



POWERLINE WASH AND TANK WASH

FLOOD DELINEATION STUDY

(FCD 92-09)

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**FINAL REPORT  
AND  
TECHNICAL DATA NOTEBOOK**

Prepared For:

FLOOD CONTROL DISTRICT  
OF MARICOPA COUNTY  
2801 West Durango Street  
Phoenix, Arizona 85007

Prepared By:

STANLEY CONSULTANTS, INC.  
2929 East Camelback Road, Suite 130  
Phoenix, Arizona 85016



Prepared April 1994

POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)

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\* See clear pocket inside back cover.

\*\* See Section 2 for reduced scale maps, full scale maps are under separate cover.

\*\*\* Under separate cover.

## INTRODUCTION

### **Purpose of Study**

The purpose of this study is to delineate the limits of the 100-year floodplain and floodway for portions of Powerline Wash and Tank Wash (including the South Branch of Tank Wash) in the Unincorporated Area of Maricopa County, Arizona.

### **Authority and Acknowledgements**

This study was prepared by Stanley Consultants, Inc., the prime study contractor, for the Flood Control District of Maricopa County (FCD) under FCD Contract 92-09. A copy of pertinent contract documents for this study are included in Section 1 of this report. Stanley Consultants' primary responsibilities in this study included overall coordination, data collection, vertical ground control for aerial topography, hydraulic analysis and production of final reports, delineation maps and flood profiles. Hydrology for this study was provided by FCD. Topography was provided by Kenney Aerial Mapping, Inc. Horizontal ground control for aerial topography was provided by Project Engineering Consultants, Ltd.

Powerline Wash and Tank Wash are tributary to Star Wash which is under concurrent study by another study contractor, Wood, Patel and Associates (FCD Contract 92-06). Topography and cross sections from the Star Wash Study were provided by Wood, Patel and their mapping subconsultant, Aerial Mapping Co. Inc., to Stanley Consultants for use at the downstream limits of the Powerline and Tank Wash Study.

A complete list of key individuals and subconsultants associated with the Powerline Wash and Tank Wash Flood Delineation Study, along with their primary responsibility is provided in

Section 1 of this report. Notification to proceed with this study was given by FCD on October 5, 1992. The hydraulic analysis for this study was initially completed in May, 1993.

### **Coordination and Public Notification**

An initial field reconnaissance trip was made with FCD staff to the study area in July of 1992. Initial coordination and scoping meetings were held with FCD staff from July to September of 1992. Public notification of the study was made by placing announcements in the Arizona Republic/Phoenix Gazette (newspaper having wide circulation) and the Wickenburg Sun (newspaper having local circulation) on October 14 and 21, 1992. Copies of the affidavits of publication for these notices is included in Section 1 of this report. A public information meeting was held by FCD staff at Morrystown School, Morrystown, Arizona on November 17, 1992 to inform the public of this study and to solicit comments.

Right of entry letters were sent to all property owners in the study area informing them of the study and the intent to enter the property to collect data and perform ground control surveys. To this date there has been no written or oral response from the public regarding the Powerline and Tank Wash Flood Delineation Study. Copies of public notification and right of entry are included in Section 1 of this report.

A second field reconnaissance trip to the study area was made with FCD staff in December 1992. Monthly progress reports have been made to FCD and coordination meetings have been held with FCD staff at significant milestones. Coordination meetings have also been held throughout this study effort with Wood, Patel and Associates to coordinate study limits, floodplain and floodway limits and starting water surface elevations between the Star Wash and Powerline/Tank Wash Studies.

## AREA STUDIED

### Scope of Study

This study covers selected portions of Powerline Wash and Tank Wash. Powerline Wash was studied from river mile 1.113 to river mile 10.424 for a total reach length of about 9.3 miles. River miles are measured in the upstream direction along Powerline Wash from its confluence with Star Wash.

Tank Wash was studied from river mile 0.980 to river mile 6.625 and the South Branch of Tank Wash was studied from river mile 0.000 to river mile 0.872 for a total reach length of about 6.5 miles. River miles on Tank Wash are measured in the upstream direction from its confluence with Star Wash. The confluence of the South Branch of Tank Wash and Tank Wash occurs at about river mile 5.7 upstream from Star Wash. River miles on the South Branch of Tank Wash are measured upstream from its confluence with Tank Wash.

The basic scope of this study is to delineate the 100-year floodplain and floodway of Powerline and Tank Washes along these reaches. This effort is in the format of a detailed study. There are no portions of Powerline Wash or Tank Wash studied by approximate methods.

All work performed in association with the Powerline Wash and Tank Wash Flood Delineation Study was done in accordance with FEMA Document 37, "Flood Insurance Study Guidelines and Specifications for Study Contractors", the general provisions of FCD Contract 92-09 and requirements of the Arizona Department of Water Resources (ADWR) for floodplain delineations.

### **Community Description**

Powerline Wash and Tank Wash are located in a generally undeveloped area of Western Maricopa County known as the "Hassayampa Plain". This area generally slopes from northwest to southeast with eventual outfall to the Hassayampa River. Both Powerline Wash and Tank Wash are major tributaries to Star Wash, which, in turn, flows into Jackrabbit Wash. Jackrabbit Wash is a major tributary in the lower Hassayampa River watershed.

The area is presently unincorporated. The nearest incorporated communities are the Town of Wickenburg located northeast of the study area approximately 20 miles and the Town of Buckeye located southeast of the study area approximately 25 miles. (Refer to Figure 1 for location of the study area.)

The primary land use in the study area is open range land and cattle grazing. According to Maricopa County land ownership records, over half of the study area is either federal or state land. The remaining land is under a single private ownership.

Immediately north of the study area is the Toyota Proving Ground test facility which was recently constructed on several sections of land. The drainage which passes through the Toyota Proving Ground eventually contributes to the lower study reach of Tank Wash but the Toyota Proving Ground itself is completely outside the study limits.

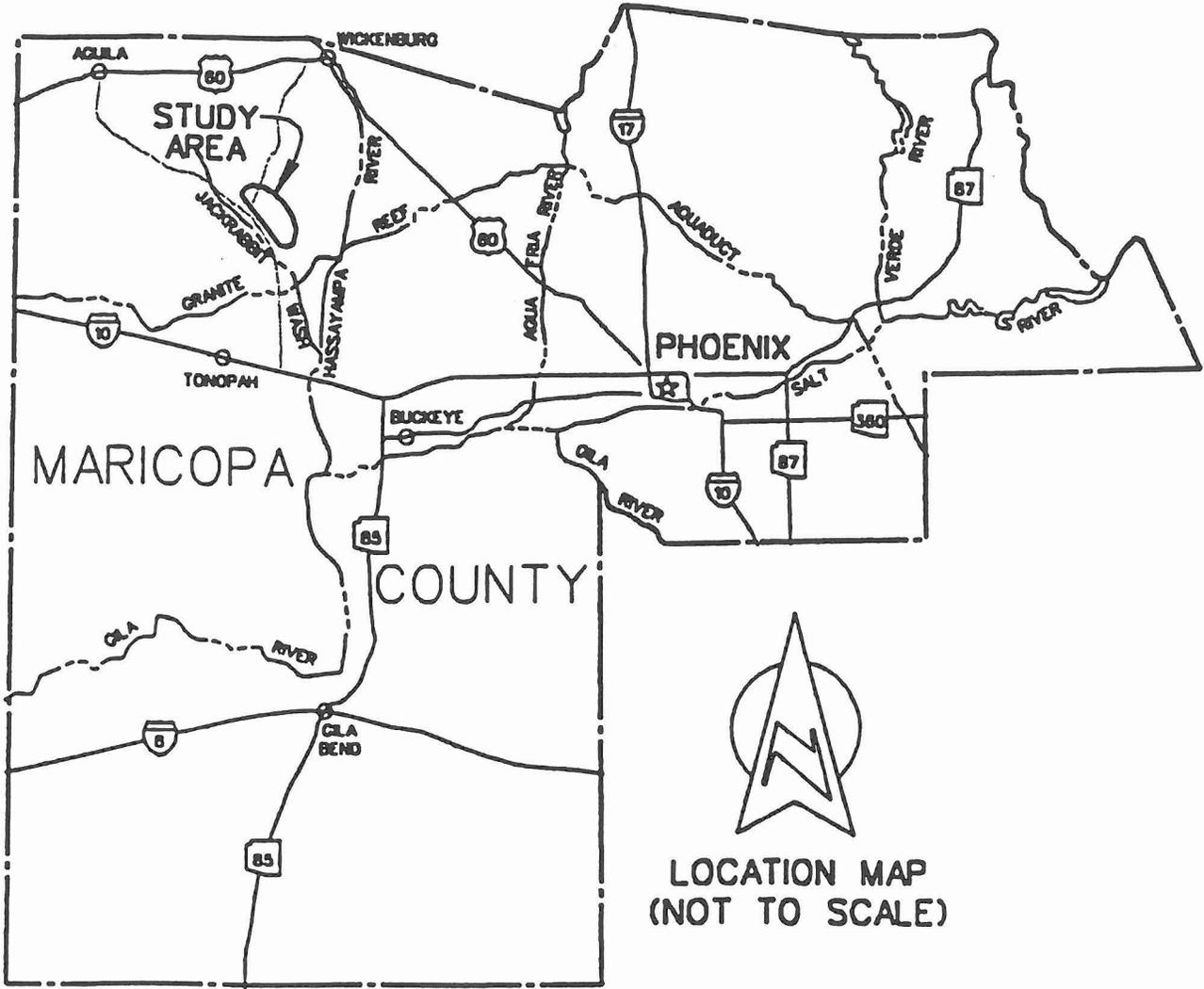


FIGURE 1

LOCATION OF STUDY

Powerline Wash and Tank Wash  
 Flood Delineation Study  
 FCD 92-09

Two sets of electrical transmission powerlines supported by steel lattice towers pass diagonally through the study area in a northwest to southeast direction. These facilities pose little or no impact to the Powerline and Tank Wash Flood Delineation Study. There are no other structures of any kind located within the study.

A few existing dirt roads pass through the study area and, at certain locations, cross the Powerline and Tank Wash study reaches via at-grade dip crossings. These dip crossings have little or no impact on flows. For a detailed description of the Powerline and Tank Wash floodplains, please refer to Section 4 of this report.

### **Principal Flood Problems**

The floodplains of Powerline Wash and Tank Wash are subject to significant flood potential resulting from locally intense thunderstorms. The main channels of these washes are subject to flow depths on the order of 4 to 10 feet and flow velocities in the range of 3 to 11 feet per second during the 100-year event. Low-lying areas along the main channels are subject to flow depths on the order of 1 to 5 feet and flow velocities in the range of 1 to 5 feet per second.

### **Flood Protection Measures**

There are no existing flood protection facilities in the study area nor are any flood control projects planned.

## TECHNICAL ANALYSIS

### Hydrologic Analysis

Peak discharges used in this study are based on hydrologic modeling from a previous study. Hydrologic modeling was necessary in the previous study because there are no stream gages in the study area. The previous study which covers the hydrology was for Jackrabbit Wash, which is immediately south of the study area. Powerline Wash and Tank Wash are both major tributaries in the Jackrabbit Wash watershed.

The Jackrabbit Wash Study was a floodplain delineation study performed by Burgess and Niple, Inc. for the Flood Control District under FCD contract 90-05. This study has been reviewed and approved by FCD, ADWR and the Federal Emergency Management Agency (FEMA). Flow rates at key locations along Powerline and Tank Washes from the Jackrabbit Wash Study were provided to Stanley Consultants by FCD. Peak flows for Powerline Wash were used directly without modification from the Jackrabbit Wash Study.

Tank Wash hydrology from the Jackrabbit Wash Study did not include a separate peak flow estimate for the South Branch. For this reason, Tank Wash hydrology was amended from the original Jackrabbit Wash Floodplain Delineation Study. This amendment was performed by FCD staff and the results provided to Stanley Consultants.

The amendment to the Jackrabbit Wash Study provided peak flows for both Tank Wash and South Branch of Tank Wash. The amendment resulted in a slight change in peak flows downstream from the Tank Wash/South Branch confluence. Hydrology from the Jackrabbit Wash Study will not be reproduced in this report in its original entirety. The supporting

technical analysis for the Tank Wash amendment to the Jackrabbit Wash hydrology is provided in Section 3 of this study.

Table 1 presents a summary of peak flow rates at various concentration points from the Jackrabbit Wash Study and the amendment to that study. Peak flows from Table 1 were apportioned along each study reach on the basis of straight line interpolation and rounded to the nearest 100 cfs. Table 2 presents a summary of peak flow rates as apportioned along each study reach.

TABLE 1  
SUMMARY OF PEAK FLOW RATES  
FROM JACKRABBIT WASH STUDY (AND AMENDMENT)

Concentration Point	100-Year Peak Discharge		
	Powerline Wash	Tank Wash	Tank Wash Amended
1755	5600 cfs		
1720 (Vulture Mine Road)	5700 cfs		
1492	5200 cfs		
1419 (Confluence with Star Wash)	5100 cfs		
1610 (North Branch)		4600 cfs	3400 cfs
1610 (South Branch)		*	2300 cfs
1610 (Below Confluence of North and South Branch)		4600 cfs	4300 cfs
1588		6300 cfs	6100 cfs
1540		6600 cfs	6900 cfs
1452 (Confluence with Star Wash)		6600 cfs	6600 cfs

\* Peak flow rate not provided in the original Jackrabbit Wash Study.

TABLE 2

SUMMARY OF PEAK FLOW RATES BY RIVER MILE

POWERLINE WASH		TANK WASH		SOUTH BRANCH TANK WASH	
From/To (River Miles)	100 Year Flow (cfs)	From/To (River Miles)	100 Year Flow (cfs)	From/To (River Miles)	100 Year Flow cfs
1.113/1.553	5100	0.980/0.980	6600	0.176/0.872	2300
1.664/2.846	5200	1.073/1.842	6700		
2.938/4.200	5300	1.939/2.805	6800		
4.294/5.589	5400	2.900/3.668	6900		
5.682/7.013	5500	3.785/4.997	6100		
7.106/8.438	5600	5.091/5.763	4300		
8.530/10.424	5700	5.853/6.625	3400		

**Hydraulic Analysis**

The U.S. Army Corps of Engineers HEC-2 computer backwater program (version 4.6.2, May, 1991) was used to hydraulically model the floodplains of Powerline Wash and Tank Wash. HEC-2 is the most widely used of the two-dimensioned, fixed-boundary hydraulic models available for this type of analysis. This model is based on standard step-backwater using hydraulic cross sections to describe the floodplain. A complete description of the methodology, selection of parameters and discussion of special problems and solutions is contained in Section 4 of this report.

## FLOODPLAIN MANAGEMENT APPLICATIONS

### Floodplain Boundaries

Floodplain boundaries were established along Powerline Wash and Tank Wash on the basis of the HEC-2 natural water surface profile and the aerial mapping. The starting and ending stations (HEC-2 variables SSTA and ENDST respectively) were plotted at each cross section. These are the points where the computed water surface elevation would theoretically intersect the ground on each side of the cross section as described by HEC-2 "GR" data.

Base flood elevations (BFE's) were also interpolated at five foot increments. BFE's and starting and ending stations were the "framework" for delineating floodplain limits. The starting and ending stations were used at each cross section to define boundaries unless:

- a. there was a conflict with mapping contours, in which case, the contours were used instead;
- b. there were multiple intersect points as in the case of backwater going up tributaries;
- c. artificial encroachment had been used to block out ineffective flow area.

Floodplain boundaries were trunkated at the upstream and downstream limits of the main study reaches and labeled as the "Upstream and Downstream Limits of Detailed Study" on the delineation maps. Floodplain limits were also trunkated at major tributaries along each main study reach and labeled "Limit of Detailed Study" on the delineation maps.

### **Floodway Limits**

The area within the floodplain between the floodplain boundary and the floodway limit is termed the floodway fringe. The floodway fringe encompasses the portion of the floodplain that hypothetically could be completely obstructed without causing more than a one foot rise in the 100-year water surface. The typical relationship between the floodway and floodway fringe and their significance to floodplain development are shown in Figure 2.

Floodway limits have been designated on the delineation maps. Limits were drawn based on the encroachment limits from the final Type 1 floodway profile for each study reach. Initial Type 1 floodway runs were based on a Type 4 encroachment profile which utilizes an equal loss of conveyance in each overbank, if possible. The final floodway encroachment run is the result of a balance between:

- a. an attempt to approach the target one foot rise as close and consistently as possible at each cross section without going over one foot;
- b. an attempt to establish a smooth and reasonable floodway limit to use as the basis for floodplain management;
- c. an attempt to center the floodway based on equal loss of conveyance as much as possible except in cases where extreme depth and velocity occur on one side of the floodplain and not on the other.

Except for the South Branch of Tank Wash, no floodway limits were designated for any tributaries in the study area.

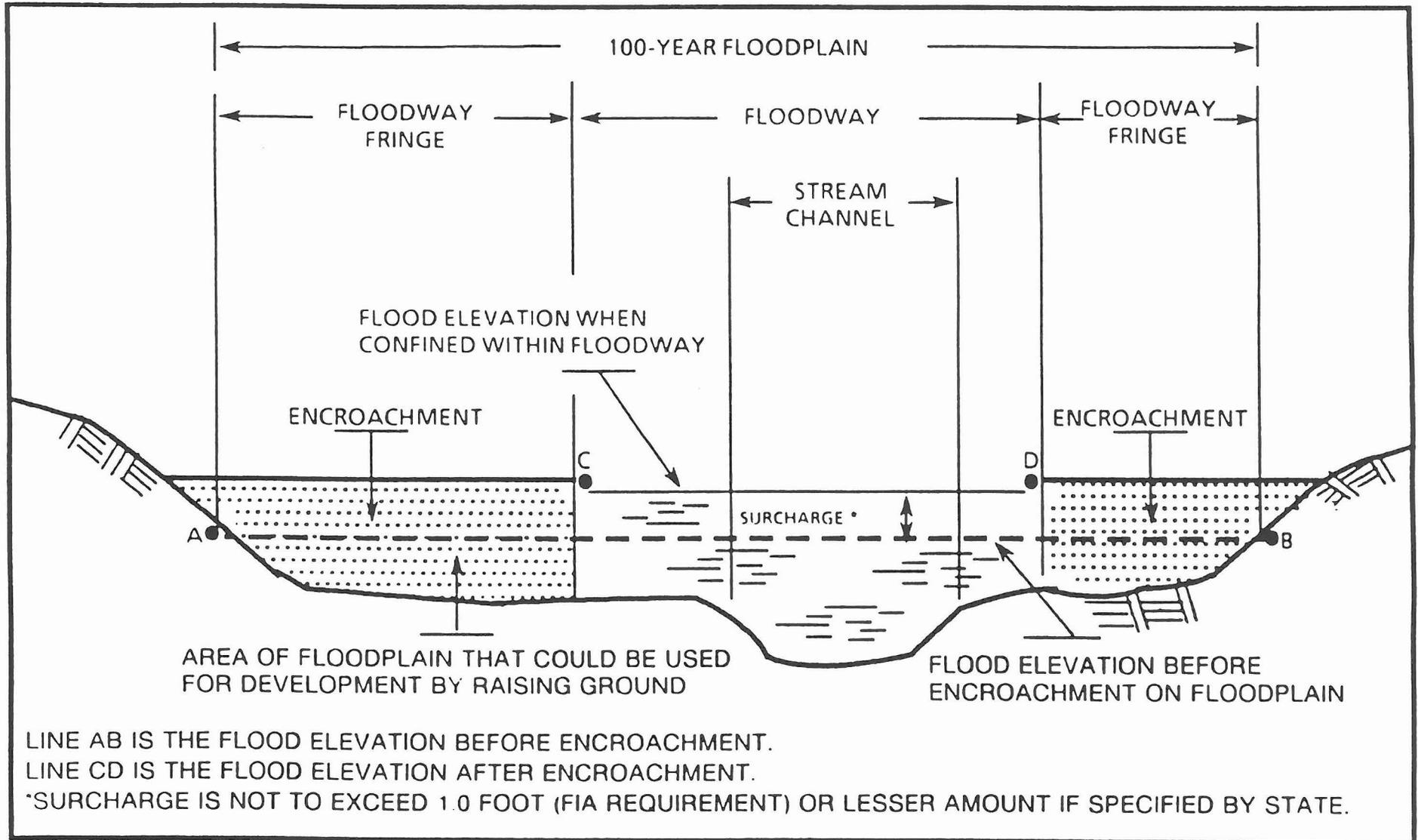


FIGURE 2

## FLOODWAY SCHEMATIC

On Powerline Wash, there are two areas of naturally high ground located in the floodway fringe near river miles 2.1 and 2.4. These areas would essentially be islands during a 100-year flood but because of their proximity to the floodway and the potential for flow velocity and erosion, they have been labeled as "Community Designated Special Hazard Zones".

On Tank Wash and the South Branch of Tank Wash, there are numerous locations where complete encroachment of the left or north floodway fringe may result in undesirable potential for breakout of flow over the south bank of the wash. This is because the "without floodway" 100-year water surface is at or close to the highest ground elevation on the right or south side of the floodplain. Areas where this potential occurs are indicated by a "Cross Section Extended" warning message in the HEC-2 final floodway printout. Caution should be exercised in the review and approval of any floodway fringe development in these areas.

**Total Acres of Floodplain and Floodway**

The total acreage of floodplain and floodway for each reach in this study has been estimated based on the "TWA" variable from HEC-2 printout. The results of this estimate are presented in Table 4.

TABLE 4  
TOTAL ACRES OF FLOODPLAIN AND FLOODWAY

Study Reach	Floodplain Acres	Floodway Acres
Powerline Wash	506	272
Tank Wash	539	256
South Branch Tank Wash	33	10

## INSURANCE APPLICATIONS

All of the area included in this study except the upstream approximately one half mile of Powerline Wash is included on Flood Insurance Rate Map (FIRM) Panel 04013C1075D for Maricopa County, Arizona and Incorporated Areas, effective date April 15, 1988. The upper approximately one half mile of Powerline Wash falls on Panel 1050 which is not in print. The entire study area included on Panel 1075D is currently designated as flood insurance Zone "B". All of Panel 1050, since it is not printed, would carry the flood insurance Zone "X" designation.

The Powerline and Tank Wash Flood Delineation Study would supersede the current flood insurance zones with an AE Zone based on the floodplain limits determined by this study. The new flood insurance zone limits have been illustrated on a copy of FIRM Panel 10175D which is included in the clear pocket at the back of this report.

There are two locations on Tank Wash where a flood Zone A has been delineated within the floodplain/Zone AE limits. These A zones are designated at major tributaries to Tank Wash between river miles 3.7 and 4.2 and river miles 5.0 and 5.5 where a small portion of Tank Wash flow breaks from the main channel and flows to these tributaries. This study does not analyze either the breakout flow or the flow in the tributary by detailed methods. Floodplain limits along the north side of the Tank Wash floodplain are approximated at these locations based on the Tank Wash 100-year "without floodway" water surface profile. The boundary between the Zone A and Zone AE at these two locations follows the limit of effective flow area on the left side of the floodplain as described in Section 4.5 of this report.

The two "Community Designated Special Hazard Zone" islands in the Powerline Wash floodway fringe mentioned in the previous section of this report have been designated flood insurance Zone X. In addition, it is anticipated that the Zone "B" currently designated on FIRM Panel 10175D will be superseded by a Zone X outside the 100-year floodplain limits with the next revision of that panel.

## **OTHER STUDIES**

### **Star Wash Study**

The two largest single tributaries to Star Wash are Powerline Wash and Tank Wash. The Star Wash floodplain, including the confluence of Powerline and Tank Washes was studied in detail concurrently with Powerline and Tank Washes by another study contractor, Wood, Patel and Associates, Inc. under FCD Contract 92-06.

### **Jackrabbit Wash Study**

The Jackrabbit Wash Study included hydrologic analysis for its entire contributing watershed which includes Powerline Wash and Tank Wash. This study was completed in 1991 by Burgess and Niple, Inc. under FCD Contract 90-05.

### **Toyota Proving Ground Study**

This study consisted of a drainage report which was done by Collar, Williams and White Engineers to analyze onsite and offsite drainage for the (then) proposed Toyota Proving Ground located north of the Powerline Wash and Tank Wash Flood Delineation study area. The Toyota Proving Ground is outside of the Powerline and Tank Wash study limits and has no impact on any of the hydraulic analysis of this study. The Toyota Proving Ground is only included as incidental reference here since it is in the vicinity of the Powerline and Tank Wash study area.

## LOCATION OF DATA

Survey, hydrologic and hydraulic data and other pertinent information used in this study may be obtained from the Flood Control District of Maricopa County, 2801 W. Durango Street, Phoenix, Arizona, 85009.

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

**SECTION 1 - GENERAL DOCUMENTATION AND CORRESPONDENCE**

- 1.2 Contact (Telephone) Reports
- 1.3 Meeting Minutes and Reports
- 1.4.7 Copy of Public Notices
- 1.5 Contract Documents

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
FCD 92-09**

**LIST OF KEY INDIVIDUALS AND SUBCONSULTANTS**

**1. PROJECT MANAGEMENT AND HYDROLOGY**

Flood Control District of Maricopa County  
2801 W. Durango Street  
Phoenix, Arizona 85009  
506-1501

Cathy Regester (Project Management)  
Sandy Story (Hydrology)

**2. HYDRAULIC MODELING AND VERTICAL GROUND CONTROL**

Stanley Consultants, Inc.  
3117 N. 16th Street  
Phoenix, Arizona 85016  
279-0901

Scott Buchanan, P.E. (Hydraulic Modeling)  
Clyde J. McCarty, R.L.S. (Vertical Ground Control)

**3. HORIZONTAL GROUND CONTROL**

Project Engineering Consultants, Inc.  
3130 N. 35th Avenue  
Phoenix, Arizona 85017  
484-7691

Larry Maldonado, P.E., L.S.

**4. AERIAL MAPPING**

Kenney Aerial Mapping, Inc.  
1130 West Fillmore  
Phoenix, Arizona 85007  
258-6471

Ellis Hyde

Aerial Mapping Company, Inc.  
3141 W. Clarendon Avenue  
Phoenix, Arizona 85017  
263-5728

Richard Cook, R.L.S.

5. **GIS CONVERSION**

GIS Southwest, Inc.  
4621 N. 16th Street  
Phoenix, Arizona 85016  
266-5080

B. J. Raval

6. **STAR WASH FLOOD DELINEATION STUDY**

Wood, Patel & Associates, Inc.  
1550 E. Missouri Avenue  
Suite 130  
Phoenix, Arizona 85014  
234-1344

Ashok Patel, P.E., R.L.S.



# TELEPHONE CALL REPORT

Date: July 6, 1992 Time \_\_\_\_\_ Job No. 11547

To: Scott Buchanan At: Stanley Consultants

From: Cathy Register At: Flood Control District

Subject: Powerline Wash and Tank Wash

Cathy Register says to take out DTM from scope. Also take our paragraph regarding ponding floodways.

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.2  
PG 3 OF 13 DATE: 7-6-92

Further Attention Required: Yes  No  By CSB Date 7-6-92



# TELEPHONE CALL REPORT

Date: August 10, 1992 Time \_\_\_\_\_ Job No. 11547

To: Scott Buchanan At: Stanley Consultants

From: Cathy Register At: Flood Control District

Subject: Powerline Wash and Tank Wash

Change in Scope: Instead of 1929 vertical datum, FEMA requires 1988 NAVD. Cathy has a copy of the new FEMA criteria we can get on Friday.

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.2  
PG 4 OF 13 DATE: 8-10-92

Further Attention Required: Yes \_\_\_\_\_ No  By LSB Date 8-10-92



# TELEPHONE CALL REPORT

Date: August 21, 1992 Time \_\_\_\_\_ Job No. 11547

To: Les Sakumoto (415) 923-7175 At: FEMA Region IX

From: Scott Buchanan At: Stanley Consultants

Subject: Powerline Wash and Tank Wash

Les Sakumoto suggested we stay on 1929 datum for consistency but provide a conversion to 1988 datum.

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.2  
PG 5 OF 13 DATE: 8-21-92

Further Attention Required: Yes  No  By LSB Date 8-21-92



# TELEPHONE CALL REPORT

Date: August 21, 1992 Time \_\_\_\_\_ Job No. 11547

To: Matt Miller At: FEMA National Headquarters

From: Scott Buchanan At: Stanley Consultants

Subject: Powerline Wash and Tank Wash

Matt Miller suggested we stay on 1929 datum and that we don't necessarily need to provide conversion to 1988. This is on the basis that our studies are such a small part of the Community's FIRM and the fact there is  $\pm 2'$  difference in datums. Mr. Miller said that FEMA is thinking of addressing the conversion to 1988 Datum on a regional or zone basis so that the burden was not on the appellant or study contractor. I passed this information on to Cathy Register at Flood Control District.

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.2  
PG 6 OF 13 DATE: 8-21-92

Further Attention Required: Yes  No  By GEB Date 8-21-92



TELEPHONE CALL REPORT

Date: October 6, 1992 Time \_\_\_\_\_ Job No. 11547

To: Scott Buchanan At: Stanley Consultants

From: Cathy Register At: Flood Control District

Subject: Powerline Wash and Tank Wash

Cathy Register gives us verbal Notice to Proceed.

- Go ahead with legal advertisement for all three studies (even though Daggs won't be approved until October 19, 1992.
- Name Cathy Register as coordinator to call in ad for all three studies.
- Flood Control District will take care of public meeting. No need to say date/time/place in our advertisement.

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 1.2  
 PG 7 OF 13 DATE: 10-6-92

Further Attention Required: Yes  No \_\_\_\_\_ By CSB Date 10-6-92



TELEPHONE CALL REPORT

Date: October 19, 1992 Time \_\_\_\_\_ Job No. 11547

To: Larry Maldonado (484-7691) At: Project Engineering Consultants

From: Scott Buchanan At: Stanley Consultants

Subject: Powerline Wash and Tank Wash

1. Project Engineering Consultants (PEC) has done their field reconnaissance locating all horizontal-vertical points. They set rebar at points where there was no existing monument.
2. PEC will do their GPS starting tomorrow and be finished by Monday, October 26, 1992.
3. PEC will be doing Wood-Patel GPS at same time they do ours. Wood-Patel survey by AMC is underway now and should be done in 2-3 weeks.
4. PEC will not set our horizontal-vertical panels until close to when we will be setting our vertical only panels. We need to tell him when.
5. AMC flew Wood-Patel study area last week.
6. I'll call PEC next Monday, October 26, and set up meeting so we can get description of location where they ended up putting H-V points so we'll have it for Wednesday, October 28, 1992 reconnaissance.

**MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 1.2  
 PG 8 OF 13 DATE: 10-19-92**

Further Attention Required: Yes  No  By LSB Date 10-19-92



# TELEPHONE CALL REPORT

Date: October 26, 1992 Time \_\_\_\_\_ Job No. 11547

To: Roy Watson (352-2554) At: Department of Energy West-  
ern Area Power Admin.

From: Scott Buchanan At: Stanley Consultants

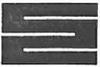
Subject: Powerline Wash and Tank Wash

Talked to Roy Watson by phone and received verbal ok to do the following:

1. Use transmission maintenance road for access.
2. Set paper panel on ground around selected tower foundation.
3. Paint top of concrete foundation with white paint (if necessary).
4. Chisel survey symbol into concrete. We will remove paper panels when finished. We will provide Roy Watson with a copy of topo when completed. We do not need to follow any of this with anything written. Western Area Power Administration owns the single northernmost transmission line through the study area and one of the southerly two lines. The other southerly line is owned by Bureau of Reclamation.

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.2  
PG 9 OF 13 DATE: 10-26-92

Further Attention Required: Yes  No  By GSB Date 10-26-92



# TELEPHONE CALL REPORT

Date: October 27, 1992 Time \_\_\_\_\_ Job No. 11547

To: Ken Carey (870-6750) At: Burec

From: Scott Buchanan At: Stanley Consultants

Subject: Powerline and Tank Wash

Ken Carey says that Department of Energy, Western Area Power Administration maintains and otherwise administers Burec transmission line in this area. If Roy Watson has no problem with what we propose, neither does he.

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.2  
PG 10 OF 13 DATE: 10-27-92

Further Attention Required: Yes  No \_\_\_\_\_ By 653 Date 10-27-92



# TELEPHONE CALL REPORT

Date: November 23, 1992 Time \_\_\_\_\_ Job No. 11547  
To: Scott Buchanan At: Stanley Consultants  
From: Ellis Hyde At: Kenney Aerial Mapping

Subject: Powerline and Tank Wash

Weather last Friday when they flew was too windy and they could not maintain level platform. They will re-fly on Tuesday, November 24. Ellis Hyde says there were enough panels on the ground, despite the wind, that we should be ok.

ALL PANELS VISIBLE ON NEGATIVES.

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.2  
PG 11 OF 13 DATE: 11-23-92

Further Attention Required: Yes \_\_\_\_\_ No  By GEB Date 11-23-92



# TELEPHONE CALL REPORT

Date: January 20, 1993 Time \_\_\_\_\_ Job No. 11547

To: Scott Buchanan At: Stanley Consultants

From: Cathy Register At: Flood Control District

Subject: Powerline and Tank Wash

Cathy Register called and had one comment on Tank Wash cross section 2.614...please move downstream to avoid going up a minor tributary wash. All the rest looks ok.

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.2  
PG 12 OF 13 DATE: 1-20-93

Further Attention Required: Yes  No \_\_\_\_\_ By CSB Date 1-20-93



TELEPHONE CALL REPORT

Date: April 14, 1993 Time \_\_\_\_\_ Job No. 11547

To: Scott Buchanan At: Stanley Consultants

From: Cathy Register At: Flood Control District

Subject: Powerline Wash and Tank Wash

Cathy Register called and said she has decided to go with normal depth starting water surface for both Powerline and Tank. Wood/Patel will do this as part of Star Wash Study and will include our first two cross sections (1.018 and 1.113) on Powerline and our first three cross sections (.9749, .883, .998) on Tank Wash in their Star Wash Study. Wood/Patel will describe this in their report. We will interface our two studies at cross section 1.113 on Powerline and .998 on Tank Wash and start with known water surface from Wood/Patel.

Asked Cathy how she wants to start South Branch Tank Tributary. Cathy says start normal depth.

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.2  
PG 13 OF 13 DATE: 4-14-93

Further Attention Required: Yes  No \_\_\_\_\_ By LSB Date 4-14-93

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

**SUMMARY OF MEETING MINUTES**

Date: July 10, 1992  
Location: Study Area  
Attendance: Cathy Regester, Flood Control District  
Scott Buchanan, Stanley Consultants, Inc.

Discussed limits of mapping and limits of study. Map limits to be windows along each wash. Area between washes to be paneled and flown but no topo now. It may be necessary to add this area later. Limits of our study will extend downstream to a point just up from the first point of confluence with Star Wash. There will be no influence of Star Wash flows in our study limits. Conversely, there will be influence of Powerline and Tank Wash in Star Wash study limits.

Discussed means of estimating flow rates along washes based on the established hydrology. Floodplain limits generally are to be actuarial.

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.3  
PG 1 OF 4 DATE: 7-10-92

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

**SUMMARY OF MEETING MINUTES**

Date: September 28, 1992  
Location: Stanley Consultants  
Attendance: Ashok Patel, Wood/Patel  
Richard Cook, Aerial Mapping Company  
Scott Buchanan, Stanley Consultants, Inc.

Aerial Mapping Company (AMC) is doing ground control survey with PEC doing horizontal GPS. AMC will start on October 5, 1992. They will reconnaissance and locate all panel points (including GPS) first, then fly. Aerial photos will be provided to PEC to aid in their field work. AMC will be doing their field work at same time as PEC is doing GPS. AMC's mapping should be available in about 2 months.

PEC will be locating and setting 19 GPS points for SCI.

**MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.3  
PG 2 OF 4 DATE: 9-28-92**

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

**SUMMARY OF MEETING MINUTES**

Date: December 7, 1992  
Location: Study Area (Field Reconnaissance)  
Attendance: Cathy Register, Flood Control District  
Scott Buchanan, Stanley Consultants, Inc.

Field reconnaissance with Cathy Register. Follow up with Ashok regarding "n" values and NC-vs-NH. Follow up with "n" value report. Follow up change in upper study limit on Tank Wash.

**MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.3  
PG 3 OF 4 DATE: 12-7-92**

MINUTES OF MEETING

RECEIVED  
APR - 9 1993  
STANLEY CONSULTANTS

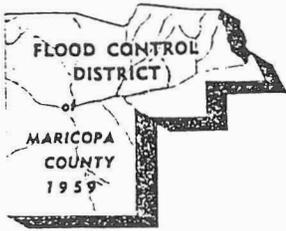
PROJECT: STAR WASH  
PROJECT #: 92916.00  
DATE: APRIL 6, 1993 AT 3:30 P.M.  
SUBJECT: HANDLING OF FLOODPLAINS AND FLOODWAY BOUNDARIES  
AT THE CONFLUENCE OF POWER LINE WASH AND TANK  
WASH  
ATTENDEES: SCOTT BUCHANAN, STANLEY CONSULTANTS  
CATHY REGESTER, FLOOD CONTROL DISTRICT OF  
MARICOPA COUNTY  
ASH PATEL, WOOD/PATEL

DISCUSSIONS:

1. Power Line Wash  
Scott Buchanan reviewed his findings on floodplain and floodway analysis for Power Line Wash and how this information compared with the work done by Wood/Patel on Star Wash. After a discussion, it was concluded that since the confluence is very complex, Wood/Patel will include two additional cross sections of Power Line Wash as Power Line Tributary within their work. This will help in the review process by Baker Engineers.
2. Tank Wash Confluence  
Scott reviewed Tank Wash confluence in detail. Here again, it was concluded for the simplicity of the review process, Wood/Patel should include two additional cross sections of Tank Wash as a Tank Wash tributary within their portion of the report.

gencor\92916.ap8

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.3  
PG 4 OF 4 DATE: 4-6-93



**FLOOD CONTROL DISTRICT**  
of  
**Maricopa County**

2801 West Durango Street • Phoenix, Arizona 85009  
Telephone (602) 506-1501  
Fax (602) 506-4601  
TDD (602) 506-5897

---

BOARD OF DIRECTORS

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James D. Bruner  
Carole Carpenter  
Tom Freestone

TO: Roy Pederson, County Manager

VIA: Louis A. Schmitt, P.E., Assistant County Manager, Transportation and  
Development Agency

FROM: Stanley L. Smith, Jr., P.E., Acting Chief Engineer and General Manager

DATE: November 17, 1992

SUBJECT: PUBLIC MEETING IN MORRISTOWN

A public meeting was held in Morristown on November 16th to announce the beginning of four floodplain delineation studies involving desert washes southwest of the Wittmann/Morristown area. Eighteen people attended the meeting, of which 12 were local residents, one represented the Toyota Proving Grounds, and the remaining five were District staff or study consultants.

Residents were given an overview of the floodplain delineation process and the purpose of such studies. A map of the general study area was distributed and a description of the five washes to be studied was provided. Residents were encouraged to submit any information they had regarding local flooding problems so that it could be incorporated into the study. The washes being studied are Iona Wash, Daggs Wash, Star Wash, Powerline Wash and Tank Wash. Except for portions of Iona Wash which are located within the City of Surprise, all the washes are located in unincorporated areas.

Staff answered questions about flood insurance and regulatory impacts associated with delineated floodplains and other general questions about the need for such studies. Residents were told that the studies would be finished next summer and that another public meeting would be held to announce the study results.

Stanley L. Smith, Jr., P.E.

Copy to: Carole Carpenter, District 4 Supervisor

**MARICOPA COUNTY, ARIZONA**  
**POWERLINE AND TANK WASHES**  
**STANLEY CONSULTANTS #11547**  
**DOCUMENT INDEX # 1.4.7**  
**PG 1 OF 21 DATE: 11-17-92**



Flood Control District of Maricopa County  
 2801 W. Durango Street  
 Phoenix, AZ 85009  
 (602) 506-1501

# FACT SHEET

## Flood Control District of Maricopa County

### Mission

To provide flood and stormwater management services for the benefit of the people of Maricopa County.

These services are provided through regulatory activities, master planning, technical assistance, and structural projects such as dams, channels, and stormdrains. Our clients are the citizens, municipalities, and other governmental agencies.

### Vision

We will continue to be a leader in the provision of quality flood protection and stormwater management services within Maricopa County. By 1995, we will be recognized nationally as a leader in this field.

### Authorized Positions

The District has 257 authorized positions.

### Fiscal Year 91/92 Budget

Operating	\$20,052,070	23.8%
CIP	57,290,730	68.0%
Project Reserve	6,913,400	8.2%
Total	\$84,256,200	100.0%

### Floodplain Delineations:

The District has an active program of identifying and mapping (delineating) 100-year floodplains within Maricopa County. The information obtained from floodplain studies is used to review development so as to reduce or prevent possible flood damage and maintain the integrity of floodplains.

### Maricopa County Floodplains (in linear miles)

- >> Within Cities.....326
- >> Unincorporated County..660
- >> Within Entire County...986

August 1992

### Floodplain Management Responsibilities

Under this program, which is mandated by ARS 48-3609, the District regulates development within the 100-year floodplains of watercourses. In order to maintain good standing with the Federal Flood Insurance Program, the District uses the regulations of the Federal Emergency Management Agency. Jurisdiction applies to both incorporated and unincorporated areas of the County unless a municipality specifically resolves to take jurisdiction.

The District undertakes floodplain management responsibilities for the following cities:

- >> Buckeye
- >> Chandler
- >> Cave Creek
- >> Gila Bend
- >> Surprise
- >> Litchfield Park
- >> Tolleson
- >> Guadalupe
- >> Carefree
- >> Queen Creek

### Drainage Responsibilities

In order to reduce existing and potential flooding problems caused by local stormwater (outside the jurisdiction of a delineated floodplain), the District administers the *Drainage Regulation* for the unincorporated areas in Maricopa County. The District coordinates with Planning and Zoning, Maricopa County Department of Transportation, County Health, and Building Safety to insure that new developments will not increase runoff, divert flows to another watershed, or cause backwater on other property. The District also investigates reports of flooding and possible flood hazards reported by citizens, and passes the information on to Planning and Zoning.

### Maintenance Responsibilities

The District maintains 22 dams and 36 facilities (floodways, drains, and pipelines).

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
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# AGENDA

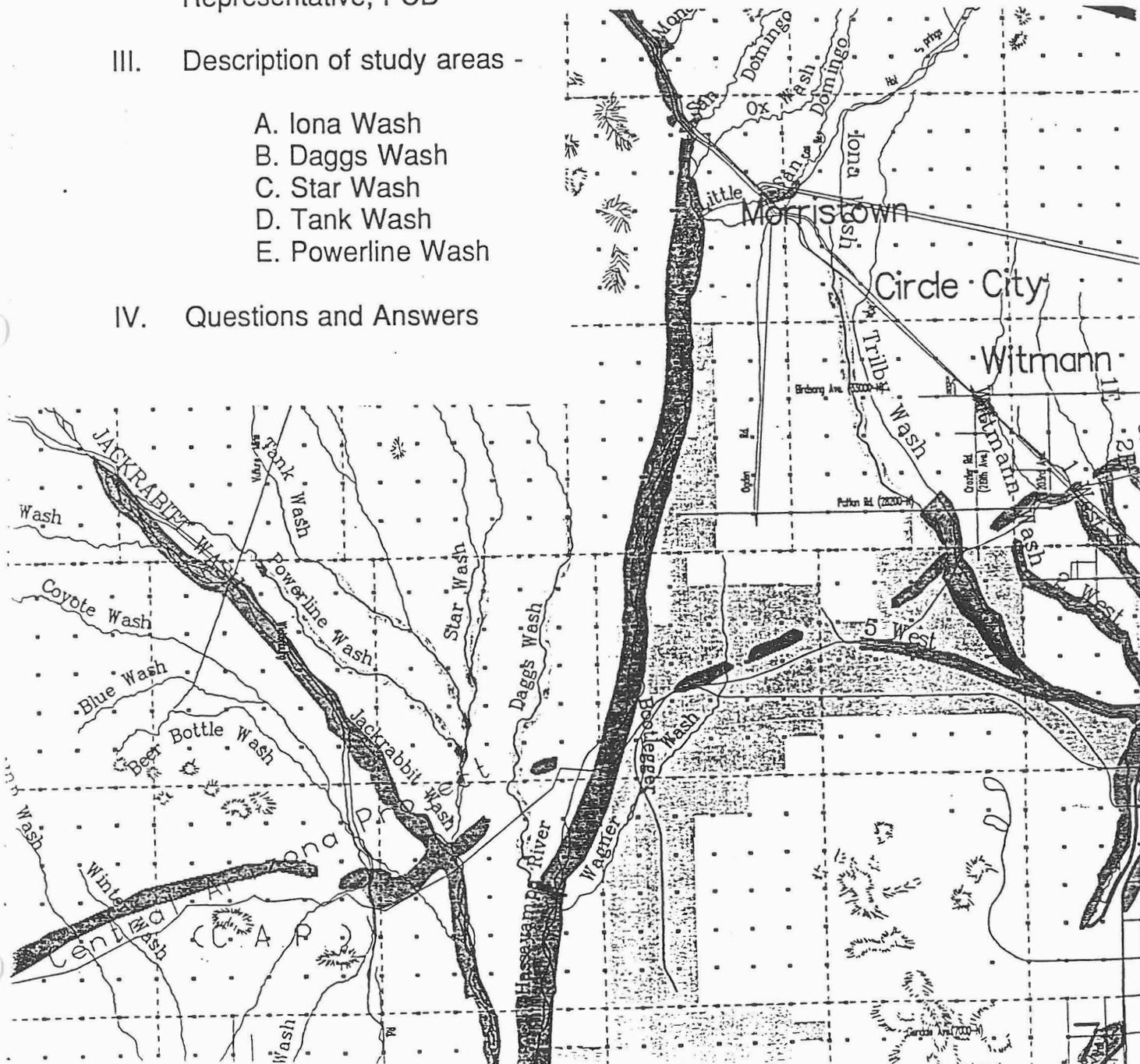
## Flood Hazard Study Public Meeting

Iona Wash, Daggs Wash, Star Wash, Tank Wash and Powerline Wash

November 16, 1992  
Morristown School

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.4.7  
PG 2 OF 2 DATE: 11-11-92

- I. Introduction - Jim Phipps, Public Involvement Coordinator, FCD
- II. Purpose and uses of Flood Hazard Studies - Ron Nevitt, Floodplain Representative, FCD
- III. Description of study areas -
  - A. Iona Wash
  - B. Daggs Wash
  - C. Star Wash
  - D. Tank Wash
  - E. Powerline Wash
- IV. Questions and Answers



**PLEASE PRINT**  
MEETING ATTENDANCE ROSTER

Pre-Study Public Meeting

MEETING: Iona, Daggs, Star, Tank & \_\_\_\_\_ LOCATION: Morristown School  
Powerline Washes  
DATE: \_\_\_\_\_  
November 16, 1992

NAME	ADDRESS	PHONE
Jane Boone	P.O. Box 1685, Wittmann, AZ 85361	602 388-2255
Ethel Moeck	P.O. Box 254, Wittmann AZ 85361	388-9423
Ken Pritchett	2320 W. BUTLER DR PHX AZ 85021	995-5367
Matthias Schler	2548 N 54 AVE Phoenix AZ 85035	272944
Paul Gillis	21724 LONE MOUNTAIN RD WITTMANN	388-2006
GERTRUDE ECHARD	21724 LONE MOUNTAIN RD. WITTMANN, AR.	388-2006
JOE CAZARES	TOYOTA PROJECT P.O., 1000 WITTMAN, AZ 85361	320-2155
SANDY SDRY	FCD	506-1501
CATHY REGESTER	FCD	506-1501
Ron New. H	FCD	506-1501
STAN PLAGENIS	44802 N Schwarz Blvd Morristown	684 3849
Ray Charles	P042 Morristown AZ 85342	388-2397
Jon Fuller	583 W MADACEN TEMPE 85283	838 0341
ALYALEEN DECEINIS	3570 W COLTER PHX 85019	973-6490
Boyon Lhiplo	14040 N 24th Phoenix AZ 85022	497-0655
DAVID GLOVER	30344 OBERLIW WAY	993 8710
DAVID GLOVER	1802 W Charleston Phoenix AZ 85023	993-8835 (Mailing add.)
<del>James H. Hagg</del>	FCD	506-1501

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Peoria, AZ 85345

Mr. Glenn H. Moiyan  
P.O Box 6158  
Sitka, AZ 99835

Mr & Mrs Giannantonio  
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Sun City, AZ 85351

Mr & Mrs Pardi  
137 Orlando Street  
Edison, NJ 08817

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Sitka, AK 99835

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Mr & Mrs Davis Jr.  
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SP 22  
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Morton, PA 19070

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Oaklawn, IL 60453

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Tacoma, WA 98498

Mr & Mrs Wheaton  
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Mr. James A. Johnson  
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Ocala, Fla. 32676

**MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
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231st Ltd Partnership  
201 W. Coolidge St  
Phoenix, AZ 85013

Ambrose Family Trust  
6520 N. Maryland Cir  
Phoenix, AZ 85013

AT & SF Railroad  
1 Sante FE Plz  
5200 E. Sheila ST  
Los Angelas CA 90001

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El Mirage, AZ 85335

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Prescott, AZ 86301

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MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
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MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
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MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.4.7  
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Phoenix, AZ 85021

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Thousand Oaks, CA 91360

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Phoenix, AZ 85016

Patton Sun Valley Ltd. Part.  
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Phoenix, AZ 85016

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Phoenix, AZ 85021

PRP Joint Venutre  
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Aurora, CO 80012

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MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.4.7  
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Belleville, IL 62223

Jeffery & Gertrude Gillis  
5859 Clinton Street  
Erie, PA 16509

Paul & Gertrude Gillis  
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Wittmann, AZ 85361

Arizona Boys Ranch  
c/o Mr. John Mangum  
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Phoenix, AZ 85003

Ms. Francis A. Sattler  
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Minocqua, WI 54548

Johnnie & Roseanne Powell  
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Phoenix, AZ 85041

Mr & Mrs Wojciechowski  
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Chicago, IL 60655

Mr. Richard Bartlett  
112 Crest Road  
Wellesley, MA 02181

Mr. and Mrs. Ansani  
1234 South Lincoln Ave.  
Park Ridge, IL 60068

**MARICOPA COUNTY, ARIZONA**  
**POWERLINE AND TANK WASHES**  
**STANLEY CONSULTANTS #11547**  
**DOCUMENT INDEX # 1.4.7**  
**PG 10 OF 21 DATE: 11-92**

Walter & Maria Bassi  
1418 Forest  
River Forest, IL 60305

Mr & Mrs Leineweber  
P.O. Box 1992  
Lucerne Valley, CA 92356

Frederick & Linda Hill  
P.O. Box 687  
Wickenburg, AZ 85265

Israel & Gloria Martinez  
30540 N. Patton Rd.  
Wittmann, AZ 85361

Ms. Inga Lisa Carlson  
7060 Shoup #190  
Canoga Park, CA 91307

Tischer Resident  
RR#2, Box 35  
Maynard, MN 56260

Mr & Mrs Estrada  
P.O. Box 487  
Wittmann, AZ 85361

Mr & Mrs Schmuhl  
P.O. Box 692  
Antioch, IL 60002

Walter & Ruth Wentzel  
8337 N. Delta Ave.  
Tucson, AZ 85741

Malcolm & Henrietta Olson  
5531 Niemeyer Road  
Erie, PA 16509

Daniel & Mary Lou Kinnerk  
116 North Green Street  
McHenry, IL 60050

Roland & Rita Samkas  
439 North Lakeshore Dr.  
Chicago, IL 60610

Ms. Vera Hoffman  
1400 N. Lakeshore Dr.  
Chicago, IL 60610

Mr. Samuel Swayne  
311 14th Ave. South  
Nampa, ID 83651

Mr & Mrs Encinas  
P.O. Box 346  
El Mirage, AZ 85335

Ms. Helen B. Anderson  
401 Finch Court N.E.  
Cedar Rapids, IA 52402

Ms. Elma Mae Demmert  
20505 Marina Drive N.W.  
Stanwood, WA 98292

Mr & Mrs Ledwina  
5365 Kilbourne  
Lyndhurst, Ohio 44134

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.4.7  
PG 11 OF 21 DATE: 11-92

Mr. Joe Encinas  
P.O. Box 94  
Waddell, AZ 85355

Charles & Lois Mydock  
10958 Oakmont Drive  
Sun City, AZ 85310

Ray & Rita Florczak  
6 Evergreen Street  
Elk Grove, IL 60007

Mr & Mrs Anast  
217 Heather Lane  
Wilmette, IL 60091

Ms. Anna Cochrane  
1724 Clermont Street  
St. Antige, WI 544409

Mr & Mrs Katharina Reicheat  
6465 N. Caldwell Ave.  
Chicago, IL 60646

Joseph & Margaret Winter  
Dreisesselstr 5 8391  
West Germany

William & Marcia Everley  
4144 South Dahlia Street  
Denver, Co 80110

James & Loma Gault  
1 Cypress Street Tittling  
Keyport, NJ 07735

Paul & Emily Todat  
2304 North Hawthorne  
Melrose Park, IL 60164

Ms. Mary G. Wightman  
8317 Oriole Avenue  
Niles, IL 60648

Mr & Mrs Schler  
2548 North 54th Avenue  
Phoenix, AZ 85038

Mr & Mrs Soltis  
3938 East Cortez  
Phoenix, AZ 85028

Alberto & Bertha Ruin  
6227 West Cambridge  
Phoenix, AZ 85035

Mr. Steven Edwards  
30339 West Peakview  
Wittman, AZ 85361

Alvin & Patricia Stutzman  
6810 North 59th Drive  
Glendale, AZ 85301

Mr & Mrs Jerome Murray  
400 East Randolph Street  
Apt. 2221  
Chicago, IL 60601

Mr. Saul Valadez  
30339 West Peakview Drive  
Wittman, AZ 85361

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.4.7  
PG 12 OF 21 DATE: 11-92

Mr. Henry Mosca  
110 Midland Ave  
Apt. 7B  
Midland Park, NJ 07432

Arizona State Land Depart.  
Mr. Bill Fish  
1616 West Adams  
Phoenix, AZ 85007

WTM Partners 86-7  
4520 N. Central Ave  
Suite 500  
Phoenix, AZ 85012

WWJ Investments General Part.  
9821 E. Mission Lane  
Scottsdale, AZ 85258

Joe Cazares, P.E.  
Taisai/Bechtel Joint Venture  
30700 W. Patton Rd.  
P.O. Box 1000  
Whitman, AZ 85361

DOUGLAS LAND CORPORATION  
767 5th Ave, 7th Floor  
New York, NY 11022

FEDERAL BUREAU OF LAND MGT.  
3707 N. 7th Street  
Phoenix, AZ 85014

BUREAU OF RECLAMATION  
Valley Center, Suite 2200  
Phoenix, AZ 85023

STATE OF ARIZONA  
State Land Department  
1616 West Adams Street  
Phoenix, AZ 85007

**MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.4.7  
PG 13 OF 21 DATE: 11-92**

Mr & Mrs Hernandez  
7372 West Desert Cove  
Peoria, AZ 85345

James & Karen Moline  
1173 East Carmen St.  
Tempe, AZ 85283

Edmund & Mary Miller  
P.O. Box 328  
El Mirage, AZ 85335

Mr. Vernon Winter  
2552 35th Ave.  
Rock Island, IL 61201

Paul & Ruth Albeck  
2516 Hessing Street  
River Grove, IL 60171

Ms. Lorriane Stewart  
19807 Willowcreek Dr.  
Sun City, AZ 85373

Peter & Gerlinde Mueller  
1732 Gay Park Lane  
Hacienda Hts, CA 91745

John & Loepoldine Omasta  
450 Rex Boulevard  
Elmhurst, IL 60126

Tim & Jean Van Horn  
30240 Pinnical Vista Rd. #B4  
Wittman, AZ 85361

Bashford & Doris Power  
415 Vista Way  
Cula Vista, CA 92010

Dann & June Yoder  
6440 lake Tahoe Circle  
San Diego, CA 92119

Mr. Homer Chamberlain  
16677 NW Grand Ave.  
Sun City, AZ 85373

Mr. Frank Buccola  
109 Sunset Drive  
Cocoa Beach, Fla 32931

Lawrence & Mary Pouse  
910 Mainland Drive  
Texas City, TX 77590

Mr & Mrs Krzykowski  
5734 Cambridge Lane Unit 7  
Racine, WI 53406

Ms. Victoria A. Duntemann  
7619 W. Clarence Ave.  
Chicago, IL 60631

John & Renee Angel  
OPM Sang  
New York, NY 09038

Claude & Laurin Brown  
346 Clara Lane Rio Comm.  
Berlin, NM 87002

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.4.7  
PG 14 OF 21 DATE: 11-92

Mr Frank B. Gossinger  
36 Chalk Hill Road  
Monroe, CT 06468

Mr & Mrs Gloria  
104 Pinta Ct.  
Pekin, Il 61554

Ms. Celia B. Pierson  
1600 60th St. Apt. 39  
Kenosha, WI 53140

Fritz & Phyllis Kreiss  
2699 Waters Avenue  
Northbrook, Il 60062

Ms. Loretta Caterino  
Ms. Charlotte Johnson  
Rural Free Delivery 1  
New Boston, N.H. 03070

Mr. Robert L. Burns  
118 Norwalk Drive #8  
Runnemede, NJ 08078

Mr. & Mrs. Hancock  
4609 West Lake Shore Dr.  
Mchenry, Il 60050

Ms. Mary L. Bay  
130 South Cleveland Ave.  
Peoria, Il 61605

Edmund & Mary Miller  
539 La Pasada Boulevard  
Goodyear, AZ 85338

Mr & Mrs Tabler  
P.O. Box 1704  
Surprise, AZ 85374

Ms. Elizabeth Reuther  
3843 Sherwin Ave.  
Lincolnwood, Il 60645

Ms. Therese M. Gherra  
606 North Howard  
Elmhurst, Il 60126

Mr. Timothy Kaufman  
2515 W. Tierra Buena Lane  
Phoenix, AZ 85023

Mr & Mrs Robert Knight  
P.O. Box 139  
Wittman, AZ 85361

Mr. Eddie Miller  
12000 West Northern  
Peoria, AZ 85308

Mr. Robert W. Benson  
10403 Tropicanna Circle  
Sun City, AZ 85351

Walter & Mary Miller  
10 Olympia Fields Dr.  
Pekin, Il 61554

Mr. Kenneth Leabo  
6312 West Georgia  
Glendale, AZ 85301

**MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.4.7  
PG 15 OF 21 DATE: 11-1-72**

The Arizona Republic The Phoenix Gazette

STATE OF ARIZONA } SS.  
COUNTY OF MARICOPA }

JOAN LOHR, being first duly sworn, upon oath deposes and says: That she is the legal advertising manager of the Arizona Business Gazette, a newspaper of general circulation in the county of Maricopa, State of Arizona, published at Phoenix, Arizona, by Phoenix Newspapers Inc., which also publishes The Arizona Republic and The Phoenix Gazette, and that the copy hereto attached is a true copy of the advertisement published in the said paper on the dates as indicated.

The Arizona Republic  
~~The Phoenix Gazette~~

October 14, 21, 1992

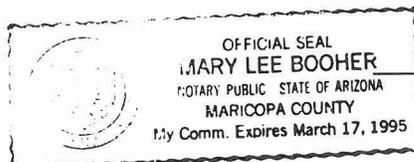
*Joan Lohr*

Sworn to before me this

23rd day of

October A.D. 1992

**MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.4.7  
PG 16 OF 21 DATE: 10-23-92**



*Mary Lee Booher*  
Notary Public

TOTAL PRICE: \$20.84

ISSUED TO: AFFIDAVIT OF PUBLICATION  
Stanley Consultants

STATE OF ARIZONA

County of Maricopa

Kevin Cloe, being duly sworn, upon  
oath, deposes and says: That he is the Publisher of

The Wickenburg Sun

**PUBLIC NOTICE -  
Your Right To Know**

**ANNOUNCEMENT OF INTENT TO  
PERFORM FLOOD ELEVATION STUDY.**  
The Flood Control District of Maricopa County (FCDMC) under authority of the National Flood Insurance Act of 1968 (P.L. 90-448), as amended, and the Flood Disaster Protection Act of 1973 (P.L. 93-234), is funding a detailed study of flood hazard areas in western Maricopa County. FCDMC has contracted Stanley Consultants, Inc., Wood/Patel Associates and A/N West, Inc. to perform studies for Powerline Wash, Tank, Star and Daggs Wash located west of the Haasayampa River approximately half way between the communities of Buckeye and Wickenburg. Flood elevations from these studies will be used to determine flood insurance rates by the Federal Emergency Management Agency (FEMA). This announcement is intended to inform all interested persons and communities of the commencement of this study so that they may have an opportunity to bring any relevant technical information to the attention of FCDMC/FEMA, so that it may be considered during the course of this study. Your comments should be addressed to Ms. Cathy Register, or Mr. Pedro Calza, Hydrologists at the Flood Control District of Maricopa County, 2801 W. Durango Street, Phoenix, AZ 85009, Phone (602) 508-1501.

*Published in The Wickenburg Sun on October 14 and 21, 1992.*

A newspaper of general circulation in the County of Maricopa, State of Arizona, published in Wickenburg, Arizona, and that the copy hereto attached is a true copy of the advertisement as published weekly in The Wickenburg Sun on the dates following:

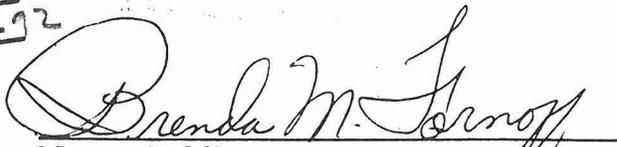
October 14 and 21, 1992

  
\_\_\_\_\_  
KEVIN CLOE  
PUBLISHER

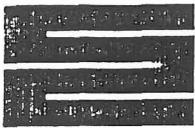
Sworn to before me this 21st day of

October A.D. 19 92

**MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.4.7  
PG 17 OF 21 DATE: 10-21-92**

  
\_\_\_\_\_  
Notary Public





October 26, 1992

STATE OF ARIZONA  
State Land Department  
1616 West Adams Street  
Phoenix, Arizona 85007

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.4.7  
PG 18 OF 21 DATE: 10-26-92

RE: Right of Entry for Surveying Purposes  
Sections 16, 32, Township 4N, Range 5W  
Section 2, Township 4N, Range 6W  
Sections 28, 32, 33, 36, Township 5N, Range 6W  
Gila and Salt River Base and Meridian

Dear Property Owner:

The Flood Control District of Maricopa County has contracted with Stanley Consultants, Inc. to perform a floodplain delineation study for Powerline Wash and Tank Wash. The study area is located approximately midway between the Towns of Buckeye and Wickenburg in Maricopa County, Arizona. The purpose of this study is to delineate areas that may be subject to inundation during a "100-year flood" event. According to records at the Maricopa County Assessor's office, you own one or more parcels of land within the limits of the study area.

The intent of this letter is to notify you of the commencement of surveying activities in support of the above mentioned study. In order to perform these surveys it may be necessary to enter your property. This activity should not result in any inconvenience or damage to property. If you have any objections to the entry onto your property, you must notify Cathy Register of the Flood Control District at 506-1501. Otherwise, it will be assumed that you consent to the entry onto your property.

The study and resulting maps will be used for floodplain management purposes and submitted to the Federal Emergency Management Agency for flood insurance information and revision of Flood Insurance Rate Maps. This study will be available to the public in approximately 12 months.

The Flood Control District and its representatives appreciate your help in assuring the accuracy of this study by allowing access to your property for the surveyors and by providing any information you may have regarding past flooding or related problems.

If you have any questions regarding this study or the right of entry, please contact Cathy Register of the Flood Control District or Scott Buchanan of Stanley Consultants, Inc.

Cathy Register, Hydrologist, Flood Control District, 506-1501.

Scott Buchanan, Project Manager, Stanley Consultants, 279-0901.

Sincerely,

STANLEY CONSULTANTS, INC.

G. Scott Buchanan  
Project Manager



October 26, 1992

BUREAU OF RECLAMATION  
Valley Center, Suite 2200  
Phoenix, Arizona 85023

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.4.7  
PG 19 OF 21 DATE: 10-26-92

RE: Right of Entry for Surveying Purposes  
Sections 29, 30, 32, Township 4N, Range 5W  
Gila and Salt River Base and Meridian  
Assessors Parcel: 503-85-33C

Dear Property Owner:

The Flood Control District of Maricopa County has contracted with Stanley Consultants, Inc. to perform a floodplain delineation study for Powerline Wash and Tank Wash. The study area is located approximately midway between the Towns of Buckeye and Wickenburg in Maricopa County, Arizona. The purpose of this study is to delineate areas that may be subject to inundation during a "100-year flood" event. According to records at the Maricopa County Assessor's office, you own one or more parcels of land within the limits of the study area.

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The study and resulting maps will be used for floodplain management purposes and submitted to the Federal Emergency Management Agency for flood insurance information and revision of Flood Insurance Rate Maps. This study will be available to the public in approximately 12 months.

The Flood Control District and its representatives appreciate your help in assuring the accuracy of this study by allowing access to your property for the surveyors and by providing any information you may have regarding past flooding or related problems.

If you have any questions regarding this study or the right of entry, please contact Cathy Register of the Flood Control District or Scott Buchanan of Stanley Consultants, Inc.

Cathy Register, Hydrologist, Flood Control District, 506-1501.

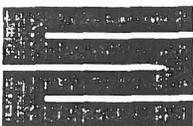
Scott Buchanan, Project Manager, Stanley Consultants, 279-0901.

Sincerely,

STANLEY CONSULTANTS, INC.

G. Scott Buchanan  
Project Manager

GSB/tlb:OCT27



October 26, 1992

FEDERAL BUREAU OF LAND MANAGEMENT  
3707 N. 7th Street  
Phoenix, Arizona 85014

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.4.7  
PG 20 OF 21 DATE: 10-26-92

RE: Right of Entry for Surveying Purposes  
Section 33, Township 4N, Range 5W  
Sections 1, 3, 4, 5, 9, 10, 11, 12, 13, 14, 15, 23, 24, Township 4N, Range 6W  
Sections 27, 34, 35, Township 5N, Range 6W  
Gila and Salt River Base and Meridian

Dear Property Owner:

The Flood Control District of Maricopa County has contracted with Stanley Consultants, Inc. to perform a floodplain delineation study for Powerline Wash and Tank Wash. The study area is located approximately midway between the Towns of Buckeye and Wickenburg in Maricopa County, Arizona. The purpose of this study is to delineate areas that may be subject to inundation during a "100-year flood" event. According to records at the Maricopa County Assessor's office, you own one or more parcels of land within the limits of the study area.

The intent of this letter is to notify you of the commencement of surveying activities in support of the above mentioned study. In order to perform these surveys it may be necessary to enter your property. This activity should not result in any inconvenience or damage to property. If you have any objections to the entry onto your property, you must notify Cathy Register of the Flood Control District at 506-1501. Otherwise, it will be assumed that you consent to the entry onto your property.

The study and resulting maps will be used for floodplain management purposes and submitted to the Federal Emergency Management Agency for flood insurance information and revision of Flood Insurance Rate Maps. This study will be available to the public in approximately 12 months.

The Flood Control District and its representatives appreciate your help in assuring the accuracy of this study by allowing access to your property for the surveyors and by providing any information you may have regarding past flooding or related problems.

If you have any questions regarding this study or the right of entry, please contact Cathy Register of the Flood Control District or Scott Buchanan of Stanley Consultants, Inc.

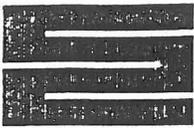
Cathy Register, Hydrologist, Flood Control District, 506-1501.

Scott Buchanan, Project Manager, Stanley Consultants, 279-0901.

Sincerely,

STANLEY CONSULTANTS, INC.

G. Scott Buchanan  
Project Manager



October 26, 1992

DOUGLAS LAND CORPORATION  
767 5th Avenue, 7th Floor  
New York, New York 11022

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.4.7  
PG 21 OF 21 DATE: 10-26-92

RE: Right of Entry for Surveying Purposes  
Sections 6, 7, 8, 9, 17, 18, 19, 20, 21, 28, 29, 30, 31, Township 4N, Range 5W  
Sections 23, 25, 26, Township 4N, Range 6W  
Section 31, Township 5N, Range 5W  
Gila and Salt River Base and Meridian

Dear Property Owner:

The Flood Control District of Maricopa County has contracted with Stanley Consultants, Inc. to perform a floodplain delineation study for Powerline Wash and Tank Wash. The study area is located approximately midway between the Towns of Buckeye and Wickenburg in Maricopa County, Arizona. The purpose of this study is to delineate areas that may be subject to inundation during a "100-year flood" event. According to records at the Maricopa County Assessor's office, you own one or more parcels of land within the limits of the study area.

The intent of this letter is to notify you of the commencement of surveying activities in support of the above mentioned study. In order to perform these surveys it may be necessary to enter your property. This activity should not result in any inconvenience or damage to property. If you have any objections to the entry onto your property, you must notify Cathy Regester of the Flood Control District at (602) 506-1501. Otherwise, it will be assumed that you consent to the entry onto your property.

The study and resulting maps will be used for floodplain management purposes and submitted to the Federal Emergency Management Agency for flood insurance information and revision of Flood Insurance Rate Maps. This study will be available to the public in approximately 12 months.

The Flood Control District and its representatives appreciate your help in assuring the accuracy of this study by allowing access to your property for the surveyors and by providing any information you may have regarding past flooding or related problems.

If you have any questions regarding this study or the right of entry, please contact Cathy Regester of the Flood Control District or Scott Buchanan of Stanley Consultants, Inc.

Cathy Regester, Hydrologist, Flood Control District, (602) 506-1501.

Scott Buchanan, Project Manager, Stanley Consultants, (602) 279-0901.

Sincerely,

STANLEY CONSULTANTS, INC.

*G. Scott Buchanan*  
G. Scott Buchanan  
Project Manager

CONTRACT FOR CONSULTANT SERVICES

CONTRACT FCD 92-09

Pursuant to the provisions of the Arizona Revised Statutes (A.R.S.), 48-3603, the Board of Directors has the authority to enter into contracts.

The Flood Control District of Maricopa County, Arizona, hereinafter called the "DISTRICT", is desirous of having certain professional services performed in connection with the Powerline Wash and Tank Wash Floodplain Delineation Study, hereinafter called the "PROJECT" and as more fully described in Exhibit "A", Scope of Work, attached; and,

STANLEY CONSULTANTS, INC., hereinafter called "CONSULTANT", is desirous of performing said services;

THEREFORE, the parties hereto mutually agree as follows:

SECTION I - SERVICES OF THE CONSULTANT

The CONSULTANT, under the general supervision of the Chief, Hydrologist of the District's Hydrology Division shall prepare studies, reports, surveys, plans, drawings, specifications and cost estimates as are necessary for the PROJECT and according to the directions and designated standards of the DISTRICT and in accordance with Exhibit A. It is understood and agreed that the DISTRICT's authorized representative shall be the Chief Hydrologist or his duly authorized representative, hereinafter called the "AGENT" and that he/she shall be the sole contact for administering this contract.

The CONSULTANT shall meet periodically with the AGENT so as to keep the DISTRICT informed of the progress of the work in accordance with the schedule defined in Exhibit A.

The CONSULTANT shall promptly advise the AGENT of any factors, which may develop during the PROJECT, that would likely result in construction or design costs in excess of budgetary constraints.

SECTION II - PERIOD OF SERVICE

The CONSULTANT shall complete all work per the schedule provided in Exhibit "A", Scope of Work within 240 calendar days after receipt of the Notice to Proceed, inclusive of DISTRICT review time. Should extension of this contract period be necessary, and any such extension(s) continue the date of contract expiration for a time period of more than one year from the date of contract execution, adjustment(s) of the consultant's fee(s) may, upon agreement by both the DISTRICT and the CONSULTANT, be made in accordance with the Consumer Price Index for Urban Consumers, Western Division published by the U.S. Department of Labor, Bureau of Labor Statistics, using the published edition coinciding with the initial contract expiration date. Any such fee adjustment shall only apply to the extended contract time period.

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.5  
PG 7 OF 23 DATE: 10-5-92

SECTION III - PAYMENTS TO THE CONSULTANT

The CONSULTANT shall be paid for work under this Contract a lump sum fee of \_\_\_\_\_ plus any adjustments that have been approved in writing in accordance with the Maricopa County Procurement Code.

The DISTRICT shall pay the CONSULTANT upon completion of the work as accepted by the DISTRICT, except that progress payments may be made as billed by the CONSULTANT based on approved monthly progress reports subject to the limitations set forth in Exhibit "A", Scope of Work. Ten percent of all contract payments made on an interim basis shall be retained by the DISTRICT as insurance of proper performance of the contract or, at the option of the CONSULTANT, a substitute security may be provided by the CONSULTANT in an authorized form pursuant to procedures established by the DISTRICT. The CONSULTANT is entitled to all interest from any such substitute security.

When the contract is fifty percent (50%) completed, one-half (1/2) of the amount retained will be paid to the CONSULTANT provided the CONSULTANT is making satisfactory progress on the contract and there is no specific cause or claim requiring a greater amount to be retained. After the contract is fifty percent (50%) completed, no more than five percent (5%) of the amount of any subsequent progress payments shall be retained providing the CONSULTANT is making satisfactory progress on the project, except if at any time the DISTRICT determines satisfactory progress is not being made, ten percent (10%) retention shall be reinstated for all progress payments made under the contract subsequent to the determination.

If the CONSULTANT desires a partial payment in accordance with the provisions above, the CONSULTANT will complete and forward, a DISTRICT provided form, indicating payment distribution to MBE/WBE firms.

Any retention shall be paid or substitute security returned or released, as applicable, to the CONSULTANT within forty-five (45) calendar days after: (1) final completion of all work per Exhibit A, (2) acceptance of work under the contract, (3) receipt of a completed "Certificate of Performance" form, (4) the CONSULTANT'S statement that no project disputes exist, (5) invoicing for any retained monies has been received by the DISTRICT, and (6) a document stating the total payments received by the prime as well as total payments the prime has made to MBE and WBE subcontractors, vendors, and suppliers.

SECTION IV - THE DISTRICT'S RESPONSIBILITIES

The DISTRICT shall furnish the CONSULTANT, at no cost to the CONSULTANT, the following information or services for this PROJECT:

A. One copy of on-hand maps, records, survey ties, bench marks or other data pertinent to the PROJECT. This does not, however, relieve the CONSULTANT of the responsibility of searching records for additional information, for requesting specific information or for verification of that information provided. The DISTRICT does not warrant the accuracy or comprehensiveness of any such information.

**MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 15  
PG 2 OF 23 DATE: 10-5-92**

B. All available information and data relative to policies, standards, criteria, and studies, etc. impacting the PROJECT as identified by the CONSULTANT.

C. Availability of staff for consultation with the CONSULTANT during the performance of studies and plan development in order to identify the problems, needs, and other functional aspects of the PROJECT.

D. Examination of documents submitted by the CONSULTANT and rendering of decisions pertaining thereto promptly, to avoid unreasonable delay in the progress of the work by the CONSULTANT. The DISTRICT will keep the CONSULTANT advised concerning the progress of the DISTRICT's review of work.

#### SECTION V - ALTERATION IN SCOPE OF WORK

Any alteration in the scope of work that will result in a substantial change in the nature of the PROJECT so as to materially increase or decrease the contract fee will require negotiation of an amendment to the contract to be executed by the DISTRICT and the CONSULTANT. No work shall commence on the change until the contract amendment has been approved by the DISTRICT and the CONSULTANT has been notified to proceed by the AGENT. It is distinctly understood and agreed that no claim for extra work done or materials furnished by the CONSULTANT will be allowed by the DISTRICT except as provided herein, nor shall the CONSULTANT do any work or furnish any materials not covered by this agreement unless such work is first authorized in writing in accordance with the Maricopa County Procurement Code. Any such work or materials furnished by the CONSULTANT without such written authorization first being given shall be at his own risk, cost, and expense, and he hereby agrees that without such written authorization he will make no claim for compensation for such work or materials furnished.

#### SECTION VI - RECORDS

Records of the CONSULTANT's payroll expense pertaining to this PROJECT and records of accounts between the DISTRICT and the CONSULTANT shall be kept on a generally recognized accounting basis and shall be available upon request to the DISTRICT or its authorized representative for audit during normal business hours. The records shall be subject to audit by appropriate grantor agency if the PROJECT is funded all or in part by a grant.

#### SECTION VII - PROJECT COMPLETION

If during the course of this contract situations arise which prevent completion within the allotted time, an extension may be granted by the AGENT.

#### SECTION VIII - TERMINATION

The DISTRICT may terminate this contract at any time upon reimbursement to the CONSULTANT of expenses which include reasonable charges for time and material for the percentage of work satisfactorily completed and turned over to the DISTRICT.

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547

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The DISTRICT reserves the right to postpone, terminate or abandon this PROJECT for the CONSULTANT's failure to complete the PROJECT on time, or failure to comply with the provisions of the contract. The DISTRICT also reserves the right to terminate any or all parts of this contract for its own convenience as the DISTRICT may determine at its sole discretion.

The DISTRICT hereby gives notice that pursuant to A.R.S. Section 38-511 "A" this contract may be cancelled without penalty or further obligation within three years after execution if any person significantly involved in initiation, negotiation, securing, drafting, or creating a contract on behalf of the DISTRICT is, at anytime while the contract or any extension of the contract is in effect, an employer, agent, or any other party to the contract in any capacity or a consultant to any other party of the contract with respect to the subject matter of the contract. Cancellation under this section shall be effective when written notice from the Chief Engineer and General Manager is received by all of the parties of the contract. In addition, the DISTRICT may recoup any fee for commission paid or due to any person significantly involved in initiation, negotiation, securing, drafting, or creating the contract on behalf of the DISTRICT from any other party to the contract arising as a result of the contract.

The CONSULTANT may terminate this contract in the event of nonpayment of fees as specified in Section III, PAYMENTS TO THE CONSULTANT.

#### SECTION IX - OWNERSHIP OF DOCUMENTS

All original documents including, but not limited to studies, reports, tracings, drawings, physical and computer models, estimates, field notes, investigations, design analyses, calculations, computer software, and specifications, prepared in the performance of this Contract are to be and remain the property of the DISTRICT and are to be delivered to the AGENT before final payment is made to the CONSULTANT. The DISTRICT reserves the right to reuse the documents as it sees fit. However, the DISTRICT will not reuse, alter, or modify these documents without noting such alterations, modifications, or intent of their reuse, and will hold the CONSULTANT harmless from any claims arising from the reuse, alteration, or modification of the documents. The CONSULTANT may retain reproducible copies of all such documents delivered to the DISTRICT.

#### SECTION X - COMPLIANCE WITH LAWS

The CONSULTANT is required to comply with all Federal, State and local laws, local ordinances and regulations. The CONSULTANT's signature on this contract certifies compliance with the provisions of the I-9 requirements of the Immigration Reform and Control Act of 1986 for all personnel that the CONSULTANT and any subconsultants employ to complete this PROJECT. It is understood that the DISTRICT shall conduct itself in accordance with the provisions of the Maricopa County Procurement Code.

SECTION XI - GENERAL CONSIDERATIONS

A. Prior to beginning the work, the CONSULTANT shall furnish the DISTRICT for approval the names of its key employees, and of its sub-consultants and their key employees to be used on this PROJECT. Any subsequent changes are subject to the written approval of the DISTRICT.

The CONSULTANT in replacing a MBE/WBE subcontractor should attempt to contract with another MBE/WBE.

B. The CONSULTANT agrees during the execution of this contract that no clients other than the DISTRICT, or the Federal Emergency Management Agency, will be retained within the area of the 100-year floodplain for the area without expressed written authority from the Chief Engineer and General Manager of the DISTRICT.

C. The failure of either party to enforce any of the provisions of this Contract or to require performance of the other party of any of the provisions hereof shall not be construed to be a waiver of such provisions, nor shall it affect the validity of this Contract or any part thereof, or the right of either party to thereafter enforce each and every provision.

D. The CONSULTANT shall be responsible for the cost of any additional design, field layout, testing, construction and supervision necessary to correct those errors or omissions attributable to the CONSULTANT and for any damage incurred by the DISTRICT as a result of additional construction costs caused by such CONSULTANT errors or omissions.

E. The fact that the DISTRICT has accepted or approved the CONSULTANT's work shall in no way relieve the CONSULTANT's responsibility.

F. It is mutually understood and agreed that this Contract shall be governed by the laws of the State of Arizona, both as to interpretation and performance. Any action at law, suit in equity, or judicial proceeding for the enforcement of this Contract, or any provision thereof, shall be instituted only in the courts of the State of Arizona.

SECTION XII - SUCCESSORS AND ASSIGNS

This Contract shall not be assigned by either party without prior written approval of the other except that the CONSULTANT may use in the performance of this Contract without prior approval of the DISTRICT, personnel or services of its related entities and affiliated companies as if they were an integral part of the CONSULTANT; and it shall extend to and be binding upon the heirs, executors, administrators, successors and assigns of the parties hereto.

SECTION XIII - NO KICK-BACK CERTIFICATION

The CONSULTANT warrants that no person has been employed or retained to solicit or secure this Contract upon any agreement or understanding for a commission, percentage, brokerage, or contingent fee; and that no member of the Board of Directors/Supervisors or any employee of the DISTRICT has any interest, financially or otherwise, in the CONSULTANT firm.

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For breach or violation of this warranty, the DISTRICT shall have the right to annul this Contract without liability, or at its discretion to deduct from the Contract price or consideration, the full amount of such commission, percentage, brokerage, or contingent fee.

#### SECTION XIV - ANTI-DISCRIMINATION PROVISION

The Flood Control District of Maricopa County will endeavor to ensure in every way possible that minority and women-owned business enterprises shall have every opportunity to participate in providing professional services, purchased goods, and contractual services to the Flood Control District of Maricopa County without being discriminated against on the grounds of race, religion, sex, age, or national origin.

The CONSULTANT agrees not to discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, or handicap and further agrees not to engage in any unlawful employment practices. The CONSULTANT further agrees to insert the foregoing provisions in all subcontracts hereunder.

#### SECTION XV - AMENDMENTS

This Contract may be amended by mutual written agreement of the DISTRICT and the CONSULTANT.

#### SECTION XVI - INDEMNIFICATION AND INSURANCE

A. The CONSULTANT shall provide and maintain the following minimum insurance requirements:

1. Professional Liability. The CONSULTANT shall show evidence of maintaining continuous insurance for the past three (3) years with a minimum coverage limit of \$1,000,000.00 each claim and/or in the aggregate.

The CONSULTANT shall provide and maintain Professional Liability Insurance with a minimum single limit of \$1,000,000.00 for each claim made and an aggregate limit of \$1,000,000.00 for all claims made through this contract's completion date or the policy's life, whichever is longer.

2. Commercial General Liability. Commercial general liability insurance with a minimum single limit of \$1,000,000.00 for each coverage/occurrence. The policy shall include coverage for bodily injury and personal injury, broad form property damage and blanket contractual coverage.

3. Automobile Liability. Automobile liability insurance, with an individual single limit for bodily injury and property damage of no less than \$1,000,000.00, each occurrence, with respects to CONSULTANT's vehicles (whether owned, hired, non-owned), assigned to or used in the performance of this contract.

4. Workers' Compensation Insurance. This insurance shall be maintained during the life of the contract.

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5. Additional Insured. The policies, except professional liability and workers' compensation, required by this section shall name the DISTRICT as Additional Insured, and shall specify that insurance afforded the CONSULTANT shall be primary insurance, and that any insurance coverage carried by the DISTRICT or its employees shall be excess coverage, and not contributory coverage to that provided by the CONSULTANT. No policy issued under this contract shall lapse, be cancelled, allowed to expire, or be materially changed to affect the coverage available to the DISTRICT without thirty (30) days written notice to the DISTRICT.

6. DISTRICT approved documentation outlining the coverages specified in this section shall be filed with the DISTRICT prior to issuance of the Notice to Proceed.

B. The CONSULTANT agrees to indemnify and save harmless the DISTRICT, any of its departments, agencies, officers, or employees from all suits, including attorney's fees and costs of litigation, actions, loss, damage, expense, cost or claims, of any character or any nature arising out of the CONSULTANT's wanton, willful or negligent acts, errors or omissions in the performance of work under this Contract, and any wanton, willful or negligent acts, errors or omissions by any subconsultant or other agent used by the CONSULTANT in the performance of work under this Contract.

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IN WITNESS WHEREOF, the parties herein have executed this Contract.

STANLEY CONSULTANTS, INC.

Michael E. Hunzinger  
Principal

Michael E. Hunzinger, P.E.

Printed Name

Vice President

Title

Date: September 10, 1992

42-1320758

Tax Identification Number

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

RECOMMENDED BY:

Stanley L. Smith, Jr.  
Stanley L. Smith, Jr., P.E.  
Acting Chief Engineer and General Manager

ACCEPTED AND APPROVED BY:

Betty Bayless  
Chairman, Board of Directors

ATTEST:

Jim McLeod  
Clerk of the Board

Date: 10.5.92

LEGAL REVIEW

Approved as to form and within the powers and authority granted under the laws of the State of Arizona to the Flood Control District of Maricopa County.

[Signature]  
General Counsel, District  
Date: 9-14-92

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SCOPE OF WORK FCD 92-09  
FLOODPLAIN DELINEATION AND TOPOGRAPHIC MAPPING  
FOR POWERLINE AND TANK WASHES

GENERAL

The project consists of approximately 15.4 river miles of floodplain and floodway delineations for 9.3 miles of Powerline Wash and 6.1 miles of Tank Wash, both as shown on Exhibit 1.

For Powerline Wash, the study shall begin at a point at which there is no influence from Star Wash on the flows in Powerline Wash. This point is estimated to be 0.25 miles south of the north section line of section 33 in T.4 N., R.5 W. The study shall terminate at a distance approximately 1 mile west of Vulture Mine Road.

For Tank Wash, the study shall begin at a point at which there is no influence from Star Wash on the flows in Tank Wash. This point is estimated to be 0.5 miles south of the north section line of section 28 in T.4 N., R.5 W. The study shall terminate at the south Township Line of T.5 N. also being the north Township Line of T.4N.,

This study will require the development of all necessary topographic data to fully cover the extent of the floodplain (extended cross sections will not be allowed except in areas of true breakouts). The eastern most mapping limits will be as shown on Wood/Patel Associates' Exhibit A. The consultant shall allow sufficient overlap in mapping to provide for continuous topographic mapping of the Powerline Wash and Tank Wash floodplains and to ensure accurate correlation between the two aerial survey subcontractors.

Coordination with Wood/Patel Associates will be required in regard to the portions of Powerline and Tank Washes located east of the mapping limits shown on Wood/Patel Associates' Exhibit A. The consultant shall identify the locations and alignments of cross sections within the area. Wood/Patel shall provide the consultant with the digital cross section data for use in the delineation study. The consultant will provide Wood/Patel with the necessary floodplain data, as identified in the GIS Data Delivery Specifications, for digitizing for the GIS.

The consultant will develop the floodplain and floodway delineations using the Corps. of Engineer's HEC-2 computer model. The consultant must use sound engineering judgement in the development of the hydraulic model. The results of the model must be analyzed carefully and refinements made to the input parameters in order to obtain the most realistic results.

All work must meet Arizona Department of Water Resources (ADWR) and Federal Emergency Management Agency (FEMA) requirements for floodplain delineations. The results of this study must be reviewed and accepted by FEMA prior to the finalization of this contract.

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All work under this Scope will be completed within 240 calendar days from the date of Notice to Proceed, including 60 days for District reviews.

**TASK 1 - COORDINATION**

- 1.1 The consultant will submit a project schedule showing coordination meetings and completion dates for each of the tasks in the scope within 14 days of Notice To Proceed. The consultant shall update this project schedule when appropriate.
- 1.2 The consultant shall participate in regular coordination meetings (at least every three weeks) with the District's Project Manager and in milestone coordination meetings in the development of the hydraulic analyses. The consultant is responsible for the minutes of any meetings. Whenever possible, coordination and milestone meetings should be combined.
- 1.3 The consultant shall submit monthly progress reports at least 5 days before submittal of monthly invoices. The report shall be brief and should be no longer than two typed pages. At a minimum, the monthly report shall contain the following:
  - a. A description of the work accomplished by task during the reporting month.
  - b. Percent (%) completed for the month and percent (%) cumulative completed for each task.
  - c. A brief description of the work to be accomplished the following month.
  - d. A description of any problems encountered.
- 1.4 The consultant is responsible for placing the legal advertising at the beginning of the study, notifying the public of the study. The ad will cover the Powerline and Tank Washes Study, the Star Wash and Tributaries Study, and the Daggs Wash Study. The ad will be run in a widely circulated newspaper two times, with approximately one week between runs. The ad must also be run two times in a local newspaper that serves the area being studied. After the ad is run the consultant will supply the District with three (3) separate original affidavits of publication from the newspaper(s) for each day that the ad ran.
- 1.5 The consultant will notify all property owners and obtain any necessary Rights of Entry for the study area. The District will assist the consultant as may be necessary to complete this task. The consultant will furnish the District with a list of all the property owners notified and a sample Right of Entry letter.

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- 1.6 The consultant shall coordinate with all local development around the study area. The purpose of this coordination is to identify local flooding problems and obtain information on current and planned public works projects, channel modifications, storm-drainage systems, development, and obtain the current corporate limits.
- 1.7 There will be two public meetings. The consultant shall provide any technical support necessary to conduct the public meetings. The meetings shall conform to FEMA guidelines. The first meeting shall be held to inform the public of the purpose and scope of the study. The second meeting will be to inform the public and obtain public comment on the study results, and shall take place prior to the submittal of the final report to FEMA.
- 1.8 The consultant will submit delineation maps, hydraulics report, and HEC-2 model to ADWR and FEMA for review by the Technical Evaluation Contractor (TEC), and any other governmental agency reviewers through the District. The consultant will respond to questions by the reviewers and make modifications to the delineation maps, hydraulics report, and HEC-2 model as required.

#### TASK 2 - DATA COLLECTION

- 2.1 The consultant will collect and review pertinent data from the District and other outside sources. Data to be collected will include previous flood hazard reports and hydrology for the study area; existing topographic mapping; historical flooding information; as-built plans for existing structures; FEMA Flood Hazard Boundary Maps and any Letters of Map Amendment and/or Revisions, and other pertinent information.
- 2.2 A written report summarizing the data collected will be submitted to the District for information purposes. A preliminary draft of this report is due within 90 days of Notice to Proceed.

#### TASK 3 - TOPOGRAPHIC MAPPING

- 3.1 An aerial survey subcontractor shall be retained by the consultant as part of this contract. The consultant shall coordinate all the aerial surveying work with the aerial surveying subcontractor to ensure that the specifications of the aerial surveying work are met. The consultant is responsible for ensuring that the topographic mapping covers the area of delineation. Quality control on surveys will be per FEMA Document 37, Flood Insurance Study Guidelines and Specifications for Study Contractors, March 1991.
- 3.2 Digital contour and planimetric data developed for this study shall be delivered according to the District's HIS specifications as specified in the District's HIS: Data Delivery Specifications-Rev. 01 and 01.1.

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- 3.3 Prepare topographic mapping to a 2-foot contour interval, with a scale of 1 inch = 200 feet, with spot elevations on all section line and mid-section line roads.
- 3.4 Ground Control:
- a. The consultant shall provide all survey control using 1983 NAD.
  - b. The consultant shall systematically set panel points and establish horizontal and vertical control throughout the areas to be mapped for use in compilation by the aerial survey contractor. Where readily available, surveys will tie into the State Plane Coordinate System. Field control shall be sufficient to readily allow for compilation of maps by the aerial survey contractor at the desired map scale and contour interval, and will be based on the National Geodetic Vertical Data of 1929 (NGVD).
  - c. The horizontal and vertical control points shall be located and marked by the consultant. The controls for the aerial mapping shall be in sufficient numbers and shall be in locations which will be compatible with the accuracy of the mapping requirements. The controls shall be of at least third order accuracy. Section corners, quarter corners, and mid-section points shall be used for control points wherever possible.
- 3.5 The consultant shall provide permanent non-erasable topographic mylars of the work study drawings. The drawings shall be 24" X 36" in size, with a scale of 1 inch = 200 feet and a contour interval of 2 feet for all mapping with the exception of section line roads which will have spot elevations. A cover sheet will be provided with the project title, date of topographic mapping, and a location map showing geographic range covered by each specific mapping sheet. Each drawing shall include the floodplain and floodway delineations and a minimum of a north arrow, scale, section corners and quarter corners, current and proposed streets and highway names, State Plane Coordinate System, major drainage features, corporate boundaries, cross section lines, channel station center line, index map, description and elevation of control points and ERMs, and reference marks used in ground control. See Exhibit 2 for how the drawings are to be laid out. The mapping will have an accuracy such that ninety percent (90%) of all contours shall be within one-half contour of the true elevations and the remaining ten percent (10%) of the contours shall not be in error by more than one contour interval.
- 3.6 Sketch maps no larger than 11" x 17" for the study area must be included in the narrative report along with the flood profile maps.
- 3.7 Flood profile maps, per FEMA Document 37, must be provided in the narrative report.

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TASK 4 - FIELD SURVEY

- 4.1 Prepare topographic mapping to a 2 foot contour interval with a scale of 1 inch = 200 feet, with spot elevations on all section line and mid-section line roads, for floodplain/floodway delineation areas as identified in Task 6 or FEMA criteria, whichever is more stringent
- 4.2 Ground Control for Floodplain Delineations:
- a. All topographic mapping and survey work shall meet or exceed Federal Emergency Management Agency (FEMA) minimum criteria as defined in FEMA Document 37, Flood Insurance Study Guidelines and Specifications for Study Contractors, March 1991. This would include, but is not limited to: the establishment of "permanent" elevation reference marks (ERM's); field control; and verification of profiles by the ground survey profile procedure. Prior to the establishment of "permanent" ERM's, the consultant shall submit to the District for comment a drawing showing the location of all proposed "permanent" ERM's.
  - b. Horizontal and Vertical Control: Systematically set panel points and establish horizontal and vertical control throughout the area to be mapped for use in compilation by the aerial survey contractor. Where readily available, surveys will tie into State Plane Coordinate System 1983 NAD. Field control shall be sufficient, at least one "permanent" point per mile, such point(s) being used as Elevation Reference Marks (ERMs). Surveys will be based on the National Geodetic Vertical Datum (NGVD 29), per FEMA guidelines. "Permanent" survey points shall consist of existing monumentation, such as brass caps or similar survey monuments. Where additional monumentation is needed, survey markers conforming to Maricopa Association of Governments (MAG) Uniform Standard Detail for Public Works Construction, detail 120-1, Type C, shall be placed 2" +/- above grade, and topped with a brass cap. Elevation Reference Marks will be labelled on available maps and described in a manner which allow them to be readily located in the field.
  - c. All aerial targets are to be removed following completion of the topographic mapping.
- 4.3 The consultant shall verify the accuracy of the mapping by the procedures called for in FEMA Document 37 or other methods approved by FEMA. This shall include the verification of cross sections used in the floodplain delineation.
- 4.4 Field surveys or "as-built" plans of all bridges, culverts, and hydraulic structures are to be obtained by the consultant. This information should be reduced and compiled into an 11"x 17" (maximum size) drawing for inclusion in the final report. The information presented in the drawing should be in a format appropriate for use in the HEC-2 model. It may be necessary to field survey some structures since the as-built plans may not be on 1929 NGVD.

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TASK 5 - HYDROLOGY

- 5.1 The hydrologic data will be provided by the District.

TASK 6 - FLOODPLAIN AND FLOODWAY DELINEATION

- 6.1 Floodplain and floodway delineations must be obtained using the U.S. Army Corps of Engineers HEC-2 Water Surface Profiles computer model, version 4.6.2, May 1991, and methodology acceptable to FEMA. This model will simulate the effects of floodplain geomorphology, flow changes, bridges, culverts, hydraulic roughness factors, effective flow limitations, split-flows, and other considerations. The consultant will prepare the study using the guidelines established in FEMA Document 37, Flood Insurance Study Guidelines and Specification for Study Contractors, March 1991, and FIA Document 12, Appeals, Revisions, and Amendments to Flood Insurance Maps, January 1990.
- 6.2 The delineation work shall meet requirements for floodplain and floodway delineations as prescribed by FEMA and the Arizona Department of Water Resources.
- 6.3 The consultant is to make refinements to the HEC-2 model based on review of the model results by the District, ADWR, FEMA, and the Technical Evaluation Contractor. The consultant shall review the HEC-2 model results for reasonableness. Adjustments to the input parameters for obtaining the most realistic results is normal to the scope.
- 6.4 The consultant will prepare working maps and models of the 100-year floodplain and floodway during the course of the hydraulic modeling analysis for review by the District at progress and milestone meetings. Floodways are to be determined using equal conveyance encroachment methods to start with, but only encroachment method 1 will be used in the final analysis. The floodway encroachment is to be as near the one foot maximum rise in elevation as possible.
- 6.5 The consultant must obtain District approval at each of the following steps:
- a. Field reconnaissance report and estimation of Manning's "n" values.
  - b. Proposed location and alignment of the cross sections and channel centerline.
  - c. Floodplain (natural) delineation.
  - d. Floodway delineation using equal conveyance encroachment.
  - e. Floodway delineation using encroachment method 1.
  - f. Final Hydraulics Report.

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- 6.6.1 The consultant will conduct a field reconnaissance of the full study reach. This will include observation of channel and floodplain conditions for estimation of Manning's "n" values; photographic documentation of floodplain characteristics; determination of channel bank stations; observation of possible overflow areas; inspection of levees or other flood control structures; and measurement of bridge dimensions.
- 6.6.2 Mannings "n" values are to be determined using the methodology in the USGS report, Estimated Manning's Roughness Coefficients for Stream Channels and Flood Plains in Maricopa County, Arizona, April 1991. Copies of the report are available through the District.
- 6.6.3 A draft report on the field reconnaissance will be submitted to the District for review and approval prior to beginning the HEC-2 modeling. The report will present the determination of channel and overbank "n" values using captioned color photographs or color photocopies. The report will also discuss floodplain conditions affecting the delineation, describe structures and obstructions, and provide color photos or photocopies of major hydraulic structures. Photo locations, structures, and "n" values will be displayed on reduced scale mapping include in the report. The final report will be included in the Final Hydraulics Report.
- 6.7.1 The location and alignment of cross sections and channel centerline will be submitted for the District's review and approval prior to digitizing the cross section data. Cross section stationing will be from left to right looking downstream with the thalweg as station 10,000. Cross sections will be spaced approximately every 500 feet, unless geographic or structural constraints dictate otherwise. Identification of cross sections will be in river miles, increasing upstream. The stationing will tie into the specified river mile of the existing FEMA studies. Cross section orientation may need to be altered after running of HEC-2 model to make sure that they are perpendicular to flow per FEMA criteria.
- 6.7.2 All cross sections will be plotted using a pen, laser, or electrostatic plotter . The cross section plots will show water surface profiles, ineffective flow areas, "n" values, encroachments, channel stationing and other pertinent information. All plots are to be at an engineered scale and are to be accompanied by a legend. These plots are to be available at all reviews.
- 6.7.3 Cross section plots will show the following information: a plot of digitized "GR", STCHL, STCHR, centerline (station 10,000) to be used as a check of input data and for working sections during compilation of the floodplain model; a plot of the cross section for the completed floodplain run which shows the floodplain water surface elevation, ineffective flow areas, "n" factor, and encroachments to be used as working sections for development of the floodway model. The final cross section plots will show a plot of the final floodway model cross sections with Type 1 encroachments, encroached water surface, and flow velocity, in addition to the previously stated items. These cross sections will be submitted as part of the Final Hydraulics Report.

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- 6.8 Bridges and culverts must be modeled in compliance with HEC-2 modeling requirements for the selected routine. Where multiple bridges occur, each bridge will be modeled separately. The HEC-2 modeling results for bridges, culverts, and other hydraulic structures must be checked by using an independent method approved by the District to analyze these structures.
- 6.9 For floodplains identified as ponding areas, it is preferable to analyze the area by using the HEC-2 model, which will provide the District with water surface elevations. If appropriate, the consultant shall identify in the ponded floodplains a floodway.
- 6.10 Flood zones must be determined according to FEMA criteria and clearly labelled on the final drawings.
- 6.11 Flood profiles must be developed per FEMA guidelines.
- 6.12 The final report for the floodplain/floodway delineation study will include, but is not limited to the following:

I. Introduction

- a. Purpose of study
- b. Authority for study
- c. Coordination and acknowledgments
- d. Public notification and contact

II. Area Studied

- a. Scope of study
- b. Community description
- c. Principal flood problems
- d. Flood protection measures

III. Engineering methods

- a. Hydrologic analyses
- b. Hydraulic analyses

IV. Floodplain Management applications

- a. Flood boundaries
- b. Floodways
- c. Total acres of floodplain and floodway (from HEC-2 output,

TWA variable

V. Insurance applications and CRS summary

VI. Other studies

VII. Location of data

VIII. Bibliography

IX. Reduced Delineation Maps (11"x17")

X. ERM's

XI. Flood Profiles

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TASK 7 - FINAL PRODUCTS

7.1. Mapping:

- a. One complete set of 9" X 9" contact prints of the aerial stereo photographs sequentially numbered and catalogued.
- b. One complete set of contour maps, blueline, draft copy for Flood Control District reference during the project, delivered immediately following completion of the topographic mapping.
- c. One complete set of contour maps at 1"= 200' scale with the floodplain delineations in reproducible form (mylar) and nine blueline copies as outlined in Task 3.
- d. One set of transparent overlays of photo-mylars.

- 7.2 Digitized topographic data and floodplain/floodway boundaries in conformance with the District's GIS Specifications.
- 7.3 Two (2) diskette copies of the HEC-2 input/output files on 5-1/4", 1.2 Mb diskettes compatible with an IBM-AT personal computer.
- 7.4 Tabular list of control points (ERM's) used with descriptions, elevations, and coordinates.
- 7.5 The consultant will produce a final report incorporating the comments of the District, FEMA and other reviewers. Six copies of the Hydraulics report, as outlined in Task 6, will be delivered.
- 7.6 Documentation for this study will be as outlined in ADWR Sate Standard Attachment 1-90, Instructions for Organizing and Submitting Technical Documentation for Flood Studies, September 1991.
- 7.7 Two (2) copies of the current FIRM panels showing the proposed delineation.

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**FLOOD CONTROL DISTRICT OF MARICOPA COUNTY**

**Contract Change Order No. 1**

Date: July 1, 1993 FCD Contract No./Name: FCD 92-09, Powerline Wash FIS

To: Stanley Consultants, Contractor/Consultant.

You are hereby directed to make the herein described changes from the plans and specifications or do the following described work not included in the plans and specifications on the above-mentioned project.

Changes requested by: Leanna Cumberland

Provide description of work to be done, estimate of quantities, and prices to be paid. Segregate between additional work at contract price, agreed price, and actual cost. Unless otherwise stated, rates for rental of equipment on actual cost work cover only such time as equipment is actually used and no allowance will be made for idle times.

\* (1) Estimate of increases and/or decreases in contract items at contract prices.

\*\* (2) Estimate of extra work at agreed price and/or actual cost.

Sheet No. 1 of 1

Bid Item		Estimated	As-Built	Difference	Unit	Difference
No.	Description	Quantity	Quantity	+ or -	Price	+ or -
DELETE PARAGRAPH 5 UNDER SECTION III - Payments To The Consultant and INSERT THE FOLLOWING PARAGRAPH: Any retention monies shall be paid or substitute security returned or released, as applicable, to the CONSULTANT within forty-five (45) calendar days after: (1) Completion of the work in Exhibit A through the submittal of District accepted/approved documents to FEMA, (2) receipt of a completed "Certificate of Substantial Performance" form, (3) the CONSULTANT's statement that no project disputes exist; and (4) invoicing for any retained monies has been received by the District. Upon acceptance and approval of the project by FEMA and the completion of all work required by the DISTRICT, the CONSULTANT shall submit a final Certificate of Performance and its invoice for any sums remaining due and payable under this Contract.						

We, the undersigned Contractor/Consultant, having given careful consideration to the change(s) proposed, hereby agree, if this proposal is approved, that we will provide all equipment, furnish all material (except as may otherwise be noted above), and perform all services necessary for the work above specified, and we will accept as full payment therefor the prices shown above.

By reason of this proposed change N/A days extension of time will be allowed. Total new contract amount through this Change Order No. 1 \$130,200.

Contractor/Consultant: Stanley Consultants  
3117 N. 16th Street  
Phoenix, AZ 85016

By: Michael C. Hernandez  
 Title: Vice President  
 Date: July 6, 1993

Recommended by: [Signature]  
 Date: July 1, 1993

Approved by: [Signature]  
 Chief Engineer and General Manager  
 Date: 7-8-93

**MARICOPA COUNTY, ARIZONA**  
**POWERLINE AND TANK WASHES**  
**STANLEY CONSULTANTS #11547**  
**DOCUMENT INDEX # 1.5**  
**PG 18 OF 23 DATE: 7-1-93**

Flood Control District of Maricopa County  
2801 West Durango Street  
Phoenix, Arizona 85009  
(602) 506-1501

FAX # 506-4601

COVER SHEET

TO: SCOTT BUCHANAN

COMPANY OR DEPT: STANLEY CONSULTANTS, INC. FAX # 230-7655

FROM: CATHY REGESTER

NUMBER OF PAGES BEING SENT INCLUDING COVER SHEET: 10

IF THERE ARE ANY PROBLEMS, PLEASE CALL (602) 506-1501.

COMMENTS: FINAL SCOPE OF WORK. ALL REFERENCES  
TO NAVD 88 REMOVED. PLEASE NOTE THAT, FOR  
CLARIFICATION, TASK ITEM 3.2 NOW SPECIFIES THE  
HIS SPECS AS REV. 01 & 01.1. THESE ARE THE  
SPECS THAT WERE HANDED OUT AND DISCUSSED IN  
THE WORKSHOP OF AUGUST 14, 1992.  
PLEASE CALL IF ANY QUESTIONS/PROBLEMS.

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.5  
PG 19 OF 23 DATE: 8-24-92



**STANLEY CONSULTANTS, INC.**

3117 North 16th Street • Phoenix, AZ 85016

Tel: 602/279-0901 • Fax: 602/230-7655

December 11, 1992

Ms. Cathy Register  
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY  
2801 W. Durango Street  
Phoenix, Arizona 85009

SUBJECT: Powerline Wash/Tank Wash FIS  
FCD Contract 92-09  
Change in Study Limits

Dear Cathy:

This letter is intended to review the change in study limits at the upstream end of Tank Wash resulting from our field reconnaissance on December 7, 1992. From our observations in the field and review of aerial photography, it is evident that there are two separate major tributaries of Tank Wash which come together in the southwest quarter of Section 1, Township 4N, Range 6W. I will refer to these tributaries as the north branch of Tank Wash and the south branch.

The north branch was used in previous hydrologic analysis and subsequently in establishing study limits for FCD Contract 92-09. However, it is evident under recent closer examination that it has a smaller contributing area and channel cross section than the south branch. It is also apparent that the estimated flow rates from the associated contributing areas may be in question.

We agreed in subsequent telephone conversations that Stanley Consultants would adjust the study limits to include mapping, cross sections, hydraulic analysis and floodplain limits on a portion of the south branch. To compensate for this additional effort, the upstream limit of the north branch will be cut back about 2,000 feet. This is intended to maintain the same basic level of effort and study fee.

The Flood Control District will be responsible for any changes in hydrology associated with this study as well as any associated coordination of revised hydrology with FEMA. Stanley Consultants will incorporate the necessary hydrologic data and narrative from the Flood Control District in its flood insurance study report to FEMA and reflect the revised hydrology in the hydraulic analysis.

I have included a copy of Exhibit A, Sheet 2 of 3 with the revised upstream limit of study dated December 10, 1992. If you have any questions, revisions or additions regarding what I have presented here, please give me a call at 279-0901. Thank you.

Sincerely,

STANLEY CONSULTANTS, INC.

Scott Buchanan  
Project Manager

gsb/tlb:DEC017  
SCI11547

cc: Mike Hunzinger, Stanley Consultants  
Ellis Hyde, Kenney Aerial (w/encl.)

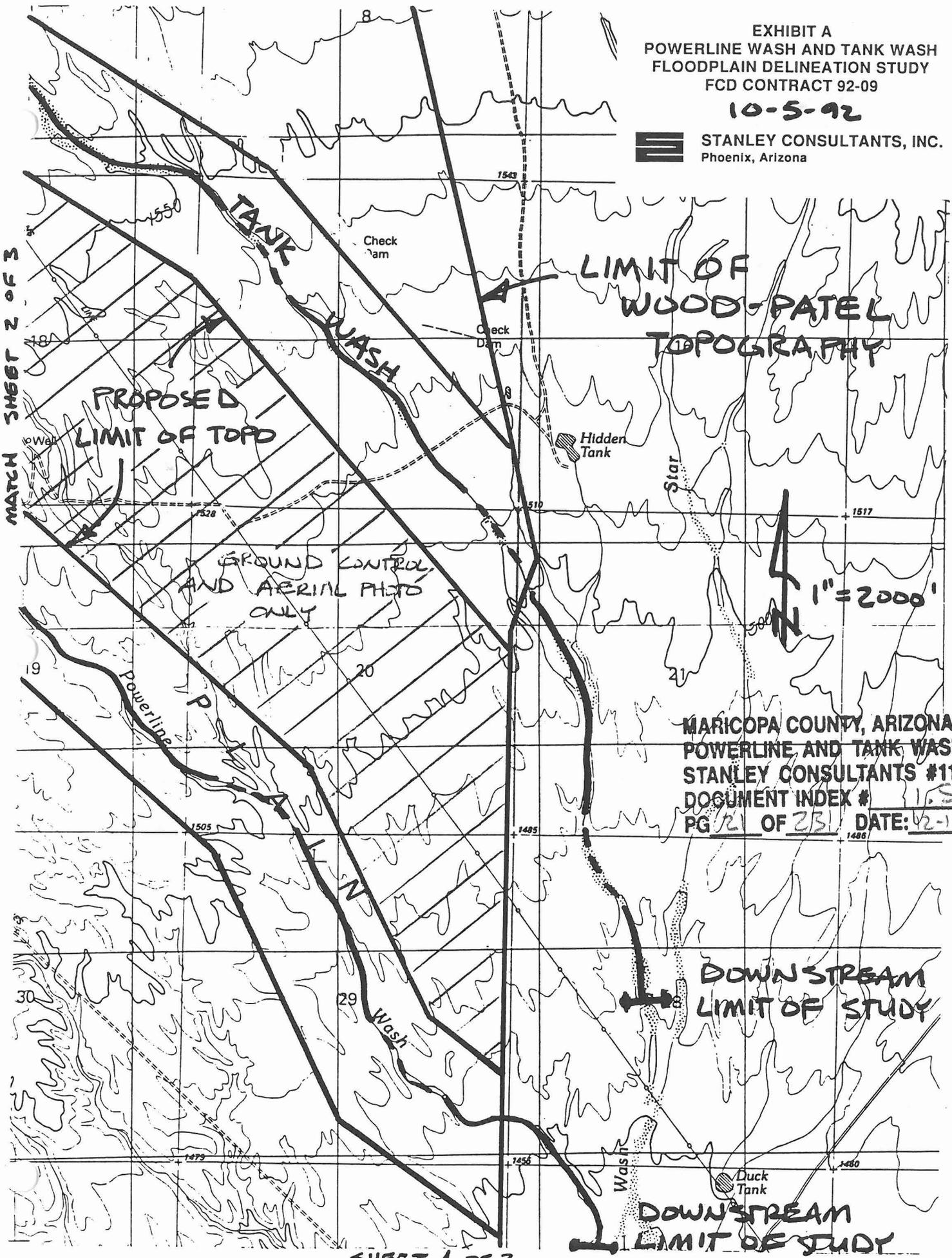
**MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 1.5  
PG 20 OF 23 DATE: 12-11-92**

EXHIBIT A  
POWERLINE WASH AND TANK WASH  
FLOODPLAIN DELINEATION STUDY  
FCD CONTRACT 92-09

10-5-92



STANLEY CONSULTANTS, INC.  
Phoenix, Arizona



MATCH SHEET 2 OF 3

PROPOSED  
LIMIT OF TOPD

LIMIT OF  
WOOD-PATEL  
TOPOGRAPHY

GROUND CONTROL  
AND AERIAL PHOTO  
ONLY

1" = 2000'

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 11.5  
PG 2 OF 231 DATE: 12-11-92

DOWNSTREAM  
LIMIT OF STUDY

DOWNSTREAM  
LIMIT OF STUDY

SHEET 1 OF 3

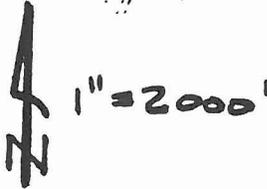
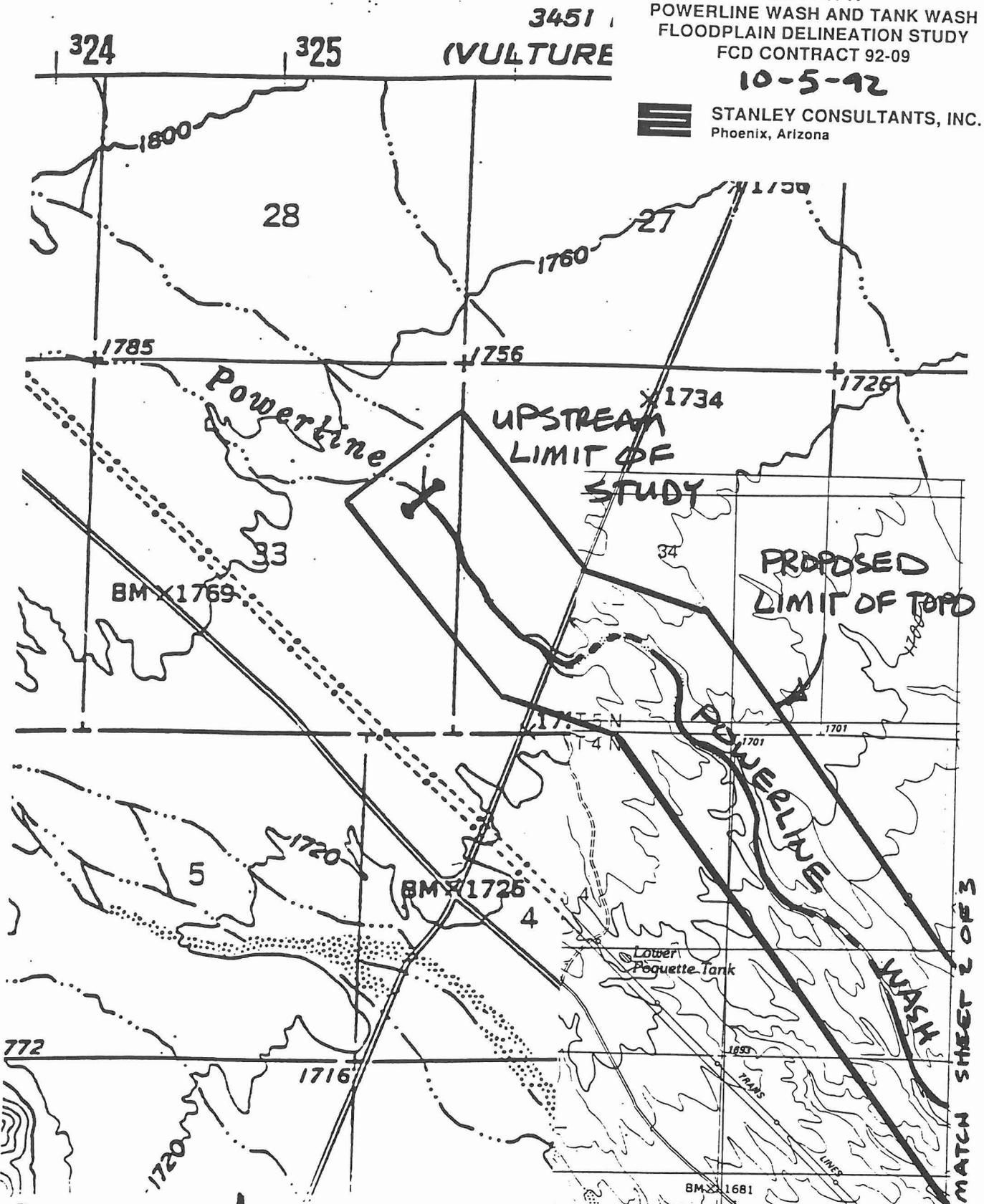


EXHIBIT A  
POWERLINE WASH AND TANK WASH  
FLOODPLAIN DELINEATION STUDY  
FCD CONTRACT 92-09

10-5-92



STANLEY CONSULTANTS, INC.  
Phoenix, Arizona



MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 21.5  
PG 23 OF 23 DATE: 12-11-92

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

**SECTION 2 - MAPPING AND SURVEY INFORMATION**

- 2.1 Description of Mapping Control and Elevation Reference Marks
- 2.2 Survey Map Index (See Clear Pocket Inside Back Cover)
- 2.3 Survey Field Notes
- 2.4 Watershed Maps (See Clear Pocket Inside Back Cover)
- 2.5 Hydraulic Analysis Maps (Preliminary Flood Delineation Maps)  
Note: Maps included in this section are reduced scale 1" = 450'. Full size maps at 1" = 200' are under separate cover.
- 2.6 Draft Flood Insurance Rate Map (See Clear Pocket Inside Back Cover)
- 2.8 Miscellaneous Maps - Aerial Photo Overlays  
Note: Aerial photo overlay maps at scale 1" = 200' are under separate cover.

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

**SECTION 2.1 - DESCRIPTION OF MAPPING AND CONTROL**

The vertical datum for the mapping used in this study is National Geodetic Vertical Datum of 1929. The horizontal datum is North American Datum of 1927. These datums were chosen, after consultation with FEMA to be consistent with the existing Jackrabbit Wash Study which is immediately adjacent to Powerline and Tank Washes.

The vertical benchmark used in this study is a United States Coast and Geodetic Survey brass cap in concrete stamped "Trans 1947" located approximately 200 feet south of the powerline maintenance road in Section 32, Township 4 North, Range 5 West. The elevation is 1461.39.

Vertical ground control was set by Stanley Consultants field crews using standard trigonometric EDM leveling. Horizontal ground control was performed by Project Engineering Consultants, Inc. (PEC), using the Global Positioning System (GPS).

Aerial mapping and HEC-2 cross sections for this study were provided by two aerial mapping firms. The division, or match line, between the two coverages is along the west line of Sections 16, 21, 28 and 33, Township 4 North, Range 5 West. The area west of this line was mapped by Kenney Aerial Mapping Inc., and the area east of this line was mapped by Aerial Mapping Company, Inc. as part of the Star Wash Flood Delineation Study which was done concurrently by Wood/Patel and Associates, Inc.

Aerial Mapping for this study was provided along the main channels of Powerline and Tank Washes. The width of each coverage was established based on site visit, aerial photographs and USGS topography to include the entire anticipated 100-year floodplain of each wash. Ground control and aerial photographs for the area in between Powerline Wash and Tank Wash was provided through this study so that 200 scale 2 foot contour mapping can be produced from this coverage if so desired in the future.

POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
FCD 92-09

ELEVATION REFERENCE MARKS

Horizontal Datum - NAD 1927

Vertical Datum - NGVD 1929

<u>ID Number</u>	<u>Elevation</u>	<u>Coordinates</u>	<u>Description/Location</u>
ERM 19	1485.03	N971584.208 E236987.221	G.L.O. BRASS CAP ON 2" PIPE, 1.20 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 20, 21, 28 AND 29, T4N-R5W, DATED 1916.
ERM 24	1536.84	N974327.015 E226704.787	G.L.O. BRASS CAP ON 1" PIPE, 1.20 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTION 24, T4N-R6W AND SECTION 19, T4N-R5W, DATED 1916.
ERM 28	1658.29	N987634.146 E216264.958	G.L.O. BRASS CAP ON 2" PIPE, 1.55 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 2, 3, 10 AND 11, T4N-R6W, DATED 1916.
ERM 32	1752.08	N997659.840 E207010.131	G.L.O. BRASS CAP ON 2" PIPE, 0.80 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 27, 28, 33 AND 34, T5N-R6W, DATED 1916.
ERM 104	1454.89	N966304.720 E236937.512	G.L.O. BRASS CAP ON 2" PIPE, 1.00 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 28, 29, 32 AND 33, T4N-R5W, DATED 1916.
ERM 108	1467.68	N966332.547 E234298.006	G.L.O. BRASS CAP ON 1" PIPE, 1.40 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 29 AND 32, T4N-R5W, DATED 1916.

<u>ID Number</u>	<u>Elevation</u>	<u>Coordinates</u>	<u>Description/Location</u>
ERM 109	1466.11	N968944.655 E236961.496	G.L.O. BRASS CAP ON 1" PIPE, 1.10 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 28 AND 29, T4N-R5W, DATED 1916.
ERM 113	1489.61	N971612.963 E234345.844	G.L.O. BRASS CAP ON 1" PIPE, 1.25 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 20 AND 29, T4N-R5W, DATED 1916.
ERM 114	1501.89	N971638.346 E231703.224	G.L.O. BRASS CAP ON 2" PIPE, 1.40 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 19, 20, 29 AND 30, T4N-R5W, DATED 1916.
ERM 119	1518.55	N971664.203 E229064.058	G.L.O. BRASS CAP ON 1" PIPE, 0.85 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 19 AND 30, T4N-R5W, DATED 1916.
ERM 127	1581.85	N977027.161 E221444.902	G.L.O. BRASS CAP ON 2" PIPE, 1.45 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 13, 14, 23 AND 24, T4N-R6W, DATED 1916.
ERM 130	1543.42	N976966.357 E226730.128	G.L.O. BRASS CAP ON 2" PIPE, 1.00 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 13 AND 24, T4N-R6W AND SECTIONS 18 AND 19, T4N-R5W, DATED 1916.
ERM 134	1516.19	N976889.412 E234387.454	G.L.O. BRASS CAP ON 2" PIPE, 0.65 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 17 AND 20, T4N-R5W, DATED 1916.
ERM 135	1508.45	N976860.830 E237027.430	G.L.O. BRASS CAP ON 2" PIPE, 0.60 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 16, 17, 20 AND 21, T4N-R5W, DATED 1916.

<u>ID Number</u>	<u>Elevation</u>	<u>Coordinates</u>	<u>Description/Location</u>
ERM 136	1509.37	N976838.373 E239667.583	G.L.O. BRASS CAP ON 1" PIPE, 1.10 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 16 AND 21, T4N-R5W, DATED 1916.
ERM 140	1538.08	N979562.629 E231763.919	G.L.O. BRASS CAP ON 1" PIPE, 1.20 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 17 AND 18, T4N-R5W, DATED 1916.
ERM 141	1564.27	N982232.066 E229143.548	G.L.O. BRASS CAP ON 1" PIPE, 1.50 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 7 AND 18, T4N-R5W, DATED 1916.
ERM 142	1575.10	N982249.320 E226779.889	G.L.O. BRASS CAP ON 2" PIPE, 1.45 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 12 AND 13, T4N-R6W AND SECTIONS 7 AND 18, T4N-R5W, DATED 1916.
ERM 145	1594.61	N979668.439 E221466.480	G.L.O. BRASS CAP ON 1" PIPE, 1.40 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 13 AND 14, T4N-R6W, DATED 1916.
ERM 146	1633.60	N982347.045 E216220.556	G.L.O. BRASS CAP ON 2" PIPE, 1.00 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 10, 11, 14 AND 15, T4N-R6W, DATED 1916.
ERM 152	1692.54	N987679.155 E210988.297	G.L.O. BRASS CAP ON 2" PIPE, 1.50 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 3, 4, 9 AND 10, T4N-R6W, DATED 1916.
ERM 156	1625.78	N987590.708 E221538.247	G.L.O. BRASS CAP ON 2" PIPE, 0.80 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 1, 2, 11 AND 12, T4N-R6W, DATED 1916.

<u>ID Number</u>	<u>Elevation</u>	<u>Coordinates</u>	<u>Description/Location</u>
ERM 158	1609.84	N987560.581 E224183.262	G.L.O. BRASS CAP ON 1" PIPE, 1.20 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 1 AND 12, T4N-R6W, DATED 1916.
ERM 159	1600.83	N987529.279 E226833.152	G.L.O. BRASS CAP ON 2" PIPE, 1.50 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 1 AND 12, T4N-R6W AND SECTIONS 6 AND 7, T4N-R5W, DATED 1916.
ERM 166	1653.50	NOT AVAILABLE	G.L.O. BRASS CAP ON 2" PIPE, 1.35 FEET ABOVE GROUND, COMMON CLOSING CORNER OF SECTIONS 1 AND 2, T4N-R6W, AND THE SOUTH LINE OF SECTION 36, T5N-R6W, DATED 1916.
ERM 168	1668.17	N992270.552 E217526.046	G.L.O. BRASS CAP ON 2" PIPE, 0.85 FEET ABOVE GROUND, COMMON CORNER SECTIONS 35 AND 36, T5N-R6W AND THE NORTH LINE OF SECTION 2, T4N-R6W, DATED 1916.
ERM 171	1702.40	N992323.199 E212240.579	G.L.O. BRASS CAP ON 2" PIPE, 1.30 FEET ABOVE GROUND, COMMON CORNER SECTIONS 34 AND 35, T5N-R6W AND THE NORTH LINE OF SECTION 3, T4N-R6W, DATED 1916.
ERM 174	1726.32	N992377.897 E206957.962	G.L.O. BRASS CAP ON 2" PIPE, 1.10 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 33 AND 34, T5N-R6W AND THE NORTH LINE OF SECTION 4, T4N-R6W, DATED 1916.
ERM 188	1621.34	N982327.432 E218856.462	G.L.O. BRASS CAP ON 1" PIPE, 1.40 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 11 AND 14, T4N-R6W, DATED 1916.



MARICOPA COUNTY, ARIZONA  
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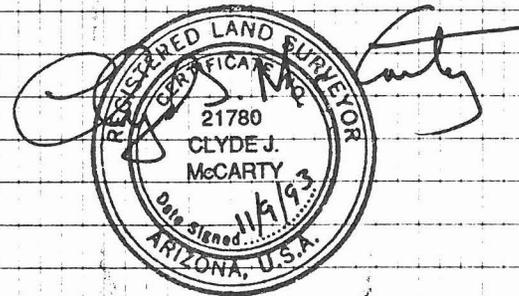
11547 Powerline Wash  
BK I Job Scheme, Levels

 **TELEDYNE**  
418  
FIELD / TRANSIT BOOK

# INDEX PAGE

Book #1

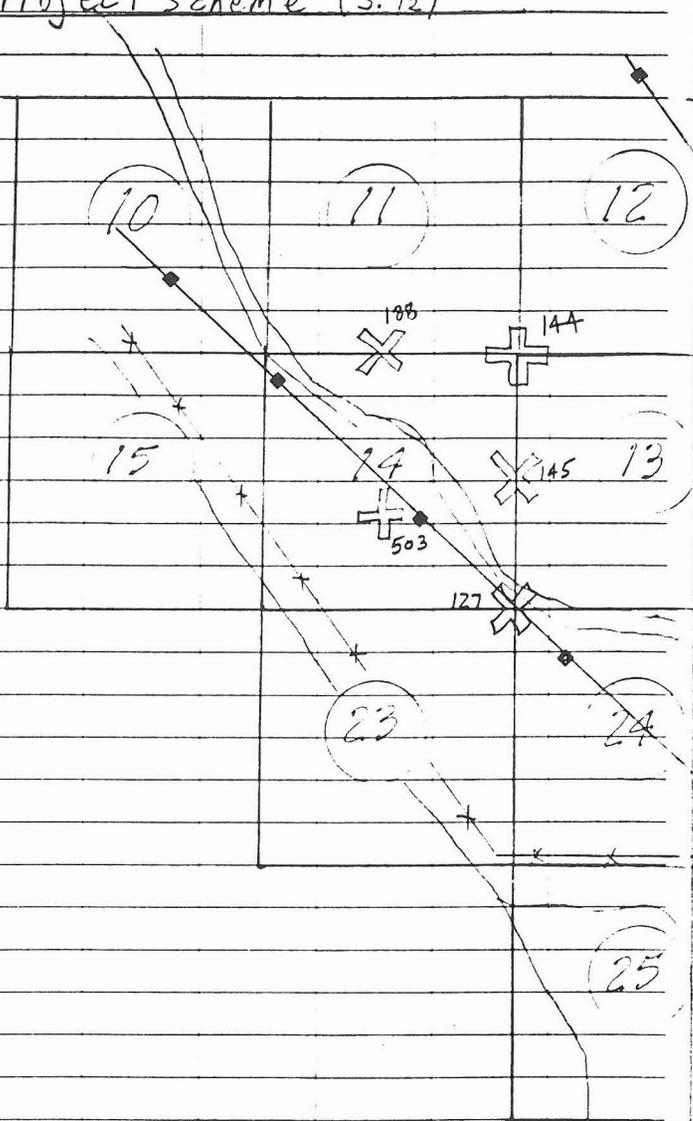
JOB NO.	PROJECT	PAGE NUMBER
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	ERM Panels	8-10
	Anchor Level Run - "Trans" to "25 WLS"	16-30
	Level Runs, South 1/2 Project	30-71



MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
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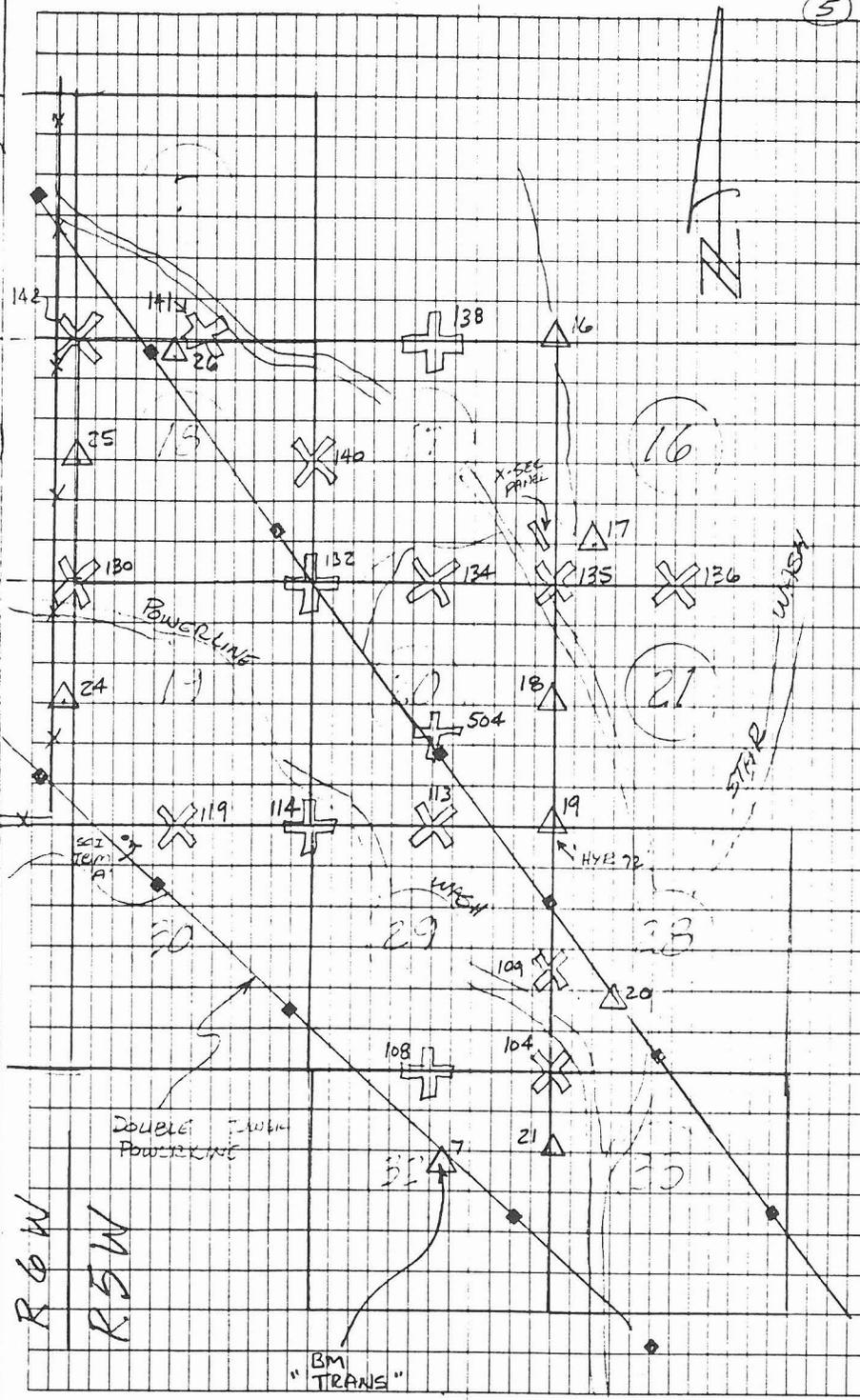


Project Scheme (S. 1/2)



MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
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5



Vert. & Horiz. & Vert. Panels

\*16 H-V

\*17 H-V 1/2" IRON BAR FLUSH

1509.9972

1510.00 PANEL

\*18 H-V 1/2" IRON BAR 0.15 ABOVE

1496.8105

1493.67 PANEL

\*19 H-V G.L.O. B.C. TAN RSW 20/21 29/28 1<sup>2</sup> ABOVE

ERM

1916

1485.031

1483.93 PANEL

\*20 H-V 1/2" IRON BAR FLUSH

1412.7530

1465.77 PANEL

\*21 H-V 1/2" REBAR FLUSH

1449.34

\*24 H-V G.L.O. B.C. @ FACE 24/19 1<sup>2</sup> ABOVE

ERM

1916

1536.335

1535.60 PANEL

\*25 H-V G.L.O. B.C. @ FACE 13/18 1<sup>9</sup> ABOVE

1563.219

1916

1561.34 PANEL

BK 1  
p. 53

BK 1  
p. 47

BK 1  
p. 36

BK 1  
p. 52

BK 1  
p. 41

BK 1  
p. 56

Vert. & Horiz. & Vert. Panels

#26 H-V 1/2" IRON BAR FLUSH

1561.2103

1561.20 PANEL

#27 H-V 1/2" REBAR FLUSH C.N. SIDE POWERLINE ED

1642.77

#28 H-V GLO. RC. TAN LOW 

3	2
12	11

 1.55 HOURS

ERM

1653.737

1656.75 PANEL

#29 H-V 1/2" REBAR FLUSH

1663.773

1663.76 PANEL

#30 H-V 1/2" REBAR FLUSH

1664.775

1664.90 PANEL

#31 H-V 1/2" REBAR FLUSH

1753.1272

1753.12 PANEL

#32 H-V GLO. RC.

ERM

1752.075

1751.32 PANEL

25/29

33/34

0.25 HOURS

19/6

BK 1 p. 58

B.1  
p. 26

BK 2 p. 23

BK 2 p. 18

BK 2 p. 17

BK 2 p. 12

BK 2 p. 10

\*500 V 2"x2" HUB FLUSH

PANEL = 1727.17

\*501 V 2"x2" HUB

PANEL = 1630.20

\*502 V 2"x2" HUB

PANEL = 1599.98

\*503 V 2"x2" HUB FLUSH

PANEL = 1601.54

\*504 V 2"x2" HUB

PANEL = 1505.95

\*505 X-SEC 2"x2" HUB

PANEL = 1471.2

### ERM'S

\*104 ERM G.L.O. B.C. TAN 25W  $\frac{29}{32}$  |  $\frac{28}{33}$  1" ABOVE  
1454.398  
1916

1453.95 PANEL

\*108 V ERM G.L.O. B.C. TAN 25W  $\frac{29}{32}$  |  $\frac{28}{33}$  1" ABOVE  
1467.6933  
1916

1466.30 PANEL

\*109 ERM G.L.O. B.C. TAN 25W 29 | 28 1" ABOVE  
1466.11  
1916

1465.00 PANEL

\*113 ERM G.L.O. B.C. TAN 25W  $\frac{20}{29}$  |  $\frac{19}{28}$  1" ABOVE  
1439.61  
1916

1438.37 PANEL

\*114 V ERM G.L.O. B.C. TAN 25W  $\frac{20}{29}$  |  $\frac{19}{28}$  1" ABOVE  
1501.994  
1916

1500.55 PANEL

BK 2 p 9

BK 2 p 15

BK 1 p 69

BK 1  
p. 23

BK 1 p. 48

BK 2 p 19

BK 1  
p. 34

BK 1  
p. 51

BK 1  
p. 35

BK 1  
p. 37

BK 1  
p. 39

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
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# ERM'S

\*119 ERM G.L.O. B.C. TAN RESW  $\frac{19}{30}$  0.35 ABOVE  
1518.547 1916

1517.70 PANEL

\*127 ERM G.L.O. B.C. TAN RESW 1916  $\frac{1413}{23124}$  1.45 ABOVE  
1531.347 1916

1530.42 PANEL

\*130 ERM G.L.O. B.C.  $\frac{13118}{24119}$  1' ABOVE  
1543.4171 1916

1543.36 PANEL

\*132 V 2" x 2" HOLE  
1526.55

\*134 ERM G.L.O. B.C. TAN RESW  $\frac{17}{20}$  0.35 ABOVE  
1516.1939 1916

1515.54 PANEL

\*135 ERM G.L.O. B.C. TAN RESW  $\frac{17116}{20121}$  0.60 ABOVE  
1503.1472 1916

1507.33 PANEL

\*136 ERM G.L.O. B.C. TAN RESW  $\frac{16}{21}$  1.5 ABOVE  
1509.3739 1916

1508.22 PANEL

\*140 ERM G.L.O. B.C. TAN RESW 18/17 1.2 ABOVE  
1523.0700 1916

1536.90 PANEL

\*141 ERM G.L.O. B.C. TAN RESW  $\frac{7}{18}$  1.55 ABOVE  
1564.2599 1916

1552.72 PANEL

\*142 ERM G.L.O. B.C.  $\frac{1217}{13118}$  1.45 ABOVE  
1575.0938 1916

1573.65 PANEL

\*143 V G.L.O. B.C. TAN RESW  $\frac{1112}{14113}$   
1601.030 1916

1600.30 PANEL

BK 1 p 40

BK 1 p 22

BK 1 p 42

BK 1 p. 50

BK 1 p. 45

BK 1 p. 46

BK 1 p. 54

BK 1 p. 60

BK 1 p. 53

BK 1 p. 57

BK 2 p. 4

ERM'S

- \*145 ERM G.L.O. C.C. TAN R6W 14 | 13 1<sup>st</sup> ABOVE  
1594.6134 1916
- 1593.23 PANEL
- \*146 ERM G.L.O. B.C. TAN R6W  $\frac{10}{15} | \frac{11}{14}$  1.00 ABOVE  
1633.595 1916
- 1632.60 PANEL
- \*188 ERM 601 NAIL FLUSH (2<sup>nd</sup> E. OF GLO B.C.)  
1621.34  $\rightarrow$  G.L.O. B.C. 1.4' above,  $\frac{11}{14}$  1/4 col.  
1619.74 PANEL 1916
- \*152 V<sup>o</sup> ERM G.L.O. B.C. TAN R6W  $\frac{4}{7} | \frac{3}{10}$  1.5 ABOVE  
1692.542 1916
- 1691.05 PANEL
- \*156 ERM G.L.O. B.C. TAN R6W  $\frac{2}{11} | \frac{1}{12}$  0.30 ABOVE  
1625.7724 1916
- 1624.74 PANEL
- \*158 ERM G.L.O. C.C. TAN R6W  $\frac{1}{12}$  1<sup>st</sup> ABOVE  
1609.2446 1916
- 1603.60 PANEL
- \*159 V<sup>o</sup> ERM 500 NAIL FLUSH  
1600.83  $\rightarrow$  G.L.O. B.C. 1.5' above,  $\frac{1}{12} | \frac{6}{7}$   
1599.27 PANEL 1916
- \*166 ERM G.L.O. B.C.  $\frac{3}{21}$  1<sup>st</sup> ABOVE  
1653.504 1916
- 1652.13 PANEL
- \*163 ERM G.L.O. B.C.  $\frac{35}{2} | \frac{36}{2}$  0.30 ABOVE  
1668.72 1916
- 1667.24 PANEL
- \*171 V<sup>o</sup> ERM G.L.O. B.C.  $\frac{34}{8} | \frac{35}{8}$  1<sup>st</sup> ABOVE  
1702.1510 1916
- 1701.14 PANEL
- \*174 V<sup>o</sup> ERM G.L.O. B.C.  $\frac{33}{4} | \frac{34}{4}$  1<sup>st</sup> ABOVE  
1726.3207 1916
- 1725.25 PANEL

BK 2 p. 3

BK \*1 p. 25

BK 2 p. 5

BK \*1 p. 27

BK 1 p. 53

BK 1 p. 67

BK 1 p. 66

BK 2 p. 16

BK 2 p. 18

BK 2 p. 27

BK 2 p. 7

POWERLINE / TANK WASH  
#11547  
LEVEL RUNS

11-13-92  
S. ANDERSON  
J. KARSTEN

NA-1 506076  
clear, warm

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 2.3  
PG 10 OF 65 DATE: NOV 92

	+	H1	-	EL
BM				1461.39
6.97	312'			
5.41	5.410	1466.900		
3.85			312'	
			10.31	
			3.75	8.750 1453.050
			7.19	
2.81	350'			
6.06	6.0507	1464.1067		
4.30			310'	
			2.39	
			1.83	1.8267 1462.230
			2.20	
8.03	532'			
5.37	5.370	1467.650		
2.71			221'	
			2.36	
			1.26	1.2567 1466.5933
			2.15	
8.77	316'			
7.18	7.180	1473.5733		
5.59			319'	
			7.13	
			5.23	5.2333 1463.540
			3.34	
12.33	422'			
10.21	10.210	1479.550		
8.09				

"TRANS" FB. B.C. IN CONC. (PER B.N. COMP SHEETS) 17

15235  
TRANS  
1947

MARICOPA COUNTY ARIZONA  
POWERLINE AND TANK WASH  
STALLEY CONSULTANTS #15  
DOCUMENT INDEX # 2.3  
PG 11 OF 65 DATE: NOV 99



+		HI	-	EL
		1498.890 (p. 18)		
			3.16	313'
			1.59	1.5933 1497.2967
			0.03	
7.35	361'			
5.54	5.5433	1502.840		
3.74				
			6.13	312'
			4.55	4.5533 1498.2967
			2.98	
10.07	359'			
8.28	8.280	1506.5667		
6.49				
			5.27	400'
			3.27	3.270 1503.2967
			1.27	
14.43	341'			
12.69	12.6933	1515.990		
10.96				
			5.45	362'
			3.64	3.640 1512.850
			1.83	
11.08	351'			
9.32	9.3233	1521.6733		
7.57				
			4.47	340'
			2.73	2.730 1518.7433
			0.99	
7.78	445'			
5.56	5.5607	1521.500		
3.33				

MARICOPA COUNTY ATTORNEY  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #1547  
 DOCUMENT INDEX # 2.3  
 PG 130 OF 165 DATE: NOV 9 12

+ HI - EL

1524.500 (P.19)

3.42 316'

1.84 1.840 1522.660

0.26

4.91

326'

3.28 3.280 1525.940

1.65

5.43 460'

IBM 'A'

3.13 3.130 1522.810

0.93 1522.782 adj

8.64

323'

7.03 7.0267 1529.8367

5.41

4.80 326'

3.17 3.170 1526.6467

1.54

7.94

308'

6.40 6.400 1533.0667

4.86

3.62 351'

1.97 1.9667 1531.200

0.11

9.57

285'

8.14 8.1433 1539.3433

6.72

3.79 312'

1.92 1.9167 1537.4267

0.35

14.92

308'

13.37 13.3767 1550.8033

11.84

20

10,560'

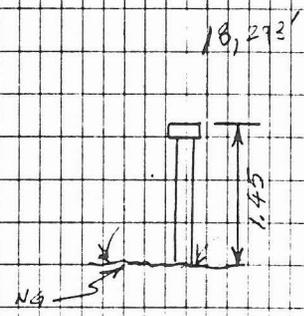
SET 1/2" REBAR NW COR XI. FE TOWER, 1ST DWG.  
E. OF FE.

MARICOPA COUNTY ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 2.3  
PG 14 OF 65 DATE: NOV 92

	+	HI	-	EL
		1550.8033 (R20)		
			6.60	400'
			4.60	Δ.60 1546.2033
			2.60	
9.28	355'			
7.51	7.5067	1553.710		
5.73				
			5.35	373'
			3.43	3.4933 1550.2266
			1.62	
9.74	348'			
8.00	8.00	1558.2266		
6.26				
			6.52	324'
			4.92	4.920 1553.3066
			3.30	
9.86	451'			
7.61	7.6067	1560.7133		
5.35				
			5.77	433'
			3.60	3.6023 1557.310
			1.42	
7.50	245'			
6.28	6.2767	1563.5966		
5.05				
			3.16	299'
			1.72	1.720 1561.8466
			0.28	
8.99	241'			
7.78	7.7833	1569.650		
6.58				

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2-3  
 PG 15 OF 65 DATE: NOV 92

	+	HI	-	EL
		1569.650 (P.21)		
			306'	
			4.06	
			2.53	1567.120
			1.00	
9.07	235'			
7.89	7.8933	1575.0133		
6.72				
			5.88	322'
			4.27	1570.7433
			2.66	
9.78	226'			
8.66	8.6533	1579.3966		
7.52				
			4.23	302'
			2.72	1576.6766
			1.21	
9.43	344'			
7.71	7.710	1584.3966		
5.99				
			4.12	326'
#127			2.49	2.190
ERM			0.86	1581.6966
				1581.847 adj
7.35	264'			
6.03	6.030	1587.9266		
4.71				
			8.33	238'
			7.64	1590.2266
			6.45	
8.32	338'			
6.64	6.6333	1586.920		
4.94				



L.O.  
SPAN R613  
14 13  
23 24  
1916

MARICOPA COUNTY, ARIZONA  
FOWLER AND TANK WASHES  
STAFF CONSULTANTS #1154  
DOCUMENT INDEX # 2.3  
PG 16 OF 65 DATE: NOV 94

	+	HI	-	EL
		1586.920 (P.22)		
			3.50	293'
			2.04	2.0367 1584.8833
			0.57	
6.97	374'			
5.10	5.10	1589.9833		
3.23				
			3.40	300'
			1.87	1.870 1588.1133
			0.34	
8.65	336'			
6.98	6.9733	1595.0366		
5.29				
			4.73	316'
			3.15	3.150 1591.9366
			1.57	
8.57	270'			
7.22	7.220	1599.1566		
5.87				
			5.37	330'
			3.72	3.720 1595.4366
			2.07	
10.27	279'			
8.87	8.8733	1604.310		
7.48				
			4.11	280'
VERT. PANEL			2.71	2.710 1601.600
#503			1.31	1601.54 adj
6.15	275'			
4.78	4.7833	1606.3833		
3.42				

MARICOPA COUNTY, ARIZONA  
 PAVING AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 pg 17 of 65 DATE: NOV 92

21,917'  
 2" x 2" HUB w/ 4' LATH, 50' W. of power road, ± 300'  
 S. of towers

H1  
1606.3833 (P.23)

			5.16	302'	
			3.65	3.650	1602.7333
			2.14		
7.78	200'				
6.35	6.750	1609.0333			
4.92					
			4.97	318'	
			3.38	3.380	1605.7033
			1.79		
9.12	236'				
7.94	7.940	1613.6433			
6.76					
			3.64	330'	
			1.98	1.9807	1611.6566
			0.34		
6.46	250'				
5.21	5.210	1616.8666			
3.96					
			3.22	295'	
			1.75	1.7467	1615.120
			0.27		
12.50	248'				
11.26	11.260	1626.380			
10.02					
			3.24	311'	
			1.69	1.6867	1624.6933
			0.13		
8.39	208'				
6.95	6.950	1631.6433			
5.51					

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #1547  
 DOCUMENT INDEX # 2.3  
 Pg 8 of 65 DATE: NOV 92

	+	H1	-	EL
		1031.6433 (P.24)		
		10.35	35'	
		8.595	8.595	1023.0483
		6.84		
13.32	230'			
12.17	12.170	1635.2183		
11.02			200'	
		2.555		
#146		1.555	1.555	1033.6433
ERM		0.555		1033.595 adj
8.74	311			
6.69	6.6967	1640.350		
5.13				
		4.22	281	
		2.80	2.800	1037.550
		1.38		
6.17	232			
5.01	5.010	1647.960		
3.85				
		9.16		
		7.41	7.4067	1035.1533
		5.65		
8.44	303			
6.925	6.925	1642.5783		
5.41				
		5.65	310	
		4.10	4.100	1037.7583
		2.55		
13.10	237			
11.64	11.6267	1649.615		
10.17				

25

25.211'

GLO P.C.

11-16-92  
S  
JK

G.L.O.  
 14N 20W  
 12 11  
 15 16  
 17 16

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 PG 19 OF 65 DATE: NOV 92

	L	H1	-	EL
		1649.615 (P. 25)		
			270'	
		8.15		
PEC #27		6.77	6.770	1642.845
		5.39		1642.77 adj.
13.52	420'			
11.42	11.420	1654.265		
9.32				
			120'	
		1.615		
		0.98	0.9817	1655.2953
		0.35		
8.83	353'			
<del>7.87</del> <sup>06</sup>	7.0633	1650.3467		
5.30				
			301'	
		3.70		
		1.88	1.880	1653.4667
		0.06		
10.74	453'			
8.57	8.5733	1667.210		
6.41				
			230'	
		2.61		
		1.43	1.430	1665.610
		0.25		
11.41	338'			
9.72	9.720	1675.330		
8.03				
			30'	
		4.72		
		3.02	3.020	1672.310
		1.32		
10.33	370'			
8.48	8.480	1680.790		
6.63				

27.571'

(26)

'1/2" REBAR FINISH @ N. SIDE POWERLINE RD.

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11647  
 DOCUMENT INDEX # 2.3  
 PG 20 OF 65 DATE: NOV 92



HI		EL	
	1693.4534	(P. 27)	
		9.06	50'
		8.14	8.1367 1685.3167
		6.61	
6.68	30'		
5.16	5.160	1690.4767	
3.64			
		10.77	2'
		9.46	9.4667 1631.0100
		8.17	
8.03	15'		
7.25	7.2533	1688.2633	
6.48			
		7.86	10'
Bm # 1681		7.02	7.020 1681.2433
		6.18	10.0933
7.97	105		
7.13	7.130	1688.2723	
6.29			
		7.62	30'
		6.07	6.070 1692.3033
		4.52	
10.26	20'		
9.11	9.110	1691.1133	
7.96			
		8.04	200'
		6.54	6.540 1634.9733
		5.04	
10.22	24'		
8.93	8.9333	1693.8500	
7.75			

ERM 1681  
26 WLS  
JR  
ERM 26  
BRV 4

104  
0.1233

36760

1156E B.C. IN CONC S. SIDE DKT RD.  
(1681 EN)

1565 ch  
#1681  
26 WLS  
1957

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WAGES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 2.3  
Pg 22 OF 65 DATE: NOV 92

		H1		EL
		1693.8566	(P.28)	
			6.97	229'
			5.83	5.8267 1688.0299
			4.63	
7.94	266'			
6.61	6.610	1694.6399		
5.28				
			4.31	306'
			2.73	2.790 1691.9597
			1.25	
10.10	113'			
8.03	8.0333	1699.8932		
5.97				
			4.55	315'
			2.93	2.9267 1696.9065
			1.30	
8.30	308'			
7.26	7.260	1704.2265		
6.72				
			8.54	317'
			6.56	6.5567 1697.6093
			4.57	
10.35	333'			
8.68	8.6833	1706.5531		
7.02				
			2.73	340'
			1.54	1.510 1704.9131
			0.30	
7.01	260'			
5.71	5.710	1710.5231		
4.41				

MARICOPA COUNTY ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #1547  
 DOCUMENT INDEX # 2.3  
 PG 23 OF 65 DATE: NOV 92

T	H1	-	EL
	1710.5231 (P.29)	182'	
		6.03	
		5.12	5.120 1705.4031
		9.21	
8.02			
6.85	6.8467 1712.2498		
5.67		34'	
		7.94	
		6.72	6.720 1705.5293
		5.50	
12.30			
10.35	10.3433 1715.9731		
8.38			
		2.12	
		1.15	1.150 1714.7231
		0.18	
10.79			
9.03	9.0333 1723.7565		
7.28			
		10.25	
		8.87	8.8733 1714.9831
		7.50	
12.50			
10.64	10.640 1725.5231		
8.78			
		5.54	
		3.96	3.9567 1721.5665
		2.37	
9.83			
8.895	8.895 1730.4615		
7.96			
		5.85	
BM * 1726		4.29	4.290 1726.715
		2.73	(+0.0975)

		114'	118'
1565	5		
1957	2		
1726			
25	WLS		

MARICOPA COUNTY ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 PG 24 OF 65 DATE: NOV 92

USGS BC N CIRC C INT. VALUE  
 BM \* 1726 25 WLS (1726.074 30)  
 JR ERM 28  
 DN \* 1



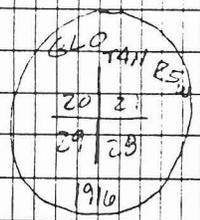
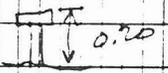
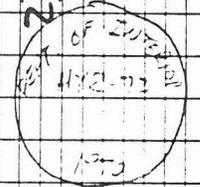








MARICOPA COUNTY ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS # 1547  
DOCUMENT INDEX # 2.3  
PG. 300-195 DATE: NOV 92

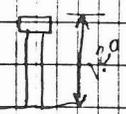


GND @ PANEL HYR-72

HYR-72 Dept. OF INTERIOR B.C.

GND @ PEC 19 9693'

GND BC



FE +	H1		EL
	1478.7033 (P.35)	284'	
		4.66	
		3.24	3.240 1475.4633
		1.82	
9.44	297		
7.95	7.9533	1483.4166	
6.47			
		5.50	506'
		3.97	3.970 1479.4466
		2.14	
9.60	349'		
7.86	7.860	1487.3266	
6.12			
		5.42	
		4.54	4.5433 1482.7633
		3.67	
6.65	182'		
5.74	5.740	1489.5033	
4.93			
GND		4.55	1483.9533
		5.18	141'
*HYR-72		4.41	4.410 1484.0933
		3.64	
GND		5.70?	470' 1482.80? 1482.80?
		4.23	153'
PEC #19		3.47	3.4667 1485.0316
ERM		2.70	1485.031 adj.
7.27	314'		
5.70	5.70	1490.7366	
4.13			

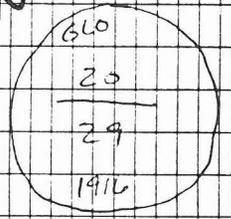
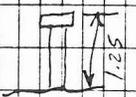
+	H1		-	EL
	1490.7366 (P. 56)		31'	
		6.47		
		4.91	4.9133	1485.9233
	18'	3.36		
3.68				
2.76	2.760	1488.5833		
1.84			282'	
		5.93		
		4.52	4.520	1484.0633
		3.11		
	316'			
10.70				
9.12	9.120	1493.1833		
7.54			344'	
		8.35		
		6.63	6.630	1486.5533
		4.91		
	334'			
8.80				
7.13	7.130	1493.6833		
5.46			235'	
		6.70		
		5.51	5.510	1488.1733
		4.32		
	155'			
5.85				
5.07	5.0733	1493.2466		
4.30				
GND		4.90		1488.35
			103'	
		4.62		
# 113		3.63	3.630	1489.6166
ERM		2.64		1489.61 adj
9.55	290'			
8.10	8.100	1497.7166		
6.65				

MATICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 GRADELY CONSULTANTS #1587  
 DOCUMENT INDEX # 2.3  
 PG 31 OF 65 DATE: NOV 92

12369'

GRID @ PANEL

GLO B.C.





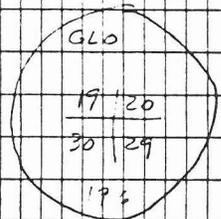
	+	H1	-	EL
		1506.0599	(A 38)	
GND		5.53		1500.53
		4.16	4'	
#114		4.16	4.1567	1501.9032
ERM	310'	3.70		1501.894adj
7.73				
6.18	6.130	1503.2332		
4.63		5.54	27'	
		4.16	4.160	1505.2332
		2.78		
9.52	700'			
8.02	8.020	1511.2132		
6.52		5.42	27A'	
		4.05	4.050	1507.3932
		2.68		
10.74	202'			
9.28	9.280	1517.1732		
7.82		5.83	28'	
		4.24	4.240	1512.9232
		2.65		
8.92	286'			
7.49	7.490	1520.1032		
6.06		9.55	27B'	
		8.16	8.160	1512.21632
		6.77		
10.81	216'			
9.73	9.730	1521.9032		
8.65				

GND @ PANEL

15,239



GLO BC

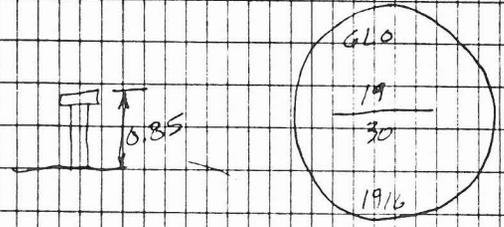


MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #1547  
 DOCUMENT INDEX # 2.3  
 PG 33 OF 65 DATE: NOV 92

	+	HI	-	EL
		1521.9932	(P. 39)	
<u>GND</u>		4.32		1517.6732
		4.04	12'	
#119		3.44	3.4367	1518.5565
ERM		2.83		1518.547 adj'
7.62				
6.31	6.310			1524.9665
5.00				
		5.61	31'	
		4.01	4.0133	1520.8532
		2.42		
6.01				
4.68	4.6767			1525.5299
3.34				
		7.56	242'	
		6.10	10.100	1519.4299
		4.64		
7.76				
6.03	6.0233			1525.4532
4.28				
		5.10	20'	
		4.10	4.110	1521.3532
		3.10		
6.15				
5.56	5.560			1526.9132
4.97				
		4.94	14'	.782
<u>SCI TBM 'A'</u>		4.12	4.120	1522.7932
		3.30		(10.0112)

GND @ PANEL

GLO B.C



(p. 22) (1522.812) 782 ADJ.

3.76 m  
19, 30, 20

MARICOPA COUNTY ARIZONA  
 POWERLINE AND TANK VALVES  
 STAFF BY CONSULTANTS #1847  
 DOCUMENT INDEX # 2.3  
 PG 34 OF 65 DATE: NOV 92

	+	H1	-	EL
SGT TBM 'A'				1522.782
9.06	33A'			
7.37	7.3667	1530.1497		
5.67				
			340'	
			5.11	
			3.41	3.410 1526.7337
			1.71	
10.91	302'			
9.10	9.100	1535.8387		
7.29				
			185'	
			2.15	
			1.22	1.220 1534.6187
			0.29	
6.81	3A2'			
5.10	5.100	1539.7187		
3.39				
			340'	
			6.01	
			4.26	4.260 1535.1537
			2.51	
8.23	491'			
5.78	5.7767	1541.2353		
3.32				
GND			5.70	1525.53
			5.45	
424			4.40	4.40 1536.5353
ERM #HV			3.35	
	346'			
10.95				
9.22	9.220	1546.0553		
7.49				

11-18-92 (41)

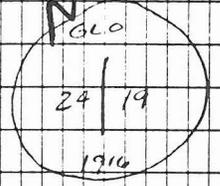
1/2" REBAR (p. 20)

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 PG 35 OF 65 DATE: NOV 92

GND @ #24



GLO B.C. & FENCE



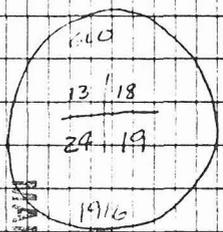
	H1		EL
	1546.0553	(P. 41)	
		354'	
		7.27	
		5.50	1540.5553
		3.73	
10.02			
7.88	7.3767	1543.4320	
5.73			
		210'	
		11.45	
		9.25	1539.1800
		7.05	
8.70			
6.43	6.4267	1545.6087	
4.15			
		135'	
		7.37	
		1.19	1541.1154
		0.52	
9.76			
8.21	8.210	1552.6254	
6.66			
GND			
		10.28	1542.34
		76'	
		10.09	
*130		9.205	1543.4171
ERM		8.33	
6.95			
5.79	5.790	1549.2071	
4.63			
		40'	
		6.12	
		4.12	1545.0904
		2.11	
9.08			
7.21	7.2133	1552.3037	
5.35			

GND @ \*130

GLS - B.C.



MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 213  
 PG 316 OF 605 DATE: NOV 92





+ H1 - EL

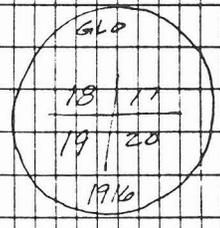
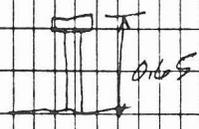
1534.730A (P. 43)

VOID

GND			7.94	1526.79
			8.84	302'
#132			7.33	7.330 1527.4004
	303'		5.82	★ Note: Panel moved
7.81				
5.90	5.3967	1532.2971		
3.98				
			10.59	345'
			8.37	8.3667 1524.4301 4305
			7.14	
8.41				
6.84	6.840	1531.4701		
5.27				
			7.62	303'
			6.13	6.130 1525.3401 1305
			4.65	
3.65				
2.52	2.5167	1527.9509		
1.38				
			10.07	350'
			8.29	8.290 1519.5568 3622
			6.51	
4.20				
2.76	2.760	1522.3205		
1.32				
			7.49	11672
			6.66	6.660 1515.6503
			5.83	
7.02				
6.24	6.2367	1521.9035		
5.45				

44

GND. C #132



GLO B.C.  
location was later - see pg. 50

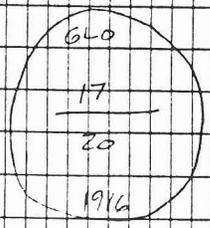
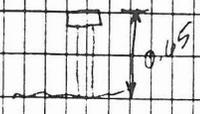
11-19-92

MARICOPA COUNTY ARIZONA  
POWERLINE AND TANK WASHES  
STAINLEY CONSULTANTS #1547  
DOCUMENT INDEX # 23  
PG 38 OF 65 DATE NOV 92

	+	HI		-	EL
		1521.9035	(P. 44)		
GND				6.17	5339 1515.7935
				6.22	1939
#134				5.51	5.510 1516.3935
ERM				4.80	
5.26					
4.49	4490	1520.8935			
3.22					
				9.09	3139
				7.37	7.370 1513.5135
				5.05	
8.28		1519.8536			
6.56	6.5567	1520.0702			
4.83					
				8.70	2339
				6.54	6.5367 1513.5335
				4.77	
6.25					
4.69	4.6933	1518.2243			
3.14					
				8.17	2039
				6.65	6.6433 1511.5835
				5.11	
5.02					
4.12	4.1233	1515.7668			
3.23					
				6.01	6739
				4.83	4.8333 1510.8735
				3.60	
5.06					
4.98	4.980	1515.8535			
4.30					

GND @ #134

GLO B.C.



MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STAFF AND CONSULTANTS #1547  
 DOCUMENT INDEX # 23  
 Pg. 39 of 65 DATE: NOV 92



	T	HI		EL
		5299 1512.7235	(P. 46)	
			309'	
			7.34	7339
			5.79	5.7933 1506.7302
			4.25	
5.90	297'			
4.41	4.4133	1072 1511.3435		
2.93				
			309'	
			10.33	4639
			8.68	8.6833 1502.4602
			7.14	
6.08	287'			
4.64	4.6433	1072 1507.3035		
3.21				
			309'	
			9.01	1732
			7.97	7.970 1488.8525
			6.33	
5.31	225'			
4.18	4.1833	3205 1503.5608		
3.06				
GND			6.65	6705 1496.9608
			720'	
			7.61	1202.8105
# 18			6.51	6.510 1447.0008
H.V.	304'		5.41	
5.31		6005		
3.79	3.796	1500.7968		
2.27				
			501'	
			7.82	3838
			6.22	6.2267 1484.5851
			4.61	
	353'			
10.75		3151		
8.98	8.9833	1503.5034		
2.22				

5.11 @ #18

1/2" IRON BAR REC #18

2-15 ACOD

MARI COPA COUNTY ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #1547  
 DOCUMENT INDEX # 2.3  
 PG 41 OF 65 DATE: NOV 92



	+	H1	-	EL
		1509. <sup>1087</sup> <del>2050</del> (P. 43)	27'	
			8.08	
			6.50	6.467 <sup>0120</sup> 1502. <del>8033</del>
	277'		4.91	
5.02		2453		
3.63	3.8333	1506. <del>7440</del>		
2.25				
			10.98	1496. <del>2153</del>
			9.75	9.780 <del>1497. <del>516</del></del>
			7.58	
5.31		1500. <del>9953</del>		
4.03	4.030	1501. <del>1916</del>		
2.75				
			7.44	3653
			5.63	5.650 <del>1495. <del>56</del></del>
			3.32	
4.70				
2.72	2.720	1499. <del>2816</del>		
1.14				
			12.21	0296
			10.24	7.0567 <del>1498. <del>3219</del></del>
			7.87	
4.18				
2.51	2.5267	1490. <del>7516</del>		
0.83				
			9.04	5786
			6.96	6.9567 <del>1483. <del>719</del></del>
			4.37	
9.09		6253		
8.05	8.0467	1491. <del>3216</del>		
7.00				

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 23  
 PG 43 OF 65 DATE: NOV 92

	+	HI	-	EL
		1491.8216 <sup>6253</sup>	(P. 49)	
			7.25	2453
			6.38	6.380 1495.416
			5.51	
5.87				
4.94	4.9433	1490.3817 <sup>1886</sup>		
4.02				
			6.18	
#19			5.17	5.1667 1485.2182 <sup>6219</sup>
ERM HV			4.15	(-0.009)

ELEV. TRANSFER TO VERT PANEL  
FROM #132

#132				1527.4024
5.41				
5.30	5.3000	1532.7004		
5.19				
			6.20	
VERT PANEL			6.07	6.070 1526.6304
			5.94	
GND			6.15	1526.55

HYR 72 (p. 36) 1435.031

3" x 2" Hx15

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK MARKS  
STANLEY CONSULTANTS #1547  
DOCUMENT NO. 23  
PAGE 14 OF 65 DATE: Nov 92

BM + HI - EL

TRANS 1461.39

7.09

5.52 5.520 1466.9100

3.95

6.77

5.09 5.0967 1461.9233

3.70

6.41

5.09 5.0967 1466.9100

3.76

6.33

4.60 4.600 1462.3100

2.97

8.64

7.27 7.270 1469.5900

5.90

GND 3.70 1461.39

3.71

1.93 1.9367 1467.0833

0.08

\* 108

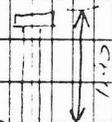
USCGS BC. IN CONC

11-20-92  
VERY Windy

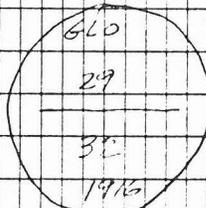
(51)

\* 108 GND

GND @ 7.23



GND B.C.



MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 2-3  
PG 45 OF 105 DATE NOV 92

	+	H1	-	EL
#109				1466.1100
6.49				
5.20	5.200	1471.3100		
3.91				
			6.35	
			5.26	5.2567 1466.0533
			4.16	
5.48				
4.20	4.200	1470.7533		
2.92				
			5.75	
			4.50	4.500 1465.533
			3.25	
6.38				
4.72	4.720	1470.4733		
3.06				
			6.40	
			4.91	4.9133 1465.5600
			3.43	
4.28				
3.13	3.130	1463.6900		
1.98				
GND			5.92	1462.77
			6.35	
*20			5.925	5.9250 1462.7650
PEL *20			3.00	

(p. 35)

GND @ #20

1/2" IRON BAR FURISH

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11347  
 DOCUMENT INDEX # 2.3  
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+ H1 - EL

1515.7155 (P. 53)

6.31  
4.84 9.340 1510.8755  
3.37

6.04  
4.63 4.630 1515.5055  
3.22

6.66  
5.79 5.7967 1509.739  
4.91

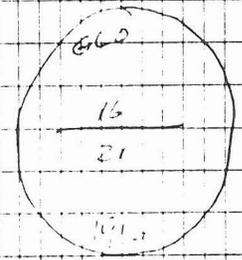
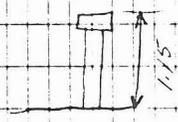
5.83  
5.085 5.095 1514.4739  
4.34

GND 6.60 1508.50

\*136 6.07  
5.43 5.430 1507.5739  
4.79

(2)

GND @ \*136



MARICOPA COUNTY ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 2.3  
PG 48 OF 65 DATE: NOV 92

#130

+ HI

- EL

1543.4171

ERM

10.82

9.67 9.670 1553.0871

8.52

2.10

1.88 13267 1551.6004

0.25

3.28

2.14 2.1367 1553.3271

0.99

5.35

3.77 2.77-8 1552.1224

3.50

11.77

10.32 10.3167 1542.4104

8.86

3.40

2.70 2.700 1553.2014

0.77

5.89

4.21 4.2033 1547.1328

2.54

4.30

2.82 2.810 1559.6138

1.50

8.93

7.58 7.580 1507.1958

6.23

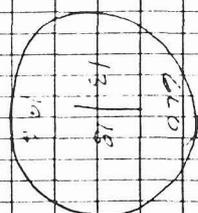
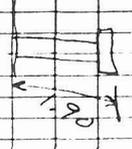
35

(p 42) GLO BC

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 23  
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	H1	H2
GND	1567.1938 (P. 55)	1561.3438
#25	5.95	5.33
H+V	3.95	3.95
	2.02	(1563.2319 ALL)
5.98		
3.72	3.72	1506.9371
1.96		
	2.42	
	1.24	1505.6971
	0.06	
10.53		
8.85	8.85	1571.5171
7.17		
	5.00	
	3.26	1571.2871
	1.916	
6.96		
5.42	5.4133	1570.5501
3.86		
	3.10	1573.5971
	1.87	
5.02		
3.73	3.73	1577.3271
1.84		

GND P #25  
 GLO ED P Fndd



MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 PG 50 OF 65 DATE: NOV 92

+ H1 - EL

1577.3271 (P.56)

GND 3.68 1573.6471

3.97

#142 2.24 3.240 1575.0871

ERM 0.61 (1575.0958 AL)

5.05

3.73 3.730 1578.3171

2.41

3.55

7.24 7.240 1571.5771

5.35

6.18

4.89 4.890 1576.1071

3.00

12.52

10.35 10.3167 1566.1204

8.16

5.97

4.65 4.6467 1570.7071

3.32

8.16

6.84 6.940 1563.9271

5.72

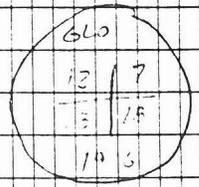
4.57

3.31 3.3133 1567.1404

2.06

GND @ #142

GLD B.C.



MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 2.3  
PG 51 OF 65 DATE: NOV 92

T H1 EL  
1567.404 (P. 57)

GND 5.94 1561.50

#26 6.61 5.34 1561.237

Rec 5.26 (1561.210 ± 0.05)

2.94 6.63 1561.3437

5.32 5.89 4.93 1562.204

5.93 5.20 1568.004

4.47 4.94 1562.204

GND 5.89 1562.204

#141 4.03 3.94 1561.504

3.05 (1564.204 ± 0.05)

4.71 3.92 1565.214

3.13 7.32 6.05 1562.254

4.99

1.93 5.71 1565.537

3.71

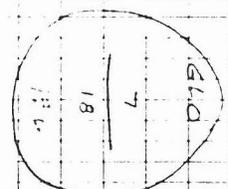
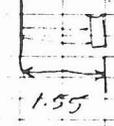
2.50

GND @ #26

1/2" IRON BONE - FLUSH

GND @ #141

GND BC



11-23-92  
New Line

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 2.3  
PG. 52 OF 65 DATE: NOV 92

+ H1 - EL

1565.8387 (P. 58)

7.39

6.57 6.5733 1559.3654

5.86

5.19

3.80 3.800 1562.0554

2.4

10.16

8.17 8.170 1554.5954

6.78

7.30

5.07 5.070 1560.7654

4.02

10.08

8.12 8.1207 1551.3154

6.8

6.37

9.52 4.5233 1556.7654

2.68

9.73

8.07 8.0607 1512.2454

6.40

5.72

4.275 4.275 1552.8704

2.83

9.57

7.75 7.7533 1544.3154

5.02

4.44

3.14 3.1467 1547.8537

1.83

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
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+ HI - EL

1547.9537 (P. 59)  
9.20  
7.68 7.6833 1540.2104  
6.17

5.69  
4.72 4.720 1544.9204  
3.75

GND 9.1 1526.8304

3.00  
# 140 6.94 6.9367 1538.0537  
5.3 (1538.5500 AW)

7.86  
6.40 6.400 1541.4537  
4.94

6.72  
5.20 5.1907 1539.2571  
3.67

8.34  
6.64 6.640 1545.9771  
4.94

8.7  
6.38 6.3767 1539.5204  
4.50

3.22  
1.91 1.9007 1541.4071  
0.59

9.07  
7.28 7.280 1534.1471  
5.49

4.07  
2.19 2.1933 1536.3404  
0.32

GND @ 140

GND BI



GLD  
18/17  
1910

MARICOPA COUNTY ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 2.3  
PG 54 OF 65 DATE: NOV 92

+ HI - EL

1536.3404 (P. 60)

8.26

6.44 6.4367 1529.9237

4.61

6.90

5.22 5,220 1535.1237

3.54

8.88

#132

7.75 7.750 1527.3737

6.62 (-0.0267)

(21)

(p. 44 GLO B.C. 1527.1204)

MARICOPA COUNTY ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #41547  
DOCUMENT INDEX # 2.3  
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	+	HI	-	EL
#141				1564.2749
3.94				(POS)
2.66	2.660	1566.9349		
1.38				
			8.35	
			6.72	1560.2149
			5.00	
2.49				
5.83	5.830	1566.2149		
4.17				
			3.57	
			6.98	1559.0642
			5.23	
6.07				
4.32	4.3267	1563.3849		
2.59				
			10.12	
			9.43	1054.9616
			6.75	
5.30				
4.07	4.070	1559.0216		
2.84				
			9.43	
			7.97	1551.0619
			6.50	
6.49				
5.34	5.340	1556.4049		
4.19				
			7.39	
			6.31	1550.8949
4.71			5.23	
3.07	3.070	1553.5649		
2.23				

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MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #1547  
 DOCUMENT INDEX # 2.3  
 PG 56 OF 65 DATE: NOV 92



+ HI - EL

1549.2815 (P. 63)

4.92

#138

4.53 4.530 1544.7515

4.14

#142

1575.0958

7.86

6.19 6.190 1531.2958

4.52

5.56

3.95 3.950 1577.3358

2.34

9.30

7.75 7.750 1535.0958

6.20

7.35

5.24 5.2433 1570.6958

3.54

9.04

7.31 7.3133 1526.7958

5.59

11.24

2.73 2.730 1537.2058

1.22

8.29

6.88 6.880 1591.1058

3.47

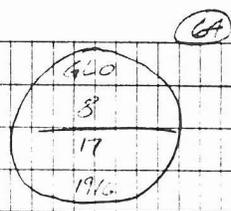
6.34

GLO B.C.

4.03 4.030 1536.4258

\*160

3.02



GLO B.C.

GLO B.C @ FENCE (P. 57)

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11517  
 DOCUMENT INDEX # 2.3  
 PG 58 OF 605 DATE: NOV 92

	+	H1	-	EL
*160				1586.4253
GLO				
B.C.				
7.93				
6.74	6.433	1592.891		
5.5				
			6.30	
			4.77	1583.2953
			3.00	
8.31				
6.87	6.363	1595.2591		
5.91				
			3.35	
			1.70	1593.5591
			2.05	
5.99				
4.57	4.570	1598.1291		
3.15				
			5.52	
			3.82	1594.2991
			2.13	
8.07				
6.82	6.8167	1601.153		
5.56				
			5.18	
			4.01	1597.053
			2.84	
7.39				
6.425	6.425	1603.5305		
5.46				

11-24-92

(25)

(p. 64)

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #1547  
 DOCUMENT INDEX # 2.3  
 PG 59 OF 65 DATE: NOV 92

	+	H1	-	EL
		1603.5308	(p. 65)	
GND		4.16		1599.37
		5.13	1A	
PANEL C #159		4.0	0.160	1599.3700
V9 ERM		3.19		(1599.3700)
		3.22	1A	
#159		2.70	2.7033	1600.8275
GLO				
B.C.				
6.35				
5.44	5.7.133	1606.2703		
4.04				
		5.12	2A	
		3.16	3.1567	1600.3141
		3.73		
7.80				
5.99	5.990	1608.3041		
4.18				
		4.02	3A	
		2.47	2.470	1606.8321
		3.82		
6.84				
5.115	5.115	1611.4091		
3.39				
		5.73		
		4.07	4.070	1607.3791
		3.71		
7.89				
6.43	6.4333	1613.3125		
4.98				

Good nail - FLUSH!

66

6.0
1.16
12.17
19.14

GLO B.C.

