

MACKENZIE.

DESIGN DRIVEN | CLIENT FOCUSED

Mount Vernon Fire Department

SITE AND FACILITY ASSESSMENT

January 29, 2020



OUR HISTORY. OUR FUTURE. OUR PROMISE.

The values of our founder, Tom Mackenzie, remain the hallmarks of our firm.

Upon this foundation we have, steadily and intentionally, built leaders in architecture, interiors, engineering, and planning, focused on delivering the highest level of design excellence in service to our clients.

This mark is our signature and our promise.

CONTENTS

INTRODUCTION

Executive Summary

iii

BASE COST ESTIMATE ESCALATIONS

Escalation Summary

01-03

TASK 2 VALUE ENGINEERING

Task 2 Summary

02-03

Program

02-05

Updated Floor Plan - Station 1

02-10

Updated Site Plans - Station 2

02-11

Updated Floor Plan - Station 2

02-13

Station 2 Massing Studies

02-14

Task 2 Cost Summary

02-16

TASK 3 VALUE ENGINEERING

Task 3 Summary

03-03

Program

03-05

Updated Floor Plan - Station 1

03-10

Station 1 VE Options

03-11

Task 3 Cost Summary

03-15

APPENDIX A: SUPPORTING COST ESTIMATE - BASE ESCALATIONS

AA-01 - AA-40

APPENDIX B: SUPPORTING COST ESTIMATE - TASK 2 VALUE ENGINEERING

AB-01 - AB-28

APPENDIX C: SUPPORTING COST ESTIMATE - TASK 3 VALUE ENGINEERING

AC-01 - AC-43

APPENDIX D: COST SUMMARY DOCUMENTS

AD-01 - AD-06

THIS PAGE INTENTIONALLY LEFT BLANK

INTRODUCTION



THIS PAGE INTENTIONALLY LEFT BLANK

EXECUTIVE SUMMARY

This report is supplemental to a Needs Assessment report developed and issued by Mackenzie on December 14, 2018 regarding Mount Vernon Fire Facility Assessment and Planning. Concepts were developed for a ground-up new Fire Station 1, as well as renovations for existing Stations 2 and 3. These proposed concepts were taken to bond in the Spring of 2019, but were not passed by the voters. In response to an unsuccessful bond approval, City Council requested cost reduction strategies be evaluated for Stations 1 and 2 in order to reduce overall bond expenditures.

The following report encompasses various value engineering studies that were conducted to reduce the overall cost of the project. The value engineering efforts focused mainly on the proposed concepts for Stations 1 and 2. This report includes the following tasks:

1. Base Cost Estimate Updates
2. Task 2: Station 2 Administration Relocation
3. Task 3: Station 1 Value Engineering

Process and Methodology

Mackenzie employed programming, communication, consensus-building, and goal-setting techniques to ensure that the final report meets the expectations of the stakeholders involved in the process. Using a multi-disciplinary approach, extensive public project experience, and lessons learned on previous fire stations and public building projects, the team provided architectural, site planning, and land use planning services to meet the project's objectives and deliverables.

Task #1: Base Cost Escalations

In order to establish a current baseline project cost in which to execute Tasks 2 and 3, the Base Cost Estimates for Stations 1, 2, and 3 have been escalated to reflect schedule delay of one year and reflective of the project's current timeline. The projected costs were adjusted based on time alone; program square footages, proposed design, and materiality remained as-designed within the December 2018 report. The updated estimate assumes an October 2022 mid-point of construction for Station 1, with Stations 2 and 3 following together with midpoints of August 2023. See below for the resulting total costs, with the full Cost Estimate Document included in Appendix A, and expanded Cost Summary Documents included in Appendix D.

DECEMBER 2018 COST SUMMARY

	STATION 1	STATION 2	STATION 3
PROJECT HARD COSTS	\$16,548,045	\$1,982,086	\$3,220,165
PROJECT SOFT COSTS	\$5,619,851	\$1,043,393	\$1,400,517
INDIVIDUAL TOTAL PROJECT COST	\$22,167,896	\$3,025,479	\$4,620,682
COMBINED TOTAL PROJECT COST	\$29,814,057.62		

JANUARY 2020 COST SUMMARY

	STATION 1	STATION 2	STATION 3
PROJECT HARD COSTS	\$18,112,514	\$2,232,020	\$3,626,216
PROJECT SOFT COSTS	\$6,061,560	\$1,127,895	\$1,536,005
INDIVIDUAL TOTAL PROJECT COST	\$24,174,074	\$3,359,915	\$5,162,221
COMBINED TOTAL PROJECT COST	\$32,696,210.19		

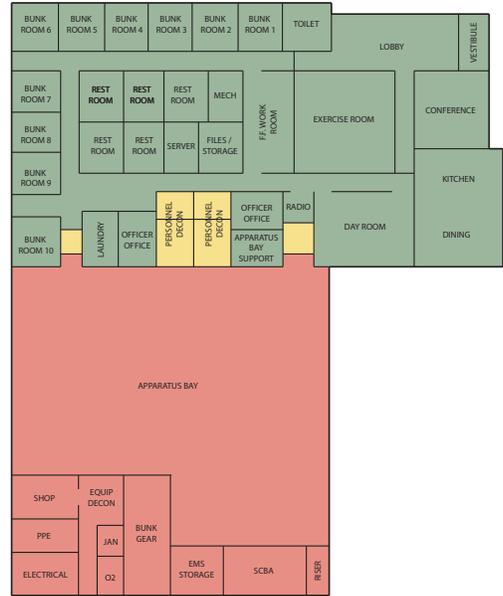
Task #2: Station 2 Administration Relocation

Task 2 surrounds further examination of Station 2 as to its capacity to house existing and planned administrative programmatic functions within the existing facility through renovation and / or available expansion. Evaluation of this scenario seeks to determine a cost comparison of the overall project budget, whereas a reduction in the cost of Station 1 would occur due to eliminating administration functions at that facility.

Programmatic elements removed from Station 1 include the Fire Chief’s Office, Assistant Chief’s Office, EMS QA Office, Office Manager’s Office, Battalion Chief’s Office, Fire Marshal’s Office, Conference Room - Small, Secretary #1 Office, Fire Prevention Inspector(s), Secretary #2 Office, Community Paramedic Office / Aid, Law Enforcement Office, Office Supply Storage / Copy, Lunch Room / Kitchen, Unisex Restrooms, Public Bathrooms, Training / EOC Room and Associated Storage, Museum / Historic Truck, Exterior Patio, and Six Administrative Staff Parking Spaces. With these changes, the station’s floor plan was re-arranged on site as a single story concept. The stairs, elevator, and associated functions were also removed. After all was completed, the resulting square footage for Station 1 finished out at 16,399 sf.

As the administrative program was re-incorporated into Station 2, the site was re-developed with local zoning and building codes in mind. Site Constraints included the following:

- Abutting Residential Zone Landscape Buffer: 10’-0”
- Abutting Residential Zone Building Setback: 20’-0” (Applies to North and West Site boundary lines)
- Parking Count Ratio for Public Use Offices: 1 Space / 300 sf
- No ratio for Fire Stations exists, a parking study will be required to determine project parking needs
- SEPA Environmental Review is not required for alterations within the following thresholds; Service Buildings up to 12,000 sf (3,219 sf to be added), Service Buildings up to 40 parking spaces (8 spaces to be added)
- Maximum Building square footage (without frontage increase) for Type VB Construction (sprinklered) per IBC is 27,000 sf (60’ Height, 3 Stories). 15,898 sf as currently proposed (~40’ Height, 2 Stories)



STATION 1 FIRST FLOOR PLAN



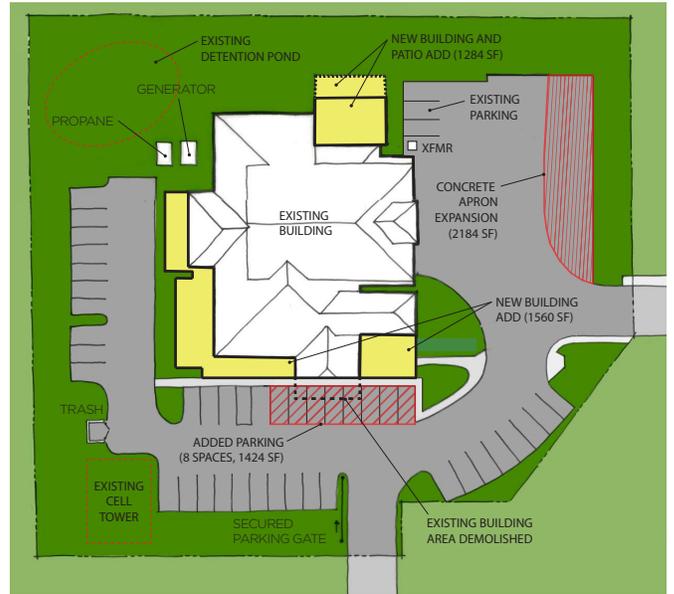
STATION 2 FIRST FLOOR PLAN

The site and floor plans were re-arranged for Station 2 to optimize programmatic adjacencies within the updated footprint and minimize operational impacts on existing operations during improvements. The resulting square footage for Station 2 finished out at 15,898 sf.

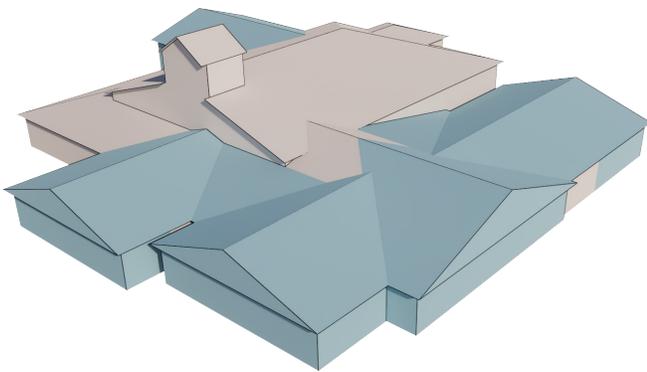
The Department also expressed a functional desire to expand the concrete apron for Station 2. The current apron is undersized, and requires the Department to use parking spots for fire truck training purposes. The proposed 2,184 square foot expansion of the Apron would account for this training area, and would free up parking spaces to be used for their dedicated purpose. The cost of the proposed Concrete Apron Expansion (assuming a 2' thick apron with 10 psf rebar) is a net add of \$145,000, including all Indirect Markups and Escalation to August 2023 per the construction schedule for Station 2. This expansion takes the total site disturbance area to 7,184 square feet.

Since the site disturbance is over 5,000 square feet, a Storm Report is triggered based on planning code. Planning does not require Flow Control until exceeding 10,000 square feet of disturbance. Flow Control would require installation of a Detention Vault to account for the new impervious area, and a Storm Report would not necessarily require the vault. While planning does not dictate a requirement of vault installation, this is not a guarantee that one will not have to be installed. If a detention vault is to be installed for Station 2, based on the new site disturbance area the vault would need to be 20' x 100' x 7' (14,000 cf), and would add a cost of \$700,000 to the project (includes all Indirect Markups, Associated Soft Costs, and Escalation to August 2023 per the construction schedule for Station 2).

See the table below for the resulting total costs, with the full Cost Estimate Document included in Appendix B, and expanded Cost Summary Documents included in Appendix D. Due to the uncertain requirements for a detention vault at Station 2, the table includes associated costs with vault installation.



PROPOSED STATION 2 SITE PLAN



PROPOSED STATION 2 MASSING

Areas of New Addition

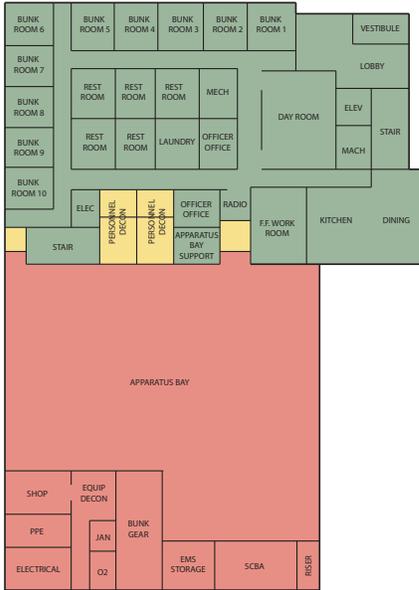
TASK 2 COST SUMMARY

	STATION 1	STATION 2	STATION 3
PROJECT HARD COSTS	\$14,821,699	\$3,724,659	\$3,626,216
PROJECT SOFT COSTS	\$5,038,061	\$1,732,476	\$1,536,005
INDIVIDUAL TOTAL PROJECT COST	\$19,859,760	\$5,457,135	\$5,162,221
COMBINED TOTAL PROJECT COST	\$30,479,116.53		

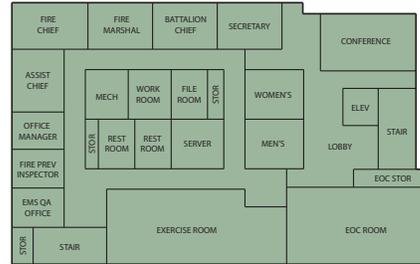
Task #3: Station 1 Value Engineering

Task 3 surrounds evaluation of the current Station 1 design in an effort to reduce overall project costs through value engineering strategies with minor program reduction that retains station function.

Programmatic elements to be removed from Station 1 without impacting station function include the Community Paramedic Office / Aid, Law Enforcement Office, Conference Room - Small, Lunch Room / Kitchen, Museum / Historic Truck (to stay at Station 2), Unisex Restroom (shower removed, water closet and lavatory remain), Exterior Patio. After all was completed, the resulting square footage for Station 1 finished out at 21,766 sf.



STATION 1 FIRST FLOOR PLAN



STATION 1 SECOND FLOOR PLAN

The Value Engineering Studies conducted for Station 1 included an exploration of alternative structural systems, cladding, and removal / deletion of various building and site elements. A full list of these studies can be found on pg. 03-11.

Station 2 remains as designed from previous efforts (December 2018) for Task 3, with exception to the re-addition of the Museum / Historic Truck to the Lobby Area.

See the table below for the updated cost summary, including the changes mentioned above for Station 1. The full Cost Estimate Document has been included in Appendix C, and expanded Cost Summary Documents have been included in Appendix D.

TASK 3 COST SUMMARY

	STATION 1	STATION 2	STATION 3
PROJECT HARD COSTS	\$15,258,796	\$2,232,020	\$3,626,216
PROJECT SOFT COSTS	\$5,256,805	\$1,127,895	\$1,536,005
INDIVIDUAL TOTAL PROJECT COST	\$20,515,601	\$3,359,915	\$5,162,221
COMBINED TOTAL PROJECT COST	\$29,037,736.99		

Cost Comparison Summary

Consolidated Cost Tables from previous pages, for use as a reference.

DECEMBER 2018 COST SUMMARY

	STATION 1	STATION 2	STATION 3
PROJECT HARD COSTS	\$16,548,045	\$1,982,086	\$3,220,165
PROJECT SOFT COSTS	\$5,619,851	\$1,043,393	\$1,400,517
INDIVIDUAL TOTAL PROJECT COST	\$22,167,896	\$3,025,479	\$4,620,682
COMBINED TOTAL PROJECT COST	\$29,814,057.62		

JANUARY 2020 COST SUMMARY

	STATION 1	STATION 2	STATION 3
PROJECT HARD COSTS	\$18,112,514	\$2,232,020	\$3,626,216
PROJECT SOFT COSTS	\$6,061,560	\$1,127,895	\$1,536,005
INDIVIDUAL TOTAL PROJECT COST	\$24,174,074	\$3,359,915	\$5,162,221
COMBINED TOTAL PROJECT COST	\$32,696,210.19		

TASK 2 COST SUMMARY

	STATION 1	STATION 2	STATION 3
PROJECT HARD COSTS	\$14,821,699	\$3,724,659	\$3,626,216
PROJECT SOFT COSTS	\$5,038,061	\$1,732,476	\$1,536,005
INDIVIDUAL TOTAL PROJECT COST	\$19,859,760	\$5,457,135	\$5,162,221
COMBINED TOTAL PROJECT COST	\$30,479,116.53		

TASK 3 COST SUMMARY

	STATION 1	STATION 2	STATION 3
PROJECT HARD COSTS	\$15,258,796	\$2,232,020	\$3,626,216
PROJECT SOFT COSTS	\$5,256,805	\$1,127,895	\$1,536,005
INDIVIDUAL TOTAL PROJECT COST	\$20,515,601	\$3,359,915	\$5,162,221
COMBINED TOTAL PROJECT COST	\$29,037,736.99		

THIS PAGE INTENTIONALLY LEFT BLANK

BASE COST ESTIMATE UPDATES

THIS PAGE INTENTIONALLY LEFT BLANK

BASE ESCALATION COST SUMMARY

Value Engineering Studies for the Mount Vernon Fire Stations began with a general escalation for the stations based on a change in timeline. For the cost escalations, program square footages, proposed design, and materiality remained as-designed from previous efforts in November 2018. See the Executive Summary on Page iii for a full description of the Base Cost Escalations.

DECEMBER 2018 COST SUMMARY

	STATION 1	STATION 2	STATION 3
PROJECT HARD COSTS	\$16,548,045	\$1,982,086	\$3,220,165
PROJECT SOFT COSTS	\$5,619,851	\$1,043,393	\$1,400,517
INDIVIDUAL TOTAL PROJECT COST	\$22,167,896	\$3,025,479	\$4,620,682
COMBINED TOTAL PROJECT COST	\$29,814,057.62		

JANUARY 2020 COST SUMMARY

	STATION 1	STATION 2	STATION 3
PROJECT HARD COSTS	\$18,112,514	\$2,232,020	\$3,626,216
PROJECT SOFT COSTS	\$6,061,560	\$1,127,895	\$1,536,005
INDIVIDUAL TOTAL PROJECT COST	\$24,174,074	\$3,359,915	\$5,162,221
COMBINED TOTAL PROJECT COST	\$32,696,210.19		

THIS PAGE INTENTIONALLY LEFT BLANK

TASK 2 VALUE ENGINEERING

THIS PAGE INTENTIONALLY LEFT BLANK

TASK 2 SUMMARY

Task 2 involved a programmatic relocation of administration functions from Station 1 to Station 2. With a reduced program, Station 1 was then re-examined as a single story concept. Site and Floor Plans were updated for Station 2 due to the added program square footage needs. The results of this study are reflected in the following pages, including a revised program document, updated floor and site plans for Stations 1 and 2, and a massing exploration for Station 2 reactant to the program shift. See the Executive Summary on Page iii for a full description of Task 2.

PROGRAM SUMMARY STATION 1

SPACE USE	SQUARE FOOTAGE
	AT MOVE-IN
APPARATUS BAY AND SUPPORT	6,501 SF
LIVING QUARTERS	4,141 SF
ADMINISTRATION AND BUILDING SUPPORT	2,477 SF
TOTAL (INCLUDES 25% CIRCULATION)	16,399 SF
SITE USE	
TOTAL EXTERIOR REQUIREMENTS (NOT INCLUDING BUILDING FOOTPRINT AREA)	11,332 SF
TOTAL SITE REQUIREMENTS	27,731 SF

**PROGRAM SUMMARY
STATION 2**

SPACE USE	SQUARE FOOTAGE	
	EXISTING	AT MOVE-IN
APPARATUS BAY AND SUPPORT	4,370 SF	5,908 SF
LIVING QUARTERS	2,984 SF	4,029 SF
ADMINISTRATION / BUILDING SUPPORT	5,325 SF	5,961 SF
TOTAL	12,679 SF	15,898 SF

SITE USE	
TOTAL EXTERIOR IMPROVEMENTS (AREA OF PARKING ADD)	2,810 SF

Updated Program

Space / Room Use	Space Requirements			Space Size			Room Type	Total Required Square Footage			Comments
	Exist	2018	2048	W	L	Area		Exist	2018	2048	
Department: Mount Vernon Fire Department - Station 1 (Summary)											
Apparatus Bay and Support Rooms								0	6501	6501	
Living Quarters								0	4141	4141	
Administration and Building Support								0	2477	2477	
SUBTOTAL								0	13119	13119	
GENERAL CIRCULATION (25%)								0	3280	3280	
TOTAL BUILDING SQUARE FOOTAGE								0	16399	16399	0.38
TOTAL EXTERIOR REQUIREMENTS								0	11332	11332	0.26
TOTAL SITE REQUIREMENTS								0	27731	27731	0.64

Department: Mount Vernon Fire Department - Station 2 (Summary)											
Apparatus Bay and Support Rooms								4370	5908	5908	Renovation - Expand into Exist. Exercise Room and back of Apparatus Bays (Leave North Bay Full Length)
Living Quarters								2984	4029	4029	Addition - Dayroom/Kitchen/Dining & Exercise Room
Administration and Building Support								5325	3771	3771	Addition - New Vestibule. Renovation - Administration Areas Including New Public Restrooms.
Administration and Building Support (Re-added in Task 2)									2190	2190	Station 1 Admin program with red strikethroughs below re-added to Station 2. Areas totaled, circulation added
TOTAL								12679	15898	15898	
TOTAL SITE IMPROVEMENTS (ADDED ADMIN PARKING)									2810	2810	TOTAL (PLUS ADMIN RE-ADDED) NOT TO EXCEED 5000 SF

General Comments - Station 1

Durable exterior materials - Include masonry and wood features appropriate to local styles
 Possible operable skylights in app bays for heat removal/air flow. May not be possible due to occupied space above
 Durable finishes, stainless steel appliances, sinks, countertops in kitchen. Stained/polished concrete surfaces throughout
 Minimum concrete curb and FRP on all 4 walls of truck bays
 Vehicle exhaust system tied to timer and door opener, magnetic direct connection ventilation and track rail w/exhaust fans and ducting.
 Also consider whole space negative pressure exhaust fan
 Trench drains located beneath each truck, no water in the walkways
 Need secured parking for 20 personal suppression staff vehicles adjacent to and with access to the living-quarters wing.
 Need secured parking for 1 administrative vehicles with access to the administrative wing.
 Gas forced air heat and A/C except apparatus bays. Also consider in-floor radiant heat/cooling systems for apparatus bays and living quarters
 Natural gas – overhead drop heaters versus in floor radiant heat (see MV station 2)
 Air compressor w/ reel system low pressure system (under 120 psi) for apparatus brake tank fill and high pressure system for apparatus tire fill (direct from air compressor, 150+psi)
 Include welder in equipment maintenance/storage room
 Power drops to apparatus to have minimum 30 amp dedicated circuits
 Emergency Generator for entire building – all circuits
 Solar panel rooftop array and/or panels integrated into other design features
 Station 2 Lobby configuration to include space for 1920 Fire Truck as currently housed at station 2 and bi-fold apparatus doors for ingress/egress.
 Also include display space and seating for 8 - 10 people

Updated Program

Space / Room Use	Space Requirements			Space Size			Room Type	Total Required Square Footage			Comments
	Exist	2018	2048	W	L	Area		Exist	2018	2048	
Department: Apparatus Bay and Support Rooms											
Apparatus Bay											
Apparatus Bays		3	3	18	80	1440		0	4320	4320	Three drive thru bays, 1 partial, 14'w x 14'h doors, 5-6 vehicles total, see below (2-engines 33' length E111, future tiller ladder truck 65' (current L125 is 43'), 1 ambulance 26' length - MVFD or CVAA Med Unit, Battalion Chief SUV 19' length. Four-fold doors at response side
		1	1	18	30	540		0	540	540	
<i>Group Total</i>								0	4860	4860	
Apparatus Support Rooms											
SCBA Maintenance and Fill Station		1	1	15	25	375		0	375	375	All-in-one compressor, cylinder/pack storage, work bench, and fill station (SCBA's, masks, EMS) Stainless steel sink and countertops. Include drying area for masks, respirators, etc.
Equipment Decon Room		1	1	6	10	60		0	60	60	
PPE Storage / Work Room		1	1	10	15	150		0	150	150	Built-in cabinetry, shelving, and countertop work space
Bunker Gear Storage Room		1	1	16	30	480		0	480	480	Room with negative ventilation, metal cage storage racks in rows
Vehicle / Equip. / Maint. / Storage Room		1	1	10	16	160		0	160	160	Built-in cabinetry, shelving, and countertop work space
Medical Air / O2 Room		1	1	6	8	48		0	48	48	
Unisex Restroom		1	1	10	8	80		0	80	80	With toilet, sink/mirror, and built-in storage, ADA accessible
Custodial Room		1	1	4	4	16		0	16	16	Wash sink, shelving, space for mops/squeegees (Room to be ventilated)
Hose Storage		1	1	4	12	48		0	48	48	Roll-away racks positioned along apparatus bay walls
EMS Storage		1	1	14	16	224		0	224	224	EMS supplies central storage room
<i>Group Total</i>								0	1641	1641	
TOTAL SQUARE FOOTAGE (Apparatus Bay and Support Rooms)								0	6501	6501	

Updated Program

Space / Room Use	Space Requirements			Space Size			Room Type	Total Required Square Footage			Comments
	Exist	2018	2048	W	L	Area		Exist	2018	2048	
Department: Living Quarters											
Living Quarters											
Decon / Shower Room		2	2	10	11	110		0	220	220	Unisex shower rooms used for transition decon (after structure fires) before entering the living quarters - See healthy in, healthy out information (Include separate access doorways from the apparatus bays and into the living area. Shower, toilet, sink/mirror, cabinet storage, and bench)
Dayroom		1	1	20	25	500		0	500	500	Open concept with drinking / kitchen room for 10 personnel. Large TV screen, combination recliners / couches
Kitchen		1	1	12	18	216		0	216	216	Include 3 full size fridges, 2 dish washers, a 6 burner, gas stove top located on an island with food prep countertop space and cabinetry underneath. Two full size electric ovens, separate space for an eating bar / stools integrated into main countertop space.
Dining Area		1	1	16	20	320		0	320	320	Integrated with the kitchen, could include eating bar, table(s), chairs, and space to accommodate up to 20
Laundry / Janitor Room		1	1	10	14	140		0	140	140	Washer and electric dryer and built-in cabinetry for linens (sheets, dish towels, blankets). Shelf storage for disposables, large utility sink, space for mops, brooms, cleaners, etc.
Bunk Rooms		10	10	10	12	120		0	1200	1200	4 lockers each and space for a small nightstand with 1 full size XL bed
Toilet Rooms		4	4	10	11	110		0	440	440	Unisex rooms each with toilet, sink/mirror, shower, and bench
Toilet Rooms		1	1	10	11	110		0	110	110	Unisex rooms each with toilet, sink/mirror, shower, and bench ADA accessible
Exercise Room		1	1	25	35	875		0	875	875	Include padded non-permeable flooring for easy cleaning/disinfecting. Include fitness equip. costs
Disposable Products Storage Room		1	1	10	12	120		0	120	120	Supply storage room. Toilet paper, paper towels etc.
<i>Group Total</i>								0	4141	4141	
TOTAL SQUARE FOOTAGE (Living Quarters)								0	4141	4141	

Updated Program

Space / Room Use	Space Requirements			Space Size			Room Type	Total Required Square Footage			Comments
	Exist	2018	2048	W	L	Area		Exist	2018	2048	
Department: Administration and Building Support											
Administration											
Fire Chief's Office		1	1	14	16	224		0	224	224	Desk and small table w/room for 2-4 chairs and/or couch
Assistant Chief's Office		1	1	14	16	224		0	224	224	
Community Paramedic Office/Aid		1	1	14	12	168		0	168	168	Provide outside access or from lobby.
Law Enforcement Office		1	1	14	12	168		0	168	168	Provide outside access
EMS QA Office		1	1	14	12	168		0	168	168	
Office Manager's Office		1	1	14	12	168		0	168	168	Locate between the fire chief and battalion chief offices
Battalion Chief's Office		1	1	14	14	196		0	196	196	Desk, file storage, small table and chairs
Captain's Office		2	2	12	12	144		0	288	288	With desk, file cabinet, seating for 2 additional
Fire Marshal's Office		1	1	14	16	224		0	224	224	Desk, plan review table and storage, locker, small table with 2 chairs. Include interior door access to file room shared with Secretary #1
Firefighter Work Stations		1	1	14	18	252		0	252	252	Room for 7 workstations; consider adjustable height desks, space for printers and cabinetry for storage
Conference Room		1	1	15	25	375		0	375	375	8-10 People
Conference Room - Small		1	1	10	12	120		0	120	120	Future Office
Secretary #1 Office		1	1	14	12	168		0	168	168	Include interior door access to file room shared with fire marshal's office
File Room		1	1	14	12	168		0	168	168	Accessed from 2 sides as described for fire marshal's office
Fire Prevention Inspector(s)		1	1	14	12	168		0	168	168	Two workstations, file storage, and two lockers. Could also be used for pub ed
Secretary #2 (Receptionist)		1	1	9	10	90	Open	0	90	90	Work station near front counter. Include space or separate room for office copy/supplies
Office Supply Storage / Copy		1	1	10	14	140		0	140	140	Separate room for office supply storage, copier/printer, and other office devices (see current station 2)
Lunch Room / Kitchen		1	1	12	14	168		0	168	168	Microwave, small electric cook top, full size fridge, food/dish/silverware storage, sink and a table for 4-6. Small hot water heater under sink
Unisex Restroom		1	1	10	8	80		0	80	80	With toilet, shower, sink/mirror, and built-in storage, ADA accessible
Unisex Restroom w/Shower		1	1	10	12	120		0	120	120	With toilet, sink/mirror, and built-in storage, ADA accessible
Training / EOC Room		1	1	30	35	1050		0	1050	1050	Max occupancy 50? Standard A/V components with interactive whiteboards, ceiling mounted projector,
Training Storage		1	1	10	15	150		0	150	150	
EOC Storage		1	1	10	15	150		0	150	150	drop-down screen and multiple TV displays
Public Bathrooms		2	2	10	20	200		0	400	400	1 male, 1 female restroom with multiple toilet stalls and sinks/mirrors in each
Dispatch / Reception / Radio		1	1	6	10	60		0	60	60	Alarm desk w/secondary dispatch capabilities (See Station 2 for example). Include cabinetry and countertop work space
Group Total								0	1143	1143	

NOTE: RED STRIKETHROUGHS REPRESENT PROGRAM RE-LOCATED TO STATION 2. BLUE STRIKETHROUGHS REPRESENT PROGRAM STRICKEN FROM STATION 1.

Updated Program

Space / Room Use	Space Requirements			Space Size			Room Type	Total Required Square Footage			Comments	
	Exist	2018	2048	W	L	Area		Exist	2018	2048		
Building Support												
Vestibule		1	1	12	8	96		0	96	96		
Lobby		1	1	25	30	750		0	750	750	Secured from entry into administrative area. Electronic door entry and panic hw w/ roll down door at front counter? Security camera to monitor area	
Museum / Historic Truck		1	1	15	30	450		0	450	450		
Stairs		2	2	10	10	100		0	360	360	Qty. 2 indicates 180 sf for each floor. Number of floors to be determined	
Elevator		2	2	10	10	100		0	200	200	Qty. 1 indicates 100 sf for each floor. Number of floors to be determined	
Elevator Mechanical Room		1	1	8	8	64		0	64	64		
Computer Server Room		1	1	12	14	168		0	168	168		
Electrical / Phone / Server Room		1	1	10	12	120		0	120	120		
Mechanical Room		1	1	10	12	120		0	120	120	Electrical panels, hot water heaters, roof access	
Fire Riser / Sprinkler Room		1	1	8	10	80		0	80	80	Exterior door access	
Janitor Closet per floor		0	0	0	4	6	24		0	0	0	Space currently allocated in Apparatus Support and Living Quarters areas. Can switch to per floor designation within building support if preferred
<i>Group Total</i>								0	1334	1334		
TOTAL SQUARE FOOTAGE (Administration and Building Support)								0	2477	2477		

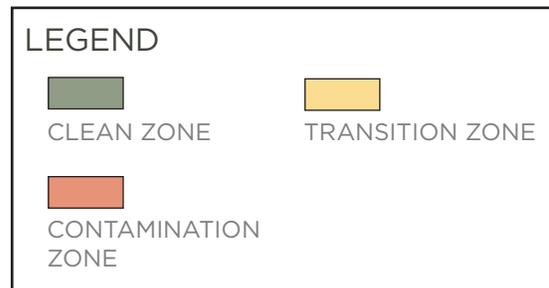
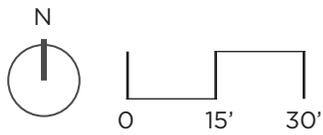
Department: Exterior Requirements											
Parking											
Public Parking - Community Rm/Training		12	12	9	18	162		0	1944	1944	
Staff Parking		21	21	9	18	162		0	3402	3402	20 Suppression Staff, 1 Admin Staff (6 Admin Staff Pkg Relocated to Station 2)
<i>Group Total</i>			33					0	5346	5346	
Site Elements											
Generator		1	1	10	12	120		0	120	120	
Trash / Recycling		1	1	10	20	200		0	200	200	Verify trash requirements w/ provider
Patio		1	1	8	38	304		0	304	304	BBQ
<i>Group Total</i>								0	320	320	
SUBTOTAL								0	5666	5666	
GENERAL CIRCULATION (100%)								0	5666	5666	
TOTAL SQUARE FOOTAGE (Exterior Requirements)								0	11332	11332	

NOTE: RED STRIKETHROUGHS REPRESENT PROGRAM RE-LOCATED TO STATION 2. BLUE STRIKETHROUGHS REPRESENT PROGRAM STRICKEN FROM STATION 1.

Updated Program

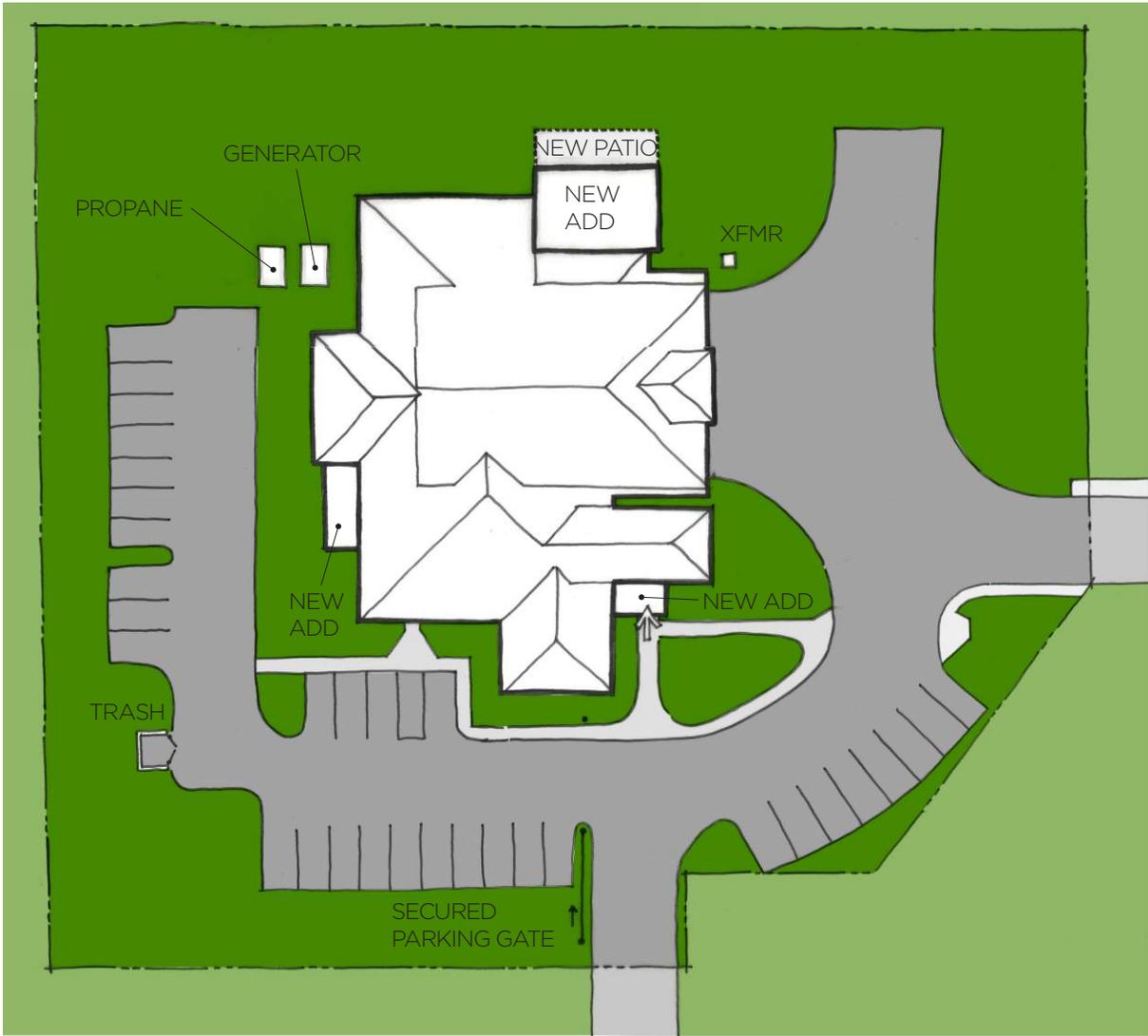


FIRST FLOOR PLAN
(SCALE: 1/32" = 1'-0")



NOTE: FLOOR PLAN IS PRELIMINARY, REFLECTANT OF SINGLE STORY CONCEPT FEASIBILITY WITH FOCUS ON PROGRAMMATIC ADJACENCIES.

