

The proposed Replacement Passenger Terminal is feasible in the preferred location

## **OUR TEAM**

- BuroHappold Engineering Project Management; Structural and MEP Engineering
- Airbiz Airport Planning
- Gruen Associates ADA and Restrooms
- Psomas Civil Engineering and Roadways
- Innovat + 20/20 Parking
- BNP Baggage Handling
- ECG Demolition
- Capital Projects Group Cost Model







## PROJECT UNDERSTANDING - THE WHAT

- Replacement Passenger Terminal
  - 355,000 SF (max)
  - 14 gates
- New Public Parking Structure
- New Employee Parking
- Support Buildings
- New Access Roads
- Demolition of Existing Terminal
- Taxiway Extensions





## PROJECT DRIVERS - THE WHY

- Runway separation does not meet current standards
- Seismically deficient
- Inconsistent capability between gates
- Complicated maneuvers required on airfield
- Aging terminal building
- Limited concessions and amenities
- Underserves users with disabilities







## **BENEFITS**

- Safety
  - Proper runway separation
  - Meets current seismic design standards
- Customer Convenience
  - ADA
  - Amenities
  - Maintain easy access and convenience
- Community
  - Resilience (Natural disasters)
  - Energy efficient terminal
  - Reduced emissions





## **BENEFITS**

- Operations
  - Reduction in taxi times and runway crossings
  - Simplified aircraft maneuvers
  - Consistency and capability at all gates
  - Increased concessions revenue
  - Expanded holdroom size
  - Faster check-in
  - Centralized TSA checkpoint
  - Centralized bag check/screening





## **PHASING**



## Phase 1: Northeast Quadrant

- Terminal
- Parking
- Access Roads
- Support Facilities

## Phase 2: Southeast Quadrant

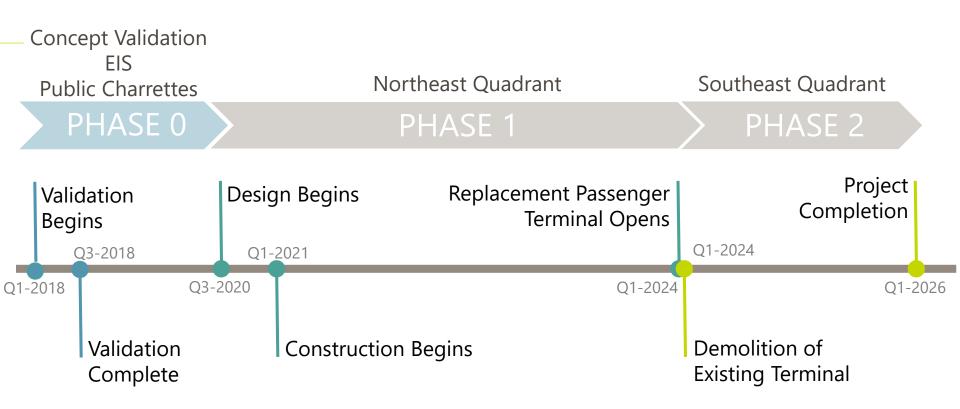
- Demolition
- Taxiway Extensions







## ASSUMED SCHEDULE IN CONCEPT VALIDATION









# **Concept Validation**







# The proposed Replacement Passenger Terminal works in the preferred location

- ADG III Aircraft Layout (Same capability at all gates)
- ✓ 14 Gates
- 355,000 SF Terminal







## PROPOSED PROGRAM VS 2016 CONCEPT

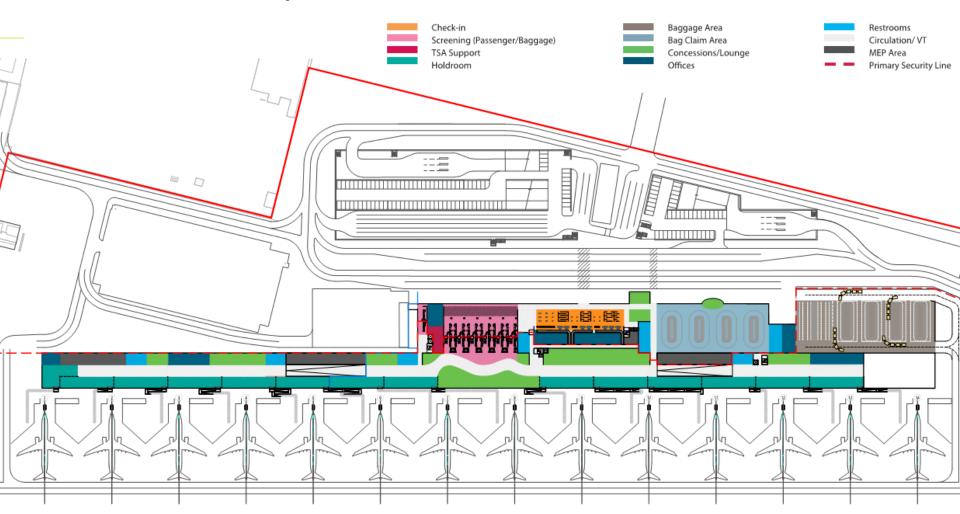
- Increase in area
  - Baggage
  - Security
  - Holdrooms
  - Concessions
- Decrease in area
  - Check In
  - Restrooms
  - Offices
  - MEP
- TOTAL AREA = 355,000 SF





