Phase 1 Budget Status

March 14, 2013

Transbay Transit Center

TJPA

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Agenda

- Recap of February 14 Presentation
- Preliminary Budget Adjustment Recommendations
- Funding Strategies

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February 14th Presentation Agenda

- Phase 1 Baseline Budget Development and Evolution
- Risk & Vulnerability Assessment
- Contingencies & Reserves
- Design, Bidding and Construction Schedule
- Preliminary Budget Adjustment Recommendations
- Funding Strategies

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Phase 1 Budget

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May 2010
$1,589M Budget

Project Costs	TOTAL (millions)
Temporary Terminal	**$25.3**
Bus Storage	**$22.9**
Demolition (Exist and Temp Term)	**$16.2**
Utility Relocation	**$65.6**
Transit Center Building Design	**$143.1**
Transit Center Building Construction	**$909.7**
Bus Ramps	**$40.2**
ROW Acquisition	**$71.9**
ROW Support	**$5.3**
Programwide	**$243.6**
Program Reserve	**$45.2**
TOTAL	**$1,589.0**

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Cost Mitigation and Containment

- Under TJPA and PMPC direction, CMGC constructability review and cost estimation and design team VE efforts have generated significant cost reductions that have helped to maintain program costs within budget
- $100 million in program savings realized through change to bottom-up construction
- *Since design inception more than $100 million in additional Phase 1 Value Engineering savings and deductive alternates have been developed and incorporated in the design documents*

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Value Engineering Efforts and Bid Alternates

- The scope of remaining construction trade packages provides limited opportunity for additional Value Engineering or significant scope reduction
- Increasing activity in regional construction market resulting in cost pressures that contribute to recommended budget adjustments on current scope of construction
- Cost reduction and containment inadequate remedies to address the known and potential budget challenges

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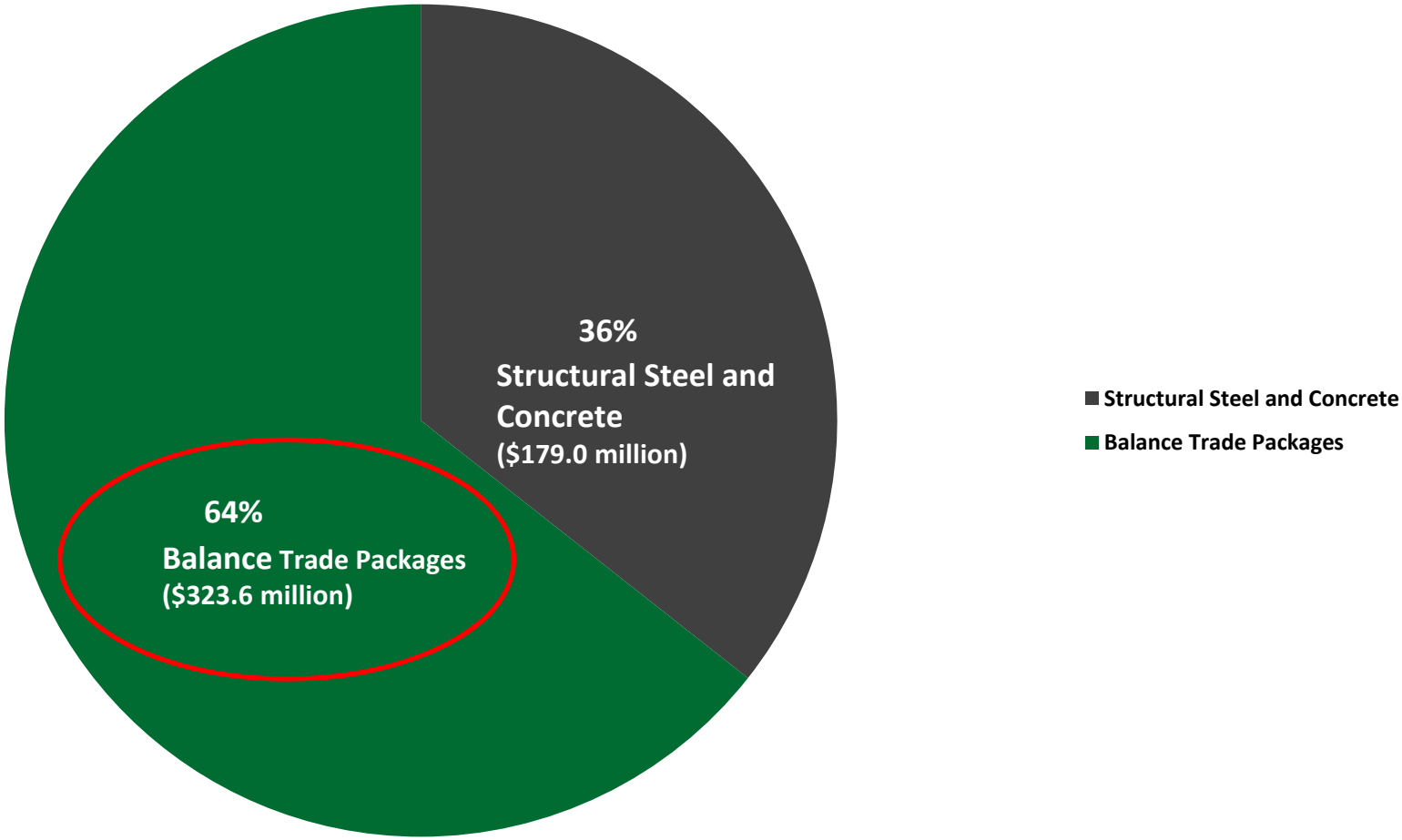
Remaining Construction Trade Packages

Remaining Construction Trade Packages = $502.6M



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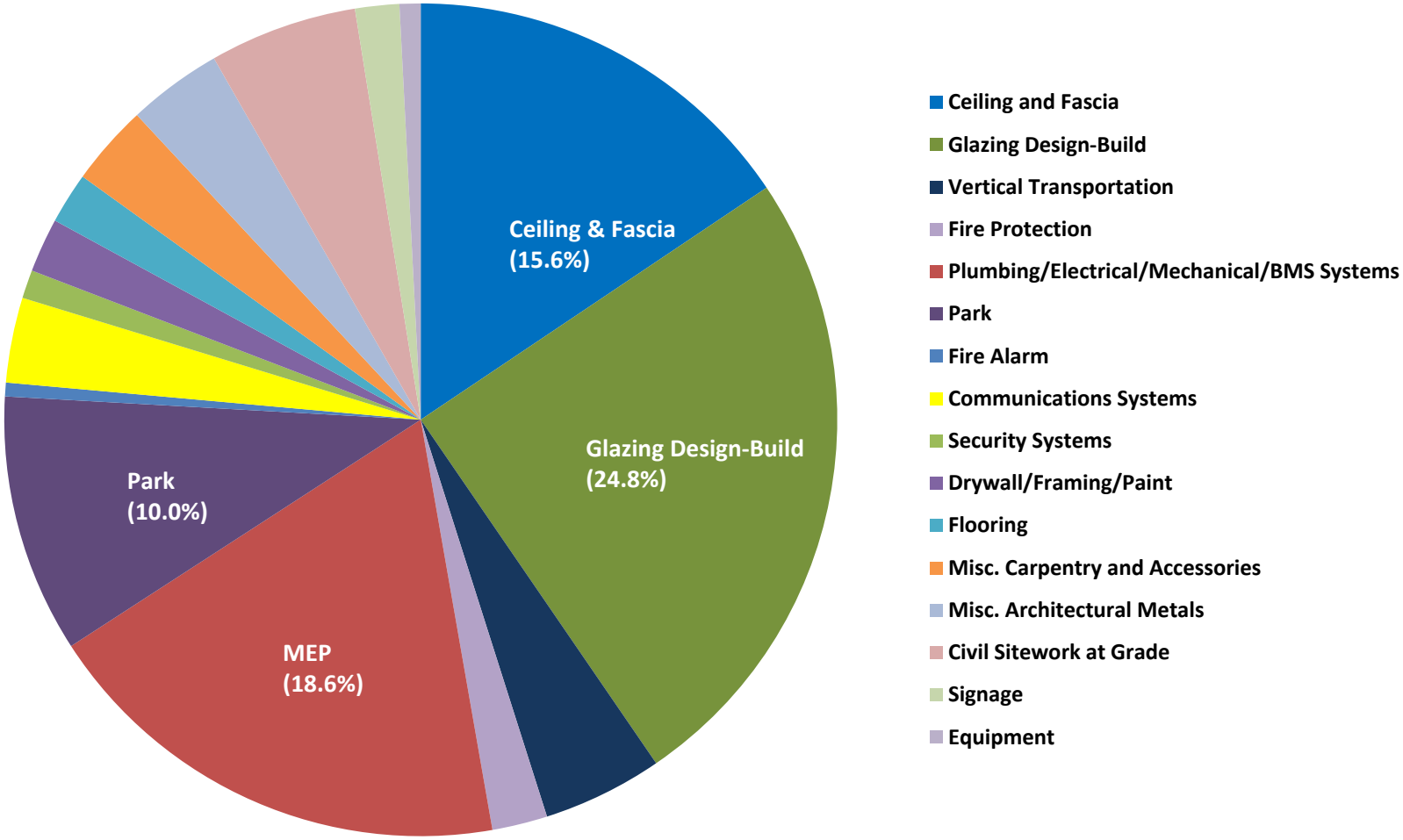
Remaining Construction Trade Packages

TCB Construction Balance Trade Packages = $322.3 million



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Risk and Vulnerability Assessment

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TJPA SMEs and Peer Reviewers

- Structural and Seismic Review Committee (SSRC)
  - Provides structural and seismic review on behalf of TJPA and Department of Building Inspection (DBI)
- Fire Design Peer Review
  - Performed peer review of smoke exhaust and fire analysis for TJPA, DBI, and San Francisco Fire Department
- DVS
  - 43 years of security consulting and engineering; more than 1000 projects; more than 40 transportation related venues
- WAI
  - 64 years experience; structural, geotechnical, civil and blast engineering, research and development for blast events
- CCI
  - 40 years of fire protection and life safety experience; licensed fire protection engineers specializing in fire/smoke movement and code compliance

URS

URS Corporation

- DHS recognized security threat and vulnerability assessment consultant
- Assessed severity threats, vulnerabilities or systems at over 500 facilities nationwide
- Project support to more than 30 nationwide rail, subway, tunnel, bus, bridge transportation venues
- More than U.S. 400 Fortune 500 firms and most federal agencies are URS clients
- Workforce of over 50,000
- Safety Act Certified

Subject Matter Expert Team

- Denise Sines, Senior Security Specialist
- Dr. Steve Landry, PhD, CBRN
- Dr. Erin Ashley, PhD, Fire
- Andy Knapke, P.E.,S.E, Structural
- Henry Belzsek, C.M., Architecture
- Mick Wolford, P.E., E.E., IT/Electrical
- Nat Natarajian, P.E., MEP/HVAC
- Peter Totten, P.E., Bridge
- Jim Gordon, Law Enforcement
- Holly Stone, P.E., Blast
- Richard Walker, E.I.T., Engineer

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URS' Outreach

- Extraordinary advantage to access threat information on a daily basis
- Access is conducted on a constant basis to validate threats
- Reach-back to intelligence programs on a daily basis
- URS' security clearances support closed-source access providing fidelity to threat and modality information

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Focus of Vulnerability Assessment

- All-hazards vulnerability assessment focused on public safety
  - Natural hazards
    - Earthquake (seismic event, ground subsidence)
    - Wind (hurricane, tropical winds, straight line winds)
    - Flooding (tsunami, surging water, isolated heavy rain events, flash floods)
  - Technological hazards
    - Storing/maintaining chemical, biological, radiological agents and explosives
    - Above- and under-ground storage tanks and pipelines
    - Proximity to surface and air transportation
    - HAZMAT events
  - Manmade event
    - Criminal acts (violent crime or malicious acts of force and violence against persons or property)
    - Fire events (Trains/buses)
    - Cyber (data integrity management, supporting mass notification systems for natural, technological and manmade events to protect public safety)
    - Terrorism (vehicular approach, explosive events, chem/bio agent attack)

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Why the Transbay Transit Center?

