

**STAFF REPORT FOR CALENDAR ITEM NO.: 7
FOR THE MEETING OF: March 25, 2013**

TRANSBAY JOINT POWERS AUTHORITY

BRIEF DESCRIPTION:

Requesting that the TJPA Board of Directors authorize the Executive Director to direct architectural consultants Pelli Clarke Pelli Architects to:

1. Redesign the W-1 System of the Transbay Transit Center from glass to perforated metal panels to improve the protective and life safety designs of the facility and reduce the cost of construction; and
2. Implement design changes in the Phase I Construction Documents in accordance with the Design Guidance Criteria contained in the 2012 update of the Risk and Vulnerability Assessment and the Addendum documentation associated with the W-1 System for the Transbay Transit Center Program.

REPORT:

W-1 System

On September 20, 2007, the TJPA Board, in Resolution 07-034, approved Pelli Clarke Pelli Architects (PCPA) as the design architect for the Transbay Transit Center. The architect's design concept, as shown in initial renderings presented during the TJPA's Design and Development Competition, featured extensive use of glass, including a glass awning system which formed the primary façade around the perimeter of the building. The awning system around the primary facade of the building is referred to as the "W-1 System."

PCPA began design following the Board's approval of Resolution 08-025 on May 15, 2008, authorizing the Executive Director to execute an agreement with PCPA for design and construction administration services for the Transit Center Building.

In 2010, the decision was made to procure the W-1 System for the Transit Center as part of a trade package comprising five separate specialty glazing systems. TG08.1, Glazing Design-Build, was issued for bid on June 3, 2011.

A comprehensive update of the project Risk and Vulnerability Assessment (RVA) began in late 2011, concurrent with the bidding period for the TG08.1 package. As part of the RVA update, the security subject matter experts recommended pre-bid blast testing of the W-1 System in order to provide enhanced information to the bidders. In January 2012, the bidding process for package TG08.1 was suspended to allow for the fabrication and testing of prototypes for the W-1 System to evaluate the performance of alternative glazing materials and attachment designs.

After the completion of the prototype process and subsequent analysis, the RVA team finalized their update of the RVA Design Guidance Criteria (DGC). The design team estimated the cost of

meeting the DGC requirements relating to the W-1 System would increase the cost of the W-1 System by approximately \$7.5 million.

Because of the W-1 System's large area and proportionately large cost, as well as the estimated increased cost to implement the DGC recommendations for a glass W-1 System, the TJPA and the design team identified the W-1 System as a potential area for cost reduction through Value Engineering. In particular, the program team recommended alternative materials be studied for the W-1 System and gave the design team a target of reducing the total cost of the W-1 System of \$17.5M, inclusive of avoided RVA costs.

The design team has recommended that perforated metal panels replace the glass in the W-1 System. Under the design team's proposal, other aspects of the W-1 (geometry, panel size, and substructure) are expected to stay consistent with the current design.

Staff has concluded that substituting perforated metal panels for glass in the W-1 System will result in substantial cost savings. The RVA team has evaluated the proposed material substitution, concluded that it would mitigate potential hazards under some conditions, and provided revised DGC for the proposed metal panels. In light of these considerations, Staff recommends that the Board authorize this change to the design of the W-1 System.

Risk and Vulnerability Assessment

During Schematic Design in 2009, the TJPA engaged URS security specialists to prepare a Risk and Vulnerability Assessment (RVA) identifying the site-specific hazards and threats – both natural and manmade (design basis threats) -- potentially facing the Transit Center and its related infrastructure and to establish appropriate mitigation measures.

Prior to finalizing the construction documents, the RVA effort was updated in 2011-12. The 2012 update was initiated on PCPA's Phase 1 50% Construction Documents. The update was necessary and appropriate to address the significantly more advanced design of the Transit Center, and changes that had been made to the phasing of the Program and its components. The update was also required because the operational needs of the transit agencies that will use the Transit Center, the requirements of local police, fire, and emergency services, and the threat environment and industry best practices and standards for protective guidance had all evolved since 2009. Updated performance criteria were also developed following best practice federal guidelines and a methodology widely used and accepted to evaluate high-profile critical infrastructure like the Transit Center.

After rigorous review, the final RVA report, including updated DGC, was completed in October 2012. The recommendations call for increased safety and security measures to be incorporated into the design. The updated DGC are consistent with federal guidance and industry best practice, and were thoroughly vetted to confirm the value of the recommendations. TJPA and PMPC Staff, our security consultants, peer review subject matter experts, and the design team have worked together to develop optimal protective design solutions conforming to the DGC and to identify DGC whose implementation can be feasibly and appropriately deferred until Phase 2 of the program. The design team has estimated that the DGC that are recommended for implementation in Phase 1 will increase the cost of construction by \$58.6 M.

Although not the reason for updating the RVA, the updated document and the implementation of the DGC would allow the TJPA to seek designation and certification under the Support Anti-terrorism by Fostering Effective Technologies Act of 2002, known as the SAFETY Act. Such designation and certification would provide significant liability protection to the TJPA.

Staff is in the process of evaluating all of the issues impacting the Phase 1 budget – including the impacts of the RVA, but also including, most notably, the recent bid received for the TG07.1 the Structural Steel package – with the intention of recommending changes to the Phase 1 budget.

In advance of a recommendation for a revised Phase 1 budget, and based on the recommendations of the subject matter experts advising the TJPA, Staff recommends that the Board authorize TJPA staff to direct the design team to incorporate into the 100% CDs the necessary design changes to meet the updated RVA Design Guidance Criteria. The current schedule for completion of the Phase 1 Construction Documents is May 31, 2013. Authorizing this direction now will allow PCPA to continue incorporating recommended mitigation measures into the design and maintain the current delivery schedule of May 31, 2013. Staff will need to bring a revised budget to the TJPA Board for adoption before additional trade packages incorporating these changes could be awarded.

RECOMMENDATION:

The TJPA Executive Director and Staff recommend that the TJPA Board of Directors authorize the Executive Director to direct architectural consultants Pelli Clarke Pelli Architects to:

1. Redesign the W-1 System of the Transbay Transit Center from glass to perforated metal panels to improve the protective and life safety designs of the facility and reduce the cost of construction; and
2. Implement design changes in the Phase I Construction Documents in accordance with the Design Guidance Criteria contained in the 2012 update of the Risk and Vulnerability Assessment for the Transbay Transit Center Program.

Providing this direction will allow the Architect to prepare appropriate W-1 design documents to be issued as an addendum to trade package TG08.1 and resume the bidding process and to maintain the May 31, 2013 schedule for delivery of the Construction Documents package.

ENCLOSURES:

1. Resolution

**TRANSBAY JOINT POWERS AUTHORITY
BOARD OF DIRECTORS**

Resolution No. _____

WHEREAS, On September 20, 2007, the TJPA Board, in Resolution 07-034, approved Pelli Clarke Pelli Architects (PCPA) as the design architect for the Transbay Transit Center; and

WHEREAS, On May 15, 2008, The TJPA Board, in Resolution 08-025, authorized the Executive Director to execute an agreement with PCPA for design and construction administration services for the Transit Center Building; and

WHEREAS, The Architect's design concept featured glass awning system which formed the primary façade around the perimeter of the building which has come to be referred to as the "W-1 System"; and

WHEREAS, In 2009 during the Transit Center Schematic Design Phase the TJPA engaged URS security specialists to prepare a Risk and Vulnerability Assessment (RVA) identifying the site-specific hazards and threats – both natural and manmade – potentially facing the Transit Center and its related infrastructure and to establish appropriate mitigation measures; and

WHEREAS, In 2011 the TJPA engaged URS security specialists to update the Risk and Vulnerability Assessment (RVA) based upon the 50% Construction Documents and changes in protective guidance practices and industry best practices since the preparation of the original RVA; and

WHEREAS, The RVA update was completed in October 2012 and included revised Design Guidance Criteria (DGC) for the design of the Transit Center; and

WHEREAS, The 100% Construction Documents are to be delivered on May 31, 2013, and if that deliverable is to address the DGC, the Architect must be directed to incorporate the recommendations in finalizing the package; and

WHEREAS, The design team must prepare and issue an addendum to update the plans and specifications for Trade Package TG08.1 to resume the schedule for bidding that package; and

WHEREAS, Reducing the cost of the W-1 System by changing the panels from glass to perforated metal requires that design change be incorporated into the addendum that is being prepared; now, therefore, be it

RESOLVED, That the TJPA Board authorizes the Executive Director to direct architectural consultants Pelli Clarke Pelli Architects to redesign the W-1 System from glass to perforated metal panels to improve the protective and life safety designs of the facility and reduce the cost of construction, improve facility safety, and to implement changes to the Phase 1 Construction Documents in accordance with the Design Guidance Criteria of the 2012 Update to the Risk and Vulnerability Assessment—; and be it

FURTHER RESOLVED, That TJPA Staff will explore with Pelli Clarke Pelli Architects and the design team packaging individual components of the RVA or other items as bid alternates.

I hereby certify that the foregoing resolution was adopted by the Transbay Joint Powers Authority Board of Directors at its meeting of March 25, 2013.

