Council Meeting Date: January 5, 2004 **Agenda Item: 6(a)**

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	**A review of options for the Robinson Water Tower located at the intersection of NW 195th Street and 3rd Avenue NW.**
DEPARTMENT:	**Planning and Development Services**
PRESENTED BY:	**Timothy M. Stewart AICP, Director** **Jeffrey B. Thomas, Senior Planner**

PROBLEM STATEMENT:

The City of Shoreline Building Official declared the Robinson Water Tower a hazardous structure in November 2000. In December 2000, the Council instructed staff to move forward with a feasibility analysis to preserve the tower at its current location as depicted on the location map included as Attachment A.

The first step in this process was to have the property owner at 224 NW 195th Street initiate the removal of the Seattle City Light power strike attached to the tower which served this property. The tower is located approximately one third on the City of Shoreline 3rd Avenue NW Right of Way and two thirds on private property. The City of Shoreline was notified in January 2003 that this had been completed.

The Building Official then conducted a second hazardous structure evaluation in June 2003, which resulted in seven additional items for correction being added to the original list from the November 2000 evaluation. These results elevated the priority of finding a course of action for the tower that would relieve both the City of Shoreline and the private property owner from the risk of maintaining a hazardous structure.

OPTIONS ANALYZED:

The firm of Architects Kubota, Kato, Chin, Inc., P.S. was then contracted to provide a feasibility analysis and if appropriate, preliminary cost estimates, for a preservation and restoration option as well as a reconstruction option for the tower. The final report is included as Attachment B. The findings and conclusions for each of these options as well as a demolition option and a no action option are summarized below.

- **Preservation and Restoration Option** – This option is not feasible. It is believed that the existing tower, as photographed in Attachment C, has deteriorated beyond salvage. Significant labor and material cost would be required to make exact determinations for the preservation and restoration of individual pieces of the existing tower. Because of this very detailed work, a cost estimate was not prepared. However, it appears that this option may cost up to twice as much as the reconstruction option, with historical specifications and new materials.

- **Reconstruction Option** – This option is feasible and includes demolition of the existing tower and using new materials to reconstruct the tower either at the current site or at an unidentified location, as it generally appears in a 1937 photograph, included as Attachment D. Reconstructing the tower at the current site presents both safe parking and access issues for the general public. Reconstructing the tower at another location removes it from the historical neighborhood context. The cost estimate for this option, as detailed in the final report, is approximately $117,000, without any additional cost of land.

- **Demolition Option** – This option would result in the demolition of the existing tower and relieve the risk of maintaining a hazardous structure. Prior to demolition, a detailed architectural inventory and photographic record of the existing tower may be created for use in any future reconstruction effort. A specific cost estimate has not been prepared for this option, however the final report allocated approximately $17,000 in the cost of the reconstruction option for demolition.

- **No Action** – This option would leave the existing tower in its current state - exposed to the weather elements and rapidly deteriorating. Both the City of Shoreline and the private property owner would be continuing the risk of maintaining a hazardous structure.

The City of Shoreline provided The Shoreline Historical Museum with a copy of the architect's final report and recently met with their Director, Victoria Stiles to discuss it. As described in a December 18, 2003 letter, included as Attachment E, Ms. Stiles concurred that the preservation and restoration options were not reasonable and noted it was determined during the 1996 King County historic sites survey that the tower was not eligible to be designated as a landmark.

Although the City of Shoreline and the private property owner were initially hopeful that a preservation and restoration option would be feasible, both parties recognize the importance in finding an option that will relieve the risk of maintaining a hazardous structure.

FINANCIAL IMPACT:
There is currently no allocated funding to perform any work on the tower. The cost issue is complex because the private property owner paid the entire cost, approximately $4,000, to have the Seattle City Light power strike removed. The property owner has not committed to funding any additional work on the tower nor has any future cost allocation plan been discussed with the City of Shoreline.

The Code Enforcement Abatement Fund has been identified as a potential funding source to perform any work related to relieving both the City of Shoreline and the private property owner from the risk of maintaining a hazardous structure, such as emergency repairs or demolition.

RECOMMENDATION:
Staff recommends that Council direct staff to move forward with the demolition option without any cost allocation plan, as the private property owner has already incurred significant expense in removing the Seattle City Light power strike. The demolition of the existing tower would relieve both the City of Shoreline and the private property owner from the risk of maintaining a hazardous structure.