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 PG 60 OF 65 DATE: NOV 92

+ HI - EL

1613.8125 (P 66) 22'

6.72

5.405 5.605 1603.2575

4.49

117'

5.98

5.35 5.3467 1613.5541

4.76

Grid

4.90

4.2

\*158

ERM

5.72 3.70 1609.3811

3.32

8.48

6.96 6.9533 1616.974

5.45

5.52

4.09 1.090 1613.7077

3.00

7.90

6.70 6.7033 1619.408

5.51

5.45

3.99 3.990 1615.4505

2.53

9.22

7.81 7.8133 1623.2341

6.41

4.27

2.83 2.8367 1620.4174

1.38

9.83

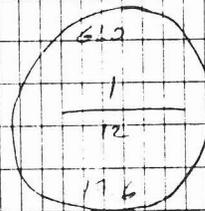
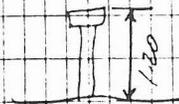
7.83 7.830 1622.374

5.83

(67)

Grid @ 4.53

6.0 B.C



MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WATERS  
 STANLEY CONSULTANTS #1547  
 DOCUMENT INDEX # 23  
 PG 61 OF 65 DATE: NOV 92



+ HI - EL

1615.5091 (P. 68)

8.84

7.66 7.6633 1607.3423

3A'

4.99

8.64

7.05 7.0467 1614.8924

5.45

3.94

7.20 7.200 1607.6924

317'

5.90

3.86

2.27 2.2733 1609.9.15

0.69

10.39

9.17 9.170 1600.1123

353'

7.93

6.09

4.32 4.3233 1605.1191

2.56

5.31

9.42 9.4233 1600.1123

220'

3.24

5.93

4.80 4.800 1605.1123

3.67

GND

5.55

1509.2453

\*502

6.11

5.42 5.4167 1600.0791

V

4.72

(1600.0791 RL)

6.07

4.69 4.690 1604.7691

3.31

GND @ 4572 V- PAMEL

E 12" HUE

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11947  
DOCUMENT INDEX # 2.3  
PG 63 OF 65 DATE: NOV 92

1604 7691 (A 69) H1

9.12 7.50 7.98 1597.2724

5.37

3.32 2.225 2.225 1599.1974

9.37 5.12 3.100 1591.3974

0.33

5.94 1.57 4.570 1595.374

4.52 5.22 5.220 1590.1474

3.92

6.92 5.71 5.710 1592.4574

5.21 5.2133 1591.7741

2.85 7.055 7.0550 1593.2051

4.71

1.20 9.95

8.38 4.7157 1591.9224

5.05 3.164 3.1640 1593.5024

4.90

2.23

1.43

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11347  
DOCUMENT INDEX # 2.3  
PG 64 OF 65 DATE: NOV 92

+ H1 - EL

1588.5024 (R. 70) 235  
5.95  
4.78 4.767 1582.7853  
3.00

7.10

5.85 5.350 1597.6358

4.54

5.75

4.47 10.220 1579.2391

235

2.01

5.06

3.64 3.6367 1582.9753

2.21

5.25

4.61 4.610 1573.7253

235

3.27

6.93

5.05 6.2533 1595.7191

3.18

9.27

\*142

8.25 3.750 1575.2253

7.23

(10.0000)

(1575.2253 3.61)

\*NOTES: LEVELS CONT'D PAGE #2

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STURLEY CONSULTANTS #11447  
DOCUMENT INDEX# 2.3  
PG 65 OF 45 DATE: NOV 92



INDONESIA, EASTERN  
OVERLINE AND TRANSIT  
SPECIALTY CONSULTANTS, INC.  
DOCUMENT INDEX # 23  
PAGE 1 OF 40 DATE DEC 92  
JAN 93

11547 Powerline Wash  
BK 2 Levels Check Profiles

 **TELEDYNE**  
418  
FIELD / TRANSIT BOOK



	+	H1	-	EL
#503				1001.540 (ADJ)
4.11				
3.45	3.450	1601.990		
2.79				
			9.82	
			3.31	3.306- 522.323
			6.79	
6.02				
4.21	4.210	1600.9933		
2.40				
			6.34	
			4.91	4.910 1515.3833
			3.18	
11.90				
10.50	10.500	1606.1933		
9.10			10.60	
			9.09	9.090 1517.3933
			7.58	
6.80				
5.22	5.220	1603.6133		
3.64				
			9.23	
			7.96	7.9567 159A.6567
			6.68	
5.68				
4.71	4.710	1579.3067		
3.74				

Book #1, pg. 23

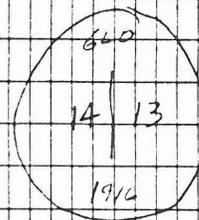
#16 = 1633.595 ADJ  
 Bal 1, of 35

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 PG 3 OF 40 DATE DEC 92  
 JAN 93

	+	H1	-	EL
		1599.3467	(R. 2)	
GND		6.15		1593.2167
		5.39		
#145		4.75	4.7533	1594.0134
6LO B.C.		4.12		
5.62				
4.27	4.270	1598.3834		
2.92				
		9.1.		
		6.54	7.540	1592.3424
		6.67		
5.24				
4.08	4.0767	1596.120		
2.91				
		5.46		
		3.95	3.9567	1592.4634
		2.12		
7.09				
5.99	5.9867	1599.1521		
4.88				
		2.82		
		5.96	5.9567	1592.4734
		2.08		
8.18				
6.68	6.680	1599.1534		
5.18				
		4.48		
		3.07	3.070	1596.1834
		1.26		
8.76				
7.87	7.8733	1603.9767		
6.99				

GND @ #145

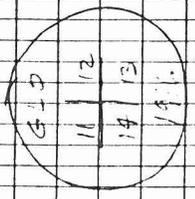
6LO B.C.



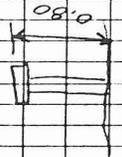
MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 PG 4 OF 40 DATE DEC 92  
 JAN 93

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 PG 5 OF 40 DATE: DEC 92

JAN 93



SND @ #144



SLO B.C.

HL - EL

	HL		EL
	1603.9747	(R. 3)	
GND	3.70		1600.28
	3.68		
#144	2.89	2.8867	1601.0900
	2.09		
10.44			
B.55	8.5567	1609.667	
6.68			
	3.78		
	1.75	1.750	1607.8357
	0.72		
B.72			
7.49	7.490	1615.3351	
6.26			
	4.81		
	3.15	3.1523	1612.2334
	1.50		
B.36			
7.01	7.010	1619.7134	
5.66			
	10.61		
	8.71	8.710	1610.5334
	6.81		
7.55			
5.78	5.7767	1616.2100	
4.00			
	2.77		
	1.89	1.890	1614.4200
	1.01		
9.52			
B.49	8.4933	1622.9134	
7.17			

	+	H1	-	EL
		1622.9134		(P. 4)
GND		3.00		1619.91
		3.75		
#183		2.99	2.9867	1619.9267
		2.22		1619.940 adj
		2.34		
G.L.O. B.C.		1.57	1.570	1621.3434
		0.90		
5.92				
4.91	4.910	1620.2534		
3.90				
		7.19		
		6.56	5.5633	1620.6901
		3.94		
12.28				
10.84	10.8367	1621.5267		
9.39				
		9.76		
		8.20	8.1967	1623.3301
		6.63		
4.77				
3.34	3.340	1626.6701		
1.91				
		4.08		
		2.76	2.760	1623.9101
		.44		
7.06				
5.80	5.7933	1629.7034		
4.52				

GND @ #183

MARK - FLOW (RANGE IS 2° E. OF G.L.O. B.C.)

MARIKOPA COUNTY ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 PG 60 OF 40 DATE: DEC 92  
 JAN 93

+

H1

EL

1629.7034 (P. 5)

7.52

5.51 5.510 1624.1934

3.50

12.92

1208 12.0833 1636.2767

11.25

3.57

#146

2.71 2.710 1632.5067

GLO

B.C.

1.85

(-0.0233)

(1633.595 12.1 16.41 p. 25)

MARICOPA COUNTY ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 PG 7 OF 40 DATE DEC 92  
 JAN 93



	+	HI	-	EL
		1735.7674	(P. 7)	
			11.34	
			9.73	9.7267 1726.0407
			8.11	
	9.18			
	7.31	7.3033		1733.3411
	5.42			
			6.05	
			4.33	4.3333 1729.0107
			2.62	
	7.60			
	6.15	6.150		1735.1607
	4.70			
	(X-SEC PANEL # 1)		5.60	1729.50
			15.85	
			12.93	12.930 1722.2207
			10.01	
	12.44			
	10.72	10.7167		1732.2174
	8.99			
			9.92	1724.5641
			8.08	8.0833 1716.1274
			6.25	
	6.08			1729.4274
	4.56	4.5633		1718.7107
	3.05			
			9.13	1722.1274
			7.30	7.300 1714.4107
			5.47	
	10.31			1731.3507
	9.22	9.2233		1720.6341
	8.14			

SAID @ CENTER OF PANEL

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 PG 9 OF 40 DATE: DEC 92  
 JAN 93





	H1		EL
	1750.3610	(P. 10)	
	1761.0408		5.59
			4.33
		4.730	1756.7108
			3.07
11.71	1767.0875		
10.33	10.3767	1756.4000	
9.04			
			6.34
			4.63
		4.6267	1762.4608
			2.91
10.50	1771.5608		
9.10	9.100	1760.8810	
7.70			
			4.36
			3.52
		3.520	1769.2408
			2.69
6.13	1772.6808		
4.64	4.640	1762.0010	
3.15			
			12.42
			10.55
		10.550	1762.1303
			8.08
7.17	1767.5808		
5.46	5.450	1750.2510	
3.73			
			12.84
			11.07
		11.070	1756.5108
			9.30
3.23	1758.8558		
2.345	2.345	1748.1100	
1.46			

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11541  
 DOCUMENT INDEX # 2.3  
 PG 12 OF 40 DATE DEC 92  
 JAN 93

	+	H1	-	EL
		1748.1760 (P. 11)		
		1758.3558	5.78	1753.9658
			4.89	1743.3860
			4.00	
10.45		1763.0308		
9.065	9.065	1753.3510		
7.68				
			3.51	1760.2975
			2.82	1747.3777
			2.14	
5.50		1764.6475		
4.44	4.440	1753.3577		
3.29				
				1753.1255
<u>GND</u>			6.52	<del>1747.11</del>
			7.79	1758.1242
<u>*31</u>			6.52	1747.11
			5.26	
6.93		1763.3242		
5.50	5.500	1752.1111		
4.07				
			4.74	1760.5642
			3.06	1749.3844
			1.33	
8.55		1767.6342		
7.07	7.070	1756.1511		
5.59				
			6.55	1763.1309
			4.50	1752.1511
			2.46	
6.25		1767.1509		
4.02	4.020	1756.1711		
2.79				

GND @ #31

ST CRANK F. W. H. G. H.

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 PG 130 OF 40 DATE: DEC 92  
 JAN 93

	+	HI	-	EL
		1756.4941	(P. 12)	
		1767.1505	3.24	1765.0576
			2.09	2.0933
			0.95	1754.3777
8.81		1772.6943		
7.63	7.6367	1762.0144		
6.47				
			4.75	1768.3643
BM			3.33	3.830
*1769			2.91	1759.1374
24 WLS				(-0.0117)

USGS B3 IN CASE (2K #1 p. 52)  
1768.976

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STAKE/CONSULTANTS #11547  
DOCUMENT INDEX # 23  
Pg 4 of 40 DATE: DEC 92  
JAN 93



	+	H1	-	EL
		1634.3713	(P. 1A)	
GND		2.70		1630.17
			133'	
		5.23		
#501		4.57	4.667	1630.3046
V		3.75		.309 adj
10.03	332'			
8.40	3.3567	1639.7012		
6.71			401'	
		4.33		
		2.64	2.040	1636.0612
		0.92		
10.25	400'			
8.25	5.250	1644.3112		
6.25			401'	
		4.25		
		2.15	2.50	1640.12
		0.05		
9.62	332'			
7.91	7.910	1650.5712		
6.20			322'	
		4.37		
		2.76	2.760	1647.3112
		1.15		
9.72	203'			
8.70	8.7033	1655.1145		
6.99				

GND @ #501

2" v2" HUB

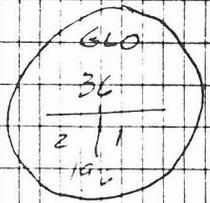
MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #14547  
 DOCUMENT INDEX # 2.3  
 PG 16 OF 40 DATE: DEC 92

JAN 93

	+	HI	-	EL
		1655.12145	(p 15)	
GND		3.51		1652.10
		3.14	201'	
#166		2.12	2.120	1653.1945
	283'	1.10		53.504 adj
6.30				
4.86	4.860			1653.3540
3.42				
		8.70	323'	
		7.07	7.0667	1651.2978
		5.43		
10.51	300'			
8.68	8.680			1659.9673
6.85			358	
		5.78		
		3.99	3.990	1655.9113
		2.20		
9.27	323'			
7.65	7.6533			1663.6311
6.04			379	
		3.75		
		2.38	2.380	1661.2511
		1.01		
9.17	445'			
7.95	7.9467			1662.278
6.72				

GND @ #166

GLO B.C.



MARICOPA COUNTY ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 23  
 PG 17 OF 40 DATE: DEC 92  
 JAN 93

+ H1 - EL

1669.1978 (P. 16)

GGND			4.31	1664.8878
			4.30	79
# 30			4.3	4.3067 1664.8911
H.V			3.5	1664.905 adj
65.71				
4.34	4.297	1669.2311		
2.97				
			9.23	215
			7.51	7.5067 1664.724
			5.73	
4.97				
3.54	3.540	1665.2644		
2.11				
			10.17	
			8.57	8.5067 1666.597
			6.96	
11.74				
10.03	10.0267	1666.7244		
8.31				
			8.14	
			6.16	6.160 1660.5644
			4.8	
9.79				
8.33	3.322	1668.3946		
6.87				
			7.71	
			6.04	6.0432 1662.3511
			4.58	
9.31				
8.27	8.2667	1671.1173		
7.22				

(17)

GND C #30

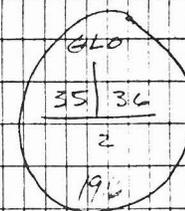
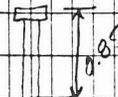
1/2" REBAR FLUSH

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 PG 18 OF 40 DATE: DEC 92  
 JAN 93

	T	H1	-	EL
		1671.1173	(P. 17)	
<u>GND</u>				3.96 1667.2578
			129'	3.61
#168				2.97 2.9667 1668.1511
	A28			2.32 1668.170 adj
5.59				
3.45	3.450	1671.6011		
1.31'			302	
				7.75
				6.24 6.240 1665.3611
				4.73
5.46	171			
4.57	4.5667	1669.9278		
3.67				
<u>GND</u>				6.17 1663.7578
			171	7.03
#29				6.75 6.75 1663.7528
	314			5.32 1663.773 adj
6.32				
3.75	3.750	1667.5078		
2.18			332	
				9.81
				8.13 8.267 1659.3761
				6.44
5.42	332			
3.76	3.760	1663.1361		
2.10				

GND @ #168

GLO BC



GND @ #29

1/2" REBND FLUSH

MARICOPA COUNTY, ARIZONA  
 PUMPING AND TANK WASHES  
 STANLEY CONSULTANTS #1547  
 DOCUMENT INDEX # 2.3  
 pg 19 of 40 DATE: DEC 9  
 JAN 9

	+	H1	-	EL
		1663.1361	(P. 18)	
			8.67	278
			7.28	7.280 1655.8561
	348		5.89	
6.93				
4.69	4.690	1660.5461		
2.95				
			9.67	293
			8.21	8.2067 1652.3594
			6.74	
4.21	214			
3.14	3.140	1655.4794		
2.07				
<u>GND</u>			9.10	1647.09
			10.32	299
*505			8.32	8.3285 1647.1561
			6.33	1647.18 adj
4.57	273			
3.40	3.4033	1650.5594		
2.24				
			10.53	329
			8.88	8.8833 1641.6761
			7.24	
5.69	160			
4.84	4.840	1646.5161		
4.04				
			10.27	319
			8.63	8.6367 1637.5374
			7.08	
8.34	282			
6.93	6.930	1644.7694		
5.57				

GND @ 505

ETW @ HVC

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 PG 20 OF 40 DATE: DEC 94  
 JAN 9

	+	HI	EL
		1644.7694 (P. 19)	
		5.17	216
		3.79	3.790 1640.9794
	335	2.91	
9.28			
7.60	7.6033	1648.5827	
5.93			
		10.38	345
		8.66	8.6567 1639.9260
		6.93	
9.33	338		
2.64	2.640	1642.5660	
0.95			
		10.12	394
		8.15	8.150 1634.4160
		6.18	
4.14	400		
2.14	2.140	1636.5560	
0.14			
		9.97	399
		8.07	8.0733 1628.4827
		6.18	
5.11	412		
3.05	3.050	1631.5327	
0.99			
		10.72	427
		8.58	8.5833 1622.9494
		6.45	
5.38	393		
3.41	3.4133	1626.3627	
1.45			

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 PG 21 OF 40 DATE: DEC 92  
 JAN 93





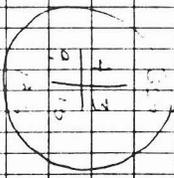


	+	HI	-	EL
		1669.8533 (P. 23)	354'	
			6.34	
			4.47	1665.3833
	204'		2.70	
6.73				
5.41	5.410	1670.7435		
4.09				
			5.52	341'
			3.18	3.175 1667.1482
			1.22	
12.93	282'			
11.52	11.520	1679.1367		
10.11				
			3.00	345'
			6.78	6.775 1675.3600
			5.00	
7.00	365'			
5.17	5.1733	1677.5733		
3.35				
			14.01	348'
			12.00	12.000 1674.5733
			10.93	
14.77	217'			
13.69	13.697	1678.590		
12.60				
			2.32	170'
			1.43	1.430 1677.1200
			2.54	
14.86	291'			
13.37	13.3733	1680.4963		
11.39				

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 PG 25 OF 40 DATE: DEC 92  
 JAN 93

	+	H <sub>1</sub>	-	EL
		1190.4933	(R24)	
			204'	
		3.22		
		1.93	13.50	1094.6107
		0.53		
9.4c	33'			
7.75	7.7407	1696.3633		
0.03				
		5.16	32'	
#152		3.35	3.9433	13.20.0000
		2.25		(-0.0320)

610	BL	(EL #1 P. 27)	
		1002.542	
			9704'



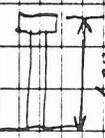
MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 PG 210 OF 40 DATE: DEC 92  
 JAN 93

	+	HI	-	EL
*500				1727.1707
5.25				
3.66	3.6567	1730.3274		
2.06				
			10.41	
			3.70	3,7,22, 1722.1240
			7.00	
4.11				
2.20	2.200	1724.3240		
0.29				
			10.65	
			3.22	3940 1715.3840
			7.23	
5.49				
4.04	4.020	1719.4740		
2.59				
			13.47	
			11.79	11.720 1707.6840
			10.11	
6.24				
4.42	4.420	1712.0540		
2.60				
GND (NO PANEL)			11.06	1700.99
GLO B.C.			11.57	
<del>FFH</del> 172			10.05	10.0467 1702.0073
			8.52	
7.97				
6.37	6.3667	1708.3740		
4.76				

2" x 2" HUB (THIS BK, P. 9)

#171  
34 | 35  
3

GLO BC  
GND e \* FFH



GLO BC

GLO  
50 Row  
4 | 35  
3  
TAN  
1916

MARICOPA COUNTY ARIZONA  
POWERLINE AND TANK WASHES  
SANITARY CONSULTANTS #1547  
DOCUMENT INDEX # 2-3  
PG 270 OF 40 DATE: DEC 92  
JAN 93

H1 - EL  
1708.3740 (P. 26)

7.77  
6.26 6.260 1702.1140  
4.75

5.17  
3.88 3.8833 1705.9973  
2.60

6.43  
5.79 5.7933 1700.2040  
5.16

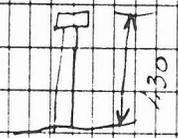
6.32  
5.70 5.700 1705.9040  
5.08

GND 4.77 1701.134

4.00  
3.50 3.500 1702.4040  
3.00 OK, jrm

\*171

max math. error = -0.0067



GLO B.C.

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 2.3  
PC 28 OF 40 DATE: DEC 92  
JAN 93

X-SECTIONS (5-TOTAL)

POWERLINE WASH  
#11547

1-21-93  
S. ANDERSON  
J. KARSTEN  
cool, clear

NA-1 #506076

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STAFF CONSULTANTS #11547  
DOCUMENT INDEX # 23  
PG 29 OF 40 DATE: DEC 92  
JAN 93

H1

EL

#174 1726.3257

9.82

8.68 8.6767 1734.9974

9.53

7.29

5.78 5.7767 1729.3257

4.26

3.06

1.86 1.8600 1731.0807

0.66

5.70

3.78 3.7833 1727.5974

1.37

7.62

6.22 6.2200 1733.5174

4.32

5.61

X sec. road 3.90 3.9000 1729.6174

3.10

4.86

3.76 3.7600 1733.3774

2.66

10+00 3.90 1729.61

11+43 3.37 1730.00 ✓

12+70 5.37 1729.00 ✓

13+01 7.40 1725.73 ✓

13+34 9.39 1723.99 ✓

14+07 11.42 1721.96 ✓

15+10 13.35 1720.03 ✓

15+80 15.37 1718.00 ✓

16+41 13.37 1720.00 ✓

16+65 11.42 1721.96 ✓

X-SEC #1 - SAT. 16

29

G.L.O. BC.

G.L.O.  
33/34  
916

(BK #1 p 10)

12+00 = 0 = 1730

12+70 30' = 1730

\* Note: Maricopa

13+10 40' = 1728

County Hwy Dept,

13+40 35' = 1726

was working the

13+75 33' = 1724

road while this

14+03 115' = 1722

profile was being

15+43 70' = 1720

taken.

16+53 45' = 1720

16+78 35' = 1722

17+03 25' = 1724

17+33 50' = 1724

17+73 20' = 1724

20+53 20' = 1724

21+24 30' = 1724

JOT MAIL TP

22+75 150' = 1724

25+65 350' = 1724

RD 347225 RDW

RD 143'

RD 27'

RD 31'

RD 33'

RD 73'

RD 103'

RD # WASH 70'

RD 61'

RD 24'

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY COMPANY STAIRS #11547  
NO. 30 OF 40 DATE DEC 99  
# 2.3  
JAN 93

HI		EL	
1733.3774 (p. 29)			
16+90		9.40	1723.98 ✓
17+19		7.37	1726.01 ✓
17+73		5.38	1728.00 ✓
		8.02	
		5.52	5.52 1727.8574
		3.02	
4.55			
3.11	3.110		1730.9674
1.67			
19+18		1.80	1729.16 ✓
20+04		3.00	1727.97 ✓
20+55		4.97	1726.00 ✓
20+88		6.94	1724.03 ✓
21+25		8.09	1721.93 ✓
21+58		9.75	1721.22 ✓
22+00		8.95	1722.02 ✓
22+75		6.95	1724.02 ✓
24+35		6.97	1724.00 ✓
		9.08	
		6.93	6.930 1724.1157-1
		4.78	
9.38			
7.54	7.5433		1731.5807
5.71			
25+59		8.83	1723.75 ✓
26+96		7.58	1724.00
28+36		5.61	1725.97

± RD.	25'
± RD	29'
± RD.	54'
± RD - High pt	145'
± RD	86'
± RD.	51'
± RD	33'
± RD	37'
± RD (Low pt.)	33'
± RD	42'
± RD	75'
± RD	210'
± RD. (Low pt)	74'
± RD	137'
± RD	140'

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.3  
 PG 31 OF 40 DATE: DEC 92  
 JAN 93

H1  
1731.5807 (p. 30)

EL

29+30 3.57 1728.01

30+02 1.63 1729.95

2.45

1.73 17267 1729.3540

1.00

8.13

7.17 7.170 1737.0240

6.21

32+13 5.02 1732.00

5.62

TBM 5.07 5.0667 1731.9574

4.51

END X-SEC #1

PANEL  
TBM NAME

5.20 1734.3174

1729.6174

13+10 9.57 1725.29 21+25 1722.07 Low pt

13+40 1723.47 22+75 1724.06

14+93 1720.65 25+65 1722.85

15+63 1718.33

16+53 1720.93

16+73 1723.03

17+03 1724.41

17+33 1726.37

17+73 1727.90

20+53 1726.21

20+93 1723.70

31

± RD. 94'

± RD. 72'

± RD (opp. + 500 ±) 211'

SET HUB w/2' CAT# E W SIDE TANK Y. 71 - 500

p. 29

1-25-93

5.46

1728.34

10.70

5.23

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 2.3  
PG 32 OF 40 DATE DEC 92  
JAN 93



t	HI	-	EL
			1587.6958

6.26 1593.9558

29+40	5.40	1583.35
31+83	3.97	1587.98
33+85	1.98	1591.98

END X-SEC \* A

T @ \* 142

HD TO E GATE  
1356.9

HD TO E WASH  
1395'

#160 1386.42

A.51 1390.93

E WASH	10.20	1380.73
N. T/B	7.1	1383.83
S. T/B	4.2	1386.73
	5.1	1385.87
	5.6	1395.33
	7.4	1383.53
	6.7	1384.33
	8.15	1382.48

(P. 32)

W FINE  
3 FINE  
2 FINE

1-25-93

APPROX. SCALED DIST

SETE 187'

WASH 3+00'

E WASH

50' N. OF E WASH

25' S. OF E WASH

160' S. " " "

190' S. " " "

50' N. " " "

120' N. " " "

E GATE

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY JOHNSON TANKS #4847  
DOCUMENT INDEX # 23  
PG 34 OF 40 DATE DEC 92  
JAN 93

H1

EL

#24

1536.8353

7.54 1544.3753

3.77 1540.6052

7.64 1548.2453

1130 n = 10+00

5.3 1542.875

12+97

3.25 1541.99

13+85

3.5 1540.09

TP

3.13 1540.0653

5.67 1545.7353

14+95

7.74 1537.99

16+05

5.72 1541.00

17+20

5.77 1539.96

17+36

7.80 1537.97

17+60

7.92 1535.35

17+90

8.30 1537.13

18+00

7.70 1538.83

19+12

5.75 1539.98

19+78

3.75 1541.97

TP

2.80 1542.4553

9.27 1552.3053

20+19

3.20 1541.00

20+99

6.30 1546.00

21+70

6.25 1546.05

25+05

8.32 1543.49

25+47

10.20 1542.00

X-SEC #3

SHT #11

1-22-92

34

G.L.O. B.C.

410  
24/19  
1540

(BK, P. 41, 6)

SA

JK

1130' = 1544 ✓

1295' = 1542 ✓

90' = 1540 ✓

110' = 1533 ✓

16405 10' = 1540 ✓

7130 115' = 1540 ✓

17425 5' = 1533 ✓

17460 35' = 1539 ✓

17490 25' = 1533 ✓

18430 90' = 1540 ✓

19450 70' = 1542 ✓

20470 40' = 1544 ✓

21490 75' = 1546 ✓

22510 385' = 1546 ✓

24152 32' = 1544 ✓

25170 38' = 1542 ✓

26190 25' = 1542 ✓

27210 105' = 1544 ✓

28230 60' = 1544 ✓

29250 55' = 1544 ✓

2 FACE

2 FACE

3 FACE

4 FACE

2 FACE

1 FACE

2 FACE

4 WASH @ FACE

2 FACE

2 FACE

2 FACE

2 FACE

2 FACE

"

"

"

"

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 2.3  
PG. 35 OF 40 DATE: DEC 92  
JAN 92

H  
1552.3053

EL

#130	3.91	1543.3953
		-0.0113
25.65	13.07	1528.05
25.90	10.06	1528.05
26.70	3.32	1541.06
27.32	1.33	1542.39
27.90	2.51	1544.90

X-20 #3

G.L.O. B.C.

13/18  
24/19

(BK) 2 7 4 3

- 1 WASH @ FINE
- 1 FINE
- 1 FINE
- 3 FINE
- 3 FINE

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #1547  
 DOCUMENT INDEX # 2.3  
 PG 36 OF 40 DATE: DEC 92  
 JAN 93

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STAFF COMPLAINTS #115  
 DOCUMENT INDEX # 2.3  
 PG 37 OF 40 DATE: DEC 92  
 JAN 93

X-SEC. # 5 SHT 5  
 620  
 17  
 201  
 (88.41, P. 9 + 15)  
 # 135 = 1508.4472  
 # 17 = 1500.9972  
 10+00 = 1518 ✓  
 15+00 308' = 1518 ✓  
 15+50 170' = 1518 ✓  
 15+70 160' = 1518 ✓  
 17+50 80' = 1518 ✓  
 17+32 52' = 1518 ✓  
 19+12 50' = 1518 ✓  
 20+00 30' = 1518 ✓  
 20+32 55' = 1518 ✓  
 25+00 25' = 1518 ✓  
 26+00 20' = 1518 ✓  
 # 82  
 # ED. 730 SW of # WASH  
 # 82

# PD  
 # RD  
 # PD of # WASH  
 # 82  
 # 82

# 13A  
 8.35  
 7.17 7.70 523.3639  
 5.99  
 7.94  
 5.88 5.8767 1517.4972  
 6.24  
 5.18 5.180 1522.6672  
 4.2  
 1008 #  
 13160  
 5.92  
 4.24 4.240 518.1272  
 2.51  
 4.56  
 4.81 4.810 1523.2372  
 3.06  
 15130  
 16+90  
 17+90  
 19+12  
 19+63  
 16+82  
 5.26 1517.93  
 4.25 1515.99  
 9.30 1513.94  
 5.32 1512.92  
 10.30 1510.94  
 5.55 1512.69  
 5.32 1517.92

1516.1939

+ H1 - EL

1523.2372 (p 36)

6.90

R 5.97 5.9733 1517.2639

5.05

6.00

4.91 4.910 1522.1739

3.82

23+32 6.05 1515.72

Y-SEC PANEL 6.04 1515.9339

25+62 4.23 1517.94

26+89 2.41 1519.76

END X-SEC #5

NG @ EDGE 1st.

CENTER OF WHEEL

NG @ EDGE 2nd

NG @ EDGE 3rd

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 2.3  
PG 38 OF 40 DATE: DEC 92  
JAN 93

+ HI - EL  
 #146 = 10+00 1633.595

3.52 1637.115

7+63 5.1 1632.01

7+70 5.3 1631.81

8+30 7.2 1629.91

9+55 5.2 1631.21

10+75 5.26 1631.85

11+95 7.2 1629.31

12+25 9.0 1628.11

12+55 11.2 1625.91

13+95 14.1 1620.21

14+45 16.1 1621.01

14+23 22.2 16 - 91

14+55 22.0 16 - 1

14+75 15.6 1621.51

15+10 16.85 1620.26

TP 15.96 1621.2550

8.67 1629.425

15+38 7.92 1630.0

15+93 7.36 1620.06

16+53 7.5 1620.42

16+43 9.3 1620.12

16+73 8.34 1621.08

16+88 7.96 1621.96

17+53 8.33 1621.59

17+44 7.91 1622.11

17+78 6.83 1623.09

17+93 6.02 1623.90

19+48 6.89 1624.04

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2  
 PG 39 OF 40 DATE DEC 92  
 HAN 93

X-SEC #2

SHT 13

125-92

33

E.L.O. B.C. (BK 1, p. 10, 125)

19.11  
15.16

SA JK

π @ #146

146-188 = 2634.75 (m) B.S. #180  
 2635.98 - Inv. Kenney coils

NG 7170 v 60 = 1632

NG 8130 v 125 = 1630

NG 9155 v 45 = 1632

NG T. 10100

NG - 10175 v 75 1632

NG - 11195 v 120 1631

NG - 12125 v 30 1628

NG - 12155 v 30 1626

NG < 13195 v 140 1620

T/B - 14155 v 60 1620

E. WASH - 15110 v 55 1620

- 15138 v 28 1620

T/B - 15193 v 55 1620

- 16153 v 40 1620

- 16173 v 20 1622

- 17153 v 30 1622

- 17178 v 25 1624

- 18130 v 70 1624

NG - 21148 v 320 1622

NG - 22158 v 30 1620

NG - 23113 v 55 163

NG - 24108 v 95 1620

NG - 24138 v 91 1622

NG - 24188 v 10 1624

NG - 25125 v 57 1626

NG - 27120 v 195 1625

NG

NG

NG

+ H1 - EL

1629.925 (P. 38)

21+68 8.20 1621.72

21+43 7.89 1622.03

TP 8.53 1621.395

9.53 1630.925

22+58 11.02 1619.90

23+13 13.12 1617.74

24+08 11.36 1619.56

24+16 10.83 1620.59

24+48 9.21 1621.71

24+56 9.90 1622.02

24+88 7.27 1623.65

24+98 6.80 1624.12

25+25 5.68 1625.24

25+50 4.93 1626.50

27+20 5.44 1625.48

27+32 4.94 1625.98

TP 3.99 1626.935

0.67 1627.605

\*188 6.29 1621.3150

ELLY 5-SEC #2

NG

G.L.O. B.C. (BK 2 p 5)

MARICOPA COUNTY, ARIZONA  
POWERLINE AND TANK WASHES  
STANLEY CONSULTANTS #11547  
DOCUMENT INDEX # 2.3  
PG 40 OF 40 DATE: DEC 92  
JAN 93

# FLOOD CONTROL DISTRICT OF MARICOPA COUNTY POWERLINE WASH AND TANK WASH FLOOD DELINEATION STUDY

FCD 92-09

**AERIAL MAPPING:**

KENNEY AERIAL MAPPING, INC.  
1130 W. FILLMORE  
PHOENIX, ARIZONA 85007 PH-(602)258-8471  
KENNEY JOB #920716  
FLIGHT DATE: NOVEMBER 24, 1992  
CONTOUR INTERVAL: 2 FEET

NOTE: AERIAL MAPPING IN SECTIONS 16, 21, 28 AND 33:  
TOWNSHIP 4 NORTH, RANGE 5 WEST WAS PROVIDED BY  
AERIAL MAPPING COMPANY, INC. IN CONJUNCTION WITH  
THE STAR WASH FLOOD DELINEATION STUDY (FCD 92-06).

**GROUND CONTROL:**

PROJECT ENGINEERING CONSULTANTS, LTD (HORIZONTAL CONTROL ONLY)  
3130 N. 35TH AVENUE, SUITE 1  
PHOENIX, ARIZONA 85017 PH-(602)484-7691  
PEC JOB #92317

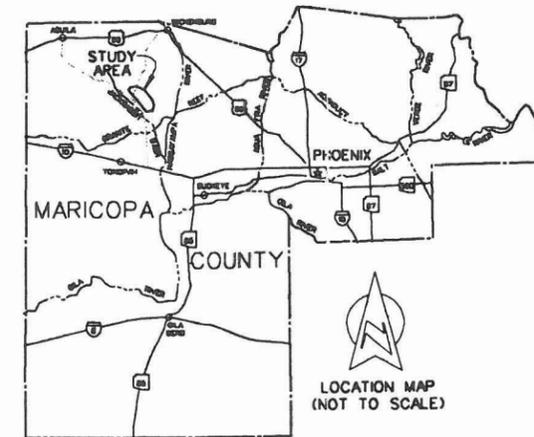
**STANLEY CONSULTANTS, INC. (VERTICAL CONTROL ONLY)**

**HYDROLOGY:**

BURGESS AND NIPLE, INC., FCD 90-05  
(AS AMENDED BY FCD FOR TANK WASH ON 3-8-93)

**SUMMARY OF PEAK FLOW RATES**

POWERLINE WASH			TANK WASH			SOUTH BRANCH TANK WASH		
FROM (RIVER MILES)	TO (RIVER MILES)	100 YR FLOW (CFS)	FROM (RIVER MILES)	TO (RIVER MILES)	100 YR FLOW (CFS)	FROM (RIVER MILES)	TO (RIVER MILES)	100 YR FLOW (CFS)
1.113	1.553	5100	0.980	0.980	6600	0.176	0.872	2300
1.664	2.846	5200	1.073	1.842	6700			
2.938	4.200	5300	1.939	2.805	6800			
4.294	5.589	5400	2.900	3.668	6900			
5.682	7.013	5500	3.785	4.997	6100			
7.106	8.438	5600	5.091	5.763	4300			
8.530	10.424	5700	5.853	6.825	3400			



**NOTE**

FLOODPLAIN LIMITS IN THIS STUDY ARE PLOTTED AT EACH HEC-2 CROSS SECTION ON THE BASIS OF STARTING (SSTA) AND ENDING (ENDST) STATIONS UNLESS THERE IS INEFFECTIVE FLOW AREA OR A CONFLICT WITH TOPOGRAPHIC CONTOURS, IN WHICH CASE, TOPOGRAPHY TAKES PRECEDENCE.

**CERTIFICATION**

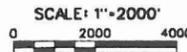
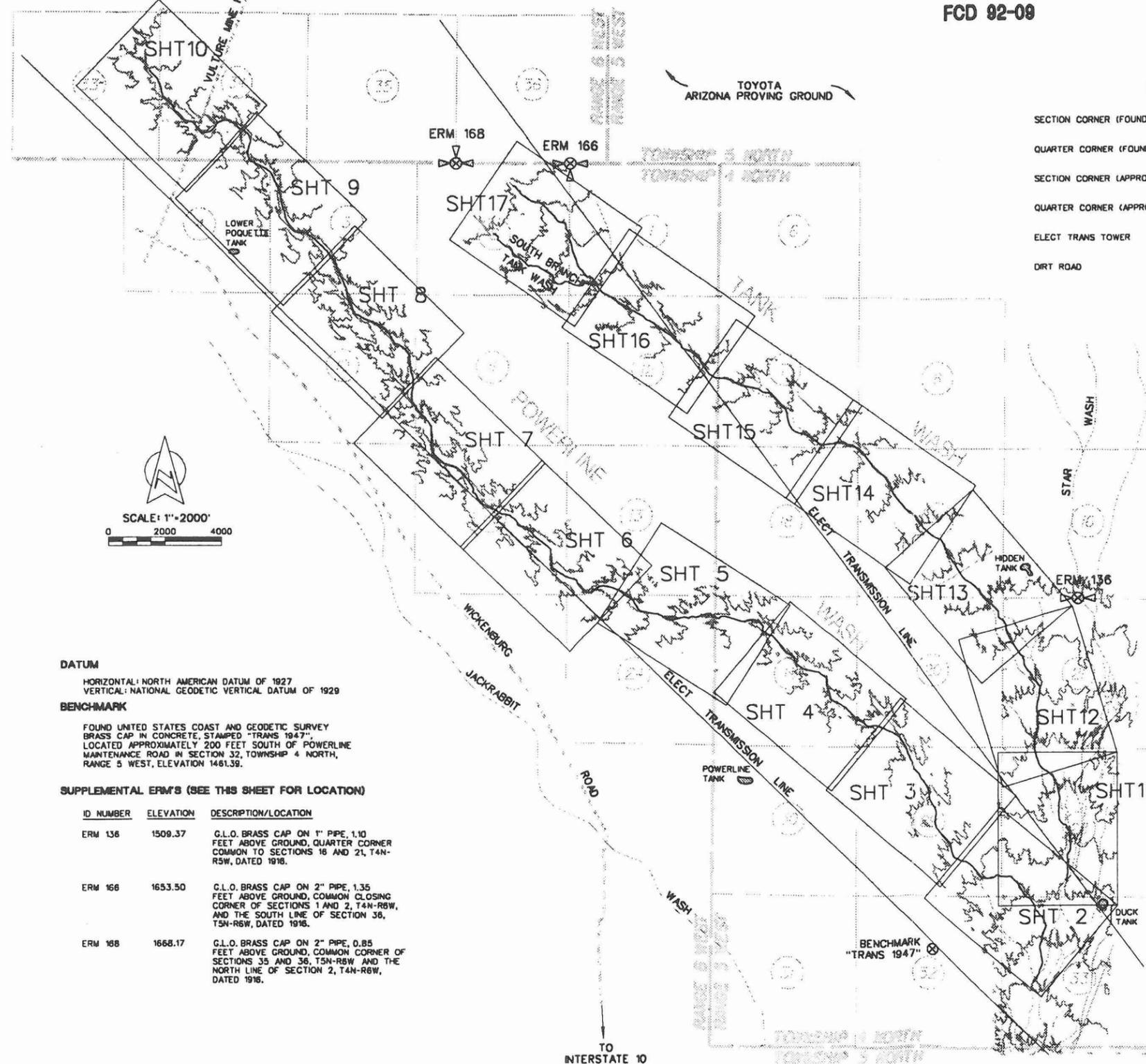
THIS IS TO CERTIFY THAT ALL WORK PERFORMED IN ASSOCIATION WITH THE FLOOD DELINEATION STUDY FOR POWERLINE WASH AND TANK WASH WAS DONE IN ACCORDANCE WITH FEMA DOCUMENT 37, "FLOOD INSURANCE STUDY GUIDELINES AND SPECIFICATIONS FOR STUDY CONTRACTORS," FEDERAL INSURANCE ADMINISTRATION, MARCH 1981, AND THE GENERAL PROVISIONS OF FCD CONTRACT 92-09 AND ALL AMENDMENTS THERE TO, TOGETHER WITH ALL SUCH MODIFICATIONS EITHER WRITTEN OR ORAL, AS THE FCD CONTRACTING OFFICER OR THEIR REPRESENTATIVES HAVE DIRECTED, AS SUCH MODIFICATIONS AFFECT THIS CONTRACT, AND THAT ALL SUCH WORK HAS BEEN ACCOMPLISHED IN ACCORDANCE WITH SOUND AND ACCEPTED ENGINEERING PRACTICE WITHIN THE CONTRACT PROVISIONS FOR RESPECTIVE PHASES OF THE WORK.

**SHEET INDEX**

- SHT 1 COVER SHEET
- SHTS 2-17 FLOOD DELINEATION MAPS
- SHTS 2P-17P AERIAL PHOTO OVERLAYS

**STANLEY CONSULTANTS, INC.**  
2929 EAST CAMELBACK ROAD, SUITE 130  
PHOENIX, ARIZONA 85016 (602)912-6500

SCI #11547 SHEET 1 OF 17



**DATUM**

HORIZONTAL: NORTH AMERICAN DATUM OF 1927  
VERTICAL: NATIONAL GEODETIC VERTICAL DATUM OF 1929

**BENCHMARK**

FOUND UNITED STATES COAST AND GEODETIC SURVEY  
BRASS CAP IN CONCRETE, STAMPED "TRANS 1947"  
LOCATED APPROXIMATELY 200 FEET SOUTH OF POWERLINE  
MAINTENANCE ROAD IN SECTION 32, TOWNSHIP 4 NORTH,  
RANGE 5 WEST, ELEVATION 1461.39.

**SUPPLEMENTAL ERM'S (SEE THIS SHEET FOR LOCATION)**

ID NUMBER	ELEVATION	DESCRIPTION/LOCATION
ERM 136	1509.37	G.L.O. BRASS CAP ON 1" PIPE, 1.10 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 16 AND 21, T4N-R5W, DATED 1916.
ERM 166	1653.50	G.L.O. BRASS CAP ON 2" PIPE, 1.35 FEET ABOVE GROUND, COMMON CLOSING CORNER OF SECTIONS 1 AND 2, T4N-R6W, AND THE SOUTH LINE OF SECTION 36, T5N-R6W, DATED 1916.
ERM 168	1668.17	G.L.O. BRASS CAP ON 2" PIPE, 0.85 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 35 AND 36, T5N-R6W AND THE NORTH LINE OF SECTION 2, T4N-R6W, DATED 1916.



FLOOD CONTROL DISTRICT  
OF MARICOPA COUNTY  
POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY

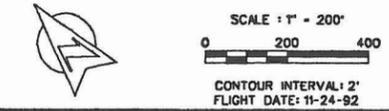
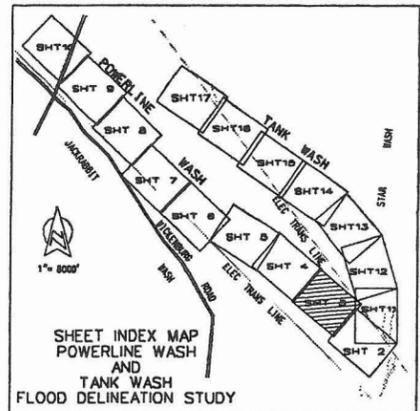
LEGEND

- 100-YR FLOODPLAIN BOUNDARY
- FLOODWAY BOUNDARY
- HYDRAULIC BASE LINE WITH RIVER MILE
- CROSS SECTION F.P. = 1446.4  
F.W. = 1447.3
- ELEVATION REFERENCE MARK ERM 104
- BASE FLOOD ELEVATION 1550
- FLOOD INSURANCE ZONE **ZONE AE**

ELEVATION REFERENCE MARKS

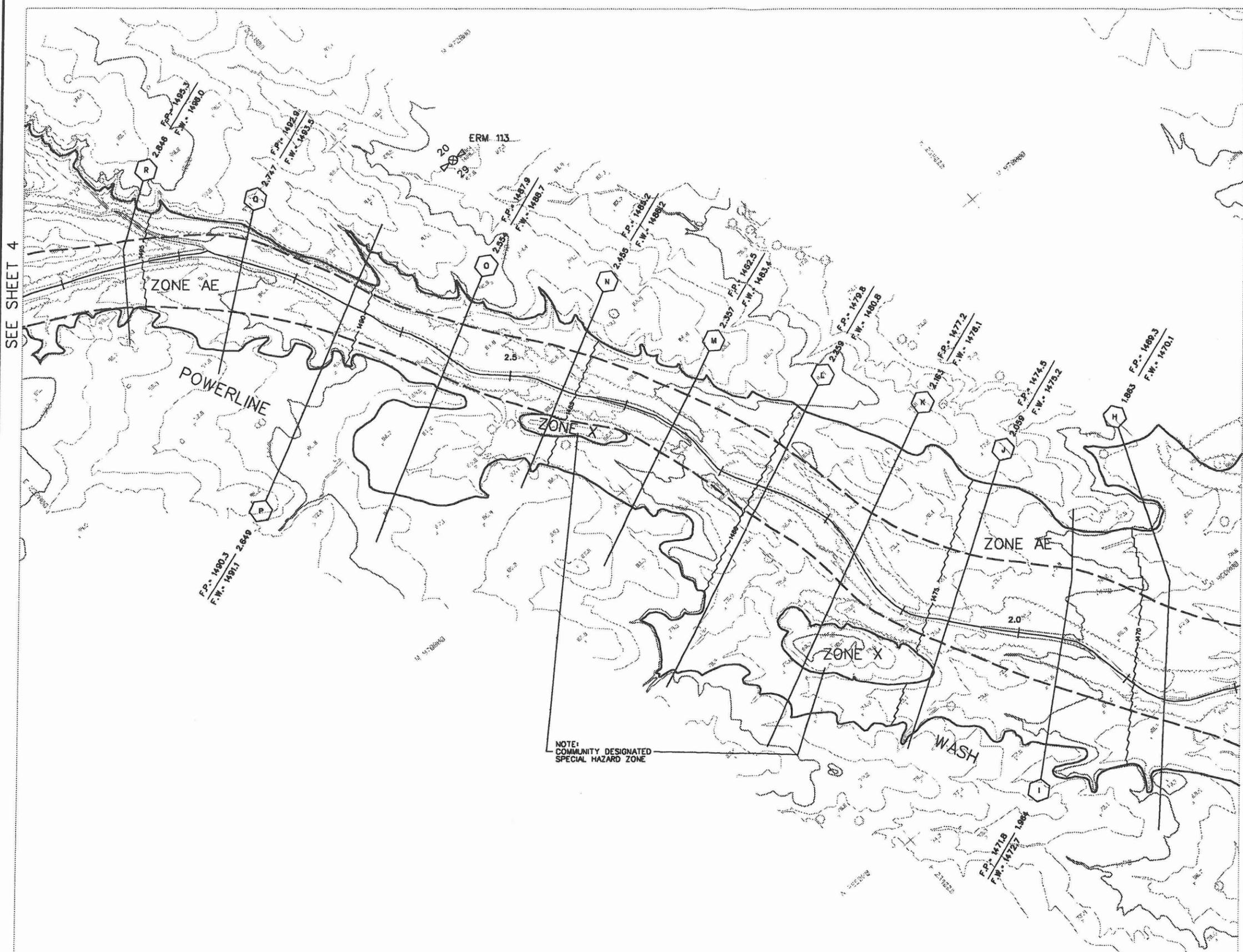
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 113	1489.61	G.L.D. BRASS CAP ON 1" PIPE, 1.25 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 20 AND 29, T4N-R5W, DATED 1916.



STANLEY CONSULTANTS

DESIGN	GSB	4 / 94	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	MSF	4 / 94	
PLANS	GSB	4 / 94	RECOMMENDED BY: _____ DATE: _____
PLANS CHK.	MSF	4 / 94	APPROVED BY: _____ DATE: _____
SUBMITTED BY:	DATE: _____		CHIEF ENGINEER AND GENERAL MANAGER
			SHEET <b>3</b> OF <b>17</b>



SEE SHEET 4

SEE SHEET 2

KENNEY AERIAL MAPPING, INC. I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAHMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY CLYDE J. MCCARTY (VERTICAL CONTROL) AND BY LARRY M. WALDONADO (HORIZONTAL CONTROL).

STANLEY CONSULTANTS, INC. CLYDE J. MCCARTY, ARIZONA REGISTERED LAND SURVEYOR #2780, CERTIFY THAT THE VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAHMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

PROJECT ENGINEERING CONSULTANTS, LTD. LARRY M. WALDONADO, ARIZONA REGISTERED LAND SURVEYOR #1863, CERTIFY THAT THE HORIZONTAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAHMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

FLOOD CONTROL DISTRICT  
OF MARICOPA COUNTY  
POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY

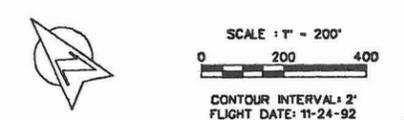
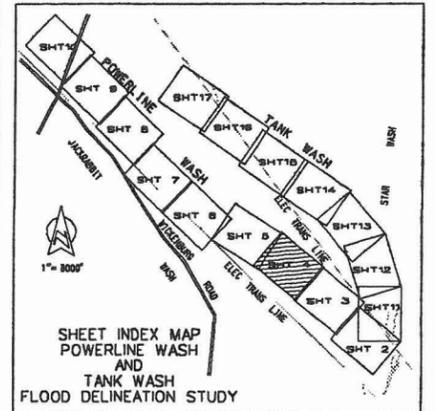
LEGEND

- 100-YR FLOODPLAIN BOUNDARY
- FLOODWAY BOUNDARY
- HYDRAULIC BASE LINE WITH RIVER MILE
- CROSS SECTION
- ELEVATION REFERENCE MARK
- BASE FLOOD ELEVATION 1550
- FLOOD INSURANCE ZONE **ZONE AE**

ELEVATION REFERENCE MARKS

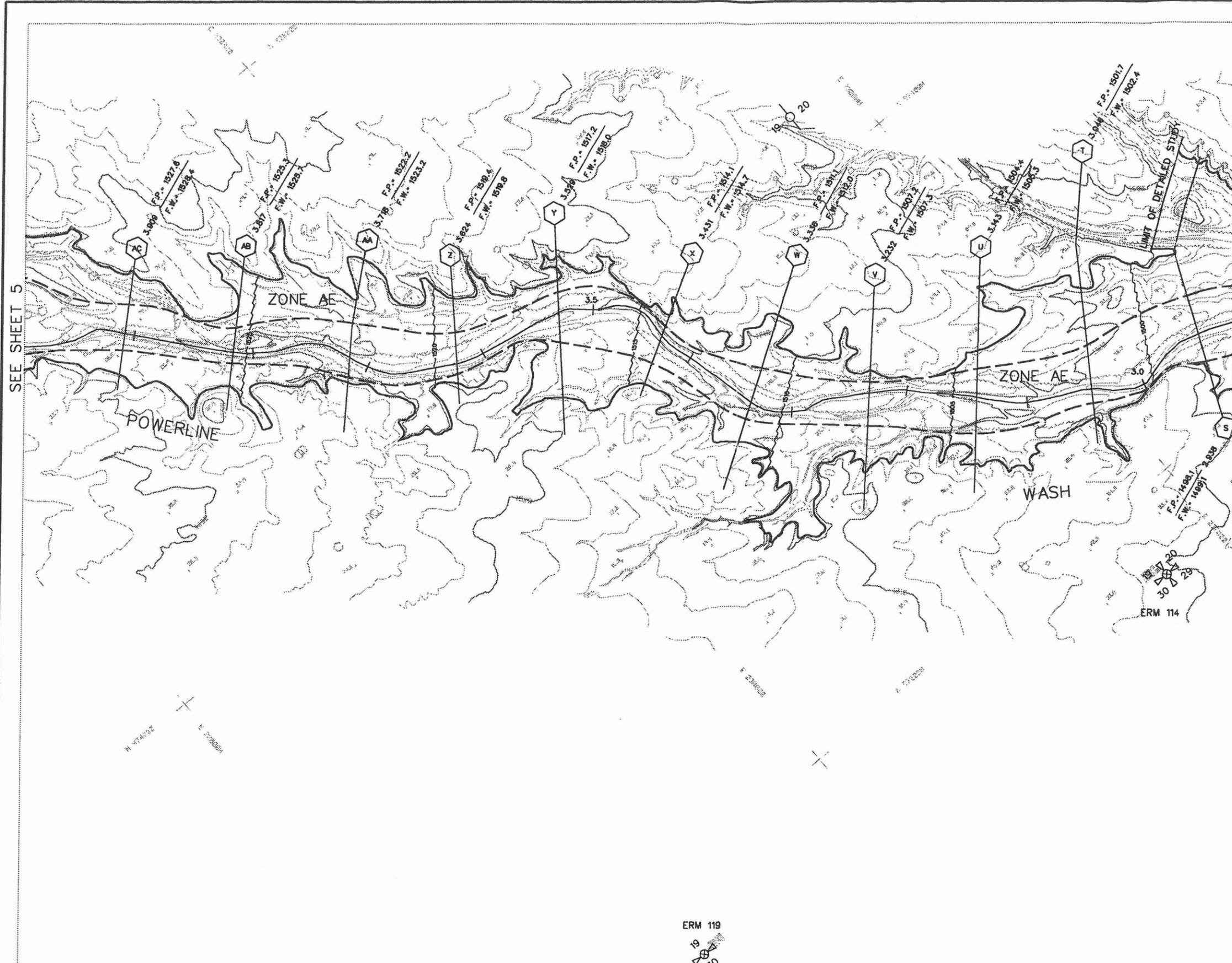
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 114	1501.89	G.L.O. BRASS CAP ON 2" PIPE, 1.40 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 19, 20, 29 AND 30, T4N-R5W, DATED 1916.
ERM 119	1518.55	G.L.O. BRASS CAP ON 1" PIPE, 0.85 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 19 AND 30, T4N-R5W, DATED 1916.



STANLEY CONSULTANTS

DESIGN	BY	DATE	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN	GSB	4 / 94	
DESIGN CHK.	MSF	4 / 94	RECOMMENDED BY: _____ DATE _____
PLANS	GSB	4 / 94	APPROVED BY: _____ DATE _____
PLANS CHK.	MSF	4 / 94	CHEF ENGINEER AND GENERAL MANAGER
SUBMITTED BY:	DATE	SHEET	4 OF 17



SEE SHEET 5

SEE SHEET 3

ERM 119



KENNEY AERIAL MAPPING, INC. STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY CLYDE J. McCARTY (VERTICAL CONTROL) AND BY LARRY M. MALDONADO (HORIZONTAL CONTROL). STANLEY CONSULTANTS, INC. I, CLYDE J. McCARTY, ARIZONA REGISTERED LAND SURVEYOR #21780, CERTIFY THAT THE VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS. PROJECT ENGINEERING CONSULTANTS, LTD. I, LARRY M. MALDONADO, ARIZONA REGISTERED LAND SURVEYOR #1883, CERTIFY THAT THE HORIZONTAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

FLOOD CONTROL DISTRICT  
OF MARICOPA COUNTY  
POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY

**LEGEND**

100-YR FLOODPLAIN BOUNDARY ————

FLOODWAY BOUNDARY - - - - -

HYDRAULIC BASE LINE WITH RIVER MILE  
5.5      5.8

CROSS SECTION  
FLOODWAY WATER SURFACE ELEVATION  
F.P. = 1446.4  
F.W. = 1447.3  
EMBRACED WATER SURFACE ELEVATION

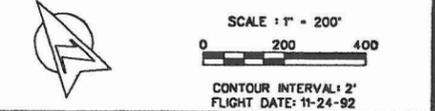
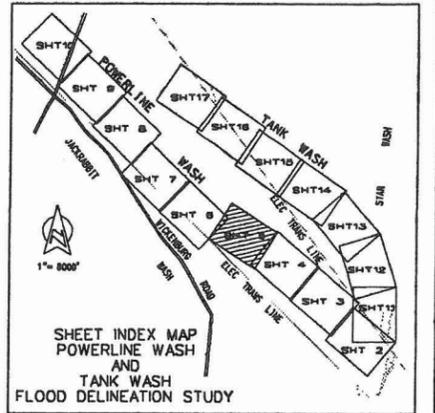
ELEVATION REFERENCE MARK      ERM 104

BASE FLOOD ELEVATION      1550

FLOOD INSURANCE ZONE      ZONE AE

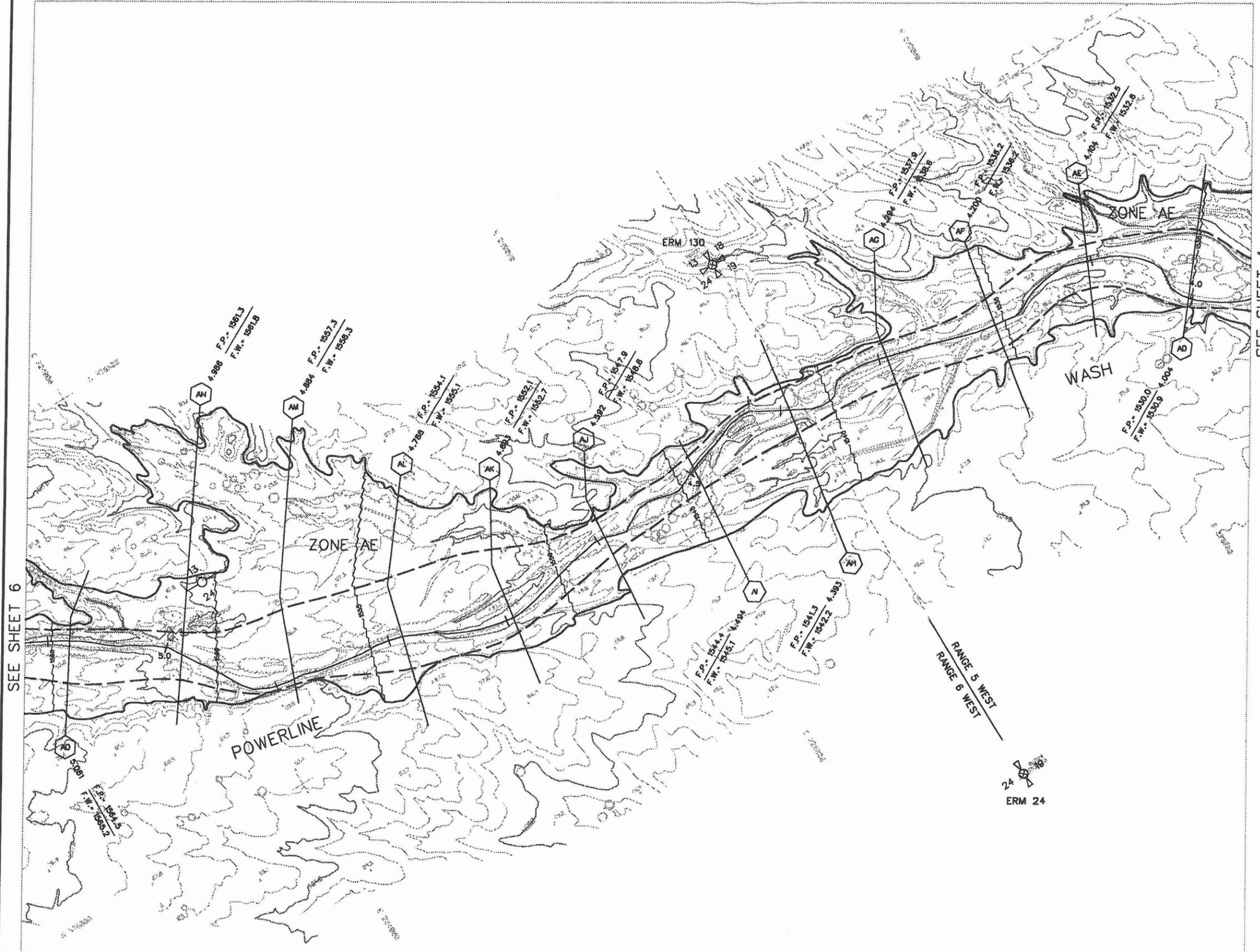
**ELEVATION REFERENCE MARKS**  
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 24	1536.84	G.L.O. BRASS CAP ON 1" PIPE, 1.20 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTION 24, T4N-R6W AND SECTION 19, T4N-R5W, DATED 1916.
ERM 130	1543.42	G.L.O. BRASS CAP ON 2" PIPE, 1.00 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 13 AND 24, T4N-R6W AND SECTIONS 18 AND 19 T4N-R5W, DATED 1916.



**STANLEY CONSULTANTS**

DESIGN	GSB	4 / 94	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	MSF	4 / 94	
PLANS	GSB	4 / 94	
PLANS CHK.	MSF	4 / 94	
RECOMMENDED BY: _____ DATE _____			CHIEF ENGINEER AND GENERAL MANAGER
APPROVED BY: _____ DATE _____			
SUBMITTED BY: _____ DATE _____			SHEET 5 OF 17



SEE SHEET 6

SEE SHEET 4

KENNEY AERIAL MAPPING, INC. HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY CLYDE J. MCCARTY (VERTICAL CONTROL) AND BY LARRY M. MALDONADO (HORIZONTAL CONTROL).

STANLEY CONSULTANTS, INC. I, CLYDE J. MCCARTY, ARIZONA REGISTERED LAND SURVEYOR #21780, CERTIFY THAT THE VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

PROJECT ENGINEERING CONSULTANTS, LTD. I, LARRY M. MALDONADO, ARIZONA REGISTERED LAND SURVEYOR #5863, CERTIFY THAT THE HORIZONTAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

FLOOD CONTROL DISTRICT  
OF MARICOPA COUNTY  
POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY

LEGEND

100-YR FLOODPLAIN BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE

CROSS SECTION F.P. = 1446.4  
F.W. = 1447.3

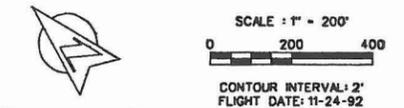
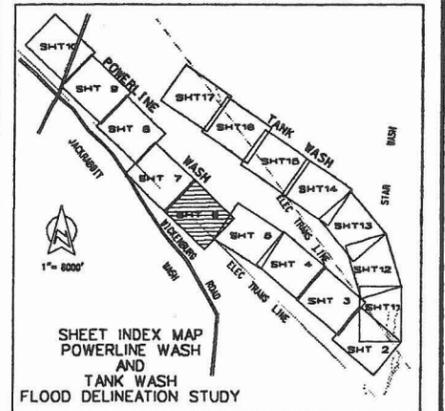
ELEVATION REFERENCE MARK ERM 104

BASE FLOOD ELEVATION 1550

FLOOD INSURANCE ZONE **ZONE AE**

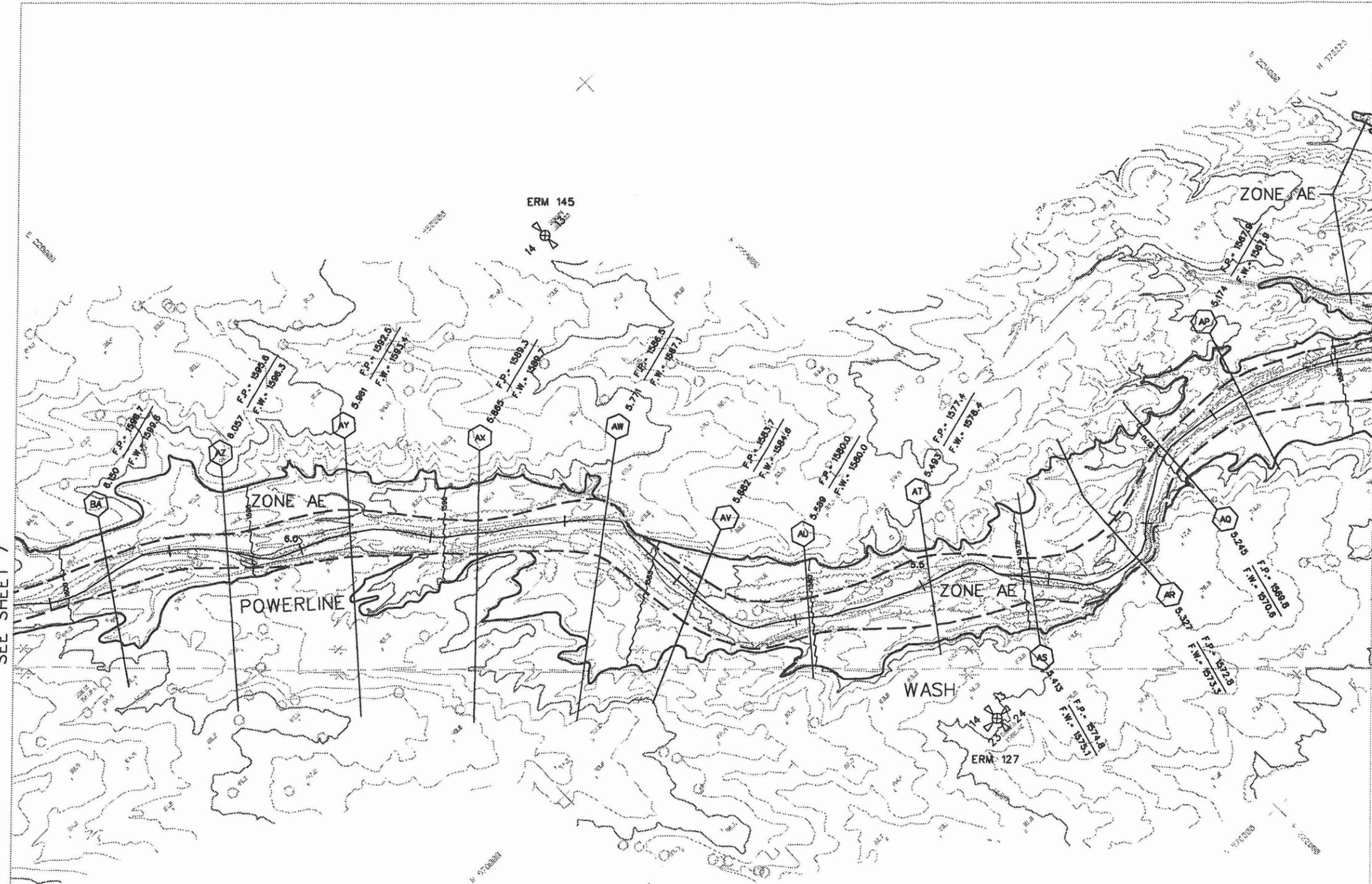
ELEVATION REFERENCE MARKS  
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 127	1581.85	G.L.O. BRASS CAP ON 2" PIPE, 1.45 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 13, 14, 23 AND 24, T4N-R6W, DATED 1916.
ERM 145	1594.61	G.L.O. BRASS CAP ON 1" PIPE, 1.40 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 13 AND 14, T4N-R6W, DATED 1916.



SEE SHEET 5

SEE SHEET 7



KENNEY AERIAL MAPPING, INC. STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY CLYDE J. MCCARTY (VERTICAL CONTROL) AND BY LARRY M. MALDONADO (HORIZONTAL CONTROL).

STANLEY CONSULTANTS, INC. CLYDE J. MCCARTY, ARIZONA REGISTERED LAND SURVEYOR #2780, CERTIFY THAT THE VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

PROJECT ENGINEERING CONSULTANTS, LTD. LARRY M. MALDONADO, ARIZONA REGISTERED LAND SURVEYOR #18663, CERTIFY THAT THE HORIZONTAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

STANLEY CONSULTANTS

DESIGN	GSB	4 / 94	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	MSF	4 / 94	
PLANS	GSB	4 / 94	RECOMMENDED BY: _____ DATE _____
PLANS CHK.	MSF	4 / 94	APPROVED BY: _____ DATE _____
SUBMITTED BY: _____	DATE _____		CHIEF ENGINEER AND GENERAL MANAGER
SHEET 6 OF 17			

FLOOD CONTROL DISTRICT  
OF MARICOPA COUNTY  
POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY

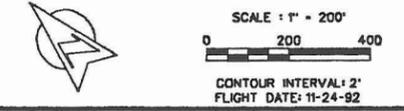
LEGEND

- 100-YR FLOODPLAIN BOUNDARY
- FLOODWAY BOUNDARY
- HYDRAULIC BASE LINE WITH RIVER MILE
- CROSS SECTION F.P. = 1446.4  
F.W. = 1447.3
- ELEVATION REFERENCE MARK ERM 104
- BASE FLOOD ELEVATION 1550
- FLOOD INSURANCE ZONE **ZONE AE**

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 146	1633.60	G.L.O. BRASS CAP ON 2" PIPE, 1.00 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 10, 11, 14 AND 15, T4N-R6W, DATED 1916.
ERM 188	1621.34	G.L.O. BRASS CAP ON 1" PIPE, 1.40 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 11 AND 14, T4N-R6W, DATED 1916.



STANLEY CONSULTANTS

DESIGN	BY: GSB	DATE: 4 / 94	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	MSF	4 / 94	
PLANS	BY: GSB	DATE: 4 / 94	RECOMMENDED BY: _____ DATE: _____
PLANS CHK.	MSF	4 / 94	APPROVED BY: _____ DATE: _____
SUBMITTED BY:	DATE: _____		CHIEF ENGINEER AND GENERAL MANAGER
SHEET 7 OF 17			



SEE SHEET 8

SEE SHEET 6

KENNEY AERIAL MAPPING, INC. I, CLYDE J. MCCARTY, ARIZONA REGISTERED LAND SURVEYOR #21780, CERTIFY THAT THE VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

STANLEY CONSULTANTS, INC. I, LARRY M. MALDONADO, ARIZONA REGISTERED LAND SURVEYOR #16663, CERTIFY THAT THE HORIZONTAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

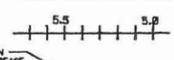
PROJECT ENGINEERING CONSULTANTS, LTD.

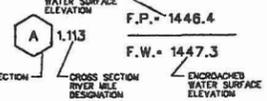
FLOOD CONTROL DISTRICT  
OF MARICOPA COUNTY  
POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY

**LEGEND**

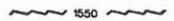
100-YR FLOODPLAIN BOUNDARY \_\_\_\_\_

FLOODWAY BOUNDARY \_\_\_\_\_

HYDRAULIC BASE LINE WITH RIVER MILE 

CROSS SECTION  F.P. = 1446.4  
F.W. = 1447.3

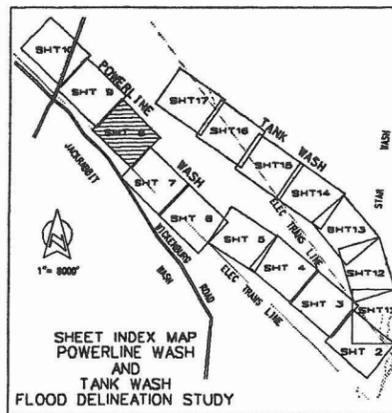
ELEVATION REFERENCE MARK **ERM 104**

BASE FLOOD ELEVATION  1550

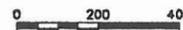
FLOOD INSURANCE ZONE **ZONE AE**

**ELEVATION REFERENCE MARKS**  
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 28	1658.29	G.L.O. BRASS CAP ON 2" PIPE, 1.55 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 2, 3, 10 AND 11, T4N-R6W, DATED 1916.



**SCALE: 1" = 200'**



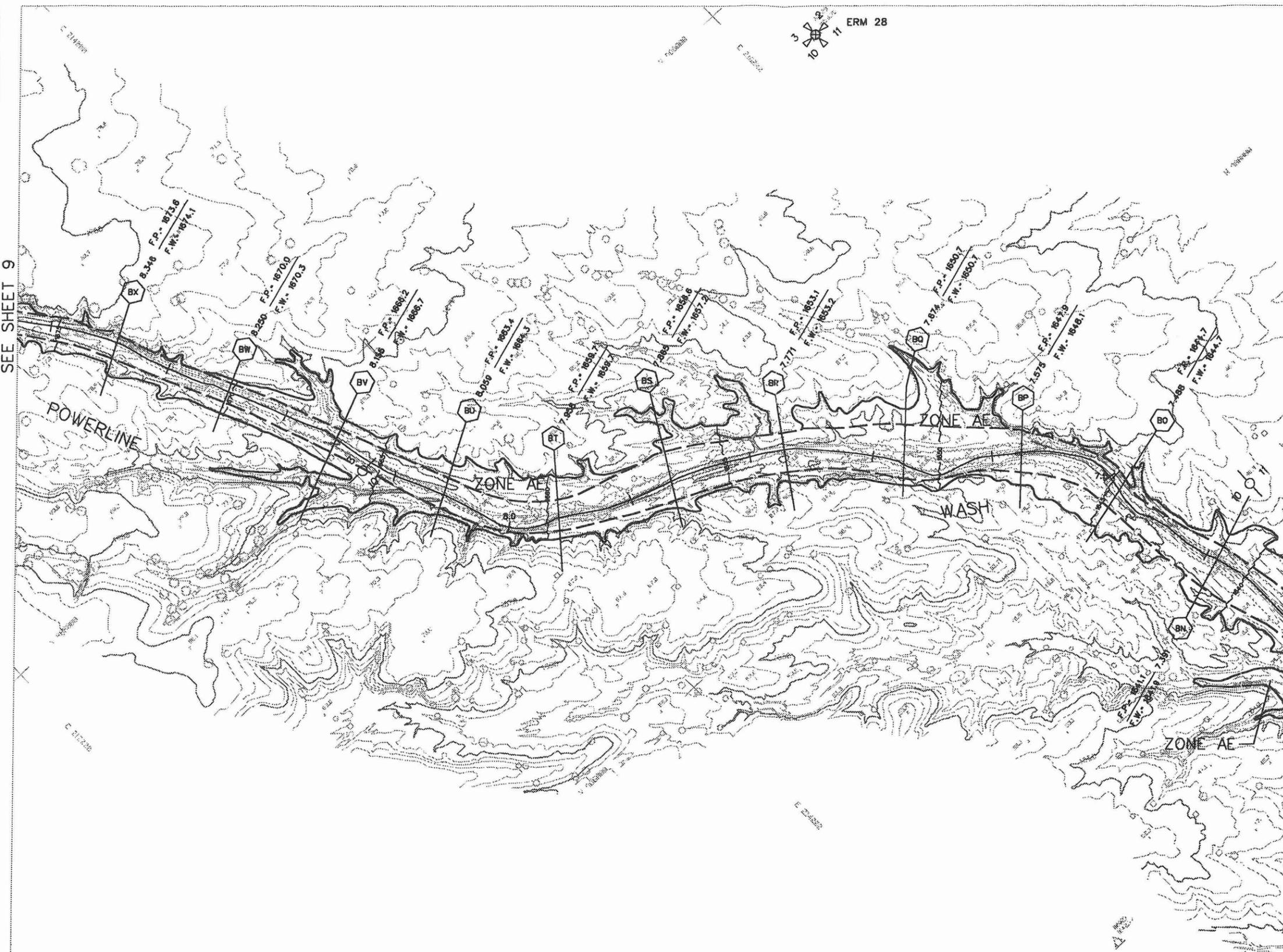
CONTOUR INTERVAL: 2'  
FLIGHT DATE: 11-24-92

**STANLEY CONSULTANTS**

DESIGN	BY GSB	DATE 4 / 94	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	MSF	4 / 94	
PLANS	GSB	4 / 94	RECOMMENDED BY: _____ DATE _____
PLANS CHK.	MSF	4 / 94	APPROVED BY: _____ DATE _____
SUBMITTED BY: _____	DATE _____		CHIEF ENGINEER AND GENERAL MANAGER
SHEET 8			OF 17

SEE SHEET 9

SEE SHEET 7



I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY GLYDE J. McCARTY (VERTICAL CONTROL) AND BY LARRY M. WALDONADO (HORIZONTAL CONTROL).

KENNEY AERIAL MAPPING, INC.

I, CLYDE J. McCARTY, ARIZONA REGISTERED LAND SURVEYOR #21780, CERTIFY THAT THE VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

STANLEY CONSULTANTS, INC.

I, LARRY M. WALDONADO, ARIZONA REGISTERED LAND SURVEYOR #18863, CERTIFY THAT THE HORIZONTAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

PROJECT ENGINEERING CONSULTANTS, LTD.

FLOOD CONTROL DISTRICT  
OF MARICOPA COUNTY  
POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY

**LEGEND**

100-YR FLOODPLAIN BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE

CROSS SECTION   
F.P. = 1446.4  
F.W. = 1447.3

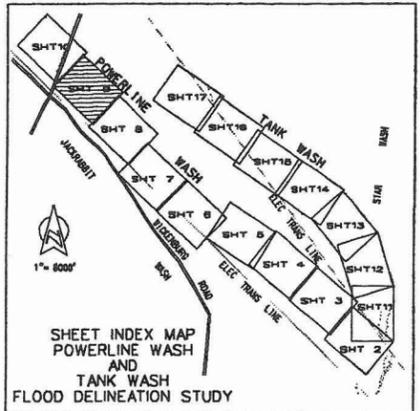
ELEVATION REFERENCE MARK **ERM 104**

BASE FLOOD ELEVATION 1550

FLOOD INSURANCE ZONE **ZONE AE**

**ELEVATION REFERENCE MARKS**  
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 152	1692.54	G.L.O. BRASS CAP ON 2" PIPE, 1.50 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 3, 4, 9 AND 10, T4N-R6W, DATED 1916.
ERM 171	1702.40	G.L.O. BRASS CAP ON 2" PIPE, 1.30 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 34 AND 35, T5N-R6W, AND THE NORTH LINE OF SECTION 3, T4N-R6W, DATED 1916.



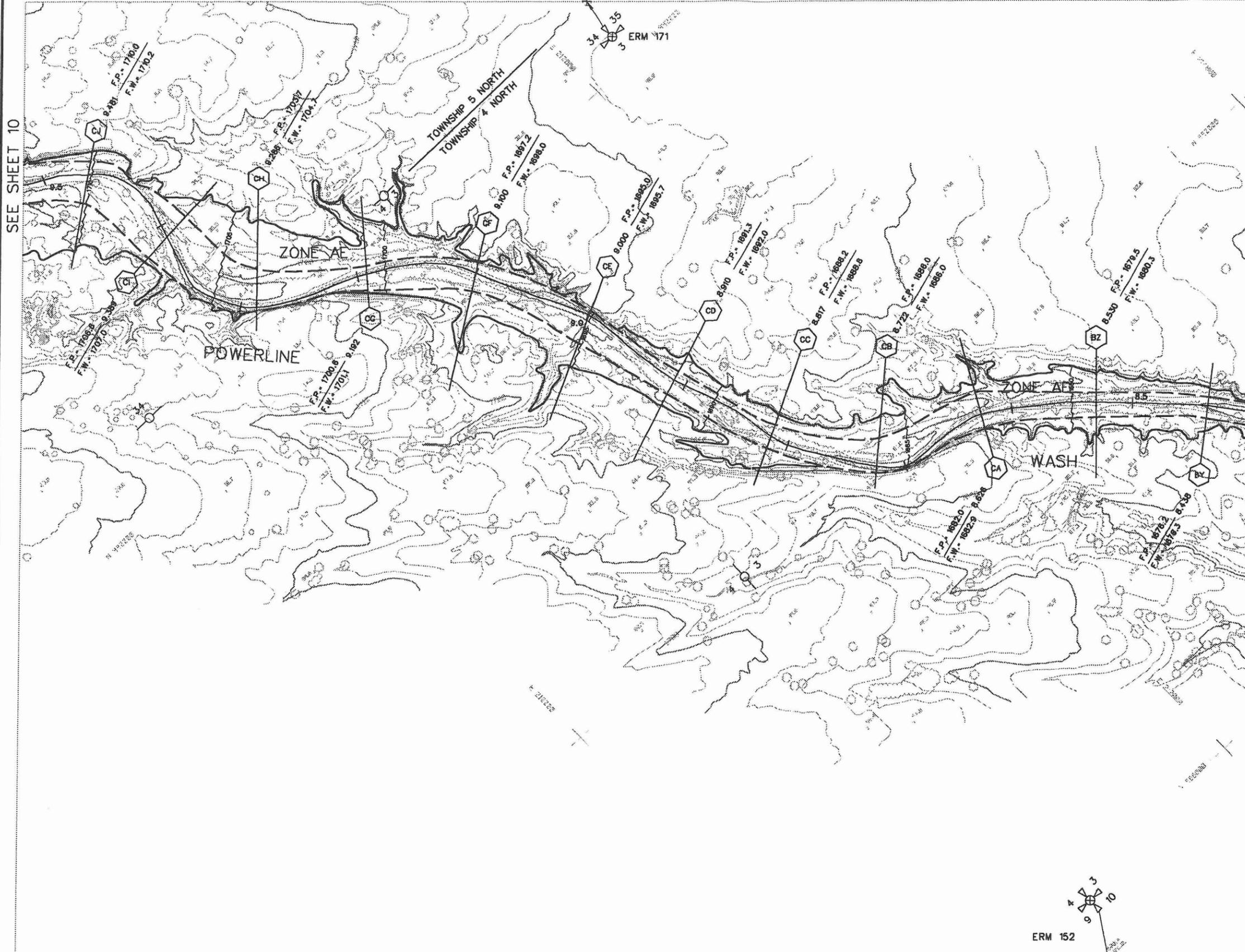
SCALE: 1" = 200'

0 200 400

CONTOUR INTERVAL: 2'  
FLIGHT DATE: 11-24-92

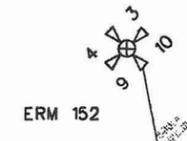
**STANLEY CONSULTANTS**

DESIGN	BY GSB	DATE 4 / 94	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	MSF	4 / 94	
PLANS	GSB	4 / 94	RECOMMENDED BY: _____ DATE _____
PLANS CHK.	MSF	4 / 94	APPROVED BY: _____ DATE _____
SUBMITTED BY: _____	DATE _____		CHEF ENGINEER AND GENERAL MANAGER
SHEET 9 OF 17			



SEE SHEET 10

SEE SHEET 8



KENNEY AERIAL MAPPING, INC. I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY CLYDE J. MCCARTY (VERTICAL CONTROL) AND BY LARRY M. WALDONADO (HORIZONTAL CONTROL).

CLYDE J. MCCARTY, ARIZONA REGISTERED LAND SURVEYOR #21780, CERTIFY THAT THE VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

STANLEY CONSULTANTS, INC. PROJECT ENGINEERING CONSULTANTS, LTD.

LARRY M. WALDONADO, ARIZONA REGISTERED LAND SURVEYOR #18663, CERTIFY THAT THE HORIZONTAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

FLOOD CONTROL DISTRICT  
OF MARICOPA COUNTY  
POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY

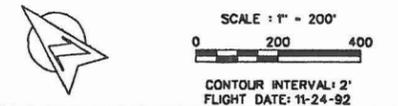
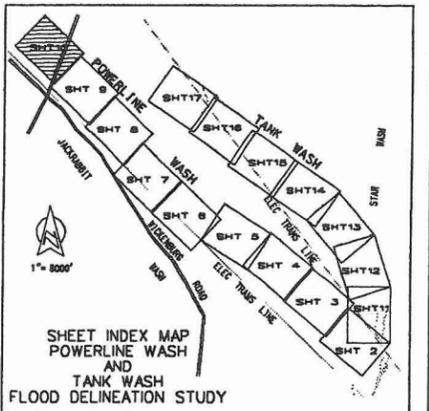
LEGEND

- 100-YR FLOODPLAIN BOUNDARY
- FLOODWAY BOUNDARY
- HYDRAULIC BASE LINE WITH RIVER MILE
- CROSS SECTION
- ELEVATION REFERENCE MARK
- BASE FLOOD ELEVATION
- FLOOD INSURANCE ZONE **ZONE AE**

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

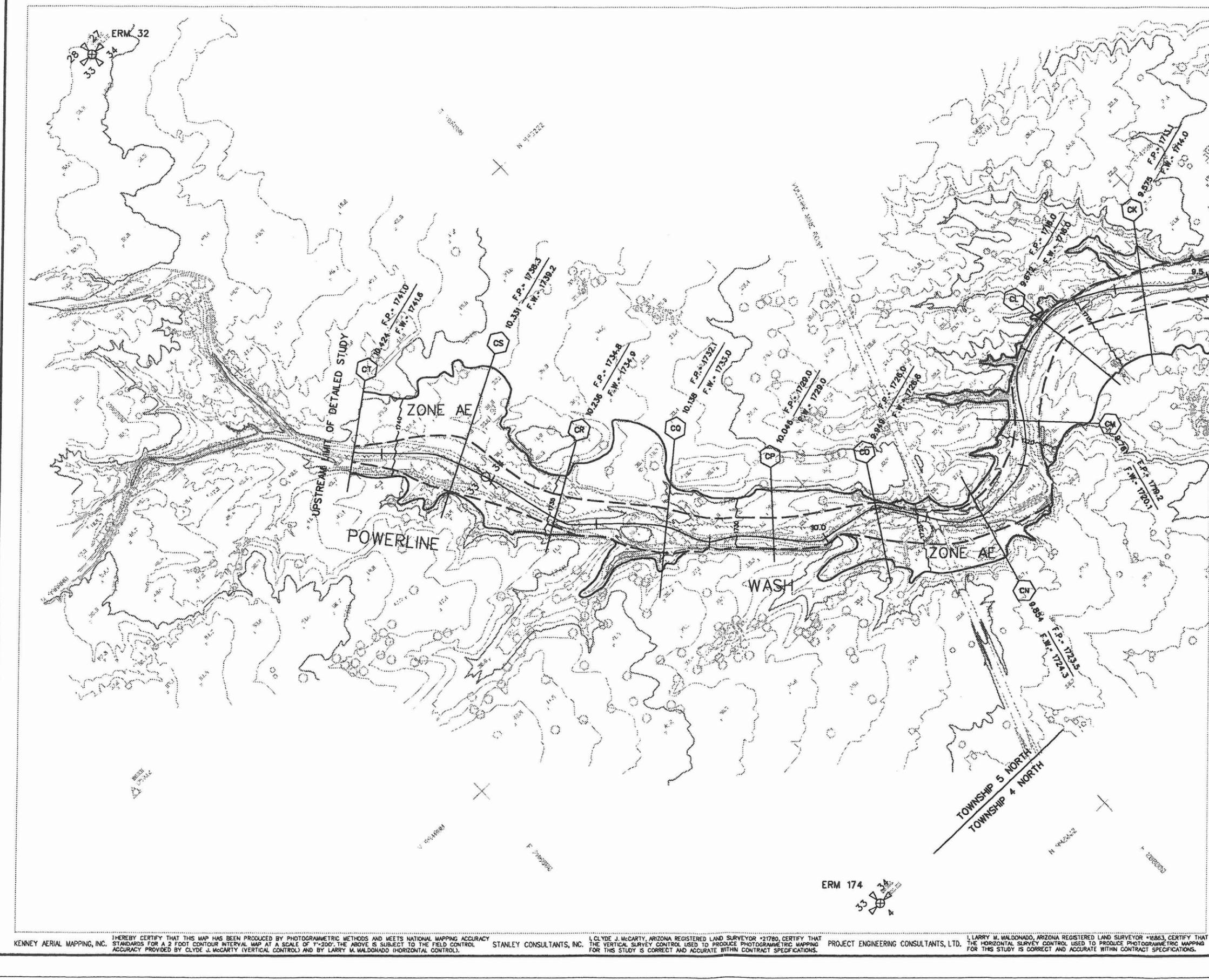
ID NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 32	1752.08	G.L.O. BRASS CAP ON 2" PIPE, 0.80 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 27, 28, 33 AND 34, T5N-R6W, DATED 1916.
ERM 174	1726.32	G.L.O. BRASS CAP ON 2" PIPE, 1.10 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 33 AND 34, T5N-R6W, AND THE NORTH LINE OF SECTION 4, T4N-R6W, DATED 1916.



STANLEY CONSULTANTS

DESIGN	BY GSB	DATE 4 / 94	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	NSF	4 / 94	
PLANS	BY GSB	DATE 4 / 94	RECOMMENDED BY: _____
PLANS CHK.	NSF	4 / 94	APPROVED BY: _____
SUBMITTED BY: _____	DATE _____	DATE _____	DATE _____
			CHIEF ENGINEER AND GENERAL MANAGER
			SHEET 10 OF 17

SEE SHEET 9



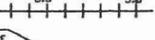
I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY CLYDE J. McCARTY (VERTICAL CONTROL) AND BY LARRY M. WALDONADO (HORIZONTAL CONTROL). STANLEY CONSULTANTS, INC.

I, CLYDE J. McCARTY, ARIZONA REGISTERED LAND SURVEYOR \*21780, CERTIFY THAT THE VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

I, LARRY M. WALDONADO, ARIZONA REGISTERED LAND SURVEYOR \*16863, CERTIFY THAT THE HORIZONTAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

FLOOD CONTROL DISTRICT  
OF MARICOPA COUNTY  
POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY

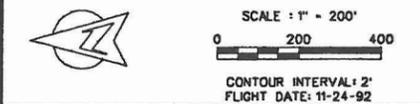
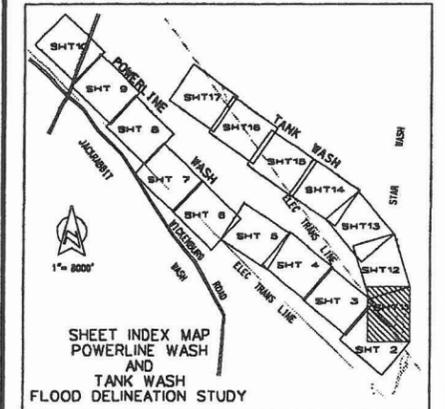
LEGEND

- 100-YR FLOODPLAIN BOUNDARY 
- FLOODWAY BOUNDARY 
- HYDRAULIC BASE LINE WITH RIVER MILE 
- CROSS SECTION  F.P. = 1446.4  
F.W. = 1447.3
- ELEVATION REFERENCE MARK  ERM 104
- BASE FLOOD ELEVATION  1550
- FLOOD INSURANCE ZONE **ZONE AE**

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 104	1454.89	G.L.O. BRASS CAP ON 2" PIPE, 1.00 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 28, 29, 32 AND 33, T4N-R5W, DATED 1916.
ERM 109	1456.11	G.L.O. BRASS CAP ON 1" PIPE, 1.10 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 28 AND 29, T4N-R5W, DATED 1916.



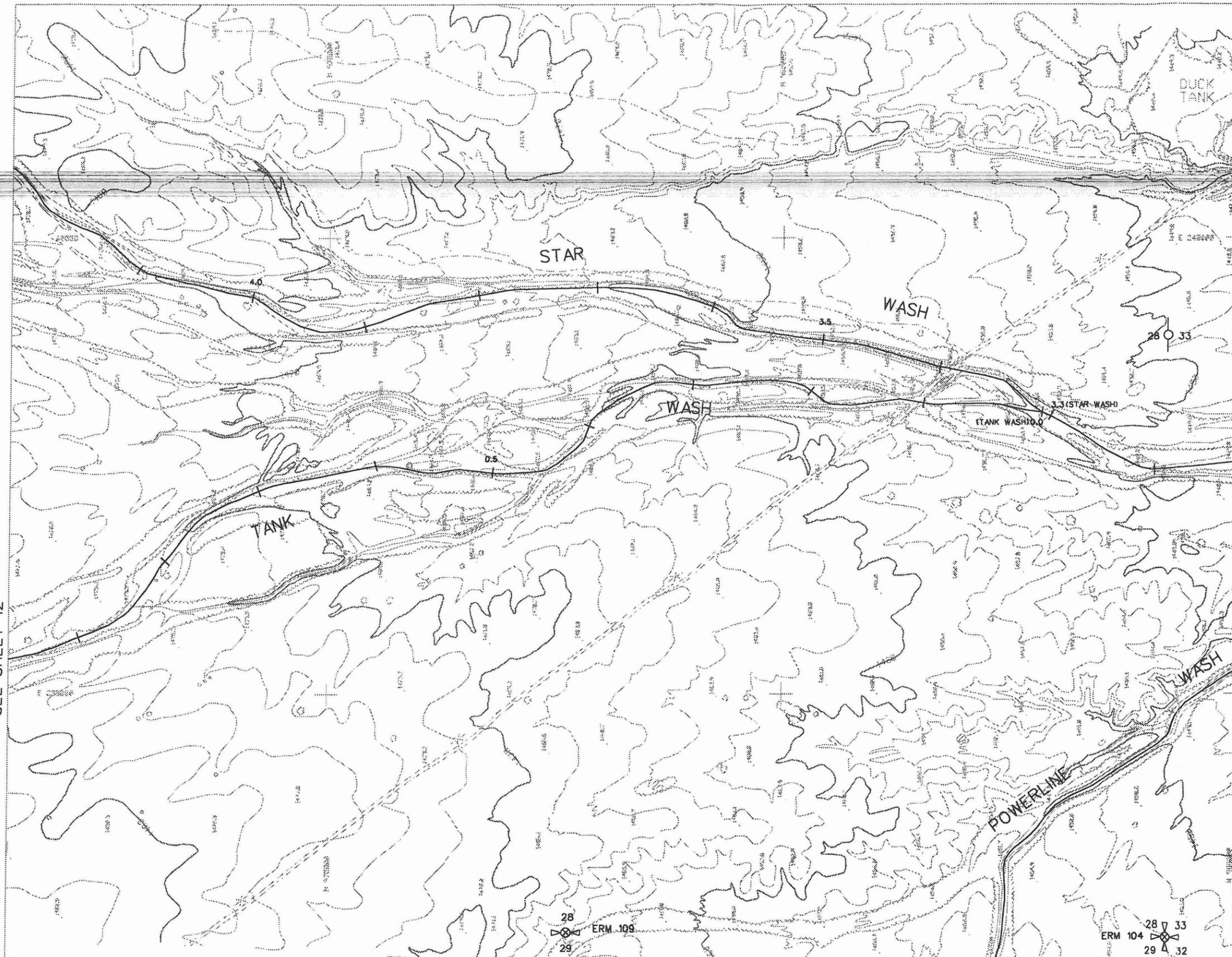
STANLEY CONSULTANTS

DESIGN	BY	DATE	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
	GSB	4 / 94	
DESIGN CHK.	MSF	4 / 94	RECOMMENDED BY: _____ DATE: _____
PLANS	GSB	4 / 94	APPROVED BY: _____ DATE: _____
PLANS CHK.	MSF	4 / 94	CHIEF ENGINEER AND GENERAL MANAGER
SUBMITTED BY:	DATE	SHEET	11 OF 17

SEE SHEET 12

SEE SHEET 2

SEE SHEET 2



FLOOD CONTROL DISTRICT  
OF MARICOPA COUNTY  
POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY

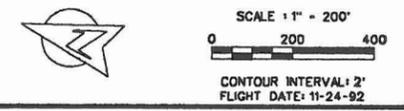
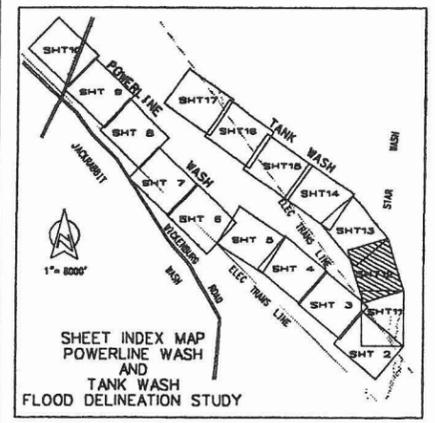
LEGEND

- 100-YR FLOODPLAIN BOUNDARY
- FLOODWAY BOUNDARY
- HYDRAULIC BASE LINE WITH RIVER MILE
- CROSS SECTION 1.113  
F.P. = 1448.4  
F.W. = 1447.3
- ELEVATION REFERENCE MARK ERM 104
- BASE FLOOD ELEVATION 1550
- FLOOD INSURANCE ZONE **ZONE AE**

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 19	1485.03	G.L.O. BRASS CAP ON 2" PIPE, 1.20 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 20, 21, 28 AND 29, T4N-R5W, DATED 1915.

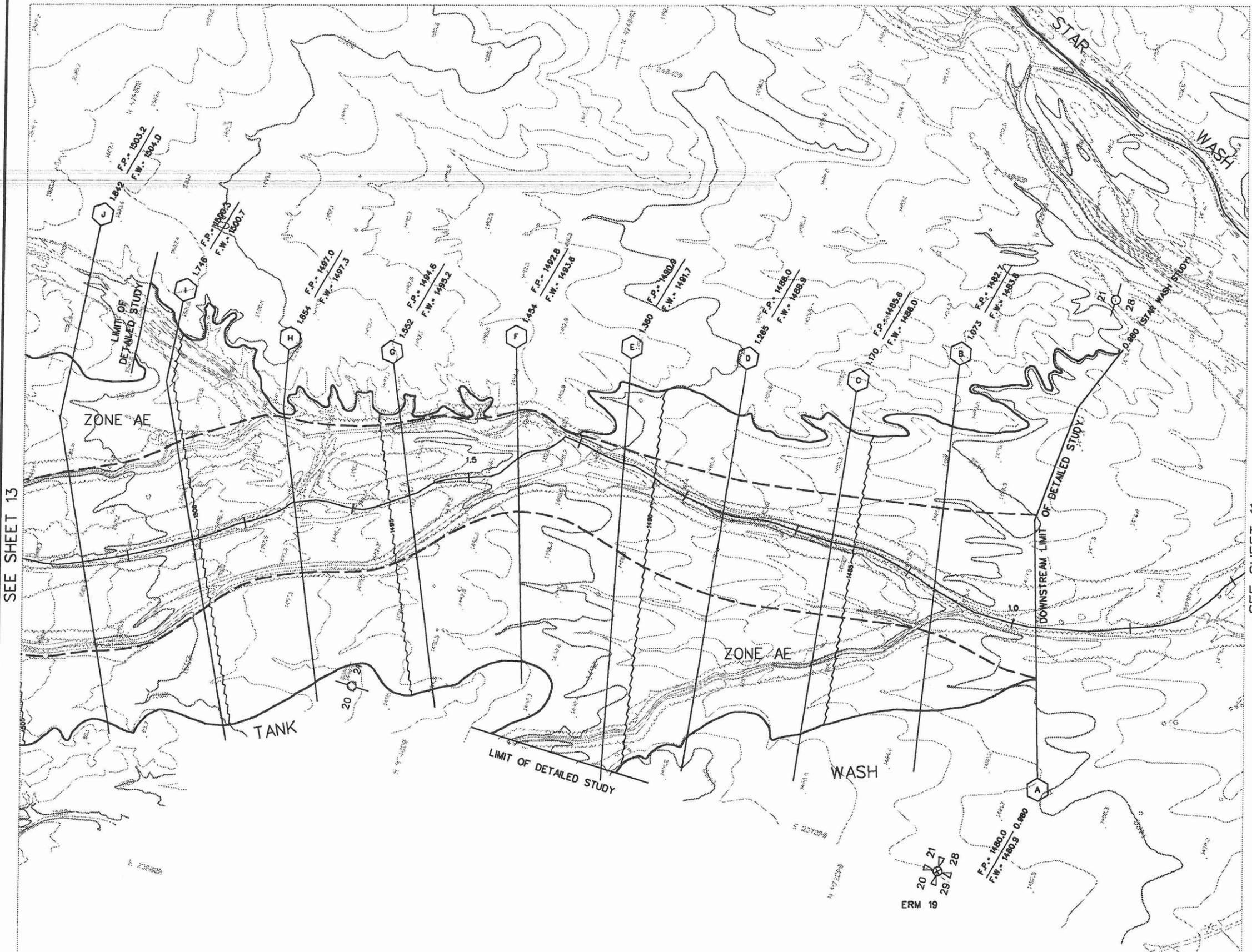


STANLEY CONSULTANTS

DESIGN	BY GSB	DATE 4 / 94	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	MSF	4 / 94	
PLANS	BY GSB	DATE 4 / 94	RECOMMENDED BY:
PLANS CHK.	MSF	4 / 94	APPROVED BY:
SUBMITTED BY:	DATE		DATE
			CHIEF ENGINEER AND GENERAL MANAGER
			SHEET 12 OF 17

SEE SHEET 13

SEE SHEET 11



I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY CLYDE J. MCCARTY (VERTICAL CONTROL) AND BY LARRY M. MALDONADO (HORIZONTAL CONTROL).  
 KENNEY AERIAL MAPPING, INC. STANLEY CONSULTANTS, INC. PROJECT ENGINEERING CONSULTANTS, LTD. LARRY M. MALDONADO, ARIZONA REGISTERED LAND SURVEYOR \*12863. CERTIFY THAT THE HORIZONTAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

FLOOD CONTROL DISTRICT  
OF MARICOPA COUNTY  
POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY

**LEGEND**

100-YR FLOODPLAIN BOUNDARY

FLOODWAY BOUNDARY

HYDRAULIC BASE LINE WITH RIVER MILE

CROSS SECTION

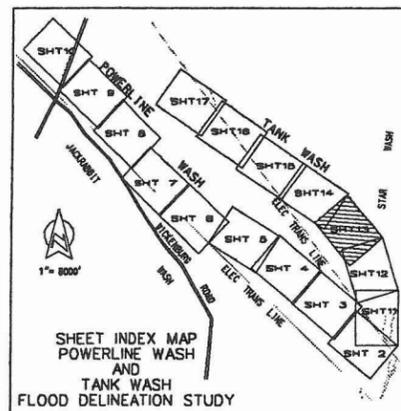
ELEVATION REFERENCE MARK

BASE FLOOD ELEVATION

FLOOD INSURANCE ZONE **ZONE AE**

**ELEVATION REFERENCE MARKS**  
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 134	1518.19	G.L.O. BRASS CAP ON 2" PIPE, 0.65 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 17 AND 20, T4N-R5W, DATED 1916.
ERM 135	1508.45	G.L.O. BRASS CAP ON 2" PIPE, 0.60 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 16, 17, 20 AND 21, T4N-R5W, DATED 1916.

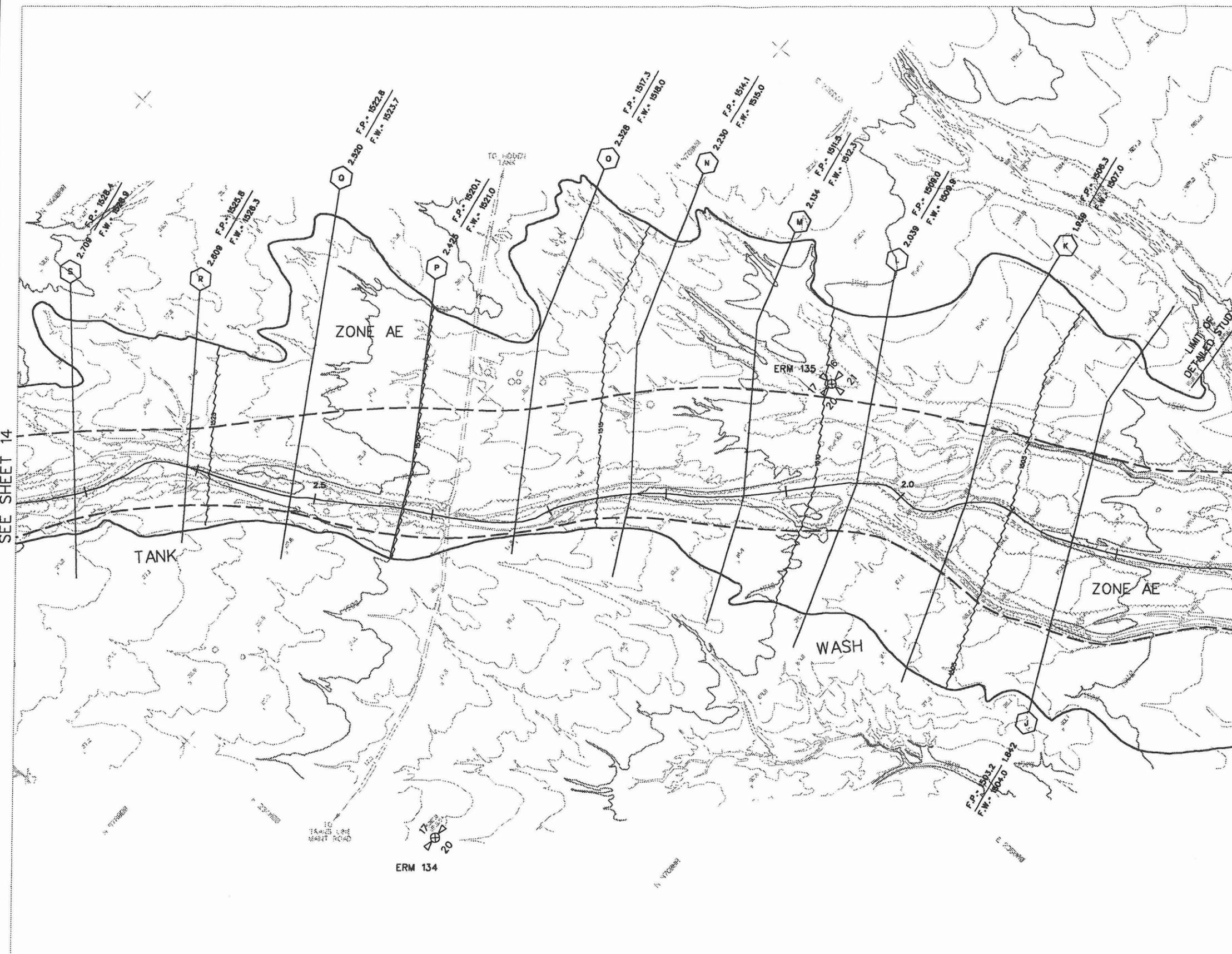


**STANLEY CONSULTANTS**

DESIGN	BY	DATE	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
	G5B	4 / 94	
DESIGN CHK.	MSF	4 / 94	RECOMMENDED BY:
PLANS	G5B	4 / 94	APPROVED BY:
PLANS CHK.	MSF	4 / 94	DATE
SUBMITTED BY:	DATE		CHIEF ENGINEER AND GENERAL MANAGER
			SHEET 13 OF 17

SEE SHEET 14

SEE SHEET 12



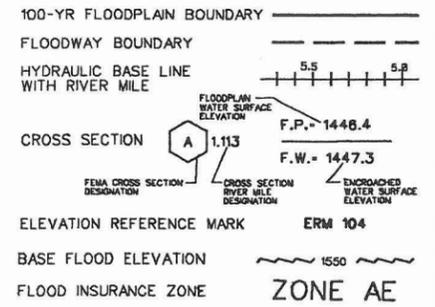
HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY CLYDE J. McCARTY (VERTICAL CONTROL) AND BY LARRY M. WALDONADO (HORIZONTAL CONTROL).

STANLEY CONSULTANTS, INC. CLYDE J. McCARTY, ARIZONA REGISTERED LAND SURVEYOR #21780, CERTIFY THAT THE VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

PROJECT ENGINEERING CONSULTANTS, LTD. LARRY M. WALDONADO, ARIZONA REGISTERED LAND SURVEYOR #16863, CERTIFY THAT THE HORIZONTAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

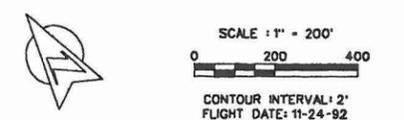
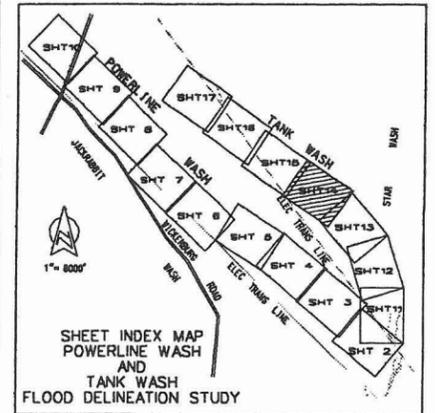
FLOOD CONTROL DISTRICT  
OF MARICOPA COUNTY  
POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY

LEGEND



ELEVATION REFERENCE MARKS  
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 140	1538.08	G.L.O. BRASS CAP ON 1" PIPE, 1.20 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 17 AND 18, T4N-R5W, DATED 1916.

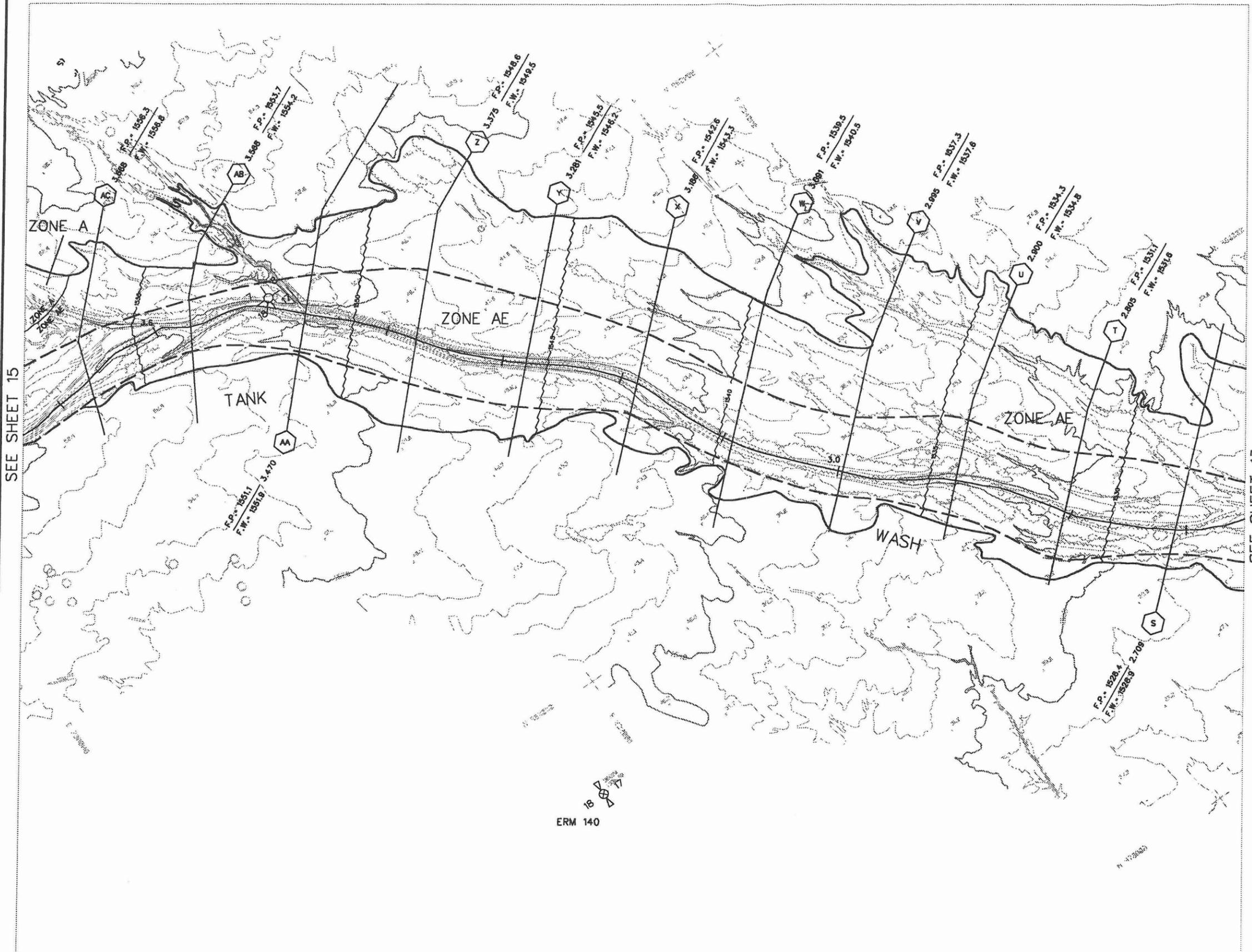


STANLEY CONSULTANTS

DESIGN	BY	DATE	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN	G.S.B.	4 / 94	
DESIGN CHK.	M.S.F.	4 / 94	RECOMMENDED BY:
PLANS	G.S.B.	4 / 94	DATE
PLANS CHK.	M.S.F.	4 / 94	APPROVED BY:
SUBMITTED BY:			DATE
			DATE

SEE SHEET 15

SEE SHEET 13



ERM 140

I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY CLYDE J. McCARTY (VERTICAL CONTROL) AND BY LARRY W. MALDONADO (HORIZONTAL CONTROL).  
KENNEY AERIAL MAPPING, INC. STANLEY CONSULTANTS, INC. CLYDE J. McCARTY, ARIZONA REGISTERED LAND SURVEYOR #21780, CERTIFY THAT THE VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.  
PROJECT ENGINEERING CONSULTANTS, LTD. LARRY W. MALDONADO, ARIZONA REGISTERED LAND SURVEYOR #16863, CERTIFY THAT THE HORIZONTAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

FLOOD CONTROL DISTRICT  
OF MARICOPA COUNTY  
POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY

**LEGEND**

100-YR FLOODPLAIN BOUNDARY \_\_\_\_\_

FLOODWAY BOUNDARY \_\_\_\_\_

HYDRAULIC BASE LINE WITH RIVER MILE \_\_\_\_\_

CROSS SECTION A 1.113 F.P. = 1446.4  
F.W. = 1447.3

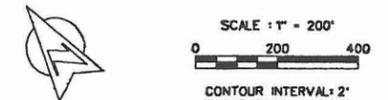
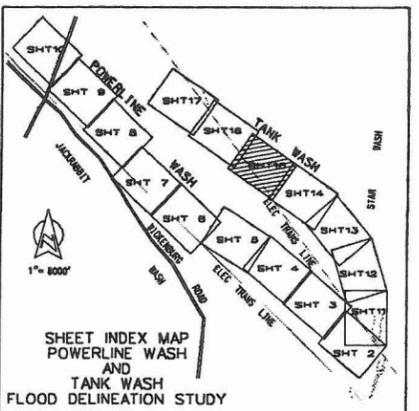
ELEVATION REFERENCE MARK ERM 104

BASE FLOOD ELEVATION 1550

FLOOD INSURANCE ZONE ZONE AE

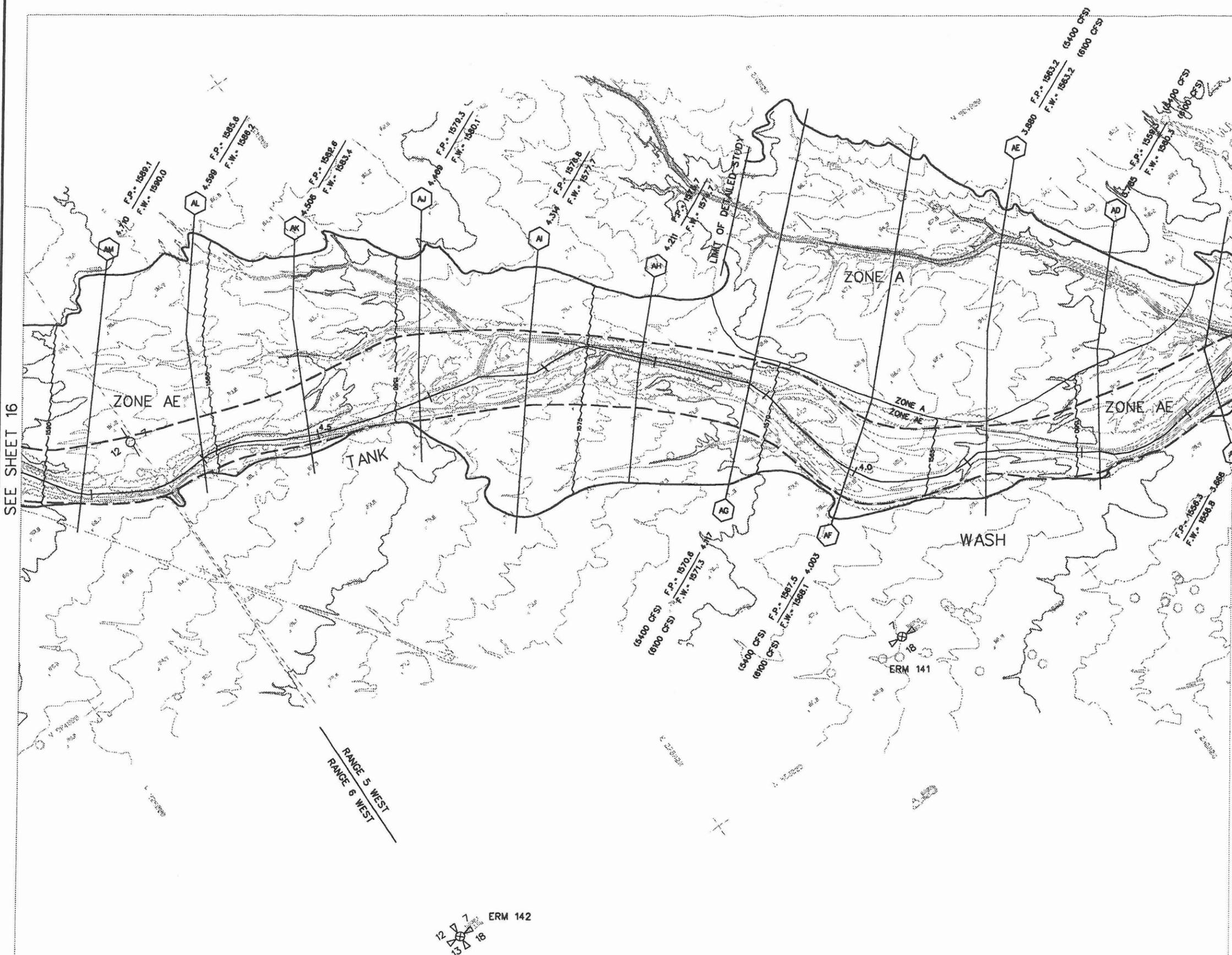
**ELEVATION REFERENCE MARKS**  
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 141	1564.27	G.L.O. BRASS CAP ON 1" PIPE, 1.50 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 7 AND 18, T4N-R5W, DATED 1916.
ERM 142	1575.10	G.L.O. BRASS CAP ON 2" PIPE, 1.45 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 12 AND 13, T4N-R5W AND SECTIONS 7 AND 18, T4N-R5W, DATED 1916.



**STANLEY CONSULTANTS**

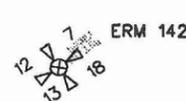
DESIGN	BY: GSB	DATE: 4 / 94	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	MSF	4 / 94	
PLANS	GSB	4 / 94	RECOMMENDED BY: _____ DATE: _____
PLANS CHK.	MSF	4 / 94	APPROVED BY: _____ DATE: _____
SUBMITTED BY: _____	DATE: _____	DATE: _____	CHIEF ENGINEER AND GENERAL MANAGER
SHEET 15 OF 17			



SEE SHEET 16

SEE SHEET 14

RANGE 5 WEST  
RANGE 6 WEST



HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY CLYDE J. McCARTY (VERTICAL CONTROL) AND BY LARRY M. WALDONADO (HORIZONTAL CONTROL).

STANLEY CONSULTANTS, INC. CLYDE J. McCARTY, ARIZONA REGISTERED LAND SURVEYOR #21780, CERTIFY THAT THE VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

PROJECT ENGINEERING CONSULTANTS, LTD. LARRY M. WALDONADO, ARIZONA REGISTERED LAND SURVEYOR #16863, CERTIFY THAT THE HORIZONTAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

ERM 159



FLOOD CONTROL DISTRICT  
OF MARICOPA COUNTY  
POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY

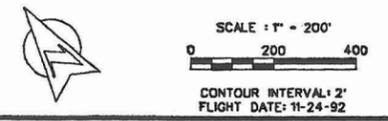
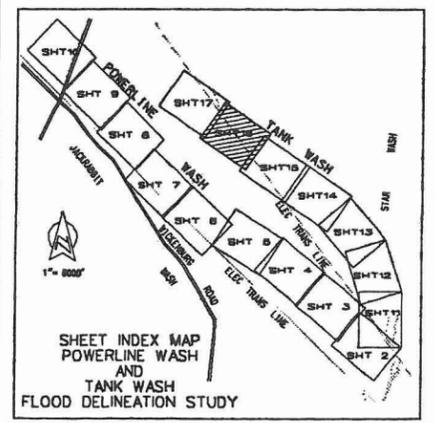
LEGEND

- 100-YR FLOODPLAIN BOUNDARY
- FLOODWAY BOUNDARY
- HYDRAULIC BASE LINE WITH RIVER MILE
- CROSS SECTION
- ELEVATION REFERENCE MARK **ERM 104**
- BASE FLOOD ELEVATION 1550
- FLOOD INSURANCE ZONE **ZONE AE**

ELEVATION REFERENCE MARKS

(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 158	1608.84	G.L.O. BRASS CAP ON 1" PIPE, 1.20 FEET ABOVE GROUND, QUARTER CORNER COMMON TO SECTIONS 1 AND 12, T4N-R6W, DATED 1916.
ERM 159	1600.83	G.L.O. BRASS CAP ON 2" PIPE, 1.50 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 1 AND 12, T4N-R6W, AND SECTIONS 6 AND 7, T4N-R5W, DATED 1916.

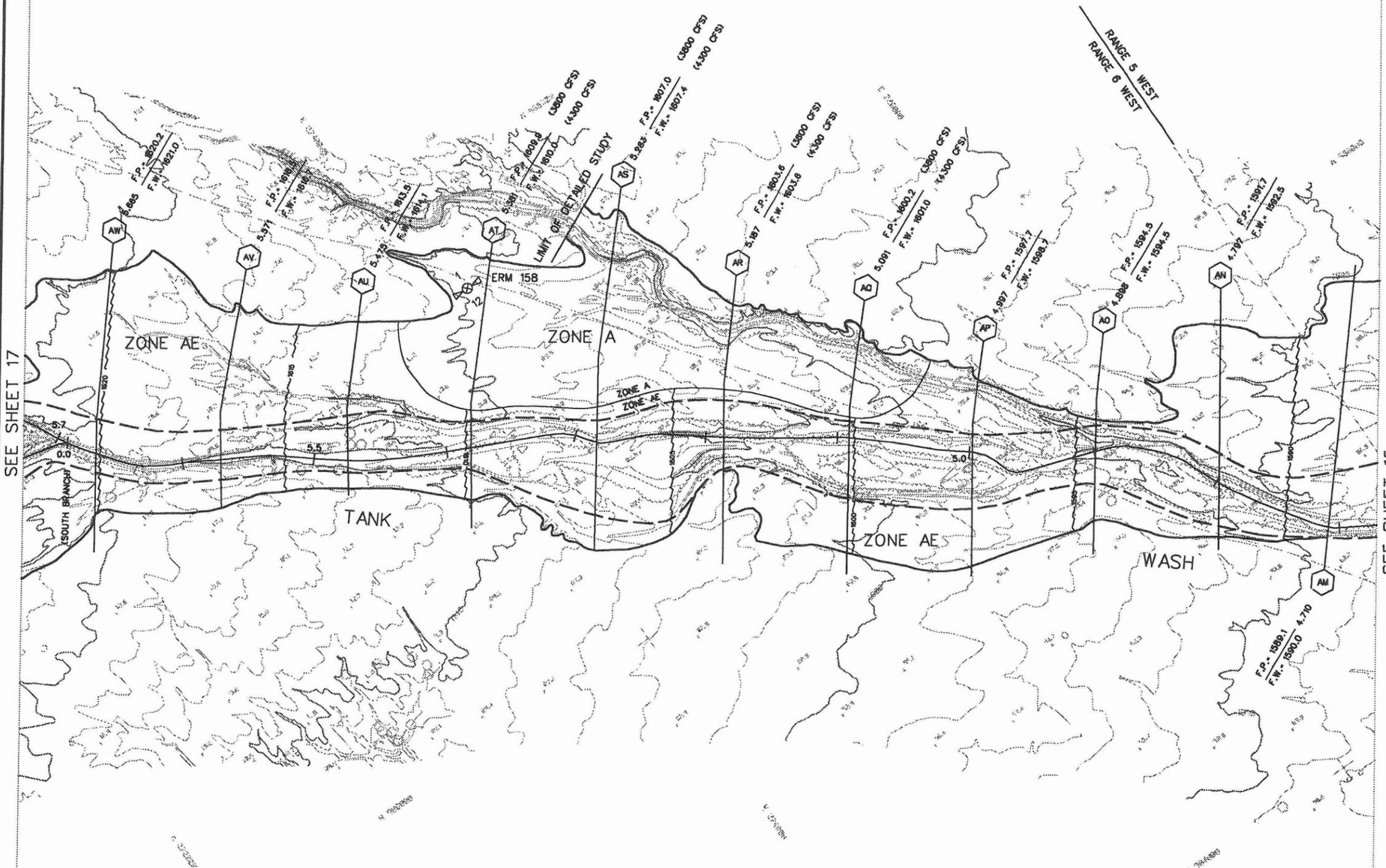


STANLEY CONSULTANTS

DESIGN	BY: GSB	DATE: 4 / 94	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	MSF	4 / 94	
PLANS	GSB	4 / 94	RECOMMENDED BY: _____ DATE: _____
PLANS CHK.	MSF	4 / 94	APPROVED BY: _____ DATE: _____
SUBMITTED BY: _____	DATE: _____		CHIEF ENGINEER AND GENERAL MANAGER
			SHEET 16 OF 17

SEE SHEET 17

SEE SHEET 15



HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL ACCURACY PROVIDED BY CLYDE J. MCCARTY (VERTICAL CONTROL) AND BY LARRY M. MALDONADO (HORIZONTAL CONTROL). STANLEY CONSULTANTS, INC.

CLYDE J. MCCARTY, ARIZONA REGISTERED LAND SURVEYOR #21789, CERTIFY THAT THE VERTICAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS. PROJECT ENGINEERING CONSULTANTS, LTD.

LARRY M. MALDONADO, ARIZONA REGISTERED LAND SURVEYOR #18663, CERTIFY THAT THE HORIZONTAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.

FLOOD CONTROL DISTRICT  
OF MARICOPA COUNTY  
POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY

LEGEND

100-YR FLOODPLAIN BOUNDARY \_\_\_\_\_

FLOODWAY BOUNDARY - - - - -

HYDRAULIC BASE LINE WITH RIVER MILE

CROSS SECTION F.P. = 1446.4  
F.W. = 1447.3

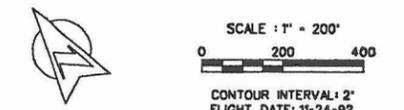
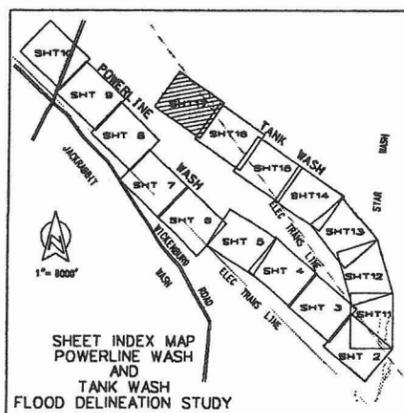
ELEVATION REFERENCE MARK ERM 104

BASE FLOOD ELEVATION

FLOOD INSURANCE ZONE ZONE AE

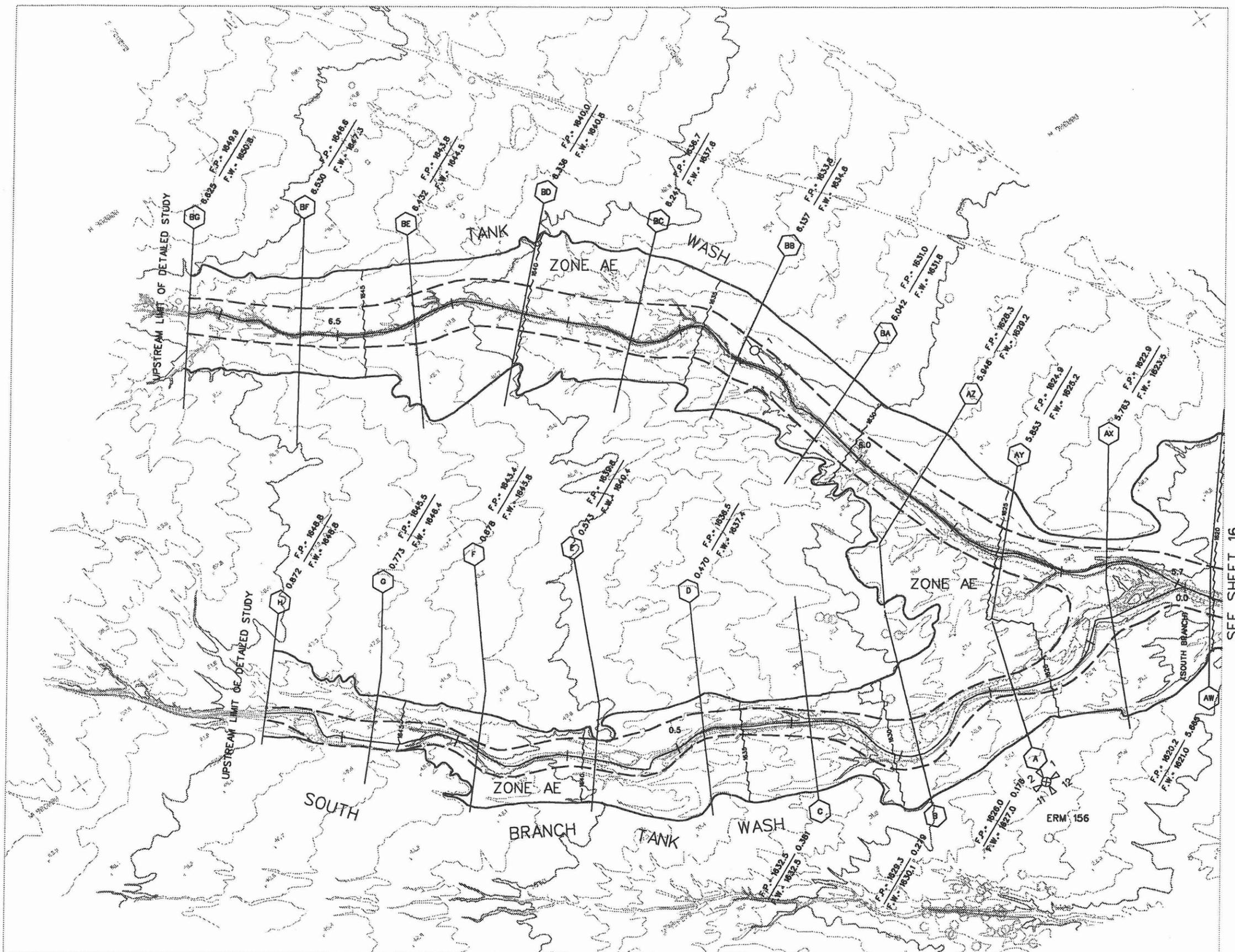
ELEVATION REFERENCE MARKS  
(NATIONAL GEODETIC VERTICAL DATUM OF 1929)

ID NUMBER	ELEVATION (FT)	DESCRIPTION/LOCATION
ERM 156	1625.78	G.L.O. BRASS CAP ON 2" PIPE, 0.80 FEET ABOVE GROUND, COMMON CORNER OF SECTIONS 1, 2, 11 AND 12, 14N-R6W, DATED 1916.



STANLEY CONSULTANTS

DESIGN	BY GSB	DATE 4 / 94	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DESIGN CHK.	WSF	4 / 94	
PLANS	GSB	4 / 94	RECOMMENDED BY: _____ DATE _____
PLANS CHK.	WSF	4 / 94	APPROVED BY: _____ DATE _____
SUBMITTED BY: _____	DATE _____	CHIEF ENGINEER AND GENERAL MANAGER	SHEET 17 OF 17



KENNEY AERIAL MAPPING, INC. I HEREBY CERTIFY THAT THIS MAP HAS BEEN PRODUCED BY PHOTOGRAMMETRIC METHODS AND MEETS NATIONAL MAPPING ACCURACY STANDARDS FOR A 2 FOOT CONTOUR INTERVAL MAP AT A SCALE OF 1"=200'. THE ABOVE IS SUBJECT TO THE FIELD CONTROL. STANLEY CONSULTANTS, INC. ACCURACY PROVIDED BY CLYDE J. McCARTY (VERTICAL CONTROL) AND BY LARRY M. MALDONADO (HORIZONTAL CONTROL).

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PROJECT ENGINEERING CONSULTANTS, LTD. LARRY M. MALDONADO, ARIZONA REGISTERED LAND SURVEYOR #16863, CERTIFY THAT THE HORIZONTAL SURVEY CONTROL USED TO PRODUCE PHOTOGRAMMETRIC MAPPING FOR THIS STUDY IS CORRECT AND ACCURATE WITHIN CONTRACT SPECIFICATIONS.



**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

**SECTION 3 - HYDROLOGIC ANALYSIS**

- 3.1 Method Description
- 3.5 Final Results/Computer Runs
- 3.6 Final Modeling Results on Diskette
- 3.7 Watershed Maps

## HYDROLOGY

The hydrology for this study was originally performed by Burgess & Niple, Inc. for the Jackrabbit Wash Floodplain Delineation Study and was revised by the Flood Control District of Maricopa County. The original hydrology model was submitted to FEMA on 03-12-91 and was accepted on 04-25-91.

In the course of delineating the floodplain for Tank Wash, a discrepancy was found in the original topographic delineation as a result of new, more detailed mapping of Tank Wash. This discrepancy generated concerns that the watershed delineation was not representative of true conditions. Therefore, changes to the original hydrology were made by the Flood Control District.

The original watershed delineation was based on 7.5 minute USGS quadrangle maps which were the only source of mapping at the time of the delineation of Jackrabbit Wash. It is important to understand that the original hydrology for Tank Wash was not for floodplain purposes, but only for determining the contributing flows to Jackrabbit Wash. The new and more detailed aerial mapping indicated that a channel existed where the USGS mapping did not so indicate. The blue line on the USGS maps representing the channel, actually proved to be a shallow channel which did not contribute to a much larger channel flowing from C51 to C58. Therefore the delineation was corrected to include a larger channel to the south (see attached map). This channel is indicated on the watershed delineation map within what is now sub-basin 10Ca.

Once the delineation was corrected to represent true conditions in the watershed, the HEC-1 model was slightly altered to reflect this. The original sub-basin 10C was further delineated into sub-basin 10Ca along the channel reach which flows from C51 to C58. The sub-basin combined with the original sub-basin 10C at C58. The routing reach from C55 was then combined with sub-basin 10Ca at C58 instead of at C57, which no longer exists. From this point downstream, the HEC-1 model was not changed.

Sub-basin 10Ca has an area of 0.37 square miles. A unit hydrograph was calculated for this sub-basin using the same methodology and same parameters as the original model. In the original hydrology, channel cross-sections were estimated in the field and from USGS mapping. This seemed reasonable at the time, in that the intent of performing the hydrology was to determine flow rates contributing to Jackrabbit Wash, not for performing a floodplain delineation on Tank Wash. The more detailed aerial mapping was used to generate channel cross-sections for the new hydrology, therefore channel routing reaches were also altered to represent true conditions. The flow rates are very comparable with the original estimations. A comparison of flow rates is as follows:

<b>Comparison of Flow Rates</b>			
Concentration Point	Jackrabbit Wash Flow - cfs	Tank Wash Flow - cfs	Comments
C51	2631	2631	No hydrology changes above this point
C58	4594	4248	Combined with sub-basin 10Ca
C59	6319	6059	
C61	6553	6861	
C82.1	6288	6551	Tank Wash before confluence with Star Wash
C82	13936	13919	At confluence with Star Wash

In summary, the flow rates are acceptable and reasonable and compare favorably with the original hydrology accepted by FEMA in the Jackrabbit Floodplain Delineation Study.

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* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
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* SEPTEMBER 1990 *
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* VERSION 4.0 *
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* RUN DATE 11/08/1993 TIME 09:56:39 *
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*
* U.S. ARMY CORPS OF ENGINEERS
*
* HYDROLOGIC ENGINEERING CENTER
*
* 609 SECOND STREET
*
* DAVIS, CALIFORNIA 95616
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* (916) 756-1104
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X X XXXXXXX XXXXX X
X X X X X XX
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XXXXXXX XXXX X XXXXX X
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE. THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION

NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY, DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
1 ID FCDMC JACKRABBIT WASH, PROJECT NO. 10310
2 ID 100-YEAR 24-HOUR DURATION STORM
3 ID FILENAME= 10310-24.H1, 15FEB91
* *****
* This model has been revised by the FCD (3/8/93) *
* to reflect new aerial mapping for the *
* Tank Wash Flood Delineation Study. *
* *****
*
*DIAGRAM
*
4 IT 5 14APR93 0000 300
5 IO 5 0.
6 IN 30 14APR93 0000
*
7 JD 4.20 0.01
8 PC .000 .005 .011 .016 .022 .028 .035 .041 .048 .056
9 PC .068 .071 .080 .089 .098 .109 .120 .133 .147 .163
10 PC .181 .204 .235 .283 .663 .735 .772 .799 .820 .838
11 PC .854 .868 .880 .891 .902 .912 .921 .929 .937 .945
12 PC .952 .959 .965 .972 .978 .984 .989 .995 1.000
*
13 JD 4.12 5.0
*
14 JD 3.99 10.0
*
15 JD 3.70 50.0
*
16 JD 3.57 100.0
*
17 JD 3.28 500.0
*
*
18 KK 10A
19 KM SUB-BASIN 10A
20 KM NODE 50
21 BA 2.01
22 LG .15 .33 6.10 .32 .00
23 UI 144. 144. 382. 618. 873. 1028. 1178. 1549. 1446. 990.
24 UI 857. 778. 698. 623. 558. 474. 398. 353. 328. 296.
25 UI 237. 197. 182. 158. 153. 110. 110. 100. 70. 70.
26 UI 70. 70. 34. 28. 28. 28. 28. 28. 28. 28.
27 UI 28. 28. 28. 0. 0. 0. 0. 0. 0. 0.
28 UI 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
29 KK R50-51
30 KM X-SECT. 10B1
31 RS 24 FLOW
32 RL 0.54 93.5
33 RC 0.03 0.038 0.03 37594 0.013
34 RX 1000.0 1587.0 1608.0 1612.0 1620.0 1624.0 1684.0 2324.6

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35 RY 101.1 94.4 94.7 93.5 93.8 95.0 94.1 101.1
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36 KK 10B
37 KM SUB-BASIN 10B
38 BA 5.36
39 LG .35 .35 4.50 .62 .00
40 UI 328. 328. 681. 1214. 1557. 1798. 2025. 2343. 2716. 3538.
41 UI 4226. 3490. 2961. 2618. 2245. 1959. 1660. 1398. 1011. 615.
42 UI 561. 539. 342. 328. 236. 101. 101. 101. 101. 101.
43 UI 101. 101. 0. 0. 0. 0. 0. 0. 0. 0.
44 UI 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
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45 KK C51
46 KM COMBINE SURFACE RUNOFF AT NODE 51
47 KM R50-51 + 10B
48 HC 2
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* Cross section changed

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49 KK R51-58
50 KM INTERPOLATE BETWEEN X-SECT.
51 RS 10 FLOW -1
52 RL 0.54 29.7
53 RC 0.033 0.038 0.033 13250 0.007
54 RX 9795.0 9795.1 9986.2 9994.5 10005.5 10022.1 10416.0 10416.1
55 RY 46.3 36.3 34.7 29.8 29.7 35.2 36.5 42.5
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* Sub-basin added

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56 KK 10Ca
57 KM SUB-BASIN 10Ca
58 BA .37
59 LG .35 .35 4.10 .63 .00
60 UI 38 84 172 222 279 398 454 338 268 208
61 UI 148 79 64 38 25 12 12 12 12 0
62 UI 0 0 0 0 0 0 0 0 0 0
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* Concentration point added

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HEC-1 INPUT

1

PAGE 3

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

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63 KK C58.1
64 KM COMBINE SURFACE RUNOFF
65 KM R51-58 + 10Ca
66 HC 2
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67 KK 10D
68 KM SUB-BASIN 10D
69 KM HEADWATERS OF TANK WASH
70 KM NODE 52
71 BA 4.54
72 LG .15 .32 7.30 .17 .00
73 UI 243. 243. 289. 719. 993. 1329. 1553. 1756. 1924. 2291.
74 UI 2900. 2270. 1726. 1509. 1408. 1298. 1196. 1114. 1008. 942.
75 UI 822. 730. 636. 594. 560. 524. 476. 399. 352. 310.
76 UI 299. 266. 266. 217. 186. 186. 186. 130. 119. 119.
77 UI 119. 119. 119. 53. 47. 47. 47. 47. 47. 47.
78 UI 47. 47. 47. 47. 47. 47. 47. 47. 47. 47.
79 UI 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
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80 KK R52-55
81 KM X-SECT. 10E2
82 RS 11 FLOW -1
83 RL 0.54 86.5
84 RC 0.035 0.036 0.035 18216 0.013
85 RX 1000.0 1520.0 1620.0 1623.0 1631.0 1637.0 1737.0 2257.0
86 RY 95.2 90.0 89.5 86.5 86.5 89.5 90.0 95.2
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87 KK 10E
88 KM SUB-BASIN 10E
89 BA 2.72
90 LG .32 .36 4.80 .51 .00
91 UI 218. 252. 774. 1051. 1249. 1488. 1824. 2570. 2524. 1989.
92 UI 1679. 1375. 1135. 885. 526. 377. 337. 218. 185. 67.
93 UI 67. 67. 67. 67. 67. 0. 0. 0. 0. 0.
94 UI 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
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95 KK C55
96 KM COMBINE SURFACE RUNOFF AT NODE 55
97 KM Crossing at Vulture Mine Road
98 KM R52-55 + 10E
99 HC 2
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* Cross section changed

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HEC-1 INPUT

1

PAGE 4

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

100 KK R55-58

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101 KM INTERPOLATE BETWEEN X-SECT.
102 RS 12 FLOW -1
103 RL .35 .35 4.10 .63 .00
104 RC 0.033 0.038 0.033 21120 0.009
105 RX 9565.3 9565.4 9986.9 9996.0 10004.5 10013.7 10233.3 10233.4
106 RY 41.7 31.7 28.8 22.8 22.5 28.9 32.6 42.6
* *****
* BA and UI changed

107 KK 10C
108 KM SUB-BASIN 10C
109 BA 5.29
110 LG .35 .35 4.10 .63 .00
111 UI 302 302 499 1068 1346 1569 1762 1991 2285 2715
112 UI 3522 3817 3119 2694 2401 2083 1825 1573 1371 1024
113 UI 696 534 497 432 302 302 173 93 93 93
114 UI 93 93 93 93 93 0 0 0 0 0
* *****
* Concentration point added

115 KK C58.2
116 KM COMBINE SURFACE RUNOFF
117 KM R55-58 + 10C
118 HC 2
* *****

119 KK C58
120 KM COMBINE SURFACE RUNOFF AT NODE 58
121 KM R51-58 + R55-58 + 10Ca +10C
122 HC 2
* *****
* Cross section parameters changed

123 KK R58-59
124 KM X-SECT. 10H1
125 RS 2 FLOW -1
126 RL 1.90 8.3
127 RC 0.035 0.037 0.035 4013 0.005
128 RX 9339.8 9339.9 9951.1 9968.3 10019.5 10044.4 10140.0 10140.1
129 RY 24.7 14.7 11.4 8.9 8.3 12.1 14.1 24.1
* *****

130 KK 10F
131 KM SUB-BASIN 10F
132 KM NODE 53
133 BA 5.68
134 LG .21 .30 7.80 .15 .00
135 UI 361. 361. 741. 1306. 1901. 2318. 2672. 3050. 3916. 3767.
136 UI 2572. 2211. 2042. 1846. 1694. 1506. 1373. 1185. 1009. 901.
HEC-1 INPUT

137 LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
137 UI 843. 778. 669. 587. 461. 452. 395. 395. 287. 277.
138 UI 277. 204. 177. 177. 177. 177. 96. 69. 69. 69.
139 UI 69. 69. 69. 69. 69. 69. 69. 69. 0. 0.
140 UI 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
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141 KK R53-54
142 KM X-SECT. 10G1
143 RS 18 FLOW -1
144 RL 0.38 92.3
145 RC 0.045 0.048 0.045 33792 0.015
146 RX 1000.0 1520.0 1601.0 1606.0 1616.0 1621.0 1630.0 1773.6
147 RY 100.8 95.6 93.6 92.5 92.3 93.6 94.0 100.8
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148 KK 10G
149 KM SUB-BASIN 10G
150 BA 4.28
151 LG .20 .35 5.20 .42 .00
152 UI 240. 240. 348. 755. 1024. 1407. 1607. 1801. 2025. 2532.
153 UI 2763. 1831. 1558. 1419. 1316. 1207. 1123. 1005. 937. 819.
154 UI 718. 625. 585. 552. 508. 442. 395. 317. 307. 275.
155 UI 263. 247. 184. 184. 184. 144. 118. 118. 118. 118.
156 UI 118. 49. 46. 46. 46. 46. 46. 46. 46. 46.
157 UI 46. 46. 46. 46. 46. 0. 0. 0. 0. 0.
158 UI 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.
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159 KK C54
160 KM COMBINE SURFACE RUNOFF AT NODE 54
161 KM R53-54 + 10G
162 KM Crossing at Vulture Mine Road
163 HC 2
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164 KK R54-59
165 KM INTERPOLATE BETWEEN X-SECT. 10H1 AND 10G1
166 RS 15 FLOW -1
167 RL 0.54 92.5
168 RC 0.04 0.043 0.04 27614 0.009
169 RX 1120.0 1520.0 1585.0 1597.0 1639.0 1650.0 1665.0 1933.8
170 RY 104.1 96.1 95.3 92.5 92.5 93.8 94.5 104.1
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171 KK 10H
172 KM SUB-BASIN 10H

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246 KM it's confluence with Star Wash.  
 247 KO 21  
 248 HC 2  
 249 ZW A=TANK WASH C=FLOW  
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HEC-1 INPUT

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

250 KK 10M  
 251 KM SUB-BASIN 10M  
 252 KM NODE 67  
 253 BA 6.17  
 254 LG .21 .32 7.00 .17 .00  
 255 UI 330. 330. 393. 978. 1349. 1806. 2110. 2386. 2615. 3114.  
 256 UI 3941. 3085. 2345. 2051. 1914. 1764. 1626. 1515. 1370. 1281.  
 257 UI 1117. 992. 864. 807. 762. 712. 647. 542. 479. 421.  
 258 UI 406. 361. 361. 295. 253. 253. 253. 177. 161. 161.  
 259 UI 161. 161. 161. 72. 63. 63. 63. 63. 63. 63.  
 260 UI 63. 63. 63. 63. 63. 63. 63. 63. 0. 0.  
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261 KK R67-68  
 262 KM INTERPOLATE BETWEEN X-SECT. 10N1 AND 10N2  
 263 RS 27 FLOW -1  
 264 RL 0.65 90.8  
 265 RC 0.035 0.045 0.035 43402 0.01  
 266 RX 1000.0 1520.0 1619.0 1630.0 1637.0 1647.0 1753.0 2076.3  
 267 RY 99.7 94.5 93.9 90.8 90.8 94.3 94.4 99.7  
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268 KK 10K  
 269 KM SUB-BASIN 10K  
 270 KM NODE 63  
 271 BA 5.44  
 272 LG .32 .35 5.10 .44 .00  
 273 UI 291. 291. 359. 990. 1218. 1441. 1624. 1802. 2050. 2314.  
 274 UI 2836. 3639. 3525. 2936. 2565. 2308. 2022. 1779. 1559. 1378.  
 275 UI 1101. 795. 514. 496. 478. 342. 291. 291. 124. 89.  
 276 UI 89. 89. 89. 89. 89. 89. 89. 0. 0. 0.  
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277 KK R63-68  
 278 KM REP. X-SECT. 10R1  
 279 RS 7 FLOW -1  
 280 RL 0.42 92.0  
 281 RC 0.035 0.033 0.035 11986 0.008  
 282 RX 1000.0 1520.0 1553.0 1562.0 1572.0 1580.0 1694.0 2244.0  
 283 RY 102.9 97.7 94.9 92.0 92.1 95.6 97.4 102.9  
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284 KK 10N  
 285 KM SUB-BASIN 10N  
 286 BA 3.47  
 287 LG .35 .36 4.60 .47 .00  
 288 UI 201. 201. 354. 719. 914. 1060. 1189. 1352. 1549. 1890.  
 289 UI 2464. 2448. 2009. 1745. 1554. 1341. 1171. 1008. 851. 620.  
 290 UI 387. 347. 331. 236. 201. 193. 62. 62. 62. 62.  
 291 UI 62. 62. 62. 62. 0. 0. 0. 0. 0. 0.  
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HEC-1 INPUT

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

292 KK C68  
 293 KM COMBINE SURFACE RUNOFF AT NODE 68  
 294 KM R67-68 + R63-68 + 10N  
 295 HC 3  
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296 KK R68-72  
 297 KM REP. X-SECT. 10N2  
 298 RS 4 FLOW -1  
 299 RL 0.54 89.5  
 300 RC 0.03 0.043 0.035 4805 0.005  
 301 RX 1000.0 1520.0 1592.0 1607.0 1613.0 1625.0 1739.0 1989.0  
 302 RY 99.6 94.4 93.4 89.6 89.5 94.4 93.1 99.6  
 \*  
 \*

303 KK 10S  
 304 KM SUB-BASIN 10S  
 305 KM HEADWATERS OF STAR WASH  
 306 KM NODE 70  
 307 BA 3.92  
 308 LG .30 .36 5.50 .23 .00  
 309 UI 269. 269. 737. 1130. 1388. 1592. 1866. 2203. 2936. 3406.  
 310 UI 2719. 2304. 1992. 1679. 1417. 1177. 833. 480. 452. 383.  
 311 UI 269. 253. 83. 83. 83. 83. 83. 83. 83. 0.  
 312 UI 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.  
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313 KK R70-71  
 314 KM X-SECT. 10U1  
 315 RS 12 FLOW -1  
 316 RL 0.54 90.9



387	LG	.17	.30	8.20	.09	.00						
388	UI	288.	474.	1114.	1765.	2158.	2820.	2892.	1883.	1621.	1412.	
389	UI	1220.	1031.	822.	699.	631.	507.	397.	345.	315.	228.	
390	UI	221.	160.	141.	141.	109.	55.	55.	55.	55.	55.	
391	UI	55.	55.	55.	0.	0.	0.	0.	0.	0.	0.	

392	KK	R73-74										
393	KM	X-SECT. 10P2										
394	RS	9 FLOW		-1								
395	RL			0.21	91.1							
396	RC	0.03	0.031	0.03	24922	0.019						
397	RX	1000.0	1522.0	1534.0	1539.0	1611.0	1620.0	1644.0	1878.2			
398	RY	98.7	93.5	93.2	91.5	91.1	93.1	94.5	98.7			

399	KK	10P										
400	KM	SUB-BASIN 10P										
401	BA	6.15										
402	LG	.20	.32	7.00	.23	.00						
403	UI	324.	324.	358.	940.	1306.	1731.	2046.	2312.	2536.	2960.	
404	UI	3731.	3324.	2360.	2063.	1902.	1767.	1631.	1519.	1381.	1277.	
405	UI	1153.	1025.	875.	807.	765.	726.	676.	551.	523.	413.	
406	UI	413.	368.	354.	346.	248.	248.	248.	227.	158.	158.	
407	UI	158.	158.	158.	137.	62.	62.	62.	62.	62.	62.	

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PAGE 12

LINE	ID	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	
408	UI	62.	62.	62.	62.	62.	62.	62.	62.	62.	62.	
409	UI	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	

410	KK	C74										
411	KM	COMBINE SURFACE RUNOFF AT NODE 74										
412	KM	R73-74 + 10P										
413	HC	2										

414	KK	R74-76										
415	KM	X-SECT. 10R1										
416	RS	11 FLOW		-1								
417	RL			0.17	92.0							
418	RC	0.035	0.033	0.035	26189	0.013						
419	RX	1000.0	1520.0	1553.0	1562.0	1572.0	1580.0	1694.0	2244.0			
420	RY	102.9	97.7	94.9	92.0	92.1	95.6	97.4	102.9			

421	KK	10R										
422	KM	SUB-BASIN 10R										
423	BA	4.93										
424	LG	.16	.36	5.80	.31	.00						
425	UI	263.	263.	314.	781.	1078.	1443.	1686.	1906.	2090.	2488.	
426	UI	3149.	2465.	1874.	1639.	1529.	1409.	1299.	1210.	1095.	1023.	
427	UI	893.	793.	690.	645.	609.	569.	517.	433.	382.	337.	
428	UI	324.	289.	289.	236.	202.	202.	202.	141.	129.	129.	
429	UI	129.	129.	129.	58.	50.	51.	50.	51.	50.	51.	
430	UI	50.	51.	51.	50.	51.	50.	51.	50.	0.	0.	

431	KK	C76										
432	KM	COMBINE SURFACE RUNOFF AT NODE 76										
433	KM	R75-76 + R74-76 + 10R										
434	HC	3										

435	KK	R76-77										
436	KM	INTERPOLATE BETWEEN X-SECT. 10V1 AND 10V2										
437	RS	10 FLOW		-1								
438	RL			0.54	89.9							
439	RC	0.035	0.04	0.035	17002	0.008						
440	RX	1000.0	1520.0	1632.0	1637.0	1663.0	1670.0	1751.0	1949.0			
441	RY	95.8	93.2	92.3	89.9	89.9	92.3	92.5	95.8			

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PAGE 13

LINE	ID	.....1	.....2	.....3	.....4	.....5	.....6	.....7	.....8	.....9	.....10	
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442	KK	10V										
443	KM	SUB-BASIN 10V										
444	BA	3.12										
445	LG	.35	.35	4.90	.46	.00						
446	UI	219.	219.	629.	934.	1143.	1315.	1551.	1854.	2525.	2672.	
447	UI	2120.	1812.	1546.	1310.	1089.	871.	548.	385.	360.	255.	
448	UI	219.	138.	67.	67.	67.	67.	67.	67.	0.	0.	

449	KK	C77										
450	KM	COMBINE SURFACE RUNOFF AT NODE 77										
451	KM	R76-77 + 10V										
452	HC	2										

453	KK	R77-80										
454	KM	REP. X-SECT. 10V2										
455	RS	3 FLOW		-1								
456	RL			0.54	92.8							



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527      KM      R72-81 + R80-81
528      HC      2
          *
          *

529      KK      R81-82
530      KM      REP. X-SECT. 10AB2
531      RS      5      FLOW      -1
532      RL      1.90      94.1
533      RC      0.035      0.029      0.035      9398      0.006
534      RX      600.0      1500.0      1571.0      1578.0      1682.0      1693.0      1733.0      2733.0
535      RY      102.0      97.5      97.3      94.1      94.1      96.8      97.0      102.0
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536      KK      10Z
537      KM      SUB-BASIN 10Z
538      BA      3.69
539      LG      .35      .35      4.40      .65      .00
540      UI      254.      254.      608.      1035.      1472.      1747.      1984.      2485.      2905.      1887.
541      UI      1583.      1441.      1294.      1176.      1045.      928.      800.      660.      610.      567.
542      UI      505.      417.      338.      320.      278.      275.      194.      194.      188.      124.
543      UI      124.      124.      124.      88.      49.      49.      49.      49.      49.      49.
544      UI      49.      49.      49.      49.      49.      0.      0.      0.      0.      0.
          *
          *

```

```

545      KK      C82.2
546      KM      CONCENTRATION POINT - CONTRIBUTING STAR WASH
547      HC      2
548      ZW      A=STAR WASH C=FLOW
          *
          *

```

1

HEC-1 INPUT

```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

```

```

549      KK      BC82.1
550      KM      RECALL HYDROGRAPH C82.1
551      BI      C82.1      21
          *
          *

```

```

552      KK      C82
553      KM      COMBINE SURFACE RUNOFF AT NODE 82: This is the total runoff at
554      KM      Node 82
555      KM      C82.1 + R81-82 + 10Z
556      HC      2
557      ZW      A=COMBINED STAR (CP82) C=FLOW
          *
          *

```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

```

INPUT
LINE      (V) ROUTING      (--->) DIVERSION OR PUMP FLOW
NO.      (.) CONNECTOR      (<---) RETURN OF DIVERTED OR PUMPED FLOW

18      10A
        V
        V
29      R50-51
        .
        .
36      .      10B
        .
        .
45      C51.....
        V
        V
49      R51-58
        .
        .
56      .      10Ca
        .
        .
63      C58.1.....
        .
        .
67      .      10D
        .
        V
        V
80      .      R52-55
        .
        .
87      .      .      10E
        .
        .
95      .      C55.....
        .
        V
        V
100     .      R55-58
        .
        .
107     .      .      10C
        .
        .
115     .      C58.2.....
        .
        .
119     C58.....
        V
        V
123     R58-59
        .
        .

```

130	.	10F		
	.	V		
	.	V		
141	.	R53-54		
	.	.		
148	.	.	10G	
	.	.	.	
159	.	C54.....		
	.	V		
	.	V		
164	.	R54-59		
	.	.		
171	.	.	10H	
	.	.	.	
181	.	C59.....		
	.	V		
	.	V		
185	.	R59-61		
	.	.		
192	.	10I		
	.	V		
	.	V		
206	.	R60-61		
	.	.		
213	.	.	10J	
	.	.	.	
222	.	C61.....		
	.	V		
	.	V		
226	.	R61-82		
	.	.		
233	.	10L		
	.	.		
242	.	C82.1.....		
	.	.		
250	.	10M		
	.	V		
	.	V		
261	.	R67-68		
	.	.		
268	.	.	10K	
	.	.	V	
	.	.	V	
277	.	R63-68		
	.	.	.	
284	.	.	.	10N
	.	.	.	.
292	.	C68.....		
	.	V		
	.	V		
296	.	R68-72		
	.	.		
303	.	.	10S	
	.	.	V	
	.	.	V	
313	.	R70-71		
	.	.	.	
320	.	.	.	10T
	.	.	.	V
	.	.	.	V
329	.	.	R69-71	
	.	.	.	.
336	.	.	.	10U
	.	.	.	.
343	.	C71.....		
	.	V		
	.	V		
347	.	R71-72		
	.	.		
354	.	C72.....		
	.	V		
	.	V		
358	.	R72-81		
	.	.		
366	.	.	10Q	
	.	.	V	
	.	.	V	
375	.	R75-76		
	.	.	.	
382	.	.	.	10O
	.	.	.	V
	.	.	.	V
392	.	.	R73-74	
	.	.	.	.
399	.	.	.	10P
	.	.	.	.
	.	.	.	.

```

410 . . . . . C74.....
      . . . . . V
      . . . . . V
414 . . . . . R74-76
      . . . . .
      . . . . .
421 . . . . . 10R
      . . . . .
      . . . . .
431 . . . . . C76.....
      . . . . . V
      . . . . . V
435 . . . . . R76-77
      . . . . .
      . . . . .
442 . . . . . 10V
      . . . . .
      . . . . .
449 . . . . . C77.....
      . . . . . V
      . . . . . V
453 . . . . . R77-80
      . . . . .
      . . . . .
460 . . . . . 10W
      . . . . . V
      . . . . . V
471 . . . . . R78-79
      . . . . .
      . . . . .
478 . . . . . 10X
      . . . . .
      . . . . .
487 . . . . . C79.....
      . . . . . V
      . . . . . V
491 . . . . . R79-80
      . . . . .
      . . . . .
498 . . . . . 10Y
      . . . . .
      . . . . .
508 . . . . . C80.....
      . . . . . V
      . . . . . V
512 . . . . . R80-81
      . . . . .
      . . . . .
521 . . . . . BR7281
      . . . . .
      . . . . .
524 . . . . . C81.....
      . . . . . V
      . . . . . V
529 . . . . . R81-82
      . . . . .
      . . . . .
536 . . . . . 10Z
      . . . . .
      . . . . .
545 . . . . . C82.2.....
      . . . . .
      . . . . .
549 . . . . . BC82.1
      . . . . .
      . . . . .
552 . . . . . C82.....

```

(\*\*\*) RUNOFF ALSO COMPUTED AT THIS LOCATION

```

1*****
*****
*
*
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
*
* SEPTEMBER 1990 *
*
* VERSION 4.0 *
*
* RUN DATE 11/08/1993 TIME 09:56:39 *
*
*
*****
*****

```

```

*
* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 756-1104
*

```

FCDMC JACKRABBIT WASH, PROJECT NO. 10310  
100-YEAR 24-HOUR DURATION STORM  
FILENAME= 10310-24.H1, 15FEB91

```

5 IO OUTPUT CONTROL VARIABLES
      IPRNT 5 PRINT CONTROL
      IPLOT 0 PLOT CONTROL
      QSCAL 0 HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA
      NMIN 5 MINUTES IN COMPUTATION INTERVAL
      IDATE 14APR93 STARTING DATE
      ITIME 0000 STARTING TIME
      NQ 300 NUMBER OF HYDROGRAPH ORDINATES
      NDDATE 15APR93 ENDING DATE
      NDTIME 0055 ENDING TIME

```





```

.00 .00 .00 .00 .00 .00 .00 .00 .00 .00
.00 .00 .00 .00 .00 .00 .00 .00 .00 .00
.00 .00 .00 .00 .00 .00 .00 .00 .00 .00
.00 .00 .00 .00 .00 .00 .00 .00 .00 .00
.00 .00 .00 .00 .00 .00 .00 .00 .00 .00
.00 .00 .00 .00 .00 .00 .00 .00 .00 .00
.00 .00 .00 .00 .00 .00 .00 .00 .00 .00

```

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*****
*      *
242 KK * C82.1 *
*      *
*****

```

```

247 KO      OUTPUT CONTROL VARIABLES
          IPRNT      5  PRINT CONTROL
          IPLOT      0  PLOT CONTROL
          QSCAL      0.  HYDROGRAPH PLOT SCALE
          IPNCH      0  PUNCH COMPUTED HYDROGRAPH
          IOUT       21  SAVE HYDROGRAPH ON THIS UNIT
          ISAV1      1  FIRST ORDINATE PUNCHED OR SAVED
          ISAV2     300  LAST ORDINATE PUNCHED OR SAVED
          TIMINT     .083 TIME INTERVAL IN HOURS

```

```

-----DSS---ZOPEN:  Version: 6-EA; Existing File Opened
Unit: 71, File: JACK.DSS
-----DSS---ZWRITE Unit 71; Vers. 4: /TANK WASH/C82.1/FLOW/13APR1993/5MIN//
-----DSS---ZWRITE Unit 71; Vers. 4: /TANK WASH/C82.1/FLOW/14APR1993/5MIN//
-----DSS---ZWRITE Unit 71; Vers. 4: /TANK WASH/C82.1/FLOW/15APR1993/5MIN//

```

\*\*\* \*\*

```

*****
*      *
358 KK * R72-81 *
*      *
*****

```

```

360 KO      OUTPUT CONTROL VARIABLES
          IPRNT      5  PRINT CONTROL
          IPLOT      0  PLOT CONTROL
          QSCAL      0.  HYDROGRAPH PLOT SCALE
          IPNCH      0  PUNCH COMPUTED HYDROGRAPH
          IOUT       22  SAVE HYDROGRAPH ON THIS UNIT
          ISAV1      1  FIRST ORDINATE PUNCHED OR SAVED
          ISAV2     300  LAST ORDINATE PUNCHED OR SAVED
          TIMINT     .083 TIME INTERVAL IN HOURS

```

WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO

```

523 BI      READ STATION R72-81 HYDROGRAPH FROM UNIT 22
-----DSS---ZWRITE Unit 71; Vers. 3: /STAR WASH/C82.2/FLOW/13APR1993/5MIN//
-----DSS---ZWRITE Unit 71; Vers. 3: /STAR WASH/C82.2/FLOW/14APR1993/5MIN//
-----DSS---ZWRITE Unit 71; Vers. 3: /STAR WASH/C82.2/FLOW/15APR1993/5MIN//

```

```

551 BI      READ STATION C82.1 HYDROGRAPH FROM UNIT 21
-----DSS---ZWRITE Unit 71; Vers. 4: /COMBINED STAR (CP82)/C82/FLOW/13APR1993/5MIN//
-----DSS---ZWRITE Unit 71; Vers. 4: /COMBINED STAR (CP82)/C82/FLOW/14APR1993/5MIN//
-----DSS---ZWRITE Unit 71; Vers. 4: /COMBINED STAR (CP82)/C82/FLOW/15APR1993/5MIN//

```

1

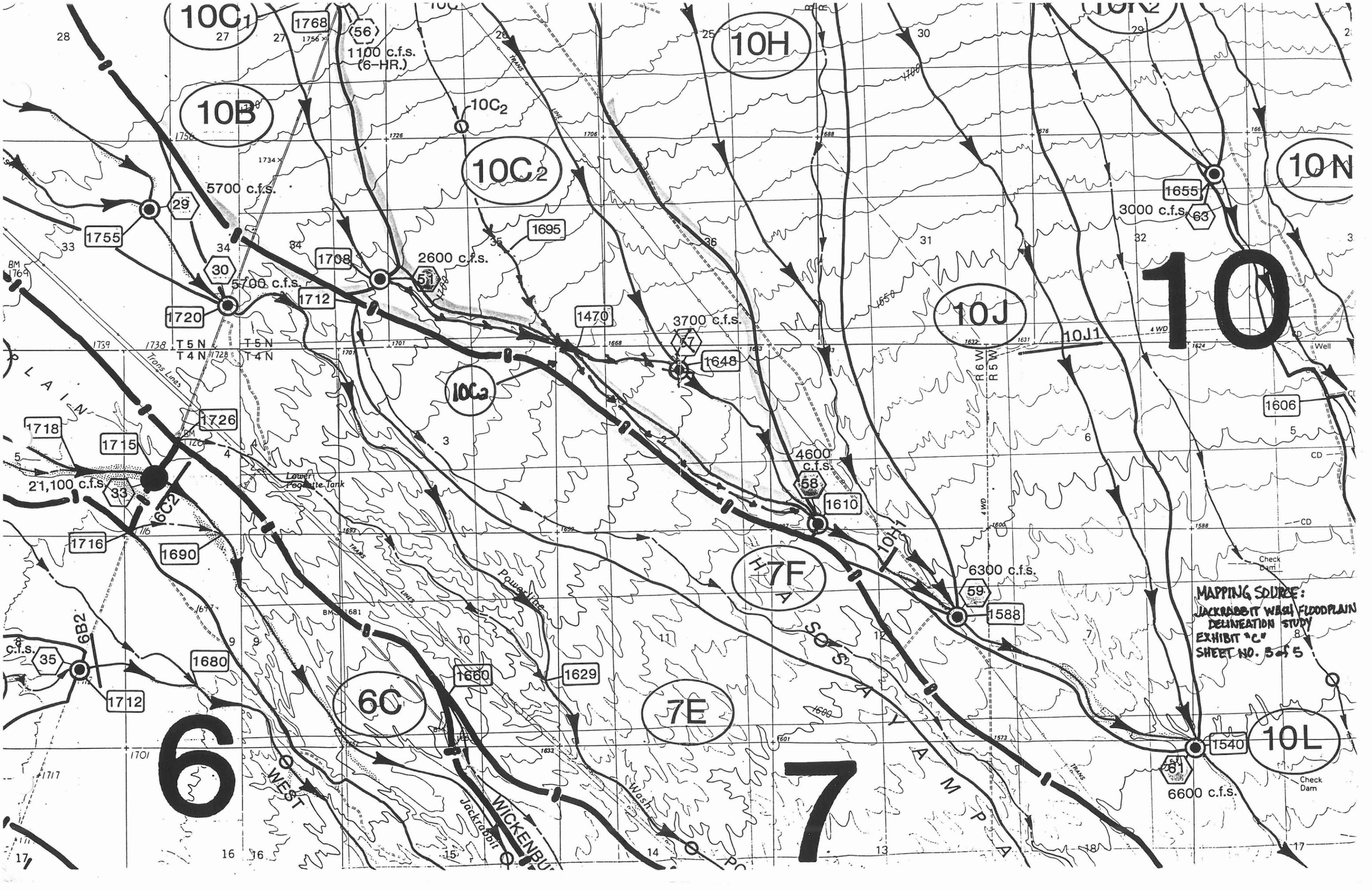
RUNOFF SUMMARY  
FLOW IN CUBIC FEET PER SECOND  
TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD			BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
				6-HOUR	24-HOUR	72-HOUR			
+	HYDROGRAPH AT								
+	ROUTED TO								
	10A	1350.	12.42	248.	62.	60.	2.01		
+	ROUTED TO								
	R50-51	787.	14.42	226.	57.	55.	2.01		
+	HYDROGRAPH AT								
	10B	2722.	12.67	478.	119.	115.	5.36		
+	2 COMBINED AT								
	C51	2631.	12.67	665.	170.	164.	7.37		
+	ROUTED TO								
	R51-58	2227.	13.42	655.	169.	163.	7.37		
+	HYDROGRAPH AT								
	10Ca	287.	12.33	35.	9.	8.	.37		
+	2 COMBINED AT								
	C58.1	2227.	13.42	680.	177.	170.	7.74		
+	HYDROGRAPH AT								
	10D	2859.	12.58	672.	168.	162.	4.54		
+	ROUTED TO								
	R52-55	2427.	13.42	663.	166.	160.	4.54		
+	HYDROGRAPH AT								
	10E	1876.	12.50	273.	68.	66.	2.72		

+	2 COMBINED AT	C55	2464.	13.42	906.	227.	219.	7.26
+	ROUTED TO	R55-58	2161.	14.42	894.	225.	217.	7.26
+	HYDROGRAPH AT	10C	2620.	12.75	486.	121.	117.	5.29
+	2 COMBINED AT	C58.2	3333.	12.75	1292.	326.	314.	12.55
+	2 COMBINED AT	C58	4248.	12.83	1845.	471.	454.	20.29
+	ROUTED TO	R58-59	4143.	13.42	1824.	466.	449.	20.29
+	HYDROGRAPH AT	10F	4088.	12.50	855.	214.	206.	5.68
+	ROUTED TO	R53-54	3109.	13.92	838.	210.	203.	5.68
+	HYDROGRAPH AT	10G	2180.	12.58	480.	120.	116.	4.28
+	2 COMBINED AT	C54	3417.	13.83	1250.	315.	304.	9.96
+	ROUTED TO	R54-59	2970.	15.00	1201.	306.	295.	9.96
+	HYDROGRAPH AT	10H	2554.	12.92	527.	132.	127.	6.74
+	3 COMBINED AT	C59	6059.	13.42	3176.	819.	788.	36.99
+	ROUTED TO	R59-61	5880.	13.75	3108.	798.	768.	36.99
+	HYDROGRAPH AT	10I	3500.	12.67	874.	219.	211.	6.93
+	ROUTED TO	R60-61	2232.	15.17	827.	208.	201.	6.93
+	HYDROGRAPH AT	10J	3177.	12.83	634.	158.	153.	7.08
+	3 COMBINED AT	C61	6861.	13.17	4108.	1076.	1036.	51.00
+	ROUTED TO	R61-82	6475.	13.92	3980.	1038.	1000.	51.00
+	HYDROGRAPH AT	10L	2938.	12.75	544.	136.	131.	6.34
+	2 COMBINED AT	C82.1	6551.	13.92	4182.	1128.	1086.	57.34
+	HYDROGRAPH AT	10M	3824.	12.58	898.	224.	216.	6.17
+	ROUTED TO	R67-68	2640.	14.67	860.	216.	208.	6.17
+	HYDROGRAPH AT	10K	2951.	12.83	577.	144.	139.	5.44
+	ROUTED TO	R63-68	2632.	13.33	575.	144.	138.	5.44
+	HYDROGRAPH AT	10N	1989.	12.75	365.	91.	88.	3.47
+	3 COMBINED AT	C68	3324.	12.92	1631.	416.	400.	15.08
+	ROUTED TO	R68-72	3293.	13.25	1621.	414.	399.	15.08
+	HYDROGRAPH AT	10S	3207.	12.58	524.	131.	126.	3.92
+	ROUTED TO	R70-71	2668.	13.42	517.	129.	125.	3.92
+	HYDROGRAPH AT	10T	2625.	12.58	437.	109.	105.	3.81
+	ROUTED TO	R69-71	2228.	13.33	432.	108.	104.	3.81
+	HYDROGRAPH AT	10U	2786.	12.50	439.	110.	106.	4.26
+	3 COMBINED AT	C71	4894.	13.33	1287.	322.	310.	11.99
+	ROUTED TO	R71-72	4670.	13.58	1280.	321.	309.	11.99
+	2 COMBINED AT	C72	7180.	13.50	2731.	693.	667.	27.07

+	ROUTED TO	R72-81	7007.	13.75	2707.	690.	665.	27.07
+	HYDROGRAPH AT	10Q	2149.	12.25	339.	85.	82.	2.61
+	ROUTED TO	R75-76	1473.	13.75	337.	84.	81.	2.61
+	HYDROGRAPH AT	10O	3181.	12.25	539.	135.	130.	3.08
+	ROUTED TO	R73-74	2827.	12.83	531.	133.	128.	3.08
+	HYDROGRAPH AT	10P	3464.	12.58	801.	200.	193.	6.15
+	2 COMBINED AT	C74	5903.	12.75	1283.	321.	309.	9.23
+	ROUTED TO	R74-76	4807.	13.67	1274.	320.	308.	9.23
+	HYDROGRAPH AT	10R	2662.	12.58	606.	152.	146.	4.93
+	3 COMBINED AT	C76	6649.	13.67	2076.	523.	504.	16.77
+	ROUTED TO	R76-77	6028.	14.42	2045.	516.	497.	16.77
+	HYDROGRAPH AT	10V	2060.	12.58	328.	82.	79.	3.12
+	2 COMBINED AT	C77	6028.	14.42	2323.	589.	568.	19.89
+	ROUTED TO	R77-80	5786.	14.67	2281.	579.	558.	19.89
+	HYDROGRAPH AT	10W	3751.	12.58	864.	216.	208.	5.30
+	ROUTED TO	R78-79	3328.	13.25	858.	215.	207.	5.30
+	HYDROGRAPH AT	10X	1872.	12.42	376.	94.	91.	2.74
+	2 COMBINED AT	C79	3987.	13.17	1193.	299.	288.	8.04
+	ROUTED TO	R79-80	3365.	14.50	1159.	293.	282.	8.04
+	HYDROGRAPH AT	10Y	1701.	12.58	378.	94.	91.	3.70
+	3 COMBINED AT	C80	8673.	14.58	3537.	903.	869.	31.63
+	ROUTED TO	R80-81	8431.	15.00	3514.	900.	866.	31.63
+	HYDROGRAPH AT	BR7281	7007.	13.75	2707.	690.	665.	27.07
+	2 COMBINED AT	C81	10661.	15.00	5853.	1496.	1441.	58.70
+	ROUTED TO	R81-82	10333.	15.42	5751.	1464.	1411.	58.70
+	HYDROGRAPH AT	10Z	1721.	12.42	324.	81.	78.	3.69
+	2 COMBINED AT	C82.2	10333.	15.42	5844.	1521.	1465.	62.39
+	HYDROGRAPH AT	BC82.1	6551.	13.92	4182.	1128.	1086.	57.34
+	2 COMBINED AT	C82	13919.	15.75	9265.	2449.	2358.	119.73

\*\*\* NORMAL END OF HEC-1 \*\*\*



1001

10B

10H

10C2

10N

10

10J

10Ca

10I

6

6C

7E

7

10L

MAPPING SOURCE:  
JACKRABBIT WASH FLOODPLAIN  
DELINEATION STUDY  
EXHIBIT "C"  
SHEET NO. 5 of 5

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

**SECTION 4 - HYDRAULIC ANALYSIS**

- 4.1 Method Description
- 4.2 Parameter Estimation
- 4.3 HEC-2 Cross Section Plots
- 4.5 Special Problems/Solutions
- 4.6 Floodway Modeling
- 4.7 Final Results/Computer Runs
- 4.8 Final Modeling Runs on Diskette  
(See clear pocket inside back cover)

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

SECTION 4.1 METHOD DESCRIPTION

The U.S. Army Corps of Engineers HEC-2 computer backwater program (version 4.6.2, May, 1991) was used to hydraulically model the floodplains of Powerline Wash and Tank Wash. HEC-2 is the most widely used of the two-dimensioned, fixed-boundary hydraulic models available for this type of analysis. This model is based on standard step-backwater using hydraulic cross sections to describe the floodplain.

Hydraulic cross sections were laid out by Stanley Consultants on aerial topography provided by Kenney Aerial Mapping, Inc. and Aerial Mapping Co., Inc. These sections were then digitized and compiled in HEC-2 format by each respective mapping company. The contour interval of the mapping is 2 feet and the horizontal scale is 1 inch = 200 feet as established in the scope of work for this study.