Secretary, Transbay Joint Powers Authority



Phase 1 Design Documents

March 25, 2013

Transbay Transit Center

TJPA





Transbay Transit Center

Agenda

- Presentation of proposed design change to W-1 Awning System
- Design Status
- Budget Status
- Staff Recommendation

TJPA BOARD DESIGN PRESENTATION

Architectural Update – Metal Panel Awning

25 March 2013
Pelli Clarke Pelli Architects



NATOMA STREET VIEW – GLASS AWNING



NATOMA STREET VIEW – METAL AWNING

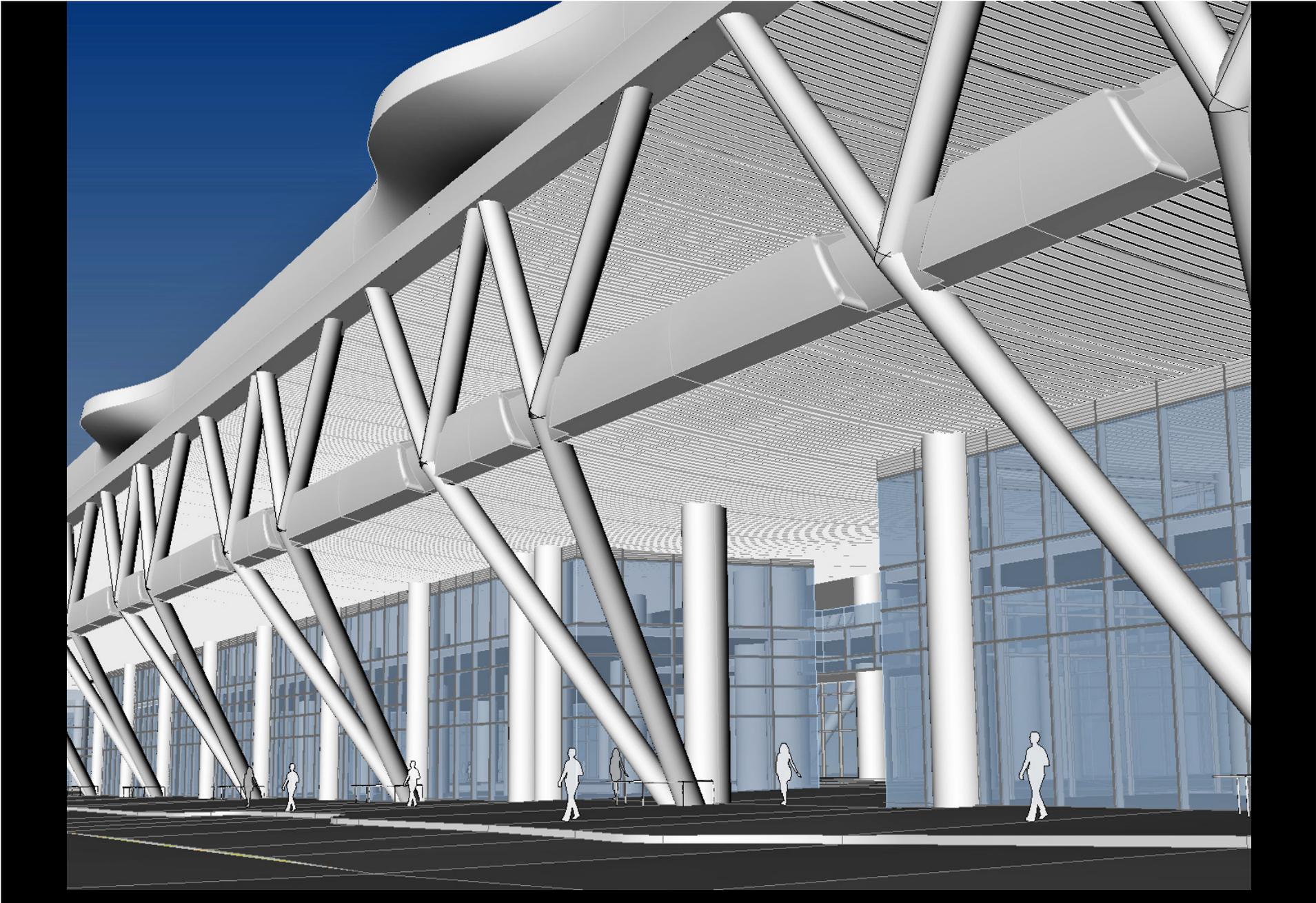


BEALE STREET VIEW – GLASS AWNING



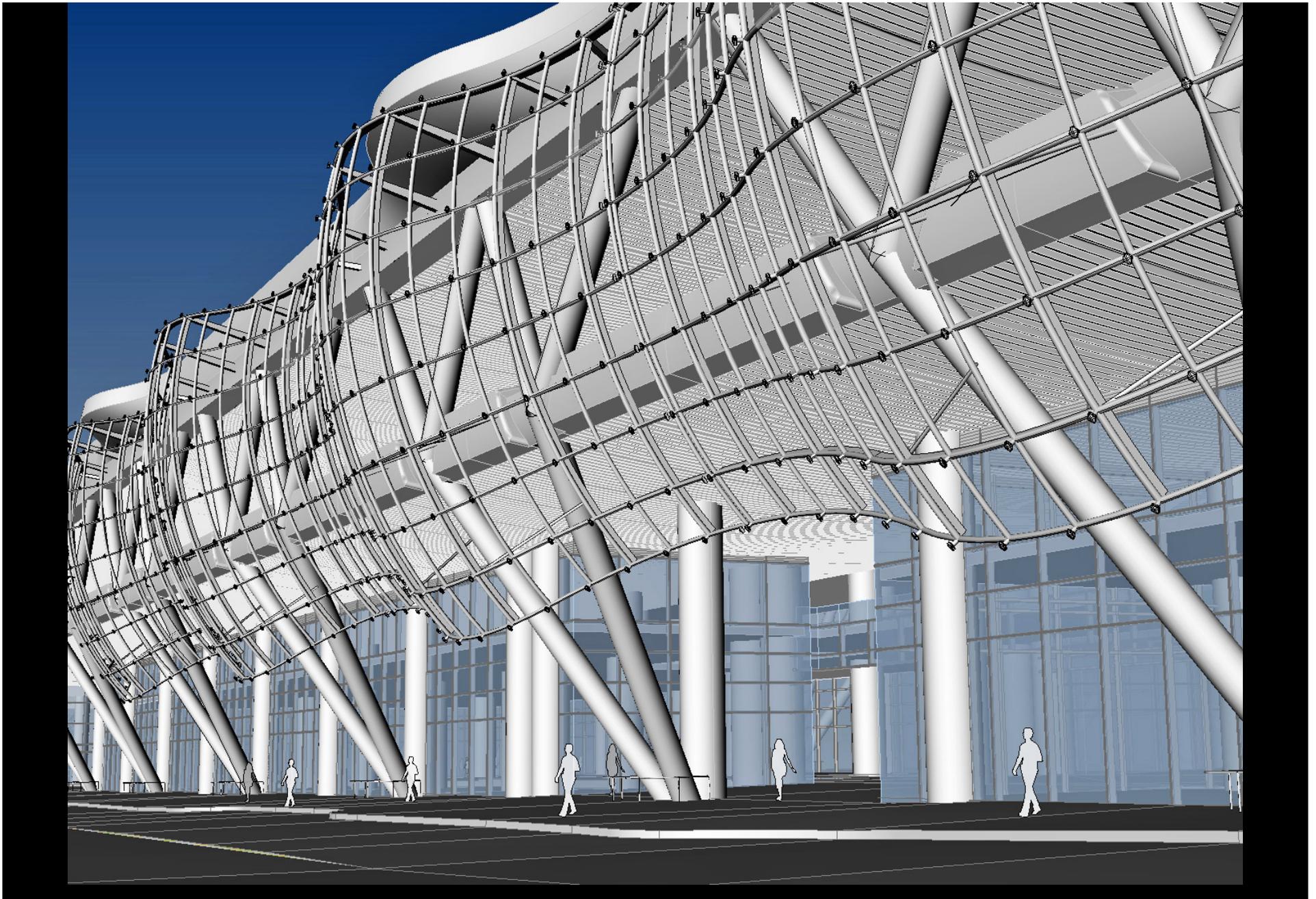
BEALE STREET VIEW – METAL AWNING

AWNING GEOMETRY

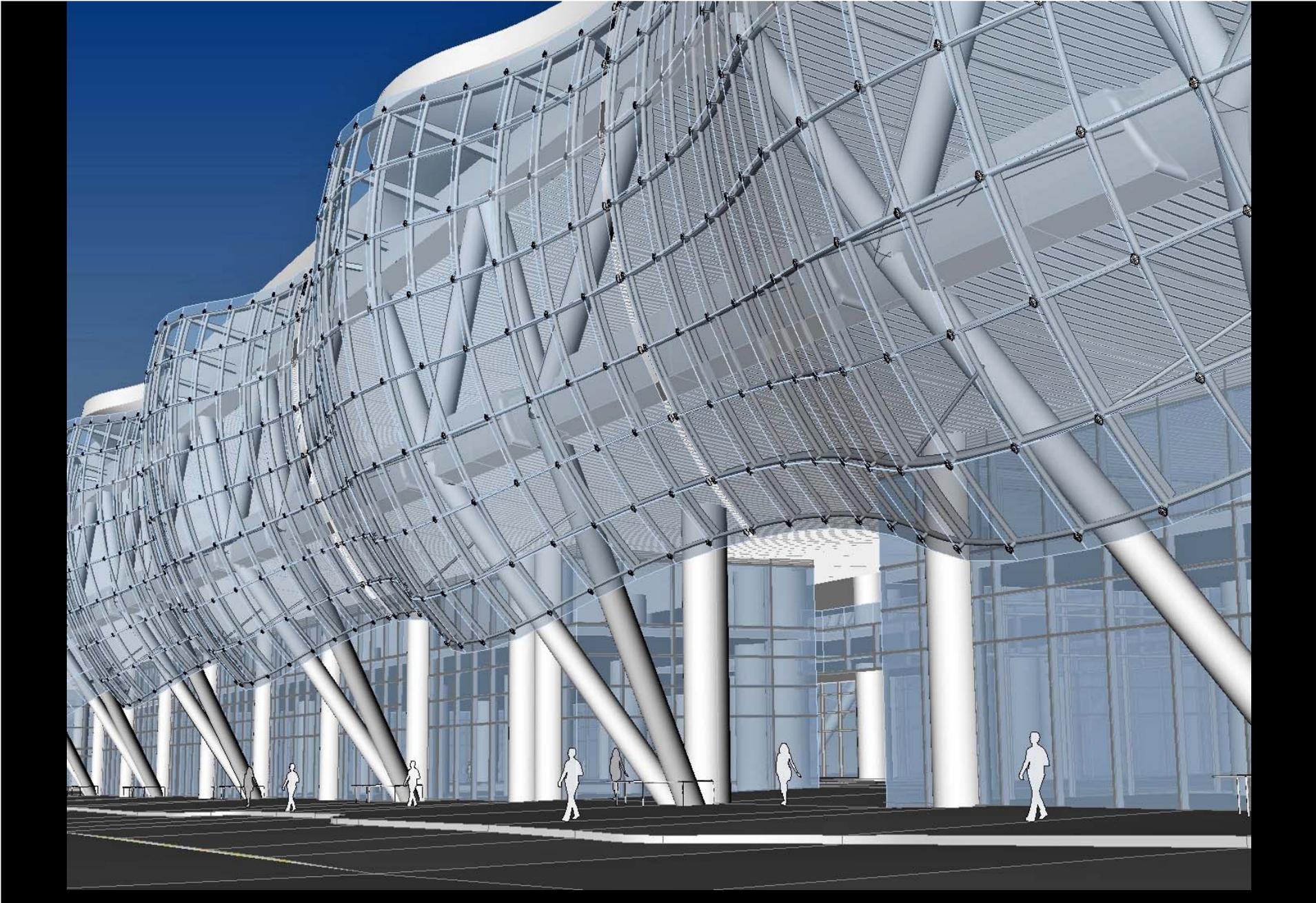


SUPERSTRUCTURE

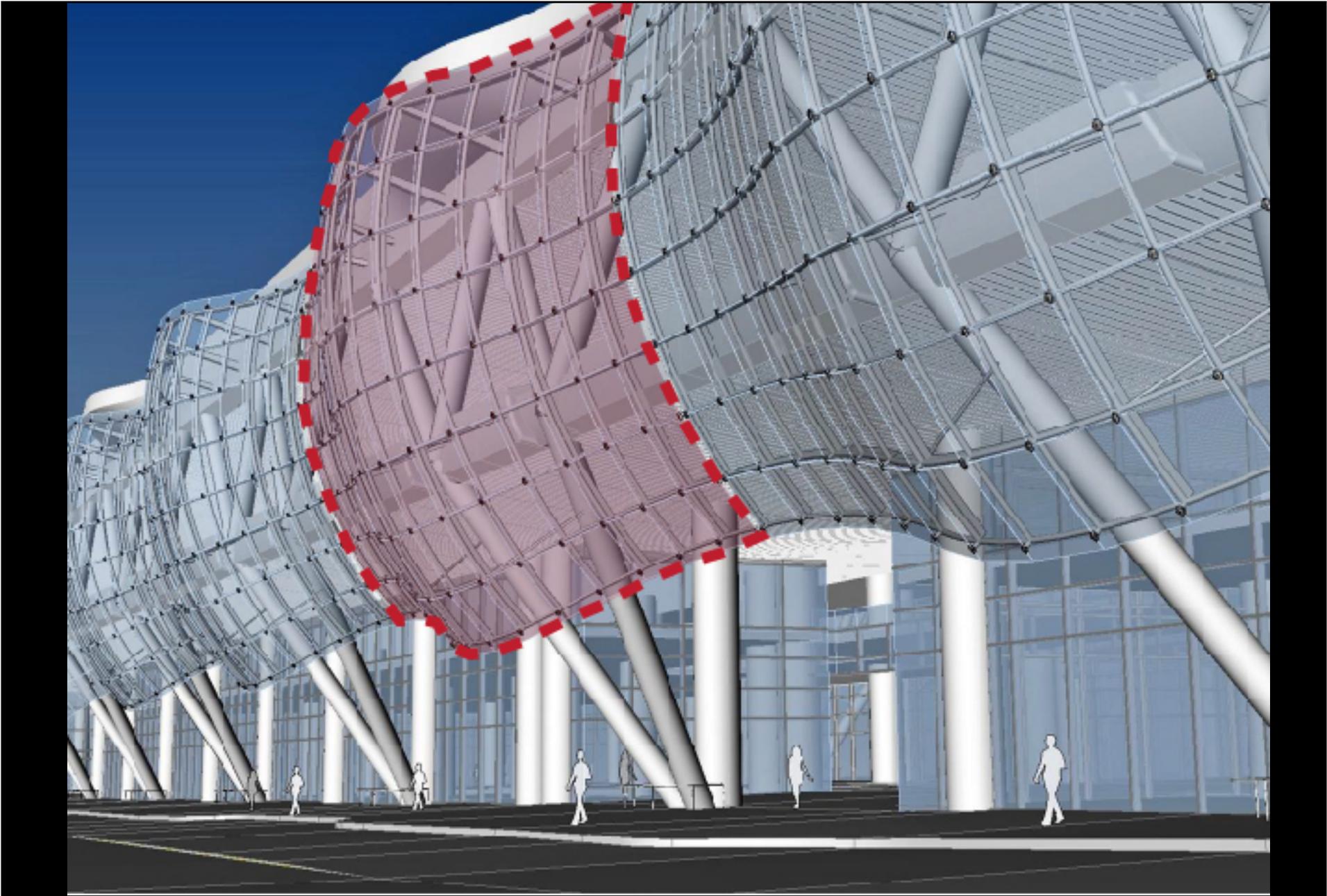




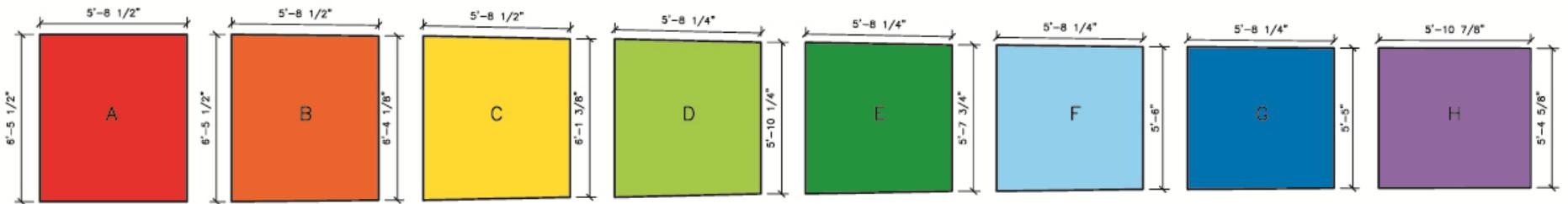
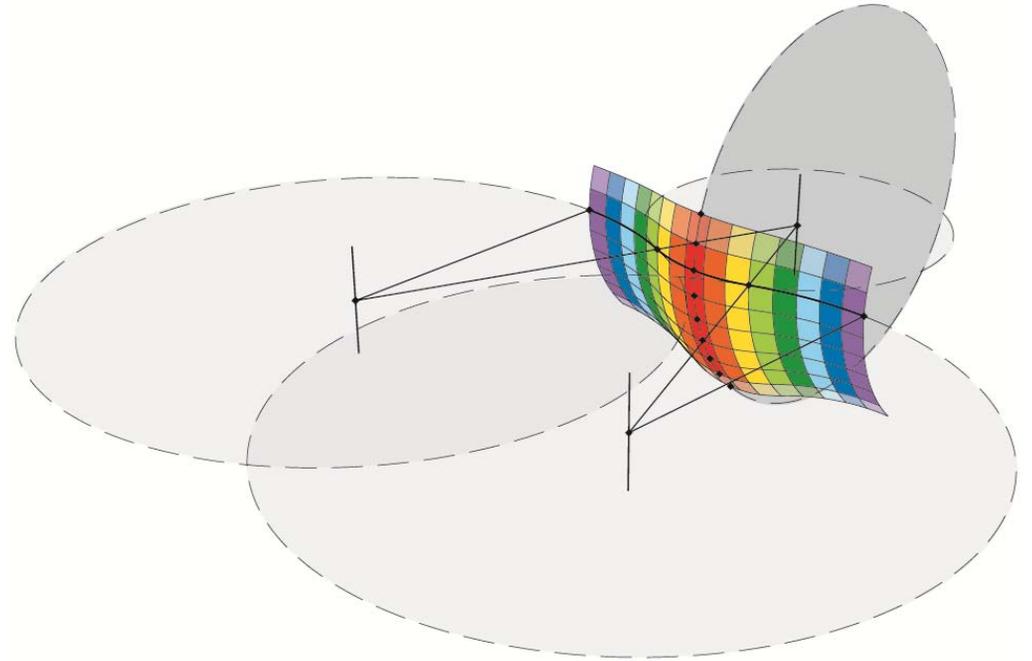
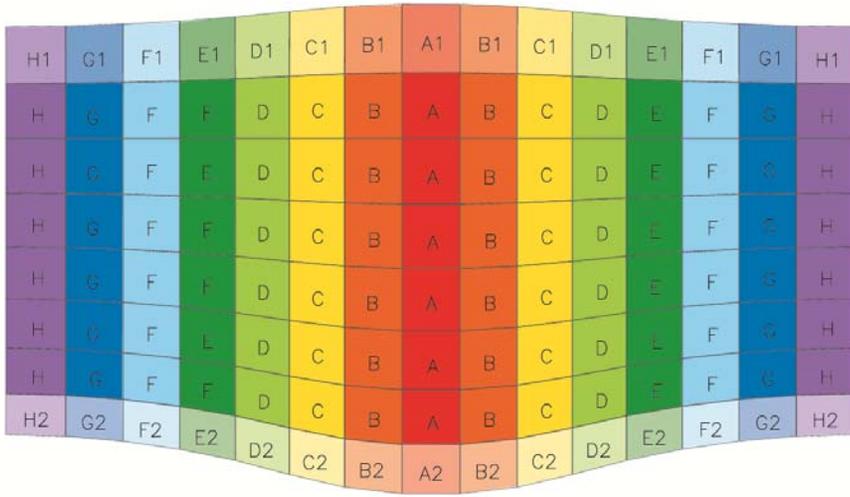
AWNING SUBSTRUCTURE