- Past history of events
- Public Surface Transportation Terrorist Plots
- Openness/ease of access
- Exposure to 125,000 passengers/visitors per day
  - Transit portion for Bay Area users of the TTC
- Iconic nature of the TTC and the Transbay Tower

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Why San Francisco?

- Density of Bay Area with a population of 7.15 million (4th in the US); City of San Francisco approximately 805,235 population
- Iconic city skyline; now and future
- Nationally and internationally recognized signature city on west coast
- When built, this will be the first application in United States of high-speed rail as critical transportation infrastructure
- Series of notable and unique public transportation amenities and programs (i.e., Muni, Caltrain, BART, etc.) on par with Washington DC, Chicago, and New York City
- Major sports venues

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"Hot Spots"

- Hot Spots of Terrorism and Other Crimes in the United States 1970-2008, U.S. Department of Homeland Security, Science and Technology, Human Factors/Behavioral Sciences Division, January 31, 2012

- The Global Terrorism Database (GTD) has been maintained since 2005 by the National Consortium for the Study of Terrorism and Responses to Terrorism (START; LaFree & Dugan, 2009).
  - Includes data on the characteristics of over 98,000 terrorist attacks that occurred worldwide since 1970

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"Hot Spot Measurements"

- Geographic Concentration of Terrorist Attacks
- Ideological Motivation
- Crime Rates

- Extreme Right-Wing
- Extreme Left-Wing
- Religious
- Ethno-National/Separatist
- Single Issue

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“Hot Spots”

- Hot Spots of terrorist attacks are areas experiencing more than the average number of events
- Widely dispersed, occurring in every state in the country including small, more rural counties (i.e., Oklahoma City - 579,999 population)
- San Francisco is identified as a “Hot Spot”

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San Francisco Counter-Terrorism Programs

- San Francisco is identified as an Urban Area Security Initiative (UASI) City
  - Bay Area UASI program to prevent, protect against, respond to and recover from terrorist incidents or related catastrophic events
  - Includes 12 counties, over 100 incorporated cities, service a population of over 7.5million
- San Francisco is a participating member of the BioWatch program
  - U.S. federal government program to detect the release of pathogens into the air as part of a terrorist attack on major American cities
  - Operating in Philadelphia, New York City, Washington, DC, San Diego, Boston, Chicago, San Francisco, St. Louis, Houston, Los Angeles and 21 other cities
- San Francisco has a Joint Terrorism Task Force (JTTF)
  - FBI, DHS, USCG, CBP, ICE, TSA, Secret Service, DoS, local and state law enforcement, and specialized agencies (i.e., railroad police)

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Transportation Plots

- Mineta Transportation Institute (US DoT, California Legislature, Caltrans), April 2012
  - Studied 13 terrorist plots against public surface transportation uncovered and foiled by authorities 1997-2010
  - Two failed attempts to carry out attacks

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Lessons Learned

- Surface transportation targets provided easy access and escape
- Very few security measures *were* in place to protect targets
- Security protection did not become a concern until the 2004 Madrid bombing
- High body count
- Security is known to have affected terrorist planning in at least two plots
- CCTV and physical security have deterrent value
- Terrorist tactics, weapons and evolving attacks provide information for better protection
- Shared intelligence is critical

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What are Other Transit Agencies Doing?

- Government agencies and public and private entities constructing/operating similar facilities have adopted all or some (due to retrofit issues) of the DGC applied to the Transit Center

CA	CT	DC	DE	FL
GA	HI	IL	MA	MD
MN	MO	NC	NJ	NY
OH	OR	PA	VA	TX

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Facility Protective Design Categories

- Recommendations developed by nationally recognized firm and industry best subject matter experts
- RVA work subject to high level peer review
- Rational and credible threats and modalities identified for this facility at this location
- Recommendations for protective design represent industry best practices and standards at comparable facilities in the U.S.

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Facility Protective Design Categories

- Design Guidance Criteria are recommended to provide Safe, Secure facility and complement future operations protocols
  - Not considered optional; agency should plan to implement these measures
- Where feasible and appropriate, DGC to be addressed in Phase 2
- Eliminating or phasing RVA DGC not recommended:
  - Safety Act Certification/Designation
  - Not introduce points vulnerability
  - Infeasible or costly to retrofit recommendations not implemented during initial construction

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Facility Protective Design Categories

Design Category	Estimated Cost (millions)
Bus, Train and Other Fire Event Management	0.8
Vehicular and Pedestrian Perimeter Protection	10.0
Radio, Cellular, and Mass Notification Communications	4.5
Glazing Systems Hazard Management	9.6
Structural Systems Seismic, Fire, & Explosive Performance	0.2
Evacuation, Rescue & Recovery Pathways Survivability	2.1
Evacuation, Rescue & Recovery Supporting Systems Operational Resiliency	17.1
Situational Awareness, Access Control, & Intrusion Detection	18.3
CBRN Detection and Mitigation	1.6
Total *** This amount reduced if facade recommendation adopted.**	**$64.3**

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Phase 1 Schedule

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Current
Phase 1 Milestones

Vacate Terminal/Begin Demolition	August 2010
Begin Shoring Wall Construction	April 2011
Complete Excavation	February 2014
Complete Below-Grade Construction	July 2015
Complete Construction of Bus Ramps	June 2017
Complete Superstructure Construction	June 2016
Complete Rooftop Park	October 2017
Begin Bus Operations	October 2017

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Schedule For Bus Operations Maintained

- The construction of the buttress has driven the critical path for excavation and subsequent construction
- 100% Construction Document completion extended to integrate updated RVA findings
- *Extended design and bidding periods has impacted design and CM/GC pre-construction expenses*

Re-sequencing of construction has allowed TJPA to maintain October 2017 date for start of bus operations

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Program
Contingencies & Reserves

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Contingencies & Reserves

Design Contingency

- Contained within construction budget
- Meant to capture scope not reflected in preliminary design drawings
- Reduced to 0% as construction documents are completed

Construction Contingency

- Contained within construction budget
- Reserved to fund construction contract changes after award due to unforeseen conditions and other changes

CM/GC Contingency

- Contained within construction budget
- Intended to address coordination issues between trade subcontractors, schedule recovery, and related issues

Program Reserve

- Independent budget category
- Reserve against all program budget requirements

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Contingencies & Reserves

A review of all contingencies and reserves has been performed to ensure that recommended budget adjustment is comprehensive

Schedule Contingency

- Independent budget category
- Reserve for extended costs to manage the project if not completed as scheduled

Market Recovery Adjustment

- Contained within construction budget
- Recommended adjustment to the budget based on Bay Area market conditions
- Significant increase in construction activity in San Francisco and the region
- Substructure package represented a return to normalcy in contractor margins
- Decreased competition and higher returns expected to impact future trade subcontract bids

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Contingencies & Reserves

Current Contingencies & Reserves	
Design Contingency	**8.2**
Construction Contingency	**33.2**
CM/GC Contingency	**16.1**
Program Reserve	**21.4**
Sub-Total Current Reserves	**$ 78.9**
Recommended Additional Contingencies & Reserves	
Market Recovery Adjustment	**55.4**
Replenish Program Reserves	**25.0**
Construction Contingency (total 8% of to-go scope)	**25.0**
Schedule Contingency	**$5.0**
Sub-Total Recommended Additional Reserves	**$ 110.4**

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Structural Steel Bid Process

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Packaging

- Preconstruction process - extensive communication with steel fabricators and contractors
  - Informed constructability comments and logistics packages approach
- Independently estimated by Webcor/Obayashi and Davis/Langdon under PCPA
  - W/O estimate based upon detailed workplan incorporating crew sizes, projected productivity, risks, and other direct and indirect cost factors
  - Assessment of costs informed by dialog with contracting community

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Pre-Qualification

- Superstructure package pre-qualification advertised in May 2012. Six submittals received.
- Five pre-qualified bidders
  - Actively engaged in pre-proposal, QBD processes
- Bidding Process
  - Engaged in addressing bidders questions
  - Bidders withdrawal during process

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Steel Bid Results

- Single bid received for Superstructure Package
- Pricing reflects a fundamentally different assessment of complexity of fabrication, productivity of erection, risks, and other costs
- Currently reviewing bid tabulation and estimates
- Evaluating all alternatives
  - Negotiating with sole bidder
  - Redesigning/redetailing
  - Repackaging
- *Recommendations to the TJPA on path forward will be shaped by conclusions of review*

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Preliminary Budget Adjustment Recommendation

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Preliminary Budget Recommendation

- Value Engineering & Design Alternates
  - More than $100 million in Value Engineering recommendations and deductive alternates developed and implemented to date
  - Revising Transit Center façade material to save $17.5 million recommended
  - Diverse nature of remaining scope and limited base cost makes further significant value engineering difficult
- Deferring RVA Design Guidance implementation not recommended
  - Jeopardize Safety Act Certification/Designation pursuit
  - Infeasible or costly to retrofit recommendations not implemented during initial construction
  - Comprehensive, balanced approach to identified threats/vulnerability
- Reduction in contingencies and reserves not recommended
  - Steel bid results exceed recommended Market Recovery adjustment

