

# Samohi Discovery Building

## Pool Shade Canopy Discussion



June 27, 2019

# Current Project Status

- GMP Approved June 6, 2019
- DSA Approval Received June 18, 2019
- Construction Underway, Concrete Pours Monday and Today
- 1,070 Cubic Yards of Concrete In Place
- Backfill begins tomorrow





# GMP Recap

- The Board accepted certain value engineering proposals in the amount of \$5,525,170 (including elimination of the pool shade structure and footings for \$3 million) and approved an amendment to the McCarthy agreement, contingent on DSA permit issuance, in the amount of \$130,987,115, for a total GMP of \$133,783,751.
- The Board approved budget adjustments to accommodate the increased costs.
- The Board directed staff to further investigate the Pool Shade Canopy and return to discuss design revisions, maintenance, cleaning, longevity, benefits/need vs. want, and alternative options.



# Value Engineering

## ■ VE with significant impact to project:

- Reduce pool size, saving \$1,100,000
  - *Not recommended due to strong desire for 50m pool.*
- Eliminate Solar Photovoltaic Panels, saving \$440,000
  - *Not recommended due to anticipated loss of \$65,000/year savings from the 433,000kWh of power generated by the system.*
- Omit Pool Shade Structure, saving \$2,300,000
  - *Shade structure is a very visible aesthetic element of overall project, which provides pool and deck shading and may reduce water polo issues that come from only a portion of the pool being shaded by the building itself. SMFDAC prefers keeping the Pool Shade Structure.*
  - *Accepting only this option would install the foundations for potential future installation of the Pool Shade Structure.*
- Eliminate Shade Structure Foundations, saving \$700,000
  - *This option is only available if the Pool Shade Structure is omitted.*
  - *If the District desires the ability to install the omitted Pool Shade Structure at a future date, this option should not be accepted.*
- Eliminate Rooftop Classroom, not priced
  - *This option is not recommended, and was not pursued, as it would reduce available learning areas, require significant redesign of the building, and impact the installation of solar photovoltaic cells.*

# Pool Shade Canopy

## ■ The Board asked staff to return to discuss:

- Cost Reduction within Existing Design
- Cleaning of the Structure
- Maintenance of the Structure
- Longevity of the Structure
- Need vs. Want
- Alternative Options





# Pool Shade Canopy

## ■ Cost Reduction within Current Design

- Potential Savings \$100-200,000, offset by additional design fees.

## ■ Cleaning of the Structure

- Fabric is woven glass fiber coated with Teflon.
- Repels particulate matter.
- Per manufacturer, cleaning is not necessary.

## ■ Maintenance/Longevity of the Structure

- Per manufacturer, useful life expectancy of 45 years.
- Rigid steel structure will be galvanized.
- Cables > 1" will be Galfan coated.
- Cables < 1" will be stainless steel.
- Cables and steel structure life expectancy greater than 45 years.
- No ongoing maintenance is expected, per manufacturer.
- 25 year warranty.



