

**Sand Point
Potential Partnership Study**

**Building No. 2
Repair Hanger**



Sand Point Potential Partnership Study

Building Data Sheet

Building No: 2

Name: Repair Hangar

General Description:

Building 2 was a Repair and Maintenance hangar, with offices/shops at the north and south ends, as well as in the middle. It was built in three phases starting in 1929. The office sections of the building at the north and center are two story structures. The south shop wing has both two story and full height single story sections. The office/shop sections are steel frames, concrete decks and brick veneer. The hangar bays are steel frames. All appear to have wood deck roof systems

Year(s) Constructed:

1929 initial construction. Two later phases.

Building Area:

1 st floor:	100,055 sf
2 nd floor:	47,911 sf
3 rd floor:	<u>n/a</u>
Total:	147,966 sf

Construction Type:

Building system is structural steel with wood roof decking. Floors are steel framed with wood deck and concrete slabs on elevated floor. Concrete SOG throughout the building. The south hangar lintel is faced with steel, and the north hangar lintel is poured in place concrete.

Relevant Reference Estimating Information Available:

- Sand Point Film Studio, Feasibility Study, 3/22/95: KMD
- Event Brochure Building 2; SPMP
- Sand Point Blue Ribbon Committee Background Materials (Cost Estimates Section), 4/14/95: EAF
- Community Preferred Reuse Plan for Sand Point, 9/93; City of Seattle Planning Dept.

Survey Highlights:

The building typically suffers from a lack of adequate emergency lighting, emergency exiting, exit stairs and exit corridors. There is a single elevator serving the N. wing but the second floors of the center and south office/shop wings have no second floor service. Without detailed study, it will be very difficult to determine the extent of renovation that would be required to provide minimum standards for the building.

The building is not fire sprinklered, the structural steel lacks fireproofing, and there is no fire alarm system. A sprinkler system and alarm system must be added.

Restrooms are scarce, and located on the 2nd floor. I was unable to find first floor restrooms except for the east end of the South wing. To provide ADA accessibility, all restrooms must be renovated, and likely additional restrooms added (definite requirement on the first floor)

There appears to be considerable roof leakage throughout the building. With the wood roof decking, this leads to concerns of deterioration of the structural integrity. The roof needs repair/replacement and a thorough survey of the wood decking undertaken to assure its integrity.

There is no heating in the hangar bays, rendering their usage questionable in the winter months. This could be handled by the addition of gas fired radiant heat from the ceilings though this may be in conflict with the energy code requirements. The office areas all appear to be served by the base wide steam radiator system. I was unable to find the boiler serving this building, but as the Parks Department occupies the north end of the building, I assume that there is a boiler somewhere.

The exterior façade needs considerable attention. The brick veneer appears to be in good condition, and should be cleaned and tuck-pointed. The painted metal and wood surfaces are another matter. There are locations of rot in some of the wood window and door frames at the west side. All of the wood and metal door and window frames are in need of painting. It is likely they will also require asbestos abatement for the putty they contain.

The hangar doors are suffering from lack of paint, lack of use, and deteriorating weather seals. There are a considerable number of corroded panels which will require repair or replacement. A decision needs to be made about the operation of these doors. If they can be locked in place, the repair and modifications required for exiting will be made less costly.

Upgrade Recommendations

- **Selective Demolition**
 - Demolition of all interior spaces
 - Demolition of exterior wall furring
- **Remediation;**
 - Asbestos
 - Base Buildings allowance @ \$1.50/sf.
 - Hangar Bays allowance @ \$0.50/sf.
 - Lead paint
 - Allowance @ \$0.50/sf
- **Seismic/Structural:**
 - Allowance of \$6.00/sf, based upon partial renovation costs for building 30.
- **Fire & Life Safety:**
 - Exiting
 - Exit signage and emergency lighting
 - Add exit doors in Hangar doors – 6 pair. (note – it is assumed at the end leaf at each side of each hangar can be made stationary, allowing the addition of exit doors)
 - Add misc. exit doors – 8 ea.
 - Corridors
 - Allow for 524 lf of 1 hr corridor at second floor
 - Allow for 200 lf of 1 hr corridor at ground floor.
 - Fire Stairs
 - Add 5 new exit stairs from second floor areas north and center
 - Add 2 new exit stairs from second floor south
 - Fire Alarm
 - To be installed with TI based on usage and requirements of FD
 - Fire Sprinklers