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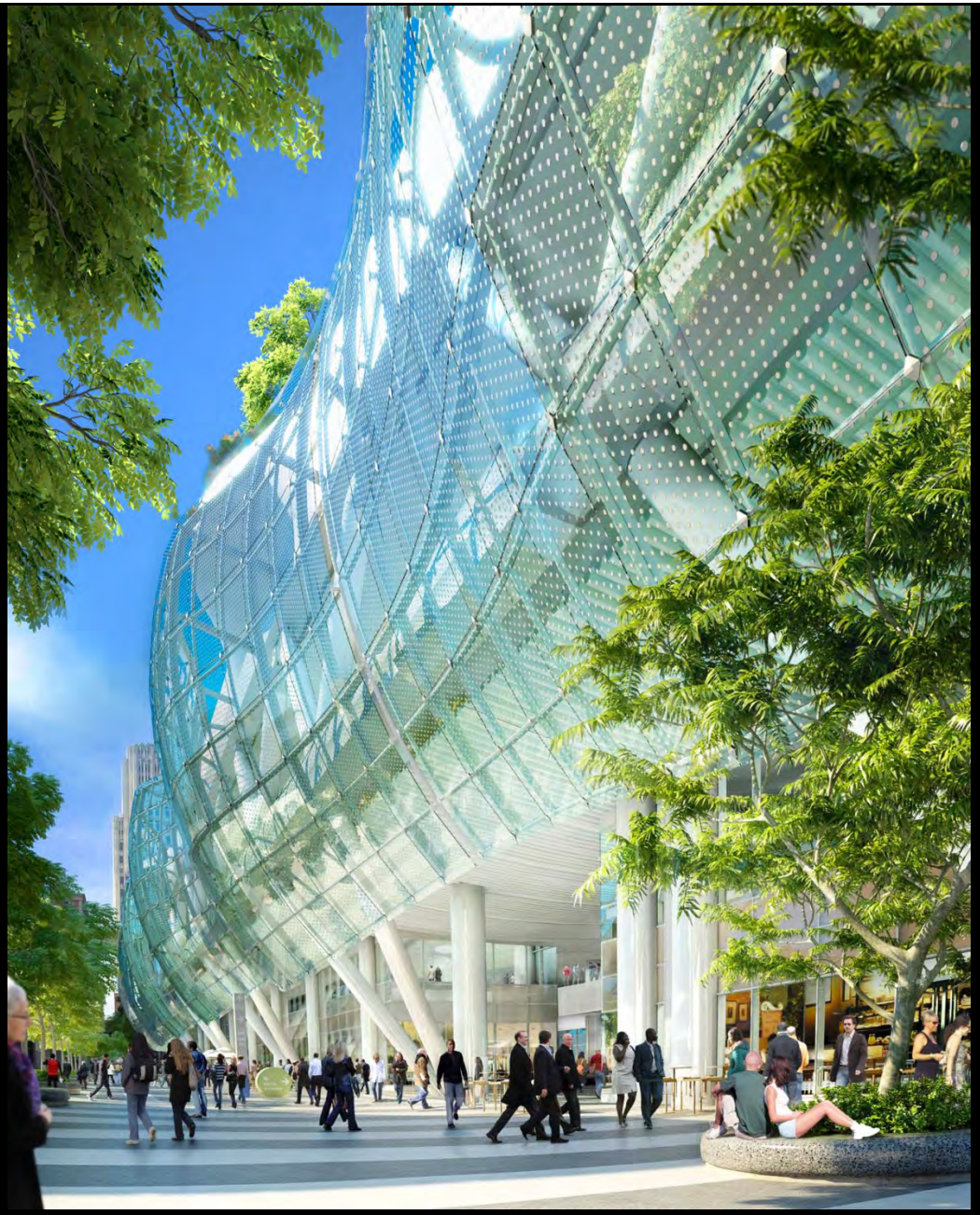
Façade Value Engineering



NATOMA STREET VIEW – GLASS AWNING

NATOMA STREET VIEW – METAL AWNING

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BEALE STREET VIEW – GLASS AWNING

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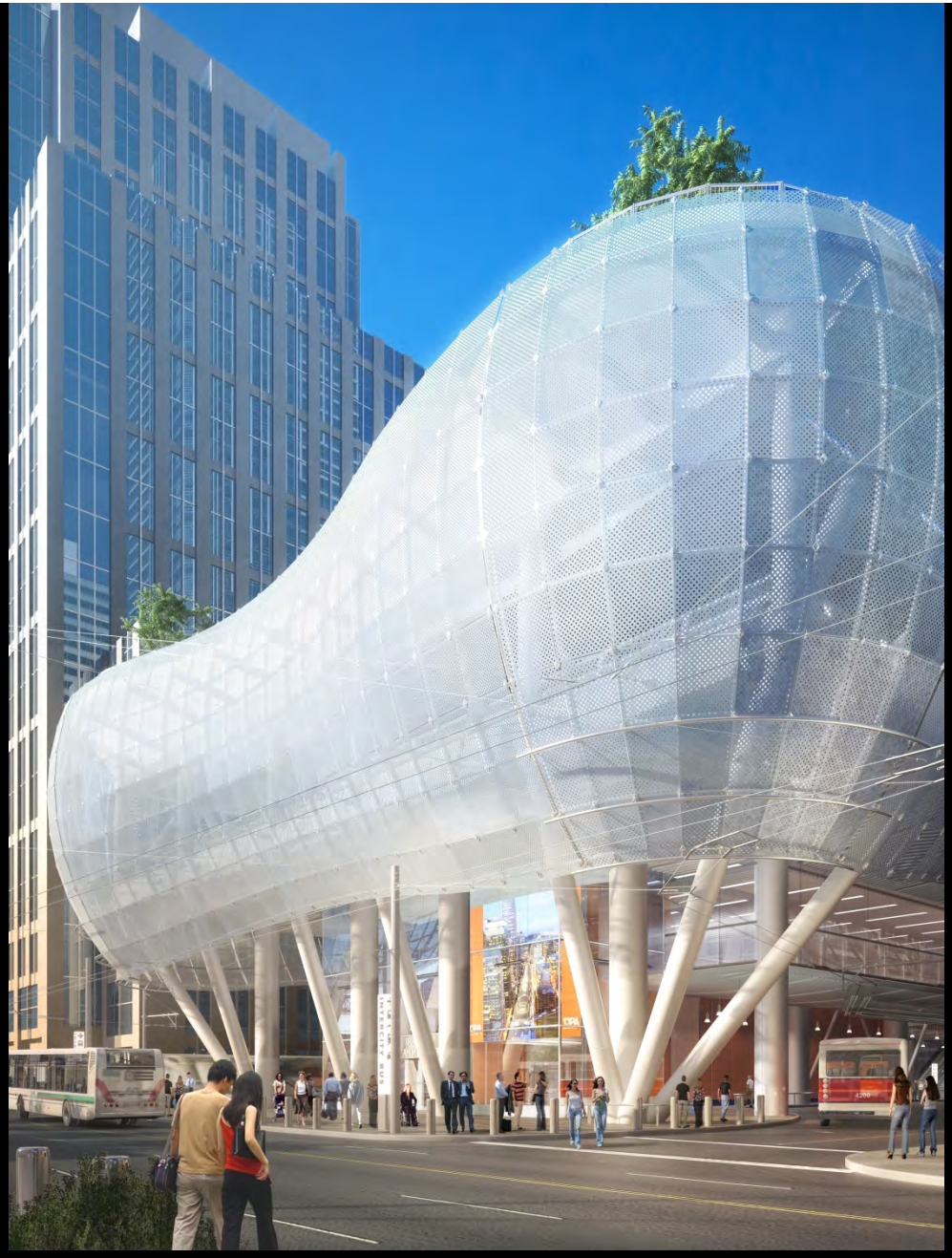
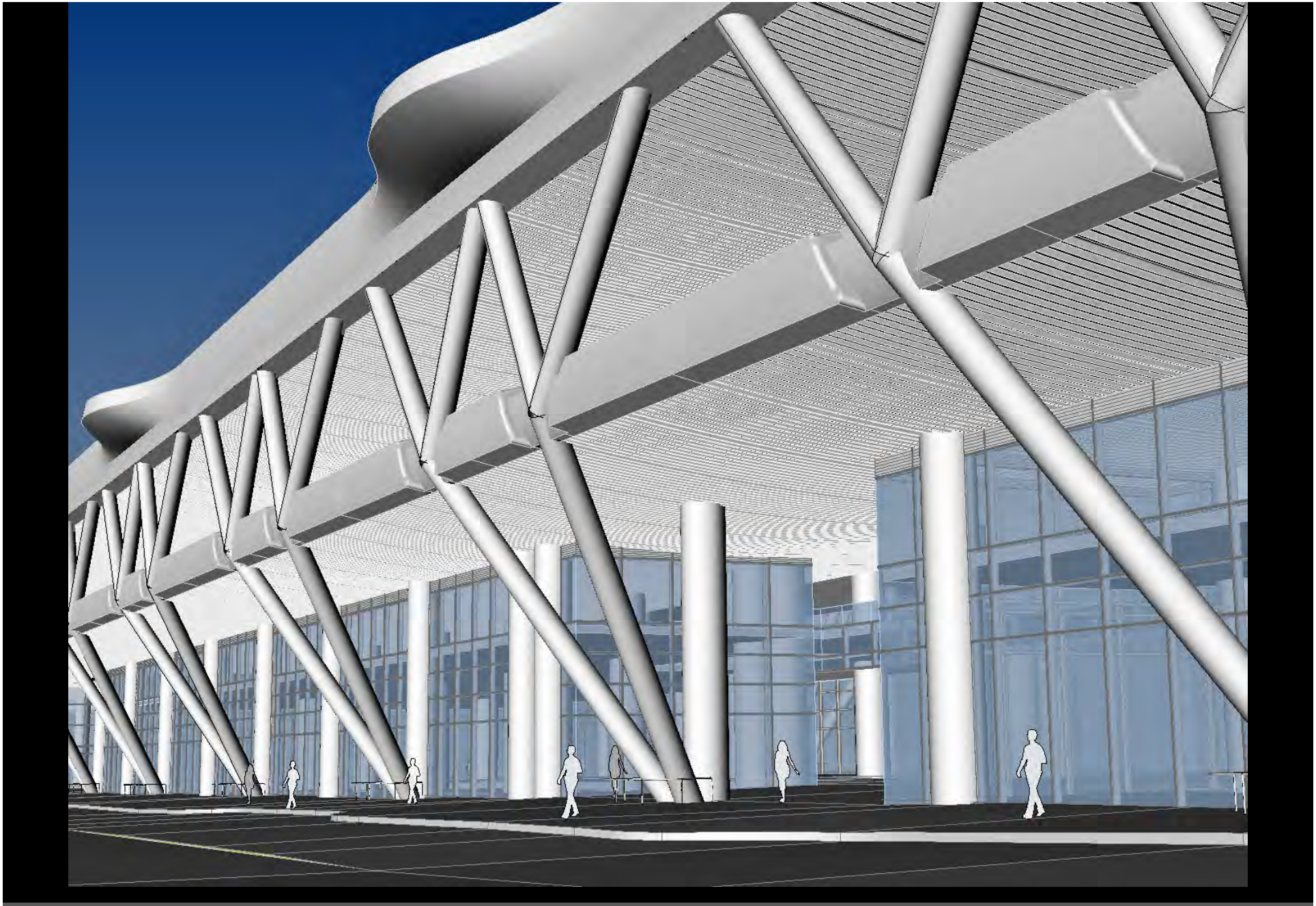


