

# B-151456 - Grading



**Permit Number:**

B-151456

**Status:**

**Finaled**

**4/3/2000**

**Permit Type:**

Grading

**Applicant:**

CHANNEL LUMBER CO

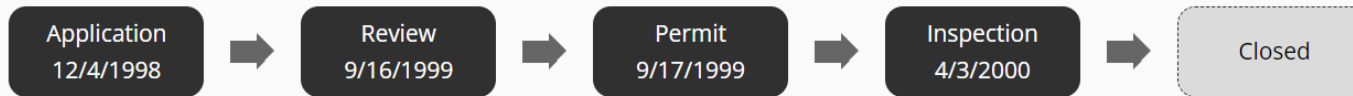
**Primary Address:**

5400 OLD REDWOOD HWY, PENNGROVE, CA

**Permit Description:**

LEGALIZE 11000 CU. YDS. IMPORT FILL IN FLOOD ZONE

## Permit Timeline



[Show Timeline ►](#)

[Show Documents \(3\) ►](#)

**699: Permit Final**

**Approved**

**4/3/2000**

Updated by: SPETERSO

STATUS: FINALED

16

5400 OLD REDWOOD HWY  
(B-151456)

# COUNTY OF SONOMA

## PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

2550 Ventura Avenue, Santa Rosa, CA

(707) 527-1900 FAX (707) 527-1103

PLANCHECK RECEIPT ONLY - NOT A PERMIT

R-151456

Address: 5400 OLD REDWOOD HWY PEN

Printed By: CNIEDERM 15:09 Dec 09, 1998

APN: 047-213-017

Cross Street: ELY RD

Res/Com:

Std/Quick:

Fire District: RANCHO ADOBE FIRE

Owner

In Planchek: 00/00/0000

Activity Type: AB-GRD 9801

Insp Area: 03

Per Rate Area: 138016

Applicant

CHANNEL LUMBER CO  
100 W CUTTING BLVD  
RICHMOND CA

948042014

CHANNEL LUMBER CO  
100 W CUTTING BLVD  
RICHMOND CA

948042014

Planchek Expires 1 Year from Date Planchek Fees Are Paid (See Register Validation Date)

VIO: FLOOD ZONE-CHECK MAP

Description: LEGALIZE 11200 CU. YDS. IMPORT FILL IN FLOOD ZONE

Initialized By: BNEUMAN

Approved By:

Status: STARTED

Planchek Multiplier: 1.00

Item #	Item Account Code	Description	Fee	Previously Paid
0060	1341	BLDG PERM PLAN CHECK FEE	\$50.31	\$0.00
0100	1341	SITE REVIEW/ELEV. CERT.	\$73.00	\$0.00
0119	649103-3661	CO FIRE MARSHAL REVIEW	\$130.00	\$0.00
0121	1341	FIRE SAFE STDS & REF PRMD	\$0.00	\$0.00
0706	3140	REF.-MINOR GRADING/SETBK	\$0.00	\$0.00
0707	3140	REF.-GRADING/DRAIN. PLAN	\$0.00	\$0.00
0708	3140	REF.-GRD/DRAIN DAM/DRVWY	\$325.00	\$0.00
5060	1341-WAIVED	BLDG PERM PLAN CHECK FEE	\$0.00	\$0.00
5100	1341-WAIVED	SITE REVIEW/ELEV. CERT.	\$0.00	\$0.00
5119	649103-3661-WAIVED	CO FIRE MARSHAL REVIEW	\$0.00	\$0.00
5121	1341-WAIVED	FIRE SAFE STDS & REF PRMD	\$0.00	\$0.00
5706	3140-WAIVED	REF.-MINOR GRADING/SETBK	\$0.00	\$0.00
5707	3140-WAIVED	REF.-GRADING/DRAIN. PLAN	\$0.00	\$0.00
5708	3140-WAIVED	REF.-GRD/DRAIN DAM/DRVWY	\$0.00	\$0.00

Qualifies for Fee Waivers (Y/N): N

\$578.31

\$0.00

Total Calculated Fees

\$578.31

Previously Paid

\$0.00

Balance Due

\$578.31

CASH REGISTER  
VALIDATION  
REQUIRED

012078 12/14/98801

# 0151455

SIERRA \$578.31

\*\*\*TTL \$578.31

CHECK \$578.31

CHNG \$0.00

012079 12/14/98801

# 0151456

SIERRA \$789.00

\*\*\*TTL \$789.00

CHECK \$789.00

CHNG \$0.00

# COUNTY OF SONOMA - PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

2550 Ventura Avenue, Santa Rosa, CA 95403 (707) 527-1900 FAX (707) 527-1103

Please Print  
Your Name:

Date  
Applied:

## INFORMATION WITHIN HEAVY LINE TO BE COMPLETED BY APPLICANT

### SITE LOCATION INFORMATION - PRINT CLEARLY

Site Address: <b>5400 Old Redwood Hwy.</b>	City: <b>PENNINGTON</b>	ZIP: <b>94964</b>
Cross-Street: <b>McDowell</b>	APN: <b>047-213-017</b>	Project Phone #: <b>(707) 795-3611</b>
Directions: <b>Legalize</b>	Subd. Name:	Project Fax #: <b>(707) 795-3616</b>
Job Description: <b>Grading 11,000 cu. yds</b>	Living Area:	Unit #:
	Garage:	Lot #:
	Decks:	Contract Price:

### OWNER NAME AND ADDRESS

Name: <b>CHANNEL LUMBER CO.</b>
Mailing Address: <b>100 W. CUTTING BLVD.</b>
City: <b>Richmond</b>
State: <b>CA</b>
ZIP: <b>94804</b>
Day Pk: <b>510 529-2611</b>
Fax: <b>510 234-0421</b>

### APPLICANT NAME AND ADDRESS

Name: <b>CHANNEL LUMBER CO.</b>
Mailing Address: <b>100 W. CUTTING BLVD.</b>
City: <b>Richmond</b>
State: <b>CA</b>
ZIP: <b>94804</b>
Day Pk: <b>510 529-2611</b>
Fax: <b>510 234-0421</b>

### CONTRACTOR INFORMATION

Company Name:
Address:
City:
State:
ZIP:
Day Pk: ( )
Fax: ( )

### OTHER PERSONS (ARCHITECT, ENGINEER, ETC.)

Name: <b>STUBER-STROEN ENGINEERING</b>
Address: <b>790 DELONCO AVE.</b>
City: <b>NOVATO</b>
State: <b>CA</b>
ZIP: <b>94945</b>
Day Pk: <b>415 892-4763</b>
Fax: <b>415 892-4502</b>

### WORKER'S COMPENSATION DECLARATION

I hereby affirm under penalty of perjury one of the following declarations:  
☐ I have and will maintain a certificate of consent to self-insure for worker's compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

☐ I have and will maintain worker's compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My worker's compensation insurance carrier and policy number are:

Carrier: \_\_\_\_\_  
 Policy: \_\_\_\_\_  
 No: \_\_\_\_\_

(This section need not be completed if the permit is for one hundred dollars (\$100) or less).

☐ I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the worker's compensation laws of California, and agree that if I should become subject to the worker's compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Exp. Date: \_\_\_\_\_ Applicant: \_\_\_\_\_  
**WARNING: FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL, AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000), IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST, AND ATTORNEY'S FEES.**

### OWNER-BUILDER DECLARATION

I hereby affirm under penalty of perjury that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5, Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractor's License Law (Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500).)

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044 Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his or her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he or she did not build or improve for the purpose of sale.)

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law.)

☐ I am exempt under Sec. \_\_\_\_\_ B & P.C. for this reason: \_\_\_\_\_  
 Date: **12-1-98** Owner: **[Signature]**

### LICENSED CONTRACTOR'S DECLARATION

I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

Lic. Class: \_\_\_\_\_ Lic. No.: \_\_\_\_\_

Exp. Date: \_\_\_\_\_ Contractor: \_\_\_\_\_

### ASBESTOS DECLARATION

Written asbestos notification pursuant to Part 61 of Title 40 of the Code of Federal Regulations is required when asbestos exists in buildings, or portions thereof, undergoing demolition. I hereby declare that demolition authorized by this permit is from construction that ( ) does ( ) does not contain asbestos, or that ( ) no demolition is authorized by this permit.

I certify that I have read this application and affirm under penalty of perjury that the above information is correct. I agree to comply with all local Ordinances and State laws relating to building construction. I hereby authorize representatives of the County of Sonoma to enter upon the above-mentioned property for inspection purposes. If, after making the Certificate of Exemption for the Worker's Compensation provision of the Labor Code I should become subject to such provisions, I will forthwith comply. In the event I do not comply with the Worker's Compensation law, this permit shall be deemed revoked.

**NOTICE: THIS PERMIT WILL EXPIRE BY LIMITATION IF WORK IS NOT STARTED IN 180 DAYS OR IF WORK IS ABANDONED FOR MORE THAN 180 DAYS. A REQUEST FOR TIME EXTENSION MUST BE SUBMITTED IN WRITING TO THE BUILDING CODE ADMINISTRATOR WITHIN THE FIRST 180 DAYS OF THE PERMIT.**

PERMITTEE SIGNATURE: **[Signature]**  
**5400 Old Redwood Hwy Pennington**  
 ADDRESS: \_\_\_\_\_ CITY: \_\_\_\_\_ ZIP: \_\_\_\_\_  
☐ Contractor ☐ Owner ☐ Agent for Contractor ☐ Agent for Owner

Permit # **B-151456** Area **11 9**

Permit Coordinator

### CONSTRUCTION LENDING DECLARATION

I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued. (Sec. 3097, Civ. C.)

Lenders Name: \_\_\_\_\_  
 Lenders Address: \_\_\_\_\_

### FOR DEPARTMENT USE

Using: <b>1. FZ BR</b>	File No: <b>DR325</b>	Acres: <b>12.18</b>
Existing Use/Structures: <b>Vacant</b>		
Proposed Use/Structures: <b>Legalize Grading</b>		
Zoning Mfr. Yard Requirements: Front _____ Left _____ Right _____ Back _____		
NOTE: Fire Safe Standards require all parcels greater than 1 Acre to have a min. 30' setback unless mitigated. <input type="checkbox"/> Mitigation Required <input type="checkbox"/> Address subject to change		
Approval for Permit Issuance: _____	Approval for Occupancy: <b>[Signature]</b>	
By: _____	By: <b>[Signature]</b>	
Date: _____	Date: <b>12-14-98</b>	
Conditions: <b># 4055, 390-762, UP, DR588-168</b>		

Sewer Connection: ☐ Available ☐ Fees Paid

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Road Encroachment: ☐ Fees Paid

Approved by: **[Signature]** Date: **9/17/99**

Septic System: **N/A Septic System on 047-14-17**

Permit/Clearance: **Adobe Alameda 12-14-98**

Approved by: **[Signature]** Date: **12-14-98**

Flood Zone: ☐ Yes ☐ No 100 Year Flood Elevation: \_\_\_\_\_

Site Review: \_\_\_\_\_

By: \_\_\_\_\_ Date: \_\_\_\_\_

Condition of Soil at Job Site: ☐ Original ☐ Engineered Fill ☐ Loose Fill

Required Reports: ☐ Geology ☐ Soils ☐ Compaction

Code Enforcement Violation: ☒ Yes ☐ No **VLR98-0074**

Work Authorized: **LEGALIZE APPROX 11,000 cu. yds**

**IMPORT FILL IN FLOOD ZONE**

☐ New ☐ Addition ☐ Alteration ☐ Repair ☐ Moving ☐ Occur'g

<input type="checkbox"/> Plans Approved		Machine Space for Permit Fee	
<input type="checkbox"/> No Plans Subject to Field Inspection			
Plancheck Cleared By: <b>[Signature]</b>	Date: <b>9/16/99</b>	1502 09/17/99SD:	
Permit Cleared for Issuance By: <b>[Signature]</b>	Date: <b>9-17-99</b>	#	<b>0151456</b>
Type of Construction	Occupancy	No. of Stories	No. of Bedrooms
Auto. Fire Sprinklers Req'd	No. of Units	Certificate of Occupancy	
Final Date	Inspector		

Distribution: White - File Canary - Applicant Pink - Audit Copy Blue - Assessor Cardstock - Inspector

JOB ADDRESS: **5400 Old Redwood Hwy**

MAP REFERENCE:

PERMIT NUMBER: **151456**

INSPECTION AREA: **9**

SPECIAL INSPECTION REQUIRED		<input type="checkbox"/> YES	<input type="checkbox"/> NO	IF YES, SEE ADDITIONAL SHEET
INSPECTION RECORD	DATE	NAME	REMARKS	
FOUNDATION				
FORMS/SETBACK				
FOOTING				
WALLS				
UFER GROUND #				
CAISSONS/PIERS				
SLAB				
MASONRY				
RETAINING WALLS				
FIREPLACE				
FOOTING				
HEARTH PROTECTION				
THROAT				
CHIMNEY				
UNDERFLOOR/UNDERSLAB				
U/F ELECTRICAL				
U/F MECHANICAL				
U/F PLUMBING				
U/F FRAMING				
U/F INSULATION				
SHEAR WALLS				
<input type="checkbox"/> INTERIOR				
<input type="checkbox"/> EXTERIOR				
DIAPHRAGMS				
<input type="checkbox"/> ROOF				
<input type="checkbox"/> FLOOR				
SIDING/SHEATHING				
HOLD DOWNS				
CLOSE-IN				
ROUGH ELECTRICAL				
ROUGH MECHANICAL				
ROUGH PLUMBING				
ROUGH FRAME				
SMOKE DETECTORS				
INSULATION				
WALLBOARD				
STUCCO/PLASTER				
<input type="checkbox"/> LATH				
<input type="checkbox"/> SCRATCH				
TUB/SHOWER PAN				
SUSPENDED CEILING				
ROUGH ELECTRICAL				
ROUGH MECHANICAL				
EXITING				
STAIRS/HANDRAILS				
RAMPS				
CORRIDORS/DOORS				
HANDICAP REQUIREMENTS				
ENERGY REQUIREMENTS				
TEMPORARY OCCUPANCY				
TEMPORARY ELECTRICAL				
TEMPORARY GAS				
ELECTRIC METER AUTHORIZATION				
PANEL BOARDS/SERVICE				
GAS METER AUTHORIZATION				
GAS PRESSURE TEST				
HOUSE				
YARD				
MANUF. HOME FOUNDATION				
MANUF. HOME INSTALLATION				
CONTINUITY				
STAIRS/SKIRTS				
RIDGE BOLTING				
SWIMMING POOLS				
PRE-GUNITE				
PRE-DECK				
PRE-PLASTER/FENCE				
GRADING FINAL	4-3-00	P		
ELECTRICAL FINAL				
MECHANICAL FINAL				
PLUMBING FINAL				
FINAL	4-3-00	P		
OCCUPANCY (OK TO OCCUPY)				

PERMIT #

FIRE INSPECTION REQUIRED ☐ Yes ☐ No  
 Inspected by:

CLEARANCES:  
 FIRE ☐ Local ☐ County  
 HEALTH DEPARTMENT  
 ZONING  
 SANITATION  
 N.C.A.P.C.D.

PLAN RETENTION REQUIRED?  
☐ Yes ☐ No

## FAX DISPATCH

from

JOHN C HOM &amp; ASSOCIATES, INC

1618 Second Street

San Rafael, California

TELEPHONE (415) 258-9027 ♦ FAX (415) 258-9309

Date ♦ March 9, 2000

Job Number ♦ 1275.1

Job Name ♦ Adobe Lumber

Petaluma, California

TO ♦ Rossi Development

Attention: Jon Rossi

your FAX ♦ (707) 257-6774

Number of Pages (including FAX sheet) ♦ 3

Post-It® Fax Note	7671	Date	3/9/00	# of pages	4
To	Shawn Peterson.	From	Joe Rossi		
Co./Dept	Sanoma County	Co.	Rossi Development		
Phone #		Phone #	2576774		
Fax #	565 1972	Fax #	2570616		

JCH

**JOHN C. HOM & ASSOCIATES, INC.**

1618 Second Street  
San Rafael, CA 94901-2707  
(415) 258-9027

March 1, 2000  
Revised 3/9/00  
Job Number 1395.1

Road Development  
Attention: Jon Rossi  
P. O. Box 756  
Napa, California 94599

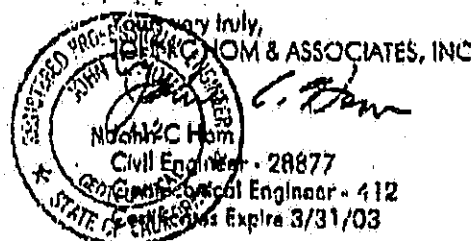
Dear Mr Rossi:

Final Report  
Field Density Testing  
Proposed Building Site  
Adobe Lumber  
Petaluma, California

This report presents the results of the field and laboratory density testing we conducted for fill placement on the proposed building site located on the east side of Adobe Lumber in Petaluma, California. The purpose of our work was to determine if the operations at the site met minimum specifications as outlined by the County of Sonoma. During fill placement preparation, our Field Geologist was on site intermittently to perform field density tests at random locations and elevations. The maximum dry density and moisture content were determined in our laboratory in accordance with ASTM D-1557-79(C) test procedures. Attached are plates summarizing our findings.

On the basis of our testing, it is our opinion that the fill placement at the subject site has been compacted to at least 90-percent relative compaction and is in accordance with the Project Specifications and is in accordance with the intent of the recommendations presented in our previous letter dated April 21, 1999.

We trust this provides the information you require at this time. If you have any questions, please call.



JCH/lbc  
Three copies submitted  
attachment

Specializing in providing Geotechnical Services for Buildings, Bridges and Earth Structures

Date	Test No	Location	Depth/ Eleva.	Dry Density	Max. Dry Den.	Moist. Cont. %	% Rel Compac.	Remarks
1999								
9/27	1	NW-edge	-1.5	100.9	117.0	16.3	86	reworked
"	2	N-dr/25'ce	-1.0	105.6	117.0	15.2	90	
"	3	ctr-fill	-1.5	100.5	117.0	17.9	86	reworked
"	4	W-edge	-3.5	85.9	117.0	24.9	73	reworked
"	5	S-ctr	-1.5	104.6	117.0	13.2	89	reworked
"	6	NW/cnr	-1.5	93.6	117.0	25.5	80	reworked
10/6	7	1/2 N/25'ce	SG	105.7	117.0	14.2	90	
"	8	W-15'F/N-cnr	-2.0	107.7	117.0	13.9	92	
"	9	1/2 W/40'E	-1.5	108.4	117.0	12.8	93	
"	10	40'E/S-end	-4.0	107.5	117.0	12.8	92	
10/12	11	SW-cnr	-2.0	107.8	117.0	11.0	92	
"	12	SW-cnr	-3.0	107.4	117.0	21.7	92	
10/13	13	125'E/SW-cnr	-1.5	109.8	117.0	15.9	94	
"	14	75'E/SW-cnr	-1.5	101.3	117.0	16.0	87	reworked
"	15	75'E/SW-cnr	-1.5	105.9	117.0	15.7	91	retest #14
10/14	16	NW-end	SG	111.8	117.0	14.9	96	
"	17	W-ctr/edge	SG	105.4	117.0	14.8	90	
"	18	SW-end	SG	109.7	117.0	16.7	94	
10/15	19	NW-cnr/25'E	SG	101.0	117.0	15.8	86	reworked
"	20	NE-edge	SG	107.6	117.0	17.3	92	
"	21	E-end/edge	SG	111.2	117.0	15.4	95	
"	22	NW-cnr/25'E	SG	105.9	117.0	15.1	91	retest #19
10/16	23	35'NE/W-edge	SG	101.6	117.0	15.6	87	reworked
"	24	35'W/W-edge	SG	113.5	117.0	13.0	97	retest #23
"	25	3' E/W-edge	SG	109.9	117.0	15.7	94	

**JCH**  
**JOHN C. HOM**  
**& ASSOCIATES, INC.**  
*Geotechnical Consultants*

Job No: 1398.1

Appr: JCH

Date: 3/00

FIELD DENSITY TESTING  
 ADOBE LUMBER  
 PETALUMA, CALIFORNIA

PLATE

1



Date	Test No	Location	Elev.	Dry Density	Max Dry Den.	Molst Cont %	% Rel Com P	Remarks
1999								
10/18	26	35'-NE/W-edge	-1.5	105.4	117.0	15.0	90	
10/19	27	SE-cnr/75'-NW/edge	-1.0	114.7	124.5	11.9	92	
"	28	40'-NW/LT	-1.0	114.1	124.5	12.4	92	
"	29	60'-NE/NW-cnr	-1.0	112.3	124.5	13.7	90	
10/21	30	E-edge/17'-N-cnr	-2.6	113.5	124.5	12.3	91	
"	31	E-edge/30'-N-cnr	-2.0	112.3	124.5	13.6	90	
10/22	32	SE-cnr	SG	112.7	124.5	13.1	91	
"	33	chr/E-edge	SG	113.4	124.5	13.3	91	
10/25	34	150'-S/N-cnr-pt	SG	117.4	124.5	13.9	94	
"	35	50'-NW/LT	SG	110.6	124.5	14.8	89	reworked
"	36	75'-SE/N-cnr/edge	SG	114.6	124.5	11.9	92	
"	37	N-cnr	SG	113.5	124.5	11.9	91	
"	38	75'-W/N-cnr/edge	SG	112.3	124.5	14.1	90	
"	39	50'-NW/LT	SG	112.1	124.5	14.5	90	retest #35

## LEGEND

N = North  
 S = South  
 E = East  
 W = West  
 ctr = center  
 oe = off edge  
 cnr = corner  
 LT = last test  
 pt = point

**JCH**  
**JOHN C. HOM**  
**& ASSOCIATES, INC.**  
 Geotechnical Consultants

Job No: 1395.1

Appr. JCH

Date: 3/00

FIELD DENSITY TESTING, continued  
 AGGREGATE LUMBER  
 PETALUMA, CALIFORNIA

PLATE

2

JCH

**JOHN C. HOM & ASSOCIATES, INC.**

1618 Second Street  
San Rafael, CA 94901-2707  
(415) 258-9027

February 10, 2000  
Job Number 1395.1

Roger Lees  
340 Mark West Station Road  
Windsor, California 95492

Dear Mr Lees:

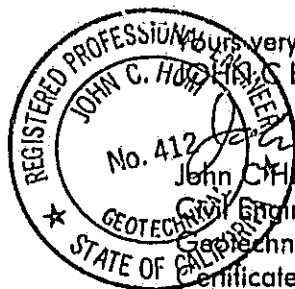
Progress Report  
Field Density Testing  
Proposed Building Site  
Adobe Lumber  
Petaluma, California

This report presents the results of the field and laboratory density testing we conducted for fill placement on the proposed building site located on the east side of Adobe Lumber in Petaluma, California. The purpose of our work was to determine if the operations at the site met minimum specifications as outlined by the County of Sonoma. During fill placement preparation, our Field Geologist was on site intermittently to perform field density tests at random locations and elevations. The maximum dry density and moisture content were determined in our laboratory in accordance with ASTM D-1557-79(C) test procedure.

On the basis of our testing, it is our opinion that the fill placement at the subject site has been compacted to at least 93 percent relative compaction and is in accordance with the Project Specifications and is in accordance with the intent of the recommendations presented in our previous letter dated April 21, 1999.

We trust this provides the information you require at this time. If you have any questions, please call.

Yours very truly,  
JOHN C. HOM & ASSOCIATES, INC  
No. 412 John C. Hom  
Geotechnical Engineer - 28877  
Geotechnical Engineer - 412  
Certificates Expire 3/31/03



JCH/jbc

three copies submitted

Specializing in providing Geotechnical Services for Buildings, Bridges and Earth Structures.