Approved By: City Manager ____ City Attorney ____

ATTACHMENTS:
Attachment A: Location Map
Attachment B: Architects Kubota, Kato, Chin, Inc., P.S. Final Report, 12-12-2003
Attachment C: Current Robinson Water Tower Photograph
Attachment D: 1937 Robinson Water Tower Photograph
Attachment E: Victoria Stiles Letter, 12-18-2003

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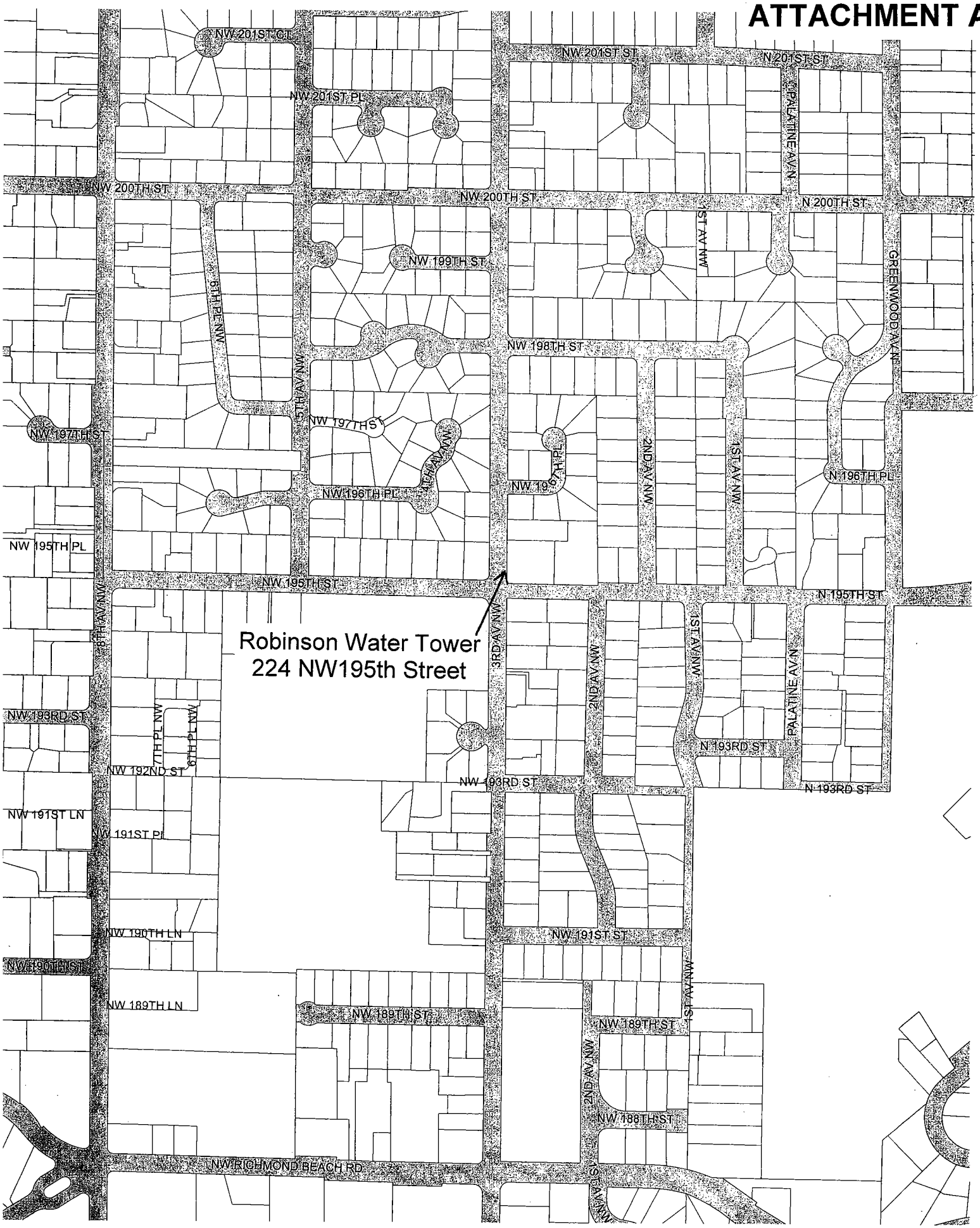
ATTACHMENT A



ATTACHMENT B

ARCHITECTS KUBOTA KATO CHIN, INC., P.S.
6201 ROOSEVELT WAY NE SEATTLE, WASHINGTON 98115 - 6614
(206) 985-5800 (206) 985-5803 FAX WWW.RKTECTS.COM

December 12, 2003

Jeff Thomas, PM
City of Shoreline
17544 Midvale Ave. N.
Shoreline, WA 98133-4921

Subject: Robinson Water Tower Preservation Project

Dear Jeff,

Architects Kubota Kato Chin and our consultant Ron Roberts of Roberts Engineering are pleased to submit this concept study and estimate on the feasibility of historical preservation versus reconstruction of the Robinson Water Tower. We looked at the water tower three years ago and in its present condition it has deteriorated beyond salvage. We recommend removing the structure altogether or rebuilding at its present location or another location selected by the City. Leaving the structure in its existing condition poses a significant liability to the City.

