



**Sunnyvale Master Plan**  
Sunnyvale, CA

Rough Order of Magnitude Rev6  
November 1, 2017  
Cumming Project No. 17-00701.00

Prepared for SmithGroupJJR

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## EXECUTIVE SUMMARY

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### 1.1 Introduction

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

The project scope encompasses construction of the new City Hall, DPS addition and Site Development at Sunnyvale Civic Center in Sunnyvale, California.

### 1.2 Project Schedule

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

### 1.3 Key Assumptions & Exclusions

#### Key Assumptions

- Lump Sum Low Bid Delivery
- Soft Cost Allowance of 35% Pending Verification
- Deep foundation allowance
- Green roof as shown

#### Key Exclusions

- Hazardous Materials Abatement
- Construction Cost Escalation beyond the Date of this Report
- Ballistic Glazing or Blast Resistant Construction
- Dual layer cladding (no metal screen shown)

## COST MODEL SUMMARY

Element	Area	Cost / SF	Total
<b>Master Plan Option 1 - Phase 1</b>			
City Hall	98,700	\$805.00	\$79,453,581
Parking Below City Hall	40,768	\$180.00	\$7,338,240
Site Development	449,602	\$36.95	\$16,614,268
DPS Addition - See Previous Submittal	11,000	\$863.64	\$9,500,000
Renovations Inside Existing PSB	8,700	\$459.77	\$4,000,000
Demolition of Existing Buildings			
Sunnyvale Office Center	47,600	\$25.00	\$1,190,000
Existing City Hall and Annex	53,500	\$25.00	\$1,337,500
Public Art	1%		\$1,200,000
PV for NZE for City Hall, per Narrative			<i>Excluded</i>
Escalation to Midpoint of Construction			<i>Excluded</i>
<b>Total Estimated Construction Cost</b>			<b>\$121,000,000</b>
Project Soft Costs	35%		\$42,400,000
<b>Total Estimated Construction Cost</b>			<b>\$163,400,000</b>
<b>Master Plan Option 2 - Phase 1</b>			
City Hall	98,700	\$765.00	\$75,505,494
Parking Below City Hall	40,768	\$180.00	\$7,338,240
Site Development	397,296	\$49.80	\$19,785,848
DPS Addition - See Previous Submittal	11,000	\$863.64	\$9,500,000
Renovations Inside Existing PSB	8,700	\$459.77	\$4,000,000
Demolition of Existing Buildings			
Sunnyvale Office Center	47,600	\$25.00	\$1,190,000
Existing City Hall and Annex	53,500	\$25.00	\$1,337,500
Public Art	1%		\$1,200,000
PV for NZE for City Hall, per Narrative			<i>Excluded</i>
Escalation to Midpoint of Construction			<i>Excluded</i>
<b>Total Estimated Construction Cost</b>			<b>\$120,000,000</b>
Project Soft Costs	35%		\$42,000,000
<b>Total Estimated Construction Cost</b>			<b>\$162,000,000</b>

Premium for Heavy Timber Construction (City Hall Upper Floors only)

*Cost Impact to Be Determined*

## City Hall Option 1

## SUMMARY - CITY HALL OPTION 1

Element	Subtotal	Total	Cost / SF	Cost / SF
<b>A) Shell (1-5)</b>		<b>\$29,683,088</b>		<b>\$300.74</b>
1 Foundations	\$2,858,422		\$28.96	
2 Vertical Structure	\$1,840,236		\$18.64	
3 Floor & Roof Structures	\$6,822,981		\$69.13	
4 Exterior Cladding	\$16,091,279		\$163.03	
5 Roofing and Waterproofing	\$2,070,170		\$20.97	
<b>B) Interiors (6-7)</b>		<b>\$7,240,515</b>		<b>\$73.36</b>
6 Interior Partitions, Doors and Glazing	\$3,405,150		\$34.50	
7 Floor, Wall and Ceiling Finishes	\$3,835,365		\$38.86	
<b>C) Equipment and Vertical Transportation (8-9)</b>		<b>\$3,267,220</b>		<b>\$33.10</b>
8 Function Equipment and Specialties	\$1,522,220		\$15.42	
9 Stairs and Vertical Transportation	\$1,745,000		\$17.68	
<b>D) Mechanical and Electrical (10-13)</b>		<b>\$15,611,318</b>		<b>\$158.17</b>
10 Plumbing Systems	\$2,036,086		\$20.63	
11 Heating, Ventilation and Air Conditioning	\$4,944,781		\$50.10	
12 Electrical Lighting, Power and Communications	\$7,930,916		\$80.35	
13 Fire Protection Systems	\$699,534		\$7.09	
<b>E) Site Construction (14-16)</b>		<b>\$500,000</b>		<b>\$5.07</b>
14 Site Preparation and Demolition				
15 Site Paving, Structures & Landscaping				
16 Utilities on Site	\$500,000		\$5.07	
Subtotal		\$56,302,140		\$570.44
General Conditions	10.00%	\$5,630,214		\$57.04
Subtotal		\$61,932,354		\$627.48
Bonds & Insurance	2.00%	\$1,126,043		\$11.41
Subtotal		\$63,058,397		\$638.89
Contractor's Fee	5.00%	\$3,152,920		\$31.94
Subtotal		\$66,211,317		\$670.83
Design Contingency	20.00%	\$13,242,263		\$134.17
<b>TOTAL ESTIMATED CONSTRUCTION COST</b>		<b>\$79,453,581</b>		<b>\$805.00</b>

Total Area: 98,700 SF

## DETAIL ELEMENTS - CITY HALL OPTION 1

Element	Quantity	Unit	Unit Cost	Total
<b>1 Foundations</b>				
Layout	40,768	sf	\$0.50	\$20,384
Basement Excavation				
Mass Excavation	24,159	cy	\$8.50	<i>Parking</i>
Dispose of excavated material	28,991	tn	\$30.00	<i>Parking</i>
Shoring, Soldier Pile Wall	16,500	sf	\$55.00	<i>Parking</i>
Backfill	1,470	tn	\$40.00	<i>Parking</i>
Dewatering system set up	1	ls	\$100,000.00	<i>Parking</i>
Dewatering management, allow 7 months	7	mnth	\$10,000.00	<i>Parking</i>
Foundations				
Rat Slab - Poured over complete basement	453	cy	\$225.00	\$101,920
Pile caps	550	cy	\$750.00	\$412,500
Grade beams	475	cy	\$750.00	\$356,250
Waterproofing slab	40,768	sf	\$11.00	\$448,448
Misc foundations for shear walls, etc	150	lf	\$750.00	\$112,500
Piles / caissons / deep foundations, allow	40,768	sf	\$30.28	\$1,234,500
Miscellaneous				
Elevator pit, passenger	2	ea	\$25,000.00	\$50,000
Elevator pit, service	1	ea	\$20,000.00	\$20,000
Mud slab, allow	40,768	sf	\$2.50	\$101,920
<b>Total - Foundations</b>				<b>\$2,858,422</b>

## 2 Vertical Structure

Cast-In-Place Concrete Shear Walls, allow 16'-0" high, 1'-0" thick at Basement				
Concrete, shear walls, 5000 psi	513	cy	\$425.00	<i>Parking</i>
Formwork, shear walls	26,400	sf	\$24.00	<i>Parking</i>
Wall reinforcing (150 #/cy)	77,000	lbs	\$1.75	<i>Parking</i>
Finish to walls	13,200	sf	\$1.50	<i>Parking</i>
Waterproofing	13,200	sf	\$18.00	<i>Parking</i>
Thermal insulation	13,200	sf	\$2.00	<i>Parking</i>
Cast-In-Place Concrete Columns, allow at Basement	40,768	sf	\$8.50	<i>Parking</i>
Structural Steel				
Structural steel columns, tube steel	142	tn	\$5,000.00	\$711,200
Structural steel columns at green roof, tube steel	26	tn	\$5,000.00	\$130,000
Structural steel columns at glass canopy, architectural, 61'-0" high	6	ea	\$45,000.00	\$270,000
BRBFs, allow	98,700	gsf	\$5.00	\$493,500
Bolts, welds and connections, allow 15%	25	tn	\$5,500.00	\$138,798
Fireproofing to steelwork	193	tn	\$500.00	\$96,738

<b>Total - Vertical Structure</b>	<b>\$1,840,236</b>
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## DETAIL ELEMENTS - CITY HALL OPTION 1