# SITE EVALUATION CHECKLIST

JOB ADDRESS: FAAO Old Redwood

File # B- 151456

Inspector: SJ

Date: 12/31/78

The proposed construction appears to be located in:

Flood Hazard:	<input type="checkbox"/> FIRM Flood Zone (A.S.F.H.) BFE = _____ ft. NGVD. Lowest finish floor at 12" above BFE at _____ ft. <input type="checkbox"/> Design for moving water is recommended Section _____ is _____ Ft/sec Section _____ is _____ Ft/sec <input type="checkbox"/> Area subject to flooding (not on adopted FIRM). <input type="checkbox"/> Project is on flood zone major damage list. <input type="checkbox"/> Flood prone urban area defined by Ordinance #4467.	<input type="checkbox"/> FIRM Floodway Portions of property in flood zone but project site not in flood zone. <input type="checkbox"/> Appears to be a "substantial improvement" therefore flood regulations apply. <input type="checkbox"/> Located inside the Laguna de Santa Rosa below elevation of 75 ft (Ord. #4467). <input type="checkbox"/> Sensitive drainage area, review by drainage section recommended.
Geo-technical:	<input type="checkbox"/> Area of suspected slides, slumps, earth flow, or soil creep. <input type="checkbox"/> Area of previous fill placement. <input type="checkbox"/> Area of highly expansive soil. <input type="checkbox"/> Area without sufficient slope setback as set forth in UBC Section 1806. <input type="checkbox"/> Area subject to possible liquefaction. <input type="checkbox"/> Area of suspected soft, compressible, or organic soil with low bearing capacity.	<input type="checkbox"/> Area without recommended setback from stream (SCWA recommendations). <input type="checkbox"/> Area of high moisture content in soil. <input type="checkbox"/> Area subject to high erosion (water or wind). <input type="checkbox"/> Area of soft soil due to past deep ripping or cultivation below minimum foundation depth. <input type="checkbox"/> Area within 1000 feet of a solid waste disposal site.
	Soils Report:      Required <input type="checkbox"/> Available <input type="checkbox"/>	
Geologic:	<input type="checkbox"/> Located in the Alquist-Priolo Special Studies Zone.	<input type="checkbox"/> Geologic report required (see DMG Publication 42).
General:	<input type="checkbox"/> Building addition will affect the required light and ventilation in an existing room. <input type="checkbox"/> Existing electric meter must be replaced. <input type="checkbox"/> Existing gas meter must be replaced. Slope is <u>per plan</u>	<input type="checkbox"/> Indications of existing substandard conditions that are not addressed by the proposed construction. <input type="checkbox"/> Indications of past work done without a permit. <input type="checkbox"/> Grading permit required for road, driveway, or site preparation. <input checked="" type="checkbox"/> Site is likely to be acceptable for conventional construction method.
Wind:	Exposure "B" <u>Exposure "C"</u> Exposure "D" Northern Sonoma County Air Pollution Control District <input type="checkbox"/> Yes <input type="checkbox"/> No	

- 1- Check Vio record - I think this "fill" may be 5-8 years old
- 2- ~~Is~~ Is compaction proposed? I answer, not.
- 3- A full layer of stone is in place and other erosion control measures.
- 4- not existing DI midway on south p/s
- 5- Ditch at west corner very shallow but OK if you like 1% slopes!

Site Sketch: 6- Drainage does seem to be with along R/R grade where ditch off site becomes deeper and more well defined.

5/11/99

Mtg on Adobe Lumber.

Deane & Ben talked to City Engineer.

Concern was that currently 3 D.I.'s accept sheetflow. This project puts all the water from this site into one D.I. and they think this will inundate the existing 3 D.I.'s.

Procedure:

Propose letter to City

Ask City to come to our office to review plans

City review of plans after we finish our review

Debra lets Chris know of this plan.

City make arrangements with Ed for their review

B-151456

5460 Old Redwood.

Log - Per



City of Petaluma 11 English Street  
Post Office Box 61 - Petaluma, California 94953

Vin Smith

RECEIVED

MAY 26 1999

PLANNING DEPARTMENT

Mayor  
Clark Thompson

Office of the City Manager  
(707) 778-4345  
Fax (707) 778-4419

Vice Mayor  
David Keller

May 24, 1999

Councilmembers  
Janice Cader-Thompson  
Jane Hamilton  
Michael Healy  
Matt Maguire  
Pamela Torliatt

Supervisor Mike Kerns  
County Board of Supervisors  
575 Administration Drive, Room 100A  
Santa Rosa, CA 95403

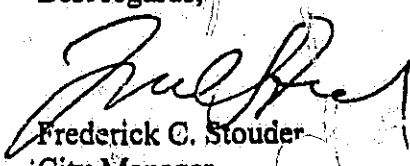
Dear Mike:

Thanks again, Mike, for your interest in the many issues facing our community, and your willingness to engage in a dialogue with the City Council about them. I know each one of the Councilmembers appreciates it. None of the issues are simple or they would not have been at the forefront so long: Lafferty, U.S. Highway 101, growth management, flooding, watershed management, and how many more could we add?

I also appreciate your keeping us informed regarding particular issues such as the illegal fill at 5400 Old Redwood Highway occupied by Adobe Lumber. My understanding is that the fill is to be removed in order to prevent any impact on drainage and potential future flooding.

Thank you for your continued help in this.

Best regards,

  
Frederick C. Stouder  
City Manager

d:/manager/stouder/fs0599/kc



E. Clark Thompson  
Mayor

Janice Corder-Thompson  
Jane Hamilton  
Michael Healy  
David Keller  
Matt Maguire  
Pamela Torilatt  
Councilmembers

July 22, 1999

Sonoma County  
Permit Division  
Attn.: Edward J.  
2550 Ventura A.  
Santa Rosa, 954

7/26/99  
Lola  
Please read this letter and tell  
me what you think it says. I  
think the 2nd paragraph says to  
take the fill out and the last  
paragraph says we can permit it  
as long as it is compatible with W.A.  
master plan & future Willow Brook Capital  
Imp. Let me know by Thursday 27th.  
Ed Scott

RE: Illegal Fill at Adobe Lumber, 5400 Old Redwood Highway

Dear Mr. Scott:

The City of Petaluma Planning and Engineering Departments have had the opportunity to review the plans and overflow analysis provided to the City by the engineering consultants, CSW/Stuber-Stroeh concerning the illegal fill which was placed on the property at 5400 Old Redwood Highway at Adobe Lumber.

It is the City's position that the illegal fill that has been placed on the above noted property could have adverse impacts (flooding) to nearby properties within the city limits. In addition, we believe that adherence with the City of Petaluma "zero-net-fill" regulations would not permit the illegal fill. As has been requested by the City in past letters, please take immediate action to cause the fill to be removed (see attached, letter from Petaluma City Manager, Fredrick Stouder). The Sonoma County Permit and Resource Management should respect and require adherence with these regulations on the subject site.

In reviewing the applicable documents, grading plan, overflow analysis and supplemental information that was provided to the City, it has been noted that the information did not contain a signature and professional engineer's seal. The City's Planning and Engineering Departments are requesting that the documents contain the necessary signature and professional engineer's seal.

Due to potential impacts to the City of Petaluma, the City is also requesting that the county provide documentation indicating that this grading and fill is compatible with the Sonoma County Water Agency Master Plan and/or Future Willow Brook Capital Improvement Projects prior to issuance of any permit.

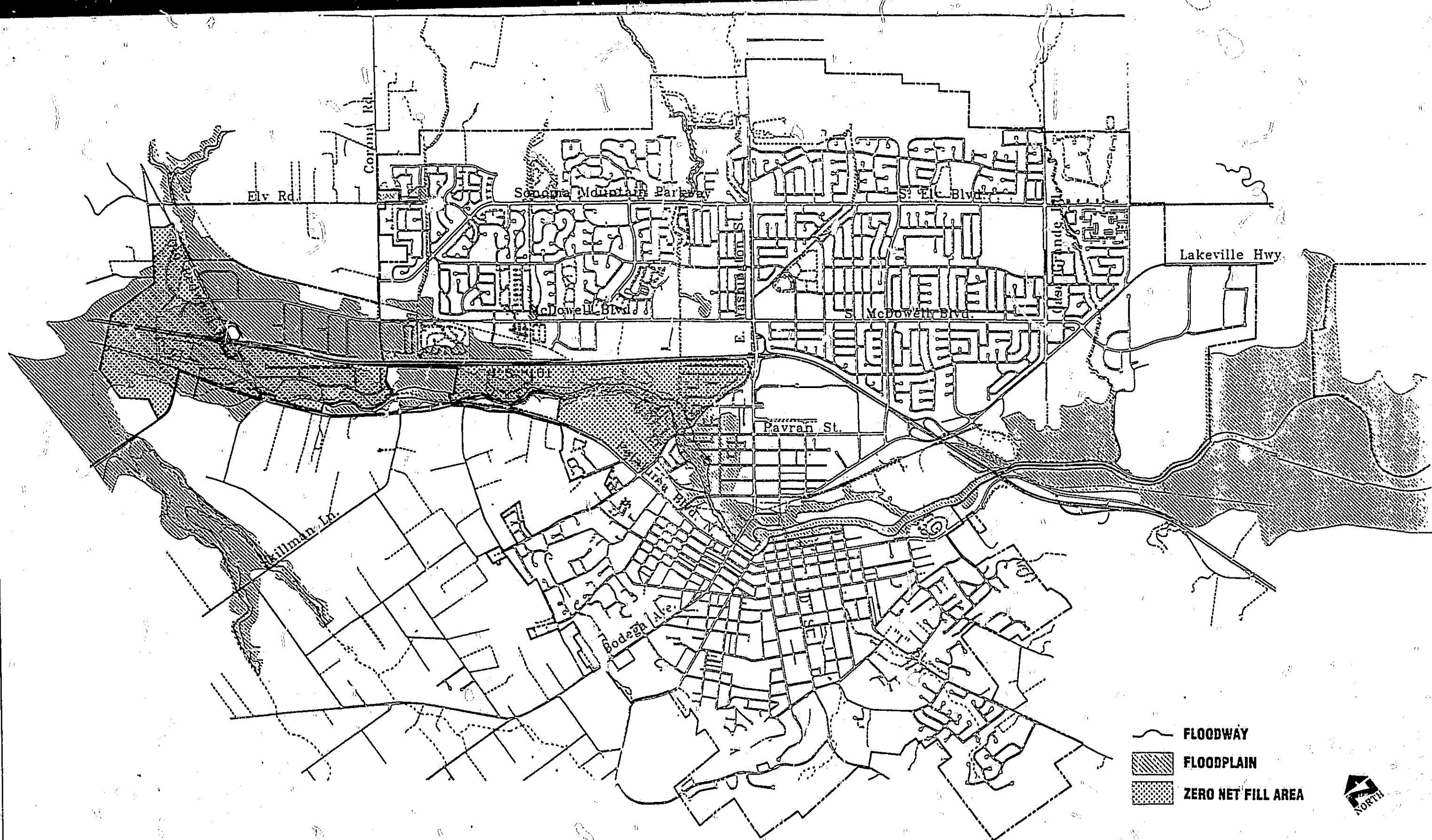
11 English Street  
Petaluma, CA 94952

Planning Department  
Phone (707) 778-4301  
Fax (707) 778-4498  
E-Mail  
planning@ci.petaluma.ca.us

Building Division  
Phone (707) 778-4302  
Fax (707) 778-4498  
E-Mail  
building@ci.petaluma.ca.us

Housing Division  
Phone (707) 778-4301  
Fax (707) 778-4498  
E-Mail  
housing@ci.petaluma.ca.us





# **CITY OF PETALUMA FLOODWAY & FLOODPLAIN AREAS**

# GROUND FILL

100 YEAR FLOOD  
WATER SURFACE

EXISTING GRADE

100 YEAR FLOOD  
WATER SURFACE

EXISTING GRADE

AREA OF FILL  
TO SUPPORT  
DEVELOPMENT

100 YEAR FLOOD  
WATER SURFACE

EXISTING GRADE

AREA REMOVED  
EQUAL TO AREA  
OF DISPLACED  
WATER

AREA OF  
DISPLACED  
WATER

100 YEAR FLOOD  
WATER SURFACE

NEW GRADE





# CITY OF PETALUMA

POST OFFICE BOX 61  
PETALUMA, CA 94953-0061

E. Clark Thompson  
Mayor

Janice Cader-Thompson  
Jane Hamilton  
Michael Henly  
David Keller  
Matt McGuire  
Pamela Torliatt  
Councilmembers

July 22, 1999

Sonoma County Permit and Resource Management  
Permit Division  
Attn.: Edward J. Scott, P.E., Division Manager  
2550 Ventura Avenue  
Santa Rosa, 95403

RE: Illegal Fill at Adobe Lumber, 5400 Old Redwood Highway

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11 English Street  
Petaluma, CA 94952

Planning Department  
Phone (707) 778-4301  
Fax (707) 778-4498  
E-Mail  
planning@ci.petaluma.ca.us

Building Division  
Phone (707) 778-4302  
Fax (707) 778-4498  
E-Mail  
building@ci.petaluma.ca.us

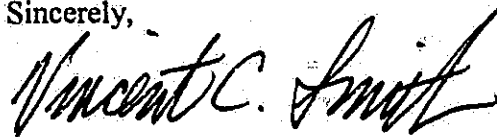
Housing Division  
Phone (707) 778-4301  
Fax (707) 778-4498  
E-Mail  
housing@ci.petaluma.ca.us



EQUAL HOUSING  
OPPORTUNITY

If you have any questions, phone me at (707) 778-4301.

Sincerely,



Vincent C. Smith, AICP  
Interim Planning Director

Enclosures

Letter from Fredrick C. Stouder, Petaluma City Manager, dated May 24, 1999.

Article 16 of the Petaluma Zoning Ordinance

O-Net Fill Policy

Memorandum from Craig Spaulding, Associate Civil Engineer

c: City Council  
Fredrick Stouder  
Mike Kerns, Sonoma County Board of Supervisors  
Sonoma County Board of Supervisors  
CSw/Stuber-Stroeh Engineering, 790 DeLong Avenue, Novato, CA  
94945  
File SCO99001  
VS/rf

s:\plan dept\letters\adobe\umber

# CSW [St]<sup>2</sup>

TEL: (707) 795-4764  
FAX: (707) 795-0516  
E-Mail: Office@cswst2.com

**CSW/Stuber-Stroeh Engineering Group, Inc.**  
Engineers • Land Planners • Surveyors • Landscape Architects

## VIA CALIFORNIA OVERNIGHT

Date: August 18, 1999  
File: 5.828.00

Post-It <sup>®</sup> brand fax transmittal memo 7671		# of pages = 2
To: <i>Lola Corretti</i>	From: <i>Wayne Leach</i>	
Co. <i>Sonoma County</i>	Co. <i>CSW/St<sup>2</sup></i>	
Dept. <i>Permits Res. Mgt.</i>	Phone #	
Fax # <i>707565-2210</i>	Fax #	

Edward J. Scott, P.E., Division Manager  
Sonoma County Permit &  
Resource Management Department  
2550 Ventura Avenue  
Santa Rosa, California

## RE: ADOBE LUMBER GRADING PERMIT

Dear Mr. Scott:

CSW/St<sup>2</sup> provides this letter and accompanying documentation to address several issues raised by City of Petaluma staff and to restate our concern that the County has not issued the Grading Permit for the above-referenced project.

In his July 22, 1999 letter, Vincent Smith, Interim Planning Director, asserted that the County must apply the City's zero net fill policy to the Adobe Lumber project. This argument ignores the jurisdictional constraints of the City because the subject property lies within the County which has no such policy applicable to this site. Therefore, the County has no authority to apply a zero net fill policy to this site.

Mr. Smith also argues for immediate removal of all of the "illegal fill." Over the past year, Adobe Lumber has submitted a Grading Permit application and has provided all of the technical information in a timely manner. This information includes a Grading Plan and an Overbank Flow Analysis which demonstrate that, with removal of part of the fill, together with regrading, the fill is not expected to significantly impact water surface elevations for properties upstream or downstream of the subject project site. This analysis confirms that the proposed grading plan conforms to the County standards for issuance of a Grading Permit, including consistency with the Sonoma County Water Agency Master Plan.

Finally, we have enclosed stamped and signed copies of the Grading Plan and Overbank Flow Analysis with copies sent to Petaluma staff.

\\oda1\data\Admin\WP\501\Corr\18-99-021

1301 Redwood Way, Suite 200, Petaluma, California 94954  
790 De Long Avenue, Novato, California 94945

*To Lola  
8/21/99  
CT*

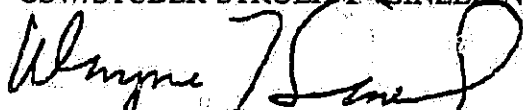
CSW  
[St]<sup>2</sup>

Edward J. Scott  
Sonoma County Permit &  
Resource Management Department  
August 18, 1999  
Page 2

We hope that the submittal of this information enables County staff to immediately issue the Grading Permit for the Adobe Lumber project. Over the last year, Adobe Lumber has complied with all County requirements in a thorough and timely manner. Unfortunately, the time periods for completing the application and issuance of the permit have been exceeded. Yet without the issuance of the permit, Adobe Lumber cannot comply with Conditions of Approval which do not exist. Unless the County immediately issues the Grading Permit, Adobe Lumber may consider exercising its rights under California Government Code 65943 et seq. before the onset of the rainy season. If you have any questions regarding this matter, please call me at (707)795-4764.

Sincerely,

CSW/STUBER-STROEH ENGINEERING GROUP, INC.



Wayne F. Leach

WFL:sef  
Enclosures

cc: Supervisor Mike Kerus  
Ms. Lola Coretti, County of Sonoma Permit & Resource Management Department  
Mr. Roger Lees, Adobe Lumber  
Vincent C. Smith, AICP, Interim Planning Director

**OVERBANK FLOW ANALYSIS  
BASED ON FILL PLACED AT ADOBE LUMBER**

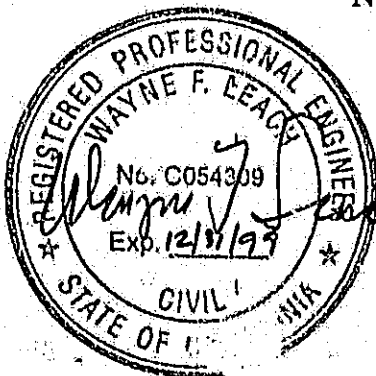
(Supplemental Information)

**ADOBE LUMBER  
SONOMA COUNTY**

February 5, 1999  
(Revised April 21, 1999)

**CSW/STUBER-STROEH ENGINEERING GROUP, INC.**  
790 DELONG AVENUE  
NOVATO, CA 94945

File: 5.82\$.00



**CSW  
[St]<sup>2</sup>**

## HEC-RAS INPUT DATA

SCENARIO 1: EXISTING CONDITION  
SCENARIO 2: POST GRADING CONDITION  
SCENARIO 3: MITIGATION CONDITION

**SCENARIO 1:EXISTING CONDITION**

GEOMETRY FILE: ALEXIST.G  
FLOW FILE: ALEXIST

all.txt

HEC-RAS Version 2.1 October 1997  
U.S. Army Corp of Engineers  
Hydrologic Engineering Center  
609 Second Street, Suite D  
Davis, California 95616-4687  
(916) 756-1104

```
X X XXXXXX XXXX XXXX XX XXXX
X XX X X X X XX X
X XY X X X X X X
XXXXXXXX XXXX X XXX XXXX XXXXXX XXXX
X XX X XX XX XX X
X XX X X X X X X X
X X XXXXXX XXXX X X X X XXXXX
```

\*\*\*\*\*

#### PROJECT DATA

Project Title: Adobe Lumber  
Project File : al.prj  
Run Date and Time: 4/16/99 9:18:44 AM

Project in English units

\*\*\*\*\*

#### PLAN DATA

Plan Title: Plan 40  
Plan File : C:\HEC\RAS\Data\al.p40

Geometry Title: Alexisting  
Geometry File : C:\HEC\RAS\Data\al.g01

Flow Title : Alexist  
Flow File : C:\HEC\RAS\Data\al.f01

#### Plan Summary Information:

Number of: Cross Sections = 7 Multiple Openings = 0  
Culverts = 0 Inline Weirs = 0  
Bridges = 0

#### Computational Information

Water surface calculation tolerance = 0.01  
Critical depth calculation tolerance = 0.01  
Maximum number of iterations = 20  
Maximum difference tolerance = 0.3  
Flow tolerance factor = 0.001



## Computational Flow Regime: Subcritical Flow

\*\*\*\*\*

## FLOW DATA

Flow Title: ALEXIST

Flow File : C:\HEC\RAS\Data\al.f01

## Flow Data (cfs)

\*\*\*\*\*

* River	Reach	RS	*	PF#1	*
* Adobe Lumber Ex 1		1560	*	2000	*
* Adobe Lumber Ex 1		1352	*	1850	*
* Adobe Lumber Ex 1		1000	*	2000	*

\*\*\*\*\*

## Boundary Conditions

\*\*\*\*\*

\*\*\*\*

* River	Reach	Profile	*	Upstream	Downstream	*
---------	-------	---------	---	----------	------------	---

\*\*\*\*\*

\*\*\*\*

* Adobe Lumber Ex 1	PF#1	*	Known WS = 39.63	*
---------------------	------	---	------------------	---

\*\*\*\*\*

\*\*\*\*

\*\*\*\*\*

## GEOMETRY DATA

Geometry Title: ALEXISTING

Geometry File : C:\HEC\RAS\Data\al.g01

CROSS SECTION RIVER: Adobe Lumber Ex  
 REACH: 1 RS: 1560

## INPUT

Description:

Station Elevation Data num= 7

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	43.3	50	38.9	132	41.8	178	40.3	362	41
580	39.9	660	41.8						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	0	.035	132	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
0	132	100	90	90	.1	.3	

all.txt

Ineffective Flow num= 1

Sta L Sta R Elev

\*\*\*\*\*

500 660 60

CROSS SECTION RIVER: Adobe Lumber Ex

REACH: 1 RS: 1470

INPUT

Description:

Station Elevation Data num= 10

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*

0 42.4 45 42 100 37.9 120 41 225 42.5

295 42 345 42.4 415 42.2 470 42.6 550 42.5

Manning's n Values num= 3

Sta n Val Sta n Val Sta n Val

\*\*\*\*\*

0 .035 45 .035 225 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

45 225 155 118 118 .1 .3

Ineffective Flow num= 3

Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev

\*\*\*\*\*

225 265 60 330 370 60 470 580 60

CROSS SECTION RIVER: Adobe Lumber Ex

REACH: 1 RS: 1352

INPUT

Description:

Station Elevation Data num= 12

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*

0 42.3 28 38.9 80 38.9 120 38.9 170 38.9

203 41.7 215 41.5 390 42.1 513 41.8 670 42.7

725 41.8 823 42.2

Manning's n Values num= 3

Sta n Val Sta n Val Sta n Val

\*\*\*\*\*

0 .035 80 .035 120 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

80 120 165 122 122 .1 .3

Ineffective Flow num= 3

Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev

\*\*\*\*\*

330 370 58 435 475 58 580 680 58

all.txt

CROSS SECTION RIVER: Adobe Lumber Ex  
REACH: 1 RS: 1230

INPUT

Description:

Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	42	30	37.4	80	37.6	240	38.3	290	38.5
302	41.8	330	41.8	432	42.5	510	41	562	42.2
627	41	777	42.7	782	42.8	857	41.7	942	41.2

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	80	.035	240	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	80	240		350	230	.1	.3	

Ineffective Flow num= 3

Sta L	Sta R	Elev	Sta L	Sta R	Elev	Sta L	Sta R	Elev
450	490	58	555	595	58	690	800	58

CROSS SECTION RIVER: Adobe Lumber Ex  
REACH: 1 RS: 1050

INPUT

Description: Adobe lumber downstream boundary

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	41.8	30	37.1	80	37.1	380	37.2	450	37.6
480	37.7	500	40.8	690	40.4	860	39.5	1040	38.9
1080	38.9	1150	42						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	80	.035	450	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	80	450		100	40	.1	.3	