This document formalizes the end of the concept estimate phase and should a decision be made in terms of preservation or reconstruction we would like to continue our participation on this project.

Sincerely;

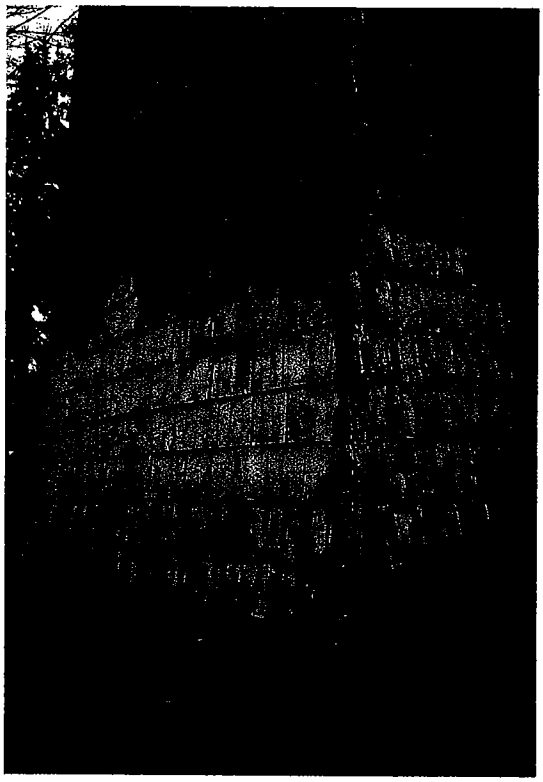
Architects Kubota Kato Chin, Inc., P.S.

Charlie Kato, Principal

1.0 Site Inspection

On December 1, 2003 the structure was inspected with Ron Roberts, a structural engineer. Weather conditions at the time of the inspection was heavy rain.

The overall appearance and condition of the water tower is bad. Visually there are significant dry rot present at the shingles, 1x ship lap sheathing, framing, and main support members. The existing window openings are covered with a metal screen which is not securely fastened. The interior has a concrete slab with ship ladder type stair to a floor level approximately eight feet in height. The sill plates are worn and the wood studs appear to be dry rotted. There was significant water coming down from above which without fully inspection of the roof system leads us to believe that it is wide open. Our assumption of the structure above is that there are significant damage. The openings at the windows show signs of dry rot. The significance of this is not known and only by removal of the shingles or interior inspections will the extent of the dry rot be known. The north base of the structure is partially buried and dry-rotted. The column at the SW corner appears to have dry rot and needs replacement. Based on current conditions we suspect that the rest of the corner columns have similar deterioration.



Much of the water tower's character has been lost. The architectural element above the roof is missing as well as much of the roof itself.

The structure does not meet current codes. To comply would mean the addition of metal hold downs, sill plates anchored to a foundation system. The lack of these elements poses a significant danger of overturning during high wind or seismic events.

1.1 Is Preservation and Restoration Feasible?

In our opinion the cost of historical preservation is not a feasible approach for the Robinson Water Tower. The cost could reach as high as 1.5 - 2 times greater than new construction. Estimating is made difficult due to the unknown extent of the decay and damage to the main structure. The restoration process alone requires extensive man hours and includes; removal of the exterior shingles for preservation, inspection and removal of all dry rotted wood, re-framing the collapsed roof structure and water tower element, new framing, plywood sheathing at the exterior, and installation of structural hangers and tie downs. In addition, the City of Shoreline would have to agree and assume responsibility for the existing

foundation to be structurally sound for reuse. In the event an agreement is not achieved then the existing foundation would need to be removed and replaced with a new structurally designed system. In essence the tower would be dismantled, all dry rotted wood replaced, the foundation removed and replaced, and finally the tower reconstructed over the new foundation.

