



FEASIBILITY STUDY COST PLAN

Warm Springs Innovation Center
Fremont, CA

jfak architects 821 traction avenue suite 107, los angeles, ca 90013

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Project No:JE6016.110

Report by **MGAC**

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Feasibility Study Cost Plan

Contents

	Page Nos.
Project Overview	1
Basis of Cost Plan	2
Project Budget Allocation	3
Overall Comparison Summary	5
Scheme S Summary	6
Scheme M Summary	15
Scheme L Summary	25
Sitework	35
Subterranean Parking	38

Description

The project comprises a feasibility study for a new innovation center building in the City of Fremont which would be constructed on an existing vacant site of approximately 22,000 gross square feet. Program areas will include an innovation hall, creative office space, event space, adaptable manufacturing space and education space (classrooms and training facilities).

The study considers three building schemes ranging in size from 75,000 gross square feet to 203,000 gross square feet, together with associated subterranean parking for each scheme.

Building Design

The cost plan reflects a concrete framed building founded on conventional wall and column footings for Scheme S and deep pile foundations for Schemes M and L. The exterior envelope assumes 75% glazing and 25% solid materials, with membrane roofing at flat roofs and pedestal pavers at accessible roof decks.

Allowances are included for interior partitions, doors, fixed accessories, finishes and built-in cabinets and countertops at spaces fitted-out as part of the project scope of work.

Fire exit stairs and an architectural stair at the two story lobby are included together with traction passenger and freight elevators.

Allowances are included for MEP and fire protection systems.

Site Conditions

The existing site is assumed to be clear and level with minimal preparation work required. Allowances are included for finished paving and landscaping, storm drainage systems and site lighting, and utility connections to the building.

Procurement

The City has not determined the actual method of procurement at this time, so the cost plan reflects a traditional design-bid-build method of procurement.

Documents / Drawings

Conceptual Overview for ROM dated February 26, 2018

Schedule

All costs reflect current (March 2018) pricing and market conditions. Allowances are shown for cost escalation for 3, 5 and 7 year options

Assumptions / Clarifications

Procurement based on design-bid-build with competitive bidding for both general contractor and all major subcontract packages

Costs reflect union labor requirements

Costs assume a minimum building life of 50 years for shell and major systems including MEP

Costs reflect a LEED gold equivalency

Scheme S is not classified as a high-rise building

Schemes M and L are classified as a high-rise building

The following items are excluded:

Work outside of the defined site boundary including off-site utility work

Work associated with the adjacent plaza / park

Helipads

Raised access floors

Fit-out of creative office space

Fit-out of adaptable manufacturing space



Feasibility Study Cost Plan

Project Budget Allocation

The information below identifies the assumptions included in this cost report relative to allocation of costs. Items listed under construction costs are included in the cost estimate and are anticipated to be part of the construction contract. Items listed under project soft costs are not included in the cost estimate and are assumed to be provided under a separate budget. Items listed as "not applicable" are assumed not to be included in any budget as the item is not required.

	Item	Project Capital Costs			Notes.
		Construction Cost.	Project Soft Cost.	Not Applicable.	
I.	PROPERTY ACQUISITION / DEVELOPMENT				
	Removal of existing buildings and structures			√	
	On-Site Utilities Relocation and/or Removal	√			
	Off-Site Utilities Improvements		√		
	Connection to Utilities (charges and fees)		√		
	Street/sidewalk improvements			√	
	Moving and Relocation Expenses			√	
II.	HAZARDOUS MATERIAL ABATEMENT				
	Building			√	
	Site		√		
III.	PROFESSIONAL SERVICES				
	Architecture and Engineering Design Fees		√		
	Project Management Fees		√		
	Geotechnical & Survey		√		
	Materials Testing & Inspection		√		
	Third Party Commissioning		√		
	LEED Consultant Fees		√		
	LEED Certification Fees		√		
IV.	SYSTEMS, FURNISHINGS & EQUIPMENT				
	a. BUILDING SYSTEMS				
	Uninterruptible Power Supplies (UPS)		√		
	Security Cabling & Equipment	√			Excludes cameras
	Telecom / AV / Data Network; Routers, Switches		√		Conduit and pull wire only in construction cost
	Communication Cabling	√			
	Audio-Visual Equipment and Cabling		√		
	Building Controls Systems	√			
	b. FURNITURE				
	Loose Furniture		√		
	Office Furniture		√		



Feasibility Study Cost Plan

Project Budget Allocation

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	Item	Project Capital Costs			Notes.
		Construction Cost.	Project Soft Cost.	Not Applicable.	
	c. FURNISHINGS				
	Window Treatments	√			
	Markerboards and tackboards	√			
	Lockers	√			
	Site Furniture	√			
	d. EQUIPMENT				
	Building Maintenance / Window Washing Equipment	√			Fall arrest davits only
	Manufacturing Equipment		√		
	Laboratory Equipment		√		
	Residential Kitchen Appliances	√			
	Commercial Kitchen Equipment	√			
	Retail Furnishings & Equipment		√		
	Parking Equipment	√			
	e. SIGNAGE				
	Directional Signage	√			
	Informational and Identification Signage	√			
	Code Required Signage	√			
	f. PROCUREMENT				
	Pre-construction Services		√		Procurement based on design-bid-build
	Bonds	√			
	Insurance	√			Professional liability insurance by Contractor
	g. CONTINGENCIES				
	Design Contingency	√			
	Construction Contingency		√		
	Owner's Contingency		√		
	h. ESCALATION				
	Labor & Material Escalation		√		Not included in base costs



Feasibility Study Cost Plan

Comparison summary - All Schemes

			Scheme S	Scheme M	Scheme L
			\$ x 1,000	\$ x 1,000	\$ x 1,000
B1	Scheme S Building		40,942	64,252	105,221
P1	Subterranean Parking		3,888	8,980	12,932
S1	Sitework		1,155	1,155	1,155
RECOMMENDED CONSTRUCTION BUDGET, March 20			45,984	74,387	119,307
Z30	Escalation Allowances				
Z31	3 Years	14.65%	6,737	10,898	17,478
Z32	5 Years	24.00%	11,036	17,853	28,634
Z33	7 Years	34.12%	15,690	25,381	40,708