Element	Quantity	Unit	Unit Cost	Total
<b>3 Floor &amp; Roof Structures</b>				
Slab On Grade 6" Thick, 4000 psi, at Basement				
Concrete, slab on grade, 4000 psi	793	cy	\$375.00	\$297,267
Formwork	413	sf	\$16.00	\$6,600
Sand base, 4"	40,768	sf	\$1.50	\$61,152
Gravel sub base, 6"	40,768	sf	\$1.72	\$70,121
Reinforcing steel, 2psf	81,536	lbs	\$1.25	\$101,920
Finish to slab	40,768	sf	\$1.20	\$48,922
Vapor barrier	40,768	sf	\$1.00	\$40,768
Slab On Grade 6" Thick, 4000 psi, at Level 1				
Concrete, slab on grade, 4000 psi	257	cy	\$375.00	\$96,520
Formwork	248	sf	\$16.00	\$3,968
Sand base, 4"	13,237	sf	\$1.50	\$19,856
Gravel sub base, 6"	13,237	sf	\$1.72	\$22,768
Reinforcing steel, 2psf	26,474	lbs	\$1.25	\$33,093
Finish to slab	13,237	sf	\$1.20	\$15,884
Vapor barrier	13,237	sf	\$1.00	\$13,237
Concrete Podium Slab, 10" Thick, 4000 psi above Basement				
Concrete, slab, 4000 psi	1,321	cy	\$375.00	<i>Parking</i>
Formwork	41,456	sf	\$16.00	<i>Parking</i>
Scaffolding	40,768	sf	\$15.00	<i>Parking</i>
Reinforcing steel, 2psf	81,536	lbs	\$1.25	<i>Parking</i>
Finish to slab	40,768	sf	\$1.20	<i>Parking</i>
Vapor barrier	40,768	sf	\$1.00	<i>Parking</i>
Thermal insulation	40,768	sf	\$2.00	<i>Parking</i>
Structural Steel				
WF beams, allow 10# / sf, at L2, L3, L4 & Enclosed Roof	347	tn	\$4,500.00	\$1,563,099
WF beams, allow 10# / sf, at Roof	150	tn	\$4,500.00	\$673,403
WF beams, allow 20# / sf, at Green Roof	82	tn	\$4,500.00	\$369,540
WF beams, allow 20# / sf, at Glass Canopy	91	tn	\$4,500.00	\$408,645
Bolts, welds and connections, allow 15%	100	tn	\$4,500.00	\$452,203
Fireproofing to steelwork	770	tn	\$500.00	\$385,210
Upper Floors				
Metal deck, 3" thick	69,471	sf	\$6.00	\$416,826
Concrete fill, 4" thick incl. rebar	69,471	sf	\$8.50	\$590,504
Deck edging	3,678	lf	\$35.00	\$128,730
Floor deck finish	69,471	sf		<i>Incl. Above</i>
Roof				
Metal deck, 2" thick	29,929	sf	\$5.50	\$164,610
Concrete fill, 3 1/2" thick incl. rebar	29,929	sf	\$8.25	\$246,914
Deck edging	989	lf	\$35.00	\$34,615
Floor deck finish	29,929	sf		<i>Incl. Above</i>
Green Roof, Sloped				<i>None Shown</i>
Green Roof, Flat				
Metal deck, 3" thick	8,212	sf	\$6.00	\$49,272
Concrete fill, 4" thick incl. rebar	8,212	sf	\$8.50	\$69,802
Deck edging	798	lf	\$35.00	\$27,930
Floor deck finish	8,212	sf		<i>Incl. Above</i>



## DETAIL ELEMENTS - CITY HALL OPTION 1

Element	Quantity	Unit	Unit Cost	Total
Miscellaneous				
Slab depressions, allow	98,700	gsf	\$0.15	\$14,805
Miscellaneous metals and concrete	98,700	gsf	\$4.00	\$394,800
<b>Total - Floor &amp; Roof Structures</b>				<b>\$6,822,981</b>

### 4 Exterior Cladding

Exterior Wall Substrate				
Metal Studs				
Standard, incl. insulation sheathing, vapor barrier at L1	5,416	sf	\$30.00	\$162,480
Standard, incl. insulation sheathing, vapor barrier at L2, L3 & L4	13,847	sf	\$30.00	\$415,410
Standard, incl. insulation sheat., vapor bar. at roof stair/elevator encl.	1,606	sf	\$30.00	\$48,180
Standard, incl. insulation sheat., vapor bar. at roof mechanical encl.	4,424	sf	\$25.00	\$110,600
Standard, incl. insulation sheathing, vapor barrier at roof parapet	3,601	sf	\$25.00	\$90,025
Precast Concrete Panels	7,021	sf	\$90.00	\$631,890
Wood Panels	13,847	sf	\$78.00	\$1,080,066
Metal Screen or Similar, Proud of Finishes				<i>Assume not required</i>
Glazing				
Curtain wall, vision glass at L1	12,178	sf	\$150.00	\$1,826,700
Curtain wall, vision glass at L2, L3 & L4	16,322	sf	\$150.00	\$2,448,300
Curtain wall support, steel framing, AESS	143	tn	\$8,000.00	\$1,144,000
Punched glazing at L1	1,975	sf	\$125.00	\$246,875
Glazing at L2, L3 & L4	13,847	sf	\$150.00	\$2,077,050
Finish at stair/elevator enclosure, allow precast concrete				<i>Incl. Above</i>
Finish at mechanical enclosure	4,424	sf	\$60.00	\$265,440
Finish at roof parapet exterior, allow precast concrete	3,601	sf	\$90.00	\$324,090
Exterior Doors				
Glass doors, double, allow	10	pr	\$7,000.00	\$70,000
Glass doors, single				<i>Assume not required</i>
HM doors, double, allow	1	pr	\$4,750.00	\$4,750
HM doors, single, allow	10	ea	\$2,500.00	\$25,000
Overhead coiling door at loading dock, finish to match exterior cladding	1	ea	\$20,000.00	\$20,000
Automatic door operators, allowance	1	ea	\$25,000.00	\$25,000
Miscellaneous				
Exterior glass canopy	8,265	sf	\$500.00	\$4,132,500
Exterior soffits, including framing and finish	2,977	sf	\$75.00	\$223,275
Misc. anchors, supports, detailing, etc.	73,216	wsf	\$3.00	\$219,648
Mechanical screening, allowance	1	ls	\$400,000.00	\$400,000
Mockups and testing	1	ls	\$100,000.00	\$100,000

<b>Total - Exterior Cladding</b>				<b>\$16,091,279</b>
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## DETAIL ELEMENTS - CITY HALL OPTION 1

Element	Quantity	Unit	Unit Cost	Total
<b>5 Roofing and Waterproofing</b>				
Roofing				
Roof finish				
Finish, incl. roof board and insulation	29,929	sf	\$20.00	\$598,580
Finish, incl. roof board and insulation, at back of parapet	3,601	sf	\$25.00	\$90,025
Pavers at roof patio, allow	5,000	sf	\$60.00	\$300,000
Flashing / Counterflashing				
Aluminum coping at parapets	989	lf	\$42.00	\$41,538
Base flashing, at base of parapets	989	lf	\$30.00	\$29,670
Green Roof system				
Waterproofing, drainage board, and specialties	10,606	sf	\$25.00	\$265,150
Lightweight soil, 36"	912	cy	\$150.00	\$136,867
Shrubbery & planting	8,212	sf	\$10.00	\$82,120
Trees, allowance	8,212	sf	\$15.00	\$123,180
Irrigation system	8,212	sf	\$5.00	\$41,060
Miscellaneous				
Caulking / sealants, misc. sheetmetal	98,700	gsf	\$0.40	\$39,480
Traffic pads, allow	1,500	sf	\$15.00	\$22,500
Glass guardrail	600	lf	\$500.00	\$300,000

<b>Total - Roofing and Waterproofing</b>	<b>\$2,070,170</b>
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## 6 Interior Partitions, Doors and Glazing

Rough Carpentry	98,700	gsf	\$0.50	\$49,350
Interior Partitions	98,700	gsf	\$25.00	\$2,467,500
Interior Doors & Hardware	98,700	gsf	\$6.00	\$592,200
Interior Glazing	98,700	gsf	\$3.00	\$296,100

<b>Total - Interior Partitions, Doors and Glazing</b>	<b>\$3,405,150</b>
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## 7 Floor, Wall and Ceiling Finishes

