



Sunnyvale Master Plan - NOVA / EOC
Sunnyvale, California

Rough Order of Magnitude Rev2
July 12, 2017
Cumming Project No. 17-00701.00

Prepared for SmithgroupJJR

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EXECUTIVE SUMMARY

1.1 Introduction

This estimate has been prepared, pursuant to an agreement between Sunnyvale, California and Cumming, for the purpose of establishing a probable cost of construction at the schematic design stage.

The project scope encompasses renovations / needs assessment scope in the existing Annex Building for NOVA program. Other scope includes a new stand-alone Emergency Operations Center (EOC) and associated renovations in the existing Public Safety Building (PSB).

1.2 Methodology

The new stand-alone EOC has been estimated based on a cost-model methodology. Cost models distribute costs among the various building components as anticipated, based on the program type. Cost models have been identified in the detailed backup of this report. Tenant improvement and renovation costs have similarly been estimated based on the cost model methodology.

Core / shell upgrades to the existing Annex and Public Safety Buildings have been estimated in detail as shown in the detailed backup of this report.

1.3 EOC - Stand-Alone Structure at PSB vs. Stand-Alone Structure at New City Hall

The EOC will be designed to the level of an Essential Facility whether at the PSB site or at the New City Hall site. The EOC will require seismic separation from the New City Hall lest the entire building be designed to the higher requirements of an Essential Facility.

The solution will be for the EOC to be designed as a stand-alone structure whether at the PSB site or at the New City Hall site, complete with independent service connections and systems. As a result the cost for the EOC may be considered constant between the two sites.

1.4 Project Schedule

	Start	Finish	Duration
Design & Engineering	tbd	tbd	tbd
Construction	tbd	tbd	tbd

1.5 Key Assumptions & Exclusions

This document should be read in association with Appendix 1 which outline assumptions, project understanding, approach, and cost management methodology. Key assumptions built into the above cost breakdown include

Key Assumptions

- Lump sum low-bid delivery.
- Soft costs allowance of 35% pending verification.
- Public Safety Building to be occupied during construction.
- Annex Building to be unoccupied during construction.

Key Exclusions

- Hazardous materials abatement.
- Construction cost escalation beyond the date of this report.
- AV Equipment.
- 9-11 Call Center.
- Ballistic glazing or blast-resistant construction.

SUMMARY

Element	Area	Cost / SF	Total
Essential Facility at Existing PSB			
Essential Facility	11,000	\$856.36	\$9,420,000
Renovations inside Existing PSB			
Locker Rooms, Tenant Improvements**	4,300	\$402.33	\$1,730,000
Crime Lab, Tenant Improvements**	1,030	\$601.94	\$620,000
Evidence Storage, Tenant Improvements**	2,000	\$505.00	\$1,010,000
Fitness Room, Tenant Improvements**	1,370	\$299.27	\$410,000
Public Safety Building - Core / Shell	39,970	\$6.76	\$270,000
Total Estimated Construction Cost	19,700	\$685.28	\$13,500,000
Escalation to Midpoint of Construction			<i>Excluded Pending Schedule</i>
Project Soft Costs - Allowance Pending Verification	35%		\$4,725,000
Total Estimated Construction Cost	19,700	\$925.13	\$18,225,000
Annex Building			
Existing Core / Shell	14,151	\$238.15	\$3,370,000
Renovations	13,101	\$197.69	\$2,590,000
Total Estimated Construction Cost	14,151	\$424.00	\$6,000,000
Escalation to Midpoint of Construction			<i>Excluded Pending Schedule</i>
Project Soft Costs - Allowance Pending Verification	35%		\$2,100,000
Total Estimated Construction Cost	14,151	\$572.40	\$8,100,000

SCHEDULE OF AREAS AND CONTROL QUANTITIES

Schedule of Areas	Essential Facility at PSB		NOVA / ANNEX
	Renovation	New Construction	Renovation
1. Enclosed Areas (x 100%)			
Program			
Men's Lockers	3,200		
Women's Lockers	1,100		
Fitness Room	1,370		
Crime Lab	1,030		
Evidence Storage	2,000		
Briefing, Interview Room			
Lobby		1,078	
EOC		4,676	
Office (NOVA Similar)		5,246	14,151
Total Enclosed	8,700	11,000	14,151
Program Total	19,700		14,151
2. Tenant Improvement Areas			
Program Area	N/A	N/A	14,151
Deduct Core / Shell Restrooms	N/A	N/A	(1,050)
Total Tenant Improvement Area			13,101