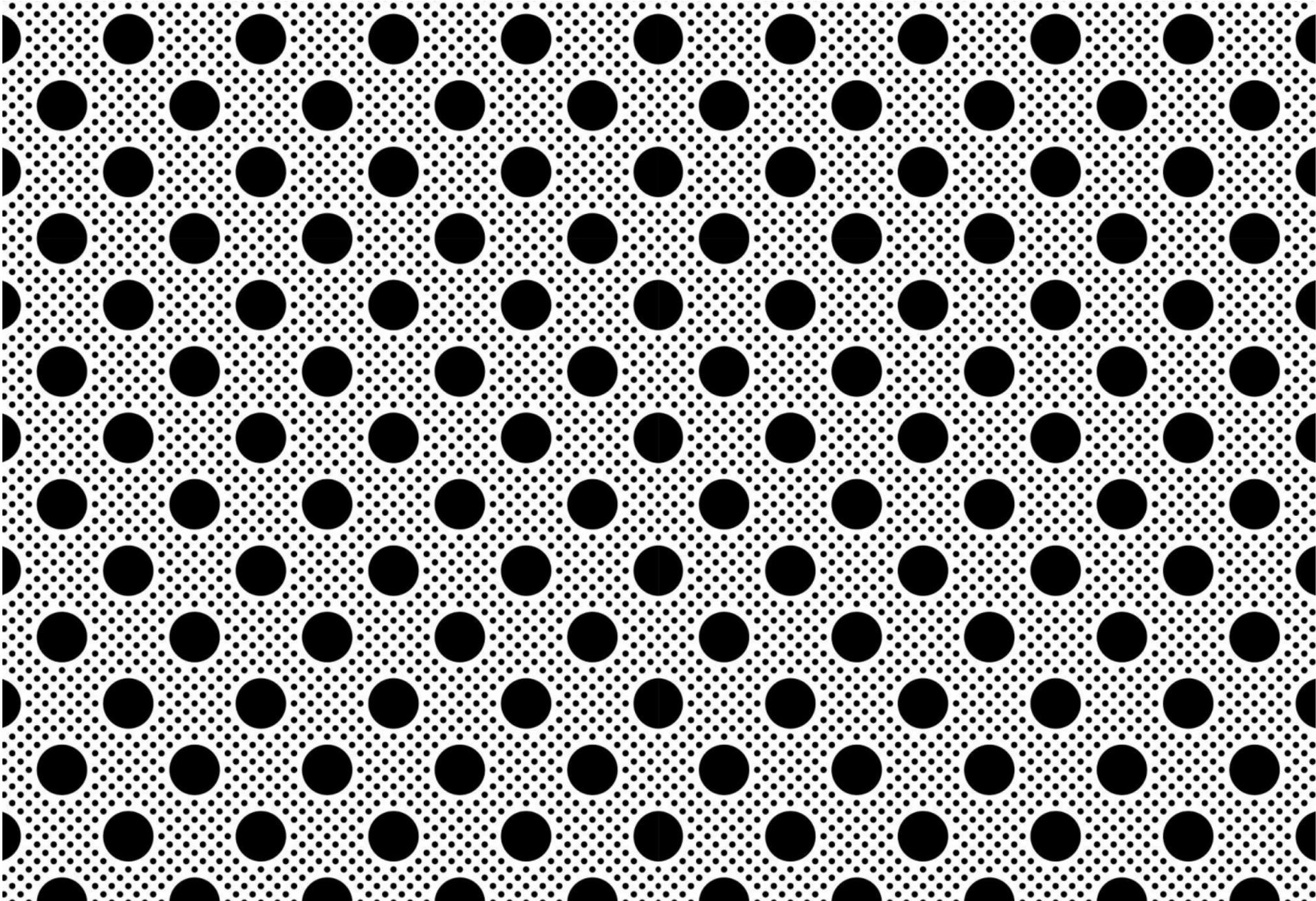
AWNING PANELS

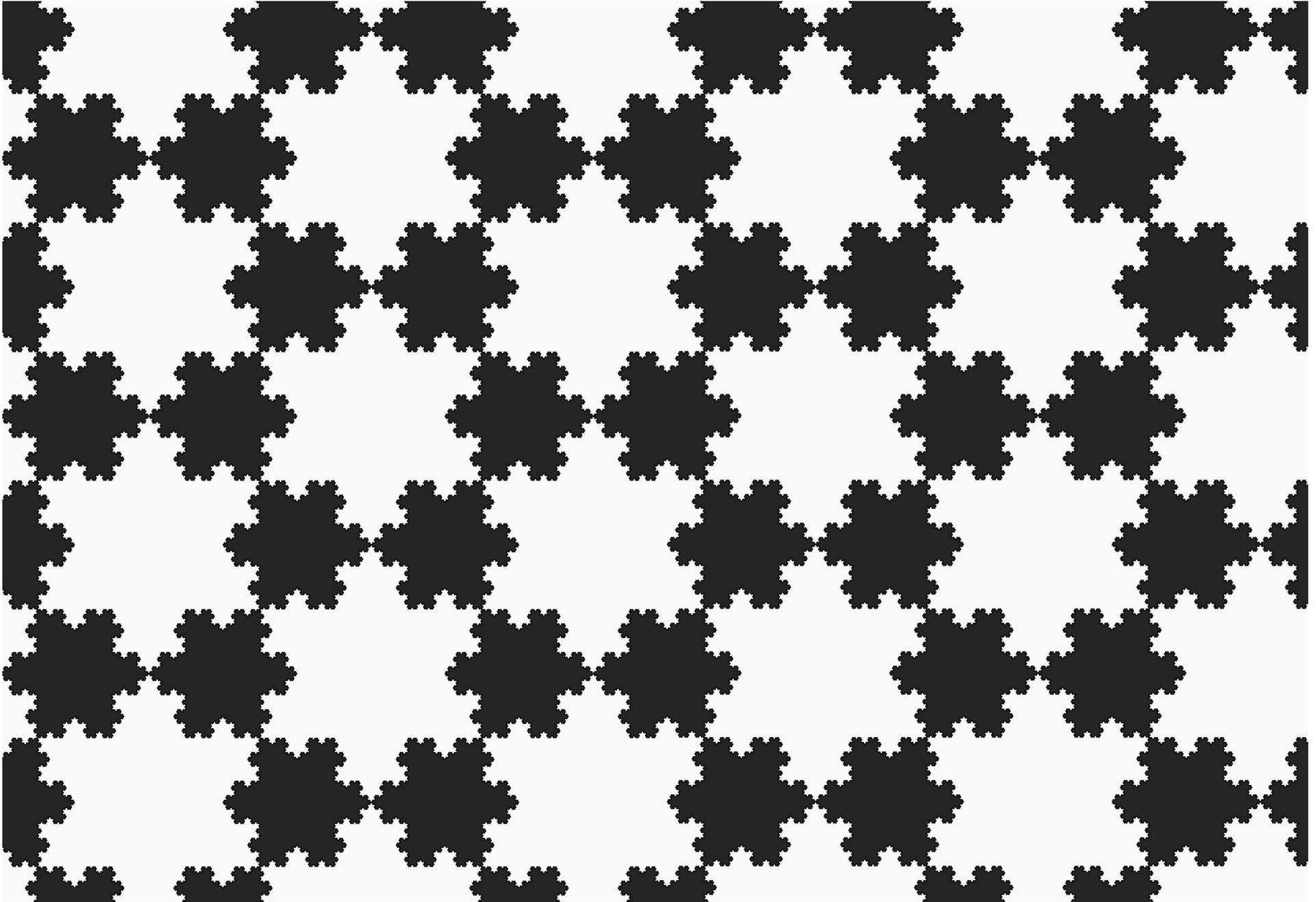


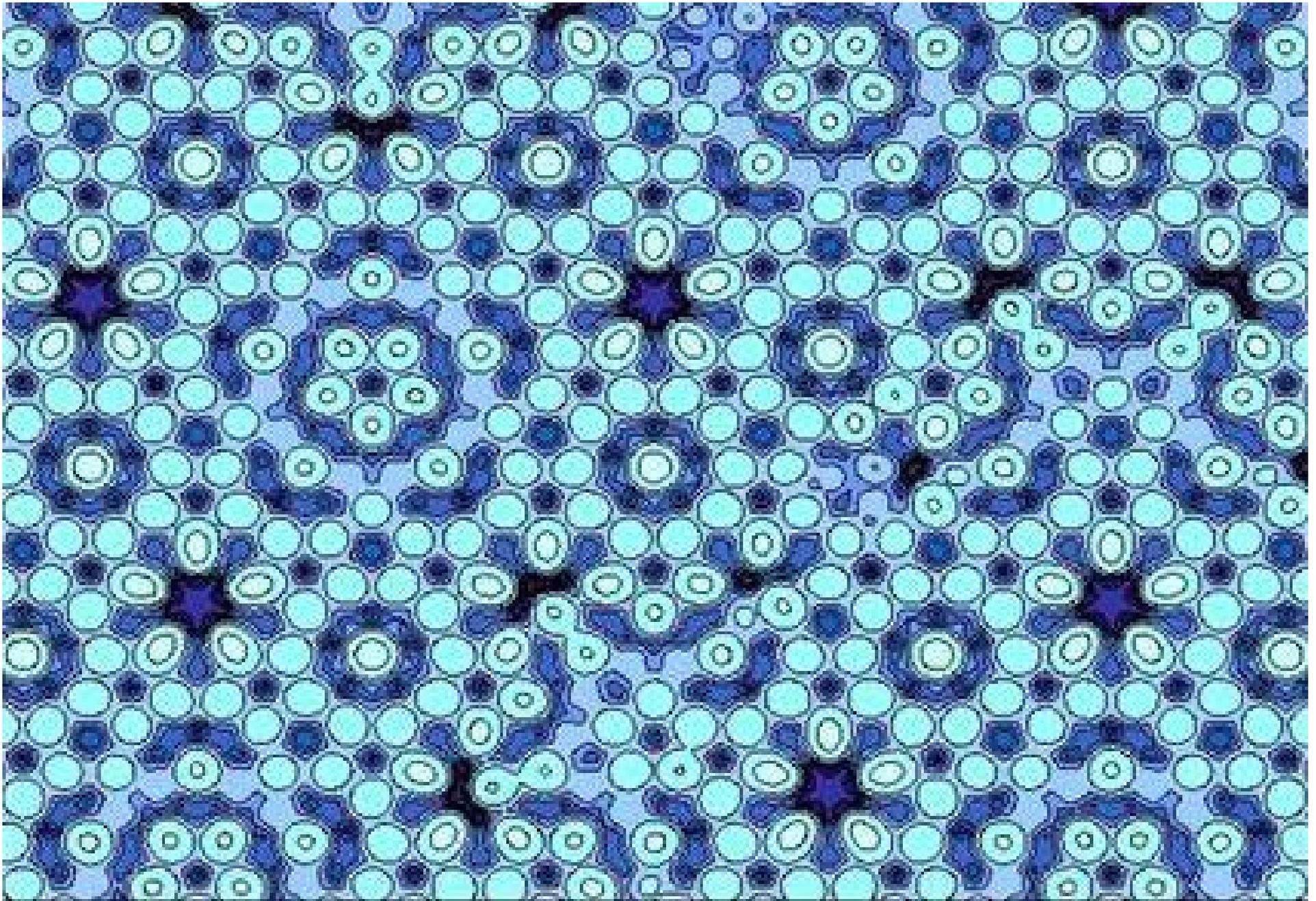
AWNING PANELS