Floor finishes	98,700	gsf	\$9.00	\$888,300
Vapor membrane at adhered floor finishes	98,700	gsf	\$3.00	\$296,100
Base finishes	98,700	gsf	\$1.20	\$118,440
Wall finishes	98,700	gsf	\$10.00	\$987,000
Ceiling finishes	98,700	gsf	\$8.00	\$789,600
Premium for Council Chamber, allow	12,651	sf	\$50.00	\$632,550
Miscellaneous	98,700	gsf	\$1.25	\$123,375

<b>Total - Floor, Wall and Ceiling Finishes</b>	<b>\$3,835,365</b>
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## DETAIL ELEMENTS - CITY HALL OPTION 1

Element	Quantity	Unit	Unit Cost	Total
<b>8 Function Equipment and Specialties</b>				
Kitchenette / Residential Kitchen Equipment	1	alw	\$25,000.00	\$25,000
Loading dock equipment	1	alw	\$25,000.00	\$25,000
Building casework	98,700	gsf	\$6.00	\$592,200
Restroom partitions & accessories	3,600	sf	\$73.00	\$262,800
Shower accessories & lockers	300	sf	\$90.00	\$27,000
Bike racks at bike storage room, allow	35	ea	\$1,200.00	\$42,000
Building interior signage - directional & room identification	98,700	gsf	\$1.50	\$148,050
Premium for Parking Garage signage / counting systems / barriers / bollards	40,768	sf	\$3.00	<i>Parking</i>
Premium for Council Chamber	12,651	sf	\$25.00	\$316,275
Miscellaneous fixed specialties	98,700	gsf	\$0.85	\$83,895

<b>Total - Function Equipment and Specialties</b>	<b>\$1,522,220</b>
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## 9 Stairs and Vertical Transportation

Stairs & Railings				
Stair, feature - allow roof and basement access	5	flr	\$75,000.00	\$375,000
Stair, standard - no roof access, allow basement access	4	flr	\$35,000.00	\$140,000
Elevators, 5 stop - allow roof & basement access				
Passenger elevator, MRL	2	ea	\$400,000.00	\$800,000
Cab finish, allow	2	ea	\$15,000.00	\$30,000
Service elevator, incl. cab finish	1	ea	\$400,000.00	\$400,000

<b>Total - Stairs and Vertical Transportation</b>	<b>\$1,745,000</b>
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## 10 Plumbing Systems

Basement - Parking	40,768	gsf	\$4.00	<i>Parking</i>
Level 1	29,229	gsf	\$21.00	\$613,817
Level 2	21,219	gsf	\$21.00	\$445,605
Level 3	21,219	gsf	\$21.00	\$445,605
Level 4	21,219	gsf	\$21.00	\$445,605
Roof Enclosures	5,813	gsf	\$14.70	\$85,453

<b>Total - Plumbing Systems</b>	<b>\$2,036,086</b>
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## 11 Heating, Ventilation and Air Conditioning

Basement - Parking	40,768	gsf	\$6.00	<i>Parking</i>
Level 1	29,229	gsf	\$51.00	\$1,490,698

## DETAIL ELEMENTS - CITY HALL OPTION 1

Element	Quantity	Unit	Unit Cost	Total
Level 2	21,219	gsf	\$51.00	\$1,082,185
Level 3	21,219	gsf	\$51.00	\$1,082,185
Level 4	21,219	gsf	\$51.00	\$1,082,185
Roof Enclosures	5,813	gsf	\$35.70	\$207,529

<b>Total - Heating, Ventilation and Air Conditioning</b>	<b>\$4,944,781</b>
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### 12 Electrical Lighting, Power and Communications

#### Electrical Service & Distribution

##### Service & Distribution

Main Switchboard 4000 amp 277/480v 3ph 4w	1	ea	\$125,742.91	\$125,743
Dist. Panelboard 1200 amp 277/480v 3ph 4w	1	ea	\$26,188.69	\$26,189
Dist. Panelboard 2000 amp 277/480v 3ph 4w	1	ea	\$87,450.00	\$87,450
MCC Panelboard 2000 amp 277/480v 3ph 4w	1	ea	\$62,500.00	\$62,500
Panelboard 225 amp 277/480v 3ph 4w	5	ea	\$3,850.24	\$19,251
Panelboard 225 amp 120/208v 3ph 4w	5	ea	\$3,319.88	\$16,599
Panelboard 100 amp 277/480v 3ph 4w	1	ea	\$3,208.21	\$3,208
Panelboard 100 amp 120/208v 3ph 4w	1	ea	\$2,681.48	\$2,681
Panelboard 60 amp 277/480v 3ph 4w	1	ea	\$2,555.35	\$2,555
Panelboard 60 amp 120/208v 3ph 4w	1	ea	\$2,435.04	\$2,435
Transformer 2500 kva 12.47kv - 480- 120/208v 3ph 4w N3R K-Rated	1	ea	\$61,875.00	\$61,875
Transformer 75 kva 480- 120/208v 3ph 4w K-Rated	5	ea	\$6,038.25	\$30,191
Transformer 30 kva 480- 120/208v 3ph 4w K-Rated	1	ea	\$4,975.00	\$4,975
Transformer 15 kva 480- 120/208v 3ph 4w K-Rated	1	ea	\$3,472.00	\$3,472
Busway - 2000A 480/277v 3ph 4w	195	lf	\$1,850.00	\$360,750
Busway - 200A 277/480v 3ph 4w Transition Tap Box	5	ea	\$2,875.00	\$14,375
Busway 400A supports	11	ea	\$450.00	\$4,950
Busway 400A end closure	1	ea	\$2,280.00	\$2,280
Grounding system	1	ls	\$15,000.00	\$15,000

##### Conduit and building wire for service equipment

Feeder, 60 amp	50	lf	\$15.48	\$774
Feeder, 100 amp	150	lf	\$26.29	\$3,944
Feeder, 225 amp	325	lf	\$36.48	\$11,856
Feeder, 400 amp	100	lf	\$96.77	\$9,677
Feeder, 600 amp	100	lf	\$142.89	\$14,289
Feeder, 1000 amp	75	lf	\$250.00	\$18,750
Feeder, 1200 amp (underground)	50	lf	\$298.75	\$14,938
Feeder, 2000 amp	100	lf	\$595.00	\$59,500
Feeder, 4000 amp 21kv (underground) (concrete-encased)	75	lf	\$1,465.27	\$109,895
Conduit supports	1	ls	\$45,000.00	\$45,000

##### EM Service and Distribution

##### Emergency System

Generator, diesel 550 kW 480/277v 3ph 4w N3R	1	ea	\$651,670.00	\$651,670
Automatic transfer switch, 600/3 by-pass isolation				NIC
Automatic transfer switch, 100/4 by-pass isolation	1	ea	\$16,654.00	\$16,654
UPS system, 750kVA with by-pass (15 minute battery)	1	ea	\$575,000.00	\$575,000

##### HVAC Equipment Connections

Conduit and building wire for equipment	98,700	gsf	\$0.50	\$49,350
	98,700	gsf	\$1.75	\$172,725

