

**Port of Seattle  
Lora Lake Apartments Site**

**Remedial Investigation/  
Feasibility Study**

**Volume I**

**Appendix C  
History of the Lora Lake 1982 Dredged  
Material Containment Area**

FINAL

**HISTORY OF THE PORT OF SEATTLE  
LORA LAKE 1982 DREDGED MATERIAL CONTAINMENT AREA  
(King County Tax Parcel No. 2023049105)**

Prepared For:

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August 2011

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## 1.0 INTRODUCTION

This report summarizes the history of the Port property used in 1982 for the containment of sediment dredged from Lora Lake. The timeframe for this research is from pre-lake dredging planning in 1981 to the present. The Port property in question is located on the east side of the intersection of South 150<sup>th</sup> Street and 12<sup>th</sup> Avenue South in the City of SeaTac.

For the purposes of this report, the area is referred to as the *Lora Lake 1982 Dredged Material Containment Area (DMCA)*.

The report is divided into two parts. The first part is a chronological historical narrative of the DMCA and is based on a review of archival records from various King County agencies and the county archives. The second part relates to observable land use changes of the DMCA based on a review of historical aerial photography.

Documents referenced in footnotes (Appendix A) and aerial photographs (Appendix B) are attached to this report as electronic files.



## 2.0 PART ONE: NARRATIVE HISTORY OF THE LORA LAKE DMCA

Although the Port property situated northeast of Lora Lake was used to place dredged materials in 1982, other plans for the property were advanced between 1980 and 1981. In June 1980, the King County Department of Public Works (KCDPW) director sent a letter to the director of aviation for the Port proposing to use Port property for Lora Lake drainage as follows: <sup>1</sup>

*The county has an existing storm drain that crosses Des Moines Way and enters at the northwest corner of the lake at a location where we are not able to bring in any equipment. All work has to be done by hand. The residents have asked us to move the drain to eliminate the silt. The line can be rerouted along Des Moines Way then easterly along South 150<sup>th</sup> Street. From this point it could be directed either to the east side of the lake near the outlet or onto Port of Seattle property. The residents would prefer that it be directed onto the Port property and kept out of the lake.*

*Members of my staff have met with Lawrence Parks of your Planning Section and representatives of your Engineering Department and discussed this. We are asking to bring the drainage onto your property and for an area to construct a retention pond. We estimate that the pond would have to be approximately 200 x 200 feet, although this would have to be determined by our Hydraulics Division so that all regulations regarding Miller Creek were met.*

*We would appreciate your views on this proposal. If it is agreeable we will proceed with further survey and engineering.*

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<sup>1</sup> Letter from James Guenther to Donald Shay, dated June 26, 1980 re: “Drainage problems—Lora Lake Area.” <sup>1</sup> King County Archives, Department of Transportation: Road Services Division, Administrative Working Files, Series 629, Accession No. A04-007, Box 12, Lora Lake Folder

Additionally, in a response to citizen concerns about the drainage of Lora Lake, KCDPW noted in a November 1980 letter: <sup>2</sup>

*As you requested at our meeting on June 10 we are now reviewing the possibility of routing the storm drainage from Lora Lake onto Port of Seattle property. We have had preliminary meetings with the Port regarding use of their land for a storm drain and retention pond. The Surface Water Management Division will be doing a hydraulic study to size the retention pond and outlet controls needed on this property. Also, additional funds over and above what is now budgeted are being requested for this project in 1981.*

KCDPW considered this action further in reporting on a Lora Lake citizens meeting held in June 1981: <sup>3</sup>

*Create a separate retention pond on Port of Seattle property to the east, by-passing Lora Lake altogether. This alternative appealed to some of the owners but County staff indicated real difficulties. The Port and potential developer were not eager to have the pond and the project would cost in excess of \$250,000. It was also pointed out to the Lora Lake owners that the springs presently supplying the lake might not continue to flow after further build-up of the area; it would be advisable to maintain the present surface inflow in some manner.*

The proposed rerouting of the storm water outfall from Lora Lake to Port of Seattle property located east of the lake did not occur. For additional information on Lora Lake drainage, please refer to the Stirling Consulting report *Historic Uses of the Port of Seattle Lora Lake Parcel*.

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<sup>2</sup> Letter from Paul Hooper, County Road Engineer to Wally Watson re: Storm drainage from Lora Lake, dated November 4. King County Department of Transportation, Road Services Division, Department of Public Works Historical Files, Folder titled "Lora Lake."

<sup>3</sup> Memorandum from Paul Hooper to record re: Lora Lake—Citizens Meeting May 28, 1981. King County Department of Transportation, Road Services Division, Department of Public Works Historical Files, Folder titled "Lora Lake."

## 2.1 LORA LAKE DREDGING

KCDPW abandoned the idea of rerouting the existing Lora Lake outfall onto Port property to the east, and in 1982 proposed the following:<sup>4</sup>

*Cleaning the lake by dredging the silty material from the lake and depositing this dredge material onto the Port of Seattle property northeast of the lake. A settlement pond is to be constructed at the inlet of the lake to keep it clean in the future.*

In March 1982, a meeting was held on the Port property between several KCDPW employees and Fred Silvers and Harry Angelos of the Port regarding uses of the property for the containment of dredged material from Lora Lake. The following meeting notes were taken:<sup>5</sup>

*Based on our field inspection we decided:*

- 1. Fred Silvers would check with the Port's planners and other people to see if they have any problems.*
- 2. Fred would respond to our letter and get back to me this week with their comments*
- 3. It appears the best containment area is between SR-509 and a paved driveway into the Port's property. Whether this will be enough will depend on survey and calculations.*
- 4. I asked if we could construct berm using on-area material. They did not object if it is adequate. Harry suggested we have our soils lab look at the material.*
- 5. The next step is to wait on the Port's response. If it's affirmative, we should order the survey.*
- 6. Negative impact statements and hydraulics permit will probably be required*
- 7. Residents adjacent to the sediment basin should be notified of our proposed work and asked for comments*
- 8. Gravity recirculating pipe system should be no problem. Check capacity.*
- 9. John Grover (KCDPW staff) said it may take 18 days working 10 hours a day to dredge lake*
- 10. Fred Silvers stated we would need to grant the Port (illegible text)... if it is okay to do this project*

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<sup>4</sup> CIP Project Description in files related to King County Ordinance No. 6104 "amending the scope of work and reducing the cost of Lora Lake Drainage." King County Council Ordinances, 1982. RG-012, Series 305, Box 130, Folder "6094-6104". King County Archives.

<sup>5</sup> Memo (handwritten) by Larry Gibbon to file re: Lora Lake dated April 29, 1982. King County Department of Transportation, Road Services Division, Department of Public Works Historical Files, Folder titled "Lora Lake."

*Design Considerations:*

1. *Construct berm adjacent to SR-509 fence*
2. *May construct two ponds so not to (illegible text) up to much water*

In June 1982, KCDPW discussed the necessity of testing Lora Lake water and sediments prior to disposing of the material on Port property: <sup>6</sup>

*One of the requirements to complete the Lora Lake project is locating an area for the purpose of disposing of dredged materials. The area selected is owned by the Port of Seattle. One of the requirements of the Port is that an EP toxicity test be made of dredged water and materials. Lux labs were awarded the contract for testing and the results will be forwarded to the Roads Division during the week of June 14, 1982. If the materials pass the toxicity test, survey field work will begin immediately to provide data for the design of a detention pond on the Port of Seattle property and the design of a rock weir at the outfall location to trap sediments and other pollutants from the surface water that empties into the lake.*

A September 1982 KCDPW memo<sup>7</sup> reveals that four samples were taken to Laucks Testing Laboratories for EP toxicity testing under Purchase Order No. R80582R. Pace Analytical, which acquired Laucks in 2008, was contacted about the existence of those test results, however, the laboratory only retains test results for 10 years; therefore analytical results for these samples are unavailable.<sup>8</sup>

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<sup>6</sup> Memorandum from Paul Taisey to J.W. Guenther re: Lora Lake dated June 14, 1982. King County Department of Transportation, Road Services Division, Department of Public Works Historical Files, Folder titled "Lora Lake." Note that "Lux Labs" is a misspelling of "Laucks."

<sup>7</sup> Memorandum from Paul Hooper to Charles Kohler re: EP Toxicity Test Charges, P.O. # R80582R, dated September 2, 1982. King County Department of Transportation, Road Services Division, Department of Public Works Historical Files, Folder titled "Lora Lake."

<sup>8</sup> Personal communication by Dale Stirling with Jim Brownfield, Pace Analytical on February 2, 2011

In October 1982, KCDPW entered into an agreement with the Lora Lake Shore Club to provide engineering and other solutions to lake drainage problems. The first of ten agreed upon items was that “King County agrees to remove or pay for the removal of siltation from the lake bed of Lora Lake in accordance with the plans which are attached as appendix “D” to this agreement”<sup>9</sup> The plan was titled *Lora Lake Dredging*, and included a sub-drawing titled *Plan—Port of Seattle Property for Placing of Dredged Material* as well as the following notes about placement of dredged material:<sup>10</sup>

- 1. Alternate silt pond outlet methods to be discussed with the dredging contractor prior to installing the type II CB-at outlet: a. Pump silt laden waters into containment area during the day. Allow time for silt to settle from the water and then reverse pumps to pump clean water back into the lake. b. Place stop logs between ‘I’ beams at the outlet of containment area. Pump silt laden water into containment area. As silt settles from water, remove one stop log out at a time to allow clean water to flow into a temporary pipe system and into the lake*
- 2. After the completion of dredging operation, grade the entire area to drain southeasterly*
- 3. The volume of dredged material is estimated 12,000 Cu. Yd.*
- 4. The spoil area and berm will be hydro seeded by others*
- 5. Berm and recycle pipe will be constructed by King County prior to dredging*
- 6. The berm shall be compacted to at least 95 percent of the maximum relative density*

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<sup>9</sup> Attached to a Letter from King County office of the Prosecuting Attorney to David Gross, Attorney at law for the Lora Lake Shore Club, dated October 1, 1982. King County Department of Transportation, Road Services Division, Department of Public Works Historical Files, Folder titled “Lora Lake.”

<sup>10</sup> See footnote #2

In the drawing, the proposed dredged material containment area is shown as a roughly rectangular area surrounded by a 6-foot wide berm on the north and south boundaries and a 15-foot wide berm on the eastern boundary. The following annotations were included regarding the dredged material containment area:

- *15' wide berm—top el. 277', side slopes as marked & as shown in sec. "A-A" Construct fabric filter on the inside slope of berm.*
- *Type II C.B. with 12" CMP outlet draining unsilted water back to Lora Lake.*
- *12" CMP to Lora Lake, approx. 600 LF of pipe*

In November 1982, under CIP Project No. 600680, KCDPW awarded Contract No. C09420C, Lora Lake Dredging, to Marine Construction & Dredging, Inc. The project was completed in December 1982. For additional information on Lora Lake drainage, please refer to the Stirling Consulting report *Historic Uses of the Port of Seattle Lora Lake Parcel*.

Although records relating to this contract exist in the King County Archives and King County Department of Transportation, Road Services Division, only two sources of information were found relating to the actual placement of dredged materials onto the Port property. The first is from a KCDPW January 26, 1983 letter to the contractor regarding payment based on actual volumes dredged:<sup>11</sup>

*We have reviewed the information which Mr. Roque submitted and the recalculations which we have done on quantities of material. As we discussed and generally agreed, the total quantity of material dredged is about 16,000 cubic yards. This is a combination of the 10,500 cubic yards from our cross sections and your 5,638 cubic yards figure for volumes dredged above the cross sections. This quantity corresponds with the volume estimated to be in the containment pond.*

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<sup>11</sup> Correspondence between Rex Knight, Manger of Engineer Services and Ken Youngsman, President of Marine Construction & Dredging, Inc., between December 2, 1982 and May 25, 1983. King County Department of Transportation, Road Services Division, Department of Public Works Historical Files, Folder titled "Lora Lake."

The other was a notice placed in the *Seattle Times* on June 22, 1984 by the county that read:

*King County Road Day Labor Construction Project Estimates*

*Date: 6-22-84*

*Project Name: Lora Lake Dump Site*

*Project Number: C46303*

*Nature of Work: Level and grade waste material*

*Estimate of Costs: \$4,924.00*

Despite the 1982 agreement between the Lora Lake Shore Club and the KCDPW, the club complained in 1983 that the KCDPW was not upholding their agreement. An internal KCDPW memo <sup>12</sup> responded that:

*The berm King County constructed around the Lora Lake dredging spoil area should be breached or leveled. Some adjacent land owners are complaining because it looks bad. I think we should do this quickly because water builds up during the winter and possibly cause the berm to fail resulting in possible siltation of Miller Creek.*

Information pertaining to the DMCA after 1983 was not available in archival records.

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<sup>12</sup> Memo from Lou Haff, Maintenance Engineer to Larry Gibbins, Surface Water Management Division, dated October 7, 1983 re: Lora Lake. King County Department of Transportation, Road Services Division, Department of Public Works Historical Files, Folder titled "Lora Lake."

### **3.0 PART TWO: HISTORICAL AERIAL PHOTOGRAPHY REVIEW**

Historical aerial photography was analyzed to determine changes in land use of the DMCA prior to the 1982 dredging through 2010. Features focused on in the aerial photographs include stockpiled material, the berm constructed around the containment area, and land altering activities such as ground clearing, vegetation removal, and establishment of ingress and outgress points. A review of 1969 and 1970 aerial photography is included as the property was being utilized as a staging area for SR-518 construction during this timeframe.

A feature of interest that appears in all aerial photography is Miller Creek. Its presence is most pronounced in the 1969-1970, 1982, 1985, and 1988 aerial photographs. It is not clear whether this is a former channel or the actual course of the creek, however, the channel is situated along the eastern boundary of the DMCA and would have been approximately adjacent to the DMCA berm constructed in 1982. Historical maps and surveys show the creek flowing off the southeast corner of Lora Lake.<sup>13</sup>

#### **3.1 PRE-DREDGING AERIAL PHOTO REVIEW**

##### **1969 (WDNR)**

This aerial photograph shows the DMCA being utilized as part of SR-518 construction. As 1969 was early in the construction history of the highway; the area may have been in the process of being cleared, although what appear to be spoil or fill piles are situated throughout the area. The entire area is devoid of vegetation and trees, and Miller Creek appears to be situated along the eastern boundary of the area.

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<sup>13</sup> For example: 1956 Plat of Lora Lake Addition and 1962 Property survey of Lora Lake for Frank Anderson by Ruskin Fisher & Associates. Washington Department of Natural Resources—Public Land Survey Office; and 1980 Lora Lake Drainage Survey by KCDPW.



### **1970 (WDNR)**

This aerial photograph shows continued use of the DMCA by the state highway department related to construction of SR-518. The entire area is devoid of vegetation and trees, and heavy equipment and vehicles are parked on the southwest corner of the area. In addition, there appear to be scattered spoil or fill piles within this area. Miller Creek also appears to be situated along the eastern boundary of this area

### **1982 (WSDOT)**

The August 1982 aerial photograph was taken three months before placement of dredged material in the DMCA. As such, the DMCA appears undeveloped; mostly consisting of scrub vegetation with some trees situated along 12<sup>th</sup> Avenue S. There is evidence of ground clearing activity, especially off the end of pavement of S. 150<sup>th</sup> Street and extending into the center of the DMCA. In addition, Miller Creek appears to be situated along the eastern boundary of this area, in the vicinity of the future DMCA.