PANELIZATION



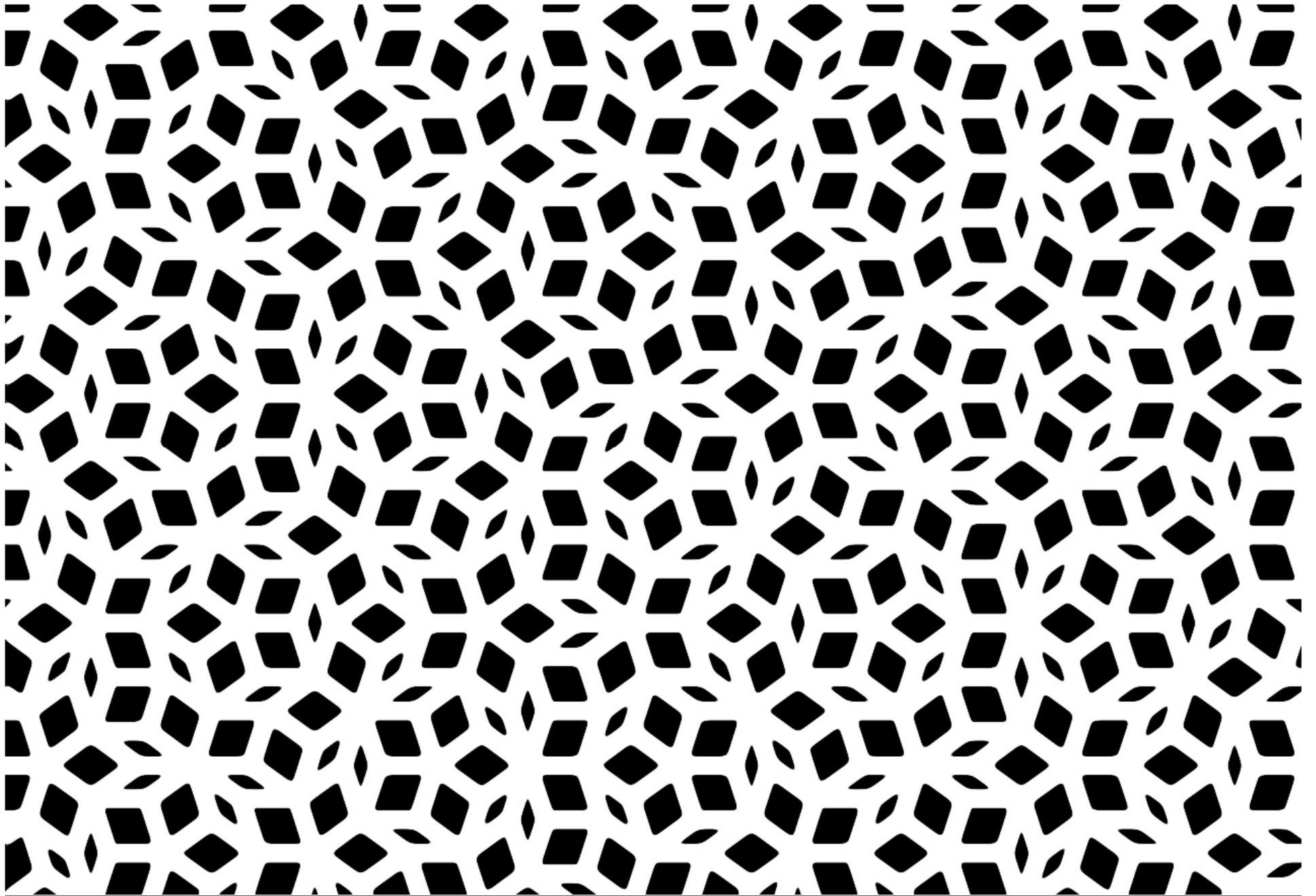




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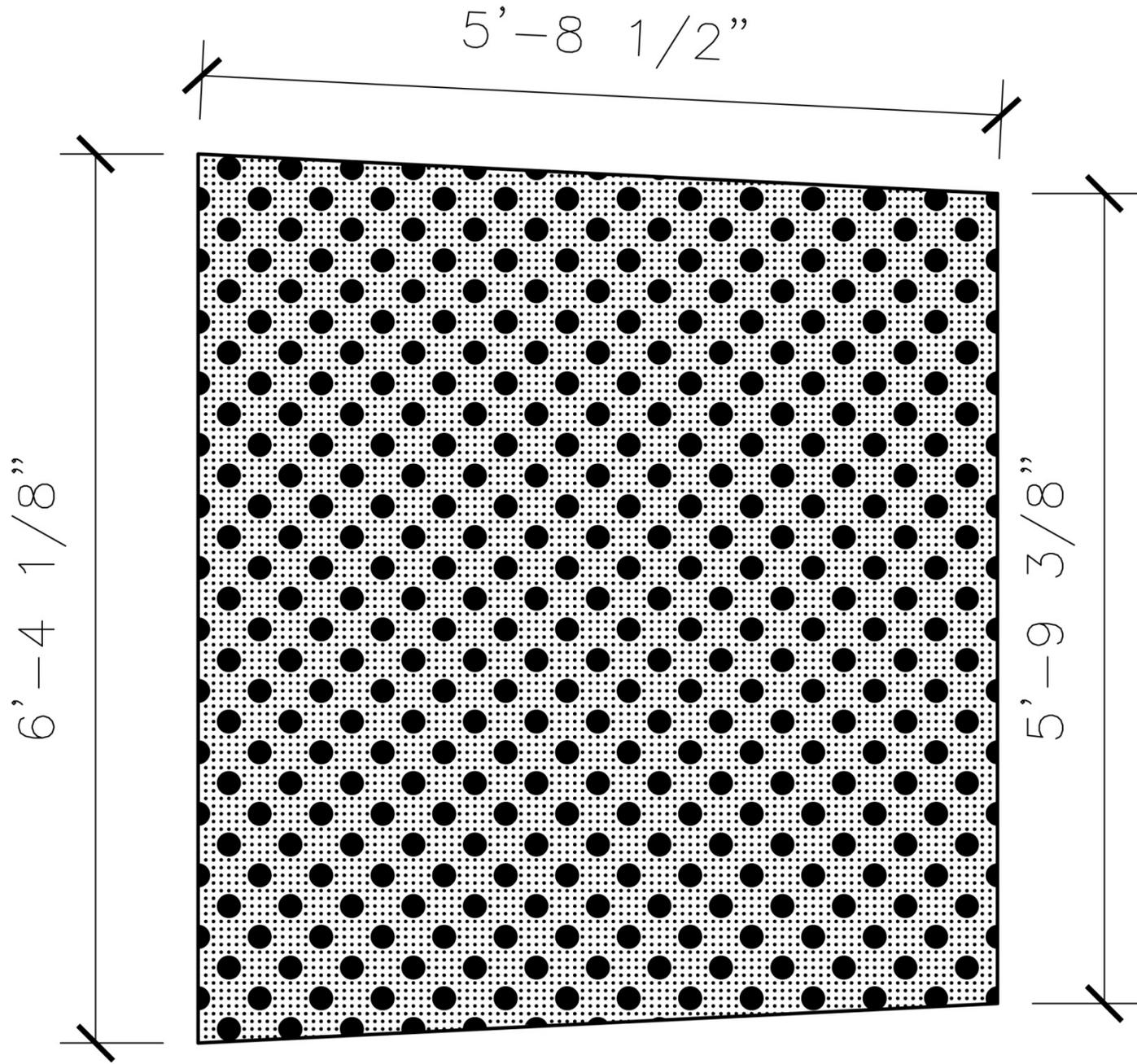


