Carter : Burgess

Consultants in Engineering, Architecture,
Planning and the Environment

July 12, 1994

Mr. John Baumgartner
Town of Addison
16801 Westgrove Drive
P.O. Box 144
Addison, TX 75001

Reference: Engineering Services Proposal For:
A. Seepage Control & Restoration of Overflow Weir
B. Bank Stabilization/Erosion Control on White Rock Creek Behind Financial Bldg.

Dear John:

Enclosed hereafter please find our revised engineering services proposal for the two small projects noted above. First, the small overflow weir structure on the upper end of the creek is experiencing seepage around the structure rather than providing overflow on the weir as intended. The Town of Addison wishes to investigate possible repair. Whitney Smith of Reed Engineering Group and I visited the site following our previous visit. We concluded the following:

1. Abutment cutoffs are required a minimum of 10 feet into both abutments of the weir, which will most likely cause the loss of the American Elm(?) on the east abutment.

2. The construction of a reinforced concrete slope pavement with abutment extensions appears feasible, although depth of the slope and cut-off into the foundation must be determined in the field by the geotechnical engineer. (See attached sketches)

3. The existing large boulders at each end of the overflow weir must be removed temporarily to extend the proposed upstream slope pavement into the abutments. The boulders may then require modification of replacement to "fit" into the new abutments.

940120.CDL

4. For budgeting and proposal purposes, we would assume an approach slope paving height of ten (10) feet, with a toe wall cut-off depth of two (2) feet. See sketches.

5. The estimated construction cost, excluding tree removal and replacement is $3,900.00. This estimate does not include the inspection and recommendation services of the geotechnical engineer or the consultant and allows $500.00 for grouting. At least 2 site visits for both the geotechnical engineer and consultant should be anticipated at $90.00 per hour each, say $300.00/visit or $1,200.00 total. If the Town of Addison desires for Carter & Burgess to provide separate bid documents for this project, allow an additional $1,500.00 for P&S development. If this project is combined with the following bid documents, the P&S development may be reduced to $1,000.00. The total project engineering services fee for Project #1 would be either $2,700.00 or $2,200.00, respectively.

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	SUBTOTAL BASIC ENGINEERING SERVICES	$ 3,000.00
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	REED ENGINEERING GROUP 2 @$300 EA	$ 600.00
	CARTER & BURGESS, INC. 2 @$300 EA	600.00
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TOTAL ENGINEERING SERVICES PROJECT #2		**$ 4,200.00**

Carter & Burgess will serve as prime contractor for these projects and will execute subcontract agreements with Craig Olden Co. and Reed Engineering Group prior to commencement of the work, upon notice to proceed from the Town of Addison.

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Associate

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Enclosure

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Carter & Burgess, Inc. 7950 Elmbrook Suite 250 Dallas, Texas 75247-4951
(214) 638-0145 Metro (214) 263-2019 Fax (214) 638-0447

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Associate

J. Phillip Deaton, P.E.
Vice President

Enclosure

cc: Dave Reitz

Accepted Project No. 2 for an estimated fee of $4200.00

By:_____
Ron Whitehead
City Manager
Town of Addison

September 28, 1994
Date

940120.CDL

	TASK	ESTIMATE COST
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CARTER & BURGESS, INC.
ENGINEERS · PLANNERS · SURVEYORS

Job No: 94315000D Disc.:
Job Name: ADDISON OVERFLOW WEIR
Date: 6/6/94 Sheet 1 of 2
By: BJG

NOTE: IF NATURAL ROCK FOUNDATION IS ENCOUNTERED IN ABUTMENTS PRIOR TO REACHING CUTOFF LIMITS SHOWN, KEY INTO EXISTING ROCK A MINIMUM OF 18" WITH NEW CONC. CUTOFF TRENCH.

CARTER & BURGESS, INC.
ENGINEERS · PLANNERS · SURVEYORS

Job No: 94315000D Disc.:
Job Name: ADDISON OVERFLOW WEIR
Date: 6/16/94 Sheet 1 of 1
By: BJG