## DETAIL ELEMENTS - CITY HALL OPTION 1

Element	Quantity	Unit	Unit Cost	Total
Convenience Power				
Convenience power				
Single receptacle, 20 amp 120v	8	ea	\$137.16	\$1,097
Duplex outlet, 20 amp 120v	529	ea	\$137.16	\$72,558
Duplex outlet, 20 amp 120v gfc	57	ea	\$148.31	\$8,454
Duplex outlet, 20 amp 120v gfc wp (site/ext. bldg.)	7	ea	\$178.25	\$1,248
Duplex outlet, 20 amp 120v gfc wp (elevator)	4	ea	\$178.25	\$713
Duplex outlet, 20 amp 120v gfc wp (roof)	5	ea	\$178.25	\$891
Double duplex outlet, 20 amp 120v	754	ea	\$188.74	\$142,310
Specialty receptacles, 30 amp gfc wp (Window washing equip.)	4	ea	\$345.00	\$1,380
Specialty receptacles, 30 amp to 50 amp	35	ea	\$345.00	\$12,075
Floorbox / Poke Thru outlet - double duplex / Tel-Data outlet, 20 amp 120v	40	ea	\$475.00	\$19,000
Junction box, 120V Furniture connection	75	ea	\$275.00	\$20,625
Electronic door hold open connection, 120v	7	ea	\$500.00	\$3,500
Fire Alarm system connection, 120v	1	ls	\$15,000.00	\$15,000
Fire Fighter / Public Emergency Phone system connection, 120v	1	ls	\$5,000.00	\$5,000
Security system connection, 120v	1	ls	\$9,250.00	\$9,250
Conduit and building wire for power				
Feeder, 15 amp - 20 amp	28,341	lf	\$11.50	\$325,922
Feeder, 15 amp - 20 amp (underground)	880	lf	\$10.95	\$9,636
Lighting & Branch Wiring				
Light Fixtures LED, Interior & Exterior (Bldg.)	98,700	gsf	\$11.00	\$1,085,700
Lighting Control System	98,700	gsf	\$3.50	\$345,450
Conduit and building wire for lighting and lighting control & daylighting sy.				
Feeder, 15 amp - 20 amp	52,274	lf	\$11.50	\$601,151
Feeder, 15 amp - 20 amp (underground)	8,000	lf	\$10.95	\$87,600
Cat 6e lighting control and daylighting system cable	1	ls	\$75,000.00	\$75,000
Miscellaneous electrical				
Coordination study and third party services	1	ls	\$50,000.00	\$50,000
Testing	1	ls	\$75,000.00	\$75,000
Lightning protection system	1	ls	\$225,000.00	\$225,000
BIM	98,700	gsf	\$2.00	\$197,400
Temporary power & lighting	98,700	gsf	\$2.25	\$222,075
Communications & Security				
Telephone Data Systems conduit, cable tray ,back boxes, rough	98,700	gsf	\$3.75	\$370,125
Access Control	98,700	gsf	\$2.00	\$197,400
Security Systems	98,700	gsf	\$2.50	\$246,750
Fire alarm Systems	98,700	gsf	\$4.50	\$444,150
Fire Fighter and Public Emergency Phone Systems	98,700	gsf	\$1.25	\$123,375
A/V Systems rough conduit and back boxes	98,700	gsf	\$1.25	\$123,375
Sound Masking System	98,700	gsf	\$2.15	\$212,205
Other Electrical Systems				
Photovoltaic Steel Structure @ Roof				By Others
Photovoltaic Power				
PV System @ Roof (Bldg.)				
PV System	29,929	gsf		See Summary

Total - Electrical Lighting, Power and Communications

\$7,930,916

## DETAIL ELEMENTS - CITY HALL OPTION 1

Element	Quantity	Unit	Unit Cost	Total
<b>13 Fire Protection Systems</b>				
Basement - Parking	40,768	gsf	\$5.00	<i>Parking</i>
Level 1	29,229	gsf	\$7.00	\$204,606
Level 2	21,219	gsf	\$7.00	\$148,535
Level 3	21,219	gsf	\$7.00	\$148,535
Level 4	21,219	gsf	\$7.00	\$148,535
Roof Enclosures	5,813	gsf	\$4.90	\$28,484
Soffits / Overhangs	2,977	sf	\$7.00	\$20,839

<b>Total - Fire Protection Systems</b>	<b>\$699,534</b>
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### 14 Site Preparation and Demolition

Master Plan Scope of Work

<b>Total - Site Preparation and Demolition</b>
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### 15 Site Paving, Structures & Landscaping

Master Plan Scope of Work

<b>Total - Site Paving, Structures &amp; Landscaping</b>
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### 16 Utilities on Site

Utility Connections to Building, <=200LF Runs	1	ls	\$500,000.00	\$500,000
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<b>Total - Utilities on Site</b>	<b>\$500,000</b>
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## Site Development Phase 1 - Option 1

## SUMMARY - SITE DEVELOPMENT PHASE 1 - OPTION 1

Element	Subtotal	Total	Cost / SF	Cost / SF
<b>E) Site Construction (14-16)</b>		<b>\$11,773,149</b>		<b>\$26.19</b>
14 Site Preparation and Demolition	\$1,169,244		\$2.60	
15 Site Paving, Structures & Landscaping	\$8,917,898		\$19.84	
16 Utilities on Site	\$1,686,008		\$3.75	
Subtotal		<u>\$11,773,149</u>		<u>\$26.19</u>
General Conditions	10.00%	\$1,177,315		\$2.62
Subtotal		<u>\$12,950,464</u>		<u>\$28.80</u>
Bonds & Insurance	2.00%	\$235,463		\$0.52
Subtotal		<u>\$13,185,927</u>		<u>\$29.33</u>
Contractor's Fee	5.00%	\$659,296		\$1.47
Subtotal		<u>\$13,845,224</u>		<u>\$30.79</u>
Design Contingency	20.00%	\$2,769,045		\$6.16
<b>TOTAL ESTIMATED CONSTRUCTION COST</b>		<b>\$16,614,268</b>		<b>\$36.95</b>

Total Area: 449,602 SF



## DETAIL ELEMENTS - SITE DEVELOPMENT PHASE 1 - OPTION 1

Element	Quantity	Unit	Unit Cost	Total
<b>14 Site Preparation and Demolition</b>				
Earthwork / Demo				
Clear and grub site	449,602	sf	\$0.50	\$224,801
Cut, allow 6" average over site area	9,000	cy	\$10.00	\$90,000
Fill, allow 3" average over site area	5,000	cy	\$10.00	\$50,000
Offhaul	5,000	cy	\$35.00	\$175,000
Tree protection	449,602	sf	\$0.25	\$112,401
Miscellaneous rough grading, allowance	449,602	sf	\$0.35	\$157,361
Fine grading	449,602	sf	\$0.50	\$224,801
Erosion control	449,602	sf	\$0.30	\$134,881
<b>Total - Site Preparation and Demolition</b>				<b>\$1,169,244</b>
<b>15 Site Paving, Structures &amp; Landscaping</b>				
Hardscape / Paving				
Granite pavers at Plaza	52,091	sf	\$60.00	\$3,125,460
Precast concrete pavers, custom, back of house	23,639	sf	\$30.00	\$709,170
AC Paving				
Parking lot				<i>Excluded</i>
Driveway / access road - overlay only	37,490	sf	\$2.00	\$74,980
Curbs and gutters to above	37,490	sf	\$1.00	\$37,490
Pedestrian walkways, assume 7'-0" wide	4,472	lf	\$140.00	\$626,080
Amphitheatre, allow				
Granite benches	182	lf	\$400.00	\$72,800
Granite paving	2,873	sf	\$60.00	\$172,380
Landscaping				<i>With Landscaping</i>
Miscellaneous furniture, lighting, power, etc.	10,236	sf	\$5.00	\$51,180
Site Structures, Seat Walls, Etc., Allow				
Granite benches, partially buried	1,116	lf	\$475.00	\$530,100
Miscellaneous, allow	449,602	gsf	\$0.30	\$134,881
Bike Racks, allow	50	ea	\$1,200.00	\$60,000
Secure bicycle parking, covered, incl. fence, gate and bike racks, allow	1	ea	\$20,000.00	\$20,000
Secure Entrance, Barriers, Badged w / Intercom				
Entry / Exit, allow				<i>Assume Not Required</i>
Entry Only, allow				<i>Assume Not Required</i>
Control station, allow				<i>Assume Not Required</i>
Signage & Wayfinding				
Parking lot direction signage, paint				<i>Excluded</i>
Driveway / access road directional signage				<i>Included</i>
Parking stalls				<i>Excluded</i>
Metal embedded signage, at pedestrian surfaces, allow	2	ea	\$15,000.00	\$30,000
Building exterior signage, allow	1	ls	\$50,000.00	\$50,000
Landscaping and Irrigation				
"Light touch", typical	185,328	sf	\$5.00	\$926,640
Upgraded landscaped areas	116,877	sf	\$15.00	\$1,753,155
Large trees, including tree grates	45	ea	\$2,000.00	\$90,000
Small red trees, including tree grates	37	ea	\$1,700.00	\$62,900
Bio-Retention Areas, Plaza Only, allow 10%	5,209	gsf	\$75.00	\$390,683

## DETAIL ELEMENTS - SITE DEVELOPMENT PHASE 1 - OPTION 1

Element	Quantity	Unit	Unit Cost	Total
Total - Site Paving, Structures & Landscaping				\$8,917,898
<b>16 Utilities on Site</b>				
Utilities				
Traffic Signalization				<i>Excluded</i>
Miscellaneous site utilities	449,602	sf	\$1.50	\$674,403
Site utility connections to bldgs.				<i>With Buildings</i>
Central Plant and Fire Water Loops				<i>Excluded</i>
Storm Drainage	449,602	sf	\$1.00	\$449,602
Site Lighting	449,602	sf	\$1.25	\$562,003
Total - Utilities on Site				\$1,686,008