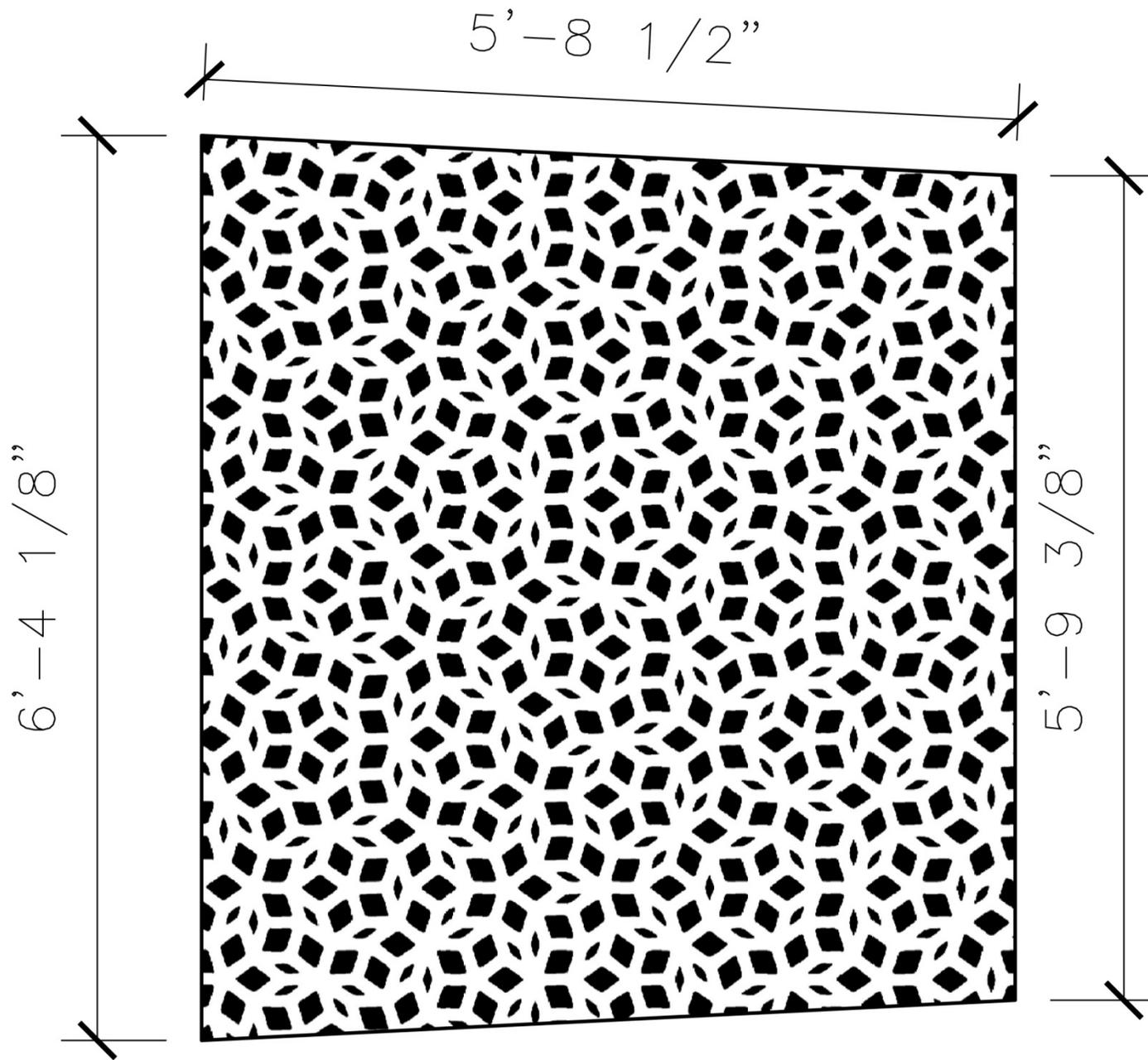
Transbay Transit Center

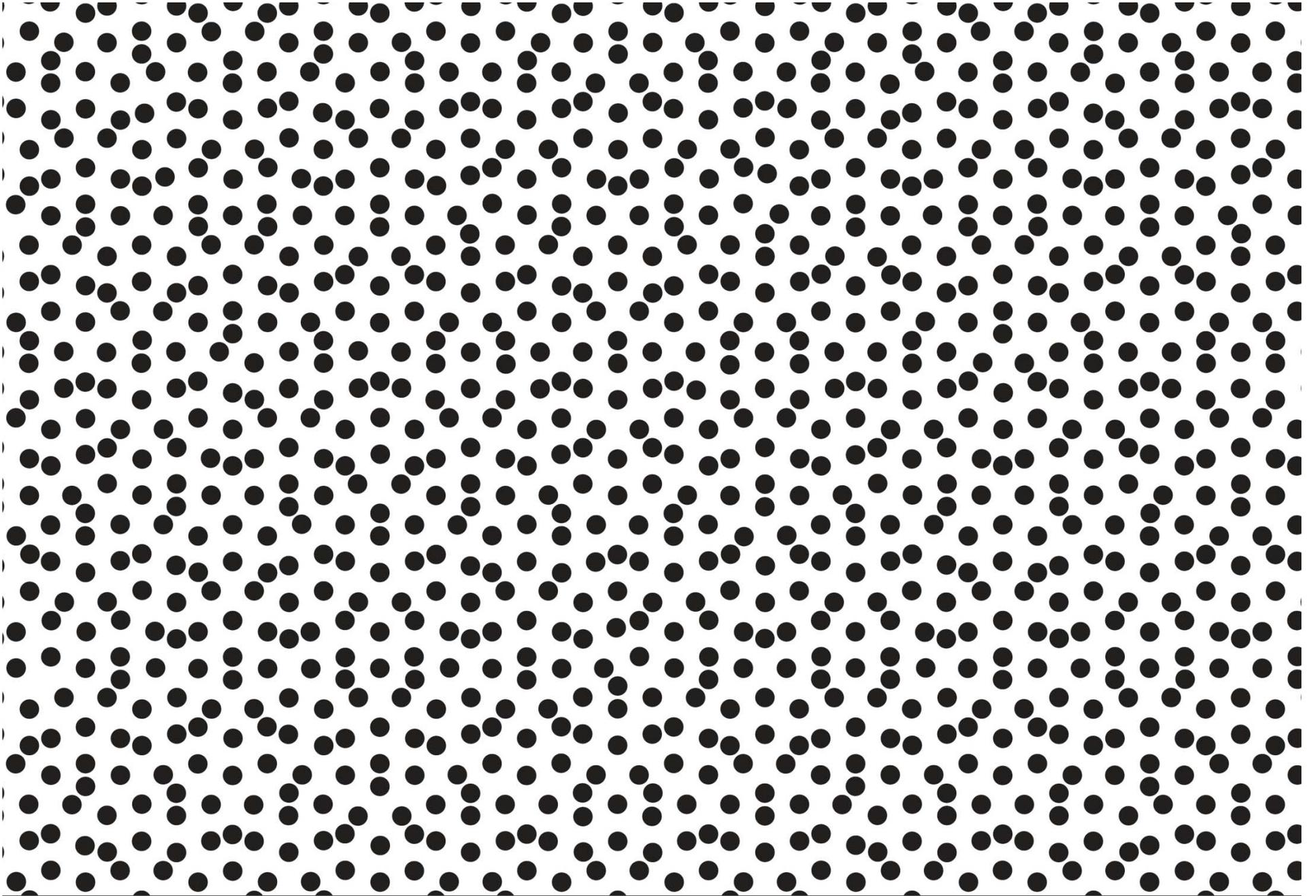


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