Feasibility Study Cost Plan

Overall Summary - Scheme S

	SF	\$/SF	TOTAL \$ x 1,000	%
B1 Scheme S Building	75,000	545.89	40,942	89%
TOTAL BUILDING			40,942	89%
P1 Subterranean Parking	24,100	161.32	3,888	8%
S1 Sitework	22,074	52.31	1,155	3%
TOTAL BUILDING AND SITEWORK			45,984	100%
RECOMMENDED CONSTRUCTION BUDGET, March 2018			45,984	100%
Z30 Escalation Allowances				
Z31 3 Years		14.65%	6,737	
Z32 5 Years		24.00%	11,036	
Z33 7 Years		34.12%	15,690	



Feasibility Study Cost Plan

Scheme S Building Areas

	SF		SF
Areas			
Enclosed Areas		Program Areas	
First Floor	16,000	Innovation Hall	32,000
Second Floor	16,000	CEM	16,000
Third Floor	16,000	Creative Office	16,000
Fourth Floor	16,000	Event Space	11,000
Fifth Floor	11,000		
Subtotal of Enclosed Areas	75,000		
Covered Areas			
Subtotal of Covered Areas at 50%	-		
TOTAL GROSS FLOOR AREA	75,000		75,000

Control Quantities			Ratio to GFA
Number of stories		5 EA	0.000
Gross Area		75,000 SF	1.000
Enclosed Area		75,000 SF	1.000
Footprint Area		16,000 SF	0.213
Volume		1,528,000 CF	20.373
Gross Wall Area		46,200 SF	0.616
Finished Wall Area		46,200 SF	0.616
Windows or Glazing	75%	34,650 SF	0.462
Main Roof Area - Flat		8,000 SF	0.107
Terrace Roof Area - Flat		8,000 SF	0.107
Roof Area - Total		16,000 SF	0.213
Staircase		11 FLT	0.000
Shelled Area		16,000 SF	0.213
Finished Area		59,000 SF	0.787
Structural Framed Area		75,000 SF	1.000
Elevators (Ratio x 10,000)		4 EA	0.533



Feasibility Study Cost Plan

Scheme S Building Summary

Ref.	Description	%	\$/SF	TOTAL \$x 1,000
		Gross Area:	75,000 SF	
A10	Foundations	1%	6.83	512
A20	Basement Construction	0%	0.00	0
A	Substructure	1%	6.83	512
B10	Superstructure	14%	77.58	5,818
B20	Exterior Enclosure	15%	82.19	6,164
B30	Roofing	1%	8.00	600
B	Shell	31%	167.76	12,582
C10	Interior Construction	7%	37.13	2,785
C20	Stairways	1%	5.00	375
C30	Interior Finishes	8%	43.20	3,240
C	Interiors	16%	85.33	6,400
D10	Conveying Systems	3%	14.00	1,050
D20	Plumbing Systems	3%	13.93	1,045
D30	Heating, Ventilation & Air Conditioning	8%	45.73	3,430
D40	Fire Protection	1%	7.00	525
D50	Electrical Lighting, Power & Communications	9%	51.47	3,860
D	Services	24%	132.13	9,910
E10	Equipment	0%	1.67	125
E20	Furnishings	2%	8.40	630
E	Equipment & Furnishings	2%	10.07	755
F10	Special Construction	0%	0.00	0
F20	Selective Demolition	0%	0.00	0
F	Special Construction & Demolition	0%	0.00	0
BUILDING ELEMENTAL COST BEFORE CONTINGENCIES		74%	402.12	30,159
Z10	Design Contingency	15.00%	11%	60.32
Z11	General Requirements	4.00%	3%	18.50
BUILDING ELEMENTAL COST INCLUDING CONTINGENCIES		88%	480.94	36,070
Z21	General Conditions	7.00%	6%	33.67
Z22	Bonds & Insurance	2.00%	2%	10.29
Z23	Contractor's Overhead, Profit & Fee	4.00%	4%	21.00
BUILDING CONSTRUCTION COST BEFORE ESCALATION		100%	545.89	40,942
Z30	See Overall Summary for Escalation	0.00%	0%	0.00
RECOMMENDED BUDGET - March, 2018		100%	545.89	40,942



Feasibility Study Cost Plan

Scheme S Building

	Quantity	Unit	Rate	Total
A10 Foundations				
A1010 Standard Foundations				320,000
Reinforced concrete including excavation				
Wall and column footings	16,000	SF	15.00	240,000
Elevator pit including waterproofing	4	EA	20,000.00	80,000
A1020 Special Foundations				
A1030 Slab On Grade				192,000
Concrete slab on grade	16,000	SF	12.00	192,000
				512,000
A20 Basement Construction				
A2010 Basement Excavation				
A2020 Basement Walls				
				0
B10 Superstructure				
B1010 Floor Construction				4,778,250
Suspended floors				
Reinforced concrete columns, shear walls, floor slabs and beams	59,000	SF	70.00	4,130,000
Miscellaneous				
Amphitheater	5,000	SF	40.00	200,000
Mechanical equipment pads and curbs	1	LS	50,000.00	50,000
Secondary support framing to exterior glazing systems	34,650	SF	5.00	173,250
Miscellaneous metals and support framing	75,000	SF	3.00	225,000