Cross sections are spaced roughly 500 feet apart and oriented from left to right looking downstream. The hydraulic baseline shown on the mapping has been designated cross section station 10,000. All backwater analysis in this study was done on the basis of predominant subcritical flow regime.

The Powerline Wash hydraulic analysis starts at river mile 1.113, which is the downstream limit of this study and the upstream limit of the Star Wash Study along the Powerline Wash tributary. The upstream limit of the Powerline Wash study reach is at river mile 10.424 which is approximately 1/2 mile upstream from Vulture Mine Road. The starting water surface on Powerline Wash for both the

natural and floodway encroachment profiles is taken from the Star Wash Study and input into HEC-2 using the known elevation option.

The Tank Wash hydraulic analysis starts at river mile 0.980 which is the upstream limit of the Star Wash Study along the Tank Wash tributary. The starting water surface on Tank Wash at the downstream limit of study for both the natural and floodway encroachment profiles is taken from the Star Wash Study as a known elevation.

The Tank Wash profile is one continuous run to the upstream limit at river mile 6.625. The South Branch of Tank Wash is a separate HEC-2 profile run. The starting water surface for the South Branch of Tank Wash was analyzed using two different methods. Both methods produced very similar results.

The first method involved the tributary option in HEC-2 with cross section 5.763 serving as the common cross section and the South Branch being the tributary. The second method used the slope-area option in HEC-2 starting at cross section 0.176 on the South Branch and using an estimated energy slope based on the slope of the channel bottom at that cross section. The slope-area method yielded a water surface at cross section 0.176 on the south Branch that was 0.20 feet higher than the water surface using the tributary option. Based on the difference in peak times between Tank Wash (12.75 hrs) and the South Branch of Tank Wash (13.42 hrs) and the fact that less than half of the South Branch peak flow of 2300 cfs is added concurrently to the Tank Wash peak flow of 3400 cfs, it is concluded that peak flows are essentially not concurrent. Because of this and since the slope-area option results in a higher water surface, it was chosen over the tributary option for the starting natural water surface on the South Branch of Tank Wash. The starting floodway encroachment water

surface for the South Branch utilizes the known elevation option with this elevation being 1.00 feet higher than the slope-area natural starting water surface.

Selected Manning roughness coefficients ("n" values), contraction and expansion coefficients, subdivision of hydraulic sections and associated HEC-2 methodology is covered in Section 4.2 of this report. Roughness coefficients for channels of both Powerline and Tank Washes ranged from 0.040 to 0.050 and overbank roughness coefficients ranged from 0.045 to 0.055.

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

**SECTION 4.2 - PARAMETER ESTIMATION**

**INDEX**

	Page
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Methodology .....	4
Results .....	7
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Composite "n" Value Calculations .....	19

## INTRODUCTION

This section is prepared in support of the hydraulic analysis for the Powerline Wash and Tank Wash Flood Delineation Study (FCD 92-09). It presents the basis for the estimation and use of Manning "n" values or "roughness coefficients" which are an integral part of the HEC-2 hydraulic analysis performed for each wash. Field reconnaissance trips in support of this section were made to the study area with Flood Control District staff on July 10, 1992 and December 7, 1992.

Powerline Wash and Tank Wash are located in an undeveloped area of western Maricopa County. Each of these washes is a major tributary to Star Wash, which, in turn, flows into Jackrabbit Wash. Jackrabbit Wash is a major tributary in the lower Hassayampa River watershed. Powerline and Tank Washes flow intermittently with their highest discharges most likely to occur from high intensity summer monsoon thunderstorms. The Powerline Wash study reach is approximately 9.3 miles in length and the Tank Wash reach is about 6.5 miles total length.

There are no hydraulic structures such as bridges or culverts present in the study area. No part of the study area has been channelized or significantly affected by roadway or fence crossings. There are no buildings present in the floodplain of either of the two washes. The cylindrical concrete foundations of existing electrical transmission lattice towers are present at certain locations in the overbanks of both washes but are not considered significant from a hydraulic standpoint.

Within the study area, Powerline Wash and Tank Wash are somewhat similar in overall hydraulic gradient, peak discharge, channel and overbank morphology and vegetation. Tank Wash has a larger contributing area than Powerline Wash with major tributaries entering from the north along the entire study reach. Tank Wash overflows its north bank at two locations with this overflow

eventually rejoining the main channel downstream from the breakout. Tank Wash generally consists of a single channel but in certain locations, especially in the middle to lower study reach, breaks into multiple channels. Tank Wash is characterized by generally sandy bottom cross sections with channel widths ranging from about 50 to 100 feet and channel depths on the order of 3 to 6 feet.

The upper Tank Wash study reach includes the South Branch of Tank Wash. Tank Wash, upstream from the South Branch confluence, is somewhat distinctive in cross section from the rest of the study. The channel bottom averages about 15 feet in width, channel sides are near vertical in places and the overbanks form a rather uniform valley section.

Powerline Wash, on the other hand, has only one significant tributary joining it from the north but has many small local tributaries along the study reach. Powerline Wash is generally a single channel over the entire study. However, a significant breakout occurs on its south overbank at about river mile 1.5. This breakout flows parallel to the main channel downstream to Star Wash. Powerline's main channel averages about 50 to 75 feet in width and 3 to 6 feet in depth.

Elevations in the study area range from a low of about 1,440 feet above sea level to a high of about 1,740 feet. The overall gradient of Powerline Wash from the upstream study limit to the downstream study limit is about 31 feet per mile (or about 0.6%). The overall gradient of Tank Wash is about 28 feet per mile (or about 0.5%).

Both Powerline Wash and Tank Wash have a generally sandy bottom main channel consisting of coarse sand. Gravel and small cobbles are present in some locations along both washes. Both washes have significant reach lengths that are fairly straight and uniform in cross section but there are areas of moderate bends, non uniform section, ineffective flow area, multiple channels and flow breakout.

The banks of both washes are typically lined with native trees such as mesquite and palo verde and brush such as sage and creosote. This vegetation is also present in the overbank areas along with a variety of short annual desert grasses. There is a significant growth of desert broom, a native shrub, along the banks of Tank Wash that is generally not found on Powerline Wash. Sage and other brush is sometimes found in isolated locations within the main channels along with deposits of debris consisting primarily of driftwood and other dead plant material.

## METHODOLOGY

The basic methodology used in this report for estimating Manning's roughness coefficients is presented in the primary reference:

**Estimated Manning's Roughness Coefficients for Stream Channels and Flood Plains in Maricopa County, Arizona; Prepared for Flood Control District of Maricopa County by the U.S. Geological Survey, Water Resources Division; April 1991.**

This reference contains methodology for estimating Manning's "n" for characteristic segments of floodplain channels and overbanks. It also presents suggested criteria for the subdivision of floodplain cross sections into primary components based on such considerations as channel geometry, flow depth, flow velocity and vegetation. This reference and its methodology is required under the scope of work for the Powerline and Tank Wash Flood Delineation Study. Although use of this reference will provide for greater consistency of results among different studies and eliminate some of the subjectivity involved in this aspect of floodplain hydraulics, a good deal of judgement and experience is still required and some degree of subjectivity remains.

The method for estimating Manning "n" values involves subdividing the study into areas and assigning an estimated, representative "n" value. In a HEC-2 floodplain study, "n" values are required at each hydraulic cross section. In this study, they are provided as input data in one of two ways. For a conventional cross section where there is a single distinct channel and left and right overbank, each being substantially uniform in flow, surface material, vegetation, etc., "n" values are typically input via the NC record. Three "n" values are provided, one for each overbank and one for the channel.

When the cross section has more than one channel or needs more than three "n" values to properly reflect roughness, the NH record is used. The NH option automatically composites "n" values.

In the Powerline Wash and Tank Wash Flood Delineation Study, both NC and NH records were used to input "n" values. In most cases, the NC record was adequate. However, in perhaps a quarter of the total number of cross sections in this study, the NH record was considered necessary. Hydraulic sections which required the use of the NH record were subdivided into segments on the basis of flow depth, channel bed or ground surface material, degree of uniformity degree of obstruction and vegetation. These segments were defined on the basis of cross section plots, aerial photographs and field reconnaissance.

According to the USGS roughness coefficient reference, the "n" value assigned to each segment of each cross section is an adjusted estimate which uses a base "n" value to which adjustment factors are added. The base "n" value depends on the type of channel bed or ground surface material. Adjustment "n" values are added to account for the degree of irregularity, effects of obstruction and effects of vegetation. In this format, the base "n" value is designated  $n_b$  and the adjustment "n" values for irregularity, obstruction and vegetation are termed  $n_1$ ,  $n_2$  and  $n_3$ , respectively.

A series of photographs numbered 1 through 18 are presented in this section to document representative channel and overbank "n" values that were used for Powerline and Tank Washes. Each photograph is captioned with a description and approximate location and alongside each photograph is a breakdown of the estimated base and adjustment "n" values. These photographs were used as guidelines throughout the study area in both the selection of representative "n" values and

in the subdivision of cross sections. Figure 1 in this section shows the location and direction of photographs 1 through 18.

In addition to roughness coefficients, the other data required by HEC-2 are coefficients for contraction and expansion of flow. Based on relatively uniform configuration of floodplain cross sections within the study and the fact that there are no significant natural or man-made constrictions, contraction and expansion coefficients of 0.1 and 0.3, respectively, were chosen and applied to the entire study reach of both washes.

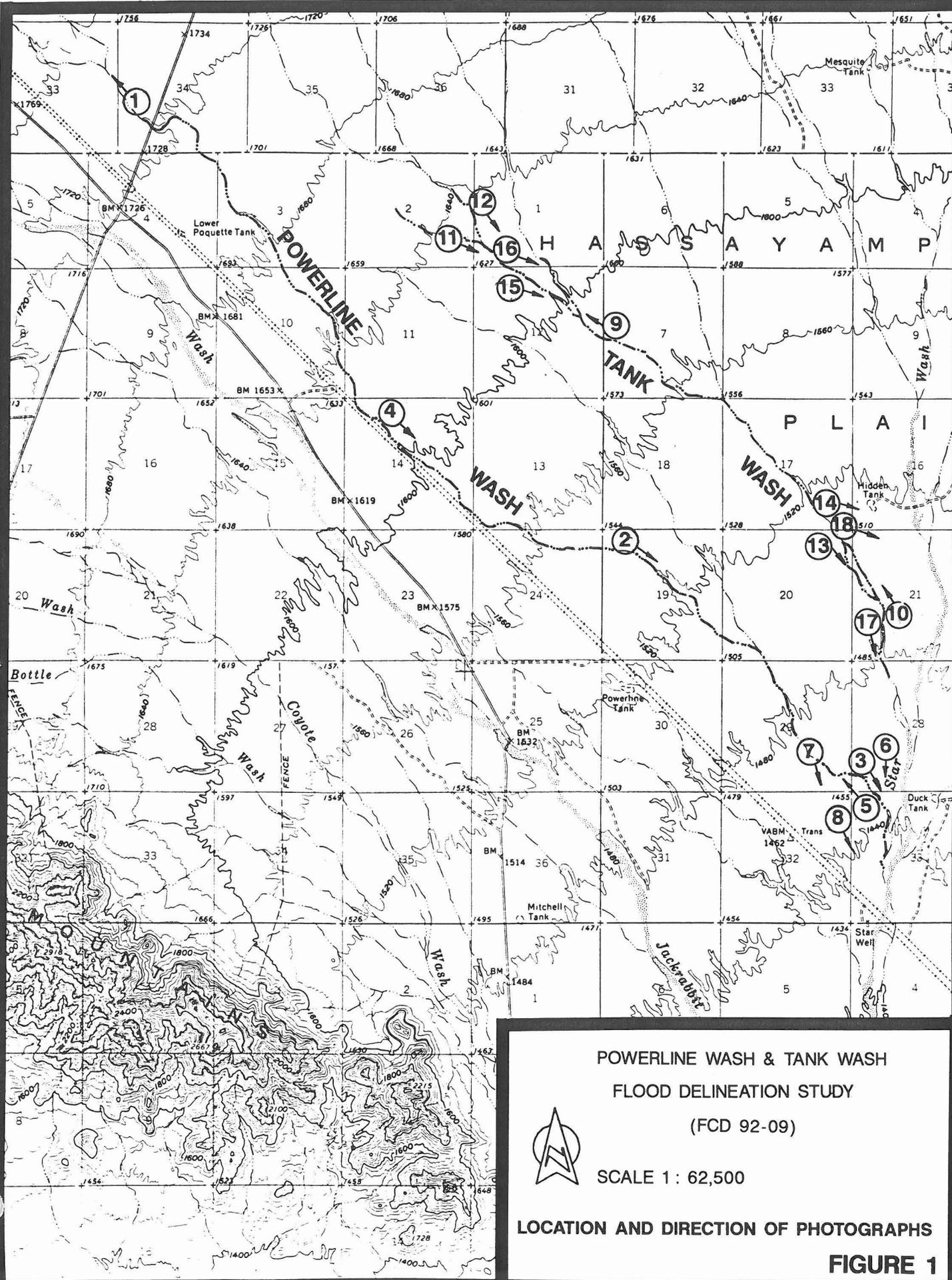
## RESULTS

A review of the hydraulic model results indicates a reasonable water surface profile for each wash using the estimated "n" values considering what was anticipated based on general field observations. A review of calculated flow velocities in each hydraulic model also indicates that they fall in a reasonable range that one would anticipate given the physical characteristics of the study area.

Intermediate HEC-2 runs were reviewed to check if composited "n" values from NH cross sections were in general agreement with the input "n" values. Three cross sections on Tank Wash were found to have a composited channel "n" value that was lower than the lowest input "n" value. These three cross sections are 4.211, 4.997 and 5.763. "n" values for these cross sections were then composited manually based on estimated wetted perimeter and the results input to the final models using the NC option. Manual calculations for these three cross sections are found at the end of this section. All other cross sections using the NH option displayed good agreement between composited "n" values and the input "n" values.

A brief investigation was made into the sensitivity of each hydraulic model to an arbitrary increase and decrease in estimated "n" values and the resulting effects on water surface. Powerline Wash "n" values were decreased by 10 percent and Tank Wash "n" values were increased by 10 percent. The resulting decrease in Powerline Wash water surface elevations ranged from 0.01 feet to 0.41 feet with the average decrease being 0.18 feet for the overall study reach. The resulting increase in Tank Wash water surface elevations ranged from 0.00 feet to 0.29 feet with the average increase being 0.13 feet for the overall study reach. The resulting changes in water surface, when compared to the predominant flow depths observed in these study reaches, seem to indicate that the hydraulic models are not particularly sensitive to changes in "n" value. HEC-2 models for this investigation and for the

composite "n" value investigation are provided on the diskette located in the clear pocket inside the back cover.





$$\begin{aligned}n_b &= 0.030 \\n_1 &= 0.001 \\n_2 &= 0.004 \\n_3 &= 0.005\end{aligned}$$

$$\begin{aligned}\text{Adjusted "n"} \\ &= 0.040\end{aligned}$$

**PHOTOGRAPH #1** Powerline Wash main channel near river mile 10.4; upper study limit. Bed material is predominantly gravel and coarse sand. Channel is relatively straight, uniform and free of obstruction. Channel width is approximately 75 feet.



$$\begin{aligned}n_b &= 0.030 \\n_1 &= 0.001 \\n_2 &= 0.004 \\n_3 &= 0.005\end{aligned}$$

$$\begin{aligned}\text{Adjusted "n"} \\ &= 0.040\end{aligned}$$

**PHOTOGRAPH #2** Powerline Wash main channel near river mile 4.4. Adjusted "n" of 0.040 is based on the same components as applied to channel in Photograph #1. Channel width is approximately 70 ft.



$$\begin{aligned}n_b &= 0.032 \\n_1 &= 0.002 \\n_2 &= 0.005 \\n_3 &= 0.006\end{aligned}$$

$$\begin{aligned}\text{Adjusted "n"} \\ &= 0.045\end{aligned}$$

**PHOTOGRAPH #3** Powerline Wash main channel near river mile 1.2, lower study limit. Bed material is predominantly gravel and coarse sand with cobbles. Channel bed is slightly irregular; width is approximately 45 feet.



$$\begin{aligned}n_b &= 0.032 \\n_1 &= 0.002 \\n_2 &= 0.005 \\n_3 &= 0.006\end{aligned}$$

$$\begin{aligned}\text{Adjusted "n"} \\ &= 0.045\end{aligned}$$

**PHOTOGRAPH #4** Powerline Wash main channel near river mile 6.6. Bed material is predominantly coarse sand with cobbles along each side. Slight lateral meander is present in this reach. Channel width is approximately 50 feet.



$$\begin{aligned}n_b &= 0.030 \\n_1 &= 0.004 \\n_2 &= 0.008 \\n_3 &= 0.008\end{aligned}$$

$$\begin{aligned}\text{Adjusted "n"} \\ &= 0.050\end{aligned}$$

**PHOTOGRAPH #5** Powerline Wash right overbank near river mile 1.5. Photograph was taken about 100 feet south of main channel in area of shallow overflow. Potential flow depth is on the order of 1 foot. Ground surface is slightly irregular with small cobbles present.



$$\begin{aligned}n_b &= 0.028 \\n_1 &= 0.005 \\n_2 &= 0.011 \\n_3 &= 0.011\end{aligned}$$

$$\begin{aligned}\text{Adjusted "n"} \\ &= 0.055\end{aligned}$$

**PHOTOGRAPH #6** Powerline Wash left overbank near downstream limit of study. Potential flow depth is less than 1 foot. Obstruction by vegetation is significant considering depth of flow.



$$n_b = 0.032$$

$$n_1 = 0.003$$

$$n_2 = 0.007$$

$$n_3 = 0.008$$

$$\text{Adjusted "n"} = 0.050$$

**PHOTOGRAPH #7** Powerline Wash right overbank near river mile 1.7. Potential flow depth is 2 to 3 feet. Sandy ground surface is covered with cobbles. Open flow paths between debris deposits, trees and brush are on the order of 10 to 15 feet wide.



$$n_b = 0.033$$

$$n_1 = 0.005$$

$$n_2 = 0.009$$

$$n_3 = 0.008$$

$$\text{Adjusted "n"} = 0.055$$

**PHOTOGRAPH #8** Powerline Wash right overbank near downstream limit of study. Small, irregular channel averages 5 feet in width. Potential flow depth is about 2-3 feet. Vegetation and debris deposits are significant.



$$\begin{aligned}n_b &= 0.030 \\n_1 &= 0.001 \\n_2 &= 0.004 \\n_3 &= 0.005\end{aligned}$$

$$\begin{aligned}\text{Adjusted "n"} \\ &= 0.040\end{aligned}$$

**PHOTOGRAPH #9** Tank Wash Main Channel near river mile 4.7. Bed material is predominantly coarse sand. Channel is relatively straight and uniform and free of obstruction. Channel width is approximately 70 feet.



$$\begin{aligned}n_b &= 0.030 \\n_1 &= 0.001 \\n_2 &= 0.004 \\n_3 &= 0.005\end{aligned}$$

$$\begin{aligned}\text{Adjusted "n"} \\ &= 0.040\end{aligned}$$

**PHOTOGRAPH #10** Tank Wash main channel near river mile 1.1. Adjusted "n" of 0.040 is based on the same components as applied to channel in Photograph #9. Channel width is approximately 90 ft.



$$n_b = 0.031$$

$$n_1 = 0.003$$

$$n_2 = 0.005$$

$$n_3 = 0.006$$

$$\text{Adjusted "n"}$$

$$= 0.045$$

**PHOTOGRAPH #11** South Branch of Tank Wash main channel near river mile 0.8, upstream limit of study. Bed material is predominantly coarse sand but it also has areas of silt, gravel and cobbles. Channel width is approximately 50 feet.



$$n_b = 0.030$$

$$n_1 = 0.005$$

$$n_2 = 0.010$$

$$n_3 = 0.010$$

$$\text{Adjusted "n"}$$

$$= 0.050$$

**PHOTOGRAPH #12** North Branch of Tank Wash main channel near river mile 6.1. Channel sides are near vertical. Channel bottom is predominantly coarse sand with some gravel and small cobbles. Channel width is approximately 15 feet with slight lateral meander. Trees and brush form canopy over wash in places.



$$n_b = 0.030$$

$$n_1 = 0.002$$

$$n_2 = 0.006$$

$$n_3 = 0.007$$

$$\text{Adjusted "n"} \\ = 0.045$$

**PHOTOGRAPH #13** Tank Wash secondary channel near river mile 1.9. Bed material is gravel and coarse sand. Channel meanders laterally somewhat. Trees and brush present slight obstruction in middle of flow path. Channel width is approximately 45 feet.



$$n_b = 0.030$$

$$n_1 = 0.003$$

$$n_2 = 0.009$$

$$n_3 = 0.008$$

$$\text{Adjusted "n"} \\ = 0.050$$

**PHOTOGRAPH #14** Tank Wash left overbank near river mile 2.1. Open flow paths between trees and bushes are on the order of 10 to 15 feet wide. Ground surface is silt and fine sand. Potential depth of flow is on the order of 1 foot.



$$\begin{aligned}n_b &= 0.030 \\n_1 &= 0.002 \\n_2 &= 0.006 \\n_3 &= 0.007\end{aligned}$$

$$\begin{aligned}\text{Adjusted "n"} \\ &= 0.045\end{aligned}$$

**PHOTOGRAPH #15** Tank Wash secondary channel near river mile 5.1. Surface material is gravel and coarse sand. Potential flow depth is on the order of 2 feet.



$$\begin{aligned}n_b &= 0.030 \\n_1 &= 0.003 \\n_2 &= 0.008 \\n_3 &= 0.009\end{aligned}$$

$$\begin{aligned}\text{Adjusted "n"} \\ &= 0.050\end{aligned}$$

**PHOTOGRAPH #16** Tank Wash left overbank near river mile 5.5. Surface material is coarse sand. Potential flow depth is 2 to 3 feet.



$$\begin{aligned}n_b &= 0.030 \\n_1 &= 0.004 \\n_2 &= 0.010 \\n_3 &= 0.011\end{aligned}$$

$$\begin{aligned}\text{Adjusted "n"} \\ &= 0.055\end{aligned}$$

**PHOTOGRAPH #17** Tank Wash right overbank near downstream limit of study. Open flow paths between trees and bushes are on the order of 5 to 10 feet wide. Potential flow depth is approximately 2 feet.



$$\begin{aligned}n_b &= 0.028 \\n_1 &= 0.004 \\n_2 &= 0.010 \\n_3 &= 0.013\end{aligned}$$

$$\begin{aligned}\text{Adjusted "n"} \\ &= 0.055\end{aligned}$$

**PHOTOGRAPH #18** Tank Wash left overbank near river mile 2.1. Photograph taken about 100 feet from left channel bank. Potential flow depth is approximately 2 feet.

TANK WASH COMPOSITE CHANNEL "n" VALUES

CROSS SECTION 4.211 -

CHANNEL WIDTH / ESTIMATED WETTED PERIMETER:

STATION 10188.7 - STATION 9976.6 = 212.1 FT

FROM STATION	TO STATION	WP (FT)	RATIO	"n"	RESULT
9976.6	10023.3	= 46.7	46.7/212.1	0.040	0.0088
10023.3	10095.2	= 71.9	71.9/212.1	0.050	0.0167
10095.2	10188.7	= 93.5	93.5/212.1	0.040	0.0176
WEIGHTED "n" =					0.043

CROSS SECTION 4.997 -

CHANNEL WIDTH / ESTIMATED WETTED PERIMETER:

STATION 10225.0 - STATION 9932.9 = 292.1 FT

9932.9	10047.8	= 114.9	114.9/292.1	0.040	0.0157
10047.8	10150.0	= 102.2	102.2/292.1	0.050	0.0175
10150.0	10225.0	= 75.0	75/292.1	0.045	0.0170
WEIGHTED "n" =					0.045

CROSS SECTION 5.763 -

CHANNEL WIDTH / ESTIMATED WETTED PERIMETER:

STATION 10312.6 - STATION 9933.0 = 379.6 FT

9933.0	10087.3	= 154.3	154.3/379.6	0.045	0.0133
10087.3	10184.0	= 96.7	96.7/379.6	0.050	0.0127
10184.0	10312.6	= 128.6	128.6/379.6	0.045	0.0152
WEIGHTED "n" =					0.046

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

**SECTION 4.3 HEC-2 CROSS SECTION PLOTS**

4.3.1 Powerline Wash

4.3.2 Tank Wash

4.3.3 South Branch Tank Wash

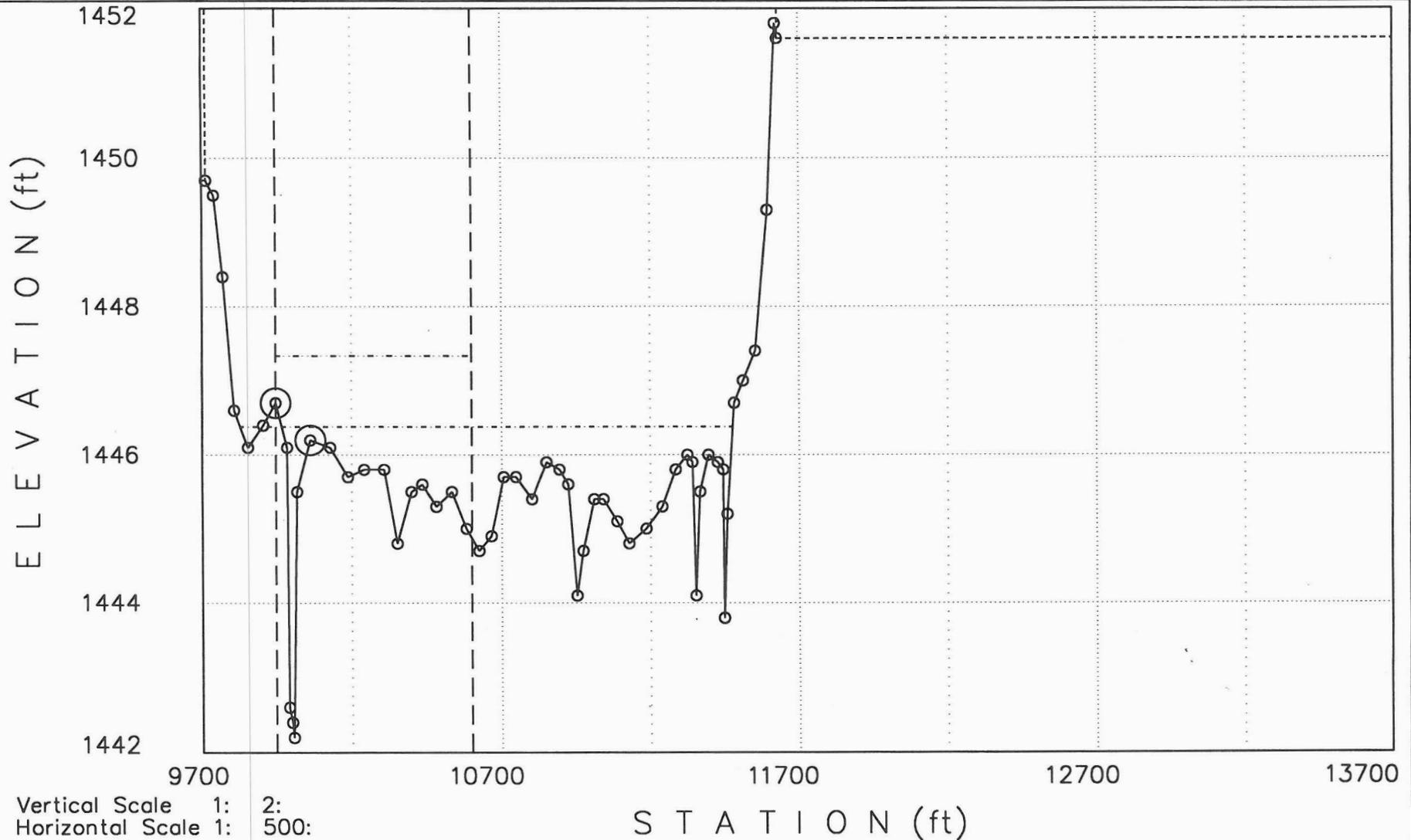
POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)  
SECTION 4.3.1 POWERLINE WASH

<<<<<< Cross Section: 1.113: (FN = 11547P31.OP1)

>>>>>>

Q1= 5100cfs WS1= 1446.38  
Q2= 5100cfs WS2= 1447.33

Manning-n Values: LOB: .055 CH: .04 ROB: .05

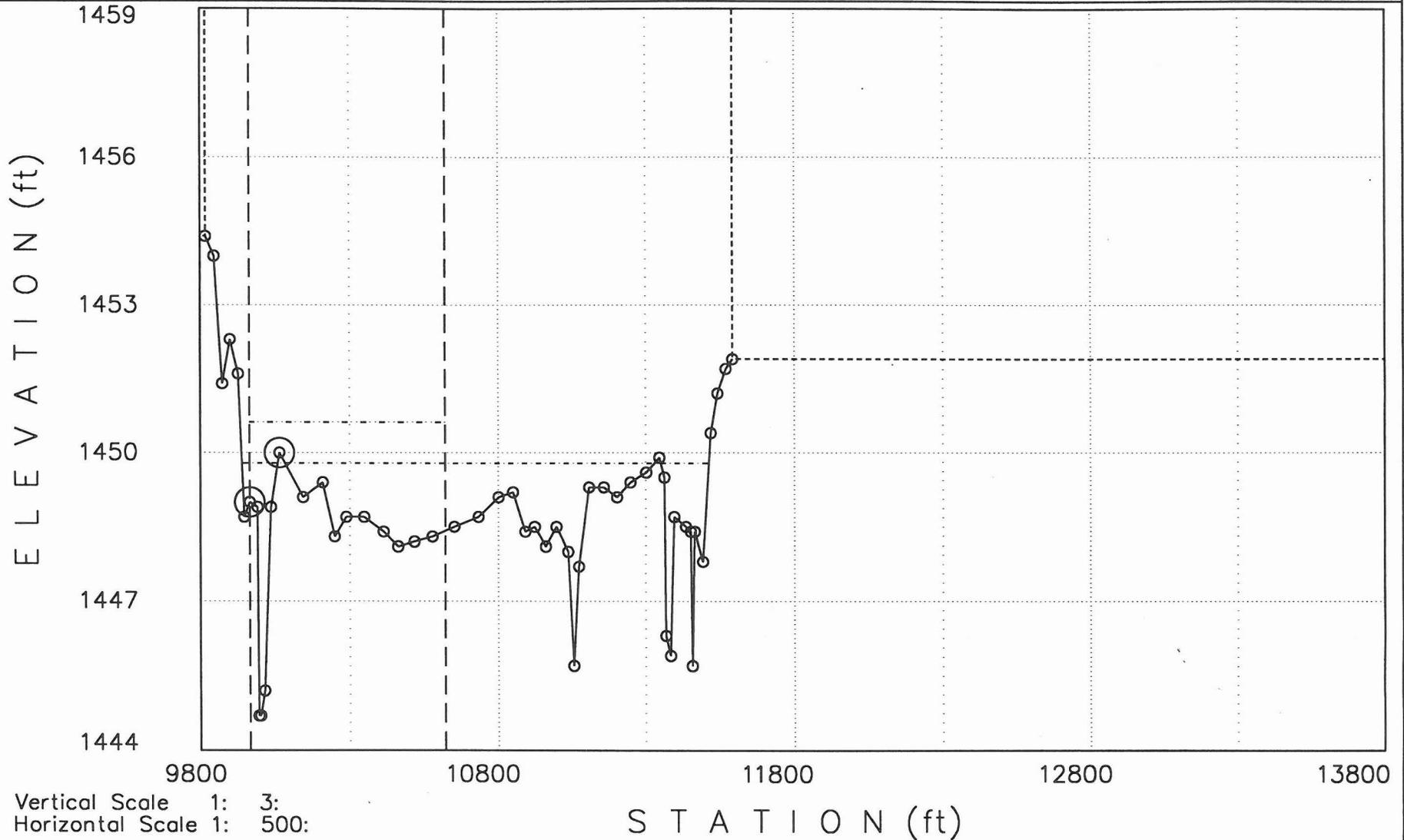


<<<<<< Cross Section: 1.203: (FN = 11547P31.OP1)

>>>>>>

Q1= 5100cfs WS1= 1449.79  
Q2= 5100cfs WS2= 1450.62

Manning-n Values: LOB: .055 CH: .045 ROB: .049 - .05

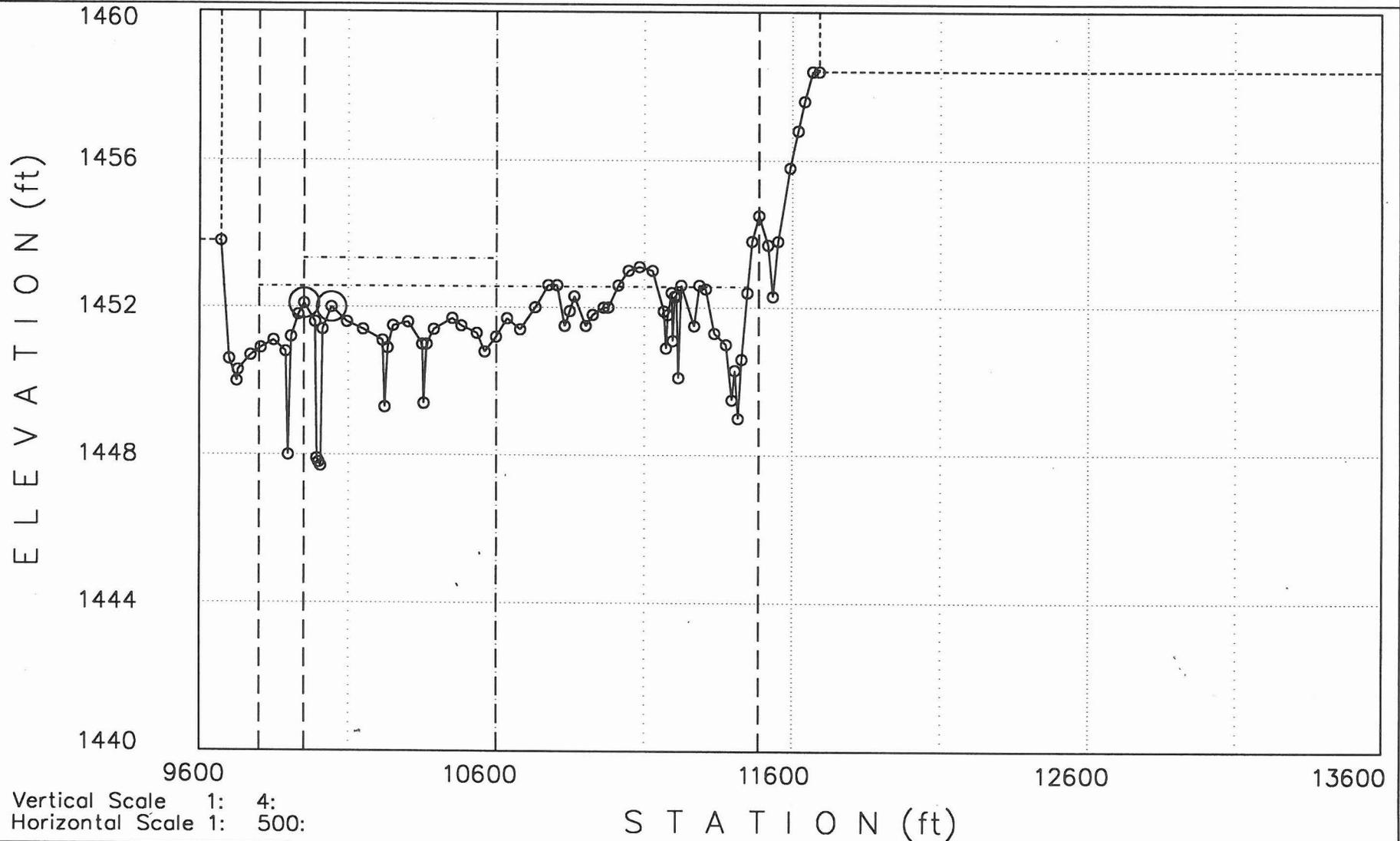


<<<<<< Cross Section: 1.3: (FN = 11547P31.OP1)

>>>>>>

Q1= 5100cfs WS1= 1452.56  
Q2= 5100cfs WS2= 1453.33

Manning-n Values: LOB: .055 CH: .04 ROB: .05

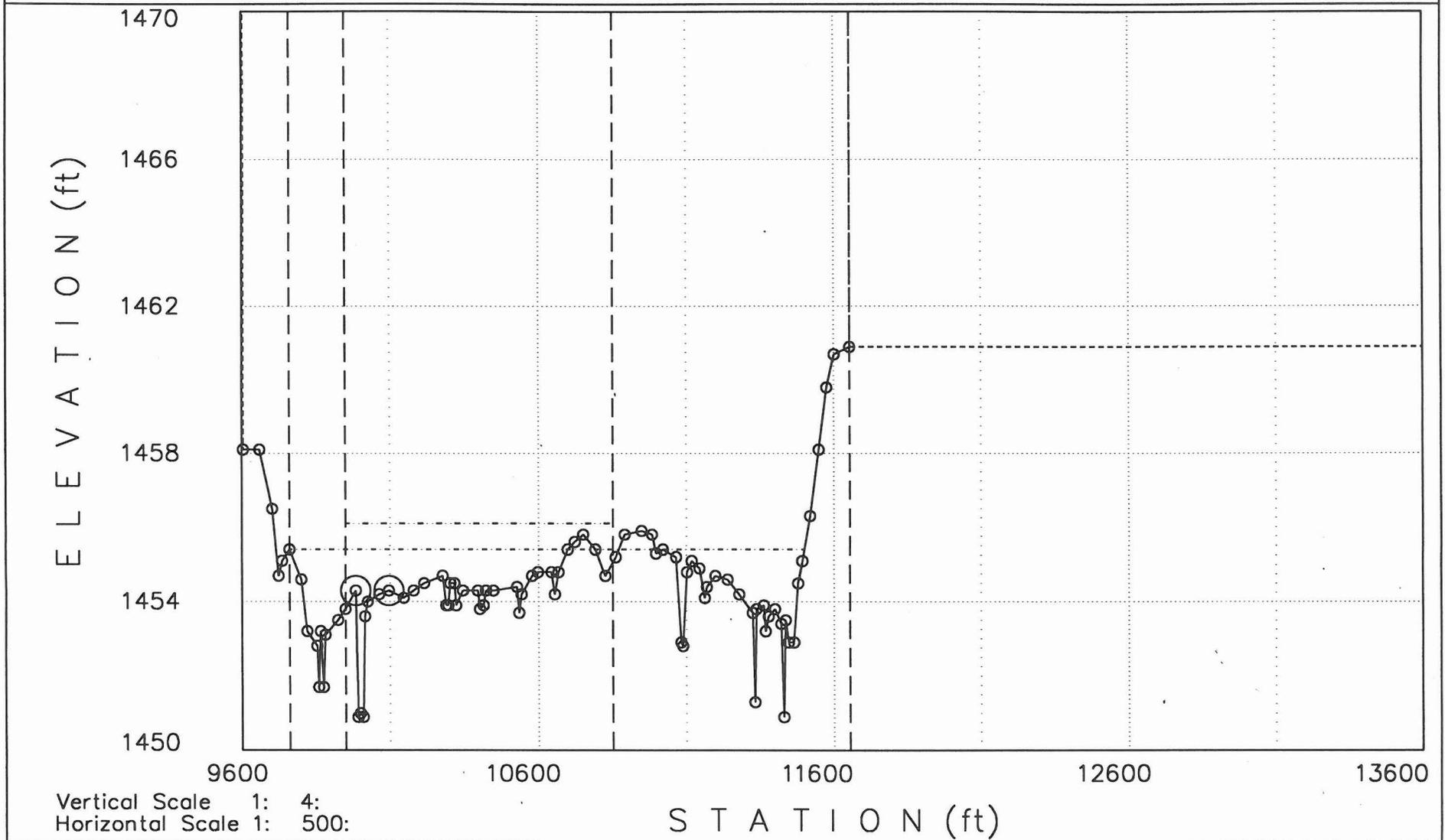


<<<<<< Cross Section: 1.4: (FN = 11547P31.OP1)

>>>>>>

Q1= 5100cfs WS1= 1455.4  
Q2= 5100cfs WS2= 1456.1

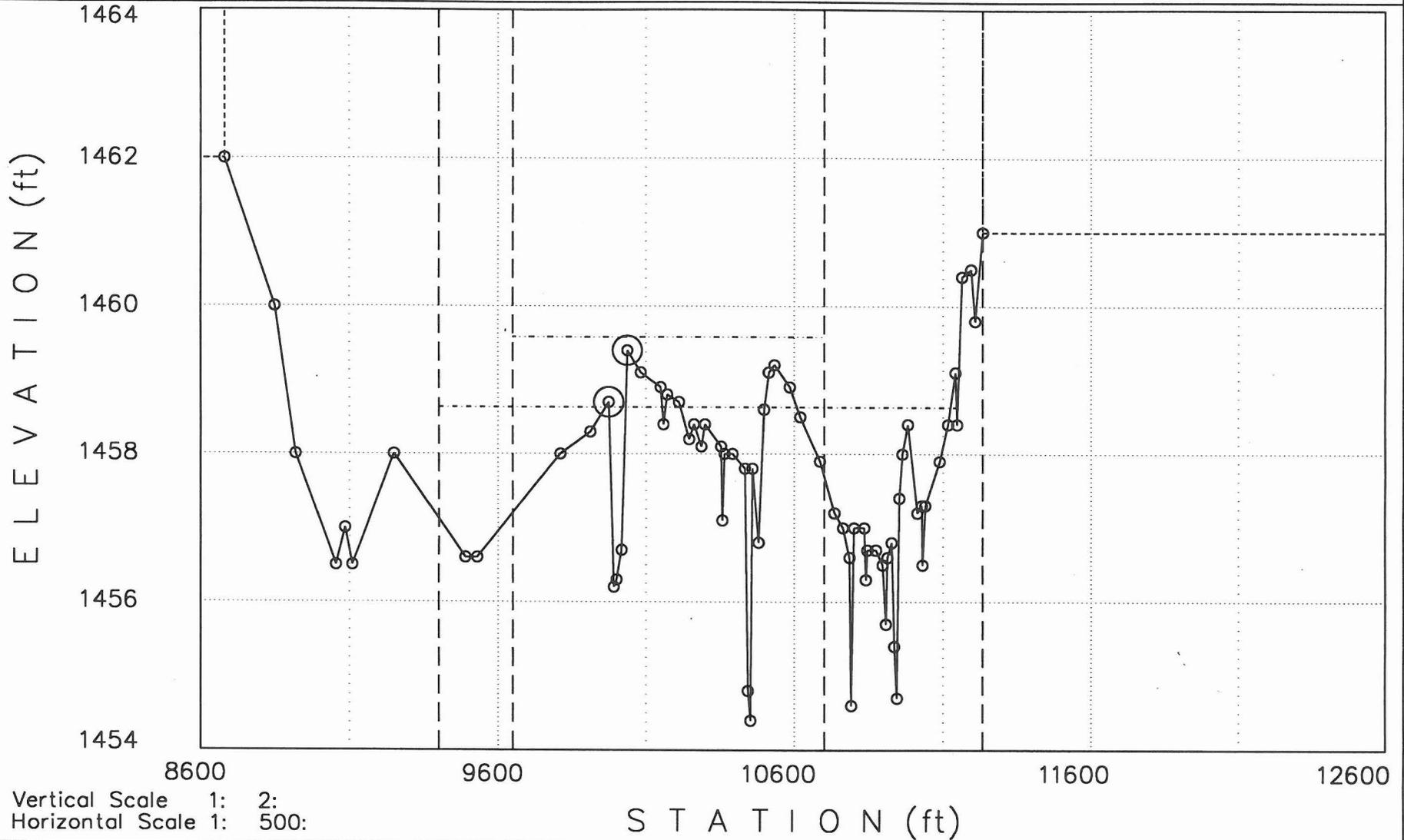
Manning-n Values: LOB: .05 CH: .045 ROB: .05



<<<<<< Cross Section: 1.553: (FN = 11547P31.0P1) >>>>>>

Q1= 5100cfs WS1= 1458.63 -----  
Q2= 5100cfs WS2= 1459.58 -----

Manning-n Values: LOB: .046 - .05 CH: .04 ROB: .048 - .049



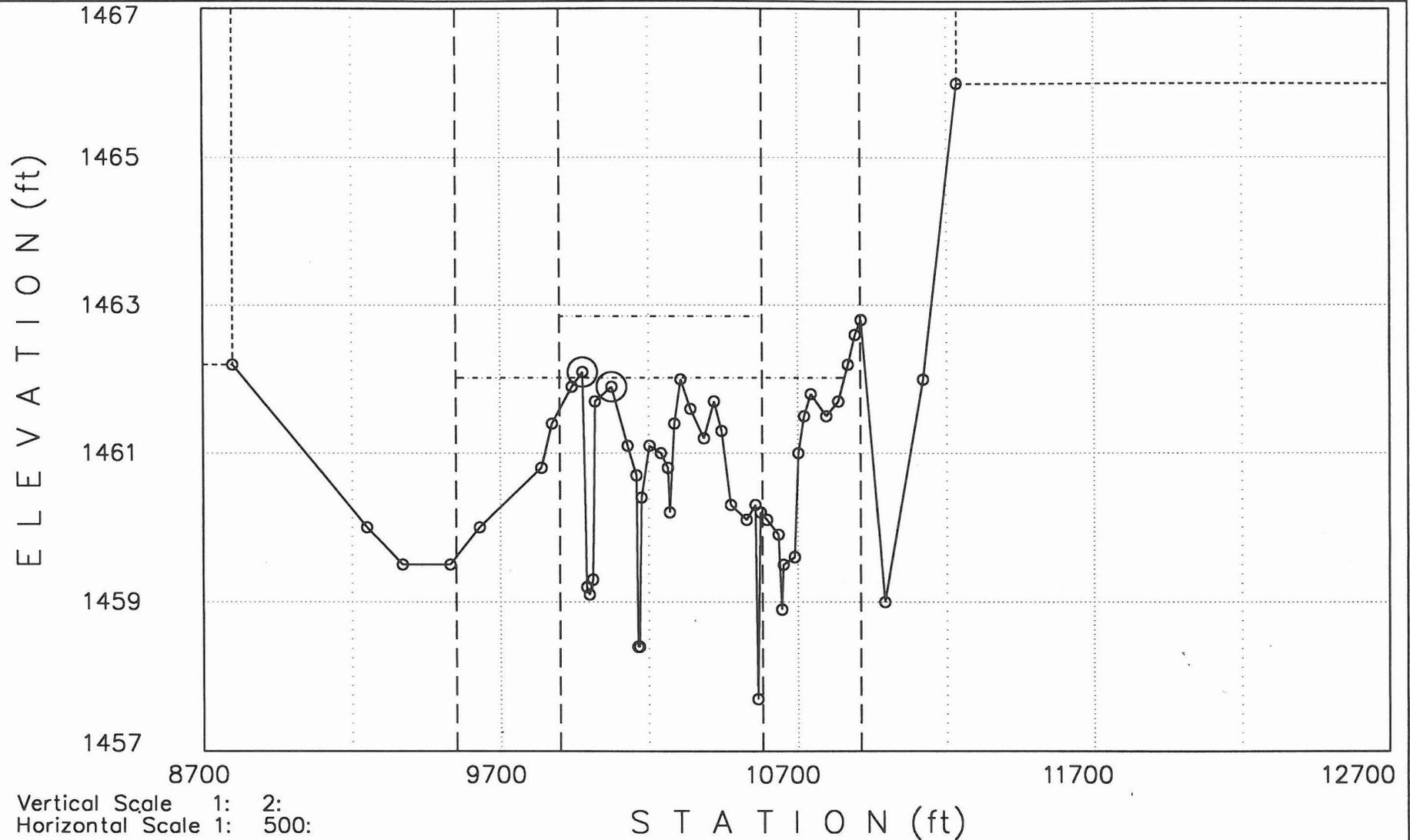
Vertical Scale 1: 2:  
Horizontal Scale 1: 500:

<<<<<< Cross Section: 1.664: (FN = 11547P31.OP1)

>>>>>>

Q1= 5200cfs WS1= 1462.02  
Q2= 5200cfs WS2= 1462.85

Manning-n Values: LOB: .055 CH: .04 ROB: .048 - .049

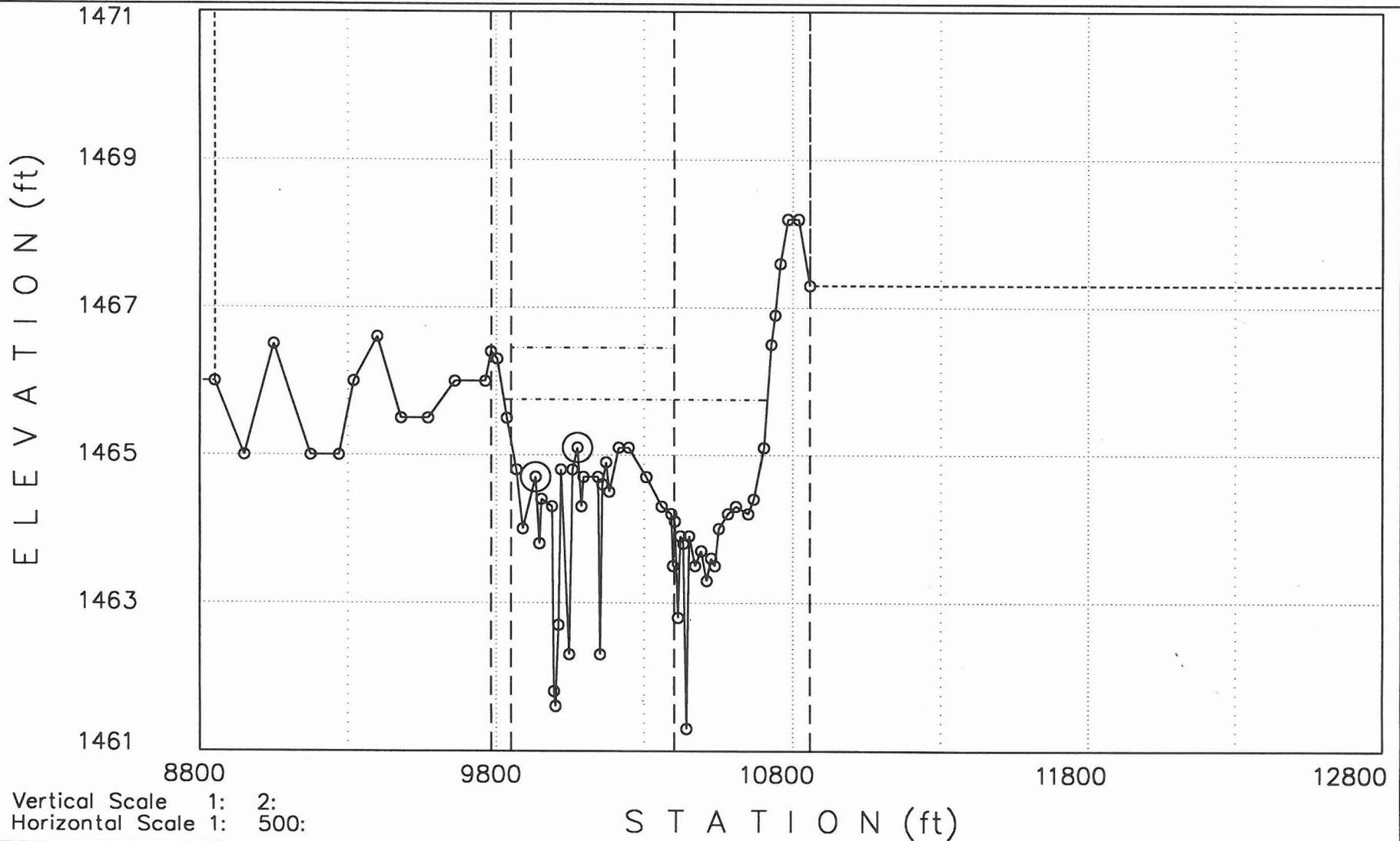


<<<<<< Cross Section: 1.759: (FN = 11547P31.OP1)

>>>>>>

Q1= 5200cfs WS1= 1465.75  
Q2= 5200cfs WS2= 1466.45

Manning-n Values: LOB: .055 CH: .04 ROB: .05

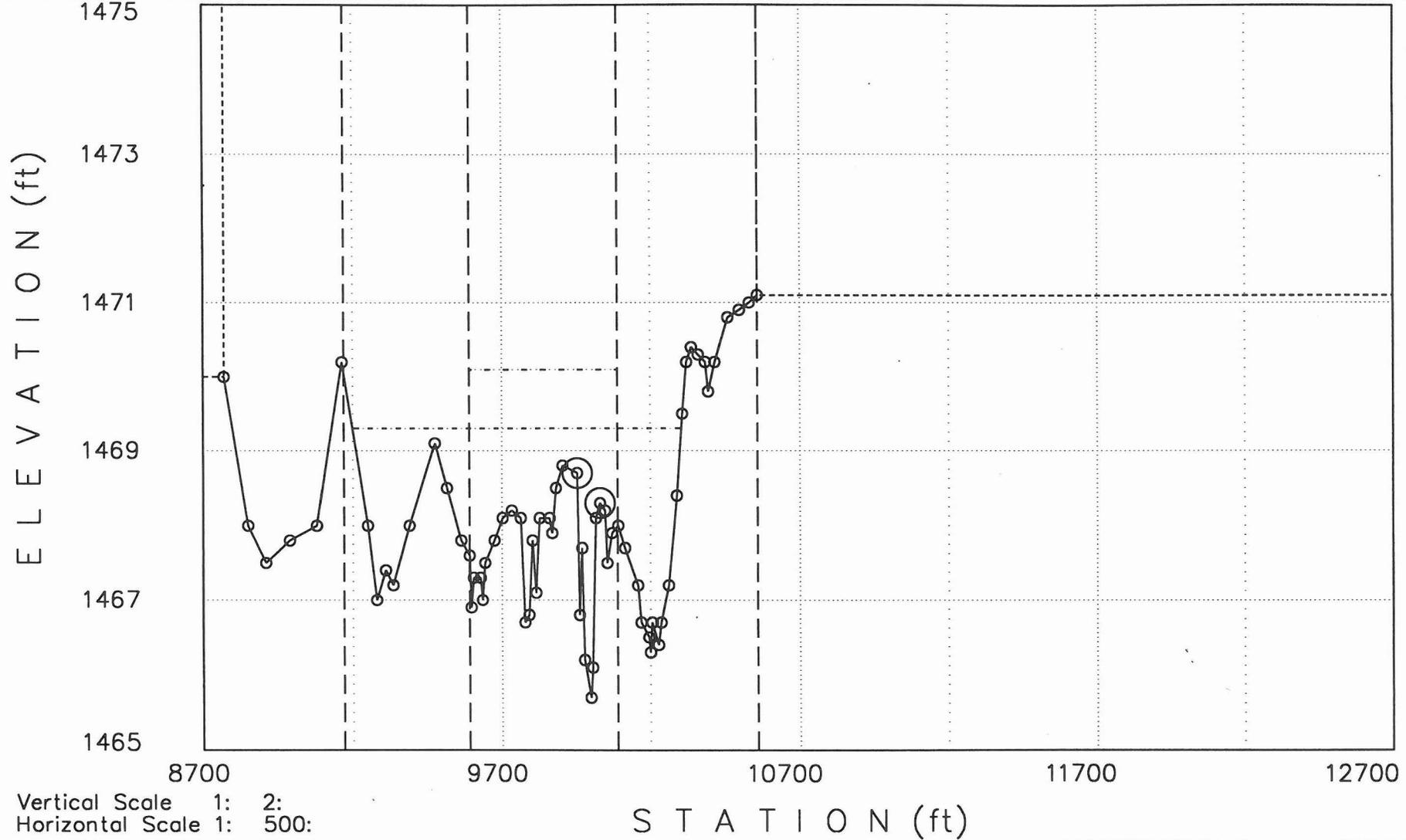


<<<<<< Cross Section: 1.863: (FN = 11547P31.OP1)

>>>>>>

Q1= 5200cfs WS1= 1469.3  
Q2= 5200cfs WS2= 1470.1

Manning-n Values: LOB: .049 - .052 CH: .04 ROB: .055

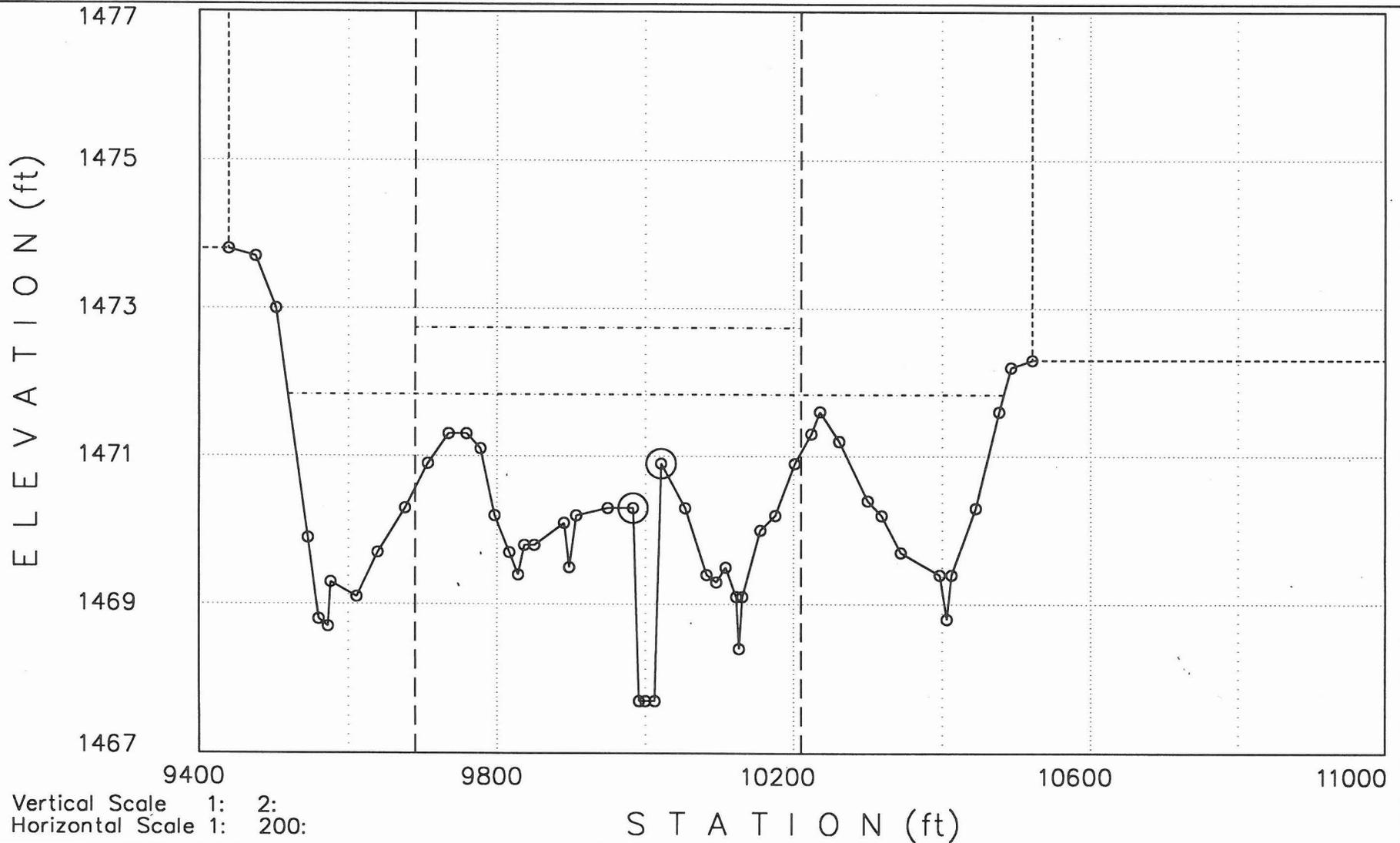


<<<<<< Cross Section: 1.964: (FN = 11547P31.OP1)

>>>>>>

Q1= 5200cfs WS1= 1471.83  
Q2= 5200cfs WS2= 1472.74

Manning-n Values: LOB: .055 CH: .04 ROB: .055

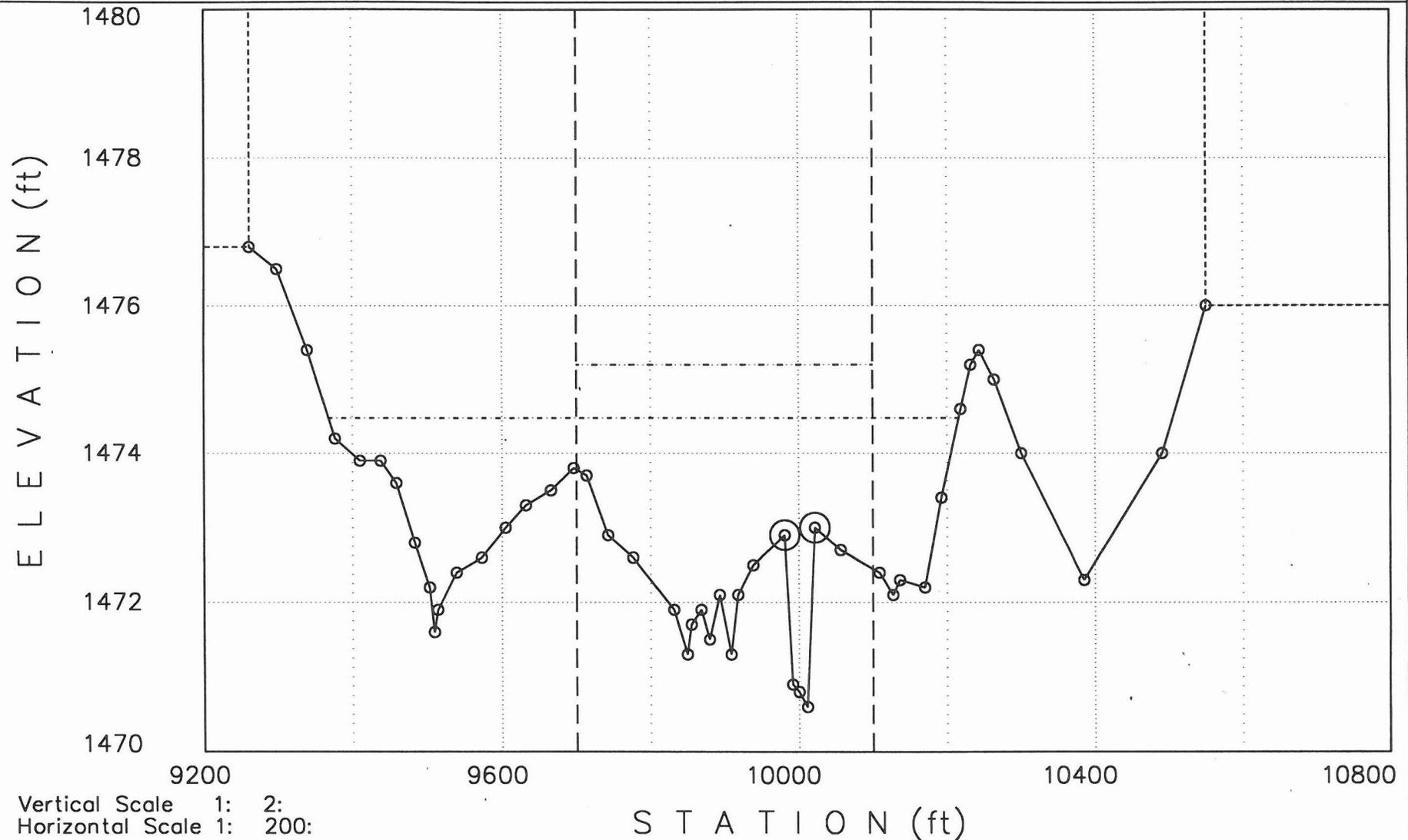


<<<<<< Cross Section: 2.059: (FN = 11547P31.OP1)

>>>>>>

Q1= 5200cfs WS1= 1474.48  
Q2= 5200cfs WS2= 1475.2

Manning-n Values: LOB: .055 CH: .04 ROB: .055



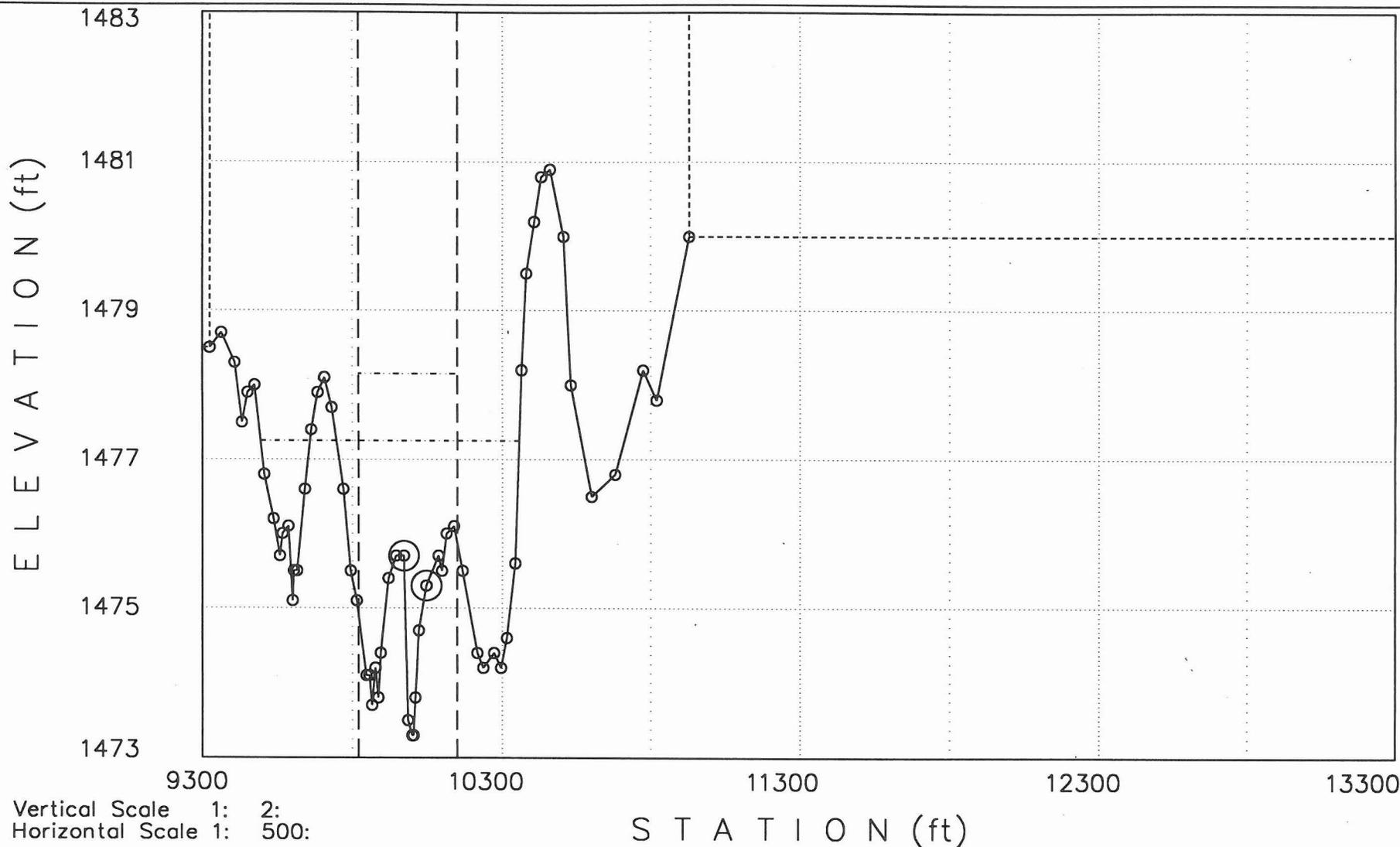
Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 2.163: (FN = 11547P31.OP1)

>>>>>>

Q1= 5200cfs WS1= 1477.25 -----  
Q2= 5200cfs WS2= 1478.15 -----

Manning-n Values: LOB: .055 CH: .04 ROB: .055

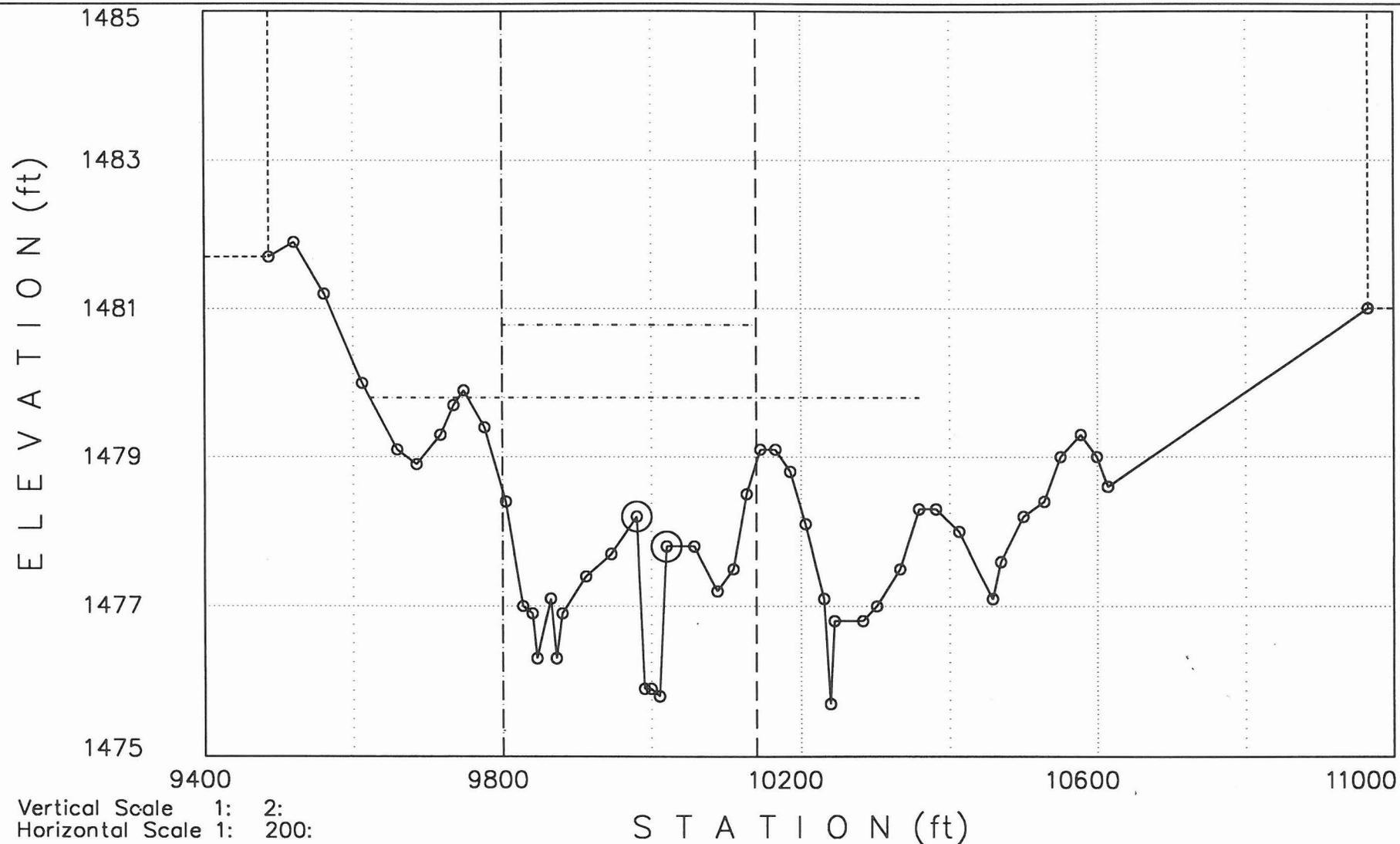


<<<<<< Cross Section: 2.259: (FN = 11547P31.OP1)

>>>>>>

Q1= 5200cfs WS1= 1479.8  
Q2= 5200cfs WS2= 1480.78

Manning-n Values: LOB: .055 CH: .04 ROB: .055



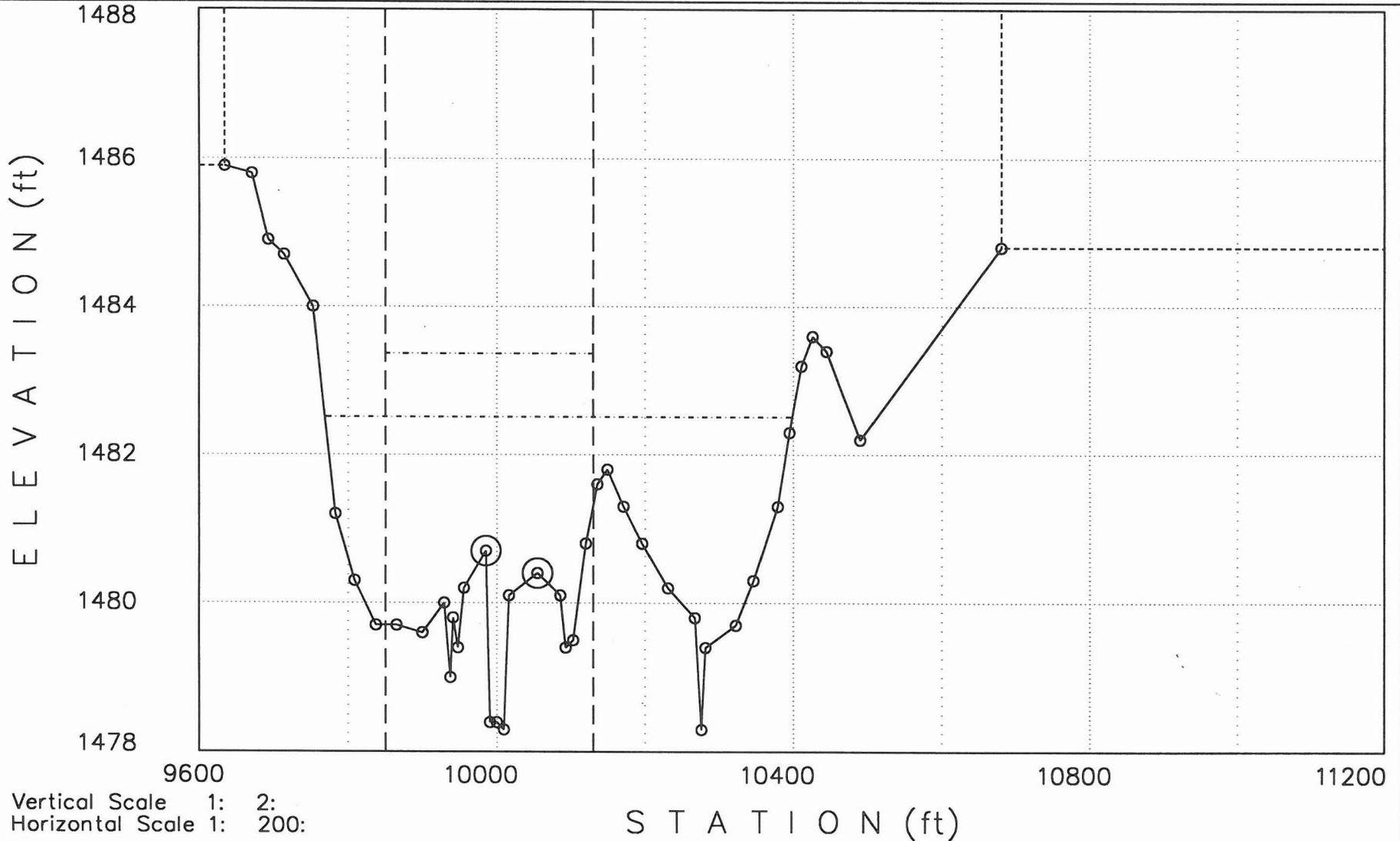
Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 2.357: (FN = 11547P31.0P1)

>>>>>>

Q1= 5200cfs WS1= 1482.51 -----  
Q2= 5200cfs WS2= 1483.37 -----

Manning-n Values: LOB: .055 CH: .04 ROB: .055

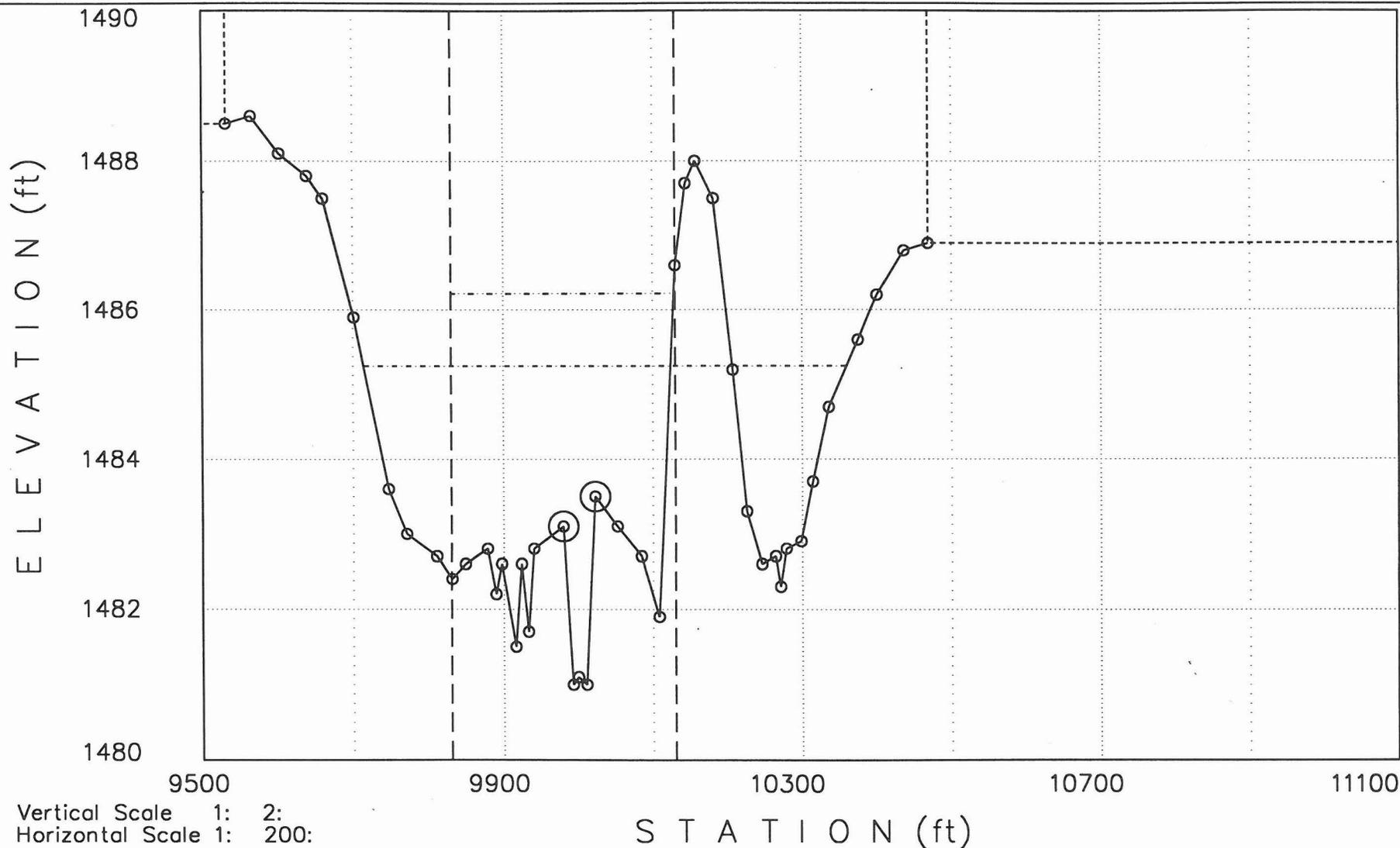


<<<<<< Cross Section: 2.455: (FN = 11547P31.OP1)

>>>>>>

Q1= 5200cfs WS1= 1485.25  
Q2= 5200cfs WS2= 1486.22

Manning-n Values: LOB: .055 CH: .04 ROB: .055

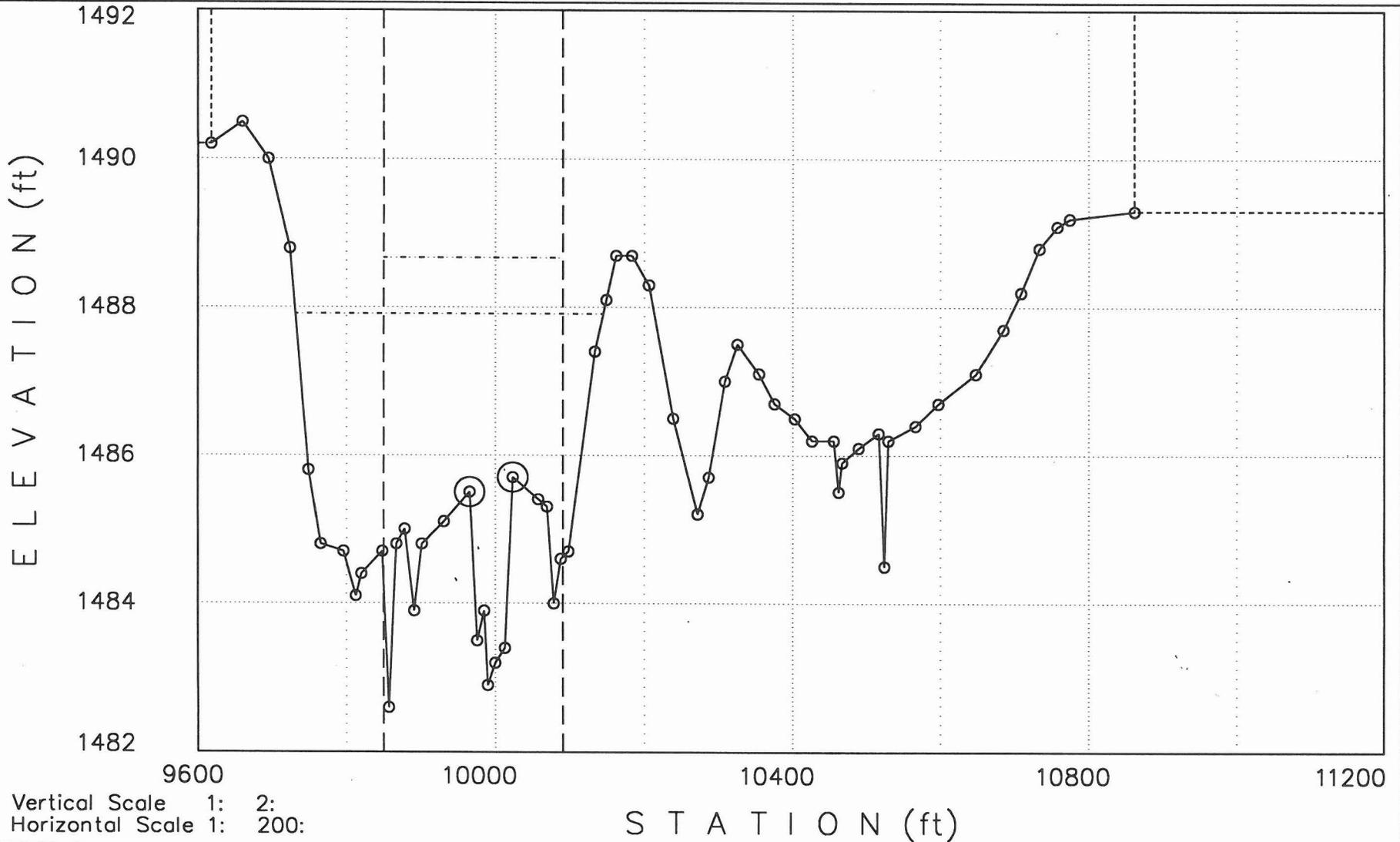


<<<<<< Cross Section: 2.554: (FN = 11547P31.0P1)

>>>>>>

Q1= 5200cfs WS1= 1487.91  
Q2= 5200cfs WS2= 1488.67

Manning-n Values: LOB: .055 CH: .04 ROB: .055

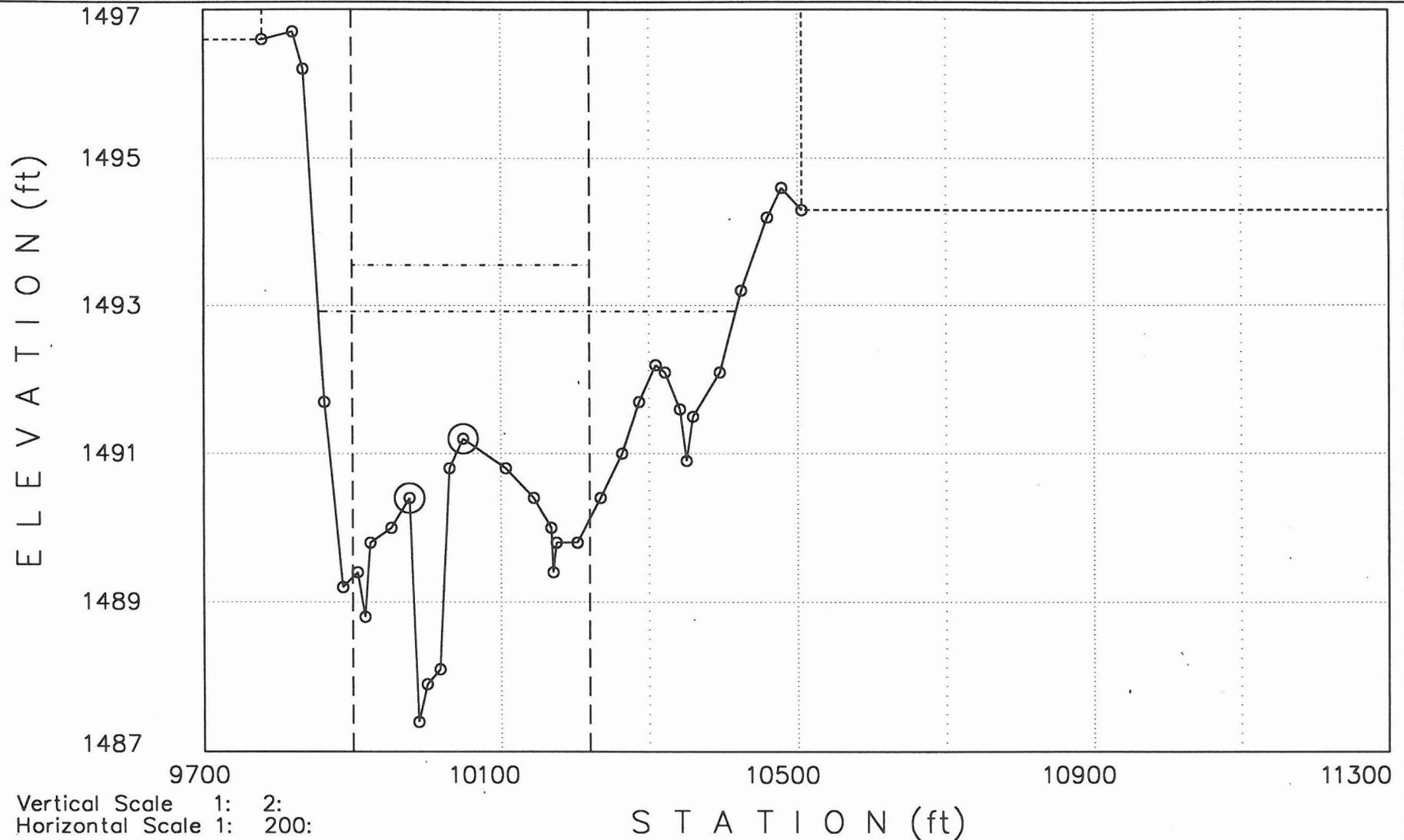


<<<<<< Cross Section: 2.747: (FN = 11547P31.0P1)

>>>>>>

Q1= 5200cfs WS1= 1492.92  
Q2= 5200cfs WS2= 1493.55

Manning-n Values: LOB: .055 CH: .04 ROB: .055



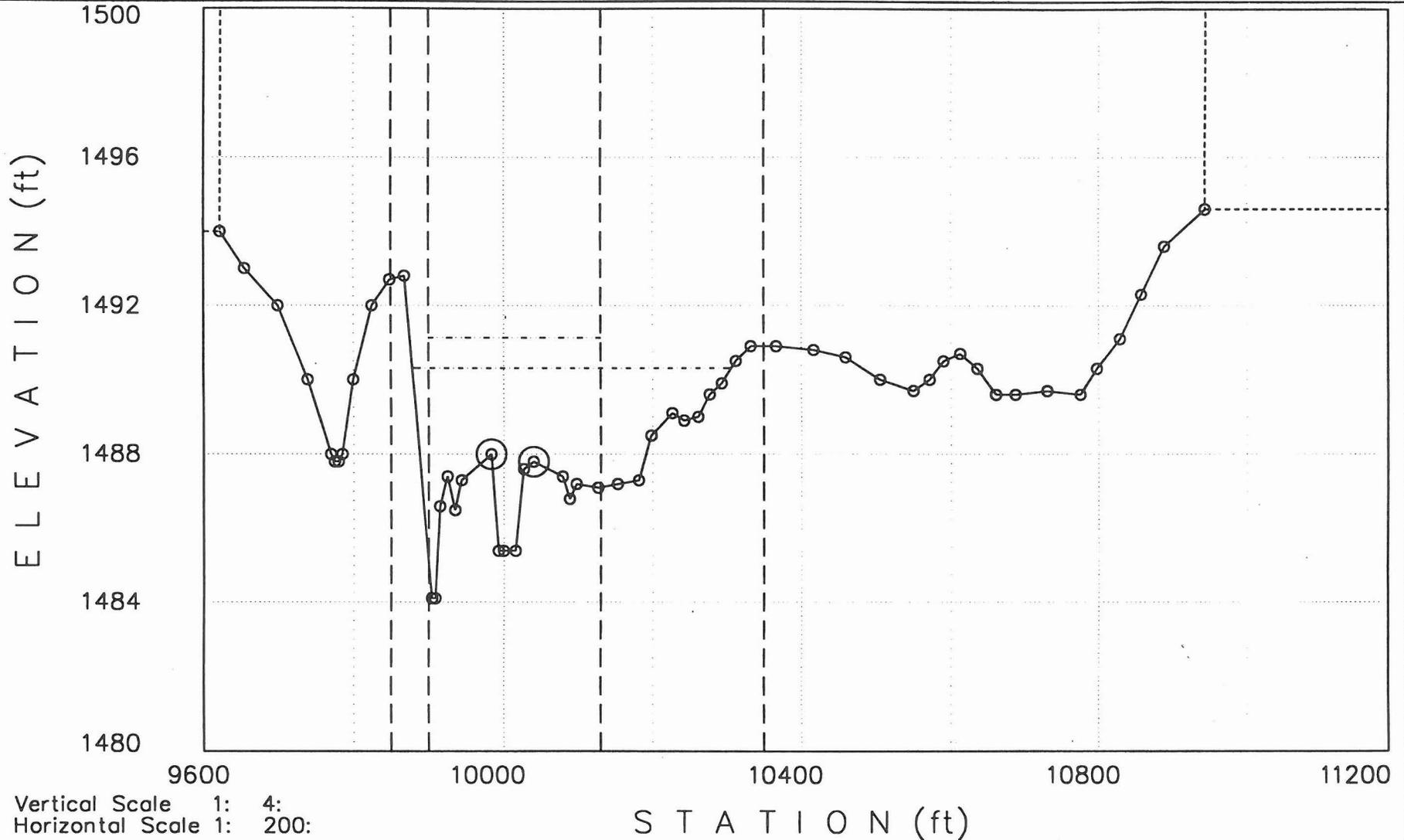
Vertical Scale 1: 2:  
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<<<<<< Cross Section: 2.649: (FN = 11547P31.0P1)

>>>>>>

Q1= 5200cfs WS1= 1490.31 -----  
Q2= 5200cfs WS2= 1491.13 -----

Manning-n Values: LOB: .055 CH: .04 ROB: .055

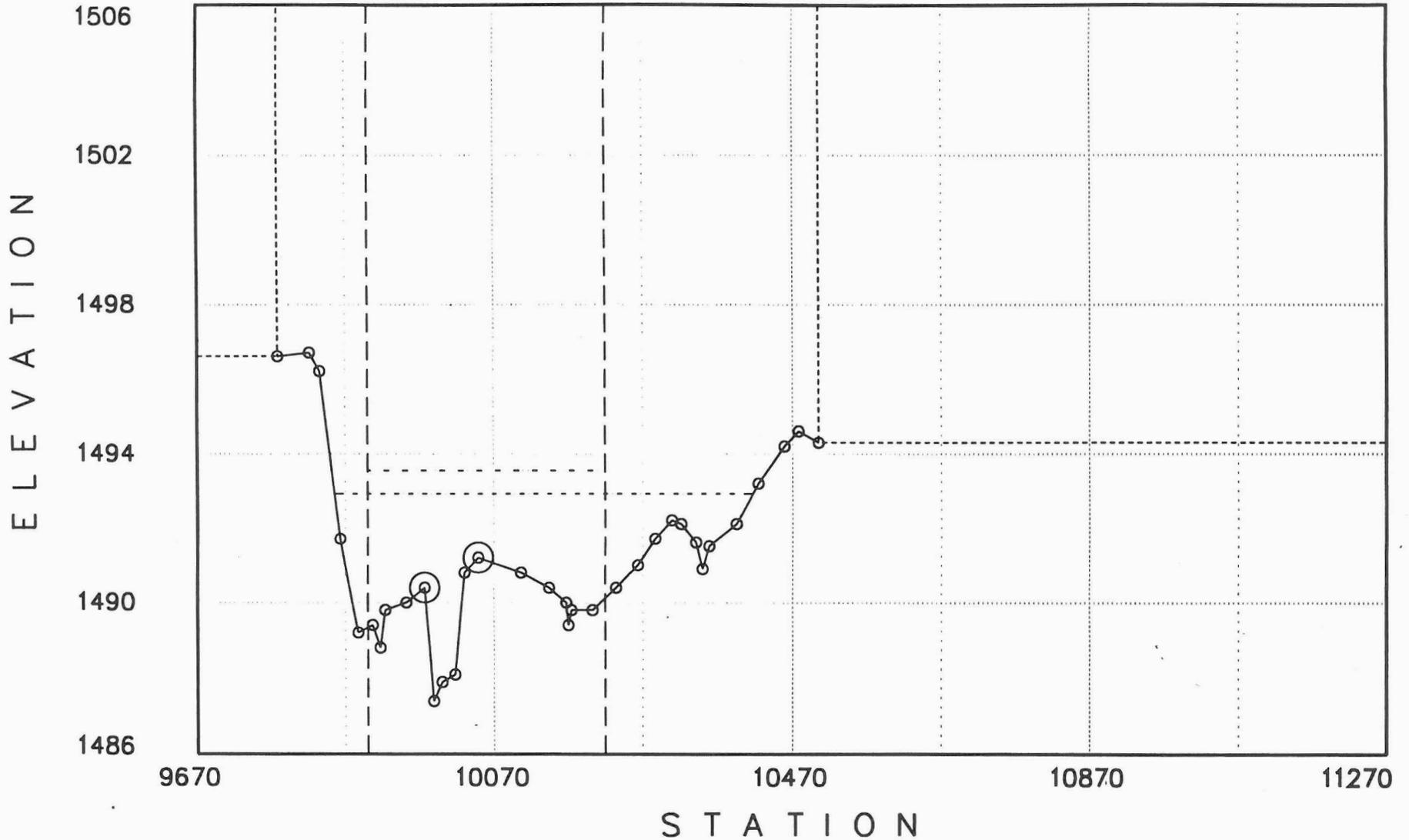


<<<<<< Cross Section: 2.747: (FN = 11547P20.OP1)

>>>>>>

Q1= 5200 WS1= 1492.92  
Q2= 5200 WS2= 1493.55

Manning-n Values: LOB: .055 CH: .04 ROB: .055

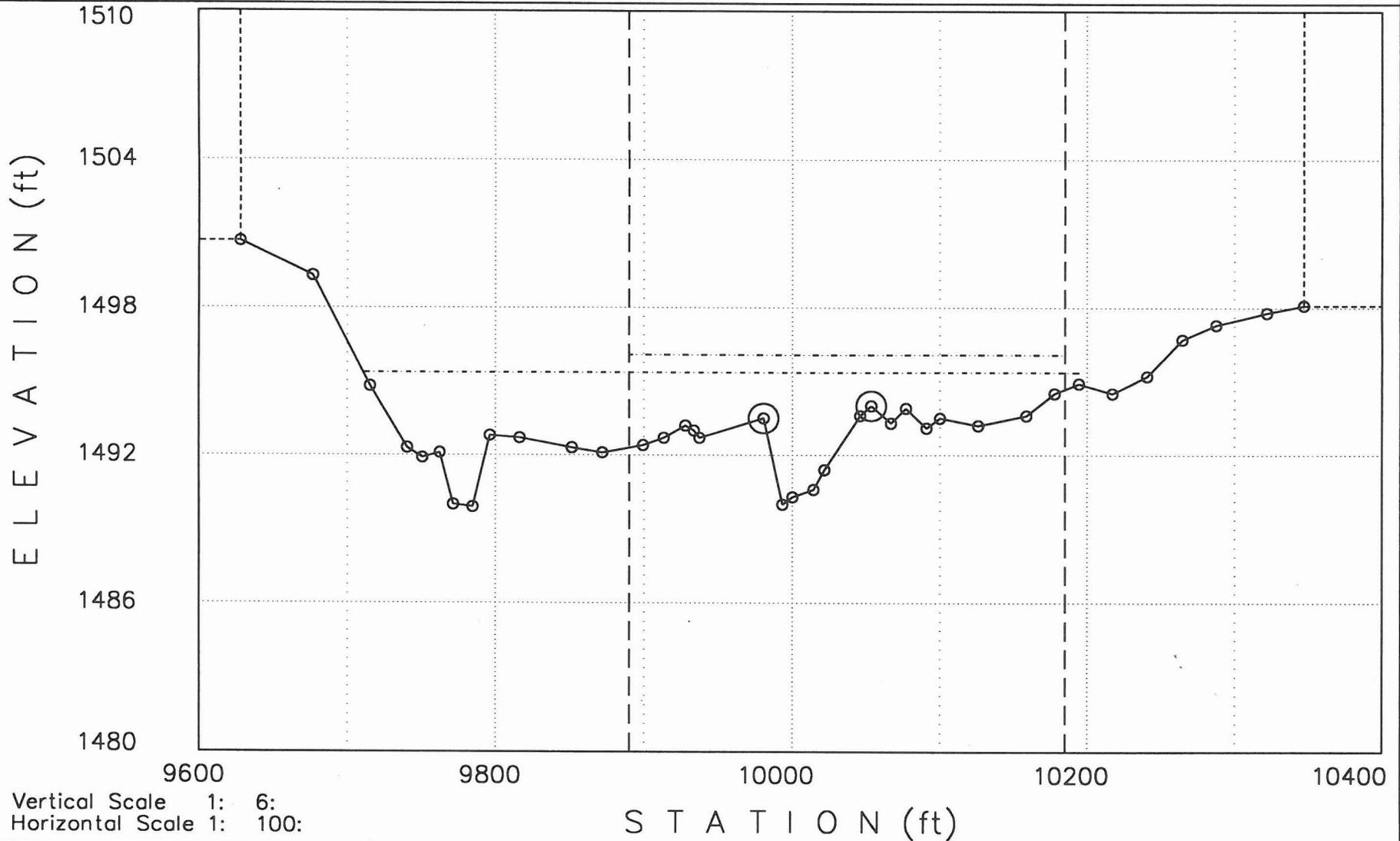


<<<<<< Cross Section: 2.846: (FN = 11547P31.OP1)

>>>>>>

Q1= 5200cfs WS1= 1495.35  
Q2= 5200cfs WS2= 1496.07

Manning-n Values: LOB: .055 CH: .04 ROB: .055

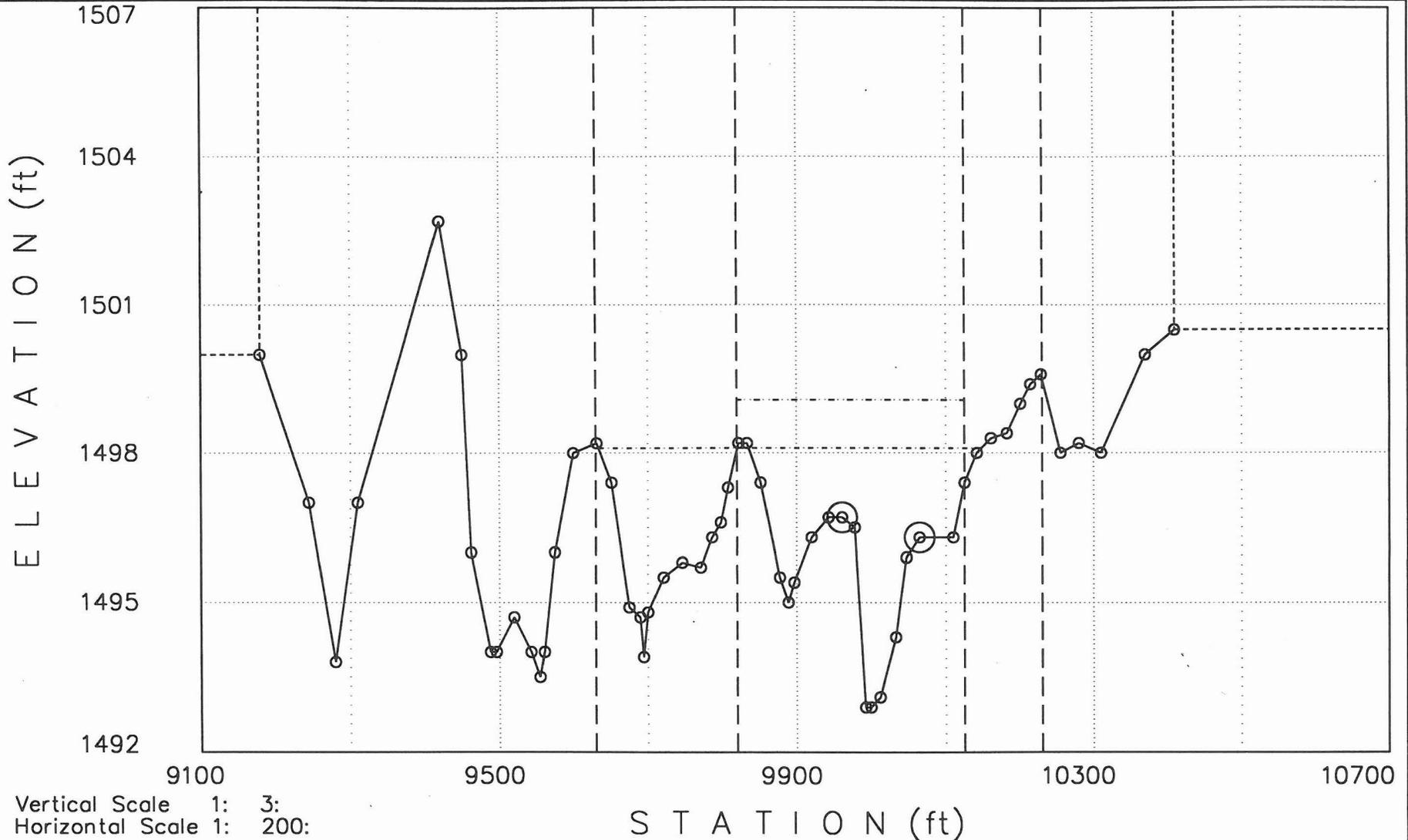


<<<<<< Cross Section: 2.938: (FN = 11547P31.0P1)

>>>>>>

Q1= 5300cfs WS1= 1498.1  
Q2= 5300cfs WS2= 1499.08

Manning-n Values: LOB: .055 CH: .04 ROB: .055

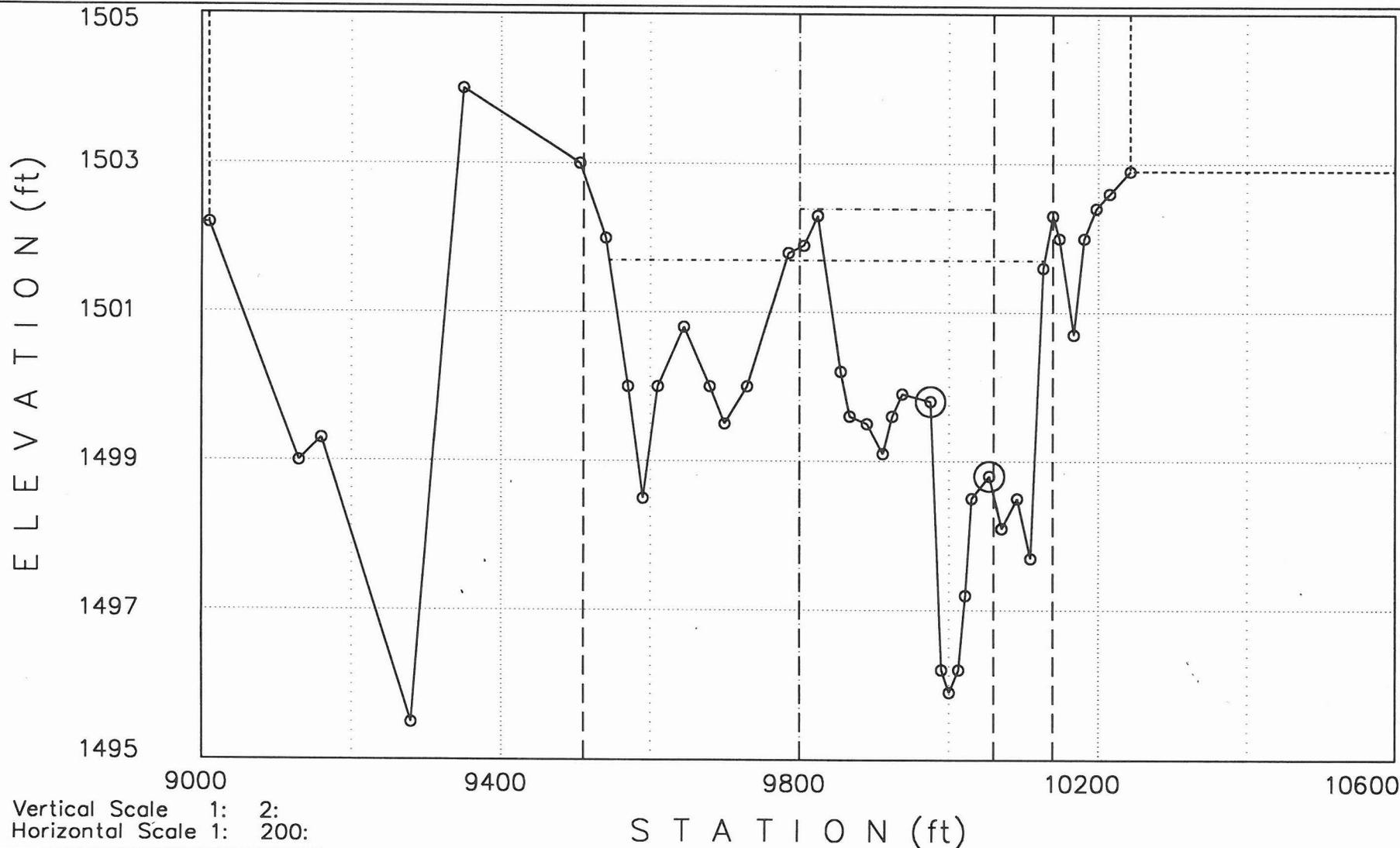


<<<<<< Cross Section: 3.046: (FN = 11547P31.OP1)

>>>>>>

Q1= 5300cfs WS1= 1501.7  
Q2= 5300cfs WS2= 1502.39

Manning-n Values: LOB: .055 CH: .04 ROB: .055



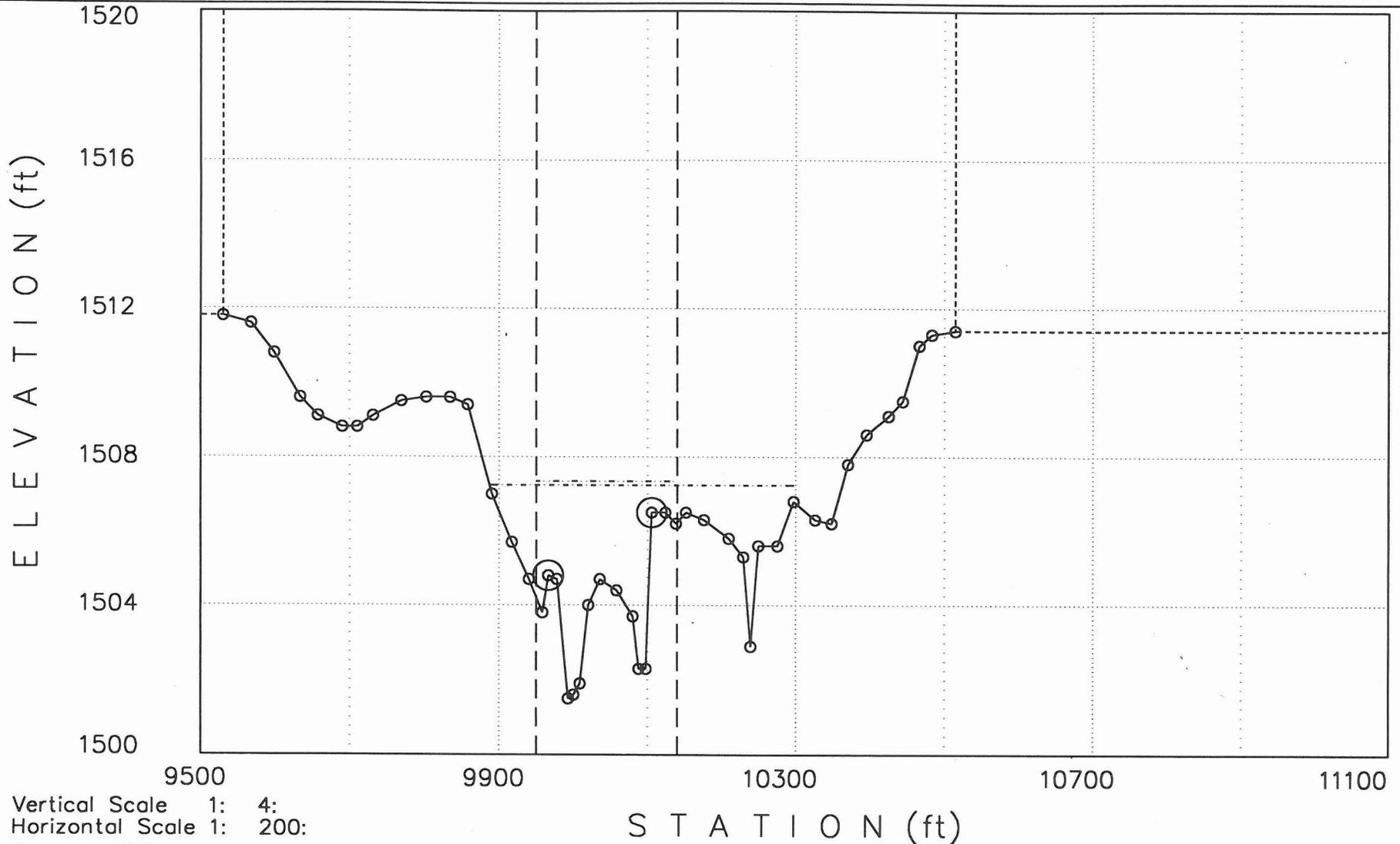


<<<<<< Cross Section: 3.232: (FN = 11547P31.OP1)

>>>>>>

Q1= 5300cfs WS1= 1507.24 -----  
Q2= 5300cfs WS2= 1507.34 -----

Manning-n Values: LOB: .055 CH: .045 ROB: .055

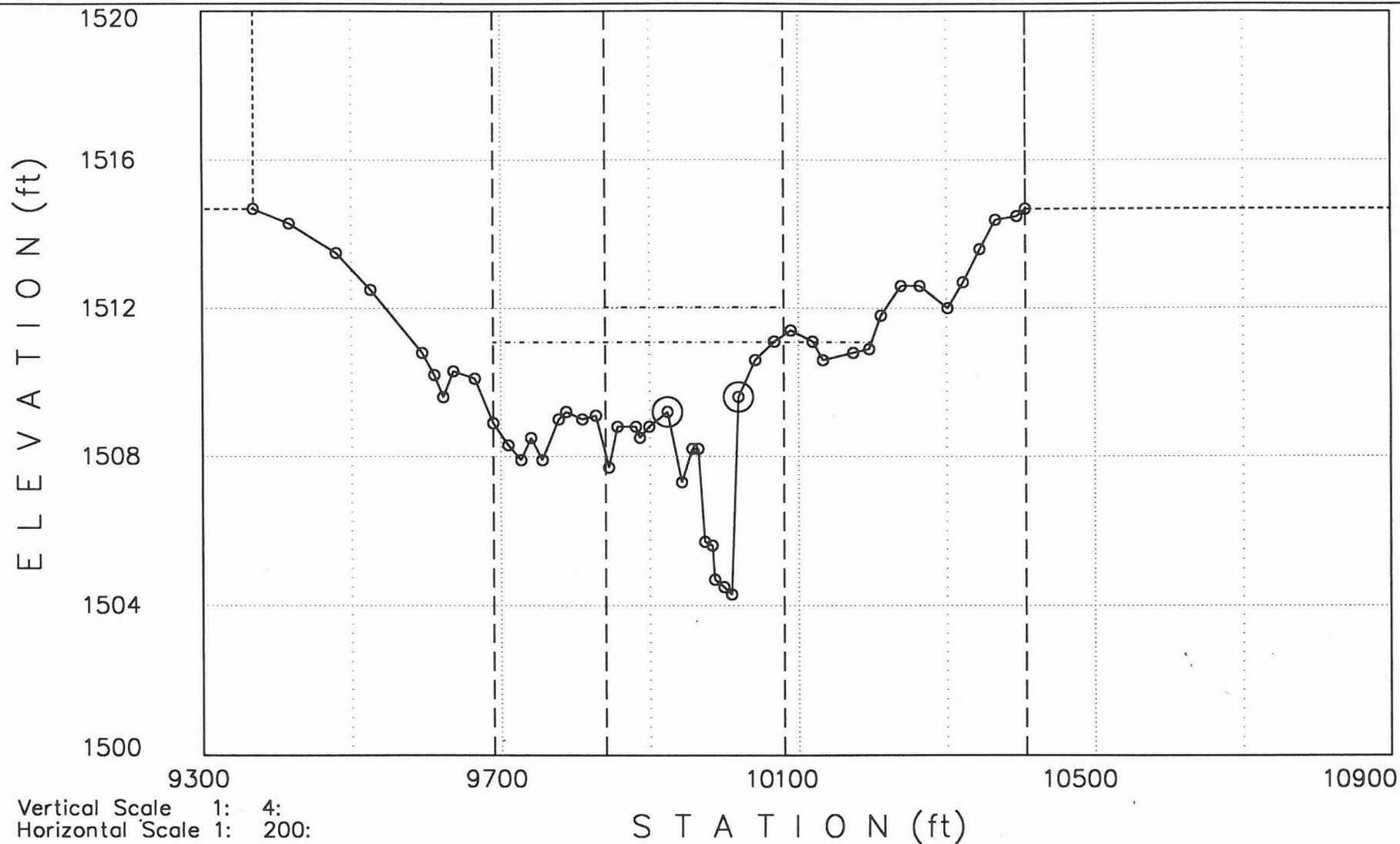


<<<<<< Cross Section: 3.336: (FN = 11547P31.OP1)

>>>>>>

Q1= 5300cfs WS1= 1511.08  
Q2= 5300cfs WS2= 1512.02

Manning-n Values: LOB: .055 CH: .04 ROB: .055

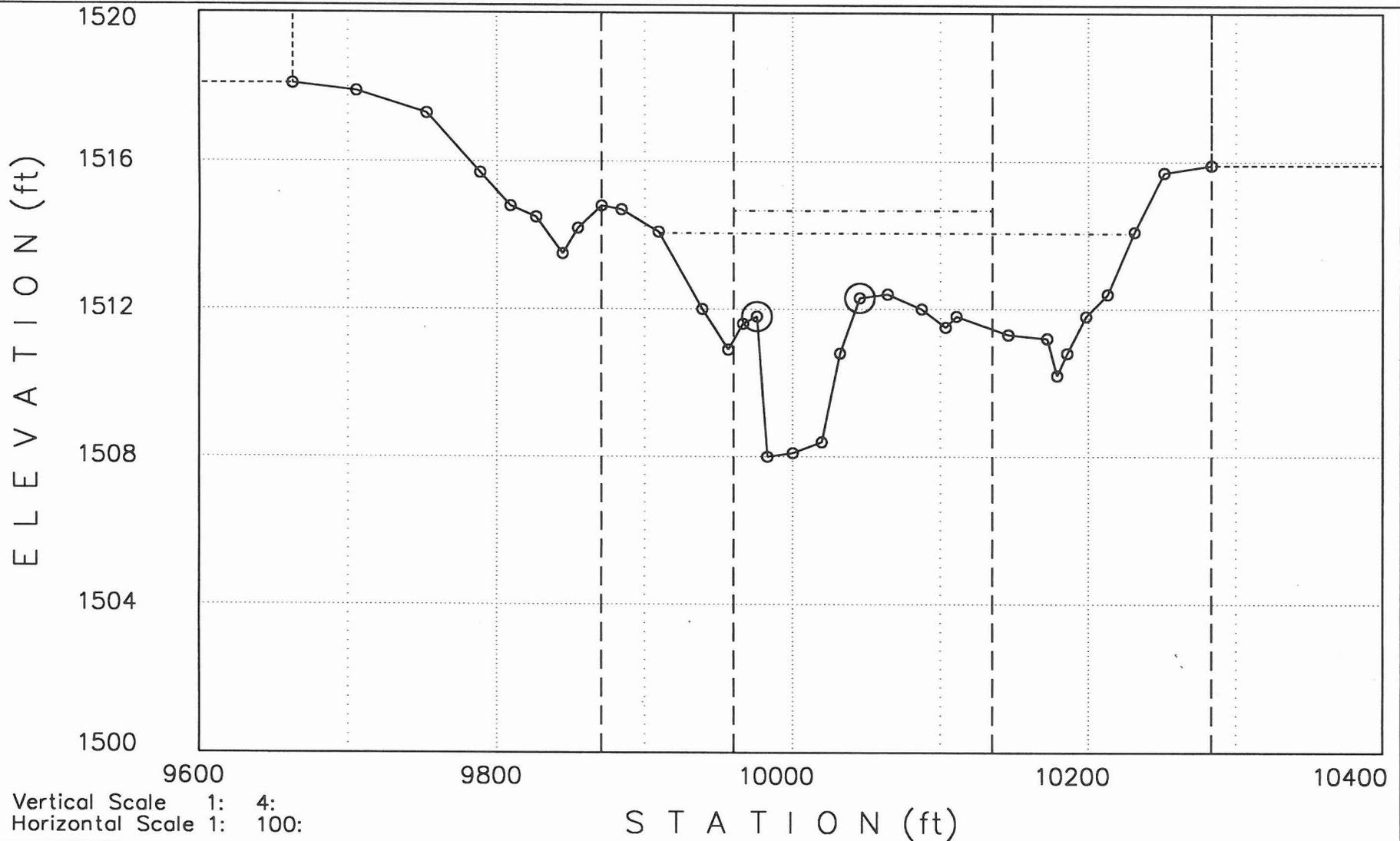


<<<<<< Cross Section: 3.431: (FN = 11547P31.OP1)

>>>>>>

Q1= 5300cfs WS1= 1514.06 -----  
Q2= 5300cfs WS2= 1514.67 -----

Manning-n Values: LOB: .055 CH: .04 ROB: .055

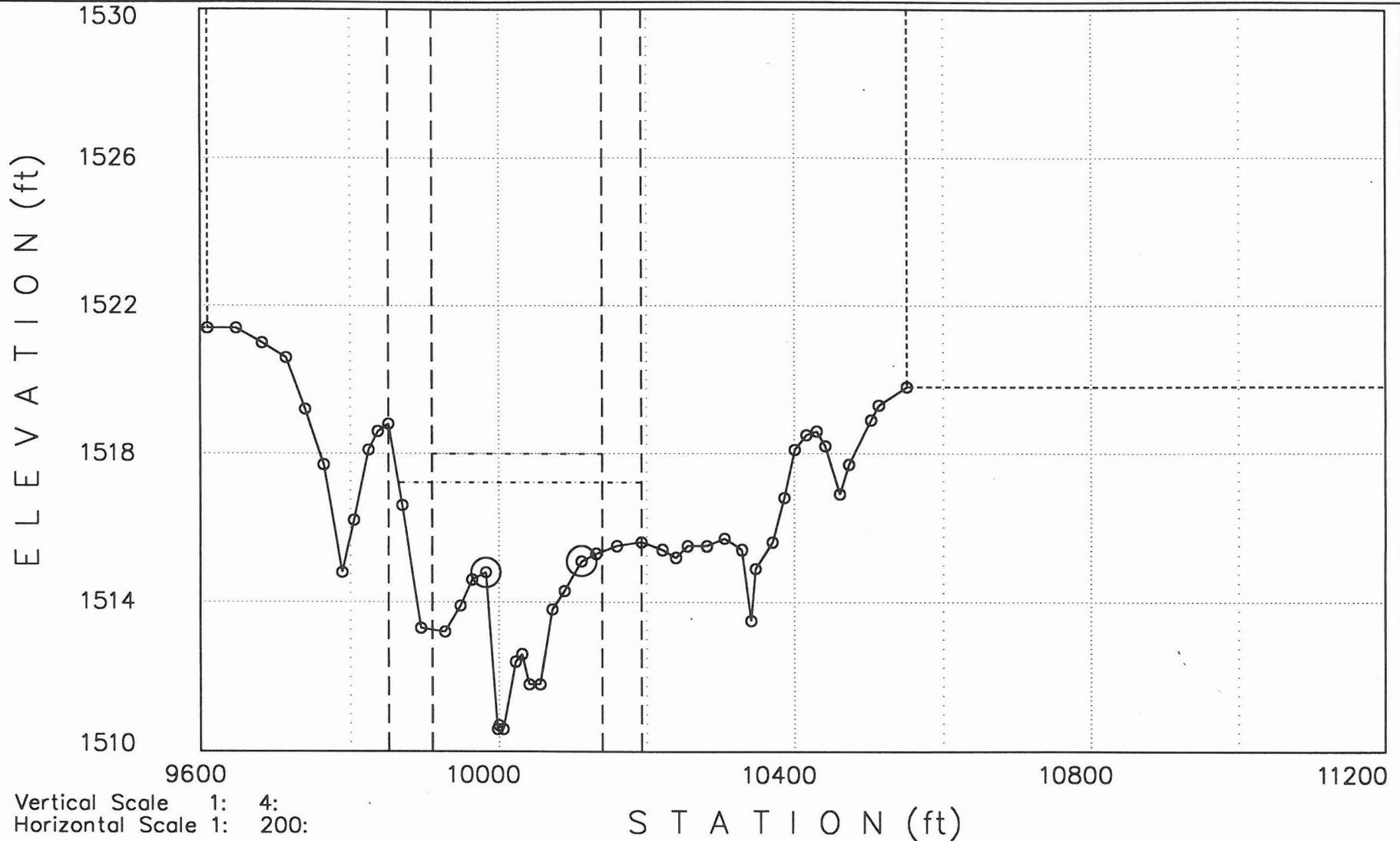


<<<<<< Cross Section: 3.529: (FN = 11547P31.OP1)

>>>>>>

Q1= 5300cfs WS1= 1517.22  
Q2= 5300cfs WS2= 1517.99

Manning-n Values: LOB: .055 CH: .04 ROB: .055

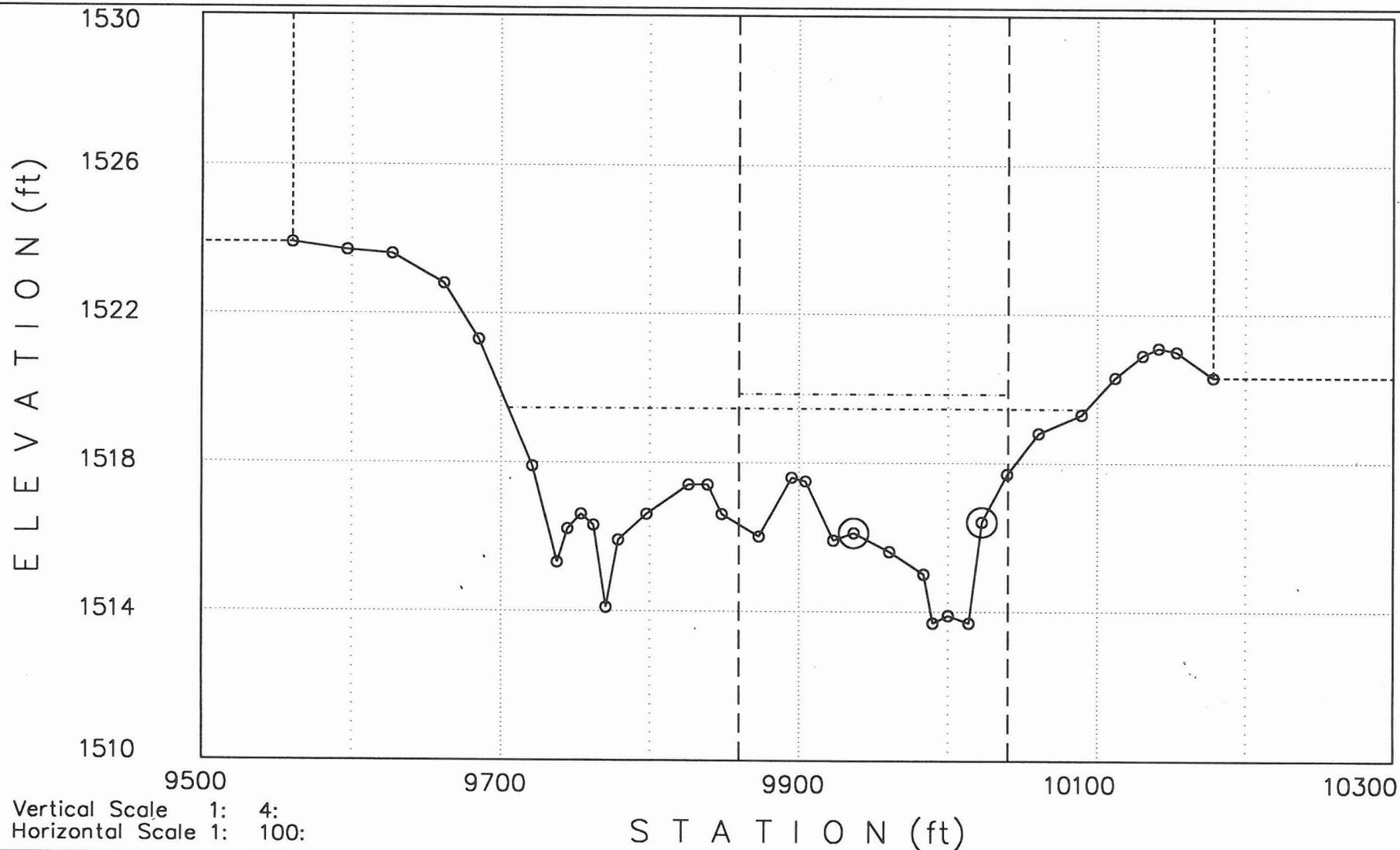


<<<<<< Cross Section: 3.624: (FN = 11547P31.OP1)

>>>>>>

Q1= 5300cfs WS1= 1519.45  
Q2= 5300cfs WS2= 1519.84

Manning-n Values: LOB: .055 CH: .04 ROB: .055

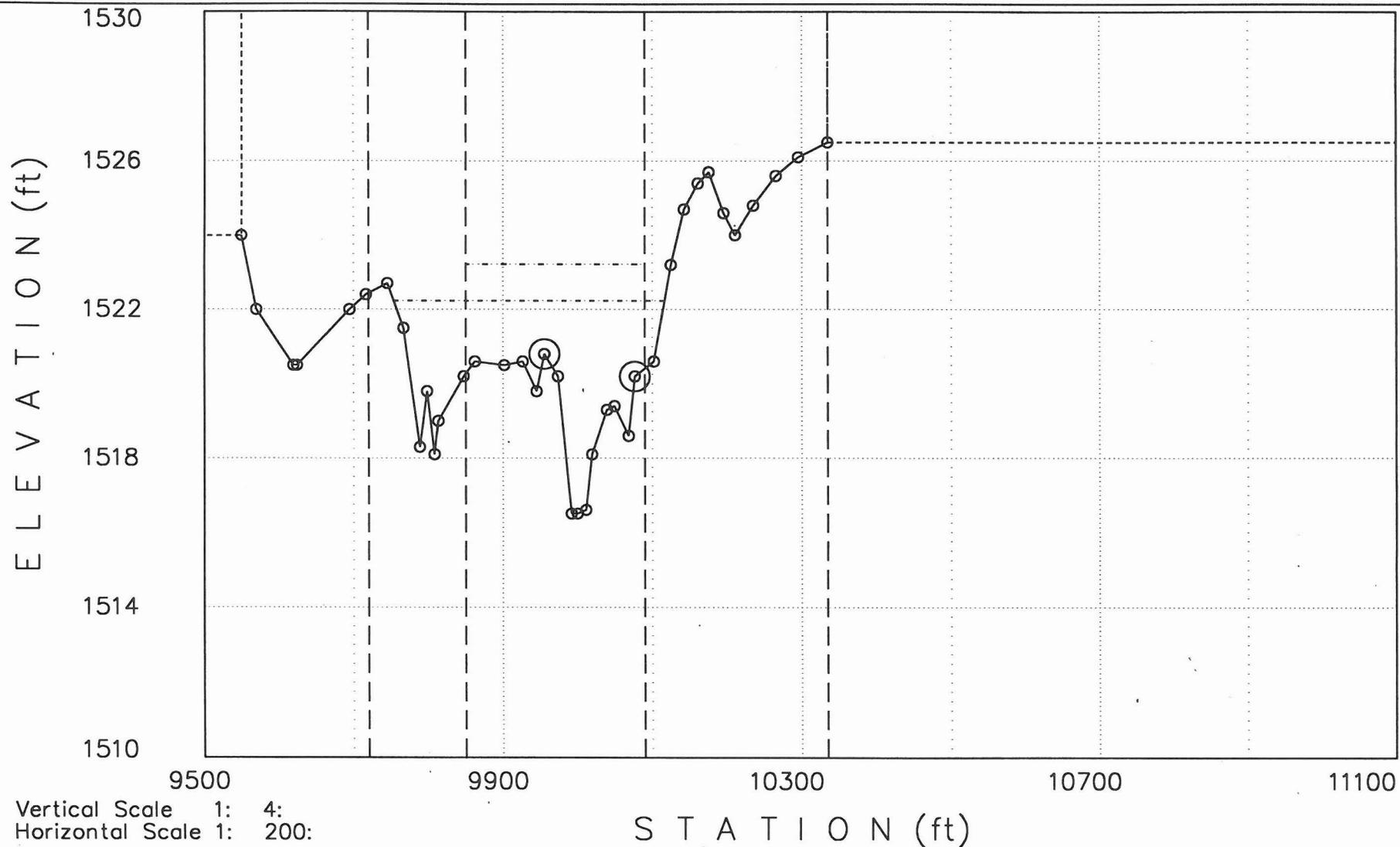


<<<<<< Cross Section: 3.718: (FN = 11547P31.OP1)

>>>>>>

Q1= 5300cfs WS1= 1522.23  
Q2= 5300cfs WS2= 1523.22

Manning-n Values: LOB: .055 CH: .04 ROB: .055

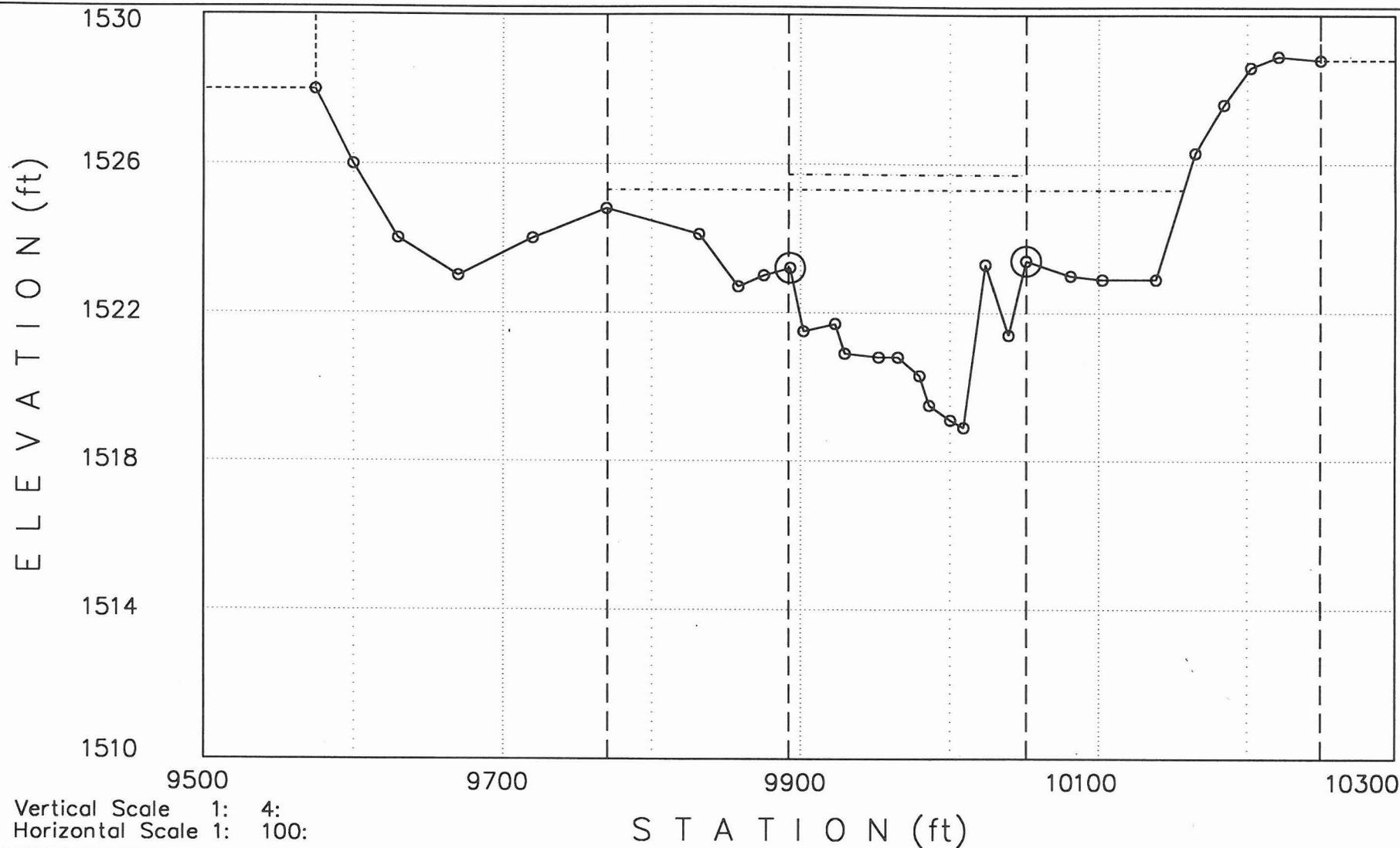


<<<<<< Cross Section: 3.817: (FN = 11547P31.0P1)

>>>>>>

Q1= 5300cfs WS1= 1525.3  
Q2= 5300cfs WS2= 1525.72

Manning-n Values: LOB: .055 CH: .04 ROB: .055

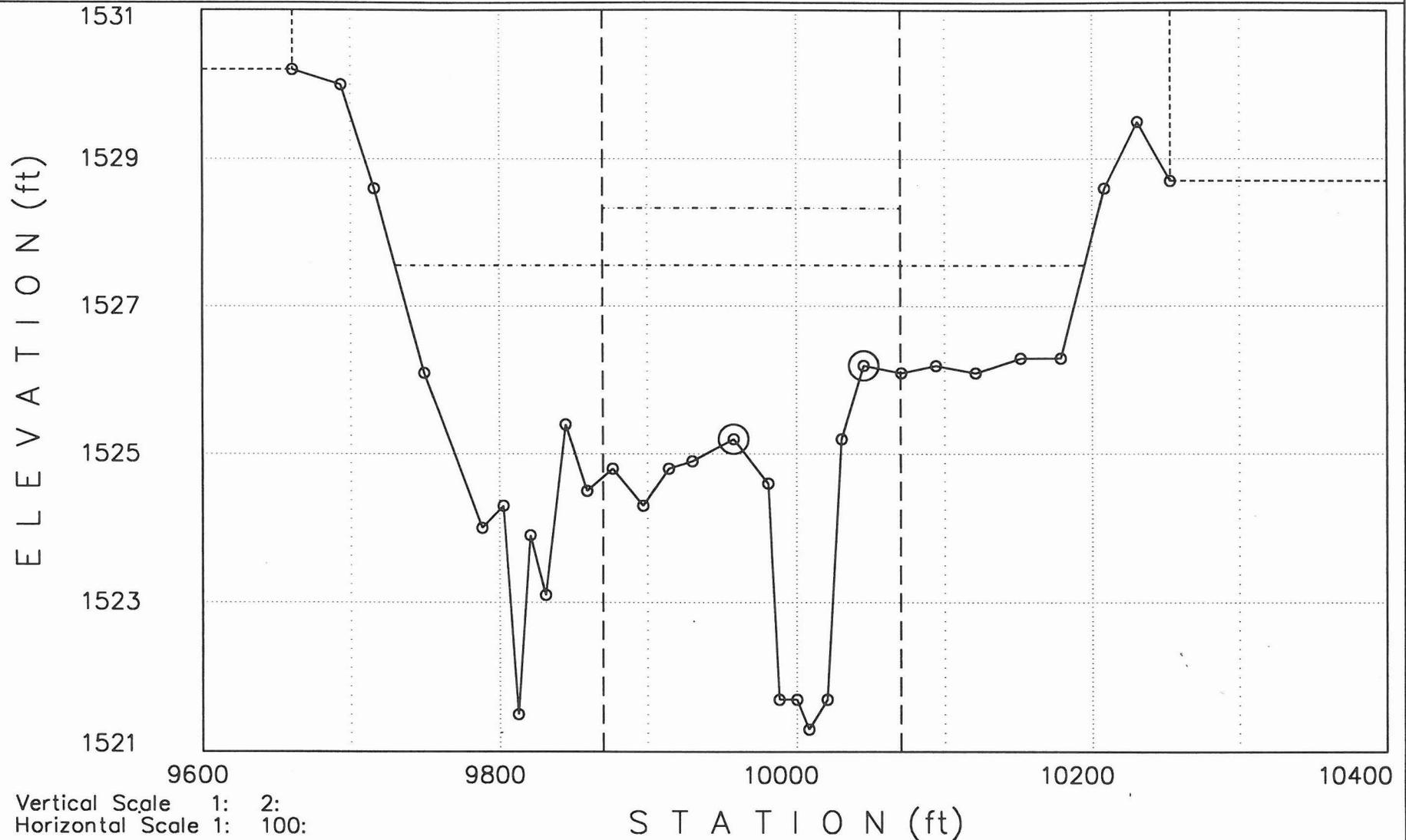


<<<<<< Cross Section: 3.909: (FN = 11547P31.OP1)

>>>>>>

Q1= 5300cfs WS1= 1527.55  
Q2= 5300cfs WS2= 1528.33

Manning-n Values: LOB: .055 CH: .04 ROB: .055



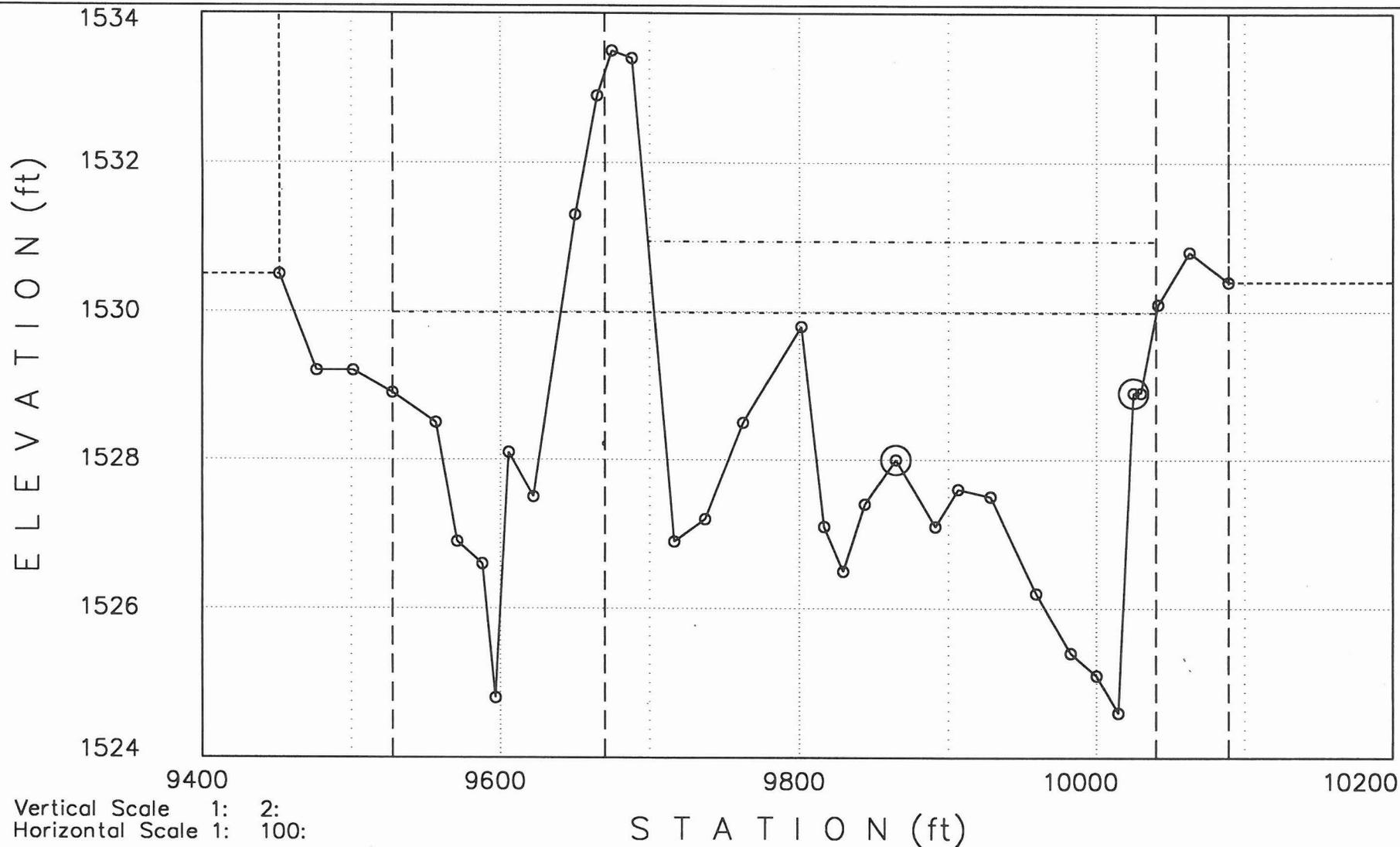
Vertical Scale 1: 2:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 4.004: (FN = 11547P31.OP1)

>>>>>>

Q1= 5300cfs WS1= 1529.99  
Q2= 5300cfs WS2= 1530.94

Manning-n Values: LOB: .05 CH: .04 ROB: .055

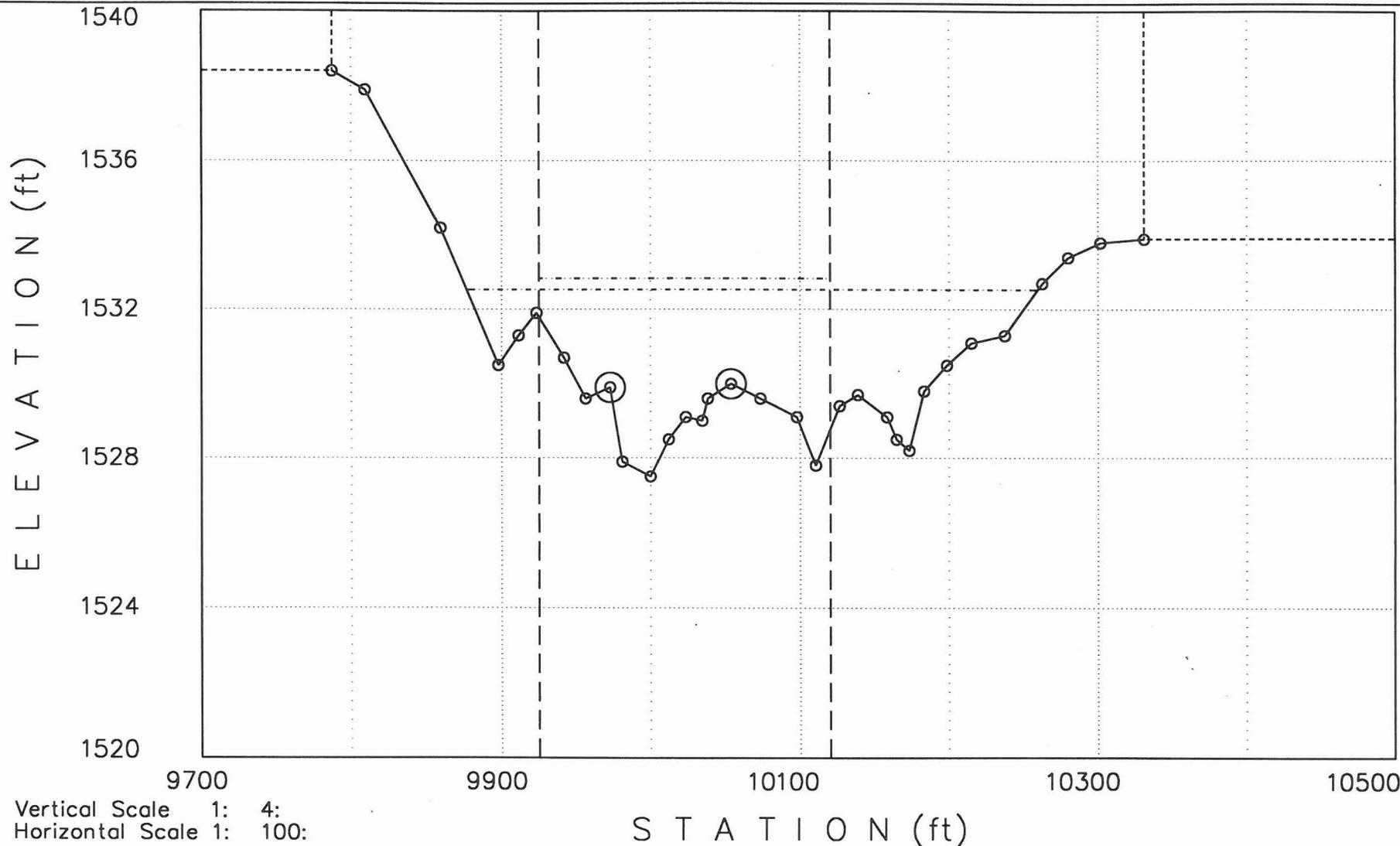


<<<<<< Cross Section: 4.104: (FN = 11547P31.OP1)

>>>>>>

Q1= 5300cfs WS1= 1532.53  
Q2= 5300cfs WS2= 1532.83

Manning-n Values: LOB: .055 CH: .04 ROB: .05



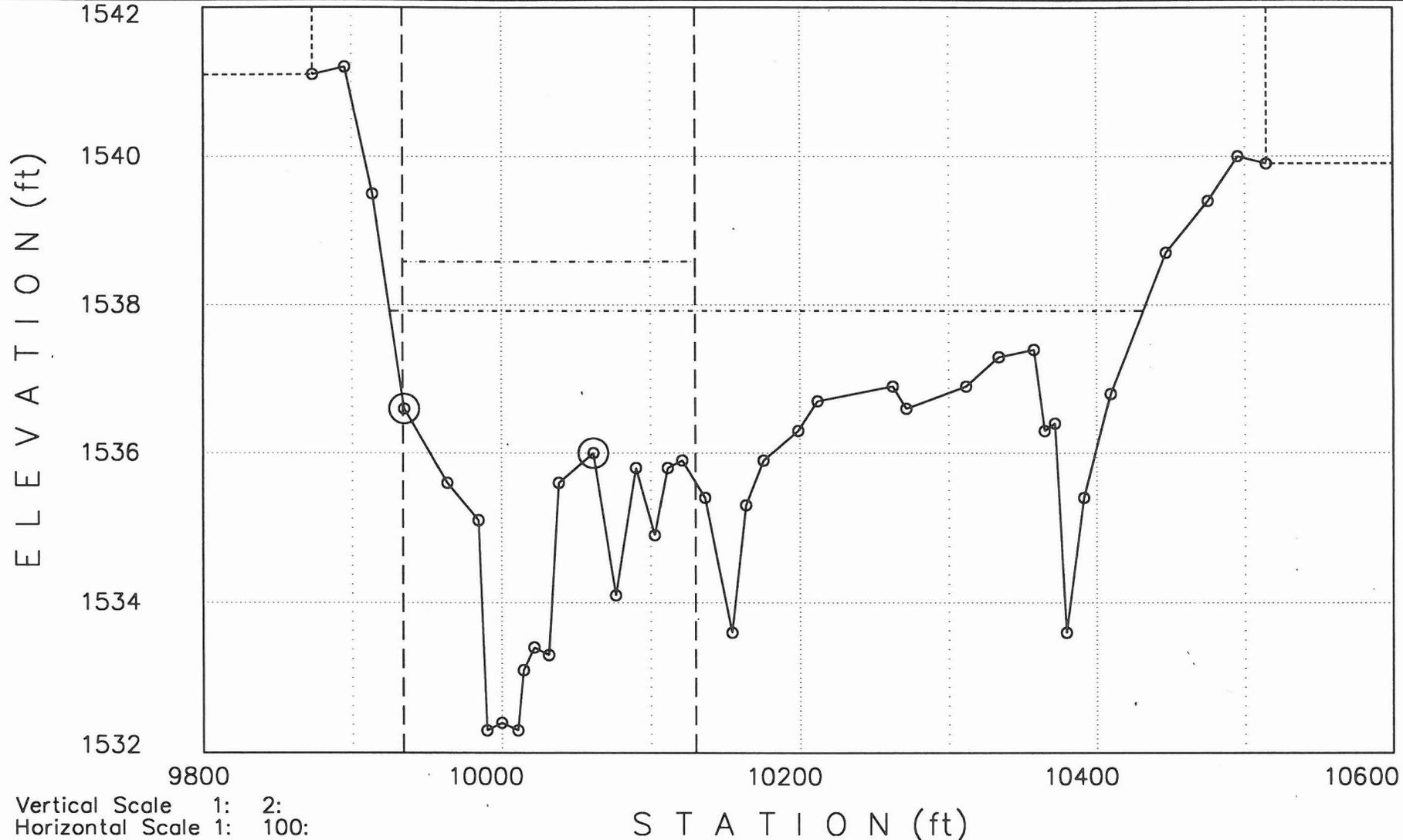


<<<<<< Cross Section: 4.294: (FN = 11547P31.0P1)

>>>>>>

Q1= 5400cfs WS1= 1537.92  
Q2= 5400cfs WS2= 1538.58

Manning-n Values: LOB: .055 CH: .04 ROB: .05

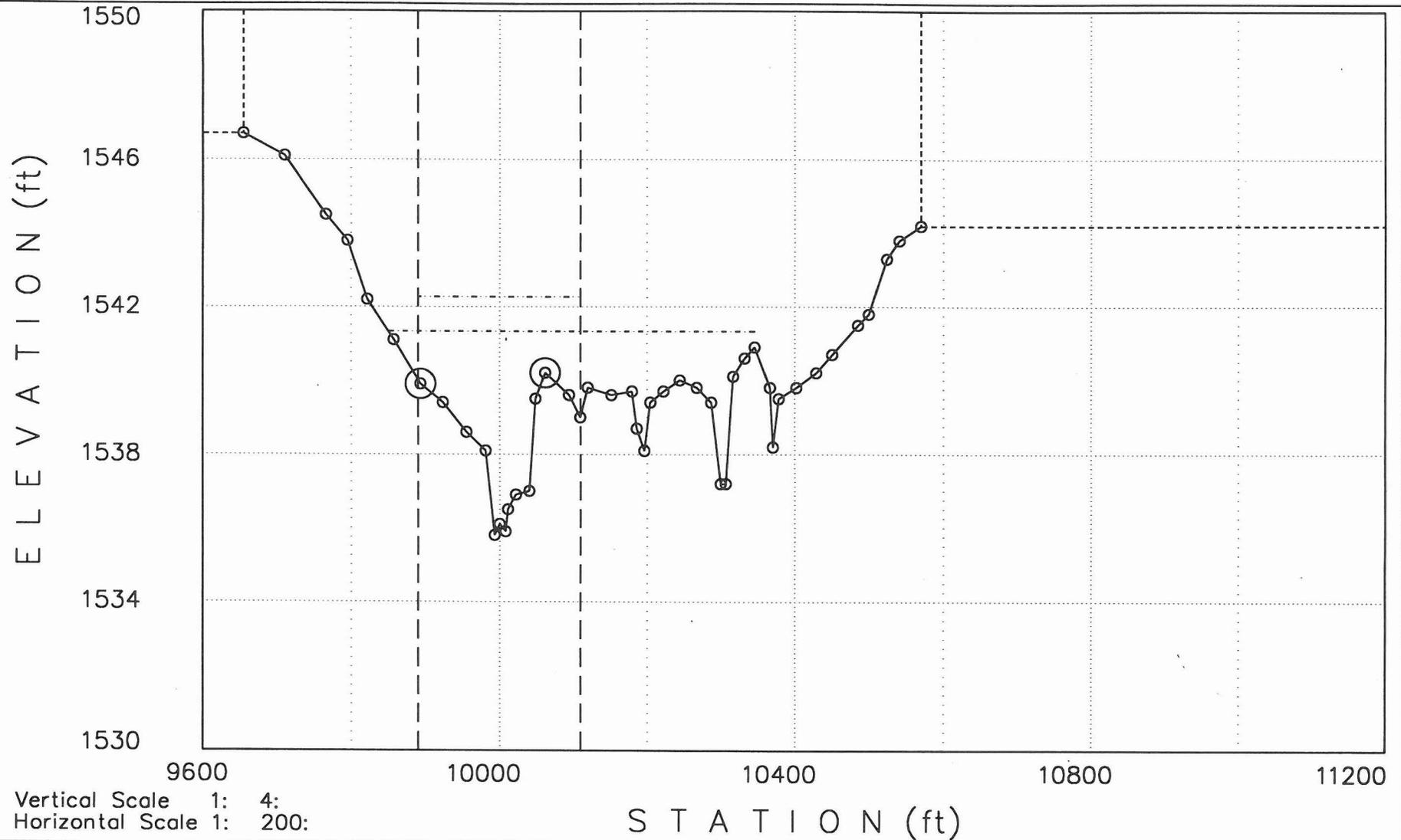


<<<<<< Cross Section: 4.393: (FN = 11547P31.0P1)

>>>>>>

Q1= 5400cfs WS1= 1541.33 -----  
Q2= 5400cfs WS2= 1542.27 -----

Manning-n Values: LOB: .055 CH: .04 ROB: .05

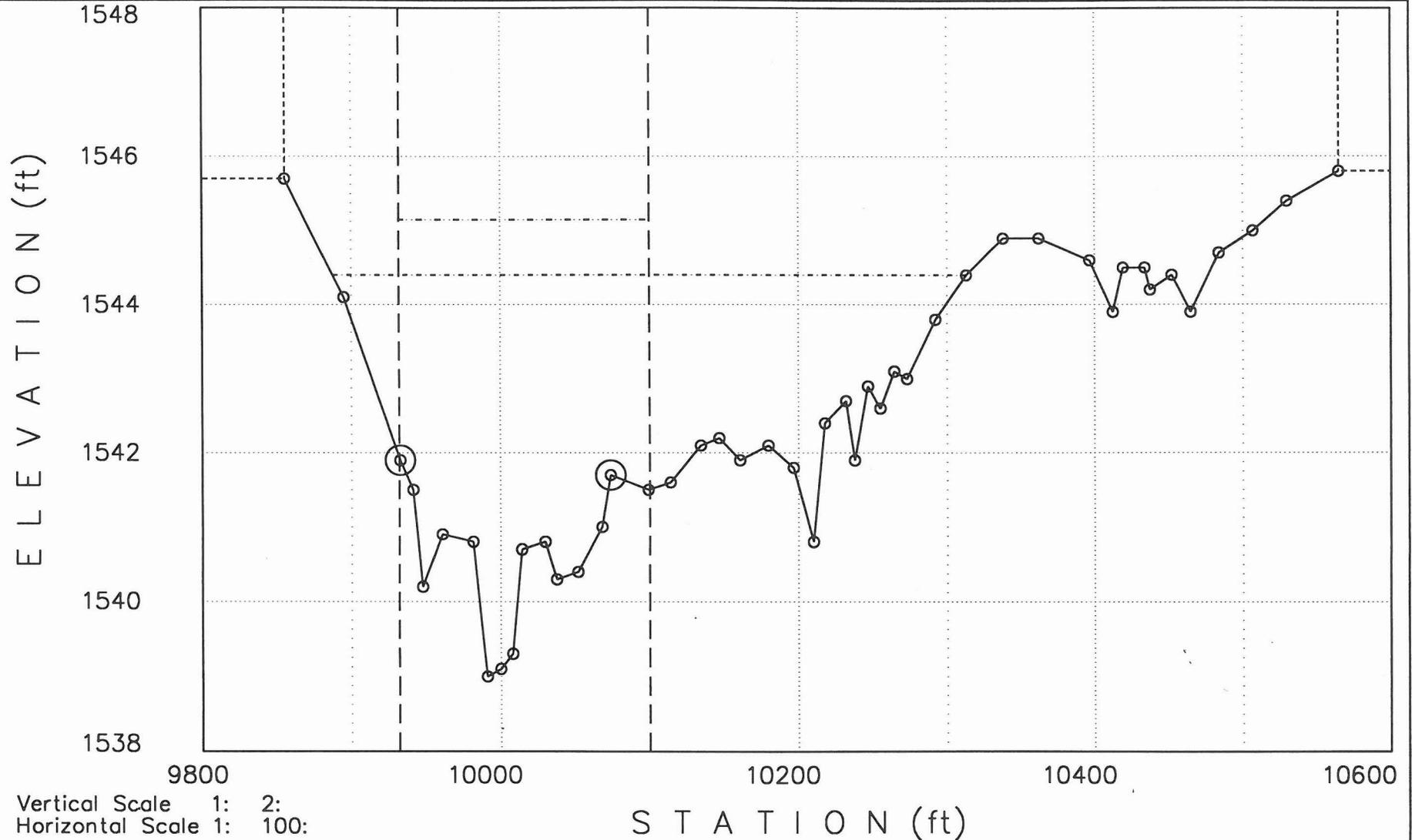


<<<<<< Cross Section: 4.494: (FN = 11547P31.OP1)

>>>>>>

Q1= 5400cfs WS1= 1544.4  
Q2= 5400cfs WS2= 1545.15

Manning-n Values: LOB: .055 CH: .04 ROB: .05



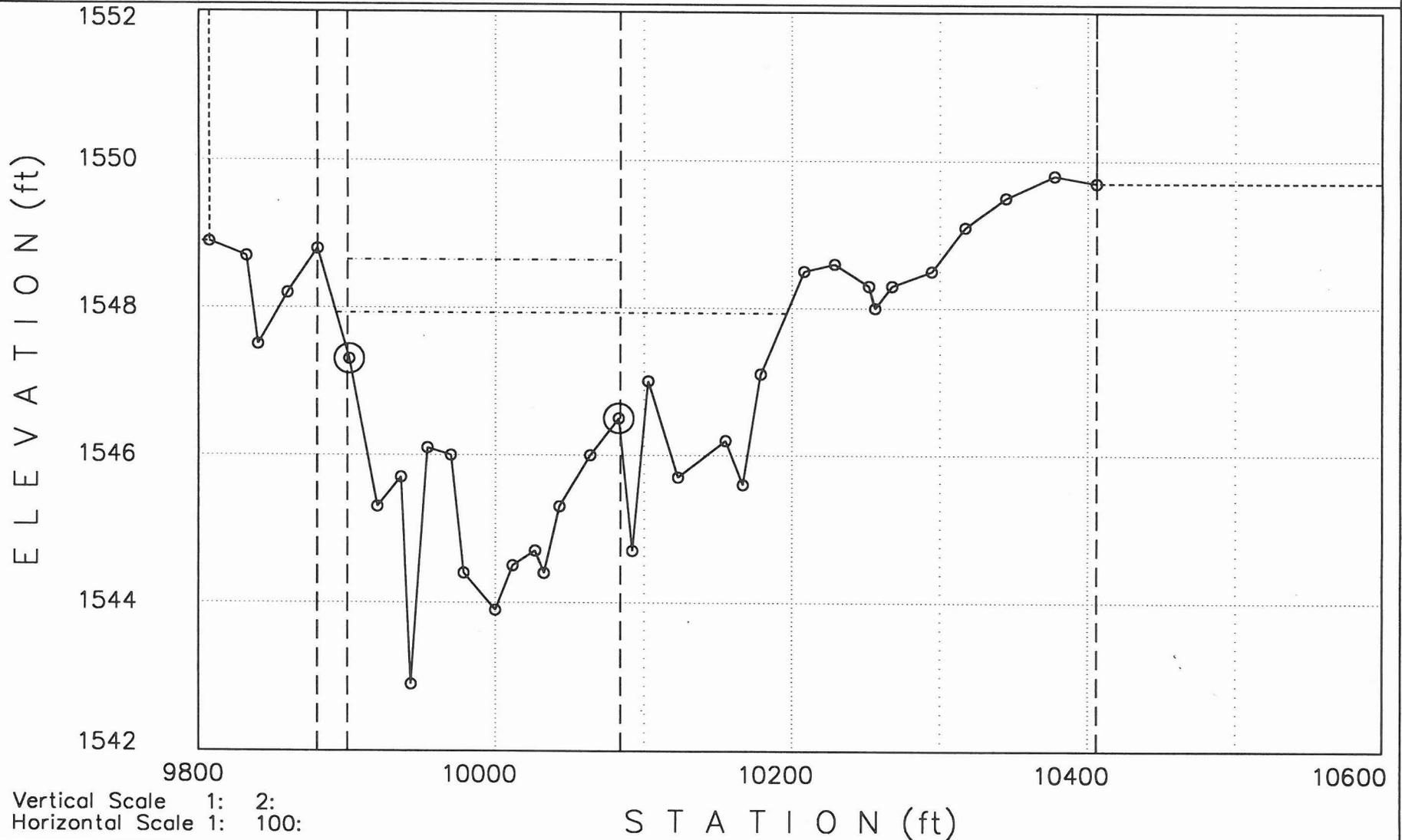
Vertical Scale 1: 2:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 4.592: (FN = 11547P31.OP1)

>>>>>>

Q1= 5400cfs WS1= 1547.93  
Q2= 5400cfs WS2= 1548.65

Manning-n Values: LOB: .055 CH: .04 ROB: .05

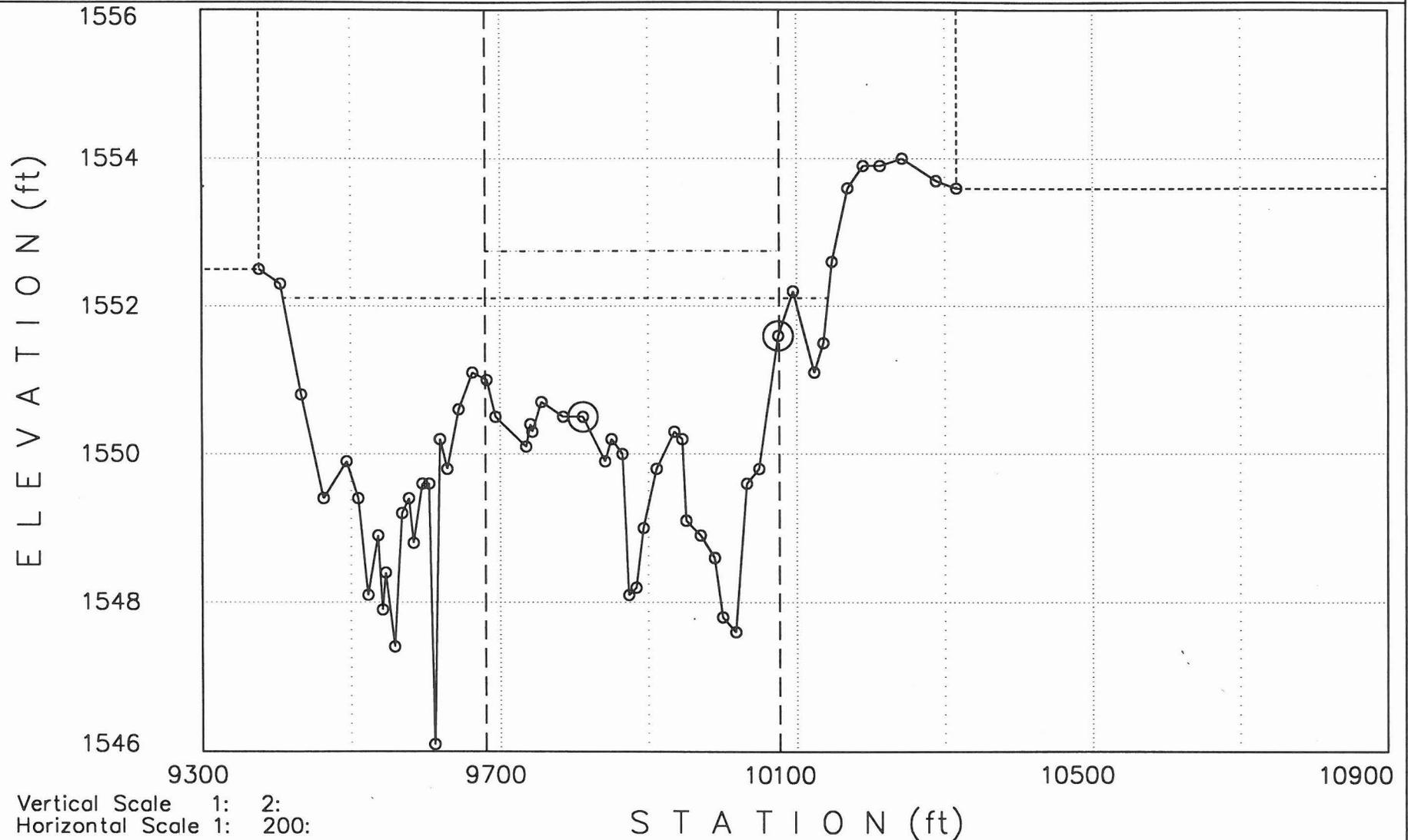


<<<<<< Cross Section: 4.693: (FN = 11547P31.OP1)

>>>>>>

Q1= 5400cfs WS1= 1552.11  
Q2= 5400cfs WS2= 1552.75

Manning-n Values: LOB: .055 CH: .04 ROB: .055

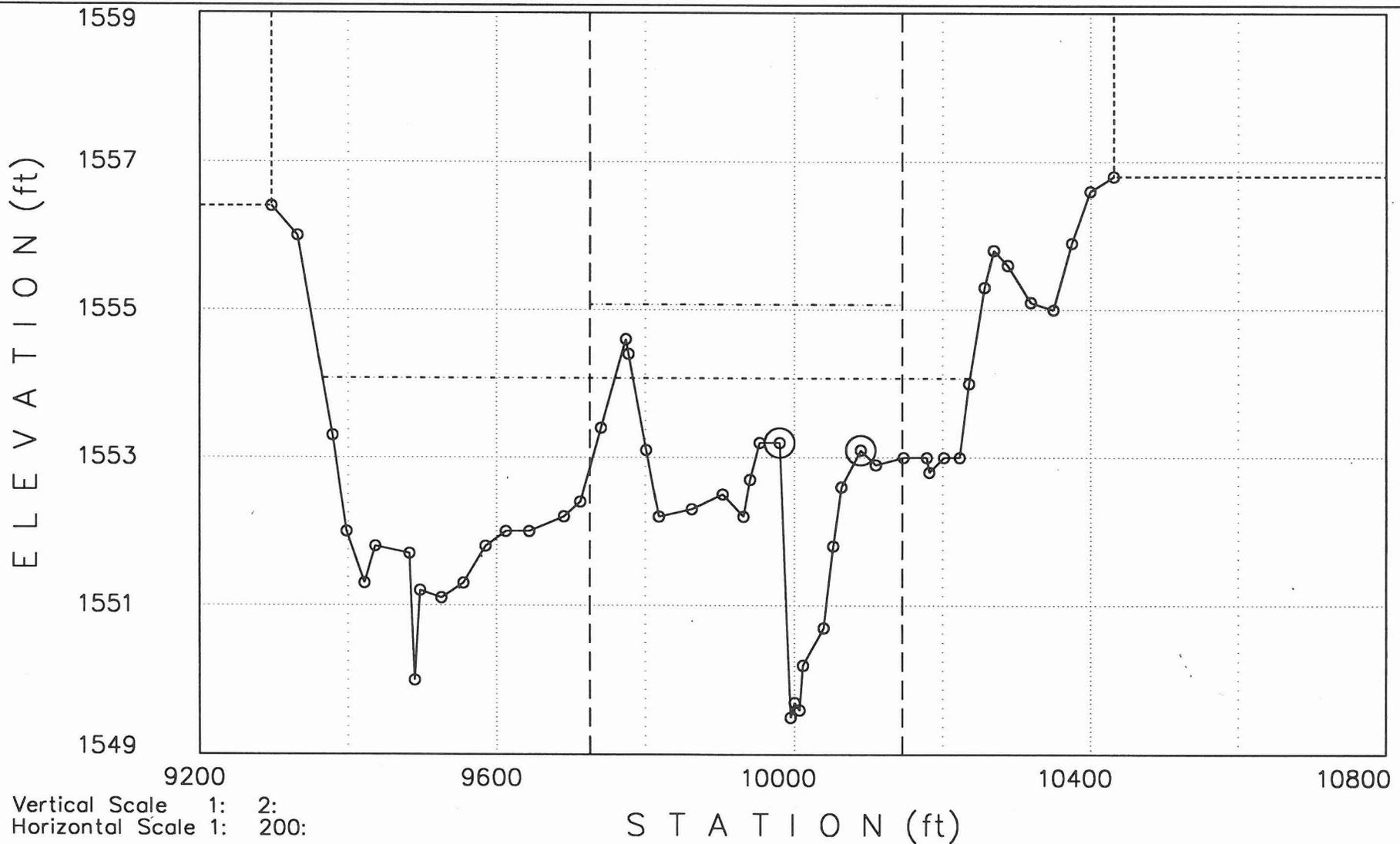


Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 4.788: (FN = 11547P31.OP1) >>>>>>

Q1= 5400cfs WS1= 1554.07 -----  
Q2= 5400cfs WS2= 1555.07 -----

Manning-n Values: LOB: .055 CH: .04 ROB: .055



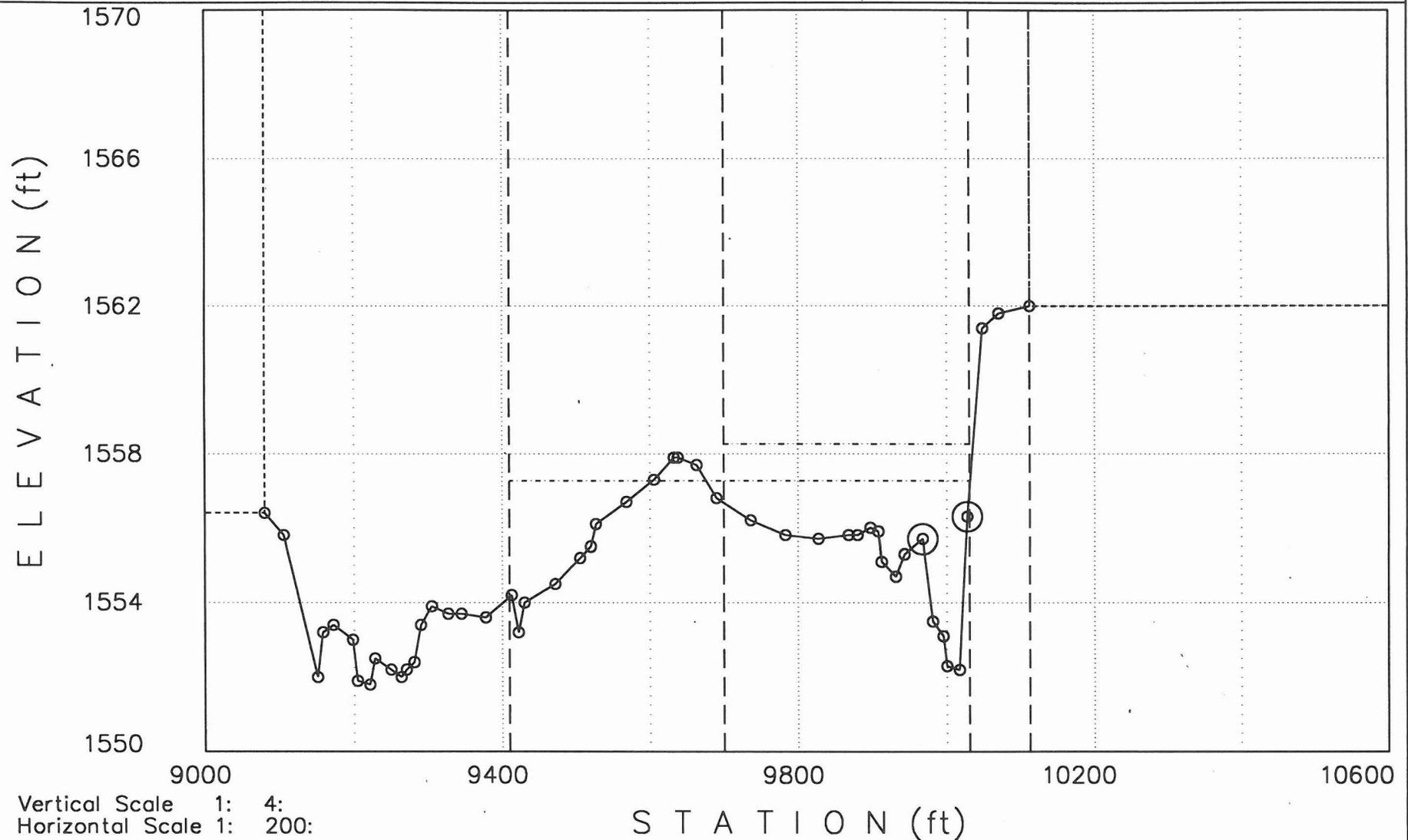
Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 4.884: (FN = 11547P31.0P1)

>>>>>>

Q1= 5400cfs WS1= 1557.27  
Q2= 5400cfs WS2= 1558.27

Manning-n Values: LOB: .055 CH: .04 ROB: .055

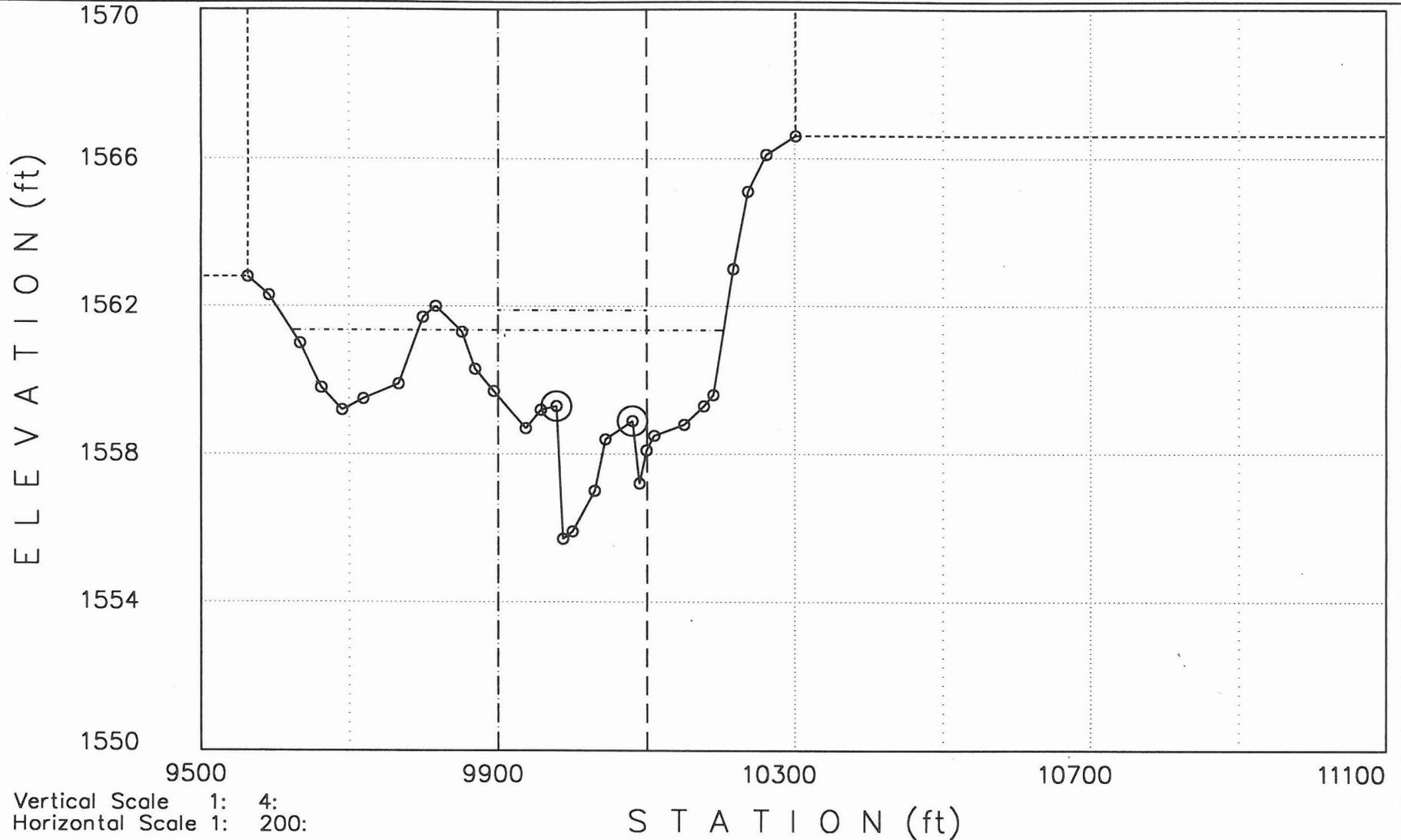


<<<<<< Cross Section: 4.986: (FN = 11547P31.OP1)