# Pool Shade Canopy

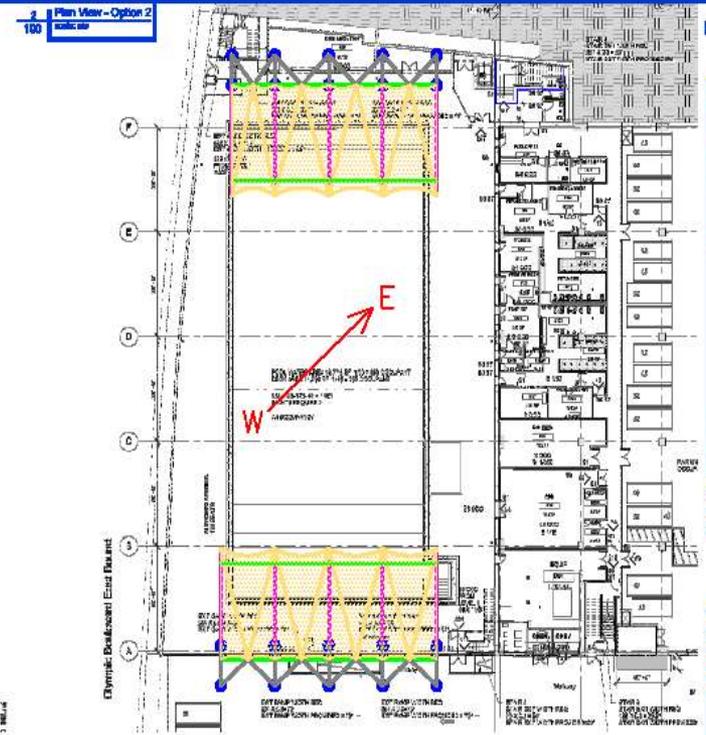
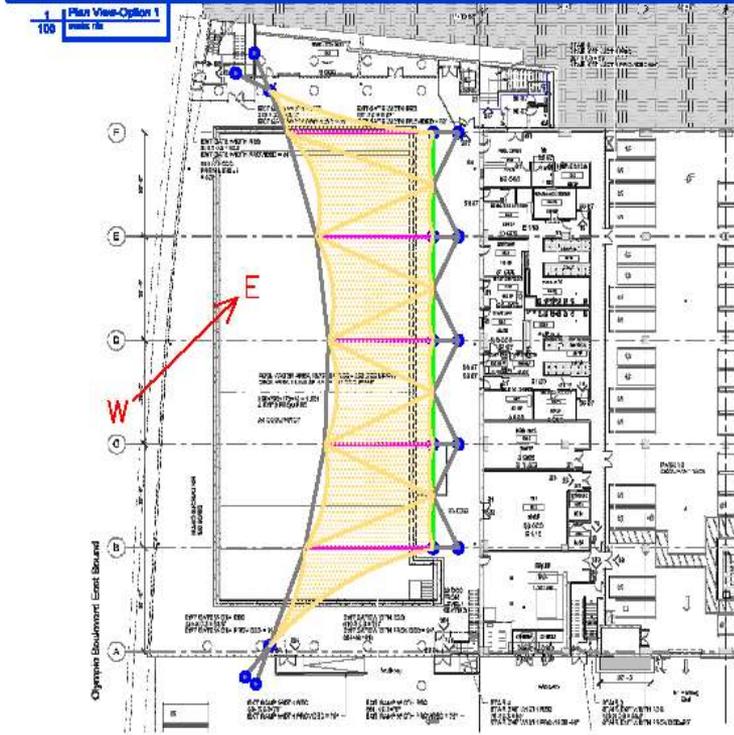
## ■ Benefits/Need vs. Want

- Reduce exposure to harmful UV rays.
- Reduce variation in light/shadows during water polo.
- Desire to increase privacy/reduce visibility from classroom windows (original design did not accomplish this, as it was not a primary concern when design began).
- Compromise when decision was made to build outside instead of inside.
- Difficult to classify as a need, but there remains a desire for the canopy.

## ■ Alternative Options

- Architect team held a design charrette Tuesday, 6/25, with the manufacturer to discuss alternative options.
- The team generated various plans that provide partial shade at a reduced cost.
- The most likely option is a cantilevered design.
- Anticipated cost is \$1.8 – \$2 million.
- Design would need to begin promptly.

# Alternative Options



**CENTRAL OFFICE (403)**  
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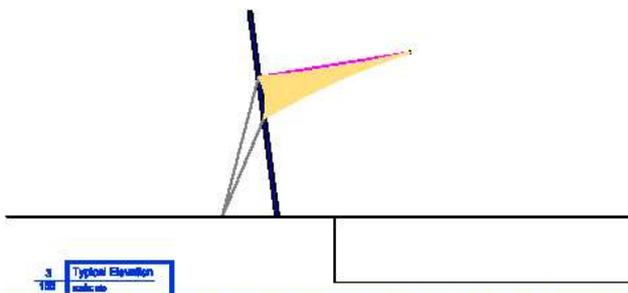
**WEST COAST OFFICE**  
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**EAST COAST OFFICE**  
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Drawn by: SS  
Checked by: SS  
Date: 07-16-12  
Professional Engineer