2.0 Is It Feasible To Reconstruct The Water Tower and What Are The Costs To Reconstruct?

New construction is far more cost effective than preservation, especially if the structure is rebuilt at the existing site, and the City of Shoreline uses the existing foundation. If the structure is built off site, the costs for a new foundation system must be added as well as demolition and cleanup of the existing tower. Building the structure off site will add costs for new electrical service as well as require the following consultants; survey, architectural, structural / civil, electrical, and landscape.

2.1 Budget

The cost for reconstructing the water tower at the existing site is $117,158. This cost does not include Markups (4% Fee, 1.7% Bond, 1% LIAB/B&O INSURANCE), State Sales Tax, Testing and Inspections, Construction Contingency, Architect/Engineering Fees, and Permits.

The attached concept estimate was based on the following assumptions:

- Demolition and rebuilding at the existing site.
- Building type is TYPE V-N; non fire rated.
- There is no interior insulation or finishes.
- Estimate was based on site inspections and photographs.
- Record or historical drawings do not exist.
- Consultant costs are not included.
- HAZMAT survey and removal costs not included.

CITY OF SHORELINE WATER TOWER RESTORATION

PROJECT : WATER TOWER RESTORATION
LOCATION : SHORELINE, WA
BLDG SF : 100 SF
ESTIMATE :
EST TYPE : SCHEMATICS

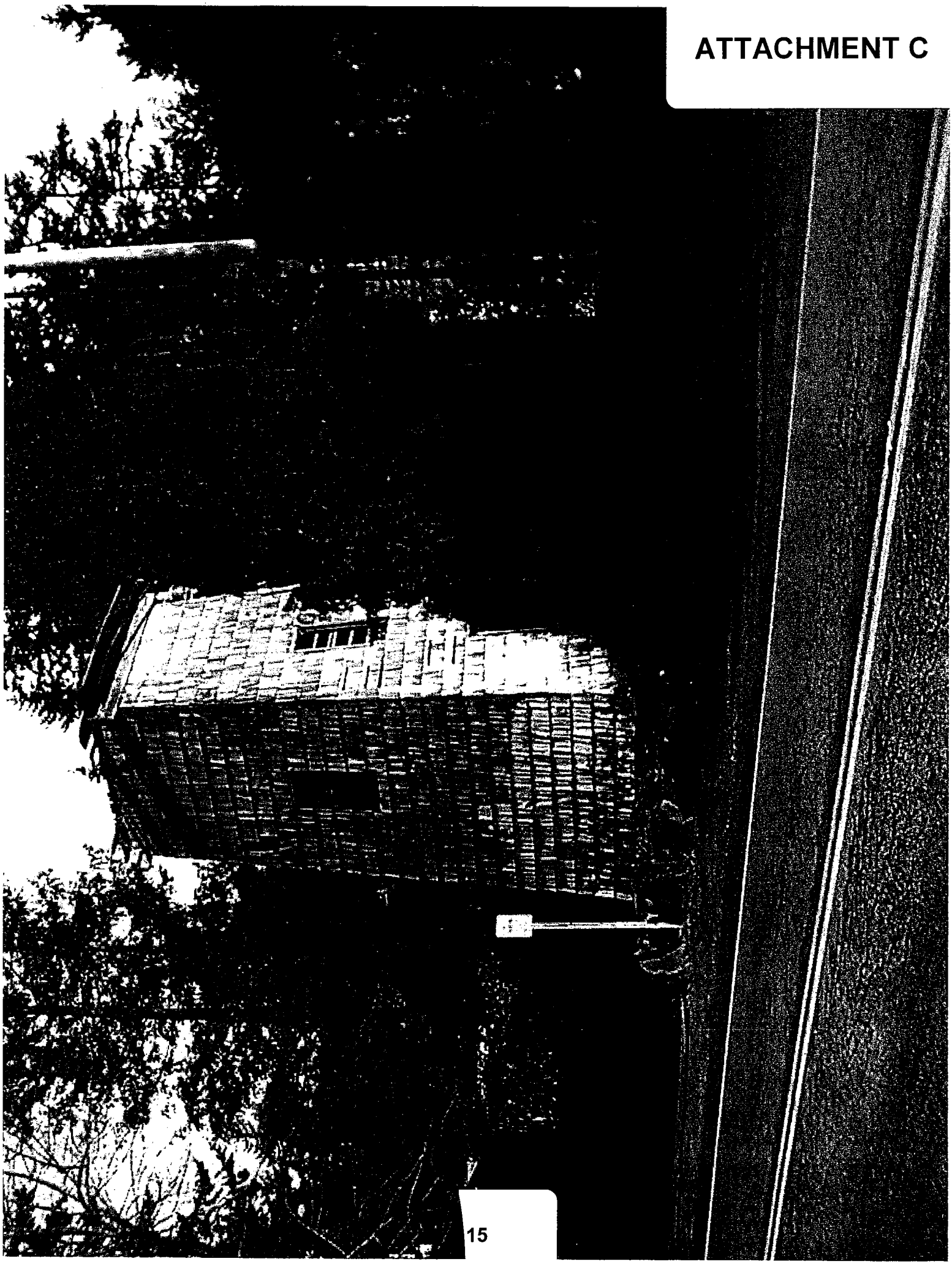
DIV #	DESCRIPTION		TOTAL
11	STANDARD FOUNDATIONS		6,233
20	SLAB ON GRADE		4,338
31	UPPER FLOOR STRUCTURE		1,038
32	ROOF STRUCTURE		6,595
40	EXT. WALLS/DOORS		25,090
50	ROOFING/FLASHING		3,708
61	INT. WALLS/DOORS		1,130
62	INT. FINISHES		1,610
63	SPECIALTIES/CASEWORK		1,250
80	MECHANICAL		0
90	ELECTRICAL		12,175
110	BLDG EQUIP/FURNISHINGS		0
120	DEMOLITION/GRADING		17,373
130	GENERAL CONDITIONS		19,250
	ESTIMATE SUBTOTAL		**99,789**
	DESIGN CONTINGENCY @	6.00%	5,987
	SUBTOTAL		105,776
	GENERAL CONTRACTOR MARK-UPS	6.50%	6,875
	SUBTOTAL		112,652
	ESCALATION TO 4/04	4.00%	4,506
	SUBTOTAL		
	TOTAL		**117,158**