WEIR & ABUT REHAB
COST ESTIMATE

1) EXCAVATION OF ABUTMENTS
10' LG 12' DEEP AVG ASSUMED

$E.A._1 = 2\left(\frac{12' \times 12'}{2}\right) + 2' \times 12' = 168\ SF$

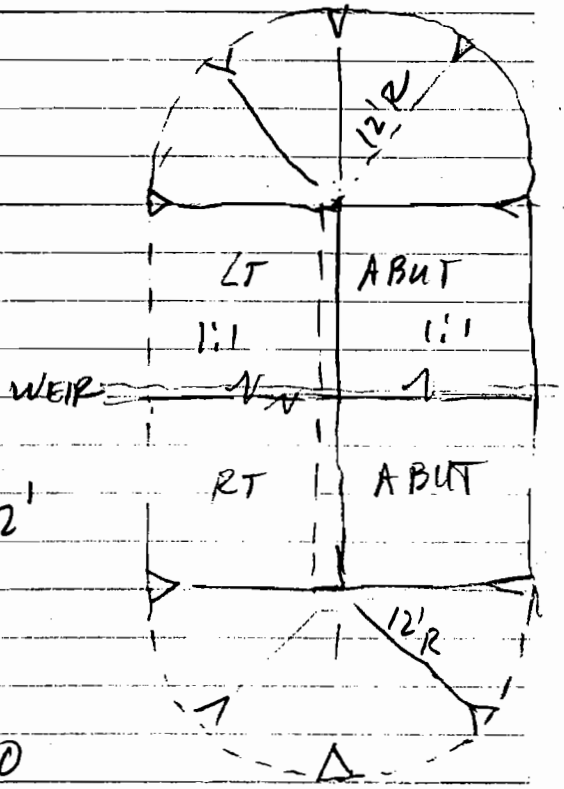
$VOL_1 = 2 \times 10' \times 168' \div 27 = 124.5\ CY$

VOL_2 12' TALL 1:1 CONE

$VOL_2 = \frac{\pi}{3} r^2 h = 1.047 r^2 h$, $r = 12'$, $h = 12'$

$VOL_2 = 1.047\ (12)^2 (12) \div 27 = 67\ C.Y.$

∴ TOTAL EST VOL. EXCAV. = 191.5 CY
SAY 200 CY @ $2.50 = $500



2) SLOPE PAVING

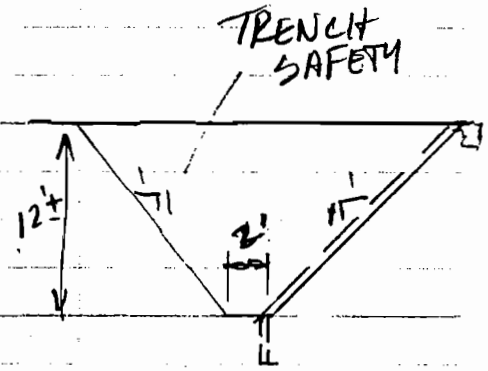
a) WEIR (ASSUMING 10' TALL)

AREA ≅ $15' \times (10'\sqrt{2} + 1.5 + 1.5') = 257.25\ SF$

$VOL_{WEIR} = 0.5' \times 257.25\ SF \div 27 = 4.76\ CY$

b) ABUT (ASSUMING 12' AVG HEIGHT)