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
0	0	60	500	1150	60

CROSS SECTION RIVER: Adobe Lumber Ex  
REACH: 1 RS: 1010

INPUT

all.txt

Description: Adobe lumber downstream boundary

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	41.1	30	37	50	37	380	37.2	550	37.7
600	37.8	627	40.8	800	40.4	970	39.5	1150	38.9
1190	38.9	1230	42						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	50	.035	550	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
50	550	20	10	10	.1	.3		

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
0	0	60	627	1230	60

CROSS SECTION RIVER: Adobe Lumber Ex  
REACH: 1 RS: 1000

INPUT

Description: Adobe lumber downstream boundary

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	41.1	30	37	50	37	380	37.2	550	37.7
600	37.8	627	40.8	800	40.4	970	39.5	1150	38.9
1190	38.9	1230	42						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	50	.035	550	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
50	550	0	0	0	.1	.3		

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
0	0	60	627	1230	60

SUMMARY OF MANNING'S N VALUES

River: Adobe Lumber Ex

* Reach	* River Sta.	* n1	* n2	* n3	*

all.txt

```
*1      * 1560      * .035* .035* .035*
*1      * 1470      * .035* .035* .035*
*1      * 1352      * .035* .035* .035*
*1      * 1230      * .035* .035* .035*
*1      * 1050      * .035* .035* .035*
*1      * 1010      * .035* .035* .035*
*1      * 1000      * .035* .035* .035*
```

\*\*\*\*\*

\*\*\*\*\*

## SUMMARY OF REACH LENGTHS

River: Adobe Lumber Ex

\*\*\*\*\*

```
* Reach * River Sta. * Left * Channel * Right *
*****
```

```
*1      * 1560      * 100* 90* 90*
*1      * 1470      * 155* 118* 118*
*1      * 1352      * 165* 122* 122*
*1      * 1230      * 350* 230* 230*
*1      * 1050      * 100* 40* 40*
*1      * 1010      * 20* 10* 10*
*1      * 1000      * 0* 0* 0*
```

\*\*\*\*\*

## Profile Output Table - Standard Table 1

\*\*\*\*\*

```
* Reach * River Sta * Q Total *Min Ch El *W.S. Elev *Crit W.S. *E.G. Elev *E.G. Slope * Vel Chnl *Flow Area *T
op Width *Froude # Chl *
* * * (cfs) * (ft) * (ft) * (ft) * (ft) * (ft/ft) * (ft/s) * (sq ft) * (ft) * *
```

\*\*\*\*\*

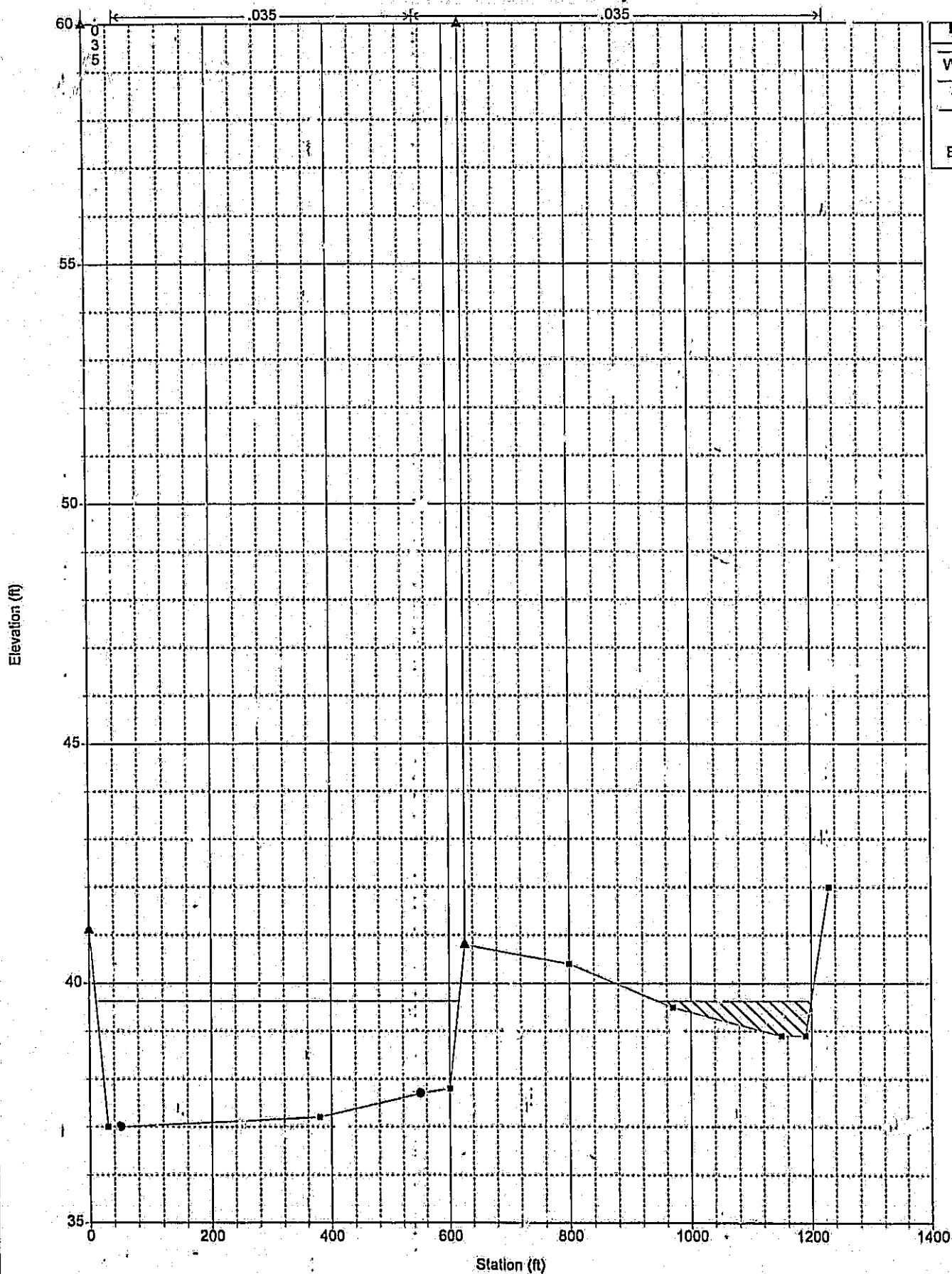
```
* 1      * 1000      * 2000.00 * 37.00 * 39.63 * 37.98 * 39.66 * 0.000372 * 1.47 * 1392.48 * 859.69 *
0.17 *
* 1      * 1010      * 1850.00 * 37.00 * 39.64 * 37.95 * 39.67 * 0.000315 * 1.36 * 1397.79 * 861.60 *
0.15 *
* 1      * 1050      * 1850.00 * 37.10 * 39.65 * 38.02 * 39.69 * 0.000475 * 1.68 * 1125.99 * 743.18 *
0.19 *
* 1      * 1230      * 1850.00 * 37.60 * 39.78 * 39.12 * 40.00 * 0.003504 * 3.76 * 497.40 * 280.18 *
0.49 *
* 1      * 1352      * 1850.00 * 38.90 * 40.57 * 40.57 * 41.33 * 0.015397 * 7.43 * 265.89 * 175.53 *
1.01 *
* 1      * 1470      * 2000.00 * 37.90 * 42.64 * 42.64 * 43.14 * 0.009662 * 5.93 * 389.13 * 580.00 *
0.80 *
* 1      * 1560      * 2000.00 * 38.90 * 43.25 * 41.45 * 43.29 * 0.000384 * 1.58 * 1282.42 * 659.41 *
0.17 *
```

