, active or retired, elected from among their members.

The plans (the “HSS Medical Plans”) for providing medical care to the City Beneficiaries and the System’s Other Beneficiaries (collectively, the “HSS Beneficiaries”) are determined annually by the Health Service Board and approved by the Board of Supervisors pursuant to Charter Section A8.422.

The Health Service System oversees a trust fund (the “Health Service Trust Fund”) established pursuant to Charter Sections 12.203 and A8.428 through which medical benefits for the HSS Beneficiaries are funded. The Health Service System issues annually a publicly available, independently audited financial report that includes financial statements for the Health Service Trust Fund. This report may be obtained by writing to the San Francisco Health Service System, 1145 Market Street, Second Floor, San Francisco, California 94103, or by calling 415-554-1727. Audited annual financial statements for several years are also posted in the Health Service System website: [www.myhss.org/finance](http://www.myhss.org/finance).

As presently structured under the Charter, the Health Service Trust Fund is not a fund through which assets are accumulated to finance post-employment healthcare benefits (an “OPEB trust fund”). Thus, the Health Service Trust Fund is not currently affected by Governmental Accounting Standards Board (“GASB”) Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions (“GASB 45”), or GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions (“GASB 75”), which apply to OPEB trust funds.

**Post-Employment Health Care Benefits.** Eligibility of City employees for retiree health care benefits is governed by the Charter, as amended by Proposition B, passed by voters on June 3, 2008. Employees hired prior to January 2009 and a spouse or dependent are potentially eligible for health benefits following retirement after age 50 and completing five years of City service, subject to other eligibility requirements. Employees hired after January 2009 and a spouse or dependent are potentially eligible for gradually vesting health benefits following retirement after age 50 and completing 20 years of City service (for full benefits), subject to other eligibility requirements.

The City was required to begin reporting the liability and related information for unfunded post-employment benefits (“OPEBs”) in the City’s financial statements for the Fiscal Year 2007-08. This new reporting requirement was defined under GASB 45. GASB 45 requires that government agencies record and report the actuarially determined unfunded liability which includes a portion of the employer’s annual required contribution (“ARC”) in each year if the ARC was not fully funded.

In June 2015, GASB issued GASB 75, which revises and establishes new accounting and financial reporting requirements for governments that provide their employees with OPEBs. The new standard is effective for periods beginning after June 15, 2017. The City is implementing the provisions of GASB 75 in its audited financial statements for Fiscal Year 2017-18. According to GASB's Summary of GASB 75, GASB 75 will require recognition of the entire OPEB liability, a more comprehensive measure of OPEB expense, and new note disclosures and required supplementary information to enhance decision-usefulness and accountability. The GASB 75 Summary also states that the consistency, comparability, and transparency of the information reported will be improved through the following requirements:

- The use of a discount rate that considers the availability of the OPEB plan's fiduciary net position associated with the OPEB of current active and inactive employees and the investment horizon of those resources, rather than utilizing only the long-term expected rate of return regardless of whether the OPEB plan's fiduciary net position is projected to be sufficient to make projected benefit payments and is expected to be invested using a strategy to achieve that return;
- A single method of attributing the actuarial present value of projected benefit payments to periods of employee service, rather than allowing a choice among six methods with additional variations;
- Immediate recognition in OPEB expense, rather than a choice of recognition periods, of the effects of changes of benefit terms; and
- Recognition of OPEB expense that incorporates deferred outflows of resources and deferred inflows of resources related to OPEB over a defined, closed period, rather than a choice between an open or closed period.

The following table shows the components of the City's annual OPEB allocation for the Airport for Fiscal Years 2012-13 through 2016-17, the amount contributed to the plan, and changes in the City's net OPEB obligation (in thousands), all as calculated pursuant to GASB 45:

#### ANNUAL OPEB ALLOCATION FOR THE AIRPORT

	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
Annual Required Contribution (ARC)	\$24,956	\$ 21,071	\$ 21,409	\$ 18,797	\$ 22,129
Interest on net OPEB Obligation	3,501	4,410	4,872	5,969	6,013
Adjustment to ARC	(2,902)	(3,677)	(4,062)	(4,853)	(2,432)
Annual OPEB Cost (expense)	25,555	21,804	22,219	19,913	25,710
Contribution Made	(10,666)	(8,734)	(10,705)	(10,858)	(11,894)
Increase in Net OPEB Obligation	14,889	13,070	11,514	9,055	13,816
Net OPEB Obligation - beginning of year	75,824	90,713	103,783	115,297	124,352
Net OPEB Obligation - end of year	<u>\$90,713</u>	<u>\$103,783</u>	<u>\$115,297</u>	<u>\$124,352</u>	<u>\$138,168</u>

Source: Commission.

For purposes of determining the Airport's OPEB costs and obligations above, the City has allocated to the Airport a portion of the City-wide OPEB costs and obligations based on the Airport's percentage of City-wide payroll costs. This allocation is for purposes of calculating the Airport's costs and obligations under GASB 45 and does not represent an assessment of the Airport's legal obligation to pay OPEB costs and obligations.

As of July 1, 2014, the most recent actuarial valuation date, which was completed pursuant to GASB 45, the City's funded status of the retiree health care benefits was 1.1%. The City's actuarial accrued liability for benefits was approximately \$4.3 billion, and the City's actuarial value of assets in the Retiree Health Care Trust Fund was approximately \$49.0 million, resulting in an unfunded actuarial accrued liability (UAAL) of the City of approximately \$4.2 billion. The Retiree Health Care Trust Fund was established in December 2010 by the Retiree Health Trust Fund Board of the City. These figures are for the retiree health care benefits for all eligible City employees and retirees and not just those allocable to the Airport. The City has not calculated how much of the UAAL is allocable to the Airport; however, if the City were to allocate to the Airport a portion of the UAAL in accordance with its percentage of City-

wide payroll costs in Fiscal Year 2016-17, then the Airport's portion of the UAAL would be equal to approximately 6.1%.

The Airport expects the City to receive an updated actuarial study of its OPEB costs and obligations completed pursuant to GASB 75 prior to the release of the Commission's audited financial statements for Fiscal Year 2017-18. This study may indicate a significant increase in the City's Net OPEB Liability. In addition, this study, together with the implementation of GASB 75 for Fiscal Year 2017-18, would result in a restatement of the Commission's Net Position as of July 1, 2017, which could show a significant decrease in Unrestricted Net Position.

As of June 30, 2017, the Airport had set aside \$115.5 million in a separate fund (a sub-fund of the Airport's operating fund) for purposes of the OPEB obligations, and such amount is included in Unrestricted Cash and Investments in the Airport's audited financial statements for Fiscal Year 2016-17. The disposition of this fund is under management's discretion and has not been placed in a trust fund.

The Health Service System issues a publicly available financial report that includes financial statements for the health care benefits plan. The report may be obtained by writing to the City and County of San Francisco, Office of the Controller, 1 Dr. Carlton B. Goodlett Place, Room 316, San Francisco, California 94102, or by calling 415-554-7500.

### **Budget Process**

The Airport budget is a part of the overall budget which is reviewed and approved according to the City's laws and policies. Starting in Fiscal Year 2012-13, the City's enterprise departments, which include the Airport, began submitting two-year budget proposals for review and approval. The Airport's proposed two-year budget is approved by the Commission before being submitted to the Mayor. The Mayor's Office reviews and may amend the Airport's proposed budget, and then incorporates the proposed budget into the overall City budget that is submitted to the Board of Supervisors for approval. Under the Charter, the Board of Supervisors may increase or decrease any proposed expenditure in the Mayor's budget so long as the aggregate changes do not cause the expenditures to exceed the total amount of revenues proposed by the Mayor. The Charter further provides that the Mayor may reduce or reject any expenditure authorized by the Board of Supervisors except appropriations for bond interest, redemption or other fixed charges, subject to reinstatement of any such expenditure by a two-thirds vote of the Board of Supervisors. The budget may be amended through a supplemental appropriation request, which is prepared by the Controller, submitted by the Mayor's Office and reviewed and approved by the Board of Supervisors.

The approved operating budget for the Airport for Fiscal Year 2018-19 is \$1.16 billion. Budgeted total revenues in the amount of \$1.16 billion include aviation revenues (\$611.9 million), parking and concessions (\$310.6 million), other non-aviation revenues (\$105.3 million) and non-operating revenues (\$132.2 million). Budgeted total expenditures for Fiscal Year 2018-19 is \$1.16 billion, including personnel costs (\$245.8 million), non-personnel services, materials and supplies, equipment, and contribution to surety bond fund (\$176.6 million), small capital outlay (\$4.8 million), debt service (\$494.8 million), utilities (\$48.2 million), services of other departments, including Fire and Police Departments (\$128.2 million), the Annual Service Payment (\$46.6 million), and facilities maintenance (\$15.0 million). This compares to an approved operating budget for Fiscal Year 2017-18 of \$1.05 billion.

The approved operating budget for the Airport for Fiscal Year 2019-20 is \$1.3 billion. Budgeted total revenues in the amount of \$1.3 billion include aviation revenues (\$667.2 million), parking and concessions (\$341.6 million), other non-aviation revenues (\$107.6 million) and non-operating revenues (\$180.9 million). Budgeted total expenditures for Fiscal Year 2019-20 is \$1.3 billion, including personnel costs (\$252.9 million), non-personnel services, materials and supplies, equipment, and contribution to surety bond fund (\$180.8 million), small capital outlay (\$5.1 million), debt service (\$585.2 million), utilities (\$50.7 million), services of other departments, including Fire and Police Departments (\$145.2 million), the Annual Service Payment (\$51.5 million), facilities maintenance (\$15.5 million), and designated for general reserve (\$10.3 million). This compares to an approved operating budget for Fiscal Year 2018-19 of \$1.16 billion.

## **Risk Management and Insurance**

Under the 1991 Master Resolution, the Commission is required to procure or provide and maintain insurance, or to self-insure, against such risks as are usually insured by other major airports in amounts adequate for the risk insured against, as determined by the Commission and to file with the Trustee each year a written summary of all insurance coverage then in effect. The Commission is not required to nor does it carry insurance or self-insure against any risks due to land movement or seismic activity.

The Airport carries general liability insurance coverage of \$1 billion subject to a deductible of \$10,000 per single occurrence. The Airport also carries commercial property insurance coverage of \$1 billion subject to a deductible of \$500,000 per single occurrence. This policy includes flood coverage up to a \$10 million sub-limit. The Airport also carries active assailant coverage of \$10 million subject to a deductible of \$25,000 per single occurrence for property damage, business interruption and extra expenses for a malicious physical attack with a weapon at any of the facilities owned by the Commission affecting three or more persons present during the attack. The Airport is self-insured as part of the City's workers' compensation program. The Airport carries public officials and employment practices liability coverage of \$5 million, subject to a deductible of \$100,000 per occurrence for Public Officials' and Public Entity Liability matters, and \$250,000 per occurrence for Employment Practices Liability matters. The Airport also carries insurance for public employee dishonesty, fine arts, electronic data processing equipment, target range liability for law enforcement personnel, and watercraft liability for Airport fire rescue vessels.

Prior to September 11, 2001, the Airport had liability insurance coverage in the amount of \$50 million per occurrence for war, terrorism and hijacking. Immediately following the events of September 11, 2001, insurers cancelled their coverages for war, terrorism and hijacking for all airports, including the Airport, and for all airlines around the country. A number of insurers now provide this coverage through the Federal Government Terrorism Risk Insurance Act. However, the scope of the coverage is limited and the premiums are high. Due to these factors, the Commission, in consultation with the City's Director of Risk Management, has elected not to secure such coverage. Effective July 1, 2016, the Airport through its Aviation Liability program carries \$250 million in War Perils liability coverage, subject to a deductible of \$10,000.

## **Investment of Airport Funds**

Under the Charter and the 1991 Master Resolution, the Revenue Fund and the accounts therein, including the Contingency Account, are held by the Treasurer. The 1991 Master Resolution further provides that moneys in all funds and accounts (including Revenues) established under the 1991 Master Resolution which are held by the Treasurer shall be invested in Permitted Investments in accordance with the policies and procedures of the Treasurer in effect from time to time. For definitions of "Revenues" and "Permitted Investments" under the 1991 Master Resolution, see APPENDIX D—"SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION—Certain Definitions." The Proposed Amendments would modify the definition of Permitted Investments. See "PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION" and in Appendix H—"SUMMARY OF PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION."

Under the Treasurer's current investment procedures, amounts in the Airport's Revenue Fund, Contingency Account, PFC Account and Construction Fund are invested in the City's larger pooled investment fund (the "City Pool"). Payments due from the Revenue Fund and the Construction Fund are made from the City Pool. Among other purposes, the City Pool serves in effect as a disbursement account for expenditures from the City's various segregated and pooled funds.

The Treasurer's investment policy is updated periodically. The objectives of the Treasurer's current investment policy, in order of priority, are preservation of capital, maintenance of liquidity and yield. The Treasurer calculated the current weighted average maturity of these investments as of October 31, 2018 to be 450 days.

Set forth in the table below are the approximate book values of amounts in the City Pool allocable to the Construction Fund, the Operating Fund, the Contingency Account, PFC Funds and the Special Revenue Fund. These amounts include certain minimum balances maintained in the City Pool for liquidity purposes. Also set forth below are the types of investments in the City Pool, and the percentage of total book value of the City Pool as of such date. As of October 31, 2018, the book value of the City Pool was approximately \$10.0 billion.

**INVESTMENT DISTRIBUTION OF CITY  
POOLED INVESTMENT FUND**  
(as Percentage of Book Value)

(as of October 31, 2018)

U.S. Treasuries	8.17%
Federal Agencies	49.16
Money Market Funds	9.39
State and Local Obligations	1.90
Supranationals	6.92
Public Time Deposits	0.25
Negotiable Certificates of Deposit	17.37
Commercial Paper	5.84
Medium Term Notes	0.99
<b>TOTAL</b>	<u><u>100.00%</u></u>

Source: Office of the Treasurer & Tax Collector of the City and County of San Francisco.

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As of June 30, 2018, the book value of the Airport's cash and investments held in the City Pool was estimated to be approximately \$1.8 billion.

**BOOK VALUE OF AIRPORT FUNDS IN CITY  
POOLED INVESTMENT FUND\***

(as of June 30, 2018)	
Construction Funds	\$986.9 million
Operating Fund	309.3 million
Contingency Account	131.5 million
PFC Funds	384.7 million
Special Revenue Fund	1.1 million
<b>TOTAL</b>	<b><u>\$1,813.6 million</u></b>

\* Estimated. See "FINANCIAL STATEMENTS – Delayed Audited Financial Statements."  
Source: Commission.

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## Currently Outstanding Bonds

The Commission had outstanding \$6,244,840,000 in aggregate principal amount of Second Series Revenue Bonds as of December 1, 2018.

Series	Dated Date	Original Principal Amount Issued	Outstanding Principal (as of 12/1/18)	Purpose
Issue 32F (Non-AMT)†	November 16, 2006	\$ 260,115,000	\$ 70,930,000	Refunding
Issue 37C (Non-AMT/Private Activity)†*	May 15, 2008	89,895,000	85,135,000	Refunding
2009A (Non-AMT/Private Activity)†	September 3, 2009	92,500,000	88,835,000	Refunding
2009B (Non-AMT/Private Activity)†	September 3, 2009	82,500,000	79,635,000	Refunding
2009C (Non-AMT/Private Activity)‡	November 3, 2009	132,915,000	30,125,000	Refunding
2009D (Non-AMT/Private Activity)†	November 4, 2009	88,190,000	80,180,000	Refunding
2009E (Non-AMT/Private Activity)† <sup>(1)</sup>	November 18, 2009	485,800,000	469,400,000	New Money
2010A (AMT)	February 10, 2010	215,970,000	205,865,000	Refunding
2010C (Non-AMT/Governmental Purpose)†	April 7, 2010	345,735,000	126,165,000	Refunding
2010D (Non-AMT/Private Activity)‡	April 7, 2010	89,860,000	43,755,000	Refunding
2010F (Non-AMT/Private Activity)†	August 5, 2010	121,360,000	121,360,000	New Money
2010G (Non-AMT/Governmental Purpose)†	August 5, 2010	7,100,000	7,100,000	New Money
2011A (AMT)†	February 22, 2011	88,815,000	7,080,000	Refunding
2011B (Non-AMT/Governmental Purpose)†	February 22, 2011	66,535,000	18,645,000	Refunding
2011C (AMT)†	July 21, 2011	163,720,000	163,720,000	Refunding
2011D (Non-AMT/Governmental Purpose)†	July 21, 2011	124,110,000	84,865,000	Refunding
2011E (Taxable)†	July 21, 2011	62,585,000	5,625,000	Refunding
2011F (AMT)†	September 20, 2011	123,325,000	123,325,000	Refunding
2011G (Non-AMT/Governmental Purpose)†	September 20, 2011	106,195,000	29,660,000	Refunding
2011H (Taxable)†	September 20, 2011	125,055,000	49,455,000	Refunding
2012A (AMT)†	March 22, 2012	208,025,000	208,025,000	Refunding
2012B (Non-AMT/Governmental Purpose)†	March 22, 2012	108,425,000	107,465,000	Refunding
2013A (AMT)†	July 31, 2013	360,785,000	319,080,000	New Money
2013B (Non-AMT/Governmental Purpose)†	July 31, 2013	87,860,000	87,860,000	New Money
2013C (Taxable)†	July 31, 2013	12,480,000	3,430,000	New Money
2014A (AMT)†	September 24, 2014	376,320,000	376,320,000	New Money
2014B (Non-AMT/Governmental Purpose)†	September 24, 2014	97,290,000	97,290,000	New Money
2016A (Non-AMT/Governmental Purpose)†	February 25, 2016	232,075,000	232,075,000	Refunding
2016B (AMT)†	September 29, 2016	574,970,000	574,970,000	New Money
2016C (Non-AMT/Governmental Purpose)†	September 29, 2016	165,155,000	165,155,000	New Money
2016D (Non-AMT/Governmental Purpose)†	September 29, 2016	147,795,000	147,305,000	Refunding
2017A (AMT)†	October 31, 2017	339,585,000	339,585,000	New Money
2017B (Non-AMT/Governmental Purpose)†	October 31, 2017	231,985,000	231,985,000	New Money
2017C (Taxable) <sup>Ω</sup>	October 31, 2017	45,140,000	45,140,000	New Money
2017D (AMT) <sup>Ω</sup>	October 31, 2017	144,830,000	144,830,000	Refunding
2018A (AMT) <sup>Ω</sup>	February 1, 2018	115,355,000	115,355,000	Refunding
2018D (AMT)†	May 30, 2018	722,805,000	722,805,000	New Money
2018E (Non-AMT)†	May 30, 2018	116,275,000	116,275,000	New Money
2018F (Taxable)†	May 30, 2018	7,025,000	7,025,000	New Money
2018G (AMT)†	May 30, 2018	35,665,000	35,665,000	Refunding
2018B (Non-AMT)	June 6, 2018	138,170,000	138,170,000	New Money
2018C (Non-AMT)	June 6, 2018	138,170,000	138,170,000	New Money
TOTAL		<u>\$7,278,465,000</u>	<u>\$6,244,840,000</u>	

\* This Issue of Bonds was converted to Bonds the interest on which is not subject to the federal alternative minimum tax.

† Secured by Original Reserve Account. See "SECURITY FOR THE SERIES 2019A-D BONDS—Reserve Fund; Reserve Accounts; Credit Facilities—Original Reserve Account."

‡ Secured by 2009 Reserve Account. See "SECURITY FOR THE SERIES 2019A-D BONDS—Reserve Fund; Reserve Accounts; Credit Facilities—2009 Reserve Account."

<sup>Ω</sup> Secured by 2017 Reserve Account. See "SECURITY FOR THE SERIES 2019A-D BONDS—Reserve Fund; Reserve Accounts; Credit Facilities—2017 Reserve Account."

<sup>(1)</sup> These Bonds were issued as Non-AMT/Private Activity bonds on May 3, 2009. The Commission plans to refund these Bonds with a portion of the proceeds of the Series 2019C Bonds and the Series 2019D Bonds. See "PLAN OF FINANCE AND REFUNDING" and "ESTIMATED SOURCES AND USES OF FUNDS."

Source: Commission.

Additional Bonds are expected to be a significant source of funding for the Commission’s Capital Improvement Plan. See “CERTAIN RISK FACTORS–Additional Long-Term Debt” and “CAPITAL PROJECTS AND PLANNING–The Capital Improvement Plan.”

## Credit Facilities

As of December 1, 2018, the Commission had outstanding \$567,340,000 of variable rate tender option Bonds, secured by bank letters of credit, as summarized in the table below. If amounts on the Bonds are paid under a letter of credit, the obligation of the Commission to repay such amounts would constitute “Repayment Obligations” under the 1991 Master Resolution and would be accorded the status of Bonds. See “SECURITY FOR THE SERIES 2019A-D BONDS–Additional Bonds–*Repayment Obligations*.”

### CREDIT FACILITIES FOR BONDS

	<u>Issue 37C</u>	<u>Series 2010A</u>	<u>Series 2018B</u>	<u>Series 2018C</u>
Outstanding Principal Amount	\$85,135,000	\$205,865,000	\$138,170,000	\$138,170,000
Type	LOC <sup>(1)</sup>	LOC <sup>(1)</sup>	LOC <sup>(1)</sup>	LOC <sup>(1)</sup>
Expiration Date	January 27, 2020	June 29, 2020	June 3, 2022	June 3, 2022
Credit Provider	Union Bank <sup>(2)</sup>	BofA <sup>(3)</sup>	Barclays <sup>(4)</sup>	Sumitomo <sup>(5)</sup>
Credit Provider Ratings <sup>(6)</sup>				
Short-Term	P-1/A-1/F1	P-1/A-1/F1+	P-1/A-1/F1	P-1/A-1/F1
Long-Term	A2/A/A	Aa3/A+/AA-	A2/A/A+	A1/A/A

<sup>(1)</sup> Letter of credit.

<sup>(2)</sup> MUFG Union Bank, N.A.

<sup>(3)</sup> Bank of America, N.A.

<sup>(4)</sup> Barclays Bank PLC.

<sup>(5)</sup> Sumitomo Mitsui Banking Corporation acting through its New York Branch.

<sup>(6)</sup> As of December 1, 2018. Ratings are provided for convenience of reference only. Such rating information has been obtained from sources believed to be reliable but has not been confirmed or re-verified by the rating agencies. The Commission does not take any responsibility for the accuracy of such ratings, or give any assurance that such ratings will apply for any given period of time, or that such ratings will not be revised downward or withdrawn if, in the judgment of the agency providing such rating, circumstances so warrant. Reflects the ratings of the credit provider, not the rating on the related Bonds. Ratings on related Bonds may be different. Ratings for the credit providers are displayed as Moody’s/S&P/Fitch. The Long-Term ratings provided are Moody’s Issuer Rating, Standard & Poor’s Long-Term Local Issuer Credit Rating and Fitch’s Long-Term Issuer Default Rating. The Short-Term ratings provided are Moody’s Short-Term Rating, Standard & Poor’s Short-Term Local Issuer Credit Rating and Fitch’s Short-Term Issuer Default Rating. These ratings were not provided by the above-referenced credit providers. None of the above-referenced credit providers has provided any information for inclusion in this Official Statement or has independently verified or reviewed, made any representation regarding, or accepts any responsibility for the accuracy or completeness of this Official Statement.

Source: Commission

In addition to the credit facilities described above, the Commission has obtained four irrevocable direct-pay letters of credit to support its Commercial Paper Notes. Repayment of amounts drawn on these letters of credit are secured by a lien on Net Revenues that is subordinate to the lien of the 1991 Master Resolution securing the Bonds. See “SECURITY FOR THE SERIES 2019A-D BONDS–Other Indebtedness–*Subordinate Bonds*” for additional information concerning these letters of credit.

## Interest Rate Swaps

Pursuant to the 1991 Master Resolution, the Commission may enter into one or more Interest Rate Swaps in connection with one or more series of Bonds. An Interest Rate Swap is an agreement between the Commission or the Trustee and a Swap Counterparty under which a variable rate cash flow (which may be subject to an interest rate cap) on a principal or notional amount is exchanged for a fixed rate of return on an equal principal or notional amount. The Swap Counterparty must be a member of the International Swaps and Derivatives Association and must be rated in one of the three top rating categories by at least one rating agency. The 1991 Master Resolution provides that, if and to the extent provided in any Supplemental Resolution authorizing the issuance of a series of Bonds, regularly

scheduled swap payments may be paid directly out of the account or accounts in the Debt Service Fund established with respect to such series of Bonds, and thus on a parity with debt service on the Bonds.

#### *Individual Interest Rate Swap Agreements*

The obligation of the Commission to make regularly scheduled payments to the Swap Provider under the Swap Agreements is an obligation of the Commission payable from Net Revenues on a parity with payments of principal of or interest on the Bonds. The Swap Agreements are subject to termination upon the occurrence of specified events and the Commission may be required to make a substantial termination payment to the respective Swap Provider depending on the then-current market value of the swap transaction even if the Commission were not the defaulting party. The termination payment would be approximately equal to the economic value realized by the Commission from the termination of the Swap Agreement. Any payment due upon the termination of a Swap Agreement is payable from Net Revenues subordinate to payments of principal of or interest on the Bonds. All of the Swap Agreements are terminable at any time at the option of the Commission at their market value. The objective of each of the Swap Agreements was to secure a synthetic fixed interest rate obligation with respect to the related Bonds.

#### *Swap Policy*

The Commission has adopted a written Interest Rate Swap Policy (the “Swap Policy”), which establishes the Commission’s policies for entering into new interest rate swap agreements. The Swap Policy is reviewed periodically by the Airport Director and revisions are submitted to the Commission for approval. The Swap Policy prohibits the Commission from entering into interest rate swaps or other derivative instruments for speculative purposes or to create extraordinary risk or leverage with respect to the related Bonds or investments, or that would result in the Commission lacking sufficient liquidity to make payments that may be due upon termination of the Swap or that lack sufficient price transparency to permit the Airport Director and the swap advisor to reasonably determine the market valuation of the Swap. The Swap Policy sets forth, among other things, criteria for qualified swap counterparties, maximum notional amounts of interest rate swap agreements and swap counterparty credit exposure limits.

#### *Risks of Interest Rate Swap Agreements*

The Commission’s interest rate swap agreements entail risk to the Commission. Although the Commission intends that its interest rate swap agreements hedge various series of variable rate Bonds, the floating rate that the Commission receives under an interest rate swap agreement can materially differ from the variable rate of interest the Commission pays on its variable rate Bonds. This can reduce the effectiveness of an interest rate swap agreement as a hedge. In addition, the counterparties to the Commission’s interest rate swap agreements may terminate the respective swaps upon the occurrence of specified termination events or events of default, which may include failure of the Commission or the counterparty to maintain credit ratings at required levels. If either the counterparty or the Commission terminates any interest rate swap agreement, the Commission may be required to make a termination payment to the counterparty (even if such termination is due to an event affecting the counterparty, including the counterparty’s failure to maintain credit ratings at required levels), and any such payment could materially adversely impact the Commission’s financial condition. The valuation of the swaps is volatile, and will vary based on a variety of factors, including current interest rates.

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The table below summarizes the interest rate swap agreements entered into by the Commission as of December 1, 2018.

### SUMMARY OF INTEREST RATE SWAP AGREEMENTS

Associated Bonds	Effective Date	Outstanding Notional Amount	Counterparty	Counterparty Credit Ratings (Moody's/S&P/Fitch) <sup>(1)</sup>	Insurer	Fixed Rate Payable by Commission	Market Value to Commission <sup>(2)</sup>	Expiration Date
<b>Issue 37B</b> <sup>(3)</sup>	05/15/2008	\$ 75,473,000	Merrill Lynch Capital Services <sup>(4)</sup>	NR/NR/NR	AGM	3.773%	(\$7,744,922.73)	May 1, 2029
<b>Issue 37C</b>	05/15/2008	85,107,000	JPMorgan Chase Bank, N.A. <sup>(5)</sup>	Aa2/A+/AA	AGM	3.898	(9,374,396.07)	May 1, 2029
<b>Series 2010A</b>	02/01/2010	137,980,000	Goldman Sachs Bank USA <sup>(6)</sup>	A1/A+/A+		3.925	(17,146,048.27)	May 1, 2030
	<b>TOTAL</b>	<u>\$298,560,000</u>					<u>(\$34,265,367.07)</u>	

<sup>(1)</sup> As of December 1, 2018. Ratings are provided for convenience of reference only. Such rating information has been obtained from sources believed to be reliable but has not been confirmed or re-verified by the rating agencies. The Commission takes no responsibility for the accuracy of such ratings, or gives any assurance that such ratings will apply for any given period of time, or that such ratings will not be revised downward or withdrawn if, in the judgment of the agency providing such rating, circumstances so warrant. The ratings provided are Moody's Issuer Rating, S&P's Long-Term Local Issuer Credit Rating and Fitch's Long-Term Issuer Default Rating.

<sup>(2)</sup> The market values of the swaps were calculated as of December 1, 2018 by an independent third-party consultant to the Commission who does not have an interest in the Swap Agreements.

<sup>(3)</sup> The Issue 37B Bonds that are hedged by this swap agreement were purchased with proceeds of the Series 2008B Notes, which the Commission subsequently refunded, and the Issue 37B Bonds are held in trust. The swap is now indirectly hedging the Series 2010A-3 Bonds.

<sup>(4)</sup> Guaranteed by Merrill Lynch Derivative Products AG, which is rated Aa3/AA/NR as of December 1, 2018.

<sup>(5)</sup> The original counterparty to this swap agreement was Bear Stearns Capital Markets Inc.

<sup>(6)</sup> Guaranteed by The Goldman Sachs Group, which is rated A3/BBB+/A as of December 1, 2018.

Source: Commission.

### Debt Service Requirements

The table on the following page presents the annual debt service requirements for the Series 2019A-D Bonds and the Outstanding Bonds, based upon monthly deposits.

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**DEBT SERVICE SCHEDULE<sup>(1)</sup>**

Fiscal Year Ending June 30	Debt Service on Outstanding Bonds <sup>(2)</sup>	Series 2019A Bonds		Series 2019B Bonds		Series 2019C Bonds		Series 2019D Bonds		Total Series 2019A-D Debt Service	Aggregate Debt Service
		Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest		
2019	\$ 432,255,898	-	\$ 699,242	-	\$ 626,329	\$ 2,305,000	\$1,007,133	-	\$ 8,146,400	\$ 12,784,103	\$ 445,040,001
2020	442,117,526	-	12,572,596	-	4,211,444	15,770,833	2,455,655	-	20,366,000	55,376,529	497,494,055
2021	450,177,055	-	20,239,066	-	4,467,893	25,894,167	2,042,687	-	20,366,000	73,009,813	523,186,868
2022	467,651,629	-	43,536,753	-	4,547,760	25,565,833	1,414,931	\$ 867,500	20,366,000	96,298,776	563,950,406
2023	467,459,978	-	57,560,750	-	4,564,000	11,204,167	633,954	9,140,833	20,322,625	103,426,329	570,886,307
2024	442,351,826	-	57,560,750	-	4,564,000	-	281,471	27,026,667	19,865,583	109,298,471	551,650,297
2025	457,678,864	-	57,560,750	-	4,564,000	-	281,471	18,210,000	18,514,250	99,130,471	556,809,335
2026	437,230,183	-	57,560,750	-	4,564,000	-	281,471	19,117,500	17,603,750	99,127,471	536,357,654
2027	423,748,587	-	57,560,750	-	4,564,000	-	281,471	20,070,833	16,647,875	99,124,930	522,873,517
2028	420,500,935	-	57,560,750	-	4,564,000	1,335,000	281,471	21,074,167	15,644,333	100,459,721	520,960,656
2029	303,939,022	-	57,560,750	-	4,564,000	6,675,000	234,560	22,127,500	14,590,625	105,752,435	409,691,457
2030	254,196,904	-	57,560,750	-	4,564,000	-	-	23,231,667	13,484,250	98,840,667	353,037,570
2031	206,497,237	-	57,560,750	-	4,564,000	-	-	24,392,500	12,322,667	98,839,917	305,337,153
2032	216,376,919	-	57,560,750	-	4,564,000	-	-	25,615,833	11,103,042	98,843,625	315,220,544
2033	322,856,300	\$ 6,478,333	57,560,750	-	4,564,000	-	-	26,892,500	9,822,250	105,317,833	428,174,133
2034	171,681,282	39,194,167	57,236,833	-	4,564,000	-	-	28,239,167	8,477,625	137,711,792	309,393,074
2035	172,049,528	41,155,000	55,277,125	-	4,564,000	-	-	29,655,000	7,065,667	137,716,792	309,766,320
2036	172,444,196	43,212,500	53,219,375	-	4,564,000	-	-	31,136,667	5,582,917	137,715,458	310,159,654
2037	191,827,616	45,375,000	51,058,750	-	4,564,000	-	-	32,690,000	4,026,083	137,713,833	329,541,450
2038	295,051,532	47,643,333	48,790,000	-	4,564,000	-	-	31,610,833	2,391,583	134,999,750	430,051,282
2039	339,824,611	50,023,333	46,407,833	-	4,564,000	-	-	16,220,833	811,042	118,027,042	457,851,653
2040	371,889,449	52,524,167	43,906,667	-	4,564,000	-	-	-	-	100,994,833	472,884,283
2041	372,246,010	55,150,833	41,280,458	-	4,564,000	-	-	-	-	100,995,292	473,241,302
2042	372,595,414	57,908,333	38,522,917	-	4,564,000	-	-	-	-	100,995,250	473,590,664
2043	372,574,278	60,803,333	35,627,500	-	4,564,000	-	-	-	-	100,994,833	473,569,111
2044	372,474,474	61,094,167	32,587,333	\$ 2,753,333	4,564,000	-	-	-	-	100,998,833	473,473,307
2045	372,314,644	50,364,167	29,549,292	16,657,500	4,426,333	-	-	-	-	100,997,292	473,311,936
2046	372,194,454	52,780,000	27,131,892	17,489,167	3,593,458	-	-	-	-	100,994,517	473,188,971
2047	372,060,997	55,317,500	24,598,583	18,362,500	2,719,000	-	-	-	-	100,997,583	473,058,580
2048	313,208,757	116,132,500	21,943,483	19,284,167	1,800,875	-	-	-	-	159,161,025	472,369,782
2049	19,422,214	341,058,333	16,369,500	16,733,333	836,667	-	-	-	-	374,997,833	394,420,047
2050	19,278,364	-	-	-	-	-	-	-	-	-	19,278,364
2051	19,120,645	-	-	-	-	-	-	-	-	-	19,120,645
2052	18,965,712	-	-	-	-	-	-	-	-	-	18,965,712
2053	18,777,104	-	-	-	-	-	-	-	-	-	18,777,104
2054	18,609,164	-	-	-	-	-	-	-	-	-	18,609,164
2055	18,423,323	-	-	-	-	-	-	-	-	-	18,423,323
2056	18,236,108	-	-	-	-	-	-	-	-	-	18,236,108
2057	18,033,950	-	-	-	-	-	-	-	-	-	18,033,950
2058	14,905,609	-	-	-	-	-	-	-	-	-	14,905,609
2059	22,384	-	-	-	-	-	-	-	-	-	22,384
<b>Total<sup>(3)</sup></b>	<b>\$10,563,270,680</b>	<b>\$1,176,215,000</b>	<b>\$1,333,723,449</b>	<b>\$91,280,000</b>	<b>\$127,637,759</b>	<b>\$88,750,000</b>	<b>\$9,196,276</b>	<b>\$407,320,000</b>	<b>\$267,520,567</b>	<b>\$3,501,643,051</b>	<b>\$14,064,913,732</b>

(1) Net debt service. Does not include interest amounts expected to be paid from Bond proceeds. Based on monthly interest and principal deposits.

(2) Excludes debt service on the Refunded Bonds. Includes credit facility and other ancillary fees with respect to variable rate bonds. In calculating the debt service for Bonds issued at variable rates, the Commission has made assumptions about interest rates, swap payments and ancillary fees; assumed annual costs range between 3.8% and 5.9% for interest payments, net swap payments and fees.

(3) Various totals may not add due to rounding.

## Historical Debt Service Coverage

The following table reflects historical Net Revenues and the calculation of debt service coverage on the Bonds based on such Net Revenues for Fiscal Years 2012-13 through 2016-17.

<b>HISTORICAL DEBT SERVICE COVERAGE</b>					
	<b>(Fiscal Year)</b>				
	<b>(\$ in thousands)</b>				
	<u>2012-13</u>	<u>2013-14</u>	<u>2014-15</u>	<u>2015-16</u>	<u>2016-17</u>
Net Revenues <sup>(1)</sup>	\$348,294	\$367,336	\$391,831	\$430,333	\$466,015
PFCs Treated as Revenues	45,000	35,700	47,550	43,110	23,363
Transfer from the Contingency Account <sup>(2)</sup>	92,559	93,327	93,883	94,426	95,221
<b>TOTAL AVAILABLE FOR DEBT SERVICE</b>	<b>\$485,854</b>	<b>\$496,363</b>	<b>\$533,264</b>	<b>\$567,869</b>	<b>\$584,599</b>
Total Annual Debt Service <sup>(3)</sup>	\$337,355	\$365,314	\$393,449	\$394,157	\$404,555
Historical Debt Service Coverage per the 1991 Master Resolution <sup>(4)</sup>	144.0%	135.9%	135.5%	144.1%	144.5%
Historical Debt Service Coverage Excluding Transfer	116.6%	110.3%	111.7%	120.1%	121.0%

<sup>(1)</sup> Using the definition of Net Revenues contained in the 1991 Master Resolution, but excluding PFCs treated as “Revenues” pursuant to the 1991 Master Resolution. See “–Passenger Facility Charge.”

<sup>(2)</sup> Represents the Transfer from the Contingency Account to the Revenues Account in each such Fiscal Year. See “SECURITY FOR THE SERIES 2019A-D BONDS–Contingency Account.”

<sup>(3)</sup> Annual Debt Service net of accrued and capitalized interest.

<sup>(4)</sup> Net Revenues plus Transfer divided by total Annual Debt Service. Must not be less than 125% pursuant to the 1991 Master Resolution. See “SECURITY FOR THE SERIES 2019A-D BONDS–Rate Covenant.”

Source: Commission.

## SFOTEC

The San Francisco Terminal Equipment Company, LLC (“SFOTEC”) is a consortium of airlines that was formed to use, operate and maintain certain Airport-owned equipment and systems related to handling flights and passengers at the ITC. This equipment, which includes computer check-in systems with baggage and boarding pass printers, baggage handling systems, passenger boarding bridges, systems for delivering preconditioned air to aircraft and ground power for aircraft, was acquired by the Airport with approximately \$100 million of Airport bond proceeds. SFOTEC also manages the daily assignment of the ITC joint use gates, holdrooms, ticket counters and baggage systems for the airlines (including five domestic airlines) operating in the ITC in accordance with the Lease and Use Agreement and with Airport-approved protocols.

The Airport and SFOTEC have entered into an agreement through June 30, 2021, pursuant to which SFOTEC is obligated to maintain, operate, repair and schedule the use of such equipment; pay the associated utility and custodial costs; and provide nondiscriminatory access to such equipment for all ITC carriers, whether or not they are members of SFOTEC. The costs of operating and maintaining the equipment are shared by all airline users of the equipment. The user fees for airlines that are members of SFOTEC are determined pursuant the terms of the SFOTEC Members Agreement. Nonmember airlines are subject to a separate rate based on use.

## REPORT OF THE AIRPORT CONSULTANT

### General

The Commission has retained LeighFisher, as recognized experts in their field, to prepare a report on traffic, revenues, expenses, the Capital Improvement Plan and financial analyses in connection with the issuance of the Series 2019A Bonds, the Series 2019B Bonds and the Series 2019C Bonds (but not the Series 2019D Bonds). The Airport Consultant has consented to the Report of the Airport Consultant, dated January 2, 2019, being included as APPENDIX A. This Report should be read in its entirety for an explanation of the assumptions and methodology used therein.

The Report of the Airport Consultant is divided into five sections (1 through 5). Section 1 provides general background information with respect to the Commission and the Airport; Section 2 describes the economic base for air traffic, airline service at the Airport and the air traffic forecasts; Section 3 describes the financial framework of the Airport, including the 1991 Master Resolution, the Annual Service Payment, the Lease and Use Agreements and various other agreements with Airport users; Section 4 provides a summary of the Capital Improvement Plan and funding sources; and Section 5 provides the Airport Consultant’s forecasts of Net Revenues demonstrating compliance by the Commission with the rate covenant provisions contained in the 1991 Master Resolution in connection with the Series 2019A Bonds, Series 2019B Bonds and Series 2019C Bonds and future Bond issuances planned during the forecast period.

In the preparation of the forecasts in its Report, the Airport Consultant has made certain assumptions with respect to conditions that may occur and the course of action that management expects to take in the future. The Airport Consultant has relied upon Commission staff for representations about its plans and expectations and for disclosure of significant information that might affect the realization of forecast results. Commission staff has reviewed these assumptions and concur that they provide a reasonable basis for the forecast. While the Commission and the Airport Consultant believe these assumptions to be reasonable for the purpose of the forecasts, they are dependent upon future events, and actual conditions may differ from those assumed in the analysis. To the extent actual future factors differ from those assumed by the Airport Consultant or provided to the Airport Consultant by others, the actual results could vary materially from those forecast. The Airport Consultant has no responsibility to update its Report for events and circumstances occurring after the date of its Report. The forecast is based on assumptions that may not be realized and actual results may differ materially from the forecast. See “CERTAIN RISK FACTORS–Uncertainties of Projections, Forecasts and Assumptions.”

Forecast financial information for the On-Airport Hotel (including forecast revenues and expenses associated with the operation of the On-Airport Hotel) are based upon assumptions made by JLL, the Commission’s hotel consultant, and are not assumptions made by the Airport Consultant. The On-Airport Hotel financial forecast is documented in the report titled: “Hotel Market and Underwriting Study: Grand Hyatt at SFO,” dated May 2, 2018, which was prepared by JLL. The On-Airport Hotel financial forecast has not been updated since May 2, 2018. Inevitably some assumptions used to develop the On-Airport Hotel financial forecast will not be realized and unanticipated events and circumstances could occur. Therefore, the actual results will vary from those forecast, and the variations could be material. See “CERTAIN RISK FACTORS–Uncertainties of Projections, Forecasts and Assumptions.”

### **Forecast of Debt Service Coverage**

The following table reflects the estimated net revenues and debt service coverage on the Bonds for Fiscal Year 2017-18 and forecast of Net Revenues and the calculation of debt service coverage on the Bonds (including the Series 2019A Bonds, Series 2019B Bonds and Series 2019C Bonds) based on such Net Revenues for Fiscal Year 2018-19 through Fiscal Year 2024-25 as set forth in Section 5 of the Report of the Airport Consultant attached hereto as APPENDIX A. Such forecast reflects the impact on revenues and expenses associated with the Series 2019A Bonds, Series 2019B Bonds and Series 2019C Bonds as well as other Bond issues expected to be undertaken during the forecast period. The forecast does not reflect the Series 2019D Bonds or the refunding of the Refunded Bonds. The forecast does not reflect the impact on Commission finances of capital projects that are in the conceptual planning stage or any other projects that may be undertaken in the future, including projects in the Recommended ADP described under “CAPITAL PROJECTS AND PLANNING–Airport Development Plan” (as described in the Report of the Airport Consultant). Any additional future capital projects may be financed by future Bond issues.

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**FORECAST OF DEBT SERVICE COVERAGE**  
(Fiscal Year)  
(\$ in thousands)

	2017-18 <sup>(1)</sup>	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Net Revenues <sup>(2)</sup>	\$474,717	\$519,310	\$580,250	\$645,388	\$787,685	\$889,001	\$930,161	\$936,457
Transfer from the Contingency Account*	100,057	112,139	125,723	137,818	173,541	198,271	211,332	213,882
<b>TOTAL AVAILABLE FOR DEBT SERVICE</b>	<b>574,774</b>	<b>\$631,449</b>	<b>\$705,973</b>	<b>\$783,206</b>	<b>\$961,226</b>	<b>\$1,087,272</b>	<b>\$1,141,492</b>	<b>\$1,150,339</b>
Debt Service Requirement <sup>(3)</sup>	\$400,227	\$448,555	\$502,893	\$551,274	\$694,163	\$793,085	\$845,328	\$855,528
Forecast Debt Service Coverage per the Resolution	144%	141%	140%	142%	138%	137%	135%	134%
Forecast Debt Service Coverage Excluding Transfer	119%	116%	115%	117%	113%	112%	110%	109%

<sup>(1)</sup> Estimated based on 12-months of data. Final results may differ. See "FINANCIAL STATEMENTS – Delayed Audited Financial Statements."

<sup>(2)</sup> Includes certain PFC revenues forecast to be designated as Revenues by the Commission, as described in the Report of the Airport Consultant. As discussed in the Report of the Airport Consultant, forecast revenues and expenses for the On-Airport Hotel were prepared by JLL. The Airport Consultant makes no representation regarding the reasonableness of the forecast financial results provided by JLL for the proposed On-Airport Hotel.

<sup>(3)</sup> Cash basis. Includes projected debt service on outstanding Bonds, Series 2019A Bonds, Series 2019B Bonds, Series 2019C Bonds and future Bonds as described in the Report of the Airport Consultant.

\* Transfer reflects lesser of Contingency Account balance or 25% of Debt Service.

Source LeighFisher, Report of the Airport Consultant.

The Report of the Airport Consultant and the forecast of Net Revenues and debt service coverage included therein incorporated assumptions of the debt service on the Series 2019A Bonds, the Series 2019B Bonds, the Series 2019C Bonds, the Commission's outstanding variable rate Bonds and Bonds to be issued during each of the forecasted years based upon projections provided by Public Financial Management, Inc., co-financial advisor in November 2018. The Report assumes that the aggregate principal amount of the Series 2019A Bonds, Series 2019B Bonds and Series 2019C Bonds is \$1,471 million and that they have an all-in true interest cost of 4.61%. The Report has not been updated to reflect the final terms of the Series 2019A Bonds, Series 2019B Bonds and Series 2019C Bonds and does not reflect the issuance of the Series 2019D Bonds and related refunding.

In addition, the forecast is based on other assumptions that may not be realized and actual results may differ materially from the forecast. The Report should be read in its entirety for an explanation of the assumptions and methodology used in developing the forecast. Also see "CERTAIN RISK FACTORS–Uncertainties of Projections, Forecasts and Assumptions."

**AIRLINE INFORMATION**

*The Commission cannot and does not assume any responsibility for the accuracy or completeness of any information contained or referred to herein regarding the business operations or financial condition of any of the airlines serving the Airport.*

Each of the principal domestic airlines serving the Airport, or their respective parent corporations, and foreign airlines serving the Airport with American Depositary Receipts ("ADRs") registered on a national exchange are subject to the information requirements of the Securities Exchange Act of 1934, and in accordance therewith files reports and other information with the SEC. Certain information, including financial information, concerning such domestic airlines or their respective parent corporations and such foreign airlines, is disclosed in certain reports and statements filed with the SEC. Such reports and statements can be inspected at the Public Reference Room of the SEC, 100 F Street, N.E., Room 1580, Washington, D.C. 20549; and the offices of The New York Stock Exchange, Inc., 20 Broad Street, New York, New York 10005 (for certain airlines whose stock or whose parent's stock is traded on the New York Stock Exchange). Copies of such reports and statements can be obtained from the Public Reference

Room, at prescribed rates or from the SEC website at: <http://www.sec.gov> (the information on such web site is not incorporated by reference herein). In addition, each airline is required to file periodic reports of financial operating statistics with the U.S. DOT. Such reports can be inspected at the Bureau of Transportation Statistics, Research and Innovative Technology Administration, Department of Transportation, 400 Seventh Street, S.W., Washington, D.C. 20590.

Airlines owned by foreign governments, or foreign corporations operating airlines (unless such airlines have ADRs registered on a national exchange), are not required to file information with the SEC. Airlines owned by foreign governments, or foreign corporations operating airlines, file limited information only with the U.S. DOT.

## **LITIGATION MATTERS**

There is no litigation pending concerning the validity of the 1991 Master Resolution or the Series 2019A-D Bonds or the issuance or delivery thereof, the existence of the Commission, the title of the officers thereof who executed or will execute the Series 2019A-D Bonds to their respective offices, or the pledge of Net Revenues to the payment of the Series 2019A-D Bonds.

In the regular course of the Airport's business, the Commission and the City are parties to a variety of pending and threatened lawsuits and administrative proceedings with respect to the Airport's operations and other matters, in addition to those specifically discussed herein. The Commission does not believe that any such lawsuits or proceedings will have a material adverse effect on the Airport's business operations or financial condition.

## **RATINGS**

Moody's has assigned a rating of "A1" (stable outlook), S&P has assigned a rating of "A+" (stable outlook) and Fitch Ratings, Inc. ("Fitch") has assigned a rating of "A+" (stable outlook) to the Series 2019A-D Bonds.

A rating reflects only the view of the agency giving such rating and is not a recommendation to buy, sell or hold the Series 2019A-D Bonds. An explanation of the significance of each rating may be obtained from the rating agencies at their respective addresses, as follows: Moody's, 7 World Trade Center, at 250 Greenwich Street, New York, New York 10007; S&P, 55 Water Street, New York, New York 10041 and Fitch, One State Street Plaza, New York, New York 10004. Generally, a rating agency bases its rating on the information and materials furnished to it and on investigations, studies and assumptions of its own. There is no assurance that a rating will apply for any given period of time, or that the rating will not be revised downward or withdrawn if, in the judgment of the agency providing such rating, circumstances so warrant. The Commission undertakes no responsibility to maintain any rating or to oppose any revision or withdrawal of a rating. A downward revision or withdrawal of a rating may have a material adverse effect on the marketability or market price of the Series 2019A-D Bonds.

## **UNDERWRITING**

### **Purchase of Series 2019A-D Bonds**

J.P. Morgan Securities LLC ("J.P. Morgan"), on its own behalf and as representative of the other underwriters identified on the cover hereof (together with J.P. Morgan, the "Underwriters") has entered into a Bond Purchase Contract between the Commission and the Underwriters (the "Bond Purchase Contract") that commits the Underwriters to purchase the Series 2019A-D Bonds, subject to the terms and conditions set forth in the Bond Purchase Contract. The Bond Purchase Contract provides that the Underwriters will purchase all of the Series 2019A-D Bonds if any are purchased.

The Series 2019A-D Bonds are being purchased through negotiation by the Underwriters at a purchase price equal to \$1,976,430,433.55 (representing the principal amount of the Series 2019A-D Bonds, plus net original issue premium equal to \$216,042,061.60 and less an underwriters' discount equal to \$3,176,628.05) pursuant to the Bond Purchase Contract.

The Underwriters may offer and sell the Series 2019A-D Bonds to certain dealers and others at prices lower than the public offering prices set forth on the inside cover. The initial public offering prices may be changed from time to time by the related Underwriters. See “CERTAIN RELATIONSHIPS” below.

### **Retail Brokerage Arrangements**

*The following paragraphs have been provided by and are being included in this Official Statement at the request of the respective Underwriters. The Commission does not assume any responsibility for the accuracy or completeness of such statements or information.*

J.P. Morgan Securities LLC (“JPMS”), an Underwriter of the Series 2019A-D Bonds, has entered into negotiated dealer agreements (each, a “Dealer Agreement”) with each of Charles Schwab & Co., Inc. (“CS&Co.”) and LPL Financial LLC (“LPL”) for the retail distribution of certain securities offerings at the original issue prices. Pursuant to each Dealer Agreement, each of CS&Co. and LPL may purchase Series 2019A-D Bonds from JPMS at the original issue price less a negotiated portion of the selling concession applicable to any Series 2019A-D Bonds that such firm sells.

Morgan Stanley, parent company of Morgan Stanley & Co. LLC., an underwriter of the Series 2019A-D Bonds, has entered into a retail distribution arrangement with its affiliate Morgan Stanley Smith Barney LLC. As part of the distribution arrangement, Morgan Stanley & Co. LLC may distribute municipal securities to retail investors through the financial advisor network of Morgan Stanley Smith Barney LLC. As part of this arrangement, Morgan Stanley & Co. LLC may compensate Morgan Stanley Smith Barney LLC for its selling efforts with respect to the Series 2019A-D Bonds.

### **CERTAIN RELATIONSHIPS**

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing, brokerage services, providing credit and liquidity facilities, and providing swaps and other derivative products. Certain of the Underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, such services for the Commission for which they received or will receive customary fees and expenses.

A portion of the proceeds of the Series 2019A Bonds, Series 2019B Bonds and Series 2019C Bonds will be used to repay a portion of the Commission’s Commercial Paper Notes. See “PLAN OF FINANCE AND REFUNDING—Financing of Capital Projects.” Some of these Commercial Paper Notes may be held by JPMS.

In the ordinary course of their various business activities, the Underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities, which may include credit default swaps) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve securities and instruments of the Commission.

The Underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

In addition, the Underwriters may currently be serving as underwriters, remarketing agents or dealers in connection with the Commission’s other outstanding obligations, including the Commission’s Commercial Paper Notes, for which they may receive certain fees. For a description of certain relationships of the Underwriters to the Commission, see “AIRPORT’S FINANCIAL AND RELATED INFORMATION—Credit Facilities” and “—Interest Rate Swaps.”

## TAX MATTERS

In the opinion of Squire Patton Boggs (US) LLP and Amira Jackmon, Attorney at Law, Co-Bond Counsel to the Commission, under existing law: (i) interest on the Series 2019A Bonds, the Series 2019B Bonds and the Series 2019D Bonds (together, the “Tax-Exempt Bonds”) is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986, as amended (the “Code”), except interest on any Series 2019A Bond and any Series 2019D Bond for any period during which that Series 2019A Bond or Series 2019D Bond is held by a “substantial user” or a “related person,” as those terms are used in Section 147(a) of the Code; (ii) interest on the Series 2019A Bonds is an item of tax preference under Section 57 of the Code and therefore may be subject to the alternative minimum tax imposed under the Code; (iii) interest on the Series 2019B Bonds and the Series 2019D Bonds is not an item of tax preference under Section 57 of the Code for purposes of the alternative minimum tax imposed under the Code; and (iv) interest on the Series 2019A-D Bonds is exempt from State of California personal income taxes. Co-Bond Counsel expresses no opinion as to any other tax consequences regarding the Series 2019A-D Bonds. INTEREST ON THE SERIES 2019C BONDS IS NOT EXCLUDED FROM GROSS INCOME FOR FEDERAL INCOME TAX PURPOSES. THE LEGAL DEFEASANCE OF THE SERIES 2019C BONDS MAY RESULT IN A DEEMED SALE OR EXCHANGE OF THE SERIES 2019C BONDS UNDER CERTAIN CIRCUMSTANCES; OWNERS OF THE SERIES 2019C BONDS SHOULD CONSULT THEIR TAX ADVISORS AS TO THE FEDERAL INCOME TAX CONSEQUENCES OF SUCH AN EVENT. PROSPECTIVE PURCHASERS OF THE SERIES 2019C BONDS SHOULD CONSULT THEIR TAX ADVISORS AS TO THE FEDERAL, STATE, LOCAL AND FOREIGN TAX CONSEQUENCES OF THEIR ACQUISITION, OWNERSHIP AND DISPOSITION OF THE SERIES 2019C BONDS.

### **Tax-Exempt Bonds**

The opinion on federal tax matters with respect to the Tax-Exempt Bonds will be based on and will assume the accuracy of certain representations and certifications, and continuing compliance with certain covenants, of the Commission contained in the transcript of proceedings and that are intended to evidence and assure the foregoing, including that the Tax-Exempt Bonds are and will remain obligations the interest on which is excluded from gross income for federal income tax purposes. Co-Bond Counsel will not independently verify the accuracy of the Commission’s certifications and representations or the continuing compliance with the Commission’s covenants.

The opinions of Co-Bond Counsel are based on current legal authority and cover certain matters not directly addressed by such authority. Those represent Co-Bond Counsel’s legal judgment as to exclusion of interest on the Tax-Exempt Bonds from gross income for federal income tax purposes but are not a guaranty of that conclusion. The opinions are not binding on the Internal Revenue Service (IRS) or any court. Co-Bond Counsel express no opinion about (i) the effect of future changes in the Code and the applicable regulations under the Code or (ii) the interpretation and the enforcement of the Code or those regulations by the IRS.

The Code prescribes a number of qualifications and conditions for the interest on state and local government obligations to be and to remain excluded from gross income for federal income tax purposes, some of which require future or continued compliance after issuance of the obligations. Noncompliance with these requirements by the Commission may cause loss of such status and result in the interest on the Tax-Exempt Bonds being included in gross income for federal income tax purposes retroactively to the date of issuance of the Tax-Exempt Bonds. The Commission has covenanted to take the actions required of it for the interest on the Tax-Exempt Bonds to be and to remain excluded from gross income for federal income tax purposes, and not to take any actions that would adversely affect that exclusion. After the date of issuance of the Tax-Exempt Bonds, Co-Bond Counsel will not undertake to determine (or to so inform any person) whether any actions taken or not taken, or any events occurring or not occurring, or any other matters coming to Co-Bond Counsel’s attention, may adversely affect the exclusion from gross income for federal income tax purposes of interest on the Tax-Exempt Bonds or the market value of the Tax-Exempt Bonds.

Interest on the Tax-Exempt Bonds may be subject to a federal branch profits tax imposed on certain foreign corporations doing business in the United States and to a federal tax imposed on excess net passive income of certain S corporations. Under the Code, the exclusion of interest from gross income for federal income tax purposes may have certain adverse federal income tax consequences on items of income, deduction or credit for certain taxpayers, including financial institutions, certain insurance companies, recipients of Social Security and Railroad Retirement benefits, those that are deemed to incur or continue indebtedness to acquire or carry tax-exempt obligations, and

individuals otherwise eligible for the earned income tax credit. The applicability and extent of these and other tax consequences will depend upon the particular tax status or other tax items of the owner of the Tax-Exempt Bonds. Co-Bond Counsel will express no opinion regarding those consequences.

Payments of interest on tax-exempt obligations, including the Tax-Exempt Bonds, are generally subject to IRS Form 1099-INT information reporting requirements. If an owner of a Tax-Exempt Bonds is subject to backup withholding under those requirements, then payments of interest will also be subject to backup withholding. Those requirements do not affect the exclusion of such interest from gross income for federal income tax purposes.

Co-Bond Counsel's engagement with respect to the Tax-Exempt Bonds ends with the issuance of the Tax-Exempt Bonds, and, unless separately engaged, Co-Bond Counsel are not obligated to defend the Commission or the owners of the Tax-Exempt Bonds regarding the tax status of interest thereon in the event of an audit examination by the IRS. The IRS has a program to audit tax-exempt obligations to determine whether the interest thereon is includible in gross income for federal income tax purposes. If the IRS does audit the Tax-Exempt Bonds, under current IRS procedures, the IRS will treat the Commission as the taxpayer and the beneficial owners of the Tax-Exempt Bonds will have only limited rights, if any, to obtain and participate in judicial review of such audit. Any action of the IRS, including but not limited to selection of the Tax-Exempt Bonds for audit, or the course or result of such audit, or an audit of other obligations presenting similar tax issues, may affect the market value of the Tax-Exempt Bonds.

Prospective purchasers of the Tax-Exempt Bonds upon their original issuance at prices other than the respective prices indicated on the pages immediately following the front cover of this Official Statement, and prospective purchasers of the Tax-Exempt Bonds at other than their original issuance, should consult their own tax advisors regarding other tax considerations such as the consequences of market discount, as to all of which Co-Bond Counsel express no opinion.

#### ***Risk of Future Legislative Changes and/or Court Decisions***

Legislation affecting tax-exempt obligations is regularly considered by the United States Congress and may also be considered by the State legislature. Court proceedings may also be filed, the outcome of which could modify the tax treatment of obligations such as the Tax-Exempt Bonds. There can be no assurance that legislation enacted or proposed, or actions by a court, after the date of issuance of the Tax-Exempt Bonds will not have an adverse effect on the tax status of interest on the Tax-Exempt Bonds or the market value or marketability of the Tax-Exempt Bonds. These adverse effects could result, for example, from changes to federal or state income tax rates, changes in the structure of federal or state income taxes (including replacement with another type of tax), or repeal (or reduction in the benefit) of the exclusion of interest on the Tax-Exempt Bonds from gross income for federal or state income tax purposes for all or certain taxpayers.

For example, federal tax legislation that was enacted on December 22, 2017 reduced corporate tax rates, modified individual tax rates, eliminated many deductions, repealed the corporate alternative minimum tax and eliminated the tax-exempt advance refunding of tax-exempt bonds, among other things. Additionally, investors in the Tax-Exempt Bonds should be aware that future legislative actions may increase, reduce or otherwise change (including retroactively) the financial benefits and the treatment of all or a portion of the interest on the Tax-Exempt Bonds for federal income tax purposes for all or certain taxpayers. In all such events, the market value of the Tax-Exempt Bonds may be adversely affected and the ability of holders to sell their Tax-Exempt Bonds in the secondary market may be reduced. The Tax-Exempt Bonds are not subject to special mandatory redemption, and the interest rates on the Tax-Exempt Bonds are not subject to adjustment, in the event of any such change in the tax treatment of interest on the Tax-Exempt Bonds.

Investors should consult their own financial and tax advisors to analyze the importance of these risks.

#### ***Original Issue Discount and Original Issue Premium***

Certain of the Tax-Exempt Bonds (Discount Tax-Exempt Bonds) have been offered and sold to the public at an original issue discount (OID). OID is the excess of the stated redemption price at maturity (the principal amount) over the "issue price" of a Discount Tax-Exempt Bond. The issue price of a Discount Tax-Exempt Bond is the initial

offering price to the public (other than to bond houses, brokers or similar persons acting in the capacity of underwriters or wholesalers) at which a substantial amount of the Discount Tax-Exempt Bonds of the same maturity is sold pursuant to that offering. For federal income tax purposes, OID accrues to the owner of a Discount Tax-Exempt Bond over the period to maturity based on the constant yield method, compounded semiannually (or over a shorter permitted compounding interval selected by the owner). The portion of OID that accrues during the period of ownership of a Discount Tax-Exempt Bond (i) is interest excluded from the owner's gross income for federal income tax purposes to the same extent, and subject to the same considerations discussed above, as other interest on the Tax-Exempt Bonds, and (ii) is added to the owner's tax basis for purposes of determining gain or loss on the maturity, redemption, prior sale or other disposition of that Discount Tax-Exempt Bond. A purchaser of a Discount Tax-Exempt Bond in the initial public offering at the issue price (described above) for that Discount Tax-Exempt Bond who holds that Discount Tax-Exempt Bond to maturity will realize no gain or loss upon the retirement of that Discount Tax-Exempt Bond.

Certain of the Tax-Exempt Bonds ("Premium Tax-Exempt Bonds") have been offered and sold to the public at a price in excess of their stated redemption price at maturity (the principal amount). That excess constitutes bond premium. For federal income tax purposes, bond premium is amortized over the period to maturity of a Premium Tax-Exempt Bond, based on the yield to maturity of that Premium Tax-Exempt Bond (or, in the case of a Premium Tax-Exempt Bond callable prior to its stated maturity, the amortization period and yield may be required to be determined on the basis of an earlier call date that results in the lowest yield on that Premium Tax-Exempt Bond), compounded semiannually. No portion of that bond premium is deductible by the owner of a Premium Tax-Exempt Bond. For purposes of determining the owner's gain or loss on the sale, redemption (including redemption at maturity) or other disposition of a Premium Tax-Exempt Bond, the owner's tax basis in the Premium Tax-Exempt Bond is reduced by the amount of bond premium that is amortized during the period of ownership. As a result, an owner may realize taxable gain for federal income tax purposes from the sale or other disposition of a Premium Tax-Exempt Bond for an amount equal to or less than the amount paid by the owner for that Premium Tax-Exempt Bond. A purchaser of a Premium Tax-Exempt Bond in the initial public offering who holds that Premium Tax-Exempt Bond to maturity (or, in the case of a callable Premium Tax-Exempt Bond, to its earlier call date that results in the lowest yield on that Premium Tax-Exempt Bond) will realize no gain or loss upon the retirement of that Premium Tax-Exempt Bond.

***Owners of Discount and Premium Tax-Exempt Bonds should consult their own tax advisors as to the determination for federal income tax purposes of the existence of OID or bond premium, the determination for federal income tax purposes of the amount of OID or bond premium properly accruable or amortizable in any period with respect to the Discount or Premium Tax-Exempt Bonds, other federal tax consequences in respect of OID and bond premium, and the treatment of OID and bond premium for purposes of state and local taxes on, or based on, income.***

#### **Series 2019C Bonds (Taxable)**

The following discussion is generally limited to "U.S. owners," meaning beneficial owners of Series 2019C Bonds that for United States federal income tax purposes are individual citizens or residents of the United States, corporations or other entities taxable as corporations created or organized in or under the laws of the United States or any state thereof (including the District of Columbia), and certain estates or trusts with specific connections to the United States. ***Partnerships holding Series 2019C Bonds, and partners in such partnerships, should consult their own tax advisors regarding the tax consequences of an investment in the Series 2019C Bonds (including their status as U.S. owners).***

Prospective purchasers of the Series 2019C Bonds upon their original issuance at prices other than the respective prices indicated on the pages immediately following the front cover of this Official Statement, and prospective purchasers of the Series 2019C Bonds at other than their original issuance, should consult their own tax advisors regarding other tax considerations such as the consequences of market discount, as to all of which Co-Bond Counsel express no opinion.

#### ***Payment of Interest***

In general, interest paid or accrued on the Series 2019C Bonds will be treated as ordinary income to U.S. owners. A U.S. owner using the accrual method of accounting for U.S. federal income tax purposes must include interest paid or accrued on the Series 2019C Bonds in ordinary income as the interest accrues, while a U.S. owner

using the cash receipts and disbursements method of accounting for U.S. federal income tax purposes must include interest in ordinary income when payments are received or constructively received by the owner.

### ***Sale, Exchange, Retirement or Other Taxable Disposition of Series 2019C Bonds***

Upon the sale, exchange, retirement or other taxable disposition of a Series 2019C Bond, a U.S. owner will recognize gain or loss equal to the difference between the amount realized from the sale, exchange, retirement or other disposition and the owner's adjusted basis in the Series 2019C Bond or applicable portion of the adjusted basis. The owner's adjusted basis generally will equal the cost of the Series 2019C Bond to the owner, reduced by any principal payments on the Series 2019C Bond previously received by the owner (including any other payments on the Series 2019C Bond that are not qualified stated interest payments). Any gain or loss recognized upon a sale, exchange, retirement or other disposition of a Series 2019C Bond (excluding amounts attributable to accrued interest) will generally be capital gain or loss and will be long-term capital gain or loss if the U.S. owner's holding period in the Series 2019C Bond exceeds one year. Long-term capital gains of individuals are currently eligible for reduced rates of taxation. The deductibility of capital losses is subject to limitations.

### ***Information Reporting and Backup Withholding***

General information reporting requirements will apply to payments of principal and interest made on Series 2019C Bonds and the proceeds of the sale of Series 2019C Bonds to non-corporate holders of the Series 2019C Bonds, and "backup withholding," currently at a rate of 24%, will apply to such payments if the owner fails to provide an accurate taxpayer identification number in the manner required or fails to report all interest required to be shown on its federal income tax returns. A beneficial owner of a Series 2019C Bond that is a U.S. owner generally can obtain complete exemption from backup withholding by providing a properly completed IRS Form W-9 (Request for Taxpayer Identification Number and Certification).

### ***Medicare Tax Affecting U.S. Owners***

A U.S. owner that is an individual or estate, or a trust not included in a special class of trusts that is exempt from such tax, is subject to a 3.8% Medicare tax on the lesser of (1) the U.S. owner's "net investment income" for the taxable year and (2) the excess of the U.S. owner's modified adjusted gross income for the taxable year over a certain threshold (which in the case of individuals is between \$125,000 and \$250,000, depending on the individual's circumstances). A U.S. owner's net investment income generally includes interest income on, and net gains from the disposition of, Series 2019C Bonds, unless such interest income or net gains are derived in the ordinary course of a trade or business (other than a trade or business that consists of certain passive or trading activities). A U.S. owner of Series 2019C Bonds that is an individual, estate, or trust should consult its own tax advisor regarding the applicability of the Medicare tax.

### ***Non-U.S. Owners***

Under the Code, interest and OID on Series 2019C Bonds whose beneficial owner is not a U.S. owner is generally not subject to United States income tax or withholding tax (including backup withholding) if the non-U.S. owner provides the payor of interest on the Series 2019C Bonds with an appropriate statement as to its status as a non-U.S. owner. This statement can be made on IRS Form W-8BEN or a successor form. If, however, the non-U.S. owner conducts a trade or business in the United States and the interest or OID on the Series 2019C Bonds held by the non-U.S. owner is effectively connected with such trade or business, that interest or OID will be subject to United States income tax but will generally not be subject to United States withholding tax (including backup withholding).

The foregoing is a brief summary of certain federal income tax consequences to a non-U.S. owner. ***Non-U.S. owners should consult their own tax advisors regarding the tax consequences of an investment in the Series 2019C Bonds.***

### ***Foreign Account Tax Compliance Act***

The Foreign Account Tax Compliance Act (“FATCA”) generally imposes a 30% withholding tax on interest payments and proceeds from the sale of interest-bearing obligations for payments made after the relevant effective date to (i) certain foreign financial institutions that fail to certify their FATCA status and (ii) investment funds and non-financial foreign entities if certain disclosure requirements related to direct and indirect United States shareholders and/or United States accountholders are not satisfied.

Under applicable Treasury regulations, the FATCA withholding tax of 30% will generally be imposed, subject to certain exceptions, on payments of (i) interest on Series 2019C Bonds and (ii) gross proceeds from the sale or other disposition of Series 2019C Bonds on or after January 1, 2019, where such payments are made to persons described in the immediately preceding paragraph. In the case of payments made to a “foreign financial institution” (generally including an investment fund), as a beneficial owner or as an intermediary, the FATCA withholding tax generally will be imposed, subject to certain exceptions, unless such institution (i) enters into (or is otherwise subject to) and complies with an agreement with the U.S. government (a “FATCA Agreement”) or (ii) is required by and complies with applicable foreign law enacted in connection with an intergovernmental agreement between the United States and a foreign jurisdiction (an “IGA”), in either case to, among other things, collect and provide to the U.S. or other relevant tax authorities certain information regarding U.S. account holders of such institution. In the case of payments made to a foreign entity that is not a financial institution (as a beneficial owner), the FATCA withholding tax generally will be imposed, subject to certain exceptions, unless such entity either provides the withholding agent with a certification that it does not have any “substantial” U.S. owner (generally, any specified U.S. person that directly or indirectly owns more than a specified percentage of such entity) or identifies its “substantial” U.S. owners.

If Series 2019C Bonds are held through a foreign financial institution that enters into (or is otherwise subject to) a FATCA Agreement, such foreign financial institution (or, in certain cases, a person paying amounts to such foreign financial institution) generally will be required, subject to certain exceptions, to withhold the 30% FATCA tax on payments of dividends or the items described above made to (i) a person (including an individual) that fails to comply with certain information requests or (ii) a foreign financial institution that has not entered into (and is not otherwise subject to) a FATCA Agreement and that is not required to comply with FATCA pursuant to applicable foreign law enacted in connection with an IGA. Coordinating rules may limit duplicative withholding in cases where the withholding described above in “*Non-U.S. Owners*” or “*Information Reporting and Backup Withholding*” also applies.

If any amount of, or in respect of, U.S. withholding tax were to be deducted or withheld from payments on Series 2019C Bonds as a result of a failure by an investor (or by an institution through which an investor holds the Series 2019C Bonds) to comply with FATCA, none of the Commission, any paying agent or any other person would, pursuant to the terms of the Series 2019C Bonds, be required to pay additional amounts with respect to any Series 2019C Bonds as a result of the deduction or withholding of such tax. ***Non-U.S. owners should consult their tax advisers regarding the application of FATCA to the ownership and disposition of Series 2019C Bonds.***

### **VERIFICATION OF MATHEMATICAL COMPUTATIONS**

Upon delivery of the Series 2019A-D Bonds, the arithmetical accuracy of certain computations included in the schedules provided by the Co-Financial Advisors on behalf of the Commission relating to escrow sufficiency, will be verified by Grant Thornton LLP, independent certified public accountants (the “Verification Agent”). Such verification shall be based solely upon information and assumptions supplied to the Verification Agent by the Co-Financial Advisors. The Verification Agent has not made a study or evaluation of the information and assumptions on which such computations are based and, accordingly, has not expressed an opinion on the data used, the reasonableness of the assumptions or the achievability of the forecasted outcome.

### **APPROVAL OF LEGAL PROCEEDINGS**

Certain legal matters incident to the authorization, issuance and sale of the Series 2019A-D Bonds are subject to the approval of Squire Patton Boggs (US) LLP and Amira Jackmon, Attorney at Law, Co-Bond Counsel to the Commission. Certain legal matters will be passed upon for the Commission by the City Attorney and by Nixon Peabody LLP, Disclosure Counsel and for the Underwriters by Hawkins Delafield & Wood LLP, Underwriters’

Counsel. Co-Bond Counsel expect to deliver separate opinions at the time of issuance of the Series 2019A-D Bonds each substantially in the form set forth in APPENDIX G—“PROPOSED FORM OF OPINION OF CO-BOND COUNSEL.”

Co-Bond Counsel are not passing upon and undertake no responsibility for the accuracy, completeness or fairness of the information contained in this Official Statement.

### **PROFESSIONALS INVOLVED IN THE OFFERING**

The Commission has retained Public Financial Management, Inc. and Backstrom McCarley Berry & Co., LLC, to serve as Co-Financial Advisors with respect to the issuance of the Series 2019A-D Bonds.

The Co-Financial Advisors, Co-Bond Counsel, Disclosure Counsel and Underwriters’ Counsel will receive compensation with respect to the Series 2019A-D Bonds which is contingent upon the sale and delivery of the Series 2019A-D Bonds.

### **FINANCIAL STATEMENTS**

The audited financial statements of the Commission for Fiscal Years 2016-17 and 2015-16 prepared in accordance with GASB guidelines, are included as APPENDIX B attached hereto. The financial statements referred to in the preceding sentence have been audited by KPMG LLP, independent certified accountants, whose report with respect thereto also appears in APPENDIX B. KPMG LLP, the Commission’s independent auditor, has not been engaged to perform and has not performed, since the date of its report included herein, any procedures on the financial statements addressed in that report. KPMG LLP also has not performed any procedures relating to this Official Statement.

The 1991 Master Resolution requires the Commission to have its financial statements audited annually by independent certified public accountants with knowledge and experience in the field of governmental accounting and auditing, and it is the policy of the City to select the independent auditor periodically through a competitive selection process. KPMG LLP has been reappointed as independent auditor for a four-year term (subject to extension for up to three years at the option of the Commission) beginning with the Fiscal Year 2015-16 audit pursuant to a regular request for proposals process conducted by the City. The audited financial statements prepared by the Commission each Fiscal Year are required to be provided to the Trustee within 120 days after the end of each such year in accordance with the 1991 Master Resolution.

#### **Delayed Audited Financial Statements**

The City transitioned to a new financial management software system at the start of Fiscal Year 2017-18, and that transition, together with the implementation of GASB 75, has led to a delay in the delivery of audited financial statements for the Commission as compared to prior fiscal years. GASB 75 revises and establishes new accounting and financial reporting requirements for governments that provide their employees with other postemployment benefits other than pensions. See “AIRPORT’S FINANCIAL AND RELATED INFORMATION—Payments to the City—*Employee Benefit Plans—Post-Employment Health Care Benefits*” for further discussion of GASB 75. The Commission’s audited financial statements will be completed following the completion of a new actuarial report required by GASB 75. This could occur later in January 2019 or later, and possibly after the date when the Commission is required to post its Annual Disclosure Report on EMMA. The Commission will post the audited financial statements with its Annual Disclosure Report on EMMA once the audited financial statements are complete. The Commission also expects to supplement the Official Statement once the audited financial statements are complete.

Figures for Fiscal Year 2017-18 presented in this Official Statement are estimated and may change in the audited financial statements. Among other things, the figures presented do not reflect adjustments that will result from the implementation of GASB 75. These adjustments may have a significant impact on the Commission’s reported operating revenues, operating expenses, and net position.

## CONTINUING DISCLOSURE

The Commission will covenant for the benefit of the Holders and Beneficial Owners (as defined in the Continuing Disclosure Certificate) of the Series 2019A-D Bonds to provide certain financial information and operating data relating to the Commission (the “Annual Disclosure Report”) by not later than 210 days following the end of each Fiscal Year, and to provide notices of certain enumerated events. The Annual Disclosure Report and notices of these enumerated events will be filed by the Commission with the means of the Electronic Municipal Market Access site (“EMMA”) maintained by the Municipal Securities Rulemaking Board. The specific nature of the information to be contained in the Annual Disclosure Report or the notices of enumerated events is summarized in APPENDIX F–“SUMMARY OF CERTAIN PROVISIONS OF THE CONTINUING DISCLOSURE CERTIFICATE.” These covenants have been made in order to assist the Underwriters of the Series 2019A-D Bonds in complying with SEC Rule 15c2-12(b)(5).

The Commission believes that it has complied in all material respects with its undertakings to provide Annual Disclosure Reports and notices of enumerated events. However, the Commission has become aware of certain facts that it does not consider to be material but that are disclosed below for the benefit of the Holders and Beneficial Owners of its Bonds.

Some information that was made available in a timely manner on EMMA was not linked to all relevant CUSIP numbers. This includes the Commission’s Annual Disclosure Report for the Fiscal Year ended June 30, 2012, for which a cover letter indicating that a previously filed remarketing memorandum contained the required financial and operating data was inadvertently omitted from the filing. Also some of the CUSIP numbers to which various other continuing disclosure filings related were not properly inputted. The Commission has taken action to link such information to the applicable CUSIP numbers, including filing the missing 2012 cover letter.

In addition, the Commission executed an enhanced master continuing disclosure certificate in 2011 in which it undertook to update additional tables in its Annual Disclosure Report. However, the Annual Disclosure Report for the Fiscal Year ended June 30, 2011 did not include all or a portion of the information in three of these tables, although two of the tables were included in offering documents filed on EMMA prior to the filing of the Annual Disclosure Report and the third table was included in an offering document posted sooner than two months after the filing. Subsequent Annual Disclosure Reports included the additional data.

In addition, in 2011, an upgraded rating on the Bonds was disclosed in an offering document made available on EMMA but the upgrade itself was not disclosed in separate filings linked to all applicable CUSIP numbers. The upgrade was subsequently disclosed in the Annual Disclosure Report for the Fiscal Year ended June 30, 2011. AGM and National, the insurers of certain Commission bonds, received ratings upgrades in March 2014. The Commission did not make filings with respect to these ratings changes until May and June, 2014, respectively.

On October 12, 2017, Moody’s raised its long-term jointly supported rating on the Commission’s Second Series Variable Rate Revenue Refunding Bonds Issue 37C (Non-AMT/Private Activity). The Commission did not make the filing with respect to the rating change until January 4, 2018.

The Commission has enhanced its continuing disclosure filing procedures to help ensure that information that is filed on EMMA in the future contains all required information and is linked to the appropriate CUSIP numbers.

Completion of the Commission’s audited financial statements for Fiscal Year 2017-18 has been delayed as described under “FINANCIAL STATEMENTS–Delayed Audited Financial Statements.” If the audited financial statements are not completed prior to the deadline for filing its next Annual Disclosure Report for Fiscal Year 2017-18, the Annual Disclosure Report will not include the audited financial statements and may be otherwise incomplete or delayed. The complete, final Annual Disclosure Report will be filed promptly after the audited financial statements are completed.

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**MISCELLANEOUS**

This Official Statement has been duly authorized, executed and delivered by the Commission.

The summaries and descriptions of provisions of the 1991 Master Resolution, the Swap Agreements, the Continuing Disclosure Certificate, the Lease and Use Agreements, the purchase contract pursuant to which the Underwriters are purchasing the Series 2019A-D Bonds, and the Reserve Account Credit Facilities and all references to other materials not purporting to be quoted in full are qualified in their entirety by reference to the complete provisions of the documents and other materials summarized or described. Copies of such documents may be obtained from the Trustee or, during the offering period, from the Underwriters. The Appendices are integral parts of this Official Statement and must be read together with all other parts of this Official Statement.

So far as any statements made in this Official Statement involve matters of opinion, forecasts or estimates, whether or not expressly stated, they are set forth as such and not as representations of fact.

**AIRPORT COMMISSION OF THE CITY AND  
COUNTY OF SAN FRANCISCO**

By: \_\_\_\_\_ /s/ Ivar C. Satero  
Ivar C. Satero  
Airport Director

**APPENDIX A**  
**REPORT OF THE AIRPORT CONSULTANT**

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Appendix A

**REPORT OF THE AIRPORT CONSULTANT**

on the proposed issuance of

SAN FRANCISCO INTERNATIONAL AIRPORT  
SECOND SERIES REVENUE BONDS  
Series 2019A (AMT), Series 2019B (Non-AMT/Governmental Purpose), and  
Series 2019C (Federally Taxable)

Prepared for

Airport Commission of the  
City and County of San Francisco, California

Prepared by

LeighFisher  
Burlingame, California

January 2, 2019

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January 2, 2019

Mr. Larry Mazzola, President  
Airport Commission of the  
City and County of San Francisco  
San Francisco International Airport  
P.O. Box 8097  
San Francisco, California 94128

**Re: Report of the Airport Consultant  
Airport Commission of the City and County of San Francisco  
San Francisco International Airport  
Second Series Revenue Bonds, Series 2019A (AMT),  
Series 2019B (Non-AMT/Governmental Purpose), and Series 2019C (Federally Taxable)**

Dear Mr. Mazzola:

We are pleased to submit this Report of the Airport Consultant (the Report) on certain aspects of the proposed issuance of new money Second Series Revenue Bonds, Series 2019A (AMT), Series 2019B (Non-AMT/Governmental Purpose), and Series 2019C (Federally Taxable) (collectively, the 2019 Bonds) by the Airport Commission (the Airport Commission or the Commission) of the City and County of San Francisco (the City) with an aggregate principal amount of approximately \$1.55 billion.\* This letter and the accompanying attachment and exhibits constitute the Report.

The City owns San Francisco International Airport (the Airport or SFO) and operates the Airport through its Airport Commission as a financially self-sufficient enterprise. Located approximately 14 miles south of downtown San Francisco, the Airport is the largest airport serving the San Francisco Bay Area. The region's expanding population base, strong economy, advanced levels of educational attainment, and relatively high per capita income contribute to strong demand for air travel. In the five years from Fiscal Year (FY)\*\* 2013 to FY 2018, enplaned passengers at the Airport increased from 22.3 million to 28.8 million, a compound annual growth rate of 5.3%.

## **AIRPORT CAPITAL IMPROVEMENT PLAN**

Airport Commission staff periodically develops and updates a plan for the redevelopment, improvement, and expansion of Airport facilities, which is reviewed by the signatory airlines and approved by the Airport Commission. The plan is submitted to the Airport Commission periodically and approved based on anticipated facility needs, current and expected future airline traffic, available funding sources, airline feedback, and project priority. The Commission-approved plan is included in the City's two-fiscal-year capital budget, which is approved by the City's Board of Supervisors.

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\*Preliminary, subject to change.

\*\*The City's Fiscal Year ends June 30.

Mr. Larry Mazzola  
January 2, 2019

On September 5, 2017, the Airport Commission adopted a resolution approving a \$7.4 billion capital improvement plan (the Capital Improvement Plan). While the Capital Improvement Plan total is unchanged since it was approved by the Airport Commission, project costs for certain projects within the plan, as well as the timing of development costs for some projects, have changed. The Capital Improvement Plan discussed in this Report and summarized in the table below reflects information on project costs and implementation timing as of November 1, 2018.

A total of \$2.68 billion has been funded for projects in the Capital Improvement Plan through the date of issuance of the 2019 Bonds, including from the proceeds of the Commission’s Series 2016B/C Bonds, the Series 2017A/B/C Bonds, and the Series 2018D/E/F Bonds (the 2016 Bonds, 2017 Bonds, and 2018 Bonds, respectively).

The approved Capital Improvement Plan reflects the combination of two distinct categories of projects:

- The “Ascent Program – Phase 1”, which represents \$7.3 billion of capital spending through FY 2026 (including program reserves), the majority of which is expected to occur prior to FY 2024. The Ascent Program – Phase 1 encompasses 49 projects that collectively address aging infrastructure, as well as passenger and airline growth-related needs of the Airport.
- “Infrastructure Projects Plan”, which represents an additional \$122 million of spending through FY 2021.

The table below summarizes the Capital Improvement Plan, and reflects information on projects costs, funding, and implementation timing as of November 1, 2018.

(\$ in millions)	Prior funding [A]	2019 Bond proceeds [B]	Future funding for FY 2019 to FY 2023 [C]	Subtotal through FY 2023 [D=A+B+C]	Funding for FY 2024 to FY 2026 [E]	Total [F=D+E]
<b>Ascent Program - Phase 1</b>						
Project costs	\$ 2,671	\$ 1,313	\$ 2,802	\$ 6,786	\$ 15	\$ 6,801
Program reserves	-	-	468	468	-	468
Subtotal - Ascent	\$ 2,671	\$ 1,313	\$ 3,271	\$ 7,255	\$ 15	\$ 7,270
<b>Infrastructure Projects Plan</b>	<b>9</b>	<b>3</b>	<b>110</b>	<b>122</b>	<b>-</b>	<b>122</b>
<b>Capital Improvement Plan total</b>	<b>\$ 2,680</b>	<b>\$ 1,316</b>	<b>\$ 3,381</b>	<b>\$ 7,377</b>	<b>\$ 15</b>	<b>\$ 7,392</b>

Note: As of November 1, 2018, a total of \$271 million of the \$739 million Ascent Program Reserve originally established has been applied to project costs, with approximately an additional \$65 million expected to be applied in the near future.

Mr. Larry Mazzola  
January 2, 2019

The Ascent Program – Phase 1 is described in more detail in Section 4, and includes the following projects among others:

- **Terminal 1 projects:** Redevelopment of Terminal 1, including a new architectural building envelope (encompassing the Terminal 1 Center and Terminal 1 North segments of the building), construction of a new 25-gate Boarding Area B (19 replacement gates and 6 new gates), a new consolidated baggage handling system and checked baggage screening system, secure connectors to Boarding Areas A and C, a sterile corridor to the International Terminal, and the relocation of certain taxilanes adjacent to the building.
- **Terminal 3 redevelopment projects:** Comprehensive renovation of a portion of Terminal 3 known as Terminal 3 West, including seismic stability improvements and building system upgrades, Boarding Area F gate capacity enhancements, and a sterile corridor to the International Terminal.
- **International Terminal refresh projects:** Upgrades and improvements to parts of the International Terminal to increase operational efficiency.
- **On-Airport hotel:** Construction of a new 351-room four-star hotel on Airport property near the International Terminal (the SFO Hotel).
- **New long-term public parking garage:** Development of a second long-term parking facility with 3,600 spaces, comprised of a new garage with 3,000 spaces and improvements to an existing parking area with 600 surface spaces (Lot DD), to accommodate expected growth in Airport parking demand.
- **AirTrain extension:** Construction of an extension to the AirTrain System from the existing Airport Rental Car Center to the long-term parking facilities, including construction of a new AirTrain station at the existing Lot DD; and construction of a new AirTrain station adjacent to the SFO Hotel.
- **Courtyard 3 connector:** The construction of a secure passenger connector between Terminal 2 and Terminal 3, and development of a new office block above the connector for use by Commission staff and third-party tenants.
- **Security improvements:** Strengthening of Airport-wide security with various improvements, including implementation of an enhanced perimeter intrusion detection system, CCTV systems, and other security system upgrades.
- **Energy improvement program (Net Zero):** Implementation of energy efficiency improvements and on-site renewable energy systems related to various projects in the Capital Improvement Plan.

In addition, the Ascent Program – Phase 1 includes other projects related to various aspects of the Airport including the terminal, airfield, and landside functions, as well as a reserve (the Ascent Program Reserve) of \$739 million. The Ascent Program Reserve is being used to address

Mr. Larry Mazzola  
January 2, 2019

unanticipated needs of projects within the Ascent Program – Phase 1, as they arise. The Airport Commission uses the Ascent Program Reserve only after all other cost mitigation methods have been considered. As of November 1, 2018, \$271 million of the Ascent Program Reserve has been applied to projects, reducing the total remaining reserve available to \$468 million. A further \$65 million of the Ascent Program Reserve is forecast by the Commission to be transferred to individual project costs in the near future, which would further reduce the reserve balance to \$403 million. Work on several of the projects in the Ascent Program – Phase 1, including the Terminal 1 and Terminal 3 redevelopment projects, has already commenced.

The Infrastructure Projects Plan component of the Capital Improvement Plan includes \$122 million of total spending, primarily related to support systems, miscellaneous airfield improvements, energy and efficiency improvements, and equipment.

The scope, phasing, and timing of implementation of projects in the Capital Improvement Plan are subject to further modification depending on aviation activity trends and other Airport operational factors.

#### **THE 2019 BONDS AND FUTURE BONDS**

The City (acting through the Airport Commission) intends to issue the new money 2019 Bonds to:

- Finance a portion of the projects in the Capital Improvement Plan (or refund outstanding commercial paper previously issued to finance a portion of projects in the Capital Improvement Plan) using the net proceeds of the Series 2019A and Series 2019B Bonds (collectively the 2019A/B Bonds)
- Pay issuance and financing costs associated with the 2019 Bonds
- Make deposits to debt service reserve accounts
- Fund capitalized interest associated with a portion of the Series 2019A and Series 2019B Bonds, and
- Make a \$20.0 million deposit to the Commission’s Contingency Account, as described later in the Report, using the proceeds of the Series 2019C Bonds

Proceeds of the 2019 Bonds will be spent on construction costs of projects that either do not require environmental review or have already undergone all necessary environmental review and received Commission approval to proceed. Specifically, proceeds of the 2019 Bonds will be used to finance and refinance a portion of the costs of the following projects, among others: redevelopment of Terminal 1; redevelopment of Terminal 3 West; renovation of the International Terminal departures level; gate capacity enhancements; security improvements; the Superbay renovation program; extension of AirTrain service to the long-term parking garages; and the new long-term parking garage.

Mr. Larry Mazzola  
January 2, 2019

Subsequent to the issuance of the 2019 Bonds, this Report assumes the issuance of approximately \$3.7 billion in principal amount of additional Bonds through FY 2024, to fund approximately \$3.2 billion of capital costs to complete the funding of the Capital Improvement Plan (as well as to fund a further \$55.3 million of deposits to the Commission's Contingency Account). Those additional Bonds anticipated to be issued through FY 2024 (subsequent to the issuance of the 2019 Bonds) are collectively referred to as the Future Bonds. No Bonds are assumed to be issued during FY 2025.

Our study was undertaken to evaluate the ability of the Airport Commission to generate sufficient Net Revenues to meet the requirements of the Bond Resolution (further discussed below), taking into account Annual Debt Service on the current Outstanding Bonds (including the 2016 Bonds, 2017 Bonds, and 2018 Bonds already issued by the Commission to partially fund the Capital Improvement Plan), the 2019 Bonds, and the Future Bonds. The forecast period extends to FY 2025, which reflects the full impact on revenues and expenses of the entire Capital Improvement Plan, and three full years after the expiration of the capitalized interest period for the 2019 Bonds.

Any Bonds that may be issued in addition to those identified herein to fully fund the Capital Improvement Plan are not reflected in the financial forecasts described in this Report. Also, the Airport Commission may issue Second Series Revenue Refunding Bonds as part of the 2019 Bond issuance, or at other times during the forecast period. The impact of any associated debt service changes related to the issuance of refunding bonds is not reflected in the financial analysis discussed in this Report.

### **THE BOND RESOLUTION\***

The 2019 Bonds are being issued under the terms and conditions of Resolution No. 91-0210 adopted by the Airport Commission on December 3, 1991, as amended and supplemented (collectively, the Bond Resolution), authorizing the issuance of San Francisco International Airport Second Series Revenue Bonds (the Bonds). The Bonds are secured by an irrevocable pledge of the Net Revenues of the Airport Commission. The Airport Commission has covenanted in the Bond Resolution not to issue any debt with a pledge of or lien on Net Revenues senior to that of the Bonds.

As defined in the Bond Resolution, Net Revenues are Revenues less Operation and Maintenance Expenses. Revenues include substantially all rentals, fees, and charges associated with possession, management, supervision, operation, and control of the Airport as determined in accordance with generally accepted accounting principles (GAAP), but do not include, among other revenues, revenues derived from passenger facility charges (PFCs) unless designated as such by the Airport Commission. Since 2002, when the Airport Commission was first authorized to apply PFC revenues to the payment of debt service, the Airport Commission has designated a portion of its PFC revenues as Revenues each year for the purpose of paying part of its Annual Debt Service. The Airport Commission expects to continue to designate certain PFC revenues as Revenues on an annual basis during and beyond the forecast period considered in this Report.

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\*References in this Report to the Bond Resolution, the Lease and Use Agreements, and various leases and agreements entered into by the City and the Airport Commission are not intended to be comprehensive or definitive. Capitalized terms have the same meaning as defined in the Bond Resolution, except as otherwise noted herein.

Mr. Larry Mazzola  
January 2, 2019

Operation and Maintenance Expenses are defined to include substantially all expenses incurred for the operation and maintenance of the Airport, as determined in accordance with GAAP. Operation and Maintenance Expenses do not include, among other costs, depreciation, amortization, debt service on Bonds or commercial paper, or expenses for which the Commission is paid or reimbursed from sources other than the Revenues of the Airport Commission.

### **Rate Covenant**

The Airport Commission has covenanted in Section 6.04(a) of the Bond Resolution (the Rate Covenant) that, so long as any of the Bonds are outstanding, it shall establish and at all times maintain rates, rentals, charges, and fees for the use of the Airport and for services rendered by the Airport Commission such that:

1. Net Revenues in each Fiscal Year will be at least sufficient (a) to make all required payments and deposits in such Fiscal Year into the Revenue Bond Account ....and (b) to make the Annual Service Payment to the City; and
2. Net Revenues, together with any Transfer, in each Fiscal Year will be at least equal to 125% of aggregate Annual Debt Service with respect to the [Bonds] for such Fiscal Year.

A Transfer is defined as (a) the amount deposited on the last Business Day of any Fiscal Year from the Contingency Account into the Revenues Account, plus (b) any amounts withdrawn from the Contingency Account during such Fiscal Year for certain specified purposes, less (c) any amounts deposited in the Contingency Account from Revenues during such Fiscal Year.

As of June 30, 2018, the balance in the Contingency Account was approximately \$130.8 million (estimated), excluding accrued but unpaid interest on investments and including accounting adjustments. There have been no withdrawals from the Contingency Account since June 30, 2018. For purposes of this Report it was assumed that the Contingency Account balance will increase gradually during the forecast period through a combination of interest earnings retained in the account and 2019 Bond and Future Bond proceeds used to fund deposits to the Account. The lesser of the Contingency Account balance or 25% of Annual Debt Service is used as the amount of the Transfer for the purpose of forecasting compliance with the Rate Covenant in this Report.

### **Additional Bonds**

To issue additional Bonds that are not refunding Bonds, the Airport Commission must meet the requirements of Section 2.11 of the Bond Resolution, which states that the Trustee must be provided with a certificate of either an Airport Consultant or an Independent Auditor, with specific requirements for each. The certificate of the Airport Consultant must state, among other things, that the Airport Commission is expected to be able to produce Net Revenues, together with any Transfer, at least sufficient to meet the requirements of the Rate Covenant in each Fiscal Year during the required forecast period. For purposes of the certificate, the Transfer amount used for any given Fiscal Year of the forecast period may not exceed 25% of Maximum Annual Debt Service. The Airport Commission will meet this requirement of the Bond Resolution prior to issuing the 2019 Bonds.

Mr. Larry Mazzola  
January 2, 2019

In addition to the 2019 Bonds, this Report assumes the issuance of several series of Future Bonds during the forecast period (between FY 2020 and FY 2024) with a total principal amount of approximately \$3.7 billion to fund elements of its Capital Improvement Plan, as described more fully later in the Report. (No Bonds are assumed to be issued during FY 2025 because the Capital Improvement Plan is assumed to be fully funded by FY 2024.)

The financial analysis section of this Report includes the forecast effects of the 2019 Bonds and the Future Bonds on Revenues, Operation and Maintenance Expenses, Debt Service, and Net Revenues of the Airport Commission. Additionally, as noted above, the Airport Commission may undertake Bond refundings during the forecast period; however, the Report does not take into account the effects that any such refunding Bonds may have on the forecasts (including any refunding Bonds that may be issued at the time the 2019 Bonds are issued).

The amount and timing of these Future Bond issues reflect the Airport Commission's adopted Capital Improvement Plan and timetable for project implementation. Such Future Bond issue amounts and timing are subject to change as aviation activity levels, facility needs, and the Airport operating environment evolve over time, and depending on financial market conditions.

#### **THE AIRLINE LEASE AND USE AGREEMENTS**

The City (acting through the Airport Commission) has entered into 10-year agreements with certain airlines serving the Airport that account for substantially all of the airline traffic at the Airport. Under these agreements, which are scheduled to expire on June 30, 2021, the airlines have agreed to pay terminal rentals and landing fees calculated under a residual airline rate-making methodology. Under a residual rate-making methodology, the airlines agree to pay the amounts necessary to enable the Airport Commission to fully recover its Airport-related costs as defined in the agreements.

For purposes of this Report, it was assumed that the residual airline ratemaking methodology currently in effect would remain in effect beyond FY 2021, under the terms of successor agreements with the airlines.

#### **PASSENGER FACILITY CHARGE PROGRAM**

The Airport Commission is currently authorized to impose a \$4.50 PFC at the Airport pursuant to approvals from the Federal Aviation Administration (FAA).

In FY 2018, the Airport Commission collected \$116.5 million of PFC revenues on a cash basis, including restricted interest income. The Airport Commission's PFC collection and spending authorization as of the date of this Report totals \$2.1 billion at the \$4.50 level, and with an expiration date no later than March 1, 2029.

As of September 30, 2018, a total of \$1.323 billion in PFC revenues (including restricted interest income) had been collected, including \$415.0 million of PFC revenues collected but not yet expended. Based on the traffic forecast included in this Report, the Airport Commission is expected to collect the full authorized amount in FY 2025. The Airport Commission intends to submit further PFC applications and application amendment requests to the FAA for increased PFC collection and

Mr. Larry Mazzola  
January 2, 2019

use authority in the future, including requests for authorization to collect and use PFC revenues to pay debt service associated with the Terminal 1 and Terminal 3 redevelopment projects.

## **SCOPE OF STUDY**

As noted earlier, our study was undertaken to evaluate the ability of the Airport enterprise to generate sufficient Net Revenues to meet the requirements of the Rate Covenant, taking into account Annual Debt Service on the Outstanding Bonds, the 2019 Bonds, and the Future Bonds.

In conducting the study, we reviewed and analyzed:

- Historical airline traffic demand at the Airport, giving consideration to the demographic and economic characteristics of the San Francisco Bay Area, historical trends in airline traffic, and other key factors that may affect future airline traffic, as the basis for preparing the aviation activity forecasts
- Debt service requirements on all current Outstanding Bonds, and estimated debt service requirements on the 2019 Bonds and the Future Bonds that are expected to be issued during the forecast period
- Historical relationships among Revenues, Operation and Maintenance Expenses, PFC revenues, and airline traffic at the Airport and other factors that may affect future Revenues and expenses
- Audited financial statements of the Airport Commission for FY 2016 and FY 2017, and estimated financial results for FY 2018 based on 12 months of preliminary data
- The Airport Commission's FY 2019 annual budget and internal airline rates and charges model, as well as other considerations related to the business operations of the Airport
- The Airport Commission's approved Capital Improvement Plan for the Airport, and its estimates of project costs and implementation schedules for projects included in the Capital Improvement Plan as of November 1, 2018
- A report concerning a hotel market study and financial analysis regarding the SFO Hotel dated May 2, 2018, prepared by Jones Lang LaSalle Incorporated, the Commission's hotel consultant
- The Airport Commission's policies and contractual arrangements relating to the use and occupancy of Airport facilities, including the calculation of airline rentals, fees, and charges; the operation of concession privileges; and the leasing of buildings and grounds
- The Airport Commission's approved PFC program, PFC-eligible enplaned passengers, and historical PFC revenues (including restricted interest income)

We also identified key factors upon which the future financial results of the Airport may depend and, with Airport Commission management, formulated assumptions about those factors. On the basis of those assumptions, we assembled the financial forecasts presented in the exhibits provided at the end of this Report:

Mr. Larry Mazzola  
January 2, 2019

Exhibit

A-1	Airport Capital Improvement Plan Costs
A-2	Airport Capital Improvement Plan Sources of Funding
B	PFC Revenue Forecast and Application of PFC Revenues
C	Sources and Uses of Bond Funds
D	Annual Debt Service Requirements
E	Operation and Maintenance Expenses
F	Revenues
F-1	Landing Fees
F-2	Terminal Area Rentals
F-3	Airline Payments per Enplaned Passenger
G	Application of Revenues
H	Rate Covenant Compliance Forecast
I	Summary of Financial Forecasts – Base Case
J	Summary of Financial Projections – Sensitivity Scenario

**SUMMARY OF FORECAST RESULTS**

As indicated in Exhibit H and further discussed in the Report, it is forecast that the Airport Commission would meet the requirements of the Rate Covenant in each Fiscal Year of the forecast period.

	Historical	Estimated	Forecast						
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Enplaned passengers	26,871	28,814	28,958	29,536	30,106	30,657	31,186	31,701	32,183
<i>Percentage change</i>	4.9%	7.2%	0.5%	2.0%	1.9%	1.8%	1.7%	1.6%	1.5%
Net Revenues (a)	\$ 489,378	\$ 474,717	\$ 519,310	\$ 580,250	\$ 645,388	\$ 787,685	\$ 889,001	\$ 930,161	\$ 936,457
Transfer	<u>95,221</u>	<u>100,057</u>	<u>112,139</u>	<u>125,723</u>	<u>137,818</u>	<u>173,541</u>	<u>198,271</u>	<u>211,332</u>	<u>213,882</u>
Total amount available	\$ 584,599	\$ 574,774	\$ 631,449	\$ 705,973	\$ 783,206	\$ 961,226	\$ 1,087,272	\$ 1,141,492	\$ 1,150,339
Debt Service on Bonds - cash basis (b)	404,555	400,227	448,555	502,893	551,274	694,163	793,085	845,328	855,528
Debt Service Coverage	145%	144%	141%	140%	142%	138%	137%	135%	134%
Passenger airline payments	\$ 442,314	\$ 470,215	\$ 505,751	\$ 566,026	\$ 608,647	\$ 702,831	\$ 803,688	\$ 862,214	\$ 879,541
Airline cost per enplaned passenger	\$ 16.46	\$ 16.32	\$ 17.47	\$ 19.16	\$ 20.22	\$ 22.93	\$ 25.77	\$ 27.20	\$ 27.33

Note: The Fiscal Year of the City ends June 30. Amounts in thousands, except the airline cost per enplaned passenger, percentages and ratios. The FY 2018 enplaned passenger figure is an actual figure. Totals may not add due to rounding.

(a) Net Revenues reflect the designation and application of a portion of the Commission’s PFC cash balances and PFC revenues as Revenues.

(b) Debt service is expressed on a “cash basis” (reflecting the timing of the actual cash payments to the bondholders).

Source for forecasts: LeighFisher.

Mr. Larry Mazzola  
January 2, 2019

The table above summarizes historical and forecast enplaned passengers, Net Revenues, Transfers, debt service on Bonds issued under the terms of the Bond Resolution (including the 2019 Bonds and the anticipated Future Bonds), debt service coverage (including Transfers), and airline cost per enplaned passenger.

**ASSUMPTIONS UNDERLYING THE FINANCIAL FORECASTS**

The financial forecasts are based on information and assumptions that were provided by, or reviewed with and agreed to by, Airport management. Accordingly, the forecasts reflect the Airport Commission’s expected course of action during the forecast period and, in Airport management’s judgment, present fairly the expected financial results of the Airport enterprise.

The key factors and assumptions that are significant to the forecasts are set forth in the attachment, “Background, Assumptions, and Rationale for the Financial Forecasts.” The attachment should be read in its entirety for an understanding of the forecasts and the underlying assumptions.

In our opinion, the underlying assumptions provide a reasonable basis for the forecasts. However, any forecast is subject to uncertainties. Inevitably, some assumptions will not be realized, and unanticipated events and circumstances may occur. Therefore, there are likely to be differences between the forecast and actual results, and those differences may be material. Neither LeighFisher nor any person acting on our behalf makes any warranty, expressed or implied, with respect to the information, assumptions, forecasts, opinions, or conclusions disclosed in the Report. We have no responsibility to update this Report for events and circumstances occurring after the date of the Report.

\* \* \* \* \*

We appreciate the opportunity to serve as the Airport Consultant for the Airport Commission of the City and County of San Francisco on this proposed financing.