AREA ≅ $2 \times 10' (12'\sqrt{2} + 1.0' + 1.5') = 389.4\ SF$

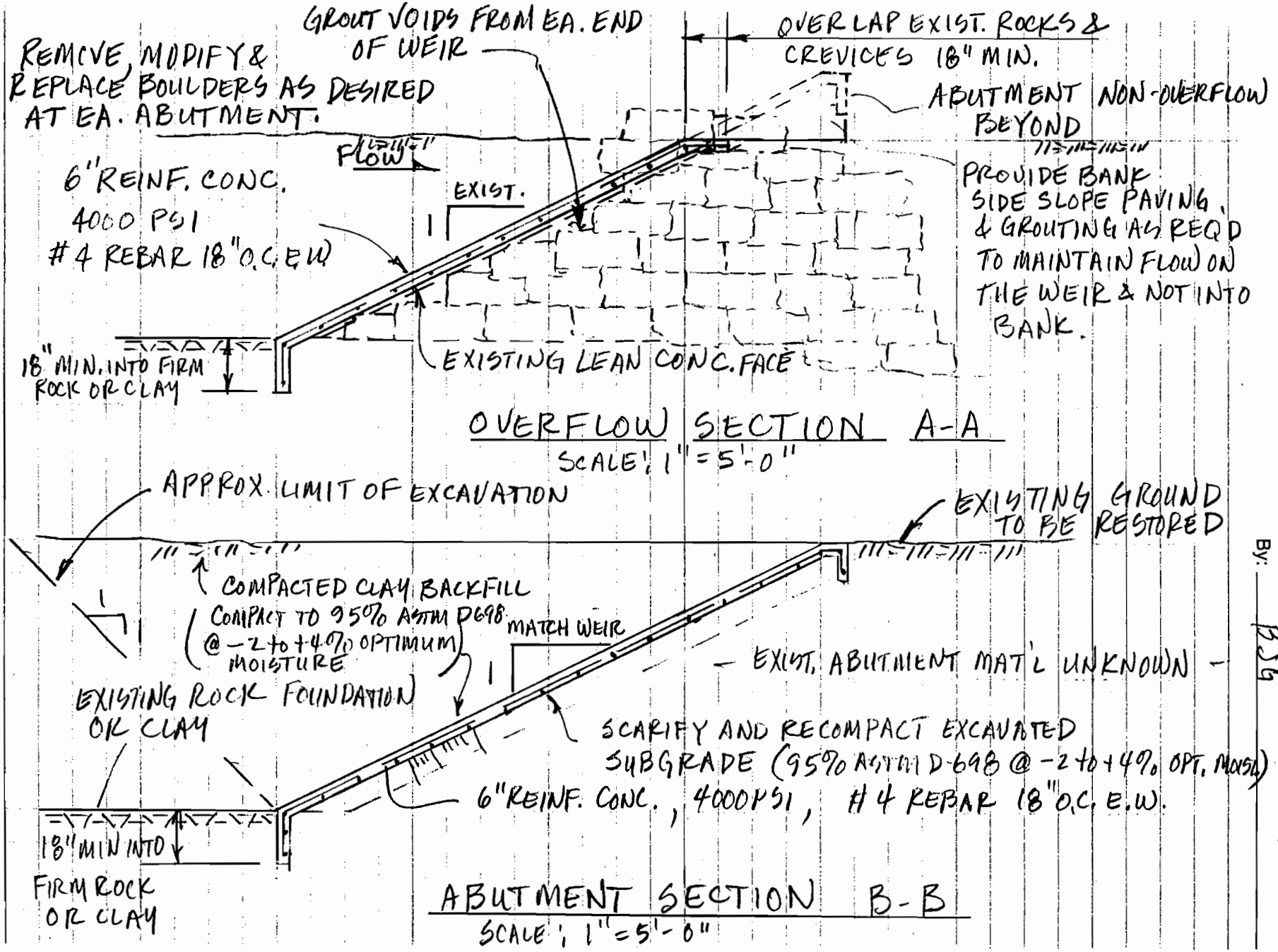


ABUT. EXC. SECT.

$VOL_{WEIR} = 0.5' \times 389.4 \div 27 = 7.21\ CY$
TOTAL CONC AREA = 646.6 SF = 71.84 SY @ $35/SY = $2514
∴ TOTAL CONC. VOL. = 11.97 CY SAY 12 CY

3) BACKFILL
$VOL_1 = (200\ CY - 12\ CY) = 188\ CY$ @ $2 = $376

∴ TOTAL EST. COST = $500 + $2514 + $376 = $3390 SAY $3400



CARTER & BURGESS, INC.
ENGINEERS · PLANNERS · SURVEYORS

Job No: 943-15000D
Job Name: ADDISON OVERFLOW WEIR
Disc.:
Date: 6/6/94
Sheet 2 of 2
By: BJG

Carter ▪ Burgess

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Town of Addison

September 28, 1994
Date

940120.CDL

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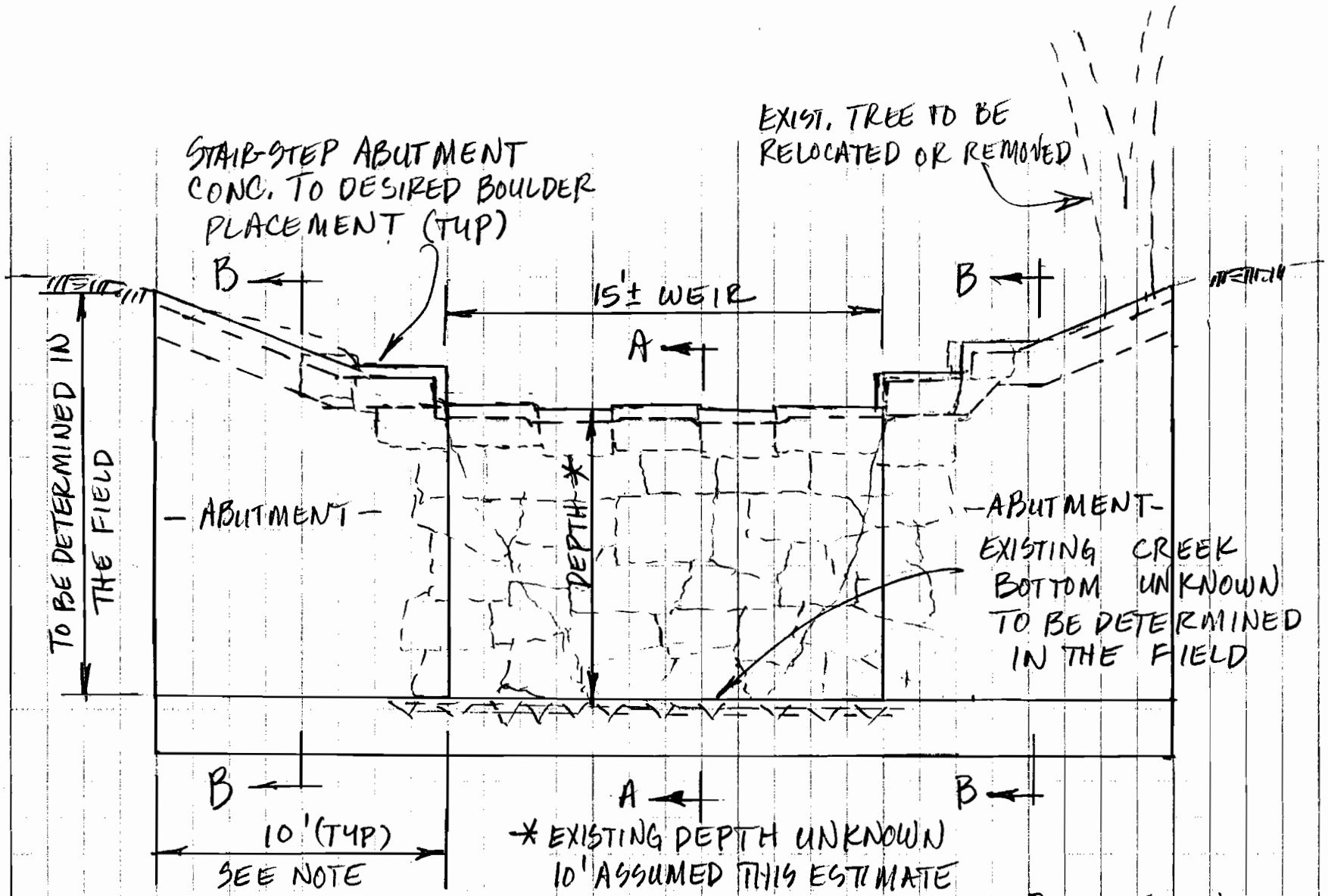