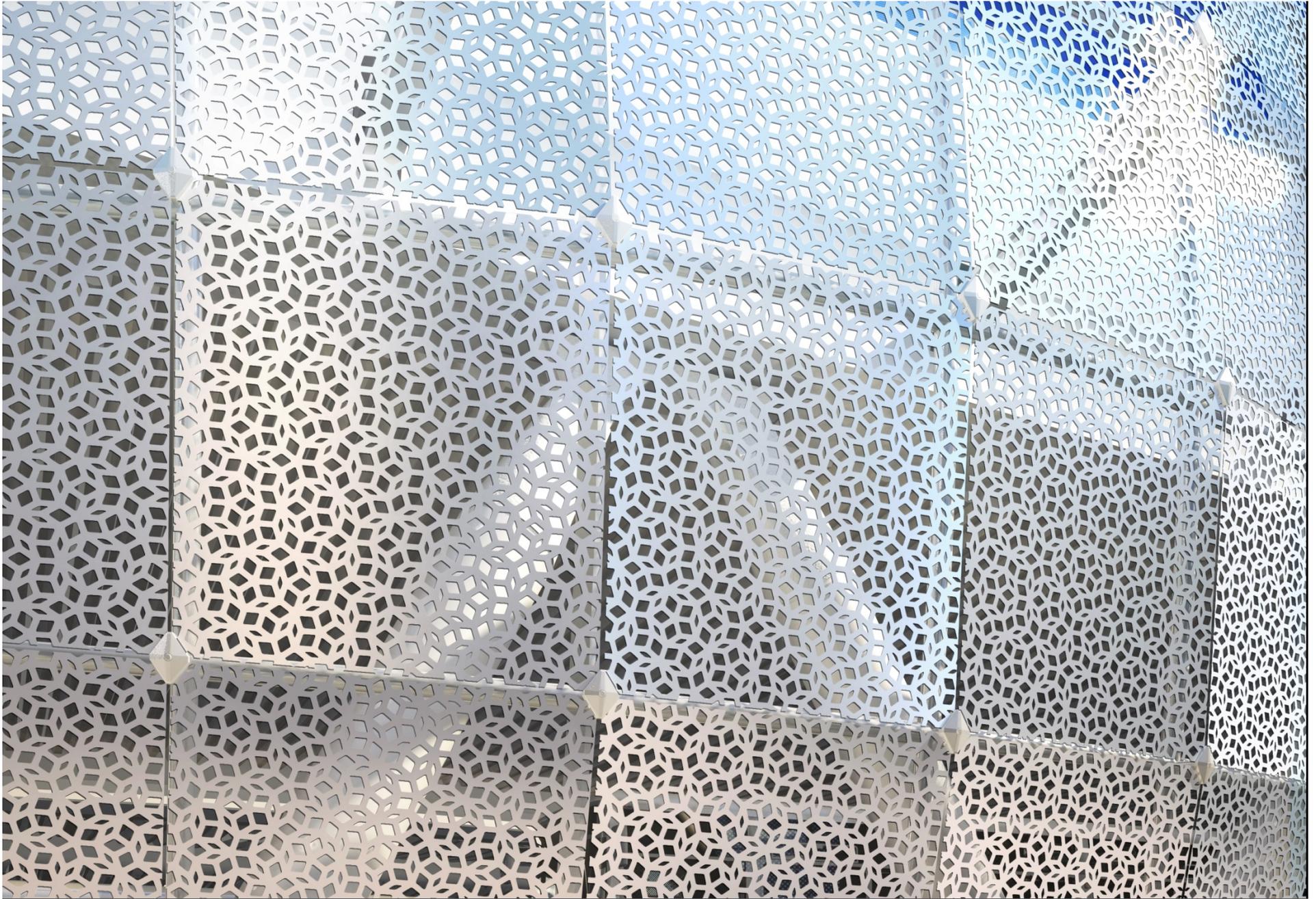


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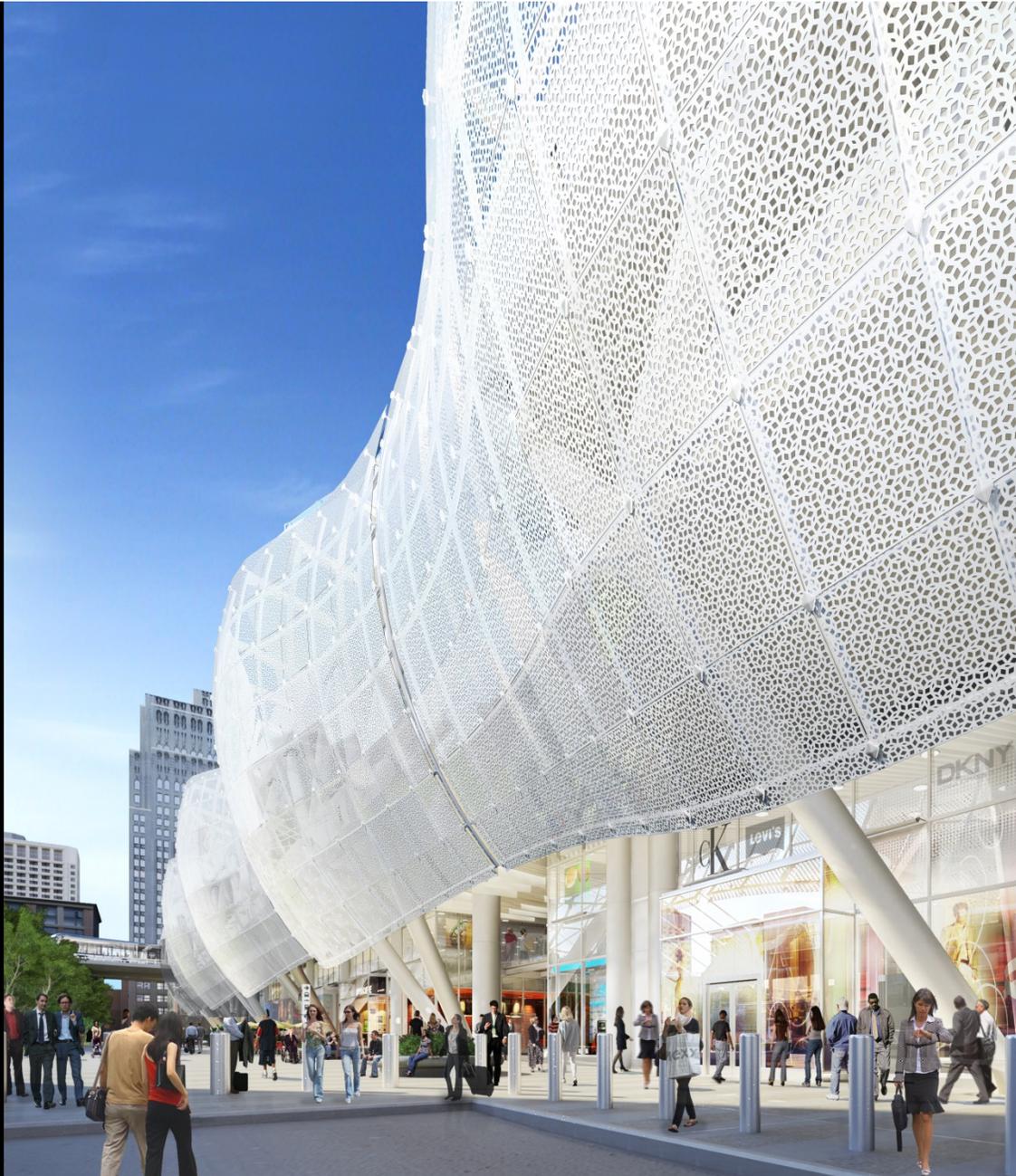
METAL PANEL STUDY