Essential Facility

SUMMARY MATRIX - OVERALL ESSENTIAL FACILITY

Element	New Facility			Renovations												Overall Totals 19,700GSF		
	Essential Facility 11,000GSF			Locker Rooms, Tenant Improvements** 4,300SF			Crime Lab, Tenant Improvements** 1,030SF			Evidence Storage, Tenant Improvements** 2,000SF			Fitness Room, Tenant Improvements** 1,370SF					
	Subtotal	Total	Cost/SF	Subtotal	Total	Cost/SF	Subtotal	Total	Cost/SF	Subtotal	Total	Cost/SF	Subtotal	Total	Cost/SF	Subtotal	Total	Cost/SF
A) Shell (1-5)		\$3,027,623	\$275.24														\$3,027,623	\$153.69
1 Foundations	\$385,000		\$35.00														\$385,000	\$19.54
2 Vertical Structure	\$220,000		\$20.00														\$220,000	\$11.17
3 Floor & Roof Structures	\$717,623		\$65.24														\$717,623	\$36.43
4 Exterior Cladding	\$1,485,000		\$135.00														\$1,485,000	\$75.38
5 Roofing and Waterproofing	\$220,000		\$20.00														\$220,000	\$11.17
B) Interiors (6-7)		\$890,600	\$80.96		\$399,900	\$93.00		\$87,550	\$85.00		\$80,000	\$40.00		\$93,160	\$68.00		\$1,551,210	\$78.74
6 Interior Partitions, Doors and Glazing	\$533,870		\$48.53	\$163,400		\$38.00	\$56,650		\$55.00	\$30,000		\$15.00	\$52,060		\$38.00	\$835,980	\$42.44	
7 Floor, Wall and Ceiling Finishes	\$356,730		\$32.43	\$236,500		\$55.00	\$30,900		\$30.00	\$50,000		\$25.00	\$41,100		\$30.00	\$715,230	\$36.31	
C) Equipment and Vertical Transportation (8-9)		\$444,408	\$40.40		\$215,000	\$50.00		\$154,500	\$150.00		\$400,000	\$200.00		\$47,950	\$35.00		\$1,261,858	\$64.05
8 Function Equipment and Specialties	\$224,408		\$20.40	\$215,000		\$50.00	\$154,500		\$150.00	\$400,000		\$200.00	\$47,950		\$35.00	\$1,041,858	\$52.89	
9 Stairs and Vertical Transportation	\$220,000		\$20.00													\$220,000	\$11.17	
D) Mechanical and Electrical (10-13)		\$1,902,649	\$172.97		\$427,850	\$99.50		\$135,445	\$131.50		\$133,000	\$66.50		\$99,325	\$72.50		\$2,698,269	\$136.97
10 Plumbing Systems	\$181,246		\$16.48	\$172,000		\$40.00	\$23,690		\$23.00	\$8,000		\$4.00	\$6,850		\$5.00	\$391,786	\$19.89	
11 Heating, Ventilation and Air Conditioning	\$749,380		\$68.13	\$107,500		\$25.00	\$50,470		\$49.00	\$50,000		\$25.00	\$41,100		\$30.00	\$998,450	\$50.68	
12 Electrical Lighting, Power and Communications	\$886,900		\$80.63	\$129,000		\$30.00	\$56,650		\$55.00	\$66,000		\$33.00	\$45,210		\$33.00	\$1,183,760	\$60.09	
13 Fire Protection Systems	\$85,123		\$7.74	\$19,350		\$4.50	\$4,635		\$4.50	\$9,000		\$4.50	\$6,165		\$4.50	\$124,273	\$6.31	
E) Site Construction (14-16)		\$682,000	\$62.00		\$64,500	\$15.00		\$15,450	\$15.00		\$30,000	\$15.00		\$20,550	\$15.00		\$812,500	\$41.24
14 Site Preparation and Demolition	\$132,000		\$12.00	\$64,500		\$15.00	\$15,450		\$15.00	\$30,000		\$15.00	\$20,550		\$15.00	\$262,500	\$13.32	
15 Site Paving, Structures & Landscaping	\$220,000		\$20.00													\$220,000	\$11.17	
16 Utilities on Site	\$330,000		\$30.00													\$330,000	\$16.75	
Subtotal Cost		\$6,947,280	\$631.57		\$1,107,250	\$257.50		\$392,945	\$381.50		\$643,000	\$321.50		\$260,985	\$190.50		\$9,351,460	\$474.69
Occupied Facility - Phasing, Off-Hours, 15.0%				\$166,088		\$38.63	\$58,942		\$57.23	\$96,450		\$48.23	\$39,148		\$28.58	\$360,627	\$18.31	
General Conditions 10.0%		\$694,728	\$63.16	\$127,334		\$29.61	\$45,189		\$43.87	\$73,945		\$36.97	\$30,013		\$21.91	\$971,209	\$49.30	
Bonds & Insurance 2.0%		\$152,840	\$13.89	\$28,013		\$6.51	\$9,942		\$9.65	\$16,268		\$8.13	\$6,603		\$4.82	\$213,666	\$10.85	
Contractor's Fee 5.0%		\$389,742	\$35.43	\$71,434		\$16.61	\$25,351		\$24.61	\$41,483		\$20.74	\$16,837		\$12.29	\$544,848	\$27.66	
Design Contingency 15.0%		\$1,227,689	\$111.61	\$225,018		\$52.33	\$79,855		\$77.53	\$130,672		\$65.34	\$53,038		\$38.71	\$1,716,271	\$87.12	
Escalation to MOC																		
Total Estimated Construction Cost		\$9,412,279	\$855.66		\$1,725,137	\$401.19		\$612,223	\$594.39		\$1,001,818	\$500.91		\$406,624	\$296.81		\$13,158,081	\$667.92