\*\*\*\*\*

\*\*\*\*\*

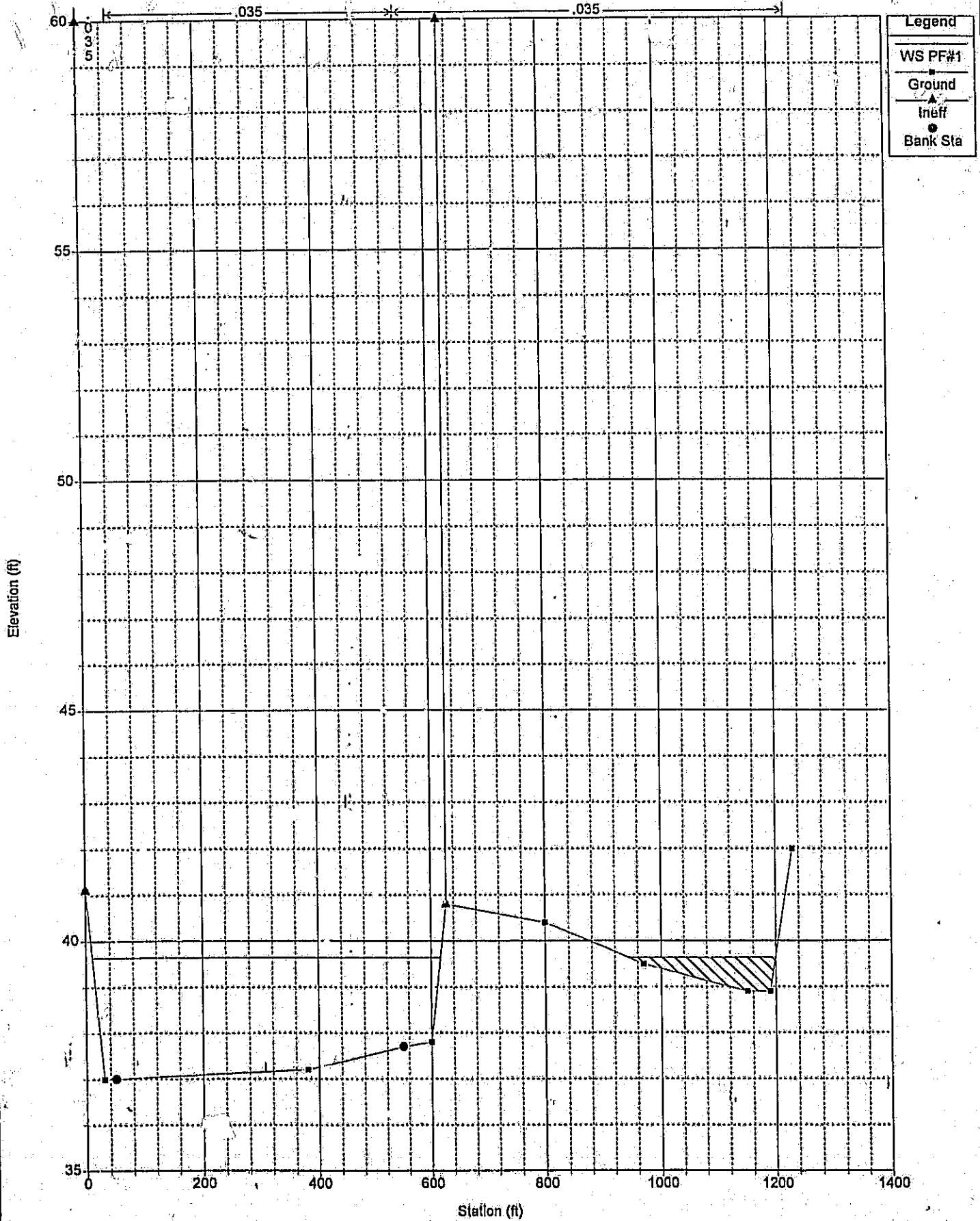
Geom: ALEXisting

Adobe lumber downstream boundary



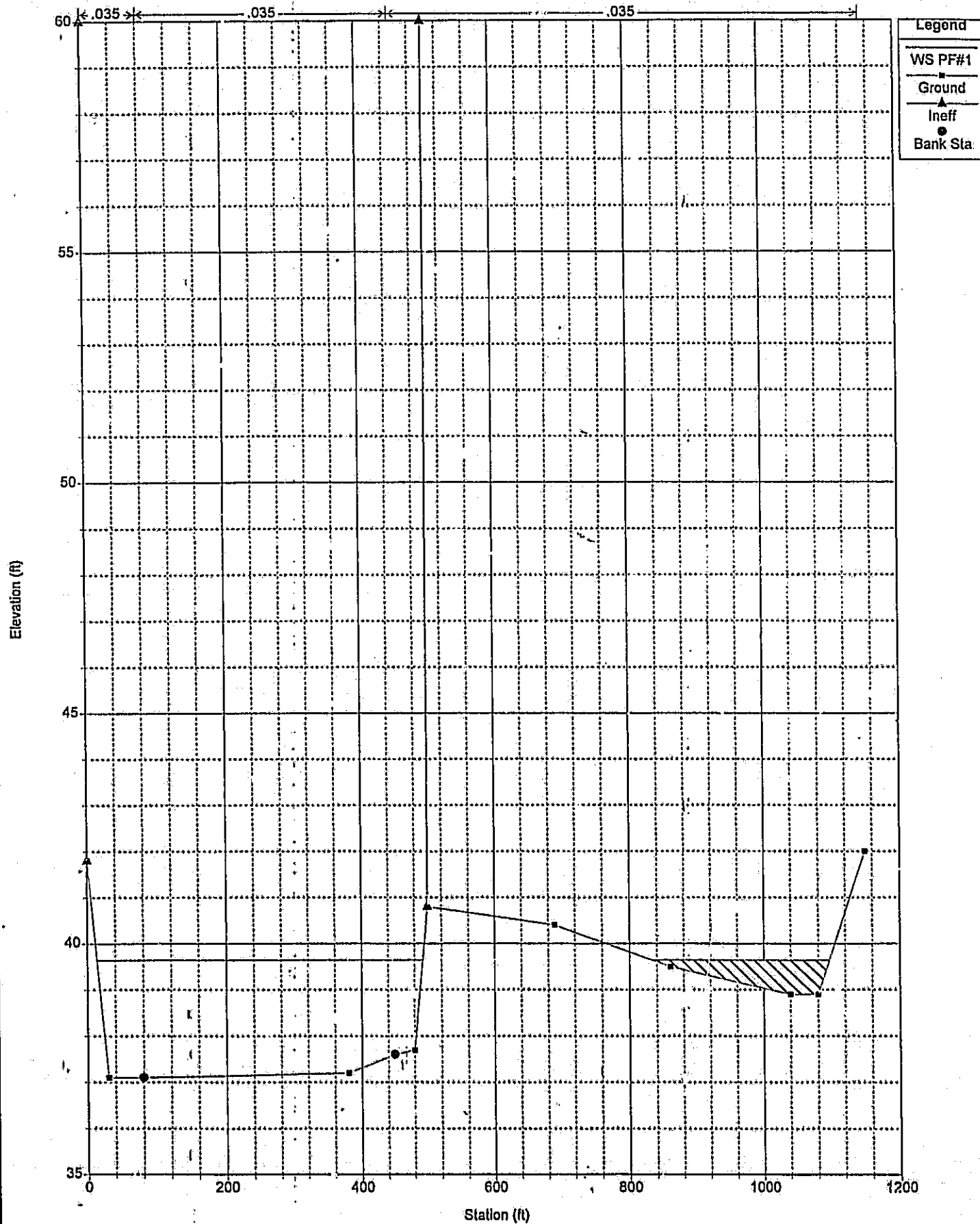
Geom: ALEXisting

Adobe lumber downstream boundary



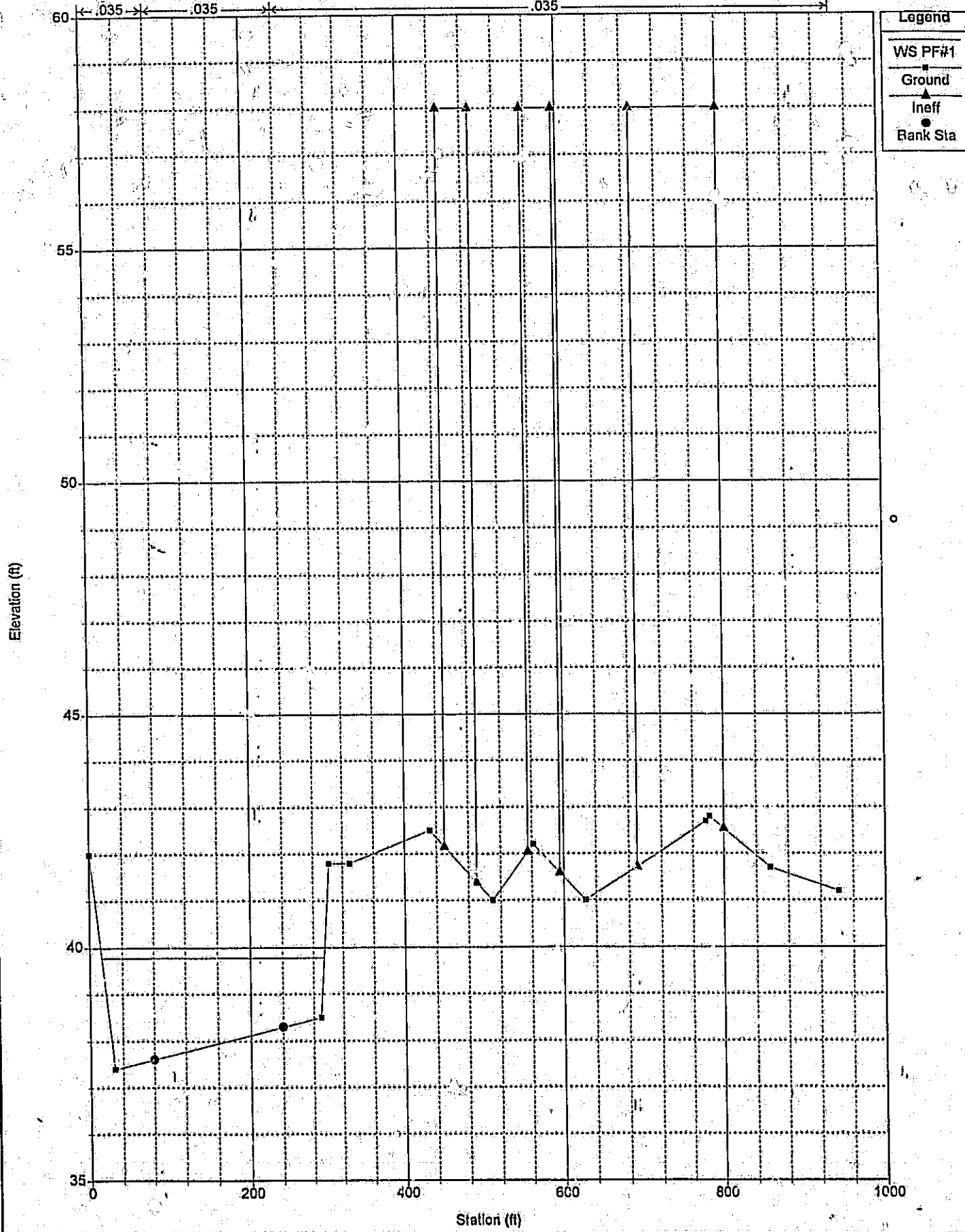
Geom: ALEXisting

Adobe lumber downstream boundary





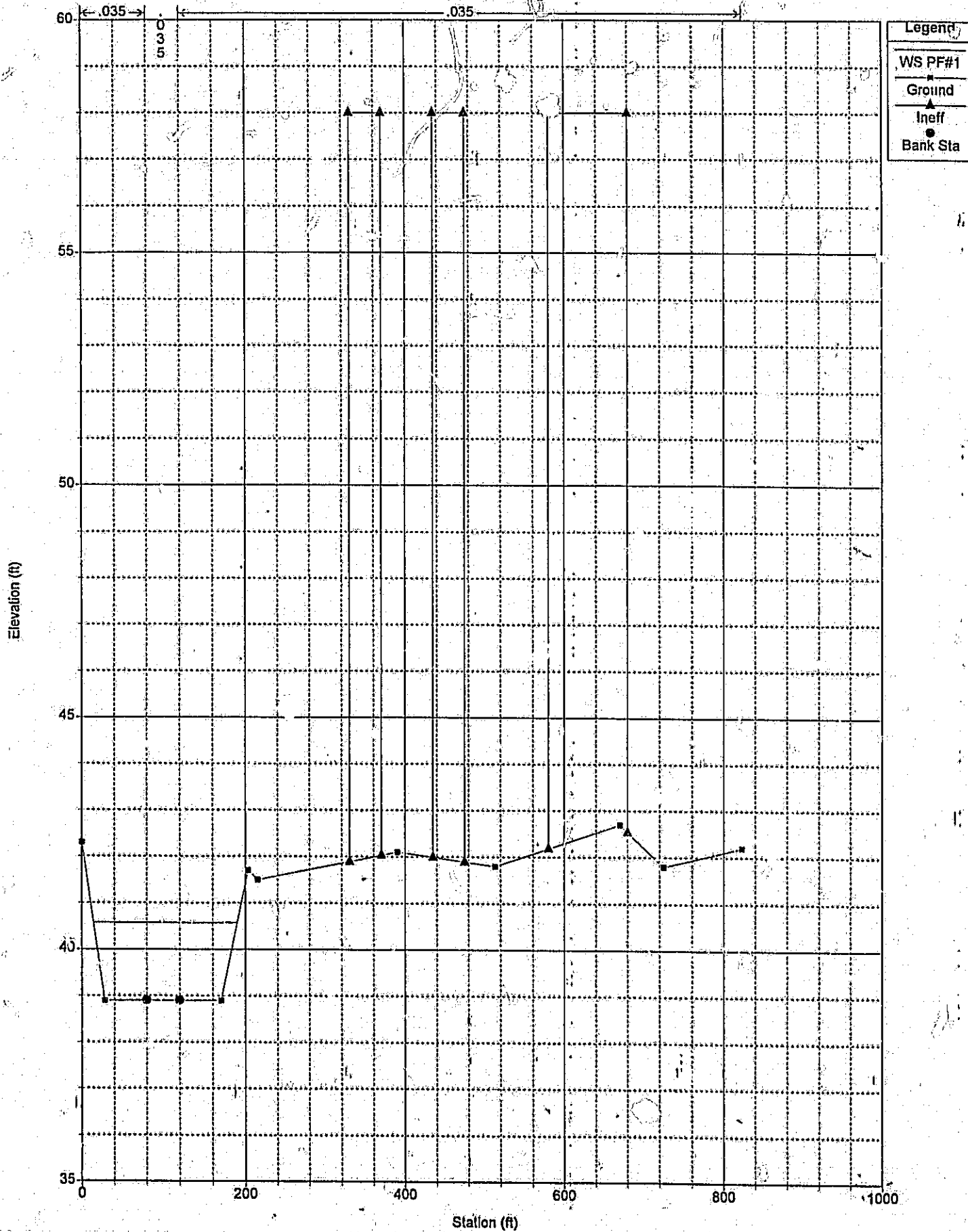
Geom: ALEXisting

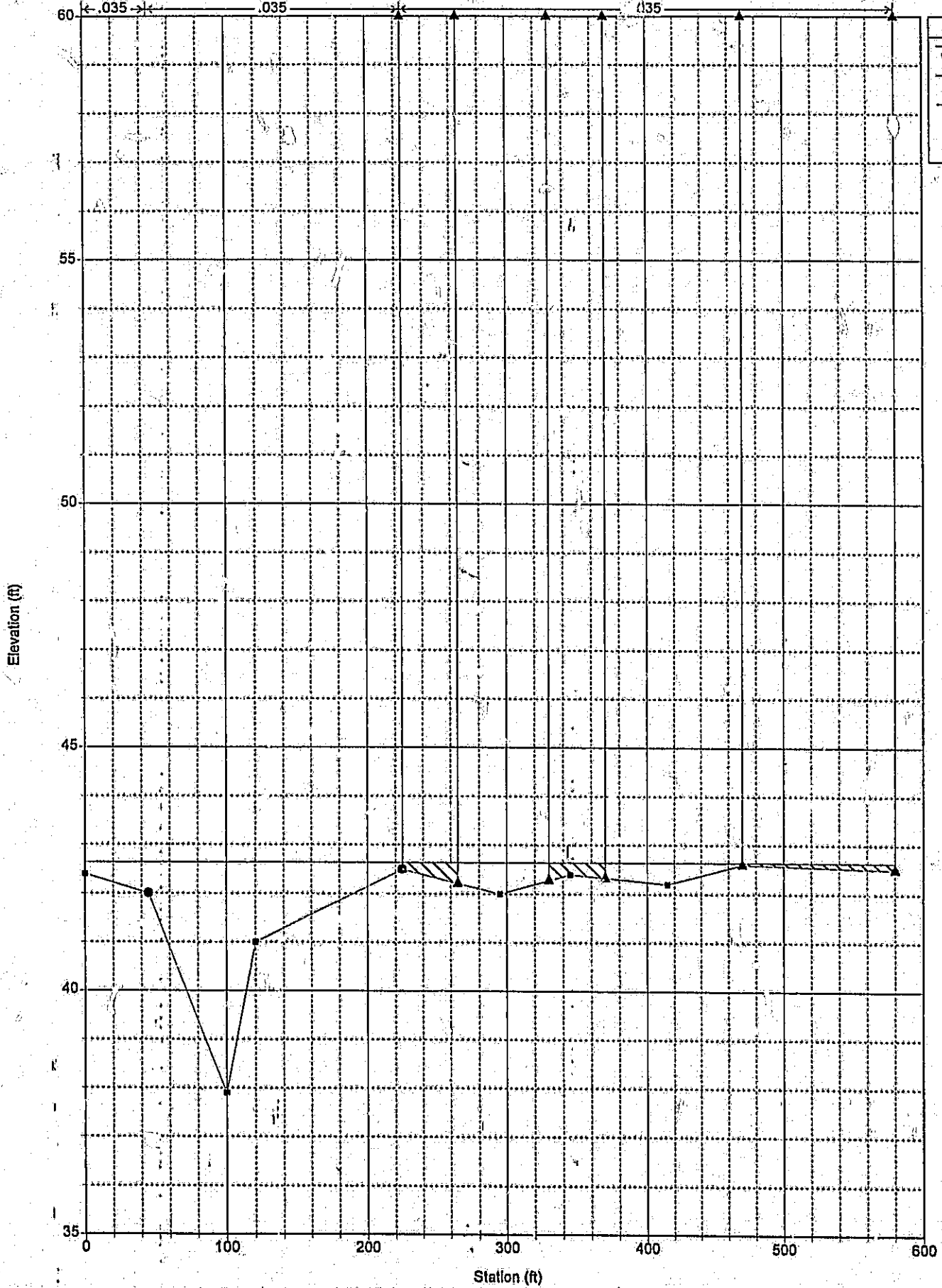


4/16/99

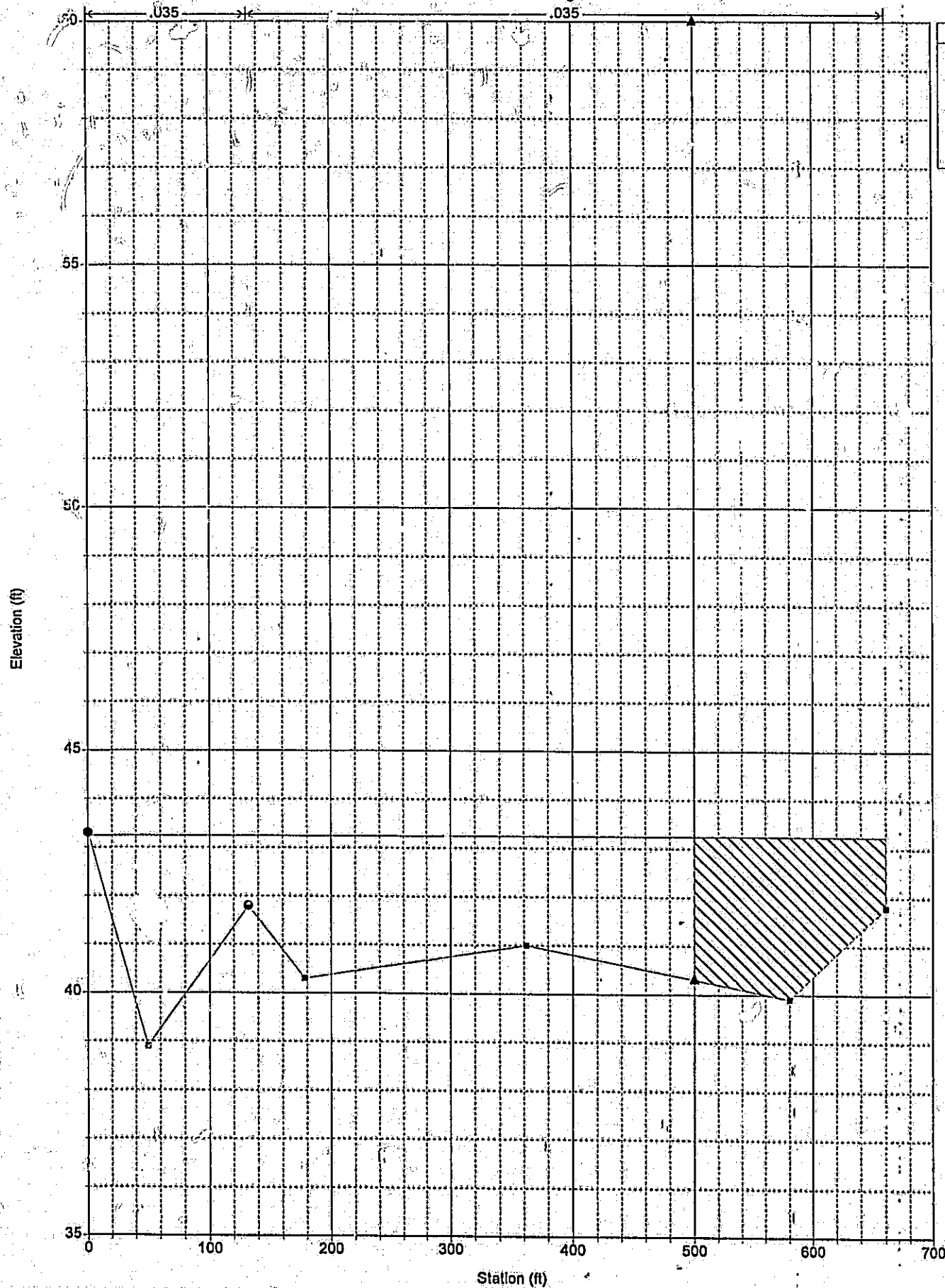
## Geom: ALEXisting

13452





Legend	
WS PF#1	
Ground	■
Ineff	▲
Bank Sta	●



Legend

WS PF#1

Ground

Ineff

Bank Sta

## SCENARIO 2: POST GRADING CONDITION

GEOMETRY FILE: AL POSTGRADING  
FLOW FILE: AL POSTGRADING

al2.txt

HEC-RAS Version 2.1 October 1997  
U.S. Army Corp of Engineers  
Hydrologic Engineering Center  
609 Second Street, Suite D  
Davis, California 95616-4687  
(916) 756-1104

1  
X X XXXXXX XXXX XXXX XX XXXX  
X XX X X X X XX X  
X XX X X X X X X  
XXXXXXXX XXXX X XXX XXXX XXXXXX XXXX  
X XX X XX X X X X  
X XX X X X X X X X  
X X XXXXXX XXXX X X X X XXXXX

\*\*\*\*\*

#### PROJECT DATA

Project Title: Adobe Lumber  
Project File: al.prj  
Run Date and Time: 4/16/99 9:30:24 AM

Project in English units

\*\*\*\*\*

#### PLAN DATA

Plan Title: Plan 40  
Plan File: C:\HEC\RAS\Data\al.p40

Geometry Title: ALpostgrading  
Geometry File: C:\HEC\RAS\Data\al.g02

Flow Title: ALpostgrading  
Flow File: C:\HEC\RAS\Data\al.f02

#### Plan Summary Information:

Number of: Cross Sections = 7 Multiple Openings = 0  
Culverts = 0 Inline Weirs = 0  
Bridges = 0

#### Computational Information

Water surface calculation tolerance = 0.01  
Critical depth calculation tolerance = 0.01  
Maximum number of iterations = 20  
Maximum difference tolerance = 0.3  
Flow tolerance factor = 0.001

## Computational Flow Regime: Subcritical Flow

## FLOW DATA

Flow Title: ALpostgrading

Flow File : C:\HEC\RAS\Data\al.f02

## Flow Data (cfs)

```
*****
* River   Reach   RS   *   PF#1 *
* Adobe Lumber 1   1560 *   2000 *
* Adobe Lumber 1   1352 *   1270 *
* Adobe Lumber 1   1000 *   2000 *
*****
```

## Boundary Conditions

```
*****
****
* River   Reach   Profile   *   Upstream   Downstream *
*****
****
* Adobe Lumber 1   PF#1   *   Known WS = 39.63 *
*****
****
```

## GEOMETRY DATA

Geometry Title: ALpostgrading

Geometry File : C:\HEC\RAS\Data\al.g02

CROSS SECTION      RIVER: Adobe Lumber  
 REACH: 1            RS: 1560

## INPUT

## Description:

Station Elevation Data num= 7

```
*****
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
0 43.3 50 38.9 132 41.8 178 40.3 362 41
580 39.9 660 41.8
*****
```

Manning's n Values num= 3

Sta n Val Sta n Val Sta n Val

```
*****
0 .035 0 .035 132 .035
*****
```

Bank Sta: Left Right Lengths: Left Channel Right | Coeff Contr. Expan.  
 0 132 100 90 90 .1 .3

al2.txt

Ineffective Flow num= 1

Sta L Sta R Elev

\*\*\*\*\*

500 660 60

CROSS SECTION RIVER: Adobe Lumber

REACH: 1 RS: 1470

INPUT

Description:

Station Elevation Data num= 10

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*

0 42.4 45 42 100 37.9 120 41 225 42.5  
295 42 345 42.4 415 42.2 470 42.6 580 42.5

Manning's n Values num= 3

Sta n Val Sta n Val Sta n Val

\*\*\*\*\*

0 .035 45 .035 120 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

45 120 155 118 118 0 .3

Ineffective Flow num= 3

Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev

\*\*\*\*\*

225 265 60 330 370 60 470 580 60

CROSS SECTION RIVER: Adobe Lumber

REACH: 1 RS: 1352

INPUT

Description:

Station Elevation Data num= 13

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*

0 42.3 28 38.9 80 41.5 120 41.5 153 41.5  
180 41.5 200 41.6 391 203 41.7 215 41.5 330 41.8  
390 42.1 513 41.8 670 42.7

Manning's n Values num= 3

Sta n Val Sta n Val Sta n Val

\*\*\*\*\*

0 .035 80 .035 120 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

80 120 165 122 122 1 .3

Ineffective Flow num= 1

Sta L Sta R Elev

\*\*\*\*\*

200 670 60



CROSS SECTION RIVER: Adobe Lumber  
 REACH: 1 RS: 1230

## INPUT

Description:

Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	42	30	37.4	80	41.5	240	41.5	300	41.5
302	41.8	330	41.8	432	42.5	510	41	562	42.2
627	41	777	42.7	782	42.8	857	41.7	942	41.2

\*\*\*\*\*

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	80	.035	240	.035

\*\*\*\*\*

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

Left	Right	Left	Right	Coeff	Contr.	Expan.
80	240	350	230	.1	.3	

Ineffective Flow num= 1

Sta L	Sta R	Elev
240	942	60

\*\*\*\*\*

CROSS SECTION RIVER: Adobe Lumber  
 REACH: 1 RS: 1050

## INPUT

Description: Adobe lumber downstream boundary

Station Elevation Data num= 11

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	41.8	30	37.1	60	37.1	80	41.5	450	41.5
500	40.8	690	40.4	860	39.5	1040	38.9	1080	38.9
1150	42								

\*\*\*\*\*

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	80	.035	450	.035

\*\*\*\*\*

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

Left	Right	Left	Right	Coeff	Contr.	Expan.
80	450	100	40	.1	.3	

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
0	0	60	500	1150	60

\*\*\*\*\*

CROSS SECTION RIVER: Adobe Lumber  
 REACH: 1 RS: 1010

## INPUT

al2.txt

Description: Adobe lumber downstream boundary

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	41.1	30	37	50	37	380	37.2	550	37.7
600	37.8	627	40.8	800	40.4	970	39.5	1150	38.9
1190	38.9	1230	42						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	50	.035	550	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

50	550	20	10	10	.1	.3
----	-----	----	----	----	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
0	0	60	627	1230	60

CROSS SECTION RIVER: Adobe Lumber

REACH: 1 RS: 1000

INPUT

Description: Adobe lumber downstream boundary

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	41.1	30	37	50	37	380	37.2	550	37.7
600	37.8	627	40.8	800	40.4	970	39.5	1150	38.9
1190	38.9	1230	42						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	50	.035	550	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

50	550	0	0	0	.1	.3
----	-----	---	---	---	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
0	0	60	627	1230	60

## SUMMARY OF MANNING'S N VALUES

River: Adobe Lumber

* Reach	* River Sta.	* n1	* n2	* n3

al2.txt

```
*1      * 1560      * .035* .035* .035*
*1/     * 1470      * .035* .035* .035*
*1      * 1352      * .035* .035* .035*
*1      * 1230      * .035* .035* .035*
*1      * 1050      * .035* .035* .035*
*1      * 1010      * .035* .035* .035*
*1      * 1000      * .035* .035* .035*
```

\*\*\*\*\*

\*\*\*\*\*

# SUMMARY OF REACH LENGTHS

River: Adobe Lumber

\*\*\*\*\*

```
* Reach * River Sta. * Left * Channel * Right *
```

\*\*\*\*\*

```
*1      * 1560      * 100* 90* 90*
*1      * 1470      * 155* 118* 118*
*1      * 1352      * 165* 122* 122*
*1      * 1230      * 350* 230* 230*
*1      * 1050      * 100* 40* 40*
*1      * 1010      * 20* 10* 10*
*1      * 1000      * 0* 0* 0*
```

\*\*\*\*\*

# Profile Output Table - Standard Table 1

\*\*\*\*\*

\*\*\*\*\*

```
* Reach * River Sta * Q Total *Min Ch El *W.S. Elev *Crt W.S. *E.G. Elev *E.G. Slope * Vel Chnl *Flow Area *T
op Width *Froude # Chl *
```

```
* * * (cfs) * (ft) * (ft) * (ft) * (ft) * (ft/ft) * (ft/s) * (sq ft) * (ft) * *
```

\*\*\*\*\*

\*\*\*\*\*

```
* 1      * 1000      * 2000.00 * 37.00 * 39.63 * 37.98 * 39.66 * 0.000372 * 1.47 * 1392.48 * 859.69 *
0.17 *
* 1      * 1010      * 1270.00 * 37.00 * 39.65 * 37.78 * 39.67 * 0.000145 * 0.93 * 1407.07 * 864.94 *
0.10 *
* 1      * 1050      * 1270.00 * 41.50 * 40.24 * 40.24 * 41.38 * 0.013662 * * 147.79 * 453.36 * 0.
00 *
* 1      * 1230      * 1270.00 * 41.50 * 42.61 * 41.86 * 42.79 * 0.001811 * 1.94 * 422.72 * 915.99 *
0.32 *
* 1      * 1352      * 1270.00 * 41.50 * 42.92 * 42.23 * 43.11 * 0.002524 * 2.69 * 374.41 * 670.00 *
0.40 *
* 1      * 1470      * 2000.00 * 37.90 * 43.21 * 42.78 * 43.44 * 0.002430 * 4.71 * 609.14 * 580.00 *
0.45 *
* 1      * 1560      * 2000.00 * 38.90 * 43.49 * 41.45 * 43.52 * 0.000285 * 1.44 * 1403.13 * 660.00 *
0.15 *
```