Respectfully submitted,

*LeighFisher*  
LEIGHFISHER

**BACKGROUND, ASSUMPTIONS, AND RATIONALE  
FOR THE FINANCIAL FORECASTS**

REPORT OF THE AIRPORT CONSULTANT

on the proposed issuance of

AIRPORT COMMISSION OF THE  
CITY AND COUNTY OF SAN FRANCISCO  
SECOND SERIES REVENUE BONDS

Series 2019A (AMT), Series 2019B (Non-AMT/Governmental Purpose),  
and Series 2019C (Federally Taxable)

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## CONTENTS

	Page
1. INTRODUCTION.....	A-19
The Airport Commission .....	A-19
The Airport.....	A-19
Airfield Facilities.....	A-22
Terminal Facilities .....	A-22
Parking .....	A-24
Airport Access.....	A-25
AirTrain System.....	A-25
Consolidated Rental Car Facility .....	A-25
Aircraft Maintenance and Cargo Facilities.....	A-25
2. AIRLINE TRAFFIC AND ECONOMIC ANALYSIS .....	A-26
Airport Service Region .....	A-26
Airport Role.....	A-28
Large-Hub Origin-Destination Airport .....	A-28
Role as a Connecting Hub .....	A-29
International Gateway.....	A-31
Primary Bay Area Airport.....	A-33
Low-Cost Carrier Airport.....	A-35
Economic Basis for Airline Traffic .....	A-37
Population, Nonagricultural Employment, and Per Capita Personal Income.....	A-37
Industry Clusters .....	A-44
Bay Area Housing Market .....	A-46
Visitor Industry .....	A-46
Economic Outlook.....	A-48
Global Economic Outlook .....	A-48
National Economic Outlook.....	A-49
Regional Economic Outlook.....	A-49
Historical Airline Service and Traffic.....	A-50
Airlines Serving the Airport.....	A-50
Enplaned Passenger Trends.....	A-50
Enplaned Passenger Market Shares .....	A-54
Domestic Origin-Destination Markets .....	A-56
International Origin-Destination Markets .....	A-56
Airline Airfares .....	A-59
Airline Yields .....	A-59
Bay Area-Los Angeles Area Corridor.....	A-61
Airline Service .....	A-62
Cargo.....	A-65

CONTENTS (*continued*)

	Page
2. AIRLINE TRAFFIC AND ECONOMIC ANALYSIS ( <i>continued</i> )	
Key Factors Affecting Future Airline Traffic.....	A-66
National Economic Conditions.....	A-66
International Economic and Political Conditions.....	A-66
Financial Health of the Airline Industry .....	A-67
Airline Service and Routes .....	A-69
Airline Competition and Airfares .....	A-70
Airline Consolidation and Alliances .....	A-70
Availability and Price of Aviation Fuel .....	A-71
Aviation Safety and Security Concerns .....	A-72
Capacity of the National Air Traffic Control System .....	A-73
Capacity of the Airport .....	A-73
High Speed Rail in California .....	A-73
Airline Traffic Forecasts .....	A-74
Underlying Assumptions.....	A-74
Enplaned Passengers .....	A-75
Landed Weight and Landings.....	A-76
3. FRAMEWORK FOR FINANCIAL OPERATION .....	A-79
The Bond Resolution.....	A-79
Rate Covenant .....	A-79
Application of Revenues .....	A-80
Additional Bonds.....	A-81
Subordinate Debt.....	A-83
Letters of Credit Supporting the Commercial Paper Program .....	A-83
Outstanding Bonds .....	A-83
Proposed and Future Bonds .....	A-83
The Annual Service Payment .....	A-84
Lease and Use Agreements .....	A-84
Terminal Rentals and Landing Fees .....	A-85
Airport Cost Centers .....	A-86
Airline Review of Capital Improvements .....	A-87
Commercial Agreements, Leases, and Permits .....	A-87
Automobile Parking .....	A-88
Rental Cars.....	A-88
Transportation Network Companies .....	A-88
Duty Free .....	A-89
Retail .....	A-89
Food and Beverage .....	A-90
Other Commercial Leases and Agreements .....	A-90
Special Facility Obligations .....	A-90
Special Facility Obligations Related to Fueling Facilities .....	A-90
Special Facility Obligations Related to the SFO Hotel.....	A-90

CONTENTS (*continued*)

	Page
4. AIRPORT CAPITAL IMPROVEMENT PLAN AND FUNDING .....	A-92
Summary of the Capital Improvement Plan .....	A-92
Projects in the Capital Improvement Plan .....	A-94
Mitigation Factors.....	A-96
Summary of Capital Improvement Plan Funding.....	A-97
Grants .....	A-97
Bonds .....	A-98
Passenger Facility Charges.....	A-98
Other Funding Sources .....	A-99
Other Potential Airport Capital Improvements .....	A-99
5. FINANCIAL ANALYSIS .....	A-100
Annual Debt Service Requirements.....	A-100
Reconciliation of Historical Financial Results .....	A-102
Operation and Maintenance Expenses.....	A-102
Personnel Expenses .....	A-104
Contractual Services .....	A-105
Other Operating Expenses.....	A-105
Revenues.....	A-105
Airline Revenues .....	A-106
Other Aviation Revenues .....	A-108
Nonairline Revenues.....	A-109
SFO Hotel .....	A-113
Interest Earnings .....	A-113
PFCs Designated and Applied as Revenues .....	A-114
Application of Revenues .....	A-114
Debt Service Coverage.....	A-114
Transfer Amount Available .....	A-114
Forecast Debt Service Coverage .....	A-115
Summary of Base Case Financial Forecasts .....	A-116
Sensitivity Scenario .....	A-116

## TABLES

		Page
1	Airport Facilities Profile .....	A-21
2	Parking Facilities .....	A-24
3	San Francisco CSA Population in 2017 .....	A-26
4	West Coast International Passenger Airline Service .....	A-33
5	Historical and Projected Socioeconomic Trends .....	A-38
6	Comparative Socioeconomic Trends for the 10 Most Populous U.S. Metropolitan Areas .....	A-40
7	Major Private Sector Employers in the San Francisco Bay Area .....	A-44
8	Passenger Airlines Providing Scheduled Service at San Francisco .....	A-51
9	Historical Enplaned Passengers .....	A-53
10	Enplaned Passengers by Airline .....	A-55
11	Domestic Origin-Destination Patterns and Airline Service .....	A-57
12	International Origin-Destination Patterns and Airline Service .....	A-58
13	Comparison of Airfares in SFO's Top Domestic Origin-Destination Markets in FY 2018	A-60
14	Published Airline Service Additions in FY 2018 and FY 2019 .....	A-64
15	Trends in Air Cargo .....	A-65
16	Airline Traffic Forecasts .....	A-77
17	Summary of Capital Improvement Plan Spending .....	A-93
18	Summary of 2019 Bonds and Future Bond Assumptions .....	A-101
19	Reconciliation of Historical Financial Results .....	A-103
20	Operation and Maintenance Expense Summary .....	A-104
21	Operating Revenue Summary .....	A-106
22	Ground Transportation Activity and Revenue Trends .....	A-110

## FIGURES

		Page
1	Aerial View .....	A-20
2	Terminal Configuration .....	A-23
3	Airport Service Region.....	A-27
4	Revenue Enplaned Passengers at the 10 Busiest U.S. Airports in FY 2018 .....	A-29
5	United Airlines Connecting Hub Airports in FY 2018 .....	A-30
6	Trends in Scheduled Departing Seats at United's Connecting Hub Airports: FY 2010 - FY 2018 .....	A-31
7	International Revenue Enplaned Passengers at the 10 Busiest U.S. Gateway Airports in FY 2018 .....	A-32
8	Origin-Destination Domestic Passenger Trends at Bay Area Airports .....	A-34
9	Low-Cost Carrier Shares of Domestic Origin-Destination Passengers at Bay Area Airports.....	A-36
10	Comparative Distribution of Nonagricultural Employment .....	A-41
11	Forecasts of Nonagricultural Employment by Sector .....	A-42
12	Monthly Unemployment Rates .....	A-43
13	Percent Change in Home Prices .....	A-47
14	Historical Enplaned Passengers.....	A-52
15	Airline Market Shares of Enplaned Passengers.....	A-54
16	Airline Yields by Fare Class for Domestic Flights in FY 2018 .....	A-61
17	International Scheduled Airline Service in July 2018 .....	A-63
18	Historical Enplaned Passengers on U.S. Airlines .....	A-67
19	Net Income for U.S. Airlines .....	A-68
20	Historical Aviation Fuel Prices .....	A-71
21	Historical and Forecast Enplaned Passengers .....	A-76
22	Application of Revenues.....	A-82

EXHIBITS

	Page
A-1 Airport Capital Improvement Plan Costs.....	A-118
A-2 Airport Capital Improvement Plan Sources of Funding .....	A-119
B PFC Revenue Forecast and Application of PFC Revenues .....	A-120
C Sources and Uses of Bond Funds .....	A-121
D Annual Debt Service Requirements .....	A-122
E Operation and Maintenance Expenses .....	A-123
F Revenues .....	A-124
F-1 Landing Fees .....	A-125
F-2 Terminal Area Rentals .....	A-126
F-3 Airline Payments per Enplaned Passenger.....	A-127
G Application of Revenues.....	A-128
H Rate Covenant Compliance Forecast .....	A-129
I Summary of Financial Forecasts – Base Case.....	A-130
J Summary of Financial Projections – Sensitivity Scenario.....	A-131

## **1. INTRODUCTION**

This section provides an overview of the Airport Commission and San Francisco International Airport (the Airport, or SFO), including airfield facilities, terminal facilities, parking, Airport access, the AirTrain system, the consolidated rental car facility, and other facilities.

### **THE AIRPORT COMMISSION**

The City and County of San Francisco (the City), through its Airport Commission (the Airport Commission, or the Commission), owns and operates the Airport as a financially self-sufficient enterprise.

The Airport Commission was created in 1970 pursuant to an amendment to the City Charter. Under the City Charter, the Airport Commission has control over the “construction, management, supervision, maintenance, extension, operation, use and control of all property, as well as the real, personal and financial assets which are under the Commission’s jurisdiction.” The City Charter further provides that “subject to the approval, amendment or rejection of the Board of Supervisors [of the City and County of San Francisco] of each issue, the Commission shall have exclusive authority to plan and issue revenue bonds for airport-related purposes.” Bonds issued by the Commission are not general indebtedness of the City, but are special limited obligations of the Commission payable solely from net revenues received by the Commission from the operation of the Airport. The Commission has no taxing power.

The Airport Commission consists of five members who are appointed for four-year terms by the Mayor of San Francisco. The City Charter provides that the Board of Supervisors may reject any appointment to the Commission by a two-thirds vote. Under the City Charter, the Airport Director is appointed by the Mayor from a list of candidates submitted by the Commission. The Airport Director is empowered to appoint or remove senior management staff. The City Attorney serves as the legal advisor to the Commission.

### **THE AIRPORT**

The Airport is located 14 miles south of downtown San Francisco, in San Mateo County, adjacent to the San Francisco Bay. The Airport occupies approximately 2,383 acres on a 5,171-acre site; the remaining 2,788 acres are undeveloped tidelands. Figure 1 shows the layout of the Airport from an aerial view, and Table 1 provides a summary of key Airport facilities.

Figure 1  
**Aerial View**  
San Francisco International Airport



**Table 1**  
**Airport Facilities Profile**  
San Francisco International Airport

Terminal gate positions	Gates (a)	Primary airlines
<b>Domestic terminals (2.7 million sq. ft.) (b)</b>		
Terminal 1		
Boarding Area B	8	Frontier, Southwest
Boarding Area C	10	American, Delta
	18	
Terminal 2		
Boarding Area D	16	American, Alaska
Terminal 3		
Boarding Area E	10	United (domestic)
Boarding Area F	24	United (domestic)
	34	
<b>International Terminal (2.5 mill. sq. ft.) (c)</b>		
Boarding Area A	12	Foreign flag, others (d)
Boarding Area G	12	Foreign flag, United (international)
	24	
Total gates	92	
Widebody capable gates (all terminals)	42	
	<b>Length</b>	
	<b>(feet)</b>	<b>ILS category</b>
<b>Airfield (approx. 1,700 acres)</b>		
Runway 10L-28R	11,870	III
Runway 10R-28L	11,381	I (e)
Runway 1R-19L	8,650	I
Runway 1L-19R	7,650	No ILS approach
<b>Cargo facilities</b>		
Number of cargo buildings	11	
Total space	Approximately 1 million square feet	

ILS = Instrument landing system

- (a) Reflects gates that are currently in use on a common use basis or are preferentially allocated. Includes one gate in Terminal 1 and one gate in Terminal 2 that has apron-level boarding, accessed by bus.
- (b) Terminals 1, 2 and 3 also handle flights to and from Canada, and flights to Mexico.
- (c) All international flights requiring customs and immigration clearance arrive at the International Terminal.
- (d) Including Alaska (domestic and international), Hawaiian, JetBlue, Sun Country.
- (e) Runway 28L has available standard ILS Category I approaches and Special Authorization Category II approaches that require special aircrew and aircraft certification requirements.

Source: San Francisco Airport Commission, September 2018.

## **Airfield Facilities**

The runway and taxiway system at the Airport occupies approximately 1,700 acres and provides four intersecting runways, three of which are equipped with an instrument landing system (ILS) for arrivals. The east-west runways are 11,870 and 11,381 feet long, respectively. The north-south runways are 8,650 and 7,650 feet long, respectively. Each of the four runways is 200 feet wide. The current runway system can accommodate the arrivals and departures at the maximum loads of all commercial aircraft currently in service, including large aircraft such as the Airbus A380. The Airport runways are built on Bay tidelands that were filled during and after World War II and, as a result, the runways continue to settle at various rates, requiring periodic repair and maintenance.

## **Terminal Facilities**

The Airport currently has 92 operational contact gates (including two remote aircraft loading positions accessible by bus), 42 of which can accommodate widebody aircraft. The Airport expects to open and close gates from time to time due to renovations to the terminals and to keep at least 90 gates operational at any time during the ongoing terminal renovation projects.

The domestic passenger terminal complex at the Airport consists of approximately 2.7 million square feet of total space divided among three terminals in a five-pier configuration. The domestic terminals (which also accommodate flights to Mexico and Canada) are located around two-thirds of the outer perimeter of the roadway that encircles the central parking garage, as follows:

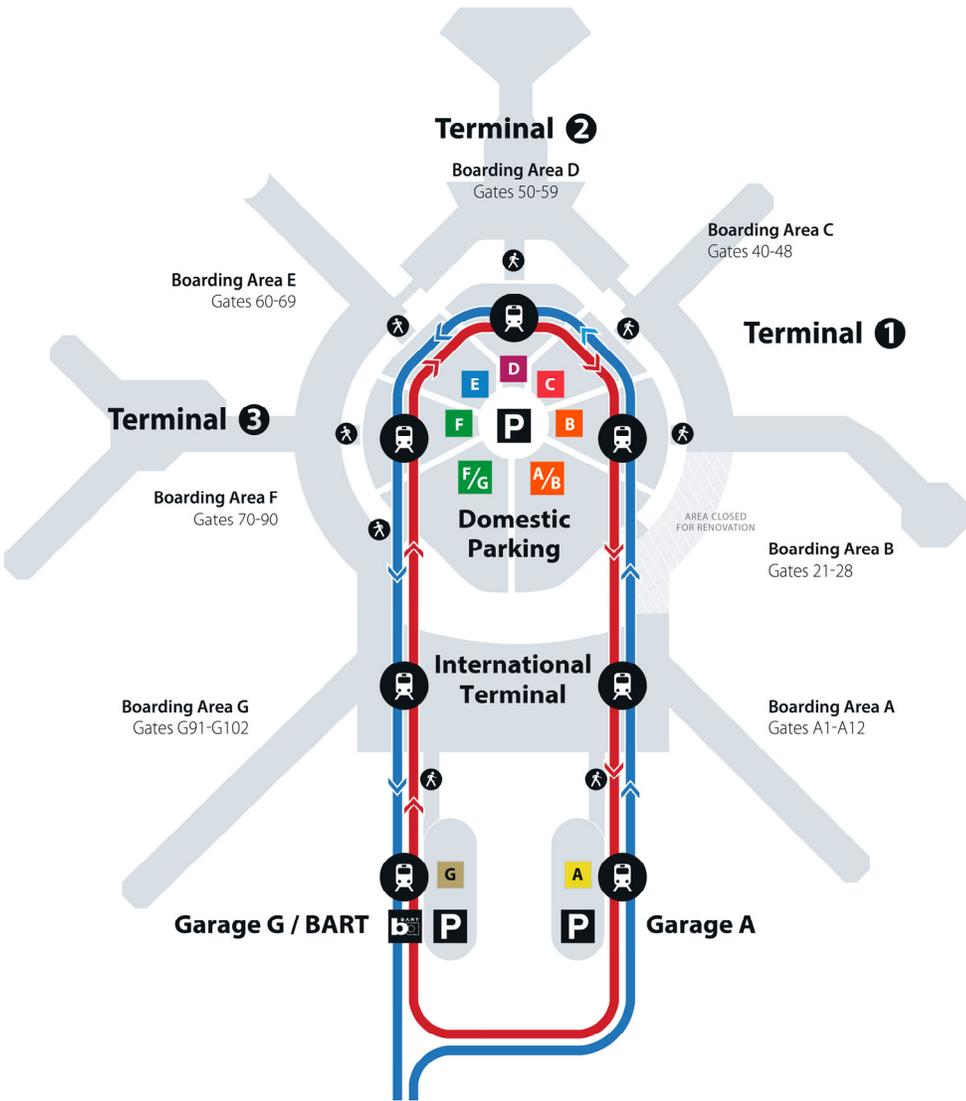
- Terminal 1 comprises Boarding Areas B and C (Gates 21 through 28 and Gates 40 through 48, respectively)
- Terminal 2 comprises Boarding Area D (Gates 50 through 59)
- Terminal 3 comprises Boarding Areas E and F (Gates 60 through 69 and Gates 70 through 90, respectively)

The International Terminal Complex (ITC) straddles the main Airport entrance roadway and consists of 2.5 million square feet configured as a main hall and two piers (Boarding Areas A and G, which include Gates A-1 through A-12, and Gates G-91 through G-102, respectively). In addition to serving as the point of departure and arrival for flights requiring Federal Inspection Services (FIS) clearance, the ITC is also used for certain domestic flights.

The three domestic terminals have 88 food and beverage and retail outlets. The ITC has 38 such outlets (including 8 duty free stores).

The terminal configuration at the Airport is shown on Figure 2.

Figure 2  
**Terminal Configuration**  
 San Francisco International Airport



Source: San Francisco Airport Commission, October 2018.

## Parking

The Airport Commission owns the short- and long-term public parking facilities at the Airport. Table 2 provides details of the number of spaces currently available in these parking facilities. The Domestic Parking Garage, which is adjacent to the domestic terminal complex, provides approximately 5,030 short-term public parking spaces. Two parking garages, located adjacent to the ITC, provide an additional 2,023 short-term parking spaces. A long-term parking garage and adjacent surface lot located approximately 1.5 miles from the terminal complex provide an additional 4,888 spaces. A total of 7,891 employee parking spaces are also provided. The number of available spaces may vary from time to time due to the impact of construction projects at the Airport, but such variations are not expected to materially impact parking revenues.

<u>Automobile Parking</u>	<u>Spaces</u>
Public parking	
Domestic Parking Garage	5,030
Garage A and Garage G	2,023
Long-Term Garage	3,109
Long-Term surface lot	<u>1,779</u>
Total public parking spaces	11,941
Employee parking	<u>7,891</u>
Total parking spaces	19,832

Note: An additional long-term parking garage with 3,600 spaces is expected to open in January 2019.

Source: San Francisco Airport Commission, December 2018.

Additionally, several independent companies offer parking facilities off Airport property and provide Airport access to their patrons via shuttle buses. The capacity of these off-Airport parking facilities is estimated to be more than 8,000 spaces.

## **Airport Access**

Access to the Airport is provided by a roadway system and by the San Francisco Bay Area Rapid Transit (BART) District rail system.

The Airport is located on the east side of the Bayshore Freeway (U.S. Highway 101) between Millbrae Avenue to the south and Interstate 380 (I-380) to the north. The Bayshore Freeway is a major north-south artery that serves the San Francisco Peninsula, providing direct access to the Airport via four exits—Millbrae Avenue, Terminal Access Road, San Bruno Avenue, and North Access Road.

I-380, north of the Airport, connects with the North Access Road and the Terminal Access Road. I-380 is an east-west freeway that serves as a connector between the Bayshore Freeway and Interstate 280 (I-280), the other major north-south freeway serving the Peninsula.

BART is an automated rapid transit system serving Alameda, Contra Costa, and San Francisco counties, as well as northern San Mateo County. A total of 45 BART stations are located along five lines. BART operation was extended directly to the Airport in 2003.

## **AirTrain System**

The AirTrain system provides transportation for travelers and others around and among key Airport facilities. The nine-station AirTrain system operates 24 hours per day on two lines (Red and Blue). Both lines connect to all Airport terminals, garages, and the Airport BART station, while the Blue line also connects to the consolidated rental car facility and certain support facilities. Three AirTrain stations are located adjacent to the domestic terminal complex atop the Domestic Parking Garage. These stations are accessed from their terminals via pedestrian “skybridges” over the loop road. AirTrain stations are also located in the ITC and in the adjacent parking facilities. One AirTrain station connects directly with the Airport BART station.

## **Consolidated Rental Car Facility**

The Commission developed a consolidated rental car facility at the Airport which opened in 1998. The facility is a five-level structure containing approximately 1.5 million square feet, approximately 5,000 parking spaces, a quick turnaround area, rental car operator staging area, rental car fueling and cleaning facilities, ticket counter space, and administrative offices. Companies representing nine rental car brands currently operate from the consolidated rental car facility.

## **Aircraft Maintenance and Cargo Facilities**

Several airlines operate maintenance and cargo facilities at the Airport. United Airlines’ Maintenance Operations Center at the Airport encompasses 3 million square feet and is one of the country’s largest private aircraft maintenance facilities. Additionally, American Airlines operates a major maintenance facility at the Airport, and several other airlines operate line maintenance facilities.

There are 11 cargo facilities at the Airport, providing approximately 1 million square feet of warehouse and office space. Services offered by cargo tenants include refrigeration/cooler facilities, dangerous goods handling, valuable goods handling, and bonded storage.

## 2. AIRLINE TRAFFIC AND ECONOMIC ANALYSIS

### AIRPORT SERVICE REGION

As shown on Figure 3, the region served by the Airport consists of the 12-county San Jose-San Francisco-Oakland Combined Statistical Area (the San Francisco CSA or the Bay Area). According to the U.S. Department of Commerce, Bureau of the Census, the population of the San Francisco CSA was 8.8 million in 2017, accounting for 22% of California’s total population of 39.5 million. The San Francisco-Oakland-Hayward Metropolitan Statistical Area (MSA) includes the City of San Francisco (equivalent to San Francisco County) which accounted for 10.0% of the population of the San Francisco CSA, as shown in Table 3. Because economic growth and activity within this area stimulate a significant portion of passenger demand at the Airport, statistics for the San Francisco CSA were used to evaluate airline traffic trends at the Airport.\*

Table 3  
**San Francisco CSA Population in 2017**

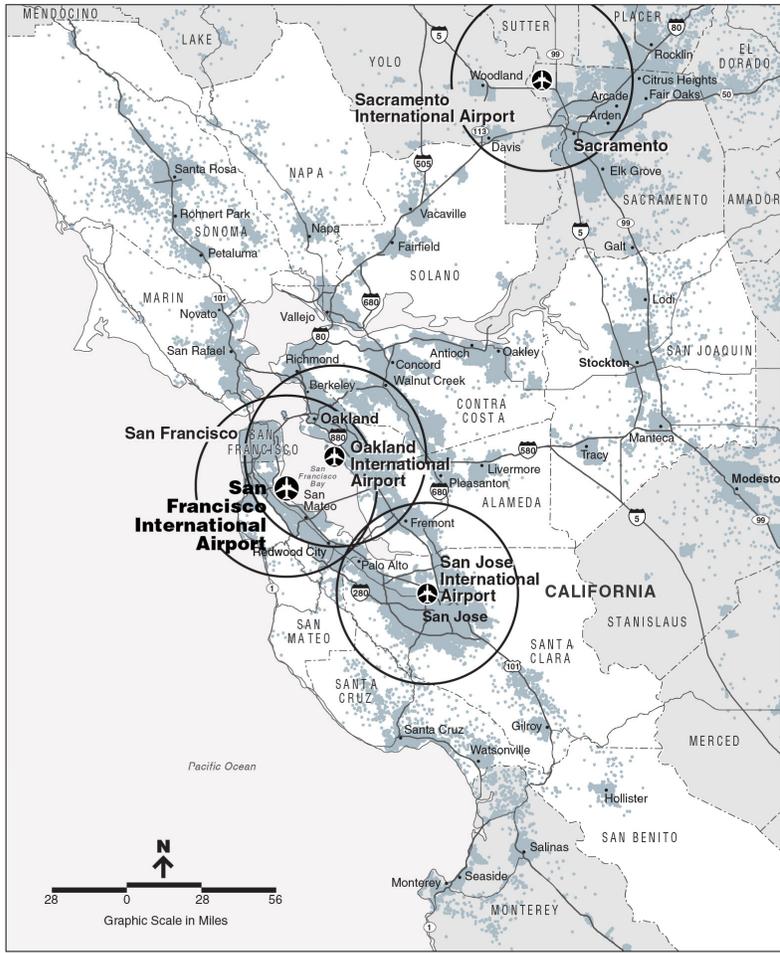
MSA/County	Population	Percent of total
San Francisco-Oakland-Hayward MSA		
Alameda	1,663,190	18.8%
Contra Costa	1,147,439	13.0
San Francisco	884,363	10.0
San Mateo	771,410	8.7
Marin	<u>260,955</u>	<u>3.0</u>
Subtotal—San Francisco MSA	4,727,357	53.5%
San Jose-Sunnyvale-Santa Clara MSA		
Santa Clara	1,938,153	21.9%
San Benito	<u>60,310</u>	<u>0.7</u>
Subtotal—San Jose MSA	1,998,463	22.6%
Stockton-Lodi MSA		
San Joaquin	745,424	8.4
Santa Rosa MSA		
Sonoma	504,217	5.7
Vallejo-Fairfield MSA		
Solano	445,458	5.0
Santa Cruz-Watsonville MSA		
Santa Cruz	275,897	3.1
Napa MSA		
Napa	<u>140,973</u>	<u>1.6%</u>
Total Airport Service Region	8,837,789	100.0%

CSA = Combined Statistical Area; MSA = Metropolitan Statistical Area

Source U.S. Department of Commerce, Bureau of the Census, [www.census.gov](http://www.census.gov), accessed March 2018.

\*Data are presented for the most recent period available and, for internet sources, dated when accessed.

Figure 3  
Airport Service Region



**Road miles from SFO to:**

Los Angeles	386
Monterey	107
Sacramento	103
Santa Rosa	84
Stockton	83
Napa	54
Vallejo	43
San Jose	34
Oakland	32

**LEGEND**

- Airport service region (San Francisco Combined Statistical Area CSA)
- Population density: 1 dot represents 100 people
- 30 mile diameter (15 mile radius from airport center)
- County boundary
- Passenger air carrier service

Note: Road miles shown are from SFO to the airports in each of the cities listed.  
Source: Google Maps, www.google.com.

The Bay Area is served by three passenger-service airports – San Francisco (SFO), Oakland (OAK), and Mineta San Jose (SJC) international airports. SFO is a large-hub airport\* and the Bay Area’s international gateway and dominates long-haul domestic service.\*\* In July 2018\*\*\*, SFO accounted for the largest shares of long-haul domestic and international departing seats at Bay Area airports, with 79% and 87%, respectively. Additionally, SFO accounted for 52% of domestic medium-haul, and 50% of domestic short-haul service. SJC accounted for 11% of domestic long-haul service, 25% of domestic medium-haul service, and 24% of domestic short-haul service. OAK accounted for 11% of domestic long-haul service, 22% of domestic medium-haul service, and 26% of domestic short-haul service. OAK and SJC are medium-hub airports and provide primarily short- and medium-haul domestic service.

In recent years, limited long-haul and international service has been added at OAK and SJC, as discussed in the section “International Gateway”. Historically, each airport has drawn passengers primarily from its closest surrounding geographical area for short- and medium-haul service, while SFO has captured most of the demand for longer domestic trips and international service from the entire Bay Area.

## **AIRPORT ROLE**

The Airport plays an important role in the national, State, and local air transportation systems. SFO is the only airport in the San Francisco CSA and Northern California with substantial levels of international service and connecting traffic.

### **Large-Hub Origin-Destination Airport**

SFO is the seventh busiest airport in the United States in terms of enplaned passengers, with 27.8 million in FY 2018 according to the U.S. Department of Transportation (DOT).\*\*\*\* The Airport ranks fourth among U.S. airports in terms of domestic and international revenue origin-destination (O&D) passengers, with 21.7 million or 78% of revenue enplaned passengers in FY 2018, as shown on Figure 4. In addition, SFO ranked seventh among U.S. airports in terms of domestic O&D passengers in FY 2018. SFO’s large O&D passenger base reflects, in part, the San Francisco CSA’s population of 8.8 million in 2017, which is the fifth most populous CSA in the nation (following the New York, Los Angeles, Chicago, and Washington DC/Baltimore CSAs).

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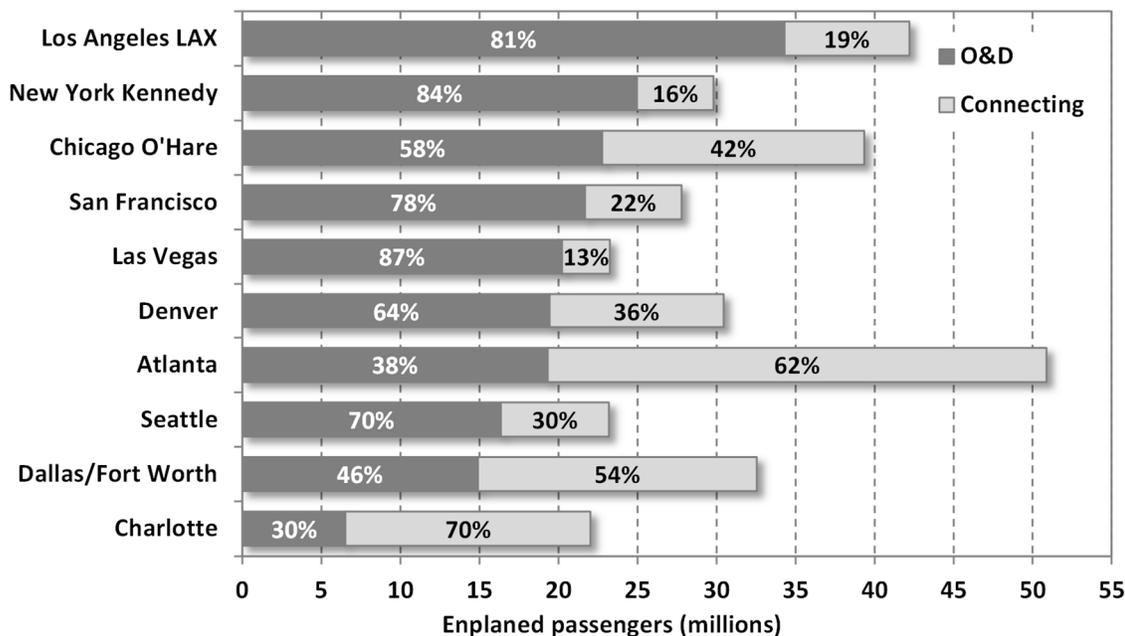
\*A large-hub airport is defined by the Federal Aviation Administration (FAA) as one that enplanes 1% or more of annual nationwide passenger boardings; a medium-hub airport enplanes between 0.5% and 1% of nationwide passenger boardings; and a small-hub airport enplanes between 0.25% and 0.5% of nationwide passenger boardings.

\*\*For the purposes of this Report, short-haul flights are 500 miles or less, medium-haul flights are 501 to 1,500 miles, and long haul flights are more than 1,500 miles.

\*\*\*Published airline schedule data for July 2018 are used throughout this Report to represent the peak month of passenger airline activity which includes daily and seasonal service and to be consistent with previous Reports of the Airport Consultant which reported July data.

\*\*\*\*Data reported to the U.S. DOT excludes nonrevenue passengers and may differ from data reported by the airlines to the Airport.

Figure 4  
**Revenue Enplaned Passengers at the 10 Busiest U.S. Airports in FY 2018**  
 Ranked by origin-destination passengers



Notes: For the Fiscal Year ended June 30  
 O&D = Origin-Destination passengers  
 Due to reporting anomalies, O&D passengers include passengers making a connection from one international flight to another international flight on foreign-flag airlines.  
 The percent of O&D passengers for SFO in FY 2018 (78%) excludes non-revenue passengers and differs from the estimate in Table 9 (78.8%) which is based on total (revenue and non-revenue) enplaned passengers.

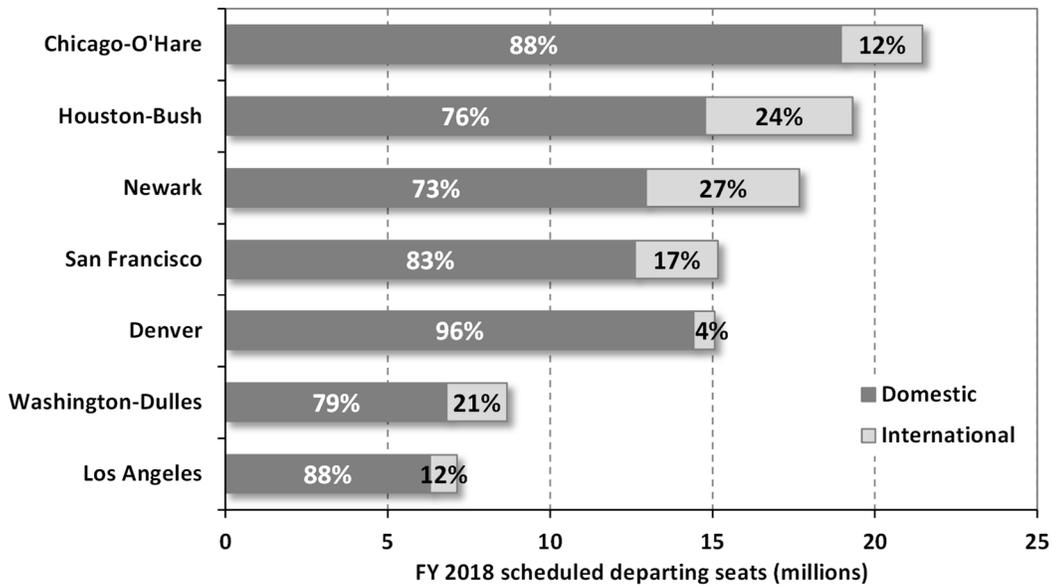
Sources: U.S. Department of Transportation, *Air Passenger Origin-Destination Survey*, reconciled to Schedule T100, and Schedule T100, accessed December 2018.

### Role as a Connecting Hub

In addition to its role as a large O&D airport, the Airport serves as a major connecting hub for United. United and its regional affiliates operate an average of more than 4,500 flights per day to 339 airports on five continents from its hubs in Newark, Chicago (O'Hare), Denver, Houston (Bush), Los Angeles (LAX), San Francisco, Washington (Dulles), and Guam.\* As shown on Figure 5, the Airport is the fourth busiest airport in United's system in FY 2018, with 8% of total scheduled departing seats (following the hubs at Chicago O-Hare, Houston-Bush, and Newark). In FY 2018, SFO ranks fifth in terms of domestic scheduled seats and third in terms of international seat capacity in United's system. In FY 2018, United accounted for approximately 44.6% of all enplaned passengers at the Airport and approximately 84% of all passengers connecting at the Airport.

\*United Continental Holdings, Inc. and Subsidiary Companies, Annual Report on Form 10-K, For the Year Ended December 31, 2017, [www.united.com](http://www.united.com).

Figure 5  
**United Airlines Connecting Hub Airports in FY 2018**



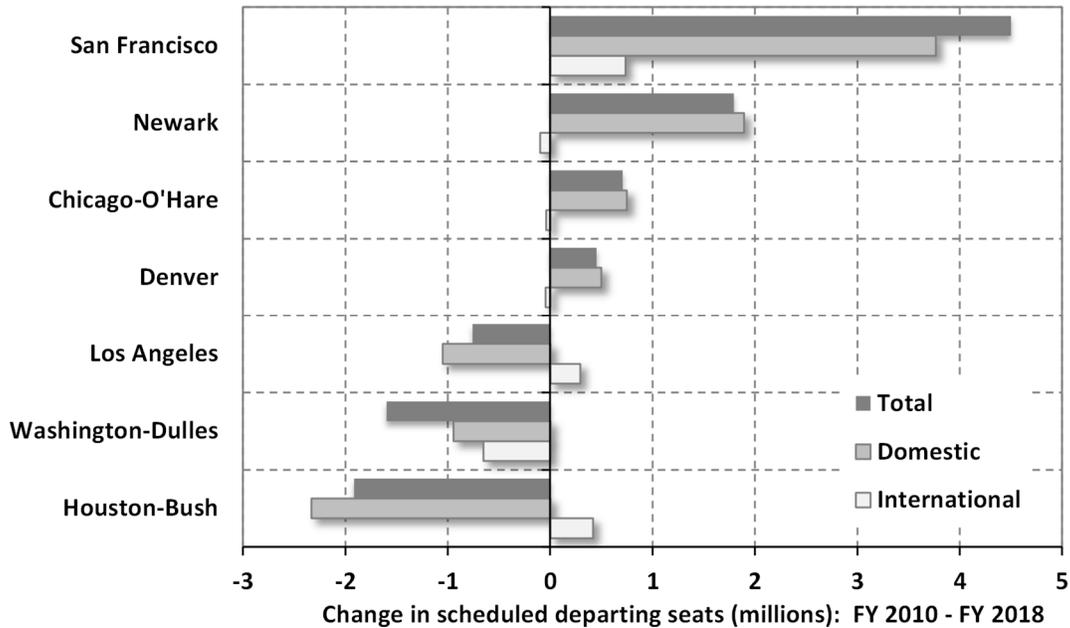
Notes: For the Fiscal Year ended June 30  
 Excludes activity for Guam, which accounted for less than 1.0 million departing seats (0.6% of United's system)

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed October 2018.

In recent years, United has increased its capacity at the Airport more than at any of its other hub airports, as shown on Figure 6. Of United's hub airports, SFO accounted for the largest increase in total capacity between FY 2010 and FY 2018, with a total gain of 4.5 million scheduled departing seats. Capacity also increased at United's Newark, O'Hare, and Denver hubs, with net capacity gains of 1.8 million, 0.7 million, and 0.5 million scheduled departing seats, respectively, between FY 2010 and FY 2018.\* Total capacity decreased at United's three other connecting hubs during this period. United's SFO hub experienced the largest gain in international capacity between FY 2010 and FY 2018 (an increase of 734,000 seats), followed by Houston (an increase of 417,000 seats), and LAX (an increase of 291,000 seats). International capacity decreased at United's four other connecting hubs during this period.

\*United Airlines ceased operations at John F. Kennedy International Airport on October 25, 2015 and transferred its transcontinental flights from JFK to Newark Liberty International Airport. United Airlines Press Release, "United Airlines Strengthens New York/New Jersey Hub with Move of p.s. [premium service] Transcontinental Service to Newark," June 16, 2015, www.united.com.

Figure 6  
**Trends in Scheduled Departing Seats at  
 United's Connecting Hub Airports: FY 2010 - FY 2018**  
*Ranked by the change in total seats*



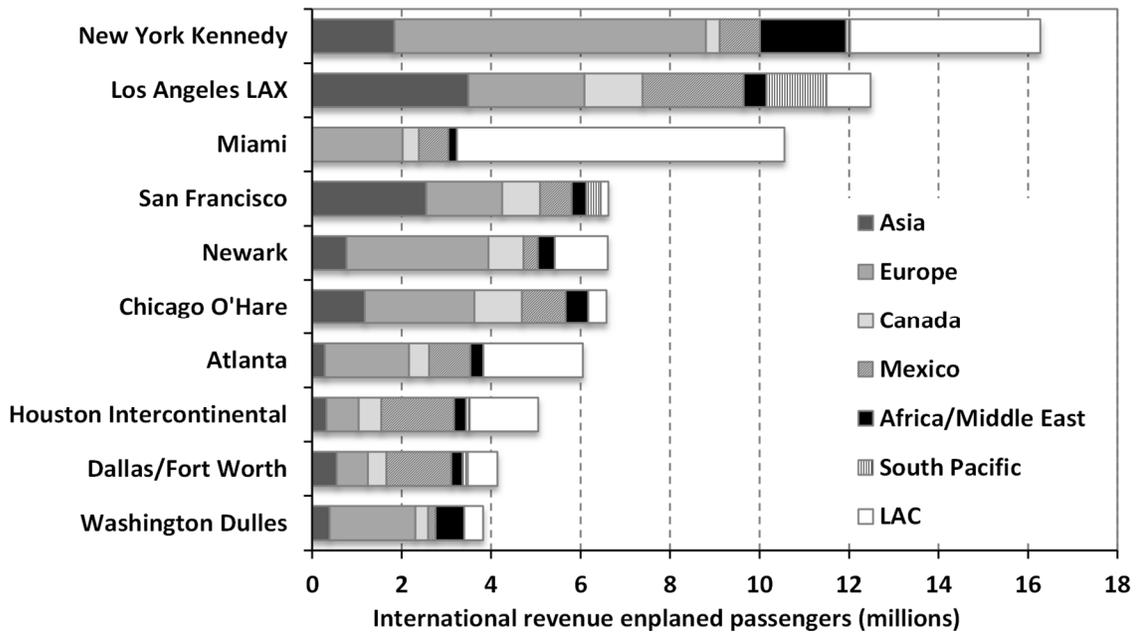
Notes: For the Fiscal Year ended June 30  
 Includes seats on United Express, Continental, Continental Connection, and Continental Express for all years shown

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed October 2018.

### International Gateway

SFO is the fourth busiest U.S. gateway airport in the United States, in terms of international revenue enplaned passengers, with 6.6 million international revenue enplaned passengers in FY 2018, as shown on Figure 7. The Airport's role as one of the primary international gateways in the United States is related to the strength of the San Francisco CSA economy, the location of global companies in the San Francisco CSA and Northern California, its proximity to expanding markets in Asia and the South Pacific, and its wide reach to markets in Canada, Europe, Mexico, and the Middle East. In FY 2018, SFO accounted for the second largest number of international passengers to Asia and the South Pacific among U.S. gateway airports (behind Los Angeles).

Figure 7  
**International Revenue Enplaned Passengers**  
**at the 10 Busiest U.S. Gateway Airports in FY 2018**  
*Ranked by total international passengers*



Notes: For the Fiscal Year ended June 30  
 LAC = Latin America and the Caribbean, excluding Mexico

Source: U.S. Department of Transportation, Schedule T100, accessed December 2018.

SFO is one of three primary international gateways on the West Coast, in addition to Los Angeles (LAX) and Seattle (SEA) international airports. In July 2018, SFO provided an average of 108 daily international departures, compared with an average of 200 daily international departures at LAX and 65 at SEA, as shown in Table 4.

SFO's international airline service is diverse. In addition to United's international service, 42 foreign-flag airlines served SFO in July 2018, including airlines from Asia (14), Europe (16), the South Pacific (3), Latin America and the Caribbean (2), the Middle East (1), Mexico (3), and Canada (3). International passenger service was also provided by Alaska Airlines.

Limited international service is also provided at nine West Coast airports in Fresno, Oakland, Ontario, Palm Springs, Portland, Sacramento, San Diego, San Jose, and Santa Ana. U.S. mainline, foreign-flag, and low-cost carrier (LCC)\* service is provided from these nine airports to airports in Asia, Canada,

\*A "low-cost carrier" is an airline that operates under a generally recognized low-cost business model, which may include a single passenger class of service, use of standardized aircraft utilization, in-flight services, use of smaller and less expensive airports, and lower employee wages and benefits.

Europe, and Mexico. Airline service at these nine West Coast airports is focused primarily on point-to-point O&D travel and typically generates lower than average airline yields.

**Table 4**  
**West Coast International Passenger Airline Service**  
July 2018

Airport	Number of international destinations served		Average daily		Percent of total	
	Daily	Weekly	Departures	Seats	Departures	Seats
<b>Primary international gateways</b>						
Los Angeles LAX	54	31	200	47,323	46.3%	50.3%
<b>San Francisco</b>	<b>38</b>	<b>10</b>	<b>108</b>	<b>26,591</b>	24.9	28.3
Seattle	<u>19</u>	<u>6</u>	<u>65</u>	<u>9,985</u>	<u>15.1</u>	<u>10.6</u>
Subtotal--primary gateways	111	47	373	83,966	86.3%	89.2%
<b>Other airports</b>						
San Jose	6	5	12	2,050	2.9%	2.2%
Oakland	5	9	9	2,081	2.1	2.2
San Diego	5	4	12	2,027	2.7	2.2
Portland	6	4	15	1,926	3.4	2.0
Ontario	2	--	2	537	0.5	0.6
Sacramento	2	1	3	465	0.7	0.5
Santa Ana (Orange County)	2	1	3	438	0.7	0.5
Fresno	1	1	2	408	0.5	0.4
Palm Springs	--	<u>2</u>	<u>1</u>	<u>159</u>	<u>0.2</u>	<u>0.2</u>
Subtotal--other airports	<u>29</u>	<u>27</u>	<u>59</u>	<u>10,130</u>	<u>13.7</u>	<u>10.8</u>
All airports	140	74	432	93,994	100.0%	100.0%

Note: A weekly flight operates less than 7 days per week.

Source OAG Worldwide Ltd, OAG Analyser database, accessed October 2018.

### Primary Bay Area Airport

SFO is the busiest airport in the Bay Area and Northern California and accounted for 58% of all Bay Area outbound domestic O&D passengers in FY 2018, as shown on Figure 8. Between FY 2005 and FY 2009, the number of outbound domestic O&D passengers at SFO increased an average of 5.5% per year, reflecting, in part, the development of low-cost carrier service by jetBlue, Southwest, and Virgin America. In comparison, outbound domestic O&D passengers at OAK and SJC decreased between FY 2005 and FY 2009—an average decrease of 8.8% and 4.0% per year, respectively, as a result of the 2008-2009 national economic recession and the increase in competitive LCC service at SFO. As a result of this strong growth, SFO's share of all Bay Area outbound domestic O&D passengers increased from 42% in FY 2005 to 54% in FY 2009, while OAK's share decreased from 34% to 24% and SJC's share decreased from 24% to 22%.

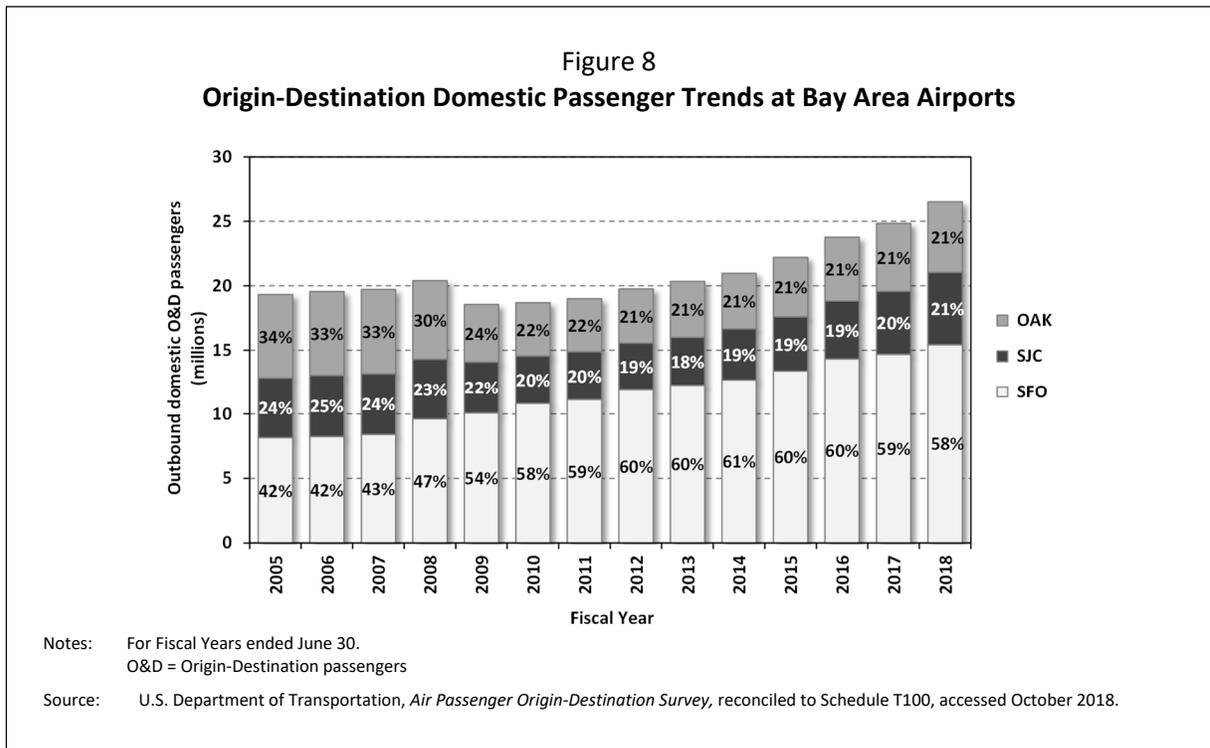
Following the recession, domestic O&D passengers at the three Bay Area airports increased an average of 2.5% per year between FY 2009 and FY 2014, driven by continued strong growth at SFO (an average increase of 4.7% per year) offset by continued decreases at OAK and SJC (an average

decrease of 0.8% and 0.1% per year, respectively). In FY 2014, SFO accounted for 61% of outbound domestic O&D passengers at Bay Area airports, its highest share since FY 2005.

Between FY 2014 and FY 2018, domestic O&D passengers at the three Bay Area airports increased an average of 6.1% per year, reflecting strong economic growth and expanded airline service compared with the previous five years. In particular:

- Nonagricultural employment and per capita personal income in the San Francisco CSA increased an average of 3.1% and 5.1% per year, respectively, between 2014 and 2017, compared with average increases of 2.2% and 3.2%, respectively, between 2009 and 2014.
- The number of scheduled domestic departing seats at the three Bay Area airports increased an average of 5.8% per year between FY 2014 and FY 2018, compared with an average increase of 1.1% per year between FY 2009 and FY 2014.
- Scheduled domestic departing seats at OAK and SJC increased an average of 5.4% and 8.7% per year, respectively, between FY 2014 and FY 2018, reflecting expanded service at OAK by LCCs (Allegiant, jetBlue, Southwest, and Spirit) and at SJC by LCCs (jetBlue and Southwest) and network airlines (Alaska, American, Delta, and United).
- From FY 2014 through FY 2018, scheduled domestic departing seats at SFO increased an average of 5.2% per year, consistent with the long-term growth in SFO's domestic O&D passengers (an average increase of 5.0% per year between FY 2005 and FY 2018).

Since FY 2010, SFO's share of all Bay Area outbound domestic O&D passengers has averaged 58% to 60% (including a high of 61% in FY 2014), with OAK and SJC each accounting for 18% to 22%.



## Low-Cost Carrier Airport

Between FY 2005 and FY 2017, the number of LCC domestic O&D passengers at SFO increased an average of 13.8% per year, compared with an average increase of 0.7% per year at SJC, an average decrease of 0.9% per year at OAK, and an average increase of 3.0% per year for all three Bay Area airports. In FY 2018, LCC domestic O&D passengers at SFO decreased 13.7%, reflecting a 34.6% decrease by Virgin America as a result of its merger with and rebranding as Alaska Airlines (which is not a LCC) in April 2018. The number of passengers by all other LCCs at SFO remained relatively unchanged in FY 2018. LCC domestic O&D passengers at OAK and SJC increased 4.9% and 18.2%, respectively, in FY 2018, reflecting the expansion in domestic scheduled seats discussed earlier.

Strong growth in LCC domestic O&D passengers at SFO reflects the introduction and development of LCC service by jetBlue, Southwest, and Virgin America between FY 2007 and FY 2017. From FY 2012 to FY 2017, LCCs have accounted for 41% to 42% of domestic O&D passengers at SFO, including 16% to 17% by Virgin America and 24% to 25% by all other LCCs, as shown on Figure 9. In FY 2018, LCCs accounted for 35% of domestic O&D passengers at SFO, including 10% by Virgin America (reflecting data for July 2017 through April 2018) and 25% by all other LCCs. As of July 2018, four airlines at the Airport offered low-cost carrier domestic service:

- Frontier Airlines
- jetBlue Airways
- Southwest Airlines
- Sun Country Airlines

Virgin America began operations as a new entrant LCC in 2007 and based its primary operations at SFO. Virgin America, Inc. and Alaska Air Group, Inc., the parent company of Alaska Airlines, announced plans to merge in April 2016. Virgin America, Inc. shareholders approved these merger plans in July 2016, followed by the U.S. Department of Justice in December 2016.\* The merged airline received a single operating certificate from the FAA in January 2018, moved to a single reservations system and rebranded as Alaska Airlines on April 25, 2018, and plans to retire the Virgin America brand by 2019 after all Virgin America aircraft are repainted.\*\* Alaska Airlines and Virgin America accounted for 5.1% and 8.1%, respectively, of total enplaned passengers at the Airport in FY 2018, with very limited overlap in the markets served from SFO.

Since closing the merger in December 2016, the combined Alaska/Virgin has increased service at the primary West Coast airports in the combined airline network, including increases of 10.1% and 12.3% in scheduled departing seats at SFO in FY 2017 and FY 2018, respectively. In FY 2019, Alaska is expected to decrease seats at SFO by approximately 11% as a result of restructuring the combined airline's network. Alaska has reduced capacity at SFO by discontinuing service to some markets or by cutting frequencies and/or downgrading to smaller aircraft, with the largest reductions occurring in medium-haul routes. Approximately 58% of the total reduced capacity at SFO (approximately 300,000 seats) related to discontinued markets. Alaska has increased its focus on long-haul routes from SFO and Los Angeles International Airport, Virgin America's former bases in California. Alaska currently occupies 10 preferential gates at SFO.

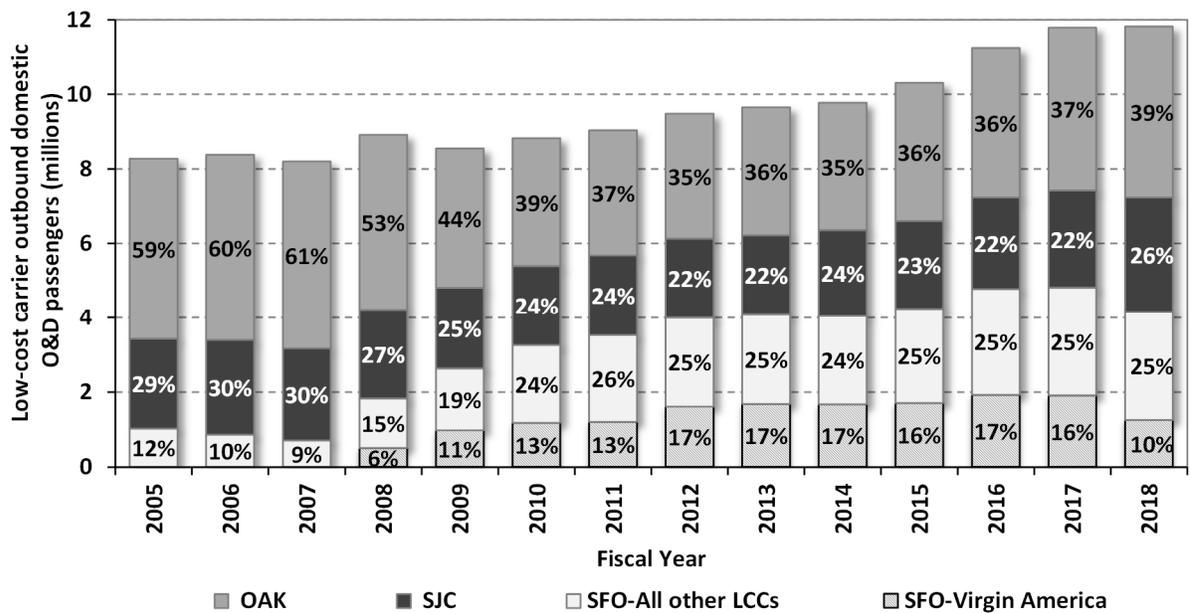
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\*"Virgin America Shareholders Vote to Approve Merger Agreement with Alaska Air Group, Inc.," July 26, 2016, [www.virginamerica.com](http://www.virginamerica.com). "Justice Department Clears Alaska Air Group's Acquisition of Virgin America," December 6, 2016, [www.alaskaair.com](http://www.alaskaair.com).

\*\*"Alaska Airlines receives single operating certificate from FAA," January 11, 2018, [www.alaskaair.com](http://www.alaskaair.com).

Alaska’s restructuring efforts also include an estimated 8% decrease in seats at Los Angeles International Airport in FY 2019 and the initiation of scheduled service at Paine Field in Seattle based on advance published schedules. Although Alaska is not considered a LCC, the continued presence of the combined airline’s service at SFO increases the level of competition which, in turn, puts downward pressure on airfares.

Figure 9  
**Low-Cost Carrier Shares of Domestic Origin-Destination Passengers at Bay Area Airports**



Notes: For Fiscal Years ended June 30  
 O&D = Origin-Destination passengers  
 Includes the LCC activity of Frontier, jetBlue, Southwest, Sun Country, and Virgin America.  
 Data for Virgin America in FY 2018 are for July 2017 through April 2018 when it was rebranded as Alaska Airlines following their merger.

Source: U.S. Department of Transportation, *Air Passenger Origin-Destination Survey*, reconciled to Schedule T100, accessed October 2018.

In addition to LCC domestic service, in July 2018, LCC international service was provided by seven foreign-flag airlines at SFO, including French Blue, Interjet, Thomas Cook, Volaris, WestJet, WOW Air, and XL Airways.\*

\*International Civil Aviation Organization (ICAO), List of Low-Cost-Carriers (LCCs), June 13, 2017. ICAO defines an LCC as “an air carrier that has a relatively low-cost structure in comparison with other comparable carriers and offers low fares and rates. Such an airline may be independent, the division or subsidiary of a major network airline or, in some instances, the ex-charter arm of an airline group.”

## ECONOMIC BASIS FOR AIRLINE TRAFFIC

The economy of the San Francisco CSA is an important determinant of long-term passenger demand at the Airport. The development of the economic base of an airport service region is important to passenger traffic growth. This is particularly true where the industries in the region rely on the airport for passenger and cargo service. The San Francisco CSA, the fifth most populous in the US, is a national and international travel destination as well as a center of business and trade in California and the nation.

The following sections present a discussion of the economic basis for airline traffic at the Airport—historical and projected population, employment, and per capita personal income of the San Francisco CSA, industry clusters, and the visitor industry—and a summary of the economic outlook for the United States, California, and the San Francisco CSA.

## POPULATION, NONAGRICULTURAL EMPLOYMENT, AND PER CAPITA PERSONAL INCOME

Table 5 presents comparative historical and projected trends in population, nonagricultural employment, and per capita personal income in the San Francisco CSA, the State of California (the State), and the United States in 2000, 2005, and from 2010 through 2017. Also presented are projected growth rates for 2017 through 2025.

**Population.** As shown in Table 5, from 2000 through 2017, the population of the San Francisco CSA increased an average of 0.8% per year, similar to growth rates for the State and the nation. The California Department of Transportation (Caltrans) projects population in the San Francisco CSA and the State to increase an average of 0.8% and 0.7% per year, respectively, between 2017 and 2025, similar to the rate for the nation by the U.S. Census Bureau.\*

**Nonagricultural Employment.** Nonagricultural employment in the San Francisco CSA increased an average of 0.6% per year between 2000 and 2017, as shown in Table 5. Between 2000 and 2010, nonagricultural employment growth in the San Francisco CSA decreased, reflecting the effects of the national economic recessions in 2001 and in 2008 and 2009. Between 2010 and 2017, nonagricultural employment in the San Francisco CSA increased an average of 3.1% per year. In 2017, strong growth in education and health services resulted in a 2.3% increase in San Francisco CSA employment, faster than growth in the State (1.8%) and the nation (1.6%). Caltrans projects nonagricultural employment in the San Francisco CSA and the State to increase an average of 1.0% and 0.9% per year, respectively, between 2017 and 2025, higher than the growth rate for the nation forecast by the U.S. Department of Labor.

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\*Caltrans manages six primary programs: Aeronautics, Highway Transportation, Mass Transportation, Transportation Planning, Administration and the Equipment Service Center. Caltrans' Transportation Economics Branch (formerly the Economic Analysis Branch) initiated the California Economic Forecasts project in 2000 to assist local and regional agencies in their planning and travel forecasting efforts and to provide a consistent set of long-term socio-economic forecasts for each county.

**Table 5**  
**Historical and Projected Socioeconomic Trends**  
**San Francisco CSA, State of California, and United States**

	Population (thousands)			Nonagricultural employment (thousands)			Per capita personal income (2017 dollars)		
	San Francisco CSA	State of California	United States	San Francisco CSA	State of California	United States	San Francisco CSA	State of California	United States
Historical									
2000	7,656	33,872	281,425	3,835	14,585	132,024	\$65,550	\$47,548	\$43,639
2005	7,781	35,828	295,517	3,568	15,045	134,051	63,107	49,358	44,994
2010	8,154	37,254	308,746	3,432	14,283	130,361	62,646	49,022	45,577
2011	8,272	37,673	311,644	3,490	14,438	131,932	64,834	50,285	46,560
2012	8,379	38,019	313,993	3,611	14,764	134,175	68,215	52,048	47,597
2013	8,490	38,347	316,235	3,741	15,154	136,381	68,043	51,740	47,166
2014	8,606	38,701	318,623	3,872	15,578	138,958	71,829	54,087	48,690
2015	8,712	39,032	321,040	4,018	16,056	141,843	77,641	57,583	50,613
2016	8,785	39,296	323,406	4,151	16,477	144,352	80,550	58,722	50,893
2017	8,838	39,537	325,719	4,247	16,773	146,627	83,432	59,796	51,640
Projected									
2025	9,417	41,715	346,371	4,599	18,049	155,042	102,547	69,264	58,985
	Percent increase (decrease)								
2010-2011	1.4%	1.1%	0.9%	1.7%	1.1%	1.2%	3.5%	2.6%	2.2%
2011-2012	1.3	0.9	0.8	3.5	2.3	1.7	5.2	3.5	2.2
2012-2013	1.3	0.9	0.7	3.6	2.6	1.6	(0.3)	(0.6)	(0.9)
2013-2014	1.4	0.9	0.8	3.5	2.8	1.9	5.6	4.5	3.2
2014-2015	1.2	0.9	0.8	3.8	3.1	2.1	8.1	6.5	3.9
2015-2016	0.8	0.7	0.7	3.3	2.6	1.8	3.7	2.0	0.6
2016-2017	0.6	0.6	0.7	2.3	1.8	1.6	3.6	1.8	1.5
	Compound annual percent increase (decrease)								
2000-2010	0.6%	1.0%	0.9%	(1.1%)	(0.2%)	(0.1%)	(0.5%)	0.3%	0.4%
2010-2017	1.2	0.9	0.8	3.1	2.3	1.7	4.2	2.9	1.8
2000-2017	0.8	0.9	0.9	0.6	0.8	0.6	1.4	1.4	1.0
2017-2025	0.8	0.7	0.8	1.0	0.9	0.7	2.6	1.9	1.7

n.a. = Not available; CSA = Combined Statistical Area, consisting of 12 counties as shown in Table 3.

Sources: Historical: U.S. Department of Commerce, Bureau of the Census, [www.census.gov](http://www.census.gov); U.S. Department of Labor, Bureau of Labor Statistics, [www.bls.gov](http://www.bls.gov); U.S. Department of Commerce, Bureau of Economic Analysis, [www.bea.gov](http://www.bea.gov), accessed March 2018. Adjusted to constant 2017 dollars using the U.S. Department of Labor, Consumer Price Index for Urban Consumers (1982-84 = 100), [www.bls.gov](http://www.bls.gov).  
Projected growth rates for San Francisco CSA and California: California Department of Transportation, *California County-Level Economic Forecast 2018-2050, The California Economic Forecast*, September 2018.  
Projected growth rates for the United States: U.S. Department of Commerce, Bureau of the Census, *Projections of the Population and Components of Change for the United States: 2015 to 2060*, December 2014, [www.census.gov](http://www.census.gov); U.S. Department of Labor, Bureau of Labor Statistics, *Employment Projections: 2016-2026*, October 2017, [www.bls.gov](http://www.bls.gov); IHS Global Insight as reported by Federal Aviation Administration, *FAA Aerospace Forecasts, Fiscal Years 2017-2037*, March 2017, [www.faa.gov](http://www.faa.gov).

**Per Capita Personal Income.** Similar to the trends in nonagricultural employment, per capita personal income (in constant 2017 dollars) in the San Francisco CSA increased an average of 1.1% per year between 2000 and 2016 (the most recent year available), with significantly faster growth between 2010 and 2016 (an average increase of 4.0% per year) due to the post-recession recovery. In 2016, per capita income in the San Francisco CSA averaged \$78,628, 34% higher than the State and 54% higher than the nation. Caltrans projects per capita personal income (in constant dollars) in the San Francisco CSA and the State to increase an average of 2.6% and 1.9% per year, respectively, between 2016 and 2025, faster than for the nation (1.7%).

**Educational Attainment.** The San Francisco CSA's higher than average per capita income levels reflect the higher than average levels of education attained by Bay Area residents. In 2017 (the most recent year available), approximately 58% of San Francisco County residents over the age of 25 had earned a Bachelor's degree or higher, compared with 45% of the San Francisco CSA, 34% of California residents and 32% of U.S. residents overall, according to the U.S. Department of Commerce, Bureau of the Census.

**Comparative Socioeconomic Trends.** Table 6 presents comparative socioeconomic trends for the 10 most populous U.S. metropolitan areas in 2010 and 2017. As shown in Table 5, the San Francisco CSA ranked first among the 10 CSAs in terms of:

- Nonagricultural employment growth—an average increase of 3.1% per year between 2010 and 2017. The Dallas/Fort Worth CSA experienced a similar rate of growth but ranked sixth in terms of total nonagricultural employment (approximately 600,000 fewer employees).
- Total per capita income—an average of \$78,628 in 2016 (the most recent year available). The New York CSA ranked second in terms of per capita income with an average of \$67,365 in 2016, 14% lower than the San Francisco CSA.
- Per capita income growth—an average increase of 4.3% per year between 2010 and 2016 (the most recent year available). The Chicago CSA and Los Angeles CSA ranked second and third, respectively, in terms of per capita income growth (an average increase of 2.7% per year), with an average per capita income 32% and 29%, respectively, lower than the San Francisco CSA in 2016.

Table 6  
**Comparative Socioeconomic Trends for the 10 Most Populous U.S. Metropolitan Areas**  
*Ranked by 2017 population*

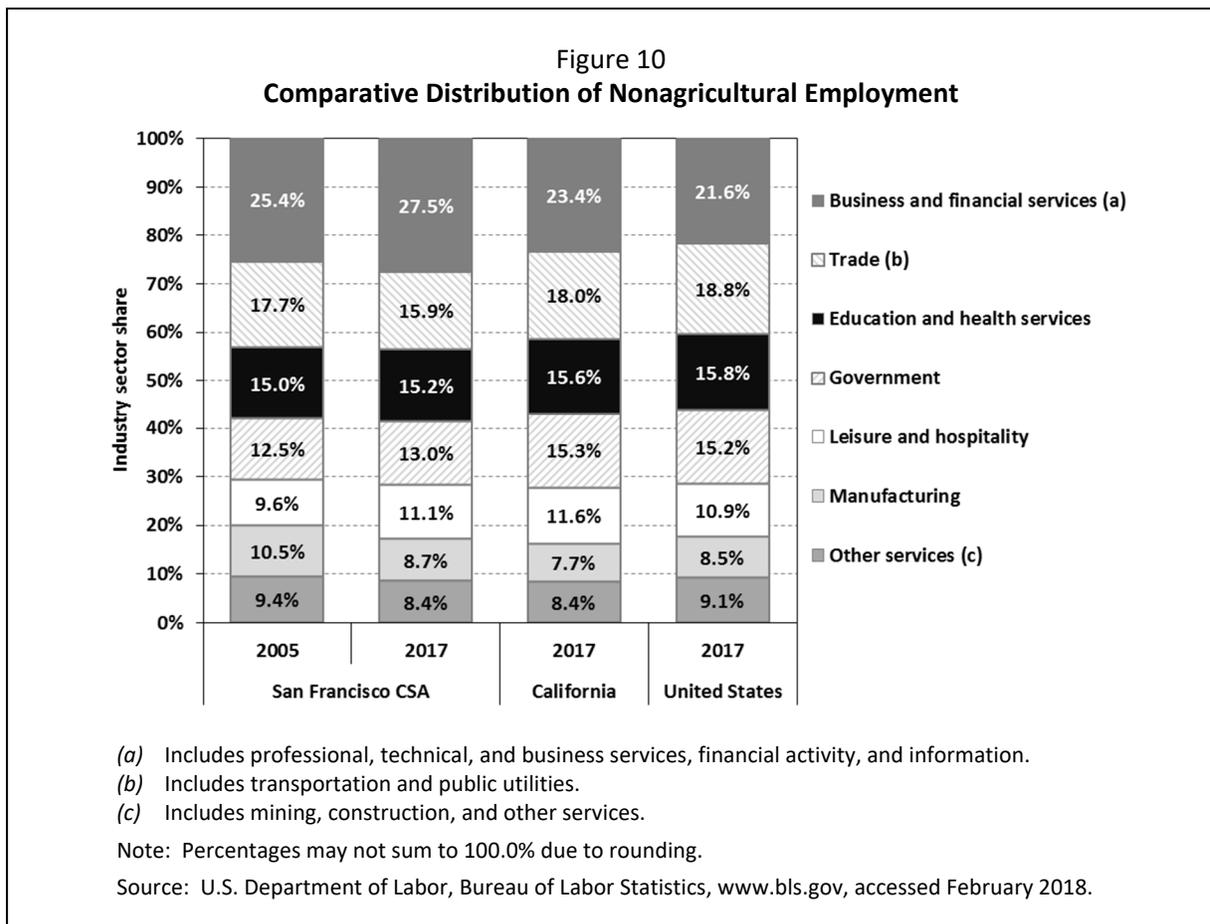
Combined Statistical Area	Population (thousands)			Nonagricultural employment (thousands)			Per capita personal income (2017 dollars)		
	2010	2017	CAGR 2010-2017	2010	2017	CAGR 2010-2017	2010	2016	CAGR 2010-2016
New York	23,077	23,876	0.5%	9,933	11,120	1.6%	\$59,834	\$67,365	2.0%
Los Angeles	17,877	18,789	0.7	6,721	7,808	2.2	45,380	53,277	2.7
Chicago	9,841	9,902	0.1	4,328	4,785	1.4	47,760	56,177	2.7
Washington, D.C.	9,052	9,764	1.1	3,952	4,354	1.4	59,172	63,645	1.2
<b>San Francisco</b>	<b>8,154</b>	<b>8,838</b>	<b>1.2</b>	<b>3,428</b>	<b>4,247</b>	<b>3.1</b>	<b>60,941</b>	<b>78,628</b>	<b>4.3</b>
Boston	7,893	8,233	0.6	2,615	2,938	1.7	57,518	64,128	1.8
Dallas-Fort Worth	6,851	7,846	2.0	2,972	3,644	3.0	44,039	51,417	2.6
Philadelphia	7,068	7,207	0.3	3,166	3,387	1.0	51,227	57,514	1.9
Houston	6,115	7,093	2.1	2,566	3,021	2.4	48,470	52,538	1.4
Miami	6,167	6,828	1.5	2,361	2,826	2.6	47,230	53,318	2.0

CSA = Combined Statistical Area

Note: Nonagricultural employment data for metropolitan statistical areas are not reported.

Sources: U.S. Department of Commerce, Bureau of the Census, [www.census.gov](http://www.census.gov), U.S. Department of Labor, Bureau of Labor Statistics, [www.bls.gov](http://www.bls.gov), U.S. Department of Commerce, Bureau of Economic Analysis, [www.bea.gov](http://www.bea.gov), accessed March 2018. Adjusted to constant 2017 dollars using the U.S. Department of Labor, Consumer Price Index for Urban Consumers (1982-84 = 100), [www.bls.gov](http://www.bls.gov).

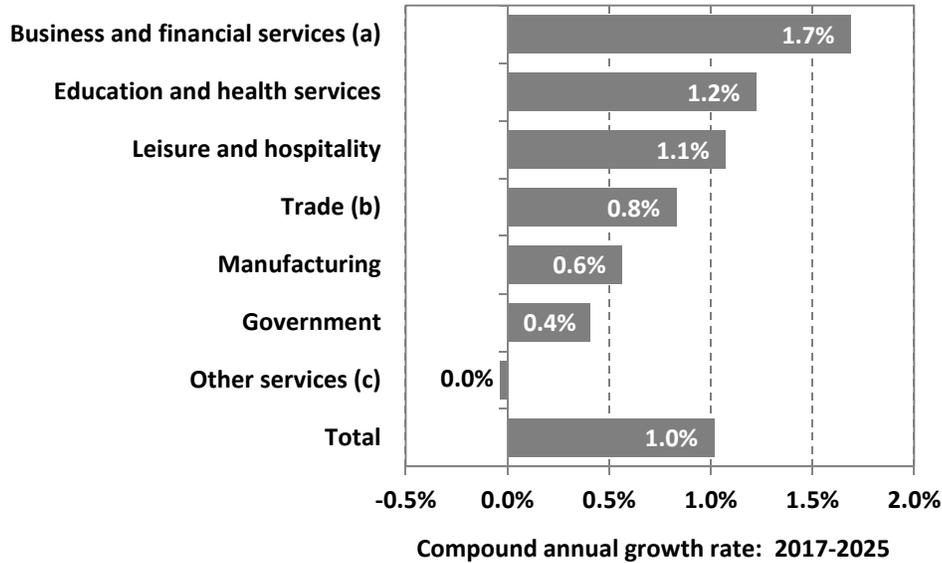
**Nonagricultural Employment by Industry Sector.** Figure 10 shows a comparative distribution of nonagricultural employment by industry sector for the San Francisco CSA in 2005 and 2017 as well as for the State and the nation in 2017. Between 2005 and 2017, the business and financial services and leisure and hospitality sectors in the San Francisco CSA experienced the strongest growth, increasing an average of 2.1% and 2.7% per year, respectively, nearly twice the overall growth rate for all sectors (1.4%). The San Francisco CSA’s business and financial services sector (inclusive of technology) accounted for the largest share of employment in 2017 with 27.5%, more than the share for the State (23.4%) and the nation (21.6%). The top four sectors—business and financial services, trade, education and health services, and government—accounted for 71.7% of the San Francisco CSA’s nonagricultural employment in 2017.



Caltrans projects San Francisco CSA employment to increase in all sectors, except other services, as shown on Figure 11. The business and financial services sector is projected to be the fastest growing sector, with the largest share of employment and considerably higher than average salaries according to the U.S. Bureau of Labor Statistics.\* Education and health services and leisure and hospitality are projected to be the second fastest growing sectors, with forecast growth of 1.2% and 1.1% per year, respectively, followed by the trade sector with forecast growth of 0.8% per year.

\*U.S. Department of Labor, Bureau of Labor Statistics, Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates, San Francisco-Oakland-Hayward, CA and San Jose-Sunnyvale-Santa Clara, CA, May 2016, www.bls.gov, accessed February 2018.

Figure 11  
**Forecasts of Nonagricultural Employment by Sector**  
 San Francisco CSA



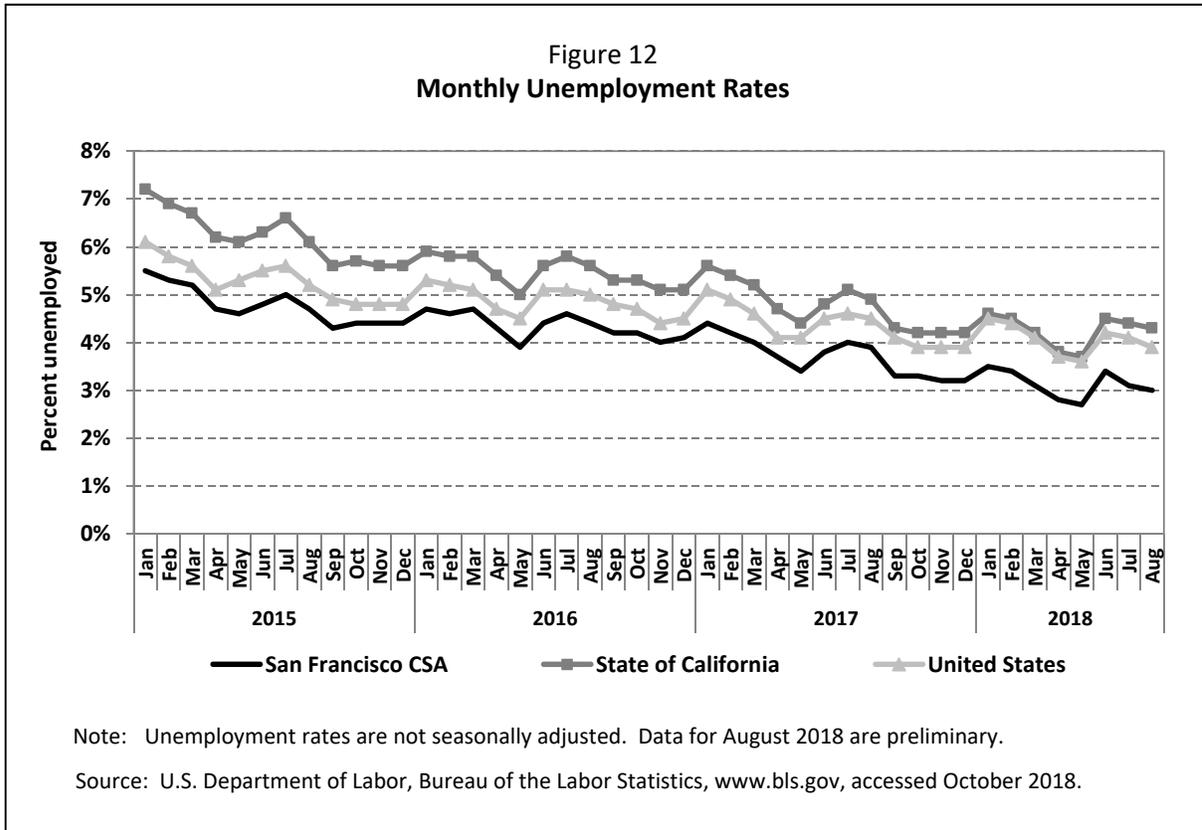
- (a) Includes professional, technical, and business services, financial activity, and information.
- (b) Includes transportation and public utilities.
- (c) Includes mining, construction, and other services.

Source: California Department of Transportation, *California County-Level Economic Forecast 2017-2050*, *The California Economic Forecast*, September 2017, [www.dot.ca.gov](http://www.dot.ca.gov).

**Unemployment Rates.** In addition to the employment trends cited above, the unemployment rate is also indicative of the general economic climate. From 2000 through 2012, unemployment rates (not seasonally adjusted) in the San Francisco CSA generally followed overall unemployment trends but remained higher than in the nation and lower than in the State. A number of factors contributed to higher than average unemployment rates in the San Francisco CSA during this period, including (1) the dot-com bust in 2000 following the boom in the late 1990s of technology-related startups and employment in the Bay Area, (2) the national economic recession in 2001, and (3) the 2008-2009 global economic recession and financial credit crisis. Since 2013, unemployment rates in the San Francisco CSA have remained lower than rates for the State and the nation. In 2017, the unemployment rate in the San Francisco CSA averaged 3.8%, lower than the State (4.8%) and the nation (4.4%).

Figure 12 shows comparative monthly unemployment rates in the San Francisco CSA, the State, and the nation as a whole from January 2015 through August 2018. During this period, unemployment rates in the San Francisco CSA have been consistently lower than those of the State and the nation, reflective of the economic health of the region. In August 2018 (the most recent period available for the CSA), the San Francisco CSA unemployment rate was 3.0%, lower than the rates for the State (4.3%) and the nation (3.9%). Historically, low unemployment rates have led to upward pressure on wages and overall inflation. In its October 2018 report, the San Francisco Federal Reserve Bank reported that during September through early October "conditions in the labor market tightened

noticeably, and wage pressures picked up. Price inflation increased moderately.” In the real estate and construction sector, the San Francisco Federal Reserve Bank also noted that “robust demand for housing outpaced the supply of homes, which continued to be constrained by shortages of labor and high material costs.”\*



**Bay Area Major Employers.** Table 7 lists the top 20 private-sector employers in the San Francisco Bay Area (based on the number of Bay Area employees). The table indicates a diversity of economic activity, as well as a strong presence of health care and high-technology employers. Many of the companies listed are involved in national and international operations that rely on airline travel. Of these 20 employers, 12 are listed on the Fortune 500 list of largest U.S. companies, ranked based on 2017 revenues (the most recent available).

While not shown in Table 7, the Bay Area contains a substantial amount of public sector employment, including the City and County of San Francisco (30,000 employees), the University of California San Francisco and Berkeley campuses (25,400 and 23,200 employees, respectively), and the State of California (15,200 employees).

\*Federal Reserve Bank, The Beige Book, Summary of Commentary on Current Economic Conditions, October 2018, www.federalreserve.gov.

Table 7  
**Major Private Sector Employers in the San Francisco Bay Area**

Company	Type of business	Employment
Kaiser Permanente	Health care	40,031
Apple Inc. (a)	Consumer electronics	25,000
Alphabet (Google) (a)	Information technology	20,000
Stanford University	Higher education	16,919
Cisco Systems Inc. (a)	Information technology	15,700
Safeway	Retail grocer	15,682
Wells Fargo & Co. (a)	Financial services	14,801
United Airlines (a)	Airline	12,000
Genentech Inc.	Biotechnology	11,000
PG&E Corp. (a)	Utility	10,424
Stanford Healthcare	Health care	10,034
Tesla Motors Inc. (a)	Auto manufacturing, energy storage	10,000
Facebook (a)	Social media	9,385
Intel Corp. (a)	Information technology	8,500
Oracle Corp. (a)	Information technology	6,781
Gap Inc. (a)	Specialty retailer	6,591
John Muir Health	Health care	6,570
Chevron (a)	Energy	5,456
Lockheed Martin Space Systems	Space flight systems	5,045
Alta Bates Summit Medical Center	Health care	4,561

Note: Includes employers in Alameda, Contra Costa, Marin, Monterey, San Benito, San Francisco, San Mateo, Santa Clara, and Santa Cruz counties, and the city of Palo Alto. List of employers may vary from year to year due to incomplete reporting.

(a) Ranked in 2018 Fortune 500 list of largest U.S. companies (based on 2017 revenue).

Source: San Francisco Business Times, 2018 Bay Area Book of Lists; and Silicon Valley Business Journal, 2017-2018 Book of Lists. Fortune Magazine, Fortune 500 Companies, 2018, www.fortune.com.

## Industry Clusters

The economy of the Bay Area is driven, in part, by companies that export goods and services nationally and globally, thereby generating new investment and job creation that will, in turn, help to spur air travel demand. The Bay Area is home to several “industry clusters,” which are a coalescence of companies in the same industry operating in the same region. Industry clusters draw competitive advantage from their proximity to customers, suppliers, competitors, and a skilled workforce, and from a shared base of sophisticated knowledge about a given industry.

The industries in the San Francisco Bay Area are diverse. In addition to the high technology businesses in Silicon Valley, the Bay Area economy is supported by businesses in the energy,

financial, healthcare, professional, and transportation sectors. The San Francisco Center for Economic Development describes six key industry clusters in the Bay Area, each of which is a substantial user of air travel:

- **Information Technology and Software.** The Bay Area is home to more than 6,700 information technology (IT) and computer software companies (e.g., Cisco, Apple, Salesforce, and Oracle), together supporting a workforce of nearly 273,000.
- **Social and Digital Media.** Closely related to IT and software, the field of online social and digital media supports more than 300 companies with substantial employment in the Bay Area (e.g., Google, Facebook, LinkedIn, Twitter, and Pixar). San Francisco State University is considered an educational leader in the area of digital media, as well.
- **Life Sciences and Biotechnology.** The Bay Area is a global leader in life sciences and biotech—home to nearly 1,400 companies (e.g., Applied Biosystems, Chiron Corporation, Genentech, and Gilead Sciences) employing a workforce of more than 90,000—supported by industry-leading programs at Stanford University and University of California campuses at Berkeley, Santa Cruz, and San Francisco, as well as numerous private research centers.
- **Environmental and “Clean” Technology.** The Bay Area is home to more than 635 clean technology companies (e.g., Amyris Biotechnologies, Clean Edge, and Tesla Motors)—one of the nation’s largest concentrations of environmental and clean technology companies. Moreover, the region is a leading adopter of clean and sustainable energy practices.
- **Professional Services.** The Bay Area is home to a myriad of companies falling under the umbrella of professional services: financial advisory, management consulting, legal services, and other specialized and high value-added businesses.
- **International Business.** Home to more than 80 consulates and foreign trade offices, large exporting and financial companies, and numerous foreign banking institutions (e.g., Barclays Bank of the United Kingdom, Hong Kong and Shanghai Banking Corporation (now HSBC), Sumitomo Bank of California, and Industrial and Commercial Bank of China), the Bay Area has substantial infrastructure supporting international business and trade.

The development of certain of these industry clusters in the San Francisco CSA is related, in part, to the availability of venture capital funds. According to CB Insights, “since the start of 2009, venture capital firms have deployed \$31.5 billion across 3,308 deals into Silicon Valley-based tech startups. In fact, Silicon Valley has consistently taken over 40% of venture capital deals and over 50% of funding to tech startups across seven major U.S. venture hubs including New York and Massachusetts.”\* During the third quarter of 2018, the Bay Area accounted for the largest share of venture capital funding in the United States (46% or more than \$12.8 billion) and 29% of U.S. deals (356 out of a total of 1,229). The New York Metro area ranked second with \$5.9 billion, followed by the New England region with \$2.4 billion and the Midwest region with \$1.2 billion during the third

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\*CB Insights, Silicon Valley Tech Venture Capital Almanac, [www.cbinsights.com](http://www.cbinsights.com). CB Insights is a venture capital database and angel investment database that provides daily real-time information about venture capital and angel investors.

quarter of 2018.\* San Francisco Bay Area based venture capital firms are ranked among the world's most active seed-stage venture capital firms, including 500 Startups, Slow Ventures, New Enterprise Associates, Accel Partners, and First Round Capital.

### **Bay Area Housing Market**

Trends in the housing market in a region generally follow economic cycles and are an indicator of overall economic activity and personal income levels. Figure 13 presents the percent change in home prices for San Francisco and composites for 10 selected metropolitan areas from January 1988 through July 2018, based on the Standard & Poor's/Case-Shiller Home Price Index.\*\*

Historically, San Francisco home prices have generally followed the trends for other major metropolitan areas, with somewhat larger peaks and valleys in certain years. During the 2008-2009 economic recession, housing prices in the Bay Area decreased more than 30%, reflecting the effects of the U.S. subprime mortgage crisis and the financial credit crisis. Since then, housing prices in the Bay Area have generally increased (notwithstanding decreases averaging about 4% in 2011) to reach all-time highs. From July 2017 through July 2018, Bay Area home prices increased 10.8% compared with the previous year, compared with a 5.5% increase for the composite indices for the 10 selected metropolitan areas included in the index. The San Francisco Federal Reserve Bank reported that "residential and commercial real estate market activity expanded at a strong pace. Lending activity picked up moderately".

### **Visitor Industry**

The visitor industry is an important driver of the San Francisco CSA economy and passenger traffic at the Airport. According to the San Francisco Travel Association, a total of 25.5 million people visited San Francisco in 2017, an increase of 1.4% from 2016. Leisure visitors accounted for 86% of all visitors in 2016 (21.6 million); business travelers accounted for the remaining 14% (3.6 million). The San Francisco Travel Association forecasts a 3.1% increase in San Francisco visitors in 2018, increasing to 26.3 million.\*\*\*

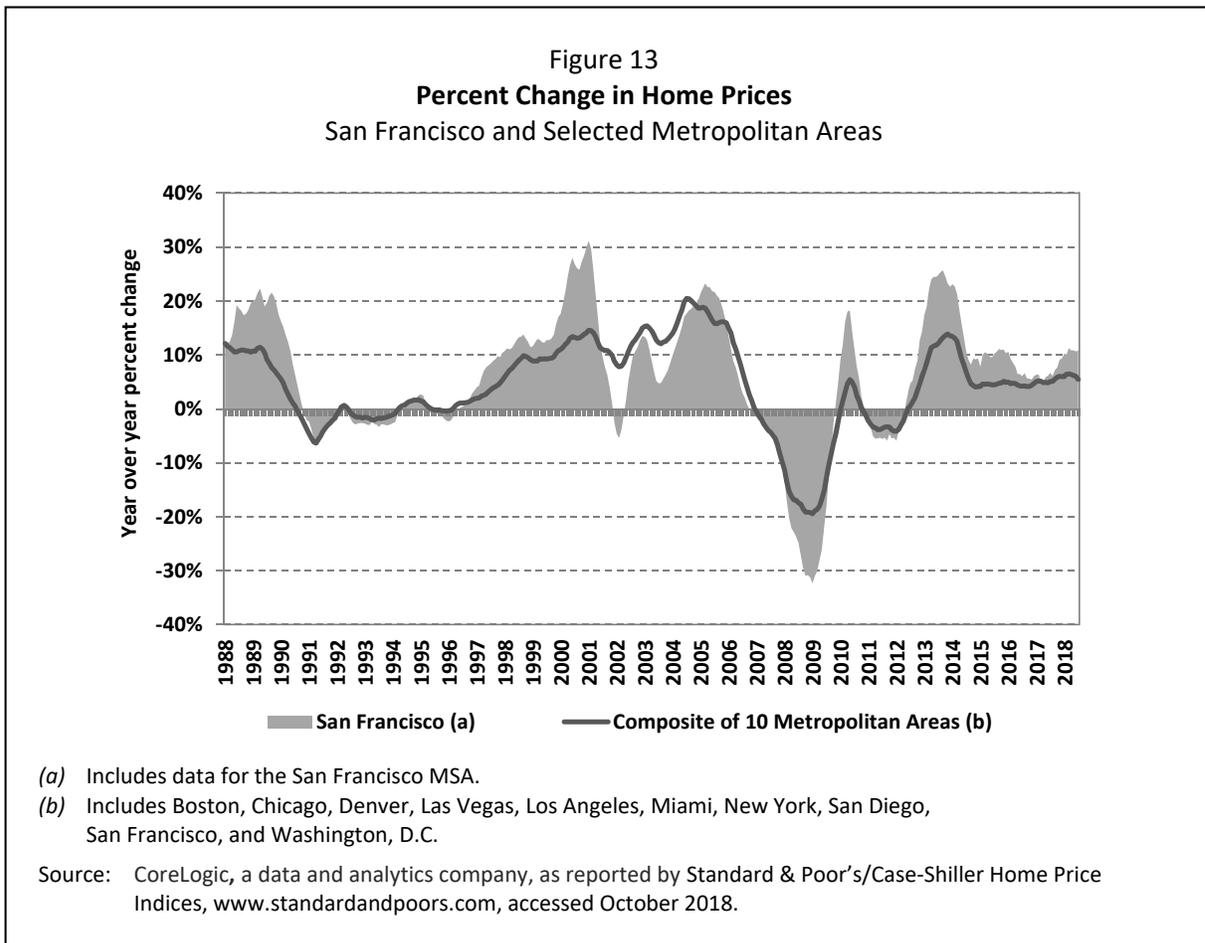
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\*PwC/CB Insights, MoneyTree Report, Q3 2018, [www.cbinsights.com](http://www.cbinsights.com).

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\*\*\*San Francisco Travel, "San Francisco Travel Updates Tourism Forecast," September 26, 2017, [www.sanfrancisco.travel](http://www.sanfrancisco.travel).

**Popular U.S. Travel Destination.** According to Visit California, the San Francisco area ranked fourth in the State in terms of the number of domestic visitors in 2016 (preceded by Los Angeles, San Diego, and Anaheim).\* A 2017 readers' poll in *Condé Nast Traveler* magazine ranked San Francisco third in the "Best Big Cities in the U.S." category. Carmel, located on the coast approximately 120 miles south of San Francisco, ranked eighth among small cities. Popular tourist attractions in the San Francisco area include Fisherman's Wharf, the Golden Gate Bridge, Chinatown, and Union Square. Many visitors also travel to the nearby coastal regions north and south of San Francisco, including Carmel and Monterey, the wine-producing areas in the Napa and Sonoma valleys, and the Sierra Nevada Mountains.



**Fifth Busiest U.S. Destination for Overseas Visitors.** San Francisco is a top destination for overseas visitors to the United States. In 2016, approximately 3.6 million travelers from abroad visited San Francisco, according to the U.S. Department of Commerce, National Travel and Tourism Office. San Francisco ranked fifth in the nation for overseas visitors (excluding Canada and Mexico), preceded by New York, Miami, Los Angeles, and Orlando.

\*Visit California, "2016 Domestic travel to California," [www.visitcalifornia.com](http://www.visitcalifornia.com). Visit California is a nonprofit corporation formed in 1998 to market California as a desirable tourism destination and works in coordination with California's Division of Tourism.

**Leading Business and Convention Destination.** The diversity of the Bay Area economy as well as the presence of Fortune 500 companies contributes to its role as a leading business and convention destination. San Francisco's Moscone Center continues to have a significant role in drawing domestic and international visitors to the city. Of the estimated 34,000 hotel rooms in San Francisco, more than 22,000 are within walking distance of the Moscone Center. In a typical year, the Moscone Center hosts 90 to 100 events attended by a total of more than one million people. In December 2018, a \$551 million expansion of the Moscone Center was completed, adding more than 157,000 gross square feet of flexible meeting space.

**Hotel Occupancy.** Reflecting strong demand by business and leisure travelers, San Francisco's overall hotel occupancy rates averaged an estimated 88.7% in 2017 (up from 87.6% in 2016), according to the San Francisco Center for Economic Development (SFCED)\*. In comparison, U.S. hotel occupancy rates reached an annual high of 65.9% in 2017 according to CBRE.\*\* The average revenue per available hotel room in San Francisco increased 12.1% in 2014, 5.9% in 2015, 4.3% in 2016, and an estimated 4.8% in 2017, reflecting high occupancy rates, a stable inventory of hotel rooms, and the strength of San Francisco as a destination for tourism, conventions, and business.

## **ECONOMIC OUTLOOK**

The economic outlook for the United States and the San Francisco CSA forms a basis for anticipated growth in airline traffic at the Airport. Economic activity in the San Francisco CSA is directly linked to the production of goods and services in the United States and the world. Both airline travel and the movement of cargo through the Airport depend on the economic linkages between and among the regional, national, and global economies. The economic and other assumptions underlying the forecasts of enplaned passengers are based on a review of global, national, and regional economic outlooks as well as an analysis of historical socioeconomic trends and airline traffic trends.

### **Global Economic Outlook**

Globalization of the world economy has linked national economies, with positive impacts on travel as well as trade. The San Francisco CSA and the State are strongly connected to the global economy through a number of industry sectors and the six world regions (Australia/Oceania, Asia, Europe, Latin America/Caribbean, the Middle East, and North America) that are currently served at SFO. The economic growth of these world regions, in terms of Gross Domestic Product (GDP), is directly related to the growth in air travel. In October 2018, the International Monetary Fund (IMF) revised its April 2018 forecasts of global economic growth downward by 0.2% to 3.7% in 2018 and 2019.\*\*\* The IMF notes a number of downside risks to global economic growth, including recently announced trade measures, including the tariffs imposed on \$200 billion of US imports from China, a reversal of capital flows to emerging market economies with weaker fundamentals and higher political risk, and inflationary pressures and tighter financial conditions in advanced economies. For advanced economies, the IMF is projecting economic growth of 2.4% in 2018 and 2.1% growth in 2019, slower than projected growth rates in the United States (2.9% in 2018 and 2.5% in 2019) but faster than the United Kingdom (1.4% in 2018 and 1.5% in 2019). The IMF projects continued growth in the

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\*Includes data for budget hotels/motels, mid-tier, upper upscale, and luxury hotels.

\*\*CBRE Hotels, "Supply Growth to Peak in 2018," February 21, 2018, [www.cbrehotels.com](http://www.cbrehotels.com). CBRE is a global real estate services firm.

\*\*\*International Monetary Fund, World Economic Outlook Update, January 2018, [www.imf.org](http://www.imf.org).

emerging economies of China (increases of 6.6% in 2018 and 6.2% in 2019) and India (increases of 7.3% in 2018 and 7.4% in 2019). Continued growth in the economies of the world regions most closely aligned with the San Francisco CSA economy and airline service at SFO are expected to contribute to continued growth in passenger traffic at the Airport.

### **National Economic Outlook**

The U.S. economy has grown at a slow to moderate pace since the 2008-2009 economic recession, with U.S. GDP growth averaging 2.1% per year between 2009 and 2017. In August 2018, the Congressional Budget Office (CBO) projected U.S. economic growth, as measured by U.S. GDP in constant dollars, to increase 3.0% in 2018 and 2.8% in 2019, for an overall growth rate of 2.0% per year between 2017 and 2025.\* IHS Global Insight, an internationally recognized economic forecasting firm, forecasts U.S. GDP, in constant dollars to increase an average of 2.1% between 2017 and 2025.\*\* Since the 2008-2009 economic recession, U.S. unemployment rates (seasonally adjusted) have decreased from 9.5% in July 2009 to 3.7% in September 2018. The CBO projects an average unemployment rate of 3.8% in 2018, 3.4% in 2019, increasing to 4.8% by 2025.\*\*\* For purposes of this forecast, it is assumed that U.S. GDP growth will average 2.0% to 2.5% per year through FY 2025.

### **Regional Economic Outlook**

The Transportation Economics Branch of the California Department of Transportation publishes county-level projections of demographic and economic variables, prepared by the California Economic Forecast. According to the California Economic Forecast, continued economic growth is forecast for the San Francisco CSA between 2017 and 2025, including:\*\*\*\*

- Population growth of 0.8% per year
- Nonagricultural employment growth of 1.0% per year
- Per capita income growth, in constant dollars, of 2.8% per year

A favorable long-term economic outlook for the Bay Area is supported by its growing population, well-educated work force, high per capita income, diverse local economy, popularity as a domestic and international tourist destination, and its strong competitive position in the six key industry clusters described earlier.

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\*Congressional Budget Office, An Update to the Budget and Economic Outlook: Fiscal Years 2018-2028, August 2018, [www.cbo.gov](http://www.cbo.gov). The CBO's report incorporates the effects of Public Law 115-97 (originally called the Tax Cuts and Jobs Act) enacted on December 22, 2017; the Bipartisan Budget Act of 2018 (P.L. 115-123) enacted on February 9, 2018; and the Consolidated Appropriations Act, 2018 (P.L. 115-141) enacted on March 23, 2018.

\*\*As reported in Federal Aviation Administration, *FAA Aerospace Forecast, Fiscal Years 2018-2038*, March 2018, [www.faa.gov](http://www.faa.gov).

\*\*\*The CBO considers 4.7% to be the natural rate of unemployment.

\*\*\*\*The California Economic Forecast, California County-Level Economic Forecast 2018-2050, September 2018, [www.dot.ca.gov](http://www.dot.ca.gov).

## **HISTORICAL AIRLINE SERVICE AND TRAFFIC**

Airlines serving the Airport, enplaned passenger trends, airline shares of passengers, origin-destination markets, airline service at the Airport, and airline fares and yields are discussed in this section.

### **Airlines Serving the Airport**

As of July 2018, 12 U.S. passenger airlines provided scheduled service at the Airport, including 5 network airlines, 3 regional airlines, and 4 low-cost carriers, as shown in Table 8. International passenger service was provided by 42 foreign-flag airlines, including airlines from Asia (14), Canada (3), Europe (16), Latin America and the Caribbean (2), Mexico (3), the Middle East (1), and the South Pacific (3). In addition, 6 airlines provided all-cargo service as discussed in the section “Cargo”.

### **Enplaned Passenger Trends**

Table 9 presents historical trends in enplaned passengers at the Airport in FY 2005 through the first 4 months of FY 2019 (July through October 2018). The number of enplaned passengers increased an average of 4.5% annually between FY 2005 and FY 2018, with stronger growth between FY 2010 and FY 2018 (an average increase of 5.3% per year). In comparison, total enplaned passengers at U.S. airports increased an average of 1.7% annually between FY 2005 and FY 2018 and an average increase of 3.0% per year FY 2010 and FY 2018. International passenger traffic at the Airport increased an average of 4.4% per year between FY 2005 and FY 2018, compared with an average increase of 4.5% per year in domestic passengers. O&D passengers are estimated to account for 78.8% of total (revenue and non-revenue) enplaned passengers at the Airport in FY 2018; connecting passengers accounted for the remaining 21.2%.

During the first 4 months of FY 2019 (July through October 2018), enplaned passenger totals increased 0.3% over the previous year, reflecting a 0.7% decrease in the number of domestic passengers and a 3.6% increase in international passengers. The decrease in domestic passengers during the first 4 months of FY 2019 reflects the decrease in seats by Alaska as a result of restructuring the combined airline’s network.

As shown on Figure 14, the distribution of passenger traffic at the Airport has changed since FY 2005, following the introduction of service by Southwest, Virgin America, and jetBlue in 2007. In FY 2018, U.S. LCCs accounted for 19% of total enplaned passengers, up from 7% in FY 2005.\* Over that same period, the share decreased for U.S. network airlines (from 68% in FY 2005 to 57% in FY 2018) and U.S. regional affiliate airlines (from 12% in FY 2005 to 8% in FY 2018). Foreign-flag airlines’ share increased to 16% in FY 2018, up from 14% in 2005.

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\*Data for FY 2018 U.S. LCC passengers includes data for Virgin America for July 2017 through April 2018.

Table 8  
**Passenger Airlines Providing Scheduled Service at San Francisco**  
As of July 2018

U.S. airlines

<b>Network airlines</b>	<b>Regional airlines (a)</b>	<b>Low-cost carriers (b)</b>
Alaska (c)	Compass (AA, DL)	Frontier
American	Horizon (AS)	jetBlue
Delta	SkyWest (AS, DL, UA)	Southwest
Hawaiian		Sun Country
United		

Foreign-flag airlines

<b>Asia</b>	<b>Europe</b>	<b>Latin America/Caribbean</b>
Air China	Aer Lingus	Avianca
Air India	Air France	Copa
All Nippon	British Airways	
Asiana	Finnair	<b>Mexico</b>
Cathay Pacific	French Blue	Aeromexico
China Airlines	Iberia	Interjet
China Eastern	Icelandair	Volaris
China Southern	KLM	
EVA	Lufthansa	<b>Middle East</b>
Hong Kong	SAS	Emirates
JAL	Swiss	
Korean	Thomas Cook	<b>South Pacific</b>
Philippine	Turkish	Air New Zealand
Singapore	Virgin Atlantic	Fiji Airways
	WOW Air	Qantas
<b>Canada</b>	XL Airways France	
Air Canada		
Jazz Aviation (d)		
WestJet		

(a) Codesharing airline in parenthesis: AA=American; AS=Alaska; UA=United.

(b) As defined by the U.S. Department of Transportation, low-cost carriers operate under a generally recognized low-cost business model, which may include a single passenger class of service, standardized aircraft utilization, limited in-flight services, use of smaller and less expensive airports, and lower employee wages and benefits.

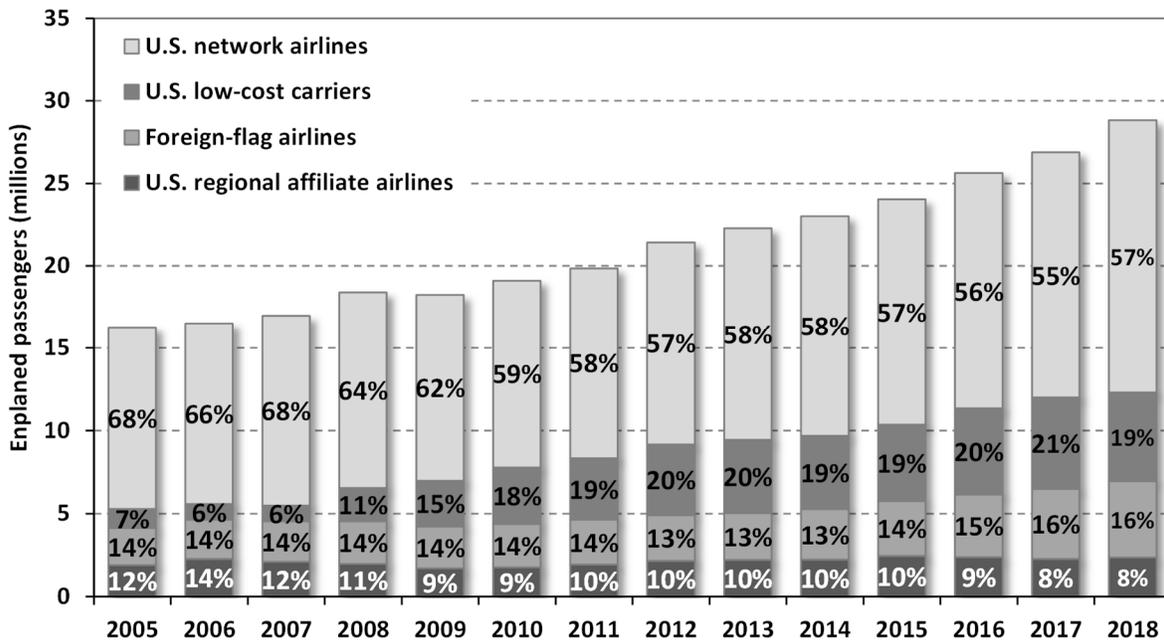
(c) Alaska acquired Virgin America in 2016. The merged airline received a single operating certificate from the FAA in January 2018, moved to a single reservations system and rebranded as Alaska Airlines on April 25, 2018, and plans to retire the Virgin America brand by 2019 after all Virgin America aircraft are repainted.\*

(d) Regional airline flights are operated by Jazz Aviation, one of Air Canada's regional affiliates.