Feasibility Study Cost Plan

Scheme S Building

	Quantity	Unit	Rate	Total
B1020 Roof Construction				1,040,000
Flat roofs				
Reinforced concrete columns, shear walls, roof slabs and beams	16,000	SF	65.00	1,040,000
				5,818,250
 B20 Exterior Enclosure				
B2010 Exterior Walls				1,662,750
Finished walls				
Wall framing, insulation, waterproofing, exterior finish materials	11,550	SF	100.00	1,155,000
Interior finish to exterior wall				
Gypsum board lining with paint finish	11,550	SF	5.00	57,750
Soffits				
Allow for soffits	1	LS	50,000.00	50,000
Balustrades, parapets and roof screens				
Metal balustrades at roof deck, mechanical equipment screen walls	1	LS	150,000.00	150,000
Miscellaneous				
Entry canopies and miscellaneous exterior wall detailing including sunshading	1	LS	250,000.00	250,000
B2020 Exterior Windows				4,331,250
Windows, glazing and louvers				
Insulated high performance curtainwall	34,650	SF	125.00	4,331,250
B2030 Exterior Doors				170,000
Doors, frames and hardware				
Glazed entry doors	1	LS	50,000.00	50,000
Steel exit doors	1	LS	20,000.00	20,000
Roll-up doors at plaza and roof deck	1	LS	100,000.00	100,000
				6,164,000



Feasibility Study Cost Plan

Scheme S Building

	Quantity	Unit	Rate	Total
B30 Roofing				
B3010 Roof Coverings				600,000
Roofing				
Membrane roofing over rigid insulation, including metal parapet caps, flashings, miscellaneous sheetmetal work	8,000	SF	25.00	200,000
Terrace				
Waterproofing, pedestal pavers	8,000	SF	50.00	400,000
B3020 Roof Openings				
				600,000
C10 Interior Construction				
C1010 Partitions				2,410,000
Partitions and doors				
Metal stud partitions, glazed partitions, wood and glazed doors, balustrades				
Innovation Hall	32,000	SF	50.00	1,600,000
CEM	16,000	SF	30.00	480,000
Creative Office	16,000	SF		<i>Shelled space</i>
Event Space	11,000	SF	30.00	330,000
C1020 Interior Doors				<i>Included above</i>
C1030 Fittings				375,000
Building accessories				
Toilet partitions and fixed restroom accessories, markerboards and tackboards, interior signage, fire extinguisher cabinets	75,000	SF	5.00	375,000
				2,785,000



Feasibility Study Cost Plan

Scheme S Building

	Quantity	Unit	Rate	Total
C20 Stairways				
C2010 Stair Construction				375,000
Stairs				
Fire exit stairs	10	FLT	30,000.00	300,000
Lobby stairs	1	FLT	75,000.00	75,000
C2020 Stair Finishes				<i>Included above</i>
				375,000

C30 Interior Finishes

C3010 Wall Finishes				3,240,000
Floor, wall and ceiling finishes				
Innovation Hall	32,000	SF	75.00	2,400,000
CEM	16,000	SF	25.00	400,000
Creative Office	16,000	SF		<i>Shelled space</i>
Event Space	11,000	SF	40.00	440,000
C3020 Floor Finishes				<i>Included above</i>
C3030 Ceiling Finishes				<i>Included above</i>
				3,240,000

D10 Conveying Systems

D1010 Elevators & Lifts				1,050,000
Traction elevators				
Passenger elevator, 5-stop	3	EA	250,000.00	750,000
Freight elevator, 5-stop	1	EA	300,000.00	300,000
D1020 Escalators & Moving Walks				



Feasibility Study Cost Plan

Scheme S Building

	Quantity	Unit	Rate	Total
D1090 Other Conveying Systems				
				1,050,000
D20 Plumbing Systems				
D2090 Other Plumbing Systems				1,045,000
Plumbing systems	75,000	SF	15.00	1,125,000
Credit for shelled space	(16,000)	SF	5.00	(80,000)
				1,045,000
D30 Heating, Ventilation & Air Conditioning				
D3090 Other HVAC Systems & Equipment				3,430,000
HVAC systems	75,000	SF	50.00	3,750,000
Credit for shelled space	(16,000)	SF	20.00	(320,000)
				3,430,000
D40 Fire Protection				
D4010 Sprinklers				525,000
Automatic wet sprinkler system	75,000	SF	7.00	525,000
				525,000
D50 Electrical Lighting, Power & Communications				
D5090 Other Electrical Systems				3,860,000
Electrical systems	75,000	SF	60.00	4,500,000
Credit for shelled space	(16,000)	SF	40.00	(640,000)
				3,860,000
E10 Equipment				



Feasibility Study Cost Plan

Scheme S Building

	Quantity	Unit	Rate	Total
E1090 Other Equipment				125,000
Amphitheater seating	250	EA	500.00	125,000
				125,000
E20 Furnishings				
E2010 Fixed Furnishings				630,000
Built-in cabinets and countertops, miscellaneous millwork				
Innovation Hall	32,000	SF	10.00	320,000
CEM	16,000	SF	5.00	80,000
Creative Office	16,000	SF		<i>Shelled space</i>
Event Space	11,000	SF	10.00	110,000
Roof top terrace	8,000	SF	15.00	120,000
E2020 Movable Furnishings				
				630,000
F10 Special Construction				
				0
F20 Selective Demolition				
				0



Feasibility Study Cost Plan

Overall Summary - Scheme M

	SF	\$/SF	TOTAL \$ x 1,000	%
B2 Scheme M Building	124,000	518.16	64,252	86%
TOTAL BUILDING			64,252	86%
P1 Subterranean Parking	48,200	186.31	8,980	12%
S1 Sitework	22,074	52.31	1,155	2%
TOTAL BUILDING AND SITEWORK, March 2018			74,387	100%
RECOMMENDED CONSTRUCTION BUDGET, March 2018			74,387	100%
Z30 Escalation Allowances				
Z31 3 Years		14.65%	10,898	
Z32 5 Years		24.00%	17,853	
Z33 7 Years		34.12%	25,381	