EXCLUSIONS:
* MARK-UPS INCLUDE (4% FEE, 1.5% BOND, 1% LIAB/B&O INSURANCE)
STATE SALES TAX
TESTING AND INSPECTIONS
CONSTRUCTION CONTINGENCY
ARCHITECT/ENGINEERING FEES
PERMITS

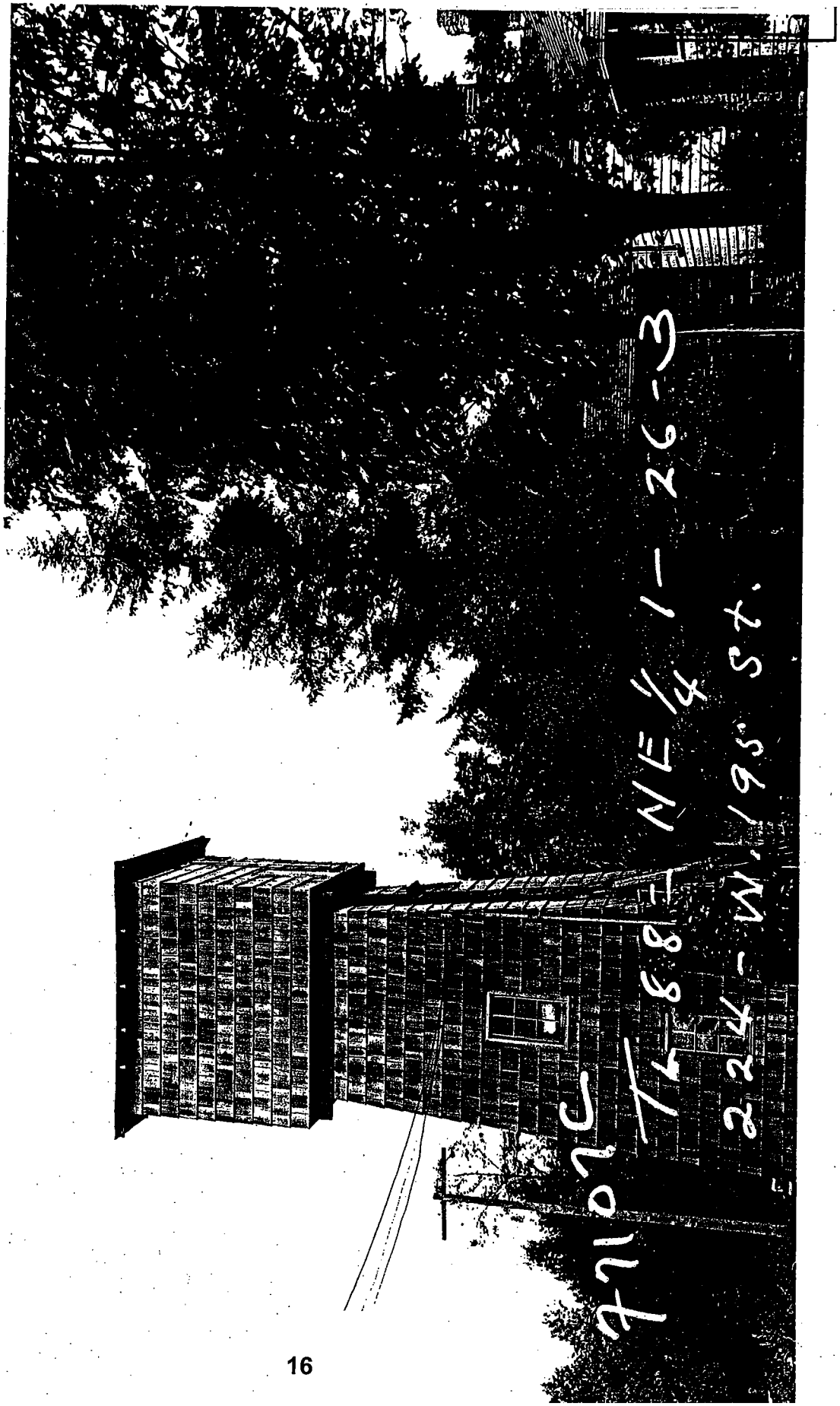
UNIT CODE	DESCRIPTION	QUANTITY	UNITS	UNIT COST	TOTAL	SUBTOTAL
11	**STANDARD FOUNDATIONS**					
2205	EXCAVATE FOUNDATIONS	100	CY	8	800	
2206	BACKFILL FOUNDATIONS	50	CY	4.5	225	
2206	HAUL/DUMP EXCESS EXCAVATION	50	CY	5	250	
2234	FOOTING DRAINS W/GRAVEL	315	LF	5.55	1,748	
2240	TEMPORARY BRACING ALLOWANCE	400	SF	1.25	500	
3041	CONC-COL FTGS	3	CY	255	765	
3041	CONC-CONT FTGS	2	CY	275	550	
3045	CONC-STEM WALLS	20	SF	28	560	
3200	ANCHOR BOLTS & REBARS @ CONC	1	LS	750	750	
7100	DAMPROOFING/DRAINAGE MAT	0	SF	1.75	0	
7100	WATER PROOF-FLUID APPLIED	0	SF	0.35	0	
7110	FNDTN-INSUL BOARD	50	SF	1.7	85	
					0	
11	**STANDARD FOUNDATIONS**		**DIVISION TOTAL**		6,233	6,233
20	**SLAB ON GRADE**					
2210	GRAVEL @ CONC S.O.G 4" DEEP	110	SF	0.35	39	
2218	2" SAND @ CONC S.O.G.	110	SF	0.15	17	
3050	S.O.G. 4"-COMPLETE	100	SF	2.55	255	