Source: OAG Worldwide Ltd, OAG Analyser database, accessed October 2018.

\*Alaska Airlines receives single operating certificate from FAA," January 11, 2018, www.alaskaair.com.

Figure 14  
**Historical Enplaned Passengers**  
 San Francisco International Airport



Note: For Fiscal Years ended June 30.

From FY 2005 through April 2018, U.S. LCCs include Frontier, jetBlue, Southwest, Sun Country, and Virgin America. On April 25, 2018, Virgin America moved to a single reservations system and rebranded as Alaska Airlines and is no longer classified as a LCC. Data for Virgin America in FY 2018 are for July 2017 through April 2018.

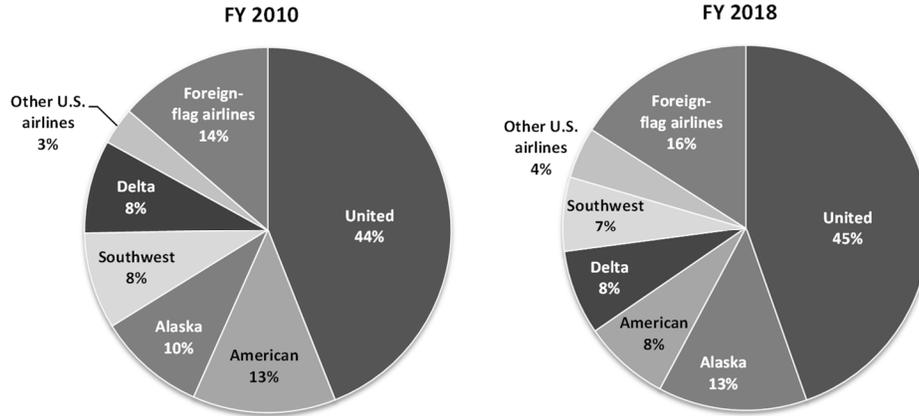
Source: San Francisco Airport Commission records.



## Enplaned Passenger Market Shares

Compared with other U.S. large-hub airports, the Airport has only a moderate degree of airline concentration. In FY 2018, United and United Express together accounted for the largest share of enplaned passengers at SFO, with 44.6%, less than the hubbing airline share at other selected U.S. large-hub airports with one hubbing airline such as American at Charlotte (nearly 90%) and Dallas-Fort Worth (more than 80%) and Delta at Atlanta (nearly 80%). United's share of all passengers at the Airport has remained relatively unchanged from 44.0% in FY 2010 (where the FY 2010 figure includes Continental and its regional affiliates), as shown in Table 10 and on Figure 15. Alaska (including Virgin America) ranked second with 13.2% of the total in FY 2018, followed by American (including US Airways) with 7.6%, and Delta with 7.5%.

Figure 15  
**Airline Market Shares of Enplaned Passengers**  
 San Francisco International Airport



Notes: For Fiscal Years ended June 30. FYTD = Fiscal Year-to-date.  
 Data for merged airlines are reported together, i.e., Alaska and Virgin America, American and US Airways, Southwest and AirTran, and United and Continental.

Source: San Francisco Airport Commission records.

Table 10  
**Enplaned Passengers by Airline**  
San Francisco International Airport

Airline (a)	Enplaned passengers		Percent of total	
	FY 2010	FY 2018	FY 2010	FY 2018
<b>Domestic</b>				
United (b)	6,930,875	10,755,903	46.6%	49.0%
Alaska (c)				
Alaska	478,516	1,363,302	3.2%	6.2
Virgin America	<u>1,265,676</u>	<u>2,264,806</u>	<u>8.5</u>	<u>10.3</u>
Subtotal--Alaska	1,744,192	3,628,108	11.7%	16.5
American (d)	2,410,901	2,198,766	16.2	10.0
Delta (e)	1,517,774	2,157,886	10.2	9.8
Southwest (f)	1,628,983	1,907,453	11.0	8.7
jetBlue	321,645	805,572	2.2	3.7
All others	<u>305,499</u>	<u>501,343</u>	<u>2.1</u>	<u>2.3</u>
Subtotal--domestic	14,859,869	21,955,031	100.0%	100.0%
<b>International</b>				
United (b)	1,476,420	2,104,519	34.8%	30.7%
Air Canada	276,574	545,755	6.5	8.0
Cathay Pacific	234,852	258,182	5.5	3.8
Lufthansa	205,192	255,434	4.8	3.7
EVA Airways	152,828	239,811	3.6	3.5
British Airways	194,120	220,552	4.6	3.2
Air France	123,153	174,842	2.9	2.5
Singapore	168,675	157,949	4.0	2.3
All others	<u>1,408,719</u>	<u>2,901,776</u>	<u>33.2</u>	<u>42.3</u>
Subtotal--international	4,240,533	6,858,820	100.0%	100.0%
<b>Total</b>				
United (b)	8,407,295	12,860,422	44.0%	44.6%
Alaska (c)	1,820,335	3,789,885	9.5	13.2
American (d)	2,410,901	2,198,766	12.6	7.6
Delta (e)	1,591,617	2,157,886	8.3	7.5
Southwest (f)	1,628,983	1,907,453	8.5	6.6
jetBlue	321,645	805,572	1.7	2.8
Air Canada	276,574	545,755	1.4	1.9
All others	<u>2,643,052</u>	<u>4,709,889</u>	<u>13.8</u>	<u>15.8</u>
Total passengers	19,100,402	28,813,851	100.0%	100.0%

Note: For Fiscal Years ended June 30.

- (a) Includes regional code-sharing affiliates, if any.
- (b) United and Continental merged in October 2010. Includes Continental in 2010.
- (c) Alaska and Virgin America merged in 2016. Includes Virgin America in 2010 and 2017.
- (d) American and US Airways merged in December 2013. Includes US Airways in 2010.
- (e) Northwest and Delta merged in October 2008.
- (f) Southwest and AirTran merged in February 2013. Includes AirTran in 2010.

Source: San Francisco Airport Commission records.

As noted in “Role as a Connecting Hub”, United has increased its capacity at SFO by more than at any of its other hub airports. Between FY 2010 and FY 2018, United’s scheduled departing seats and enplaned passengers at SFO increased an average of 5.5% per year. In comparison, the scheduled departing seats and enplaned passengers of all other airlines at SFO increased an average of 4.5% and 5.1% per year, respectively, between FY 2010 and FY 2018. As a result of the similar rates of growth in departing seats and passengers for United and all other airlines, United’s share of SFO passengers has remained relatively unchanged since FY 2010.

In FY 2018, United and United Express together accounted for 49.0% of all domestic passengers at the Airport. Alaska (including Virgin America) and American ranked second and third, respectively. Southwest, and jetBlue, both of whom initiated service at the Airport in 2007, accounted for a combined 12.4% of all domestic enplaned passengers at the Airport in FY 2018.

United also enplaned the most passengers on international flights at the Airport in FY 2018, with 30.7% of the total. Seven foreign-flag airlines, ranking second through eighth, together enplaned 27.0% of international passengers at the Airport in FY 2018.

### **Domestic Origin-Destination Markets**

In FY 2018, the top 20 domestic passenger markets accounted for 77.3% of domestic O&D passengers at the Airport, as shown in Table 11. Los Angeles and New York are the top two destination markets for O&D passengers at the Airport, accounting for 13.5% and 11.5%, respectively, of domestic O&D passengers at the Airport in FY 2018. Other major destinations include Chicago, Las Vegas, and Seattle. Each of the top 20 domestic destinations was served nonstop from the Airport in July 2018, with service provided by 2 or more airlines to 19 of the top 20 markets and 3 or more airlines to 16 of the top 20 markets, as shown in Table 11.

### **International Origin-Destination Markets**

In FY 2018, the top 20 international passenger markets at SFO in terms of international O&D passenger bookings\* accounted for 50.0% of the total international O&D passenger bookings, as shown in Table 12. Passenger bookings include data for U.S. and foreign-flag airlines and are used as a proxy for international passengers due to the reporting limitations of U.S. DOT O&D passenger data. London, England, is the largest O&D market with 5.2% of international O&D passenger bookings, followed by Hong Kong, China (3.6%); Taipei, Taiwan (3.4%); Vancouver, Canada (3.2%); and Seoul, Korea (3.1%). Of the top 20 international destinations, 19 were served nonstop from the Airport in July 2018, with service provided by 2 or more airlines to 15 of the top 20 markets, as shown in Table 12.

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\*As defined by the International Air Transport Association (IATA), a passenger airline “booking,” equivalent to the term “reservation,” means the allotment in advance of seating accommodation for a passenger. IATA, Passenger Glossary of Terms, [www.iata.org](http://www.iata.org).

Table 11  
**Domestic Origin-Destination Patterns and Airline Service**  
San Francisco International Airport

Rank	Origin-destination market	Air miles from San Francisco	Percent of domestic O&D passengers FY 2018	Average daily scheduled nonstop departures July 2018	Number of airlines
1	Los Angeles (a)	300	13.5%	83	6
2	New York (b)	2,235	11.5	39	5
3	Chicago (c)	1,601	4.9	26	5
4	Las Vegas	359	4.7	22	5
5	Seattle	588	4.7	28	3
6	Boston	2,344	4.3	17	5
7	San Diego	388	4.2	23	3
8	Washington DC (d)	2,111	4.1	14	2
9	Denver	839	3.6	17	4
10	Dallas/Fort Worth (e)	1,275	3.0	17	4
11	Portland	478	2.7	18	3
12	Miami (f)	2,241	2.4	8	3
13	Minneapolis-St. Paul	1,377	2.0	11	4
14	Phoenix	565	2.0	14	4
15	Honolulu	2,080	1.9	7	4
16	Atlanta	1,854	1.9	11	3
17	Philadelphia	2,185	1.7	8	3
18	Orlando	2,121	1.6	4	2
19	Austin	1,304	1.5	7	3
20	Houston (g)	1,418	<u>1.3</u>	<u>10</u>	1
	Cities listed		77.3%	384	
	Other cities		<u>22.7</u>	<u>142</u>	
	All cities		100.0%	526	

Note: For the Fiscal Year ended June 30, unless otherwise noted.

- (a) Los Angeles International, Hollywood Burbank, Long Beach, John Wayne/Orange County, and Ontario International airports.
- (b) Newark Liberty International, LaGuardia, and John F. Kennedy International airports.
- (c) Chicago O'Hare and Midway International airports.
- (d) Reagan Washington National, Baltimore/Washington International Thurgood Marshall, and Washington Dulles International airports.
- (e) Dallas Fort Worth International Airport and Love Field.
- (f) Miami and Fort Lauderdale International airports.
- (g) Bush Intercontinental Airport/Houston and William P. Hobby airports.

Sources: O&D percentage: U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedule T100, accessed October 2018. Departures: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed October 2018.

Table 12  
**International Origin-Destination Patterns and Airline Service**  
San Francisco International Airport

Rank	Origin-destination market	Air miles from San Francisco	Percent of international O&D passengers In FY 2018	Average daily scheduled nonstop departures July 2018	Number of airlines
1	London (a)	4,651	5.2%	6	3
2	Hong Kong	6,006	3.6	6	4
3	Taipei (b)	5,608	3.4	5	3
4	Vancouver	694	3.2	11	3
5	Seoul (c)	4,903	3.1	4	3
6	Toronto	1,959	3.0	6	1
7	Tokyo (d)	4,457	2.9	4	4
8	Manila	6,060	2.9	1	1
9	Shanghai (e)	5,331	2.7	3	2
10	Mexico City (f)	1,635	2.6	4	3
11	Paris (g)	4,837	2.6	4	4
12	Cancun	2,090	2.2	3	2
13	Beijing	5,124	2.0	2	2
14	San Jose del Cabo	1,085	1.9	3	2
15	Delhi	6,682	1.8	1	1
16	Puerto Vallarta	1,352	1.7	3	2
17	Sydney	6,449	1.4	2	2
18	Singapore	7,330	1.4	2	2
19	Ho Chi Minh City (h)	7,837	1.3	--	--
20	Amsterdam	5,456	<u>1.2</u>	<u>2</u>	1
	Cities listed		50.0%	72	
	Other cities		<u>50.0</u>	<u>36</u>	
	All cities		100.0%	108	

Notes: For the Fiscal Year ended June 30, unless otherwise noted.  
Data are for international O&D passenger bookings.

(a) Heathrow, Gatwick, Stansted, and London City airports.

(b) Taoyuan and Sung Shan airports.

(c) Incheon and Gimpo airports

(d) Haneda and Narita airports.

(e) Pudong and Hongqiao airports.

(f) Juarez and Toluca airports.

(g) Charles de Gaulle and Orly airports.

(h) Airline service from SFO to Ho Chi Minh City is provided through other airports.

Sources: OAG Aviation Worldwide Ltd, OAG Analyser database and OAG Traffic database, accessed October 2018.

## Airline Airfares

Table 13 provides a comparison of average domestic one-way airfares paid at the Airport in FY 2018 with the airfares at OAK and SJC.\* Average airfares tend to be higher at SFO than at OAK and SJC airports due to longer trips and a larger share of premium fares. In short and medium-haul markets, SFO airfares are competitive (i.e., no more than 12% higher than at OAK or SJC), except for markets such as Austin, Dallas/Fort Worth, Houston, and Las Vegas where Southwest Airlines accounts for a large number of discount seats at OAK and SJC. As shown previously in Table 11, 19 of the top 20 domestic O&D markets at SFO are served by 2 airlines or more, ensuring competitive airline service and airfares.

SFO accounted for 70% or more of domestic O&D passengers at the three Bay Area airports in seven of its nine long-haul markets (1,500 miles or more) in FY 2018, reflecting its role in providing service for longer domestic trips in the San Francisco CSA, as shown in Table 13. In comparison, SFO accounted for considerable but smaller shares of domestic O&D passengers in medium- and short-haul markets in FY 2018, with 40% to 86% of medium haul domestic passengers and 41% to 49% of short-haul passengers.

As shown in Table 13, SFO accounted for 86.3% of first and business class domestic fare revenue at the three primary airports in the San Francisco CSA in FY 2018. OAK and SJC accounted for 6.1% and 7.6%, respectively. SFO's long-haul markets accounted for 76% to 99% of first and business class domestic fare revenue in the busiest nine long-haul markets.

## Airline Yields

Figure 16 presents recent trends in airline yields (the airfare paid per mile flown) by fare class for domestic flights at Bay Area airports based on FY 2018 passenger bookings. SFO's first and business class passengers on domestic flights accounted for 23% of total domestic revenue in FY 2018, more than the shares at OAK (12%) and SJC (8%), reflecting the role of the Airport in serving the Bay Area business community. In FY 2018, SFO's first and business class yields on domestic flights were similar to those for OAK because of a considerably shorter passenger trip length on OAK's domestic flights in FY 2018, as shown on Figure 16.\*\* In contrast, SFO's first and business class yields on domestic flights were 62% higher than those for SJC in FY 2018. At the same time, SFO's economy class yields on domestic flights in FY 2018 were lower than those at OAK and SJC, reflecting the expansion of LCC service at SFO in recent years and a longer average passenger trip length.

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\*The fares that airlines report to the U.S. DOT are exclusive of many ancillary charges (fees for checked baggage and preferred aircraft seating, for example) and, given the rapid rise in such fees beginning in 2008, increasingly understate the consumer's real cost of airline travel.

\*\*Airline yields (airfare paid per mile flown) are typically higher on short-haul routes and lower on long-haul routes because the fixed costs are allocated over a smaller number of miles.

**Table 13**  
**Comparison of Airfares in SFO's Top Domestic Origin-Destination Markets in FY 2018**  
**Bay Area Airports**

Rank	Market	Length of haul	SFO percent of domestic O&D passengers for three airports	Average one-way domestic airfare paid			SFO percent of first/business class fare revenue for three airports
				SFO	OAK	SJC	
1	Los Angeles (a)	Short	40.9%	\$ 83	\$ 86	\$ 88	53.7%
2	New York (b)	Long	88.9	298	179	212	97.6
3	Chicago (c)	Long	74.8	202	146	203	90.7
4	Las Vegas	Short	48.1	89	73	91	20.2
5	Seattle	Medium	48.6	125	112	124	65.9
6	Boston	Long	88.5	255	191	208	95.6
7	San Diego	Short	43.6	92	97	93	100.0
8	Washington DC (d)	Long	73.6	302	179	215	97.6
9	Denver	Medium	61.1	121	126	128	72.6
10	Dallas/Fort Worth (e)	Medium	68.0	153	117	207	82.9
11	Portland	Short	45.8	99	93	99	9.3
12	Miami (f)	Long	92.3	227	199	223	98.5
13	Minneapolis-St. Paul	Medium	86.4	169	182	231	96.9
14	Phoenix	Medium	39.9	131	125	137	90.9
15	Honolulu	Long	55.9	264	243	241	75.7
16	Atlanta	Long	66.8	264	189	254	83.4
17	Philadelphia	Long	85.0	280	217	241	98.6
18	Orlando	Long	79.5	205	193	205	96.1
19	Austin	Medium	56.6	204	168	174	93.5
20	Houston (g)	Medium	51.1	292	161	218	93.4
	Cities listed		58.1	181	109	128	88.5
	Other cities		58.5	235	171	201	76.6
	All cities		58.2	194	124	144	86.3

Notes: For the Fiscal Year ended June 30.

For the purposes of this Report, short-haul flights are 500 miles or less, medium-haul flights are 501 to 1,500 miles, and long-haul flights are more than 1,500 miles.

(a) Newark Liberty International, LaGuardia, and John F. Kennedy International airports.

(b) Los Angeles International, Hollywood Burbank, Long Beach, John Wayne/Orange County, and Ontario International airports.

(c) Chicago O'Hare and Midway International airports.

(d) Reagan Washington National, Baltimore/Washington International Thurgood Marshall, and Washington Dulles International airports.

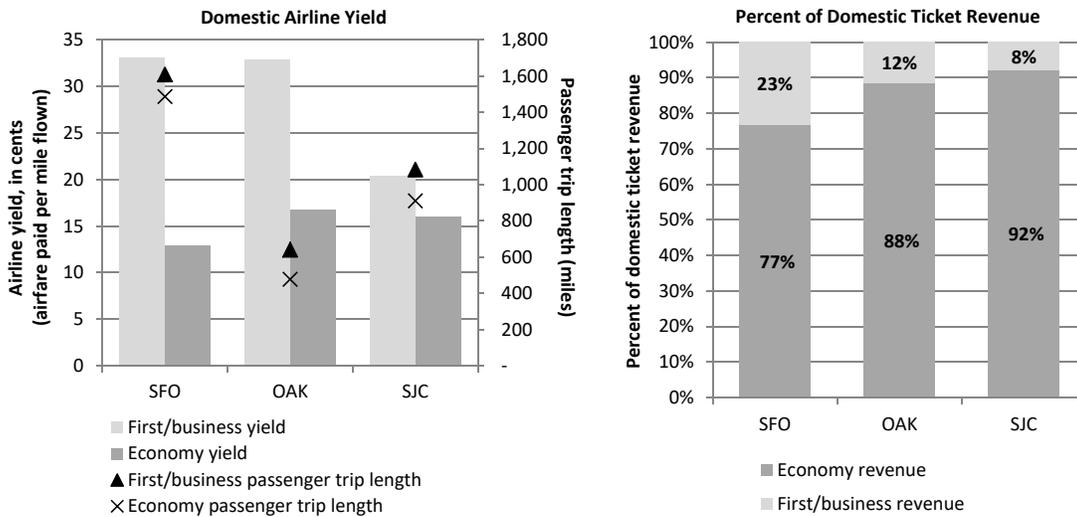
(e) Dallas Fort Worth International Airport and Love Field.

(f) Miami and Fort Lauderdale International airports.

(g) Bush Intercontinental Airport/Houston and William P. Hobby airports.

Sources: U.S. Department of Transportation, *Air Passenger Origin-Destination Survey*, reconciled to Schedule T100 and OAG Worldwide Aviation Ltd, Traffic Analyser bookings, accessed October 2018.

Figure 16  
**Airline Yields by Fare Class for Domestic Flights in FY 2018**  
 Bay Area Airports



Notes: A first or business class ticket is for seating in the front of the aircraft with more space, comfort, service, and privacy and fewer, if any, ancillary fees than the main cabin.  
 Economy class tickets are for seating in the main cabin and may include fee penalties for changes to a passenger's itinerary which may vary by airline.

Source: OAG Worldwide Aviation Ltd, Traffic Analyser bookings, accessed October 2018.

### Bay Area-Los Angeles Area Corridor

Airline service in the Bay Area-Los Angeles Area Corridor (the “Corridor” linking the three Bay Area airports with the five Los Angeles area airports) is highly competitive. In July 2018, the 8 airlines providing service in the Corridor\* operated an average of 191 daily nonstop departures, the equivalent of approximately 8 departures per hour during a 24-hour period, including 3 flights per hour from SFO. Three of the 8 airlines—Delta, jetBlue, and Southwest—provide service at each of the three Bay Area airports. Southwest is the only airline to provide service at each of the five Los Angeles Area airports. As shown in Table 13, SFO accounted for 40.9% of the O&D passengers in the Corridor in FY 2018. In comparison, Oakland and SJC accounted for 32.0% and 27.1%, respectively, of O&D passengers in the Corridor in FY 2018. The highly competitive nature of airline service in the Corridor results in competitive fares and airline service options that are not dominated by a single airline or airport.

\*Alaska, American, Delta, jetBlue, JetSuite, Southwest, Spirit, and United.

## **Airline Service**

In July 2018, SFO provided a total of 634 scheduled daily nonstop departures, including 526 domestic departures and 108 international departures. SFO provides nonstop international service to seven international regions—Asia, Canada, Europe, Latin America/the Caribbean, Mexico, the Middle East, and the South Pacific—as shown on Figure 17.

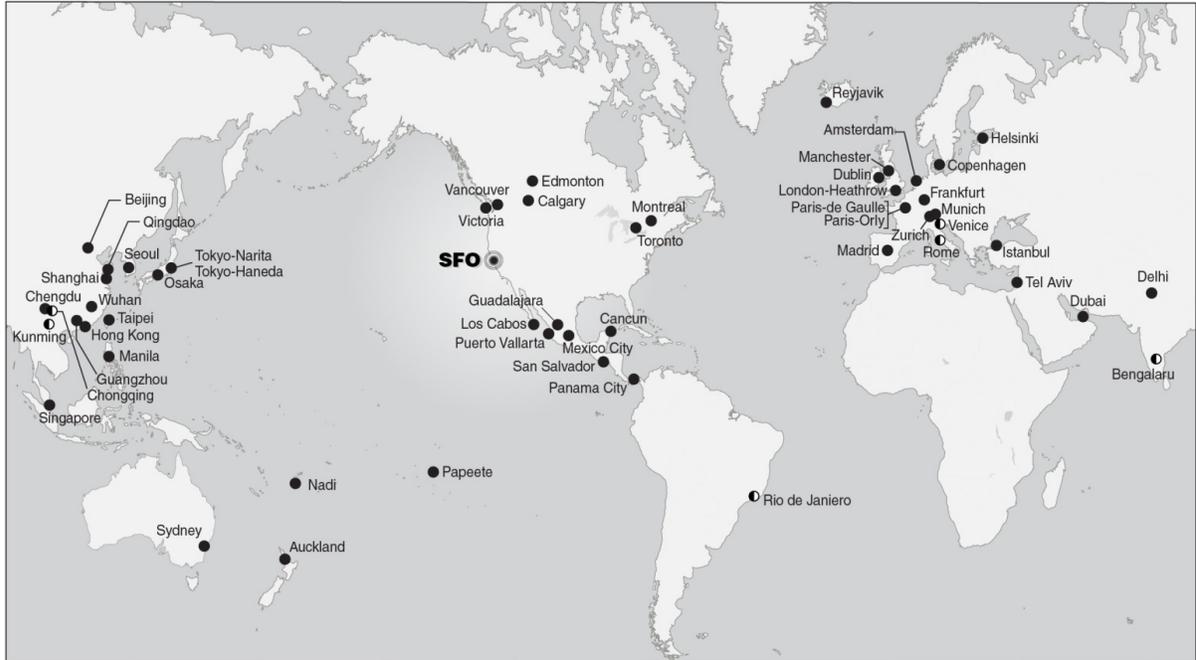
From FY 2007 through FY 2018, scheduled departing seats at the Airport increased an average of 4.4% per year, compared with an average increase of 0.5% per year for all U.S. airports during this period. Strong growth in seats at the Airport in recent years reflects, in part, the buildup in low-cost carrier service, including jetBlue, Southwest/AirTran, and Virgin America.

During the first 4 months of FY 2019 (July through October 2018), scheduled departing seats at SFO decreased 0.5% compared with the same period in FY 2018, driven by a 2.0% decrease in domestic seats resulting primarily from restructuring of the combined Alaska and Virgin America networks. During the last 8 months of FY 2019 (November 2018 through June 2019), scheduled departing seats at SFO are expected to increase 0.7% compared with the same period in FY 2018 based on advance published airline schedules.\* In FY 2019, domestic departing seats are estimated to decrease 1.4% as a result of short-term adjustments in domestic flights related primarily to Alaska’s restructuring. International departing seats are estimated to increase 5.8% in FY 2019 based on advanced published airline schedules. Table 14 presents a summary of planned or initiated service during FY 2018 and preliminary and partial data for new nonstop service during FY 2019 (July 2018 through February 2019) available for this report. In addition to the changes shown in Table 14, normal seasonal adjustments are also occurring. Other than service reductions by Alaska noted in Table 14, no significant airline service reductions have been announced for FY 2019 based on published airline schedules.

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\*Advance airline schedules are subject to change.

Figure 17  
**International Scheduled Airline Service in July 2018**  
**San Francisco International Airport**



**LEGEND**

- Scheduled nonstop service
- ◐ Scheduled one-stop same-plane service

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed October 2018.

SFO089 F-001

**Table 14**  
**Published Airline Service Additions in FY 2018 and FY 2019**  
**San Francisco International Airport**

Sector	Airline	Destination	New daily service, except as noted	Date of change	
<b>Domestic</b>	Alaska	Albuquerque	1.0	September 2017	
	Alaska	Baltimore	1.0	October 2017	
	Alaska	Indianapolis	1.0	September 2017	
	Alaska	Kansas City	1.0	September 2017	
	Alaska	Kona	1.0	December 2017	
	Alaska	Minneapolis	2.0	July 2017	
	Alaska	Nashville	1.0	September 2017	
	Alaska	New Orleans	1.0	September 2017	
	Alaska	Philadelphia	1.0	August 2017	
	Alaska	Phoenix	2.0 (a)	February 2018	
	Alaska	Raleigh-Durham	1.0	October 2017	
	Alaska	Seattle (Paine Field)	2.0	February 2019	
	Frontier	Atlanta	1.0 (c)	November 2018	
	Frontier	Des Moines	0.4 (b)	June 2018	
	Frontier	Omaha	0.6 (c)	June 2018	
	Southwest	Austin	1.0	April 2018	
	United	Madison	1.0	June 2018	
	United	Vail	<u>0.1 (d)</u>	December 2017	
	Total domestic			19.1	
	<b>International</b>	Air Canada	Edmonton, Canada	1.0	May 2018
Alaska		Mexico City	1.0	August 2017	
Cathay Pacific		Hong Kong	1.0 (e)	November 2017	
El Al		Tel Aviv	0.4 (b)	November 2018	
Fiji		Nadi	0.4 (f)	November 2017	
French Blue		Paris (Orly), France	0.3 (g)	May 2018	
French Blue		Papeete, Tahiti	0.3 (g)	May 2018	
Hong Kong		Hong Kong	1.0 (d)	March 2018	
Iberia		Madrid, Spain	0.4 (b)	April 2018	
Icelandair		Reykjavik, Iceland	0.6 (c)	June 2018	
Interjet		Cancun	0.4 (b)	March 2018	
Interjet		Guadalajara	0.4 (b)	March 2018	
Korean		Seoul	1.0 (e)	September 2017	
Qantas		Melbourne, Australia	0.6 (c)	November 2018	
United		Zurich, Switzerland	0.3 (g)	June 2018	
United		Papeete, Tahiti	<u>0.4 (b)</u>	October 2018	
Total International			<u>9.5</u>		
Total Airport			28.6		

Notes: Air Berlin provided seasonal service (May through October) from SFO to Berlin and Dusseldorf but ceased operations on October 22, 2017 after filing for bankruptcy. Etihad Airways provided daily nonstop service from SFO to Abu Dhabi but discontinued service in October 2017. Alaska Airlines discontinued nonstop service from SFO to Cancun (weekly) in March 2018, Mexico City in May 2018 (daily), Minneapolis in May (twice daily), Denver (twice daily) in June 2018, and Albuquerque in January 2019 (daily). Frontier discontinued service from SFO to Des Moines (weekly) and Omaha (weekly) in November 2018.

- (a) Seasonal service operated in February-March 2018, during Major League Baseball spring training.
- (b) New 3 times weekly service.
- (c) New 4 times weekly service.
- (d) New 1 time weekly service.
- (e) Increased frequency of service by 5 weekly flights.
- (f) Change from seasonal to year-round service.
- (g) New 2 times weekly service.

Sources: San Francisco Airport Commission records and OAG Worldwide Aviation Ltd, online database, accessed December 2018.

## Cargo

Since 2000, the cargo industry nationwide and at SFO has experienced significant changes related to a number of factors, including air cargo security regulations by the FAA and Transportation Security Administration (TSA), consolidation in the air cargo industry, an increasing trend in the volume of cargo transported by truck, and the national and global economic recessions. Between FY 2000 and FY 2010, total air cargo tonnage at SFO decreased an average of 6.8% per year, including an average decrease of 9.6% and 4.5% per year, respectively, in domestic and international air cargo. As shown in Table 15, total air cargo tonnage at SFO increased an average of 3.3% per year between FY 2010 and FY 2018, with considerable year-to-year variation, including an 18.6% increase in FY 2017. In FY 2018, passenger airlines accounted for 73.5% of total air cargo at the Airport; cargo airlines accounted for the remaining 26.5%.

**Table 15**  
**Trends in Air Cargo**  
San Francisco International Airport

	Metric tons		CAGR	Percent of total	
	FY 2010	FY 2018	FY 2010 FY 2018	FY 2010	FY 2018
<b>By Airline Type</b>					
<b>Domestic</b>					
Passenger airlines	87,342	115,767	3.6%	20.2%	20.6%
Cargo airlines	<u>75,843</u>	<u>92,392</u>	2.5	<u>17.6</u>	<u>16.5</u>
Subtotal-domestic	163,185	208,159	3.1%	37.8%	37.1%
<b>International</b>					
Passenger airlines	183,610	296,621	6.2%	42.5%	52.9%
Cargo airlines	<u>85,196</u>	<u>56,371</u>	(5.0)	<u>19.7</u>	<u>10.0</u>
Subtotal-international	268,805	352,991	3.5%	62.2%	62.9%
<b>Total</b>					
Passenger airlines	270,952	412,388	5.4%	62.7%	73.5%
Cargo airlines	<u>161,038</u>	<u>148,763</u>	(1.0)	<u>37.3</u>	<u>26.5</u>
Total air cargo	431,990	561,150	3.3%	100.0%	100.0%
<b>By World Area</b>					
United States	163,185	208,159	3.1%	37.8%	37.1%
Asia and South Pacific	213,258	257,327	2.4	49.4	45.9
Europe	49,922	83,840	6.7	11.6	14.9
Middle East	3,678	8,648	11.3	0.9	1.5
Canada	1,052	2,237	9.9	0.2	0.4
Mexico, Central & South America	<u>896</u>	<u>940</u>	0.6	<u>0.2</u>	<u>0.2</u>
Total air cargo	431,990	561,150	3.3%	100.0%	100.0%

Notes: For Fiscal Years ended June 30.

CAGR = Compound annual growth rate

Sum of enplaned and deplaned freight and mail.

All-cargo airlines serving SFO in FY 2018 and FY 2019 (July through October) include Atlas Air, FedEx, Kalitta Air, Nippon Cargo, and Redding Aero Enterprises. In addition, cargo service was provided by the subsidiaries of four passenger airlines (Asiana, China, EVA, and Korean) and two ground handling companies (Swissport and Total Airport Services).

Source: San Francisco Airport Commission records.

Domestic air cargo accounted for 37.1% of total air cargo in FY 2018. Of this total, passenger airlines handled 56% of domestic cargo volumes and cargo airlines handled the remainder. International air cargo accounted for 62.9% of total air cargo in FY 2018. Passenger airlines carried 84% of international air cargo and cargo airlines handled the remainder. Two world regions—Asia and the South Pacific and Europe—accounted for nearly 61% of total air cargo in FY 2018.

SFO accounted for 46.2% of air cargo tonnage at the three Bay Area airports in FY 2018, Oakland International Airport, a regional hub for Federal Express, handled 49.3%, while Mineta San Jose handled 4.6%.\*

During the first 4 months of FY 2019 (July through October 2018), air cargo tonnage at the Airport increased 2.4%, reflecting a 5.4% increase in passenger airline air cargo and a 6.0% decrease in cargo airline air cargo.

### **KEY FACTORS AFFECTING FUTURE AIRLINE TRAFFIC**

In addition to the economy and demographics of the Airport service region, discussed earlier, key factors affecting future airline traffic at the Airport include:

- National economic conditions
- International economic and political conditions
- The financial health of the airline industry
- Airline service and routes
- Airline competition and airfares
- Airline consolidation and alliances
- The availability and price of aviation fuel
- Aviation safety and security concerns
- The capacity of the national air traffic control system
- The capacity of the Airport

### **National Economic Conditions**

Historically, airline passenger traffic nationwide has correlated closely with the state of the U.S. economy and levels of real disposable income. As illustrated on Figure 18, recessions in the U.S. economy in 2001 and 2008–2009 and associated high unemployment reduced discretionary income and contributed to a reduction in airline travel demand in those years.

### **International Economic and Political Conditions**

With the globalization of business and the increased importance of international trade and tourism, international economics, trade balances, currency exchange rates, and political relationships all influence passenger traffic at major U.S. airports. Concerns about hostilities and other perceived security and public health risks also affect travel demand to particular international destinations.

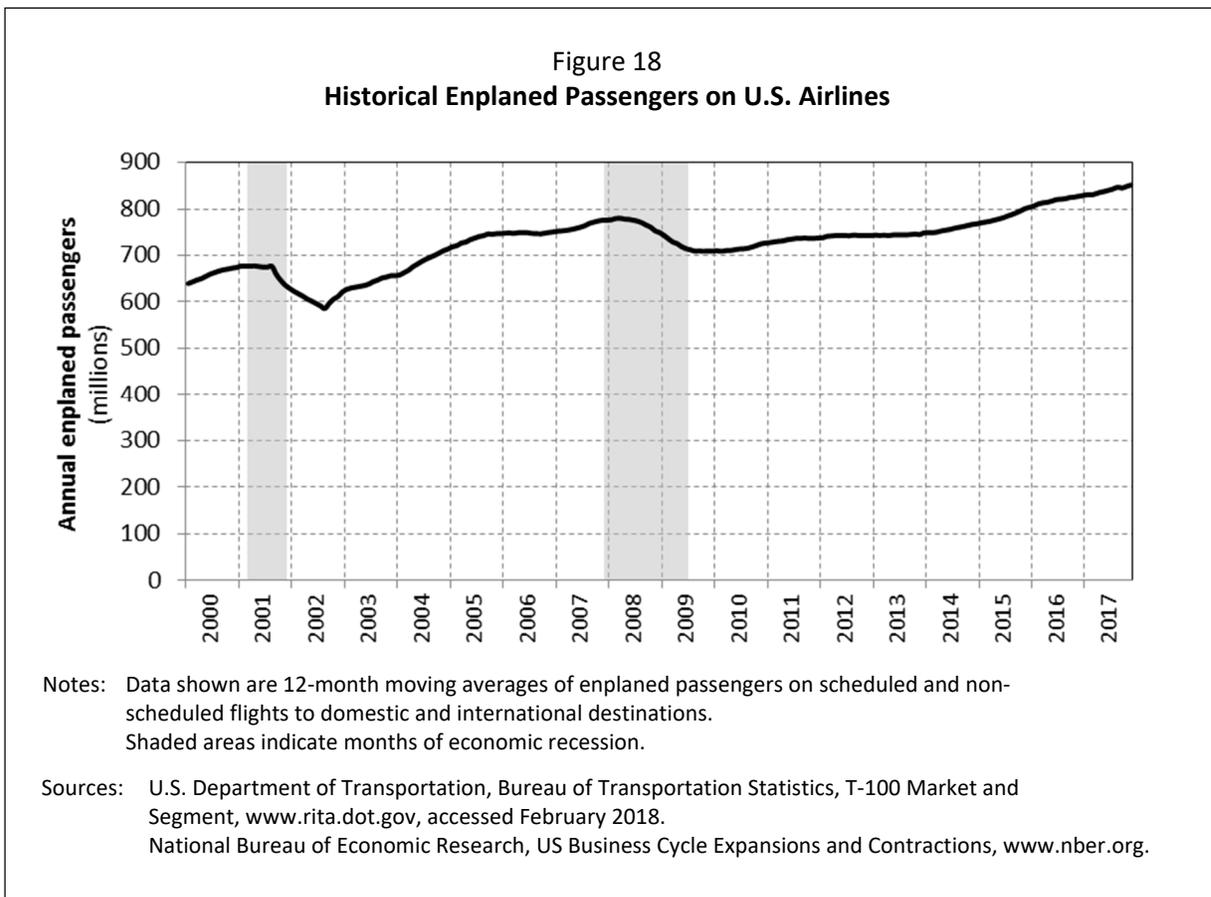
On September 24, 2017, the Trump administration issued a third executive order seeking to restrict travel from eight countries: six countries in Africa and the Middle East (Chad, Iran, Libya, Somalia, Syria, and Yemen), as well as North Korea and Venezuela. In December 2017, the Supreme Court

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\*Totals may not add to 100% due to rounding.

allowed the implementation of the travel ban, although legal challenges were still pending in the appeals process. In June 2018, the Supreme Court upheld an indefinite ban on travel from seven countries (Iran, Libya, North Korea, Somalia, Syria, Venezuela, and Yemen). It is important to note that the travel ban primarily affects travel to the United States from countries in the Middle East and Africa which together account for about 1% of all international travelers to SFO. Sustained future increases in passenger traffic at the Airport will depend on stable and secure international conditions as well as national and global economic growth.

In March 2018, the Trump administration announced changes in U.S. trade policy with the implementation of tariffs on steel and aluminum imports and on imports from China and Chinese investment in the United States. In September 2018, U.S. tariffs were imposed on \$200 billion of goods imported from China. In October 2018, the Trump administration announced the replacement of the North American Free Trade Agreement (NAFTA) with the United States-Mexico-Canada Agreement (USMCA). It is unclear what impacts, if any, these changes in U.S. trade policy will have on economic growth and passenger traffic growth at SFO at the writing of this Report.

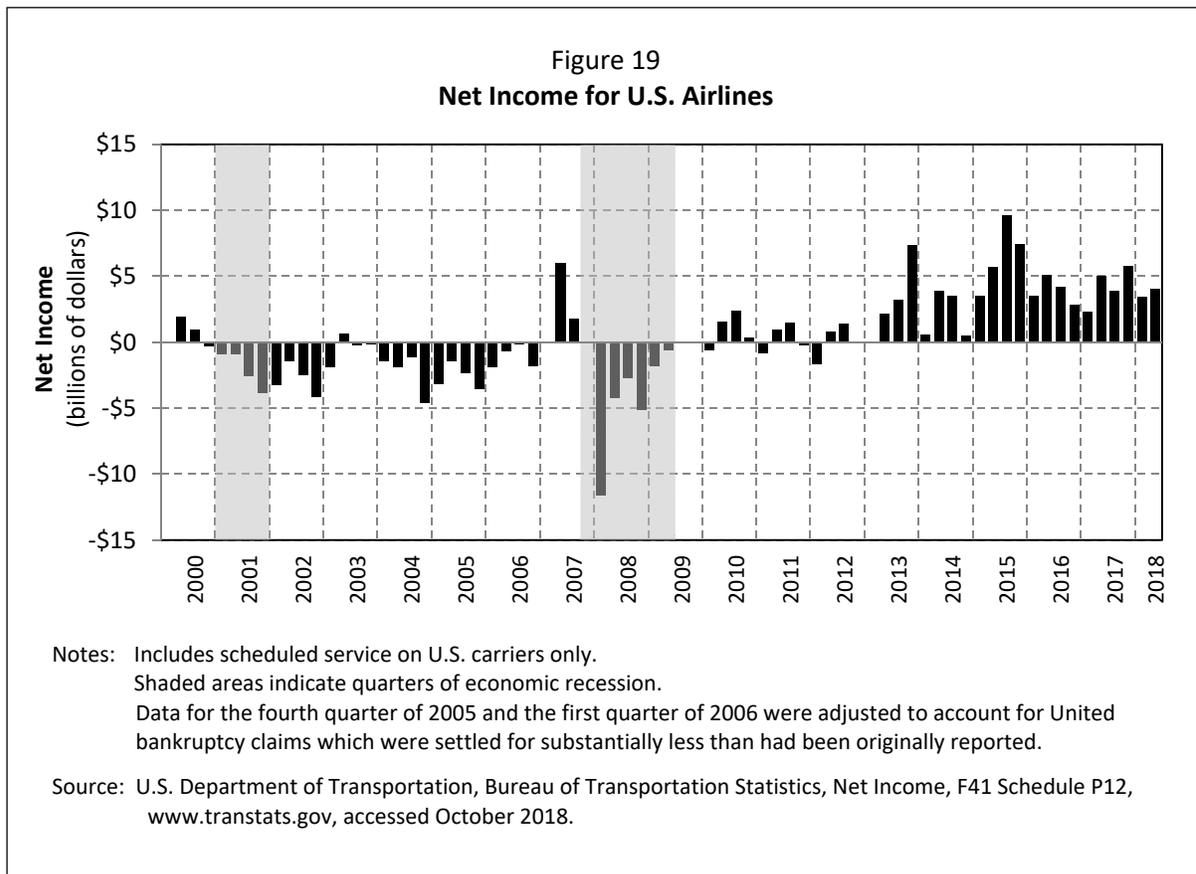


### Financial Health of the Airline Industry

The number of passengers using the Airport will depend partly on the profitability of the U.S. airline industry and the associated ability of the industry and individual airlines to make the necessary investments to provide service. Figure 19 shows historical net income for U.S. airlines in the first quarter of 2000 through the second quarter of 2018.

As a result of the 2001 economic recession, the disruption of the airline industry that followed the September 2001 attacks, increased fuel and other operating costs, and price competition, the industry experienced huge financial losses. In 2001 through 2005, the major U.S. passenger airlines collectively recorded net losses of approximately \$61 billion. To mitigate those losses, all of the major network airlines restructured their route networks and flight schedules and reached agreement with their employees, lessors, vendors, and creditors to cut costs, either under Chapter 11 bankruptcy protection or the possibility of such. Between 2002 and 2005, Delta Air Lines, Northwest Airlines, United Airlines, and US Airways all filed for bankruptcy protection and restructured their operations.

In 2007, the U.S. passenger airline industry as a whole was profitable, recording net income of approximately \$7 billion, but in 2008, as oil and aviation fuel prices increased to unprecedented levels, the industry experienced a profitability crisis. In 2008 and 2009, the U.S. passenger airline industry recorded net losses of approximately \$26 billion. The industry responded by, among other actions, grounding less fuel-efficient aircraft, eliminating unprofitable routes and hubs, reducing seat capacity, and increasing airfares. Between 2007 and 2009, U.S. passenger airlines collectively reduced domestic capacity (as measured by available seat-miles) by approximately 10%.



In 2010 through 2013, the U.S. passenger airline industry as a whole recorded net income of approximately \$15 billion, in spite of sustained high fuel prices, by controlling capacity and nonfuel expenses, increasing airfares, recording high load factors, and increasing ancillary revenues. Between 2009 and 2013, the airlines collectively increased domestic seat-mile capacity by an average of just 1.0% per year. In 2014, the U.S. passenger airline industry reported net income of \$9 billion,

assisted by reduced fuel prices in the second half of the year (as discussed in the later section, “Availability and Price of Aviation Fuel”). In 2015, the industry achieved record net income of \$27 billion as fuel prices decreased further, demand remained strong, and capacity control allowed average fares to remain high. Strong industry profitability continued in 2016 through the first half of 2018.

Consolidation has resulted in four airlines (American, Delta, Southwest, and United) accounting for approximately 80% of domestic seat-mile capacity and is expected by airline industry analysts to contribute to industry profitability. However, any resumption of financial losses could cause U.S. airlines to seek bankruptcy protection or liquidate. The liquidation of any of the large network airlines would drastically affect airline service at certain connecting hub airports, present business opportunities for the remaining airlines, and change airline travel patterns nationwide.

Virgin America, Inc. and Alaska Air Group, Inc., the parent company of Alaska Airlines, announced plans to merge in April 2016, which were approved by Virgin America, Inc. shareholders in July 2016 and by the U.S. Department of Justice in December 2016.\* The merged airline received a single operating certificate from the FAA in January 2018, moved to a single reservations system and rebranded as Alaska Airlines on April 25, 2018, and plans to retire the Virgin America brand by 2019 after all Virgin America aircraft are repainted.\*\* Alaska Airlines and Virgin America accounted for 5.1% and 8.1%, respectively, of total enplaned passengers at the Airport in FY 2018, with very limited overlap in the markets served from SFO. Since closing the merger in December 2016, Alaska has increased service at the primary West Coast airports in the combined airline network, including increases of 10.1% and 12.3% in scheduled departing seats at SFO in FY 2016 and FY 2017, respectively. In FY 2019, however, Alaska is expected to decrease seats at SFO by approximately 11% as a result of restructuring the combined airline’s network. Alaska’s restructuring efforts also include an estimated 8% decrease in seats at Los Angeles International Airport in FY 2019 and the initiation of scheduled service at Paine Field in Seattle based on advance published schedules. Although Alaska is not considered a LCC, the continued presence of the combined airline’s service at SFO increases the level of competition which, in turn, puts downward pressure on airfares.

SFO is less susceptible to the potential impacts of an airline bankruptcy due to its relatively low degree of airline concentration compared with many other large U.S. hub airports and its large population and O&D passenger traffic base which would likely be served by other airlines at the Airport.

### **Airline Service and Routes**

Most large airports serve as gateways to their communities and as connecting points. The number of origin and destination passengers at an airport depends on the intrinsic attractiveness of the region as a business and leisure destination, the propensity of its residents to travel, and the airline fares and service provided at the Airport and at other competing airports. The number of connecting passengers, on the other hand, depends entirely on the airline service provided. As discussed in the earlier section, “Enplaned Passengers,” in FY 2018, an estimated 78.8% of passengers at the Airport are originating their journeys, with the remaining 21.2% connecting between flights.

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\*“Virgin America Shareholders Vote to Approve Merger Agreement with Alaska Air Group, Inc.,” July 26, 2016, [www.virginamerica.com](http://www.virginamerica.com). “Justice Department Clears Alaska Air Group’s Acquisition of Virgin America,” December 6, 2016, [www.alaskaair.com](http://www.alaskaair.com).

\*\*“Alaska Airlines receives single operating certificate from FAA,” January 11, 2018, [www.alaskaair.com](http://www.alaskaair.com).

The network airlines have developed hub-and-spoke systems that allow them to offer high-frequency service in many city-pair markets. Because most connecting passengers have a choice of airlines and intermediate airports, connecting traffic at an airport depends on the route networks and flight schedules of the airlines serving that airport and competing hub airports. Since 2003, as the U.S. airline industry has consolidated, airline service has been drastically reduced at many former connecting hub airports, including those serving St. Louis (American 2003-2005), Dallas-Fort Worth (Delta 2005), Pittsburgh (US Airways 2006-2008), Las Vegas (US Airways 2007-2010), Cincinnati (Delta 2009-2011), Memphis (Delta 2011-2013), and Cleveland (United 2014).

### **Airline Competition and Airfares**

Airline fares have an important effect on passenger demand, particularly for relatively short trips for which the automobile and other travel modes are potential alternatives, and for price-sensitive “discretionary” travel. The price elasticity of demand for airline travel increases in weak economic conditions when the disposable income of potential airline travelers is reduced. Airfares are influenced by airline capacity and yield management; passenger demand; airline market presence; labor, fuel, and other airline operating costs; taxes, fees, and other charges assessed by governmental agencies; and competitive factors. Future passenger numbers, both nationwide and at the Airport, will depend, in part, on the level of airfares.

Overcapacity in the industry, the ability of consumers to compare airfares and book flights easily via the Internet, and other competitive factors combined to reduce airfares between 2000 and 2005. During that period, the average domestic yield for U.S. airlines decreased from 14.9 cents to 13.8 cents per passenger-mile. In 2006 through 2008, as airlines reduced capacity and sustained fare increases, the average domestic yield increased to 15.9 cents per passenger-mile. In 2009, yields again decreased, but, beginning in 2010, as airline travel demand increased and seat capacity was restricted, yields increased to 17.7 cents per passenger-mile by 2015. Between 2015 and 2017, domestic yields decreased to 16.6 cents per passenger-mile, reflecting lower aviation fuel prices and increased airline competition.

Beginning in 2006, ancillary charges have been introduced by most airlines for services such as checked baggage, preferred seating, in-flight meals, and entertainment; thereby increasing the effective price of airline travel more than these yield figures indicate.

### **Airline Consolidation and Alliances**

In response to competitive pressures, the U.S. airline industry has consolidated. Among the significant mergers and combinations were:

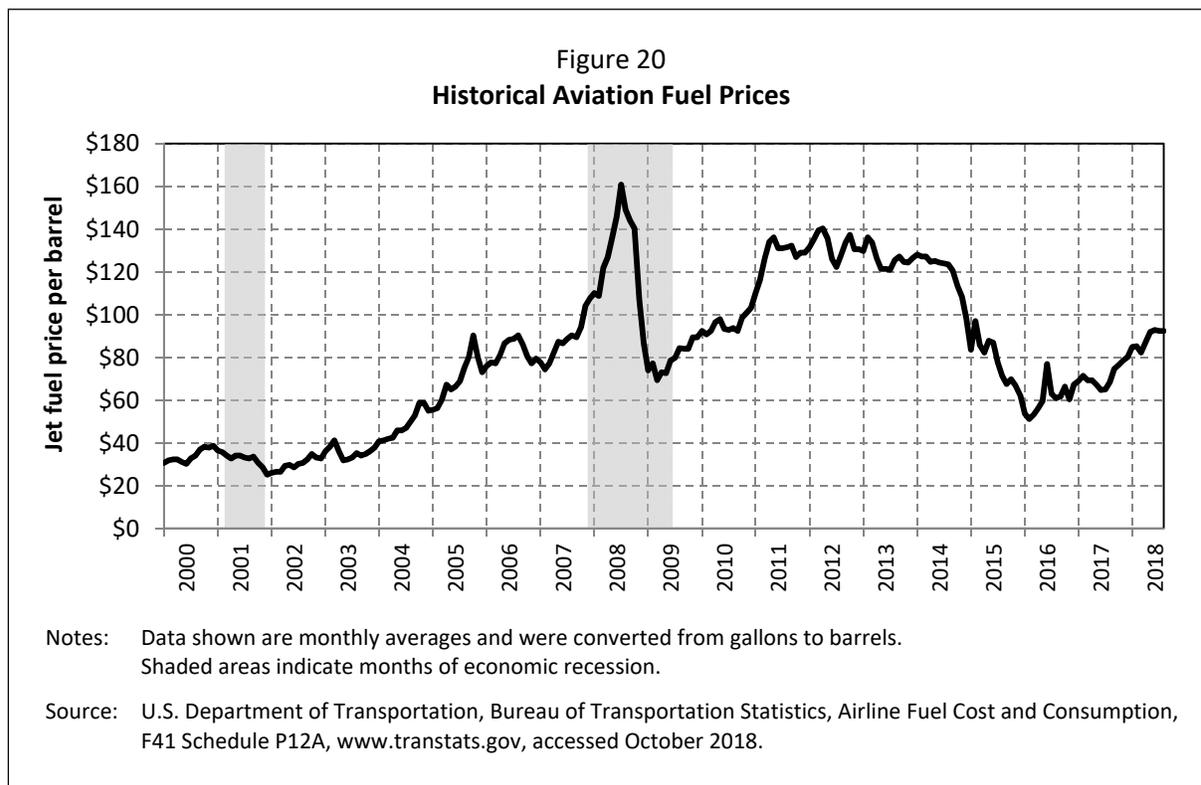
- In April 2001, American completed an acquisition of failing Trans World Airlines
- In September 2005, US Airways and America West Airlines merged
- In October 2009, Republic Airways Holdings completed purchases of Frontier and Midwest airlines
- In December 2009, Delta and Northwest merged
- In October 2010, United and Continental completed a merger
- In May 2011, Southwest completed its acquisition of AirTran, and integrated operations in 2014

- In December 2013, American and US Airways completed their merger and have maintained all hubs in the combined system
- In December 2016, Alaska Air Group, parent of Alaska Airlines, and Virgin America Airlines completed their merger. The merged airline received a single operating certificate from the FAA in January 2018, moved to a single reservations system and rebranded as Alaska Airlines on April 25, 2018, and plans to retire the Virgin America brand by 2019 after all Virgin America aircraft are repainted.

Alliances, joint ventures, and other marketing arrangements provide airlines with many of the advantages of mergers. Alliances typically involve marketing, code sharing, and scheduling arrangements to facilitate the transfer of passengers between the airlines. Joint ventures involve even closer cooperation and the sharing of costs and revenues on designated routes. Most of the largest U.S. airlines are members of such alliances with foreign-flag airlines.

### Availability and Price of Aviation Fuel

The price of aviation fuel is a critical and uncertain factor affecting airline operating economics. Fuel prices are particularly sensitive to worldwide political instability and economic uncertainty. Figure 20 shows the historical fluctuation in fuel prices since 2000. Beginning in 2003, fuel prices increased as a result of the invasion and occupation of Iraq; political unrest in other oil-producing countries; the growing economies of China, India, and other developing countries; and other factors influencing the demand for and supply of oil. By mid-2008, average fuel prices were three times higher than they were in mid-2004 and represented the largest airline operating expense, accounting for between 30% and 40% of expenses for most airlines. Fuel prices fell sharply in the second half of 2008 as demand declined worldwide, but increased as global demand increased.



Between early 2011 and mid-2014, fuel prices were relatively stable, partly as a result of increased supply from U.S. domestic production. As of mid-2014, average aviation fuel prices were approximately three times the prices prevailing at the end of 2003. Beginning in mid-2014, an imbalance between worldwide supply and demand resulted in a precipitous decline in the price of oil and aviation fuel. Decreased demand from China and other developing countries, combined with a continued surplus in the worldwide supply (and the potential for further surpluses from Iran as trade sanctions are lifted) resulted in further reductions in fuel prices in 2015. As shown on Figure 20, the average price of aviation fuel at the end of 2015 was approximately 50% of the price at mid-2014, before rising again modestly in the early months of 2016. The reduction in fuel prices is having a positive effect on airline profitability as well as far-reaching implications for the global economy.

Three Category 4 and 5 hurricanes made U.S. landfall in August and September 2017, causing billions of dollars in damage and uncertainty for aviation fuel supply and prices: Hurricane Harvey along the Texas Coast on August 25, 2017, Hurricane Irma in southern Florida on September 10, 2017, and Hurricane Maria in Puerto Rico on September 20, 2017. U.S. refinery capacity was reduced during this period, contributing to increases in the price of aviation fuel in August and September 2017 of 13.1% and 21.8%, respectively, compared with the same months in 2016. In August 2018 (the most recent data available), the price of aviation fuel was 35.0% higher than in August 2017.

Airline industry analysts hold differing views on how oil and aviation fuel prices may change in the near term. However, there is widespread agreement that fuel prices are likely to increase over the long term as global energy demand increases in the face of finite oil supplies that are becoming more expensive to extract.

Aviation fuel prices will continue to affect fares, passenger numbers, airline profitability, and the ability of airlines to provide service. Airline operating economics will also be affected as regulatory costs are imposed on the airline industry as part of efforts to reduce aircraft emissions contributing to global climate change.

### **Aviation Safety and Security Concerns**

Concerns about the safety of airline travel and the effectiveness of security precautions influence passenger travel behavior and airline travel demand. Anxieties about the safety of flying and the inconveniences and delays associated with security screening procedures lead to both the avoidance of travel and the switching from air to surface modes of transportation for short trips. Public health and safety concerns have also affected airline travel demand to particular regions of the world from time to time.

Safety concerns in the aftermath of the September 2001 attacks were largely responsible for the steep decline in airline travel nationwide in 2002. Since 2001, government agencies, airlines, and airport operators have upgraded security measures to guard against changing threats and maintain confidence in the safety of airline travel. These measures include strengthened aircraft cockpit doors, changed flight crew procedures, increased presence of armed sky marshals, federalization of airport security functions under the Transportation Security Administration (TSA), more effective dissemination of information about threats, more intensive screening of passengers and baggage, and deployment of new screening technologies. The TSA has introduced “pre-check” service to expedite the screening of passengers who have submitted to background checks. Concerns about the safety of air travel have been heightened by a shooting incident at Fort Lauderdale International

Airport in January 2017 and terrorist attacks at Paris Orly International Airport in March 2017 and at Bishop International Airport in Flint, Michigan in June 2017.

Historically, airline travel demand has recovered after temporary decreases stemming from terrorist attacks or threats, hijackings, aircraft crashes, and public health and safety concerns. Provided that precautions by government agencies, airlines, and airport operators serve to maintain confidence in the safety of commercial aviation without imposing unacceptable inconveniences for airline travelers, it can be expected that future demand for airline travel at the Airport will depend primarily on economic, not safety or security, factors.

### **Capacity of the National Air Traffic Control System**

Demands on the national air traffic control system have, in the past, caused delays and operational restrictions affecting airline schedules and passenger traffic. The FAA is gradually implementing its Next Generation Air Transport System (NextGen) air traffic management programs to modernize and automate the guidance and communications equipment of the air traffic control system and enhance the use of airspace and runways through improved air navigation aids and procedures. Since 2007, airline traffic delays nationwide have decreased as a result of reduced numbers of aircraft operations (down approximately 17% between 2007 and 2017), but, as airline travel increases in the future, flight delays and restrictions can be expected.

### **Capacity of the Airport**

In addition to any future constraints that may be imposed by the capacity of the national air traffic control system, future growth in airline traffic at the Airport will depend on the provision of capacity to accommodate aircraft flights and passengers. The forecasts presented later in this section were based on the assumption that neither available airfield capacity nor demand management initiatives will constrain traffic growth at the Airport. Furthermore, it is assumed that the forecast increases in enplaned passengers can be accommodated by existing terminal capacity in conjunction with the capital improvements planned through the end of the forecast period.

### **HIGH SPEED RAIL IN CALIFORNIA**

In November 2008, California voters passed a referendum authorizing the State to issue approximately \$10 billion in bonds to fund the first phase of a high-speed electric train system. The California High-Speed Rail Authority plans a rail network stretching from Sacramento and San Francisco, through the Central Valley, to Los Angeles and San Diego. In January 2015, construction of the initial part of the system began in the Central Valley. In April 2016, the California High Speed Rail Authority approved a revised business plan to construct the initial operating segment from the Central Valley north to Silicon Valley, a change from the original plan to build a southern segment to the San Fernando Valley. In June 2018, the California High Speed Rail Authority released a 2018 business plan to address the \$2.8 billion in cost overruns and the delays associated with buying the right-of-way for construction and increased litigation in 2018.\* Such rail service is not expected to be operational before the end of the forecast period considered in this Report.

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\*California High Speed Rail Authority, 2018 Business Plan, June 1, 2018, [www.hsr.ca.gov](http://www.hsr.ca.gov).

## **AIRLINE TRAFFIC FORECASTS**

The forecast of enplaned passengers at the Airport through FY 2025 was developed taking into account travel demand to and from the Bay Area, economic projections, trends in historical enplaned passengers, and other key factors likely to affect future passenger levels, all discussed in earlier sections.

### **Underlying Assumptions**

In developing the passenger forecast for this Report, it was assumed that, over the long term, airline traffic at the Airport will increase as a function of growth in the economy of the San Francisco CSA and continued airline competition. It was assumed that airline service at SFO will not be constrained by the availability of aviation fuel, the capacity of the air traffic control system or the Airport, charges for the use of aviation facilities, or government policies or actions that restrict growth. As noted in "Capacity of the Airport", it was assumed that the forecast increases in enplaned passengers could be accommodated by existing terminal capacity in conjunction with the capital improvements planned through the end of the forecast period.

From FY 2019 through FY 2025, passenger numbers at the Airport are forecast to increase gradually on the basis of the following assumptions:

- The economy of the Bay Area will increase at a rate comparable to or greater than that of the State and nation as a whole.
- The U.S. economy will experience sustained GDP growth averaging approximately 2.0% to 2.5% per year, as noted in the previous section "National Economic Outlook".
- United will continue to develop the Airport as its primary West Coast connecting hub and international gateway. United will gradually increase the number of destinations served and the frequency of flights from the Airport. Other airlines will continue to provide competitive nonstop service to and from large travel markets.
- Alaska Airlines and Virgin America, merged and rebranded as Alaska Airlines on April 25, 2018, will continue to use SFO as a West Coast hub. Following short-term adjustments in its network in FY 2019, Alaska is expected to gradually increase the number of destinations served and the frequency of flights from SFO.
- Any airline consolidation that may occur during the forecast period will not have a material impact on the level of passenger activity at the Airport.
- Neither Oakland nor Mineta San Jose international airports will attract sufficient domestic feeder traffic to support international gateway operations on more than a very limited scale, and international airline travel demand to and from the Bay Area will continue primarily through the Airport.
- Competition among the airlines serving the Airport will ensure the continued availability of competitive airfares, and SFO will continue to be served by a broad array of U.S. and foreign flag airlines, with no significant increase in airline concentration.

- There will be no major disruption of airline service or airline travel behavior as a result of airline bankruptcies or liquidations, international hostilities, terrorist acts or threats, or public health crises.
- Aviation fuel prices will increase in 2019, reflecting price increases since mid-2017 as U.S. and global oil inventories have decreased and global economic growth has improved.\* From FY 2019 through FY 2025, aviation fuel prices will increase at moderate rates but remain below the record prices reached in mid-2008, reflecting reduced consumption levels, technological advances, and the availability of previously unexplored resources.

## Enplaned Passengers

In FY 2019, the numbers of passengers enplaned at the Airport are estimated to increase to 29.0 million, an increase of 0.5% compared with the previous year, based on actual activity for July through October 2018, airline service announcements, and published airline schedules for November 2018 through June 2019. The FY 2019 estimate reflects the short-term restructuring of the combined airline of Alaska and Virgin America.

In FY 2025, total enplaned passengers are forecast to increase to 32.2 million, reflecting an average increase of 1.6% per year between FY 2018 and FY 2025, as shown on Figure 21 and in Table 16. In its most recent *Terminal Area Forecast* for the Airport (published online in January 2018), the FAA forecasts SFO's enplaned passengers to increase an average of 2.6% per year between FY 2018 and FY 2025.

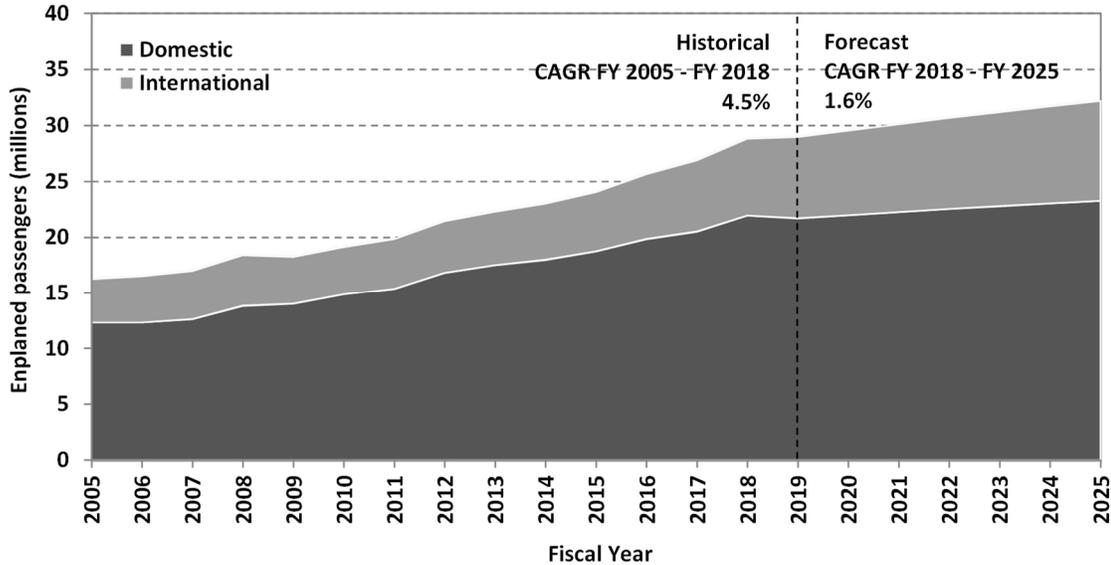
Domestic enplaned passengers at SFO are estimated to decrease to 21.7 million in FY 2019, a 1.2% decrease from the previous year, while international enplaned passengers are estimated to increase to 7.3 million, a 5.8% increase. Between FY 2018 and FY 2025, domestic passengers are forecast to increase an average of 0.8% per year, compared with an average increase of 3.8% per year in international passengers. The forecasts of domestic passengers reflect the socioeconomic forecasts for the Bay Area and airline plans for domestic service at the Airport presented earlier. The international passenger forecasts at SFO are driven by the continued development of airline service to markets in Asia, Australia/Oceania, Europe, and the Middle East.

As shown in Table 16, O&D passengers at SFO are forecast to increase an average of 1.6% per year between FY 2018 and FY 2025. The increasing base of connecting passengers reflects the ongoing role of the Airport as a primary connecting hub and international gateway in United's system. As shown in Table 16, the percent of connecting passengers at the Airport is forecast to average 21.3% through FY 2025.

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\*In its October 2018 *Short-Term Energy Outlook*, the U.S. Energy Information Administration projected crude oil prices, in terms of West Texas Intermediate oil, to average \$68 per barrel in 2018 and \$70 in 2019, down from \$93 per barrel in 2014, but up from \$43 and \$51 per barrel in 2016 and 2017, respectively.

Figure 21  
**Historical and Forecast Enplaned Passengers**  
 San Francisco International Airport



Notes: For Fiscal Years ending June 30.  
 CAGR = Compound annual growth rate.  
 This forecast was prepared on the basis of the information and assumptions given in the text. The achievement of any forecast is dependent upon the occurrence of future events which cannot be assured. Therefore, the actual results may vary from the forecast and the variance could be material.  
 Data for FY 2019 are estimated based on actual data for July through October 2018 and published airline schedules for November 2018 through June 2019.

Sources: Historical—San Francisco Airport Commission records.  
 Forecast—LeighFisher, November 2018.

### Landed Weight and Landings

From FY 2018 through FY 2025, aircraft landed weight at the Airport is forecast to increase an average of 1.3% per year to 43.4 million 1,000-pound units in FY 2025, as shown in Table 16. The forecast rate of growth in landed weight is lower than that for enplaned passengers, reflecting an assumed gradual increase in the enplaned passenger load factors and the average aircraft size, in terms of seats, at the Airport.

In recent years, the aircraft fleet mix at the Airport has changed, reflecting the cessation of United’s service with 30-seat turbo prop aircraft and replacement with larger capacity regional jets, thereby increasing the overall aircraft size and reducing the number of landings and the potential for Airport congestion. As shown in Table 16, total airline landings at the Airport are forecast to increase an average of 0.7% per year between FY 2018 and FY 2025, from 219,532 to 227,960.



Table 16 (page 2 of 2)  
**Airline Traffic Forecasts**  
 San Francisco International Airport

	Historical FY 2018	Forecast FY 2019	Forecast					CAGR	
			FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2018
Landed weight (thousands of 1,000-pound units)									
Passenger airlines									
Domestic									
Network airlines (a)	19,634	20,013	19,811	19,982	20,144	20,297	20,440	20,562	0.7%
Low-cost carriers	3,503	3,239	3,171	3,173	3,177	3,165	3,153	3,142	-1.5
Regional airlines/affiliates	<u>2,696</u>	<u>2,563</u>	<u>2,563</u>	<u>2,535</u>	<u>2,514</u>	<u>2,493</u>	<u>2,472</u>	<u>2,452</u>	-1.3
Subtotal—domestic	25,833	25,815	25,545	25,691	25,835	25,954	26,065	26,157	0.2
International	<u>12,517</u>	<u>13,078</u>	<u>13,848</u>	<u>14,312</u>	<u>14,743</u>	<u>15,174</u>	<u>15,588</u>	<u>15,971</u>	3.5
Total—passenger airlines	38,350	38,893	39,394	40,003	40,578	41,128	41,654	42,128	1.4
All-cargo airlines	<u>1,184</u>	<u>1,029</u>	<u>1,208</u>	<u>1,220</u>	<u>1,232</u>	<u>1,245</u>	<u>1,257</u>	<u>1,270</u>	1.0
<b>Total</b>	<b>39,534</b>	<b>39,922</b>	<b>40,602</b>	<b>41,223</b>	<b>41,810</b>	<b>42,373</b>	<b>42,911</b>	<b>43,397</b>	<b>1.3</b>
<b>Annual percent increase</b>	<b>5.2%</b>	<b>1.0%</b>	<b>1.7%</b>	<b>1.5%</b>	<b>1.4%</b>	<b>1.3%</b>	<b>1.3%</b>	<b>1.1%</b>	
Landings									
Passenger airlines									
Domestic									
Network airlines (a)	116,088	115,570	116,610	117,600	118,540	119,430	120,260	120,970	0.6
Low-cost carriers	25,181	23,320	22,850	22,860	22,890	22,800	22,720	22,640	-1.5
Regional airlines/affiliates	<u>41,849</u>	<u>41,750</u>	<u>42,570</u>	<u>42,110</u>	<u>41,760</u>	<u>41,410</u>	<u>41,070</u>	<u>40,750</u>	-0.4
Subtotal—domestic	183,118	180,640	182,030	182,570	183,190	183,640	184,050	184,360	0.1
International	<u>33,917</u>	<u>34,730</u>	<u>35,890</u>	<u>37,000</u>	<u>38,060</u>	<u>39,090</u>	<u>40,040</u>	<u>40,930</u>	2.7
Total—passenger airlines	217,035	215,370	217,920	219,570	221,250	222,730	224,090	225,290	0.5
All-cargo airlines	<u>2,497</u>	<u>2,530</u>	<u>2,550</u>	<u>2,580</u>	<u>2,600</u>	<u>2,620</u>	<u>2,650</u>	<u>2,670</u>	1.0
<b>Total</b>	<b>219,532</b>	<b>217,900</b>	<b>220,470</b>	<b>222,150</b>	<b>223,850</b>	<b>225,350</b>	<b>226,740</b>	<b>227,960</b>	<b>0.5</b>
<b>Annual percent increase (decrease)</b>	<b>5.6%</b>	<b>-0.7%</b>	<b>1.2%</b>	<b>0.8%</b>	<b>0.8%</b>	<b>0.7%</b>	<b>0.6%</b>	<b>0.5%</b>	

Note: For Fiscal Years ending June 30; CAGR = Compound annual growth rate.

The forecasts presented in this table were prepared using the information and assumptions given in the accompanying text. Inevitably, some of the assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances may occur. Therefore, there are likely to be differences between the forecast and actual results, and those differences may be material.

Data for FY 2019 are estimated based on actual data for July through October 2018 and published airline schedules for November 2018 through June 2019.

(a) Includes charter airlines.

Sources: Historical: San Francisco Airport Commission records.

Forecast: LeighFisher, December 2018.

### 3. FRAMEWORK FOR FINANCIAL OPERATION

The framework for the Airport Commission's financial operation is discussed in this section, which contains descriptions of the Bond Resolution, the Annual Service Payment, airline Lease and Use Agreements, commercial agreements and leases, and Special Facility Obligations.

#### THE BOND RESOLUTION\*

Pursuant to the City Charter, the City (acting through the Airport Commission) is authorized to issue airport revenue bonds subject to approval by the Board of Supervisors of the City. Bonds issued by the Commission are not general indebtedness of the City, but are limited, special indebtedness of the Commission payable solely from revenues received by the Commission from its airport facilities. The Commission has no taxing power.

On December 3, 1991, the Commission adopted Resolution No. 91-0210 (together with amendments and supplemental resolutions, the Bond Resolution) authorizing the issuance of San Francisco International Airport Second Series Revenue Bonds.

These Bonds are called "second series" Bonds to distinguish them from bonds of the Commission issued prior to December 1991. All bonds issued under prior bond resolutions are no longer outstanding, having been defeased or refunded, and the Airport Commission has covenanted not to issue additional bonds under the terms of those prior resolutions. The Commission's Second Series Revenue Bonds have the most senior lien on the revenues of the Commission of any outstanding debt, and the Commission has covenanted in the Bond Resolution not to issue any debt with a pledge of, or lien on, Net Revenues senior to that of the Second Series Revenue Bonds.

#### Rate Covenant

The Commission has covenanted in Section 6.04(a) of the Bond Resolution that it shall establish and at all times maintain rentals, rates, fees, and charges for the use of the Airport, and for services rendered by the Commission in connection with the Airport, so that:

- (i) Net Revenues in each Fiscal Year will be at least sufficient (a) to make all required payments and deposits in such Fiscal Year into the Revenue Bond Account. . .and (b) to make the Annual Service Payment to the City; and
- (ii) Net Revenues, together with any Transfer, in each Fiscal Year will be at least equal to 125% of aggregate Annual Debt Service with respect to the. . .[Bonds] for such Fiscal Year.

Net Revenues are defined in the Bond Resolution as Revenues less Operation and Maintenance Expenses. Revenues are defined as substantially all revenues from the operation of the Airport determined in accordance with generally accepted accounting principles (GAAP), with the exception of passenger facility charge (PFC) revenues (unless designated as such by the Airport Commission), Special Facility Revenues, and certain other excluded revenue categories. Operation and

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\*References in this Report to the Bond Resolution, the Lease and Use Agreements, and various leases and agreements entered into by the City and the Airport Commission are not intended to be comprehensive or definitive. Capitalized terms have the same meaning as defined in the Bond Resolution, except as otherwise noted herein.

Maintenance Expenses are defined as substantially all day-to-day expenses of operating the Airport as defined under GAAP, but exclude depreciation, amortization, debt service on Bonds and commercial paper, or expenses for which the Commission is paid or reimbursed from sources other than Revenues. The Transfer, for any given Fiscal Year, is the amount withdrawn from the Airport Commission's Contingency Account and deposited into the Revenues Account on the last day of the Fiscal Year (plus withdrawals for certain purposes from the Contingency Account during the Fiscal Year, net of deposits to the Account made from Revenues during the Fiscal Year).

### **Application of Revenues**

The City Charter caused the creation of the Commission's Airport Revenue Fund. The Bond Resolution established a Revenues Account and five other accounts within the Airport Revenue Fund. In addition to the accounts created within the Airport Revenue Fund, a Debt Service Fund and a Reserve Fund were also established for Bonds issued under the Bond Resolution. The Airport Revenue Fund is held by the City Treasurer, while the Debt Service Fund and the Reserve Fund are held by the Trustee.

On the first business day of each month, moneys in the Revenues Account are applied in the following order to accounts within the Airport Revenue Fund:

- (a) Into the Operation and Maintenance Account, an amount equal to one-twelfth (1/12) of the estimated Operation and Maintenance Expenses for the then current Fiscal Year or such other amount as may be required to provide for the payment of Operation and Maintenance Expenses due (the O&M Account is not pledged and shall not be applied to Bond payments).
- (b) Into the Revenue Bond Account, the amount necessary:
  - (i) To make all payments and deposits required to be made during such month into the Debt Service Fund and the Reserve Fund and the accounts therein in the amounts and at the times required by the Bond Resolution and by supplemental resolutions with respect to Bonds; and
  - (ii) To make all payments and deposits required to be made during such month into any funds and accounts created to pay or secure the payment of the principal or purchase price of or interest or redemption premium on any Subordinate Bonds in the amounts and at the times required by the resolutions and other agreements authorizing the issuance and providing the terms and conditions thereof.
- (c) Into the General Obligation Bond Account, amounts, if any, required with respect to general obligation bonds of the City issued for Airport purposes. (The City does not have General Obligation Bonds outstanding for Airport purposes, nor does it anticipate issuing General Obligation Bonds for Airport purposes in the future.)
- (d) Into the General Purpose Account, an amount at least equal to the payments estimated to be made from the account during such month. Moneys in the General Purpose Account may be used for any lawful purpose of the Commission.

- (e) Into the Contingency Account, such amounts, if any, as the Commission may determine from time to time. Contingency Account balances may be used to pay Operation and Maintenance Expenditures, to pay Bond debt service, and to fund Airport capital expenditures; but only when monies from other sources for such purposes are not available.

The application of Revenues in accordance with the Bond Resolution is illustrated on Figure 22.

### **Additional Bonds**

Whenever the Commission wishes to issue additional Bonds that are not refunding Bonds, the Commission is required by Section 2.11 of the Bond Resolution to file with the Bond Trustee either:

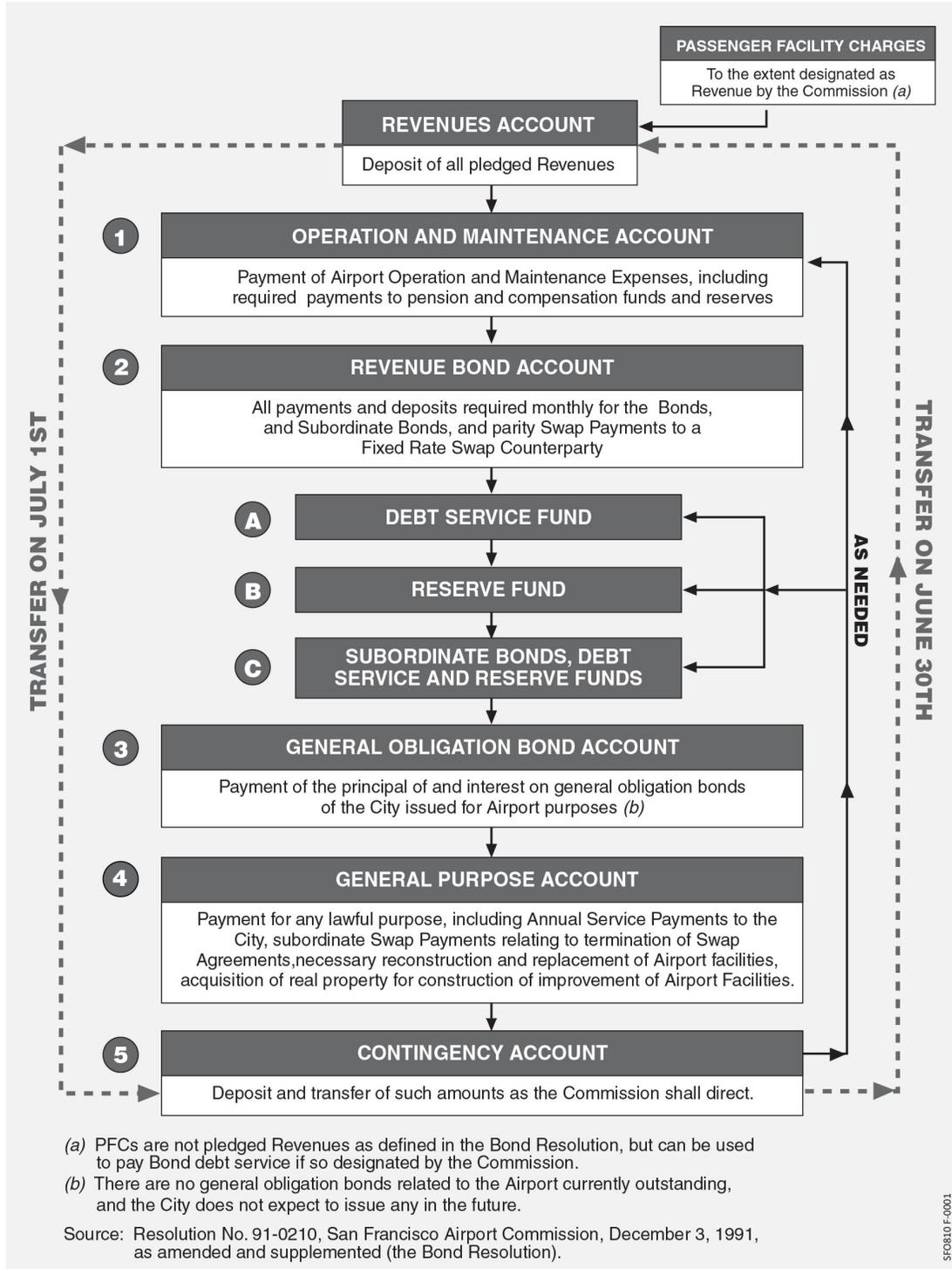
- (a) A certificate of an Airport Consultant dated within 30 days prior to the date of delivery of the Bonds stating that:
  - (i) For the period, if any, from and including the first full Fiscal Year following the issuance of such Bonds through and including the last Fiscal Year during any part of which interest on such Bonds is expected to be paid from the proceeds thereof, projected Net Revenues, together with any Transfer, in each such Fiscal Year will be at least equal to 1.25 times Annual Debt Service; and
  - (ii) For the period from and including the first full Fiscal Year following the issuance of such Bonds during which no interest on such Bonds is expected to be paid from the proceeds thereof through and including the later of: (A) the fifth full Fiscal Year following the issuance of such Bonds, or (B) the third full Fiscal Year during which no interest on such Bonds is expected to be paid from the proceeds thereof, projected Net Revenues, together with any Transfer, if applicable, in each such Fiscal Year will be at least sufficient to satisfy the rate covenants set forth in subsection (a) of Section 6.04 of the Bond Resolution;

or

- (b) A certificate of an Independent Auditor stating that Net Revenues together with any Transfer, in the most recently completed Fiscal Year were at least equal to 125% of the sum of (i) Annual Debt Service on the . . . [Bonds] in such Fiscal Year, plus (ii) Maximum Annual Debt Service on the Bonds proposed to be issued.

For the purpose of paragraphs (a) and (b) above, the amount of any Transfer shall not exceed 25% of Maximum Annual Debt Service in such Fiscal Year.

Figure 22  
**Application of Revenues**  
 Airport Revenue Fund



Refunding Bonds may be issued by the Commission under Section 2.12 of the Bond Resolution, but:

...only (i) upon compliance with the conditions set forth in Section 2.11 of the Bond Resolution, or (ii) if the Commission shall deliver to the Trustee a certificate of an Airport Consultant or Financial Consultant to the effect that (A) aggregate Annual Debt Service in each Fiscal Year with respect to all . . . [Bonds] to be Outstanding after the issuance of such refunding Bonds shall be less than aggregate Annual Debt Service in each such Fiscal Year in which . . . [Bonds] are Outstanding prior to the issuance of such refunding Bonds, and (B) Maximum Annual Debt Service with respect to all . . . [Bonds] to be Outstanding after issuance of such refunding Bonds shall not exceed Maximum Annual Debt Service with respect to all . . . [Bonds] Outstanding immediately prior to such issuance.

### **Subordinate Debt**

Section 2.13 of the Bond Resolution permits issuance of “. . . Subordinate Bonds with a pledge of, lien on, and security interest in Net Revenues which are junior and subordinate to those of the Bonds, whether then issued or thereafter to be issued.”

On May 20, 1997, the Commission adopted Resolution No. 97-0146 (the Subordinate Debt Resolution) authorizing the issuance of San Francisco International Airport Second Series Subordinate Revenue Bonds (the Subordinate Bonds). The Commission is authorized, pursuant to the Subordinate Debt Resolution as amended, to issue Subordinate Commercial Paper Notes in an amount not to exceed a total outstanding principal balance of \$500 million.

### **Letters of Credit Supporting the Commercial Paper Program**

The Commission has obtained four Letters of Credit for a total of \$500 million in principal amount to support the Subordinate Commercial Paper program issued under the terms of the Subordinate Debt Resolution, which expire on various dates between May 2019 and June 2022. The Airport Commission expects to either renew these Letters of Credit when necessary or, if not renewed, obtain replacement Letters of Credit. As of January 1, 2019, the Commission had approximately \$436 million of Commercial Paper Notes outstanding. The Commission expects to repay approximately \$432 million of the outstanding Commercial Paper Notes with a portion of the proceeds of the 2019 Bonds.

### **Outstanding Bonds**

The Commission had \$6.245 billion of Bonds outstanding as of December 31, 2018. Of this amount, \$567 million bears interest at variable rates pursuant to the Bond Resolution and \$5.678 billion bears interest at fixed interest rates to maturity. The last maturity date on the Outstanding Bonds is in FY 2048, except for the 2018B/C Bonds, which bear interest at variable rates and have mandatory sinking fund requirements that commence in FY 2027 and extend through FY 2058.

### **Proposed and Future Bonds**

The Airport Commission expects to issue approximately \$1.5 billion in principal amount of new money 2019 Bonds which, taken together with an original issue premium, provides \$1.3 billion of net proceeds to be applied to project costs in the Capital Improvement Plan or for the repayment of outstanding Commercial Paper Notes balances (with the balance to provide for a deposit to the Contingency Account, reserve funding, capitalized interest, and issuance costs).

As described in Section 4, the Commission further expects to issue Future Bonds after the proposed 2019 Bonds to fund the remaining Capital Improvement Plan costs. Those bonds anticipated to be issued through FY 2024 (subsequent to the issuance of the 2019 Bonds) are collectively referred to as the Future Bonds. No Bonds are assumed to be issued in FY 2025. The financial analysis presented in Section 5 of this Report reflects the effect on the Commission's finances of the 2019 Bonds and the Future Bonds.

Additionally, the Commission may refund certain currently outstanding Bonds during the forecast period (including as part of the 2019 Bond issuance), depending on financial market conditions and the ability of the Commission to lower its debt service payments. The Commission may pursue refundings for debt service savings or for other reasons in compliance with the Commission's debt policy. The effect of such potential Bond refundings (including any refunding Bonds that are issued as part of the current transaction) has not been included in the financial analysis.

### **THE ANNUAL SERVICE PAYMENT**

The City Charter provides that a portion of the nonairline revenues generated at the Airport each Fiscal Year can be transferred into the General Fund of the City. This transfer, the Annual Service Payment, is computed under the airline Lease and Use Agreements (described below) as the greater of: (a) 15% of "Concession Revenues" as defined in the Lease and Use Agreements, or (b) \$5 million. The Annual Service Payment to the City constitutes full satisfaction of all obligations of the Airport, the Commission, and the airlines for any and all indirect services provided each year by the City to the Airport and the Commission. Direct services provided by the City to the Airport are paid for as received and are reflected in the financial statements of the Commission as an operating expense.

The document titled "Policies and Procedures Concerning the Use of Airport Revenue", adopted by the FAA in 1999, cites the Commission's Annual Service Payment to the City's General Fund as an example of a lawful revenue diversion that is "grandfathered", as such term is defined in that document. As described later, for purposes of the financial forecasts described in this Report, it was assumed that the Annual Service Payment will continue to be grandfathered and that the Commission will continue to make the Annual Service Payment.

### **LEASE AND USE AGREEMENTS**

The City (acting through the Airport Commission) and most of the airlines serving the Airport have entered into Lease and Use Agreements, effective July 1, 2011 and expiring June 30, 2021, which govern, among other things, the procedures and formulas for the periodic setting of terminal rental rates and landing fees for the use of the Airport by the airlines serving the Airport. Airlines representing substantially all of the passenger throughput of the Airport are signatory to the Lease and Use Agreements. Airlines that are not signatory to the Lease and Use Agreements or that operate on an itinerant basis may use the Airport under the terms of a 30-day operating permit and pay landing fees at a rate 25% higher than the signatory rates.

Upon the expiration of the Lease and Use Agreements, the Commission will have various options including (a) extending the current agreements, (b) negotiating new agreements with the airlines, (c) entering into month-to-month agreements under the holdover provisions of the current Lease and Use Agreements, or (d) not entering into new agreements and instead opting to set airline rates and charges at the Airport by resolution. In any event, the Commission intends to establish rates and

charges at the Airport so as to comply with the rate covenant provision of the Bond Resolution. The Commission and the airlines have not yet initiated discussions regarding this topic.

For purposes of this Report, it was assumed that the residual airline ratemaking methodology currently in effect would remain in effect beyond FY 2021, under the terms of successor agreements with the airlines, and that the Annual Service Payment described above would continue to be made to the City's General Fund in accordance with the arrangements described in the current Lease and Use Agreements.

### **Terminal Rentals and Landing Fees**

The City Administrative Code states that the Commission has the power to fix, change, and adjust rates and charges for the furnishing of services at the Airport. This includes landing fees and terminal rentals, which are set following the methodology agreed upon in the Lease and Use Agreements.

The Lease and Use Agreements provide that, among other things, the airlines are to pay landing fees and terminal rentals each year to allow the Commission to recover the difference between Commission expenses and Commission nonairline revenues (i.e., a residual airline rate-making methodology).

The Commission expenses for any given Fiscal Year include the sum of the following:

- Allocated direct and indirect Operation and Maintenance Expenses
- Equipment and Small Capital Outlay
- Debt service requirements, including amounts required:
  - For debt service on Bonds
  - For deposits to the Contingency Account
  - To ensure compliance with the Rate Covenant (if any)
  - To be paid under credit and liquidity facilities, interest rate swaps, and other agreements entered into in connection with Airport debt
  - For debt service on Special Facility Bonds, to the extent such Special Facility Bonds are further secured by and payable from Revenues, which must be authorized by a Majority-in-Interest (MII) of the airlines (none of the Commission's currently outstanding Special Facility Bonds are further secured by Revenues)
  - Other subordinate contractual or debt-related payments
- The Annual Service Payment to the City

The Commission's nonairline revenues include concession revenues, revenues from other sales and fees, fixed or cost-recovery rentals, interest income, and those PFC revenues designated as Revenues.

The Commission computes, in accordance with procedures set forth in the Lease and Use Agreements, the landing fee rates and the terminal rental rates for the ensuing Fiscal Year using budgetary and estimated information for the Airport Cost Centers (noted below). Not less than 60 days prior to the start of a Fiscal Year, the airlines are notified of the proposed rates, rentals, and fees for the ensuing year. These proposed rates, rentals, and fees are subject to review by, but not the approval of, the airlines at a meeting with representatives of the Commission, as provided for in Article 5 of the Lease and Use Agreements. Rates, rentals, and fees become effective July 1 each year – the first day of the City’s Fiscal Year.

Additionally, if at any time during a Fiscal Year, the actual expenses (including debt service) are projected by the City to exceed by 10% or more the actual revenues in certain areas as defined in the Lease and Use Agreements, then the Commission may, after consultation with the airlines and after using commercially reasonable efforts to reduce expenses, increase landing fees and/or terminal rental rates following a 60-day notification period. The airlines are required to pay such additional landing fees and/or terminal rentals, which shall equal the projected deficiency, over the remaining months of the then-current Fiscal Year.

At the end of each Fiscal Year, the amount the airlines should have paid in landing fees and terminal rentals to meet the requirement of the Rate Covenant is compared with the amount actually paid in such Fiscal Year. If there is an over-collection, as provided for in the Lease and Use Agreement the Airport Commission can apply such unearned aviation revenue balances to reduce future airline rates and charges, and when used for this purpose in future years will be recognized as part of Revenues.

### **Airport Cost Centers**

The Commission allocates both costs and revenues to five Airport Cost Centers to calculate the landing fee rate and terminal rental rates to be charged to the airlines in the ensuing Fiscal Year:

- **Airfield Area**, which includes all runways, taxiways, ramps, aprons, landing areas, adjacent infield areas, and related support facilities (e.g., perimeter dike, drainage pumping stations, field lighting, navigational aids, aircraft rescue and fire-fighting (ARFF) support facilities, fire and rescue watercraft, boathouses and related support facilities, and cart roads).
- **Airport Support Area**, which includes all areas and facilities that support airline functions (e.g., hangars, aircraft maintenance facilities, cargo facilities, fuel farms, flight kitchens), Airport support, City/State/federal installations, fixed base operators (FBOs), airline and certain other offices outside the Terminal Area, airline and Commission employee parking, sewage/waste treatment plants, detention ponds, other related facilities, and all unleased land not included in another cost center.
- **Terminal Area**, which includes all areas within the passenger terminals of the Airport (e.g., concourses, boarding areas, public circulation space, pedestrian bridges, entrance areas to the underground walkways to the parking garages, mechanical/utility areas, lobbies, offices, concession areas, Commission facilities, baggage facilities, and storage areas).
- **Groundside Area**, which includes all roadways, parkways, courtyards, fences, walks, bridges, culverts, public parking lots, garages, the SFO Hotel, service stations, shuttle bus service (nonairline), the consolidated rental car facility, the AirTrain system (including

pedestrian bridges to the terminals), leased commercial unimproved areas, paved areas, and buildings/structures other than terminals and Airport/government installations.

- **Utilities Area**, which includes the facilities for water, gas, electricity, and telecommunications and information systems, including distribution systems. The net cost of the Utilities Area is allocated to the other four Airport Cost Centers.

The Lease and Use Agreements also identify a sixth Airport Cost Center, the West of Bayshore Area, which consists of undeveloped land that is not relevant to the rate calculations until such time as it might be developed by the Commission. The Commission does not expect to develop the West of Bayshore Area in the foreseeable future and, in the meantime, any associated costs incurred are included in the Groundside Area.

### **Airline Review of Capital Improvements**

The Lease and Use Agreements provide for review of proposed Airport capital improvements by the airlines that are signatory to the agreements. A “capital improvement” is defined as any item of capital expenditure with a cost exceeding \$626,257 in FY 2009 dollars (as adjusted annually pursuant to the Lease and Use Agreements) and a useful life of more than 3 years.

An MII of the airlines signatory to the Lease and Use Agreements may require the Commission to defer a capital improvement for 6 months so that such airlines can present their opposition to the improvement. In the absence of MII concurrence by the airlines, the Commission may undertake such capital improvement after the end of the 6-month period. The following three types of capital improvements are not subject to the MII review process: (1) those required by a federal or State agency having jurisdiction over Airport operations, (2) those financed by Special Facility Bonds, or (3) an emergency that, if not made, would result in the closing of the Airport within 48 hours.

Pursuant to the terms of the Lease and Use Agreements, the Commission is to use commercially reasonable efforts to finance all capital improvements through grants, TSA funding, passenger facility charges, or the issuance of airport revenue bonds. The Commission may budget and spend up to \$4,200,000 (measured in FY 2009 dollars, as adjusted pursuant to the Lease and Use Agreements) per year from its revenues on capital improvements, or a greater amount, as may be agreed to by a MII of the airlines.

The Commission will satisfy the requirement for airline review prior to spending 2019 Bond proceeds on project costs, where applicable. Some projects in the Capital Improvement Plan will require airline review prior to the expenditure of proceeds from the subject Bonds. However, the Commission has received airline review of qualifying projects in excess of the proposed 2019 Bond funding amounts. Further, additional airline review of projects is expected to be completed in summer 2019.

### **COMMERCIAL AGREEMENTS, LEASES, AND PERMITS**

The Airport Commission enters into commercial agreements and leases for automobile parking operations, rental car facilities, duty free operations, general merchandise concessions, and food and beverage operations, among other services, and issues permits for ground transportation providers, among other services.

## **Automobile Parking**

The public automobile parking facilities at the Airport are operated for the Commission by New South Parking – California under a management contract with a term that expires on June 30, 2023. The Commission periodically reviews and adjusts parking rates, receives all revenues, and pays all costs of operation and maintenance of the facilities. The Commission does not impose a privilege fee on the off-Airport parking operations of private companies, but does impose a trip fee for the shuttle bus operations of off-Airport parking companies.

## **Rental Cars**

By resolution of the Commission, all on-Airport rental car transactions must take place at the consolidated rental car facility, and all off-Airport rental car companies must pick up and drop off their customers at that facility. No rental car counters are located in the terminal complex.

The Commission executed rental car agreements with five companies that operate nine rental car brands on-Airport that expired on December 31, 2018. These nine rental car brands are Alamo, Avis, Budget, Dollar, Enterprise, Fox, Hertz, National, and Thrifty. On October 16, 2018, the Commission approved new five-year agreements with two-year extension options, to be effective upon approval by the Board of Supervisors in 2019, with four companies that operate nine rental car brands. All brands will remain the same, except that Fox will be replaced by Sixt Rent a Car. The expired agreements will continue on a month-to-month holdover basis until the new agreements are approved by the Board of Supervisors and fully executed. Fox has challenged the Commission's action awarding the new agreements. According to the Commission, it will vigorously defend this litigation.

The concession agreements require a concession fee equal to the greater of 10% of gross receipts or a stated minimum annual guarantee (MAG). The aggregate MAG for the on-Airport rental car companies will be \$47.2 million under the new agreements, compared to total concession fees of \$46.0 million in FY 2018. Additionally, the on-Airport rental car companies pay facility rent at the consolidated rental car facility.

The Commission imposes a fee on rental car customers per rental contract for transportation between the terminal complex and the consolidated rental car facility on the AirTrain system. The rental car companies collect this transportation fee (which is currently \$18.00 per rental car contract) to reimburse the Commission for a portion of the cost of operating and maintaining the AirTrain system. Revenues from the transportation fee are presented under the Net Sales and Services category of Exhibit F.

## **Transportation Network Companies**

Effective October 2014, the Commission implemented a pilot program allowing transportation network companies (TNCs) including Uber, Lyft, and others to pick up and drop off passengers on Airport property including at the terminal curbsides. The pilot program ended on February 29, 2016, and a new program involving non-exclusive operating permits for all TNCs operating at the Airport was started. Under the terms of these permits, TNC operators pay a per-trip fee for each pick-up and drop-off transaction at the Airport. The TNC trip fee, set annually by the Commission, was \$3.85 from the start of the pilot program through June 30, 2016, and \$3.80 from July 1, 2016 through June 30, 2018.

Effective on July 1, 2018, the fee structure was adjusted. A per trip fee of \$3.60 was initiated for TNC trips as well as other commercial vehicle trips (excluding taxi) that do not access the terminal curbside. This fee covers both high occupancy vehicle trips (defined as 7 or more passengers) and low occupancy trips (including TNCs as well as limousines). TNCs and other low occupancy vehicle modes that do access the terminal curbside are subject to an additional curbside access premium fee of \$1.40 per trip (i.e., \$5.00 per trip in total).

This updated fee structure was initiated by the Commission to alleviate roadway and terminal curbside congestion, giving low occupancy vehicles (except taxis) an option to use the 5<sup>th</sup> (upper) level of the domestic parking garage for pick-ups and drop-offs at a reduced rate. The Commission will continue to monitor curbside congestion and may make additional changes to the TNC fee structure.

The Commission's ground transportation fee structure reflects cost recovery principles, whereby the Commission seeks to recover allocable costs of these activities through revenues from ground transportation users of the Airport.

### **Duty Free**

The Commission entered into a new concession agreement with DFS Group L.P. (DFS) covering 42,581 square feet of space in the ITC for the exclusive right to sell duty free merchandise and the non-exclusive right to sell luxury merchandise on a duty paid basis\*. The agreement was effective on October 1, 2018, and extends for a development term during which tenant facilities will be refurbished and developed, plus an operating term of up to 14 years. This lease will be automatically extended in the event that the Airport opens a single consolidated security checkpoint in the International Terminal during the 14-year lease term, by an amount of time sufficient to ensure that DFS will have five years of operation in the reconfigured retail plaza located past the consolidated checkpoint.

The new agreement with DFS provides for the payment of concession fees equal to the greater of a MAG or a percentage of gross sales. During the development term through September 30, 2019, DFS will pay 30% of the gross sales to the Commission. The MAG in the initial year after the development term is \$42 million, and is subject to annual upward adjustment. The percentage rent is calculated as 45.8% of the first \$100 million in gross sales from the duty free operations, 41.8% of the next \$60 million of sales, and 30% of gross sales in excess of \$160 million. DFS is required to make a minimum investment of \$46.3 million in the development of retail facilities.

### **Retail**

The Commission provides for retail concessions on a duty paid basis through agreements with multiple vendors, including DFS, as noted above. All of these agreements have a MAG provision. The Commission continues to review and improve its retail concession activities as opportunities arise. The terms of many of the retail concessionaire agreements result in concession fees equal to the MAG. The domestic terminals currently have 40 retail outlets and the international terminal has 20 retail outlets (including 8 duty free outlets).

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\*The DFS agreement also includes 3,714 square feet of duty free retail space in Terminal 1, which may also have some items for sale on a duty paid basis. The DFS agreement encompasses 46,295 square feet in total.

## **Food and Beverage**

Food and beverage operations are provided by multiple vendors throughout the terminals under different agreements. These agreements provide for a rental payment equal to the greater of a MAG or a percentage of gross sales. The domestic terminals currently have 48 restaurants and the international terminal has 18 restaurants.

## **Other Commercial Leases and Agreements**

The Commission has entered into other terminal area concession agreements for advertising, banking, foreign currency exchange, and vending machines, among other services. These agreements provide for a rental payment equal to the greater of a MAG or a percentage of gross sales. Among them are an agreement with Travelex to provide currency exchange services in retail stores and automated teller machines at the Airport, which has a MAG of \$5.4 million and extends through August 31, 2020.

The Commission awarded an eight year advertising agreement with Clear Channel Airports, effective January 1, 2015, with an annual MAG of \$10.0 million (as adjusted pursuant to the lease). The Commission also has numerous leases, agreements, and permits with airlines and others for various types of rentals and other activities at the Airport, including, among others, ground transportation, hangar rentals, cargo handling, FBO facilities, aviation support, airline employee parking, and federal government activities.

## **SPECIAL FACILITY OBLIGATIONS**

The Commission, pursuant to Section 2.16 of the Bond Resolution, may designate an existing or planned facility as a "Special Facility," and provide that revenues earned by the Commission from such Special Facility are "Special Facility Revenues" and are not be included in Revenues. Under certain conditions, the Commission may issue Special Facility Bonds to fund such Special Facilities. Debt service on Special Facility Bonds is payable from and secured by the associated Special Facility Revenues and not from or by Net Revenues of the Commission.

### **Special Facility Obligations Related to Fueling Facilities**

As of January 2, 2019, \$58.1 million in principal amount of SFO Fuel Special Facility Bonds was outstanding. These bonds financed jet fuel and gasoline delivery facilities serving domestic and international airlines and ground service equipment users at the Airport. Rent payable by SFO FUEL COMPANY LLC is pledged to repay these bonds.

The Commission is currently in the process of issuing additional Special Facility Bonds to: (1) finance approximately \$52.2 million of fuel system upgrades at the Airport, (2) reimburse SFO FUEL COMPANY LLC for certain capital improvements it has already made to the fuel facilities at the Airport, and (3) refinance all currently outstanding Special Facility Bonds related to the fuel system. This transaction is expected to close in January 2019. The cost estimate for implementing these fuel system upgrades may be refined (and the size of the Special Facility Bond issuance adjusted accordingly) as this Special Facility Bond transaction is completed.

### **Special Facility Obligations Related to the SFO Hotel**

The Airport Commission has designated the new SFO Hotel as a Special Facility, and the Airport Commission issued \$260 million of Special Facility Bonds in June 2018 to finance the construction of

the SFO Hotel. Simultaneously, the Airport Commission issued Second Series Revenue Bonds (the 2018B/C Bonds) to purchase those Special Facility Bonds and to finance the construction of the adjacent AirTrain station. The full amount of the Special Facility Bonds issued for the SFO Hotel remains outstanding.

For purposes of this Report it was assumed that the amount of Revenues from the SFO Hotel recognized under the Bond Resolution would be equivalent to the annual debt service on these Special Facility Bonds.

## 4. AIRPORT CAPITAL IMPROVEMENT PLAN AND FUNDING

This section includes summaries of the Airport Commission’s Capital Improvement Plan and the funding sources for the Capital Improvement Plan.

### SUMMARY OF THE CAPITAL IMPROVEMENT PLAN

Airport staff periodically develops and updates a plan for the redevelopment, improvement, and expansion of Airport facilities, which is reviewed by the airlines and approved by the Airport Commission. The plan is submitted to the Airport Commission periodically and approved based on anticipated facility needs, current and expected future airline traffic, available funding sources, airline feedback, and project priority. The Commission-approved plan is included in the City’s two-fiscal-year capital budget, which is approved by the City’s Board of Supervisors.

On September 5, 2017, the Airport Commission adopted a resolution approving a \$7.4 billion capital improvement plan for the Airport (the Capital Improvement Plan). While the Capital Improvement Plan total is unchanged since it was approved by the Airport Commission, project costs for certain projects within the plan, as well as the timing of development costs for some projects, has changed. The Capital Improvement Plan discussed in this Report reflects the most up-to-date information on project costs and implementation timing as of November 1, 2018.