## **3.2 POST-DREDGING AERIAL PHOTO REVIEW**

### **1985 (WSDOT)**

This aerial photograph clearly shows the DMCA. A berm surrounds the entire perimeter of the area and it appears that trees were removed from the area. It is not clear if material in the center of the DMCA is dredged material or scrub vegetation that wasn't removed during construction of the DMCA. The northwest corner of the area evidences the most ground disturbance and suggests this may have been the access point for depositing the dredged material. As observed in the 1969, 1970 and 1982 aerial photographs, Miller Creek appears to be situated along the eastern boundary of the area.

### **1988 (Port of Seattle and WSDOT)**

From 1988, the aerial topographic survey from the Port, as well as the WSDOT aerial photograph show the DMCA bisected by what appear to be dirt roads that extend into the area from S. 150<sup>th</sup> Street and reach its northern and eastern boundaries. In addition, the northwest corner is devoid of vegetation indicating either recent land clearing activity has occurred or the area possibly contains dredged material placed six years earlier. The berm constructed around the DMCA is faintly visible and most pronounced on the eastern and southern boundaries of the DMCA. Again, as observed earlier, Miller Creek appears to be situated along the eastern boundary of this area.

### **1990 (U.S. Geological Survey)**

The DMCA is covered with scrub vegetation and trees. The bisection of the area by what appear to be dirt roads is similar to that seen in the 1988 aerial topographic survey, as are vestiges of the berm on the eastern and southern boundaries of this area.

### **1992 (WSDOT)**

The DMCA is covered with scrub vegetation and trees and evidences similar land uses as observed in the 1990 U.S. Geological Survey aerial photograph.

### **1993 (WSDOT)**

The DMCA is covered with scrub vegetation and trees. Observations are similar to those seen on the 1990 and 1992 aerial photographs. In addition, vestiges of the berm are visible along the eastern boundary of this area.

### **2000 (King County Dept. Natural Resources & Parks: Water & Land Resources Division)**

The DMCA is covered with scrub vegetation and trees, and as in the 1993 aerial photograph, vestiges of the berm are visible along the eastern boundary of this area. However, there is little evidence of the apparent dirt roads that bisected the area between 1988 and 1993.

### **2002 (U.S. Geological Survey)**

The DMCA is covered with scrub vegetation and trees. However, ground clearing is evident on the southeast corner of the area and mounds or piles of material of unknown composition are situated in this area as well. Vestiges of the berm are visible on the eastern boundary of this area

### **2003 (Port of Seattle Aviation Stormwater GIS)**

Land uses observed on this aerial photograph are similar to those observed on the 2002 aerial photograph.

### **2005 (King County Dept. Natural Resources & Parks: Water & Land Resources Division)**

The DMCA is covered with scrub vegetation and trees. A dirt access road, likely associated with Seattle-Tacoma International Airport Third Runway construction, has been established along the southern boundary and appears to encroach onto the southern portion of the DMCA.

### **Ca. mid 2000's (Port of Seattle)**

In this poor quality aerial image, the approximate western half of the DMCA appears to have been cleared of vegetation and trees in response to Seattle-Tacoma International Airport Third Runway construction activities. Land uses on the eastern half of the DMCA are not discernable.

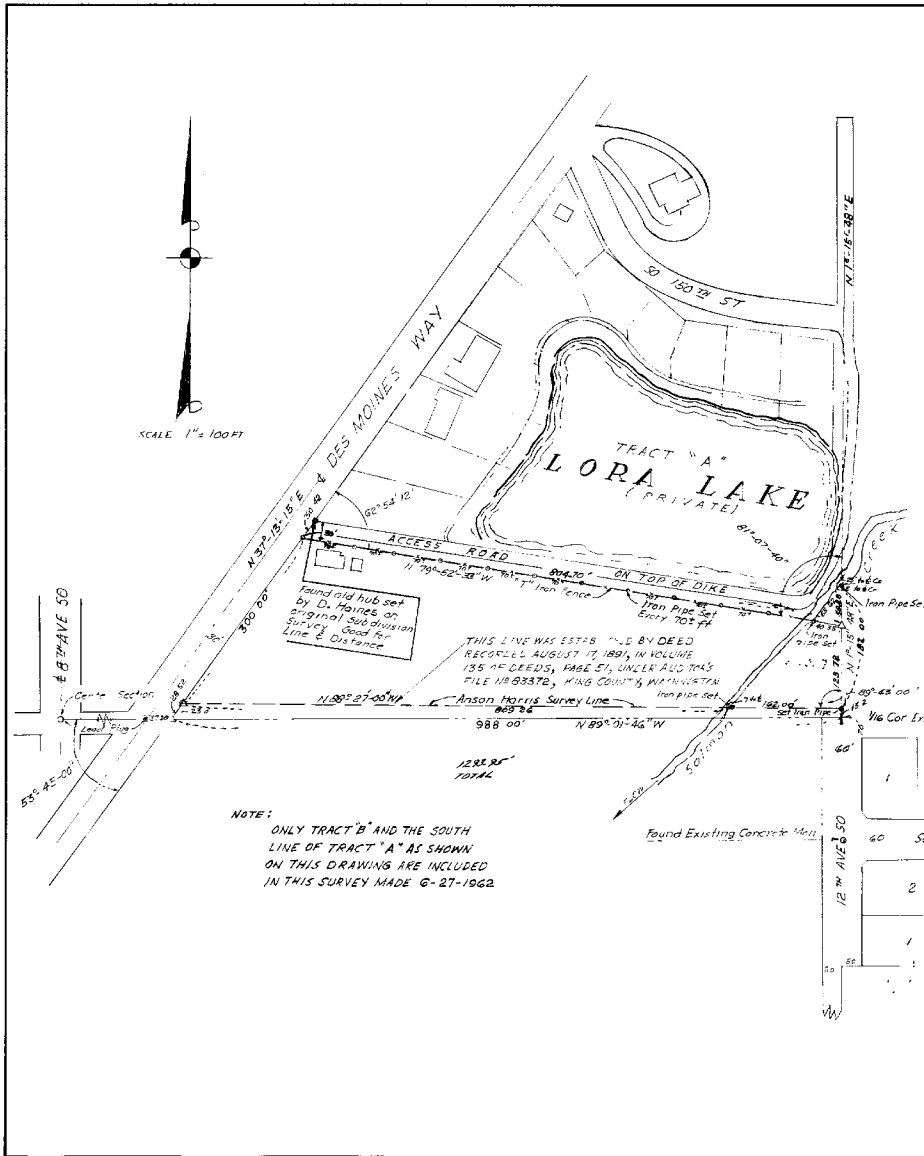
### **2007 (King County Dept. Natural Resources & Parks: Water & Land Resources Division)**

The DMCA is primarily covered with scrub vegetation and trees; however, a small portion on the western boundary of this area has been cleared. An elevated structure extending from the north end of the Seattle-Tacoma International Airport Third Runway to the north side of SR-518 is situated above the clearing. The cleared area is occupied by unidentified buildings and structures, likely associated with this elevated runway feature.

## **2010 (Port of Seattle Aviation Stormwater GIS)**

This is the most recent available aerial photo of the DMCA. The majority of the area is covered with scrub vegetation and trees; however, what appears to be a spoil or fill pile of undetermined origin extends into the eastern boundary of the area from the adjacent eastern property. As this feature does not appear in earlier aerial photographs, it is unrelated to the 1982 dredging of Lora Lake. The buildings and structures occupying the western boundary of the area in 2007 are no longer present; however, a small structure, resembling a semi-trailer, is situated on the southwest corner of the area. In addition, the elevated structure extending across and above the western boundary of the DMCA remains.

## **APPENDIX A: FOOTNOTE REFERENCES**



**LEGAL DESCRIPTION**

THE SOUTH PROPERTY LINE OF TRACT "A"  
(FRANK L ANDERSON PROPERTY)

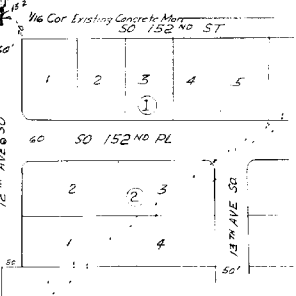
COMMENCING AT THE INTERSECTION OF A PROPERTY LINE ESTABLISHED BY CONVEYANCE OF DEED TO ANSON HARRIS, RECORDED AUGUST 17, 1891 IN VOLUME 135 OF DEEDS, PAGE 51, UNDER AUDITOR'S FILE NO. 83372, WITH THE EASTERLY MARGIN OF DES MOINES WAY, THENCE N 37° 12' 15\"/>

**TRACT "B"**

THAT PORTION OF THE SW 1/4 OF THE NE 1/4 OF SECTION 20, TWP 23 N., R. 4 E. W. M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS: BEGINNING AT THE INTERSECTION OF THE EAST LINE OF SAID SUBDIVISION WITH THE NORTH LINE OF A TRACT OF LAND CONVEYED TO ANSON HARRIS BY DEED RECORDED AUGUST 17, 1891, IN VOLUME 135 OF DEEDS, PAGE 51, UNDER AUDITOR'S FILE NO. 83372; THENCE NORTH ALONG THE SAID EAST LINE 182.00 FT TO THE SOUTHEASTERLY MARGIN OF A CREEK; THENCE SOUTHWESTERLY ALONG SAID SOUTHEASTERLY MARGIN TO ITS INTERSECTION WITH THE NORTH LINE OF SAID HARRIS TRACT; WHICH IS ALSO THE LINE OF A FENCE AS LOCATED AND EXISTING ON JULY 13, 1891; THENCE EASTERLY ALONG THE NORTH LINE OF SAID HARRIS TRACT, 162 FEET TO THE TRUE POINT OF BEGINNING.

NOTE: DESCRIPTION OF TRACT "B"  
REFER TO NO 166822 LIMITED  
LIABILITY REPORT OF LAWYERS  
TITLE INSURANCE CORPORATION

NOTE:  
ONLY TRACT "B" AND THE SOUTH  
LINE OF TRACT "A" AS SHOWN  
ON THIS DRAWING ARE INCLUDED  
IN THIS SURVEY MADE 6-27-1962



NO.	REVISION	DATE	BY
<b>RUSKIN FISHER &amp; ASSOCIATES</b> CIVIL ENGINEERS      LAND SURVEYORS SEATTLE WASH.			
<b>PROPERTY SURVEY</b> FOR <b>MR. FRANK L. ANDERSON</b> 3055 SOUTH 304 <sup>TH</sup> ST - AUBURN, WASHINGTON			
DRAWN BY: K.R.B.		SCALE: 1" = 100 FT.	
CHECKED BY: M.H.S.		DATE: SEPT. 17, 1962	
APPROVED BY: [Signature]		DATE: _____	
JOB NO.: 62194		SHEET: 1 OF 1	

62194



OFFSET DIST. TO RIGHT FROM BASE LINE

STA.	ELEV. 258	ELEV. 256	ELEV. 254	ELEV. 250
1+00	32 ± 170	-	-	-
1+50	16 ± 210	50 ± 220	-	-
2+00	30 ± 277	43 ± 240	50 ± 215	-
2+50	27 ± 267	58 ± 232	44 ± 216	54 ± 166
3+00	18 ± 253	34 ± 215	40 ± 204	50 ± 163
3+50	22 ± 240	35 ± 200	40 ± 190	50 ± 162
4+00	27 ± 225	40 ± 185	50 ± 174	60 ± 160
4+48.78	37 ± 225	57 ± 180	140 ± 170	-

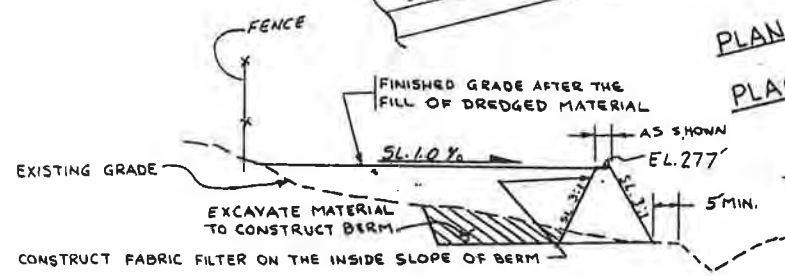
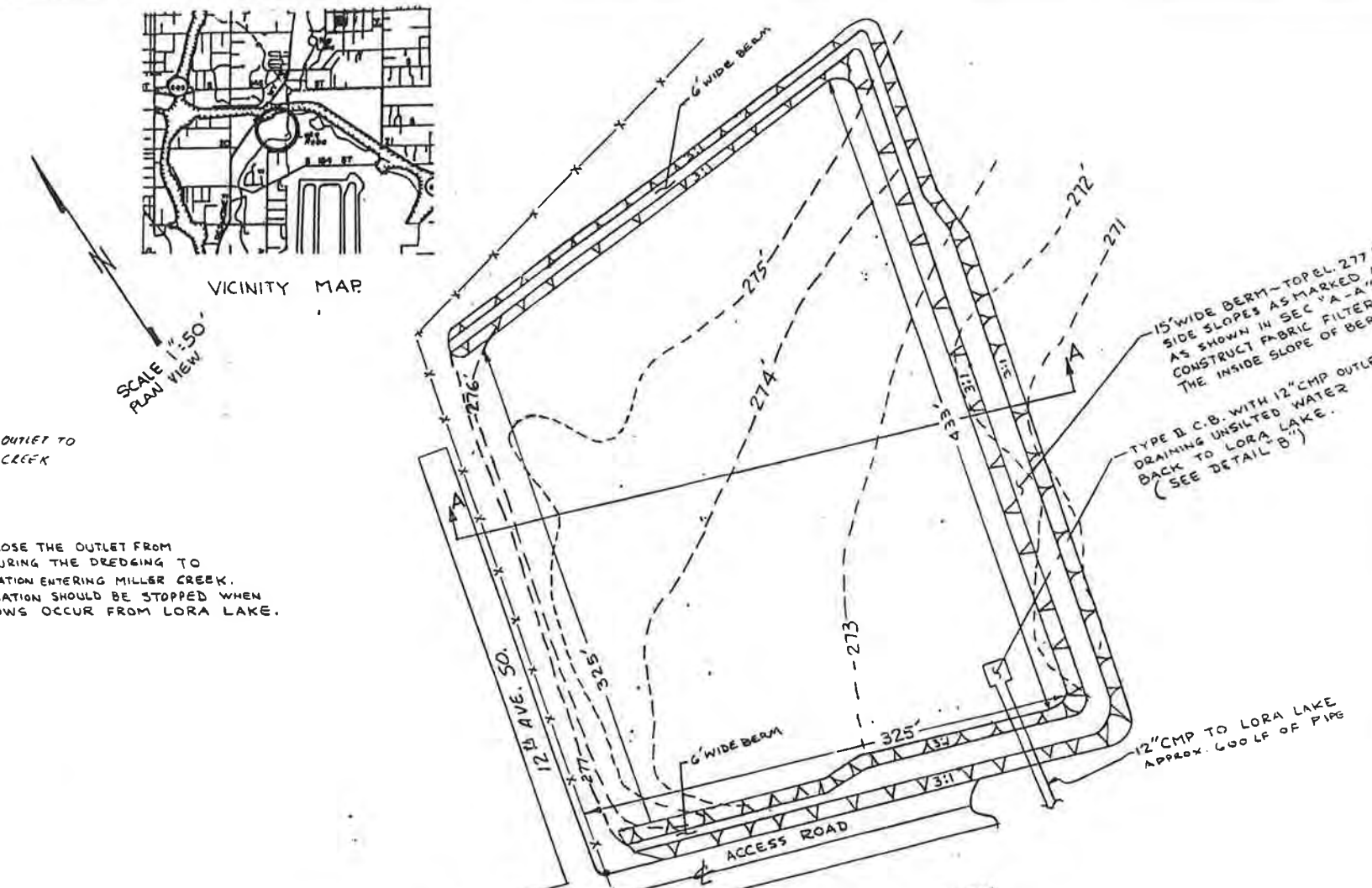
LORA LAKE  
 DREDGING SITE PLAN

**LEGAL DESCRIPTION OF PROPERTY OWNED BY THE PORT OF SEATTLE**

**LEGAL DESCRIPTION: TAX LOT 215**  
 The North 27 acres of the Northwest 1/4 of the Northwest 1/4 of Section 20, Township 23 North, Range 1 East, U.M., in King County Washington, less that portion lying westerly of a line bearing South 87°-59'-55" West from a point on the North line of said subdivision, 122.16 feet westerly of the Northwest corner thereof; also less that portion of the above described property lying westerly of the Southly merge of secondary State Highway No. 1-4, (SAS15).