UPSTREAM ELEVATION OF WEIR

PROVIDE CONTINOUS PAVEMENT - NO JOINTS

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ENGINEERS · PLANNERS · SURVEYORS

Job No: 943150000 Disc.:
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Date: 6/6/94 Sheet 1 of 2
By: BJG

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Date: 6/6/94 Sheet 1 of 1
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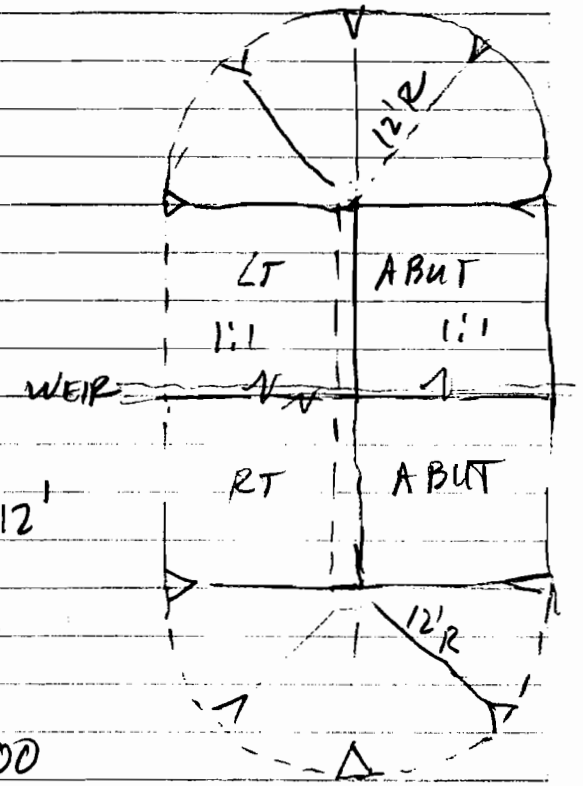

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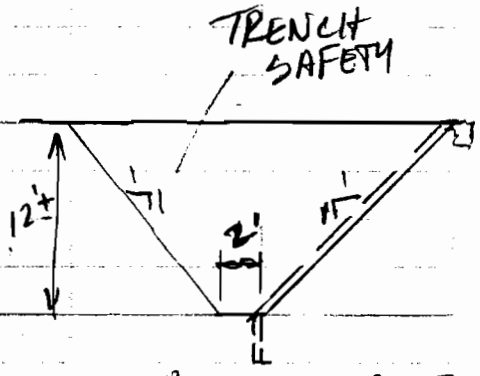