Feasibility Study Cost Plan

Scheme M Building Areas

	SF		SF
Areas		Program Areas	
Enclosed Areas		Innovation Hall	32,000
First Floor	16,000	CEM	16,000
Second Floor	16,000	Adaptable Manufacturing	26,000
Third Floor	16,000	Creative Office	40,000
Fourth Floor	16,000	Event Space	10,000
Fifth Floor	10,000		
Sixth Floor	10,000		
Seventh Floor	10,000		
Eighth Floor	10,000		
Ninth Floor	10,000		
Tenth Floor	10,000		
Subtotal of Enclosed Areas	124,000		
Covered Areas			
Subtotal of Covered Areas at 50%	-		
TOTAL GROSS FLOOR AREA	124,000		124,000

Control Quantities			Ratio to GFA
Number of stories		10 EA	0.000
Gross Area		124,000 SF	1.000
Enclosed Area		124,000 SF	1.000
Footprint Area		16,000 SF	0.129
Volume		2,344,000 CF	18.903
Gross Wall Area		78,125 SF	0.630
Finished Wall Area		78,125 SF	0.630
Windows or Glazing	75%	58,594 SF	0.473
Main Roof Area - Flat		8,000 SF	0.065
Terrace Roof Area - Flat		8,000 SF	0.065
Roof Area - Total		16,000 SF	0.129
Staircase		31 FLT	0.000
Shelled Area		66,000 SF	0.532
Finished Area		58,000 SF	0.468
Structural Framed Slab		124,000 SF	1.000
Elevators (Ratio x 10,000)		6 EA	0.484



Feasibility Study Cost Plan

Scheme M Building Summary

Ref.	Description		%	\$/SF	TOTAL \$x1,000
			Gross Area:	124,000 SF	
A10	Foundations		4%	21.87	2,712
A20	Basement Construction		0%	0.00	0
A	Substructure		4%	21.87	2,712
B10	Superstructure		15%	76.94	9,540
B20	Exterior Enclosure		16%	82.06	10,175
B30	Roofing		1%	4.84	600
B	Shell		32%	163.83	20,315
C10	Interior Construction		5%	24.19	3,000
C20	Stairways		2%	7.86	975
C30	Interior Finishes		5%	25.81	3,200
C	Interiors		11%	57.86	7,175
D10	Conveying Systems		5%	25.00	3,100
D20	Plumbing Systems		2%	12.34	1,530
D30	Heating, Ventilation & Air Conditioning		8%	41.85	5,190
D40	Fire Protection		2%	9.02	1,118
D50	Electrical Lighting, Power & Communications		8%	43.71	5,420
D	Services		25%	131.92	16,358
E10	Equipment		0%	1.21	150
E20	Furnishings		1%	5.00	620
E	Equipment & Furnishings		1%	6.21	770
F10	Special Construction		0%	0.00	0
F20	Selective Demolition		0%	0.00	0
F	Special Construction & Demolition		0%	0.00	0
BUILDING ELEMENTAL COST BEFORE CONTINGENCIES			74%	381.69	47,330
Z10	Design Contingency	15.00%	11%	57.25	7,099
Z11	General Requirements	4.00%	3%	17.56	2,177
BUILDING ELEMENTAL COST INCLUDING CONTINGENCIES			88%	456.51	56,607
Z21	General Conditions	7.00%	6%	31.96	3,962
Z22	Bonds & Insurance	2.00%	2%	9.77	1,211
Z23	Contractor's Overhead, Profit & Fee	4.00%	4%	19.93	2,471
BUILDING CONSTRUCTION COST BEFORE ESCALATION			100%	518.16	64,252
Z30	See Overall Summary for Escalation	0.00%	0%	0.00	0
RECOMMENDED BUDGET - March, 2018			100%	518.16	64,252



Feasibility Study Cost Plan

Scheme M Building

	Quantity	Unit	Rate	Total
A10 Foundations				
A1010 Standard Foundations				120,000
Reinforced concrete including excavation				
Elevator pit including waterproofing	6	EA	20,000.00	120,000
A1020 Special Foundations				2,400,000
Piling				
Piles, pile caps and grade beams	16,000	SF	150.00	2,400,000
A1030 Slab On Grade				192,000
Concrete slab on grade	16,000	SF	12.00	192,000
				2,712,000
A20 Basement Construction				
A2010 Basement Excavation				
A2020 Basement Walls				
				0
B10 Superstructure				
B1010 Floor Construction				8,499,969
Suspended floors				
Reinforced concrete columns, shear walls, floor slabs and beams	108,000	SF	70.00	7,560,000
Miscellaneous				
Amphitheater	5,000	SF	40.00	200,000
Mechanical equipment pads and curbs	1	LS	75,000.00	75,000
Secondary support framing to exterior glazing systems	58,594	SF	5.00	292,969
Miscellaneous metals and support framing	124,000	SF	3.00	372,000



Feasibility Study Cost Plan

Scheme M Building

	Quantity	Unit	Rate	Total
B1020 Roof Construction				1,040,000
Flat roofs				
Reinforced concrete columns, shear walls, roof slabs and beams	16,000	SF	65.00	1,040,000
				9,539,969
B20 Exterior Enclosure				
B2010 Exterior Walls				2,600,781
Finished walls				
Wall framing, insulation, waterproofing, exterior finish materials	19,531	SF	100.00	1,953,125
Interior finish to exterior wall				
Gypsum board lining with paint finish	19,531	SF	5.00	97,656
Soffits				
Allow for soffits	1	LS	50,000.00	50,000
Balustrades, parapets and roof screens				
Metal balustrades at roof deck, mechanical equipment screen walls	1	LS	150,000.00	150,000
Miscellaneous				
Entry canopies and miscellaneous exterior wall detailing including sunshading	1	LS	350,000.00	350,000
B2020 Exterior Windows				7,324,219
Windows, glazing and louvers				
Insulated high performance curtainwall	58,594	SF	125.00	7,324,219
B2030 Exterior Doors				250,000
Doors, frames and hardware				
Glazed entry doors	1	LS	75,000.00	75,000
Steel exit doors	1	LS	25,000.00	25,000
Roll-up doors at plaza and roof decks	1	LS	150,000.00	150,000
				10,175,000