- Dry system in Hangar Bays
 - Wet system at all other areas
 - Fire Separations
 - Concrete Masonry Unit separation walls between hangars and offices.
 - Plumbing
 - Allowance for inspection and repair.
 - HVAC
 - Provide heating and ventilating at 1 cfm/sq ft with main duct systems in “office/interior” spaces
 - Provide alternate for Air conditioning at 400 sf/ton (*NOTE: The addition of air conditioning must be decided in the initial design, not as a later addition*)
 - Add gas fired radiant heating only at both hangar bays
 - Electrical
 - Upgrade Service Panels
 - Electrical for HVAC
 - ADA Compliance
 - Accessibility
 - Add entry at A-1
 - Vertical transportation
 - Renovate existing elevator, north wing
 - Add Hydro Elevators at Center and South Wings (*With Elevator Alternate*)
 - Restrooms
 - *Likely requirements - Actual costs will be based on TI usage and requirements.*
 - *South wing*
 - *Add 2nd Floor Men and Women (2 stalls each)*
 - *Renovate 1st floor into Men and Women (2 stalls each)*
 - *Center*
 - *Add 2nd floor Men and Women (2 stalls each)*
 - *Add 1st floor Men and Women)4 stalls each)*
 - *North Wing*
 - *Renovate 2nd floor Men and Women (2 stalls each)*
 - *Add 2nd floor Men and Women (2 stalls each)*
 - *Add 1st floor Men and Women (2 stalls each)*
 - Signage
 - Allowance for code signage only
 - Exterior Envelope
 - Façade
 - Masonry
 - Clean and Point
 - Regrout and brace parapet caps
 - Steel
 - Windows and doors – replace 100%
 - Wood
 - Misc. wood allowance only.
 - Renovate existing Hangar doors
 - Overhead doors – replace with insulated units.
 - Exterior walls
 - Furr and insulate at office areas, (*GWB with TI*)
 - Furr and insulate at Hangar/internal space separation walls (*GWB with TI*)
 - Cleaning and Painting
 - Windows and Frames
 - Doors and Frames
 - Allowance for all exterior metal and wood flashings, caps, etc.
 - Concrete wainscot

- Exterior concrete header at Repair hangar
- Roof
 - Roofing and Flashing – Complete replacement
 - Rigid insulation with roof installation, over interior spaces only
- Miscellaneous
 - Allow for replacement of 25% of the wood deck, when roofing, due to potential decay from moisture intrusion.

**Sand Point Magnuson Park
Potential Partnership Study
Estimated Shell Upgrade
Building 2 Repair Hanger
Estimate Summary**

Building Area:	
1 st floor:	100,055 sf
2 nd floor:	47,911 sf
3 rd floor:	<u>n/a</u> sf
Total:	147,966 sf

Work Item	Cost			
Selective Demolition	\$413,163.10			
Remediation;	\$345,235.80			
Seismic/Structural:	\$887,796.00			
Fire & Life Safety:	\$1,572,748.48			
Plumbing	\$145,822.50			
hHeating and Ventilating	\$841,157.40			
Electrical	\$455,398.00			
ADA Compliance	\$39,310.00			
Exterior Envelope	\$2,032,596.67			
Miscellaneous	<u>\$187,603.13</u>			
Subtotal Direct Construction	\$6,920,831.08			
General Conditions	\$692,083.11			
Overhead and Fee	\$761,291.42			
Escalation	none			
Estimating Contingency	\$1,256,130.84			
Sales tax	<u>\$847,469.61</u>			
Subtotal Hard construction cost	\$10,477,806.05			
Soft Costs (permits, fees, consultants, administrative)	<u>\$4,191,122.42</u>			
Total Project Cost	\$14,668,928.47	\$99.14	\$/sf	\$14,668,928.47
Restroom Alternative				
Cost based on 1 stall, room approx 8' x 5'	20,147.22			
Cost based on estimated requirements	\$282,061.07	\$1.91	\$/sf	\$282,061.07
Additional Stalls				
Add 8 x 4	12,356.88			
Cost based on estimated requirements	\$247,137.52	\$1.67	\$/sf	\$247,137.52
HVAC air conditioning alternate				
Based on 400 sf/ton excluding hangars	1,030,251.91	\$6.96	\$/sf	nic
Estimate to add elevator				
2 stop hydraulic, with shaft	147,612.84			
cost based on estimated requirement	\$295,225.67	\$2.00	\$/sf	\$295,225.67
Total Cost based on estimated requirements, without Air Conditioning				\$15,493,352.73
				\$104.71 \$/sf