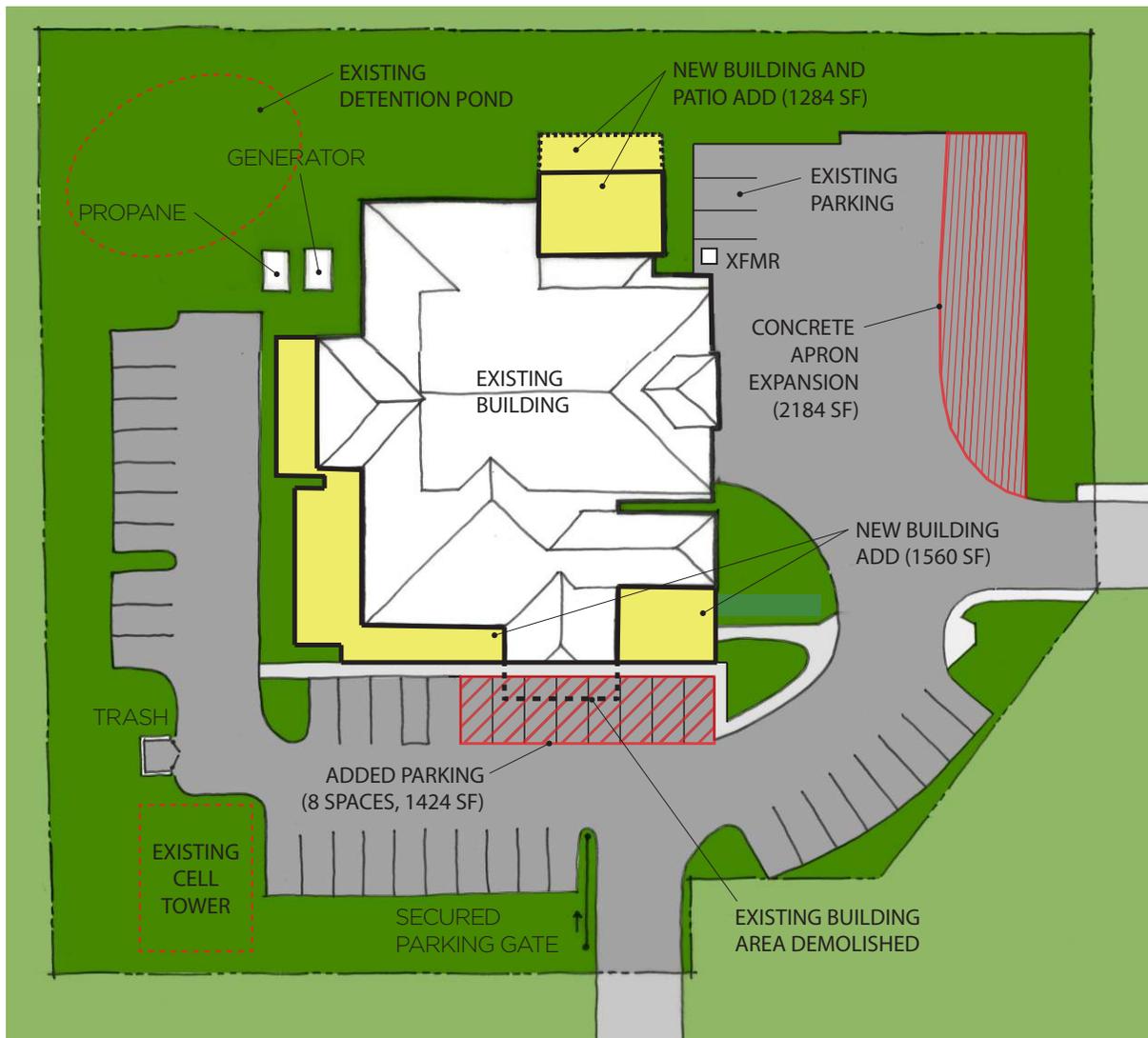
Updated Floor Plan - Station 1



PREVIOUS SITE PLAN
(SCALE: 1" = 60'-0")



Site Plans - Station 2



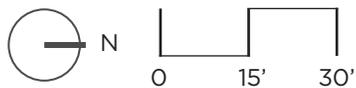
UPDATED SITE PLAN
(SCALE: 1" = 60'-0")



Site Plans - Station 2



FIRST FLOOR PLAN
(SCALE: 1/32" = 1'-0")

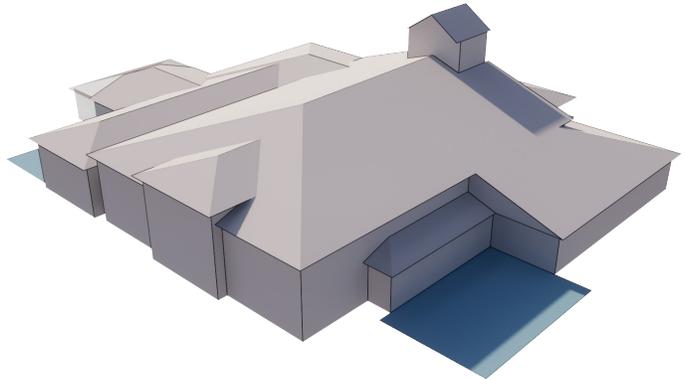
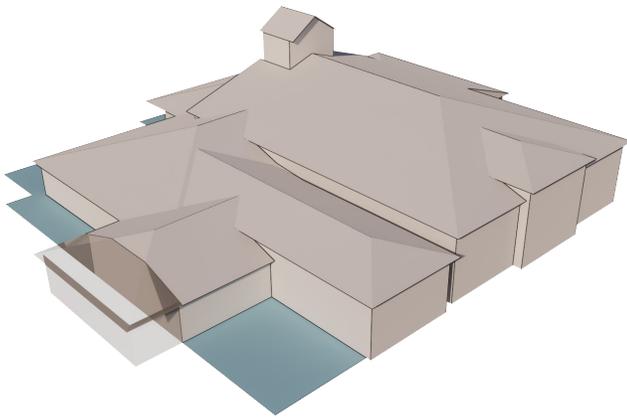
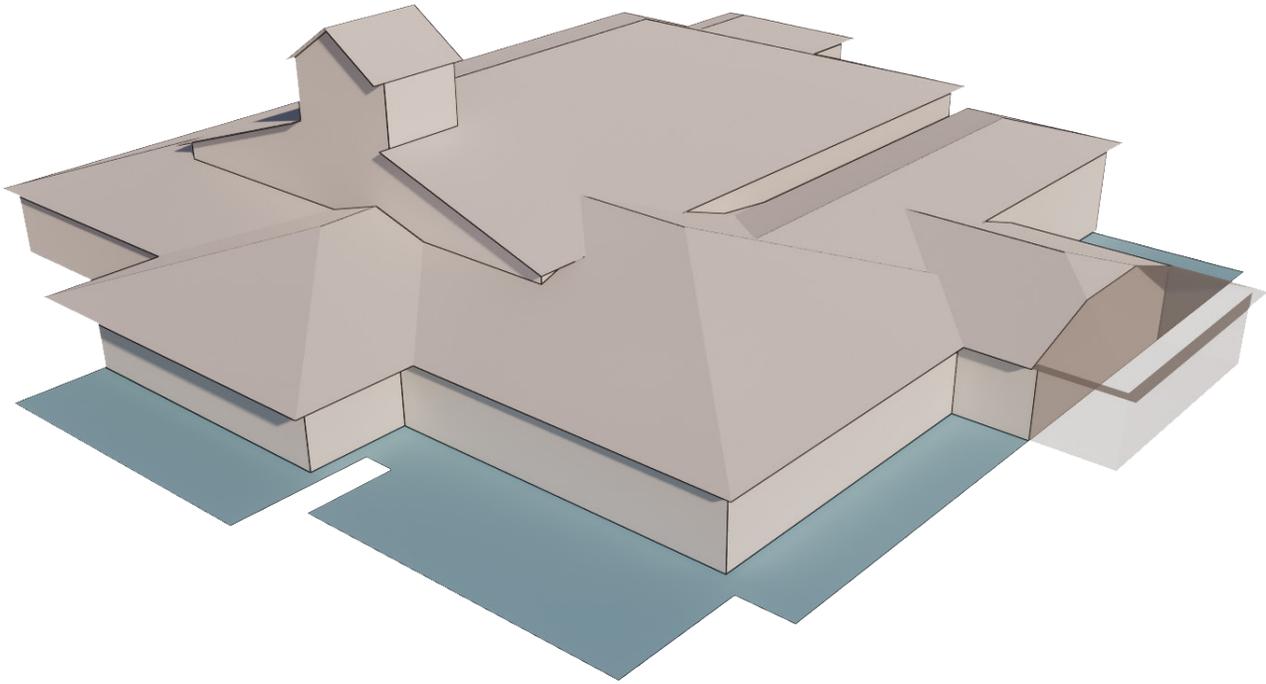


LEGEND

	
CLEAN ZONE	TRANSITION ZONE
	
CONTAMINATION ZONE	

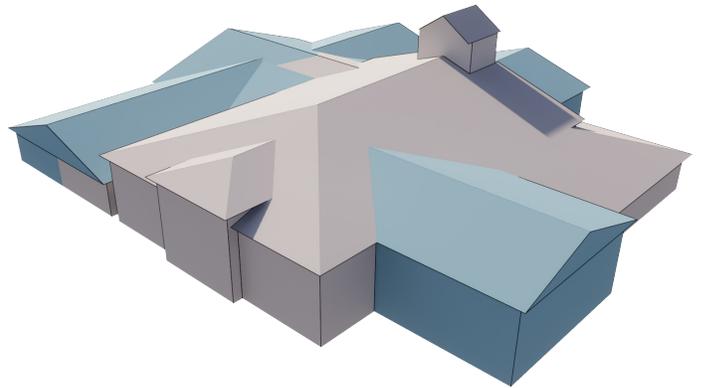
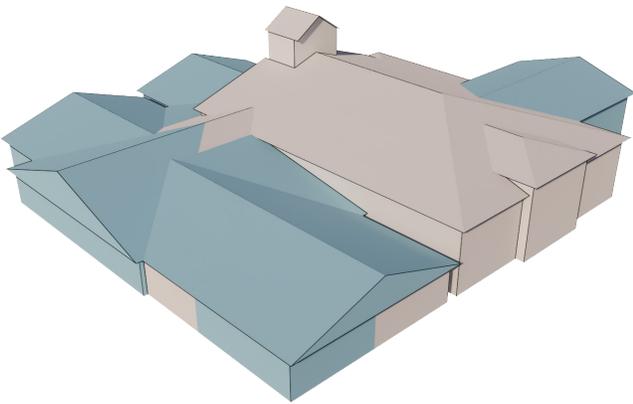
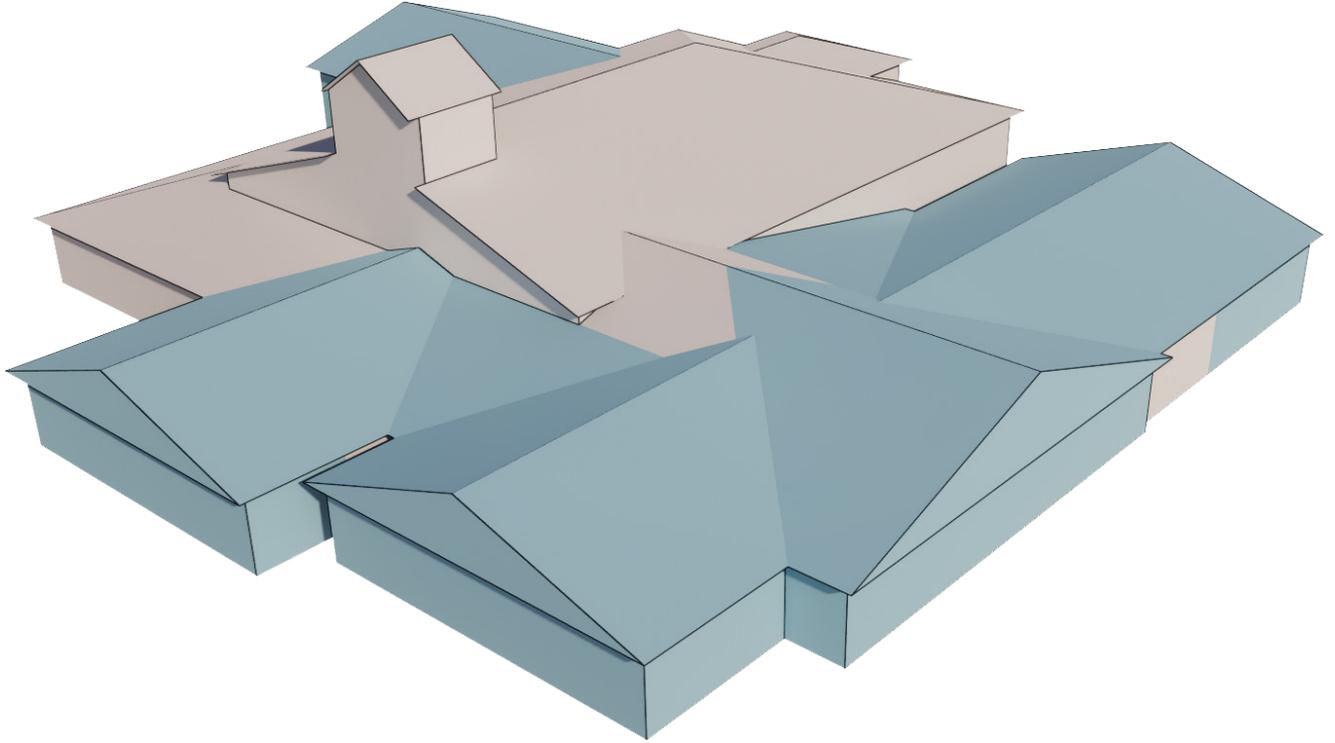
NOTE: FLOOR PLAN IS PRELIMINARY, REFLECTANT OF PROPOSED FOOTPRINT'S FUNCTIONALITY WITH FOCUS ON PROGRAMMATIC ADJACENCIES.

Updated Floor Plan - Station 2



CURRENT STATION 2 MASSING
CLEAR AREA TO BE DEMOLISHED, WHITE AREAS EXISTING, BLUE AREAS REFLECT NEW ADDITION

Massing Study - Station 2



PROPOSED STATION 2 MASSING
WHITE AREAS EXISTING, BLUE AREAS REFLECT NEW ADDITION

Massing Study - Station 2

TASK 2 COST SUMMARY

The Base Cost Estimates for Stations 1, 2, and 3 have been escalated to reflect the project's current timeline. The projected costs were adjusted based on time alone; program square footages, proposed design, and materiality remained as-designed from the December 2018 report. The updated estimate assumes an October 2022 mid-point of construction for Station 1, with Stations 2 and 3 following together with midpoints of August 2023.

The Costs were then updated to reflect the Task 2 VE Efforts. Changes include the reduced square footage and resulting second floor at Station 1, and the added square footage and site improvements at Station 2. Station 3 remained as previously designed in this effort. Due to the uncertain requirements for a detention vault at Station 2, the table below includes associated costs with vault installation. See Appendix B for the full Cost Estimate Document, and Appendix D for expanded Cost Summary Documents.

TASK 2 COST SUMMARY

	STATION 1	STATION 2	STATION 3
PROJECT HARD COSTS	\$14,821,699	\$3,724,659	\$3,626,216
PROJECT SOFT COSTS	\$5,038,061	\$1,732,476	\$1,536,005
INDIVIDUAL TOTAL PROJECT COST	\$19,859,760	\$5,457,135	\$5,162,221
COMBINED TOTAL PROJECT COST	\$30,479,116.53		

Cost Estimate Summary

TASK 3 VALUE ENGINEERING

THIS PAGE INTENTIONALLY LEFT BLANK

TASK 3 SUMMARY

Task 3 involved a programmatic reduction of the Station 1 Facility, followed by a study of value engineering options. The results of this study are reflected in the following pages, including a revised program document, updated floor plans for Station 1, and a VE options list with pricing impact and subsequent tagged elevations and perspectives highlighting the aforementioned options. See the Executive Summary on Page iii for a full description of Task 3.

PROGRAM SUMMARY STATION 1

SPACE USE	SQUARE FOOTAGE
	AT MOVE-IN
APPARATUS BAY AND SUPPORT	6,501 SF
LIVING QUARTERS	4,141 SF
ADMINISTRATION AND BUILDING SUPPORT	6,771 SF
TOTAL (INCLUDES 25% CIRCULATION)	21,766 SF
SITE USE	
TOTAL EXTERIOR REQUIREMENTS (NOT INCLUDING BUILDING FOOTPRINT AREA)	13,276 SF
TOTAL SITE REQUIREMENTS	35,042 SF

**PROGRAM SUMMARY
STATION 2**

SPACE USE	SQUARE FOOTAGE	
	EXISTING	AT MOVE-IN
APPARATUS BAY AND SUPPORT	4,370 SF	5,908 SF
LIVING QUARTERS	2,984 SF	4,029 SF
ADMINISTRATION / BUILDING SUPPORT	5,325 SF	3,771 SF
TOTAL	12,679 SF	13,708 SF

Updated Program

Space / Room Use	Space Requirements			Space Size			Room Type	Total Required Square Footage			Comments
	Exist	2018	2048	W	L	Area		Exist	2018	2048	
Department: Mount Vernon Fire Department - Station 1 (Summary)											
Apparatus Bay and Support Rooms								0	6501	6501	
Living Quarters								0	4141	4141	
Administration and Building Support								0	6771	6771	
SUBTOTAL								0	17413	17413	
GENERAL CIRCULATION (25%)								0	4353	4353	
TOTAL BUILDING SQUARE FOOTAGE								0	21766	21766	0.50
TOTAL EXTERIOR REQUIREMENTS								0	13276	13276	0.30
TOTAL SITE REQUIREMENTS								0	35042	35042	0.80

Department: Mount Vernon Fire Department - Station 2 (Summary)											
Apparatus Bay and Support Rooms								4370	5908	5908	Renovation - Expand into Exist. Exercise Room and back of Apparatus Bays (Leave North Bay Full Length)
Living Quarters								2984	4029	4029	Addition - Dayroom/Kitchen/Dining & Exercise Room
Administration and Building Support								5325	3771	3771	Addition - New Vestibule. Renovation - Administration Areas Including New Public Restrooms.
TOTAL								12679	13708	13708	

General Comments - Station 1

Durable exterior materials - Include masonry and wood features appropriate to local styles
 Possible operable skylights in app bays for heat removal/air flow. May not be possible due to occupied space above
 Durable finishes, stainless steel appliances, sinks, countertops in kitchen. Stained/polished concrete surfaces throughout
 Minimum concrete curb and FRP on all 4 walls of truck bays
 Vehicle exhaust system tied to timer and door opener, magnetic direct connection ventilation and track rail w/exhaust fans and ducting.
 Also consider whole space negative pressure exhaust fan
 Trench drains located beneath each truck, no water in the walkways
 Need secured parking for 20 personal suppression staff vehicles adjacent to and with access to the living-quarters wing.
 Need secured parking for 7 administrative vehicles with access to the administrative wing.
 Gas forced air heat and A/C except apparatus bays. Also consider in-floor radiant heat/cooling systems for apparatus bays and living quarters
 Natural gas – overhead drop heaters versus in floor radiant heat (see MV station 2)
 Air compressor w/ reel system low pressure system (under 120 psi) for apparatus brake tank fill and high pressure system for apparatus tire fill (direct from air compressor, 150+psi)
 Include welder in equipment maintenance/storage room
 Power drops to apparatus to have minimum 30 amp dedicated circuits
 Emergency Generator for entire building – all circuits
 Solar panel rooftop array and/or panels integrated into other design features
 Station 2 Lobby configuration to include space for 1920 Fire Truck currently housed at station 2 and bi-fold apparatus doors for ingress/egress.
 Also include display space and seating for 8 - 10 people

Space / Room Use	Space Requirements			Space Size			Room Type	Total Required Square Footage			Comments
	Exist	2018	2048	W	L	Area		Exist	2018	2048	
Department: Apparatus Bay and Support Rooms											
Apparatus Bay											
Apparatus Bays		3	3	18	80	1440		0	4320	4320	Three drive thru bays, 1 partial, 14'w x 14'h doors, 5-6 vehicles total, see below (2-engines 33' length E111, future tiller ladder truck 65' (current L125 is 43'), 1 ambulance 26' length - MVFD or CVAA Med Unit, Battalion Chief SUV 19' length. Four-fold doors at response side
		1	1	18	30	540		0	540	540	
<i>Group Total</i>								0	4860	4860	
Apparatus Support Rooms											
SCBA Maintenance and Fill Station		1	1	15	25	375		0	375	375	All-in-one compressor, cylinder/pack storage, work bench, and fill station (SCBA's, masks, EMS) Stainless steel sink and countertops. Include drying area for masks, respirators, etc. Built-in cabinetry, shelving, and countertop work space Room with negative ventilation, metal cage storage racks in rows Built-in cabinetry, shelving, and countertop work space With toilet, sink/mirror, and built-in storage, ADA accessible Wash sink, shelving, space for mops/squeegees (Room to be ventilated) Roll-away racks positioned along apparatus bay walls EMS supplies central storage room
Equipment Decon Room		1	1	6	10	60		0	60	60	
PPE Storage / Work Room		1	1	10	15	150		0	150	150	
Bunker Gear Storage Room		1	1	16	30	480		0	480	480	
Vehicle / Equip. / Maint. / Storage Room		1	1	10	16	160		0	160	160	
Medical Air / O2 Room		1	1	6	8	48		0	48	48	
Unisex Restroom		1	1	10	8	80		0	80	80	
Custodial Room		1	1	4	4	16		0	16	16	
Hose Storage		1	1	4	12	48		0	48	48	
EMS Storage		1	1	14	16	224		0	224	224	
<i>Group Total</i>								0	1641	1641	
TOTAL SQUARE FOOTAGE (Apparatus Bay and Support Rooms)								0	6501	6501	

Updated Program

Space / Room Use	Space Requirements			Space Size			Room Type	Total Required Square Footage			Comments
	Exist	2018	2048	W	L	Area		Exist	2018	2048	
Department: Living Quarters											
Living Quarters											
Decon / Shower Room		2	2	10	11	110		0	220	220	Unisex shower rooms used for transition decon (after structure fires) before entering the living quarters - See healthy in, healthy out information (Include separate access doorways from the apparatus bays and into the living area. Shower, toilet, sink/mirror, cabinet storage, and bench)
Dayroom		1	1	20	25	500		0	500	500	Open concept with drinking / kitchen room for 10 personnel. Large TV screen, combination recliners / couches
Kitchen		1	1	12	18	216		0	216	216	Include 3 full size fridges, 2 dish washers, a 6 burner, gas stove top located on an island with food prep countertop space and cabinetry underneath. Two full size electric ovens, separate space for an eating bar / stools integrated into main countertop space.
Dining Area		1	1	16	20	320		0	320	320	Integrated with the kitchen, could include eating bar, table(s), chairs, and space to accommodate up to 20
Laundry / Janitor Room		1	1	10	14	140		0	140	140	Washer and electric dryer and built-in cabinetry for linens (sheets, dish towels, blankets). Shelf storage for disposables, large utility sink, space for mops, brooms, cleaners, etc.
Bunk Rooms		10	10	10	12	120		0	1200	1200	4 lockers each and space for a small nightstand with 1 full size XL bed
Toilet Rooms		4	4	10	11	110		0	440	440	Unisex rooms each with toilet, sink/mirror, shower, and bench
Toilet Rooms		1	1	10	11	110		0	110	110	Unisex rooms each with toilet, sink/mirror, shower, and bench ADA accessible
Exercise Room		1	1	25	35	875		0	875	875	Include padded non-permeable flooring for easy cleaning/disinfecting. Include fitness equip. costs
Disposable Products Storage Room		1	1	10	12	120		0	120	120	Supply storage room. Toilet paper, paper towels etc.
<i>Group Total</i>								0	4141	4141	
TOTAL SQUARE FOOTAGE (Living Quarters)								0	4141	4141	

Updated Program

Space / Room Use	Space Requirements			Space Size			Room Type	Total Required Square Footage			Comments
	Exist	2018	2048	W	L	Area		Exist	2018	2048	
Department: Administration and Building Support											
Administration											
Fire Chief's Office		1	1	14	16	224		0	224	224	Desk and small table w/room for 2-4 chairs and/or couch
Assistant Chief's Office		1	1	14	16	224		0	224	224	
Community Paramedic Office/Aid		1	1	14	12	168		0	168	168	Provide outside access or from lobby.
Law Enforcement Office		1	1	14	12	168		0	168	168	Provide outside access
EMS QA Office		1	1	14	12	168		0	168	168	
Office Manager's Office		1	1	14	12	168		0	168	168	Locate between the fire chief and battalion chief offices
Battalion Chief's Office		1	1	14	14	196		0	196	196	Desk, file storage, small table and chairs
Captain's Office		2	2	12	12	144		0	288	288	With desk, file cabinet, seating for 2 additional
Fire Marshal's Office		1	1	14	16	224		0	224	224	Desk, plan review table and storage, locker, small table with 2 chairs. Include interior door access to file room shared with Secretary #1
Firefighter Work Stations		1	1	14	18	252		0	252	252	Room for 7 workstations; consider adjustable height desks, space for printers and cabinetry for storage
Conference Room		1	1	15	25	375		0	375	375	8-10 People
Conference Room - Small		1	1	10	12	120		0	120	120	Future Office
Secretary #1 Office		1	1	14	12	168		0	168	168	Include interior door access to file room shared with fire marshal's office
File Room		1	1	14	12	168		0	168	168	Accessed from 2 sides as described for fire marshal's office
Fire Prevention Inspector(s)		1	1	14	12	168		0	168	168	Two workstations, file storage, and two lockers. Could also be used for pub ed
Secretary #2 (Receptionist)		1	1	8	10	80	Open	0	80	80	Work station near front counter. Include space or separate room for office copy/supplies
Office Supply Storage / Copy		1	1	10	14	140		0	140	140	Separate room for office supply storage, copier/printer, and other office devices (see current station 2)
Lunch Room / Kitchen		1	1	12	14	168		0	168	168	Microwave, small electric cook top, full size fridge, food/dish/silverware storage, sink and a table for 4-6. Small hot water heater under sink
Unisex Restroom		1	1	10	8	80		0	80	80	With toilet, shower, sink/mirror, and built-in storage, ADA accessible
Unisex Restroom w/Shower		1	1	10	8	80		0	80	80	With toilet, sink/mirror, and built-in storage, ADA accessible (Shower Removed as part of Task 3)
Training / EOC Room		1	1	30	35	1050		0	1050	1050	Max occupancy 50? Standard A/V components with interactive whiteboards, ceiling mounted projector,
Training Storage		1	1	10	15	150		0	150	150	
EOC Storage		1	1	10	15	150		0	150	150	
Public Bathrooms		2	2	10	20	200		0	400	400	drop-down screen and multiple TV displays 1 male, 1 female restroom with multiple toilet stalls and sinks/mirrors in each
Dispatch / Reception / Radio		1	1	6	10	60		0	60	60	Alarm desk w/secondary dispatch capabilities (See Station 2 for example). Include cabinetry and countertop work space
Group Total								0	4813	4813	

NOTE: RED STRIKETHROUGHS REPRESENT PROGRAM STRICKEN FROM STATION 1.

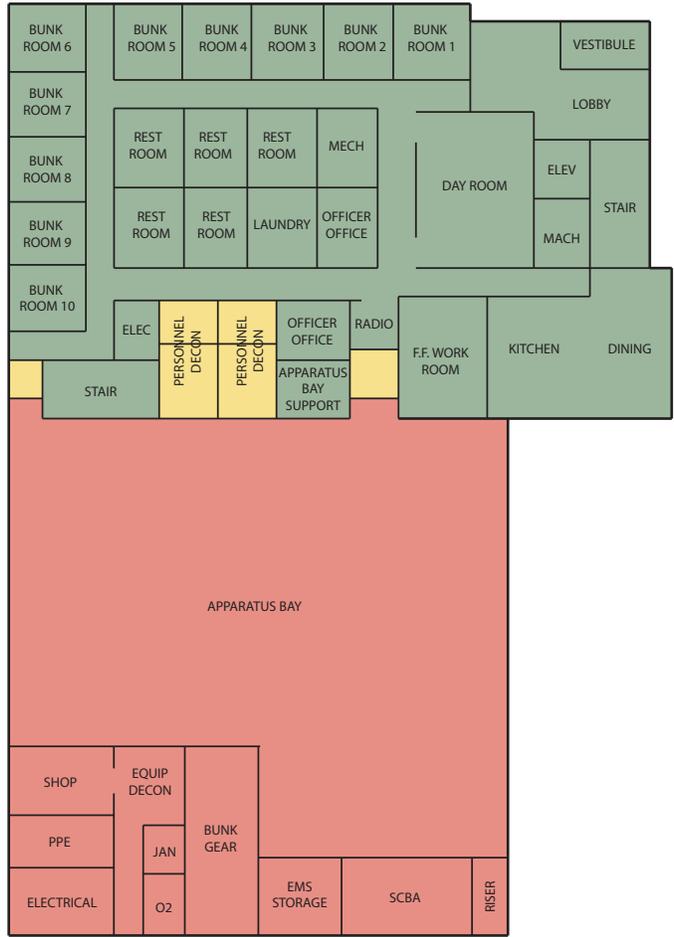
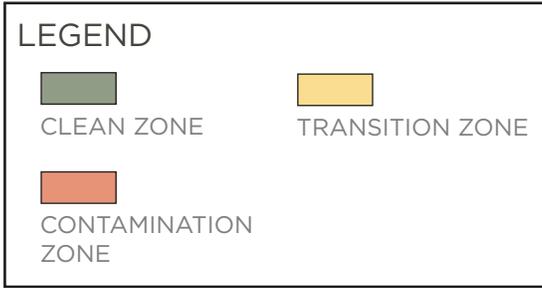
Updated Program

Space / Room Use	Space Requirements			Space Size			Room Type	Total Required Square Footage			Comments
	Exist	2018	2048	W	L	Area		Exist	2018	2048	
Building Support											
Vestibule		1	1	12	8	96		0	96	96	
Lobby		1	1	25	30	750		0	750	750	Secured from entry into administrative area. Electronic door entry and panic hw w/ roll down door at front counter? Security camera to monitor area
Museum / Historic Truck		1	1	15	30	450		0	450	450	
Stairs		2	2	10	18	180		0	360	360	Qty. 2 indicates 180 sf for each floor. Number of floors to be determined
Elevator		2	2	10	10	100		0	200	200	Qty. 1 indicates 100 sf for each floor. Number of floors to be determined
Elevator Mechanical Room		1	1	8	8	64		0	64	64	
Computer Server Room		1	1	12	14	168		0	168	168	
Electrical / Phone / Server Room		1	1	10	12	120		0	120	120	
Mechanical Room		1	1	10	12	120		0	120	120	Electrical panels, hot water heaters, roof access
Fire Riser / Sprinkler Room		1	1	8	10	80		0	80	80	Exterior door access
Janitor Closet per floor		0	0	0	4	6	24		0	0	0 Space currently allocated in Apparatus Support and Living Quarters areas. Can switch to per floor designation within building support if preferred
<i>Group Total</i>								0	1958	1958	
TOTAL SQUARE FOOTAGE (Administration and Building Support)								0	6771	6771	

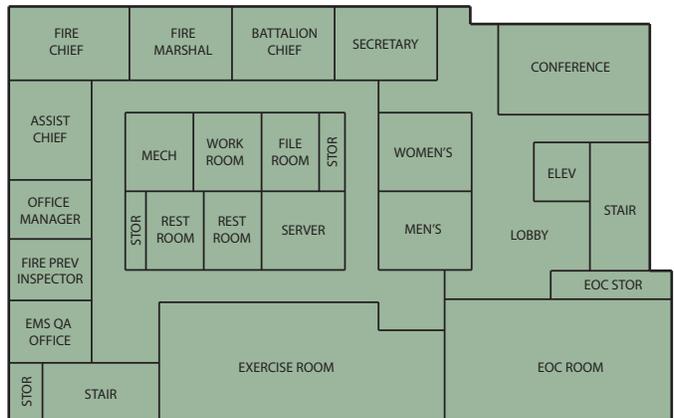
Department: Exterior Requirements											
Parking											
Public Parking - Community Rm/Training		12	12	9	18	162		0	1944	1944	
Staff Parking		27	27	9	18	162		0	4374	4374	20 Suppression Staff, 7 Admin Staff
<i>Group Total</i>				39				0	6318	6318	
Site Elements											
Generator		1	1	10	12	120		0	120	120	
Trash / Recycling		1	1	10	20	200		0	200	200	Verify trash requirements w/ provider
Patio		1	1	8	38	304		0	304	304	BBQ
<i>Group Total</i>								0	320	320	
SUBTOTAL								0	6638	6638	
GENERAL CIRCULATION (100%)								0	6638	6638	
TOTAL SQUARE FOOTAGE (Exterior Requirements)								0	13276	13276	

NOTE: RED STRIKETHROUGHS REPRESENT PROGRAM STRICKEN FROM STATION 1.

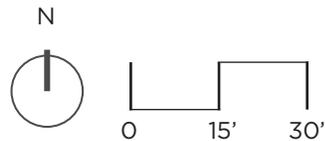
Updated Program



FIRST FLOOR PLAN
(SCALE: 1/32" = 1'-0")



SECOND FLOOR PLAN
(SCALE: 1/32" = 1'-0")



NOTE: FLOOR PLAN IS PRELIMINARY, REFLECTANT OF REDUCED SQUARE FOOTAGE CONCEPT FEASIBILITY WITH FOCUS ON PROGRAMMATIC ADJACENCIES.

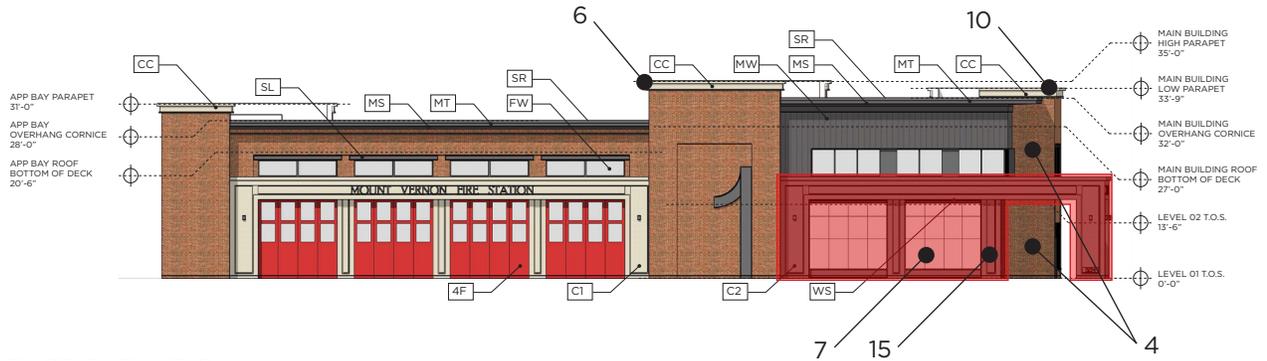
Updated Floor Plan - Station 1

VE OPTIONS

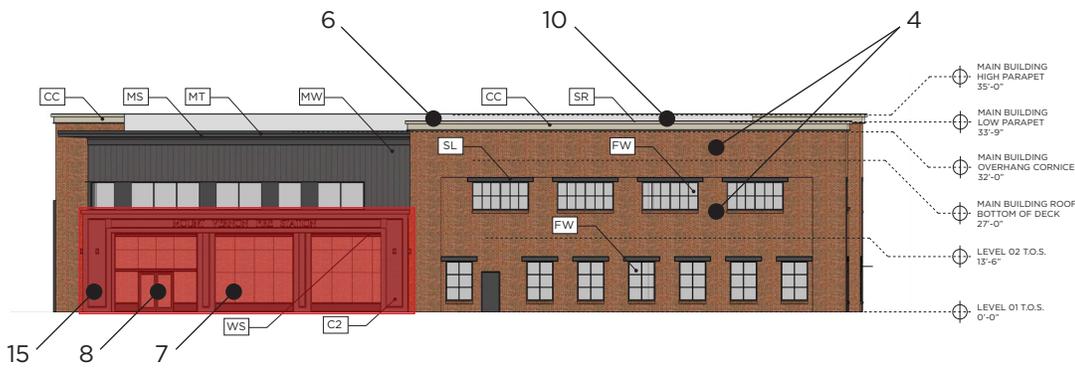
Coinciding Tags are included in Concept Design Section Following. Costs in table below reflect Construction Costs Only. Associated Soft Costs will Incur Additional Savings, and have been Updated in the Cost Summary Table on Page 03-15.

PROPOSED OPTION	PRICE AFFECT
1. REVISE TO WOOD CONSTRUCTION (WALLS, STRUCTURE, FLOOR, ROOF, AND STAIRS)	-\$674,430
2. REDUCE BRICK SQUARE FOOTAGE FROM SITE FENCE	-\$14,684
3. REVISE STRUCTURAL BRICK WALL SYSTEM TO BRICK VENEER	-\$267,559
4. REDUCE BRICK SQUARE FOOTAGE	-\$7,549
5. REPLACE ALL BRICK WALLS WITH FIBER CEMENT OR METAL PANEL WALLS VE ITEM #3 HAS BEEN INCLUDED FOR THE TOTAL SHOWN BELOW. THIS OPTION WOULD BE AN ALTERNATE VE STRATEGY FOR THE PROJECT.	-\$203,422
6. REVISE CAST CONCRETE CORNICES TO MANUFACTURED METAL COPING	-\$13,716
7. REVISE BUTT-GLAZED ENTRY STOREFRONT TO TYPICAL MULLION TYPE	-\$6,167
8. REVISE ENTRY DOORS FROM DOUBLE-SWING TO SINGLE-SWING STOREFRONT DOORS	-\$8,222
9. REVISE WOOD ENTRY SOFFIT TO FIBER CEMENT SOFFIT	-\$8,110
10. REDUCE PARAPET HEIGHTS THROUGHOUT AMD CENTER RTU'S TO EASE SCREENING	-\$121,556
11. REDUCE SIDELITE COUNT THROUGHOUT INTERIOR	-\$4,858
12. REVISE POLISHED CONCRETE FLOORS AT APP BAY AND UTILITY FUNCTIONS TO SEALED CONCRETE	-\$67,426
13. REMOVE PHOTOVOLTAIC PANELS AND BACKBONE FROM ROOF	-\$471,477
14. REDUCE CASEWORK SCOPE	-\$67,794
15. REDUCE / RE-DESIGN CONCRETE ENTRY ELEMENT	-\$27,656
16. REDUCE / REMOVE CONCRETE SEATWALLS	-\$7,475
TOTAL OF BOLDED ITEMS ABOVE	-\$1,768,679

Station 1 VE Options



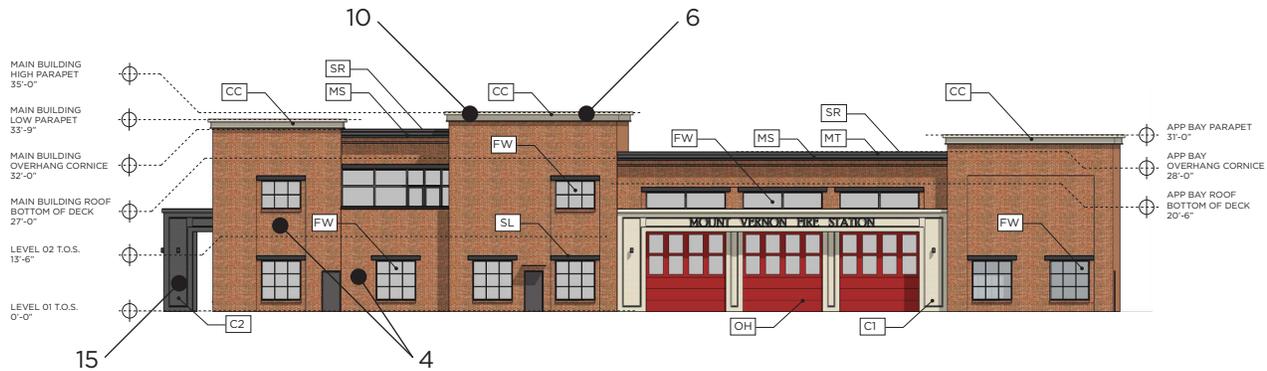
EAST ELEVATION
(NOT TO SCALE)



Material Legend

- C1 Cast in Place Concrete (Sandstone Color)
- C2 Cast in Place Concrete (Dark Gray Color)
- CC Cast Concrete Cornice
- FW Fiberglass Window
- MW Metal Wall Panels
- MS Metal Soffit Panels
- MT Metal Trim (Dark Bronze)
- OH Overhead Door
- SF Dark Bronze Storefront System
- SL Steel Lintel
- SR Single-Ply Roof (60 Mil)
- WS Wood Tongue and Groove Soffit
- 4F 4-Fold Door

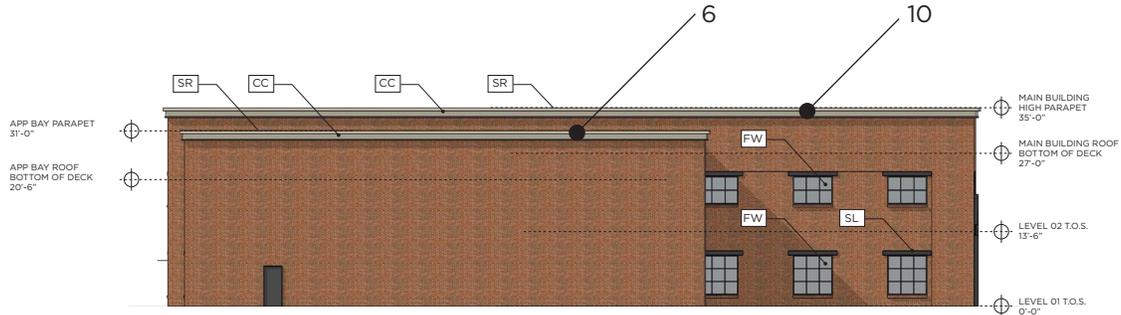
NORTH ELEVATION
(NOT TO SCALE)



WEST ELEVATION
(NOT TO SCALE)

SEE VE OPTIONS LIST ON PAGE 03-11 FOR COINCIDING TAGS

Updated Concept Design - Station 1



Material Legend

C1	Cast in Place Concrete (Sandstone Color)
C2	Cast in Place Concrete (Dark Gray Color)
CC	Cast Concrete Cornice
FW	Fiberglass Window
MW	Metal Wall Panels
MS	Metal Soffit Panels
MT	Metal Trim (Dark Bronze)
OH	Overhead Door
SF	Dark Bronze Storefront System
SL	Steel Lintel
SR	Single-Ply Roof (60 Mil)
WS	Wood Tongue and Groove Soffit
4F	4-Fold Door

SOUTH ELEVATION
(NOT TO SCALE)



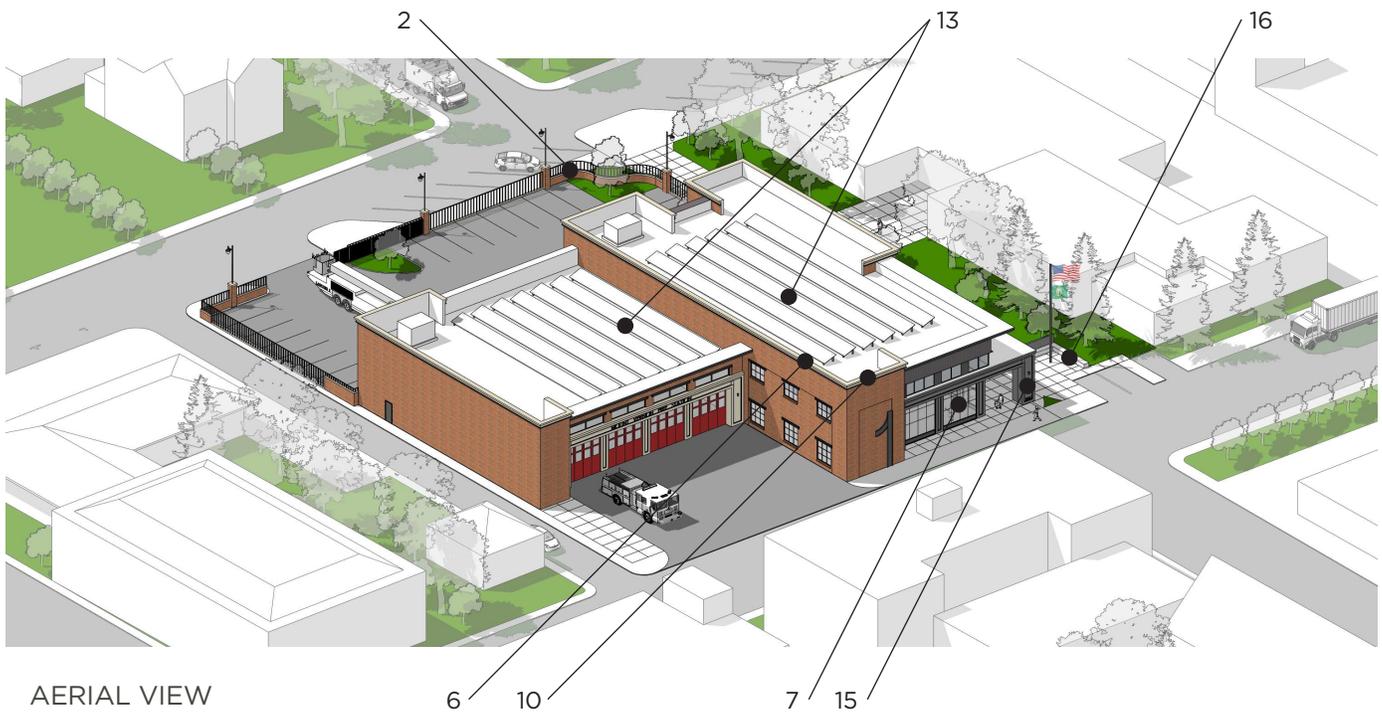
VIEW FROM CORNER OF 2ND ST AND SNOQUALMIE

SEE VE OPTIONS LIST ON PAGE 03-11 FOR COINCIDING TAGS

Updated Concept Design - Station 1



VIEW FROM CORNER OF CLEVELAND AVE AND SNOQUALMIE



AERIAL VIEW

SEE VE OPTIONS LIST ON PAGE 03-11 FOR COINCIDING TAGS

Updated Concept Design - Station 1

TASK 3 COST SUMMARY

The Base Cost Estimates for Stations 1, 2, and 3 have been escalated to reflect the project's current timeline. The projected costs were adjusted based on time alone; program square footages, proposed design, and materiality remained as-designed from the December 2018 report. The updated estimate assumes an October 2022 mid-point of construction for Station 1, with Stations 2 and 3 following together with midpoints of August 2023.

The Costs were then updated to reflect the Task 3 VE Efforts, including a square footage reduction, and an exploration of alternative structural systems, cladding, and removal / deletion of various building and site elements at Station 1 (listed on pg. 03-11). Stations 2 and 3 remained as previously designed in this effort. See the table below for the cost summary. Also, see Appendix C for the full Cost Estimate Document, and Appendix D for expanded Cost Summary Documents.

TASK 3 COST SUMMARY

	STATION 1	STATION 2	STATION 3
PROJECT HARD COSTS	\$15,258,796	\$2,232,020	\$3,626,216
PROJECT SOFT COSTS	\$5,256,805	\$1,127,895	\$1,536,005
INDIVIDUAL TOTAL PROJECT COST	\$20,515,601	\$3,359,915	\$5,162,221
COMBINED TOTAL PROJECT COST	\$29,037,736.99		

Cost Estimate Summary

THIS PAGE INTENTIONALLY LEFT BLANK

A large, light grey arrow graphic that starts at the bottom left and points diagonally upwards and to the right, crossing the top of the page.

SUPPORTING COST ESTIMATE - BASE ESCALATIONS

APPENDIX A

THIS PAGE INTENTIONALLY LEFT BLANK



Mount Vernon Fire Department
Mount Vernon, WA

Conceptual - Rev 5
Document 1
December 13, 2019
Cumming Project No. 18-01155.00



Prepared for Mackenzie

1325 FOURTH AVENUE, SUITE 1010 • SEATTLE • WASHINGTON • 98101
PHONE: 206-876-8008 • FAX: 206-973-1092

TABLE OF CONTENTS

	Page
1. Project Introduction	
Executive Summary	3
Approach and Methodology	4
Scope Assumptions	6
2. Cost Summaries	
Summary	9
3. Control Areas	
Controls	10
4. Construction Cost Back Up	
Fire Station #1	11
Fire Station #2	21
Fire Station #3	30

DOCUMENT 1

EXECUTIVE SUMMARY

1.1 Introduction

Estimates were prepared in December 2018 for work to Fire Stations 1, 2 and 3. The project scope was the renovation of two existing fire stations, and the construction of a new 24,000 sf fire station. The estimate costs were escalated to the mid point of the construction phase, which at that time was September 2020.