	DOWELS/TIE-IN @ EXISTING CONC	200	LF	20	4,000	
7100	VAPOR BARRIER @ SLAB	110	SF	0.25	28	
7210	RIGID INSULATION @ SLAB	0	SF	0.75	0	
20	**SLAB ON GRADE**		**DIVISION TOTAL**		4,338	4,338
31	**UPPER FLOOR STRUCTURE**					
	2x10 FLOOR JOIST @ 16" O.C.-8'	130	LF	1.8	234	
	2x8 JOIST @ 16" O.C.@ 20'	130	LF	1.8	234	
	3/4" CDX PLYWD. DECK	100	SF	1.7	170	
5110	ERECT COLS/BEAMS @ FLOOR	1	LS	400	400	
5115	STEEL TUBE BEAMS/COLUMNS	0	LB	1.5	0	
5120	ERECT COLUMNS @ FLOOR	0	EA	70	0	
7200	INSULATION R-11 BATT-FLOORS	0	SF	0.4	0	
31	**UPPER FLOOR STRUCTURE**		**DIVISION TOTAL**		1,038	1,038
32	**ROOF STRUCTURE**					
5115	WOOD BEAMS/COLUMNS: FRAMG. ALLOW.	1	LS	1800	1,800	
6108	2X8 RAFTERS	120	LF	1.5	180	
6109	INSTALL RAFTERS	8	EA	30	240	
6108	4X8 BEAMS: ALLOWANCE	120	LF	3.5	420	
6109	INSTALL BEAMS	4	EA	50	200	
	SPECIAL DETAILING; CLEAR CDR.	1	LS	1700	1,700	
6140	ROOF PLYWOOD 5/8	150	SF	1.1	165	
6195	OVERHANGS	200	SF	5	1,000	
6198	ROUGH HARDWARE/BLOCKING	1	LS	500	500	
7120	FIRESTOPPING	1	LS	150	150	
	PAINT TRIM	120	SF	2	240	
					0	
32	**ROOF STRUCTURE**		**DIVISION TOTAL**		6,595	6,595