**Indicates Cost Model by Program Type

SUMMARY MATRIX - ESSENTIAL FACILITY

Element	Core / Shell, Essential Facility** 11,000GSF			Lobby, Tenant Improvements** 1,078SF			EOC, Tenant Improvements** 4,676SF			Office, Tenant Improvements** 5,246SF			Overall Totals 11,000GSF		
	Subtotal	Total	Cost/SF	Subtotal	Total	Cost/SF	Subtotal	Total	Cost/SF	Subtotal	Total	Cost/SF	Subtotal	Total	Cost/SF
A) Shell (1-5)		\$3,025,000	\$275.00							\$2,623	\$0.50		\$3,027,623	\$275.24	
1 Foundations	\$385,000		\$35.00										\$385,000		\$35.00
2 Vertical Structure	\$220,000		\$20.00										\$220,000		\$20.00
3 Floor & Roof Structures	\$715,000		\$65.00							\$2,623	\$0.50		\$717,623		\$65.24
4 Exterior Cladding	\$1,485,000		\$135.00										\$1,485,000		\$135.00
5 Roofing and Waterproofing	\$220,000		\$20.00										\$220,000		\$20.00
B) Interiors (6-7)		\$77,000	\$7.00	\$80,850	\$75.00		\$444,220	\$95.00		\$288,530	\$55.00		\$890,600	\$80.96	
6 Interior Partitions, Doors and Glazing	\$33,000		\$3.00	\$16,170	\$15.00		\$327,320	\$70.00		\$157,380	\$30.00		\$533,870		\$48.53
7 Floor, Wall and Ceiling Finishes	\$44,000		\$4.00	\$64,680	\$60.00		\$116,900	\$25.00		\$131,150	\$25.00		\$356,730		\$32.43
C) Equipment and Vertical Transportation (8-9)		\$242,000	\$22.00	\$16,170	\$15.00		\$107,548	\$23.00		\$78,690	\$15.00		\$444,408	\$40.40	
8 Function Equipment and Specialties	\$22,000		\$2.00	\$16,170	\$15.00		\$107,548	\$23.00		\$78,690	\$15.00		\$224,408		\$20.40
9 Stairs and Vertical Transportation	\$220,000		\$20.00										\$220,000		\$20.00
D) Mechanical and Electrical (10-13)		\$946,000	\$86.00	\$79,233	\$73.50		\$483,966	\$103.50		\$393,450	\$75.00		\$1,902,649	\$172.97	
10 Plumbing Systems	\$132,000		\$12.00	\$4,312	\$4.00		\$18,704	\$4.00		\$26,230	\$5.00		\$181,246		\$16.48
11 Heating, Ventilation and Air Conditioning	\$396,000		\$36.00	\$32,340	\$30.00		\$163,660	\$35.00		\$157,380	\$30.00		\$749,380		\$68.13
12 Electrical Lighting, Power and Communications	\$385,000		\$35.00	\$37,730	\$35.00		\$280,560	\$60.00		\$183,610	\$35.00		\$886,900		\$80.63
13 Fire Protection Systems	\$33,000		\$3.00	\$4,851	\$4.50		\$21,042	\$4.50		\$26,230	\$5.00		\$85,123		\$7.74
E) Site Construction (14-16)		\$682,000	\$62.00										\$682,000	\$62.00	
14 Site Preparation and Demolition	\$132,000		\$12.00										\$132,000		\$12.00
15 Site Paving, Structures & Landscaping	\$220,000		\$20.00										\$220,000		\$20.00
16 Utilities on Site	\$330,000		\$30.00										\$330,000		\$30.00
Subtotal Cost		\$4,972,000	\$452.00	\$176,253	\$163.50		\$1,035,734	\$221.50		\$763,293	\$145.50		\$6,947,280	\$632	
Occupied Facility - Phasing, Off-Hours, Etc.															
General Conditions 10.0%		\$497,200	\$45.20	\$17,625	\$16.35		\$103,573	\$22.15		\$76,329	\$14.55		\$694,728	\$63.16	
Bonds & Insurance 2.0%		\$109,384	\$9.94	\$3,878	\$3.60		\$22,786	\$4.87		\$16,792	\$3.20		\$152,840	\$13.89	
Contractor's Fee 5.0%		\$278,929	\$25.36	\$9,888	\$9.17		\$58,105	\$12.43		\$42,821	\$8.16		\$389,742	\$35.43	
Design Contingency 15.0%		\$878,627	\$79.88	\$31,147	\$28.89		\$183,030	\$39.14		\$134,885	\$25.71		\$1,227,689	\$111.61	
Escalation to MOC															
Total Estimated Construction Cost		\$6,736,140	\$612.38	\$238,790	\$221.51		\$1,403,228	\$300.09		#####	\$197.13		\$9,412,279	\$855.66	

**Indicates Cost Model by Program Type

Public Safety Building - Existing Core / Shell

SUMMARY - PUBLIC SAFETY BUILDING - EXISTING CORE / SHELL

Element	Subtotal	Total	Cost / SF	Cost / SF
A) Shell (1-5)				
1 Foundations				
2 Vertical Structure				
3 Floor & Roof Structures				
4 Exterior Cladding				
5 Roofing and Waterproofing				
B) Interiors (6-7)				
6 Interior Partitions, Doors and Glazing				
7 Floor, Wall and Ceiling Finishes				
C) Equipment and Vertical Transportation (8-9)				
8 Function Equipment and Specialties				
9 Stairs and Vertical Transportation				
D) Mechanical and Electrical (10-13)				
10 Plumbing Systems	\$6,000		\$0.15	
11 Heating, Ventilation and Air Conditioning	\$140,000		\$3.50	
12 Electrical Lighting, Power and Communications	\$25,000		\$0.63	
13 Fire Protection Systems				
E) Site Construction (14-16)				
14 Site Preparation and Demolition				
15 Site Paving, Structures & Landscaping				
16 Utilities on Site				
Subtotal		\$171,000		\$4.28
Occupied Facility - Phasing, Off-Hours, Etc.	15.00%	\$25,650		\$0.64
Subtotal		\$196,650		\$4.92
General Conditions	10.00%	\$19,665		\$0.49
Subtotal		\$216,315		\$5.41
Bonds & Insurance	2.00%	\$3,420		\$0.09
Subtotal		\$219,735		\$5.50
Contractor's Fee	5.00%	\$10,987		\$0.27
Subtotal		\$230,722		\$5.77
Design Contingency	15.00%	\$34,608		\$0.87
Subtotal		\$265,330		\$6.64
Escalation to MOC				
TOTAL ESTIMATED CONSTRUCTION COST		\$265,330		\$6.64