\*\*\*\*\*

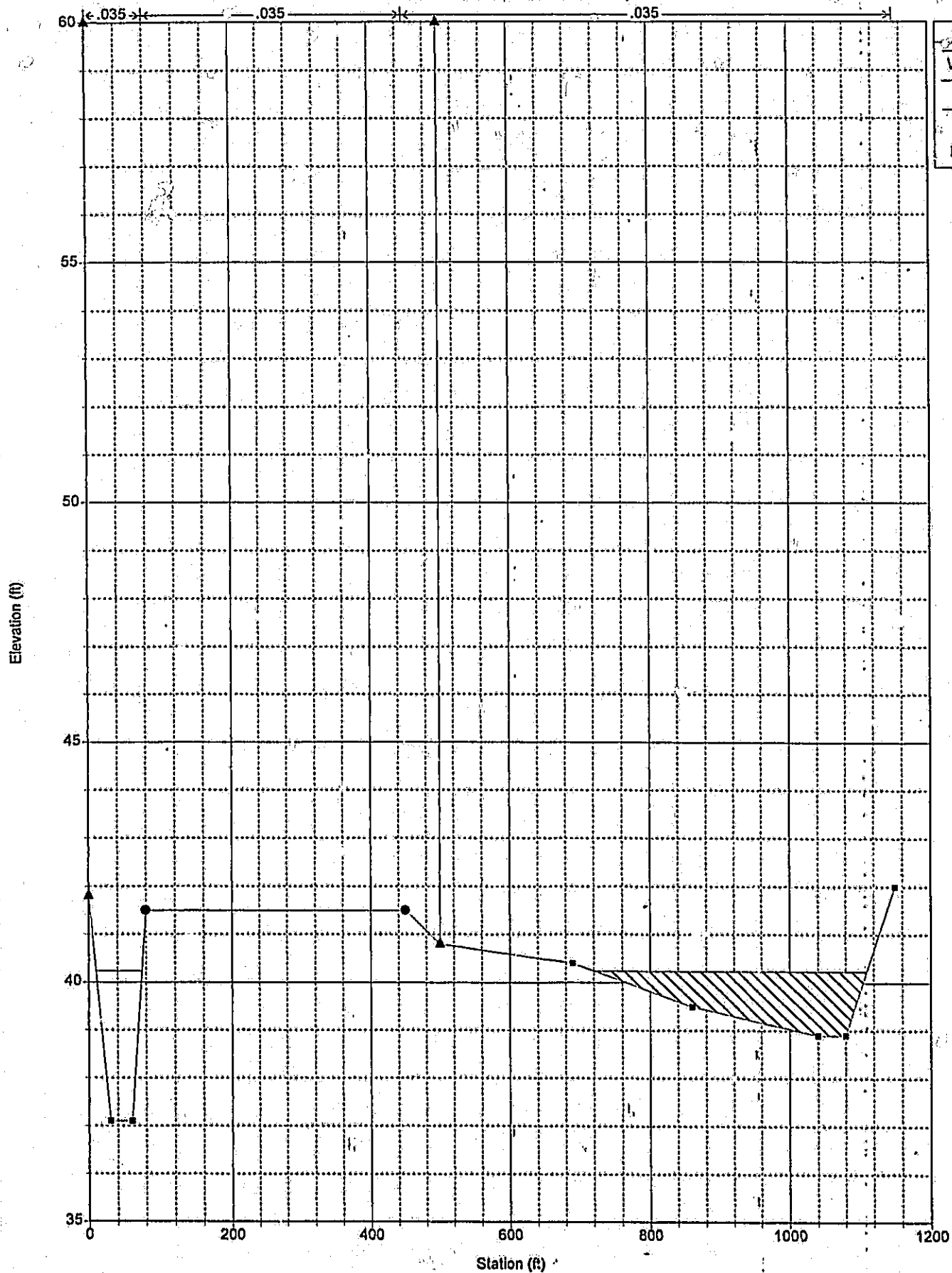
\*\*\*\*\*

Adobe Lumber Plan 40 4/16/99

Geom: ALpostgrading

Adobe lumber downstream boundary

10+00

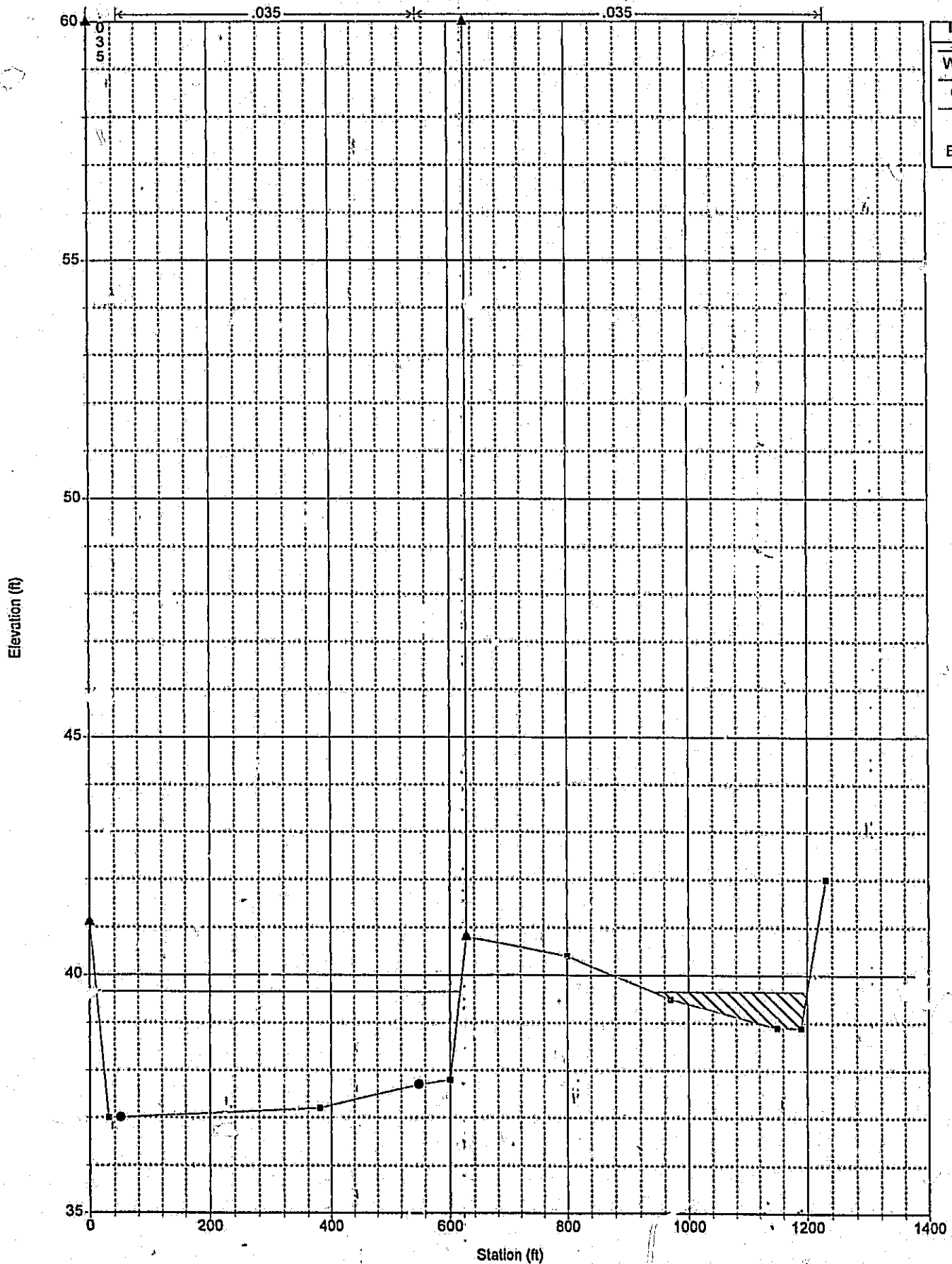


# Adobe Lumber Plan 40 4/16/99

Geom: ALpostgrading

Adobe lumber downstream boundary

10+10

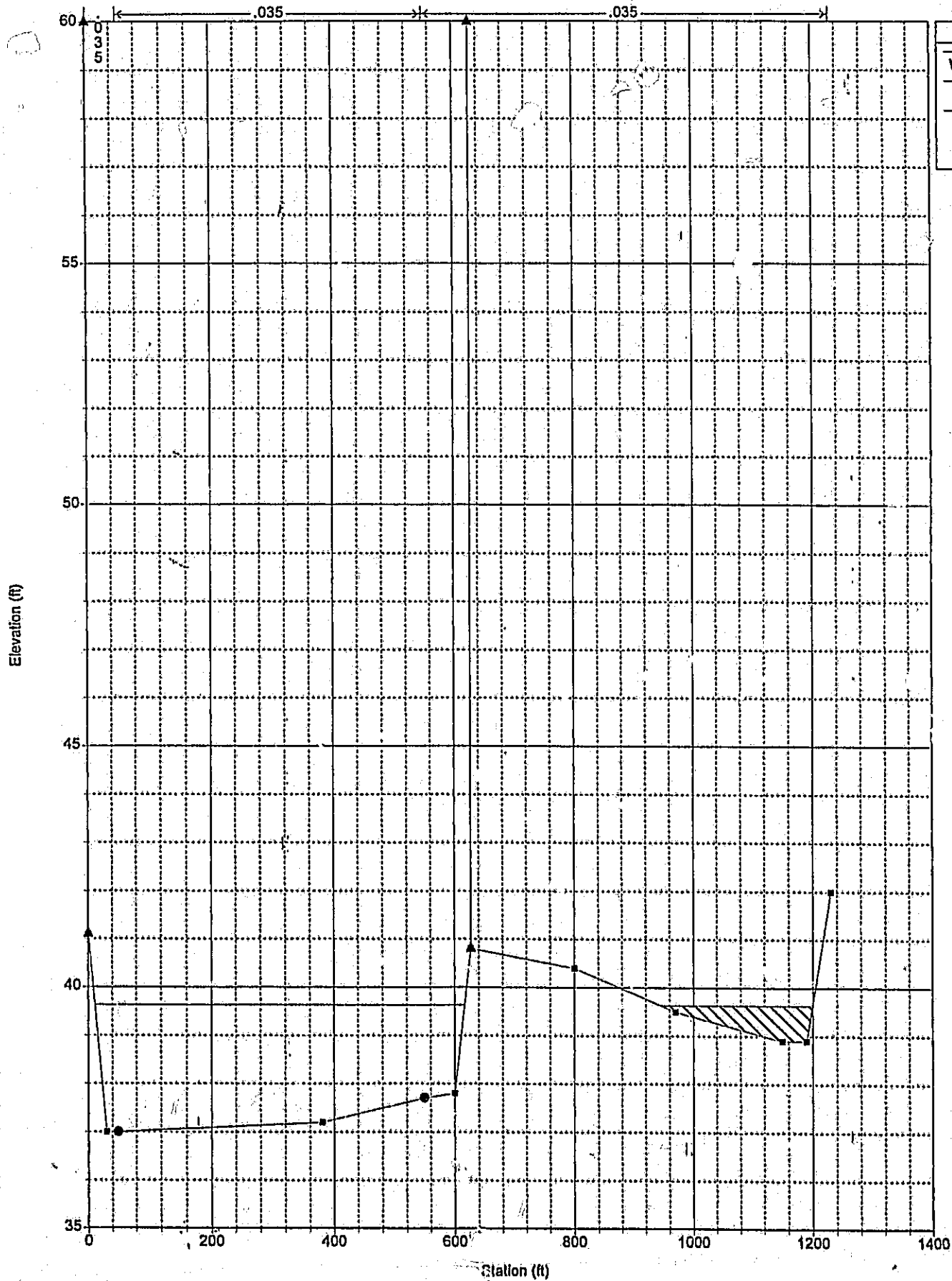


Adobe Lumber Plan 40 4/16/99

Geom: ALpos'gr. Eng

Adobe lumber downstream boundary

10+50



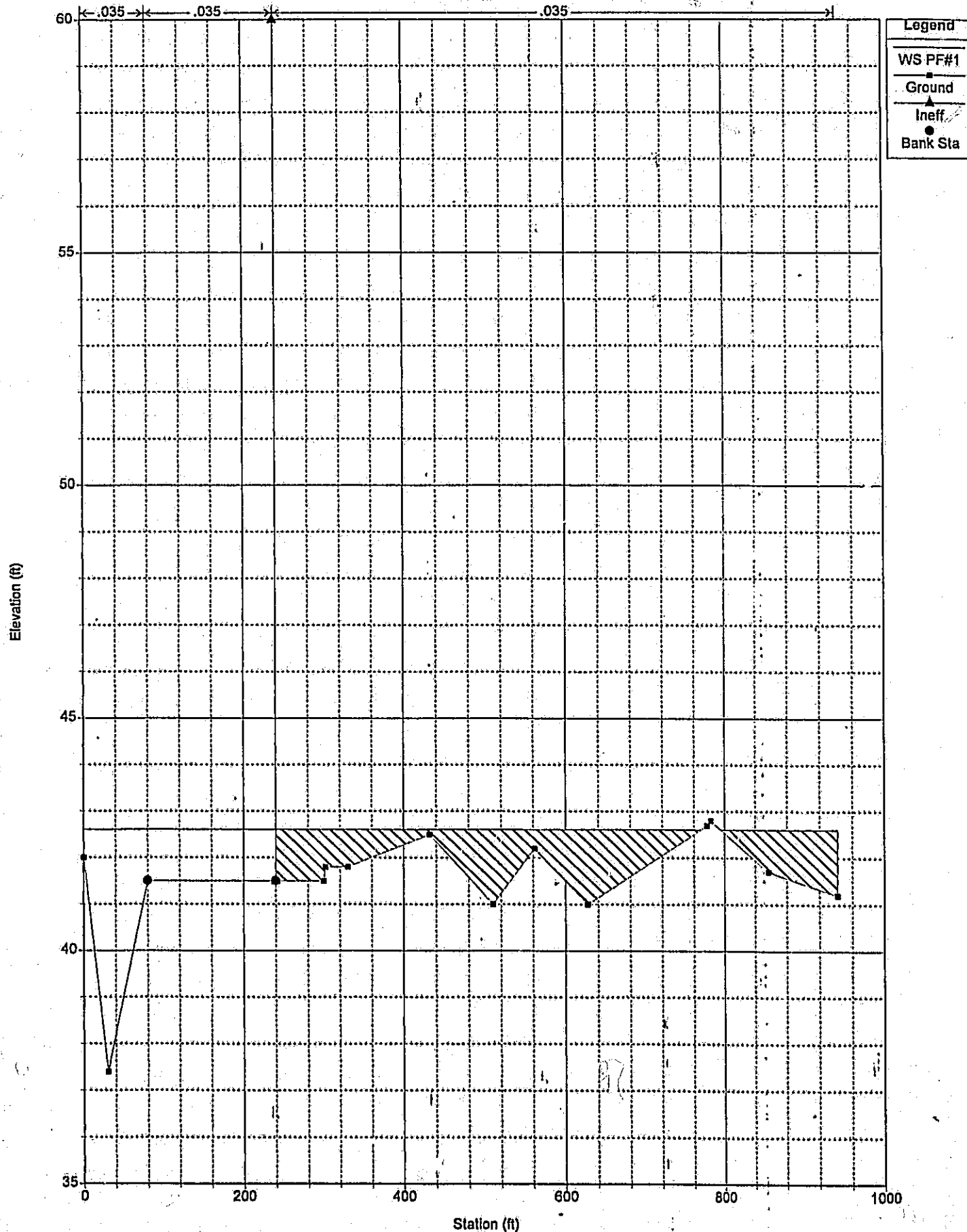
Legend

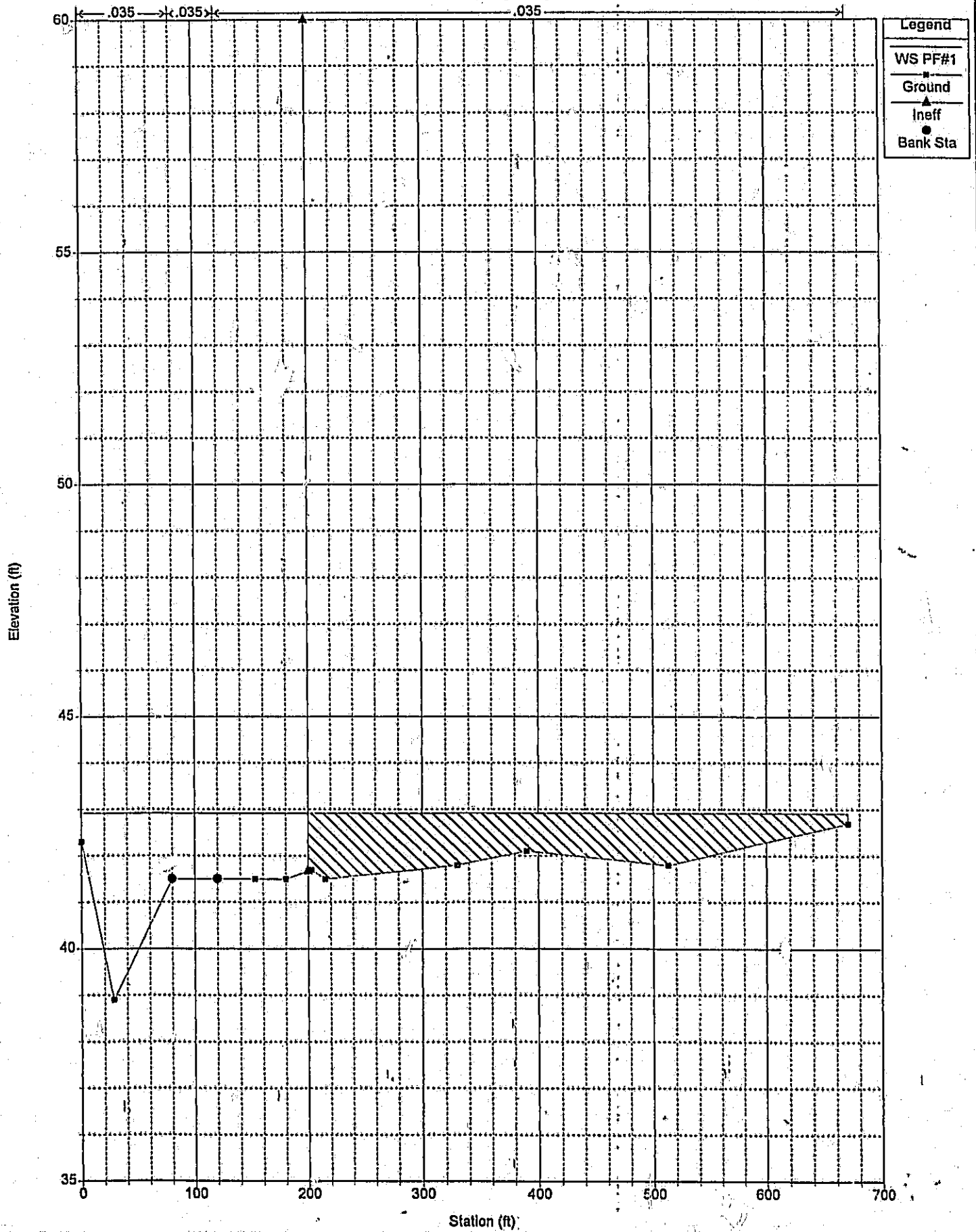
WS PF#1

Ground

Ineff

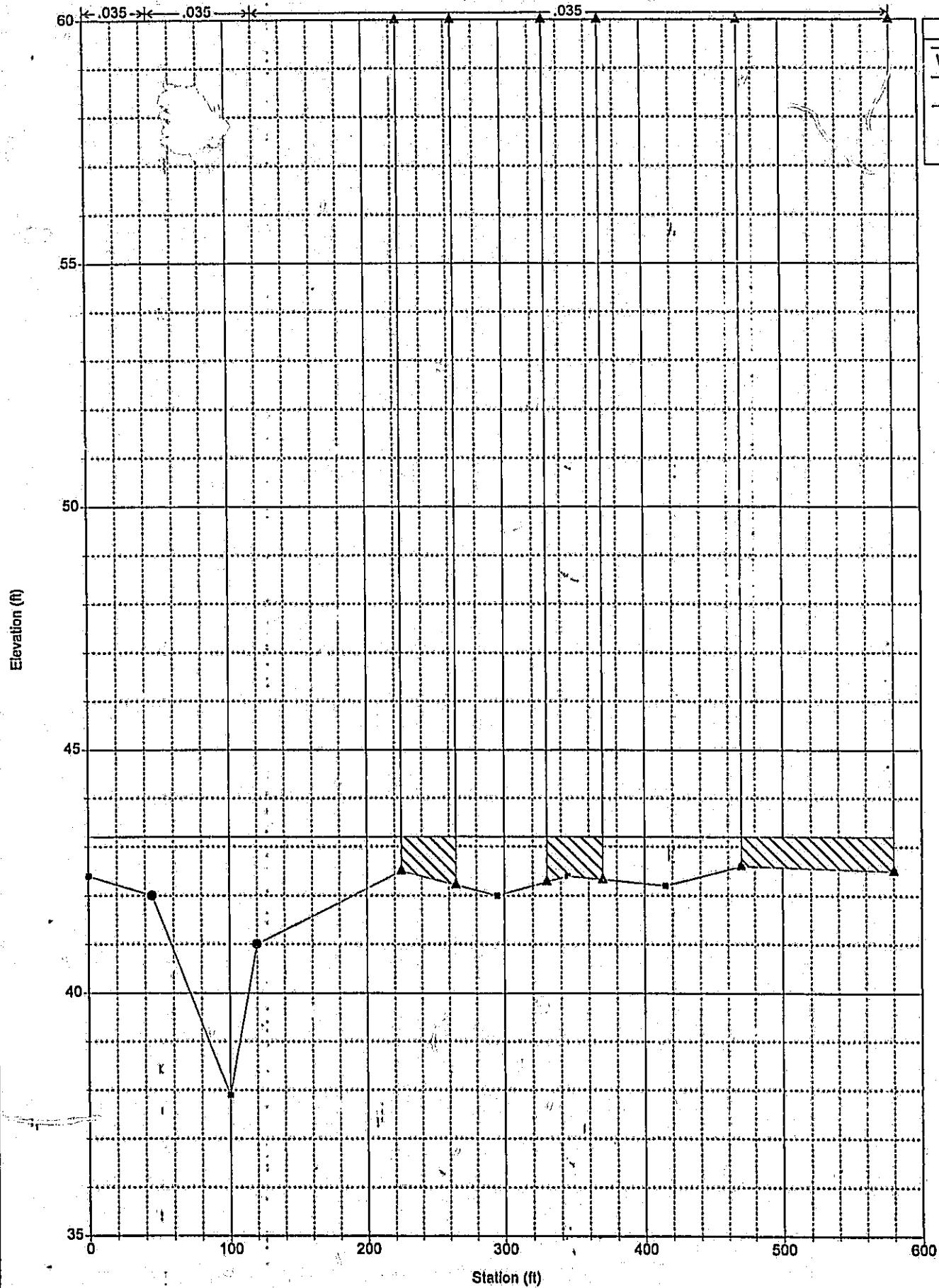
Bank Sta







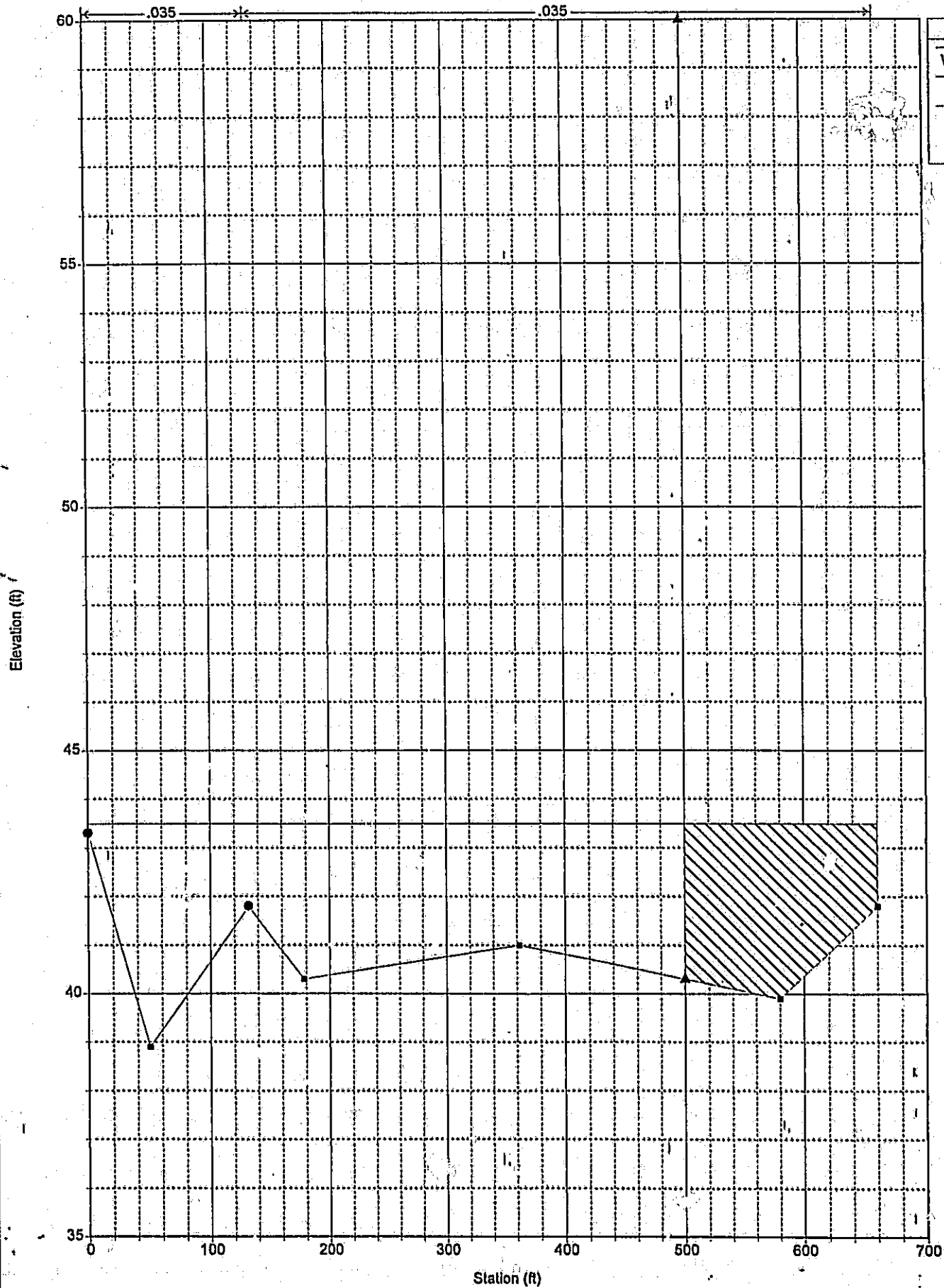
Geom: ALpostgrading



# Adobe Lumber Plan 40 4/16/99

Geom: AL postgrading

15160



## Legend

WS PF#1

Ground

Ineff

Bank Sta

### **SCENARIO 3: MITIGATION CONDITION**

GEOMETRY FILE: ALfix2A  
FLOW FILE: ALfix2A  
(50' channel)

al3.txt

HEC-RAS Version 2.1 October 1997  
U.S. Army Corp of Engineers  
Hydrologic Engineering Center  
609 Second Street, Suite D  
Davis, California 95616-4687  
(916) 756-1104

```
X X XXXXXX XXXX XXXX XX XXXX
X. XX X X X X X X
X XX X X X X X
XXXXXXXX XXXX X XXX XXXX XXXXXX XXXX
X XX X XX X X X
X XX X X X X X X
X X XXXXXX XXXX X X X X XXXXX
```

\*\*\*\*\*

#### PROJECT DATA

Project Title: Adobe Lumber  
Project File : al.prj  
Run Date and Time: 4/16/99 9:40:05 AM

Project in English units

\*\*\*\*\*

#### PLAN DATA

Plan Title: Plan 40  
Plan File : C:\HEC\RAS\Data\al.p40

Geometry Title: ALfix2a  
Geometry File : C:\HEC\RAS\Data\al.g05

Flow Title : ALfix2a  
Flow File : C:\HEC\RAS\Data\al.f05

#### Plan Summary Information:

Number of: Cross Sections = 8 Multiple Openings = 0  
Culverts = 0 Inline Weirs = 0  
Bridges = 0

#### Computational Information

Water surface calculation tolerance = 0.01  
Critical depth calculation tolerance = 0.01  
Maximum number of iterations = 20  
Maximum difference tolerance = 0.3  
Flow tolerance factor = 0.001

## Computational Flow Regime: Subcritical Flow

\*\*\*\*\*

## FLOW DATA

Flow Title: ALfix2a

Flow File : C:\HEC\RAS\Data\al.f05

## Flow Data (cfs)

\*\*\*\*\*

* River	Reach	RS	*	PF#1	*
* Adobe Lumber	1	1560	*	2000	*
* Adobe Lumber	1	1352	*	1890	*
* Adobe Lumber	1	1135	*	1245	*
* Adobe Lumber	1	1010	*	2000	*

\*\*\*\*\*

## Boundary Conditions

\*\*\*\*\*

\*\*\*\*

* River	Reach	Profile	*	Upstream	Downstream	*
---------	-------	---------	---	----------	------------	---

\*\*\*\*\*

\*\*\*\*

* Adobe Lumber	1	PF#1	*	Known WS = 39.63		*
----------------	---	------	---	------------------	--	---

\*\*\*\*\*

\*\*\*\*

\*\*\*\*\*

## GEOMETRY DATA

Geometry Title: ALfix2a

Geometry File : C:\HEC\RAS\Data\al.g05

CROSS SECTION RIVER: Adobe Lumber  
 REACH: 1 RS: 1560

## INPUT

## Description:

Station Elevation Data num= 7

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-----	------	-----	------	-----	------	-----	------	-----	------

\*\*\*\*\*

0	43.3	50	38.9	132	41.8	178	40.3	362	41
580	39.9	660	41.8						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-----	-------	-----	-------	-----	-------

\*\*\*\*\*

0	.035	0	.035	132	.035
---	------	---	------	-----	------

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

al3.txt

0 132 100 90 90 1 3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev  
 \*\*\*\*\*  
 500 660 60

CROSS SECTION RIVER: Adobe Lumber  
 REACH: 1 RS: 1470

# INPUT

Description:

Station Elevation Data num= 12

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*  
 0 42.4 45 42 85.57 38.98 90 37.5 110 37.5  
 120.52 41.01 225 42.5 295 42 345 42.4 415 42.2 58.72 4.4' 20' 13.4'  
 470 42.6 580 42.5 37.5 41.01

Manning's n Values num= 3

Sta n Val Sta n Val Sta n Val

\*\*\*\*\*  
 0 .035 45 .035 225 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

45 225 155 118 118 0 .3

Ineffective Flow num= 3

Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev

\*\*\*\*\*  
 225 265 60 330 370 60 470 580 60

CROSS SECTION RIVER: Adobe Lumber  
 REACH: 1 RS: 1352

# INPUT

Description:

Station Elevation Data num= 17

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*  
 0 42.3 88 38.9 28.26 38.91 32.5 37.5 67.5 37.5  
 79.41 41.47 80 41.5 120 41.5 153 41.5 178 41.5  
 190 37.5 210 37.5 222.06 41.52 330 41.8 390 42.1  
 513 41.8 670 42.7 TB Loop: D/S

Manning's n Values num= 3

Sta n Val Sta n Val Sta n Val

\*\*\*\*\*  
 0 .035 0 .035 80 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

0 80 165 122 122 .1 .3

Ineffective Flow num= 1

Sta L Sta R Elev

al3.txt

\*\*\*\*\*

390 670 60

CROSS SECTION RIVER: Adobe Lumber  
REACH: 1 RS: 1230

INPUT

Description:

Station Elevation Data num= 21

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*

0 42 30 37.4 32.25 37.58 32.5 37.5 67.5 37.5  
79.34 41.45 80 41.5 240 41.5 278 41.5 290 37.5  
310 37.5 322.9 41.8 330 41.8 432 42.5 510 41  
562 42.2 627 41 777 42.7 782 42.8 857 41.7  
942 41.2