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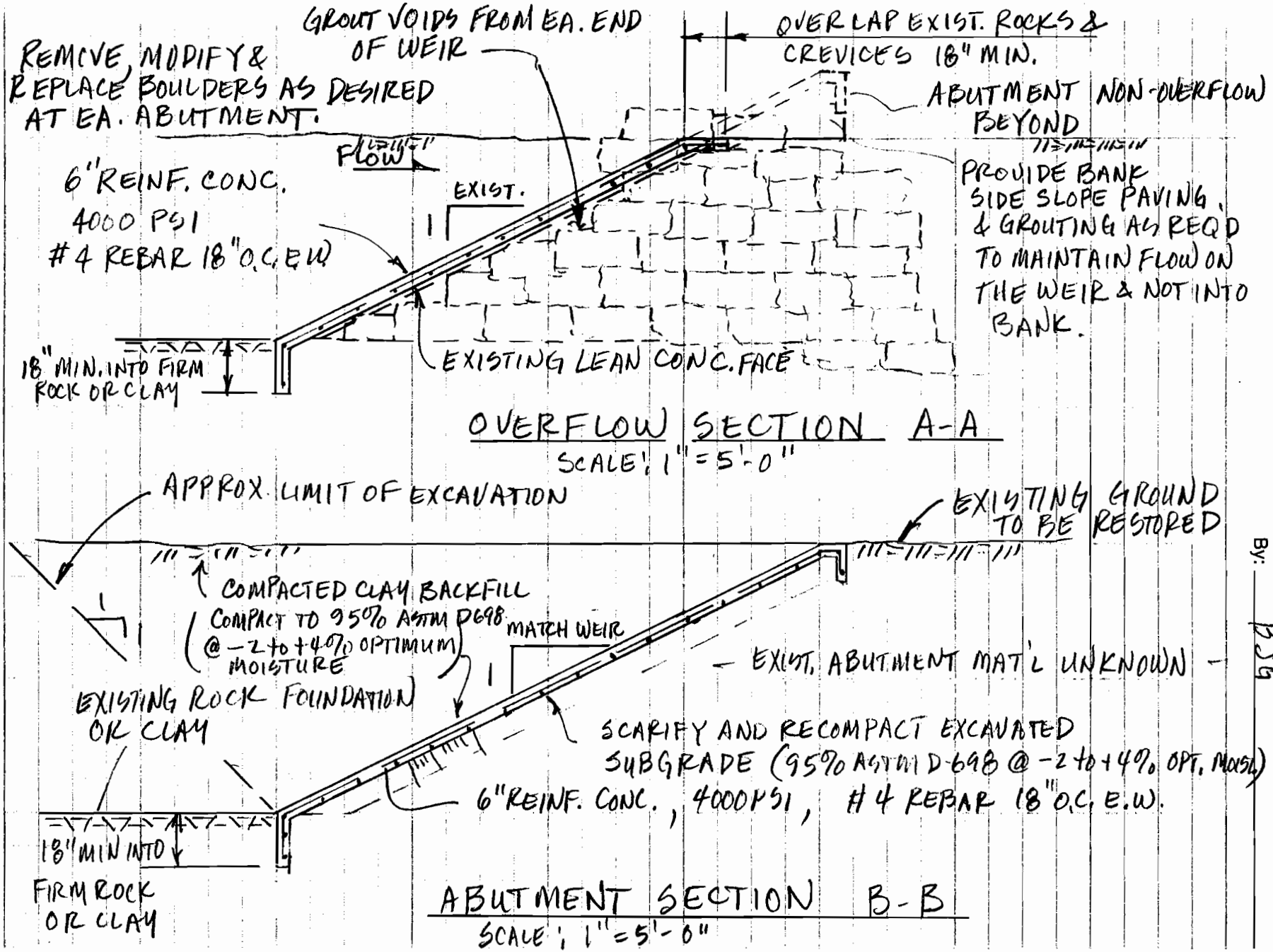