## PROPOSED LAYOUT: GROUND FLOOR

Total Floor Area = **247,601 SF** 

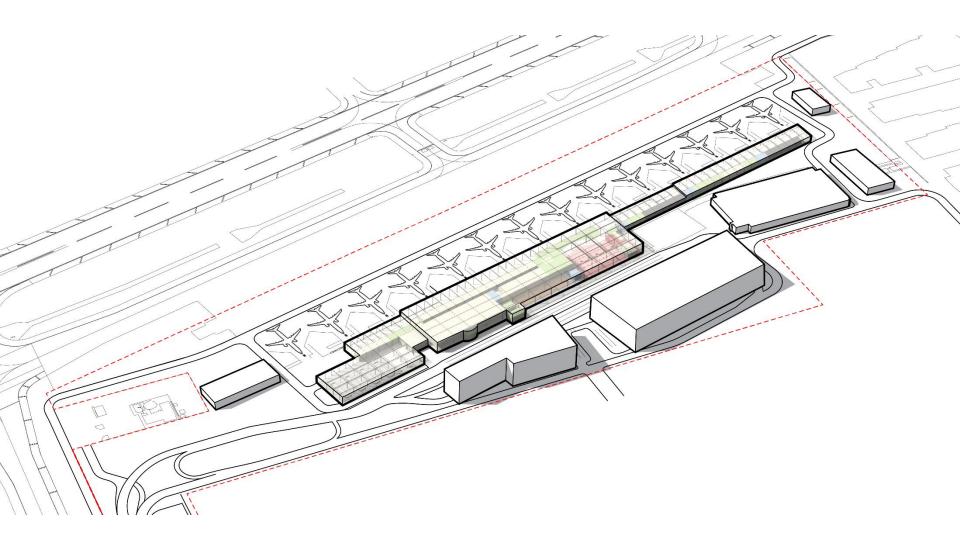








## AERIAL









## OPPORTUNITIES TO BE ADDRESSED IN DESIGN PHASE

- 1. Terminal Depth
- 2. Site Grade
- 3. Airport Access
- 4. Employee Parking
- 5. Public Parking Structure
- 6. Air Traffic Control Tower
- 7. Aircraft Rescue and Fire Fighting Facility

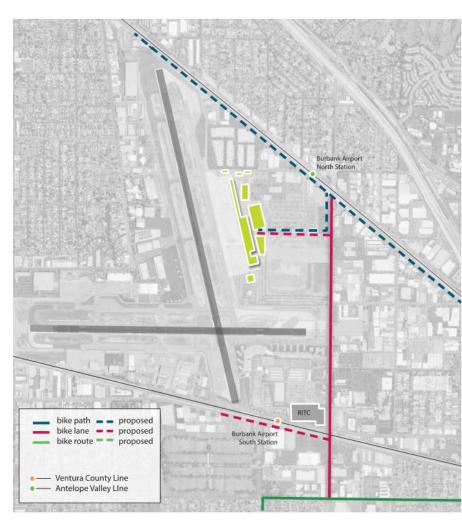






## **ACCESS**











# **Cost Model**







## SUMMARY

Project Element	Construction Costs	Soft Costs	Project Contingency	Total Project Budget
Airside	\$85,500,000	\$21,400,000	\$10,700,000	\$117,600,000
Landside	\$266,300,000	\$70,600,000	\$32,300,000	\$369,200,000
Terminal	\$476,900,000	\$189,000,000	\$66,000,000	\$731,900,000
Demolition	\$15,900,000	\$4,000,000	\$1,500,000	\$21,400,000
Total All Elements	\$844,600,000	\$285,000,000	\$110,500,000	\$1,240,100,000







## BASIS OF COST MODEL

- Design Contingency Included
- Construction Contingency Included
- Program Contingency Included
- Pricing and Cost Escalation Contingency
  - 2018 6%
  - 2019 5%
  - 2020 4%
  - 2021 4%
  - 2022 4%





### BASIS OF COST MODEL

### Soft Costs

- Design Costs 7.0% 15.0%
- Project / Program Management / Oversight 3.0% 6.0%
- Consultant Construction Services 3.0% 6.0%
- Quality Assurance / Testing / Inspection 2.0% 3.0%
- Permitting, Utility Connections, Etc. 0.5% 1.5%
- Furnishings, Fixtures and Equipment (FF&E) Common Use 1.0% 2.0%
- Low Voltage / Security Active Equipment Common Use 2.0% 5.0%
- Art in Public Places (Defined below) 0.5% 1.0%



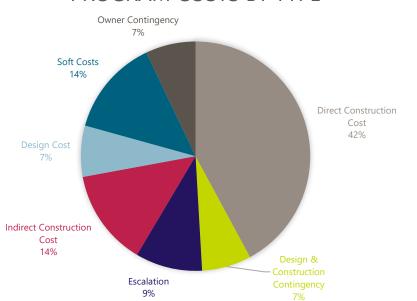




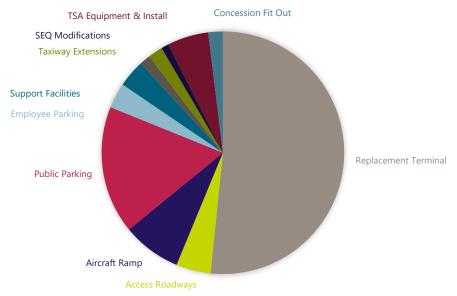
### SUMMARY

- Cost model presents total program cost
- Includes both Authority responsibilities and costs paid for by others
- Certain program elements may be deferred

#### PROGRAM COSTS BY TYPE



#### PROGRAM COST BY ELEMENT











# BUROHAPPOLD ENGINEERING