Since December of 2018 a new project schedule has been developed which pushes out the construction start date of each fire station. This report (Document 1) has taken the previous estimates and updated the costs to match the revised construction dates.

Minor changes were made to the original scope of the December 2018 estimate for Fire Station #1 which increased the base cost slightly.

1.2 Project Schedule

	Start	Finish	Duration	Mid Point
Construction - Fire Station #1	Apr-22	May-23	14 months	Oct-22
Construction - Fire Station #2	Jun-23	Jan-24	8 months	Aug-23
Construction - Fire Station #3	Jun-23	Jan-24	8 months	Aug-23

1.3 Key Assumptions & Exclusions

This document should be read in association with Methods and Assumptions sections. Key assumptions built into the above cost breakdown include

Key Assumptions

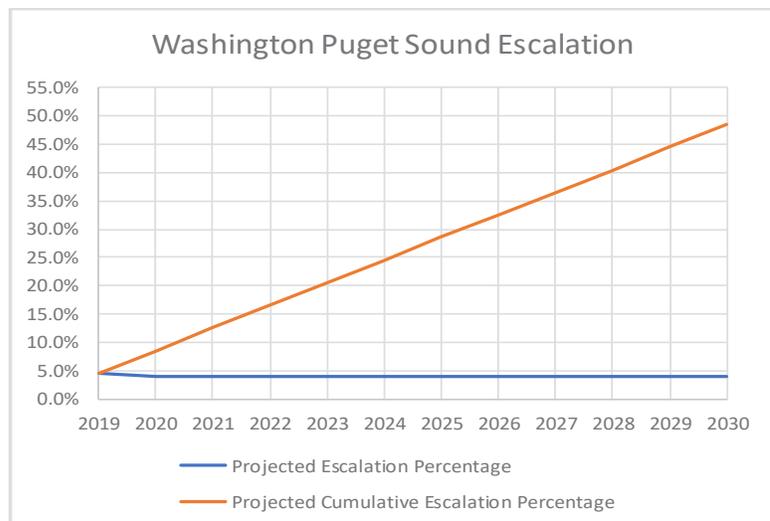
- Design/Bid/Build
- Single Phase Construction

Key Exclusions

- Project Soft Costs, other than specified furnishings & equipment
- Department Relocation
- AV Equipment supply (OFCI video conference install is included)
- Existing building demo (partial demo at renovations is included)
- Soil remediation and treatments (piles are included at FS #1)
- WSST
- B&O Tax

1.4 Escalation Projection

Year	Projected Escalation Percentage	Projected Cumulative Escalation Percentage
2019	4.5%	4.5%
2020	4.0%	8.5%
2021	4.0%	12.5%
2022	4.0%	16.5%
2023	4.0%	20.5%
2024	4.0%	24.5%
2025	4.0%	28.5%
2026	4.0%	32.5%
2027	4.0%	36.5%
2028	4.0%	40.5%
2029	4.0%	44.5%
2030	4.0%	48.5%



DOCUMENT 1

APPROACH & METHODOLOGY

Basis of Estimate	<p>The undernoted documents were used in the preparation of the base costs (Revision 4, December 2018)</p> <ul style="list-style-type: none"> - Final Concept Design 11.2.2018 Reduced - dated 11/2/18 - MVFD_Exist Plan Markups for Costing-11.01.18 - dated 11/1/18 - MVFD_Narrative Scope Station 2- Electrical - dated 11/8/18 - MVFD_Narrative Scope Station 2-Sazan Mech - dated 11/8/18 - MVFD_Narrative Scope Station 3- Electrical - dated 11/8/18 - MVFD_Narrative Scope Station 3- Sazan Mech - dated 11/8/18 - MVFD_Prelim Cost Spec Stat 2.3-11.06.18 - dated 11/6/18 - MVFD_Preliminary Spec-06.11.18 - dated 11/6/18
Estimate Format	<p>A component cost classification format has been used for the preparation of this estimate. It classifies costs by building system / element.</p>
Cost Mark Ups	<p>The following % mark ups have been included in each design option:</p> <ul style="list-style-type: none"> - General Conditions (7.00% on direct costs) - General Requirements (3.00% compound) - Bonds & Insurance (2.00% compound) - Contractor's Fee (4.00% compound) - Design Contingency (9% compound) <p>Fire Station #1 - Escalation to MOC, 10/15/22 (17.31% compound) Fire Station #2 - Escalation to MOC, 8/12/23 (21.44% compound) Fire Station #3 - Escalation to MOC, 8/12/23 (21.44% compound)</p>
Design Contingency	<p>An allowance of 9% for undeveloped design details has been included in this estimate. As the design of each system is further developed, details which historically increase cost become apparent and must be incorporated into the estimate while decreasing the % burden.</p>
Method of Procurement	<p>The estimate is based on a Design/Bid/Build delivery model.</p>
Bid Conditions	<p>This estimate has been based upon competitive bid situations (minimum of 3 bidders) for all items of subcontracted work.</p>
Basis For Quantities	<p>To a small degree, this estimate has been based upon the actual measurement of different items of work, however the vast majority is based on parametric measurements used in conjunction with other projects of a similar nature.</p>
Basis for Unit Costs	<p>Unit costs as contained herein are based on current bid prices in the northern Puget Sound area. 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, field overhead, home office overhead, and profit. The general contractor's overhead is shown separately on the master summary.</p>
Sources for Pricing	<p>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 municipale facility construction, updated to reflect current conditions in the north Puget Sound area.</p>

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 13-Dec-19

DOCUMENT 1

APPROACH & METHODOLOGY

Key Exclusions

The following items have been excluded from our estimate:

- Project Soft Costs, other than specified furnishings & equipment
- Department Relocation
- AV Equipment supply (OFCI video conference install is included)
- Existing building demo (partial demo at renovations is included)
- Soil remediation and treatments (piles are included at FS #1)
- WSST
- B&O tax

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.

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

SCOPE ASSUMPTIONS

Description	Assumed Scope
General Project Info	<ul style="list-style-type: none"> - Local GC laydown / compound area within proximity. - Local trade parking available both onsite (partial) and offsite. - All sub trades to be competitively bid. - Labor pool from Puget Sound area.
Detailed Assumptions	
1. Substructure / Foundations	<ul style="list-style-type: none"> - Mass excavation and off haul. - Piles assumed at Station #1. - Continuous footings / spread footings for existing building additions and for Station #1. - Sub slab drainage and vault for Station #1.
2. Structure	<ul style="list-style-type: none"> - Assumed slab on grade, steel columns, structural steel, metal decks at Station #1. - Assume modifications to wooden structures at Stations #2 and #3.
3. Envelope / Roofing	<ul style="list-style-type: none"> - Station #1. <ul style="list-style-type: none"> - Exterior substrate of metal studs, densglas sheathing, batt insulation. - Blend of exterior brick veneer, cast in place walls, and composite metal panel systems. - Exterior storefront glazing. - Assumed 60 mil TPO or similar roof. - Assume metal and wood T&G soffits. -Apparatus Bay doors include 4# 4-fold doors and 3# overhead doors - Stations #2 and #3. <ul style="list-style-type: none"> - Wood framed walls with composite paneling. Storefront at Station #2 vestibule. - Wood framed roof with composition roofing.
4. Interiors	<ul style="list-style-type: none"> - Station #1. <ul style="list-style-type: none"> - Metal stud framed, to deck, interior construction. - Stations #1, #2, and #3. <ul style="list-style-type: none"> - Solid core wood interior doors. - Floor allowances for range of finishes - Assume gypsum board ceilings in restrooms and personnel decon rooms. - Assume open to structure ceiling in mechanical, electrical, storage, stairs, apparatus bays, and apparatus bay support rooms. - Assume SC wood doors with HM frames. - Wall allowances for range of finishes. - Allowance for restroom partitions and specialties. - Allowance for install of miscellaneous OFCI equipment. - Allowance for casework. - Assume wood framing (stations #2 and #3)

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 13-Dec-19

DOCUMENT 1

SCOPE ASSUMPTIONS

Description	Assumed Scope
5. Vert. Transportation	- Two-stop elevator for Station #1.
6. Plumbing	- Plumbing is a cost per square foot allowance.
7. HVAC	- HVAC is a cost per square foot allowance.
8. Electrical	- Electrical is a cost per square foot allowance.
9. Fire Protection	- Fire Protection is a cost per square foot allowance.
10. Sitework	<ul style="list-style-type: none"> - Station #1. <ul style="list-style-type: none"> - Demo of Snoqualmie St between Cleveland Ave and S 2nd St, including asphalt and concrete complete. - Allowance for removal of utilities in Snoqualmie St, and rerouting around site via S 2nd St, alley south of station, and Cleveland Ave. - Clear, grub, and cut and fill of site, assuming balanced site. - Dewatering as required. - Pedestrian plaza pavement, and seat wall, extending north to library, terminating at south face of library. - Trees as shown in plans. Allowance for irrigated landscaping in plan space shown as landscaped. - Onsite and offsite sidewalks and miscellaneous flat work. - CMU trash enclosure. - Asphalt drives and parking, with additional offsite parking. - Allowance for underground stormwater storage vault. - Allowance for domestic and fire water. - Allowance for sanitary sewer. - Allowance for stormwater drainage. - Allowance for natural gas service. - Station #2. <ul style="list-style-type: none"> - New concrete patios. - Allowance for site adjustments at new vestibule. - 6' high security fence with privacy slats. - Allowance for new powered cantilever gate/fence with battery backup and proximity reader on pedestal. - Station #3. <ul style="list-style-type: none"> - New concrete apron and modified asphalt approach. - Allowance for new powdered double-swing gate/fence with battery backup and proximity reader on pedestal. - Allowance for modified and new landscape and driveline edge.

Mount Vernon Fire Department

Mount Vernon, WA

Conceptual - Rev 5

Project # 18-01155.00

13-Dec-19

DOCUMENT 1

SCOPE ASSUMPTIONS

Description	Assumed Scope
-------------	---------------

11. Exclusions	<ul style="list-style-type: none">- Project Soft Costs, other than specified furnishings & equipment- Department Relocation- AV Equipment supply (OFCI video conference install is included)- Existing building demo (partial demo at renovations is included)- Soil remediation and treatments (piles are included at FS #1)- WSST- B&O Tax
----------------	--

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 13-Dec-19

DOCUMENT 1

SUMMARY

Element		Area	Cost / SF	Total
Fire Station #1				
Estimated cost per December 2018 report	Base cost at Dec 2018 (excludes Escalation)	24,000	\$643.33	<u>\$15,439,872</u>
Estimated cost per December 2018 report	Base costs escalated to Sep 2020 (8.29%)	24,000	\$689.50	<u>\$16,719,837</u>
Estimated cost per December 2019 report	Base costs escalated to Oct 2022 (17.31%)	24,000	\$754.69	<u>\$18,112,514</u>
Fire Station #2				
Estimated cost per December 2018 report	Base cost at Dec 2018 (excludes Escalation)	4,289	\$636.74	<u>\$1,830,425</u>
Estimated cost per December 2018 report	Escalation to Sep 2020 (8.29%)	4,289	\$462.13	<u>\$1,982,086</u>
Estimated cost per December 2019 report	Escalation Aug 2023 (21.94%)	4,289	\$520.41	<u>\$2,232,020</u>
Fire Station #3				
Estimated cost per December 2018 report	Base cost at Dec 2018 (excludes Escalation)	5,634	\$527.83	<u>\$2,973,771</u>
Estimated cost per December 2018 report	Escalation to Sep 2020 (8.29%)	5,634	\$571.56	<u>\$3,220,165</u>
Estimated cost per December 2019 report	Escalation Aug 2023 (21.94%)	5,634	\$643.63	<u>\$3,626,216</u>

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 13-Dec-19

DOCUMENT 1

SCHEDULE OF AREAS AND CONTROL QUANTITIES

Schedule of Areas	Fire Station #1	Fire Station #2	Fire Station #3	SF
1. Enclosed Areas (x 100%)				
Level 1	16,000			16,000
Level 2	8,000			8,000
Existing - Untouched		9,711	4,526	14,237
Additions		1,303	4,187	5,490
Renovations		2,986	1,447	4,433
Total Enclosed	24,000	14,000	10,160	48,160
2. Unenclosed Areas				
Sitework	25,020	1,902	6,427	33,349
Offsite Work	4,740			4,740
Total Unenclosed	29,760	1,902	6,427	19,045

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
12/13/19

Fire Station #1

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

SUMMARY - FIRE STATION #1

Element	Escalation Itemised			Escalation Included		
	Subsystem	System	Cost / SF	Subsystem	System	Cost / SF
A - SUBSTRUCTURE		\$930,260	\$38.76		\$1,091,288	\$45.47
A10 Foundations	\$638,800		\$26.62	\$749,376		\$31.22
A1010 Standard Foundations	\$638,800		\$26.62	\$749,376		\$31.22
A40 Slabs-on-Grade	\$179,670		\$7.49	\$210,771		\$8.78
A4010 Standard Slabs-on-Grade	\$175,670		\$7.32	\$206,078		\$8.59
A4040 Pits and Bases	\$4,000		\$0.17	\$4,692		\$0.20
A90 Substructure Related Activities	\$111,790		\$4.66	\$131,141		\$5.46
A9010 Substructure Excavation	\$31,940		\$1.33	\$37,469		\$1.56
A9020 Construction Dewatering	\$79,850		\$3.33	\$93,672		\$3.90
B - SHELL		\$2,875,196	\$119.80		\$3,372,892	\$140.54
B10 Superstructure	\$886,624		\$36.94	\$1,040,099		\$43.34
B1010 Floor Construction	\$432,300		\$18.01	\$507,131		\$21.13
B1020 Roof Construction	\$394,324		\$16.43	\$462,581		\$19.27
B1080 Stairs	\$60,000		\$2.50	\$70,386		\$2.93
B20 Exterior Vertical Enclosures	\$1,565,001		\$65.21	\$1,835,902		\$76.50
B2010 Exterior Walls	\$1,130,266		\$47.09	\$1,325,915		\$55.25
B2020 Exterior Windows	\$181,335		\$7.56	\$212,724		\$8.86
B2050 Exterior Doors and Grilles	\$253,400		\$10.56	\$297,264		\$12.39
B30 Exterior Horizontal Enclosures	\$423,571		\$17.65	\$496,891		\$20.70
B3010 Roofing	\$423,571		\$17.65	\$496,891		\$20.70
C - INTERIORS		\$1,255,259	\$52.30		\$1,472,544	\$61.36
C10 Interior Construction	\$946,741		\$39.45	\$1,110,622		\$46.28
C1010 Interior Partitions	\$589,374		\$24.56	\$691,395		\$28.81
C1020 Interior Windows	\$5,200		\$0.22	\$6,100		\$0.25
C1030 Interior Doors	\$175,000		\$7.29	\$205,293		\$8.55
C1070 Suspended Ceiling Construction	\$20,207		\$0.84	\$23,705		\$0.99
C1090 Interior Specialties	\$156,960		\$6.54	\$184,130		\$7.67
C20 Interior Finishes	\$308,518		\$12.85	\$361,922		\$15.08
C2010 Wall Finishes	\$65,486		\$2.73	\$76,822		\$3.20
C2030 Flooring	\$140,053		\$5.84	\$164,296		\$6.85
C2040 Stair Finishes	\$5,000		\$0.21	\$5,866		\$0.24
C2050 Ceiling Finishes	\$97,979		\$4.08	\$114,940		\$4.79
D - SERVICES		\$4,912,827	\$204.70		\$5,763,238	\$240.13
D10 Conveying	\$150,000		\$6.25	\$175,965		\$7.33
D1010 Vertical Conveying Systems	\$150,000		\$6.25	\$175,965		\$7.33
D20 Plumbing	\$930,480		\$38.77	\$1,091,546		\$45.48
D2010 Domestic Water Distribution	\$393,600		\$16.40	\$461,732		\$19.24
D2020 Sanitary Drainage	\$192,480		\$8.02	\$225,798		\$9.41
D2030 Building Support Plumbing Systems	\$293,760		\$12.24	\$344,610		\$14.36
D2050 General Service Compressed-Air	\$50,640		\$2.11	\$59,406		\$2.48
D30 Heating, Ventilation, and Air Condition (HVAC)	\$1,071,360		\$44.64	\$1,256,812		\$52.37
D3030 Cooling Systems	\$756,960		\$31.54	\$887,990		\$37.00
D3050 Facility HVAC Distribution Systems	\$314,400		\$13.10	\$368,823		\$15.37
D40 Fire Protection	\$146,400		\$6.10	\$171,742		\$7.16
D4010 Fire Suppression	\$146,400		\$6.10	\$171,742		\$7.16
D50 Electrical	\$1,639,387		\$68.31	\$1,923,165		\$80.13
D5010 Facility Power Generation	\$250,000		\$10.42	\$293,275		\$12.22
D5020 Electrical Service and Distribution	\$360,000		\$15.00	\$422,316		\$17.60
D5030 General Purpose Electrical Power	\$210,000		\$8.75	\$246,351		\$10.26
D5040 Lighting	\$504,000		\$21.00	\$591,242		\$24.64
D5080 Miscellaneous Electrical Systems	\$315,387		\$13.14	\$369,981		\$15.42
D60 Communications	\$300,000		\$12.50	\$351,930		\$14.66
D6010 Data Communications	\$132,000		\$5.50	\$154,849		\$6.45
D6030 Audio-Video Communication	\$168,000		\$7.00	\$197,081		\$8.21
D70 Electronic Safety and Security	\$491,600		\$20.48	\$576,696		\$24.03
D7010 Access Control and Intrusion Detection	\$99,600		\$4.15	\$116,841		\$4.87
D7050 Detection and Alarm	\$276,000		\$11.50	\$323,776		\$13.49
D7070 Electronic Monitoring and Control	\$96,000		\$4.00	\$112,618		\$4.69
D7090 Electronic Safety and Security Supplementary Components	\$20,000		\$0.83	\$23,462		\$0.98
D80 Integrated Automation	\$183,600		\$7.65	\$215,381		\$8.97
D8010 Integrated Automation Facility Controls	\$183,600		\$7.65	\$215,381		\$8.97
E - EQUIPMENT & FURNISHINGS		\$201,440	\$8.39		\$236,309	\$9.85
E10 Equipment	\$33,440		\$1.39	\$39,228		\$1.63
E1030 Commercial Equipment	\$9,440		\$0.39	\$11,074		\$0.46
E1040 Institutional Equipment	\$24,000		\$1.00	\$28,154		\$1.17
E20 Furnishings	\$168,000		\$7.00	\$197,081		\$8.21
E2010 Fixed Furnishings	\$168,000		\$7.00	\$197,081		\$8.21

DOCUMENT 1

SUMMARY - FIRE STATION #1

Element	Escalation Itemised			Escalation Included		
	Subsystem	System	Cost / SF	Subsystem	System	Cost / SF
G - SITEWORK		\$1,941,114	\$80.88		\$2,277,120	\$94.88
G10 Site Preparation		\$627,057	\$26.13		\$735,600	\$30.65
G1010 Site Clearing		\$2,502	\$0.10		\$2,935	\$0.12
G1020 Site Elements Demolition		\$609,542	\$25.40		\$715,054	\$29.79
G1070 Site Earthwork		\$15,013	\$0.63		\$17,611	\$0.73
G20 Site Improvements		\$519,057	\$21.63		\$608,906	\$25.37
G2010 Roadways		\$72,000	\$3.00		\$84,463	\$3.52
G2020 Parking Lots		\$71,365	\$2.97		\$83,718	\$3.49
G2030 Pedestrian Plazas and Walkways		\$151,492	\$6.31		\$177,715	\$7.40
G2060 Site Development		\$138,750	\$5.78		\$162,768	\$6.78
G2080 Landscaping		\$85,450	\$3.56		\$100,241	\$4.18
G30 Liquid and Gas Site Utilities		\$725,000	\$30.21		\$850,498	\$35.44
G3010 Water Supply		\$75,000	\$3.13		\$87,983	\$3.67
G3020 Sanitary Sewerage Utilities		\$35,000	\$1.46		\$41,059	\$1.71
G3030 Storm Drainage Utilities		\$600,000	\$25.00		\$703,860	\$29.33
G3090 Liquid and Gas Site Utilities Supplementary Components		\$15,000	\$0.63		\$17,597	\$0.73
G40 Electrical Site Improvements		\$70,000	\$2.92		\$82,117	\$3.42
G4010 Site Electric Distribution Systems		\$50,000	\$2.08		\$58,655	\$2.44
G4050 Site Lighting		\$20,000	\$0.83		\$23,462	\$0.98
Subtotal	Dec 2018	\$12,116,095	\$504.84	Oct 2022	\$14,213,392	\$592.22
General Conditions	7.00%	\$848,127	\$35.34		\$994,937	\$41.46
Subtotal		\$12,964,222	\$540.18		\$15,208,329	\$633.68
General Requirements	3.00%	\$388,927	\$16.21		\$456,250	\$19.01
Subtotal		\$13,353,149	\$556.38		\$15,664,579	\$652.69
Bonds & Insurance	2.00%	\$267,063	\$11.13		\$313,292	\$13.05
Subtotal		\$13,620,212	\$567.51		\$15,977,870	\$665.74
Contractor's Fee	4.00%	\$544,808	\$22.70		\$639,115	\$26.63
Subtotal		\$14,165,020	\$590.21		\$16,616,985	\$692.37
Design Contingency	9.00%	\$1,274,852	\$53.12		\$1,495,529	\$62.31
Subtotal		\$15,439,872	\$643.33		\$18,112,514	\$754.69
Escalation to MOC, 10/15/22	17.31%	\$2,672,642	\$111.36			
TOTAL ESTIMATED CONSTRUCTION COST (to midpoint of construction - Oct 22)		\$18,112,514	\$754.69		\$18,112,514	\$754.69

Total Area: 24,000 SF

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #1

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
A - SUBSTRUCTURE						
A10 Foundations						
A1010 Standard Foundations						
Piles & pile caps - allowance	15,970	sf	\$30.00	\$479,100	\$35.19	\$562,032
Foundation footings and stem walls	15,970	sf	\$10.00	\$159,700	\$11.73	\$187,344
				<u>\$638,800</u>		<u>\$749,376</u>
A10 Foundations				\$638,800		\$749,376
A40 Slabs-on-Grade						
A4010 Standard Slabs-on-Grade						
Slab on grade, complete	15,970	sf	\$11.00	\$175,670	\$12.90	\$206,078
				<u>\$175,670</u>		<u>\$206,078</u>
A4040 Pits and Bases						
Elevator pit	1	ea	\$4,000.00	\$4,000	\$4,692.40	\$4,692
				<u>\$4,000</u>		<u>\$4,692</u>
A40 Slabs-on-Grade				\$179,670		\$210,771
A90 Substructure Related Activities						
A9010 Substructure Excavation						
Foundation excavation and fill	15,970	sf	\$2.00	\$31,940	\$2.35	\$37,469
				<u>\$31,940</u>		<u>\$37,469</u>
A9020 Construction Dewatering						
Dewatering allowance	15,970	sf	\$2.50	\$39,925	\$2.93	\$46,836
Dewatering premium (associated with piles)	15,970	sf	\$2.50	\$39,925	\$2.93	\$46,836
				<u>\$79,850</u>		<u>\$93,672</u>
A90 Substructure Related Activities				\$111,790		\$131,141
A - SUBSTRUCTURE				\$930,260		\$1,091,288
B - SHELL						
B10 Superstructure						
B1010 Floor Construction						
Second floor deck, concrete on metal decking, reinforced, including columns and framing	7,860	sf	\$55.00	\$432,300	\$64.52	\$507,131
				<u>\$432,300</u>		<u>\$507,131</u>
B1020 Roof Construction						
Roof structure with metal deck, including columns and framing	14,083	sf	\$28.00	\$394,324	\$32.85	\$462,581
				<u>\$394,324</u>		<u>\$462,581</u>
B1080 Stairs						
Egress stairs	2	flights	\$30,000.00	\$60,000	\$35,193.00	\$70,386
				<u>\$60,000</u>		<u>\$70,386</u>
B10 Superstructure				\$886,624		\$1,040,099
B20 Exterior Vertical Enclosures						
B2010 Exterior Walls						
Structural brick, framed, insulated, gypsum board interior	13,020	sf	\$61.00	\$794,196	\$71.56	\$931,671
CIP concrete fascia, framed, insulated, gypsum board interior	2,241	sf	\$85.00	\$190,485	\$99.71	\$223,458
Metal siding, framed, insulated, gypsum board interior	1,032	sf	\$60.00	\$61,920	\$70.39	\$72,638
Cast concrete cornice	823	lf	\$75.00	\$61,725	\$87.98	\$72,410

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #1

Element	Quantity	Unit	Unit Cost	Total	Unit Cost	Total
			Dec 2018		Oct 2022	
Metal trim	338	sf	\$50.00	\$16,900	\$58.66	\$19,825
Steel lintel	336	lf	\$15.00	\$5,040	\$17.60	\$5,912
				\$1,130,266		\$1,325,915
B2020 Exterior Windows						
Exterior glazing at lobby - storefront	825	sf	\$95.00	\$78,375	\$111.44	\$91,942
Exterior glazing - fiberglass framed	1,716	sf	\$60.00	\$102,960	\$70.39	\$120,782
				\$181,335		\$212,724
B2050 Exterior Doors and Grilles						
3'x7' HM door and frame	4	ea	\$3,350.00	\$13,400	\$3,929.89	\$15,720
6'x7' double interior storefront door	1	ea	\$11,000.00	\$11,000	\$12,904.10	\$12,904
East apparatus bay - four-fold doors	4	ea	\$46,000.00	\$184,000	\$53,962.60	\$215,850
West apparatus bay doors - overhead coiling	3	ea	\$15,000.00	\$45,000	\$17,596.50	\$52,790
				\$253,400		\$297,264
B20 Exterior Vertical Enclosures				\$1,565,001		\$1,835,902
B30 Exterior Horizontal Enclosures						
B3010 Roofing						
Flat roof, complete	14,083	sf	\$25.00	\$352,075	\$29.33	\$413,019
Metal soffit	72	sf	\$25.00	\$1,800	\$29.33	\$2,112
Wood T&G soffit	228	sf	\$42.00	\$9,576	\$49.27	\$11,234
Parapets (framing included in exterior walls)	4,008	sf	\$15.00	\$60,120	\$17.60	\$70,527
				\$423,571		\$496,891
B30 Exterior Horizontal Enclosures				\$423,571		\$496,891
B - SHELL				\$2,875,196		\$3,372,892
C - INTERIORS						
C10 Interior Construction						
C1010 Interior Partitions						
Partition walls, to deck, insulated	32,743	sf	\$18.00	\$589,374	\$21.12	\$691,395
				\$589,374		\$691,395
C1020 Interior Windows						
Sidellies at offices, conference rooms, and EOC room	16	ea	\$325.00	\$5,200	\$381.26	\$6,100
				\$5,200		\$6,100
C1030 Interior Doors						
3'x7' wood door with frame	75	ea	\$2,200.00	\$165,000	\$2,580.82	\$193,562
6'x7' double interior storefront door	1	ea	\$10,000.00	\$10,000	\$11,731.00	\$11,731
				\$175,000		\$205,293
C1070 Suspended Ceiling Construction						
Framed ceilings, with gypsum board	1,837	sf	\$11.00	\$20,207	\$12.90	\$23,705
				\$20,207		\$23,705
C1090 Interior Specialties						
Restroom specialties	1,440	sf	\$15.00	\$21,600	\$17.60	\$25,339
Building specialties - allowance	22,560	sf	\$6.00	\$135,360	\$7.04	\$158,791
				\$156,960		\$184,130
C10 Interior Construction				\$946,741		\$1,110,622
C20 Interior Finishes						
C2010 Wall Finishes						

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #1

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
Painting	65,486	sf	\$1.00	\$65,486	\$1.17	\$76,822
				<u>\$65,486</u>		<u>\$76,822</u>
C2030 Flooring						
Flooring allowances - including base						
Office & quarters - assume primarily carpet and tile	8,030	sf	\$7.00	\$56,210	\$8.21	\$65,940
Ground floor - assume polished concrete	15,970	sf	\$5.25	\$83,843	\$6.16	\$98,356
				<u>\$140,053</u>		<u>\$164,296</u>
C2040 Stair Finishes						
Allowances	1	ls	\$5,000.00	\$5,000	\$5,865.50	\$5,866
				<u>\$5,000</u>		<u>\$5,866</u>
C2050 Ceiling Finishes						
Painted hard ceilings	1,837	sf	\$0.86	\$1,580	\$1.01	\$1,853
Painted open to structure	8,456	sf	\$2.66	\$22,493	\$3.12	\$26,386
Suspended acoustical ceilings	13,536	sf	\$5.46	\$73,907	\$6.41	\$86,700
				<u>\$97,979</u>		<u>\$114,940</u>
C20 Interior Finishes				\$308,518		\$361,922
C - INTERIORS				\$1,255,259		\$1,472,544
D - SERVICES						
D10 Conveying						
D1010 Vertical Conveying Systems						
Passenger elevator	2	stop	\$75,000.00	\$150,000	\$87,982.50	\$175,965
				<u>\$150,000</u>		<u>\$175,965</u>
D10 Conveying				\$150,000		\$175,965
D20 Plumbing						
D2010 Domestic Water Distribution						
Domestic water piping	24,000	sf	\$8.35	\$200,400	\$9.80	\$235,089
Fixture w/rough-in	24,000	sf	\$8.05	\$193,200	\$9.44	\$226,643
				<u>\$393,600</u>		<u>\$461,732</u>
D2020 Sanitary Drainage						
Waste/vent piping	24,000	sf	\$8.02	\$192,480	\$9.41	\$225,798
				<u>\$192,480</u>		<u>\$225,798</u>
D2030 Building Support Plumbing Systems						
Equipment	24,000	sf	\$1.85	\$44,400	\$2.17	\$52,086
Natural gas system	24,000	sf	\$2.12	\$50,880	\$2.49	\$59,687
Roof Drainage	24,000	sf	\$3.47	\$83,280	\$4.07	\$97,696
Condensate Drainage	24,000	sf	\$2.60	\$62,400	\$3.05	\$73,201
Testing/ firestopping / seismic/ misc	24,000	sf	\$2.20	\$52,800	\$2.58	\$61,940
				<u>\$293,760</u>		<u>\$344,610</u>
D2050 General Service Compressed-Air						
Compressed air	24,000	sf	\$2.11	\$50,640	\$2.48	\$59,406
				<u>\$50,640</u>		<u>\$59,406</u>
D20 Plumbing				\$930,480		\$1,091,546
D30 Heating, Ventilation, and Air Conditioning (HVAC)						
D3030 Cooling Systems						

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #1

Element	Quantity	Unit	Unit Cost	Total	Unit Cost	Total
			Dec 2018		Oct 2022	
Air side equipment (Split sys, heat pumps, fans)	24,000	sf	\$28.65	\$687,600	\$33.61	\$806,624
Test / balance / firestopping / seismic	24,000	sf	\$2.89	\$69,360	\$3.39	\$81,366
				\$756,960		\$887,990
D3050 Facility HVAC Distribution Systems						
Air distribution	24,000	sf	\$13.10	\$314,400	\$15.37	\$368,823
				\$314,400		\$368,823
D30 Heating, Ventilation, and Air Conditioning (HVAC)				\$1,071,360		\$1,256,812
D40 Fire Protection						
D4010 Fire Suppression						
Automatic Sprinkler System	24,000	sf	\$6.10	\$146,400	\$7.16	\$171,742
				\$146,400		\$171,742
D40 Fire Protection				\$146,400		\$171,742
D50 Electrical						
D5010 Facility Power Generation						
Generator and ATS	24,000	sf	\$10.42	\$250,000	\$12.22	\$293,275
				\$250,000		\$293,275
D5020 Electrical Service and Distribution						
Distribution Equipment	24,000	sf	\$15.00	\$360,000	\$17.60	\$422,316
				\$360,000		\$422,316
D5030 General Purpose Electrical Power						
HVAC and Equipment Connections	24,000	sf	\$2.25	\$54,000	\$2.64	\$63,347
Convenience Power	24,000	sf	\$6.50	\$156,000	\$7.63	\$183,004
				\$210,000		\$246,351
D5040 Lighting						
Lighting and Lighting Control	24,000	sf	\$21.00	\$504,000	\$24.64	\$591,242
				\$504,000		\$591,242
D5080 Miscellaneous Electrical Systems						
Photovoltaic panels	6,500	sf	\$19.41	\$126,155	\$22.77	\$147,992
Photovoltaic backbone	6,500	sf	\$29.11	\$189,232	\$34.15	\$221,989
				\$315,387		\$369,981
D50 Electrical				\$1,639,387		\$1,923,165
D60 Communications						
D6010 Data Communications						
Voice and Data System	24,000	sf	\$5.50	\$132,000	\$6.45	\$154,849
				\$132,000		\$154,849
D6030 Audio-Video Communication						
PA System	24,000	sf	\$7.00	\$168,000	\$8.21	\$197,081
				\$168,000		\$197,081
D60 Communications				\$300,000		\$351,930
D70 Electronic Safety and Security						
D7010 Access Control and Intrusion Detection						
Access Control System - includes electronic access for all doors	24,000	sf	\$4.15	\$99,600	\$4.87	\$116,841

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #1

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
D7050 Detection and Alarm				\$99,600		\$116,841
Security System	24,000	sf	\$1.50	\$36,000	\$1.76	\$42,232
Fire Alarm System	24,000	sf	\$10.00	\$240,000	\$11.73	\$281,544
				\$276,000		\$323,776
D7070 Electronic Monitoring and Control						
CCTV System	24,000	sf	\$4.00	\$96,000	\$4.69	\$112,618
				\$96,000		\$112,618
D7090 Electronic Safety and Security Supplementary Components						
Alerting System - allowance	1	ls	\$20,000.00	\$20,000	\$23,462.00	\$23,462
				\$20,000		\$23,462
D70 Electronic Safety and Security				\$491,600		\$576,696
D80 Integrated Automation						
D8010 Integrated Automation Facility Controls						
Direct Digital Controls	24,000	sf	\$7.65	\$183,600	\$8.97	\$215,381
				\$183,600		\$215,381
D80 Integrated Automation				\$183,600		\$215,381
D - SERVICES				\$4,912,827		\$5,763,238
E - EQUIPMENT & FURNISHINGS						
E10 Equipment						
E1030 Commercial Equipment						
Install only OFCI food service equipment	1,180	sf	\$8.00	\$9,440	\$9.38	\$11,074
				\$9,440		\$11,074
E1040 Institutional Equipment						
Miscellaneous OFCI equipment install allowance	24,000		\$1.00	\$24,000	\$1.17	\$28,154
				\$24,000		\$28,154
E10 Equipment				\$33,440		\$39,228
E20 Furnishings						
E2010 Fixed Furnishings						
Casework allowance	24,000	sf	\$7.00	\$168,000	\$8.21	\$197,081
				\$168,000		\$197,081
E2050 Movable Furnishings						
Excluded						
E20 Furnishings				\$168,000		\$197,081
E - EQUIPMENT & FURNISHINGS				\$201,440		\$236,309
G - SITEWORK						
G10 Site Preparation						
G1010 Site Clearing						
Site clear and grub	25,021	sf	\$0.10	\$2,502	\$0.12	\$2,935
				\$2,502		\$2,935
G1020 Site Elements Demolition						

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #1

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
Site demolition allowance	25,021	sf	\$2.00	\$50,042	\$2.35	\$58,704
Offsite demolition allowance	4,740	sf	\$3.00	\$14,220	\$3.52	\$16,681
Snoqualmie Street demolition and associated allowances						
Demo asphalt	9,600	sf	\$1.00	\$9,600	\$1.17	\$11,262
Demo sidewalk	2,400	sf	\$3.00	\$7,200	\$3.52	\$8,446
Demo curb and gutter	480	lf	\$6.00	\$2,880	\$7.04	\$3,379
Demo storm drains	2	ea	\$250.00	\$500	\$293.28	\$587
Demo trees	12	ea	\$1,500.00	\$18,000	\$1,759.65	\$21,116
Demo electrical service boxes	2	ea	\$250.00	\$500	\$293.28	\$587
Demo site lighting	6	ea	\$500.00	\$3,000	\$586.55	\$3,519
Haul and dispose	2,500	lcy	\$20.00	\$50,000	\$23.46	\$58,655
Potholing allowance	9,600	sf	\$1.00	\$9,600	\$1.17	\$11,262
Mass excavation - assume 5' deep, includes compacted fill	1,800	cy	\$45.00	\$81,000	\$52.79	\$95,021
Remove utilities as required	240	lf	\$200.00	\$48,000	\$234.62	\$56,309
Cut, trench, relay utilities around site, fill, patch - allowance	580	lf	\$500.00	\$290,000	\$586.55	\$340,199
New fire station warning light	1	ea	\$25,000.00	\$25,000	\$29,327.50	\$29,328
				\$609,542		\$715,054
G1050 Site Remediation						
Excluded						
G1070 Site Earthwork						
Cut, fill, fine grading - assume balanced site	25,021	sf	\$0.50	\$12,511	\$0.59	\$14,676
Erosion control allowance	25,021	sf	\$0.10	\$2,502	\$0.12	\$2,935
				\$15,013		\$17,611
G10 Site Preparation				\$627,057		\$735,600
G20 Site Improvements						
G2010 Roadways						
Asphalt drives, including curb and gutter	8,000	sf	\$9.00	\$72,000	\$10.56	\$84,463
				\$72,000		\$84,463
G2020 Parking Lots						
Asphalt parking, including curbs, and markings	8,080	sf	\$7.00	\$56,560	\$8.21	\$66,351
Offsite parking, including curbs, and markings	1,645	sf	\$9.00	\$14,805	\$10.56	\$17,368
				\$71,365		\$83,718
G2030 Pedestrian Plazas and Walkways						
Pedestrian Plaza concrete, including all associated work	1,586	sf	\$16.00	\$25,376	\$18.77	\$29,769
Pedestrian Plaza concrete, including all associated work	3,009	sf	\$16.00	\$48,144	\$18.77	\$56,478
Onsite flatwork, including all associated work	750	sf	\$14.00	\$10,500	\$16.42	\$12,318
Offsite flatwork, including all associated work	3,549	sf	\$16.00	\$56,784	\$18.77	\$66,613
Offsite flatwork, including all associated work	668	sf	\$16.00	\$10,688	\$18.77	\$12,538
				\$151,492		\$177,715
G2060 Site Development						
Trash enclosure	1	ea	\$15,000.00	\$15,000	\$17,596.50	\$17,597
Flag pole	1	ea	\$12,000.00	\$12,000	\$14,077.20	\$14,077
Brick/steel picket security fence	222	lf	\$100.00	\$22,200	\$117.31	\$26,043
Brick/steel picket security fence	108	lf	\$100.00	\$10,800	\$117.31	\$12,669
Pedestrian Gate	9	lf	\$250.00	\$2,250	\$293.28	\$2,639
Motorized gate	34	lf	\$2,250.00	\$76,500	\$2,639.48	\$89,742
				\$138,750		\$162,768
G2080 Landscaping						
Seat wall	35	lf	\$250.00	\$8,750	\$293.28	\$10,265
Large trees	6	ea	\$3,500.00	\$21,000	\$4,105.85	\$24,635
Medium trees	6	ea	\$1,100.00	\$6,600	\$1,290.41	\$7,742
Medium trees	3	ea	\$1,100.00	\$3,300	\$1,290.41	\$3,871

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #1

Element	Quantity	Unit	Unit Cost	Total	Unit Cost	Total
			Dec 2018		Oct 2022	
Medium trees	1	ea	\$1,100.00	\$1,100	\$1,290.41	\$1,290
General landscaping, including irrigation	6,235	sf	\$6.00	\$37,410	\$7.04	\$43,886
General landscaping, including irrigation	1,215	sf	\$6.00	\$7,290	\$7.04	\$8,552
				<u>\$85,450</u>		<u>\$100,241</u>
G20 Site Improvements				\$519,057		\$608,906
G30 Site Mechanical Utilities						
G3010 Water Utilities						
Domestic and fire water - allowance	1	ls	\$75,000.00	\$75,000	\$87,982.50	\$87,983
				<u>\$75,000</u>		<u>\$87,983</u>
G3020 Sanitary Sewerage Utilities						
Sanitary sewage - allowance	1	ls	\$35,000.00	\$35,000	\$41,058.50	\$41,059
				<u>\$35,000</u>		<u>\$41,059</u>
G3030 Storm Drainage Utilities						
Stormdrain, including underground storage vault system	1	ls	\$600,000.00	\$600,000	\$703,860.00	\$703,860
				<u>\$600,000</u>		<u>\$703,860</u>
G3090 Liquid and Gas Site Utilities Supplementary Components						
Natural gas - allowance	1	ls	\$15,000.00	\$15,000	\$17,596.50	\$17,597
				<u>\$15,000</u>		<u>\$17,597</u>
G30 Site Mechanical Utilities				\$725,000		\$850,498
G40 Site Electrical Utilities						
G4010 Site Electric Distribution Systems						
Site power - allowance	1	ls	\$50,000.00	\$50,000	\$58,655.00	\$58,655
				<u>\$50,000</u>		<u>\$58,655</u>
G4050 Site Lighting						
Site lighting - allowance	1	ls	\$10,000.00	\$10,000	\$11,731.00	\$11,731
Site lighting - allowance	1	ls	\$10,000.00	\$10,000	\$11,731.00	\$11,731
				<u>\$20,000</u>		<u>\$23,462</u>
G - SITEWORK				\$1,941,114		\$2,277,120