Feasibility Study Cost Plan

Scheme M Building

	Quantity	Unit	Rate	Total
B30 Roofing				
B3010 Roof Coverings				600,000
Roofing				
Membrane roofing over rigid insulation, including metal parapet caps, flashings, miscellaneous sheetmetal work	8,000	SF	25.00	200,000
Terrace				
Waterproofing, pedestal pavers	8,000	SF	50.00	400,000
B3020 Roof Openings				
				600,000
C10 Interior Construction				
C1010 Partitions				2,380,000
Partitions and doors				
Metal stud partitions, glazed partitions, wood and glazed doors, balustrades				
Innovation Hall	32,000	SF	50.00	1,600,000
CEM	16,000	SF	30.00	480,000
Adaptable Manufacturing	26,000	SF		<i>Shelled space</i>
Creative Office	40,000	SF		<i>Shelled space</i>
Event Space	10,000	SF	30.00	300,000
C1020 Interior Doors				<i>Included above</i>
C1030 Fittings				620,000
Building accessories				
Toilet partitions and fixed restroom accessories, markerboards and tackboards, interior signage, fire extinguisher cabinets	124,000	SF	5.00	620,000
				3,000,000



Feasibility Study Cost Plan

Scheme M Building

	Quantity	Unit	Rate	Total
C20 Stairways				
C2010 Stair Construction				975,000
Stairs				
Fire exit stairs	30	FLT	30,000.00	900,000
Lobby stairs	1	FLT	75,000.00	75,000
C2020 Stair Finishes				Included above
				975,000

C30 Interior Finishes

C3010 Wall Finishes				3,200,000
Floor, wall and ceiling finishes				
Innovation Hall	32,000	SF	75.00	2,400,000
CEM	16,000	SF	25.00	400,000
Adaptable Manufacturing	26,000	SF		Shelled space
Creative Office	40,000	SF		Shelled space
Event Space	10,000	SF	40.00	400,000
C3020 Floor Finishes				Included above
C3030 Ceiling Finishes				Included above
				3,200,000

D10 Conveying Systems

D1010 Elevators & Lifts				3,100,000
Traction elevators				
Passenger elevator, 10-stop	5	EA	500,000.00	2,500,000
Freight elevator, 10-stop	1	EA	600,000.00	600,000
D1020 Escalators & Moving Walks				



Feasibility Study Cost Plan

Scheme M Building

	Quantity	Unit	Rate	Total
D1090 Other Conveying Systems				
				3,100,000
D20 Plumbing Systems				
D2090 Other Plumbing Systems				1,530,000
Plumbing systems	124,000	SF	15.00	1,860,000
Credit for shelled space	(66,000)	SF	5.00	(330,000)
				1,530,000
D30 Heating, Ventilation & Air Conditioning				
D3090 Other HVAC Systems & Equipment				5,190,000
HVAC systems	124,000	SF	52.50	6,510,000
Credit for shelled space	(66,000)	SF	20.00	(1,320,000)
				5,190,000
D40 Fire Protection				
D4010 Sprinklers				1,118,000
Automatic wet sprinkler system	124,000	SF	7.00	868,000
Fire pump and water storage	1	LS	250,000.00	250,000
				1,118,000
D50 Electrical Lighting, Power & Communications				
D5090 Other Electrical Systems				5,420,000
Electrical systems	124,000	SF	65.00	8,060,000
Credit for shelled space	(66,000)	SF	40.00	(2,640,000)
				5,420,000



Feasibility Study Cost Plan

Scheme M Building

	Quantity	Unit	Rate	Total
E10 Equipment				
E1090 Other Equipment				150,000
Amphitheater seating	250	EA	500.00	125,000
Loading dock equipment	1	LS	25,000.00	25,000
				150,000
E20 Furnishings				
E2010 Fixed Furnishings				620,000
Built-in cabinets and countertops, miscellaneous millwork				
Innovation Hall	32,000	SF	10.00	320,000
CEM	16,000	SF	5.00	80,000
Adaptable Manufacturing	26,000	SF		<i>Shelled space</i>
Creative Office	40,000	SF		<i>Shelled space</i>
Event Space	10,000	SF	10.00	100,000
Roof top terrace	8,000	SF	15.00	120,000
E2020 Movable Furnishings				
				620,000
F10 Special Construction				
				0
F20 Selective Demolition				
				0



Feasibility Study Cost Plan

Overall Summary - Scheme L

	SF	\$/SF	TOTAL \$ x 1,000	%
B3 Scheme L Building	203,000	518.33	105,221	88%
TOTAL BUILDING			105,221	88%
P1 Subterranean Parking	72,300	178.86	12,932	11%
S1 Sitework	22,074	52.31	1,155	1%
TOTAL BUILDING AND SITEWORK, March 2018			119,307	100%
RECOMMENDED CONSTRUCTION BUDGET, March 2018			119,307	100%
Z30 Escalation Allowances				
Z31 3 Years		14.65%	17,478	
Z32 5 Years		24.00%	28,634	
Z33 7 Years		34.12%	40,708	



