

**BROWN REYNOLDS WATFORD  
ARCHITECTS**


1620 MONTGOMERY ST  
SUITE 320  
SAN FRANCISCO, CALIFORNIA 94111  
415-749-2670  
WWW.BRWARCH.COM

April 20, 2015

Robert G. Haun, Public Works Director  
Public Works Department  
950 West Mall Square, Room 110  
Alameda, CA 94501

### **ARCHITECTURAL SERVICES FOR FIRE STATION #3 | Alternative Design Review**

Mr. Haun:

This is to provide a review of an alternative 3-story single building configuration to combine the Emergency Operations Center (EOC) and Fire Station 3 at the current site. This review is not an exhaustive analysis of all aspects of the facility operations or design. Rather this review is focused on the potential changes to site layout, square footage and height, building structure, mechanical and plumbing systems, and cost impacts that are likely to result from a change to this alternative design.

### **ALTERNATIVE DESIGN OVERVIEW**

#### **Current Design**

2-story Emergency Operations Center	3,360 SF
2-story Fire Station 3	8,948 SF
<b>TOTAL CURRENT DESIGN:</b>	<b>12,308 SF</b>

#### **Alternative Design**

Ground Floor:	6,120 SF
<ul style="list-style-type: none"> <li>○ Apparatus Bays and Support Spaces (4200)</li> <li>○ Fire Station Entrance and Lobby (150)</li> <li>○ Firefighter Workstations and Conference Room (300)</li> <li>○ EOC Entrance and Lobby (150)</li> <li>○ Elevator / Elev. Mechanical Room (160)</li> <li>○ (3) Stairways (600)</li> <li>○ Public Restrooms (160)</li> <li>○ Data Center (200)</li> <li>○ Electrical / Janitors (200)</li> </ul>	
Second Floor:	4,150 SF
<ul style="list-style-type: none"> <li>○ Firefighter Kitchen, Dining and Dayroom (1000)</li> <li>○ Firefighter Bedrooms and Restrooms (2000)</li> <li>○ Exercise Room (600)</li> <li>○ Laundry / Storage / Janitor (300)</li> <li>○ Outdoor deck (250)</li> </ul>	
Third Floor:	3,300 SF
<ul style="list-style-type: none"> <li>○ Emergency Operations / Training Room (1600)</li> <li>○ Office and Conference Room (800)</li> <li>○ Radio Services Workstation (100)</li> <li>○ Storage (200)</li> <li>○ Restrooms / Showers / Janitors (600)</li> </ul>	
<b>TOTAL ALTERNATIVE DESIGN:</b>	<b>13,570 SF</b>

## **ESTIMATED CHANGES TO MATERIALS, SYSTEMS AND COST:**

### **A: UTILITIES AND SITE IMPROVEMENTS**

- UTILITIES: no significant changes in approach
- FOOTPRINT: Reduce to accommodate for parking lot off Buena Vista
- PAVING AND SIDEWALKS: add small parking lot off Hibbard to serve the EOC. Keep firefighter parking lot off Buena Vista.
- SITE DRAINAGE: combine the detention basins to collect along Grand Street.
- LANDSCAPE / PLAZA: keep memorial plaza, adjust design for added parking lot off Buena Vista.

### **B: ARCHITECTURAL ELEMENTS**

- BUILDING HEIGHT: Increase from 29.5 ft. to 45 ft.
- EXTERIOR SKIN: Change FROM stucco on concrete block TO stucco metal stud with rigid insulation
- ELEVATOR: Change FROM 2-stop 12 ft. vertical lift TO 3-stop 30 ft. vertical lift.
- STAIRS: Three sets of interior stairs will be required: two rated enclosures, one non-rated "firefighter only" stair.

### **C: STRUCTURAL SYSTEMS**

- FOUNDATION: Deeper spread foundation, possible piers
- SUPERSTRUCTURE: change FROM concrete block and steel beams TO steel frame with lower floor masonry exterior walls for durability.
- LATERAL SYSTEM: change FROM concrete block walls TO steel braces and /moment frames depending on building geometry
- PERIMETER WALLS: change FROM concrete block TO structural studs.
- SLIGHTLY GREATER SQUARE FOOTAGE: existing system uses masonry walls structurally; steel system will need to accommodate interior columns in the room layouts.
- FLOOR AND ROOF FRAMING: no change - steel beams, steel deck fill concrete fill

### **D: HVAC SYSTEMS**

- MECHANICAL SYSTEM: change FROM RTU's and individual heat pumps TO built-up system with individual air handlers.
- TAILPIPE EXHAUST: increase duct runs and fan size due to building height; instead of mounting exhaust units directly above the App. Bay, the exhaust system will be on the roof of the third floor.

### **E: COST FACTORS**

- SITE GRADING AND UTILITIES: No change in improvement cost or service fees.
- SITE SURFACE IMPROVEMENTS: Increase site cost by 25% to accommodate added driveway off Buena Vista, added parking lot and revisions to the site drainage and retention system.
- BUILDING COST: Increase square foot costs FROM \$532/SF TO \$600/SF.

## CONSTRUCTION COSTS

### Current Cost (NIC permits)

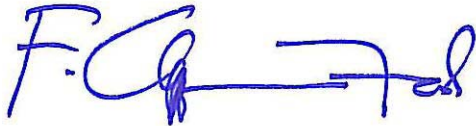
EOC and Related Site Improvements:	\$ 3,205,991
Fire Station 3 and Related Site Improvements:	\$ 4,264,509
<b>TOTAL:</b>	<b>\$ 7,470,500</b>

### Alternative Design Cost (NIC permits and design fees)

Combined EOC and Station 3 (13,570 SF x \$600/SF):	\$ 8,142,000
Site Improvements (\$923k + 25%):	\$ 1,153,750
<b>TOTAL:</b>	<b>\$ 9,295,750</b>

We are looking forward to the City Council review of the project bids on May 19th. In the meantime, please let me know if you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read 'F. Christopher Ford', with a stylized flourish at the end.

F. CHRISTOPHER FORD, AIA  
PRINCIPAL