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
12/13/19

Fire Station #2

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

SUMMARY - FIRE STATION #2

Element	Escalation Itemised			Escalation Included		
	Subsystem	System	Cost / SF	Subsystem	System	Cost / SF
A - SUBSTRUCTURE		\$27,306	\$6.37		\$33,297	\$7.76
A10 Foundations	\$13,320		\$3.11	\$16,242		\$3.79
A1010 Standard Foundations	\$13,320		\$3.11	\$16,242		\$3.79
A40 Slabs-on-Grade	\$13,986		\$3.26	\$17,055		\$3.98
A4010 Standard Slabs-on-Grade	\$13,986		\$3.26	\$17,055		\$3.98
B - SHELL		\$207,495	\$48.38		\$253,019	\$58.99
B10 Superstructure	\$31,968		\$7.45	\$38,982		\$9.09
B1020 Roof Construction	\$31,968		\$7.45	\$38,982		\$9.09
B20 Exterior Vertical Enclosures	\$129,828		\$30.27	\$158,312		\$36.91
B2010 Exterior Walls	\$85,008		\$19.82	\$103,659		\$24.17
B2020 Exterior Windows	\$25,420		\$5.93	\$30,997		\$7.23
B2050 Exterior Doors and Grilles	\$19,400		\$4.52	\$23,656		\$5.52
B30 Exterior Horizontal Enclosures	\$45,699		\$10.65	\$55,725		\$12.99
B3010 Roofing	\$45,699		\$10.65	\$55,725		\$12.99
C - INTERIORS		\$242,863	\$56.62		\$296,147	\$69.05
C10 Interior Construction	\$119,248		\$27.80	\$145,411		\$33.90
C1010 Interior Partitions	\$63,017		\$14.69	\$76,843		\$17.92
C1030 Interior Doors	\$24,200		\$5.64	\$29,509		\$6.88
C1090 Interior Specialties	\$32,031		\$7.47	\$39,059		\$9.11
C20 Interior Finishes	\$123,615		\$28.82	\$150,736		\$39.87
C2010 Wall Finishes	\$10,431		\$2.43	\$12,719		\$2.97
C2030 Flooring	\$82,903		\$19.33	\$101,092		\$23.57
C2050 Ceiling Finishes	\$30,281		\$7.06	\$36,925		\$8.61
D - SERVICES		\$675,248	\$157.44		\$823,397	\$191.98
D20 Plumbing	\$127,563		\$29.74	\$155,550		\$36.27
D2010 Domestic Water Distribution	\$67,668		\$15.78	\$82,515		\$19.24
D2020 Sanitary Drainage	\$34,398		\$8.02	\$41,945		\$9.78
D2030 Building Support Plumbing Systems	\$25,497		\$5.94	\$31,091		\$7.25
D30 Heating, Ventilation, and Air Condition (HVAC)	\$140,232		\$32.70	\$170,999		\$39.87
D3030 Cooling Systems	\$79,716		\$18.59	\$97,206		\$22.66
D3050 Facility HVAC Distribution Systems	\$60,516		\$14.11	\$73,793		\$17.21
D40 Fire Protection	\$18,250		\$4.26	\$22,254		\$5.19
D4010 Fire Suppression	\$18,250		\$4.26	\$22,254		\$5.19
D50 Electrical	\$175,849		\$41.00	\$214,430		\$50.00
D5020 Electrical Service and Distribution	\$42,890		\$10.00	\$52,300		\$12.19
D5030 General Purpose Electrical Power	\$37,529		\$8.75	\$45,763		\$10.67
D5040 Lighting	\$90,069		\$21.00	\$109,830		\$25.61
D5080 Miscellaneous Electrical Systems	\$5,361		\$1.25	\$6,538		\$1.52
D60 Communications	\$53,613		\$12.50	\$65,375		\$15.24
D6010 Data Communications	\$23,590		\$5.50	\$28,765		\$6.71
D6030 Audio-Video Communication	\$30,023		\$7.00	\$36,610		\$8.54
D70 Electronic Safety and Security	\$139,600		\$32.55	\$170,228		\$39.69
D7010 Access Control and Intrusion Detection	\$53,120		\$12.39	\$64,775		\$15.10
D7050 Detection and Alarm	\$49,324		\$11.50	\$60,145		\$14.02
D7070 Electronic Monitoring and Control	\$17,156		\$4.00	\$20,920		\$4.88
D80 Integrated Automation	\$20,142		\$4.70	\$24,561		\$5.73
D8010 Integrated Automation Facility Controls	\$20,142		\$4.70	\$24,561		\$5.73
E - EQUIPMENT & FURNISHINGS		\$36,768	\$8.57		\$44,835	\$10.45
E10 Equipment	\$6,745		\$1.57	\$8,225		\$1.92
E1030 Commercial Equipment	\$2,456		\$0.57	\$2,995		\$0.70
E1040 Institutional Equipment	\$4,289		\$1.00	\$5,230		\$1.22
E20 Furnishings	\$30,023		\$7.00	\$36,610		\$8.54
E2010 Fixed Furnishings	\$30,023		\$7.00	\$36,610		\$8.54
F - SPECIAL CONSTRUCTION & DEMOLITION		\$42,890	\$10.00		\$52,300	\$12.19
F30 Demolition	\$42,890		\$10.00	\$52,300		\$12.19
F3030 Selective Demolition	\$42,890		\$10.00	\$52,300		\$12.19
G - SITEWORK		\$106,683	\$24.87		\$130,089	\$30.33
G20 Site Improvements	\$106,683		\$24.87	\$130,089		\$30.33
G2030 Pedestrian Plazas and Walkways	\$15,288		\$3.56	\$18,642		\$4.35
G2060 Site Development	\$16,125		\$3.76	\$19,663		\$4.58
G2080 Landscaping	\$19,020		\$4.43	\$23,193		\$5.41
Subtotal	Dec 2018	\$1,339,253	\$312.25	Oct 2022	\$1,633,085	\$380.76
General Conditions	7.00%	\$93,748	\$21.86	7.00%	\$114,316	\$26.65

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 13-Dec-19

DOCUMENT 1

SUMMARY - FIRE STATION #2

Element	Escalation Itemised			Escalation Included		
	Subsystem	System	Cost / SF	Subsystem	System	Cost / SF
Subtotal		\$1,433,000	\$334.11		\$1,747,400	
General Requirements	3.00%	\$42,990	\$10.02	3.00%	\$52,422	\$12.22
Subtotal		\$1,475,990	\$344.13		\$1,799,822	
Bonds & Insurance	2.00%	\$29,520	\$6.88	2.00%	\$35,996	\$8.39
Subtotal		\$1,505,510	\$351.02		\$1,835,819	
Contractor's Fee	4.00%	\$60,220	\$14.04	4.00%	\$73,433	\$17.12
Subtotal		\$1,565,730	\$365.06		\$1,909,252	
Design Contingency	16.91%	\$264,694	\$61.71	16.91%	\$322,768	\$75.25
Subtotal		\$1,830,425	\$426.77		\$2,232,020	
Escalation to MOC, 09/30/23	21.94%	\$401,595	\$93.63			
TOTAL ESTIMATED CONSTRUCTION COST		\$2,232,020	\$520.41		\$2,232,020	\$520.41

Total Area: 4,289 SF

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #2

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
A - SUBSTRUCTURE						
A10 Foundations						
A1010 Standard Foundations						
Foundation - new addition - vestibule	128	sf	\$10.00	\$1,280	\$12.19	\$1,561
Foundation - new addition - exercise room	897	sf	\$10.00	\$8,970	\$12.19	\$10,938
Foundation - new addition - kitchen / dining	307	sf	\$10.00	\$3,070	\$12.19	\$3,744
				<u>\$13,320</u>		<u>\$16,242</u>
A10 Foundations				\$13,320		\$16,242
A40 Slabs-on-Grade						
A4010 Standard Slabs-on-Grade						
Slab on grade - new addition - vestibule	128	sf	\$10.50	\$1,344	\$12.80	\$1,639
Slab on grade - new addition - exercise room	897	sf	\$10.50	\$9,419	\$12.80	\$11,485
Slab on grade - new addition - kitchen / dining	307	sf	\$10.50	\$3,224	\$12.80	\$3,931
				<u>\$13,986</u>		<u>\$17,055</u>
A40 Slabs-on-Grade				\$13,986		\$17,055
A - SUBSTRUCTURE				\$27,306		\$33,297
B - SHELL						
B10 Superstructure						
B1020 Roof Construction						
Roof construction - new addition - vestibule	128	sf	\$24.00	\$3,072	\$29.27	\$3,746
Roof construction - new addition - exercise room	897	sf	\$24.00	\$21,528	\$29.27	\$26,251
Roof construction - new addition - kitchen / dining	307	sf	\$24.00	\$7,368	\$29.27	\$8,985
				<u>\$31,968</u>		<u>\$38,982</u>
B10 Superstructure				\$31,968		\$38,982
B20 Exterior Vertical Enclosures						
B2010 Exterior Walls						
Full wall assembly - allow for composite wood siding						
Exterior walls - new addition - vestibule	332	sf	\$44.00	\$14,608	\$53.65	\$17,813
Exterior walls - new addition - exercise room	1,077	sf	\$44.00	\$47,388	\$53.65	\$57,785
Exterior walls - new addition - kitchen / dining	523	sf	\$44.00	\$23,012	\$53.65	\$28,061
				<u>\$85,008</u>		<u>\$103,659</u>
B2020 Exterior Windows						
Exterior windows - new addition - vestibule	116	sf	\$95.00	\$11,020	\$115.84	\$13,438
Exterior windows - fiberglass framed - new addition - exercise room	162	sf	\$60.00	\$9,720	\$73.16	\$11,853
Exterior windows - fiberglass framed - new addition - kitchen / dining	78	sf	\$60.00	\$4,680	\$73.16	\$5,707
				<u>\$25,420</u>		<u>\$30,997</u>
B2050 Exterior Doors and Grilles						
Exterior doors - new addition - vestibule	1	ea	\$3,350.00	\$3,350	\$4,084.99	\$4,085
Exterior doors - new addition - exercise room	2	ea	\$3,350.00	6700	\$4,084.99	8169.98
Exterior doors - new addition - exercise room - glazed garage door	1	ea	\$6,000.00	6000	\$7,316.40	7316.4
Exterior doors - new addition - kitchen / dining	1	ea	\$3,350.00	\$3,350	\$4,084.99	\$4,085
				<u>\$19,400</u>		<u>\$23,656</u>
B20 Exterior Vertical Enclosures				\$129,828		\$158,312
B30 Exterior Horizontal Enclosures						
B3010 Roofing						
Roofing - new addition - vestibule	128	sf	\$35.00	\$4,480	\$42.68	\$5,463
Roofing - new addition - exercise room	897	sf	\$35.00	\$31,395	\$42.68	\$38,283
Roofing - new addition - kitchen / dining	307	sf	\$32.00	\$9,824	\$39.02	\$11,979

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #2

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
				\$45,699		\$55,725
B30 Exterior Horizontal Enclosures				\$45,699		\$55,725
B - SHELL				\$207,495		\$253,019
C - INTERIORS						
C10 Interior Construction						
C1010 Interior Partitions						
Partitions - new addition - exercise room	200	sf	\$18.00	\$3,600	\$21.95	\$4,390
Partitions - space designated for new wall framing	2,306	sf	\$21.00	\$48,426	\$25.61	\$59,051
Partitions - new bunker gear storage room	299	sf	\$10.00	\$2,990	\$12.19	\$3,646
Partitions - framing and fixture for new vestibule	115	sf	\$21.00	\$2,415	\$25.61	\$2,945
Partitions - reconfigure SCBA into Personal Decon	266	sf	\$21.00	\$5,586	\$25.61	\$6,812
				\$63,017		\$76,843
C1030 Interior Doors						
Interior doors - new addition - exercise room	1	ea	\$2,200.00	\$2,200	\$2,682.68	\$2,683
Interior doors - space designated for new wall framing	6	ea	\$2,200.00	\$13,200	\$2,682.68	\$16,096
Interior doors - new bunker gear storage room	1	ea	\$2,200.00	\$2,200	\$2,682.68	\$2,683
Interior doors - framing and fixture for new vestibule	1	ea	\$2,200.00	\$2,200	\$2,682.68	\$2,683
Interior doors - reconfigure SCBA into Personal Decon	2	ea	\$2,200.00	\$4,400	\$2,682.68	\$5,365
				\$24,200		\$29,509
C1090 Interior Specialties						
Interior specialties - new addition - vestibule	128	sf	\$6.00	\$768	\$7.32	\$936
Interior specialties - new addition - exercise room	897	sf	\$6.00	\$5,382	\$7.32	\$6,563
Interior specialties - new addition - kitchen / dining	307	sf	\$11.00	\$3,377	\$13.41	\$4,118
Interior specialties - space designated for new wall framing	2,306	sf	\$6.00	\$13,836	\$7.32	\$16,872
Interior specialties - new bunker gear storage room	299	sf	\$8.00	\$2,392	\$9.76	\$2,917
Interior specialties - framing and fixture for new vestibule	115	sf	\$6.00	\$690	\$7.32	\$841
Interior specialties - reconfigure SCBA into Personal Decon	266	sf	\$21.00	\$5,586	\$25.61	\$6,812
				\$32,031		\$39,059
C10 Interior Construction				\$119,248		\$145,411
C20 Interior Finishes						
C2010 Wall Finishes						
Wall finishes - new addition - vestibule	648	sf	\$1.00	\$648	\$1.22	\$790
Wall finishes - new addition - exercise room	2,128	sf	\$1.00	\$2,128	\$1.22	\$2,595
Wall finishes - new addition - kitchen / dining	1,053	sf	\$1.00	\$1,053	\$1.22	\$1,284
Wall finishes - space designated for new wall framing	2,306	sf	\$2.33	\$5,381	\$2.85	\$6,561
Wall finishes - new bunker gear storage room	299	sf	\$1.11	\$332	\$1.35	\$405
Wall finishes - framing and fixture for new vestibule	115	sf	\$2.33	\$268	\$2.85	\$327
Wall finishes - reconfigure SCBA into Personal Decon	266	sf	\$2.33	\$621	\$2.85	\$757
				\$10,431		\$12,719
C2030 Flooring						
Flooring allowances - including base						
Flooring - new addition - vestibule - assume recessed walk-off mat	128	sf	\$75.00	\$9,600	\$91.46	\$11,706
Flooring - new addition - exercise room	897	sf	\$15.00	\$13,455	\$18.29	\$16,407
Flooring - new addition - kitchen / dining	307	sf	\$18.00	\$5,526	\$21.95	\$6,738
Flooring - space designated for new wall framing	2,306	sf	\$15.00	\$34,590	\$18.29	\$42,179
Flooring - new bunker gear storage room - assume polished concrete	299	sf	\$5.25	\$1,570	\$6.40	\$1,914
Flooring - framing and fixture for new vestibule	115	sf	\$18.00	\$2,070	\$21.95	\$2,524
Flooring - reconfigure SCBA into Personal Decon - assm. pol. concrete	266	sf	\$18.00	\$4,788	\$21.95	\$5,838
Flooring - day room	628	sf	\$18.00	\$11,304	\$21.95	\$13,784
				\$82,903		\$101,092
C2050 Ceiling Finishes						
Ceiling finishes - new addition - vestibule - assume ACT	128	sf	\$5.50	\$704	\$6.71	\$858
Ceiling finishes - new addition - exercise room - assume ACT	897	sf	\$5.50	\$4,934	\$6.71	\$6,016

Prepared by CUMMING

Page 25 of 38

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #2

Element	Quantity	Unit	Unit Cost	Total	Unit Cost	Total
			Dec 2018		Oct 2022	
Ceiling finishes - new addition - kitchen / dining - assume ACT & GWB	307	sf	\$7.75	\$2,379	\$9.45	\$2,901
Ceiling finishes - space designated for new wall framing - assume ACT	2,306	sf	\$5.50	\$12,683	\$6.71	\$15,466
Ceiling finishes - new bunker gear storage room - assume painted GWB	299	sf	\$7.75	\$2,317	\$9.45	\$2,826
Ceiling finishes - framing and fixture for new vestibule - assume GWB	115	sf	\$10.00	\$1,150	\$12.19	\$1,402
Ceiling finishes - reconfigure SCBA into Personal Decon - assume GWB	266	sf	\$10.00	\$2,660	\$12.19	\$3,244
Ceiling finishes - day room - assume ACT	628	sf	\$5.50	\$3,454	\$6.71	\$4,212
				\$30,281		\$36,925
C20 Interior Finishes				\$123,615		\$150,736
C - INTERIORS				\$242,863		\$296,147
D - SERVICES						
D20 Plumbing						
D2010 Domestic Water Distribution						
New						
Domestic water piping	1,303	sf	\$8.35	\$10,880	\$10.18	\$13,267
Fixture w/rough-in	1,303	sf	\$6.00	\$7,818	\$7.32	\$9,533
Renovation						
Domestic water piping	2,986	sf	\$8.35	\$24,933	\$10.18	\$30,403
Fixture w/rough-in	2,986	sf	\$8.05	\$24,037	\$9.82	\$29,311
				\$67,668		\$82,515
D2020 Sanitary Drainage						
New						
Waste/vent piping	1,303	sf	\$8.02	\$10,450	\$9.78	\$12,743
Renovation						
Waste/vent piping	2,986	sf	\$8.02	\$23,948	\$9.78	\$29,202
				\$34,398		\$41,945
D2030 Building Support Plumbing Systems						
New						
Equipment	1,303	sf	\$1.85	\$2,411	\$2.26	\$2,939
Natural gas system	1,303	sf	\$2.00	\$2,606	\$2.44	\$3,178
Roof Drainage	1,303	sf	\$3.47	\$4,521	\$4.23	\$5,513
Condensate Drainage	1,303	sf	\$2.60	\$3,388	\$3.17	\$4,131
Testing/ firestopping / seismic/ misc	1,303	sf	\$2.20	\$2,867	\$2.68	\$3,496
Renovation						
Demolition	2,986	sf	\$1.25	\$3,733	\$1.52	\$4,551
Testing/ firestopping / seismic/ misc	2,986	sf	\$2.00	\$5,972	\$2.44	\$7,282
				\$25,497		\$31,091
D20 Plumbing				\$127,563		\$155,550
D30 Heating, Ventilation, and Air Conditioning (HVAC)						
D3030 Cooling Systems						
New						
Air side equipment (Split sys, heat pumps, fans)	1,303	sf	\$15.00	\$19,545	\$18.29	\$23,833
Test / balance / firestopping / seismic	1,303	sf	\$2.89	\$3,766	\$3.52	\$4,592
Renovation						
Air side equipment (Split sys, heat pumps, fans)	2,986	sf	\$16.00	\$47,776	\$19.51	\$58,258
Test / balance / firestopping / seismic	2,986	sf	\$2.89	\$8,630	\$3.52	\$10,523
				\$79,716		\$97,206
D3050 Facility HVAC Distribution Systems						
New						
Air distribution	1,303	sf	\$13.10	\$17,069	\$15.97	\$20,814
Renovation						
Demolition	2,986	sf	\$1.45	\$4,330	\$1.77	\$5,280
Air distribution	2,986	sf	\$13.10	\$39,117	\$15.97	\$47,699

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #2

Element	Quantity	Unit	Unit Cost		Total	
			Dec 2018	Oct 2022	Dec 2018	Oct 2022
					\$60,516	\$73,793
D30 Heating, Ventilation, and Air Conditioning (HVAC)					\$140,232	\$170,999
D40 Fire Protection						
D4010 Fire Suppression						
New						
Automatic Sprinkler System	1,303	sf	\$6.10	\$7,948	\$7.44	\$9,692
Renovation						
Automatic Sprinkler System - relocate heads	2,986	sf	\$3.45	\$10,302	\$4.21	\$12,562
					<u>\$18,250</u>	<u>\$22,254</u>
D40 Fire Protection					\$18,250	\$22,254
D50 Electrical						
D5020 Electrical Service and Distribution						
Distribution Equipment	4,289	sf	\$10.00	\$42,890	\$12.19	\$52,300
					<u>\$42,890</u>	<u>\$52,300</u>
D5030 General Purpose Electrical Power						
HVAC and Equipment Connections	4,289	sf	\$2.25	\$9,650	\$2.74	\$11,768
Convenience Power	4,289	sf	\$6.50	\$27,879	\$7.93	\$33,995
					<u>\$37,529</u>	<u>\$45,763</u>
D5040 Lighting						
Lighting and Lighting Control	4,289	sf	\$21.00	\$90,069	\$25.61	\$109,830
					<u>\$90,069</u>	<u>\$109,830</u>
D5080 Miscellaneous Electrical Systems						
Demolition	4,289	sf	\$1.25	\$5,361	\$1.52	\$6,538
					<u>\$5,361</u>	<u>\$6,538</u>
D50 Electrical					\$175,849	\$214,430
D60 Communications						
D6010 Data Communications						
Voice and Data System	4,289	sf	\$5.50	\$23,590	\$6.71	\$28,765
					<u>\$23,590</u>	<u>\$28,765</u>
D6030 Audio-Video Communication						
PA System	4,289	sf	\$7.00	\$30,023	\$8.54	\$36,610
					<u>\$30,023</u>	<u>\$36,610</u>
D60 Communications					\$53,613	\$65,375
D70 Electronic Safety and Security						
D7010 Access Control and Intrusion Detection						
Access Control System - includes electronic access for all doors	12,800	sf	\$4.15	\$53,120	\$5.06	\$64,775
					<u>\$53,120</u>	<u>\$64,775</u>
D7050 Detection and Alarm						
Security System	4,289	sf	\$1.50	\$6,434	\$1.83	\$7,845
Fire Alarm System	4,289	sf	\$10.00	\$42,890	\$12.19	\$52,300
					<u>\$49,324</u>	<u>\$60,145</u>
D7070 Electronic Monitoring and Control						
CCTV System	4,289	sf	\$4.00	\$17,156	\$4.88	\$20,920

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #2

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
D7090 Electronic Safety and Security Supplementary Components				\$17,156		\$20,920
Alerting System - allowance	1	ls	\$20,000.00	\$20,000	\$24,388.00	\$24,388
				\$20,000		\$24,388
D70 Electronic Safety and Security				\$139,600		\$170,228
D80 Integrated Automation						
D8010 Integrated Automation Facility Controls						
New						
Direct Digital Controls	1,303	sf	\$4.00	\$5,212	\$4.88	\$6,356
Renovation						
Direct Digital Controls	2,986	sf	\$5.00	\$14,930	\$6.10	\$18,206
				\$20,142		\$24,561
D80 Integrated Automation				\$20,142		\$24,561
D - SERVICES				\$675,248		\$823,397
E - EQUIPMENT & FURNISHINGS						
E10 Equipment						
E1030 Commercial Equipment						
Install only OFCI ood services equipment - new addition - kitchen / dining	307	sf	\$8.00	\$2,456	\$9.76	\$2,995
				\$2,456		\$2,995
E1040 Institutional Equipment						
Miscellaneous OFCI equipment install allowance	4,289	sf	\$1.00	\$4,289	\$1.22	\$5,230
				\$4,289		\$5,230
E10 Equipment				\$6,745		\$8,225
E20 Furnishings						
E2010 Fixed Furnishings						
Casework allowance	4,289	sf	\$7.00	\$30,023	\$8.54	\$36,610
				\$30,023		\$36,610
E2050 Movable Furnishings						
Excluded						
E20 Furnishings				\$30,023		\$36,610
E - EQUIPMENT & FURNISHINGS				\$36,768		\$44,835
F - SPECIAL CONSTRUCTION & DEMOLITION						
F30 Demolition						
F3030 Selective Demolition						
Miscellaneous demolition	4,289	sf	\$10.00	\$42,890	\$12.19	\$52,300
				\$42,890		\$52,300
F30 Demolition				\$42,890		\$52,300
F - SPECIAL CONSTRUCTION & DEMOLITION				\$42,890		\$52,300
G - SITEWORK						
G20 Site Improvements						
G2010 Roadways						

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #2

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
Retop all asphalt	25,000	sf	\$2.25	\$56,250	\$2.74	\$68,591
				<u>\$56,250</u>		<u>\$68,591</u>
G2030 Pedestrian Plazas and Walkways						
New concrete patio, including all associated work	1,092	sf	\$14.00	\$15,288	\$17.07	\$18,642
				<u>\$15,288</u>		<u>\$18,642</u>
G2060 Site Development						
6' high chainlink fence with privacy slats	40	lf	\$50.00	\$2,000	\$60.97	\$2,439
New powered cantilever gate fence	33	lf	\$125.00	\$4,125	\$152.43	\$5,030
Allowance for sitework for new vestibule	1	ls	\$10,000.00	\$10,000	\$12,194.00	\$12,194
				<u>\$16,125</u>		<u>\$19,663</u>
G2080 Landscaping						
Allowance for landscaping	1,902	sf	\$10.00	\$19,020	\$12.19	\$23,193
				<u>\$19,020</u>		<u>\$23,193</u>
G20 Site Improvements				\$106,683		\$130,089

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
12/13/19

Fire Station #3

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

SUMMARY - FIRE STATION #3

Element	Escalation Itemised			Escalation Included		
	Subsystem	System	Cost / SF	Subsystem	System	Cost / SF
A - SUBSTRUCTURE		\$83,517	\$14.82		\$101,841	\$18.08
A10 Foundations	\$40,740		\$7.23	\$49,678		\$8.82
A1010 Standard Foundations	\$40,740		\$7.23	\$49,678		\$8.82
A40 Slabs-on-Grade	\$42,777		\$7.59	\$52,162		\$9.26
A4010 Standard Slabs-on-Grade	\$42,777		\$7.59	\$52,162		\$9.26
B - SHELL		\$607,815	\$107.88		\$741,170	\$131.55
B10 Superstructure	\$134,791		\$23.92	\$164,364		\$29.17
B1010 Floor Construction	\$37,015		\$6.57	\$45,136		\$8.01
B1020 Roof Construction	\$97,776		\$17.35	\$119,228		\$21.16
B20 Exterior Vertical Enclosures	\$334,778		\$59.42	\$408,228		\$72.46
B2010 Exterior Walls	\$251,548		\$44.65	\$306,738		\$54.44
B2020 Exterior Windows	\$51,480		\$9.14	\$62,775		\$11.14
B2050 Exterior Doors and Grilles	\$31,750		\$5.64	\$38,716		\$6.87
B30 Exterior Horizontal Enclosures	\$138,246		\$24.54	\$168,577		\$29.92
B3010 Roofing	\$138,246		\$24.54	\$168,577		\$29.92
C - INTERIORS		\$391,973	\$69.57		\$477,972	\$84.84
C10 Interior Construction	\$261,056		\$46.34	\$318,332		\$56.50
C1010 Interior Partitions	\$130,389		\$23.14	\$158,996		\$28.22
C1030 Interior Doors	\$68,200		\$12.11	\$83,163		\$14.76
C1090 Interior Specialties	\$62,467		\$11.09	\$76,172		\$13.52
C20 Interior Finishes	\$130,917		\$23.24	\$159,640		\$28.34
C2010 Wall Finishes	\$9,056		\$1.61	\$11,042		\$1.96
C2030 Flooring	\$85,935		\$15.25	\$104,789		\$18.60
C2050 Ceiling Finishes	\$35,927		\$6.38	\$43,809		\$7.78
D - SERVICES		\$893,888	\$158.66		\$1,090,007	\$193.47
D20 Plumbing	\$208,701		\$37.04	\$254,490		\$45.17
D2010 Domestic Water Distribution	\$101,738		\$18.06	\$124,060		\$22.02
D2020 Sanitary Drainage	\$46,603		\$8.27	\$56,827		\$10.09
D2030 Building Support Plumbing Systems	\$56,173		\$9.97	\$68,497		\$12.16
D2050 General Service Compressed-Air	\$4,187		\$0.74	\$5,106		\$0.91
D30 Heating, Ventilation, and Air Condition (HVAC)	\$178,143		\$31.62	\$217,227		\$38.56
D3030 Cooling Systems	\$102,239		\$18.15	\$124,671		\$22.13
D3050 Facility HVAC Distribution Systems	\$75,904		\$13.47	\$92,557		\$16.43
D40 Fire Protection	\$30,533		\$5.42	\$37,232		\$6.61
D4010 Fire Suppression	\$30,533		\$5.42	\$37,232		\$6.61
D50 Electrical	\$230,994		\$41.00	\$281,674		\$50.00
D5020 Electrical Service and Distribution	\$56,340		\$10.00	\$68,701		\$12.19
D5030 General Purpose Electrical Power	\$49,298		\$8.75	\$60,113		\$10.67
D5040 Lighting	\$118,314		\$21.00	\$144,272		\$25.61
D5080 Miscellaneous Electrical Systems	\$7,043		\$1.25	\$8,588		\$1.52
D60 Communications	\$70,425		\$12.50	\$85,876		\$15.24
D6010 Data Communications	\$30,987		\$5.50	\$37,786		\$6.71
D6030 Audio-Video Communication	\$39,438		\$7.00	\$48,091		\$8.54
D70 Electronic Safety and Security	\$151,110		\$26.82	\$184,263		\$32.71
D7010 Access Control and Intrusion Detection	\$43,783		\$7.77	\$53,388		\$9.48
D7050 Detection and Alarm	\$64,791		\$11.50	\$79,006		\$14.02
D7070 Electronic Monitoring and Control	\$22,536		\$4.00	\$27,480		\$4.88
D80 Integrated Automation	\$23,983		\$4.26	\$29,245		\$5.19
D8010 Integrated Automation Facility Controls	\$23,983		\$4.26	\$29,245		\$5.19
E - EQUIPMENT & FURNISHINGS		\$57,544	\$10.21		\$70,169	\$12.45
E10 Equipment	\$18,106		\$3.21	\$22,078		\$3.92
E1010 Vehicle and Pedestrian Equipment	\$10,000		\$1.77	\$12,194		\$2.16
E1030 Commercial Equipment	\$2,472		\$0.44	\$3,014		\$0.54
E1040 Institutional Equipment	\$5,634		\$1.00	\$6,870		\$1.22
E20 Furnishings	\$39,438		\$7.00	\$48,091		\$8.54
E2010 Fixed Furnishings	\$39,438		\$7.00	\$48,091		\$8.54
F - SPECIAL CONSTRUCTION & DEMOLITION		\$56,340	\$10.00		\$68,701	\$12.19
F30 Demolition	\$56,340		\$10.00	\$68,701		\$12.19
F3030 Selective Demolition	\$56,340		\$10.00	\$68,701		\$12.19
G - SITEWORK		\$144,719	\$25.69		\$176,470	\$31.32
G20 Site Improvements	\$144,719		\$25.69	\$176,470		\$31.32
G2010 Roadways	\$57,935		\$10.28	\$70,646		\$12.54
G2030 Pedestrian Plazas and Walkways	\$55,034		\$9.77	\$67,108		\$11.91
G2060 Site Development	\$1,750		\$0.31	\$2,134		\$0.38
G2080 Landscaping	\$30,000		\$5.32	\$36,582		\$6.49

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

SUMMARY - FIRE STATION #3

Element	Escalation Itemised			Escalation Included		
	Subsystem	System	Cost / SF	Subsystem	System	Cost / SF
Subtotal		\$2,235,796	\$396.84		\$2,726,330	\$483.91
General Conditions	7.00%	\$156,506	\$27.78	7.00%	\$190,843	\$33.87
Subtotal		\$2,392,302	\$424.62		\$2,917,173	\$517.78
General Requirements	3.00%	\$71,769	\$12.74	3.00%	\$87,515	\$15.53
Subtotal		\$2,464,071	\$437.36		\$3,004,688	\$533.31
Bonds & Insurance	2.00%	\$49,281	\$8.75	2.00%	\$60,094	\$10.67
Subtotal		\$2,513,352	\$446.10		\$3,064,782	\$543.98
Contractor's Fee	4.00%	\$100,534	\$17.84	4.00%	\$122,591	\$21.76
Subtotal		\$2,613,887	\$463.95		\$3,187,373	\$565.74
Design Contingency	13.77%	\$359,884	\$63.88	13.77%	\$438,843	\$77.89
Subtotal		\$2,973,771	\$527.83		\$3,626,216	\$643.63
Escalation to MOC, 09/30/23	21.94%	\$652,445	\$115.80			
TOTAL ESTIMATED CONSTRUCTION COST		\$3,626,216	\$643.63		\$3,626,216	\$643.63

Total Area: 5,634 SF

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #3

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Dec 2022	Total
A - SUBSTRUCTURE						
A10 Foundations						
A1010 Standard Foundations						
Foundation - new addition - apparatus bay	1,448	sf	\$10.00	\$14,480	\$12.19	\$17,657
Foundation - new addition - exercise room & dining	1,229	sf	\$10.00	\$12,290	\$12.19	\$14,986
Foundation - new addition - training room, lobby, and restrooms	1,397	sf	\$10.00	\$13,970	\$12.19	\$17,035
				\$40,740		\$49,678
A10 Foundations				\$40,740		\$49,678
A40 Slabs-on-Grade						
A4010 Standard Slabs-on-Grade						
Slab on grade - new addition - apparatus bay	1,448	sf	\$10.50	\$15,204	\$12.80	\$18,540
Slab on grade - new addition - exercise room & dining	1,229	sf	\$10.50	\$12,905	\$12.80	\$15,736
Slab on grade - new addition - training room, lobby, and restrooms	1,397	sf	\$10.50	\$14,669	\$12.80	\$17,887
				\$42,777		\$52,162
A40 Slabs-on-Grade				\$42,777		\$52,162
A - SUBSTRUCTURE				\$83,517		\$101,841
B - SHELL						
B10 Superstructure						
B1010 Floor Construction						
Storage mezzanine above new apparatus bay	673	sf	\$55.00	\$37,015	\$67.07	\$45,136
				\$37,015		\$45,136
B1020 Roof Construction						
Roof construction - new addition - apparatus bay	1,448	sf	\$24.00	\$34,752	\$29.27	\$42,377
Roof construction - new addition - exercise room & dining	1,229	sf	\$24.00	\$29,496	\$29.27	\$35,967
Roof construction - new addition - training room, lobby, and restrooms	1,397	sf	\$24.00	\$33,528	\$29.27	\$40,884
				\$97,776		\$119,228
B10 Superstructure				\$134,791		\$164,364
B20 Exterior Vertical Enclosures						
B2010 Exterior Walls						
Full wall assembly - allow for composite wood siding						
Exterior walls - new addition - apparatus bay	2,630	sf	\$44.00	\$115,720	\$53.65	\$141,109
Exterior walls - new addition - exercise room & dining	1,402	sf	\$44.00	\$61,688	\$53.65	\$75,222
Exterior walls - new addition - training room, lobby, and restrooms	1,685	sf	\$44.00	\$74,140	\$53.65	\$90,406
				\$251,548		\$306,738
B2020 Exterior Windows						
Fiberglass framed windows						
Exterior windows - new addition - apparatus bay	395	sf	\$60.00	\$23,700	\$73.16	\$28,900
Exterior windows - new addition - exercise room & dining	210	sf	\$60.00	\$12,600	\$73.16	\$15,364
Exterior windows - new addition - training room, lobby, and restrooms	253	sf	\$60.00	\$15,180	\$73.16	\$18,510
				\$51,480		\$62,775
B2050 Exterior Doors and Grilles						
Exterior doors - new addition - apparatus bay	2	ea	\$3,350.00	\$6,700	\$4,084.99	\$8,169.98
Exterior doors - new addition - apparatus bay - four-fold door	1	ea	\$15,000.00	\$15,000	\$18,291.00	\$18,291
Exterior doors - new addition - exercise room & dining	2	ea	\$3,350.00	\$6,700	\$4,084.99	\$8,169.98
Exterior doors - new addition - training room, lobby, and restrooms	1	ea	\$3,350.00	\$3,350	\$4,084.99	\$4,085
				\$31,750		\$38,716
B20 Exterior Vertical Enclosures				\$334,778		\$408,228
B30 Exterior Horizontal Enclosures						

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #3

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Dec 2022	Total
B3010 Roofing						
Roofing - new addition - apparatus bay	1,448	sf	\$32.00	\$46,336	\$39.02	\$56,502
Roofing - new addition - exercise room & dining	1,229	sf	\$35.00	\$43,015	\$42.68	\$52,452
Roofing - new addition - training room, lobby, and restrooms	1,397	sf	\$35.00	\$48,895	\$42.68	\$59,623
				\$138,246		\$168,577
B30 Exterior Horizontal Enclosures				\$138,246		\$168,577
B - SHELL				\$607,815		\$741,170
C - INTERIORS						
C10 Interior Construction						
C1010 Interior Partitions						
Partitions - new addition - apparatus bay	1,448	sf	\$21.00	\$30,408	\$25.61	\$37,080
Partitions - new addition - exercise room & dining	1,229	sf	\$21.00	\$25,809	\$25.61	\$31,471
Partitions - new addition - training room, lobby, and restrooms	1,397	sf	\$21.00	\$29,337	\$25.61	\$35,774
Partitions - converted office to new bunkroom	236	sf	\$21.00	\$4,956	\$25.61	\$6,043
Partitions - modified closet w/ new casework and wall framing	22	sf	\$21.00	\$462	\$25.61	\$563
Partitions - new wall framing for new vestibule and hall	119	sf	\$21.00	\$2,499	\$25.61	\$3,047
Partitions - storage mezzanine above new apparatus bay	673	sf	\$21.00	\$14,133	\$25.61	\$17,234
Partitions - area designated for rework	761	sf	\$21.00	\$15,981	\$25.61	\$19,487
Partitions - renovated kitchen	309	sf	\$21.00	\$6,489	\$25.61	\$7,913
Partitions - framing modifications for new office	15	sf	\$21.00	\$315	\$25.61	\$384
				\$130,389		\$158,996
C1030 Interior Doors						
Interior doors - new addition - apparatus bay	7	ea	\$2,200.00	\$15,400	\$2,682.68	\$18,779
Interior doors - new addition - exercise room & dining	6	ea	\$2,200.00	\$13,200	\$2,682.68	\$16,096
Interior doors - new addition - training room, lobby, and restrooms	7	ea	\$2,200.00	\$15,400	\$2,682.68	\$18,779
Interior doors - converted office to new bunkroom	1	ea	\$2,200.00	\$2,200	\$2,682.68	\$2,683
Interior doors - new wall framing for new vestibule and hall	1	ea	\$2,200.00	\$2,200	\$2,682.68	\$2,683
Interior doors - storage mezzanine above new apparatus bay	3	ea	\$2,200.00	\$6,600	\$2,682.68	\$8,048
Interior doors - area designated for rework	4	ea	\$2,200.00	\$8,800	\$2,682.68	\$10,731
Interior doors - renovated kitchen	2	ea	\$2,200.00	\$4,400	\$2,682.68	\$5,365
				\$68,200		\$83,163
C1090 Interior Specialties						
Interior specialties - new addition - apparatus bay	1,448	sf	\$11.00	\$15,928	\$13.41	\$19,423
Interior specialties - new addition - exercise room & dining	1,229	sf	\$8.00	\$9,832	\$9.76	\$11,989
Interior specialties - new addition - training room, lobby, and restrooms	1,397	sf	\$16.00	\$22,352	\$19.51	\$27,256
Interior specialties - converted office to new bunkroom	236	sf	\$6.00	\$1,416	\$7.32	\$1,727
Interior specialties - modified closet w/ new casework and wall framing	22	sf	\$6.00	\$132	\$7.32	\$161
Interior specialties - new wall framing for new vestibule and hall	119	sf	\$6.00	\$714	\$7.32	\$871
Interior specialties - storage mezzanine above new apparatus bay	673	sf	\$6.00	\$4,038	\$7.32	\$4,924
Interior specialties - area designated for rework	761	sf	\$6.00	\$4,566	\$7.32	\$5,568
Interior specialties - renovated kitchen	309	sf	\$11.00	\$3,399	\$13.41	\$4,145
Interior specialties - framing modifications for new office	15	sf	\$6.00	\$90	\$7.32	\$110
				\$62,467		\$76,172
C10 Interior Construction				\$261,056		\$318,332
C20 Interior Finishes						
C2010 Wall Finishes						
Wall finishes - new addition - apparatus bay	1,448	sf	\$1.00	\$1,448	\$1.22	\$1,766
Wall finishes - new addition - exercise room & dining	1,229	sf	\$1.00	\$1,229	\$1.22	\$1,499
Wall finishes - new addition - training room, lobby, and restrooms	1,397	sf	\$1.00	\$1,397	\$1.22	\$1,704
Wall finishes - converted office to new bunkroom	236	sf	\$2.33	\$551	\$2.85	\$671
Wall finishes - modified closet w/ new casework and wall framing	22	sf	\$2.33	\$51	\$2.85	\$63
Wall finishes - new wall framing for new vestibule and hall	119	sf	\$2.33	\$278	\$2.85	\$339
Wall finishes - storage mezzanine above new apparatus bay	673	sf	\$2.33	\$1,570	\$2.85	\$1,915
Wall finishes - area designated for rework	761	sf	\$2.33	\$1,776	\$2.85	\$2,165
Wall finishes - renovated kitchen	309	sf	\$2.33	\$721	\$2.85	\$879
Wall finishes - framing modifications for new office	15	sf	\$2.33	\$35	\$2.85	\$43

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #3

Element	Quantity	Unit	Unit Cost	Total	Unit Cost	Total
			Dec 2018		Dec 2022	
C2030 Flooring				\$9,056		\$11,042
Flooring allowances - including base						
Flooring - new addition - apparatus bay - assume polished concrete	1,448	sf	\$5.25	\$7,602	\$6.40	\$9,270
Flooring - new addition - exercise room & dining	1,229	sf	\$17.50	\$21,508	\$21.34	\$26,226
Flooring - new addition - training room, lobby, and restrooms	1,397	sf	\$17.50	\$24,448	\$21.34	\$29,811
Flooring - converted office to new bunkroom	236	sf	\$15.00	\$3,540	\$18.29	\$4,317
Flooring - modified closet w/ new casework and wall framing - assume polished concrete	22	sf	\$5.25	\$116	\$6.40	\$141
Flooring - new wall framing for new vestibule and hall - assume polished concrete	119	sf	\$5.25	\$625	\$6.40	\$762
Flooring - storage mezzanine above new apparatus bay - assume polished concrete	673	sf	\$5.25	\$3,533	\$6.40	\$4,308
Flooring - area designated for rework	761	sf	\$15.00	\$11,415	\$18.29	\$13,919
Flooring - renovated kitchen	309	sf	\$18.00	\$5,562	\$21.95	\$6,782
Flooring - framing modifications for new office	15	sf	\$15.00	\$225	\$18.29	\$274
Flooring - day room	409	sf	\$18.00	\$7,362	\$21.95	\$8,977
				\$85,935		\$104,789
C2050 Ceiling Finishes						
Ceiling finishes - new addition - apparatus bay - assume painted OTS	1,448	sf	\$3.00	\$4,344	\$3.66	\$5,297
Ceiling finishes - new addition - exercise room & dining - assume ACT	1,229	sf	\$5.50	\$6,760	\$6.71	\$8,243
Ceiling finishes - new addition - training room, lobby, and restrooms - assume GWB	1,397	sf	\$10.00	\$13,970	\$12.19	\$17,035
Ceiling finishes - converted office to new bunkroom - assume ACT	236	sf	\$5.50	\$1,298	\$6.71	\$1,583
Ceiling finishes - modified closet w/ new casework and wall framing - assume painted OTS	22	sf	\$3.00	\$66	\$3.66	\$80
Ceiling finishes - new wall framing for new vestibule and hall - assume ACT	119	sf	\$5.50	\$655	\$6.71	\$798
Ceiling finishes - area designated for rework - assume ACT	761	sf	\$5.50	\$4,186	\$6.71	\$5,104
Ceiling finishes - renovated kitchen - assume ACT & GWB	309	sf	\$7.50	\$2,318	\$9.15	\$2,826
Ceiling finishes - framing modifications for new office - assume ACT	15	sf	\$5.50	\$83	\$6.71	\$101
Ceiling finishes - day room - assume ACT	409	sf	\$5.50	\$2,250	\$6.71	\$2,743
				\$35,927		\$43,809
C20 Interior Finishes				\$130,917		\$159,640
C - INTERIORS				\$391,973		\$477,972
D - SERVICES						
D20 Plumbing						
D2010 Domestic Water Distribution						
New						
Domestic water piping	4,187	sf	\$8.35	\$34,961	\$10.18	\$42,632
Fixture w/rough-in	4,187	sf	\$8.00	\$33,496	\$9.76	\$40,845
Renovation						
Domestic water piping	1,447	sf	\$10.00	\$14,470	\$12.19	\$17,645
Fixture w/rough-in	1,447	sf	\$13.00	\$18,811	\$15.85	\$22,938
				\$101,738		\$124,060
D2020 Sanitary Drainage						
New						
Waste/vent piping	4,187	sf	\$8.02	\$33,580	\$9.78	\$40,947
Renovation						
Waste/vent piping	1,447	sf	\$9.00	\$13,023	\$10.97	\$15,880
				\$46,603		\$56,827
D2030 Building Support Plumbing Systems						
New						
Equipment	4,187	sf	\$1.85	\$7,746	\$2.26	\$9,445
Natural gas system	4,187	sf	\$2.00	\$8,374	\$2.44	\$10,211
Roof Drainage	4,187	sf	\$3.47	\$14,529	\$4.23	\$17,717
Condensate Drainage	4,187	sf	\$2.60	\$10,886	\$3.17	\$13,275
Testing/ firestopping / seismic/ misc	4,187	sf	\$2.20	\$9,211	\$2.68	\$11,232
Renovation						