Total Area: 39,970 SF

DETAIL ELEMENTS - PUBLIC SAFETY BUILDING - EXISTING CORE / SHELL

Element	Quantity	Unit	Unit Cost	Total
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1 Foundations

No Work Anticipated

Total - Foundations

2 Vertical Structure

No Work Anticipated

Total - Vertical Structure

3 Floor & Roof Structures

No Work Anticipated

Total - Floor & Roof Structures

4 Exterior Cladding

No Work Anticipated

Total - Exterior Cladding

5 Roofing and Waterproofing

No Work Anticipated

Total - Roofing and Waterproofing

6 Interior Partitions, Doors and Glazing

No Work Anticipated

Total - Interior Partitions, Doors and Glazing

7 Floor, Wall and Ceiling Finishes

No Work Anticipated

Total - Floor, Wall and Ceiling Finishes

8 Function Equipment and Specialties

DETAIL ELEMENTS - PUBLIC SAFETY BUILDING - EXISTING CORE / SHELL

Element	Quantity	Unit	Unit Cost	Total
No Work Anticipated				

Total - Function Equipment and Specialties

9 Stairs and Vertical Transportation

No Work Anticipated

Total - Stairs and Vertical Transportation

10 Plumbing Systems

Option A

Replace plumbing fixtures				w/ TI
Reuse CW pipe service, new pipe otherwise				w/ TI
Reuse water heater	1	ls	\$1,000.00	\$1,000
New hot water pipe throughout				w/ TI
Reuse sewer pipe service, new pipe otherwise				w/ TI
Reuse storm drain pipe, roof drains throughout	1	ls	\$5,000.00	\$5,000

Total - Plumbing Systems \$6,000

11 Heating, Ventilation and Air Conditioning

Reuse existing existing cooling towers, chiller, boiler, and associated pumps	1	ls	\$25,000.00	\$25,000
Provide new AHU (10,000 cfm) unit				Excluded
Provide 8 VAV terminal units w/ reheat (1000 cfm ea)				w/ TI
Toilet exhaust fan, 2000 cfm				w/ TI
Cooling units to IDF/MPOE rooms	1	ls	\$30,000.00	\$30,000
New controls system	1	ls	\$60,000.00	\$60,000
CHW system to be reused				w/ TI
HHW system to be reused				w/ TI
AHU's to be replaced				Included Above
Replace filters				Included Above
Replace exhaust systems				Included Above
Decentralized systems				Included Above
Replace ductwork (shell & core only)				w/ TI
Replace insulation (CHW/HHW piping only)				w/ TI
Pre-testing	1	ls	\$25,000.00	\$25,000

Total - Heating, Ventilation and Air Conditioning \$140,000

12 Electrical Lighting, Power and Communications

Service & Distribution

DETAIL ELEMENTS - PUBLIC SAFETY BUILDING - EXISTING CORE / SHELL

Element	Quantity	Unit	Unit Cost	Total
Tie-in to existing system (DB's, Swbd's, Etc.)	1	ls	\$15,000.00	\$15,000
Panelboards, feeders, as required				w/ TI
HVAC Equipment Connections	1	ls	\$10,000.00	\$10,000
Convenience Power				w/ TI
Light Fixtures LED, Interior				w/ TI

Total - Electrical Lighting, Power and Communications \$25,000

13 Fire Protection Systems

See Tenant Improvements

Total - Fire Protection Systems

14 Site Preparation and Demolition

No Work Anticipated

Total - Site Preparation and Demolition

15 Site Paving, Structures & Landscaping

No Work Anticipated

Total - Site Paving, Structures & Landscaping

16 Utilities on Site

No Work Anticipated

Total - Utilities on Site

Annex Building

SUMMARY MATRIX - ANNEX

Element	Annex Building - Existing Core / Shell 14,151GSF			NOVA / ANNEX, Tenant Improvements** 13,101SF			Overall Totals 14,151GSF		
	Subtotal	Total	Cost/SF	Subtotal	Total	Cost/SF	Subtotal	Total	Cost/SF
A) Shell (1-5)		\$1,120,463			\$6,551	\$0.50		\$1,127,014	\$79.64
1 Foundations									
2 Vertical Structure	\$42,180		\$2.98				\$42,180		\$2.98
3 Floor & Roof Structures	\$411,283		\$29.06	\$6,551		\$0.50	\$417,834		\$29.53
4 Exterior Cladding	\$607,000		\$42.89				\$607,000		\$42.89
5 Roofing and Waterproofing	\$60,000		\$4.24				\$60,000		\$4.24
B) Interiors (6-7)		\$110,250			\$720,555	\$55.00		\$830,805	\$58.71
6 Interior Partitions, Doors and Glazing	\$31,500		\$2.23	\$393,030		\$30.00	\$424,530		\$30.00
7 Floor, Wall and Ceiling Finishes	\$78,750		\$5.56	\$327,525		\$25.00	\$406,275		\$28.71
C) Equipment and Vertical Transportation (8-9)		\$315,750			\$196,515	\$15.00		\$512,265	\$36.20
8 Function Equipment and Specialties	\$15,750		\$1.11	\$196,515		\$15.00	\$212,265		\$15.00
9 Stairs and Vertical Transportation	\$300,000		\$21.20				\$300,000		\$21.20
D) Mechanical and Electrical (10-13)		\$464,487			\$982,575	\$75.00		\$1,447,062	\$102.26
10 Plumbing Systems	\$117,368		\$8.29	\$65,505		\$5.00	\$182,873		\$12.92
11 Heating, Ventilation and Air Conditioning	\$170,000		\$12.01	\$393,030		\$30.00	\$563,030		\$39.79
12 Electrical Lighting, Power and Communications	\$177,118		\$12.52	\$458,535		\$35.00	\$635,653		\$44.92
13 Fire Protection Systems				\$65,505		\$5.00	\$65,505		\$4.63
E) Site Construction (14-16)		\$477,265						\$477,265	\$33.73
14 Site Preparation and Demolition	\$212,265		\$15.00				\$212,265		\$15.00
15 Site Paving, Structures & Landscaping	\$265,000		\$18.73				\$265,000		\$18.73
16 Utilities on Site									
Subtotal Cost		\$2,488,215	\$175.83		\$1,906,196	\$145.50		\$4,394,410	\$311
Occupied Facility - Phasing, Off-Hours, Etc.									
General Conditions 10.0%		\$248,821	\$17.58	\$190,620		\$14.55	\$439,441		\$31.05
Bonds & Insurance 2.0%		\$49,764	\$3.52	\$41,936		\$3.20	\$91,701		\$6.48
Contractor's Fee 5.0%		\$139,340	\$9.85	\$106,938		\$8.16	\$246,278		\$17.40
Design Contingency 15.0%		\$438,921	\$31.02	\$336,853		\$25.71	\$775,774		\$54.82
Escalation to MOC									
Total Estimated Construction Cost		\$3,365,062	\$237.80		\$2,582,542	\$197.13		\$5,947,604	\$420.30