BEALE STREET VIEW – METAL AWNING

AWNING GEOMETRY



SUPERSTRUCTURE

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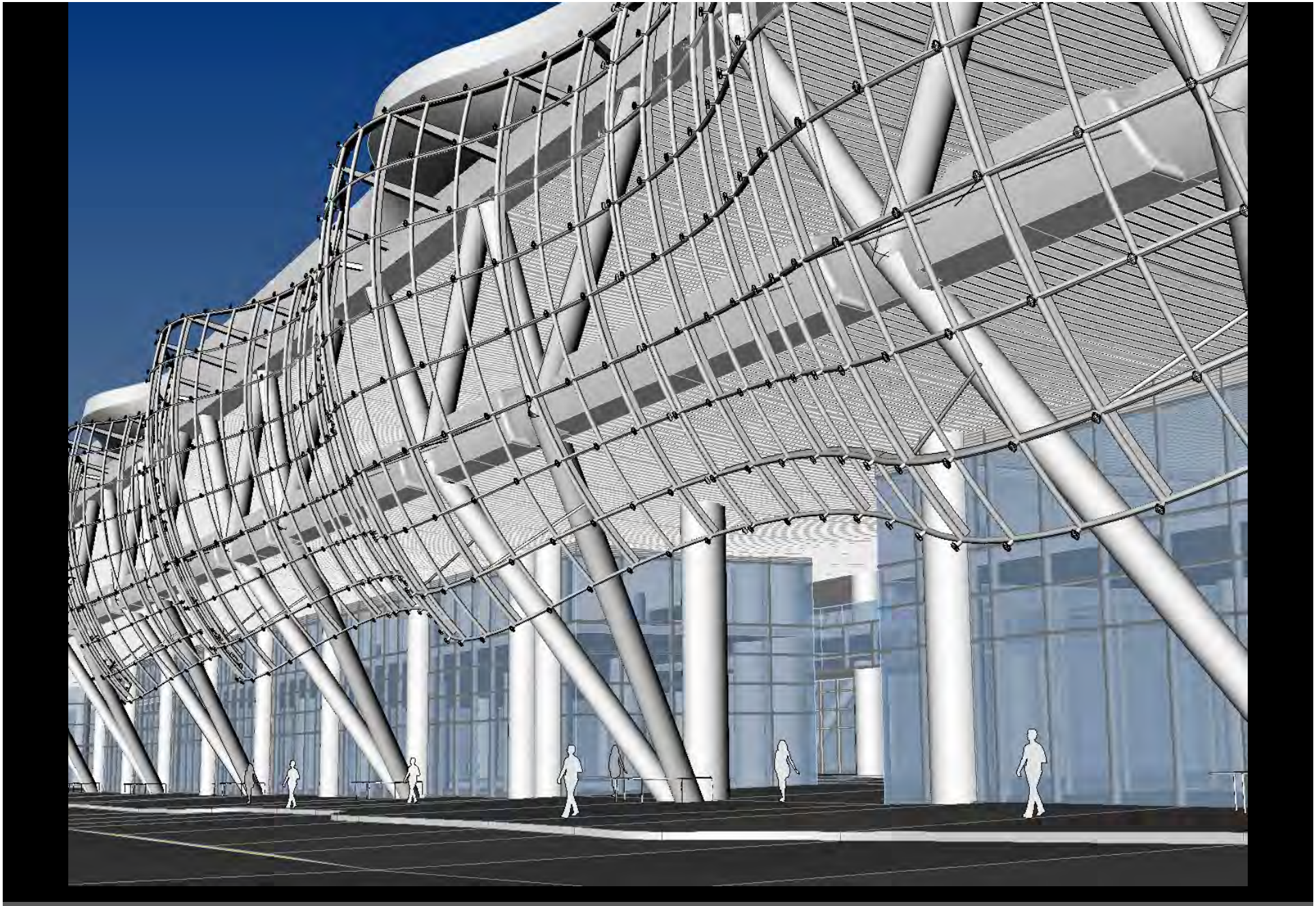

AWNING SUBSTRUCTURE

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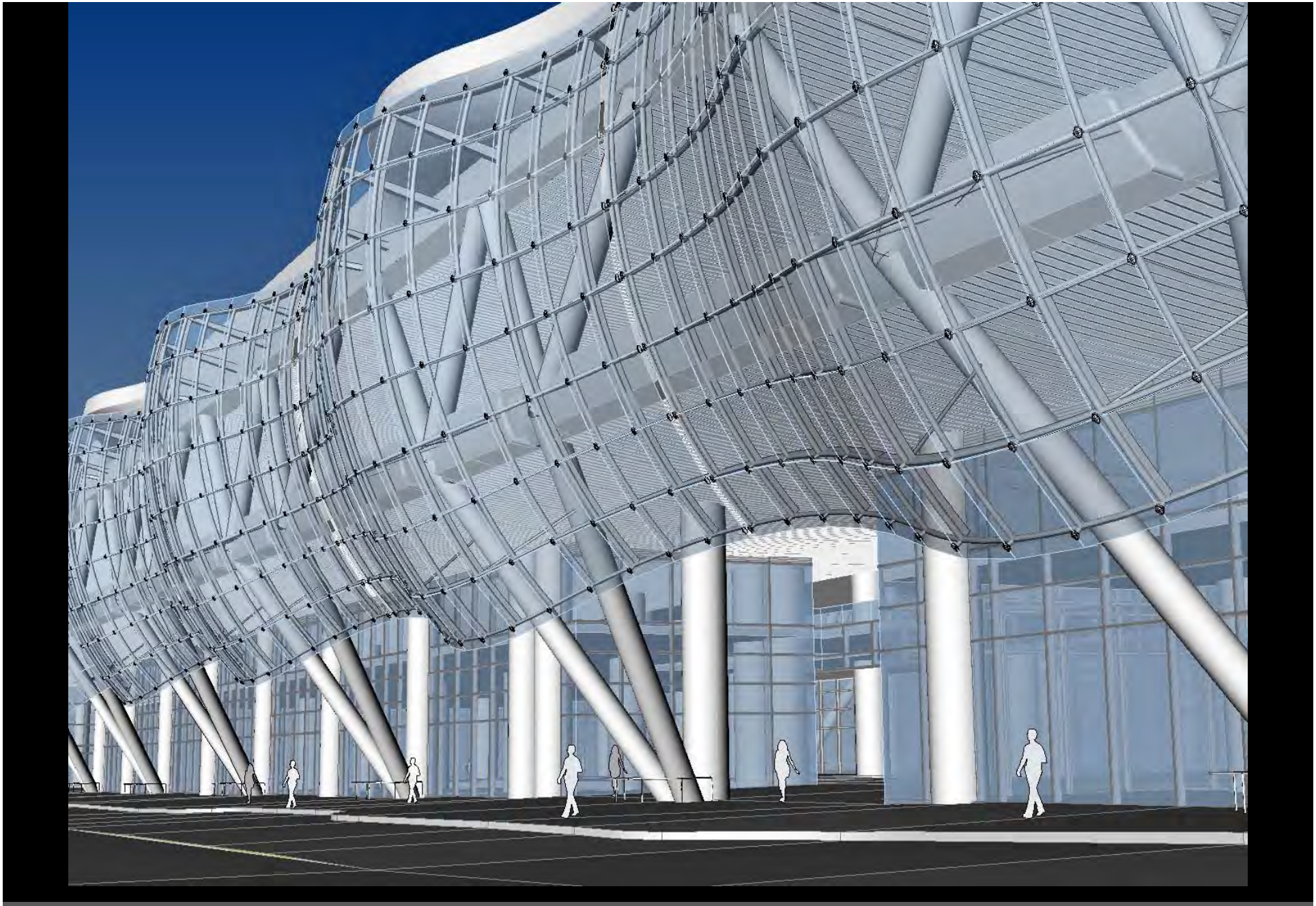
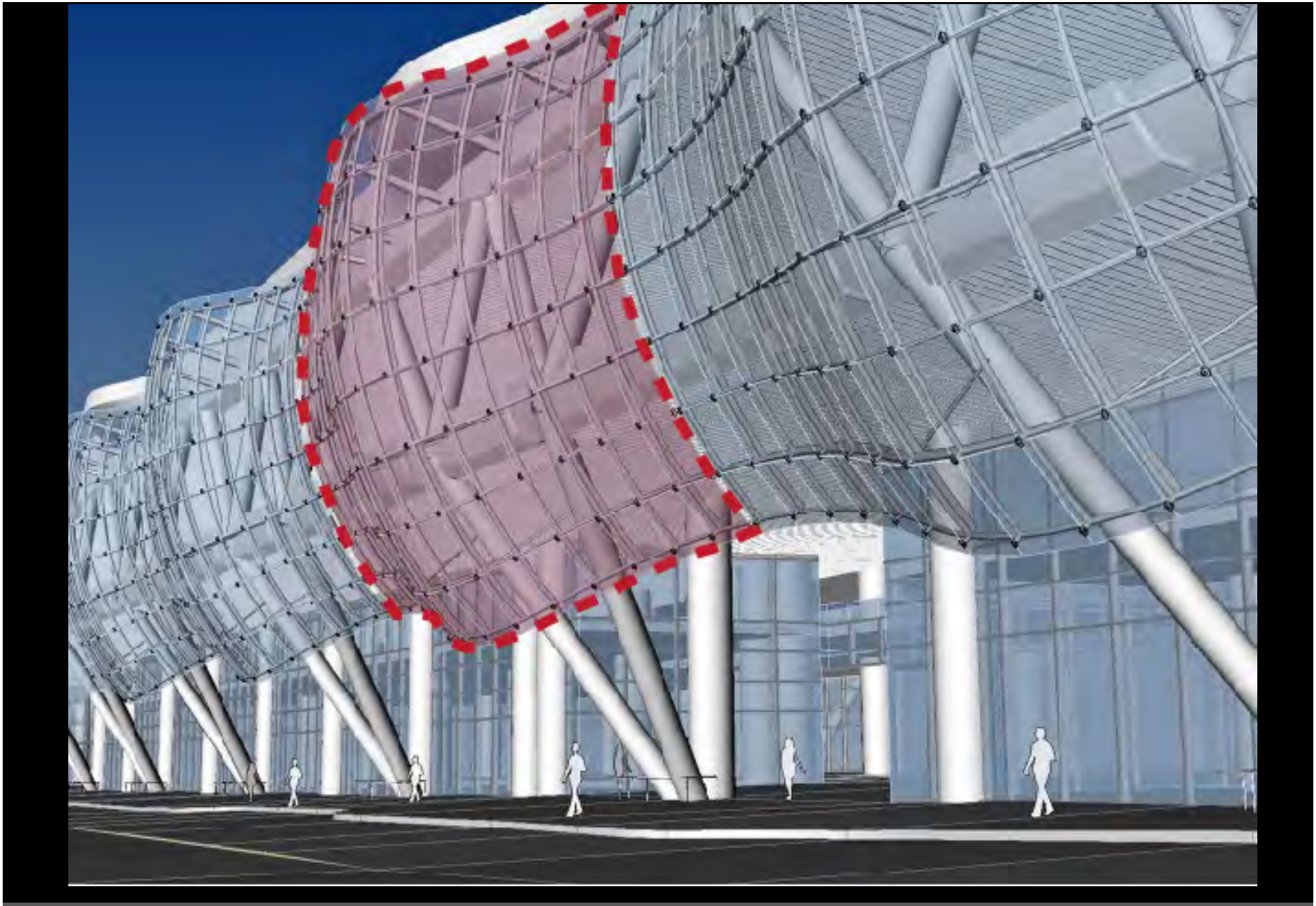