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #3

Element	Quantity	Unit	Unit Cost	Total	Unit Cost	Total
			Dec 2018		Dec 2022	
Demolition	1,447	sf	\$1.25	\$1,809	\$1.52	\$2,206
Testing/ firestopping / seismic/ misc	1,447	sf	\$2.50	\$3,618	\$3.05	\$4,411
				<u>\$56,173</u>		<u>\$68,497</u>
D2050 General Service Compressed-Air						
New						
Compressed air	4,187	sf	\$1.00	\$4,187	\$1.22	\$5,106
				<u>\$4,187</u>		<u>\$5,106</u>
D20 Plumbing				\$208,701		\$254,490
D30 Heating, Ventilation, and Air Conditioning (HVAC)						
D3030 Cooling Systems						
New						
Air side equipment (Split sys, heat pumps, fans)	4,187	sf	\$15.00	\$62,805	\$18.29	\$76,584
Test / balance / firestopping / seismic	4,187	sf	\$2.89	\$12,100	\$3.52	\$14,755
Renovation						
Air side equipment (Split sys, heat pumps, fans)	1,447	sf	\$16.00	\$23,152	\$19.51	\$28,232
Test / balance / firestopping / seismic	1,447	sf	\$2.89	\$4,182	\$3.52	\$5,099
				<u>\$102,239</u>		<u>\$124,671</u>
D3050 Facility HVAC Distribution Systems						
New						
Air distribution	4,187	sf	\$13.10	\$54,850	\$15.97	\$66,884
Renovation						
Demolition	1,447	sf	\$1.45	\$2,098	\$1.77	\$2,558
Air distribution	1,447	sf	\$13.10	\$18,956	\$15.97	\$23,115
				<u>\$75,904</u>		<u>\$92,557</u>
D30 Heating, Ventilation, and Air Conditioning (HVAC)				\$178,143		\$217,227
D40 Fire Protection						
D4010 Fire Suppression						
New						
Automatic Sprinkler System	4,187	sf	\$6.10	\$25,541	\$7.44	\$31,144
Renovation						
Automatic Sprinkler System - relocate heads	1,447	sf	\$3.45	\$4,992	\$4.21	\$6,087
				<u>\$30,533</u>		<u>\$37,232</u>
D40 Fire Protection				\$30,533		\$37,232
D50 Electrical						
D5020 Electrical Service and Distribution						
Distribution Equipment	5,634	sf	\$10.00	\$56,340	\$12.19	\$68,701
				<u>\$56,340</u>		<u>\$68,701</u>
D5030 General Purpose Electrical Power						
HVAC and Equipment Connections	5,634	sf	\$2.25	\$12,677	\$2.74	\$15,458
Convenience Power	5,634	sf	\$6.50	\$36,621	\$7.93	\$44,656
				<u>\$49,298</u>		<u>\$60,113</u>
D5040 Lighting						
Lighting and Lighting Control	5,634	sf	\$21.00	\$118,314	\$25.61	\$144,272
				<u>\$118,314</u>		<u>\$144,272</u>
D5080 Miscellaneous Electrical Systems						
Demolition	5,634	sf	\$1.25	\$7,043	\$1.52	\$8,588
				<u>\$7,043</u>		<u>\$8,588</u>
D50 Electrical				\$230,994		\$281,674

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #3

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Dec 2022	Total
D60 Communications						
D6010 Data Communications						
Voice and Data System	5,634	sf	\$5.50	\$30,987	\$6.71	\$37,786
				\$30,987		\$37,786
D6030 Audio-Video Communication						
PA System	5,634	sf	\$7.00	\$39,438	\$8.54	\$48,091
				\$39,438		\$48,091
D60 Communications				\$70,425		\$85,876
D70 Electronic Safety and Security						
D7010 Access Control and Intrusion Detection						
Access Control System - includes electronic access for all doors	10,550	sf	\$4.15	\$43,783	\$5.06	\$53,388
				\$43,783		\$53,388
D7050 Detection and Alarm						
Security System	5,634	sf	\$1.50	\$8,451	\$1.83	\$10,305
Fire Alarm System	5,634	sf	\$10.00	\$56,340	\$12.19	\$68,701
				\$64,791		\$79,006
D7070 Electronic Monitoring and Control						
CCTV System	5,634	sf	\$4.00	\$22,536	\$4.88	\$27,480
				\$22,536		\$27,480
D7090 Electronic Safety and Security Supplementary Components						
Alerting System - allowance	1	ls	\$20,000.00	\$20,000	\$24,388.00	\$24,388
				\$20,000		\$24,388
D70 Electronic Safety and Security				\$151,110		\$184,263
D80 Integrated Automation						
D8010 Integrated Automation Facility Controls						
New						
Direct Digital Controls	4,187	sf	\$4.00	\$16,748	\$4.88	\$20,423
Renovation						
Direct Digital Controls	1,447	sf	\$5.00	\$7,235	\$6.10	\$8,822
				\$23,983		\$29,245
D80 Integrated Automation				\$23,983		\$29,245
D - SERVICES				\$893,888		\$1,090,007
E - EQUIPMENT & FURNISHINGS						
E10 Equipment						
E1010 Vehicle and Pedestrian Equipment						
Powered double swing gate w/ battery backup and proximity card reader on pedestal	1	pair	\$10,000.00	\$10,000	\$12,194.00	\$12,194
				\$10,000		\$12,194
E1030 Commercial Equipment						
Install only food services equipment - renovated kitchen	309	sf	\$8.00	\$2,472	\$9.76	\$3,014
				\$2,472		\$3,014
E1040 Institutional Equipment						
Miscellaneous OFCI equipment install allowance	5,634	sf	\$1.00	\$5,634	\$1.22	\$6,870

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 1

DETAIL ELEMENTS - FIRE STATION #3

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Dec 2022	Total
				\$5,634		\$6,870
E10 Equipment				\$18,106		\$22,078
E20 Furnishings						
E2010 Fixed Furnishings						
Casework allowance	5,634	sf	\$7.00	\$39,438	\$8.54	\$48,091
				\$39,438		\$48,091
E2050 Movable Furnishings						
E20 Furnishings				\$39,438		\$48,091
E - EQUIPMENT & FURNISHINGS				\$57,544		\$70,169
F - SPECIAL CONSTRUCTION & DEMOLITION						
F30 Demolition						
F3030 Selective Demolition						
Miscellaneous demolition	5,634	sf	\$10.00	\$56,340	\$12.19	\$68,701
				\$56,340		\$68,701
F30 Demolition				\$56,340		\$68,701
F - SPECIAL CONSTRUCTION & DEMOLITION				\$56,340		\$68,701
G - SITEWORK						
G20 Site Improvements						
G2010 Roadways						
New asphalt roadway, including all associated work	2,486	sf	\$10.00	\$24,860	\$12.19	\$30,314
Retop all asphalt	14,700	sf	\$2.25	\$33,075	\$2.74	\$40,332
				\$57,935		\$70,646
G2030 Pedestrian Plazas and Walkways						
New concrete apron, including all associated work	3,931	sf	\$14.00	\$55,034	\$17.07	\$67,108
				\$55,034		\$67,108
G2060 Site Development						
6' chain link fence incl. all footings	35	lf	\$50.00	\$1,750	\$60.97	\$2,134
				\$1,750		\$2,134
G2080 Landscaping						
Allowance for modified landscape and driveway edge	1	ls	\$30,000.00	\$30,000	\$36,582.00	\$36,582
				\$30,000		\$36,582
G20 Site Improvements				\$144,719		\$176,470
G - SITEWORK				\$144,719		\$176,470

A large, light grey checkmark graphic is positioned on the left side of the page, extending from the top left towards the bottom center. The text is centered in the upper half of the page.

SUPPORTING COST
ESTIMATE - TASK 2
VALUE ENGINEERING

APPENDIX B

THIS PAGE INTENTIONALLY LEFT BLANK



Mount Vernon Fire Department
Mount Vernon, WA

Conceptual - Rev 5
Document 2
December 13, 2019
Cumming Project No. 18-01155.00



Prepared for Mackenzie

1325 FOURTH AVENUE, SUITE 1010 • SEATTLE • WASHINGTON • 98101
PHONE: 206-876-8008 • FAX: 206-973-1092

TABLE OF CONTENTS

	Page
1. Project Introduction	
Executive Summary	3
Approach and Methodology	4
Scope Assumptions	6
2. Cost Summaries	
Summary	9
3. Control Areas	
Controls	10
4. Construction Cost Back Up	
Fire Station #1 - Alternate with Upper Floor Removed	11
Fire Station #2 - Alternate with Additional extensions + Car Parking	17

DOCUMENT 2

EXECUTIVE SUMMARY

1.1 Introduction

Estimates were prepared in December 2018 for work to Fire Stations 1, 2 and 3. The project scope was the renovation of two existing fire stations, and the construction of a new 24,000 sf fire station. The estimate costs were escalated to the mid point of the construction phase, which at that time was September 2020.

Since December of 2018 a new project schedule has been developed which pushes out the construction start date of each fire station. Document 1 dated 13 December 2019 updated the December 2018 estimates to match the revised construction dates.

Document 2 provides Alternate costs for Fire Stations 1 & 2.

Fire Station #1 - Upper Floor Removed

Fire Station #2 - Additional Extension areas added; parking spaces added

All costs have been escalated to the mid point of construction for each of the Fire Stations

1.2 Project Schedule

	Start	Finish	Duration	Mid Point
Construction - Fire Station #1	Apr-22	May-23	14 months	Oct-22
Construction - Fire Station #2	Jun-23	Jan-24	8 months	Aug-23

1.3 Key Assumptions & Exclusions

This document should be read in association with Methods and Assumptions sections. Key assumptions built into the above cost breakdown include

Key Assumptions

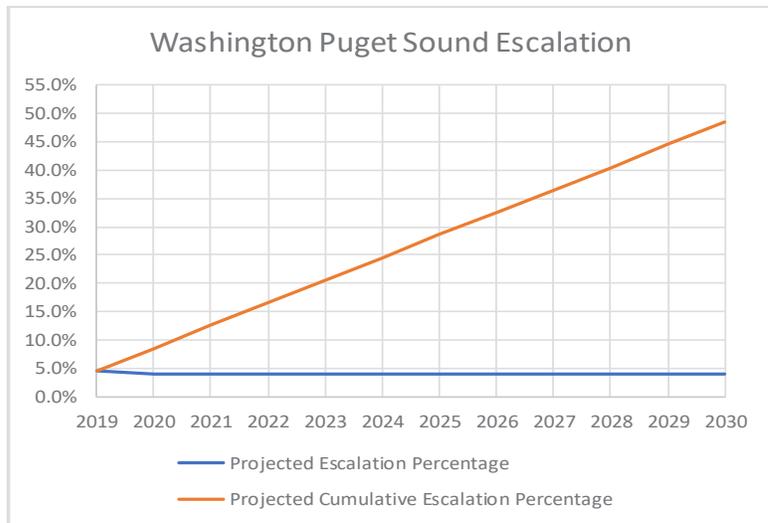
- Design/Bid/Build
- Single Phase Construction

Key Exclusions

- Project Soft Costs, other than specified furnishings & equipment
- Department Relocation
- AV Equipment supply (OFCI video conference install is included)
- Existing building demo (partial demo at renovations is included)
- Soil remediation and treatments (piles are included at FS #1)
- WSST
- B&O Tax

1.4 Escalation Projection

Year	Projected Escalation Percentage	Projected Cumulative Escalation Percentage
2019	4.5%	4.5%
2020	4.0%	8.5%
2021	4.0%	12.5%
2022	4.0%	16.5%
2023	4.0%	20.5%
2024	4.0%	24.5%
2025	4.0%	28.5%
2026	4.0%	32.5%
2027	4.0%	36.5%
2028	4.0%	40.5%
2029	4.0%	44.5%
2030	4.0%	48.5%



DOCUMENT 2

APPROACH & METHODOLOGY

Basis of Estimate	<p>The undernoted documents were used in the preparation of the base costs (Revision 4, December 2018)</p> <ul style="list-style-type: none"> - Final Concept Design 11.2.2018 Reduced - dated 11/2/18 - MVFD_Exist Plan Markups for Costing-11.01.18 - dated 11/1/18 - MVFD_Narrative Scope Station 2- Electrical - dated 11/8/18 - MVFD_Narrative Scope Station 2-Sazan Mech - dated 11/8/18 - MVFD_Narrative Scope Station 3- Electrical - dated 11/8/18 - MVFD_Narrative Scope Station 3- Sazan Mech - dated 11/8/18 - MVFD_Prelim Cost Spec Stat 2.3-11.06.18 - dated 11/6/18 - MVFD_Preliminary Spec-06.11.18 - dated 11/6/18 <p>The undernoted documents were used in the preparation of the Alternate costs (Revision 5, December 2019)</p> <ul style="list-style-type: none"> - Task 2 - Program Update / Test Fit - Station 2 12.06.19
Estimate Format	A component cost classification format has been used for the preparation of this estimate. It classifies costs by building system / element.
Cost Mark Ups	<p>The following % mark ups have been included in each design option:</p> <ul style="list-style-type: none"> - General Conditions (7.00% on direct costs) - General Requirements (3.00% compound) - Bonds & Insurance (2.00% compound) - Contractor's Fee (4.00% compound) - Design Contingency (9.006% compound) <p>Fire Station #1 - Escalation to MOC, 10/15/22 (17.31% compound) Fire Station #2 - Escalation to MOC, 8/12/23 (21.44% compound)</p>
Design Contingency	An allowance of 9% 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.
Method of Procurement	The estimate is based on a Design/Bid/Build delivery model.
Bid Conditions	This estimate has been based upon competitive bid situations (minimum of 3 bidders) for all items of subcontracted work.
Basis For Quantities	To a small degree, this estimate has been based upon the actual measurement of different items of work, however the vast majority is based on parametric measurements used in conjunction with other projects of a similar nature.
Basis for Unit Costs	Unit costs as contained herein are based on current bid prices in the northern Puget Sound area. 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, field overhead, home office overhead, and profit. The general contractor's overhead is shown separately on the master summary.
Sources for Pricing	This estimate was prepared by a team of qualified cost consultants experienced in estimating construction costs at all stages of design. These consultants have used pricing data from Cumming's database for municipal facility construction, updated to reflect current conditions in the north Puget Sound area.

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 13-Dec-19

DOCUMENT 2

APPROACH & METHODOLOGY

Key Exclusions

The following items have been excluded from our estimate:

- Project Soft Costs, other than specified furnishings & equipment
- Department Relocation
- AV Equipment supply (OFCI video conference install is included)
- Existing building demo (partial demo at renovations is included)
- Soil remediation and treatments (piles are included at FS #1)
- WSST
- B&O tax

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.

DOCUMENT 2

SCOPE ASSUMPTIONS

Description	Assumed Scope
General Project Info	<ul style="list-style-type: none"> - Local GC laydown / compound area within proximity. - Local trade parking available both onsite (partial) and offsite. - All sub trades to be competitively bid. - Labor pool from Puget Sound area.
Alternates	<ul style="list-style-type: none"> Fire Station# 1 Remove the Upper Floor of the Admin wing Fire Station# 2 Revise the footprint and increase the areas of the building extensions; Add 8# car parking spaces
Detailed Assumptions - Base Scope	<ul style="list-style-type: none"> 1. Substructure / Foundations <ul style="list-style-type: none"> - Mass excavation and off haul. - Piles assumed at Station #1. - Continuous footings / spread footings for existing building additions and for Station #1. - Sub slab drainage and vault for Station #1. 2. Structure <ul style="list-style-type: none"> - Assumed slab on grade, steel columns, structural steel, metal decks at Station #1. - Assume modifications to wooden structures at Stations #2 and #3. 3. Envelope / Roofing <ul style="list-style-type: none"> - Station #1. <ul style="list-style-type: none"> - Exterior substrate of metal studs, densglas sheathing, batt insulation. - Blend of exterior brick veneer, cast in place walls, and composite metal panel systems. - Exterior storefront glazing. - Assumed 60 mil TPO or similar roof. - Assume metal and wood T&G soffits. -Apparatus Bay doors include 4# 4-fold doors and 3# overhead doors - Stations #2 and #3. <ul style="list-style-type: none"> - Wood framed walls with composite paneling. Storefront at Station #2 vestibule. - Wood framed roof with composition roofing. 4. Interiors <ul style="list-style-type: none"> - Station #1. <ul style="list-style-type: none"> - Metal stud framed, to deck, interior construction. - Stations #1, #2, and #3. <ul style="list-style-type: none"> - Solid core wood interior doors. - Floor allowances for range of finishes - Assume gypsum board ceilings in restrooms and personnel decon rooms. - Assume open to structure ceiling in mechanical, electrical, storage, stairs, apparatus bays, and apparatus bay support rooms. - Assume SC wood doors with HM frames.

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 13-Dec-19

DOCUMENT 2

SCOPE ASSUMPTIONS

Description	Assumed Scope
	<ul style="list-style-type: none"> - Wall allowances for range of finishes. - Allowance for restroom partitions and specialties. - Allowance for install of miscellaneous OFCI equipment. - Allowance for casework. - Assume wood framing (stations #2 and #3)
5. Vert. Transportation	- Two-stop elevator for Station #1 [Removed in the ALTERNATE cost]
6. Plumbing	- Plumbing is a cost per square foot allowance.
7. HVAC	- HVAC is a cost per square foot allowance.
8. Electrical	- Electrical is a cost per square foot allowance.
9. Fire Protection	- Fire Protection is a cost per square foot allowance.
10. Sitework	<ul style="list-style-type: none"> - Station #1. <ul style="list-style-type: none"> - Demo of Snoqualmie St between Cleveland Ave and S 2nd St, including asphalt and concrete complete. - Allowance for removal of utilities in Snoqualmie St, and rerouting around site via S 2nd St, alley south of station, and Cleveland Ave. - Clear, grub, and cut and fill of site, assuming balanced site. - Dewatering as required. - Pedestrian plaza pavement, and seat wall, extending north to library, terminating at south face of library. - Trees as shown in plans. Allowance for irrigated landscaping in plan space shown as landscaped. - Onsite and offsite sidewalks and miscellaneous flat work. - CMU trash enclosure. - Asphalt drives and parking, with additional offsite parking. - Allowance for underground stormwater storage vault. - Allowance for domestic and fire water. - Allowance for sanitary sewer. - Allowance for stormwater drainage. - Allowance for natural gas service. - Station #2. <ul style="list-style-type: none"> - New concrete patios. - Allowance for site adjustments at new vestibule. - 6' high security fence with privacy slats. - Allowance for new powered cantilever gate/fence with battery backup and proximity reader on pedestal.

Mount Vernon Fire Department

Mount Vernon, WA

Conceptual - Rev 5

Project # 18-01155.00

13-Dec-19

DOCUMENT 2

SCOPE ASSUMPTIONS

Description	Assumed Scope
-------------	---------------

11. Exclusions	<ul style="list-style-type: none">- Project Soft Costs, other than specified furnishings & equipment- Department Relocation- AV Equipment supply (OFCI video conference install is included)- Existing building demo (partial demo at renovations is included)- Soil remediation and treatments (piles are included at FS #1)- WSST- B&O Tax
----------------	--

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 13-Dec-19

DOCUMENT 2

SUMMARY

Element		Area	Total
Fire Station #1			
Estimated cost per December 2018 report	Base costs escalated to Sep 2020 (8.29%)	24,000	<u>\$16,719,837</u>
<u>Alternate</u>			
FS#1 with Upper Floor Deducted	Base costs escalated to Oct 2022 (17.31%)	16,000	<u>\$14,821,699</u>
<hr/>			
Fire Station #2			
Estimated cost per December 2018 report	Escalation to Sep 2020 (8.29%)	4,289	<u>\$2,232,020</u>
<u>Alternate</u>			
FS# 2 with additional Extentions + Car Parking	Escalation Aug 2023 (21.94%)	5,830	<u>\$3,079,659</u>
<hr/>			

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 13-Dec-19

DOCUMENT 2

SCHEDULE OF AREAS AND CONTROL QUANTITIES

Schedule of Areas	Fire Station #1	Fire Station #2	SF
1. Enclosed Areas (x 100%)			
Level 1	16,000		16,000
Level 2	8,000		8,000
Existing - Untouched		9,711	9,711
Additions		2,844	2,844
Renovations		2,986	2,986
Total Enclosed	24,000	15,541	39,541

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
12/13/19

Fire Station #1
ALTERNATE
UPPER FLOOR REMOVED

SUMMARY - FIRE STATION #1 - ALTERNATE (UPPER FLOOR REMOVED)

Element	Escalation Identified Separately			Escalation Included		
	Subsystem	System	Cost / SF	Subsystem	System	Cost / SF
A - SUBSTRUCTURE						
A10 Foundations		\$638,800	\$38.76			
A1010 Standard Foundations		\$638,800	\$26.62	\$749,376	\$1,091,288	\$45.47
A40 Slabs-on-Grade		\$179,670	\$7.49			
A4010 Standard Slabs-on-Grade		\$175,670	\$7.32	\$210,771		\$8.78
A4040 Pits and Bases		\$4,000	\$0.17	\$206,078		\$8.59
A90 Substructure Related Activities		\$111,790	\$4.66			
A9010 Substructure Excavation		\$31,940	\$1.33	\$4,692		\$0.20
A9020 Construction Dewatering		\$79,850	\$3.33	\$131,141		\$5.46
				\$37,469		\$1.56
				\$93,672		\$3.90
B - SHELL		\$2,875,196	\$119.80			
B10 Superstructure		\$886,624	\$36.94		\$3,372,892	\$140.54
B1010 Floor Construction		\$432,300	\$18.01	\$1,040,099		\$43.34
B1020 Roof Construction		\$394,324	\$16.43	\$507,131		\$21.13
B1080 Stairs		\$60,000	\$2.50	\$462,581		\$19.27
B20 Exterior Vertical Enclosures		\$1,565,001	\$65.21			
B2010 Exterior Walls		\$1,130,266	\$47.09	\$1,835,902		\$76.50
B2020 Exterior Windows		\$181,335	\$7.56	\$1,325,915		\$55.25
B2050 Exterior Doors and Grilles		\$253,400	\$10.56	\$212,724		\$8.86
B30 Exterior Horizontal Enclosures		\$423,571	\$17.65			
B3010 Roofing		\$423,571	\$17.65	\$297,264		\$12.39
				\$496,891		\$20.70
C - INTERIORS		\$1,255,259	\$52.30		\$1,472,544	\$61.36
C10 Interior Construction		\$946,741	\$39.45			
C1010 Interior Partitions		\$589,374	\$24.56	\$1,110,622		\$46.28
C1020 Interior Windows		\$5,200	\$0.22	\$691,395		\$28.81
C1030 Interior Doors		\$175,000	\$7.29	\$6,100		\$0.25
C1070 Suspended Ceiling Construction		\$20,207	\$0.84	\$205,293		\$8.55
C1090 Interior Specialties		\$156,960	\$6.54	\$23,705		\$0.99
C20 Interior Finishes		\$308,518	\$12.85			
C2010 Wall Finishes		\$65,486	\$2.73	\$184,130		\$7.67
C2030 Flooring		\$140,053	\$5.84	\$361,922		\$15.08
C2040 Stair Finishes		\$5,000	\$0.21	\$76,822		\$3.20
C2050 Ceiling Finishes		\$97,979	\$4.08	\$164,296		\$6.85
				\$5,866		\$0.24
				\$114,940		\$4.79
D - SERVICES		\$4,912,827	\$204.70		\$5,763,238	\$240.13
D10 Conveying		\$150,000	\$6.25			
D1010 Vertical Conveying Systems		\$150,000	\$6.25	\$175,965		\$7.33
D20 Plumbing		\$930,480	\$38.77			
D2010 Domestic Water Distribution		\$393,600	\$16.40	\$1,091,546		\$45.48
D2020 Sanitary Drainage		\$192,480	\$8.02	\$461,732		\$19.24
D2030 Building Support Plumbing Systems		\$293,760	\$12.24	\$225,798		\$9.41
D2050 General Service Compressed-Air		\$50,640	\$2.11	\$344,610		\$14.36
D30 Heating, Ventilation, and Air Condition (HVAC)		\$1,071,360	\$44.64			
D3030 Cooling Systems		\$756,960	\$31.54	\$1,256,812		\$52.37
D3050 Facility HVAC Distribution Systems		\$314,400	\$13.10	\$887,990		\$37.00
D40 Fire Protection		\$146,400	\$6.10			
D4010 Fire Suppression		\$146,400	\$6.10	\$368,823		\$15.37
D50 Electrical		\$1,639,387	\$68.31			
D5010 Facility Power Generation		\$250,000	\$10.42	\$171,742		\$7.16
D5020 Electrical Service and Distribution		\$360,000	\$15.00	\$171,742		\$7.16
D5030 General Purpose Electrical Power		\$210,000	\$8.75	\$1,923,165		\$80.13
D5040 Lighting		\$504,000	\$21.00	\$293,275		\$12.22
D5080 Miscellaneous Electrical Systems		\$315,387	\$13.14	\$422,316		\$17.60
D60 Communications		\$300,000	\$12.50			
D6010 Data Communications		\$132,000	\$5.50	\$246,351		\$10.26
D6030 Audio-Video Communication		\$168,000	\$7.00	\$591,242		\$24.64
D70 Electronic Safety and Security		\$491,600	\$20.48			
D7010 Access Control and Intrusion Detection		\$99,600	\$4.15	\$369,981		\$15.42
D7050 Detection and Alarm		\$276,000	\$11.50	\$351,930		\$14.66
D7070 Electronic Monitoring and Control		\$96,000	\$4.00	\$154,849		\$6.45
D7090 Electronic Safety and Security Supplementary Components		\$20,000	\$0.83	\$197,081		\$8.21
D80 Integrated Automation		\$183,600	\$7.65			
D8010 Integrated Automation Facility Controls		\$183,600	\$7.65	\$576,696		\$24.03
E - EQUIPMENT & FURNISHINGS		\$201,440	\$8.39		\$236,309	\$9.85
E10 Equipment		\$33,440	\$1.39			
E1030 Commercial Equipment		\$9,440	\$0.39	\$39,228		\$1.63
E1040 Institutional Equipment		\$24,000	\$1.00	\$11,074		\$0.46
E20 Furnishings		\$168,000	\$7.00			
E2010 Fixed Furnishings		\$168,000	\$7.00	\$28,154		\$1.17
				\$197,081		\$8.21

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 13-Dec-19

DOCUMENT 2

SUMMARY - FIRE STATION #1 - ALTERNATE (UPPER FLOOR REMOVED)

Element	Escalation Identified Separately			Escalation Included		
	Subsystem	System	Cost / SF	Subsystem	System	Cost / SF
G - SITEWORK		\$1,941,114	\$80.88		\$2,277,120	\$94.88
G10 Site Preparation		\$627,057	\$26.13	\$735,600		\$30.65
G1010 Site Clearing		\$2,502	\$0.10	\$2,935		\$0.12
G1020 Site Elements Demolition		\$609,542	\$25.40	\$715,054		\$29.79
G1070 Site Earthwork		\$15,013	\$0.63	\$17,611		\$0.73
G20 Site Improvements		\$519,057	\$21.63	\$608,906		\$25.37
G2010 Roadways		\$72,000	\$3.00	\$84,463		\$3.52
G2020 Parking Lots		\$71,365	\$2.97	\$83,718		\$3.49
G2030 Pedestrian Plazas and Walkways		\$151,492	\$6.31	\$177,715		\$7.40
G2060 Site Development		\$138,750	\$5.78	\$162,768		\$6.78
G2080 Landscaping		\$85,450	\$3.56	\$100,241		\$4.18
G30 Liquid and Gas Site Utilities		\$725,000	\$30.21	\$850,498		\$35.44
G3010 Water Supply		\$75,000	\$3.13	\$87,983		\$3.67
G3020 Sanitary Sewerage Utilities		\$35,000	\$1.46	\$41,059		\$1.71
G3030 Storm Drainage Utilities		\$600,000	\$25.00	\$703,860		\$29.33
G3090 Liquid and Gas Site Utilities Supplementary Components		\$15,000	\$0.63	\$17,597		\$0.73
G40 Electrical Site Improvements		\$70,000	\$2.92	\$82,117		\$3.42
G4010 Site Electric Distribution Systems		\$50,000	\$2.08	\$58,655		\$2.44
G4050 Site Lighting		\$20,000	\$0.83	\$23,462		\$0.98
Subtotal	Dec 2018	\$12,116,095	\$504.84	Oct 2022	\$14,213,392	\$592.22
General Conditions	7.00%	\$848,127	\$35.34		\$994,937	\$41.46
Subtotal		\$12,964,222	\$540.18		\$15,208,329	\$633.68
General Requirements	3.00%	\$388,927	\$16.21		\$456,250	\$19.01
Subtotal		\$13,353,149	\$556.38		\$15,664,579	\$652.69
Bonds & Insurance	2.00%	\$267,063	\$11.13		\$313,292	\$13.05
Subtotal		\$13,620,212	\$567.51		\$15,977,870	\$665.74
Contractor's Fee	4.00%	\$544,808	\$22.70		\$639,115	\$26.63
Subtotal		\$14,165,020	\$590.21		\$16,616,985	\$692.37
Design Contingency	9.00%	\$1,274,852	\$53.12		\$1,495,529	\$62.31
Subtotal		\$15,439,872	\$643.33		\$18,112,514	\$754.69
Escalation to MOC, 10/15/22	17.31%	\$2,672,429	\$111.35			
TOTAL ESTIMATED CONSTRUCTION COST (to midpoint of construction - Oct 22)		\$18,112,301	\$754.68		\$18,112,514	\$754.69

Total Area: 24,000 SF

ALTERNATE

DEDUCT - UPPER FLOOR of ADMIN WING	(\$3,290,777)	(\$3,290,815)
Costs include allowances for all Markups and Escalation		
Revised Gross Floor Area	16,000 SF	
TOTAL ESTIMATED CONSTRUCTION COST INCLUDING ALTERNATE	\$14,821,525	\$926.35
		\$14,821,699
		\$926.36

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
13-Dec-19

DOCUMENT 2

DETAIL ELEMENTS - FIRE STATION #1 - ALTERNATE (UPPER FLOOR REMOVED)

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
ALTERNATE						
REMOVE UPPER FLOOR						
A - SUBSTRUCTURE						
A1010 Standard Foundations - No Adjustments						
A4010 Standard Slabs-on-Grade						
A4040 Pits and Bases - Elevator Pit	(1.0)	ea	\$4,000.00	-\$4,000	\$4,692.40	(\$4,692)
A9010 Substructure Excavation - No Adjustments						
A9020 Construction Dewatering - No Adjustments						
B - SHELL						
B10 Superstructure						
B1010 Floor Construction						
Remove 2nd floor deck	(7,860.0)	sf	\$55.00	-\$432,300	\$64.52	(\$507,131)
B1080 Stairs						
Remove egress stairs	(2.0)	flights	\$30,000.00	-\$60,000	\$35,193.00	(\$70,386)
B20 Exterior Vertical Enclosures						
B2010 Exterior Walls						
Structural brick, framed, insulated, gypsum board interior	(3,150.0)	sf	\$61.00	-\$192,150	\$71.56	(\$225,411)
CIP concrete fascia - No Adjustment		sf	\$85.00		\$99.71	
Metal siding, framed, insulated, gypsum board interior	(1,032.0)	sf	\$60.00	-\$61,920	\$70.39	(\$72,638)
Cast concrete cornice - No Adjustment		lf	\$75.00		\$87.98	
Metal trim - No Adjustment		sf	\$50.00		\$58.66	
Steel lintel	(84.0)	lf	\$15.00	-\$1,260	\$17.60	(\$1,478)
B2020 Exterior Windows						
Exterior glazing - fiberglass framed	(795.0)	sf	\$60.00	-\$47,700	\$70.39	(\$55,957)
C - INTERIORS						
C1010 Interior Partitions						
Partition walls, to deck, insulated	(7,860.0)	gfa	\$24.56	-\$193,042	\$28.81	(\$226,457)
C1020 Interior Windows						
Sidelites at conference room	(1.0)	ea	\$325.00	-\$325	\$381.26	(\$381)
C1030 Interior Doors						
3'x7' wood door with frame	(28.0)	ea	\$2,200.00	-\$61,600	\$2,580.82	(\$72,263)
C1070 Suspended Ceiling Construction						
Framed ceilings, with gypsum board - No adjustments						
C1090 Interior Specialties						
Restroom specialties	(2.0)	ea	\$3,085.00	-\$6,170	\$3,619.01	(\$7,238)
Building specialties - allowance	(7,860.0)	sf	\$6.00	-\$47,160	\$7.04	(\$55,323)
C2010 Wall Finishes						
Painting	(21,610.4)	sf	\$1.00	-\$21,610	\$1.17	(\$25,351)
C2030 Flooring						
Office & quarters - assume primarily carpet and tile	(7,860.0)	sf	\$7.00	-\$55,020	\$8.21	(\$64,544)
C2040 Stair Finishes						
Allowances	(1.0)	ls	\$5,000.00	-\$5,000	\$5,865.50	(\$5,866)
C2050 Ceiling Finishes						
Painted open to structure	(7,860.0)	sf	\$2.66	-\$20,908	\$3.12	(\$24,527)
D - SERVICES						
D1010 Vertical Conveying Systems						
Passenger elevator	(2.0)	stop	\$75,000.00	-\$150,000	\$87,982.50	(\$175,965)
D2010 Domestic Water Distribution						
Domestic water piping	(7,860.0)	sf	\$3.35	-\$26,331	\$3.93	(\$30,889)

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 13-Dec-19

DOCUMENT 2

DETAIL ELEMENTS - FIRE STATION #1 - ALTERNATE (UPPER FLOOR REMOVED)

Element	Quantity	Unit	Unit Cost	Total	Unit Cost	Total
			Dec 2018	Oct 2022	Oct 2022	
Subtotal				(\$2,355,436)		(\$2,763,162)
General Requirements			3.00%	(\$70,663)	3.00%	(\$82,895)
Subtotal				(\$2,426,099)		(\$2,846,056)
Subtotal				(\$2,474,621)		(\$2,902,978)
Contractor's Fee			4.00%	(\$98,985)	4.00%	(\$116,119)
Subtotal				(\$2,573,606)		(\$3,019,097)
Design Contingency			9.00%	(\$231,625)	9.00%	(\$271,719)
Subtotal				(\$2,805,230)		(\$3,290,815)
Subtotal				(\$2,805,230)		(\$3,290,815)
Escalation to MOC, 10/15/22			17.31%	(\$485,547)		
				(3,290,777)		(3,290,815)

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
12/13/19

Fire Station #2

ALTERNATE

ADDITIONAL EXTENSIONS ADDED

SUMMARY - FIRE STATION #2 - ALTERNATE (ADDITIONAL EXTENSIONS)

Element	Escalation Identified Separately			Escalation Included		
	Subsystem	System	Cost / SF	Subsystem	System	Cost / SF
A - SUBSTRUCTURE		\$58,302	\$10.00		\$71,093	\$12.19
A10 Foundations	\$28,440		\$4.88	\$34,680		\$5.95
A1010 Standard Foundations	\$28,440		\$4.88	\$34,680		\$5.95
A40 Slabs-on-Grade	\$29,862		\$5.12	\$36,414		\$6.25
A4010 Standard Slabs-on-Grade	\$29,862		\$5.12	\$36,414		\$6.25
B - SHELL		\$351,652	\$60.32		\$428,804	\$73.55
B10 Superstructure	\$68,256		\$11.71	\$83,231		\$14.28
B1020 Roof Construction	\$68,256		\$11.71	\$83,231		\$14.28
B20 Exterior Vertical Enclosures	\$183,856		\$31.54	\$224,194		\$38.46
B2010 Exterior Walls	\$125,136		\$21.46	\$152,591		\$26.17
B2020 Exterior Windows	\$32,620		\$5.60	\$39,777		\$6.82
B2050 Exterior Doors and Grilles	\$26,100		\$4.48	\$31,826		\$5.46
B30 Exterior Horizontal Enclosures	\$99,540		\$17.07	\$121,379		\$20.82
B3010 Roofing	\$99,540		\$17.07	\$121,379		\$20.82
C - INTERIORS		\$311,533	\$53.44		\$379,883	\$65.16
C10 Interior Construction	\$152,520		\$26.16	\$185,983		\$31.90
C1010 Interior Partitions	\$63,017		\$10.81	\$76,843		\$13.18
C1030 Interior Doors	\$48,400		\$8.30	\$59,019		\$10.12
C1090 Interior Specialties	\$41,103		\$7.05	\$50,121		\$8.60
C20 Interior Finishes	\$159,013		\$27.27	\$193,900		\$33.26
C2010 Wall Finishes	\$11,431		\$1.96	\$13,939		\$2.39
C2030 Flooring	\$105,583		\$18.11	\$128,748		\$22.08
C2050 Ceiling Finishes	\$41,999		\$7.20	\$51,214		\$8.78
D - SERVICES		\$898,046	\$154.04		\$1,095,077	\$187.83
D20 Plumbing	\$180,712		\$31.00	\$220,360		\$37.80
D2010 Domestic Water Distribution	\$89,782		\$15.40	\$109,480		\$18.78
D2020 Sanitary Drainage	\$46,757		\$8.02	\$57,015		\$9.78
D2030 Building Support Plumbing Systems	\$44,174		\$7.58	\$53,866		\$9.24
D30 Heating, Ventilation, and Air Condition (HVAC)	\$187,987		\$32.24	\$229,232		\$39.32
D3030 Cooling Systems	\$107,285		\$18.40	\$130,823		\$22.44
D3050 Facility HVAC Distribution Systems	\$80,703		\$13.84	\$98,409		\$16.88
D40 Fire Protection	\$27,650		\$4.74	\$33,717		\$5.78
D4010 Fire Suppression	\$27,650		\$4.74	\$33,717		\$5.78
D50 Electrical	\$239,030		\$41.00	\$291,473		\$50.00
D5020 Electrical Service and Distribution	\$58,300		\$10.00	\$71,091		\$12.19
D5030 General Purpose Electrical Power	\$51,013		\$8.75	\$62,205		\$10.67
D5040 Lighting	\$122,430		\$21.00	\$149,291		\$25.61
D5080 Miscellaneous Electrical Systems	\$7,288		\$1.25	\$8,886		\$1.52
D60 Communications	\$72,875		\$12.50	\$88,864		\$15.24
D6010 Data Communications	\$32,065		\$5.50	\$39,100		\$6.71
D6030 Audio-Video Communication	\$40,810		\$7.00	\$49,764		\$8.54
D70 Electronic Safety and Security	\$163,485		\$28.04	\$199,354		\$34.19
D7010 Access Control and Intrusion Detection	\$53,120		\$9.11	\$64,775		\$11.11
D7050 Detection and Alarm	\$67,045		\$11.50	\$81,755		\$14.02
D7070 Electronic Monitoring and Control	\$23,320		\$4.00	\$28,436		\$4.88
D80 Integrated Automation	\$26,306		\$4.51	\$32,078		\$5.50
D8010 Integrated Automation Facility Controls	\$26,306		\$4.51	\$32,078		\$5.50
E - EQUIPMENT & FURNISHINGS		\$49,096	\$8.42		\$59,868	\$10.27
E10 Equipment	\$8,286		\$1.42	\$10,104		\$1.73
E1030 Commercial Equipment	\$2,456		\$0.42	\$2,995		\$0.51
E1040 Institutional Equipment	\$5,830		\$1.00	\$7,109		\$1.22
E20 Furnishings	\$40,810		\$7.00	\$49,764		\$8.54
E2010 Fixed Furnishings	\$40,810		\$7.00	\$49,764		\$8.54
F - SPECIAL CONSTRUCTION & DEMOLITION		\$58,300	\$10.00		\$71,091	\$12.19
F30 Demolition	\$58,300		\$10.00	\$71,091		\$12.19
F3030 Selective Demolition	\$58,300		\$10.00	\$71,091		\$12.19
G - SITEWORK		\$120,923	\$20.74		\$147,454	\$25.29
G20 Site Improvements	\$120,923		\$20.74	\$147,454		\$25.29
G2030 Pedestrian Plazas and Walkways	\$15,288		\$2.62	\$18,642		\$3.20
G2060 Site Development	\$16,125		\$2.77	\$19,663		\$3.37
G2080 Landscaping	\$19,020		\$3.26	\$23,193		\$3.98
Subtotal	Dec 2018	\$1,847,851	\$316.96	Oct 2022	\$2,253,270	\$386.50
General Conditions	7.00%	\$129,350	\$22.19	7.00%	\$157,729	\$27.05
Subtotal		\$1,977,201	\$339.14		\$2,410,999	
General Requirements	3.00%	\$59,316	\$10.17	3.00%	\$72,330	\$12.41

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 13-Dec-19

DOCUMENT 2

SUMMARY - FIRE STATION #2 - ALTERNATE (ADDITIONAL EXTENSIONS)

Element	Escalation Identified Separately			Escalation Included		
	Subsystem	System	Cost / SF	Subsystem	System	Cost / SF
Subtotal		\$2,036,517	\$349.32		\$2,483,329	
Bonds & Insurance	2.00%	\$40,730	\$6.99	2.00%	\$49,667	\$8.52
Subtotal		\$2,077,247	\$356.30		\$2,532,995	
Contractor's Fee	4.00%	\$83,090	\$14.25	4.00%	\$101,320	\$17.38
Subtotal		\$2,160,337	\$370.56		\$2,634,315	
Design Contingency	16.91%	\$365,216	\$62.64	16.91%	\$445,344	\$76.39
Subtotal		\$2,525,553	\$433.20		\$3,079,659	
Escalation to MOC, 09/30/23	21.94%	\$554,106	\$95.04			
TOTAL ESTIMATED CONSTRUCTION COST		\$3,079,659	\$528.24		\$3,079,659	\$528.24