**LEGAL DESCRIPTION: TAX LOT 541 and 52**  
 The North 194 Feet of the South 1/2 acre of the Southwest 1/4 of the Northwest 1/4 of Section 20, Township 23 North, Range 1 East, U.M., in King County, Washington less that portion lying westerly of the Northwesterly prolongation of the corner line of the Home South, as shown on the Plat of Street Extension Addition, as recorded in volume 46 of Plats, Page 82, records of King County, Washington.

**LEGAL DESCRIPTION OF LAKE:**  
 Tract "A", Lora Lake Addition, as recorded in Volume 57 of Plats, page 24 Records of King County, Washington, Tax #440140-0060.



- NOTES:
- ALTERNATE SILT POND OUTLET METHODS TO BE DISCUSSED WITH THE DREDGING CONTRACTOR PRIOR TO INSTALLING THE TYPE II C.B. AT OUTLET:  
 a. PUMP SILT LADEN WATERS INTO DISPOSAL SITE DURING THE DAY. ALLOW TIME FOR SILT TO SETTLE FROM THE WATER AND THEN REVERSE PUMPS TO PUMP CLEAN WATER BACK INTO LAKE.  
 b. PLACE STOP LOGS BETWEEN "I" BEAMS AT THE OUTLET OF DISPOSAL AREA. PUMP SILT LADEN WATER INTO DISPOSAL AREA. AS SILT SETTLES FROM WATER, REMOVE ONE STOP LOG OUT AT A TIME TO ALLOW CLEAN WATER TO FLOW INTO A TEMPORARY PIPE SYSTEM AND INTO THE LAKE.
  - AFTER THE COMPLETION OF DREDGING OPERATION, GRADE THE ENTIRE SITE TO DRAIN SOUTHEASTERLY.
  - THE VOLUME OF DREDGED MATERIAL IS ESTIMATED 12,000 CU. YDS.
  - THE SPOIL AREA AND BERM WILL BE HYDROSEEDED BY OTHERS.
  - BERM AND RECYCLE PIPE WILL BE CONSTRUCTED BY KING COUNTY PRIOR TO DREDGING.
  - THE BERM SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM RELATIVE DENSITY.
  - IF ALTERNATE METHODS AS SHOWN IN NOTES 1a AND 1b ARE USED, A PLAN MUST BE SUBMITTED TO THE DEVELOPMENT REVIEW SECTION OF THE DIVISION OF SURFACE WATER MANAGEMENT.

KING COUNTY DEPT. OF PUBLIC WORKS  
 SURFACE WATER MANAGEMENT

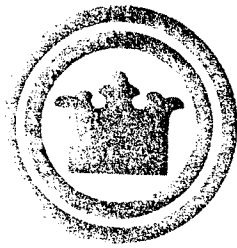
**LORA LAKE DREDGING**

SHEET 1 OF 1 SHEETS  
 SCALE 1"=50'-0"

RECOMMENDED BY: M.A. JUNE 10

APPROVED BY: LARRY R. GIBBONS

LARRY R. GIBBONS  
 PROFESSIONAL ENGINEER



**King County** State of Washington  
John D. Spellman, County Executive

**Department of Public Works**  
James W. Guenther, Director  
900 King County Administration Building  
500 Fourth Avenue  
Seattle, Washington 98104

Telephone: (206) 344-2517

June 26, 1980

Mr. Donald G. Shay  
Director of Aviation  
Port of Seattle  
P.O. Box 1209  
Seattle, WA 98111

Re: Drainage Problem - Lora Lake Area

Dear Mr. Shay:

We have been working with a group of residents who live adjacent to Lora Lake, which is located along the northwest edge of the Airport.

The County has an existing storm drain that crosses Des Moines Way and enters at the northwest corner of the lake. The storm drain carries a fine silt into the lake at a location where we are not able to bring in any equipment. All work has to be done by hand. The residents have asked us to move the drain to eliminate the silt. The line can be rerouted along Des Moines Way then easterly along South 150th Street. From this point it could be directed either to the east side of the lake near the outlet or onto Port of Seattle property. The residents would prefer that it be directed onto the Port property and kept out of the lake.

Members of my staff have met with Lawrence Parks of your Planning Section and representatives of your Engineering Department and discussed this. We are asking to bring the drainage onto your property and for an area to construct a retention pond. We estimate that the pond would have to be approximately 200 X 200 feet, although this would have to be determined by our Hydraulics Division so that all regulations regarding Miller Creek were met. Sketches of the approximate locations are attached for your information.




Mr. Donald G. Shay  
Page 2  
June 26, 1980

We would appreciate your views on this proposal. If it is agreeable we will proceed with further survey and engineering.

Thank you for your consideration of the matter.

Very truly yours,

  
for James W. Guenther  
Director

JWG:JHM:cc

↙  
Attachments

cc: Wally Watson

King County State of Washington  
John D. Spellman, County Executive

Department of Public Works  
James W. Guenther, Director  
900 King County Administration Building  
500 Fourth Avenue  
Seattle, Washington 98104

Telephone: (206) 344-2517

November 4, 1980

Mr. Wally Watson  
15040 Des Moines Way South  
Seattle, WA 98148

Re: Storm Drainage from Lora Lake

Dear Mr. Watson:

As you requested at our meeting on June 10 we are now reviewing the possibility of routing the storm drainage from Lora Lake onto Port of Seattle property.

We have had preliminary meetings with the Port regarding use of their land for a storm drain and retention pond. The Surface Water Management Division will be doing a hydraulic study to size the retention pond and outlet controls needed on this property. Also, additional funds over and above what is now budgeted are being requested for this project in 1981.

This new route will delay actual construction approximately one year as was explained to you. At this time, we do not feel that construction will start until early summer of 1981. I hope this will help bring you up to date on this situation.

Very truly yours,

  
Paul C. Hooper, P.E.  
County Road Engineer

PCH:JHM:cc

# MEMORANDUM

6-29-81  
Date June 2, 1981

RECORDS CENTER

To RECORD

From PAUL C. HOOPER *PCH*

Subject LORA LAKE - CITIZENS MEETING MAY 28, 1981

A meeting was held on the subject of Lora Lake at the home of Frank Yellum, 15052 Des Moines Way South at 7:30 PM on Thursday May 28, 1981.

County staff attending were the following:

Paul Hooper, County Road Engineer  
Paul Taisey, Operations Engineer  
Larry Gibbons, Project Engineer, Surface Water Management  
Stuart MacVeigh, Assistant Design Engineer  
Korman Olsen, Road Designer  
George Martonik, Representative of Councilman Bob Greive

Adjacent owners who attended are listed in the attached roster.

Mr. Hooper reviewed the County's involvement with Lora Lake since 1975 and earlier, mentioning concerns with problems of drainage and siltation.

Larry Gibbons said most of the silting appeared related to construction in the early '70's, such as construction of SR 518 and re-work of a wrecking yard in the area. Current and future deposit of debris in the inflow at the north-west corner should be much less.

Larry discussed several alternatives:

1. Leave inflow as is. Build loose rock dike on about a 20' radius to create area in which silt can settle out and be removed periodically by County crews. This alternative was cheapest but entailed problems of access for County equipment. Also, the adjacent owners objected that this inflow area already tended to be stagnant and full of debris. The rock dike they felt would only make things worse.
2. Block present inflow. Conduct water by pipe around north and east sides and into Lake in vicinity of present outflow. This would keep the County legal with respect to run-off into nearby Salmon Creek. It would also provide effective catchment of silt by several catch basins in the line before entering

June 2, 1981

Lora Lake. It would necessitate an easement across a 1' wide strip of property on the east side to permit access for construction and maintenance. Cost of this alternative was within present available funds of about \$120,000. It appeared generally acceptable to the owners present.

3. Create a separate retention pond on Port of Seattle property to the east, by-passing Lora Lake altogether. This alternative appealed to some of the owners but County staff indicated real difficulties. The Port and potential developer were not eager to have the pond and the project would cost in excess of \$250,000. It was also pointed out to the Lora Lake owners that the springs presently supplying the Lake might not continue to flow after further build-up of the area; it would be advisable to maintain the present surface inflow in some manner.

One of the owners, Wally Watson, said he felt the County bore responsibility for the silting up of the Lake, which had resulted in lessening the typical depth from 14 feet to only 9 feet. His attorney had given the owners advice to this effect. He said the County should undertake to clean out the Lake, i.e., remove all the material presumably carried in with the inflow; and thereafter to come back periodically, say every five years, to repeat the process. He said this commitment by the County was more important to him than re-routing the inflow.

There was some further discussion of all these points. Mr. Hooper said he would have to seek advice from the Prosecutor's office as to the extent of the County's responsibility for siltation of the Lake. He said the Department wanted to cooperate with the neighborhood in solving the problem. However in taking any steps, consideration would have to be given to the limitation in public funds and the practicalities of construction and future maintenance. He said that within a few weeks, following study of the situation, Department staff would be back in touch with the owners. If the #2 pipe-around alternative was decided on as being best, construction could possibly be started late this summer.

The meeting concluded with apparent feeling of mutual understanding between County staff and the owners.

SM:cg

Enclosure

cc: All attendees  
Darrell Syferd, Deputy Prosecutor  
Sandy Adams  
Dave Aggerholm

8/3/82:gn

820823-02

PAUL BARDEN

INTRODUCED BY

PROPOSED NO.

82-446

ORDINANCE NO. 6104

AN ORDINANCE amending the scope of work and reducing the cost of Lora Lake Drainage; amending Ordinance No. 5757, Sections 70 and 71, as amended.

BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

SECTION 1. There is hereby approved and adopted a change of scope for Lora Lake Drainage, Capital Improvement Project No. 600680.

SECTION 2. The project information sheet attached hereto is adopted to amend and revise the 1982 Capital Improvement Program and Budget; amending Ordinance No. 5757, Section 70, Attachment No. 1, as amended.

SECTION 3. Ordinance No. 5757, Section 71, is hereby amended to read as follows:

Accumulated unexpended prior years appropriations from several capital improvement project funds for the specific projects identified and contained in Attachment No. 1 to this ordinance are hereby cancelled as follows:

County Roads (CIP Only)	( <del>+\$860,281</del> )	\$897,281
County Road Construction	( <del>+\$1,554,379</del> )	\$1,591,379

INTRODUCED AND READ for the first time this 16<sup>th</sup> day of August, 1982.

PASSED this 23<sup>rd</sup> day of August, 1982.

KING COUNTY COUNCIL  
KING COUNTY, WASHINGTON

Lois North  
Chairman

ATTEST:

Janet M. Owens  
DEPUTY Clerk of the Council

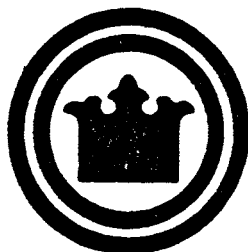
APPROVED this 2<sup>nd</sup> day of September, 1982.

Randy Reeves  
King County Executive

820823-02

**King County Council**

AUDREY GRUGER, Dist. No. 1  
SCOTT BLAIR, Dist. No. 2  
BILL REAMS, Dist. No. 3  
LOIS NORTH, Dist. No. 4  
RUBY CHOW, Dist. No. 5  
BRUCE LAING, Dist. No. 6  
PAUL BARDEN, Dist. No. 7  
BOB GREIVE, Dist. No. 8  
GARY GRANT, Dist. No. 9



**King County Council**

Lois North, *Chairman*  
Mary Matilda Jones, *Council Administrator*  
Gerald A. Peterson, *Deputy Council Administrator*  
Room 402, King County Courthouse  
Seattle, Washington 98104

(206) 344-2500

6104

August 12, 1982

TO: Scott Blair, Chairman  
Fiscal Management Committee

FROM: Peter Hahn, Council Staff

SUBJECT: Proposed Ordinance 82-446: Amendment to project scope  
and cost of Lora Lake  
Drainage

Project History: The existing drainage outfall at Lora Lake has been depositing silt, sand, oil and debris from nearby roads and properties for many years. The Lora Lake Homeowners have asked the County to correct this condition because the lake has ceased to serve its former recreational purposes.

Original Project Scope: The County's original plan to remedy the siltation problem at the Lake was to reconstruct the drainage system around the south side of the Lake and have it discharge into Miller Creek.

Change in Scope: The Prosecuting Attorney reviewed the proposed project and questioned whether the rerouting of the drainage system would remedy the existing problem of heavy siltation in the lake. With a concern for potential lawsuits from residents, the scope of the project was changed to dredging the silt from the lake, depositing it at nearby Sea-Tac property, and constructing a settlement pond to catch silt, debris, etc. before it gets into the lake. The settlement pond would be cleaned once a year and the silt would be deposited on the Port of Seattle's property.

Fiscal Impact: The revised project scope is estimated to cost \$98,000 -- \$37,000 less than the original budget.

Staff Recommendation: A do pass.

PH/gj

820823-02

6104



RECEIVED

1982 AUG -3 PM 4:00

CLERK  
KING COUNTY COUNCIL

**King County Executive**  
Randy Revelle

August 3, 1982

The Honorable Lois North  
Chairman, King County Council  
C O U R T H O U S E

*Waggener - Buden - FM*

RE: Change of Scope for Lora Lake Drainage

Dear Madam Chairman:

If approved, the enclosed ordinance will change the scope of work for Lora Lake drainage. This ordinance request is based on the recommendation of the Prosecuting Attorney's Office.

The proposal identified in the October 1981 CIP description included eliminating the existing outfall into Lora Lake and the replacement of the existing storm drainage system with a new alignment around the south side of the lake to a discharge point in Miller Creek.

The new proposal calls for cleaning the lake by dredging the silty material from the lake and depositing this dredge material onto the Port of Seattle property northeast of Lora Lake. A settlement pond is to be constructed at the inlet of the lake to keep the lake clean in future. The Port of Seattle has agreed to allow the County to use their property for the dredge material. This revised scope of work should result in savings of \$37,000 over the earlier proposal.