Feasibility Study Cost Plan

Scheme L Building Areas

SF			
Areas			
Enclosed Areas		Program Areas	
First Floor	19,000	Innovation Hall	38,000
Second Floor	19,000	CEM	19,000
Third Floor	19,000	Adaptable Manufacture	43,000
Fourth Floor	19,000	Education Multiplex	36,000
Fifth Floor	12,000	Creative Office	48,000
Sixth Floor	12,000	Event space	19,000
Seventh Floor	12,000		
Eighth Floor	12,000		
Ninth Floor	12,000		
Tenth Floor	12,000		
Eleventh Floor	12,000		
Twelfth Floor	12,000		
Thirteenth Floor	12,000		
Fourteenth Floor	12,000		
Fifteenth Floor	7,000		
<hr/>		<hr/>	
Subtotal of Enclosed Areas	203,000		
Covered Areas			
<hr/>		<hr/>	
Subtotal of Covered Areas at 50%	-		
<hr/>		<hr/>	
TOTAL GROSS FLOOR AREA	203,000		203,000
<hr/>		<hr/>	
Control Quantities			Ratio to GFA
Number of stories		15 EA	0.000
Gross Area		203,000 SF	1.000
Enclosed Area		203,000 SF	1.000
Footprint Area		19,000 SF	0.094
Volume		3,658,000 CF	18.020
Gross Wall Area		119,100 SF	0.587
Finished Wall Area		119,100 SF	0.587
Windows or Glazing	75%	89,325 SF	0.440
Main Roof Area - Flat		9,500 SF	0.047
Terrace Roof Area - Flat		9,500 SF	0.047
Roof Area - Total		19,000 SF	0.094
Staircase		45 FLT	0.000
Shelled Area		91,000 SF	0.448
Finished Area		112,000 SF	0.552
Structural Framed Slab		203,000 SF	1.000
Elevators (Ratio x 10,000)		8 EA	0.394



Feasibility Study Cost Plan

Scheme L Building Summary

Ref.	Description		%	\$/SF	TOTAL \$x 1,000
			Gross Area:	203,000 SF	
A10	Foundations		3%	15.95	3,238
A20	Basement Construction		0%	0.00	0
A	Substructure		3%	15.95	3,238
B10	Superstructure		15%	76.21	15,471
B20	Exterior Enclosure		14%	74.84	15,192
B30	Roofing		1%	3.51	713
B	Shell		30%	154.56	31,375
C10	Interior Construction		5%	27.96	5,675
C20	Stairways		1%	6.87	1,395
C30	Interior Finishes		5%	27.22	5,525
C	Interiors		12%	62.04	12,595
D10	Conveying Systems		6%	30.30	6,150
D20	Plumbing Systems		2%	12.76	2,590
D30	Heating, Ventilation & Air Conditioning		8%	43.53	8,838
D40	Fire Protection		2%	8.23	1,671
D50	Electrical Lighting, Power & Communications		9%	47.07	9,555
D	Services		27%	141.89	28,804
E10	Equipment		0%	0.74	150
E20	Furnishings		1%	6.64	1,348
E	Equipment & Furnishings		1%	7.38	1,498
F10	Special Construction		0%	0.00	0
F20	Selective Demolition		0%	0.00	0
F	Special Construction & Demolition		0%	0.00	0
BUILDING ELEMENTAL COST BEFORE CONTINGENCIES			74%	381.82	77,509
Z10	Design Contingency	15.00%	11%	57.27	11,626
Z11	General Requirements	4.00%	3%	17.56	3,565
Z12	Other 2	0.00%	0%	0.00	0
BUILDING ELEMENTAL COST INCLUDING CONTINGENCIES			88%	456.65	92,701
Z21	General Conditions	7.00%	6%	31.97	6,489
Z22	Bonds & Insurance	2.00%	2%	9.77	1,984
Z23	Contractor's Overhead, Profit & Fee	4.00%	4%	19.94	4,047
BUILDING CONSTRUCTION COST BEFORE ESCALATION			100%	518.33	105,221
Z30	See Overall Summary for Escalation	0.00%	0%	0.00	0
RECOMMENDED BUDGET - March, 2018			100%	518.33	105,221



Feasibility Study Cost Plan

Scheme L Building

	Quantity	Unit	Rate	Total
A10 Foundations				
A1010 Standard Foundations				160,000
Reinforced concrete including excavation				
Elevator pit including waterproofing	8	EA	20,000.00	160,000
A1020 Special Foundations				2,850,000
Piling				
Piles, pile caps and grade beams	19,000	SF	150.00	2,850,000
A1030 Slab On Grade				228,000
Concrete slab on grade	19,000	SF	12.00	228,000
				3,238,000
A20 Basement Construction				
A2010 Basement Excavation				
A2020 Basement Walls				
				0
B10 Superstructure				
B1010 Floor Construction				14,235,625
Suspended floors				
Reinforced concrete columns, shear walls, floor slabs and beams	184,000	SF	70.00	12,880,000
Miscellaneous				
Amphitheater	5,000	SF	40.00	200,000
Mechanical equipment pads and curbs	1	LS	100,000.00	100,000
Secondary support framing to exterior glazing systems	89,325	SF	5.00	446,625
Miscellaneous metals and support framing	203,000	SF	3.00	609,000



Feasibility Study Cost Plan

Scheme L Building

	Quantity	Unit	Rate	Total
B1020 Roof Construction				1,235,000
Flat roofs				
Reinforced concrete columns, shear walls, roof slabs and beams	19,000	SF	65.00	1,235,000
				15,470,625
 B20 Exterior Enclosure				
B2010 Exterior Walls				3,776,375
Finished walls				
Wall framing, insulation, waterproofing, exterior finish materials	29,775	SF	100.00	2,977,500
Interior finish to exterior wall				
Gypsum board lining with paint finish	29,775	SF	5.00	148,875
Soffits				
Allow for soffits	1	LS	50,000.00	50,000
Balustrades, parapets and roof screens				
Metal balustrades at roof deck, mechanical equipment screen walls	1	LS	150,000.00	150,000
Miscellaneous				
Entry canopies and miscellaneous exterior wall detailing including sunshading	1	LS	450,000.00	450,000
B2020 Exterior Windows				11,165,625
Windows, glazing and louvers				
Insulated high performance curtainwall	89,325	SF	125.00	11,165,625
B2030 Exterior Doors				250,000
Doors, frames and hardware				
Glazed entry doors	1	LS	75,000.00	75,000
Steel exit doors	1	LS	25,000.00	25,000
Roll-up doors at plaza and roof decks	1	LS	150,000.00	150,000
				15,192,000