The Capital Improvement Plan reflects completion costs of certain currently ongoing projects, and estimated total costs for projects yet to be initiated. A total of \$2.68 billion was funded through the date of issuance of the 2019 Bonds, including from the proceeds of the Commission’s Series 2016B/C Bonds, Series 2017A/B/C Bonds, and Series 2018D/E/F Bonds, which is included in the Capital Improvement Plan spending total of \$7.4 billion noted above.

The approved Capital Improvement Plan reflects the combination of two distinct categories of projects:

- The “Ascent Program – Phase 1”, which represents \$7.3 billion of capital spending through FY 2026 (including program reserves), the majority of which is expected to occur prior to FY 2024. The Ascent Program – Phase 1 encompasses 49 projects that collectively address aging infrastructure, as well as the passenger and airline growth-related needs of the Airport.
- “Infrastructure Projects Plan”, which represents an additional \$122 million of spending through FY 2021.

Table 17 summarizes the overall Capital Improvement Plan, and reflects the most up-to-date information on project costs, funding, and implementation timing.

Commission staff is currently in the process of updating the Capital Improvement Plan, but these updates have not yet been presented to or approved by the Airport Commission. Over 40 new projects costing approximately \$380 million have been proposed for inclusion in an updated Capital Improvement Plan, all in the Infrastructure Projects Plan project category, and these projects are currently under consideration by Commission staff. Additionally, projects previously approved in the Infrastructure Projects Plan category may have increased budgets, expected to be approximately \$20

million. Commission staff expects to present an updated Capital Improvement Plan to the Airport Commission for approval in February 2019. These additional projects and increased project budgets are not reflected in the financial forecasts described in this Report.

Before implementing a capital project, Airport Commission management is required to:

- Obtain approvals from the Airport Commission
- Obtain, for certain projects, a finding of fiscal feasibility by the City Board of Supervisors (certain actions of which are subject to approval or veto by the Mayor of San Francisco)
- Obtain applicable environmental approvals, which may include actions by the Airport Commission, the City Board of Supervisors, or both, and
- Conduct a consultation with the airlines signatory to the Lease and Use Agreements when required by the terms of those Agreements

Table 17  
**Summary of Capital Improvement Plan Spending**  
San Francisco International Airport

(\$ in millions)	Prior funding	2019 Bond proceeds	Future funding for FY 2019 to FY 2023	Subtotal through FY 2023	Funding for FY 2024 to FY 2026	Total
	[A]	[B]	[C]	[D=A+B+C]	[E]	[F=D+E]
<b>Ascent Program - Phase 1</b>						
Project costs	\$ 2,671	\$ 1,313	\$ 2,802	\$ 6,786	\$ 15	\$ 6,801
Program reserves	-	-	468	468	-	468
Subtotal - Ascent	\$ 2,671	\$ 1,313	\$ 3,271	\$ 7,255	\$ 15	\$ 7,270
Infrastructure Projects Plan	9	3	110	122	-	122
Capital Improvement Plan total	\$ 2,680	\$ 1,316	\$ 3,381	\$ 7,377	\$ 15	\$ 7,392

Note: As of November 1, 2018, a total of \$271 million of the \$739 million Ascent Program Reserve originally established has been applied to project costs, with approximately an additional \$65 million expected to be applied in the near future.

Proceeds of the 2019 Bonds will be spent on construction costs of projects that either do not require environmental review or have already undergone all necessary environmental review and received Commission approval to proceed. The Commission has also presented most of these projects to the airlines as part of the FY 2018 Capital Improvement Plan update. Seven projects were not presented for MII review because they fall below the spending threshold and an additional two projects (related to energy and fire systems) are likely to be presented to the airlines in summer 2019. In accordance

with the Lease and Use Agreements, projects will receive formal airline MII review before monies are spent on those projects.

For purposes of this Report it was assumed that all approvals necessary for the implementation of the projects in the Capital Improvement Plan would be obtained by the Commission in accordance with the project implementation schedules reflected in Exhibit A-1.

The scope, phasing, and timing of implementation of some projects in the Capital Improvement Plan are subject to further refinements depending on aviation activity trends and other Airport operational factors.

The forecast period extends through FY 2025, which reflects the full impact on revenues and expenses of the currently approved Capital Improvement Plan. This Report assumes that the Ascent Program Reserve is fully utilized. To the extent that the Ascent Program Reserve is not fully utilized, Commission staff may request Airport Commission approval to apply the unused Ascent Program Reserve budget to future capital projects.

While there is no specific plan for a subsequent phase to the Ascent Program – Phase 1, in 2016 the Commission completed a recommended Airport Development Plan (ADP), which is currently undergoing environmental review. The recommended ADP provides a long-term planning framework to guide future Airport development to cost effectively accommodate up to approximately 71 million annual passengers. The recommended ADP, as modified during environmental review, will result in the identification of a range of potential additional capital projects, one or more of which may be designated as the “Ascent Program – Phase 2” (or similar title) and added to future versions of the Commission’s capital improvement plan, if and when the Airport Commission deems that they are warranted to address traffic growth and other factors. The recommended ADP is not included in the Ascent Program – Phase 1 or the Capital Improvement Plan, nor is it reflected in the financial forecasts included in this Report.

### **Projects in the Capital Improvement Plan**

The major projects in the Ascent Program – Phase 1 portion of the Capital Improvement Plan are summarized as follows, with the costs shown reflecting the entire project cost, including amounts funded before FY 2019, where applicable:

- ***Terminal 1 projects:*** Redevelopment of Terminal 1, including a new architectural building envelope (encompassing the Terminal 1 Center and Terminal 1 North segments of the building), construction of a new 25-gate Boarding Area B (19 replacement gates and 6 new gates), a new consolidated baggage handling system and checked baggage screening system, secure connectors to Boarding Areas A and C, a sterile corridor to the International Terminal, and the relocation of certain taxilanes adjacent to the building. (Total cost: \$2.38 billion.)
- ***Terminal 3 redevelopment projects:*** Comprehensive renovation of the portion of Terminal 3 known as Terminal 3 West including seismic stability improvements and building systems upgrades, a sterile connector to the International Terminal, and Boarding Area F gate capacity enhancements. (Total cost: \$1.23 billion.)
- ***International Terminal refresh projects:*** Upgrades and improvements to parts of the International Terminal to increase operational efficiency. (Total cost: \$313 million.)

- **Courtyard 3 connector:** Construction of a secure passenger connector between Terminal 2 and Terminal 3, and development of a new office block above the connector for use by Commission staff and third-party tenants. (Total cost: \$254 million.)
- **SFO Hotel:** Development of a new 351-room four-star on-Airport hotel near the International Terminal. (Total cost: \$240 million.)
- **AirTrain extension:** Construction of an extension to the AirTrain system from the Airport Rental Car Center to the long-term parking facilities, including construction of a new AirTrain station at Lot DD and construction of a new AirTrain station adjacent to the SFO Hotel. This project has yet to receive all required environmental approvals. (Total cost: \$219 million.)
- **Security improvements:** Strengthening of Airport-wide security with various improvements, including implementation of an enhanced perimeter intrusion detection system, CCTV systems, and other security system upgrades. (Total cost: \$179 million.)
- **Energy improvement program (Net Zero):** Implement energy efficiency improvements and on-site renewable energy systems related to various projects in the Capital Improvement Plan. (Total cost: \$176 million.)
- **New long-term public parking garage:** Development of a second long-term parking facility with 3,600 spaces, comprised of a new garage with 3,000 spaces and improvements to an existing parking area with 600 surface spaces (Lot DD), to accommodate expected growth in Airport parking demand. (Total cost: \$161 million.)
- **Air Traffic Control Tower program:** Demolition of the seismically unsound old tower in accordance with FAA requirements, and completion of the construction of the new Air Traffic Control Tower. (Total cost: \$134 million.)
- **Technology improvement projects:** Upgrades, replacements, and additions of new telecommunications systems infrastructure to enhance the delivery and connectivity of business services around the Airport. (Total cost: \$128 million.)
- **Waste water system improvements:** Construction of a new industrial waste treatment plant, installation of a new recycled water system for reclaimed water, upgrading of water pipes and infrastructure, and improvements to other supporting infrastructure. (Total cost: \$126 million.)
- **Superbay renovation projects:** Renovation of the existing Superbay facility (a large maintenance hangar) to address ageing infrastructure; improvement including systems upgrades and environmental abatement. (Total cost: \$113 million.)

In addition to these projects, the Ascent Program – Phase 1 portion of the Capital Improvement Plan includes a total of \$1.29 billion of spending associated with other projects around the Airport, including airfield, terminal, and landside facilities.

The Capital Improvement Plan also includes an Ascent Program Reserve, which was originally established at \$739 million. The Ascent Program Reserve is used to address unanticipated needs of

projects within the Ascent Program when they arise. The Airport Commission uses the Ascent Program Reserve only after all other available cost mitigation methods have been considered. As of November 1, 2018, \$271 million of the Ascent Program Reserve has been applied to individual projects, reducing the total remaining reserve available to \$468 million. A further \$65 million of the Ascent Program Reserve is forecast by the Commission to be transferred to individual project costs in the near future, which would further reduce the Program Reserve balance to \$403 million.

The Infrastructure Projects Plan component of the Capital Improvement Plan includes \$122 million of total spending, primarily related to support systems, miscellaneous airfield improvements, energy and efficiency improvement, and equipment.

The scope, phasing, and timing of implementation of projects in the Capital Improvement Plan are subject to further refinements depending on aviation activity trends and other Airport operational factors.

### **Mitigation Factors**

Where possible, the Commission implements capital projects using a modular and phased approach, so that future project phases could be deferred (or cancelled) if unanticipated events occur, such as significant declines in aviation activity at the Airport. For example, sections of the Courtyard 3 connector project, such as the secure connector between Terminal 2 and Terminal 3, and the office block, could be deferred if needed. However, the Airport is now committed to more than half of the Ascent Program – Phase 1, and remaining projects are entering their respective construction phases. Therefore, while approximately \$1.3 billion of Ascent Program – Phase 1 projects have been identified as being able to be deferred as of November 1, 2018, approximately \$1 billion of those costs are associated with projects that are anticipated to begin construction within a year, and soon will no longer be available for deferral.

The Commission's design-build and design-bid-build contracts allow the Commission to change, suspend, or delay the work, or terminate an entire contract for the Commission's convenience, while allowing the contractor to seek compensation for costs, if any, associated with a change order, or with the work's suspension, delay, or termination.

If unanticipated events such as a material reduction in aviation activity were to occur at the Airport, the Commission has a range of options at its disposal for addressing a more constrained financial environment, such as:

- Deferring or cancelling a variety of projects (or elements of projects) in the Capital Improvement Plan
- Reducing, or limiting the increase in, Airport Operation and Maintenance Expenses
- Increasing certain nonairline fees and charges that are not subject to agreements with Airport tenants and users (such as automobile parking rates and ground transportation fees)
- Adjusting airline rates and charges in accordance with the terms of the Airline Lease and Use Agreements (including the provision to implement mid-year rate adjustments if needed)

- Adjusting the debt structure for Future Bond issues to better correlate with the debt maturities for Bonds currently outstanding; as described later, for purposes of this Report it was assumed that all future Bond issuance after the 2019 Bonds would be undertaken on a level annual debt service basis
- Increasing the amount of PFCs designated and applied as Revenues, to the extent such PFC cash balances are available

## **SUMMARY OF CAPITAL IMPROVEMENT PLAN FUNDING**

Several funding sources are expected to be available to finance the improvements in the Capital Improvement Plan, including the following sources, as shown in more detail in Exhibit A-2.

### **Grants**

Through FY 2023, the Airport Commission expects to receive a total of \$129 million in grants to partially fund projects in the Capital Improvement Plan, including amounts already received. These grants primarily consist of \$68 million of anticipated federal Airport Improvement Program (AIP), \$1 million of State of California grants, and \$60 million of TSA grants, which would be approved and disbursed by the FAA, the State of California, and the TSA respectively. AIP grants encompass both entitlement grants and discretionary grants; entitlement grants are determined on a formula based on passenger and cargo numbers, while discretionary grants are determined by the FAA based on the nature of the specific project in comparison with projects at other airports in the FAA region.

During federal fiscal year 2017 ended September 30, 2017, and federal fiscal year 2018 ended September 30, 2018, the Airport Commission did not request AIP grant funding because the schedules of the Commission's AIP eligible projects did not align with required federal grant application timeline. The Commission intends to apply the majority of its AIP discretionary and entitlement grants to airfield related projects. For purposes of this Report, it was assumed that an annual average of approximately \$13.1 million of AIP entitlement funding and discretionary grant funding would be available.

When determining the distribution of discretionary grants, the FAA may consider, as a mitigating factor, whether the Airport Commission uses its revenues for purposes other than its capital or operating costs when those revenues exceed the amount used by the Commission for such costs in the base year ending June 30, 1995, as adjusted for inflation. The Commission's Annual Service Payment to the City's General Fund for indirect services, management, and facilities provided by the City to the Commission is considered to be a non-capital, non-operating cost for this purpose. For approximately the past ten fiscal years, the Annual Service Payment has exceeded the inflation-adjusted base year payment. Growing levels of Annual Service Payments are a direct result of the Airport Commission's success in increasing concession revenues at the Airport, as noted in Section 3. There may be similar reductions in AIP discretionary grants in the future for the same reason.

In recent years, AIP discretionary grants requested by the Airport Commission have been reduced by the FAA because of the growing Annual Service Payments being made to the City's General Fund. For example, during Federal Fiscal Year 2016, the FAA provided discretionary grants of \$12.4 million to the Commission, \$15.4 million less than the amount requested.

The Airport Commission has also executed Other Transaction Agreements (OTAs) with the TSA to receive up to \$64 million of funds related to Checked Baggage Inspection System (CBIS) improvements, of which \$4.0 million has been received by the Commission to date.

Any reductions in AIP grant and TSA funding amounts below the total assumed for this analysis would instead necessitate the Airport Commission to issue additional Bonds to make up for the shortfall (and include the associated debt service in the airline rate base), or fund those shortfalls with PFCs on a pay-as-you-go basis, or with other available Airport Commission funds such as unrestricted cash balances.

## **Bonds**

This Report assumes remaining Bond funding of \$4.5 billion in Capital Improvement Plan project costs, including \$1.3 billion to be provided by the 2019 Bonds. The Commission expects to use a portion of the 2019 Bond proceeds to repay approximately \$430.4 million of outstanding commercial paper previously issued to finance a portion of the costs of the Capital Improvement Plan.

Proceeds of the 2019 Bonds are also to be used for costs of issuance, a deposit to the Contingency Account, to fund deposits to the Original Reserve Account, and to pay capitalized interest on a portion of the 2019 Bonds.

The Airport Commission has approved the issuance of the 2019 Bonds, and expects to obtain the additional approvals required before the issuance of the planned Future Bonds during the forecast period. Future Bond proceeds are to be used to fund a wide range of projects in the Capital Improvement Plan, or to repay commercial paper issued to pay these costs\*.

## **Passenger Facility Charges**

The majority of the Commission's PFC revenues have been and will continue to be applied to pay a portion of the debt service on outstanding Bonds. As described more fully in Section 3, PFC revenues are not included in the definition of Revenues pursuant to the Bond Resolution, unless specifically designated as such by the Airport Commission. Annually since 2002, the Commission has designated and applied a certain amount of PFC revenues as Revenues, and used those amounts to pay debt service on Outstanding Bonds. (The Commission may elect to actually apply fewer PFCs as Revenues during a given fiscal year than it had earlier designated.) During FY 2017 and FY 2018, \$23.4 million and \$4.1 million (estimated) in PFC revenues, respectively, was applied as Revenues pursuant to the Bond Resolution and applied to Bond debt service. The Commission does not currently anticipate applying PFCs to projects on a pay-as-you-go basis.

The Airport Commission's current PFC collection and spending authorization totals \$2.1 billion (all authorized for collection at the \$4.50 PFC level), and extends until the date on which the total authorized amount has been collected, but not later than March 1, 2029, as approved by the FAA in its Final Agency Decision associated with the Airport Commission's most recently approved PFC application.

The PFC revenues received by the Commission are subject to audit and final acceptance by the FAA and costs reimbursed with PFC revenues are subject to adjustment upon audit. As of September 30, 2018, the Commission had collected a total of \$1.323 billion in PFC revenues (including associated

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\*A portion of the Future Bond proceeds are also expected to be used to fund deposits to the Commission's Contingency Account.

interest income) on a cash basis, including \$415.0 million in PFC revenues collected but not yet expended.

The Commission intends to submit future PFC applications seeking PFC funding for the Terminal 1 and Terminal 3 projects, including approval to pay associated Bond debt service with PFCs.

Exhibit B shows the forecast collection of PFC revenues during the forecast period, and the projected application of those PFC revenues. Annual PFC revenues are forecast to increase from \$116.5 million in FY 2018 (estimated) to \$123.5 million in FY 2025 (including associated interest income). The Airport Commission plans to adjust the amount of PFC revenues included as Revenues to manage realized airline payments in each future year, and to increase the amount to \$160.7 million in FY 2025. From FY 2019 through FY 2025, the Airport Commission plans to include a total of \$890.5 million of PFC revenues as Revenues.

As of September 30, 2018, the remaining PFC spending authority under the Commission's approved PFC applications was \$1.203 billion. As discussed above, the Airport Commission expects to continue submitting PFC applications to obtain additional PFC collection and spending authorization in the future.

### **Other Funding Sources**

Additional sources of funds available to the Airport Commission to finance capital improvements at the Airport include the Airport's unrestricted or available cash balances, unspent proceeds from Bonds issued prior to the 2019 Bonds, and funds from the issuance of special facility bonds to finance improvement to the fuel storage and distribution system at the Airport (i.e., SFO Fuel Bonds). Unrestricted cash balances are those amounts that are primarily generated from the day-to-day operation of the Airport (i.e., operating cash flow, net of Bond debt service and reserve funding requirements). Third party funding sources may also be used for certain types of projects in the Capital Improvement Plan.

The Commission currently anticipates funding approximately \$52.2 million in fuel system improvements with SFO Fuel bonds, \$24.7 million on equipment and capital outlays paid from operating funds, \$6.3 million from airline contributions, and \$1.1 million from other funds.

### **OTHER POTENTIAL AIRPORT CAPITAL IMPROVEMENTS**

As noted earlier, the Airport Commission expects to continue to develop and finance needed capital improvements at the Airport, including repair and rehabilitation of existing facilities, and development of new facilities to accommodate anticipated airline traffic demand at the Airport.

These projects would only be undertaken as needed, based on market demand for airfield facilities, terminal facilities, gates, and landside facilities. Such projects are outside the currently approved Capital Improvement Plan and have not been reflected in the financial forecasts in this Report.

As noted above, the Commission is currently in the process of updating its Capital Improvement Plan. Approximately \$380 million in potential new projects are being considered for addition to the Infrastructure Projects Plan category, with an additional \$20 million of cost increases for projects already included in this project category.

## 5. FINANCIAL ANALYSIS

Our study was undertaken to evaluate the ability of the Airport Commission to generate sufficient Net Revenues to meet the requirements of the Bond Resolution, taking into account Annual Debt Service on the currently Outstanding Bonds, the 2019 Bonds, and anticipated Future Bonds. The forecast period for this Report extends to FY 2025, three full fiscal years after capitalized interest on the 2019 Bonds has been fully applied (a portion of the interest on the 2019 Bonds is capitalized through May 2022).

The financial data for FY 2017 reflects the actual operating results; data for FY 2018 are estimated based on 12 months of preliminary data; data for FY 2019 are forecast based on the Airport Commission's budget. Data for FY 2020 through FY 2025 were forecast by taking into consideration historical operating results, the Commission's approved FY 2019 budget and preliminary FY 2020 budget, and the aviation activity forecasts described in Section 2, among other factors.

To provide the basis for the financial analysis the following are presented: annual debt service requirements, reconciliation of historical financial results, Operation and Maintenance Expenses, Revenues, application of Revenues, debt service coverage, and a summary of financial forecasts. A sensitivity scenario is also presented.

### ANNUAL DEBT SERVICE REQUIREMENTS

Exhibit C presents a summary of estimated sources and uses of funds for the 2019 Bonds as prepared by Public Financial Management, Inc. (PFM), the Airport Commission's co-financial adviser, based on certain data and information provided by the Commission.

For purposes of this Report, it was assumed that the 2019 Bonds are to be issued as fixed-rate securities with an estimated all-in true interest cost of 4.61% and a term to final maturity of 30 years. These interest rate assumptions were provided by PFM in November 2018, and are higher than comparable rates in the financial markets as of the date of this Report.

Exhibit C also presents a summary of the estimated sources and uses of funds for the anticipated Future Bonds, which are expected to be issued during the forecast period, although the timing and amount of these issues may change based on future events and circumstances. The estimated sources and uses of funds for the Future Bonds were also provided by PFM, based on certain data and information provided by the Commission. These planned Future Bonds were assumed to have a term to final maturity of 30 years with approximately level annual debt service (after the respective capitalized interest periods), and to be issued at a true interest cost of approximately 6.1%.

While for purposes of this Report a level annual debt service structure was assumed for the Future Bonds, the Commission intends to investigate alternative structures that would smooth total annual debt service (taking both currently Outstanding Bonds and Future Bonds into account) and better enable the Commission to achieve its financial targets, such as smoothing the future annual airline cost per enplaned passenger metric.

In addition to providing funds for the Capital Improvement Plan, for purposes of this Report it was assumed that the Airport Commission would use a portion of the proceeds of the 2019 Bonds and the Future Bonds to increase the balance of the Contingency Account by approximately \$75.3 million

through FY 2025. A summary of the 2019 Bonds and the Future Bond issues assumed for purposes of this Report is shown in Table 18.

	Issuance Date	Principal Amount (\$ millions)	Project Costs (\$ millions)	Final Maturity	All-in True Interest Cost	Interest Capitalized through
2019 A/B/C Bonds	Feb-19	\$1,471	\$1,316	2049	4.61%	May-22
Future Bonds						
2019 Bonds (Fall)	Nov-19	609	514	2049	6.1%	Oct-20
2020 Bonds (Summer)	Jun-20	999	840	2050	6.1%	Jun-21
2021 Bonds (Winter)	Jan-21	918	779	2051	6.1%	Nov-21
2022 Bonds (Winter)	Jan-22	663	573	2052	6.1%	Aug-22
2023 Bonds (Winter)	Jan-23	531	477	2053	6.1%	None
Subtotal - Future Bonds		\$3,720	\$3,183			
Total: 2019 Bonds and Future Bonds		\$5,192	\$4,499			

Source: Public Financial Management, Inc., November 2018.

Exhibit D shows annual debt service for all current\* and anticipated Future Bonds to be issued under the Bond Resolution during the forecast period, including the 2019 Bonds. Debt service on a cash basis is forecast to increase from \$400.2 million in FY 2018 to peak at \$855.5 million in FY 2025. Because a level annual debt service structure was assumed for the Future Bonds, debt service on a cash basis is expected to decline gradually beginning in FY 2026, to below \$700 million by FY 2030 and thereafter.

The Airport Commission intends to closely monitor aviation activity levels at the Airport, the Airport Commission's financial position, Airport operational factors, and general financial market conditions; and make adjustments as needed to its Capital Improvement Plan phasing (to the extent possible), overall debt levels, and airline payments per enplaned passenger levels to ensure that needed Airport facilities are provided on a timely basis and in a manner that will not impede the Airport's competitive position or financing capability.

Additionally, the Airport Commission intends to use commercial paper as interim financing for the Capital Improvement Plan, and to repay the principal amount of commercial paper using the

\*Debt service for currently outstanding variable rate Bonds was forecast based on the requirements of each individual variable rate Bond series, assuming annual costs ranging between 3.8% and 5.9% for interest payments, net swap payments, remarketing fees and liquidity fees.

proceeds of Future Bonds. The interest payments on the commercial paper, as well as related expenses, are subordinate debt service of the Airport Commission.

## **RECONCILIATION OF HISTORICAL FINANCIAL RESULTS**

The Airport Commission maintains its accounting records on an accrual basis, in conformance with generally accepted accounting principles (GAAP) for governmental entities. Table 19 presents a summary and reconciliation of the historical operating results of the Commission for FY 2016 and FY 2017, as obtained from the Commission's audited financial statements.

## **OPERATION AND MAINTENANCE EXPENSES**

As described in Section 3, under the Bond Resolution, Operation and Maintenance (O&M) Expenses are defined as substantially all operating and maintenance expenses of the Airport, excluding depreciation and amortization expenses.

Forecast O&M Expenses for FY 2019 through FY 2025 are based on the Commission's FY 2018 estimated financial results, its FY 2019 budget and FY 2020 preliminary expense budget (with certain adjustments for utilities expenses and other post-employment benefits expenses), and its plan for operating Airport facilities through the forecast period. O&M Expenses for FY 2020 through FY 2025 take into consideration assumed inflationary increases in the cost of labor, services, utilities, and supplies, as well as the effect of new facilities coming into service during the forecast period. An annual increase of approximately 3% per year was assumed, except for salary growth at 4% per year.

Exhibit E (and Table 20) shows O&M Expenses for the forecast period, as determined in accordance with the Bond Resolution. In total, O&M Expenses are forecast to increase from an estimated \$514.1 million in FY 2018 to \$755.7 million in FY 2025, representing an average increase of 5.7% per year. The projected increase in FY 2019 reflects the Commission's FY 2019 budget, including the variance between estimated results and budget, and anticipated expenses of new positions and contractual services to support the ongoing Capital Improvement Plan.

Table 19  
**Reconciliation of Historical Financial Results**  
San Francisco International Airport  
For Fiscal Years ended June 30; dollars in thousands

	2016	2017
<b>Financial Statements (FS)</b>		
Operating Revenues	\$ 866,991	\$ 926,800
Operating Expenses exc. Depreciation & Amortization	(412,114)	(543,019)
Depreciation and Amortization	<u>(228,359)</u>	<u>(265,841)</u>
Operating Income	\$ 226,518	\$ 117,940
Nonoperating Revenues (expenses)		
Interest Income	\$ 13,957	\$ 7,892
Interest Expenses	(208,597)	(210,415)
Passenger Facility Charge Revenues	99,131	103,955
Write-offs and Loss on Disposal	(13,091)	(21,619)
Net Other Nonoperating Revenues (expenses)	<u>(35,863)</u>	<u>(80,833)</u>
Total Nonoperating Revenues (expenses)	\$ (144,463)	\$ (201,020)
Income before Contributions and Special Items	\$ 82,055	\$ (83,080)
Capital Grant Contributions	10,424	11,212
Transfers to the City and County of San Francisco	<u>(42,542)</u>	<u>(45,036)</u>
Changes in Net Assets	<u>\$ 49,937</u>	<u>\$ (116,904)</u>
<b>Net Revenues under Bond Resolution</b>		
Revenues	\$ 917,127	\$ 960,228
Operation and Maintenance Expenses	<u>(443,684)</u>	<u>(470,850)</u>
Net Revenues under Bond Resolution	<u>\$ 473,443</u>	<u>\$ 489,378</u>
<b>Reconciliation</b>		
Changes in Net Assets	\$ 49,937	\$ (116,904)
Excluding		
Passenger Facility Revenues Collected	(99,131)	(103,955)
Interest Income	(13,957)	(7,892)
Interest Expenses	208,597	210,415
Write-offs and Loss on Disposal	13,091	21,619
Net Other Nonoperating Revenues (expenses)	35,863	80,833
Capital Grant Contributions	(10,424)	(11,212)
Annual Service Payments	42,542	45,036
Including		
Depreciation	228,359	265,841
Passenger Facility Revenues Designated as Revenues	43,110	23,363
Interest Income Classified as Revenues	7,025	10,065
Net Expenses Adjustment under Bond Resolution	<u>(31,569)</u>	<u>72,170</u>
Net Revenues under Bond Resolution	<u>\$ 473,443</u>	<u>\$ 489,378</u>

Sources: Airport Commission financial statements for FY 2016 and FY 2017.  
Reconciliation prepared by LeighFisher.

Table 20  
**Operation and Maintenance Expense Summary**  
For Fiscal Years Ending June 30; dollars in thousands

<u>Categories</u>	<u>Estimated</u>		<u>Forecast</u>		<u>Forecast</u>	
	<u>FY 2018</u>		<u>FY 2019</u>		<u>FY 2025</u>	
	<u>Amount</u>	<u>% of total</u>	<u>Amount</u>	<u>% of total</u>	<u>Amount</u>	<u>% of total</u>
Salaries and benefits	318,523	62.0%	344,916	58.0%	442,165	58.5%
Contractual services	89,394	17.4%	123,247	20.7%	148,842	19.7%
Services provided by other City departments	24,267	4.7%	37,391	6.3%	47,720	6.3%
Repairs and maintenance	35,529	6.9%	36,950	6.2%	44,120	5.8%
Utilities	24,714	4.8%	27,992	4.7%	32,421	4.3%
Materials and supplies	18,247	3.5%	20,938	3.5%	22,008	2.9%
General administration	3,427	0.7%	3,564	0.6%	4,255	0.6%
Incremental expenses for new facilities (a)	0	0.0%	0	0.0%	14,032	1.9%
<b>Total Operation and Maintenance Expenses</b>	<b>514,100</b>	<b>100.0%</b>	<b>594,998</b>	<b>100.0%</b>	<b>755,563</b>	<b>100.0%</b>

(a) Net of operating expense reductions associated with the implementation of certain projects in the Capital Improvement Plan.

Note: Numbers may not add to totals due to rounding.

Sources: Actual and estimated - Airport Commission; Forecast - LeighFisher.

For the purposes of this Report, the following assumptions were used to forecast O&M Expenses:

- The cost of labor (salaries) and benefits for the Commission, including police and fire services, will increase on average 4.8% per year from FY 2018 to FY 2025, which reflects assumed inflation and a real (net of inflation) increase.
- Contractual services will increase on average 7.6% per year, reflecting the Commission's FY 2019 budget, followed by inflationary increases in the following years.
- Other expenses, including services provided by other City departments, repairs and maintenance, utilities, materials and supplies, general and administration, and environmental expenses, will increase on average 5.1% per year, reflecting the Commission's FY 2019 budget, followed by inflationary increases in the following years.
- Incremental operating expenses are expected to be cumulatively up to \$14.0 million per year by FY 2025 associated with completion of additional facilities in the Capital Improvement Plan.

The allocation of O&M Expenses to Airport Cost Centers, as shown in Exhibit E, was based on the Airport Commission's procedures and cost accounting system, as described in the airline Lease and Use Agreements. The main categories of O&M Expenses are described below.

### **Personnel Expenses**

Personnel expenses include the salaries and fringe benefits of Commission employees, as well as the direct expenses for police and fire services provided by the City. Personnel expenses of the

Commission accounted for an estimated 45.7% of O&M Expenses in FY 2018. Police and firefighting expenses accounted for 11.3% and 4.9% of estimated O&M expenses, respectively, in FY 2018.

### **Contractual Services**

Contractual services include payments made to outside vendors for services such as maintenance, professional services, and rents. Contractual services accounted for 17.4% of estimated O&M Expenses in FY 2018.

### **Other Operating Expenses**

Other operating expenses include services provided by other City departments, repairs and maintenance, utilities, materials and supplies, general administration, and environmental expenses.

- **Services Provided by Other City Departments** include legal, purchasing, human resources, the Contract Monitoring Division, workers' compensation, and finance services, as well as water supply. (These are direct services in addition to those paid for with the Annual Service Payment.) This expense category accounted for 4.7% of estimated O&M Expenses in FY 2018.
- **Repairs and Maintenance** includes routine maintenance expenses for buildings, vehicles, and equipment, including elevators, escalators, and moving sidewalks. Write-offs of construction work in progress may also be recorded as part of this line item. Repairs and maintenance accounted for 6.9% of estimated O&M Expenses in FY 2018.
- **Utilities** include expenses for light, heat, power, and natural gas at the Airport. The gross costs for electricity net of the cost of electricity sold to tenants are recorded as part of this line item. Utilities accounted for 4.8% of estimated O&M Expenses in FY 2018. No utility cost savings associated with the Commission's Net Zero initiative were assumed.
- **Materials and Supplies** reflect expenses incurred to support the maintenance and repair of buildings, vehicles, and equipment and to support various services of the Airport. Materials and supplies accounted for 3.5% of estimated O&M Expenses in FY 2018.
- **General Administration** includes expenses related to insurance; taxes, licenses, and permits; judgments and claims; and write-offs for bad debts. General and administration expenses accounted for 0.7% of estimated O&M Expenses in FY 2018.
- **Environmental** includes the costs of environmental cleanup incurred in connection with normal operations or with capital improvement projects; the costs are offset by reimbursements, if any, for such costs. There were no costs in this category during FY 2018.

### **REVENUES**

Airport Revenues consist of substantially all airline revenues and nonairline revenues generated from the operation of the Airport, as shown in Table 21. Exhibit F presents Revenues of the Airport Commission for FY 2016 and FY 2017 (actual), FY 2018 (estimated based on 12 month of data), and FY 2019 through FY 2025 (forecast).

Table 21  
**Operating Revenue Summary**  
For Fiscal Years Ending June 30; dollars in thousands

Categories	Estimated		Forecast		Forecast	
	FY 2018		FY 2019		FY 2025	
	Amount	% of total	Amount	% of total	Amount	% of total
<b>Aviation Revenues</b>						
Landing Fee Revenues	\$ 196,326	20.2%	\$ 224,765	22.1%	\$ 374,815	25.3%
Terminal Rentals	<u>291,770</u>	<u>30.0%</u>	<u>308,777</u>	<u>30.4%</u>	<u>515,707</u>	<u>34.9%</u>
<b>Airline Revenue</b>	\$ 488,096	50.2%	\$ 533,543	52.5%	\$ 890,521	60.2%
<b>Other Aviation Revenues</b>						
Other Rental Revenue	54,703	5.6%	53,916	5.3%	61,863	4.2%
Other Aviation Revenue	<u>36,307</u>	<u>3.7%</u>	<u>35,218</u>	<u>3.5%</u>	<u>44,117</u>	<u>3.0%</u>
	<u>91,010</u>	<u>9.4%</u>	<u>89,134</u>	<u>8.8%</u>	<u>105,980</u>	<u>7.2%</u>
Total Aviation Revenues	\$ 579,106	59.5%	\$ 622,677	61.3%	\$ 996,502	67.3%
<b>Concession Revenues</b>						
Parking	100,903	10.4%	97,645	9.6%	113,786	7.7%
On-airport Rental Car	46,018	4.7%	46,419	4.6%	51,589	3.5%
Duty Free	31,659	3.3%	27,620	2.7%	58,237	3.9%
Retail	19,687	2.0%	19,356	1.9%	25,720	1.7%
Food & Beverage	25,474	2.6%	28,148	2.8%	39,361	2.7%
Other Services	25,390	2.6%	25,193	2.5%	29,694	2.0%
TNC and Ground Transportation (a)	44,662	4.6%	48,823	4.8%	54,261	3.7%
Other Concession Revenue (a)	<u>16,530</u>	<u>1.7%</u>	<u>17,445</u>	<u>1.7%</u>	<u>20,456</u>	<u>1.4%</u>
	310,325	31.9%	310,649	30.6%	393,104	26.6%
<b>Net Sales and Services</b>						
Utilities (Net of Costs)	11,370	1.2%	11,657	1.1%	16,891	1.1%
BART Payments	3,419	0.4%	3,446	0.3%	3,600	0.2%
Rental Car Facility Fees	16,024	1.6%	16,660	1.6%	19,320	1.3%
Rental Car Transportation Fees	32,314	3.3%	31,371	3.1%	29,149	2.0%
Other Sales and Services	<u>20,044</u>	<u>2.1%</u>	<u>19,796</u>	<u>1.9%</u>	<u>21,096</u>	<u>1.4%</u>
	<u>83,171</u>	<u>8.6%</u>	<u>82,930</u>	<u>8.2%</u>	<u>90,055</u>	<u>6.1%</u>
Total Nonairline Revenues	<u>393,496</u>	<u>40.5%</u>	<u>393,579</u>	<u>38.7%</u>	<u>483,160</u>	<u>32.7%</u>
<b>Total operating revenues</b>	\$ 972,602	100.0%	\$ 1,016,256	100.0%	\$ 1,479,661	100.0%

(a) Revenues from taxi cabs are included in the "Other Concession Revenue" category in this table.

In Table 22, taxi cab revenues are grouped with limousine and bus revenues in the "taxi/limousine/bus" category

Note: Numbers may not add to totals due to rounding.

Source: Actual and estimated -- Airport Commission; Forecast -- LeighFisher.

## Airline Revenues

Airline revenues are derived from landing fees and terminal rentals paid by airlines to the Airport Commission pursuant to the Lease and Use Agreements. Airline revenues, taken in the aggregate, are equivalent to the airline revenue requirement in the residual rate-making methodology used at the Airport.

The airline revenue requirement is calculated by subtracting nonairline revenues from the total revenue requirement as determined pursuant to the Lease and Use Agreements. Nonairline revenues are discussed in more detail below.

As of June 30, 2017, the Airport Commission had recorded unearned aviation revenues of \$54.9 million, which are revenues over-collected from airlines in prior fiscal years (and therefore not recognized as revenues in the prior years). As provided for in the Lease and Use Agreement, the Airport Commission can apply such unearned aviation revenue balances to reduce future airline rates and charges, and when used for this purpose in future years will be recognized as part of Revenues.

**Landing Fee Revenues.** The calculation of the landing fee rate and landing fee revenues is shown in Exhibit F-1. Allocated costs of the Airfield Area (including O&M Expenses and allocable debt service) are calculated first. Then, certain adjustments are made, as follows:

- Allocable Utilities Area expenses are added
- Nonairline revenues generated from airfield activities, including allocated PFC revenues, are deducted
- Airport Support Area deficits or surpluses are added (or subtracted, as applicable)
- Adjustments for prior year Airfield Area surpluses (or deficits) are added (or subtracted, as applicable)

The resulting net amount is then divided by the forecast landed weight of the scheduled airlines to calculate a basic landing fee rate.

Subsequently, a landing fee surcharge is collected to recover 50% of the Rental Surcharge (described below) net of surplus in the Groundside Area, if any. The sum of the basic landing fee rate and the surcharge rate, if any, is the effective landing fee rate to be paid by the airlines.

The effective landing fee rate is forecast to increase from \$5.54 per 1,000 pounds of landed weight charged in FY 2019 to \$8.64 per 1,000 pounds of landed weight in FY 2025. Landing fee revenues are forecast to increase from \$224.8 million to \$374.8 million over the same period.

**Terminal Rentals.** The calculation of the terminal rental rate and terminal rental revenues are shown in Exhibit F-2. Allocated costs of the Terminal Area (including allocable O&M Expenses and debt service) are calculated first. Then, certain adjustments are made as follows:

- Allocable Utilities Area expenses are added
- The Annual Service Payment to the City is added
- Adjustments to prior year surpluses (or deficits) in the Terminal Area are added (or subtracted, as applicable)

The resulting amount is divided by the gross square footage of the Terminal Area to calculate the basic terminal rental rate per square foot.

Subsequently, a terminal Rental Surcharge is calculated, as follows:

- The cost of public space in the Terminal Area (the basic rental rate multiplied by total public space) is calculated
- Nonairline revenues generated in the Terminal Area, including allocated PFC revenues, are deducted
- Groundside Area deficits are added

If the resulting net amount is a deficit, it is allocated 50% to the Terminal Area (and 50% to the Airfield Area, as noted above), with the 50% share allocated to the Terminal Area divided by airline leased space to calculate the terminal rental surcharge rate per square foot. If the resulting net amount is a surplus, it is allocated 100% to the Terminal Area and results in a downward adjustment to the basic terminal rate. The effective terminal rental rate paid by the airlines is the sum of the basic rental rate and the Rental Surcharge, if any.

The effective average terminal rental rate is forecast to increase from \$179.21 per square foot charged in FY 2019 to \$273.51 per square foot in FY 2025. Airline terminal rental revenues are forecast to increase from \$308.8 million to \$515.7 million over the same period.

**Total Airline Revenues and Airline Payments per Enplaned Passenger.** As shown in Exhibit F-3, passenger airline payments per enplaned passenger are forecast to increase from \$16.32 in FY 2018 to \$27.33 in FY 2025 when measured in nominal dollars, primarily reflecting additional debt service associated with the 2019 Bonds and Future Bonds to be issued to implement the Capital Improvement Plan. The enplaned passenger forecasts used to calculate these figures are described earlier in Section 2, and such enplanement forecasts took into account the anticipated increases in airline cost levels associated with the Capital Improvement Plan, among numerous other factors. (These figures reflect airline payments made by the passenger airlines only; landing fees paid by the cargo airlines are excluded from the numerator for the calculation.)

### **Other Aviation Revenues**

The Commission generates revenues from aviation sources in addition to fees and charges paid by the airlines. It was assumed that the Airport Commission's current operating practices related to the other aviation revenue items would remain generally unchanged during the forecast period; and where applicable, expiring contracts and agreements would be renewed or replaced on generally the same terms as the current contracts and agreements.

**Other Rental Revenue.** This revenue category represents monies collected from the aviation-related activities of Airport tenants. It consists primarily of (1) rental revenue from ground leases, cargo building leases, and aircraft parking area leases, and (2) fees for parking by airline employees. Other rental revenue totaled an estimated \$54.7 million in FY 2018 and is forecast to increase to \$61.9 million in FY 2025.

**Other Miscellaneous Aviation Revenue.** This revenue category consists primarily of rentals, fees, and charges related to the sale of aviation fuel, servicing of airline and general aviation aircraft, and for the use and occupancy of general aviation facilities. Other aviation revenue totaled an estimated \$36.3 million in FY 2018 and is forecast to increase to \$44.1 million in FY 2025.

## Nonairline Revenues

Nonairline revenues include revenues generated from automobile parking, automobile rentals, TNCs, duty free, retail, food and beverage, telephone and other services, and other concessions. Additionally, nonairline revenues include certain interest earnings of the Commission. It was assumed that the Airport Commission's current operating practices related to nonairline revenue items would remain generally unchanged during the forecast period unless otherwise noted; and where applicable, expiring contracts and agreements would be renewed or replaced on generally the same terms as the current contracts and agreements (unless otherwise noted below). These revenues are described below and shown in Exhibit F.

**Automobile Parking.** Automobile parking revenues consist of all revenues derived from public parking at the Airport, including 11,862 public parking spaces in parking garage and surface lots, as described in Section 1. The remote long-term parking facility is served by shuttle bus. The parking rates are \$2 per 15-minute increment up to a maximum of \$36 for each 24 hours in the Domestic Parking Garage and in the ITC garages, and a daily maximum parking rate of \$25 in the long term parking lot. Revenues from valet parking, the sale of impounded vehicles, and parking for employees of concession operators are also included in parking revenues. Revenues from the Commission's parking operation totaled an estimated \$100.9 million in FY 2018, equivalent to \$4.45 per originating passenger.

The continued adoption of TNC services by patrons of the Airport, as well as the most recent increase in parking rates in June 2016, has reduced the utilization of parking facilities at the Airport over the past few years. Total parking transactions declined from 3.6 million in FY 2014 (the last full fiscal year before TNCs commenced service at the Airport) to 3.3 million in FY 2018, as shown in Table 22. This is equivalent to a drop from 0.20 parking transactions to 0.15 parking transactions per originating passenger over the same period. However, TNC transactions totaled 4.4 million in FY 2016 (the first full year of TNC operations) and over 9.0 million transactions in FY 2018 (or 0.21 transactions per originating passenger in FY 2016, rising to 0.40 transactions per originating passenger in FY 2018).

Parking revenues were forecast as a function of forecast numbers of originating passengers, parking transactions per passenger, and revenue per transaction, and reflect fluctuations in the number of parking spaces available during the period of construction for certain projects in the Capital Improvement Plan (the Commission is expected to temporarily lose some parking spaces), as well as the anticipated ongoing impact on parking of the increased use of TNC activities at the Airport.

The parking revenue forecast for FY 2025 is \$113.8 million, including approximately \$6.4 million annually from a new long-term parking garage expected to open in January 2019, and assumes that parking revenues per originating passenger remain constant at approximately \$4.49 between FY 2018 and FY 2025. For purposes of this Report, it was assumed that parking rates would not be adjusted during the forecast period other than an assumed decrease in the long-term parking garage rate during FY 2019.

**Table 22**  
**Ground Transportation Activity and Revenue Trends**  
For Fiscal Years Ending June 30; in thousands except ratios

Ground transport mode	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FYTD (a)	
							2018	2019
<b>Trips/exits/contracts</b>								
Public parking exits	3,455	3,550	3,520	3,554	3,273	3,298	880	869
Rental car contracts	1,715	1,860	1,926	1,939	1,831	1,795	520	506
TNC transactions	-	-	1,708	4,389	6,975	9,092	2,125	2,609
Taxi/limousine/bus trips	3,639	4,224	4,325	3,903	3,418	2,998	798	728
Originating passengers	17,422	18,033	19,063	20,459	21,159	22,688	6,124	6,157
<b>Trips/exits/contracts per originating passenger</b>								
Public parking exits	0.20	0.20	0.18	0.17	0.15	0.15	0.14	0.14
Rental car contracts	0.10	0.10	0.10	0.09	0.09	0.08	0.08	0.08
TNC transactions	-	-	0.09	0.21	0.33	0.40	0.35	0.42
Taxi/limousine/bus trips	0.21	0.23	0.23	0.19	0.16	0.13	0.13	0.12
<b>Total revenues (b)(c)</b>								
Public parking (d)	\$ 101,041	\$ 101,799	\$ 102,552	\$ 103,282	\$ 106,791	\$ 101,398	26,063	25,328
Rental car (e)	47,530	51,865	53,255	52,787	51,035	49,654	17,498	17,202
TNCs	-	-	6,575	16,898	26,555	34,549	8,073	12,765
Taxi/limousine/bus (f)	11,681	13,893	14,595	15,161	14,183	12,652	3,368	3,365
<b>Total</b>	<b>\$ 160,252</b>	<b>\$ 167,557</b>	<b>\$ 176,977</b>	<b>\$ 188,128</b>	<b>\$ 198,564</b>	<b>\$ 198,253</b>	<b>\$ 55,002</b>	<b>\$ 58,661</b>
<i>Percentage change</i>		4.6%	5.6%	6.3%	5.5%	-0.2%		6.7%
Revenues per originating passenger	\$ 9.20	\$ 9.29	\$ 9.28	\$ 9.20	\$ 9.38	\$ 8.74	\$ 8.98	\$ 9.53

(a) Data for the first three months of the respective fiscal years (July to September). Originating passenger figures are estimates.

(b) The categorization and grouping of certain ground transportation revenue items differs between this Table 22 and the figures shown in Table 21 and Exhibit F.

(c) Reflects a parking rate increase in June 2016 and TNC rate adjustments in June 2018.

(d) Parking revenues exclude banking and other cashiering adjustments.

(e) Including revenues from on-Airport and off-Airport rental car activity. Excluding certain year-end accounting adjustments.

(f) Excluding revenues from vehicle registration and other groundside operations related fees.

Source: Compiled from monthly "Groundside Revenue & Activity Report", San Francisco Airport Commission.

**Rental Cars.** Rental car revenues consist of concession fees from on-Airport rental car companies. Under the terms of new agreements with the rental car companies that are scheduled to become effective during 2019 (upon approval by the Board of Supervisors), the on-Airport rental car companies pay a privilege fee to the Commission equivalent to 10% of their gross revenues, subject to MAGs totaling \$47 million (up from \$40 million under the prior agreements). Rental car concession fee revenues declined from \$51.2 million in FY 2015 to \$49.0 million in FY 2017, and declined further to an estimated \$46.1 million in FY 2018, attributable primarily to ground transportation mode share shifts resulting from TNCs starting service at the Airport, offset by passenger growth. Rental car concession fee revenues from on-Airport operators are forecast to increase to \$51.6 million in FY 2025, driven by higher level of passenger activities. It was assumed that the terms and conditions governing the use of the Airport by off-Airport rental car operators,

which represents a minimal amount of revenue, would not change materially during the forecast period.

The Commission expects to implement a rental car customer facility charge (CFC) in the near future, at a rate to be determined but no more than \$10.00 per rental car transaction in accordance with California law for the purpose of making improvements to the Commission's rental car facilities. CFC revenues are currently classified as Revenues of the Commission in accordance with the Bond Resolution, but the Commission is undertaking to exclude CFC revenues from Revenues pursuant to the Bond Resolution by adopting an amendment to the Bond Resolution that has not yet taken effect. For purposes of this Report, CFC revenues are not included in the forecast of Revenues.

**TNCs and Ground Transportation.** This category consists of ground transportation and TNC trip fees. As described earlier, TNCs have been operating at the Airport since September 2014. During FY 2017, the Commission generated \$26.6 million in TNC trip fees, increasing to \$34.5 million during FY 2018, which is the primary driver for the decrease in the other ground transportation revenue categories.

Revenues in this category are forecast to increase to \$54.3 million in FY 2025, driven by the assumption of higher trip fees related to cost recovery of the TNC operation and forecast increases in aviation activity. Overall, the continued adoption of TNCs among users of the Airport has had a significant impact on the revenue contribution from various modes. However, total ground transportation revenues from all modes combined have been relatively stable, from \$160.3 million in FY 2013 to \$198.5 million in FY 2017, before showing a slight reduction to \$198.3 million in FY 2018, as shown earlier in Table 22. The trend of shifting mode shares is expected to level off in the future as TNC activity at the Airport and in the industry in general stabilizes. From that point forward, growth in all four ground transportation revenue categories is expected to generally be a function of Airport enplaned passenger levels and pricing.

**Duty Free.** As described in Section 3, the Airport Commission has a new contract with DFS Group for the duty free concession in the ITC (also encompassing duty paid luxury stores), which commenced on October 1, 2018, and provides for payment to the Commission of a certain percentage of the concessionaire's gross sales at the Airport, subject to a MAG. The prior agreement provided separate percentage fee ratios between 12% and 16% for duty paid goods, and therefore the payment under the prior agreement was split between duty free revenues and retail revenues based on estimates. Of the total \$36.4 million of revenues received from DFS in FY 2018, \$31.7 million was recognized as duty free revenues.

The new agreement has an annual MAG of \$42.0 million (after completion of improvements to the retail areas) and does not provide a separate percentage fee ratio for duty paid goods. Certain duty free concession spaces will be out of service for renovations during the development term of the new contract between October 1, 2018 and September 30, 2019. Therefore, the duty free revenues in FY 2019 are budgeted to be \$27.6 million. Duty free revenues to the Airport after FY 2019 are expected to increase due to higher percentage fee ratios, and are expected to exceed the annual MAG. Consequently, duty free revenues are forecast to increase from an estimated \$31.7 million in FY 2018 to \$58.2 million in FY 2025.

**Retail.** Retail revenues consist of concession fees paid by gift and retail concessionaires in both the ITC and the domestic terminals, including those from the duty paid operations under the

DFS contract prior to FY 2019. Revenues in this category increased from \$18.3 million in FY 2017 to an estimated \$19.7 million in FY 2018. Due to anticipated concession improvements as well as traffic growth, total retail revenues are forecast to increase to \$25.7 million in FY 2025.

**Food and Beverage.** Food and beverage revenues consist mainly of rents and fees paid by food and beverage concessionaires for in-terminal operations. In FY 2018, food and beverage revenues totaled an estimated \$25.5 million.

The Airport Commission expects food and beverage revenues to increase when phases of the Terminal 1 Redevelopment program and the Terminal 3 program are completed. For purpose of this Report, it was assumed that net incremental revenues due to completion of the Terminal 1 Redevelopment would be \$3.5 million starting FY 2021, in addition to adjustments for inflation and passenger traffic growth. Food and beverage revenues are forecast to total \$39.4 million in FY 2025.

**Other Services.** Other services revenues consist of rents and privilege fees paid by banks, an advertising company, and several other miscellaneous concessionaires. Revenues in this category totaled an estimated \$25.4 million in FY 2018 and are forecast to increase to \$29.7 million in FY 2025.

**Other Concession Revenues.** Other concession revenues consist of nonairline revenues from terminal and other building space, taxicab trip fees, miscellaneous fees and charges, privilege fees assessed off-Airport rental car companies, and rents from on-Airport rental car companies for unimproved land.

Other concession revenues totaled an estimated \$16.5 million for FY 2018 and are forecast to increase to \$20.5 million in FY 2025.

**Net Sales and Services Revenues.** Net sales and services revenues consist primarily of revenues from utilities, BART District payments, rental car facility fees, rental car transportation fees, and other miscellaneous sales and services. Revenues in this category totaled an estimated \$83.2 million in FY 2018 and are forecast to increase to \$90.1 million in FY 2025. Among the individual revenue items in this category are the following:

**Utilities.** The Commission sells gas and electricity to Airport tenants. Revenues from such sales, net of the cost to purchase the gas and electricity from suppliers, are recorded as utility revenues.

**BART District Payments.** The BART District pays the Commission a fixed rental amount of \$2.5 million per year and a fee for recovery of certain O&M expenses, which totaled an estimated \$3.4 million in FY 2018.

**Rental Car Facility Fees.** This category represents revenues derived under facility leases with the on-Airport rental car companies for the use and occupancy of the consolidated rental car facility. This is in addition to the concession fees paid by these companies.

**Rental Car Transportation Fees.** Rental car companies collect a per rental car contract fee, which is paid to the Commission for reimbursement of certain costs of operating and providing the AirTrain facilities. Effective on July 1, 2017, Transportation and Facilities Fee was reduced from

\$19 to \$18 per rental car contract, and is forecast to stay at the level through FY 2023, but to decline further in FY 2024 and FY 2025 reflecting lower debt service allocation to the system.

**Other Sales and Services.** This category represents, among other sources of revenue, cost-based reimbursements paid by San Francisco Terminal Equipment Company, LLC for equipment and operating expenses in the ITC, revenues from a telecommunications access fee, and revenues from fees for licenses, permits, and security badges.

## **SFO Hotel**

The SFO Hotel is expected to provide a stream of cash flows that will be Revenues of the Commission as defined in the Bond Resolution. Specifically, these Revenues are expected to be the sum of: (1) an amount equivalent to the annual debt service on the Commission's SFO Hotel-related Special Facility Bonds (because the Commission, or a separate trust entity created by the Commission, will be the sole holder of such bonds), plus (2) a portion of the annual net operating cash flow for the SFO Hotel, but only to the extent the Commission elects to transfer such monies to the Airport Revenue Fund.

For purposes of this Report, it was assumed that the monies from the SFO Hotel that would be recognized annually as Revenues of the Commission would be equivalent to the annual debt service on the Commission's Series 2018 Special Facility Bonds only. Therefore, SFO Hotel Revenues per the Bond Resolution are forecast to increase from \$6.2 million in FY 2019 (to be paid from capitalized interest of the Special Facility Bonds) to \$8.7 million in FY 2025, which is equal to the debt service on the Special Facility Bonds during that period\*.

According to a report from the Board of Supervisors' Budget and Legislative Analyst to the Budget and Finance Committee of the Board, dated October 30, 2015, in connection with the Board's approval of the financing structure for the project, the contribution to the Annual Service Payment from the SFO Hotel is expected to be equivalent to 15% of the gross revenues of the SFO Hotel less hotel operating expenses and scheduled debt service on the Special Facility Bonds. This is the assumption used for purposes of preparing the financial forecasts documented in this Report (the associated payment is forecast to increase from \$0.5 million in FY 2020 to \$1.0 million in FY 2025).

For purposes of this Report, we relied upon the forecast of SFO Hotel revenues and expenses prepared by Jones Lang LaSalle (JLL), the Commission's hotel consultant, which are presented in Section V of the "Hotel Market and Underwriting Study: Grand Hyatt at SFO", dated May 2, 2018. Based on the assumptions documented in the JLL report, the Commission is expected to generate revenues from the SFO Hotel at least sufficient to pay the debt service and other payments required with respect to the SFO Hotel-related Special Facility Bonds, and all costs of operating and maintaining the SFO Hotel.

## **Interest Earnings**

Certain categories of interest earnings of the Commission are categorized as Revenues in accordance with the Bond Resolution. Specifically, interest earnings on operating funds and accounts, the Debt Service Fund, the Debt Service Reserve Fund, and the Contingency Account are classified as Revenues. Interest earnings were estimated to be \$12.1 million in FY 2018, and are forecast to

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\*In June 2018, the Commission issued \$260.0 million of Special Facility Bonds for the SFO Hotel at an interest rate of 3.0% and a final term of 40 years.

increase to \$43.0 million in FY 2025, due to an assumed increase in the interest earning rates to 3.0% annually, and an increase in the Debt Service Reserve Fund and Contingency Account balances, reflecting the additional Bonds assumed to be issued during the period.

### **PFCs Designated and Applied as Revenues**

As described earlier in Section 3, the Commission uses, and intends to continue to use, a portion of its PFC revenues to pay debt service on certain FAA-approved and PFC-eligible costs associated with the development of certain terminal and other projects. When declared and applied as such by the Commission, PFC revenues used to pay debt service are classified as Revenues under the terms of the Bond Resolution, which also serve to reduce the amount of the airline revenue requirement under the terms of the Lease and Use Agreements. In any given period, the Commission may decide to apply an amount of PFCs less than the amount it earlier designated for such purpose.

For the purposes of this Report, it was assumed that the Airport Commission would use a portion of its PFC fund balance to designate more PFC revenues than the projected annual collection amount in some years during the forecast period (e.g., \$160.7 million in FY 2025, compared to a projected PFC collection amount of \$120.1 million in that year). The PFC fund balance at the end of FY 2025 is forecast to be \$324.8 million. The Commission has made a strategic decision to allow PFC cash balances to build up during the early years of the forecast period, and to then apply those balances to pay a portion of the debt service during the latter years of the forecast period and beyond, so as to moderate the increase in the airline payments (cost) per enplaned passenger.

If the designated amount were not greater than the annual collection amount in any given year, then airline rates and charges would need to be higher to make up the difference, leading to higher airline cost per enplaned passenger in certain years of the forecast period.

### **APPLICATION OF REVENUES**

Exhibit G presents the forecast application of Airport Commission Revenues for FY 2019 through FY 2025 in accordance with the provisions of the Bond Resolution, as well as historical data for FY 2017 and FY 2018 (estimated based on 12 months of data).

After fulfillment of the higher priority funding obligations described in Section 5.06 of the Bond Resolution, all remaining amounts are deposited into the General Purpose Account. For purposes of this Report, it was further assumed that interest income generated from balances in the Contingency Account were applied to the Account (i.e., interest income in the Contingency Account is retained within the Account).

### **DEBT SERVICE COVERAGE**

Exhibit H presents Revenues; O&M Expenses; debt service requirements for current Outstanding Bonds, estimated debt service requirements on the 2019 Bonds, and anticipated debt service on Future Bonds assumed to be issued during the forecast period; and debt service coverage.

### **Transfer Amount Available**

The forecast of the amount available for deposit by the Commission into the Revenues Account from the Contingency Account in each Fiscal Year of the forecast period is shown in Exhibit H. Based upon the plans of, and actions taken by, the Commission, it was assumed that the Commission will

maintain a balance in the Contingency Account and increase the amount when needed; however, the Commission is not required to do so. It was further assumed that, as provided for in the Bond Resolution, the amount in the Contingency Account will be deposited into the Revenues Account at the end of such Fiscal Year and that such amount will be re-deposited into the Contingency Account from the Revenues Account at the beginning of the following Fiscal Year.

For the purposes of this Report, as noted above it was assumed that the Airport Commission would retain interest earnings of the Contingency Account, at approximately \$2 million to \$4 million annually, and deposit a total of \$75.3 million of 2019 Bond and Future Bond proceeds into the Contingency Account, as shown in Exhibit C.

While the amount used for the Transfer in the additional bond test calculations is limited to the lesser of (1) the amount available in the Contingency Account for such Fiscal Year, or (2) an amount equal to 25% of Maximum Annual Debt Service as calculated for such Fiscal Year, there is no such restriction for Rate Covenant calculation purposes. However, for purposes of this Report, it was assumed that in any given year the Transfer would be equivalent to the lesser of the Contingency Account balance or 25% of Annual Debt Service for that year. By FY 2025, the balance of \$231.5 million in the Contingency Account is forecast to be higher than 25% of that year's Annual Debt Service net of capitalized interest (i.e., \$213.9 million, which is the assumed Transfer in that year).

### **Forecast Debt Service Coverage**

In each year of the forecast period, Net Revenues (together with Transfers) are forecast to exceed the requirements of the Rate Covenant contained in the Bond Resolution. The forecast debt service coverage reflects the effects of the Commission's Bond issuances during the forecast period, specifically the 2019 Bonds and the anticipated Future Bonds to be issued during the forecast period. Debt service coverage is forecast to range from 134% to 142% between FY 2019 and FY 2025.

The forecast coverage exceeds 125% in each year of the forecast period primarily because certain categories of expenses are included in the airline rate base for the calculation of airline rentals, fees, and charges, but are not included in the application of Revenues for the payment of Bond debt service. These expenses are "below the line" items, and are to be paid after the payment of Bond debt service and the calculation of debt service coverage. The largest of these expense items is the Annual Service Payment to the City, which is assumed to be paid in accordance with current practices throughout the forecast period.

Further, Net Revenues in each Fiscal Year are forecast to be at least sufficient to make all required payments and deposits to the Revenue Bond Account, as well as to make the Annual Service Payment to the City.

Thus, the Rate Covenant provision of the Bond Resolution is forecast to be met in each Fiscal Year of the forecast period.

## **SUMMARY OF BASE CASE FINANCIAL FORECASTS**

Exhibit I summarizes the forecast financial results of the Airport Commission presented in Exhibits A through H, as discussed in the preceding sections, and includes the calculation of airline payments (costs) per enplaned passenger based on such data. Revenues and O&M Expenses were forecast using the forecast of enplaned passengers and aircraft landed weight presented in Section 2 of this Report.

## **SENSITIVITY SCENARIO**

Exhibit J is an identical presentation of financial projections for a hypothetical sensitivity scenario. The hypothetical sensitivity scenario is based on the same assumptions described in the sections above, except:

- The number of enplaned passengers, and all other related airline traffic activities, would be 10% lower, starting in FY 2020, than the forecast of enplaned passengers presented in Table 16.
- Projections of those categories of nonairline and commercial revenues that are variable based on passenger activity were decreased proportionately.
- The stream of monies from the SFO Hotel classified as Revenues of the Commission per the Bond Resolution is identical to the base case. Under the sensitivity scenario, the SFO Hotel would generate sufficient funds (whether as current revenues or from available reserves) to pay debt service on the SFO Hotel-related Special Facility Bonds.
- The debt service profile reflects the base case – the annual debt service profile for the 2019 Bonds shown in Exhibit D, and approximately level annual debt service for the Future Bonds.
- The amount of PFCs classified as Revenues is identical to that shown in the base case because sufficient PFC cash balances are available for such purpose during the forecast period.

Airline payments were calculated under the residual cost rate-setting methodology of the airline Lease and Use Agreements. Under this hypothetical scenario, the Commission would generate sufficient Net Revenues to meet the requirements of the Rate Covenant, and debt service coverage would be approximately the same as under the base case forecasts, given the residual airline ratemaking system. Passenger airline payments per enplaned passenger would increase to \$31.48 in FY 2025, compared to \$27.33 in FY 2025 under the base case, when measured in nominal dollars.

In the event that enplaned passenger levels actually declined substantially, the Airport Commission would have a range of options at its disposal to mitigate the impact of such a downturn as described earlier in Section 4. Among them would be the ability to reduce Operation and Maintenance Expenses, and to a limited extent to defer certain capital improvements as described in Section 4 (thereby reducing Future Bond issuance during the forecast period).

Additionally, the Airline Lease and Use Agreements provide for mid-year airline rate adjustments, in the event that there is a significant drop in aviation activity at the Airport during the course of a year.

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**AIRPORT CAPITAL IMPROVEMENT PLAN COSTS**  
**Airport Commission, City and County of San Francisco**  
 (for Fiscal Years ending June 30; amounts in millions)

	Prior Funding	FY 2019-26 Capital Plan						Subtotal		Total	Grand Total
		2019 Bonds	Remaining 2019	2020	2021	2022	2023	FY 19-23	FY 2024-26	FY 2019-26	
<b>Terminal Area</b>											
Terminal 1 Projects											
Boarding Area B Redevelopment	\$ 429	\$ 195	\$ -	\$ 67	\$ 75	\$ 51	\$ -	\$ 389	\$ -	\$ 389	\$ 817
Central Area	500	360	47	22	85	137	205	856	-	856	1,356
Other Terminal 1 Projects	199	2	-	2	0	1	1	6	-	6	205
Subtotal	\$ 1,127	\$ 557	\$ 47	\$ 92	\$ 160	\$ 189	\$ 206	\$ 1,251	\$ -	\$ 1,251	\$ 2,378
Terminal 3 Redevelopment Projects											
Terminal 3 West Improvements	\$ 32	\$ 56	\$ 94	\$ 192	\$ 205	\$ 206	\$ 189	\$ 942	\$ -	\$ 942	\$ 974
Terminal 3 East Improvements	254	-	-	-	-	-	-	-	-	-	254
Subtotal	\$ 286	\$ 56	\$ 94	\$ 192	\$ 205	\$ 206	\$ 189	\$ 942	\$ -	\$ 942	\$ 1,228
International Terminal Refresh Projects	16	55	43	156	43	-	-	297	-	297	313
Courtyard 3 Connector	23	51	19	74	87	-	-	231	-	231	254
Revenue Enhancement and Customer Hospitality (REACH) Program	30	16	8	-	-	-	-	24	-	24	55
Gate Capacity Enhancements	17	56	-	26	-	-	-	82	-	82	98
Air Traffic Control Tower Program	86	40	6	2	-	-	-	47	-	47	134
Miscellaneous Terminal Projects	37	47	18	20	43	14	0	144	11	154	191
	\$ 1,621	\$ 879	\$ 235	\$ 561	\$ 539	\$ 409	\$ 395	\$ 3,018	\$ 11	\$ 3,028	\$ 4,650
<b>Airfield Area</b>	\$ 48	\$ 26	\$ 72	\$ 30	\$ 4	\$ -	\$ -	\$ 132	\$ -	\$ 132	\$ 180
<b>Airport Support Area</b>											
Security Improvements	\$ 89	\$ 53	\$ 30	\$ 7	\$ -	\$ -	\$ -	\$ 90	\$ -	\$ 90	\$ 179
Technology Improvement Projects	71	35	13	7	1	2	-	57	-	57	128
Superbay Renovation Program	34	56	13	-	11	-	-	79	-	79	113
Consolidated Administration Campus	66	5	14	-	-	-	-	18	-	18	84
Miscellaneous Support Projects	120	36	23	13	22	24	6	125	4	129	249
	\$ 380	\$ 184	\$ 92	\$ 26	\$ 33	\$ 26	\$ 6	\$ 368	\$ 4	\$ 372	\$ 753
<b>Groundside Area</b>											
On-Airport Hotel	\$ 240	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 240
AirTrain Extension	128	56	25	10	-	-	-	91	-	91	219
Additional Long Term Parking Garage	59	56	46	-	-	-	-	102	-	102	161
Miscellaneous Groundside Projects	124	2	32	26	2	2	-	64	-	64	188
	\$ 550	\$ 114	\$ 103	\$ 36	\$ 2	\$ 2	\$ -	\$ 257	\$ -	\$ 257	\$ 807
<b>Utilities</b>											
Net Zero Energy Program	\$ 13	\$ 44	\$ 33	\$ 47	\$ 24	\$ 15	\$ -	\$ 163	\$ -	\$ 163	\$ 176
Waste Water System Improvements	27	48	7	23	21	0	0	99	-	99	126
Water System Improvements	1	0	1	8	8	1	0	18	-	18	19
Miscellaneous Other Projects	30	19	25	12	4	-	-	60	-	60	90
	\$ 71	\$ 110	\$ 66	\$ 90	\$ 58	\$ 16	\$ 0	\$ 340	\$ -	\$ 340	\$ 411
<b>Reserve</b>	\$ -	\$ -	\$ -	\$ 124	\$ 150	\$ 128	\$ 66	\$ 468	\$ -	\$ 468	\$ 468
<b>SUBTOTAL - ASCENT PROGRAM PHASE 1</b>	<b>\$ 2,671</b>	<b>\$ 1,313</b>	<b>\$ 568</b>	<b>\$ 868</b>	<b>\$ 786</b>	<b>\$ 580</b>	<b>\$ 469</b>	<b>\$ 4,584</b>	<b>\$ 15</b>	<b>\$ 4,599</b>	<b>\$ 7,270</b>
Infrastructure Projects Plan	9	3	91	16	3	-	-	113	-	113	122
<b>CAPITAL IMPROVEMENT PLAN</b>	<b>\$ 2,680</b>	<b>\$ 1,316</b>	<b>\$ 659</b>	<b>\$ 884</b>	<b>\$ 789</b>	<b>\$ 580</b>	<b>\$ 469</b>	<b>\$ 4,697</b>	<b>\$ 15</b>	<b>\$ 4,712</b>	<b>\$ 7,392</b>

Note: Figures may not sum to totals due to rounding.  
 Source: Airport Commission, November 2018.

**AIRPORT CAPITAL IMPROVEMENT PLAN SOURCES OF FUNDING**  
**Airport Commission, City and County of San Francisco**  
 (for Fiscal Years ending June 30; amounts in millions)

	Prior Funding	FY 2019-23							Total
		Other Funds	Revenue Bonds		Subtotal	FY 2019-23	FY 2024-26	FY 2019-26	
			2019 Bonds	Future					
<b>Terminal Area</b>									
Terminal 1 Projects									
Boarding Area B Redevelopment	\$ 429	\$ -	\$ 195	\$ 194	\$ 389	\$ 389	\$ -	\$ 389	\$ 817
Central Area	500	60	360	436	796	856	-	856	1,356
Other Terminal 1 Projects	199	-	2	4	6	6	-	6	205
Subtotal	\$ 1,127	\$ 60	\$ 557	\$ 634	\$ 1,191	\$ 1,251	\$ -	\$ 1,251	\$ 2,378
Terminal 3 Redevelopment Projects									
Terminal 3 West Improvements	\$ 32	\$ -	\$ 56	\$ 886	\$ 942	\$ 942	\$ -	\$ 942	\$ 974
Terminal 3 East Improvements	254	-	-	-	-	-	-	-	254
Subtotal	\$ 286	\$ -	\$ 56	\$ 886	\$ 942	\$ 942	\$ -	\$ 942	\$ 1,228
International Terminal Refresh Projects	16	-	55	242	297	297	-	297	313
Courtyard 3 Connector	23	-	51	180	231	231	-	231	254
Revenue Enhancement and Customer Hospitality (REACH) Program	30	-	16	8	24	24	-	24	55
Gate Capacity Enhancements	17	-	56	26	82	82	-	82	98
Air Traffic Control Tower Program	86	-	40	7	47	47	-	47	134
Miscellaneous Terminal Projects	37	-	47	96	144	144	11	154	191
	\$ 1,621	\$ 60	\$ 879	\$ 2,079	\$ 2,958	\$ 3,018	\$ 11	\$ 3,028	\$ 4,650
<b>Airfield Area</b>	\$ 48	\$ 52	\$ 26	\$ 54	\$ 80	\$ 132	\$ -	\$ 132	\$ 180
<b>Airport Support Area</b>									
Security Improvements	\$ 89	\$ -	\$ 53	\$ 36	\$ 90	\$ 90	\$ -	\$ 90	\$ 179
Technology Improvement Projects	71	-	35	22	57	57	-	57	128
Superbay Renovation Program	34	-	56	23	79	79	-	79	113
Consolidated Administration Campus	66	-	5	14	18	18	-	18	84
Miscellaneous Support Projects	120	29	36	59	95	125	4	129	249
	\$ 380	\$ 29	\$ 184	\$ 155	\$ 339	\$ 368	\$ 4	\$ 372	\$ 753
<b>Groundside Area</b>									
On-Airport Hotel	\$ 240	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 240
AirTrain Extension	128	-	56	35	91	91	-	91	219
Additional Long Term Parking Garage	59	-	56	46	102	102	-	102	161
Miscellaneous Groundside Projects	124	-	2	62	64	64	-	64	188
	\$ 550	\$ -	\$ 114	\$ 143	\$ 257	\$ 257	\$ -	\$ 257	\$ 807
<b>Utilities</b>									
Net Zero Energy Program	\$ 13	\$ -	\$ 44	\$ 120	\$ 163	\$ 163	\$ -	\$ 163	\$ 176
Waste Water System Improvements	27	1	48	51	99	99	-	99	126
Water System Improvements	1	-	0	17	18	18	-	18	19
Miscellaneous Other Projects	30	-	19	41	60	60	-	60	90
	\$ 71	\$ 1	\$ 110	\$ 229	\$ 339	\$ 340	\$ -	\$ 340	\$ 411
<b>Reserve</b>	\$ -	\$ -	\$ -	\$ 468	\$ 468	\$ 468	\$ -	\$ 468	\$ 468
<b>SUBTOTAL - ASCENT PROGRAM PHASE 1</b>	\$ 2,671	\$ 142	\$ 1,313	\$ 3,128	\$ 4,442	\$ 4,584	\$ 15	\$ 4,599	\$ 7,270
Infrastructure Projects Plan	9	71	3	39	42	113	-	113	122
<b>CAPITAL IMPROVEMENT PLAN</b>	\$ 2,680	\$ 213	\$ 1,316	\$ 3,168	\$ 4,484	\$ 4,697	\$ 15	\$ 4,712	\$ 7,392

Note: Figures may not sum to totals due to rounding.  
 Source: Airport Commission, November 2018.

**Exhibit B**

**PFC REVENUE FORECAST AND APPLICATION OF PFC REVENUES**  
**Airport Commission, City and County of San Francisco**  
(for Fiscal Years ending June 30; amounts in thousands except PFC levels)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport Commission management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances could occur. Therefore, the actual results will vary from those forecast, and the variations could be material.

	<b>Historical 2017</b>	<b>Estimated 2018</b>	<b>Forecast 2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<b><u>PFC Collections</u></b>									
Enplaned Passengers	26,871	28,814	28,958	29,536	30,106	30,657	31,186	31,701	32,183
Percent of PFC Eligible Passengers Paying	<u>82.5%</u>	<u>88.1%</u>	<u>85.0%</u>	<u>85.0%</u>	<u>85.0%</u>	<u>85.0%</u>	<u>85.0%</u>	<u>85.0%</u>	<u>85.0%</u>
PFC Eligible Enplaned Passengers	22,161	25,371	24,614	25,105	25,590	26,058	26,508	26,945	27,355
PFC Level	\$ 4.50	\$ 4.50	\$ 4.50	\$ 4.50	\$ 4.50	\$ 4.50	\$ 4.50	\$ 4.50	\$ 4.50
Less: PFC Airline Collection Fee	<u>(0.11)</u>	<u>(0.11)</u>	<u>(0.11)</u>	<u>(0.11)</u>	<u>(0.11)</u>	<u>(0.11)</u>	<u>(0.11)</u>	<u>(0.11)</u>	<u>(0.11)</u>
Net PFC Level	\$ 4.39	\$ 4.39	\$ 4.39	\$ 4.39	\$ 4.39	\$ 4.39	\$ 4.39	\$ 4.39	\$ 4.39
PFC Collections (not including interest income)	\$ 97,287	\$ 111,379	\$ 108,055	\$ 110,212	\$ 112,342	\$ 114,396	\$ 116,371	\$ 118,290	\$ 120,090
Cumulative PFC Collections (a)	\$ 1,177,701	\$ 1,294,231	\$ 1,406,347	\$ 1,521,095	\$ 1,638,258	\$ 1,757,301	\$ 1,877,884	\$ 1,999,968	\$ 2,123,475
<b><u>PFC Cash Flow</u></b>									
PFC Fund - Beginning Balance	\$ 197,554	\$ 273,598	\$ 386,061	\$ 430,296	\$ 481,300	\$ 487,806	\$ 446,192	\$ 400,518	\$ 361,945
Deposits:									
PFC Collections	\$ 97,287	\$ 111,379	\$ 108,055	\$ 110,212	\$ 112,342	\$ 114,396	\$ 116,371	\$ 118,290	\$ 120,090
Interest Earnings	<u>2,120</u>	<u>5,151</u>	<u>4,061</u>	<u>4,535</u>	<u>4,821</u>	<u>4,647</u>	<u>4,212</u>	<u>3,793</u>	<u>3,417</u>
Total Annual PFC Revenues	\$ 99,407	\$ 116,530	\$ 112,116	\$ 114,747	\$ 117,163	\$ 119,043	\$ 120,583	\$ 122,084	\$ 123,507
<b><u>Annual Use of PFC Revenues</u></b>									
Planned Pay-as-you-go	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Debt Service	<u>(23,363)</u>	<u>(4,068)</u>	<u>(67,881)</u>	<u>(63,744)</u>	<u>(110,657)</u>	<u>(160,657)</u>	<u>(166,257)</u>	<u>(160,657)</u>	<u>(160,657)</u>
Total Annual Use of PFC Revenues	\$ (23,363)	\$ (4,068)	\$ (67,881)	\$ (63,744)	\$ (110,657)	\$ (160,657)	\$ (166,257)	\$ (160,657)	\$ (160,657)
<b>PFC Fund - Ending Balance</b>	\$ 273,598	\$ 386,061	\$ 430,296	\$ 481,300	\$ 487,806	\$ 446,192	\$ 400,518	\$ 361,945	\$ 324,795

(a) The Airport Commission has received PFC collection authority for a total of \$2.112 billion as of October 2018.

Note: Figures may not sum to totals due to rounding.

Sources: Historical and Estimated - Airport Commission; Forecast - LeighFisher.

**Exhibit C**

**SOURCES & USES OF BOND FUNDS**  
**Airport Commission, City and County of San Francisco**  
(for Fiscal Years ending June 30; dollars in thousands)

	<b>Proposed 2019 Bonds (a)</b>	<b>Future Bonds</b>	<b>Other Funding Sources</b>	<b>Grand Total FY 2019-26 (b)</b>
<b>Sources of Funds</b>				
Bond Proceeds	\$ 1,471,290	\$ 3,720,495	\$ -	\$ 5,191,785
Premium / (Discount)	82,126	-	-	82,126
FY 2019-2023 Grants	-	-	128,878	128,878
SFO Fuel Special Facility Bonds Net Proceeds	-	-	52,200	52,200
Equipment and Capital Outlay and Other Funds	-	-	32,050	32,050
<b>Total</b>	<b>\$ 1,553,416</b>	<b>\$ 3,720,495</b>	<b>\$ 213,128</b>	<b>\$ 5,487,038</b>
<b>Uses of Funds</b>				
Capital Plan Project Expenditures	\$ 885,477	\$ 3,182,687	\$ 213,128	\$ 4,281,292
Commercial Paper Refunding	430,443	-	-	430,443
Subtotal Capital Costs	\$ 1,315,920	\$ 3,182,687	\$ 213,128	\$ 4,711,735
Deposit to Contingency Account	20,000	63,342	-	83,342
Capitalized Interest	135,158	162,572	-	297,730
Bond Reserve Account	78,306	278,342	-	356,647
Cost of Issuance	4,032	33,553	-	37,585
<b>Total</b>	<b>\$ 1,553,416</b>	<b>\$ 3,720,495</b>	<b>\$ 213,128</b>	<b>\$ 5,487,038</b>

(a) Includes \$\$430.4 million to refund outstanding commercial paper.

(b) Does not include \$2.68 billion of prior funding.

Note: Figures may not sum to totals due to rounding.

Sources: Airport Commission; Public Financial Management, Inc., November 2018.

**Exhibit D**

**ANNUAL DEBT SERVICE REQUIREMENTS**  
**Airport Commission, City and County of San Francisco**  
(for Fiscal Years ending June 30; dollars in thousands)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport Commission management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances could occur. Therefore, the actual results will vary from those forecast, and the variations could be material.

	<b>Historical 2017</b>	<b>Estimated 2018</b>	<b>Forecast 2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<b>DEBT SERVICE - CASH BASIS (a)</b>									
Outstanding Bonds									
Fixed Rate Bonds	\$ 370,538	\$ 376,106	\$ 413,017	\$ 443,177	\$ 456,914	\$ 477,246	\$ 475,876	\$ 436,967	\$ 447,488
Variable Rate Bonds	34,016	24,121	32,919	33,773	38,130	39,762	45,822	50,695	50,362
Subtotal	\$ 404,555	\$ 400,227	\$ 445,936	\$ 476,950	\$ 495,044	\$ 517,008	\$ 521,698	\$ 487,662	\$ 497,850
Proposed 2019 Bonds	-	-	2,619	25,943	34,921	58,117	79,340	79,341	79,343
Future Bonds	-	-	-	-	21,308	119,038	192,048	278,325	278,334
<b>Total Debt Service - Cash Basis</b>	<b>\$ 404,555</b>	<b>\$ 400,227</b>	<b>\$ 448,555</b>	<b>\$ 502,893</b>	<b>\$ 551,274</b>	<b>\$ 694,163</b>	<b>\$ 793,085</b>	<b>\$ 845,328</b>	<b>\$ 855,528</b>
<b>DEBT SERVICE - DEPOSIT BASIS</b>									
Outstanding Bonds									
Fixed Rate Bonds	\$ 380,778	\$ 384,581	\$ 418,481	\$ 446,401	\$ 460,469	\$ 477,018	\$ 469,391	\$ 438,721	\$ 444,128
Variable Rate Bonds	27,972	27,291	32,980	34,587	38,228	40,386	46,796	50,879	50,551
Subtotal	\$ 408,750	\$ 411,871	\$ 451,461	\$ 480,987	\$ 498,697	\$ 517,404	\$ 516,187	\$ 489,600	\$ 494,679
Proposed 2019 Bonds	-	-	6,222	27,703	37,870	63,028	79,340	79,341	79,343
Future Bonds	-	-	-	1,015	34,709	129,886	213,172	278,326	278,333
<b>Total Debt Service - Deposit Basis</b>	<b>\$ 408,750</b>	<b>\$ 411,871</b>	<b>\$ 457,684</b>	<b>\$ 509,705</b>	<b>\$ 571,277</b>	<b>\$ 710,318</b>	<b>\$ 808,699</b>	<b>\$ 847,267</b>	<b>\$ 852,355</b>
<b>DEBT SERVICE BY COST CENTER - DEPOSIT BASIS</b>									
Airfield Area			\$ 56,975	\$ 51,655	\$ 47,208	\$ 52,494	\$ 55,704	\$ 57,324	\$ 58,609
Airport Support Area			41,122	49,073	56,109	71,103	80,858	81,876	82,279
Terminal Area			220,486	262,592	311,778	402,975	470,184	500,409	498,906
Groundside Area			114,918	119,650	123,337	137,876	146,898	147,398	152,855
Utility			24,183	26,735	32,844	45,871	55,055	60,261	59,705
<b>Total Debt Service by Cost Center</b>			<b>\$ 457,684</b>	<b>\$ 509,705</b>	<b>\$ 571,277</b>	<b>\$ 710,318</b>	<b>\$ 808,699</b>	<b>\$ 847,267</b>	<b>\$ 852,355</b>

(a) Debt service expressed on a deposit basis reflects the monthly payments the Commission is required to make to the Trustee, while debt service expressed on a cash basis reflects the actual payment of principal and interest to the Bond holders.

Note: Figures may not sum to totals due to rounding.

Sources: Airport Commission; Public Financial Management, Inc., November 2018.

**Exhibit E**

**OPERATION AND MAINTENANCE EXPENSES**  
**Airport Commission, City and County of San Francisco**  
(for Fiscal Years ending June 30; dollars in thousands)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport Commission management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances could occur. Therefore, the actual results will vary from those forecast, and the variations could be material.

	<b>Historical 2017</b>	<b>Estimated 2018</b>	<b>Forecast 2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
Salaries & Benefits									
Commission Staff	\$ 218,375	\$ 235,113	\$ 254,423	\$ 268,116	\$ 276,594	\$ 286,236	\$ 296,236	\$ 306,610	\$ 317,371
Police	54,113	58,260	61,492	77,524	79,850	82,246	84,713	87,254	89,872
Fire	23,360	25,150	29,001	30,124	31,028	31,958	32,917	33,905	34,922
Total Salaries and Benefits	\$ 295,848	\$ 318,523	\$ 344,916	\$ 375,764	\$ 387,472	\$ 400,440	\$ 413,866	\$ 427,769	\$ 442,165
Contractual Services									
Parking Garage Management Services	\$ 20,943	\$ 21,976	\$ 23,010	\$ 24,278	\$ 25,006	\$ 25,756	\$ 26,529	\$ 27,325	\$ 28,144
Other Contractual Services	51,202	67,417	100,237	104,115	107,238	110,455	113,769	117,182	120,697
Total Contractual Services	\$ 72,145	\$ 89,394	\$ 123,247	\$ 128,392	\$ 132,244	\$ 136,211	\$ 140,298	\$ 144,507	\$ 148,842
Services Provided by Other City Departments	\$ 22,315	\$ 24,267	\$ 37,391	\$ 39,222	\$ 40,791	\$ 42,422	\$ 44,119	\$ 45,884	\$ 47,720
Repairs and Maintenance	36,028	35,529	36,950	38,058	39,200	40,376	41,587	42,835	44,120
Utilities	23,865	24,714	27,992	28,710	29,438	30,174	30,917	31,667	32,421
Materials and Supplies	16,653	18,247	20,938	18,984	19,554	20,140	20,745	21,367	22,008
General and Administration	3,997	3,427	3,564	3,671	3,781	3,894	4,011	4,131	4,255
Environmental	(0)	-	-	-	-	-	-	-	-
<b>BASE EXPENSES</b>	\$ 470,850	\$ 514,100	\$ 594,998	\$ 632,802	\$ 652,479	\$ 673,658	\$ 695,544	\$ 718,160	\$ 741,531
Incremental Expenses for Future Facilities (a)	-	-	-	-	7,466	9,811	12,974	13,493	14,032
<b>OPERATION AND MAINTENANCE EXPENSES</b>	\$ 470,850	\$ 514,100	\$ 594,998	\$ 632,802	\$ 659,945	\$ 683,469	\$ 708,518	\$ 731,653	\$ 755,563
Percent Change	6.1%	9.2%	15.7%	6.4%	4.3%	3.6%	3.7%	3.3%	3.3%
<b>O&amp;M Expenses by Cost Center</b>									
Airfield Area			\$ 48,927	\$ 51,204	\$ 52,345	\$ 54,394	\$ 56,109	\$ 57,993	\$ 59,908
Airport Support Area			59,571	62,085	63,855	65,797	67,813	69,979	72,270
Terminal Area			290,263	311,814	330,935	344,023	359,140	371,498	383,952
Groundside Area			142,149	152,587	156,824	161,804	166,565	171,724	177,288
Utility Area			46,793	46,914	47,574	48,817	50,031	51,368	52,817
Total O&M Expenses by Cost Center			\$ 587,703	\$ 624,604	\$ 651,532	\$ 674,836	\$ 699,659	\$ 722,562	\$ 746,234
Adjustment (b)			7,295	8,198	8,413	8,633	8,859	9,091	9,329
<b>OPERATION AND MAINTENANCE EXPENSES</b>			\$ 594,998	\$ 632,802	\$ 659,945	\$ 683,469	\$ 708,518	\$ 731,653	\$ 755,563

(a) Also reflects projected saving of shuttle bus operating expenses in 2021 after AirTrain extension, among other expenses.

(b) Adjustments are for the difference in other post-retirement benefit expenses between the amounts charged to the airlines and the amount recognized under GAAP.

Note: Figures may not sum to totals due to rounding.

Sources: Historical and Estimated - Airport Commission; Forecast - LeighFisher.

**Exhibit F**

**REVENUES**

**Airport Commission, City and County of San Francisco**  
(for Fiscal Years ending June 30; dollars in thousands)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport Commission management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances could occur. Therefore, the actual results will vary from those forecast, and the variations could be material.

	<b>Historical 2017</b>	<b>Estimated 2018</b>	<b>Forecast 2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<b>Aviation Revenues</b>									
Landing Fees	\$ 188,581	\$ 196,326	\$ 224,765	\$ 248,991	\$ 252,014	\$ 299,405	\$ 340,106	\$ 366,281	\$ 374,815
Terminal Rentals	272,994	291,770	308,777	345,296	364,093	412,251	473,572	506,663	515,707
<b>Aviation Revenue - Airlines</b>	<b>\$ 461,575</b>	<b>\$ 488,096</b>	<b>\$ 533,543</b>	<b>\$ 594,287</b>	<b>\$ 616,106</b>	<b>\$ 711,656</b>	<b>\$ 813,678</b>	<b>\$ 872,944</b>	<b>\$ 890,521</b>
Other Rental Revenues	50,540	54,703	53,916	55,654	56,835	58,046	59,287	60,559	61,863
Other Aviation Revenues	33,195	36,307	35,218	36,273	37,864	38,993	40,960	42,868	44,117
	<b>\$ 545,310</b>	<b>\$ 579,106</b>	<b>\$ 622,677</b>	<b>\$ 686,214</b>	<b>\$ 710,805</b>	<b>\$ 808,695</b>	<b>\$ 913,925</b>	<b>\$ 976,371</b>	<b>\$ 996,502</b>
<b>Concession Revenues</b>									
Parking	\$ 106,791	\$ 100,903	\$ 97,645	\$ 104,426	\$ 106,445	\$ 108,391	\$ 110,262	\$ 112,081	\$ 113,786
On-airport Rental Car	48,967	46,018	46,419	47,346	48,261	49,143	49,991	50,816	51,589
Duty Free (a)	25,296	31,659	27,620	42,000	48,068	51,854	55,642	57,379	58,237
Retail	18,250	19,687	19,356	21,638	22,481	23,317	24,160	25,004	25,720
Food & Beverage	23,483	25,474	28,148	32,773	34,062	35,366	36,684	38,022	39,361
Other Services	24,123	25,390	25,193	25,910	26,643	27,387	28,144	28,915	29,694
TNC and Ground Transportation	36,573	44,662	48,823	49,798	50,760	51,688	52,580	53,448	54,261
Other Concession Revenues	16,763	16,530	17,445	18,477	18,875	19,272	19,668	20,064	20,456
	<b>\$ 300,245</b>	<b>\$ 310,325</b>	<b>\$ 310,649</b>	<b>\$ 342,368</b>	<b>\$ 355,594</b>	<b>\$ 366,417</b>	<b>\$ 377,130</b>	<b>\$ 385,729</b>	<b>\$ 393,104</b>
<b>Net Sales and Services</b>									
Utilities (net of costs)	\$ 10,072	\$ 11,370	\$ 11,657	\$ 12,367	\$ 13,134	\$ 13,964	\$ 14,862	\$ 15,835	\$ 16,891
BART Payments	3,391	3,419	3,446	3,470	3,495	3,520	3,546	3,572	3,600
Rental Car Facility Fees	15,470	16,024	16,660	17,077	17,503	17,941	18,390	18,849	19,320
Rental Car Transportation Fees	34,724	32,314	31,371	31,997	32,616	33,212	33,785	28,712	29,149
Other Sales and Services	17,588	20,044	19,796	19,999	20,208	20,422	20,641	20,866	21,096
	<b>\$ 81,245</b>	<b>\$ 83,171</b>	<b>\$ 82,930</b>	<b>\$ 84,910</b>	<b>\$ 86,956</b>	<b>\$ 89,058</b>	<b>\$ 91,224</b>	<b>\$ 87,834</b>	<b>\$ 90,055</b>
<b>TOTAL OPERATING REVENUES</b>	<b>\$ 926,800</b>	<b>\$ 972,602</b>	<b>\$ 1,016,256</b>	<b>\$ 1,113,492</b>	<b>\$ 1,153,355</b>	<b>\$ 1,264,170</b>	<b>\$ 1,382,279</b>	<b>\$ 1,449,934</b>	<b>\$ 1,479,661</b>
PFCs Classified as Revenues (b)	23,363	4,068	67,881	63,744	110,657	160,657	166,257	160,657	160,657
Hotel Revenues	-	-	6,223	7,594	7,594	8,559	8,255	8,534	8,729
Interest Income (c)	10,065	12,147	23,948	28,223	33,727	37,768	40,727	42,688	42,973
<b>TOTAL REVENUES</b>	<b>\$ 960,228</b>	<b>\$ 988,817</b>	<b>\$ 1,114,307</b>	<b>\$ 1,213,052</b>	<b>\$ 1,305,333</b>	<b>\$ 1,471,154</b>	<b>\$ 1,597,518</b>	<b>\$ 1,661,813</b>	<b>\$ 1,692,020</b>

(a) Revenues from duty-free sales only. Amounts attributed as revenues from duty-paid sales under the DFS Group contract through FY 2018 are included in retail revenues.

(b) Portion of PFC receipts used to pay debt service in such fiscal year, based on the Airport Commission's expectations.

(c) Certain interest income included by the Commission in Airline Rates and Charges calculations.

Note: Figures may not sum to totals due to rounding.

Sources: Historical and Estimated - Airport Commission; Forecast - LeighFisher.

**Exhibit F-1**

**LANDING FEES**

**Airport Commission, City and County of San Francisco**  
(for Fiscal Years ending June 30; amounts in thousands except rates)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport Commission management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances could occur. Therefore, the actual results will vary from those forecast, and the variations could be material.

	<b>Forecast</b>						
	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<b>Airfield Area</b>							
Operation and Maintenance Expenses	\$ 48,927	\$ 51,204	\$ 52,345	\$ 54,394	\$ 56,109	\$ 57,993	\$ 59,908
Existing Debt Service	56,762	50,672	44,723	45,889	45,689	45,078	46,363
Future Debt Service	213	983	2,485	6,605	10,015	12,246	12,246
Subordinate Lien Debt	516	641	678	716	754	795	795
Small Capital Outlays	1,000	1,020	1,044	1,068	1,092	1,117	1,143
Equipment	516	382	696	717	739	761	784
<b>Airfield Area Expenses</b>	<b>\$ 107,934</b>	<b>\$ 104,901</b>	<b>\$ 101,971</b>	<b>\$ 109,389</b>	<b>\$ 114,398</b>	<b>\$ 117,989</b>	<b>\$ 121,239</b>
Allocated Expenses from Utility Area	4,484	4,650	5,101	6,142	6,879	7,306	7,289
PFCs Classified as Revenues	-	-	-	-	(5,600)	-	-
Airfield Nonairline Revenues	(3,309)	(3,337)	(3,343)	(3,387)	(3,421)	(3,500)	(3,553)
Deficit/(Surplus) from Prior Fiscal Years	(4,494)	(5,213)	-	-	-	-	-
<b>Adjusted Airfield Area Expenses</b>	<b>\$ 104,614</b>	<b>\$ 101,001</b>	<b>\$ 103,729</b>	<b>\$ 112,144</b>	<b>\$ 112,256</b>	<b>\$ 121,796</b>	<b>\$ 124,974</b>
Deficit/(Surplus) from Airport Support Area	13,266	21,358	28,082	43,515	53,563	54,864	54,953
<b>Gross Landing Fee Payable by Airlines</b>	<b>\$ 117,880</b>	<b>\$ 122,359</b>	<b>\$ 131,811</b>	<b>\$ 155,658</b>	<b>\$ 165,818</b>	<b>\$ 176,660</b>	<b>\$ 179,927</b>
Landed Weight of Scheduled Airlines	39,922	40,602	41,223	41,810	42,373	42,911	43,397
<b>Basic Landing Fee Rate (per 1,000 lbs)</b>	<b>\$ 2.95</b>	<b>\$ 3.01</b>	<b>\$ 3.20</b>	<b>\$ 3.72</b>	<b>\$ 3.91</b>	<b>\$ 4.12</b>	<b>\$ 4.15</b>
<b>Total Terminal and Groundside Area Surcharge</b>	<b>\$ 212,376</b>	<b>\$ 243,970</b>	<b>\$ 257,280</b>	<b>\$ 287,493</b>	<b>\$ 348,576</b>	<b>\$ 379,243</b>	<b>\$ 389,774</b>
Airfield Portion (50%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
<b>Terminal Area Rental Surcharge</b>	<b>\$ 106,188</b>	<b>\$ 121,985</b>	<b>\$ 128,640</b>	<b>\$ 143,747</b>	<b>\$ 174,288</b>	<b>\$ 189,622</b>	<b>\$ 194,887</b>
Surplus of Groundside Area	(3,797)	(566)	(8,437)	-	-	-	-
<b>Subtotal</b>	<b>\$ 102,391</b>	<b>\$ 121,419</b>	<b>\$ 120,203</b>	<b>\$ 143,747</b>	<b>\$ 174,288</b>	<b>\$ 189,622</b>	<b>\$ 194,887</b>
Landed Weight of Scheduled Airlines	39,922	40,602	41,223	41,810	42,373	42,911	43,397
<b>Landing Fee Surcharge Rate (per 1,000 lbs)</b>	<b>\$ 2.56</b>	<b>\$ 2.99</b>	<b>\$ 2.92</b>	<b>\$ 3.44</b>	<b>\$ 4.11</b>	<b>\$ 4.42</b>	<b>\$ 4.49</b>
Basic Landing Fee Rate	\$ 2.95	\$ 3.01	\$ 3.20	\$ 3.72	\$ 3.91	\$ 4.12	\$ 4.15
Landing Fee Surcharge Rate	2.56	2.99	2.92	3.44	4.11	4.42	4.49
<b>Effective Landing Fee Rate (per 1,000 lbs)</b>	<b>\$ 5.52</b>	<b>\$ 6.00</b>	<b>\$ 6.11</b>	<b>\$ 7.16</b>	<b>\$ 8.03</b>	<b>\$ 8.54</b>	<b>\$ 8.64</b>
<b>Total Landing Fee Revenues</b>	<b>\$ 220,271</b>	<b>\$ 243,778</b>	<b>\$ 252,014</b>	<b>\$ 299,405</b>	<b>\$ 340,106</b>	<b>\$ 366,281</b>	<b>\$ 374,815</b>
Adjustment for Deferred Aviation Revenues	4,494	5,213	-	-	-	-	-
<b>Landing Fee Revenues Recognized</b>	<b>\$ 224,765</b>	<b>\$ 248,991</b>	<b>\$ 252,014</b>	<b>\$ 299,405</b>	<b>\$ 340,106</b>	<b>\$ 366,281</b>	<b>\$ 374,815</b>

Note: Figures may not sum to totals due to rounding. The landing fee and associated landing fee revenues for FY 2019 shown in this exhibit reflect updated estimates based on year to date data, and differ from the budgeted amounts (landing fee rate of \$5.54 and revenues of \$226.7 million).

Source: LeighFisher.

**Exhibit F-2**

**TERMINAL AREA RENTALS**  
**Airport Commission, City and County of San Francisco**  
(for Fiscal Years ending June 30; amounts in thousands except rates)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport Commission management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances could occur. Therefore, the actual results will vary from those forecast, and the variations could be material.

	<b>Forecast</b>						
	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<b>Terminal Area</b>							
Operation and Maintenance Expenses	\$ 290,263	\$ 311,814	\$ 330,935	\$ 344,023	\$ 359,140	\$ 371,498	\$ 383,952
Existing Debt Service	216,225	242,929	262,083	270,886	269,901	255,514	254,005
Future Debt Service	4,261	19,663	49,695	132,089	200,282	244,895	244,901
Subordinate Lien Debt	7,248	8,997	9,528	10,058	10,588	11,161	11,161
Small Capital Outlays	1,000	1,020	1,044	1,068	1,092	1,117	1,143
Equipment	1,235	1,874	1,667	1,717	1,768	1,821	1,876
<b>Terminal Area Expenses</b>	<b>\$ 520,232</b>	<b>\$ 586,297</b>	<b>\$ 654,951</b>	<b>\$ 759,841</b>	<b>\$ 842,773</b>	<b>\$ 886,006</b>	<b>\$ 897,037</b>
Allocable Expenses from Utility Area	38,671	40,106	43,998	52,975	59,329	63,017	62,866
Annual Service Payments	46,597	51,828	53,960	55,904	57,602	58,931	60,064
<b>Total Terminal Area Expenses</b>	<b>\$ 605,500</b>	<b>\$ 678,231</b>	<b>\$ 752,909</b>	<b>\$ 868,720</b>	<b>\$ 959,704</b>	<b>\$ 1,007,954</b>	<b>\$ 1,019,967</b>
Deficit/(Surplus) from Prior Fiscal Years	(17,506)	(15,640)	-	-	-	-	-
<b>Adjusted Terminal Area Expenses</b>	<b>\$ 587,995</b>	<b>\$ 662,591</b>	<b>\$ 752,909</b>	<b>\$ 868,720</b>	<b>\$ 959,704</b>	<b>\$ 1,007,954</b>	<b>\$ 1,019,967</b>
Divided by Gross Building Area (square feet)	5,248	5,500	5,754	5,822	5,908	5,994	5,994
<b>Annual Cost per Square Foot ("Basic Rate")</b>	<b>\$ 112.04</b>	<b>\$ 120.47</b>	<b>\$ 130.86</b>	<b>\$ 149.23</b>	<b>\$ 162.44</b>	<b>\$ 168.15</b>	<b>\$ 170.15</b>
Airline Leased Space (square feet)	1,652	1,724	1,799	1,799	1,842	1,885	1,885
<b>Airline Rental Payable</b>	<b>\$ 185,084</b>	<b>\$ 207,672</b>	<b>\$ 235,453</b>	<b>\$ 268,504</b>	<b>\$ 299,284</b>	<b>\$ 317,041</b>	<b>\$ 320,820</b>
<b>Annual Cost per Square Foot ("Basic Rate")</b>	<b>\$ 112.04</b>	<b>\$ 120.47</b>	<b>\$ 130.86</b>	<b>\$ 149.23</b>	<b>\$ 162.44</b>	<b>\$ 168.15</b>	<b>\$ 170.15</b>
Public Space (square feet)	3,596	3,776	3,954	4,022	4,066	4,109	4,109
Cost of Public Space	\$ 402,911	\$ 454,920	\$ 517,456	\$ 600,215	\$ 660,420	\$ 690,913	\$ 699,147
PFCs Classified as Revenues	(67,881)	(63,744)	(100,000)	(150,000)	(150,000)	(150,000)	(150,000)
Terminal Nonairline Revenues	(122,654)	(147,206)	(160,177)	(169,616)	(179,219)	(186,040)	(189,800)
Deficit of Groundside Area	-	-	-	6,894	17,374	24,370	30,427
<b>Total Terminal and Groundside Area Surcharge</b>	<b>\$ 212,376</b>	<b>\$ 243,970</b>	<b>\$ 257,280</b>	<b>\$ 287,493</b>	<b>\$ 348,576</b>	<b>\$ 379,243</b>	<b>\$ 389,774</b>
Terminal Portion (50%)	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
<b>Terminal Area Rental Surcharge</b>	<b>\$ 106,188</b>	<b>\$ 121,985</b>	<b>\$ 128,640</b>	<b>\$ 143,747</b>	<b>\$ 174,288</b>	<b>\$ 189,622</b>	<b>\$ 194,887</b>
Airline Leased Space	1,652	1,724	1,799	1,799	1,842	1,885	1,885
Rental Surcharge Rate	\$ 64.28	\$ 70.76	\$ 71.49	\$ 79.89	\$ 94.60	\$ 100.57	\$ 103.36
<b>Basic Rate (per square foot)</b>	<b>\$ 112.04</b>	<b>\$ 120.47</b>	<b>\$ 130.86</b>	<b>\$ 149.23</b>	<b>\$ 162.44</b>	<b>\$ 168.15</b>	<b>\$ 170.15</b>
Rental Surcharge Rate	64.28	70.76	71.49	79.89	94.60	100.57	103.36
<b>Effective Average Rental Rate (per square foot)</b>	<b>\$ 176.32</b>	<b>\$ 191.23</b>	<b>\$ 202.35</b>	<b>\$ 229.11</b>	<b>\$ 257.04</b>	<b>\$ 268.72</b>	<b>\$ 273.51</b>
<b>Total Airline Terminal Rentals</b>	<b>\$ 291,272</b>	<b>\$ 329,657</b>	<b>\$ 364,093</b>	<b>\$ 412,251</b>	<b>\$ 473,572</b>	<b>\$ 506,663</b>	<b>\$ 515,707</b>
Adjustment for Deferred Aviation Revenues	17,506	15,640	-	-	-	-	-
<b>Terminal Revenues Recognized</b>	<b>\$ 308,777</b>	<b>\$ 345,296</b>	<b>\$ 364,093</b>	<b>\$ 412,251</b>	<b>\$ 473,572</b>	<b>\$ 506,663</b>	<b>\$ 515,707</b>

Note: Figures may not sum to totals due to rounding. The terminal rental rate and associated rental revenues for FY 2019 shown in this exhibit reflect updated estimates based on year to date data, and differ from the budgeted amounts (rental rate of \$179.21 per sq. ft. and \$296.1 million of rental revenues).

Source: LeighFisher.

**Exhibit F-3**

**AIRLINE PAYMENTS PER ENPLANED PASSENGER**  
**Airport Commission, City and County of San Francisco**  
(for Fiscal Years ending June 30; amounts in thousands except ratios)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport Commission management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances could occur. Therefore, the actual results will vary from those forecast, and the variations could be material.