**Indicates Cost Model by Program Type

Annex Building - Existing Core / Shell

SUMMARY - ANNEX BUILDING - EXISTING CORE / SHELL

Element	Subtotal	Total	Cost / SF	Cost / SF
A) Shell (1-5)		\$1,120,463		\$79.18
1 Foundations				
2 Vertical Structure	\$42,180		\$2.98	
3 Floor & Roof Structures	\$411,283		\$29.06	
4 Exterior Cladding	\$607,000		\$42.89	
5 Roofing and Waterproofing	\$60,000		\$4.24	
B) Interiors (6-7)		\$110,250		\$7.79
6 Interior Partitions, Doors and Glazing	\$31,500		\$2.23	
7 Floor, Wall and Ceiling Finishes	\$78,750		\$5.56	
C) Equipment and Vertical Transportation (8-9)		\$315,750		\$22.31
8 Function Equipment and Specialties	\$15,750		\$1.11	
9 Stairs and Vertical Transportation	\$300,000		\$21.20	
D) Mechanical and Electrical (10-13)		\$464,487		\$32.82
10 Plumbing Systems	\$117,368		\$8.29	
11 Heating, Ventilation and Air Conditioning	\$170,000		\$12.01	
12 Electrical Lighting, Power and Communications	\$177,118		\$12.52	
13 Fire Protection Systems				
E) Site Construction (14-16)		\$477,265		\$33.73
14 Site Preparation and Demolition	\$212,265		\$15.00	
15 Site Paving, Structures & Landscaping	\$265,000		\$18.73	
16 Utilities on Site				
Subtotal		<u>\$2,488,215</u>		<u>\$175.83</u>
Occupied Facility - Phasing, Off-Hours, Etc.				
Subtotal		<u>\$2,488,215</u>		<u>\$175.83</u>
General Conditions	10.00%	\$248,821		\$17.58
Subtotal		<u>\$2,737,036</u>		<u>\$193.42</u>
Bonds & Insurance	2.00%	\$49,764		\$3.52
Subtotal		<u>\$2,786,801</u>		<u>\$196.93</u>
Contractor's Fee	5.00%	\$139,340		\$9.85
Subtotal		<u>\$2,926,141</u>		<u>\$206.78</u>
Design Contingency	15.00%	\$438,921		\$31.02
Subtotal		<u>\$3,365,062</u>		<u>\$237.80</u>
Escalation to MOC				

TOTAL ESTIMATED CONSTRUCTION COST		\$3,365,062		\$237.80
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Total Area: 14,151 SF

DETAIL ELEMENTS - ANNEX BUILDING - EXISTING CORE / SHELL

Element	Quantity	Unit	Unit Cost	Total
1 Foundations				
No Work Anticipated				
Total - Foundations				
2 Vertical Structure				
Structural Steel				
Cut hole in <E> concrete ceiling for access, 24" sq.	7	loc	\$1,000.00	\$7,000
HSS6x6x3/8 columns, 10'6" tall max, installed	11	ea	\$2,000.00	\$22,000
Epoxy wall anchors at 4' o.c., ceiling / floor anchors	176	ea	\$55.00	\$9,680
Firestop / patch concrete ceilings	7	loc	\$500.00	\$3,500
Total - Vertical Structure				\$42,180
3 Floor & Roof Structures				
Slab On Grade				
Miscellaneous patch and repair for core / shell work, allowance	14,151	gsf	\$2.00	\$28,302
Roof Structure				
Temporary shoring of existing concrete "lid"	1,885	sf	\$5.00	\$9,425
Remove existing concrete "lid", sawcut (impact tools not allowed)	1,885	sf	\$25.00	\$47,125
HSS6x6x3/8 columns	2	ea	\$3,000.00	\$6,000
W18x46, 35' long	1	ea	\$7,000.00	\$7,000
Remove existing gypsum board, direct nailed to roof and beams, allow per plan area	12,000	sf	\$4.50	\$54,000
Replace existing drywall after installation of rough carpentry, allow per plan area	12,000	sf	\$7.25	\$87,000
Plywood sheathing, allow per plan area				
3x4 blocking	4,100	sf	\$1.00	\$4,100
1/2" plywood sheathing to underside of joists / blocking	4,100	sf	\$5.00	\$20,500
Wall bracing				
4x16PSLs, notched, A34 attachment @ 12" o.c.	632	lf	\$115.00	\$72,680
4x12 blocking, A34 attachment @ 12" o.c.	247	lf	\$30.00	\$7,410
HDU2 with epoxy all-thread rods into existing brick	160	ea	\$200.00	\$32,000
Miscellaneous hardware and framing				
MSTC40 straps, <=5' long typ	17	ea	\$130.00	\$2,210
Sister 2x8 to existing framing	129	lf	\$20.00	\$2,580
Miscellaneous hardware, blocking, and rough carpentry, allowance	14,151	gsf	\$1.00	\$14,151
Aerial equipment and small tools	6	wks	\$2,800.00	\$16,800
Total - Floor & Roof Structures				\$411,283