## City Hall Option 2

## SUMMARY - CITY HALL OPTION 2

Element	Subtotal	Total	Cost / SF	Cost / SF
<b>A) Shell (1-5)</b>		<b>\$26,247,829</b>		<b>\$265.94</b>
1 Foundations	\$2,794,136		\$28.31	
2 Vertical Structure	\$1,786,636		\$18.10	
3 Floor & Roof Structures	\$7,252,862		\$73.48	
4 Exterior Cladding	\$11,236,797		\$113.85	
5 Roofing and Waterproofing	\$3,177,398		\$32.19	
<b>B) Interiors (6-7)</b>		<b>\$7,240,515</b>		<b>\$73.36</b>
6 Interior Partitions, Doors and Glazing	\$3,405,150		\$34.50	
7 Floor, Wall and Ceiling Finishes	\$3,835,365		\$38.86	
<b>C) Equipment and Vertical Transportation (8-9)</b>		<b>\$3,267,220</b>		<b>\$33.10</b>
8 Function Equipment and Specialties	\$1,522,220		\$15.42	
9 Stairs and Vertical Transportation	\$1,745,000		\$17.68	
<b>D) Mechanical and Electrical (10-13)</b>		<b>\$16,248,896</b>		<b>\$164.63</b>
10 Plumbing Systems	\$2,036,070		\$20.63	
11 Heating, Ventilation and Air Conditioning	\$4,944,742		\$50.10	
12 Electrical Lighting, Power and Communications	\$8,567,008		\$86.80	
13 Fire Protection Systems	\$701,076		\$7.10	
<b>E) Site Construction (14-16)</b>		<b>\$500,000</b>		<b>\$5.07</b>
14 Site Preparation and Demolition				
15 Site Paving, Structures & Landscaping				
16 Utilities on Site	\$500,000		\$5.07	
Subtotal		\$53,504,460		\$542.09
General Conditions	10.00%	\$5,350,446		\$54.21
Subtotal		\$58,854,906		\$596.30
Bonds & Insurance	2.00%	\$1,070,089		\$10.84
Subtotal		\$59,924,995		\$607.14
Contractor's Fee	5.00%	\$2,996,250		\$30.36
Subtotal		\$62,921,245		\$637.50
Design Contingency	20.00%	\$12,584,249		\$127.50
<b>TOTAL ESTIMATED CONSTRUCTION COST</b>		<b>\$75,505,494</b>		<b>\$765.00</b>

Total Area: 98,700 SF

## DETAIL ELEMENTS - CITY HALL OPTION 2

Element	Quantity	Unit	Unit Cost	Total
<b>1 Foundations</b>				
Layout	40,768	sf	\$0.50	\$20,384
Basement Excavation				
Mass Excavation	24,159	cy	\$8.50	<i>Parking</i>
Dispose of excavated material	28,991	tn	\$30.00	<i>Parking</i>
Shoring, Soldier Pile Wall	20,620	sf	\$55.00	<i>Parking</i>
Backfill	1,845	tn	\$40.00	<i>Parking</i>
Dewatering system set up	1	ls	\$100,000.00	<i>Parking</i>
Dewatering management, allow 9 months	9	mnth	\$10,000.00	<i>Parking</i>
Foundations				
Rat Slab - Poured over complete basement	453	cy	\$225.00	\$101,920
Pile caps	853	cy	\$750.00	\$639,375
Grade beams	736	cy	\$750.00	\$552,188
Waterproofing slab	736	sf	\$11.00	\$8,099
Misc foundations for shear walls, etc	227	lf	\$750.00	\$170,250
Piles / caissons / deep foundations, allow	40,768	sf	\$27.72	\$1,130,001
Miscellaneous				
Elevator pit, passenger	2	ea	\$25,000.00	\$50,000
Elevator pit, service	1	ea	\$20,000.00	\$20,000
Mud slab, allow	40,768	sf	\$2.50	\$101,920
<b>Total - Foundations</b>				<b>\$2,794,136</b>

## 2 Vertical Structure

Cast-In-Place Concrete Shear Walls, allow 16'-0" high, 1'-0" thick at Basement				
Concrete, shear walls, 5000 psi	642	cy	\$425.00	<i>Parking</i>
Formwork, shear walls	32,992	sf	\$24.00	<i>Parking</i>
Wall reinforcing (150 #/cy)	96,227	lbs	\$1.75	<i>Parking</i>
Finish to walls	16,496	sf	\$1.50	<i>Parking</i>
Waterproofing	16,496	sf	\$18.00	<i>Parking</i>
Thermal insulation	16,496	sf	\$2.00	<i>Parking</i>
Cast-In-Place Concrete Columns, allow at Basement	40,768	sf	\$8.50	<i>Parking</i>
Structural Steel				
Structural steel columns, tube steel	130	tn	\$5,000.00	\$647,700
Structural steel columns at green roof, tube steel	18	tn	\$5,000.00	\$90,000
Round columns	37	tn	\$5,000.00	\$182,563
Round columns at green roof	18	tn	\$5,000.00	\$90,000
BRBFs, allow	98,700	gsf	\$5.00	\$493,500
Bolts, welds and connections, allow 15%	30	tn	\$5,500.00	\$166,693
Fireproofing to steelwork	232	tn	\$500.00	\$116,180

<b>Total - Vertical Structure</b>	<b>\$1,786,636</b>
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## DETAIL ELEMENTS - CITY HALL OPTION 2

Element	Quantity	Unit	Unit Cost	Total
<b>3 Floor &amp; Roof Structures</b>				
Slab On Grade 6" Thick, 4000 psi, at Basement				
Concrete, slab on grade, 4000 psi	793	cy	\$375.00	\$297,267
Formwork	516	sf	\$16.00	\$8,248
Sand base, 4"	40,768	sf	\$1.50	\$61,152
Gravel sub base, 6"	40,768	sf	\$1.72	\$70,121
Reinforcing steel, 2psf	81,536	lbs	\$1.25	\$101,920
Finish to slab	40,768	sf	\$1.20	\$48,922
Vapor barrier	40,768	sf	\$1.00	\$40,768
Slab On Grade 6" Thick, 4000 psi, at Level 1				
Concrete, slab on grade, 4000 psi	377	cy	\$375.00	\$141,560
Formwork	309	sf	\$16.00	\$4,944
Sand base, 4"	19,414	sf	\$1.50	\$29,121
Gravel sub base, 6"	19,414	sf	\$1.72	\$33,392
Reinforcing steel, 2psf	38,828	lbs	\$1.25	\$48,535
Finish to slab	19,414	sf	\$1.20	\$23,297
Vapor barrier	19,414	sf	\$1.00	\$19,414
Concrete Podium Slab, 10" Thick, 4000 psi above Basement				
Concrete, slab, 4000 psi	1,321	cy	\$375.00	<i>Parking</i>
Formwork	41,627	sf	\$16.00	<i>Parking</i>
Scaffolding	40,768	sf	\$15.00	<i>Parking</i>
Reinforcing steel, 2psf	81,536	lbs	\$1.25	<i>Parking</i>
Finish to slab	40,768	sf	\$1.20	<i>Parking</i>
Vapor barrier	40,768	sf	\$1.00	<i>Parking</i>
Thermal insulation	40,768	sf	\$2.00	<i>Parking</i>
Structural Steel				
WF beams, allow 10# / sf, at L2, L3, L4 & Enclosed Roof	342	tn	\$4,500.00	\$1,538,261
WF beams, allow 10# / sf, at Roof	152	tn	\$4,500.00	\$682,482
WF beams, allow 20# / sf, at Green Roof	189	tn	\$4,500.00	\$850,500
Bolts, welds and connections, allow 15%	102	tn	\$4,500.00	\$460,686
Fireproofing to steelwork	785	tn	\$500.00	\$392,437
Upper Floors				
Metal deck, 3" thick	68,367	sf	\$6.00	\$410,203
Concrete fill, 4" thick incl. rebar	68,367	sf	\$8.50	\$581,121
Deck edging, 16 GA	3,594	lf	\$35.00	\$125,790
Floor deck finish				<i>Incl. Above</i>
Roof				
Metal deck, 2" thick	30,333	sf	\$5.50	\$166,829
Concrete fill, 3 1/2" thick incl. rebar	30,333	sf	\$8.25	\$250,243
Deck edging, 16 GA	1,608	lf	\$35.00	\$56,280
Floor deck finish				<i>Incl. Above</i>
Green Roof, Sloped				
Metal deck, 3" thick	15,700	sf	\$6.00	\$94,200
Concrete fill, 4" thick incl. rebar	15,700	sf	\$8.50	\$133,450
Deck edging, 16 GA	842	lf	\$35.00	\$29,470
Floor deck finish				<i>Incl. Above</i>
Green Roof, Flat				
Metal deck, 3" thick	7,950	sf	\$6.00	\$47,700