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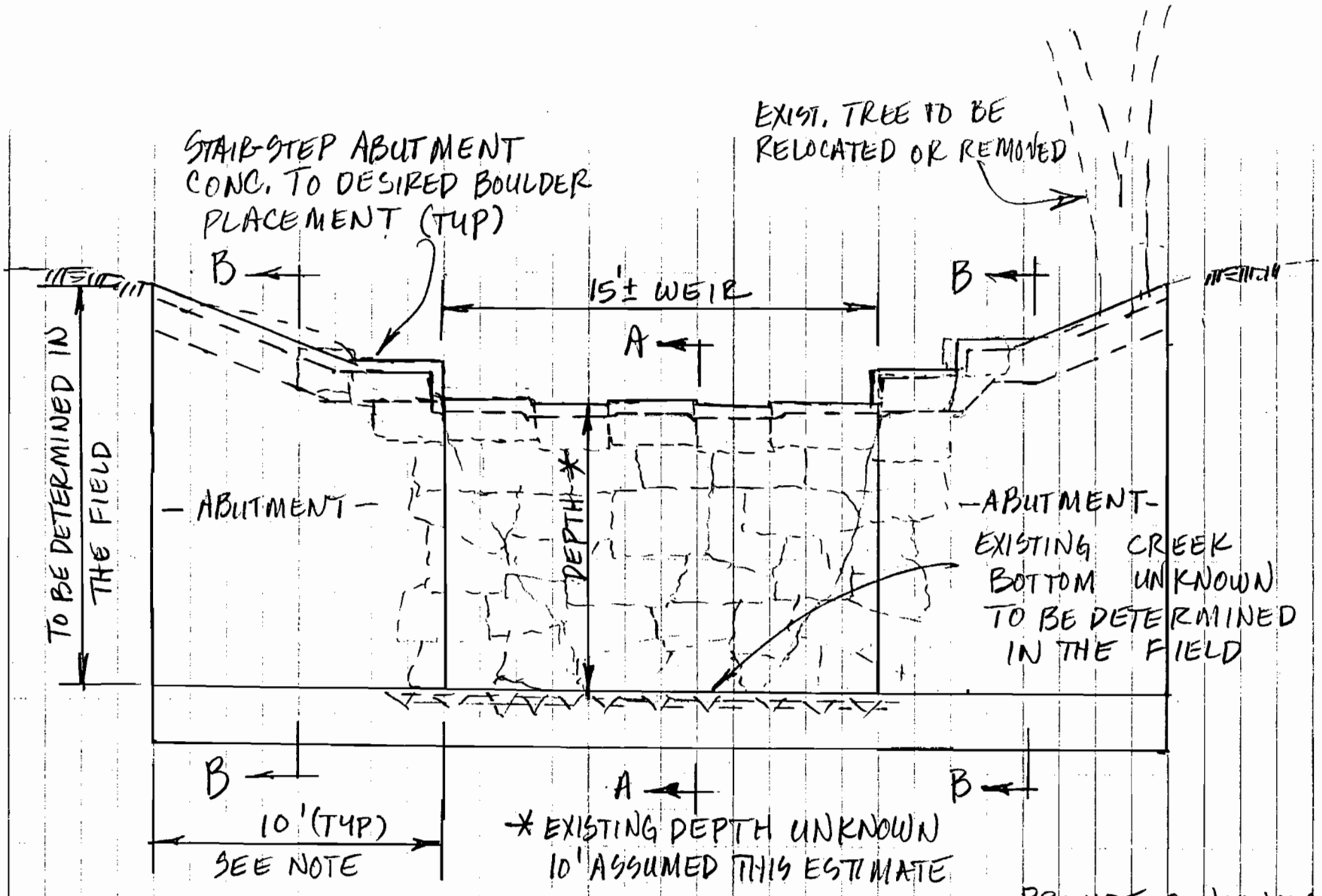
Date

940120.CDL



UPSTREAM ELEVATION OF WEIR

NOTE: IF NATURAL ROCK FOUNDATION IS ENCOUNTERED IN ABUTMENTS PRIOR TO REACHING CUTOFF LIMITS SHOWN, KEY INTO EXISTING ROCK A MINIMUM OF 18" WITH NEW CONC. CUTOFF TRENCH.

CARTER & BURGESS, INC.
ENGINEERS · PLANNERS · SURVEYORS

Job No: 943150000
Job Name: ADDISON
Date: 6/6/94
By: BJG
Disc.: OVERFLOW WEIR
Sheet 1 of 2

CARTER & BURGESS, INC.
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Job No: 94315000D Disc.:
Job Name: ADDISON OVERFLOW WEIR
Date: 6/16/94 Sheet 1 of 1
By: BJG

WEIR & ABUT REHAB
COST ESTIMATE

1) EXCAVATION OF ABUTMENTS
10' LG 12' DEEP AVG ASSUMED

$E.A._1 = 2\left(\frac{12' \times 12'}{2}\right) + 2' \times 12' = 168\ SF$

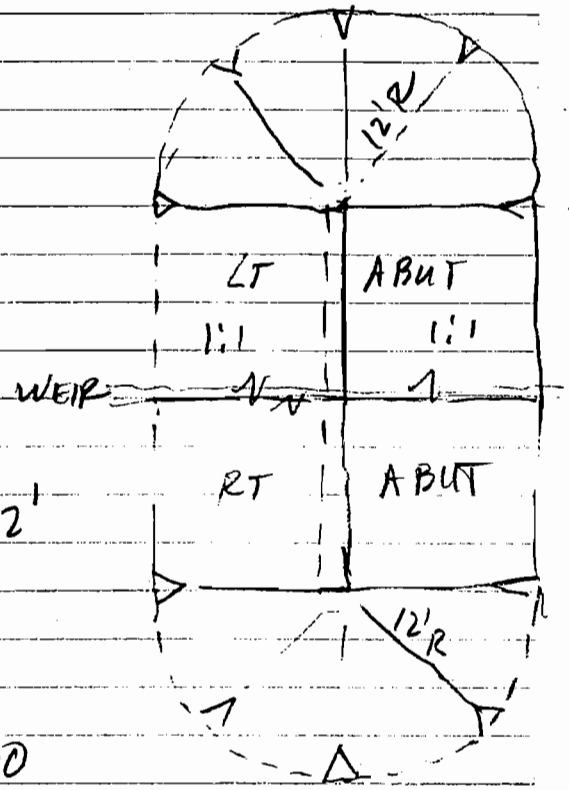
$VOL_1 = 2 \times 10' \times 168' \div 27 = 124.5\ CY$