>>>>>>

Q1= 5400cfs WS1= 1561.35  
Q2= 5400cfs WS2= 1561.89

Manning-n Values: LOB: .055 CH: .04 ROB: .055

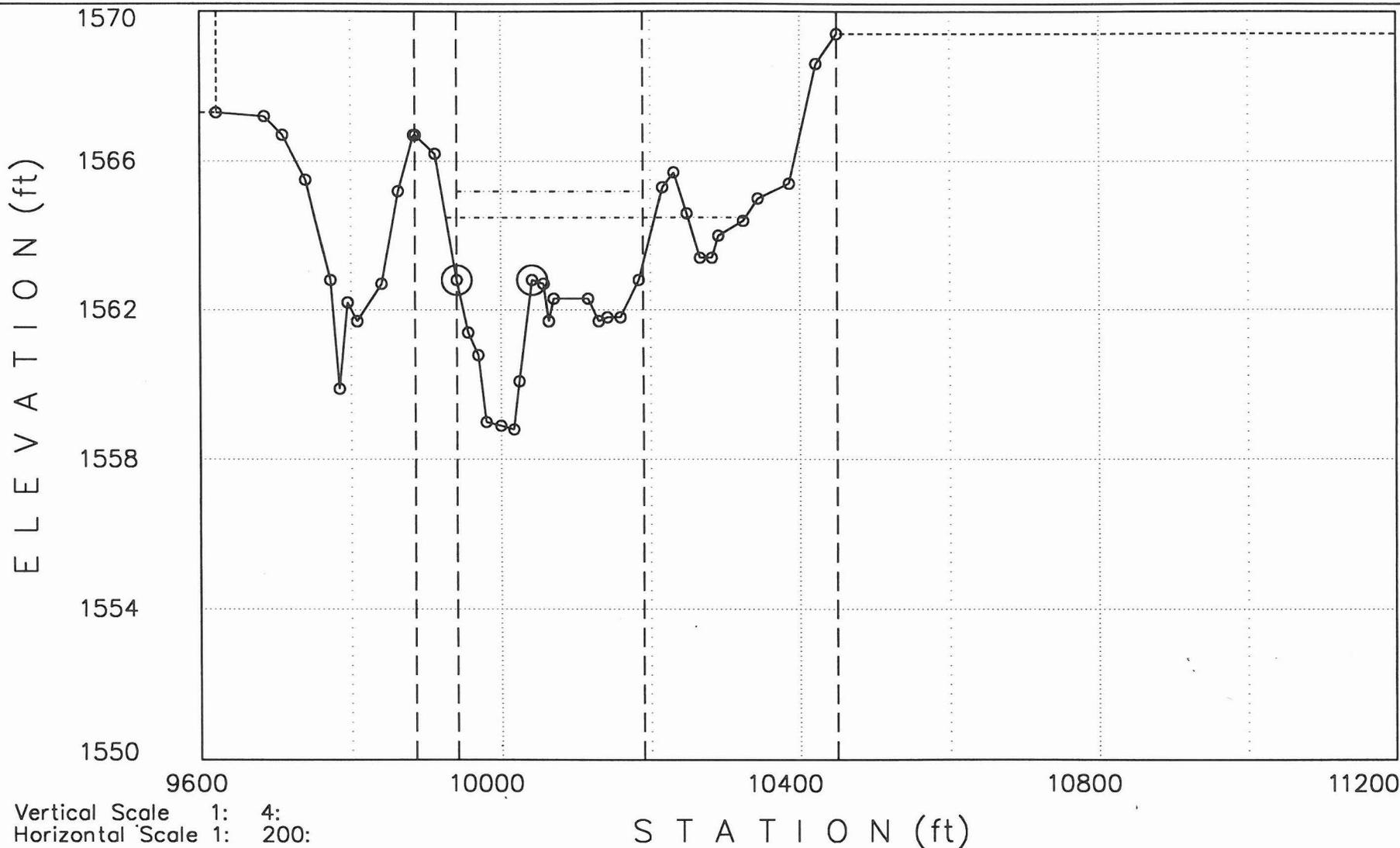


<<<<<< Cross Section: 5.081: (FN = 11547P31.OP1)

>>>>>>

Q1= 5400cfs WS1= 1564.49 -----  
Q2= 5400cfs WS2= 1565.19 -----

Manning-n Values: LOB: .055 CH: .04 ROB: .055

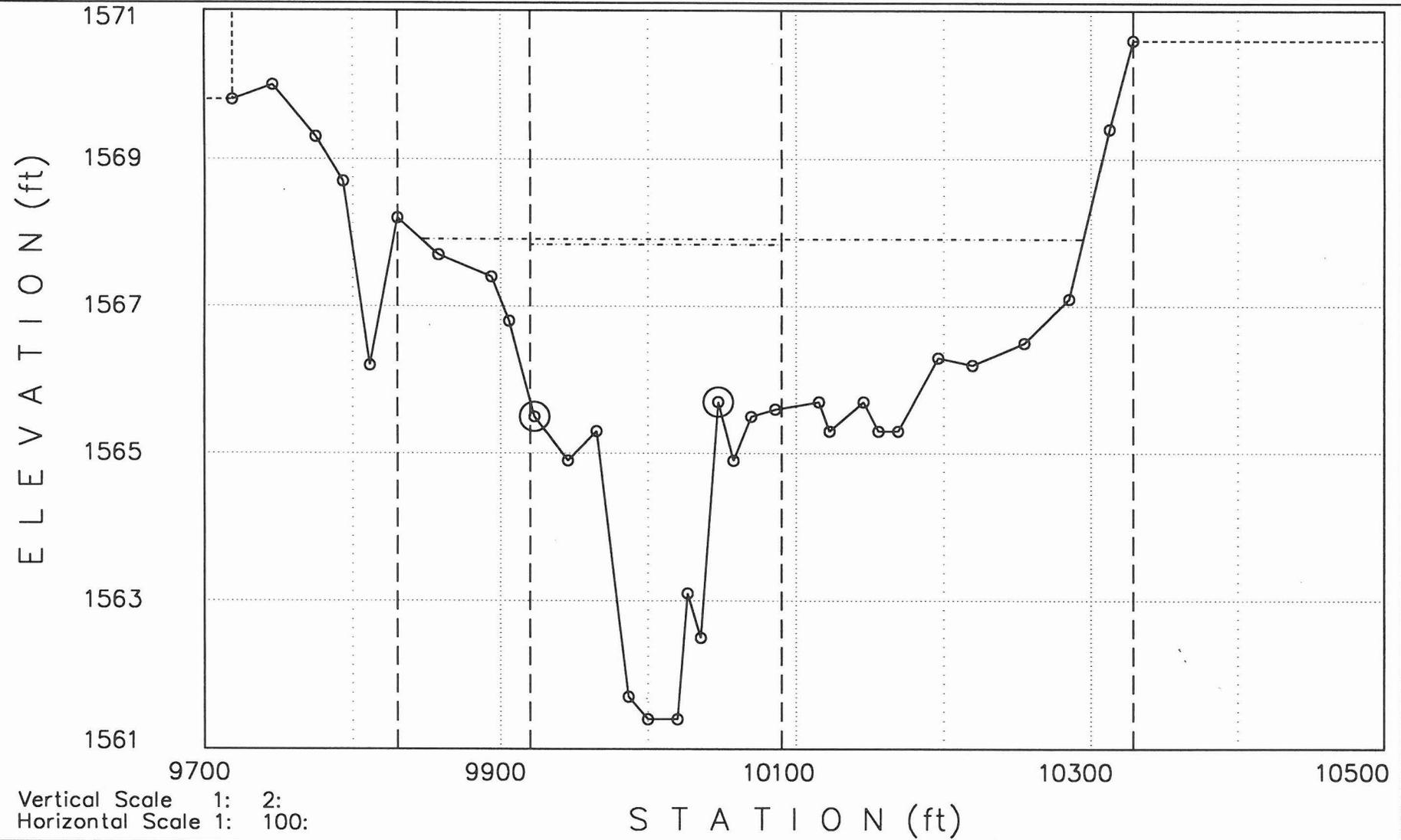


<<<<<< Cross Section: 5.174: (FN = 11547P31.0P1)

>>>>>>

Q1= 5400cfs WS1= 1567.91 -----  
Q2= 5400cfs WS2= 1567.84 -----

Manning-n Values: LOB: .055 CH: .04 ROB: .055



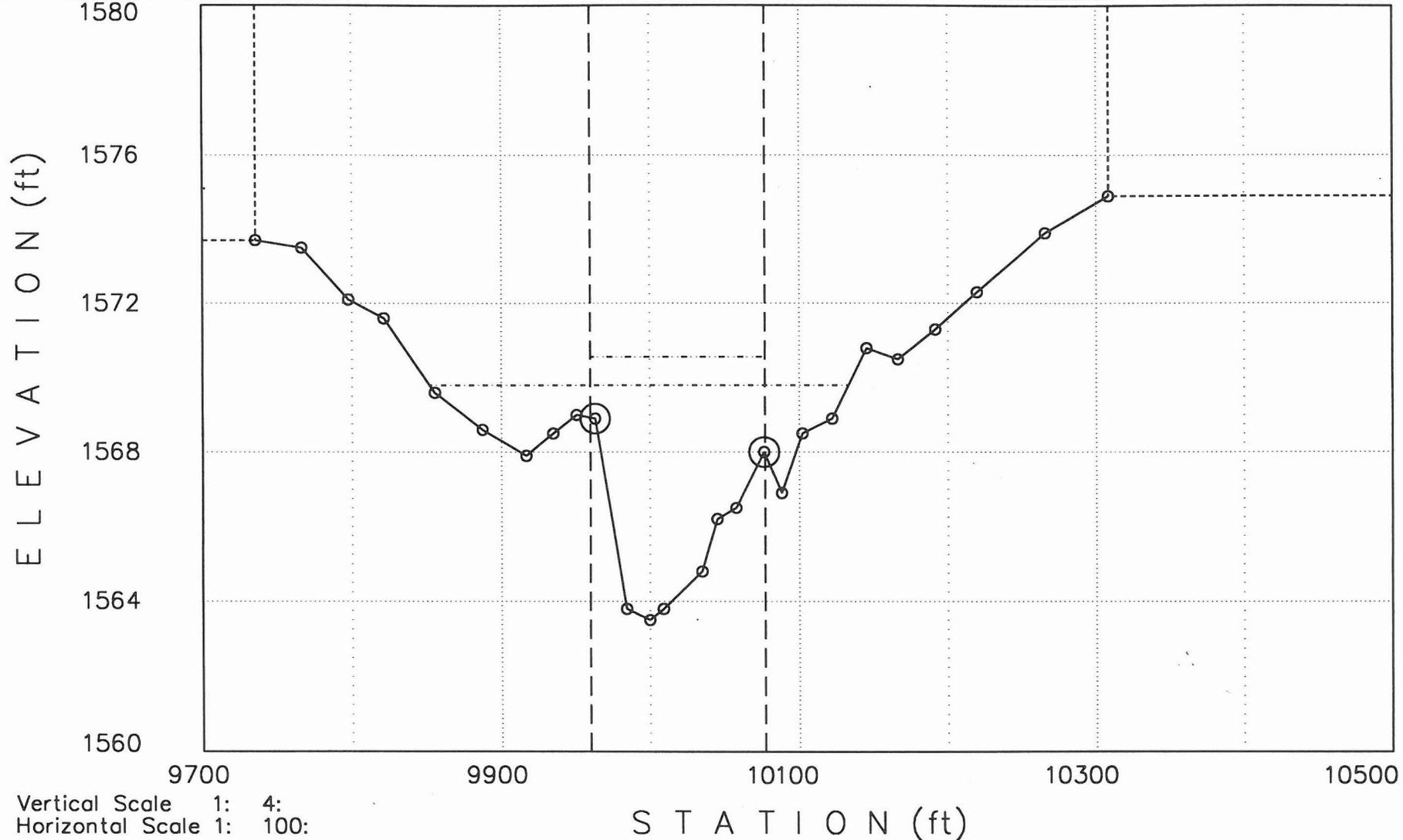
Vertical Scale 1: 2:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 5.245: (FN = 11547P31.OP1)

>>>>>>

Q1= 5400cfs WS1= 1569.8  
Q2= 5400cfs WS2= 1570.57

Manning-n Values: LOB: .055 CH: .04 ROB: .055



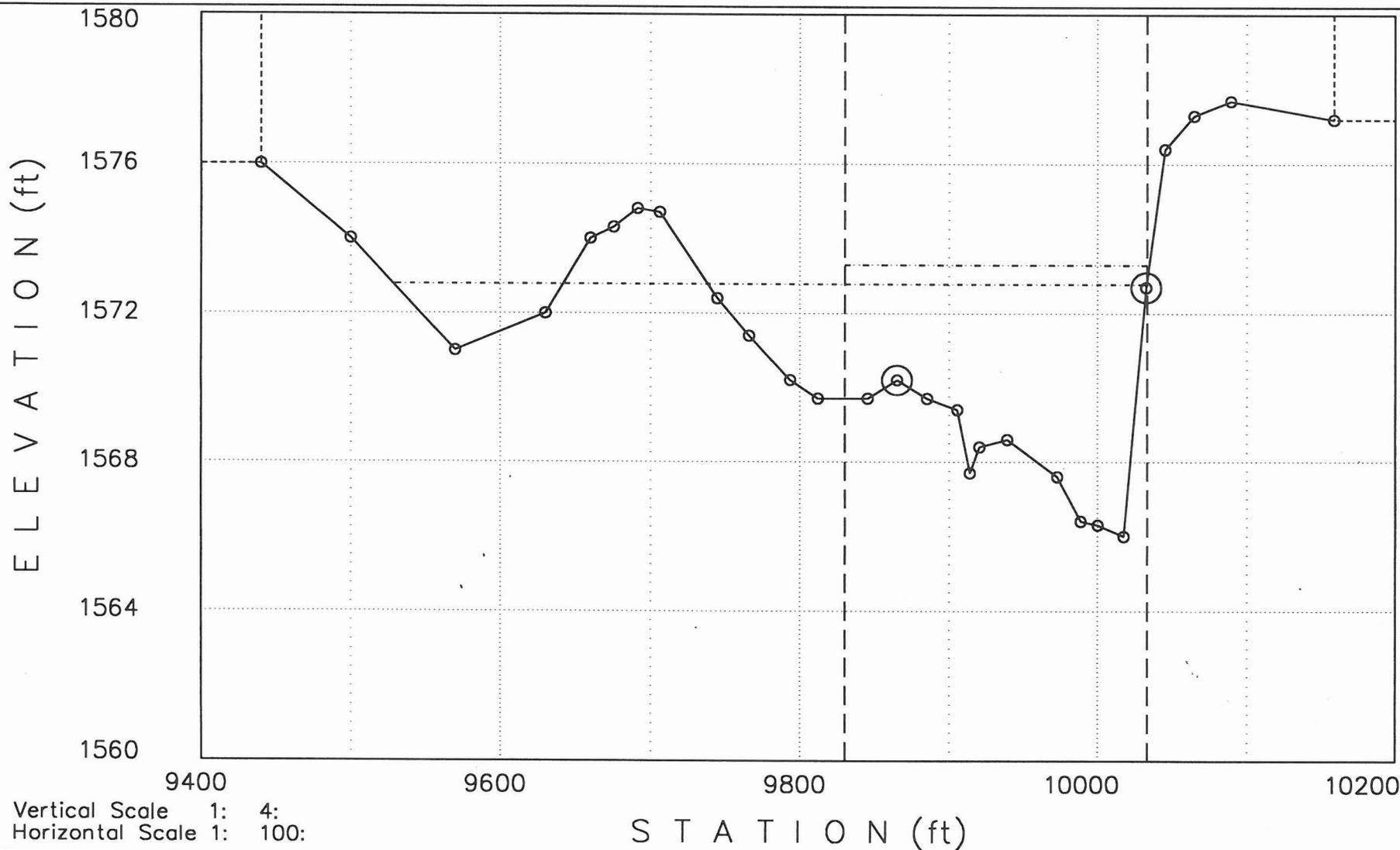
Vertical Scale 1: 4:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 5.327: (FN = 11547P31.OP1)

>>>>>>

Q1= 5400cfs WS1= 1572.78 -----  
Q2= 5400cfs WS2= 1573.29 -----

Manning-n Values: LOB: .055 CH: .04 ROB: .055

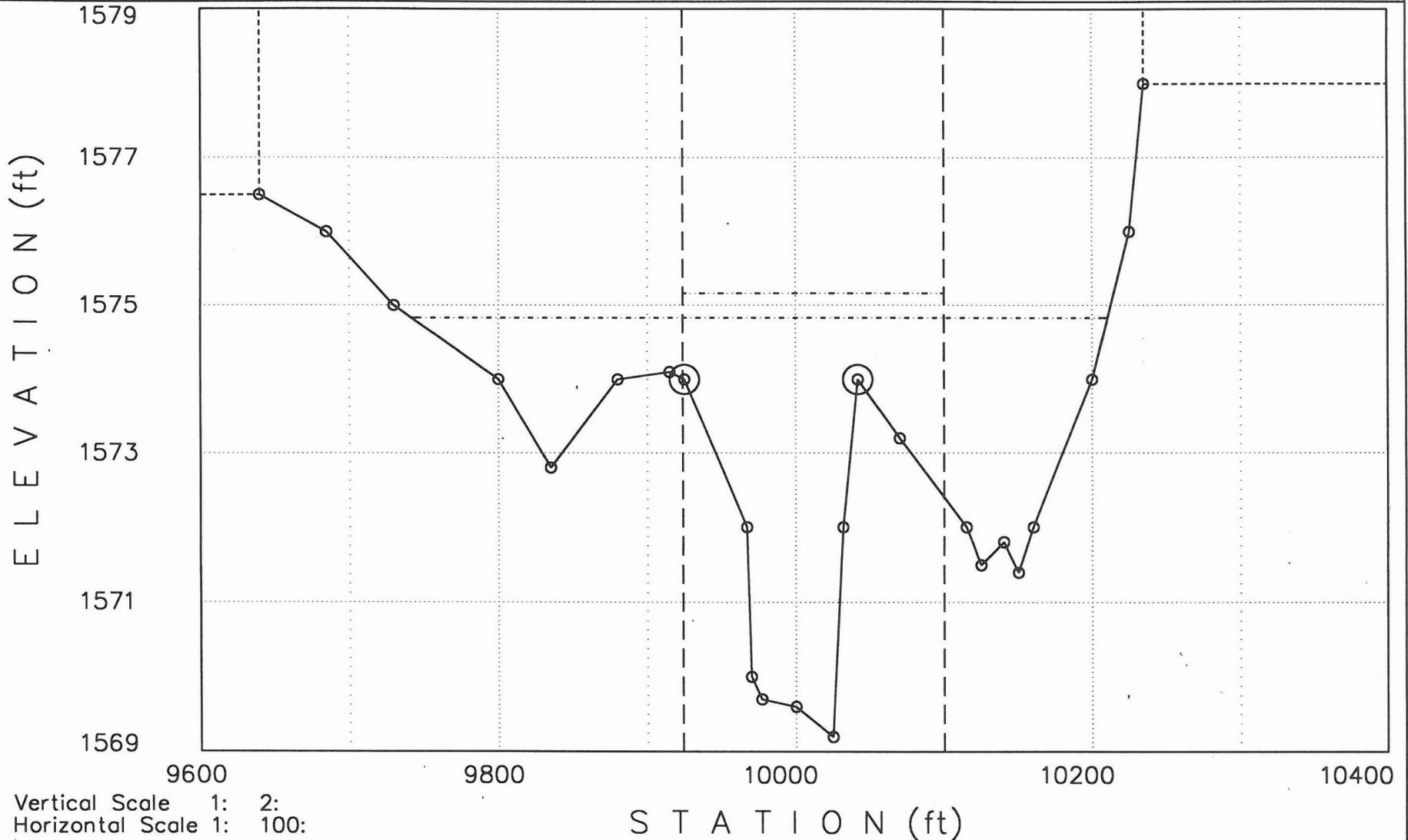


<<<<<< Cross Section: 5.413: (FN = 11547P31.OP1)

>>>>>>

Q1= 5400cfs WS1= 1574.83  
Q2= 5400cfs WS2= 1575.16

Manning-n Values: LOB: .055 CH: .04 ROB: .045 - .047

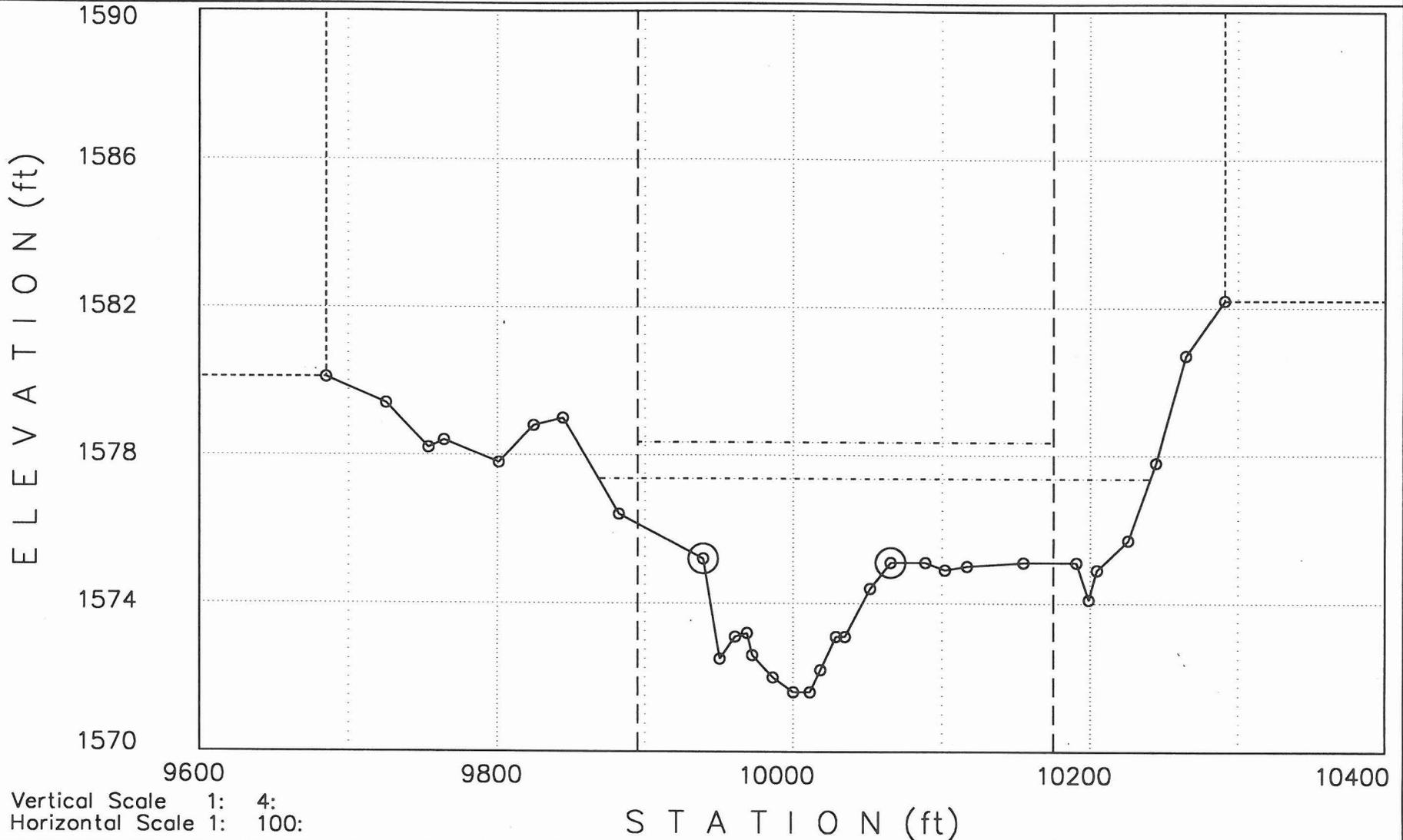


<<<<<< Cross Section: 5.493: (FN = 11547P31.OP1)

>>>>>>

Q1= 5400cfs WS1= 1577.36  
Q2= 5400cfs WS2= 1578.35

Manning-n Values: LOB: .055 CH: .04 ROB: .05

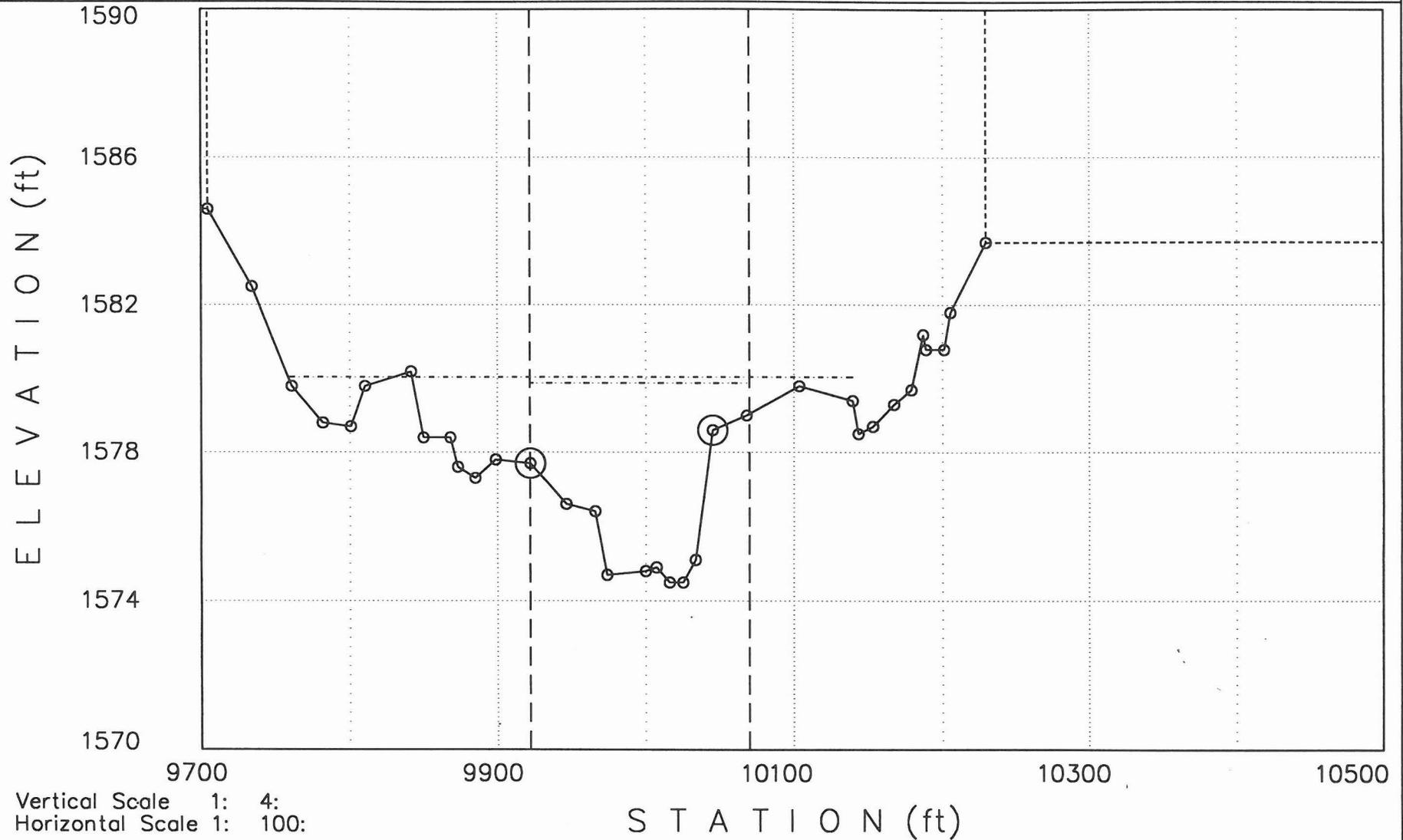


<<<<<< Cross Section: 5.589: (FN = 11547P31.OP1)

>>>>>>

Q1= 5400cfs WS1= 1580.05 -----  
Q2= 5400cfs WS2= 1579.88 -----

Manning-n Values: LOB: .05 CH: .04 ROB: .055

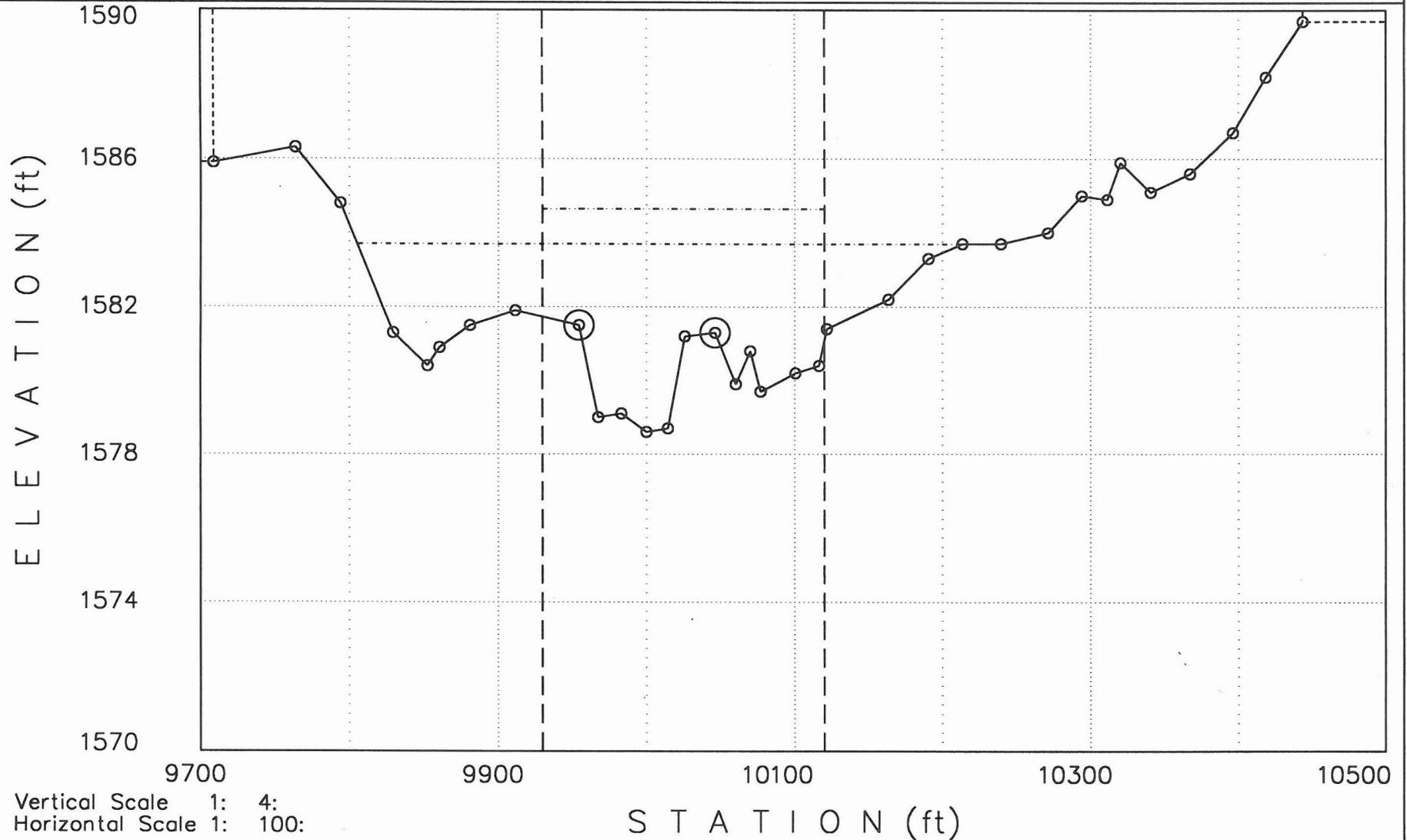


<<<<<< Cross Section: 5.682: (FN = 11547P31.OP1)

>>>>>>

Q1= 5500cfs WS1= 1583.69  
Q2= 5500cfs WS2= 1584.64

Manning-n Values: LOB: .05 CH: .04 ROB: .055



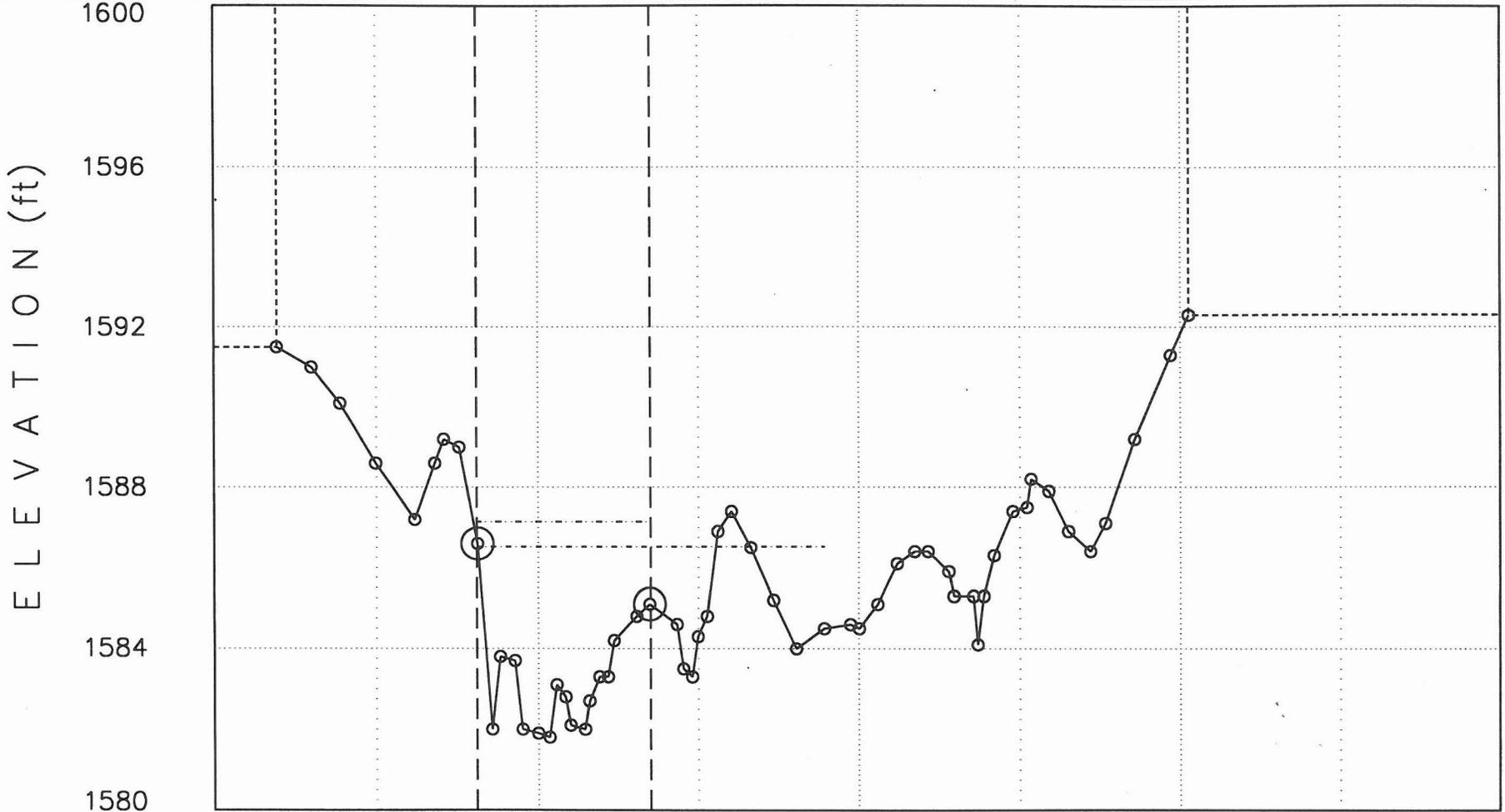
Vertical Scale 1: 4:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 5.771: (FN = 11547P31.0P1)

>>>>>>

Q1= 5500cfs WS1= 1586.52  
Q2= 5500cfs WS2= 1587.14

Manning-n Values: LOB: 0 - .05 CH: .04 ROB: .055



Vertical Scale 1: 4:  
Horizontal Scale 1: 200:  
STATION (ft)

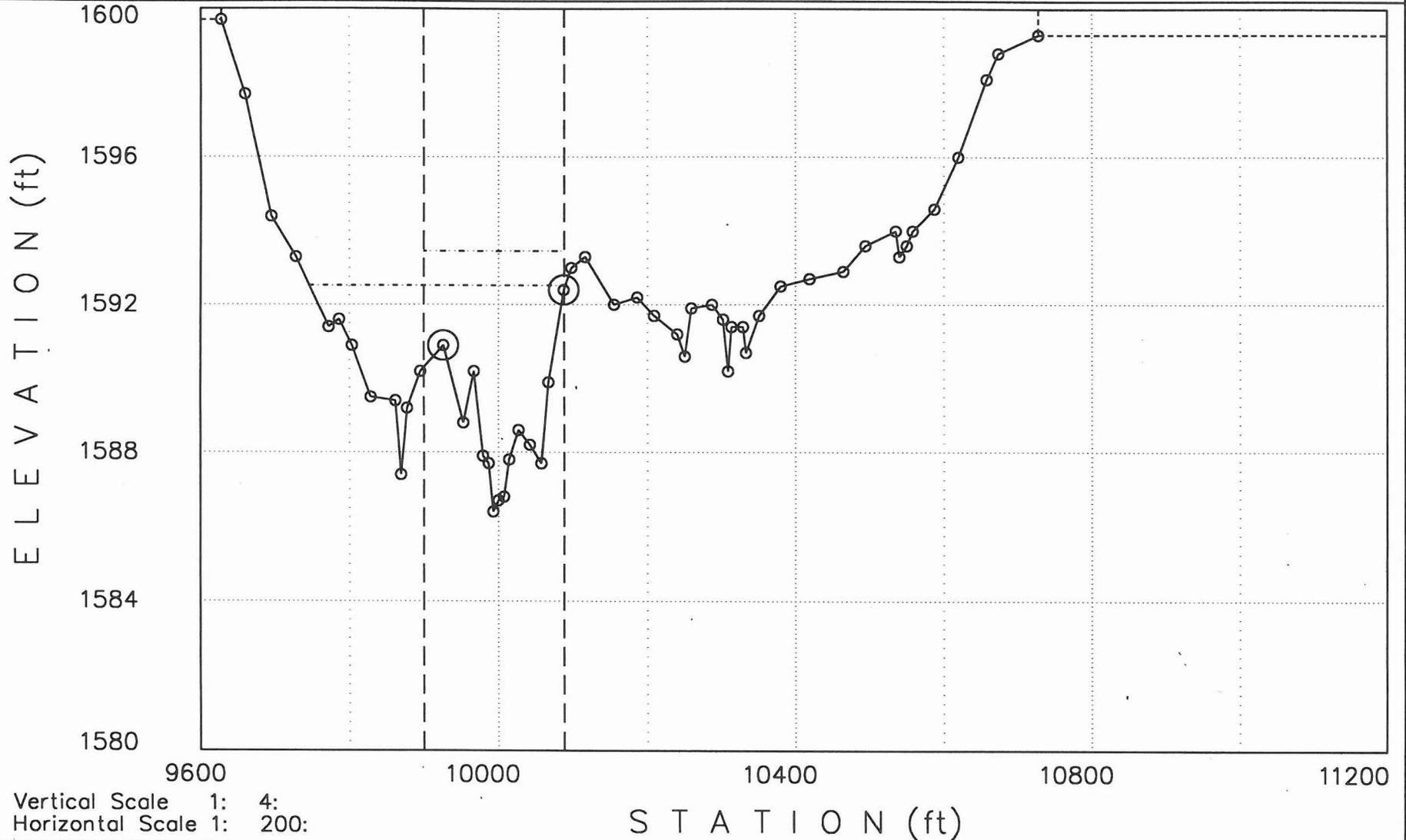


<<<<<< Cross Section: 5.961: (FN = 11547P31.OP1)

>>>>>>

Q1= 5500cfs WS1= 1592.52 -----  
Q2= 5500cfs WS2= 1593.46 -----

Manning-n Values: LOB: .05 CH: .045 ROB: .055

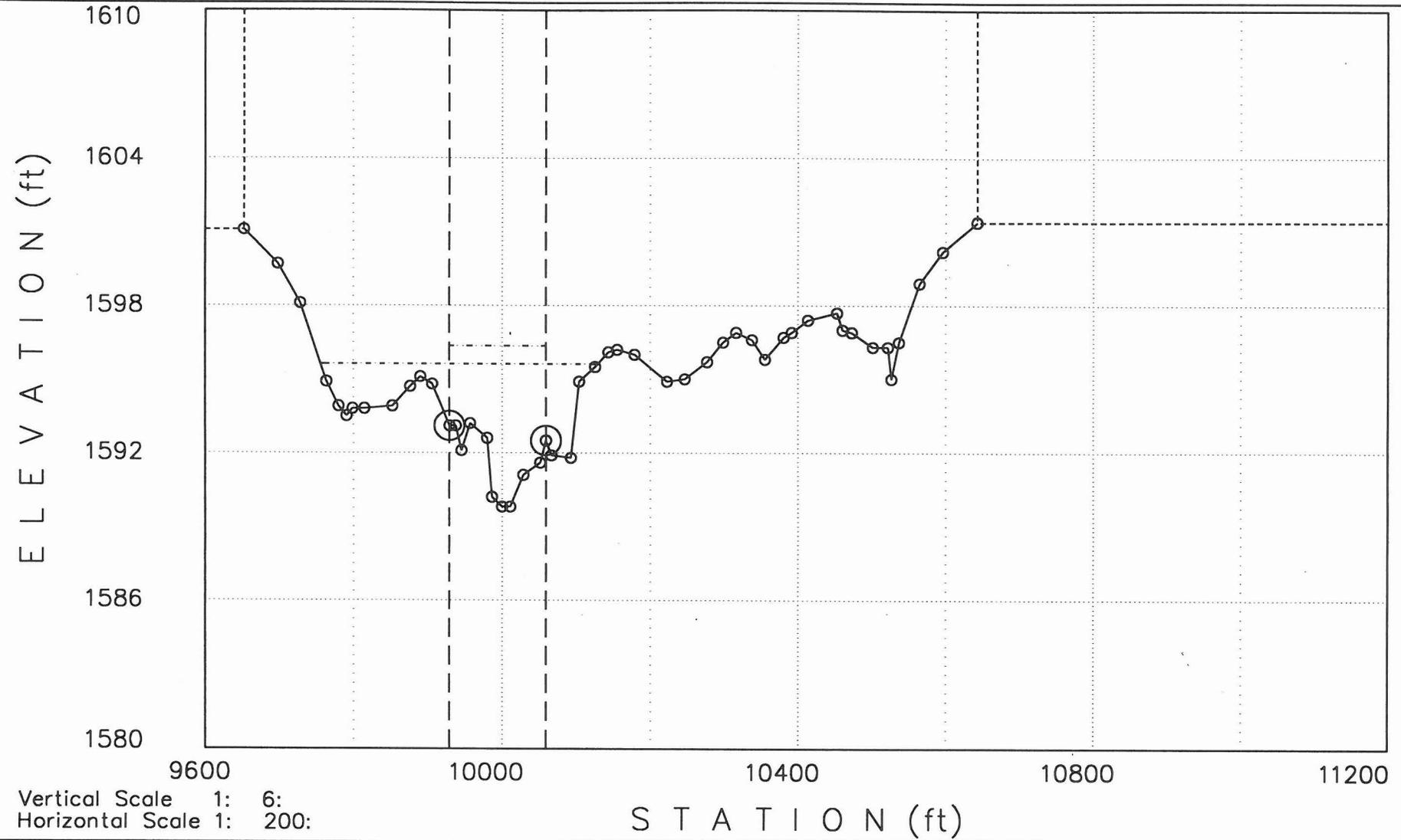


<<<<<< Cross Section: 6.057: (FN = 11547P31.OP1)

>>>>>>

Q1= 5500cfs WS1= 1595.62  
Q2= 5500cfs WS2= 1596.35

Manning-n Values: LOB: .05 CH: .04 ROB: .055



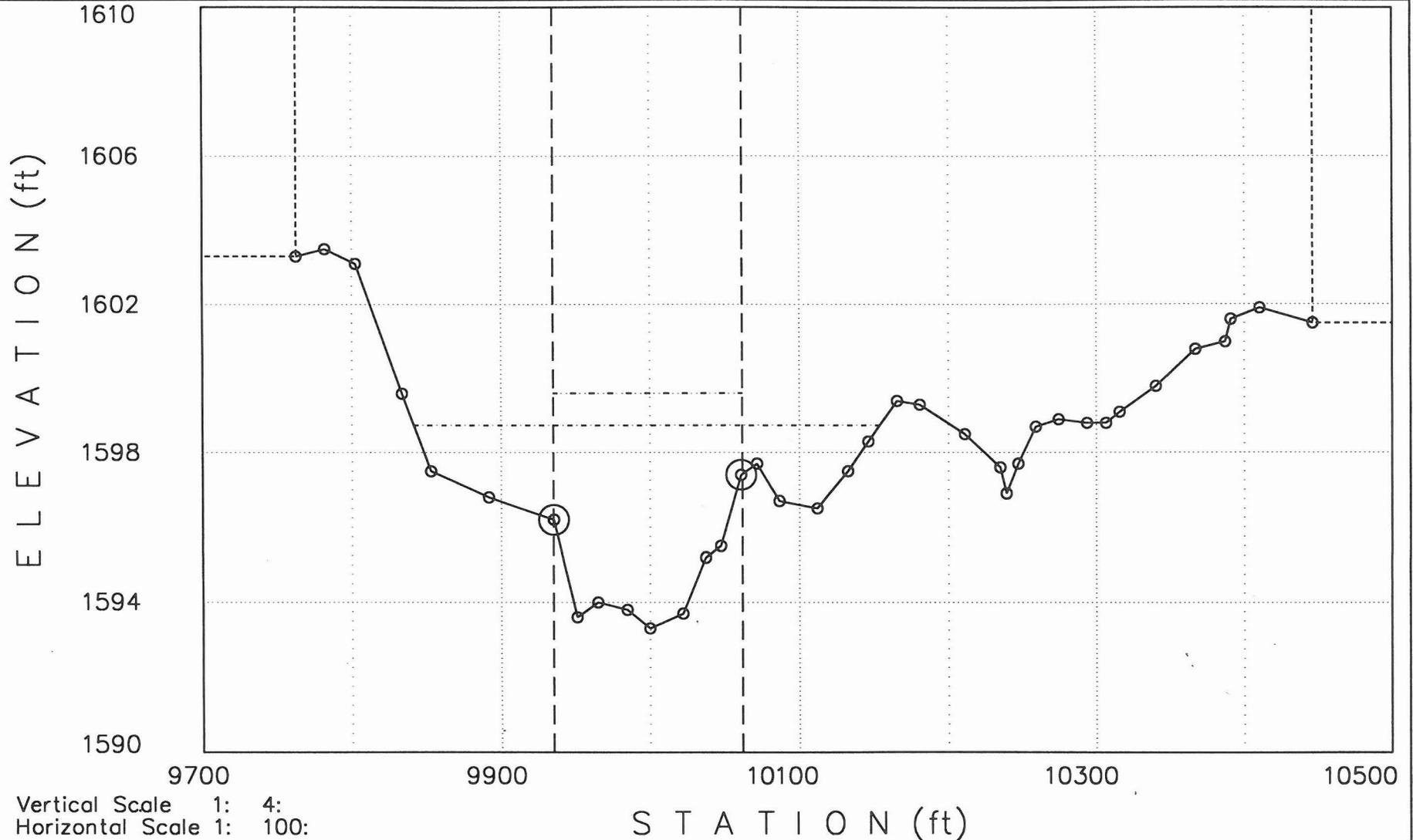
Vertical Scale 1: 6:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 6.15: (FN = 11547P31.OP1)

>>>>>>

Q1= 5500cfs WS1= 1598.74  
Q2= 5500cfs WS2= 1599.61

Manning-n Values: LOB: .05 CH: .04 ROB: .055

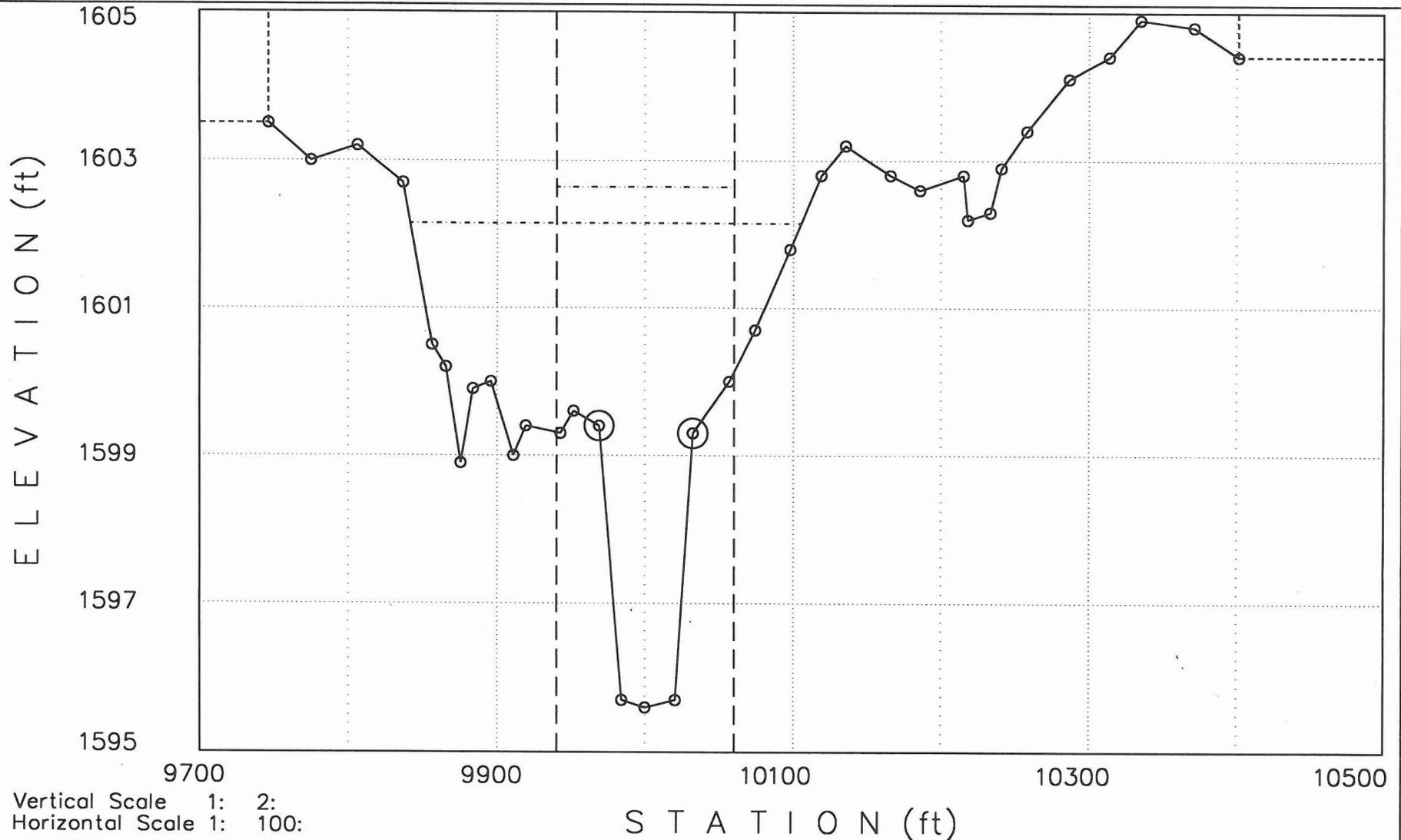


<<<<<< Cross Section: 6.248: (FN = 11547P31.OP1)

>>>>>>

Q1= 5500cfs WS1= 1602.15  
Q2= 5500cfs WS2= 1602.64

Manning-n Values: LOB: .05 CH: .04 ROB: .055

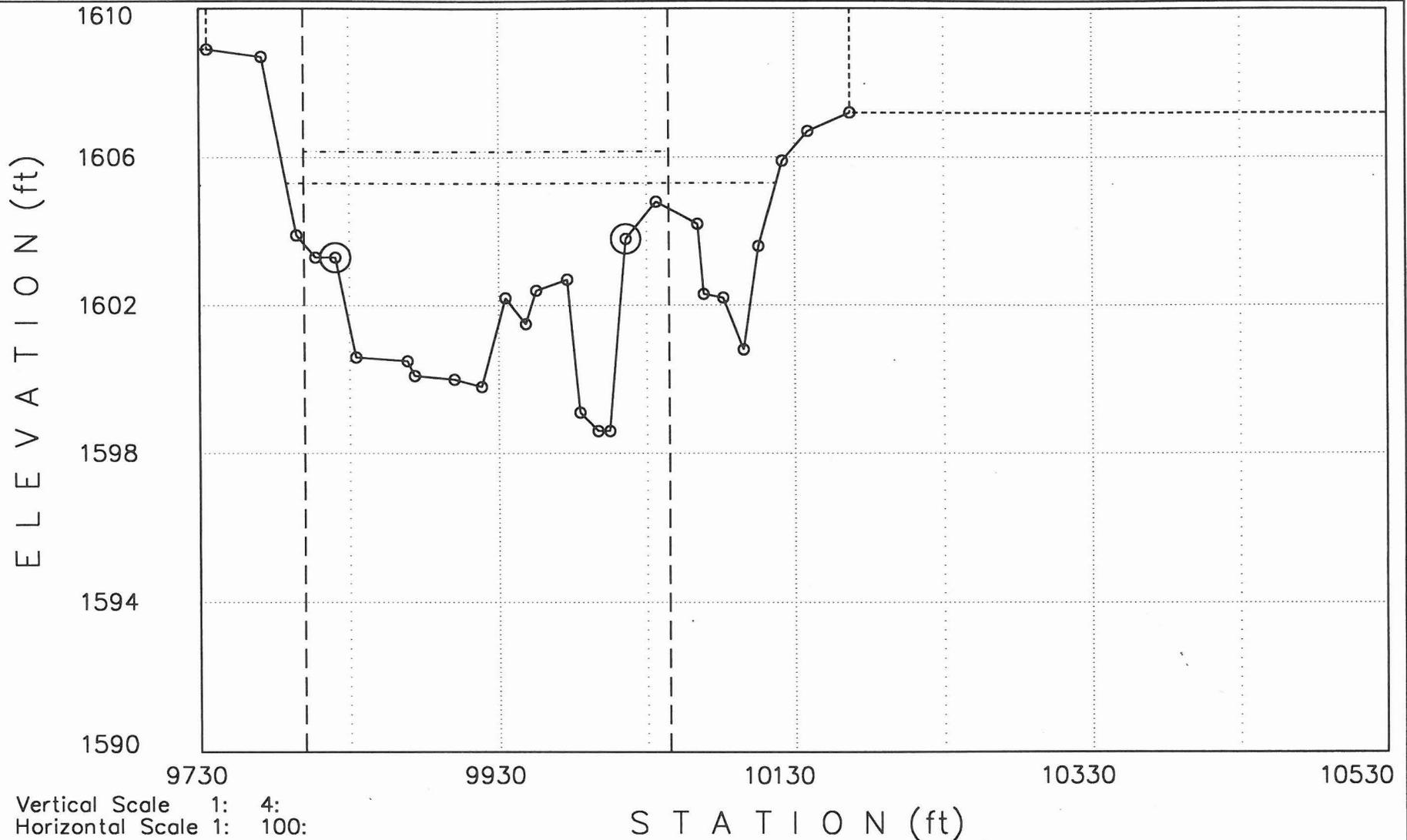


<<<<<< Cross Section: 6.347: (FN = 11547P31.OP1)

>>>>>>

Q1= 5500cfs WS1= 1605.3  
Q2= 5500cfs WS2= 1606.16

Manning-n Values: LOB: .055 CH: .04 - .041 ROB: .055

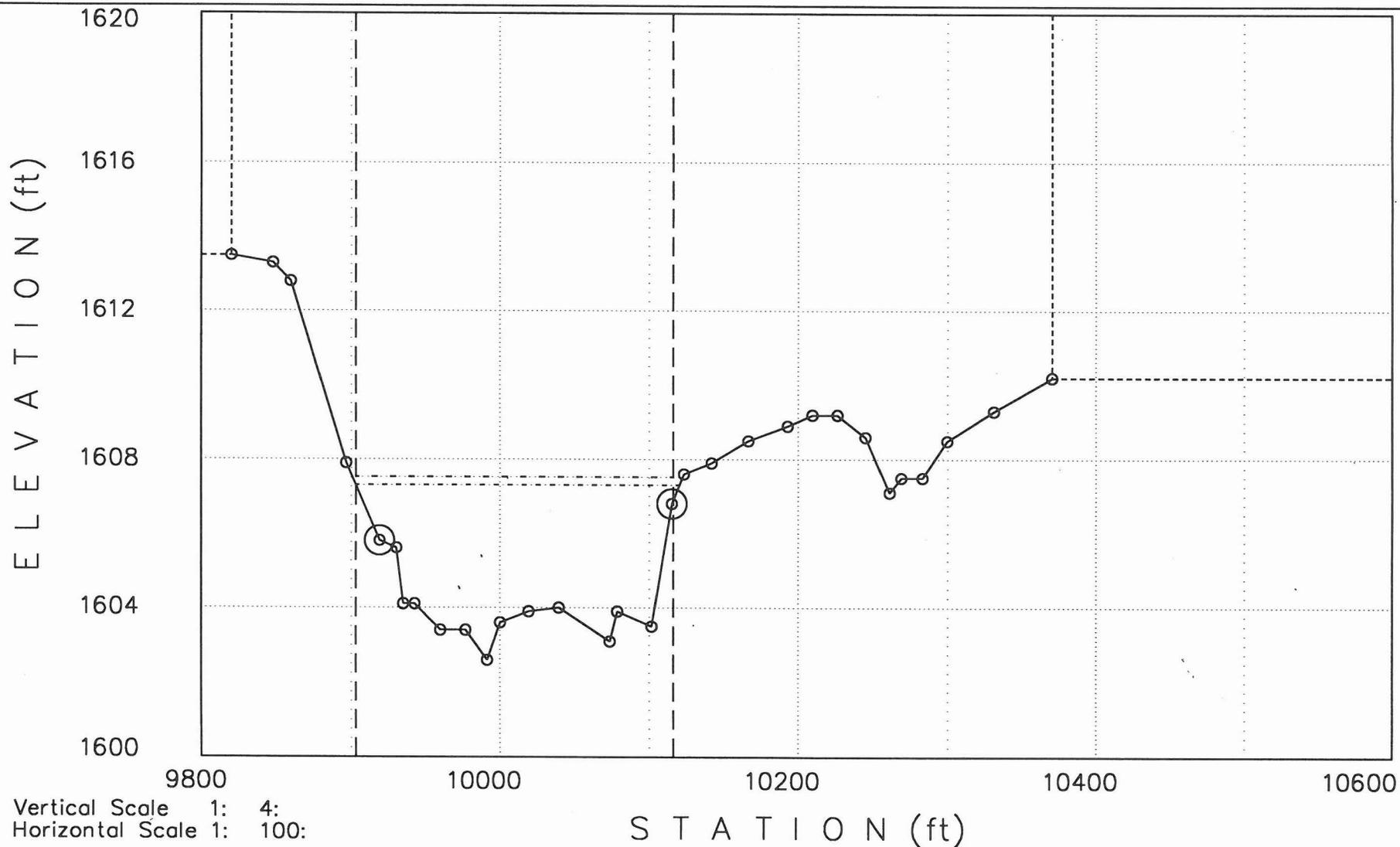


<<<<<< Cross Section: 6.44: (FN = 11547P31.OP1)

>>>>>>

Q1= 5500cfs WS1= 1607.3  
Q2= 5500cfs WS2= 1607.52

Manning-n Values: LOB: .055 CH: .04 ROB: .055



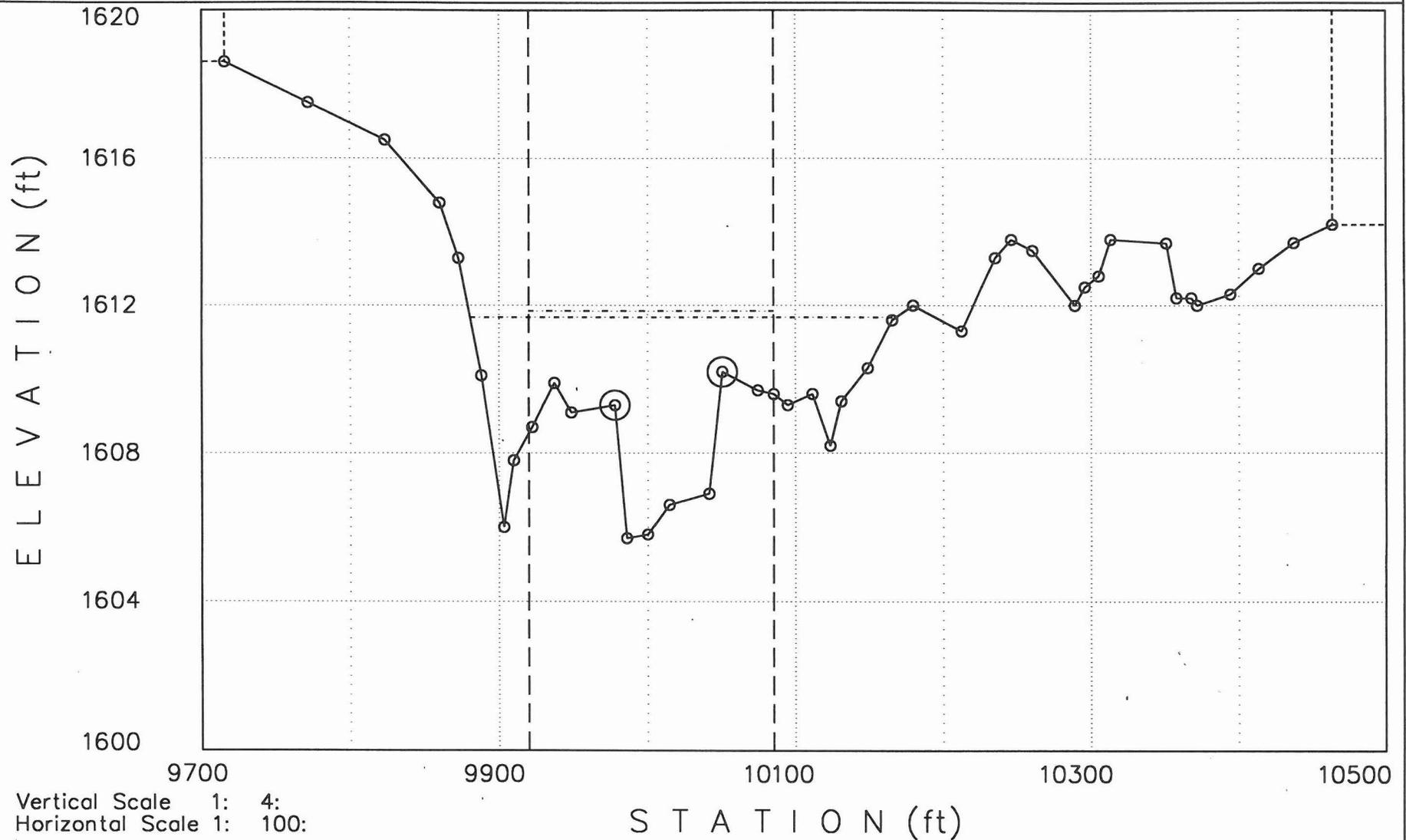
Vertical Scale 1: 4:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 6.538: (FN = 11547P31.OP1)

>>>>>>

Q1= 5500cfs WS1= 1611.68  
Q2= 5500cfs WS2= 1611.85

Manning-n Values: LOB: .05 CH: .04 ROB: .055

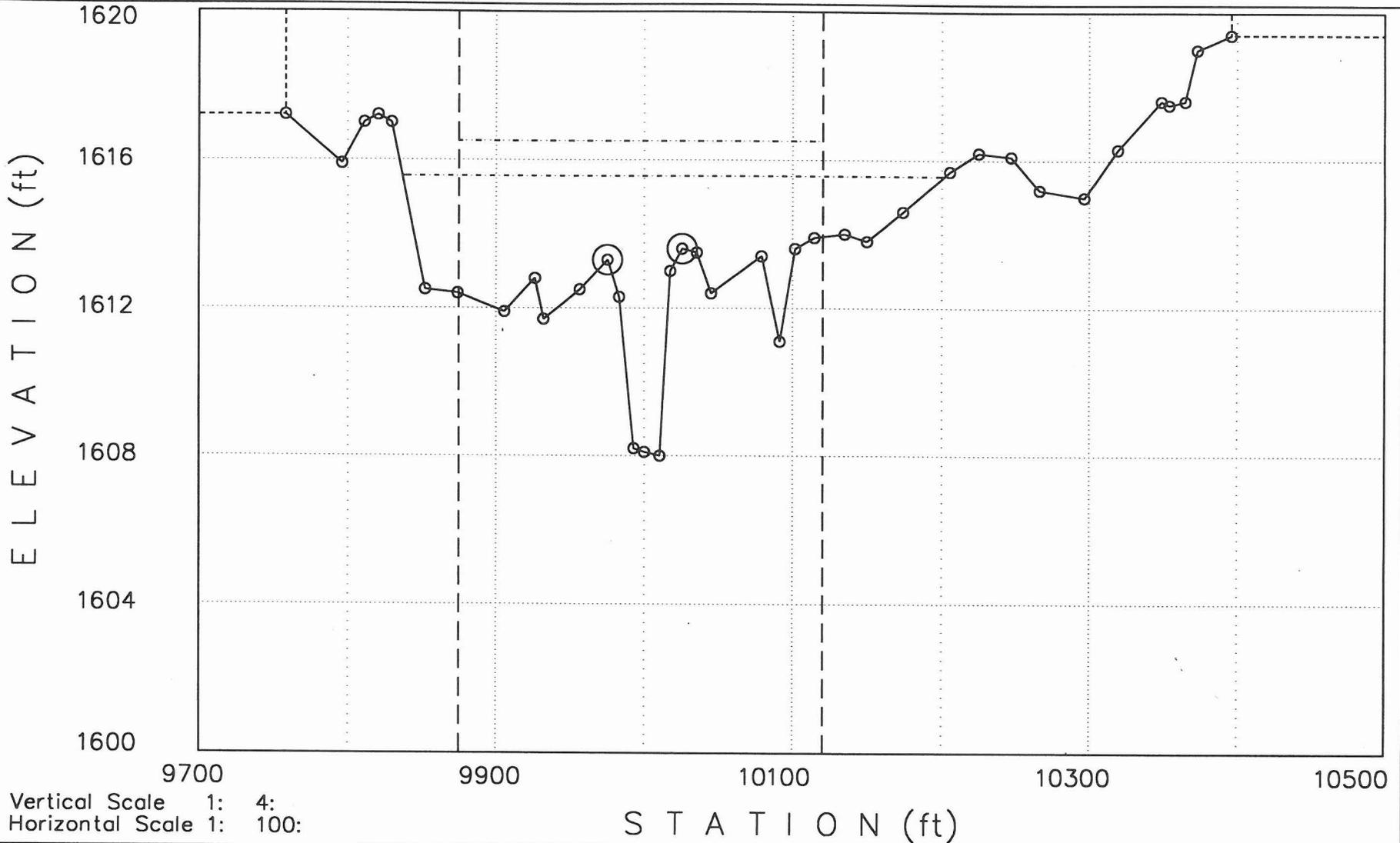


Vertical Scale 1: 4:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 6.63: (FN = 11547P31.OP1) >>>>>>

Q1= 5500cfs WS1= 1615.57  
Q2= 5500cfs WS2= 1616.51

Manning-n Values: LOB: .05 CH: .045 ROB: .055

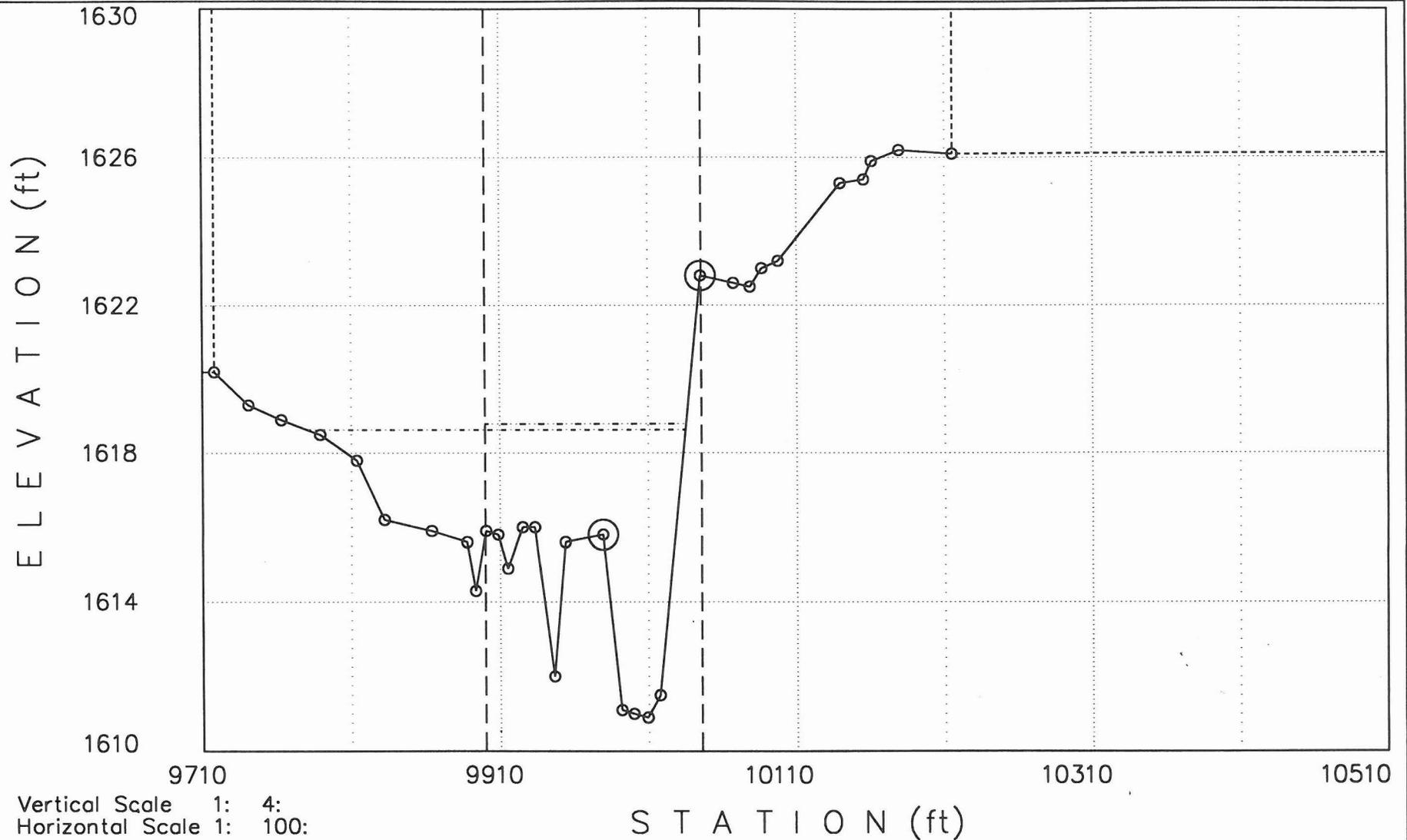


<<<<<< Cross Section: 6.727: (FN = 11547P31.OP1)

>>>>>>

Q1= 5500cfs WS1= 1618.63  
Q2= 5500cfs WS2= 1618.79

Manning-n Values: LOB: .05 CH: .04 ROB: 0

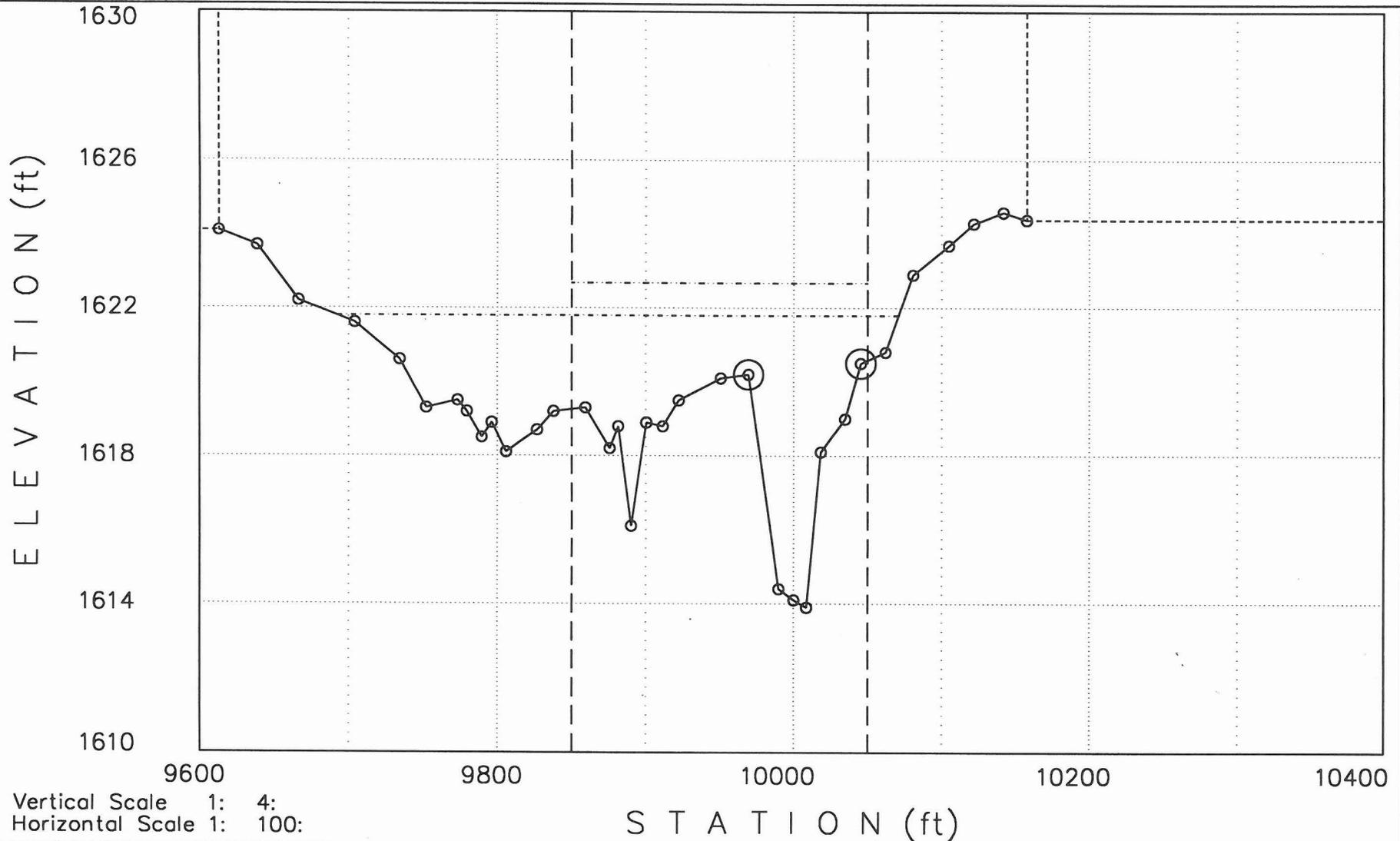


Vertical Scale 1: 4:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 6.825: (FN = 11547P31.0P1) >>>>>>

Q1= 5500cfs WS1= 1621.79 -----  
Q2= 5500cfs WS2= 1622.68 -----

Manning-n Values: LOB: .05 CH: .04 ROB: .055

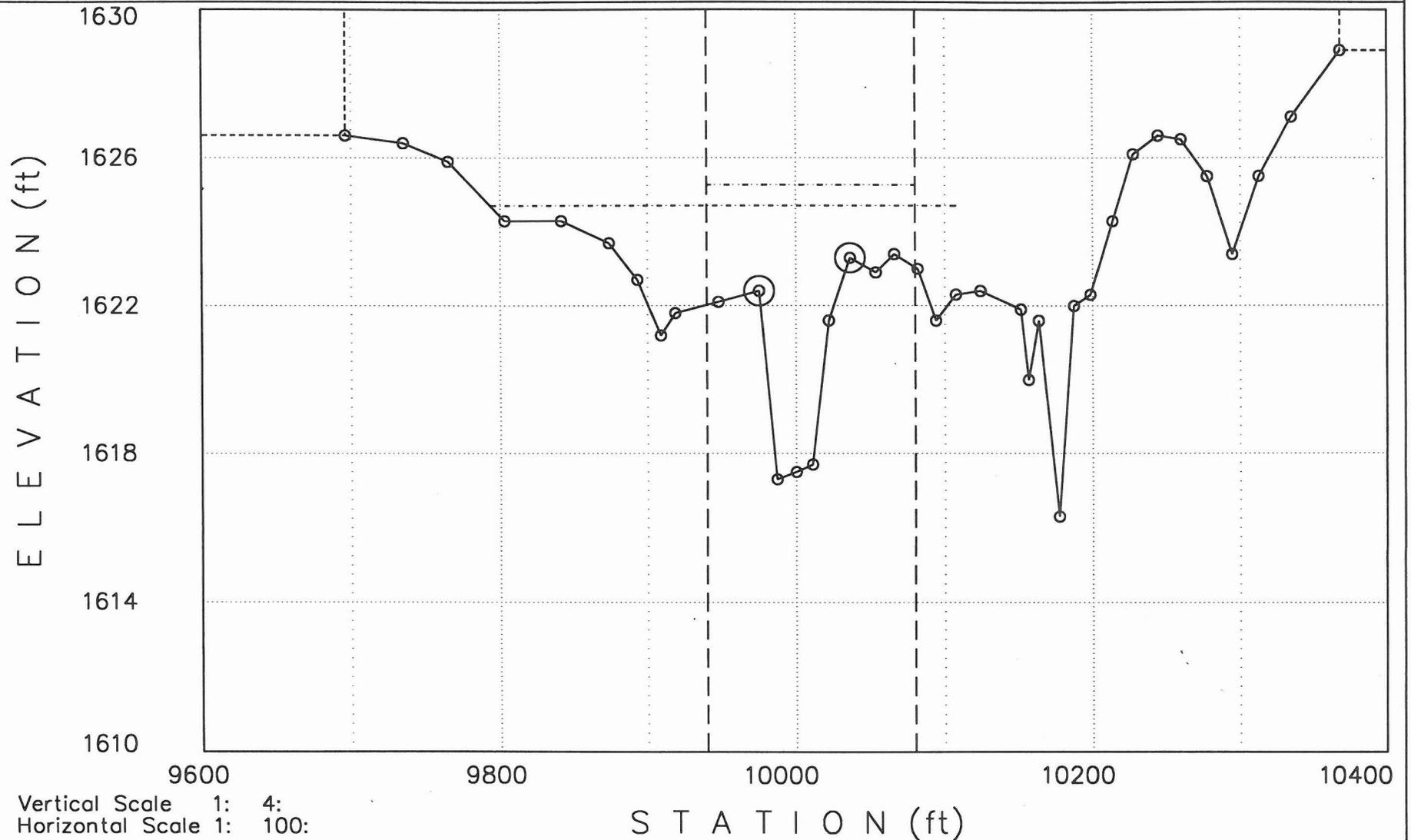


<<<<<< Cross Section: 6.921: (FN = 11547P31.OP1)

>>>>>>

Q1= 5500cfs WS1= 1624.71 -----  
Q2= 5500cfs WS2= 1625.27 -----

Manning-n Values: LOB: .05 CH: .04 ROB: .055

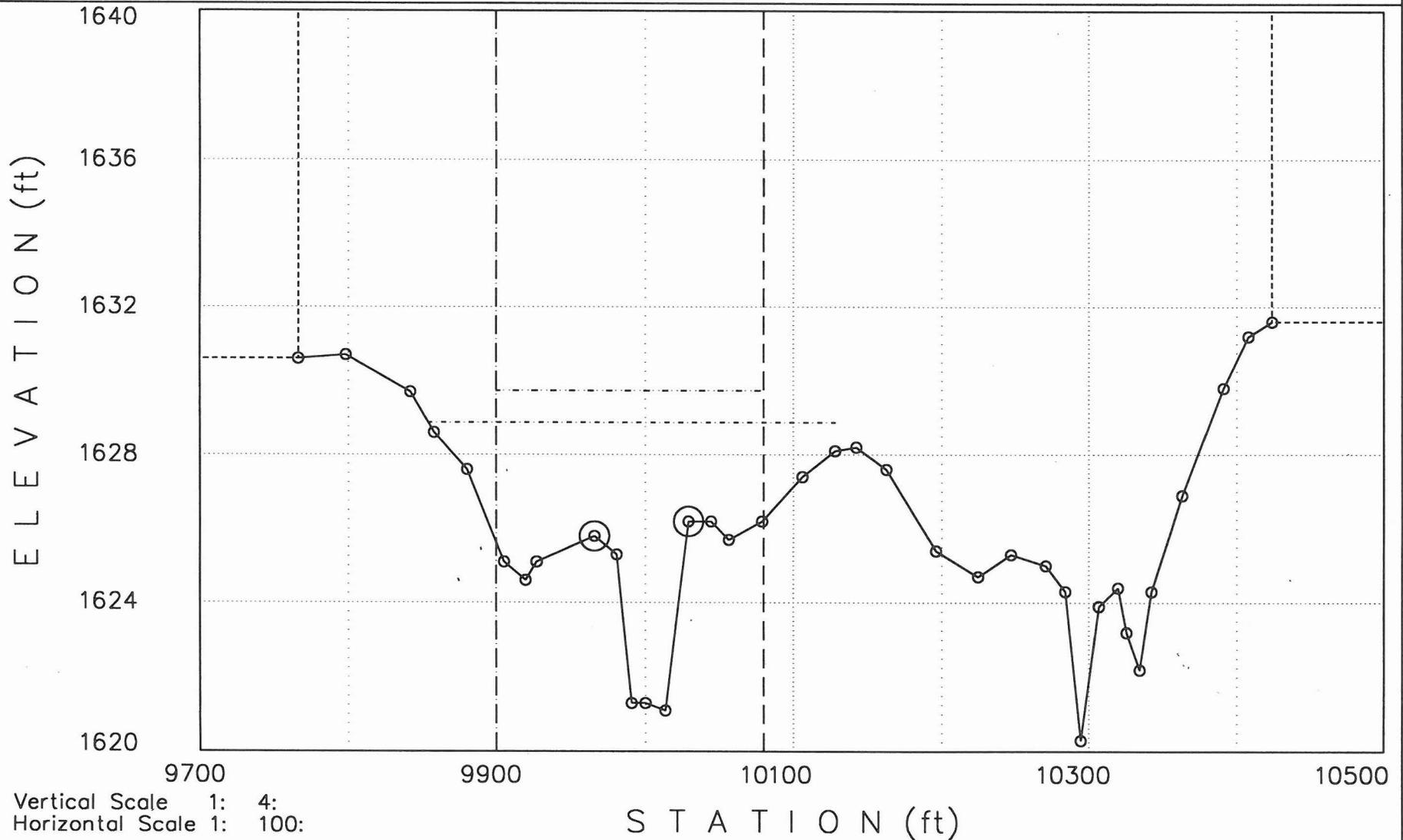


Vertical Scale 1: 4:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 7.013: (FN = 11547P31.OP1) >>>>>>

Q1= 5500cfs WS1= 1628.87 -----  
Q2= 5500cfs WS2= 1629.73 -----

Manning-n Values: LOB: .05 CH: .04 ROB: .055



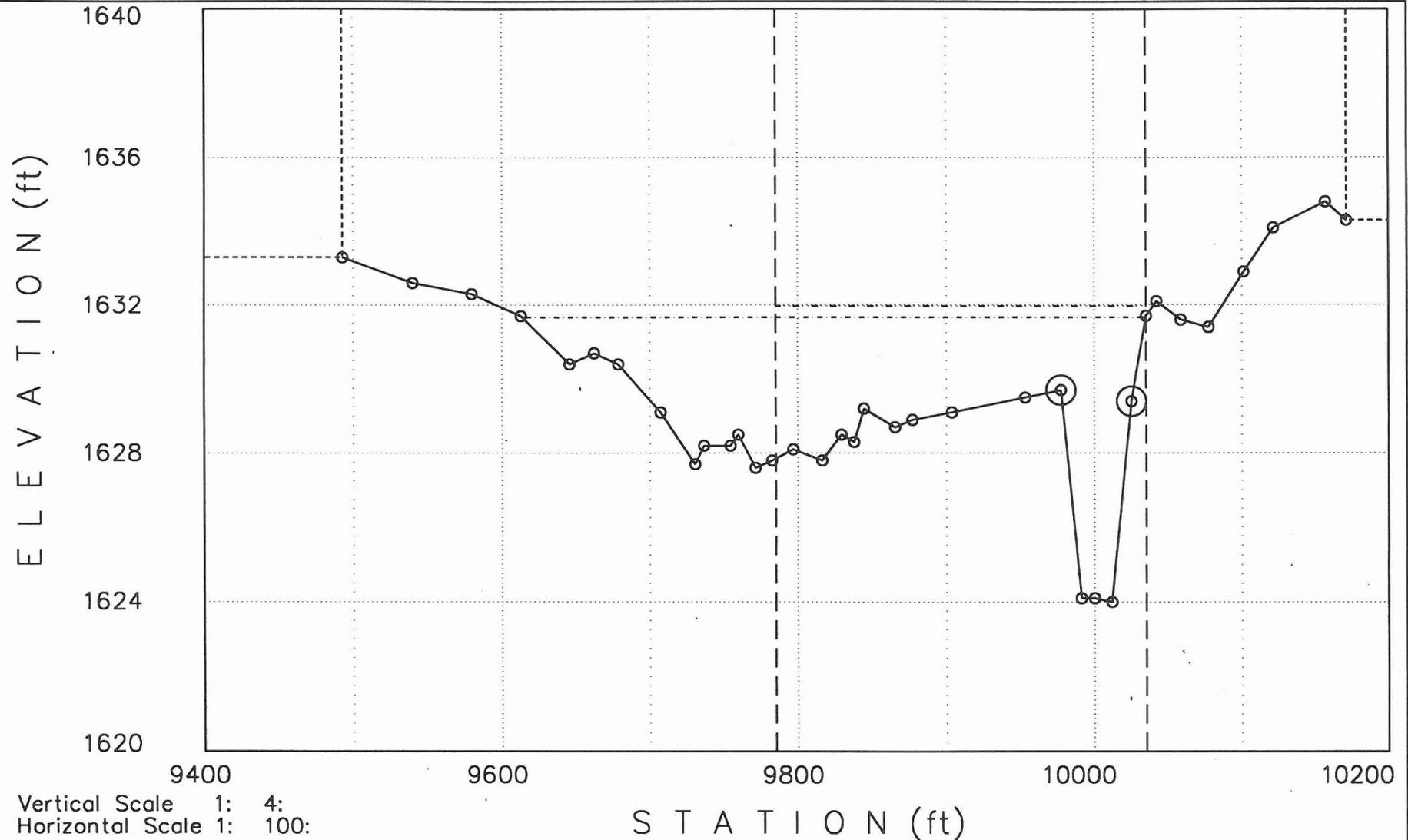
Vertical Scale 1: 4:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 7.106: (FN = 11547P31.OP1)

>>>>>>

Q1= 5600cfs WS1= 1631.66  
Q2= 5600cfs WS2= 1631.97

Manning-n Values: LOB: .05 CH: .04 ROB: .055



Vertical Scale 1: 4:  
Horizontal Scale 1: 100:

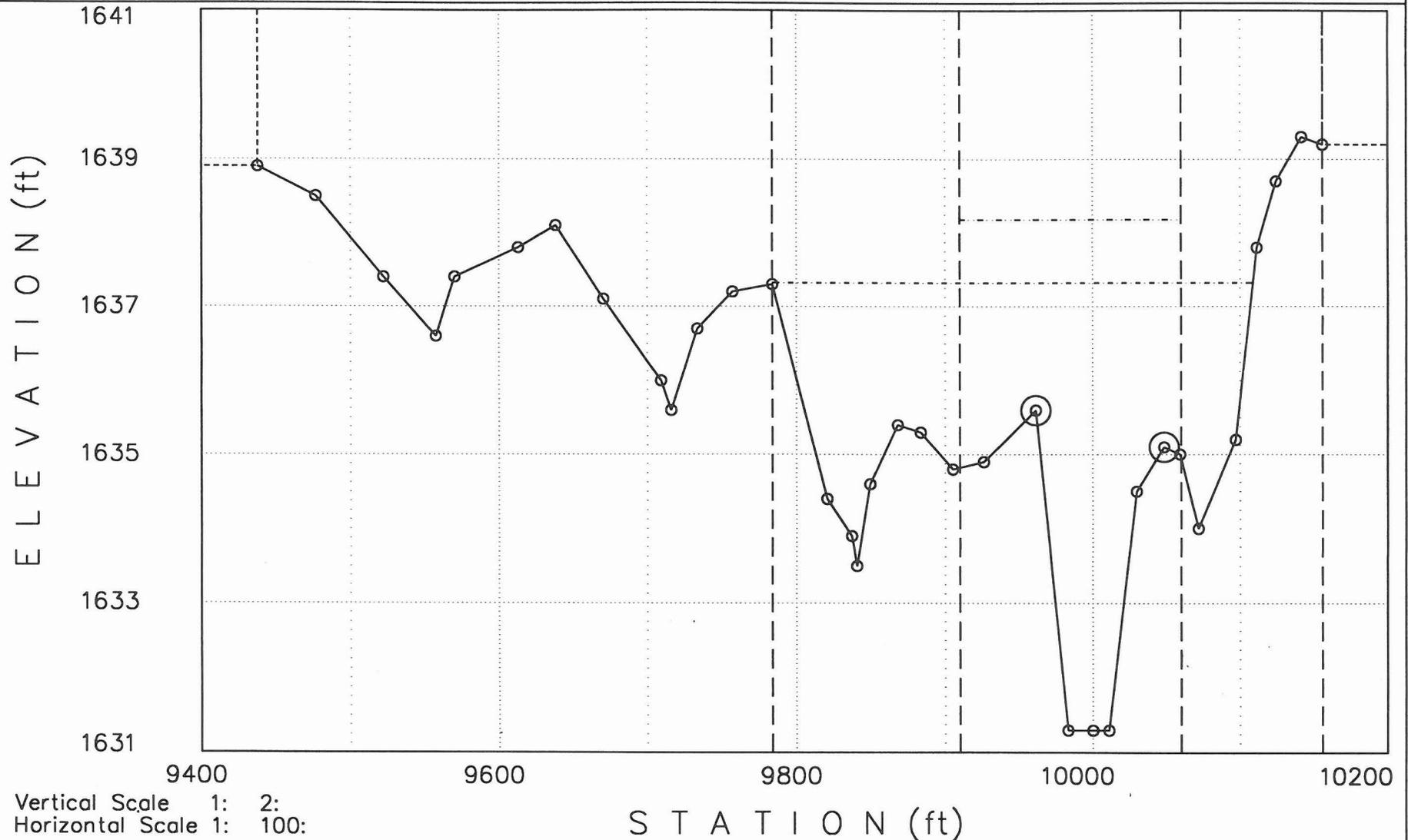


<<<<<< Cross Section: 7.297: (FN = 11547P31.OP1)

>>>>>>

Q1= 5600cfs WS1= 1637.32  
Q2= 5600cfs WS2= 1638.18

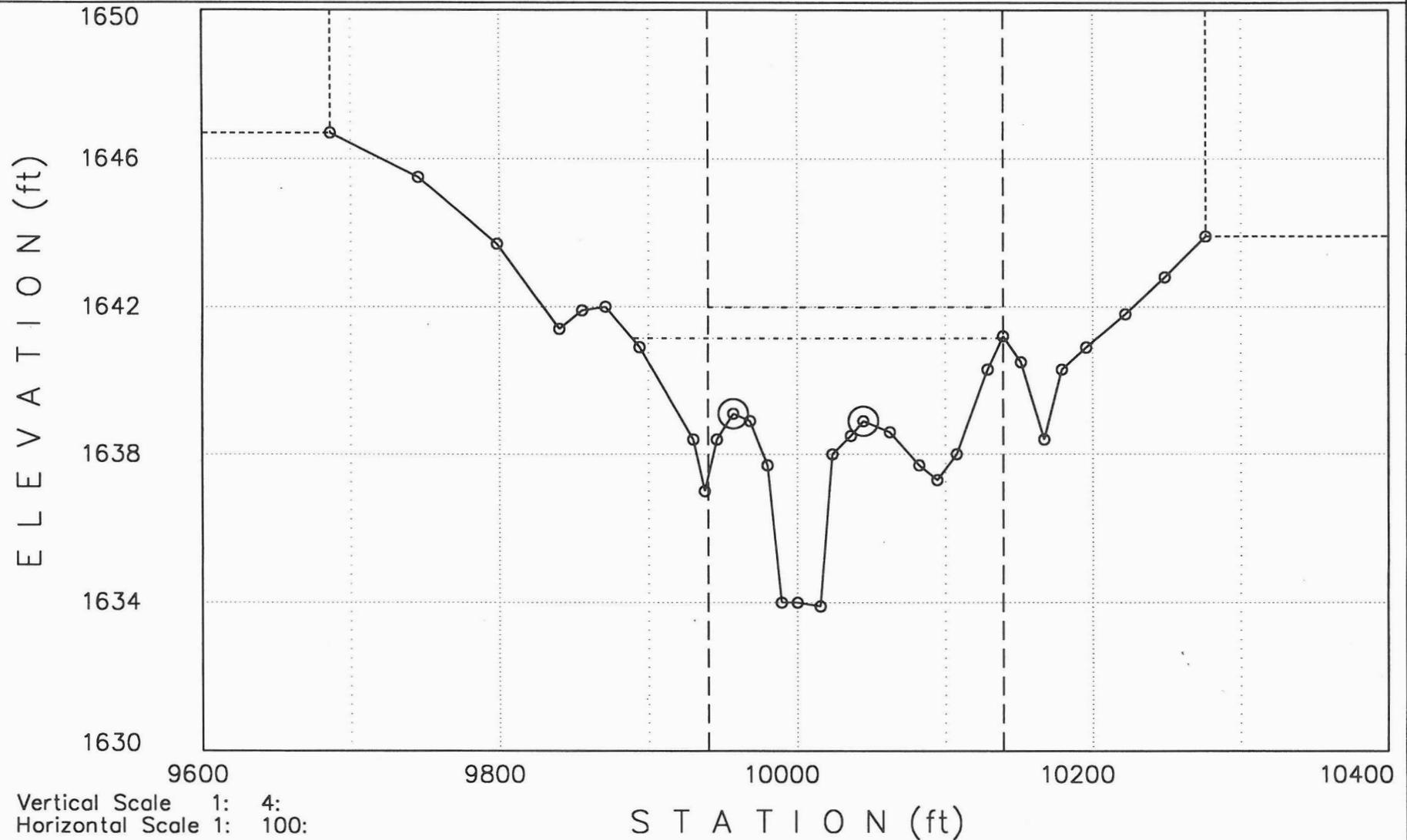
Manning-n Values: LOB: .05 CH: .04 ROB: .055



<<<<<< Cross Section: 7.391: (FN = 11547P31.OP1) >>>>>>

Q1= 5600cfs WS1= 1641.14 -----  
Q2= 5600cfs WS2= 1641.99 -----

Manning-n Values: LOB: .055 CH: .04 ROB: .055



Vertical Scale 1: 4:  
Horizontal Scale 1: 100:

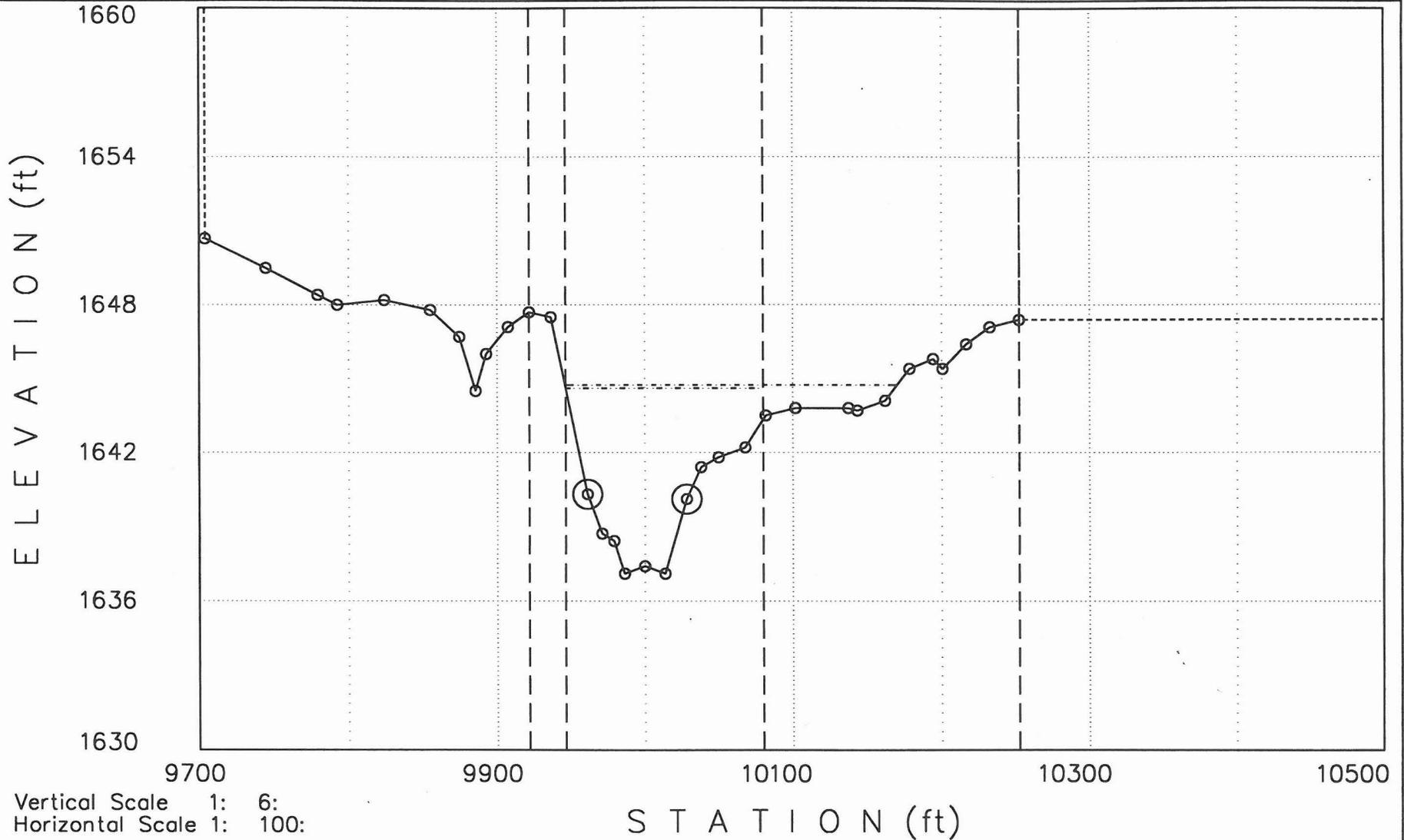
<<<<<< Cross Section: 7.488: (FN = 11547P31.OP1)

>>>>>>

Q1= 5600cfs WS1= 1644.73  
Q2= 5600cfs WS2= 1644.6

-----  
-----

Manning-n Values: LOB: .055 CH: .04 ROB: .055



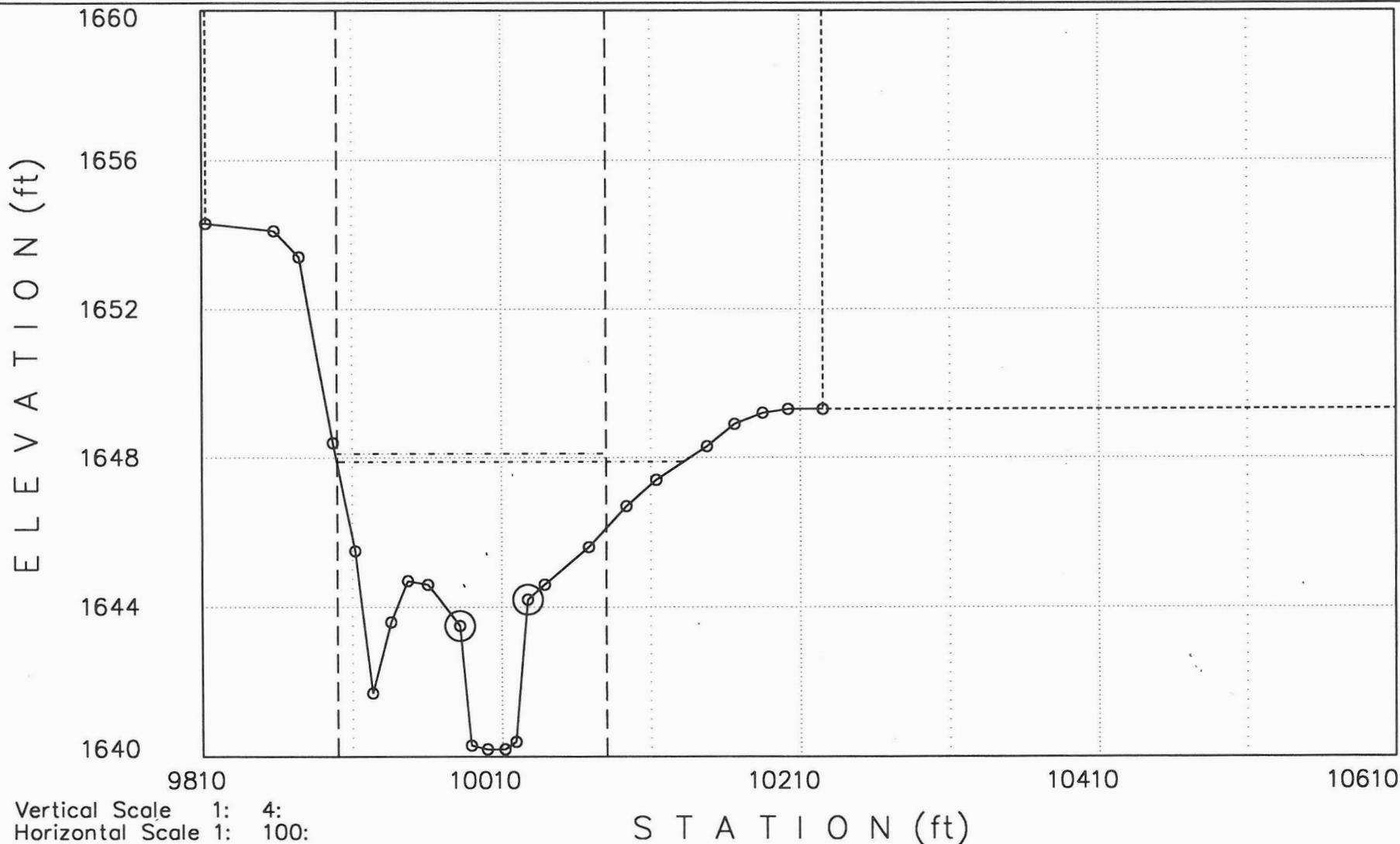
Vertical Scale 1: 6:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 7.575: (FN = 11547P31.OP1)

>>>>>>

Q1= 5600cfs WS1= 1647.89 -----  
Q2= 5600cfs WS2= 1648.11 .-----

Manning-n Values: LOB: .05 CH: .04 ROB: .055



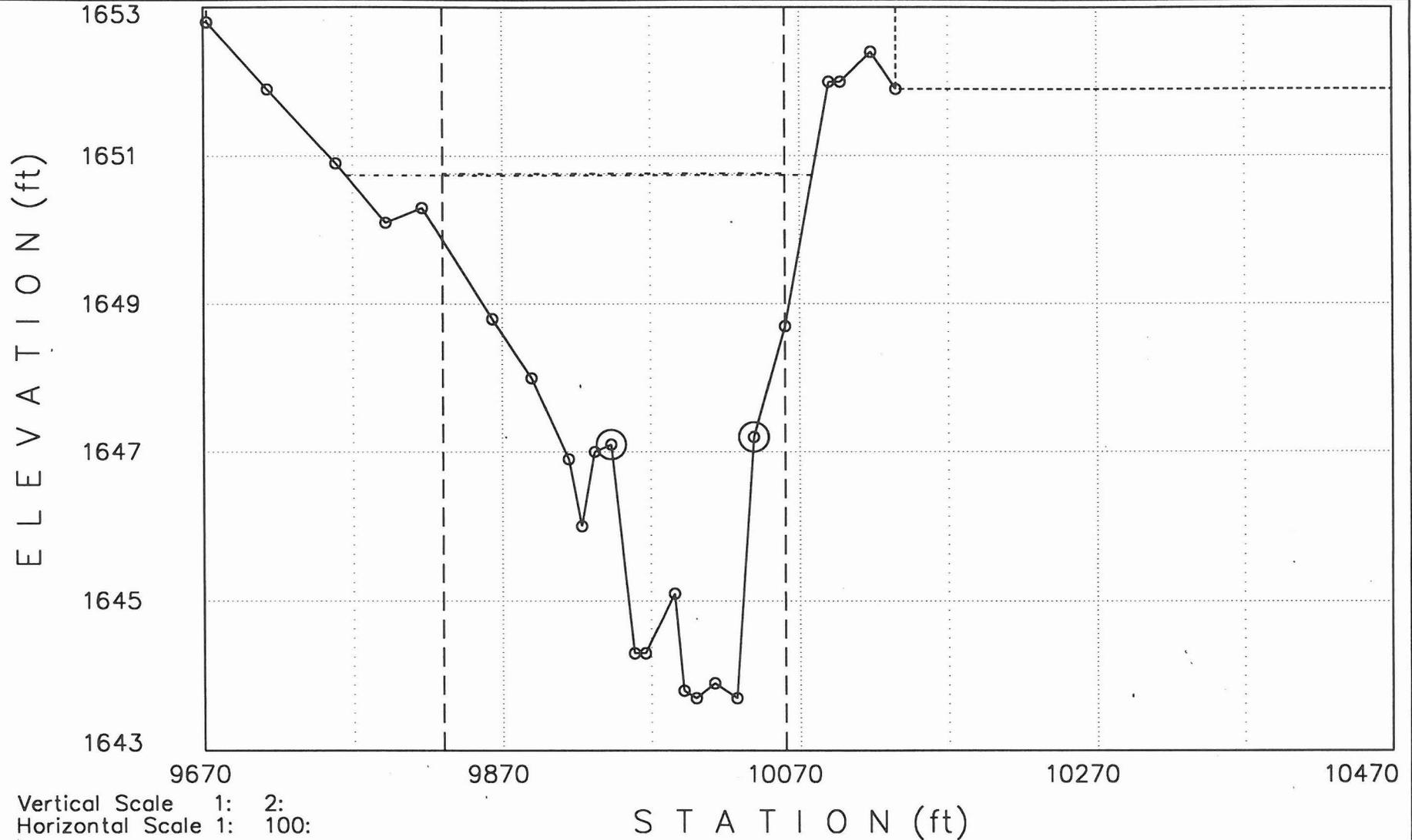
<<<<<< Cross Section: 7.674: (FN = 11547P31.OP1)

>>>>>>

Q1= 5600cfs WS1= 1650.74  
Q2= 5600cfs WS2= 1650.76

-----  
-----

Manning-n Values: LOB: .05 CH: .042 ROB: .055



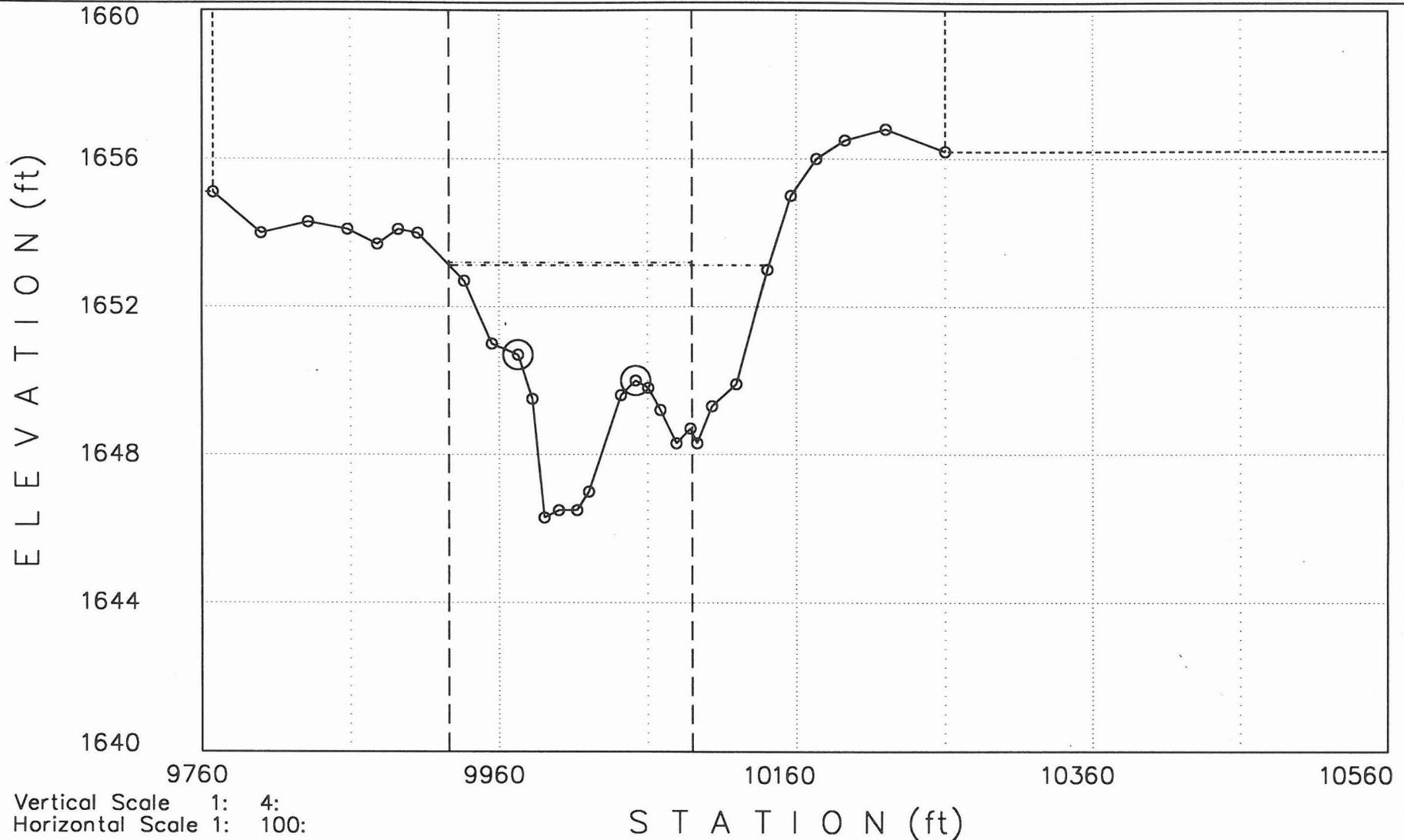
<<<<<< Cross Section: 7.771: (FN = 11547P31.OP1)

>>>>>>

Q1= 5600cfs WS1= 1653.12  
Q2= 5600cfs WS2= 1653.2

-----  
-----

Manning-n Values: LOB: .055 CH: .045 ROB: .05



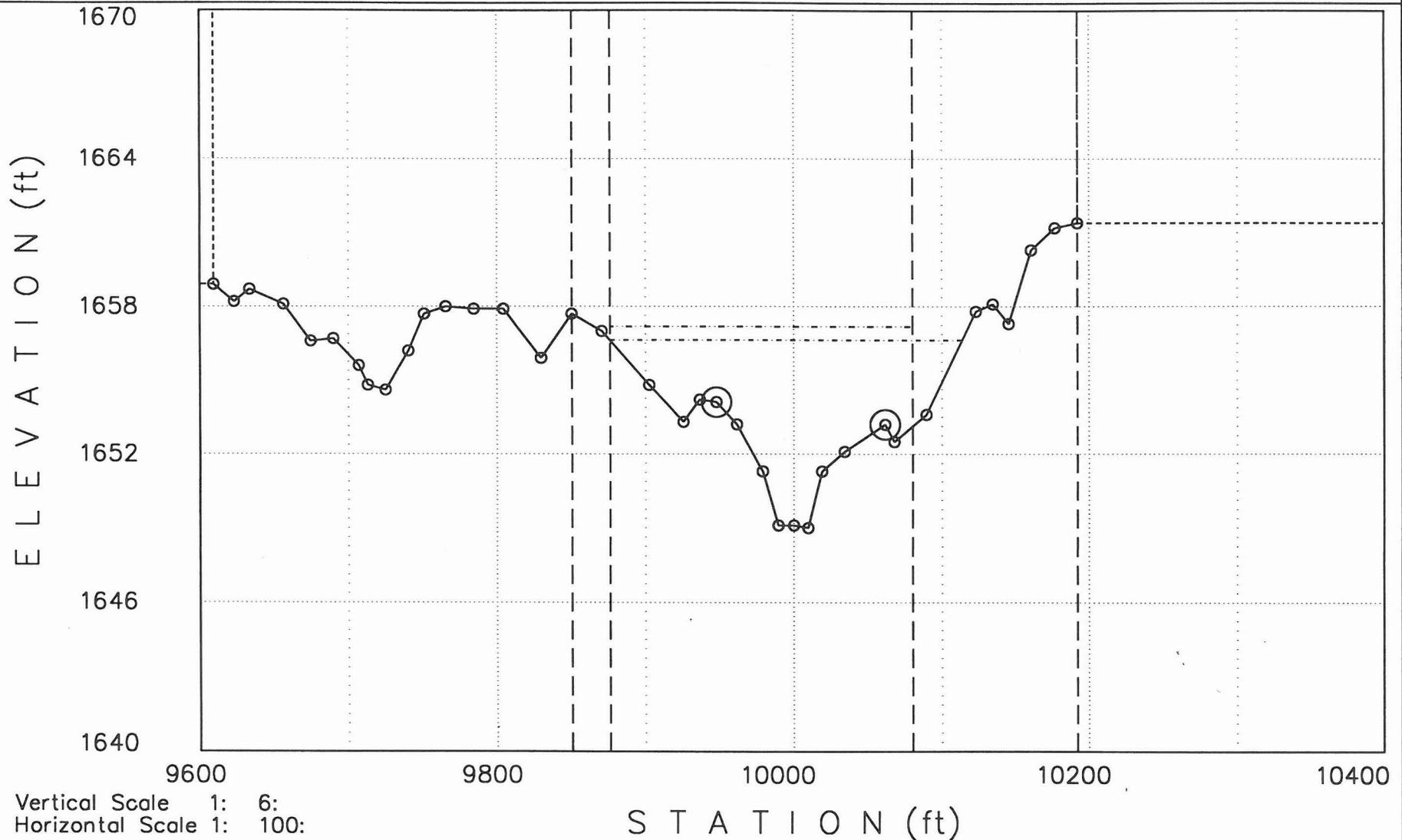
Vertical Scale 1: 4:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 7.865: (FN = 11547P31.OP1)

>>>>>>

Q1= 5600cfs WS1= 1656.63  
Q2= 5600cfs WS2= 1657.19

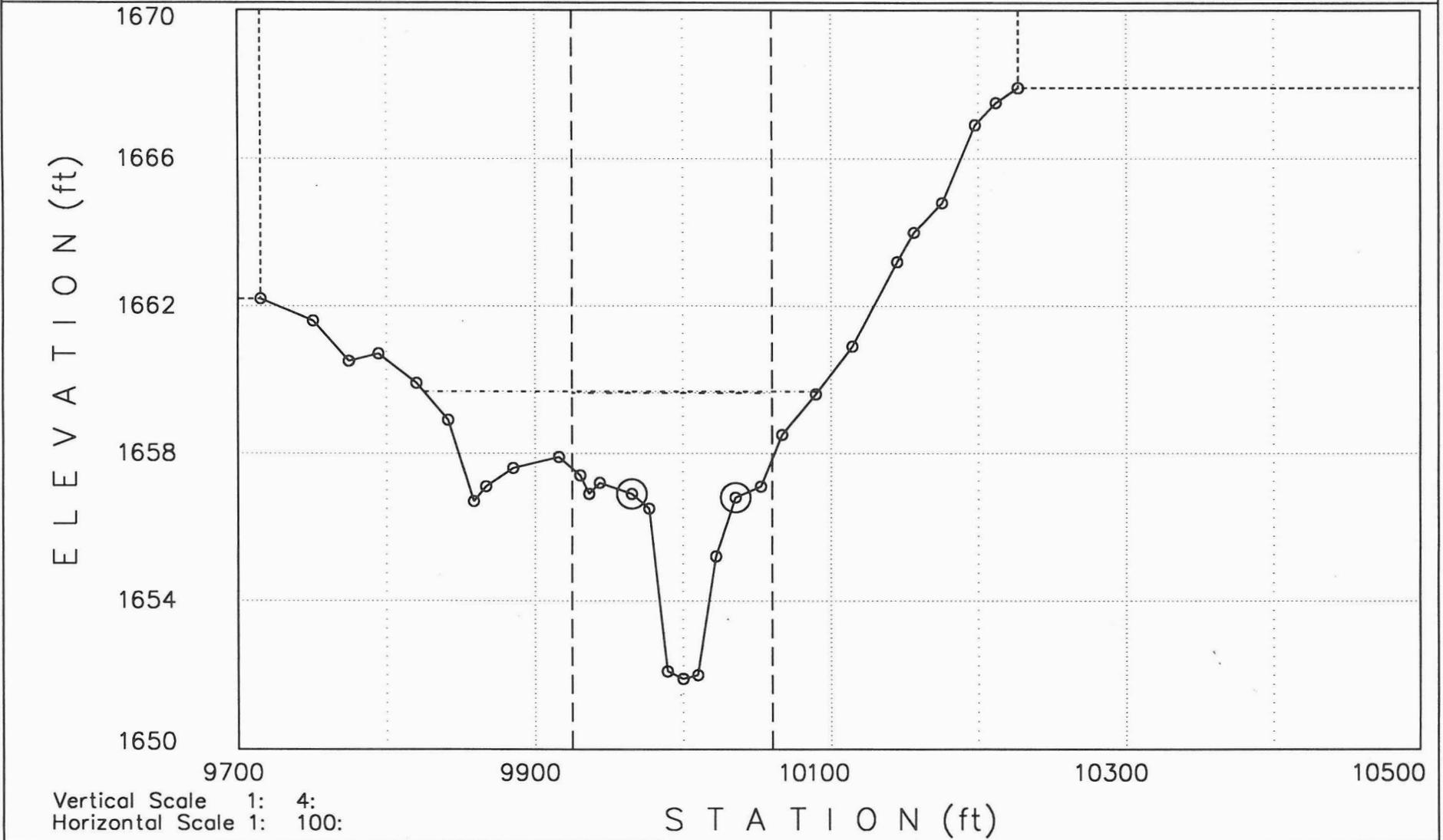
Manning-n Values: LOB: .05 CH: .045 ROB: .05



<<<<<< Cross Section: 7.958: (FN = 11547P31.OP1) >>>>>>

Q1= 5600cfs WS1= 1659.67  
Q2= 5600cfs WS2= 1659.63

Manning-n Values: LOB: .05 CH: .04 ROB: .05

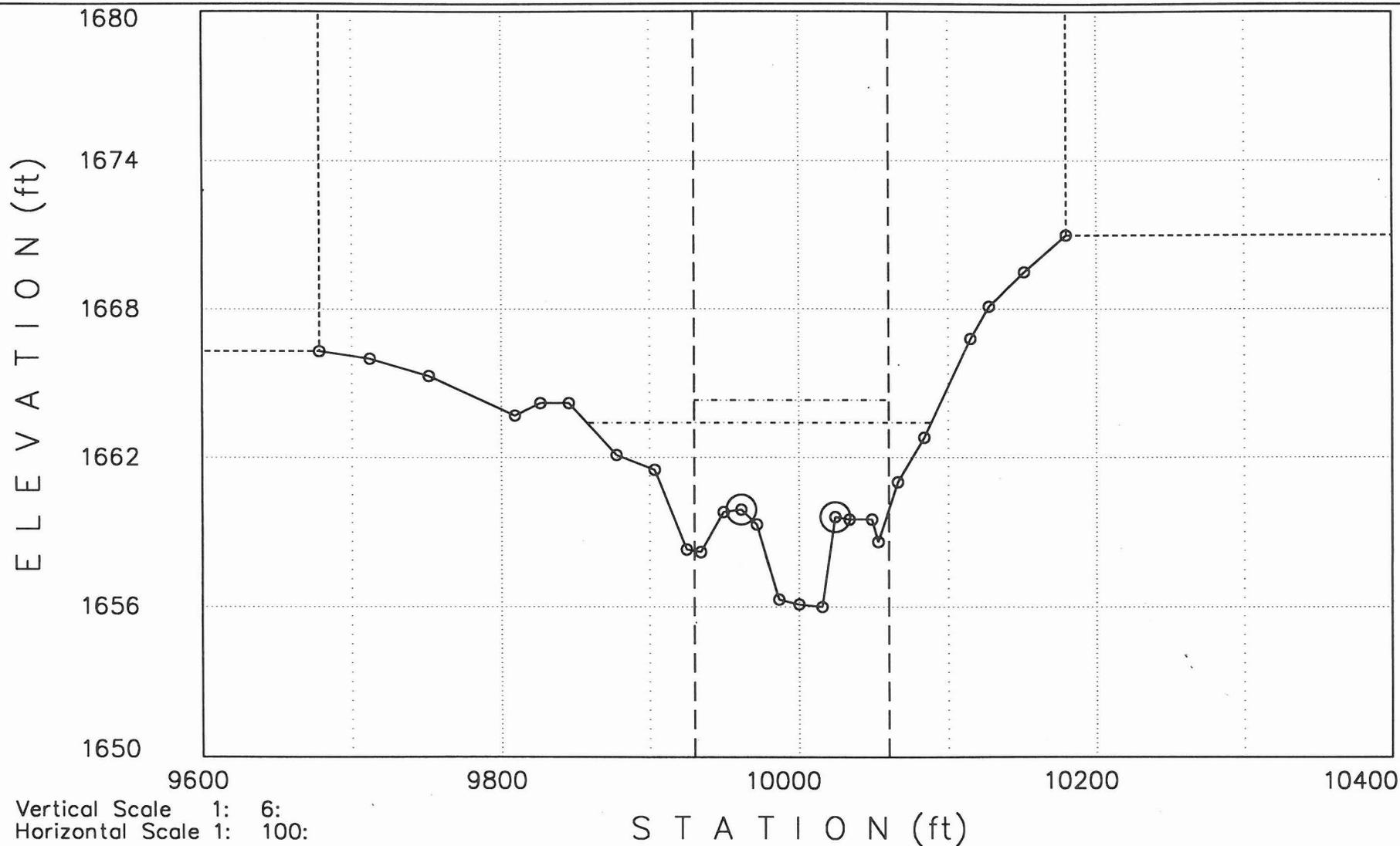


<<<<<< Cross Section: 8.059: (FN = 11547P31.OP1)

>>>>>>

Q1= 5600cfs WS1= 1663.41  
Q2= 5600cfs WS2= 1664.31

Manning-n Values: LOB: .05 CH: .04 ROB: .05



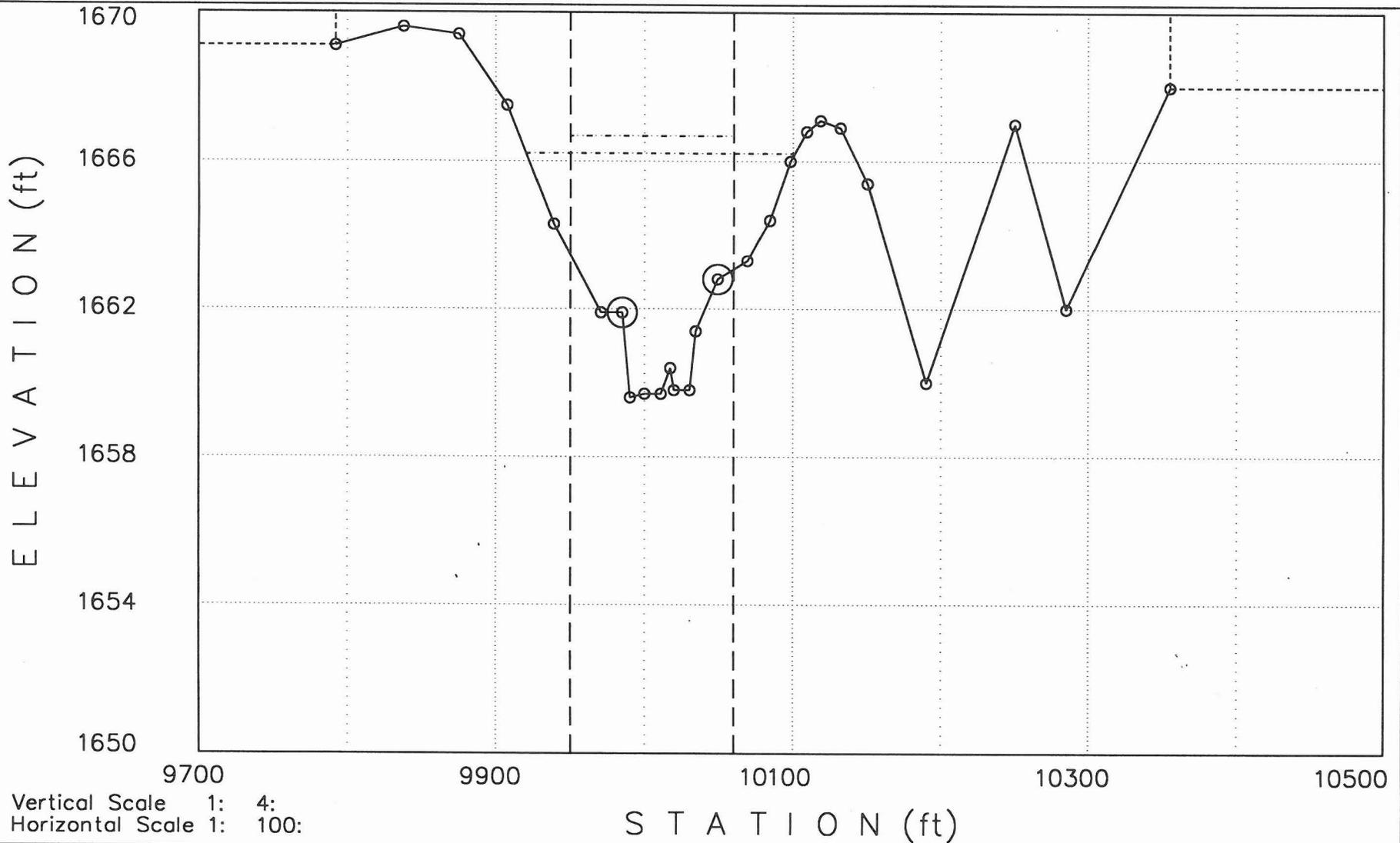
Vertical Scale 1: 6:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 8.155: (FN = 11547P31.OP1)

>>>>>>

Q1= 5600cfs WS1= 1666.21  
Q2= 5600cfs WS2= 1666.68

Manning-n Values: LOB: .055 CH: .04 ROB: .055



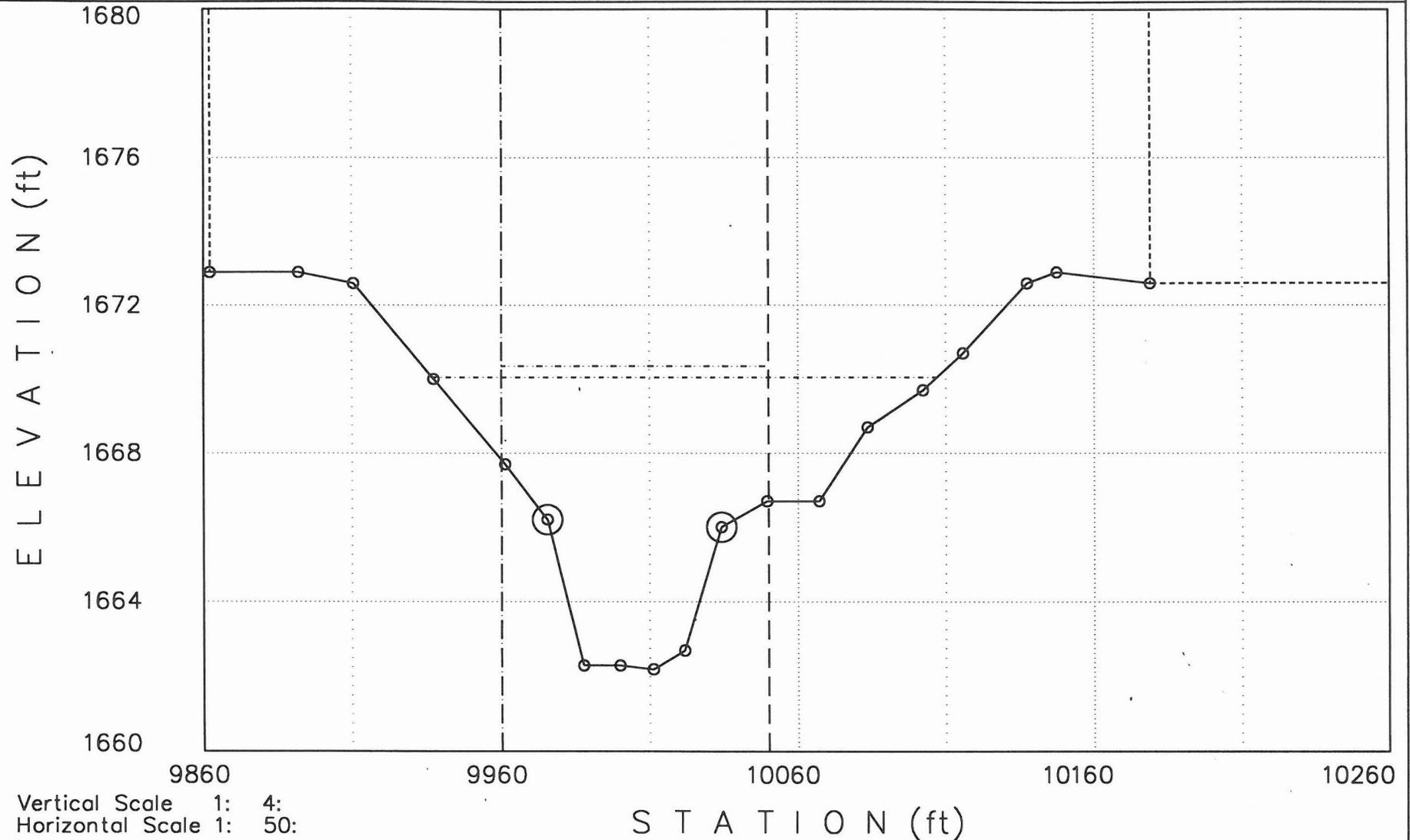
Vertical Scale 1: 4:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 8.25: (FN = 11547P31.OP1)

>>>>>>

Q1= 5600cfs WS1= 1670.04  
Q2= 5600cfs WS2= 1670.35

Manning-n Values: LOB: .055 CH: .04 ROB: .055



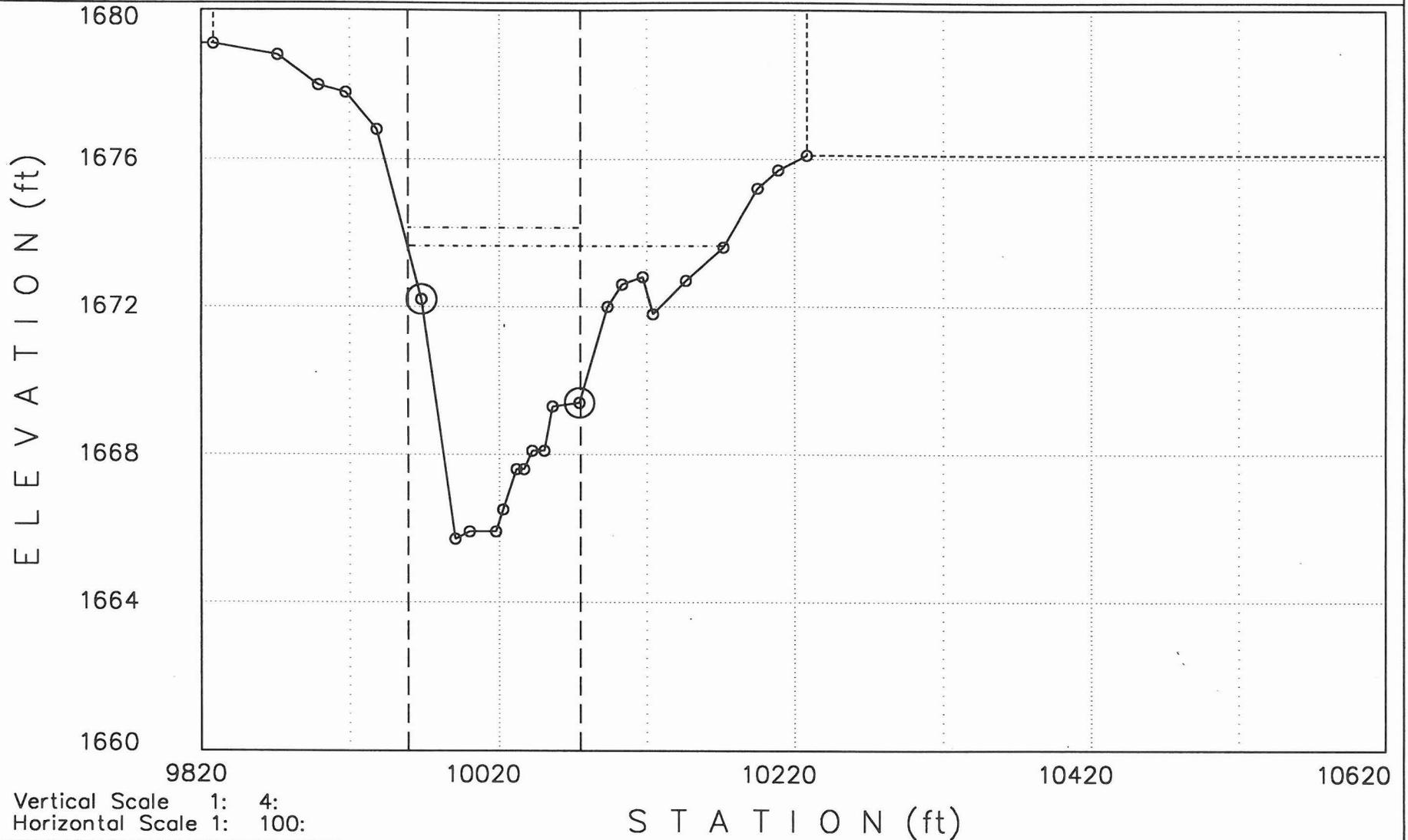
Vertical Scale 1: 4:  
Horizontal Scale 1: 50:

<<<<<< Cross Section: 8.346: (FN = 11547P31.OP1)

>>>>>>

Q1= 5600cfs WS1= 1673.64  
Q2= 5600cfs WS2= 1674.14

Manning-n Values: LOB: .055 CH: .04 ROB: .055

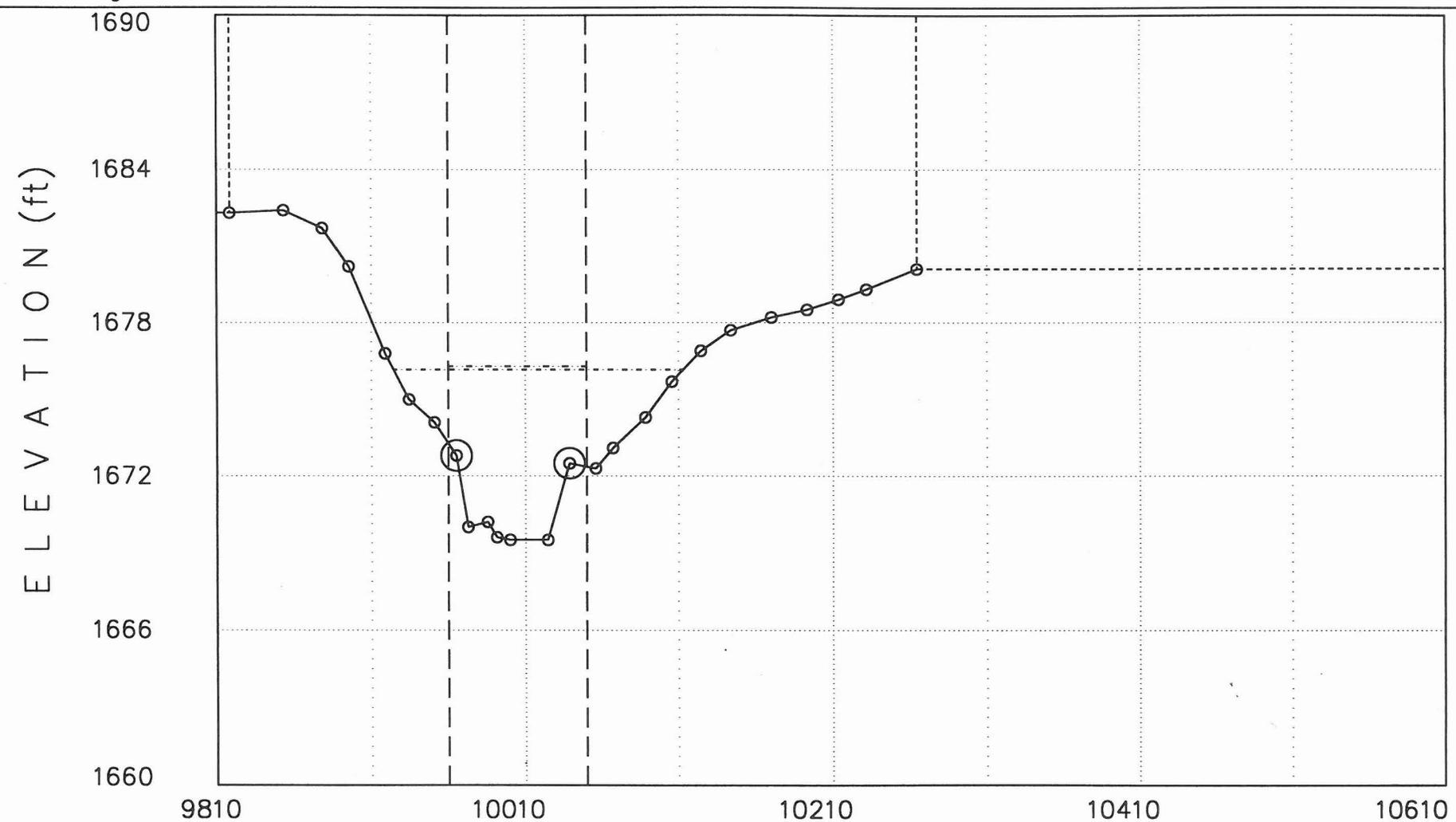


<<<<<< Cross Section: 8.438: (FN = 11547P31.OP1)

>>>>>>

Q1= 5600cfs WS1= 1676.16  
Q2= 5600cfs WS2= 1676.29

Manning-n Values: LOB: .055 CH: .04 ROB: .055



Vertical Scale 1: 6:  
Horizontal Scale 1: 100:

S T A T I O N (ft)

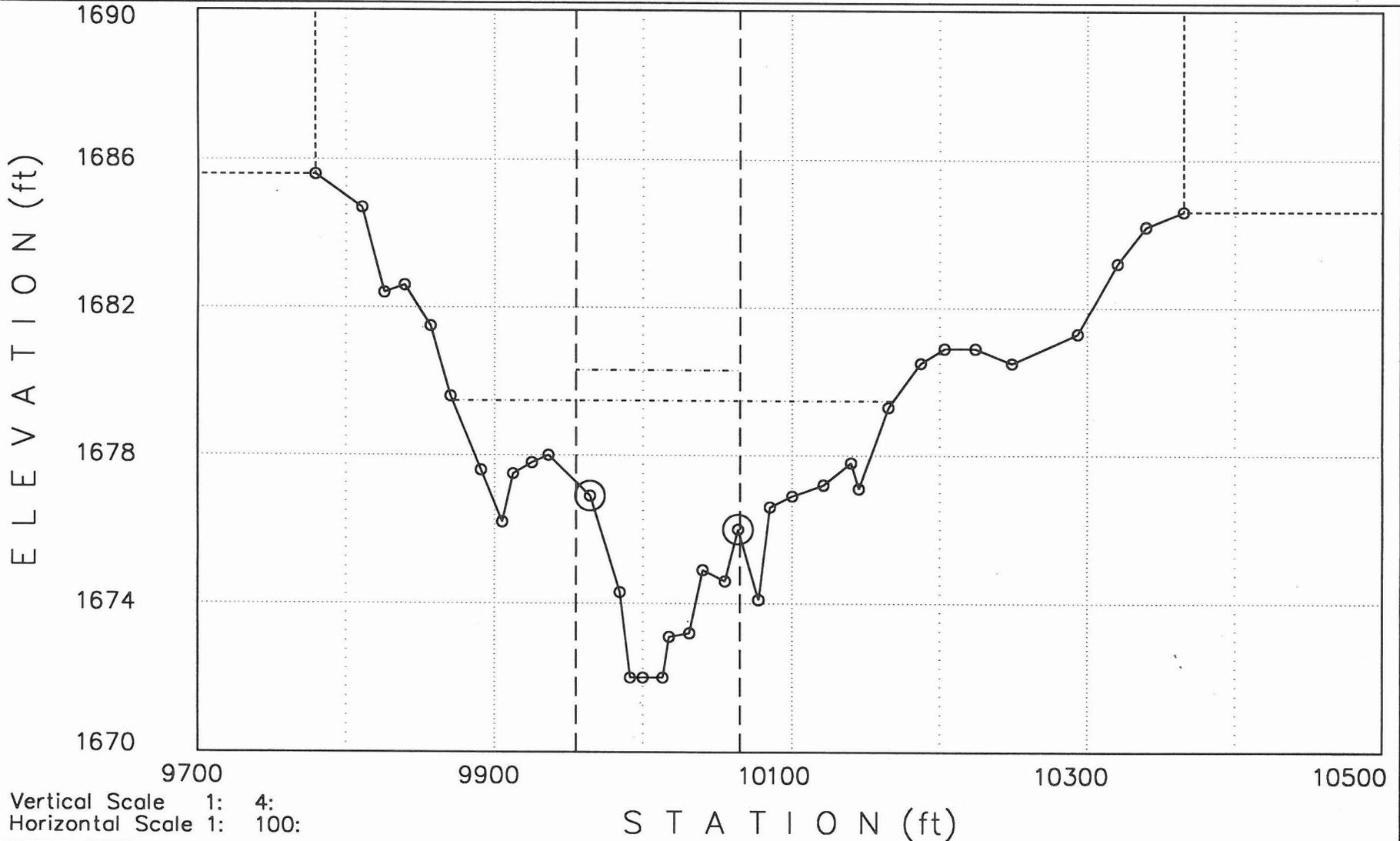
<<<<<< Cross Section: 8.53: (FN = 11547P31.OP1)

>>>>>>

Q1= 5700cfs WS1= 1679.48  
Q2= 5700cfs WS2= 1680.3

-----  
-----

Manning-n Values: LOB: .055 CH: .04 ROB: .055

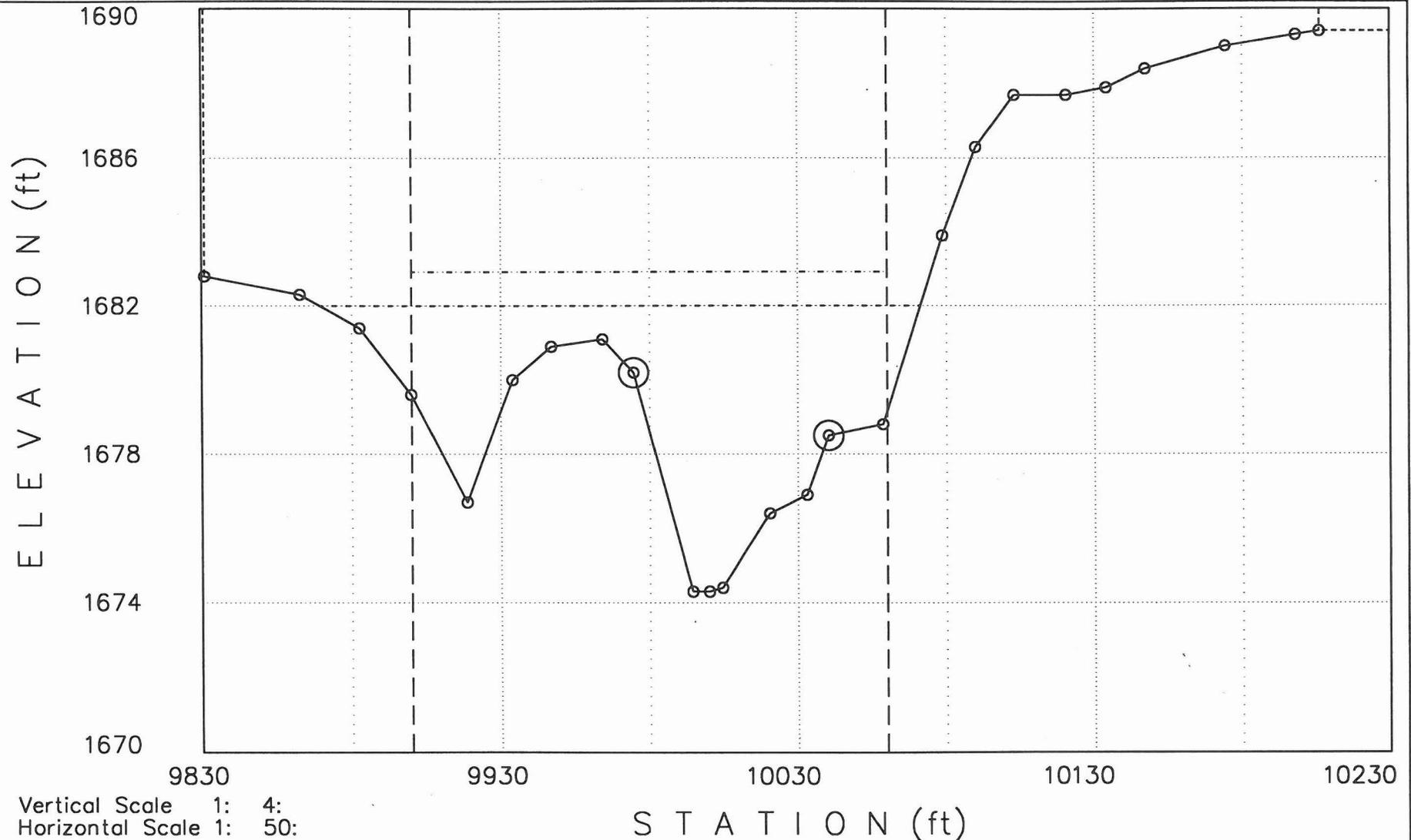


<<<<<< Cross Section: 8.626: (FN = 11547P31.OP1)

>>>>>>

Q1= 5700cfs WS1= 1682 -----  
Q2= 5700cfs WS2= 1682.92 -----

Manning-n Values: LOB: .055 CH: .04 ROB: .055

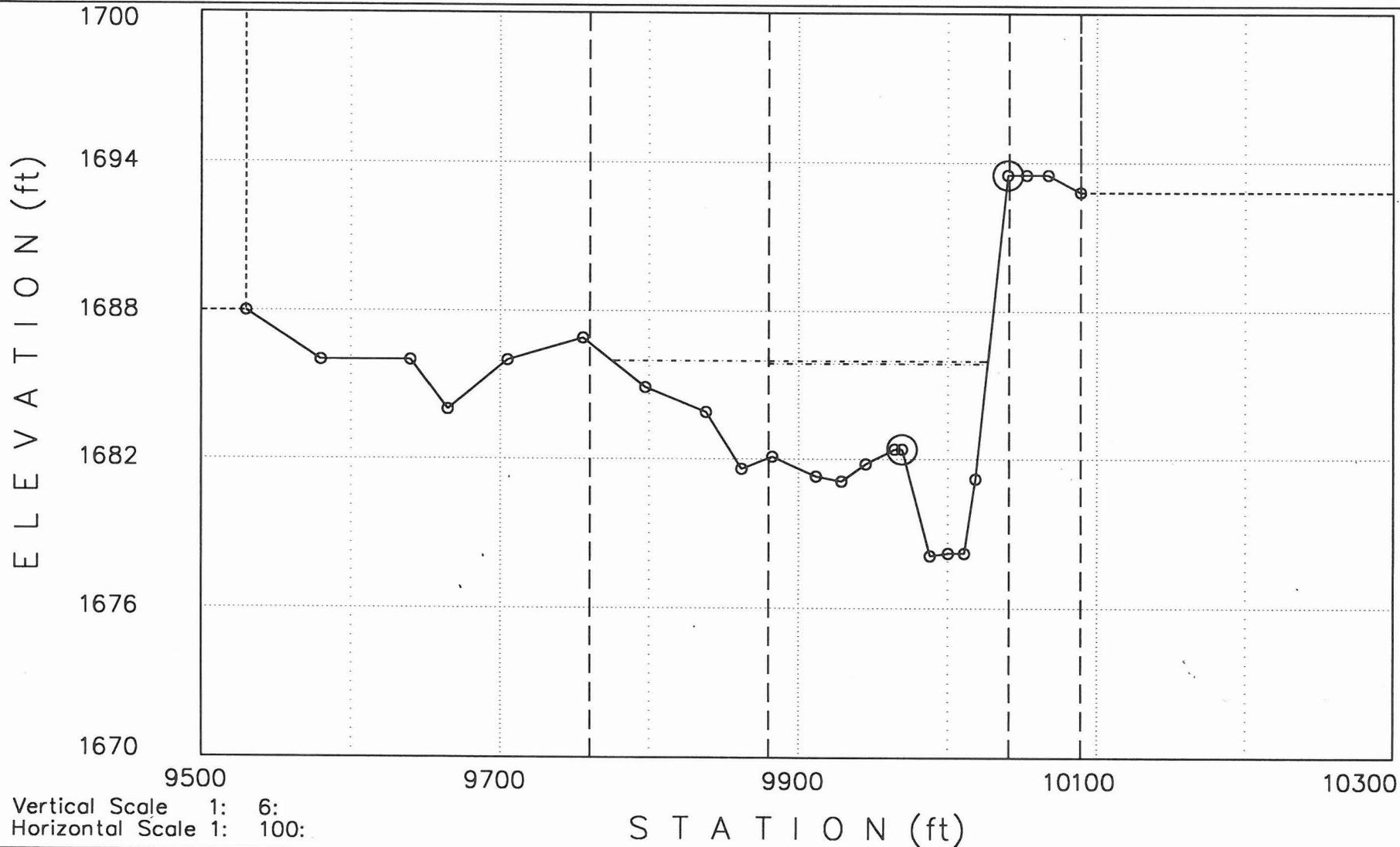


<<<<<< Cross Section: 8.722: (FN = 11547P31.OP1)

>>>>>>

Q1= 5700cfs WS1= 1685.98  
Q2= 5700cfs WS2= 1685.86

Manning-n Values: LOB: .05 CH: .04 ROB: 0



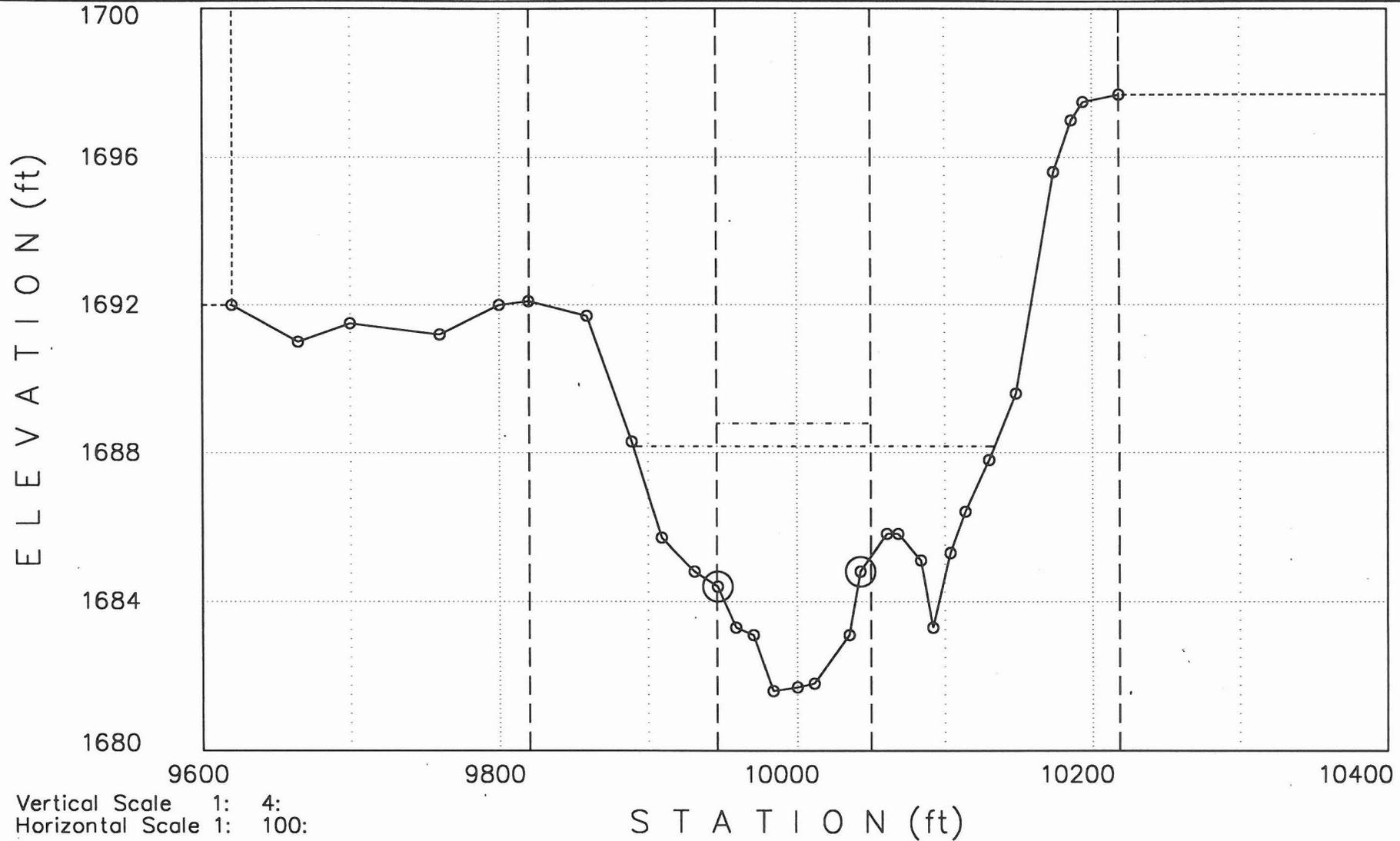
Vertical Scale 1: 6:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 8.817: (FN = 11547P31.0P1)

>>>>>>

Q1= 5700cfs WS1= 1688.17  
Q2= 5700cfs WS2= 1688.79

Manning-n Values: LOB: .055 CH: .04 ROB: .055

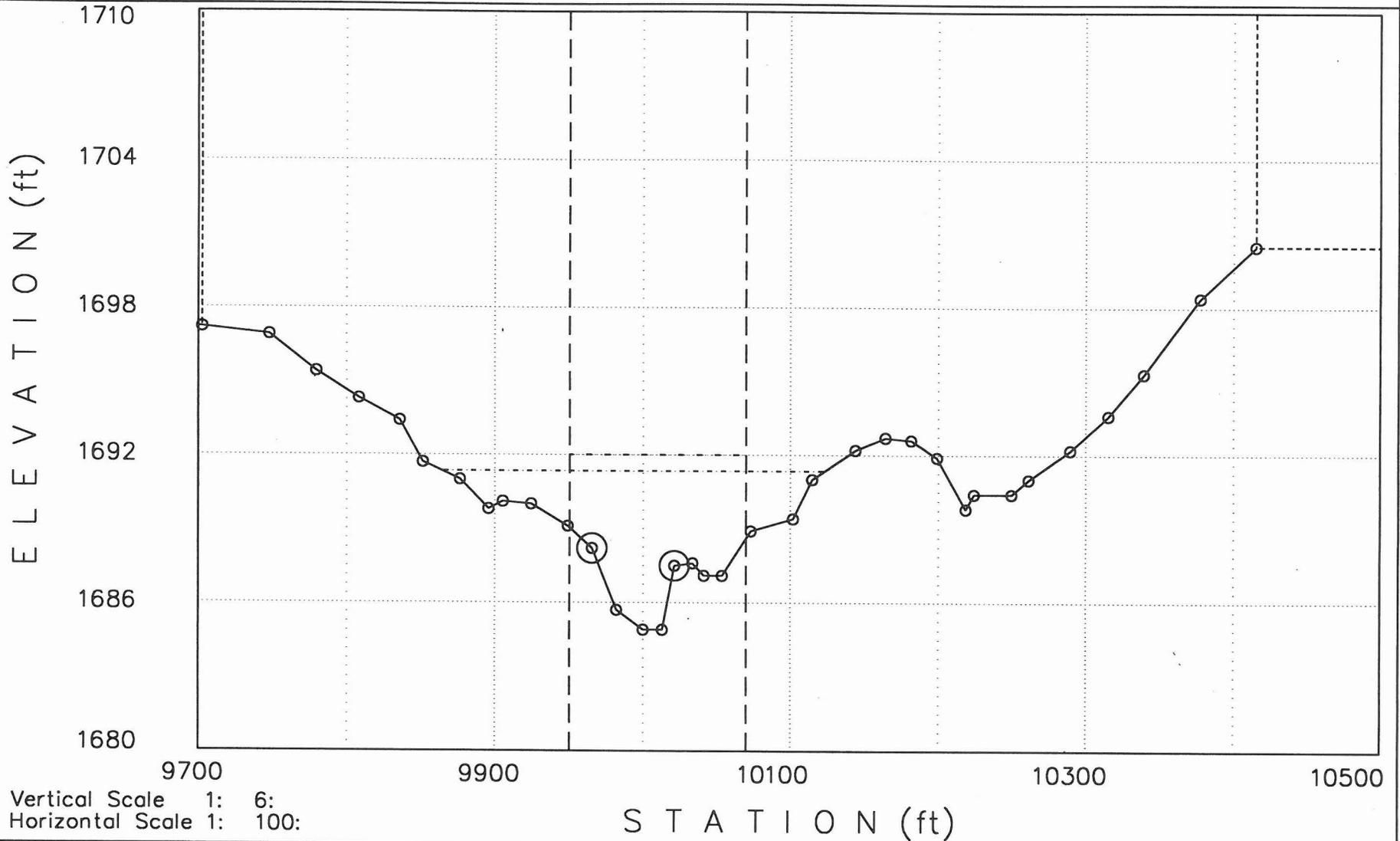


<<<<<< Cross Section: 8.91: (FN = 11547P31.0P1)

>>>>>>

Q1= 5700cfs WS1= 1691.34 -----  
Q2= 5700cfs WS2= 1692 -----

Manning-n Values: LOB: .055 CH: .04 ROB: .055



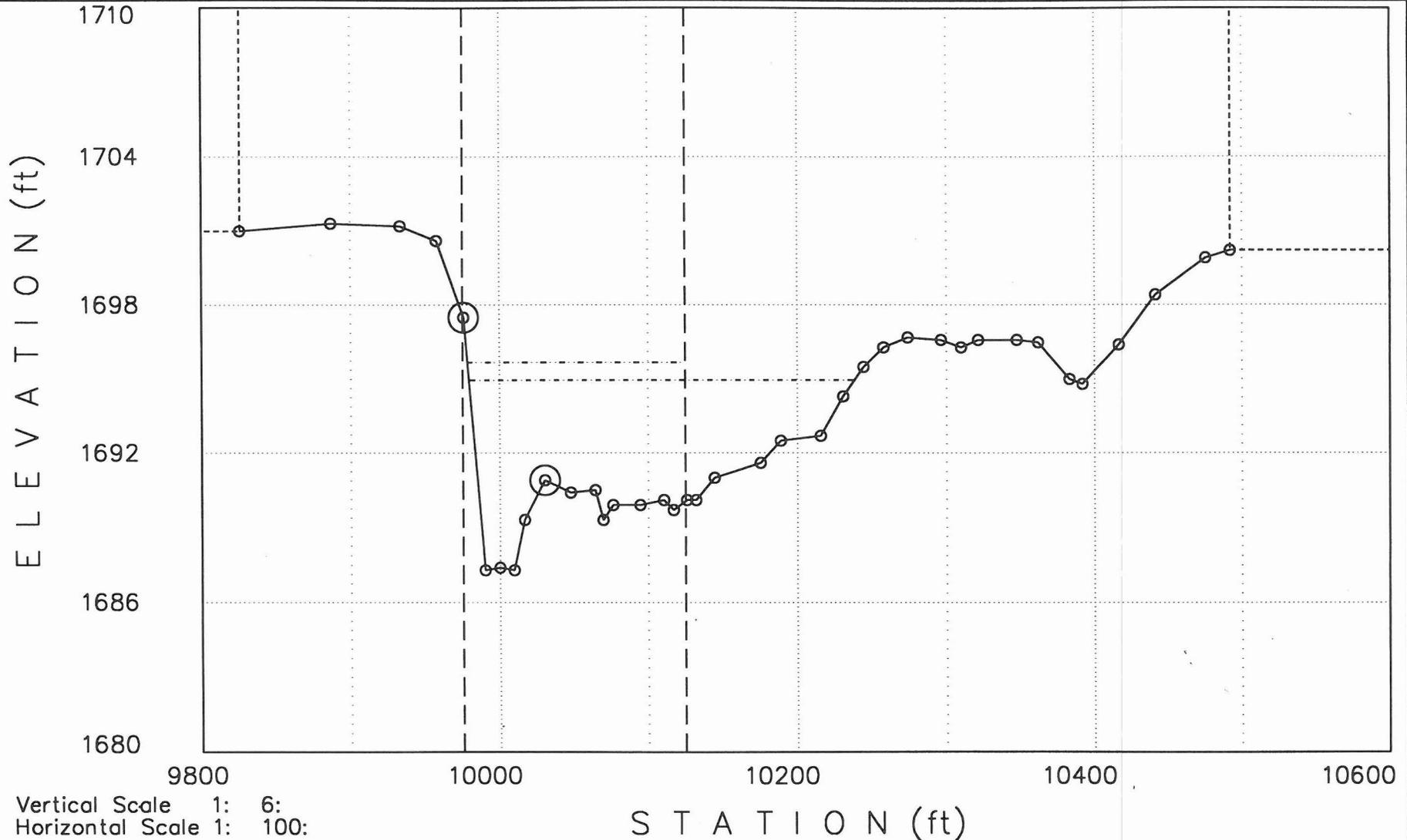
Vertical Scale 1: 6:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 9: (FN = 11547P31.0P1)

>>>>>>

Q1= 5700cfs WS1= 1694.96  
Q2= 5700cfs WS2= 1695.68

Manning-n Values: LOB: 0 CH: .04 ROB: .05

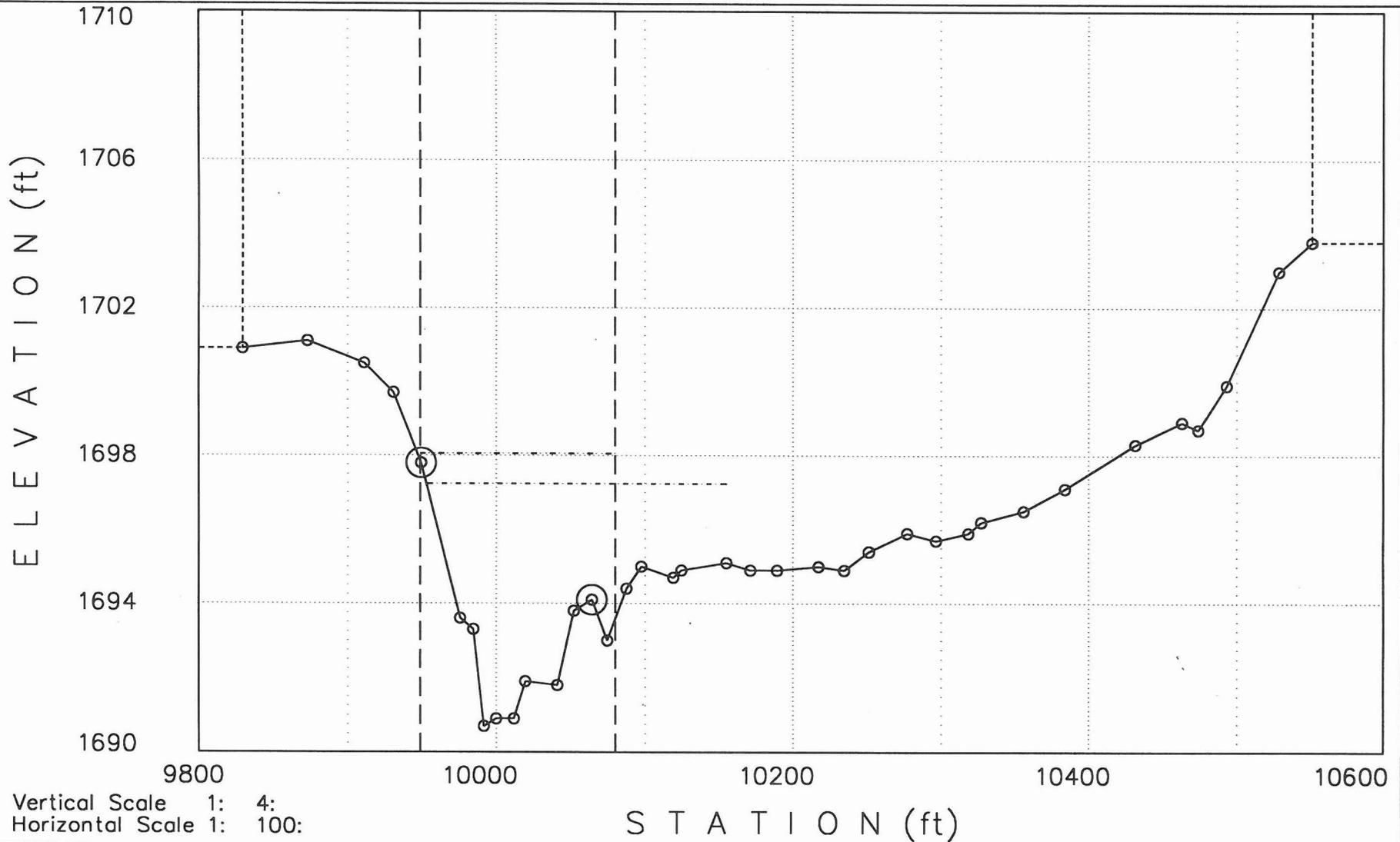


Vertical Scale 1: 6:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 9.1: (FN = 11547P31.OP1) >>>>>>

Q1= 5700cfs WS1= 1697.24  
Q2= 5700cfs WS2= 1698.05

Manning-n Values: LOB: 0 - .055 CH: .04 ROB: .05



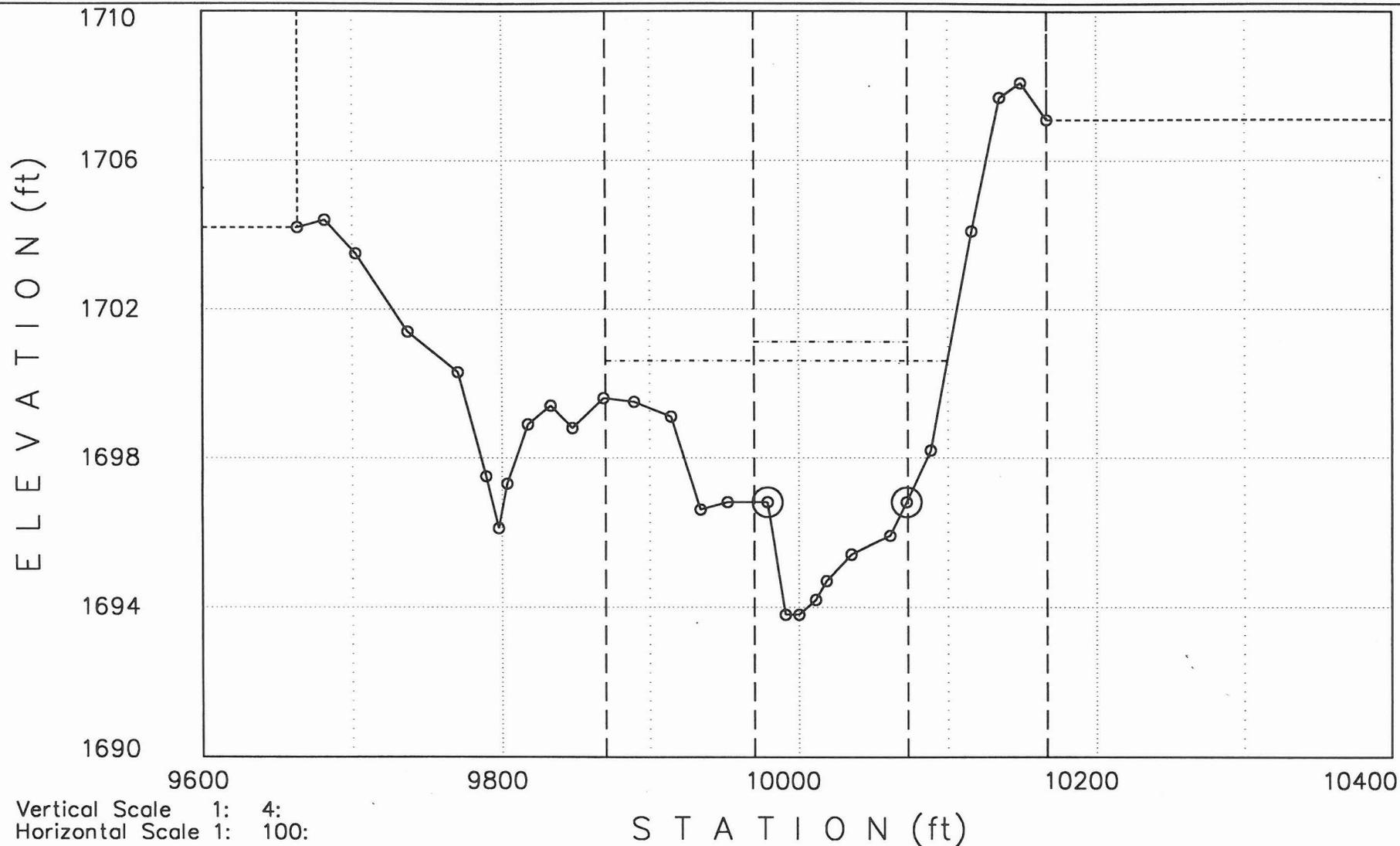
Vertical Scale 1: 4:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 9.192: (FN = 11547P31.OP1)

>>>>>>

Q1= 5700cfs WS1= 1700.61 -----  
Q2= 5700cfs WS2= 1701.12 -----

Manning-n Values: LOB: .055 CH: .04 ROB: .05



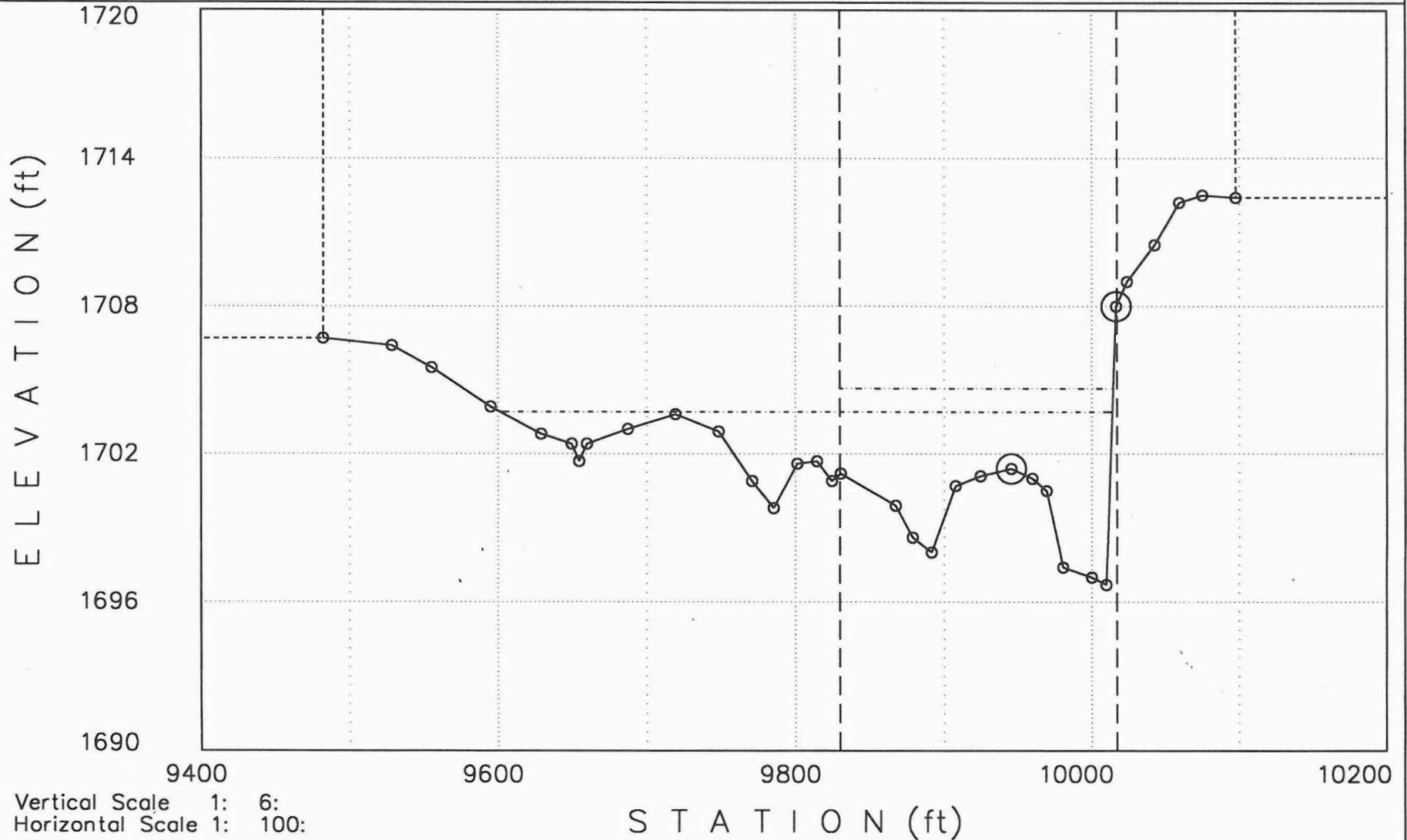
Vertical Scale 1: 4:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 9.286: (FN = 11547P31.OP1)