DETAIL ELEMENTS - ANNEX BUILDING - EXISTING CORE / SHELL

Element	Quantity	Unit	Unit Cost	Total
4 Exterior Cladding				
Exterior Walls And Parapets				
Repair existing concrete and brick walls on south side of bldg., allowance, 110LF x 20' Tall Average Height	2,200	sf	\$10.00	\$22,000
Replace existing louvers and doors on south side of bldg., allowance	1	ls	\$15,000.00	\$15,000
Work to remaining brick and concrete walls				<i>Excluded</i>
Gypsum Board to Interior of Exterior - Allow for Quantities				
Remove existing gypsum board and insulation at interior face of exterior wall and replace with new thermal insulation and gypsum board	7,000	sf	\$10.00	\$70,000
Exterior Glazing - Allow for Quantities				
Remove and replace existing exterior glazing	4,000	sf	\$125.00	\$500,000

Total - Exterior Cladding				\$607,000
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5 Roofing and Waterproofing

Roofing				
Remove existing tile roof, stockpile				<i>Excluded - Assume Not Required</i>
Remove existing waterproofing and replace				<i>Excluded - Assume Not Required</i>
Reinstall existing roof tile				<i>Excluded - Assume Not Required</i>
Material breakage allowance				<i>Excluded - Assume Not Required</i>
Sheetmetal and detailing, allowance				<i>Excluded - Assume Not Required</i>
Miscellaneous				
Repair water damage to oversized rafter ends and provide flashing	40	loc	\$1,500.00	\$60,000

Total - Roofing and Waterproofing				\$60,000
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6 Interior Partitions, Doors and Glazing

Interior Partitions, Doors, and Glazing				
Restrooms	1,050	sf	\$30.00	\$31,500
Tenant improvement areas				<i>Improvements</i>

Total - Interior Partitions, Doors and Glazing				\$31,500
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7 Floor, Wall and Ceiling Finishes

Interior Finishes				
Restrooms	1,050	sf	\$75.00	\$78,750
Tenant improvement areas				<i>Improvements</i>

Total - Floor, Wall and Ceiling Finishes				\$78,750
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DETAIL ELEMENTS - ANNEX BUILDING - EXISTING CORE / SHELL

Element	Quantity	Unit	Unit Cost	Total
8 Function Equipment and Specialties				
Function Equipment and Specialties				
Restrooms	1,050	sf	\$15.00	\$15,750
Tenant improvement areas				<i>Improvements</i>

Total - Function Equipment and Specialties				\$15,750
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9 Stairs and Vertical Transportation

Stairs				<i>No Work Anticipated</i>
Elevators				
Upgrade existing elevators, scope to be verified, allowance	1	ls	\$300,000.00	\$300,000

Total - Stairs and Vertical Transportation				\$300,000
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10 Plumbing Systems

Replace plumbing fixtures	1	ls	\$56,604.00	\$56,604
Reuse CW pipe service, new pipe otherwise	1	ls	\$26,108.60	\$26,109
Reuse water heater	1	ls	\$1,000.00	\$1,000
New hot water pipe throughout	1	ls	\$31,910.51	\$31,911
Reuse sewer pipe service, new pipe otherwise	1	ls	\$53,349.27	\$53,349
Reuse storm drain pipe, roof drains throughout deduct for T.I.	14,151	sf	-\$4.00	-\$56,604

Total - Plumbing Systems				\$117,368
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11 Heating, Ventilation and Air Conditioning

Reuse existing existing cooling towers, chiller, boiler, and associated pumps	1	ls	\$15,000.00	\$15,000
Provide new AHU (20,000 cfm) unit				<i>Excluded</i>
Provide 15 VAV terminal units w/ reheat (1000 cfm ea)				<i>w/ TI</i>
Toilet exhaust fan, 2000 cfm	1	ls	\$5,000.00	\$5,000
Cooling units to IDF/MPOE rooms	1	ls	\$30,000.00	\$30,000
New controls system	1	ls	\$105,000.00	\$105,000
CHW system to be reused				<i>w/ TI</i>
HHW system to be reused				<i>w/ TI</i>
AHU's to be replaced				<i>Incl. Above</i>
Replace filters				<i>Incl. Above</i>
Replace exhaust systems				<i>Incl. Above</i>
Decentralized systems				<i>Incl. Above</i>
Replace ductwork (shell & core only)				<i>w/ TI</i>

Sunnyvale Master Plan - NOVA / EOC

Sunnyvale, California

Rough Order of Magnitude Rev2

Project # 17-00701.00

07/12/17

DETAIL ELEMENTS - ANNEX BUILDING - EXISTING CORE / SHELL

Element	Quantity	Unit	Unit Cost	Total
Replace insulation (CHW/HHW piping only)				w/ TI
Pre-testing	1	ls	\$15,000.00	\$15,000
Total - Heating, Ventilation and Air Conditioning				\$170,000