GLASS AWNING DETAILED VIEW



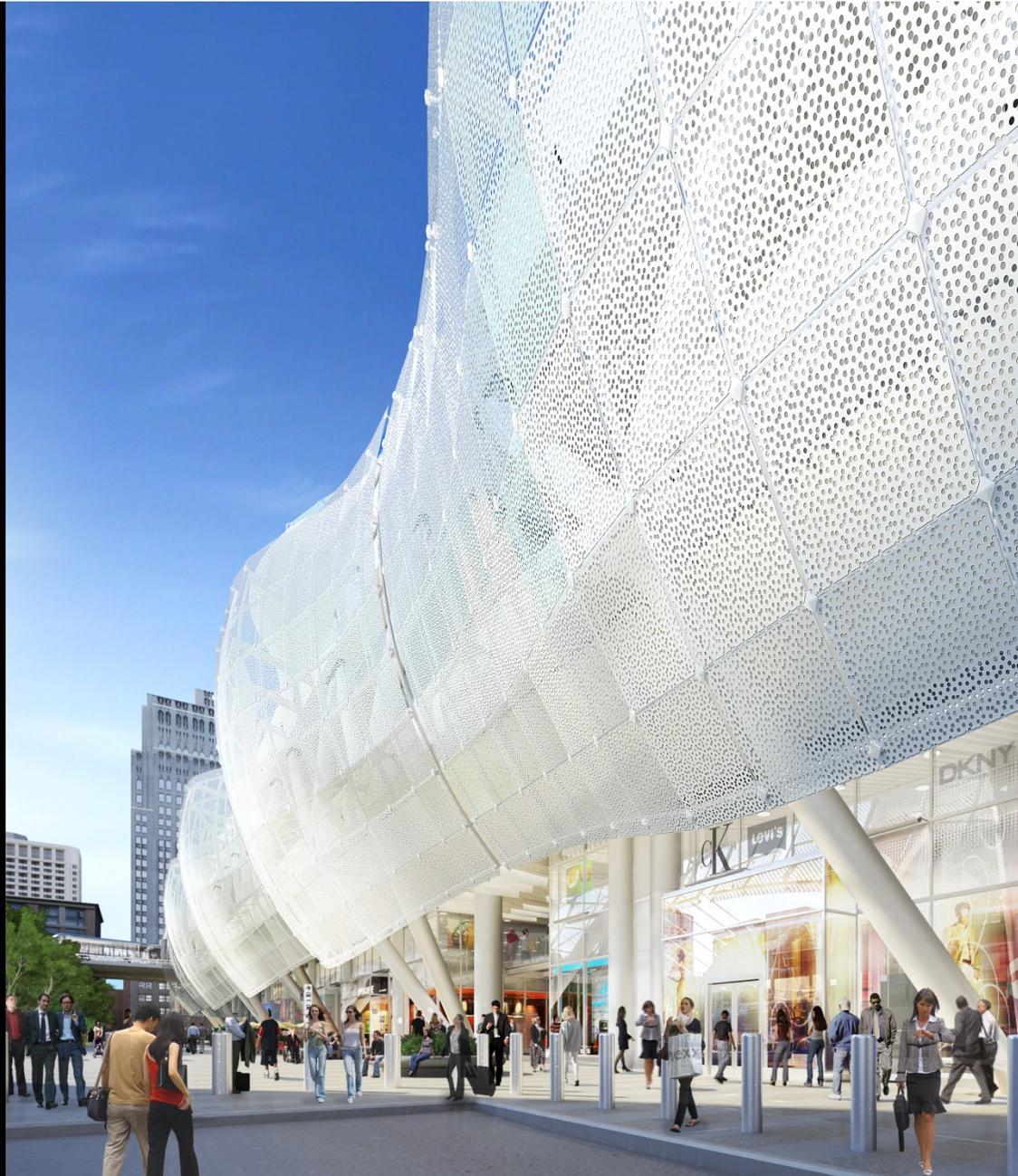
METAL PANEL AWNING DETAILED VIEW – STUDY 1



NATOMA STREET VIEW – METAL PANEL AWNING STUDY 1



METAL PANEL AWNING DETAILED VIEW – STUDY 2



NATOMA STREET VIEW – METAL PANEL AWNING STUDY 2

INTERIOR VIEW



INTERIOR VIEW FROM BUS DECK – GLASS AWNING



INTERIOR VIEW FROM BUS DECK – METAL AWNING

LIGHTING



NATOMA STREET VIEW – METAL PANEL AWNING LIGHTING 1



NATOMA STREET VIEW – METAL PANEL AWNING LIGHTING 2



Transbay Transit Center

Design Status

- The Design Team is in the process of finalizing the Transit Center Construction Documents due May 31, 2013
- TG08.1, which includes the W-1 Awning System and other glazed systems, has been suspended to allow for additional security and design evaluation, but must be resumed to maintain the construction schedule
- TG08.1 – and the W-1 System in particular – presents a singular Value Engineering opportunity of up to \$17.5M
- If the TJPA is to reduce the cost of the W-1 System by modifying its design and changing the materials, an addendum must be prepared and issued to the bidders



Transbay Transit Center

Design Status

- In October 2012, the URS Security Team completed an update of the Transit Center Risk and Vulnerability Assessment which provided revised Design Guidance Criteria (DGC) for the Transit Center, Bus Ramps, Downtown Rail Extension, and related facilities
- The DGC represent recommendations which the URS Security Team believes, and the TJPA's Security Matter Experts (SMEs) concur, should be incorporated into the Transit Center construction documents to be delivered May 31, 2013



Transbay Transit Center

Design Status

- Staff have reviewed the DGC with the TJPA's SMEs, the Architect, PMPC and the CM/GC to:
 - Identify the most practical and cost-efficient means of fulfilling the DGC security objectives
 - Identify those DGC which could be fulfilled in Phase 2
 - Develop estimates of the cost of addressing the DGC in the Transit Center Construction
- The Design Team is working towards a May 31, 2013 deadline for delivery of the primary 100% Construction Documents package
 - To ensure incorporation of these DGC into the Construction Documents the Design Team must be instructed now to make the appropriate changes



Transbay Transit Center

Budget Status

- As presented at the February and March regular TJPA Board meetings, TJPA staff are evaluating the need to revise the Phase 1 Budget
- Staff is also developing revenue strategies for the anticipated revision of the Phase 1 Budget
- The recommended change to the W-1 System will decrease the amount of a potential budget change



Transbay Transit Center

Budget Status

- In directing the Design Team to address the security DGC in the construction documents the TJPA would not authorize their construction or formally modify the Phase 1 budget
- Board action to adopt a revised Phase 1 budget will be necessary to award future trade contracts incorporating changes that would exceed the current budget
- TJPA Staff anticipates bringing a Phase 1 budget revision after fully evaluating the bid received on the steel trade package and further briefing the TJPA Board



Transbay Transit Center

Net New Revenues

- The TJPA has projected \$49.8M in Net New Revenues to help mitigate the potential budget increase
- *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



Transbay Transit Center

Target Revenues

- The TJPA has identified other revenue opportunities to pursue in addressing the balance of a potential budget increase
- *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



Transbay Transit Center

Target Revenues

- *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
- *Accelerated Land Sales from Phase 2:*
 - Could include no-interest loan based on estimated values of Parcel F and Block 4 (would leave more than \$100M for Phase 2)
- *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



Transbay Transit Center

Recommendation

Staff recommends that the Board authorize directing the Design Team to proceed with:

- Redesigning the W-1 awning system as a metal panel rather than a glazed system to reduce the cost of constructing the system by \$17.5 million, inclusive of projected RVA costs
- The Design Guidance Criteria from the 2012 RVA Update in the Phase 1 Construction Documents including the May 31, 2013 package



Transbay Transit Center

Next Steps

- Provide Direction to Design Team
- Refine Budget Recommendations
 - Evaluate steel bid; negotiate and/or repackage as appropriate
 - Review recommended reserves and contingencies
 - Present to TJPA Board
- Pursue TIFIA Loan adjustment and other supplemental funding