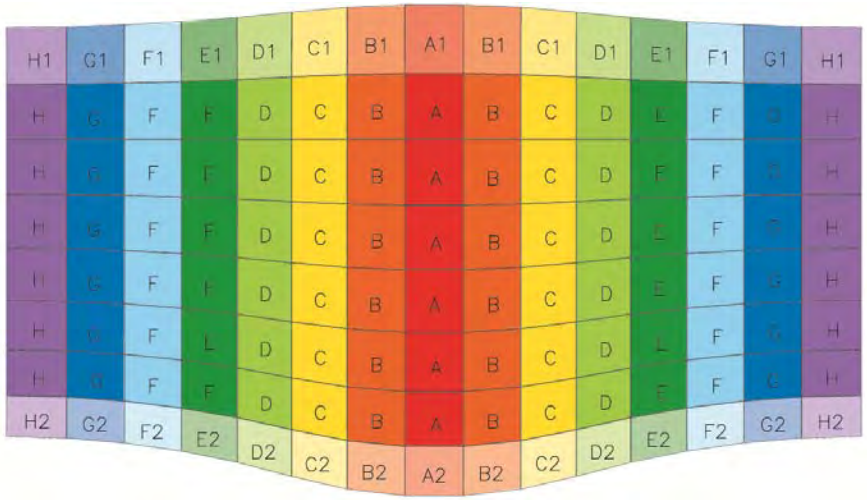
AWNING PANELS

Transbay Transit Center



AWNING PANELS

Transbay Transit Center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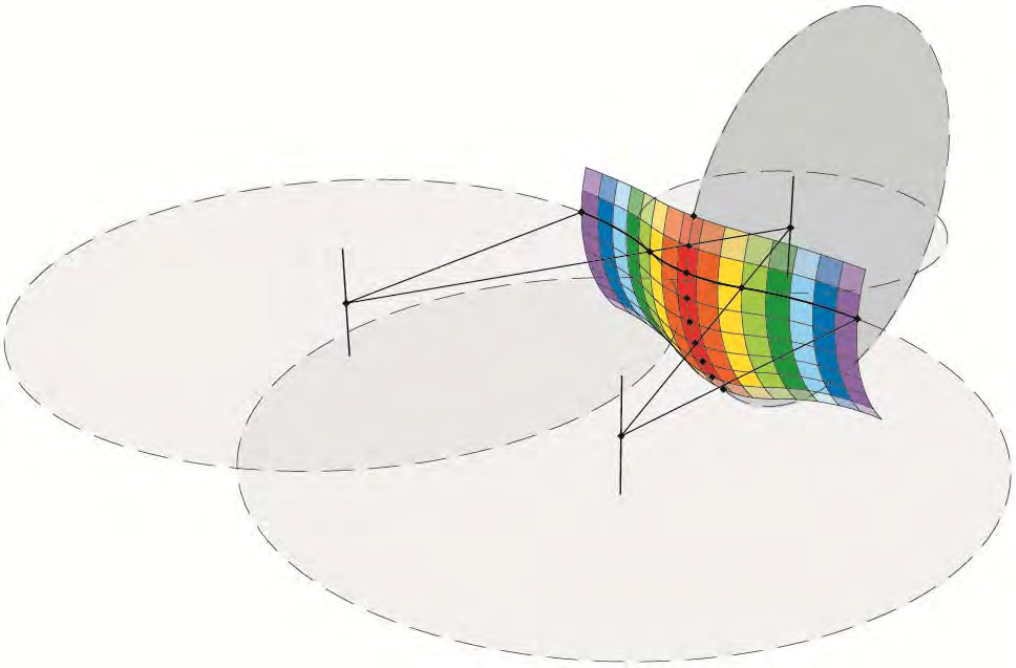

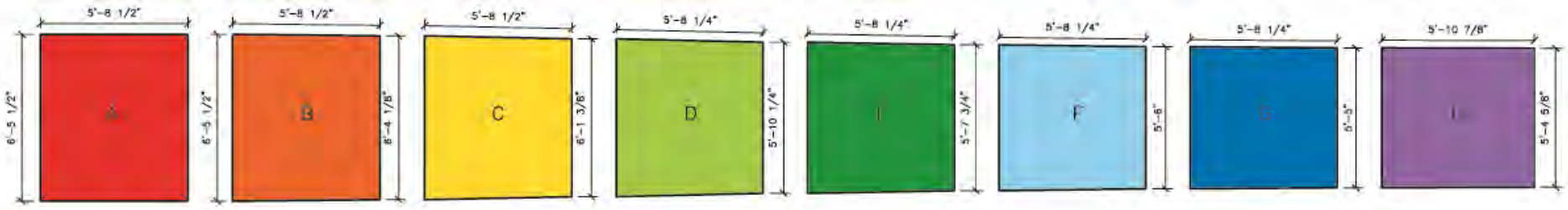
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A
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C
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5'-8 1/4"
D
5'-10 1/4"
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5'-7 3/4"
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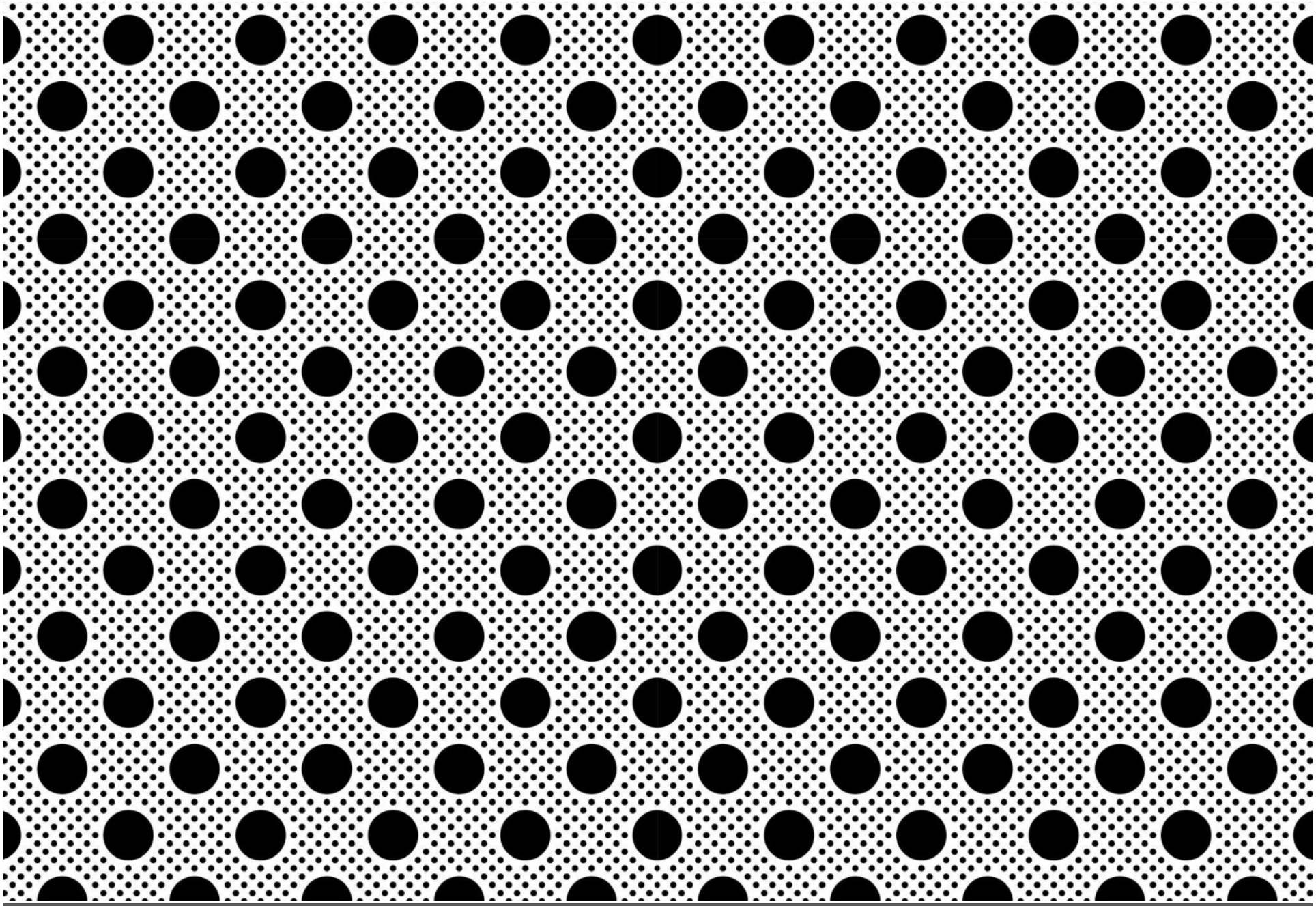
5'-5"
5'-10 7/8"
5'-4 5/8"