12 Electrical Lighting, Power and Communications

Service & Distribution				
Tie-in to existing system (DB's, Swbd's, Etc.)	1	ls	\$15,000.00	\$15,000
Panelboard 225 amp 277/480v 3ph 4w	4	ea	\$3,850.24	\$15,401
Panelboard 225 amp 120/208v 3ph 4w	2	ea	\$3,319.88	\$6,640
Panelboard 100 amp 277/480v 3ph 4w	6	ea	\$3,208.21	\$19,249
Panelboard 100 amp 120/208v 3ph 4w	3	ea	\$2,681.48	\$8,044
Transformer 75 kva 480- 120/208v 3ph 4w	2	ea	\$5,038.02	\$10,076
Grounding system	1	ls	\$1,500.00	\$1,500
Conduit and building wire for service equipment				
Feeder, 100 amp	1,125	lf	\$18.75	\$21,094
Feeder, 225 amp	775	lf	\$20.34	\$15,764
Conduit supports	1	ls	\$8,500.00	\$8,500
HVAC Equipment Connections				
Equipment connections				
VRV/VRF Unit connection, 3 Tons	2	ea	\$975.00	\$1,950
VAV connection	15	ea	\$775.00	\$11,625
AHU connection, 480v	1	ea	\$1,476.00	\$1,476
Exhaust Fan, Toilet	1	ea	\$450.00	\$450
Disconnect switch, motor rated with thermal O/L	16	ea	\$391.60	\$6,266
Disconnect switch, 30/3 fused N1	2	ea	\$664.42	\$1,329
Disconnect switch, 60/3 fused N1	1	ea	\$890.77	\$891
Conduit and building wire for equipment				
Feeder, 30 amp	1,710	lf	\$12.75	\$21,803
Feeder, 60 amp	650	lf	\$15.48	\$10,062
Convenience Power				
Convenience power devices (Receptacles, Etc.)				w/ TI
Specialty receptacles, 30 amp to 50 amp				w/ TI
Floorbox / Poke Thru outlet - double duplex / Tel-Data outlet, 20 amp 120v				w/ TI
Junction box, 120V Furniture connection				w/ TI
Electronic door hold open connection, 120v				w/ TI
Fire Alarm system connection, 120v				w/ TI
Conduit and building wire for power				
Feeder, 15 amp - 20 amp				w/ TI
Light Fixtures LED, Interior				w/ TI
Fire Alarm System - Tie-in to existing, new devices as needed				w/ TI

Total - Electrical Lighting, Power and Communications	\$177,118
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DETAIL ELEMENTS - ANNEX BUILDING - EXISTING CORE / SHELL

Element	Quantity	Unit	Unit Cost	Total
13 Fire Protection Systems				
See Tenant Improvements				
Total - Fire Protection Systems				
14 Site Preparation and Demolition				
Selective Demolition of Bldg. Interiors See Below for Site Scope	14,151	gsf	\$15.00	\$212,265
Total - Site Preparation and Demolition				
15 Site Paving, Structures & Landscaping				
Additional Parking Spaces - Scope Allowance	5,000	sf	\$20.00	\$100,000
Accessible Path from Parking to Building - Scope Allowance	1,000	sf	\$15.00	\$15,000
Planters - Allowance to Rework Planter and Waterproofing to Address Leaks	1	ls	\$150,000.00	\$150,000
Total - Site Paving, Structures & Landscaping				
16 Utilities on Site				
See Above				
Total - Utilities on Site				

APPENDIX 1 - SCOPE ASSUMPTIONS

Description	Assumed Scope
General Project Info	<ul style="list-style-type: none"> - Local GC laydown / compound area within proximity. - Local trade parking available both onsite (partial) and offsite. - All sub trades to be competitively bid. - Labor pool from the greater Bay Area. - The following markups are included, as outlined in Appendix 2: General Contractor markups, and design contingency. - An allowance for project soft costs (change order contingency, design fees, etc.) has been included on the summary page. - Pricing is in current (Q3 2017) construction dollars.
Detailed Assumptions	
1. Essential Facility at Existing PSB	<ul style="list-style-type: none"> - New Essential Facility at the existing PSB including associated core / shell construction. - New utility service connections. - Site development to 5' beyond the perimeter of the building - reconfiguration of existing parking and / or site development beyond this boundary is excluded. - Lobby, office, and EOC program as shown. - Ballistic glazing and / or blast resistant construction are excluded. - Construction is anticipated to occur during normal business hours with a standard (non-accelerated) construction schedule.
2. Renovations at Existing PSB	<ul style="list-style-type: none"> - Work to the existing PSB core / shell is minimal and does not include the following: structural seismic upgrades, major MEP systems equipment replacement, re-roofing, or work to the existing exterior cladding. Work to the existing PSB core / shell is as outlined in the MEP BOD and detailed within the backup of this report. - Programmatic renovations inside the existing PSB are outlined in the summary of this report. The costs contained herein are for scope within the boundary of these renovations. - Construction may potentially be phased and occur in part during off-hours with a standard (non-accelerated) construction schedule.
3. Annex Bldg. - Core / Shell	<ul style="list-style-type: none"> - Work to the existing Annex Bldg. core / shell includes the following scope, as detailed in the backup of this report (and outlined in design narratives): <ul style="list-style-type: none"> ◦Structural seismic upgrades. ◦Removal of the existing concrete "lid". ◦Repair of existing concrete / brick walls at the south side of the building. ◦Removal and replacement of existing drywall and insulation at the interior face of the exterior wall. ◦Removal and replacement of existing exterior glazing. ◦Repair to water damaged rafter ends at building exterior. ◦New restroom construction. ◦Upgrades to the existing elevator. ◦MEP services upgrades as outlined in the detailed backup. ◦Selective demolition of building interiors for anticipated tenant improvement scope (NOVA). ◦Allowance to reconfigure 5,000sf of existing parking as required. ◦\$15K Allowance for ADA pathway modifications.