>>>>>>

Q1= 5700cfs WS1= 1703.69 -----  
Q2= 5700cfs WS2= 1704.65 -----

Manning-n Values: LOB: .05 CH: .04 ROB: 0



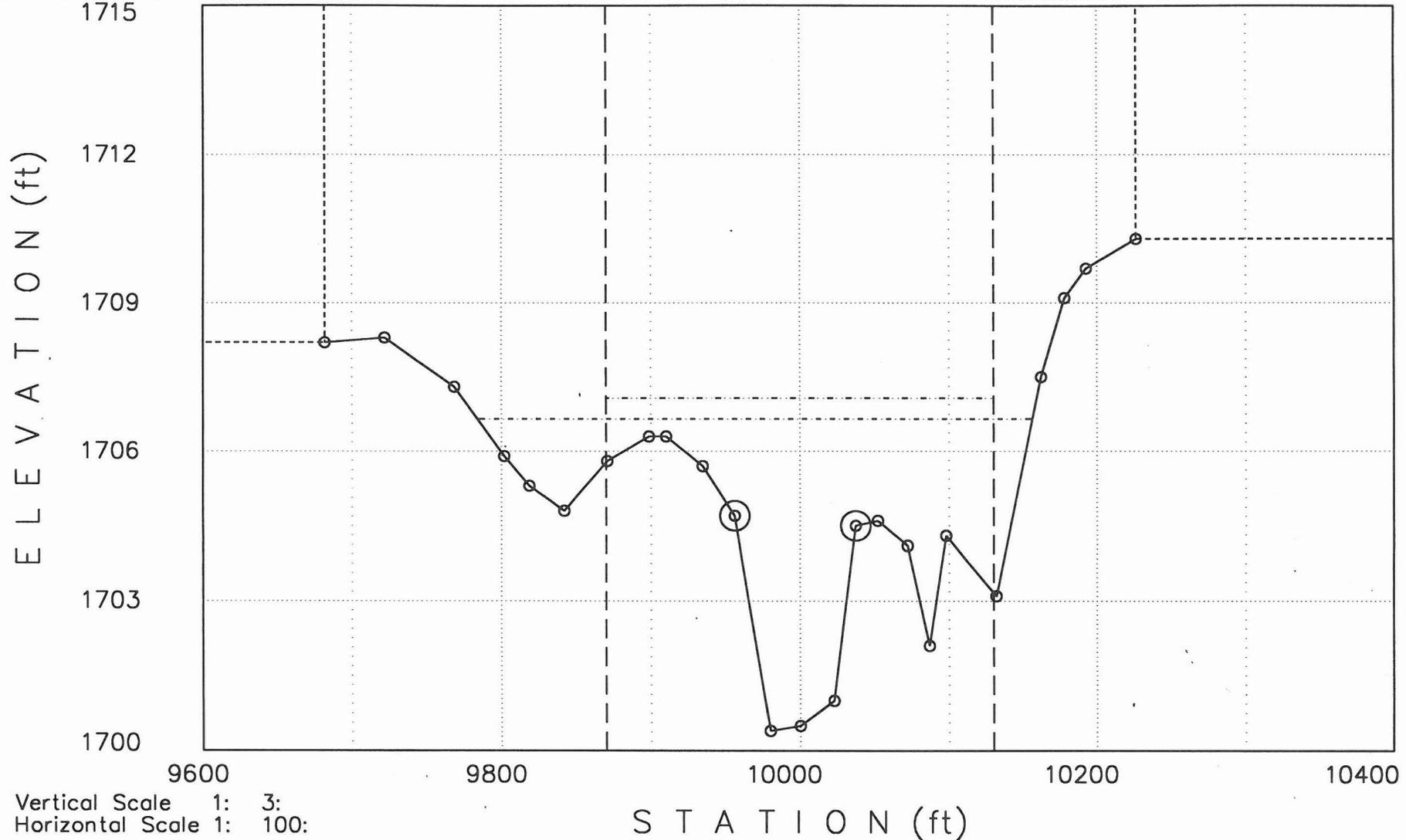
Vertical Scale 1: 6:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 9.389: (FN = 11547P31.OP1)

>>>>>>

Q1= 5700cfs WS1= 1706.65  
Q2= 5700cfs WS2= 1707.07

Manning-n Values: LOB: .05 CH: .04 ROB: .05

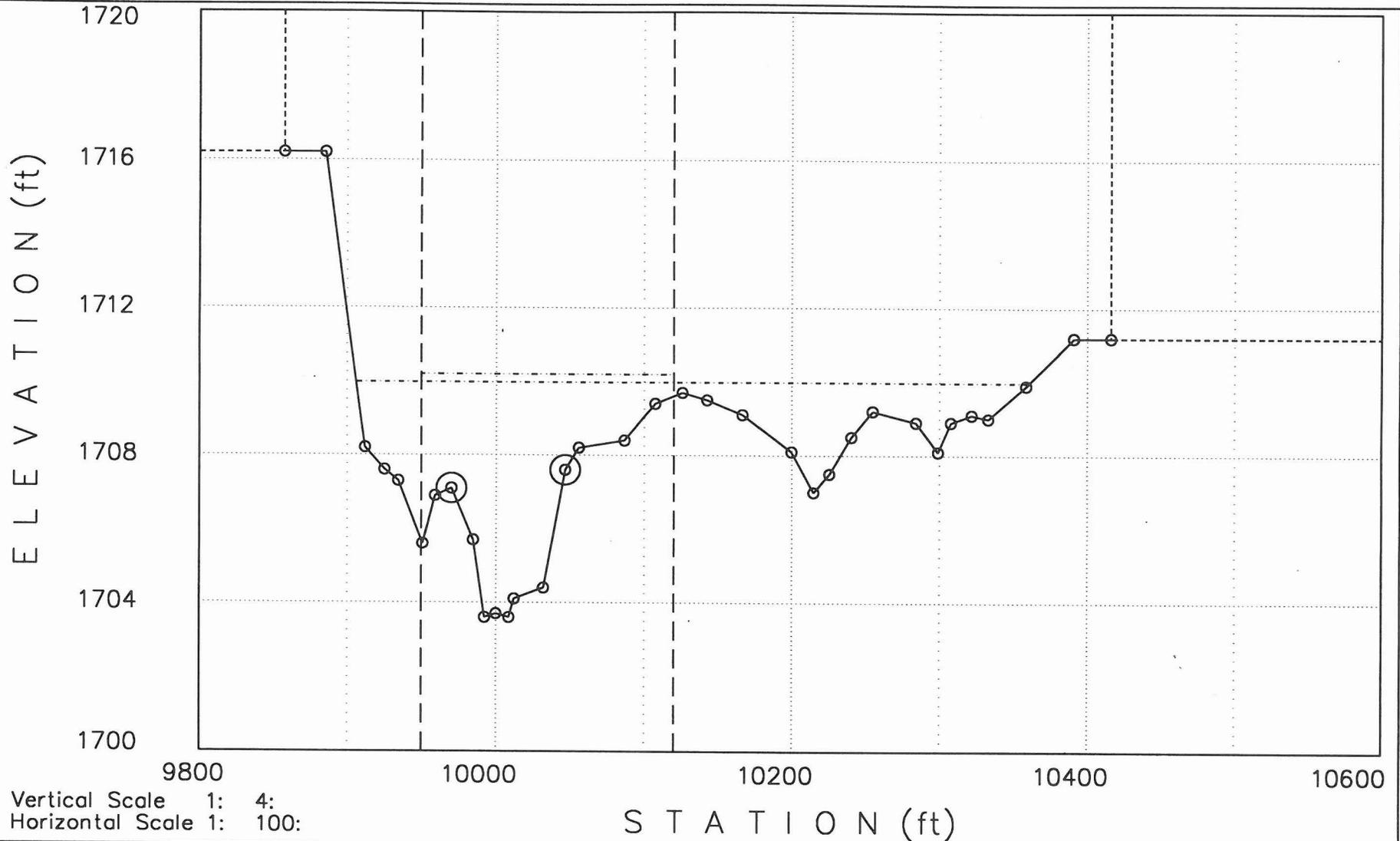


Vertical Scale 1: 3:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 9.481: (FN = 11547P31.OP1) >>>>>>

Q1= 5700cfs WS1= 1709.98  
Q2= 5700cfs WS2= 1710.2

Manning-n Values: LOB: .05 CH: .04 ROB: .055

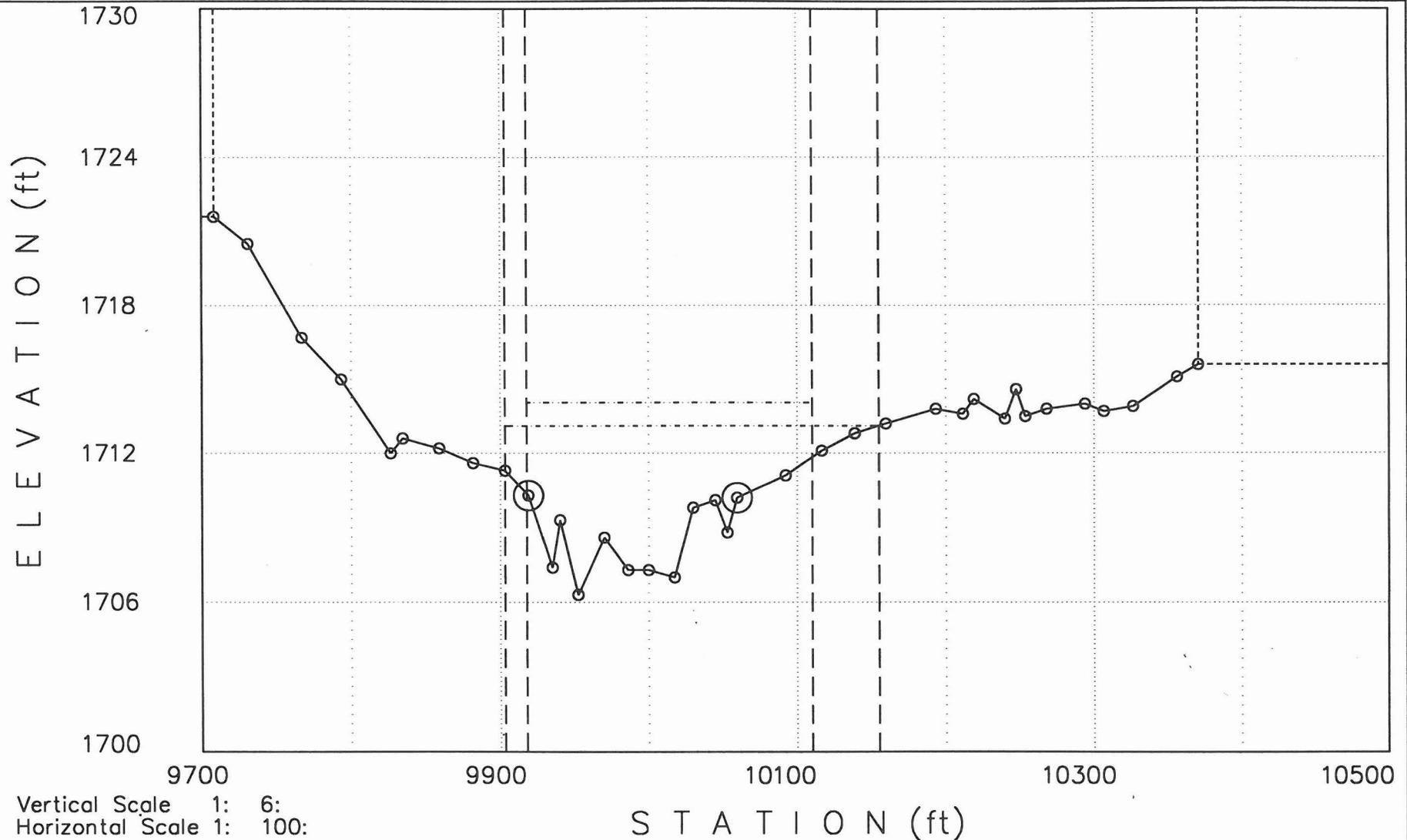


<<<<<< Cross Section: 9.575: (FN = 11547P31.OP1)

>>>>>>

Q1= 5700cfs WS1= 1713.1  
Q2= 5700cfs WS2= 1714.05

Manning-n Values: LOB: .05 CH: .04 ROB: .05

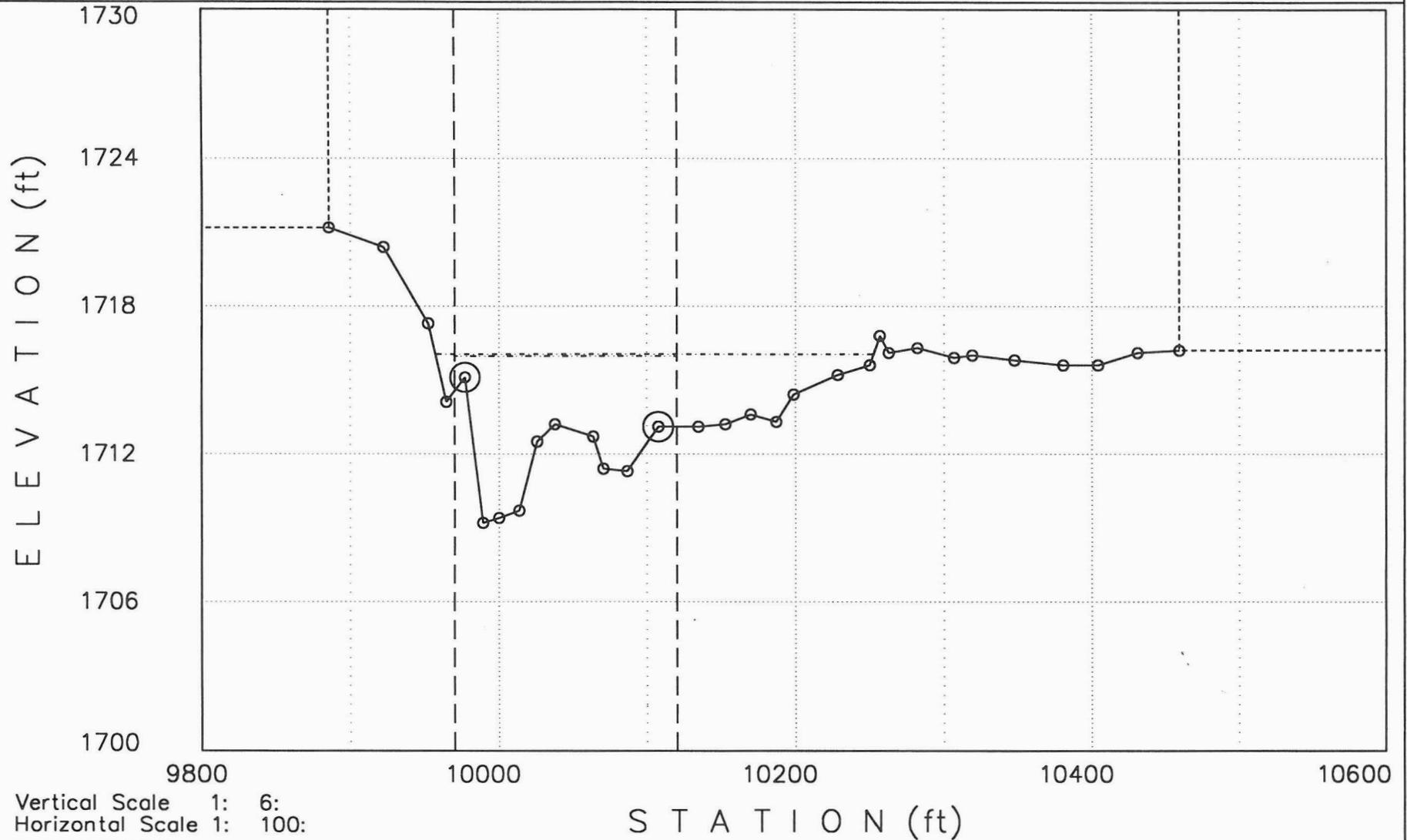


<<<<<< Cross Section: 9.672: (FN = 11547P31.OP1)

>>>>>>

Q1= 5700cfs WS1= 1716.04  
Q2= 5700cfs WS2= 1715.96

Manning-n Values: LOB: .055 CH: .042 ROB: .05



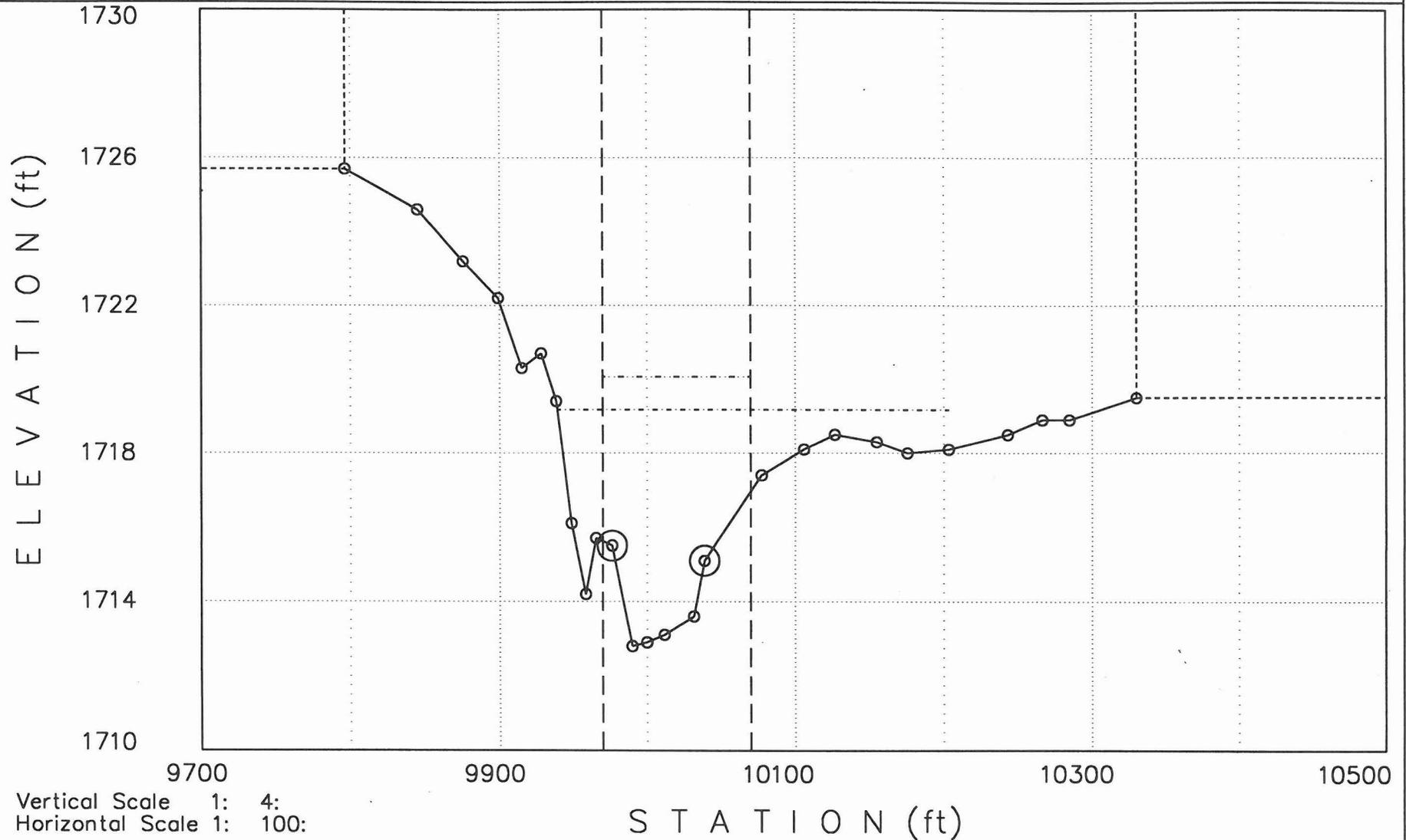
Vertical Scale 1: 6:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 9.761: (FN = 11547P31.OP1)

>>>>>>

Q1= 5700cfs WS1= 1719.17  
Q2= 5700cfs WS2= 1720.06

Manning-n Values: LOB: .05 CH: .04 ROB: .055

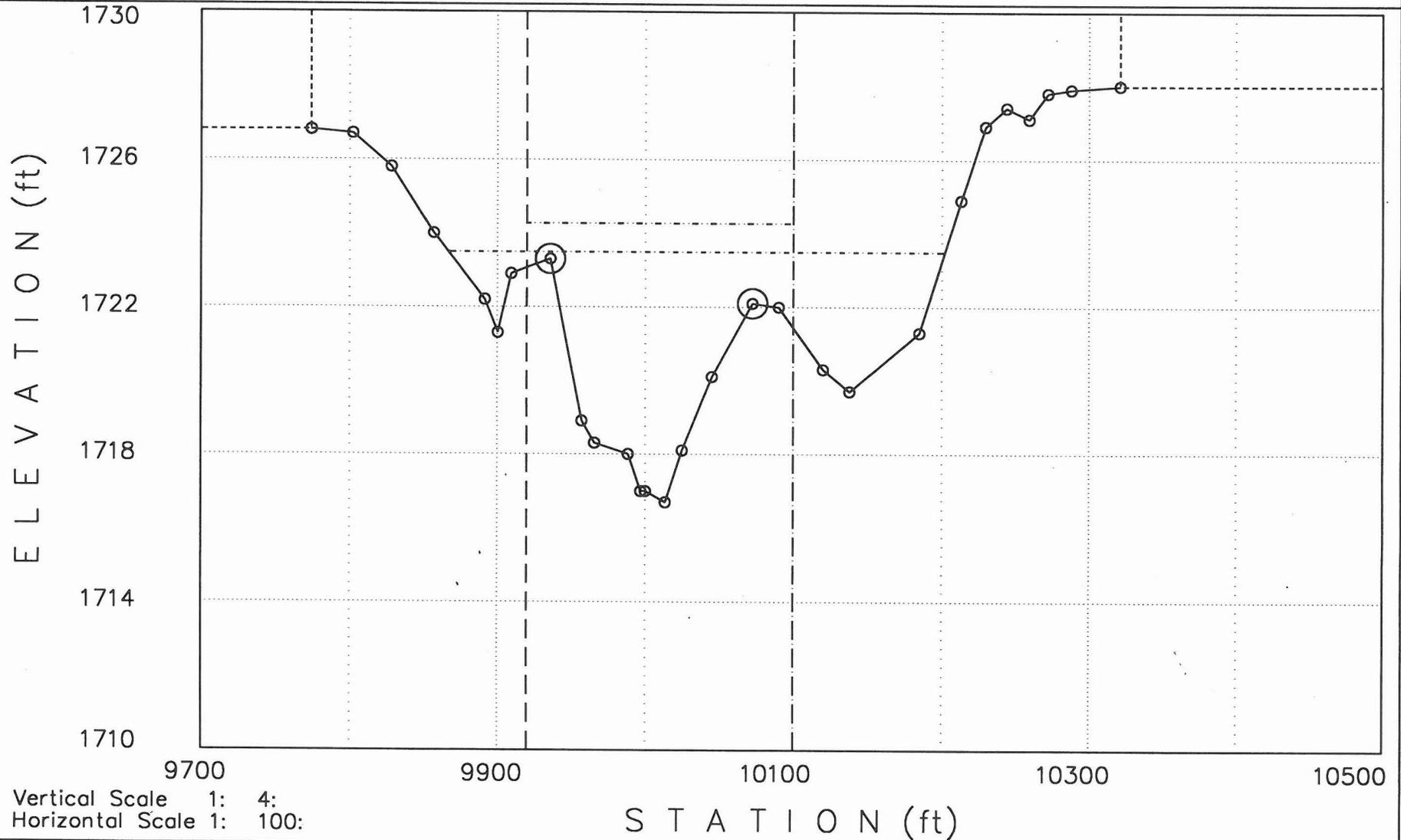


<<<<<< Cross Section: 9.854: (FN = 11547P31.0P1)

>>>>>>

Q1= 5700cfs WS1= 1723.49  
Q2= 5700cfs WS2= 1724.27

Manning-n Values: LOB: .055 CH: .04 ROB: .05

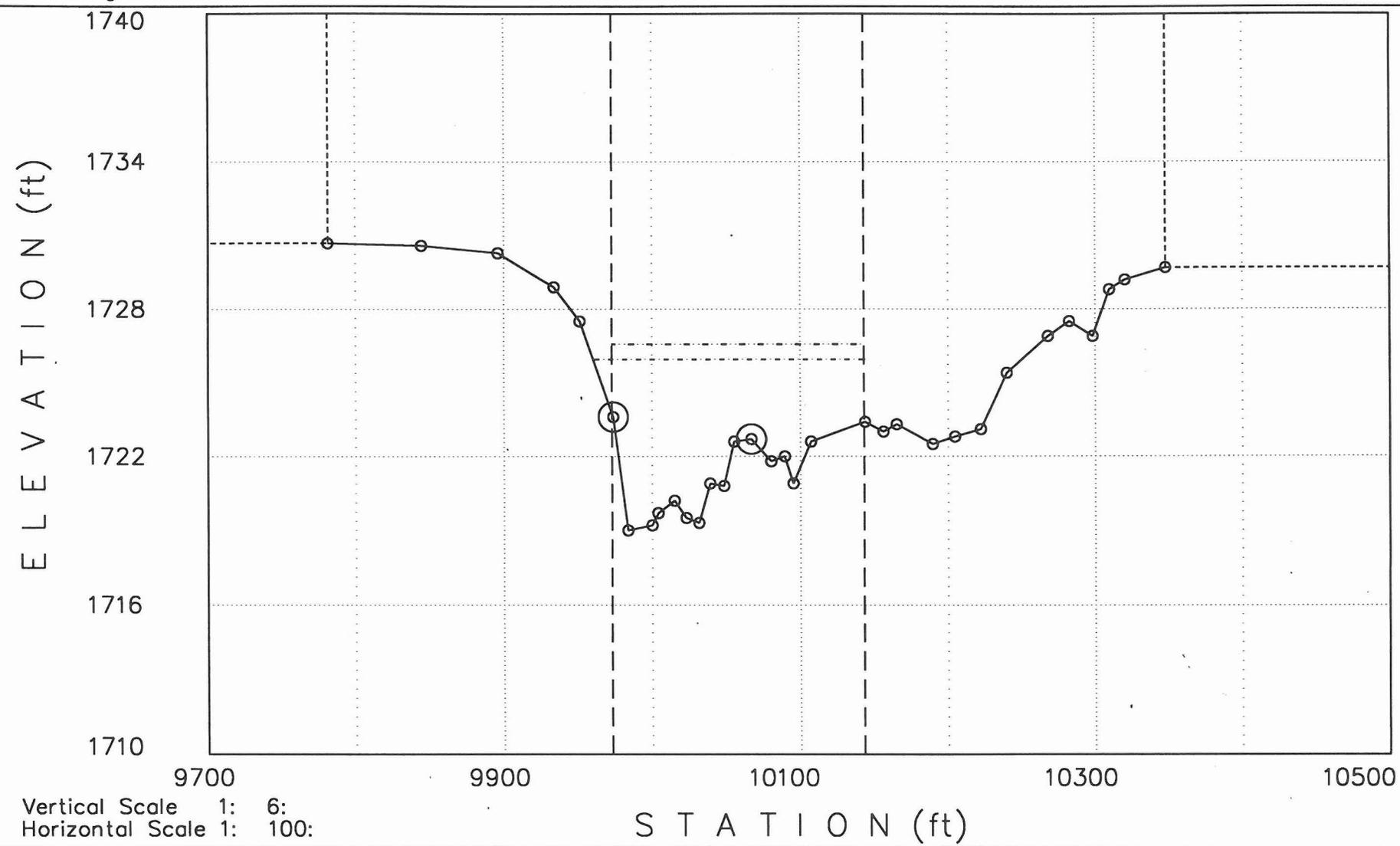


<<<<<< Cross Section: 9.949: (FN = 11547P31.OP1)

>>>>>>

Q1= 5700cfs WS1= 1725.95  
Q2= 5700cfs WS2= 1726.57

Manning-n Values: LOB: .055 CH: .04 ROB: .05



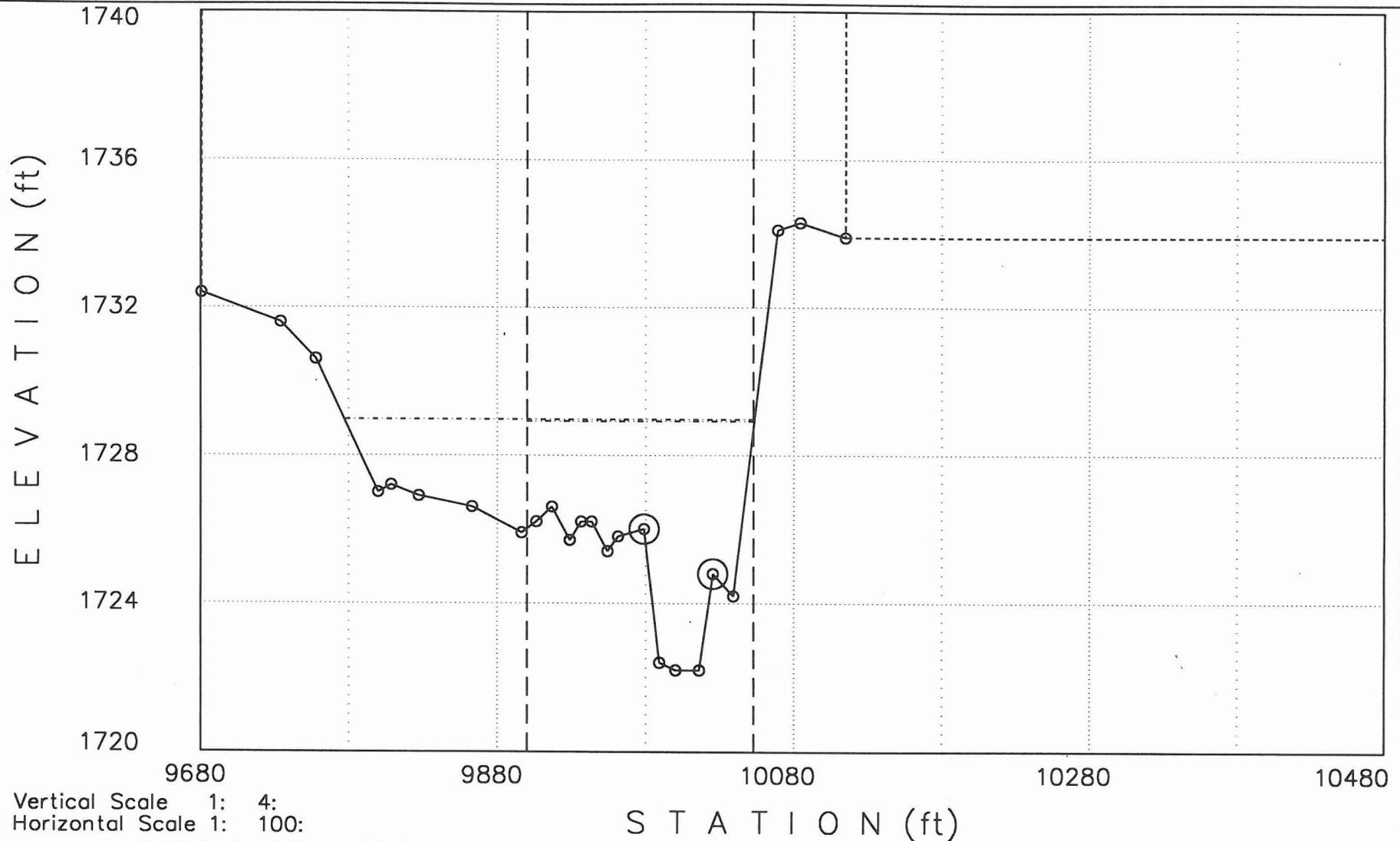
Vertical Scale 1: 6:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 10.045: (FN = 11547P31.OP1)

>>>>>>

Q1= 5700cfs WS1= 1728.97  
Q2= 5700cfs WS2= 1728.92

Manning-n Values: LOB: .05 CH: .04 ROB: .055



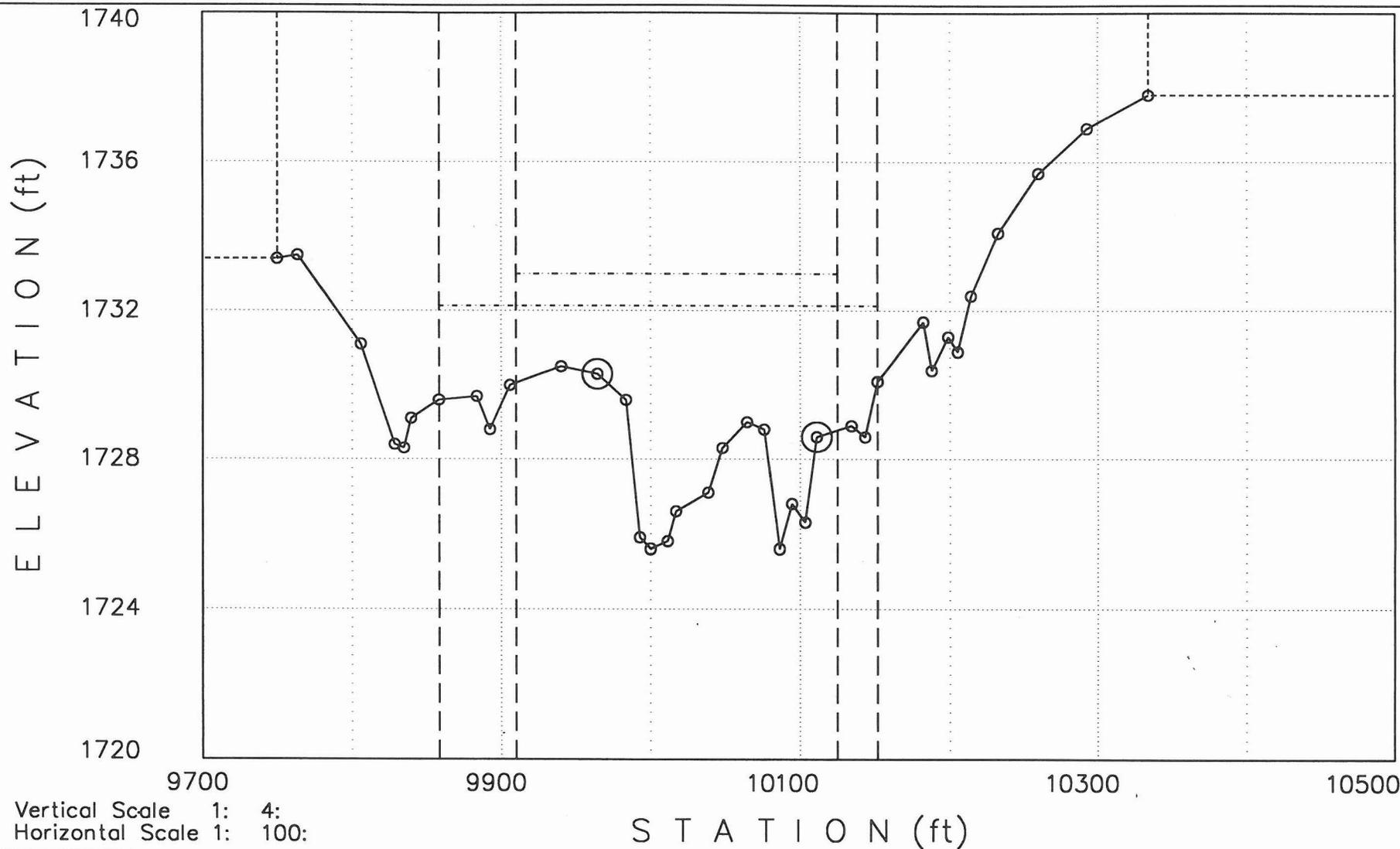
Vertical Scale 1: 4:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 10.138: (FN = 11547P31.OP1)

>>>>>>

Q1= 5700cfs WS1= 1732.13 -----  
Q2= 5700cfs WS2= 1733 -----

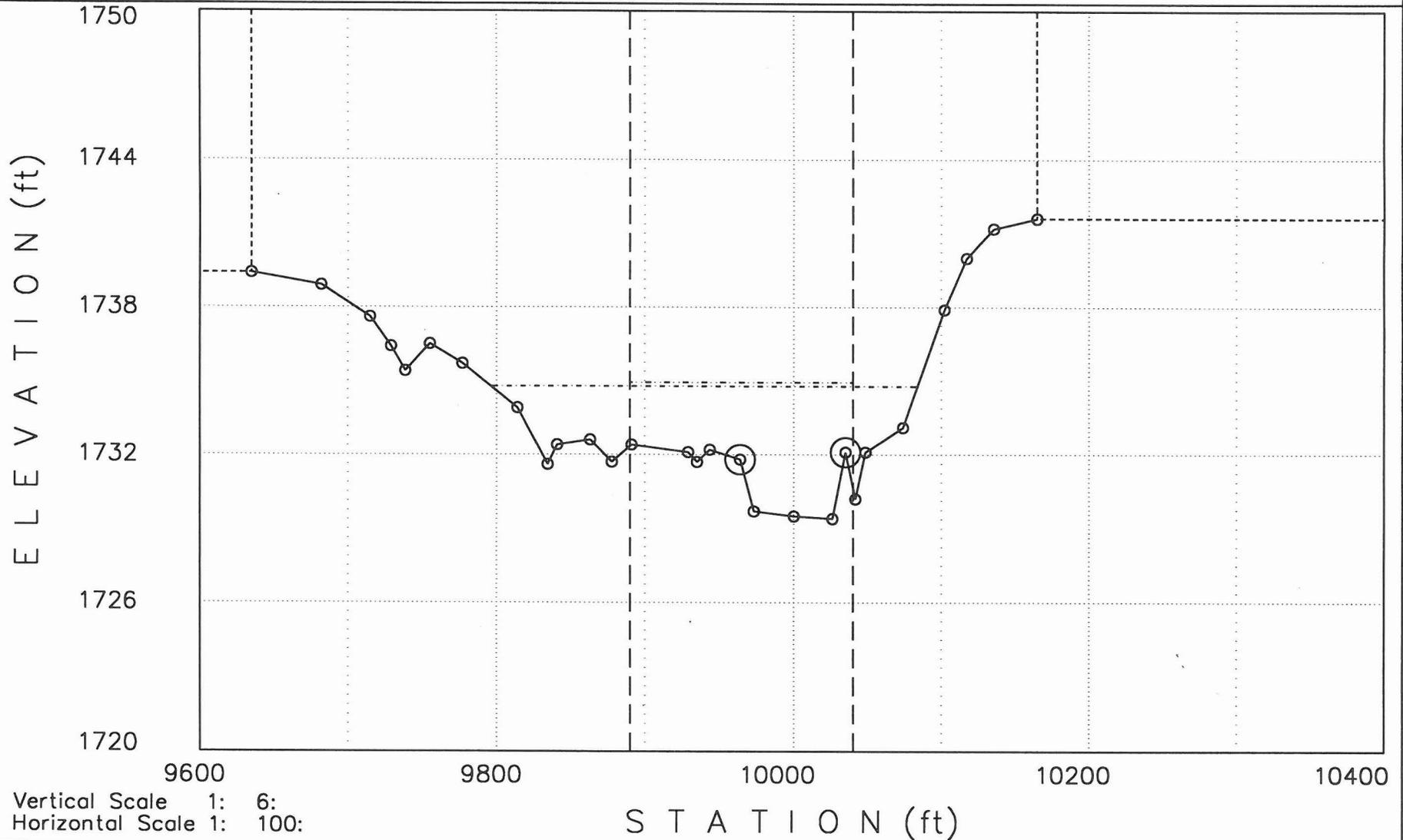
Manning-n Values: LOB: .05 CH: .04 ROB: .055



<<<<<< Cross Section: 10.236: (FN = 11547P31.OP1) >>>>>>

Q1= 5700cfs WS1= 1734.78  
Q2= 5700cfs WS2= 1734.93

Manning-n Values: LOB: .05 CH: .04 ROB: .055



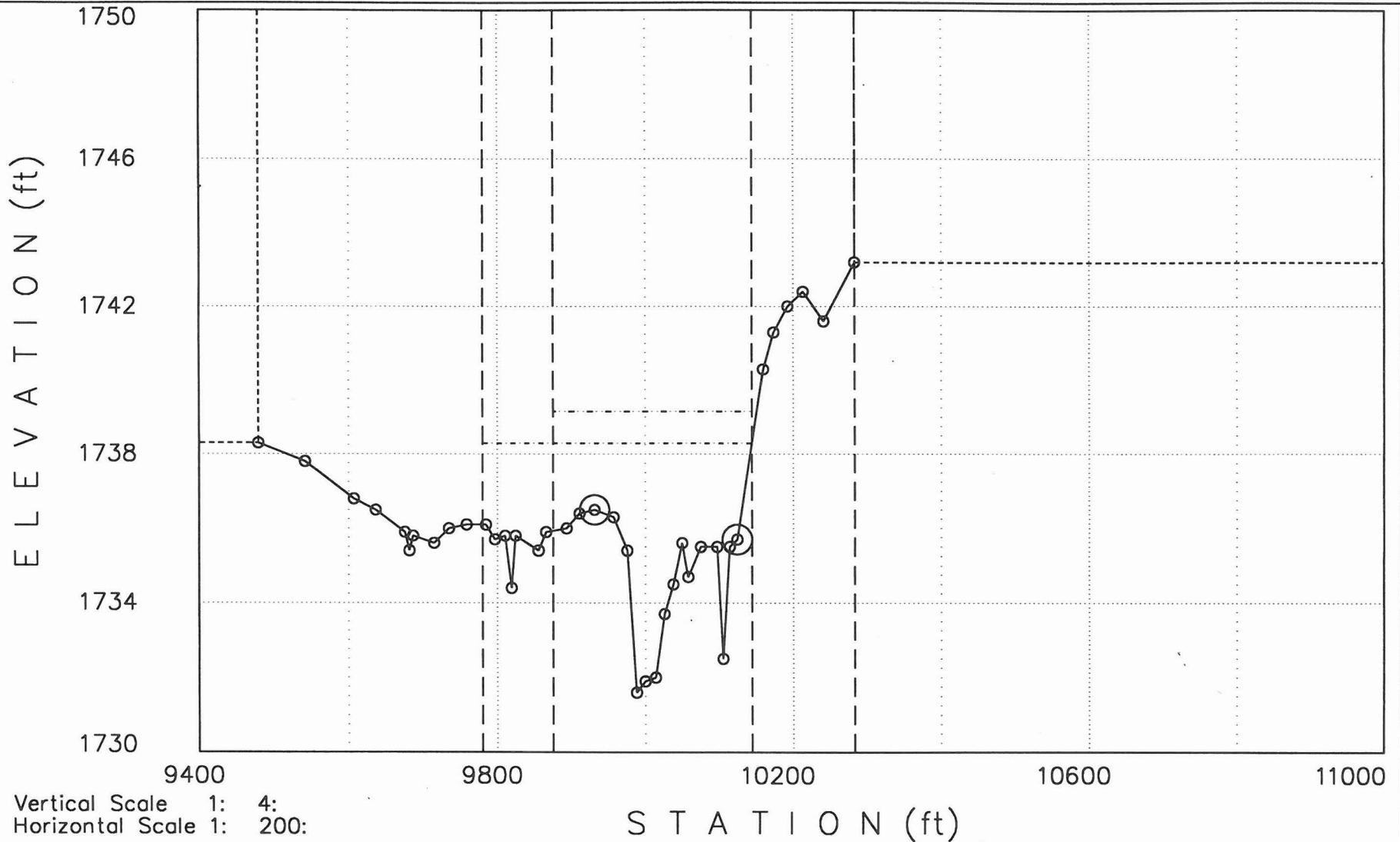
Vertical Scale 1: 6:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: 10.331: (FN = 11547P31.OP1)

>>>>>>

Q1= 5700cfs WS1= 1738.29  
Q2= 5700cfs WS2= 1739.15

Manning-n Values: LOB: .05 CH: .04 ROB: .055



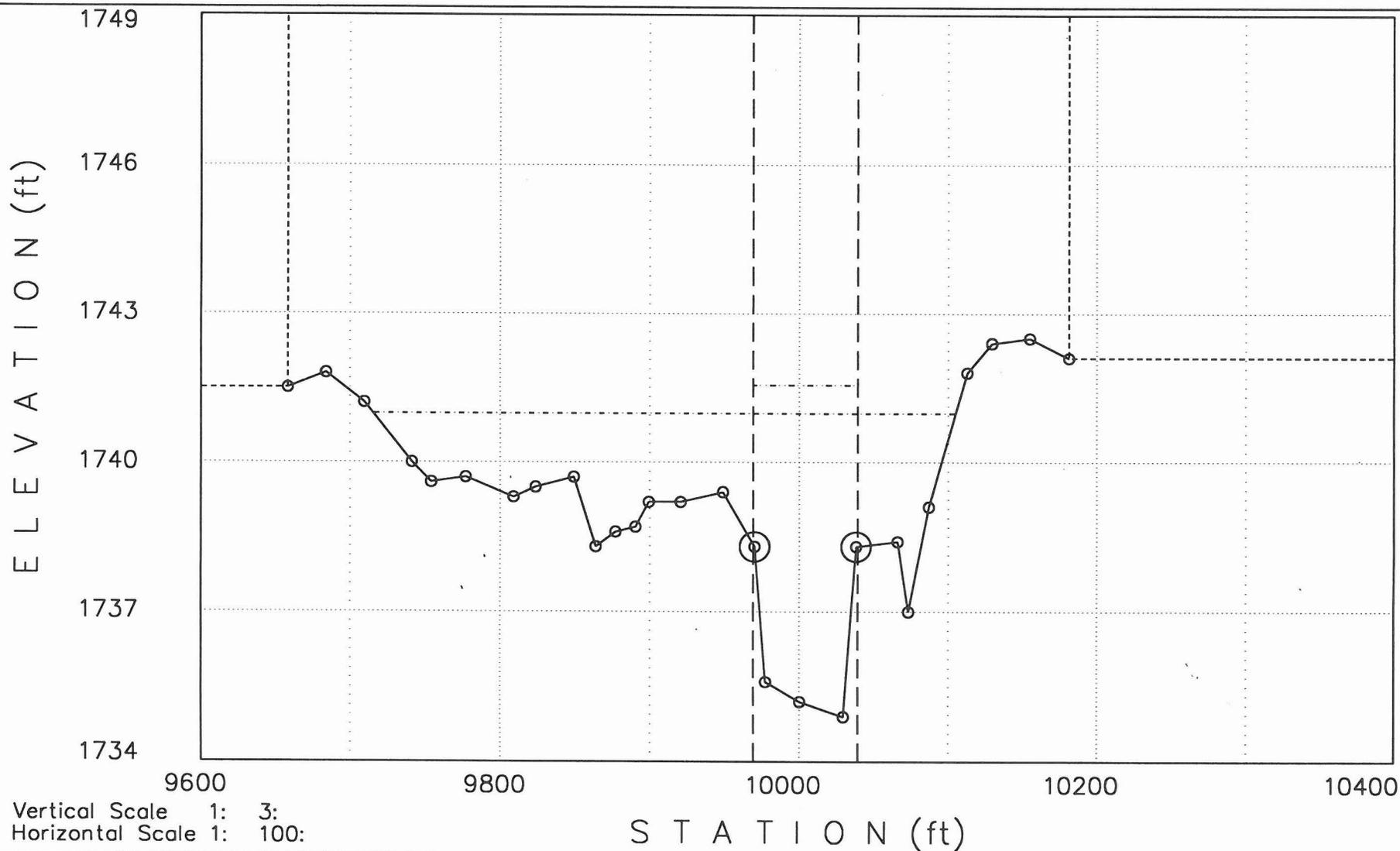
Vertical Scale 1: 4:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 10.424: (FN = 11547P31.0P1)

>>>>>>

Q1= 5700cfs WS1= 1740.98 -----  
Q2= 5700cfs WS2= 1741.55 -----

Manning-n Values: LOB: .05 CH: .04 ROB: .055



**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

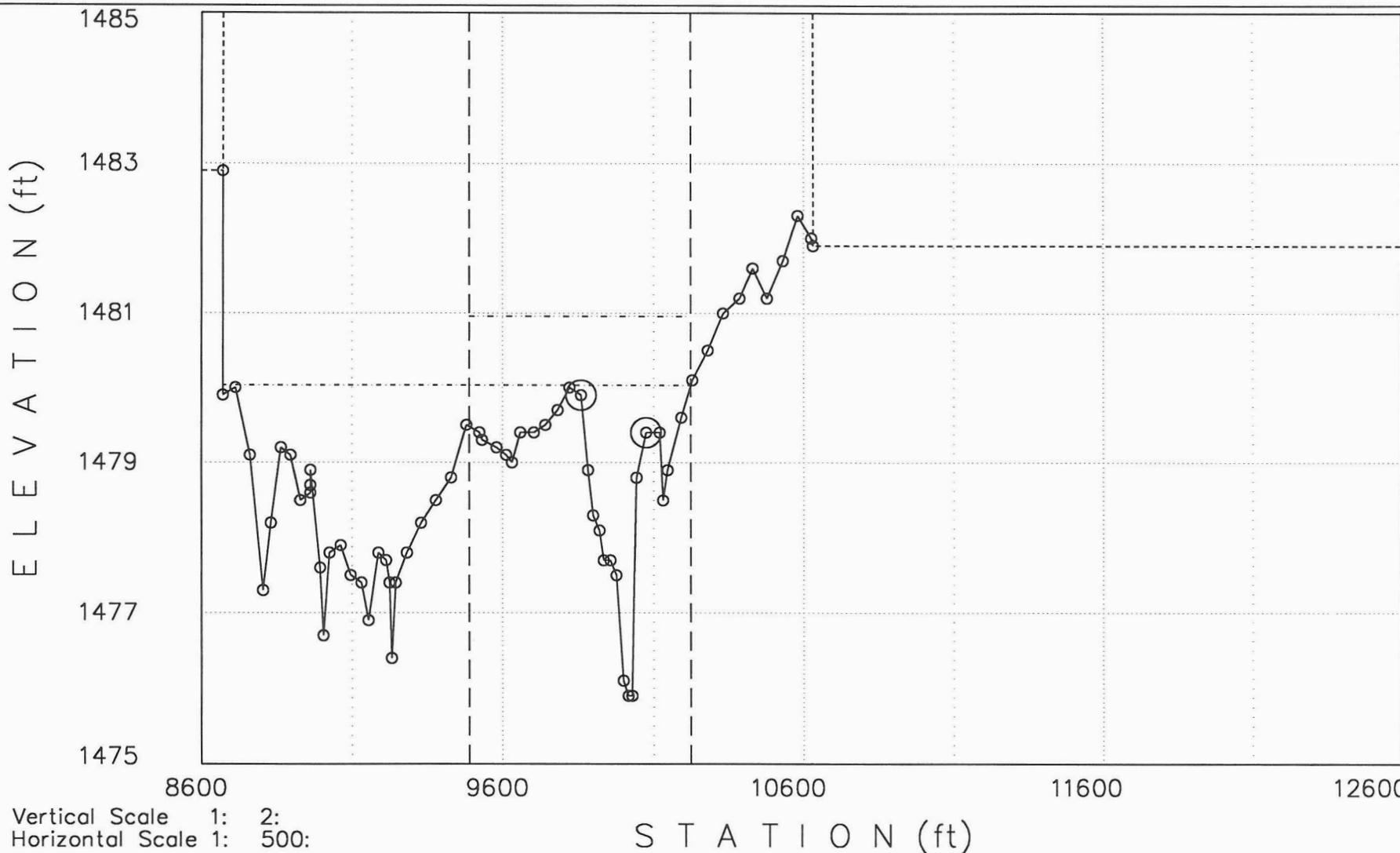
**SECTION 4.3.2 TANK WASH**

<<<<<< Cross Section: .98: (FN = 11547T31.OP1)

>>>>>>

Q1= 6600cfs WS1= 1480.03  
Q2= 6600cfs WS2= 1480.96

Manning-n Values: LOB: .055 CH: .04 ROB: .055

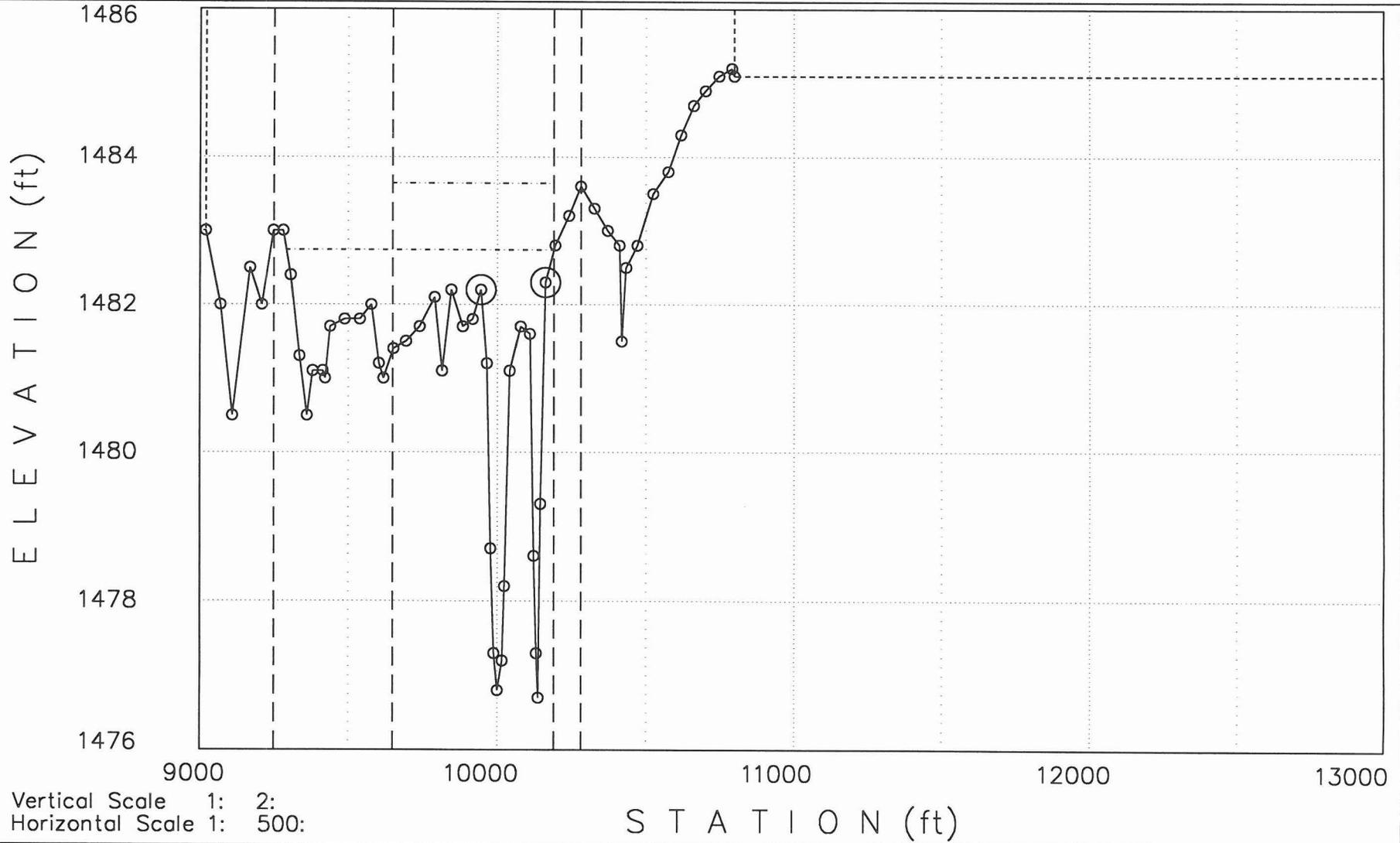


<<<<<< Cross Section: 1.073: (FN = 11547T31.OP1)

>>>>>>

Q1= 6700cfs WS1= 1482.74  
Q2= 6700cfs WS2= 1483.64

Manning-n Values: LOB: .055 CH: .041 ROB: .055

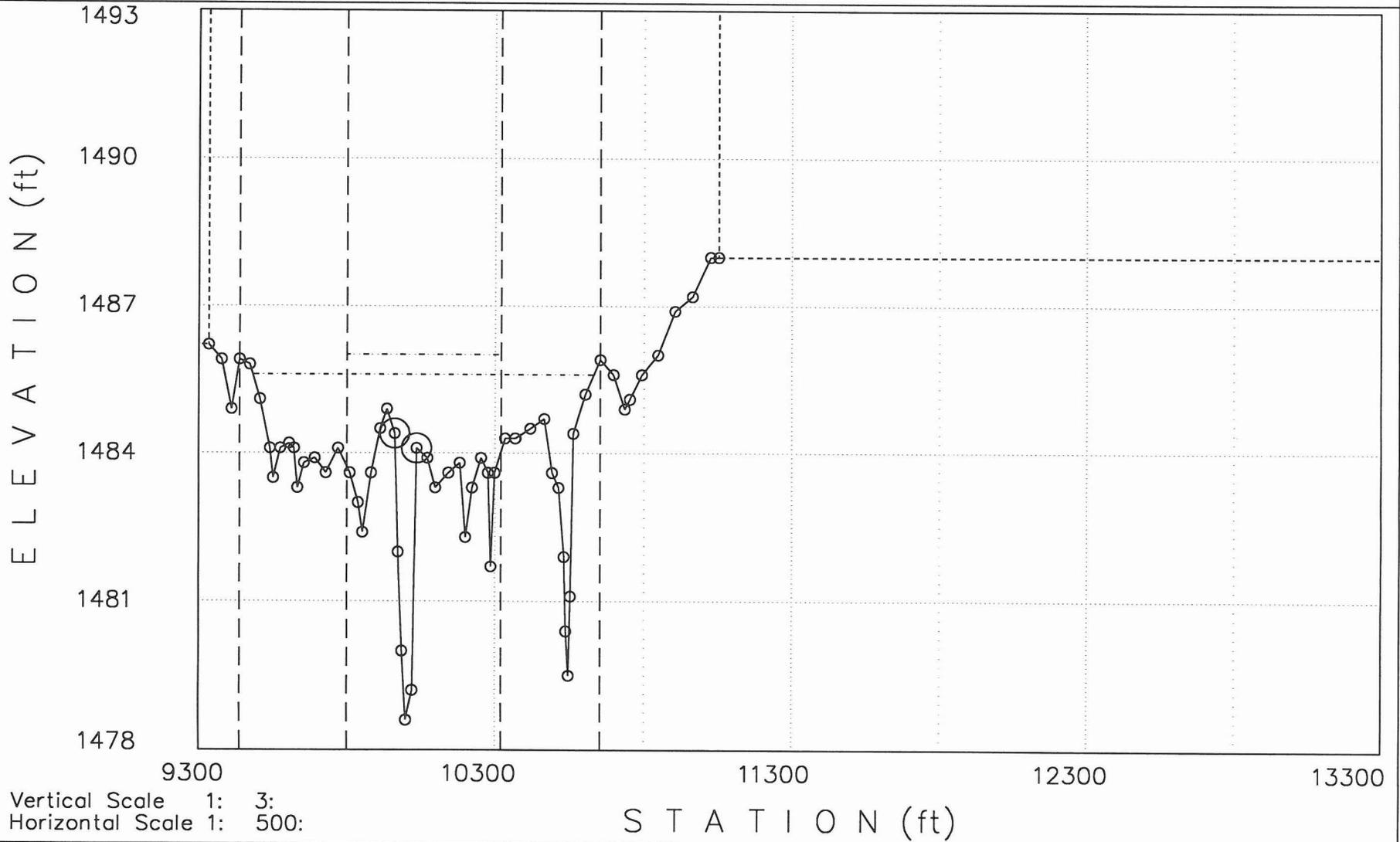


<<<<<< Cross Section: 1.17: (FN = 11547T31.OP1)

>>>>>>

Q1= 6700cfs WS1= 1485.6  
Q2= 6700cfs WS2= 1486

Manning-n Values: LOB: .055 CH: .04 ROB: .055



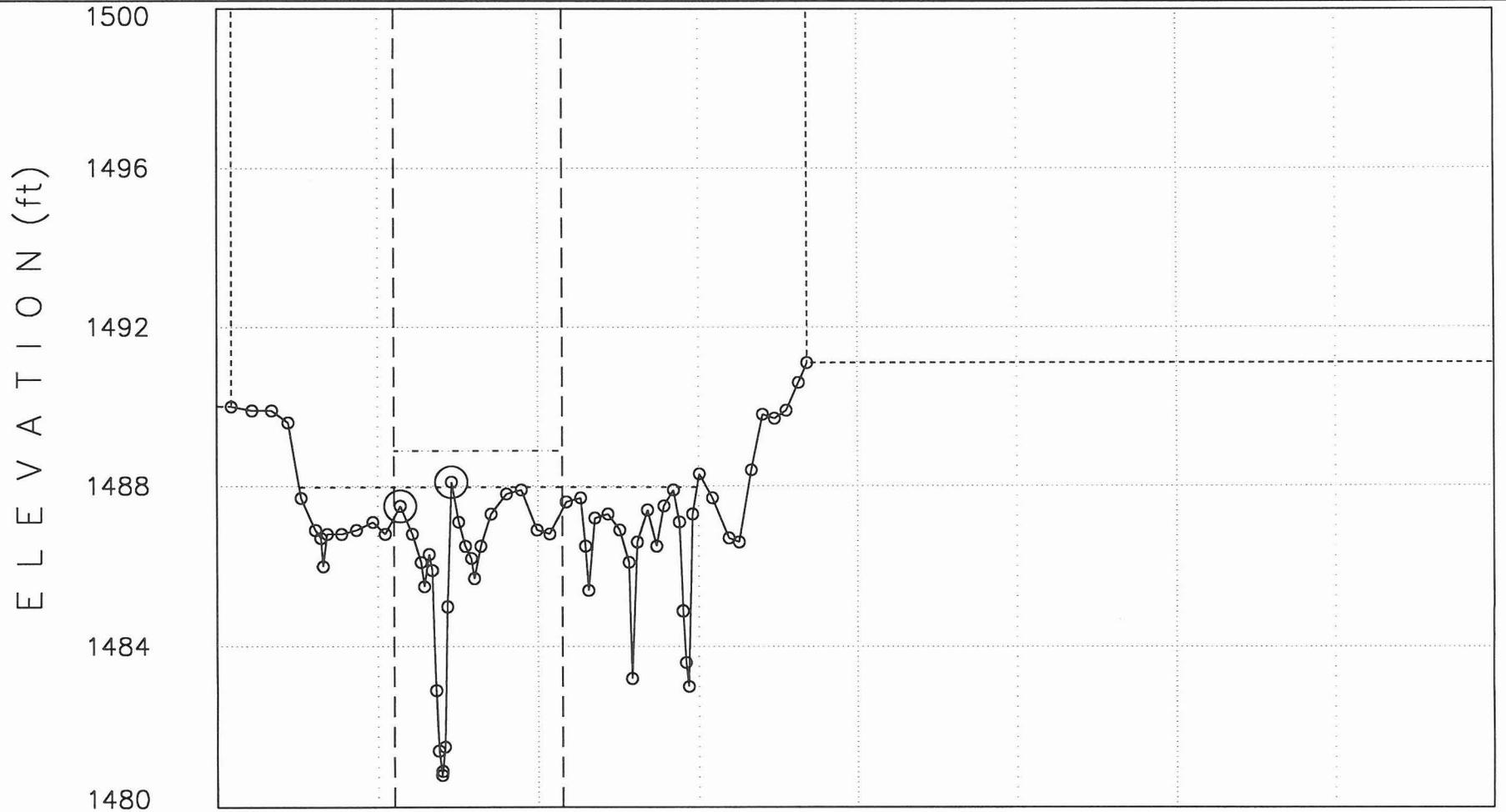
Vertical Scale 1: 3:  
Horizontal Scale 1: 500:

<<<<<< Cross Section: 1.265: (FN = 11547T31.OP1)

>>>>>>

Q1= 6700cfs WS1= 1487.97  
Q2= 6700cfs WS2= 1488.89

Manning-n Values: LOB: .055 CH: .04 ROB: .055



Vertical Scale 1: 4:  
Horizontal Scale 1: 500:

S T A T I O N (ft)

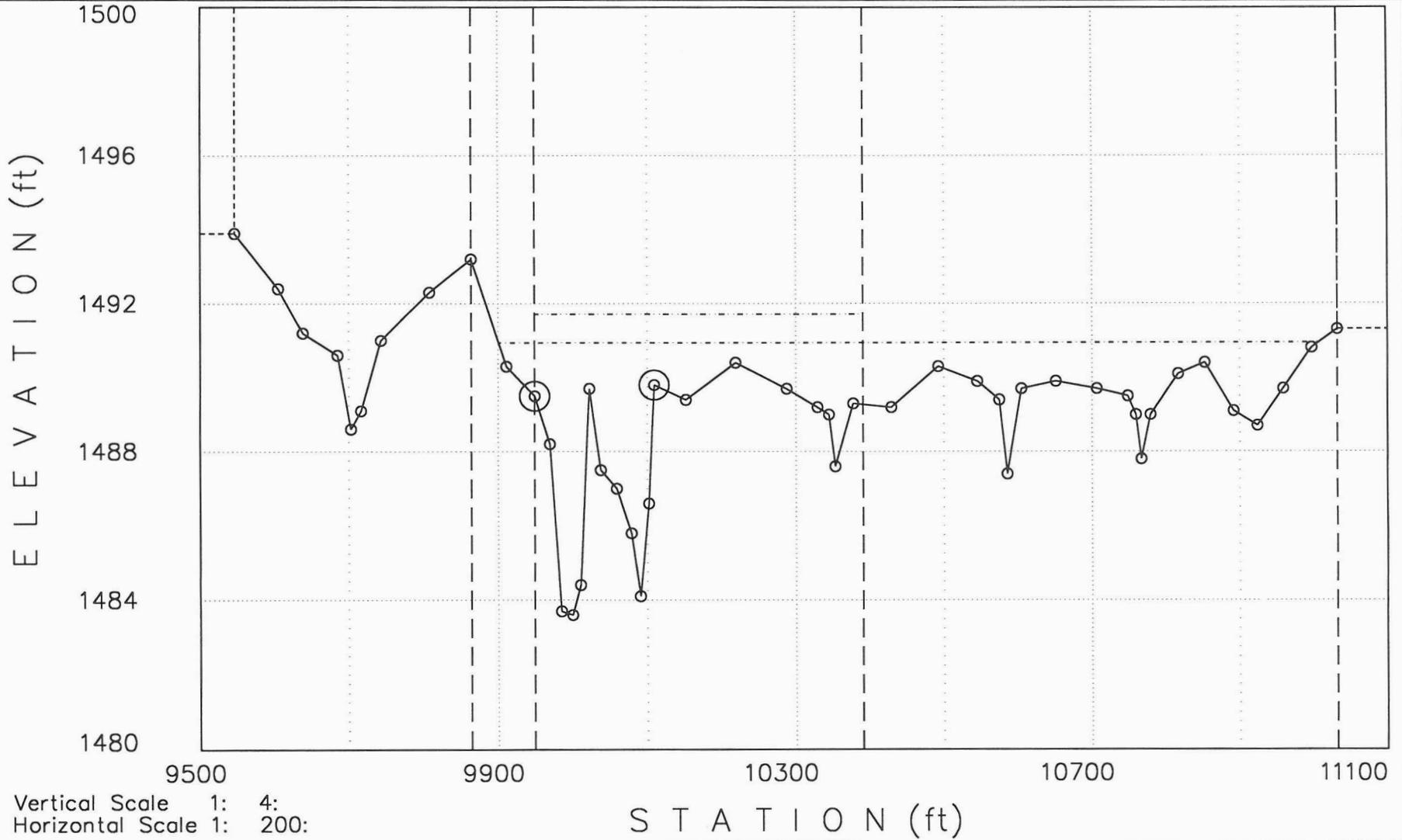
<<<<<< Cross Section: 1.36: (FN = 11547T31.OP1)

>>>>>>

Q1= 6700cfs WS1= 1490.94  
Q2= 6700cfs WS2= 1491.71

-----  
-----

Manning-n Values: LOB: .055 CH: .045 ROB: .055



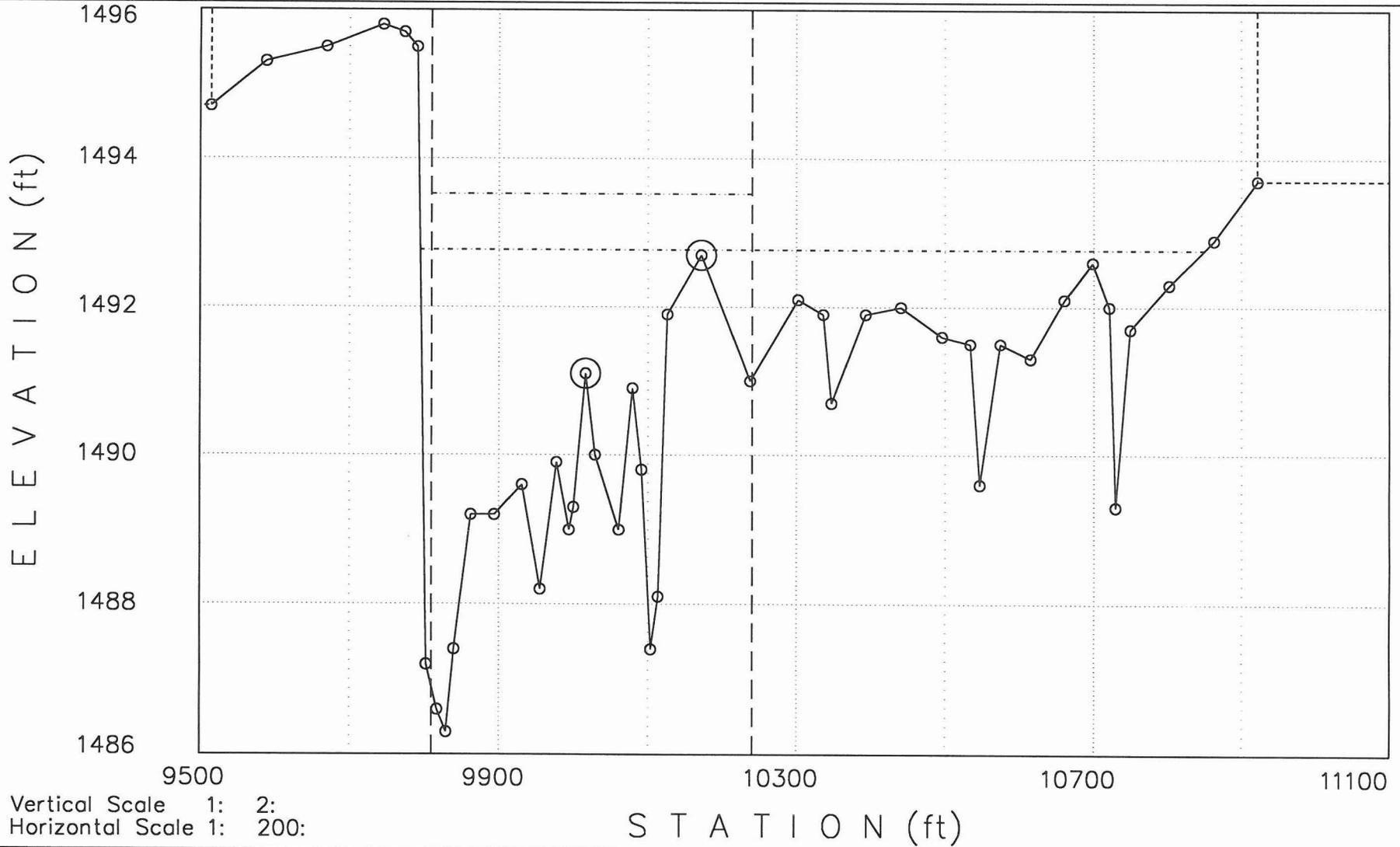
Vertical Scale 1: 4:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 1.454: (FN = 11547T31.OP1)

>>>>>>

Q1= 6700cfs WS1= 1492.77  
Q2= 6700cfs WS2= 1493.52

Manning-n Values: LOB: .048 - .049 CH: .045 ROB: .055



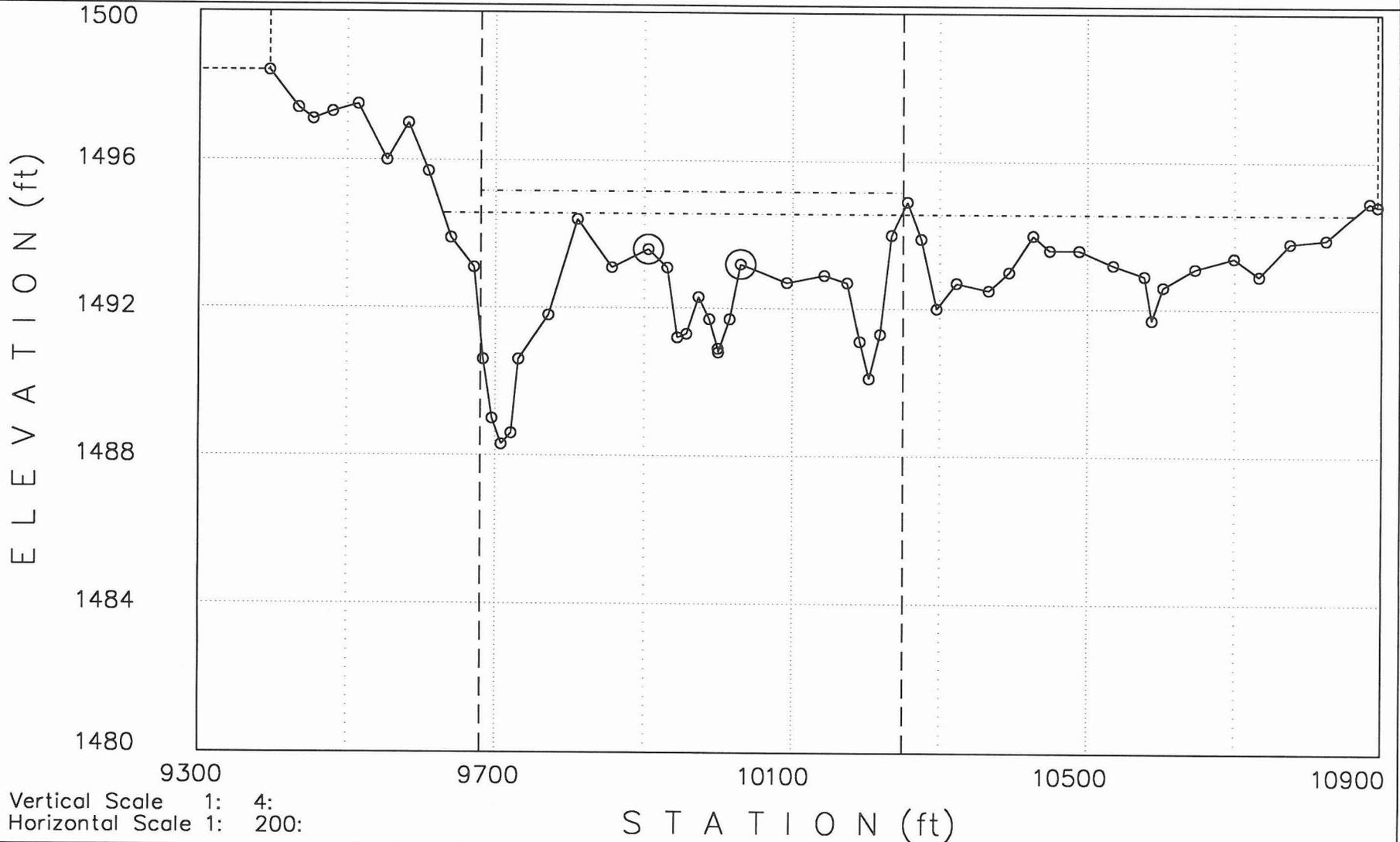
Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 1.552: (FN = 11547T31.OP1)

>>>>>>

Q1= 6700cfs WS1= 1494.56 -----  
Q2= 6700cfs WS2= 1495.16 -----

Manning-n Values: LOB: .046 CH: .045 ROB: .047 - .051

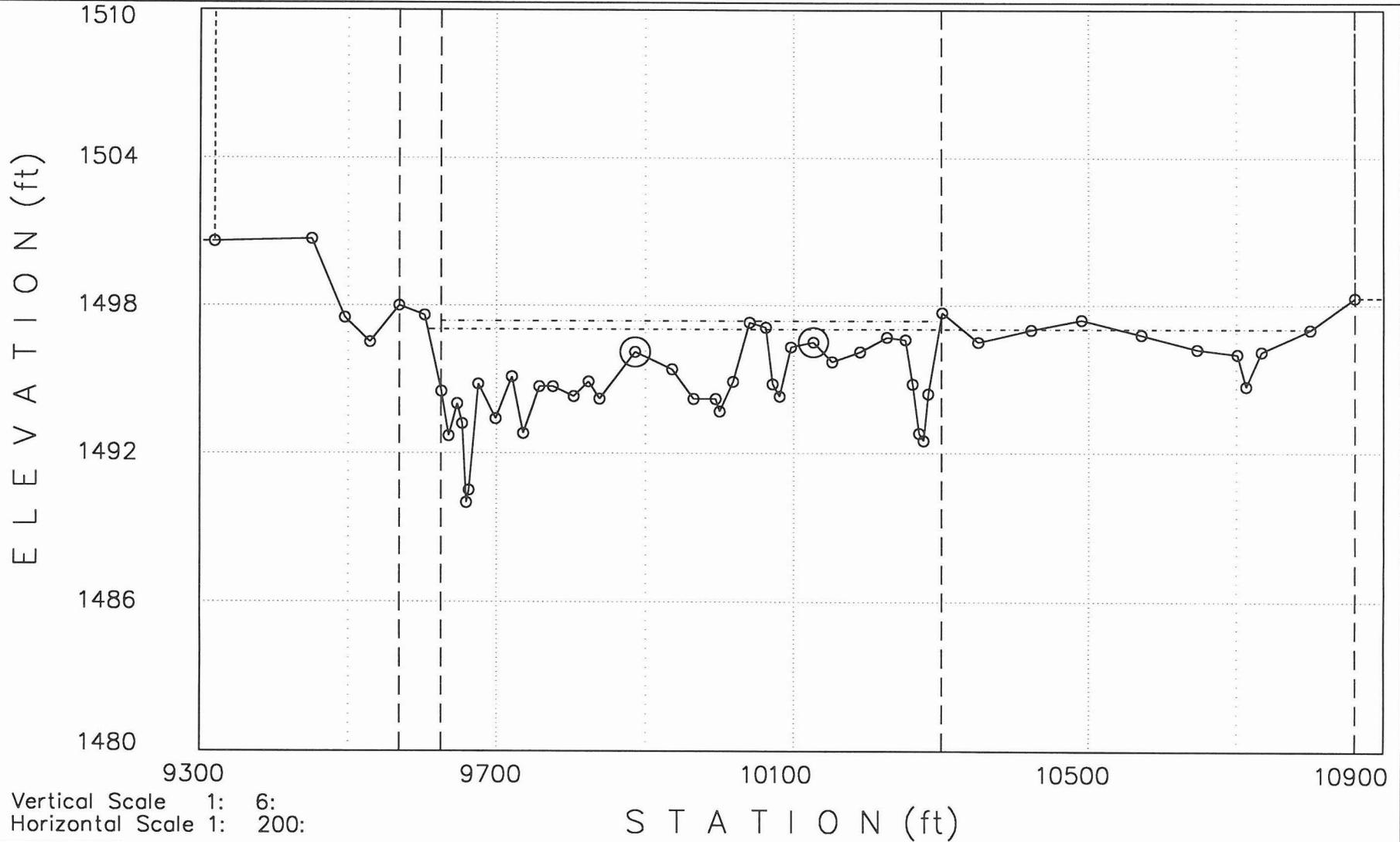


<<<<<< Cross Section: 1.654: (FN = 11547T31.OP1)

>>>>>>

Q1= 6700cfs WS1= 1497.03  
Q2= 6700cfs WS2= 1497.36

Manning-n Values: LOB: .052 CH: .045 ROB: .047 - .049



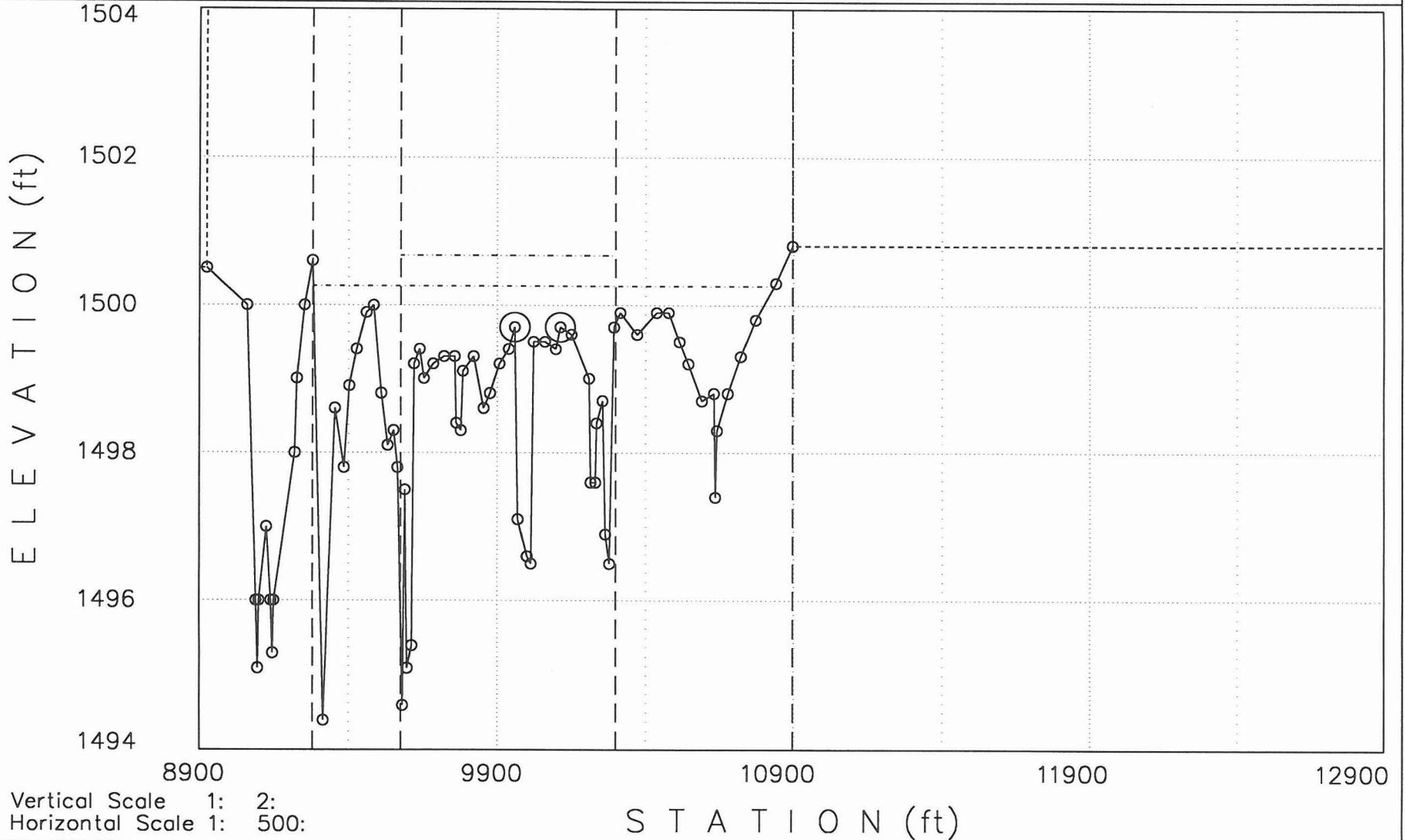
Vertical Scale 1: 6:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 1.746: (FN = 11547T31.OP1)

>>>>>>

Q1= 6700cfs WS1= 1500.26  
Q2= 6700cfs WS2= 1500.67

Manning-n Values: LOB: .055 CH: .04 ROB: .046 - .05



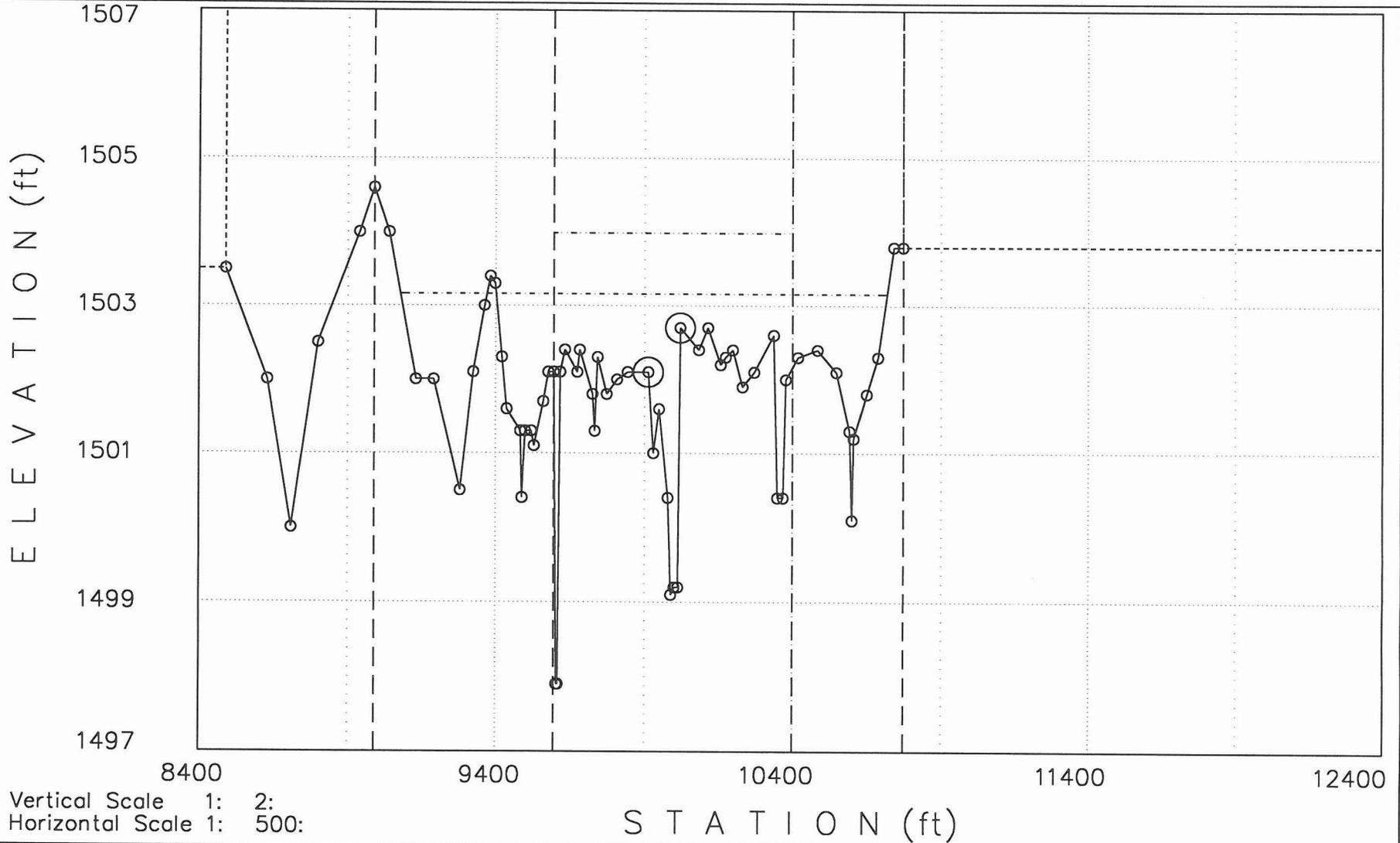
Vertical Scale 1: 2:  
Horizontal Scale 1: 500:

<<<<<< Cross Section: 1.842: (FN = 11547T31.OP1)

>>>>>>

Q1= 6700cfs WS1= 1503.16 -----  
Q2= 6700cfs WS2= 1503.99 -----

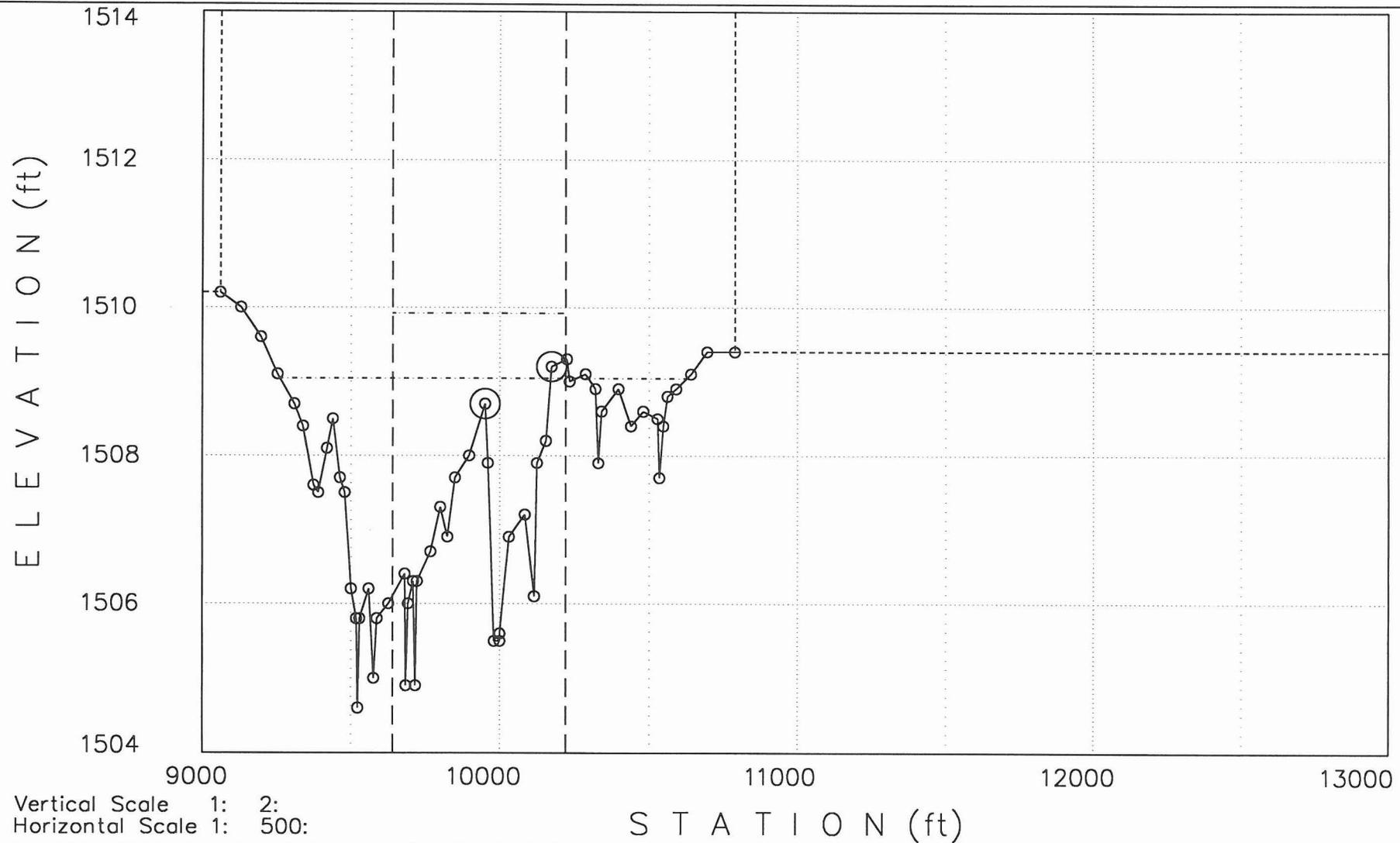
Manning-n Values: LOB: .055 CH: .04 ROB: .048 - .051



<<<<<< Cross Section: 2.039: (FN = 11547T31.OP1) >>>>>>

Q1= 6800cfs WS1= 1509.04 -----  
Q2= 6800cfs WS2= 1509.92 -----

Manning-n Values: LOB: .05 CH: .04 ROB: .055

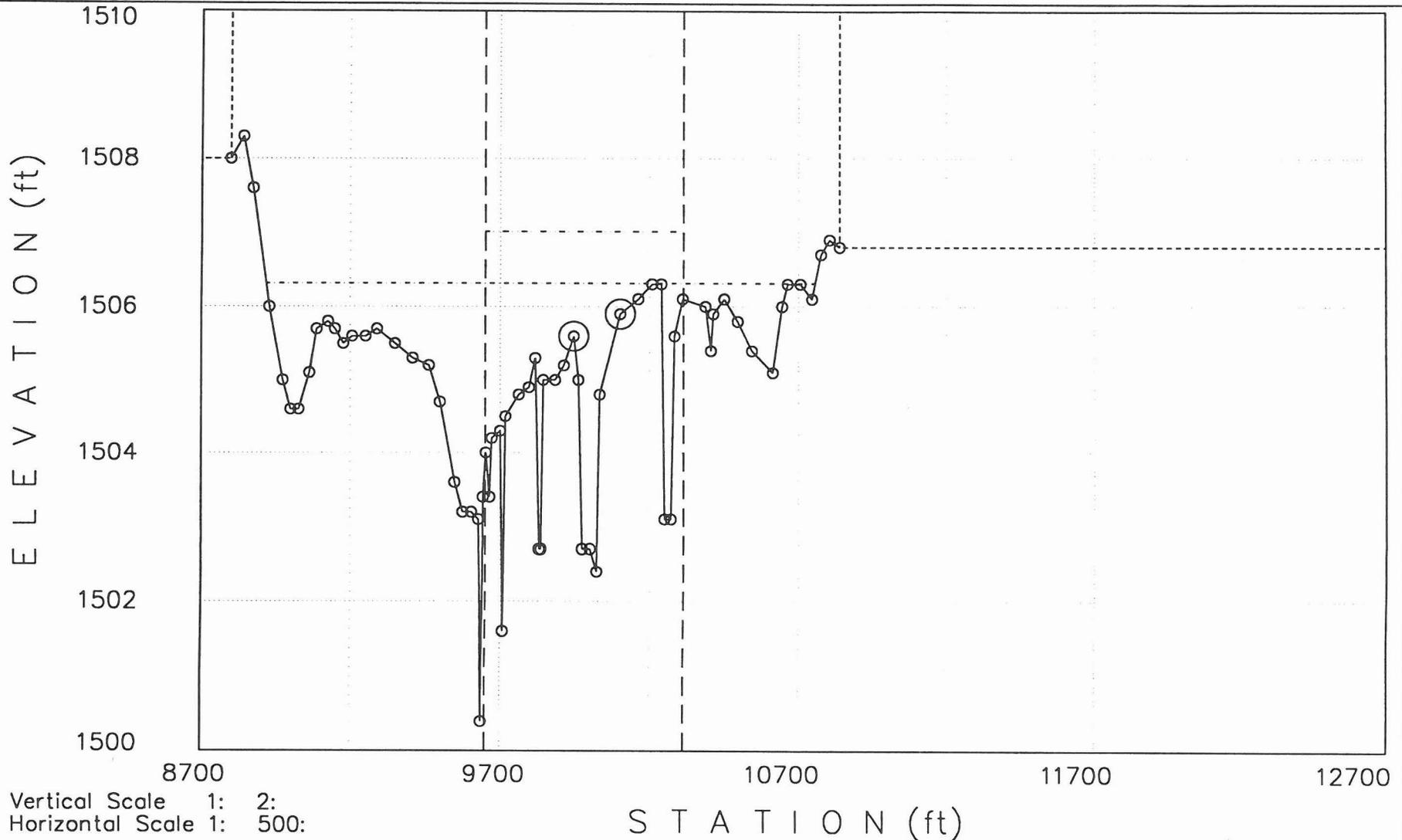


<<<<<< Cross Section: 1.939: (FN = 11547T31.OP1)

>>>>>>

Q1= 6800cfs WS1= 1506.31 -----  
Q2= 6800cfs WS2= 1507.01 -----

Manning-n Values: LOB: .055 CH: .04 ROB: .047 - .049

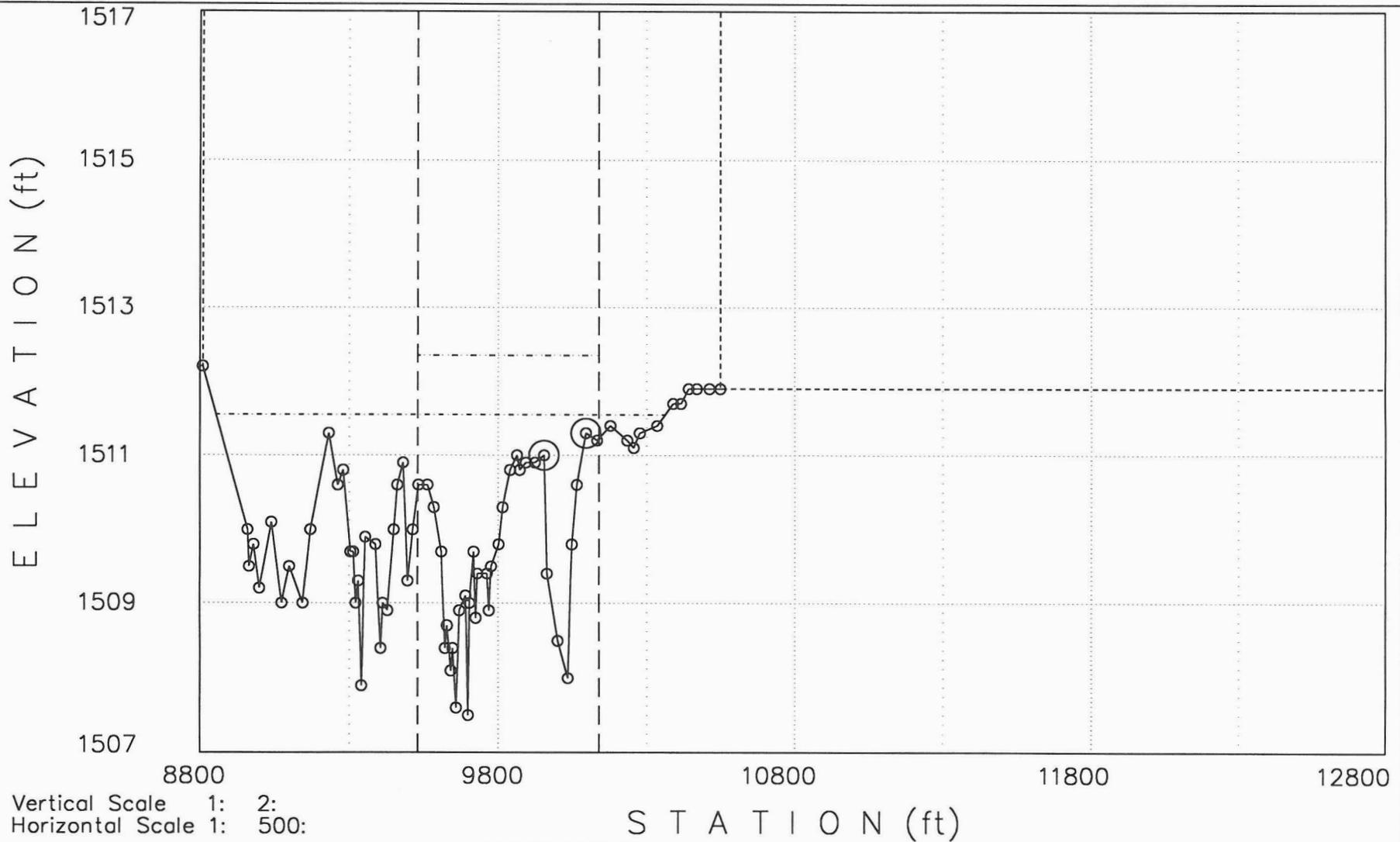


Vertical Scale 1: 2:  
Horizontal Scale 1: 500:

<<<<<< Cross Section: 2.134: (FN = 11547T31.OP1) >>>>>>

Q1= 6800cfs WS1= 1511.55 -----  
Q2= 6800cfs WS2= 1512.35 -----

Manning-n Values: LOB: .05 CH: .04 ROB: .055

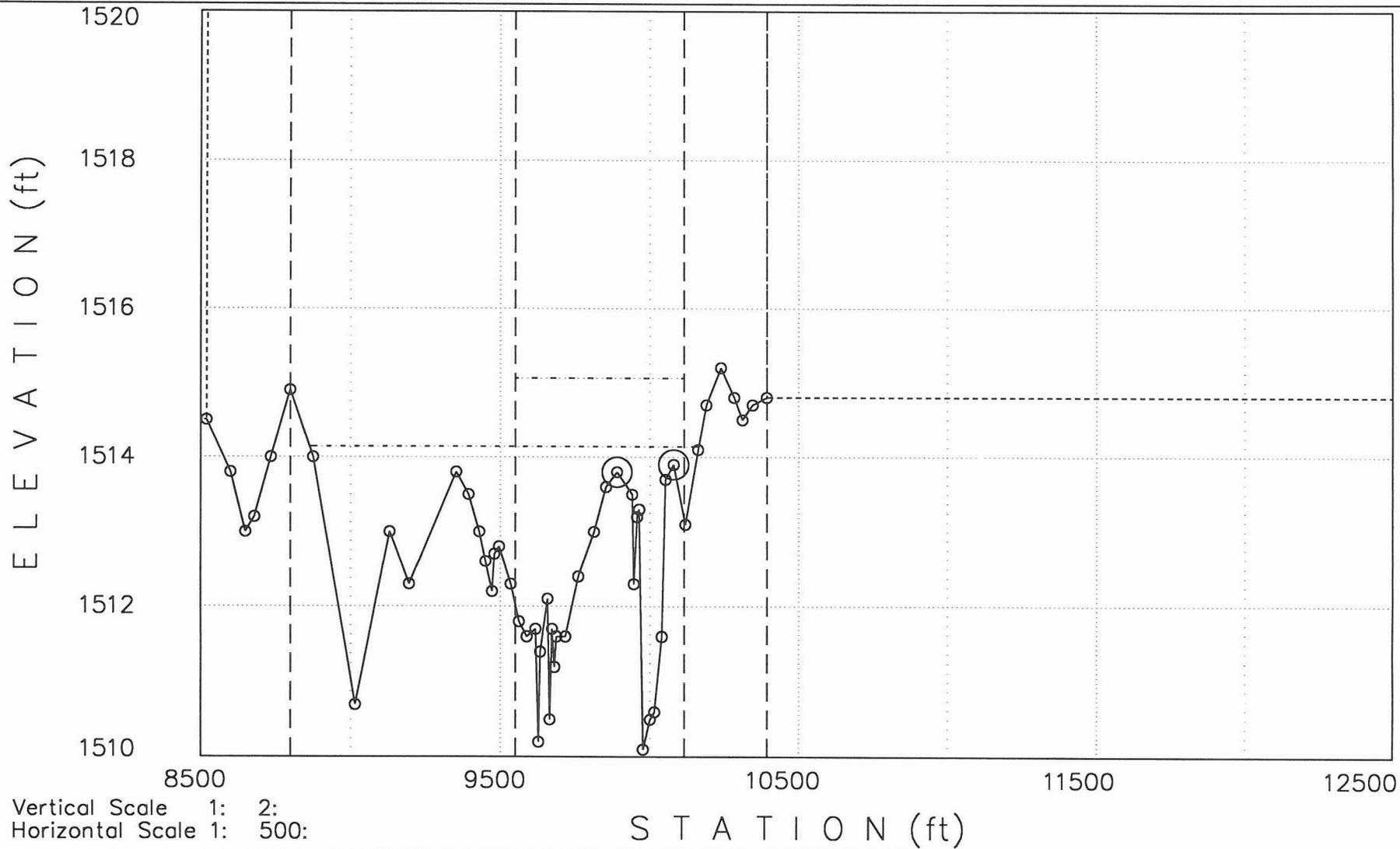


<<<<<< Cross Section: 2.23: (FN = 11547T31.OP1)

>>>>>>

Q1= 6800cfs WS1= 1514.14  
Q2= 6800cfs WS2= 1515.06

Manning-n Values: LOB: .05 CH: .04 ROB: .055

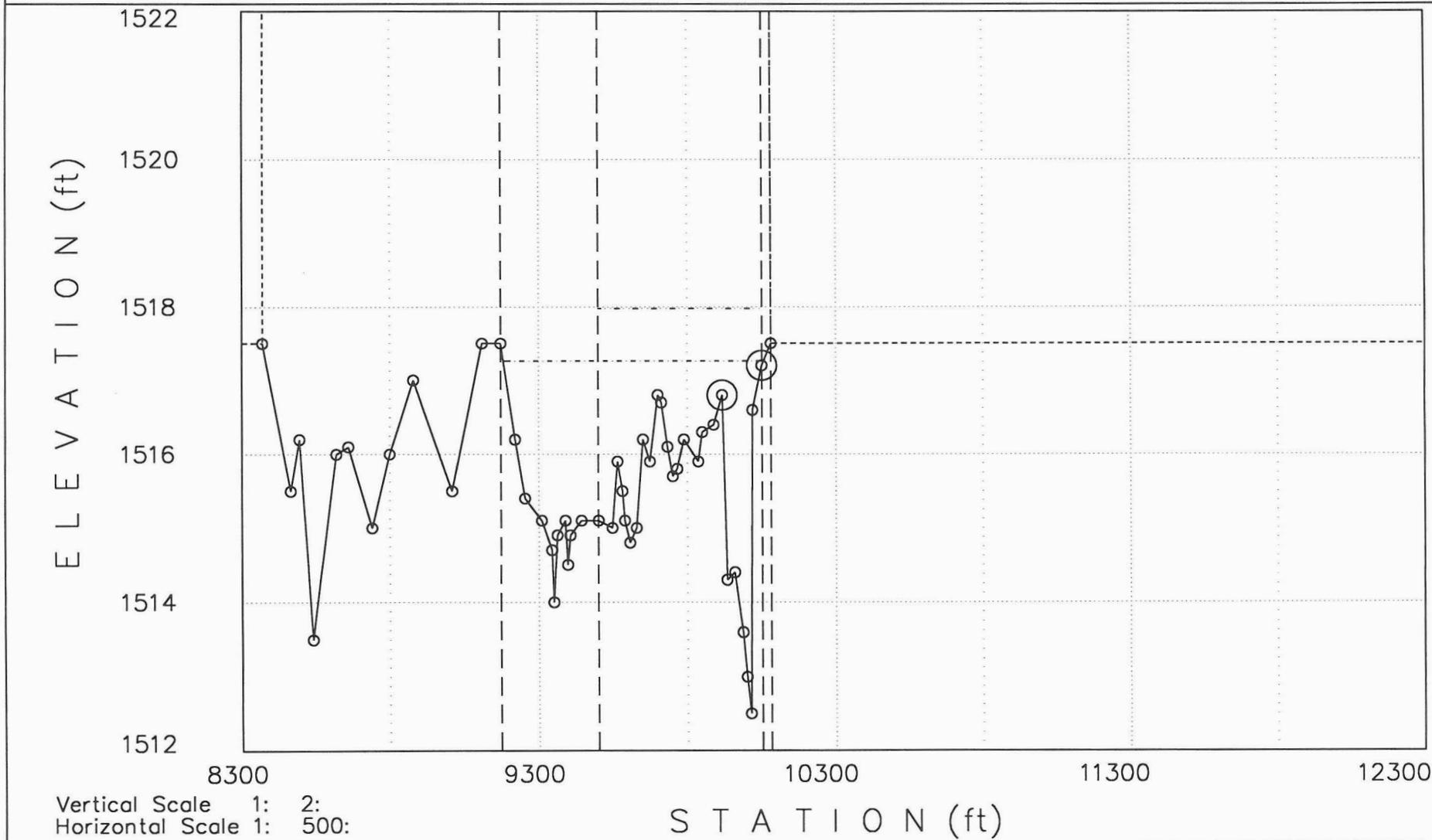


<<<<<< Cross Section: 2.328: (FN = 11547T31.OP1)

>>>>>>

Q1= 6800cfs WS1= 1517.26  
Q2= 6800cfs WS2= 1517.98

Manning-n Values: LOB: .05 CH: .04 ROB: .055

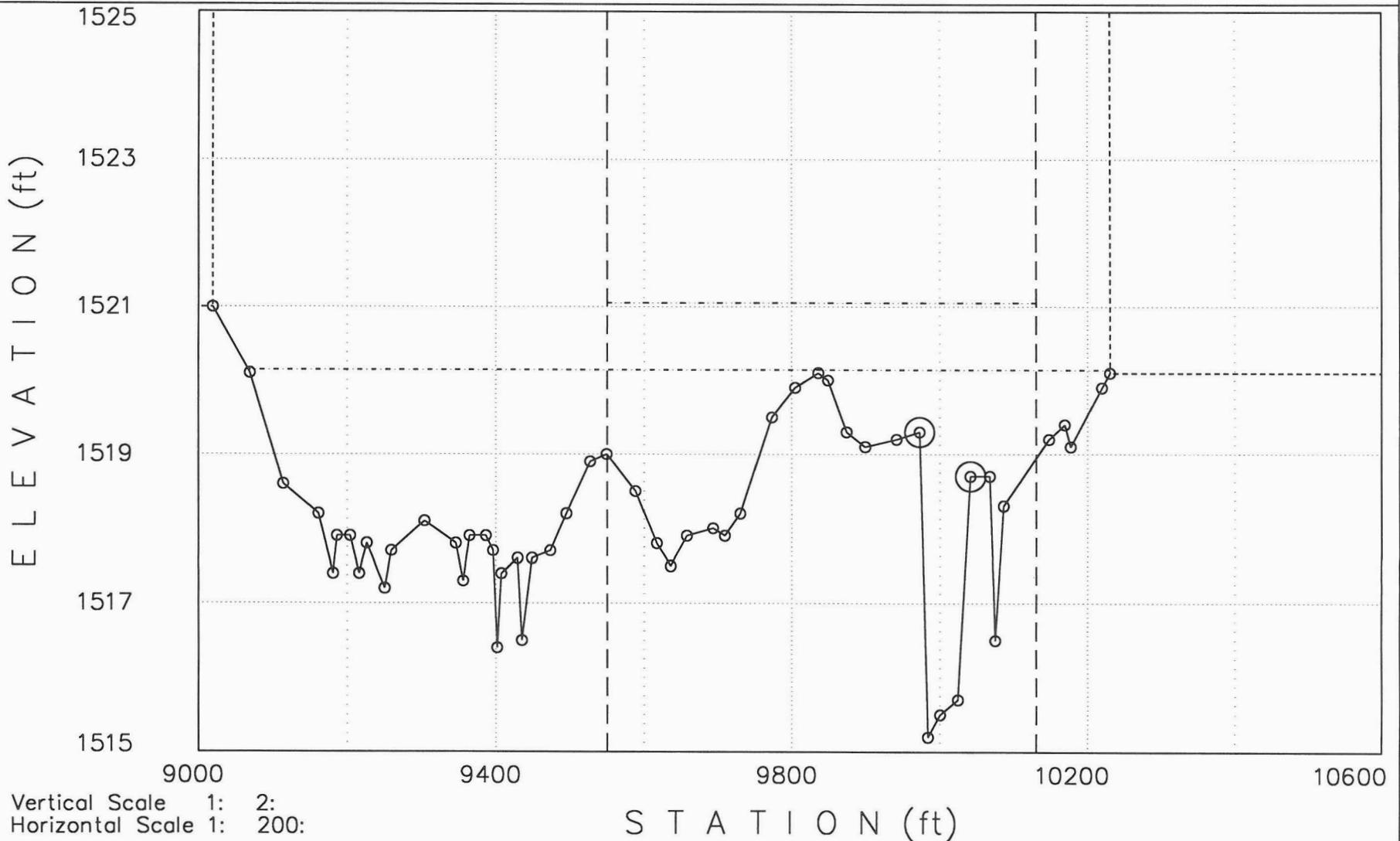


<<<<<< Cross Section: 2.425: (FN = 11547T31.OP1)

>>>>>>

Q1= 6800cfs WS1= 1520.14  
Q2= 6800cfs WS2= 1521.05

Manning-n Values: LOB: .05 CH: .04 ROB: .055

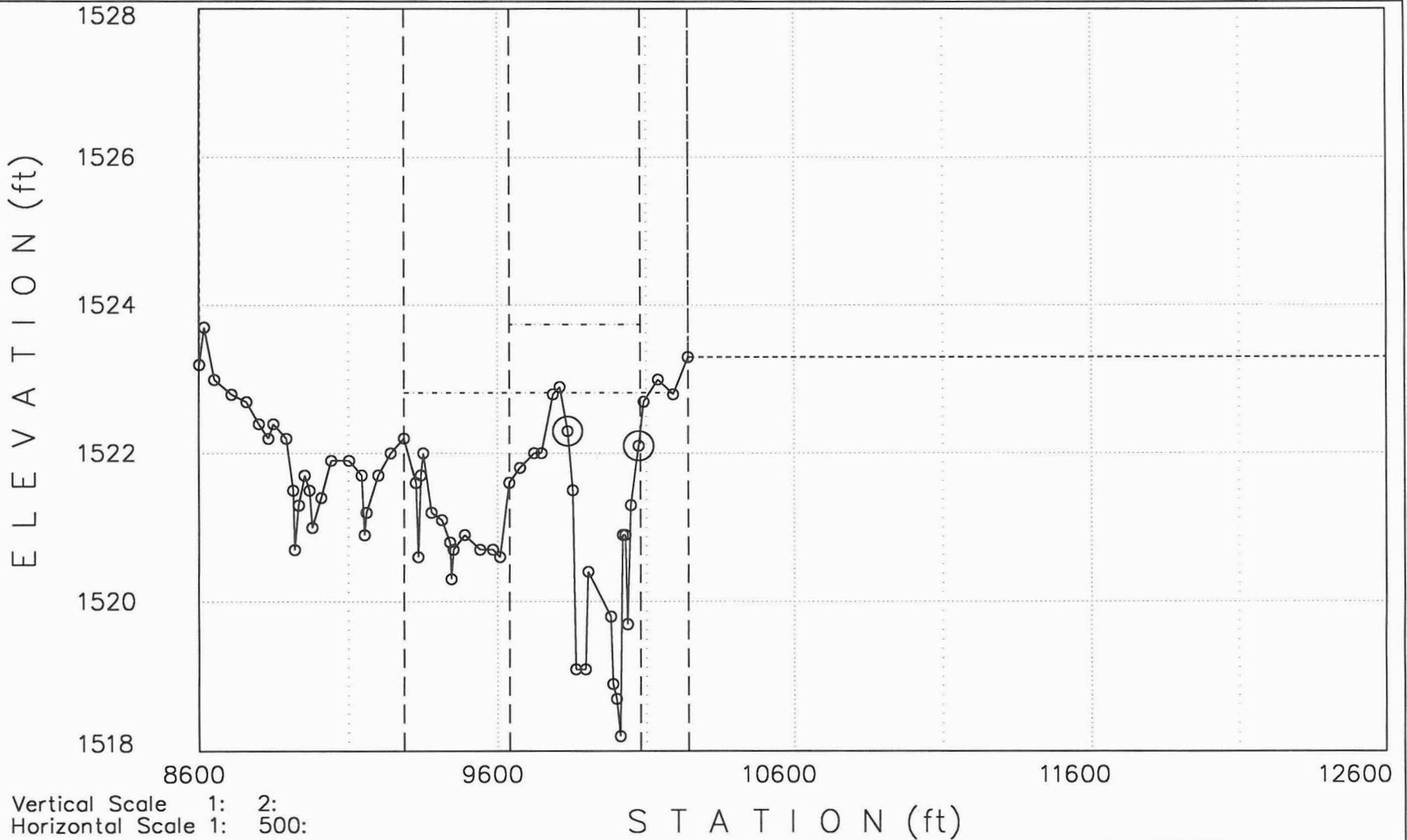


<<<<<< Cross Section: 2.52: (FN = 11547T31.OP1)

>>>>>>

Q1= 6800cfs WS1= 1522.82  
Q2= 6800cfs WS2= 1523.74

Manning-n Values: LOB: .055 CH: .04 ROB: .055

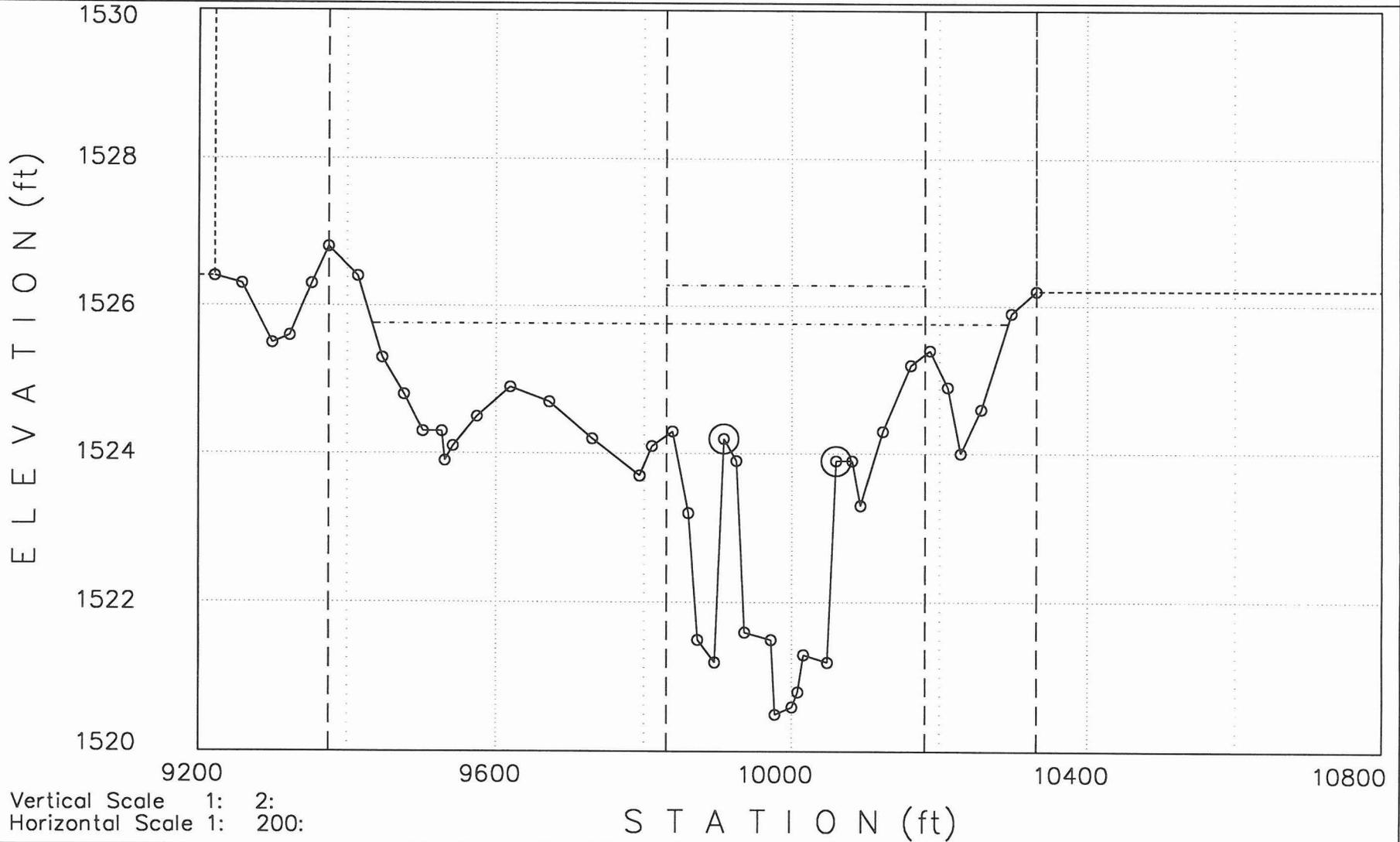


<<<<<< Cross Section: 2.609: (FN = 11547T31.OP1)

>>>>>>

Q1= 6800cfs WS1= 1525.76 -----  
Q2= 6800cfs WS2= 1526.28 -----

Manning-n Values: LOB: .055 CH: .04 ROB: .055

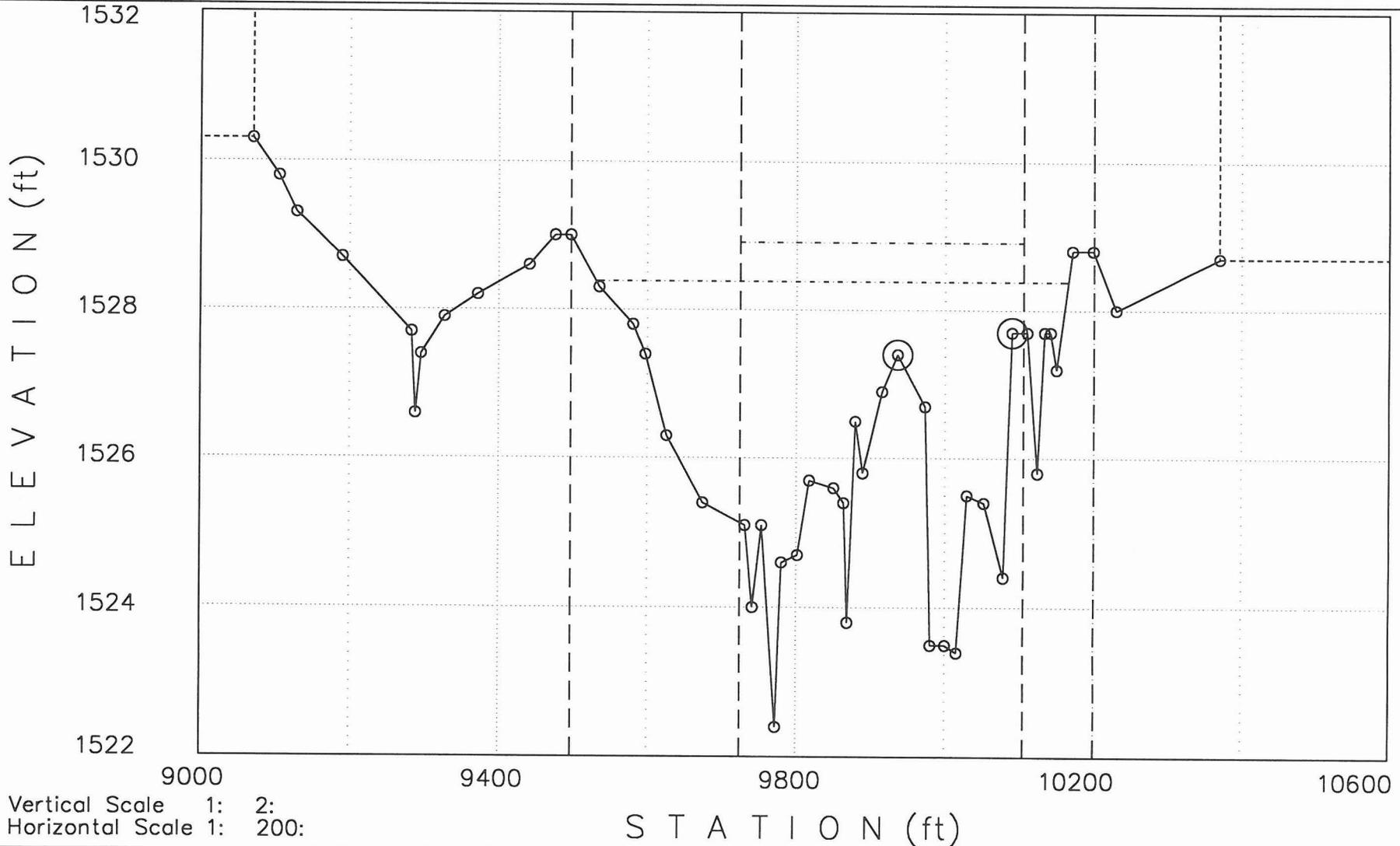


<<<<<< Cross Section: 2.709: (FN = 11547T31.OP1)

>>>>>>

Q1= 6800cfs WS1= 1528.38  
Q2= 6800cfs WS2= 1528.91

Manning-n Values: LOB: .055 CH: .04 ROB: .045 - .046



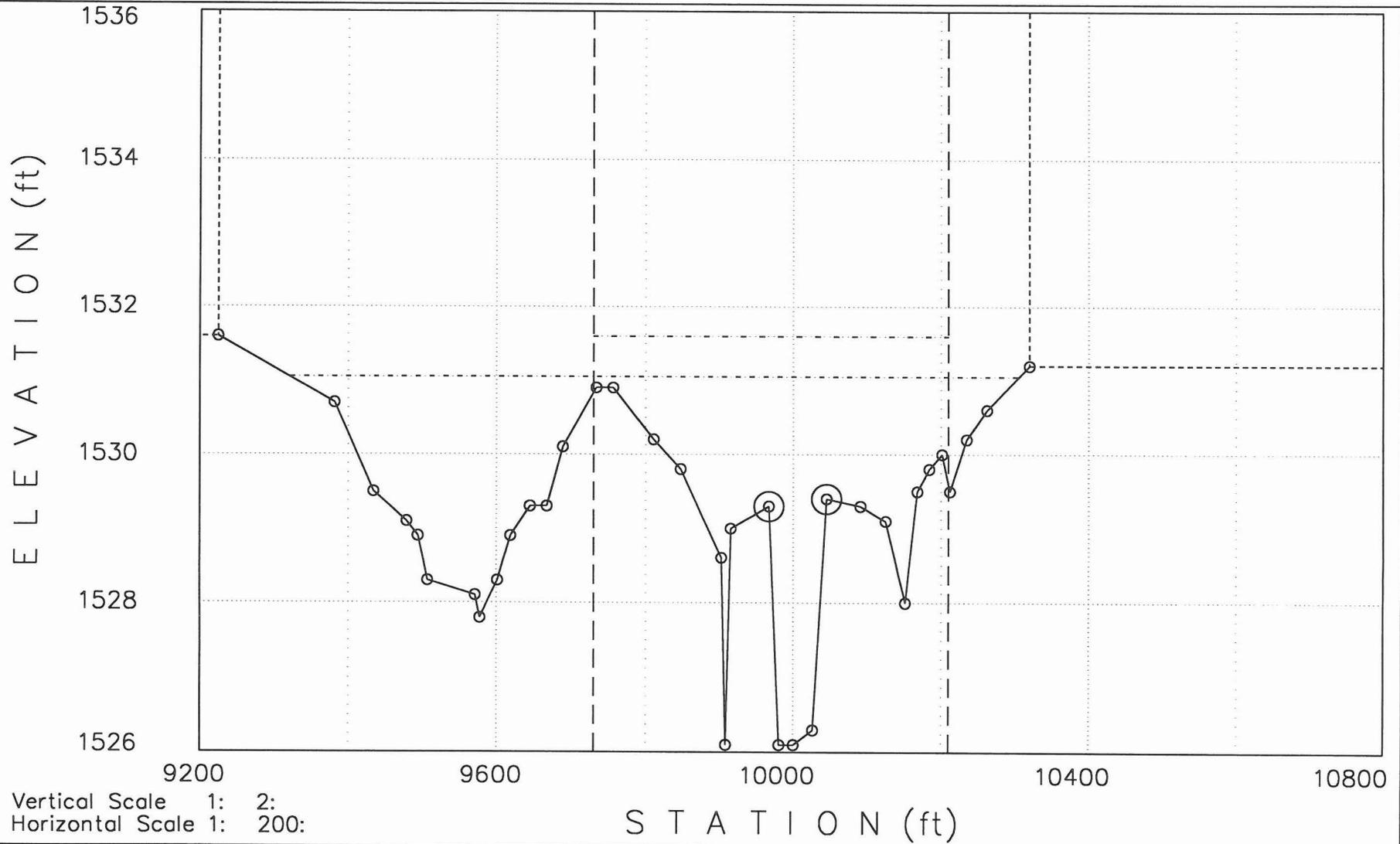
Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 2.805: (FN = 11547T31.0P1)

>>>>>>

Q1= 6800cfs WS1= 1531.05 -----  
Q2= 6800cfs WS2= 1531.6 -----

Manning-n Values: LOB: .055 CH: .04 ROB: .047 - .048



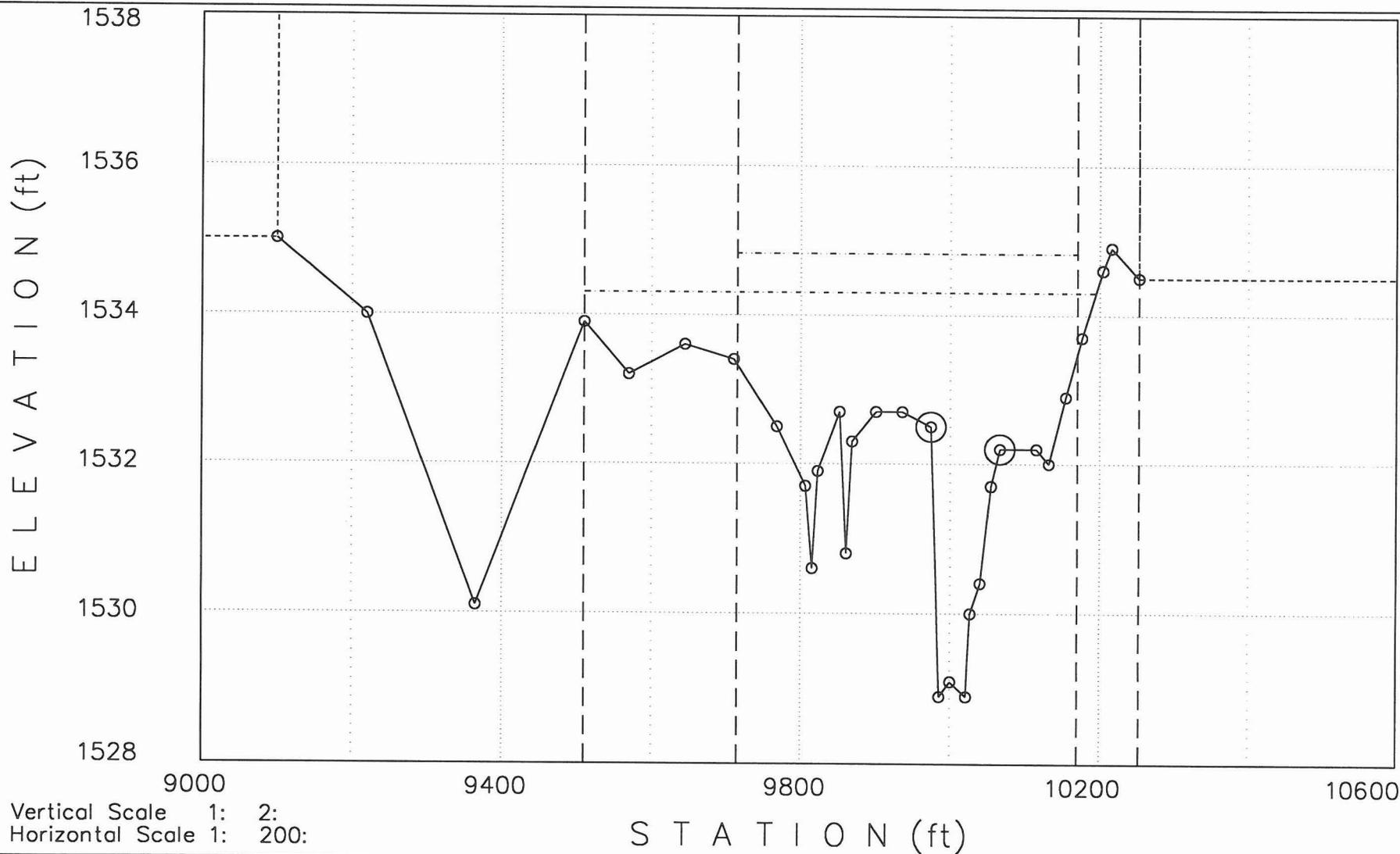
Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 2.9: (FN = 11547T31.OP1)

>>>>>>

Q1= 6900cfs WS1= 1534.3      - - - - -  
 Q2= 6900cfs WS2= 1534.82      - - - - -

Manning-n Values: LOB: .045 - .046 CH: .04 ROB: .055

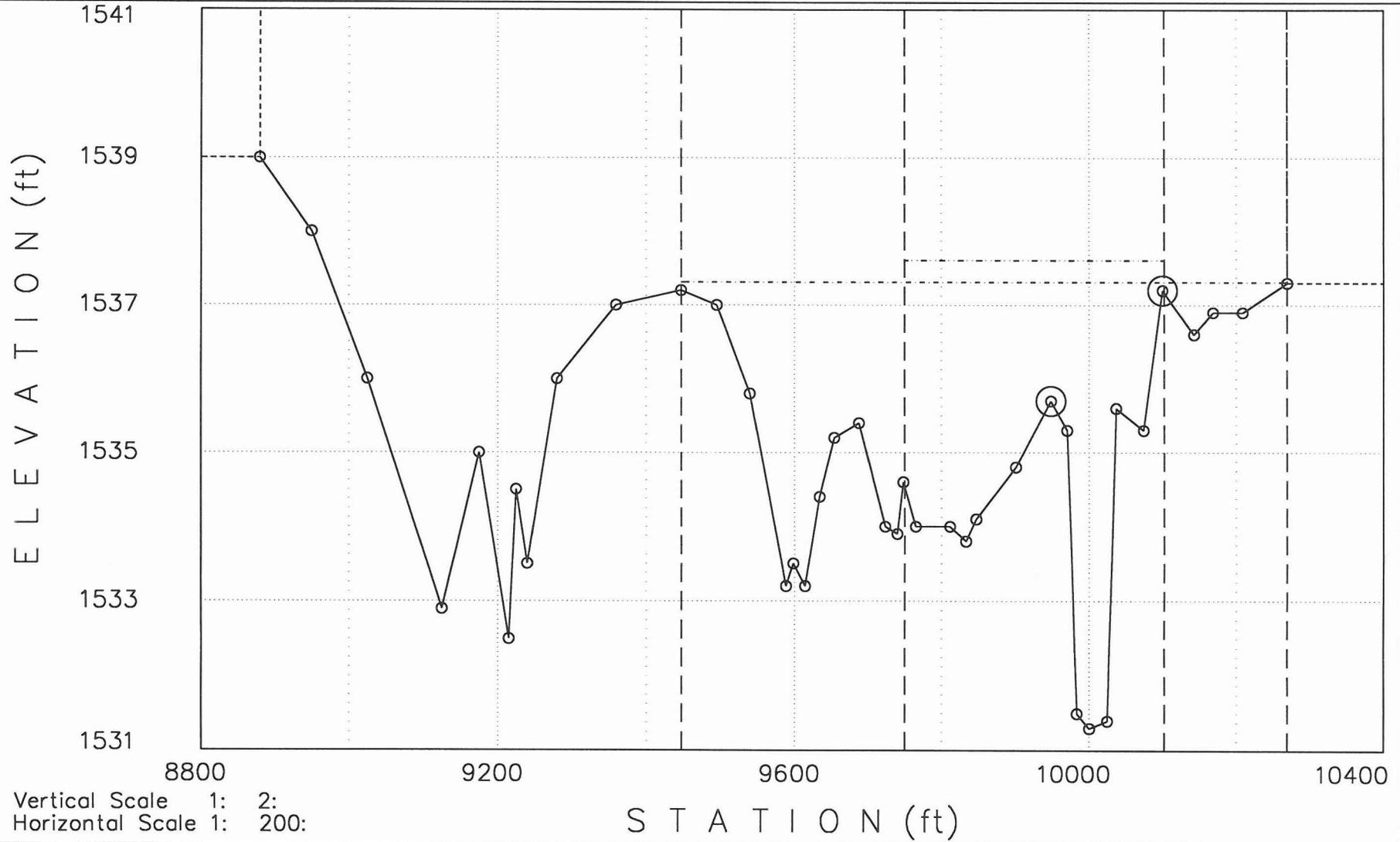


<<<<<< Cross Section: 2.995: (FN = 11547T31.OP1)

>>>>>>

Q1= 6900cfs WS1= 1537.31 -----  
Q2= 6900cfs WS2= 1537.61 -----

Manning-n Values: LOB: .045 CH: .04 ROB: .055



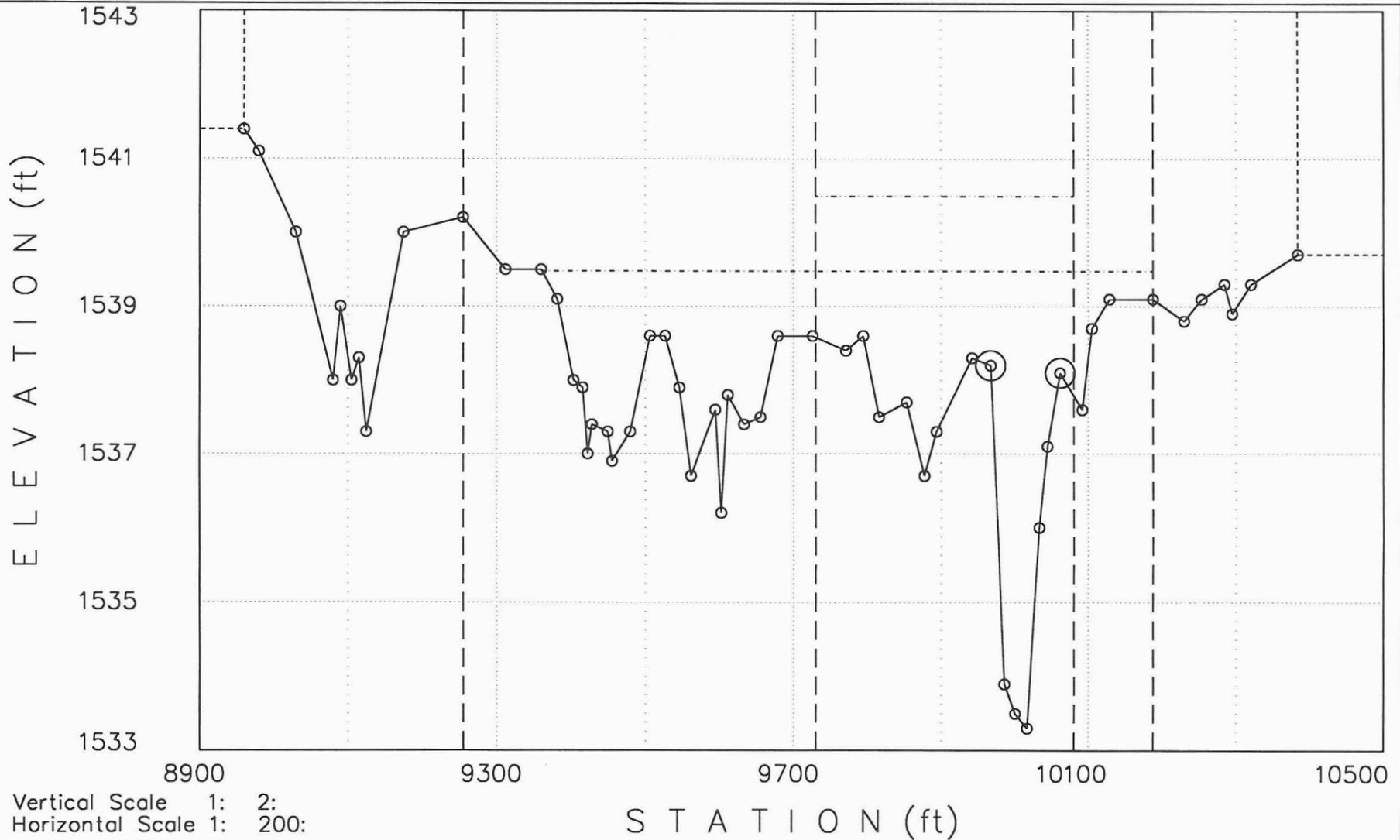
Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 3.091: (FN = 11547T31.OP1)

>>>>>>

Q1= 6900cfs WS1= 1539.48  
Q2= 6900cfs WS2= 1540.49

Manning-n Values: LOB: .05 CH: .04 ROB: .05

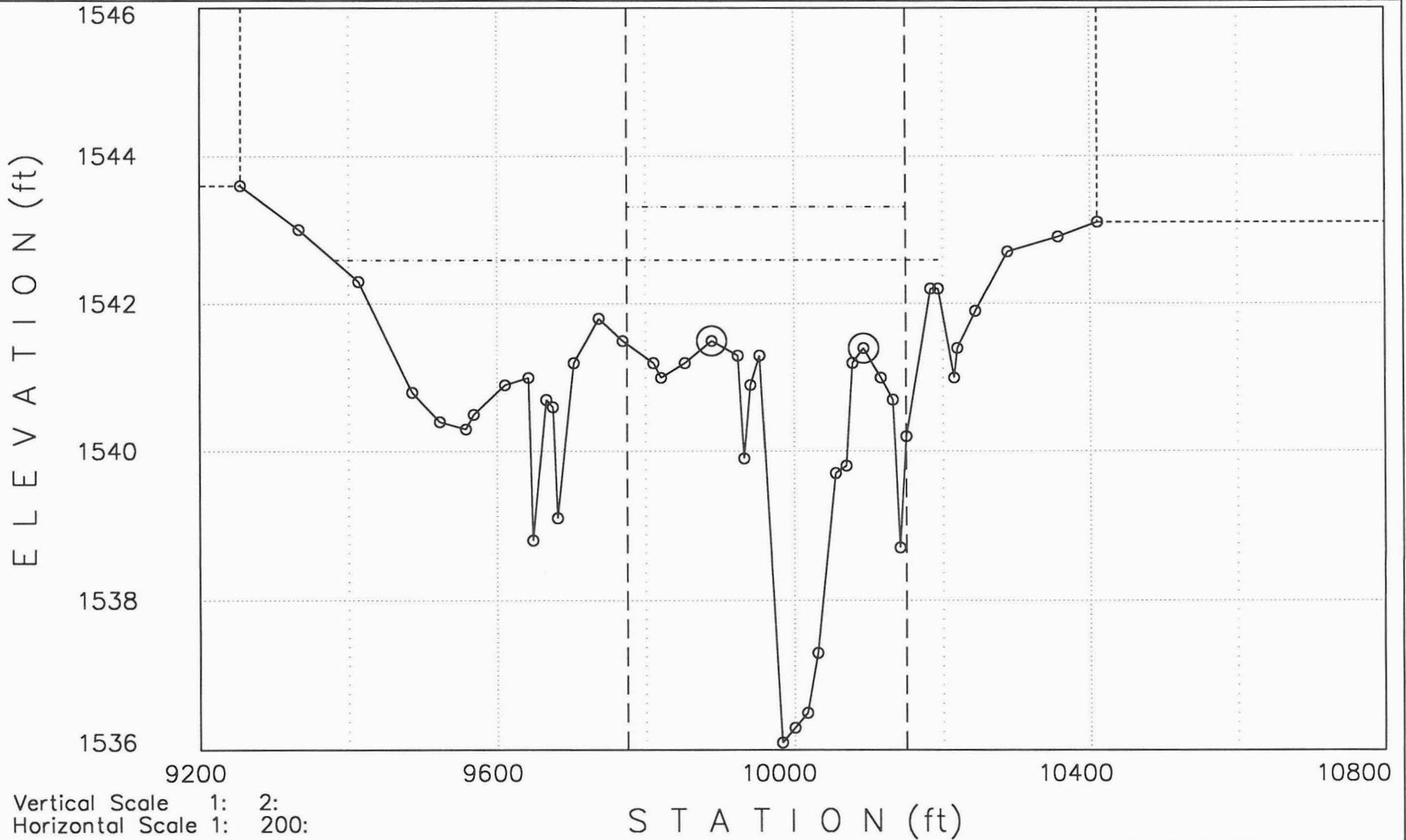


<<<<<< Cross Section: 3.186: (FN = 11547T31.OP1)

>>>>>>

Q1= 6900cfs WS1= 1542.59  
Q2= 6900cfs WS2= 1543.31

Manning-n Values: LOB: .05 CH: .04 ROB: .05



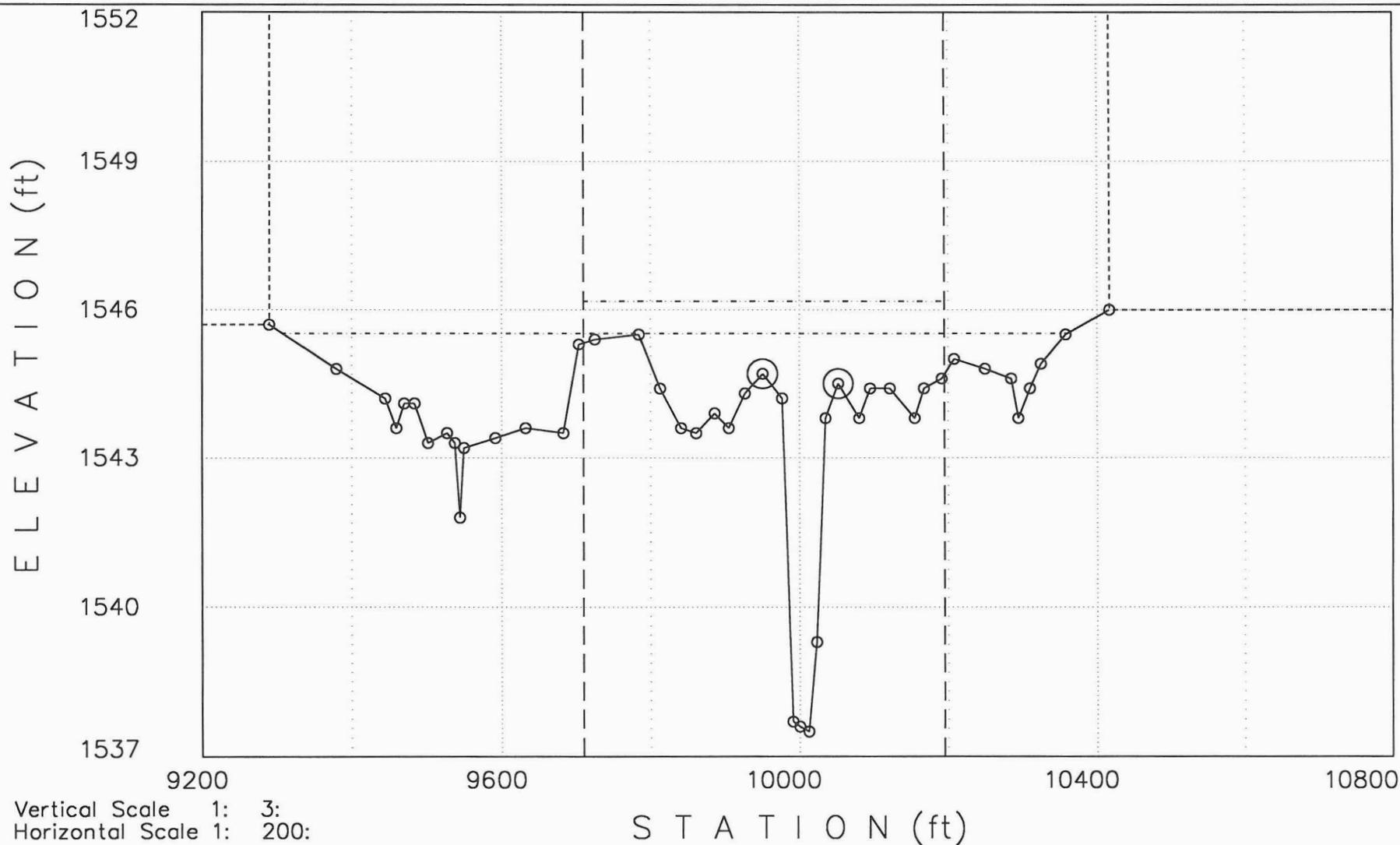
Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 3.281: (FN = 11547T31.OP1)

>>>>>>

Q1= 6900cfs WS1= 1545.52  
Q2= 6900cfs WS2= 1546.17

Manning-n Values: LOB: .05 CH: .04 ROB: .05



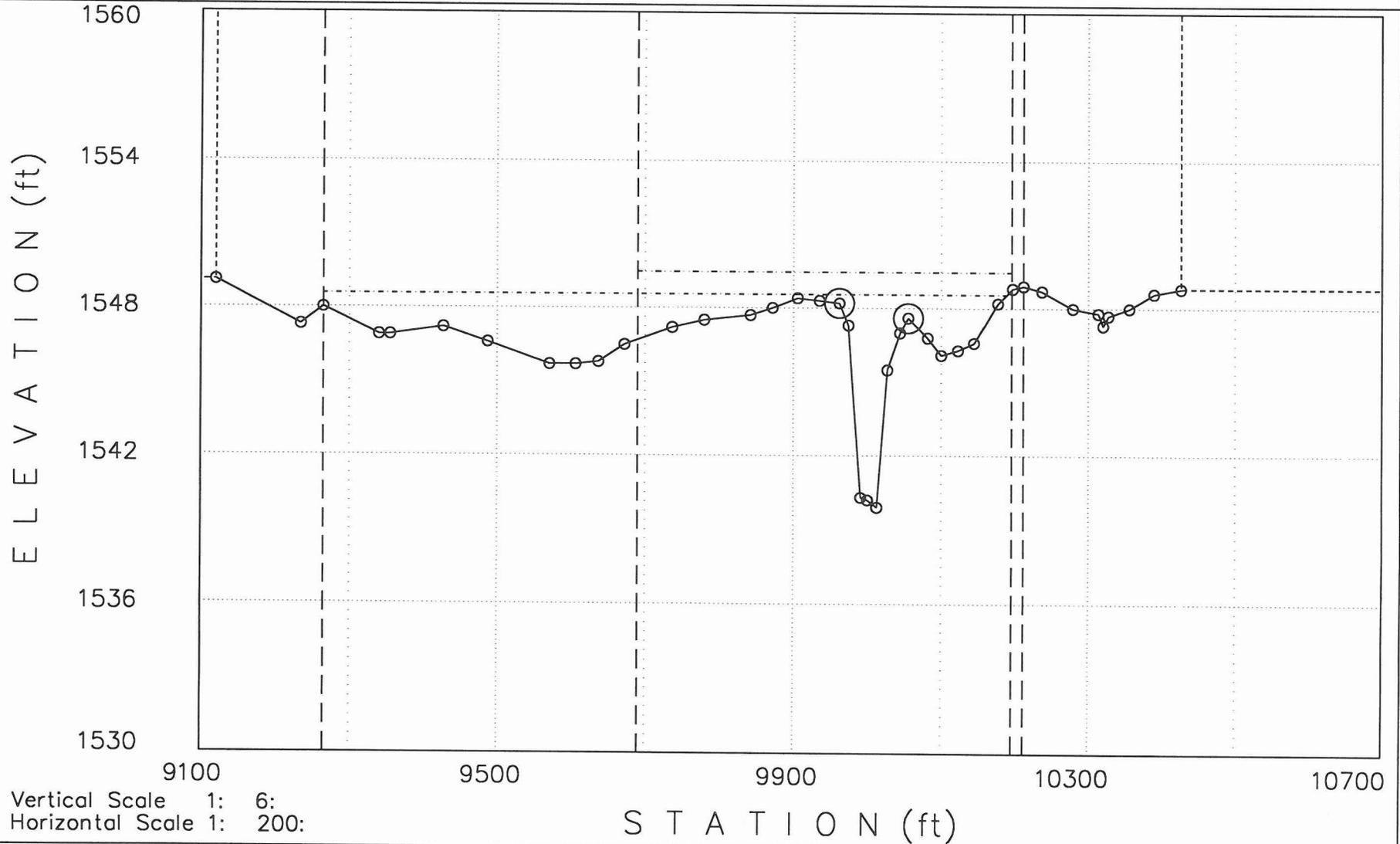
Vertical Scale 1: 3:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 3.375: (FN = 11547T31.OP1)

>>>>>>

Q1= 6900cfs WS1= 1548.56 -----  
Q2= 6900cfs WS2= 1549.46 -----

Manning-n Values: LOB: .05 CH: .04 ROB: .05



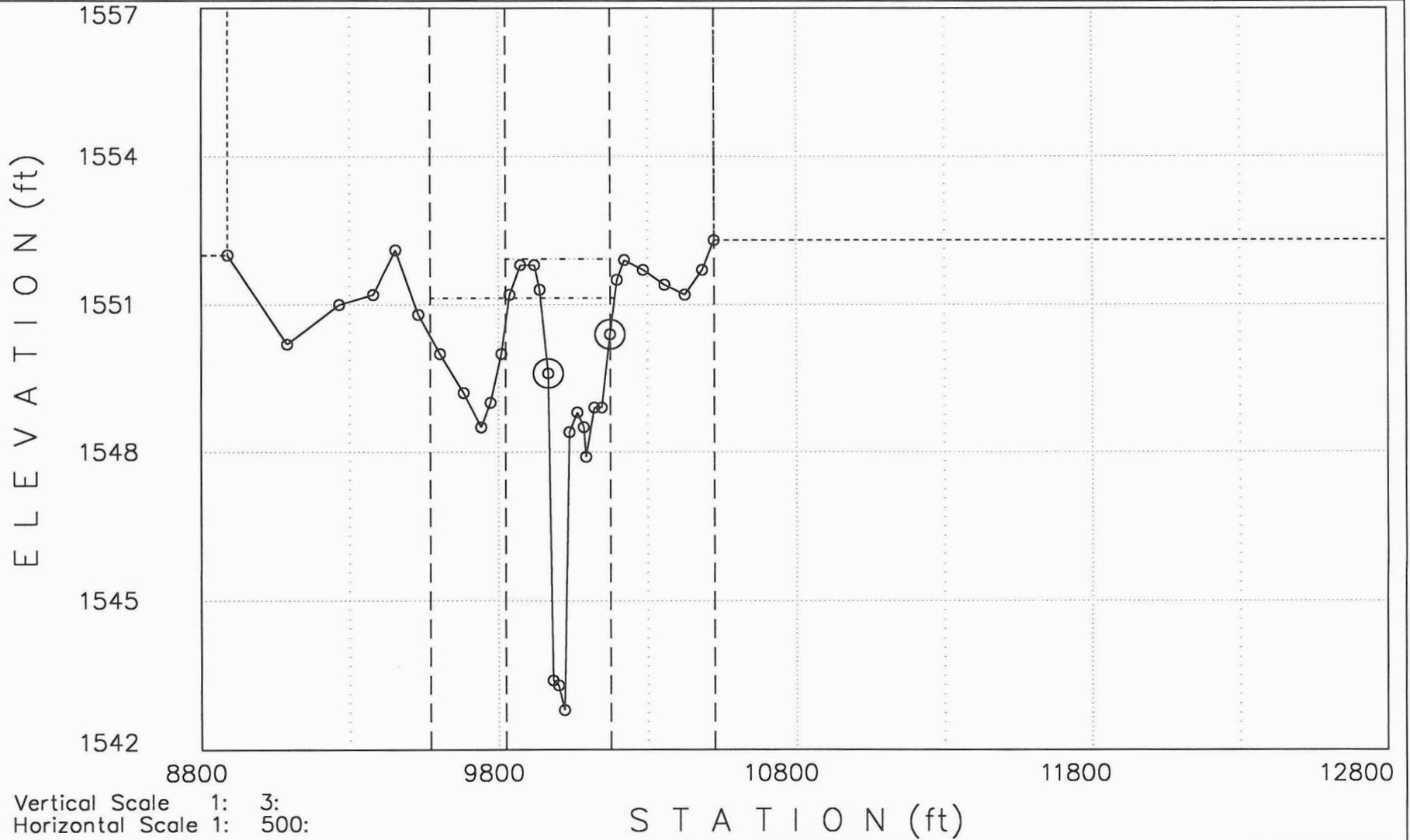
Vertical Scale 1: 6:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 3.47: (FN = 11547T31.OP1)

>>>>>>

Q1= 6900cfs WS1= 1551.13  
Q2= 6900cfs WS2= 1551.92

Manning-n Values: LOB: .05 CH: .04 ROB: .05

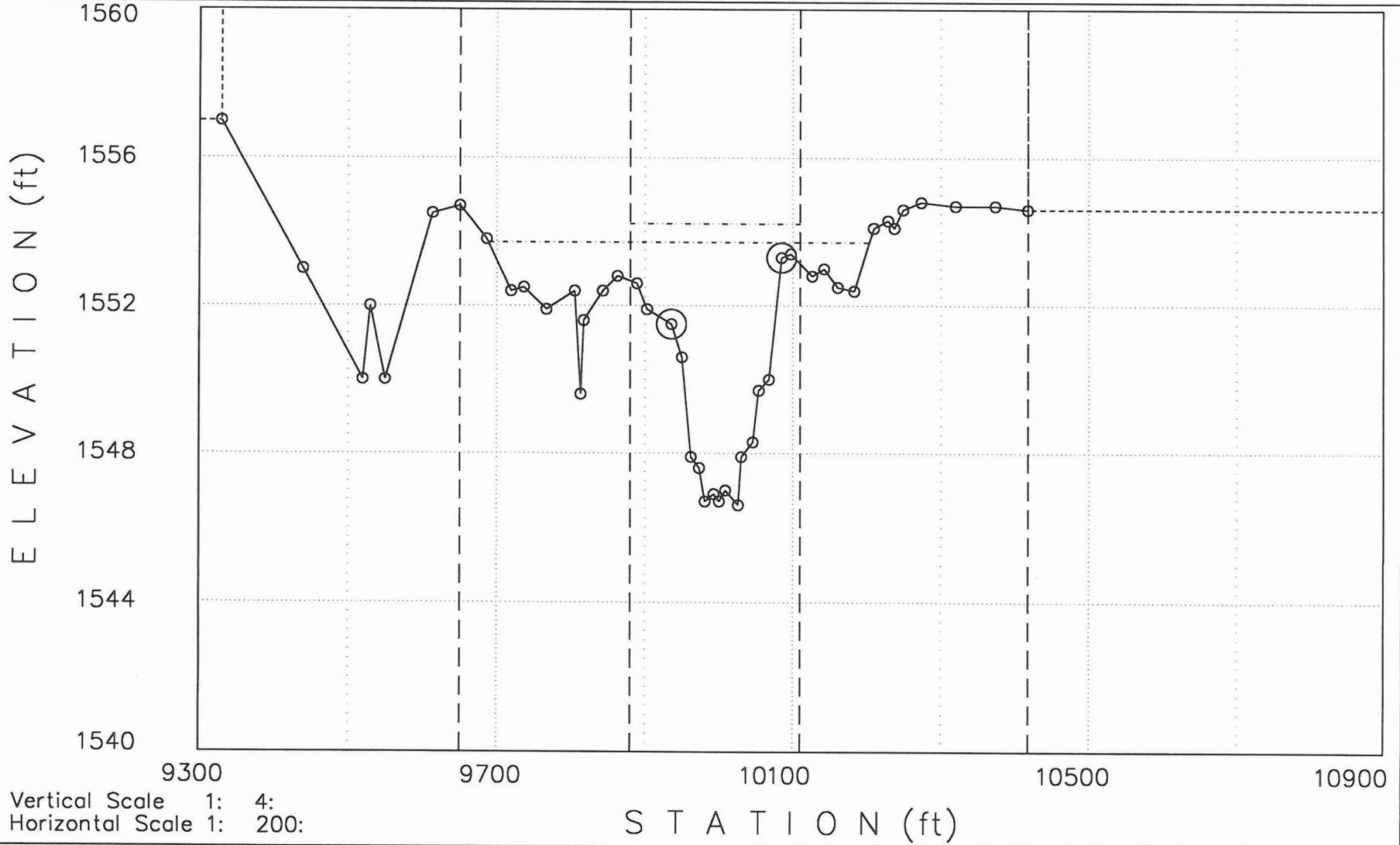


<<<<<< Cross Section: 3.568: (FN = 11547T31.OP1)

>>>>>>

Q1= 6900cfs WS1= 1553.71 -----  
Q2= 6900cfs WS2= 1554.21 -----

Manning-n Values: LOB: .055 CH: .04 ROB: .055



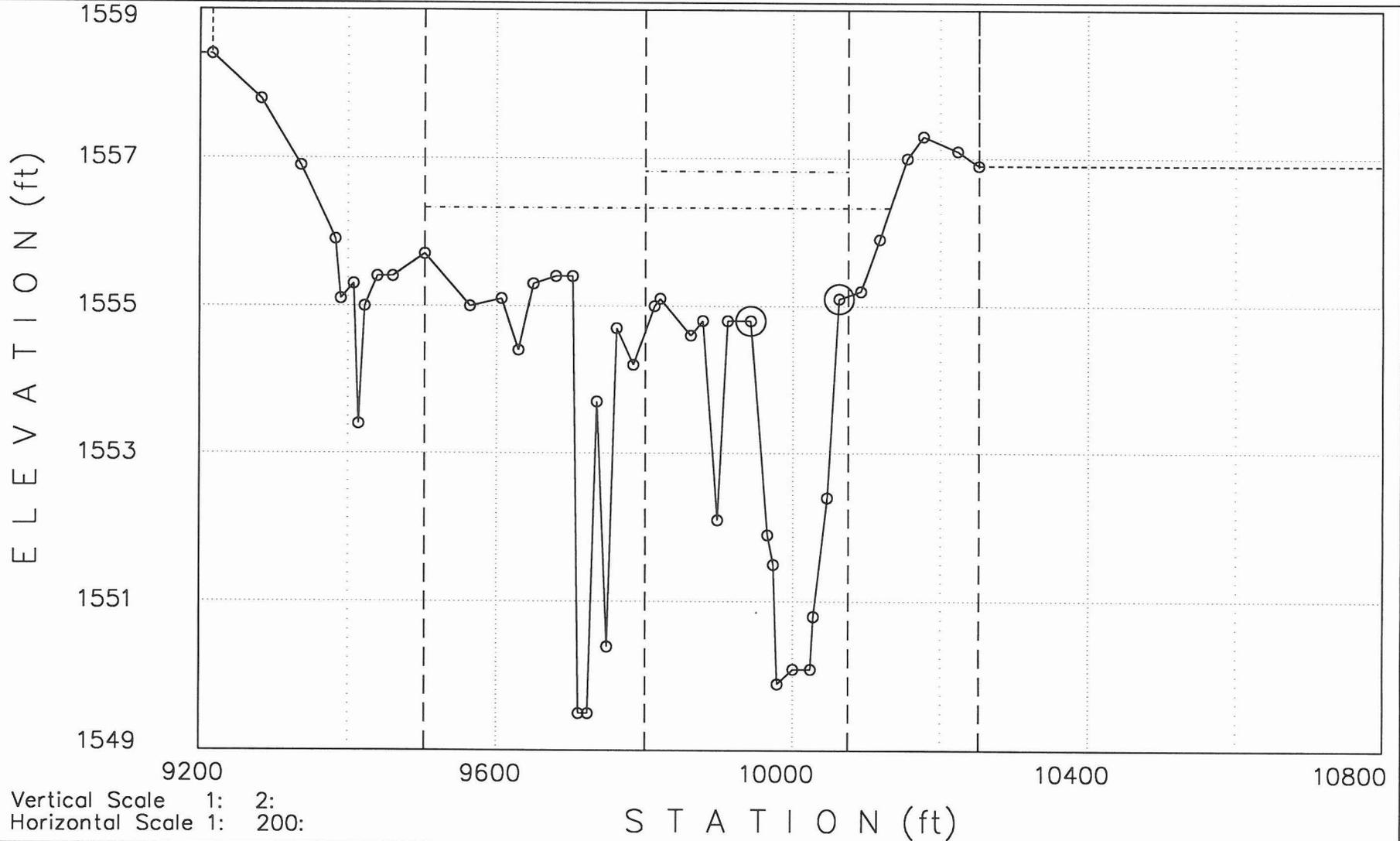
Vertical Scale 1: 4:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 3.668: (FN = 11547T31.OP1)

>>>>>>

Q1= 6900cfs WS1= 1556.32  
Q2= 6900cfs WS2= 1556.82

Manning-n Values: LOB: .045 - .046 CH: .04 ROB: .055

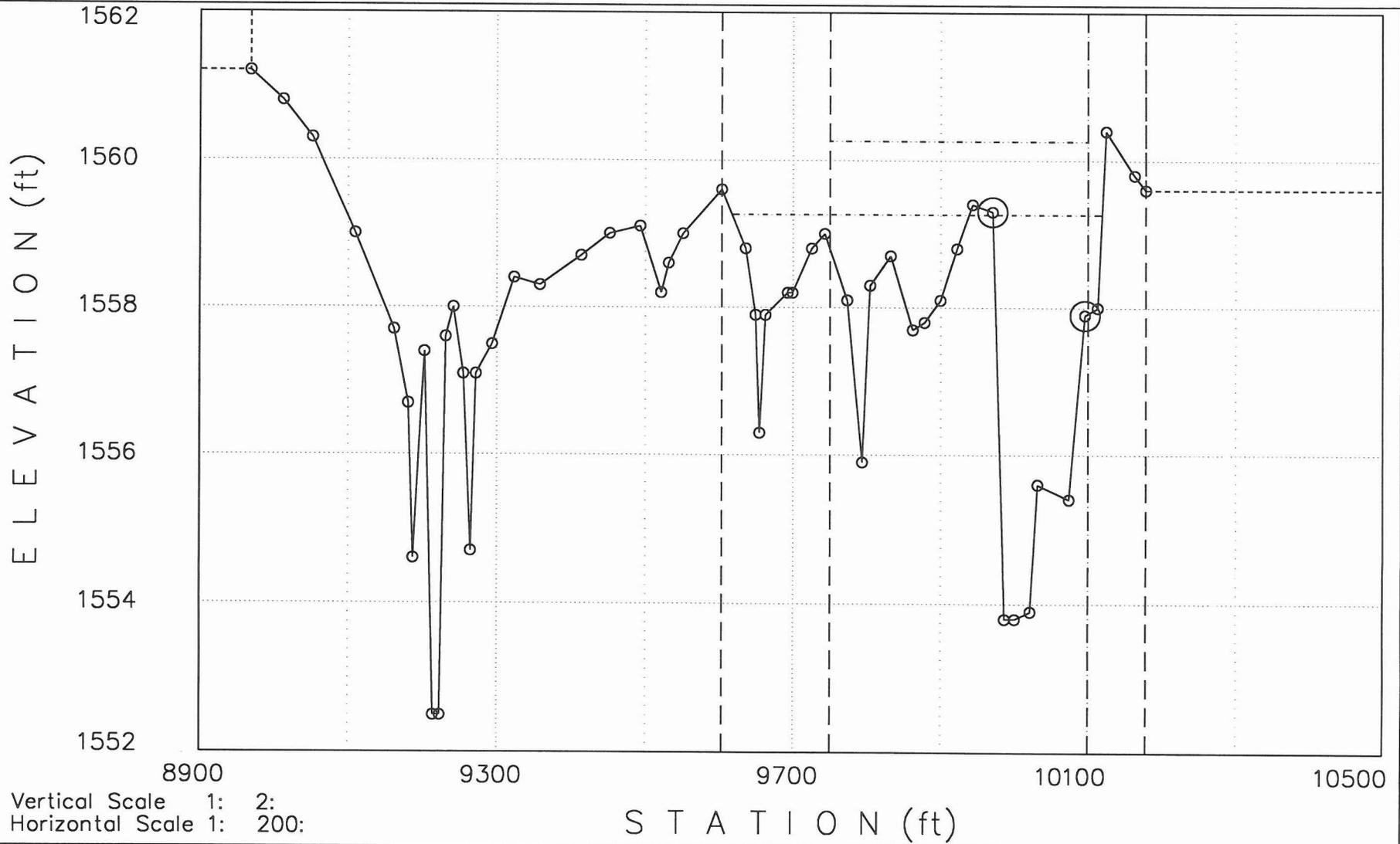


<<<<<< Cross Section: 3.785: (FN = 11547T31.OP1)

>>>>>>

Q1= 5400cfs WS1= 1559.26  
Q2= 6100cfs WS2= 1560.26

Manning-n Values: LOB: .05 CH: .04 ROB: .055

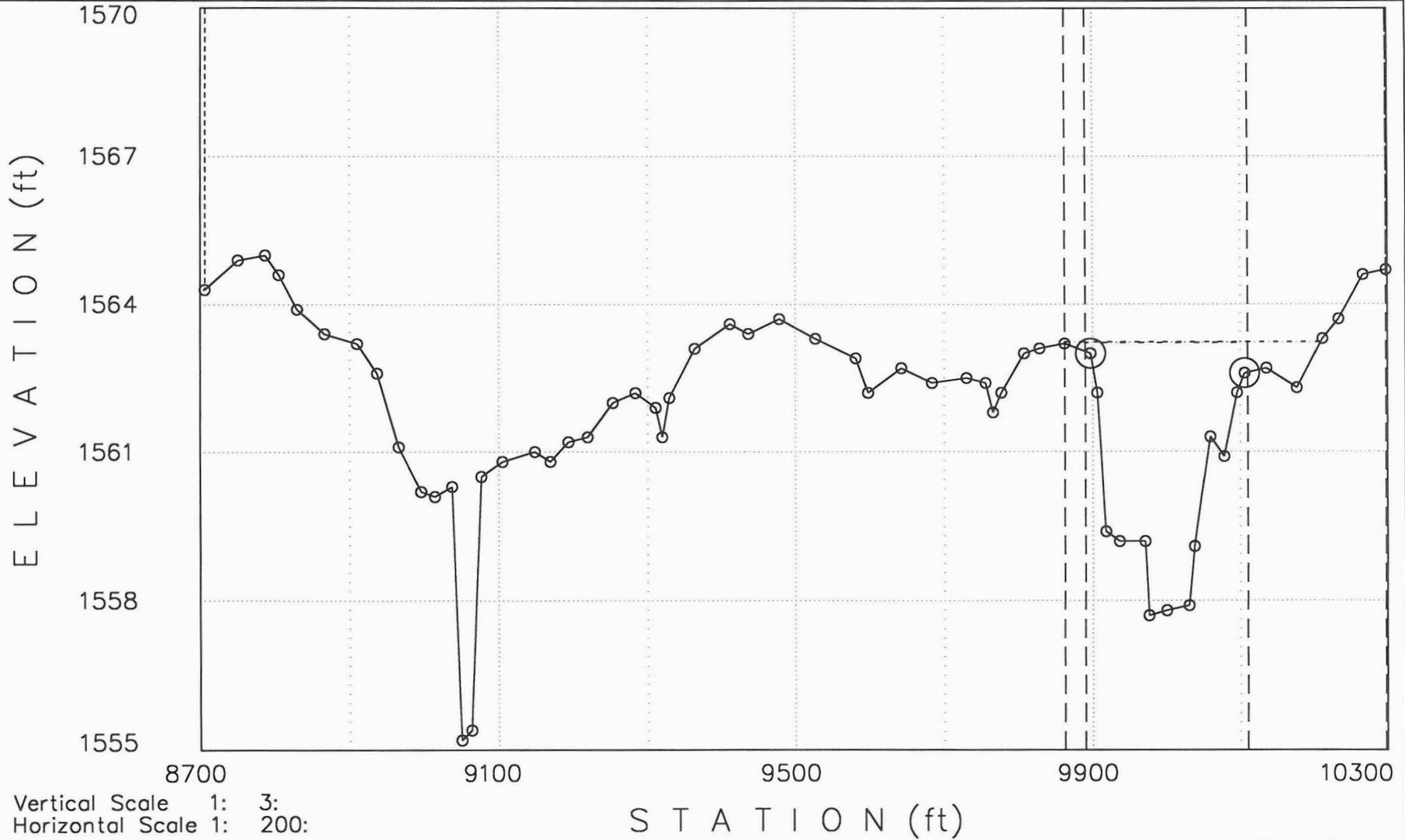


<<<<<< Cross Section: 3.88: (FN = 11547T31.OP1)

>>>>>>

Q1= 5400cfs WS1= 1563.23  
Q2= 6100cfs WS2= 1563.22

Manning-n Values: LOB: .05 CH: .04 ROB: .055

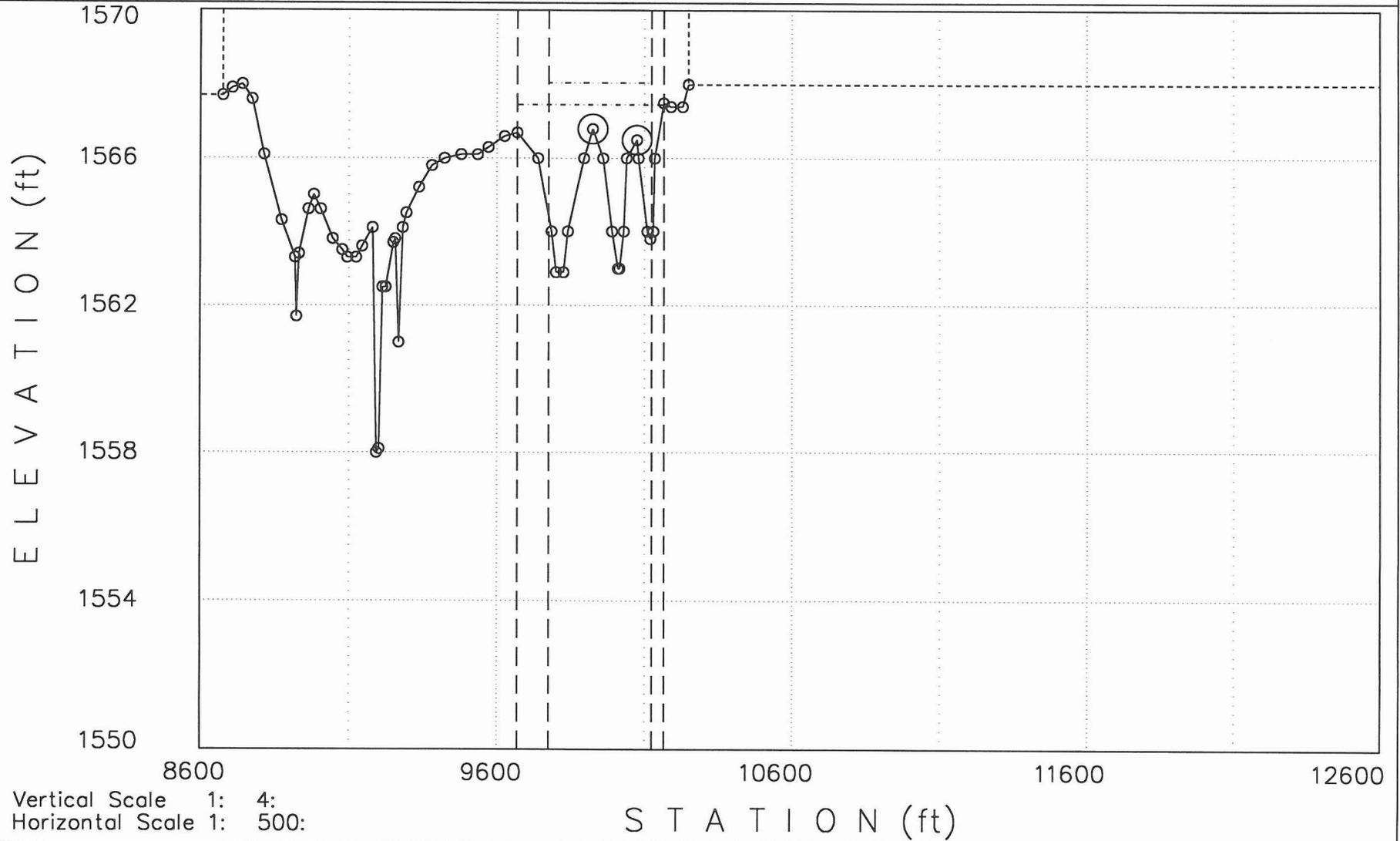


<<<<<< Cross Section: 4.003: (FN = 11547T31.OP1)

>>>>>>

Q1= 5400cfs WS1= 1567.46 -----  
Q2= 6100cfs WS2= 1568.04 -----

Manning-n Values: LOB: .045 CH: .04 ROB: .045

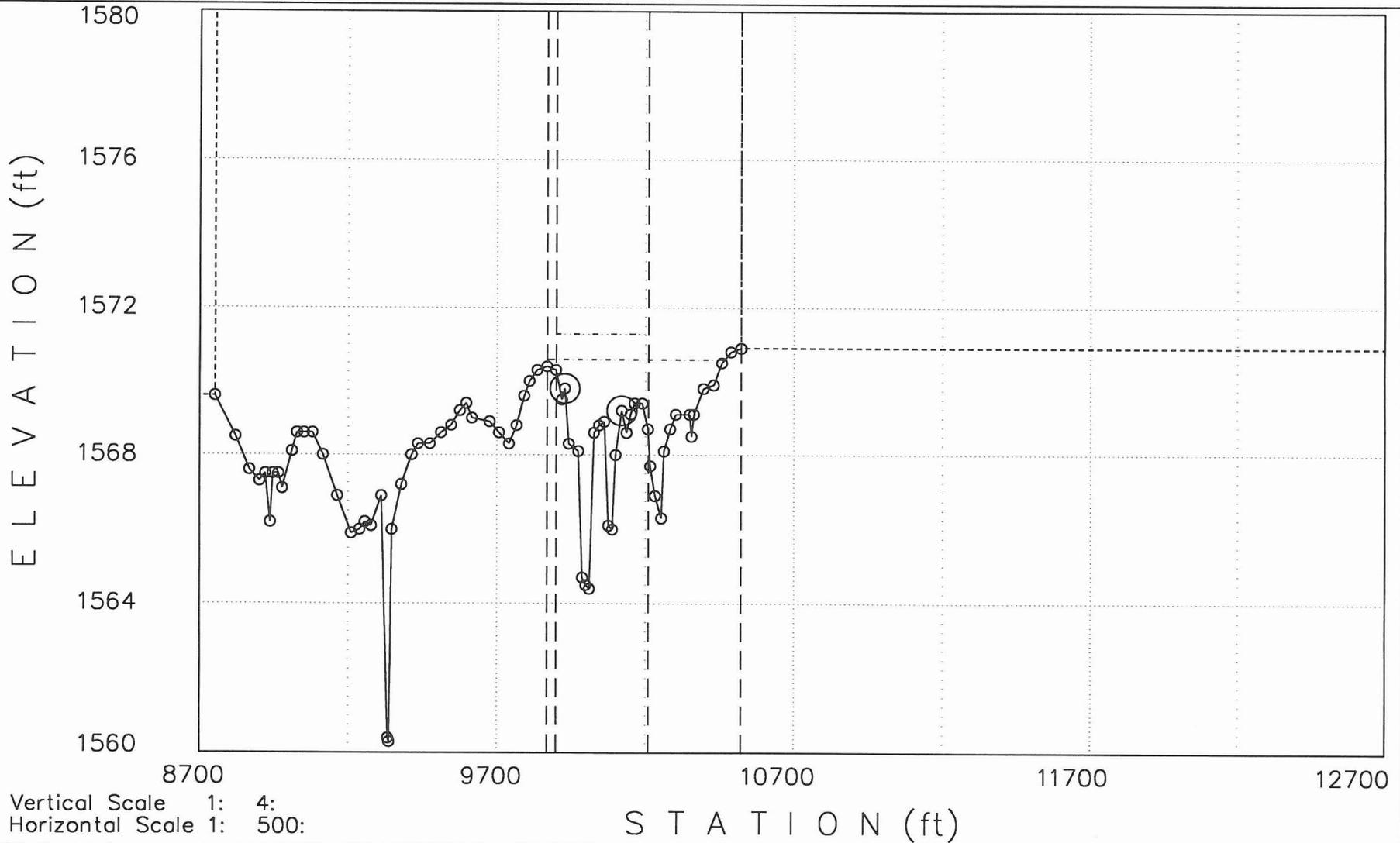


<<<<<< Cross Section: 4.117: (FN = 11547T31.OP1)