40	**EXT. WALLS/DOORS**					
	TAPERED WD. SHINGLE CORNERS	140	LF	4	560	
	WOOD SHINGLES	1,200	SF	4.5	5,400	
5500	STEEL HANDRAILS	20	LF	25	500	
6129	EXT. WALL SHEATHING-1/2 CDX	1,500	SF	1.4	2,100	
6185	BLDG PAPER/DBL LAYER	2,800	SF	0.2	560	
6185	BLUESKIN WALL/WINDOW/DOOR WRAP	1	LS	1500	1,500	
6200	ROUGH HARDWARE	1	LS	1200	1,200	
7200	INSULATION R-21 BATT-WALLS	0	SF	0.51	0	
7205	INSULATION BOARD-5/8	0	SF	0.9	0	
8100	HM DOOR LEAF 3070	1	EA	350	350	
	HM DOOR SILL MTL. FLASHG.	1	EA	50	50	
8500	WOOD WINDOWS	50	SF	37	1,850	
	5/4" CLR. CDR. TRIM @ WDW..DR.	200	LF	6	1,200	
8930	HARDWARE SET-EXTERIOR	1	EA	350	350	
9250	STUD 2x6-EXT WALL	1,400	SF	2.8	3,920	
9250	2X PRESSURE TREATED WD.	1	LS	1200	1,200	
9250	MISC. 2x6- FRAMING ALLOW.	1	LS	1800	1,800	
	FRAME WINDOW & DOOR OPENGS.	1	LS	1500	1,500	
9904	STAIN SHINGLES & TRIM: CLEAR	1,500	SF	0.7	1,050	
40	**EXT. WALLS/DOORS**		**DIVISION TOTAL**		**25,090**	25,090
50	**ROOFING/FLASHING**					
5510	STEEL ACCESS LADDER:ALLOWANCE	2	EA	700	1,400	
6135	EXT. SOFFIT SHEATHING	150	SF	1.6	240	
6140	ROOF SHEATHING; 5/8"	150	SF	1.4	210	
6185	BLDG PAPER (#15)	150	SF	0.35	53	
7200	INSUL R-30 BATT ROOF	0	SF	1	0	
7400	METAL ROOF/ACCESSORIES	1.5	SQ	280	420	
7620	FLASHING / ACCESSORIES	1	LS	500	500	
7620	GUTTERS	50	LF	10	500	
7630	DOWNSPOUTS	70	LF	5.5	385	
50	**ROOFING/FLASHING**		**DIVISION TOTAL**		**3,708**	3,708
61	**INT. WALLS/DOORS**					
6200	MISC. BLOCKING/BACKING	1	LS	500	500	
7200	INSULATION R-13 BATT-WALLS	0	SF	0.6	0	
9250	WD STUD 2X4 WALL: ALLOWANCE	350	SF	1.8	630	
9254	GWB 5/8"-WALLS	0	SF	1.5	0	
61	**INT. WALLS/DOORS**		**DIVISION TOTAL**		**1,130**	1,130
62	**INT. FINISHES**					
6200	MISC FINISH CARPENTRY	1	LS	1500	1,500	
					0	
9908	PAINT DOOR/FRAME/TRIM	1	EA	110	110	
9909	PAINT CEILINGS-SOFFITS	0	SF	0.45	0	
9909	PAINT WALLS/INT-GWB	0	SF	0.4	0	
					0	
62	**INT. FINISHES**		**DIVISION TOTAL**		**1,610**	1,610
63	**SPECIALTIES/CASEWORK**					
10150	SIGNAGE	1	LS	1000	1,000	
10550	FIRE EXTINGUISHER WALL MOUNT; INT.	2	EA	125	250	
63	**SPECIALTIES/CASEWORK**		**DIVISION TOTAL**		**1,250**	1,250
80	**MECHANICAL**					
	NO WORK REQUIRED				0	
80	**MECHANICAL**		**DIVISION TOTAL**		**0**	0