APPENDIX 1 - SCOPE ASSUMPTIONS

Description	Assumed Scope
4. Annex Bldg. - NOVA Tenant Improvements	<ul style="list-style-type: none">◦\$150K Allowance for planter repair to address basement leaks.◦No scope is assumed in the existing basement, beyond incidental work for the above. <ul style="list-style-type: none">- New tenant improvements, including fitout, lighting, HVAC distribution, etc., for NOVA office program.
5. Exclusions	<ul style="list-style-type: none">- Hazardous materials abatement.- Construction cost escalation beyond the date of this report.- AV Equipment.- 9-11 Call Center.- Ballistic glazing or blast-resistant construction.

APPENDIX 2 - APPROACH & METHODOLOGY

Basis of Estimate	<p>Electronic Documents as listed below:</p> <ul style="list-style-type: none">- Architectural Program Matrix, dated 06/28/2017- Civic Center Modernization Project Master Plan; Emergency Operation Center + City Hall Annex Assessment DRAFT, dated 06/22/2017- DRAFT Narrative, undated- MEP Assessment Report, dated 06/26/2017- Structural Evaluation Report, dated 06/26/2017
Estimate Format	<p>A component cost classification format has been used for the preparation of this estimate. It classifies costs by building system / element.</p>
Cost Mark Ups	<p>The following % mark ups have been included in each design option:</p> <ul style="list-style-type: none">- Occupied Facility - Phasing, Off-Hours, Etc. (15.00% on direct costs), where applicable- General Conditions (10.00% compound)- Bonds & Insurance (2.00% on direct costs)- Contractor's Fee (5.00% compound)- Design Contingency (15.00% compound)- Escalation to MOC (0.00% compound) - excluded pending schedule
Escalation	<p>All subcontract prices herein are reflective of current bid prices. Escalation has been included on the summary level to the stated mid point of construction.</p>
Design Contingency	<p>An allowance of 15% for undeveloped design details has been included in this estimate. As the design of each system is further developed, details which historically increase cost become apparent and must be incorporated into the estimate while decreasing the % burden.</p>
Construction Contingency	<p>It is prudent for all program budgets to include an allowance for change orders which occur during the construction phase. These change orders normally increase the cost of the project. It is recommended that a 8%-10% construction contingency is carried in this respect. This cost is not included within the estimate.</p>
Method of Procurement	<p>The estimate is based on a lump sum low bid procurement method.</p>
Bid Conditions	<p>This estimate has been based upon competitive bid situations (minimum of 3 bidders) for all items of subcontracted work.</p>
Basis For Quantities	<p>Wherever possible, this estimate has been based upon the actual measurement of different items of work. For the remaining items, parametric measurements were used in conjunction with other projects of a similar nature.</p>
Basis for Unit Costs	<p>Unit costs as contained herein are based on current bid prices in Sunnyvale, California. Sub overheads and profit are included in each line item unit cost. Their overhead and profit covers each sub's cost for labor burden, materials, and equipment, sales taxes, field overhead, home office overhead, and profit. The general contractor's overhead is shown separately on the master summary.</p>

APPENDIX 2 - APPROACH & METHODOLOGY

Sources for Pricing

This estimate was prepared by a team of qualified cost consultants experienced in estimating construction costs at all stages of design. These consultants have used pricing data from Cumming's database for construction, updated to reflect current conditions in Sunnyvale, California.

Key Exclusions

The following items have been excluded from our estimate:

- Hazardous materials abatement.
- Construction cost escalation beyond the date of this report.
- AV Equipment.
- 9-11 Call Center.
- Ballistic glazing or blast-resistant construction.

Items Affecting Cost Estimate

Items which may change the estimated construction cost include, but are not limited to:

- Modifications to the scope of work included in this estimate.
- Unforeseen sub-surface conditions.
- Restrictive technical specifications or excessive contract conditions.
- Any specified item of material or product that cannot be obtained from 3 sources.
- Any other non-competitive bid situations.
- Bids delayed beyond the projected schedule.

Statement of Probable Cost

Cumming has no control over the cost of labor and materials, the general contractor's or any subcontractor's method of determining prices, or competitive bidding and market conditions. This estimate is made on the basis of the experience, qualifications, and best judgement of a professional consultant familiar with the construction industry. Cumming, however, cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from this or subsequent cost estimates.

Cumming's staff of professional cost consultants has prepared this estimate in accordance with generally accepted principles and practices. This staff is available to discuss its contents with any interested party.

Pricing reflects probable construction costs obtainable in the project locality on the target dates specified and is a determination of fair market value for the construction of this project. The estimate is not a prediction of low bid. Pricing assumes competitive bidding for every portion of the construction work for all sub and general contractors with a range of 3 - 4 bidders for all items of work. Experience and research indicates that a fewer number of bidders may result in higher bids. Conversely, an increased number of bidders may result in more competitive bid day responses.

Recommendations

Cumming recommends that the Owner and the Architect carefully review this entire document to ensure it reflects their design intent. Requests for modifications of any apparent errors or omissions to this document must be made to Cumming within ten days of receipt of this estimate. Otherwise, it will be assumed that its contents have been reviewed and accepted. If the project is over budget or there are unresolved budget issues, alternate systems / schemes should be evaluated before proceeding into further design phases.

It is recommended that there are preparations of further cost estimates throughout design by Cumming to determine overall cost changes since the preparation of this preliminary estimate. These future estimates will have detailed breakdowns indicating materials by type, kind, and size, priced by their respective units of measure.