Total Area: 5,830 SF

New Areas

Extension to Existing Building	1,284
	1,560
	<u>2,844</u> SF
Work in Existing Building	<u>2,986</u> SF

DOCUMENT 2

DETAIL ELEMENTS - FIRE STATION #2 - ALTERNATE (ADDITIONAL EXTENSIONS)

Element	Quantity	Unit	Mat.	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
A - SUBSTRUCTURE							
A10 Foundations							
A1010 Standard Foundations							
Foundation - new additions	2,844	sf		\$10.00	\$28,440	\$12.19	\$34,680
					<u>\$28,440</u>		<u>\$34,680</u>
A10 Foundations					\$28,440		\$34,680
A40 Slabs-on-Grade							
A4010 Standard Slabs-on-Grade							
Slab on Grade - new additions	2,844	sf		\$10.50	\$29,862	\$12.80	\$36,414
					<u>\$29,862</u>		<u>\$36,414</u>
A40 Slabs-on-Grade					\$29,862		\$36,414
A - SUBSTRUCTURE					\$58,302		\$71,093
B - SHELL							
B10 Superstructure							
B1020 Roof Construction							
Roof construction - new additions	2,844	sf		\$24.00	\$68,256	\$29.27	\$83,231
					<u>\$68,256</u>		<u>\$83,231</u>
B10 Superstructure					\$68,256		\$83,231
B20 Exterior Vertical Enclosures							
B2010 Exterior Walls							
Full wall assembly - allow for composite wood siding							
Wall assembly - new additions	2,844	sf		\$44.00	\$125,136	\$53.65	\$152,591
					<u>\$125,136</u>		<u>\$152,591</u>
B2020 Exterior Windows							
Exterior windows - vestibule	116	sf		\$95.00	\$11,020	\$115.84	\$13,438
Exterior windows - fiberglass framed - Allowance	360	sf		\$60.00	\$21,600	\$73.16	\$26,339
					<u>\$32,620</u>		<u>\$39,777</u>
B2050 Exterior Doors and Grilles							
Exterior doors - new additions	1	ea		\$3,350.00	\$3,350	\$4,084.99	\$4,085
Exterior doors - new addition - exercise room	2	ea		\$3,350.00	6700	\$4,084.99	8169.98
Exterior doors - new addition - exercise room - glazed garage door	1	ea		\$6,000.00	6000	\$7,316.40	7316.4
Exterior doors - new addition - kitchen / dining	3	ea		\$3,350.00	\$10,050	\$4,084.99	\$12,255
					<u>\$26,100</u>		<u>\$31,826</u>
B20 Exterior Vertical Enclosures					\$183,856		\$224,194
B30 Exterior Horizontal Enclosures							
B3010 Roofing							
Roofing - new additions	2,844	sf		\$35.00	\$99,540	\$42.68	\$121,379

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 13-Dec-19

DOCUMENT 2

DETAIL ELEMENTS - FIRE STATION #2 - ALTERNATE (ADDITIONAL EXTENSIONS)

Element	Quantity	Unit	Mat.	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
					\$99,540		\$121,379
B30 Exterior Horizontal Enclosures					\$99,540		\$121,379
B - SHELL					\$351,652		\$428,804
C - INTERIORS							
C10 Interior Construction							
C1010 Interior Partitions							
Partitions - new addition - exercise room	200	sf		\$18.00	\$3,600	\$21.95	\$4,390
Partitions - space designated for new wall framing	2,306	sf		\$21.00	\$48,426	\$25.61	\$59,051
Partitions - new bunker gear storage room	299	sf		\$10.00	\$2,990	\$12.19	\$3,646
Partitions - framing and fixture for new vestibule	115	sf		\$21.00	\$2,415	\$25.61	\$2,945
Partitions - reconfigure SCBA into Personal Decon	266	sf		\$21.00	\$5,586	\$25.61	\$6,812
					\$63,017		\$76,843
C1030 Interior Doors							
Interior doors - new additions	12	ea		\$2,200.00	\$26,400	\$2,682.68	\$32,192
Interior doors - space designated for new wall framing	6	ea		\$2,200.00	\$13,200	\$2,682.68	\$16,096
Interior doors - new bunker gear storage room	1	ea		\$2,200.00	\$2,200	\$2,682.68	\$2,683
Interior doors - framing and fixture for new vestibule	1	ea		\$2,200.00	\$2,200	\$2,682.68	\$2,683
Interior doors - reconfigure SCBA into Personal Decon	2	ea		\$2,200.00	\$4,400	\$2,682.68	\$5,365
					\$48,400		\$59,019
C1090 Interior Specialties							
Interior specialties - new additions	2,537	sf		\$6.00	\$15,222	\$7.32	\$18,562
Interior specialties - new addition - kitchen / dining	307	sf		\$11.00	\$3,377	\$13.41	\$4,118
Interior specialties - space designated for new wall framing	2,306	sf		\$6.00	\$13,836	\$7.32	\$16,872
Interior specialties - new bunker gear storage room	299	sf		\$8.00	\$2,392	\$9.76	\$2,917
Interior specialties - framing and fixture for new vestibule	115	sf		\$6.00	\$690	\$7.32	\$841
Interior specialties - reconfigure SCBA into Personal Decon	266	sf		\$21.00	\$5,586	\$25.61	\$6,812
					\$41,103		\$50,121
C10 Interior Construction					\$152,520		\$185,983
C20 Interior Finishes							
C2010 Wall Finishes							
Wall finishes - new addition - vestibule	648	sf		\$1.00	\$648	\$1.22	\$790
Wall finishes - new addition - exercise room	2,128	sf		\$1.00	\$2,128	\$1.22	\$2,595
Wall finishes - new addition - kitchen / dining	2,053	sf		\$1.00	\$2,053	\$1.22	\$2,503
Wall finishes - space designated for new wall framing	2,306	sf		\$2.33	\$5,381	\$2.85	\$6,561
Wall finishes - new bunker gear storage room	299	sf		\$1.11	\$332	\$1.35	\$405
Wall finishes - framing and fixture for new vestibule	115	sf		\$2.33	\$268	\$2.85	\$327
Wall finishes - reconfigure SCBA into Personal Decon	266	sf		\$2.33	\$621	\$2.85	\$757
					\$11,431		\$13,939
C2030 Flooring							
Flooring allowances - including base							
Flooring - new addition - vestibule - assume recessed walk-off mat	128	sf		\$75.00	\$9,600	\$91.46	\$11,706
Flooring - new additions	2,409	sf		\$15.00	\$36,135	\$18.29	\$44,063
Flooring - new addition - kitchen / dining	307	sf		\$18.00	\$5,526	\$21.95	\$6,738
Flooring - space designated for new wall framing	2,306	sf		\$15.00	\$34,590	\$18.29	\$42,179
Flooring - new bunker gear storage room - assume polished concrete	299	sf		\$5.25	\$1,570	\$6.40	\$1,914
Flooring - framing and fixture for new vestibule	115	sf		\$18.00	\$2,070	\$21.95	\$2,524
Flooring - reconfigure SCBA into Personal Decon - assm. pol. concrete	266	sf		\$18.00	\$4,788	\$21.95	\$5,838
Flooring - day room	628	sf		\$18.00	\$11,304	\$21.95	\$13,784
					\$105,583		\$128,748
C2050 Ceiling Finishes							
Ceiling finishes - new addition - vestibule - assume ACT	128	sf		\$5.50	\$704	\$6.71	\$858
Ceiling finishes - new addition - exercise room - assume ACT	897	sf		\$5.50	\$4,934	\$6.71	\$6,016
Ceiling finishes - new addition - kitchen / dining - assume ACT & GWB	1,819	sf		\$7.75	\$14,097	\$9.45	\$17,190
Ceiling finishes - space designated for new wall framing - assume ACT	2,306	sf		\$5.50	\$12,683	\$6.71	\$15,466
Ceiling finishes - new bunker gear storage room - assume painted GWB	299	sf		\$7.75	\$2,317	\$9.45	\$2,826

DOCUMENT 2

DETAIL ELEMENTS - FIRE STATION #2 - ALTERNATE (ADDITIONAL EXTENSIONS)

Element	Quantity	Unit	Mat.	Unit Cost	Total	Unit Cost	Total
				Dec 2018		Oct 2022	
Ceiling finishes - framing and fixture for new vestibule - assume GWB	115	sf		\$10.00	\$1,150	\$12.19	\$1,402
Ceiling finishes - reconfigure SCBA into Personal Decon - assume GWB	266	sf		\$10.00	\$2,660	\$12.19	\$3,244
Ceiling finishes - day room - assume ACT	628	sf		\$5.50	\$3,454	\$6.71	\$4,212
					\$41,999		\$51,214
C20 Interior Finishes					\$159,013		\$193,900
C - INTERIORS					\$311,533		\$379,883
D - SERVICES							
D20 Plumbing							
D2010 Domestic Water Distribution							
New							
Domestic water piping	2,844	sf		\$8.35	\$23,747	\$10.18	\$28,958
Fixture w/rough-in	2,844	sf		\$6.00	\$17,064	\$7.32	\$20,808
Renovation							
Domestic water piping	2,986	sf		\$8.35	\$24,933	\$10.18	\$30,403
Fixture w/rough-in	2,986	sf		\$8.05	\$24,037	\$9.82	\$29,311
					\$89,782		\$109,480
D2020 Sanitary Drainage							
New							
Waste/vent piping	2,844	sf		\$8.02	\$22,809	\$9.78	\$27,813
Renovation							
Waste/vent piping	2,986	sf		\$8.02	\$23,948	\$9.78	\$29,202
					\$46,757		\$57,015
D2030 Building Support Plumbing Systems							
New							
Equipment	2,844	sf		\$1.85	\$5,261	\$2.26	\$6,416
Natural gas system	2,844	sf		\$2.00	\$5,688	\$2.44	\$6,936
Roof Drainage	2,844	sf		\$3.47	\$9,869	\$4.23	\$12,034
Condensate Drainage	2,844	sf		\$2.60	\$7,394	\$3.17	\$9,017
Testing/ firestopping / seismic/ misc	2,844	sf		\$2.20	\$6,257	\$2.68	\$7,630
Renovation							
Demolition	2,986	sf		\$1.25	\$3,733	\$1.52	\$4,551
Testing/ firestopping / seismic/ misc	2,986	sf		\$2.00	\$5,972	\$2.44	\$7,282
					\$44,174		\$53,866
D20 Plumbing					\$180,712		\$220,360
D30 Heating, Ventilation, and Air Conditioning (HVAC)							
D3030 Cooling Systems							
New							
Air side equipment (Split sys, heat pumps, fans)	2,844	sf		\$15.00	\$42,660	\$18.29	\$52,020
Test / balance / firestopping / seismic	2,844	sf		\$2.89	\$8,219	\$3.52	\$10,022
Renovation							
Air side equipment (Split sys, heat pumps, fans)	2,986	sf		\$16.00	\$47,776	\$19.51	\$58,258
Test / balance / firestopping / seismic	2,986	sf		\$2.89	\$8,630	\$3.52	\$10,523
					\$107,285		\$130,823
D3050 Facility HVAC Distribution Systems							
New							
Air distribution	2,844	sf		\$13.10	\$37,256	\$15.97	\$45,430
Renovation							
Demolition	2,986	sf		\$1.45	\$4,330	\$1.77	\$5,280
Air distribution	2,986	sf		\$13.10	\$39,117	\$15.97	\$47,699
					\$60,703		\$98,409
D30 Heating, Ventilation, and Air Conditioning (HVAC)					\$187,987		\$229,232

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 13-Dec-19

DOCUMENT 2

DETAIL ELEMENTS - FIRE STATION #2 - ALTERNATE (ADDITIONAL EXTENSIONS)

Element	Quantity	Unit	Mat.	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
D40 Fire Protection							
D4010 Fire Suppression							
New							
Automatic Sprinkler System	2,844	sf		\$6.10	\$17,348	\$7.44	\$21,155
Renovation							
Automatic Sprinkler System - relocate heads	2,986	sf		\$3.45	\$10,302	\$4.21	\$12,562
					\$27,650		\$33,717
D40 Fire Protection					\$27,650		\$33,717
D50 Electrical							
D5020 Electrical Service and Distribution							
Distribution Equipment	5,830	sf		\$10.00	\$58,300	\$12.19	\$71,091
					\$58,300		\$71,091
D5030 General Purpose Electrical Power							
HVAC and Equipment Connections	5,830	sf		\$2.25	\$13,118	\$2.74	\$15,995
Convenience Power	5,830	sf		\$6.50	\$37,895	\$7.93	\$46,209
					\$51,013		\$62,205
D5040 Lighting							
Lighting and Lighting Control	5,830	sf		\$21.00	\$122,430	\$25.61	\$149,291
					\$122,430		\$149,291
D5080 Miscellaneous Electrical Systems							
Demolition	5,830	sf		\$1.25	\$7,288	\$1.52	\$8,886
					\$7,288		\$8,886
D50 Electrical					\$239,030		\$291,473
D60 Communications							
D6010 Data Communications							
Voice and Data System	5,830	sf		\$5.50	\$32,065	\$6.71	\$39,100
					\$32,065		\$39,100
D6030 Audio-Video Communication							
PA System	5,830	sf		\$7.00	\$40,810	\$8.54	\$49,764
					\$40,810		\$49,764
D60 Communications					\$72,875		\$88,864
D70 Electronic Safety and Security							
D7010 Access Control and Intrusion Detection							
Access Control System - includes electronic access for all doors	12,800	sf		\$4.15	\$53,120	\$5.06	\$64,775
					\$53,120		\$64,775
D7050 Detection and Alarm							
Security System	5,830	sf		\$1.50	\$8,745	\$1.83	\$10,664
Fire Alarm System	5,830	sf		\$10.00	\$58,300	\$12.19	\$71,091
					\$67,045		\$81,755
D7070 Electronic Monitoring and Control							
CCTV System	5,830	sf		\$4.00	\$23,320	\$4.88	\$28,436
					\$23,320		\$28,436
D7090 Electronic Safety and Security Supplementary Components							
Alerting System - allowance	1	ls		\$20,000.00	\$20,000	\$24,388.00	\$24,388

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 13-Dec-19

DOCUMENT 2

DETAIL ELEMENTS - FIRE STATION #2 - ALTERNATE (ADDITIONAL EXTENSIONS)

Element	Quantity	Unit	Mat.	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
					\$20,000		\$24,388
D70 Electronic Safety and Security					\$163,485		\$199,354
D80 Integrated Automation							
D8010 Integrated Automation Facility Controls							
New							
Direct Digital Controls	2,844	sf		\$4.00	\$11,376	\$4.88	\$13,872
Renovation							
Direct Digital Controls	2,986	sf		\$5.00	\$14,930	\$6.10	\$18,206
					\$26,306		\$32,078
D80 Integrated Automation					\$26,306		\$32,078
D - SERVICES					\$898,046		\$1,095,077
E - EQUIPMENT & FURNISHINGS							
E10 Equipment							
E1030 Commercial Equipment							
Install only OFCI ood services equipment - new addition - kitchen / dining	307	sf		\$8.00	\$2,456	\$9.76	\$2,995
					\$2,456		\$2,995
E1040 Institutional Equipment							
Miscellaneous OFCI equipment install allowance	5,830	sf		\$1.00	\$5,830	\$1.22	\$7,109
					\$5,830		\$7,109
E10 Equipment					\$8,286		\$10,104
E20 Furnishings							
E2010 Fixed Furnishings							
Casework allowance	5,830	sf		\$7.00	\$40,810	\$8.54	\$49,764
					\$40,810		\$49,764
E2050 Movable Furnishings							
Excluded							
E20 Furnishings					\$40,810		\$49,764
E - EQUIPMENT & FURNISHINGS					\$49,096		\$59,868
F - SPECIAL CONSTRUCTION & DEMOLITION							
F30 Demolition							
F3030 Selective Demolition							
Miscellaneous demolition	5,830	sf		\$10.00	\$58,300	\$12.19	\$71,091
					\$58,300		\$71,091
F30 Demolition					\$58,300		\$71,091
F - SPECIAL CONSTRUCTION & DEMOLITION					\$58,300		\$71,091
G - SITEWORK							
G20 Site Improvements							
G2010 Roadways							
Retop all asphalt	25,000	sf		\$2.25	\$56,250	\$2.74	\$68,591
New parking area	1,424	sf		\$10.00	\$14,240	\$12.19	\$17,364
					\$70,490		\$85,955
G2030 Pedestrian Plazas and Walkways							

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 13-Dec-19

DOCUMENT 2

DETAIL ELEMENTS - FIRE STATION #2 - ALTERNATE (ADDITIONAL EXTENSIONS)

Element	Quantity	Unit	Mat.	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
New concrete patio, including all associated work	1,092	sf		\$14.00	\$15,288	\$17.07	\$18,642
					<u>\$15,288</u>		<u>\$18,642</u>
G2060 Site Development							
6' high chainlink fence with privacy slats	40	lf		\$50.00	\$2,000	\$60.97	\$2,439
New powered cantilever gate fence	33	lf		\$125.00	\$4,125	\$152.43	\$5,030
Allowance for sitework for new vestibule	1	ls		\$10,000.00	\$10,000	\$12,194.00	\$12,194
					<u>\$16,125</u>		<u>\$19,663</u>
G2080 Landscaping							
Allowance for landscaping	1,902	sf		\$10.00	\$19,020	\$12.19	\$23,193
					<u>\$19,020</u>		<u>\$23,193</u>
G20 Site Improvements					\$120,923		\$147,454
G - SITEWORK					\$120,923		\$147,454

THIS PAGE INTENTIONALLY LEFT BLANK



SUPPORTING COST
ESTIMATE - TASK 3
VALUE ENGINEERING

APPENDIX C

THIS PAGE INTENTIONALLY LEFT BLANK



Mount Vernon Fire Department
Mount Vernon, WA

Conceptual - Rev 5
Document 3
December 16, 2019
Cumming Project No. 18-01155.00



Prepared for Mackenzie

1325 FOURTH AVENUE, SUITE 1010 • SEATTLE • WASHINGTON • 98101
PHONE: 206-876-8008 • FAX: 206-973-1092

TABLE OF CONTENTS

	Page
1. Project Introduction	
Executive Summary	3
Approach and Methodology	4
Scope Assumptions	6
2. Cost Summaries	
Summary	8
3. Control Areas	
Controls	10
4. Construction Cost Back Up	
Fire Station #1	11
Fire Station #1 - Reduced footprint	21
Value Engineering Options	31

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 16-Dec-19

DOCUMENT 3

EXECUTIVE SUMMARY

1.1 Introduction

An Estimate was prepared in December 2018 for work to Fire Stations 1. The project scope was the construction of a new 24,000 sf fire station. The estimate cost were escalated to the mid point of the construction phase, which at that time was September 2020.

Since December of 2018 a new project schedule has been developed which pushes out the construction start date the fire station. A report was prepared, Document 1 dated 13 December 2019, that took the December 2018 estimate and updated the costs to match the revised construction date.

This report further develops these previous costs (Documents 1 & 2) to incorporate a Revised Floor Plan and VE options.

1.2 Project Schedule

	Start	Finish	Duration	Mid Point
Construction - Fire Station #1	Apr-22	May-23	14 months	Oct-22

1.3 Key Assumptions & Exclusions

This document should be read in association with Methods and Assumptions sections. Key assumptions built into the above cost breakdown include

Key Assumptions

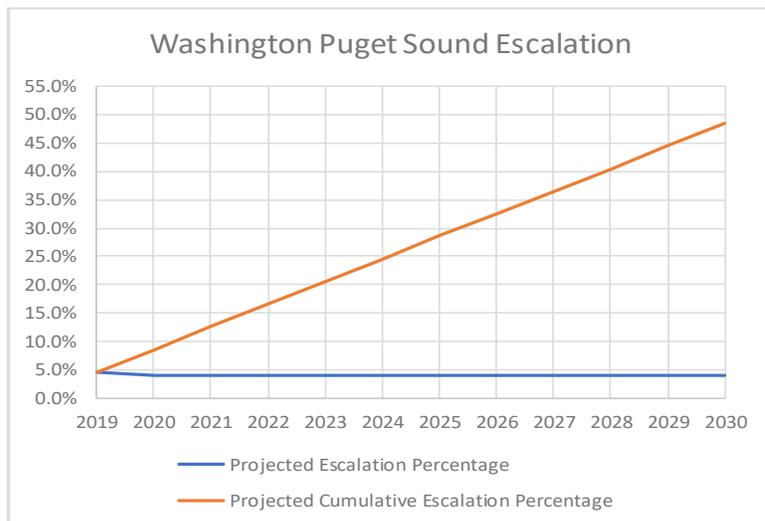
- Design/Bid/Build
- Single Phase Construction

Key Exclusions

- Project Soft Costs, other than specified furnishings & equipment
- Department Relocation
- AV Equipment supply (OFCI video conference install is included)
- Existing building demo (partial demo at renovations is included)
- Soil remediation and treatments (piles are included at FS #1)
- WSST
- B&O Tax

1.4 Escalation Projection

Year	Projected Escalation Percentage	Projected Cumulative Escalation Percentage
2019	4.5%	4.5%
2020	4.0%	8.5%
2021	4.0%	12.5%
2022	4.0%	16.5%
2023	4.0%	20.5%
2024	4.0%	24.5%
2025	4.0%	28.5%
2026	4.0%	32.5%
2027	4.0%	36.5%
2028	4.0%	40.5%
2029	4.0%	44.5%
2030	4.0%	48.5%



DOCUMENT 3

APPROACH & METHODOLOGY

Basis of Estimate	<p>The undernoted documents were used in the preparation of the base costs (Revision 4, December 2018)</p> <ul style="list-style-type: none"> - Final Concept Design 11.2.2018 Reduced - dated 11/2/18 - MVFD_Exist Plan Markups for Costing-11.01.18 - dated 11/1/18 - MVFD_Narrative Scope Station 2- Electrical - dated 11/8/18 - MVFD_Narrative Scope Station 2-Sazan Mech - dated 11/8/18 - MVFD_Narrative Scope Station 3- Electrical - dated 11/8/18 - MVFD_Narrative Scope Station 3- Sazan Mech - dated 11/8/18 - MVFD_Prelim Cost Spec Stat 2.3-11.06.18 - dated 11/6/18 - MVFD_Preliminary Spec-06.11.18 - dated 11/6/18 <p>The costs for the revised floor plan and the VE Options are based on</p> <ul style="list-style-type: none"> - Task 3 - VE Examination - Station 1 12.06.19
Estimate Format	A component cost classification format has been used for the preparation of this estimate. It classifies costs by building system / element.
Cost Mark Ups	<p>The following % mark ups have been included in each design option:</p> <ul style="list-style-type: none"> - General Conditions (7.00% on direct costs) - General Requirements (3.00% compound) - Bonds & Insurance (2.00% compound) - Contractor's Fee (4.00% compound) - Design Contingency (9% compound) <p>Fire Station #1 - Escalation to MOC, 10/15/22 (17.31% compound)</p>
Design Contingency	An allowance of 9% 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.
Method of Procurement	The estimate is based on a Design/Bid/Build delivery model.
Bid Conditions	This estimate has been based upon competitive bid situations (minimum of 3 bidders) for all items of subcontracted work.
Basis For Quantities	To a small degree, this estimate has been based upon the actual measurement of different items of work, however the vast majority is based on parametric measurements used in conjunction with other projects of a similar nature.
Basis for Unit Costs	Unit costs as contained herein are based on current bid prices in the northern Puget Sound area. 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, field overhead, home office overhead, and profit. The general contractor's overhead is shown separately on the master summary.
Sources for Pricing	This estimate was prepared by a team of qualified cost consultants experienced in estimating construction costs at all stages of design. These consultants have used pricing data from Cumming's database for municipal facility construction, updated to reflect current conditions in the north Puget Sound area.

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 16-Dec-19

DOCUMENT 3

APPROACH & METHODOLOGY

Key Exclusions

The following items have been excluded from our estimate:

- Project Soft Costs, other than specified furnishings & equipment
- Department Relocation
- AV Equipment supply (OFCI video conference install is included)
- Existing building demo (partial demo at renovations is included)
- Soil remediation and treatments (piles are included at FS #1)
- WSST
- B&O tax

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.

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
16-Dec-19

DOCUMENT 3

SCOPE ASSUMPTIONS

Description	Assumed Scope
General Project Info	<ul style="list-style-type: none"> - Local GC laydown / compound area within proximity. - Local trade parking available both onsite (partial) and offsite. - All sub trades to be competitively bid. - Labor pool from Puget Sound area.
Detailed Assumptions	Base Scope
1. Substructure / Foundations	<ul style="list-style-type: none"> - Mass excavation and off haul. - Piles assumed at Station #1. - Continuous footings / spread footings for existing building additions and for Station #1. - Sub slab drainage and vault for Station #1.
2. Structure	<ul style="list-style-type: none"> - Assumed slab on grade, steel columns, structural steel, metal decks at Station #1. - Assume modifications to wooden structures at Stations #2 and #3.
3. Envelope / Roofing	<ul style="list-style-type: none"> - Station #1. <ul style="list-style-type: none"> - Exterior substrate of metal studs, densglas sheathing, batt insulation. - Blend of exterior brick veneer, cast in place walls, and composite metal panel systems. - Exterior storefront glazing. - Assumed 60 mil TPO or similar roof. - Assume metal and wood T&G soffits. -Apparatus Bay doors include 4# 4-fold doors and 3# overhead doors
4. Interiors	<ul style="list-style-type: none"> - Station #1. <ul style="list-style-type: none"> - Metal stud framed, to deck, interior construction. - Solid core wood interior doors. - Floor allowances for range of finishes - Assume gypsum board ceilings in restrooms and personnel decon rooms. - Assume open to structure ceiling in mechanical, electrical, storage, stairs, apparatus bays, and apparatus bay support rooms. - Assume SC wood doors with HM frames. - Wall allowances for range of finishes. - Allowance for restroom partitions and specialties. - Allowance for install of miscellaneous OFCI equipment. - Allowance for casework.
5. Vert. Transportation	<ul style="list-style-type: none"> - Two-stop elevator for Station #1.
6. Plumbing	<ul style="list-style-type: none"> - Plumbing is a cost per square foot allowance.
7. HVAC	<ul style="list-style-type: none"> - HVAC is a cost per square foot allowance.

Prepared by **CUMMING**

Page 6 of 37

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 16-Dec-19

DOCUMENT 3

SCOPE ASSUMPTIONS

Description	Assumed Scope
8. Electrical	- Electrical is a cost per square foot allowance.
9. Fire Protection	- Fire Protection is a cost per square foot allowance.
10. Sitework	<ul style="list-style-type: none"> - Station #1. - Demo of Snoqualmie St between Cleveland Ave and S 2nd St, including asphalt and concrete complete. - Allowance for removal of utilities in Snoqualmie St, and rerouting around site via S 2nd St, alley south of station, and Cleveland Ave. - Clear, grub, and cut and fill of site, assuming balanced site. - Dewatering as required. - Pedestrian plaza pavement, and seat wall, extending north to library, terminating at south face of library. - Trees as shown in plans. Allowance for irrigated landscaping in plan space shown as landscaped. - Onsite and offsite sidewalks and miscellaneous flat work. - CMU trash enclosure. - Asphalt drives and parking, with additional offsite parking. - Allowance for underground stormwater storage vault. - Allowance for domestic and fire water. - Allowance for sanitary sewer. - Allowance for stormwater drainage. - Allowance for natural gas service.
11. Exclusions	<ul style="list-style-type: none"> - Project Soft Costs, other than specified furnishings & equipment - Department Relocation - AV Equipment supply (OFCI video conference install is included) - Existing building demo (partial demo at renovations is included) - Soil remediation and treatments (piles are included at FS #1) - WSST - B&O Tax

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
16-Dec-19

DOCUMENT 3

SUMMARY

Element		Area	Cost / SF	Total
Fire Station #1				
Estimated cost per December 2019 report	Costs escalated to Oct 2022 (17.31%)	24,000	\$754.69	<u>\$18,112,514</u>

Task 3 - Reduced footprint + Value Engineering Options

Estimated cost per Document 3 report	Costs escalated to Oct 2022 (17.31%)	21,800	\$781.08	<u>\$17,027,475</u>
---	--------------------------------------	--------	----------	----------------------------

Value Engineering Options

All costs include Mark Ups for General Conditions, General Conditions, Bonds, Insurance, Contractors Fee, Design Contingency, and Escalation (Oct 2022)

1. Revise Partitions to Wood Stud Framing				<u>(\$165,206)</u>
2. Revise Floor, Roof, and Stair Systems to Wood Framed Construction				<u>(\$1,649)</u>
3. Revise Structural Brick Wall System to Brick Veneer				<u>(\$267,559)</u>
4. Reduce Brick Square Footage				<u>(\$7,549)</u>
5. Replace all Brick Walls with Fiber Cement or Metal Panel Walls				<u>(\$203,422)</u>
6. Revise Cast Concrete Cornices to Manufactured Metal Coping				<u>(\$13,716)</u>
7. Revise Butt-Glazed Entry Storefront to Typical Mullion Type				<u>(\$6,167)</u>
8. Revise Entry Doors from Double-Swing to Single-Swing Storefront Doors				<u>(\$8,222)</u>
9. Revise Wood Entry Soft to Fiber Cement Soft				<u>(\$8,110)</u>
10. Reduce Parapet Heights Throughout and Center RTU's to Ease Screening				<u>(\$121,556)</u>
11. Reduce Sidelite Count throughout Interior				<u>(\$4,858)</u>
12. Revise Polished Concrete Floors at App Bay and Utility Functions to Sealed Concrete				<u>(\$67,426)</u>

Prepared by CUMMING

Page 8 of 37

13. Remove Photovoltaic Panels and Backbone from Roof	<u>(\$471,477)</u>
14. Reduce Casework Scope	<u>(\$67,794)</u>
15. Reduce / Re-Design Concrete Entry Element	<u>(\$27,656)</u>
16. Reduce / Remove Concrete Seatwalls	<u>(\$7,475)</u>
17. Reduce Brick Square Footage from Site Fence	<u>(\$14,684)</u>
18. Revise Floor, Roof, Stair and Wall Systems to CLT construction	<u>\$446,682</u>

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 16-Dec-19

DOCUMENT 3

SCHEDULE OF AREAS AND CONTROL QUANTITIES

Schedule of Areas - Original Floor Plan **Fire Station #1** **SF**

1. Enclosed Areas (x 100%)

Level 1	16,000	16,000
Level 2	8,000	8,000
Existing - Untouched		
Additions		
Renovations		
Total Enclosed	<u>24,000</u>	<u>24,000</u>

2. Unenclosed Areas

Sitework	25,020	25,020
Offsite Work	4,740	4,740
Total Unenclosed	<u>29,760</u>	<u>14,880</u>

Schedule of Areas - Revised Floor Plan **Fire Station #1** **SF**

1. Enclosed Areas (x 100%)

Level 1	14,500	14,500
Level 2	7,300	7,300
Total Enclosed	<u>21,800</u>	<u>21,800</u>

2. Unenclosed Areas

Sitework	25,020	25,020
Offsite Work	4,740	4,740
Total Unenclosed	<u>29,760</u>	<u>14,880</u>

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
12/16/19

Fire Station #1

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
16-Dec-19

DOCUMENT 3

SUMMARY - FIRE STATION #1

Element	Escalation Separately Identified			Escalation Included		
	Subsystem	System	Cost / SF	Subsystem	System	Cost / SF
A - SUBSTRUCTURE		\$930,260	\$38.76		\$1,091,288	\$45.47
A10 Foundations		\$638,800	\$26.62	\$749,376		\$31.22
A1010 Standard Foundations		\$638,800	\$26.62	\$749,376		\$31.22
A40 Slabs-on-Grade		\$179,670	\$7.49	\$210,771		\$8.78
A4010 Standard Slabs-on-Grade		\$175,670	\$7.32	\$206,078		\$8.59
A4040 Pits and Bases		\$4,000	\$0.17	\$4,692		\$0.20
A90 Substructure Related Activities		\$111,790	\$4.66	\$131,141		\$5.46
A9010 Substructure Excavation		\$31,940	\$1.33	\$37,469		\$1.56
A9020 Construction Dewatering		\$79,850	\$3.33	\$93,672		\$3.90
B - SHELL		\$2,875,196	\$119.80		\$3,372,892	\$140.54
B10 Superstructure		\$886,624	\$36.94	\$1,040,099		\$43.34
B1010 Floor Construction		\$432,300	\$18.01	\$507,131		\$21.13
B1020 Roof Construction		\$394,324	\$16.43	\$462,581		\$19.27
B1080 Stairs		\$60,000	\$2.50	\$70,386		\$2.93
B20 Exterior Vertical Enclosures		\$1,565,001	\$65.21	\$1,835,902		\$76.50
B2010 Exterior Walls		\$1,130,266	\$47.09	\$1,325,915		\$55.25
B2020 Exterior Windows		\$181,335	\$7.56	\$212,724		\$8.86
B2050 Exterior Doors and Grilles		\$253,400	\$10.56	\$297,264		\$12.39
B30 Exterior Horizontal Enclosures		\$423,571	\$17.65	\$496,891		\$20.70
B3010 Roofing		\$423,571	\$17.65	\$496,891		\$20.70
C - INTERIORS		\$1,255,259	\$52.30		\$1,472,544	\$61.36
C10 Interior Construction		\$946,741	\$39.45	\$1,110,622		\$46.28
C1010 Interior Partitions		\$589,374	\$24.56	\$691,395		\$28.81
C1020 Interior Windows		\$5,200	\$0.22	\$6,100		\$0.25
C1030 Interior Doors		\$175,000	\$7.29	\$205,293		\$8.55
C1070 Suspended Ceiling Construction		\$20,207	\$0.84	\$23,705		\$0.99
C1090 Interior Specialties		\$156,960	\$6.54	\$184,130		\$7.67
C20 Interior Finishes		\$308,518	\$12.85	\$361,922		\$15.08
C2010 Wall Finishes		\$65,486	\$2.73	\$76,822		\$3.20
C2030 Flooring		\$140,053	\$5.84	\$164,296		\$6.85
C2040 Stair Finishes		\$5,000	\$0.21	\$5,866		\$0.24
C2050 Ceiling Finishes		\$97,979	\$4.08	\$114,940		\$4.79
D - SERVICES		\$4,912,827	\$204.70		\$5,763,238	\$240.13
D10 Conveying		\$150,000	\$6.25	\$175,965		\$7.33
D1010 Vertical Conveying Systems		\$150,000	\$6.25	\$175,965		\$7.33
D20 Plumbing		\$930,480	\$38.77	\$1,091,546		\$45.48
D2010 Domestic Water Distribution		\$393,600	\$16.40	\$461,732		\$19.24
D2020 Sanitary Drainage		\$192,480	\$8.02	\$225,798		\$9.41
D2030 Building Support Plumbing Systems		\$293,760	\$12.24	\$344,610		\$14.36
D2050 General Service Compressed-Air		\$50,640	\$2.11	\$59,406		\$2.48
D30 Heating, Ventilation, and Air Condition (HVAC)		\$1,071,360	\$44.64	\$1,256,812		\$52.37
D3030 Cooling Systems		\$756,960	\$31.54	\$887,990		\$37.00
D3050 Facility HVAC Distribution Systems		\$314,400	\$13.10	\$368,823		\$15.37
D40 Fire Protection		\$146,400	\$6.10	\$171,742		\$7.16
D4010 Fire Suppression		\$146,400	\$6.10	\$171,742		\$7.16
D50 Electrical		\$1,639,387	\$68.31	\$1,923,165		\$80.13
D5010 Facility Power Generation		\$250,000	\$10.42	\$293,275		\$12.22
D5020 Electrical Service and Distribution		\$360,000	\$15.00	\$422,316		\$17.60
D5030 General Purpose Electrical Power		\$210,000	\$8.75	\$246,351		\$10.26
D5040 Lighting		\$504,000	\$21.00	\$591,242		\$24.64
D5080 Miscellaneous Electrical Systems		\$315,387	\$13.14	\$369,981		\$15.42
D60 Communications		\$300,000	\$12.50	\$351,930		\$14.66
D6010 Data Communications		\$132,000	\$5.50	\$154,849		\$6.45
D6030 Audio-Video Communication		\$168,000	\$7.00	\$197,081		\$8.21
D70 Electronic Safety and Security		\$491,600	\$20.48	\$576,696		\$24.03
D7010 Access Control and Intrusion Detection		\$99,600	\$4.15	\$116,841		\$4.87
D7050 Detection and Alarm		\$276,000	\$11.50	\$323,776		\$13.49
D7070 Electronic Monitoring and Control		\$96,000	\$4.00	\$112,618		\$4.69
D7090 Electronic Safety and Security Supplementary Components		\$20,000	\$0.83	\$23,462		\$0.98
D80 Integrated Automation		\$183,600	\$7.65	\$215,381		\$8.97
D8010 Integrated Automation Facility Controls		\$183,600	\$7.65	\$215,381		\$8.97
E - EQUIPMENT & FURNISHINGS		\$201,440	\$8.39		\$236,309	\$9.85
E10 Equipment		\$33,440	\$1.39	\$39,228		\$1.63
E1030 Commercial Equipment		\$9,440	\$0.39	\$11,074		\$0.46
E1040 Institutional Equipment		\$24,000	\$1.00	\$28,154		\$1.17
E20 Furnishings		\$168,000	\$7.00	\$197,081		\$8.21
E2010 Fixed Furnishings		\$168,000	\$7.00	\$197,081		\$8.21

DOCUMENT 3

SUMMARY - FIRE STATION #1

Element	Escalation Separately Identified			Escalation Included		
	Subsystem	System	Cost / SF	Subsystem	System	Cost / SF
G - SITEWORK		\$1,941,114	\$80.88		\$2,277,120	\$94.88
G10 Site Preparation		\$627,057	\$26.13	\$735,600		\$30.65
G1010 Site Clearing		\$2,502	\$0.10	\$2,935		\$0.12
G1020 Site Elements Demolition		\$609,542	\$25.40	\$715,054		\$29.79
G1070 Site Earthwork		\$15,013	\$0.63	\$17,611		\$0.73
G20 Site Improvements		\$519,057	\$21.63	\$608,906		\$25.37
G2010 Roadways		\$72,000	\$3.00	\$84,463		\$3.52
G2020 Parking Lots		\$71,365	\$2.97	\$83,718		\$3.49
G2030 Pedestrian Plazas and Walkways		\$151,492	\$6.31	\$177,715		\$7.40
G2060 Site Development		\$138,750	\$5.78	\$162,768		\$6.78
G2080 Landscaping		\$85,450	\$3.56	\$100,241		\$4.18
G30 Liquid and Gas Site Utilities		\$725,000	\$30.21	\$850,498		\$35.44
G3010 Water Supply		\$75,000	\$3.13	\$87,983		\$3.67
G3020 Sanitary Sewerage Utilities		\$35,000	\$1.46	\$41,059		\$1.71
G3030 Storm Drainage Utilities		\$600,000	\$25.00	\$703,860		\$29.33
G3090 Liquid and Gas Site Utilities Supplementary Components		\$15,000	\$0.63	\$17,597		\$0.73
G40 Electrical Site Improvements		\$70,000	\$2.92	\$82,117		\$3.42
G4010 Site Electric Distribution Systems		\$50,000	\$2.08	\$58,655		\$2.44
G4050 Site Lighting		\$20,000	\$0.83	\$23,462		\$0.98
Subtotal	Dec 2018	\$12,116,095	\$504.84	Oct 2022	\$14,213,392	\$592.22
General Conditions	7.00%	\$848,127	\$35.34		\$994,937	\$41.46
Subtotal		\$12,964,222	\$540.18		\$15,208,329	\$633.68
General Requirements	3.00%	\$388,927	\$16.21		\$456,250	\$19.01
Subtotal		\$13,353,149	\$556.38		\$15,664,579	\$652.69
Bonds & Insurance	2.00%	\$267,063	\$11.13		\$313,292	\$13.05
Subtotal		\$13,620,212	\$567.51		\$15,977,870	\$665.74
Contractor's Fee	4.00%	\$544,808	\$22.70		\$639,115	\$26.63
Subtotal		\$14,165,020	\$590.21		\$16,616,985	\$692.37
Design Contingency	9.00%	\$1,274,852	\$53.12		\$1,495,529	\$62.31
Subtotal		\$15,439,872	\$643.33		\$18,112,514	\$754.69
Escalation to MOC, 10/15/22	17.31%	\$2,672,642	\$111.36			
TOTAL ESTIMATED CONSTRUCTION COST (to midpoint of construction - Oct 22)		\$18,112,514	\$754.69		\$18,112,514	\$754.69

Total Area: 24,000 SF

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
16-Dec-19

DOCUMENT 3

DETAIL ELEMENTS - FIRE STATION #1

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
A - SUBSTRUCTURE						
A10 Foundations						
A1010 Standard Foundations						
Piles & pile caps - allowance	15,970	sf	\$30.00	\$479,100	\$35.19	\$562,032
Foundation footings and stem walls	15,970	sf	\$10.00	\$159,700	\$11.73	\$187,344
				<u>\$638,800</u>		<u>\$749,376</u>
A10 Foundations				\$638,800		\$749,376
A40 Slabs-on-Grade						
A4010 Standard Slabs-on-Grade						
Slab on grade, complete	15,970	sf	\$11.00	\$175,670	\$12.90	\$206,078
				<u>\$175,670</u>		<u>\$206,078</u>
A4040 Pits and Bases						
Elevator pit	1	ea	\$4,000.00	\$4,000	\$4,692.40	\$4,692
				<u>\$4,000</u>		<u>\$4,692</u>
A40 Slabs-on-Grade				\$179,670		\$210,771
A90 Substructure Related Activities						
A9010 Substructure Excavation						
Foundation excavation and fill	15,970	sf	\$2.00	\$31,940	\$2.35	\$37,469
				<u>\$31,940</u>		<u>\$37,469</u>
A9020 Construction Dewatering						
Dewatering allowance	15,970	sf	\$2.50	\$39,925	\$2.93	\$46,836
Dewatering premium (associated with piles)	15,970	sf	\$2.50	\$39,925	\$2.93	\$46,836
				<u>\$79,850</u>		<u>\$93,672</u>
A90 Substructure Related Activities				\$111,790		\$131,141
A - SUBSTRUCTURE				\$930,260		\$1,091,288
B - SHELL						
B10 Superstructure						
B1010 Floor Construction						
Second floor deck, concrete on metal decking, reinforced, including columns and framing	7,860	sf	\$55.00	\$432,300	\$64.52	\$507,131
				<u>\$432,300</u>		<u>\$507,131</u>
B1020 Roof Construction						
Roof structure with metal deck, including columns and framing	14,083	sf	\$28.00	\$394,324	\$32.85	\$462,581
				<u>\$394,324</u>		<u>\$462,581</u>
B1080 Stairs						
Egress stairs	2	flights	\$30,000.00	\$60,000	\$35,193.00	\$70,386
				<u>\$60,000</u>		<u>\$70,386</u>
B10 Superstructure				\$886,624		\$1,040,099
B20 Exterior Vertical Enclosures						
B2010 Exterior Walls						
Structural brick, framed, insulated, gypsum board interior	13,020	sf	\$61.00	\$794,196	\$71.56	\$931,671
CIP concrete fascia, framed, insulated, gypsum board interior	2,241	sf	\$85.00	\$190,485	\$99.71	\$223,458
Metal siding, framed, insulated, gypsum board interior	1,032	sf	\$60.00	\$61,920	\$70.39	\$72,638
Cast concrete cornice	823	lf	\$75.00	\$61,725	\$87.98	\$72,410