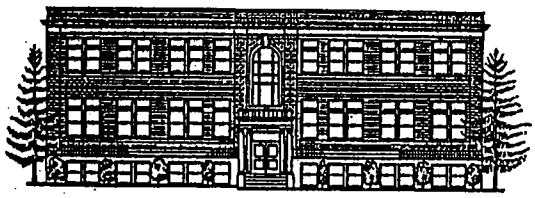
90	**ELECTRICAL**					
16100	Panel & Meter Box	1	LS	1000	1,000	
??	Underground Power	50	FT	30	1,500	
	Power	1	EA	175	175	
	Lighting	6	EA	800	4,800	
	Rigid Conduit	1	LS	1500	1,500	
	1 Ext. GFI/1 Int. circuit/Switches	1	LS	500	500	
	Materials	1	LS	1500	1,500	
	SCL connection fees	1	LS	1200	1,200	
90	**ELECTRICAL**		**DIVISION TOTAL**		**12,175**	12,175
110	**BLDG EQUIP/FURNISHINGS**					
	NO WORK NEEDED				0	
110	**BLDG EQUIP/FURNISHINGS**		**DIVISION TOTAL**		**0**	0
120	**SITEWORK**					
	MOBILIZATION	1	LS	1000	1,000	
2006	DEMO-WALLS	1,200	SF	3	3,600	
2006	DEMO-WOOD ROOF STRUCTURE	70	SF	3	210	
	DEMO - CONCRETE EXIST	150	SF	6	900	
2008	DEMO-DOORS/WINDOWS	5	EA	53	265	
2017	MISC. DEMO/SAWCUTTING	1	LS	0	0	
	CLEARING & GRUBING	150	SF	2	300	
	SCAFFOLDING; 3 MONTHS	1	LS	3500	3,500	
	SHORING	0	SF	25	0	
	UNDERPINING	0	EA	3000	0	
	MASS EXCAVATION	7.5	CY	3	23	
	HAUL	50	CY	15	750	
	BACKFILL	50	CY	8	400	
	SANITARY SEWER	0	LF	15	0	
	BACKHOE; STORM SEWER	1	LS	750	750	
	STORM SEWER: ALLOWANCE	50	LF	25	1,250	
	MANHOLES/CB	0	EA	1500	0	
	TEMP DRAINAGE	0	LS	500	0	
	PINPILES	0	EA	75	0	
	PAVEMENT	0	SF	2	0	
	SITE CONCRETE WALKS	0	SF	3	0	
	CURBS	0	LF	6.5	0	
	TEMP STORAGE	0	EA	2500	0	
	ROCKERY WALLS: ALLOWANCE	150	SF FACE	15	2,250	
	FINE GRADE	250	SF	0.3	75	
	STORM/SEWER FEES	0	EA	10000	0	
	LANDSCAPE ALLOWANCE	1	LS	1200	1,200	
2203	FENCING	0	LF	20	0	
	GATE, SPECIAL	0	PAIRS	500	0	
	MISC. SITE: BARRICADE	1	LS	900	900	
					0	
120	**SITEWORK**		**DIVISION TOTAL**		**17,373**	17,373
130	**GENERAL CONDITIONS**					
1000	GENERAL CONDITIONS-PRORATED	3.5	MTH	5500	19,250	
130	**GENERAL CONDITIONS**		**DIVISION TOTAL**		**19,250**	19,250
			ESTIMATE SUBTOTAL			**99,789**



ATTACHMENT D



ATTACHMENT E



The Shoreline Historical Museum
Serving Northwest King County ♦ Shoreline ♦ Lake Forest Park ♦ North Seattle

December 18, 2003

Tim Stewart, Director
City of Shoreline
Planning and Development Services
17544 - Midvale Ave. N.
Shoreline, Washington 98133

Dear Tim Stewart:

Thank you for the informative meeting on December 17 regarding the Robinson Water Tower on 3rd Avenue N.W. in Shoreline. I have been aware for some time that the structure, built in 1910, was most likely unsound. Kubota/Kato/Chin, the architects hired by the City of Shoreline to examine the water tower, have illustrated in their report the reasons why it is unsalvageable. While the structure has stood for a long time, I recognize the danger it presents and the need to prevent it from causing damage or harm. Despite its age, it was determined in an historic sites survey done by King county in 1996 that the tower was not eligible to be designated as a landmark. Thank you again for your efforts to examine every aspect of this situation.

Sincerely,

Victoria Stiles

Victoria Stiles
Director

cc: Jeff Thomas

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