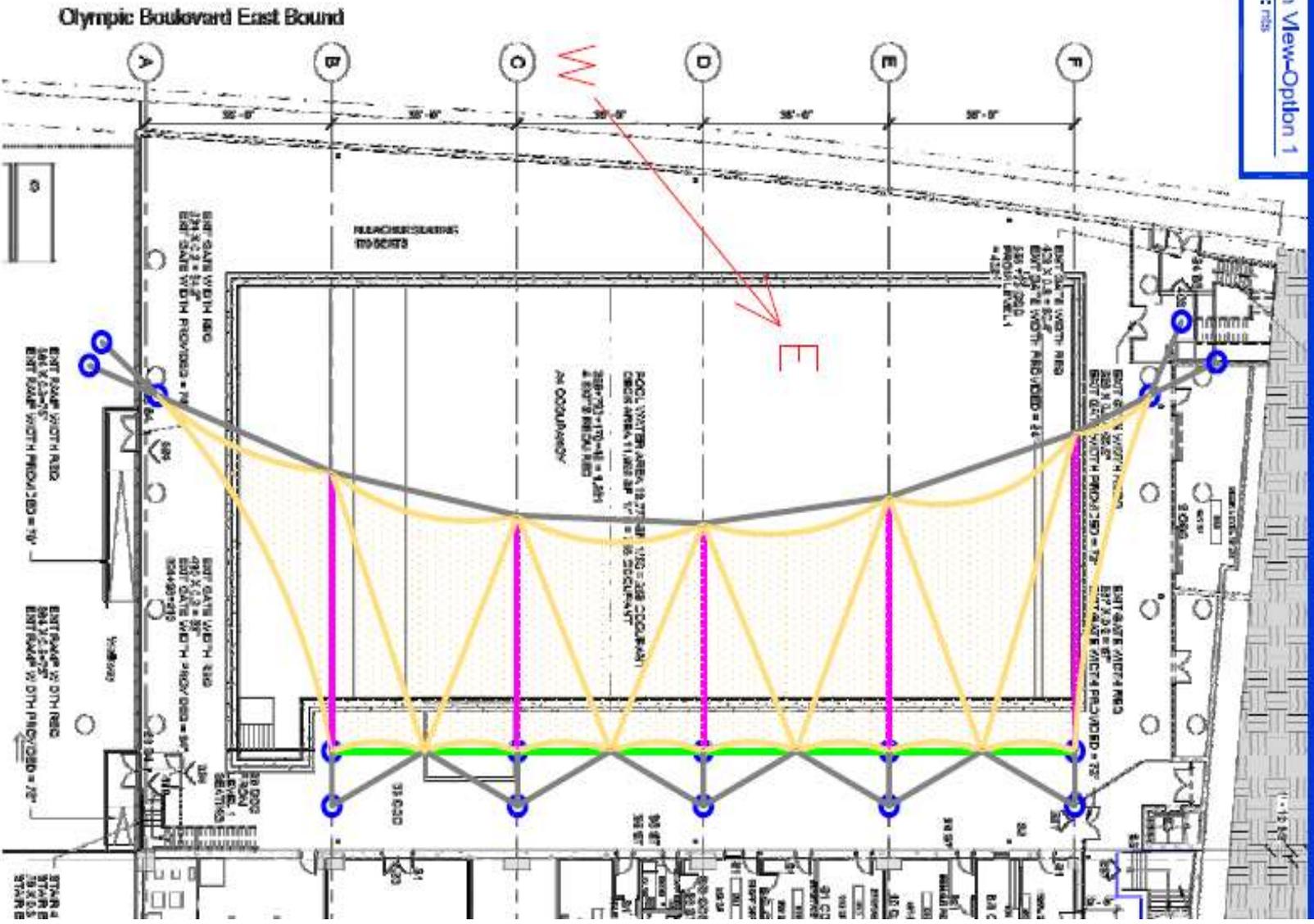
**Samuel VE**  
Concept  
Layouts

**CONCEPT ONLY**  
Plans are for your  
reference only. No  
guarantee of accuracy  
is made. All dimensions  
shall be as shown.



# Alternative Options

Plan View-Option 1  
SCALE: R/S





# Next Steps

- Board provides guidance to staff tonight.
- If District does not wish to pursue alternative design, no further action is necessary.
- If District wishes to pursue alternative design:
  - Architect will continue study of concepts and begin design, working with canopy manufacturer.
  - Architect will submit to DSA for review and approval.
  - Once design is complete, McCarthy will provide a cost proposal for District review, including revised footings.
  - Once pricing is acceptable, staff will return with change order to increase GMP.
  - Footing construction must begin once parking structure is complete, anticipated in mid-late October.