	<b>Historical 2017</b>	<b>Estimated 2018</b>	<b>Forecast 2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
Aviation Revenue - Airlines									
Landing Fees	\$ 188,581	\$ 196,326	\$ 224,765	\$ 248,991	\$ 252,014	\$ 299,405	\$ 340,106	\$ 366,281	\$ 374,815
Terminal Area Rentals	<u>272,994</u>	<u>291,770</u>	<u>308,777</u>	<u>345,296</u>	<u>364,093</u>	<u>412,251</u>	<u>473,572</u>	<u>506,663</u>	<u>515,707</u>
Aviation Revenue - Airlines	\$ 461,575	\$ 488,096	\$ 533,543	\$ 594,287	\$ 616,106	\$ 711,656	\$ 813,678	\$ 872,944	\$ 890,521
Adjustment for Deferred Aviation Revenues (a)	<u>(12,703)</u>	<u>(12,000)</u>	<u>(22,000)</u>	<u>(20,853)</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Subtotal	\$ 448,873	\$ 476,096	\$ 511,543	\$ 573,434	\$ 616,106	\$ 711,656	\$ 813,678	\$ 872,944	\$ 890,521
Estimated Cargo Carrier Landing Fees	<u>(6,559)</u>	<u>(5,881)</u>	<u>(5,792)</u>	<u>(7,408)</u>	<u>(7,459)</u>	<u>(8,825)</u>	<u>(9,990)</u>	<u>(10,730)</u>	<u>(10,980)</u>
Passenger Airline Payments	<u>\$ 442,314</u>	<u>\$ 470,215</u>	<u>\$ 505,751</u>	<u>\$ 566,026</u>	<u>\$ 608,647</u>	<u>\$ 702,831</u>	<u>\$ 803,688</u>	<u>\$ 862,214</u>	<u>\$ 879,541</u>
Enplaned Passengers	26,871	28,814	28,958	29,536	30,106	30,657	31,186	31,701	32,183
Airline Cost per Enplaned Passenger - Nominal Dollars	\$ 16.46	\$ 16.32	\$ 17.47	\$ 19.16	\$ 20.22	\$ 22.93	\$ 25.77	\$ 27.20	\$ 27.33
In Constant 2018 Dollars (b)		16.32	17.04	18.24	18.77	20.77	22.78	23.45	22.99

(a) The amount reflects the difference between actual receipts and recalculated airline requirement.

(b) Discounted at an assumed rate of 2.5% annually.

Note: Figures may not sum to totals due to rounding.

Sources: Historical and Estimated - Airport Commission; Forecast - LeighFisher.

**Exhibit G**

**APPLICATION OF REVENUES**  
**Airport Commission, City and County of San Francisco**  
(for Fiscal Years ending June 30; dollars in thousands)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport Commission management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances could occur. Therefore, the actual results will vary from those forecast, and the variations could be material.

	<b>Historical 2017</b>	<b>Estimated 2018</b>	<b>Forecast 2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<b>REVENUES</b>									
<b>Operating Revenues</b>									
Aviation	\$ 545,310	\$ 579,106	\$ 622,677	\$ 686,214	\$ 710,805	\$ 808,695	\$ 913,925	\$ 976,371	\$ 996,502
Concession	300,245	310,325	310,649	342,368	355,594	366,417	377,130	385,729	393,104
Net Sales and Service	<u>81,245</u>	<u>83,171</u>	<u>82,930</u>	<u>84,910</u>	<u>86,956</u>	<u>89,058</u>	<u>91,224</u>	<u>87,834</u>	<u>90,055</u>
	\$ 926,800	\$ 972,602	\$ 1,016,256	\$ 1,113,492	\$ 1,153,355	\$ 1,264,170	\$ 1,382,279	\$ 1,449,934	\$ 1,479,661
PFCs Classified as Revenues	23,363	4,068	67,881	63,744	110,657	160,657	166,257	160,657	160,657
Hotel Revenues	-	-	6,223	7,594	7,594	8,559	8,255	8,534	8,729
Interest Income	<u>10,065</u>	<u>12,147</u>	<u>23,948</u>	<u>28,223</u>	<u>33,727</u>	<u>37,768</u>	<u>40,727</u>	<u>42,688</u>	<u>42,973</u>
<b>Total Revenues</b>	<b>\$ 960,228</b>	<b>\$ 988,817</b>	<b>\$ 1,114,307</b>	<b>\$ 1,213,052</b>	<b>\$ 1,305,333</b>	<b>\$ 1,471,154</b>	<b>\$ 1,597,518</b>	<b>\$ 1,661,813</b>	<b>\$ 1,692,020</b>
<b>APPLICATION OF REVENUES</b>									
Operation and Maintenance Expenses	\$ 470,850	\$ 514,100	\$ 594,998	\$ 632,802	\$ 659,945	\$ 683,469	\$ 708,518	\$ 731,653	\$ 755,563
Debt Service on Bonds - Deposit Basis	408,750	411,871	457,684	509,705	571,277	710,318	808,699	847,267	852,355
Reserve Fund Deposits	-	-	-	-	-	-	-	-	-
Subordinate Debt Service	6,885	11,877	12,814	15,908	16,845	17,783	18,720	19,733	19,733
Deposit to General Purpose Account									
For Annual Service Payment to City	45,037	46,549	46,597	51,828	53,960	55,904	57,602	58,931	60,064
Other Deposits to the General Purpose Account	28,046	3,278	100	100	100	100	100	100	100
Deposits to the Contingency Account (a)	<u>661</u>	<u>1,143</u>	<u>2,114</u>	<u>2,710</u>	<u>3,206</u>	<u>3,580</u>	<u>3,880</u>	<u>4,129</u>	<u>4,206</u>
<b>Total Application of Revenues</b>	<b>\$ 960,228</b>	<b>\$ 988,817</b>	<b>\$ 1,114,307</b>	<b>\$ 1,213,052</b>	<b>\$ 1,305,333</b>	<b>\$ 1,471,154</b>	<b>\$ 1,597,518</b>	<b>\$ 1,661,813</b>	<b>\$ 1,692,020</b>

(a) Equal to interest income earned in the Contingency Account.

Note: Figures may not sum to totals due to rounding.

Sources: Historical and Estimated - Airport Commission; Forecast - LeighFisher.

**Exhibit H**

**RATE COVENANT COMPLIANCE FORECAST**  
**Airport Commission, City and County of San Francisco**  
(for Fiscal Years ending June 30; amounts in thousands except ratios)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport Commission management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances could occur. Therefore, the actual results will vary from those forecast, and the variations could be material.

	<b>Historical 2017</b>	<b>Estimated 2018</b>	<b>Forecast 2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<b>RATE COVENANT CALCULATIONS</b>									
<b>Requirement 6.04(a)(i)</b>									
Revenues (a)	\$ 960,228	\$ 988,817	\$ 1,114,307	\$ 1,213,052	\$ 1,305,333	\$ 1,471,154	\$ 1,597,518	\$ 1,661,813	\$ 1,692,020
Less: Operation and Maintenance Expenses	(470,850)	(514,100)	(594,998)	(632,802)	(659,945)	(683,469)	(708,518)	(731,653)	(755,563)
Net Revenues	\$ 489,378	\$ 474,717	\$ 519,310	\$ 580,250	\$ 645,388	\$ 787,685	\$ 889,001	\$ 930,161	\$ 936,457
Debt Service on Bonds - Deposit Basis	(408,750)	(411,871)	(457,684)	(509,705)	(571,277)	(710,318)	(808,699)	(847,267)	(852,355)
Deposit to Debt Service Reserve Fund	-	-	-	-	-	-	-	-	-
Subordinate Debt Service	(6,885)	(11,877)	(12,814)	(15,908)	(16,845)	(17,783)	(18,720)	(19,733)	(19,733)
Annual Service Payment to City	(45,037)	(46,549)	(46,597)	(51,828)	(53,960)	(55,904)	(57,602)	(58,931)	(60,064)
Equals: Remaining Amounts (must not be < zero)	\$ 28,707	\$ 4,420	\$ 2,214	\$ 2,810	\$ 3,306	\$ 3,680	\$ 3,980	\$ 4,229	\$ 4,306
<b>Requirement 6.04(a)(ii)</b>									
Contingency Account Balance	\$ 95,221	\$ 124,363	\$ 146,478	\$ 173,309	\$ 193,533	\$ 209,729	\$ 223,196	\$ 227,325	\$ 231,530
Net Revenues	\$ 489,378	\$ 474,717	\$ 519,310	\$ 580,250	\$ 645,388	\$ 787,685	\$ 889,001	\$ 930,161	\$ 936,457
Transfer (b)	95,221	100,057	112,139	125,723	137,818	173,541	198,271	211,332	213,882
Total Amount Available	\$ 584,599	\$ 574,774	\$ 631,449	\$ 705,973	\$ 783,206	\$ 961,226	\$ 1,087,272	\$ 1,141,492	\$ 1,150,339
Debt Service on Bonds - Cash Basis (c)	\$ 404,555	\$ 400,227	\$ 448,555	\$ 502,893	\$ 551,274	\$ 694,163	\$ 793,085	\$ 845,328	\$ 855,528
Coverage (must not be < 125%)	145%	144%	141%	140%	142%	138%	137%	135%	134%

(a) Revenue totals include PFCs classified as Revenues.

(b) Transfer amounts for FY 2019 - FY 2025 are limited to 25% of annual Debt Service for the purpose of this Report.

(c) Annual Debt Service is presented net of accrued interest and net of capitalized interest.

Note: Figures may not sum to totals due to rounding.

Sources: Historical and Estimated - Airport Commission; Forecast - LeighFisher.

**Exhibit I**

**SUMMARY OF FINANCIAL FORECASTS**  
**Airport Commission, City and County of San Francisco**  
(for Fiscal Years ending June 30; amounts in thousands except rates and ratios)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport Commission management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances could occur. Therefore, the actual results will vary from those forecast, and the variations could be material.

	<b>Historical 2017</b>	<b>Estimated 2018</b>	<b>Forecast 2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<b>ENPLANED PASSENGERS</b>									
Percentage Change	26,871 4.9%	28,814 7.2%	28,958 0.5%	29,536 2.0%	30,106 1.9%	30,657 1.8%	31,186 1.7%	31,701 1.6%	32,183 1.5%
<b>DEBT SERVICE COVERAGE</b>									
Revenues (a)	\$ 960,228	\$ 988,817	\$ 1,114,307	\$ 1,213,052	\$ 1,305,333	\$ 1,471,154	\$ 1,597,518	\$ 1,661,813	\$ 1,692,020
Operation and Maintenance Expenses	(470,850)	(514,100)	(594,998)	(632,802)	(659,945)	(683,469)	(708,518)	(731,653)	(755,563)
Net Revenues	\$ 489,378	\$ 474,717	\$ 519,310	\$ 580,250	\$ 645,388	\$ 787,685	\$ 889,001	\$ 930,161	\$ 936,457
Debt Service on Bonds - Cash Basis	404,555	400,227	448,555	502,893	551,274	694,163	793,085	845,328	855,528
Debt Service Coverage (without Transfer)	121%	119%	116%	115%	117%	113%	112%	110%	109%
Transfer Amount (b)	\$ 95,221	\$ 100,057	\$ 112,139	\$ 125,723	\$ 137,818	\$ 173,541	\$ 198,271	\$ 211,332	\$ 213,882
Debt Service Coverage (with Transfer)	145%	144%	141%	140%	142%	138%	137%	135%	134%
PFCs Classified as Revenues	\$ 23,363	\$ 4,068	\$ 67,881	\$ 63,744	\$ 110,657	\$ 160,657	\$ 166,257	\$ 160,657	\$ 160,657
<b>AIRLINE FEES AND CHARGES</b>									
Budgeted/Forecast Landing Fee Rate	\$ 4.99	\$ 5.24	\$ 5.54	\$ 6.00	\$ 6.11	\$ 7.16	\$ 8.03	\$ 8.54	\$ 8.64
Budgeted/Forecast Average Terminal Rate	161.16	169.03	179.21	191.23	202.35	229.11	257.04	268.72	273.51
Airline Payments per Enplaned Passenger - Nominal	16.46	16.32	17.47	19.16	20.22	22.93	25.77	27.20	27.33
In Constant 2018 Dollars (c)		16.32	17.04	18.24	18.77	20.77	22.78	23.45	22.99
<b>CONCESSION REVENUES</b>									
Concession Revenues	\$ 300,245	\$ 310,325	\$ 310,649	\$ 342,368	\$ 355,594	\$ 366,417	\$ 377,130	\$ 385,729	\$ 393,104
Concession Revenues per Enplaned Passenger	\$ 11.17	\$ 10.77	\$ 10.73	\$ 11.59	\$ 11.81	\$ 11.95	\$ 12.09	\$ 12.17	\$ 12.21
Percentage Change	0.9%	-3.6%	-0.4%	8.1%	1.9%	1.2%	1.2%	0.6%	0.4%

(a) Revenue totals include PFCs classified as Revenues.

(b) Transfer amounts for FY 2019 - FY 2025 are limited to 25% of annual Debt Service for the purpose of this Report.

(c) Discounted at an assumed rate of 2.5% annually.

Note: Figures may not sum to totals due to rounding.

Sources: Historical and Estimated - Airport Commission; Forecast - LeighFisher.

**Exhibit J**

**SUMMARY OF FINANCIAL PROJECTIONS - SENSITIVITY SCENARIO**

**Airport Commission, City and County of San Francisco**

(for Fiscal Years ending June 30; amounts in thousands except rates and ratios)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport Commission management, as described in the accompanying text. Inevitably, some assumptions used to develop the projections will not be realized and unanticipated events and circumstances could occur. Therefore, the actual results will vary from those projected, and the variations could be material.

	<b>Historical 2017</b>	<b>Estimated 2018</b>	<b>Projection 2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
<b>ENPLANED PASSENGERS</b>									
Percentage Change	26,871 4.9%	28,814 7.2%	28,958 0.5%	26,582 -8.2%	27,096 1.9%	27,591 1.8%	28,067 1.7%	28,530 1.6%	28,965 1.5%
<b>DEBT SERVICE COVERAGE</b>									
Revenues (a)	\$ 960,228	\$ 988,817	\$ 1,114,307	\$ 1,208,464	\$ 1,300,560	\$ 1,466,234	\$ 1,592,452	\$ 1,656,633	\$ 1,686,745
Operation and Maintenance Expenses	(470,850)	(514,100)	(594,998)	(632,802)	(659,945)	(683,469)	(708,518)	(731,653)	(755,563)
Net Revenues	\$ 489,378	\$ 474,717	\$ 519,310	\$ 575,662	\$ 640,615	\$ 782,765	\$ 883,935	\$ 924,981	\$ 931,182
Debt Service on Bonds - Cash Basis	404,555	400,227	448,555	502,893	551,274	694,163	793,085	845,328	855,528
Debt Service Coverage (without Transfer)	121%	119%	116%	114%	116%	113%	111%	109%	109%
Transfer Amount (b)	\$ 95,221	\$ 100,057	\$ 112,139	\$ 125,723	\$ 137,818	\$ 173,541	\$ 198,271	\$ 211,332	\$ 213,882
Debt Service Coverage (with Transfer)	145%	144%	141%	139%	141%	138%	136%	134%	134%
PFCs Classified as Revenues	\$ 23,363	\$ 4,068	\$ 67,881	\$ 63,744	\$ 110,657	\$ 160,657	\$ 166,257	\$ 160,657	\$ 160,657
<b>AIRLINE FEES AND CHARGES</b>									
Budgeted/Projected Landing Fee Rate	\$ 4.99	\$ 5.24	\$ 5.54	\$ 7.10	\$ 7.33	\$ 8.39	\$ 9.36	\$ 9.92	\$ 10.04
Budgeted/Projected Average Terminal Rate	161.16	169.03	179.21	199.12	208.01	237.36	265.32	276.83	281.77
Airline Payments per Enplaned Passenger - Nominal	16.46	16.32	17.47	22.37	23.56	26.59	29.76	31.33	31.48
In Constant 2018 Dollars (c)		16.32	17.04	21.30	21.88	24.09	26.30	27.02	26.48
<b>CONCESSION REVENUES</b>									
Concession Revenues	\$ 300,245	\$ 310,325	\$ 310,649	\$ 311,778	\$ 323,778	\$ 333,616	\$ 343,357	\$ 351,196	\$ 357,936
Concession Revenues per Enplaned Passenger	\$ 11.17	\$ 10.77	\$ 10.73	\$ 11.73	\$ 11.95	\$ 12.09	\$ 12.23	\$ 12.31	\$ 12.36
Percentage Change	0.9%	-3.6%	-0.4%	9.3%	1.9%	1.2%	1.2%	0.6%	0.4%

(a) Revenue totals include PFCs classified as Revenues.

(b) Transfer amounts for FY 2019 - FY 2025 are limited to 25% of annual Debt Service for the purpose of this Report.

(c) Discounted at an assumed rate of 2.5% annually.

Note: Figures may not sum to totals due to rounding.

Sources: Historical and Estimated - Airport Commission; Projected - LeighFisher.

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**APPENDIX B**

**FINANCIAL STATEMENTS WITH SCHEDULE OF PASSENGER FACILITY CHARGE REVENUES  
AND EXPENDITURES JUNE 30, 2017 AND 2016 (WITH INDEPENDENT AUDITORS' REPORT  
THEREON)**

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**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Financial Statements with  
Schedule of Passenger Facility Charge Revenues and Expenditures

June 30, 2017 and 2016

(With Independent Auditors' Report Thereon)

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

**Table of Contents**

	<b>Page</b>
Independent Auditors' Report	1
Management's Discussion and Analysis (Unaudited)	3
Financial Statements:	
Statements of Net Position	33
Statements of Revenues, Expenses, and Changes in Net Position	35
Statements of Cash Flows	36
Notes to Financial Statements	38
Schedule of Passenger Facility Charge Revenues and Expenditures	100
Notes to Schedule of Passenger Facility Charge Revenues and Expenditures	101
Independent Auditors' Report on Internal Control over Financial Reporting Based on an Audit of Financial Statements Performed in Accordance with <i>Government Auditing Standards</i>	102
Independent Auditors' Report on Compliance with Requirements That Could Have a Direct and Material Effect on the Passenger Facility Charge Program and on Internal Control over Compliance in Accordance with the <i>Passenger Facility Charge Audit Guide for Public Agencies</i>	104
Schedule of Findings and Responses	106



KPMG LLP  
Suite 1400  
55 Second Street  
San Francisco, CA 94105

## Independent Auditors' Report

The Honorable Mayor and Board of Supervisors  
City and County of San Francisco:

We have audited the accompanying financial statements of the Airport Commission, City and County of San Francisco, San Francisco International Airport (the Airport), an enterprise fund of the City and County of San Francisco, California (the City), as of and for the years ended June 30, 2017 and 2016, and the related notes to the financial statements, as listed in the table of contents.

### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Airport Commission, City and County of San Francisco, San Francisco International Airport, as of June 30, 2017 and 2016, and the changes in its financial position and its cash flows for the years then ended in accordance with U.S. generally accepted accounting principles.

### Emphasis of Matter

As discussed in note 1, the financial statements are intended to present the financial position and the changes in financial position and cash flows of only that portion of the City that is attributable to the transactions of the



Airport. They do not purport to, and do not, present fairly the financial position of the City, as of June 30, 2017 and 2016, the changes in its financial position, or, its cash flows for the years then ended in accordance with U.S. generally accepted accounting principles. Our opinion is not modified with respect to this matter.

## **Other Matters**

### *Required Supplementary Information*

U.S. generally accepted accounting principles require that the Management's Discussion and Analysis on pages 3–32 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

### *Supplementary and Other Information*

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Airport's basic financial statements. The accompanying Schedule of Passenger Facility Charge Revenues and Expenditures as specified in the Passenger Facility Charge Audit Guide for Public Agencies, issued by the Federal Aviation Administration are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The Schedule of Passenger Facility Charge Revenues and Expenditures is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Schedule of Passenger Facility Charge Revenues and Expenditures is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

## **Other Reporting Required by Government Auditing Standards**

In accordance with *Government Auditing Standards*, we have also issued our report dated October 20, 2017 on our consideration of the Airport's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Airport's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Airport's internal control over financial reporting and compliance.

**KPMG LLP**

San Francisco, California  
October 20, 2017

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

The management of the Airport Commission, City and County of San Francisco, San Francisco International Airport (the Airport or SFO), an enterprise fund of City and County of San Francisco (the City), presents the following narrative overview and analysis of the financial activities of the Airport for the fiscal years ended June 30, 2017 and 2016.

The Airport's financial statements comprise the following components: (1) Financial Statements and (2) Notes to Financial Statements. The Airport's financial statements include:

*Statements of Net Position* present information on the Airport's assets, deferred outflows of resources, liabilities, and deferred inflows of resources as of the year end, with the difference between the amounts as net position. Increases or decreases in net position may serve as a useful indicator of whether the financial position of the Airport is improving or weakening.

While the statements of net position provide information about the nature and amount of resources and obligations at the year end, the *Statements of Revenues, Expenses, and Changes in Net Position* present the results of the Airport's operations over the course of the fiscal year and information as to how the net position changed during the fiscal year. These statements can be used as an indicator of the extent to which the Airport has successfully recovered its costs through user fees and other charges. All changes in net position are reported during the period in which the underlying event giving rise to the change occurs, regardless of the timing of the related cash flows.

The *Statements of Cash Flows* present changes in cash and cash equivalents resulting from operating, noncapital financing, capital financing, and investing activities. These statements summarize the annual flow of cash receipts and cash payments, without consideration of the timing of the event giving rise to the obligation or revenue and exclude noncash accounting measures of depreciation or amortization of assets.

The *Notes to Financial Statements* provide information that is not displayed on the face of the financial statements but is essential to a full understanding of the financial statements.

**Highlights of Airline Operations at the Airport**

Fiscal year 2017 passenger traffic at SFO concluded with 26.9 million enplanements, an increase of 4.9% compared to the prior fiscal year, establishing a new peak for the Airport. Domestic growth was from increased service, mainly by a combination of Low Cost Carriers (LCCs) and legacy carrier United Airlines (United). The international sector also experienced service additions. These included new services commenced by Finnair, Thomas Cook, Virgin Atlantic, Volaris, United and WOW Air, and aircraft size or frequency increases by Air Canada, Air Berlin, KLM, Swiss International, Korean Air, and United. Total cargo and U.S. mail tonnage increased by 18.6% due to increases in both domestic and international shipments.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

The 4.9% fiscal year-over-year enplanement increase at SFO compares to increases of 8.3%<sup>1</sup> at Oakland International Airport and 12.8%<sup>2</sup> at Mineta San Jose International Airport, resulting in relatively stable Bay Area passenger market share of 69.1% for SFO, compared to 70.2% in fiscal year 2016.

**Passenger and Other Traffic Activity**

The number of flight operations (takeoffs and landings) increased by 2.1% fiscal year-over-year. Aircraft revenue landed weight, which affects revenue generated by landing fees, increased by 7.4% above prior fiscal year levels. Total Airport passengers, which comprise enplaned, deplaned and in-transit passengers (defined as passengers who fly into and out of SFO on the same aircraft) were 54.0 million, establishing a new peak for the Airport. Overall enplaned passengers totaled 26.9 million, a 4.9% increase, with 20.5 million domestic and 6.4 million international enplaned passengers, increases of 3.4% and 10.1%, respectively. Cargo and U.S. mail tonnage increased by 18.6%, reflecting a freight increase of 21.8%, and mail increase of 0.7%.

The following table<sup>3</sup> presents a comparative summary of passenger and other traffic at the Airport for the fiscal years ended June 30, 2017, 2016, and 2015:

	FY 2017	FY 2016	FY 2015*	Percentage change FY 2017	Percentage change FY 2016
Flight operations	449,035	439,918	428,171	2.1 %	2.7 %
Landed weight (in 000 lbs.)	37,596,628	35,012,485	32,610,052	7.4	7.4
Total Airport passengers	53,985,826	51,421,348	48,243,910	5.0	6.6
Enplaned passengers	26,871,549	25,621,510	24,023,599	4.9	6.7
Domestic enplaned passengers	20,513,891	19,844,991	18,749,797	3.4	5.8
International enplaned passengers	6,357,658	5,776,519	5,273,802	10.1	9.5
Cargo and U.S. mail tonnage (in metric tons)	535,581	451,501	441,797	18.6	2.2

\* Numbers updated to include revised data received subsequent to the 2015 fiscal year end.

**Fiscal Year 2017**

**Passenger Traffic**

Compared to fiscal year 2016, passenger enplanements in fiscal year 2017 increased by 4.9% from 25.6 million to 26.9 million passengers. Domestic passenger enplanements increased 3.4%, while international enplanements increased 10.1%. The enplanement increase totaled 1,250,039 passengers, 668,900 of which were domestic and 581,139 were international. The domestic sector grew mostly from service additions by LCCs JetBlue, Frontier and Virgin America, and by legacy carrier United. The international sector had a number of new and added services. Asia had the largest increase in international enplanements with 225,961, followed

<sup>1</sup> Source: Oakland International Airport Traffic Report.

<sup>2</sup> Source: Mineta San Jose International Airport Traffic Report.

<sup>3</sup> Sources: Analysis of Airline Traffic, Fiscal Years 2015, 2016 and 2017.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

by Latin America with 153,713, and Europe with 113,378. Growth to Asia was from increased services, including service additions and upgauging and frequency increases by Air China, China Eastern, China Southern, China Airlines, EVA Air, Korean Airlines, and United. New services were also started to Asia by China Eastern to Qingdao, China, and United to Hangzhou, China and nonstop to Singapore. Latin American growth was primarily due to additional service by Copa Airlines and Volaris. Europe growth came from new services by WOW Air to Keflavik, return of Air Berlin service to Dusseldorf as well as new nonstop service to Berlin, new seasonal service to Manchester, UK by Virgin Atlantic and Thomas Cook, as well as frequency increases by KLM to Amsterdam. Canada enplanements increased by 16,780 mainly due to Air Canada service and capacity increase. Australia/Oceania enplanements grew by 82,282 mainly from increased frequency by Qantas Airways, and seasonal services by Fiji Airways to Nadi, and United to Auckland, New Zealand. The Middle East was the only region to experience decline in enplanements by 10,975, mainly due to Etihad Airways reductions to Abu Dhabi that will be fully discontinued in October.

The fiscal year quarterly results outpaced the previous year with strong performance in both domestic and international sectors, with overall enplanement growth rates of 7.1%, 4.9%, 2.5%, and 4.6% in each of the four consecutive quarters. The increases resulted from added frequencies and operations of larger aircraft, and the addition of new services. Airline seat capacity increased by 6.7% during fiscal year 2017, with a domestic increase of 4.9% and an international increase of 12.8%. The overall load factor decreased by 1.4 percentage points to 82.1%. Domestic load factor decreased by 1.2 percentage points to 82.6% and international decreased by 2.0 percentage points to 80.6%.

### **Flight Operations**

During fiscal year 2017, the number of aircraft operations (takeoffs and landings) increased by 9,117 flights (2.1%). Scheduled passenger aircraft arrivals and departures increased by 10,769 flights (2.5%). Civil and military traffic decreased by 1,652 flights (10.3%).

Total scheduled airline passenger and cargo landings increased by 2.6% with an increase in revenue landed weight of 7.4%. Domestic passenger landings increased by 1.2%, while domestic landed weight increased by 5.4%. International passenger landings increased by 11.5%, while international landed weight increased by 12.2%. Average passenger aircraft size increased from approximately 153 to 157 seats per flight. Domestic scheduled seats per flight increased from 138 to 141 while international scheduled seats per flight increased from 245 to 247 in fiscal year 2017. The overall balance between mainline passenger aircraft (wide body and narrow body) and commuters (regional jets and turbo props) continued to shift towards mainline, which increased in share by 1.8 percentage points to 79.5% for domestic and international operations combined. Mainline landings increased by 7,795, and commuter landings decreased by 2,397. Cargo only aircraft landings decreased by 4.2%, while cargo-only landed weight increased by 2.1%.

### **Cargo Tonnage**

Fiscal year 2017 cargo and U.S. mail tonnage increased by 84,080 metric tons (18.6%). Mail increased by 463 metric tons (0.7%), as growth in domestic mail was offset by a decrease in international mail, and cargo volume excluding mail increased by 83,617 metric tons (21.8%), due to increases in both domestic and international shipments. Cargo-only carriers' tonnage share decreased by 3.0 percentage points to 21.1%. Tonnage on cargo-only carriers increased by 3.8%, while those on passenger carriers increased by 23.4%.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

**Fiscal Year 2016**

**Passenger Traffic**

Compared to fiscal year 2015, passenger enplanements in fiscal year 2016 increased by 6.7% from 24.0 million to 25.6 million passengers. Domestic passenger enplanements increased 5.8%, while international enplanements increased 9.5%. The enplanement increase totaled 1,597,911 passengers, 1,095,194 of which were domestic and 502,717 were international. The domestic sector grew mostly from service additions by LCCs JetBlue, Frontier and Virgin America, and by legacy carrier United. The international sector had a number of new and added services. Europe had the largest increase in international enplanements with 163,745, followed by Asia with 150,396, and Latin America with 81,093. Growth to Europe was from a number of new and increased services, including service additions and upgauging by British Airways, Air France and Virgin Atlantic. Asia growth was also from a number of new services such as Air India to New Delhi and United to Xi'an, China, as well as frequency increases by Cathay Pacific and China Southern. Latin America enplanements increased mainly due to new service by Copa Airlines to Panama City in September 2015. The Middle East which is now served nonstop by 3 carriers, increased in enplanements by 32,186 passengers due to Etihad's increase in frequency to Abu Dhabi and United's new service to Tel Aviv that started in March 2016. Australia/Oceania enplanements increased by 34,226 mainly from the return of Qantas Airways with service to Sydney in December 2015, and the start of seasonal service to Nadi by Fiji Airways in June 2016.

The fiscal year quarterly results outpaced the previous year with strong performance in both domestic and international sectors, with growth rates of 6.5%, 8.9%, 5.6%, and 5.6% in each of the four consecutive quarters. The increases resulted from added frequencies and operations of larger aircraft, and the addition of new services. Airline seat capacity increased by 8.0%, with a domestic increase of 7.0% and an international increase of 11.6%. The overall load factor decreased by 1.0 percentage point to 83.5%. Domestic load factor decreased by 0.9 percentage point to 83.8% and international decreased by 1.5 percentage points to 82.6%.

**Flight Operations**

During fiscal year 2016, the number of aircraft operations (takeoffs and landings) increased by 11,747 flights (2.7%). Scheduled passenger aircraft arrivals and departures increased by 11,274 flights (2.7%). Civil and military traffic increased by 473 flights (3.0%).

Total scheduled airline passenger and cargo landings increased by 1.9% with an increase in revenue landed weight of 7.4%. Domestic passenger landings increased by 1.4%, while domestic landed weight increased by 5.8%. International passenger landings increased by 6.3%, while international landed weight increased by 11.6%. Average passenger aircraft size increased from approximately 145 to 153 seats per flight. Domestic scheduled seats per flight increased from 131 to 138 while international scheduled seats per flight increased from 233 to 245 in fiscal year 2016. The overall balance between mainline passenger aircraft (wide body and narrow body) and commuters (regional jets and turbo props) continued to shift towards mainline, which increased in share by 3.7 percentage points to 77.7% for domestic and international operations combined. Mainline landings increased by 10,348, and commuter landings decreased by 6,374. Cargo only aircraft landings decreased by 9.4%, while cargo-only landed weight increased by 1.3%.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

**Cargo Tonnage**

Fiscal year 2016 cargo and U.S. mail tonnage increased by 9,704 metric tons (2.2%). Mail increased by 9,749 metric tons (16.7%), and cargo volume excluding mail remained flat at 383,305 metric tons (0.0%), as growth in domestic shipments was offset by a decrease in international shipments. The decrease is from a relatively high base from last year, where shipment volume was high due to labor issues at west coast ports. Cargo-only carriers' tonnage share increased by 3.9 percentage points to 24.2%. Tonnage on cargo-only carriers increased by 22.1%, while those on passenger carriers decreased by 2.9%.

**Financial Highlights, Fiscal Year 2017**

- Assets and deferred outflows of resources exceeded liabilities and deferred inflows of resources at the close of the fiscal year by \$50.2 million.
- Total revenue bonds payable by the Airport increased by \$656.0 million.
- Operating revenues were \$926.8 million.
- Operating expenses were \$808.9 million.
- Nonoperating expenses, net of revenues from nonoperating sources (including revenues of \$104.0 million from Passenger Facility Charges) were \$201.0 million.
- Capital contributions from the Federal Aviation Administration's (FAA) Airport Improvement Program (AIP) and Air Traffic Control Tower program, and Transportation Security Administration's (TSA) Airport Checked Baggage Screening System were \$11.2 million.
- Transfers to the City and County of San Francisco as annual service payment were \$45.0 million.
- Net position decreased by \$116.9 million due to a significant increase in net pension liability. This increase primarily resulted from updated assumptions about citywide supplemental cost of living adjustments (COLA) for certain retirees. See note 10a.

**Financial Highlights, Fiscal Year 2016**

- Assets and deferred outflows of resources exceeded liabilities and deferred inflows of resources at the close of the fiscal year by \$167.1 million.
- Total revenue bonds payable by the Airport decreased by \$235.2 million.
- Operating revenues were \$867.0 million.
- Operating expenses were \$640.5 million.
- Nonoperating expenses, net of revenues from nonoperating sources (including revenues of \$99.1 million from Passenger Facility Charges) were \$144.5 million.
- Capital contributions from the Federal Aviation Administration's (FAA) Air Traffic Control Tower, and Transportation Security Administration's (TSA) Airport Checked Baggage Screening System were \$10.4 million.
- Transfers to the City and County of San Francisco as annual service payment were \$42.5 million.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

- Net position increased by \$49.9 million due to higher operating income resulting from growth in domestic and international passenger traffic.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

**Overview of the Airport's Financial Statements**

**Net Position Summary**

A condensed summary of the Airport's net position for the fiscal years 2017, 2016, and 2015 is shown below (in thousands):

**SAN FRANCISCO INTERNATIONAL AIRPORT'S NET POSITION**

	FY 2017	FY 2016	FY 2015 (as restated)	Percentage increase (decrease) FY 2017	Percentage increase (decrease) FY 2016
<b>Assets:</b>					
Unrestricted current assets	\$ 440,930	467,577	450,598	(5.7)%	3.8 %
Restricted current assets	437,934	282,371	245,719	55.1	14.9
Restricted noncurrent assets	726,310	640,970	643,686	13.3	(0.4)
Capital assets, net	4,282,629	4,045,636	3,936,426	5.9	2.8
<b>Total assets</b>	<b>5,887,803</b>	<b>5,436,554</b>	<b>5,276,429</b>	<b>8.3</b>	<b>3.0</b>
<b>Deferred outflows of resources:</b>					
Unamortized loss on refunding of debt	76,789	68,100	78,388	12.8	(13.1)
Deferred outflows on derivative instruments	54,870	83,614	65,408	(34.4)	27.8
Deferred outflows related to pensions	145,743	43,982	37,517	231.4	17.2
<b>Total deferred outflows of resources</b>	<b>277,402</b>	<b>195,696</b>	<b>181,313</b>	<b>41.8</b>	<b>7.9</b>
<b>Liabilities:</b>					
Current liabilities	284,221	309,888	285,929	(8.3)	8.4
Current liabilities payable from restricted assets	356,535	494,128	154,611	(27.8)	219.6
Noncurrent liabilities	5,033,314	4,372,604	4,608,523	15.1	(5.1)
Net pension liability	359,599	144,271	111,932	149.3	28.9
Derivative instruments	65,965	96,132	79,321	(31.4)	21.2
<b>Total liabilities</b>	<b>6,099,634</b>	<b>5,417,023</b>	<b>5,240,316</b>	<b>12.6</b>	<b>3.4</b>
<b>Deferred inflows of resources:</b>					
Deferred inflows related to pensions	15,402	48,154	100,290	(68.0)	(52.0)
<b>Total deferred inflows of resources</b>	<b>15,402</b>	<b>48,154</b>	<b>100,290</b>	<b>(68.0)</b>	<b>(52.0)</b>
<b>Net position:</b>					
Net investment in capital assets	(284,761)	(117,377)	(103,109)	142.6	13.8
Restricted for debt service	109,554	35,462	37,427	208.9	(5.3)
Restricted for capital projects	296,188	212,931	165,224	39.1	28.9
Unrestricted	(70,812)	36,057	17,594	(296.4)	104.9
<b>Total net position</b>	<b>\$ 50,169</b>	<b>167,073</b>	<b>117,136</b>	<b>(70.0)%</b>	<b>42.6 %</b>

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

The Airport adopted the provisions of GASB Statement No. 72 – *Fair Value Measurement and Application* (GASB 72) in fiscal year 2016, which changes how fair value is measured and provides guidance for applying fair value to assets and liabilities, including to investments. As a result, the Airport restated the beginning deferred outflows on derivative instruments and derivative instruments liabilities for fiscal year 2015.

**Fiscal Year 2017**

Total net position serves as an indicator of the Airport's financial position. The Airport's assets and deferred outflows of resources exceeded liabilities and deferred inflows of resources by \$50.2 million and \$167.1 million as of June 30, 2017 and 2016, respectively, representing a decrease of \$116.9 million (70.0%). Unrestricted net position represented (141.1%) and 21.6% of total net position as of June 30, 2017 and 2016, respectively.

Unrestricted current assets consist primarily of cash and investments available to meet the Airport's current obligations. Unrestricted current assets decreased by \$26.6 million (5.7%) as of June 30, 2017, primarily due to decrease in the Airport's cash and investments held in the City Treasury as a result of the transfer of July 2017 debt service deposit in June 2017.

Restricted current assets consist of cash and investments held in the City Treasury, primarily from Passenger Facility Charges (PFC) collected, debt service funds held by the bond trustee, grants receivable and PFC receivable. Restricted current assets increased by \$155.6 million (55.1%) as of June 30, 2017. The increase was primarily due to an increase in the Airport's cash and investments held in the City Treasury generated from the growth of passenger traffic and an increase in the Airport's cash and investments held outside the City Treasury in connection with the issuance of the Airport's Second Series Revenue Bonds, Series 2016B/C.

Restricted noncurrent assets increased by \$85.3 million (13.3%) as of June 30, 2017. The increase was primarily due to an increase in the Airport's cash and investments held in the City Treasury and outside the City Treasury related to the issuance of the Airport's Second Series Revenue Bonds, Series 2016B/C and the Airport's Second Series Revenue Refunding Bonds, Series 2016D.

Capital assets consist of land, buildings, structures, improvements, equipment, and intangible assets. Capital assets, net of depreciation, increased by \$237.0 million (5.9%) as of June 30, 2017, primarily due to the capitalization of capital improvement project costs.

Unamortized loss on refunding of debt increased by \$8.7 million (12.8%) as of June 30, 2017. The increase was due to the issuance of the Airport's Second Series Revenue Refunding Bonds, Series 2016D.

Deferred outflows on derivative instruments decreased by \$28.7 million (34.4%) as of June 30, 2017, representing deferred outflows of resources offsetting interest rate swap liabilities in accordance with GASB Statement No. 53 – *Accounting and Financial Reporting for Derivative Instruments* (GASB 53) and GASB Statement No. 72 – *Fair Value Measurement and Application* (GASB 72).

Deferred outflows related to pensions increased by \$101.8 million (231.4%) primarily due to the change of assumptions and the difference between projected and actual investment earnings on pension plan investments. See additional information in note 10a.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

Current liabilities payable from unrestricted assets decreased by \$25.7 million (8.3%) as of June 30, 2017, primarily due to the decrease in current maturities of the Airport's long-term debt and unearned aviation revenue.

Current liabilities payable from restricted assets decreased by \$137.6 million (27.8%) as of June 30, 2017, primarily due to the take-out of commercial paper notes with the proceeds of the Airport's Second Series Revenue Bonds, Series 2016B/C during fiscal year 2017.

Noncurrent liabilities before net pension liability and derivative instruments increased by \$660.7 million (15.1%) as of June 30, 2017, primarily due to the issuance of the Airport's Second Series Revenue Bonds, Series 2016B/C and the Airport's Second Series Revenue Refunding Bonds, Series 2016D during fiscal year 2017.

Net pension liability (NPL) increased by \$215.3 million (149.3%) primarily due to the impact of changes in benefits, the updated citywide Supplemental COLA assumptions and amortization of deferred outflows/inflows. See additional information in note 10a.

Derivative instruments liabilities decreased by \$30.2 million (31.4%) as of June 30, 2017, due to the change in fair values of interest rate swap contracts per GASB 53 and GASB 72.

Deferred inflows related to pensions decreased by \$32.8 million (68.0%) primarily due to the difference between projected and actual investment earnings on pension plan investments. See additional information in note 10a.

The Airport's net investment in capital assets decreased by \$167.4 million (142.6%) as of June 30, 2017, primarily due to the residual effect of the Airport depreciating its capital assets faster than repaying its bonded debt.

Net position restricted for debt service increased by \$74.1 million (208.9%) as of June 30, 2017, primarily due to an increase in the Airport's cash and investments held outside the City Treasury in connection with the issuance of the Airport's Second Series Revenue Bonds, Series 2016B/C and the Airport's Second Series Revenue Refunding Bonds, Series 2016D.

Net position restricted for capital projects increased by \$83.3 million (39.1%) as of June 30, 2017, primarily due to an increase in the Airport's cash and investment held in the City Treasury related to the issuance of the Airport's Second Series Revenue Bonds, Series 2016B/C.

Unrestricted net position decreased by \$106.9 million (296.4%) as of June 30, 2017, primarily due to the 149.3% increase in net pension liability related to the impact of changes in benefits, the updated citywide Supplemental COLA assumptions and amortization of deferred outflows/inflows.

**Fiscal Year 2016**

Total net position serves as an indicator of the Airport's financial position. The Airport's assets and deferred outflows of resources exceeded liabilities and deferred inflows of resources by \$167.1 million and \$117.1 million as of June 30, 2016 and 2015, respectively, representing an increase of \$50.0 million (42.6%).

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

Unrestricted net position represented 21.6% and 15.0% of total net position as of June 30, 2016 and 2015, respectively.

Unrestricted current assets consist primarily of cash and investments available to meet the Airport's current obligations. Unrestricted current assets increased by \$17.0 million (3.8%) as of June 30, 2016, primarily due to the increase in the Airport's cash and investments held in the City Treasury and accounts receivable generated from Airport operations.

Restricted current assets consist of cash and investments held in the City Treasury, primarily from Passenger Facility Charges (PFC) collected, debt service funds held by the bond trustee, grants receivables and PFC receivable. Restricted current assets increased \$36.7 million (14.9%) as of June 30, 2016. The increase was primarily due to increase in the Airport's cash and investments held in the City Treasury.

Restricted noncurrent assets decreased by \$2.7 million (0.4%) as of June 30, 2016. The decrease was primarily due to the amortization of prepaid bond insurance cost.

Capital assets consist of land, buildings, structures, improvements, equipment, and intangible assets. Capital assets, net of depreciation, increased by \$109.2 million (2.8%) as of June 30, 2016, primarily due to the capitalization of capital improvement project costs.

Unamortized loss on refunding of debt decreased by \$10.3 million (13.1%) as of June 30, 2016. The decrease was due to the amortization of deferred refunding loss.

Deferred outflows on derivative instruments increased by \$18.2 million (27.8%) as of June 30, 2016, representing deferred outflows of resources offsetting interest rate swap liabilities in accordance with GASB Statement No. 53 – *Accounting and Financial Reporting for Derivative Instruments* (GASB 53) and GASB Statement No. 72 – *Fair Value Measurement and Application* (GASB 72).

Deferred outflows related to pensions increased by \$6.5 million (17.2%) primarily due to the changes of assumptions. See additional information in note 10a.

Current liabilities payable from unrestricted assets increased by \$24.0 million (8.4%) as of June 30, 2016, primarily due to increases in current maturities of the Airport's long-term debt and unearned aviation revenue.

Current liabilities payable from restricted assets increased by \$339.5 million (219.6%) as of June 30, 2016, primarily due to the issuance of commercial paper notes to fund capital improvement projects.

Noncurrent liabilities before net pension liability and derivative instruments decreased by \$236.0 million (5.1%) as of June 30, 2016, primarily due to redemptions and the refunding of outstanding debt.

Net pension liability (NPL) increased by \$32.3 million (28.9%) primarily due to higher service costs and interest costs, and a decrease in the discount rate. See additional information in note 10a.

Derivative instruments liabilities increased by \$16.8 million (21.2%) as of June 30, 2016, due to the change in fair values of interest rate swap contracts per GASB 53 and GASB 72.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

Deferred inflows related to pensions decreased by \$52.1 million (52.0%) primarily due to the difference between projected and actual earnings on pension plan investments. See additional information in note 10a.

The Airport's net investment in capital assets decreased by \$14.3 million (13.8%) as of June 30, 2016, primarily due to the residual effect of the Airport depreciating its capital assets faster than repaying its bonded debt.

Net position restricted for debt service decreased \$2.0 million (5.3%) as of June 30, 2016, primarily due to a reduction in the bond debt service reserve fund requirement, largely as the result of a bond refunding during fiscal year 2016.

Net position restricted for capital projects increased \$47.7 million (28.9%) as of June 30, 2016, primarily due to the issuance of commercial paper notes.

Unrestricted net position increased \$18.5 million (104.9%) as of June 30, 2016, primarily due to higher operating income from Airport operations.

**Highlights of Changes in Net Position**

The following table shows a condensed summary of changes in net position for fiscal years 2017, 2016, and 2015 (in thousands):

	<u>FY 2017</u>	<u>FY 2016</u>	<u>FY 2015</u>	<u>FY 2017 percentage increase (decrease)</u>	<u>FY 2016 percentage increase (decrease)</u>
Operating revenues	\$ 926,800	866,991	815,364	6.9 %	6.3 %
Operating expenses	(808,860)	(640,473)	(609,029)	26.3	5.2
Operating income	117,940	226,518	206,335	(47.9)	9.8
Nonoperating expenses, net	(201,020)	(144,463)	(141,826)	39.1	1.9
Income (loss) before capital contributions and transfers	(83,080)	82,055	64,509	(201.2)	27.2
Capital contributions	11,212	10,424	32,119	7.6	(67.5)
Transfers to City and County of San Francisco	(45,036)	(42,542)	(40,480)	5.9	5.1
Changes in net position	(116,904)	49,937	56,148	(334.1)	(11.1)
Total net position – beginning of year (as originally reported)	167,073	117,136	266,757	42.6	(56.1)
Restatement due to adoption of GASB 68	—	—	(205,769)	—	(100.0)
Total net position – beginning of year (as restated)	167,073	117,136	60,988	42.6	92.1
Total net position at end of year	\$ 50,169	167,073	117,136	(70.0)%	42.6 %

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

**Operating Revenues**

The Airport derives its revenues from rates, fees, and charges assessed to the airlines; the operation of public and employee parking facilities; rents and fees assessed to concessionaires and ground transportation operators; and fees assessed for telecommunication access services. Terminal rental rates and landing fees assessed to air carriers are set periodically based on formulas and procedures described in the Lease and Use Agreement (Agreement).<sup>4</sup>

A brief summary of the underlying rate-setting methodology under this Agreement is presented below:

The Agreement establishes a residual rate-setting methodology for the calculation of the landing fees and terminal rental rates using certain cost centers. Under this methodology, landing fees and terminal rentals are established each year to produce projected revenues from the airlines equal to the difference between the Airport's estimated nonairline revenues and the Airport's budgeted total costs, including operating expenses, debt service expenses and the annual service payment to the City for that year. The Agreement provides for matching revenues each fiscal year to the Airport's expenditures by adjusting payments from the airlines. Differences between actual revenues and expenditures and amounts estimated in the calculation of airline fees and charges for that fiscal year result in adjustments of terminal rentals and landing fees in subsequent years. Such differences are recorded on the statements of net position in the financial statements of the Airport in the fiscal year to which such differences pertain. Net overcharges are recorded as liabilities and net undercharges are recorded as assets.

The overcharge balance of \$67.6 million as of June 30, 2016, decreased to \$54.9 million as of June 30, 2017, and was recorded as unearned aviation revenue in the statements of net position. See note 2j.

<sup>4</sup> In fiscal year 2010, the Airport and airlines reached agreement on a new form of Lease and Use Agreement that became effective on July 1, 2011 and expires June 30, 2021. The Lease and Use Agreements are referred to generally as the "Lease and Use Agreement," and the airlines that are parties to those agreements are referred to as the "Signatory Airlines."

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

The following table shows the air carriers that served the Airport in fiscal year 2017:

**Air Carriers Serving the Airport in Fiscal Year 2017**

<u>Domestic passenger air carriers</u>	<u>Foreign flag carriers</u>	<u>Cargo only carriers</u>
Alaska Airlines	Aer Lingus	ABX Air Inc.
American Airlines	Aeromexico	Atlas Air (DHL)
Delta Air Lines	Air Berlin	Federal Express
Frontier Airlines	Air Canada	Kalitta Air
Hawaiian Airlines	Air China	Nippon Cargo Airlines
JetBlue Airways	Air France	Redding Aero Enterprise
Southwest Airlines	Air India Limited	
Sun Country Airlines	Air New Zealand	
United Airlines	Air Pacific Limited dba Fiji Airways	
Virgin America	All Nippon Airways	
	Asiana Airlines	
	British Airways	
	COPA Airlines, Inc.	
	Cathay Pacific	
	China Airlines	
	China Eastern	
	China Southern	
	EVA Airways	
	Emirates	
	Etiihad Airways	
	FINNAIR	
	Japan Airlines	
	KLM Royal Dutch Airlines	
	Korean Air Lines	
	Lufthansa German Airlines	
	Philippine Airlines	
	Qantas Airways	
	SAS Airlines	
	Singapore Airlines	
	Swiss International	
	TACA	
	Thomas Cook Group	
	Turkish Airlines	
	Virgin Atlantic	
	Volaris Airlines	
	WestJet Airlines	
	WOW Air	
	XL Airways France	
<u>Commuter air carriers</u>		
Compass Airlines (American Airlines)		
Compass Airlines (Delta Air Lines)		
Horizon Air (Alaska Airlines)		
Jazz Aviation (Air Canada)		
SkyWest Airlines (Alaska Airlines)		
SkyWest Airlines (Delta Air Lines)		
SkyWest Airlines (United Airlines)		

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

The following table shows a comparison of terminal rental rates and airline landing fees for fiscal years 2017, 2016, and 2015:

**SAN FRANCISCO INTERNATIONAL AIRPORT TERMINAL RENTAL RATES AND LANDING FEES**

	<u>FY 2017</u>	<u>FY 2016</u>	<u>FY 2015</u>
Effective average terminal rental rate (per sq. ft.)	\$ 161.16	157.18	149.98
Signatory Airline – landing fee rate (per 1,000 lbs.)	4.99	4.87	4.57
General aviation and itinerant aircraft – landing fee rate (per 1,000 lbs.)	5.49	5.36	5.03

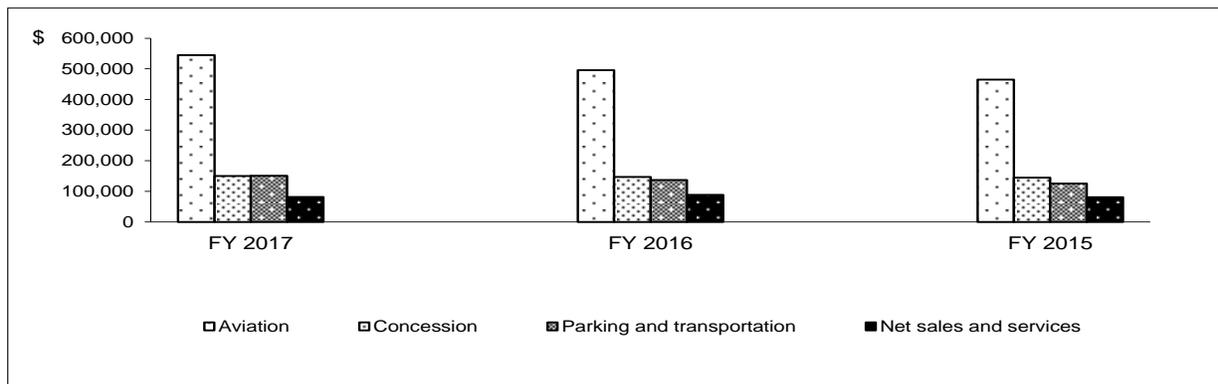
During fiscal years ended June 30, 2017, 2016, and 2015, revenues realized from the following source equaled or exceeded 5% of the Airport's total operating revenues:

	<u>FY 2017</u>	<u>FY 2016</u>	<u>FY 2015</u>
United Airlines	23.9 %	23.5 %	23.5 %

The following shows a comparative summary of operating revenues for fiscal years 2017, 2016, and 2015 (in thousands):

**COMPARATIVE SUMMARY OF AIRPORT'S OPERATING REVENUES**

	<u>FY 2017</u>	<u>FY 2016</u>	<u>FY 2015</u>	<u>FY 2017 percentage increase (decrease)</u>	<u>FY 2016 percentage increase</u>
Aviation	\$ 545,310	495,439	464,610	10.1 %	6.6 %
Concession	149,697	146,872	144,781	1.9	1.4
Parking and transportation	150,548	136,743	125,087	10.1	9.3
Net sales and services	81,245	87,937	80,886	(7.6)	8.7
Total operating revenues	<u>\$ 926,800</u>	<u>866,991</u>	<u>815,364</u>	<u>6.9 %</u>	<u>6.3 %</u>



**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

**Fiscal Year 2017**

Operating revenues increased by 6.9%, from \$867.0 million in fiscal year 2016 to \$926.8 million in fiscal year 2017. The Airport experienced increases in aviation revenues, concession revenues, and parking and transportation revenues, which were offset by a decline in net sales and service revenues.

Aviation revenues increased by 10.1%, from \$495.4 million in fiscal year 2016 to \$545.3 million in fiscal year 2017, due to increases in airline landing fees and passenger traffic, and due to increases in terminal rent partly offset by a net reduction in total rented space. As determined by the calculation method in the Agreement, scheduled airline landing fees per thousand pounds increased 2.5%, from \$4.87 in fiscal year 2016 to \$4.99 in fiscal year 2017. The airline average annual terminal rent per square foot increased 2.5%, from \$157.18 in fiscal year 2016 to \$161.16 in fiscal year 2017, partially due to a 3.2% increase in the residual airline terminal rental revenue requirement. Airline leased space increased 0.6% to 1.66 million square feet.

Before the unearned aviation revenue adjustment, revenues from landing fees increased by \$16.5 million (9.9%), which reflects the rate increase and a 7.4% increase in airline landed weight. Terminal rentals increased by \$3.2 million (1.2%), based on the rate increase partly offset by consolidation of rented space as a result of the US Airways/American Airlines merger which reduced leased space in the Terminal 1. The overcharge balance decreased by \$12.7 million, from \$67.6 million in fiscal year 2016 to \$54.9 million at the end of fiscal year 2017. In aggregate, all other aviation revenues increased by \$5.6 million (7.2%), from \$78.1 million in fiscal year 2016 to \$83.7 million in fiscal year 2017, with net aviation rental revenue and activity-based fees including aircraft parking, common use gates, and employee parking all showing increases.

Concession revenues, consisting of rentals and fees derived from food and beverage concessions, duty free, retail merchandise (gifts, candy, tobacco, and news) and rental car concessions increased by 1.9%, from \$146.9 million in fiscal year 2016 to \$149.7 million in fiscal year 2017. The higher revenues primarily resulted from a 5.0% increase in airport passengers, and a higher food and beverage spend rate per passenger. Food and beverage revenues increased by \$2.1 million (9.9%) due to the commencement of the new International Terminal Food & Beverage program and a 1.5% increase in the passenger food and beverage spend rate. Retail merchandise excluding duty free revenues were slightly higher by \$0.03 million (0.2%) despite increases in passenger traffic, as the per passenger spend rate for such merchandise declined from \$4.85 to \$4.72 (2.7%). Revenues from duty free merchandise sales increased by \$0.2 million (0.8%) despite a decline in spend rate per international enplaned passenger departing from the International Terminal of 2.6% from \$19.70 to \$19.19. On and off-Airport rental car revenues decreased by \$1.0 million (1.9%). Other concession revenues increased by \$1.5 million (5.0%), primarily from additional jet bridge advertising and a new foreign currency exchange lease that includes a higher Minimum Annual Guarantee (MAG) rent to the Airport.

Public parking and transportation revenues, consisting of rentals and fees derived from parking facilities and ground transportation operations, increased by 10.1%, from \$136.7 million in fiscal year 2016 to \$150.5 million in fiscal year 2017. Public parking transactions decreased by 7.9% in fiscal year 2017 resulting from the displacement of approximately 600 long-term parking spaces due to the construction of the second long-term garage partly offset by an increase in average ticket price by 12.2%, from \$29.12 in fiscal year 2016 to \$32.66 in fiscal year 2017. The net result was a parking revenue increase of \$3.5 million (3.4%). Ground transportation revenues, including taxi trip fee revenue, increased by \$10.3 million (30.7%) in fiscal year 2017 primarily due to both commercial vehicle trip fee rate increases of up to 18.0% and a 58.9% increase in transportation network

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

company (TNC) operations at the Airport (including Uber Technologies Inc., Lyft, Inc., and Tickengo, Inc., d/b/a/ Wingz). TNC Airport pick-ups/drop-offs totaled nearly 7.0 million during the fiscal year resulting in \$26.5 million in trip fee revenue. Other modes of transportation also experienced activity increases compared to fiscal year 2016 including door-to-door pre-arranged vans (14.2%), hotel shuttles (5.0%), off-airport parking vans (4.6%), scheduled buses (2.2%) and charter buses (0.7%). Modes that experienced declines compared to the prior year include shared-ride-vans (7.4%), limousines (14.5%) and taxis (18.1%).

Net sales and service revenues consist of revenue derived from utility services, telecommunication access fees, badge and permit fees, rental car facility fees, and cost-based reimbursement of various services. Revenues from net sales and services decreased by 7.6%, from \$87.9 million in fiscal year 2016 to \$81.2 million in fiscal year 2017. Sales of electricity revenue increased by \$0.2 million (2.9%) from utility rate increases. Revenue from the sale of water-sewage disposal increased by \$0.3 million (6.4%) from a 10.0% water rate increase in fiscal year 2017 partly offset by a 4.1% decline in tenant usage. Telecommunication fees were higher by \$0.4 million (11.7%) from increased demand for telecommunication access services. Licenses and permits fees increased \$0.4 million (21.6%) from increased badging activity from tenant employees and contractors. The transportation and facility fee (AirTrain fee charged on rental car contracts) decreased by \$4.1 million (10.5%) due to the combination of a \$1 per transaction rate deduction and a 5.6% decline in rental car contracts. Fees collected for the cost of the Rental Car Center (RCC) increased \$0.5 million (3.3%) due to the Rental Car Center structure and surface rent annual Consumer Price Index (CPI) adjustments. Revenue from penalties resulting from the enforcement of airfield safety rules and regulations decreased by \$0.6 million (39.4%). Miscellaneous terminal fees increased by \$0.4 million (11.6%) due to the Terminal 2 baggage handling maintenance contract premium increase. Miscellaneous airport revenue decreased by \$4.8 million (99.4%) compared to fiscal year 2016, when the Airport recorded payments from certain air carriers and other Airport users under a settlement agreement governing cost sharing for residual contamination. Net revenue from all other sales and services including collection charges, food court infrastructure/cleaning fees, refuse disposal, governmental agency rentals, collection charges and settlements increased \$0.6 million (6.5%).

**Fiscal Year 2016**

Operating revenues increased by 6.3%, from \$815.4 million in fiscal year 2015 to \$867.0 million in fiscal year 2016. The Airport experienced increases in aviation revenues, concession revenues, parking and transportation revenues, and net sales and services revenues.

Aviation revenues increased by 6.6%, from \$464.6 million in fiscal year 2015 to \$495.4 million in fiscal year 2016, due to increases in airline landing fees and terminal rent. As determined by the calculation method in the Agreement, scheduled airline landing fees per thousand pounds increased 6.7%, from \$4.57 in fiscal year 2015 to \$4.87 in fiscal year 2016. The airline average annual terminal rent per square foot increased 4.8%, from \$149.98 in fiscal year 2015 to \$157.18 in fiscal year 2016, partially due to a 6.9% increase in the residual airline terminal rental revenue requirement. Airline leased space increased 2.0% to 1.65 million square feet.

Before the unearned aviation revenue adjustment, revenues from landing fees increased by \$18.5 million (12.5%), which reflects the rate increase and a 7.4% increase in airline landed weight. Terminal rentals increased by \$20.6 million (8.5%), based on the rate increase and additional leased space. The overcharge balance increased by \$11.9 million, from \$55.7 million in fiscal year 2015 to \$67.6 million at the end of fiscal year 2016. In aggregate, all other aviation revenues increased by \$3.5 million (4.7%), from \$74.6 million in

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

fiscal year 2015 to \$78.1 million in fiscal year 2016, with net aviation rental revenue and activity-based fees including aircraft parking, jet bridge fees, and employee parking all showing increases.

Concession revenues, consisting of rentals and fees derived from food and beverage concessions, duty free, retail merchandise (gifts, candy, tobacco, and news) and rental car concessions increased by 1.4%, from \$144.8 million in fiscal year 2015 to \$146.9 million in fiscal year 2016. The higher revenues primarily resulted from a 6.6% increase in passenger enplanements and deplanements, and a higher food and beverage spend rate per passenger. Food and beverage revenues increased by \$1.7 million (8.8%) due to the re-opening of Boarding Area E with new concessions on January 28, 2016 and a 1.7% increase in the passenger spend rate. Retail merchandise excluding duty free revenue decreased by \$0.1 million (0.7%) despite increases in passenger traffic, as the per passenger spend rate for such merchandise declined from \$4.97 to \$4.85 (2.4%). Revenues from duty free merchandise sales decreased by \$1.6 million (5.2%) with a decline in spend rate per international passenger of 18.4% from \$22.14 to \$18.07, likely primarily the result of recent global events. On and off-Airport rental car revenues decreased slightly by \$0.1 million (0.2%). Other concession revenues increased by \$2.2 million (8.1%), primarily from a new foreign currency exchange lease that includes a higher Minimum Annual Guarantee (MAG) rent to the Airport.

Public parking and transportation revenues, consisting of rentals and fees derived from parking facilities and ground transportation operations, increased by 9.3%, from \$125.1 million in fiscal year 2015 to \$136.7 million in fiscal year 2016. Public parking transactions increased by 1.0% in fiscal year 2016, partly offset by a slight decline in average ticket price by 0.1%, from \$29.13 in fiscal year 2015 to \$29.12 in fiscal year 2016. The net result was a parking revenue increase of \$0.9 million (0.9%). Ground transportation revenues, including taxi trip fee revenue, increased by \$10.7 million (47.4%) in fiscal year 2016 primarily due to both commercial vehicle trip fee rate increases of up to 4.7% and a 157.7% increase in the transportation network companies' (TNC) operations at the Airport. TNC Airport pick-ups/drop-offs totaled nearly 4.4 million during the fiscal year resulting in \$16.9 million in trip fee revenue. All other modes of transportation experienced activity declines compared to fiscal year 2015 including door-to-door pre-arranged vans (23.9%), shared-ride-vans (21.2%), charter buses (21.2%), taxis (13.2%), limousines (4.3%), hotel shuttles (3.6%) and off-airport parking vans (3.0%).

Net sales and service revenues consist of revenue derived from utility services, telecommunication access fees, badge and permit fees, rental car facility fees, and cost-based reimbursement of various services. Revenues from net sales and services increased by 8.7%, from \$80.9 million in fiscal year 2015 to \$87.9 million in fiscal year 2016. Sales of electricity revenue increased by \$0.8 million (18.9%) from increased usage demand and utility rate increases. Revenue from the sale of water-sewage disposal decreased by \$0.2 million (5.2%) from a 17.2% usage decline partly offset by a 13.9% water rate increase in fiscal year 2016. Telecommunication fees were higher by \$0.3 million (10.6%) from increased demand for technology services. Licenses and permits fees increased \$0.4 million (27.3%) from increased badging activity from tenant employees and contractors. The transportation and facility fee (AirTrain fee charged on rental car contracts) increased \$0.1 million (0.2%) due to a 0.9% increase in rental car contracts. The per rental car contract rate of \$20 was unchanged in fiscal year 2016. Fees collected for the cost of the Rental Car Center (RCC) increased \$0.4 million (3.1%) due to RCC structure and surface rent annual Consumer Price Index (CPI) adjustments. Revenue from penalties increased by \$1.3 million (434.8%) resulting from additional revisions to the airfield safety rules and regulations and their enforcement. Miscellaneous airport revenue increased \$3.6 million

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

(292.4%) primarily due to payments from certain air carriers and other Airport users under a settlement agreement governing cost sharing for residual contamination. Net revenue from all other sales and services including collection charges, food court infrastructure/cleaning fees, refuse disposal, miscellaneous terminal fees, and other settlements increased \$0.3 million (2.5%).

**Operating Expenses**

The following table shows a comparative summary of operating expenses for fiscal years 2017, 2016, and 2015 (in thousands):

	<u>FY 2017</u>	<u>FY 2016</u>	<u>FY 2015</u>	<b>Percentage increase (decrease) FY 2017</b>	<b>Percentage increase (decrease) FY 2016</b>
Personnel	\$ 364,831	241,162	226,790	51.3 %	6.3 %
Depreciation	265,841	228,359	216,146	16.4	5.7
Contractual services	73,918	68,064	67,491	8.6	0.8
Light, heat and power	23,093	22,925	22,296	0.7	2.8
Services provided by other City departments	21,594	19,946	17,958	8.3	11.1
Repairs and maintenance	34,863	35,839	33,278	(2.7)	7.7
Materials and supplies	16,152	16,419	14,592	(1.6)	12.5
General and administrative	4,360	3,694	5,654	18.0	(34.7)
Environmental remediation	4,208	4,065	4,824	3.5	(15.7)
	<u>\$ 808,860</u>	<u>640,473</u>	<u>609,029</u>	<u>26.3 %</u>	<u>5.2 %</u>

**Fiscal Year 2017**

Operating expenses increased \$168.4 million (26.3%), from \$640.5 million in fiscal year 2016 to \$808.9 million in fiscal year 2017, due to increases in expense for personnel, depreciation, contractual services, services provided by other City departments, general and administrative costs and costs of environmental remediation. The increase was partially offset by a decrease in the cost of repairs and maintenance, and materials and supplies expenses. In fiscal year 2017, the Airport capitalized \$18.1 million of indirect costs related to construction of capital projects as overhead, compared to \$14.6 million in fiscal year 2016. The variance in the different categories are discussed below.

Personnel expenses increased \$123.6 million (51.3%), from \$241.2 million in fiscal year 2016 to \$364.8 million in fiscal year 2017. The increase was primarily due to a significant pension costs increase, cost of living adjustments, and additional positions added in fiscal year 2017.

Depreciation increased \$37.4 million (16.4%), from \$228.4 million in fiscal year 2016 to \$265.8 million in fiscal year 2017. The increase was primarily due to the addition of completed capital improvement projects such as Terminal 1 Temporary Boarding Area B, Fire House #3 and South Field Checkpoint Relocation, and Terminal 1 Center.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

Contractual services increased \$5.8 million (8.6%), from \$68.1 million in fiscal year 2016 to \$73.9 million in fiscal year 2017. The increase was driven by higher software licensing costs and the expansion of information booth services.

Light, heat and power expenses increased \$0.2 million (0.7%), from \$22.9 million in fiscal year 2016 to \$23.1 million in fiscal year 2017. The increase was primarily due to increases in rate and higher consumption.

Expenses of services provided by other City departments increased \$1.7 million (8.3%), from \$19.9 million in fiscal year 2016 to \$21.6 million in fiscal year 2017. The increase was primarily due to costs associated with the implementation of the City's new financial system.

Repairs and maintenance expenses decreased \$0.9 million (2.7%), from \$35.8 million in fiscal year 2016 to \$34.9 million in fiscal year 2017. The decrease was primarily due to lower spending on facilities maintenance projects.

Materials and supplies expenses decreased \$0.2 million (1.6%), from \$16.4 million in fiscal year 2016 to \$16.2 million in fiscal year 2017. This decrease was primarily due to lower spending on electrical supplies.

General and administrative expenses increased \$0.7 million (18.0%), from \$3.7 million in fiscal year 2016 to \$4.4 million in fiscal year 2017. This increase was primarily due to the increase in estimated bad debt expense.

Environmental remediation expenses increased \$0.1 million (3.5%), from \$4.1 million in fiscal year 2016 to \$4.2 million in fiscal year 2017. The increase was primarily due an increase in remediation costs related to capital improvement projects.

**Fiscal Year 2016**

Operating expenses increased \$31.4 million (5.2%), from \$609.0 million in fiscal year 2015 to \$640.5 million in fiscal year 2016, due to increases in expenses for personnel, depreciation, contractual services, services provided by other City departments, repairs and maintenance, and materials and supplies expenses. The increase was partially offset by a decrease in general and administrative costs, amortization of prepaid bond insurance costs, and costs of environmental remediation. In fiscal year 2016, the Airport capitalized \$14.6 million of indirect costs related to construction of capital projects as overhead, compared to \$12.7 million in fiscal year 2015. The variance in the different operating expense categories are discussed below.

Personnel costs increased \$14.4 million (6.3%), from \$226.8 million in fiscal year 2015 to \$241.2 million in fiscal year 2016. The increase was primarily due to additional positions and cost of living adjustments included in collective bargaining agreements for Airport employees.

Depreciation increased \$12.2 million (5.7%), from \$216.1 million in fiscal year 2015 to \$228.4 million in fiscal year 2016. The increase was primarily due to the addition of completed capital improvement projects such as Terminal 3 east improvements, the air traffic control tower, and power and water distribution system.

Contractual services increased \$0.6 million (0.8%), from \$67.5 million in fiscal year 2015 to \$68.1 million in fiscal year 2016. This increase was driven by higher costs for curbside management services related to a significant increase in commercial ground transportation activity, particularly from TNCs.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

Light, heat, and power expenses increased \$0.6 million (2.8%), from \$22.3 million in fiscal year 2015 to \$22.9 million in fiscal year 2016. The increase was primarily due to an increase in electricity rates and higher consumption.

Services provided by other City departments increased \$2.0 million (11.1%), from \$18.0 million in fiscal year 2015 to \$19.9 million in fiscal year 2016. The increase was primarily due to costs associated with the City's new Financial System Project.

Repairs and maintenance expenses increased \$2.6 million (7.7%), from \$33.3 million in fiscal year 2015 to \$35.8 million in fiscal year 2016. This increase was primarily due to higher costs in information technology & telecommunications support and maintenance of additional networking hardware installed as part of various Airport improvement projects.

Materials and supplies expenses increased \$1.8 million (12.5%), from \$14.6 million in fiscal year 2015 to \$16.4 million in fiscal year 2016. This increase was primarily due to increases in custodial, mechanical, and electrical supplies for the building maintenance.

General and administrative expenses decreased \$2.0 million (34.7%), from \$5.7 million in fiscal year 2015 to \$3.7 million in fiscal year 2016. The decrease was due to lower legal expense and decrease of unamortized prepared bond insurance costs.

Environmental remediation expenses decreased \$0.7 million (15.7%), from \$4.8 million in fiscal year 2015 to \$4.1 million in fiscal year 2016. The decrease was primarily due to the fact that fewer remediation costs were incurred.

**Nonoperating Revenues and Expenses**

The following summary shows a comparison of nonoperating revenues and expenses in fiscal years 2017, 2016, and 2015 (in thousands):

	<u>FY 2017</u>	<u>FY 2016</u>	<u>FY 2015</u>	<u>FY 2017 percentage increase (decrease)</u>	<u>FY 2016 percentage increase (decrease)</u>
Nonoperating revenues:					
Passenger facility charges (PFC)	\$ 103,955	99,131	92,042	4.9 %	7.7 %
Investment income	7,892	13,957	9,118	(43.5)	53.1
Other	1,075	2,597	1,323	(58.6)	96.3
Total nonoperating revenues	<u>112,922</u>	<u>115,685</u>	<u>102,483</u>	<u>(2.4)</u>	<u>12.9</u>
Nonoperating expenses:					
Interest expense	210,415	208,597	210,608	0.9	(1.0)
Write-offs and loss on disposal	21,619	13,091	8,104	65.1	61.5
Other	81,908	38,460	25,597	113.0	50.3
Total nonoperating expenses	<u>313,942</u>	<u>260,148</u>	<u>244,309</u>	<u>20.7</u>	<u>6.5</u>

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

	<u>FY 2017</u>	<u>FY 2016</u>	<u>FY 2015</u>	<u>FY 2017 percentage increase (decrease)</u>	<u>FY 2016 percentage increase (decrease)</u>
Capital contributions	\$ 11,212	10,424	32,119	7.6 %	(67.5)%
Transfers to City and County of San Francisco	<u>(45,036)</u>	<u>(42,542)</u>	<u>(40,480)</u>	<u>5.9</u>	<u>5.1</u>
Total	<u>\$ (234,844)</u>	<u>(176,581)</u>	<u>(150,187)</u>	<u>33.0 %</u>	<u>17.6 %</u>

**Fiscal Year 2017**

Nonoperating revenues consist primarily of PFC revenues and investment income, while nonoperating expenses consist of interest expense, write-offs and loss on the disposal of capital assets, and capital improvement costs that did not meet capitalization requirements. PFCs, which became effective in October 2001, generated \$104.0 million during fiscal year 2017, an increase of 4.9% compared to the \$99.1 million received in fiscal year 2016. The increase in PFC revenues was primarily due to an increase in passenger traffic.

Investment income decreased \$6.1 million (43.5%), from \$14.0 million in fiscal year 2016 to \$7.9 million in fiscal year 2017, primarily due to the net effect of \$12.3 million of investment fair value adjustments. Excluding the fair value adjustments, actual investment income increased \$6.2 million.

Other nonoperating revenues decreased \$1.5 million (58.6%) from \$2.6 million in fiscal year 2016 to \$1.1 million in fiscal year 2017, primarily due to the decrease in settlement income.

Interest expense increased \$1.8 million (0.9%), from \$208.6 million in fiscal year 2016 to \$210.4 million in fiscal year 2017, primarily due to an increase in financing activities to fund capital improvement projects.

Write-offs and loss on disposal increased \$8.5 million (65.1%), from \$13.1 million in fiscal year 2016 to \$21.6 million in fiscal year 2017, primarily due to the write-offs of the replaced capital assets and assets that did not meet the capitalization threshold.

Other nonoperating expenses increased \$43.4 million (113.0%), from \$38.5 million in fiscal year 2016 to \$81.9 million in fiscal year 2017, primarily due to the higher demolition and capital improvement projects costs that did not meet the capitalization requirement.

Capital contributions received from federal grants increased \$0.8 million (7.6%) from \$10.4 million in fiscal year 2016 to \$11.2 million in fiscal year 2017. The net increase was primarily due to the increase of \$10.2 million in the FAA Air Traffic Control Tower and Airport Improvement Program grants, and the decrease of \$9.4 million in the TSA's Checked Baggage Screening System grant.

The annual service payments transferred to the City increased \$2.5 million (5.9%), from \$42.5 million in fiscal year 2016 to \$45.0 million in fiscal year 2017. The increase was due to higher concession, parking and transportation revenues during fiscal year 2017.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

**Fiscal Year 2016**

Nonoperating revenues consist primarily of PFC revenues and investment income, while nonoperating expenses consist of interest expense, write-offs and loss on the disposal of capital assets, and capital improvement costs that did not meet the capitalization requirement. PFCs, which became effective in October 2001, generated \$99.1 million during fiscal year 2016, an increase of 7.7% compared to the \$92.0 million received in fiscal year 2015. The increase in PFC revenues was primarily due to an increase in passenger traffic.

Investment income increased \$4.9 million (53.1%), from \$9.1 million in fiscal year 2015 to \$14.0 million in fiscal year 2016, primarily due to the increase in interest earned and unrealized gains from investments outside the City Treasury.

Other nonoperating revenues were primarily operating grants received during the fiscal year. For fiscal year 2016, other nonoperating revenues increased \$1.3 million from \$1.3 million in fiscal year 2015 to \$2.6 million in fiscal year 2016, primarily due to prior year's cost recovery.

Interest expense decreased \$2.0 million (1.0%), from \$210.6 million in fiscal year 2015 to \$208.6 million in fiscal year 2016, primarily due to decrease in fixed rate bond interest.

Write-offs and loss on disposal increased \$5.0 million (61.5%), from \$8.1 million in fiscal year 2015 to \$13.1 million in fiscal year 2016, primarily due to write-off of capital asset being replaced.

Other nonoperating expenses increased \$12.9 million (50.3%), from \$25.6 million in fiscal year 2015 to \$38.5 million in fiscal year 2016, primarily due to the portion of Terminal 1 capital improvement costs that did not meet the capitalization requirement.

Capital contributions received from federal grants decreased \$21.7 million (67.5%), from \$32.1 million in fiscal year 2015 to \$10.4 million in fiscal year 2016, primarily due to the decrease in grant reimbursable capital improvement projects.

The annual service payments transferred to the City increased \$2.0 million (5.1%), from \$40.5 million in fiscal year 2015 to \$42.5 million in fiscal year 2016. The increase in annual service payments was proportionate to the increase in concession, parking, and transportation revenues during fiscal year 2016.

**Capital Acquisitions and Construction**

Under the Lease and Use Agreement, the Airport Commission is obligated to use commercially reasonable efforts to finance all capital improvements (above certain de minimis amounts) through the issuance of Airport revenue bonds, grants, TSA funding, and PFCs. The Lease and Use Agreement also provides for airline review of capital projects that exceed the dollar thresholds established in the Agreement.

The Airport has five- and ten-year Capital Plans to build new facilities, improve existing facilities, renovate buildings, repair or replace infrastructure, preserve assets, enhance safety and security, develop systems functionality, and perform needed maintenance.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

**Fiscal Year 2017**

Expenses incurred during fiscal year 2017 with respect to major capital projects are listed below. The figures below do not reflect the total project budget. Most major capital projects at the Airport are implemented over multiple fiscal years.

	<u>Amount</u>
Terminal 1 Redevelopment	\$ 287,274,333
Runway Improvements	35,839,944
South Field Redevelopment	31,990,680
AirTrain Extension	28,458,188
Consolidated Administration Campus	27,304,929
Additional Long-Term Parking Garage	25,567,160
Airport Traffic Control Tower	20,333,657
Plot 700 Redevelopment	16,057,414
Revenue Enhancement and Customer Hospitality (REACH)	13,752,773
On-Airport Hotel	11,795,966
Security Improvements	8,783,795
Superbay Renovation	7,987,835
Capital Improvement Plan Support	7,076,890
Waste Water System Improvements	6,245,015
Terminal 3 Renovation	5,601,704
Technology Improvement	4,469,897
Parking and Garage Improvements	4,063,867
International Terminal Improvements	3,580,364
Support Facility Improvements	3,547,704
Miscellaneous Terminal Improvements	2,971,747
South McDonnell Road Realignment	2,577,821
Capital Equipment	2,165,901
Shoreline Protection	2,122,848
Miscellaneous Airfield Improvements	1,418,473
Roadway Improvements	1,324,244
Wi-Fi Improvements	1,266,074
Fire Equipment Replacement	1,262,688
Support Facility Improvements	1,152,351
Wayfinding	1,123,892
Gate Capacity Enhancements	<u>1,072,785</u>
Total	<u>\$ 568,190,939</u>

Significant projects in design or under construction in fiscal year 2018 include the Terminal 1 (T1) Redevelopment Projects, which includes the redevelopment of Boarding Area B and the expansion of the

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

T1 Central Area, as well as the Terminal 3 (T3) Redevelopment Projects, which will include the redevelopment of the western portion of T3 and a new secure connector and office block between Terminal 2 (T2) and T3. Other notable ongoing projects include a new on-airport hotel, a new consolidated administration campus building, upgrades and enhancements to the International Terminal, a second long-term parking garage, the extension of the AirTrain to the second long-term parking garage, and a new industrial waste treatment plant.

Additional information about the Airport's capital acquisitions and construction is presented in note 5 to the financial statements.

**Fiscal Year 2016**

Expenses incurred during fiscal year 2016 with respect to major capital projects are listed below. The figures below do not reflect the total project budget. Most major capital projects at the Airport are implemented over multiple fiscal years.

	<b>Amount</b>
Terminal 1 Redevelopment	\$ 174,361,928
Terminal 3 East Improvements	61,835,219
South Field Redevelopment	25,774,425
Terminal 1 Air Traffic Control Tower Integrated Facilities	13,924,685
Air Traffic Control Tower	7,537,962
Miscellaneous Airfield Improvements	7,461,396
Additional Long-Term Parking Garage	6,406,650
Common Use Self Service	6,016,828
Plot 700 Redevelopment	5,888,892
AirTrain Extension	4,447,992
Consolidated Administration Campus	4,226,134
Ground Transportation Management System	3,783,382
Parking and Garage Improvements	3,509,170
Cargo and Hangar Improvements	3,173,535
Power and Lighting Improvements	3,157,769
On-Airport Hotel	2,995,097
Screening Improvements	2,928,781
Technology Improvement	2,696,033
Wi-Fi Improvements	2,693,263
Revenue Enhancement and Customer Hospitality (REACH)	2,379,012
Capital Improvement Plan Support	2,310,502
International Terminal Improvements	1,693,937
Fire Equipment Replacement	1,309,215
AirTrain Improvements	1,115,552
	\$ 351,627,359
Total	\$ 351,627,359

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

Significant projects in design or under construction in fiscal year 2017 include the Terminal 1 (T1) Redevelopment Program which includes the redevelopment of Boarding Area B, the expansion of the T1 Central Area, and a new baggage handling system, in addition to the Terminal 3 (T3) Redevelopment Program which creates a unified T3 checkpoint and constructs a new secure connector and office block. Other notable ongoing projects include the on-airport hotel, a new consolidated administration campus building, a second long term parking garage, and a new industrial waste treatment plant.

Additional information about the Airport's capital acquisitions and construction is presented in note 5 to the financial statements.

**Debt Administration**

**Fiscal Year 2017**

*Capital Plan Bonds:* During fiscal year 2017, the Airport issued two series of bonds to fund capital projects. On September 29, 2016, the Airport issued its long-term, fixed rate Second Series Revenue Bonds, Series 2016B (AMT) and 2016C (Non-AMT/Governmental Purpose) in the aggregate principal amount of \$740.1 million, to finance and refinance (through the repayment of commercial paper notes) the following projects, among others: (a) redevelopment of Terminal 1 including construction of an interim Boarding Area B and the design and construction of a new 24-gate Boarding Area B facility, (b) relocation of a firehouse and vehicle security checkpoint to accommodate the expansion of Boarding Area B and the related realignment of Taxiways H and M, (c) relocation of ground transportation facilities to accommodate the expansion of Boarding Area B, (d) construction of a new administration campus to consolidate some Airport administrative departments, (e) upgrades to operating systems-related components for the AirTrain extension, (f) gate enhancements to accommodate larger aircraft and address demand-driven gate needs, and (g) various technology improvements to upgrade network services.

*Refunding Bonds:* On September 29, 2016, the Airport issued its Second Series Revenue Refunding Bonds, Series 2016D (Non-AMT/Governmental Purpose) in the principal amount of \$147.8 million to refund \$42.2 million of its Series 2010C, \$39.2 million of its Series 2011D, and \$76.5 million of its Series 2011G long-term fixed rate bonds, each of which was refunded for debt service savings.

*Cash Defeasance:* On June 20, 2017, the Airport legally defeased \$12.9 million of its Second Series Revenue Refunding Bonds, Issue 34E (AMT), using available cash on hand together with amounts held by the Trustee for purposes of paying future debt service on such bonds.

*Remarketed Bonds:* The Airport did not remarket any outstanding bonds during fiscal year 2017.

*Subordinate Commercial Paper Notes:*

- During fiscal year 2017, the Airport used proceeds of the Series 2016B and Series 2016C Bonds to retire the \$343.1 million in commercial paper notes that were outstanding as of July 1, 2016, and subsequently issued \$179.0 million in new money commercial paper notes, of which \$1.0 million were retired using available cash on hand. As of June 30, 2017, the Airport had \$178.0 million in outstanding commercial paper notes.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

- On May 4, 2017, the Airport closed an extension of the irrevocable letter of credit issued by Royal Bank of Canada, supporting \$200.0 million principal amount of the Airport's subordinate commercial paper notes, Series A-3, Series B-3, and Series C-3. The letter of credit will expire May 1, 2020.
- On June 22, 2017, the Airport closed a \$100.0 million expansion of the commercial paper program, increasing the aggregate principal amount of the commercial paper notes that can be outstanding at any one time from \$400.0 million to \$500.0 million. A five-year irrevocable letter of credit issued by Sumitomo Mitsui Banking Corporation, acting through its New York Branch, supports the additional \$100.0 million principal amount of the Airport's subordinate commercial paper notes, reviving the Series A-2, Series B-2 and Series C-2 commercial paper notes that had not been supported by a letter of credit since 2014. The Sumitomo letter of credit will expire June 21, 2022.

*Interest Rate Swaps:* The Airport ended fiscal year 2017 with six interest rate swaps outstanding with a total notional amount of \$462.4 million. The Airport's interest rate swaps are intended as a hedge against the potential volatility of the interest rates on the Airport's variable rate bonds. Under the Airport's swap agreements, the Airport receives a monthly variable rate payment from each counterparty that is intended to approximate the interest payments the Airport makes on the associated variable rate bonds, while the Airport makes a monthly fixed rate payment to the swap counterparties, resulting in a synthetic fixed rate for these bonds. As of June 30, 2017, the Airport's interest rate swaps were associated with the Airport's Issue 36A/B/C, Issue 37C, and Series 2010A Bonds, either directly or indirectly.

More detailed information about the Airport's subordinate commercial paper notes, long-term debt, and interest rate swaps is presented in notes 6 and 7 to the financial statements.

*1991 Master Bond Resolution Covenant Compliance:* During fiscal year 2017, the Airport's operating revenues, together with the permitted transfers from the Airport's Contingency Account, were sufficient to meet the rate covenant requirements under the Airport's 1991 Master Bond Resolution. See note 7f.

### **Fiscal Year 2016**

*Capital Plan Bonds:* The Airport did not issue additional bonds to fund new capital projects during fiscal year 2016.

*Refunding Bonds:* On February 25, 2016, the Airport issued its Second Series Revenue Refunding Bonds, Series 2016A (Non-AMT/Governmental Purpose), in the principal amount of \$232.1 million to refund \$66.5 million of its Issue 32F, \$155.3 million of its Issue 32G and \$63.1 million of its Issue 34D long-term fixed rate bonds, which were refunded for debt service savings.

*Cash Defeasance:* On June 30, 2016 the Airport used available cash on hand to defease a portion of its Second Series Revenue Refunding Bonds, Issue 34E (AMT) (\$24.7 million).

*Remarketed Bonds:* During Fiscal Year 2016, the Airport remarketed two series of outstanding bonds:

- On June 29, 2016 the Airport remarketed its Second Series Variable Rate Revenue Refunding Bonds, Issue 36A (Non-AMT/Private Activity), with a new irrevocable letter of credit from Wells Fargo Bank, National Association, that expires on June 29, 2018. The bonds were previously secured by a letter of

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

credit provided by U.S. Bank, National Association, which was terminated on July 7, 2016, prior to its stated expiration date of October 26, 2016.

- On June 29, 2016 the Airport remarketed its long-term Second Series Variable Rate Revenue Refunding Bonds, Series 2010A (AMT), with a new irrevocable letter of credit from Bank of America, National Association, that expires on June 29, 2020. The bonds were originally secured by a letter of credit provided by JPMorgan Chase Bank, National Association, which was terminated on July 11, 2016, prior to its stated expiration date of December 14, 2016.

*Subordinate Commercial Paper Notes:*

- During fiscal year 2016, the Airport did not retire any of the \$40 million in commercial paper notes that were outstanding as of July 1, 2015 and issued \$304.1 million in new money commercial paper notes, of which \$1.1 million were retired. As of June 30, 2016, the Airport had \$343.1 million in outstanding commercial paper notes.
- On June 2, 2016, the Airport closed a three-year extension of the irrevocable letter of credit issued by Wells Fargo Bank, National Association, supporting \$100.0 million of the Airport's subordinate commercial paper notes, Series A-4, Series B-4 and Series C-4. The letter of credit will expire May 31, 2019.

*Interest Rate Swaps:* The Airport ended fiscal year 2016 with six interest rate swaps outstanding with a total notional amount of \$479.5 million. The Airport's interest rate swaps are intended as a hedge against the potential volatility of the interest rates on the Airport's variable rate bonds. Under the Airport's swap agreements, the Airport receives a monthly variable rate payment from each counterparty that is intended to approximate the interest payments the Airport makes on the associated variable rate bonds, while the Airport makes a monthly fixed rate payment to the swap counterparties, resulting in a synthetic fixed rate for these bonds. As of June 30, 2016, the Airport's interest rate swaps were associated with the Airport's Issue 36A/B/C, Issue 37C, and Series 2010A Bonds, either directly or indirectly.

More detailed information about the Airport's subordinate commercial paper notes, long-term debt, and interest rate swaps is presented in notes 6 and 7 to the financial statements.

*Master Bond Resolution Covenant Compliance:* During fiscal year 2016, the Airport's operating revenues, together with the permitted transfers from the Airport's Contingency Account, were sufficient to meet the rate covenant requirements under the Airport's 1991 Master Bond Resolution.

## **Credit Ratings and Bond Insurance**

### **Fiscal Year 2017**

*Credit Ratings:* During fiscal year 2017, Moody's Investors Service Inc. (Moody's), Standard & Poor's Ratings Services, a Standard and Poor's Financial Services LLC business (S&P), and Fitch Inc. (Fitch) affirmed their underlying credit ratings on the outstanding debt of the Airport of "A1", "A+", and "A+", respectively, each with stable rating outlooks.

Ratings on each subseries of the Airport's commercial paper notes reflect the short-term credit ratings of the bank whose letter of credit supports that subseries.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

As of September 13, 2016, Moody's, S&P, and Fitch assigned credit ratings of "A1", "A+", and "A+", respectively, to the Series 2016B/C/D Bonds, which were issued on September 29, 2016.

*Bond Insurance:* Prior to fiscal year 2009, the Airport generally purchased municipal bond insurance policies in connection with the issuance of many series of its outstanding revenue bonds from monoline bond insurance companies that enjoyed "AAA" ratings at the time. The insured credit ratings on these Airport bonds declined in tandem with the credit ratings of most bond insurance companies as a result of the global financial crisis that began in fiscal year 2008.

In fiscal year 2017, certain outstanding Airport bonds were supported by Assured Guaranty Corp., Assured Guaranty Municipal Corp., and National Public Finance Guarantee Corp. In fiscal year 2017, the public ratings of Assured Guaranty Corp. were "A3" by Moody's and "AA" by S&P, and the public ratings of Assured Guaranty Municipal Corp. (formerly known as Financial Security Assurance Inc.) were "A2" by Moody's and "AA" by S&P. On June 26, 2017, S&P lowered its financial strength rating on National Public Finance Guarantee Corp. (National) from "AA-" to "A". The Moody's public rating of National (which has assumed the obligations of MBIA Insurance Corporation and Financial Guaranty Insurance Corp.) was "A3" in fiscal year 2017.

**Fiscal Year 2016**

*Credit Ratings:* During fiscal year 2016, Moody's Investors Service Inc. (Moody's), Standard & Poor's Ratings Services, a Standard and Poor's Financial Services LLC business (S&P), and Fitch Inc. (Fitch) affirmed their underlying credit ratings on the outstanding debt of the Airport of "A1", "A+", and "A+" with Stable Rating Outlooks, respectively.

On September 11, 2015, Fitch upgraded the credit rating on the Commission's San Francisco International Airport Special Facilities Lease Revenue Bonds (SFO Fuel Company LLC), Series 1997A, and San Francisco International Airport 1997 Special Facilities Lease Revenue Bonds (SFO Fuel Company LLC), Series 2000A, from "BBB+" to "A-" (Stable Outlook).

Ratings on each subseries of the Airport's commercial paper notes reflect the short-term credit ratings of the bank whose letter of credit support that subseries.

On January 20, 2016, Moody's, S&P, and Fitch assigned credit ratings of "A1", "A+", and "A+", respectively, to the Series 2016A Bonds, which were issued on February 25, 2016.

On October 5, 2015, Fitch upgraded the long-term credit rating of U.S. Bank National Association. The Airport's Second Series Variable Rate Revenue Refunding Bonds, Issue 36A, were secured by an irrevocable letter of credit issued by U.S. Bank. As a result, on October 6, 2015, Fitch raised its joint-support, long-term credit rating on the Issue 36A Bonds from "AA+" to "AAA".

On May 23, 2016, S&P applied its updated Methodology and Assumptions for Rating Jointly Supported Financial Obligations criteria to the Airport's Second Series Variable Rate Revenue Bonds, Issues 36A/B/C, Issue 37C, and Series 2010A. As a result, on May 23, 2016, S&P lowered its joint-support, long-term credit rating on those Bonds from "AAA" to "AA+".

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

On June 29, 2016, the Airport remarketed the Issue 36A Bonds with a new irrevocable letter of credit issued by Wells Fargo Bank, National Association that replaced the prior letter of credit issued by U.S. Bank National Association. In connection with the new letter of credit, the joint-support credit ratings on the Series 36A Bonds were affirmed.

On June 29, 2016, the Airport remarketed the Series 2010A Bonds with a new irrevocable letter of credit issued by Bank of America, National Association that replaced the prior letter of credit issued by JPMorgan Chase Bank, National Association. In connection with the new letter of credit, Moody's downgraded its joint-support credit ratings on the Series 2010A Bonds to "Aa2/VMIG1" and Fitch downgraded its joint-support credit ratings on the Series 2010A Bonds to "AA/F1".

*Bond Insurance:* Prior to fiscal year 2009, the Airport generally purchased municipal bond insurance policies in connection with the issuance of many series of its outstanding revenue bonds from monoline bond insurance companies that enjoyed "AAA" ratings at the time. The insured credit ratings on these Airport bonds declined in tandem with the credit ratings of most bond insurance companies as a result of the global financial crisis that began in fiscal year 2008.

In fiscal year 2016, the Airport's bond insurance companies' ratings were unchanged. The public ratings of Assured Guaranty Corp. were "A3" by Moody's and "AA" by S&P, and the public ratings of Assured Guaranty Municipal Corp. (formerly known as Financial Security Assurance Inc.) were "A2" by Moody's and "AA" by S&P. The public ratings of National Public Finance Guarantee Corp. (which has assumed the obligations of MBIA Insurance Corporation and Financial Guaranty Insurance Corp.) were "A3" by Moody's and "AA-" by S&P.

**Fiscal Year 2018 Airline Rates and Charges**

Terminal rental rates and airline landing fees for fiscal year 2018 have been developed as part of the annual budget process that started in October 2016. The Lease and Use Agreement between the Airport and the Signatory Airlines provides the rate-setting methodology for calculating the terminal rental rates and Airline landing fees. Not less than 60 days prior to the start of the fiscal year, the Signatory Airlines are notified of the proposed rates and fees. These fees are subject to review by, but not the approval of, the Signatory Airlines. The terminal rental rates and airline landing fees for fiscal year 2018, which became effective on July 1, 2017, are as follows:

Effective average terminal rental rate (per sq. ft)	\$	169.03
Signatory Airline – landing fee rate (per 1,000 lbs.)		5.24
NonSignatory Airline – landing fee rate (per 1,000 lbs.)		6.55
General aviation – landing fee rate (per 1,000 lbs.)		6.55

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Management's Discussion and Analysis

June 30, 2017 and 2016

The effective average terminal rental rate increased by 4.9%, from \$161.16 per sq. ft. in fiscal year 2017 to \$169.03 per sq. ft. in fiscal year 2018. The fiscal year 2017 landing fee rate for Signatory Airlines increased by 4.9%, from \$4.99 per 1,000 pounds in fiscal year 2017 to \$5.24 per 1,000 pounds in fiscal year 2018, while the Non-Signatory Airline landing fee rate increased by 4.9%, from \$6.24 per 1,000 pounds in fiscal year 2017 to \$6.55 per 1,000 pounds in fiscal year 2018. The fiscal year 2017 landing fee rate for general aviation aircraft increased by 19.3%, from \$5.49 per 1,000 pounds in fiscal year 2017 to \$6.55 per 1,000 pounds in fiscal year 2018.

**Requests for Information**

This report is designed to provide a general overview of the San Francisco International Airport's finances. Questions concerning any of the information provided in this report or requests for additional information should be addressed to the Chief Business & Finance Officer, San Francisco International Airport, P.O. Box 8097, San Francisco, California 94128.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Statements of Net Position

June 30, 2017 and 2016

(In thousands)

	<b>2017</b>	<b>2016</b>
<b>Assets:</b>		
Current assets:		
Cash and investments held in City Treasury	\$ 375,593	410,358
Cash and investments outside City Treasury	5,854	5,927
Cash – Revolving Fund	10	10
Accounts receivable (net of allowance for doubtful accounts: 2017: \$1,807; 2016: \$1,214)	53,085	47,851
Accrued interest – City Treasury	513	430
Accrued interest – outside City Treasury	1,572	1,156
Inventories	58	38
Other current assets	4,245	1,807
Restricted assets:		
Cash and investments held in City Treasury	273,106	197,348
Cash and investments outside City Treasury	142,557	63,885
Accounts receivable	—	781
Accrued interest – Other	172	39
Grants receivable	5,083	9,970
Passenger facility charges receivable	17,016	10,348
Total current assets	878,864	749,948
Noncurrent assets:		
Restricted assets:		
Cash and investments held in City Treasury	315,746	259,134
Cash and investments outside City Treasury	409,355	381,237
Accrued interest – City Treasury	924	532
Prepaid bond insurance costs	285	67
Capital assets, net	4,282,629	4,045,636
Total noncurrent assets	5,008,939	4,686,606
Total assets	5,887,803	5,436,554
Deferred outflows of resources:		
Unamortized loss on refunding of debt	76,789	68,100
Deferred outflows on derivative instruments	54,870	83,614
Deferred outflows related to pensions	145,743	43,982
Total deferred outflows of resources	\$ 277,402	195,696

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Statements of Net Position

June 30, 2017 and 2016

(In thousands)

	<b>2017</b>	<b>2016</b>
Liabilities:		
Current liabilities:		
Accounts payable	\$ 54,064	56,483
Accrued payroll	10,477	9,579
Compensated absences	9,845	9,714
Accrued workers' compensation	1,520	1,413
Estimated claims payable	777	1,346
Unearned aviation revenue	54,853	67,556
Current maturities of long-term debt	152,685	163,797
Payable from restricted assets:		
Accounts payable	90,794	82,720
Accrued payroll	784	467
Grants received in advance	—	6,088
Accrued bond interest payable	36,062	31,475
Commercial paper	178,000	343,050
Current maturities of long-term debt	50,895	30,328
Total current liabilities	640,756	804,016
Noncurrent liabilities:		
Compensated absences, net of current portion	7,172	7,326
Accrued workers' compensation, net of current portion	5,816	5,244
Estimated claims payable, net of current portion	78	131
Long-term debt, net of current maturities	4,882,080	4,235,551
Other postemployment benefits obligation	138,168	124,352
Net pension liability	359,599	144,271
Derivative instruments	65,965	96,132
Total noncurrent liabilities	5,458,878	4,613,007
Total liabilities	6,099,634	5,417,023
Deferred inflows of resources:		
Deferred inflows related to pensions	15,402	48,154
Total deferred inflows of resources	15,402	48,154
Net position:		
Net investment in capital assets	(284,761)	(117,377)
Restricted for debt service	109,554	35,462
Restricted for capital projects	296,188	212,931
Unrestricted	(70,812)	36,057
Total net position	\$ 50,169	167,073

See accompanying notes to financial statements.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Statements of Revenues, Expenses, and Changes in Net Position

Years ended June 30, 2017 and 2016

(In thousands)

	<u>2017</u>	<u>2016</u>
Operating revenues:		
Aviation	\$ 545,310	495,439
Concession	149,697	146,872
Parking and transportation	150,548	136,743
Net sales and services	<u>81,245</u>	<u>87,937</u>
Total operating revenues	<u>926,800</u>	<u>866,991</u>
Operating expenses:		
Personnel	364,831	241,162
Depreciation	265,841	228,359
Contractual services	73,918	68,064
Light, heat, and power	23,093	22,925
Services provided by other City departments	21,594	19,946
Repairs and maintenance	34,863	35,839
Materials and supplies	16,152	16,419
General and administrative	4,360	3,694
Environmental remediation	<u>4,208</u>	<u>4,065</u>
Total operating expenses	<u>808,860</u>	<u>640,473</u>
Operating income	<u>117,940</u>	<u>226,518</u>
Nonoperating revenues (expenses):		
Investment income	7,892	13,957
Interest expense	(210,415)	(208,597)
Passenger facility charges	103,955	99,131
Write-offs and loss on disposal	(21,619)	(13,091)
Other nonoperating revenues	1,075	2,597
Other nonoperating expenses	<u>(81,908)</u>	<u>(38,460)</u>
Total nonoperating expenses, net	<u>(201,020)</u>	<u>(144,463)</u>
Income (loss) before capital contributions and transfers	(83,080)	82,055
Capital contributions:		
Grants	11,212	10,424
Transfers to City and County of San Francisco	<u>(45,036)</u>	<u>(42,542)</u>
Changes in net position	(116,904)	49,937
Total net position – beginning of year	<u>167,073</u>	<u>117,136</u>
Total net position – end of year	<u>\$ 50,169</u>	<u>167,073</u>

See accompanying notes to financial statements.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Statements of Cash Flows

Years ended June 30, 2017 and 2016

(In thousands)

	<u>2017</u>	<u>2016</u>
Cash flows from operating activities:		
Cash received from airline carriers, concessionaires, and others	\$ 931,127	891,569
Cash paid for employees' services	(268,646)	(254,837)
Cash paid to suppliers of goods and services	(204,038)	(194,383)
Net cash provided by operating activities	<u>458,443</u>	<u>442,349</u>
Cash flows from noncapital financing activities:		
Transfers to City and County of San Francisco	(45,036)	(42,542)
Other noncapital financing revenues	1,075	2,597
Other noncapital financing expenses	(81,908)	(38,460)
Net cash used in noncapital financing activities	<u>(125,869)</u>	<u>(78,405)</u>
Cash flows from capital and related financing activities:		
Principal paid on revenue bonds and commercial paper notes	(208,125)	(209,910)
Interest paid on revenue bonds and commercial paper notes	(233,585)	(225,073)
Acquisition and construction of capital assets	(506,508)	(304,421)
Revenues from passenger facility charges	97,287	98,432
Proceeds from sale of revenue bonds	437,465	841
Proceeds from commercial paper notes	179,000	304,100
Capital contributed by federal agencies and others	10,011	20,665
Net cash used in capital and related financing activities	<u>(224,455)</u>	<u>(315,366)</u>
Cash flows from investing activities:		
Sales of investments with Trustee	664,457	635,126
Purchases of investments with Trustee	(689,700)	(624,603)
Interest received on investments	15,235	4,808
Net cash provided (used) in investing activities	<u>(10,008)</u>	<u>15,331</u>
Net increase in cash and cash equivalents	98,111	63,909
Cash and cash equivalents, beginning of year	<u>873,741</u>	<u>809,832</u>
Cash and cash equivalents, end of year	<u>\$ 971,852</u>	<u>873,741</u>
Reconciliation of cash and cash equivalents to the statements of net position:		
Cash and investments held in City Treasury – unrestricted	\$ 375,593	410,358
Cash and investments held in City Treasury – restricted	588,852	456,482
Cash and investments outside City Treasury – unrestricted	5,854	5,927
Cash and investments outside City Treasury – restricted	1,123	1,090
Cash – Revolving Fund	10	10
Cash, cash equivalents, and investments	<u>971,432</u>	<u>873,867</u>
Unrealized gain or loss on investments	<u>420</u>	<u>(126)</u>
Cash and cash equivalents, June 30	<u>\$ 971,852</u>	<u>873,741</u>

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Statements of Cash Flows

Years ended June 30, 2017 and 2016

(In thousands)

	<u>2017</u>	<u>2016</u>
Reconciliation of operating income to net cash provided by operating activities:		
Operating income	\$ 117,940	226,518
Adjustments for noncash and other activities:		
Depreciation	265,841	228,359
Allowance for doubtful accounts	593	581
Cost of issuance paid from bond proceeds	1,912	980
Changes in assets and liabilities:		
Accounts receivable	(5,827)	(9,536)
Inventories	(20)	4
Other current assets	(2,438)	(1,188)
Accrued payroll receivable	—	1
Deferred outflows related to pensions	(101,761)	(6,465)
Accounts payable and other liabilities	(3,041)	(1,546)
Accrued payroll	898	2,209
Compensated absences	(22)	746
Accrued workers' compensation	679	576
Other postemployment benefits obligation	13,816	9,055
Unearned aviation revenue	(12,703)	11,852
Deferred inflows related to pensions	(32,752)	(52,136)
Net pension liability	215,328	32,339
Net cash provided by operating activities	<u>\$ 458,443</u>	<u>442,349</u>
Noncash transactions:		
Accrued capital asset costs	\$ 91,578	83,187
Bond refunding through fiscal agent	184,536	282,453
Bond proceeds held by fiscal agent	434,287	—
Commercial paper repaid through fiscal agent	343,050	—

See accompanying notes to financial statements.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**(1) Definition of Reporting Entity**

The accompanying financial statements reflect the net position and changes in net position of the Airport Commission, City and County of San Francisco, San Francisco International Airport (the Airport or SFO), a commercial service airport owned and operated as an enterprise fund of the City and County of San Francisco (the City). The Airport opened in 1927 and for calendar year 2016 was the seventh busiest airport in the United States in terms of passengers and fifteenth in terms of cargo tonnage.<sup>5</sup> The Airport is also a major origin and destination point and one of the nation's principal gateways for Pacific traffic. A five-member Airport Commission is responsible for its operation, development, and maintenance. Airport Commission members are appointed by the City's Mayor for terms of four years.