This ordinance will have no adverse impacts on the County's fiscal affairs. The Council's early consideration of this matter is appreciated.

If you have any questions about this matter, please call Shelly Yapp, Director, Budget Department at 344-3434.

Sincerely,

*[Handwritten signature]*  
RANDY REVELLE  
King County Executive

RR/JRE:gn  
Enclosure

- cc: King County Councilmembers
- Mary Jones, Council Administrator
- Jerry Peterson, Deputy Council Administrator
- Jim Guenther, Director, Department of Public Works
- Shelly Yapp, Director, Budget Department
- ATTN: Bob Edmundson, Budget Analyst

0210823-02

Project: 70680 Lora Lake Drainage

**Description:**

**Council District:** No. 7  
**CIP Planning Area:** Highline

Work Scope: The existing proposal is to eliminate the existing outfall into Lora Lake and build a new system around the south side of lake to a discharge point in Miller Creek.

The new proposal calls for cleaning the lake by dredging the silty material from the lake and depositing this dredge material onto the Port of Seattle property northeast of Lora Lake. A settlement pond is to be constructed at the inlet of the lake to keep it clean in the future.

Justification: The present outfall continually deposits silt, sand, oils and debris from contiguous roads and properties into Lora Lake. The lake is becoming unfit for recreational activities enjoyed by the residents. The lake is spring fed and does not require surface water augmentation to maintain a constant water level.

**Project Comparison**

(vs. Last Council Approval)

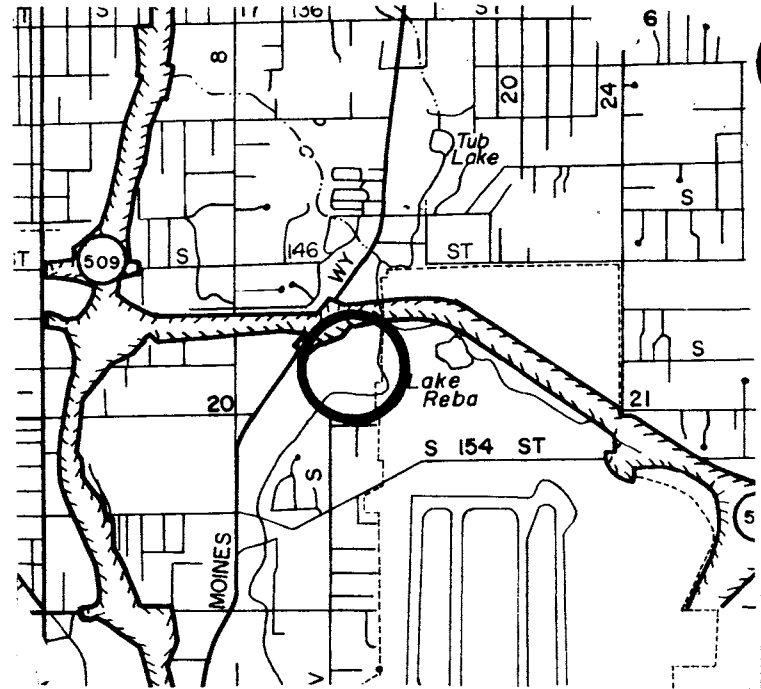
- No Changes
- To Be Abandoned
- To Be Merged
- Total Cost Change
- Site Change
- New
- Revenue Change
- Scope Change
- Schedule Change

**Cost Data:**

Original Cost Estimate -1979 \$60,000

**Status:**

Construction scheduled to begin by October, 1982.



**Project Data:**

FUND 000003860 COUNTY ROAD CONSTRUCTION  
 DEPARTMENT 0737 ROADS-COUNTY ROADS CONSTRUCTION  
 FUNCTION 54100 ROAD & STREET CONSTRUCTION  
 SERVICE 54157 SPECIALIZED PROJECTS  
 PROGRAM 54177 DISCRETE PROJECTS

DEPARTMENT PRIORITY REQUEST PRINTED JUNE 1982

LOCATION - So. 150th - 12th SO AREA

CURRENT PROJECT COST ESTIMATE 98,000

EXPENDED & APPROPRIATED (INC RECOMMENDED) 98,000

FUTURE FUNDING REQUIRED TO COMPLETE PROJECT 0

OPTION	EXPENDITURES TO 12-31-80 (A)	EXISTING BUDGET (B)	1982 RECOMMENDED (C)	EXP + BUDGET + RECOMMENDED (A+B+C)	*PROGRAM PROJECTIONS - THOUSANDS OF DOLLARS*					OPT/ACCOUNT TOTAL	
					1983	1984	1985	1986	1987		TOTAL
-----EXPENDITURE DATA-----											
DESIGN, PRELIM ENG		1,000		1,000	*					*	1,000
CONSTRUCTION		100,000	(34,000)	66,000	*					*	66,000
COUNTY FORCE DESIGN	9,182	1,818	5,000	16,000	*					*	16,000
CONST ADMIN/ENGINEER		23,000	(8,000)	15,000	*					*	15,000
EXPENDITURE TOTALS	9,182	125,818	(37,000)	98,000	*					*	98,000
-----REVENUE SOURCES-----											
37203 (A) CONT.-COUNTY ROADS		125,818	(37,000)	88,818	*					*	88,818
PRIOR YRS REV	9,182			9,182	*					*	9,182
REVENUE TOTALS	9,182	125,818	(37,000)	98,000	*					*	98,000
REVENUE AVAILABLE	98,000				*					*	
		REVENUE PENDING	0		*					*	

CAPITAL IMPROVEMENT PROGRAM

6104

820823-02

T(SR)



Memo

Lora Lake

To: File

~~From:~~ Larry Gibbons

Subject: Lora Lake

File

A meeting was held at the Port of Seattle property adjacent to Lora Lake on March 29, 1982, to discuss the potential of using the Port's property for a sediment basin for Lora Lake.

The following people were present:

- Bob McManus, King County
- John Grover, " "
- Larry Gibbons, " "

- Fred Stevens, Port of Seattle
- ~~Harry Angelos~~, " "
- ~~Ray Annis~~, " "

Based on our field inspection we decided:

1. Fred S other people to see if they have any problems.
2. Fred would respond to our letter and get back to me this week with their comments.
3. It appears the best disposal area is between SR509 and a paved driveway into the Port's property. Whether this will be enough will depend on surveying and calculations.
4. I asked if we could contract berm using on-site material. They did not object if it is adequate.

~~Harry~~ suggested we have our soils lab look at the material.

5. The next step is to wait on the Point's response. If it's affirmative, we should order the survey.
  - a. Negative impact statement and hydraulics permit will probably be required.
  - b. Residents adjacent to the sediment basin should be notified of our proposed work and asked for comments.
6. Gravity ~~pipe~~ recirculating pipe system should be no problem. Check capacity.
7. John Gower said it may take 18 days working 10 hours a day to dredge lake.
8. Fred Siver's stated we would need to grant the Point and release of damages if it is okay to do the project.

### Design Considerations:

1. Construct berm adjacent to SR509 fence
2. May construct two ponds so not to store up too much water.

# MEMORANDUM

Date June 14, 1982

To J. W. Guenther via Paul C. Hooper

From *Paul W. Taisey*  
Paul W. Taisey

Subject LORA LAKE

This will respond to your request of June 7, 1982, regarding a status report on the Lora Lake project.

One of the requirements to complete the Lora Lake project is locating a site for purposes of disposing of dredged materials. The site selected is owned by the Port of Seattle. One of the requirements of the Port is that an EP toxicity test be made of dredged water and materials. Lux Labs was awarded the contract for testing and the results will be forwarded to the Roads Division during the week of June 14, 1982.

If the materials pass the toxicity test, survey field work will begin immediately to provide data for the design of a detention pond on the Port of Seattle property and the design of a rock weir at the outfall location to trap sediments and other pollutants from the surface water that empties into the lake.

Jim Brewer of the Prosecuting Attorneys Office has informed the attorneys representing the Lora Lake Community Club of the progress being made.

Due to budgetary constraints, a contract will have to be awarded to construct the detention pond and the installation of two manholes in the existing storm drain system.

It is anticipated County day labor forces will construct the weir at the outfall of the storm drain system where it enters the lake.

Assuming the EP toxicity test is OK, construction would begin by September 1, 1982.


PCH/PWT:ap

King County  
Dept. of Public Works

# MEMORANDUM

9-8-82  
Date September 2, 1982

To Charles T. Kohler, Manager, Purchasing

From Paul C. Hooper, County Road Engineer 

Subject EP TOXICITY TEST CHARGES, P.O.# R80582R

The King County Department of Public Works was required to provide an analysis of the silt material that we propose to dredge from the bottom of Lora Lake. This requirement was requested by the Port of Seattle since we plan to dump the dredgings on Port property.

The price quoted by Mike Nelson of Laucks Testing Laboratories was \$365.00 per sample for an E.P. Toxicity test. However, due to a misunderstanding, four samples were taken to the testing laboratory by Public Works personnel. We feel that no error was committed by the people from Laucks Laboratories and the invoice from them should be paid as submitted.

PCH/WH:syl

cc: Jim Pomeroy, Manager, Finance Section  
Paul W. Taisey, Manager, Operations Planning

FILED for Record at Request of

Name King County, Prosecuting Attorney  
Address 6350 KC Courthouse  
Seattle WA 98104

COPY RECEIVED  
OCT 21

AGREEMENT BETWEEN  
THE LORALAKE SHORE CLUB  
AND KING COUNTY

NORM MARRIS  
PROSECUTING ATTORNEY  
CIVIL DIVISION  
Nov 23 11 21 AM

8211230704

THIS AGREEMENT made and entered into this 27 day of OCTOBER, 1982, by and between THE LORALAKE SHORE CLUB and its members, and KING COUNTY;

WHEREAS, THE LORALAKE SHORE CLUB (hereinafter referred to as the "SHORE CLUB") is comprised of the eleven (11) individuals and marital communities that own equal, undivided one-eleventh interests in a lake known as Loralake. These individuals and marital communities are listed in Appendix "A", attached hereto. Loralake is designated as Tract A of Loralake Addition, per plat recorded in Volume 57 of Plats, page 24, records of King County, Washington. The members of the SHORE CLUB are also the owners of the eleven parcels of waterfront property that adjoin Loralake on the west and on the north, all situated in King County, Washington; and

WHEREAS, the SHORE CLUB contends that KING COUNTY has, for many years, deposited silt and other pollutants into Loralake by intentionally building and maintaining a drainage system which collects surface water runoff from surrounding areas and directs that surface runoff into Loralake; and

WHEREAS, the SHORE CLUB and its members contend they have suffered damages as a result of the pollution of Loralake by KING COUNTY, such damages including the build-up of pollutants and silt in Loralake which has resulted in a loss of the use and

82-11-23  
REC'D F  
CRSHSL

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W0704

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52112339704

enjoyment of Loralake to its owners and a decrease in the value of Loralake; and

WHEREAS, KING COUNTY contends that the deposition of silt and other material into Loralake is a natural process which has been accelerated by the developer of Loralake through the artificial creation of Loralake within a pre-existing natural watercourse, thereby providing greater depth and volume of water in which silts may more freely settle out than in the natural condition; and

WHEREAS, KING COUNTY contends that it is not its responsibility to remove all sediments or pollutants from drainage which reaches its roadway drainage system or is thereafter discharged to a watercourse; and

WHEREAS, the SHORE CLUB has been negotiating with KING COUNTY for many years to resolve the pollution and siltation problem which KING COUNTY has caused at Loralake; and

WHEREAS, all parties believe they would prevail in litigation and subsequent appeals of this matter, but are desirous of settling the existing dispute between them without further expense or delay; NOW, THEREFORE,

IN CONSIDERATION of the mutual promises, covenants and agreements herein, the parties hereby agree as follows with the intent that each be legally bound;

1. KING COUNTY agrees to remove or pay for the removal of siltation from the lake bed of Loralake in accordance with the plans which are attached as appendix "D" to this agreement.

8211230701

2. KING COUNTY agrees to create two additional large catch basins above the current outfall into Loralake which will be designed to remove sediment and oil from the surface water which empties into Loralake. These catch basins are more fully described in Appendix "B", attached hereto.

3. KING COUNTY agrees to place a rock weir system with a twenty-five foot radius at the existing location for the outfall into Loralake; such rock weir system to be designed to trap sediment from the surface water which empties into Loralake. This rock weir system is more fully described in Appendix "C", attached hereto.

4. KING COUNTY agrees to maintain and clean the catch basins and rock weir system on an annual basis.

5. KING COUNTY agrees to restore all property around Loralake which is used by KING COUNTY to gain access to Loralake or to perform the work described in this Agreement to the condition the property was in before it was used by KING COUNTY.

6. KING COUNTY agrees to provide the SHORE CLUB and its members with an artist's conception of the rock weir system before any work is performed on that system, and KING COUNTY further agrees to work with the SHORE CLUB and its members to make the rock weir system as attractive as possible.

7. KING COUNTY agrees to perform the various elements of the work set out in this Agreement in a systematic and logical order which will minimize the possibility that additional silta-

821123070.1

tion and oil will enter Loralake and which will allow for the completion of all work by November 30, 1982, except for construction of the rock weir system provided in paragraph 3 above which shall be completed by June 1, 1983. King County shall also remove sediment according to the plan accumulating from the outfall between the time silt removal is complete and when the rock weir is constructed.

8. KING COUNTY agrees to reimburse the SHORE CLUB \$2,710.35 for attorneys' fees and costs which it has incurred as part of its effort to reach an agreement with KING COUNTY.

9. The SHORE CLUB and/or its members will authorize and execute the necessary easements to allow KING COUNTY to gain access to Loralake or to perform the work described in this Agreement and by this agreement hereby authorize KING COUNTY and its agents and contractors to enter onto property owned by the SHORE CLUB or any member for the purpose of performing the silt removal described in paragraph 1.

10. Upon completion of the first eight (8) elements of this Agreement, the SHORE CLUB will release KING COUNTY from any and all liability for the siltation and pollution of Loralake which has or may have occurred prior to the date of this Agreement. However, this Agreement is not intended to and should not be construed to be a release by the SHORE CLUB of KING COUNTY for liability for pollution and siltation of Loralake caused by KING COUNTY after the date of this Agreement.



THE LORALAKE SHORE CLUB

KING COUNTY

By Wally Watson

By [Signature]

Its J Pres.