>>>>>>

Q1= 5400cfs WS1= 1570.59  
Q2= 6100cfs WS2= 1571.28

Manning-n Values: LOB: .05 CH: .041 ROB: .05



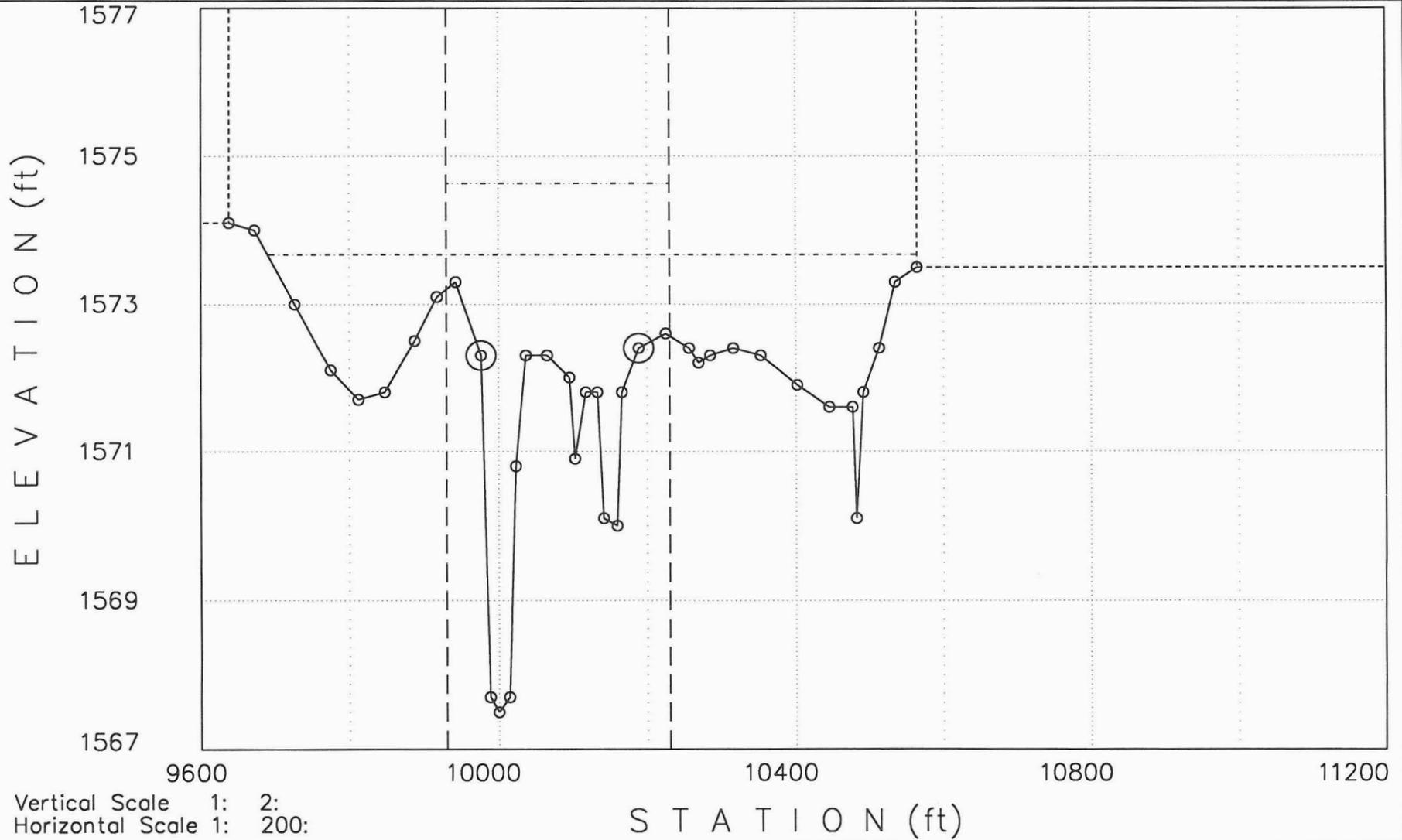
Vertical Scale 1: 4:  
Horizontal Scale 1: 500:

<<<<<< Cross Section: 4.211: (FN = 11547T31.OP1)

>>>>>>

Q1= 6100cfs WS1= 1573.67  
Q2= 6100cfs WS2= 1574.63

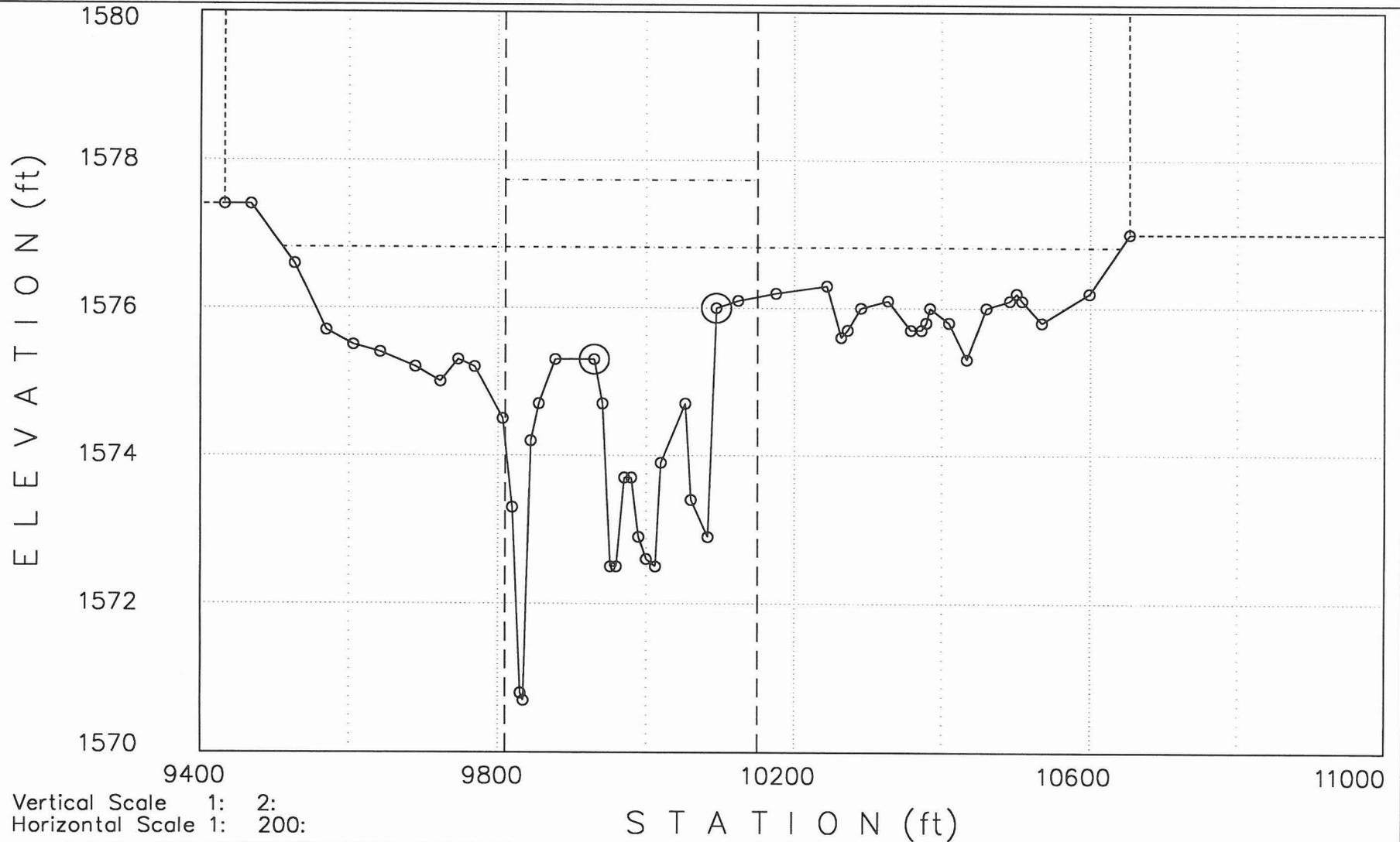
Manning-n Values: LOB: .055 CH: .043 ROB: .05



<<<<<< Cross Section: 4.314: (FN = 11547T31.OP1) >>>>>>

Q1= 6100cfs WS1= 1576.82  
Q2= 6100cfs WS2= 1577.73

Manning-n Values: LOB: .045 - .046 CH: .04 ROB: .05

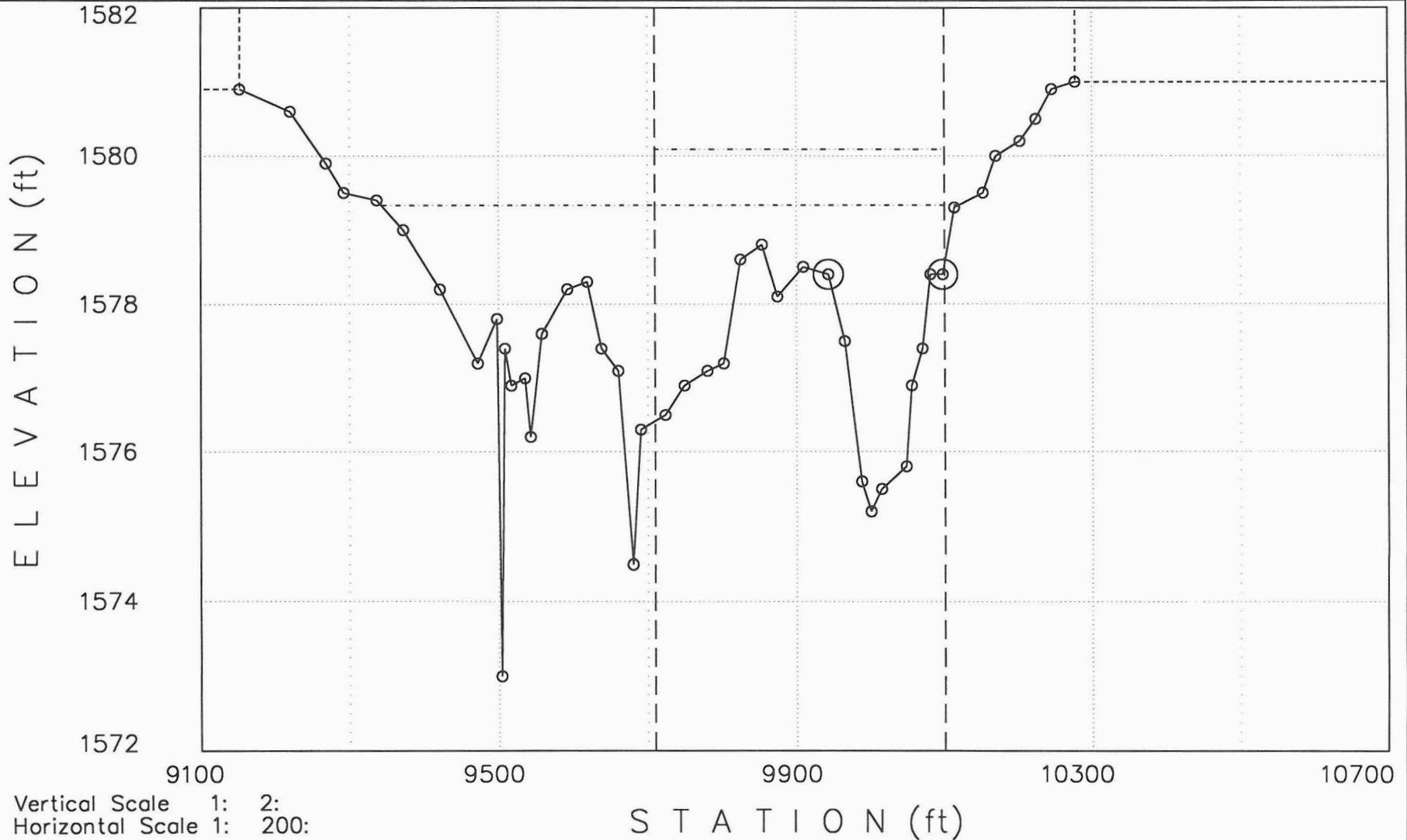


<<<<<< Cross Section: 4.409: (FN = 11547T31.OP1)

>>>>>>

Q1= 6100cfs WS1= 1579.33  
Q2= 6100cfs WS2= 1580.09

Manning-n Values: LOB: .05 CH: .04 ROB: .05

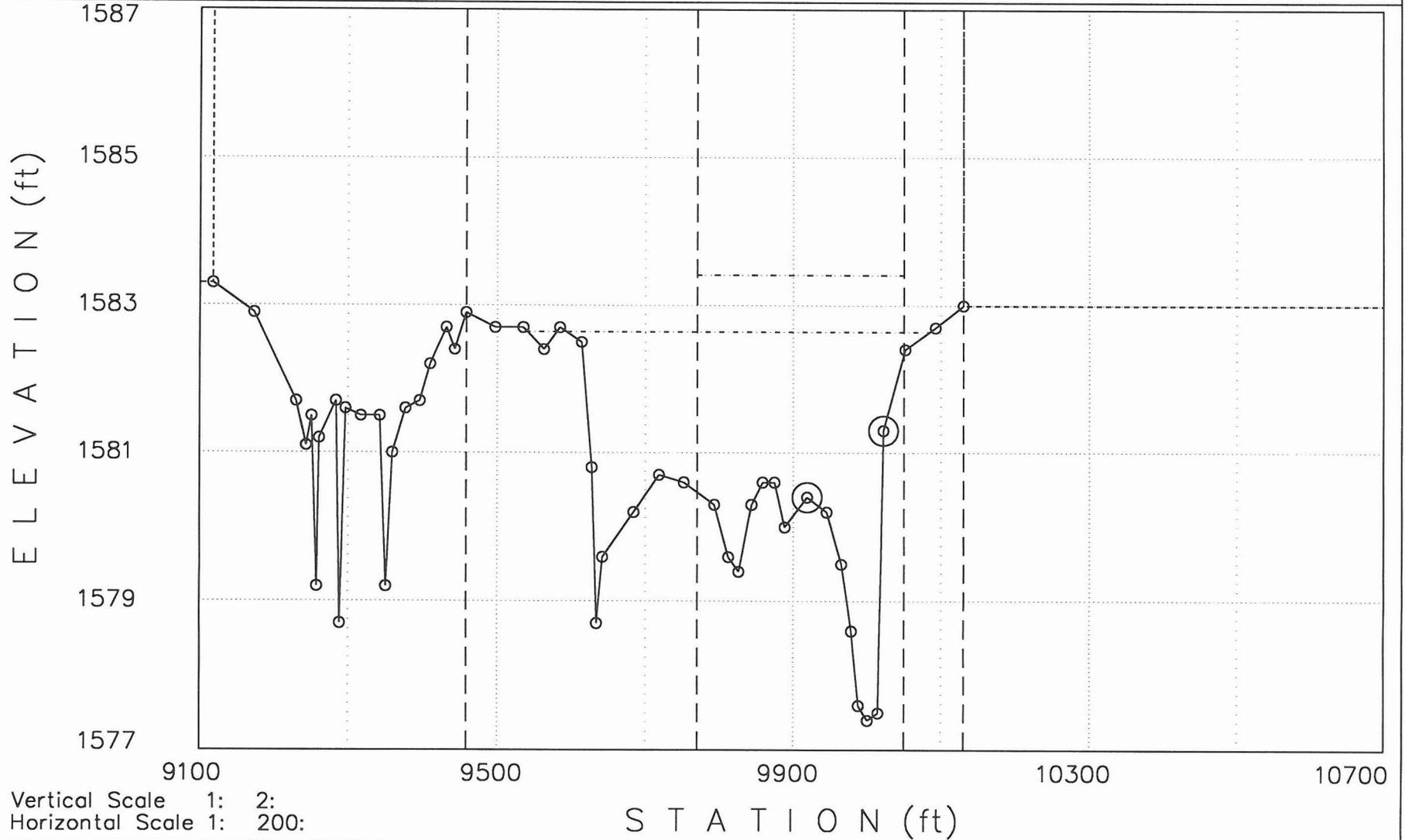


<<<<<< Cross Section: 4.506: (FN = 11547T31.OP1)

>>>>>>

Q1= 6100cfs WS1= 1582.64  
Q2= 6100cfs WS2= 1583.41

Manning-n Values: LOB: .045 CH: .04 ROB: .055

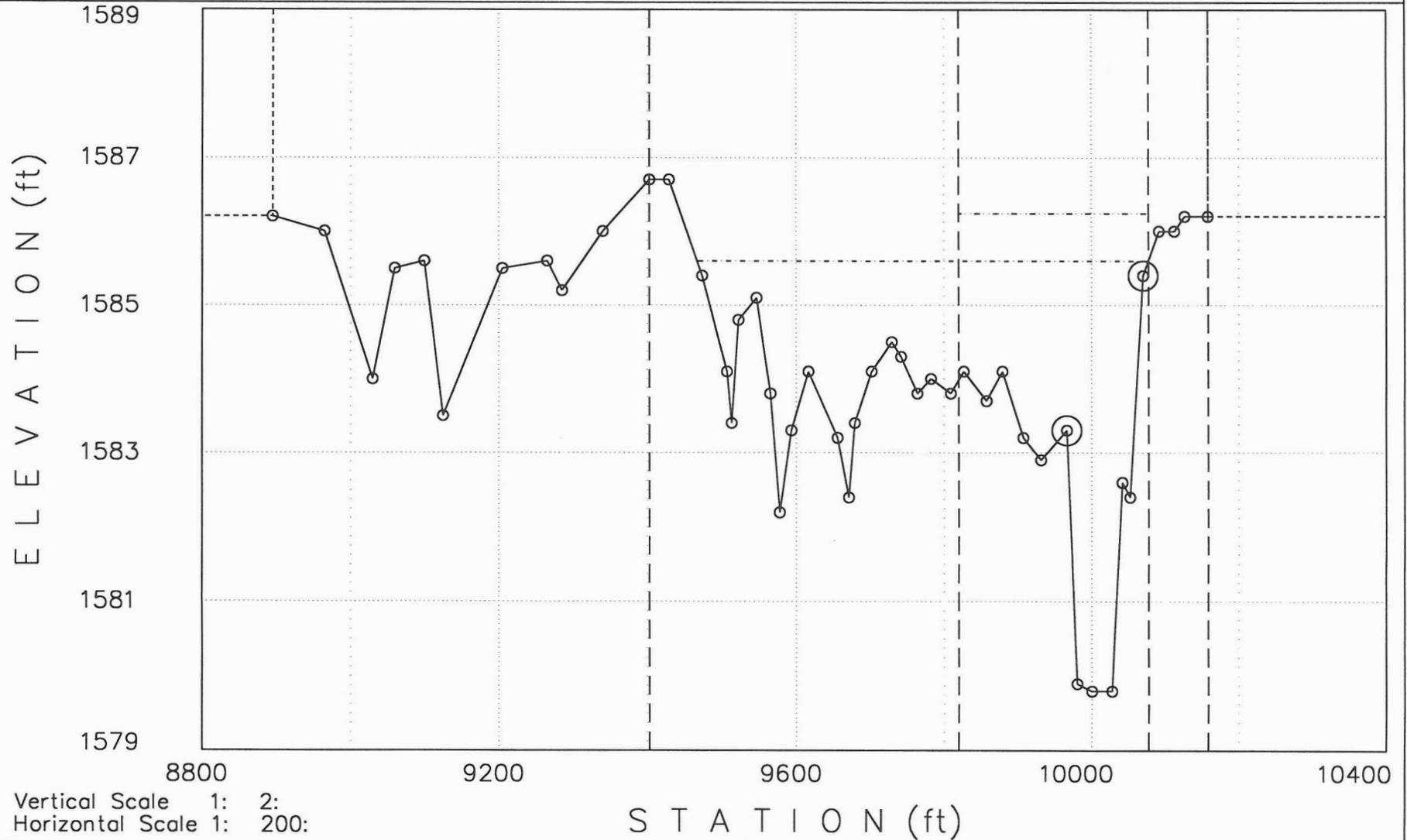


<<<<<< Cross Section: 4.599: (FN = 11547T31.OP1)

>>>>>>

Q1= 6100cfs WS1= 1585.6  
Q2= 6100cfs WS2= 1586.24

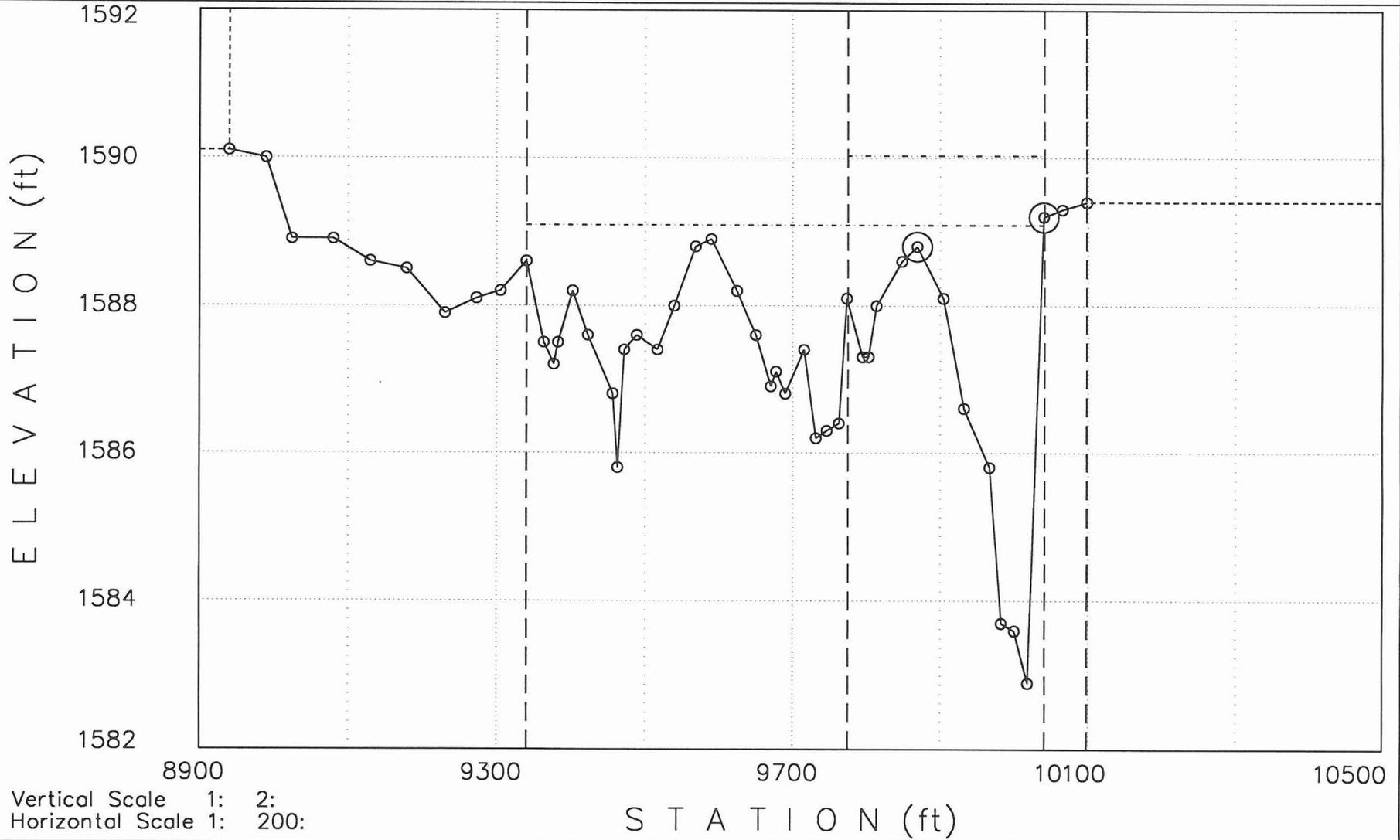
Manning-n Values: LOB: .05 CH: .04 ROB: .055



<<<<<< Cross Section: 4.71: (FN = 11547T31.OP1) >>>>>>

Q1= 6100cfs WS1= 1589.09  
 Q2= 6100cfs WS2= 1590.03

Manning-n Values: LOB: .05 CH: .04 ROB: 0 - .055

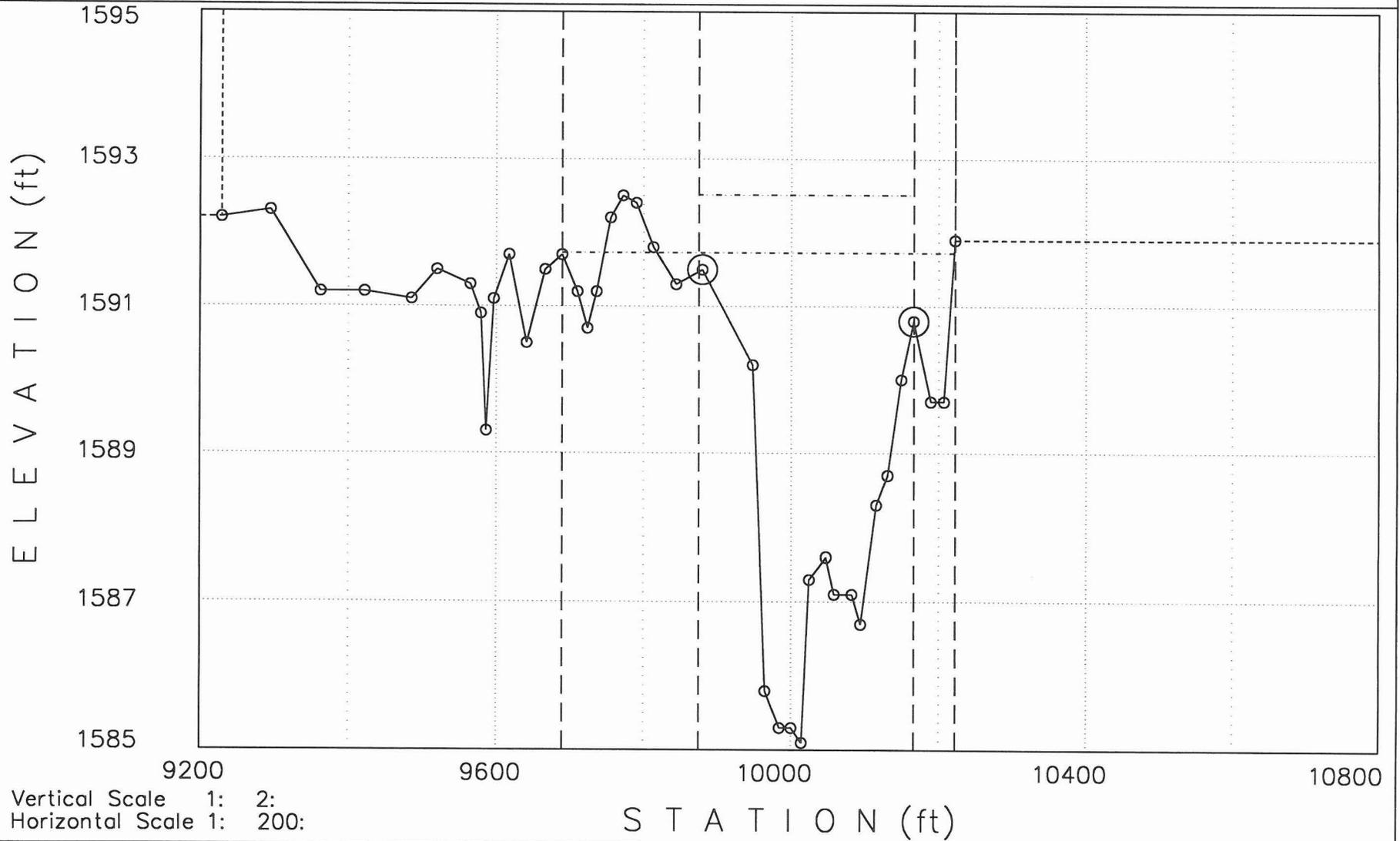


Vertical Scale 1: 2:  
 Horizontal Scale 1: 200:

<<<<<< Cross Section: 4.797: (FN = 11547T31.OP1) >>>>>>

Q1= 6100cfs WS1= 1591.73 -----  
 Q2= 6100cfs WS2= 1592.51 -----

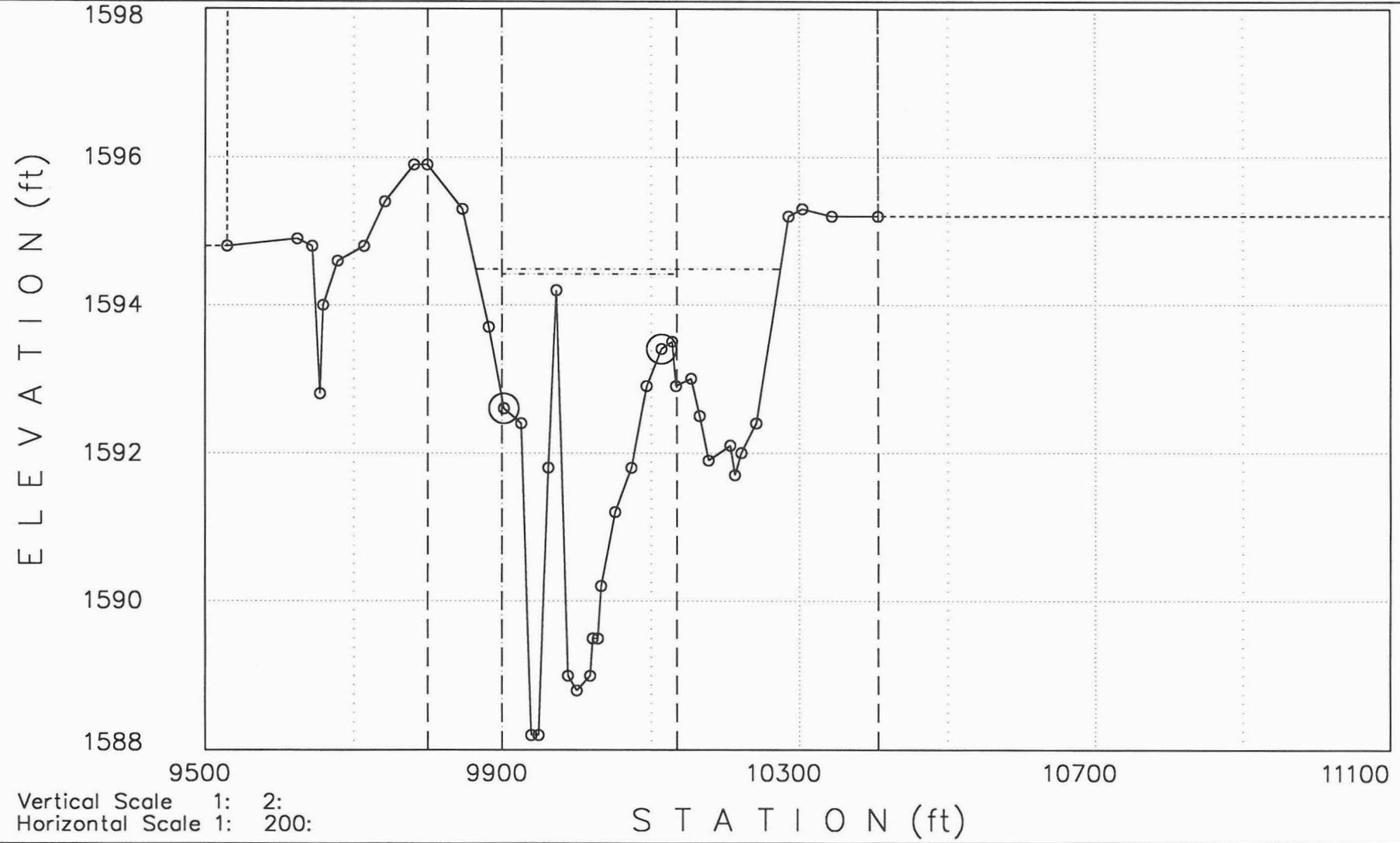
Manning-n Values: LOB: .055 CH: .04 ROB: .055



<<<<<< Cross Section: 4.898: (FN = 11547T31.OP1) >>>>>>

Q1= 6100cfs WS1= 1594.49 -----  
Q2= 6100cfs WS2= 1594.42 -----

Manning-n Values: LOB: .055 CH: .04 ROB: .05



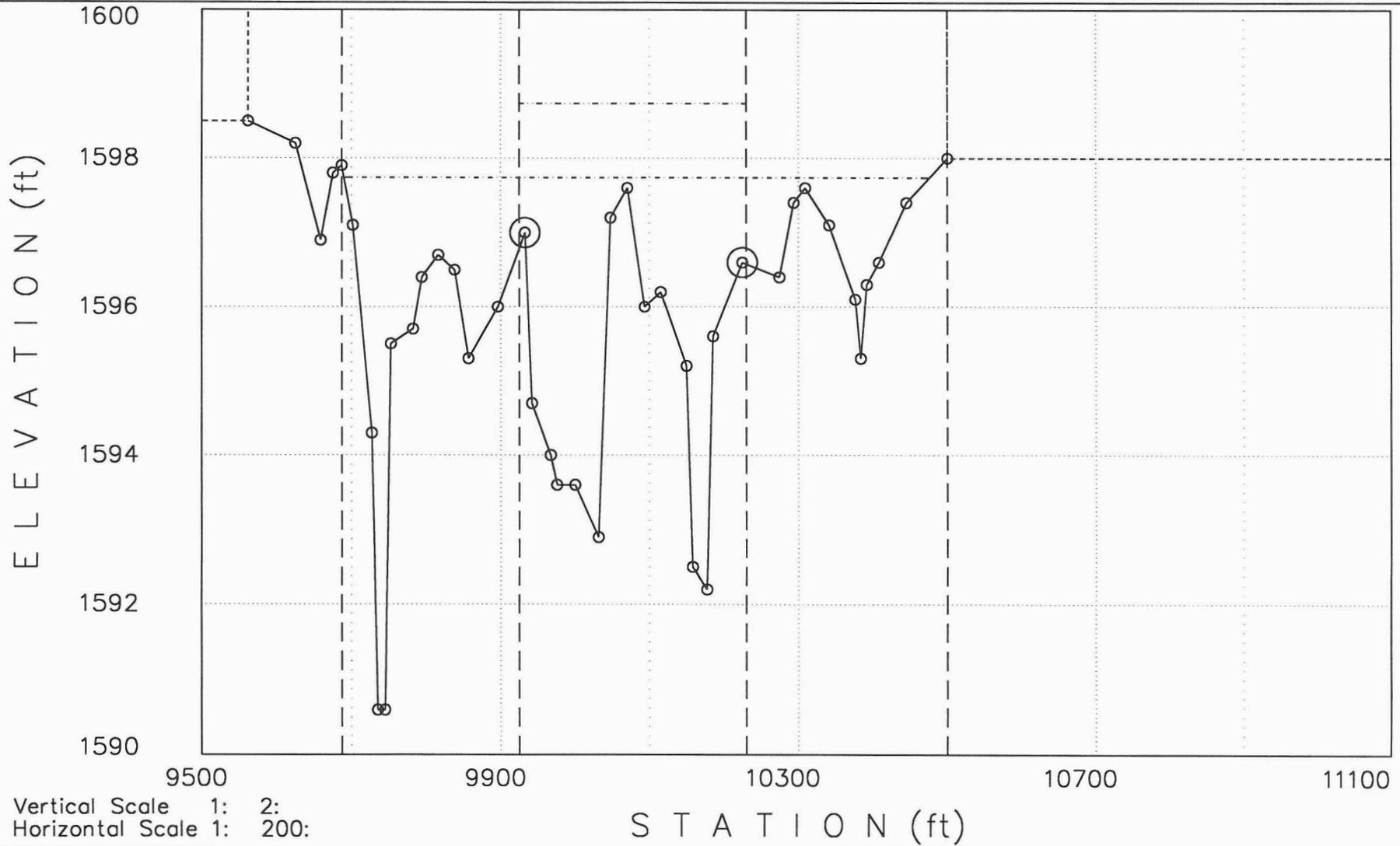
Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 4.997: (FN = 11547T31.OP1)

>>>>>>

Q1= 6100cfs WS1= 1597.74  
Q2= 6100cfs WS2= 1598.74

Manning-n Values: LOB: .046 - .05 CH: .045 ROB: .055



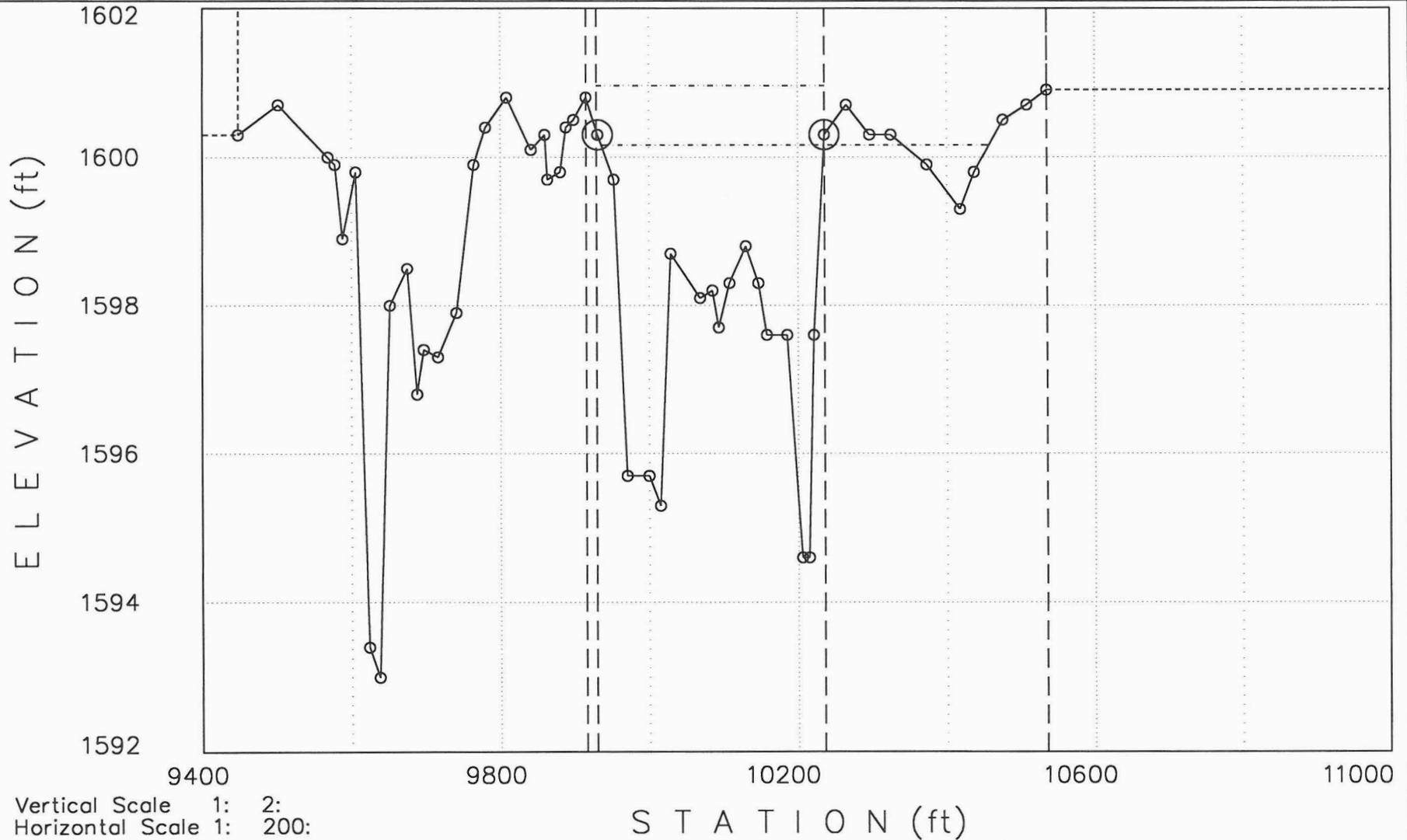
Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 5.091: (FN = 11547T31.OP1)

>>>>>>

Q1= 3800cfs WS1= 1600.16 -----  
Q2= 4300cfs WS2= 1600.96 -----

Manning-n Values: LOB: 0 - .055 CH: .043 - .044 ROB: .055

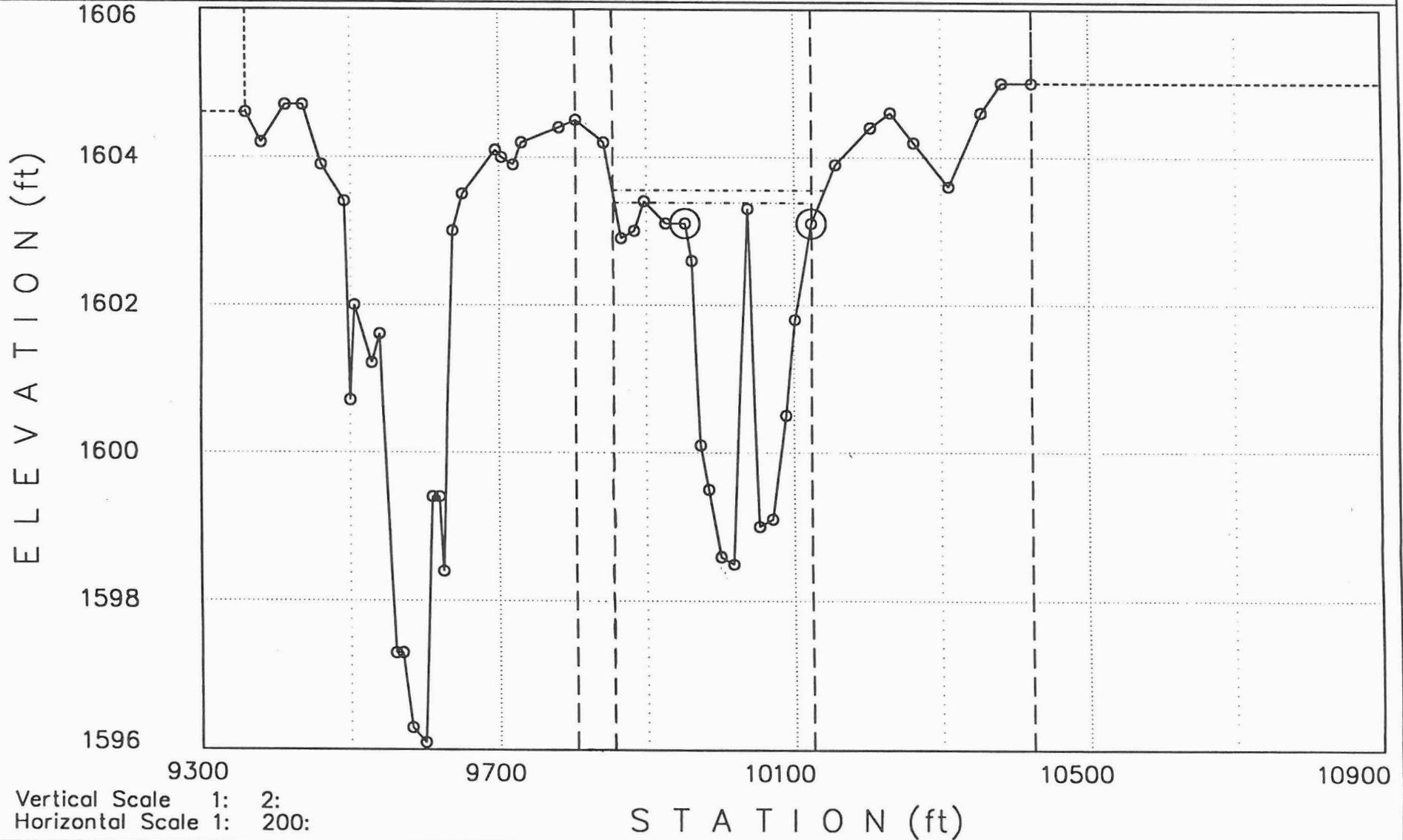


<<<<<< Cross Section: 5.187: (FN = 11547T31.OP1)

>>>>>>

Q1= 3800cfs WS1= 1603.55  
Q2= 4300cfs WS2= 1603.38

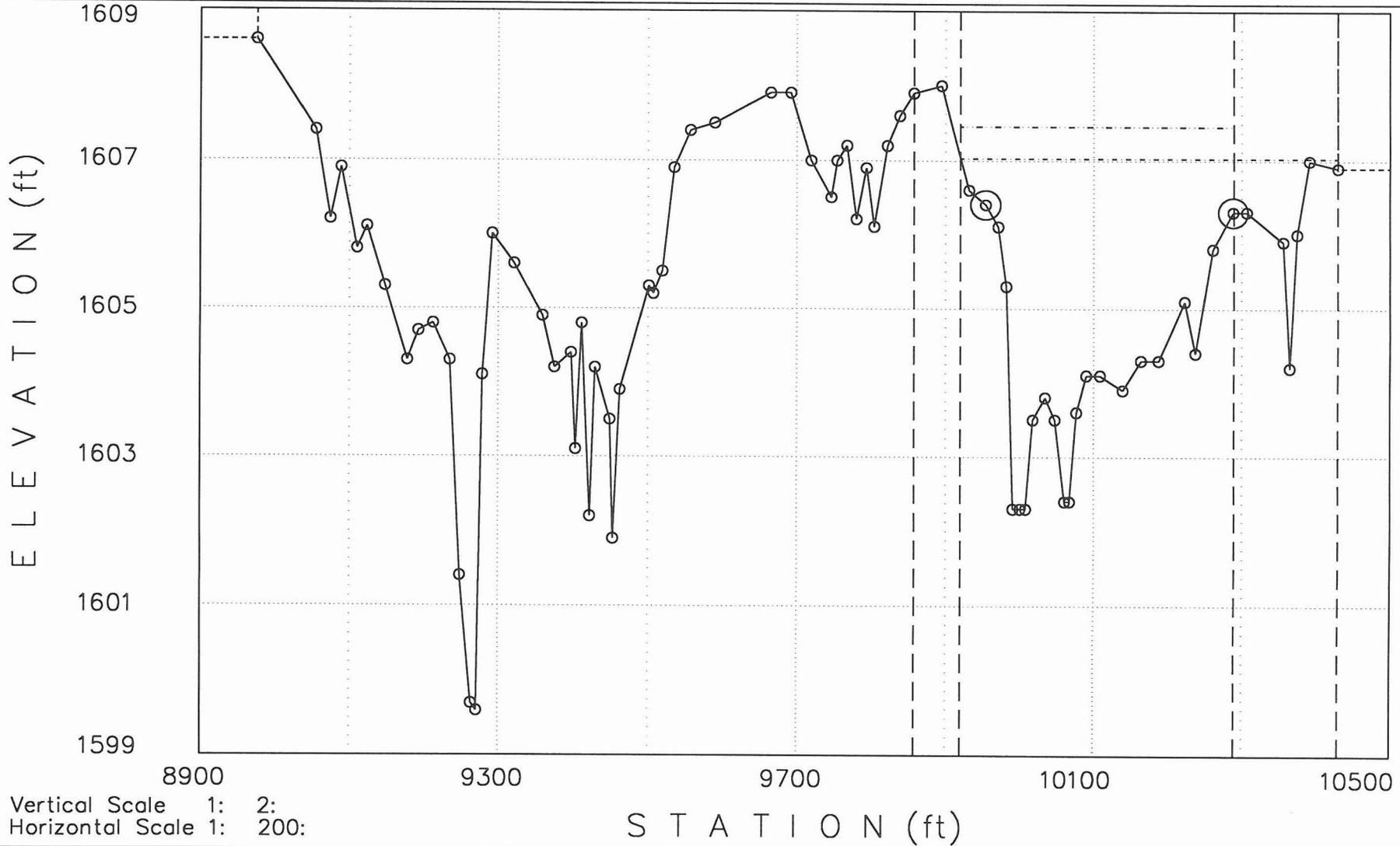
Manning-n Values: LOB: .05 CH: .045 ROB: .055



<<<<<< Cross Section: 5.283: (FN = 11547T31.OP1) >>>>>>

Q1= 3800cfs WS1= 1607.03 -----  
Q2= 4300cfs WS2= 1607.46 -----

Manning-n Values: LOB: .05 CH: .045 ROB: .045

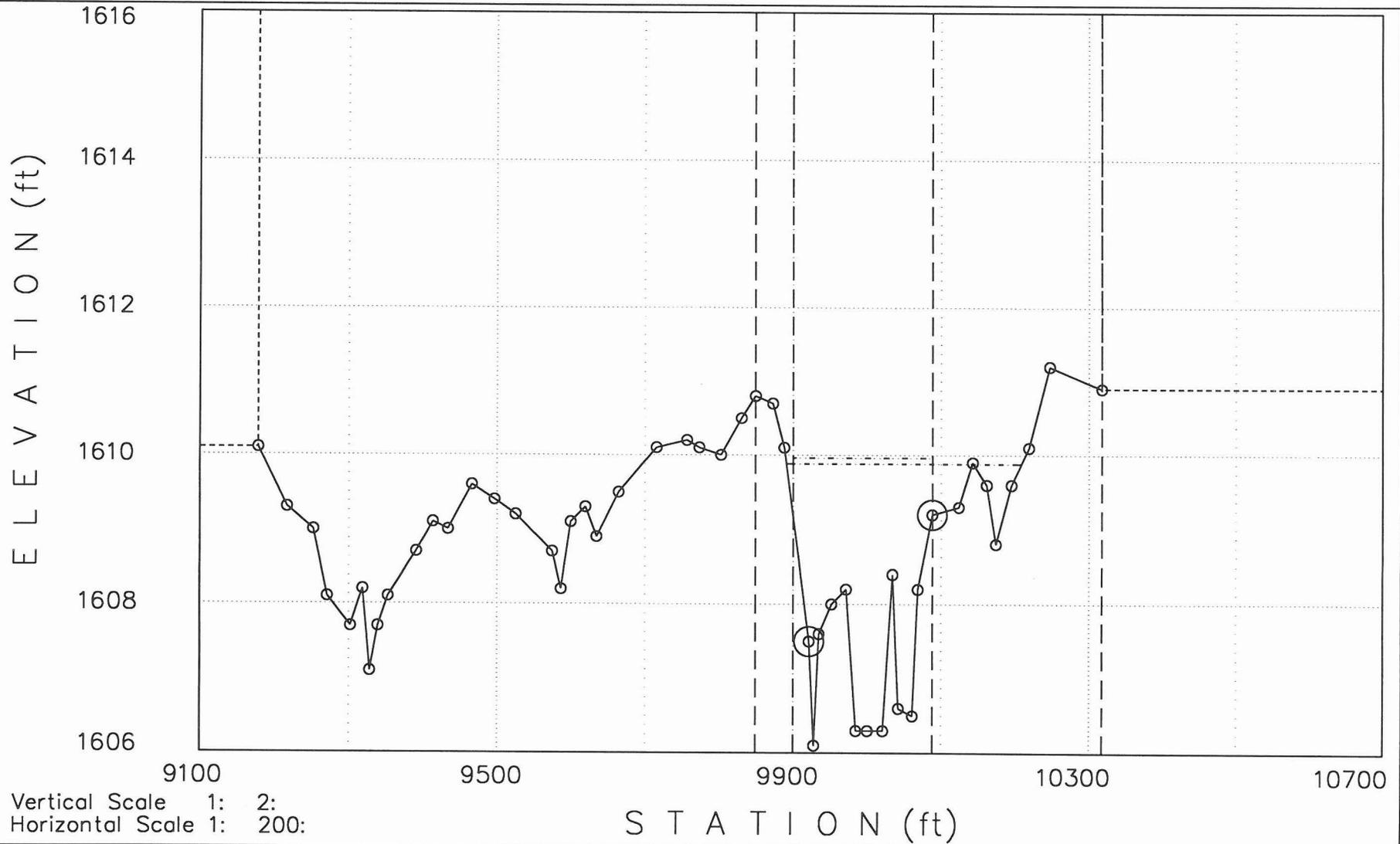


<<<<<< Cross Section: 5.381: (FN = 11547T31.OP1)

>>>>>>

Q1= 3800cfs WS1= 1609.88  
Q2= 4300cfs WS2= 1609.96

Manning-n Values: LOB: .05 CH: .04 ROB: .055



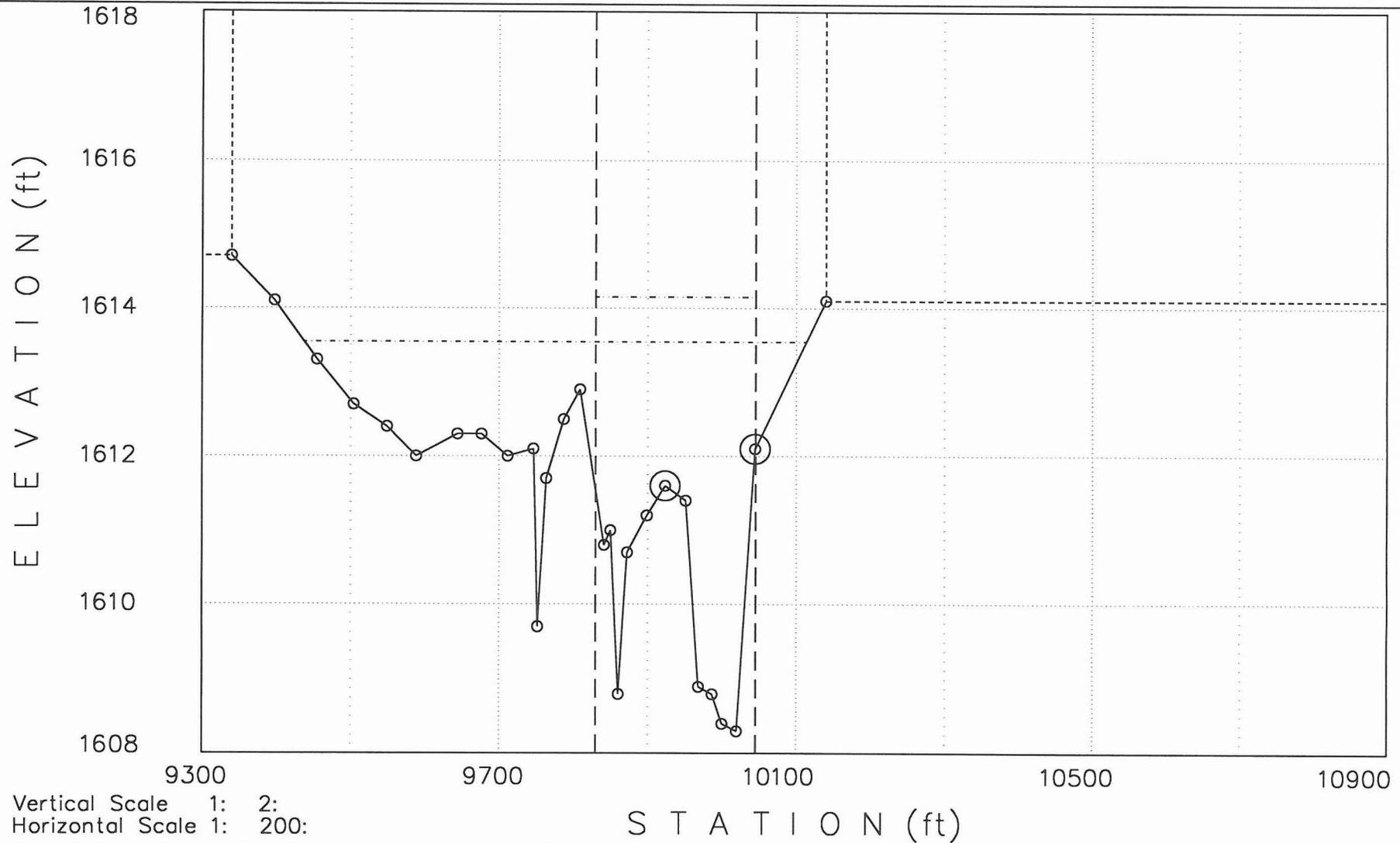
Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 5.475: (FN = 11547T31.OP1)

>>>>>>

Q1= 4300cfs WS1= 1613.54 -----  
Q2= 4300cfs WS2= 1614.15 -----

Manning-n Values: LOB: .05 CH: .04 ROB: .055



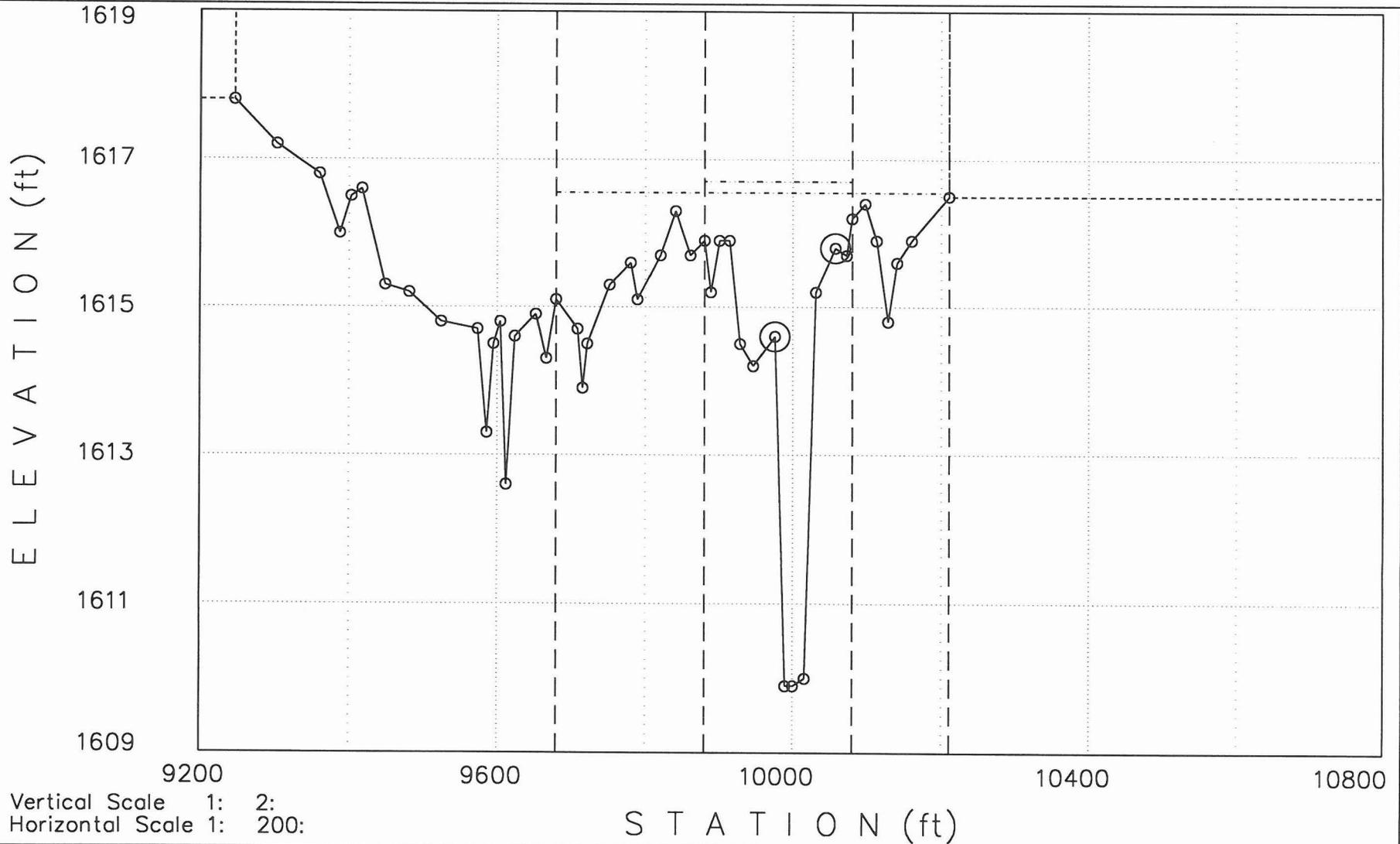
Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 5.571: (FN = 11547T31.OP1)

>>>>>>

Q1= 4300cfs WS1= 1616.55  
Q2= 4300cfs WS2= 1616.7

Manning-n Values: LOB: .05 CH: .04 ROB: .055



Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

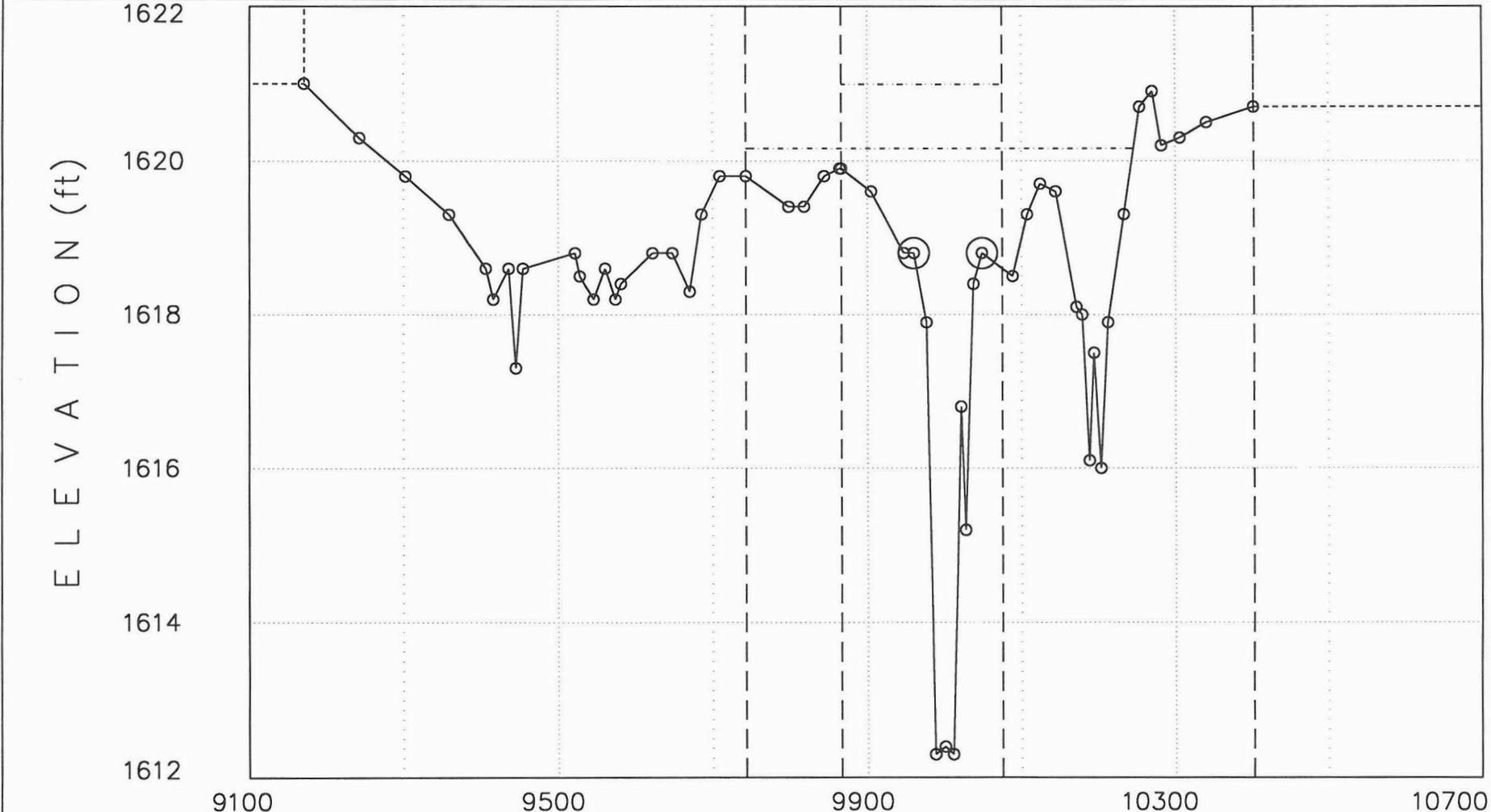
S T A T I O N (ft)

<<<<<< Cross Section: 5.665: (FN = 11547T31.OP1)

>>>>>>

Q1= 4300cfs WS1= 1620.16  
Q2= 4300cfs WS2= 1620.99

Manning-n Values: LOB: .05 CH: .04 ROB: .055



Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

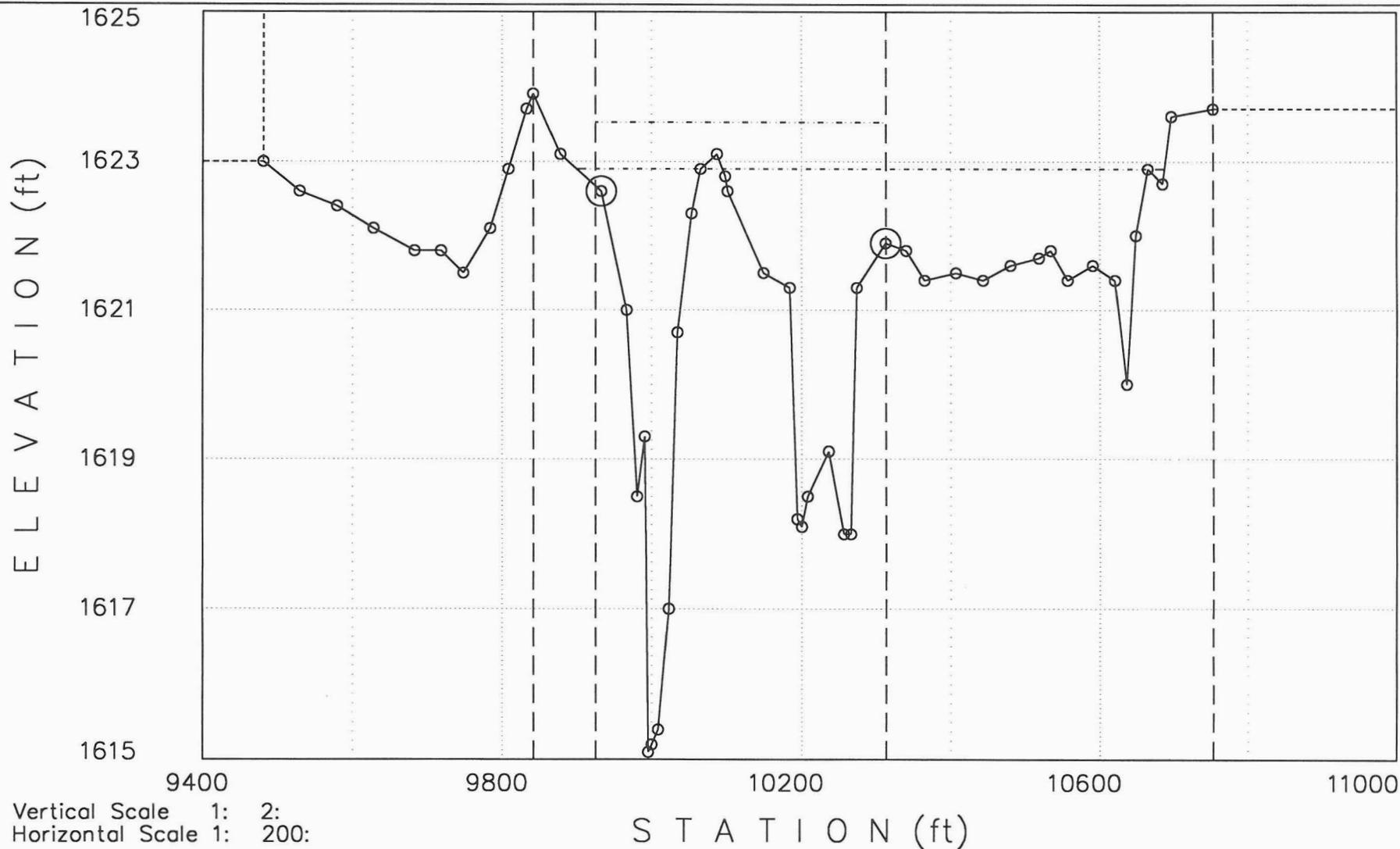
S T A T I O N (ft)

<<<<<< Cross Section: 5.763: (FN = 11547T31.OP1)

>>>>>>

Q1= 4300cfs WS1= 1622.9  
Q2= 4300cfs WS2= 1623.52

Manning-n Values: LOB: .055 CH: .046 ROB: .055

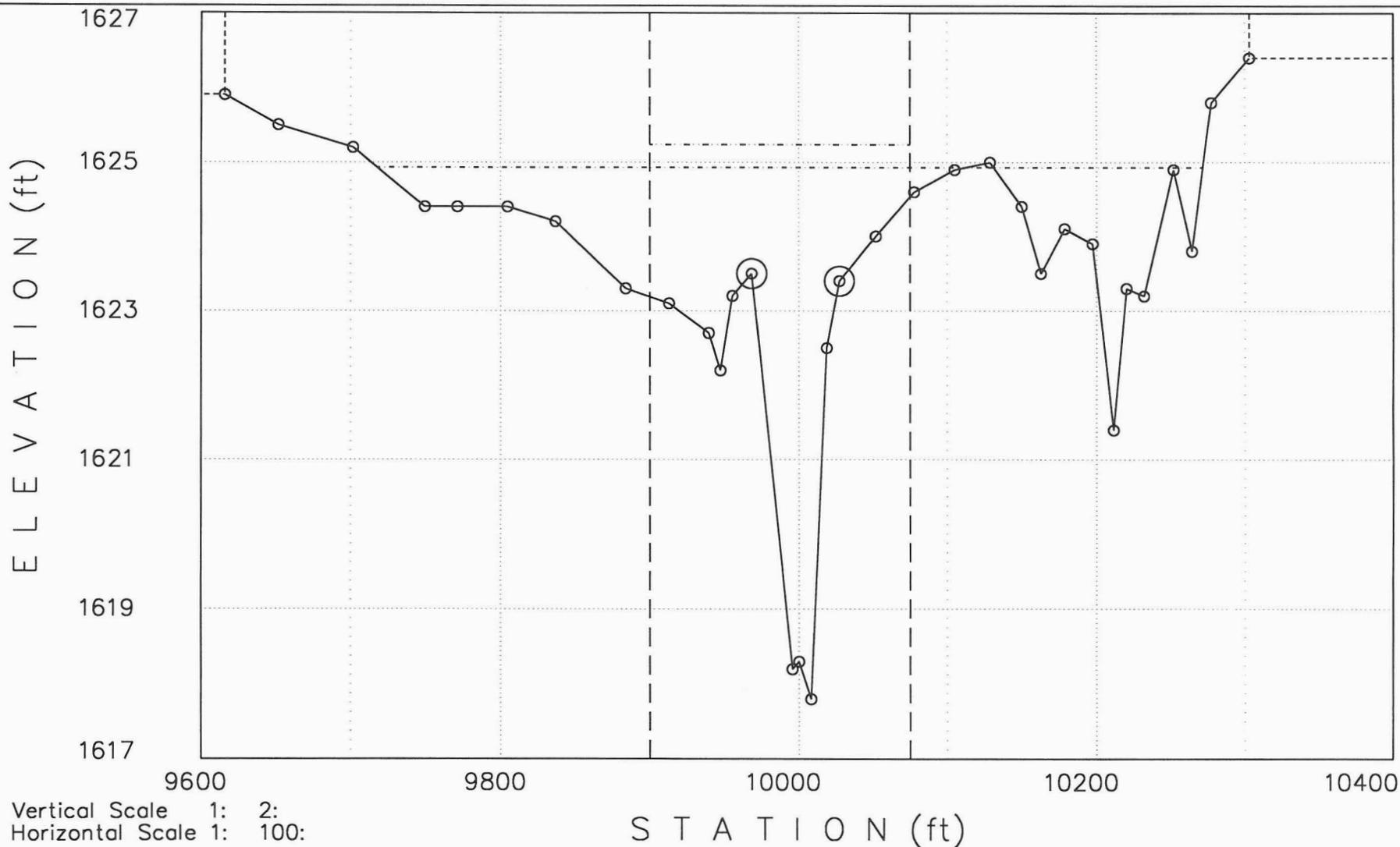


<<<<<< Cross Section: 5.853: (FN = 11547T31.OP1)

>>>>>>

Q1= 3400cfs WS1= 1624.93 -----  
Q2= 3400cfs WS2= 1625.24 -----

Manning-n Values: LOB: .055 CH: .05 ROB: .055

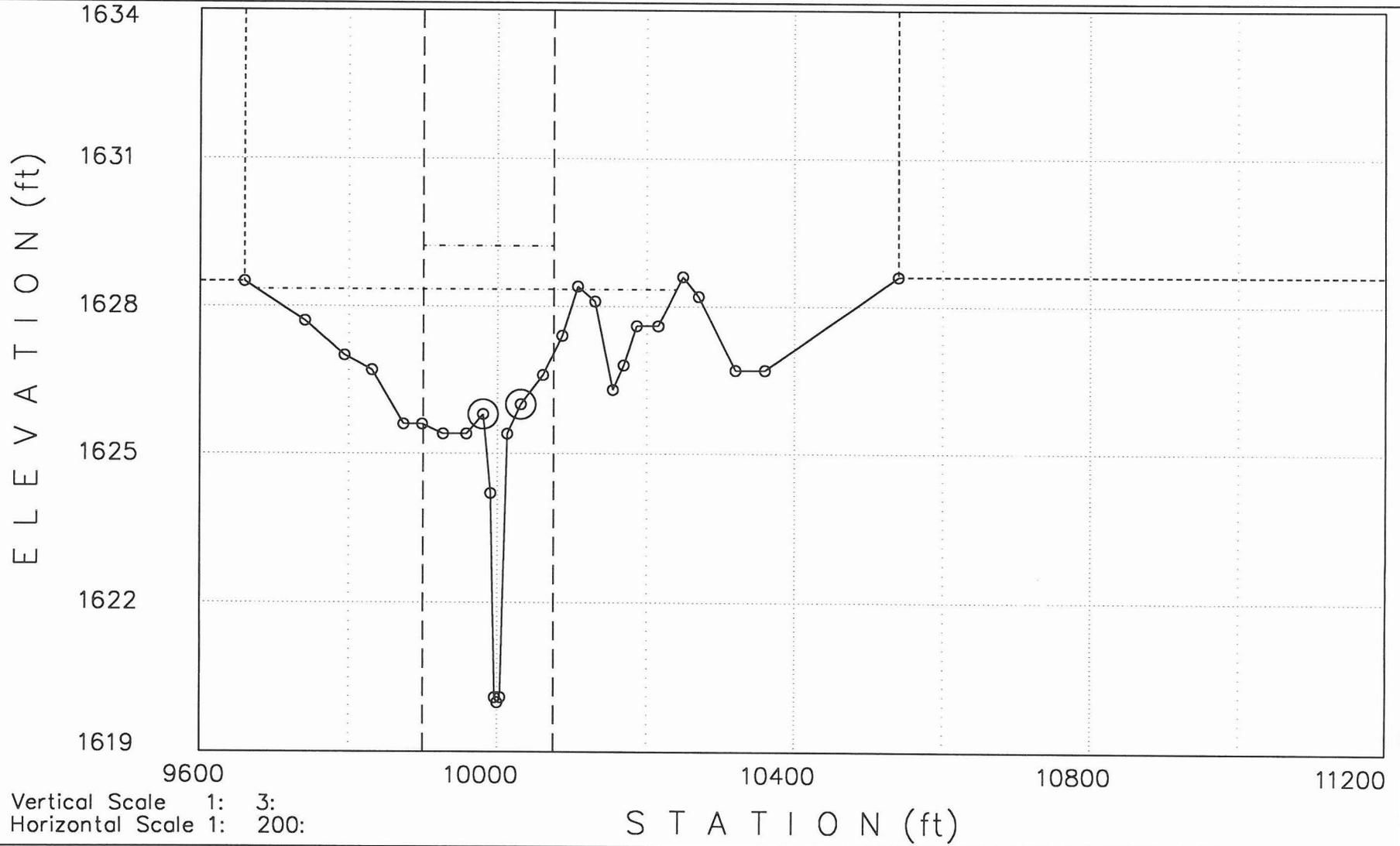


<<<<<< Cross Section: 5.948: (FN = 11547T31.OP1)

>>>>>>

Q1= 3400cfs WS1= 1628.34  
Q2= 3400cfs WS2= 1629.22

Manning-n Values: LOB: .055 CH: .05 ROB: .055



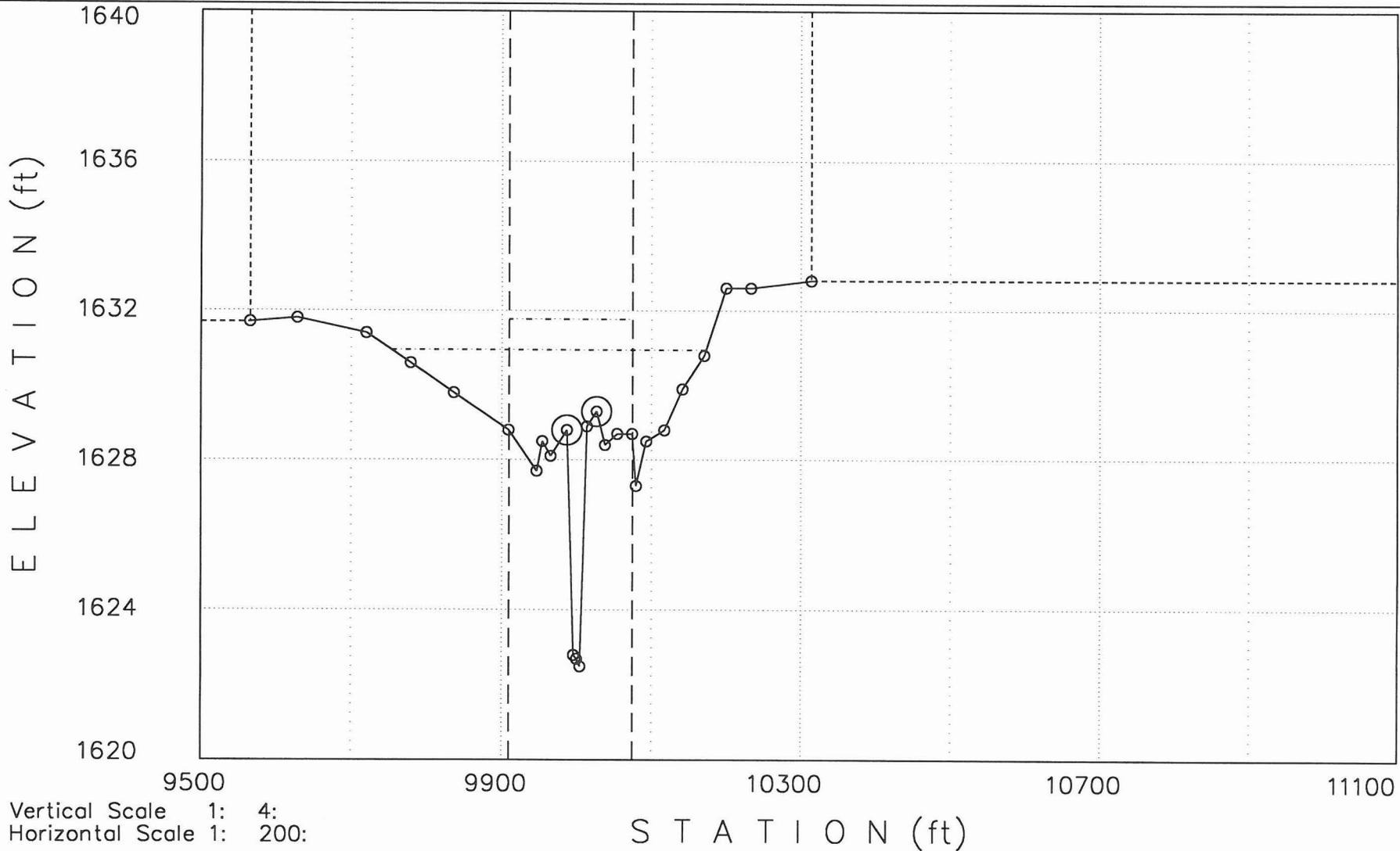
Vertical Scale 1: 3:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 6.042: (FN = 11547T31.OP1)

>>>>>>

Q1= 3400cfs WS1= 1630.95  
Q2= 3400cfs WS2= 1631.77

Manning-n Values: LOB: .055 CH: .05 ROB: .055



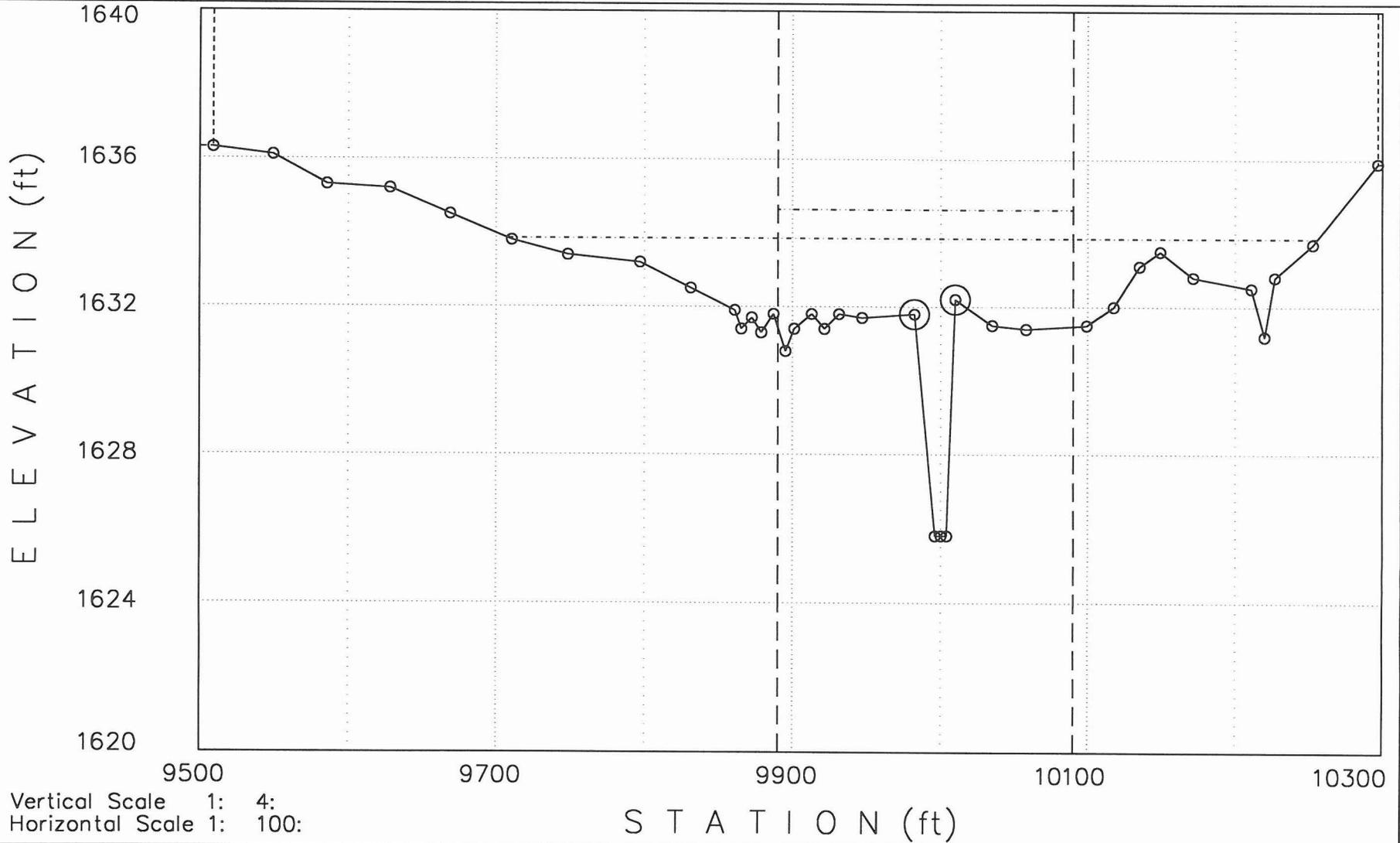
Vertical Scale 1: 4:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: 6.137: (FN = 11547T31.OP1)

>>>>>>

Q1= 3400cfs WS1= 1633.85 -----  
Q2= 3400cfs WS2= 1634.63 -----

Manning-n Values: LOB: .055 CH: .05 ROB: .055

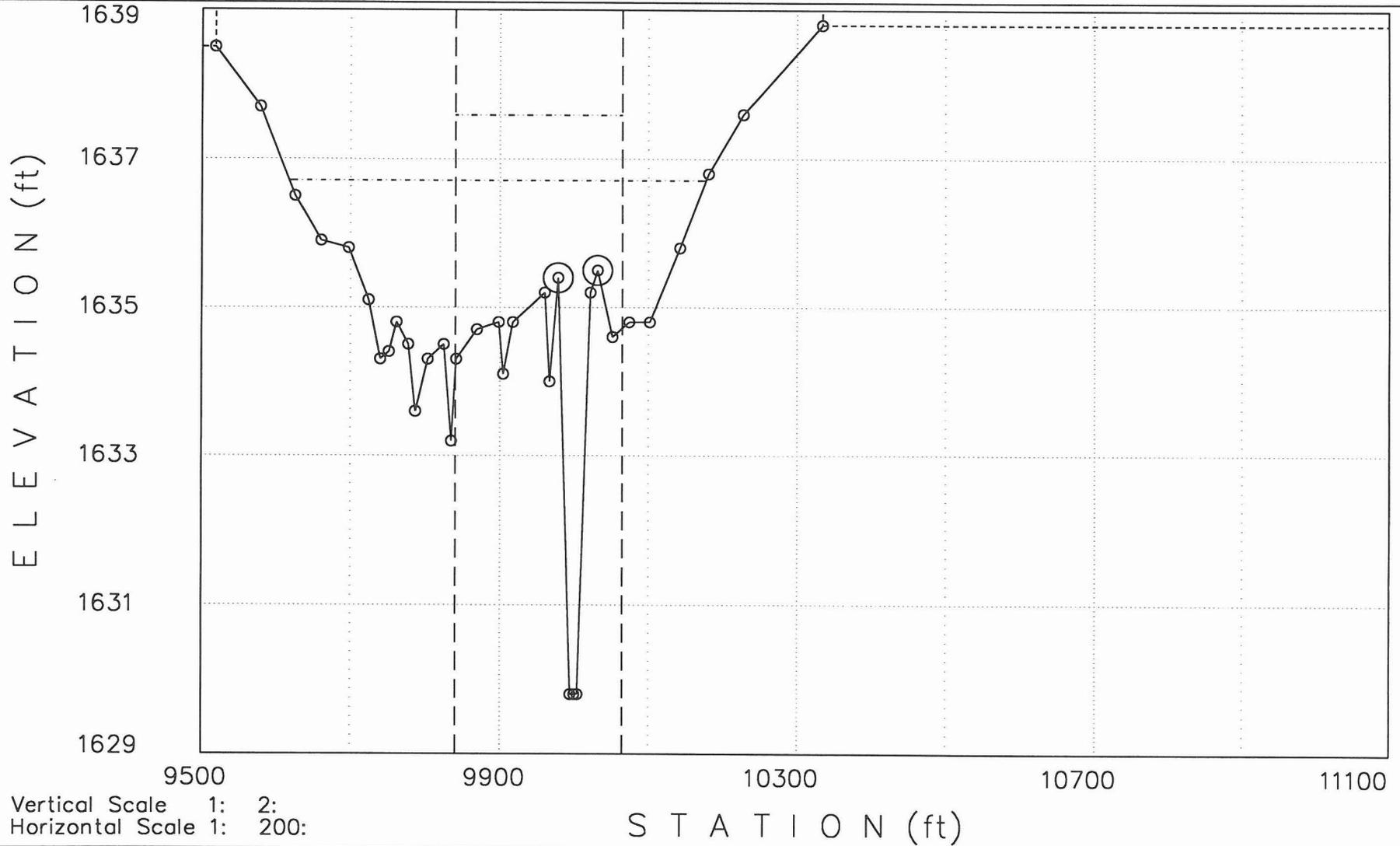


<<<<<< Cross Section: 6.241: (FN = 11547T31.OP1)

>>>>>>

Q1= 3400cfs WS1= 1636.71  
Q2= 3400cfs WS2= 1637.59

Manning-n Values: LOB: .055 CH: .05 ROB: .055

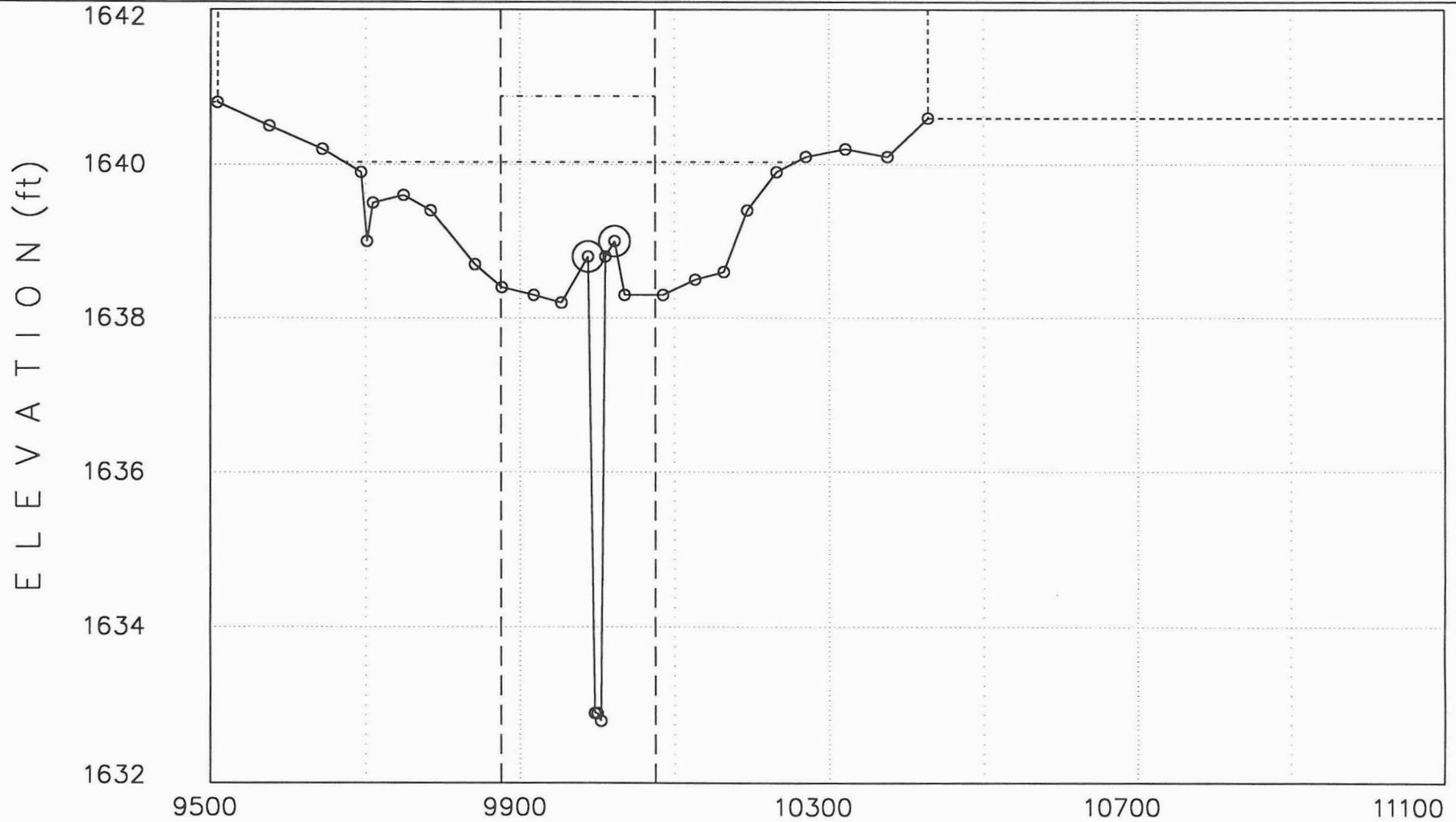


<<<<<< Cross Section: 6.336: (FN = 11547T31.OP1)

>>>>>>

Q1= 3400cfs WS1= 1640.03  
Q2= 3400cfs WS2= 1640.88

Manning-n Values: LOB: .055 CH: .05 ROB: .055



Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

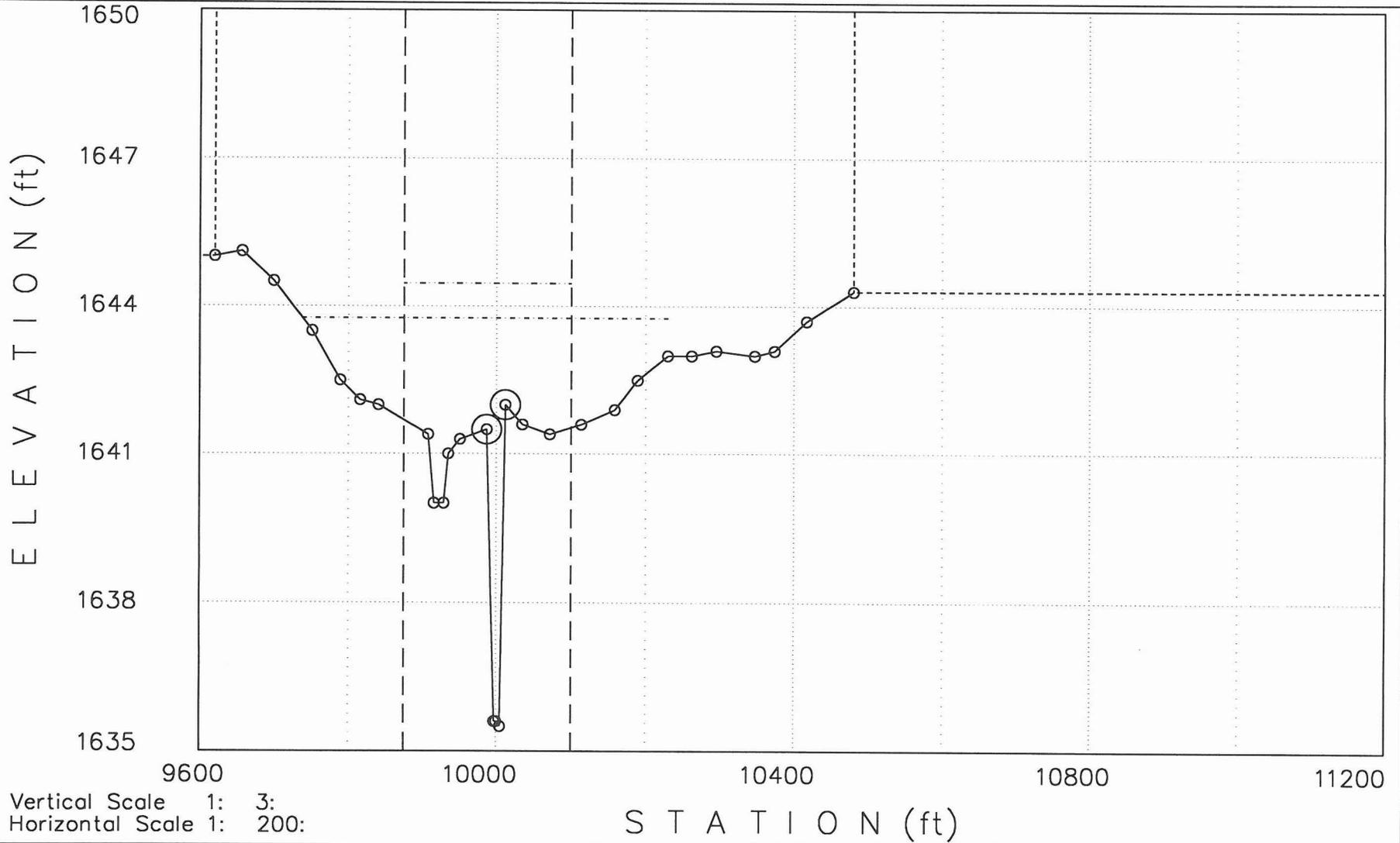
S T A T I O N (ft)

<<<<<< Cross Section: 6.432: (FN = 11547T31.OP1)

>>>>>>

Q1= 3400cfs WS1= 1643.76  
Q2= 3400cfs WS2= 1644.46

Manning-n Values: LOB: .055 CH: .05 ROB: .055



Vertical Scale 1: 3:  
Horizontal Scale 1: 200:

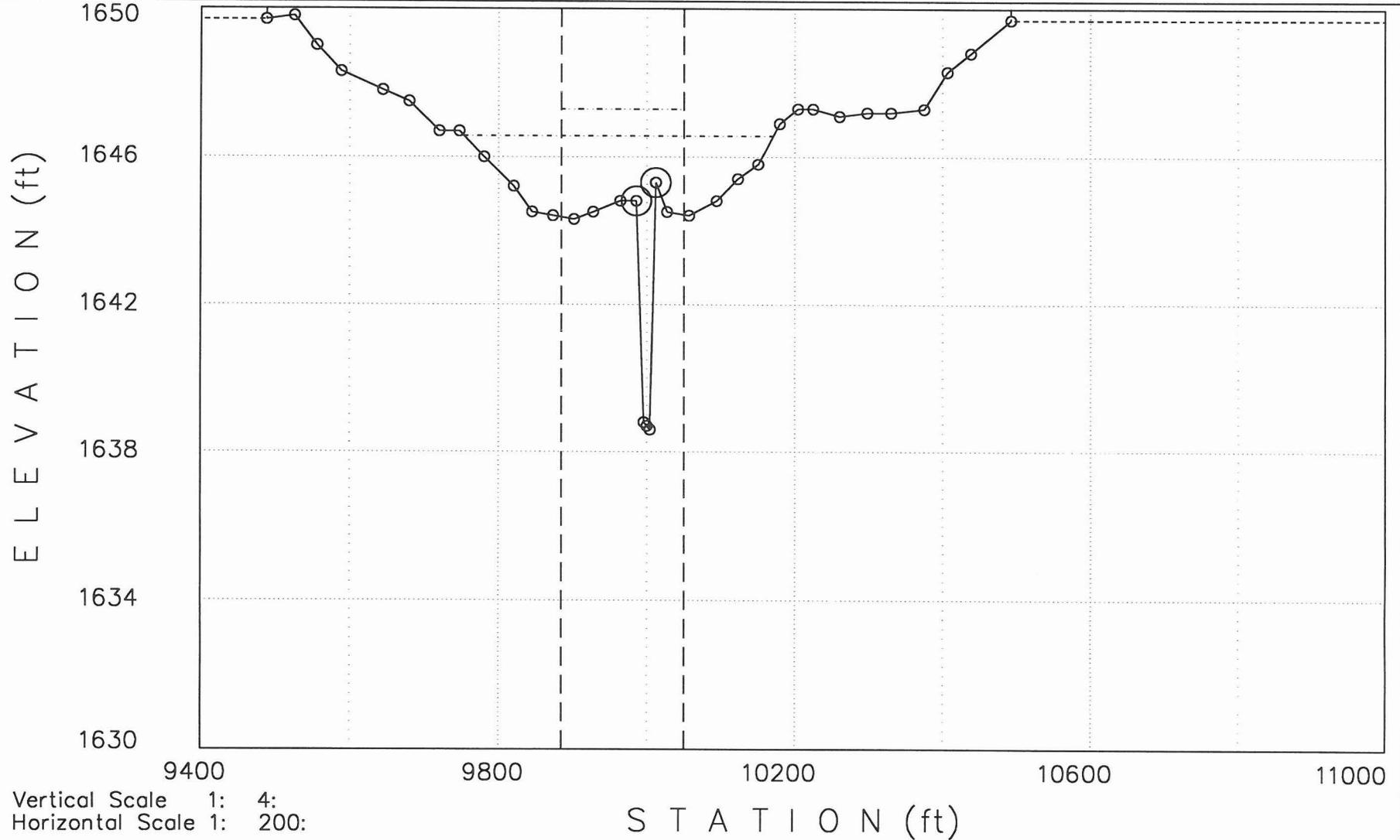
S T A T I O N (ft)

<<<<<< Cross Section: 6.53: (FN = 11547T31.OP1)

>>>>>>

Q1= 3400cfs WS1= 1646.57 -----  
Q2= 3400cfs WS2= 1647.29 -----

Manning-n Values: LOB: .055 CH: .05 ROB: .055

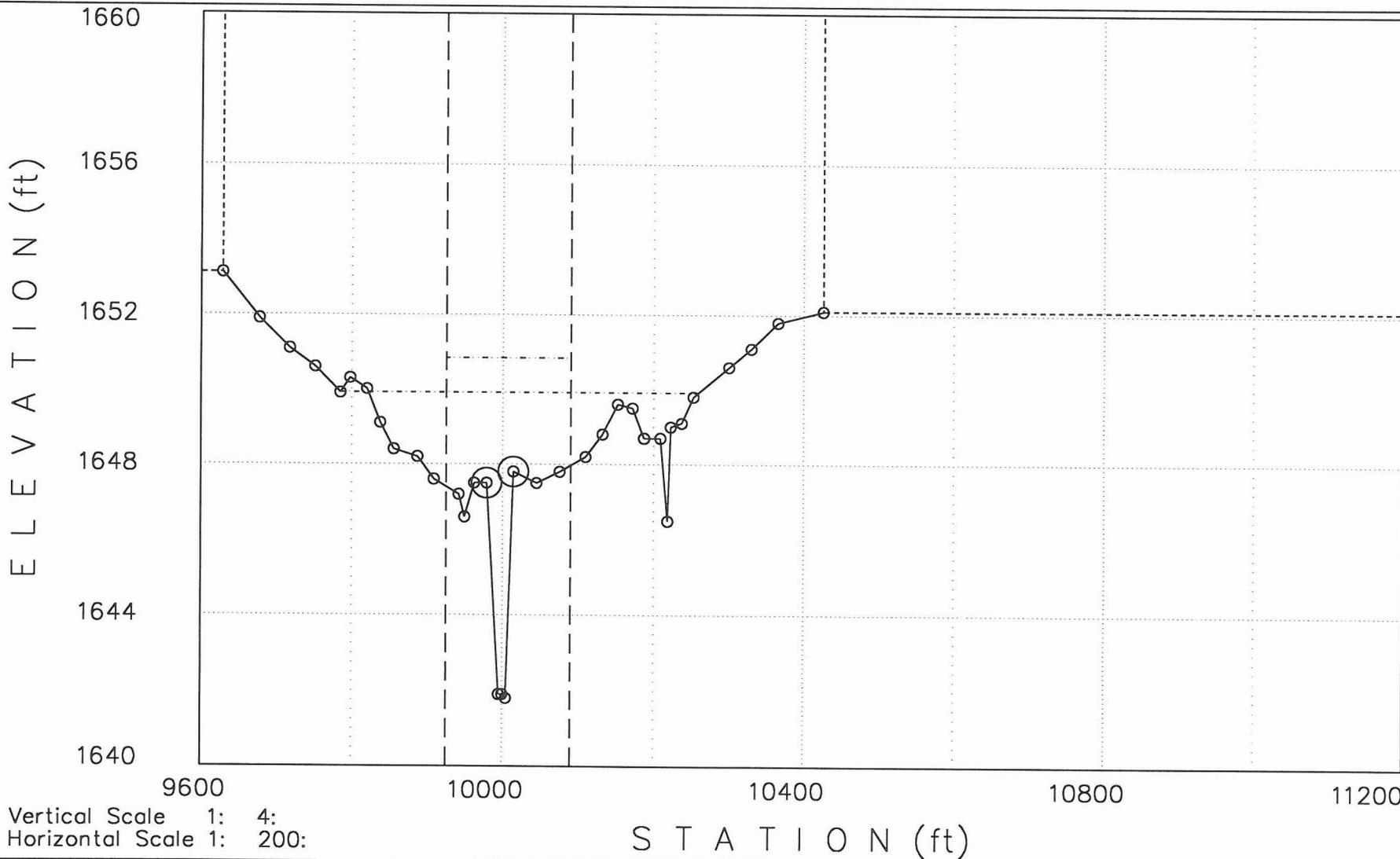


<<<<<< Cross Section: 6.625: (FN = 11547T31.OP1)

>>>>>>

Q1= 3400cfs WS1= 1649.91  
Q2= 3400cfs WS2= 1650.84

Manning-n Values: LOB: .055 CH: .05 ROB: .055



Vertical Scale 1: 4:  
Horizontal Scale 1: 200:

**POWERLINE WASH AND TANK WASH  
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(FCD 92-09)**

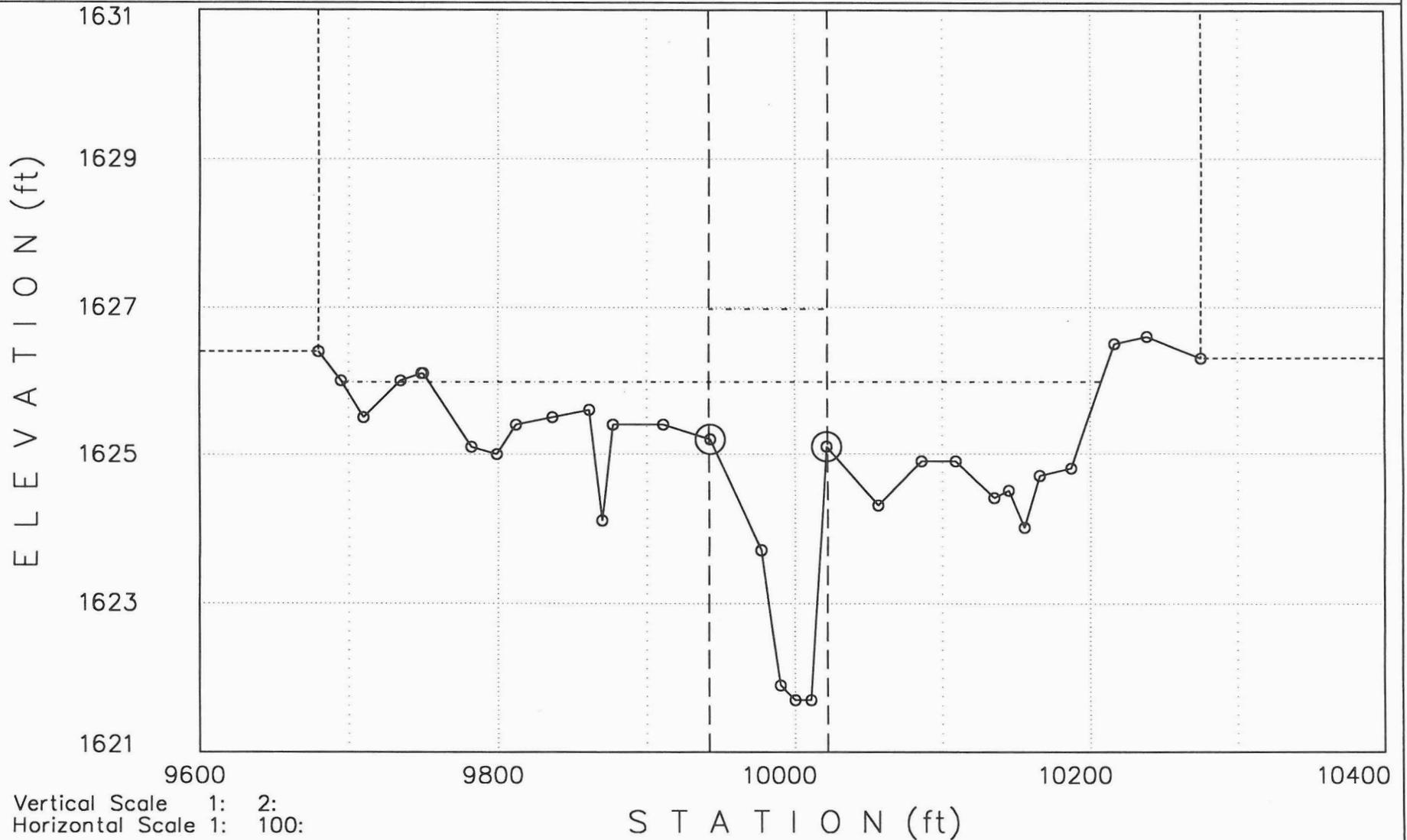
**SECTION 4.3.3 SOUTH BRANCH TANK WASH**

<<<<<< Cross Section: .176: (FN = 11547T34.OP1)

>>>>>>

Q1= 2300cfs WS1= 1625.98  
Q2= 2300cfs WS2= 1626.98

Manning-n Values: LOB: .055 CH: .04 ROB: .05



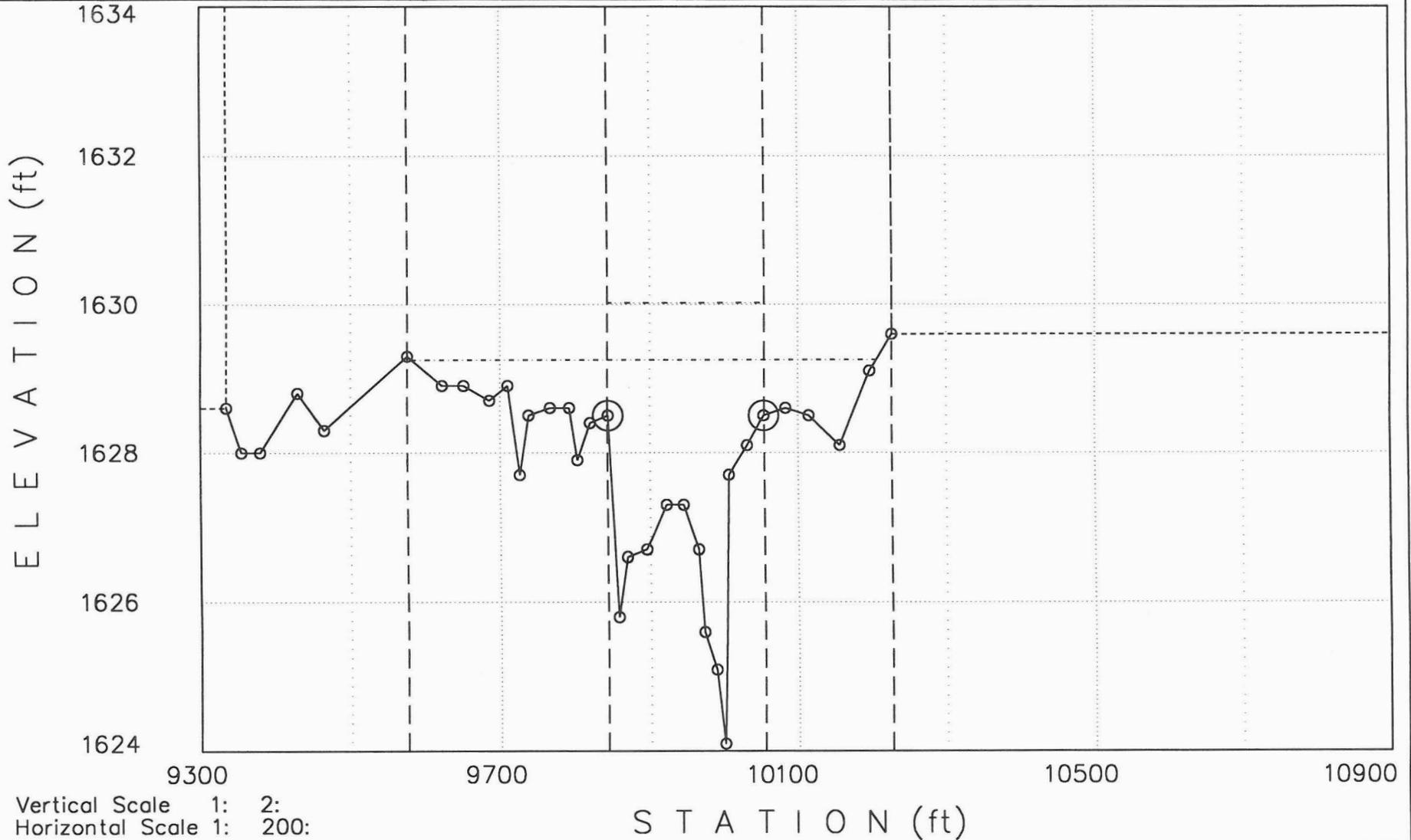
Vertical Scale 1: 2:  
Horizontal Scale 1: 100:

<<<<<< Cross Section: .279: (FN = 11547T34.OP1)

>>>>>>

Q1= 2300cfs WS1= 1629.25  
Q2= 2300cfs WS2= 1630.02

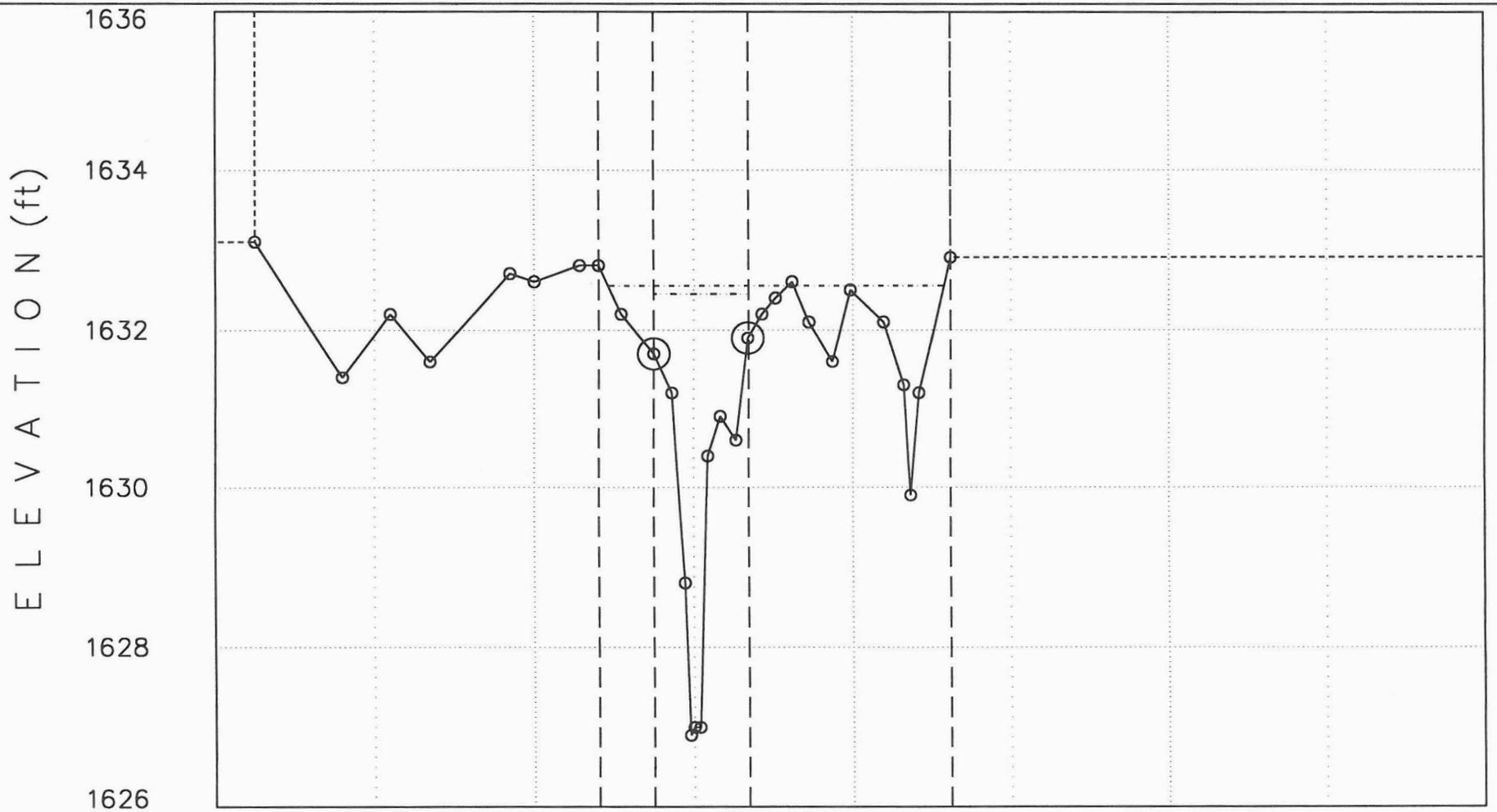
Manning-n Values: LOB: .055 CH: .044 ROB: .055



<<<<<< Cross Section: .381: (FN = 11547T34.OP1) >>>>>>

Q1= 2300cfs WS1= 1632.55 -----  
Q2= 2300cfs WS2= 1632.45 -----

Manning-n Values: LOB: .055 CH: .045 ROB: .055



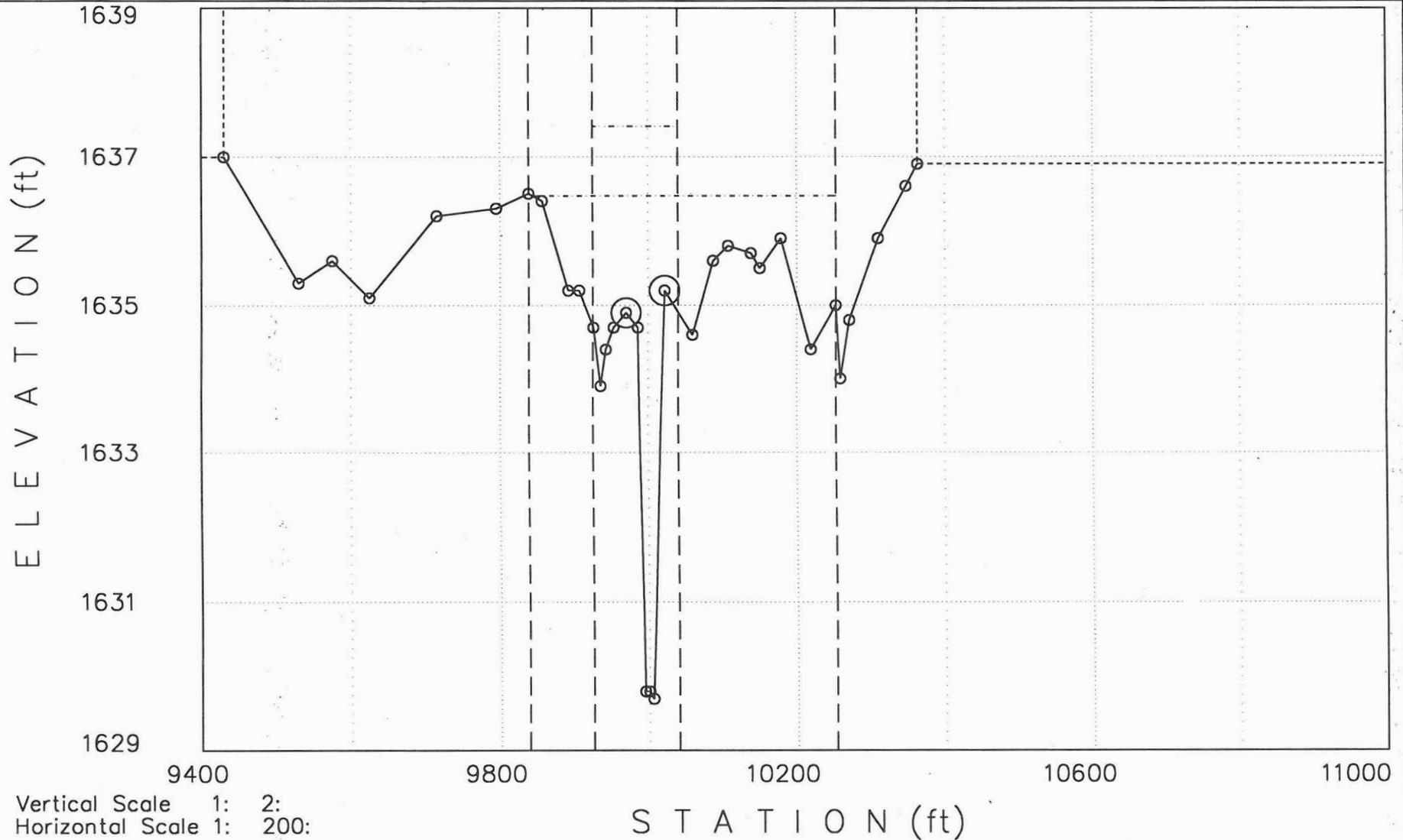
Vertical Scale 1: 2:  
Horizontal Scale 1: 200:  
STATION (ft)

<<<<<< Cross Section: .47: (FN = 11547T34.OP1)

>>>>>>

Q1= 2300cfs WS1= 1636.47  
Q2= 2300cfs WS2= 1637.41

Manning-n Values: LOB: .055 CH: .045 ROB: .055



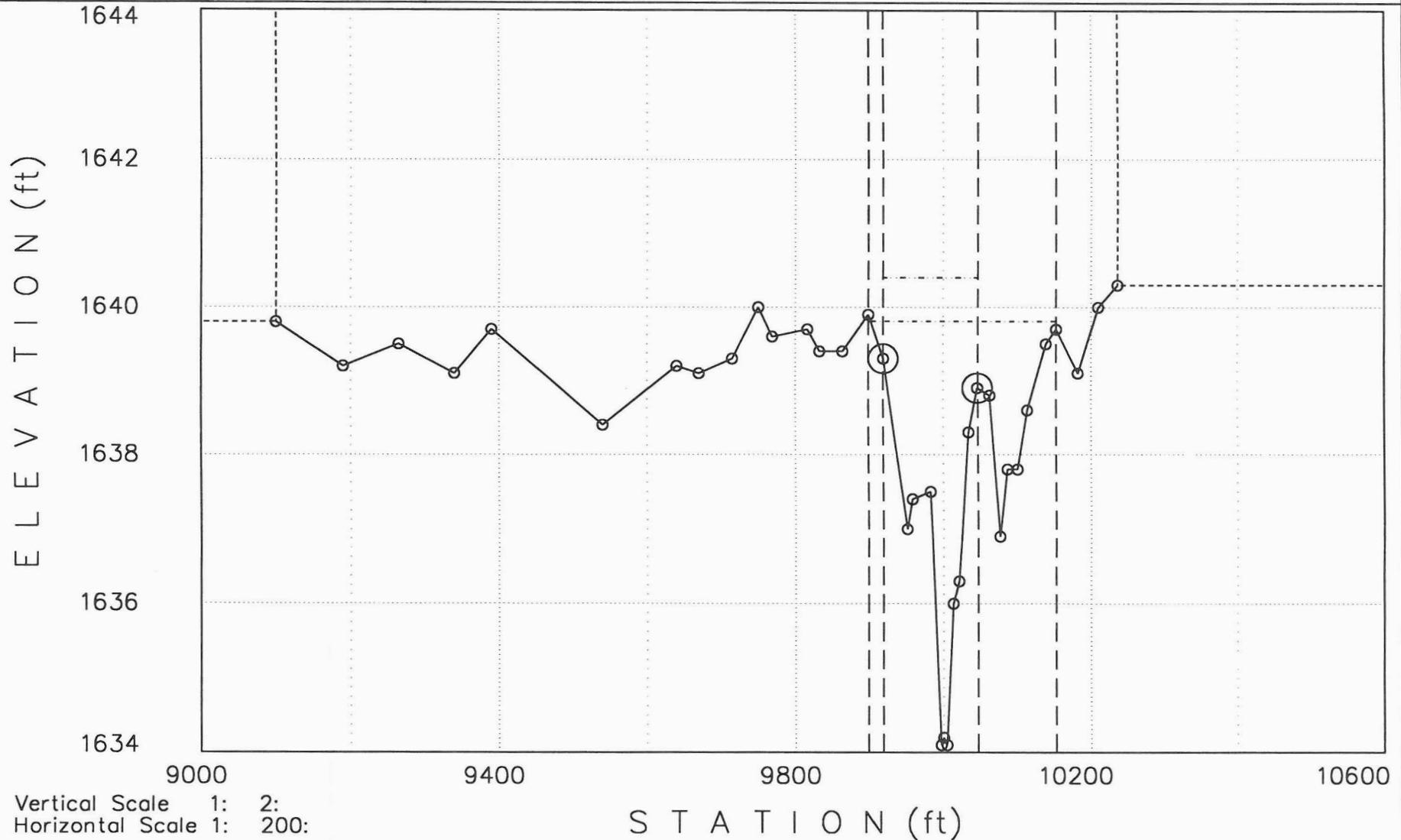
Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: .573: (FN = 11547T34.OP1)

>>>>>>

Q1= 2300cfs WS1= 1639.81 -----  
Q2= 2300cfs WS2= 1640.4 -----

Manning-n Values: LOB: .055 CH: .045 ROB: .055



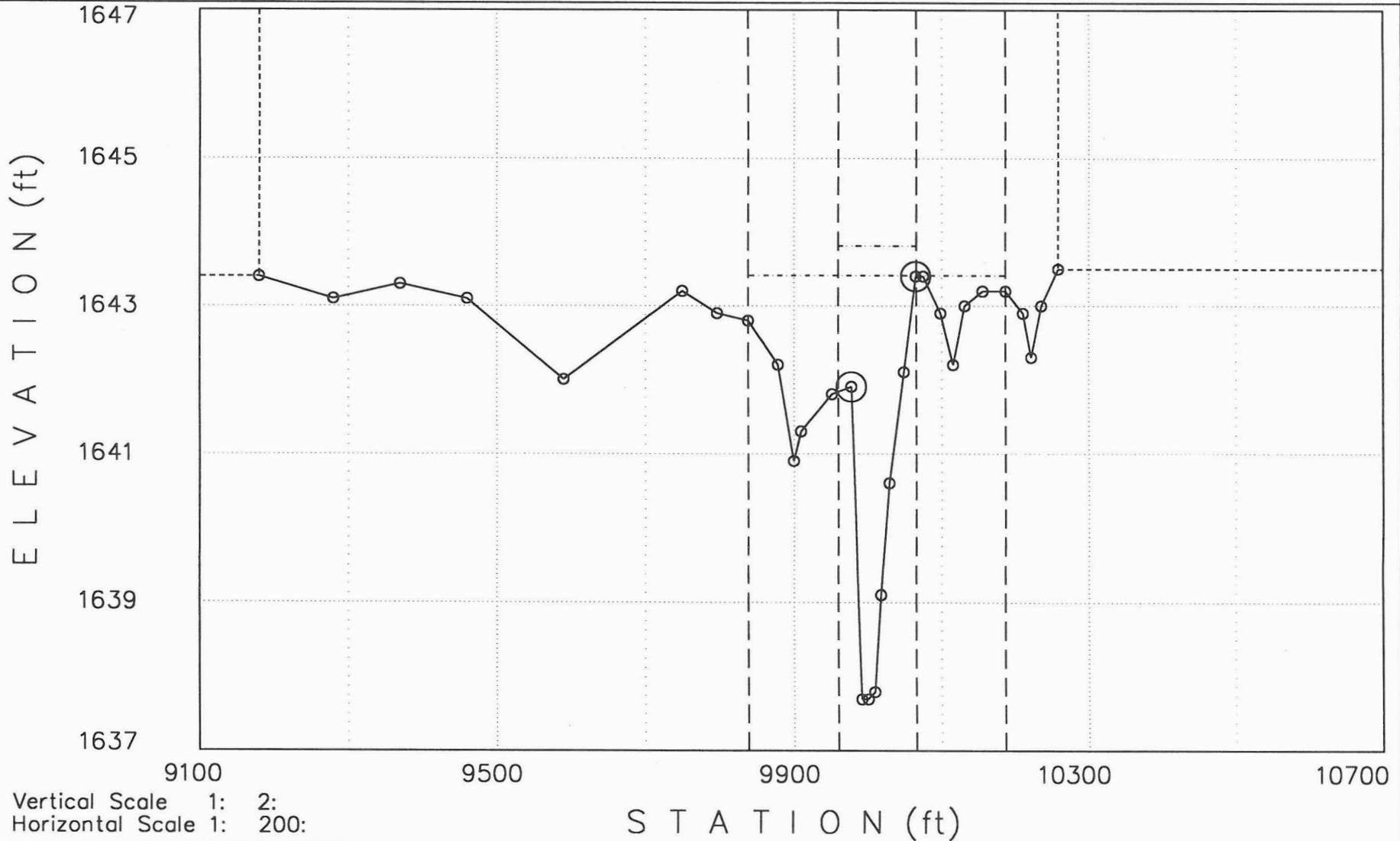
Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: .678: (FN = 11547T34.OP1)

>>>>>>

Q1= 2300cfs WS1= 1643.41      - - - - -  
Q2= 2300cfs WS2= 1643.81      - - - - -

Manning-n Values: LOB: .055 CH: .045 ROB: .055

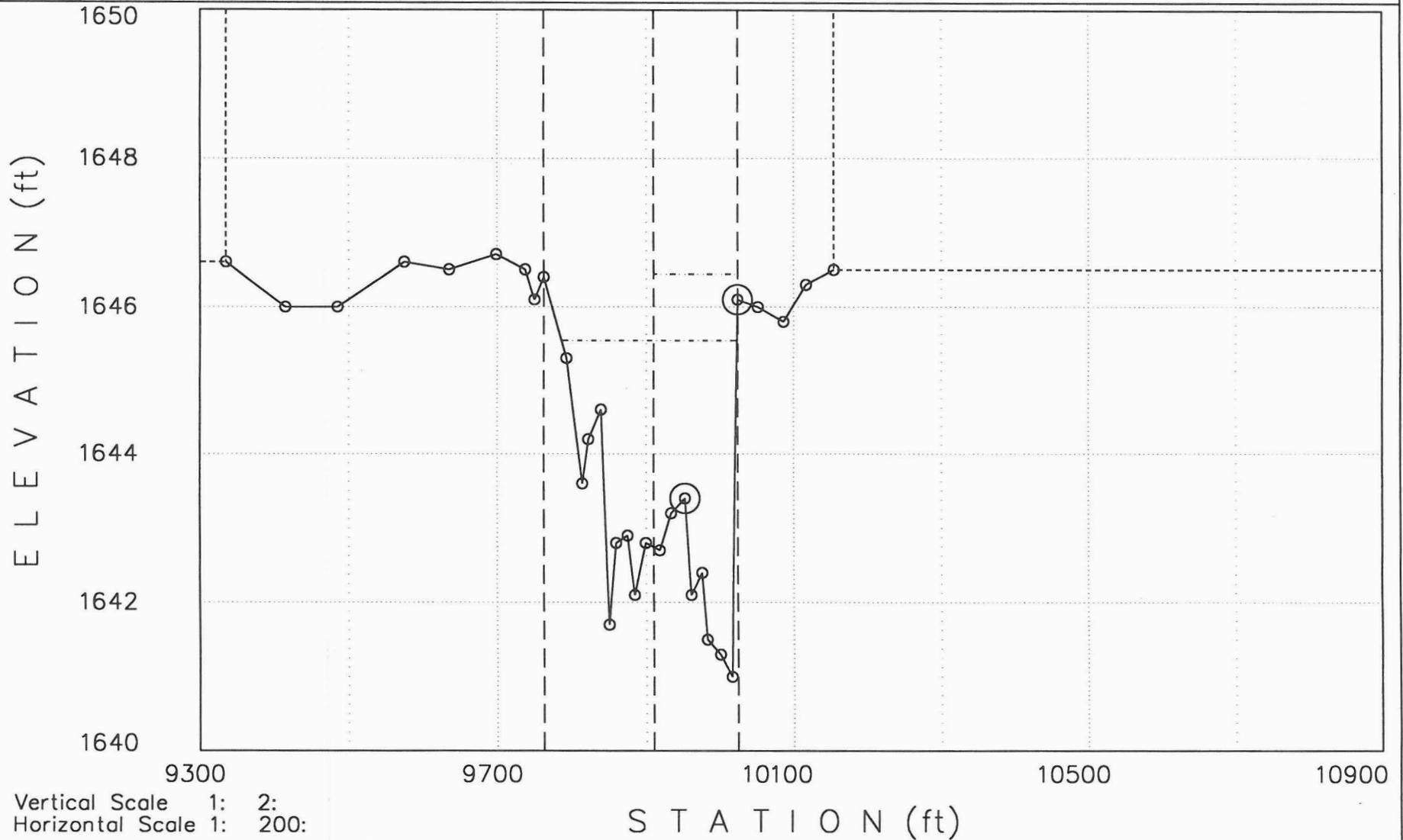


<<<<<< Cross Section: .773: (FN = 11547T34.OP1)

>>>>>>

Q1= 2300cfs WS1= 1645.54  
Q2= 2300cfs WS2= 1646.44

Manning-n Values: LOB: .045 - .046 CH: .04 ROB: 0 - .055



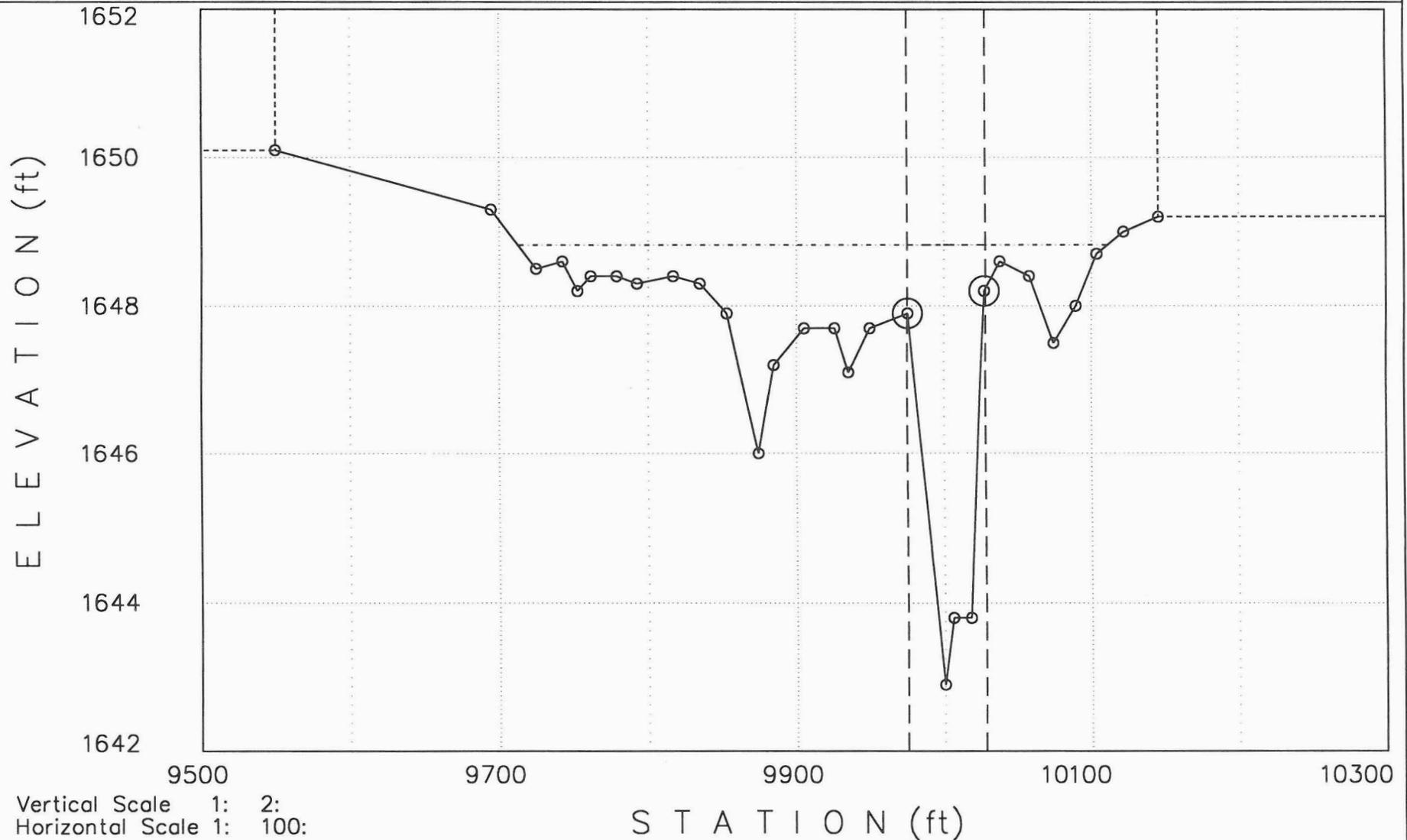
Vertical Scale 1: 2:  
Horizontal Scale 1: 200:

<<<<<< Cross Section: .872: (FN = 11547T34.0P1)

>>>>>>

Q1= 2300cfs WS1= 1648.82  
Q2= 2300cfs WS2= 1648.82

Manning-n Values: LOB: .055 CH: .045 ROB: .055



Vertical Scale 1: 2:  
Horizontal Scale 1: 100:

**POWERLINE WASH AND TANK WASH  
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(FCD 92-09)**

**SECTION 4.5 SPECIAL PROBLEMS/SOLUTIONS**

As mentioned previously, peak flow rates for Powerline Wash were taken unchanged from the Jackrabbit Wash Study but hydrology for Tank Wash required additional study. In addition to this, flow rates for Tank Wash natural floodplain runs were subdivided on the basis of hydraulic analysis in two localized sub-reaches where a small portion of flow breaks over the north (or left) channel bank. This flow becomes hydraulically separated from the main channel for a short distance until it rejoins the main channel at a point downstream of the breakout.

The breakouts occur in the vicinity of river miles 4.2 and 5.5. The amount of flow which breaks out was estimated on the basis of how much flow occurs in the left overbank at these points. This was done using the HEC-2 flow distribution output. At HEC-2 cross section 4.211, approximately 12% of the total flow of 6100 cfs (or about 700 cfs) is in the left overbank and assumed to break out.

Cross sections 4.117, 4.003, 3.880 and 3.785 downstream from 4.211 are artificially encroached in the left overbank and the flow rate for the remaining effective flow area is reduced from 6100 cfs to 5400 cfs. At cross section 3.668, the breakout flow rejoins the main channel. Additional tributary flow also joins the main channel at this cross section. In the floodway encroachment run, the entire flow of 6100 cfs is used between cross sections 4.211 and 3.785.

At cross section 5.475, about 12% of the total flow of 4300 cfs (or about 500 cfs) is in the left overbank and assumed to break out. Cross sections 5.381, 5.283, 5.187 and 5.091 downstream from 5.475 are artificially encroached on the left side and the flow rate for the remaining effective flow

area is reduced from 4300 cfs to 3800 cfs. At cross section 4.997, the breakout flow rejoins the main channel. Additional tributary flow also joins the main channel at this cross section. In the floodway encroachment run, the entire flow of 4300 cfs is used between cross sections 5.475 and 5.091.

Very shallow breakout may occur over the south (or right) overbank of Tank Wash at certain locations. "Cross section extended" messages occur in HEC-2 printout at five cross sections located between river mile 5.6 and river mile 2.4 along Tank Wash for the "without floodway" profile. Table 3 is a summary of these cross sections and the amount they were extended.

TABLE 3  
CROSS SECTION EXTENSIONS  
TANK WASH

Cross Section	Extended
2.425	0.04 ft.
2.995	0.01 ft.
4.211	0.16 ft.
5.283	0.14 ft.
5.571	0.05 ft.

If flow does break from the south bank of Tank Wash, it does not return to Tank Wash immediately downstream as was the case with the breakout on the north bank. It is possible, depending on the location of the breakout, that it would not return to Tank Wash at all. However, as indicated by Table 3, the depth of potential breakout is extremely shallow. With the inherent limitations of accuracy in mapping and hydraulics in this type of study, it is difficult to be conclusive one way or another when dealing with flow depths on the order of a tenth or two tenths feet.

Based on the hydraulic evidence, review of aerial photography and reconnaissance in the field, it is the conclusion of this study that the potential exists for shallow breakout to occur. However, since this potential appears to be significantly less than a foot in depth, the flood hazard along the south floodplain limit of Tank Wash can be classified under the Zone X flood insurance zone.

On Powerline Wash, there is a slight potential for breakout of flow on the right side of cross section 9.761. The amount of breakout flow involved is about 130 cfs (out of a total 5700 cfs) based on HEC-2 flow distribution printout. Flow breaking out at this cross section rejoins the main flow a short distance downstream between cross sections 9.575 and 9.481.

The right side of cross sections 9.761, 9.672 and 9.575 have been modeled as ineffective flow area in the "without floodway" profile where the breakout is likely to occur. The right side floodplain limit at cross sections 9.761 and 9.672 have been plotted where the resulting computed water surface would intersect ground. The right side floodplain limit at cross section 9.575 was estimated based on ground contours and the computed water surface elevations at the adjacent upstream and downstream cross sections.

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

**SECTION 4.6 FLOODWAY MODELING**

The final floodway encroachment runs for both Powerline and Tank Washes use the Type 1 encroachment option in HEC-2. The target rise in water surface above the natural profile was one foot. Final floodway encroachment stations were based on intermediate floodway encroachment runs using the Type 4 encroachment option (equal loss of conveyance in left and right overbanks) with a target rise of one foot over the natural profile.

The target rise of one foot on final floodway encroachment runs was not achieved consistently along many sub-reaches of the study area. This is due primarily to non-uniformity between cross sections. Type 1 encroachment was also used on the natural profiles of both Powerline and Tank Washes. This was done only in instances where there was ineffective flow area in the overbank of a particular cross section.

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

**SECTION 4.7 - FINAL RESULTS/COMPUTER RUNS**

**SUMMARY DESCRIPTION OF HEC-2 HYDRAULIC MODELS**

<u>Model/Input Filename</u>	<u>Description</u>
<b>Powerline Wash:</b>	
11547P30.	Final floodplain/Type 4 Floodway
11547P31.	Final floodplain/Type 1 Floodway
11547P32.	Roughness "n" value runs based on final floodplain model
<b>Tank Wash:</b>	
11547T30.	Final floodplain/Type 4 Floodway
11547T31.	Final floodplain/Type 1 Floodway
11547T32.	Roughness "n" value runs based on final floodplain model
<b>South Branch Tank Wash:</b>	
11547T33.	Final floodplain/Type 4 Floodway
11547T34.	Final floodplain/Type 1 Floodway



\*\*\*\*\*  
 \* HEC-2 WATER SURFACE PROFILES \*  
 \* \*  
 \* Version 4.6.2; May 1991 \*  
 \* \*  
 \* RUN DATE 25SEP93 TIME 22:18:19 \*  
 \*\*\*\*\*

\*\*\*\*\*  
 \* U.S. ARMY CORPS OF ENGINEERS \*  
 \* HYDROLOGIC ENGINEERING CENTER \*  
 \* 609 SECOND STREET, SUITE D \*  
 \* DAVIS, CALIFORNIA 95616-4687 \*  
 \* (916) 756-1104 \*  
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PAGE 1

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 HEC-2 WATER SURFACE PROFILES  
 Version 4.6.2; May 1991  
 \*\*\*\*\*

- T1 FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
- T2 POWERLINE WASH AND TANK WASH FLOOD DELINEATION STUDY (FCD 92-09)
- T3 POWERLINE WASH 100-YR STANLEY CONSULTANTS # 11547 FILENAME: 11547P31
- T4
- T4 1. CROSS SECTIONS ORIENTED LEFT TO RIGHT LOOKING DOWNSTREAM
- T4 2. HYDRAULIC BASELINE IS CROSS SECTION STATION 10,000
- T4 3. GR DATA BASED ON KENNEY AERIAL TOPO, FLIGHT DATE 11-24-92 AND AERIAL
- T4 MAPPING COMPANY TOPO FROM WOOD/PATEL STAR WASH STUDY, FLIGHT DATE
- T4 10-20-92; VERTICAL DATUM FOR ALL TOPO IS NGVD 1929
- T4 4. POWERLINE RIVER MILE 0.0 CORRESPONDS TO CONFLUENCE WITH STAR WASH
- T4 5. STARTING WATER SURFACE FROM WOOD/PATEL STAR WASH STUDY 6-29-93
- T4 6. CHANNEL "n" RANGES FROM 0.040 TO 0.050
- T4 7. OVERBANK "n" RANGES FROM 0.045 TO 0.055
- T4 8. NH RECORD USED AT MULTI-CHANNEL XSECTNS
- T4 9. FLOW RATES APPORTIONED BASED ON BURGESS-NIPLE JACKRABBIT WASH
- T4 HYDROLOGY
- T4 10. INEFFECTIVE FLOW AREAS BLOCKED OUT USING ET RECORD ON NATURAL RUN
- T4 11. PROFILE 1 - NATURAL ; PROFILE 2 - TYPE 1 ENCROACHMENT
- T4

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		2							1446.38	
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1		-1							15
J3	VARIABLE CODES FOR SUMMARY PRINTOUT									
	38	43	1	2	13	55	16	14	26	17
	15	56	18		38	43	1	25	42	8
	39	27	53	54	28	4	37		38	43
	1	50	3	61	27	21	23	24	22	28
		200								

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NC	0.0	0.0	0.0	0.1	0.3					
QT	3	5100	5100	5100						
NH	5	0.055	9947.1	0.040	10062.6	0.050	11324.3	0.045	11394.5	0.055
NH	11628.									
ET			10.4	9.1					9947.0	10600.0

\*\*\* XSECTN 1.113 IS THE UPSTREAM LIMIT OF WOOD/PATEL STAR WASH STUDY AND THE DOWNSTREAM LIMIT OF STANLEY CONSULTANTS POWERLINE WASH STUDY. GR AND ENCROACHMENT STATIONS FOR XSECTN 1.113 ARE FROM THE WOOD/PATEL STUDY \*\*\*

X1	1.113	55	9947.1	10062.6						
GR	1449.7	9714.1	1449.5	9739.7	1448.4	9770.3	1446.6	9807.9	1446.1	9853.9
GR	1446.4	9905.1	1446.7	9947.1	1446.1	9984.9	1442.6	9990.3	1442.4	10000.0
GR	1442.2	10005.4	1445.5	10017.9	1446.2	10062.6	1446.1	10128.6	1445.7	10187.9
GR	1445.8	10242.4	1445.8	10309.5	1444.8	10352.3	1445.5	10399.8	1445.6	10435.5
GR	1445.3	10480.7	1445.5	10532.2	1445.0	10581.3	1444.7	10624.0	1444.9	10665.4
GR	1445.7	10706.4	1445.7	10747.8	1445.4	10802.2	1445.9	10850.6	1445.8	10894.3
GR	1445.6	10923.7	1444.1	10952.8	1444.7	10973.6	1445.4	11010.7	1445.4	11041.9
GR	1445.1	11087.4	1444.8	11127.8	1445.0	11186.0	1445.3	11239.4	1445.8	11284.8
GR	1446.0	11324.3	1445.9	11341.3	1444.1	11352.9	1445.5	11366.5	1446.0	11394.5
GR	1445.9	11425.9	1445.8	11443.6	1443.8	11447.3	1445.2	11457.6	1446.7	11481.4
GR	1447.0	11511.2	1447.4	11552.4	1449.3	11593.3	1451.8	11621.6	1451.6	11628.4

NH	5	0.055	9964.6	0.045	10065.2	0.050	11345.7	0.045	11464.3	0.050
NH	11593.									
QT	3	5100	5100	5100						
ET				9.1					9964.0	10620.0
X1	1.203	52	9964.6	10065.2	485	475	475			
GR	1454.4	9817.4	1454.0	9845.9	1451.4	9873.6	1452.3	9899.7	1451.6	9926.6
GR	1448.7	9946.2	1449.0	9964.6	1448.9	9990.6	1444.7	9994.1	1444.7	10000.0
GR	1445.2	10014.1	1448.9	10035.9	1450.0	10065.2	1449.1	10144.2	1449.4	10209.9
GR	1448.3	10249.4	1448.7	10288.6	1448.7	10348.5	1448.4	10412.9	1448.1	10461.7
GR	1448.2	10516.7	1448.3	10577.0	1448.5	10650.8	1448.7	10733.0	1449.1	10801.2
GR	1449.2	10850.3	1448.4	10891.8	1448.5	10923.4	1448.1	10960.8	1448.5	10996.6
GR	1448.0	11036.8	1445.7	11056.0	1447.7	11073.1	1449.3	11107.9	1449.3	11158.4
GR	1449.1	11203.4	1449.4	11249.1	1449.6	11302.0	1449.9	11345.7	1449.5	11362.3
GR	1446.3	11367.4	1445.9	11383.1	1448.7	11395.2	1448.5	11434.4	1448.4	11450.8
GR	1445.7	11456.2	1448.4	11464.3	1447.8	11492.2	1450.4	11519.3	1451.2	11542.6
GR	1451.7	11570.3	1451.9	11593.0						

NH	5	0.055	9952.0	0.040	10043.8	0.050	11191.7	0.045	11285.8	0.050
NH	11690.									
ET		7.1		9.1			9800.0	11487.0	9951.0	10600.0
X1	1.300	79	9952.0	10043.8	510	480	510			
GR	1453.8	9671.7	1450.6	9700.2	1450.0	9725.5	1450.3	9729.3	1450.7	9771.8
GR	1450.9	9805.9	1451.1	9848.9	1450.8	9889.4	1448.0	9897.7	1451.2	9907.8
GR	1451.8	9932.2	1452.1	9952.0	1451.6	9988.7	1447.9	9993.9	1447.8	10000.0
GR	1447.7	10006.3	1451.4	10013.5	1452.0	10043.8	1451.6	10096.0	1451.4	10150.1
GR	1451.1	10216.0	1449.3	10222.7	1450.9	10233.1	1451.5	10251.0	1451.6	10301.7
GR	1451.0	10349.6	1449.4	10354.4	1451.0	10364.1	1451.4	10388.2	1451.7	10450.8
GR	1451.5	10481.6	1451.3	10534.1	1450.8	10560.9	1451.2	10599.4	1451.7	10636.5
GR	1451.4	10680.8	1452.0	10731.4	1452.6	10775.1	1452.6	10804.5	1451.5	10830.1

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GR	1451.9	10847.2	1452.3	10862.8	1451.5	10901.7	1451.8	10925.5	1452.0	10962.2
GR	1452.0	10978.3	1452.6	11012.5	1453.0	11046.8	1453.1	11084.1	1453.0	11127.2
GR	1451.9	11165.5	1450.9	11173.0	1451.8	11178.9	1452.4	11191.7	1451.1	11195.8
GR	1452.3	11202.4	1452.3	11207.9	1450.1	11215.0	1452.6	11224.3	1451.5	11268.3
GR	1452.6	11285.8	1452.5	11307.6	1451.3	11336.4	1451.0	11375.9	1449.5	11395.3
GR	1450.3	11405.7	1449.0	11416.8	1450.6	11429.0	1452.4	11448.8	1453.8	11464.2
GR	1454.5	11487.0	1453.7	11517.4	1452.3	11534.2	1453.8	11551.8	1455.8	11592.1
GR	1456.8	11619.6	1457.6	11641.0	1458.4	11668.0	1458.4	11690.1		

NH	5	0.050	9984.5	0.045	10096.9	0.050	11020.2	0.045	11144.8	0.050
NH	11653.									
ET		7.1		9.1			9761.2		9950.0	10850.0
X1	1.400	87	9984.5	10096.9	530	470	530			
GR	1458.1	9604.5	1458.1	9659.8	1456.5	9702.7	1454.7	9724.0	1455.1	9735.9
GR	1455.4	9761.2	1454.6	9800.7	1453.2	9820.4	1452.8	9854.1	1451.7	9859.4
GR	1453.2	9865.8	1451.7	9875.6	1453.1	9882.0	1453.5	9924.7	1453.8	9949.8
GR	1454.3	9984.5	1450.9	9992.1	1451.0	10000.0	1450.9	10009.4	1453.6	10015.7
GR	1454.0	10024.7	1454.2	10063.9	1454.3	10096.9	1454.1	10147.2	1454.3	10180.8
GR	1454.5	10216.6	1454.7	10279.5	1453.9	10291.1	1453.9	10298.3	1454.5	10305.0
GR	1454.5	10318.8	1453.9	10324.5	1454.3	10347.5	1454.3	10397.1	1453.8	10403.9
GR	1453.9	10416.1	1454.3	10424.0	1454.3	10448.8	1454.4	10527.6	1453.7	10535.1
GR	1454.2	10543.1	1454.7	10578.6	1454.8	10598.3	1454.8	10643.9	1454.2	10650.0
GR	1454.8	10667.8	1455.4	10698.8	1455.6	10722.2	1455.8	10750.5	1455.4	10791.4
GR	1454.7	10825.1	1455.2	10860.1	1455.8	10890.2	1455.9	10947.5	1455.8	10982.9
GR	1455.3	10997.0	1455.4	11020.2	1455.2	11065.5	1452.9	11083.0	1452.8	11089.1
GR	1454.8	11102.8	1455.1	11118.6	1454.9	11144.8	1454.1	11162.9	1454.4	11169.9
GR	1454.7	11198.9	1454.6	11240.6	1454.2	11280.1	1453.7	11325.5	1451.3	11333.0
GR	1453.8	11338.4	1453.9	11362.8	1453.2	11368.8	1453.6	11379.0	1453.8	11400.2
GR	1453.4	11421.5	1450.9	11430.0	1453.5	11436.1	1452.9	11446.4	1452.9	11464.0
GR	1454.5	11478.0	1455.1	11492.5	1456.3	11518.5	1458.1	11548.1	1459.8	11575.2
GR	1460.7	11600.8	1460.9	11653.9						

NH	5	0.050	9810.0	0.040	10037.3	0.050	10393.0	0.045	10533.4	0.050
NH	11233.									
ET		7.1		9.1			9400.0		9650.0	10700.0
X1	1.553	70	9973.3	10037.3	800	490	810			
GR	1462.0	8680.0	1460.0	8850.0	1458.0	8920.0	1456.5	9055.0	1457.0	9085.0
GR	1456.5	9110.0	1458.0	9250.0	1456.6	9490.0	1456.6	9530.0	1458.0	9810.0
GR	1458.3	9911.0	1458.7	9973.3	1456.2	9990.7	1456.3	10000.0	1456.7	10016.8
GR	1459.4	10037.3	1459.1	10082.7	1458.9	10149.7	1458.4	10159.2	1458.8	10172.3
GR	1458.7	10212.0	1458.2	10246.5	1458.4	10262.9	1458.1	10288.0	1458.4	10299.8
GR	1458.1	10354.2	1457.1	10358.5	1458.0	10366.2	1458.0	10393.0	1457.8	10434.7
GR	1454.8	10444.2	1454.4	10452.7	1457.8	10459.9	1456.8	10480.5	1458.6	10498.8
GR	1459.1	10514.5	1459.2	10533.4	1458.9	10585.0	1458.5	10620.0	1457.9	10686.0
GR	1457.2	10734.6	1457.0	10763.3	1456.6	10785.5	1454.6	10790.9	1457.0	10800.2
GR	1457.0	10834.6	1456.3	10840.3	1456.7	10845.4	1456.7	10873.3	1456.5	10895.6
GR	1455.7	10906.5	1456.6	10911.8	1456.8	10925.8	1455.4	10934.7	1454.7	10943.5
GR	1457.4	10951.4	1458.0	10961.9	1458.4	10980.6	1457.2	11012.2	1457.3	11027.4
GR	1456.5	11030.5	1457.3	11039.5	1457.9	11088.0	1458.4	11116.5	1459.1	11141.4
GR	1458.4	11147.2	1460.4	11163.6	1460.5	11194.1	1459.8	11208.0	1461.0	11233.1

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NH	4	0.055	9978.0	0.040	10075.8	0.045	10307.3	0.050	11235.0	
QT	3	5200	5200	5200						
ET		7.1		9.1			9550.0	10910.0	9900.0	10580.0
X1	1.664	50	9978.0	10075.8	600	500	585			
GR	1462.2	8800.0	1460.0	9250.0	1459.5	9370.0	1459.5	9530.0	1460.0	9630.0
GR	1460.8	9838.9	1461.4	9874.7	1461.9	9942.0	1462.1	9978.0	1459.2	9991.3
GR	1459.1	10000.0	1459.3	10011.6	1461.7	10019.8	1461.9	10075.8	1461.1	10129.1
GR	1460.7	10158.3	1458.4	10163.8	1458.4	10168.9	1460.4	10175.4	1461.1	10202.6
GR	1461.0	10240.2	1460.8	10263.8	1460.2	10269.9	1461.4	10285.9	1462.0	10307.3
GR	1461.6	10340.2	1461.2	10385.2	1461.7	10419.5	1461.3	10444.3	1460.3	10475.0
GR	1460.1	10527.4	1460.3	10557.2	1457.7	10564.7	1460.2	10574.4	1460.1	10595.3
GR	1459.9	10633.9	1458.9	10645.1	1459.5	10651.1	1459.6	10688.5	1461.0	10701.5

GR	1461.5	10720.9	1461.8	10743.8	1461.5	10795.3	1461.7	10835.6	1462.2	10868.1
GR	1462.6	10891.8	1462.8	10912.0	1459.0	10990.0	1462.0	11120.0	1466.0	11235.0
NC	0.055	0.050	0.040	0.1	0.3					
ET		7.1		9.1			9782.3		9850.0	10400.0
X1	1.759	63	9932.9	10074.9	500	510	500			
GR	1466.0	8850.0	1465.0	8950.0	1466.5	9050.0	1465.0	9175.0	1465.0	9270.0
GR	1466.0	9320.0	1466.6	9400.0	1465.5	9480.0	1465.5	9570.0	1466.0	9660.0
GR	1466.0	9763.2	1466.4	9782.3	1466.3	9803.9	1465.5	9836.3	1464.8	9868.2
GR	1464.0	9889.6	1464.7	9932.9	1463.8	9945.4	1464.4	9952.5	1464.3	9988.0
GR	1461.8	9995.2	1461.6	10000.0	1462.7	10010.3	1464.8	10018.5	1462.3	10047.0
GR	1464.8	10057.5	1465.1	10074.9	1464.3	10088.0	1464.7	10095.1	1464.7	10144.2
GR	1462.3	10151.5	1464.6	10158.9	1464.9	10171.9	1464.5	10182.1	1465.1	10214.6
GR	1465.1	10248.4	1464.7	10307.2	1464.3	10358.2	1464.2	10390.5	1463.5	10396.4
GR	1464.1	10402.3	1462.8	10413.3	1463.9	10420.7	1463.8	10430.7	1461.3	10441.3
GR	1463.9	10450.1	1463.5	10470.6	1463.7	10490.7	1463.3	10509.6	1463.6	10524.3
GR	1463.5	10537.0	1464.0	10550.3	1464.2	10581.3	1464.3	10608.3	1464.2	10649.8
GR	1464.4	10668.2	1465.1	10702.1	1466.5	10727.1	1466.9	10740.4	1467.6	10757.4
GR	1468.2	10782.8	1468.2	10818.8	1467.3	10856.9				

NH	4	0.055	9733.4	0.045	9954.3	0.040	10031.2	0.055	10558.7	
ET		7.1		9.1			9170.0		9590.0	10090.0
X1	1.863	66	9954.3	10031.2	520	520	550			
GR	1470.0	8770.0	1468.0	8850.0	1467.5	8910.0	1467.8	8990.0	1468.0	9080.0
GR	1470.2	9165.0	1468.0	9250.0	1467.0	9280.0	1467.4	9310.0	1467.2	9335.0
GR	1468.0	9390.0	1469.1	9475.3	1468.5	9515.0	1467.8	9562.6	1467.6	9590.8
GR	1466.9	9596.9	1467.3	9604.7	1467.3	9628.1	1467.0	9634.6	1467.5	9643.3
GR	1467.8	9674.7	1468.1	9702.1	1468.2	9733.4	1468.1	9763.5	1466.7	9778.3
GR	1466.8	9792.1	1467.8	9803.6	1467.1	9815.6	1468.1	9827.3	1468.1	9860.3
GR	1467.9	9869.2	1468.5	9882.1	1468.8	9904.9	1468.7	9954.3	1466.8	9962.3
GR	1467.7	9970.6	1466.2	9979.1	1465.7	10000.0	1466.1	10006.3	1468.1	10017.2
GR	1468.3	10031.2	1468.2	10047.8	1467.5	10055.7	1467.9	10071.1	1468.0	10092.1
GR	1467.7	10114.8	1467.2	10158.4	1466.7	10169.7	1466.5	10195.6	1466.3	10200.5
GR	1466.7	10206.1	1466.4	10226.8	1466.7	10235.8	1467.2	10260.7	1468.4	10288.1
GR	1469.5	10307.2	1470.2	10321.5	1470.4	10337.7	1470.3	10360.6	1470.2	10384.3
GR	1469.8	10394.3	1470.2	10416.1	1470.8	10459.7	1470.9	10498.5	1471.0	10531.9
GR	1471.1	10558.7								

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NC	0.055	0.055	0.040	0.1	0.3					
ET				9.1					9690.0	10210.0
X1	1.964	51	9983.1	10021.1	485	505	535			
GR	1473.8	9439.3	1473.7	9475.3	1473.0	9502.9	1469.9	9545.8	1468.8	9560.3
GR	1468.7	9572.7	1469.3	9576.2	1469.1	9611.3	1469.7	9639.5	1470.3	9676.6
GR	1470.9	9707.2	1471.3	9735.0	1471.3	9759.1	1471.1	9778.1	1470.2	9796.9
GR	1469.7	9816.7	1469.4	9828.5	1469.8	9836.7	1469.8	9850.1	1470.1	9889.6
GR	1469.5	9896.8	1470.2	9906.0	1470.3	9948.7	1470.3	9983.1	1467.7	9991.3
GR	1467.7	10000.0	1467.7	10012.4	1470.9	10021.1	1470.3	10053.6	1469.4	10082.7
GR	1469.3	10095.8	1469.5	10108.4	1469.1	10122.7	1468.4	10126.5	1469.1	10131.0
GR	1470.0	10155.3	1470.2	10175.3	1470.9	10201.4	1471.3	10223.5	1471.6	10235.1
GR	1471.2	10260.9	1470.4	10299.3	1470.2	10317.8	1469.7	10343.7	1469.4	10396.3
GR	1468.8	10406.0	1469.4	10412.3	1470.3	10445.0	1471.6	10476.1	1472.2	10492.0
GR	1472.3	10520.9								

ET		7.1		9.1				10260.0	9700.0	10100.0
X1	2.059	48	9980.7	10021.5	490	520	500			
GR	1476.8	9261.3	1476.5	9298.7	1475.4	9340.0	1474.2	9376.8	1473.9	9410.1
GR	1473.9	9437.8	1473.6	9458.9	1472.8	9483.3	1472.2	9503.3	1471.6	9509.6
GR	1471.9	9514.0	1472.4	9539.2	1472.6	9572.9	1473.0	9604.8	1473.3	9632.2
GR	1473.5	9665.7	1473.8	9696.4	1473.7	9713.8	1472.9	9742.7	1472.6	9776.6
GR	1471.9	9831.1	1471.3	9849.1	1471.7	9854.5	1471.9	9867.8	1471.5	9879.1
GR	1472.1	9892.8	1471.3	9908.4	1472.1	9917.7	1472.5	9938.3	1472.9	9980.7
GR	1470.9	9991.2	1470.8	10000.0	1470.6	10011.2	1473.0	10021.5	1472.7	10056.2
GR	1472.4	10108.6	1472.1	10126.9	1472.3	10136.1	1472.2	10169.9	1473.4	10192.3
GR	1474.6	10218.2	1475.2	10231.9	1475.4	10243.5	1475.0	10263.4	1474.0	10300.0
GR	1472.3	10385.0	1474.0	10490.0	1476.0	10550.0				

ET		7.1		9.1				10459.3	9820.0	10150.0
X1	2.163	60	9972.2	10047.8	500	540	550			
GR	1478.5	9324.4	1478.7	9362.8	1478.3	9407.3	1477.5	9431.5	1477.9	9450.7
GR	1478.0	9474.5	1476.8	9506.9	1476.2	9538.0	1475.7	9559.2	1476.0	9568.1
GR	1476.1	9587.8	1475.1	9601.9	1475.5	9605.8	1475.5	9616.6	1476.6	9642.9
GR	1477.4	9664.0	1477.9	9685.4	1478.1	9707.4	1477.7	9731.2	1476.6	9770.0
GR	1475.5	9794.5	1475.1	9814.8	1474.1	9846.7	1474.1	9856.6	1473.7	9865.6
GR	1474.2	9876.5	1473.8	9886.7	1474.4	9894.7	1475.4	9920.7	1475.7	9945.6
GR	1475.7	9972.2	1473.5	9986.0	1473.3	10000.0	1473.3	10004.6	1473.8	10010.8
GR	1474.7	10022.9	1475.3	10047.8	1475.7	10087.3	1475.5	10099.3	1476.0	10114.0
GR	1476.1	10139.2	1475.5	10168.1	1474.4	10217.4	1474.2	10236.9	1474.4	10273.0
GR	1474.2	10296.0	1474.6	10315.7	1475.6	10343.6	1478.2	10364.7	1479.5	10380.6
GR	1480.2	10406.9	1480.8	10430.2	1480.9	10459.3	1480.0	10505.0	1478.0	10530.0
GR	1476.5	10600.0	1476.8	10680.0	1478.2	10775.0	1477.8	10820.0	1480.0	10930.0

ET		7.1		9.1				10360.0	9800.0	10140.0
X1	2.259	50	9980.3	10020.1	495	495	505			
GR	1481.7	9487.0	1481.9	9521.0	1481.2	9561.5	1480.0	9612.1	1479.1	9659.1
GR	1478.9	9685.2	1479.3	9717.0	1479.7	9734.6	1479.9	9748.2	1479.4	9776.3
GR	1478.4	9804.7	1477.0	9827.4	1476.9	9840.2	1476.3	9846.4	1477.1	9864.6
GR	1476.3	9872.1	1476.9	9880.0	1477.4	9912.2	1477.7	9946.1	1478.2	9980.3
GR	1475.9	9991.0	1475.9	10000.0	1475.8	10011.0	1477.8	10020.1	1477.8	10057.1
GR	1477.2	10088.1	1477.5	10109.6	1478.5	10127.1	1479.1	10145.5	1479.1	10165.5
GR	1478.8	10185.3	1478.1	10205.8	1477.1	10230.4	1475.7	10238.9	1476.8	10244.4
GR	1476.8	10282.5	1477.0	10301.3	1477.5	10332.6	1478.3	10358.1	1478.3	10381.0

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GR	1478.0	10412.3	1477.1	10457.7	1477.6	10468.7	1478.2	10499.0	1478.4	10527.5
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GR	1479.0	10549.7	1479.3	10577.3	1479.0	10599.2	1478.6	10613.7	1481.0	10965.0
ET		7.1		9.1				10440.0	9850.0	10130.0
X1	2.357	42	9985.2	10055.2	505	505	515			
GR	1485.9	9634.5	1485.8	9671.4	1484.9	9693.2	1484.7	9714.3	1484.0	9753.2
GR	1481.2	9782.8	1480.3	9808.8	1479.7	9837.3	1479.7	9865.0	1479.6	9899.7
GR	1480.0	9928.8	1479.0	9937.1	1479.8	9940.8	1479.4	9947.3	1480.2	9955.5
GR	1480.7	9985.2	1478.4	9990.6	1478.4	10000.0	1478.3	10009.6	1480.1	10016.6
GR	1480.4	10055.2	1480.1	10085.8	1479.4	10093.0	1479.5	10103.1	1480.8	10120.0
GR	1481.6	10135.5	1481.8	10149.2	1481.3	10170.8	1480.8	10196.0	1480.2	10230.8
GR	1479.8	10267.2	1478.3	10275.9	1479.4	10281.5	1479.7	10322.4	1480.3	10346.1
GR	1481.3	10378.6	1482.3	10394.6	1483.2	10410.7	1483.6	10425.8	1483.4	10444.6
GR	1482.2	10490.0	1484.8	10680.0						
ET				9.1					9830.0	10130.0
X1	2.455	43	9979.9	10022.6	525	515	515			
GR	1488.5	9532.1	1488.6	9565.9	1488.1	9603.6	1487.8	9640.1	1487.5	9660.7
GR	1485.9	9701.3	1483.6	9747.1	1483.0	9771.0	1482.7	9810.8	1482.4	9831.0
GR	1482.6	9848.9	1482.8	9878.4	1482.2	9889.8	1482.6	9897.5	1481.5	9916.4
GR	1482.6	9924.1	1481.7	9933.3	1482.8	9940.7	1483.1	9979.9	1481.0	9993.0
GR	1481.1	10000.0	1481.0	10011.2	1483.5	10022.6	1483.1	10052.2	1482.7	10084.5
GR	1481.9	10108.2	1486.6	10130.2	1487.7	10144.2	1488.0	10157.4	1487.5	10181.8
GR	1485.2	10207.2	1483.3	10225.9	1482.6	10246.0	1482.7	10263.9	1482.3	10270.8
GR	1482.8	10278.3	1482.9	10298.1	1483.7	10314.0	1484.7	10335.8	1485.6	10375.0
GR	1486.2	10400.3	1486.8	10436.1	1486.9	10468.5				
ET		7.1		9.1				10160.0	9850.0	10090.0
X1	2.554	58	9965.6	10023.3	515	515	525			
GR	1490.2	9617.7	1490.5	9660.2	1490.0	9695.0	1488.8	9724.3	1485.8	9749.3
GR	1484.8	9765.3	1484.7	9796.0	1484.1	9812.8	1484.4	9820.3	1484.7	9848.4
GR	1482.6	9857.3	1484.8	9867.3	1485.0	9878.5	1483.9	9891.5	1484.8	9901.4
GR	1485.1	9930.9	1485.5	9965.6	1483.5	9975.7	1483.9	9985.2	1482.9	9990.1
GR	1483.2	10000.0	1483.4	10012.8	1485.7	10023.3	1485.4	10057.1	1485.3	10068.8
GR	1484.0	10078.0	1484.6	10087.3	1484.7	10097.7	1487.4	10133.4	1488.1	10148.9
GR	1488.7	10162.1	1488.7	10183.3	1488.3	10206.2	1486.5	10238.8	1485.2	10271.8
GR	1485.7	10286.8	1487.0	10308.5	1487.5	10325.5	1487.1	10354.5	1486.7	10375.2
GR	1486.5	10402.4	1486.2	10425.6	1486.2	10455.1	1485.5	10461.8	1485.9	10466.5
GR	1486.1	10489.0	1486.3	10516.0	1484.5	10523.8	1486.2	10529.1	1486.4	10566.0
GR	1486.7	10597.0	1487.1	10647.4	1487.7	10684.5	1488.2	10708.4	1488.8	10733.0
GR	1489.1	10757.4	1489.2	10774.2	1489.3	10861.6				
ET		7.1		9.1			9850.0	10350.0	9900.0	10130.0
X1	2.649	56	9983.3	10040.1	500	510	500			
GR	1494.0	9622.0	1493.0	9655.0	1492.0	9700.0	1490.0	9740.0	1488.0	9770.0
GR	1487.8	9775.0	1487.8	9780.0	1488.0	9785.0	1490.0	9800.0	1492.0	9825.0
GR	1492.7	9848.7	1492.8	9868.2	1484.1	9904.1	1484.1	9908.4	1486.6	9914.8
GR	1487.4	9924.8	1486.5	9934.9	1487.3	9943.7	1488.0	9983.3	1485.4	9993.0
GR	1485.4	10000.0	1485.4	10015.7	1487.6	10026.9	1487.8	10040.1	1487.4	10079.1
GR	1486.8	10088.6	1487.2	10097.7	1487.1	10126.6	1487.2	10152.9	1487.3	10181.3
GR	1488.5	10198.1	1489.1	10226.5	1488.9	10242.5	1489.0	10261.5	1489.6	10277.1
GR	1489.9	10293.5	1490.5	10312.4	1490.9	10332.5	1490.9	10366.1	1490.8	10416.2
GR	1490.6	10459.3	1490.0	10505.3	1489.7	10549.4	1490.0	10571.0	1490.5	10589.8
GR	1490.7	10612.3	1490.3	10635.5	1489.6	10660.3	1489.6	10686.7	1489.7	10729.8
1	25SEP93	22:18:19								
GR	1489.6	10775.0	1490.3	10797.5	1491.1	10828.9	1492.3	10857.9	1493.6	10889.2
GR	1494.6	10943.9								
ET				9.1					9900.0	10220.0
X1	2.747	34	9976.7	10049.0	535	485	515			
GR	1496.6	9779.6	1496.7	9821.7	1496.2	9835.6	1491.7	9862.9	1489.2	9887.1
GR	1489.4	9906.8	1488.8	9916.9	1489.8	9923.8	1490.0	9952.1	1490.4	9976.7
GR	1487.4	9988.7	1487.9	10000.0	1488.1	10017.3	1490.8	10030.4	1491.2	10049.0
GR	1490.8	10106.8	1490.4	10144.8	1490.0	10168.0	1489.4	10171.0	1489.8	10175.2
GR	1489.8	10203.4	1490.4	10234.7	1491.0	10263.7	1491.7	10286.8	1492.2	10309.1
GR	1492.1	10321.5	1491.6	10341.4	1490.9	10350.2	1491.5	10358.9	1492.1	10395.4
GR	1493.2	10424.3	1494.2	10459.3	1494.6	10478.5	1494.3	10505.6		
ET		7.1		9.1				10194.4	9890.0	10185.0
X1	2.846	38	9980.6	10053.3	545	485	525			
GR	1500.7	9628.0	1499.3	9676.8	1494.8	9715.5	1492.3	9740.5	1491.9	9750.8
GR	1492.1	9762.4	1490.0	9771.5	1489.9	9784.7	1492.8	9796.3	1492.7	9816.4
GR	1492.3	9851.5	1492.1	9872.0	1492.4	9899.5	1492.7	9913.3	1493.2	9927.9
GR	1493.0	9933.7	1492.7	9937.5	1493.5	9980.6	1490.0	9993.2	1490.3	10000.0
GR	1490.6	10014.2	1491.4	10021.6	1493.6	10045.8	1494.0	10053.3	1493.3	10066.6
GR	1493.9	10076.8	1493.1	10090.8	1493.5	10100.0	1493.2	10126.0	1493.6	10158.7
GR	1494.5	10177.9	1494.9	10194.4	1494.5	10217.0	1495.2	10240.6	1496.7	10264.6
GR	1497.3	10287.5	1497.8	10322.0	1498.1	10347.1				
QT	3	5300	5300	5300						
ET		7.1		9.1			9630.0	10230.0	9820.0	10125.0
X1	2.938	56	9961.2	10064.6	505	465	485			
GR	1500.0	9180.0	1497.0	9245.0	1493.8	9280.0	1497.0	9310.0	1502.7	9420.0
GR	1500.0	9450.0	1496.0	9462.0	1494.0	9488.0	1494.0	9496.0	1494.7	9520.0
GR	1494.0	9543.0	1493.5	9555.0	1494.0	9561.0	1496.0	9575.0	1498.0	9600.0
GR	1498.2	9631.4	1497.4	9651.3	1494.9	9675.1	1494.7	9689.9	1493.9	9694.5
GR	1494.8	9700.3	1495.5	9720.9	1495.8	9746.2	1495.7	9771.2	1496.3	9786.4
GR	1496.6	9798.3	1497.3	9808.1	1498.2	9822.4	1498.2	9833.9	1497.4	9852.0
GR	1495.5	9877.3	1495.0	9888.9	1495.4	9896.7	1496.3	9920.0	1496.7	9943.0
GR	1496.7	9961.2	1496.5	9978.1	1492.9	9992.7	1492.9	10000.0	1493.1	10012.1
GR	1494.3	10032.9	1495.9	10047.2	1496.3	10064.6	1496.3	10109.7	1497.4	10125.0
GR	1498.0	10141.7	1498.3	10160.7	1498.4	10182.2	1499.0	10200.5	1499.4	10214.2
GR	1499.6	10228.7	1498.0	10255.0	1498.2	10280.0	1498.0	10310.0	1500.0	10370.0
GR	1500.5	10410.0								
ET		7.1		9.1			9510.0	10138.8	9800.0	10060.0
X1	3.046	41	9975.0	10054.0	530	560	570			
GR	1502.2	9010.0	1499.0	9130.0	1499.3	9160.0	1495.5	9280.0	1504.0	9350.0

GR	1503.0	9505.0	1502.0	9540.0	1500.0	9570.0	1498.5	9590.0	1500.0	9610.0
GR	1500.8	9645.0	1500.0	9680.0	1499.5	9700.0	1500.0	9730.0	1501.8	9785.0
GR	1501.9	9805.5	1502.3	9823.7	1500.2	9854.6	1499.6	9866.6	1499.5	9889.7
GR	1499.1	9911.0	1499.6	9923.3	1499.9	9937.0	1499.8	9975.0	1496.2	9989.7
GR	1495.9	10000.0	1496.2	10012.6	1497.2	10021.7	1498.5	10030.3	1498.8	10054.0
GR	1498.1	10070.2	1498.5	10091.1	1497.7	10108.9	1501.6	10125.8	1502.3	10138.8
GR	1502.0	10147.7	1500.7	10166.8	1502.0	10180.8	1502.4	10197.0	1502.6	10214.7
GR	1502.9	10242.3								