The Airport is an integral part of the City and is reported as a major enterprise fund in the City's Comprehensive Annual Financial Report. There are no component units considered for inclusion in the Airport's financial reporting entity. The accompanying financial statements present only the financial operations of the Airport and do not purport to, and do not, present the financial position of the City, or the results of its operations and the cash flows of its other proprietary fund types.

**(2) Significant Accounting Policies**

**(a) Measurement Focus and Basis of Accounting**

The Airport's financial activities are accounted for on a flow of economic resources measurement focus, using the accrual basis of accounting in accordance with U.S. generally accepted accounting principles (GAAP).

The Airport distinguishes operating revenues and expenses from nonoperating revenues and expenses. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with an organization's principal ongoing operations. The principal operating revenues of the Airport are charges to airlines, concessionaires, and parking and transportation charges. Operating expenses of the Airport include personnel costs, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting these definitions are reported as nonoperating revenues and expenses.

As prescribed under GASB Statement No. 68 – *Accounting and Financial Reporting for Pensions* – an amendment of GASB Statement 27, net pension liability, deferred outflows/inflows of resources related to pensions, pension expense, information about the fiduciary net position of the San Francisco Employees Retirement System (SFERS) plan and additions to/deductions from the plan's fiduciary net position have been determined on the same basis as they are reported by the plan. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Plan member contributions are recognized in the period in which the contributions are due. Investments are reported at fair value and liabilities are based on the results of actuarial calculations.

<sup>5</sup> Source: Airports Council International – North America, 2016 North American Traffic Report.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**(b) Implementation of New Governmental Accounting Standards Board (GASB)**

**Governmental Accounting Standards Board (GASB) Statement No. 73**

In June 2015, the GASB issued Statement No. 73 – *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68*, and Amendments to Certain Provisions of GASB Statements 67 and 68. GASB Statement No. 73 addresses accounting and financial reporting for pensions provided by governments that are not within the scope of GASB 68. The new standard is effective for periods beginning after June 15, 2016. The Airport adopted the provisions of this Statement, which did not have a significant impact on its financial statements.

**Governmental Accounting Standards Board (GASB) Statement No. 75**

In June 2015, the GASB issued Statement No. 75 – *Accounting and Financial Reporting for Postemployment Benefit Other Than Pension Plans*. GASB Statement No. 75 revises and establishes new accounting and financial reporting requirements for governments that provides their employees with other postemployment benefits other than pensions (OPEB). The new standard is effective for periods beginning after June 15, 2017. The Airport will implement the provisions of Statement No. 75 in fiscal year 2018.

**Governmental Accounting Standards Board (GASB) Statement No. 77**

In August 2015, the GASB issued Statement No. 77 – *Tax Abatement Disclosures*. GASB Statement No. 77 establishes financial reporting standards for tax abatement agreements entered into by state and local governments. The new standard is effective for periods beginning after December 15, 2015. The Airport adopted the provisions of this Statement, which did not have a significant impact on its financial statements.

**Governmental Accounting Standards Board (GASB) Statement No. 78**

In December 2015, the GASB issued Statement No. 78 – *Pensions Provided through Certain Multiple-Employer Defined Benefit Pension Plans*. GASB Statement No. 78 establishes accounting and financial reporting standards for defined benefit pensions provided by state or local governments through a cost-sharing plan that meets the criteria of Statement No. 68 and is not a state or local governmental pension plan. The new standard is effective for periods beginning after December 15, 2015. The Airport adopted the provisions of this Statement, which did not have a significant impact on its financial statements.

**Governmental Accounting Standards Board (GASB) Statement No. 81**

In March 2016, the GASB issued Statement No. 81 – *Irrevocable Split-Interest Agreements*. GASB Statement No. 81 establishes accounting and financial reporting standards for irrevocable split-interest agreement created through trusts in which a donor irrevocably transfers resources to an intermediary. The new standard is effective for periods beginning after December 15, 2016. The Airport will implement the provisions of Statement No. 81 in fiscal year 2018.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**Governmental Accounting Standards Board (GASB) Statement No. 82**

In March 2016, the GASB issued Statement No. 82 – *Pension Issues*, an amendment of GASB Statements No. 67, No. 68, and No. 73. GASB Statement No. 82 addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. The new standard is effective for periods beginning after June 15, 2016. The Airport elected early implementation in fiscal year 2016 and there was no significant impact to its financial statements.

**Governmental Accounting Standards Board (GASB) Statement No. 83**

In November 2016, the GASB issued Statement No. 83 – *Certain Asset Retirement Obligations*. GASB Statement No. 83 establishes accounting and financial reporting standards for certain asset retirement obligations (AROs). The new standard is effective for periods beginning after June 15, 2018. The Airport will implement the provisions of Statement No. 83 in fiscal year 2019.

**Governmental Accounting Standards Board (GASB) Statement No. 84**

In January 2017, the GASB issued Statement No. 84 – *Fiduciary Activities*. GASB Statement No. 84 establishes criteria for state and local governments to identify fiduciary activities and how those activities should be reported. The new standard is effective for periods beginning after December 15, 2018. The Airport will implement the provisions of Statement No. 84 in fiscal year 2020.

**Governmental Accounting Standards Board (GASB) Statement No. 85**

In March 2017, the GASB issued Statement No. 85 – *Omnibus 2017*. GASB Statement No. 85 addresses practice issues identified during the implementation and application of certain GASB Statements. The new standard is effective for periods beginning after June 15, 2017. The Airport will implement the provisions of Statement No. 85 in fiscal year 2018.

**Governmental Accounting Standards Board (GASB) Statement No. 86**

In May 2017, the GASB issued Statement No. 86 – *Certain Debt Extinguishment Issues*. GASB Statement No. 86 improves accounting and financial reporting for in-substance defeasance of debt using existing resources other than proceeds of refunding debt. The new standard is effective for periods beginning after June 15, 2017. The Airport will implement the provisions of Statement No. 86 in fiscal year 2018.

**Governmental Accounting Standards Board (GASB) Statement No. 87**

In June 2017, the GASB issued Statement No. 87 – *Leases*. GASB Statement No. 87 establishes a single model for lease accounting and requires reporting of certain lease liabilities that currently are not reported. The new standard is effective for periods beginning after December 15, 2019. The Airport will implement the provisions of Statement No. 87 in fiscal year 2021.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**(c) Cash, Cash Equivalents, and Investments**

The Airport maintains its cash, cash equivalents, investments, and a significant portion of its restricted cash and investments as part of the City’s pool of cash and investments. The Airport’s portion of this pool is displayed on the statements of net position as “Cash and investments held in City Treasury.” Income earned or losses arising from pooled investments are allocated on a monthly basis to appropriate funds and entities based on their average daily cash balances.

The City reports certain investments at fair value in the statements of net position and recognizes the corresponding change in fair value of investments in the year in which the change occurred.

The Airport considers its pooled deposits held with the City Treasurer to be demand deposits and therefore cash for financial reporting. The City considers highly liquid investments with original maturities of three months or less to be cash equivalents. Restricted cash and investments held by the bond trustees that meet these criteria are considered to be cash and cash equivalents.

The debt service fund, the debt service reserve fund, the costs of issuance fund, the debt service holding fund, and the variable rate demand bond fee account for the Airport’s revenue bonds are held and invested at the Airport’s direction by an independent bond trustee.

**(d) Capital Assets**

Capital assets are stated at historical cost, or if donated, at fair value at the date of donation. The capitalization threshold for real property is \$100,000 and \$5,000 for personal property with a useful life greater than one year.

Depreciation and amortization are computed using the straight-line method over the following estimated useful lives:

	<b>Years</b>
Buildings, structures, and improvements	5–50
Equipment	5–20
Intangible assets	3–20

Maintenance, repairs, and minor replacements are charged against operations in the year performed. Major replacements that extend the useful life of the related assets are capitalized. No depreciation is provided on construction in progress until construction is substantially complete and the asset is placed in service. The Airport begins depreciation on capital assets the month following the date in which assets are placed in service. Additionally, the Airport commenced allocating indirect costs on self-constructed assets starting fiscal year 2007. The indirect cost rate applied is based on a cost allocation plan developed in accordance with the terms of 2 CFR Part 200 *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (the Uniform Guidance)*, as applicable. See note 5.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**(e) Capitalized Interest**

Interest cost of debt issued for acquiring a capital asset is capitalized as part of the historical cost of the asset. Interest costs of tax-exempt bond funds used for specified construction purposes, net of interest earned on the temporary investment of the proceeds of such tax-exempt borrowings, are capitalized from the date of borrowings until the asset is ready for its intended use. Interest costs of other borrowings are capitalized based on average accumulated construction expenditures.

**(f) Derivative Instruments**

The Airport has entered into certain derivative instrument agreements, which it values at fair value, in accordance with GASB Statement No. 53 – *Accounting and Financial Reporting for Derivative Instruments* and GASB Statement No. 72 – *Fair Value Measurement and Application*. The Airport applies hedge accounting for changes in the fair value of hedging derivative instruments, in accordance with GASB Statement No. 64 – *Derivative Instruments: Application of Hedge Accounting Termination Provisions*, an amendment of GASB Statement No. 53. Under hedge accounting, if the derivatives are determined to be effective hedges, the changes in the fair value of hedging derivative instruments are reported as either deferred inflows or deferred outflows in the statements of net position, otherwise changes in fair values are recorded within the investment revenue classification.

**(g) Bond Issuance Costs, Discounts, and Premiums**

Bond issuance costs related to prepaid insurance costs are capitalized and amortized using the effective interest method. Other bond issuance costs are expensed when incurred. Original issue bond discount or premium are offset against the related debt and are also amortized using the effective interest method. Deferred outflows/inflows of resources from refunding of debt are recognized as a component of interest expense using the effective interest method over the remaining life of the old debt or the life of the new debt, whichever is shorter.

**(h) Compensated Absences**

Vested vacation, sick leave, and related benefits are accrued when incurred for all Airport employees.

**(i) Net Position**

Net position consists of the following:

*Net Investment in Capital Assets* – consists of capital assets, including restricted capital assets, reduced by accumulated depreciation and by any outstanding debt incurred to acquire, construct, or improve those assets (including any unamortized original issue discounts or premiums related to the debt). Deferred outflows of resources that are attributable to the acquisition, construction, or improvement of those assets or related debt (such as deferred losses on advance refundings) are also included in this component of net position.

*Restricted for Debt Service and Capital Projects* – consists of restricted assets and deferred outflows of resources reduced by liabilities related to those assets and deferred outflows of resources. Restricted assets are those assets with restrictions on their use that are externally imposed (by creditors, grantors, contributors, or the laws or regulations of other governments).

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

*Unrestricted Net Position* – consists of the net amount of the assets, deferred outflows of resources, and liabilities, of the Airport that are not restricted for any project or other purpose.

A significant portion of the Airport's net position is restricted by master bond resolutions and the Lease and Use Agreement with the airlines for the purpose of capital improvements and contingencies.

**(j) Aviation Revenue and Unearned Aviation Revenue**

Aviation revenue is based on reimbursable expenditures as defined in the Lease and Use Agreement with the airlines. Under the Lease and Use Agreement, the airlines are required to pay terminal rents and landing fees in amounts that, when aggregated with certain other Airport revenues, will be equal to the Airport's expenditures for: operating expenses other than depreciation and amortization; principal and interest on outstanding debt; annual service payments to the City; and certain acquisitions of capital assets. Other capital asset additions are funded with proceeds of revenue bonds for which the airlines are required to fund debt service. During fiscal year 2010, the Airport reached an agreement with the airlines on a new 10-year Lease and Use Agreement that became effective on July 1, 2011. Airlines that are not signatories to one of these long-term agreements operate under month-to-month permits.

Amounts billed to airlines are based on budgeted revenues and expenditures, including debt service, pension charges and proportionate payments to such compensation and other insurance or outside reserve funds as the Commission may establish or the Board of Supervisors may require with respect to employees of the Commission. Noncash accrued pension obligations other than those actually paid or budgeted to be paid during the fiscal year are excluded. Aviation revenue collected in advance will be applied to reduce future billings and is recorded as a liability in the financial statements. Aviation revenue due will be reduced by increases in future billings and is recorded as an asset in the financial statements. Pursuant to the terms of the Lease and Use Agreement, the Airport has aviation revenue collected in advance from the airlines of approximately \$54.9 million and \$67.6 million as of June 30, 2017 and 2016, respectively.

**(k) Concession Revenues**

Concession revenues consist of rentals and fees derived from food and beverage concessions, duty free, retail merchandise and rental car concessions. Revenues are based on terms of lease agreements entered between the Airport and concessionaires, and are the greater of a percentage of tenant's gross revenues or a minimum annual guarantee (MAG) amount.

**(l) Parking and Transportation Revenues**

Parking and transportation revenues consist of fees derived from parking facilities and ground transportation operations. Parking revenues are parking fees collected from all public parking facilities at the Airport. Transportation revenues are ground transportation trip fees assessed to commercial vehicles that service the Airport.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**(m) Net Sales and Services Revenues**

Net sales and services revenues are collected for utility, security, and miscellaneous services provided to the tenants. Utility services are provided by the City. See note 11.

**(n) Environmental Remediation Expenses and Recoveries**

The Airport incurs costs associated with environmental remediation activities, which arise during the normal course of business. These costs are recorded as a liability when the Airport is required to perform the remediation and if the costs can be reasonably estimated. The Airport records environmental remediation cost recoveries as nonoperating revenues in the financial statements.

**(o) Capital Contributions**

The Airport receives federal grants for the purpose of acquisition or construction of property and equipment. These grants are recorded as capital contributions when earned generally upon expenditures of the funds.

**(p) Use of Estimates**

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

**(q) Reclassification**

Certain amounts have been reclassified to conform to the current year presentation.

**(3) Cash, Cash Equivalents, and Investments**

**(a) Pooled Cash and Investments**

The Airport maintains operating cash, cash equivalents, investments, and certain restricted cash and investments as part of the City's pool of cash and investments. The City's investment pool is an unrated pool pursuant to investment policy guidelines established by the City Treasurer and is treated as a cash equivalent for financial reporting purposes as the Airport is able to withdraw amounts from the pool on demand without notice or penalty. The objectives of the policy are, in order of priority, preservation of capital, liquidity, and yield. The policy addresses soundness of financial institutions in which the City will deposit funds, types of investment instruments as permitted by the California Government Code and the City Treasurer policy, and the percentage of the portfolio that may be invested in certain instruments with longer terms to maturity. The Airport's unspent bond and commercial paper note proceeds are also generally invested as part of the City's investment pool.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

The Airport's cash and investments, at fair value, held in the City's pool as of June 30, 2017 and 2016 are as follows (in thousands):

	<u>2017</u>	<u>2016</u>
Pooled cash and investments:		
Cash and investments held in City Treasury – unrestricted	\$ 375,593	410,358
Cash and investments held in City Treasury – restricted current	273,106	197,348
Cash and investments held in City Treasury – restricted noncurrent	<u>315,746</u>	<u>259,134</u>
Total cash and investments in City Treasury	<u>\$ 964,445</u>	<u>866,840</u>

The following table shows the percentage distribution of the City's pooled investments by maturity:

<u>Investment maturities (in months)</u>			
<u>Under 1</u>	<u>1 – less than 6</u>	<u>6 – less than 12</u>	<u>12 – 60</u>
20.1 %	21.2 %	18.0 %	40.7 %

**(b) Cash and Investments with Fiscal Agent**

The restricted assets for revenue bond reserves, debt service and costs of issuance are held by an independent bond trustee for the Airport's senior lien bonds (the Senior Trustee) and a separate independent bond trustee for the Airport's subordinate lien bonds (the Subordinate Trustee, and collectively with the Senior Trustee, the Trustees). The unrestricted assets in the debt service holding fund and the variable rate demand bond fee account are not pledged to the payment of the Airport Commission's bonds, but are held by the Senior Trustee for the convenience of the Airport Commission in the administration and investment of monies delivered to the Senior Trustee prior to the time the Airport Commission is required to make deposits into the Debt Service Fund or pay the fees of the remarketing agents for the Airport Commission's variable rate bonds, respectively.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

As of June 30, 2017 and 2016, the Senior Trustee held investments for the benefit of the Airport with maturities as follows (in thousands):

Investments	Credit ratings June 30, 2017 (S&P/Moody's / Fitch)	June 30, 2017		June 30, 2016	
		Maturities	Fair value	Maturities	Fair value
Federal Home Loan Bank Notes	AA+/Aaa/na	—	\$ —	May 30, 2017	\$ 7,609
Federal Home Loan Bank Notes	AA+/Aaa/NR	October 1, 2018	22,116	—	—
Federal Home Loan Bank Notes	AA+/Aaa/NR	March 18, 2019	12,145	—	—
Federal Home Loan Bank Notes	AA+/Aaa/na	May 28, 2019	5,045	—	—
Federal Home Loan Bank Notes	AA+/Aaa/NR	June 21, 2019	10,441	—	—
Federal Home Loan Bank Notes	AA+/Aaa/NR	August 5, 2019	10,737	—	—
Federal Home Loan Bank Notes	AA+/Aaa/NR	September 26, 2019	9,107	—	—
Federal Home Loan Bank Notes	AA+/Aaa/NR	November 15, 2019	8,514	—	—
Federal National Mortgage Association Notes	AA+/Aaa/AAA	October 26, 2017	12,091	September 27, 2017	13,903
Federal National Mortgage Association Notes	AA+/Aaa/AAA	October 19, 2018	14,604	October 26, 2017	62,617
Federal National Mortgage Association Notes	AA+/Aaa/AAA	February 26, 2019	10,529	October 19, 2018	14,785
Federal National Mortgage Association Notes	AA+/Aaa/AAA	August 28, 2019	17,730	February 26, 2019	10,652
Federal National Mortgage Association Notes	AA+/Aaa/AAA	January 21, 2020	9,906	January 21, 2020	10,113
Federal National Mortgage Association Notes	AA+/Aaa/AAA	February 28, 2020	9,181	June 22, 2020	6,447
Federal National Mortgage Association Notes	AA+/Aaa/AAA	May 6, 2021	11,921	May 6, 2021	12,181
Federal National Mortgage Association Notes	AA+/Aaa/AAA	April 5, 2022	6,400	—	—
U.S. Treasury Notes	AA+/Aaa/AAA	July 31, 2017	1,970	August 31, 2016	165
U.S. Treasury Notes	AA+/Aaa/AAA	August 31, 2017	1,974	October 31, 2016	62,024
U.S. Treasury Notes	AA+/Aaa/AAA	September 30, 2017	1,973	January 31, 2016	100
U.S. Treasury Notes	AA+/Aaa/AAA	October 31, 2017	72,293	May 31, 2017	15,659
U.S. Treasury Notes	AA+/Aaa/AAA	November 30, 2017	1,866	November 30, 2018	16,127
U.S. Treasury Notes	AA+/Aaa/AAA	December 31, 2017	1,859	February 28, 2019	3,497
U.S. Treasury Notes	AA+/Aaa/AAA	January 31, 2018	1,867	April 30, 2019	14,353
U.S. Treasury Notes	AA+/Aaa/AAA	February 28, 2018	1,864	August 31, 2019	29,223
U.S. Treasury Notes	AA+/Aaa/AAA	March 31, 2018	1,865	September 30, 2019	34,042
U.S. Treasury Notes	AA+/Aaa/AAA	April 30, 2018	1,860	November 30, 2019	7,458
U.S. Treasury Notes	AA+/Aaa/AAA	May 31, 2018	1,865	February 29, 2020	18,644
U.S. Treasury Notes	AA+/Aaa/AAA	June 30, 2018	1,571	July 31, 2020	33,464
U.S. Treasury Notes	AA+/Aaa/AAA	July 31, 2018	1,576	November 30, 2020	13,621
U.S. Treasury Notes	AA+/Aaa/AAA	August 31, 2018	1,574	February 28, 2021	20,598
U.S. Treasury Notes	AA+/Aaa/AAA	September 30, 2018	1,574	—	—
U.S. Treasury Notes	AA+/Aaa/AAA	October 31, 2018	1,583	—	—
U.S. Treasury Notes	AA+/Aaa/AAA	November 30, 2018	1,580	—	—
U.S. Treasury Notes	AA+/Aaa/AAA	December 31, 2018	1,568	—	—

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

Investments	Credit ratings June 30, 2017 (S&P/Moody's / Fitch)	June 30, 2017		June 30, 2016	
		Maturities	Fair value	Maturities	Fair value
U.S. Treasury Notes	AA+/Aaa/AAA	January 31, 2019	\$ 1,558	—	—
U.S. Treasury Notes	AA+/Aaa/AAA	February 28, 2019	1,558	—	—
U.S. Treasury Notes	AA+/Aaa/AAA	March 31, 2019	1,517	—	—
U.S. Treasury Notes	AA+/Aaa/AAA	May 31, 2019	10,974	—	—
U.S. Treasury Notes	AA+/Aaa/AAA	September 30, 2019	32,485	—	—
U.S. Treasury Notes	AA+/Aaa/AAA	June 30, 2020	6,296	—	—
U.S. Treasury Notes	AA+/Aaa/AAA	July 31, 2020	32,462	—	—
U.S. Treasury Notes	AA+/Aaa/AAA	November 30, 2020	13,188	—	—
U.S. Treasury Notes	AA+/Aaa/AAA	February 28, 2021	10,182	—	—
U.S. Treasury Notes	AA+/Aaa/AAA	March 31, 2021	12,594	—	—
U.S. Treasury Notes	AA+/Aaa/AAA	April 30, 2021	14,512	—	—
U.S. Treasury Notes	AA+/Aaa/AAA	July 31, 2021	5,640	—	—
U.S. Treasury Notes	AA+/Aaa/AAA	August 31, 2021	35,358	—	—
U.S. Treasury Notes	AA+/Aaa/AAA	October 31, 2021	14,359	—	—
Federal Home Loan Mortgage Corp Notes	AA+/Aaa/AAA	January 12, 2018	12,970	February 22, 2017	11,026
Federal Home Loan Mortgage Corp Notes	AA+/Aaa/AAA	July 19, 2019	9,248	January 12, 2018	13,022
Federal Home Loan Mortgage Corp Notes	AA+/Aaa/AAA	April 20, 2020	9,175	May 30, 2019	11,251
Federal Home Loan Mortgage Corp Notes	AA+/Aaa/AAA	August 12, 2021	18,316	—	—
Goldman Sachs Financial Square Treasury Obligations Fund	AAAm/Aaa/NR	—	6,822	—	6,920
Cash			35,803		1,548
Total			\$ 557,766		\$ 451,049

**Fair Value Hierarchy**

The City categorizes its fair value measurements within the fair value hierarchy established by GAAP. The hierarchy is based on the valuation inputs used to measure fair value of the assets. The inputs and techniques used for valuing securities are not necessarily an indication of risk associated with investing in those securities.

- Level 1 Inputs: Unadjusted quoted prices in active markets for identical assets or liabilities accessible to the reporting entity at the measurement date.
- Level 2 Inputs: Other than quoted prices included in Level 1 inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the asset or liability.
- Level 3 Inputs: Unobservable inputs for the asset or liability used to measure fair value to the extent that observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at measurement date.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

The following is a summary of the fair value hierarchy of the Airport's cash and investments with fiscal agent as of June 30, 2017 and June 30, 2016.

	Fiscal year 2017				
	Fair value June 30, 2017	Investments exempt from fair value	Fair value measurement using		
Quoted prices in active markets for identical assets (Level 1)			Significant other observable inputs (Level 2)	Unobservable inputs (Level 3)	
Investments outside City Treasury:					
U.S. Treasury securities	\$ 294,965	—	294,965	—	—
U.S. agencies	220,176	—	—	220,176	—
Cash and cash equivalents	35,803	35,803	—	—	—
Investments exempt from fair value*	6,822	6,822	—	—	—
Total	<u>\$ 557,766</u>	<u>42,625</u>	<u>294,965</u>	<u>220,176</u>	<u>—</u>

\* Money market funds

	Fiscal year 2016				
	Fair value June 30, 2016	Investments exempt from fair value	Fair value measurement using		
Quoted prices in active markets for identical assets (Level 1)			Significant other observable inputs (Level 2)	Unobservable inputs (Level 3)	
Investments outside City Treasury:					
U.S. Treasury securities	\$ 268,975	—	268,975	—	—
U.S. agencies	173,606	—	—	173,606	—
Cash and cash equivalents	1,548	1,548	—	—	—
Investments exempt from fair value*	6,920	6,920	—	—	—
Total	<u>\$ 451,049</u>	<u>8,468</u>	<u>268,975</u>	<u>173,606</u>	<u>—</u>

\* Money market funds

Investments outside the City Treasury pool consists of U.S. Treasury securities, U.S. Government Agency securities, and Money Market Funds. U.S. Treasury securities are valued using quoted prices in active markets and classified in Level 1 of the fair value hierarchy. U.S. Government Agency securities are valued using mid pricing and classified in Level 2 of the fair value hierarchy. Investments exempt from fair value treatment consist of money market mutual funds with investment holdings having maturities of one year or less at the time of purchase.

The primary objectives of the Airport's policy on investment of debt service reserve funds and debt service funds (including principal and interest accounts) held by the Trustees are safety, liquidity, and yield.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

Safety is the foremost objective of the investment program. Investments undertaken seek to ensure the preservation of capital in the overall portfolio, the objective of which is to mitigate credit and interest rate risk.

The term of any investment is based on the cash flow needed to meet the Airport's debt service requirements. Consequently, investment of any debt service reserve funds is limited to seven years or less, and investments in any principal and interest payment accounts are to mature no later than the dates on which the principal or interest payments are due.

The Airport will maximize the retainable earnings of all bond proceeds after meeting the requirements of safety and liquidity. After these objectives are met, the Airport's investment policy will attempt to achieve net investment yield as close as practicable to each bond fund's arbitrage yield.

Funds held by the Senior Trustee in funds and accounts established under the Airport Commission's Resolution No. 91-0210 adopted on December 3, 1991, as amended and supplemented (the 1991 Master Bond Resolution), are invested in "Permitted Investments" as defined in the 1991 Master Bond Resolution.

Funds held by the Subordinate Trustee in funds and accounts established under the Airport Commission's Resolution No. 97-0146 adopted on May 20, 1997 as amended and supplemented (the 1997 Note Resolution) are invested in "Permitted Investments" as defined in the 1997 Note Resolution. Banker's Acceptances are permitted investments only for funds relating to the 1991 Master Bond Resolution. The Airport's policy on Banker's Acceptances of a banking institution requires the highest short-term rating category by at least two Rating Agencies, and Banker's Acceptances must not exceed 270 days maturity or forty percent (40%) of monies invested pursuant to the 1991 Master Bond Resolution. In addition, no more than twenty percent (20%) of monies invested pursuant to the 1991 Master Bond Resolution is to be invested in the Banker's Acceptances of any one commercial bank. The Airport had approximately \$557.8 million and \$451.0 million in investments held by, and in the name of, the Trustees as of June 30, 2017 and 2016, respectively.

All other funds of the Airport are invested in accordance with the (1) City Treasurer's policy and, if applicable, (2) the 1991 Master Bond Resolution or the 1997 Note Resolution, as appropriate.

**(4) Grants Receivable**

The Airport receives federal funding from the FAA, the TSA, and other federal agencies. Grants receivable of \$5.1 million and \$10.0 million as of June 30, 2017 and 2016, respectively, were based on actual costs incurred, subject to federal reimbursement limits.

In making decisions concerning the distribution of discretionary grants to an airport, the Secretary of Transportation may consider, as a militating factor, whether the Airport uses its revenues for purposes other than capital or operating costs, when those revenues exceed the amount used by the Airport for such costs in the base year ending June 30, 1995 as adjusted for inflation. The Airport Commission pays a portion of the Airport's revenues to the City's General Fund as an annual service payment, in part as compensation for all indirect services, management and facilities provided by the City to the Airport. The annual service payment is considered to be a noncapital, nonoperating cost for this purpose. For the past

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

ten fiscal years, the annual service payment has exceeded the inflation-adjusted base year payment when adjusted for inflation. The Airport Commission uses discretionary grants from the FAA to offset a portion of the costs of various capital projects at the Airport. In the federal fiscal year ended September 30, 2014, the FAA provided discretionary grants of \$38.6 million, \$11.9 million less than the Airport had requested, as a result of the amount of the annual service payment. In federal fiscal year ended September 30, 2015, the Airport did not apply for any discretionary grants. The Commission received \$12.4 million in FAA discretionary grants in the federal fiscal year ended September 30, 2016, \$15.3 million less than the Commission requested, as a result of the amount of the annual service payment. The Commission did not receive FAA discretionary grants in the federal fiscal year ending September 30, 2017. The FAA may further reduce discretionary grants in the future. The reduction in discretionary grants awarded to the Airport increases by a corresponding amount the capital expenditures that the Airport Commission needs to fund from other sources, including operating revenues, PFCs and bond proceeds.

Project costs are subject to audit by the funding agencies to ensure that the costs are allowable under the grant agreements. If any project costs are disallowed, amounts recorded as grants receivable will be reduced or refunded to the respective funding agencies.

In fiscal years 2009 and 2010, the Airport was awarded two grants under the American Recovery and Reinvestment Act of 2009 (ARRA) totaling \$14.5 million from the FAA in the DOT for runway improvements. The Office of Inspector General (OIG) for the DOT has audited ARRA grants for several airports nationwide, including these two grants received by the Airport.

The initial OIG audit of the DOT concluded in fiscal year 2012 that several Airport expenditures of the two FAA ARRA grants were questionable because of inadequate documentation, work outside the approved scope for otherwise eligible projects, and nonqualifying expenditures. These Airport expenditures were made on contracts with expenditures that were also reimbursed by two other FAA AIP grants. In fiscal year 2014 and fiscal year 2015, the Airport repaid approximately \$1.1 million of the two ARRA grant reimbursements and \$0.6 million of other AIP grant reimbursements. Following an internal review, the Airport identified an additional \$0.5 million of ineligible ARRA grant reimbursements and an additional \$0.4 million of ineligible other AIP grant reimbursements that were repaid to the FAA in December 2015. The Airport received closeout letters from the FAA for the FAA ARRA grants and the other AIP grants in January 2016.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**(5) Capital Assets**

Capital assets consist of the following (in thousands):

**Fiscal Year 2017**

	<u>July 1, 2016</u>	<u>Additions</u>	<u>Deletions</u>	<u>June 30, 2017</u>
Capital assets not being depreciated:				
Land	\$ 3,074	—	—	3,074
Intangible assets	6,881	—	—	6,881
Construction in progress	286,228	398,713	(145,672)	539,269
Total capital assets not being depreciated	<u>296,183</u>	<u>398,713</u>	<u>(145,672)</u>	<u>549,224</u>
Capital assets being depreciated/amortized:				
Buildings, structures, and improvements	6,109,994	219,192	(62,092)	6,267,094
Equipment	290,644	39,067	(11,079)	318,632
Intangible assets	144,982	8,855	(41,900)	111,937
Total capital assets being depreciated/amortized	<u>6,545,620</u>	<u>267,114</u>	<u>(115,071)</u>	<u>6,697,663</u>
Less accumulated depreciation/amortization:				
Buildings, structures, and improvements	(2,518,350)	(226,245)	48,235	(2,696,360)
Equipment	(148,411)	(33,089)	7,646	(173,854)
Intangible assets	(129,406)	(6,507)	41,869	(94,044)
Total accumulated depreciation/amortization	<u>(2,796,167)</u>	<u>(265,841)</u>	<u>97,750</u>	<u>(2,964,258)</u>
Total capital assets being depreciated/amortized, net	<u>3,749,453</u>	<u>1,273</u>	<u>(17,321)</u>	<u>3,733,405</u>
Total capital assets, net	<u>\$ 4,045,636</u>	<u>399,986</u>	<u>(162,993)</u>	<u>4,282,629</u>

Total interest costs were approximately \$219.2 million for fiscal year 2017 and \$216.3 million for fiscal year 2016, of which approximately \$8.8 million and \$7.7 million, respectively, were capitalized.

In fiscal year 2007, the Airport adopted a cost allocation plan to capture indirect costs as a component of a building or other capital asset to reflect the full and true cost of a capital asset. In accordance with the Uniform Guidance, the indirect costs capitalized for the years ended June 30, 2017 and 2016, were \$18.1 million and \$14.6 million, respectively.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**Fiscal Year 2016**

	<u>July 1, 2015</u>	<u>Additions</u>	<u>Deletions</u>	<u>June 30, 2016</u>
Capital assets not being depreciated:				
Land	\$ 3,074	—	—	3,074
Intangible assets	6,881	—	—	6,881
Construction in progress	359,799	244,488	(318,059)	286,228
Total capital assets not being depreciated	<u>369,754</u>	<u>244,488</u>	<u>(318,059)</u>	<u>296,183</u>
Capital assets being depreciated/amortized:				
Buildings, structures, and improvements	5,743,103	388,378	(21,487)	6,109,994
Equipment	272,083	29,647	(11,086)	290,644
Intangible assets	142,332	2,650	—	144,982
Total capital assets being depreciated/amortized	<u>6,157,518</u>	<u>420,675</u>	<u>(32,573)</u>	<u>6,545,620</u>
Less accumulated depreciation/amortization:				
Buildings, structures, and improvements	(2,339,995)	(190,618)	12,263	(2,518,350)
Equipment	(127,510)	(31,676)	10,775	(148,411)
Intangible assets	(123,341)	(6,065)	—	(129,406)
Total accumulated depreciation/amortization	<u>(2,590,846)</u>	<u>(228,359)</u>	<u>23,038</u>	<u>(2,796,167)</u>
Total capital assets being depreciated/amortized, net	<u>3,566,672</u>	<u>192,316</u>	<u>(9,535)</u>	<u>3,749,453</u>
Total capital assets, net	<u>\$ 3,936,426</u>	<u>436,804</u>	<u>(327,594)</u>	<u>4,045,636</u>

**(6) Subordinate Commercial Paper Notes**

On May 20, 1997, the Airport Commission adopted Resolution No. 97-0146, as amended and supplemented (the 1997 Note Resolution), authorizing the issuance of subordinate commercial paper (CP) notes in an aggregate principal amount not to exceed the lesser of \$400.0 million or the stated amount of the letter(s) of credit securing the CP. On November 1, 2016, the Airport Commission adopted Resolution No. 16-0275, which amended the 1997 Note Resolution to increase the authorized maximum aggregate principal amount by \$100.0 million, from \$400.0 million to \$500.0 million.

The Airport issues CP in series based on tax status that are divided into subseries according to the bank providing the applicable direct-pay letter of credit. In addition to the applicable letter of credit, the CP notes are further secured by a pledge of the Net Revenues of the Airport, subject to the prior payment of the Commission's San Francisco International Airport Second Series Revenue Bonds (the Senior Bonds) outstanding from time to time under Resolution No. 91-0210, adopted by the Commission on December 3, 1991, as amended and supplemented (the 1991 Master Bond Resolution).

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

Net Revenues are generally defined in the 1997 Note Resolution as all revenues earned by the Commission from or with respect to its construction, possession, management, supervision, maintenance, extension, operation, use and control of the Airport (not including certain amounts specified in the 1997 Note Resolution), less Operation and Maintenance Expenses (as defined in the 1997 Note Resolution). See note 8.

The CP notes are special, limited obligations of the Commission, and the payment of the principal of and interest on the CP notes is secured by a pledge of, lien on and security interest in the Net Revenues and amounts in the funds and accounts as provided in the 1997 Note Resolution, subject to the prior payment of principal of and interest on the Senior Bonds. The CP notes are secured on a parity with any other bonds or other obligations from time to time outstanding under the 1997 Note Resolution.

**Fiscal Year 2017**

During fiscal year 2017, the CP program was supported by two \$100.0 million principal amount direct-pay letters of credit issued by State Street Bank and Trust Company and Wells Fargo Bank, National Association, which, as of June 30, 2017, had expiration dates of May 2, 2019, and May 31, 2019, respectively; a third letter of credit issued by Royal Bank of Canada in the principal amount of \$200.0 million that was amended on May 4, 2017, to extend its expiration date from May 19, 2017 to May 1, 2020; and a new letter of credit issued on June 22, 2017, by Sumitomo Mitsui Banking Corporation, acting through its New York Branch, in the principal amount of \$100.0 million and with an expiration date of June 21, 2022. Each of the letters of credit supports separate subseries of CP. In the aggregate the letters of credit permit the Airport to issue CP up to a combined maximum principal amount of \$500.0 million as of June 30, 2017.

As of June 30, 2017, there were no obligations other than the CP notes outstanding under the 1997 Note Resolution.

During fiscal year 2017, the Airport issued new money CP in the amount of \$67.0 million (AMT) and \$111.0 million (Non-AMT) to fund capital improvement projects. The Airport also issued and retired \$1.0 million of new money CP (taxable) during fiscal year 2017, to fund costs related to various bond and note transactions.

The following table summarizes the activity of CP (excluding refunding CP) during the fiscal year ended June 30, 2017 (in thousands):

	<u>Interest rate</u>	<u>July 1, 2016</u>	<u>Increases</u>	<u>Decreases</u>	<u>June 30, 2017</u>
Commercial paper (Taxable)	0.90 %	\$ —	1,000	(1,000)	—
Commercial paper (AMT)	0.36%–1.01%	320,350	67,000	(320,350)	67,000
Commercial paper (Non-AMT)	0.46%–0.99%	22,700	111,000	(22,700)	111,000
Total		<u>\$ 343,050</u>	<u>179,000</u>	<u>(344,050)</u>	<u>178,000</u>

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**Fiscal Year 2016**

During fiscal year 2016, the CP program was supported by two \$100.0 million principal amount direct-pay letters of credit issued by State Street Bank and Trust Company and Wells Fargo Bank, National Association, which, as of June 30, 2016, had expiration dates of May 2, 2019, and May 31, 2019, respectively, and a third letter of credit issued by Royal Bank of Canada in the principal amount of \$200.0 million that, as of June 30, 2016, had an expiration date of May 19, 2017. Each of the letters of credit supports separate subseries of CP and permits the Airport to issue CP up to a combined maximum principal amount of \$400.0 million as of June 30, 2016.

As of June 30, 2016, there were no obligations other than the CP notes outstanding under the 1997 Note Resolution.

During fiscal year 2016, the Airport issued \$280.4 million of new money CP (AMT) and \$22.7 million (Non-AMT) to fund capital improvement projects. The Airport also issued and retired \$1.1 million of new money CP (taxable) during fiscal year 2016, to fund costs related to various bond and note transactions.

The following table summarizes the activity of CP (excluding refunding CP) during the fiscal year ended June 30, 2016 (in thousands):

	<u>Interest rate</u>	<u>July 1, 2015</u>	<u>Increases</u>	<u>Decreases</u>	<u>June 30, 2016</u>
Commercial paper (Taxable)	0.55 %	\$ —	1,050	(1,050)	—
Commercial paper (AMT)	0.02%–0.58%	40,000	280,350	—	320,350
Commercial paper (Non-AMT)	0.05%–0.52%	—	22,700	—	22,700
Total		<u>\$ 40,000</u>	<u>304,100</u>	<u>(1,050)</u>	<u>343,050</u>

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**(7) Long-Term Obligations**

Long-term obligation activity for the years ended June 30, 2017 and 2016, was as follows (in thousands):

	<u>July 1, 2016</u>	<u>Additions</u>	<u>Reductions</u>	<u>June 30, 2017</u>	<u>Due within one year</u>
Revenue bonds payable	\$ 4,234,725	887,920	(365,115)	4,757,530	203,580
Less unamortized discounts	(271)	—	9	(262)	—
Add unamortized premiums	195,222	168,368	(35,198)	328,392	—
Total revenue bonds payable	4,429,676	1,056,288	(400,304)	5,085,660	203,580
Compensated absences	17,039	13,525	(13,547)	17,017	9,845
Accrued workers' compensation	6,657	3,095	(2,416)	7,336	1,520
Estimated claims payable	1,477	174	(796)	855	777
Other postemployment benefits obligation	124,352	13,816	—	138,168	—
Net pension liability (see note 10a)	144,271	215,328	—	359,599	—
Derivative instruments	96,132	—	(30,167)	65,965	—
Total	<u>\$ 4,819,604</u>	<u>1,302,226</u>	<u>(447,230)</u>	<u>5,674,600</u>	<u>215,722</u>

	<u>July 1, 2015</u>	<u>Additions</u>	<u>Reductions</u>	<u>June 30, 2016</u>	<u>Due within one year</u>
Revenue bonds payable	\$ 4,496,390	232,075	(493,740)	4,234,725	194,125
Less unamortized discounts	(279)	—	8	(271)	—
Add unamortized premiums	168,784	51,219	(24,781)	195,222	—
Total revenue bonds payable	4,664,895	283,294	(518,513)	4,429,676	194,125
Compensated absences	16,293	13,493	(12,747)	17,039	9,714
Accrued workers' compensation	6,081	2,654	(2,078)	6,657	1,413
Estimated claims payable	3,772	108	(2,403)	1,477	1,346
Other postemployment benefits obligation	115,297	9,055	—	124,352	—
Net pension liability (see note 10a)	111,932	32,339	—	144,271	—
Derivative instruments	79,321	16,811	—	96,132	—
Total	<u>\$ 4,997,591</u>	<u>357,754</u>	<u>(535,741)</u>	<u>4,819,604</u>	<u>206,598</u>

**Bond Transactions and Balances**

On December 3, 1991, the Commission adopted Resolution No. 91-0210, as amended and supplemented (the 1991 Master Bond Resolution), authorizing the issuance from time to time of San Francisco International Airport Second Series Revenue Bonds to finance capital projects at the Airport. The maximum principal amount of such bonds is not limited by the 1991 Master Bond Resolution, but the Commission

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

must satisfy an additional bonds test prior to the issuance of any such bonds. The 1991 Master Bond Resolution constitutes a contract between the Commission and the registered owners of the bonds under which the Commission has irrevocably pledged the Net Revenues of the Airport to the payment of the principal of and interest on the bonds.

Net Revenues are generally defined in the 1991 Master Bond Resolution as all revenues earned by the Commission from or with respect to its construction, possession, management, supervision, maintenance, extension, operation, use and control of the Airport (not including certain amounts specified in the 1991 Master Bond Resolution), less Operation and Maintenance Expenses (as defined in the 1991 Master Bond Resolution). See note 8.

The bonds are special, limited obligations of the Commission, and the payment of the principal of and interest on the bonds is secured by a pledge of, lien on and security interest in the Net Revenues and amounts in the funds and accounts provided in the 1991 Master Bond Resolution. The payment of the principal of and interest on all previously issued bonds under the 1991 Master Bond Resolution is secured by a pledge of, lien on and security interest in Net Revenues on a parity with the pledge, lien and security interest securing any additional bonds issued thereunder.

As of June 30, 2017 and 2016, long-term revenue bonds consisted of the following (in thousands):

Description	Date of issue	Interest rate	2017	2016
Second Series Revenue Bonds:				
Issue 31F	01/26/05	4.91 %	\$ —	6,385
Issue 32F	11/16/06	5.25 %	103,475	134,200
Issue 34C/D/E/F*	03/27/08	5.00%–5.75%	157,800	199,825
Issue 36A	06/03/09	Variable rate	93,130	100,000
Issue 36B	06/03/09	Variable rate	37,820	40,620
Issue 36C	06/03/09	Variable rate	33,655	36,145
Issue 37C	06/03/09	Variable rate	86,930	88,650
Issue 2009A/B	09/03/09	4.90 %	175,000	175,000
Issue 2009C	11/03/09	3.88%–5.00%	40,925	51,295
Issue 2009D	11/04/09	2.50%–4.00%	81,870	83,490
Issue 2009E	11/18/09	4.38%–6.00%	485,800	485,800
Issue 2010A	02/10/10	Variable rate	209,240	212,475
Issue 2010C	04/07/10	3.00%–5.00%	171,545	251,615
Issue 2010D	04/07/10	3.00%–5.00%	55,550	65,390
Issue 2010F	08/05/10	5.00 %	121,360	121,360
Issue 2010G	08/05/10	5.00 %	7,100	7,100
Issue 2011A	02/22/11	5.00%–5.75%	23,915	37,130
Issue 2011B	02/22/11	5.00%–5.50%	24,100	29,295
Issue 2011C	07/21/11	5.00 %	163,720	163,720
Issue 2011D	07/21/11	5.00 %	84,865	124,110
Issue 2011E	07/21/11	3.43%–4.48%	12,760	19,720

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

Description	Date of issue	Interest rate	2017	2016
Issue 2011F	09/20/11	5.00 %	\$ 123,325	123,325
Issue 2011G	09/20/11	5.00%–5.25%	29,660	106,195
Issue 2011H	09/20/11	2.74%–4.15%	66,195	88,780
Issue 2012A	03/22/12	5.00 %	208,025	208,025
Issue 2012B	03/22/12	4.00%–5.00%	108,265	108,265
Issue 2013A	07/31/13	5.00%–5.50%	360,785	360,785
Issue 2013B	07/31/13	5.00 %	87,860	87,860
Issue 2013C	07/31/13	2.12%–2.86%	9,350	12,480
Issue 2014A	09/24/14	5.00 %	376,320	376,320
Issue 2014B	09/24/14	5.00 %	97,290	97,290
Issue 2016A	02/25/16	3.00%–5.00%	232,075	232,075
Issue 2016B	09/29/16	5.00 %	574,970	—
Issue 2016C	09/29/16	5.00 %	165,155	—
Issue 2016D	09/29/16	5.00 %	147,695	—
			<u>4,757,530</u>	<u>4,234,725</u>
Unamortized discount			(262)	(271)
Unamortized premium			<u>328,392</u>	<u>195,222</u>
Total revenue bonds payable			5,085,660	4,429,676
Less current portion			<u>(203,580)</u>	<u>(194,125)</u>
Total long-term revenue bonds payable			<u>\$ 4,882,080</u>	<u>4,235,551</u>

\* As of June 30, 2017, Issue 34C/F was no longer outstanding.

**Fiscal Year 2017**

**(a) Second Series Revenue Bonds (Capital Plan Bonds)**

Pursuant to resolutions approved in fiscal years 2008, 2012, 2014, 2016, and 2017, the Airport Commission has authorized the issuance of up to \$7.8 billion of San Francisco International Airport Second Series Revenue Bonds (Capital Plan Bonds) to finance and refinance the construction, acquisition, equipping, and development of capital projects undertaken by the Airport, including retiring all or a portion of the Airport's outstanding subordinate commercial paper notes issued for capital projects, funding debt service reserves, and for paying costs of issuance. As of June 30, 2017, \$5.5 billion of the authorized capital plan bonds remained unissued.

*On-Airport Hotel Second Series Revenue Bonds and Related Special Facility Bonds*

Pursuant to resolutions adopted in fiscal years 2016 and 2017, the Airport Commission has authorized the issuance of \$278.0 million of San Francisco International Airport Second Series Revenue Bonds (Capital Plan Bonds) and \$260.0 million of San Francisco International Airport Hotel Special Facility Revenue Bonds to finance the development and construction of a new Airport-owned hotel and related

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

AirTrain station. The Commission also designated the planned hotel as a “special facility” under the 1991 Master Bond Resolution, which will allow the hotel revenues to be segregated from the Airport’s other revenues and used to pay hotel operating expenses and debt service on the Hotel Special Facility Bonds. In order to obtain the lowest cost of financing, the Commission does not plan to sell the Hotel Special Facility Bonds to investors, but will purchase them itself with a portion of the proceeds of Capital Plan Bonds, which will be sold to investors. The total net proceeds of the two bond issuances are expected to be approximately \$278.0 million, which will be applied to the \$255.0 million construction costs of the hotel and AirTrain station, capitalized interest on the Hotel Special Facility Bonds and other costs of issuance. In fiscal years 2016 and 2017, the City’s Board of Supervisors authorized the issuance of such Hotel Special Facility Bonds and Capital Plan Bonds for the hotel and AirTrain station. Airport Commission approval of the bond sale is required before such bonds can be issued.

*Second Series Revenue Bonds, Series 2016B/C*

On September 29, 2016, the Airport issued its long-term, fixed rate Second Series Revenue Bonds (Capital Plan Bonds), Series 2016B (AMT) and 2016C (Non-AMT/Governmental Purpose) in the aggregate principal amount of \$740.1 million, to finance and refinance (through the repayment of commercial paper notes) the following projects, among others: (a) redevelopment of Terminal 1 including construction of an interim Boarding Area B and the design and construction of a new 24-gate Boarding Area B facility, (b) relocation of a firehouse and vehicle security checkpoint to accommodate the expansion of Boarding Area B and the related realignment of Taxiways H and M, (c) relocation of ground transportation facilities to accommodate the expansion of Boarding Area B, (d) construction of a new administration campus to consolidate some Airport administrative departments, (e) upgrades to operating systems-related components for the AirTrain extension, (f) gate enhancements to accommodate larger aircraft and address demand-driven gate needs, and (g) various technology improvements to upgrade network services.

**(b) Second Series Revenue Refunding Bonds**

Pursuant to resolutions adopted between fiscal years 2005 through 2016, the Airport Commission has authorized the issuance of up to \$8.4 billion of San Francisco International Airport Second Series Revenue Refunding Bonds for the purposes of refunding outstanding 1991 Master Bond Resolution Bonds and outstanding subordinate commercial paper notes, funding debt service reserves, and paying costs of issuance, including any related bond redemption premiums.

As of June 30, 2017, \$1.0 billion of such refunding bonds remained authorized but unissued.

During fiscal year 2017, the Airport issued the following new refunding bonds under the 1991 Master Bond Resolution:

*Second Series Revenue Refunding Bonds, Series 2016D*

On September 29, 2016, the Airport issued its Second Series Revenue Refunding Bonds, Series 2016D (Non-AMT/Governmental Purpose), in the principal amount of \$147.8 million to advance refund and legally defease long-term fixed rate Series 2010C, 2011D, and 2011G bonds. The Series 2016D Bonds bear interest at a fixed rate of 5.0%, and have a final maturity of May 1, 2031.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

The net proceeds of \$188.1 million (consisting of the \$147.8 million par amount of the Series 2016D Bonds, original issue premium of \$37.0 million, and \$3.3 million accumulated in the debt service fund relating to the refunded bonds) were used to pay \$0.3 million underwriter's discount and \$0.2 million in costs of issuance and deposit \$187.6 million into irrevocable escrow funds with the Senior Trustee to defease and refund \$158.0 million in revenue bonds as described below.

	<u>Amount refunded</u>	<u>Interest rate</u>	<u>Redemption price</u>
Second Series Revenue Bond Issue:			
2010C (Non-AMT)	\$ 42,210,000	4.00%–5.00%	100 %
2011D (Non-AMT)	39,245,000	5.00 %	100 %
2011G (Non-AMT)	<u>76,535,000</u>	5.00%–5.25%	100 %
Total	<u>\$ 157,990,000</u>		

The refunded bonds were legally defeased and scheduled for redemption on May 1, 2020 (Series 2010C) and May 3, 2021 (Series 2011D and Series 2011G). Accordingly, the liability for these bonds has been removed from the accompanying statements of net assets.

The refunding resulted in the recognition of a deferred accounting gain of \$0.2 million for fiscal year ended June 30, 2017. The Airport reduced its aggregate debt service payments by approximately \$15.0 million over the next fourteen years and obtained an economic gain (the difference between the present values of the old debt and the new debt) of \$13.5 million.

**(c) Variable Rate Demand Bonds**

As of June 30, 2017, the Airport Commission had outstanding an aggregate principal amount of \$460.8 million of Second Series Variable Rate Revenue Refunding Bonds, consisting of Issue 36A/B/C, Issue 37C, and Series 2010A (collectively, the "Variable Rate Bonds"), with final maturity dates of May 1, 2026 (Issue 36A/B/C), May 1, 2029 (Issue 37C), and May 1, 2030 (Series 2010A). The Variable Rate Bonds are long-term, tax-exempt bonds that currently bear interest at a rate that is adjusted weekly, and that are subject to tender at par at the option of the holder thereof on seven days' notice. Any tendered Variable Rate Bonds are remarketed by the applicable remarketing agent in the secondary market to other investors. The interest rate on the Variable Rate Bonds can be converted to other interest rate modes, including a term rate or fixed rates to maturity, upon appropriate notice by the Airport.

The scheduled payment of the principal of and interest on, and payment of purchase price of, the Variable Rate Bonds is secured by separate irrevocable letters of credit issued to the Senior Trustee for the benefit of the applicable bondholders by the banks identified in the table below.

Amounts drawn under a letter of credit that are not reimbursed by the Airport constitute "Repayment Obligations" under the 1991 Master Bond Resolution and are accorded the status of other outstanding bonds to the extent provided in the Resolution. The commitment fees for the letters of credit range

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

between 0.45% and 0.63% per annum. As of June 30, 2017, there were no unreimbursed draws under these facilities.

The letters of credit securing the Variable Rate Bonds included in long-term debt as of June 30, 2017, are as follows:

	<u>Issue 36A</u>	<u>Issue 36B</u>	<u>Issue 36C</u>	<u>Issue 37C</u>	<u>Series 2010A</u>
Principal amount	\$ 93,130,000	37,820,000	33,655,000	86,930,000	209,240,000
Expiration date	June 29, 2018	April 25, 2018	April 25, 2018	January 28, 2019	June 29, 2020
Credit provider	Wells Fargo <sup>(1)</sup>	BTMJ <sup>(2)</sup>	BTMJ <sup>(2)</sup>	MUFG Union Bank <sup>(3)</sup>	Bank of America <sup>(4)</sup>

(1) Wells Fargo Bank, National Association

(2) The Bank of Tokyo-Mitsubishi UFJ, Ltd.

(3) Formerly Union Bank, N.A.

(4) Bank of America, National Association

**(d) Interest Rate Swaps**

Objective and Terms – On December 16, 2004, the Airport entered into seven forward starting interest rate swaps (the 2004 swaps) with an aggregate notional amount of \$405.0 million, in connection with the anticipated issuance of Second Series Variable Rate Revenue Refunding Bonds, Issues 32A-E on February 10, 2005, and Second Series Variable Rate Revenue Refunding Bonds, Issue 33 on February 15, 2006. The swap structure was intended as a means to increase the Airport's debt service savings when compared with fixed rate refunding bonds at the time of issuance. The expiration date of the 2004 swaps is May 1, 2026.

On July 26, 2007, the Airport entered into four additional forward starting interest rate swaps in connection with the anticipated issuance of its Second Series Variable Rate Revenue Refunding Bonds, Issue 37B/C, on May 15, 2008 (the 2007 swaps), and Second Series Variable Rate Revenue Refunding Bonds, Series 2010A, on February 10, 2010 (the 2010 swaps). The expiration dates of the 2007 and 2010 swaps are May 1, 2029 and 2030, respectively.

In the spring of 2008, the Airport refunded several issues of auction rate and variable rate bonds, including Issue 32 and Issue 33. The 2004 swaps associated with these issues then became associated with the Second Series Variable Rate Revenue Refunding Bonds, Issues 36A-D, and Issue 37A. Subsequently, on October 30, 2008 and December 3, 2008, the Airport refunded Issue 37A and Issue 37B, respectively. Concurrently with the refunding of Issue 37A, the three associated swaps with an aggregate notional amount of \$205.1 million were terminated. The swap associated with Issue 37B was not terminated upon the refunding of Issue 37B.

On December 16, 2010, the Airport terminated a swap with Depfa Bank plc associated with the Series 2010A-3 Bonds, with a notional amount of \$72.0 million.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

Following the termination of the Depfa swap, the Series 2010A-3 Bonds, which are variable rate, were no longer hedged with an interest rate swap. However, the swap associated with the Issue 37B Bonds is now indirectly hedging the Series 2010A-3 Bonds for accounting purposes. As a practical matter, the swap associated with the Issue 37B Bonds also serves as an indirect hedge on the unhedged portions of the Issue 36B and Issue 36C Bonds, when viewed alongside the Airport's other swaps, and only to the extent that the swap's notional amount exceeds the outstanding amount of the Series 2010A-3 Bonds.

On September 20, 2011, the Airport refunded the Issue 36D Bonds with proceeds of the San Francisco International Airport Second Series Revenue Refunding Bonds, Series 2011H and terminated the swap with JP Morgan Chase Bank, N.A., associated with Issue 36D, which had an initial notional amount of \$30.0 million. The Airport paid a termination fee of \$4.6 million to the counterparty.

Under the 2004 swaps, the Airport receives a monthly variable rate payment from each counterparty equal to 63.50% of USD-LIBOR-BBA plus 0.29%. Under the 2007 and 2010 swaps, the Airport receives 61.85% of USD-LIBOR-BBA plus 0.34%. These payments are intended to approximate the variable interest rates on the bonds originally hedged by the swaps. The Airport makes a monthly fixed rate payment to the counterparties as set forth below which commenced on the date of issuance of the related bonds. The objective of the swaps is to achieve a synthetic fixed rate with respect to the hedged bonds. All of the outstanding interest rate swaps are terminable at any time upon making a market-based termination payment solely at the option of the Airport.

As of June 30, 2017, the Airport's derivative instruments comprised of six interest rate swaps that the Airport entered into to hedge the interest payments on several series of its variable rate Second Series Revenue Bonds. The Airport determined the hedging relationship between the variable rate bonds and the related interest rate swaps continued to be effective as of June 30, 2017.

<u>No.</u>	<u>Current bonds</u>	<u>Initial notional amount</u>	<u>Notional amount June 30, 2017</u>	<u>Effective date</u>
1	36AB	\$ 70,000,000	65,170,000	2/10/2005
2	36AB	69,930,000	65,135,000	2/10/2005
3	36C	30,000,000	27,930,000	2/10/2005
4	2010A (37B)*	79,684,000	77,061,000	5/15/2008
5	37C	89,856,000	86,899,000	5/15/2008
6	2010A**	143,947,000	140,230,000	2/1/2010
	Total	\$ <u>483,417,000</u>	<u>462,425,000</u>	

\* The Issue 37B Bonds that are hedged by this swap agreement were purchased with proceeds of the Series 2008B Notes, which the Commission subsequently refunded, and the Issue 37B Bonds are held in trust. The swap is now indirectly hedging the Series 2010A-3 Bonds for accounting purposes.

\*\* Hedges Series 2010A-1 and 2010A-2.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

*Fair Value*

The fair values take into consideration the prevailing interest rate environment and the specific terms and conditions of each swap. All values were estimated using the zero-coupon discounting method. This method calculates the future payments required by the swap, assuming that the current forward rates implied by the yield curve are the market's best estimate of future spot interest rates. These payments are then discounted using the spot rates implied by the current yield curve for a hypothetical zero-coupon rate bond due on the date of each future net settlement payment on the swaps to arrive at the so-called "settlement amount", i.e., the approximate amount a party would have to pay or would receive if the swap was terminated.

In addition, pursuant to GASB 72, the settlement amounts are then adjusted for the nonperformance risk of each party to the swap to arrive at the fair value. For each swap, the nonperformance risk was computed as the total cost of the transactions required to hedge the default exposure, i.e., a series of European swaptions, exercisable on each of the future payment exchange dates under the swap that are structured to reverse the remaining future cash flow obligations as of such dates, adjusted by probability of default on each future date. Default probabilities were derived from recovery rate adjusted credit default swap quotes or generic ratings based borrowing curves that fall into Level 2 of the GASB 72 fair value hierarchy.

As of June 30, 2017, the fair value of the Airport's six outstanding swaps, counterparty credit ratings, and fixed rate payable by the Airport Commission are as follows:

No.	Current bonds	Counterparty/guarantor*	Counterparty credit ratings (S&P/Moody's/ Fitch)	Fixed rate payable by Commission	Fair value to Commission
1	36AB	J.P. Morgan Chase Bank, N.A.	A+/Aa3/AA-	3.444 %	\$ (5,509,894)
2	36AB	J.P. Morgan Chase Bank, N.A.	A+/Aa3/AA-	3.445	(5,513,321)
3	36C	J.P. Morgan Chase Bank, N.A.	A+/Aa3/AA-	3.444	(2,362,561)
4	2010A (37B)**	Merrill Lynch Capital Services, Inc./ Merrill Lynch Derivative Products AG	AA/Aa3/NR*	3.773	(12,652,178)
5	37C	J.P. Morgan Chase Bank, N.A.	A+/Aa3/AA-	3.898	(14,581,404)
6	2010A***	Goldman Sachs Bank USA/ Goldman Sachs Group, Inc.	BBB+/A3/A*	3.925	(25,345,773)
Total					<u>\$ (65,965,131)</u>

\* Reflects ratings of the guarantor.

\*\* The Issue 37B Bonds that are hedged by this swap agreement were purchased with proceeds of the Series 2008B Notes, which the Commission subsequently refunded, and the Issue 37B Bonds are held in trust. The swap is now indirectly hedging the Series 2010A-3 Bonds for accounting purposes.

\*\*\* Hedges Series 2010A-1 and 2010A-2.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**Fair Value Hierarchy**

	<u>Fair value June 30, 2017</u>	<u>Fair value measurements using significant other observable inputs (Level 2)</u>
Interest rate swaps	\$ (65,965,131)	(65,965,131)

**Change in Fair Value**

The impact of the interest rate swaps on the financial statements for the year ended June 30, 2017 is as follows (in thousands):

	<u>Deferred outflows on derivative instruments</u>	<u>Derivative instruments</u>
Balance as of June 30, 2016	\$ 83,614	96,132
Change in fair value to year end	<u>(28,744)</u>	<u>(30,167)</u>
Balance as of June 30, 2017	<u>\$ 54,870</u>	<u>65,965</u>

The fair value of the interest rate swap portfolio is recorded as a liability (since the Airport would owe a termination payment to the counterparty) in the statements of net position. Unless a swap was determined to be an off-market swap at the inception of its hedging relationship, the fair value of the swap is recorded as a deferred outflow asset (if a termination payment would be due to the counterparty) or inflow liability (if a termination payment would be due to the Airport). The off-market portions of the Airport's swaps are recorded as carrying costs with respect to various refunded bond issues. Unlike fair value and deferred inflow/outflow values, the balance of remaining off-market portions are valued on a present value, or fixed yield, to maturity basis. The difference between the deferred outflows and derivative instruments presented in the table above constitutes the unamortized off-market portions of the swaps as of June 30, 2017.

*Risks*

*Basis Risk* – The Airport has chosen a variable rate index based on a percentage of London Interbank Offered Rate (LIBOR) plus a spread, which historically has closely approximated the variable rates payable on the related bonds. However, the Airport is subject to the risk that a change in the relationship between the LIBOR-based swap rate and the variable bond rates would cause a material mismatch between the two rates. Changes that cause the payments received from the counterparty to be insufficient to make the payments due on the associated bonds result in an increase in the synthetic interest rate on the bonds, while changes that cause the counterparty payments to exceed the payments due on the associated bonds result in a decrease in the synthetic interest rate on the bonds.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

During the fiscal year ended June 30, 2017, the Airport paid a total of \$0.6 million less in interest on its variable rate bonds than the floating-rate payments it received from the swap counterparties, resulting in a decrease in the effective synthetic interest rates on the associated bonds.

*Credit Risk* – As of June 30, 2017, the Airport is not exposed to credit risk because the swaps have a negative fair value to the Airport. Should long-term interest rates rise and the fair value of the swaps become positive, the Airport would be exposed to credit risk in the amount of the swaps' fair value. Under the terms of the swaps, counterparties are required to post collateral consisting of specified U.S. Treasury and Agency securities in an amount equal to the market value of a swap that exceeds specified thresholds linked to the counterparty's credit ratings. Any such collateral will be held by a custodial bank.

*Counterparty Risk* – The Airport is exposed to counterparty risk, which is related to credit and termination risk. While the insolvency or bankruptcy of a counterparty, or its failure to perform would be a default under the applicable swap documents, none of the Airport's swaps would automatically terminate. Rather, the Airport would have the option to terminate the affected swap at a market-based termination value, which may result in a payment to or from the counterparty. The Airport may also be exposed to counterparty risk in a high interest rate environment in the event a counterparty is unable to perform its obligations on a swap transaction leaving the Airport exposed to the variable rates on the associated debt. In order to diversify the Airport's swap counterparty credit risk and to limit the Airport's credit exposure to any one counterparty, the Airport's swap policy imposes limits on the maximum net termination exposure to any one counterparty. Maximum net termination exposure is calculated as of the date of execution of each swap and is monitored regularly during the term of the swap. The exposure limits vary for collateralized and noncollateralized swaps based upon the credit rating of the counterparty. If any exposure limit is exceeded by a counterparty during the term of a swap, the Airport Director is required to consult with the Airport's swap advisor and bond counsel regarding appropriate actions to take, if any, to mitigate such increased exposure, including, without limitation, transfer or substitution of a swap. As of June 30, 2017, the fair value of the Airport's swaps was negative to the Airport (representing an amount payable by the Airport to each counterparty in the event the relevant swap was terminated).

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

*Termination Risk* – All of the interest rate swaps are terminable at their termination price at any time at the option of the Airport. The Airport has limited termination risk with respect to the interest rate swaps. That risk would arise primarily from certain credit-related events or events of default on the part of the Airport, the municipal swap insurer, or the counterparty. The Airport has secured municipal swap insurance for all its regular payments and some termination payments due under all its interest rate swaps, except the swaps associated with the Series 2010A Bonds, from the following insurers:

<b>No.</b>	<b>Swap</b>	<b>Swap insurer</b>	<b>Insurer credit ratings June 30, 2017 (S&amp;P/Moody's /Fitch)</b>
1	Issue 36AB	FGIC/National Public Finance Guarantee Corporation	A/A3/NR
2	Issue 36AB	FGIC/National Public Finance Guarantee Corporation	A/A3/NR
3	Issue 36C	Assured Guaranty Municipal Corp.	AA/A2/NR
4	Series 2010A (37B)	Assured Guaranty Municipal Corp.	AA/A2/NR
5	Issue 37C	Assured Guaranty Municipal Corp.	AA/A2/NR
6	Series 2010A	None	N/A

If the Airport is rated between Baa1/BBB+ and Baa3/BBB- (Moody's/S&P), and the applicable bond insurer is rated below A3/A- (Moody's/S&P), the counterparties may terminate the swaps and require the Airport to pay the termination value, if any, unless the Airport chooses to provide suitable replacement credit enhancement, assign the Airport's interest in the swaps to a suitable replacement counterparty, or post collateral to secure the swap termination value. If the Airport is rated below Baa3/BBB- (Moody's/S&P) or its ratings are withdrawn or suspended, and the applicable bond insurer is rated below A3/A- (Moody's/S&P), the counterparties may terminate the swaps and require the Airport to pay the termination value, if any. With respect to the Series 2010A swaps with no swap insurance, the counterparty termination provisions and the Airport rating thresholds are the same as described above.

Additional Termination Events under the swap documents with respect to the Airport include an insurer payment default under the applicable swap insurance policy, and certain insurer rating downgrades or specified insurer nonpayment defaults combined with a termination event or event of default on the part of the Airport or a ratings downgrade of the Airport below investment grade. Additional Termination Events under the swap documents with respect to a counterparty and/or its guarantor include a rating downgrade below a specific rating threshold, followed by a failure of the counterparty to assign its rights and obligations under the swap documents to another entity acceptable to the applicable insurer within 15 business days.

On December 16, 2016, S&P upgraded the credit rating of Goldman Sachs Bank USA, the swap counterparty on the Series 2010A Swap, from "A" to "A+".

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

On December 23, 2016, S&P upgraded the credit rating of Merrill Lynch Derivative Products AG, the guarantor on the Issue 37B (2010A) Swap, from "AA-" to "AA".

The downgrade of any swap counterparty is indicative of an increased risk to the Airport that such counterparty may become bankrupt or insolvent and not perform under the applicable swap. If a counterparty does not perform under its swap, the Airport may be required to continue making its fixed rate payments to the counterparty even though it does not receive a variable rate payment in return. The Airport may elect to terminate a swap with a nonperforming counterparty and may be required to pay a substantial termination payment related to the fair value of such swap, depending on market conditions at the time. As of June 30, 2017, the fair value of each swap was negative to the Airport as shown above. The risks and termination rights related to the Airport's swaps are discussed in further detail above.

**(e) Special Facilities Lease Revenue Bonds**

In addition to the long-term obligations discussed above, the Commission's San Francisco International Airport Special Facilities Lease Revenue Bonds (SFO Fuel Company LLC), Series 1997A and 2000A, were outstanding in the principal amounts of \$68.2 million and \$73.2 million, respectively, as of June 30, 2017 and 2016. SFO Fuel Company LLC (SFO Fuel), a special purpose limited liability company formed by certain airlines operating at the Airport, is required to pay facilities rent to the Airport pursuant to a lease agreement between the Commission and SFO Fuel with respect to the on-Airport jet fuel distribution facilities in an amount equal to debt service payments on the bonds and any required bond reserve account deposits. The principal and interest on the bonds are paid solely from the facilities rent payable by SFO Fuel to the Airport. The lease payments, and therefore the SFO Fuel bonds, are payable from charges imposed by SFO Fuel on air carriers for into-plane fueling at the Airport, and are not payable from or secured by the Net Revenues of the Airport. The Airport assigned its right to receive the facilities rent to the bond trustee to pay and secure the payment of the bonds. Neither the Airport nor the City is obligated in any manner for the repayment of the SFO Fuel bonds other than from the facilities rent received from SFO Fuel. The bonds are therefore not reported in the accompanying financial statements.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**(f) Debt Service Reserve and Covenants**

The Airport Commission issues its senior lien San Francisco International Airport Second Series Revenue Bonds under the 1991 Master Bond Resolution, which provides, among other things, the general terms and conditions of the bonds, the funds and accounts relating to the bonds, and certain covenants made by the Airport Commission for the benefit of bondholders. Such covenants include not creating or allowing creation of liens on its property essential to operations or disposing of any property essential to maintaining revenues or operating the Airport, and maintaining specified levels of insurance or self-insurance. The Airport Commission may also establish one or more reserve accounts with different reserve requirements to secure one or more series of bonds. Accordingly, the Airport Commission has established two reserve accounts in the Reserve Fund: the Issue 1 Reserve Account and the 2009 Reserve Account, both of which are held by the Senior Trustee.

**Issue 1 Reserve Account**

The Issue 1 Reserve Account is the Airport's original parity reserve account established in connection with the first issuance of bonds under the 1991 Master Bond Resolution and which now secures most of the Airport Commission's outstanding bonds. The Airport Commission may designate any series of bonds as a "participating series" secured by the Issue 1 Reserve Account. The reserve requirement is equal to the maximum annual debt service accruing in any year during the life of all participating series of bonds secured by the Issue 1 Reserve Account. As of June 30, 2017, the reserve requirement was \$386.6 million, which was satisfied by \$390.9 million of cash and investment securities, and reserve fund surety policies in the initial principal amount of \$132.7 million. All of the providers of such reserve policies have one or more credit ratings below the Airport's rating or are no longer rated. In addition, \$75.8 million of such surety policies have likely experienced a reduction in value in accordance with their terms.

**2009 Reserve Account**

The Airport Commission has established an additional pooled reserve account identified as the 2009 Reserve Account in the Reserve Fund, as security for each series of bonds (a 2009 Reserve Series) that is designated as being secured by the 2009 Reserve Account. Currently, only the Series 2009C and 2010D Bonds are secured by the 2009 Reserve Account. The reserve requirement for each 2009 Reserve Series is the lesser of: (i) maximum annual debt service for such series of 2009 Reserve Series Bonds, (ii) 125% of average annual debt service for such series of 2009 Reserve Series Bonds, and (iii) 10% of the outstanding principal amount of such series (or allocable issue price of such series if such series is sold with more than a de minimis (2%) amount of original issue discount), in each case as determined from time to time. With respect to all 2009 Reserve Series, the reserve requirement is the aggregate of such amounts for each individual series. As of June 30, 2017, the reserve requirement for the 2009 Reserve Account was \$9.6 million, which was satisfied by \$19.6 million in cash and investment securities, and a reserve policy in the principal amount of \$3.4 million issued by Financial Security Assurance Inc. (now known as Assured Guaranty Municipal Corp.). The value of this reserve policy may be adjusted downward under certain circumstances and may have experienced a reduction in value.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**Series Secured by Other or No Reserve Accounts**

As permitted under the 1991 Master Bond Resolution, the Airport Commission may establish separate reserve accounts for individual series of bonds, or may issue bonds without a reserve account.

The Airport Commission does not maintain reserve accounts for its Second Series Variable Rate Revenue Refunding Bonds, Issue 36A/B/C and Series 2010A, all of which are secured by letters of credit.

**Reserve Policies**

Under the 1991 Master Bond Resolution, the Airport Commission may satisfy a portion of a reserve requirement by depositing with the Senior Trustee one or more reserve policies issued by a credit provider rated in the highest category by at least two rating agencies. However, the 1991 Master Bond Resolution does not require that those ratings be maintained after the date of deposit. Each of the providers of the reserve policies in the reserve accounts was rated “AAA” at the time the policies were deposited. However, as a result of the financial crisis that began in 2007, all of the major municipal bond insurance companies have been downgraded, and several are no longer providing current financial and operating information. In addition, under the terms of several of the reserve policies, the value of the policies may be adjusted downward from time to time as related bonds are refunded and such policies may have experienced a reduction in value. The Airport has periodically deposited additional cash in the Issue 1 Reserve Account to satisfy the reserve requirement and compensate for the diminished value or downgraded providers of these reserve policies, and, as of June 30, 2017, sufficient cash and investments were on deposit in the Issue 1 Reserve Account and the 2009 Reserve Account to satisfy the applicable reserve requirement without the reserve policies.

**Rate Covenant**

Under the terms of the 1991 Master Bond Resolution, the Airport has covenanted that it will establish and at all times maintain rentals, rates, fees, and charges for the use of the Airport and for services rendered by the Airport so that:

- (a) Net Revenues (as defined in the 1991 Master Bond Resolution) in each fiscal year will be at least sufficient (i) to make all required debt service payments and deposits in such fiscal year with respect to the bonds, any subordinate bonds, and any general obligation bonds issued by the City for the benefit of the Airport (there have been no such general obligation bonds outstanding for more than 30 years), and (ii) to make the annual service payment to the City, and
- (b) Net Revenues, together with any transfer from the Contingency Account to the Revenue Account (both held by the City Treasurer), in each fiscal year will be at least equal to 125% of aggregate annual debt service with respect to the bonds for such fiscal year.

The methods required by the 1991 Master Bond Resolution for calculating debt service coverage differ from those required under GAAP, which are used to determine amounts reported in the Airport’s financial statements. For example, the 1991 Master Bond Resolution includes in the definition of Operating and Maintenance Expenses (which is used to calculate Net Revenues) “the *payment* of pension charges ... with respect to employees of the Commission...” (emphasis added) and excludes a

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

number of noncash accrual items. Accordingly, the Commission excludes from its rate covenant calculations any noncash accrued pension obligations and includes only pension obligations actually paid during the fiscal year.

Revenue bond debt service requirements to maturity are as follows (in thousands):

	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
Fiscal year:			
2018	\$ 203,580	239,823	443,403
2019	213,255	227,086	440,341
2020	219,630	216,864	436,494
2021	230,735	206,128	436,863
2022	236,280	194,857	431,137
2023–2027	1,185,975	797,622	1,983,597
2028–2032	627,840	538,894	1,166,734
2033–2037	373,020	414,940	787,960
2038–2042	734,755	298,051	1,032,806
2043–2046	732,460	93,790	826,250
Total	\$ <u>4,757,530</u>	<u>3,228,055</u>	<u>7,985,585</u>

The table below presents the revenue bond debt service requirements in the event the letters of credit securing the Airport's outstanding variable rate bonds had to be drawn upon to pay such bonds and the amount drawn had to be repaid by the Airport pursuant to the terms of the related agreements with the banks providing such letters of credit (in thousands):

	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
Fiscal year:			
2018	\$ 349,500	240,298	589,798
2019	276,185	219,675	495,860
2020	392,040	208,074	600,114
2021	199,965	189,439	389,404
2022	204,110	179,508	383,618
2023–2027	987,330	745,660	1,732,990
2028–2032	508,165	529,699	1,037,864
2033–2037	373,020	414,940	787,960
2038–2042	734,755	298,051	1,032,806
2043–2046	732,460	93,790	826,250
Total	\$ <u>4,757,530</u>	<u>3,119,134</u>	<u>7,876,664</u>

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**(g) Post-Issuance Compliance with Federal Tax Law**

The Airport follows certain federal tax law post-issuance compliance procedures that are intended to ensure that proceeds of its tax-exempt bonds are invested and expended consistent with applicable federal tax law, including the Internal Revenue Code of 1986, the Regulations promulgated thereunder, and other applicable guidance from the U.S. Treasury Department and the Internal Revenue Service (IRS).

**(h) Cash Defeasance of Bonds**

In June 2017, the Airport Commission used cash on hand to legally defease \$12.9 million of outstanding Second Series Revenue Refunding Bonds Issue 34E maturing in 2024.

**Fiscal Year 2016**

**(a) Second Series Revenue Bonds (Capital Plan Bonds)**

Pursuant to resolutions approved in fiscal years 2008, 2012, 2014 and 2016, the Airport Commission has authorized the issuance of up to \$5.0 billion of San Francisco International Airport Second Series Revenue Bonds to finance and refinance the construction, acquisition, equipping, and development of capital projects undertaken by the Airport, including retiring all or a portion of the Airport's outstanding subordinate commercial paper notes issued for capital projects, funding debt service reserves, and for paying costs of issuance. As of June 30, 2016, \$3.4 billion of the authorized capital plan bonds remained unissued.

In September 2015, the Airport Commission authorized the issuance of an additional \$243.0 million of San Francisco International Airport Second Series Revenue Bonds (Capital Plan Bonds) and \$225.0 million of San Francisco International Airport Hotel Special Facility Revenue Bonds to finance the development and construction of a new Airport-owned hotel and related AirTrain station. The Commission also designated the planned hotel as a "special facility" under the 1991 Master Bond Resolution, which will allow the hotel revenues to be segregated from the Airport's other revenues and used to pay hotel operating expenses and debt service on the Hotel Special Facility Bonds. In order to obtain the lowest cost of financing, the Commission does not plan to sell the Hotel Special Facility Bonds to investors, but will purchase them itself with a portion of the proceeds of the Capital Plan Bonds, which will be sold to investors. The total net proceeds of the two bond issuances are expected to be approximately \$243.0 million, which will be applied to the \$225.0 million construction costs of the hotel and AirTrain station, capitalized interest on the Hotel Special Facility Bonds and other costs of issuance. On December 1, 2015, the City's Board of Supervisors authorized the issuance of such Hotel Special Facility Bonds and Capital Plan Bonds for the hotel and AirTrain station. Airport Commission approval of the bond sale is required before such bonds can be issued.

**(b) Second Series Revenue Refunding Bonds**

Pursuant to sale resolutions approved between fiscal years 2005 through 2016, the Airport Commission has authorized the issuance of up to \$8.4 billion of San Francisco International Airport Second Series Revenue Refunding Bonds for the purposes of refunding outstanding 1991 Master Bond Resolution Bonds and outstanding subordinate commercial paper notes, funding debt service reserves, and paying costs of issuance, including any related bond redemption premiums.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

On February 25, 2016 the Airport issued its Second Series Revenue Refunding Bonds, Series 2016A (Non-AMT/Governmental Purpose), in the principal amount of \$232.1 million to refund \$66.5 million of its Issue 32F, \$155.3 million of its Issue 32G and \$63.1 million of its Issue 34D long-term fixed rate bonds for debt service savings.

As of June 30, 2016, net of expired sale authorizations, \$1.2 billion of such refunding bonds remained authorized but unissued.

**(c) Variable Rate Demand Bonds**

As of June 30, 2016, the Airport Commission had outstanding an aggregate principal amount of \$477.9 million of Second Series Variable Rate Revenue Refunding Bonds, consisting of Issue 36A/B/C and Issue 37C, and Series 2010A (collectively, the "Variable Rate Bonds), with final maturity dates of May 1, 2026 (Issue 36A/B/C), May 1, 2029 (Issue 37C), and May 1, 2030 (Series 2010A). The Variable Rate Bonds are long-term, tax-exempt bonds that currently bear interest at a rate that is adjusted weekly, and that are subject to tender at par at the option of the holder thereof on seven days' notice. Any tendered Variable Rate Bonds are remarketed by the applicable remarketing agent in the secondary market to other investors. The interest rate on the Variable Rate Bonds can be converted to other interest rate modes, including a term rate or fixed rates to maturity, upon appropriate notice by the Airport.

The scheduled payment of the principal and purchase price of and interest on the Variable Rate Bonds is secured by separate irrevocable letters of credit issued to the Senior Trustee for the benefit of the applicable bondholders by the banks identified in the table below.

Amounts drawn under a letter of credit that are not reimbursed by the Airport constitute "Repayment Obligations" under the 1991 Master Bond Resolution and are accorded the status of other outstanding bonds to the extent provided in the Resolution. The commitment fees for the letters of credit range between 0.450% and 0.630% per annum. As of June 30, 2016, there were no unreimbursed draws under these facilities.

On June 29, 2016, the Airport obtained a new irrevocable letter of credit issued by Wells Fargo Bank, National Association, supporting the Second Series Variable Rate Revenue Refunding Bonds, Issue 36A. The letter of credit will expire June 29, 2018.

On June 29, 2016, the Airport obtained a new irrevocable letter of credit issued by Bank of America, National Association, supporting the Second Series Variable Rate Revenue Refunding Bonds Series 2010A. The letter of credit expires June 29, 2020.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

The letters of credit securing the Variable Rate Bonds included in long-term debt as of June 30, 2016, are as follows:

	<u>Issue 36A</u>	<u>Issue 36B</u>	<u>Issue 36C</u>	<u>Issue 37C</u>	<u>Series 2010A</u>
Principal amount	\$ 100,000,000	40,620,000	36,145,000	88,650,000	212,475,000
Expiration date	June 29, 2018	April 25, 2018	April 25, 2018	January 28, 2019	June 29, 2020
Credit provider	Wells Fargo <sup>(1)</sup>	BTMU <sup>(2)</sup>	BTMU <sup>(2)</sup>	MUFG Union Bank <sup>(3)</sup>	Bank of America <sup>(4)</sup>

(1) Wells Fargo Bank, National Association

(2) The Bank of Tokyo-Mitsubishi UFJ. Ltd.

(3) Formerly Union Bank, N.A.

(4) Bank of America, National Association

**(d) Interest Rate Swaps**

*Objective and Terms* – On December 16, 2004, the Airport entered into seven forward starting interest rate swaps (the 2004 swaps) with an aggregate notional amount of \$405.0 million, in connection with the anticipated issuance of Second Series Variable Rate Revenue Refunding Bonds, Issue 32A-E on February 10, 2005, and Second Series Variable Rate Revenue Refunding Bonds, Issue 33 on February 15, 2006. The swap structure was intended as a means to increase the Airport's debt service savings when compared with fixed rate refunding bonds at the time of issuance. The expiration date of the 2004 swaps is May 1, 2026.

On July 26, 2007, the Airport entered into four additional forward starting interest rate swaps in connection with the anticipated issuance of its Second Series Variable Rate Revenue Refunding Bonds, Issue 37B/C, on May 15, 2008 (the 2007 swaps), and Second Series Variable Rate Revenue Refunding Bonds, Series 2010A, on February 10, 2010 (the 2010 swaps). The expiration dates of the 2007 and 2010 swaps are May 1, 2029 and 2030, respectively.

In the spring of 2008, the Airport refunded several issues of auction rate and variable rate bonds, including Issue 32 and Issue 33. The 2004 swaps associated with these issues then became associated with the Second Series Variable Rate Revenue Refunding Bonds, Issues 36A-D, and Issue 37A. Subsequently, on October 30, 2008 and December 3, 2008, the Airport refunded Issue 37A and Issue 37B, respectively. Concurrently with the refunding of Issue 37A, the three associated swaps with an aggregate notional amount of \$205.1 million were terminated. The swap associated with Issue 37B was not terminated upon the refunding of Issue 37B.

On December 16, 2010, the Airport terminated a swap associated with the Series 2010A-3 Bonds, with a notional amount of \$72.0 million. The Airport paid a termination amount of \$6.7 million to the counterparty, Depfa Bank plc. The payment was funded with taxable commercial paper, which was subsequently retired with Airport operating funds on March 28, 2011.

Following the termination of the Depfa swap, the Series 2010A-3 Bonds, which are variable rate, were no longer hedged with an interest rate swap. The swap associated with the Issue 37B Bonds, however, is now associated with the Series 2010A-3 Bonds.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

On September 20, 2011, the Airport refunded the Issue 36D Bonds with proceeds of the San Francisco International Airport Second Series Revenue Refunding Bonds, Series 2011H and terminated the swap associated with Issue 36D, which had an initial notional amount of \$30.0 million and JP Morgan Chase Bank, N.A. as counterparty. The Airport paid a termination fee of \$4.6 million to the counterparty.

Under the 2004 swaps, the Airport receives a monthly variable rate payment from each counterparty equal to 63.50% of USD-LIBOR-BBA plus 0.29%. Under the 2007 and 2010 swaps, the Airport receives 61.85% of USD-LIBOR-BBA plus 0.34%. These payments are intended to approximate the variable interest rates on the bonds originally hedged by the swaps. The Airport makes a monthly fixed rate payment to the counterparties as set forth below which commenced on the date of issuance of the related bonds. The objective of the swaps is to achieve a synthetic fixed rate with respect to the hedged bonds. All of the outstanding interest rate swaps are terminable at their market value at any time solely at the option of the Airport.

As of June 30, 2016, the Airport's derivative instruments comprised six interest rate swaps that the Airport entered into to hedge the interest payments on several series of its variable rate Second Series Revenue Bonds. The Airport determined the hedging relationship between the variable rate bonds and the related interest rate swaps to be effective as of June 30, 2016.

<u>No.</u>	<u>Current bonds</u>	<u>Initial notional amount</u>	<u>Notional amount June 30, 2016</u>	<u>Effective date</u>
1	36AB	\$ 70,000,000	70,000,000	2/10/2005
2	36AB	69,930,000	69,930,000	2/10/2005
3	36C	30,000,000	30,000,000	2/10/2005
4	2010A (37B)*	79,684,000	78,584,000	5/15/2008
5	37C	89,856,000	88,616,000	5/15/2008
6	2010A**	143,947,000	142,383,000	2/1/2010
	Total	\$ 483,417,000	479,513,000	

\* The Issue 37B Bonds that are hedged by this swap agreement were purchased with proceeds of the Series 2008B Notes, which the Commission subsequently refunded, and the Issue 37B Bonds are held in trust. The swap is now indirectly hedging the Series 2010A-3 Bonds for accounting purposes.

\*\* Hedges Series 2010A-1 and 2010A-2.

*Fair Value*

The fair values take into consideration the prevailing interest rate environment and the specific terms and conditions of each swap. All values were estimated using the zero-coupon discounting method. This method calculates the future payments required by the swap, assuming that the current forward rates implied by the yield curve are the market's best estimate of future spot interest rates. These payments are then discounted using the spot rates implied by the current yield curve for a hypothetical zero-coupon rate bond due on the date of each future net settlement payment on the swaps to arrive at

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

the so-called “settlement amount”, i.e., the approximate amount a party would have to pay or would receive if the swap was terminated.

In addition, pursuant to GASB 72, the settlement amounts are then adjusted for the nonperformance risk of each party to the swap to arrive at the fair value. For each swap, the nonperformance risk was computed as the total cost of the transactions required to hedge the default exposure, i.e., a series of European swaptions, exercisable on each of the future payment exchange dates under the swap that are structured to reverse the remaining future cash flow obligations as of such dates, adjusted by probability of default on each future date. Default probabilities were derived from recovery rate adjusted credit default swap quotes or generic ratings based borrowing curves that fall into Level 2 of the GASB 72 fair value hierarchy.

As of June 30, 2016, the fair value of the Airport's six outstanding swaps, counterparty credit ratings, and fixed rate payable by the Airport Commission are as follows:

No.	Current bonds	Counterparty/guarantor*	Counterparty credit ratings (S&P/Moody's/ Fitch)	Fixed rate payable by Commission	Fair value to Commission
1	36AB	J.P. Morgan Chase Bank, N.A.	A+/Aa3/AA-	3.444 %	\$ (8,962,694)
2	36AB	J.P. Morgan Chase Bank, N.A.	A+/Aa3/AA-	3.445	(8,965,164)
3	36C	J.P. Morgan Chase Bank, N.A.	A+/Aa3/AA-	3.444	(3,842,002)
4	2010A (37B)**	Merrill Lynch Capital Services, Inc./ Merrill Lynch Derivative Products AG	AA-/Aa3/NR*	3.773	(17,705,290)
5	37C	J.P. Morgan Chase Bank, N.A.	A+/Aa3/AA-	3.898	(20,588,207)
6	2010A***	Goldman Sachs Bank USA/ Goldman Sachs Group, Inc.	BBB+/A3/A*	3.925	(36,068,731)
Total					<u>\$ (96,132,088)</u>

\* Reflects ratings of the guarantor.

\*\* The Issue 37B Bonds that are hedged by this swap agreement were purchased with proceeds of the Series 2008B Notes, which the Commission subsequently refunded, and the Issue 37B Bonds are held in trust. The swap is now indirectly hedging the Series 2010A-3 Bonds for accounting purposes.

\*\*\* Hedges Series 2010A-1 and 2010A-2.

**Fair Value Hierarchy**

	Fair value June 30, 2016	Fair value measurements using significant other observable inputs (Level 2)
Interest rate swaps	\$ (96,132,088)	(96,132,088)

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**Change in Fair Value**

The impact of the interest rate swaps on the financial statements for the year ended June 30, 2016 is as follows (in thousands):

	<b>Deferred outflows on derivative instruments</b>	<b>Derivative instruments</b>
Balance as of June 30, 2015 (as restated)	\$ 65,408	79,321
Change in fair value to year end	18,206	16,811
Balance as of June 30, 2016	<u>\$ 83,614</u>	<u>96,132</u>

The fair value of the interest rate swap portfolio is recorded as a liability (since the Airport would owe a termination payment to the counterparty) in the statements of net position. Unless a swap was determined to be an off-market swap at the inception of its hedging relationship, the fair value of the swap is recorded as a deferred outflow asset (if a termination payment would be due to the counterparty) or inflow liability (if a termination payment would be due to the Airport). The off-market portions of the Airport's swaps are recorded as carrying costs with respect to various refunded bond issues. Unlike fair value and deferred inflow/outflow values, the balance of remaining off-market portions are valued on a present value, or fixed yield, to maturity basis. The difference between the deferred outflows and derivative instruments presented in the table above constitutes the unamortized off-market portions of the swaps as of June 30, 2016.

*Risks*

*Basis Risk* – The Airport has chosen a variable rate index based on a percentage of London Interbank Offered Rate (LIBOR) plus a spread, which historically has closely approximated the variable rates payable on the related bonds. However, the Airport is subject to the risk that a change in the relationship between the LIBOR-based swap rate and the variable bond rates would cause a material mismatch between the two rates. Changes that cause the payments received from the counterparty to be insufficient to make the payments due on the associated bonds result in an increase in the synthetic interest rate on the bonds, while changes that cause the counterparty payments to exceed the payments due on the associated bonds result in a decrease in the synthetic interest rate on the bonds. During the fiscal year ended June 30, 2016, the Airport paid a total of \$2.0 million less in interest on its variable rate bonds than the floating-rate payments it received from the swap counterparties, resulting in a decrease in the effective synthetic interest rates on the associated bonds.

*Credit Risk* – As of June 30, 2016, the Airport is not exposed to credit risk because the swaps have a negative fair value to the Airport. Should long-term interest rates rise and the fair value of the swaps become positive, the Airport would be exposed to credit risk in the amount of the swaps' fair value. Under the terms of the swaps, counterparties are required to post collateral consisting of specified U.S. Treasury and Agency securities in an amount equal to the market value of a swap that exceeds specified thresholds linked to the counterparty's credit ratings. Any such collateral will be held by a custodial bank.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

*Counterparty Risk* – The Airport is exposed to counterparty risk, which is related to credit and termination risk. While the insolvency or bankruptcy of a counterparty, or its failure to perform would be a default under the applicable swap documents, none of the Airport’s swaps would automatically terminate. Rather, the Airport would have the option to terminate the affected swap at its fair value, which may result in a payment to or from the counterparty. The Airport may also be exposed to counterparty risk in a high interest rate environment in the event a counterparty is unable to perform its obligations on a swap transaction leaving the Airport exposed to the variable rates on the associated debt. In order to diversify the Airport’s swap counterparty credit risk and to limit the Airport’s credit exposure to any one counterparty, the Airport’s swap policy imposes limits on the maximum net termination exposure to any one counterparty. Maximum net termination exposure is calculated as of the date of execution of each swap and is monitored regularly during the term of the swap. The exposure limits vary for collateralized and noncollateralized swaps based upon the credit rating of the counterparty. If any exposure limit is exceeded by a counterparty during the term of a swap, the Airport Director is required to consult with the Airport’s swap advisor and bond counsel regarding appropriate actions to take, if any, to mitigate such increased exposure, including, without limitation, transfer or substitution of a swap. As of June 30, 2016, the fair value of the Airport’s swaps was negative to the Airport (representing an amount payable by the Airport to each counterparty in the event the relevant swap was terminated).

*Termination Risk* – All of the interest rate swaps are terminable at their market value at any time at the option of the Airport. The Airport has limited termination risk with respect to the interest rate swaps. That risk would arise primarily from certain credit-related events or events of default on the part of the Airport, the municipal swap insurer, or the counterparty. The Airport has secured municipal swap insurance for all its regular payments and some termination payments due under all its interest rate swaps, except the swaps associated with the Series 2010A Bonds, from the following insurers:

<b>No.</b>	<b>Swap</b>	<b>Swap insurer</b>	<b>Insurer credit ratings June 30, 2016 (S&amp;P/Moody’s /Fitch)</b>
1	Issue 36AB	FGIC/National Public Finance Guarantee Corporation	AA-/A3/NR
2	Issue 36AB	FGIC/National Public Finance Guarantee Corporation	AA-/A3/NR
3	Issue 36C	Assured Guaranty Municipal Corp.	AA/A2/NR
4	Series 2010A (37B)	Assured Guaranty Municipal Corp.	AA/A2/NR
5	Issue 37C	Assured Guaranty Municipal Corp.	AA/A2/NR
6	Series 2010A	None	N/A

If the Airport is rated between Baa1/BBB+/BBB+ and Baa3/BBB-/BBB- (Moody’s/S&P/Fitch), and the applicable bond insurer is rated below A3/A- (Moody’s/S&P), the counterparties may terminate the swaps and require the Airport to pay the termination value, if any, unless the Airport chooses to provide suitable replacement credit enhancement, assign the Airport’s interest in the swaps to a suitable replacement counterparty, or post collateral to secure the swap termination value. If the Airport is rated

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

below Baa3/BBB-/BBB- (Moody's/S&P/Fitch) or its ratings are withdrawn or suspended, and the applicable bond insurer is rated below A3/A- (Moody's/S&P), the counterparties may terminate the swaps and require the Airport to pay the termination value, if any. With respect to the Series 2010A swaps with no swap insurance, the counterparty termination provisions and the Airport rating thresholds are the same as described above.

Additional Termination Events under the swap documents with respect to the Airport include an insurer payment default under the applicable swap insurance policy, and certain insurer rating downgrades or specified insurer nonpayment defaults combined with a termination event or event of default on the part of the Airport or a ratings downgrade of the Airport below investment grade. Additional Termination Events under the swap documents with respect to a counterparty or its guarantor include a rating downgrade below A3/A1/A1 (Moody's/S&P/Fitch), followed by a failure of the counterparty to assign its rights and obligations under the swap documents to another entity acceptable to the applicable insurer within 15 business days.

Goldman Sachs Group, Inc., which is the guarantor of the Airport's swap counterparty Goldman Sachs Bank USA, was downgraded to BBB+ by S&P during the year ended June 30, 2016.

Merrill Lynch Derivative Products AG, which is the guarantor of the Airport's swap counterparty Merrill Lynch Capital Services, Inc., was upgraded by one or more of the rating agencies during the year ended June 30, 2016.

The downgrade of any swap counterparty increases the risk to the Airport that such counterparty may become bankrupt or insolvent and not perform under the applicable swap. If a counterparty does not perform under its swap, the Airport may be required to continue making its fixed rate payments to the counterparty even though it does not receive a variable rate payment in return. The Airport may elect to terminate a swap with a nonperforming counterparty and may be required to pay a substantial termination payment approximately equal to the fair value of such swap, depending on market conditions at the time. As of June 30, 2016, the fair value of each swap was negative to the Airport as shown above. The risks and termination rights related to the Airport's swaps are discussed in further detail above.

**(e) Special Facilities Lease Revenue Bonds**

In addition to the long-term obligations discussed above, the Commission's San Francisco International Airport Special Facilities Lease Revenue Bonds (SFO Fuel Company LLC), Series 1997A and 2000A, were outstanding in the principal amounts of \$73.2 million and \$78.1 million, respectively, as of June 30, 2016 and 2015. SFO Fuel Company LLC (SFO Fuel), a special purpose limited liability company formed by certain airlines operating at the Airport, is required to pay facilities rent to the Airport pursuant to a lease agreement between the Commission and SFO Fuel with respect to the jet fuel distribution facilities in an amount equal to debt service payments on the bonds and any required bond reserve account deposits. The principal and interest on the bonds are paid solely from the facilities rent payable by SFO Fuel to the Airport. The lease payments, and therefore the SFO Fuel bonds, are payable from charges imposed by SFO Fuel on air carriers for into-plane fueling at the Airport, and are not payable from or secured by the Net Revenues of the Airport. The Airport assigned

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

its right to receive the facilities rent to the bond trustee to pay and secure the payment of the bonds. Neither the Airport nor the City is obligated in any manner for the repayment of the SFO Fuel bonds other than from the facilities rent received from SFO Fuel. The bonds are therefore not reported in the accompanying financial statements.

**(f) Post-Issuance Compliance with Federal Tax Law**

The Airport follows certain federal tax law post-issuance compliance procedures that are intended to ensure that proceeds of its tax-exempt bonds are invested and expended consistent with applicable federal tax law, including the Internal Revenue Code of 1986, the Regulations promulgated thereunder, and other applicable guidance from the U.S. Treasury Department and the IRS.

**(g) Cash Defeasance of Bonds**

In June 2016, the Airport Commission used cash on hand to defease \$24.7 million of outstanding Second Series Revenue Refunding Bonds Issue 34E.

**(8) Pledged Revenue**

The Airport Commission has pledged all of the Net Revenues of the Airport to repay the following obligations when due, in order of priority, (1) the San Francisco International Airport Second Series Revenue Bonds (Senior Bonds) issued and to be issued under the Commission's Resolution No. 91-0210 adopted on December 3, 1991, as amended and supplemented (1991 Master Bond Resolution), and amounts due under the letters of credit securing the Senior Bonds to the extent provided in the 1991 Master Bond Resolution, (2) the San Francisco International Airport Subordinate Commercial Paper Notes and any other obligations (Subordinate Bonds) issued and to be issued under the Commission's Resolution No. 97-0146 adopted on May 20, 1997, as amended and supplemented (1997 Note Resolution) and amounts due to reimburse drawings under the letters of credit securing the Commercial Paper Notes, (3) remaining amounts due to reimburse drawings under the letters of credit securing the Senior Bonds, and (4) interest rate swap termination payments. The Senior Bonds and Commercial Paper Notes are issued to finance capital projects at the Airport and to refund previously issued Senior Bonds and Commercial Paper Notes. The pledges of Net Revenues described above are in force so long as the secured obligations are outstanding. As of June 30, 2017, the final maturities of the obligations secured by the Net Revenues are Senior Bonds that mature in fiscal year 2046.

Net Revenues are defined in the 1991 Master Bond Resolution and the 1997 Note Resolution as Revenues less Operation and Maintenance Expenses. Revenues are defined to include all revenues earned by the Commission with respect to the Airport, as determined in accordance with GAAP. Revenues do not include: (a) investment income from moneys in (i) the Construction Fund, (ii) the Debt Service Fund which constitute capitalized interest, or (iii) the Reserve Fund if and to the extent there is any deficiency therein; (b) interest income on, and any profit realized from, the investment of the proceeds of any Special Facility Bonds (as defined in the 1991 Master Bond Resolution); (c) Special Facility Revenues (as defined in the 1991 Master Bond Resolution) and any income realized from the investment thereof unless designated as Revenues by the Commission; (d) any passenger facility or similar charge levied by or on behalf of the Commission unless designated as Revenues by the Commission; (e) grants-in-aid, donations and bequests; (f) insurance proceeds not deemed to be Revenues in accordance with GAAP; (g) the proceeds of any

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

condemnation award; (h) the proceeds of any sale of land, buildings or equipment; and (i) any money received by or for the account of the Commission from the levy or collection of taxes upon any property of the City.

Operation and Maintenance Expenses are defined in the 1991 Master Bond Resolution and the 1997 Note Resolution to include all expenses of the Commission incurred for the operation and maintenance of the Airport, as determined in accordance with GAAP. Operation and Maintenance Expenses do not include: (a) the principal of, premium, if any, or interest on the Senior Bonds or Subordinate Bonds (including Commercial Paper Notes); (b) any allowance for amortization, depreciation or obsolescence of the Airport; (c) any expense for which, or to the extent to which, the Commission will be paid or reimbursed from or through any source that is not included or includable as Revenues; (d) any extraordinary items arising from the early extinguishment of debt; (e) Annual Service Payments to the City; (f) any costs, or charges made therefor, for capital additions, replacements or improvements to the Airport which, under GAAP, are properly chargeable to a capital account or reserve for depreciation; and (g) any losses from the sale, abandonment, reclassification, revaluation or other disposition of any Airport properties. Operating and Maintenance Expenses include the payment of pension charges and proportionate payments to such compensation and other insurance or outside reserve funds as the Commission may establish or the Board of Supervisors may require with respect to Commission employees.

During fiscal years 2017 and 2016, the original principal amount of Senior Bonds and Commercial Paper Notes issued, principal and interest remaining due on outstanding Senior Bonds and Commercial Paper Notes, principal and interest paid on such obligations, and applicable Net Revenues are as set forth in the table below (in thousands). There were no unreimbursed drawings under any letter of credit or interest rate swap termination payments due.

	<u>2017</u>	<u>2016</u>
Bonds issued with revenue pledge	\$ 887,920	232,075
Bond principal and interest remaining due at the end of the fiscal year	7,985,585	6,705,026
Commercial paper issued with subordinate revenue pledge	179,000	304,100
Commercial paper principal and interest remaining due at the end of the fiscal year	178,564	343,343
Net revenues	489,378	473,086
Bond principal and interest paid in the fiscal year	408,750	416,610
Commercial paper principal, interest and fees paid in the fiscal year	4,106	3,900

**Pledged Facilities Rent from Fuel System Lease with SFO Fuel Company LLC**

The Commission entered into a Fuel System Lease dated as of September 1, 1997, with SFO Fuel Company LLC (SFO Fuel), a special purpose limited liability company formed by certain airlines operating at the Airport. The facilities rent payable by SFO Fuel has been pledged and assigned to the bond trustee to secure the repayment of the Commission's San Francisco International Airport Special Facilities Lease

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

Revenue Bonds (SFO Fuel Company LLC), Series 1997A and 2000A, which were outstanding in the aggregate principal amounts of \$68.2 million and \$73.2 million, respectively, as of June 30, 2017 and 2016. The SFO Fuel bonds were issued to finance improvements to the jet fuel storage and distribution system at the Airport. The pledge of the facilities rent will be in effect until the maturity of the SFO Fuel bonds on January 1, 2027, unless this date is extended because additional bonds (including refunding bonds) with a later maturity are issued.

**(9) Concession Revenue and Minimum Future Rents**

Certain of the Airport's rental agreements with concessionaires specify that rental payments are to be based on a percentage of tenant sales, subject to a minimum amount, known as a Minimum Annual Guarantee (MAG). Concession percentage rents in excess of the applicable MAG were approximately \$29.6 million and \$26.3 million as of June 30, 2017 and 2016, respectively. Most of these concession agreements provide that the MAG does not apply if the actual enplanements achieved during a one-month period is less than 80% of the actual enplanements of the same reference month in the reference year, and such shortfall continues for three consecutive months. The MAG is reinstated once monthly enplanements equal or exceed 80% of the reference month enplanements for two consecutive months.

A five-year car rental lease agreement option was exercised effective January 1, 2014. Under this agreement, the rental car companies will continue to pay 10% of gross revenues or a minimum guaranteed rent, whichever is higher. The MAG attributable to the rental car companies was approximately \$42.5 million and \$43.3 million as of June 30, 2017 and 2016, respectively.

Minimum future rents under noncancelable operating leases at the Airport having terms in excess of one year are as follows (in thousands):

Fiscal year ending:			
2018	\$	92,170	
2019		54,136	
2020		26,371	
2021		20,021	
2022		16,277	
2023 and thereafter		16,576	
	\$	225,551	

**(10) Employee Benefit Plans**

**(a) Retirement Plan**

The City administers a cost-sharing multiple-employer defined benefit pension Plan (the Plan). The Plan is administered by the San Francisco City and County Employees' Retirement System (the Retirement System). For purposes of measuring the net pension liability, deferred outflows/inflows of resources related to pensions, pension expense, information about the fiduciary net position of the SFERS plans, and additions to/deductions from the Plan's fiduciary net position have been determined

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

on the same basis as they are reported by Cheiron, the consulting actuary for the Plan. Benefit payments (including refunds of employee contributions) are recognized when currently due and payable in accordance with the benefit terms. Investments are reported at fair value.