PATTERNS

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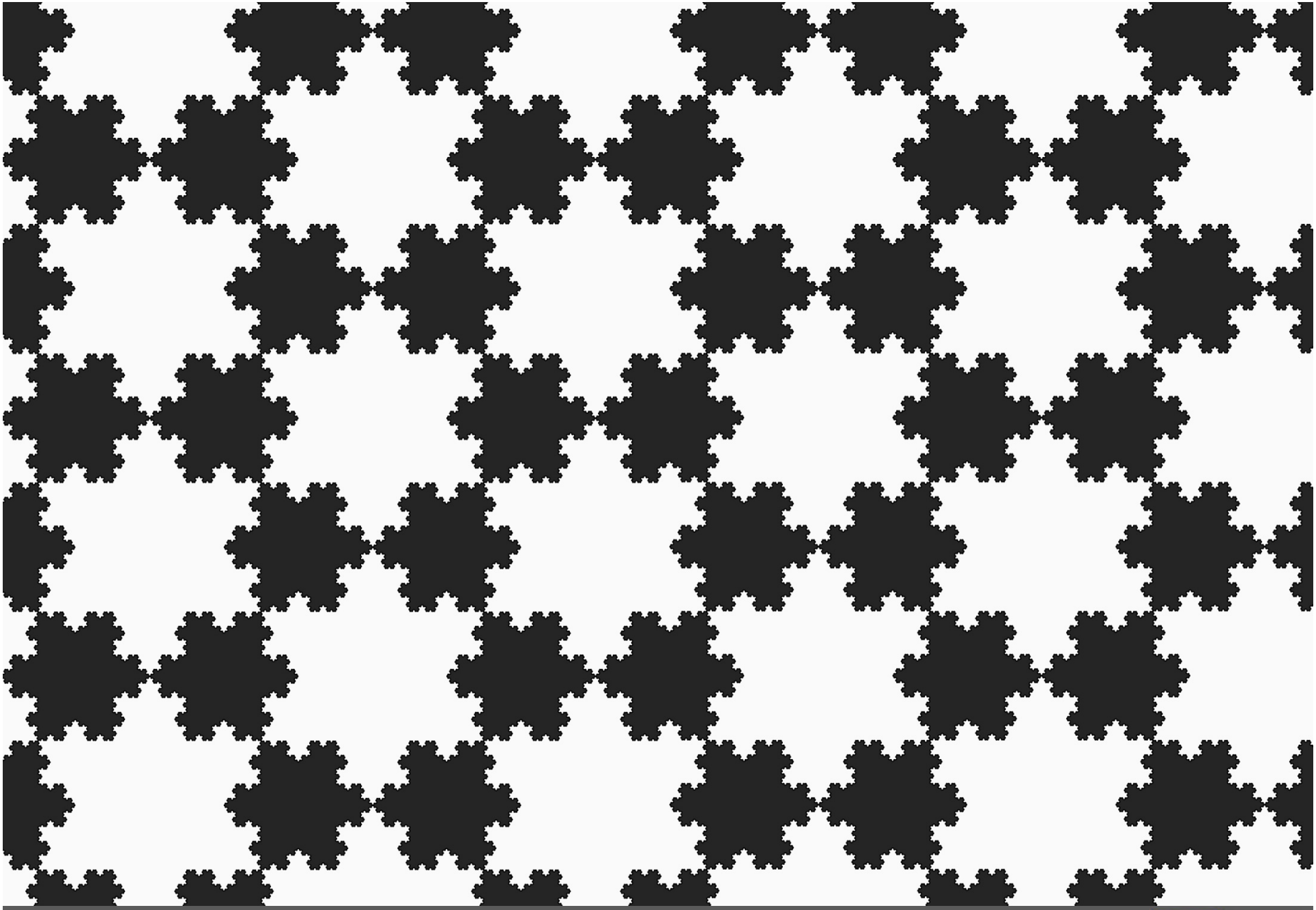

PATTERNS

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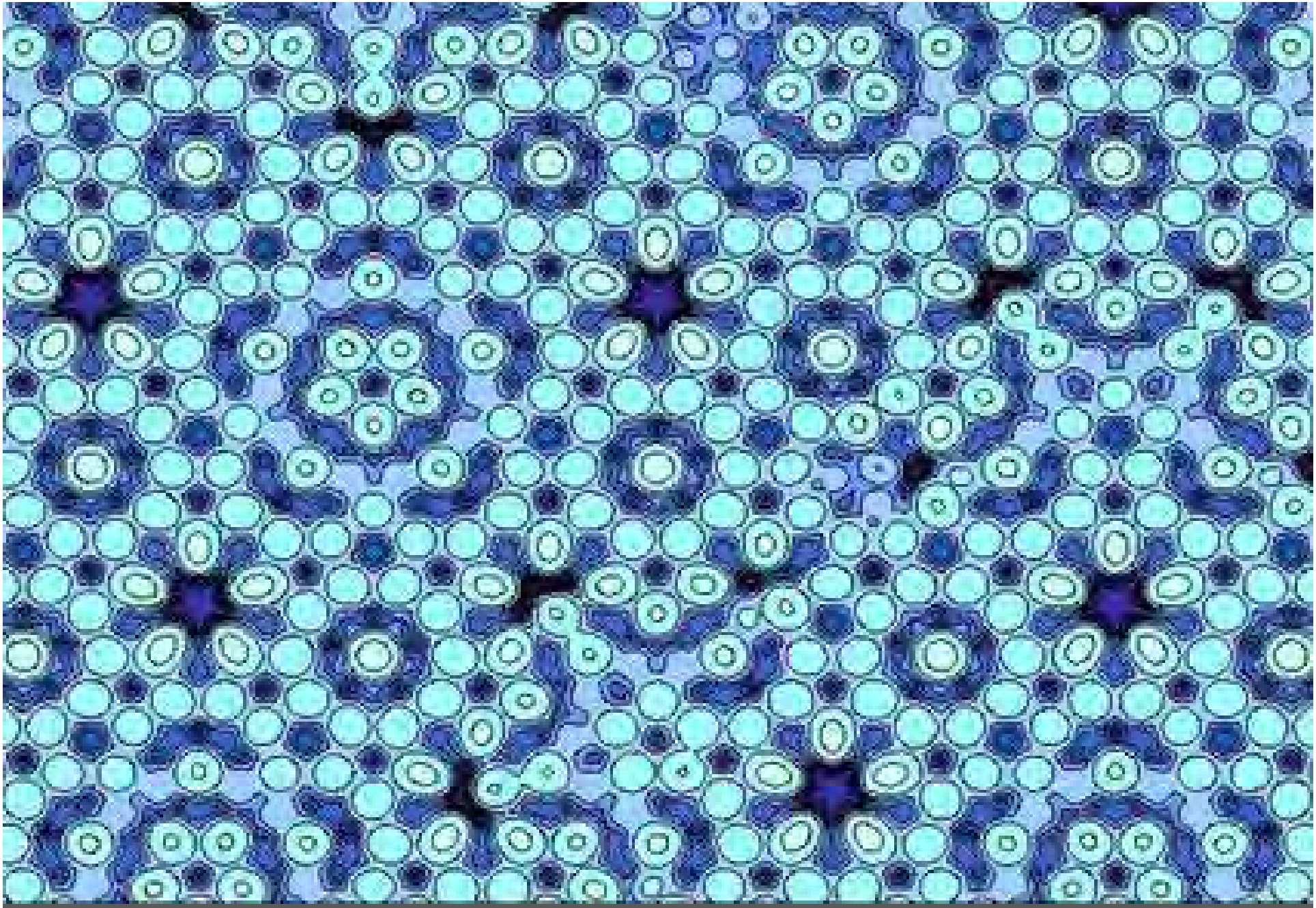

PATTERNS

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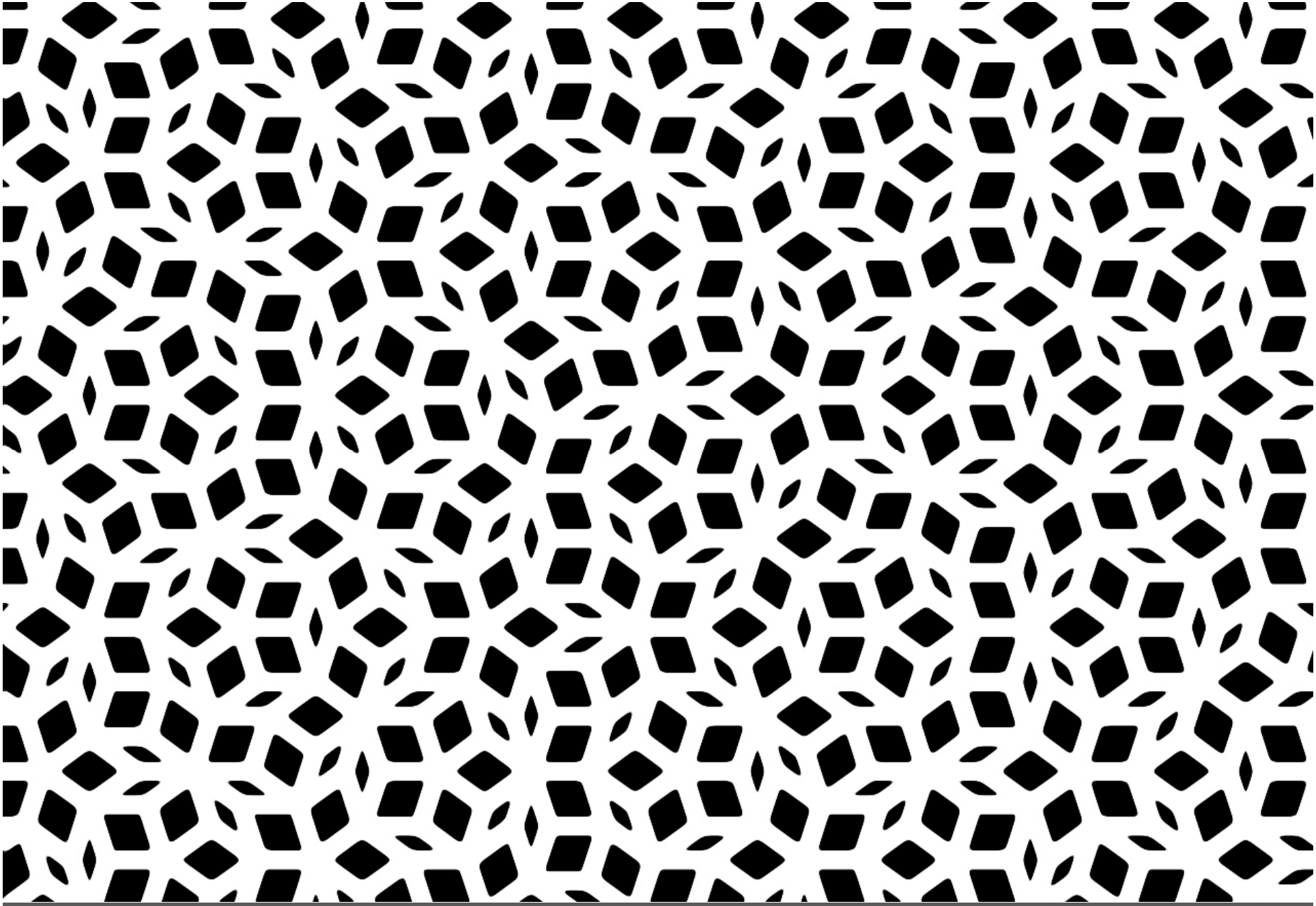