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 16-Dec-19

DOCUMENT 3

DETAIL ELEMENTS - FIRE STATION #1

Element	Quantity	Unit	Unit Cost	Total	Unit Cost	Total
			Dec 2018		Oct 2022	
Metal trim	338	sf	\$50.00	\$16,900	\$58.66	\$19,825
Steel lintel	336	lf	\$15.00	\$5,040	\$17.60	\$5,912
				\$1,130,266		\$1,325,915
B2020 Exterior Windows						
Exterior glazing at lobby - storefront	825	sf	\$95.00	\$78,375	\$111.44	\$91,942
Exterior glazing - fiberglass framed	1,716	sf	\$60.00	\$102,960	\$70.39	\$120,782
				\$181,335		\$212,724
B2050 Exterior Doors and Grilles						
3'x7' HM door and frame	4	ea	\$3,350.00	\$13,400	\$3,929.89	\$15,720
6'x7' double interior storefront door	1	ea	\$11,000.00	\$11,000	\$12,904.10	\$12,904
East apparatus bay - four-fold doors	4	ea	\$46,000.00	\$184,000	\$53,962.60	\$215,850
West apparatus bay doors - overhead coiling	3	ea	\$15,000.00	\$45,000	\$17,596.50	\$52,790
				\$253,400		\$297,264
B20 Exterior Vertical Enclosures				\$1,565,001		\$1,835,902
B30 Exterior Horizontal Enclosures						
B3010 Roofing						
Flat roof, complete	14,083	sf	\$25.00	\$352,075	\$29.33	\$413,019
Metal soffit	72	sf	\$25.00	\$1,800	\$29.33	\$2,112
Wood T&G soffit	228	sf	\$42.00	\$9,576	\$49.27	\$11,234
Parapets (framing included in exterior walls)	4,008	sf	\$15.00	\$60,120	\$17.60	\$70,527
				\$423,571		\$496,891
B30 Exterior Horizontal Enclosures				\$423,571		\$496,891
B - SHELL				\$2,875,196		\$3,372,892
C - INTERIORS						
C10 Interior Construction						
C1010 Interior Partitions						
Partition walls, to deck, insulated	32,743	sf	\$18.00	\$589,374	\$21.12	\$691,395
				\$589,374		\$691,395
C1020 Interior Windows						
Sidellies at offices, conference rooms, and EOC room	16	ea	\$325.00	\$5,200	\$381.26	\$6,100
				\$5,200		\$6,100
C1030 Interior Doors						
3'x7' wood door with frame	75	ea	\$2,200.00	\$165,000	\$2,580.82	\$193,562
6'x7' double interior storefront door	1	ea	\$10,000.00	\$10,000	\$11,731.00	\$11,731
				\$175,000		\$205,293
C1070 Suspended Ceiling Construction						
Framed ceilings, with gypsum board	1,837	sf	\$11.00	\$20,207	\$12.90	\$23,705
				\$20,207		\$23,705
C1090 Interior Specialties						
Restroom specialties	1,440	sf	\$15.00	\$21,600	\$17.60	\$25,339
Building specialties - allowance	22,560	sf	\$6.00	\$135,360	\$7.04	\$158,791
				\$156,960		\$184,130
C10 Interior Construction				\$946,741		\$1,110,622
C20 Interior Finishes						
C2010 Wall Finishes						

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
16-Dec-19

DOCUMENT 3

DETAIL ELEMENTS - FIRE STATION #1

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
Painting	65,486	sf	\$1.00	\$65,486	\$1.17	\$76,822
				<u>\$65,486</u>		<u>\$76,822</u>
C2030 Flooring						
Flooring allowances - including base						
Office & quarters - assume primarily carpet and tile	8,030	sf	\$7.00	\$56,210	\$8.21	\$65,940
Ground floor - assume polished concrete	15,970	sf	\$5.25	\$83,843	\$6.16	\$98,356
				<u>\$140,053</u>		<u>\$164,296</u>
C2040 Stair Finishes						
Allowances	1	ls	\$5,000.00	\$5,000	\$5,865.50	\$5,866
				<u>\$5,000</u>		<u>\$5,866</u>
C2050 Ceiling Finishes						
Painted hard ceilings	1,837	sf	\$0.86	\$1,580	\$1.01	\$1,853
Painted open to structure	8,456	sf	\$2.66	\$22,493	\$3.12	\$26,386
Suspended acoustical ceilings	13,536	sf	\$5.46	\$73,907	\$6.41	\$86,700
				<u>\$97,979</u>		<u>\$114,940</u>
C20 Interior Finishes				\$308,518		\$361,922
C - INTERIORS				\$1,255,259		\$1,472,544
D - SERVICES						
D10 Conveying						
D1010 Vertical Conveying Systems						
Passenger elevator	2	stop	\$75,000.00	\$150,000	\$87,982.50	\$175,965
				<u>\$150,000</u>		<u>\$175,965</u>
D10 Conveying				\$150,000		\$175,965
D20 Plumbing						
D2010 Domestic Water Distribution						
Domestic water piping	24,000	sf	\$8.35	\$200,400	\$9.80	\$235,089
Fixture w/rough-in	24,000	sf	\$8.05	\$193,200	\$9.44	\$226,643
				<u>\$393,600</u>		<u>\$461,732</u>
D2020 Sanitary Drainage						
Waste/vent piping	24,000	sf	\$8.02	\$192,480	\$9.41	\$225,798
				<u>\$192,480</u>		<u>\$225,798</u>
D2030 Building Support Plumbing Systems						
Equipment	24,000	sf	\$1.85	\$44,400	\$2.17	\$52,086
Natural gas system	24,000	sf	\$2.12	\$50,880	\$2.49	\$59,687
Roof Drainage	24,000	sf	\$3.47	\$83,280	\$4.07	\$97,696
Condensate Drainage	24,000	sf	\$2.60	\$62,400	\$3.05	\$73,201
Testing/ firestopping / seismic/ misc	24,000	sf	\$2.20	\$52,800	\$2.58	\$61,940
				<u>\$293,760</u>		<u>\$344,610</u>
D2050 General Service Compressed-Air						
Compressed air	24,000	sf	\$2.11	\$50,640	\$2.48	\$59,406
				<u>\$50,640</u>		<u>\$59,406</u>
D20 Plumbing				\$930,480		\$1,091,546
D30 Heating, Ventilation, and Air Conditioning (HVAC)						
D3030 Cooling Systems						

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 16-Dec-19

DOCUMENT 3

DETAIL ELEMENTS - FIRE STATION #1

Element	Quantity	Unit	Unit Cost	Total	Unit Cost	Total
			Dec 2018		Oct 2022	
Air side equipment (Split sys, heat pumps, fans)	24,000	sf	\$28.65	\$687,600	\$33.61	\$806,624
Test / balance / firestopping / seismic	24,000	sf	\$2.89	\$69,360	\$3.39	\$81,366
				<u>\$756,960</u>		<u>\$887,990</u>
D3050 Facility HVAC Distribution Systems						
Air distribution	24,000	sf	\$13.10	\$314,400	\$15.37	\$368,823
				<u>\$314,400</u>		<u>\$368,823</u>
				\$1,071,360		\$1,256,812
D40 Fire Protection						
D4010 Fire Suppression						
Automatic Sprinkler System	24,000	sf	\$6.10	\$146,400	\$7.16	\$171,742
				<u>\$146,400</u>		<u>\$171,742</u>
				\$146,400		\$171,742
D50 Electrical						
D5010 Facility Power Generation						
Generator and ATS	24,000	sf	\$10.42	\$250,000	\$12.22	\$293,275
				<u>\$250,000</u>		<u>\$293,275</u>
D5020 Electrical Service and Distribution						
Distribution Equipment	24,000	sf	\$15.00	\$360,000	\$17.60	\$422,316
				<u>\$360,000</u>		<u>\$422,316</u>
D5030 General Purpose Electrical Power						
HVAC and Equipment Connections	24,000	sf	\$2.25	\$54,000	\$2.64	\$63,347
Convenience Power	24,000	sf	\$6.50	\$156,000	\$7.63	\$183,004
				<u>\$210,000</u>		<u>\$246,351</u>
D5040 Lighting						
Lighting and Lighting Control	24,000	sf	\$21.00	\$504,000	\$24.64	\$591,242
				<u>\$504,000</u>		<u>\$591,242</u>
D5080 Miscellaneous Electrical Systems						
Photovoltaic panels	6,500	sf	\$19.41	\$126,155	\$22.77	\$147,992
Photovoltaic backbone	6,500	sf	\$29.11	\$189,232	\$34.15	\$221,989
				<u>\$315,387</u>		<u>\$369,981</u>
				\$1,639,387		\$1,923,165
D60 Communications						
D6010 Data Communications						
Voice and Data System	24,000	sf	\$5.50	\$132,000	\$6.45	\$154,849
				<u>\$132,000</u>		<u>\$154,849</u>
D6030 Audio-Video Communication						
PA System	24,000	sf	\$7.00	\$168,000	\$8.21	\$197,081
				<u>\$168,000</u>		<u>\$197,081</u>
				\$300,000		\$351,930
D70 Electronic Safety and Security						
D7010 Access Control and Intrusion Detection						
Access Control System - includes electronic access for all doors	24,000	sf	\$4.15	\$99,600	\$4.87	\$116,841

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
16-Dec-19

DOCUMENT 3

DETAIL ELEMENTS - FIRE STATION #1

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
D7050 Detection and Alarm				\$99,600		\$116,841
Security System	24,000	sf	\$1.50	\$36,000	\$1.76	\$42,232
Fire Alarm System	24,000	sf	\$10.00	\$240,000	\$11.73	\$281,544
				\$276,000		\$323,776
D7070 Electronic Monitoring and Control						
CCTV System	24,000	sf	\$4.00	\$96,000	\$4.69	\$112,618
				\$96,000		\$112,618
D7090 Electronic Safety and Security Supplementary Components						
Alerting System - allowance	1	ls	\$20,000.00	\$20,000	\$23,462.00	\$23,462
				\$20,000		\$23,462
D70 Electronic Safety and Security				\$491,600		\$576,696
D80 Integrated Automation						
D8010 Integrated Automation Facility Controls						
Direct Digital Controls	24,000	sf	\$7.65	\$183,600	\$8.97	\$215,381
				\$183,600		\$215,381
D80 Integrated Automation				\$183,600		\$215,381
D - SERVICES				\$4,912,827		\$5,763,238
E - EQUIPMENT & FURNISHINGS						
E10 Equipment						
E1030 Commercial Equipment						
Install only OFCI food service equipment	1,180	sf	\$8.00	\$9,440	\$9.38	\$11,074
				\$9,440		\$11,074
E1040 Institutional Equipment						
Miscellaneous OFCI equipment install allowance	24,000		\$1.00	\$24,000	\$1.17	\$28,154
				\$24,000		\$28,154
E10 Equipment				\$33,440		\$39,228
E20 Furnishings						
E2010 Fixed Furnishings						
Casework allowance	24,000	sf	\$7.00	\$168,000	\$8.21	\$197,081
				\$168,000		\$197,081
E2050 Movable Furnishings						
Excluded						
E20 Furnishings				\$168,000		\$197,081
E - EQUIPMENT & FURNISHINGS				\$201,440		\$236,309
G - SITEWORK						
G10 Site Preparation						
G1010 Site Clearing						
Site clear and grub	25,021	sf	\$0.10	\$2,502	\$0.12	\$2,935
				\$2,502		\$2,935
G1020 Site Elements Demolition						

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 16-Dec-19

DOCUMENT 3

DETAIL ELEMENTS - FIRE STATION #1

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
Site demolition allowance	25,021	sf	\$2.00	\$50,042	\$2.35	\$58,704
Offsite demolition allowance	4,740	sf	\$3.00	\$14,220	\$3.52	\$16,681
Snoqualmie Street demolition and associated allowances						
Demo asphalt	9,600	sf	\$1.00	\$9,600	\$1.17	\$11,262
Demo sidewalk	2,400	sf	\$3.00	\$7,200	\$3.52	\$8,446
Demo curb and gutter	480	lf	\$6.00	\$2,880	\$7.04	\$3,379
Demo storm drains	2	ea	\$250.00	\$500	\$293.28	\$587
Demo trees	12	ea	\$1,500.00	\$18,000	\$1,759.65	\$21,116
Demo electrical service boxes	2	ea	\$250.00	\$500	\$293.28	\$587
Demo site lighting	6	ea	\$500.00	\$3,000	\$586.55	\$3,519
Haul and dispose	2,500	lcy	\$20.00	\$50,000	\$23.46	\$58,655
Potholing allowance	9,600	sf	\$1.00	\$9,600	\$1.17	\$11,262
Mass excavation - assume 5' deep, includes compacted fill	1,800	cy	\$45.00	\$81,000	\$52.79	\$95,021
Remove utilities as required	240	lf	\$200.00	\$48,000	\$234.62	\$56,309
Cut, trench, relay utilities around site, fill, patch - allowance	580	lf	\$500.00	\$290,000	\$586.55	\$340,199
New fire station warning light	1	ea	\$25,000.00	\$25,000	\$29,327.50	\$29,328
				\$609,542		\$715,054
G1050 Site Remediation						
Excluded						
G1070 Site Earthwork						
Cut, fill, fine grading - assume balanced site	25,021	sf	\$0.50	\$12,511	\$0.59	\$14,676
Erosion control allowance	25,021	sf	\$0.10	\$2,502	\$0.12	\$2,935
				\$15,013		\$17,611
G10 Site Preparation				\$627,057		\$735,600
G20 Site Improvements						
G2010 Roadways						
Asphalt drives, including curb and gutter	8,000	sf	\$9.00	\$72,000	\$10.56	\$84,463
				\$72,000		\$84,463
G2020 Parking Lots						
Asphalt parking, including curbs, and markings	8,080	sf	\$7.00	\$56,560	\$8.21	\$66,351
Offsite parking, including curbs, and markings	1,645	sf	\$9.00	\$14,805	\$10.56	\$17,368
				\$71,365		\$83,718
G2030 Pedestrian Plazas and Walkways						
Pedestrian Plaza concrete, including all associated work	1,586	sf	\$16.00	\$25,376	\$18.77	\$29,769
Pedestrian Plaza concrete, including all associated work	3,009	sf	\$16.00	\$48,144	\$18.77	\$56,478
Onsite flatwork, including all associated work	750	sf	\$14.00	\$10,500	\$16.42	\$12,318
Offsite flatwork, including all associated work	3,549	sf	\$16.00	\$56,784	\$18.77	\$66,613
Offsite flatwork, including all associated work	668	sf	\$16.00	\$10,688	\$18.77	\$12,538
				\$151,492		\$177,715
G2060 Site Development						
Trash enclosure	1	ea	\$15,000.00	\$15,000	\$17,596.50	\$17,597
Flag pole	1	ea	\$12,000.00	\$12,000	\$14,077.20	\$14,077
Brick/steel picket security fence	222	lf	\$100.00	\$22,200	\$117.31	\$26,043
Brick/steel picket security fence	108	lf	\$100.00	\$10,800	\$117.31	\$12,669
Pedestrian Gate	9	lf	\$250.00	\$2,250	\$293.28	\$2,639
Motorized gate	34	lf	\$2,250.00	\$76,500	\$2,639.48	\$89,742
				\$138,750		\$162,768
G2080 Landscaping						
Seat wall	35	lf	\$250.00	\$8,750	\$293.28	\$10,265
Large trees	6	ea	\$3,500.00	\$21,000	\$4,105.85	\$24,635
Medium trees	6	ea	\$1,100.00	\$6,600	\$1,290.41	\$7,742
Medium trees	3	ea	\$1,100.00	\$3,300	\$1,290.41	\$3,871

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
16-Dec-19

DOCUMENT 3

DETAIL ELEMENTS - FIRE STATION #1

Element	Quantity	Unit	Unit Cost	Total	Unit Cost	Total
			Dec 2018		Oct 2022	
Medium trees	1	ea	\$1,100.00	\$1,100	\$1,290.41	\$1,290
General landscaping, including irrigation	6,235	sf	\$6.00	\$37,410	\$7.04	\$43,886
General landscaping, including irrigation	1,215	sf	\$6.00	\$7,290	\$7.04	\$8,552
				<u>\$85,450</u>		<u>\$100,241</u>
G20 Site Improvements				\$519,057		\$608,906
G30 Site Mechanical Utilities						
G3010 Water Utilities						
Domestic and fire water - allowance	1	ls	\$75,000.00	\$75,000	\$87,982.50	\$87,983
				<u>\$75,000</u>		<u>\$87,983</u>
G3020 Sanitary Sewerage Utilities						
Sanitary sewage - allowance	1	ls	\$35,000.00	\$35,000	\$41,058.50	\$41,059
				<u>\$35,000</u>		<u>\$41,059</u>
G3030 Storm Drainage Utilities						
Stormdrain, including underground storage vault system	1	ls	\$600,000.00	\$600,000	\$703,860.00	\$703,860
				<u>\$600,000</u>		<u>\$703,860</u>
G3090 Liquid and Gas Site Utilities Supplementary Components						
Natural gas - allowance	1	ls	\$15,000.00	\$15,000	\$17,596.50	\$17,597
				<u>\$15,000</u>		<u>\$17,597</u>
G30 Site Mechanical Utilities				\$725,000		\$850,498
G40 Site Electrical Utilities						
G4010 Site Electric Distribution Systems						
Site power - allowance	1	ls	\$50,000.00	\$50,000	\$58,655.00	\$58,655
				<u>\$50,000</u>		<u>\$58,655</u>
G4050 Site Lighting						
Site lighting - allowance	1	ls	\$10,000.00	\$10,000	\$11,731.00	\$11,731
Site lighting - allowance	1	ls	\$10,000.00	\$10,000	\$11,731.00	\$11,731
				<u>\$20,000</u>		<u>\$23,462</u>
G - SITEWORK				\$1,941,114		\$2,277,120

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
12/16/19

Fire Station #1 - Revised Floor Plan

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
16-Dec-19

DOCUMENT 3

SUMMARY - FIRE STATION #1 - REVISED FLOOR PLAN

Element	Escalation Separately Identified			Escalation Included		
	Subsystem	System	Cost / SF	Subsystem	System	Cost / SF
A - SUBSTRUCTURE		\$845,000	\$38.76		\$991,270	\$45.47
A10 Foundations	\$580,000		\$26.61	\$680,398		\$31.21
A1010 Standard Foundations	\$580,000		\$26.61	\$680,398		\$31.21
A40 Slabs-on-Grade	\$163,500		\$7.50	\$191,802		\$8.80
A4010 Standard Slabs-on-Grade	\$159,500		\$7.32	\$187,109		\$8.58
A4040 Pits and Bases	\$4,000		\$0.18	\$4,692		\$0.22
A90 Substructure Related Activities	\$101,500		\$4.66	\$119,070		\$5.46
A9010 Substructure Excavation	\$29,000		\$1.33	\$34,020		\$1.56
A9020 Construction Dewatering	\$72,500		\$3.33	\$85,050		\$3.90
B - SHELL		\$2,806,661	\$128.75		\$3,292,493	\$151.03
B10 Superstructure	\$867,500		\$39.79	\$1,017,664		\$46.68
B1010 Floor Construction	\$401,500		\$18.42	\$471,000		\$21.61
B1020 Roof Construction	\$406,000		\$18.62	\$476,279		\$21.85
B1080 Stairs	\$60,000		\$2.75	\$70,386		\$3.23
B20 Exterior Vertical Enclosures	\$1,508,739		\$69.21	\$1,769,902		\$81.19
B2010 Exterior Walls	\$1,074,004		\$49.27	\$1,259,914		\$57.79
B2020 Exterior Windows	\$181,335		\$8.32	\$212,724		\$9.76
B2050 Exterior Doors and Grilles	\$253,400		\$11.62	\$297,264		\$13.64
B30 Exterior Horizontal Enclosures	\$430,421		\$19.74	\$504,927		\$23.16
B3010 Roofing	\$430,421		\$19.74	\$504,927		\$23.16
C - INTERIORS		\$1,083,765	\$49.71		\$1,271,365	\$58.32
C10 Interior Construction	\$809,772		\$37.15	\$949,944		\$43.58
C1010 Interior Partitions	\$497,304		\$22.81	\$583,387		\$26.76
C1020 Interior Windows	\$3,250		\$0.15	\$3,813		\$0.17
C1030 Interior Doors	\$146,400		\$6.72	\$171,742		\$7.88
C1070 Suspended Ceiling Construction	\$19,481		\$0.89	\$22,853		\$1.05
C1090 Interior Specialties	\$143,337		\$6.58	\$168,149		\$7.71
C20 Interior Finishes	\$273,993		\$12.57	\$321,422		\$14.74
C2010 Wall Finishes	\$55,256		\$2.53	\$64,821		\$2.97
C2030 Flooring	\$128,314		\$5.89	\$150,525		\$6.90
C2040 Stair Finishes	\$5,000		\$0.23	\$5,866		\$0.27
C2050 Ceiling Finishes	\$85,424		\$3.92	\$100,211		\$4.60
D - SERVICES		\$4,529,895	\$207.79		\$5,314,020	\$243.76
D10 Conveying	\$150,000		\$6.88	\$175,965		\$8.07
D1010 Vertical Conveying Systems	\$150,000		\$6.88	\$175,965		\$8.07
D20 Plumbing	\$845,186		\$38.77	\$991,488		\$45.48
D2010 Domestic Water Distribution	\$357,520		\$16.40	\$419,407		\$19.24
D2020 Sanitary Drainage	\$174,836		\$8.02	\$205,100		\$9.41
D2030 Building Support Plumbing Systems	\$266,832		\$12.24	\$313,021		\$14.36
D2050 General Service Compressed-Air	\$45,998		\$2.11	\$53,960		\$2.48
D30 Heating, Ventilation, and Air Condition (HVAC)	\$973,152		\$44.64	\$1,141,605		\$52.37
D3030 Cooling Systems	\$687,572		\$31.54	\$806,591		\$37.00
D3050 Facility HVAC Distribution Systems	\$285,580		\$13.10	\$335,014		\$15.37
D40 Fire Protection	\$132,980		\$6.10	\$155,999		\$7.16
D4010 Fire Suppression	\$132,980		\$6.10	\$155,999		\$7.16
D50 Electrical	\$1,540,937		\$70.69	\$1,807,674		\$82.92
D5010 Facility Power Generation	\$250,000		\$11.47	\$293,275		\$13.45
D5020 Electrical Service and Distribution	\$327,000		\$15.00	\$383,604		\$17.60
D5030 General Purpose Electrical Power	\$190,750		\$8.75	\$223,769		\$10.26
D5040 Lighting	\$457,800		\$21.00	\$537,045		\$24.64
D5080 Miscellaneous Electrical Systems	\$315,387		\$14.47	\$369,981		\$16.97
D60 Communications	\$272,500		\$12.50	\$319,670		\$14.66
D6010 Data Communications	\$119,900		\$5.50	\$140,655		\$6.45
D6030 Audio-Video Communication	\$152,600		\$7.00	\$179,015		\$8.21
D70 Electronic Safety and Security	\$448,370		\$20.57	\$525,983		\$24.13
D7010 Access Control and Intrusion Detection	\$90,470		\$4.15	\$106,130		\$4.87
D7050 Detection and Alarm	\$250,700		\$11.50	\$294,096		\$13.49
D7070 Electronic Monitoring and Control	\$87,200		\$4.00	\$102,294		\$4.69
D7090 Electronic Safety and Security Supplementary Components	\$20,000		\$0.92	\$23,462		\$1.08
D80 Integrated Automation	\$166,770		\$7.65	\$195,638		\$8.97
D8010 Integrated Automation Facility Controls	\$166,770		\$7.65	\$195,638		\$8.97
E - EQUIPMENT & FURNISHINGS		\$183,840	\$8.43		\$215,663	\$9.89
E10 Equipment	\$31,240		\$1.43	\$36,648		\$1.68
E1030 Commercial Equipment	\$9,440		\$0.43	\$11,074		\$0.51
E1040 Institutional Equipment	\$21,800		\$1.00	\$25,574		\$1.17
E20 Furnishings	\$152,600		\$7.00	\$179,015		\$8.21
E2010 Fixed Furnishings	\$152,600		\$7.00	\$179,015		\$8.21

DOCUMENT 3

SUMMARY - FIRE STATION #1 - REVISED FLOOR PLAN

Element	Escalation Separately Identified			Escalation Included		
	Subsystem	System	Cost / SF	Subsystem	System	Cost / SF
G - SITEWORK		\$1,941,114	\$89.04		\$2,277,120	\$104.46
G10 Site Preparation		\$627,057	\$28.76	\$735,600		\$33.74
G1010 Site Clearing		\$2,502	\$0.11	\$2,935		\$0.13
G1020 Site Elements Demolition		\$609,542	\$27.96	\$715,054		\$32.80
G1070 Site Earthwork		\$15,013	\$0.69	\$17,611		\$0.81
G20 Site Improvements		\$519,057	\$23.81	\$608,906		\$27.93
G2010 Roadways		\$72,000	\$3.30	\$84,463		\$3.87
G2020 Parking Lots		\$71,365	\$3.27	\$83,718		\$3.84
G2030 Pedestrian Plazas and Walkways		\$151,492	\$6.95	\$177,715		\$8.15
G2060 Site Development		\$138,750	\$6.36	\$162,768		\$7.47
G2080 Landscaping		\$85,450	\$3.92	\$100,241		\$4.60
G30 Liquid and Gas Site Utilities		\$725,000	\$33.26	\$850,498		\$39.01
G3010 Water Supply		\$75,000	\$3.44	\$87,983		\$4.04
G3020 Sanitary Sewerage Utilities		\$35,000	\$1.61	\$41,059		\$1.88
G3030 Storm Drainage Utilities		\$600,000	\$27.52	\$703,860		\$32.29
G3090 Liquid and Gas Site Utilities Supplementary Components		\$15,000	\$0.69	\$17,597		\$0.81
G40 Electrical Site Improvements		\$70,000	\$3.21	\$82,117		\$3.77
G4010 Site Electric Distribution Systems		\$50,000	\$2.29	\$58,655		\$2.69
G4050 Site Lighting		\$20,000	\$0.92	\$23,462		\$1.08
Subtotal	Dec 2018	\$11,390,275	\$522.49	Oct 2022	\$13,361,931	\$612.93
General Conditions	7.00%	\$797,319	\$36.57		\$935,335	\$42.91
Subtotal		\$12,187,594	\$559.06		\$14,297,267	\$655.84
General Requirements	3.00%	\$365,628	\$16.77		\$428,918	\$19.68
Subtotal		\$12,553,222	\$575.84		\$14,726,185	\$675.51
Bonds & Insurance	2.00%	\$251,064	\$11.52		\$294,524	\$13.51
Subtotal		\$12,804,286	\$587.35		\$15,020,708	\$689.02
Contractor's Fee	4.00%	\$512,171	\$23.49		\$600,828	\$27.56
Subtotal		\$13,316,458	\$610.85		\$15,621,537	\$716.58
Design Contingency	9.00%	\$1,198,481	\$54.98		\$1,405,938	\$64.49
Subtotal		\$14,514,939	\$665.82		\$17,027,475	\$781.08
Escalation to MOC, 10/15/22	17.31%	\$2,512,536	\$115.25			
TOTAL ESTIMATED CONSTRUCTION COST (to midpoint of construction - Oct 22)		\$17,027,475	\$781.08		\$17,027,475	\$781.08

Total Area: 21,800 SF

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
16-Dec-19

DOCUMENT 3

DETAIL ELEMENTS - FIRE STATION #1 - REVISED FLOOR PLAN

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
A - SUBSTRUCTURE						
A10 Foundations						
A1010 Standard Foundations						
Piles & pile caps - allowance	14,500	sf	\$30.00	\$435,000	\$35.19	\$510,299
Foundation footings and stem walls	14,500	sf	\$10.00	\$145,000	\$11.73	\$170,100
				<u>\$580,000</u>		<u>\$680,399</u>
A10 Foundations				\$580,000		\$680,398
A40 Slabs-on-Grade						
A4010 Standard Slabs-on-Grade						
Slab on grade, complete	14,500	sf	\$11.00	\$159,500	\$12.90	\$187,109
				<u>\$159,500</u>		<u>\$187,109</u>
A4040 Pits and Bases						
Elevator pit	1	ea	\$4,000.00	\$4,000	\$4,692.40	\$4,692
				<u>\$4,000</u>		<u>\$4,692</u>
A40 Slabs-on-Grade				\$163,500		\$191,802
A90 Substructure Related Activities						
A9010 Substructure Excavation						
Foundation excavation and fill	14,500	sf	\$2.00	\$29,000	\$2.35	\$34,020
				<u>\$29,000</u>		<u>\$34,020</u>
A9020 Construction Dewatering						
Dewatering allowance	14,500	sf	\$2.50	\$36,250	\$2.93	\$42,525
Dewatering premium (associated with piles)	14,500	sf	\$2.50	\$36,250	\$2.93	\$42,525
				<u>\$72,500</u>		<u>\$85,050</u>
A90 Substructure Related Activities				\$101,500		\$119,070
A - SUBSTRUCTURE				\$845,000		\$991,270
B - SHELL						
B10 Superstructure						
B1010 Floor Construction						
Second floor deck, concrete on metal decking, reinforced, including columns and framing	7,300	sf	\$55.00	\$401,500	\$64.52	\$471,000
				<u>\$401,500</u>		<u>\$471,000</u>
B1020 Roof Construction						
Roof structure with metal deck, including columns and framing	14,500	sf	\$28.00	\$406,000	\$32.85	\$476,279
				<u>\$406,000</u>		<u>\$476,279</u>
B1080 Stairs						
Egress stairs	2	flights	\$30,000.00	\$60,000	\$35,193.00	\$70,386
				<u>\$60,000</u>		<u>\$70,386</u>
B10 Superstructure				\$867,500		\$1,017,664
B20 Exterior Vertical Enclosures						
B2010 Exterior Walls						
Structural brick, framed, insulated, gypsum board interior	12,369	sf	\$61.00	\$754,486	\$71.56	\$885,087
CIP concrete fascia, framed, insulated, gypsum board interior	2,129	sf	\$85.00	\$180,961	\$99.71	\$212,285
Metal siding, framed, insulated, gypsum board interior	980	sf	\$60.00	\$58,824	\$70.39	\$69,006
Cast concrete cornice	782	lf	\$75.00	\$58,639	\$87.98	\$68,789

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 16-Dec-19

DOCUMENT 3

DETAIL ELEMENTS - FIRE STATION #1 - REVISED FLOOR PLAN

Element	Quantity	Unit	Unit Cost		Total	
			Dec 2018	Oct 2022	Dec 2018	Oct 2022
Metal trim	321	sf	\$50.00		\$16,055	\$18,834
Steel lintel	336	lf	\$15.00		\$5,040	\$5,912
					<u>\$1,074,004</u>	<u>\$1,259,914</u>
B2020 Exterior Windows						
Exterior glazing at lobby - storefront	825	sf	\$95.00		\$78,375	\$91,942
Exterior glazing - fiberglass framed	1,716	sf	\$60.00		\$102,960	\$120,782
					<u>\$181,335</u>	<u>\$212,724</u>
B2050 Exterior Doors and Grilles						
3'x7' HM door and frame	4	ea	\$3,350.00		\$13,400	\$15,720
6'x7' double interior storefront door	1	ea	\$11,000.00		\$11,000	\$12,904.10
East apparatus bay - four-fold doors	4	ea	\$46,000.00		\$184,000	\$215,850
West apparatus bay doors - overhead coiling	3	ea	\$15,000.00		\$45,000	\$52,790
					<u>\$253,400</u>	<u>\$297,264</u>
B20 Exterior Vertical Enclosures					\$1,508,739	\$1,769,902
B30 Exterior Horizontal Enclosures						
B3010 Roofing						
Flat roof, complete	14,500	sf	\$25.00		\$362,500	\$425,249
Metal soffit	68	sf	\$25.00		\$1,710	\$2,006
Wood T&G soffit	217	sf	\$42.00		\$9,097	\$10,672
Parapets (framing included in exterior walls)	3,808	sf	\$15.00		\$57,114	\$67,000
					<u>\$430,421</u>	<u>\$504,927</u>
B30 Exterior Horizontal Enclosures					\$430,421	\$504,927
B - SHELL					\$2,806,661	\$3,292,493
C - INTERIORS						
C10 Interior Construction						
C1010 Interior Partitions						
Partition walls, to deck, insulated	27,628	sf	\$18.00		\$497,304	\$583,387
					<u>\$497,304</u>	<u>\$583,387</u>
C1020 Interior Windows						
Sidelites at offices, conference rooms, and EOC room	10	ea	\$325.00		\$3,250	\$3,813
					<u>\$3,250</u>	<u>\$3,813</u>
C1030 Interior Doors						
3'x7' wood door with frame	62	ea	\$2,200.00		\$136,400	\$160,011
6'x7' double interior storefront door	1	ea	\$10,000.00		\$10,000	\$11,731
					<u>\$146,400</u>	<u>\$171,742</u>
C1070 Suspended Ceiling Construction						
Framed ceilings, with gypsum board	1,771	sf	\$11.00		\$19,481	\$22,853
					<u>\$19,481</u>	<u>\$22,853</u>
C1090 Interior Specialties						
Restroom specialties	1,393	sf	\$15.00		\$20,895	\$24,512
Building specialties - allowance	20,407	sf	\$6.00		\$122,442	\$143,637
					<u>\$143,337</u>	<u>\$168,149</u>
C10 Interior Construction					\$809,772	\$949,944
C20 Interior Finishes						
C2010 Wall Finishes						

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
16-Dec-19

DOCUMENT 3

DETAIL ELEMENTS - FIRE STATION #1 - REVISED FLOOR PLAN

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
Painting	55,256	sf	\$1.00	\$55,256	\$1.17	\$64,821
				<u>\$55,256</u>		<u>\$64,821</u>
C2030 Flooring						
Flooring allowances - including base						
Office & quarters - assume primarily carpet and tile	7,922	sf	\$7.00	\$55,454	\$8.21	\$65,053
Ground floor - assume polished concrete	13,878	sf	\$5.25	\$72,860	\$6.16	\$85,471
				<u>\$128,314</u>		<u>\$150,525</u>
C2040 Stair Finishes						
Allowances	1	ls	\$5,000.00	\$5,000	\$5,865.50	\$5,866
				<u>\$5,000</u>		<u>\$5,866</u>
C2050 Ceiling Finishes						
Painted hard ceilings	1,771	sf	\$0.86	\$1,523	\$1.01	\$1,787
Painted open to structure	9,092	sf	\$2.66	\$24,185	\$3.12	\$28,371
Suspended acoustical ceilings	10,937	sf	\$5.46	\$59,716	\$6.41	\$70,053
				<u>\$85,424</u>		<u>\$100,211</u>
C20 Interior Finishes				\$273,993		\$321,422
C - INTERIORS				\$1,083,765		\$1,271,365
D - SERVICES						
D10 Conveying						
D1010 Vertical Conveying Systems						
Passenger elevator	2	stop	\$75,000.00	\$150,000	\$87,982.50	\$175,965
				<u>\$150,000</u>		<u>\$175,965</u>
D10 Conveying				\$150,000		\$175,965
D20 Plumbing						
D2010 Domestic Water Distribution						
Domestic water piping	21,800	sf	\$8.35	\$182,030	\$9.80	\$213,539
Fixture w/rough-in	21,800	sf	\$8.05	\$175,490	\$9.44	\$205,867
				<u>\$357,520</u>		<u>\$419,407</u>
D2020 Sanitary Drainage						
Waste/vent piping	21,800	sf	\$8.02	\$174,836	\$9.41	\$205,100
				<u>\$174,836</u>		<u>\$205,100</u>
D2030 Building Support Plumbing Systems						
Equipment	21,800	sf	\$1.85	\$40,330	\$2.17	\$47,311
Natural gas system	21,800	sf	\$2.12	\$46,216	\$2.49	\$54,216
Roof Drainage	21,800	sf	\$3.47	\$75,646	\$4.07	\$88,740
Condensate Drainage	21,800	sf	\$2.60	\$56,680	\$3.05	\$66,491
Testing/ firestopping / seismic/ misc	21,800	sf	\$2.20	\$47,960	\$2.58	\$56,262
				<u>\$266,832</u>		<u>\$313,021</u>
D2050 General Service Compressed-Air						
Compressed air	21,800	sf	\$2.11	\$45,998	\$2.48	\$53,960
				<u>\$45,998</u>		<u>\$53,960</u>
D20 Plumbing				\$845,186		\$991,488
D30 Heating, Ventilation, and Air Conditioning (HVAC)						
D3030 Cooling Systems						

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 16-Dec-19

DOCUMENT 3

DETAIL ELEMENTS - FIRE STATION #1 - REVISED FLOOR PLAN

Element	Quantity	Unit	Unit Cost	Total	Unit Cost	Total
			Dec 2018		Oct 2022	
Air side equipment (Split sys, heat pumps, fans)	21,800	sf	\$28.65	\$624,570	\$33.61	\$732,683
Test / balance / firestopping / seismic	21,800	sf	\$2.89	\$63,002	\$3.39	\$73,908
				\$687,572		\$806,591
D3050 Facility HVAC Distribution Systems						
Air distribution	21,800	sf	\$13.10	\$285,580	\$15.37	\$335,014
				\$285,580		\$335,014
D30 Heating, Ventilation, and Air Conditioning (HVAC)				\$973,152		\$1,141,605
D40 Fire Protection						
D4010 Fire Suppression						
Automatic Sprinkler System	21,800	sf	\$6.10	\$132,980	\$7.16	\$155,999
				\$132,980		\$155,999
D40 Fire Protection				\$132,980		\$155,999
D50 Electrical						
D5010 Facility Power Generation						
Generator and ATS	21,800	sf	\$11.47	\$250,000	\$13.45	\$293,275
				\$250,000		\$293,275
D5020 Electrical Service and Distribution						
Distribution Equipment	21,800	sf	\$15.00	\$327,000	\$17.60	\$383,604
				\$327,000		\$383,604
D5030 General Purpose Electrical Power						
HVAC and Equipment Connections	21,800	sf	\$2.25	\$49,050	\$2.64	\$57,541
Convenience Power	21,800	sf	\$6.50	\$141,700	\$7.63	\$166,228
				\$190,750		\$223,769
D5040 Lighting						
Lighting and Lighting Control	21,800	sf	\$21.00	\$457,800	\$24.64	\$537,045
				\$457,800		\$537,045
D5080 Miscellaneous Electrical Systems						
Photovoltaic panels	6,500	sf	\$19.41	\$126,155	\$22.77	\$147,992
Photovoltaic backbone	6,500	sf	\$29.11	\$189,232	\$34.15	\$221,989
				\$315,387		\$369,981
D50 Electrical				\$1,540,937		\$1,807,674
D60 Communications						
D6010 Data Communications						
Voice and Data System	21,800	sf	\$5.50	\$119,900	\$6.45	\$140,655
				\$119,900		\$140,655
D6030 Audio-Video Communication						
PA System	21,800	sf	\$7.00	\$152,600	\$8.21	\$179,015
				\$152,600		\$179,015
D60 Communications				\$272,500		\$319,670
D70 Electronic Safety and Security						
D7010 Access Control and Intrusion Detection						
Access Control System - includes electronic access for all doors	21,800	sf	\$4.15	\$90,470	\$4.87	\$106,130

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
16-Dec-19

DOCUMENT 3

DETAIL ELEMENTS - FIRE STATION #1 - REVISED FLOOR PLAN

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
D7050 Detection and Alarm				\$90,470		\$106,130
Security System	21,800	sf	\$1.50	\$32,700	\$1.76	\$38,360
Fire Alarm System	21,800	sf	\$10.00	\$218,000	\$11.73	\$255,736
				\$250,700		\$294,096
D7070 Electronic Monitoring and Control						
CCTV System	21,800	sf	\$4.00	\$87,200	\$4.69	\$102,294
				\$87,200		\$102,294
D7090 Electronic Safety and Security Supplementary Components						
Alerting System - allowance	1	ls	\$20,000.00	\$20,000	\$23,462.00	\$23,462
				\$20,000		\$23,462
D70 Electronic Safety and Security				\$448,370		\$525,983
D80 Integrated Automation						
D8010 Integrated Automation Facility Controls						
Direct Digital Controls	21,800	sf	\$7.65	\$166,770	\$8.97	\$195,638
				\$166,770		\$195,638
D80 Integrated Automation				\$166,770		\$195,638
D - SERVICES				\$4,529,895		\$5,314,020
E - EQUIPMENT & FURNISHINGS						
E10 Equipment						
E1030 Commercial Equipment						
Install only OFCI food service equipment	1,180	sf	\$8.00	\$9,440	\$9.38	\$11,074
				\$9,440		\$11,074
E1040 Institutional Equipment						
Miscellaneous OFCI equipment install allowance	21,800		\$1.00	\$21,800	\$1.17	\$25,574
				\$21,800		\$25,574
E10 Equipment				\$31,240		\$36,648
E20 Furnishings						
E2010 Fixed Furnishings						
Casework allowance	21,800	sf	\$7.00	\$152,600	\$8.21	\$179,015
				\$152,600		\$179,015
E2050 Movable Furnishings						
Excluded						
E20 Furnishings				\$152,600		\$179,015
E - EQUIPMENT & FURNISHINGS				\$183,840		\$215,663
G - SITEWORK						
G10 Site Preparation						
G1010 Site Clearing						
Site clear and grub	25,021	sf	\$0.10	\$2,502	\$0.12	\$2,935
				\$2,502		\$2,935
G1020 Site Elements Demolition						