GASB 68 requires that the reported results must pertain to liability and asset information within certain defined timeframes. For this report, the following timeframes are used:

**San Francisco Employers Retirement System (SFERS) – Cost Sharing**

**Fiscal year 2017**

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Valuation Date (VD)	June 30, 2015 updated to June 30, 2016
Measurement Date (MD)	June 30, 2016
Measurement Period (MP)	July 1, 2015 to June 30, 2016

**Fiscal year 2016**

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Valuation Date (VD)	June 30, 2014 updated to June 30, 2015
Measurement Date (MD)	June 30, 2015
Measurement Period (MP)	July 1, 2014 to June 30, 2015

The City is an employer of the plan with a proportionate share of 94.22% as of June 30, 2016, and 93.90% as of June 30, 2015 (measurement date). The Airport's allocation percentage was determined based on the Airport's employer contributions divided by the City's total employer contributions for fiscal years 2016 and 2015. The net pension liability, deferred outflows/inflows of resources related to pensions, amortization of deferred outflows/inflows and pension expense to each department is based on the Airport's allocated percentage. The Airport's allocation of the City's proportionate share was 6.57% as of June 30, 2016, and 6.64% as of June 30, 2015 (measurement date).

**Plan Description**

The Plan provides basic service retirement, disability, and death benefits based on specified percentages of defined final average monthly salary and provides annual cost-of-living adjustments after retirement. The Plan also provides pension continuation benefits to qualified survivors. The San Francisco City and County Charter and the Administrative Code are the authorities which establish and amend the benefit provisions and employer obligations of the Plan. The Retirement System issues a publicly available financial report that includes financial statements and required supplementary information for the Plan. That report may be obtained by writing to the San Francisco City and County Employees' Retirement System, 1145 Market Street, 5th Floor, San Francisco, CA 94103 or by calling (415) 487-7000.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**Benefits**

The Retirement System provides service retirement, disability and death benefits based on specified percentages of defined final average monthly salary and annual cost of living adjustments after retirement. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan. The Retirement System pays benefits according to the category of employment and the type of benefit coverage provided by the City and County. The four main categories of Plan members are:

- Miscellaneous Non-Safety Members – staff, operational, supervisory, and all other eligible employees who are not in special membership categories.
- Sheriff's Department and Miscellaneous Safety Members – sheriffs assuming office on and after January 7, 2012, and undersheriffs, deputized personnel of the sheriff's department, and miscellaneous safety employees hired on and after January 7, 2012.
- Firefighter Members – firefighters and other employees whose principal duties are in fire prevention and suppression work or who occupy positions designated by law as firefighter member positions.
- Police Members – police officers and other employees whose principal duties are in active law enforcement or who occupy positions designated by law as police member positions.

The membership groups and the related service retirement benefits are included in the Notes to the Basic Financial Statements of the San Francisco Employees Retirement System.

All members are eligible to apply for a disability retirement benefit, regardless of age, when they have 10 or more years of credited service and they sustain an injury or illness that prevents them from performing their duties. Safety members are eligible to apply for an industrial disability retirement benefit from their first day on the job if their disability is caused by an illness or injury that they receive while performing their duties.

All retired members receive a benefit adjustment each July 1, which is the Basic COLA. The majority of adjustments are determined by changes in CPI with increases capped at 2%. The Plan provides for a Supplemental COLA in years when there are sufficient "excess" investment earnings in the Plan. The maximum benefit adjustment each July 1 is 3.5% including the Basic COLA. Effective July 1, 2012, voters approved changes in the criteria for payment of the Supplemental COLA benefit, so that Supplemental COLAs would only be paid when the Plan is also fully funded on a market value of assets basis. Certain provisions of this voter-approved proposition were challenged in the courts. A decision by the California courts modified the interpretation of the proposition. Effective July 1, 2012, members who retired before November 6, 1996, will receive a Supplemental COLA only when the Plan is also fully funded on a market value of assets basis. However, the "full funding" requirement does not apply to members who retired on or after November 6, 1996, and were hired before January 7, 2012. For all members hired before January 7, 2012, all Supplemental COLAs paid to them in retirement benefits will continue into the future even where an additional Supplemental COLA is not payable in any given year. For members hired on and after January 7, 2012, a Supplemental COLA will only be paid to retirees when the Plan is fully funded on a market value of asset basis, and, in addition for these members, Supplemental COLAs will not be permanent adjustments to retirement benefits. That is, in years when a Supplemental COLA is not paid, all previously paid Supplemental COLAs will expire.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**Funding and Contribution Policy**

Contributions are made to the basic plan by both the City and the participating employees. Employee contributions are mandatory as required by the Charter. Employee contribution rates for fiscal year 2017 varied from 7.5% to 12.0% as a percentage of gross covered salary. Most employee groups agreed through collective bargaining for employees to contribute the full amount of the employee contributions on a pretax basis. The City is required to contribute at an actuarially determined rate. Based on the July 1, 2015 actuarial report, the required employer contribution rate for fiscal year 2017 was 17.90% to 21.40%.

Employer contributions and employee contributions made by the employer to the Plan are recognized when due and the employer has made a formal commitment to provide the contributions. The City's proportionate share of employer contributions recognized by the Retirement System in the fiscal year ended June 30, 2016 (measurement period) was \$496.3 million. The Airport's allocation of employer contributions for fiscal year 2016 was \$33.0 million.

**Pension Liability, Pension Expenses and Deferred Outflows/Inflows of Resources Related to Pensions**

**Fiscal Year 2017**

As of June 30, 2017, the City reported net pension liabilities for its proportionate share of the pension liability of the Plan of \$5.48 billion. The City's net pension liability for the Plan is measured as the proportionate share of the net pension liability. The net pension liability of the Plan is measured as of June 30, 2016 (MD), and the total pension liability for the Plan used to calculate the net pension liability was determined by an actuarial valuation as of June 30, 2015 rolled forward to June 30, 2016, using standard update procedures. The City's proportion of the net pension liability was based on a projection of the City's long-term share of contributions to the pension plan relative to the projected contributions of all participating employers, actuarially determined. The Airport's allocation of the City's proportionate share of the net pension liability for each Plan as of June 30, 2016 and 2017 (reporting years) was \$144.3 million and \$359.6 million respectively. During the measurement year 2016 the increase in service costs, interest costs, change in benefits, change in assumptions, and difference between projected and actual investment earnings increased total pension liability. This was only partially offset by an increase in the discount rate, contributions, investment income, and actuarial experience gains, resulting in an overall increase in net pension liability.

For the year ended June 30, 2017, the City's recognized pension expense was \$1.8 billion including amortization of deferred outflow/inflow related pension items. The Airport's allocation of pension expense including amortization of deferred outflow/inflow related pension items was \$114.9 million. Pension expense increased significantly, largely due to the impact of changes in benefits, namely the updated Supplemental COLA assumptions and amortization of deferred inflows/outflows.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

At June 30, 2017, the Airport's proportionate share of the City's reported deferred outflows of resources and deferred inflows of resources related to pensions from the sources set forth below (in thousands).

**Schedule of Deferred Inflows and Outflows**

	<b>Deferred outflows of resources</b>	<b>Deferred inflows of resources</b>
Changes of assumptions	\$ 61,861	1,814
Net difference between projected and actual earnings on pension plan investments	49,167	—
Change in proportionate share	632	337
Difference between expected and actual experience	—	13,251
Pension contributions subsequent to the measurement date	34,083	—
Total	\$ 145,743	15,402

Amounts reported as deferred outflows (excluding pension contributions made subsequent to measurement date) and deferred inflows of resources will be amortized annually and recognized as pension expense as follows (in thousands):

	<b>Deferred outflows/ (inflows) of resources</b>
Fiscal year:	
2018	\$ 14,167
2019	14,167
2020	38,699
2021	29,225
Total	\$ 96,258

**Fiscal Year 2016**

As of June 30, 2016, the City reported net pension liabilities for its proportionate share of the pension liability of the Plan of \$2.16 billion. The City's net pension liability for the Plan is measured as the proportionate share of the net pension liability. The net pension liability of the Plan is measured as of June 30, 2015, and the total pension liability for the Plan used to calculate the net pension liability was determined by an actuarial valuation as of June 30, 2014, rolled forward to June 30, 2015, using standard update procedures. The City's proportion of the net pension liability was based on a projection of the City's long-term share of contributions to the pension plan relative to the projected contributions

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

of all participating employers, actuarially determined. The Airport's allocation of the City's proportionate share of the net pension liability for each Plan as of June 30, 2015 (MP) and 2014 (MP) was \$144.3 million and \$111.9 million, respectively. During the measurement period fiscal year 2015, there were no changes to benefits. The increase in service costs, interest costs, and decrease in the discount rate increased total pension liability and were only partially offset by contributions, investment income, and actuarial experience gains, resulting in an overall increase in net pension liability.

For the year ended June 30, 2016, the City's recognized pension expense was \$106.5 million including amortization of deferred outflow/inflow related pension items. The Airport's allocation of pension expense including amortization of deferred outflow/inflow related pension items was \$6.7 million. At June 30, 2016, the Airport's reported deferred outflows of resources and deferred inflows of resources related to pensions from the sources set forth below (in thousands).

**Schedule of Deferred Inflows and Outflows**

	<b>Deferred outflows of resources</b>	<b>Deferred inflows of resources</b>
Changes of assumptions	\$ 10,815	2,785
Net difference between projected and actual earnings on pension plan investments	—	34,976
Change in proportionate share	214	519
Difference between expected and actual experience	—	9,874
Pension contributions subsequent to the measurement date	<u>32,953</u>	<u>—</u>
Total	<u>\$ 43,982</u>	<u>48,154</u>

Amounts reported as deferred outflows (excluding pension contributions made subsequent to measurement date) and deferred inflows of resources will be amortized annually and recognized as pension expense as follows (in thousands):

	<b>Deferred outflows/ (inflows) of resources</b>
Fiscal year:	
2017	\$ (15,557)
2018	(15,557)
2019	(15,557)
2020	<u>9,546</u>
Total	<u>\$ (37,125)</u>

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**Actuarial Assumptions**

**Fiscal Year 2017**

A summary of the actuarial assumptions and methods used to calculate the Total Pension Liability as of June 30, 2016 (measurement period) is provided below, including any assumptions that differ from those used in the July 1, 2015 actuarial valuation. Refer to the July 1, 2015 actuarial valuation report for a complete description of all other assumptions, which can be found on the Retirement System's website <http://mysfers.org>.

Key actuarial assumptions:

Inflation	3.25%
Salary increases	3.75% plus merit component based on employee classification and years of service
Valuation date	June 30, 2015 updated to June 30, 2016
Measurement date	June 30, 2016
Actuarial cost method	Entry-Age Normal Cost Method
Expected rate of return	7.50%
Municipal bond yield	3.85% as of June 30, 2015 2.85% as of June 30, 2016 Bond Buyer 20-Bond GO Index, July 2, 2015 and June 30, 2016
Discount rate	7.46% as of June 30, 2015 7.50% as of June 30, 2016
Administrative expenses	0.45% of payroll as of June 30, 2015 0.60% of payroll as of June 30, 2016

	<b>Old Miscellaneous and all New Plans</b>	<b>Old Police &amp; Fire pre July 1, 1975 Retirements</b>	<b>Old Police &amp; Fire, Charters A8.595 and A8.596</b>	<b>Old Police &amp; Fire, Charters A8.559 and A8.585</b>
Basic COLA:				
June 30, 2015	2.00 %	3.00 %	4.00 %	5.00 %
June 30, 2016	2.00 %	2.70 %	3.30 %	4.40 %

Mortality rates for active members and healthy annuitants were based upon adjusted Employee and Healthy Annuitant CalPERS mortality tables projected generationally from the 2009 base year using a modified version of the MP-2015 projection scale.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**Fiscal Year 2016**

A summary of the actuarial assumptions and methods used to calculate the Total Pension Liability as of June 30, 2015 is provided below, including any assumptions that differ from those used in the July 1, 2014 actuarial valuation. Refer to the July 1, 2014 actuarial valuation report for a complete description of all other assumptions, which can be found on the Retirement System's website <http://mysfers.org/>.

Key actuarial assumptions:

Inflation	3.25%
Salary increases	3.75% plus merit component based on employee classification and years of service
Valuation date	June 30, 2014 updated to June 30, 2015
Measurement date	June 30, 2015
Actuarial cost method	Entry-Age Normal Cost Method
Expected rate of return	7.50%
Municipal bond yield	4.31% as of June 30, 2014 3.85% as of June 30, 2015 Bond Buyer 20-Bond GO Index, July 2, 2014 and July 2, 2015
Discount rate	7.58% as of June 30, 2014 7.46% as of June 30, 2015
Administrative expenses	0.45% of payroll

	<b>Old Miscellaneous and all New Plans</b>	<b>Old Police &amp; Fire pre July 1, 1975 Retirements</b>	<b>Old Police &amp; Fire, Charters A8.595 and A8.596</b>	<b>Old Police &amp; Fire, Charters A8.559 and A8.585</b>
Basic COLA:				
June 30, 2015	2.00 %	3.00 %	4.00 %	5.00 %

Mortality rates for active members were based upon the RP-2000 Employee Tables for Males and Females projected using Scale AA to 2030 for females and to 2005 for males. Mortality rates for healthy annuitants were based upon the RP-2000 Healthy Annuitant Tables for Males and Females projected using Scale AA to 2020.

**Discount Rate**

**Fiscal Year 2017**

The beginning and end of year measurements are based on different assumptions and contribution methods that result in different discount rates. The discount rate was 7.46% as of June 30, 2015 (measurement date) and 7.50% as of June 30, 2016 (measurement date).

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

The discount rate used to measure the Total Pension Liability as of June 30, 2016, was 7.50%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will continue to be made at the rates specified in the Charter. Employer contributions were assumed to be made in accordance with the contribution policy in effect for the July 1, 2015, actuarial valuation. That policy includes contributions equal to the employer portion of the Entry Age normal costs for members as of the valuation date, a payment for expected administrative expenses, and an amortization payment on the unfunded actuarial liability.

The amortization payment is based on closed periods that vary in length depending on the source. Charter amendments prior to July 1, 2014, are amortized over 20 years. After July 1, 2014, any Charter changes to active member benefits are amortized over 15 years and changes to inactive member benefits, including Supplemental COLAs, are amortized over 5 years. The remaining Unfunded Actuarial Liability not attributable to Charter amendments as of July 1, 2013, is amortized over a 19-year period commencing July 1, 2014. Experience gains and losses and assumption or method changes on or after July 1, 2014, are amortized over 20 years. For the July 1, 2016 valuation, the increases in the Unfunded Actuarial Liability attributable to the Supplemental COLAs granted on July 1, 2013 and July 1, 2014, are amortized over 17-years and 5-years, respectively. All amortization schedules are established as a level percentage of payroll so payments increase 3.75% each year. The Unfunded Actuarial Liability is based on an Actuarial Value of Assets that smooths investment gains and losses over five years and a measurement of the Actuarial Liability that excludes the value of any future Supplemental COLAs.

While the contributions and measure of Actuarial Liability in the valuation do not anticipate any future Supplemental COLAs, the projected contributions for the determination of the discount rate include the anticipated future amortization payments on future Supplemental COLAs for current members when they are expected to be granted. For members who worked after November 6, 1996 and before Proposition C passed, a Supplemental COLA is granted if the actual investment earnings during the year exceed the expected investment earnings on the Actuarial Value of Assets. For members who did not work after November 6, 1996 and before Proposition C passed, the Market Value of Assets must also exceed the actuarial liability at the beginning of the year for a Supplemental COLA to be granted. When a Supplemental COLA is granted, the amount depends on the amount of excess earnings and the basic COLA amount for each membership group. The large majority of members receive a 1.50% Supplemental COLA when granted.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

Because the probability of a Supplemental COLA depends on the current funded level of the System for certain members, Cheiron developed an assumption as of June 30, 2016 for the probability and amount of Supplemental COLA for each future year. The table below shows the net assumed Supplemental COLA for members with a 2.00% Basic COLA for sample years.

**Assumed Supplemental COLA for Members with a 2.00% Basic COLA**

	<b>1996 – Prop C</b>	<b>Before November 6, 1996 or after Prop C</b>
Fiscal year:		
2018	0.750 %	— %
2023	0.750	0.220
2028	0.750	0.322
2033	0.750	0.370
2038+	0.750	0.375

The projection of benefit payments to current members for determining the discount rate includes the payment of anticipated future Supplemental COLAs.

Based on these assumptions, the System’s fiduciary net position was projected to be available to make projected future benefit payments for current members until fiscal year end 2093 when only a portion of the projected benefit payments can be made from the projected fiduciary net position. Projected benefit payments are discounted at the long-term expected return on assets of 7.50% to the extent the fiduciary net position is available to make the payments and at the municipal bond rate of 2.85% to the extent they are not available. The single equivalent rate used to determine the Total Pension Liability as of June 30, 2016, is 7.50%.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

The long-term expected rate of return on pension plan investments was 7.50%. It was set by the Retirement Board after consideration of both expected future returns and historical returns experienced by the Retirement System. Expected future returns were determined by using a building-block method in which best-estimate ranges of expected future real rates of return were developed for each major asset class. These ranges were combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Target allocation and best estimates of geometric long-term expected real rates of return (net of pension plan investment expense and inflation) for each major asset class are summarized in the following table:

<b>Asset class</b>	<b>Target allocation</b>	<b>Long-term expected real rate of return</b>
Global equity	40 %	5.1 %
Fixed income	20	1.1
Private equity	18	6.3
Real assets	17	4.3
Hedge funds/absolute return	5	3.3
	100 %	

**Fiscal Year 2016**

The beginning and end of year measurements are based on different assumptions and contribution methods that result in different discount rates. The discount rate was 7.58% as of June 30, 2014, and 7.46% as of June 30, 2015.

The discount rate used to measure the total pension liability as of June 30, 2015, was 7.46%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will continue to be made at the rates specified in the Charter. Employer contributions were assumed to be made in accordance with the contribution policy in effect for July 1, 2014 actuarial valuation. That policy includes contributions equal to the employer portion of the Entry Age normal costs for members as of the valuation date, a payment for the expected administrative expenses, and an amortization payment on the unfunded actuarial liability. The amortization payment is based on closed periods that vary in length depending on the source. Charter amendments prior to July 1, 2014, are amortized over 20 years. After July 1, 2014, any Charter changes to active member benefits are amortized over 15 years and changes to inactive member benefits, including Supplemental COLAs, are amortized over 5 years. The remaining unfunded actuarial liability not attributable to Charter amendments as of July 1, 2013, is amortized over a 19-year period commencing July 1, 2014. Experience gains and losses and assumption or method changes on or after July 1, 2014, are amortized over 20 years. All amortization schedules are established as a level percentage of payroll so payments increase 3.75% each year. The unfunded actuarial liability is based on an actuarial value of assets that smooths investment gains and losses over five years and a measurement of the actuarial liability that excludes the value of any future Supplemental COLAs.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

While the contributions and measure of actuarial liability in the valuation do not anticipate any Supplemental COLAs, the projected contributions for the determination of the discount rate include the anticipated future amortization payments on future Supplemental COLA's for current members when they are expected to be granted. For a Supplemental COLA to be granted the market value of assets must exceed the actuarial liability at the beginning of the year and the actual investment earnings during the year must exceed the expected investment earnings on the actuarial value of assets. When a Supplemental COLA is granted, the amount depends on the amount of excess earnings and the basic COLA amount for each membership group. In most cases, the large majority of members receive a 1.50% Supplemental COLA.

Because the probability of a Supplemental COLA depends on the current funded level of the System, we developed an assumption as of June 30, 2015, of the probability and amount of Supplemental COLA for each future year. The table below shows the net assumed Supplemental COLAs for members with a 2.00% basic COLA for sample years.

**Assumed Supplemental COLA for Members  
with a 2.00% Basic COLA**

	<u>Assumption</u>
Fiscal year:	
2016	— %
2021	0.345
2026	0.375
2031	0.375
2036+	0.375

The projection of benefit payments to current members for determining the discount rate includes the payment of anticipated future Supplemental COLAs.

Based on these assumptions, the Retirement System's fiduciary net position was projected to be available to make projected future benefit payments for current members until fiscal year end 2076 when only a portion of the projected benefit payments can be made from the projected fiduciary net position. Projected benefit payments are discounted at the long-term expected return on assets of 7.50% to the extent the fiduciary net position is available to make the payments and at the municipal bond rate of 3.85% to the extent they are not available. The single equivalent rate used to determine the Total Pension Liability as of June 30, 2015, is 7.46%.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

The long-term expected rate of return on pension plan investments was 7.50%. It was set by the Retirement Board after consideration of both expected future returns and historical returns experienced by the Retirement System. Expected future returns were determined by using a building-block method in which best-estimate ranges of expected future real rates of return were developed for each major asset class. These ranges were combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Target allocation and best estimates of geometric long-term expected real rates of return (net of pension plan investment expense and inflation) for each major asset class are summarized in the following table:

<b>Asset class</b>	<b>Target allocation</b>	<b>Long-term expected real rate of return</b>
Global equity	40 %	5.1 %
Fixed income	20	1.2
Private equity	18	7.5
Real assets	17	4.1
Hedge funds/absolute return	5	3.5
	100 %	

**Sensitivity of Proportionate Share of the Net Pension Liability to Changes in the Discount Rate**

The following presents the Airport's allocation of the employer's proportionate share of the net pension liability for the Plan, calculated using the discount rate, as well as what the Airport's allocation of the employer's proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1% lower or 1% higher than the current rate (in thousands):

**Fiscal Year 2017**

<b>Employer</b>	<b>1% decrease share of NPL @ 6.50%</b>	<b>Share of NPL @ 7.50%</b>	<b>1% increase share of NPL @ 8.50%</b>
Airport	\$ 569,852	359,599	185,694

**Fiscal Year 2016**

<b>Employer</b>	<b>1% decrease share of NPL @ 6.46%</b>	<b>Share of NPL @ 7.46%</b>	<b>1% increase share of NPL @ 8.46%</b>
Airport	\$ 319,033	144,271	(2,294)

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**(b) Health Care Benefits**

Health care benefits of Airport employees, retired employees, and surviving spouses are financed by beneficiaries and by the City through the City and County of San Francisco Health Service System (the Health Service System). The Airport's annual contribution, which amounted to approximately \$39.7 million and \$36.7 million in fiscal years 2017 and 2016, respectively, is determined by a Charter provision based on similar contributions made by the 10 most populous counties in California.

Included in these amounts are \$10.9 million and \$10.3 million for fiscal years 2017 and 2016, respectively, to provide postretirement benefits for retired Airport employees on a pay-as-you-go basis, as well as \$1.0 million and \$0.5 million for fiscal years 2017 and 2016, respectively, to fund the Airport's share of the City's retiree health care trust fund. The City did not allocate to the Airport any additional share of the payments made by the City's Health Service System for postretirement health benefits in fiscal years 2017 and 2016.

The City has determined a Citywide annual required contribution (ARC), interest on net other postemployment benefits other than pensions (OPEB), ARC adjustment, and OPEB cost based upon an actuarial valuation performed in accordance with GASB 45, by the City's actuaries. The City's allocation of the OPEB-related costs to Airport for the years ended June 30, 2017 and 2016, based upon its percentage of Citywide payroll costs is presented below.

The following table shows the components of the City's annual OPEB allocations for the Airport for the fiscal year, the amount contributed to the plan, and changes in the net OPEB obligation (in thousands):

	<u>2017</u>	<u>2016</u>
Annual required contribution	\$ 22,129	18,797
Interest on net OPEB obligation	6,013	5,969
Adjustment to ARC	<u>(2,432)</u>	<u>(4,853)</u>
Annual OPEB cost	25,710	19,913
Contribution made	<u>(11,894)</u>	<u>(10,858)</u>
Increase in net OPEB obligation	13,816	9,055
Net OPEB obligation – beginning of year	<u>124,352</u>	<u>115,297</u>
Net OPEB obligation – end of year	<u>\$ 138,168</u>	<u>124,352</u>

As of June 30, 2017, the Airport has set aside \$115.5 million in a separate fund for purposes of the OPEB obligations and such amount is included in Unrestricted Cash and Investments in the accompanying statements of net position. The disposition of this fund is under management's discretion and has not been placed in a trust fund.

The City issues a publicly available financial report for Citywide level that includes the complete note disclosures and required supplementary information related to the City's postretirement health care

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

obligations. The report may be obtained by writing to City and County of San Francisco, Office of the Controller, 1 Dr. Carlton B. Goodlett Place, Room 316, San Francisco, California 94102, or by calling (415) 554-7500.

**(11) Related-Party Transactions**

The Airport receives services from various other City departments that are categorized in the various operating expense line items in the statements of revenues, expenses, and changes in net position. These services include utilities provided to tenants (see note 2m) and the Airport. The cost of all services provided to the Airport by the City work order system totaled approximately \$147.4 million and \$140.7 million in fiscal years 2017 and 2016, respectively. Included in personnel operating expenses are approximately \$74.6 million and \$70.5 million in fiscal years 2017 and 2016, respectively, related to police and fire services.

The Lease and Use Agreement with the airlines provides for continuing annual service payments to the City equal to 15% of concession revenues (net of certain adjustments), but not less than \$5.0 million per fiscal year. Annual service payments to the City were \$45.0 million and \$42.5 million in fiscal years 2017 and 2016, respectively. The annual service payments are reported as transfers in the statements of revenues, expenses, and changes in net position.

**(12) Passenger Facility Charges**

As of June 30, 2017, the FAA has approved several Airport applications to collect and use PFCs (from PFC #2 to PFC #7) in a total cumulative collection amount of \$2.0 billion and the cumulative use amount of \$1.7 billion, with a final charge expiration date estimated to be February 1, 2030. During the fiscal years ended June 30, 2014, 2015 and 2017, the following changes occurred to the Airport's PFC collection authorizations.

In October 2013, the FAA approved the Airport's fifth application (PFC #5) for \$610.5 million to pay for debt service related costs associated with the reconstruction and reopening of Terminal 2 and Boarding Area D renovations. The earliest charge effective date is January 1, 2017 and is based upon the estimated charge expiration date of PFC #3. The FAA estimates the charge expiration date for PFC #5 to be June 1, 2023. In November 2014, the FAA approved an amendment to PFC #5 that increased the imposition and use authority by \$131.3 million from \$610.5 million to \$741.7 million. The estimated expiration date for PFC #5 was changed from June 1, 2023 to October 1, 2024. The Airport is working with the FAA to change the expiration date for PFC #3 and the charge effective date for PFC #5 from January 1, 2017 to November 1, 2013, because PFC #3 was fully collected earlier than originally anticipated due to increased passenger levels.

In June 2015, the FAA approved the Airport's sixth PFC application (PFC #6) for \$141.1 million to pay for debt service related to the Runway Safety Area Program and the installation of ten passenger boarding bridges at Boarding Area E. The FAA estimates the charge expiration date for PFC #6 to be March 1, 2026.

In May 2017, the FAA approved the Airport's seventh PFC application (PFC #7) for collection of \$319.7 million to pay for debt service associated with the AirTrain Extension and Improvements Project at the Airport. The approval of PFC #7 for use is pending. FAA estimates the charge expiration date for PFC #7 to be February 1, 2030.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

PFC collections and related interest earned for the years ended June 30, 2017 and 2016, are as follows (in thousands):

	<b>2017</b>	<b>2016</b>
Amount collected	\$ 103,955	99,131
Interest earned	1,972	1,070
Total	\$ 105,927	100,201

Interest earned on PFC revenues is included in investment income in the accompanying financial statements.

**(13) Commitments, Litigation, and Contingencies**

**(a) Commitments**

Purchase commitments for construction, material, and services as of June 30, 2017 are as follows (in thousands):

Construction	\$ 188,826
Operating	28,896
Total	\$ 217,722

The Airport's Noise Insulation Program was implemented to mitigate the aircraft noise impact in the surrounding communities. This involved execution of a Memorandum of Understanding in 1992 with neighboring communities to insulate eligible properties and acquire easements for noise, vibration, and other effects resulting from aircraft operations at the Airport, and implementation of a supplemental program in 2000 to complete the work. This program was managed by the local communities with Airport funds (using bond proceeds, operating and other internally generated funds), as well as federal grants.

In fiscal year 2008, these components of the program were finalized and a new phase was started, with the Airport managing all new noise insulation work directly. In fiscal year 2017, the Airport disbursed approximately \$77,000 in this new phase of the program (\$50,000 in federal grants and \$27,000 in Airport funds). In fiscal year 2016, the Airport disbursed approximately \$33,000 in this phase of the program (\$300 in federal grants and \$32,700 in Airport funds). As of June 30, 2017, the cumulative disbursements of Airport funds under this program were approximately \$122.3 million.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**(b) Security Deposits**

Airline leases and permits require airlines to deliver a security deposit to the Airport prior to the effective date of the lease or permit. Such deposits are either in the form of (a) a surety bond payable to the City or (b) a letter of credit naming the City as a beneficiary. Under the 2011 Lease and Use Agreement, security deposits are renewed and increased annually in order to equal to two months of fees, as established by the Airport Director each fiscal year in accordance with Rates and Charges. Under most other leases and permits at the Airport, a deposit equal to six months is required.

The bonds or letters of credit are required to be kept in full force and effect at all times to ensure the faithful performance by the respective lessee or permittee of all covenants, terms, and conditions of the leases or permits, including payment of the monthly fees.

**(c) Litigation**

The Airport is a defendant in various legal actions and claims that arise during the normal course of business. Insurance policies cover certain actions, claims, and defense costs. Only those items not covered by insurance are included in the financial statements. The Airport's potential liabilities have been estimated and reported in the financial statements, in conformity with GAAP.

**(d) Risk Management**

Under the 1991 Master Bond Resolution, the Airport is required to procure or provide and maintain insurance, or to self-insure, against such risks as are usually insured by other major airports in amounts adequate for the risk insured against, as determined by the Airport, and to file with the Trustee each year a written summary of all insurance coverage then in effect. The Airport is not required to nor does it carry insurance or self-insure against any risks due to land movement or seismic activity.

The Airport has an ongoing loss prevention program, a safety officer, property loss control, and ongoing employee training programs. The Airport has instituted an Enterprise Risk Management Program by implementing a comprehensive risk identification, assessment, and treatment protocol to address key risks that may adversely affect the Airport's ability to meet its business goals and objectives. The Airport carries general liability insurance coverage of \$1.0 billion with \$250.0 million in War Perils Liability, subject to a deductible of \$10,000 per single occurrence. The Airport also carries commercial property insurance coverage for full replacement value on all facilities at the Airport owned by the Airport, subject to a limit of \$1.0 billion per single occurrence and a deductible of \$500,000 per single occurrence.

Additionally, tenants and contractors on all contracts are required to carry commercial general and automobile liability insurance in various amounts, naming the Airport as additional insured. The Airport is self-insured as part of the City's workers' compensation program. From current revenues, the Airport pays losses from workers' compensation claims of Airport employees, the deductible portion of insured losses, and losses from other uninsured risks. The Airport carries public officials' liability and employment practices liability coverage of \$5.0 million, subject to a deductible of \$100,000 per single occurrence for each wrongful act other than employment practices' violations, and \$250,000 per each occurrence for each employment practices' violation. The Airport also carries insurance for public employee dishonesty, fine arts, electronic data processing equipment, and watercraft liability for Airport

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

fire and rescue vessels and Target Range Liability for the San Francisco Police Department's firearms range located at the Airport.

Prior to September 11, 2001, the Airport had liability insurance coverage in the amount of \$750.0 million per occurrence for war, terrorism, and hijacking. Immediately following the events of September 11, 2001, insurers canceled the coverage for war, terrorism, and hijacking for all airports, including the Airport, and for all airlines around the country. A number of insurers now provide this coverage through the Terrorism Risk Insurance Program Reauthorization Act (TRIPA) of 2015. However, the scope of the coverage is limited and the premiums are high. Due to these factors, the Airport, in consultation with the City's Director of Risk Management, has elected not to secure such coverage.

The estimated claims payable are actuarially determined as part of the City's self-insurance program. Changes in the reported amount resulted from the following activity (in thousands):

Balance as of June 30, 2015	\$	3,772
Claim payments		(2,403)
Claims and changes in estimates		<u>108</u>
Balance as of June 30, 2016		1,477
Claim payments		(796)
Claims and changes in estimates		<u>174</u>
Balance as of June 30, 2017	\$	<u><u>855</u></u>

The Airport is self-insured as part of the City's program for workers' compensation. All self-insurance claims are processed by the City. Liability and risk are retained by the Airport. Accrued workers' compensation includes provisions for claims reported and claims incurred but not reported. This accrued workers' compensation liability is actuarially determined as part of the City's program and is as follows (in thousands):

Balance as of June 30, 2015	\$	6,081
Claim payments		(2,078)
Claims and changes in estimates		<u>2,654</u>
Balance as of June 30, 2016		6,657
Claim payments		(2,416)
Claims and changes in estimates		<u>3,095</u>
Balance as of June 30, 2017	\$	<u><u>7,336</u></u>

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**(e) Grants**

Grants that the Airport receives are subject to audit and final acceptance by the granting agency. Current and prior year costs of such grants are subject to adjustment upon audit.

**(f) Financial Guarantees**

The Airport participates in the City and County of San Francisco's surety bond program which provides training, support and City-funded surety bond guaranties for local business enterprise (LBE) contractors who want to bid on construction contracts for City departments (including the Airport), but cannot qualify for the required surety bonds on their own. If program parameters are met, the Airport may guaranty the lesser of \$750,000 or 40% of the face amount of the surety bond, which would enable the LBE contractor to bid on Airport construction work. There were no outstanding Airport guaranties under the program as of June 30, 2017.

**(g) Concentration of Credit Risk**

The Airport leases facilities to the airlines pursuant to the Lease and Use Agreement (see note 2j) and to other businesses to operate concessions at the Airport. For fiscal years ended June 30, 2017 and 2016, revenues realized from the following source exceeded 5% of the Airport's total operating revenues:

	2017	2016
United Airlines	23.9 %	23.5 %

**(h) Noncancelable Operating Leases**

The Airport has noncancelable operating leases for certain buildings and equipment that require the following minimum annual payments, net of sublease income (in thousands):

Fiscal year ending:		
2018	\$	148
2019		—
Total	\$	148

Net operating lease expense incurred for the fiscal year ended 2017 was the same as 2016 at approximately \$0.2 million.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Financial Statements

June 30, 2017 and 2016

**(14) Subsequent Events**

**(a) Credit Rating Changes**

On October 3, 2017 Fitch downgraded the long-term credit rating of Wells Fargo Bank, N.A. (Wells Fargo), which provides a \$100 million principal amount irrevocable letter of credit in support of the Commission's Second Series Variable Rate Revenue Refunding Bonds, Issue 36A. As a result, on October 4, 2017, Fitch lowered its long-term jointly supported rating on the Issue 36A Bonds from "AAA" to "AA+." Fitch's short-term rating on the Issue 36A Bonds (F1+) remained unchanged. Fitch's underlying long-term rating on the Issue 36A Bonds (A+) also remained unchanged.

**(b) Issuance of Capital Plan Bonds and Refunding Bonds and Swaps Termination**

On October 11, 2017, the Commission priced and expects to issue on October 31, 2017 approximately \$571.6 million in Second Series Revenue Bonds, Series 2017A and 2017B, a portion of which will be used to finance and refinance (through the repayment of \$300.5 million of commercial paper notes) a portion of the costs of capital improvements to the Airport; \$45.1 million in Second Series Revenue Refunding Bonds, Series 2017C, to fund a deposit to the Contingency Account, to finance a \$12.6 million termination payment on a portion of the interest rate swaps associated with the Second Series Revenue Refunding Bonds, Issue 36A, 36B, and 36C, and to pay costs of issuance of its Second Series Revenue Refunding Bonds, Series 2017D; and \$144.8 million in Second Series Revenue Refunding Bonds, Series 2017D, to current refund the remaining \$164.6 million principal amount of the Second Series Revenue Refunding Bonds, Issue 36A, 36B, and 36C. The Commission also expects to issue on February 1, 2018, \$115.4 million in Second Series Revenue Refunding Bonds, Series 2018A, under a forward purchase agreement executed on October 11, 2017, for the purpose of current refunding \$140.1 million in outstanding Second Series Revenue Refunding Bonds, Issue 34E. Moody's, S&P, and Fitch assigned credit ratings of "A1", "A+", and "A+" to these bonds.

The Commission issued an additional \$152.4 million in subordinate commercial paper notes on July 27, 2017, for a total of \$330.4 million subordinate commercial paper notes outstanding. On November 2, 2017, the Commission expects proceeds of the Series 2017A and 2017B Bonds to be used to repay \$300.5 million in subordinate commercial paper notes, leaving a total of \$29.8 million subordinate commercial paper notes outstanding.

**(c) Interest Rate Swaps – LIBOR**

In July 2017, the United Kingdom (UK) Financial Conduct Authority, the UK markets regulator, indicated that the London Interbank Overnight Rate (LIBOR) would be phased out by the end of 2021. The Commission's interest rate swap agreements calculate the variable rate payment owed from each counterparty to the Airport each month using LIBOR plus a certain spread. At least a portion of the Airport's swaps are not scheduled to terminate until May 1, 2030. The Commission expects its interest rate swap agreements to be modified to reflect the permanent discontinuation of LIBOR and its substitution with a new variable rate benchmark or variable rate-setting mechanism.

**SCHEDULE OF PASSENGER FACILITY CHARGE  
REVENUES AND EXPENDITURES**

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Schedule of Passenger Facility Charge Revenues and Expenditures

Years ended June 30, 2017 and 2016

(In thousands)

	<b>Passenger Facility Charge revenues</b>	<b>Interest earned</b>	<b>Total revenues</b>	<b>Expenditures on approved projects</b>	<b>Revenues over (under) expenditures on approved projects</b>
Program to date as of June 30, 2015	\$ 971,217	17,251	988,468	(837,629)	150,839
Fiscal year 2015 – 2016 transactions:					
Reversal of prior year passenger facility charges accrual	(9,649)	—	(9,649)	—	(9,649)
Quarter ended September 30, 2015	24,574	243	24,817	—	24,817
Quarter ended December 31, 2015	22,457	212	22,669	—	22,669
Quarter ended March 31, 2016	23,977	305	24,282	—	24,282
Quarter ended June 30, 2016	27,424	360	27,784	(43,110)	(15,326)
Unrealized loss on investments	—	(50)	(50)	—	(50)
Passenger facility charges accrual	10,348	—	10,348	—	10,348
Total fiscal year 2015 – 2016 transactions	99,131	1,070	100,201	(43,110)	57,091
Program to date as of June 30, 2016	1,070,348	18,321	1,088,669	(880,739)	207,930
Fiscal year 2016 – 2017 transactions:					
Reversal of prior year passenger facility charges accrual	(10,348)	—	(10,348)	—	(10,348)
Quarter ended September 30, 2016	25,802	414	26,216	—	26,216
Quarter ended December 31, 2016	24,041	421	24,462	—	24,462
Quarter ended March 31, 2017	20,150	553	20,703	—	20,703
Quarter ended June 30, 2017	27,294	731	28,025	(23,363)	4,662
Unrealized loss on investments	—	(147)	(147)	—	(147)
Passenger facility charges accrual	17,016	—	17,016	—	17,016
Total fiscal year 2016 – 2017 transactions	103,955	1,972	105,927	(23,363)	82,564
Program to date as of June 30, 2017	\$ 1,174,303	20,293	1,194,596	(904,102)	290,494

See accompanying independent auditors' report and notes to schedule of passenger facility charge revenues and expenditures.

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Notes to Schedule of Passenger Facility Charge Revenues and Expenditures  
Year ended June 30, 2017

**(1) General**

The accompanying schedule of Passenger Facility Charge (PFC) revenues and expenditures includes activities related to applications 02-02-C-00-SFO, 03-03-C-01-SFO, 11-05-C-01-SFO, 13-06-C-00-SFO and 17-07-I-00-SFO of the PFC program of the Airport Commission, City and County of San Francisco, San Francisco International Airport (the Airport). The level of PFCs authorized, charge effective dates, and approved collection amounts of the Airport's PFC program are as follows:

<u>Application number</u>	<u>Level of PFCs authorized</u>	<u>Charge effective date for collection</u>	<u>Amounts approved for collection (in thousands)</u>
02-02-C-00-SFO	\$ 4.50	October 1, 2001	\$ 224,035
03-03-C-01-SFO	4.50	November 1, 2005	609,108
11-05-C-01-SFO	4.50	January 1, 2017	741,744
13-06-C-00-SFO	4.50	October 1, 2024	141,076
17-07-I-00-SFO	3.00	March 1, 2026	<u>319,711</u>
Total			<u>\$ 2,035,674</u>

**(2) Basis of Accounting – Schedule of Passenger Facility Charge Revenues and Expenditures**

The accompanying Schedule of Passenger Facility Charge Revenues and Expenditures (the Schedule) has been prepared on the accrual basis of accounting which is described in note 2a of the Airport's basic financial statements.



KPMG LLP  
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San Francisco, CA 94105

## **Independent Auditors' Report on Internal Control over Financial Reporting Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards***

The Honorable Mayor and Board of Supervisors  
City and County of San Francisco:

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Airport Commission, City and County of San Francisco, San Francisco International Airport (the Airport), an enterprise fund of the City and County of San Francisco, California (the City), which comprise the statement of financial position as of and for the year ended June 30, 2017, and the related statements of revenues, expenses, and changes in financial position, and cash flows for the year then ended, and the related notes to the financial statements, and have issued a report thereon dated October 20, 2017.

### **Internal Control over Financial Reporting**

In planning and performing our audit of the financial statements, we considered the Airport's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Airport's internal control. Accordingly, we do not express an opinion on the effectiveness of the Airport's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

### **Compliance and Other Matters**

As part of obtaining reasonable assurance about whether the Airport's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.



### **Purpose of this Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Airport's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Airport's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

KPMG LLP

San Francisco, California  
October 20, 2017

# **PASSENGER FACILITY CHARGE PROGRAM AUDIT REPORT**



KPMG LLP  
Suite 1400  
55 Second Street  
San Francisco, CA 94105

## **Independent Auditors' Report on Compliance with Requirements That Could Have a Direct and Material Effect on the Passenger Facility Charge Program and on Internal Control over Compliance in Accordance with the Passenger Facility Charge Audit Guide for Public Agencies**

The Honorable Mayor and Board of Supervisors  
City and County of San Francisco:

### **Report on Compliance for Passenger Facility Charge Program**

We have audited the Airport Commission, City and County of San Francisco, San Francisco International Airport's (the Airport) compliance with the types of compliance requirements described in the Passenger Facility Charge Audit Guide for Public Agencies, issued by the Federal Aviation Administration (the Guide) that could have a direct and material effect on the Airport's passenger facility charge program for the year ended June 30, 2017.

#### *Management's Responsibility*

Management is responsible for compliance with the requirements of laws, regulations, contracts, and grants applicable to the passenger facility charge program.

#### *Auditors' Responsibility*

Our responsibility is to express an opinion on compliance for the Airport's passenger facility charge program based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the Guide. Those standards and the Guide require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on passenger facility charge occurred. An audit includes examining, on a test basis, evidence about the Airport's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for the passenger facility charge program. However, our audit does not provide a legal determination of the Airport's compliance.

#### *Opinion*

In our opinion, the Airport complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on the passenger facility charge program for the year ended June 30, 2017.

### **Report on Internal Control over Compliance**

Management of the Airport is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the Airport's internal control over compliance with the types of requirements that could have a direct and material effect on the passenger facility charge program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance and to test and report on internal control over compliance in accordance with the Guide, but not for the purpose



of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the Airport's internal control over compliance.

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A material weakness in internal control over compliance is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A significant deficiency in internal control over compliance is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Guide. Accordingly, this report is not suitable for any other purpose.

*KPMG LLP*

San Francisco, California  
October 20, 2017

**AIRPORT COMMISSION  
CITY AND COUNTY OF SAN FRANCISCO  
SAN FRANCISCO INTERNATIONAL AIRPORT**

Schedule of Findings and Responses

Year ended June 30, 2017

**I. Summary of Auditors' Results**

1. The type of report issued on whether the financial statements were prepared in accordance with generally accepted accounting principles: **Unmodified opinion**
2. Internal control deficiencies over financial reporting disclosed by the audit of the financial statements:
  - Material weaknesses: **No**
  - Significant deficiencies: **None Reported**
3. Noncompliance which is material to the financial statements: **No**
4. Internal control deficiencies over the passenger facility charge program:
  - Material weaknesses: **No**
  - Significant deficiencies: **None Reported**
5. The type of report issued on compliance for the passenger facility charge program: **Unmodified opinion**
6. Any audit findings: **No**

**II. Findings and Responses Related to the Passenger Facility Charge Program**

**None**

## APPENDIX C

### INFORMATION REGARDING DTC AND THE BOOK-ENTRY ONLY SYSTEM

#### Introduction

The information below concerning DTC and DTC's book-entry system has been obtained from DTC, and the Commission assumes no responsibility for the accuracy or completeness thereof. DTC has established a book-entry depository system pursuant to certain agreements between DTC and its participants (the "Participants"). The Commission is not a party to those agreements. The Commission and the Trustee do not have any responsibility or obligation to DTC Participants, to the persons for whom they act as nominees, or to any other person who is not shown on the registration books as being an owner of the Series 2019A-D Bonds, with respect to any matter including (i) the accuracy of any records maintained by DTC or any of its Participants, (ii) the payment by DTC or its Participants of any amount in respect of the principal of, redemption price of, or interest on the Series 2019A-D Bonds; (iii) the delivery of any notice which is permitted or required to be given to registered owners under the 1991 Master Resolution; (iv) the selection by DTC or any of its Participants of any person to receive payment in the event of a partial redemption of the Series 2019A-D Bonds; (v) any consent given or other action taken by DTC as registered owner; or (vi) any other matter. The Commission and the Trustee cannot and do not give any assurances that DTC, its Participants or others will distribute payments of principal of or interest on the Series 2019A-D Bonds paid to DTC or its nominee, as the registered owner, or give any notices to the Beneficial Owners or that they will do so on a timely basis or will serve and act in a manner described in this Official Statement.

#### General

The Depository Trust Company ("DTC"), New York, New York, will act as securities depository for the Series 2019A-D Bonds. The Series 2019A-D Bonds will be issued as fully registered securities registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully registered Series 2019A-D Bond certificate will be issued for each maturity and series of Series 2019A-D Bonds, each in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world's largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). DTC has a Standard & Poor's rating of AA+. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at [www.dtcc.com](http://www.dtcc.com). The information contained in such website is not incorporated by reference herein.

Purchases of the Series 2019A-D Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series 2019A-D Bonds on DTC's records. The ownership interest of each actual purchaser of each Series 2019A-D Bond ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well

as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Series 2019A-D Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the Series 2019A-D Bonds, except in the event that use of the book-entry system for the Series 2019A-D Bonds is discontinued.

To facilitate subsequent transfers, all Series 2019A-D Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Series 2019A-D Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Series 2019A-D Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Series 2019A-D Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of the Series 2019A-D Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Series 2019A-D Bonds, such as redemptions, tenders, defaults, and proposed amendments to the authorizing documents. For example, Beneficial Owners of the Series 2019A-D Bonds may wish to ascertain that the nominee holding the Series 2019A-D Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the Series 2019A-D Bonds within an issue are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Series 2019A-D Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Commission as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Series 2019A-D Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal and interest payments on the Series 2019A-D Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Commission or the Trustee, on payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Trustee or the Commission, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Trustee, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

**SO LONG AS CEDE & CO. IS THE REGISTERED OWNER OF THE SERIES 2019A-D BONDS, AS NOMINEE OF DTC, REFERENCES HEREIN TO THE OWNERS OR OWNERS OF THE SERIES 2019A-D BONDS SHALL MEAN CEDE & CO., AS AFORESAID, AND SHALL NOT MEAN THE BENEFICIAL OWNERS OF THE SERIES 2019A-D BONDS.**

#### **Discontinuance of DTC Services**

DTC may discontinue providing its services as depository with respect to the Series 2019A-D Bonds at any time by giving reasonable notice to the Commission or the Trustee. Under such circumstances, in the event that a

successor depository is not obtained, Series 2019A-D Bond certificates will be printed and delivered as described in the 1991 Master Resolution.

The Commission may decide to discontinue use of the system of book-entry transfers through DTC (or a successor securities depository). In that event, Series 2019A-D Bond certificates will be printed and delivered as described in the 1991 Master Resolution.

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## APPENDIX D

### SUMMARY OF CERTAIN PROVISIONS OF THE 1991 MASTER RESOLUTION

The following is a summary of certain provisions contained in Resolution No. 91-0210, adopted by the Commission on December 3, 1991 (the "1991 Master Resolution"), as subsequently amended and supplemented, and is not to be considered as a full statement thereof. See also "DESCRIPTION OF THE SERIES 2019A-D BONDS." Taken together, the 1991 Master Resolution, as amended and supplemented (collectively, the "Supplemental Resolutions"), and certificates of additional terms are herein called the "Resolution," to which certain references below are made. Furthermore, reference is made to the Resolution for full details of the terms of the Series 2019A-D Bonds, the application of revenues therefor, and the security provisions pertaining thereto. Capitalized terms used herein and not otherwise defined herein have the meanings assigned to them in the Resolution. As noted in this Official Statement under the caption "PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION" (which Proposed Amendments are summarized in Appendix H—"SUMMARY OF PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION"), purchasers of the Series 2019A-D Bonds, by such purchase, consent to the Proposed Amendments, which Proposed Amendments, upon becoming effective, modify certain defined terms and other provisions of the 1991 Master Resolution summarized in this Appendix D.

#### Certain Definitions

*Act* means the Charter of the City and County of San Francisco, as supplemented and amended, all enactments of the Board adopted pursuant thereto, and all laws of the State of California incorporated therein by reference.

*Aggregate Maximum Annual Debt Service* means the maximum amount of Annual Debt Service on all Participating Series in any Fiscal Year during the period from the date of calculation to the final scheduled maturity of the Participating Series.

*Airport* means the San Francisco International Airport, located in San Mateo County, State of California, together with all additions, betterments, extensions and improvements thereto. Unless otherwise specifically provided in any Supplemental Resolution, the term shall include all other airports, airfields, landing places and places for the take-off and landing of aircraft, together with related facilities and property, located elsewhere, which are hereafter owned, controlled or operated by the Commission or over which the Commission has possession, management, supervision or control.

*Airport Consultant* means a firm or firms of national recognition with knowledge and experience in the field of advising the management of airports as to the planning, development, operation and management of airports and aviation facilities, selected and employed by the Commission from time to time.

*Amortized Bonds* means the maximum principal amount of any existing or proposed Commercial Paper Program authorized by the Commission to be Outstanding at any one time.

*Annual Debt Service* means the amount scheduled to become due and payable on the Outstanding Bonds or any one or more Series thereof in any Fiscal Year as (i) interest, plus (ii) principal at maturity, plus (iii) mandatory sinking fund redemptions. For purposes of calculating Annual Debt Service, the following assumptions shall be used:

- (a) All principal payments and mandatory sinking fund redemptions shall be made as and when the same shall become due;
- (b) Outstanding Variable Rate Bonds shall be deemed to bear interest during any period after the date of calculation at a fixed annual rate equal to the average of the actual rates on such Bonds for each day during the 365 consecutive days (or any lesser period such Bonds have been Outstanding) ending on the last day of the month next preceding the date of computation, or at the effective fixed annual rate thereon as a result of an interest rate swap with respect to such Bonds;

- (c) Variable Rate Bonds proposed to be issued shall be deemed to bear interest at a fixed annual rate equal to the estimated initial rate or rates thereon, as set forth in a certificate of a Financial Consultant dated within 30 days prior to the date of delivery of such Bonds, or at the effective fixed annual rate thereon as a result of an interest rate swap with respect to such Bonds;
- (d) Amortized Bonds shall be deemed to be amortized on a level debt service basis over a 20-year period beginning on the date of calculation at the Index Rate;
- (e) Payments of principal of and interest on Repayment Obligations shall be deemed to be payments of principal of and interest on Bonds to the extent provided in the Resolution; and
- (f) Capitalized interest on any Bonds and accrued interest paid on the date of initial delivery of any Series of Bonds shall be excluded from the calculation of Annual Debt Service if cash and/or Permitted Investments have been irrevocably deposited with and are held by the Trustee or other fiduciary for the Owners of such Bonds sufficient to pay such interest.

*Annual Service Payments* means amounts paid to the City pursuant to the Charter (pursuant to the Lease and Use Agreements, this amount is limited to approximately 15% of concession revenues at the Airport).

*Authorized Denominations* means with respect to the Series 2019A-D Bonds, \$5,000 or any integral multiple thereof.

*Bond Insurance Policy* means a municipal bond insurance policy insuring the payment of principal of and interest on all or a portion of a Series of Bonds.

*Bond Insurer* means the provider of a Bond Insurance Policy.

*Bonds* means any evidences of indebtedness for borrowed money issued from time to time by the Commission by the Resolution or by Supplemental Resolution, including but not limited to bonds, notes, bond anticipation notes, commercial paper, lease or installment purchase agreements or certificates of participation therein and Repayment Obligations to the extent provided in the Resolution.

*Business Day* means a day on which the principal office of the Trustee, any Paying Agent, the Remarketing Agent, the Credit Provider, if any, with respect to that Series of Bonds, the Liquidity Provider, if any, with respect to that Series of Bonds, or banks or trust companies in New York, New York, are not authorized or required to remain closed and on which the New York Stock Exchange is not closed.

*Closing Date* means the date upon which a Series of Bonds is initially issued and delivered in exchange for the proceeds representing the purchase price of such Series of Variable Rate Bonds paid by the original purchaser thereof.

*Code* means the Internal Revenue Code of 1986, as amended, and the applicable Treasury Regulations, rulings and procedures proposed or promulgated thereunder or under the Internal Revenue Code of 1954, as amended.

*Costs of Issuance* means payment of, or reimbursement of the Commission for, all reasonable costs incurred by the Commission in connection with the issuance of a Series of Bonds, including, but not limited to: (a) counsel fees related to the issuance of such Series of Bonds (including bond counsel, co-bond counsel, disclosure counsel, Trustee's counsel and the City Attorney); (b) financial advisor fees incurred in connection with the issuance of such Series of Bonds; (c) rating agency fees; (d) the initial fees and expenses of the Trustee, the Registrar, the Authenticating Agent and the Underwriters; (e) fees of any Credit Provider for the provision of a Credit Facility, as applicable; (f) accountant fees related to the issuance of such Series of Bonds; (g) printing and publication costs; (h) costs of engineering and feasibility studies necessary to the issuance of such Series of Bonds; and (i) any other cost incurred in connection with the issuance of the Bonds that constitutes an "issuance cost" within the meaning of Section 147(g) of the Code.

*Credit Facility* means a letter of credit, line of credit, standby purchase agreement, municipal bond insurance policy, surety bond or other financial instrument which obligates a third party to pay or provide funds for the payment

of the principal or purchase price of and/or interest on any Bonds and which is designated as a Credit Facility in the Supplemental Resolution authorizing the issuance of such Bonds.

*Credit Provider* means the person or entity obligated to make a payment or payments with respect to any Bonds under a Credit Facility and which is designated a Credit Provider in a Series Sale Resolution relating to such Series of Bonds or an alternate credit provider if an alternate credit facility is in effect with respect to such Series of Bonds.

*Electronic Means* means telecopy, telegraph, telex, facsimile transmission, e-mail transmission or other similar electronic means of communication of a written image, and shall include a telephonic communication promptly confirmed in writing or by electronic transmission of a written image.

*Event of Default* means any one or more of the events described hereinafter under the caption "Events of Default."

*Financial Consultant* means a firm or firms of financial advisors of national recognition with knowledge and experience in the field of municipal finance selected or employed by the Commission.

*Fiscal Year* means the one-year period beginning on July 1 of each year and ending on June 30 of the succeeding year, or such other one-year period as the Commission shall designate as its Fiscal Year.

*Government Certificates* means evidences of ownership of proportionate interests in future principal or interest payments of Government Obligations, including depository receipts thereof. Investments in such proportionate interests are required to be limited to circumstances wherein (i) a bank or trust company acts as custodian and holds the underlying Government Obligations; (ii) the owner of the investment is the real party in interest and has the right to proceed directly and individually against the obligor of the underlying Government Obligations; and (iii) the underlying Government Obligations are held in a special account, segregated from the custodian's general assets, and are not available to satisfy any claim of the custodian, or any person claiming through the custodian, or any person to whom the custodian may be obligated.

*Government Obligations* means direct and general obligations of, or obligations the timely payment of principal of and interest on which are unconditionally guaranteed by, the United States of America.

*Holder, Bondholder, Owner and Bondowner* mean the person or persons in whose name any Bond or Bonds are registered on the records maintained by the Registrar or, in the case of bearer obligations, who hold any Bond or Bonds, and shall include any Credit Provider to which a Repayment Obligation is then owed, to the extent that such Repayment Obligation is deemed to be a Bond pursuant to the Resolution.

*Independent Auditor* means a firm or firms of independent certified public accountants with knowledge and experience in the field of governmental accounting and auditing selected or employed by the City.

*Index Rate* means, unless otherwise provided in a Series Sale Resolution for a Variable Rate Bond in the Index Rate mode, the SIFMA Rate plus the Applicable Spread determined pursuant to the Resolution.

*Insolvent* is used in the Resolution to describe the Trustee, any Paying Agent, Authenticating Agent, Registrar, other agent appointed under the 1991 Master Resolution or any Credit Provider, if (a) such person has instituted proceedings to be adjudicated a bankrupt or insolvent, has consented to the institution of bankruptcy or insolvency proceedings against it, has filed a petition or answer or consent seeking reorganization or relief under the federal Bankruptcy Code or any other similar applicable federal or state law, or has consented to the filing of any such petition or to the appointment of a receiver, liquidator, assignee, trustee or sequestrator or other similar official of itself or of any substantial part of its property, or fails to timely controvert an involuntary petition filed against it under the federal Bankruptcy Code, or consents to the entry of an order for relief under the federal Bankruptcy Code or makes an assignment for the benefit of creditors or admits in writing its inability to pay its debts generally as they become due; or (b) a decree or order by a court having jurisdiction in the premises adjudging such person as bankrupt or insolvent, or approving as properly filed a petition seeking reorganization, arrangement, adjustment or composition

of or in respect of such person under the federal Bankruptcy Code or any other similar applicable federal or state law or for relief under the federal Bankruptcy Code after an involuntary petition has been filed against such person, or appointing a receiver, liquidator, assignee, trustee or sequestrator or other similar official of such person or of any substantial part of its property, or ordering the winding up or liquidation of its affairs, has been entered and has continued unstayed and in effect for a period of 90 consecutive days.

*Interest Payment Date* means with respect to the Series 2019A-D Bonds, May 1 and November 1 of each year, commencing May 1, 2019.

*Issue 1 Reserve Account* or *Original Reserve Account* means the Issue 1 Reserve Account established in the Reserve Fund pursuant to the 1991 Master Resolution as security for the Issue 1 Bonds and any other Participating Series of Bonds designated by Supplemental Resolution as being secured by the Issue 1 Reserve Account, including the Series 2019A Bonds and Series 2019C Bonds.

*Mandatory Sinking Fund Payment* means a principal amount of Bonds of a Series which is subject to mandatory redemption on a Mandatory Sinking Fund Redemption Date.

*Mandatory Sinking Fund Redemption Date* means each May 1 upon which Bonds of a Series are subject to mandatory redemption under the applicable Supplemental Resolutions.

*Maximum Annual Debt Service* means the maximum amount of Annual Debt Service in any Fiscal Year during the period from the date of calculation to the final scheduled maturity of the Bonds.

*Maximum Series Annual Debt Service* means the maximum amount of Annual Debt Service in any Fiscal Year during the period from the date of calculation to the final scheduled maturity of a single Series of Bonds.

*Net Revenues* means Revenues less Operation and Maintenance Expenses.

*Operation and Maintenance Expenses* means, for any period, all expenses of the Commission incurred for the operation and maintenance of the Airport, as determined in accordance with generally accepted accounting principles. Operation and Maintenance Expenses does not include: (a) the principal of, premium, if any, or interest on any Bonds, Subordinate Bonds or general obligation bonds issued by the City for Airport purposes; (b) any allowance for amortization, depreciation or obsolescence of the Airport; (c) any expense for which, or to the extent to which, the Commission is or will be paid or reimbursed from or through any source that is not included or includable as Revenues; (d) any extraordinary items arising from the early extinguishment of debt; (e) Annual Service Payments; (f) any costs, or charges made therefor, for capital additions, replacements, betterments, extensions or improvements to the Airport which, under generally accepted accounting principles, are properly chargeable to the capital account or the reserve for depreciation; and (g) any losses from the sale, abandonment, reclassification, revaluation or other disposition of any Airport properties. Operation and Maintenance Expenses shall include the payment of pension charges and proportionate payments to such compensation and other insurance or outside reserve funds as the Commission may establish or the Board of Supervisors may require with respect to employees of the Commission, as now provided in the Charter.

*Original Reserve Account* means the Issue 1 Reserve Account. See definition of “*Issue 1 Reserve Account*” above.

*Outstanding* means, as of any date of determination, all Bonds of such Series which have been executed and delivered under the 1991 Master Resolution except: (a) Bonds cancelled by the Trustee or delivered to the Trustee for cancellation; (b) Bonds which are deemed paid and no longer Outstanding as provided in the 1991 Master Resolution or in any Supplemental Resolution authorizing the issuance thereof; (c) Bonds in lieu of which other Bonds have been issued pursuant to the provisions of the 1991 Master Resolution or of any Supplemental Resolution authorizing the issuance thereof; and (d) for purposes of any consent or other action to be taken under the 1991 Master Resolution by the Holders of a specified percentage of Principal Amount of Bonds of a Series or all Series, Bonds held by or for the account of the Commission.

*Participating Series* means the Issue 1 Bonds and any other Series of Bonds designated pursuant to a Supplemental Resolution as being secured by the Issue 1 Reserve Account, including the Series 2019A Bonds and Series 2019C Bonds.

*Permitted Investments* means and includes any of the following, if and to the extent the same are at the time legal for the investment of the Commission's money:

- (a) Government Obligations and Government Certificates.
- (b) Obligations issued or guaranteed by any of the following:
  - (i) Federal Home Loan Banks System;
  - (ii) Export-Import Bank of the United States;
  - (iii) Federal Financing Bank;
  - (iv) Government National Mortgage Association;
  - (v) Farmers Home Administration;
  - (vi) Federal Home Loan Mortgage Corporation;
  - (vii) Federal Housing Administration;
  - (viii) Private Export Funding Corporation;
  - (ix) Federal National Mortgage Association;
  - (x) Federal Farm Credit System;
  - (xi) Resolution Funding Corporation;
  - (xii) Student Loan Marketing Association; and
  - (xiii) any other instrumentality or agency of the United States.
- (c) Pre-refunded municipal obligations rated in the highest rating category by at least two Rating Agencies and meeting the following conditions:
  - (i) such obligations are: (A) not subject to redemption prior to maturity or the Trustee has been given irrevocable instructions concerning their calling and redemption, and (B) the issuer of such obligations has covenanted not to redeem such obligations other than as set forth in such instructions;
  - (ii) such obligations are secured by Government Obligations or Government Certificates that may be applied only to interest, principal and premium payments of such obligations;
  - (iii) the principal of and interest on such Government Obligations or Government Certificates (plus any cash in the escrow fund with respect to such pre-refunded obligations) are sufficient to meet the liabilities of the obligations;
  - (iv) the Government Obligations or Government Certificates serving as security for the obligations have been irrevocably deposited with and are held by an escrow agent or trustee; and
  - (v) such Government Obligations or Government Certificates are not available to satisfy any other claims, including those against the trustee or escrow agent.
- (d) Direct and general long-term obligations of any State of the United States of America or the District of Columbia (a "State") to the payment of which the full faith and credit of such State is pledged and that are rated in either of the two highest rating categories by at least two Rating Agencies.
- (e) Direct and general short-term obligations of any State to the payment of which the full faith and credit of such State is pledged and that are rated in the highest rating category by at least two Rating Agencies.

(f) Interest-bearing demand or time deposits with, or interests in money market portfolios rated in the highest rating category by at least two Rating Agencies issued by, state banks or trust companies or national banking associations that are members of the Federal Deposit Insurance Corporation (“FDIC”). Such deposits or interests must either be: (i) continuously and fully insured by FDIC; (ii) if they have a maturity of one year or less, with or issued by banks that are rated in one of the two highest short term rating categories by at least two Rating Agencies; (iii) if they have a maturity longer than one year, with or issued by banks that are rated in one of the two highest rating categories by at least two Rating Agencies; or (iv) fully secured by Government Obligations and Government Certificates. Such Government Obligations and Government Certificates must have a market value at all times at least equal to the principal amount of the deposits or interests. The Government Obligations and Government Certificates must be held by a third party (who shall not be the provider of the collateral), or by any Federal Reserve Bank or depository, as custodian for the institution issuing the deposits or interests. Such third party must have a perfected first lien in the Government Obligations and Government Certificates serving as collateral, and such collateral must be free from all other third party liens.

(g) Eurodollar time deposits issued by a bank with a deposit rating in one of the two highest short-term deposit rating categories by at least two Rating Agencies.

(h) Long-term or medium-term corporate debt guaranteed by any corporation that is rated in one of the two highest rating categories by at least two Rating Agencies.

(i) Repurchase agreements with maturities of either (A) 30 days or less, or (B) longer than 30 days and not longer than one year provided that the collateral subject to such agreements are marked to market daily, entered into with financial institutions such as banks or trust companies organized under State or federal law, insurance companies, or government bond dealers reporting to, trading with, and recognized as a primary dealer by, the Federal Reserve Bank of New York and a member of the Security Investors Protection Corporation, or with a dealer or parent holding company that is rated investment grade (“A” or better) by at least two Rating Agencies. The repurchase agreement must be in respect of Government Obligations and Government Certificates or obligations described in paragraph (b) of this definition. The repurchase agreement securities and, to the extent necessary, Government Obligations and Government Certificates or obligations described in paragraph (b), exclusive of accrued interest, shall be maintained in an amount at least equal to the amount invested in the repurchase agreements. In addition, the provisions of the repurchase agreement shall meet the following additional criteria:

(1) the third party (who shall not be the provider of the collateral) has possession of the repurchase agreement securities and the Government Obligations and Government Certificates;

(2) failure to maintain the requisite collateral levels will require the third party having possession of the securities to liquidate the securities immediately; and

(3) the third party having possession of the securities has a perfected, first priority security interest in the securities.

(j) Prime commercial paper of a corporation, finance company or banking institution rated in the highest short-term rating category by at least two Rating Agencies.

(k) Public housing bonds issued by public agencies which are either: (i) fully guaranteed by the United States of America; or (ii) temporary notes, preliminary loan notes or project notes secured by a requisition or payment agreement with the United States of America; or (iii) state or public agency or municipality obligations rated in the highest credit rating category by at least two Rating Agencies.

(l) Shares of a diversified open-end management investment company, as defined in the Investment Company Act of 1940, as amended, or shares in a regulated investment company, as defined in Section 851(a) of the Code, that is a money market fund that has been rated in the highest rating category by at least two Rating Agencies.

(m) Money market accounts of any state or federal bank, or bank whose holding parent company is, rated in the top two short-term or long-term rating categories by at least two Rating Agencies.

(n) Investment agreements the issuer of which is rated in one of the two highest rating categories by at least two Rating Agencies.

(o) Shares in a California common law trust established pursuant to Title 1, Division 7, Chapter 5 of the Government Code of the State of California which invests exclusively in investments otherwise permitted in paragraphs (a) through (m) above.

(p) Any other debt or fixed income security specified by the Commission (except securities of the City and any agency, department, commission or instrumentality thereof other than the Commission) and rated in the highest category by at least two Rating Agencies.

(q) Bankers acceptances of a banking institution rated in the highest short-term rating category by at least two Rating Agencies, not exceeding 270 days maturity or 40% of moneys invested pursuant to the 1991 Master Resolution. No more than 20% of moneys invested pursuant to the 1991 Master Resolution shall be invested in the bankers acceptances of any one commercial bank pursuant to this paragraph (q).

*Principal Amount* means, as of any date of calculation, (i) with respect to any capital appreciation Bond or compound interest Bond, the accreted value thereof, and (ii) with respect to any other Bonds, the stated principal amount thereof.

*Principal Payment Date* means, with respect to any Series of Bonds, each date specified in the 1991 Master Resolution or in the Supplemental Resolution authorizing the issuance thereof for the payment of the principal of such Bonds either at maturity, or upon prior redemption from Mandatory Sinking Fund Payments.

*Rating Agency* means Fitch, Moody's and S&P or any other nationally recognized credit rating agency specified in a Supplemental Resolution; provided, however, that the term "Rating Agency" shall in any event include Fitch, Moody's or S&P, respectively, during such time that such rating agency maintains a credit rating on any Series of Bonds Outstanding under the 1991 Master Resolution.

*Repayment Obligation* means an obligation under a written agreement between the Commission and a Credit Provider or Liquidity Provider to reimburse such Credit Provider or Liquidity Provider for amounts paid under or pursuant to a Credit Facility or Liquidity Facility, as applicable, for the payment of the principal or purchase price of and/or interest on any Bonds.

*Revenues* means all revenues earned by the Commission from or with respect to its possession, management, supervision, operation and control of the Airport, as determined in accordance with generally accepted accounting principles. Revenues does not include: (i) interest income on, and any profit realized from, the investment of moneys in (A) the Construction Fund or any other construction fund funded from proceeds of any Subordinate Bonds, or (B) the Debt Service Fund which constitute capitalized interest, to the extent required to be paid into the Debt Service Fund, or (C) the Reserve Fund if and to the extent there is any deficiency therein; (ii) interest income on, and any profit realized from, the investment of the proceeds of any Special Facility Bonds; (iii) Special Facility Revenues and any interest income or profit realized from the investment thereof, unless such receipts are designated as Revenues by the Commission; (iv) any passenger facility charge or similar charge levied by or on behalf of the Commission against passengers, unless all or a portion thereof are designated as Revenues by the Commission; (v) grants-in-aid, donations and/or bequests; (vi) insurance proceeds which are not deemed to be Revenues in accordance with generally accepted accounting principles; (vii) the proceeds of any condemnation award; (viii) the proceeds of any sale of land, buildings or equipment; and (ix) any money received by or for the account of the Commission from the levy or collection of taxes upon any property in the City.

*Series 2009C Bonds* means the Airport Commission of the City and County of San Francisco, San Francisco International Airport Second Series Revenue Refunding Bonds, Series 2009C.

*Series 2010A Bonds* means the Airport Commission of the City and County of San Francisco, San Francisco International Airport Second Series Revenue Refunding Bonds, Series 2010A.

*Series 2010D Bonds* means the Airport Commission of the City and County of San Francisco, San Francisco International Airport Second Series Revenue Refunding Bonds, Series 2010D.

*Series 2017C Bonds* means the Airport Commission of the City and County of San Francisco, San Francisco International Airport Second Series Revenue Bonds, Series 2017C.

*Series 2017D Bonds* means the Airport Commission of the City and County of San Francisco, San Francisco International Airport Second Series Revenue Refunding Bonds, Series 2017D.

*Series 2018A Bonds* means the Airport Commission of the City and County of San Francisco, San Francisco International Airport Second Series Revenue Refunding Bonds, Series 2018A.

*Series 2018B Bonds* means the Airport Commission of the City and County of San Francisco, San Francisco International Airport Second Series Revenue Bonds, Series 2018B.

*Series 2018C Bonds* means the Airport Commission of the City and County of San Francisco, San Francisco International Airport Second Series Revenue Bonds, Series 2018C.

*Series 2019A Bonds* means the Airport Commission of the City and the County of San Francisco, San Francisco International Airport Second Series Revenue Bonds, Series 2019A.

*Series 2019B Bonds* means the Airport Commission of the City and the County of San Francisco, San Francisco International Airport Second Series Revenue Bonds, Series 2019B.

*Series 2019C Bonds* means the Airport Commission of the City and the County of San Francisco, San Francisco International Airport Second Series Revenue Bonds, Series 2019C.

*Series 2019D Bonds* means the Airport Commission of the City and the County of San Francisco, San Francisco International Airport Second Series Revenue Refunding Bonds, Series 2019D.

*Series of Bonds or Bonds of a Series or Series* means a series of Bonds issued pursuant to the 1991 Master Resolution.

*Series Sale Resolution* means one or more resolutions of the Commission, (i) in the case of a competitive sale, awarding or providing for the award of a Series of Bonds to the successful bidder in accordance with the terms of the official notice of sale, or in the case of a negotiated sale, providing for the sale of a Series of Bonds to an underwriter or underwriters in accordance with the terms of a bond purchase contract, and (ii) determining or providing for the determination of the interest rates, the mode, the maturity date and the maximum rate (if such Series of Bonds are secured by a Credit Facility, other than a Bond Insurance Policy or reserve fund surety policy) to be borne by such Series of Bonds, whether principal payments in any given year are to be series maturities or Mandatory Sinking Fund Payments, the purchase price of such Series of Bonds, providing for a Credit Facility securing any or all of such Series of Bonds and naming the Credit Provider, and remarketing agent, if any, and determining or providing for the determination of such other matters relating to the Series of Bonds as may be permitted or authorized to be determined by the Commission in accordance with the 1991 Master Resolution. A certificate signed by the President and the Secretary of the Commission or by the Airport Director may be deemed to be a Series Sale Resolution; provided, that such certificate does not impose additional material obligations on or surrender material rights of the Commission.

*Special Facility* means any existing or planned facility, structure, equipment or other property, real or personal, which is at the Airport or a part of any facility or structure at the Airport and designated as such by the Commission pursuant to the Resolution.

*Special Facility Bonds* means any revenue bonds, notes, bond anticipation notes, commercial paper or other evidences of indebtedness for borrowed money issued by the Commission to finance a Special Facility, the principal of, premium, if any, and interest on which are payable from and secured by Special Facility Revenues derived from such Special Facility, and not from or by Net Revenues.

*Special Facility Revenues* means the revenues earned by the Commission from or with respect to any Special Facility and designated as such by the Commission.

*Subordinate Bonds* means any evidences of indebtedness for borrowed money issued from time to time by the Commission pursuant to the 1991 Master Resolution, including but not limited to bonds, notes, bond anticipation notes, commercial paper, lease or installment purchase agreements or certificates of participation therein, with a pledge of, lien on, and security interest in Net Revenues which are junior and subordinate to those of the Bonds whether then issued or thereafter to be issued.

*Supplemental Resolution* means a resolution supplementing or amending the provisions of the 1991 Master Resolution which is adopted by the Commission pursuant to Article IX of the 1991 Master Resolution.

*Transfer* means (i) the amount deposited on the last Business Day of any Fiscal Year from the Contingency Account into the Revenues Account, plus (ii) any amounts withdrawn from the Contingency Account during such Fiscal Year for the purposes specified in the 1991 Master Resolution, less (iii) any amounts deposited in the Contingency Account from Revenues during such Fiscal Year.

*Treasurer* means the Treasurer of the City, and any successor to his or her duties under the Resolution.

*Trustee* means, with respect to the Series 2019A-D Bonds, The Bank of New York Mellon Trust Company, N.A., and its successors and assigns and any other person or entity which may at any time be substituted for it, as successor trustee and paying agent under the Resolution.

*2009 Reserve Account* means the 2009 Reserve Account established in the Reserve Fund pursuant to the Series Sale Resolution for the Series 2009C Bonds as security for the Series 2009C Bonds and any other 2009 Reserve Account Series designated by a Supplemental Resolution or a Series Sale Resolution as being secured by the 2009 Reserve Account.

*2009 Reserve Account Series* means each of the Series 2009C Bonds, the Series 2010D Bonds and any other Series of Bonds designated by a Supplemental Resolution or a Series Sale Resolution as being secured by the 2009 Reserve Account.

*2009 Reserve Requirement* means an amount with respect to each 2009 Reserve Account Series equal to the lesser of: (i) Maximum Annual Debt Service for each Series of Bonds, (ii) 125% of average Annual Debt Service for such Series of Bonds, and (iii) 10% of the outstanding principal amount of such Series, (or allocable issue price of such Series if such Series is sold with more than a *de minimis* amount of original issue discount or premium), in each case as determined from time to time, and with respect to all 2009 Reserve Account Series means the aggregate of such amounts for each individual 2009 Reserve Account Series.

*2017 Reserve Account* means the 2017 Reserve Account established in the Reserve Fund pursuant to the Series Sale Resolution for the Series 2017C Bonds, Series 2017D Bonds and Series 2018A Bonds as security for the 2017 Reserve Account Series Bonds.

*2017 Reserve Account Maximum Annual Debt Service* means the maximum amount of aggregate Annual Debt Service for all 2017 Reserve Account Series Bonds in any Fiscal Year during the period from the date of calculation to the final scheduled maturity of the 2017 Reserve Account Series Bonds.

*2017 Reserve Account Series Bonds* means, collectively, the Series 2017C Bonds, the Series 2017D Bonds, the Series 2018A Bonds, the Series 2019B Bonds, the Series 2019D Bonds and any other Series of Bonds designated by a Supplemental Resolution, a capital plan bonds Sale Resolution or a Series Sale Resolution as participating in and being secured by the 2017 Reserve Account.

*2017 Reserve Requirement* means, with respect to the 2017 Reserve Account, an amount equal to the lesser of: (a) 2017 Reserve Account Maximum Annual Debt Service, (b) 10% of the outstanding aggregate principal amount of all 2017 Reserve Account Series Bonds (provided that the issue price of a Series of 2017 Reserve Account Series

Bonds shall be used in this calculation if such Series was sold with an original issue discount that exceeded 2% of the principal of such Series on its original date of sale), and (c) 125% of the average aggregate Annual Debt Service for all 2017 Reserve Account Series Bonds.

*Variable Rate Bonds* means one or more Series of variable rate bonds authorized by the Supplemental Resolutions to be issued under the 1991 Master Resolution, in the aggregate principal amounts specified in one or more Series Sale Resolutions. Variable Rate Bonds may bear interest at Daily Rates, Weekly Rates, Index Rate, Commercial Paper Rates, Term Rates or a Fixed Rate, as such terms are defined in the 1991 Master Resolution.

### **Pledge of Net Revenues and Other Moneys**

The Bonds are revenue bonds, are not secured by any taxing power of the Commission (which has no taxing power) and are payable as to both principal and interest, and any premium exclusively from, and are secured by a pledge of, lien on and security interest in Net Revenues of the Airport. Net Revenues constitute a trust fund for the security and payment of the principal of, purchase price, if any, premium, if any, and interest on, the Bonds. The Commission has assigned to the Trustee for the benefit of the Bondholders all of its right, title and interest in, the following:

- (a) Amounts on deposit from time to time in the funds and accounts created pursuant to the 1991 Master Resolution, including the earnings thereon, subject to the provisions of the 1991 Master Resolution permitting the application thereof for the purposes and on the terms and conditions set forth therein; provided, however, that there expressly is excluded from any pledge, assignment, lien or security interest created by the 1991 Master Resolution, Revenues appropriated, transferred, deposited, expended or used for the payment of Operation and Maintenance Expenses;
- (b) Amounts constituting Net Revenues; and
- (c) Any and all other property of any kind from time to time by delivery or by writing of any kind specifically conveyed, pledged, assigned or transferred, as and for additional security for the Bonds, by the Commission or anyone on its behalf or with its written consent in favor of the Trustee, which is authorized to receive any and all such property at any and all times and to hold and apply the same subject to the terms of the 1991 Master Resolution.

The pledge of Net Revenues and other moneys and property made in the 1991 Master Resolution is irrevocable until all of the Bonds have been paid and retired.

All Bonds issued and Outstanding under the 1991 Master Resolution are and will be equally and ratably secured with all other Outstanding Bonds, with the same right, lien, preference and priority with respect to Net Revenues, without preference, priority or distinction on account of the date or dates or the actual time or times of the issuance or maturity of the Bonds or otherwise. All Bonds of a particular Series will in all respects be equally and ratably secured and will have the same right, lien and preference established under the 1991 Master Resolution for the benefit of such Series of Bonds, including, without limitation, rights in any related account in the Construction Fund, the Debt Service Fund or the Reserve Fund. Amounts drawn under a Credit Facility with respect to particular Bonds and all other amounts held in funds or accounts established with respect to such Bonds pursuant to the provisions of the 1991 Master Resolution and of any Supplemental Resolution with respect thereto will be applied solely to make payments on such Bonds.

### **Revenue Fund; Allocation of Net Revenues**

The Revenue Fund has heretofore been created and is held by the Treasurer. The 1991 Master Resolution established the following accounts within the Revenue Fund:

- Revenues Account
- Operation and Maintenance Account
- Revenue Bond Account
- General Obligation Bond Account

General Purpose Account  
Contingency Account

All Revenues are required to be set aside and deposited in the Revenues Account in the Revenue Fund as received. On the first Business Day of each month, moneys in the Revenues Account will be set aside and applied for the following purposes in the following amounts and order of priority, each priority to be fully satisfied before the next priority in order:

**First: Operation and Maintenance Account.** In the Operation and Maintenance Account an amount equal to one-twelfth (1/12th) of the estimated Operation and Maintenance Expenses for the then-current Fiscal Year as set forth in the budget of the Airport for such Fiscal Year as finally approved by the Commission. In the event that the balance in the Operation and Maintenance Account at any time is insufficient to make any required payments therefrom, additional amounts at least sufficient to make such payments will immediately be deposited in the Operation and Maintenance Account from the Revenues Account, and may be credited against the next succeeding monthly deposit upon the written direction of the Commission to the Treasurer.

**Second: Revenue Bond Account.** In the Revenue Bond Account such amount as is necessary:

- (a) to make all payments and deposits required to be made during such month into the Debt Service Fund and the Reserve Fund and the accounts therein in the amounts and at the times required by the 1991 Master Resolution and by any Supplemental Resolution with respect to the Bonds; and
- (b) to make all payments and deposits required to be made during such month into any funds and accounts created to pay or secure the payment of the principal or purchase price of or interest or redemption premium on any Subordinate Bonds in the amounts and at the times required by the resolutions and other agreements authorizing the issuance and providing the terms and conditions thereof.

**Third: General Obligation Bond Account.** In the General Obligation Bond Account an amount equal to one-sixth (1/6) of the aggregate amount of interest coming due on the next succeeding interest payment date, plus one-twelfth (1/12) of the aggregate amount of principal coming due on the next succeeding principal payment date, with respect to general obligation bonds of the City issued for Airport purposes.

**Fourth: General Purpose Account.** In the General Purpose Account an amount at least equal to the payments estimated to be made therefrom during such month.

**Fifth: Contingency Account.** In the Contingency Account such amount, if any, as shall be directed by the Commission from time to time.

### **Construction Fund**

The 1991 Master Resolution created the Construction Fund as a separate fund to be maintained and accounted for by the Treasurer. Moneys in the Construction Fund will be used for the purposes for which Bonds are authorized to be issued, including but not limited to the payment of principal and purchase price of and interest and redemption premium on the Bonds and the costs of issuance and sale thereof. A separate account will be created within the Construction Fund with respect to each Series of Bonds. Amounts in the Construction Fund may be invested in any Permitted Investment, in accordance with the policies and procedures of the Treasurer.

### **Costs of Issuance Fund**

The 1991 Master Resolution created the Costs of Issuance Fund as a separate fund to be maintained and accounted for by the Trustee. A separate account will be created within the Costs of Issuance Fund with respect to

each Series of Bonds. Monies deposited in each Costs of Issuance Account shall be used only for the authorized Costs of Issuance such Series of Bonds. Any balance remaining in any Costs of Issuance Account is to be transferred to the appropriate account in the Construction Fund, no later than one year following the date of issuance of each such Series of Bonds. Amounts in the Costs of Issuance Fund may be invested in any Permitted Investment.

### **Debt Service Holding Fund**

The 1991 Master Resolution created the Debt Service Holding Fund as a separate fund, which is not pledged to the payment of the Bonds, but is established for the convenience of the Commission in the administration and investment of monies delivered to the Trustee prior to the time the Commission is required to make deposits into the Debt Service Fund and the series principal and interest accounts therein as required by the 1991 Master Resolution. The Commission may at any time, deliver to the Trustee monies for deposit in the Debt Service Holding Fund, to be held and invested therein as directed by an authorized Commission representative. Upon the order of an Authorized Commission Representative, monies in the Debt Service Holding Fund and investment earnings thereon may be invested in any Permitted Investment, transferred to the Debt Service Fund and the series principal and interest accounts therein, or returned to the Commission.

### **Debt Service and Reserve Funds**

The 1991 Master Resolution establishes the following funds and accounts to be held by the Trustee:

Debt Service Fund  
Reserve Fund

The Commission will establish separate accounts within the Debt Service Fund with respect to any or all of the Bonds of one or more Series. Moneys in the Debt Service Fund and the accounts therein will be held in trust and applied to pay principal and purchase price of and interest and redemption premium on such Bonds, in the amounts, at the times and in the manner set forth in the 1991 Master Resolution and in the Supplemental Resolutions with respect thereto; provided, however, that each Supplemental Resolution must require to the extent practicable that amounts be accumulated in the applicable accounts in the Debt Service Fund so that moneys sufficient to make any regularly scheduled payment of principal of or interest on the Bonds are on deposit therein at least one month prior thereto. Moneys in the accounts in the Debt Service Fund may also be applied to pay or reimburse a Credit Provider for Repayment Obligations to the extent provided in the 1991 Master Resolution or in the Supplemental Resolutions with respect thereto.

If and to the extent provided in any Supplemental Resolution authorizing the issuance of a Series of Bonds, interest rate swap payments may be paid directly out of, and interest rate swap receipts paid directly into, the account or accounts in the Debt Service Fund established with respect to such Series of Bonds.

The Commission may establish a separate account or accounts in the Reserve Fund with respect to any or all of the Bonds of one or more Series. Moneys in the Reserve Fund and the accounts therein will be held in trust for the benefit and security of the Holders of the Bonds to which such accounts are pledged, and will not be available to pay or secure the payment of any other Bonds. Each account in the Reserve Fund will be funded and replenished in the amounts, at the times and in the manner provided in the 1991 Master Resolution or in the Supplemental Resolutions with respect thereto, including without limitation through the use of a Credit Facility. Moneys in the respective accounts in the Reserve Fund will be applied to pay and secure the payment of such Bonds as provided in the 1991 Master Resolution or in the Supplemental Resolutions with respect thereto. Moneys in an account in the Reserve Fund may also be applied to pay or reimburse a Credit Provider for Repayment Obligations to the extent provided in the 1991 Master Resolution or in the Supplemental Resolutions with respect thereto.

#### *Issue 1 Reserve Account (Original Reserve Account)*

The 1991 Master Resolution established the "Issue 1 Reserve Account" as security for the Issue 1 Bonds and any other Participating Series of Bonds designated by Supplemental Resolution as being secured by the Issue 1 Reserve

Account. ***The Series 2019A Bonds and Series 2019C Bonds are each a Participating Series secured by the Issue 1 Reserve Account.***

#### *2009 Reserve Account*

The Series Sale Resolution for the Series 2009C Bonds established the “2009 Reserve Account” as security for the Series 2009C Bonds and any other 2009 Reserve Account Series designated by Supplemental Resolution or by a Series Sale Resolution as being secured by the 2009 Reserve Account. ***None of the Series 2019A-D Bonds is a 2009 Reserve Account Series, and the Series 2019A-D Bonds are not secured by the 2009 Reserve Account.*** The 2009 Reserve Account is required to be funded at the 2009 Reserve Requirement. The moneys in said account will be used solely for the purpose of paying principal, interest or mandatory sinking fund payments on the Series of Bonds secured by such reserve account whenever any moneys then credited to the accounts within the Debt Service Fund for such Series of Bonds are insufficient for such purposes.

#### *2017 Reserve Account*

The Series Sale Resolution for the Series 2017C Bonds, Series 2017D Bonds and Series 2018A Bonds established the “2017 Reserve Account” as security for the Series 2017C Bonds, the Series 2017D Bonds, the Series 2018A Bonds and any other 2017 Reserve Account Series Bonds designated by a Supplemental Resolution or by a Series Sale Resolution as being secured by the 2017 Reserve Account. ***The Series 2019B Bonds and Series 2019D Bonds are 2017 Reserve Account Series Bonds and are secured by the 2017 Reserve Account.*** The 2017 Reserve Account is required to be funded at the 2017 Reserve Requirement. The moneys in said account will be used solely for the purpose of paying principal, interest or mandatory sinking fund payments on the 2017 Reserve Account Series Bonds whenever any moneys then credited to the accounts within the Debt Service Fund for 2017 Reserve Account Series Bonds are insufficient for such purposes.

#### *Separate Reserve Accounts for Bonds not Designated as Participating Series, 2009 Reserve Series or 2017 Reserve Series Bonds*

Unless otherwise provided in a Series Sale Resolution, each Series of Bonds will be a Participating Series, a 2009 Reserve Account Series or 2017 Reserve Account Series, or may be secured by a separate Series Reserve Account. The amount in each Series Reserve Account will be established and maintained at an amount equal to the applicable Series Reserve Requirement, which will be Maximum Series Annual Debt Service, or such other amount as shall be set forth in a Series Sale Resolution.

#### *Application and Valuation of Issue 1 Reserve Account and 2017 Reserve Account*

The moneys in the Issue 1 Reserve Account, the 2017 Reserve Account and any separate Series Reserve Account (each a “Reserve Account”) are to be used solely for the purposes of paying interest, principal or mandatory sinking fund payments on the Bonds to which such accounts are pledged whenever any moneys then credited to the accounts within the Debt Service Fund for the applicable Series of Bonds are insufficient for such purposes and to pay one or more Credit Providers principal due with respect to any Credit Facility deposited in the Reserve Account for the applicable Series of Bonds to the extent that such payment will cause the amount available to be drawn under the related Credit Facility or Credit Facilities to be reinstated in an amount at least equal to the amount of such payment. In the event that the Trustee is required to apply amounts in a Reserve Account to pay interest, principal or mandatory sinking fund payments on the Series of Bonds to which such Reserve Account is pledged, the Trustee will apply all amounts (the “Cash Amount”) in such Reserve Account, other than amounts available pursuant to draws on Credit Facilities deposited in such Reserve Account, to such payments before drawing on any such Credit Facility. If after exhausting the Cash Amount, the Trustee has insufficient moneys to pay interest, principal or mandatory sinking fund payments on the applicable Series of Bonds, the Trustee will draw on the Credit Facilities deposited in the Reserve Account on a pro rata basis to the extent required to remedy the remaining deficiency.

If at any time the balance in any Reserve Account is for any reason diminished below the amount required to be on deposit therein, the Trustee is required to immediately notify the Commission of such deficiency, and the Commission is required to cause the applicable Reserve Account to be replenished by transfers from available Net

Revenues over a period not to exceed 12 months from the date the Commission receives notice from the Trustee of such deficiency.

Subject to the terms and conditions of the 1991 Master Resolution, each Reserve Account is to be replenished from available Net Revenues in the following order of priority, each requirement to be satisfied in full before the next requirement in priority: (1) on a pro rata basis, payments to Credit Providers of principal then due with respect to any Credit Facility deposited in such Reserve Account to the extent that such payments will cause the amounts available to be drawn under such Credit Facility or Credit Facilities to be reinstated in an amount at least equal to such payments; and (2) other amounts required to be deposited in such Reserve Account to increase the amount therein to the Aggregate Maximum Annual Debt Service on the then Outstanding Bonds to which such Reserve Account is pledged.

Under the 1991 Master Resolution, the Trustee is required to determine the amount in each Reserve Account from time to time but not less frequently than annually. Permitted Investments in each Reserve Account are to be valued at cost plus accreted value. In the event that the Trustee determines on any valuation date that the amount in a Reserve Account exceeds Aggregate Maximum Annual Debt Service (with respect to the Issue 1 Reserve Account) or the 2017 Reserve Requirement (with respect to the 2017 Reserve Account) on all then Outstanding Bonds to which such Reserve Account is pledged, upon the request of the Commission, the Trustee will transfer the amount of such excess to the Treasurer for deposit in the applicable Revenues Account.

In the event Bonds of a Series are to be redeemed in whole or in part pursuant to the 1991 Master Resolution, or the Commission notifies the Trustee in writing of its intention to refund Bonds of a Series in whole or in part, the Trustee is required to value the amount in the Reserve Account applicable to such Bonds, and, if the Trustee determines that the amount in the applicable Reserve Account exceeds Aggregate Maximum Annual Debt Service (with respect to the Issue 1 Reserve Account) or the 2017 Reserve Requirement (with respect to the 2017 Reserve Account) on the Bonds to which such Reserve Account is pledged to remain Outstanding after such redemption or refunding, upon the request of the Commission, the Trustee will transfer the amount of such excess in accordance with such request.

At its option, the Commission may at any time substitute a Credit Facility meeting the requirements of the 1991 Master Resolution for amounts on deposit in each Reserve Account. The 1991 Master Resolution requires that the substitution of a Credit Facility for amounts on deposit in each Reserve Account not cause the then-current ratings on the Bonds to which such accounts are pledged to be downgraded or withdrawn. In the event that after the substitution of a Credit Facility for all or any part of the amounts on deposit in a Reserve Account, the amount in such Reserve Account is greater than the amount required to be on deposit therein, upon the request of an authorized Commission representative, the Trustee will transfer such excess to the Commission to be used solely for Airport purposes. The 1991 Master Resolution further requires that any such Credit Facility provided in the form of a surety bond be issued by an institution then rated in the highest rating category, without regard to subcategories, by Moody's and S&P, and that any such Credit Facility provided in the form of a letter of credit be issued (with respect to the Issue 1 Reserve Account) by an institution then rated in at least the second highest rating category, without regard to subcategories, by Moody's and S&P and (with respect to the 2017 Reserve Account) by an institution whose (i) short-term rating is then rated either "P1" by Moody's or "A-1" by S&P, or (ii) long-term rating is then rated in at least the second highest rating category, without regard to subcategories, by Moody's and S&P.

Any draw on any Credit Facility on deposit in a Reserve Account shall be made only after all the funds in such Reserve Account have been expended. In such event, draws on each Credit Facility shall be made on a pro rata basis to fund the insufficiency. The 1991 Master Resolution provides that a Reserve Account shall be replenished in the following priority: (i) principal of each Credit Facility shall be paid from first available Net Revenues on a pro rata basis to the extent that such payments will cause the amounts available to be drawn under each Credit Facility to be reinstated in an amount at least equal to such payments; and (ii) after all such amounts are paid in full, amounts necessary to fund a Reserve Account to the required level, after taking into account the amounts available under each Credit Facility shall be deposited from next available Net Revenues.

#### *Application and Valuation of 2009 Reserve Account*

The moneys in the 2009 Reserve Account are to be used solely for the purposes of paying interest, principal or mandatory sinking fund payments on the 2009 Reserve Account Series Bonds whenever any moneys then credited to the accounts within the Debt Service Fund for the applicable Series of 2009 Reserve Account Series Bonds are

insufficient for such purposes. If at any time the balance in the 2009 Reserve Account is for any reason diminished below an amount equal to Maximum Series Annual Debt Service on the then Outstanding 2009 Reserve Account Series Bonds, the Trustee is required to immediately notify the Commission of such deficiency, and the Commission is required to cause the 2009 Reserve Account to be replenished by transfers from available Net Revenues over a period not to exceed 12 months from the date the Commission receives notice from the Trustee of such deficiency.

Under the 1991 Master Resolution, the Trustee is required to determine the amount in the 2009 Reserve Account from time to time but not less frequently than annually. Permitted Investments in the 2009 Reserve Account are to be valued at cost plus accreted value. In the event that the Trustee determines on any valuation date that the amount in the 2009 Reserve Account exceeds Maximum Series Annual Debt Service on all then outstanding 2009 Reserve Account Series Bonds, upon the request of the Commission, the Trustee will transfer the amount of such excess to the Treasurer for deposit in the applicable Revenues Account.

In the event 2009 Reserve Account Series Bonds are to be redeemed in whole or in part pursuant to the 1991 Master Resolution, or the Commission notifies the Trustee in writing of its intention to refund 2009 Reserve Account Series Bonds in whole or in part, the Trustee is required to value the amount in the 2009 Reserve Account, and if the Trustee determines that the amount in the 2009 Reserve Account exceeds Maximum Series Annual Debt Service on the 2009 Reserve Account Series Bonds to remain outstanding after such redemption or refunding, upon the request of the Commission, the Trustee will transfer the amount of such excess in accordance with such request.

At its option, the Commission may at any time substitute a Credit Facility meeting the requirements of the 1991 Master Resolution for amounts on deposit in the 2009 Reserve Account. The 1991 Master Resolution requires that the substitution of a Credit Facility for amounts on deposit in the 2009 Reserve Account not cause the then-current ratings on the 2009 Reserve Account Series Bonds to be downgraded or withdrawn. In the event that after the substitution of a Credit Facility for all or any part of the amounts on deposit in the 2009 Reserve Account, the amount in the 2009 Reserve Account is greater than the amount required to be on deposit therein, upon the request of an authorized Commission representative, the Trustee will transfer such excess to the Commission to be used solely for Airport purposes. The 1991 Master Resolution further requires that any such Credit Facility provided in the form of a surety bond be issued by an institution then rated in the highest rating category, without regard to subcategories, by Moody's and S&P, and that any such Credit Facility provided in the form of a letter of credit be issued by an institution then rated in at least the second highest rating category, without regard to subcategories, by Moody's and S&P.

#### *Permitted Investments*

Amounts in the Series Debt Service Accounts for the Series 2019A-D Bonds shall be invested in Permitted Investments or any other obligations or investments in which the Treasurer is permitted to invest Commission funds maturing on or before the related Payment Date on which the proceeds of such Permitted Investments are intended to be applied for the purposes of the related Series Debt Service Account for the Series 2019A-D Bonds. Amounts in the Issue 1 Reserve Account shall be invested in Permitted Investments described in clauses (a) or (b) of the definition of Permitted Investments maturing no later than seven years after the date of purchase of said Permitted Investment. Amounts in the 2017 Reserve Account shall be invested by the Trustee in accordance with instructions provided by the Commission (or such third parties appointed by the Commission) or, in the absence of instructions from the Commission (or such third parties appointed by the Commission), pursuant to the Commission's standing instructions, in Permitted Investments or any other obligations or investments in which the Treasurer is permitted to invest Commission funds. Amounts in the Series 2019A Construction Account, the 2019B Construction Account and the 2019C Construction Account may be invested in any Permitted Investment or any other obligations or investments in which the Treasurer is permitted to invest Commission funds.

### **Issuance of Additional Series of Bonds**

#### *General Requirements*

Whenever the Commission determines to issue any additional Series of Bonds, the Commission is required to adopt a Supplemental Resolution authorizing the issuance of such Series of Bonds and to deliver to the Trustee: (i) a certificate to the effect that the Commission is not then in default under the terms and provisions of the 1991 Master Resolution or any Supplemental Resolution; (ii) an opinion of bond counsel to the effect that such Series of

Bonds has been duly authorized in conformity with law and all prior proceedings of the Commission, and such Bonds constitute valid and binding obligations of the Commission; and (iii) certain other items specified by the 1991 Master Resolution or the Supplemental Resolution or which may be reasonably requested by the Commission or the Trustee.

#### *Additional Bonds Test*

The Commission is not permitted to issue any additional Series of Bonds (other than refunding Bonds, described below under “—Refunding Bonds”) unless the Trustee has been provided with either:

- (a) a certificate of an Airport Consultant dated within 30 days prior to the date of delivery of the Bonds stating that:
  - (i) for the period, if any, from and including the first full Fiscal Year following the issuance of such Bonds through and including the last Fiscal Year during any part of which interest on such Bonds is expected to be paid from the proceeds thereof, projected Net Revenues, together with any Transfer, in each such Fiscal Year will be at least equal to 1.25 times Annual Debt Service; and
  - (ii) for the period from and including the first full Fiscal Year following the issuance of such Bonds during which no interest on such Bonds is expected to be paid from the proceeds thereof through and including the later of: (A) the fifth full Fiscal Year following the issuance of such Bonds, or (B) the third full Fiscal Year during which no interest on such Bonds is expected to be paid from the proceeds thereof, projected Net Revenues, together with any Transfer, if applicable, in each such Fiscal Year will be (1) at least sufficient to make all required payments and deposits in such Fiscal Year into the Revenue Bond Account and the General Obligation Bond Account pursuant to the 1991 Master Resolution, and to make the Annual Service Payment to the City and (2) at least equal to 125% of aggregate Annual Debt Service with respect to the Bonds for such Fiscal Year; or
- (b) a certificate of an Independent Auditor stating that Net Revenues, together with any Transfer, in the most recently completed Fiscal Year were at least equal to 125% of the sum of (i) Annual Debt Service on the Bonds in such Fiscal Year, plus (ii) Maximum Annual Debt Service on the Bonds proposed to be issued.

For purposes of (a) and (b) above, the amount of any Transfer taken into account shall not exceed 25% of Maximum Annual Debt Service in such Fiscal Year. In determining projected Net Revenues for purposes of (a) above, the Airport Consultant may take into account reasonably anticipated changes in Revenues and Operation and Maintenance Expenses over such period. In determining Annual Debt Service for purposes of (a) or (b) above, Bonds that will be paid or discharged immediately after the issuance of the Series of Bonds proposed to be issued from the proceeds thereof or other moneys will be disregarded, and Variable Rate Bonds will be deemed to bear interest during any period after the date of calculation at a fixed annual rate equal to 1.25 times the rate determined pursuant to paragraphs (b) and (c), as the case may be, of the definition of “Annual Debt Service” of the Resolution.

In the event that the Commission proposes to assume any indebtedness for borrowed money in connection with assuming the possession, management, supervision and control of any airport or other revenue-producing facilities, such indebtedness may constitute additional Bonds under the 1991 Master Resolution entitled to an equal pledge of and lien on Net Revenues as the Bonds provided that the requirements of the 1991 Master Resolution relating to additional Bonds are satisfied with respect to the assumption of such indebtedness.

#### **Refunding Bonds**

The Commission may issue Bonds for the purpose of refunding any Bonds or Subordinate Bonds on or prior to maturity or thereafter. The Commission is permitted to issue such refunding Bonds only (i) upon compliance with the additional Bonds test established by the 1991 Master Resolution as described above under “—Issuance of Additional Series of Bonds—*Additional Bonds Test*,” or (ii) if the Commission delivers to the Trustee a certificate of

an Airport Consultant or Financial Consultant to the effect that (A) aggregate Annual Debt Service in each Fiscal Year with respect to all Bonds to be Outstanding after the issuance of such refunding Bonds will be less than aggregate Annual Debt Service in each such Fiscal Year in which Bonds are Outstanding prior to the issuance of such refunding Bonds, and (B) Maximum Annual Debt Service with respect to all Bonds to be Outstanding after issuance of such refunding Bonds will not exceed Maximum Annual Debt Service with respect to all Bonds Outstanding immediately prior to such issuance.

### **Repayment Obligations**

If so provided in the applicable Supplemental Resolution and in the written agreement between the Commission and the Credit Provider or Liquidity Provider, as applicable, a Repayment Obligation may be accorded the status of a Bond solely for purposes of the 1991 Master Resolution, provided, however, that the Credit Facility or Liquidity Facility, as applicable, with respect thereto shall not constitute a bond for any other purpose, including without limitation for purposes of the Charter. The Credit Provider or Liquidity Provider, as applicable, shall be deemed to be the Holder of such Bond, and such Bond shall be deemed to have been issued as of the original date of the Bond or Bonds for which such Credit Facility or Liquidity Facility, as applicable, was provided. Notwithstanding the stated terms of the Repayment Obligation, the Bond deemed to be held by the Credit Provider or Liquidity Provider, as applicable, shall be deemed to be amortized on a level debt service basis at the Index Rate over a period equal to the lesser of (a) 20 years, or (b) the period ending on the later of (i) the final maturity date of the Bonds payable from or secured by such Credit Facility or Liquidity Facility, as applicable, or (ii) the date the Repayment Obligation is due under the terms of the written agreement with respect thereto, with principal payable annually commencing on the next Principal Payment Date with respect to such Bonds and interest payable semiannually commencing on the next Interest Payment Date with respect to such Bonds. Such Bond shall be deemed to bear interest at the rate provided in the written agreement with respect to the Repayment Obligation. Any amount which becomes due and payable on the Repayment Obligation under the written agreement with respect thereto (but not earlier than 15 years from the date such Repayment Obligation is incurred) and which is in excess of the amount deemed to be principal of and interest on a Bond shall be junior and subordinate to the Bonds. The rights of a Credit Provider or Liquidity Provider, as applicable, under the 1991 Master Resolution shall be in addition to any rights of subrogation which the Credit Provider or Liquidity Provider, as applicable, may otherwise have or be granted under law or pursuant to any Supplemental Resolution. Notwithstanding anything in the 1991 Master Resolution to the contrary, a Bond and an unreimbursed Repayment Obligation arising with respect to such Bond shall not be deemed to be Outstanding at the same time.

### **Subordinate Bonds**

The Commission may issue, at any time while any of the Bonds are Outstanding, Subordinate Bonds with a pledge of, lien on, and security interest in Net Revenues which are junior and subordinate to those of the Bonds. The principal and purchase price of and interest, redemption premium and reserve fund requirements on such Subordinate Bonds will be payable from time to time out of Net Revenues only if all amounts then required to have been paid or deposited under the Resolution from Net Revenues with respect to principal, purchase price, redemption premium, interest and reserve fund requirements on the Bonds then Outstanding or thereafter to be Outstanding have been paid or deposited as required in the 1991 Master Resolution and any Supplemental Resolution.