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NH	5	0.055	9967.1	0.040	10041.3	0.050	10098.3	0.045	10149.2	0.055
NH	10428.									
ET		7.1		9.1			9730.0		9870.0	10160.0
X1	3.143	45	9967.1	10041.3	500	500	510			
GR	1507.2	9400.0	1504.0	9520.0	1506.0	9565.0	1505.0	9635.0	1506.0	9680.0
GR	1506.2	9733.8	1506.1	9764.0	1505.3	9788.9	1502.7	9818.6	1503.1	9835.4
GR	1503.4	9858.1	1502.4	9887.2	1501.9	9911.4	1501.2	9914.7	1502.5	9925.5
GR	1502.0	9940.7	1502.9	9952.7	1502.9	9967.1	1502.0	9982.7	1499.3	9988.9
GR	1499.3	10000.0	1499.4	10015.0	1500.1	10028.0	1500.9	10041.3	1500.5	10066.0
GR	1501.3	10075.2	1501.5	10098.3	1499.3	10119.0	1501.7	10128.6	1502.0	10149.2
GR	1501.3	10155.4	1501.8	10161.8	1502.0	10187.4	1501.9	10204.0	1503.4	10223.5
GR	1503.7	10236.1	1502.8	10259.1	1503.1	10274.1	1504.0	10296.9	1505.5	10309.4
GR	1506.6	10325.1	1507.3	10349.8	1507.8	10371.8	1508.5	10398.9	1508.4	10428.6

NC	0.055	0.055	0.045	0.1	0.3					
ET		7.1		9.1				10297.0	9950.0	10140.0
X1	3.232	47	9966.1	10105.7	470	480	470			
GR	1511.8	9530.4	1511.6	9568.0	1510.8	9599.1	1509.6	9634.0	1509.1	9657.9
GR	1508.8	9690.5	1508.8	9710.5	1509.1	9731.8	1509.5	9769.7	1509.6	9802.8
GR	1509.6	9834.3	1509.4	9858.0	1507.0	9890.5	1505.7	9917.3	1504.7	9940.5
GR	1503.8	9958.3	1504.8	9966.1	1504.7	9977.6	1501.5	9992.6	1501.6	10000.0
GR	1501.9	10008.6	1504.0	10020.0	1504.7	10035.5	1504.4	10058.1	1503.7	10080.3
GR	1502.3	10088.2	1502.3	10097.9	1506.5	10105.7	1506.5	10124.0	1506.2	10138.4
GR	1506.5	10152.0	1506.3	10176.3	1505.8	10209.7	1505.3	10229.2	1502.9	10239.1
GR	1505.6	10249.5	1505.6	10275.0	1506.8	10297.0	1506.3	10325.9	1506.2	10348.1
GR	1507.8	10370.3	1508.6	10395.3	1509.1	10424.7	1509.5	10443.7	1511.0	10466.0
GR	1511.3	10483.0	1511.4	10514.5						

NC	0.055	0.055	0.040	0.1	0.3					
ET		7.1		9.1			9690.0		9840.0	10080.0
X1	3.336	49	9923.8	10019.9	510	540	550			
GR	1514.7	9368.9	1514.3	9417.3	1513.5	9480.0	1512.5	9526.1	1510.8	9595.4
GR	1510.2	9611.4	1509.6	9623.3	1510.3	9637.0	1510.1	9665.7	1508.9	9690.2
GR	1508.3	9710.2	1507.9	9727.3	1508.5	9740.7	1507.9	9755.7	1509.0	9777.4
GR	1509.2	9787.5	1509.0	9809.2	1509.1	9827.4	1507.7	9844.7	1508.8	9856.4
GR	1508.8	9881.2	1508.5	9886.6	1508.8	9899.2	1509.2	9923.8	1507.3	9943.0
GR	1508.2	9957.1	1508.2	9965.4	1505.7	9974.1	1505.6	9984.1	1504.7	9987.5
GR	1504.5	10000.0	1504.3	10010.3	1509.6	10019.9	1510.6	10042.6	1511.1	10067.8
GR	1511.4	10089.6	1511.1	10118.9	1510.6	10132.8	1510.8	10173.7	1510.9	10195.2
GR	1511.8	10211.0	1512.6	10238.0	1512.6	10263.6	1512.0	10301.4	1512.7	10322.3
GR	1513.6	10345.1	1514.4	10366.4	1514.5	10395.1	1514.7	10406.8		

ET		7.1		9.1			9870.8		9960.0	10135.0
X1	3.431	33	9975.8	10045.5	490	490	500			
GR	1518.1	9663.2	1517.9	9705.8	1517.3	9753.0	1515.7	9788.8	1514.8	9809.2
GR	1514.5	9826.5	1513.5	9844.4	1514.2	9854.7	1514.8	9870.8	1514.7	9884.3
GR	1514.1	9909.3	1512.0	9938.9	1510.9	9956.5	1511.6	9966.5	1511.8	9975.8
GR	1508.0	9982.8	1508.1	10000.0	1508.4	10019.7	1510.8	10032.1	1512.3	10045.5
GR	1512.4	10064.3	1512.0	10087.4	1511.5	10103.5	1511.8	10110.8	1511.3	10145.7
GR	1511.2	10172.0	1510.2	10178.8	1510.8	10185.6	1511.8	10198.4	1512.4	10212.8
GR	1514.1	10231.1	1515.7	10251.3	1515.9	10283.3				

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ET		7.1		9.1			9851.2	10193.1	9910.0	10140.0
X1	3.529	49	9982.5	10112.3	545	485	515			
GR	1521.4	9609.8	1521.4	9648.3	1521.0	9683.3	1520.6	9715.5	1519.2	9740.8
GR	1517.7	9765.0	1514.8	9789.3	1516.2	9804.8	1518.1	9824.4	1518.6	9836.9
GR	1518.8	9851.2	1516.6	9869.8	1513.3	9894.8	1513.2	9926.9	1513.9	9947.9
GR	1514.6	9963.8	1514.8	9982.5	1510.6	9998.0	1510.7	10000.0	1510.6	10005.8
GR	1512.4	10022.8	1512.6	10031.6	1511.8	10041.2	1511.8	10056.0	1513.8	10072.7
GR	1514.3	10089.3	1515.1	10112.3	1515.3	10132.1	1515.5	10160.0	1515.6	10193.1
GR	1515.4	10221.2	1515.2	10239.5	1515.5	10255.3	1515.5	10281.4	1515.7	10305.4
GR	1515.4	10329.3	1513.5	10341.6	1514.9	10347.8	1515.6	10370.3	1516.8	10386.4
GR	1518.1	10400.5	1518.5	10416.1	1518.6	10430.0	1518.2	10441.6	1516.9	10461.3
GR	1517.7	10473.6	1518.9	10503.3	1519.3	10513.5	1519.8	10550.9		

ET				9.1					9860.0	10040.0
X1	3.624	35	9936.6	10022.6	515	515	515			
GR	1523.9	9560.6	1523.7	9597.0	1523.6	9627.2	1522.8	9661.9	1521.3	9685.3
GR	1517.9	9721.0	1515.3	9737.6	1516.2	9744.6	1516.6	9753.7	1516.3	9762.1
GR	1514.1	9770.5	1515.9	9778.7	1516.6	9797.9	1517.4	9826.2	1517.4	9839.0
GR	1516.6	9848.6	1516.0	9873.4	1517.6	9895.0	1517.5	9904.2	1515.9	9922.9
GR	1516.1	9936.6	1515.6	9960.4	1515.0	9983.5	1513.7	9989.7	1513.9	10000.0
GR	1513.7	10013.9	1516.4	10022.6	1517.7	10039.4	1518.8	10060.6	1519.3	10089.3
GR	1520.3	10111.8	1520.9	10130.4	1521.1	10141.2	1521.0	10153.4	1520.3	10178.2

ET		7.1		9.1			9720.0		9850.0	10090.0
X1	3.718	38	9955.8	10076.8	485	495	495			
GR	1524.0	9550.0	1522.0	9570.0	1520.5	9620.0	1520.5	9625.0	1522.0	9695.0
GR	1522.4	9716.7	1522.7	9745.2	1521.5	9766.9	1518.3	9788.6	1519.8	9798.5
GR	1518.1	9808.2	1519.0	9813.3	1520.2	9847.5	1520.6	9862.3	1520.5	9901.8
GR	1520.6	9926.7	1519.8	9945.4	1520.8	9955.8	1520.2	9973.7	1516.5	9991.8
GR	1516.5	10000.0	1516.6	10011.4	1518.1	10019.5	1519.3	10039.5	1519.4	10049.6
GR	1518.6	10068.6	1520.2	10076.8	1520.6	10102.3	1523.2	10124.7	1524.7	10142.4

GR	1525.4	10160.9	1525.7	10175.4	1524.6	10195.4	1524.0	10210.8	1524.8	10235.1
GR	1525.6	10265.2	1526.1	10295.0	1526.5	10334.5				
ET		7.1		9.1			9770.0		9892.0	10051.0
X1	3.817	30	9893.0	10050.9	515	525	525			
GR	1528.0	9575.0	1526.0	9600.0	1524.0	9630.0	1523.0	9670.0	1524.0	9720.0
GR	1524.8	9769.4	1524.1	9832.0	1522.7	9858.3	1523.0	9875.5	1523.2	9893.0
GR	1521.5	9901.9	1521.7	9923.2	1520.9	9929.6	1520.8	9952.2	1520.8	9964.9
GR	1520.3	9979.4	1519.5	9985.8	1519.1	10000.0	1518.9	10008.9	1523.3	10023.7
GR	1521.4	10039.1	1523.4	10050.9	1523.0	10080.8	1522.9	10102.2	1522.9	10138.2
GR	1526.3	10164.8	1527.6	10184.1	1528.6	10202.3	1528.9	10221.1	1528.8	10249.6
ET				9.1					9870.0	10070.0
X1	3.909	31	9957.8	10045.5	485	485	485			
GR	1530.2	9661.4	1530.0	9693.7	1528.6	9715.9	1526.1	9749.5	1524.0	9788.3
GR	1524.3	9802.7	1521.5	9812.6	1523.9	9820.9	1523.1	9831.2	1525.4	9844.8
GR	1524.5	9859.3	1524.8	9876.6	1524.3	9897.1	1524.8	9914.4	1524.9	9930.2
GR	1525.2	9957.8	1524.6	9980.9	1521.7	9988.1	1521.7	10000.0	1521.3	10008.1
GR	1521.7	10020.5	1525.2	10030.5	1526.2	10045.5	1526.1	10070.6	1526.2	10094.1
GR	1526.1	10120.9	1526.3	10151.2	1526.3	10178.6	1528.6	10208.2	1529.5	10230.8
GR	1528.7	10253.2								

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NC	0.050	0.055	0.040	0.1	0.3					
ET		7.1		9.1			9527.7		9670.0	10040.0
X1	4.004	34	9864.6	10024.8	510	490	500			
GR	1530.5	9451.8	1529.2	9477.0	1529.2	9501.3	1528.9	9527.7	1528.5	9556.6
GR	1526.9	9571.0	1526.6	9587.9	1524.8	9596.8	1528.1	9605.6	1527.5	9622.2
GR	1531.3	9650.2	1532.9	9665.1	1533.5	9675.0	1533.4	9688.3	1526.9	9716.2
GR	1527.2	9736.8	1528.5	9762.2	1529.8	9801.2	1527.1	9816.5	1526.5	9829.4
GR	1527.4	9843.8	1528.0	9864.6	1527.1	9891.1	1527.6	9906.3	1527.5	9829.1
GR	1526.2	9959.0	1525.4	9982.5	1525.1	10000.0	1524.6	10014.5	1528.9	10024.8
GR	1528.9	10029.8	1530.1	10041.5	1530.8	10062.8	1530.4	10089.1		

NC	0.055	0.050	0.040	0.1	0.3					
ET				9.1					9925.0	10120.0
X1	4.104	32	9972.9	10053.8	490	430	530			
GR	1538.4	9787.4	1537.9	9809.4	1534.2	9859.3	1530.5	9898.0	1531.3	9911.5
GR	1531.9	9923.5	1530.7	9941.7	1529.6	9956.3	1529.9	9972.9	1527.9	9981.0
GR	1527.5	10000.0	1528.5	10012.1	1529.1	10023.6	1529.0	10034.6	1529.6	10038.3
GR	1530.0	10053.8	1529.6	10073.5	1529.1	10097.8	1527.8	10110.4	1529.4	10126.4
GR	1529.7	10138.6	1529.1	10158.2	1528.5	10164.5	1528.2	10173.1	1529.8	10183.0
GR	1530.5	10198.5	1531.1	10215.0	1531.3	10237.2	1532.7	10262.4	1533.4	10279.9
GR	1533.8	10301.6	1533.9	10330.8						

ET				9.1					9870.0	10110.0
X1	4.200	41	9931.3	10039.7	515	435	505			
GR	1540.1	9597.4	1538.4	9618.6	1534.8	9645.8	1534.2	9654.7	1533.9	9677.5
GR	1534.4	9708.4	1534.2	9722.7	1533.6	9728.8	1533.5	9746.7	1533.9	9762.2
GR	1533.8	9778.3	1532.8	9799.0	1532.4	9815.7	1532.5	9837.5	1531.8	9863.0
GR	1531.9	9901.5	1530.5	9911.4	1531.7	9931.3	1531.4	9947.0	1531.1	9966.5
GR	1530.6	9990.7	1529.9	10000.0	1529.7	10014.9	1533.1	10020.3	1534.4	10039.7
GR	1534.2	10056.7	1533.1	10077.5	1532.2	10083.2	1533.4	10088.8	1534.0	10106.5
GR	1533.5	10123.3	1533.8	10150.6	1535.6	10183.9	1536.9	10215.4	1537.0	10235.7
GR	1536.6	10269.7	1536.7	10298.5	1536.8	10335.6	1537.1	10363.2	1537.6	10405.6
GR	1537.4	10427.7								

QT	3	5400	5400	5400						
ET				9.1					9934.0	10130.0
X1	4.294	39	9935.0	10061.5	505	515	495			
GR	1541.1	9874.0	1541.2	9895.5	1539.5	9914.0	1536.6	9935.0	1535.6	9963.6
GR	1535.1	9984.5	1532.3	9990.0	1532.4	10000.0	1532.3	10010.9	1533.1	10014.7
GR	1533.4	10021.9	1533.3	10031.6	1535.6	10038.3	1536.0	10061.5	1534.1	10076.5
GR	1535.8	10090.1	1534.9	10102.7	1535.8	10111.3	1535.9	10121.0	1535.4	10136.3
GR	1533.6	10154.3	1535.3	10163.7	1535.9	10175.5	1536.3	10198.8	1536.7	10211.8
GR	1536.9	10262.3	1536.6	10271.4	1536.9	10311.7	1537.3	10333.8	1537.4	10357.4
GR	1536.3	10364.5	1536.4	10371.5	1533.6	10379.2	1535.4	10391.2	1536.8	10409.4
GR	1538.7	10446.7	1539.4	10475.2	1540.0	10499.2	1539.9	10514.5		

ET		7.1		9.1				10345.9	9890.0	10110.0
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\*\*\* DIRT ROAD ON RANGE LINE 5 WEST - 6 WEST CROSSES POWERLINE WASH AT MILE 4.38 \*\*\*

X1	4.393	46	9893.4	10061.9	525	495	525			
GR	1546.7	9655.0	1546.1	9710.9	1544.5	9766.3	1543.8	9795.3	1542.2	9821.9
GR	1541.1	9857.3	1539.9	9893.4	1539.4	9923.4	1538.6	9955.2	1538.1	9981.1
GR	1535.8	9993.3	1536.1	10000.0	1535.9	10007.9	1536.5	10011.2	1536.9	10022.0
GR	1537.0	10040.3	1539.5	10048.9	1540.2	10061.9	1539.6	10094.2	1539.0	10109.4
GR	1539.8	10119.7	1539.6	10151.7	1539.7	10179.7	1538.7	10186.1	1538.1	10196.3
GR	1539.4	10204.5	1539.7	10222.0	1540.0	10244.2	1539.8	10267.1	1539.4	10286.9
GR	1537.2	10299.5	1537.2	10306.4	1540.1	10316.7	1540.6	10332.3	1540.9	10345.9
GR	1539.8	10366.3	1538.2	10370.1	1539.5	10378.1	1539.8	10402.0	1540.2	10428.9
GR	1540.7	10450.4	1541.5	10485.3	1541.8	10499.9	1543.3	10524.0	1543.8	10540.9
GR	1544.2	10569.8								

ET		7.1		9.1				10337.9	9932.0	10100.0
X1	4.494	46	9932.7	10073.8	545	575	535			
GR	1545.7	9855.7	1544.1	9895.1	1541.9	9932.7	1541.5	9941.4	1540.2	9947.8
GR	1540.9	9960.9	1540.8	9981.6	1539.0	9990.9	1539.1	10000.0	1539.3	10008.2
GR	1540.7	10014.4	1540.8	10030.0	1540.3	10037.7	1540.4	10052.0	1541.0	10068.1
GR	1541.7	10073.8	1541.5	10099.2	1541.6	10113.9	1542.1	10134.4	1542.2	10146.8
GR	1541.9	10160.7	1542.1	10179.7	1541.8	10196.6	1540.8	10210.0	1542.4	10217.7

GR	1542.7	10232.0	1541.9	10237.8	1542.9	10246.8	1542.6	10255.0	1543.1	10264.3
GR	1543.0	10272.9	1543.8	10292.1	1544.4	10313.0	1544.9	10337.9	1544.9	10362.1
GR	1544.6	10396.6	1543.9	10412.2	1544.5	10419.0	1544.5	10433.7	1544.2	10437.3
GR	1544.4	10451.9	1543.9	10464.6	1544.7	10483.7	1545.0	10506.7	1545.4	10529.7
GR	1545.8	10564.8								
ET		7.1		9.1			9880.0		9900.0	10084.0
X1	4.592	35	9901.4	10083.0	505	495	515			
GR	1548.9	9807.0	1548.7	9832.2	1547.5	9840.2	1548.2	9860.0	1548.8	9880.0
GR	1547.3	9901.4	1545.3	9920.3	1545.7	9936.3	1542.9	9943.1	1546.1	9954.0
GR	1546.0	9969.8	1544.4	9978.6	1543.9	10000.0	1544.5	10011.7	1544.7	10026.7
GR	1544.4	10032.6	1545.3	10043.1	1546.0	10063.8	1546.5	10083.0	1544.7	10092.0
GR	1547.0	10102.8	1545.7	10122.9	1546.2	10155.2	1545.6	10166.9	1547.1	10178.9
GR	1548.5	10208.1	1548.6	10228.8	1548.3	10252.0	1548.0	10256.2	1548.3	10267.6
GR	1548.5	10294.3	1549.1	10317.1	1549.5	10344.5	1549.8	10377.5	1549.7	10405.8
NC	0.055	0.055	0.040	0.1	0.3					
ET				9.1				9680.0		10076.0
X1	4.693	56	9811.8	10075.0	505	525	535			
GR	1552.5	9377.2	1552.3	9405.7	1550.8	9433.6	1549.4	9463.3	1549.9	9494.1
GR	1549.4	9509.7	1548.1	9523.0	1548.9	9536.2	1547.9	9542.4	1548.4	9546.5
GR	1547.4	9558.5	1549.2	9568.4	1549.4	9577.6	1548.8	9583.8	1549.6	9595.7
GR	1549.6	9604.6	1546.1	9611.5	1550.2	9619.0	1549.8	9628.7	1550.6	9644.2
GR	1551.1	9662.9	1551.0	9682.3	1550.5	9694.0	1550.1	9735.2	1550.4	9741.0
GR	1550.3	9743.7	1550.7	9756.0	1550.5	9784.9	1550.5	9811.8	1549.9	9841.6
GR	1550.2	9850.3	1550.0	9865.1	1548.1	9873.8	1548.2	9883.7	1549.0	9893.4
GR	1549.8	9911.1	1550.3	9935.1	1550.2	9945.8	1549.1	9950.9	1548.9	9970.3
GR	1548.6	9989.3	1547.8	10000.0	1547.6	10017.5	1549.6	10032.5	1549.8	10049.2
GR	1551.6	10075.0	1552.2	10095.0	1551.1	10123.5	1551.5	10136.0	1552.6	10147.5
GR	1553.6	10169.0	1553.9	10189.8	1553.9	10212.5	1554.0	10242.1	1553.7	10288.2
GR	1553.6	10315.8								

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ET				9.1					9725.0	10145.0
X1	4.788	50	9980.0	10088.9	480	500	500			
GR	1556.4	9296.4	1556.0	9331.6	1553.3	9379.0	1552.0	9398.0	1551.3	9422.5
GR	1551.8	9437.0	1551.7	9483.3	1550.0	9490.5	1551.2	9497.7	1551.1	9525.8
GR	1551.3	9555.5	1551.8	9585.2	1552.0	9612.5	1552.0	9644.0	1552.2	9690.3
GR	1552.4	9712.3	1553.4	9740.0	1554.6	9773.8	1554.4	9777.5	1553.1	9801.2
GR	1552.2	9818.4	1552.3	9862.6	1552.5	9903.8	1552.2	9931.7	1552.7	9940.4
GR	1553.2	9953.4	1553.2	9980.0	1549.5	9994.6	1549.7	10000.0	1549.6	10006.5
GR	1550.2	10011.2	1550.7	10039.1	1551.8	10051.8	1552.6	10062.8	1553.1	10088.9
GR	1552.9	10109.2	1553.0	10146.6	1553.0	10178.1	1552.8	10181.5	1553.0	10201.5
GR	1553.0	10222.8	1554.0	10235.7	1555.3	10256.3	1555.8	10268.6	1555.6	10287.3
GR	1555.1	10318.6	1555.0	10349.2	1555.9	10374.2	1556.6	10399.2	1556.8	10430.8

ET		7.1		9.1			9410.0		9700.0	10030.0
X1	4.884	50	9967.4	10027.3	495	505	505			
GR	1556.4	9080.5	1555.8	9106.2	1552.0	9151.5	1553.2	9158.6	1553.4	9172.3
GR	1553.0	9198.4	1551.9	9204.6	1551.8	9221.3	1552.5	9228.2	1552.2	9250.0
GR	1552.0	9263.6	1552.2	9270.6	1552.4	9281.2	1553.4	9290.2	1553.9	9304.9
GR	1553.7	9326.9	1553.7	9344.9	1553.6	9377.8	1554.2	9412.9	1553.2	9422.2
GR	1554.0	9430.2	1554.5	9471.8	1555.2	9505.5	1555.5	9520.1	1556.1	9527.0
GR	1556.7	9568.3	1557.3	9605.6	1557.9	9632.3	1557.9	9637.7	1557.7	9663.1
GR	1556.8	9689.9	1556.2	9736.2	1555.8	9782.8	1555.7	9827.3	1555.8	9868.0
GR	1555.8	9880.0	1556.0	9897.3	1555.9	9907.9	1555.1	9912.5	1554.7	9931.4
GR	1555.3	9943.0	1555.7	9967.4	1553.5	9981.0	1553.1	9995.1	1552.3	10000.0
GR	1552.2	10016.7	1556.3	10027.3	1561.4	10048.2	1561.8	10069.8	1562.0	10112.0

ET				9.1					9900.0	10100.0
X1	4.986	30	9978.5	10080.6	485	525	540			
GR	1562.8	9563.7	1562.3	9592.7	1561.0	9634.8	1559.8	9663.1	1559.2	9690.7
GR	1559.5	9719.3	1559.9	9766.9	1561.7	9799.7	1562.0	9816.7	1561.3	9851.9
GR	1560.3	9869.5	1559.7	9894.6	1558.7	9937.3	1559.2	9957.5	1559.3	9978.5
GR	1555.7	9987.1	1555.9	10000.0	1557.0	10029.8	1558.4	10044.1	1558.9	10080.6
GR	1557.2	10089.9	1558.1	10099.5	1558.5	10109.8	1558.8	10150.2	1559.3	10177.1
GR	1559.6	10189.9	1563.0	10217.1	1565.1	10237.0	1566.1	10261.8	1566.6	10301.3

ET		7.1		9.1			9885.5		9941.0	10190.0
X1	5.081	40	9941.3	10041.9	495	505	500			
GR	1567.3	9621.9	1567.2	9686.0	1566.7	9710.1	1565.5	9740.7	1562.8	9773.1
GR	1559.9	9784.6	1562.2	9795.8	1561.7	9808.4	1562.7	9840.8	1565.2	9863.0
GR	1566.7	9883.6	1566.7	9886.1	1566.2	9912.2	1562.8	9941.3	1561.4	9956.2
GR	1560.8	9969.7	1559.0	9980.3	1558.9	10000.0	1558.8	10017.3	1560.1	10024.6
GR	1562.8	10041.9	1562.7	10057.0	1561.7	10063.9	1562.3	10070.4	1562.3	10116.4
GR	1561.7	10130.8	1561.8	10142.4	1561.8	10159.9	1562.8	10184.6	1565.3	10216.2
GR	1565.7	10231.3	1564.6	10249.0	1563.4	10266.7	1563.4	10282.7	1564.0	10291.5
GR	1564.4	10324.9	1565.0	10344.5	1565.4	10385.8	1568.6	10421.5	1569.4	10449.2

ET		7.1		9.1			9830.5		9920.0	10090.0
X1	5.174	32	9923.0	10047.6	500	460	490			
GR	1569.8	9718.8	1570.0	9746.2	1569.3	9775.3	1568.7	9793.5	1566.2	9811.8
GR	1568.2	9830.3	1567.7	9858.1	1567.4	9893.8	1566.8	9905.8	1565.5	9923.0
GR	1564.9	9945.6	1565.3	9965.2	1561.7	9986.9	1561.4	10000.0	1561.4	10019.9
GR	1563.1	10026.8	1562.5	10035.8	1565.7	10047.6	1564.9	10057.8	1565.5	10069.8
GR	1565.6	10085.8	1565.7	10115.3	1565.3	10122.5	1565.7	10145.7	1565.3	10155.7

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GR	1565.3	10168.9	1566.3	10196.2	1566.2	10219.4	1566.5	10254.5	1567.1	10285.0
GR	1569.4	10312.5	1570.6	10328.6						
ET				9.1					9960.0	10077.0
X1	5.245	26	9963.3	10076.4	385	355	375			
GR	1573.7	9735.7	1573.5	9766.7	1572.1	9797.8	1571.6	9821.4	1569.6	9855.5
GR	1568.6	9887.4	1567.9	9916.8	1568.5	9934.9	1569.0	9950.7	1568.9	9963.3

GR	1563.8	9984.5	1563.5	10000.0	1563.8	10009.1	1564.8	10034.9	1566.2	10044.9
GR	1566.5	10057.6	1568.0	10076.4	1566.9	10088.1	1568.5	10102.0	1568.9	10122.0
GR	1570.8	10145.3	1570.5	10166.4	1571.3	10191.5	1572.3	10219.4	1573.9	10265.3
GR	1574.9	10308.2								
ET				9.1					9830.0	10033.0
X1	5.327	28	9864.9	10032.4	370	405	430			
GR	1576.0	9440.0	1574.0	9500.0	1571.0	9570.0	1572.0	9630.0	1574.0	9660.0
GR	1574.3	9675.5	1574.8	9691.4	1574.7	9706.1	1572.4	9744.6	1571.4	9765.9
GR	1570.2	9793.4	1569.7	9811.9	1569.7	9845.3	1570.2	9864.9	1569.7	9885.1
GR	1569.4	9905.4	1567.7	9913.8	1568.4	9920.3	1568.6	9938.9	1567.6	9972.8
GR	1566.4	9988.6	1566.3	10000.0	1566.0	10017.3	1572.7	10032.4	1576.4	10045.0
GR	1577.3	10064.6	1577.7	10089.2	1577.2	10158.7				
NH	5	0.055	9925.0	0.040	10042.0	0.050	10070.0	0.045	10200.0	0.055
NH	10235.									
ET				9.1					9924.0	10100.0
X1	5.413	24	9925.0	10042.0	375	495	475			
GR	1576.5	9640.0	1576.0	9685.0	1575.0	9730.0	1574.0	9800.0	1572.8	9835.0
GR	1574.0	9880.0	1574.1	9915.0	1574.0	9925.0	1572.0	9967.0	1570.0	9970.0
GR	1569.7	9977.0	1569.6	10000.0	1569.2	10025.0	1572.0	10032.0	1574.0	10042.0
GR	1573.2	10070.0	1572.0	10115.0	1571.5	10125.0	1571.8	10140.0	1571.4	10150.0
GR	1572.0	10160.0	1574.0	10200.0	1576.0	10225.0	1578.0	10235.0		
NC	0.055	0.050	0.040	.1	.3					
ET				9.1					9895.0	10175.0
X1	5.493	32	9939.5	10065.1	400	400	420			
GR	1580.1	9685.0	1579.4	9725.4	1578.2	9753.6	1578.4	9763.9	1577.8	9801.0
GR	1578.8	9824.6	1579.0	9844.2	1576.4	9882.2	1575.2	9939.5	1572.5	9950.6
GR	1573.1	9961.0	1573.2	9969.0	1572.6	9972.5	1572.0	9986.2	1571.6	10000.0
GR	1571.6	10011.2	1572.2	10018.3	1573.1	10028.8	1573.1	10034.7	1574.4	10051.5
GR	1575.1	10065.1	1575.1	10088.6	1574.9	10101.8	1575.0	10116.7	1575.1	10154.7
GR	1575.1	10190.5	1574.1	10198.9	1574.9	10204.4	1575.7	10225.3	1577.8	10244.1
GR	1580.7	10264.4	1582.2	10290.8						
NC	0.050	0.055	0.040	0.1	0.3					
ET		7.1		9.1				10139.4	9922.0	10070.0
X1	5.589	34	9922.3	10045.2	495	515	505			
GR	1584.6	9704.5	1582.5	9734.4	1579.8	9761.3	1578.8	9782.0	1578.7	9800.7
GR	1579.8	9810.3	1580.2	9841.4	1578.4	9849.7	1578.4	9867.9	1577.6	9873.1
GR	1577.3	9885.0	1577.8	9898.9	1577.7	9922.3	1576.6	9946.4	1576.4	9965.8
GR	1574.7	9973.9	1574.8	10000.0	1574.9	10007.2	1574.5	10016.0	1574.5	10025.1
GR	1575.1	10033.6	1578.6	10045.2	1579.0	10068.3	1579.8	10103.6	1579.4	10139.4
GR	1578.5	10143.2	1578.7	10152.9	1579.3	10167.1	1579.7	10178.8	1581.2	10186.8
GR	1580.8	10188.7	1580.8	10201.0	1581.8	10205.3	1583.7	10229.3		

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QT	3	5500	5500	5500						
ET				9.1					9930.0	10120.0
X1	5.682	34	9954.6	10046.3	400	530	490			
GR	1585.9	9708.6	1586.3	9764.1	1584.8	9794.1	1581.3	9829.6	1580.4	9852.7
GR	1580.9	9860.6	1581.5	9881.1	1581.9	9911.6	1581.5	9954.6	1579.0	9967.5
GR	1579.1	9983.1	1578.6	10000.0	1578.7	10014.3	1581.2	10025.8	1581.3	10046.3
GR	1579.9	10060.3	1580.8	10070.0	1579.7	10076.9	1580.2	10100.4	1580.4	10116.5
GR	1581.4	10121.8	1582.2	10163.5	1583.3	10190.5	1583.7	10213.4	1583.7	10239.4
GR	1584.0	10271.1	1585.0	10293.9	1584.9	10311.1	1585.9	10320.0	1585.1	10340.5
GR	1585.6	10367.3	1586.7	10396.2	1588.2	10418.5	1589.7	10443.7		
ET		7.1		9.1				10357.4	9924.0	10140.0
X1	5.771	58	9924.8	10139.2	470	430	470			
GR	1591.5	9677.6	1591.0	9720.5	1590.1	9755.9	1588.6	9799.3	1587.2	9847.2
GR	1588.6	9872.2	1589.2	9883.5	1589.0	9902.5	1586.6	9924.8	1582.0	9942.8
GR	1583.8	9952.8	1583.7	9971.0	1582.0	9980.5	1581.9	10000.0	1581.8	10014.0
GR	1583.1	10023.0	1582.8	10034.0	1582.1	10040.2	1582.0	10058.0	1582.7	10063.6
GR	1583.3	10076.1	1583.3	10087.0	1584.2	10094.3	1584.8	10122.8	1585.1	10139.2
GR	1584.6	10173.4	1583.5	10181.3	1583.3	10192.4	1584.3	10199.6	1584.8	10211.0
GR	1586.9	10224.1	1587.4	10241.3	1586.5	10265.5	1585.2	10294.2	1584.0	10322.5
GR	1584.5	10357.4	1584.6	10389.7	1584.5	10400.4	1585.1	10423.4	1586.1	10447.3
GR	1586.4	10469.1	1586.4	10485.8	1585.9	10511.5	1585.3	10518.0	1585.3	10542.2
GR	1584.1	10547.5	1585.3	10555.1	1586.3	10567.6	1587.4	10591.1	1587.5	10608.8
GR	1588.2	10613.8	1587.9	10636.1	1586.9	10660.5	1586.4	10688.0	1587.1	10706.8
GR	1589.2	10743.2	1591.3	10787.8	1592.3	10810.1				
ET		7.1		9.1				10149.2	9945.0	10088.0
X1	5.865	47	9962.2	10087.0	510	490	490			
GR	1595.8	9671.8	1595.1	9703.5	1593.6	9741.1	1590.6	9783.1	1589.3	9802.7
GR	1587.2	9825.2	1586.6	9842.3	1586.6	9875.8	1587.4	9907.5	1586.6	9915.4
GR	1586.8	9939.8	1587.3	9962.2	1584.3	9979.8	1584.8	9993.5	1584.1	10000.0
GR	1584.3	10009.3	1583.3	10038.6	1583.2	10051.8	1586.9	10064.0	1587.6	10087.0
GR	1588.5	10106.7	1590.1	10126.7	1590.3	10149.2	1590.1	10179.9	1589.9	10210.8
GR	1589.3	10252.3	1588.2	10299.7	1588.5	10341.3	1588.2	10368.9	1587.9	10384.4
GR	1588.6	10404.8	1590.1	10436.9	1590.5	10457.0	1590.9	10482.2	1590.8	10501.5
GR	1590.1	10515.8	1590.1	10531.4	1589.5	10534.7	1589.5	10549.0	1590.5	10553.0
GR	1590.7	10586.3	1590.4	10601.2	1590.9	10613.9	1592.4	10631.5	1593.3	10661.9
GR	1594.8	10701.0	1596.3	10757.1						
NC	0.050	0.055	0.045	0.1	0.3					
ET		7.1		9.1				10116.2	9900.0	10088.0
X1	5.961	54	9926.0	10087.6	515	505	505			
GR	1599.7	9627.7	1597.7	9660.0	1594.4	9695.8	1593.3	9728.8	1591.4	9772.5
GR	1591.6	9786.4	1590.9	9803.5	1589.5	9828.5	1589.4	9861.8	1587.4	9869.2
GR	1589.2	9877.4	1590.2	9895.4	1590.9	9926.0	1588.8	9952.6	1590.2	9967.0
GR	1587.9	9979.0	1587.7	9986.8	1586.4	9993.1	1586.7	10000.0	1586.8	10007.5
GR	1587.8	10014.3	1588.6	10027.1	1588.2	10042.2	1587.7	10057.5	1589.9	10067.1
GR	1592.4	10087.6	1593.0	10097.7	1593.3	10116.2	1592.0	10155.2	1592.2	10186.2
GR	1591.7	10209.1	1591.2	10240.4	1590.6	10250.7	1591.9	10259.5	1592.0	10287.5
GR	1591.6	10302.5	1590.2	10309.3	1591.4	10313.9	1591.4	10329.5	1590.7	10333.5

GR	1591.7	10351.2	1592.5	10379.8	1592.7	10418.8	1592.9	10464.5	1593.6	10494.5
GR	1594.0	10535.0	1593.3	10539.7	1593.6	10549.7	1594.0	10557.7	1594.6	10587.1
GR	1596.0	10619.5	1598.1	10657.9	1598.8	10673.4	1599.3	10727.3		

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NC	0.050	0.055	0.040	0.1	0.3					
ET		7.1		9.1				10155.1	9929.0	10059.0
X1	6.057	50	9929.5	10058.7	495	495	505			
GR	1601.1	9652.5	1599.7	9698.1	1598.1	9728.4	1594.9	9763.7	1593.9	9779.9
GR	1593.5	9790.7	1593.8	9798.8	1593.8	9814.8	1593.9	9852.6	1594.7	9876.8
GR	1595.1	9890.5	1594.8	9906.5	1593.1	9929.5	1593.1	9937.9	1592.1	9945.6
GR	1593.2	9957.1	1592.6	9980.0	1590.2	9986.6	1595.8	10000.0	1589.8	10010.9
GR	1591.1	10028.5	1591.6	10051.2	1592.5	10058.7	1591.9	10065.9	1591.8	10091.9
GR	1594.9	10103.3	1595.5	10125.1	1596.1	10143.1	1596.2	10155.1	1596.0	10178.7
GR	1594.9	10222.6	1595.0	10246.7	1595.7	10277.1	1596.5	10298.8	1596.9	10316.4
GR	1596.6	10337.8	1595.8	10355.5	1596.7	10380.4	1596.9	10391.4	1597.4	10413.5
GR	1597.7	10452.7	1597.0	10460.2	1596.9	10472.6	1596.3	10501.2	1596.3	10521.4
GR	1595.0	10526.1	1596.5	10536.3	1598.9	10564.4	1600.2	10595.8	1601.4	10642.4

ET		7.1		9.1				10180.0	9935.0	10062.0
X1	6.150	37	9935.4	10061.1	490	480	490			
GR	1603.3	9762.9	1603.5	9782.0	1603.1	9802.6	1599.6	9833.8	1597.5	9853.1
GR	1596.8	9891.8	1596.2	9935.4	1593.6	9951.0	1594.0	9964.9	1593.8	9984.7
GR	1593.3	10000.0	1593.7	10022.0	1595.2	10037.4	1595.5	10047.5	1597.4	10061.1
GR	1597.7	10071.7	1596.7	10086.5	1596.5	10111.9	1597.5	10132.5	1598.3	10146.2
GR	1599.4	10165.3	1599.3	10180.6	1598.5	10211.0	1597.6	10234.9	1596.9	10239.0
GR	1597.7	10247.0	1598.7	10258.9	1598.9	10274.4	1598.8	10293.7	1598.8	10306.5
GR	1599.1	10315.6	1599.8	10340.2	1600.8	10367.0	1601.0	10387.0	1601.6	10390.7
GR	1601.9	10410.3	1601.5	10446.3						

ET				9.1					9940.0	10060.0
X1	6.248	35	9969.0	10032.4	515	505	515			
GR	1603.5	9746.4	1603.0	9775.0	1603.2	9806.4	1602.7	9837.1	1600.5	9856.5
GR	1600.2	9865.6	1598.9	9875.4	1599.9	9883.8	1600.0	9895.9	1599.0	9911.0
GR	1599.4	9919.4	1599.3	9942.7	1599.6	9951.6	1599.4	9969.0	1595.7	9984.2
GR	1595.6	10000.0	1595.7	10020.3	1599.3	10032.4	1600.0	10056.8	1600.7	10074.2
GR	1601.8	10097.8	1602.8	10118.8	1603.2	10135.4	1602.8	10165.6	1602.6	10185.7
GR	1602.8	10215.2	1602.2	10218.1	1602.3	10233.1	1602.9	10240.5	1603.4	10257.9
GR	1604.1	10286.7	1604.4	10313.6	1604.9	10334.9	1604.8	10371.1	1604.4	10401.3

NH	5	0.055	9820.8	0.040	9934.7	0.050	9976.3	0.040	10016.0	0.055
NH	10167.									
ET				9.1					9800.0	10045.0
X1	6.347	27	9820.8	10016.0	465	545	525			
GR	1608.9	9735.5	1608.7	9772.1	1603.9	9795.1	1603.3	9807.7	1603.3	9820.8
GR	1600.6	9834.4	1600.5	9868.7	1600.1	9873.6	1600.0	9900.0	1599.8	9918.5
GR	1602.2	9934.7	1601.5	9948.5	1602.4	9955.6	1602.7	9976.3	1599.1	9984.8
GR	1598.6	9996.9	1598.6	10004.8	1603.8	10016.0	1604.8	10036.6	1604.2	10064.5
GR	1602.3	10068.6	1602.2	10081.8	1600.8	10095.5	1603.6	10105.7	1605.9	10121.7
GR	1606.7	10139.0	1607.2	10167.3						

NC	0.055	0.055	0.040	0.1	0.3					
ET		7.1		9.1				10210.0	9903.0	10116.0
X1	6.440	31	9919.1	10115.2	490	490	490			
GR	1613.5	9820.2	1613.3	9847.9	1612.8	9859.7	1607.9	9896.6	1605.8	9919.1
GR	1605.6	9930.5	1604.1	9935.1	1604.1	9942.8	1603.4	9960.0	1603.4	9976.9
GR	1602.6	9991.5	1603.6	10000.2	1603.9	10019.4	1604.0	10039.3	1603.1	10073.6
GR	1603.9	10078.6	1603.5	10101.6	1606.8	10115.2	1607.6	10123.3	1607.9	10142.0

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GR	1608.5	10166.7	1608.9	10192.9	1609.2	10209.5	1609.2	10226.2	1608.6	10244.9
GR	1607.1	10261.0	1607.5	10268.8	1607.5	10283.0	1608.5	10299.6	1609.3	10331.1
GR	1610.2	10370.4								

NC	0.050	0.055	0.040	0.1	0.3					
ET		7.1		9.1				10174.5	9920.0	10085.0
X1	6.538	42	9977.8	10050.5	535	535	515			
GR	1618.6	9715.6	1617.5	9772.2	1616.5	9823.7	1614.8	9860.0	1613.3	9872.6
GR	1610.1	9888.2	1606.0	9903.3	1607.8	9909.9	1608.7	9922.3	1609.9	9937.1
GR	1609.1	9948.4	1609.3	9977.8	1605.7	9985.8	1605.8	10000.0	1606.6	10014.6
GR	1606.9	10041.5	1610.2	10050.5	1609.7	10074.5	1609.6	10085.2	1609.3	10094.7
GR	1609.6	10111.5	1608.2	10123.6	1609.4	10131.1	1610.3	10149.0	1611.6	10165.3
GR	1612.0	10179.5	1611.3	10212.3	1613.3	10234.9	1613.8	10245.8	1613.5	10260.2
GR	1612.0	10288.9	1612.5	10295.7	1612.8	10305.1	1613.8	10313.2	1613.7	10350.9
GR	1612.2	10357.6	1612.2	10367.7	1612.0	10371.6	1612.3	10394.1	1613.0	10413.4
GR	1613.7	10437.2	1614.2	10463.4						

NC	0.050	0.055	0.045	0.1	0.3					
ET		7.1		9.1				10220.0	9875.0	10120.0
X1	6.630	38	9975.2	10025.6	545	465	485			
GR	1617.2	9758.4	1615.9	9796.2	1617.0	9811.4	1617.2	9820.7	1617.0	9829.8
GR	1612.5	9852.4	1612.4	9874.3	1611.9	9905.7	1612.8	9926.2	1611.7	9931.9
GR	1612.5	9956.3	1613.3	9975.2	1612.3	9983.1	1608.2	9992.9	1608.1	10000.0
GR	1608.0	10010.3	1613.0	10017.5	1613.6	10025.6	1613.5	10035.5	1612.4	10045.2
GR	1613.4	10079.2	1611.1	10091.3	1613.6	10101.6	1613.9	10114.4	1614.0	10134.7
GR	1613.8	10149.7	1614.6	10173.8	1615.7	10205.3	1616.2	10224.8	1616.1	10246.8
GR	1615.2	10266.1	1615.0	10296.5	1616.3	10319.0	1617.6	10348.6	1617.5	10353.9
GR	1617.6	10364.8	1619.0	10373.1	1619.4	10395.9				

NC	0.050	0.055	0.040	0.1	0.3					
ET				9.1					9900.0	10046.0
X1	6.727	31	9979.6	10045.5	490	520	510			
GR	1620.2	9717.9	1619.3	9741.1	1618.9	9763.3	1618.5	9789.4	1617.8	9813.8
GR	1616.2	9832.4	1615.9	9864.0	1615.6	9887.8	1614.3	9893.5	1615.9	9900.5
GR	1615.8	9908.7	1614.9	9915.3	1616.0	9925.2	1616.0	9933.5	1612.0	9946.6

GR	1615.6	9954.2	1615.8	9979.6	1611.1	9991.9	1611.0	10000.0	1610.9	10009.4
GR	1611.5	10017.6	1622.8	10045.5	1622.6	10067.6	1622.5	10078.8	1623.0	10086.6
GR	1623.2	10097.5	1625.3	10139.6	1625.4	10155.5	1625.9	10160.8	1626.2	10179.2
GR	1626.1	10215.2								
ET				9.1					9850.0	10050.0
X1	6.825	34	9969.4	10045.3	465	525	515			
GR	1624.1	9612.8	1623.7	9638.7	1622.2	9666.5	1621.6	9704.2	1620.6	9734.3
GR	1619.3	9752.0	1619.5	9773.2	1619.2	9779.5	1618.5	9789.6	1618.9	9796.4
GR	1618.1	9806.1	1618.7	9826.9	1619.2	9837.9	1619.3	9859.3	1618.2	9875.6
GR	1618.8	9881.4	1616.1	9890.1	1618.9	9900.4	1618.8	9911.4	1619.5	9922.2
GR	1620.1	9950.6	1620.2	9969.4	1614.4	9989.8	1614.1	10000.0	1613.9	10008.6
GR	1618.1	10018.3	1619.0	10034.7	1620.5	10045.3	1620.8	10061.9	1622.9	10080.6
GR	1623.7	10104.8	1624.3	10121.7	1624.6	10141.6	1624.4	10157.5		

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ET		7.1		9.1				10120.0	9940.0	10080.0
X1	6.921	37	9975.3	10036.4	455	515	505			
GR	1626.6	9696.3	1626.4	9735.2	1625.9	9765.0	1624.3	9803.2	1624.3	9841.6
GR	1623.7	9873.9	1622.7	9893.2	1621.2	9909.0	1621.8	9918.8	1622.1	9948.0
GR	1622.4	9975.3	1617.3	9987.1	1617.5	10000.0	1617.7	10011.0	1621.6	10022.1
GR	1623.3	10036.4	1622.9	10053.5	1623.4	10065.9	1623.0	10081.7	1621.6	10094.0
GR	1622.3	10107.4	1622.4	10124.0	1621.9	10151.2	1620.0	10156.4	1621.6	10163.3
GR	1616.3	10177.0	1622.0	10187.2	1622.3	10198.5	1624.3	10213.5	1626.1	10227.4
GR	1626.6	10244.2	1626.5	10259.8	1625.5	10277.5	1623.4	10294.5	1625.5	10312.6
GR	1627.1	10334.9	1628.9	10368.1						

ET		7.1		9.1				10140.0	9900.0	10080.0
X1	7.013	36	9965.8	10029.1	525	475	485			
GR	1630.6	9766.5	1630.7	9798.4	1629.7	9842.1	1628.6	9858.0	1627.6	9880.4
GR	1625.1	9905.4	1624.6	9919.9	1625.1	9927.2	1625.8	9965.8	1625.3	9980.8
GR	1621.3	9990.8	1621.3	10000.0	1621.1	10013.3	1626.2	10029.1	1626.2	10044.4
GR	1625.7	10056.5	1626.2	10078.9	1627.4	10106.0	1628.1	10128.0	1628.2	10142.3
GR	1627.6	10162.5	1625.4	10196.0	1624.7	10224.6	1625.3	10247.0	1625.0	10270.7
GR	1624.3	10284.0	1620.3	10294.5	1623.9	10306.6	1624.4	10319.5	1623.2	10325.3
GR	1622.2	10334.2	1624.3	10342.3	1626.9	10363.1	1629.8	10391.0	1631.2	10407.8
GR	1631.6	10424.0								

QT	3	5600	5600	5600						
ET		7.1		9.1				10042.0	9785.0	10035.0
X1	7.106	36	9977.3	10025.0	520	490	490			
GR	1633.3	9493.0	1632.6	9540.1	1632.3	9579.7	1631.7	9613.0	1630.4	9645.5
GR	1630.7	9662.2	1630.4	9678.7	1629.1	9707.2	1627.7	9730.6	1628.2	9736.6
GR	1628.2	9754.5	1628.5	9759.8	1627.6	9771.4	1627.8	9782.5	1628.1	9796.7
GR	1627.8	9816.2	1628.5	9829.3	1628.3	9837.8	1629.2	9844.5	1628.7	9865.3
GR	1628.9	9877.1	1629.1	9903.6	1629.5	9953.0	1629.7	9977.3	1624.1	9991.1
GR	1624.1	10000.0	1624.0	10011.7	1629.4	10025.0	1631.7	10034.9	1632.1	10042.0
GR	1631.6	10058.5	1631.4	10077.3	1632.9	10101.2	1634.1	10121.5	1634.8	10156.9
GR	1634.3	10171.3								

ET		7.1		9.1			9500.9		9735.0	10027.0
X1	7.200	38	9918.0	10026.3	440	520	510			
GR	1635.5	9315.0	1635.2	9369.0	1634.4	9418.7	1634.0	9445.9	1633.6	9471.3
GR	1634.9	9500.9	1633.6	9524.5	1631.9	9547.3	1631.6	9558.4	1631.8	9572.4
GR	1630.8	9580.0	1631.3	9586.3	1632.0	9602.9	1632.8	9615.7	1632.8	9636.8
GR	1630.7	9655.9	1630.7	9664.3	1629.8	9669.7	1631.0	9679.3	1631.8	9702.4
GR	1632.0	9727.4	1631.9	9745.0	1632.2	9774.6	1632.8	9782.0	1633.3	9816.5
GR	1632.6	9850.4	1632.8	9869.7	1632.8	9898.5	1632.8	9918.0	1631.8	9935.9
GR	1631.1	9956.4	1628.3	9985.1	1627.2	10000.0	1634.7	10026.3	1638.4	10049.4
GR	1640.7	10075.0	1642.1	10099.2	1642.9	10131.3				

ET		7.1		9.1			9783.8		9910.0	10060.0
X1	7.297	34	9961.3	10048.4	450	510	510			
GR	1638.9	9437.9	1638.5	9476.8	1637.4	9522.3	1636.6	9557.5	1637.4	9570.2
GR	1637.8	9613.2	1638.1	9638.4	1637.1	9670.5	1636.0	9709.2	1635.6	9716.0
GR	1636.7	9733.7	1637.2	9757.3	1637.3	9783.8	1634.4	9820.5	1633.9	9837.0
GR	1633.5	9840.5	1634.6	9849.3	1635.4	9867.9	1635.3	9883.4	1634.8	9905.2
GR	1634.9	9926.1	1635.6	9961.3	1631.3	9983.1	1631.3	10000.0	1631.3	10010.8
GR	1634.5	10029.7	1635.1	10048.4	1635.0	10059.3	1634.0	10071.7	1635.2	10097.0

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GR	1637.8	10111.4	1638.7	10124.4	1639.3	10141.6	1639.2	10155.7		
NC	0.055	0.055	0.040	0.1	0.3					
ET		7.1		9.1				10139.0	9940.0	10139.0
X1	7.391	32	9957.0	10044.4	515	475	495			
GR	1646.7	9686.3	1645.5	9745.8	1643.7	9798.5	1641.4	9840.2	1641.9	9855.5
GR	1642.0	9871.2	1640.9	9894.2	1638.4	9930.1	1637.0	9937.7	1638.4	9945.9
GR	1639.1	9957.0	1638.9	9968.2	1637.7	9979.8	1634.0	9989.3	1634.0	10000.0
GR	1633.9	10015.4	1638.0	10023.5	1638.5	10036.0	1638.9	10044.4	1638.6	10062.2
GR	1637.7	10082.1	1637.3	10094.3	1638.0	10107.6	1640.3	10128.7	1641.2	10139.0
GR	1640.5	10151.2	1638.4	10166.9	1640.3	10179.0	1640.9	10195.5	1641.8	10221.8
GR	1642.8	10248.5	1643.9	10276.0						

ET		7.1		9.1			9921.8		9946.0	10080.0
X1	7.488	33	9961.0	10028.3	500	510	510			
GR	1650.7	9704.0	1649.5	9744.8	1648.4	9779.6	1648.0	9792.6	1648.2	9824.1
GR	1647.8	9855.0	1646.7	9874.6	1644.5	9885.5	1646.0	9892.7	1647.1	9907.5
GR	1647.7	9921.8	1647.5	9936.3	1640.3	9961.0	1638.7	9970.9	1638.4	9979.0
GR	1637.1	9986.3	1637.4	10000.0	1637.1	10013.7	1640.1	10028.3	1641.4	10038.1
GR	1641.8	10049.9	1642.2	10067.9	1643.5	10081.7	1643.8	10101.7	1643.8	10137.2
GR	1643.7	10143.2	1644.1	10161.8	1645.4	10178.3	1645.8	10194.2	1645.4	10200.6
GR	1646.4	10216.6	1647.1	10232.3	1647.4	10252.0				

NC 0.050 0.055 0.040 0.1 0.3

ET				9.1					9900.0	10080.0
X1	7.575	24	9982.0	10027.6	480	440	460			
GR	1654.3	9812.6	1654.1	9858.2	1653.4	9874.9	1648.4	9897.3	1645.5	9912.0
GR	1641.7	9923.5	1643.6	9936.0	1644.7	9947.3	1644.6	9960.7	1643.5	9982.0
GR	1640.3	9989.3	1640.2	10000.0	1640.2	10011.8	1640.4	10019.3	1644.2	10027.6
GR	1644.6	10038.8	1645.6	10068.3	1646.7	10093.7	1647.4	10113.8	1648.3	10147.8
GR	1648.9	10166.2	1649.2	10184.9	1649.3	10201.8	1649.3	10224.9		
NH	4	0.050	9943.2	0.045	9985.8	0.040	10039.2	0.055	10134.9	
ET				9.1					9830.0	10060.0
X1	7.674	24	9943.2	10039.2	505	525	525			
GR	1652.8	9672.4	1651.9	9712.9	1650.9	9758.8	1650.1	9792.2	1650.3	9816.5
GR	1648.8	9863.5	1648.0	9889.8	1646.9	9914.5	1646.0	9923.2	1647.0	9932.0
GR	1647.1	9943.2	1644.3	9958.7	1644.3	9966.1	1645.1	9985.8	1643.8	9991.8
GR	1643.7	10000.0	1643.9	10012.4	1643.7	10027.3	1647.2	10039.2	1648.7	10060.2
GR	1652.0	10089.9	1652.0	10097.6	1652.4	10118.2	1651.9	10134.9		
NC	0.055	0.050	0.045	0.1	0.3					
ET				9.1					9926.0	10090.0
X1	7.771	30	9972.8	10052.0	520	500	510			
GR	1655.1	9767.4	1654.0	9799.8	1654.3	9831.7	1654.1	9858.1	1653.7	9878.2
GR	1654.1	9892.3	1654.0	9905.4	1652.7	9936.5	1651.0	9955.2	1650.7	9972.8
GR	1649.5	9982.5	1646.3	9990.3	1646.5	10000.0	1646.5	10012.3	1647.0	10020.3
GR	1649.6	10042.0	1650.0	10052.0	1649.8	10060.4	1649.2	10068.5	1648.3	10079.3
GR	1648.7	10088.8	1648.3	10093.3	1649.3	10103.3	1649.9	10119.7	1653.0	10140.6
GR	1655.0	10156.3	1656.0	10173.5	1656.5	10192.7	1656.8	10219.9	1656.2	10259.9

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NC	0.050	0.050	0.045	0.1	0.3					
ET				9.1					9876.0	10080.0
X1	7.865	37	9948.0	10061.3	505	495	9850.3			
GR	1658.9	9609.3	1658.2	9623.2	1658.7	9633.7	1658.1	9656.5	1656.6	9674.8
GR	1656.7	9689.9	1655.6	9707.1	1654.8	9713.2	1654.6	9725.1	1656.2	9740.5
GR	1657.7	9751.1	1658.0	9765.5	1657.9	9784.5	1657.9	9804.6	1655.9	9829.9
GR	1657.7	9850.3	1657.0	9870.5	1654.8	9902.5	1653.3	9925.6	1654.2	9936.7
GR	1654.1	9948.0	1653.2	9961.8	1651.3	9979.0	1649.1	9989.5	1649.1	10000.0
GR	1649.0	10009.6	1651.3	10018.8	1652.1	10034.0	1653.2	10061.3	1652.5	10067.5
GR	1653.6	10089.3	1657.8	10123.2	1658.1	10134.6	1657.3	10145.4	1660.3	10160.6
GR	1661.2	10176.7	1661.4	10192.1						
NC	0.050	0.050	0.040	0.1	0.3					
ET				9.1					9925.0	10060.0
X1	7.958	30	9965.4	10035.5	480	500	490			
GR	1662.2	9715.3	1661.6	9750.8	1660.5	9775.0	1660.7	9794.8	1659.9	9820.3
GR	1658.9	9841.5	1656.7	9858.6	1657.1	9866.8	1657.6	9885.2	1657.9	9916.2
GR	1657.4	9930.5	1656.9	9936.5	1657.2	9943.7	1656.9	9965.4	1656.5	9977.1
GR	1652.1	9989.4	1651.9	10000.0	1652.0	10009.9	1655.2	10022.3	1656.8	10035.5
GR	1657.1	10052.5	1658.5	10066.9	1659.6	10089.7	1660.9	10114.5	1663.2	10145.0
GR	1664.0	10156.2	1664.8	10175.3	1666.9	10197.8	1667.5	10212.0	1667.9	10226.9
NC	0.050	0.050	0.040	0.1	0.3					
ET				9.1					9930.0	10060.0
X1	8.059	26	9961.4	10024.2	475	545	535			
GR	1666.3	9678.5	1666.0	9712.1	1665.3	9751.5	1663.7	9809.3	1664.2	9826.6
GR	1664.2	9845.7	1662.1	9877.7	1661.5	9903.4	1658.3	9924.7	1658.2	9934.2
GR	1659.8	9949.5	1659.9	9961.4	1659.3	9971.8	1656.3	9986.5	1656.1	10000.0
GR	1656.0	10015.5	1659.6	10024.2	1659.5	10033.7	1659.5	10048.8	1658.6	10052.9
GR	1661.0	10066.0	1662.8	10083.8	1666.8	10115.0	1668.1	10127.5	1669.5	10151.3
GR	1671.0	10179.6								
NC	0.055	0.055	0.040	0.1	0.3					
ET				9.1				10120.0	9950.0	10060.0
X1	8.155	26	9985.1	10049.3	495	515	505			
GR	1669.1	9792.2	1669.6	9838.1	1669.4	9875.3	1667.5	9907.8	1664.3	9938.9
GR	1661.9	9970.7	1661.9	9985.1	1659.6	9990.3	1659.7	10000.0	1659.7	10010.9
GR	1660.4	10017.3	1659.8	10019.7	1659.8	10030.3	1661.4	10034.4	1662.8	10049.3
GR	1663.3	10069.3	1664.4	10084.3	1666.0	10098.1	1666.8	10109.2	1667.1	10118.5
GR	1666.9	10131.9	1665.4	10150.2	1660.0	10190.0	1667.0	10250.0	1662.0	10285.0
GR	1668.0	10355.0								
ET				9.1					9960.0	10050.0
X1	8.250	19	9975.5	10034.1	500	500	500			
GR	1672.9	9862.2	1672.9	9892.2	1672.6	9910.6	1670.0	9937.3	1667.7	9961.3
GR	1666.2	9975.5	1662.3	9987.7	1662.3	10000.0	1662.2	10011.2	1662.7	10021.7
GR	1666.0	10034.1	1666.7	10049.5	1666.7	10067.2	1668.7	10083.6	1669.7	10102.3
GR	1670.7	10115.8	1672.6	10137.3	1672.9	10147.3	1672.6	10178.9		

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ET				9.1					9959.0	10075.0
X1	8.346	25	9968.1	10074.2	515	505	505			
GR	1679.1	9828.0	1678.8	9871.6	1678.0	9899.0	1677.8	9917.4	1676.8	9938.3
GR	1672.2	9968.1	1665.7	9990.4	1665.9	10000.0	1665.9	10017.7	1666.5	10022.5
GR	1667.6	10031.6	1667.6	10036.7	1668.1	10042.3	1668.1	10050.3	1669.3	10056.0
GR	1669.4	10074.2	1672.0	10093.4	1672.6	10103.3	1672.8	10117.4	1671.8	10124.2
GR	1672.7	10146.5	1673.6	10172.1	1675.2	10195.0	1675.7	10208.8	1676.1	10228.2
ET				9.1					9960.0	10050.0
X1	8.438	25	9965.3	10038.9	495	475	485			
GR	1682.3	9818.4	1682.4	9853.5	1681.7	9878.6	1680.2	9895.6	1676.8	9919.1
GR	1675.0	9934.5	1674.1	9951.1	1672.8	9965.3	1670.0	9972.8	1670.2	9985.5
GR	1669.6	9991.5	1669.5	10000.0	1669.5	10024.7	1672.5	10038.9	1672.3	10056.0
GR	1673.1	10067.3	1674.3	10088.5	1675.7	10105.8	1676.9	10124.6	1677.7	10144.1
GR	1678.2	10170.4	1678.5	10193.2	1678.9	10213.6	1679.3	10231.7	1680.1	10264.5

QT	3	5700	5700	5700						
ET				9.1					9955.0	10065.0
X1	8.530	36	9964.3	10063.7	495	485	485			
GR	1685.6	9779.3	1684.7	9810.9	1682.4	9826.0	1682.6	9839.6	1681.5	9856.9
GR	1679.6	9870.4	1677.6	9890.9	1676.2	9905.2	1677.5	9912.5	1677.8	9925.2
GR	1678.0	9936.3	1676.9	9964.3	1674.3	9984.5	1672.0	9991.5	1672.0	10000.0
GR	1672.0	10013.2	1673.4	10017.6	1673.2	10031.2	1674.9	10040.1	1674.6	10055.0
GR	1676.0	10063.7	1674.1	10077.4	1676.6	10084.9	1676.9	10100.0	1677.2	10121.2
GR	1677.8	10139.8	1677.1	10145.1	1679.3	10164.9	1680.5	10187.0	1680.9	10203.2
GR	1680.9	10224.1	1680.5	10248.8	1681.3	10293.3	1683.2	10320.3	1684.2	10339.5
GR	1684.6	10365.0								

ET				9.1					9900.0	10060.0
X1	8.626	25	9974.6	10040.3	515	495	505			
GR	1682.8	9831.0	1682.3	9862.9	1681.4	9882.7	1679.6	9899.9	1676.7	9918.6
GR	1680.0	9933.9	1680.9	9946.8	1681.1	9964.1	1680.2	9974.6	1674.3	9994.4
GR	1674.3	10000.0	1674.4	10004.5	1676.4	10020.5	1676.9	10033.0	1678.5	10040.3
GR	1678.8	10058.6	1683.9	10078.7	1686.3	10090.0	1687.7	10102.9	1687.7	10120.5
GR	1687.9	10134.0	1688.4	10147.2	1689.0	10174.3	1689.3	10198.1	1689.4	10206.2

NC	0.050	0.055	0.040	0.1	0.3					
ET		7.1		9.1				9760.0	9880.0	10041.0
X1	8.722	23	9969.2	10040.0	465	505	505			
GR	1688.0	9530.0	1686.0	9580.0	1686.0	9640.0	1684.0	9665.0	1686.0	9705.0
GR	1686.9	9755.5	1684.9	9797.5	1683.9	9838.2	1681.6	9862.0	1682.1	9882.3
GR	1681.3	9911.5	1681.1	9928.6	1681.8	9944.9	1682.4	9964.2	1682.4	9969.2
GR	1678.1	9987.9	1678.2	10000.0	1678.2	10010.9	1681.2	10018.5	1693.5	10040.0
GR	1693.5	10052.7	1693.5	10067.3	1692.8	10089.0				

NC	0.055	0.055	0.040	0.1	0.3					
ET		7.1		9.1				9820.0	9946.0	10050.0
X1	8.817	30	9946.7	10042.9	490	510	510			
GR	1692.0	9620.0	1691.0	9665.0	1691.5	9700.0	1691.2	9760.0	1692.0	9800.0
GR	1692.1	9819.8	1691.7	9859.1	1688.3	9889.1	1685.7	9909.0	1684.8	9931.1
GR	1684.4	9946.7	1683.3	9958.9	1683.1	9970.7	1681.6	9983.7	1681.7	10000.0
GR	1681.8	10011.5	1683.1	10035.3	1684.8	10042.9	1685.8	10060.6	1685.8	10068.2
GR	1685.1	10083.7	1683.3	10091.8	1685.3	10103.7	1686.4	10113.8	1687.8	10129.8

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GR	1689.6	10148.1	1695.6	10173.8	1697.0	10185.9	1697.5	10193.9	1697.7	10218.2
ET		7.1		9.1				10164.0	9950.0	10070.0
X1	8.910	35	9965.2	10021.2	490	500	490			
GR	1697.2	9702.7	1696.9	9748.0	1695.4	9779.7	1694.3	9808.2	1693.4	9835.9
GR	1691.7	9851.5	1691.0	9876.5	1689.8	9895.8	1690.1	9905.4	1690.0	9924.3
GR	1689.1	9948.8	1688.2	9965.2	1685.7	9981.9	1684.9	10000.0	1684.9	10012.9
GR	1687.5	10021.2	1687.6	10033.6	1687.1	10041.3	1687.1	10053.7	1688.9	10073.3
GR	1689.4	10101.7	1691.0	10114.6	1692.2	10143.8	1692.7	10164.0	1692.6	10181.4
GR	1691.9	10199.0	1689.8	10218.4	1690.4	10224.0	1690.4	10249.3	1691.0	10261.0
GR	1692.2	10289.4	1693.6	10314.9	1695.3	10338.9	1698.4	10377.3	1700.5	10415.0

NC	0.055	0.050	0.040	0.1	0.3					
ET		7.1		9.1				10273.9	9975.0	10125.0
X1	9.000	38	9975.8	10030.4	485	465	475			
GR	1701.0	9825.8	1701.3	9887.0	1701.2	9933.3	1700.6	9957.6	1697.5	9975.8
GR	1687.3	9990.0	1687.4	10000.0	1687.3	10009.7	1689.3	10016.8	1690.9	10030.4
GR	1690.4	10047.7	1690.5	10064.3	1689.3	10069.7	1689.9	10076.3	1689.9	10094.6
GR	1690.1	10110.4	1689.7	10116.9	1690.1	10125.8	1690.1	10132.0	1691.0	10144.4
GR	1691.6	10175.4	1692.5	10188.8	1692.7	10215.5	1694.3	10230.6	1695.5	10244.3
GR	1696.3	10257.7	1696.7	10273.9	1696.6	10296.3	1696.3	10309.8	1696.6	10321.3
GR	1696.6	10347.2	1696.5	10361.7	1695.0	10383.0	1694.8	10391.8	1696.4	10416.3
GR	1698.4	10441.1	1699.9	10475.3	1700.2	10491.9				

ET		7.1		9.1				10170.0	9949.0	10080.0
X1	9.100	37	9949.5	10064.2	540	520	530			
GR	1700.9	9829.7	1701.1	9873.3	1700.5	9911.2	1699.7	9931.0	1697.8	9949.5
GR	1693.6	9975.7	1693.3	9984.6	1690.7	9991.7	1690.9	10000.0	1690.9	10012.0
GR	1691.9	10019.7	1691.8	10041.0	1693.8	10052.1	1694.1	10064.2	1693.0	10074.5
GR	1694.4	10087.5	1695.0	10097.5	1694.7	10119.0	1694.9	10124.5	1695.1	10155.1
GR	1694.9	10171.3	1694.9	10189.2	1695.0	10217.3	1694.9	10234.6	1695.4	10251.2
GR	1695.9	10276.9	1695.7	10296.4	1695.9	10318.3	1696.2	10327.0	1696.5	10355.8
GR	1697.1	10383.8	1698.3	10431.3	1698.9	10462.9	1698.7	10473.9	1699.9	10493.0
GR	1703.0	10528.7	1703.8	10551.4						

ET		7.1		9.1			9870.0		9970.0	10073.0
X1	9.192	29	9979.0	10072.1	505	475	485			
GR	1704.2	9663.8	1704.4	9681.8	1703.5	9702.4	1701.4	9737.1	1700.3	9770.5
GR	1697.5	9789.4	1696.1	9797.8	1697.3	9803.6	1698.9	9817.6	1699.4	9832.9
GR	1698.8	9847.6	1699.6	9868.8	1699.5	9889.5	1699.1	9914.4	1696.6	9934.1
GR	1696.8	9952.2	1696.8	9979.0	1693.8	9990.9	1693.8	10000.0	1694.2	10011.2
GR	1694.7	10018.4	1695.4	10035.2	1695.9	10061.1	1696.8	10072.1	1698.2	10088.3
GR	1704.1	10115.9	1707.7	10134.5	1708.1	10148.7	1707.1	10166.3		

NC	0.050	0.055	0.040	0.1	0.3				9830.0	10017.0
ET				9.1						
X1	9.286	34	9945.2	10016.4	495	515	505			
GR	1706.7	9482.2	1706.4	9528.7	1705.5	9553.3	1703.9	9595.2	1702.8	9629.3
GR	1702.4	9649.8	1701.7	9654.8	1702.4	9660.0	1703.0	9687.4	1703.6	9719.2
GR	1702.9	9748.4	1700.9	9770.8	1699.8	9785.2	1701.6	9801.2	1701.7	9814.5
GR	1700.9	9824.6	1701.2	9830.5	1699.9	9867.2	1698.6	9878.6	1698.0	9891.4
GR	1700.7	9907.6	1701.1	9924.5	1701.4	9945.2	1701.0	9959.5	1700.5	9969.2
GR	1697.4	9980.4	1697.0	10000.0	1696.7	10009.7	1708.0	10016.4	1709.0	10023.7
GR	1710.5	10042.5	1712.2	10059.2	1712.5	10074.9	1712.4	10097.4		

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NC	0.050	0.050	0.040	0.1	0.3					
ET				9.1					9870.0	10130.0
X1	9.389	24	9956.2	10037.3	445	555	545			
GR	1708.2	9681.9	1708.3	9722.0	1707.3	9768.7	1705.9	9801.9	1705.3	9818.8
GR	1704.8	9842.1	1705.8	9870.8	1706.3	9898.8	1706.3	9910.1	1705.7	9934.6
GR	1704.7	9956.2	1700.4	9979.9	1700.5	10000.0	1701.0	10022.8	1704.5	10037.3
GR	1704.6	10052.0	1704.1	10072.0	1702.1	10086.8	1704.3	10097.9	1703.1	10131.8
GR	1707.5	10162.2	1709.1	10177.9	1709.7	10192.6	1710.3	10226.3		
NC	0.050	0.055	0.040	0.1	0.3					
ET				9.1					9950.0	10120.0
X1	9.481	34	9970.2	10046.4	505	415	485			
GR	1716.2	9857.6	1716.2	9885.5	1708.2	9912.1	1707.6	9925.2	1707.3	9934.5
GR	1705.6	9950.9	1706.9	9959.2	1707.1	9970.2	1705.7	9984.7	1703.6	9992.4
GR	1703.7	10000.0	1703.6	10008.7	1704.1	10012.2	1704.4	10031.9	1707.6	10046.4
GR	1708.2	10055.6	1708.4	10086.6	1709.4	10107.4	1709.7	10126.0	1709.5	10142.9
GR	1709.1	10166.9	1708.1	10199.7	1707.0	10214.6	1707.5	10225.3	1708.5	10240.2
GR	1709.2	10254.6	1708.9	10283.9	1708.1	10298.9	1708.9	10307.6	1709.1	10321.8
GR	1709.0	10332.9	1709.9	10358.5	1711.2	10390.7	1711.2	10415.8		
NC	0.050	0.050	0.040	0.1	0.3					
ET		7.1		9.1				9903.2	10155.0	9918.0
X1	9.575	37	9919.0	10059.7	515	475	495			10110.0
GR	1721.6	9708.3	1720.5	9731.3	1716.7	9767.3	1715.0	9793.5	1712.0	9826.5
GR	1712.6	9834.6	1712.2	9859.1	1711.6	9881.8	1711.3	9903.2	1710.3	9919.0
GR	1707.4	9935.1	1709.3	9940.2	1706.3	9952.4	1708.6	9970.0	1707.3	9986.1
GR	1707.3	10000.0	1707.0	10017.3	1709.8	10029.9	1710.1	10044.9	1708.8	10053.1
GR	1710.2	10059.7	1711.1	10092.2	1712.1	10116.5	1712.8	10138.7	1713.2	10159.5
GR	1713.8	10193.2	1713.6	10211.5	1714.2	10218.9	1713.4	10239.7	1714.6	10247.3
GR	1713.5	10253.5	1713.8	10267.9	1714.0	10293.9	1713.7	10306.5	1713.9	10326.2
GR	1715.1	10356.2	1715.6	10370.6						
NH	4	0.055	9977.1	0.040	10037.9	0.045	10107.7	0.050	10459.3	
ET		7.1		9.1				10256.8	9970.0	10120.0
X1	9.672	31	9977.1	10107.7	520	470	510			
GR	1721.2	9885.6	1720.4	9922.4	1717.3	9952.3	1714.1	9964.5	1715.1	9977.1
GR	1709.2	9989.2	1709.4	10000.0	1709.7	10013.7	1712.5	10025.8	1713.2	10037.9
GR	1712.7	10063.9	1711.4	10070.8	1711.3	10087.0	1713.1	10107.7	1713.1	10134.6
GR	1713.2	10152.8	1713.6	10169.9	1713.3	10187.0	1714.4	10198.7	1715.2	10228.4
GR	1715.6	10250.1	1716.8	10256.8	1716.1	10262.8	1716.3	10282.1	1715.9	10306.7
GR	1716.0	10319.0	1715.8	10347.3	1715.6	10380.4	1715.6	10404.0	1716.1	10430.8
GR	1716.2	10459.3								
NC	0.050	0.055	0.040	0.1	0.3					
ET		7.1		9.1				10203.2	9970.0	10070.0
X1	9.761	26	9976.4	10038.9	480	440	470			
GR	1725.7	9796.5	1724.6	9845.1	1723.2	9875.4	1722.2	9899.1	1720.3	9915.0
GR	1720.7	9928.1	1719.4	9938.3	1716.1	9948.7	1714.2	9958.5	1715.7	9965.4
GR	1715.5	9976.4	1712.8	9990.1	1712.9	10000.0	1713.1	10011.7	1713.6	10031.7
GR	1715.1	10038.9	1717.4	10077.4	1718.1	10105.8	1718.5	10126.6	1718.3	10154.8
GR	1718.0	10175.4	1718.1	10203.2	1718.5	10242.8	1718.9	10266.3	1718.9	10284.6
GR	1719.5	10330.0								

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NC	0.055	0.050	0.040	0.1	0.3					
ET				9.1					9920.0	10100.0
X1	9.854	29	9936.0	10072.4	480	580	490			
GR	1726.8	9774.5	1726.7	9802.2	1725.8	9828.2	1724.0	9856.9	1722.2	9891.6
GR	1721.3	9900.5	1722.9	9909.5	1723.3	9936.0	1718.9	9957.3	1718.3	9965.9
GR	1718.0	9988.5	1717.0	9997.0	1717.0	10000.0	1716.7	10013.3	1716.7	10013.3
GR	1718.1	10024.7	1720.1	10044.9	1722.1	10072.4	1722.0	10090.1	1720.3	10120.0
GR	1719.7	10137.9	1721.3	10184.8	1724.9	10212.8	1726.9	10229.3	1727.4	10243.7
GR	1727.1	10259.0	1727.8	10271.9	1727.9	10287.8	1728.0	10321.0		
ET		7.1		9.1				10143.6	9973.0	10143.0

\*\*\* VULTURE MINE ROAD CROSSES POWERLINE WASH AT MILE 9.90 \*\*\*

X1	9.949	33	9973.8	10067.0	500	500	500			
GR	1730.7	9781.5	1730.6	9844.6	1730.3	9896.1	1728.9	9933.8	1727.5	9951.3
GR	1723.6	9973.8	1719.0	9983.7	1719.2	10000.0	1719.7	10004.1	1720.2	10015.1
GR	1719.5	10023.0	1719.3	10031.5	1720.9	10039.0	1720.8	10048.4	1722.6	10055.3
GR	1722.7	10067.0	1721.8	10080.2	1722.0	10089.3	1720.9	10095.1	1722.6	10107.0
GR	1723.4	10143.6	1723.0	10155.9	1723.3	10164.9	1722.5	10189.4	1722.8	10204.5
GR	1723.1	10222.1	1725.4	10239.7	1726.9	10267.8	1727.5	10282.3	1726.9	10298.3
GR	1728.8	10309.4	1729.2	10320.0	1729.7	10347.7				

NC	0.050	0.055	0.040	0.1	0.3					
ET				9.1					9900.0	10053.0
X1	10.045	24	9978.8	10025.3	485	515	505			
GR	1732.4	9680.7	1731.6	9734.4	1730.6	9758.2	1727.0	9800.0	1727.2	9808.8
GR	1726.9	9827.4	1726.6	9863.1	1725.9	9896.4	1726.2	9906.2	1726.6	9916.6
GR	1725.7	9928.6	1726.2	9936.2	1726.2	9943.3	1725.4	9954.1	1725.8	9961.2
GR	1726.0	9978.8	1722.4	9989.1	1722.2	10000.0	1722.2	10016.0	1724.8	10025.3
GR	1724.2	10039.2	1734.1	10069.3	1734.3	10084.4	1733.9	10114.9		

ET		7.1		9.1				9858.2	10151.6	9910.0
X1	10.138	37	9964.5	10111.0	495	495	495			10125.0
GR	1733.4	9750.1	1733.5	9763.7	1731.1	9805.9	1728.4	9828.5	1728.3	9834.8
GR	1729.1	9839.6	1729.6	9858.2	1729.7	9883.6	1728.8	9892.5	1730.0	9906.0
GR	1730.5	9940.3	1730.3	9964.5	1729.6	9983.7	1725.9	9992.8	1725.6	10000.0
GR	1725.8	10011.2	1726.6	10016.8	1727.1	10038.5	1728.3	10048.0	1729.0	10064.4
GR	1728.8	10075.8	1725.6	10086.1	1726.8	10094.4	1726.3	10103.3	1728.6	10111.0
GR	1728.9	10134.2	1728.6	10143.3	1730.1	10151.6	1731.7	10182.1	1730.4	10187.7
GR	1731.3	10198.8	1730.9	10205.2	1732.4	10214.1	1734.1	10232.4	1735.7	10259.5
GR	1736.9	10292.6	1737.8	10333.9						

ET			9.1						9890.0	10040.0
X1	10.236	28	9963.9	10035.0	515	515	515			
GR	1739.4	9635.0	1738.9	9682.0	1737.6	9715.1	1736.4	9729.3	1735.4	9738.9
GR	1736.5	9755.3	1735.7	9777.0	1733.9	9814.2	1731.6	9834.5	1732.4	9840.9
GR	1732.6	9863.2	1731.7	9877.8	1732.4	9891.2	1732.1	9929.1	1731.7	9935.0
GR	1732.2	9943.6	1731.8	9963.9	1729.7	9973.1	1729.5	10000.0	1729.4	10026.1
GR	1732.1	10035.0	1730.2	10041.7	1732.1	10048.5	1733.1	10073.9	1737.9	10102.2
GR	1740.0	10117.4	1741.2	10135.5	1741.6	10164.8				

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ET		7.1		9.1			9780.0		9875.0	10144.0
X1	10.331	40	9931.3	10124.3	510	500	500			
GR	1738.3	9479.8	1737.8	9542.2	1736.8	9607.2	1736.5	9636.6	1735.9	9676.0
GR	1735.4	9682.0	1735.8	9687.0	1735.6	9714.9	1736.0	9734.8	1736.1	9758.6
GR	1736.1	9784.7	1735.7	9796.8	1735.8	9810.5	1734.4	9819.5	1735.8	9824.7
GR	1735.4	9855.6	1735.9	9865.6	1736.0	9893.4	1736.4	9911.0	1736.5	9931.3
GR	1736.3	9957.0	1735.4	9975.6	1731.6	9988.3	1731.9	10000.0	1732.0	10013.8
GR	1733.7	10025.8	1734.5	10037.8	1735.6	10049.8	1734.7	10058.0	1735.5	10075.1
GR	1735.5	10097.1	1732.5	10105.3	1735.5	10114.2	1735.7	10124.3	1740.3	10159.4
GR	1741.3	10173.3	1742.0	10192.3	1742.4	10213.1	1741.6	10241.1	1743.2	10283.2

ET 9.1 9969.0 10039.0

\*\*\* XSECTN 10.424 IS THE UPSTREAM LIMIT OF POWERLINE WASH STUDY \*\*\*

X1	10.424	27	9970.0	10038.0	500	480	490			
GR	1741.5	9658.4	1741.8	9684.0	1741.2	9709.6	1740.0	9741.3	1739.6	9754.1
GR	1739.7	9777.0	1739.3	9809.0	1739.5	9823.8	1739.7	9849.2	1738.3	9863.8
GR	1738.6	9877.1	1738.7	9890.5	1739.2	9899.5	1739.2	9920.5	1739.4	9948.9
GR	1738.3	9970.0	1735.6	9977.2	1735.2	10000.0	1734.9	10029.3	1738.3	10038.0
GR	1738.4	10065.9	1737.0	10073.2	1739.1	10086.9	1741.8	10112.7	1742.4	10129.3
GR	1742.5	10154.7	1742.1	10181.1						

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

\*PROF 1

0  
CCHV= .100 CEHV= .300  
1490 NH CARD USED  
\*SECNO 1.113

3265 DIVIDED FLOW

\*\*\* XSECTN 1.113 IS THE UPSTREAM LIMIT OF WOOD/PATEL STAR WASH STUDY AND THE DOWNSTREAM LIMIT OF STANLEY CONSULTANTS POWERLINE WASH STUDY. GR AND ENCROACHMENT STATIONS FOR XSECTN 1.113 ARE FROM THE WOOD/PATEL STUDY \*\*\*

1.113	4.18	1446.38	.00	1446.38	1446.58	.20	.00	.00	1446.70
5100.0	8.0	614.7	4477.3	10.3	128.4	1330.8	.0	.0	1446.20
.00	.78	4.79	3.36	.055	.040	.050	.000	1442.20	9828.14
.011391	0.	0.	0.	0	0	0	.00	1582.61	11476.32

FLOW DISTRIBUTION FOR SECNO= 1.11 CWSEL= 1446.38

STA=	9828.	9902.	10063.	10242.	10352.	10400.	10481.	10532.	10581.	10624.	10665.	10748.	10851.
PER Q=	.2	12.1	3.0	4.7	4.2	4.1	3.1	3.7	5.4	5.5	4.3	4.3	
AREA=	10.3	128.4	78.0	85.1	58.4	71.7	50.5	55.5	65.3	65.4	72.4	80.5	
VEL=	.8	4.8	2.0	2.8	3.6	2.9	3.1	3.4	4.2	4.3	3.0	2.7	
DEPTH=	.1	1.3	.4	.8	1.2	.9	1.0	1.1	1.5	1.6	.9	.8	
STA=	10851.	10953.	10974.	11011.	11087.	11128.	11186.	11239.	11341.	11367.	11458.	11476.	
PER Q=	5.6	4.0	3.7	5.3	4.6	7.0	4.7	3.1	3.4	3.7	.4		
AREA=	87.7	41.2	49.3	82.0	57.8	86.1	65.7	63.9	37.5	65.7	11.0		
VEL=	3.2	5.0	3.8	3.3	4.0	4.1	3.6	2.5	4.6	2.9	2.0		
DEPTH=	.9	2.0	1.3	1.1	1.4	1.5	1.2	.6	1.5	.7	.6		

1490 NH CARD USED  
\*SECNO 1.203

3265 DIVIDED FLOW

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.55

1.203	5.09	1449.79	.00	.00	1449.91	.12	3.33	.01	1449.00
5100.0	36.3	743.6	4320.1	21.5	201.5	1625.4	18.1	17.0	1450.00

.05 1.69 3.69 2.66 .055 .045 .049 .000 1444.70 9938.79  
 .004741 485. 475. 475. 5 0 0 .00 1531.76 11513.02

FLOW DISTRIBUTION FOR SECNO= 1.20 CWSEL= 1449.79

STA= 9939. 9965. 10065. 10289. 10413. 10462. 10517. 10577. 10651. 10733. 10850. 10923. 10997.  
 PER Q= .7 14.6 5.3 6.5 4.1 5.1 5.0 5.2 4.5 3.2 3.7 5.8  
 AREA= 21.5 201.5 145.5 146.0 75.5 90.6 93.3 103.1 98.4 93.0 84.0 109.6  
 VEL= 1.7 3.7 1.8 2.3 2.7 2.9 2.7 2.6 2.3 1.8 2.3 2.7  
 DEPTH= .8 2.1 .7 1.2 1.5 1.6 1.5 1.4 1.2 .8 1.1 1.5

STA= 10997. 11037. 11056. 11073. 11203. 11383. 11434. 11464. 11513.  
 PER Q= 3.3 4.6 4.5 3.5 7.8 4.8 4.3 3.5  
 AREA= 62.2 56.6 53.0 97.1 113.1 77.1 59.2 68.1  
 VEL= 2.7 4.2 4.3 1.9 3.5 3.2 3.7 2.6  
 DEPTH= 1.5 2.9 3.1 .7 .6 1.5 2.0 1.4

1490 NH CARD USED  
 \*SECNO 1.300

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 9800.0 11487.0 TYPE= 1 TARGET= 1687.000  
 1.300 4.86 1452.56 .00 .00 1452.71 .16 2.79 .01 1452.10  
 5100.0 771.7 618.9 3709.4 235.3 146.9 1266.2 37.6 33.7 1452.00  
 .09 3.28 4.21 2.93 .055 .040 .050 .000 1447.70 9800.00  
 .007086 510. 510. 480. 4 0 0 .00 1470.92 11450.49

FLOW DISTRIBUTION FOR SECNO= 1.30 CWSEL= 1452.56

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

STA= 9800. 9849. 9889. 9908. 9952. 10044. 10150. 10216. 10233. 10302. 10350. 10388. 10451.  
 PER Q= 4.5 4.0 5.1 1.6 12.1 4.5 5.0 3.6 4.0 3.4 4.9 3.1  
 AREA= 76.7 64.9 56.0 37.7 146.9 96.3 85.9 41.3 75.1 60.1 66.8 62.8  
 VEL= 3.0 3.1 4.6 2.1 4.2 2.4 3.0 4.4 2.7 2.9 3.7 2.5  
 DEPTH= 1.6 1.6 3.0 .9 1.6 .9 1.3 2.4 1.1 1.3 1.7 1.0

STA= 10451. 10534. 10599. 10681. 10847. 10962. 11224. 11376. 11395. 11417. 11429. 11450.  
 PER Q= 4.7 6.5 4.3 3.2 3.0 3.4 5.2 3.8 5.8 3.2 1.1  
 AREA= 89.9 100.1 85.4 81.9 78.0 77.8 105.6 44.7 59.8 33.6 21.0  
 VEL= 2.6 3.3 2.6 2.0 2.0 2.3 2.5 4.4 4.9 4.9 2.6  
 DEPTH= 1.1 1.5 1.0 .5 .7 .3 .7 2.3 2.8 2.8 1.0

1490 NH CARD USED  
 \*SECNO 1.400

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 9761.2 11653.9 TYPE= 1 TARGET= -9761.200  
 1.400 4.50 1455.40 .00 .00 1455.53 .13 2.81 .00 1454.30  
 5100.0 1292.6 784.6 3022.8 390.5 221.5 1224.6 57.1 50.2 1454.30  
 .14 3.31 3.54 2.47 .050 .045 .050 .000 1450.90 9761.20  
 .004728 530. 530. 470. 3 0 0 .00 1521.39 11499.02

FLOW DISTRIBUTION FOR SECNO= 1.40 CWSEL= 1455.40

STA= 9761. 9854. 9876. 9925. 9985. 10097. 10181. 10280. 10348. 10416. 10528. 10644. 11089.  
 PER Q= 7.7 5.3 7.5 4.9 15.4 4.6 3.2 3.7 3.8 5.1 3.6 4.2  
 AREA= 126.3 64.5 108.9 90.8 221.5 100.7 86.2 80.8 82.7 120.4 95.7 104.5  
 VEL= 3.1 4.2 3.5 2.7 3.5 2.3 1.9 2.3 2.3 2.2 1.9 2.1  
 DEPTH= 1.4 3.0 2.2 1.5 2.0 1.2 .9 1.2 1.2 1.1 .8 .2

STA= 11089. 11199. 11326. 11363. 11400. 11430. 11446. 11464. 11499.  
 PER Q= 3.6 6.0 4.9 4.0 4.6 3.1 3.2 1.6  
 AREA= 88.6 136.7 75.0 67.6 66.0 42.2 44.0 33.5  
 VEL= 2.1 2.2 3.3 3.0 3.6 3.8 3.8 2.5  
 DEPTH= .8 1.1 2.0 1.8 2.2 2.6 2.5 1.0

1490 NH CARD USED

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

\*SECNO 1.553

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 9400.0 11233.1 TYPE= 1 TARGET= -9400.000  
 1.553 4.23 1458.63 .00 .00 1458.78 .15 3.24 .01 1458.70

5100.0 1902.4 354.6 2843.0 665.5 92.2 900.2 81.6 70.2 1459.40  
 .19 2.86 3.85 3.16 .050 .040 .049 .000 1454.40 9400.00  
 .005763 800. 810. 490. 4 0 0 .00 1431.30 11149.03

FLOW DISTRIBUTION FOR SECNO= 1.55 CWSEL= 1458.63

STA= 9400. 9490. 9530. 9810. 9961. 10037. 10435. 10453. 10481. 10735. 10786. 10800. 10835.  
 PER Q= 10.1 5.7 19.7 1.7 7.0 3.3 6.1 3.2 3.9 5.2 3.7 3.4  
 AREA= 158.4 80.9 370.3 55.8 92.2 106.2 56.3 45.4 97.6 84.2 42.6 55.8  
 VEL= 3.3 3.6 2.7 1.6 3.8 1.6 5.5 3.5 2.0 3.2 4.5 3.1  
 DEPTH= 1.8 2.0 1.3 .4 1.6 .3 3.1 1.6 .4 1.7 2.9 1.6

STA= 10835. 10873. 10896. 10912. 10935. 10944. 11012. 11088. 11149.  
 PER Q= 5.2 3.2 3.3 3.7 3.2 3.2 4.7 .4  
 AREA= 75.7 45.1 40.6 49.4 31.4 63.9 91.3 14.8  
 VEL= 3.5 3.6 4.1 3.8 5.3 2.6 2.6 1.3  
 DEPTH= 2.0 2.0 2.5 2.2 3.6 .9 1.2 .2

1490 NH CARD USED  
 \*SECNO 1.664

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 9550.0 10910.0 TYPE= 1 TARGET= 1360.000  
 1.664 4.32 1462.02 .00 .00 1462.19 .17 3.41 .01 1462.10  
 5200.0 1802.7 314.1 3083.2 573.7 100.4 887.7 101.7 87.1 1461.90  
 .24 3.14 3.13 3.47 .055 .040 .049 .000 1457.70 9550.00  
 .006880 600. 585. 500. 4 0 0 .00 1290.76 10856.17

FLOW DISTRIBUTION FOR SECNO= 1.66 CWSEL= 1462.02

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SECNO	DEPTH	CWSEL	CRISWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

STA= 9550. 9630. 9839. 9963. 10076. 10164. 10175. 10240. 10286. 10475. 10527. 10557. 10574.  
 PER Q= 12.7 20.0 1.9 6.0 4.0 3.9 4.0 3.3 4.3 6.7 3.8 5.1  
 AREA= 177.3 337.7 58.7 100.4 73.7 35.5 70.8 55.1 111.2 95.2 54.1 52.4  
 VEL= 3.7 3.1 1.7 3.1 2.8 5.8 2.9 3.1 2.0 3.7 3.7 5.0  
 DEPTH= 2.2 1.6 .5 1.0 .8 3.1 1.1 1.2 .6 1.8 1.8 3.0

STA= 10574. 10634. 10651. 10689. 10836. 10856.  
 PER Q= 8.7 4.2 8.0 3.2 .0  
 AREA= 116.8 46.2 92.2 81.2 3.3  
 VEL= 3.9 4.8 4.5 2.1 .7  
 DEPTH= 2.0 2.7 2.5 .6 .2

CCHV= .100 CEHV= .300  
 \*SECNO 1.759

3470 ENCROACHMENT STATIONS= 9782.3 10856.9 TYPE= 1 TARGET= -9782.300  
 1.759 4.45 1465.75 .00 .00 1466.02 .27 3.80 .03 1464.70  
 5200.0 306.5 1407.4 3486.1 110.0 272.3 927.4 118.4 99.8 1465.10  
 .27 2.79 5.17 3.76 .055 .040 .050 .000 1461.30 9826.16  
 .008218 500. 500. 510. 5 0 0 .00 887.55 10713.71

FLOW DISTRIBUTION FOR SECNO= 1.76 CWSEL= 1465.75

STA= 9826. 9933. 10075. 10144. 10172. 10307. 10358. 10391. 10413. 10431. 10441. 10450. 10471.  
 PER Q= 5.9 27.1 4.0 3.6 5.3 3.8 3.3 4.1 3.1 3.7 3.0 3.5  
 AREA= 110.0 272.3 74.2 46.5 113.6 63.8 48.5 48.0 36.8 33.9 27.7 42.0  
 VEL= 2.8 5.2 2.8 4.0 2.4 3.1 3.5 4.4 4.5 5.7 5.6 4.3  
 DEPTH= 1.0 1.9 1.1 1.7 .8 1.3 1.5 2.1 2.1 3.2 3.2 2.1

STA= 10471. 10491. 10510. 10524. 10550. 10581. 10650. 10702. 10714.  
 PER Q= 3.7 3.8 3.1 4.6 3.7 7.0 3.5 .1  
 AREA= 43.2 42.5 33.8 54.5 51.2 102.8 60.6 3.8  
 VEL= 4.5 4.6 4.7 4.4 3.8 3.5 3.0 1.3  
 DEPTH= 2.2 2.3 2.3 2.1 1.7 1.5 1.2 .3

1490 NH CARD USED  
 \*SECNO 1.863

3470 ENCROACHMENT STATIONS= 9170.0 10558.7 TYPE= 1 TARGET= -9170.000  
 1.863 3.60 1469.30 .00 .00 1469.47 .17 3.45 .01 1468.70  
 5200.0 2701.0 859.8 1639.1 982.1 180.4 510.8 136.4 111.7 1468.30  
 .32 2.75 4.77 3.21 .052 .040 .055 .000 1465.70 9199.68  
 .005337 520. 550. 520. 4 0 0 .00 1104.09 10303.77

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SECNO	DEPTH	CWSEL	CRISWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

FLOW DISTRIBUTION FOR SECNO= 1.86 CWSEL= 1469.30

STA= 9200. 9280. 9310. 9335. 9390. 9563. 9597. 9628. 9675. 9733. 9778. 9792. 9816.
PER Q= 4.0 3.9 3.0 5.1 4.8 3.1 3.9 4.7 3.2 3.8 3.1 3.2
AREA= 86.8 63.1 50.1 93.6 139.0 57.7 64.0 83.7 73.1 62.8 35.2 45.3
VEL= 2.4 3.2 3.1 2.8 1.8 2.8 3.2 2.9 2.3 3.1 4.5 3.7
DEPTH= 1.1 2.1 2.0 1.7 .8 1.7 2.1 1.8 1.2 1.4 2.6 1.9

STA= 9816. 9860. 9954. 10031. 10092. 10158. 10196. 10227. 10261. 10304.
PER Q= 3.4 2.7 16.5 3.8 6.2 6.9 6.5 5.8 2.2
AREA= 59.6 68.0 180.4 82.0 113.7 96.6 86.9 83.3 48.2
VEL= 3.0 2.1 4.8 2.4 2.8 3.7 3.9 3.6 2.4
DEPTH= 1.3 .7 2.3 1.3 1.7 2.6 2.8 2.5 1.1

CCHV= .100 CEHV= .300

\*SECNO 1.964
1.964 4.13 1471.83 .00 .00 1472.02 .19 2.54 .01 1470.30
5200.0 2257.8 773.4 2168.8 781.7 132.5 752.0 155.4 123.5 1470.90
.36 2.89 5.84 2.88 .055 .040 .055 .000 1467.70 9519.05
.004831 485. 535. 505. 3 0 0 .00 963.24 10482.28

FLOW DISTRIBUTION FOR SECNO= 1.96 CWSEL= 1471.83

STA= 9519. 9560. 9576. 9611. 9640. 9677. 9797. 9829. 9890. 9949. 9983. 10021. 10083.
PER Q= 3.3 3.6 6.4 4.5 3.7 3.7 3.7 6.8 5.2 2.5 14.9 5.0
AREA= 61.9 48.1 92.4 68.6 68.0 105.2 64.2 119.9 100.5 52.7 132.5 97.8
VEL= 2.8 3.9 3.6 3.4 2.8 1.8 3.0 3.0 2.7 2.5 5.8 2.6
DEPTH= 1.5 3.0 2.6 2.4 1.8 .9 2.0 2.0 1.7 1.5 3.5 1.6

STA= 10083. 10108. 10127. 10155. 10201. 10318. 10396. 10412. 10445. 10482.
PER Q= 4.2 3.3 4.5 3.2 3.6 10.2 3.1 3.7 .9
AREA= 63.2 47.9 69.4 68.2 99.9 168.9 43.7 64.9 28.2
VEL= 3.4 3.6 3.4 2.5 1.9 3.1 3.7 3.0 1.7
DEPTH= 2.5 2.6 2.4 1.5 .9 2.2 2.7 2.0 .8

\*SECNO 2.059
2.059 3.88 1474.48 .00 .00 1474.71 .23 2.68 .01 1472.90
5200.0 3297.6 791.7 1110.7 1013.4 129.1 345.7 173.6 133.9 1473.00
.40 3.25 6.13 3.21 .055 .040 .055 .000 1470.60 9368.12
.005955 490. 500. 520. 2 0 0 .00 847.56 10215.68

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SECNO DEPTH CWSEL CRIWS WSELK EG HV HL OLOSS L-BANK ELEV
Q QLOB QCH QROB ALOB ACH AROB VOL TWA R-BANK ELEV
TIME VLOB VCH VROB XNL XNCH XNR WTN ELMIN SSTA
SLOPE XLOBL XLCH XLOBR ITRIAL IDC ICONT CORAR TOPWID ENDST

FLOW DISTRIBUTION FOR SECNO= 2.06 CWSEL= 1474.48

STA= 9368. 9503. 9539. 9573. 9605. 9666. 9777. 9831. 9849. 9868. 9893. 9908. 9938.
PER Q= 5.3 6.3 4.2 3.0 3.3 6.3 8.3 4.2 4.1 5.3 3.4 5.1
AREA= 118.2 87.1 66.8 53.7 72.8 131.3 121.7 51.9 51.8 68.2 43.4 70.9
VEL= 2.3 3.8 3.3 3.0 2.4 2.5 3.6 4.2 4.1 4.1 4.1 3.7
DEPTH= .9 2.4 2.0 1.7 1.2 1.2 2.2 2.9 2.8 2.7 2.8 2.4

STA= 9938. 9981. 10022. 10056. 10109. 10136. 10170. 10216.
PER Q= 4.5 15.2 3.2 6.3 4.3 5.2 2.5
AREA= 75.6 129.1 56.7 101.3 61.9 75.5 50.4
VEL= 3.1 6.1 2.9 3.2 3.6 3.6 2.6
DEPTH= 1.8 3.2 1.6 1.9 2.2 2.2 1.1

\*SECNO 2.163

3265 DIVIDED FLOW

2.163 3.95 1477.25 .00 .00 1477.46 .21 2.75 .00 1475.70
5200.0 1909.4 1174.4 2116.2 638.1 223.9 655.7 191.5 143.5 1475.30
.44 2.99 5.24 3.23 .055 .040 .055 .000 1473.30 9494.74
.004704 500. 550. 540. 2 0 0 .00 775.26 10357.00

FLOW DISTRIBUTION FOR SECNO= 2.16 CWSEL= 1477.25

STA= 9495. 9588. 9643. 9815. 9847. 9866. 9887. 9921. 9972. 10048. 10087. 10139. 10217.
PER Q= 3.4 3.8 3.6 5.8 4.8 5.4 5.8 4.1 22.6 3.6 3.2 9.0
AREA= 89.8 81.4 82.1 84.6 61.3 69.1 86.3 83.6 223.9 69.1 72.1 155.3
VEL= 2.0 2.4 2.3 3.5 4.1 4.1 3.5 2.6 5.2 2.7 2.3 3.0
DEPTH= 1.0 1.5 .5 2.7 3.2 3.3 2.5 1.6 3.0 1.8 1.4 2.0

STA= 10217. 10237. 10273. 10296. 10316. 10344. 10357.
PER Q= 4.2 7.8 5.0 4.0 3.6 .3
AREA= 57.5 106.5 67.9 56.2 60.0 11.1
VEL= 3.8 3.8 3.8 3.7 3.1 1.6
DEPTH= 3.0 3.0 3.0 2.9 2.2 .8

\*SECNO 2.259

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SECNO DEPTH CWSEL CRIWS WSELK EG HV HL OLOSS L-BANK ELEV
Q QLOB QCH QROB ALOB ACH AROB VOL TWA R-BANK ELEV
TIME VLOB VCH VROB XNL XNCH XNR WTN ELMIN SSTA
SLOPE XLOBL XLCH XLOBR ITRIAL IDC ICONT CORAR TOPWID ENDST

3265 DIVIDED FLOW

2.259	4.10	1479.80	.00	.00	1480.06	.26	2.59	.02	1478.20
5200.0	1805.8	858.3	2535.9	525.7	135.3	706.3	207.9	152.0	1477.80
.47	3.44	6.34	3.59	.055	.040	.055	.000	1475.70	9622.50
.005792	495.	505.	495.	2	0	0	.00	723.27	10358.10

FLOW DISTRIBUTION FOR SECNO= 2.26 CWSEL= 1479.80

STA=	9623.	9827.	9846.	9865.	9880.	9912.	9946.	9980.	10020.	10057.	10088.	10110.	10166.
PER Q=	5.8	4.6	4.7	4.1	6.5	5.2	3.8	16.5	4.6	4.9	3.8	3.0	3.0
AREA=	139.4	56.3	56.4	48.5	85.4	76.3	63.3	135.3	74.0	71.3	52.7	63.9	63.9
VEL=	2.2	4.2	4.4	4.4	3.9	3.5	3.1	6.3	3.3	3.6	3.7	2.4	2.4
DEPTH=	.7	3.0	3.1	3.2	2.7	2.3	1.9	3.4	2.0	2.3	2.5	1.1	1.1

STA=	10166.	10230.	10244.	10283.	10301.	10333.	10358.
PER Q=	5.6	4.3	9.4	4.4	5.9	2.8	
AREA=	98.7	48.4	114.3	54.5	79.8	48.5	
VEL=	2.9	4.7	4.3	4.2	3.8	3.0	
DEPTH=	1.5	3.5	3.0	2.9	2.6	1.9	

\*SECNO 2.357

2.357	4.21	1482.51	.00	.00	1482.73	.23	2.67	.00	1480.70
5200.0	1813.3	1070.9	2315.8	520.5	204.8	707.6	224.2	159.9	1480.40
.51	3.48	5.23	3.27	.055	.040	.055	.000	1478.30	9768.98
.004800	505.	515.	505.	2	0	0	.00	629.33	10398.31

FLOW DISTRIBUTION FOR SECNO= 2.36 CWSEL= 1482.51

STA=	9769.	9837.	9865.	9900.	9929.	9947.	9985.	10055.	10086.	10103.	10136.	10231.	10267.
PER Q=	7.4	5.6	7.2	5.5	4.1	5.1	20.6	4.3	3.7	3.4	6.8	6.1	6.1
AREA=	126.2	77.8	99.2	78.8	55.4	83.3	204.8	69.1	50.7	60.1	138.3	91.3	91.3
VEL=	3.0	3.7	3.8	3.6	3.9	3.2	5.2	3.2	3.8	2.9	2.5	3.5	3.5
DEPTH=	1.8	2.8	2.9	2.7	3.0	2.2	2.9	2.3	2.9	1.9	1.5	2.5	2.5

STA=	10267.	10282.	10322.	10346.	10395.	10398.
PER Q=	4.2	9.0	3.9	3.2	.0	
AREA=	50.6	121.0	59.4	66.8	.4	
VEL=	4.3	3.9	3.5	2.5	.4	
DEPTH=	3.5	3.0	2.5	1.4	.1	

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

\*SECNO 2.455

3265 DIVIDED FLOW

2.455	4.25	1485.25	.00	.00	1485.56	.32	2.80	.03	1483.10
5200.0	2441.4	1023.4	1735.2	624.8	152.1	485.9	240.2	167.0	1483.50
.54	3.91	6.73	3.57	.055	.040	.055	.000	1481.00	9714.45
.006110	525.	515.	515.	1	0	0	.00	561.94	10359.31

FLOW DISTRIBUTION FOR SECNO= 2.45 CWSEL= 1485.25

STA=	9714.	9771.	9811.	9831.	9849.	9878.	9898.	9916.	9933.	9980.	10023.	10052.	10085.
PER Q=	3.9	6.9	4.3	3.9	5.7	4.3	5.3	4.6	8.2	19.7	3.6	5.4	5.4
AREA=	73.1	95.1	54.3	49.0	74.9	53.1	60.3	53.0	111.9	152.1	57.4	75.6	75.6
VEL=	2.8	3.8	4.1	4.1	3.9	4.2	4.6	4.5	3.8	6.7	3.3	3.7	3.7
DEPTH=	1.3	2.4	2.7	2.7	2.5	2.8	3.2	3.1	2.4	3.6	1.9	2.3	2.3

STA=	10085.	10108.	10246.	10264.	10278.	10298.	10359.
PER Q=	5.8	5.5	3.6	3.1	3.4	3.0	
AREA=	69.7	90.6	46.4	39.1	47.3	59.9	
VEL=	4.3	3.1	4.0	4.1	3.8	2.6	
DEPTH=	2.9	.7	2.6	2.7	2.4	1.0	

\*SECNO 2.554

2.554	5.31	1487.91	.00	.00	1488.24	.34	2.68	.01	1485.50
5200.0	2755.6	1513.7	930.8	709.7	238.9	276.3	255.0	172.8	1485.70
.58	3.88	6.34	3.37	.055	.040	.055	.000	1482.60	9731.73
.004434	515.	525.	515.	2	0	0	.00	412.94	10144.66

FLOW DISTRIBUTION FOR SECNO= 2.55 CWSEL= 1487.91

STA=	9732.	9765.	9796.	9813.	9848.	9857.	9867.	9892.	9931.	9966.	10023.	10057.	10078.
PER Q=	3.4	7.2	4.7	9.6	3.4	3.7	6.0	9.1	5.9	29.1	4.9	4.2	4.2
AREA=	60.3	97.0	58.9	121.8	37.9	42.1	78.7	122.5	90.5	238.9	79.7	59.9	59.9
VEL=	2.9	3.9	4.2	4.1	4.6	4.6	4.0	3.8	3.4	6.3	3.2	3.6	3.6
DEPTH=	1.8	3.2	3.5	3.4	4.3	4.2	3.3	3.1	2.6	4.1	2.4	2.9	2.9

STA=	10078.	10098.	10133.	10145.
PER Q=	5.3	3.5	.0	
AREA=	67.5	66.4	2.9	
VEL=	4.1	2.7	.7	
DEPTH=	3.4	1.9	.3	

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

\*SECNO 2.649

3470 ENCROACHMENT STATIONS=	9850.0	10350.0	TYPE=	1	TARGET=	500.000				
2.649	6.21	1490.31	.00	.00	1490.70	.38	2.44	.01	1488.00	
5200.0	1508.7	1504.1	2187.1	340.8	223.8	586.5	268.7	177.6	1487.80	
.60	4.43	6.72	3.73	.055	.040	.055	.000	1484.10	9878.46	
.005325	500.	500.	510.	2	0	0	.00	428.09	10306.55	

FLOW DISTRIBUTION FOR SECNO= 2.65 CWSEL= 1490.31

STA=	9878.	9904.	9908.	9915.	9935.	9983.	10040.	10079.	10098.	10127.	10153.	10181.	10227.
PER Q=	6.3	3.4	3.3	5.7	10.3	28.9	7.8	5.1	7.5	6.8	7.0	4.9	
AREA=	79.7	26.7	31.8	67.1	135.5	223.8	105.9	60.7	91.4	83.2	87.0	83.6	
VEL=	4.1	6.7	5.5	4.4	3.9	6.7	3.8	4.3	4.2	4.2	4.2	3.1	
DEPTH=	3.1	6.2	5.0	3.3	2.8	3.9	2.7	3.3	3.2	3.2	3.1	1.8	

STA= 10227. 10294. 10307.

PER Q=	3.0	.0
AREA=	72.0	2.7
VEL=	2.2	.7
DEPTH=	1.1	.2

\*SECNO 2.747

2.747	5.52	1492.92	.00	.00	1493.23	.31	2.53	.01	1490.40	
5200.0	1368.7	1680.3	2151.0	351.6	274.1	694.7	283.1	183.3	1491.20	
.64	3.89	6.13	3.10	.055	.040	.055	.000	1487.40	9855.50	
.004662	535.	515.	485.	2	0	0	.00	561.46	10416.95	

FLOW DISTRIBUTION FOR SECNO= 2.75 CWSEL= 1492.92

STA=	9855.	9887.	9907.	9917.	9952.	9977.	10049.	10107.	10145.	10168.	10203.	10235.	10264.
PER Q=	4.0	6.0	3.3	8.4	4.6	32.3	6.1	5.5	4.4	8.5	6.3	3.9	
AREA=	64.3	71.3	38.6	110.5	66.9	274.1	111.0	88.2	63.1	111.6	88.3	64.4	
VEL=	3.2	4.3	4.5	4.0	3.6	6.1	2.9	3.2	3.6	4.0	3.7	3.1	
DEPTH=	2.0	3.6	3.8	3.1	2.7	3.8	1.9	2.3	2.7	3.2	2.8	2.2	

STA= 10264. 10341. 10395. 10417.

PER Q=	3.6	3.1	.2
AREA=	88.8	70.6	8.8
VEL=	2.1	2.3	1.0
DEPTH=	1.1	1.3	.4

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

\*SECNO 2.846

2.846	5.45	1495.35	.00	.00	1495.66	.31	2.43	.00	1493.50	
5200.0	2999.5	1561.0	639.5	771.0	263.2	236.8	298.5	189.5	1494.00	
.67	3.89	5.93	2.70	.055	.040	.055	.000	1489.90	9710.76	
.004641	545.	525.	485.	2	0	0	.00	483.64	10194.40	

FLOW DISTRIBUTION FOR SECNO= 2.85 CWSEL= 1495.35

STA=	9711.	9751.	9762.	9772.	9785.	9796.	9816.	9852.	9872.	9900.	9928.	9981.	10053.
PER Q=	5.0	3.1	3.6	7.8	4.1	3.5	7.1	4.9	6.4	4.9	7.3	30.0	
AREA=	79.8	38.9	39.1	71.3	46.4	52.3	100.1	64.6	85.3	73.7	119.6	263.2	
VEL=	3.2	4.1	4.8	5.7	4.5	3.5	3.7	4.0	3.9	3.5	3.2	5.9	
DEPTH=	2.0	3.4	4.3	5.4	4.0	2.6	2.9	3.2	3.1	2.6	2.3	3.6	

STA= 10053. 10091. 10126. 10159. 10194.

PER Q=	3.4	4.0	3.5	1.3
AREA=	66.4	70.9	63.8	35.7
VEL=	2.7	2.9	2.9	1.9
DEPTH=	1.8	2.0	2.0	1.0

\*SECNO 2.938

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS=	9630.0	10230.0	TYPE=	1	TARGET=	600.000				
2.938	5.20	1498.10	.00	.00	1498.60	.50	2.88	.06	1496.70	
5300.0	2491.2	2465.1	343.8	609.3	344.4	107.7	311.7	195.0	1496.30	
.70	4.09	7.16	3.19	.055	.040	.055	.000	1492.90	9633.75	
.007514	505.	485.	465.	2	0	0	.00	499.47	10148.37	

FLOW DISTRIBUTION FOR SECNO= 2.94 CWSEL= 1498.10



SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 9690.0 10406.8 TYPE= 1 TARGET= -9690.000  
 3.336 6.78 1511.08 .00 .00 1511.66 .58 3.75 .01 1509.20  
 5300.0 2103.3 3124.7 72.0 571.5 425.4 52.5 363.2 217.7 1509.60  
 .80 3.68 7.35 1.37 .055 .040 .055 .000 1504.30 9690.00  
 .005526 510. 550. 540. 2 0 0 .00 456.03 10198.42

FLOW DISTRIBUTION FOR SECNO= 3.34 CWSEL= 1511.08

STA=	9690.	9710.	9727.	9756.	9777.	9809.	9845.	9881.	9899.	9924.	10020.	10198.
PER Q=	3.5	4.0	6.3	4.1	3.8	5.6	6.2	3.0	3.2	59.0	1.4	
AREA=	50.1	51.0	81.9	57.1	63.1	83.4	89.8	43.8	51.3	425.4	52.5	
VEL=	3.7	4.2	4.1	3.8	3.2	3.6	3.7	3.6	3.3	7.3	1.4	
DEPTH=	2.5	3.0	2.9	2.6	2.0	2.4	2.5	2.4	2.1	4.4	.3	

\*SECNO 3.431

3470 ENCROACHMENT STATIONS= 9870.8 10283.3 TYPE= 1 TARGET= -9870.800  
 3.431 6.06 1514.06 .00 .00 1514.91 .85 3.17 .08 1511.80  
 5300.0 496.7 3047.0 1756.3 125.9 335.9 416.9 374.1 222.1 1512.30  
 .82 3.94 9.07 4.21 .055 .040 .055 .000 1508.00 9909.86  
 .007503 490. 500. 490. 2 0 0 .00 320.81 10230.67

FLOW DISTRIBUTION FOR SECNO= 3.43 CWSEL= 1514.06

STA=	9910.	9957.	9976.	10046.	10087.	10111.	10146.	10172.	10186.	10198.	10231.
PER Q=	5.2	4.2	57.5	4.9	4.3	7.1	6.5	4.7	3.1	2.5	
AREA=	75.9	50.1	335.9	75.1	54.8	87.6	73.9	47.1	35.3	43.1	
VEL=	3.6	4.4	9.1	3.5	4.1	4.3	4.7	5.3	4.6	3.1	
DEPTH=	1.6	2.6	4.8	1.8	2.3	2.5	2.8	3.5	2.8	1.3	

\*SECNO 3.529

3470 ENCROACHMENT STATIONS= 9851.2 10193.1 TYPE= 1 TARGET= 341.899  
 3.529 6.62 1517.22 .00 .00 1517.70 .48 2.75 .04 1514.80  
 5300.0 1337.8 3597.6 364.6 356.1 571.7 145.3 385.6 225.9 1515.10  
 .85 3.76 6.29 2.51 .055 .040 .055 .000 1510.60 9864.64  
 .004008 545. 515. 485. 1 0 0 .00 328.46 10193.10

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

FLOW DISTRIBUTION FOR SECNO= 3.53 CWSEL= 1517.22

STA=	9865.	9870.	9895.	9927.	9948.	9964.	9983.	10112.	10132.	10160.	10193.
PER Q=	.0	3.1	10.3	5.9	3.1	2.8	67.9	2.0	2.4	2.4	
AREA=	1.6	56.5	127.1	76.9	47.1	47.0	571.7	39.8	50.5	55.0	
VEL=	.8	2.9	4.3	4.1	3.5	3.2	6.3	2.7	2.5	2.3	
DEPTH=	.3	2.3	4.0	3.7	3.0	2.5	4.4	2.0	1.8	1.7	

\*SECNO 3.624

3.624 5.75 1519.45 .00 .00 1519.93 .48 2.23 .00 1516.10  
 5300.0 2431.3 2673.0 195.7 640.5 387.2 76.7 398.5 230.1 1516.40  
 .87 3.80 6.90 2.55 .055 .040 .055 .000 1513.70 9704.84  
 .004683 515. 515. 515. 2 0 0 .00 387.59 10092.43

FLOW DISTRIBUTION FOR SECNO= 3.62 CWSEL= 1519.45

STA=	9705.	9738.	9754.	9771.	9779.	9798.	9826.	9873.	9895.	9923.	9937.	10023.	10061.
PER Q=	3.6	4.2	5.0	3.4	4.6	4.4	8.8	3.8	4.4	3.7	50.4	3.5	
AREA=	59.6	53.5	60.7	36.4	61.2	69.0	127.4	57.0	68.6	47.1	387.2	65.3	
VEL=	3.2	4.1	4.4	4.9	4.0	3.3	3.6	3.5	3.4	4.2	6.9	2.8	
DEPTH=	1.8	3.3	3.6	4.4	3.2	2.4	2.7	2.6	2.5	3.4	4.5	1.7	

STA= 10061. 10092.

PER Q= .2  
 AREA= 11.4  
 VEL= 1.0  
 DEPTH= .4

\*SECNO 3.718

3470 ENCROACHMENT STATIONS= 9720.0 10334.5 TYPE= 1 TARGET= -9720.000  
 3.718 5.73 1522.23 .00 .00 1522.91 .68 2.92 .06 1520.80  
 5300.0 1743.6 3365.4 191.0 421.2 437.0 58.2 409.8 234.3 1520.20  
 .90 4.14 7.70 3.28 .055 .040 .055 .000 1516.50 9753.65



STA= 9877. 9942. 9973. 10054. 10074. 10098. 10110. 10126. 10139. 10158. 10173. 10183. 10215.  
 PER Q= 3.5 6.0 41.1 4.5 7.2 5.6 6.7 3.2 5.7 6.4 3.5 4.6  
 AREA= 77.0 80.8 311.2 53.7 77.2 51.4 62.8 36.3 61.3 59.4 34.9 65.4  
 VEL= 2.4 3.9 7.0 4.5 4.9 5.8 5.7 4.7 4.9 5.8 5.3 3.7  
 DEPTH= 1.2 2.6 3.8 2.7 3.2 4.1 3.9 3.0 3.1 4.0 3.5 2.0

STA= 10215. 10259.  
 PER Q= 2.0  
 AREA= 43.0  
 VEL= 2.4  
 DEPTH= 1.0

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

\*SECNO 4.200  
 4.200 5.51 1535.21 .00 .00 1535.59 .38 2.54 .01 1531.70  
 5300.0 2236.5 2562.0 501.5 634.4 415.9 188.3 472.6 258.5 1534.40  
 1.03 3.53 6.16 2.66 .055 .040 .050 .000 1529.70 9642.70  
 .004639 515. 505. 435. 2 0 0 .00 533.99 10176.69

FLOW DISTRIBUTION FOR SECNO= 4.20 CWSEL= 1535.21

STA= 9643. 9729. 9778. 9816. 9838. 9863. 9902. 9911. 9931. 10040. 10083. 10123. 10177.  
 PER Q= 3.1 3.4 5.0 4.1 5.7 10.1 3.5 7.3 48.3 3.3 3.5 2.7  
 AREA= 87.2 75.0 83.1 60.2 78.0 129.4 39.7 81.8 415.9 62.5 64.8 61.0  
 VEL= 1.9 2.4 3.2 3.6 3.9 4.1 4.6 4.7 6.2 2.8 2.8 2.4  
 DEPTH= 1.0 1.5 2.2 2.8 3.1 3.4 4.0 4.1 3.8 1.4 1.6 1.1

\*SECNO 4.294  
 4.294 5.62 1537.92 .00 .00 1538.40 .48 2.78 .03 1536.60  
 5400.0 10.5 2770.3 2619.2 6.3 415.6 648.6 486.0 264.6 1536.00  
 1.06 1.66 6.67 4.04 .055 .040 .050 .000 1532.30 9925.44  
 .006674 505. 495. 515. 2 0 0 .00 505.94 10431.38

FLOW DISTRIBUTION FOR SECNO= 4.29 CWSEL= 1537.92

STA= 9925. 9935. 10062. 10077. 10090. 10111. 10136. 10154. 10164. 10199. 10262. 10334. 10379.  
 PER Q= .2 51.3 3.9 3.7 4.6 4.2 6.3 3.3 5.0 3.8 3.6 3.4  
 AREA= 6.3 415.6 43.0 40.4 54.5 54.8 61.6 32.6 69.8 75.0 75.9 54.5  
 VEL= 1.7 6.7 4.9 5.0 4.5 4.1 5.5 5.5 3.9 2.7 2.6 3.4  
 DEPTH= .7 3.3 2.9 3.0 2.6 2.2 3.4 3.5 2.0 1.2 1.1 1.2

STA= 10379. 10391. 10431.  
 PER Q= 4.2 2.6  
 AREA= 41.0 45.4  
 VEL= 5.5 3.1  
 DEPTH= 3.4 1.1

\*SECNO 4.393

\*\*\* DIRT ROAD ON RANGE LINE 5 WEST - 6 WEST CROSSES POWERLINE WASH  
 AT MILE 4.38 \*\*\*

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

4.393 5.53 1541.33 .00 .00 1541.82 .49 3.42 .00 1539.90  
 5400.0 58.5 3393.8 1947.7 30.7 525.6 508.5 498.4 270.4 1540.20  
 1.08 1.90 6.46 3.83 .055 .040 .050 .000 1535.80 9849.99  
 .006663 525. 525. 495. 4 0 0 .00 495.92 10345.90

FLOW DISTRIBUTION FOR SECNO= 4.39 CWSEL= 1541.33

STA= 9850. 9893. 10062. 10109. 10152. 10186. 10205. 10244. 10287. 10300. 10306. 10332. 10346.  
 PER Q= 1.1 62.8 4.8 4.6 4.0 4.5 4.0 4.1 3.6 3.3 3.0 .2  
 AREA= 30.7 525.6 76.9 71.9 60.6 51.0 63.9 66.9 38.1 28.5 42.8 7.9  
 VEL= 1.9 6.5 3.4 3.5 3.5 4.8 3.3 3.3 5.0 6.2 3.8 1.6  
 DEPTH= .7 3.1 1.6 1.7 1.8 2.8 1.6 1.6 3.0 4.1 1.7 .6

\*SECNO 4.494  
 4.494 5.40 1544.40 .00 .00 1544.87 .47 3.05 .00 1541.90  
 5400.0 122.7 3484.9 1792.4 53.8 552.2 497.9 512.2 276.3 1541.70  
 1.11 2.28 6.31 3.60 .055 .040 .050 .000 1539.00 9887.68  
 .004703 545. 535. 575. 3 0 0 .00 425.39 10313.07

FLOW DISTRIBUTION FOR SECNO= 4.49 CWSEL= 1544.40

STA= 9888. 9933. 10074. 10099. 10114. 10134. 10161. 10180. 10210. 10232. 10264. 10313.  
 PER Q= 2.3 64.5 5.3 3.2 3.7 4.0 3.1 6.2 3.1 3.3 1.4  
 AREA= 53.8 552.2 71.2 41.9 52.3 60.6 45.6 83.0 48.0 58.2 37.1  
 VEL= 2.3 6.3 4.1 4.1 3.8 3.6 3.7 4.0 3.5 3.0 2.0

DEPTH= 1.2 3.9 2.8 2.9 2.6 2.3 2.4 2.7 2.2 1.8 .8

\*SECNO 4.592

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY  
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=	9880.0	10405.8	TYPE=	1	TARGET=	-9880.000			
4.592	5.03	1547.93	1547.93	.00	1549.00	1.07	3.95	.18	1547.30
5400.0	4.4	4354.0	1041.5	2.9	492.3	189.4	522.6	280.5	1546.50
1.13	1.54	8.84	5.50	.055	.040	.050	.000	1542.90	9892.37
.015142	505.	515.	495.	2	10	0	.00	303.92	10196.28

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

FLOW DISTRIBUTION FOR SECNO= 4.59 CWSEL= 1547.93

STA=	9892.	9901.	10083.	10092.	10103.	10123.	10155.	10167.	10179.	10196.
PER Q=	.1	80.6	2.5	2.4	2.9	6.8	2.6	1.7	.3	
AREA=	2.9	492.3	21.0	22.5	31.8	64.1	23.8	19.0	7.2	
VEL=	1.5	8.8	6.4	5.9	5.0	5.8	5.9	4.9	2.0	
DEPTH=	.3	2.7	2.3	2.1	1.6	2.0	2.0	1.6	.4	

CCHV= .100 CEHV= .300  
\*SECNO 4.693

3265 DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.15

4.693	6.01	1552.11	.00	.00	1552.30	.20	3.21	.09	1550.50
5400.0	2482.2	2887.6	30.2	875.3	705.6	29.3	536.4	286.7	1551.60
1.17	2.84	4.09	1.03	.055	.040	.055	.000	1546.10	9409.32
.003269	505.	535.	525.	5	0	0	.00	727.40	10142.33

FLOW DISTRIBUTION FOR SECNO= 4.69 CWSEL= 1552.11

STA=	9409.	9463.	9494.	9523.	9536.	9559.	9578.	9596.	9612.	9644.	9735.	9785.	9812.
PER Q=	3.0	3.9	4.8	3.2	6.5	4.1	3.1	3.2	4.2	5.1	3.1	1.7	
AREA=	75.4	75.6	82.9	47.6	89.7	63.5	53.2	51.7	79.6	134.2	78.8	43.2	
VEL=	2.2	2.8	3.2	3.6	3.9	3.5	3.2	3.4	2.8	2.1	2.1	2.1	
DEPTH=	1.4	2.5	2.9	3.6	4.0	3.3	2.9	3.3	2.4	1.5	1.6	1.6	

STA=	9812.	10075.	10142.
PER Q=	53.5	.6	
AREA=	705.6	29.3	
VEL=	4.1	1.0	
DEPTH=	2.7	.4	

\*SECNO 4.788

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

3265 DIVIDED FLOW

4.788	4.57	1554.07	.00	.00	1554.30	.23	1.98	.01	1553.20
5400.0	3505.4	1579.9	314.8	1100.1	301.2	154.6	554.1	295.5	1553.10
1.21	3.19	5.24	2.04	.055	.040	.055	.000	1549.50	9365.51
.005170	480.	500.	500.	4	0	0	.00	846.55	10236.78

FLOW DISTRIBUTION FOR SECNO= 4.79 CWSEL= 1554.07

STA=	9366.	9423.	9483.	9498.	9526.	9556.	9585.	9613.	9644.	9690.	9740.	9863.	9904.
PER Q=	5.2	9.2	3.8	6.0	6.2	5.0	3.6	3.8	5.1	3.3	5.7	3.5	
AREA=	91.4	143.9	48.1	82.0	85.2	74.8	59.2	65.2	91.1	71.3	119.6	68.7	
VEL=	3.0	3.5	4.3	4.0	3.9	3.6	3.3	3.2	3.1	2.5	2.6	2.7	
DEPTH=	1.6	2.4	3.3	2.9	2.9	2.5	2.2	2.1	2.0	1.4	1.0	1.7	

STA=	9904.	9940.	9980.	10089.	10178.	10237.
PER Q=	3.2	1.3	29.3	3.7	2.1	
AREA=	62.0	37.6	301.2	97.2	57.5	
VEL=	2.8	1.9	5.2	2.1	2.0	
DEPTH=	1.7	1.0	2.8	1.1	1.0	

\*SECNO 4.884

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 9410.0 10112.0 TYPE= 1 TARGET= -9410.000  
 4.884 5.47 1557.27 .00 .00 1557.95 .68 3.52 .13 1555.70  
 5400.0 3292.5 2104.3 3.2 770.4 230.8 1.9 568.7 303.5 1556.30  
 1.23 4.27 9.12 1.66 .055 .040 .055 .000 1551.80 9410.00  
 .010199 495. 505. 505. 3 0 0 .00 549.50 10031.29

FLOW DISTRIBUTION FOR SECNO= 4.88 CWSEL= 1557.27

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV				
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV				
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA				
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST				
STA=	9410.	9422.	9430.	9472.	9506.	9568.	9783.	9827.	9868.	9908.	9931.	9967.	10027.
PER Q=	4.5	3.5	13.3	7.4	4.5	5.3	4.5	4.2	3.5	4.6	5.5	39.0	
AREA=	42.2	29.4	125.8	81.7	74.4	108.8	67.8	62.0	55.5	53.0	69.7	230.8	
VEL=	5.8	6.5	5.7	4.9	3.3	2.7	3.6	3.6	3.4	4.7	4.3	9.1	
DEPTH=	3.5	3.7	3.0	2.4	1.2	.5	1.5	1.5	1.4	2.3	1.9	3.9	

STA= 10027. 10031.  
 PER Q= .1  
 AREA= 1.9  
 VEL= 1.7  
 DEPTH= .5

\*SECNO 4.986

3265 DIVIDED FLOW

4.986 5.65 1561.35 .00 .00 1561.83 .48 3.86 .02 1559.30  
 5400.0 1393.9 2804.7 1201.4 463.2 401.6 305.3 581.4 309.6 1558.90  
 1.26 3.01 6.98 3.93 .055 .040 .055 .000 1555.70 9623.42  
 .005752 485. 540. 525. 2 0 0 .00 524.51 10203.91

FLOW DISTRIBUTION FOR SECNO= 4.99 CWSEL= 1561.35

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV			
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV			
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA			
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST			
STA=	9623.	9691.	9719.	9767.	9937.	9958.	9979.	10081.	10100.	10150.	10177.	10204.
PER Q=	3.9	3.4	4.2	8.2	3.3	2.7	5.8	5.8	10.5	4.1	1.8	
AREA=	80.0	57.2	78.6	154.7	48.5	44.1	401.6	66.2	140.6	61.9	36.6	
VEL=	2.7	3.3	2.9	2.9	3.7	3.4	7.0	4.7	4.0	3.6	2.7	
DEPTH=	1.2	2.0	1.7	.9	2.4	2.1	3.9	3.5	2.8	2.3	1.4	

\*SECNO 5.081

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 9885.5 10449.2 TYPE= 1 TARGET= -9885.500  
 5.081 5.69 1564.49 .00 .00 1565.44 .95 3.47 .14 1562.80  
 5400.0 27.2 3811.7 1561.2 12.2 426.2 389.1 592.8 314.7 1562.80  
 1.28 2.22 8.94 4.01 .055 .040 .055 .000 1558.80 9926.83  
 .008514 495. 500. 505. 2 0 0 .00 356.41 10327.87

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

FLOW DISTRIBUTION FOR SECNO= 5.08 CWSEL= 1564.49

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
STA=	9927.	9941.	10042.	10064.	10116.	10131.	10160.	10185.	10328.
PER Q=	.5	70.6	3.0	9.2	3.0	7.1	4.2	2.3	
AREA=	12.2	426.2	42.1	117.0	35.9	78.9	54.1	61.1	
VEL=	2.2	8.9	3.9	4.3	4.6	4.8	4.2	2.1	
DEPTH=	.8	4.2	1.9	2.2	2.5	2.7	2.2	.4	

\*SECNO 5.174

3470 ENCROACHMENT STATIONS= 9830.5 10328.6 TYPE= 1 TARGET= -9830.500  
 5.174 6.51 1567.91 .00 .00 1568.47 .56 3.00 .04 1565.50  
 5400.0 109.4 3815.1 1475.5 53.7 554.3 482.8 603.3 319.1 1565.70  
 1.30 2.04 6.88 3.06 .055 .040 .055 .000 1561.40 9846.70  
 .004740 500. 490. 460. 1 0 0 .00 447.93 10294.63

FLOW DISTRIBUTION FOR SECNO= 5.17 CWSEL= 1567.91

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV	
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV	
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	
STA=	9847.	9923.	10048.	10070.	10115.	10146.	10169.	10196.	10255.	10295.
PER Q=	2.0	70.6	3.9	6.2	4.5	3.7	3.3	4.4	1.3	
AREA=	53.7	554.3	59.0	104.2	73.1	58.4	57.5	93.0	37.6	
VEL=	2.0	6.9	3.6	3.2	3.3	3.4	3.1	2.5	1.9	
DEPTH=	.7	4.4	2.7	2.3	2.4	2.5	2.1	1.6	.9	

\*SECNO 5.245

3301 HV CHANGED MORE THAN HVINS

5.245	6.30	1569.80	1569.64	.00	1571.02	1.21	2.35	.20	1568.90
5400.0	373.5	4712.6	314.0	125.7	502.3	84.3	611.0	322.1	1568.00
1.31	2.97	9.38	3.73	.055	.040	.055	.000	1563.50	9851.90
.008815	385.	375.	355.	4	11	0	.00	281.27	10133.17

FLOW DISTRIBUTION FOR SECNO= 5.24 CWSEL= 1569.80

STA=	9852.	9887.	9917.	9935.	9951.	9963.	10076.	10088.	10102.	10122.	10133.
PER Q=	.9	2.9	1.9	.8	.5	87.3	2.3	2.3	1.1	.1	
AREA=	23.1	45.9	29.2	16.8	10.9	502.3	27.6	29.3	22.2	5.1	
VEL=	2.0	3.4	3.5	2.6	2.3	9.4	4.5	4.2	2.7	1.5	
DEPTH=	.6	1.6	1.6	1.1	.9	4.4	2.4	2.1	1.1	.5	

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

\*SECNO 5.327

3265 DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.65

5.327	6.78	1572.78	.00	.00	1573.22	.44	2.12	.08	1570.20
5400.0	1025.7	4374.3	.0	404.1	758.8	.0	619.9	325.3	1572.70
1.33	2.54	5.76	.02	.055	.040	.055	.000	1566.00	9528.41
.003255	370.	430.	405.	2	0	0	.00	407.82	10032.68

FLOW DISTRIBUTION FOR SECNO= 5.33 CWSEL= 1572.78

STA=	9528.	9570.	9630.	9642.	9745.	9766.	9793.	9812.	9845.	9865.	10032.
PER Q=	1.0	2.6	.1	.0	.5	2.5	3.0	6.2	3.2	81.0	
AREA=	37.1	77.0	4.6	1.2	18.8	54.5	52.4	103.0	55.5	758.8	
VEL=	1.4	1.8	.8	.5	1.4	2.4	3.1	3.3	3.1	5.8	
DEPTH=	.9	1.3	.4	.0	.9	2.0	2.8	3.1	2.8	4.5	

1490 NH CARD USED

\*SECNO 5.413

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .66

5.413	5.63	1574.83	.00	.00	1575.49	.66	2.20	.07	1574.00
5400.0	432.6	3199.3	1768.2	171.4	424.6	352.3	630.8	329.6	1574.00
1.35	2.52	7.54	5.02	.055	.040	.045	.000	1569.20	9742.77
.007496	375.	475.	495.	2	0	0	.00	467.46	10210.22

FLOW DISTRIBUTION FOR SECNO= 5.41 CWSEL= 1574.83

STA=	9743.	9835.	9880.	9925.	10042.	10115.	10125.	10140.	10150.	10160.	10200.	10210.
PER Q=	3.3	3.5	1.3	59.2	10.8	3.4	5.4	3.7	3.5	5.7	.1	
AREA=	73.0	63.8	34.5	424.6	133.9	30.7	47.5	32.2	31.2	72.7	4.2	
VEL=	2.4	3.0	2.0	7.5	4.4	6.0	6.2	6.2	6.1	4.3	1.3	
DEPTH=	.8	1.4	.8	3.6	1.8	3.1	3.2	3.2	3.1	1.8	.4	

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= .100 CEHV= .300

\*SECNO 5.493

5.493	5.76	1577.36	.00	.00	1577.93	.57	2.43	.01	1575.20
5400.0	230.5	3818.7	1350.8	95.8	555.2	382.5	640.1	333.5	1575.10
1.37	2.41	6.88	3.53	.055	.040	.050	.000	1571.60	9868.23
.004751	400.	420.	400.	2	0	0	.00	371.90	10240.12

FLOW DISTRIBUTION FOR SECNO= 5.49 CWSEL= 1577.36

STA=	9868.	9882.	9940.	10065.	10089.	10102.	10117.	10155.	10191.	10199.	10204.	10225.	10240.
PER Q=	.1	4.1	70.7	3.5	2.1	2.4	5.8	5.3	1.7	1.2	2.6	.4	
AREA=	6.7	89.2	555.2	53.0	31.1	35.8	87.6	80.8	23.2	15.7	43.0	12.3	
VEL=	1.1	2.5	6.9	3.5	3.6	3.7	3.6	3.5	4.0	4.1	3.3	1.8	
DEPTH=	.5	1.6	4.4	2.3	2.4	2.4	2.3	2.3	2.8	2.9	2.1	.8	

CCHV= .100 CEHV= .300

\*SECNO 5.589

3265 DIVIDED FLOW

5.589	5.55	1580.05	.00	.00	1580.97	.93	2.94	.11	1577.70
5400.0	832.5	4430.4	137.0	215.9	529.7	67.4	650.8	337.8	1578.60
1.39	3.86	8.36	2.03	.050	.040	.055	.000	1574.50	9758.86
.007286	495.	505.	515.	2	0	0	.00	367.76	10139.40

FLOW DISTRIBUTION FOR SECNO= 5.59 CWSEL= 1580.05

STA=	9759.	9868.	9885.	9922.	10045.	10139.
PER Q=	4.5	3.5	7.4	82.0	2.5	
AREA=	86.1	41.5	88.4	529.7	67.4	
VEL=	2.8	4.6	4.5	8.4	2.0	
DEPTH=	.8	2.4	2.4	4.3	.7	

*SECNO 5.682	5.682	5.09	1583.69	.00	.00	1584.24	.54	3.23	.04	1581.50
	5500.0	1271.2	2671.1	1557.7	316.3	363.9	365.7	660.9	342.0	1581.30
	1.42	4.02	7.34	4.26	.050	.040	.055	.000	1578.60	9805.33
	.006258	400.	490.	530.	3	0	0	.00	407.67	10213.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

FLOW DISTRIBUTION FOR SECNO= 5.68 CWSEL= 1583.69

STA=	9805.	9853.	9881.	9912.	9955.	10046.	10060.	10077.	10100.	10117.	10164.	10213.
PER Q=	7.0	6.2	4.1	5.8	48.6	3.6	4.9	8.2	4.8	5.8	1.0	
AREA=	94.7	75.1	60.8	85.7	363.9	43.3	56.2	88.0	54.6	93.7	29.9	
VEL=	4.1	4.5	3.7	3.7	7.3	4.5	4.8	5.2	4.8	3.4	1.9	
DEPTH=	2.0	2.6	2.0	2.0	4.0	3.1	3.4	3.7	3.4	2.0	.6	

\*SECNO 5.771

3265 DIVIDED FLOW

5.771	4.72	1586.52	.00	.00	1587.06	.54	2.82	.00	1586.60
5500.0	.0	4449.5	1050.5	.0	703.1	315.7	671.8	346.1	1585.10
1.44	.00	6.33	3.33	.000	.040	.055	.000	1581.80	9925.10
.005986	470.	470.	430.	2	0	0	.00	389.14	10357.40

FLOW DISTRIBUTION FOR SECNO= 5.77 CWSEL= 1586.52

STA=	9925.	10139.	10173.	10181.	10192.	10200.	10211.	10222.	10294.	10323.	10357.
PER Q=	80.9	3.1	1.3	2.8	1.4	1.3	.3	.6	3.2	5.0	
AREA=	703.1	57.2	19.5	34.7	19.6	22.5	9.3	19.3	54.4	79.3	
VEL=	6.3	2.9	3.8	4.5	4.0	3.3	1.9	1.6	3.2	3.5	
DEPTH=	3.3	1.7	2.5	3.1	2.7	2.0	.9	.3	1.9	2.3	

\*SECNO 5.865

5.865	6.08	1589.28	.00	.00	1589.97	.69	2.87	.05	1587.30
5500.0	1408.7	4030.5	60.7	357.0	543.3	28.1	682.8	350.1	1587.60
1.46	3.95	7.42	2.16	.050	.040	.055	.000	1583.20	9802.90
.005663	510.	490.	490.	1	0	0	.00	313.56	10116.46

FLOW DISTRIBUTION FOR SECNO= 5.86 CWSEL= 1589.28

STA=	9803.	9825.	9842.	9876.	9908.	9915.	9940.	9962.	10087.	10107.	10116.
PER Q=	1.0	3.0	7.0	5.1	1.3	4.8	3.5	73.3	1.0	.1	
AREA=	23.2	40.7	89.8	72.3	18.0	63.0	50.0	543.3	24.3	3.8	
VEL=	2.3	4.0	4.3	3.9	3.9	4.2	3.8	7.4	2.3	1.1	
DEPTH=	1.0	2.4	2.7	2.3	2.3	2.6	2.2	4.4	1.2	.4	

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= .100 CEHV= .300

\*SECNO 5.961

5.961	6.12	1592.52	.00	.00	1593.04	.52	3.05	.02	1590.90
5500.0	1731.6	3768.4	.0	386.8	598.7	.1	694.0	354.0	1592.40
1.48	4.48	6.29	.33	.050	.045	.055	.000	1586.40	9746.72
.006389	515.	505.	505.	2	0	0	.00	342.91	10089.63

FLOW DISTRIBUTION FOR SECNO= 5.96 CWSEL= 1592.52

STA=	9747.	9773.	9786.	9804.	9829.	9862.	9869.	9877.	9895.	9926.	10088.	10090.
PER Q=	.4	.6	1.1	4.4	9.3	3.3	3.8	4.4	4.1	68.5	.0	
AREA=	14.4	14.2	21.7	58.0	102.3	30.5	34.6	50.8	60.3	598.7	.1	
VEL=	1.6	2.4	2.8	4.2	5.0	6.0	6.1	4.7	3.7	6.3	.3	
DEPTH=	.6	1.0	1.3	2.3	3.1	4.1	4.2	2.8	2.0	3.7	.1	

CCHV= .100 CEHV= .300  
 \*SECNO 6.057  
 6.057 5.82 1595.62 .00 .00 1596.33 .71 3.24 .06 1593.10  
 5500.0 794.8 3959.1 746.0 246.6 522.4 158.0 705.0 358.1 1592.50  
 1.51 3.22 7.58 4.72 .050 .040 .055 .000 1589.80 9755.74  
 .006503 495. 505. 495. 2 0 0 .00 373.03 10128.76

FLOW DISTRIBUTION FOR SECNO= 6.06 CWSEL= 1595.62

STA= 9756. 9799. 9853. 9930. 10059. 10092. 10129.  
 PER Q= 3.5 6.2 4.7 72.0 11.6 1.9  
 AREA= 59.4 96.1 91.1 522.4 122.7 35.3  
 VEL= 3.3 3.5 2.9 7.6 5.2 3.0  
 DEPTH= 1.4 1.8 1.2 4.0 3.7 1.0

\*SECNO 6.150  
 6.150 5.44 1598.74 .00 .00 1599.60 .86 3.22 .04 1596.20  
 5500.0 618.3 4448.7 433.0 165.7 549.8 138.3 715.0 361.9 1597.40  
 1.52 3.73 8.09 3.13 .050 .040 .055 .000 1593.30 9841.75  
 .006661 490. 490. 480. 1 0 0 .00 311.99 10153.74

FLOW DISTRIBUTION FOR SECNO= 6.15 CWSEL= 1598.74

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SECNO	DEPTH	CWSEL	CRISWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

STA= 9842. 9853. 9892. 9935. 10061. 10072. 10087. 10112. 10133. 10146. 10154.  
 PER Q= .2 3.7 7.3 80.9 .6 1.2 3.6 2.1 .4 .0  
 AREA= 7.0 61.3 97.4 549.8 12.6 22.7 54.2 35.7 11.4 1.6  
 VEL= 1.8 3.3 4.1 8.1 2.5 2.9 3.7 3.2 2.0 .8  
 DEPTH= .6 1.6 2.2 4.4 1.2 1.5 2.1 1.7 .8 .2

\*SECNO 6.248  
 6.248 6.55 1602.15 .00 .00 1603.30 1.16 3.62 .09 1599.40  
 5500.0 1442.1 3643.3 414.6 302.9 360.4 114.4 724.6 365.3 1599.30  
 1.54 4.76 10.11 3.62 .050 .040 .055 .000 1595.60 9842.01  
 .007445 515. 515. 505. 1 0 0 .00 263.01 10105.01

FLOW DISTRIBUTION FOR SECNO= 6.25 CWSEL= 1602.15

STA= 9842. 9875. 9896. 9911. 9943. 9969. 10032. 10057. 10105.  
 PER Q= 3.8 4.2 3.6 8.4 6.3 66.2 4.7 2.8  
 AREA= 53.7 49.6 39.9 89.8 70.0 360.4 60.8 53.5  
 VEL= 3.9 4.6 4.9 5.1 4.9 10.1 4.3 2.9  
 DEPTH= 1.6 2.4 2.6 2.8 2.7 5.7 2.5 1.1

1490 NH CARD USED  
 \*SECNO 6.347

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.56

6.347	6.70	1605.30	.00	.00	1605.73	.43	2.36	.07	1603.30
5500.0	112.5	4884.4	503.1	52.1	882.5	184.6	735.8	368.8	1603.80
1.57	2.16	5.53	2.72	.055	.040	.055	.000	1598.60	9788.42
.003061	465.	525.	545.	2	0	0	.00	329.06	10117.48

FLOW DISTRIBUTION FOR SECNO= 6.35 CWSEL= 1605.30

STA= 9788. 9821. 9935. 9976. 10016. 10082. 10096. 10117.  
 PER Q= 2.0 56.9 8.1 23.8 3.7 3.4 2.0  
 AREA= 52.1 540.4 128.0 214.0 91.1 52.0 41.5  
 VEL= 2.2 5.8 3.5 6.1 2.2 3.6 2.7  
 DEPTH= 1.6 4.7 3.1 5.4 1.4 3.8 1.9

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SECNO	DEPTH	CWSEL	CRISWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

CCHV= .100 CEHV= .300  
 \*SECNO 6.440

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .58

6.440	4.70	1607.30	.00	.00	1608.32	1.01	2.41	.17	1605.80
5500.0	25.9	5472.8	1.3	12.1	675.7	1.3	746.0	371.9	1606.80
1.59	2.13	8.10	1.03	.055	.040	.055	.000	1602.60	9902.98
.009182	490.	490.	490.	2	0	0	.00	217.32	10120.30

FLOW DISTRIBUTION FOR SECNO= 6.44 CWSEL= 1607.30

STA= 9903. 9919. 10115. 10120.
PER Q= .5 99.5 .0
AREA= 12.1 675.7 1.3
VEL= 2.1 8.1 1.0
DEPTH= .8 3.4 .3

CCHV= .100 CEHV= .300

\*SECNO 6.538
6.538 5.98 1611.68 .00 .00 1612.58 .91 4.26 .01 1609.30
5500.0 1404.2 3260.2 835.6 266.9 357.8 220.8 755.2 374.9 1610.20
1.61 5.26 9.11 3.78 .050 .040 .055 .000 1605.70 9880.54
.007367 535. 515. 535. 3 0 0 .00 284.76 10165.30

FLOW DISTRIBUTION FOR SECNO= 6.54 CWSEL= 1611.68

STA= 9881. 9903. 9910. 9922. 9948. 9978. 10051. 10085. 10112. 10131. 10165.
PER Q= 6.1 4.0 4.5 4.8 6.2 59.3 4.0 4.2 4.6 2.4
AREA= 60.7 31.5 42.4 59.6 72.7 357.8 62.9 58.4 55.1 44.4
VEL= 5.5 7.1 5.8 4.4 4.7 9.1 3.5 3.9 4.6 3.0
DEPTH= 2.7 4.8 3.4 2.3 2.5 4.9 1.8 2.2 2.8 1.3

CCHV= .100 CEHV= .300

\*SECNO 6.630
6.630 7.57 1615.57 .00 .00 1616.14 .57 3.52 .03 1613.30
5500.0 2190.1 2025.5 1284.3 419.9 259.2 337.8 765.9 378.6 1613.60
1.63 5.22 7.81 3.80 .050 .045 .055 .000 1608.00 9836.97
.006724 545. 485. 465. 2 0 0 .00 364.70 10201.66

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SECNO DEPTH CWSEL CRIWS WSELK EG HV HL OLOSS L-BANK ELEV
Q QLOB QCH QROB ALOB ACH AROB VOL TWA R-BANK ELEV
TIME VLOB VCH VROB XNL XNCH XNR WTN SSTA
SLOPE XLOBL XLCH XLOBR ITRIAL IDC ICONT CORAR TOPWID ENDST

FLOW DISTRIBUTION FOR SECNO= 6.63 CWSEL= 1615.57

STA= 9837. 9874. 9906. 9926. 9956. 9975. 10026. 10045. 10079. 10091. 10114. 10150. 10202.
PER Q= 7.9 10.8 6.4 10.5 4.3 36.8 3.2 7.0 3.6 4.3 3.3 2.0
AREA= 92.1 107.5 66.1 103.7 50.5 259.2 45.5 90.9 40.2 56.5 58.0 46.6
VEL= 4.7 5.5 5.3 5.5 4.7 7.8 3.9 4.3 4.9 4.1 3.1 2.3
DEPTH= 2.5 3.4 3.2 3.4 2.7 5.1 2.3 2.7 3.3 2.4 1.6 .9

CCHV= .100 CEHV= .300

\*SECNO 6.727
6.727 7.73 1618.63 .00 .00 1619.53 .90 3.29 .10 1615.80
5500.0 2518.6 2981.4 .0 507.4 320.9 .0 776.5 382.2 1622.80
1.65 4.96 9.29 .00 .050 .040 .000 1610.90 9781.07
.006375 490. 510. 520. 2 0 0 .00 254.13 10035.20

FLOW DISTRIBUTION FOR SECNO= 6.73 CWSEL= 1618.63

STA= 9781. 9864. 9888. 9901. 9915. 9934. 9947. 9954. 9980. 10046.
PER Q= 8.7 6.0 4.5 4.0 4.7 7.1 4.2 6.6 54.2
AREA= 123.9 68.5 45.7 44.4 53.3 60.6 36.7 74.4 320.9
VEL= 3.9 4.8 5.5 4.9 4.9 6.4 6.3 4.9 9.3
DEPTH= 1.5 2.9 3.6 3.0 2.9 4.6 4.8 2.9 5.8

\*SECNO 6.825

6.825 7.89 1621.79 .00 .00 1622.34 .56 2.78 .03 1620.20
5500.0 2732.9 2722.1 45.0 658.3 366.5 23.3 787.0 385.6 1620.50
1.67 4.15 7.43 1.93 .050 .040 .055 .000 1613.90 9692.20
.005054 465. 515. 525. 1 0 0 .00 378.53 10070.72

FLOW DISTRIBUTION FOR SECNO= 6.82 CWSEL= 1621.79

STA= 9692. 9773. 9790. 9806. 9827. 9859. 9876. 9890. 9900. 9922. 9951. 9969. 10045.
PER Q= 6.0 3.4 4.4 6.1 6.3 4.0 5.4 4.4 4.6 3.4 1.6 49.5
AREA= 105.2 45.1 52.9 70.5 85.6 49.6 56.9 44.2 60.9 56.5 30.9 366.5
VEL= 3.1 4.2 4.6 4.8 4.0 4.4 5.2 5.4 4.2 3.3 2.9 7.4
DEPTH= 1.3 2.7 3.2 3.4 2.6 3.0 3.9 4.3 2.8 2.0 1.6 4.8

STA= 10045. 10071.

PER Q= .8
AREA= 23.3
VEL= 1.9
DEPTH= .9

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SECNO DEPTH CWSEL CRIWS WSELK EG HV HL OLOSS L-BANK ELEV
Q QLOB QCH QROB ALOB ACH AROB VOL TWA R-BANK ELEV
TIME VLOB VCH VROB XNL XNCH XNR WTN SSTA
SLOPE XLOBL XLCH XLOBR ITRIAL IDC ICONT CORAR TOPWID ENDST

\*SECNO 6.921

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY  
3720 CRITICAL DEPTH ASSUMED

6.921	8.41	1624.71	1624.71	.00	1625.99	1.28	3.33	.22	1622.40
5500.0	1475.0	3453.6	571.3	292.7	318.4	137.4	796.8	389.4	1623.30
1.69	5.04	10.85	4.16	.050	.040	.055	.000	1616.30	9793.41
.009817	455.	505.	515.	2	8	0	.00	313.99	10107.40

FLOW DISTRIBUTION FOR SECNO= 6.92 CWSEL= 1624.71

STA=	9793.	9893.	9909.	9919.	9948.	9975.	10036.	10066.	10094.	10107.
PER Q=	3.5	4.6	3.7	8.5	6.6	62.8	3.1	4.1	3.2	
AREA=	69.8	43.6	31.5	80.6	67.2	318.4	46.9	53.5	37.0	
VEL=	2.8	5.8	6.4	5.8	5.4	10.8	3.6	4.2	4.7	
DEPTH=	.7	2.8	3.2	2.8	2.5	5.2	1.6	1.9	2.8	

\*SECNO 7.013

7.013	8.57	1628.87	.00	.00	1629.71	.85	3.68	.04	1625.80
5500.0	1478.3	3194.5	827.2	300.2	359.5	222.1	806.1	392.8	1626.20
1.71	4.93	8.89	3.72	.050	.040	.055	.000	1620.30	9854.13
.005836	525.	485.	475.	1	0	0	.00	273.87	10128.00

FLOW DISTRIBUTION FOR SECNO= 7.01 CWSEL= 1628.87

STA=	9854.	9880.	9905.	9920.	9927.	9966.	10029.	10044.	10057.	10079.	10106.	10128.
PER Q=	.6	4.8	6.1	3.1	12.4	58.1	2.9	2.7	5.0	3.4	1.0	
AREA=	17.7	62.9	58.3	29.3	131.9	359.5	40.8	35.3	65.4	56.0	24.6	
VEL=	1.9	4.2	5.7	5.7	5.2	8.9	4.0	4.2	4.2	3.3	2.2	
DEPTH=	.7	2.5	4.0	4.0	3.4	5.7	2.7	2.9	2.9	2.1	1.1	

\*SECNO 7.106

7.106	7.66	1631.66	.00	.00	1632.12	.46	2.37	.04	1629.70
5600.0	3433.1	2147.2	19.7	919.8	287.9	11.0	818.4	396.8	1629.40
1.73	3.73	7.46	1.80	.050	.040	.055	.000	1624.00	9614.05
.003890	520.	490.	490.	3	0	0	.00	420.67	10034.72

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

FLOW DISTRIBUTION FOR SECNO= 7.11 CWSEL= 1631.66

STA=	9614.	9707.	9731.	9755.	9771.	9783.	9797.	9816.	9829.	9845.	9865.	9904.	9953.
PER Q=	4.6	5.5	6.4	4.5	3.6	4.2	5.7	3.5	3.3	3.6	6.7	6.8	
AREA=	111.0	76.2	84.2	59.4	43.9	52.7	72.3	46.0	47.2	56.3	104.2	116.5	
VEL=	2.3	4.1	4.3	4.3	4.6	4.4	4.4	4.3	3.9	3.6	3.6	3.3	
DEPTH=	1.2	3.3	3.5	3.5	4.0	3.7	3.7	3.5	3.1	2.7	2.7	2.4	

STA= 9953. 9977. 10025. 10035.

PER Q=	2.7	38.3	.4	
AREA=	50.0	287.9	11.0	
VEL=	3.0	7.5	1.8	
DEPTH=	2.1	6.0	1.1	

\*SECNO 7.200

3470 ENCROACHMENT STATIONS=	9500.9	10131.3	TYPE=	1	TARGET=	-9500.900			
7.200	6.81	1634.01	.00	.00	1634.54	.53	2.40	.02	1632.80
5600.0	2832.5	2767.5	.0	711.7	382.0	.0	830.6	401.7	1634.70
1.76	3.98	7.25	.00	.050	.040	.000	.000	1627.20	9516.96
.006977	440.	510.	520.	1	0	0	.00	506.95	10023.90

FLOW DISTRIBUTION FOR SECNO= 7.20 CWSEL= 1634.01

STA=	9517.	9558.	9580.	9603.	9656.	9670.	9679.	9702.	9727.	9775.	9850.	9899.	9918.
PER Q=	3.4	4.3	4.8	5.9	4.9	3.6	5.1	3.9	6.7	3.8	3.1	1.2	
AREA=	55.6	53.1	58.0	89.6	48.2	34.7	60.4	52.9	94.5	80.7	60.4	23.7	
VEL=	3.5	4.5	4.6	3.7	5.7	5.8	4.7	4.1	3.9	2.6	2.9	2.8	
DEPTH=	1.3	2.5	2.5	1.7	3.5	3.6	2.6	2.1	2.0	1.1	1.3	1.2	

STA= 9918. 10026.