PATTERNS

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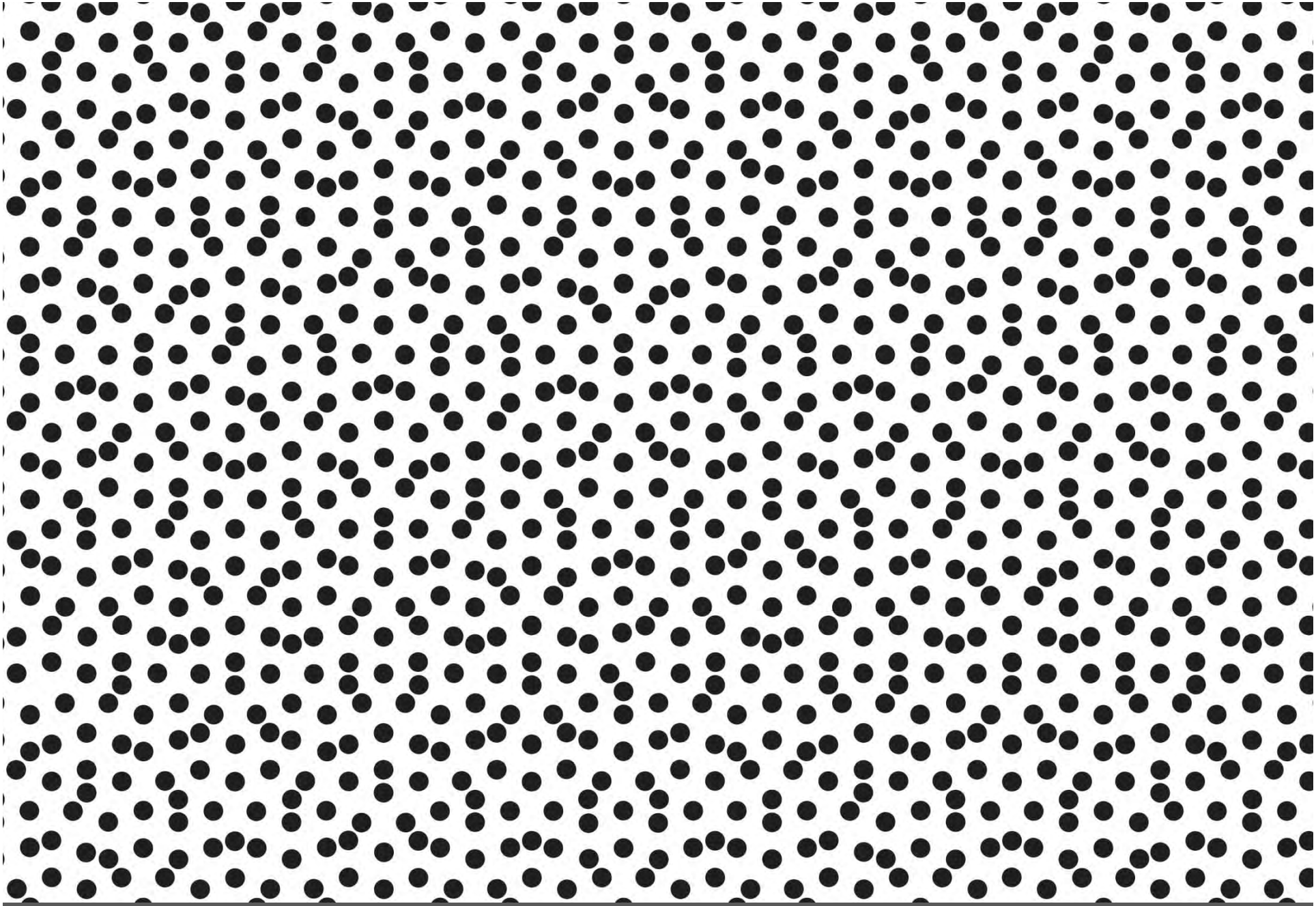

PATTERNS

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METAL PANEL STUDY

GLASS AWNING DETAILED VIEW

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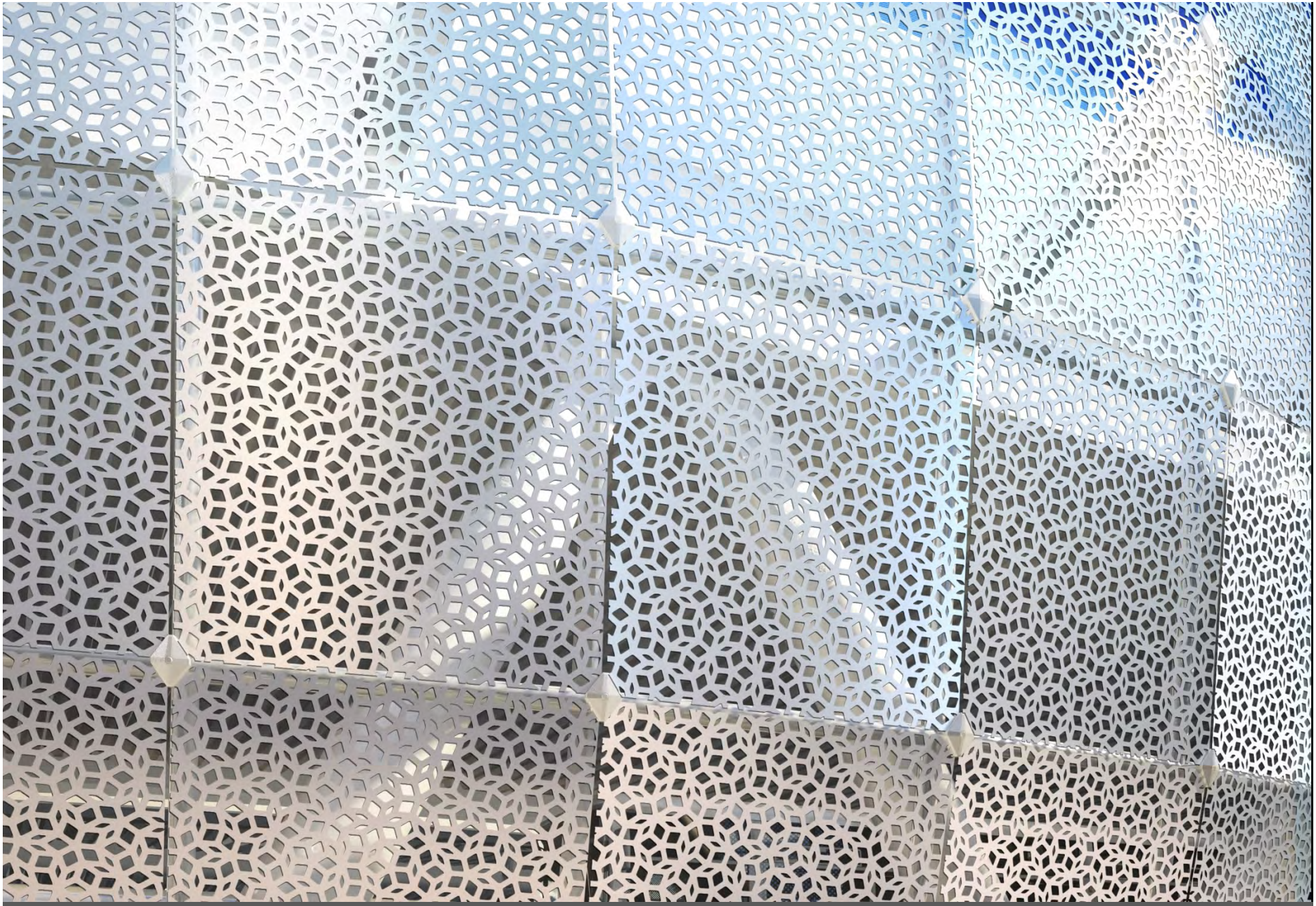