Its OCT 19 1992

Approved as to form:

[Signature]  
Marian Belt

[Signature]  
Deputy Prosecuting Attorney

[Signature]  
Jimmy Breeze

[Signature]  
"Duke" Thomas De La Hunt

[Signature]  
Margene Holmstrom - Marjane Hallstrom

[Signature]  
Jane Johnson

[Signature]  
Greg McGonagill

[Signature]  
Eleanore Vistaunet

Wally Watson  
Wally Watson

[Signature]  
Theresa Watson

821123070.1

Georgia Wardall  
Georgia Wardall

Jim Wilcher  
Jim Wilcher

Virginia Wilcher  
Virginia Wilcher

Frank Yellam  
Frank Yellam

Angelina Yellam  
Angelina Yellam

5211239701

8211230701

APPENDIX A

Jimmy Breeze  
1041 South 150th Street  
Seattle, Washington 98148

Jane Johnson  
1033 - South 150th  
Seattle, Washington 98148

Merian Belt  
1029 South 150th  
Seattle, Washington 98148

Margene Holstrom  
1021 South 150th  
Seattle, Washington 98148

Georgia Wardall  
1009 South 150th  
Seattle, Washington 98148

Jim Wilcher  
15006 Des Moines Way South  
Seattle, Washington 98148

Greg McGonagill  
15010 Des Moines Way South  
Seattle, Washington 98148

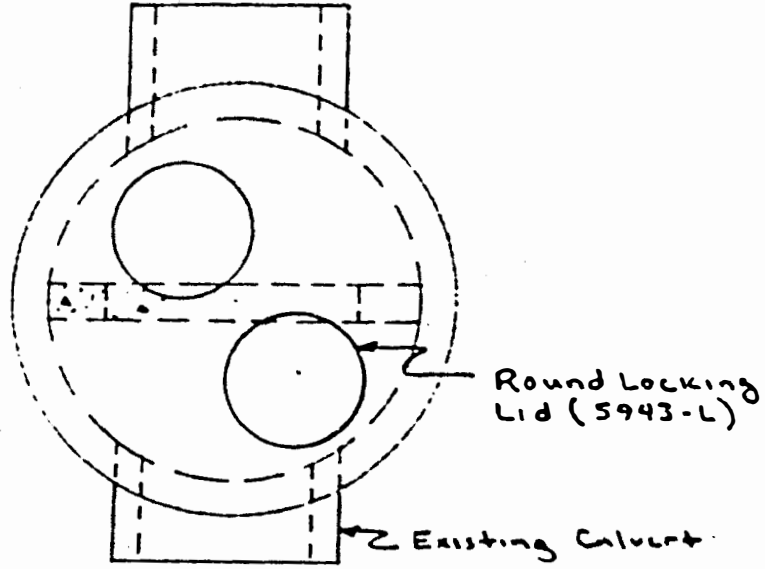
"Duke" Thomas De La Hunt  
15016 Des Moines Way South  
Seattle, Washington 98148

Eleanore Vistaunet  
15028 Des Moines Way South  
Seattle, Washington 98148

Wally Watson  
15040 Des Moines Way South  
Seattle, Washington 98148

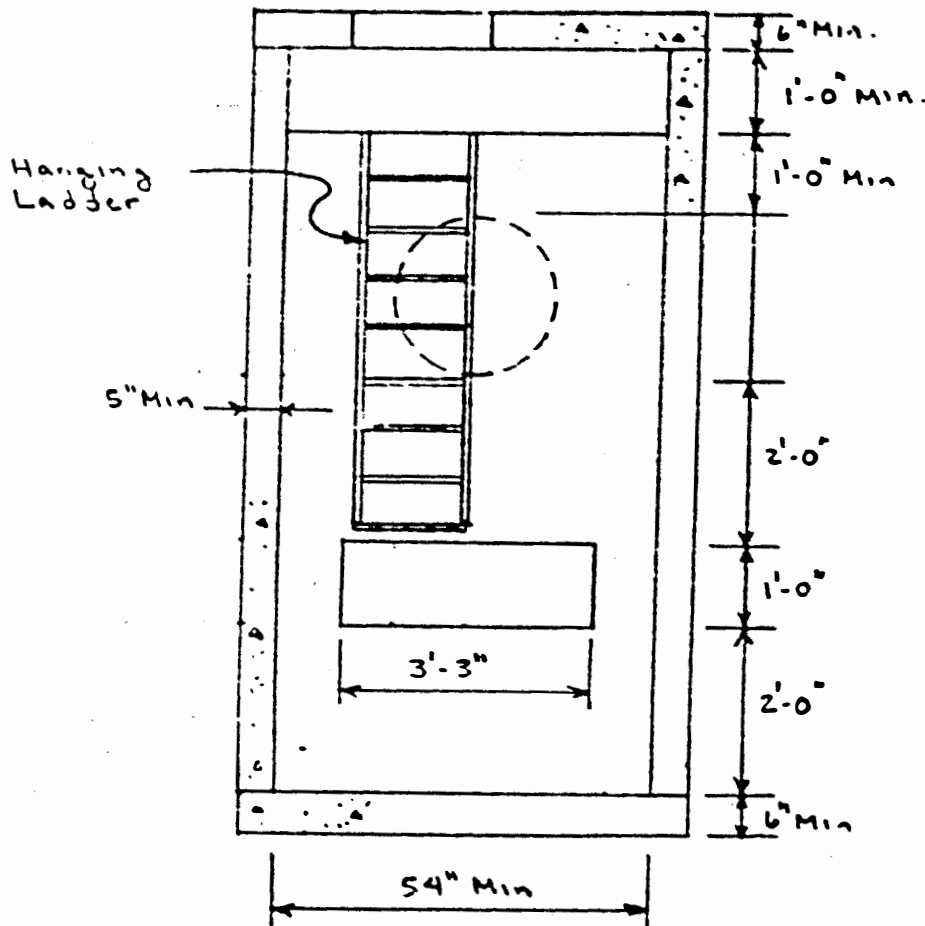
Frank Yellam  
15052 Des Moines Way South  
Seattle, Washington 98148

APPENDIX "B"



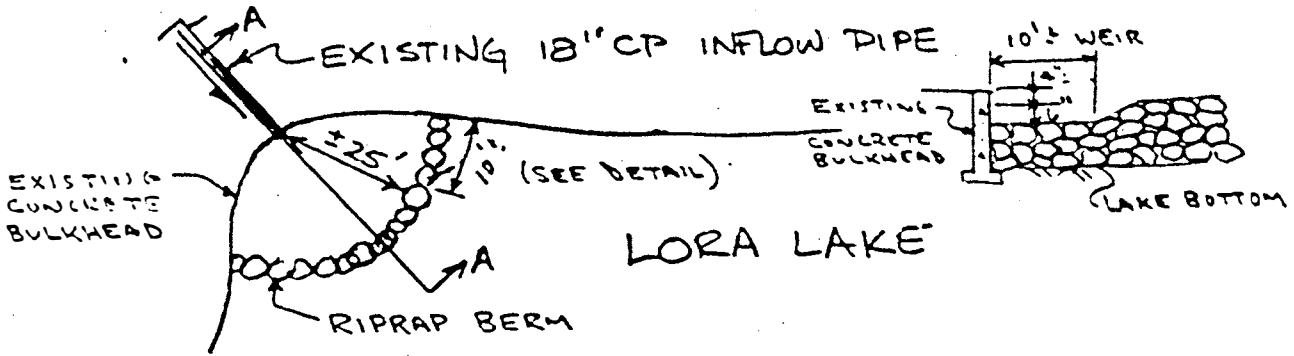
PLAN

S211230704

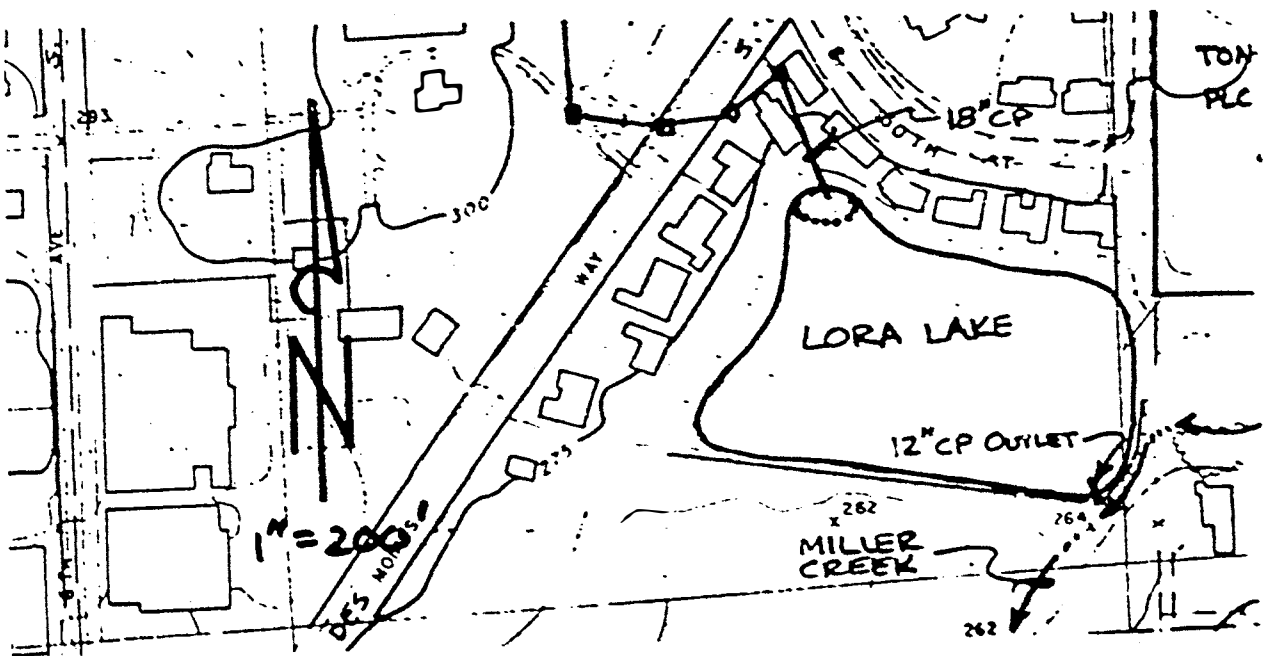
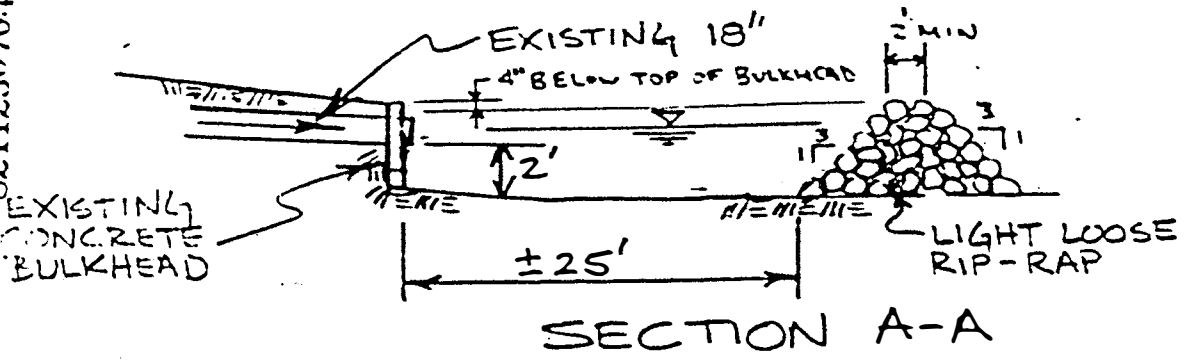


APPENDIX "C"

SETTLING BASIN DESIGN

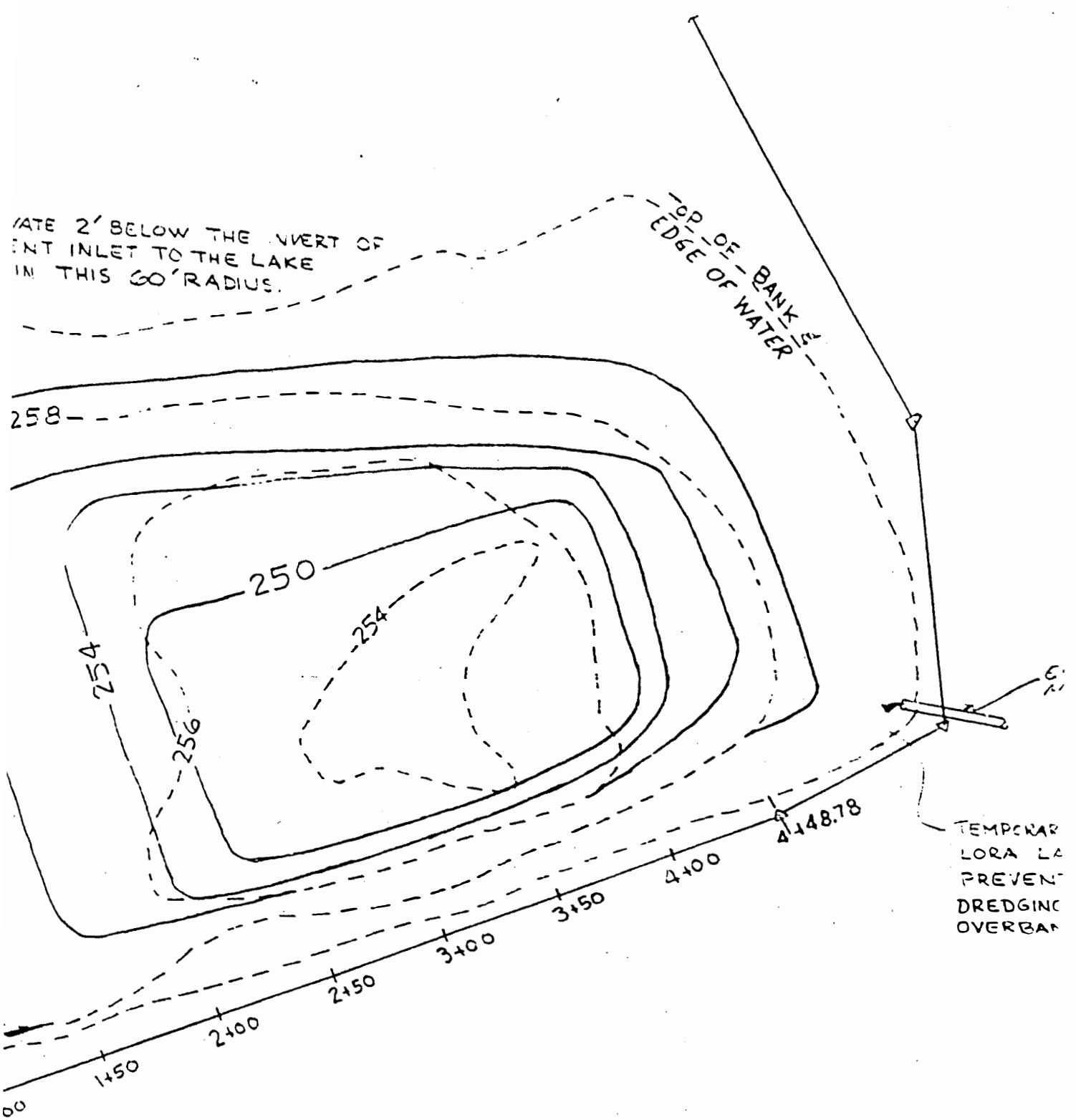


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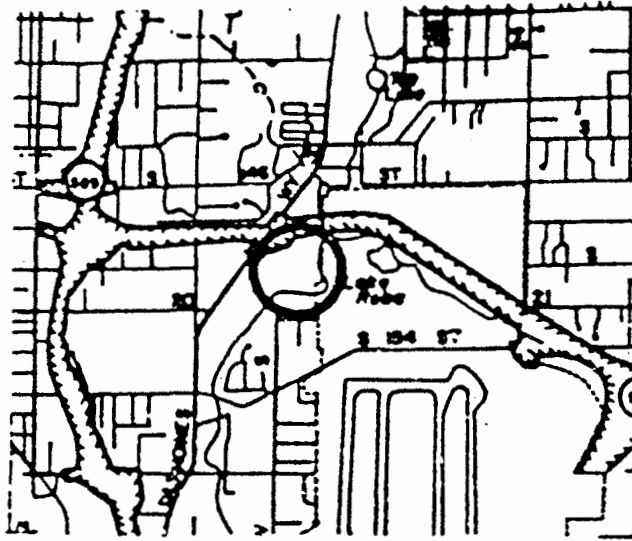


GATE 2' BELOW THE INVERT OF INLET TO THE LAKE IN THIS 60' RADIUS.