Manning's n Values num= 3

Sta n Val Sta n Val Sta n Val

\*\*\*\*\*

0 .035 0 .035 80 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
0 80 125 125 .95 .1 .3

Ineffective Flow num= 1

Sta L Sta R Elev

\*\*\*\*\*

432 942 60

CROSS SECTION RIVER: Adobe Lumber  
REACH: 1 RS: 1135

INPUT

Description:

Station Elevation Data num= 12

Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

\*\*\*\*\*

0 41.7 30 37.5 65 37.5 77 41.5 370 41.5  
382 37.5 402 37.5 414 41.8 600 40.8 785 41.1  
870 41 1050 42

Manning's n Values num= 3

Sta n Val Sta n Val Sta n Val

\*\*\*\*\*

0 .035 0 .035 77 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
0 77 140 85 85 .1 .3

Ineffective Flow num= 1

Sta L Sta R Elev

\*\*\*\*\*

77 1050 60

CROSS SECTION RIVER: Adobe Lumber  
 REACH: 1 RS: 1050

## INPUT

Description: Adobe lumber downstream boundary

Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	41.8	30	37.1	60	37.1	61.82	37.5	160	37.5
172	41.5	450	41.5	479.23	41.09	490	37.5	510	37.5
519.78	40.76	690	40.4	860	39.5	1040	38.9	1080	38.9
1150	42								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	0	.035	172	.035

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
0	172		100	100	40		.1	.3	

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
0	0	60	172	1150	60

CROSS SECTION RIVER: Adobe Lumber  
 REACH: 1 RS: 1010

## INPUT

Description: Adobe lumber downstream boundary

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	41.1	30	37	50	37	380	37.2	550	37.7
600	37.8	627	40.8	800	40.4	970	39.5	1150	38.9
1190	38.9	1230	42						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	0	.035	627	.035

Bank Sta:	Left	Right	Lengths:	Left	Channel	Right	Coeff	Contr.	Expan.
0	627		20	20	10		.1	.3	

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
0	0	60	627	1230	60

CROSS SECTION RIVER: Adobe Lumber  
 REACH: 1 RS: 1000



al3.txt

# INPUT

Description: Adobe lumber downstream boundary

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	41.1	30	37	50	37	380	37.2	550	37.7
600	37.8	627	40.8	800	40.4	970	39.5	1150	38.9
1190	38.9	1230	42						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	0	.035	627	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

0	627	0	0	0	.1	.3
---	-----	---	---	---	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
0	0	60	627	1230	60

## SUMMARY OF MANNING'S N VALUES

River: Adobe Lumber

* Reach	* River Sta.	* n1	* n2	* n3
* 1	* 1560	* .035*	* .035*	* .035*
* 1	* 1470	* .035*	* .035*	* .035*
* 1	* 1352	* .035*	* .035*	* .035*
* 1	* 1230	* .035*	* .035*	* .035*
* 1	* 1135	* .035*	* .035*	* .035*
* 1	* 1050	* .035*	* .035*	* .035*
* 1	* 1010	* .035*	* .035*	* .035*
* 1	* 1000	* .035*	* .035*	* .035*

## SUMMARY OF REACH LENGTHS

River: Adobe Lumber

* Reach	* River Sta.	* Left	* Channel	* Right
* 1	* 1560	* 100*	* 90*	* 90*
* 1	* 1470	* 155*	* 118*	* 118*
* 1	* 1352	* 165*	* 122*	* 122*
* 1	* 1230	* 125*	* 125*	* 95*

al3.txt

```
*1      * 1135      * 140* 85* 85*
*1      * 1050      * 100* 100* 40*
*1      * 1010      * 20* 20* 10*
*1      * 1000      * 0* 0* 0*
```

\*\*\*\*\*

# Profile Output Table - Standard Table 1

\*\*\*\*\*

\*\*\*\*\*

\* Reach \* River Sta \* Q Total \* Min Ch El \* W.S. Elev \* Crit W.S. \* E.G. Elev \* E.G. Slope \* Vel Chnl \* Flow Area \* T  
op Width \* Froude # Chl \*

\* \* \* (cfs) \* (ft) \* (ft) \* (ft) \* (ft) \* (ft/ft) \* (ft/s) \* (sq ft) \* (ft) \* \*

\*\*\*\*\*

\*\*\*\*\*

\* 1 \* 1000 \* 2000.00 \* 37.00 \* 39.63 \* 37.98 \* 39.66 \* 0.000377 \* 1.44 \* 1392.48 \* 859.69 \*

0.17 \*

\* 1 \* 1010 \* 2000.00 \* 37.00 \* 39.64 \* 37.98 \* 39.67 \* 0.000373 \* 1.43 \* 1397.05 \* 861.34 \*

0.17 \*

\* 1 \* 1050 \* 1245.00 \* 37.10 \* 39.55 \* 38.78 \* 39.81 \* 0.003715 \* 4.10 \* 303.72 \* 427.31 \*

0.51 \*

\* 1 \* 1135 \* 1245.00 \* 37.50 \* 40.43 \* 40.43 \* 41.56 \* 0.013748 \* 8.51 \* 146.28 \* 101.73 \*

1.00 \*

\* 1 \* 1230 \* 1890.00 \* 37.40 \* 41.91 \* 40.30 \* 42.25 \* 0.003262 \* 5.31 \* 490.66 \* 662.04 \*

0.52 \*

\* 1 \* 1352 \* 1890.00 \* 37.50 \* 42.38 \* 40.45 \* 42.57 \* 0.001964 \* 4.23 \* 629.25 \* 613.49 \*

0.40 \*

\* 1 \* 1470 \* 2000.00 \* 37.50 \* 42.62 \* 42.48 \* 43.06 \* 0.007592 \* 5.55 \* 411.36 \* 580.00 \*

0.72 \*

\* 1 \* 1560 \* 2000.00 \* 38.90 \* 43.16 \* 41.45 \* 43.20 \* 0.000428 \* 1.64 \* 1240.57 \* 658.45 \*