## DETAIL ELEMENTS - CITY HALL OPTION 2

Element	Quantity	Unit	Unit Cost	Total
Concrete fill, 4" thick incl. rebar	7,950	sf	\$8.50	\$67,575
Deck edging, 16 GA	782	lf	\$35.00	\$27,370
Floor deck finish				<i>Incl. Above</i>
Miscellaneous				
Slab depressions, allow	98,700	gsf	\$0.15	\$14,805
Miscellaneous metals and concrete	98,700	gsf	\$4.00	\$394,800

### Total - Floor & Roof Structures

\$7,252,862

## 4 Exterior Cladding

### Exterior Wall Substrate

#### Metal Studs

Standard, incl. insulation sheathing, vapor barrier at L1	9,286	sf	\$30.00	\$278,580
Faceted walls, incl. insulation sheathing, vapor barrier at L1	1,088	sf	\$35.00	\$38,080
Standard, incl. insulation sheathing, vapor barrier at L2, L3 & L4	7,249	sf	\$30.00	\$217,470
Faceted walls, incl. insulation sheathing, vapor barrier at L2, L3 & L4	10,788	sf	\$35.00	\$377,580
Standard, incl. insulation sheat., vapor bar. at roof stair/elevator encl.	585	sf	\$30.00	\$17,550
Standard, incl. insulation sheat., vapor bar. at roof mechanical encl.	4,230	sf	\$25.00	\$105,750
Standard, incl. insulation sheathing, vapor barrier at roof parapet	3,112	sf	\$25.00	\$77,800

#### Precast Concrete Panels

	12,032	sf	\$90.00	\$1,082,880
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#### Metal Panels

	16,962	sf	\$80.00	\$1,356,960
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#### Glazing

Curtain wall, vision glass at L1	6,074	sf	\$150.00	\$911,100
Faceted curtain wall, vision glass at L1	714	sf	\$155.00	\$110,670
Curtain wall, vision glass at L2, L3 & L4	6,151	sf	\$150.00	\$922,650
Faceted curtain wall, vision glass at L2, L3 & L4	738	sf	\$155.00	\$114,390
Curtain wall support, steel framing, AESS	69	tn	\$8,000.00	\$552,000
Punched glazing	21,769	sf	\$125.00	\$2,721,125

#### Finish at stair/elevator enclosure, allow precast concrete

				<i>Incl. Above</i>
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Finish at mechanical enclosure	4,230	sf	\$60.00	\$253,800
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Finish at roof parapet exterior, allow precast concrete	3,112	sf	\$90.00	\$280,080
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#### Exterior Doors

Glass doors, double	10	ea	\$7,000.00	\$70,000
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Glass doors, single *Assume not required*

HM doors, double	1	pr	\$4,750.00	\$4,750
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HM doors, single, allow	10	ea	\$2,500.00	\$25,000
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Overhead coiling door at loading dock, finish to match exterior cladding	1	ea	\$20,000.00	\$20,000
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Automatic door operators, allowance	1	ea	\$25,000.00	\$25,000
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#### Miscellaneous

Wood cladding at terrace walls, ceiling and entrance	9,210	sf	\$78.00	\$718,380
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Exterior soffits, including framing and finish	3,198	sf	\$75.00	\$239,850
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Misc. anchors, supports, detailing, etc.	71,784	wsf	\$3.00	\$215,352
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Mechanical screening, allowance	1	ls	\$400,000.00	\$400,000
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Mockups and testing	1	ls	\$100,000.00	\$100,000
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### Total - Exterior Cladding

\$11,236,797

## DETAIL ELEMENTS - CITY HALL OPTION 2

Element	Quantity	Unit	Unit Cost	Total
<b>5 Roofing and Waterproofing</b>				
Roofing				
Roof finish				
Finish, incl. roof board and insulation	30,333	sf	\$20.00	\$606,650
Finish, incl. roof board and insulation, at back of parapet	3,112	sf	\$25.00	\$77,800
Wood deck / pavers at terraces	1,903	sf	\$75.00	\$142,725
Pavers at roof patio	5,000	sf	\$60.00	\$300,000
Flashing / Counterflashing				
Aluminum coping at parapets	894	lf	\$42.00	\$37,548
Base flashing, at base of parapets	894	lf	\$30.00	\$26,820
Green Roof system				
Waterproofing, drainage board, and specialties	21,645	sf	\$25.00	\$541,125
Lightweight soil, 36"	2,405	cy	\$150.00	\$360,750
Shrubbery & planting	18,900	sf	\$10.00	\$189,000
Trees, allowance	18,900	sf	\$15.00	\$283,500
Irrigation system	18,900	sf	\$5.00	\$94,500
Miscellaneous				
Caulking / sealants, misc. sheetmetal	98,700	gsf	\$0.40	\$39,480
Traffic pads, allow	1,500	sf	\$15.00	\$22,500
Glass guardrail	910	lf	\$500.00	\$455,000

<b>Total - Roofing and Waterproofing</b>	<b>\$3,177,398</b>
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## 6 Interior Partitions, Doors and Glazing

Rough Carpentry	98,700	gsf	\$0.50	\$49,350
Interior Partitions	98,700	gsf	\$25.00	\$2,467,500
Interior Doors & Hardware	98,700	gsf	\$6.00	\$592,200
Interior Glazing	98,700	gsf	\$3.00	\$296,100

<b>Total - Interior Partitions, Doors and Glazing</b>	<b>\$3,405,150</b>
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## 7 Floor, Wall and Ceiling Finishes

Floor finishes	98,700	gsf	\$9.00	\$888,300
Vapor membrane at adhered floor finishes	98,700	gsf	\$3.00	\$296,100
Base finishes	98,700	gsf	\$1.20	\$118,440
Wall finishes	98,700	gsf	\$10.00	\$987,000
Ceiling finishes	98,700	gsf	\$8.00	\$789,600
Premium for Council Chamber	12,651	sf	\$50.00	\$632,550
Miscellaneous	98,700	gsf	\$1.25	\$123,375

<b>Total - Floor, Wall and Ceiling Finishes</b>	<b>\$3,835,365</b>
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## DETAIL ELEMENTS - CITY HALL OPTION 2

Element	Quantity	Unit	Unit Cost	Total
<b>8 Function Equipment and Specialties</b>				
Kitchen equipment	1	alw	\$25,000.00	\$25,000
Loading dock equipment	1	alw	\$25,000.00	\$25,000
Building casework	98,700	gsf	\$6.00	\$592,200
Restroom partitions & accessories	3,600	sf	\$73.00	\$262,800
Shower accessories & lockers	300	sf	\$90.00	\$27,000
Bike racks at bike storage room, allow	35	ea	\$1,200.00	\$42,000
Building interior signage - directional & room identification	98,700	gsf	\$1.50	\$148,050
Premium for Parking Garage signage / counting systems / barriers / bollards	28,117	sf	\$3.00	<i>Parking</i>
Premium for Council Chamber	12,651	sf	\$25.00	\$316,275
Miscellaneous fixed specialties	98,700	gsf	\$0.85	\$83,895

### Total - Function Equipment and Specialties

**\$1,522,220**

## 9 Stairs and Vertical Transportation

Stairs & Railings				
Stair, feature - allow roof and basement access	5	flt	\$75,000.00	\$375,000
Stair, standard - no roof access, allow basement access	4	flt	\$35,000.00	\$140,000
Elevators, 5 stop - allow roof & basement access				
Passenger elevator, MRL	2	ea	\$400,000.00	\$800,000
Cab finish, allow	2	ea	\$15,000.00	\$30,000
Service elevator, incl. cab finish	1	ea	\$400,000.00	\$400,000