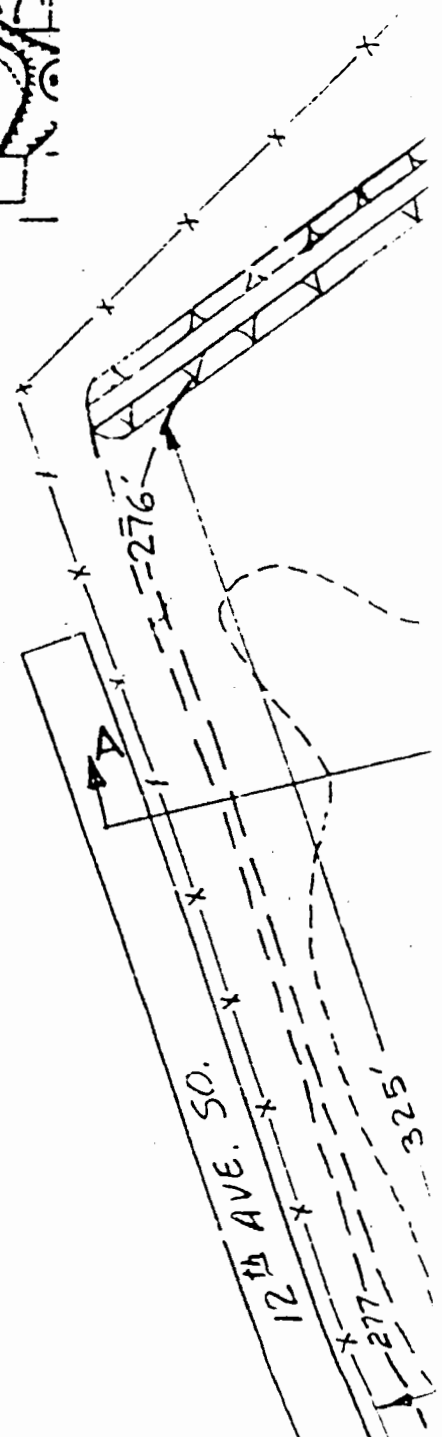
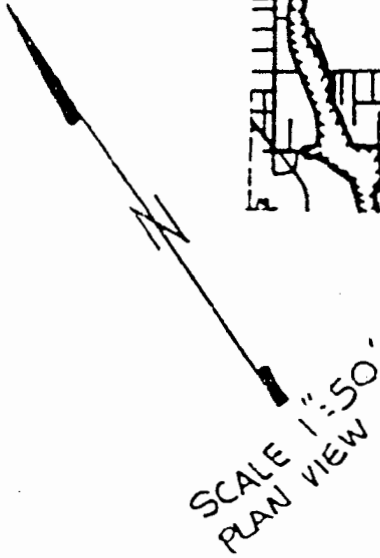
TOP OF BANK & EDGE OF WATER

TEMPORARY LORRA LA PREVENT DREDGING OVERBAR

LINE  
LEGEND : - - - 123 - - - EXIST SILT TOP  
          — 123 — FINISHED ELEV.



VICINITY MAP

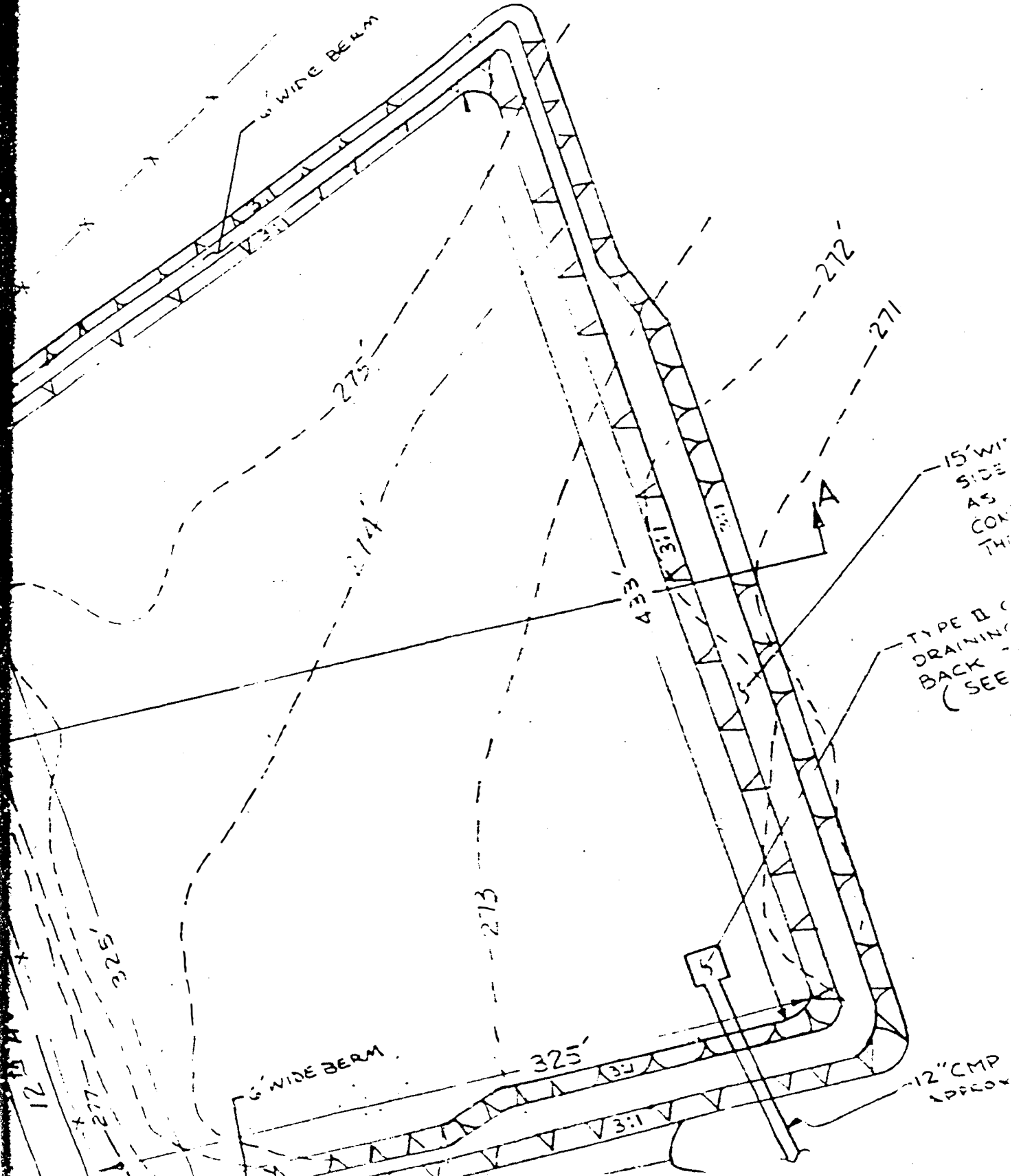


EXISTING CULVERT TO  
MILLER CREEK

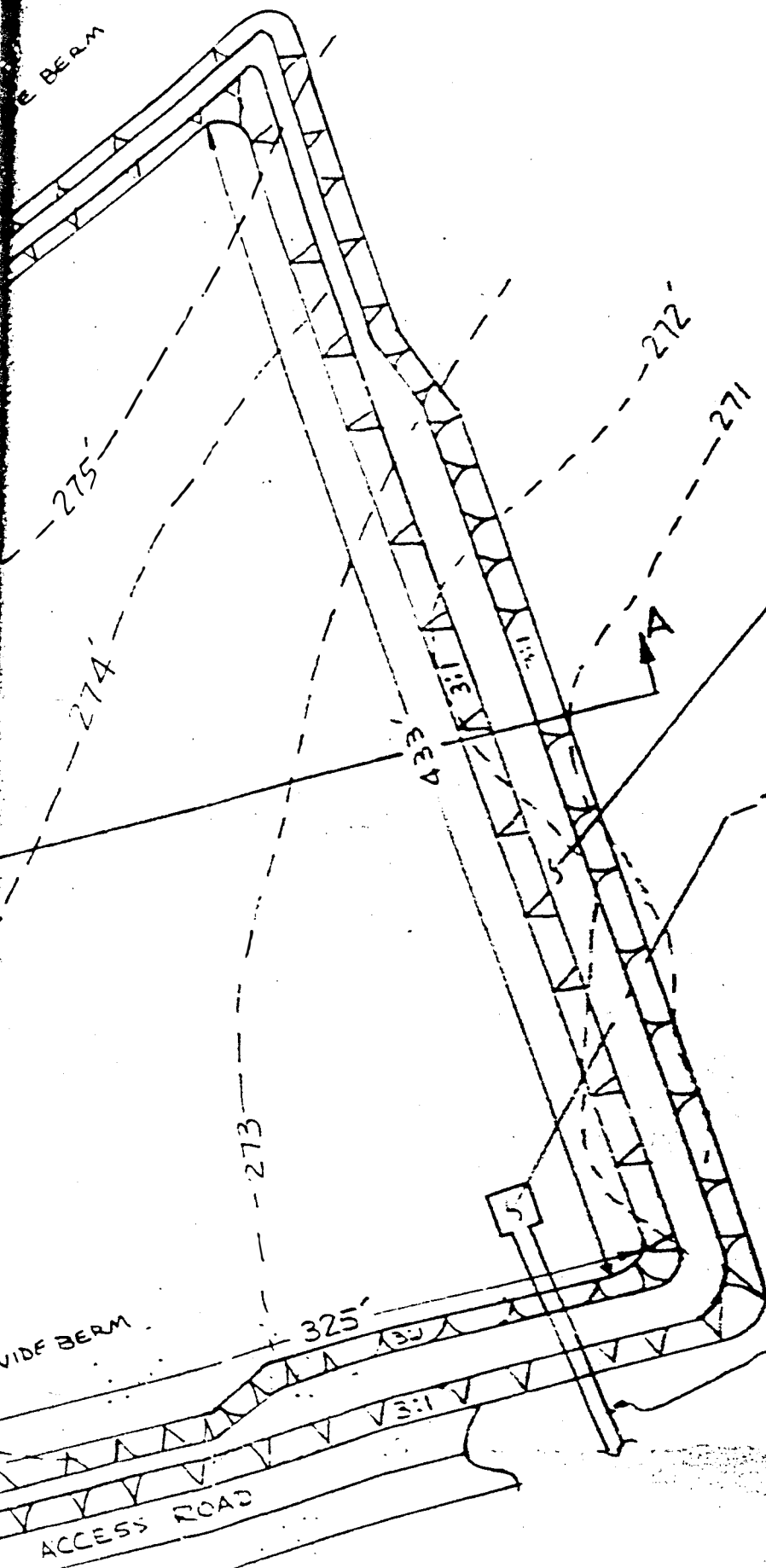
EARLY CLOSE THE OUTLET FROM  
LAKE DURING THE DREDGING TO  
PREVENT SILTATION ENTERING MILLER CREEK.  
DREDGING OPERATION SHOULD BE STOPPED WHEN  
ANY FLOWS OCCUR FROM LORA LAKE.



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04

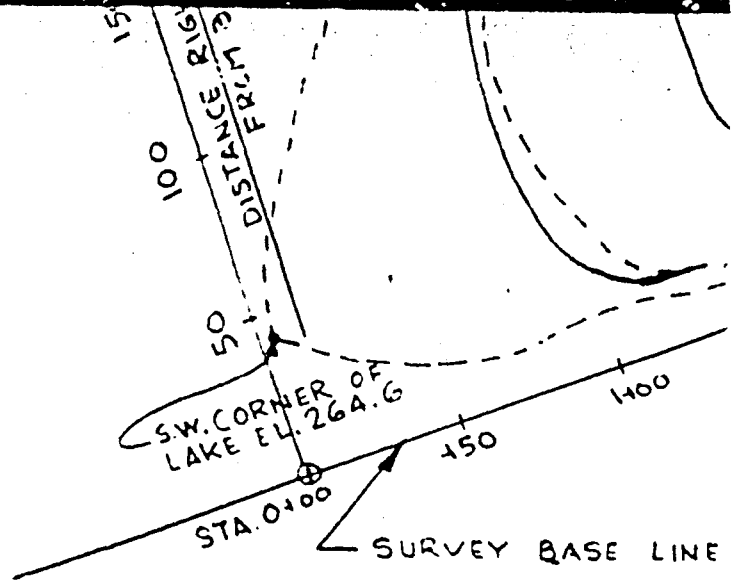


15' WIDE BERM - TO ELEV 277'  
 SIDE SLOPES AS MARKED E  
 AS SHOWN IN SEC "A-A"  
 CONSTRUCT FABRIC FILTER ON  
 THE INSIDE SLOPE OF BERM

TYPE II C.B. WITH 12" CMP OUTLET  
 DRAINING UNSILTED WATER  
 BACK TO LORA LAKE.  
 (SEE DETAIL B)

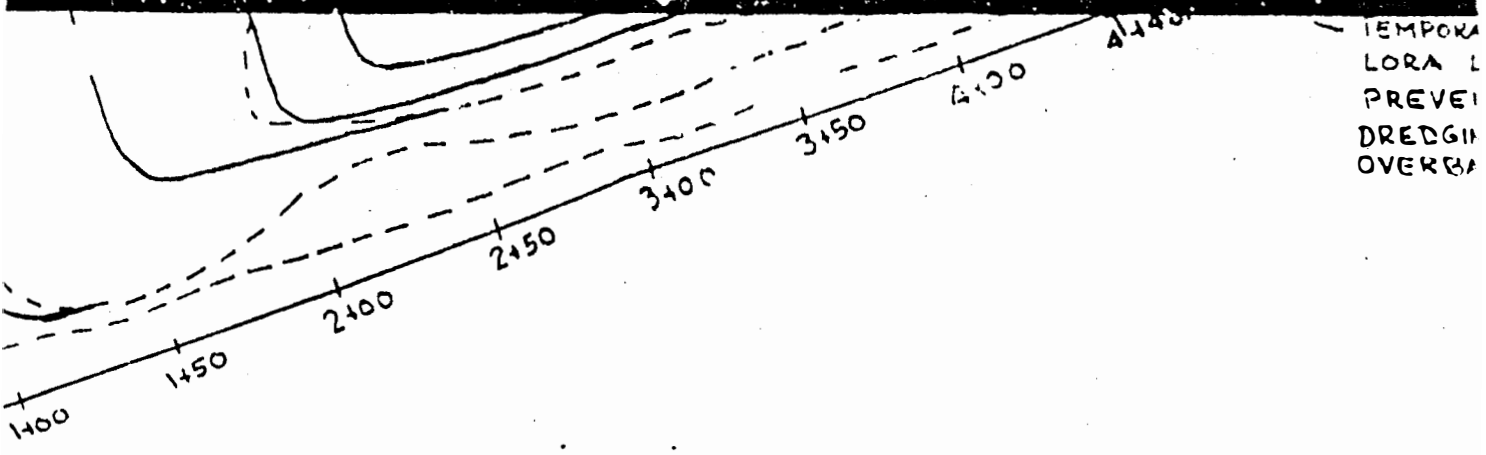
12" CMP TO LORA LAKE  
 APPROX. 600 LF OF PIPE

NOTE BOOK NO	BY	DATE
		SURVEYED
		PLOTTED
		ALIGNMENT CHECKED
		RT. OF WAY CHECKED



OFFSET DIST. TO RIGHT FROM BA

STA.	ELEV. 258	ELEV. 256	ELEV. 254	ELEV. 25
1+00	32 ± 170	-	-	-
1+50	18 ± 270	50 ± 220	-	-
2+00	30 ± 277	43 ± 240	50 ± 215	-
2+50	27 ± 267	38 ± 232	44 ± 216	54 ± 1
3+00	18 ± 253	34 ± 215	40 ± 204	50 ± 1
3+50	22 ± 240	35 ± 200	40 ± 190	50 ± 1
4+00	27 ± 225	40 ± 185	50 ± 174	60 ±
4+48.78	37 ± 225	57 ± 180	140 ± 170	-



TEMPORARY  
LORA LAKE  
PREVIOUS  
DREDGING  
OVERBANK

E LINE

LEGEND : --- 123 --- EXIST SILT TOP  
 ——— 123 ——— FINISHED ELEV.