METAL PANEL AWNING DETAILED VIEW – STUDY 1

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NATOMA STREET VIEW – METAL PANEL AWNING STUDY 1

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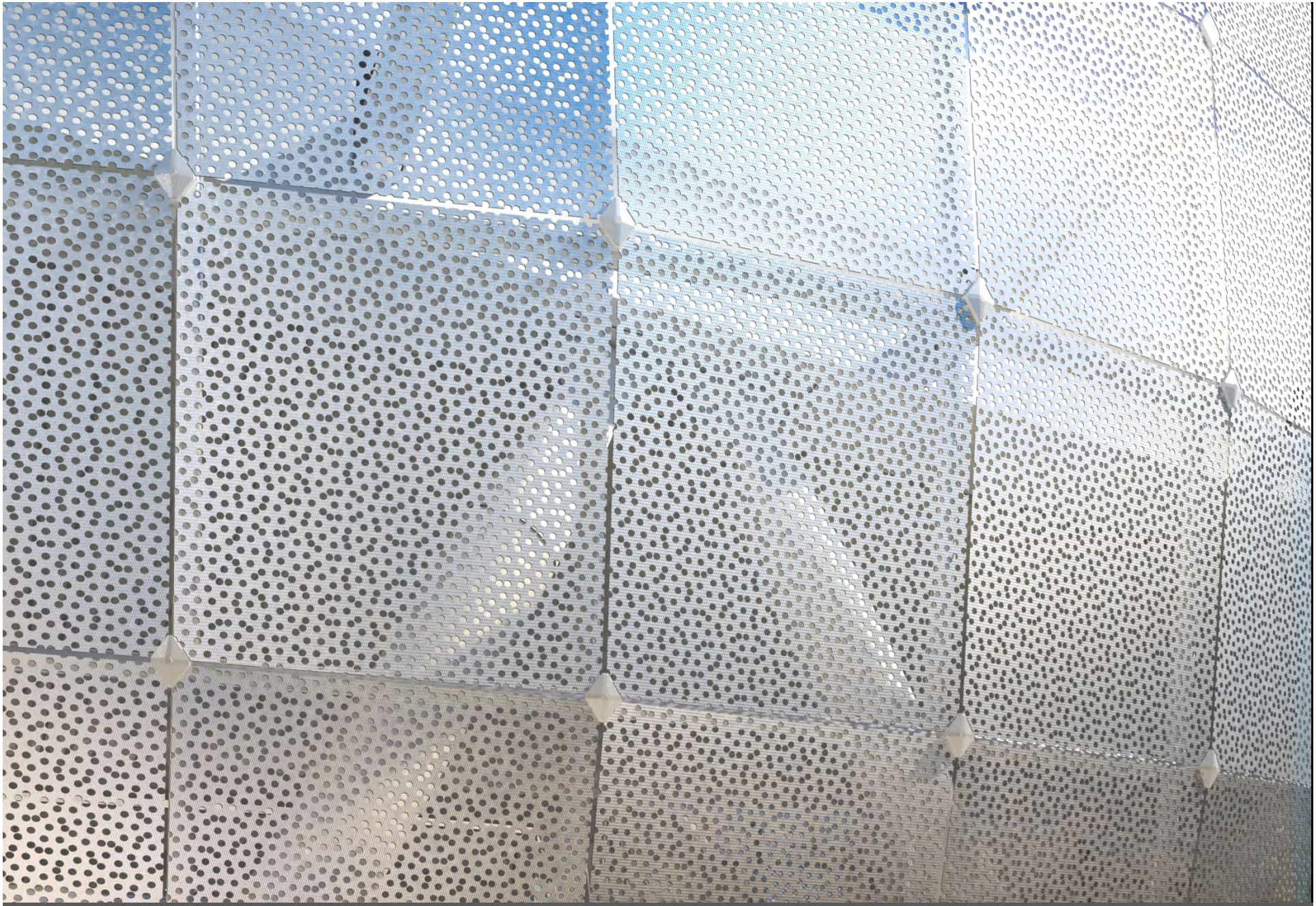

METAL PANEL AWNING DETAILED VIEW – STUDY 2

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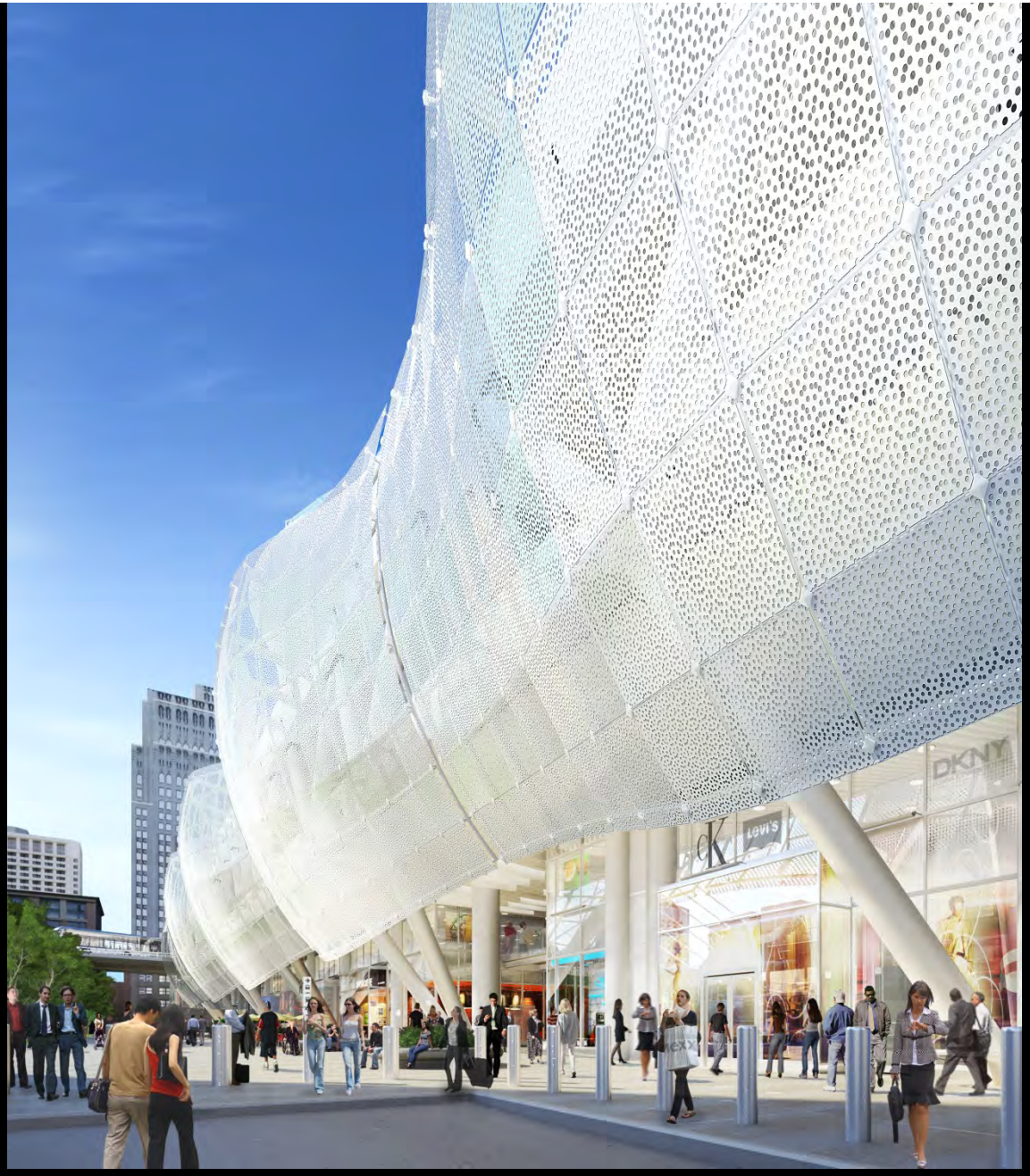

NATOMA STREET VIEW – METAL PANEL AWNING STUDY 2

INTERIOR VIEW

INTERIOR VIEW FROM BUS DECK – GLASS AWNING

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INTERIOR VIEW FROM BUS DECK – METAL AWNING

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LIGHTING

NATOMA STREET VIEW – METAL PANEL AWNING LIGHTING 1

NATOMA STREET VIEW – METAL PANEL AWNING LIGHTING 2

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Baseline, Current, & Proposed Budget (millions)

Project Costs	Baseline	Current	Proposed
Temporary Terminal	$25.3	$25.7	$25.7
Bus Storage	$22.9	$24.7	$24.8
Demolition (Exist and Temp Term)	$16.2	$16.8	$16.8
Utility Relocation	$65.6	$29.5	$29.4
Transit Center Building Design	$143.1	$168.7	$181.9
Transit Center Building Construction	$909.7	$902.9	$1,056.8
Bus Ramps	$40.2	$53.6	$53.7
ROW Acquisition	$71.9	$71.9	$72.9
ROW Support	$5.3	$4.8	$4.8
Programwide	$243.6	$268.9	$290.0
Program Reserve	$45.2	$21.5	$46.5
TOTAL	**$1,589.0**	**$1,589.0**	**$1,803.3**

- ***$49.8 million in Net New Revenue identified, resulting in $164.5 in Additional Revenue Required***

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Revenue Plan for Estimated Draft Budget Adjustment

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Estimated Draft Revenue Required

RVA Costs	$56.8
Contingencies and Program Reserves	$110.4
Other Construction Costs	$12.0
Soft and Programwide Costs	$35.1
Estimated Draft Budget Adjustment	$214.3
Net New Revenue Identified	$49.8
Estimated Additional Revenue Required	***$164.5***

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Net New Revenues

- *Increased Land Sales Values:*
  - $53 million increase, based on 2013 “Conservative Appreciation” update of land values and likely RFP schedule
- *TCDP Impact Fees for Park:*
  - $15 million for City Park included in Transit Center District Plan Implementation Document
- *Reduction in RTIP Funds:*
  - $18.2 million no longer available during Phase 1 schedule, based on SFCTA prioritization of local needs and State gas tax revenue projections

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Draft Additional Revenue Strategy

Increase TIFIA Loan	$97.0
Accelerated Prop K	$15.0
One Bay Area Grant Program	$10.2
Accelerated Land Sales from Phase 2	$10.5
Other Discretionary Funds	$31.8
Total	*$164.5*

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Target Revenues

- *Increase TIFIA Loan Amount:*
  - Modify and increase the existing TIFIA loan by up to $97 million
- *Accelerate SF Prop K Sales Tax:*
  - Acceleration of funds currently programmed in FY34 to Phase 1 construction period yields an estimated $15 million
- *One Bay Area Grant Program:*
  - Region's program to distribute federal STP/CMAQ funds via county congestion management agencies; funding strategy includes TJPA's request of $10 million for bike and pedestrian elements; programming decisions to be finalized in Spring 2013; currently in the Upper Tier of candidate projects

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Target Revenues

- *Accelerated Land Sales from Phase 2:*
  - Could include no-interest loan based on estimated values of Parcel F and Block
- *Other Discretionary Funds:*
  - May include Federal funds such as PNRS or TIGER, or local/regional funds required due to contract certification needs and funding eligibility issues

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Target Revenues & Phase 2 Funding

- Capacity for Phase 2 financing dependent upon:
  - Pace of development
  - Size, timing and interest rate for Phase 1 loan
  - Timing of construction for Phase 2
  - Duration of tax increment collections
  - Back stop of loan from local and regional funding partners
- Alternatives include TIFIA loan, bond sales, or other financing mechanisms

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Target Revenues & Phase 2 Funding

- *Accelerated Land Sales from Phase 2:*
  - Projected value of Phase 2 parcels – Parcel F and Block 4 (the Temporary Terminal site) – is more than $125 million; revenue plan would advance only $10.5 million of this value
  - Use of parcels for transit operations and construction access and restrictions on use of land sales proceeds limit ability to include parcels in Phase 1 funding plan
  - A no-interest loan for a fraction of the projected value is proposed to help close the Phase 1 funding gap
  - Majority of value would remain for Phase 2 construction

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Next Steps

- *Review Structural Steel Bid and Estimates*
  - Bring update/possible recommendation to TJPA Board on 3/25
- *PCPA to Continue Construction Document Efforts*
  - Request approval of RVA and façade design changes at 3/25 TJPA Board meeting to meet May 31 CD deadline
- *Finalize Phase 1 Budget Recommendations for contingencies and reserves*
  - After evaluation of steel bids and estimates
  - Present Budget Recommendations on contingencies/reserves to Board for Consideration/Action at a later TJPA Board meeting