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 16-Dec-19

DOCUMENT 3

DETAIL ELEMENTS - FIRE STATION #1 - REVISED FLOOR PLAN

Element	Quantity	Unit	Unit Cost Dec 2018	Total	Unit Cost Oct 2022	Total
Site demolition allowance	25,021	sf	\$2.00	\$50,042	\$2.35	\$58,704
Offsite demolition allowance	4,740	sf	\$3.00	\$14,220	\$3.52	\$16,681
Snoqualmie Street demolition and associated allowances						
Demo asphalt	9,600	sf	\$1.00	\$9,600	\$1.17	\$11,262
Demo sidewalk	2,400	sf	\$3.00	\$7,200	\$3.52	\$8,446
Demo curb and gutter	480	lf	\$6.00	\$2,880	\$7.04	\$3,379
Demo storm drains	2	ea	\$250.00	\$500	\$293.28	\$587
Demo trees	12	ea	\$1,500.00	\$18,000	\$1,759.65	\$21,116
Demo electrical service boxes	2	ea	\$250.00	\$500	\$293.28	\$587
Demo site lighting	6	ea	\$500.00	\$3,000	\$586.55	\$3,519
Haul and dispose	2,500	lcy	\$20.00	\$50,000	\$23.46	\$58,655
Potholing allowance	9,600	sf	\$1.00	\$9,600	\$1.17	\$11,262
Mass excavation - assume 5' deep, includes compacted fill	1,800	cy	\$45.00	\$81,000	\$52.79	\$95,021
Remove utilities as required	240	lf	\$200.00	\$48,000	\$234.62	\$56,309
Cut, trench, relay utilities around site, fill, patch - allowance	580	lf	\$500.00	\$290,000	\$586.55	\$340,199
New fire station warning light	1	ea	\$25,000.00	\$25,000	\$29,327.50	\$29,328
				\$609,542		\$715,054
G1050 Site Remediation						
Excluded						
G1070 Site Earthwork						
Cut, fill, fine grading - assume balanced site	25,021	sf	\$0.50	\$12,511	\$0.59	\$14,676
Erosion control allowance	25,021	sf	\$0.10	\$2,502	\$0.12	\$2,935
				\$15,013		\$17,611
G10 Site Preparation				\$627,057	\$735,600	
G20 Site Improvements						
G2010 Roadways						
Asphalt drives, including curb and gutter	8,000	sf	\$9.00	\$72,000	\$10.56	\$84,463
				\$72,000		\$84,463
G2020 Parking Lots						
Asphalt parking, including curbs, and markings	8,080	sf	\$7.00	\$56,560	\$8.21	\$66,351
Offsite parking, including curbs, and markings	1,645	sf	\$9.00	\$14,805	\$10.56	\$17,368
				\$71,365		\$83,718
G2030 Pedestrian Plazas and Walkways						
Pedestrian Plaza concrete, including all associated work	1,586	sf	\$16.00	\$25,376	\$18.77	\$29,769
Pedestrian Plaza concrete, including all associated work	3,009	sf	\$16.00	\$48,144	\$18.77	\$56,478
Onsite flatwork, including all associated work	750	sf	\$14.00	\$10,500	\$16.42	\$12,318
Offsite flatwork, including all associated work	3,549	sf	\$16.00	\$56,784	\$18.77	\$66,613
Offsite flatwork, including all associated work	668	sf	\$16.00	\$10,688	\$18.77	\$12,538
				\$151,492		\$177,715
G2060 Site Development						
Trash enclosure	1	ea	\$15,000.00	\$15,000	\$17,596.50	\$17,597
Flag pole	1	ea	\$12,000.00	\$12,000	\$14,077.20	\$14,077
Brick/steel picket security fence	222	lf	\$100.00	\$22,200	\$117.31	\$26,043
Brick/steel picket security fence	108	lf	\$100.00	\$10,800	\$117.31	\$12,669
Pedestrian Gate	9	lf	\$250.00	\$2,250	\$293.28	\$2,639
Motorized gate	34	lf	\$2,250.00	\$76,500	\$2,639.48	\$89,742
				\$138,750		\$162,768
G2080 Landscaping						
Seat wall	35	lf	\$250.00	\$8,750	\$293.28	\$10,265
Large trees	6	ea	\$3,500.00	\$21,000	\$4,105.85	\$24,635
Medium trees	6	ea	\$1,100.00	\$6,600	\$1,290.41	\$7,742
Medium trees	3	ea	\$1,100.00	\$3,300	\$1,290.41	\$3,871

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
16-Dec-19

DOCUMENT 3

DETAIL ELEMENTS - FIRE STATION #1 - REVISED FLOOR PLAN

Element	Quantity	Unit	Unit Cost	Total	Unit Cost	Total
			Dec 2018		Oct 2022	
Medium trees	1	ea	\$1,100.00	\$1,100	\$1,290.41	\$1,290
General landscaping, including irrigation	6,235	sf	\$6.00	\$37,410	\$7.04	\$43,886
General landscaping, including irrigation	1,215	sf	\$6.00	\$7,290	\$7.04	\$8,552
				\$85,450		\$100,241
G20 Site Improvements				\$519,057		\$608,906
G30 Site Mechanical Utilities						
G3010 Water Utilities						
Domestic and fire water - allowance	1	ls	\$75,000.00	\$75,000	\$87,982.50	\$87,983
				\$75,000		\$87,983
G3020 Sanitary Sewerage Utilities						
Sanitary sewage - allowance	1	ls	\$35,000.00	\$35,000	\$41,058.50	\$41,059
				\$35,000		\$41,059
G3030 Storm Drainage Utilities						
Stormdrain, including underground storage vault system	1	ls	\$600,000.00	\$600,000	\$703,860.00	\$703,860
				\$600,000		\$703,860
G3090 Liquid and Gas Site Utilities Supplementary Components						
Natural gas - allowance	1	ls	\$15,000.00	\$15,000	\$17,596.50	\$17,597
				\$15,000		\$17,597
G30 Site Mechanical Utilities				\$725,000		\$850,498
G40 Site Electrical Utilities						
G4010 Site Electric Distribution Systems						
Site power - allowance	1	ls	\$50,000.00	\$50,000	\$58,655.00	\$58,655
				\$50,000		\$58,655
G4050 Site Lighting						
Site lighting - allowance	1	ls	\$10,000.00	\$10,000	\$11,731.00	\$11,731
Site lighting - allowance	1	ls	\$10,000.00	\$10,000	\$11,731.00	\$11,731
				\$20,000		\$23,462
G - SITEWORK				\$1,941,114		\$2,277,120

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
16-Dec-19

Fire Station #1 - Revised Floor Plan - Value Engineering Options

FIRE STATION #1 - REVISED FLOOR PLAN - VALUE ENGINEERING OPTIONS

	Base Cost	Markups	Escalation	TOTAL
1. Revise Partitions to Wood Stud Framing	<i>(\$110,512)</i>	<i>(\$30,316)</i>	<i>(\$24,377)</i>	(\$165,206)
2. Revise Floor, Roof, and Stair Systems to Wood Framed Construction	<i>(\$1,103)</i>	<i>(\$303)</i>	<i>(\$243)</i>	(\$1,649)
3. Revise Structural Brick Wall System to Brick Veneer	<i>(\$178,979)</i>	<i>(\$49,099)</i>	<i>(\$39,480)</i>	(\$267,559)
4. Reduce Brick Square Footage	<i>(\$5,050)</i>	<i>(\$1,385)</i>	<i>(\$1,114)</i>	(\$7,549)
5. Replace all Brick Walls with Fiber Cement or Metal Panel Walls	<i>(\$136,076)</i>	<i>(\$37,329)</i>	<i>(\$30,017)</i>	(\$203,422)
6. Revise Cast Concrete Cornices to Manufactured Metal Coping	<i>(\$9,175)</i>	<i>(\$2,517)</i>	<i>(\$2,024)</i>	(\$13,716)
7. Revise Butt-Glazed Entry Storefront to Typical Mullion Type	<i>(\$4,125)</i>	<i>(\$1,132)</i>	<i>(\$910)</i>	(\$6,167)
8. Revise Entry Doors from Double-Swing to Single-Swing Storefront Doors	<i>(\$5,500)</i>	<i>(\$1,509)</i>	<i>(\$1,213)</i>	(\$8,222)
9. Revise Wood Entry Soft to Fiber Cement Soft	<i>(\$5,425)</i>	<i>(\$1,488)</i>	<i>(\$1,197)</i>	(\$8,110)
10. Reduce Parapet Heights Throughout and Center RTU's to Ease Screening	<i>(\$81,313)</i>	<i>(\$22,306)</i>	<i>(\$17,937)</i>	(\$121,556)
11. Reduce Sidelite Count throughout Interior	<i>(\$3,250)</i>	<i>(\$892)</i>	<i>(\$717)</i>	(\$4,858)
12. Revise Polished Concrete Floors at App Bay and Utility Functions to Sealed Concrete	<i>(\$45,104)</i>	<i>(\$12,373)</i>	<i>(\$9,949)</i>	(\$67,426)
13. Remove Photovoltaic Panels and Backbone from Roof	<i>(\$315,387)</i>	<i>(\$86,519)</i>	<i>(\$69,570)</i>	(\$471,477)
14. Reduce Casework Scope	<i>(\$45,350)</i>	<i>(\$12,441)</i>	<i>(\$10,004)</i>	(\$67,794)
15. Reduce / Re-Design Concrete Entry Element	<i>(\$18,500)</i>	<i>(\$5,075)</i>	<i>(\$4,081)</i>	(\$27,656)
16. Reduce / Remove Concrete Seatwalls	<i>(\$5,000)</i>	<i>(\$1,372)</i>	<i>(\$1,103)</i>	(\$7,475)
17. Reduce Brick Square Footage from Site Fence	<i>(\$9,823)</i>	<i>(\$2,695)</i>	<i>(\$2,167)</i>	(\$14,684)
18. Revise Floor, Roof, Stair and Wall Systems to CLT construction	\$446,682	\$122,537	\$98,532	\$667,751

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 16-Dec-19

DOCUMENT 3

FIRE STATION #1 - VALUE ENGINEERING OPTIONS

Element	Quantity	Unit	Unit Cost	Total
1. Revise Partitions to Wood Stud Framing				
Internal stud partitions only				
<u>Delete</u>				
Partition walls, to deck, insulated (metal studs)	(27,628)	sf	\$18.00	(\$497,304)
<u>Add</u>				
Partition walls, to deck, insulated (timber studs)	27,628	sf	\$14.00	\$386,792
1. Revise Partitions to Wood Stud Framing				(\$110,512)
2. Revise Floor, Roof, and Stair Systems to Wood Framed Construction				
<u>Delete</u>				
Second floor deck, concrete on metal decking, reinforced	(7,300)	sf		
1 1/2", 18 Ga. metal deck	(7,300)	sf	\$7.40	(\$54,020)
Deck edging, 16 Ga.	(350)	lf	\$51.32	(\$17,962)
Elevated slab reinforcing	(10,950)	lbs	\$1.49	(\$16,316)
3 1/2" thick normal weight concrete deck topping, 3000 psi, incl. reinforcing	(62)	cy	\$279.00	(\$17,287)
Roof structure with metal deck	(14,500)	sf		
1 1/2", 20 Ga. metal deck	(14,500)	sf	\$6.15	(\$89,175)
Deck edging, 16 Ga.	(490)	lf	\$51.32	(\$25,147)
Elevated slab reinforcing	(14,500)	lbs	\$1.49	(\$21,605)
3 1/2" thick lightweight concrete deck topping, incl. reinforcing	(123)	cy	\$215.17	(\$26,481)
Egress stairs	(2)	flights	\$30,000.00	(\$60,000)
<u>Add</u>				
Second floor deck, timber joists, plywood covering	7,300	sf		
Wood truss framing, 14" IJ @ 16" o.c.	7,300	sf	\$10.83	\$79,059
Plywood floor sheathing, 3/4"	7,300	sf	\$3.32	\$24,236
Roof structure with timber joists, plywood covering	14,600	sf		
Wood truss framing, 9 1/2" IJ @ 16" o.c.	14,600	sf	\$8.67	\$126,582
Roof sheathing, 1/2"	14,600	sf	\$3.22	\$47,012
Egress stairs	2	flights	\$25,000.00	\$50,000
2. Revise Floor, Roof, and Stair Systems to Wood Framed Construction				(\$1,103)
3. Revise Structural Brick Wall System to Brick Veneer				
<u>Delete</u>				
Structural brick, framed, insulated, gypsum board interior	(12,369)	sf		
Brick, structural, standard unit, grade SW, 4-5/8"x2-3/4"x9-5/8", includes mortar	(12,369)	sf	\$38.24	(\$472,991)
Reinforcing, 5 psf	(61,845)	lb	\$1.58	(\$97,715)
Metal studs, 3 5/8", 20 Ga., at 16" o.c.	(12,369)	sf	\$11.36	(\$140,512)
Polyethylene Vapor barrier	(12,369)	sf	\$0.31	(\$3,834)
Batt insulation	(12,369)	sf	\$1.83	(\$22,635)
Gypsum board, 5/8" thick, finished (I4), type X	(12,369)	sf	\$3.49	(\$43,168)
<u>Add</u>				
Veneer brick, framed, insulated, gypsum board interior	12,369	sf		
Brick veneer masonry, standard brick, 4"x2-2/3"x8"	12,369	sf	\$19.62	\$242,680
Felt paper sheathing	12,369	sf	\$0.32	\$3,958
Tiebacks	12,369	sf	\$0.08	\$990
1/2" plywood sheathing	12,369	sf	\$2.94	\$36,365

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
16-Dec-19

DOCUMENT 3

FIRE STATION #1 - VALUE ENGINEERING OPTIONS

Element	Quantity	Unit	Unit Cost	Total
Exterior metal stud framing, 6" 18 Ga. at 16" o.c.	12,369	sf	\$20.38	\$252,080
Batt insulation	12,369	sf	\$1.83	\$22,635
Gypsum board, 5/8" thick, finished (I4), type X	12,369	sf	\$3.49	\$43,168
3. Revise Structural Brick Wall System to Brick Veneer				(\$178,979)

4. Reduce Brick Square Footage

Delete

Structural brick, framed, insulated, gypsum board interior	(5,050)	sf	\$61.00	(\$308,050)
--	---------	----	---------	-------------

Add

Metal siding, framed, insulated, gypsum board interior	5,050	sf	\$60.00	\$303,000
--	-------	----	---------	-----------

4. Reduce Brick Square Footage **(\$5,050)**

5. Replace all Brick Walls with Fiber Cement or Metal Panel Walls

Delete

Structural brick, framed, insulated, gypsum board interior	(12,369)	sf		
Brick, structural, standard unit, grade SW, 4-5/8"x2-3/4"x9'5/8", includes mortar	(12,369)	sf	\$38.24	(\$472,976)
Reinforcing, 5 psf	(61,843)	lb	\$1.58	(\$97,712)
Metal studs, 3 5/8", 20 Ga., at 16" o.c.	(12,369)	sf	\$11.36	(\$140,508)
Polyethylene Vapor barrier	(12,369)	sf	\$0.31	(\$3,834)
Batt insulation	(12,369)	sf	\$1.83	(\$22,635)
Gypsum board, 5/8" thick, finished (I4), type X	(12,369)	sf	\$3.49	(\$43,166)

Add

Fiber cement, framed, insulated, gypsum board interior	12,369	sf		
Glass mesh reinforced lamina and synthetic stucco finish	12,369	sf	\$7.85	\$97,055
4" EPS insulation	12,369	sf	\$11.32	\$140,017
Liquid applied water control layer	12,369	sf	\$4.01	\$49,600
Exterior sheathing	12,369	sf	\$2.94	\$36,365
Exterior metal stud framing, 6" 18 Ga. at 16" o.c.	12,369	sf	\$20.38	\$252,080
Polyethylene Vapor barrier	12,369	sf	\$0.31	\$3,834
Batt insulation	12,369	sf	\$1.83	\$22,635
Gypsum board, 5/8" thick, finished (I4), type X	12,369	sf	\$3.49	\$43,168

5. Replace all Brick Walls with Fiber Cement or Metal Panel Walls **(\$136,076)**

6. Revise Cast Concrete Cornices to Manufactured Metal Coping

Delete

Cast concrete cornice	(782)	lf	\$75.00	(\$58,650)
-----------------------	-------	----	---------	------------

Add

Metal trim	895	sf	\$50.00	\$44,750
Metal soffit	189	sf	\$25.00	\$4,725

6. Revise Cast Concrete Cornices to Manufactured Metal Coping **(\$9,175)**

7. Revise Butt-Glazed Entry Storefront to Typical Mullion Type

Delete

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 16-Dec-19

DOCUMENT 3

FIRE STATION #1 - VALUE ENGINEERING OPTIONS

Element	Quantity	Unit	Unit Cost	Total
Exterior glazing at lobby - storefront <i>Assumes thicker glazing and approximately half the mullions</i>	(825)	sf		
1" insulated glass	(825)	sf	\$65.00	(\$53,625.00)
Aluminum mullion system	(825)	sf	\$30.00	(\$24,750.00)
Add				
Exterior glazing at lobby - storefront	825	sf		
1/2" insulated glass	825	sf	\$45.00	\$37,125.00
Aluminum mullion system	825	sf	\$45.00	\$37,125.00
7. Revise Butt-Glazed Entry Storefront to Typical Mullion Type				(\$4,125)
8. Revise Entry Doors from Double-Swing to Single-Swing Storefront Doors				
Delete				
Double swing door	(1)	ea	\$11,000.00	(\$11,000)
Add				
Single swing door	1	ea	\$5,500.00	\$5,500
8. Revise Entry Doors from Double-Swing to Single-Swing Storefront Doors				(\$5,500)
9. Revise Wood Entry Soft to Fiber Cement Soft				
Delete				
Wood T&G soffit	(217)	sf	\$42.00	(\$9,114)
Add				
Fibre cement soffit	217	sf	\$17.00	\$3,689
9. Revise Wood Entry Soft to Fiber Cement Soft				(\$5,425)
10. Reduce Parapet Heights Throughout and Center RTU's to Ease Screening				
Delete				
Structural brick, framed, insulated, gypsum board interior	(1,333)	sf	\$61.00	(\$81,313)
10. Reduce Parapet Heights Throughout and Center RTU's to Ease Screening				(\$81,313)
11. Reduce Sidelite Count throughout Interior				
Delete				
Sidelites at offices, conference rooms, and EOC room	(10)	ea	\$325.00	(\$3,250)
11. Reduce Sidelite Count throughout Interior				(\$3,250)
12. Revise Polished Concrete Floors at App Bay and Utility Functions to Sealed Concrete				
Delete				
Polished concrete	(13,878)	sf	\$5.25	(\$72,860)

Mount Vernon Fire Department
Mount Vernon, WA
Conceptual - Rev 5

Project # 18-01155.00
16-Dec-19

DOCUMENT 3

FIRE STATION #1 - VALUE ENGINEERING OPTIONS

Element	Quantity	Unit	Unit Cost	Total
Add				
Sealed concrete	13,878	sf	\$2.00	\$27,756
12. Revise Polished Concrete Floors at App Bay and Utility Functions to Sealed Concrete				(\$45,104)
13. Remove Photovoltaic Panels and Backbone from Roof				
Delete				
Photovoltaic panels	(6,500)	sf	\$19.41	(\$126,155)
Photovoltaic backbone	(6,500)	sf	\$29.11	(\$189,232)
13. Remove Photovoltaic Panels and Backbone from Roof				(\$315,387)
14. Reduce Casework Scope				
Delete				
Casework allowance	(1)	ls	\$152,600.00	(\$152,600)
Add				
Casework	330	lf	\$325.00	\$107,250
14. Reduce Casework Scope				(\$45,350)
15. Reduce / Re-Design Concrete Entry Element				
Delete				
CIP concrete fascia, framed, insulated, gypsum board interior	(925)	sf	\$85.00	(\$78,625)
Add				
Metal siding, framed, insulated, gypsum board interior	925	sf	\$65.00	\$60,125
15. Reduce / Re-Design Concrete Entry Element				(\$18,500)
16. Reduce / Remove Concrete Seatwalls				
Delete				
Seat wall	(20)	sf	\$250.00	(\$5,000)
16. Reduce / Remove Concrete Seatwalls				(\$5,000)
17. Reduce Brick Square Footage from Site Fence				
Delete				
Brick wall	(263)	sf		
<i>Assumes 24" high x 12" thick brick wall with precast cap</i>				
Brick, structural, standard unit, grade SW, 4-5/8"x2-3/4"x9'5/8", includes mortar	(263)	sf	\$38.24	(\$10,057)
Precast cap	(80.0)	lf	\$52.07	(\$4,166)
Add				
Metal post fencing	80	lf	\$55.00	\$4,400

Mount Vernon Fire Department
 Mount Vernon, WA
 Conceptual - Rev 5

Project # 18-01155.00
 16-Dec-19

DOCUMENT 3

FIRE STATION #1 - VALUE ENGINEERING OPTIONS

Element	Quantity	Unit	Unit Cost	Total
17. Reduce Brick Square Footage from Site Fence				(\$9,823)
18. Revise Floor, Roof, Stair and Wall Systems to CLT construction				
<u>Delete</u> Steel frame			(\$33.51) \$/sf	
<u>Add</u> Timber GLB frame with CLT panels			\$54.00 \$/sf	
	21,800	sf	\$20.49	\$446,682
18. Revise Floor, Roof, Stair and Wall Systems to CLT construction				\$446,682



Mt. Vernon Fire Station #1
Mt. Vernon, WA

Conceptual - VE
January 27, 2020
Cumming Project No. 18-01155.00



Prepared for Mackenzie

1325 FOURTH AVENUE, SUITE 1010 • SEATTLE • WASHINGTON • 98101
PHONE: 206-876-8008 • FAX: 206-973-1092



Mt. Vernon Fire Station - VE Exercise
 Monday, January 27, 2020

	Direct Cost of Construction	Total Cost of Construction
Option A - Structural Brick Exterior with Steel Framed Structure	\$1,964,925	\$2,937,393
Option B - Brick Veneer Exterior with Wood Framed Structure	\$1,334,796	\$1,995,404
Option B - Anticipated Net Savings	\$630,129	\$941,989

Mt. Vernon Fire Station - VE Exercise

Monday, January 27, 2020

Option A - Structural Brick Exterior with Steel Framed Structure

Description	Qty	Unit	Unit Cost	Total
Structural brick exterior bearing walls				
Brick, structural, standard unit, grade SW, 4-5/8"x2-3/4"x9'5/8", includes mortar	12,369	sf	\$38.24	\$472,991
Reinforcing, 5 psf	61,845	lb	\$1.58	\$97,715
Metal studs, 3 5/8", 20 Ga., at 16" o.c.	12,369	sf	\$11.36	\$140,512
Polyethylene Vapor barrier	12,369	sf	\$0.31	\$3,834
Batt insulation	12,369	sf	\$1.83	\$22,635
Gypsum board, 5/8" thick, finished (I4), type X	12,369	sf	\$3.49	\$43,168
Subtotal Structural brick exterior bearing walls				\$780,855
Structural steel interior framing				
HSS6x6x5/8, incl 15% waste and connections (638 vlf total)	16	tn	\$4,500.00	\$72,000
W24x84 beams, incl 10% waste (437 lf total)	16	tn	\$4,500.00	\$72,000
W16x26 beams, incl 10% waste (898 lf total)	16	tn	\$4,500.00	\$72,000
W18x40 beams, incl 10% waste (553 lf total)	13	tn	\$4,500.00	\$58,500
20 K5 joists, (1,624 lf total)	1,624	lf	\$32.66	\$53,040
Subtotal Structural steel interior framing				\$327,540
Metal stud infill partitions				
Metal studs, 3 5/8", 20 Ga., at 16" o.c.	27,628	sf	\$11.36	\$313,854
Gypsum board, 5/8" thick, finished (I4), type X	55,256	sf	\$3.49	\$192,843
Bolt bottom stud channel to concrete floor	2,125	lf	\$12.73	\$27,054
Bolt top stud channel to structure above incl. double top track	2,125	lf	\$24.65	\$52,387
Sound batt insulation, unbacked	27,628	sf	\$1.34	\$37,022
Subtotal Metal stud infill partitions				\$623,160
Concrete and metal deck floor assembly				
3" 18 ga metal deck	7,300	sf	\$9.61	\$70,153
Bent plate closure angle at floor deck	355	lf	\$51.32	\$18,219
4" concrete, 10% waste with 1.5 psf rebar	136	cy	\$193.41	\$26,364
1.5 psf rebar	204	lb	\$1.49	\$305
Subtotal Concrete and metal deck floor assembly				\$115,040
Metal decking for roof				
1-1/2" 18 ga metal deck	14,600	sf	\$7.40	\$108,040
Deck edging, 16 Ga.	700	lf	\$14.70	\$10,290
Subtotal Metal decking for roof				\$118,330
Total Direct Construction Cost				\$1,964,925
General Conditions	7.00%			\$137,545
Subtotal				\$2,102,470
General Requirements	3.00%			\$63,074.10
Subtotal				\$2,165,544
Bonds & Insurance	2.00%			\$43,310.88
Subtotal				\$2,208,855
Contractor's Fee	4.00%			\$88,354.20
Subtotal				\$2,297,209
Design Contingency	9.00%			\$206,748.83
Subtotal				\$2,503,958
Escalation to MOC, 10/15/22	17.31%			\$433,435.14
TOTAL				\$2,937,393

CUMMING

Mt. Vernon Fire Station - VE Exercise
Monday, January 27, 2020

Option B - Brick Veneer Exterior with Wood Framed Structure

Description	Qty	Unit	Unit Cost	Total
Brick veneer tied back to stud framing				
Brick veneer masonry, standard brick, 4"x2-2/3"x8"	12,369	sf	\$19.62	\$242,680
Felt paper sheathing	12,369	sf	\$0.32	\$3,958
Tiebacks	12,369	sf	\$0.08	\$990
1/2" plywood sheathing	12,369	sf	\$2.94	\$36,365
Exterior metal stud framing, 6" 18 Ga. at 16" o.c.	12,369	sf	\$20.38	\$252,080
Batt insulation	12,369	sf	\$1.83	\$22,635
Gypsum board, 5/8" thick, finished (I4), type X	12,369	sf	\$3.49	\$43,168
Subtotal Brick veneer tied back to stud framing				\$601,876
Wood load bearing studs throughout as needed				
Wood studs, 2x4, at 16" o.c.	27,628	sf	\$4.93	\$136,206
4" x 6" posts, allowance, one post per 30' of partition wall	921	vf	\$31.41	\$28,929
Gypsum board, 5/8" thick, finished (I4), type X	55,256	sf	\$3.49	\$192,843
Bolt bottom plate to concrete floor	2,125	lf	\$12.73	\$27,054
Bolt top plate to structure above incl. double top plate	2,125	lf	\$24.65	\$52,387
Sound batt insulation, unbacked	27,628	sf	\$1.34	\$37,022
Subtotal Wood load bearing studs throughout as needed				\$474,441
Wood TJI joists supporting floor assembly				
16" TJI 230 joists	5,590	lf	\$12.38	\$69,204
Blocking	7,300	sf	\$2.50	\$18,250
Hangers	130	ea	\$10.00	\$1,300
Subtotal Wood TJI joists supporting floor assembly				\$88,754
Wood truss supporting roof assembly				
24" Red-H Redbuilt trusses	5,566	lf	\$10.15	\$56,495
Truss hardware	96	ea	\$15.00	\$1,440
Subtotal Wood truss supporting roof assembly				\$57,935
Plywood with topping slab floor assembly				
3/4" plywood floor decking	7,300	sf	\$7.40	\$54,020
Lightweight concrete topping slab, 2" thick, 10% waste	50	cy	\$215.17	\$10,759
Subtotal Plywood with topping slab floor assembly				\$64,779
Plywood for roof				
1/2" OSB	14,600	sf	\$3.22	\$47,012
Subtotal Plywood for roof				\$47,012
Total Direct Construction Cost				\$1,334,796
General Conditions	7.00%			\$93,436
Subtotal				\$1,428,232
General Requirements	3.00%			\$42,846.95
Subtotal				\$1,471,079
Bonds & Insurance	2.00%			\$29,421.57
Subtotal				\$1,500,500
Contractor's Fee	4.00%			\$60,020.00
Subtotal				\$1,560,520
Design Contingency	9.00%			\$140,446.81
Subtotal				\$1,700,967
Escalation to MOC, 10/15/22	17.31%			\$294,437.37
TOTAL				\$1,995,404

Prepared by Cumming

Page 4 of 4

THIS PAGE INTENTIONALLY LEFT BLANK

COST SUMMARY DOCUMENTS



APPENDIX D

THIS PAGE INTENTIONALLY LEFT BLANK

Mount Vernon Fire Department - Cost Summary

Renovations/ Additions / New Construction		12/14/2018		
	11/16/18 Cost Est.	11/16/18 Cost Est.	11/16/18 Cost Est.	Comments
Construction Cost of Facility	STATION 1	STATION 2	STATION 3	
Building Hardcost	\$13,869,478	\$1,875,403	\$3,075,446	
On-Site Hardcost	\$1,547,526	\$106,683	\$144,719	
Off-Site Hardcost	\$1,131,041	\$0	\$0	
Subtotal	\$16,548,045	\$1,982,086	\$3,220,165	
Margins				
Owner's Contingency	\$1,241,103	\$148,656	\$241,512	7.5% Allowance
Sales Tax	\$1,547,656 ¹	\$185,375 ¹	\$301,166 ¹	8.7% Combined State & City
Subtotal	\$2,788,759	\$334,031	\$542,678	
Total Construction Costs	\$19,336,804	\$2,316,117	\$3,762,843	
	\$805.70 /sf	\$165.09 /sf	\$374.52 /sf	
Consultants Costs	STATION 1	STATION 2	STATION 3	
A/E Design and Construction - Base	\$1,564,816 ²	\$296,007 ²	\$462,493 ²	A/E Guidelines - Off. Of Financial Mgmt. - WA
Reimbursables	\$46,944	\$8,880	\$13,875	3.0% Allowance
Owner's Project Manager	\$120,000	\$35,000	\$35,000	
Marketing Materials	\$0	\$0	\$0	
Topo and Boundary Survey	\$0 ³	\$0 ³	\$0 ³	By City of M.V.
Geotechnical Investigations	\$0 ³	\$0 ³	\$0 ³	By City of M.V.
Special Inspections	\$35,000	\$10,000	\$10,000	Allowance
Geotechnical Field Inspections	\$10,000	\$3,000	\$4,000	Allowance
Environmental Services	\$0	\$0	\$0	
Transportation Engineering	\$0	\$0	\$0	
Haz. Material Survey/Testing/Mitigation Specs	\$0	\$8,000	\$8,000	
Commissioning	\$0	\$0	\$0	
Arborist	\$0	\$0	\$0	By City
Subtotal - Consultants	\$1,776,760	\$360,887	\$533,368	
Consultants Contingency	\$133,257	\$27,067	\$40,003	7.5%
Total Consultants Costs	\$1,910,018	\$387,954	\$573,370	
	\$79.58 /sf	\$27.65 /sf	\$57.07 /sf	
Owner Costs	STATION 1	STATION 2	STATION 3	
Land Acquisition	\$0	\$0	\$0	
Fixtures, Furniture & Equipment (FF&E)	\$528,509	\$107,030	\$74,608	Allowance
Fitness Equipment	\$0	\$0	\$0	
Telephone/Data/AV/Security Equipment	\$0	\$0	\$0	
Moving Allowance	\$0	\$0	\$0	N/A
Temporary Facilities	\$0	\$0	\$0	N/A
Permit Fees	\$259,728	\$168,025	\$168,834	
Subtotal - Owner Costs	\$788,237	\$275,055	\$243,442	
Owner Contingency	\$59,118	\$20,629	\$18,258	7.5% of Owner Costs
Sales Tax	\$73,720 ¹	\$25,725 ¹	\$22,768 ¹	8.7% Combined State & City
Total Owner Costs	\$921,075	\$321,409	\$284,468	
	\$38.38 /sf	\$22.91 /sf	\$28.31 /sf	
Individual Total Project Cost	\$22,167,896	\$3,025,479	\$4,620,682	
	\$923.66 /sf	\$215.66 /sf	\$459.91 /sf	
COMBINED TOTAL PROJECT COST	\$29,814,057.62			
Building Size (SF):	24,000 SF	14,029 SF	10,047 SF	

Mount Vernon Fire Department - Base Cost Escalation Summary

Renovations/ Additions / New Construction		1/17/2020		
	12/13/19 Cost Est.	12/13/19 Cost Est.	12/13/19 Cost Est.	Comments
Construction Cost of Facility	STATION 1	STATION 2	STATION 3	
Building Hardcost	\$15,835,394	\$2,101,931	\$3,449,746	
On-Site Hardcost	\$1,448,866	\$130,089	\$176,470	
Off-Site Hardcost	\$828,254	\$0	\$0	
Subtotal	\$18,112,514	\$2,232,020	\$3,626,216	
Margins				
Owner's Contingency	\$1,358,439	\$167,402	\$271,966	7.5% Allowance
Sales Tax	\$1,693,973 ¹	\$208,750 ¹	\$339,142 ¹	8.7% Combined State & City
Subtotal	\$3,052,411	\$376,151	\$611,108	
Total Construction Costs	\$21,164,925	\$2,608,171	\$4,237,324	
	\$881.87 /sf	\$190.27 /sf	\$421.75 /sf	
Consultants Costs	STATION 1	STATION 2	STATION 3	
A/E Design and Construction - Base	\$1,712,756 ²	\$333,333 ²	\$520,812 ²	A/E Guidelines - Off. Of Financial Mgmt. - WA
Reimbursables	\$51,383	\$10,000	\$15,624	3.0% Allowance
Owner's Project Manager	\$120,000	\$35,000	\$35,000	
Marketing Materials	\$0	\$0	\$0	
Topo and Boundary Survey	\$0 ³	\$0 ³	\$0 ³	By City of M.V.
Geotechnical Investigations	\$0 ³	\$0 ³	\$0 ³	By City of M.V.
Special Inspections	\$35,000	\$10,000	\$10,000	Allowance
Geotechnical Field Inspections	\$10,000	\$3,000	\$4,000	Allowance
Environmental Services	\$0	\$0	\$0	
Transportation Engineering	\$0	\$0	\$0	
Haz. Material Survey/Testing/Mitigation Specs	\$0	\$8,000	\$8,000	
Commissioning	\$0	\$0	\$0	
Arborist	\$0	\$0	\$0	By City
Subtotal - Consultants	\$1,929,138	\$399,333	\$593,437	
Consultants Contingency	\$144,685	\$29,950	\$44,508	7.5%
Total Consultants Costs	\$2,073,824	\$429,283	\$637,944	
	\$86.41 /sf	\$31.32 /sf	\$63.50 /sf	
Owner Costs	STATION 1	STATION 2	STATION 3	
Land Acquisition	\$0	\$0	\$0	
Fixtures, Furniture & Equipment (FF&E)	\$528,509	\$107,030	\$74,608	Allowance
Fitness Equipment	\$0	\$0	\$0	
Telephone/Data/AV/Security Equipment	\$0	\$0	\$0	
Moving Allowance	\$0	\$0	\$0	N/A
Temporary Facilities	\$0	\$0	\$0	N/A
Permit Fees	\$271,923	\$168,926	\$170,960	
Subtotal - Owner Costs	\$800,432	\$275,956	\$245,568	
Owner Contingency	\$60,032	\$20,697	\$18,418	7.5% of Owner Costs
Sales Tax	\$74,860 ¹	\$25,809 ¹	\$22,967 ¹	8.7% Combined State & City
Total Owner Costs	\$935,325	\$322,461	\$286,952	
	\$38.97 /sf	\$23.52 /sf	\$28.56 /sf	
Individual Total Project Cost	\$24,174,074	\$3,359,915	\$5,162,221	
	\$1,007.25 /sf	\$245.11 /sf	\$513.81 /sf	
COMBINED TOTAL PROJECT COST	\$32,696,210.19			
<i>Building Size (SF):</i>	<i>24,000 SF</i>	<i>13,708 SF</i>	<i>10,047 SF</i>	

Mount Vernon Fire Department - Task 2 Cost Summary

Renovations/ Additions / New Construction

1/17/2020

	12/13/19 Cost Est.	12/13/19 Cost Est.	12/13/19 Cost Est.	Comments
Construction Cost of Facility	STATION 1	STATION 2	STATION 3	
Building Hardcost	\$12,544,579	\$2,932,205	\$3,449,746	
On-Site Hardcost	\$1,448,866	\$292,454	\$176,470	
Off-Site Hardcost	\$828,254	\$0	\$0	
Subtotal	\$14,821,699	\$3,224,659	\$3,626,216	
Margins				
Owner's Contingency	\$1,111,627	\$241,849	\$271,966	7.5% Allowance
Sales Tax	\$1,386,199 ¹	\$301,586 ¹	\$339,142 ¹	8.7% Combined State & City
Subtotal	\$2,497,827	\$543,436	\$611,108	
Total Construction Costs	\$17,319,526	\$3,768,095	\$4,237,324	
	\$1,056.13 /sf	\$237.02 /sf	\$421.75 /sf	
Consultants Costs	STATION 1	STATION 2	STATION 3	
A/E Design and Construction - Base	\$1,401,570 ²	\$481,575 ²	\$520,812 ²	A/E Guidelines - Off. Of Financial Mgmt. - WA
Reimbursables	\$42,047	\$14,447	\$15,624	3.0% Allowance
Owner's Project Manager	\$120,000	\$35,000	\$35,000	
Marketing Materials	\$0	\$0	\$0	
Topo and Boundary Survey	\$0 ³	\$0 ³	\$0 ³	By City of M.V.
Geotechnical Investigations	\$0 ³	\$0 ³	\$0 ³	By City of M.V.
Special Inspections	\$35,000	\$10,000	\$10,000	Allowance
Geotechnical Field Inspections	\$10,000	\$3,000	\$4,000	Allowance
Environmental Services	\$0	\$0	\$0	
Transportation Engineering	\$0	\$0	\$0	
Haz. Material Survey/Testing/Mitigation Specs	\$0	\$8,000	\$8,000	
Commissioning	\$0	\$0	\$0	
Arborist	\$0	\$0	\$0	By City
Subtotal - Consultants	\$1,608,617	\$552,022	\$593,437	
Consultants Contingency	\$120,646	\$41,402	\$44,508	7.5%
Total Consultants Costs	\$1,729,263	\$593,424	\$637,944	
	\$105.45 /sf	\$37.33 /sf	\$63.50 /sf	
Owner Costs	STATION 1	STATION 2	STATION 3	
Land Acquisition	\$0	\$0	\$0	
Fixtures, Furniture & Equipment (FF&E)	\$455,639	\$160,700	\$74,608	Allowance
Fitness Equipment	\$0	\$0	\$0	
Telephone/Data/AV/Security Equipment	\$0	\$0	\$0	
Moving Allowance	\$0	\$0	\$0	N/A
Temporary Facilities	\$0	\$0	\$0	N/A
Permit Fees	\$238,374	\$177,861	\$170,960	
Subtotal - Owner Costs	\$694,013	\$338,561	\$245,568	
Owner Contingency	\$52,051	\$25,392	\$18,418	7.5% of Owner Costs
Sales Tax	\$64,908 ¹	\$31,664 ¹	\$22,967 ¹	8.7% Combined State & City
Total Owner Costs	\$810,972	\$395,617	\$286,952	
	\$49.45 /sf	\$24.88 /sf	\$28.56 /sf	
Individual Total Project Cost	\$19,859,760	\$4,757,135	\$5,162,221	
	\$1,211.03 /sf	\$299.23 /sf	\$513.81 /sf	
COMBINED TOTAL PROJECT COST	\$29,779,116.53			
<i>Building Size (SF):</i>	<i>16,399 SF</i>	<i>15,898 SF</i>	<i>10,047 SF</i>	

Mount Vernon Fire Department - Task 3 Cost Summary

Renovations/ Additions / New Construction		1/17/2020		
	12/16/19 Cost Est.	12/16/19 Cost Est.	12/16/19 Cost Est.	Comments
Construction Cost of Facility				
	STATION 1	STATION 2	STATION 3	
Building Hardcost	\$13,003,835	\$2,101,931	\$3,449,746	
On-Site Hardcost	\$1,426,707	\$130,089	\$176,470	
Off-Site Hardcost	\$828,254	\$0	\$0	
Subtotal	\$15,258,796	\$2,232,020	\$3,626,216	
Margins				
Owner's Contingency	\$1,144,410	\$167,402	\$271,966	7.5% Allowance
Sales Tax	\$1,427,079 ¹	\$208,750 ¹	\$339,142 ¹	8.7% Combined State & City
Subtotal	\$2,571,489	\$376,151	\$611,108	
Total Construction Costs	\$17,830,285	\$2,608,171	\$4,237,324	
	\$819.18 /sf	\$190.27 /sf	\$421.75 /sf	
Consultants Costs				
	STATION 1	STATION 2	STATION 3	
A/E Design and Construction - Base	\$1,442,902 ²	\$333,333 ²	\$520,812 ²	A/E Guidelines - Off. Of Financial Mgmt. - WA
Reimbursables	\$43,287	\$10,000	\$15,624	3.0% Allowance
Owner's Project Manager	\$120,000	\$35,000	\$35,000	
Marketing Materials	\$0	\$0	\$0	
Topo and Boundary Survey	\$0 ³	\$0 ³	\$0 ³	By City of M.V.
Geotechnical Investigations	\$0 ³	\$0 ³	\$0 ³	By City of M.V.
Special Inspections	\$35,000	\$10,000	\$10,000	Allowance
Geotechnical Field Inspections	\$10,000	\$3,000	\$4,000	Allowance
Environmental Services	\$0	\$0	\$0	
Transportation Engineering	\$0	\$0	\$0	
Haz. Material Survey/Testing/Mitigation Specs	\$0	\$8,000	\$8,000	
Commissioning	\$0	\$0	\$0	
Arborist	\$0	\$0	\$0	By City
Subtotal - Consultants	\$1,651,189	\$399,333	\$593,437	
Consultants Contingency	\$123,839	\$29,950	\$44,508	7.5%
Total Consultants Costs	\$1,775,028	\$429,283	\$637,944	
	\$81.55 /sf	\$31.32 /sf	\$63.50 /sf	
Owner Costs				
	STATION 1	STATION 2	STATION 3	
Land Acquisition	\$0	\$0	\$0	
Fixtures, Furniture & Equipment (FF&E)	\$528,509	\$107,030	\$74,608	Allowance
Fitness Equipment	\$0	\$0	\$0	
Telephone/Data/AV/Security Equipment	\$0	\$0	\$0	
Moving Allowance	\$0	\$0	\$0	N/A
Temporary Facilities	\$0	\$0	\$0	N/A
Permit Fees	\$250,497	\$168,926	\$170,960	
Subtotal - Owner Costs	\$779,006	\$275,956	\$245,568	
Owner Contingency	\$58,425	\$20,697	\$18,418	7.5% of Owner Costs
Sales Tax	\$72,857 ¹	\$25,809 ¹	\$22,967 ¹	8.7% Combined State & City
Total Owner Costs	\$910,288	\$322,461	\$286,952	
	\$41.82 /sf	\$23.52 /sf	\$28.56 /sf	
Individual Total Project Cost	\$20,515,601	\$3,359,915	\$5,162,221	
	\$942.55 /sf	\$245.11 /sf	\$513.81 /sf	
COMBINED TOTAL PROJECT COST	\$29,037,736.99			
Building Size (SF):	21,766 SF	13,708 SF	10,047 SF	

THIS PAGE INTENTIONALLY LEFT BLANK

Back Cover