VOL_2 12' TALL 1:1 CONE

$VOL_2 = \frac{\pi}{3} r^2 h = 1.047 r^2 h$, $r = 12'$, $h = 12'$

$VOL_2 = 1.047\ (12)^2 (12) \div 27 = 67\ C.Y.$

$\therefore$ TOTAL EST VOL. EXCAV. = 191.5 CY
SAY 200 CY @ $2.50 = $500



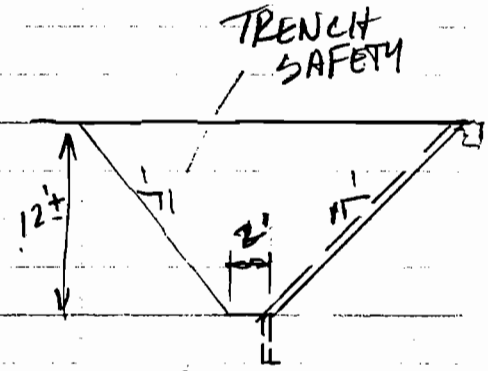
2) SLOPE PAVING

a) WEIR (ASSUMING 10' TALL)

AREA $\cong 15' \times (10'\sqrt{2} + 1.5 + 1.5') = 257.25F$
$VOL_{WEIR} = 0.5' \times 257.25F \div 27 = 4.76\ CY$

b) ABUT (ASSUMING 12' AVG HEIGHT)

AREA $\cong 2 \times 10' (12'\sqrt{2} + 1.0' + 1.5') = 389.4SF$

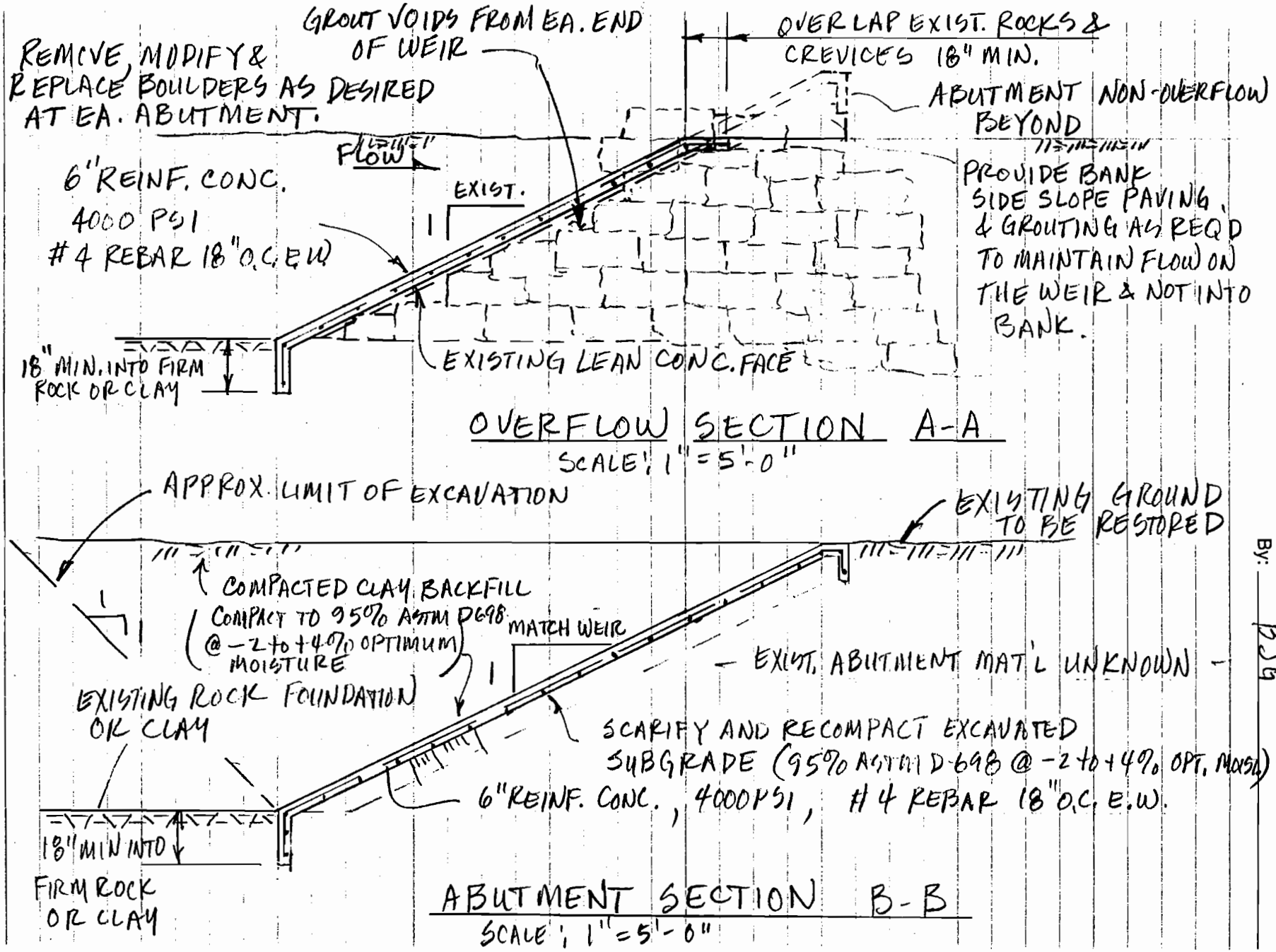


ABUT. EXC. SECT.