### Total - Stairs and Vertical Transportation

**\$1,745,000**

## 10 Plumbing Systems

Basement - Parking	40,768	gsf	\$4.00	<i>Parking</i>
Level 1	30,333	gsf	\$21.00	\$636,983
Level 2	20,851	gsf	\$21.00	\$437,878
Level 3	20,851	gsf	\$21.00	\$437,878
Level 4	20,851	gsf	\$21.00	\$437,878
Roof Enclosures	5,813	gsf	\$14.70	\$85,453

### Total - Plumbing Systems

**\$2,036,070**

## 11 Heating, Ventilation and Air Conditioning

Basement - Parking	40,768	gsf	\$6.00	<i>Parking</i>
Level 1	30,333	gsf	\$51.00	\$1,546,958
Level 2	20,851	gsf	\$51.00	\$1,063,418
Level 3	20,851	gsf	\$51.00	\$1,063,418
Level 4	20,851	gsf	\$51.00	\$1,063,418
Roof Enclosures	5,813	gsf	\$35.70	\$207,529

## DETAIL ELEMENTS - CITY HALL OPTION 2

Element	Quantity	Unit	Unit Cost	Total
Total - Heating, Ventilation and Air Conditioning				\$4,944,742
<b>12 Electrical Lighting, Power and Communications</b>				
Electrical Service & Distribution				
Service & Distribution				
Main Switchboard 4000 amp 277/480v 3ph 4w	1	ea	\$125,742.91	\$125,743
Dist. Panelboard 1200 amp 277/480v 3ph 4w	1	ea	\$26,188.69	\$26,189
Dist. Panelboard 2000 amp 277/480v 3ph 4w	1	ea	\$87,450.00	\$87,450
MCC Panelboard 2000 amp 277/480v 3ph 4w	1	ea	\$62,500.00	\$62,500
Panelboard 225 amp 277/480v 3ph 4w	6	ea	\$3,850.24	\$23,101
Panelboard 225 amp 120/208v 3ph 4w	6	ea	\$3,319.88	\$19,919
Panelboard 100 amp 277/480v 3ph 4w	1	ea	\$3,208.21	\$3,208
Panelboard 100 amp 120/208v 3ph 4w	1	ea	\$2,681.48	\$2,681
Panelboard 60 amp 277/480v 3ph 4w	1	ea	\$2,555.35	\$2,555
Panelboard 60 amp 120/208v 3ph 4w	1	ea	\$2,435.04	\$2,435
Transformer 2500 kva 12.47kv - 480- 120/208v 3ph 4w N3R K-Rated	1	ea	\$61,875.00	\$61,875
Transformer 75 kva 480- 120/208v 3ph 4w K-Rated	5	ea	\$6,038.25	\$30,191
Transformer 30 kva 480- 120/208v 3ph 4w K-Rated	1	ea	\$4,975.00	\$4,975
Transformer 15 kva 480- 120/208v 3ph 4w K-Rated	1	ea	\$3,472.00	\$3,472
Busway - 2000A 480/277v 3ph 4w	245	lf	\$1,850.00	\$453,250
Busway - 200A 277/480v 3ph 4w Transition Tap Box	6	ea	\$2,875.00	\$17,250
Busway 400A supports	14	ea	\$450.00	\$6,300
Busway 400A end closure	1	ea	\$2,280.00	\$2,280
Grounding system	1	ls	\$15,000.00	\$15,000
Conduit and building wire for service equipment				
Feeder, 60 amp	63	lf	\$15.48	\$975
Feeder, 100 amp	189	lf	\$26.29	\$4,969
Feeder, 225 amp	409	lf	\$36.48	\$14,920
Feeder, 400 amp	125	lf	\$96.77	\$12,096
Feeder, 600 amp	125	lf	\$142.89	\$17,861
Feeder, 1000 amp	100	lf	\$250.00	\$25,000
Feeder, 1200 amp (underground)	75	lf	\$298.75	\$22,406
Feeder, 2000 amp	125	lf	\$595.00	\$74,375
Feeder, 4000 amp 21kv (underground) (concrete-encased)	100	lf	\$1,465.27	\$146,527
Conduit supports	1	ls	\$55,000.00	\$55,000
EM Service and Distribution				
Emergency System				
Generator, diesel 550 kW 480/277v 3ph 4w N3R	1	ea	\$651,670.00	\$651,670
Automatic transfer switch, 600/3 by-pass isolation				NIC
Automatic transfer switch, 100/4 by-pass isolation	1	ea	\$16,654.00	\$16,654
UPS system, 750kVA with by-pass (15 minute battery)	1	ea	\$575,000.00	\$575,000
HVAC Equipment Connections	98,700	gsf	\$0.50	\$49,350
Conduit and building wire for equipment	98,700	gsf	\$1.75	\$172,725
Convenience Power				
Convenience power				
Single receptacle, 20 amp 120v	10	ea	\$137.16	\$1,372
Duplex outlet, 20 amp 120v	665	ea	\$137.16	\$91,211

## DETAIL ELEMENTS - CITY HALL OPTION 2

Element	Quantity	Unit	Unit Cost	Total
Duplex outlet, 20 amp 120v gfc	72	ea	\$148.31	\$10,678
Duplex outlet, 20 amp 120v gfc wp (site/ext. bldg.)	9	ea	\$178.25	\$1,604
Duplex outlet, 20 amp 120v gfc wp (elevator)	5	ea	\$178.25	\$891
Duplex outlet, 20 amp 120v gfc wp (roof)	6	ea	\$178.25	\$1,070
Double duplex outlet, 20 amp 120v	950	ea	\$188.74	\$179,303
Specialty receptacles, 30 amp gfc wp (Window washing equip.)	5	ea	\$345.00	\$1,725
Specialty receptacles, 30 amp to 50 amp	44	ea	\$345.00	\$15,180
Floorbox / Poke Thru outlet - double duplex / Tel-Data outlet, 20 amp 120v	50	ea	\$475.00	\$23,750
Junction box, 120V Furniture connection	95	ea	\$275.00	\$26,125
Electronic door hold open connection, 120v	9	ea	\$500.00	\$4,500
Fire Alarm system connection, 120v	1	ls	\$19,000.00	\$19,000
Fire Fighter / Public Emergency Phone system connection, 120v	1	ls	\$6,300.00	\$6,300
Security system connection, 120v	1	ls	\$11,655.00	\$11,655
Conduit and building wire for power				
Feeder, 15 amp - 20 amp	35,709	lf	\$11.50	\$410,654
Feeder, 15 amp - 20 amp (underground)	1,108	lf	\$10.95	\$12,133
Lighting & Branch Wiring				
Light Fixtures LED, Interior & Exterior (Bldg.)	98,700	gsf	\$11.00	\$1,085,700
Lighting Control System	98,700	gsf	\$3.50	\$345,450
Conduit and building wire for lighting and lighting control & daylighting system				
Feeder, 15 amp - 20 amp	65,865	lf	\$11.50	\$757,448
Feeder, 15 amp - 20 amp (underground)	10,000	lf	\$10.95	\$109,500
Cat 6e lighting control and daylighting system cable	1	ls	\$100,000.00	\$100,000
Miscellaneous electrical				
Coordination study and third party services	1	ls	\$75,000.00	\$75,000
Testing	1	ls	\$100,000.00	\$100,000
Lightning protection system	1	ls	\$250,000.00	\$250,000
Cathodic protection system				
BIM	98,700	gsf	\$2.00	\$197,400
Temporary power & lighting	98,700	gsf	\$2.25	\$222,075
Communications & Security				
Telephone Data Systems conduit, cable tray ,back boxes, rough	98,700	gsf	\$3.75	\$370,125
Access Control	98,700	gsf	\$2.00	\$197,400
Security Systems	98,700	gsf	\$2.50	\$246,750
Fire alarm Systems	98,700	gsf	\$4.50	\$444,150
Fire Fighter and Public Emergency Phone Systems	98,700	gsf	\$1.25	\$123,375
A/V Systems rough conduit and back boxes	98,700	gsf	\$1.25	\$123,375
Sound Masking System	98,700	gsf	\$2.15	\$212,205
Other Electrical Systems				
Photovoltaic Power				
PV System @ Roof (Bldg.)				
PV System	30,333	gsf		See Summary