M BASE LINE

ELEV.
250
-
-
-
54 & 166
50 & 163
50 & 162
60 & 160
-

**LORA LAKE**  
**DREDGING SITE PLAN**

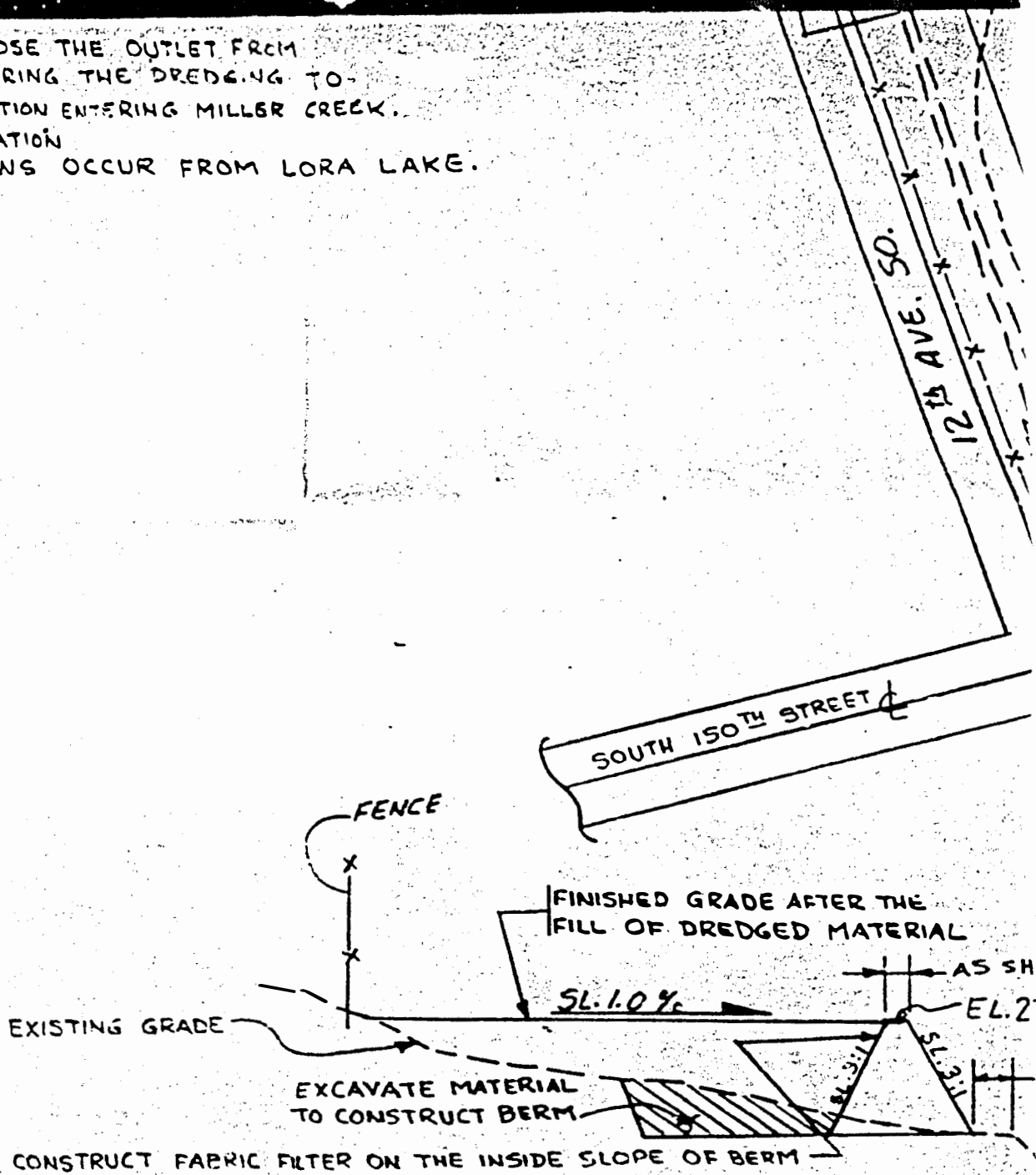
DESCRIPTION OF PROPERTY OWNED  
By the PORT OF SEATTLE

**LEGAL DESCRIPTION: TAX LOT 209**  
 The 1/4 in 27 acres of the Southeast 1/4 of the North-  
 west 1/4 of Section 20, Township 23 North, Range 4  
 East, N.M., in King County Washington, less that  
 portion lying easterly of a line bearing South  
 01°-09'-25" East from a point on the North line of  
 said subdivision, 572.76 feet easterly of the  
 Northwest corner thereof; also less that portion  
 of the above described property lying northerly  
 of the southerly margin of secondary State Highway  
 No. 1-1 (SR518).

**LEGAL DESCRIPTION: TAX LOT 401 and 17**  
 The North 190 feet of the South 13 acres of the  
 Southeast 1/4 of the Northwest 1/4 of Section 20, Town-  
 ship 23 North, Range 4 East, N.M., in King County,  
 Washington; less that portion lying Easterly of the  
 northerly prolongation of the centerline of 10th  
 Avenue South, as shown on the Plat of Sunset Terrace  
 Addition, as recorded in volume 80 of Plats, Page  
 63, records of King County, Washington.

LEGAL DESCRIPTION OF LAKE:  
 Tract 515, 1st Edition, as recorded in...

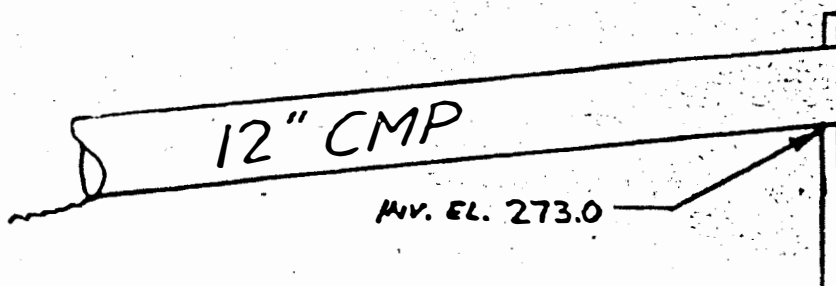
12" CMP RILY CLOSE THE OUTLET FROM  
 LORA LAKE DURING THE DREDGING TO  
 PREVENT SILTATION ENTERING MILLER CREEK.  
 DREDGING OPERATION  
 OVERBANK FLOWS OCCUR FROM LORA LAKE.

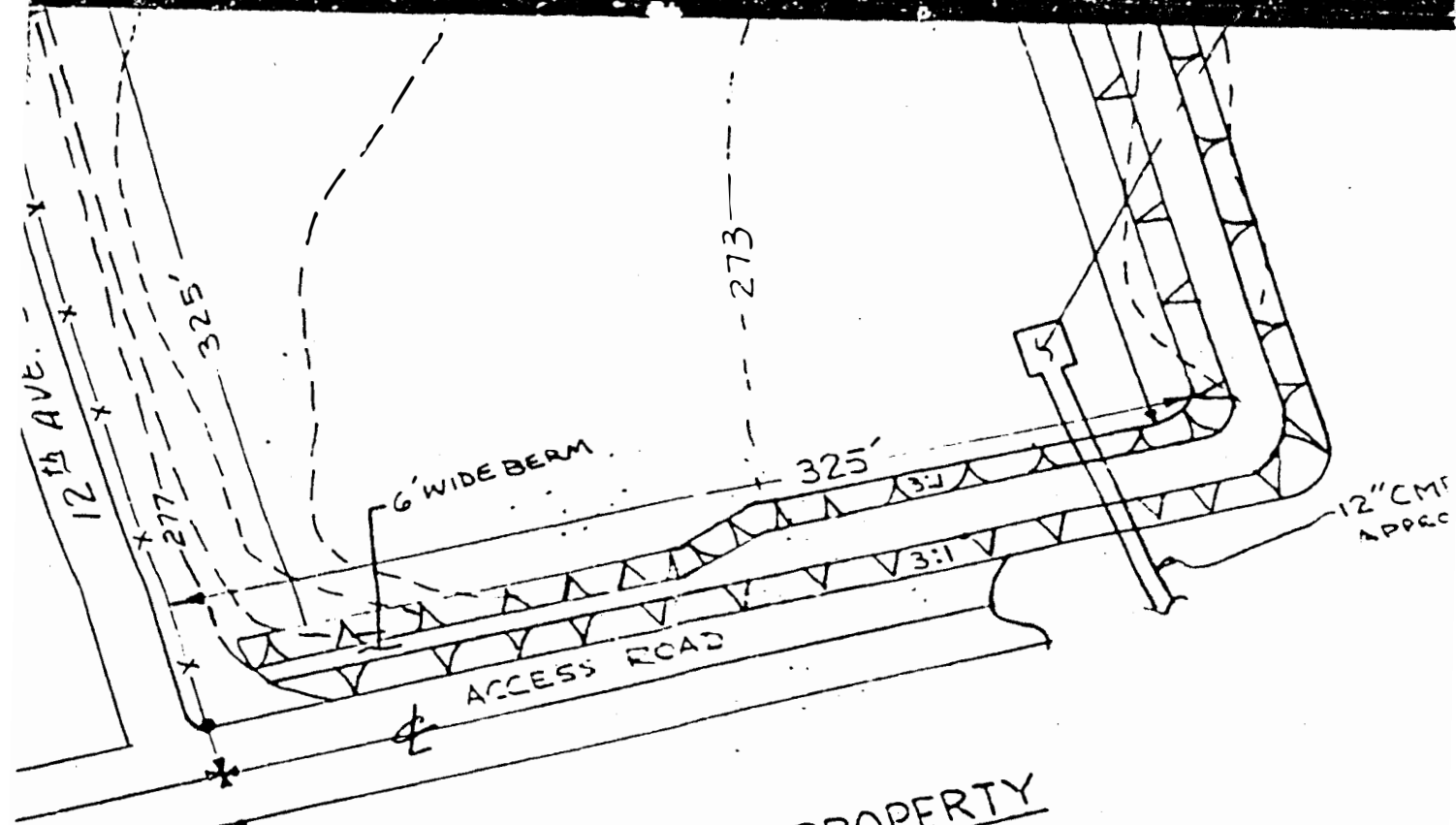


SECTION A-A

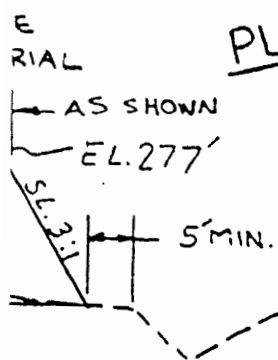
NOT TO SCALE

EL. 275.5





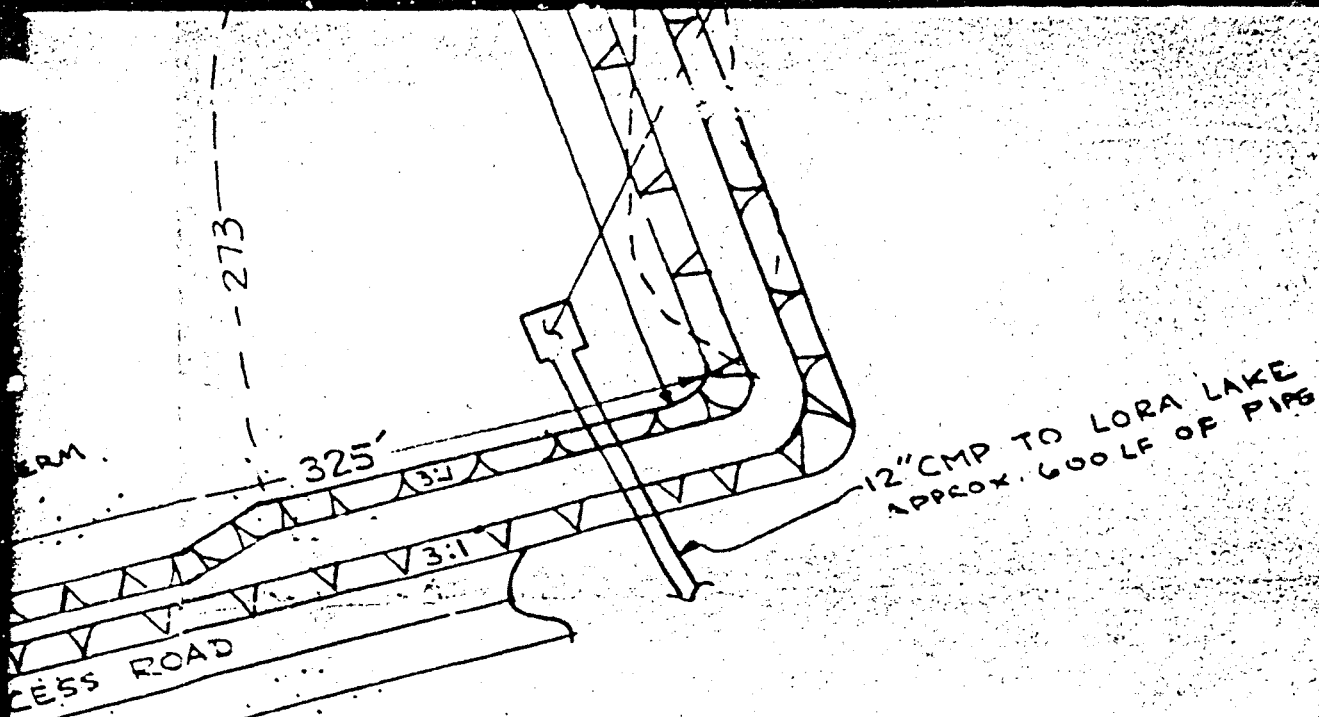
PLAN ~ PORT OF SEATTLE PROPERTY  
FOR  
PLACING OF DREDGED MATERIAL



**NOTES :**

1. ALTERNATE SILT POND OUTLET METHODS TO BE THE DREDGING CONTRACTOR PRIOR TO INSTALLING THE
  - a. PUMP SILT LADEN WATERS INTO DISPOSAL SITE ALLOW TIME FOR SILT TO SETTLE FROM REVERSE PUMPS TO PUMP CLEAN WATER
  - b. PLACE STOP LOGS BETWEEN "I" BEAMS AT DISPOSAL AREA. PUMP SILT LADEN WATER AS SILT SETTLES FROM WATER, REMOVE CUT AT A TIME TO ALLOW CLEAN WATER TEMPORARY PIPE SYSTEM AND INTO THE
2. AFTER THE COMPLETION OF DREDGING OPERATIONS SITE TO DRAIN SOUTHEASTERLY.
3. THE VOLUME OF DREDGED MATERIAL IS ESTIMATED
4. THE SPOIL AREA AND BERM WILL BE HYDROSECTED
5. BERM AND RECYCLE PIPE WILL BE CONSTRUCTED PRIOR TO DREDGING.
6. THE BERM SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM RELATIVE DENSITY.