$VOL_{WEIR} = 0.5' \times 389.4 \div 27 = 7.21\ CY$
TOTAL CONC AREA = 646.6 SF = 71.84 SY @ $35/SY = $2514
$\therefore$ TOTAL CONC. VOL. = 11.97 CY SAY 12 CY

3) BACKFILL
$VOL_1 = (200\ CY - 12\ CY) = 188\ CY$ @ $2 = $376

$\therefore$ TOTAL EST. COST = $500 + $2514 + $376 = $3390 SAY $3400



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Job No: 943-45000D
Job Name: ADDISON OVERFLOW WEIR
Disc.:
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By: BJG
Sheet 2 of 2

Town of Addison
Project Application

Project Name (Maximum 30 characters) FINANCE POND STABILIZATION

Project Description

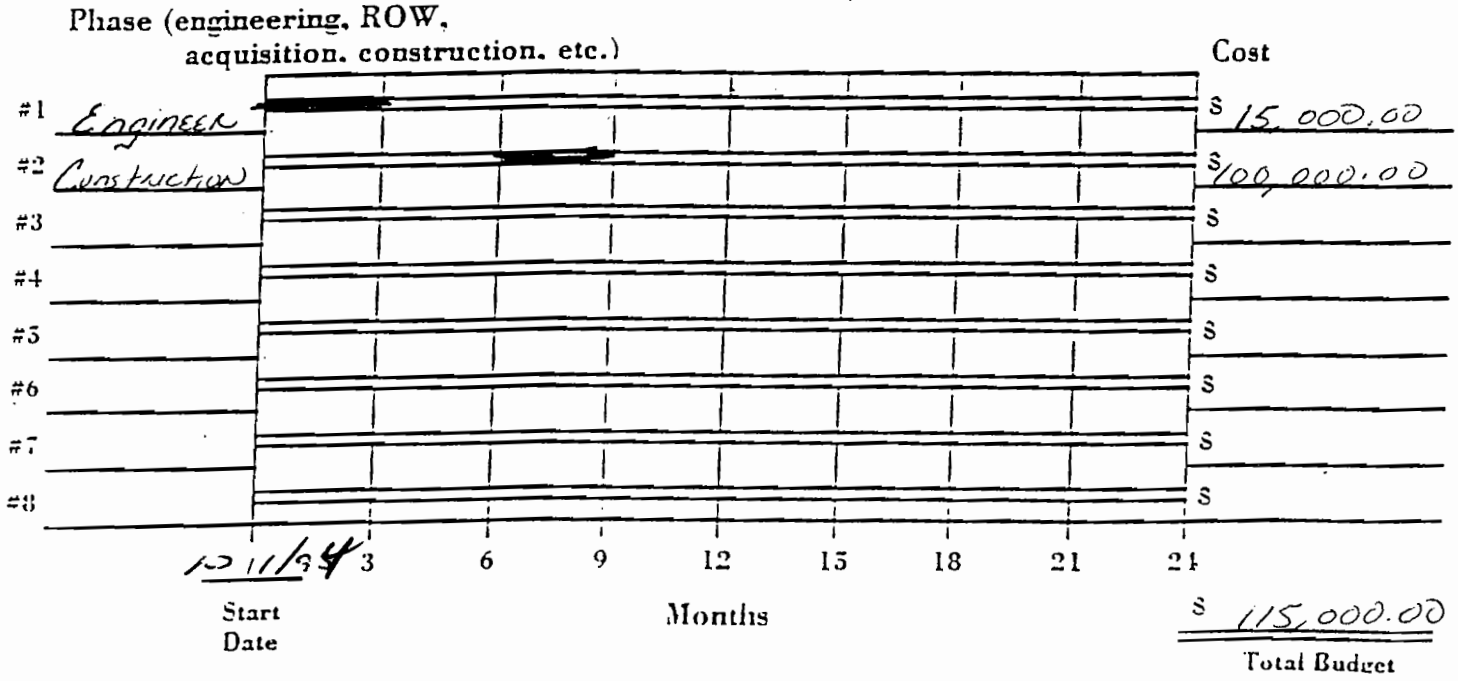
This project will provide for the stabilization of the Finance pond bank.

Project Type: ☐ Operating/Unique ☐ Operating/Recurring ☒ Capital ☐ Special Event

Time to Complete (In months)

Located in Planning Sector: (1) 2 3 4 5 6 N/A

Project Time Line



Finance Department Use

Project # 5 / 1 / 4 / 0 / 0

Year / Sector / Type / Free / Seq.

Entered 1-27-95 SR