0.18 \*

\*\*\*\*\*

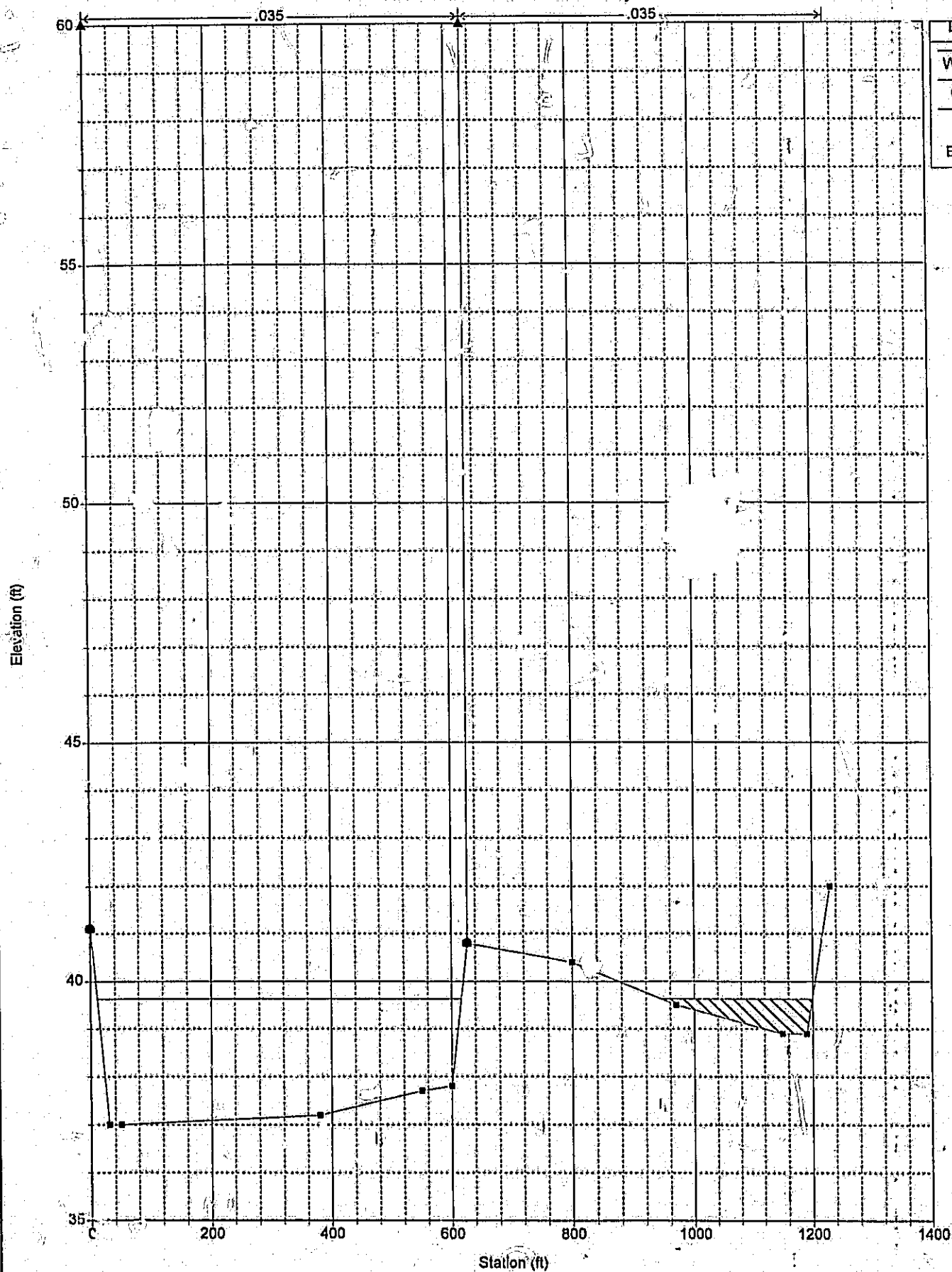
\*\*\*\*\*

Adobe Lumber Plan 40 4/16/99

Geom: ALfix2a

10400

Adobe lumber downstream boundary

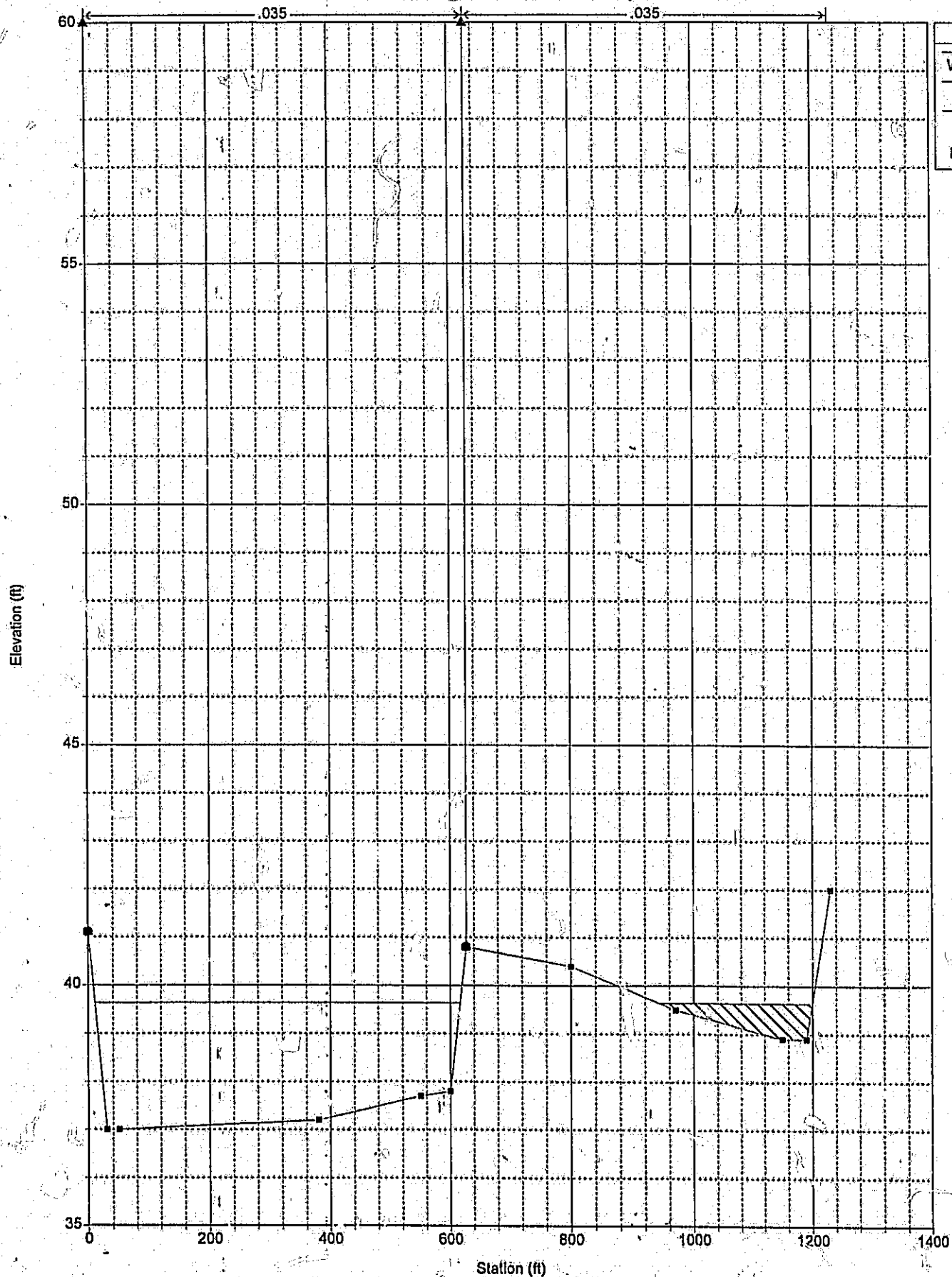


Adobe Lumber Plan 40 4/16/99

Geom: ALfix2a

Adobe lumber downstream boundary

10910

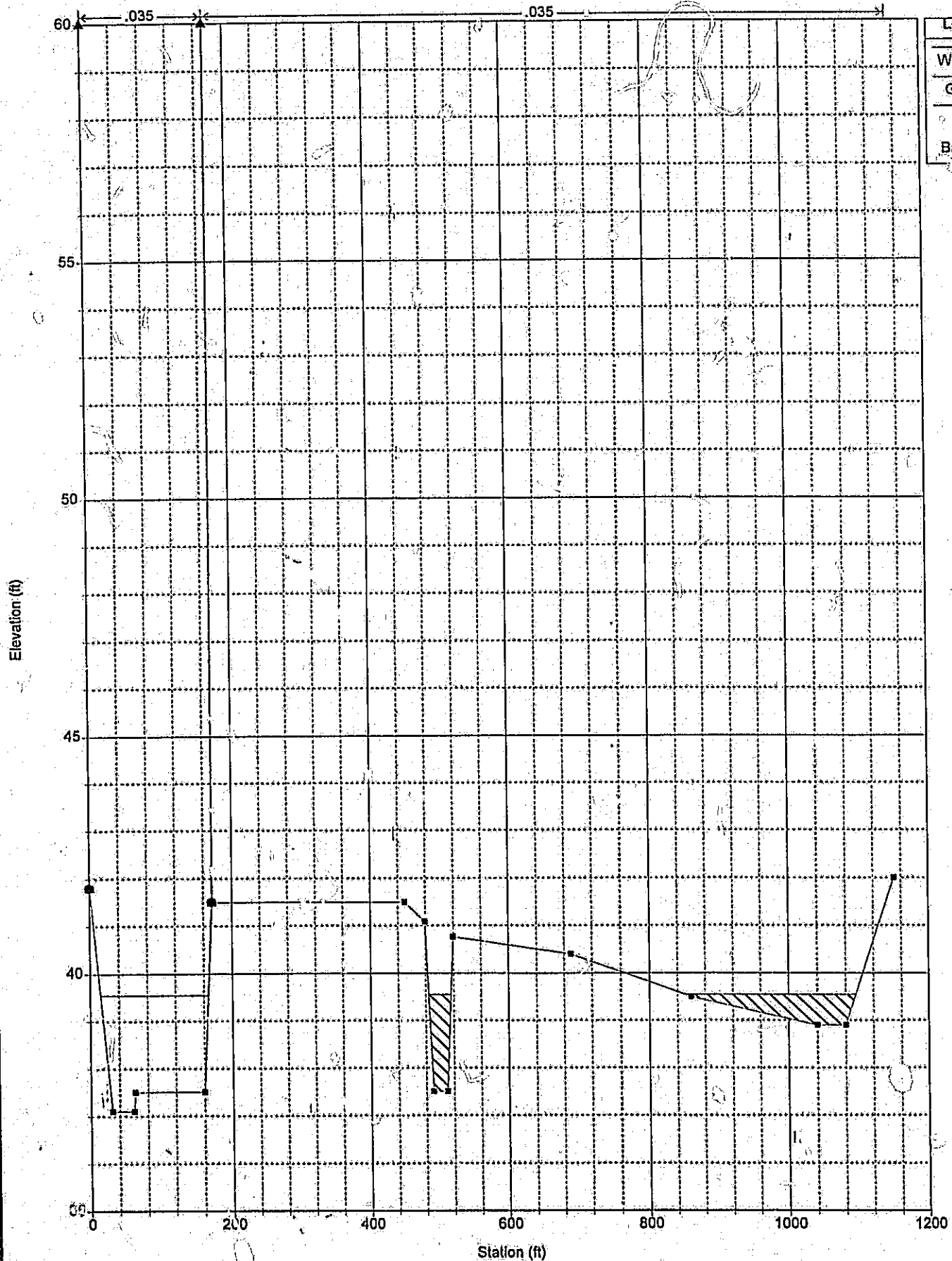


Adobe Lumber Plan 40 4/16/99

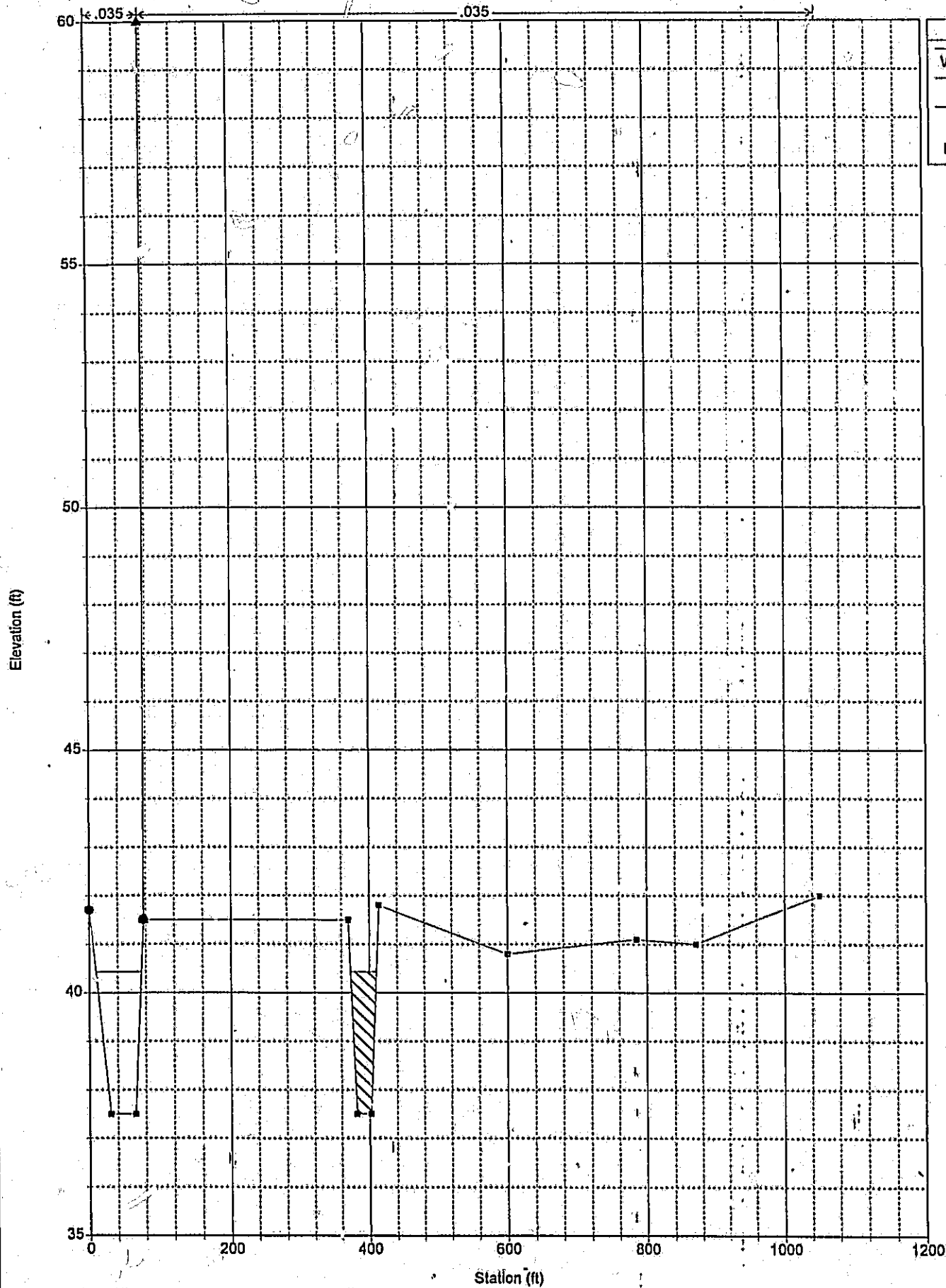
Geom: ALfix2a

Adobe lumber downstream boundary

10+50



Legend	
WS PF#1	■
Ground	▲
Ineff	○
Bank Sta	●



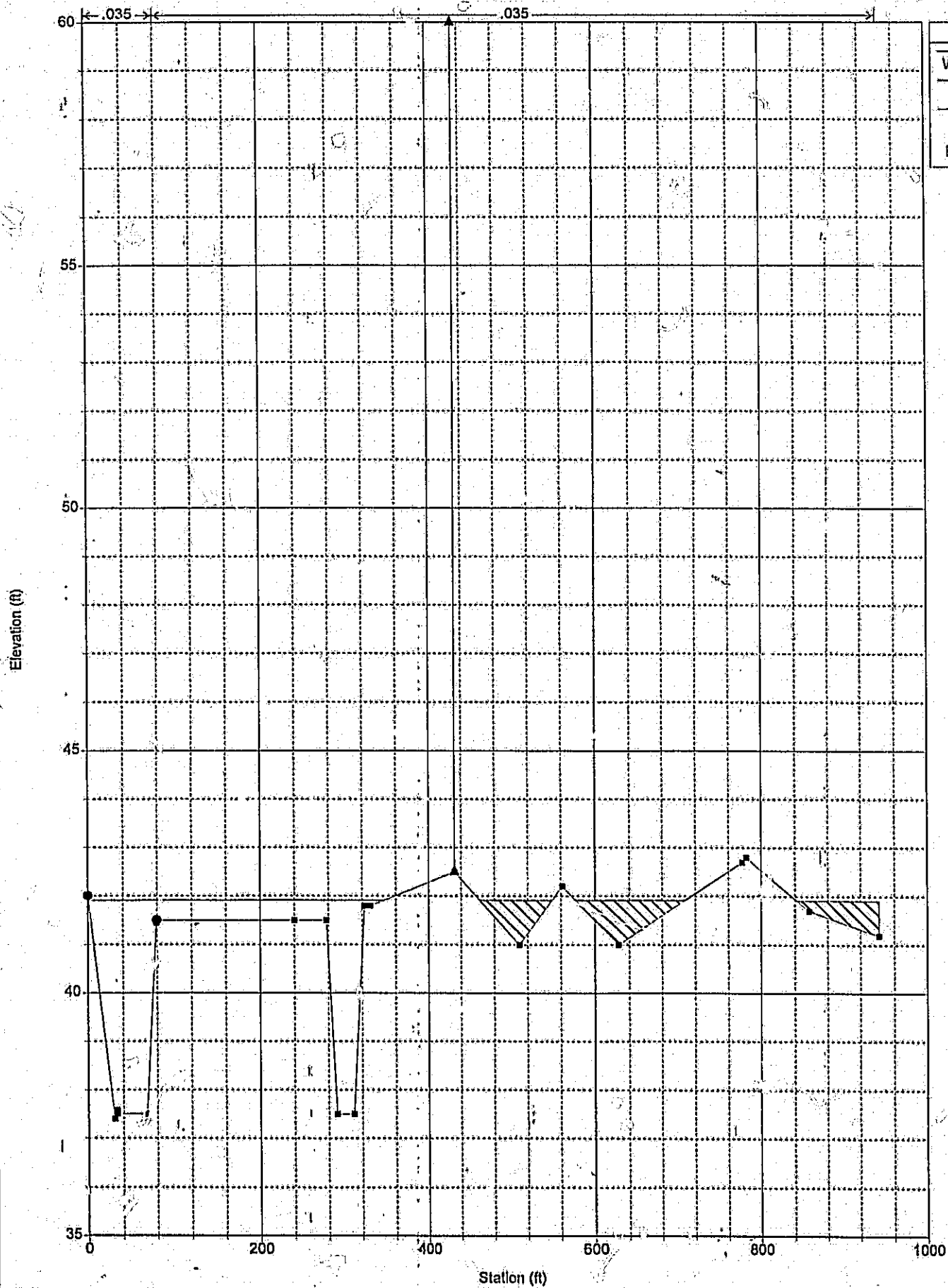
Legend

WS PF#1

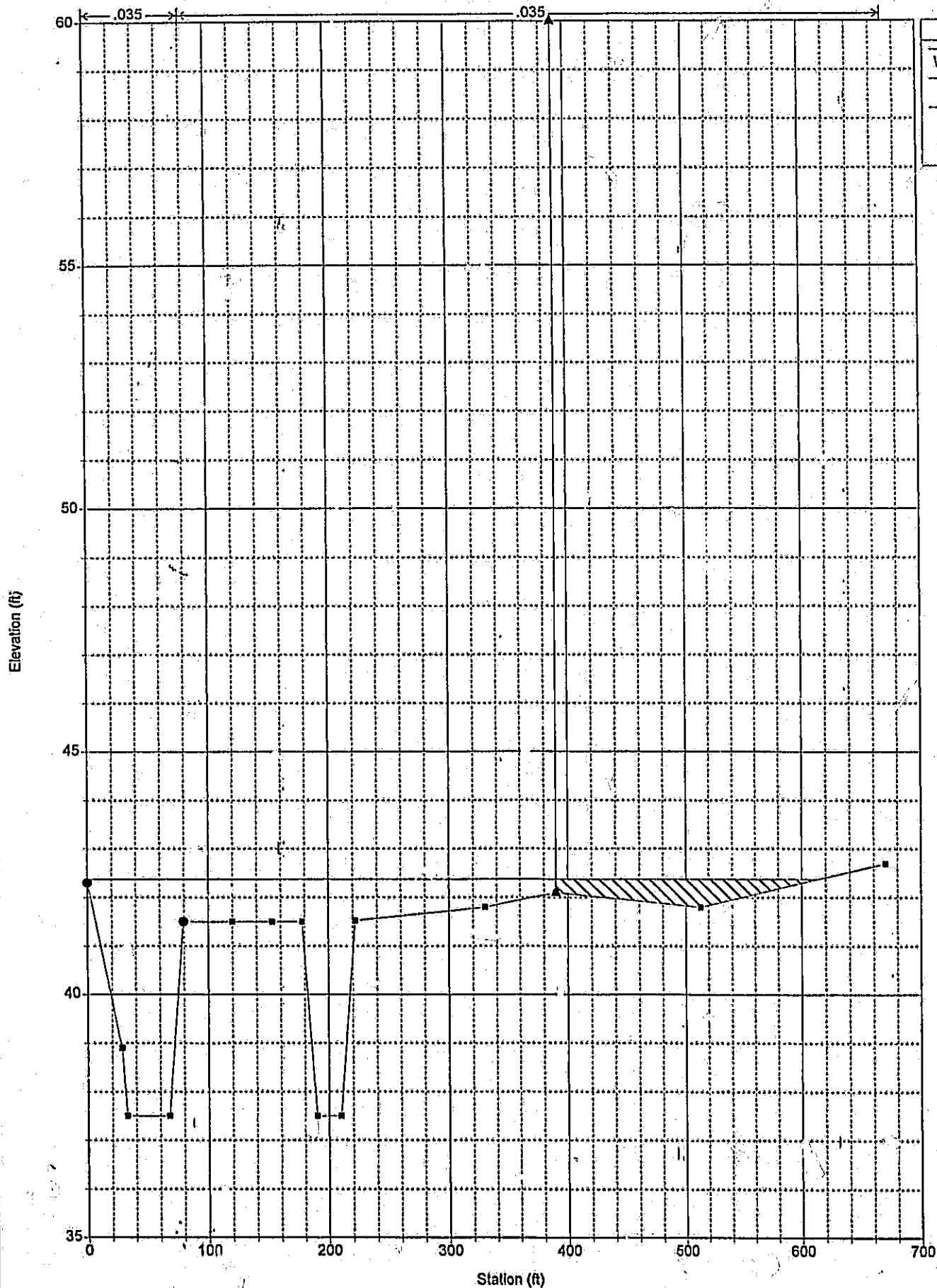
Ground

Ineff

Bank Sta

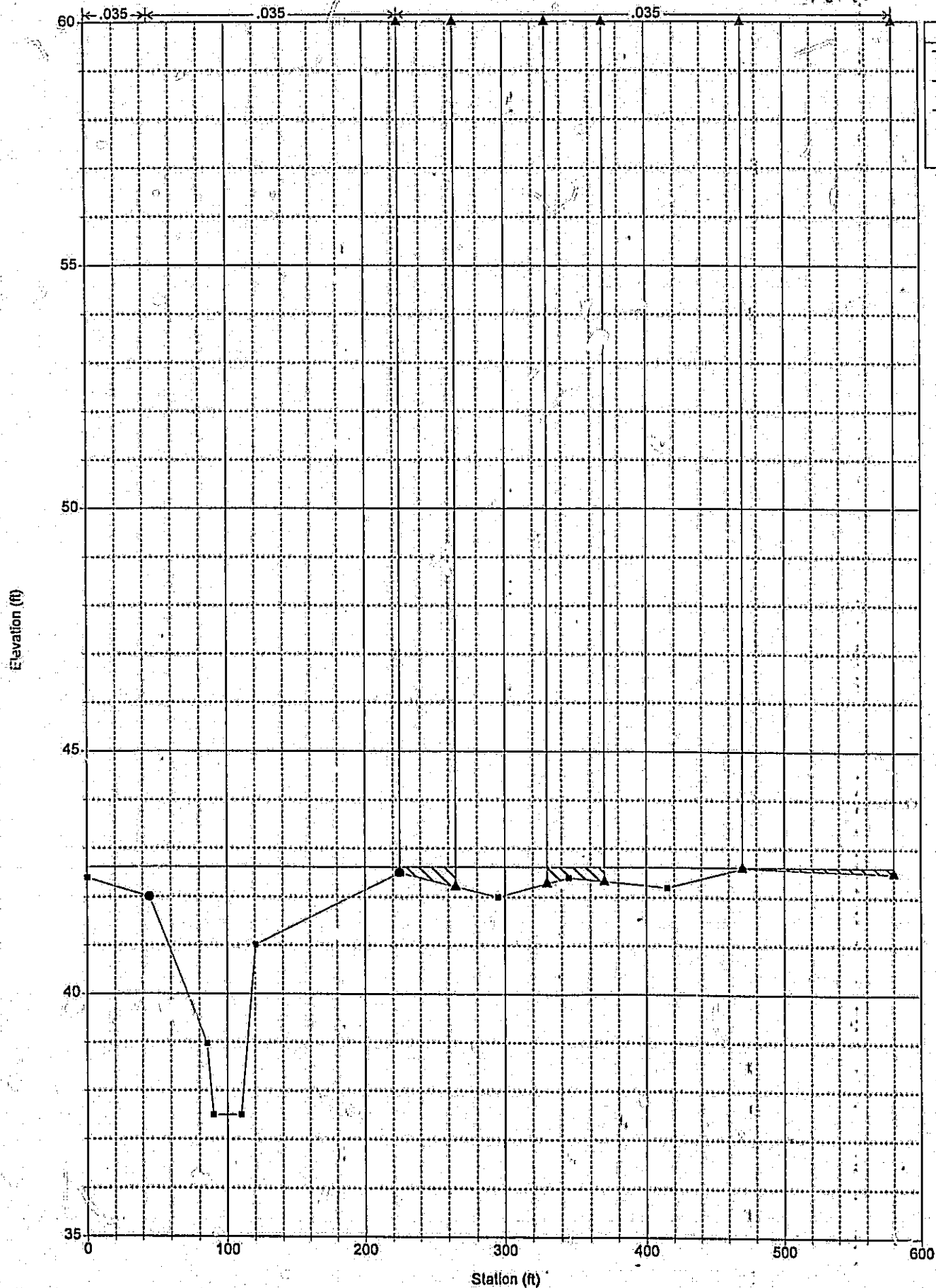


Legend	
WS PF#1	□
Ground	▲
Ineff	●
Bank Sta	●

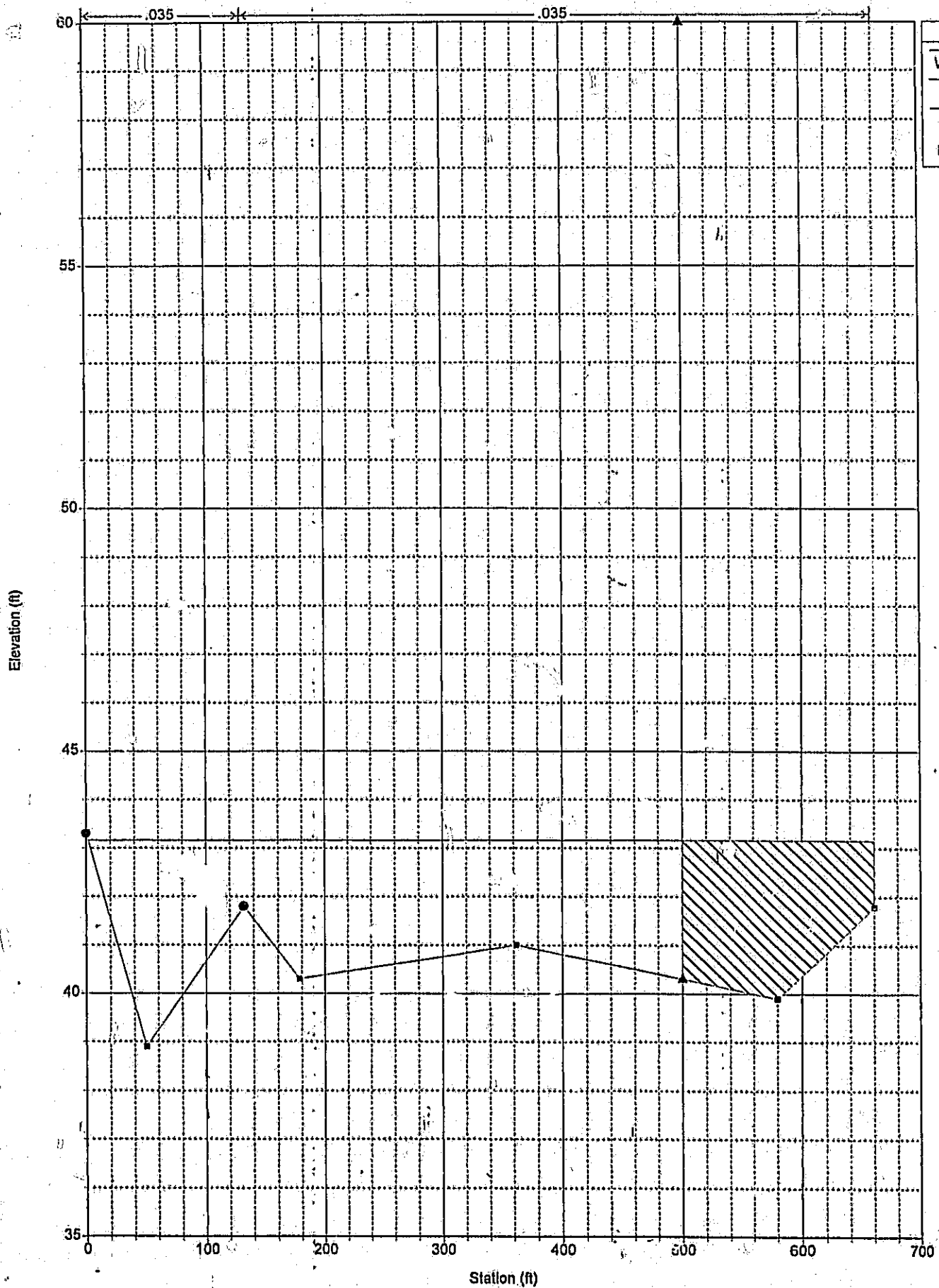


Legend
WS PF#1
Ground
Ineff
Bank Sta





Legend
WS PF#1
Ground
Ineff
Bank Sta



Legend	
WS PF#1	■
Ground	▲
Ineff	●
Bank Sta	●

GEOMETRY FILE: ALfix2b  
FLOW FILE: ALfix2b  
(20' Channel)  
al4.txt

HEC-RAS Version 2.1 October 1997

U.S. Army Corp of Engineers  
Hydrologic Engineering Center  
609 Second Street, Suite D  
Davis, California 95616-4687  
(916) 756-1104

```
X X XXXXXX XXXX XXXX XX XXXX
X XX X X XX XX X
X XX X XX XX X
XXXXXXXX XXXX X XXX XXXX XXXXXX XXXX
X XX X XX XX X
X XX X X XX XX X
X X XXXXXX XXXX X X X XXXXX
```

\*\*\*\*\*

PROJECT DATA

Project Title: Adobe Lumber  
Project File : al.prj  
Run Date and Time: 4/16/99 9:41:50 AM

Project in English units

\*\*\*\*\*

PLAN DATA

Plan Title: Plan 40  
Plan File : C:\HEC\RAS\Data\al.p40

Geometry Title: ALfix2b  
Geometry File : C:\HEC\RAS\Data\al.g06

Flow Title : ALfix2b  
Flow File : C:\HEC\RAS\Data\al.f06

Plan Summary Information:

Number of: Cross Sections = 8 Multiple Openings = 0  
Culverts = 0 Inline Weirs = 0  
Bridges = 0

Computational Information

Water surface calculation tolerance = 0.01  
Critical depth calculation tolerance = 0.01  
Maximum number of iterations = 20  
Maximum difference tolerance = 0.3  
Flow tolerance factor = 0.001

al4.txt

# Computational Flow Regime: Subcritical Flow

\*\*\*\*\*

## FLOW DATA

Flow Title: ALfix2b

Flow File : C:\HEC\RAS\Data\al.f06

## Flow Data (cfs)

\*\*\*\*\*

* River	Reach	RS	*	PF#1	*
* Adobe Lumber	1	1560	*	2000	*
* Adobe Lumber	1	1352	*	1890	*
* Adobe Lumber	1	1135	*	645	*
* Adobe Lumber	1	1010	*	2000	*

\*\*\*\*\*

## Boundary Conditions

\*\*\*\*\*

\*\*\*\*

* River	Reach	Profile	*	Upstream	Downstream	*
---------	-------	---------	---	----------	------------	---

\*\*\*\*\*

\*\*\*\*

* Adobe Lumber	1	PF#1	*	Known WS = 39.63		*
----------------	---	------	---	------------------	--	---

\*\*\*\*\*

\*\*\*\*

\*\*\*\*\*

## GEOMETRY DATA

Geometry Title: ALfix2b

Geometry File : C:\HEC\RAS\Data\al.g06

CROSS SECTION RIVER: Adobe Lumber

REACH: 1 RS: 1560

## INPUT

Description:

Station Elevation Data num= 7

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
-----	------	-----	------	-----	------	-----	------	-----	------

\*\*\*\*\*

0	43.3	51	38.9	132	41.8	178	40.3	362	41
---	------	----	------	-----	------	-----	------	-----	----

580	39.9	60	41.8						
-----	------	----	------	--	--	--	--	--	--

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
-----	-------	-----	-------	-----	-------

\*\*\*\*\*

0	.035	0	.035	132	.035
---	------	---	------	-----	------

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr, Expan.

al4.txt

0 132 100 90 90 .1 .3  
 Ineffective Flow num= 1  
 Sta L Sta R Elev  
 \*\*\*\*\*  
 500 660 60

CROSS SECTION RIVER: Adobe Lumber  
 REACH: 1 RS: 1470

# INPUT

Description:

Station Elevation Data num= 12  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 42.4 45 42 85.57 38.98 90 37.5 110 37.5  
 120.52 41.01 225 42.5 295 42 345 42.4 415 42.2  
 470 42.6 580 42.5

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .035 45 .035 225 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 45 225 155 118 118 0 .3

Ineffective Flow num= 3  
 Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev  
 \*\*\*\*\*  
 225 265 60 330 370 60 470 580 60

CROSS SECTION RIVER: Adobe Lumber  
 REACH: 1 RS: 1352

# INPUT

Description:

Station Elevation Data num= 17  
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev  
 \*\*\*\*\*  
 0 42.3 28 38.9 28.26 38.91 32.5 37.5 67.5 37.5  
 79.41 41.47 80 41.5 120 41.5 153 41.5 178 41.5  
 190 37.5 210 37.5 227.06 41.52 330 41.8 390 42.1  
 513 41.8 670 42.7

Manning's n Values num= 3  
 Sta n Val Sta n Val Sta n Val  
 \*\*\*\*\*  
 0 .035 0 .035 80 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.  
 0 80 165 122 122 .1 .3

Ineffective Flow num= 1  
 Sta L Sta R Elev

al4.txt

\*\*\*\*\*  
390 670 60

CROSS SECTION RIVER: Adobe Lumber  
REACH: 1 RS: 1230

INPUT

Description:

Station Elevation Data num= 21

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	42	30	37.4	32.25	37.58	32.5	37.5	67.5	37.5
79.34	41.45	80	41.5	240	41.5	278	41.5	290	37.5
310	37.5	322.9	41.8	330	41.8	432	42.5	510	41
562	42.2	627	41	777	42.7	782	42.8	857	41.7
942	41.2								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	0	.035	80	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan
0	80	125	125	95	.1	.3	

Ineffective Flow num= 1

Sta L	Sta R	Elev
330	942	60

CROSS SECTION RIVER: Adobe Lumber  
REACH: 1 RS: 1135

INPUT

Description:

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	41.7	30	37.5	65	37.5	77	41.5	370	41.5
382	37.5	402	37.5	414	41.8	600	40.8	785	41.1
870	41	1050	42						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	0	.035	77	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan
0	77	140	85	85	.1	.3	

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
0	370	60	414	1050	60

al4.txt

CROSS SECTION RIVER: Adobe Lumber  
REACH: 1 RS: 1050

INPUT

Description: Adobe lumber downstream boundary

Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	41.8	30	37.1	60	37.1	61.82	37.5	160	37.5
172	41.5	450	41.5	479.23	41.09	490	37.5	510	37.5
519.78	40.76	690	40.4	860	39.5	1040	38.9	1080	38.9
1150	42								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	0	.035	172	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Contr.	Expan.
0	172		100	100	40	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
0	479.23	60	519.78	1150	60

CROSS SECTION RIVER: Adobe Lumber  
REACH: 1 RS: 1010

INPUT

Description: Adobe lumber downstream boundary

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	41.1	30	37	50	37	2	37.2	590	37.7
600	37.8	627	40.8	800	40.4	970	39.5	1150	38.9
1190	38.9	1230	42						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	0	.035	627	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff Cont.	Expan.
0	627		20	20	10	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
0	0	60	627	1230	60

CROSS SECTION RIVER: Adobe Lumber  
REACH: 1 RS: 1000

al4.txt.

# INPUT

Description: Adobe lumber downstream boundary

Station Elevation Data num= 12

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	41.1	30	37	50	37	380	37.2	550	37.7
600	37.8	627	40.8	800	40.4	970	39.5	1150	38.9
1190	38.9	1230	42						

\*\*\*\*\*

0	41.1	30	37	50	37	380	37.2	550	37.7
600	37.8	627	40.8	800	40.4	970	39.5	1150	38.9
1190	38.9	1230	42						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	0	.035	627	.035

\*\*\*\*\*

0	.035	0	.035	627	.035
---	------	---	------	-----	------

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

0	627	0	0	0	.1	.3
---	-----	---	---	---	----	----

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
0	0	60	627	1230	60

\*\*\*\*\*

0	0	60	627	1230	60
---	---	----	-----	------	----

\*\*\*\*\*

## SUMMARY OF MANNING'S N VALUES

River: Adobe Lumber

\*\*\*\*\*

* Reach	* R	* n1	* n2	* n3
*1	* 1560	* .035*	* .035*	* .035*
*1	* 1470	* .035*	* .035*	* .035*
*1	* 1352	* .035*	* .035*	* .035*
*1	* 1230	* .035*	* .035*	* .035*
*1	* 1135	* .035*	* .035*	* .035*
*1	* 1050	* .035*	* .035*	* .035*
*1	* 1010	* .035*	* .035*	* .035*
*1	* 1000	* .035*	* .035*	* .035*

\*\*\*\*\*

*1	* 1560	* .035*	* .035*	* .035*
*1	* 1470	* .035*	* .035*	* .035*
*1	* 1352	* .035*	* .035*	* .035*
*1	* 1230	* .035*	* .035*	* .035*
*1	* 1135	* .035*	* .035*	* .035*
*1	* 1050	* .035*	* .035*	* .035*
*1	* 1010	* .035*	* .035*	* .035*
*1	* 1000	* .035*	* .035*	* .035*

\*\*\*\*\*

\*\*\*\*\*

## SUMMARY OF REACH LENGTHS

River: Adobe Lumber

\*\*\*\*\*

* Reach	* River Sta.	* Left	* Channel	* Right
*1	* 1560	* 100*	* 90*	* 90*
*1	* 1470	* 155*	* 118*	* 118*
*1	* 1352	* 165*	* 122*	* 122*
*1	* 1230	* 125*	* 125*	* 95*

\*\*\*\*\*

*1	* 1560	* 100*	* 90*	* 90*
*1	* 1470	* 155*	* 118*	* 118*
*1	* 1352	* 165*	* 122*	* 122*
*1	* 1230	* 125*	* 125*	* 95*



al4.txt

```
*1      * 1135 * 140* 85* 85*
*i      * 1050 * 100* 100* 40*
*1      * 1010 * 20* 20* 10*
*1      * 1000 * 0* 0* 0*
```

\*\*\*\*\*

# Profile Output Table - Standard Table 1

\*\*\*\*\*

\*\*\*\*\*

\* Reach \* River Sta \* Q Total \* Min Ch El \* W.S. Elev \* Crit W.S. \* E.G. Elev \* E.G. Slope \* Vel Chnl \* Flow Area \* Top Width \* Froude # Chl \*

\* \* \* (cfs) \* (ft) \* (ft) \* (ft) \* (ft) \* (ft/ft) \* (ft/s) \* (sq ft) \* (ft) \* \*