Feasibility Study Cost Plan

Scheme L Building

	Quantity	Unit	Rate	Total
B30 Roofing				
B3010 Roof Coverings				712,500
Roofing				
Membrane roofing over rigid insulation, including metal parapet caps, flashings, miscellaneous sheetmetal work	9,500	SF	25.00	237,500
Terrace				
Waterproofing, pedestal pavers	9,500	SF	50.00	475,000
B3020 Roof Openings				
				712,500
C10 Interior Construction				
C1010 Partitions				4,660,000
Partitions and doors				
Metal stud partitions, glazed partitions, wood and glazed doors, balustrades				
Innovation Hall	38,000	SF	50.00	1,900,000
CEM	19,000	SF	30.00	570,000
Adaptable Manufacturing	43,000	SF		<i>Shelled space</i>
Education Multiplex	36,000	SF	45.00	1,620,000
Creative Office	48,000	SF		<i>Shelled space</i>
Event Space	19,000	SF	30.00	570,000
C1020 Interior Doors				<i>Included above</i>
C1030 Fittings				1,015,000
Building accessories				
Toilet partitions and fixed restroom accessories, markerboards and tackboards, interior signage, fire extinguisher cabinets	203,000	SF	5.00	1,015,000
				5,675,000



Feasibility Study Cost Plan

Scheme L Building

	Quantity	Unit	Rate	Total
C20 Stairways				
C2010 Stair Construction				1,395,000
Stairs				
Fire exit stairs	44	FLT	30,000.00	1,320,000
Lobby stairs	1	FLT	75,000.00	75,000
C2020 Stair Finishes				<i>Included above</i>
				1,395,000

C30 Interior Finishes

C3010 Wall Finishes				5,525,000
Floor, wall and ceiling finishes				
Innovation Hall	38,000	SF	75.00	2,850,000
CEM	19,000	SF	25.00	475,000
Adaptable Manufacturing	43,000	SF		<i>Shelled space</i>
Education Multiplex	36,000	SF	40.00	1,440,000
Creative Office	48,000	SF		<i>Shelled space</i>
Event Space	19,000	SF	40.00	760,000
C3020 Floor Finishes				<i>Included above</i>
C3030 Ceiling Finishes				<i>Included above</i>
				5,525,000

D10 Conveying Systems

D1010 Elevators & Lifts				6,150,000
Traction elevators				
Passenger elevator, 15-stop	7	EA	750,000.00	5,250,000
Freight elevator, 15-stop	1	EA	900,000.00	900,000
D1020 Escalators & Moving Walks				



Feasibility Study Cost Plan

Scheme L Building

	Quantity	Unit	Rate	Total
D1090 Other Conveying Systems				
				6,150,000
D20 Plumbing Systems				
D2090 Other Plumbing Systems				2,590,000
Plumbing systems	203,000	SF	15.00	3,045,000
Credit for shelled space	(91,000)	SF	5.00	(455,000)
				2,590,000
D30 Heating, Ventilation & Air Conditioning				
D3090 Other HVAC Systems & Equipment				8,837,500
HVAC systems	203,000	SF	52.50	10,657,500
Credit for shelled space	(91,000)	SF	20.00	(1,820,000)
				8,837,500
D40 Fire Protection				
D4010 Sprinklers				1,671,000
Automatic wet sprinkler system	203,000	SF	7.00	1,421,000
Fire pump and water storage	1	LS	250,000.00	250,000
				1,671,000
D50 Electrical Lighting, Power & Communications				
D5090 Other Electrical Systems				9,555,000
Electrical systems	203,000	SF	65.00	13,195,000
Credit for shelled space	(91,000)	SF	40.00	(3,640,000)
				9,555,000



Feasibility Study Cost Plan

Scheme L Building

	Quantity	Unit	Rate	Total
E10 Equipment				
E1010 Commercial Equipment				150,000
Amphitheater seating	250	EA	500.00	125,000
Loading dock equipment	1	LS	25,000.00	25,000
				150,000
E20 Furnishings				
E2010 Fixed Furnishings				1,347,500
Built-in cabinets and countertops, miscellaneous millwork				
Innovation Hall	38,000	SF	10.00	380,000
CEM	19,000	SF	5.00	95,000
Adaptable Manufacturing	43,000	SF		<i>Shelled space</i>
Education Multiplex	36,000	SF	15.00	540,000
Creative Office	48,000	SF		<i>Shelled space</i>
Event Space	19,000	SF	10.00	190,000
Roof top terrace	9,500	SF	15.00	142,500
E2020 Movable Furnishings				
				1,347,500
F10 Special Construction				
				0
F20 Selective Demolition				
				0



Feasibility Study Cost Plan

Sitework Areas

	SF	SF	SF
Areas			
Net Site Areas	6,074		
Net Site Area		6,074	
Building Footprint Areas			
Building Footprint Area	16,000		
Subtotal of Building Footprint Areas		16,000	
TOTAL SITE AREA			22,074



Feasibility Study Cost Plan

Sitework Summary

			%	\$/SF	TOTAL \$x1,000
				Gross Area: 22,074 SF	
G10	Site Preparation		3%	1.50	33
G20	Site Improvements		26%	13.76	304
G30	Site Mechanical Utilities		19%	9.89	218
G40	Site Electrical Utilities		26%	13.39	296
G90	Other Site Construction		0%	0.00	0
G	Building Sitework		74%	38.53	851
SITE ELEMENTAL COST BEFORE CONTINGENCIES			74%	38.53	851
Z10	Design Contingency	15.00%	11%	5.78	128
Z11	General Requirements	4.00%	3%	1.77	39
SITE ELEMENTAL COST INCLUDING CONTINGENCIES			88%	46.09	1,017
Z21	General Conditions	7.00%	6%	3.23	71
Z22	Bonds & Insurance	2.00%	2%	0.99	22
Z23	Contractor's Overhead, Profit & Fee	4.00%	4%	2.01	44
SITE CONSTRUCTION COST BEFORE ESCALATION			100%	52.31	1,155
Z30	See Overall Summary for Escalation	0.00%	0%	0.00	0
RECOMMENDED BUDGET - March, 2018			100%	52.31	1,155