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Category	Work Item	Units	Unit	Unit Price	Cost
Selective Demolition	Interior improvements demolition	97,215 sf		3.25	315,948.10
	Building Area	147,966			
	Deduct S. hangar	-37,484			
	Deduct N. Hangar	-14,467			
		1,200			
	Demolition of Interior sheathing on exterior walls				incl
	Demolition required for restroom renovations				incl
	Demolition required for elevator openings	2 ea			w/elevator alternate
	Demolition required for Fire and Life Safety issues				incl
	Remove existing radiant heating system and associated piping	97,215 sf		1.00	97,215.00
<i>Subtotal - Selective Demolition</i>					413,163.10
Remediation;	Asbestos				
	Allow \$1.50/sf for interior improvements area of building	97,215 sf		1.50	145,822.20
	Allow \$1.00/sf roe roofing materials abatement	100,055 sf		1.00	100,055.00
	Allow \$0.50/sf for the hangar bays	50,751 sf		0.50	25,375.60
	Lead paint				0.00
	Allow \$0.50/sf for the building	147,966 sf		0.50	73,983.00
<i>Subtotal - Remediation</i>					345,235.80
Seismic/Structural:	Allow \$6/sf (Bldg 30 @ \$3.90 for roof only)	147,966 ls		6.00	887,796.00
	<i>Subtotal - Seismic/Structural</i>				
Fire & Life Safety:	Exiting				
	Exit signage and emergency lighting				W/TI
	Provide exit doors from Hangar bays	6 ea		2,500.00	15,000.00
	Provide exit doors from office space areas	8 ea		2,000.00	16,000.00
	Corridors				297,466.00
	Allow for 524 lf of exit corridor at 2nd floor center and north				
	Allow for 200 lf exit corridor at 1st floor center				
	Fire Stairs				
	Add 5 new exit stairs from 2 nd floor north and center	1 ls		164,722.00	164,722.00
	Add 2 new exit stairs from 2 nd floor south	1 ls		38,072.00	38,072.00
	Fire Alarm				
	Allowance for full building system				W/TI
	Fire Sprinklers				
	Wet system in interior spaces	97,215 sf		3.00	291,644.40
	Dry system in hangers	50,751 sf		4.00	203,004.80
Fire Separations					
Hangar/internal space separation only. CMU Block	26,275 sf		14.00	367,843.84	
Footings for CMU	821 lnft		50.00	41,054.00	
Allowance for windows in wall 15% other separations	3,941 sf		35.00	137,941.44	
<i>Subtotal - Fire & Life Safety</i>					1,572,748.48
Plumbing	Allowance for inspection and repair Plumbing for restrooms	97,215 sf		1.50	145,822.50
	<i>Subtotal Plumbing</i>				

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hHeating and Ventilating

Heating and ventilating system based on 1 cfm/sq ft.				
Main duct only.	97,215 sf	8.00		777,718.40
Radiant gas heaters in Hangar bays	50,751 sf	1.25		63,439.00

Subtotal - Heating and Ventilating

841,157.40

Electrical

Upgrade service panels	147,966 sf	3.00		443,898.00
Electrical for Heating and Ventilating	1 ls	9,000.00		9,000.00
Electrical Radiant gas heaters in Hangar bays	1 ls	2,500.00		2,500.00

Subtotal - Electrical

455,398.00

ADA Compliance

Accessibility				
	Add entry @ A-1	1 ls	4,310.00	4,310.00
	Entry door and infill door/hardware	80 sf	35.00	2,800.00
		1 ea	1,500.00	1,500.00
	Concrete apron	48 sf	10.00	10.00

Vertical transportation

	Elevators per TI usage	1 ls		W/Elevator Alternate
	repair and upgrade allowance for existing	1 allow	25,000.00	25,000.00

Restrooms

	Restrooms per TI usage			W/Restroom Alt
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Signage

Allowance for code signage only	1 Allow	10,000.00		10,000.00
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Subtotal - ADA