**KING COUNTY DEPT. C**  
 SURFACE WATER DIVISION



OF SEATTLE PROPERTY  
FOR  
DREDGED MATERIAL

- S:
1. ALTERNATE SILT POND OUTLET METHODS TO BE DISCUSSED WITH THE DREDGING CONTRACTOR PRIOR TO INSTALLING THE TYPE II CB AT OUTLET:
    - a. PUMP SILT LADEN WATERS INTO DISPOSAL SITE DURING THE DAY. ALLOW TIME FOR SILT TO SETTLE FROM THE WATER AND THEN REVERSE PUMPS TO PUMP CLEAN WATER BACK INTO LAKE.
    - b. PLACE STOP LOGS BETWEEN "I" BEAMS AT THE OUTLET OF DISPOSAL AREA. PUMP SILT LADEN WATER INTO DISPOSAL AREA AS SILT SETTLES FROM WATER, REMOVE ONE STOP LOG OUT AT A TIME TO ALLOW CLEAN WATER TO FLOW INTO A TEMPORARY PIPE SYSTEM AND INTO THE LAKE.
  2. AFTER THE COMPLETION OF DREDGING OPERATION, GRADE THE ENTIRE SITE TO DRAIN SOUTHEASTERLY.
  3. THE VOLUME OF DREDGED MATERIAL IS ESTIMATED 12,000 CU.YD
  4. THE SPOIL AREA AND BERM WILL BE HYDROSEEDED BY OTHERS.
  5. BERM AND RECYCLE PIPE WILL BE CONSTRUCTED BY KING COUNTY PRIOR TO DREDGING.

BERM SHALL BE COMPACTED AT LEAST 95 PERCENT OF THE M RELATIVE DENSITY.

**KING COUNTY DEPT. OF PUBLIC WORKS**  
SURFACE WATER MANAGEMENT  
LORA LAKE DREDGING



Record Center

**King County Executive**  
Randy Revelle  
**Department of Public Works**  
Donald J. LaBelle, *Director*

1-28-83

January 26, 1983

Serial Letter No. 3

Marine Construction & Dredging, Inc.  
1579 Dunbar Road  
Mt. Vernon, WA 98273

re: Lora Lake Dredging  
Project 600680 (Contract C09420C)

This is in response to the meeting with you on January 17, 1983, regarding your claim on the above project.

We have reviewed the information which Mr. Roque submitted and the recalculations which we have done on quantities of material. As we discussed and generally agreed, the total quantity of material dredged is about 16,000 cubic yards. This is a combination of the 10,500 cubic yards from our cross sections and your 5,638 cubic yards figure for volumes dredged above the cross sections. This quantity corresponds with the volume estimated to be in the disposal pond.

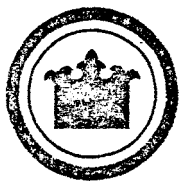
Our records indicate the dredge worked 18 days, of which 2½ days were in the inlet area. In your letter of December 13, 1982, you state your bid was based on 66 hours of dredging. The \$14,000 bid price for dredging divided by the 66 hours gives a rate of \$212/hour for dredging. Figuring the 16,000 cubic yards divided by the 15½ days (124 hours) of dredging time, indicates an average rate of 130 cubic yards per hour. This rate appears to be reasonable considering the nature of the material being dredged.

The 15½ days (124 hours) was 58 hours in excess of your original estimate for time to complete the work. Using the \$212 per hour rate for dredging from the original bid, the 58 hours of added time required to complete the project would translate into justification for \$12,296 additional compensation.

As discussed in our meeting, we assume this offer will satisfy your claim.



26 TTX *file*



King County Executive  
Randy Revelle  
Department of Public Works  
Donald J. LaBelle, Director  
October 7, 1983

FORBES / GROVER  
WHAT ARE OUR OBLIGA-  
TIONS HERE?  
ARE YOU FAMILIER W/  
LORA LAKE COMMITMENT.

*LoA*

TO: Lou Haff, Maintenance Engineer  
FROM: Larry Gibbons, Surface Water Management  
RE: Lora Lake

Wally Watson, spokesman for the Lora Lake Community Club, called Paul Hooper on September 30, 1983, because he believes King County still has a few items of work to do according to our agreement with the Lora Lake Community Club. When I talked to Wally Watson on October 3, he said the Community Club would be happy if the following items were completed:

1. Some large rocks they claim are located a considerable distance away from the recently constructed rock weir in Lora Lake. He wants King County to move those rocks back onto the weir. I talked to Jerry Adair who managed the construction project and he was not aware of any rock located outside the rock weir and said that they have released the contractor.
2. The silt presently behind the rock weir should be cleaned out.
3. Construct another overflow weir adjacent to the existing bulk-head. I believe this is something two people from the Community Club could do by hand in one hour.
4. The berm King County constructed around the Lora Lake dredging spoil area should be breached or leveled. Some adjacent land-owners are complaining because it looks bad. I think we should do this quickly because water could build up during the winter and possibly cause the berm to fail resulting in possible siltation of Miller Creek.
5. Watson claims John Grover said King County would buildup a low bank on the east side of Lora Lake and correct the outlet pipe from the lake. He wants to know when this is going to be done.

Memo to Lou Haff  
October 7, 1983  
Page Two

I talked to John about the above items. I told Wally Watson I would get back to him by October 27, which is the next scheduled Lora Lake Community Club meeting. Therefore, I would appreciate your comments by October 26, 1983.

LRG:bjs

cc: Paul Hooper  
Jerry Adair

## **APPENDIX B: AERIAL PHOTOGRAPHY**



1969





1970





1982



1985





1988



**LEGEND**

Horizontal Control:  $\triangle$   
 Horiz. & Vert. Control:  $\odot$   
 Vertical Control:  $\circ$   
 Spot Elevation:  $\times$   
 Index Contour:  $-325-$   
 Dashed Index Cont.:  $-325-$   
 Intermediate Cont.:  $-325-$   
 Dashed Inter. Cont.:  $-325-$   
 Depression Cont.:  $-325-$   
 Dashed Dep. Cont.:  $-325-$

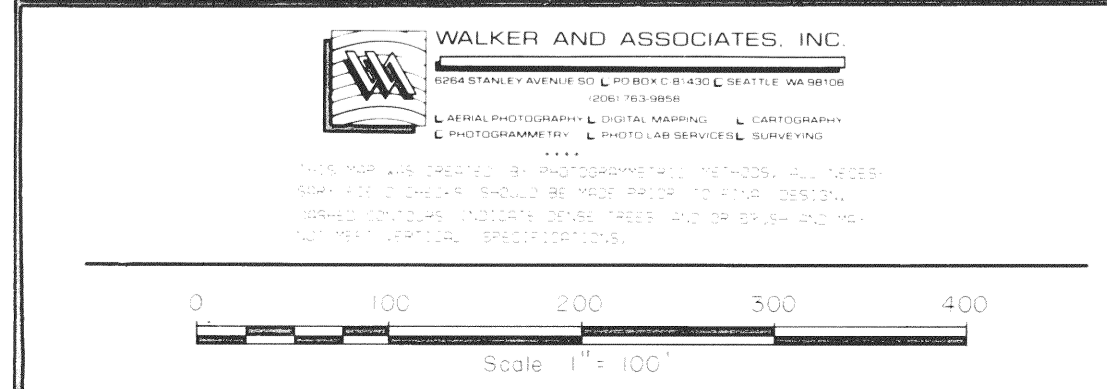
Date of Photography: 5-8-88

Datum:  
 Horizontal: Lambert, N. Zone  
 Vertical: NGVD 83  
 Solid Grid Lines: Sea-Tac Grid  
 Grid Ticks: Lambert Grid

Note:  
 Control by Port of Seattle and Horton Dennis & Associates, Inc.

ABBREVIATIONS:  
 Horizontal: Cont.  
 Vertical: Cont.  
 Contour: Cont.  
 Intermediate: Inter.  
 Depression: Dep.  
 None: None

Note:  
 Dashed contours indicate dense trees and brush and may not meet vertical specifications



PROJECT ENGR./ARCH.  
 - Riley

DESIGNER:  
 DRAWN BY: D.S. & S.M.  
 SCALE: 1" = 100'  
 DATE: 5-8-88  
 CHECKED BY:  
 G. Stebens



REVISIONS									
NO.	DATE	BY	DESCRIPTION	APP'D.	NO.	DATE	BY	DESCRIPTION	APP'D.

PROJECT ENGINEER  
 Steve Okamura

DESIGNER:  
 DATE:

DRAWN BY:  
 CHECKED BY:

APPROVED BY:  
 Steve Okamura

**PORT OF SEATTLE**

SEA-TAC INTERNATIONAL AIRPORT  
 1988 AERIAL TOPOGRAPHIC SURVEY of  
 SEATTLE-TACOMA INTERNATIONAL AIRPORT

**PLATE NO. 8**

WORK ORDER NO.  
 C-2661

CONSULTANT'S NO.

PORT OF SEATTLE NO.  
 STIA-8847-C-8



1988





**1990**



Image courtesy of the U.S. Geological Survey

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1992



1993





2000



(C) 2010 King County

0 1536ft





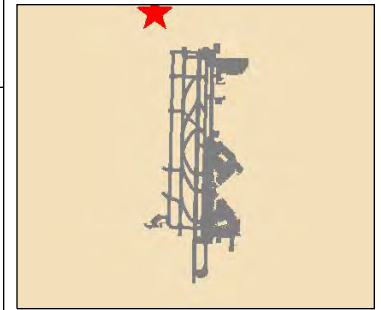
Image courtesy of the U.S. Geological Survey

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# Internet Mapping Framework



## Legend

PeopleSoft Asset Mgt

Cities

2003 S. King County 12-inch  
Color



Map center: 47° 28' 9.1" N, 122° 19' 3.0" W



Scale: 1:2,000

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.



2005





Mid 2000's



F-1





2007

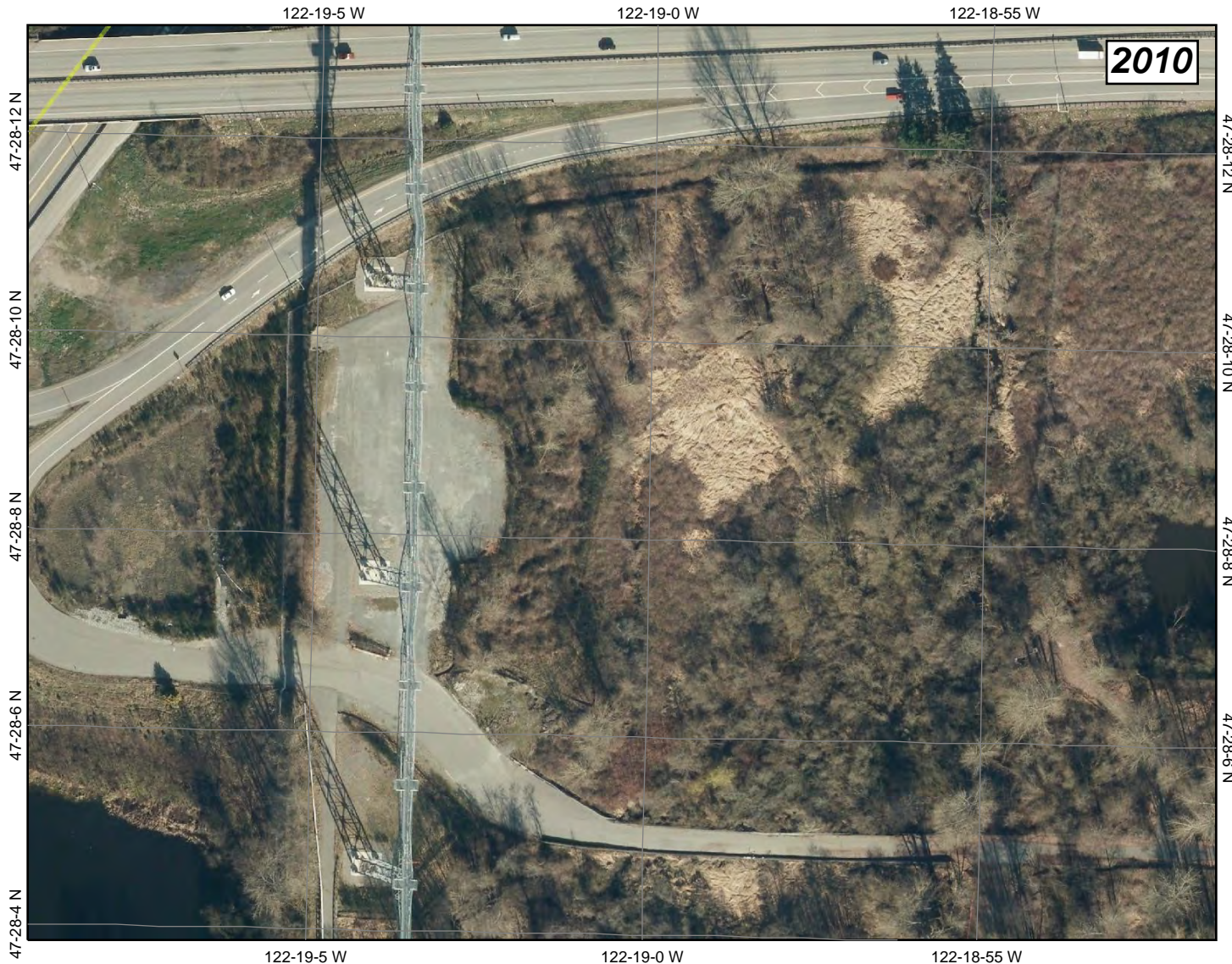
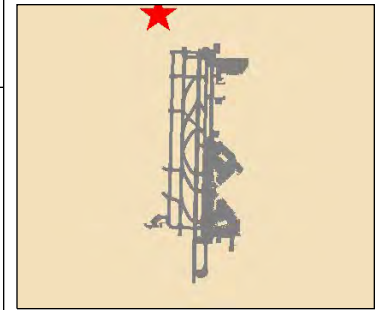


(C) 2010 King County

0 1536ft




# Internet Mapping Framework



**Legend**

- PeopleSoft Asset Mgt
- Cities
- 2010 6-inch Color

 Scale: 1:2,000



Map center: 47° 28' 8.5" N, 122° 19' 0.4" W

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