Feasibility Study Cost Plan

Sitework

Item Description	Quantity	Unit	Rate	Total
G10 Site Preparation				
G1010 Site Clearing				33,111
General site clearing and grading	22,074	SF	1.50	33,111
G1020 Site Demolition and Relocations				
G1030 Site Earthwork				
G1040 Hazardous Waste Remediation				<i>Excluded</i>
				33,111
G20 Site Improvements				
G2040 Site Development				303,700
Paving and landscaping				
Paving and landscaping, site furniture and signage	6,074	SF	50.00	303,700
G2050 Landscaping				<i>Included above</i>
				303,700
G30 Site Mechanical Utilities				
G3090 Other Site Mechanical Utilities				218,222
Storm sewer systems (excluding on-site containment)	6,074	SF	3.00	18,222
Fire and domestic water, gas connections to building	1	LS	200,000.00	200,000
				218,222



Feasibility Study Cost Plan

Sitework

Item Description	Quantity	Unit	Rate	Total
G40 Site Electrical Utilities				
G4090 Other Site Electrical Utilities				295,555
Site lighting	6,074	SF	7.50	45,555
Site power and communication connections to building	1	LS	250,000.00	250,000
				295,555
G90 Other Site Construction				
				0



Feasibility Study Cost Plan

Subterranean Parking

Item Description	Quantity	Unit	Rate	Total
Scheme S: One level - 24,100 GSF				
Excavation and removal off site	10,000	CY	35.00	350,000
Reinforced concrete foundations	24,100	SF	5.00	120,500
Reinforced concrete slab on grade	24,100	SF	10.00	241,000
Reinforced concrete retaining walls including waterproofing	7,150	SF	75.00	536,250
Reinforced concrete columns	24,100	SF	5.00	120,500
Premium for suspended reinforced concrete lid in lieu of slab on grade at building and site	24,100	SF	25.00	602,500
Waterproofing at site areas	6,074	SF	15.00	91,110
Stairs including shafts	2	FLT	50,000.00	100,000
Additional elevator stop and shaft	2	EA	60,000.00	120,000
MEP systems	24,100	SF	20.00	482,000
Parking control equipment	1	LS	100,000.00	100,000
Alternate Cost Before Markups				2,863,860
Z10 Design Contingency	15.00%			429,579
Z11 General Requirements	4.00%			131,738
Z21 General Conditions	7.00%			239,762
Z22 Bonds & Insurance	2.00%			73,299
Z23 Contractor's Overhead, Profit & Fee	4.00%			149,530
Z30 See Overall Summary for Escalation	0.00%			
	161.32			3,887,767



Feasibility Study Cost Plan

Subterranean Parking

Item Description	Quantity	Unit	Rate	Total
Scheme M: Two levels - 48,200 GSF				
Excavation and removal off site	20,000	CY	35.00	700,000
Temporary dewatering	1	LS	100,000.00	100,000
Shoring	14,300	SF	60.00	858,000
Reinforced concrete foundations	24,100	SF	5.00	120,500
Reinforced concrete slab on grade	24,100	SF	10.00	241,000
Underslab drainage and waterproofing systems	24,100	SF	15.00	361,500
Reinforced concrete retaining walls including waterproofing	14,300	SF	75.00	1,072,500
Reinforced concrete columns	48,200	SF	5.00	241,000
Reinforced concrete suspended floor slab and beams, including ramps	24,100	SF	30.00	723,000
Premium for suspended reinforced concrete lid in lieu of slab on grade at building and site	24,100	SF	25.00	602,500
Waterproofing at site areas	6,074	SF	15.00	91,110
Stairs including shafts	4	FLT	50,000.00	200,000
Additional elevator stop and shaft	4	EA	60,000.00	240,000
MEP systems	48,200	SF	20.00	964,000
Parking control equipment	1	LS	100,000.00	100,000
Alternate Cost Before Markups				6,615,110
Z10 Design Contingency	15.00%			992,267
Z11 General Requirements	4.00%			304,295
Z21 General Conditions	7.00%			553,817
Z22 Bonds & Insurance	2.00%			169,310
Z23 Contractor's Overhead, Profit & Fee	4.00%			345,392
Z30 See Overall Summary for Escalation	0.00%			
			186.31	8,980,190



Feasibility Study Cost Plan

Subterranean Parking

Item Description	Quantity	Unit	Rate	Total
Scheme L: Three levels - 72,300 GSF				
Excavation and removal off site	30,000	CY	35.00	1,050,000
Temporary dewatering	1	LS	150,000.00	150,000
Shoring	21,450	SF	60.00	1,287,000
Reinforced concrete foundations	24,100	SF	5.00	120,500
Reinforced concrete slab on grade	24,100	SF	10.00	241,000
Underslab drainage and waterproofing systems	24,100	SF	15.00	361,500
Reinforced concrete retaining walls including waterproofing	21,450	SF	75.00	1,608,750
Reinforced concrete columns	72,300	SF	5.00	361,500
Reinforced concrete suspended floor slab and beams, including ramps	48,200	SF	30.00	1,446,000
Premium for suspended reinforced concrete lid in lieu of slab on grade at building and site	24,100	SF	25.00	602,500
Waterproofing at site areas	6,074	SF	15.00	91,110
Stairs including shafts	6	FLT	50,000.00	300,000
Additional elevator stop and shaft	6	EA	60,000.00	360,000
MEP systems	72,300	SF	20.00	1,446,000
Parking control equipment	1	LS	100,000.00	100,000
Alternate Cost Before Markups				9,525,860
Z10 Design Contingency	15.00%			1,428,879
Z11 General Requirements	4.00%			438,190
Z21 General Conditions	7.00%			797,505
Z22 Bonds & Insurance	2.00%			243,809
Z23 Contractor's Overhead, Profit & Fee	4.00%			497,370
Z30 See Overall Summary for Escalation	0.00%			
	178.86			12,931,612