39,310.00

Exterior Envelope

Façade

Masonry				
	Clean and Point	22,807 sf	2.00	45,613.12
	Parapet cap regrouting/bracing	993 lf	53.50	53,107.31
Steel				
	Windows and doors – replace 100 %	7,389 sf	45.00	332,505.00
	Clearstory windows	3,567 sf	45.00	160,515.90
	Hangar doors - renovate	18,170 sf	21.69	394,150.50
		14,970		
		3,200		
	Renovate windows	8,928 sf	30.00	267,840.00
		1,200 sf	30.00	36,000.00
	replace 20 % of door panels	1,608 sf	30.00	48,249.00
	repaint doors	8,042 sf	1.00	8,041.50
	repair door seals	846 lf	30.00	25,380.00
		288 lf	30.00	8,640.00
				394,150.50
Wood				
	misc wood allowance	1 allow	10,000.00	10,000.00
Overhead doors – Replace with insulated units		824 sf	35.00	28,840.00
Exterior walls				
	Furr and insulate	26,777 sf	6.00	160,664.16
	At Hangar separations	26,275 sf	6.00	157,647.36
		12,835		
		10,240		
		3,200		
Cleaning and Painting				
	Exterior wood and metal	1 allow	5,000.00	5,000.00
	Windows and Frames			in reno
	Doors and Frames	888 sf	2.50	2,220.00
	wainscot concrete	3,971 sf	1.50	5,956.20
	repair hanger header	804 sf	3.50	2,815.12
	Hangar doors	18,170 sf		incl w. reno

Roof

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Building 2 - Repair Hanger**

	100,055 sf	5.50	550,302.50
Roofing and Flashing – complete replacement			
Rigid insulation with roof replacement over interior spaces only, not hangars	49,304 sf	2.50	123,259.50
<i>Subtotal - Exterior Envelope</i>			2,032,596.67
Miscellaneous			
Allow for replacement of 25% of wood roof decking, when roofing due to potential decay from moisture intrusion.	25,014 sf	7.50	187,603.13
<i>Subtotal - Miscellaneous</i>			<u>187,603.13</u>
 <i>Subtotal Direct Construction</i>			 6,920,831.08
<i>General Conditions</i>	10%		<u>692,083.11</u>
<i>Subtotal</i>			7,612,914.18
<i>Overhead and Fee</i>	10%		<u>761,291.42</u>
<i>Subtotal</i>			8,374,205.60
<i>Escalation</i>	0%		<u>none</u>
<i>Subtotal</i>			8,374,205.60
<i>Estimating Contingency</i>	15%		<u>1,256,130.84</u>
<i>Total Direct Construction Cost</i>			9,630,336.44
<i>Sales tax</i>	8.8%		<u>847,469.61</u>
<i>Subtotal</i>			10,477,806.05
<i>Soft Costs (permits, fees, consultants, administrative)</i>	40%		<u>4,191,122.42</u>
<i>Total Project Cost</i>			14,668,928.47

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Building 2 - Repair Hanger**

Restroom Alternative
Cost based on 1 stall, room approx 8' x 5'

	<i>Total Project Cost</i>	20,147.22
Likely requirement	14	282,061.07
Additional Stalls	Add 8 x 4	
	<i>Total Project Cost</i>	12,356.88
Likely requirement	20	247,137.52
HVAC air conditioning alternate		
Based on 400 sf/ton excluding hangars		
Cooling - Remote Chiller	97,215 sf 2.50	243,037.50
Heating - Hydronic Boiler System	97,215 sf 2.50	243,037.50
		486,075.00
		<u>0.00</u>
	<i>Subtotal Direct Construction</i>	486,075.00
<i>General Conditions</i>	10%	<u>48,607.50</u>
	<i>Subtotal</i>	534,682.50
<i>Overhead and Fee</i>	10%	<u>53,468.25</u>
	<i>Subtotal</i>	588,150.75
<i>Escalation</i>	0%	<u>none</u>
	<i>Subtotal</i>	588,150.75
<i>Estimating Contingency</i>	15%	<u>88,222.61</u>
	<i>Total Direct Construction Cost</i>	676,373.36
<i>Sales tax</i>	8.8%	<u>59,520.86</u>
	<i>Subtotal</i>	735,894.22
<i>Soft Costs (permits, fees, consultants, administrative)</i>	40%	<u>294,357.69</u>
	<i>Total Project Cost</i>	1,030,251.91
Elevator Alternative		
2 stop hydraulic, 3500 lb capacity		
Assumes overrun can be handled under roof.		
	<i>Total Project Cost</i>	147,612.84