**Total - Electrical Lighting, Power and Communications**

**\$8,567,008**

## DETAIL ELEMENTS - CITY HALL OPTION 2

Element	Quantity	Unit	Unit Cost	Total
<b>13 Fire Protection Systems</b>				
Basement - Parking	40,768	gsf	\$5.00	<i>Parking</i>
Level 1	30,333	gsf	\$7.00	\$212,328
Level 2	20,851	gsf	\$7.00	\$145,959
Level 3	20,851	gsf	\$7.00	\$145,959
Level 4	20,851	gsf	\$7.00	\$145,959
Roof Enclosures	5,813	gsf	\$4.90	\$28,484
Soffits / Overhangs	3,198	sf	\$7.00	\$22,386

<b>Total - Fire Protection Systems</b>	<b>\$701,076</b>
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### 14 Site Preparation and Demolition

Master Plan Scope of Work

<b>Total - Site Preparation and Demolition</b>
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### 15 Site Paving, Structures & Landscaping

Master Plan Scope of Work

<b>Total - Site Paving, Structures &amp; Landscaping</b>
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### 16 Utilities on Site

Utility Connections to Building, <=200LF Runs	1	ls	\$500,000.00	\$500,000
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<b>Total - Utilities on Site</b>	<b>\$500,000</b>
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## Site Development Phase 1 - Option 2

## SUMMARY - SITE DEVELOPMENT PHASE 1 - OPTION 2

Element	Subtotal	Total	Cost / SF	Cost / SF
<b>E) Site Construction (14-16)</b>		<b>\$14,020,584</b>		<b>\$35.29</b>
14 Site Preparation and Demolition	\$1,194,862		\$3.01	
15 Site Paving, Structures & Landscaping	\$10,185,861		\$25.64	
16 Utilities on Site	\$2,639,860		\$6.64	
Subtotal		\$14,020,584		\$35.29
General Conditions	10.00%	\$1,402,058		\$3.53
Subtotal		\$15,422,642		\$38.82
Bonds & Insurance	2.00%	\$280,412		\$0.71
Subtotal		\$15,703,054		\$39.52
Contractor's Fee	5.00%	\$785,153		\$1.98
Subtotal		\$16,488,206		\$41.50
Design Contingency	20.00%	\$3,297,641		\$8.30
<b>TOTAL ESTIMATED CONSTRUCTION COST</b>		<b>\$19,785,848</b>		<b>\$49.80</b>

Total Area: 397,296 SF

## DETAIL ELEMENTS - SITE DEVELOPMENT PHASE 1 - OPTION 2

Element	Quantity	Unit	Unit Cost	Total
<b>14 Site Preparation and Demolition</b>				
Earthwork / Demo				
Clear and grub site	397,296	sf	\$0.50	\$198,648
Cut, allow 6" average over site area	8,000	cy	\$10.00	\$80,000
Fill, allow 3" average over site area	4,000	cy	\$10.00	\$40,000
Offhaul	4,000	cy	\$35.00	\$140,000
Berms and mounding	15,000	cy	\$12.00	\$180,000
Tree protection	397,296	sf	\$0.25	\$99,324
Miscellaneous rough grading, allowance	397,296	sf	\$0.35	\$139,054
Fine grading	397,296	sf	\$0.50	\$198,648
Erosion control	397,296	sf	\$0.30	\$119,189
<b>Total - Site Preparation and Demolition</b>				<b>\$1,194,862</b>
<b>15 Site Paving, Structures &amp; Landscaping</b>				
Hardscape / Paving				
Granite pavers at Plaza	60,503	sf	\$60.00	\$3,630,180
Precast concrete pavers, custom			<i>Assume Not Required</i>	
AC Paving				
Parking lot				<i>Excluded</i>
Driveway / access road - overlay only	17,785	sf	\$2.00	\$35,570
Curbs and gutters to above	17,785	sf	\$1.00	\$17,785
Pedestrian walkways, assume 7'-0" wide	5,702	lf	\$140.00	\$798,280
Amphitheatre, allow				
Granite benches	182	lf	\$400.00	\$72,800
Granite paving	2,873	sf	\$60.00	\$172,380
Landscaping				<i>With Landscaping</i>
Miscellaneous furniture, lighting, power, etc.	8,616	sf	\$5.00	\$43,080
Site Structures, Seat Walls, Etc., Allow				
Granite benches, circular, 6'-0" diameter	65	ea	\$9,000.00	\$585,000
Miscellaneous, allow	397,296	gsf	\$0.30	\$119,189
Bike Racks, allow	50	ea	\$1,200.00	\$60,000
Secure bicycle parking, covered, incl. fence, gate and bike racks, allow	1	ea	\$20,000.00	\$20,000
Secure Entrance, Barriers, Badged w / Intercom				
Entry / Exit, allow				<i>Assume Not Required</i>
Entry Only, allow				<i>Assume Not Required</i>
Control station, allow				<i>Assume Not Required</i>
Signage & Wayfinding				
Parking lot direction signage, paint				<i>Excluded</i>
Driveway / access road directional signage				<i>Included</i>
Parking stalls				<i>Excluded</i>
Metal embedded signage, at pedestrian surfaces, allow	2	ea	\$15,000.00	\$30,000
Building exterior signage, allow	1	ls	\$50,000.00	\$50,000
Landscaping and Irrigation				
"Light touch", typical	78,846	sf	\$5.00	\$394,230
Lawn area	57,377	sf	\$25.00	\$1,434,425
Upgraded landscaped areas	139,998	sf	\$15.00	\$2,099,970
Large trees, including tree grates	37	ea	\$2,000.00	\$74,000
Small red trees, including tree grates	56	ea	\$1,700.00	\$95,200

## DETAIL ELEMENTS - SITE DEVELOPMENT PHASE 1 - OPTION 2

Element	Quantity	Unit	Unit Cost	Total
Bio-Retention Areas, Plaza Only, allow 10%	6,050	gsf	\$75.00	\$453,773
<b>Total - Site Paving, Structures &amp; Landscaping</b>				<b>\$10,185,861</b>
<b>16 Utilities on Site</b>				
Utilities				
Miscellaneous site utilities	397,296	sf	\$1.50	\$595,944
Site utility connections to bldgs.				<i>With Buildings</i>
Central Plant and Fire Water Loops				<i>Excluded</i>
Realign Street Utilities				
Demo existing	1	ls	\$200,000.00	\$200,000
New piping	1	ls	\$450,000.00	\$450,000
Pump station, allowance	1	ls	\$500,000.00	\$500,000
Storm Drainage	397,296	sf	\$1.00	\$397,296
Site Lighting	397,296	sf	\$1.25	\$496,620
<b>Total - Utilities on Site</b>				<b>\$2,639,860</b>



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## APPENDIX 1 - APPROACH & METHODOLOGY

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<b>Basis of Estimate</b>	2017-1009 City Hall Cost Package_UPDATED 1016 2017-1012 Illustrative Master Plans 2017-10-19_14101_Option 1 2017-10-19_14101_Option 2
<b>Estimate Format</b>	A elemental classification format has been used for the preparation of this estimate. It classifies costs by building system / element.
<b>Cost Mark Ups</b>	The following % mark ups have been included in each design option: <ul style="list-style-type: none"><li>- General Conditions (10.00% on direct costs)</li><li>- Bonds &amp; Insurance (2.00% on direct costs)</li><li>- Contractor's Fee (5.00% compound)</li><li>- Design Contingency (20.00% compound)</li></ul>
<b>Escalation</b>	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.
<b>Design Contingency</b>	An allowance of 20.00% 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.
<b>Construction Contingency</b>	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 5 - 10% construction contingency is carried in this respect. This cost is not included within the estimate.
<b>Construction Schedule</b>	TBD
<b>Bid Conditions</b>	This estimate has been based upon competitive bid situations (minimum of 3 bidders) for all items of subcontracted work.
<b>Basis For Quantities</b>	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.
<b>Basis for Unit Costs</b>	Unit costs as contained herein are based on current bid prices in Sunnyvale, CA. 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.
<b>Sources for Pricing</b>	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 education and office construction, updated to reflect current conditions in Sunnyvale, CA.

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## APPENDIX 1 - APPROACH & METHODOLOGY

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### Key Exclusions

The following items have been excluded from our estimate:

- Escalation
- Dual layer cladding
- Temporary alternate space
- Audio-visual equipment
- Testing and inspection fees
- Furnishing, equipment, and associated special construction unless noted in estimate
- Owner-furnished items
- Estimate currently anticipates work will be carried out within unoccupied areas, on a two floor at a time basis.
- Work outside of regular working hours

### 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.