\*\*\*\*\*

\*\*\*\*\*

```
* 1      * 1000 * 2000.00 * 37.00 * 39.63 * 37.98 * 39.66 * 0.000377 * 1.44 * 1392.48 * 859.69 *
0.17 *
* 1      * 1010 * 2000.00 * 37.00 * 39.64 * 37.98 * 39.67 * 0.000373 * 1.43 * 1397.05 * 861.34 *
0.17 *
* 1      * 1050 * 645.00 * 37.10 * 40.25 * 40.25 * 41.32 * 0.014416 * * 77.71 * 587.12 * 0.0
0 *
* 1      * 1135 * 645.00 * 37.50 * 41.52 * 40.26 * 41.92 * 0.003509 * * 127.38 * 911.09 * 0.0
0 *
* 1      * 1230 * 1890.00 * 37.40 * 41.96 * 40.29 * 42.27 * 0.002938 * 5.08 * 506.97 * 685.98 *
0.49 *
* 1      * 1352 * 1890.00 * 37.50 * 42.38 * 40.45 * 42.57 * 0.001958 * 4.23 * 630.02 * 613.84 *
0.40 *
* 1      * 1470 * 2000.00 * 37.50 * 42.62 * 42.48 * 43.06 * 0.007567 * 5.55 * 411.70 * 580.00 *
0.72 *
* 1      * 1560 * 2000.00 * 38.90 * 43.16 * 41.45 * 43.20 * 0.000428 * 1.64 * 1240.59 * 658.46 *
0.18 *
```

\*\*\*\*\*

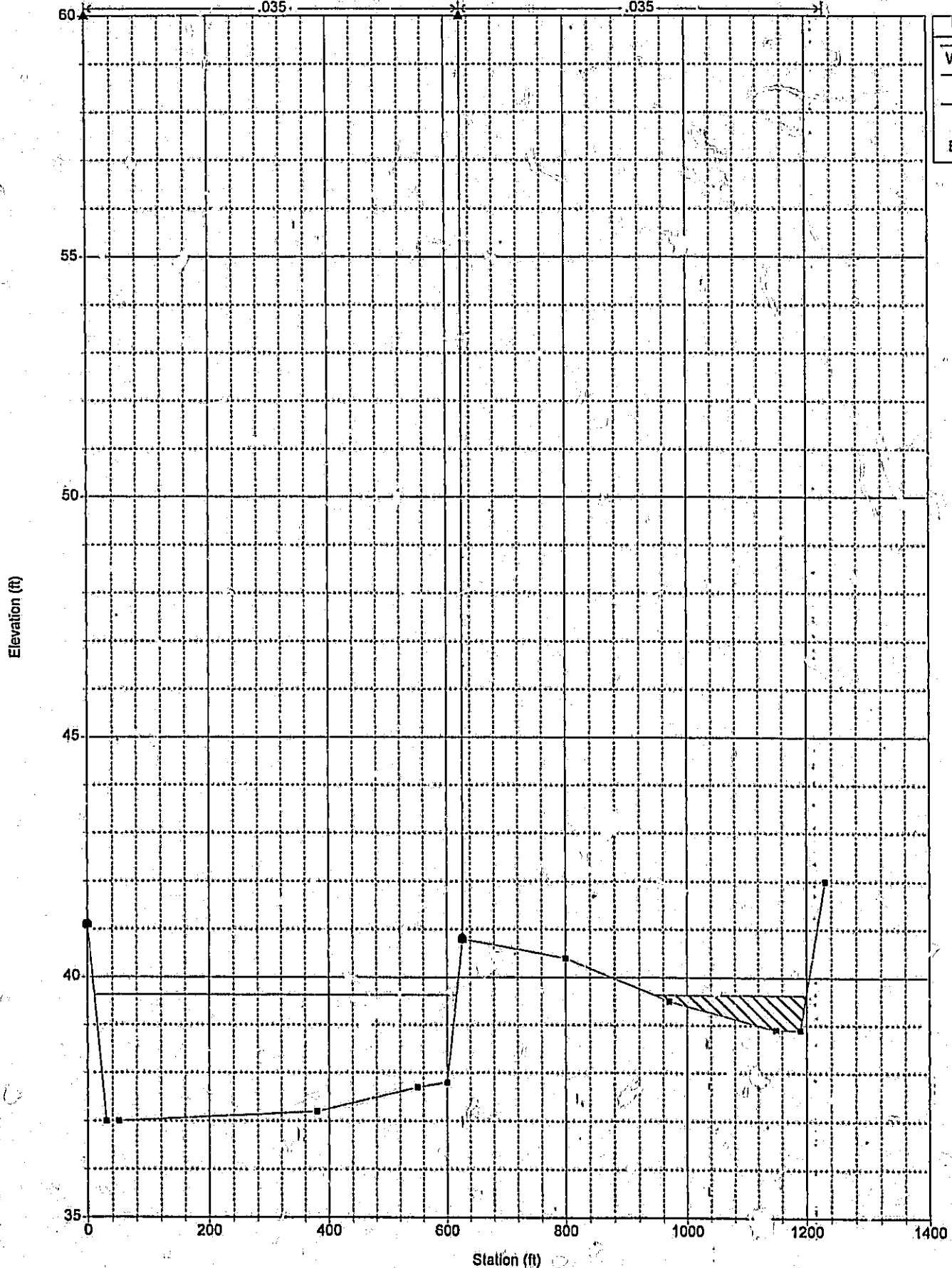
\*\*\*\*\*

Adobe Lumber Plan 40 4/16/99

Geom: ALfix2b

Adobe lumber downstream boundary

10400

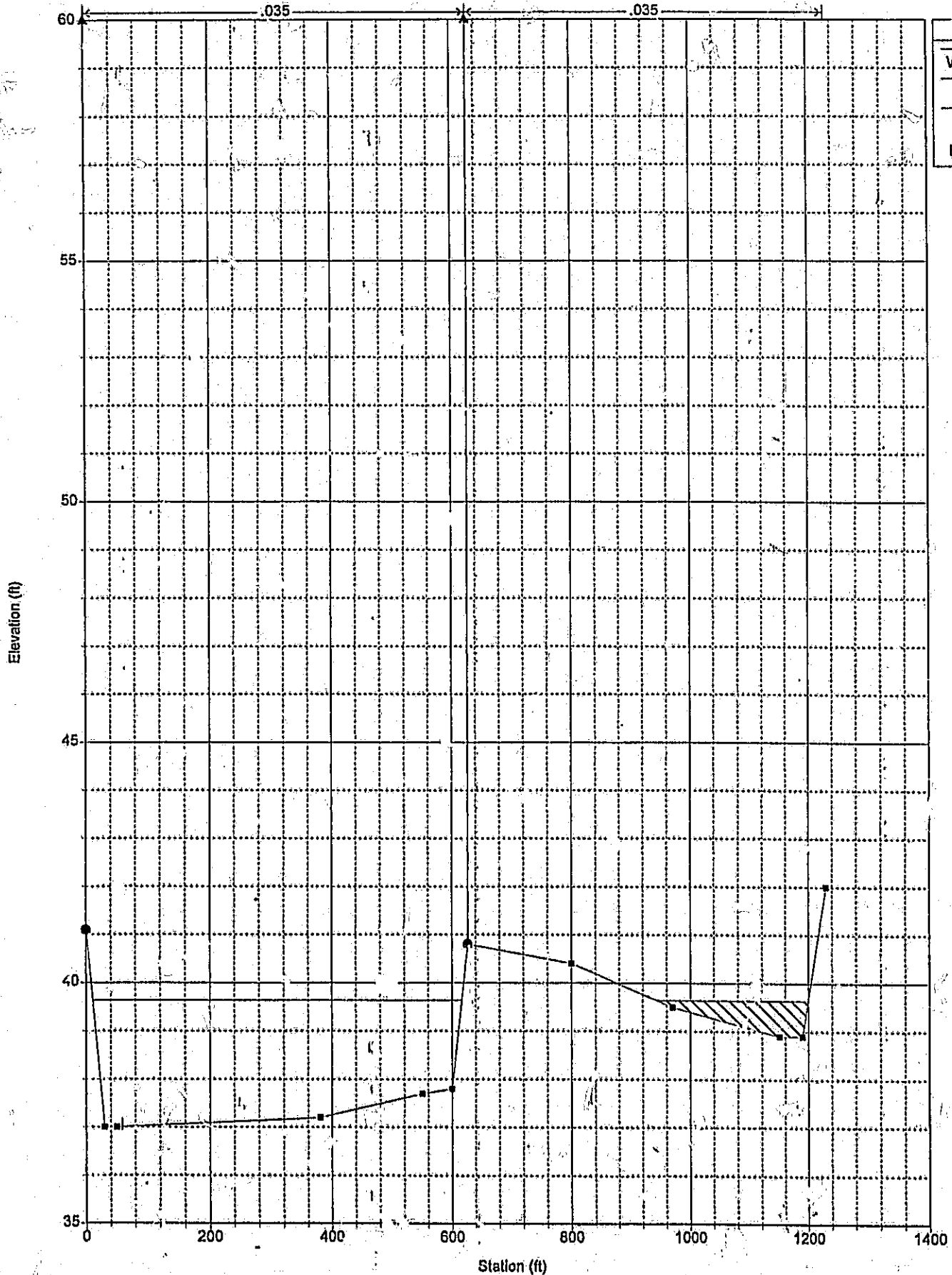


Adobe Lumber Plan 40 4/16/99

Geom: ALfix2b

Adobe lumber downstream boundary

10+10

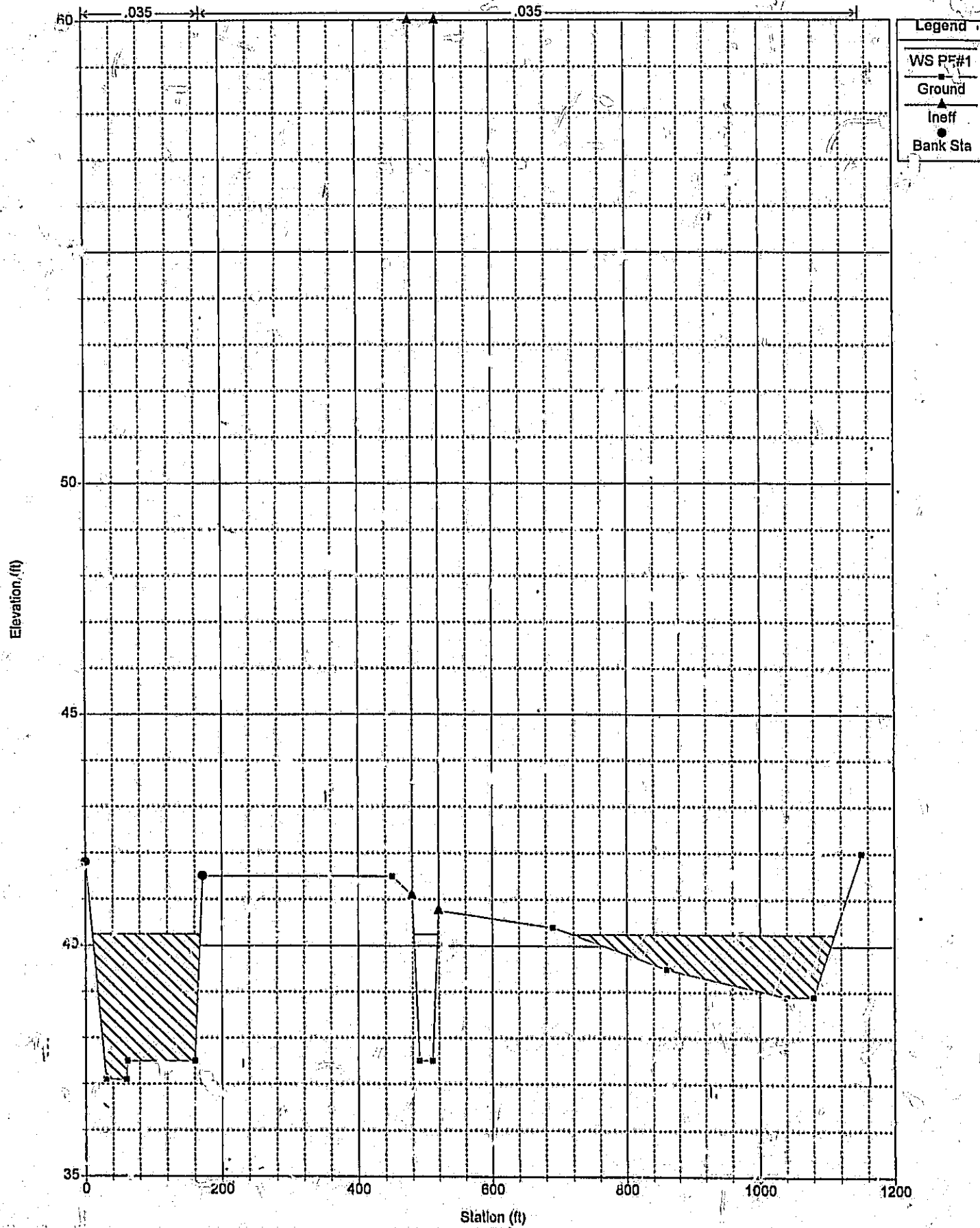


Adobe Lumber Plan 40 4/16/99

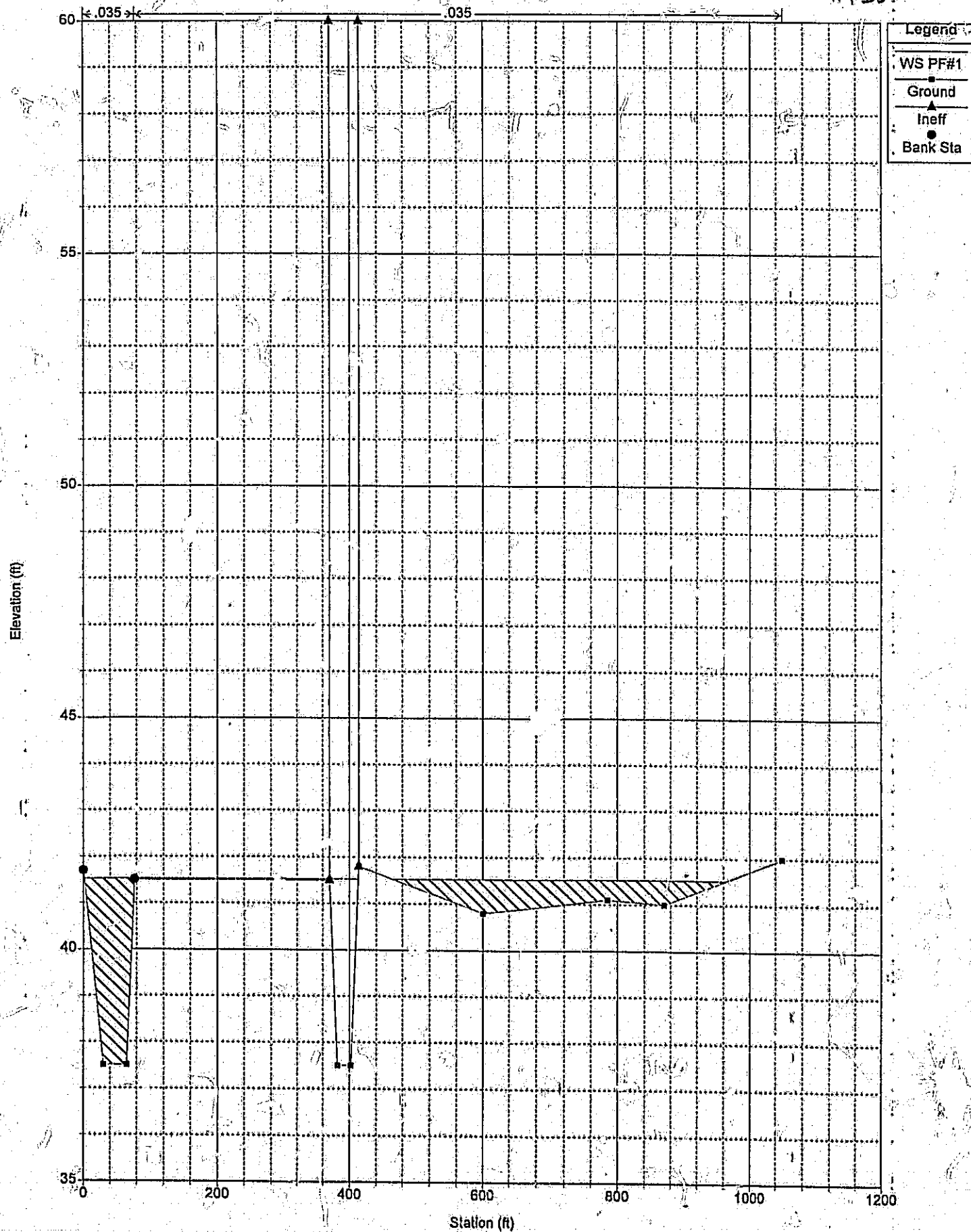
Geom: A.Lfix2b

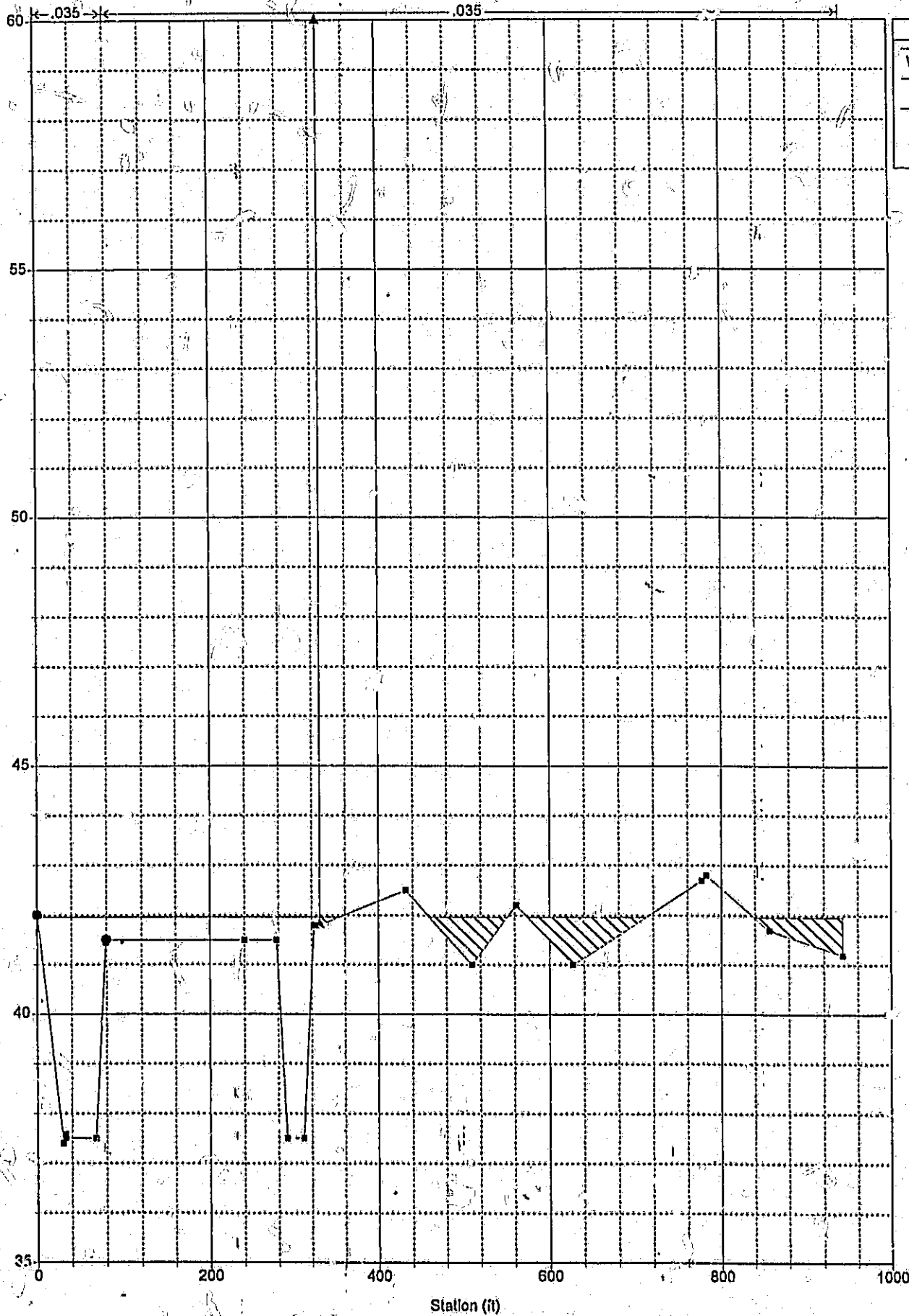
Adobe lumber downstream boundary

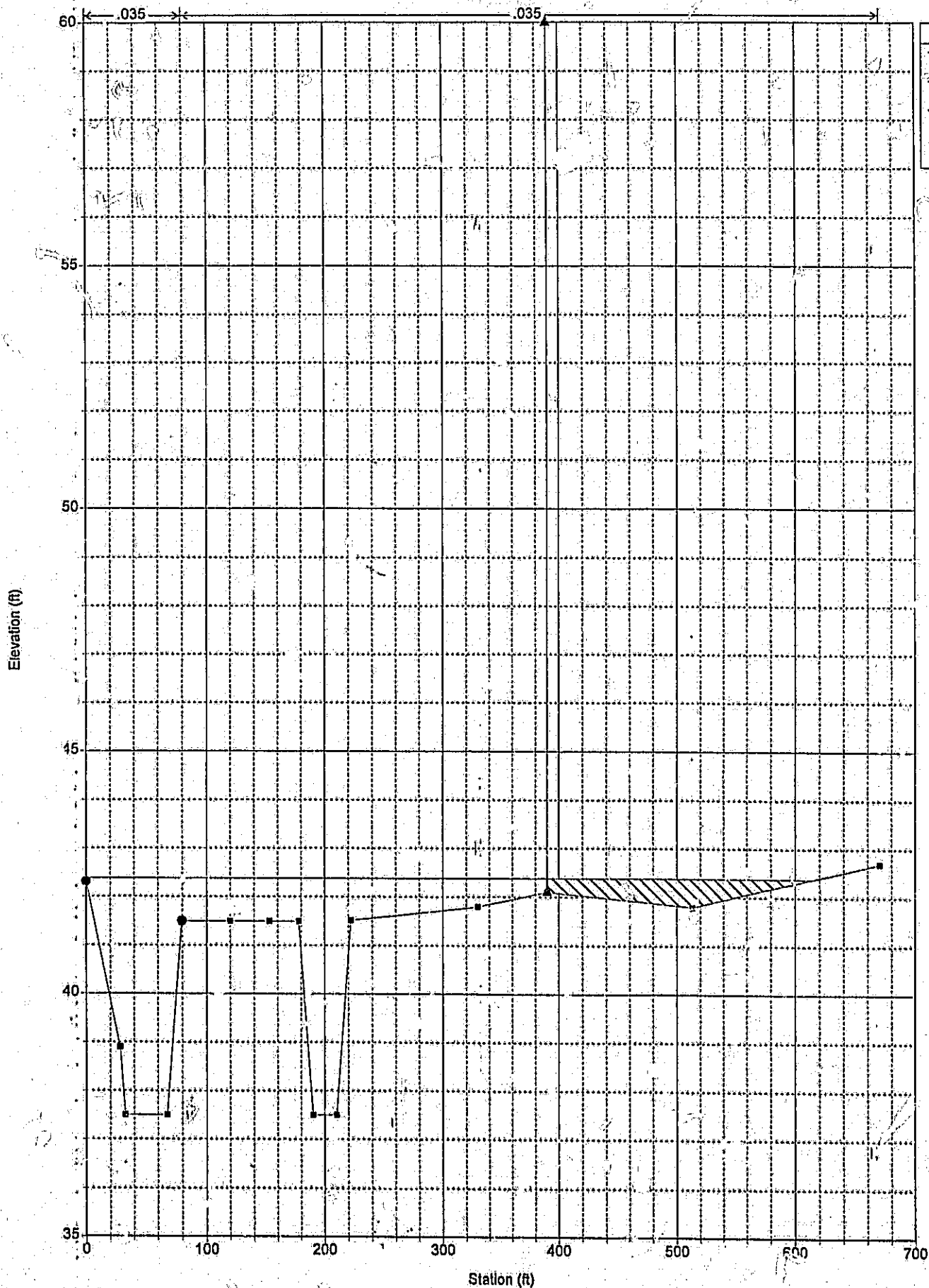
10450



11-35







Legend

WS PF#1

Ground

Ine./

Bank Sta