### **Special Facility Bonds**

The Commission from time to time, subject to the conditions described in this section captioned “—Special Facility Bonds” may (a) designate an existing or planned facility, structure, equipment or other property, real or personal, which is at the Airport or part of any facility or structure at the Airport as a “Special Facility,” (b) provide that revenues earned by the Commission from or with respect to such Special Facility shall constitute “Special Facility Revenues” and shall not be included as Revenues, and (c) issue Special Facility Bonds primarily for the purpose of acquiring, constructing, renovating, or improving such Special Facility, or providing financing to a third party for such purposes. Principal, purchase price, if any, redemption premium, if any, and interest with respect to Special Facility Bonds shall be payable from and secured by the Special Facility Revenues with respect thereto, and not from or by Net Revenues. The Commission from time to time may refinance any such Special Facility Bonds with other Special Facility Bonds.

No Special Facility Bonds shall be issued by the Commission unless there has been filed with the Trustee a certificate of an Airport Consultant that (i) the estimated Special Facility Revenues with respect to the proposed Special Facility will be at least sufficient to pay the principal, or purchase price, interest, all costs of operating and maintain such Special Facility not paid by a party other than the Commission, and all sinking fund, reserve fund and other payments required with respect to such Special Facility Bonds when due; (ii) estimated Net Revenues calculated without including the Special Facility Revenues and without including any operation and maintenance expenses of the Special Facility as Operation and Maintenance Expenses will be sufficient so that the Commission will be in compliance with the rate covenant (see “—Certain Covenants—*Rate Covenant*” below) during each of the five Fiscal Years immediately following the issuance of such Special Facility Bonds; and (iii) no Event of Default exists.

Upon the payment in full or other discharge of the Special Facility Bonds, including Special Facility Bonds issued to refinance such Special Facility Bonds, Special Facility Revenues with respect to such Special Facility shall be included as Revenues.

### **Certain Covenants**

#### *Punctual Payment*

The Commission has covenanted that it will promptly pay or cause to be paid the principal and purchase price of, premium, if any, and interest to become due in respect of all the Bonds, in strict conformity with the terms of the Bonds and of the 1991 Master Resolution and any applicable Supplemental Resolution, but solely from the sources pledged to such payment or from such other sources or revenues as may be used for such payment, and the Commission has covenanted that it will faithfully observe and perform all of the conditions, covenants and requirements of the 1991 Master Resolution and all Supplemental Resolutions and of the Bonds.

#### *Negative Pledge*

The Commission has covenanted that it will not create any pledge, lien on, security interest in or encumbrance upon, or permit the creation of any pledge of, lien on, security interest in or encumbrance upon, Revenues or Net Revenues except for a pledge, lien, security interest or encumbrance subordinate to the pledge, lien and security interest granted by the 1991 Master Resolution for the benefit of the Bonds.

#### *Rate Covenant*

The Commission has covenanted that it will establish and at all times maintain rentals, rates, fees and charges for the use of the Airport and for the services rendered by the Commission in connection with the Airport so that:

- (a) Net Revenues in each Fiscal Year will be at least sufficient (i) to make all required payments and deposits in such Fiscal Year into the Revenue Bond Account and the General Obligation Bond Account pursuant to the 1991 Master Resolution, and (ii) to make the Annual Service Payment to the City; and
- (b) Net Revenues, together with any Transfer, in each Fiscal Year will be at least equal to 125% of aggregate Annual Debt Service with respect to the Bonds for such Fiscal Year.

The Commission has covenanted that if Net Revenues, together with any Transfer, in any Fiscal Year are less than the amount specified in clause (b) above, the Commission will retain and direct an Airport Consultant to make recommendations as to the revision of the Commission’s business operations and its schedule of rentals, rates, fees and charges for the use of the Airport and for services rendered by the Commission in connection with the Airport, and after receiving such recommendations or giving reasonable opportunity for such recommendations to be made the Commission will take all lawful measures to revise the schedule of rentals, rates, fees and charges as may be necessary to produce Net Revenues, together with any Transfer, in the amount specified in clause (b) above in the next succeeding Fiscal Year.

In the event that Net Revenues for any Fiscal Year are less than the amount specified in clause (b) above, but the Commission promptly has taken prior to or during the next succeeding Fiscal Year all lawful measures to revise the schedule of rentals, rates, fees and charges as required by the 1991 Master Resolution and described in the previous paragraph, such deficiency in Net Revenues will not constitute an Event of Default under the 1991 Master Resolution as described in clause (d) under the caption “—Events of Default” below. Nevertheless, if after taking the measures required in the previous paragraph to revise the schedule of rentals, rates, fees and charges, Net Revenues in the next succeeding Fiscal Year (as evidenced by the audited financial statements of the Commission for such Fiscal Year) are less than the amount specified in clause (b) above, such deficiency in Net Revenues will constitute an Event of Default under the 1991 Master Resolution as described in clause (e) under the caption “—Events of Default” below.

#### *Operation and Maintenance of the Airport*

The Commission has covenanted that it will operate and maintain the Airport as a revenue producing enterprise in accordance with the Act. The Commission will make such repairs to the Airport as are necessary or appropriate in the prudent management thereof. The Commission also has covenanted that it will operate and maintain the Airport in a manner which will entitle it at all times to charge and collect fees, charges and rentals in accordance with Airport use agreements, if any, or as otherwise permitted by law, and the Commission will take all reasonable measures permitted by law to enforce prompt payment to it of such fees, charges and rentals when and as due. The Commission will, from time to time, duly pay and discharge, or cause to be paid and discharged, any taxes, assessments or other governmental charges lawfully imposed upon the Airport or upon any part thereof, or upon the revenues from the operation thereof, when the same become due, as well as any lawful claim for labor, materials or supplies which, if unpaid, might by law become a lien or charge upon the Airport or such revenues, or which might impair the security of the Bonds. Notwithstanding the foregoing, the Commission need not pay or discharge any tax, assessment or other governmental charge or claim for labor, materials or supplies, if and so long as the Commission contests the validity or application thereof in good faith. The Commission will continuously operate the Airport so that all lawful orders of the FAA and any other governmental agency or authority having jurisdiction in the premises will be complied with, but the Commission is not required to comply with any such orders so long as the validity or application thereof is being contested in good faith.

#### *Maintenance of Powers; Retention of Assets*

The Commission has covenanted that it will use its best efforts to keep the Airport open for landings and takeoffs of commercial aircraft using facilities similar to those at the Airport and to maintain the powers, functions, duties and obligations now reposed in it pursuant to law, and will not at any time voluntarily do, suffer or permit any act or thing the effect of which would be to hinder, delay or imperil either the payment of the indebtedness evidenced by any of the Bonds or any other obligation secured by the 1991 Master Resolution or the performance or observance of any of the covenants contained therein. The Commission also has covenanted that it will not dispose of assets necessary to operate the Airport in the manner and at the levels of activity required to enable it to perform its covenants contained in the 1991 Master Resolution.

#### *Insurance*

Subject in each case to the condition that insurance is obtainable at reasonable rates from responsible insurers and upon reasonable terms and conditions:

- (a) The Commission will procure or provide and maintain, at all times while any of the Bonds shall be outstanding, insurance or qualified self-insurance on the Airport against such risks as are usually insured by other major airports. Such insurance or qualified self-insurance shall be in an adequate amount as to the risk insured against as determined by the Commission. The Commission is not required to carry insurance or qualified self-insurance against losses caused by land movement, including but not limited to seismic activity.
- (b) Any qualified self-insurance is required to be established in accordance with applicable law; is required to include reserves or reinsurance in amounts which the Commission determines to be adequate to protect against risks assumed under such qualified self-insurance, including without limitation any potential retained liability in the event of the termination of such qualified self-

insurance; and is required to be reviewed at least once every 12 months by an insurance consultant who will deliver to the Commission a report on the adequacy of the reserves established or reinsurance provided thereunder. If the insurance consultant determines that such reserves or reinsurance are inadequate, it will make a recommendation as to the amount of reserves or reinsurance that should be established and maintained, and the Commission will comply with such recommendation unless it can establish to the satisfaction of, and receive a certification from, the insurance consultant that a lower amount is reasonable to provide adequate protection to the Airport and the Commission.

- (c) The Commission will secure and maintain adequate fidelity insurance or bonds on all officers and employees handling or responsible for funds of the Commission, except to the extent that such insurance is provided by the City.
- (d) Within 120 days after the close of each Fiscal Year, the Commission will file with the Trustee a certificate of an authorized Commission representative containing a summary of all insurance policies and qualified self-insurance then in effect with respect to the Airport and the Commission.
- (e) The proceeds of any insurance is required to be applied solely for Airport purposes.

#### *Financial Records and Statements*

The Commission will maintain, or cause to be maintained, proper books and records in which full and correct entries are required to be made in accordance with generally accepted accounting principles, of all its business and affairs. The Commission is required to have an annual audit made by an independent auditor and will within 120 days after the end of each of its Fiscal Years furnish to the Trustee copies of the audited financial statements of the Commission for such Fiscal Year.

#### *Tax Covenants*

The Commission has covenanted that, except as otherwise provided in the 1991 Master Resolution or in any Supplemental Resolution, it will make no use of the proceeds of any Series of Bonds or take any other action or permit any other action to be taken that would affect adversely the exclusion from gross income of, interest on such Series of Bonds for federal income tax purposes or, if applicable, the non-preference status of such interest for federal alternative minimum income tax purposes.

#### *Limitation on Covered Obligations*

The Commission has covenanted and agreed that it will not issue or incur any obligation for borrowed money payable from Net Revenues (i) which is subject to optional or mandatory purchase or tender for purchase prior to maturity (other than at the option of the Commission), or (ii) which matures in less than 365 days from the date of issuance thereof (collectively, "Covered Obligations") to the extent the aggregate principal amount of all such Covered Obligations, at the time of issuance or incurrence thereof, would exceed 40% of the aggregate principal amount of all obligations of the Commission for borrowed money payable from Net Revenues then outstanding. The limitation described in the foregoing sentence does not apply to Covered Obligations described in clause (i) the scheduled maturity of which is not subject to acceleration. The credit or liquidity facility in connection with any Covered Obligation any portion of the repayment or reimbursement obligation with respect to which is on a parity with the Bonds shall be subject to the limitations thereon described under the caption "—Repayment Obligations" above.

#### **Events of Default**

The 1991 Master Resolution provides that "Event of Default" with respect to a Series of Bonds means any one of the following events:

- (a) if payment by the Commission in respect of any installment of interest on any Bond of such Series is not made in full when the same becomes due and payable;

- (b) if payment by the Commission in respect of the principal or Accreted Value of any Bond of such Series is not made in full when the same becomes due and payable, whether at maturity or by proceedings for redemption or otherwise;
- (c) if payment of the purchase price of any Bond tendered for optional or mandatory purchase in accordance with the provisions of the Supplemental Resolution providing for the issuance of such Bond is not made in full when due;
- (d) if the Commission fails to observe or perform any other covenant or agreement on its part under the 1991 Master Resolution (other than the covenant or agreement to maintain rentals, rates, fees and charges sufficient to meet the rate covenant with respect to the Bonds), for a period of 60 days after the date on which written notice of such failure, requiring the same to be remedied, have been given to the Commission by the Trustee, or to the Commission and the Trustee by the Holders of at least 25% in aggregate Principal Amount of Bonds of such Series then Outstanding; provided, however, that if the breach of covenant or agreement is one which cannot be completely remedied within the 60 days after written notice has been given, it shall not be an Event of Default with respect to such Series as long as the Commission has taken active steps within the 60 days after written notice has been given to remedy the failure and is diligently pursuing such remedy;
- (e) if the Commission is required pursuant to the rate covenant contained in the 1991 Master Resolution to take measures to revise the schedule of rentals, rates, fees and charges for the use of the Airport and Net Revenues, together with any Transfer, for the Fiscal Year in which such adjustments are made are less than the amount required by the rate covenant with respect to the Bonds (See “—Certain Covenants—*Rate Covenant*”);
- (f) if either the Commission or the City institutes proceedings to be adjudicated a bankrupt or insolvent, or consents to the institution of bankruptcy or insolvency proceedings against it, or files a petition or answer or consent seeking reorganization or relief under the federal Bankruptcy Code or any other similar applicable federal or state law, or consents to the filing of any such petition or to the appointment of a receiver, liquidator, assignee, trustee or sequestrator (or other similar official) of the Commission or of any substantial part of its property, or fails to timely controvert an involuntary petition filed against it under the federal Bankruptcy Code, or consents to entry of an order for relief under the federal Bankruptcy Code or makes an assignment for the benefit of creditors, or admits in writing its inability to pay its debts generally as they become due; and
- (g) the occurrence of any other Event of Default with respect to such Series of Bonds as is provided in a Supplemental Resolution.

An Event of Default with respect to one Series of Bonds will not in and of itself constitute an Event of Default with respect to any other Series of Bonds unless such event or condition on its own constitutes an Event of Default with respect to such other Series of Bonds pursuant to the 1991 Master Resolution.

### **No Acceleration**

The Bonds are not subject to acceleration under any circumstance or for any reason, including without limitation upon the occurrence and continuance of an Event of Default under the 1991 Master Resolution or any Supplemental Resolution. Moreover, the Bonds will not be subject to mandatory redemption or mandatory purchase or tender for purchase as a result of the occurrence and continuance of an Event of Default to the extent the redemption or purchase price is payable from Net Revenues.

### **Remedies Upon Default**

Subject to the terms of the 1991 Master Resolution described in the last paragraph in this section captioned “—Remedies Upon Default”, upon the occurrence and continuance of an Event of Default with respect to one or more Series of Bonds, the Trustee may, or upon the written request of the Holders of not less than a majority in aggregate

Principal Amount of the Bonds of such Series together with indemnification of the Trustee to its satisfaction therefor shall, proceed forthwith to protect and enforce its rights and the rights of the Bondholders under the 1991 Master Resolution and under the Act and such Bonds by such suits, actions or proceedings as the Trustee, being advised by counsel, deems expedient, including but not limited to:

- (a) Actions to recover money or damages due and owing;
- (b) Actions to enjoin any acts or things, which may be unlawful or in violation of the rights of the Holders of such Bonds; and
- (c) Enforcement of any other right of such Bondholders conferred by law, including the Act, or by the 1991 Master Resolution, including without limitation by suit, action, injunction, mandamus or other proceedings to enforce and compel the performance by the Commission of actions required by the Act or the 1991 Master Resolution, including the fixing, changing and collection of fees or other charges.

Subject to the last paragraph of the 1991 Master Resolution described in this section captioned “—Remedies Upon Default”, regardless of the happening of an Event of Default, the Trustee, if requested in writing by the Holders of not less than 25% in aggregate Principal Amount of the Bonds of one or more Series, shall upon being indemnified to its satisfaction therefor, institute and maintain such suits and proceedings as it may be advised shall be necessary or expedient (i) to prevent any impairment of the security under the 1991 Master Resolution by any acts or omissions to act which may be unlawful or in violation of the 1991 Master Resolution, or (ii) to preserve or protect the interests of the Holders, provided that such request is in accordance with law and the provisions of the 1991 Master Resolution and, in the sole judgment of the Trustee, is not unduly prejudicial to the interests of the Holders of Bonds of each Series not making such request.

Notwithstanding anything else in the 1991 Master Resolution to the contrary, the remedies provided for with respect to obtaining moneys on deposit in funds or accounts shall be limited to the funds or accounts under the Resolution pledged to the applicable Series of Bonds with respect to which an Event of Default exists.

Furthermore, while a Credit Facility with respect to any Bonds is in effect, a Supplemental Resolution may provide that so long as the Credit Provider is not Insolvent and is not in default under the Credit Facility, no right, power or remedy under the 1991 Master Resolution with respect to such Bonds may be pursued without the prior written consent of the Credit Provider.

If an Event of Default with respect to one or more but not all Series of Bonds Outstanding has occurred and is continuing, the Holders of a majority in aggregate Principal Amount of the Bonds of such one or more Series then Outstanding have the right at any time, by an instrument or instruments in writing executed and delivered to the Trustee, to direct the method and place of conducting any proceeding to be taken with respect to funds or assets solely securing such one or more Series in connection with the enforcement of the terms and conditions of the 1991 Master Resolution; provided, that such direction is in accordance with law and the provisions of the 1991 Master Resolution (including any indemnity to the Trustee as provided in the 1991 Master Resolution) and, in the sole judgment of the Trustee, is not unduly prejudicial to the interests of Bondholders of each Series of Bonds not joining in such direction; and provided further, that the Trustee shall have discretion to take any other action under the 1991 Master Resolution which it may deem proper and in accordance with the 1991 Master Resolution and which is not inconsistent with such direction by Bondholders.

If an Event of Default with respect to all Series of Bonds has occurred and is continuing, the Holders of a majority in aggregate Principal Amount of all Bonds then Outstanding shall have the right, at any time, by an instrument in writing executed and delivered to the Trustee to direct the method and place of conducting any proceeding to be taken with respect to Net Revenues or other assets securing all Bonds in connection with the enforcement of the terms and conditions of the 1991 Master Resolution; provided, that such direction is in accordance with law and the provisions of the 1991 Master Resolution (including indemnity to the Trustee as provided in the 1991 Master Resolution) and, in the sole judgment of the Trustee, is not unduly prejudicial to the interests of Holders of Bonds not joining in such direction; and provided further, that the Trustee shall have discretion to take any other action

under the Resolution which it may deem proper and in accordance with the 1991 Master Resolution and which is not inconsistent with such direction by Holders of Bonds.

The 1991 Master Resolution provides that no Holder of any Bond of a Series shall have any right to institute any suit, action or proceeding in equity or at law for the enforcement of the 1991 Master Resolution unless:

- (a) an Event of Default has occurred with respect to such Series and the Trustee is deemed to have notice of such Event of Default, the Trustee has actual knowledge of such Event of Default or the Trustee has been notified in writing of such Event of Default by the Commission or by the Holders of at least 25% in aggregate Principal Amount of all such Series of Bonds with respect to which an Event of Default has occurred;
- (b) the Holders of at least a majority in aggregate Principal Amount of Bonds of all such Series then Outstanding with respect to which an Event of Default has occurred have made written request to the Trustee to proceed to exercise the powers granted under the 1991 Master Resolution or to institute such action, suit or proceeding in its own name;
- (c) such Holders of Bonds have offered the Trustee indemnity as provided under the 1991 Master Resolution; and
- (d) the Trustee has failed or refused to exercise the powers granted under the 1991 Master Resolution or to institute such action, suit or proceedings in its own name for a period of 60 days after receipt by it of such request and offer of indemnity.

No one or more Holders of Bonds of such Series shall have any right in any manner whatsoever to affect, disturb or prejudice the security of, or to enforce any right under, the 1991 Master Resolution except for in the manner provided under the Resolution and for the equal benefit of the Holders of all Bonds of such Series then Outstanding.

No Holder of any Bond of such Series may institute or prosecute any such suit or enter judgment therein if, and to the extent that, the institution or prosecution of such suit or the entry of judgment therein would, under applicable law, result in the surrender, impairment, waiver or loss of the lien of the 1991 Master Resolution on the moneys, funds and properties pledged thereunder for the equal and ratable benefit of all Holders of Bonds of such Series.

### **Defeasance**

Payment of any Bonds may be provided for by the deposit with the Trustee, in trust, of moneys, noncallable Government Obligations, noncallable Government Certificates, certain types of pre-refunded municipal obligations described in the definition of Permitted Investments or any combination thereof. Provided that the moneys and the maturing principal and interest income on any securities so deposited will be sufficient and available without reinvestment to pay when due the principal, whether at maturity or upon fixed redemption dates, or purchase price and premium, if any, and interest on such Bonds, and provision for any required notice of redemption prior to maturity has been made, such Bonds will no longer be deemed Outstanding under the 1991 Master Resolution. No Bond may be so provided for if, as a result thereof or of any other action in connection with which the provision for payment of such Bond is made, the interest payable on any tax-exempt Bond is made subject to federal income taxes.

### **Modification or Amendment of the 1991 Master Resolution**

The 1991 Master Resolution and the rights and obligations of the Commission and of the Holders of the Bonds may be modified or amended at any time by a Supplemental Resolution with the written consent, without a meeting, of the Holders of a majority in aggregate Principal Amount of the Outstanding Bonds of all Series affected. No such modification or amendment may (i) extend the stated maturity of or time or change the currency for paying the principal or purchase price of, premium, if any, or interest on any Bond or reduce the Principal Amount or purchase price of or the redemption premium or rate of interest payable on any Bond without the consent of the Holder of such Bond; (ii) except as expressly permitted by the 1991 Master Resolution, prefer or give a priority to any Bond over any

other Bond without the consent of the Holder of each Bond then Outstanding not receiving such preference or priority; or (iii) permit the creation of a lien not expressly permitted by the 1991 Master Resolution upon or pledge of Net Revenues ranking prior to or on a parity with the lien of the 1991 Master Resolution or reduce the aggregate Principal Amount of Bonds then Outstanding the consent of the Holders of which is required to authorize such Supplemental Resolution, without the consent of the Holders of all Bonds then Outstanding.

The 1991 Master Resolution and the rights and obligations of the Commission and of the Holders of the Bonds may also be modified or amended at any time by a Supplemental Resolution, without the consent or notice to of any Bondholders, for one or more of the following purposes:

- (a) to cure any ambiguity or formal defect or omission in the 1991 Master Resolution;
- (b) to correct or supplement any provision of the 1991 Master Resolution which may be inconsistent with any other provision of the 1991 Master Resolution or to make any other provisions with respect to matters or questions arising thereunder that will not have a material adverse effect on the interests of the Holders;
- (c) to grant or confer upon the Holders any additional rights, remedies, powers or authority that may lawfully be granted or conferred upon them;
- (d) to secure additional revenues or provide additional security or reserves for payment of any Bonds;
- (e) to preserve the excludability of interest on any Bonds from gross income for purposes of federal income taxes, or to change the tax covenants set forth in the 1991 Master Resolution, pursuant to an opinion of nationally recognized bond counsel that such action will not affect adversely such excludability;
- (f) to provide for the issuance of, and to set the terms and conditions of, each additional Series of Bonds, including covenants and provisions with respect thereto which do not violate the terms of the 1991 Master Resolution;
- (g) to add requirements the compliance with which is required by a Rating Agency in connection with issuing a rating with respect to any Series of Bonds;
- (h) to confirm, as further assurance, any interest of the Trustee in and to Net Revenues or in and to the funds and accounts held by the Trustee or in and to any other moneys, securities or funds of the Commission provided pursuant to the 1991 Master Resolution;
- (i) to comply with the requirements of the Trust Indenture Act of 1939, as amended, to the extent applicable;
- (j) to provide for uncertificated Bonds or for the issuance of coupon or bearer Bonds or Bonds registered only as to principal;
- (k) to accommodate the use of a Credit Facility for specific Bonds or a Series of Bonds;
- (l) to designate any other airports, airfields, landing places or places for the take-off and landing of aircraft, together with related facilities or property, which are hereafter owned, controlled or operated by the Commission or over which the Commission has possession, management, supervision or control as not a part of the Airport; and
- (m) to make any other change or addition to the 1991 Master Resolution which, in the opinion of nationally recognized bond counsel, will not have a material adverse effect on the interests of the Holders of the Bonds.

## **Certain Rights and Duties of the Trustee**

The Trustee may resign at any time. Written notice of such resignation must be given to the Commission and such resignation will take effect upon the later of the date 90 days after receipt of such notice by the Commission and the date of the appointment, qualification and acceptance of a successor Trustee. In the event a successor Trustee has not been appointed and qualified within 60 days after the date notice of resignation is given, the Trustee or the Commission may apply to any court of competent jurisdiction for the appointment of a successor Trustee to act until such time as a successor is appointed.

In addition, the Trustee may be removed at any time by the Commission so long as (i) no Event of Default has occurred and is continuing and (ii) the Commission determines that the removal of the Trustee will not have an adverse effect upon the rights or interests of the Holders of Bonds. Subject to clause (ii) of the preceding sentence, in the event the Trustee becomes Insolvent, the Commission may remove the Trustee by written notice effective immediately upon the appointment, qualification and acceptance of a successor Trustee.

In the event the Trustee resigns, is removed, is dissolved, becomes Insolvent or otherwise becomes incapable to act as the Trustee, the Commission is entitled to appoint a successor Trustee. In any event, no removal or resignation of the Trustee will be effective until a successor trustee has accepted appointment by the Commission.

Unless otherwise ordered by a court or regulatory body, or unless required by law, any successor Trustee will be a trust company or bank having the powers of a trust company as to trusts, qualified to do and doing trust business within the State of California and having an officially reported combined capital, surplus, undivided profits and reserves aggregating at least \$50,000,000; provided, such an institution is willing, qualified and able to accept the trust upon reasonable or customary terms.

The recitals, statements and representations contained in the 1991 Master Resolution or in any Bond are to be taken and construed as made by and on the part of the Commission and not by the Trustee, and the Trustee neither assumes nor has any responsibility for the correctness of the same other than the Trustee's certification of authentication of any Bonds as to which it is authenticating agent.

Except as otherwise provided in the 1991 Master Resolution, the Trustee is under no duty of inquiry with respect to any default which constitutes, or with notice or lapse of time or both would constitute, an Event of Default without actual knowledge of the Trustee or receipt by the Trustee of written notice of such default from the Commission or any Holder of Bonds.

Except as expressly required under the 1991 Master Resolution, the Trustee is not required to institute any suit or action or other proceeding in which it may be a defendant, nor is it required to take any steps to enforce its rights and expose it to liability, unless and until it has been indemnified, to its satisfaction, against any and all reasonable costs and against all liability and damages. The Trustee nevertheless, may begin suit, or appear in and defend suit, or do anything else which in its judgment is proper to be done by it as the Trustee, without prior assurance of indemnity, and in such case the Commission is required to reimburse the Trustee for all reasonable costs and for all liability and damages suffered by the Trustee in connection therewith, except for the Trustee's own negligent action, its own negligent failure to act, its own willful misconduct or self-dealing constituting a breach of trust under applicable law.

In the absence of bad faith on the part of the Trustee, the Trustee may conclusively rely upon and will be protected in acting or refraining from acting in reliance upon any document reasonably believed by it to be genuine and to have been signed or presented by the proper officials of the Commission, the Treasurer, the City, an Airport Consultant, a Financial Consultant, an Independent Auditor or the Holders of Bonds or agents or attorneys of such Holders; provided, in the case of any such document specifically required to be furnished to the Trustee under the 1991 Master Resolution, the Trustee shall be under a duty to examine the same to determine whether it conforms to the requirements of the 1991 Master Resolution. The Trustee is not bound to make any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, facsimile transmission, bond or other paper or document submitted to the Trustee.

## SUMMARY OF CERTAIN SUPPLEMENTAL RESOLUTIONS

*The following is a summary of certain provisions contained in the Supplemental Resolutions, as the same may have been subsequently amended or supplemented, and is not to be considered as a full statement thereof. Reference is made to each of these Supplemental Resolutions and to the 1991 Master Resolution for full details of the terms of the Bonds, the application of revenues therefor, and the security provisions pertaining thereto. See also "DESCRIPTION OF THE SERIES 2019A-D BONDS" in the front portion of this Official Statement for a summary of the provisions related to the Series 2019A-D Bonds.*

### Funds and Accounts

The Resolution establishes the following funds and accounts:

#### Within the Costs of Issuance Fund:

- Series 2019A Costs of Issuance Account
- Series 2019B Costs of Issuance Account
- Series 2019C Costs of Issuance Account
- Series 2019D Costs of Issuance Account

#### Within the Construction Fund

- Series 2019A Construction Account
- Series 2019B Construction Account
- Series 2019C Construction Account

#### Within the Debt Service Fund

- Series 2019A Capitalized Interest Account
- Series 2019B Capitalized Interest Account
- Series 2019C Capitalized Interest Account

- Series 2019A Interest Account
- Series 2019B Interest Account
- Series 2019C Interest Account
- Series 2019D Interest Account
- Series 2019A Principal Account
- Series 2019B Principal Account
- Series 2019C Principal Account
- Series 2019D Principal Account

- Series 2019A Redemption Account
- Series 2019B Redemption Account
- Series 2019C Redemption Account
- Series 2019D Redemption Account

#### Within the Rebate Fund:

- Series 2019A/B/D Rebate Account

The 1991 Master Resolution established the Issue 1 Reserve Account as security for the Issue 1 Bonds and any other Participating Series of Bonds designated by Supplemental Resolution or by the Director as being secured by the Issue 1 Reserve Account. The Series 2019A Bonds and Series 2019C Bonds have each been designated as a Participating Series of Bonds with respect to the Issue 1 Reserve Account. The Resolution established the 2017 Reserve Account as security for the 2017 Reserve Account Series Bonds and any other Series of Bonds designated by Supplemental Resolution or by the Director as being secured by the 2017 Reserve Account. The Series 2019B Bonds and Series 2019D Bonds have each been designated as a Series of Bonds secured by the 2017 Reserve Account.

### **Application of Series 2019A-D Bonds Costs of Issuance Accounts**

The 1991 Master Resolution requires the Trustee to apply moneys in the Series 2019A Costs of Issuance Account, the Series 2019B Costs of Issuance Account, the Series 2019C Costs of Issuance Account and the Series 2019D Costs of Issuance Account to the payment of costs of issuance of the Series 2019A-D Bonds. Amounts in the Series 2019A-D Costs of Issuance Accounts may be invested in any Permitted Investment.

### **Application of Series 2019A, Series 2019B and Series 2019C Construction Accounts**

The 1991 Master Resolution requires the Trustee to disperse moneys in the Series 2019A Construction Account, Series 2019B Construction Account and the Series 2019C Construction Account to the payment of Capital Improvement Plan Projects.

### **Application of Series 2019A-D Debt Service Accounts**

The Series 2019A Interest Account, the Series 2019A Principal Account and the Series 2019A Redemption Account are sometimes referred to herein as the “Series 2019A Debt Service Accounts”. The Series 2019B Interest Account, the Series 2019B Principal Account and the Series 2019B Redemption Account are sometimes referred to herein as the “Series 2019B Debt Service Accounts”. The Series 2019C Interest Account, the Series 2019C Principal Account and the Series 2019C Redemption Account are sometimes referred to herein as the “Series 2019C Debt Service Accounts”. The Series 2019D Interest Account and the Series 2019D Principal Account are sometimes referred to herein as the “Series 2019D Debt Service Accounts”. The Supplemental Resolutions require the Trustee to apply moneys in the Series 2019A Interest Account, the Series 2019B Interest Account, the Series 2019C Interest Account and the Series 2019D Interest Account to the payment of interest on the related Series 2019A-D Bonds when due, including accrued interest on any of the related Series 2019A-D Bonds purchased or redeemed prior to maturity. The Supplemental Resolutions require the Trustee to apply moneys in the Series 2019A Principal Account, the Series 2019B Principal Account, the Series 2019C Principal Account and the Series 2019D Principal Account to the payment of the Principal Amount of the related Series 2019A-D Bonds when due.

The Commission may, from time to time, purchase any Series 2019A-D Bonds out of available moneys of the Commission at such prices as the Commission may determine plus accrued interest thereon. All Series 2019A-D Bonds purchased under the provisions of the 1991 Master Resolution will be delivered to, and canceled and destroyed by, the Trustee and shall not be reissued.

The Trustee is required to apply moneys in the Series 2019A Redemption Account, the Series 2019B Redemption Account and the Series 2019C Redemption Account to the payment of the redemption price of applicable Series of Bonds called for redemption. Accrued interest on the Series 2019A Bonds, the Series 2019B Bonds and the Series 2019C Bonds redeemed pursuant to the 1991 Master Resolution will be paid from the Series 2019A Interest Account, the Series 2019B Interest Account or the Series 2019C Interest Account, as applicable.

In the event that the amount on deposit in any Series 2019A Debt Service Account is insufficient to pay the interest or Principal Amount or redemption price coming due on the Series 2019A Bonds, the 1991 Master Resolution requires the Trustee to transfer the amount of such deficiency from the Issue 1 Reserve Account to the Series 2019A Interest Account, the Series 2019A Principal Account or the Series 2019A Redemption Account, as the case may be, not later than five days prior to the date on which such payment is required.

In the event that the amount on deposit in any Series 2019B Debt Service Account is insufficient to pay the interest or Principal Amount or redemption price coming due on the Series 2019B Bonds, the 1991 Master Resolution requires the Trustee to transfer the amount of such deficiency from the 2017 Reserve Account to the Series 2019B Interest Account, the Series 2019B Principal Account or the Series 2019B Redemption Account, as the case may be, not later than five days prior to the date on which such payment is required.

In the event that the amount on deposit in any Series 2019C Debt Service Account is insufficient to pay the interest or Principal Amount or redemption price coming due on the Series 2019C Bonds, the 1991 Master Resolution requires the Trustee to transfer the amount of such deficiency from the Issue 1 Reserve Account to the Series 2019C

Interest Account, the Series 2019C Principal Account or the Series 2019C Redemption Account, as the case may be, not later than five days prior to the date on which such payment is required.

In the event that the amount on deposit in any Series 2019D Debt Service Account is insufficient to pay the interest or Principal Amount coming due on the Series 2019D Bonds, the 1991 Master Resolution requires the Trustee to transfer the amount of such deficiency from the 2017 Reserve Account to the Series 2019D Interest Account, the Series 2019D Principal Account or the Series 2019D Redemption Account, as the case may be, not later than five days prior to the date on which such payment is required.

### **Rebate; Series 2019A/B/D Rebate Accounts**

The Commission will pay or cause to be paid to the United States Government the amounts required by Section 148(f) of the Code and any Regulations promulgated thereunder at the times required thereby. The 1991 Master Resolution requires the Trustee to hold any payments received from the Commission for deposit into the Series 2019A/B/D Rebate Account for purposes of paying rebate to the United States. Pending payment to the United States, moneys held in the 2019A/B/D Rebate Account are pledged to secure such payments to the United States as provided in the 1991 Master Resolution and in the Tax Certificate for the Series 2019A Bonds, the Series 2019B Bonds and the Series 2019D Bonds (the “Series 2019A/B/D Tax Certificate”) Bonds and neither the Commission, the Bondholders nor any other person shall have any rights in or claim to such moneys. The 1991 Master Resolution requires the Trustee to invest all amounts held in the Series 2019A/B/D Rebate Account in Nonpurpose Investments (as defined in the Series 2019A/B/D Tax Certificate), as directed by the Commission in the Series 2019A/B/D Tax Certificate.

### **Permitted Investments**

Amounts in the Series Debt Service Accounts for the Series 2019A-D Bonds shall be invested in Permitted Investments or any other obligations or investments in which the Treasurer is permitted to invest Commission funds maturing on or before the related Payment Date on which the proceeds of such Permitted Investments are intended to be applied for the purposes of the related Series Debt Service Account for the Series 2019A-D Bonds. Amounts in the Issue 1 Reserve Account shall be invested in Permitted Investments described in clauses (a) or (b) of the definition of Permitted Investments maturing no later than seven years after the date of purchase of said Permitted Investment. Amounts in the 2017 Reserve Account shall be invested by the Trustee in accordance with instructions provided by the Commission (or such third parties appointed by the Commission) or, in the absence of instructions from the Commission (or such third parties appointed by the Commission), pursuant to the Commission’s standing instructions, in Permitted Investments or any other obligations or investments in which the Treasurer is permitted to invest Commission funds. Amounts in the Series 2019A Construction Account, the 2019B Construction Account and the 2019C Construction Account may be invested in any Permitted Investment or any other obligations or investments in which the Treasurer is permitted to invest Commission funds.

### **Deposits of Net Revenues in Series Debt Service Accounts**

In accordance with the 1991 Master Resolution, the Treasurer is required, on the second Business Day of each month, to allocate and transfer to the Trustee for deposit in the Series Debt Service Accounts for Series 2019A-D Bonds amounts from Net Revenues, as follows:

- (a) In each Series Interest Account associated with the related Series 2019A-D Bonds, in approximately equal monthly installments, an amount equal to at least one-sixth (1/6) of the aggregate amount of interest becoming due and payable on the Series 2019A-D Bonds on the next succeeding semiannual interest payment date; provided, however, that no moneys need be deposited in the Series Interest Account except to the extent that such moneys are required for the payment of interest to become due on the Series 2019A-D Bonds on the next succeeding semiannual interest payment date, after the application of the moneys then on deposit in the applicable Series Interest Account; and provided, further, that subject to the preceding proviso, during the period preceding the first interest payment date on the Series 2019A-D Bonds, the amount of each monthly installment shall be equal to the product of a fraction the numerator of which is one and the denominator of which is the number of whole calendar months from the

Closing Date to the first interest payment date on the Series 2019A-D Bonds minus one, and the aggregate amount of interest becoming due and payable on the Series 2019A-D Bonds on said interest payment date.

- (b) In each Series Principal Account in approximately equal monthly installments, commencing on the second Business Day of the month determined pursuant to a Series Sale Resolution or Bond Purchase Contract, an amount equal to at least one twelfth (1/12) of the aggregate Principal Amount becoming due and payable on any Outstanding serial Bonds of the Series 2019A-D Bonds on the next succeeding Principal Payment Date, until there shall have been accumulated in the applicable Series Principal Account an amount sufficient to pay the Principal Amount of all serial Series 2019A-D Bonds maturing by their terms on the next Principal Payment Date.

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## APPENDIX E

### SUMMARY OF CERTAIN PROVISIONS OF THE LEASE AND USE AGREEMENTS

The City and County of San Francisco (the “City”), acting by and through its Airport Commission (the “Commission”), has entered into a form of Lease and Use Agreement (the “Lease and Use Agreement”) with a majority of the airlines (“Signatory Airlines”) operating at the Airport. The following summary of the Lease and Use Agreements does not purport to be complete and reference is hereby made to the complete text of the documents, copies of which are on file and are available for examination at the offices of the Commission.

#### **Term of Lease**

The Lease and Use Agreements took effect on and after July 1, 2011 and expire on June 30, 2021.

Any airline that holds over with the Commission’s consent beyond the expiration date of its Lease and Use Agreement is deemed a month-to-month tenant, and the holdover airline will continue to pay the same rate of rentals and landing fees as Signatory Airlines, unless different rates are agreed upon. Any airline that holds over without the Commission’s consent is deemed a month-to-month tenant, and the holdover airline will pay the 25% premium on landing fees charged to other non-signatory airlines. Any holding over without the Commission’s consent also constitutes an event of default by the airline.

#### **Signatory Airlines, Non-Signatory Airlines and Affiliates**

Any air carrier that is certified by the Secretary of Transportation, is engaged in the business of scheduled or non-scheduled commercial transportation by air of persons, property, mail, parcels and/or cargo, and signs a Lease and Use Agreement, is considered a “Signatory Airline.”

Any air carrier that does not qualify as a Signatory Airline, may operate at the Airport under a month-to-month Operating Permit or as an itinerant airline. Airlines that are not Signatory Airlines or an Affiliate Airline of a Signatory Airline will pay a 25% premium on landing fees.

An “Affiliate Airline” is a non-Signatory Airline that is operating at the Airport under an Operating Permit and either (i) is a wholly owned subsidiary of a Signatory Airline, (ii) is a subsidiary of the same corporate parent of the Signatory Airline, (iii) shares flight codes with a Signatory Airline at the Airport, or (iv) operates cargo feeder flights at the Airport under the direction and control of a Signatory Airline. If the non-Signatory Airline is able to sell its own seats for flights at the Airport, however, it will not be classified as an Affiliate Airline of any Signatory Airline even if it may satisfy one of the criteria described above. Each Lease and Use Agreement constitutes an agreement by a Signatory Airline to guarantee the performance of all reporting and payment obligations of its Affiliate Airline(s) to the Commission. An Affiliate Airline has no Majority-in-Interest voting rights, but is included with its Signatory Airline’s revenue aircraft arrivals for purposes of determining a Majority-in-Interest.

#### **Lease of Premises**

The Commission leases terminal space under the Lease and Use Agreements on an exclusive use basis, a preferential use basis, a joint use basis and a common-use basis, each with the following characteristics:

*Exclusive use space*, which includes back offices, clubs and lounges, ticket counters, and baggage handling space in domestic terminals, is leased to one Signatory Airline and is charged on a per-square-foot basis. Gates are no longer leased exclusively to one airline.

*Preferential use space*, which includes only domestic gates and holdrooms, is assigned annually to one Signatory Airline based on a formula taking into account the Signatory Airline’s share of traffic at the Airport. See “–Preferential Use Gate Allocation Methodology” below. Rent for preferential use space is charged on a per-square-foot basis, with the rent for holdrooms being calculated based on the average size of all holdrooms in the applicable boarding area. The Signatory Airline to which a gate has been assigned has a preferential right to use the gate during

its scheduled operations, but the Airport retains the right to let other airlines use the gate when not in active use by the assigned Signatory Airline. See “–Airport Scheduling Rights at Preferential Use Gates” below.

*Joint use space* applies primarily to gates, holdrooms, ticket counters and baggage facilities in the ITC, although joint use baggage systems are also located in Terminals 1 and 2. Joint use space and facilities are leased to a group of Signatory Airlines for their collective use in accordance with gate and ticket counter management protocols approved by the Airport. Rental charges are based on a formula, in accordance with which 80% of the charges are allocated pro rata to the Signatory Airlines in the group based on their passenger levels, and 20% of the charges are shared equally by the Signatory Airlines in the group.

*Common-use space and facilities* include gates in the domestic and international terminals, as well as ticket counters and baggage handling facilities in the domestic terminals. The Airport Director is permitted under the Lease and Use Agreements annually to designate up to 10% of the domestic terminal gates for common-use by any airline. Common-use facilities are not leased to any airline, but are used as needed by airlines which pay per-use fees. Common-use fees are calculated annually based on the cost of the applicable facilities divided by an average number of “turns” (i.e. periods of use). Airlines are charged 100% of the applicable common-use fee for a narrow-body aircraft and 115% of the fee for a wide-body aircraft.

As defined in the Lease and Use Agreement, a “gate” includes the passenger holdroom, together with any or all of the following equipment if owned by the Commission: a passenger loading bridge, a 400 MHz power unit, a pre-conditioned air unit, and related equipment. The related ramp (apron) is not included in the gate, but is retained by the Commission and used by the air carrier using the related gate.

## **Designation of Common Use Gates and Facilities**

### *Common Use Gates*

The Lease and Use Agreements provide that, no later than October 1 of each year, the Commission is to present to the Resource Management Advisory Committee (“RMAC”) (a committee composed of three representatives of the Commission and three representatives of the Signatory Airlines) for review and discussion a preliminary plan indicating the number of gates in each terminal proposed to be reserved for use as common-use gates in the following Fiscal Year. Although the Director has sole discretion, after taking into consideration any recommendations by the RMAC, to determine the total number of gates to be reserved as common-use gates effective July 1, 2011 and July 1 of each Fiscal Year thereafter, such number may not exceed 10% of the total number of domestic terminal gates. Gates other than joint use gates remaining available after such determination shall be offered by the Commission to Signatory Airlines for use as preferential use gates to be allocated in accordance with the procedure described below. The Commission is to notify in writing all Signatory Airlines of its determination with respect to common-use gates no later than December 1 of each Fiscal Year.

### *Common Use Ticket Counters and Support Facilities*

As of the effective date of the Lease and Use Agreement, the Director is to identify the initial ticket counters and support facilities to be designated for common-use. Thereafter, if in the Director’s reasonable discretion an adjustment to the location or number of common-use ticket counters and common-use support facilities would be desirable, the Director may designate additional ticket counters and support facilities for common-use. The Director may also change ticket counters and support facilities from common-use to joint use or exclusive use for lease to Signatory Airlines. The Commission retains exclusive control of the use of all common-use gates, common-use ticket counters and common-use support facilities, provided that common-use facilities in the international terminal are to be managed and scheduled in accordance with the applicable gate and ticket counter management protocols.

## **Preferential Use Gate Allocation Methodology**

After determination by the Airport Director of the total number of common-use gates as described above, the Commission is to apply the following methodology to determine the total number of preferential use gates that are to

be offered to each Signatory Airline during each Fiscal Year, effective July 1, 2011 and July 1 of each Fiscal Year thereafter:

(a) The Commission will first divide the number of Scheduled Seats for each Signatory Airline, including its Affiliate Airline(s), by the total number of Scheduled Seats for all Signatory Airlines to determine the Signatory Airline's percentage share of all Scheduled Seats ("Scheduled Seats Percentage"). "Scheduled Seats" means the average daily number of departing seats on the scheduled operations of a Signatory Airline (including its Affiliate Airlines) to destinations in the United States or Canada and on international flights allowed by the Commission to operate from a domestic terminal, for the month of August immediately preceding the Fiscal Year for which the determination is being made, which is computed by dividing total departing seats for the scheduled operations of a Signatory Airline (including its Affiliate Airlines) for the month of August by 31.

(b) The Commission will calculate the number of preferential use gates to be offered to a Signatory Airline by multiplying the Signatory Airline's Scheduled Seats Percentage by the total number of gates to be made available for preferential use, rounding the product to the nearest whole number; provided that a product less than 0.5 will not be eligible for rounding during this step.

(c) If as a result of rounding, the total number of preferential use gates to be offered to all Signatory Airlines computed as described in paragraph (b) is less than the total number of gates available for preferential use, the Commission will allocate such remaining preferential use gates to Signatory Airlines based on the unrounded results of the computations described in paragraph (b). The remaining preferential use gates will be allocated in priority order by first increasing by one the number of preferential use gates to be offered to the Signatory Airline whose unrounded product is nearest to 0.5 without equaling or exceeding 0.5 and next proceeding to increase by one the number of preferential use gates to be offered to the Signatory Airline whose unrounded product is second nearest to 0.5 without equaling or exceeding 0.5 and so on until the total number of preferential use gates to be made available to all Signatory Airlines by the Commission is reached.

(d) If as a result of rounding, the total number of preferential use gates to be offered to all Signatory Airlines computed as described in paragraph (b) exceeds the total number of preferential use gates, the Commission will reduce the number of calculated preferential use gates to be offered to Signatory Airlines based on the unrounded results of the computations described in paragraph (b). The number of over-allocated preferential use gates will be reduced in priority order by first reducing by one the number of allocated preferential use gates to the Signatory Airline whose unrounded product calculated as described in paragraph (b) is nearest to 0.5 without being less than 0.5 and next proceeding to reduce by one the number of preferential use gates to be offered to the Signatory Airline whose unrounded product calculated as described in paragraph (b) is second nearest 0.5 without being less than 0.5 and so on until the total number of preferential use gates to be made available to all Signatory Airlines by the Commission is reached.

(e) No later than December 1 of each Fiscal Year, the Commission will provide written notice to all Signatory Airlines of its annual determination of preferential use gates as described above and will offer each Signatory Airline the opportunity to be allocated the number of preferential use gates indicated by these calculations. Each Signatory Airline will provide written notice to the Commission no later than February 1 of each Fiscal Year either accepting or rejecting any or all of the gates offered to it by the Commission for preferential use.

(f) If a Signatory Airline does not accept the allocation of a preferential use gate by February 1 of each Fiscal Year, the Signatory Airline rejecting such gate may request the Commission allocate such preferential use gate to another Signatory Airline if, within the acceptance period, the following two conditions are met: (i) the Signatory Airline rejecting the preferential use gate has a written handling agreement with the Signatory Airline accepting allocation of the rejected preferential use gate, and (ii) the Signatory Airline accepting allocation of the rejected preferential use gate demonstrates to the Commission's satisfaction that it needs the rejected preferential use gate reasonably to accommodate the rejecting Signatory Airline's flights, in which case the gate will be allocated to that other Signatory Airline as a preferential use gate. Alternatively, if any Signatory Airline does not accept the allocation of a preferential use gate, the Commission may elect to reallocate such gate to another Signatory Airline if the Commission determines the number of common-use gates is adequate to accommodate all airline operations needing to use gates at the Airport. The Commission may reallocate such gates until all gates available for use as preferential use gates are allocated to Signatory Airlines or rejected for use as preferential use gates.

(g) Any gate rejected for allocation during a Fiscal Year as a preferential use gate by all eligible Signatory Airlines may be deactivated or used during such Fiscal Year as the Commission sees fit, including, without limitation, as a common-use gate, even though such election may cause the total number of common-use gates to exceed ten percent of the total number of domestic terminal gates.

(h) The Commission will, in its sole discretion, determine the locations of any preferential use gates to be offered to a Signatory Airline, after taking into consideration the compatibility of such Signatory Airline's aircraft with the gate being assigned and the desirability of assigning contiguous gates within the same terminal for preferential use by any given Signatory Airline and minimizing the frequency of changes in the locations of preferential use gates, as well as any recommendations by the RMAC. By March 1 of each Fiscal Year, the Commission will provide Signatory Airlines notice of the assignments of preferential use gates and the locations of common-use gates, to be effective the following July 1.

### **Airport Scheduling Rights at Preferential Use Gates**

A Signatory Airline will have scheduling preference during a period of use at its preferential use gates only for an operation (arrival or departure) that occurs in accordance with a published schedule. The Commission will have the right, upon reasonable notice to a Signatory Airline, to schedule arrivals and departures by a requesting airline at a preferential use gate at all periods of time other than the Signatory Airline's periods of use of that assigned preferential use gate. In accommodating the Commission in its right to schedule such operations at a preferential use gate, the Signatory Airline will allow for use of its facilities or equipment (not including ground service equipment) at the preferential use gate or permit use of the Commission's equipment and podiums as may be required for the efficient use of the preferential use gate by a requesting airline. Whenever practical, the Commission will first consider the availability of common-use gates and any recommendations of the RMAC before scheduling requesting airline arrivals and departures at any preferential use gate. Any requesting airline that is accommodated at any of a Signatory Airline's preferential use gates shall be required to pay the Commission the same charges for use of the preferential use gate that it would have been required to pay for use of a common-use gate. The Commission will provide a credit to the Signatory Airline for one-half of the amount of any such gate-use payment.

### **Airport's Rights to Accommodate Other Airlines and Recapture Space**

#### *Accommodation of Other Air Carriers in a Signatory Airline's Exclusive Use Space*

To facilitate the entry of new airlines and to maximize the utilization of facilities at the Airport, the Commission will first attempt to accommodate airlines needing space with preferential use gates as described above, common-use facilities, joint use space, or uncommitted space available in the applicable terminal. If such facilities cannot adequately accommodate the requesting airline's needs, the Commission will have the right to require the temporary accommodation of a requesting airline in a Signatory Airline's exclusive use space if (i) the Signatory Airline has adequate capabilities, capacity, facilities and personnel for its own needs and the needs of the requesting airline, and (ii) the two airlines enter into an agreement and satisfy certain documentary requirements, such as fees, indemnification and insurance.

#### *Recapture of Exclusive Use Space Following Reduction in Number of Preferential Use Gates*

If the number of preferential use gates assigned to a Signatory Airline is reduced, the Commission may at any time thereafter and from time to time, after taking into account any recommendations of the RMAC, at the Commission's sole discretion and upon 30 days written notice to the Signatory Airline, terminate the Signatory Airline's rights to use all or a portion of its exclusive use space, including ticket counters and support facilities, that is reasonably required to support the operations of other airlines using the preferential use gates no longer assigned to the Signatory Airline. The Commission will not terminate rights to exclusive use space that, in the Director's reasonable discretion, is required to support the Signatory Airline's continued operations at its remaining preferential use gate(s), if any.

### *Recapture of Exclusive Use Space Following Rejection of Preferential Use Gates*

Whenever a Signatory Airline declines to accept a preferential use gate following the annual allocation of gates described above, the Commission may at any time thereafter and from time to time, after taking into account any recommendations of the RMAC, at the Commission's sole discretion and upon 60 days notice, reclaim all or a portion of the Signatory Airline's exclusive use space associated with the rejected preferential use gate, including ticket counters and support facilities, as follows:

(a) If there is another Signatory Airline that is willing to lease the reclaimed space, the two Signatory Airlines will attempt to negotiate an agreement as to any changes to the condition or layout of the space, any required sharing of support facilities, any associated costs, and any other provisions required to permit the other Signatory Airline to use the reclaimed space for its intended purpose.

(b) If the two Signatory Airlines cannot reach agreement, the Commission will join the negotiations and attempt to mediate an agreement.

(c) If the Commission is unable to mediate an agreement, the Airport Director will formulate a reasonable solution and notify both Signatory Airlines.

(d) If there is no other Signatory Airline willing to lease the reclaimed space, the space will revert to the possession and control of the Commission and may thereafter be made available by the Commission on a common-use basis to other airlines, or leased on an exclusive use or preferential use basis to other Signatory Airlines or Airport tenants.

### *Relocation of Signatory Airline Operations*

Under the Lease and Use Agreements, the Commission has the right upon 60 days notice, to require a Signatory Airline to relocate its operations at the Airport in order to improve Airport facilities, accommodate the traveling public, or maximize the use of the terminals and related facilities by all users thereof. All reasonable moving costs resulting from relocation of a Signatory Airline in a Commission-imposed temporary reallocation of space shall be funded by the Commission; provided that if the removal and reinstallation of the Signatory Airline's trade fixtures and other movable property is possible and not unreasonable, the Signatory Airline will not be entitled to a replacement of such fixtures or property. In addition, a Signatory Airline will not be entitled to reimbursement for relocation of or within joint use space, or preferential use space resulting from the annual reallocation, acceptance or rejection of gates.

## **Rates and Charges**

### *Airport Cost Centers and Space Categories*

The Lease and Use Agreements set forth the following six cost centers based on functional areas of the Airport to be used in accounting for revenues, expenses and debt service: Airfield Area, Airport Support Area, Terminal Area, Groundside Area, Utilities Area and West of Bayshore Area. Direct and indirect expenses are recorded and allocated to the appropriate cost centers. Terminal Area space, including ticket counters, ticket counter back offices, administrative and operation offices, baggage handling areas, and unenclosed or covered areas, is classified in five space categories, each with a different rental rate.

### *Rentals and Landing Fees and their Adjustment*

The Lease and Use Agreements provide for the residual rate setting methodology at the Airport, in order to match revenues each year to the Commission's expenditures by adjusting aviation revenues. Differences between actual receipts and expenditures result in adjustment of Terminal Area rentals and landing fees in subsequent years. The Commission's financial statements reflect such adjustments in the year in which the difference occurs.

The Lease and Use Agreements provide a methodology for computing the landing fee rate and Terminal Area rental rates to ensure that revenues equal expenditures. Airlines that are not Signatory Airlines or an Affiliate Airline of a Signatory Airline will pay a 25% premium on landing fees.

Landing fees and Terminal Area rental rates are adjusted annually. Not fewer than 90 days before the end of each fiscal year, each Signatory Airline is required to submit to the Commission the landed weight forecast for itself and its Affiliate Airlines, and notice of any proposed additions to the space in the Terminal Area it leases, for the next fiscal year. Concurrently, the Commission submits to the airlines its budgetary forecast for the various cost centers for the next fiscal year. The Commission then computes and forwards to the Signatory Airlines not fewer than 60 days before the end of the Fiscal Year its computations made in accordance with the requirements of the Lease and Use Agreements of the landing fee rate and the Terminal Area rental rates for the next fiscal year. The Signatory Airlines and the Commission may meet to discuss the proposed rates and charges, and the Commission will give due regard to any comments offered by the Signatory Airlines on the proposed calculations. Within 30 days after the meeting, or the forwarding of the rentals and fees to the Signatory Airlines if no meeting is held, the rentals and fees, as calculated by the Commission in accordance with Lease and Use Agreements and the 1991 Master Resolution, will become effective.

If at any time during the Fiscal Year, the actual expenses (including debt service) of the Terminal Area and the Groundside Area are projected to exceed by ten percent or more the actual revenues in the Terminal Area and Groundside Area, the Commission may, after using commercially reasonable efforts to reduce expenses, and upon 60 days notice to, and in consultation with, the Signatory Airlines, increase the Terminal Area rentals. The Lease and Use Agreements require the Signatory Airlines to pay such increased rentals or such lesser amount which equals the projected deficiency for the remaining months of the then-current fiscal year. Landing fees may similarly be increased in the event the actual expenses (including debt service) of the Airfield Area and Airport Support Area are projected to exceed by ten percent or more the actual revenues in such areas.

### **Airline Review of Capital Improvements**

Under the Lease and Use Agreements, the Commission is limited in any Fiscal Year to appropriating from current revenues up to \$4,200,000 in Fiscal Year 2008-09 dollars, as adjusted, to finance capital improvements. A Majority-in-Interest of the Signatory Airlines may approve the use of additional current revenues to fund capital improvements. The Commission must otherwise use commercially reasonable efforts to finance capital improvements in excess of such amount through the use of grants, funding from the Transportation Security Administration, and passenger facility charges, and through the issuance of Airport revenue bonds. A "capital improvement" is a single Airport addition or improvement, including equipment, which is purchased, leased or constructed at a cost of \$626,257 in Fiscal Year 2008-09 dollars or more, and a useful life of more than three years. The dollars amounts are to be adjusted annually by the Implicit Price Deflator Index for Gross Domestic Product published by the U.S. Department of Commerce, Bureau of Economic Analysis.

Proposed capital improvements with a cost in excess of \$626,257 in Fiscal Year 2008-09 dollars that would result in a charge to Signatory Airlines in the terminal area rentals or landing fees are subject to certain review procedures established under the Lease and Use Agreements. A Majority-in-Interest of the Signatory Airlines (defined as more than 50% in number of the Signatory Airlines who, on the date in question, also account for more than 50% of the aggregate revenue aircraft landed weight landed by the Signatory Airlines at the Airport during the immediately preceding fiscal year) may require the Commission to defer a proposed capital improvement for six months to give the airlines time to present their views regarding the capital improvement. Capital improvements that are (i) required by a federal or state agency having jurisdiction over Airport operations, (ii) to be financed by the issuance of Special Revenue Bonds, or (iii) of an emergency nature, which, if not made, would result in the closing of the Airport within 48 hours, are not subject to the review procedures.

"Special Revenue Bonds" are taxable and tax-exempt obligations (such as special facility bonds) issued by the Commission, the principal of, premium, if any, and interest on which are payable from or secured in whole or substantial part by revenues other than Airport "Revenues," as defined under the 1991 Master Resolution. The Commission may pledge Revenues as further security for Special Revenue Bonds, or issue general Airport revenue bonds to refund Special Revenue Bonds in accordance with the 1991 Master Resolution, if (i) the Signatory Airlines are notified in writing of the proposed pledge or issuance, and (ii) the Majority-in-Interest approves the pledge or

issuance within 45 days of the mailing of the notice. The Commission may not proceed with any such pledge or issuance that is not so approved by a Majority-in-Interest.

### **Public Liability and Property Damage Insurance**

A Signatory Airline, at its own cost and expense, must obtain and maintain certain public liability and property damage insurance during the term of its Lease and Use Agreement, including (i) an aircraft liability policy with coverage of at least \$500 million combined single limit for bodily injury and property damage, (ii) at least \$100 million War and Named Perils coverage for bodily injury and property damage, (iii) a workers' compensation and employers' liability policy, (iv) a commercial business auto policy with a minimum limit of not less than \$2 million combined single limit for bodily injury and property damage, and (v) property insurance in an amount equal to the value of airline improvements and betterments during the course of any construction and after completion of construction. The Commission has the right at any time to review the coverage, form and amount of insurance and may require a Signatory Airline to obtain additional insurance, provided it is commercially reasonable.

### **Security Deposit**

A Signatory Airline's faithful performance of its Lease and Use Agreement will be secured by a security deposit equal to two months of Terminal Area rentals, landing fees, usage fees, rates and charges. The security deposit may be in the form of a surety bond or a letter of credit to be renewed annually at the Signatory Airline's cost, and kept in full force and effect at all times. If the Signatory Airline fails to pay any amounts due or otherwise defaults under the Lease and Use Agreement, the Commission may draw on the Signatory Airline's security deposit for the payment of any delinquent amounts, or to compensate the Commission for any loss or damages suffered by the Commission. The Signatory Airline is required to replenish its security deposit within 10 days.

### **Assignment and Subletting**

A Signatory Airline is not permitted to transfer or assign its leased premises, its Lease and Use Agreement, or any right thereunder without the Director's prior written consent. Any transfer made without the Director's consent constitutes an event of default hereunder and will be voidable at the Director's election. The merger of a Signatory Airline with any other entity or the transfer of any controlling ownership interest in a Signatory Airline, or the assignment or transfer of a substantial portion of the assets of a Signatory Airline, whether or not located on the leased premises will be deemed a transfer to which the consent requirements are applicable. In addition, a Signatory Airline's entering into any operating agreement, license or other agreement where a third party, other than a subsidiary, Affiliate Airline, or code share partner of the Signatory Airline, is given rights or privileges to utilize portions of the leased space will be considered an attempted transfer which requires Airport consent.

However, the restrictions on asset transfers in the Lease and Use Agreements will not apply to stock or limited liability company interest transfers of corporations or limited liability companies the stock or interests of which are traded through an exchange or over the counter. A Signatory Airline will also have the right, without first obtaining the Airport's written consent, to assign or transfer its Lease and Use Agreement, to an entity controlling, controlled by or under common control with such Signatory Airline, or to a successor by merger, consolidation or acquisition to all or substantially all of the assets of the Signatory Airline, if such entity or successor operates at the Airport and assumes all rights and obligations under the Lease and Use Agreement.

### **Damage and Destruction; Condemnation/Eminent Domain**

#### *Damage and Destruction*

If any part of a Signatory Airline's leased space is partially damaged by fire or other casualty but is not rendered untenable, the damaged space will be repaired by the parties as described below. If any part of the leased premises is so extensively damaged by fire or other casualty as to render any portion of the space untenable but capable of being repaired, the same will be repaired by the parties as described below, and the Commission will use commercially reasonable efforts to provide the Signatory Airline with comparable temporary alternative facilities sufficient to allow the Signatory Airline to continue its operations while repairs are being completed. If any part of

the leased premises will be damaged by fire or other casualty, and is so extensively damaged as to render any portion of the leased premises untenable and not economically feasible to repair, the Commission will notify the Signatory Airline within 45 days after the date of such damage of its decision whether said space should be reconstructed or replaced. If the Commission elects to replace or reconstruct the affected space, the same will be reconstructed by the parties as described below, and the Commission will use commercially reasonable efforts to provide the Signatory Airline with comparable temporary alternative facilities sufficient to allow the Signatory Airline to continue its operations while reconstruction is being completed. If the Commission elects to not reconstruct or replace the damaged leased premises, the Commission will either relocate the Signatory Airline, or if no replacement premises are available, permanently reduce the space leased to the Signatory Airline. If the Signatory Airline is not relocated and its remaining tenantable leased premises are not sufficient to maintain operations at the Airport, the Signatory Airline may terminate its Lease and Use Agreement.

#### *Allocation of Responsibility for Reconstruction; No Abatement of Rent*

In the event any Signatory Airline's alterations in its exclusive or preferential use space are to be reconstructed or repaired following damage by a casualty, the Signatory Airline will use commercially reasonable efforts to repair its alterations, at its sole cost and expense, within 90 days for space that is open to the public and within 180 days for space that is not open to the public, and its Lease and Use Agreement will continue in full force and effect. In the event any improvements in the joint use space included in the leased premises of one or more Signatory Airlines is to be reconstructed or repaired following damage by a casualty, the responsibility to repair such damage will be allocated among the applicable Signatory Airlines and the Commission in accordance with the maintenance responsibilities set forth in the Lease and Use Agreement. Any other replacement, repair or reconstruction will be completed by the Commission.

If Signatory Airline's leased space is wholly or partially destroyed or damaged, the Signatory Airline will have no claim against the Commission for any damage suffered by reason of any such damage, destruction or repair. In addition, the Signatory Airline will not be entitled to an abatement of rent resulting from any damage, destruction or repair; provided that the Signatory Airline will not be charged rent for both untenable leased premises and temporary alternative facilities.

#### *Condemnation/Eminent Domain*

If all or a substantial part of a Signatory Airline's leased premises will be taken or condemned through eminent domain, the Signatory Airline may terminate its Lease and Use Agreement upon 30 days' notice if the Commission does not notify the Signatory Airline in writing within 60 days before the date of taking that it will provide the Signatory Airline with mutually acceptable substitute facilities. If only a portion of the leased premises will be taken, the Signatory Airline will have the right to amend its Lease and Use Agreement to remove the leased premises so taken upon 30 days' notice, if the Commission does not notify the Signatory Airline in writing within 60 days before the date of taking that it will provide the Signatory Airline with mutually acceptable substitute facilities.

#### **Payments from Commission to City**

The Lease and Use Agreements provide for payments from the Commission to the City consisting of the Annual Service Payments and reimbursement for the costs of direct services provided by City departments to the Commission. See "AIRPORT'S FINANCIAL AND RELATED INFORMATION—Payments to the City" in the forepart of this Official Statement.

"Annual Service Payments" are to be paid from the Airport Revenue Fund to the City's General Fund for each fiscal year beginning with Fiscal Year 2011-12 through Fiscal Year 2020-21 during the term of the Lease and Use Agreement. These payments constitute full satisfaction of all obligations of the Airport, the Commission, and the airlines for all indirect services, management and facilities provided by the City to the Airport, and are equal to the greater of (i) 15% of Concession Revenues and (ii) \$5 million. "Concession Revenues" is defined in the Lease and Use Agreements as the fees and rentals collected by Commission for the right to provide and operate restaurants, car rental services, shops, advertising, courtesy vehicles, ground transportation services, parking and other services.

The Lease and Use Agreements provide that if a Signatory Airline was a signatory to certain prior agreements with the Airport or signed certain releases relating to prior litigation, that such Signatory Airline waives any rights it may have either under the prior agreements or by reason of such releases, to challenge any Annual Service Payments made after June 30, 2011.

The Lease and Use Agreements further provide that the Commission may reimburse the City for the cost of certain direct services provided to the Airport by other City departments, such as the City Attorney, the Fire Department, the Police Department, the City Controller, the Water Department, the Department of Public Works, the Purchasing Department and the City-wide risk manager.

### **Events of Default; Termination or Suspension of Lease and Use Agreement Provisions**

Each of the following events constitutes an Event of Default under the Lease and Use Agreement: (i) a failure punctually to pay any amount due that continues beyond the date specified in a written notice of default from the Airport, which date will be no earlier than the tenth (10th) day after the date of the notice; provided that if two payment defaults occur, the Commission will have no obligation to give further notices and an immediate Event of Default will occur; (ii) various events of insolvency or bankruptcy relating to the Signatory Airline; (iii) an involuntary bankruptcy petition is filed against the Signatory Airline and not dismissed within 30 days; (iv) an unauthorized transfer of the Lease and Use Agreement without the prior approval of the Commission that is not voided or rescinded within ten days after receipt of notice to the Signatory Airline; (v) the abandonment of the leased premises; (vi) a lien is filed against the lease premises as a result of an act or omission of the Signatory Airline, and is not discharged or contested within 30 days after receipt of notice; (vii) a failure to maintain the required security deposit for a period of more than three days after receipt of notice; (viii) a failure to maintain the required insurance or self-insured reserves; (ix) a failure to observe any covenant in the Lease and Use Agreement for a period of more than ten days after receipt of notice, or failure to commence a cure within ten days after receipt of notice, followed by a failure to diligently prosecute the cure within one hundred twenty days after the notice; (x) the occurrence a default under any other agreement between the Signatory Airline and the Commission that is not cured as provided in the other agreement; or (xi) a failure timely to remit any passenger facility charges collected by the Signatory Airline.

Upon the occurrence and continuation of an Event of Default, the Commission may elect from the following remedies in addition to any other rights and remedies available to the Commission at law or in equity: (i) terminate the Signatory Airline's use of the leased premises and recover statutory damages from the Signatory Airline; (ii) not terminate the Lease and Use Agreement and continue to collect rent as it becomes due; (iii) appoint a receiver to take possession of the leased premises and collect rents therefrom; (iv) terminate any other agreement between the Signatory Airline and the Commission; or (v) require prepayment of any amounts due under the Lease and Use Agreement.

If a Signatory Airline fails to perform a duty under its Lease and Use Agreement and does not cure within 3 days (as to any emergency) or 30 days (as to any non-emergency) following notice, the Commission has the right to perform such duty at the Signatory Airline's expense. The Commission also has the right to impose and collect fines from the Signatory Airlines as set forth in the Airport Rules as established and updated from time to time by the Commission.

In addition, the Commission may terminate a Lease and Use Agreement if the Signatory Airline ceases revenue aircraft arrivals at the Airport for more than 30 consecutive days for reasons other than certain force majeure events.

A Signatory Airline may terminate its Lease and Use Agreement upon the occurrence of any of the following events: (i) the issuance of a permanent injunction by any court of competent jurisdiction which remains in force for 180 days and substantially prevents the Signatory Airline from using all or major portions of the Airport; (ii) any action of any governmental authority, board, agency or officer with proper jurisdiction preventing the Signatory Airline from operating at the Airport; (iii) the involuntary termination by any governmental authority, board, agency or officer having jurisdiction, of Signatory Airline's right to serve the Airport; (iv) a default by the Commission in the performance of any material covenant, which default materially and adversely limits or prohibits the Signatory Airline's operations at the Airport, and the failure by the Commission to remedy such default in a timely manner as provided in the Lease and Use Agreement; (v) if the Signatory Airline's leased premises are completely destroyed and

the Commission elects not to reconstruct or replace the premises, does not relocate the Signatory Airline, and the remaining premises are not sufficient to maintain operations at the Airport; (vi) all or a substantial part of a Signatory Airline's leased premises are taken or condemned by any competent authority through exercise of its power of eminent domain, and the Commission does not notify the Signatory Airline within 60 days before the date of taking that it will provide mutually acceptable substitute facilities; or (vii) the Annual Service Payments can no longer be made and the Commission elects to suspend certain portions of the Lease and Use Agreement. See "*Commission's Right to Suspend Part of Lease and Use Agreement*" below.

In addition, each Signatory Airline will have a one-time mid-term option to request termination of its use of up to twenty percent of its exclusive use space upon ninety days notice, effective July 1, 2016. If, in the Commission's sole determination, the exclusive use space the Signatory Airline intends to vacate has independent physical access and is otherwise functional and useable by other air carriers or tenants, the Commission will not unreasonably withhold approval of the Signatory Airline's request.

#### *Commission's Right to Suspend Part of Lease and Use Agreement*

In the event that the Annual Service Payments cannot be made for any reason for 12 months, other than through the City's or Commission's own inaction or action not in conformance with the Lease and Use Agreements, including, but not limited to, supervening legislation or court decision, the Commission may elect to suspend uniformly as to all Signatory Airlines, all or some of the provisions of the Lease and Use Agreements relating to: the calculation and adjustment of landing fees; the limitation on funding capital projects from current revenues; the right of a Majority-in-Interest of the Signatory Airlines to delay capital improvements; and the Commission's covenant to require all users of the Airfield Area to pay for their use thereof and to credit the amounts received to the appropriate cost centers, so as to reduce the amounts needing to be collected from the Signatory Airlines through landing fees. If the Commission elects to suspend any of these provisions, any Signatory Airline may terminate its Lease and Use Agreement upon 30 days notice.

In addition, during any period of suspension of some or all of the provisions described above, the Commission may: (1) appropriate an amount equal to the then-payable Annual Service Payments for capital improvements included in its five-year capital program; and (2) adjust the level of terminal rental rates, observing in the calculations of such adjusted rental rates the cost centers and procedures for allocation of revenues, expenses, and debt service to such cost centers in accordance with the Lease and Use Agreement, and maintaining the relationships between rental rates for each category of space described in the Lease and Use Agreement.

During the period when the Annual Service Payments cannot be made, the Commission is required to segregate the amounts that would otherwise have been paid to the City General Fund in an identifiable, interest-bearing subaccount of the Airport Revenue Fund, to be applied to any lawful purpose of the Commission other than as security for any bond issue. To the extent monies are so segregated and applied, the Annual Service Payments will be deemed to have been satisfied.

Upon resumption of the Annual Service Payments or receipt of an equivalent amount by City's General Fund, the right of the Commission to suspend the provisions of the Lease and Use Agreements described above will terminate and the Commission will release any segregated amounts to the Airport Revenue Fund for customary budgeting disposition. The Commission will also make any necessary adjustments to terminal rentals and landing fees.

#### **Limited Obligations of the City**

Any obligation or liability of the City created by or arising out of the Lease and Use Agreements will be payable solely out of the Revenues and other lawfully available moneys of the Airport, and will not constitute a general obligation of the City or a charge upon its General Fund. The Lease and Use Agreements will not obligate the City to make any appropriation from its General Fund for any payment due hereunder. No breach by the Commission under the Lease and Use Agreements will impose any pecuniary liability upon the City, other than from Revenues, or be payable from or constitute a charge upon the general credit or against the taxing power of the City.

## **West of Bayshore Lands**

The Lease and Use Agreements restrict the development of Airport property west of the Bayshore Freeway. Maintenance costs of the property in its current undeveloped state are an obligation of the Commission and are included in calculations to determine landing fee rates. Any future development of such property, however, may be undertaken solely with non-Airport revenues and without the use of Airport staff, facilities and resources. The airlines disclaim the right to any revenues from the area.

## **Other Lease and Use Agreement Covenants**

The Commission covenants in the Lease and Use Agreements to: (i) efficiently manage and operate the Airport on the basis of sound business and airport management principles in effect at airports of comparable size in the continental United States and with efficient and prudent control of all capital and operating expenses; (ii) use commercially reasonable efforts to operate the Airport in a manner consistent with its strategic marketing and public relations plans in order to maximize revenues from concessionaires, lessees and other non-airline users; and (iii) require all users to pay for use of the airfield, with the fees paid by users other than Signatory Airlines and their Affiliate Airlines to be credited to the appropriate cost centers so as to reduce the amounts required to be collected from the Signatory Airlines and their Affiliate Airlines through landing fees.

Except as otherwise provided in the Lease and Use Agreements or as the Commission and Signatory Airlines may subsequently agree, the Commission may not charge any Signatory Airline, its passengers, employees, furnishers of services, or suppliers, any charges, fees or tolls of any nature, direct or indirect, for any of the premises or privileges granted in the Lease and Use Agreement. The Commission, however, may impose and use passenger facility charges in accordance with applicable law.

In the Lease and Use Agreement, the Commission agrees that all Airport-related functions provided as of July 1, 2009, by City employees assigned to the Commission and working under the direct authority and control of the Director will continue to be provided by employees assigned to the Commission and may only be transferred to other City departments upon 60 days notice to the Signatory Airlines, and consideration and response to any comments, questions or objections of the Signatory Airlines to the proposed transfer of functions within 45 days of receipt. Any City department head whose department receives work relating to the Airport in a transfer of functions is to coordinate and consult with the Director at least annually to ensure that the work is performed in a manner that is efficient, meets the needs of the Airport, conforms to sound business and airport management principles, and is properly documented as required by FAA rules and regulations.

## **Holding Over**

If a Signatory Airline shall, with the concurrence of the Commission, hold over after the expiration or sooner termination of the term of its Lease and Use Agreement, the resulting tenancy shall, unless otherwise mutually agreed, be on a month-to-month basis, and may be terminated by the Signatory Airline or the Commission at any time on 30 days written notice to the other party. During such month-to-month tenancy, the Signatory Airline shall pay to the Commission the same rate of rentals and landing fees as are set forth in its Lease and Use Agreement, unless different rates shall be agreed upon, and the parties shall be bound by all of the provisions of such Lease and Use Agreement, insofar as they may be pertinent, unless different terms and conditions shall be agreed upon. If a Signatory Airline shall, without the written consent of the Commission, hold over after the expiration or sooner termination of the term of its Lease and Use Agreement, the Signatory Airline shall pay to the Commission on a month-to-month basis the rentals and a 25% premium on landing fees as provided in its Lease and Use Agreement for any such holdover period and shall otherwise be subject to the terms and conditions of its Lease and Use Agreement beyond the end of its term. Any holding over without the Commission's consent shall constitute a default by the Signatory Airline and entitle the Commission to exercise any or all remedies as provided in the Lease and Use Agreement, notwithstanding that the Commission may elect to accept one or more payments of Terminal Area rentals, and whether or not such amounts are at the holdover rate specified above or the rate at the end of the term of the Lease and Use Agreement.

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## APPENDIX F

### SUMMARY OF CERTAIN PROVISIONS OF THE CONTINUING DISCLOSURE CERTIFICATE

The following is a summary of certain provisions of the master Continuing Disclosure Certificate entered into by the Commission, the terms of which will apply to the Series 2019A-D Bonds (the “Disclosure Certificate”). This summary is not to be considered as a full statement of the Disclosure Certificate and reference is made thereto for the full details of the terms thereof.

#### **Purpose**

The Disclosure Certificate is being executed and delivered by the Commission for the benefit of the Holders and Beneficial Owners of the Series 2019A-D Bonds and in order to assist the Participating Underwriter in complying with SEC Rule 15c2-12(b)(5).

#### **Definitions**

In addition to the definitions set forth in the 1991 Master Resolution, which apply to any capitalized term used in the Disclosure Certificate unless otherwise defined below, the following capitalized terms have the following meanings for purposes of the Disclosure Certificate:

“Annual Disclosure Report” shall mean any Annual Disclosure Report provided by the Commission pursuant to, and as described in, the Disclosure Certificate.

“Beneficial Owner” shall mean any person who has or shares the power, directly or indirectly, to make investment decisions concerning ownership of any Series 2019A-D Bonds, including persons holding Series 2019A-D Bonds through nominees, depositories or other intermediaries.

“Dissemination Agent” shall mean the Commission, or any successor Dissemination Agent designated in writing by the Commission and which has filed with the Commission a written acceptance of such designation.

“Holder” shall mean the person in whose name any Series 2019A-D Bond shall be registered.

“Listed Events” shall mean any of the events listed as such in the Disclosure Certificate.

“MSRB” shall mean the Municipal Securities Rulemaking Board or any other entity designated or authorized by the Securities and Exchange Commission to receive reports pursuant to the Rule. Until otherwise designated by the MSRB or the Securities and Exchange Commission, filings with the MSRB are to be made through the Electronic Municipal Market Access (EMMA) website of the MSRB, currently located at <http://emma.msrb.org>.

“Participating Underwriter” shall mean any of the Underwriters of the Series 2019A-D Bonds required to comply with the Rule in connection with the issuance of the Series 2019A-D Bonds.

“Rule” shall mean Rule 15c2-12(b)(5) adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as the same may be amended from time to time.

#### **Provision of Annual Disclosure Reports**

The Commission shall, or shall cause the Dissemination Agent to, not later than 210 days after the end of the Commission’s fiscal year (which currently ends June 30), commencing with Fiscal Year 2017-18, provide to the MSRB an Annual Disclosure Report which is consistent with the requirements of the Disclosure Certificate, with a copy to the Trustee. The Annual Disclosure Report must be submitted in electronic format, accompanied by such identifying information as is prescribed by the MSRB, and may cross-reference other information as provided in the

Disclosure Certificate; provided that the audited financial statements of the Commission may be submitted separately from the balance of the Annual Disclosure Report, and later than the date required above for the filing of the Annual Disclosure Report if they are not available by that date. If the Commission's fiscal year changes, it shall give notice of such change in the same manner as for a Listed Event under the Disclosure Certificate.

Not later than fifteen (15) Business Days prior to the date specified above for providing the Annual Disclosure Report to the MSRB, the Commission shall provide the Annual Disclosure Report to the Dissemination Agent (if other than the Commission).

If the Commission is unable to provide to the MSRB an Annual Disclosure Report by the date required above, the Commission shall send a notice, in electronic format to the MSRB, in substantially the form attached to the Disclosure Certificate.

The Dissemination Agent shall file a report with the Commission (if the Commission is not the Dissemination Agent) certifying that the Annual Disclosure Report has been provided pursuant to the Disclosure Certificate and stating the date it was provided.

### **Content of Annual Disclosure Reports**

The Commission's Annual Disclosure Report shall contain or include by reference the following for the most recently ended fiscal year:

1. Audited Financial Statements of the Commission, presented in accordance with generally accepted accounting principles applicable to the Commission from time to time. If the Commission's audited financial statements are not available by the time the Annual Disclosure Report is required to be filed as described above, the Annual Disclosure Report shall contain unaudited financial statements in a format similar to the financial statements contained in the Official Statement, and the audited financial statements shall be filed in the same manner as the Annual Disclosure Report when they become available.
2. Air Traffic Data (number of scheduled aircraft arrivals and departures, domestic enplanements and deplanements, international enplanements and deplanements, and total passengers at the Airport; number of enplanements by carrier for top ten carriers).
3. Cargo Traffic Data (weight of air cargo on and off at the Airport).
4. Total Landed Weights (landed weight by carrier of the top ten carriers and total landed weight at the Airport).
5. Airline Service (identity of all domestic and international carriers serving the Airport during such Fiscal Year).
6. Ten Highest Revenue Producing Concessionaires (name, lease expiration, minimum annual rent, if any, and concession revenues).
7. Ten Highest Revenue Producers (name and revenues produced).
8. Total Outstanding Long-Term Debt of the Commission (outstanding principal amount and lien position).
9. Historical Landing Fees and Terminal Rentals.
10. Calculation of Net Revenues and compliance with the Rate Covenant (each as defined in the 1991 Master Resolution).

11. Passenger Facility Charge Collections Designated as Revenues by the Commission for Payment of Debt Service on Outstanding Bonds (designation date, amount designated, and applicable fiscal year).
12. Summary of Payments Made by the Airport to the City and County of San Francisco (annual service payment and reimbursement for direct services, including police, fire, other and utility costs).
13. Liquidity Facilities and Credit Facilities Supporting Outstanding Bonds and Commercial Paper (principal amount, type, expiration date, insurer and insurer rating, credit or liquidity provider, short term and long term rating).
14. Summary of Interest Rate Swap Agreements (effective date and expiration date, initial notional amount, counterparty or guarantor and ratings, insurer, fixed rate payable by Commission, market value to Commission).

Any of all of the items listed above may be included by specific reference to other documents, including official statements of debt issues of the Commission or related public entities, which have been made available to the public on MSRB's website. The Commission shall clearly identify each such other document so included by reference.

### **Reporting of Significant Events**

A. Pursuant to the provisions of the Disclosure Certificate, the Commission shall give, or cause to be given, notice of the occurrence of any of the following events with respect to the Series 2019A-D Bonds not later than ten business days after the occurrence of the event:

1. Principal and interest payment delinquencies;
2. Unscheduled draws on debt service reserves reflecting financial difficulties;
3. Unscheduled draws on credit enhancements reflecting financial difficulties;
4. Substitution of credit or liquidity providers, or their failure to perform;
5. Issuance by the Internal Revenue Service of proposed or final determination of taxability or of a Notice of Proposed Issue (IRS Form 5701-TEB);
6. Tender offers;
7. Defeasances;
8. Rating changes; or
9. Bankruptcy, insolvency, receivership or similar event of the "obligated person" (within the meaning of the Rule).

Note: for the purposes of the event identified in subparagraph (9), the event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for an obligated person in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the obligated person, or if such jurisdiction has been assumed by leaving the existing governmental body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the obligated person.

B. The Commission shall give, or cause to be given, notice of the occurrence of any of the following events with respect to the Series 2019A-D Bonds, if material, not later than ten business days after the occurrence of the event:

1. Unless described in subparagraph A5 above, adverse tax opinions or other material notices or determinations by the Internal Revenue Service with respect to the tax status of the Series 2019A-D Bonds or other material events affecting the tax status of the Series 2019A-D Bonds;
2. Modifications to rights of the Series 2019A-D Bondholders;
3. Optional, unscheduled or contingent the Series 2019A-D Bond calls;
4. Release, substitution, or sale of property securing repayment of the Series 2019A-D Bonds;
5. Non-payment related defaults;
6. The consummation of a merger, consolidation, or acquisition involving an obligated person or the sale of all or substantially all of the assets of the obligated person, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms; or
7. Appointment of a successor or additional trustee or the change of name of a trustee.

Whenever the Commission obtains knowledge of the occurrence of an event listed in the paragraph B above, the Commission shall as soon as possible determine if such event would be material under applicable federal securities laws.

If the Commission learns of the occurrence of an event listed in A above or determines that knowledge of the occurrence of an event listed in paragraph B above would be material under applicable federal securities laws, the Commission shall within ten business days of occurrence file a notice of such occurrence with the MSRB. Notwithstanding the foregoing, notice of Listed Events described in A.7 and B.3 above need not be given any earlier than the notice (if any) of the underlying event is given to Holders of affected Series 2019A-D Bonds pursuant to the 1991 Master Resolution.

### **Termination of Reporting Obligation**

The Commission's obligations under the Disclosure Certificate shall terminate upon (a) the legal defeasance, prior redemption or payment in full of all of the Series 2019A-D Bonds or (b) if, in the opinion of nationally recognized bond counsel, the Commission ceases to be an obligated person with respect to the Bonds or the Bonds otherwise cease to be subject to the requirements of the Rule. If such termination occurs prior to the final maturity of the Bonds, the Commission shall give notice of such termination in the same manner as for a Listed Event.

### **Dissemination Agent**

The Commission may, from time to time, appoint or engage a Dissemination Agent to assist it in carrying out its obligations under the Disclosure Certificate, and may discharge any such Agent, with or without appointing a successor Dissemination Agent. The initial Dissemination Agent shall be the Commission.

### **Amendment; Waiver**

Notwithstanding any other provision of the Disclosure Certificate, the Commission may amend the Disclosure Certificate, and any provision of the Disclosure Certificate may be waived, provided that the following conditions are satisfied:

(a) If the amendment or waiver relates to the provisions described in the first paragraph under “Provision of Annual Disclosure Reports” or described under “Content of Annual Disclosure Reports” or described in the first two paragraphs under “Reporting of Significant Events,” it may only be made in connection with a change in circumstances that arises from a change in legal requirements, change in law or change in the identity, nature or status or an obligated person with respect to the Series 2019A-D Bonds, or the type of business conducted;

(b) The undertaking, as amended or taking into account such waiver, would, in the opinion of nationally recognized bond counsel, have complied with the requirements of the Rule at the time of the original issuance of the Series 2019A-D Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and

(c) The amendment or waiver either (i) is approved by the Holders of the Series 2019A-D Bonds in the same manner as provided in the 1991 Master Resolution for amendments to the 1991 Master Resolution with the consent of the Holders, or (ii) does not, in the opinion of the Trustee or nationally recognized bond counsel, materially impair the interests of the Holders or Beneficial Owners of the Series 2019A-D Bonds.

In the event of any amendment or waiver of any provision of the Disclosure Certificate, the Commission shall describe such amendment in the next Annual Disclosure Report, and shall include, as applicable, a narrative explanation of the reason for the amendment or waiver and its impact on the type (or in the case of a change in accounting principles, on the presentation) of financial information or operating data being presented by the Commission. In addition, if the amendment relates to the accounting principles to be followed in preparing financial statements, (i) notice of such change shall be given in the same manner as for a Listed Event, and (ii) the Annual Disclosure Report for the year in which the change is made should present a comparison (in narrative form and also, if feasible, in quantitative form) between the financial statements as prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles.

#### **Additional Information**

Nothing in the Disclosure Certificate shall be deemed to prevent the Commission from disseminating any other information, using the means of dissemination set forth in the Disclosure Certificate or any other means of communication, or including any other information in any Annual Disclosure Report or notice of occurrence of a Listed Event, in addition to that which is required by the Disclosure Certificate. If the Commission chooses to include any information in any Annual Disclosure Report or notice of occurrence of a Listed Event in addition to that which is specifically required by the Disclosure Certificate, the Commission shall have no obligation under the Disclosure Agreement to update such information or include it in any future Annual Disclosure Report or notice of occurrence of a Listed Event.

#### **Default**

In the event of a failure of the Commission to comply with any provision of the Disclosure Certificate, the Trustee may (and, at the request of any Participating Underwriter or the Holders of at least 25% aggregate principal amount of Outstanding Series 2019A-D Bonds and upon receipt of indemnity satisfactory to the Trustee, shall), or any Holder or Beneficial Owner of the Series 2019A-D Bonds may take such actions as may be necessary and appropriate, including seeking specific performance by court order, to cause the Commission to comply with its obligations under the Disclosure Certificate. Failure by the Commission to comply with any provision of the Disclosure Certificate shall not be deemed an Event of Default under the 1991 Master Resolution, and the sole remedy under the Disclosure Certificate in the event of any failure of the Commission to comply with the Disclosure Certificate shall be an action to compel performance.

#### **Beneficiaries**

The Disclosure Certificate shall inure solely to the benefit of the Commission, the Trustee, the Participating Underwriter and Holders and Beneficial Owners from time to time of the Series 2019A-D Bonds, and shall create no rights in any other person or entity.

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## APPENDIX G

### PROPOSED FORM OF OPINION OF CO-BOND COUNSEL

February 7, 2019

To: Airport Commission of the City and  
County of San Francisco  
San Francisco, California

We have acted as Co-Bond Counsel to our client the Airport Commission (the "Commission") of the City and County of San Francisco (the "City") in connection with the issuance and sale by the Commission of \$1,176,215,000 principal amount of the Commission's Second Series Revenue Bonds, Series 2019A (AMT) (the "Series 2019A Bonds"), \$91,280,000 principal amount of the Commission's Second Series Revenue Bonds, Series 2019B (Non-AMT/Governmental Purpose) (the "Series 2019B Bonds"), \$88,750,000 principal amount of the Commission's Second Series Revenue Bonds, Series 2019C (Federally Taxable) (the "Series 2019C Bonds") and \$407,320,000 principal amount of the Commission's Second Series Revenue Refunding Bonds, Series 2019D (Non-AMT/Private Activity) (the "Series 2019D Bonds" and, together with the Series 2019A Bonds, the Series 2019B Bonds and the Series 2019C Bonds, the "Bonds").

The Bonds are authorized to be issued by the authority of the Charter of the City, the laws of the State of California, and Resolution No. 91-0210, adopted by the Commission on December 3, 1991, as supplemented and amended to the date hereof, including as supplemented by the Certificate of Additional Terms of the Commission relating to the Bonds, dated the date hereof (collectively, the "1991 Master Resolution"). Capitalized terms not otherwise defined herein shall have the meanings ascribed thereto in the 1991 Master Resolution.

In our capacity as Co-Bond Counsel, we have examined the transcript of proceedings relating to the issuance of the Bonds, a copy of the signed and authenticated Bonds, the 1991 Master Resolution and such other documents, matters and law as we deem necessary to render the opinions set forth in this letter.

Based on that examination and subject to the limitations stated below, we are of the opinion that, under existing law:

1. The Bonds are valid and binding special, limited obligations of the Commission, enforceable in accordance with their terms. The principal of and interest and redemption premium, if any, on the Bonds (collectively, "debt service") are payable from and secured solely by the Net Revenues and the funds and accounts provided for in the 1991 Master Resolution. The payment of debt service on the Bonds is not secured by an obligation or pledge of any money raised by taxation and the Bonds do not represent or constitute a general obligation or a pledge of the faith and credit of the City, the State of California or any of its political subdivisions. The Commission has no taxing power.
2. The 1991 Master Resolution constitutes the valid and binding obligation of the Commission. The 1991 Master Resolution creates a valid pledge of Net Revenues to secure the payment of debt service on the Bonds, subject to the provisions of the 1991 Master Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the 1991 Master Resolution.
3. Interest on (i) the Series 2019A Bonds, the Series 2019B Bonds and the Series 2019D Bonds (together, the "Tax-Exempt Bonds") is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986, as amended (the "Code"), except interest on any Series 2019A Bond and any Series 2019D Bond for any period during which that Series 2019A Bond or Series 2019D Bond is held by a "substantial user" or a "related person," as those

terms are used in Section 147(a) of the Code; (ii) the Series 2019A Bonds is an item of tax preference under Section 57 of the Code and therefore may be subject to the alternative minimum tax imposed under the Code; (iii) the Series 2019B Bonds and the Series 2019D Bonds is not an item of tax preference under Section 57 of the Code for purposes of the alternative minimum tax imposed under the Code; and (iv) the Bonds is exempt from State of California personal income taxes. We express no opinion as to any other tax consequences regarding the Bonds.

4. Interest on the Series 2019C Bonds is not excluded from gross income for federal income tax purposes.

The opinions stated above are based on an analysis of existing laws, regulations, rulings and court decisions and cover certain matters not directly addressed by such authorities. In rendering all such opinions, we assume, without independent verification, and rely upon (i) the accuracy of the factual matters represented, warranted or certified in the proceedings and documents we have examined and (ii) the due and legal authorization, execution and delivery of those documents by, and the valid, binding and enforceable nature of those documents upon, any parties other than the Commission and the City.

In rendering those opinions with respect to treatment of the interest on the Tax-Exempt Bonds under the federal tax laws, we further assume and rely upon compliance with the covenants in the proceedings and documents we have examined, including those of the Commission. Failure to comply with certain of those covenants subsequent to issuance of the Tax-Exempt Bonds may cause interest on the Tax-Exempt Bonds to be included in gross income for federal income tax purposes retroactively to their date of issuance.

The rights of the owners of the Bonds and the enforceability of the Bonds and the 1991 Master Resolution are subject to bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance or transfer, and other laws relating to or affecting the rights and remedies of creditors generally; to the application of equitable principles, whether considered in a proceeding at law or in equity; to the exercise of judicial discretion; and to limitations on legal remedies against charter cities and counties in California.

No opinions other than those expressly stated herein are implied or shall be inferred as a result of anything contained in or omitted from this letter. The opinions expressed in this letter are stated only as of the time of its delivery and we disclaim any obligation to revise or supplement this letter thereafter. Our engagement as Co-Bond Counsel in connection with the original issuance and delivery of the Bonds is concluded upon delivery of this letter.

Respectfully submitted,

## APPENDIX H

### SUMMARY OF PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION

Pursuant to the Twenty-First Supplemental Resolution, certain amendments were made to the 1991 Master Resolution and will become effective upon receipt of all required consents and approvals. The “Proposed Amendments,” which consist of the General Proposed Amendments (as described below) and the Original Reserve Proposed Amendments (as described below), include amendments relating to the calculation of Revenues, Annual Debt Service and Maximum Annual Debt Service, amendments to the definition of Permitted Investments, amendments relating to any Credit Facilities deposited to the Original Reserve Account (also known as the Issue 1 Reserve Account) and amendments relating to Bondholder consent requirements, among others.

The Proposed Amendments described below under clauses (a) through (i) of “Section 1.01 Definitions,” “Section 2.11 Additional Bonds,” “Section 2.12 Refunding Bonds,” “Section 6.04 Rate Covenants” and “Section 9.02 Supplemental Resolutions Requiring Consent of Bondholders” (collectively, the “General Proposed Amendments”), will become effective only upon the satisfaction of certain conditions, including (1) receipt by the Commission of the consent of the Holders of a majority in aggregate principal amount of all Outstanding Bonds, and (2) delivery of a certificate from the Airport Director (y) declaring that all other consents required for such amendments have been obtained (i.e., the applicable consents of the applicable Credit Providers), and (z) electing that such amendments shall be effective. The consent and approval of the General Proposed Amendments described in clauses (e), (f) and (g) of “Section 1.01 Definitions” below apply to Permitted Investments, as applicable, held in all funds and accounts established under the 1991 Master Resolution, except the Original Reserve Account and the 2009 Reserve Account. ***By their purchase of the Series 2019A-D Bonds, the purchasers of the Series 2019A-D Bonds consent to the General Proposed Amendments and authorize the Trustee to take all actions necessary to evidence or effect such consent.***

The Proposed Amendments described below under clauses (e), (f) and (g) of “Section 1.01 Definitions” (as such amendments apply to the Original Reserve Account), “Section 1-13.07. Establishment, Application and Valuation of Issue 1 Reserve Account,” and “Section 1-13.10. Permitted Investments” (collectively, the “Original Reserve Proposed Amendments”), will become effective only upon the satisfaction of certain conditions, including (1) receipt by the Commission of the consent of the Holders of a majority in aggregate principal amount of all Outstanding Bonds secured by the Original Reserve Account, and (2) delivery of a certificate from the Airport Director (y) declaring that all other consents required for such amendments have been obtained (i.e., the applicable consents of the applicable Credit Providers), and (z) electing that such amendments shall be effective. The consent and approval of the Original Reserve Proposed Amendments described in clauses (e), (f) and (g) of “Section 1.01 Definitions” below only apply to Permitted Investment held in the Original Reserve Account. ***By their purchase of the Series 2019A Bonds and the Series 2019C Bonds, the purchasers of the Series 2019A Bonds and the Series 2019C Bonds consent to the Original Reserve Proposed Amendments and authorize the Trustee to take all actions necessary to evidence or effect such consent.***

On the date of issuance of the Series 2019A-D Bonds, it is expected that approximately 50.4% of the Holders of the then-Outstanding Bonds will have consented to the General Proposed Amendments, and approximately 44.0% of the Holders of the then-Outstanding Bonds secured by the Original Reserve Account will have consented to the Original Reserve Proposed Amendments. The General Proposed Amendments will not be effective until other required consents are received and other conditions are met. The Original Reserve Proposed Amendments will not be effective until required Bondholder consent is obtained and other required consents are received and other conditions are met. See “PROPOSED AMENDMENTS TO 1991 MASTER RESOLUTION” in the body of this Official Statement. There can be no assurance that the Proposed Amendments will become effective within any definite time frame and the Proposed Amendments may become effective on different dates. Additionally, not all amendments may become effective.

The Proposed Amendments are set forth below. Additions to the 1991 Master Resolution are shown in **bold and double underline** and deletions are shown in ~~strikethrough~~.

## Section 1.01 Definitions

The following definitions are to be amended or added to read as follows:

(a) Clause (iv) of the definition of “Annual Debt Service” is amended as follows:

(iv) Amortized Bonds shall be deemed to be amortized on a level debt service basis over a ~~20~~30-year period beginning on the date of calculation at the Index Rate;

(b) The following clause (viii) is added to the end of the definition of “Annual Debt Service”:

**(viii) Interest on or principal of any Bonds paid or to be paid during such Fiscal Year from Federal Subsidy Payments shall be excluded from the calculation of Annual Debt Service except to the extent all or a portion of such Federal Subsidy Payments are designated as Revenues by the Commission.**

(c) The following definition of “Customer Facility Charge” is added:

**“Customer Facility Charge” means a customer facility charge imposed by the Commission in accordance with Sections 50474.21 and 50474.3 of the California Government Code, as they may be amended or supplemented, or any other applicable state law.**

(d) The following definition of “Federal Subsidy Payments” is added:

**“Federal Subsidy Payments” means amounts payable by the Federal government to the Commission under direct-pay subsidy programs substantially similar to the Build America Bond program under Section 54AA of the Code.**

(e) Clause (B) in the first sentence of paragraph (i) of the definition of “Permitted Investments” is amended as follows:

(B) longer than 30 days and not longer than one year provided that the collateral subject to such agreements are marked to market daily, entered into with financial institutions such as banks or trust companies organized under State or federal law, insurance companies, or government bond dealers reporting to, trading with, and recognized as a primary dealer by, the Federal Reserve Bank of New York and a member of the Security Investors Protection Corporation, or with a dealer or parent holding company that is rated investment grade (“A”, **“A-”** or **“A3”** or better) by at least two Rating Agencies.

(f) Paragraph (j) of the definition of “Permitted Investments” is amended as follows:

(j) Prime commercial paper of a corporation, finance company or banking institution rated in the highest short-term rating category **without regard to any numerical modifier, plus or minus sign or other modifier** by at least two Rating Agencies.

(g) The following clause (r) is added to the end of the definition of “Permitted Investments”:

**and (r) any other obligations or investments in which the Treasurer is permitted to invest Commission funds.**

(h) The following clause (j) is added to the end of the definition of “Revenues”:

**(j) any Customer Facility Charge or similar charge levied by or on behalf of the Commission against customers, except to the extent all or a portion thereof is designated as Revenues by the Commission;**

(i) The following clause (k) is added to the end of the definition of “Revenues”:

**and (k) any Federal Subsidy Payments, except to the extent all or a portion thereof is designated as Revenues by the Commission.**

#### **Section 2.11. Additional Bonds**

The following paragraph is added to the end of Section 2.11:

**For purposes of this Section 2.11, “Annual Debt Service” and “Maximum Annual Debt Service” may, at the Commission’s option, be calculated based on required deposits to pay Annual Debt Service.**

#### **Section 2.12. Refunding Bonds**

The following paragraph is added to the end of Section 2.12:

**For purposes of this Section 2.12, “Annual Debt Service” and “Maximum Annual Debt Service” may, at the Commission’s option, be calculated based on required deposits to pay Annual Debt Service.**

#### **Section 6.04. Rate Covenants**

The following paragraph is added to the end of Section 6.04:

**For purposes of Section 6.04(a)(ii), “Annual Debt Service” may, at the Commission’s option, be calculated based on required deposits to pay Annual Debt Service.**

#### **Section 9.02. Supplemental Resolutions Requiring Consent of Bondholders**

Section 9.02(c) is amended as follows:

(c) **Upon receipt of consent**, if within such period, not exceeding one year, as shall be prescribed by the Commission, following the first giving of a notice as provided in (b) above, the Trustee shall receive an instrument or instruments purporting to be executed by the Holders of not less than the aggregate Principal Amount of Bonds specified in subsection 9.02(a) for the Supplemental Resolution in question, which instrument or instruments shall refer to the proposed Supplemental Resolution described in such notice and shall specifically consent to and approve the execution thereof in substantially the form of the copy thereof referred to in such notice as on file with the Trustee, thereupon, but not otherwise, the Trustee may accept such Supplemental Resolution in substantially such form, without liability or responsibility to any Holder of any Bond, regardless of whether such Holder shall have consented thereto.

#### **Section 1-13.07. Establishment, Application and Valuation of Issue 1 Reserve Account**

Section 1-13.07(e) is amended as follows:

(e) At its option, the Commission may at any time substitute a Credit Facility meeting the requirements of this Section 1-13.07(e) for amounts on deposit in the Issue 1 Reserve Account. The Commission shall not substitute a Credit Facility for all or any part of the amounts on deposit in the Issue 1 Reserve Account if such substitution will cause the then current ratings on Participating Series to be downgraded or withdrawn. Any such Credit Facility provided in the form of a surety bond shall be issued by an institution then rated in the highest rating category, without regard to subcategories, by Moody’s and Standard & Poor’s, and any such Credit Facility provided in the form of a letter of credit shall be issued by an institution **whose (i) short-term rating is then**

rated either “P1” by Moody’s or “A-1” by Standard & Poor’s, or (ii) long term rating is then rated in at least the second highest rating category, without regard to subcategories, by Moody’s and Standard & Poor’s. In the event that after the substitution of a Credit Facility for all or any part of the amounts on deposit in the Issue 1 Reserve Account, the amount in the Issue 1 Reserve Account is greater than Aggregate Maximum Annual Debt Service of the then Outstanding Bonds of Participating Series, upon the request of an Authorized Commission Representative, the Trustee shall transfer such excess to the Commission to be used solely for Airport purposes.

#### **Section 1-13.10. Permitted Investments**

Section 1-13.10 is amended as follows:

Amounts in the Issue 1 Debt Service Accounts shall be invested in Permitted Investments described in clauses (a) or (b) of the definition of Permitted Investments maturing on or before the Payment Date on which the proceeds of such Permitted Investments are intended to be applied for the purposes of the Issue 1 Debt Service Account to which such Permitted Investments are allocated. ~~Amounts in the Issue 1 Reserve Account shall be invested in Permitted Investments described in clauses (a) or (b) of the definition of Permitted Investments maturing no later than seven years after the date of purchase of said Permitted Investment.~~

*Pursuant to the provisions of the Twenty-First Supplemental Resolution, the Airport Director is authorized, for, in the name and on behalf of the Commission, to supplement or modify the Proposed Amendments described above in such manner as the Airport Director, in consultation with the City Attorney, determines is in the best interest of the Commission, does not otherwise materially increase the obligations or liabilities of the Commission, is necessary or advisable to effectuate the purposes of the Twenty-First Supplemental Resolution, is in compliance with all applicable laws, and does not otherwise materially adversely affect the interests of any Holders of the Bonds.*

## APPENDIX I

### LIST OF REFUNDED BONDS

#### Refunded Bonds

The Refunded Bonds consist of the Bonds listed below.

**Airport Commission of the City and County of San Francisco**  
**San Francisco International Airport**  
**Second Series Revenue Bonds**  
**Series 2009E**  
**(Non-AMT/Private Activity)**  
**Dated Date: November 18, 2009**

<u>Maturity Date (May 1)</u>	<u>Principal Amount</u>	<u>Interest Rate</u>	<u>Redemption Date</u>	<u>Redemption Price</u>	<u>CUSIP†</u>
2020	\$ 1,800,000	4.375%	May 1, 2019	100%	79765A 2W5
2020	9,120,000	5.000	May 1, 2019	100	79765A 2X3
2021	3,140,000	4.500	May 1, 2019	100	79765A 2Y1
2021	19,545,000	5.000	May 1, 2019	100	79765A 2Z8
2022	25,555,000	5.250	May 1, 2019	100	79765A 3A2
2023	25,530,000	5.250	May 1, 2019	100	79765A 3B0
2024	650,000	4.750	May 1, 2019	100	79765A 3C8
2024	26,905,000	5.250	May 1, 2019	100	79765A 3D6
2025	16,700,000	5.500	May 1, 2019	100	79765A 3E4
2026	17,620,000	5.500	May 1, 2019	100	79765A 3F1
2029	1,670,000	5.000	May 1, 2019	100	79765A 3G9
2032	125,535,000	5.250	May 1, 2019	100	79765A 3H7
2039	195,630,000	6.000	May 1, 2019	100	79766D LN7

† CUSIP is a registered trademark of the American Bankers Association. CUSIP data herein is provided by CUSIP Global Services, managed by Standard and Poor's Financial Services LLC on behalf of the American Bankers Association. CUSIP numbers are provided for convenience of reference only. Neither the Commission nor the Underwriters take any responsibility for the accuracy of such CUSIP numbers.

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