PER Q=	49.4	
AREA=	382.0	
VEL=	7.2	
DEPTH=	3.6	

\*SECNO 7.297

3470 ENCROACHMENT STATIONS=	9783.8	10155.7	TYPE=	1	TARGET=	-9783.800			
7.297	6.02	1637.32	.00	.00	1638.09	.77	3.47	.07	1635.60
5600.0	1769.3	3232.4	598.3	394.6	381.4	140.7	841.6	406.1	1635.10
1.78	4.48	8.47	4.25	.050	.040	.055	.000	1631.30	9783.80
.007341	450.	510.	510.	3	0	0	.00	324.92	10108.72

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

FLOW DISTRIBUTION FOR SECNO= 7.77 CWSEL= 1653.12

STA=	9926.	9973.	10052.	10069.	10079.	10089.	10103.	10120.	10142.
PER Q=	4.1	61.9	6.0	5.9	5.7	8.0	6.2	2.3	
AREA=	66.0	405.7	56.4	47.2	43.9	64.1	57.8	35.1	
VEL=	3.5	8.5	5.9	7.0	7.2	7.0	6.0	3.6	
DEPTH=	1.4	5.1	3.4	4.4	4.6	4.4	3.5	1.6	

CCHV= .100 CEHV= .300  
\*SECNO 7.865

3470 ENCROACHMENT STATIONS=	9850.3	10192.1	TYPE=	1	TARGET=	-9850.300			
7.865	7.63	1656.63	.00	.00	1657.38	.75	3.33	.02	1654.10
5600.0	577.3	4361.4	661.3	144.6	580.0	139.0	898.3	423.5	1653.20
1.89	3.99	7.52	4.76	.050	.045	.050	.000	1649.00	9875.75
.005924	505.	495.	495.	2	0	0	.00	238.08	10113.83

FLOW DISTRIBUTION FOR SECNO= 7.86 CWSEL= 1656.63

STA=	9876.	9903.	9926.	9937.	9948.	10061.	10068.	10089.	10114.
PER Q=	.9	4.6	2.7	2.1	77.9	2.3	7.5	2.0	
AREA=	24.6	59.8	32.1	28.1	580.0	23.5	78.2	37.3	
VEL=	2.2	4.3	4.6	4.2	7.5	5.5	5.4	3.0	
DEPTH=	.9	2.6	2.9	2.5	5.1	3.8	3.6	1.5	

CCHV= .100 CEHV= .300  
\*SECNO 7.958

7.958	7.77	1659.67	.00	.00	1660.91	1.25	3.38	.15	1656.90
5600.0	1291.5	3929.8	378.8	282.7	382.1	87.3	907.4	426.3	1656.80
1.90	4.57	10.28	4.34	.050	.040	.050	.000	1651.90	9825.21
.008182	480.	490.	500.	2	0	0	.00	265.79	10091.00

FLOW DISTRIBUTION FOR SECNO= 7.96 CWSEL= 1659.67

STA=	9825.	9867.	9885.	9916.	9937.	9965.	10036.	10053.	10091.
PER Q=	4.6	3.6	4.4	3.6	6.9	70.2	4.3	2.4	
AREA=	60.9	42.7	59.5	44.0	75.7	382.1	46.2	41.0	
VEL=	4.2	4.7	4.2	4.5	5.1	10.3	5.2	3.3	
DEPTH=	1.5	2.3	1.9	2.2	2.6	5.5	2.7	1.1	

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

CCHV= .100 CEHV= .300  
\*SECNO 8.059

8.059	7.41	1663.41	.00	.00	1664.24	.83	3.28	.04	1659.90
5600.0	1392.2	3306.8	901.0	287.7	382.1	189.0	916.9	429.2	1659.60
1.93	4.84	8.65	4.77	.050	.040	.050	.000	1656.00	9857.79
.004993	475.	535.	545.	2	0	0	.00	230.75	10088.53

FLOW DISTRIBUTION FOR SECNO= 8.06 CWSEL= 1663.41

STA=	9858.	9925.	9934.	9950.	9961.	10024.	10034.	10049.	10066.	10089.
PER Q=	8.9	5.5	6.8	3.7	59.0	3.4	5.5	5.9	1.3	
AREA=	129.0	49.0	67.4	42.3	382.1	36.6	59.0	65.1	28.3	
VEL=	3.9	6.3	5.6	4.9	8.7	5.2	5.2	5.1	2.7	
DEPTH=	1.9	5.2	4.4	3.6	6.1	3.9	3.9	3.8	1.3	

CCHV= .100 CEHV= .300  
\*SECNO 8.155

3301 HV CHANGED MORE THAN HVINS

8.155	6.61	1666.21	.00	.00	1667.70	1.49	3.26	.20	1661.90
5600.0	989.3	4073.5	537.2	178.8	369.3	112.9	925.7	431.6	1662.80
1.94	5.53	11.03	4.76	.055	.040	.055	.000	1659.60	9920.33
.008721	495.	505.	515.	2	0	0	.00	180.71	10101.03

FLOW DISTRIBUTION FOR SECNO= 8.15 CWSEL= 1666.21

STA=	9920.	9939.	9971.	9985.	10049.	10069.	10084.	10098.	10101.
PER Q=	.8	9.5	7.4	72.7	6.1	2.8	.6	.0	
AREA=	17.8	98.9	62.1	369.3	63.2	35.4	14.0	.3	
VEL=	2.4	5.4	6.7	11.0	5.4	4.5	2.5	.6	
DEPTH=	1.0	3.1	4.3	5.8	3.2	2.4	1.0	.1	

\*SECNO 8.250

8.250	7.84	1670.04	.00	.00	1671.67	1.63	3.93	.04	1666.20
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5600.0	284.1	4520.2	795.7	72.4	403.3	170.7	933.2	433.6	1666.00
1.95	3.92	11.21	4.66	.055	.040	.055	.000	1662.20	9936.90
.007120	500.	500.	500.	2	0	0	.00	169.98	10106.88

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SECNO	DEPTH	CWSEL	CRISWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

FLOW DISTRIBUTION FOR SECNO= 8.25 CWSEL= 1670.04

STA=	9937.	9961.	9976.	10034.	10050.	10067.	10084.	10102.	10107.
PER Q=	1.3	3.8	80.7	5.5	5.4	2.7	.6	.0	
AREA=	28.5	43.9	403.3	56.8	59.1	38.4	15.7	.8	
VEL=	2.6	4.8	11.2	5.4	5.1	4.0	2.0	.7	
DEPTH=	1.2	3.1	6.9	3.7	3.3	2.3	.8	.2	

\*SECNO 8.346

3301 HV CHANGED MORE THAN HVINS

8.346	7.94	1673.64	.00	.00	1674.65	1.01	2.92	.06	1672.20
5600.0	10.0	5213.7	376.2	6.7	626.4	135.7	941.4	435.8	1669.40
1.97	1.49	8.32	2.77	.055	.040	.055	.000	1665.70	9958.76
.004773	515.	505.	505.	2	0	0	.00	213.92	10172.69

FLOW DISTRIBUTION FOR SECNO= 8.35 CWSEL= 1673.64

STA=	9959.	9968.	10074.	10093.	10103.	10117.	10124.	10147.	10172.
PER Q=	.2	93.1	3.8	.5	.4	.4	1.3	.3	
AREA=	6.7	626.4	56.5	13.3	13.3	9.1	31.0	12.6	
VEL=	1.5	8.3	3.8	2.3	1.8	2.3	2.3	1.2	
DEPTH=	.7	5.9	2.9	1.3	.9	1.3	1.4	.5	

\*SECNO 8.438

8.438	6.66	1676.16	.00	.00	1677.52	1.36	2.76	.10	1672.80
5600.0	259.8	4523.8	816.5	71.0	444.3	177.4	949.6	438.0	1672.50
1.99	3.66	10.18	4.60	.055	.040	.055	.000	1669.50	9924.56
.006937	495.	485.	475.	2	0	0	.00	188.48	10113.04

FLOW DISTRIBUTION FOR SECNO= 8.44 CWSEL= 1676.16

STA=	9925.	9935.	9951.	9965.	10039.	10056.	10067.	10089.	10106.	10113.
PER Q=	.2	1.5	3.0	80.8	6.3	3.6	3.8	.9	.0	
AREA=	5.8	26.8	38.5	444.3	64.3	39.1	52.2	20.1	1.7	
VEL=	1.6	3.1	4.4	10.2	5.4	5.1	4.1	2.5	.8	
DEPTH=	.6	1.6	2.7	6.0	3.8	3.5	2.5	1.2	.2	

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SECNO	DEPTH	CWSEL	CRISWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

\*SECNO 8.530

3301 HV CHANGED MORE THAN HVINS

8.530	7.48	1679.48	.00	.00	1680.22	.74	2.64	.06	1676.90
5700.0	486.4	4287.6	925.9	171.7	556.7	257.5	958.9	440.7	1676.00
2.01	2.83	7.70	3.60	.055	.040	.055	.000	1672.00	9871.64
.004377	495.	485.	485.	2	0	0	.00	296.56	10168.20

FLOW DISTRIBUTION FOR SECNO= 8.53 CWSEL= 1679.48

STA=	9872.	9913.	9964.	10064.	10077.	10100.	10140.	10168.
PER Q=	3.8	4.7	75.2	5.1	4.9	4.7	1.5	
AREA=	74.2	97.6	556.7	60.7	72.2	88.3	36.4	
VEL=	3.0	2.7	7.7	4.8	3.9	3.1	2.3	
DEPTH=	1.8	1.9	5.6	4.4	3.2	2.2	1.3	

\*SECNO 8.626

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .69

8.626	7.70	1682.00	1681.84	.00	1683.56	1.56	3.10	.25	1680.20
5700.0	1044.8	4229.0	426.2	209.3	375.6	81.5	968.5	443.6	1678.50
2.02	4.99	11.26	5.23	.055	.040	.055	.000	1674.30	9869.46
.009199	515.	505.	495.	4	5	0	.00	201.76	10071.22

FLOW DISTRIBUTION FOR SECNO= 8.63 CWSEL= 1682.00

STA=	9869.	9883.	9900.	9919.	9934.	9947.	9964.	9975.	10040.	10059.	10071.
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PER Q=	.1	1.5	8.0	5.9	1.2	.8	.8	74.2	6.2	1.2
AREA=	4.0	25.8	72.0	55.9	20.0	17.3	14.2	375.6	61.3	20.2
VEL=	1.2	3.4	6.3	6.1	3.5	2.6	3.2	11.3	5.8	3.5
DEPTH=	.3	1.5	3.9	3.7	1.6	1.0	1.4	5.7	3.4	1.6

CCHV= .100 CEHV= .300

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

\*SECNO 8.722

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.46

3470 ENCROACHMENT STATIONS=	9760.0	10089.0	TYPE=	1	TARGET=	-9760.000				
8.722	7.88	1685.98	.00	.00	1686.64	.66	2.99	.09	1682.40	
5700.0	2869.9	2830.1	.0	610.3	354.3	.0	977.6	446.1	1693.50	
2.04	4.70	7.99	.00	.050	.040	.000	.000	1678.10	9774.86	
.004330	465.	505.	505.	2	0	0	.00	252.00	10026.85	

FLOW DISTRIBUTION FOR SECNO= 8.72 CWSEL= 1685.98

STA=	9775.	9798.	9838.	9862.	9882.	9912.	9929.	9945.	9964.	9969.	10040.
PER Q=	.3	3.0	5.7	7.4	11.3	8.0	6.9	6.3	1.4	49.7	
AREA=	12.2	64.2	76.8	83.8	124.9	81.7	73.8	74.8	17.9	354.3	
VEL=	1.3	2.7	4.3	5.0	5.2	5.5	5.3	4.8	4.6	8.0	
DEPTH=	.5	1.6	3.2	4.1	4.3	4.8	4.5	3.9	3.6	6.1	

CCHV= .100 CEHV= .300

\*SECNO 8.817

3470 ENCROACHMENT STATIONS=	9820.0	10218.2	TYPE=	1	TARGET=	-9820.000				
8.817	6.57	1688.17	.00	.00	1688.97	.81	2.29	.04	1684.40	
5700.0	536.9	4293.5	869.6	143.4	535.1	230.2	988.4	449.0	1684.80	
2.06	3.74	8.02	3.78	.055	.040	.055	.000	1681.60	9890.12	
.004758	490.	510.	510.	3	0	0	.00	243.42	10133.53	

FLOW DISTRIBUTION FOR SECNO= 8.82 CWSEL= 1688.17

STA=	9890.	9909.	9931.	9947.	10043.	10061.	10068.	10084.	10092.	10104.	10114.	10130.	10134.
PER Q=	.9	4.3	4.2	7.3	3.3	1.0	2.7	2.6	3.7	1.3	.6	.0	.0
AREA=	23.3	64.5	55.7	535.1	50.7	18.0	42.1	32.1	46.0	23.4	17.1	.7	.7
VEL=	2.1	3.8	4.4	8.0	3.8	3.3	3.6	4.6	4.5	3.3	1.9	.6	.6
DEPTH=	1.2	2.9	3.6	5.6	2.9	2.4	2.7	4.0	3.9	2.3	1.1	.2	.2

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

\*SECNO 8.910

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

8.910	6.44	1691.34	1691.34	.00	1692.77	1.43	3.26	.19	1688.20	
5700.0	573.1	3525.6	1601.3	145.9	308.4	274.1	997.6	451.8	1687.50	
2.08	3.93	11.43	5.84	.055	.040	.055	.000	1684.90	9864.35	
.009878	490.	490.	500.	3	8	0	.00	258.52	10122.88	

FLOW DISTRIBUTION FOR SECNO= 8.91 CWSEL= 1691.34

STA=	9864.	9949.	9965.	10021.	10034.	10041.	10054.	10073.	10102.	10123.
PER Q=	6.0	4.0	61.9	5.4	3.6	6.5	6.9	4.9	.8	
AREA=	101.8	44.1	308.4	47.0	30.7	52.6	65.5	62.2	16.1	
VEL=	3.4	5.2	11.4	6.5	6.7	7.0	6.0	4.5	2.7	
DEPTH=	1.2	2.7	5.5	3.8	4.0	4.2	3.3	2.2	.8	

CCHV= .100 CEHV= .300

\*SECNO 9.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.69

9.000	7.66	1694.96	.00	.00	1695.44	.48	2.58	.09	1697.50	
5700.0	.0	2114.2	3585.8	.0	304.3	786.6	1007.5	454.6	1690.90	
2.10	.0	6.95	4.56	.000	.040	.050	.000	1687.30	9979.33	
.003479	485.	475.	465.	3	0	0	.00	258.84	10238.18	

FLOW DISTRIBUTION FOR SECNO= 9.00 CWSEL= 1694.96

STA=	9979.	10030.	10048.	10064.	10076.	10095.	10110.	10126.	10144.	10175.	10216.	10238.
PER Q=	37.1	6.1	6.3	5.8	8.4	7.0	7.1	7.2	8.3	5.9		.9
AREA=	304.3	74.6	74.9	62.7	92.7	78.4	78.0	84.9	113.6	102.2	24.6	
VEL=	6.9	4.6	4.8	5.2	5.2	5.1	5.2	4.8	4.2	3.3	2.1	
DEPTH=	6.0	4.3	4.5	5.2	5.1	5.0	5.1	4.6	3.7	2.5	1.1	

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

\*SECNO 9.100

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .65

9.100	6.54	1697.24	.00	.00	1698.31	1.08	2.69	.18	1697.80
5700.0	.0	4426.2	1273.8	.0	490.2	242.4	1018.4	457.4	1694.10
2.12	.00	9.03	5.25	.000	.040	.050	.000	1690.70	9953.02
.008267	540.	530.	520.	3	0	0	.00	202.08	10155.10

FLOW DISTRIBUTION FOR SECNO= 9.10 CWSEL= 1697.24

STA=	9953.	10064.	10075.	10088.	10098.	10119.	10125.	10155.
PER Q=	77.7	4.3	5.0	2.2	4.3	1.1	5.3	
AREA=	490.2	38.0	46.0	25.4	51.3	13.4	68.4	
VEL=	9.0	6.4	6.2	5.0	4.8	4.9	4.4	
DEPTH=	4.4	3.7	3.5	2.5	2.4	2.4	2.2	

\*SECNO 9.192

3470 ENCROACHMENT STATIONS=	9870.0	10166.3	TYPE=	1	TARGET=	-9870.000		
9.192	6.81	1700.61	.00	.00	1701.49	.88	.02	1696.80
5700.0	1155.9	4281.1	262.9	280.4	512.1	63.9	1027.3	459.8
2.14	4.12	8.36	4.11	.055	.040	.050	.000	1693.80
.005247	505.	485.	475.	2	0	0	.00	229.57
								9870.00
								10099.57

FLOW DISTRIBUTION FOR SECNO= 9.19 CWSEL= 1700.61

STA=	9870.	9890.	9914.	9934.	9952.	9979.	10072.	10088.	10100.
PER Q=	.7	1.3	3.7	6.0	8.5	75.1	4.0	.6	
AREA=	20.7	32.6	54.3	70.7	102.1	512.1	50.4	13.6	
VEL=	2.0	2.3	3.8	4.9	4.8	8.4	4.6	2.4	
DEPTH=	1.1	1.3	2.8	3.9	3.8	5.5	3.1	1.2	

CCHV= .100 CEHV= .300

*SECNO 9.286	9.286	6.99	1703.69	.00	.00	1704.26	.57	2.74	.03	1701.40
5700.0	3233.7	2466.3	.0	709.9	325.3	.0	1038.2	463.5	1708.00	
2.16	4.56	7.58	.00	.050	.040	.000	.000	1696.70	9601.67	
.005684	495.	505.	515.	2	0	0	.00	412.18	10013.85	

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

FLOW DISTRIBUTION FOR SECNO= 9.29 CWSEL= 1703.69

STA=	9602.	9687.	9785.	9801.	9825.	9867.	9879.	9891.	9908.	9925.	9945.	10016.
PER Q=	3.2	7.1	3.9	3.4	10.9	5.4	8.3	7.3	3.7	3.6	43.3	
AREA=	78.6	113.6	47.9	51.3	130.9	50.6	69.0	70.3	47.2	50.5	325.3	
VEL=	2.3	3.6	4.6	3.8	4.7	6.0	6.9	5.9	4.4	4.1	7.6	
DEPTH=	.9	1.2	3.0	2.2	3.1	4.4	5.4	4.3	2.8	2.4	4.7	

CCHV= .100 CEHV= .300

*SECNO 9.389	9.389	6.25	1706.65	.00	.00	1707.59	.95	3.22	.11	1704.70
5700.0	455.8	3746.5	1497.7	167.2	412.3	310.4	1049.2	467.8	1704.50	
2.18	2.73	9.09	4.82	.050	.040	.050	.000	1700.40	9784.28	
.006935	445.	545.	555.	1	0	0	.00	372.00	10156.28	

FLOW DISTRIBUTION FOR SECNO= 9.39 CWSEL= 1706.65

STA=	9784.	9842.	9935.	9956.	10037.	10072.	10087.	10098.	10132.	10156.
PER Q=	3.1	3.1	1.7	65.7	5.6	5.3	3.7	8.9	2.7	
AREA=	61.3	74.8	31.2	412.3	76.6	52.4	38.2	99.8	43.4	
VEL=	2.9	2.4	3.2	9.1	4.2	5.7	5.6	5.1	3.6	
DEPTH=	1.1	.8	1.4	5.1	2.2	3.5	3.4	2.9	1.8	

CCHV= .100 CEHV= .300

\*SECNO 9.481  
 9.481 6.38 1709.98 .00 .00 1710.93 .95 3.34 .00 1707.10  
 5700.0 934.8 3617.6 1147.7 178.1 388.7 383.2 1059.0 472.1 1707.60  
 2.20 5.25 9.31 2.99 .050 .040 .055 .000 1703.60 9906.16  
 .007239 505. 485. 415. 2 0 0 .00 454.49 10360.65

FLOW DISTRIBUTION FOR SECNO= 9.48 CWSEL= 1709.98

STA= 9906. 9935. 9951. 9959. 9970. 10046. 10087. 10200. 10225. 10284. 10359.  
 PER Q= 4.1 6.0 3.3 3.0 63.5 4.3 4.1 5.0 3.7 3.2  
 AREA= 56.2 58.0 31.0 32.9 388.7 71.5 99.2 65.6 73.4 73.4  
 VEL= 4.2 5.8 6.0 5.2 9.3 3.4 2.3 4.3 2.8 2.5  
 DEPTH= 2.0 3.5 3.7 3.0 5.1 1.8 .9 2.6 1.3 1.0

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

CCHV= .100 CEHV= .300  
 \*SECNO 9.575

3470 ENCROACHMENT STATIONS= 9903.2 10155.0 TYPE= 1 TARGET= 251.800  
 9.575 6.80 1713.10 .00 .00 1713.91 .81 2.97 .01 1710.30  
 5700.0 124.7 5143.1 432.2 36.4 683.8 133.1 1069.2 476.0 1710.20  
 2.22 3.43 7.52 3.25 .050 .040 .050 .000 1706.30 9903.20  
 .005062 515. 495. 475. 2 0 0 .00 251.24 10154.44

FLOW DISTRIBUTION FOR SECNO= 9.57 CWSEL= 1713.10

STA= 9903. 9919. 10060. 10092. 10117. 10139. 10154.  
 PER Q= 2.2 90.2 5.4 1.8  
 AREA= 36.4 683.8 79.7 36.5 14.5 2.4  
 VEL= 3.4 7.5 3.8 2.8 1.6 .6  
 DEPTH= 2.3 4.9 2.5 1.5 .7 .2

1490 NH CARD USED

\*SECNO 9.672  
 9.672 6.84 1716.04 .00 .00 1716.80 .76 2.88 .01 1715.10  
 5700.0 65.3 4353.0 1281.7 25.3 570.7 298.2 1079.2 479.1 1713.10  
 2.24 2.58 7.63 4.30 .055 .042 .050 .000 1709.20 9957.10  
 .006487 520. 510. 470. 2 0 0 .00 295.47 10252.56

FLOW DISTRIBUTION FOR SECNO= 9.67 CWSEL= 1716.04

STA= 9957. 9977. 10038. 10108. 10135. 10153. 10170. 10187. 10228. 10253.  
 PER Q= 1.1 46.6 29.7 6.8 4.5 3.6 3.5 3.6 .4  
 AREA= 25.3 307.2 263.4 79.1 52.6 45.2 44.3 62.5 14.5  
 VEL= 2.6 8.7 6.4 4.9 4.9 4.6 4.5 3.3 1.7  
 DEPTH= 1.3 5.1 3.8 2.9 2.9 2.6 2.6 1.5 .6

CCHV= .100 CEHV= .300  
 \*SECNO 9.761

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY  
 3720 CRITICAL DEPTH ASSUMED

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

9.761 6.37 1719.17 1719.17 .00 1720.64 1.48 3.53 .22 1715.50  
 5700.0 800.2 3956.7 943.1 122.5 354.4 244.0 1087.8 482.1 1715.10  
 2.25 6.53 11.17 3.87 .050 .040 .055 .000 1712.80 9939.04  
 .009014 480. 470. 440. 2 11 0 .00 264.16 10203.20

FLOW DISTRIBUTION FOR SECNO= 9.76 CWSEL= 1719.17

STA= 9939. 9949. 9959. 9965. 9976. 10039. 10077. 10106. 10127. 10155. 10175. 10203.  
 PER Q= .9 4.9 3.7 4.5 69.4 10.3 2.3 .7 .8 1.0 1.5  
 AREA= 14.8 39.4 29.1 39.2 354.4 112.3 40.2 18.0 21.6 20.9 31.0  
 VEL= 3.6 7.0 7.3 6.6 11.2 5.2 3.2 2.3 2.1 2.6 2.7  
 DEPTH= 1.5 4.0 4.2 3.6 5.7 2.9 1.4 .9 .8 1.0 1.1

CCHV= .100 CEHV= .300  
 \*SECNO 9.854

3301 HV CHANGED MORE THAN HVINS

9.854 6.79 1723.49 .00 .00 1724.15 .66 3.43 .08 1723.30  
 5700.0 108.3 4276.9 1314.8 54.4 596.2 316.9 1097.8 485.7 1722.10  
 2.27 1.99 7.17 4.15 .055 .040 .050 .000 1716.70 9866.72  
 .005256 480. 490. 580. 2 0 0 .00 335.11 10201.84

FLOW DISTRIBUTION FOR SECNO= 9.85 CWSEL= 1723.49

STA= 9867. 9892. 9901. 9910. 9936. 10072. 10090. 10120. 10138. 10185. 10202.
PER Q= .4 .8 .5 .2 75.0 1.2 4.7 5.4 11.0 .7
AREA= 16.1 15.5 12.5 10.3 596.2 25.5 70.0 62.5 140.3 18.7
VEL= 1.5 2.8 2.4 1.0 7.2 2.7 3.8 5.0 4.5 2.3
DEPTH= .6 1.7 1.4 .4 4.4 1.4 2.3 3.5 3.0 1.1

\*SECNO 9.949

\*\*\* VULTURE MINE ROAD CROSSES POWERLINE WASH AT MILE 9.90 \*\*\*

9.949 6.95 1725.95 .00 .00 1726.87 .92 2.65 .08 1723.60
5700.0 34.8 4312.1 1353.1 16.0 514.4 270.1 1108.0 488.7 1722.70
2.29 2.18 8.38 5.01 .055 .040 .050 .000 1719.00 9960.21
.005330 500. 500. 500. 3 0 0 .00 183.39 10143.60

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SECNO DEPTH CWSEL CRIWS WSELK EG HV HL OLOSS L-BANK ELEV
Q QLOB QCH QROB ALOB ACH AROB VOL TWA R-BANK ELEV
TIME VLOB VCH VROB XNL XNCH XNR WTN ELMIN SSTA
SLOPE XLOBL XLCH XLOBR ITRIAL IDC ICONT CORAR TOPWID ENDST

FLOW DISTRIBUTION FOR SECNO= 9.95 CWSEL= 1725.95

STA= 9960. 9974. 10067. 10080. 10089. 10095. 10107. 10144.
PER Q= .6 75.7 4.5 3.6 2.7 4.9 8.1
AREA= 16.0 514.4 48.9 36.9 26.1 50.0 108.2
VEL= 2.2 8.4 5.2 5.5 5.8 5.6 4.3
DEPTH= 1.2 5.5 3.7 4.1 4.5 4.2 3.0

CCHV= .100 CEHV= .300

\*SECNO 10.045

10.045 6.77 1728.97 .00 .00 1729.97 1.00 3.08 .03 1726.00
5700.0 2300.6 2879.7 519.7 488.8 281.1 96.8 1117.6 491.3 1724.80
2.31 4.71 10.24 5.37 .050 .040 .055 .000 1722.20 9777.11
.007097 485. 505. 515. 2 0 0 .00 276.60 10053.71

FLOW DISTRIBUTION FOR SECNO= 10.05 CWSEL= 1728.97

STA= 9777. 9827. 9863. 9896. 9917. 9936. 9954. 9979. 10025. 10039. 10054.
PER Q= 4.5 5.9 7.8 4.8 5.1 4.9 7.4 50.5 6.7 2.4
AREA= 74.8 79.3 90.6 55.4 56.8 53.9 78.0 281.1 62.2 34.6
VEL= 3.4 4.3 4.9 4.9 5.1 5.2 5.4 10.2 6.2 3.9
DEPTH= 1.5 2.2 2.7 2.7 2.9 3.0 3.2 6.0 4.5 2.4

\*SECNO 10.138

3470 ENCROACHMENT STATIONS= 9858.2 10151.6 TYPE= 1 TARGET= 293.399
10.138 6.53 1732.13 .00 .00 1732.71 .58 2.69 .04 1730.30
5700.0 757.5 4439.2 503.2 231.3 668.4 132.1 1128.3 494.6 1728.60
2.33 3.27 6.64 3.81 .050 .040 .055 .000 1725.60 9858.20
.004293 495. 495. 495. 1 0 0 .00 293.40 10151.60

FLOW DISTRIBUTION FOR SECNO= 10.14 CWSEL= 1732.13

STA= 9858. 9884. 9893. 9906. 9940. 9965. 10111. 10134. 10143. 10152.
PER Q= 3.7 1.8 2.4 3.3 2.1 77.9 5.5 2.1 1.2
AREA= 62.9 25.6 36.8 64.3 41.8 668.4 78.3 30.7 23.0
VEL= 3.3 3.9 3.8 3.0 2.8 6.6 4.0 4.0 3.0
DEPTH= 2.5 2.9 2.7 1.9 1.7 4.6 3.4 3.4 2.8

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SECNO DEPTH CWSEL CRIWS WSELK EG HV HL OLOSS L-BANK ELEV
Q QLOB QCH QROB ALOB ACH AROB VOL TWA R-BANK ELEV
TIME VLOB VCH VROB XNL XNCH XNR WTN ELMIN SSTA
SLOPE XLOBL XLCH XLOBR ITRIAL IDC ICONT CORAR TOPWID ENDST

\*SECNO 10.236

10.236 5.38 1734.78 .00 .00 1735.74 .96 2.92 .12 1731.80
5700.0 1864.7 3326.6 508.8 386.2 351.3 112.6 1139.5 498.0 1732.10
2.35 4.83 9.47 4.52 .050 .040 .055 .000 1729.40 9796.04
.007813 515. 515. 515. 2 0 0 .00 287.75 10083.80

FLOW DISTRIBUTION FOR SECNO= 10.24 CWSEL= 1734.78

STA= 9796. 9835. 9863. 9878. 9891. 9929. 9944. 9964. 10035. 10049. 10074. 10084.
PER Q= 3.2 5.7 3.4 3.3 8.2 3.8 5.1 58.4 4.7 3.9 .3
AREA= 49.2 68.6 38.4 36.6 95.8 41.3 56.4 351.3 49.0 55.3 8.3
VEL= 3.8 4.7 5.0 5.1 4.9 5.3 5.2 9.5 5.5 4.0 2.1
DEPTH= 1.3 2.4 2.6 2.7 2.5 2.8 2.8 4.9 3.6 2.2 .8

\*SECNO 10.331

3470 ENCROACHMENT STATIONS= 9780.0 10283.2 TYPE= 1 TARGET= -9780.000
10.331 6.69 1738.29 .00 .00 1738.76 .47 2.97 .05 1736.50
5700.0 1348.6 4296.1 55.3 367.4 714.6 25.5 1150.8 501.8 1735.70

2.38 3.67 6.01 2.17 .050 .040 .055 .000 1731.60 9780.00  
 .004630 510. 500. 500. 3 0 0 .00 364.03 10144.03

FLOW DISTRIBUTION FOR SECNO= 10.33 CWSEL= 1738.29

STA=	9780.	9785.	9797.	9811.	9820.	9825.	9856.	9866.	9893.	9911.	9931.	10124.	10144.
PER Q=	.5	1.8	2.3	2.2	1.2	5.7	1.8	4.1	2.1	2.0	75.4	1.0	
AREA=	10.3	28.9	34.7	28.7	16.6	83.0	26.4	64.9	36.7	37.3	714.6	25.5	
VEL=	2.6	3.6	3.8	4.3	4.3	3.9	3.9	3.6	3.3	3.0	6.0	2.2	
DEPTH=	2.2	2.4	2.5	3.2	3.2	2.7	2.6	2.3	2.1	1.8	3.7	1.3	

\*SECNO 10.424

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

\*\*\* XSECTN 10.424 IS THE UPSTREAM LIMIT OF POWERLINE WASH STUDY \*\*\*

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SECNO	DEPTH	CWSEL	CRIS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	
10.424	6.08	1740.98	1740.98	.00	1741.97	.99	2.82	.16	1738.30	
5700.0	1482.2	3551.8	666.0	405.2	367.8	154.1	1162.3	506.1	1738.30	
2.40	3.66	9.66	4.32	.050	.040	.055	.000	1734.90	9715.51	
.007272	500.	490.	480.	2	10	0	.00	389.32	10104.83	

FLOW DISTRIBUTION FOR SECNO= 10.42 CWSEL= 1740.98

STA=	9716.	9809.	9849.	9877.	9900.	9949.	9970.	10038.	10066.	10087.	10105.
PER Q=	5.4	3.3	4.8	3.7	5.4	3.3	62.3	5.6	5.4	.6	
AREA=	105.3	58.3	62.4	49.4	84.9	44.9	367.8	73.3	64.0	16.8	
VEL=	2.9	3.3	4.4	4.3	3.6	4.2	9.7	4.4	4.8	2.2	
DEPTH=	1.1	1.4	2.2	2.2	1.7	2.1	5.4	2.6	3.0	.9	

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T1 FLOOD CONTROL DISTRICT OF MARICOPA COUNTY  
 T2 POWERLINE WASH AND TANK WASH FLOOD DELINEATION STUDY (FCD 92-09)  
 T3 POWERLINE WASH 100-YR STANLEY CONSULTANTS # 11547 FILENAME: 11547P31

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		4							1447.33	
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	2		-1							

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SECNO	DEPTH	CWSEL	CRIS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

\*PROF 2

0

CCHV= .100 CEHV= .300  
 1490 NH CARD USED  
 \*SECNO 1.113

3470 ENCROACHMENT STATIONS= 9947.0 10600.0 TYPE= 1 TARGET= 653.000

\*\*\* XSECTN 1.113 IS THE UPSTREAM LIMIT OF WOOD/PATEL STAR WASH STUDY AND THE DOWNSTREAM LIMIT OF STANLEY CONSULTANTS POWERLINE WASH STUDY. GR AND ENCROACHMENT STATIONS FOR XSECTN 1.113 ARE FROM THE WOOD/PATEL STUDY \*\*\*

1.113	5.13	1447.33	.00	1446.38	1447.64	.31	.00	.00	1446.70	
5100.0	.0	1291.6	3808.4	.1	234.9	936.7	.0	.0	1446.20	
.00	.03	5.50	4.07	.055	.040	.050	.000	1442.20	9947.00	
.008645	0.	0.	0.	0	0	0	.00	653.00	10600.00	

1490 NH CARD USED

\*SECNO 1.203

3470 ENCROACHMENT STATIONS= 9964.0 10620.0 TYPE= 1 TARGET= 656.000

1.203	5.92	1450.62	.00	1449.79	1450.86	.23	3.21	.01	1449.00	
5100.0	1.1	1360.1	3738.7	1.0	284.1	1069.4	13.8	7.1	1450.00	

.03 1.15 4.79 3.50 .055 .045 .050 .000 1444.70 9964.00  
 .005427 485. 475. 475. 4 0 0 .00 656.00 10620.00

1490 NH CARD USED  
 \*SECNO 1.300

3470 ENCROACHMENT STATIONS= 9951.0 10600.0 TYPE= 1 TARGET= 649.000  
 1.300 5.63 1453.33 .00 1452.56 1453.57 .24 2.71 .00 1452.10  
 5100.0 1.7 1075.6 4022.7 1.2 218.4 1113.0 28.8 14.4 1452.00  
 .07 1.37 4.92 3.61 .055 .040 .050 .000 1447.70 9951.00  
 .005697 510. 510. 480. 3 0 0 .00 649.00 10600.00

1490 NH CARD USED  
 \*SECNO 1.400

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS= 9950.0 10850.0 TYPE= 1 TARGET= 900.000  
 1.400 5.20 1456.10 .00 1455.40 1456.30 .20 2.73 .00 1454.30  
 5100.0 240.9 1405.4 3453.7 70.6 300.0 1129.1 44.4 22.9 1454.30  
 .11 3.41 4.68 3.06 .050 .045 .050 .000 1450.90 9950.00  
 .005520 530. 530. 470. 2 0 0 .00 900.00 10850.00

1490 NH CARD USED  
 \*SECNO 1.553

3470 ENCROACHMENT STATIONS= 9650.0 10700.0 TYPE= 1 TARGET= 1050.000  
 1.553 5.18 1459.58 .00 1458.63 1459.78 .20 3.48 .00 1458.70  
 5100.0 1819.1 748.0 2532.9 527.7 151.0 798.4 65.0 35.8 1459.40  
 .16 3.45 4.95 3.17 .046 .040 .048 .000 1454.40 9650.00  
 .005706 800. 810. 490. 4 0 0 .00 1050.00 10700.00

1490 NH CARD USED  
 \*SECNO 1.664

3470 ENCROACHMENT STATIONS= 9900.0 10580.0 TYPE= 1 TARGET= 680.000  
 1.664 5.15 1462.85 .00 1462.02 1463.14 .29 3.33 .03 1462.10  
 5200.0 171.1 844.8 4184.1 77.2 182.0 979.1 81.6 46.4 1461.90  
 .19 2.22 4.64 4.27 .055 .040 .048 .000 1457.70 9900.00  
 .006881 600. 585. 500. 3 0 0 .00 680.00 10580.00

CCHV= .100 CEHV= .300  
 \*SECNO 1.759

3470 ENCROACHMENT STATIONS= 9850.0 10400.0 TYPE= 1 TARGET= 550.000  
 1.759 5.15 1466.45 .00 1465.75 1466.84 .39 3.67 .03 1464.70  
 5200.0 595.6 2279.0 2325.4 161.2 371.6 592.5 95.3 53.5 1465.10  
 .22 3.70 6.13 3.93 .055 .040 .050 .000 1461.30 9850.00  
 .007644 500. 500. 510. 4 0 0 .00 550.00 10400.00

1490 NH CARD USED  
 \*SECNO 1.863

3470 ENCROACHMENT STATIONS= 9590.0 10090.0 TYPE= 1 TARGET= 500.000  
 1.863 4.40 1470.10 .00 1469.30 1470.45 .35 3.61 .00 1468.70  
 5200.0 3269.5 1495.7 434.8 796.1 241.7 126.2 109.2 59.8 1468.30  
 .25 4.11 6.19 3.45 .049 .040 .055 .000 1465.70 9590.00  
 .006089 520. 550. 520. 3 0 0 .00 500.00 10090.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= .100 CEHV= .300  
 \*SECNO 1.964

3280 CROSS SECTION 1.96 EXTENDED .45 FEET

3470 ENCROACHMENT STATIONS= 9690.0 10210.0 TYPE= 1 TARGET= 520.000  
 1.964 5.04 1472.74 .00 1471.83 1473.01 .28 2.56 .01 1470.30  
 5200.0 2232.9 1078.1 1889.1 691.4 167.2 526.2 123.8 65.6 1470.90  
 .29 3.23 6.45 3.59 .055 .040 .055 .000 1467.70 9690.00  
 .004323 485. 535. 505. 2 0 0 .00 520.00 10210.00

\*SECNO 2.059

3470 ENCROACHMENT STATIONS= 9700.0 10100.0 TYPE= 1 TARGET= 400.000  
 2.059 4.60 1475.20 .00 1474.48 1475.58 .38 2.53 .03 1472.90

5200.0	3347.9	1114.2	737.9	784.9	157.9	195.7	138.2	70.9	1473.00
.32	4.27	7.06	3.77	.055	.040	.055	.000	1470.60	9700.00
.006027	490.	500.	520.	1	0	0	.00	400.00	10100.00

\*SECNO 2.163

3470 ENCROACHMENT STATIONS=	9820.0	10150.0	TYPE=	1	TARGET=	330.000			
2.163	4.85	1478.15	.00	1477.25	1478.61	.45	3.01	.02	1475.70
5200.0	2320.7	1987.1	892.2	511.4	292.5	247.6	151.3	75.3	1475.30
.34	4.54	6.79	3.60	.055	.040	.055	.000	1473.30	9820.00
.005527	500.	550.	540.	2	0	0	.00	330.00	10150.00

\*SECNO 2.259

3470 ENCROACHMENT STATIONS=	9800.0	10140.0	TYPE=	1	TARGET=	340.000			
2.259	5.08	1480.78	.00	1479.80	1481.15	.36	2.53	.01	1478.20
5200.0	2617.2	1180.1	1402.7	617.2	174.4	361.4	163.9	79.1	1477.80
.37	4.24	6.77	3.88	.055	.040	.055	.000	1475.70	9800.00
.004698	495.	505.	495.	2	0	0	.00	340.00	10140.00

\*SECNO 2.357

3470 ENCROACHMENT STATIONS=	9850.0	10130.0	TYPE=	1	TARGET=	280.000			
2.357	5.07	1483.37	.00	1482.51	1483.86	.48	2.67	.04	1480.70
5200.0	2273.0	1842.5	1084.5	477.0	266.0	239.6	176.3	82.7	1480.40
.40	4.77	6.93	4.53	.055	.040	.055	.000	1478.30	9850.00
.005940	505.	515.	505.	0	0	0	.00	280.00	10130.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XLNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

\*SECNO 2.455

3470 ENCROACHMENT STATIONS=	9830.0	10130.0	TYPE=	1	TARGET=	300.000			
2.455	5.22	1486.22	.00	1485.25	1486.64	.42	2.78	.01	1483.10
5200.0	2477.2	1368.9	1353.9	553.0	194.3	331.0	188.6	86.1	1483.50
.43	4.48	7.05	4.09	.055	.040	.055	.000	1481.00	9830.00
.004836	525.	515.	515.	1	0	0	.00	298.45	10128.45

\*SECNO 2.554

3470 ENCROACHMENT STATIONS=	9850.0	10090.0	TYPE=	1	TARGET=	240.000			
2.554	6.07	1488.67	.00	1487.91	1489.20	.54	2.53	.04	1485.50
5200.0	2096.3	2106.5	997.2	453.5	282.4	232.5	200.7	89.3	1485.70
.45	4.62	7.46	4.29	.055	.040	.055	.000	1482.60	9850.00
.004913	515.	525.	515.	2	0	0	.00	240.00	10090.00

\*SECNO 2.649

3470 ENCROACHMENT STATIONS=	9900.0	10130.0	TYPE=	1	TARGET=	230.000			
2.649	7.03	1491.13	.00	1490.31	1491.65	.52	2.45	.00	1488.00
5200.0	1697.4	1959.5	1543.2	352.6	270.2	342.2	211.9	92.1	1487.80
.48	4.81	7.25	4.51	.055	.040	.055	.000	1484.10	9900.00
.004826	500.	500.	510.	1	0	0	.00	230.00	10130.00

\*SECNO 2.747

3470 ENCROACHMENT STATIONS=	9900.0	10220.0	TYPE=	1	TARGET=	320.000			
2.747	6.15	1493.55	.00	1492.92	1493.94	.39	2.28	.01	1490.40
5200.0	1185.9	2049.3	1964.8	288.7	319.9	531.3	224.2	95.3	1491.20
.51	4.11	6.41	3.70	.055	.040	.055	.000	1487.40	9900.00
.004144	535.	515.	485.	2	0	0	.00	320.00	10220.00

\*SECNO 2.846

3470 ENCROACHMENT STATIONS=	9890.0	10185.0	TYPE=	1	TARGET=	295.000			
2.846	6.17	1496.07	.00	1495.35	1496.71	.64	2.69	.08	1493.50
5200.0	1335.3	2536.2	1328.6	286.6	315.1	325.7	236.4	98.9	1494.00
.53	4.66	8.05	4.08	.055	.040	.055	.000	1489.90	9890.00
.006716	545.	525.	485.	2	0	0	.00	295.00	10185.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XLNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

\*SECNO 2.938

3470 ENCROACHMENT STATIONS=	9820.0	10125.0	TYPE=	1	TARGET=	305.000			
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2.938	6.18	1499.08	.00	1498.10	1499.68	.61	2.97	.00	1496.70
5300.0	1421.2	3266.6	612.2	355.6	445.8	159.9	246.9	102.2	1496.30
.55	4.00	7.33	3.83	.055	.040	.055	.000	1492.90	9820.00
.005583	505.	485.	465.	2	0	0	.00	305.00	10125.00

\*SECNO 3.046

3470 ENCROACHMENT STATIONS=	9800.0	10060.0	TYPE=	1	TARGET=	260.000			
3.046	6.89	1502.39	.00	1501.70	1503.38	.99	3.58	.12	1499.80
5300.0	1618.8	3591.5	89.6	374.1	388.9	22.3	258.0	105.8	1498.80
.57	4.33	9.23	4.02	.055	.040	.055	.000	1495.50	9800.00
.007450	530.	570.	560.	1	0	0	.00	260.00	10060.00

1490 NH CARD USED

\*SECNO 3.143

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.58

3470 ENCROACHMENT STATIONS=	9870.0	10160.0	TYPE=	1	TARGET=	290.000			
3.143	6.04	1505.34	.00	1504.43	1505.71	.37	2.27	.06	1502.90
5300.0	880.6	2162.7	2256.7	289.1	367.6	507.0	269.3	108.9	1500.90
.60	3.05	5.88	4.45	.055	.040	.048	.000	1499.30	9870.00
.003002	500.	510.	500.	2	0	0	.00	290.00	10160.00

CCHV= .100 CEHV= .300

\*SECNO 3.232

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .46

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

3470 ENCROACHMENT STATIONS=	9950.0	10140.0	TYPE=	1	TARGET=	190.000			
3.232	5.84	1507.34	.00	1507.24	1508.63	1.28	2.64	.27	1504.80
5300.0	317.6	4887.8	94.6	51.5	524.2	31.7	278.9	111.5	1506.50
.62	6.17	9.32	2.98	.055	.045	.055	.000	1501.50	9950.00
.013886	470.	470.	480.	2	0	0	.00	190.00	10140.00

CCHV= .100 CEHV= .300

\*SECNO 3.336

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.72

3470 ENCROACHMENT STATIONS=	9840.0	10080.0	TYPE=	1	TARGET=	240.000			
3.336	7.72	1512.02	.00	1511.08	1512.77	.75	4.09	.05	1509.20
5300.0	1123.9	3973.7	202.3	278.7	515.8	83.5	288.1	114.2	1509.60
.64	4.03	7.70	2.42	.055	.040	.055	.000	1504.30	9840.00
.004701	510.	550.	540.	2	0	0	.00	240.00	10080.00

\*SECNO 3.431

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=	9960.0	10135.0	TYPE=	1	TARGET=	175.000			
3.431	6.67	1514.67	.00	1514.06	1516.00	1.32	3.05	.17	1511.80
5300.0	228.8	3922.1	1149.1	49.1	378.5	243.5	296.9	116.5	1512.30
.65	4.66	10.36	4.72	.055	.040	.055	.000	1508.00	9960.00
.008351	490.	500.	490.	3	0	0	.00	175.00	10135.00

\*SECNO 3.529

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.69

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

3470 ENCROACHMENT STATIONS= 9910.0 10140.0 TYPE= 1 TARGET= 230.000  
 3.529 7.39 1517.99 .00 1517.22 1518.45 .47 2.37 .09 1514.80  
 5300.0 1058.9 4032.2 208.9 295.0 673.3 76.4 307.1 118.9 1515.10  
 .68 3.59 5.99 2.74 .055 .040 .055 .000 1510.60 9910.00  
 .002918 545. 515. 485. 1 0 0 .00 230.00 10140.00

\*SECNO 3.624

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .63

3470 ENCROACHMENT STATIONS= 9860.0 10040.0 TYPE= 1 TARGET= 180.000  
 3.624 6.14 1519.84 .00 1519.45 1520.89 1.05 2.26 .17 1516.10  
 5300.0 1225.9 3857.5 216.6 247.6 422.0 48.2 317.5 121.4 1516.40  
 .70 4.95 9.14 4.49 .055 .040 .055 .000 1513.70 9860.00  
 .007322 515. 515. 515. 2 0 0 .00 180.00 10040.00

\*SECNO 3.718

3470 ENCROACHMENT STATIONS= 9850.0 10090.0 TYPE= 1 TARGET= 240.000  
 3.718 6.72 1523.22 .00 1522.23 1523.90 .68 2.98 .04 1520.80  
 5300.0 1100.1 4066.5 133.4 293.7 557.2 38.6 326.6 123.7 1520.20  
 .72 3.75 7.30 3.46 .055 .040 .055 .000 1516.50 9850.00  
 .005077 485. 495. 495. 2 0 0 .00 240.00 10090.00

\*SECNO 3.817

3470 ENCROACHMENT STATIONS= 9892.0 10051.0 TYPE= 1 TARGET= 159.000  
 3.817 6.82 1525.72 .00 1525.30 1526.51 .79 2.58 .03 1523.20  
 5300.0 3.8 5296.1 .1 2.5 740.8 .2 336.4 126.1 1523.40  
 .74 1.49 7.15 .39 .055 .040 .055 .000 1518.90 9892.00  
 .004762 515. 525. 525. 3 0 0 .00 159.00 10051.00

\*SECNO 3.909

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

3470 ENCROACHMENT STATIONS= 9870.0 10070.0 TYPE= 1 TARGET= 200.000  
 3.909 7.03 1528.33 .00 1527.55 1529.19 .86 2.66 .02 1525.20  
 5300.0 1546.2 3570.4 183.5 312.4 424.0 53.5 344.9 128.1 1526.20  
 .76 4.95 8.42 3.43 .055 .040 .055 .000 1521.30 9870.00  
 .006400 485. 485. 485. 2 0 0 .00 200.00 10070.00

CCHV= .100 CEHV= .300

\*SECNO 4.004

3280 CROSS SECTION 4.00 EXTENDED .54 FEET

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.51

3470 ENCROACHMENT STATIONS= 9670.0 10040.0 TYPE= 1 TARGET= 370.000  
 4.004 6.34 1530.94 .00 1529.99 1531.29 .34 2.04 .05 1528.00  
 5300.0 1609.2 3639.8 51.0 480.1 696.8 25.7 356.4 131.2 1528.90  
 .79 3.35 5.22 1.98 .050 .040 .055 .000 1524.60 9698.85  
 .002806 510. 500. 490. 2 0 0 .00 341.15 10040.00

CCHV= .100 CEHV= .300

\*SECNO 4.104

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .55

3470 ENCROACHMENT STATIONS= 9925.0 10120.0 TYPE= 1 TARGET= 195.000  
 4.104 5.33 1532.83 .00 1532.53 1533.86 1.03 2.37 .21 1529.90  
 5300.0 571.4 3112.4 1616.2 116.9 336.1 243.5 367.4 134.3 1530.00  
 .81 4.89 9.26 6.64 .055 .040 .050 .000 1527.50 9925.00  
 .009356 490. 530. 430. 2 0 0 .00 195.00 10120.00

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

\*SECNO 4.200

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.57

3470 ENCROACHMENT STATIONS=	9870.0	10110.0	TYPE=	1	TARGET=	240.000				
4.200	6.49	1536.19	.00	1535.21	1536.71	.52	2.80	.05	1531.70	
5300.0	1296.3	3401.8	601.9	287.5	522.7	176.4	376.9	136.7	1534.40	
.83	4.51	6.51	3.41	.055	.040	.050	.000	1529.70	9870.00	
.003817	515.	505.	435.	2	0	0	.00	240.00	10110.00	

\*SECNO 4.294

3470 ENCROACHMENT STATIONS=	9934.0	10130.0	TYPE=	1	TARGET=	196.000				
4.294	6.28	1538.58	.00	1537.92	1539.51	.92	2.67	.12	1536.60	
5400.0	3.5	4116.7	1279.8	1.9	499.7	223.0	386.7	139.2	1536.00	
.85	1.85	8.24	5.74	.055	.040	.050	.000	1532.30	9934.00	
.007974	505.	495.	515.	3	0	0	.00	196.00	10130.00	

\*SECNO 4.393

3470 ENCROACHMENT STATIONS= 9890.0 10110.0 TYPE= 1 TARGET= 220.000

\*\*\* DIRT ROAD ON RANGE LINE 5 WEST - 6 WEST CROSSES POWERLINE WASH AT MILE 4.38 \*\*\*

4.393	6.47	1542.27	.00	1541.33	1543.00	.73	3.47	.02	1539.90	
5400.0	19.9	4864.0	516.1	7.9	684.3	123.6	395.9	141.7	1540.20	
.87	2.54	7.11	4.18	.055	.040	.050	.000	1535.80	9890.00	
.005679	525.	525.	495.	3	0	0	.00	220.00	10110.00	

\*SECNO 4.494

3470 ENCROACHMENT STATIONS=	9932.0	10100.0	TYPE=	1	TARGET=	168.000				
4.494	6.15	1545.15	.00	1544.40	1545.98	.83	2.95	.03	1541.90	
5400.0	3.1	4939.5	457.5	2.3	657.6	93.0	405.6	144.1	1541.70	
.89	1.36	7.51	4.92	.055	.040	.050	.000	1539.00	9932.00	
.005279	545.	535.	575.	3	0	0	.00	168.00	10100.00	

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

\*SECNO 4.592

3470 ENCROACHMENT STATIONS=	9900.0	10084.0	TYPE=	1	TARGET=	184.000				
4.592	5.75	1548.65	.00	1547.93	1549.81	1.16	3.73	.10	1547.30	
5400.0	3.9	5390.8	5.3	1.8	622.6	2.2	413.7	146.2	1546.50	
.91	2.17	8.66	2.34	.055	.040	.050	.000	1542.90	9900.00	
.010611	505.	515.	495.	2	0	0	.00	184.00	10084.00	

CCHV= .100 CEHV= .300

\*SECNO 4.693

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.65

3470 ENCROACHMENT STATIONS=	9680.0	10076.0	TYPE=	1	TARGET=	396.000				
4.693	6.65	1552.75	.00	1552.11	1553.12	.37	3.23	.08	1550.50	
5400.0	875.0	4523.7	1.3	299.7	875.2	1.1	424.7	149.7	1551.60	
.94	2.92	5.17	1.11	.055	.040	.055	.000	1546.10	9680.00	
.003912	505.	535.	525.	2	0	0	.00	396.00	10076.00	

\*SECNO 4.788

3470 ENCROACHMENT STATIONS=	9725.0	10145.0	TYPE=	1	TARGET=	420.000				
4.788	5.57	1555.07	.00	1554.07	1555.59	.53	2.43	.05	1553.20	
5400.0	2071.9	2922.6	405.6	550.2	410.0	117.8	437.4	154.3	1553.10	
.96	3.77	7.13	3.44	.055	.040	.055	.000	1549.50	9725.00	
.006332	480.	500.	500.	3	0	0	.00	420.00	10145.00	

\*SECNO 4.884

3470 ENCROACHMENT STATIONS=	9700.0	10030.0	TYPE=	1	TARGET=	330.000				
4.884	6.47	1558.27	.00	1557.27	1558.99	.73	3.34	.06	1555.70	

5400.0	2813.2	2576.1	10.7	666.5	291.0	4.5	449.1	158.6	1556.30
.98	4.22	8.85	2.40	.055	.040	.055	.000	1551.80	9700.00
.007060	495.	505.	505.	2	0	0	.00	330.00	10030.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

\*SECNO 4.986

3470 ENCROACHMENT STATIONS=	9900.0	10100.0	TYPE=	1	TARGET=	200.000			
4.986	6.19	1561.89	.00	1561.35	1562.85	.96	3.78	.07	1559.30
5400.0	984.6	3961.9	453.5	217.3	456.4	78.3	459.2	161.7	1558.90
1.00	4.53	8.68	5.79	.055	.040	.055	.000	1555.70	9900.00
.007496	485.	540.	525.	2	0	0	.00	200.00	10100.00

\*SECNO 5.081

3470 ENCROACHMENT STATIONS=	9941.0	10190.0	TYPE=	1	TARGET=	249.000			
5.081	6.39	1565.19	.00	1564.49	1565.85	.66	2.97	.03	1562.80
5400.0	.6	3696.9	1702.6	.7	496.2	438.9	468.9	164.2	1562.80
1.02	.78	7.45	3.88	.055	.040	.055	.000	1558.80	9941.00
.004825	495.	500.	505.	2	0	0	.00	249.00	10190.00

\*SECNO 5.174

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=	9920.0	10090.0	TYPE=	1	TARGET=	170.000			
5.174	6.44	1567.84	.00	1567.91	1569.02	1.18	3.01	.15	1565.50
5400.0	19.6	4927.0	453.4	6.7	545.8	103.5	477.7	166.5	1565.70
1.04	2.94	9.03	4.38	.055	.040	.055	.000	1561.40	9920.00
.008324	500.	490.	460.	2	0	0	.00	170.00	10090.00

\*SECNO 5.245

3470 ENCROACHMENT STATIONS=	9960.0	10077.0	TYPE=	1	TARGET=	117.000			
5.245	7.07	1570.57	.00	1569.80	1571.87	1.30	2.81	.04	1568.90
5400.0	13.0	5384.9	2.1	5.5	587.7	1.6	483.0	167.8	1568.00
1.05	2.38	9.16	1.37	.055	.040	.055	.000	1563.50	9960.00
.006823	385.	375.	355.	2	0	0	.00	117.00	10077.00

\*SECNO 5.327

3301 HV CHANGED MORE THAN HVINS

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.50

3470 ENCROACHMENT STATIONS=	9830.0	10033.0	TYPE=	1	TARGET=	203.000			
5.327	7.29	1573.29	.00	1572.78	1573.81	.52	1.86	.08	1570.20
5400.0	382.1	5017.7	.2	120.1	842.6	.3	490.6	169.3	1572.70
1.07	3.18	5.95	.65	.055	.040	.055	.000	1566.00	9830.00
.003021	370.	430.	405.	2	0	0	.00	203.00	10033.00

1490 NH CARD USED

\*SECNO 5.413

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .50

3470 ENCROACHMENT STATIONS=	9924.0	10100.0	TYPE=	1	TARGET=	176.000			
5.413	5.96	1575.16	.00	1574.83	1576.65	1.50	2.55	.29	1574.00
5400.0	2.3	4769.1	628.6	1.2	465.0	114.7	498.9	171.4	1574.00
1.09	1.98	10.26	5.48	.055	.040	.047	.000	1569.20	9924.00
.012300	375.	475.	495.	2	0	0	.00	176.00	10100.00

CCHV= .100 CEHV= .300

\*SECNO 5.493

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.20

3470 ENCROACHMENT STATIONS=	9895.0	10175.0	TYPE=	1	TARGET=	280.000			
5.493	6.75	1578.35	.00	1577.36	1578.76	.42	2.00	.11	1575.20
5400.0	303.7	3913.8	1182.5	119.3	679.7	362.3	507.2	173.5	1575.10
1.11	2.55	5.76	3.26	.055	.040	.050	.000	1571.60	9895.00
.002543	400.	420.	400.	2	0	0	.00	280.00	10175.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= .100 CEHV= .300  
\*SECNO 5.589

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .46

3470 ENCROACHMENT STATIONS=	9922.0	10070.0	TYPE=	1	TARGET=	148.000			
5.589	5.38	1579.88	.00	1580.05	1581.54	1.66	2.41	.37	1577.70
5400.0	.9	5318.1	81.0	.7	510.0	26.5	517.1	176.0	1578.60
1.12	1.33	10.43	1671.6	.050	.040	.055	.000	1574.50	9922.00
.011909	495.	505.	515.	3	0	0	.00	148.00	10070.00

\*SECNO 5.682

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.53

3470 ENCROACHMENT STATIONS=	9930.0	10120.0	TYPE=	1	TARGET=	190.000			
5.682	6.04	1584.64	.00	1583.69	1585.39	.75	3.75	.09	1581.50
5500.0	313.2	5315.2	1671.6	74.5	451.1	322.5	524.9	177.9	1581.30
1.14	4.20	7.79	5.18	.050	.040	.055	.000	1578.60	9930.00
.005298	400.	490.	530.	4	0	0	.00	190.00	10120.00

\*SECNO 5.771

3470 ENCROACHMENT STATIONS=	9924.0	10140.0	TYPE=	1	TARGET=	216.000			
5.771	5.34	1587.14	.00	1586.52	1587.81	.67	2.42	.01	1586.60
5500.0	.4	5497.4	2.2	.4	836.6	1.6	533.9	180.1	1585.10
1.16	.99	6.57	1.34	.050	.040	.055	.000	1581.80	9924.00
.005128	470.	470.	430.	3	0	0	.00	216.00	10140.00

\*SECNO 5.865

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=	9945.0	10088.0	TYPE=	1	TARGET=	143.000			
5.865	6.52	1589.72	.00	1589.28	1590.91	1.18	2.94	.15	1587.30
5500.0	193.4	5302.9	3.7	45.0	598.7	2.1	542.2	182.1	1587.60
1.18	4.30	8.86	1.76	.050	.040	.055	.000	1583.20	9945.00
.007093	510.	490.	490.	1	0	0	.00	143.00	10088.00

CCHV= .100 CEHV= .300  
\*SECNO 5.961

3470 ENCROACHMENT STATIONS=	9900.0	10088.0	TYPE=	1	TARGET=	188.000			
5.961	7.06	1593.46	.00	1592.52	1594.18	.72	3.22	.05	1590.90
5500.0	310.2	5189.4	.4	73.9	748.3	.4	550.8	184.0	1592.40
1.20	4.20	6.93	.90	.050	.045	.055	.000	1586.40	9900.00
.005762	515.	505.	505.	1	0	0	.00	188.00	10088.00

CCHV= .100 CEHV= .300  
\*SECNO 6.057

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 9929.0 10059.0 TYPE= 1 TARGET= 130.000

6.057	6.55	1596.35	.00	1595.62	1597.58	1.24	3.25	.16	1593.10
5500.0	2.3	5496.5	1.1	1.6	615.7	1.2	559.1	185.9	1592.50
1.21	1.45	8.93	.98	.050	.040	.055	.000	1589.80	9929.00
.007250	495.	505.	495.	2	0	0	.00	130.00	10059.00

\*SECNO 6.150

3470 ENCROACHMENT STATIONS=	9935.0	10062.0	TYPE=	1	TARGET=	127.000			
6.150	6.31	1599.61	.00	1598.74	1600.69	1.08	3.09	.02	1596.20
5500.0	1.5	5495.5	3.0	1.4	660.0	2.0	566.3	187.3	1597.40
1.23	1.12	8.33	1.49	.050	.040	.055	.000	1593.30	9935.00
.005530	490.	490.	480.	2	0	0	.00	127.00	10062.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

\*SECNO 6.248

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=	9940.0	10060.0	TYPE=	1	TARGET=	120.000			
6.248	7.04	1602.64	.00	1602.15	1604.46	1.82	3.55	.22	1599.40
5500.0	530.9	4558.7	410.3	91.9	391.7	81.1	573.6	188.8	1599.30
1.24	5.78	11.64	5.06	.050	.040	.055	.000	1595.60	9940.00
.008834	515.	515.	505.	2	0	0	.00	120.00	10060.00

1490 NH CARD USED

\*SECNO 6.347

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.09

3470 ENCROACHMENT STATIONS=	9800.0	10045.0	TYPE=	1	TARGET=	245.000			
6.347	7.56	1606.16	.00	1605.30	1606.54	.38	1.94	.14	1603.30
5500.0	131.8	5280.8	87.4	58.1	1051.6	50.5	583.9	190.9	1603.80
1.27	2.27	5.02	1.73	.055	.041	.055	.000	1598.60	9800.00
.002026	465.	525.	545.	2	0	0	.00	245.00	10045.00

CCHV= .100 CEHV= .300

\*SECNO 6.440

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .52

3470 ENCROACHMENT STATIONS=	9903.0	10116.0	TYPE=	1	TARGET=	213.000			
6.440	4.92	1607.52	.00	1607.30	1608.41	.89	1.72	.15	1605.80
5500.0	35.4	5463.9	.7	15.7	718.9	.5	594.5	193.5	1606.80
1.29	2.26	7.60	1.22	.055	.040	.055	.000	1602.60	9903.00
.007444	490.	490.	490.	2	0	0	.00	213.00	10116.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= .100 CEHV= .300

\*SECNO 6.538

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=	9920.0	10085.0	TYPE=	1	TARGET=	165.000			
6.538	6.15	1611.85	1611.85	1611.68	1613.61	1.75	4.72	.26	1609.30
5500.0	877.8	4319.8	302.4	149.8	371.1	68.8	602.4	195.8	1610.20
1.31	5.86	11.64	4.39	.050	.040	.055	.000	1605.70	9920.00
.011458	535.	515.	535.	4	11	0	.00	165.00	10085.00

CCHV= .100 CEHV= .300

\*SECNO 6.630

3301 HV CHANGED MORE THAN HVINS



5600.0	1701.3	3898.6	.1	407.9	478.3	.1	666.3	211.3	1634.70
1.44	4.17	8.15	.58	.050	.040	.055	.000	1627.20	9735.00
.006748	440.	510.	520.	2	0	0	.00	292.00	10027.00

\*SECNO 7.297

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=	9910.0	10060.0	TYPE=	1	TARGET=	150.000			
7.297	6.88	1638.18	.00	1637.32	1639.53	1.35	3.65	.17	1635.60
5600.0	843.7	4575.3	181.0	156.7	456.8	36.4	674.9	213.7	1635.10
1.45	5.39	10.02	4.97	.050	.040	.055	.000	1631.30	9910.00
.008059	450.	510.	510.	2	0	0	.00	150.00	10060.00

CCHV= .100 CEHV= .300

\*SECNO 7.391

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=	9940.0	10139.0	TYPE=	1	TARGET=	199.000			
7.391	8.09	1641.99	.00	1641.14	1642.83	.83	3.24	.05	1639.10
5600.0	240.3	3864.7	1495.0	60.1	467.4	319.4	683.4	215.7	1638.90
1.47	4.00	8.27	4.68	.055	.040	.055	.000	1633.90	9940.00
.005440	515.	495.	475.	2	0	0	.00	199.00	10139.00

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

\*SECNO 7.488

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=	9946.0	10080.0	TYPE=	1	TARGET=	134.000			
7.488	7.50	1644.60	.00	1644.73	1646.26	1.66	3.19	.25	1640.30
5600.0	118.7	4823.2	658.1	31.8	438.7	142.2	691.9	217.6	1640.10
1.49	3.74	10.99	4.63	.055	.040	.055	.000	1637.10	9946.24
.007273	500.	510.	510.	2	0	0	.00	133.76	10080.00

CCHV= .100 CEHV= .300

\*SECNO 7.575

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=	9900.0	10080.0	TYPE=	1	TARGET=	180.000			
7.575	7.91	1648.11	.00	1647.89	1649.14	1.04	2.82	.06	1643.50
5600.0	1729.7	3234.9	635.4	315.0	329.7	156.9	699.4	219.3	1644.20
1.50	5.49	9.81	4.05	.050	.040	.055	.000	1640.20	9900.00
.005211	480.	460.	440.	2	0	0	.00	180.00	10080.00

1490 NH CARD USED

\*SECNO 7.674

3470 ENCROACHMENT STATIONS=	9830.0	10060.0	TYPE=	1	TARGET=	230.000			
7.674	7.06	1650.76	.00	1650.74	1651.42	.66	2.24	.04	1647.10
5600.0	1158.0	4263.9	178.1	308.0	594.0	58.6	709.9	221.7	1647.20
1.53	3.76	7.18	3.04	.050	.042	.055	.000	1643.70	9830.00
.003626	505.	525.	525.	2	0	0	.00	230.00	10060.00

CCHV= .100 CEHV= .300

\*SECNO 7.771

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .59

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS=	9926.0	10090.0	TYPE=	1	TARGET=	164.000			
7.771	6.90	1653.20	.00	1653.12	1654.55	1.35	2.92	.21	1650.70
5600.0	289.0	4121.8	1189.2	69.5	411.7	155.8	719.3	224.0	1650.00
1.54	4.16	10.01	7.63	.055	.045	.050	.000	1646.30	9926.00
.010360	520.	510.	500.	2	0	0	.00	164.00	10090.00

CCHV= .100 CEHV= .300  
\*SECNO 7.865

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.52

3470 ENCROACHMENT STATIONS=	9876.0	10080.0	TYPE=	1	TARGET=	204.000			
7.865	8.19	1657.19	.00	1656.63	1657.85	.66	3.23	.07	1654.10
5600.0	723.9	4493.6	382.5	184.2	642.3	81.6	728.1	226.1	1653.20
1.56	3.93	7.00	4.69	.050	.045	.050	.000	1649.00	9876.00
.004475	505.	495.	495.	2	0	0	.00	204.00	10080.00

CCHV= .100 CEHV= .300  
\*SECNO 7.958

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY  
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=	9925.0	10060.0	TYPE=	1	TARGET=	135.000			
7.958	7.73	1659.63	1659.63	1659.67	1661.66	2.03	3.35	.41	1656.90
5600.0	590.1	4651.1	358.8	101.2	379.6	61.8	736.2	228.0	1656.80
1.57	5.83	12.25	5.80	.050	.040	.050	.000	1651.90	9925.00
.011721	480.	490.	500.	3	11	0	.00	135.00	10060.00

CCHV= .100 CEHV= .300  
\*SECNO 8.059

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.66

3470 ENCROACHMENT STATIONS=	9930.0	10060.0	TYPE=	1	TARGET=	130.000			
8.059	8.31	1664.31	.00	1663.41	1665.26	.95	3.49	.11	1659.90
5600.0	845.4	3835.4	919.2	159.9	438.8	175.3	744.1	229.6	1659.60
1.59	5.29	8.74	5.24	.050	.040	.050	.000	1656.00	9930.00
.004235	475.	535.	545.	3	0	0	.00	130.00	10060.00

CCHV= .100 CEHV= .300  
\*SECNO 8.155

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=	9950.0	10060.0	TYPE=	1	TARGET=	110.000			
8.155	7.08	1666.68	.00	1666.21	1668.35	1.66	2.87	.21	1661.90
5600.0	934.7	4471.7	193.6	151.7	399.6	40.1	752.0	231.0	1662.80
1.61	6.16	11.19	4.83	.055	.040	.055	.000	1659.60	9950.00
.008081	495.	505.	515.	2	0	0	.00	110.00	10060.00

\*SECNO 8.250

3470 ENCROACHMENT STATIONS=	9960.0	10050.0	TYPE=	1	TARGET=	90.000			
8.250	8.15	1670.35	.00	1670.04	1672.32	1.98	3.88	.09	1666.20
5600.0	260.4	4975.9	363.7	51.6	421.2	63.3	758.5	232.2	1666.00
1.62	5.05	11.81	5.74	.055	.040	.055	.000	1662.20	9960.00
.007466	500.	500.	500.	2	0	0	.00	90.00	10050.00

\*SECNO 8.346

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=	9959.0	10075.0	TYPE=	1	TARGET=	116.000			
8.346	8.44	1674.14	.00	1673.64	1675.18	1.04	2.76	.09	1672.20
5600.0	21.5	5573.4	5.1	11.2	678.8	3.7	765.6	233.4	1669.40
1.64	1.92	8.21	1.36	.055	.040	.055	.000	1665.70	9959.00
.004172	515.	505.	505.	2	0	0	.00	116.00	10075.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

\*SECNO 8.438

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .69

3470 ENCROACHMENT STATIONS=	9960.0	10050.0	TYPE=	1	TARGET=	90.000		
8.438	6.79	1676.29	.00	1676.16	1678.32	2.03	2.85	.30 1672.80
5600.0	71.3	5309.2	219.5	17.3	454.3	42.9	772.4	234.5 1672.50
1.65	4.13	11.69	5.12	.055	.040	.055	.000	1669.50 9960.00
.008873	495.	485.	475.	2	0	0	.00	90.00 10050.00

\*SECNO 8.530

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=	9955.0	10065.0	TYPE=	1	TARGET=	110.000		
8.530	8.30	1680.30	.00	1679.48	1681.47	1.18	3.06	.09 1676.90
5700.0	99.9	5589.6	10.5	29.8	637.0	5.7	779.0	235.6 1676.00
1.66	3.35	8.78	1.84	.055	.040	.055	.000	1672.00 9955.00
.004747	495.	485.	485.	2	0	0	.00	110.00 10065.00

\*SECNO 8.626

3470 ENCROACHMENT STATIONS=	9900.0	10060.0	TYPE=	1	TARGET=	160.000		
8.626	8.61	1682.92	.00	1682.00	1684.04	1.12	2.56	.01 1680.20
5700.0	1122.2	4157.6	420.2	247.7	435.9	83.7	787.4	237.2 1678.50
1.68	4.53	9.54	1.84	.055	.040	.055	.000	1674.30 9900.00
.005412	515.	505.	495.	2	0	0	.00	160.00 10060.00

CCHV= .100 CEHV= .300

\*SECNO 8.722

3470 ENCROACHMENT STATIONS=	9880.0	10041.0	TYPE=	1	TARGET=	161.000		
8.722	7.76	1685.86	.00	1685.98	1686.98	1.13	2.94	.00 1682.40
5700.0	2306.7	3393.3	.0	371.2	347.2	.0	795.7	238.9 1693.50
1.70	6.21	9.77	.00	.050	.040	.000	.000	1678.10 9880.00
.006620	465.	505.	505.	2	0	0	.00	146.64 10026.64

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XLNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

CCHV= .100 CEHV= .300

\*SECNO 8.817

3470 ENCROACHMENT STATIONS=	9946.0	10050.0	TYPE=	1	TARGET=	104.000		
8.817	7.19	1688.79	.00	1688.17	1690.14	1.35	3.09	.07 1684.40
5700.0	4.5	5594.3	101.2	3.1	595.1	26.9	803.5	240.3 1684.80
1.71	1.45	9.40	3.76	.055	.040	.055	.000	1681.60 9946.00
.005665	490.	510.	510.	2	0	0	.00	104.00 10050.00

\*SECNO 8.910

3470 ENCROACHMENT STATIONS=	9950.0	10070.0	TYPE=	1	TARGET=	120.000		
8.910	7.10	1692.00	.00	1691.34	1693.64	1.64	3.41	.09 1688.20
5700.0	258.4	3988.5	1453.1	51.4	345.1	219.2	810.5	241.6 1687.50
1.73	5.03	11.56	6.63	.055	.040	.055	.000	1684.90 9950.00
.008690	490.	490.	500.	2	0	0	.00	120.00 10070.00

CCHV= .100 CEHV= .300

\*SECNO 9.000

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.48

3470 ENCROACHMENT STATIONS=	9975.0	10125.0	TYPE=	1	TARGET=	150.000		
9.000	8.38	1695.68	.00	1694.96	1696.40	.73	2.67	.09 1697.50
5700.0	.0	2696.0	3004.0	.0	341.0	524.7	818.5	243.0 1690.90
1.75	.00	7.91	5.73	.000	.040	.050	.000	1687.30 9978.34
.003989	485.	475.	465.	2	0	0	.00	146.66 10125.00

\*SECNO 9.100

3470 ENCROACHMENT STATIONS=	9949.0	10080.0	TYPE=	1	TARGET=	131.000		
9.100	7.35	1698.05	.00	1697.24	1699.27	1.22	2.72	.15 1697.80
5700.0	.1	5267.8	432.2	.1	581.2	72.3	827.6	244.7 1694.10
1.76	.65	9.06	5.98	.055	.040	.050	.000	1690.70 9949.00
.006920	540.	530.	520.	2	0	0	.00	131.00 10080.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

\*SECNO 9.192

3470 ENCROACHMENT STATIONS=	9970.0	10073.0	TYPE=	1	TARGET=	103.000			
9.192	7.32	1701.12	.00	1700.61	1702.59	1.47	3.25	.08	1696.80
5700.0	172.8	5519.6	7.6	38.9	559.6	3.8	834.6	246.0	1696.80
1.78	4.45	9.86	1.97	.055	.040	.050	.000	1693.80	9970.00
.006491	505.	485.	475.	2	0	0	.00	103.00	10073.00

CCHV= .100 CEHV= .300  
\*SECNO 9.286

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=	9830.0	10017.0	TYPE=	1	TARGET=	187.000			
9.286	7.95	1704.65	.00	1703.69	1705.31	.66	2.64	.08	1701.40
5700.0	2792.9	2907.1	.0	515.1	391.7	.0	843.3	247.7	1708.00
1.80	5.42	7.42	.00	.050	.040	.000	.000	1696.70	9830.00
.004342	495.	505.	515.	2	0	0	.00	184.42	10014.42

CCHV= .100 CEHV= .300  
\*SECNO 9.389

3470 ENCROACHMENT STATIONS=	9870.0	10130.0	TYPE=	1	TARGET=	260.000			
9.389	6.67	1707.07	.00	1706.65	1708.01	.94	2.61	.08	1704.70
5700.0	285.0	3942.4	1472.6	104.6	446.7	300.0	853.6	250.2	1704.50
1.82	2.72	8.83	4.91	.050	.040	.050	.000	1700.40	9870.00
.005880	445.	545.	555.	2	0	0	.00	260.00	10130.00

CCHV= .100 CEHV= .300  
\*SECNO 9.481

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY  
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=	9950.0	10120.0	TYPE=	1	TARGET=	170.000			
9.481	6.60	1710.20	1710.20	1709.98	1712.05	1.85	3.70	.27	1707.10
5700.0	498.1	4735.2	466.8	72.1	404.9	115.9	861.4	252.5	1707.60
1.83	6.91	11.69	4.03	.050	.040	.055	.000	1703.60	9950.00
.010820	505.	485.	415.	3	5	0	.00	170.00	10120.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= .100 CEHV= .300  
\*SECNO 9.575

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.95

3470 ENCROACHMENT STATIONS=	9918.0	10110.0	TYPE=	1	TARGET=	192.000			
9.575	7.74	1714.05	.00	1713.10	1714.63	.58	2.45	.13	1710.30
5700.0	5.0	5173.9	521.1	3.7	816.7	156.4	870.3	254.6	1710.20
1.85	1.36	6.34	3.33	.050	.040	.050	.000	1706.30	9918.00
.002833	515.	495.	475.	3	0	0	.00	192.00	10110.00

1490 NH CARD USED  
\*SECNO 9.672

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .51

3470 ENCROACHMENT STATIONS=	9970.0	10120.0	TYPE=	1	TARGET=	150.000			
9.672	6.76	1715.96	.00	1716.04	1717.41	1.45	2.52	.26	1715.10
5700.0	22.2	5485.9	191.9	8.1	560.6	35.2	879.4	256.5	1713.10
1.87	2.73	9.79	5.45	.055	.042	.050	.000	1709.20	9970.00
.010919	520.	510.	470.	3	0	0	.00	150.00	10120.00

CCHV= .100 CEHV= .300  
 \*SECNO 9.761  
 3280 CROSS SECTION 9.76 EXTENDED .56 FEET

3470 ENCROACHMENT STATIONS=	9970.0	10070.0	TYPE=	1	TARGET=	100.000			
9.761	7.26	1720.06	.00	1719.17	1721.96	1.89	4.41	.13	1715.50
5700.0	148.9	4822.1	729.0	28.8	410.1	125.3	885.7	257.9	1715.10
1.88	5.17	11.76	5.82	.050	.040	.055	.000	1712.80	9970.00
.008226	480.	470.	440.	2	0	0	.00	100.00	10070.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= .100 CEHV= .300  
 \*SECNO 9.854

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=	9920.0	10100.0	TYPE=	1	TARGET=	180.000			
9.854	7.57	1724.27	.00	1723.49	1725.17	.90	3.11	.10	1723.30
5700.0	33.5	5443.8	222.7	17.5	702.7	64.6	893.5	259.5	1722.10
1.90	1.91	7.75	3.45	.055	.040	.050	.000	1716.70	9920.00
.004924	480.	490.	580.	3	0	0	.00	180.00	10100.00

\*SECNO 9.949

3470 ENCROACHMENT STATIONS= 9973.0 10143.0 TYPE= 1 TARGET= 170.000

\*\*\* VULTURE MINE ROAD CROSSES POWERLINE WASH AT MILE 9.90 \*\*\*

9.949	7.57	1726.57	.00	1725.95	1727.29	.72	2.11	.02	1723.60
5700.0	2.8	4254.0	1443.2	2.3	571.7	315.3	903.1	261.5	1722.70
1.92	1.21	7.44	4.58	.055	.040	.050	.000	1719.00	9973.00
.003649	500.	500.	500.	3	0	0	.00	170.00	10143.00

CCHV= .100 CEHV= .300  
 \*SECNO 10.045

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY  
 3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=	9900.0	10053.0	TYPE=	1	TARGET=	153.000			
10.045	6.72	1728.92	1728.92	1728.97	1730.79	1.87	3.00	.34	1726.00
5700.0	1460.4	3593.0	646.6	229.5	278.9	95.4	911.7	263.4	1724.80
1.93	6.36	12.88	6.78	.050	.040	.055	.000	1722.20	9900.00
.011344	485.	505.	515.	2	15	0	.00	153.00	10053.00

\*SECNO 10.138

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.91

3470 ENCROACHMENT STATIONS=	9910.0	10125.0	TYPE=	1	TARGET=	215.000			
10.138	7.40	1733.00	.00	1732.13	1733.57	.57	2.65	.13	1730.30
5700.0	446.5	5051.9	201.6	145.3	796.4	60.3	920.8	265.5	1728.60
1.95	3.07	6.34	3.34	.050	.040	.055	.000	1725.60	9910.00
.003100	495.	495.	495.	3	0	0	.00	215.00	10125.00

\*SECNO 10.236

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .51

3470 ENCROACHMENT STATIONS=	9890.0	10040.0	TYPE=	1	TARGET=	150.000			
10.236	5.53	1734.93	.00	1734.78	1736.72	1.80	2.79	.37	1731.80
5700.0	1325.6	4295.6	78.8	207.7	362.2	17.7	930.2	267.6	1732.10
1.97	6.38	11.86	4.45	.050	.040	.055	.000	1729.40	9890.00

\*SECNO 10.331

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.92

3470 ENCROACHMENT STATIONS=		9875.0	10144.0	TYPE=	1	TARGET=	269.000				
10.331	7.55	1739.15	.00	1738.29	1739.62	.47	2.76	.13	1736.50		
5700.0	547.5	5047.9	104.5	165.3	881.3	42.5	939.9	270.0	1735.70		
1.99	3.31	5.73	2.46	.050	.040	.055	.000	1731.60	9875.00		
.003178	510.	500.	500.	3	0	0	.00	269.00	10144.00		

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

\*SECNO 10.424

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL  
 3693 PROBABLE MINIMUM SPECIFIC ENERGY  
 3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9969.0 10039.0 TYPE= 1 TARGET= 70.000

\*\*\* XSECTN 10.424 IS THE UPSTREAM LIMIT OF POWERLINE WASH STUDY \*\*\*

10.424	6.65	1741.55	1741.55	1740.98	1744.57	3.02	2.81	.77	1738.30
5700.0	9.3	5682.3	8.5	3.2	406.9	3.2	948.4	272.0	1738.30
2.00	2.87	13.97	2.60	.050	.040	.055	.000	1734.90	9969.00
.013297	500.	490.	480.	20	11	0	.00	70.00	10039.00

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THIS RUN EXECUTED 25SEP93 22:18:48

\*\*\*\*\*  
 HEC-2 WATER SURFACE PROFILES  
 Version 4.6.2; May 1991  
 \*\*\*\*\*

NOTE- ASTERISK (\*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

POWERLINE WASH 100-YR  
 SUMMARY PRINTOUT

SECNO	Q	CWSEL	CRIWS	QLOB	VLOB	K*XLN	QCH	VCH	K*XNCH	QROB	VROB	K*X
1.113	5100.00	1446.38	.00	8.01	.78	55.00	614.67	4.79	40.00	4477.32	3.36	49.
1.113	5100.00	1447.33	.00	.00	.03	55.00	1291.63	5.50	40.00	3808.37	4.07	50.
* 1.203	5100.00	1449.79	.00	36.30	1.69	55.00	743.65	3.69	45.00	4320.05	2.66	49.
1.203	5100.00	1450.62	.00	1.12	1.15	55.00	1360.15	4.79	45.00	3738.73	3.50	50.
1.300	5100.00	1452.56	.00	771.71	3.28	55.00	618.85	4.21	40.00	3709.44	2.93	49.
1.300	5100.00	1453.33	.00	1.70	1.37	55.00	1075.60	4.92	40.00	4022.69	3.61	50.
1.400	5100.00	1455.40	.00	1292.61	3.31	50.00	784.62	3.54	45.00	3022.77	2.47	49.
1.400	5100.00	1456.10	.00	240.91	3.41	50.00	1405.44	4.68	45.00	3453.65	3.06	50.
1.553	5100.00	1458.63	.00	1902.42	2.86	49.54	354.62	3.85	40.00	2842.95	3.16	48.
1.553	5100.00	1459.58	.00	1819.10	3.45	46.09	748.04	4.95	40.00	2532.87	3.17	47.
1.664	5200.00	1462.02	.00	1802.73	3.14	55.00	314.06	3.13	40.00	3083.21	3.47	48.
1.664	5200.00	1462.85	.00	171.11	2.22	55.00	844.81	4.64	40.00	4184.08	4.27	47.
1.759	5200.00	1465.75	.00	306.46	2.79	55.00	1407.40	5.17	40.00	3486.13	3.76	50.
1.759	5200.00	1466.45	.00	595.60	3.70	55.00	2279.01	6.13	40.00	2325.39	3.93	50.
1.863	5200.00	1469.30	.00	2701.04	2.75	51.89	859.83	4.77	40.00	1639.12	3.21	55.
1.863	5200.00	1470.10	.00	3269.51	4.11	49.11	1495.68	6.19	40.00	434.81	3.45	55.
1.964	5200.00	1471.83	.00	2257.81	2.89	55.00	773.43	5.84	40.00	2168.76	2.88	55.
1.964	5200.00	1472.74	.00	2232.85	3.23	55.00	1078.06	6.45	40.00	1889.09	3.59	55.
2.059	5200.00	1474.48	.00	3297.62	3.25	55.00	791.73	6.13	40.00	1110.65	3.21	55.
2.059	5200.00	1475.20	.00	3347.89	4.27	55.00	1114.24	7.06	40.00	737.88	3.77	55.

2.163	5200.00	1477.25	.00	1909.39	2.99	55.00	1174.43	5.24	40.00	2116.18	3.23	55.
2.163	5200.00	1478.15	.00	2320.70	4.54	55.00	1987.07	6.79	40.00	892.23	3.60	55.

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SECNO	Q	CWSEL	CRWS	QLOB	VLOB	K*XNL	QCH	VCH	K*XNCH	QROB	VROB	K*X
2.259	5200.00	1479.80	.00	1805.80	3.44	55.00	858.34	6.34	40.00	2535.86	3.59	
2.259	5200.00	1480.78	.00	2617.21	4.24	55.00	1180.08	6.77	40.00	1402.71	3.88	
2.357	5200.00	1482.51	.00	1813.33	3.48	55.00	1070.91	5.23	40.00	2315.76	3.27	55.
2.357	5200.00	1483.37	.00	2273.05	4.77	55.00	1842.46	6.93	40.00	1084.49	4.53	55.
2.455	5200.00	1485.25	.00	2441.37	3.91	55.00	1023.44	6.73	40.00	1735.19	3.57	55.
2.455	5200.00	1486.22	.00	2477.21	4.48	55.00	1368.86	7.05	40.00	1353.93	4.09	55.
2.554	5200.00	1487.91	.00	2755.56	3.88	55.00	1513.68	6.34	40.00	930.76	3.37	55.
2.554	5200.00	1488.67	.00	2096.29	4.62	55.00	2106.54	7.46	40.00	997.17	4.29	55.
2.649	5200.00	1490.31	.00	1508.74	4.43	55.00	1504.12	6.72	40.00	2187.14	3.73	55.
2.649	5200.00	1491.13	.00	1697.36	4.81	55.00	1959.45	7.25	40.00	1543.18	4.51	55.
2.747	5200.00	1492.92	.00	1368.69	3.89	55.00	1680.30	6.13	40.00	2151.00	3.10	55.
2.747	5200.00	1493.55	.00	1185.92	4.11	55.00	2049.30	6.41	40.00	1964.77	3.70	55.
2.846	5200.00	1495.35	.00	2999.51	3.89	55.00	1560.95	5.93	40.00	639.54	2.70	55.
2.846	5200.00	1496.07	.00	1335.25	4.66	55.00	2536.17	8.05	40.00	1328.58	4.08	55.
2.938	5300.00	1498.10	.00	2491.15	4.09	55.00	2465.06	7.16	40.00	343.78	3.19	55.
2.938	5300.00	1499.08	.00	1421.25	4.00	55.00	3266.55	7.33	40.00	612.20	3.83	55.
3.046	5300.00	1501.70	.00	1872.07	3.03	55.00	2445.29	7.30	40.00	982.64	4.41	55.
3.046	5300.00	1502.39	.00	1618.83	4.33	55.00	3591.53	9.23	40.00	89.64	4.02	55.
* 3.143	5300.00	1504.43	.00	793.03	2.78	55.00	1937.45	6.45	40.00	2569.52	4.10	49.
* 3.143	5300.00	1505.34	.00	880.63	3.05	55.00	2162.72	5.88	40.00	2256.66	4.45	47.
* 3.232	5300.00	1507.24	.00	653.45	4.43	55.00	3743.14	7.36	45.00	903.41	3.51	55.
* 3.232	5300.00	1507.34	.00	317.59	6.17	55.00	4887.82	9.32	45.00	94.59	2.98	55.
* 3.336	5300.00	1511.08	.00	2103.34	3.68	55.00	3124.65	7.35	40.00	72.01	1.37	55.
* 3.336	5300.00	1512.02	.00	1123.92	4.03	55.00	3973.73	7.70	40.00	202.35	2.42	55.
3.431	5300.00	1514.06	.00	496.70	3.94	55.00	3047.03	9.07	40.00	1756.27	4.21	55.
3.431	5300.00	1514.67	.00	228.78	4.66	55.00	3922.13	10.36	40.00	1149.09	4.72	55.
* 3.529	5300.00	1517.22	.00	1337.78	3.76	55.00	3597.61	6.29	40.00	364.61	2.51	55.
* 3.529	5300.00	1517.99	.00	1058.90	3.59	55.00	4032.19	5.99	40.00	208.91	2.74	55.
* 3.624	5300.00	1519.45	.00	2431.33	3.80	55.00	2672.96	6.90	40.00	195.70	2.55	
* 3.624	5300.00	1519.84	.00	1225.86	4.95	55.00	3857.54	9.14	40.00	216.59	4.49	55.
3.718	5300.00	1522.23	.00	1743.62	4.14	55.00	3365.40	7.70	40.00	190.98	3.28	55.
3.718	5300.00	1523.22	.00	1100.11	3.75	55.00	4066.49	7.30	40.00	133.40	3.46	55.
3.817	5300.00	1525.30	.00	459.28	2.50	55.00	4197.86	6.22	40.00	642.86	2.89	55.
3.817	5300.00	1525.72	.00	3.76	1.49	55.00	5296.15	7.15	40.00	.09	.39	55.

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SECNO	Q	CWSEL	CRWS	QLOB	VLOB	K*XNL	QCH	VCH	K*XNCH	QROB	VROB	K*X
3.909	5300.00	1527.55	.00	2557.66	3.97	55.00	2313.33	6.52	40.00	429.02	2.26	55.
3.909	5300.00	1528.33	.00	1546.16	4.95	55.00	3570.37	8.42	40.00	183.47	3.43	55.
* 4.004	5300.00	1529.99	.00	2139.41	3.69	50.00	3142.48	5.76	40.00	18.11	1.60	55.
* 4.004	5300.00	1530.94	.00	1609.24	3.35	50.00	3639.80	5.22	40.00	50.95	1.98	55.
* 4.104	5300.00	1532.53	.00	500.99	3.18	55.00	2177.78	7.00	40.00	2621.23	4.80	50.
* 4.104	5300.00	1532.83	.00	571.40	4.89	55.00	3112.42	9.26	40.00	1616.18	6.64	50.
* 4.200	5300.00	1535.21	.00	2236.51	3.53	55.00	2562.02	6.16	40.00	501.47	2.66	50.
* 4.200	5300.00	1536.19	.00	1296.30	4.51	55.00	3401.81	6.51	40.00	601.89	3.41	50.
4.294	5400.00	1537.92	.00	10.49	1.66	55.00	2770.29	6.67	40.00	2619.23	4.04	50.
4.294	5400.00	1538.58	.00	3.54	1.85	55.00	4116.68	8.24	40.00	1279.77	5.74	50.
4.393	5400.00	1541.33	.00	58.45	1.90	55.00	3393.83	6.46	40.00	1947.72	3.83	50.
4.393	5400.00	1542.27	.00	19.94	2.54	55.00	4864.00	7.11	40.00	516.06	4.18	50.
4.494	5400.00	1544.40	.00	122.71	2.28	55.00	3484.87	6.31	40.00	1792.42	3.60	50.
4.494	5400.00	1545.15	.00	3.08	1.36	55.00	4939.45	7.51	40.00	457.47	4.92	50.
* 4.592	5400.00	1547.93	1547.93	4.41	1.54	55.00	4354.04	8.84	40.00	1041.54	5.50	50.
* 4.592	5400.00	1548.65	.00	3.95	2.17	55.00	5390.79	8.66	40.00	5.26	2.34	50.
* 4.693	5400.00	1552.11	.00	2482.22	2.84	55.00	2887.59	4.09	40.00	30.20	1.03	55.
* 4.693	5400.00	1552.75	.00	874.99	2.92	55.00	4523.74	5.17	40.00	1.26	1.11	
4.788	5400.00	1554.07	.00	3505.38	3.19	55.00	1579.87	5.24	40.00	314.75	2.04	55.
4.788	5400.00	1555.07	.00	2071.87	3.77	55.00	2922.57	7.13	40.00	405.57	3.44	55.
4.884	5400.00	1557.27	.00	3292.48	4.27	55.00	2104.30	9.12	40.00	3.22	1.66	55.
4.884	5400.00	1558.27	.00	2813.24	4.22	55.00	2576.08	8.85	40.00	10.68	2.40	55.
4.986	5400.00	1561.35	.00	1393.94	3.01	55.00	2804.70	6.98	40.00	1201.35	3.93	55.

4.986	5400.00	1561.89	.00	984.63	4.53	55.00	3961.90	8.68	40.00	453.46	5.79	55.
5.081	5400.00	1564.49	.00	27.15	2.22	55.00	3811.68	8.94	40.00	1561.17	4.01	55.
5.081	5400.00	1565.19	.00	.55	.78	55.00	3696.88	7.45	40.00	1702.57	3.88	55.
5.174	5400.00	1567.91	.00	109.38	2.04	55.00	3815.10	6.88	40.00	1475.52	3.06	55.
5.174	5400.00	1567.84	.00	19.62	2.94	55.00	4926.99	9.03	40.00	453.39	4.38	55.
5.245	5400.00	1569.80	1569.64	373.48	2.97	55.00	4712.57	9.38	40.00	313.95	3.73	55.
5.245	5400.00	1570.57	.00	13.00	2.38	55.00	5384.87	9.16	40.00	2.13	1.37	55.
* 5.327	5400.00	1572.78	.00	1025.71	2.54	55.00	4374.28	5.76	40.00	.00	.02	55.
* 5.327	5400.00	1573.29	.00	382.08	3.18	55.00	5017.72	5.95	40.00	.19	.65	55.
* 5.413	5400.00	1574.83	.00	432.56	2.52	55.00	3199.28	7.54	40.00	1768.16	5.02	45.
* 5.413	5400.00	1575.16	.00	2.30	1.98	55.00	4769.15	10.26	40.00	628.56	5.48	46.

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SECNO	Q	CWSEL	CRWS	QLOB	VLOB	K*XML	QCH	VCH	K*XMLCH	QROB	VROB	K*X
* 5.493	5400.00	1577.36	.00	230.51	2.41	55.00	3818.67	6.88	40.00	1350.82	3.53	50.
5.493	5400.00	1578.35	.00	303.68	2.55	55.00	3913.82	5.76	40.00	1182.51	3.26	50.
* 5.589	5400.00	1580.05	.00	832.52	3.86	50.00	4430.43	8.36	40.00	137.04	2.03	55.
5.589	5400.00	1579.88	.00	.87	1.33	50.00	5318.11	10.43	40.00	81.02	3.05	55.
* 5.682	5500.00	1583.69	.00	1271.21	4.02	50.00	2671.14	7.34	40.00	1557.65	4.26	55.
5.682	5500.00	1584.64	.00	313.18	4.20	50.00	3515.18	7.79	40.00	1671.64	5.18	55.
5.771	5500.00	1586.52	.00	.00	.00	.00	4449.49	6.33	40.00	1050.50	3.33	55.
5.771	5500.00	1587.14	.00	.40	.99	50.00	5497.41	6.57	40.00	2.19	1.34	55.
5.865	5500.00	1589.28	.00	1408.75	3.95	50.00	4030.52	7.42	40.00	60.73	2.16	55.
5.865	5500.00	1589.72	.00	193.38	4.30	50.00	5302.91	8.86	40.00	3.70	1.76	55.
5.961	5500.00	1592.52	.00	1731.59	4.48	50.00	3768.37	6.29	45.00	.04	.33	55.
5.961	5500.00	1593.46	.00	310.24	4.20	50.00	5189.39	6.93	45.00	.37	.90	55.
6.057	5500.00	1595.62	.00	794.82	3.22	50.00	3959.15	7.58	40.00	746.03	4.72	55.
6.057	5500.00	1596.35	.00	2.34	1.45	50.00	5496.53	8.93	40.00	1.12	.98	55.
6.150	5500.00	1598.74	.00	618.28	3.73	50.00	4448.74	8.09	40.00	432.98	3.13	55.
6.150	5500.00	1599.61	.00	1.52	1.12	50.00	5495.52	8.33	40.00	2.95	1.49	55.
6.248	5500.00	1602.15	.00	1442.10	4.76	50.00	3643.34	10.11	40.00	414.56	3.62	55.
6.248	5500.00	1602.64	.00	530.95	5.78	50.00	4558.73	11.64	40.00	410.32	5.06	55.
* 6.347	5500.00	1605.30	.00	112.49	2.16	55.00	4884.39	5.53	40.28	503.11	2.72	55.
* 6.347	5500.00	1606.16	.00	131.85	2.27	55.00	5280.78	5.02	40.60	87.37	1.73	55.
* 6.440	5500.00	1607.30	.00	25.87	2.13	55.00	5472.80	8.10	40.00	1.32	1.03	55.
* 6.440	5500.00	1607.52	.00	35.43	2.26	55.00	5463.91	7.60	40.00	.67	1.22	55.
* 6.538	5500.00	1611.68	.00	1404.16	5.26	50.00	3260.20	9.11	40.00	835.64	3.78	55.
6.538	5500.00	1611.85	1611.85	877.82	5.86	50.00	4319.79	11.64	40.00	302.38	4.39	55.
* 6.630	5500.00	1615.57	.00	2190.15	5.22	50.00	2025.52	7.81	45.00	1284.33	3.80	55.
6.630	5500.00	1616.51	.00	2046.56	4.89	50.00	2118.52	6.92	45.00	1334.92	4.05	55.
* 6.727	5500.00	1618.63	.00	2518.61	4.96	50.00	2981.39	9.29	40.00	.00	.00	.
6.727	5500.00	1618.79	.00	1850.48	6.53	50.00	3649.52	11.07	40.00	.00	.00	.
6.825	5500.00	1621.79	.00	2732.91	4.15	50.00	2722.13	7.43	40.00	44.96	1.93	55.
6.825	5500.00	1622.68	.00	2040.95	4.76	50.00	3435.19	7.91	40.00	23.85	2.37	55.
* 6.921	5500.00	1624.71	1624.71	1475.03	5.04	50.00	3453.62	10.85	40.00	571.35	4.16	55.
* 6.921	5500.00	1625.27	1625.27	685.13	6.33	50.00	4389.93	12.44	40.00	424.94	4.60	55.
* 7.013	5500.00	1628.87	.00	1478.31	4.93	50.00	3194.53	8.89	40.00	827.16	3.72	55.
7.013	5500.00	1629.73	.00	1452.84	4.92	50.00	3297.67	7.96	40.00	749.49	3.98	55.

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SECNO	Q	CWSEL	CRWS	QLOB	VLOB	K*XML	QCH	VCH	K*XMLCH	QROB	VROB	K*X
7.106	5600.00	1631.66	.00	3433.06	3.73	50.00	2147.24	7.46	40.00	19.70	1.80	55.
7.106	5600.00	1631.97	.00	2787.96	4.68	50.00	2777.08	9.17	40.00	34.96	2.48	55.
7.200	5600.00	1634.01	.00	2832.47	3.98	50.00	2767.53	7.25	40.00	.00	.00	.
7.200	5600.00	1634.92	.00	1701.33	4.17	50.00	3898.60	8.15	40.00	.06	.58	55.
7.297	5600.00	1637.32	.00	1769.26	4.48	50.00	3232.41	8.47	40.00	598.32	4.25	55.
7.297	5600.00	1638.18	.00	843.73	5.39	50.00	4575.30	10.02	40.00	180.97	4.97	55.
7.391	5600.00	1641.14	.00	619.08	4.57	55.00	3743.36	9.51	40.00	1237.56	5.17	55.
7.391	5600.00	1641.99	.00	240.31	4.00	55.00	3864.66	8.27	40.00	1495.03	4.68	55.
7.488	5600.00	1644.73	.00	119.50	3.56	55.00	4651.73	10.41	40.00	828.76	3.63	55.
7.488	5600.00	1644.60	.00	118.67	3.74	55.00	4823.21	10.99	40.00	658.12	4.63	55.
7.575	5600.00	1647.89	.00	1667.10	5.61	50.00	3244.01	10.15	40.00	688.88	3.67	55.
7.575	5600.00	1648.11	.00	1729.65	5.49	50.00	3234.92	9.81	40.00	635.42	4.05	55.
7.674	5600.00	1650.74	.00	1167.59	3.48	50.00	4214.90	7.12	41.75	217.51	2.82	55.
7.674	5600.00	1650.76	.00	1157.99	3.76	50.00	4263.93	7.18	41.75	178.08	3.04	55.

*	7.771	5600.00	1653.12	.00	231.88	3.51	55.00	3463.97	8.54	45.00	1904.15	6.25	50.
*	7.771	5600.00	1653.20	.00	288.98	4.16	55.00	4121.78	10.01	45.00	1189.24	7.63	50.
	7.865	5600.00	1656.63	.00	577.28	3.99	50.00	4361.39	7.52	45.00	661.33	4.76	50.
*	7.865	5600.00	1657.19	.00	723.87	3.93	50.00	4493.60	7.00	45.00	382.52	4.69	50.
	7.958	5600.00	1659.67	.00	1291.47	4.57	50.00	3929.75	10.28	40.00	378.77	4.34	50.
*	7.958	5600.00	1659.63	1659.63	590.12	5.83	50.00	4651.10	12.25	40.00	358.78	5.80	50.
	8.059	5600.00	1663.41	.00	1392.23	4.84	50.00	3306.80	8.65	40.00	900.97	4.77	50.
*	8.059	5600.00	1664.31	.00	845.43	5.29	50.00	3835.36	8.74	40.00	919.20	5.24	50.
	8.155	5600.00	1666.21	.00	989.26	5.53	55.00	4073.50	11.03	40.00	537.23	4.76	55.
	8.155	5600.00	1666.68	.00	934.70	6.16	55.00	4471.67	11.19	40.00	193.63	4.83	55.
	8.250	5600.00	1670.04	.00	284.12	3.92	55.00	4520.16	11.21	40.00	795.71	4.66	55.
	8.250	5600.00	1670.35	.00	260.40	5.05	55.00	4975.86	11.81	40.00	363.74	5.74	55.
	8.346	5600.00	1673.64	.00	10.01	1.49	55.00	5213.75	8.32	40.00	376.24	2.77	55.
	8.346	5600.00	1674.14	.00	21.52	1.92	55.00	5573.40	8.21	40.00	5.09	1.36	55.
	8.438	5600.00	1676.16	.00	259.76	3.66	55.00	4523.75	10.18	40.00	816.48	4.60	55.
*	8.438	5600.00	1676.29	.00	71.31	4.13	55.00	5309.23	11.69	40.00	219.46	5.12	55.
	8.530	5700.00	1679.48	.00	486.43	2.83	55.00	4287.63	7.70	40.00	925.93	3.60	55.
	8.530	5700.00	1680.30	.00	99.91	3.35	55.00	5589.62	8.78	40.00	10.47	1.84	55.
	8.626	5700.00	1682.00	1681.84	1044.78	4.99	55.00	4229.02	11.26	40.00	426.20	5.23	55.
*	8.626	5700.00	1682.92	.00	1122.16	4.53	55.00	4157.65	9.54	40.00	420.19	5.02	55.

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	SECNO	Q	CWSEL	CRIWS	QLOB	VLOB	K*XNL	QCH	VCH	K*XNCH	QROB	VROB	K*X
*	8.722	5700.00	1685.98	.00	2869.87	4.70	50.00	2830.13	7.99	40.00	.00	.00	.
	8.722	5700.00	1685.86	.00	2306.74	6.21	50.00	3393.26	9.77	40.00	.00	.00	.
	8.817	5700.00	1688.17	.00	536.90	3.74	55.00	4293.46	8.02	40.00	869.64	3.78	55.
	8.817	5700.00	1688.79	.00	4.46	1.45	55.00	5594.32	9.40	40.00	101.22	3.76	55.
*	8.910	5700.00	1691.34	1691.34	573.08	3.93	55.00	3525.61	11.43	40.00	1601.31	5.84	55.
	8.910	5700.00	1692.00	.00	258.41	5.03	55.00	3988.50	11.56	40.00	1453.09	6.63	55.
*	9.000	5700.00	1694.96	.00	.00	.00	.00	2114.24	6.95	40.00	3585.76	4.56	50.
*	9.000	5700.00	1695.68	.00	.00	.00	.00	2695.95	7.91	40.00	3004.05	5.73	50.
*	9.100	5700.00	1697.24	.00	.00	.00	.00	4426.18	9.03	40.00	1273.82	5.25	50.
	9.100	5700.00	1698.05	.00	.07	.65	55.00	5267.76	9.06	40.00	432.17	5.98	50.
	9.192	5700.00	1700.61	.00	1155.91	4.12	55.00	4281.14	8.36	40.00	262.95	4.11	50.
	9.192	5700.00	1701.12	.00	172.77	4.45	55.00	5519.63	9.86	40.00	7.60	1.97	50.
	9.286	5700.00	1703.69	.00	3233.69	4.56	50.00	2466.31	7.58	40.00	.00	.00	.
	9.286	5700.00	1704.65	.00	2792.93	5.42	50.00	2907.07	7.42	40.00	.00	.00	.
	9.389	5700.00	1706.65	.00	455.78	2.73	50.00	3746.54	9.09	40.00	1497.68	4.82	50.
	9.389	5700.00	1707.07	.00	285.03	2.72	50.00	3942.37	8.83	40.00	1472.60	4.91	50.
*	9.481	5700.00	1709.98	.00	934.75	5.25	50.00	3617.56	9.31	40.00	1147.69	2.99	55.
	9.481	5700.00	1710.20	1710.20	498.06	6.91	50.00	4735.18	11.69	40.00	466.76	4.03	55.
*	9.575	5700.00	1713.10	.00	124.67	3.43	50.00	5143.15	7.52	40.00	432.18	3.25	50.
*	9.575	5700.00	1714.05	.00	5.04	1.36	50.00	5173.86	6.34	40.00	521.11	3.33	50.
	9.672	5700.00	1716.04	.00	65.33	2.58	55.00	4353.00	7.63	41.54	1281.67	4.30	50.
*	9.672	5700.00	1715.96	.00	22.23	2.73	55.00	5485.85	9.79	41.51	191.92	5.45	50.
*	9.761	5700.00	1719.17	1719.17	800.23	6.53	50.00	3956.67	11.17	40.00	943.11	3.87	55.
	9.761	5700.00	1720.06	.00	148.90	5.17	50.00	4822.13	11.76	40.00	728.97	5.82	55.
	9.854	5700.00	1723.49	.00	108.26	1.99	55.00	4276.93	7.17	40.00	1314.81	4.15	50.
	9.854	5700.00	1724.27	.00	33.45	1.91	55.00	5443.81	7.75	40.00	222.74	3.45	50.
	9.949	5700.00	1725.95	.00	34.85	2.18	55.00	4312.08	8.38	40.00	1353.08	5.01	50.
	9.949	5700.00	1726.57	.00	2.80	1.21	55.00	4253.96	7.44	40.00	1443.24	4.58	50.
*	10.045	5700.00	1728.97	.00	2300.65	4.71	50.00	2879.66	10.24	40.00	519.69	5.37	55.
	10.045	5700.00	1728.92	1728.92	1460.44	6.36	50.00	3593.01	12.88	40.00	646.55	6.78	55.
*	10.138	5700.00	1732.13	.00	757.54	3.27	50.00	4439.24	6.64	40.00	503.22	3.81	55.
	10.138	5700.00	1733.00	.00	446.53	3.07	50.00	5051.91	6.34	40.00	201.56	3.34	55.
*	10.236	5700.00	1734.78	.00	1864.67	4.83	50.00	3326.58	9.47	40.00	508.76	4.52	55.
	10.236	5700.00	1734.93	.00	1325.60	6.38	50.00	4295.56	11.86	40.00	78.84	4.45	55.

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	SECNO	Q	CWSEL	CRIWS	QLOB	VLOB	K*XNL	QCH	VCH	K*XNCH	QROB	VROB	K*X
*	10.331	5700.00	1738.29	.00	1348.59	3.67	50.00	4296.06	6.01	40.00	55.34	2.17	55.
*	10.331	5700.00	1739.15	.00	547.51	3.31	50.00	5047.94	5.73	40.00	104.54	2.46	55.
*	10.424	5700.00	1740.98	1740.98	1482.21	3.66	50.00	3551.81	9.66	40.00	665.98	4.32	55.
*	10.424	5700.00	1741.55	1741.55	9.27	2.87	50.00	5682.28	13.97	40.00	8.45	2.60	55.

POWERLINE WASH 100-YR  
SUMMARY PRINTOUT

SECNO	Q	CWSEL	AREA	ELMIN	DEPTH	XLCH	STENCL	SSTA	ENDST	STENCR	TOPWID	TW
1.113	5100.00	1446.38	1469.55	1442.20	4.18	.00	.00	9828.14	11476.32	.00	1582.61	.
1.113	5100.00	1447.33	1171.68	1442.20	5.13	.00	9947.00	9947.00	10600.00	10600.00	653.00	.
*	1.203	5100.00	1449.79	1848.41	1444.70	5.09	.00	9938.79	11513.02	.00	1531.76	16.
1.203	5100.00	1450.62	1354.46	1444.70	5.92	475.00	9964.00	9964.00	10620.00	10620.00	656.00	7.
1.300	5100.00	1452.56	1648.34	1447.70	4.86	510.00	9800.00	9800.00	11450.49	11487.00	1470.92	33.
1.300	5100.00	1453.33	1332.65	1447.70	5.63	510.00	9951.00	9951.00	10600.00	10600.00	649.00	14.
1.400	5100.00	1455.40	1836.63	1450.90	4.50	530.00	9761.20	9761.20	11499.02	11653.90	1521.39	50.
1.400	5100.00	1456.10	1499.74	1450.90	5.20	530.00	9950.00	9950.00	10850.00	10850.00	900.00	22.
1.553	5100.00	1458.63	1657.81	1454.40	4.23	810.00	9400.00	9400.00	11149.03	11233.10	1431.30	70.
1.553	5100.00	1459.58	1477.13	1454.40	5.18	810.00	9650.00	9650.00	10700.00	10700.00	1050.00	35.
1.664	5200.00	1462.02	1561.74	1457.70	4.32	585.00	9550.00	9550.00	10856.17	10910.00	1290.76	87.
1.664	5200.00	1462.85	1238.30	1457.70	5.15	585.00	9900.00	9900.00	10580.00	10580.00	680.00	46.
1.759	5200.00	1465.75	1309.63	1461.30	4.45	500.00	9782.30	9826.16	10713.71	10856.90	887.55	99.
1.759	5200.00	1466.45	1125.20	1461.30	5.15	500.00	9850.00	9850.00	10400.00	10400.00	550.00	53.
1.863	5200.00	1469.30	1673.24	1465.70	3.60	550.00	9170.00	9199.68	10303.77	10558.70	1104.09	111.
1.863	5200.00	1470.10	1164.00	1465.70	4.40	550.00	9590.00	9590.00	10090.00	10090.00	500.00	59.
1.964	5200.00	1471.83	1666.18	1467.70	4.13	535.00	.00	9519.05	10482.28	.00	963.24	123.
1.964	5200.00	1472.74	1384.83	1467.70	5.04	535.00	9690.00	9690.00	10210.00	10210.00	520.00	65.
2.059	5200.00	1474.48	1488.24	1470.60	3.88	500.00	.00	9368.12	10215.68	10260.00	847.56	133.
2.059	5200.00	1475.20	1138.53	1470.60	4.60	500.00	9700.00	9700.00	10100.00	10100.00	400.00	70.
2.163	5200.00	1477.25	1517.76	1473.30	3.95	550.00	.00	9494.74	10357.00	10459.30	775.26	143.
2.163	5200.00	1478.15	1051.46	1473.30	4.85	550.00	9820.00	9820.00	10150.00	10150.00	330.00	75.
2.259	5200.00	1479.80	1367.27	1475.70	4.10	505.00	.00	9622.50	10358.10	10360.00	723.27	152.
2.259	5200.00	1480.78	1153.01	1475.70	5.08	505.00	9800.00	9800.00	10140.00	10140.00	340.00	79.
2.357	5200.00	1482.51	1432.93	1478.30	4.21	515.00	.00	9768.98	10398.31	10440.00	629.33	159.
2.357	5200.00	1483.37	982.54	1478.30	5.07	515.00	9850.00	9850.00	10130.00	10130.00	280.00	82.
2.455	5200.00	1485.25	1262.83	1481.00	4.25	515.00	.00	9714.45	10359.31	.00	561.94	167.
2.455	5200.00	1486.22	1078.32	1481.00	5.22	515.00	9830.00	9830.00	10128.45	10130.00	298.45	86.
2.554	5200.00	1487.91	1224.86	1482.60	5.31	525.00	.00	9731.73	10144.66	10160.00	412.94	172.
2.554	5200.00	1488.67	968.41	1482.60	6.07	525.00	9850.00	9850.00	10090.00	10090.00	240.00	89.
2.649	5200.00	1490.31	1151.19	1484.10	6.21	500.00	9850.00	9878.46	10306.55	10350.00	428.09	177.
2.649	5200.00	1491.13	965.00	1484.10	7.03	500.00	9900.00	9900.00	10130.00	10130.00	230.00	92.

SECNO	Q	CWSEL	AREA	ELMIN	DEPTH	XLCH	STENCL	SSTA	ENDST	STENCR	TOPWID	TW
2.747	5200.00	1492.92	1320.36	1487.40	5.52	515.00	.00	9855.50	10416.95	.00	561.46	183.
2.747	5200.00	1493.55	1139.86	1487.40	6.15	515.00	9900.00	9900.00	10220.00	10220.00	320.00	95.
2.846	5200.00	1495.35	1270.99	1489.90	5.45	525.00	.00	9710.76	10194.40	10194.40	483.64	189.
2.846	5200.00	1496.07	927.45	1489.90	6.17	525.00	9890.00	9890.00	10185.00	10185.00	295.00	98.
2.938	5300.00	1498.10	1061.51	1492.90	5.20	485.00	9630.00	9633.75	10148.37	10230.00	499.47	195.
2.938	5300.00	1499.08	961.28	1492.90	6.18	485.00	9820.00	9820.00	10125.00	10125.00	305.00	102.
3.046	5300.00	1501.70	1176.44	1495.50	6.20	570.00	9510.00	9544.44	10127.73	10138.80	532.88	201.
3.046	5300.00	1502.39	785.36	1495.50	6.89	570.00	9800.00	9800.00	10060.00	10060.00	260.00	105.
* 3.143	5300.00	1504.43	1212.22	1499.30	5.13	510.00	9730.00	9798.85	10300.48	10428.60	501.63	207.
3.143	5300.00	1505.34	1163.66	1499.30	6.04	510.00	9870.00	9870.00	10160.00	10160.00	290.00	108.
* 3.232	5300.00	1507.24	913.51	1501.50	5.74	470.00	.00	9887.30	10297.00	10297.00	409.70	212.
3.232	5300.00	1507.34	607.47	1501.50	5.84	470.00	9950.00	9950.00	10140.00	10140.00	190.00	111.
* 3.336	5300.00	1511.08	1049.35	1504.30	6.78	550.00	9690.00	9690.00	10198.42	10406.80	456.03	217.
3.336	5300.00	1512.02	877.97	1504.30	7.72	550.00	9840.00	9840.00	10080.00	10080.00	240.00	114.
3.431	5300.00	1514.06	878.71	1508.00	6.06	500.00	9870.80	9909.86	10230.67	10283.30	320.81	222.
3.431	5300.00	1514.67	671.05	1508.00	6.67	500.00	9960.00	9960.00	10135.00	10135.00	175.00	116.
* 3.529	5300.00	1517.22	1073.10	1510.60	6.62	515.00	9851.20	9864.64	10193.10	10193.10	328.46	225.
3.529	5300.00	1517.99	1044.73	1510.60	7.39	515.00	9910.00	9910.00	10140.00	10140.00	230.00	118.
* 3.624	5300.00	1519.45	1104.47	1513.70	5.75	515.00	.00	9704.84	10092.43	.00	387.59	230.
3.624	5300.00	1519.84	717.86	1513.70	6.14	515.00	9860.00	9860.00	10040.00	10040.00	180.00	121.
3.718	5300.00	1522.23	916.46	1516.50	5.73	495.00	9720.00	9753.65	10116.37	10334.50	362.71	234.
3.718	5300.00	1523.22	889.44	1516.50	6.72	495.00	9850.00	9850.00	10090.00	10090.00	240.00	123.
3.817	5300.00	1525.30	1081.49	1518.90	6.40	525.00	9770.00	9770.00	10157.00	10249.60	387.00	238.
3.817	5300.00	1525.72	743.58	1518.90	6.82	525.00	9892.00	9892.00	10051.00	10051.00	159.00	126.

	3.909	5300.00	1527.55	1189.54	1521.30	6.25	485.00	.00	9730.08	10194.62	.00	464.54	243.
	3.909	5300.00	1528.33	789.87	1521.30	7.03	485.00	9870.00	9870.00	10070.00	10070.00	200.00	128.
*	4.004	5300.00	1529.99	1136.36	1524.60	5.39	500.00	9527.70	9527.70	10040.49	10089.10	450.48	248.
	4.004	5300.00	1530.94	1202.60	1524.60	6.34	500.00	9670.00	9698.85	10040.00	10040.00	341.15	131.
*	4.104	5300.00	1532.53	1014.61	1527.50	5.03	530.00	.00	9876.79	10259.30	.00	382.51	253.
	4.104	5300.00	1532.83	696.46	1527.50	5.33	530.00	9925.00	9925.00	10120.00	10120.00	195.00	195.
*	4.200	5300.00	1535.21	1238.52	1529.70	5.51	505.00	.00	9642.70	10176.69	.00	533.99	250.
	4.200	5300.00	1536.19	986.58	1529.70	6.49	505.00	9870.00	9870.00	10110.00	10110.00	240.00	136.
	4.294	5400.00	1537.92	1070.45	1532.30	5.62	495.00	.00	9925.44	10431.38	.00	505.94	264.
	4.294	5400.00	1538.58	724.60	1532.30	6.28	495.00	9934.00	9934.00	10130.00	10130.00	196.00	139.

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	SECNO	Q	CWSEL	AREA	ELMIN	DEPTH	XLCH	STENCL	SSTA	ENDST	STENCR	TOPWID	TW
	4.393	5400.00	1541.33	1064.80	1535.80	5.53	525.00	.00	9849.99	10345.90	10345.90	495.92	270.
	4.393	5400.00	1542.27	815.79	1535.80	6.47	525.00	9890.00	9890.00	10110.00	10110.00	220.00	141.
	4.494	5400.00	1544.40	1103.99	1539.00	5.40	535.00	.00	9887.68	10313.07	10337.90	425.39	276.
	4.494	5400.00	1545.15	752.88	1539.00	6.15	535.00	9932.00	9932.00	10100.00	10100.00	168.00	144.
*	4.592	5400.00	1547.93	684.59	1542.90	5.03	515.00	9880.00	9892.37	10196.28	10405.80	303.92	280.
	4.592	5400.00	1548.65	626.68	1542.90	5.75	515.00	9900.00	9900.00	10084.00	10084.00	184.00	146.
*	4.693	5400.00	1552.11	1610.18	1546.10	6.01	535.00	.00	9409.32	10142.33	.00	727.40	286.
	4.693	5400.00	1552.75	1175.98	1546.10	6.65	535.00	9680.00	9680.00	10076.00	10076.00	396.00	149.
	4.788	5400.00	1554.07	1555.98	1549.50	4.57	500.00	.00	9365.51	10236.78	.00	846.55	295.
	4.788	5400.00	1555.07	1077.97	1549.50	5.57	500.00	9725.00	9725.00	10145.00	10145.00	420.00	154.
	4.884	5400.00	1557.27	1003.09	1551.80	5.47	505.00	9410.00	9410.00	10031.29	10112.00	549.50	303.
	4.884	5400.00	1558.27	961.88	1551.80	6.47	505.00	9700.00	9700.00	10030.00	10030.00	330.00	158.
	4.986	5400.00	1561.35	1170.14	1555.70	5.65	540.00	.00	9623.42	10203.91	.00	524.51	309.
	4.986	5400.00	1561.89	751.95	1555.70	6.19	540.00	9900.00	9900.00	10100.00	10100.00	200.00	161.
	5.081	5400.00	1564.49	827.51	1558.80	5.69	500.00	9885.50	9926.83	10327.87	10449.20	356.41	314.
	5.081	5400.00	1565.19	935.83	1558.80	6.39	500.00	9941.00	9941.00	10190.00	10190.00	249.00	164.
	5.174	5400.00	1567.91	1090.76	1561.40	6.51	490.00	9830.50	9846.70	10294.63	10328.60	447.93	319.
	5.174	5400.00	1567.84	655.90	1561.40	6.44	490.00	9920.00	9920.00	10090.00	10090.00	170.00	166.
	5.245	5400.00	1569.80	712.37	1563.50	6.30	375.00	.00	9851.90	10133.17	.00	281.27	7.
	5.245	5400.00	1570.57	594.66	1563.50	7.07	375.00	9960.00	9960.00	10077.00	10077.00	117.00	117.
*	5.327	5400.00	1572.78	1162.89	1566.00	6.78	430.00	.00	9528.41	10032.68	.00	407.82	325.
	5.327	5400.00	1573.29	963.06	1566.00	7.29	430.00	9830.00	9830.00	10033.00	10033.00	203.00	169.
*	5.413	5400.00	1574.83	948.23	1569.20	5.63	475.00	.00	9742.77	10210.22	.00	467.46	329.
	5.413	5400.00	1575.16	580.82	1569.20	5.96	475.00	9924.00	9924.00	10100.00	10100.00	176.00	171.
	5.493	5400.00	1577.36	1033.52	1571.60	5.76	420.00	.00	9868.23	10240.12	.00	371.90	333.
	5.493	5400.00	1578.35	1161.32	1571.60	6.75	420.00	9895.00	9895.00	10175.00	10175.00	280.00	173.
*	5.589	5400.00	1580.05	813.05	1574.50	5.55	505.00	.00	9758.86	10139.40	10139.40	367.76	337.
	5.589	5400.00	1579.88	537.20	1574.50	5.38	505.00	9922.00	9922.00	10070.00	10070.00	148.00	176.
*	5.682	5500.00	1583.69	1045.97	1578.60	5.09	490.00	.00	9805.33	10213.00	.00	407.67	341.
	5.682	5500.00	1584.64	848.09	1578.60	6.04	490.00	9930.00	9930.00	10120.00	10120.00	190.00	177.
	5.771	5500.00	1586.52	1018.82	1581.80	4.72	470.00	.00	9925.10	10357.40	10357.40	389.14	346.
	5.771	5500.00	1587.14	838.67	1581.80	5.34	470.00	9924.00	9924.00	10140.00	10140.00	216.00	180.
	5.865	5500.00	1589.28	928.34	1583.20	6.08	490.00	.00	9802.90	10116.46	10149.20	313.56	350.
	5.865	5500.00	1589.72	645.77	1583.20	6.52	490.00	9945.00	9945.00	10088.00	10088.00	143.00	182.

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	SECNO	Q	CWSEL	AREA	ELMIN	DEPTH	XLCH	STENCL	SSTA	ENDST	STENCR	TOPWID	TW
	5.961	5500.00	1592.52	985.68	1586.40	6.12	505.00	.00	9746.72	10089.63	10116.20	342.91	353.
	5.961	5500.00	1593.46	822.65	1586.40	7.06	505.00	9900.00	9900.00	10088.00	10088.00	188.00	184.
	6.057	5500.00	1595.62	927.10	1589.80	5.82	505.00	.00	9755.74	10128.76	10155.10	373.03	358.
	6.057	5500.00	1596.35	618.44	1589.80	6.55	505.00	9929.00	9929.00	10059.00	10059.00	130.00	185.
	6.150	5500.00	1598.74	853.88	1593.30	5.44	490.00	.00	9841.75	10153.74	10180.00	311.99	361.
	6.150	5500.00	1599.61	663.33	1593.30	6.31	490.00	9935.00	9935.00	10062.00	10062.00	127.00	187.
	6.248	5500.00	1602.15	777.74	1595.60	6.55	515.00	.00	9842.01	10105.01	.00	263.01	365.
	6.248	5500.00	1602.64	564.70	1595.60	7.04	515.00	9940.00	9940.00	10060.00	10060.00	120.00	188.
*	6.347	5500.00	1605.30	1119.20	1598.60	6.70	525.00	.00	9788.42	10117.48	.00	329.06	360.
	6.347	5500.00	1606.16	1160.15	1598.60	7.56	525.00	9800.00	9800.00	10045.00	10045.00	245.00	190.
*	6.440	5500.00	1607.30	689.13	1602.60	4.70	490.00	.00	9902.98	10120.30	10210.00	217.32	371.
	6.440	5500.00	1607.52	735.13	1602.60	4.92	490.00	9903.00	9903.00	10116.00	10116.00	213.00	193.
*	6.538	5500.00	1611.68	845.49	1605.70	5.98	515.00	.00	9880.54	10165.30	10174.50	284.76	374.
	6.538	5500.00	1611.85	589.71	1605.70	6.15	515.00	9920.00	9920.00	10085.00	10085.00	165.00	195.

*	6.630	5500.00	1615.57	1016.84	1608.00	7.57	485.00	.00	9836.97	10201.66	10220.00	364.70	378.
	6.630	5500.00	1616.51	1054.40	1608.00	8.51	485.00	9875.00	9875.00	10120.00	10120.00	245.00	198.
*	6.727	5500.00	1618.63	828.27	1610.90	7.73	510.00	.00	9781.07	10035.20	.00	254.13	382.
	6.727	5500.00	1618.79	613.24	1610.90	7.89	510.00	9900.00	9900.00	10035.59	10046.00	135.59	200.
	6.825	5500.00	1621.79	1048.11	1613.90	7.89	515.00	.00	9692.20	10070.72	.00	378.53	385.
	6.825	5500.00	1622.68	872.70	1613.90	8.78	515.00	9850.00	9850.00	10050.00	10050.00	200.00	202.
*	6.921	5500.00	1624.71	748.41	1616.30	8.41	505.00	.00	9793.41	10107.40	10120.00	313.99	389.
*	6.921	5500.00	1625.27	553.47	1616.30	8.97	505.00	9940.00	9940.00	10080.00	10080.00	140.00	204.
*	7.013	5500.00	1628.87	881.75	1620.30	8.57	485.00	.00	9854.13	10128.00	10140.00	273.87	392.
	7.013	5500.00	1629.73	897.89	1620.30	9.43	485.00	9900.00	9900.00	10080.00	10080.00	180.00	205.
	7.106	5600.00	1631.66	1218.62	1624.00	7.66	490.00	.00	9614.05	10034.72	10042.00	420.67	396.
	7.106	5600.00	1631.97	912.28	1624.00	7.97	490.00	9785.00	9785.00	10035.00	10035.00	250.00	208.
	7.200	5600.00	1634.01	1093.65	1627.20	6.81	510.00	9500.90	9516.96	10023.90	10131.30	506.95	401.
	7.200	5600.00	1634.92	886.28	1627.20	7.72	510.00	9735.00	9735.00	10027.00	10027.00	292.00	211.
	7.297	5600.00	1637.32	916.75	1631.30	6.02	510.00	9783.80	9783.80	10108.72	10155.70	324.92	406.
	7.297	5600.00	1638.18	649.88	1631.30	6.88	510.00	9910.00	9910.00	10060.00	10060.00	150.00	213.
	7.391	5600.00	1641.14	768.16	1633.90	7.24	495.00	.00	9889.07	10138.38	10139.00	249.31	409.
	7.391	5600.00	1641.99	846.93	1633.90	8.09	495.00	9940.00	9940.00	10139.00	10139.00	199.00	215.
	7.488	5600.00	1644.73	708.89	1637.10	7.63	510.00	9921.80	9945.83	10169.71	10252.00	223.89	412.
	7.488	5600.00	1644.60	612.65	1637.10	7.50	510.00	9946.00	9946.24	10080.00	10080.00	133.76	217.

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	SECNO	Q	CWSEL	AREA	ELMIN	DEPTH	XLCH	STENCL	SSTA	ENDST	STENCR	TOPWID	TW
	7.575	5600.00	1647.89	804.36	1640.20	7.69	460.00	.00	9899.86	10132.48	.00	232.61	414.
	7.575	5600.00	1648.11	801.49	1640.20	7.91	460.00	9900.00	9900.00	10080.00	10080.00	180.00	219.
	7.674	5600.00	1650.74	1004.54	1643.70	7.04	525.00	.00	9765.66	10078.52	.00	312.86	417.
	7.674	5600.00	1650.76	960.58	1643.70	7.06	525.00	9830.00	9830.00	10060.00	10060.00	230.00	221.
*	7.771	5600.00	1653.12	776.24	1646.30	6.82	510.00	.00	9926.35	10141.58	.00	215.23	420.
*	7.771	5600.00	1653.20	637.07	1646.30	6.90	510.00	9926.00	9926.00	10090.00	10090.00	164.00	224.
*	7.865	5600.00	1656.63	863.61	1649.00	7.63	495.00	9850.30	9875.75	10113.83	10192.10	238.08	423.
	7.865	5600.00	1657.19	908.10	1649.00	8.19	495.00	9876.00	9876.00	10080.00	10080.00	204.00	226.
*	7.958	5600.00	1659.67	752.03	1651.90	7.77	490.00	.00	9825.21	10091.00	.00	265.79	426.
	7.958	5600.00	1659.63	542.65	1651.90	7.73	490.00	9925.00	9925.00	10060.00	10060.00	135.00	228.
*	8.059	5600.00	1663.41	858.84	1656.00	7.41	535.00	.00	9857.79	10088.53	.00	230.75	429.
	8.059	5600.00	1664.31	774.01	1656.00	8.31	535.00	9930.00	9930.00	10060.00	10060.00	130.00	229.
	8.155	5600.00	1666.21	661.02	1659.60	6.61	505.00	.00	9920.33	10101.03	10120.00	180.71	431.
	8.155	5600.00	1666.68	591.45	1659.60	7.08	505.00	9950.00	9950.00	10060.00	10060.00	110.00	231.
	8.250	5600.00	1670.04	646.42	1662.20	7.84	500.00	.00	9936.90	10106.88	.00	169.98	433.
	8.250	5600.00	1670.35	536.06	1662.20	8.15	500.00	9960.00	9960.00	10050.00	10050.00	90.00	232.
	8.346	5600.00	1673.64	768.90	1665.70	7.94	505.00	.00	9958.76	10172.69	.00	213.92	435.
	8.346	5600.00	1674.14	693.81	1665.70	8.44	505.00	9959.00	9959.00	10075.00	10075.00	116.00	233.
*	8.438	5600.00	1676.16	692.77	1669.50	6.66	485.00	.00	9924.56	10113.04	.00	188.48	438.
	8.438	5600.00	1676.29	514.43	1669.50	6.79	485.00	9960.00	9960.00	10050.00	10050.00	90.00	234.
	8.530	5700.00	1679.48	985.92	1672.00	7.48	485.00	.00	9871.64	10168.20	.00	296.56	440.
	8.530	5700.00	1680.30	672.47	1672.00	8.30	485.00	9955.00	9955.00	10065.00	10065.00	110.00	235.
*	8.626	5700.00	1682.00	666.43	1674.30	7.70	505.00	.00	9869.46	10071.22	.00	201.76	443.
	8.626	5700.00	1682.92	767.31	1674.30	8.61	505.00	9900.00	9900.00	10060.00	10060.00	160.00	237.
*	8.722	5700.00	1685.98	964.56	1678.10	7.88	505.00	9760.00	9774.86	10026.85	10089.00	252.00	446.
	8.722	5700.00	1685.86	718.43	1678.10	7.76	505.00	9880.00	9880.00	10026.64	10041.00	146.64	238.
	8.817	5700.00	1688.17	908.65	1681.60	6.57	510.00	9820.00	9890.12	10133.53	10218.20	243.42	448.
	8.817	5700.00	1688.79	625.13	1681.60	7.19	510.00	9946.00	9946.00	10050.00	10050.00	104.00	240.
*	8.910	5700.00	1691.34	728.37	1684.90	6.44	490.00	.00	9864.35	10122.88	10164.00	258.52	451.
	8.910	5700.00	1692.00	615.61	1684.90	7.10	490.00	9950.00	9950.00	10070.00	10070.00	120.00	241.
*	9.000	5700.00	1694.96	1090.91	1687.30	7.66	475.00	.00	9979.33	10238.18	10273.90	258.84	454.
*	9.000	5700.00	1695.68	865.64	1687.30	8.38	475.00	9975.00	9978.34	10125.00	10125.00	146.66	243.
*	9.100	5700.00	1697.24	732.67	1690.70	6.54	530.00	.00	9953.02	10155.10	10170.00	202.08	457.
	9.100	5700.00	1698.05	653.66	1690.70	7.35	530.00	9949.00	9949.00	10080.00	10080.00	131.00	244.

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	SECNO	Q	CWSEL	AREA	ELMIN	DEPTH	XLCH	STENCL	SSTA	ENDST	STENCR	TOPWID	TW
	9.192	5700.00	1700.61	856.52	1693.80	6.81	485.00	9870.00	9870.00	10099.57	10166.30	229.57	459.
	9.192	5700.00	1701.12	602.32	1693.80	7.32	485.00	9970.00	9970.00	10073.00	10073.00	103.00	246.
	9.286	5700.00	1703.69	1035.25	1696.70	6.99	505.00	.00	9601.67	10013.85	.00	412.18	463.
	9.286	5700.00	1704.65	906.78	1696.70	7.95	505.00	9830.00	9830.00	10014.42	10017.00	184.42	247.
	9.389	5700.00	1706.65	889.96	1700.40	6.25	545.00	.00	9784.28	10156.28	.00	372.00	467.

	9.389	5700.00	1707.07	851.32	1700.40	6.67	545.00	9870.00	9870.00	10130.00	10130.00	260.00	250.
*	9.481	5700.00	1709.98	950.04	1703.60	6.38	485.00	.00	9906.16	10360.65	.00	454.49	472.
	9.481	5700.00	1710.20	592.94	1703.60	6.60	485.00	9950.00	9950.00	10120.00	10120.00	170.00	252.
*	9.575	5700.00	1713.10	853.23	1706.30	6.80	495.00	9903.20	9903.20	10154.44	10155.00	251.24	476.
	9.575	5700.00	1714.05	976.79	1706.30	7.74	495.00	9918.00	9918.00	10110.00	10110.00	192.00	254.
*	9.672	5700.00	1716.04	894.25	1709.20	6.84	510.00	.00	9957.10	10252.56	10256.80	295.47	47
	9.672	5700.00	1715.96	603.97	1709.20	6.76	510.00	9970.00	9970.00	10120.00	10120.00	150.00	2
*	9.761	5700.00	1719.17	720.86	1712.80	6.37	470.00	.00	9939.04	10203.20	10203.20	264.16	482.
	9.761	5700.00	1720.06	564.25	1712.80	7.26	470.00	9970.00	9970.00	10070.00	10070.00	100.00	257.
	9.854	5700.00	1723.49	967.51	1716.70	6.79	490.00	.00	9866.72	10201.84	.00	335.11	485.
	9.854	5700.00	1724.27	784.79	1716.70	7.57	490.00	9920.00	9920.00	10100.00	10100.00	180.00	259.
	9.949	5700.00	1725.95	800.56	1719.00	6.95	500.00	.00	9960.21	10143.60	10143.60	183.39	488.
	9.949	5700.00	1726.57	889.32	1719.00	7.57	500.00	9973.00	9973.00	10143.00	10143.00	170.00	261.
*	10.045	5700.00	1728.97	866.68	1722.20	6.77	505.00	.00	9777.11	10053.71	.00	276.60	491.
	10.045	5700.00	1728.92	603.77	1722.20	6.72	505.00	9900.00	9900.00	10053.00	10053.00	153.00	263.
*	10.138	5700.00	1732.13	1031.80	1725.60	6.53	495.00	9858.20	9858.20	10151.60	10151.60	293.40	494.
	10.138	5700.00	1733.00	1002.03	1725.60	7.40	495.00	9910.00	9910.00	10125.00	10125.00	215.00	265.
*	10.236	5700.00	1734.78	850.13	1729.40	5.38	515.00	.00	9796.04	10083.80	.00	287.75	498.
	10.236	5700.00	1734.93	587.58	1729.40	5.53	515.00	9890.00	9890.00	10040.00	10040.00	150.00	267.
*	10.331	5700.00	1738.29	1107.51	1731.60	6.69	500.00	9780.00	9780.00	10144.03	10283.20	364.03	501.
	10.331	5700.00	1739.15	1089.10	1731.60	7.55	500.00	9875.00	9875.00	10144.00	10144.00	269.00	270.
*	10.424	5700.00	1740.98	927.09	1734.90	6.08	490.00	.00	9715.51	10104.83	.00	389.32	506.
	10.424	5700.00	1741.55	413.36	1734.90	6.65	490.00	9969.00	9969.00	10039.00	10039.00	70.00	271.

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POWERLINE WASH 100-YR

SUMMARY PRINTOUT

SECNO	Q	CWSEL	DIFWSP	EG	DIFEG	STENCL	STCHL	XLBEL	RBEL	STCHR	STENCR	
	1.113	5100.00	1446.38	.00	1446.58	.00	.00	9947.10	1446.70	1446.20	10062.60	.00
	1.113	5100.00	1447.33	.95	1447.64	1.06	9947.70	9947.10	1446.70	1446.20	10062.60	10600.00
*	1.203	5100.00	1449.79	.00	1449.91	.00	.00	9964.60	1449.00	1450.00	10065.20	.00
	1.203	5100.00	1450.62	.83	1450.86	.94	9964.00	9964.60	1449.00	1450.00	10065.20	10620.00
	1.300	5100.00	1452.56	.00	1452.71	.00	9800.00	9952.00	1452.10	1452.00	10043.80	11487.00
	1.300	5100.00	1453.33	.77	1453.57	.85	9951.00	9952.00	1452.10	1452.00	10043.80	10600.00
	1.400	5100.00	1455.40	.00	1455.53	.00	9761.20	9984.50	1454.30	1454.30	10096.90	11653.90
	1.400	5100.00	1456.10	.70	1456.30	.77	9950.00	9984.50	1454.30	1454.30	10096.90	10850.00
	1.553	5100.00	1458.63	.00	1458.78	.00	9400.00	9973.30	1458.70	1459.40	10037.30	11233.10
	1.553	5100.00	1459.58	.95	1459.78	1.00	9650.00	9973.30	1458.70	1459.40	10037.30	10700.00
	1.664	5200.00	1462.02	.00	1462.19	.00	9550.00	9978.00	1462.10	1461.90	10075.80	10910.00
	1.664	5200.00	1462.85	.84	1463.14	.95	9900.00	9978.00	1462.10	1461.90	10075.80	10580.00
	1.759	5200.00	1465.75	.00	1466.02	.00	9782.30	9932.90	1464.70	1465.10	10074.90	10856.90
	1.759	5200.00	1466.45	.70	1466.84	.82	9850.00	9932.90	1464.70	1465.10	10074.90	10400.00
	1.863	5200.00	1469.30	.00	1469.47	.00	9170.00	9954.30	1468.70	1468.30	10031.20	10558.70
	1.863	5200.00	1470.10	.80	1470.45	.98	9590.00	9954.30	1468.70	1468.30	10031.20	10090.00
	1.964	5200.00	1471.83	.00	1472.02	.00	.00	9983.10	1470.30	1470.90	10021.10	.00
	1.964	5200.00	1472.74	.91	1473.01	1.00	9690.00	9983.10	1470.30	1470.90	10021.10	10210.00
	2.059	5200.00	1474.48	.00	1474.71	.00	.00	9980.70	1472.90	1473.00	10021.50	10260.00
	2.059	5200.00	1475.20	.72	1475.58	.87	9700.00	9980.70	1472.90	1473.00	10021.50	10100.00
	2.163	5200.00	1477.25	.00	1477.46	.00	.00	9972.20	1475.70	1475.30	10047.80	10459.30
	2.163	5200.00	1478.15	.91	1478.61	1.14	9820.00	9972.20	1475.70	1475.30	10047.80	10150.00
	2.259	5200.00	1479.80	.00	1480.06	.00	.00	9980.30	1478.20	1477.80	10020.10	10360.00
	2.259	5200.00	1480.78	.98	1481.15	1.08	9800.00	9980.30	1478.20	1477.80	10020.10	10140.00
	2.357	5200.00	1482.51	.00	1482.73	.00	.00	9985.20	1480.70	1480.40	10055.20	10440.00
	2.357	5200.00	1483.37	.87	1483.86	1.12	9850.00	9985.20	1480.70	1480.40	10055.20	10130.00
	2.455	5200.00	1485.25	.00	1485.56	.00	.00	9979.90	1483.10	1483.50	10022.60	.00
	2.455	5200.00	1486.22	.98	1486.64	1.08	9830.00	9979.90	1483.10	1483.50	10022.60	10130.00
	2.554	5200.00	1487.91	.00	1488.24	.00	.00	9965.60	1485.50	1485.70	10023.30	10160.00
	2.554	5200.00	1488.67	.76	1489.20	.96	9850.00	9965.60	1485.50	1485.70	10023.30	10090.00
	2.649	5200.00	1490.31	.00	1490.70	.00	9850.00	9983.30	1488.00	1487.80	10040.10	10350.00
	2.649	5200.00	1491.13	.82	1491.65	.96	9900.00	9983.30	1488.00	1487.80	10040.10	10130.00

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SECNO	Q	CWSEL	DIFWSP	EG	DIFEG	STENCL	STCHL	XLBEL	RBEL	STCHR	STENCR
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2.747	5200.00	1492.92	.00	1493.23	.00	.00	9976.70	1490.40	1491.20	10049.00	.00
2.747	5200.00	1493.55	.63	1493.94	.71	9900.00	9976.70	1490.40	1491.20	10049.00	10220.00
2.846	5200.00	1495.35	.00	1495.66	.00	.00	9980.60	1493.50	1494.00	10053.30	10194.40
2.846	5200.00	1496.07	.72	1496.71	1.05	9890.00	9980.60	1493.50	1494.00	10053.30	10185.00
2.938	5300.00	1498.10	.00	1498.60	.00	9630.00	9961.20	1496.70	1496.30	10064.60	10230.00
2.938	5300.00	1499.08	.98	1499.68	1.08	9820.00	9961.20	1496.70	1496.30	10064.60	10125.00
3.046	5300.00	1501.70	.00	1502.19	.00	9510.00	9975.00	1499.80	1498.80	10054.00	10138.80
3.046	5300.00	1502.39	.68	1503.38	1.19	9800.00	9975.00	1499.80	1498.80	10054.00	10060.00
*	3.143	5300.00	.00	1504.81	.00	9730.00	9967.10	1502.90	1500.90	10041.30	10428.60
	3.143	5300.00	.91	1505.71	.90	9870.00	9967.10	1502.90	1500.90	10041.30	10160.00
*	3.232	5300.00	.00	1507.90	.00	.00	9966.10	1504.80	1506.50	10105.70	10297.00
	3.232	5300.00	.11	1508.63	.72	9950.00	9966.10	1504.80	1506.50	10105.70	10140.00
*	3.336	5300.00	.00	1511.66	.00	9690.00	9923.80	1509.20	1509.60	10019.90	10406.80
	3.336	5300.00	.94	1512.77	1.11	9840.00	9923.80	1509.20	1509.60	10019.90	10080.00
	3.431	5300.00	.00	1514.91	.00	9870.80	9975.80	1511.80	1512.30	10045.50	10283.30
	3.431	5300.00	.61	1516.00	1.08	9960.00	9975.80	1511.80	1512.30	10045.50	10135.00
*	3.529	5300.00	.00	1517.70	.00	9851.20	9982.50	1514.80	1515.10	10112.30	10193.10
	3.529	5300.00	.77	1518.45	.75	9910.00	9982.50	1514.80	1515.10	10112.30	10140.00
*	3.624	5300.00	.00	1519.93	.00	.00	9936.60	1516.10	1516.40	10022.60	.00
	3.624	5300.00	.39	1520.89	.96	9860.00	9936.60	1516.10	1516.40	10022.60	10040.00
	3.718	5300.00	.00	1522.91	.00	9720.00	9955.80	1520.80	1520.20	10076.80	10334.50
	3.718	5300.00	.99	1523.90	.99	9850.00	9955.80	1520.80	1520.20	10076.80	10090.00
	3.817	5300.00	.00	1525.80	.00	9770.00	9893.00	1523.20	1523.40	10050.90	10249.60
	3.817	5300.00	.42	1526.51	.71	9892.00	9893.00	1523.20	1523.40	10050.90	10051.00
	3.909	5300.00	.00	1527.96	.00	.00	9957.80	1525.20	1526.20	10045.50	.00
	3.909	5300.00	.78	1529.19	1.23	9870.00	9957.80	1525.20	1526.20	10045.50	10070.00
*	4.004	5300.00	.00	1530.39	.00	9527.70	9864.60	1528.00	1528.90	10024.80	10089.10
	4.004	5300.00	.95	1531.29	.90	9670.00	9864.60	1528.00	1528.90	10024.80	10040.00
*	4.104	5300.00	.00	1533.03	.00	.00	9972.90	1529.90	1530.00	10053.80	.00
	4.104	5300.00	.31	1533.86	.83	9925.00	9972.90	1529.90	1530.00	10053.80	10120.00
*	4.200	5300.00	.00	1535.59	.00	.00	9931.30	1531.70	1534.40	10039.70	.00
	4.200	5300.00	.98	1536.71	1.13	9870.00	9931.30	1531.70	1534.40	10039.70	10110.00
	4.294	5400.00	.00	1538.40	.00	.00	9935.00	1536.60	1536.00	10061.50	.00
	4.294	5400.00	.66	1539.51	1.11	9934.00	9935.00	1536.60	1536.00	10061.50	10130.00

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SECNO	Q	CWSEL	DIFWSP	EG	DIFEG	STENCL	STCHL	XLBEL	RBEL	STCHR	STENCR
4.393	5400.00	1541.33	.00	1541.82	.00	.00	9893.40	1539.90	1540.20	10061.90	10345.90
4.393	5400.00	1542.27	.94	1543.00	1.19	9890.00	9893.40	1539.90	1540.20	10061.90	10110.00
4.494	5400.00	1544.40	.00	1544.87	.00	.00	9932.70	1541.90	1541.70	10073.80	10337.90
4.494	5400.00	1545.15	.75	1545.98	1.11	9932.00	9932.70	1541.90	1541.70	10073.80	10100.00
*	4.592	5400.00	.00	1549.00	.00	9880.00	9901.40	1547.30	1546.50	10083.00	10405.80
	4.592	5400.00	.72	1549.81	.81	9900.00	9901.40	1547.30	1546.50	10083.00	10084.00
*	4.693	5400.00	.00	1552.30	.00	.00	9811.80	1550.50	1551.60	10075.00	.00
	4.693	5400.00	.64	1553.12	.81	9680.00	9811.80	1550.50	1551.60	10075.00	10076.00
	4.788	5400.00	.00	1554.30	.00	.00	9980.00	1553.20	1553.10	10088.90	.00
	4.788	5400.00	1.00	1555.59	1.29	9725.00	9980.00	1553.20	1553.10	10088.90	10145.00
	4.884	5400.00	.00	1557.95	.00	9410.00	9967.40	1555.70	1556.30	10027.30	10112.00
	4.884	5400.00	1.00	1558.99	1.04	9700.00	9967.40	1555.70	1556.30	10027.30	10030.00
	4.986	5400.00	.00	1561.83	.00	.00	9978.50	1559.30	1558.90	10080.60	.00
	4.986	5400.00	.54	1562.85	1.02	9900.00	9978.50	1559.30	1558.90	10080.60	10100.00
	5.081	5400.00	.00	1565.44	.00	9885.50	9941.30	1562.80	1562.80	10041.90	10449.20
	5.081	5400.00	.70	1565.85	.41	9941.00	9941.30	1562.80	1562.80	10041.90	10190.00
	5.174	5400.00	.00	1568.47	.00	9830.50	9923.00	1565.50	1565.70	10047.60	10328.60
	5.174	5400.00	-.08	1569.02	.54	9920.00	9923.00	1565.50	1565.70	10047.60	10090.00
	5.245	5400.00	.00	1571.02	.00	.00	9963.30	1568.90	1568.00	10076.40	.00
	5.245	5400.00	.76	1571.87	.85	9960.00	9963.30	1568.90	1568.00	10076.40	10077.00
*	5.327	5400.00	.00	1573.22	.00	.00	9864.90	1570.20	1572.70	10032.40	.00
	5.327	5400.00	.50	1573.81	.59	9830.00	9864.90	1570.20	1572.70	10032.40	10033.00
*	5.413	5400.00	.00	1575.49	.00	.00	9925.00	1574.00	1574.00	10042.00	.00
	5.413	5400.00	.33	1576.65	1.17	9924.00	9925.00	1574.00	1574.00	10042.00	10100.00
*	5.493	5400.00	.00	1577.93	.00	.00	9939.50	1575.20	1575.10	10065.10	.00
	5.493	5400.00	.99	1578.76	.84	9895.00	9939.50	1575.20	1575.10	10065.10	10175.00
*	5.589	5400.00	.00	1580.97	.00	.00	9922.30	1577.70	1578.60	10045.20	10139.40
	5.589	5400.00	-.17	1581.54	.57	9922.00	9922.30	1577.70	1578.60	10045.20	10070.00
	5.682	5500.00	.00	1584.24	.00	.00	9954.60	1581.50	1581.30	10046.30	.00

*	5.682	5500.00	1584.64	.95	1585.39	1.15	9930.00	9954.60	1581.50	1581.30	10046.30	10120.00
	5.771	5500.00	1586.52	.00	1587.06	.00	.00	9924.80	1586.60	1585.10	10139.20	10357.40
	5.771	5500.00	1587.14	.62	1587.81	.76	9924.00	9924.80	1586.60	1585.10	10139.20	10140.00
	5.865	5500.00	1589.28	.00	1589.97	.00	.00	9962.20	1587.30	1587.60	10087.00	10149.20
	5.865	5500.00	1589.72	.44	1590.91	.94	9945.00	9962.20	1587.30	1587.60	10087.00	10088.00

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	SECNO	Q	CWSEL	DIFWSP	EG	DIFEG	STENCL	STCHL	XLBEL	RBEL	STCHR	STENCR
	5.961	5500.00	1592.52	.00	1593.04	.00	.00	9926.00	1590.90	1592.40	10087.60	10116.20
	5.961	5500.00	1593.46	.93	1594.18	1.14	9900.00	9926.00	1590.90	1592.40	10087.60	10088.00
	6.057	5500.00	1595.62	.00	1596.33	.00	.00	9929.50	1593.10	1592.50	10058.70	10155.10
	6.057	5500.00	1596.35	.72	1597.58	1.25	9929.00	9929.50	1593.10	1592.50	10058.70	10059.00
	6.150	5500.00	1598.74	.00	1599.60	.00	.00	9935.40	1596.20	1597.40	10061.10	10180.00
	6.150	5500.00	1599.61	.87	1600.69	1.09	9935.00	9935.40	1596.20	1597.40	10061.10	10062.00
	6.248	5500.00	1602.15	.00	1603.30	.00	.00	9969.00	1599.40	1599.30	10032.40	.00
	6.248	5500.00	1602.64	.49	1604.46	1.16	9940.00	9969.00	1599.40	1599.30	10032.40	10060.00
*	6.347	5500.00	1605.30	.00	1605.73	.00	.00	9820.80	1603.30	1603.80	10016.00	.00
*	6.347	5500.00	1606.16	.86	1606.54	.81	9800.00	9820.80	1603.30	1603.80	10016.00	10045.00
*	6.440	5500.00	1607.30	.00	1608.32	.00	.00	9919.10	1605.80	1606.80	10115.20	10210.00
*	6.440	5500.00	1607.52	.21	1608.41	.09	9903.00	9919.10	1605.80	1606.80	10115.20	10116.00
	6.538	5500.00	1611.68	.00	1612.58	.00	.00	9977.80	1609.30	1610.20	10050.50	10174.50
*	6.538	5500.00	1611.85	.18	1613.61	1.02	9920.00	9977.80	1609.30	1610.20	10050.50	10085.00
	6.630	5500.00	1615.57	.00	1616.14	.00	.00	9975.20	1613.30	1613.60	10025.60	10220.00
*	6.630	5500.00	1616.51	.94	1617.00	.85	9875.00	9975.20	1613.30	1613.60	10025.60	10120.00
	6.727	5500.00	1618.63	.00	1619.53	.00	.00	9979.60	1615.80	1622.80	10045.50	.00
*	6.727	5500.00	1618.79	.16	1620.27	.74	9900.00	9979.60	1615.80	1622.80	10045.50	10046.00
	6.825	5500.00	1621.79	.00	1622.34	.00	.00	9969.40	1620.20	1620.50	10045.30	.00
	6.825	5500.00	1622.68	.90	1623.42	1.08	9850.00	9969.40	1620.20	1620.50	10045.30	10050.00
*	6.921	5500.00	1624.71	.00	1625.99	.00	.00	9975.30	1622.40	1623.30	10036.40	10120.00
*	6.921	5500.00	1625.27	.56	1627.30	1.30	9940.00	9975.30	1622.40	1623.30	10036.40	10080.00
	7.013	5500.00	1628.87	.00	1629.71	.00	.00	9965.80	1625.80	1626.20	10029.10	10140.00
*	7.013	5500.00	1629.73	.86	1630.45	.74	9900.00	9965.80	1625.80	1626.20	10029.10	10080.00
	7.106	5600.00	1631.66	.00	1632.12	.00	.00	9977.30	1629.70	1629.40	10025.00	10042.00
	7.106	5600.00	1631.97	.31	1632.79	.66	9785.00	9977.30	1629.70	1629.40	10025.00	10035.00
	7.200	5600.00	1634.01	.00	1634.54	.00	.00	9500.90	1632.80	1634.70	10026.30	10131.30
	7.200	5600.00	1634.92	.90	1635.72	1.17	9735.00	9918.00	1632.80	1634.70	10026.30	10027.00
	7.297	5600.00	1637.32	.00	1638.09	.00	.00	9783.80	1635.60	1635.10	10048.40	10155.70
	7.297	5600.00	1638.18	.87	1639.53	1.45	9910.00	9961.30	1635.60	1635.10	10048.40	10060.00
	7.391	5600.00	1641.14	.00	1642.21	.00	.00	9957.00	1639.10	1638.90	10044.40	10139.00
	7.391	5600.00	1641.99	.85	1642.83	.61	9940.00	9957.00	1639.10	1638.90	10044.40	10139.00
	7.488	5600.00	1644.73	.00	1646.16	.00	.00	9921.80	1640.30	1640.10	10028.30	10252.00
	7.488	5600.00	1644.60	-.12	1646.26	.10	9946.00	9961.00	1640.30	1640.10	10028.30	10080.00

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	SECNO	Q	CWSEL	DIFWSP	EG	DIFEG	STENCL	STCHL	XLBEL	RBEL	STCHR	STENCR
	7.575	5600.00	1647.89	.00	1648.99	.00	.00	9982.00	1643.50	1644.20	10027.60	.00
	7.575	5600.00	1648.11	.21	1649.14	.15	9900.00	9982.00	1643.50	1644.20	10027.60	10080.00
	7.674	5600.00	1650.74	.00	1651.37	.00	.00	9943.20	1647.10	1647.20	10039.20	.00
	7.674	5600.00	1650.76	.03	1651.42	.05	9830.00	9943.20	1647.10	1647.20	10039.20	10060.00
*	7.771	5600.00	1653.12	.00	1654.04	.00	.00	9972.80	1650.70	1650.00	10052.00	.00
*	7.771	5600.00	1653.20	.08	1654.55	.51	9926.00	9972.80	1650.70	1650.00	10052.00	10090.00
	7.865	5600.00	1656.63	.00	1657.38	.00	.00	9850.30	1654.10	1653.20	10061.30	10192.10
*	7.865	5600.00	1657.19	.56	1657.85	.47	9876.00	9948.00	1654.10	1653.20	10061.30	10080.00
	7.958	5600.00	1659.67	.00	1660.91	.00	.00	9965.40	1656.90	1656.80	10035.50	.00
*	7.958	5600.00	1659.63	-.04	1661.66	.74	9925.00	9965.40	1656.90	1656.80	10035.50	10060.00
	8.059	5600.00	1663.41	.00	1664.24	.00	.00	9961.40	1659.90	1659.60	10024.20	.00
*	8.059	5600.00	1664.31	.90	1665.26	1.02	9930.00	9961.40	1659.90	1659.60	10024.20	10060.00
	8.155	5600.00	1666.21	.00	1667.70	.00	.00	9985.10	1661.90	1662.80	10049.30	10120.00
	8.155	5600.00	1666.68	.47	1668.35	.65	9950.00	9985.10	1661.90	1662.80	10049.30	10060.00
	8.250	5600.00	1670.04	.00	1671.67	.00	.00	9975.50	1666.20	1666.00	10034.10	.00
	8.250	5600.00	1670.35	.31	1672.32	.65	9960.00	9975.50	1666.20	1666.00	10034.10	10050.00
	8.346	5600.00	1673.64	.00	1674.65	.00	.00	9968.10	1672.20	1669.40	10074.20	.00
	8.346	5600.00	1674.14	.49	1675.18	.53	9959.00	9968.10	1672.20	1669.40	10074.20	10075.00
	8.438	5600.00	1676.16	.00	1677.52	.00	.00	9965.30	1672.80	1672.50	10038.90	.00
*	8.438	5600.00	1676.29	.13	1678.32	.80	9960.00	9965.30	1672.80	1672.50	10038.90	10050.00

	8.530	5700.00	1679.48	.00	1680.22	.00	.00	9964.30	1676.90	1676.00	10063.70	.00
	8.530	5700.00	1680.30	.82	1681.47	1.25	9955.00	9964.30	1676.90	1676.00	10063.70	10065.00
*	8.626	5700.00	1682.00	.00	1683.56	.00	.00	9974.60	1680.20	1678.50	10040.30	.00
	8.626	5700.00	1682.92	.92	1684.04	.47	9900.00	9974.60	1680.20	1678.50	10040.30	10060.00
*	8.722	5700.00	1685.98	.00	1686.64	.00	9760.00	9969.20	1682.40	1693.50	10040.00	10089.00
	8.722	5700.00	1685.86	-.12	1686.98	.34	9880.00	9969.20	1682.40	1693.50	10040.00	10041.00
	8.817	5700.00	1688.17	.00	1688.97	.00	9820.00	9946.70	1684.40	1684.80	10042.90	10218.20
	8.817	5700.00	1688.79	.63	1690.14	1.17	9946.00	9946.70	1684.40	1684.80	10042.90	10050.00
*	8.910	5700.00	1691.34	.00	1692.77	.00	.00	9965.20	1688.20	1687.50	10021.20	10164.00
	8.910	5700.00	1692.00	.66	1693.64	.87	9950.00	9965.20	1688.20	1687.50	10021.20	10070.00
*	9.000	5700.00	1694.96	.00	1695.44	.00	.00	9975.80	1697.50	1690.90	10030.40	10273.90
*	9.000	5700.00	1695.68	.71	1696.40	.96	9975.00	9975.80	1697.50	1690.90	10030.40	10125.00
*	9.100	5700.00	1697.24	.00	1698.31	.00	.00	9949.50	1697.80	1694.10	10064.20	10170.00
	9.100	5700.00	1698.05	.81	1699.27	.95	9949.00	9949.50	1697.80	1694.10	10064.20	10080.00

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	SECNO	Q	CWSEL	DIFWSP	EG	DIFEG	STENCL	STCHL	XLBEL	RBEL	STCHR	STENCR
	9.192	5700.00	1700.61	.00	1701.49	.00	9870.00	9979.00	1696.80	1696.80	10072.10	10166.30
	9.192	5700.00	1701.12	.51	1702.59	1.10	9970.00	9979.00	1696.80	1696.80	10072.10	10073.00
	9.286	5700.00	1703.69	.00	1704.26	.00	.00	9945.20	1701.40	1708.00	10016.40	.00
	9.286	5700.00	1704.65	.96	1705.31	1.05	9830.00	9945.20	1701.40	1708.00	10016.40	10017.00
	9.389	5700.00	1706.65	.00	1707.59	.00	.00	9956.20	1704.70	1704.50	10037.30	.00
	9.389	5700.00	1707.07	.42	1708.01	.41	9870.00	9956.20	1704.70	1704.50	10037.30	10130.00
*	9.481	5700.00	1709.98	.00	1710.93	.00	.00	9970.20	1707.10	1707.60	10046.40	.00
	9.481	5700.00	1710.20	.22	1712.05	1.12	9950.00	9970.20	1707.10	1707.60	10046.40	10120.00
*	9.575	5700.00	1713.10	.00	1713.91	.00	9903.20	9919.00	1710.30	1710.20	10059.70	10155.00
	9.575	5700.00	1714.05	.94	1714.63	.71	9918.00	9919.00	1710.30	1710.20	10059.70	10110.00
*	9.672	5700.00	1716.04	.00	1716.80	.00	.00	9977.10	1715.10	1713.10	10107.70	10256.80
	9.672	5700.00	1715.96	-.08	1717.41	.61	9970.00	9977.10	1715.10	1713.10	10107.70	10120.00
*	9.761	5700.00	1719.17	.00	1720.64	.00	.00	9976.40	1715.50	1715.10	10038.90	10203.20
	9.761	5700.00	1720.06	.90	1721.96	1.31	9970.00	9976.40	1715.50	1715.10	10038.90	10070.00
	9.854	5700.00	1723.49	.00	1724.15	.00	.00	9936.00	1723.30	1722.10	10072.40	.00
	9.854	5700.00	1724.27	.78	1725.17	1.02	9920.00	9936.00	1723.30	1722.10	10072.40	10100.00
	9.949	5700.00	1725.95	.00	1726.87	.00	.00	9973.80	1723.60	1722.70	10067.00	10143.60
	9.949	5700.00	1726.57	.61	1727.29	.42	9973.00	9973.80	1723.60	1722.70	10067.00	10143.00
*	10.045	5700.00	1728.97	.00	1729.97	.00	.00	9978.80	1726.00	1724.80	10025.30	.00
	10.045	5700.00	1728.92	-.05	1730.79	.82	9900.00	9978.80	1726.00	1724.80	10025.30	10053.00
*	10.138	5700.00	1732.13	.00	1732.71	.00	9858.20	9964.50	1730.30	1728.60	10111.00	10151.60
	10.138	5700.00	1733.00	.87	1733.57	.86	9910.00	9964.50	1730.30	1728.60	10111.00	10125.00
*	10.236	5700.00	1734.78	.00	1735.74	.00	.00	9963.90	1731.80	1732.10	10035.00	.00
	10.236	5700.00	1734.93	.15	1736.72	.99	9890.00	9963.90	1731.80	1732.10	10035.00	10040.00
*	10.331	5700.00	1738.29	.00	1738.76	.00	9780.00	9931.30	1736.50	1735.70	10124.30	10283.20
	10.331	5700.00	1739.15	.86	1739.62	.86	9875.00	9931.30	1736.50	1735.70	10124.30	10144.00
*	10.424	5700.00	1740.98	.00	1741.97	.00	.00	9970.00	1738.30	1738.30	10038.00	.00
*	10.424	5700.00	1741.55	.57	1744.57	2.60	9969.00	9970.00	1738.30	1738.30	10038.00	10039.00

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SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 1.203 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 3.143 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 3.232 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 3.336 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 3.529 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 3.624 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 4.004 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 4.104 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 4.200 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 CAUTION SECNO= 4.592 PROFILE= 1 CRITICAL DEPTH ASSUMED  
 CAUTION SECNO= 4.592 PROFILE= 1 MINIMUM SPECIFIC ENERGY

WARNING SECNO=	4.693	PROFILE=	1	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	4.693	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	5.327	PROFILE=	1	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	5.327	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	5.413	PROFILE=	1	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	5.413	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	5.493	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	5.589	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	5.682	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	6.347	PROFILE=	1	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	6.347	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	6.440	PROFILE=	1	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	6.440	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
CAUTION SECNO=	6.538	PROFILE=	2	CRITICAL DEPTH ASSUMED				
CAUTION SECNO=	6.538	PROFILE=	2	MINIMUM SPECIFIC ENERGY				
WARNING SECNO=	6.630	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	6.727	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
CAUTION SECNO=	6.921	PROFILE=	1	CRITICAL DEPTH ASSUMED				
CAUTION SECNO=	6.921	PROFILE=	1	MINIMUM SPECIFIC ENERGY				

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CAUTION SECNO=	6.921	PROFILE=	2	CRITICAL DEPTH ASSUMED				
CAUTION SECNO=	6.921	PROFILE=	2	MINIMUM SPECIFIC ENERGY				
WARNING SECNO=	7.013	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	7.771	PROFILE=	1	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	7.771	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	7.865	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
CAUTION SECNO=	7.958	PROFILE=	2	CRITICAL DEPTH ASSUMED				
CAUTION SECNO=	7.958	PROFILE=	2	MINIMUM SPECIFIC ENERGY				
WARNING SECNO=	8.059	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	8.438	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	8.626	PROFILE=	1	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	8.722	PROFILE=	1	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
CAUTION SECNO=	8.910	PROFILE=	1	CRITICAL DEPTH ASSUMED				
CAUTION SECNO=	8.910	PROFILE=	1	MINIMUM SPECIFIC ENERGY				
WARNING SECNO=	9.000	PROFILE=	1	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	9.000	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	9.100	PROFILE=	1	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
CAUTION SECNO=	9.481	PROFILE=	2	CRITICAL DEPTH ASSUMED				
CAUTION SECNO=	9.481	PROFILE=	2	MINIMUM SPECIFIC ENERGY				
WARNING SECNO=	9.575	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	9.672	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
CAUTION SECNO=	9.761	PROFILE=	1	CRITICAL DEPTH ASSUMED				
CAUTION SECNO=	9.761	PROFILE=	1	MINIMUM SPECIFIC ENERGY				
CAUTION SECNO=	10.045	PROFILE=	2	CRITICAL DEPTH ASSUMED				
CAUTION SECNO=	10.045	PROFILE=	2	MINIMUM SPECIFIC ENERGY				
WARNING SECNO=	10.138	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	10.236	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
WARNING SECNO=	10.331	PROFILE=	2	CONVEYANCE	CHANGE	OUTSIDE	ACCEPTABLE	RANGE
CAUTION SECNO=	10.424	PROFILE=	1	CRITICAL DEPTH ASSUMED				
CAUTION SECNO=	10.424	PROFILE=	1	MINIMUM SPECIFIC ENERGY				
CAUTION SECNO=	10.424	PROFILE=	2	CRITICAL DEPTH ASSUMED				
CAUTION SECNO=	10.424	PROFILE=	2	PROBABLE MINIMUM SPECIFIC ENERGY				
CAUTION SECNO=	10.424	PROFILE=	2	20 TRIALS ATTEMPTED TO BALANCE WSEL				

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STATION	----- WIDTH	FLOODWAY SECTION AREA	----- MEAN VELOCITY	WATER WITH FLOODWAY	SURFACE ELEVATION WITHOUT FLOODWAY	DIFFERENCE
1.113	653.	1172.	4.4	1447.3	1446.4	.9
1.203	656.	1354.	3.8	1450.6	1449.8	.8
1.300	649.	1333.	3.8	1453.4	1452.6	.8
1.400	900.	1500.	3.4	1456.1	1455.4	.7
1.553	1050.	1477.	3.5	1459.6	1458.6	1.0
1.664	680.	1238.	4.2	1462.8	1462.0	.8
1.759	550.	1125.	4.6	1466.5	1465.8	.7
1.863	500.	1164.	4.5	1470.1	1469.3	.8
1.964	520.	1385.	3.8	1472.7	1471.8	.9
2.059	400.	1139.	4.6	1475.2	1474.5	.7
2.163	330.	1051.	4.9	1478.1	1477.2	.9
2.259	340.	1153.	4.5	1480.8	1479.8	1.0
2.357	280.	983.	5.3	1483.4	1482.5	.9
2.455	298.	1078.	4.8	1486.2	1485.2	1.0
2.554	240.	968.	5.4	1488.7	1487.9	.8
2.649	230.	965.	5.4	1491.1	1490.3	.8
2.747	320.	1140.	4.6	1493.5	1492.9	.6
2.846	295.	927.	5.6	1496.0	1495.3	.7
2.938	305.	961.	5.5	1499.1	1498.1	1.0
3.046	260.	785.	6.7	1502.4	1501.7	.7
3.143	290.	1164.	4.6	1505.3	1504.4	.9
3.232	190.	607.	8.7	1507.3	1507.2	.1
3.336	240.	878.	6.0	1512.0	1511.1	.9
3.431	175.	671.	7.9	1514.7	1514.1	.6
3.529	230.	1045.	5.1	1518.0	1517.2	.8
3.624	180.	718.	7.4	1519.8	1519.4	.4
3.718	240.	889.	6.0	1523.2	1522.2	1.0
3.817	159.	744.	7.1	1525.7	1525.3	.4
3.909	200.	790.	6.7	1528.4	1527.6	.8
4.004	341.	1203.	4.4	1530.9	1530.0	.9
4.104	195.	696.	7.6	1532.8	1532.5	.3
4.200	240.	987.	5.4	1536.2	1535.2	1.0
4.294	196.	725.	7.5	1538.6	1537.9	.7
4.393	220.	816.	6.6	1542.2	1541.3	.9
4.494	168.	753.	7.2	1545.1	1544.4	.7
4.592	184.	627.	8.6	1548.6	1547.9	.7
4.693	396.	1176.	4.6	1552.7	1552.1	.6
4.788	420.	1078.	5.0	1555.1	1554.1	1.0
4.884	330.	962.	5.6	1558.3	1557.3	1.0
4.986	200.	752.	7.2	1561.8	1561.3	.5
5.081	249.	936.	5.8	1565.2	1564.5	.7
5.174	170.	656.	8.2	1567.8	1567.9	-.1

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FLOODWAY DATA, POWERLINE WASH 100-YR  
PROFILE NO. 2

STATION	----- WIDTH	FLOODWAY SECTION AREA	----- MEAN VELOCITY	WATER WITH FLOODWAY	SURFACE ELEVATION WITHOUT FLOODWAY	DIFFERENCE
5.245	117.	595.	9.1	1570.6	1569.8	.8
5.327	203.	963.	5.6	1573.3	1572.8	.5
5.413	176.	581.	9.3	1575.1	1574.8	.3
5.493	280.	1161.	4.6	1578.4	1577.4	1.0
5.589	148.	537.	10.1	1579.8	1580.0	-.2
5.682	190.	848.	6.5	1584.6	1583.7	.9
5.771	216.	839.	6.6	1587.1	1586.5	.6
5.865	143.	646.	8.5	1589.7	1589.3	.4
5.961	188.	823.	6.7	1593.4	1592.5	.9
6.057	130.	618.	8.9	1596.3	1595.6	.7
6.150	127.	663.	8.3	1599.6	1598.7	.9
6.248	120.	565.	9.7	1602.6	1602.1	.5
6.347	245.	1160.	4.7	1606.2	1605.3	.9
6.440	213.	735.	7.5	1607.5	1607.3	.2
6.538	165.	590.	9.3	1611.9	1611.7	.2
6.630	245.	1054.	5.2	1616.5	1615.6	.9
6.727	136.	613.	9.0	1618.8	1618.6	.2
6.825	200.	873.	6.3	1622.7	1621.8	.9
6.921	140.	553.	9.9	1625.3	1624.7	.6
7.013	180.	898.	6.1	1629.8	1628.9	.9
7.106	250.	912.	6.1	1632.0	1631.7	.3
7.200	292.	886.	6.3	1634.9	1634.0	.9
7.297	150.	650.	8.6	1638.2	1637.3	.9
7.391	199.	847.	6.6	1641.9	1641.1	.8
7.488	134.	613.	9.1	1644.6	1644.7	-.1
7.575	180.	801.	7.0	1648.1	1647.9	.2
7.674	230.	961.	5.8	1650.7	1650.7	.0
7.771	164.	637.	8.8	1653.2	1653.1	.1
7.865	204.	908.	6.2	1657.2	1656.6	.6
7.958	135.	543.	10.3	1659.7	1659.7	.0
8.059	130.	774.	7.2	1664.3	1663.4	.9
8.155	110.	591.	9.5	1666.7	1666.2	.5
8.250	90.	536.	10.4	1670.3	1670.0	.3
8.346	116.	694.	8.1	1674.1	1673.6	.5
8.438	90.	514.	10.9	1676.3	1676.2	.1
8.530	110.	672.	8.5	1680.3	1679.5	.8
8.626	160.	767.	7.4	1682.9	1682.0	.9
8.722	147.	718.	7.9	1685.9	1686.0	-.1

8.817	104.	625.	9.1	1688.8	1688.2	.6
8.910	120.	616.	9.3	1692.0	1691.3	.7
9.000	147.	866.	6.6	1695.7	1695.0	.7
9.100	131.	654.	8.7	1698.0	1697.2	.8

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FLOODWAY DATA, POWERLINE WASH 100-YR  
 PROFILE NO. 2

STATION	WIDTH	FLOODWAY SECTION AREA	MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WATER SURFACE ELEVATION WITHOUT FLOODWAY	ELEVATION DIFFERENCE
9.192	103.	602.	9.5	1701.1	1700.6	.5
9.286	184.	907.	6.3	1704.7	1703.7	1.0
9.389	260.	851.	6.7	1707.0	1706.6	.4
9.481	170.	593.	9.6	1710.2	1710.0	.2
9.575	192.	977.	5.8	1714.0	1713.1	.9
9.672	150.	604.	9.4	1715.9	1716.0	-.1
9.761	100.	564.	10.1	1720.1	1719.2	.9
9.854	180.	785.	7.3	1724.3	1723.5	.8
9.949	170.	889.	6.4	1726.6	1726.0	.6
10.045	153.	604.	9.4	1729.0	1729.0	.0
10.138	215.	1002.	5.7	1733.0	1732.1	.9
10.236	150.	588.	9.7	1734.9	1734.8	.1
10.331	269.	1089.	5.2	1739.2	1738.3	.9
10.424	70.	413.	13.8	1741.6	1741.0	.6



1\*\*\*\*\*  
 \* HEC-2 WATER SURFACE PROFILES \*  
 \* \*  
 \* Version 4.6.2; May 1991 \*  
 \* \*  
 \* RUN DATE 12APR94 TIME 14:07:05 \*  
 \*\*\*\*\*

\*\*\*\*\*  
 \* U.S. ARMY CORPS OF ENGINEERS \*  
 \* HYDROLOGIC ENGINEERING CENTER \*  
 \* 609 SECOND STREET, SUITE D \*  
 \* DAVIS, CALIFORNIA 95616-4687 \*  
 \* (916) 756-1104 \*  
 \*\*\*\*\*

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X   X  XXXXXXX  XXXXX          XXXXX
X   X  X      X   X          X   X
X   X  X      X   X          X   X
XXXXXXX XXXX  X           XXXXX  XXXXX
X   X  X      X   X          X   X
X   X  X      X   X          X   X
X   X  XXXXXXX  XXXXX          XXXXXXX

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THIS RUN EXECUTED 12APR94 14:07:05

\*\*\*\*\*  
 HEC-2 WATER SURFACE PROFILES  
 Version 4.6.2; May 1991  
 \*\*\*\*\*

T1 FLOOD CONTROL DISTRICT OF MARICOPA COUNTY  
 T2 POWERLINE WASH AND TANK WASH FLOOD DELINEATION STUDY (FCD 92-09)  
 T3 TANK WASH 100-YR STANLEY CONSULTANTS # 11547 FILENAME: 11547T35  
 T4  
 T4  
 T4 1. CROSS SECTIONS ORIENTED LEFT TO RIGHT LOOKING DOWNSTREAM  
 T4 2. HYDRAULIC BASELINE IS CROSS SECTION STATION 10,000  
 T4 3. GR DATA BASED ON KENNEY AERIAL TOPO, FLIGHT DATE 11-24-92 AND AERIAL  
 T4 MAPPING COMPANY TOPO FROM WOOD/PATEL STAR WASH STUDY, FLIGHT DATE  
 T4 10-20-92; VERTICAL DATUM FOR ALL TOPO IS NGVD 1929  
 T4 4. TANK WASH MILE 0.0 CORRESPONDS TO CONFLUENCE WITH STAR WASH  
 T4 5. STARTING WATER SURFACE FROM WOOD/PATEL STAR WASH STUDY 6-29-93  
 T4 6. CHANNEL "n" RANGES FROM 0.040 TO 0.050  
 T4 7. OVERBANK "n" RANGES FROM 0.045 TO 0.055  
 T4 8. NH RECORD USED AT MULTI-CHANNEL XSECTNS  
 T4 9. FLOW RATES APPORTIONED BASED ON BURGESS-NIPLE JACKRABBIT WASH  
 T4 HYDROLOGY AS AMENDED BY FCD DATED 03-08-93  
 T4 10. INEFFECTIVE FLOW AREAS BLOCKED OUT USING ET RECORD ON NATURAL RUN  
 T4 11. PROFILE 1 - NATURAL ; PROFILE 2 - TYPE 1 ENCROACHMENT  
 T4

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		2							1480.03	
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1		-1							15
J3	VARIABLE CODES FOR SUMMARY PRINTOUT									
	38	43	1	2	13	55	16	14	26	17
	15	56	18		38	43	1	25	42	8
	39	27	53	54	28	4	37		38	43
	1	50	3	61	27	21	23	24	22	28
		200								

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NC	0.055	0.055	0.040	0.1	0.3				
QT	3	6600	6600	6600					
ET			10.4	9.1				9490.0	10224.0

\*\*\* XSECTN 0.980 IS UPSTREAM LIMIT OF WOOD/PATEL STAR WASH STUDY AND  
 DOWNSTREAM LIMIT OF STANLEY CONSULTANTS TANK WASH STUDY. GR AND  
 ENCROACHMENT STATIONS FOR 0.980 ARE FROM WOOD/PATEL STUDY \*\*\*

X1	0.980	65	9859.3	10075.2						
GR	1482.9	8671.4	1479.9	8671.5	1480.0	8713.4	1479.1	8761.5	1477.3	8804.9
GR	1478.2	8830.7	1479.2	8864.2	1479.1	8895.6	1478.5	8927.4	1478.6	8960.9
GR	1478.7	8961.1	1478.9	8961.4	1477.6	8993.7	1476.7	9004.7	1477.8	9025.0
GR	1477.9	9062.4	1477.5	9095.7	1477.4	9132.1	1476.9	9155.4	1477.8	9188.4
GR	1477.7	9214.2	1477.4	9225.5	1476.4	9232.6	1477.4	9246.5	1477.8	9283.0
GR	1478.2	9329.9	1478.5	9379.3	1478.8	9429.9	1479.5	9481.0	1479.4	9523.9
GR	1479.3	9532.6	1479.2	9580.8	1479.1	9612.4	1479.0	9631.7	1479.4	9659.1
GR	1479.4	9703.5	1479.5	9741.5	1479.7	9782.0	1480.0	9821.3	1479.9	9859.3
GR	1478.9	9882.3	1478.3	9899.3	1478.1	9920.3	1477.7	9934.5	1477.7	9956.6
GR	1477.5	9976.5	1476.1	10000.0	1475.9	10016.3	1475.9	10028.3	1478.8	10043.3
GR	1479.4	10075.2	1479.4	10120.3	1478.5	10131.3	1478.9	10146.6	1479.6	10192.4
GR	1480.1	10229.3	1480.5	10280.8	1481.0	10331.8	1481.2	10387.0	1481.6	10429.9
GR	1481.2	10477.2	1481.7	10530.5	1482.3	10579.6	1482.0	10625.3	1481.9	10631.2

NH	4	0.055	9945.2	0.040	10078.6	0.045	10162.3	0.055	10798.8
QT	3	6700	6700	6700					
ET		7.1		9.1			9250.0	10282.0	9650.0
X1	1.073	59	9945.2	10162.3	450	500	490		10190.0
GR	1483.0	9020.0	1482.0	9070.0	1480.5	9110.0	1482.5	9170.0	1482.0
GR	1483.0	9249.2	1483.0	9282.4	1482.4	9306.8	1481.3	9336.3	1480.5
GR	1481.1	9380.7	1481.1	9414.7	1481.0	9422.8	1481.7	9439.7	1481.8
GR	1481.8	9539.2	1482.0	9577.8	1481.2	9603.3	1481.0	9618.6	1481.4
GR	1481.5	9693.8	1481.7	9739.0	1482.1	9789.3	1481.1	9814.1	1482.2
GR	1481.7	9883.6	1481.8	9916.8	1482.2	9945.2	1481.2	9964.9	1478.7
GR	1477.3	9988.5	1476.8	10000.0	1477.2	10016.6	1478.2	10024.3	1481.1
GR	1481.7	10078.6	1481.6	10109.3	1478.6	10122.2	1477.3	10131.1	1476.7
GR	1479.3	10144.8	1482.3	10162.3	1482.8	10195.3	1483.2	10242.0	1483.6
GR	1483.3	10327.5	1483.0	10372.6	1482.8	10412.3	1481.5	10419.3	1482.5
GR	1482.8	10471.4	1483.5	10524.7	1483.8	10576.1	1484.3	10619.2	1484.7
GR	1484.9	10701.8	1485.1	10747.5	1485.2	10790.7	1485.1	10798.8	

NC	0.055	0.055	0.040	0.1	0.3				
ET		7.1		9.1			9438.1	10654.3	9800.0
X1	1.170	60	9962.5	10036.1	510	490	510		10320.0
GR	1486.2	9333.9	1485.9	9377.4	1484.9	9410.8	1485.9	9438.1	1485.8
GR	1485.1	9506.8	1484.1	9541.1	1483.5	9551.8	1484.1	9576.1	1484.2
GR	1484.1	9622.1	1483.3	9633.6	1483.8	9655.7	1483.9	9692.2	1483.6
GR	1484.1	9770.7	1483.6	9810.2	1483.0	9838.0	1482.4	9853.0	1483.6
GR	1484.5	9913.3	1484.9	9935.9	1484.4	9962.5	1482.0	9973.9	1480.0
GR	1478.6	10000.0	1479.2	10021.2	1484.1	10036.1	1483.9	10072.3	1483.3
GR	1483.6	10143.3	1483.8	10181.5	1482.3	10200.6	1483.3	10223.0	1483.9
GR	1483.6	10276.4	1481.7	10286.5	1483.6	10298.9	1484.3	10334.0	1484.3
GR	1484.5	10418.0	1484.7	10465.1	1483.6	10491.6	1483.3	10513.6	1481.9
GR	1480.4	10538.0	1479.5	10546.7	1481.1	10553.5	1484.4	10563.6	1485.2

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GR	1485.9	10654.3	1485.6	10698.6	1484.9	10736.2	1485.1	10753.1	1485.6	10793.0
GR	1486.0	10847.7	1486.9	10904.9	1487.2	10964.2	1488.0	11025.3	1488.0	11053.0

ET		7.1		9.1				10802.4	9850.0	10375.0
X1	1.265	65	9870.1	10029.1	500	500	500			
GR	1490.0	9346.3	1489.9	9410.8	1489.9	9471.6	1489.6	9522.7	1487.7	9562.7
GR	1486.9	9606.9	1486.7	9623.5	1486.0	9630.2	1486.8	9642.9	1486.8	9687.6
GR	1486.9	9733.6	1487.1	9784.8	1486.8	9823.3	1487.5	9870.1	1486.8	9907.7
GR	1486.1	9934.9	1485.5	9945.0	1486.3	9960.1	1485.9	9969.6	1482.9	9980.9
GR	1481.4	9989.2	1480.8	9998.8	1480.9	10000.0	1481.5	10007.2	1485.0	10016.4
GR	1488.1	10029.1	1487.1	10051.5	1486.5	10072.6	1486.2	10091.3	1485.7	10100.4
GR	1486.5	10120.9	1487.3	10153.1	1487.8	10201.7	1487.9	10248.7	1486.9	10297.7
GR	1486.8	10337.2	1487.6	10387.9	1487.7	10432.3	1486.5	10447.4	1485.4	10456.6
GR	1487.2	10476.3	1487.3	10517.2	1486.9	10553.9	1486.1	10582.9	1483.2	10591.9
GR	1486.6	10608.7	1487.4	10640.8	1486.5	10669.4	1487.5	10692.2	1487.9	10721.9
GR	1487.1	10740.2	1484.9	10750.9	1483.6	10759.7	1483.0	10768.5	1487.3	10781.1
GR	1488.3	10802.4	1487.7	10843.2	1486.7	10895.2	1486.6	10927.2	1488.4	10965.8
GR	1489.8	11001.8	1489.7	11039.4	1489.9	11076.3	1490.6	11114.9	1491.1	11141.4

NC	0.055	0.055	0.045	0.1	0.3					
ET		7.1		9.1			9864.1		9949.0	10390.0
X1	1.360	48	9949.1	10109.5	500	430	500			
GR	1493.9	9546.6	1492.4	9605.6	1491.2	9638.6	1490.6	9685.1	1488.6	9703.2
GR	1489.1	9716.8	1491.0	9743.6	1492.3	9808.2	1493.2	9864.1	1490.3	9911.3
GR	1489.5	9949.1	1488.2	9969.5	1483.7	9984.9	1483.6	10000.0	1484.4	10010.7
GR	1489.7	10022.6	1487.5	10037.7	1487.0	10059.2	1485.8	10078.8	1484.1	10090.8
GR	1486.6	10102.2	1489.8	10109.5	1489.4	10152.2	1490.4	10219.1	1489.7	10287.4
GR	1489.2	10329.1	1489.0	10344.6	1487.6	10353.0	1489.3	10377.4	1489.2	10428.5
GR	1490.3	10492.3	1489.9	10545.1	1489.4	10574.9	1487.4	10585.7	1489.7	10604.8
GR	1489.9	10651.2	1489.7	10706.3	1489.5	10748.2	1489.0	10759.1	1487.8	10766.5
GR	1489.0	10778.9	1490.1	10816.4	1490.4	10852.2	1489.1	10891.5	1488.7	10923.9
GR	1489.7	10959.2	1490.8	10997.4	1491.3	11031.9				

NH	5	0.055	9802.7	0.045	9839.7	0.050	10016.2	0.045	10172.3	0.055
NH	10922.									
ET				9.1					9810.0	10240.0
X1	1.454	45	10016.2	10172.3	505	425	495			
GR	1494.7	9514.6	1495.3	9588.9	1495.5	9669.5	1495.8	9745.4	1495.7	9773.8
GR	1495.5	9790.9	1487.2	9802.7	1486.6	9817.1	1486.3	9829.1	1487.4	9839.7
GR	1489.2	9862.4	1489.2	9894.0	1489.6	9930.9	1488.2	9955.0	1489.9	9977.2
GR	1489.0	9994.0	1489.3	10000.0	1491.1	10016.2	1490.0	10029.0	1489.0	10061.0
GR	1490.9	10079.3	1489.8	10091.4	1487.4	10103.7	1488.1	10113.6	1491.9	10126.3
GR	1492.7	10172.3	1491.0	10237.5	1492.1	10302.1	1491.9	10336.0	1490.7	10346.9
GR	1491.9	10392.9	1492.0	10440.4	1491.6	10495.9	1491.5	10533.6	1489.6	10546.4
GR	1491.5	10574.2	1491.3	10614.7	1492.1	10660.3	1492.6	10698.3	1492.0	10720.5
GR	1489.3	10729.0	1491.7	10748.8	1492.3	10801.6	1492.9	10862.5	1493.7	10922.0

NH	7	0.055	9670.9	0.045	9810.0	0.050	9905.6	0.045	10029.9	0.050
NH	10174.	0.045	10255.6	0.055	10894.1					
ET				9.1					9680.0	10250.0

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X1	1.552	55	9905.6	10029.9	525	465	515			
GR	1498.4	9394.9	1497.4	9433.9	1497.1	9453.8	1497.3	9480.1	1497.5	9514.8
GR	1496.0	9554.0	1497.0	9582.7	1495.7	9609.7	1493.9	9640.1	1493.1	9670.9
GR	1490.6	9683.5	1489.0	9695.6	1488.3	9708.2	1488.6	9721.3	1490.6	9731.1
GR	1491.8	9771.1	1494.4	9810.0	1493.1	9856.5	1493.6	9905.6	1493.1	9931.1
GR	1491.2	9944.8	1491.3	9957.1	1492.3	9973.4	1491.7	9987.9	1490.9	9999.4
GR	1490.8	10000.0	1491.7	10015.3	1493.2	10029.9	1492.7	10092.1	1492.9	10142.9
GR	1492.7	10174.0	1491.1	10190.9	1490.1	10203.4	1491.3	10218.5	1494.0	10233.9
GR	1494.9	10255.6	1493.9	10274.5	1492.0	10295.5	1492.7	10322.6	1492.5	10366.0
GR	1493.0	10393.6	1494.0	10426.0	1493.6	10448.6	1493.6	10488.7	1493.2	10534.7
GR	1492.9	10577.1	1491.7	10587.3	1492.6	10602.7	1493.1	10646.0	1493.4	10698.9
GR	1492.9	10733.2	1493.8	10775.2	1493.9	10823.7	1494.9	10883.3	1494.8	10894.1

NH	6	0.055	9675.6	0.050	9886.4	0.045	10126.5	0.050	10226.0	0.045
NH	10300.	0.055	10860.7							
ET		7.1		9.1			9568.9		9625.0	10300.0
X1	1.654	52	9886.4	10126.5	540	520	540			
GR	1500.6	9320.0	1500.7	9451.1	1497.5	9495.5	1496.5	9529.5	1498.0	9568.9
GR	1497.6	9602.9	1494.5	9625.7	1492.7	9635.4	1494.0	9647.1	1493.2	9653.8
GR	1490.0	9659.4	1490.5	9662.8	1494.8	9675.6	1493.4	9699.1	1495.1	9721.0
GR	1492.8	9736.1	1494.7	9757.5	1494.7	9775.8	1494.3	9803.9	1494.9	9824.0
GR	1494.2	9838.7	1496.1	9886.4	1495.4	9936.0	1494.2	9964.9	1494.2	9994.6
GR	1493.7	10000.0	1494.9	10018.0	1497.3	10040.3	1497.1	10062.1	1494.8	10071.4
GR	1494.3	10080.9	1496.3	10096.2	1496.5	10126.5	1495.7	10151.9	1496.1	10189.8
GR	1496.7	10226.0	1496.6	10251.1	1494.8	10260.8	1492.8	10269.3	1492.5	10275.4
GR	1494.4	10281.9	1497.7	10300.8	1496.5	10349.5	1497.0	10421.3	1497.4	10490.2
GR	1496.8	10571.4	1496.2	10646.8	1496.0	10701.2	1494.7	10713.1	1496.1	10734.1
GR	1497.0	10800.1	1498.3	10860.7						

NH	5	0.055	9959.5	0.040	10112.2	0.050	10209.8	0.045	10294.0	0.055
NH	10896.									
ET		7.1		9.1			9279.2		9575.0	10300.0
X1	1.746	74	9959.5	10112.2	525	485	485			
GR	1500.5	8925.0	1500.0	9060.0	1496.0	9090.0	1495.1	9095.0	1496.0	9100.0
GR	1497.0	9125.0	1496.0	9140.0	1495.3	9145.0	1496.0	9150.0	1498.0	9220.0
GR	1499.0	9227.1	1500.0	9252.1	1500.6	9279.2	1494.4	9315.0	1498.6	9354.6
GR	1497.8	9384.8	1498.9	9402.8	1499.4	9427.4	1499.9	9460.0	1500.0	9484.2
GR	1498.8	9510.1	1498.1	9531.5	1498.3	9551.6	1497.8	9564.9	1494.6	9581.3
GR	1497.5	9589.5	1495.1	9596.0	1495.4	9611.5	1499.2	9619.5	1499.4	9638.6
GR	1499.0	9653.0	1499.2	9684.4	1499.3	9721.0	1499.3	9756.9	1498.4	9762.2
GR	1498.3	9777.7	1499.1	9784.5	1499.3	9821.0	1498.6	9854.7	1498.8	9876.2
GR	1499.2	9908.3	1499.4	9939.3	1499.7	9959.5	1497.1	9969.3	1496.6	10000.0
GR	1496.5	10013.1	1499.5	10022.3	1499.5	10060.2	1499.4	10096.8	1499.7	10112.2
GR	1499.6	10150.0	1499.0	10209.8	1497.6	10215.1	1497.6	10231.0	1498.4	10235.2
GR	1498.7	10255.4	1496.9	10264.7	1496.5	10278.3	1499.7	10294.0	1499.9	10315.3
GR	1499.6	10371.6	1499.9	10437.7	1499.9	10478.2	1499.5	10515.0	1499.2	10544.8
GR	1498.7	10590.7	1498.8	10631.3	1497.4	10635.8	1498.3	10641.8	1498.8	10678.1
GR	1499.3	10721.6	1499.8	10771.5	1500.3	10840.2	1500.8	10896.0		

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NH	5	0.055	9912.9	0.040	10020.6	0.050	10335.8	0.045	10418.4	0.055
NH	10771.									
ET		7.1		9.1			8990.0		9595.0	10400.0
X1	1.842	65	9912.9	10020.6	505	525	505			
GR	1503.5	8490.0	1502.0	8630.0	1500.0	8710.0	1502.5	8800.0	1504.0	8940.0
GR	1504.6	8990.0	1504.0	9040.0	1502.0	9130.0	1502.0	9190.0	1500.5	9280.0
GR	1502.1	9324.6	1503.0	9362.6	1503.4	9382.9	1503.3	9398.7	1502.3	9421.8
GR	1501.6	9438.2	1501.3	9484.0	1500.4	9489.4	1501.3	9499.6	1501.3	9520.0
GR	1501.1	9529.3	1501.7	9560.6	1502.1	9577.3	1502.1	9595.5	1497.9	9604.5
GR	1497.9	9608.7	1502.1	9617.3	1502.4	9632.9	1502.1	9674.4	1502.4	9682.6
GR	1501.8	9726.0	1501.3	9733.1	1502.3	9743.0	1501.8	9773.6	1502.0	9808.5
GR	1502.1	9844.1	1502.1	9912.9	1501.0	9929.8	1501.6	9949.2	1500.4	9978.8
GR	1499.1	9988.7	1499.2	10000.0	1499.2	10012.6	1502.7	10020.6	1502.4	10083.4
GR	1502.7	10114.5	1502.2	10157.3	1502.3	10174.0	1502.4	10198.3	1501.9	10231.1
GR	1502.1	10269.8	1502.6	10335.8	1500.4	10348.3	1500.4	10367.6	1502.0	10376.9
GR	1502.3	10418.4	1502.4	10483.6	1502.1	10546.8	1501.3	10590.6	1500.1	10598.9
GR	1501.2	10604.7	1501.8	10648.1	1502.3	10686.0	1503.8	10739.1	1503.8	10771.0

NH	5	0.055	9945.6	0.040	10102.8	0.055	10240.4	0.045	10312.3	0.055
NH	10838.									
QT	3	6800	6800	6800						
ET				9.1					9650.0	10315.0
X1	1.939	67	9945.6	10102.8	500	550	510			
GR	1508.0	8798.0	1508.3	8840.6	1507.6	8873.9	1506.0	8929.1	1505.0	8974.5
GR	1504.6	9001.0	1504.6	9028.4	1505.1	9064.2	1505.7	9088.4	1505.8	9126.5
GR	1505.7	9149.4	1505.5	9177.4	1505.6	9207.3	1505.6	9252.2	1505.7	9290.5
GR	1505.5	9350.6	1505.3	9409.8	1505.2	9463.4	1504.7	9499.9	1503.6	9548.6
GR	1503.2	9575.4	1503.2	9604.4	1503.1	9627.6	1500.4	9637.5	1503.4	9643.1
GR	1504.0	9652.6	1503.4	9665.0	1504.2	9672.3	1504.3	9700.3	1501.6	9708.6
GR	1504.5	9717.7	1504.8	9762.3	1504.9	9796.0	1505.3	9816.7	1502.7	9828.8
GR	1502.7	9834.8	1505.0	9842.8	1505.0	9882.8	1505.2	9912.2	1505.6	9945.6
GR	1505.0	9961.4	1502.7	9973.4	1502.7	10000.0	1502.4	10022.6	1504.8	10033.1
GR	1505.9	10102.8	1506.1	10163.2	1506.3	10209.0	1506.3	10240.4	1503.1	10250.5
GR	1503.1	10272.1	1505.6	10284.6	1506.1	10312.3	1506.0	10388.5	1505.4	10406.8
GR	1505.9	10415.1	1506.1	10451.5	1505.8	10496.6	1505.4	10544.1	1505.1	10613.1
GR	1506.0	10644.8	1506.3	10663.1	1506.3	10706.0	1506.1	10745.2	1506.7	10775.0
GR	1506.9	10804.1	1506.8	10838.0						

NC	0.050	0.055	0.040	0.1	0.3				9640.0	10220.0
ET				9.1						
X1	2.039	60	9950.0	10173.2	530	530	530			
GR	1510.2	9060.6	1510.0	9130.2	1509.6	9197.1	1509.1	9253.3	1508.7	9310.0
GR	1508.4	9338.7	1507.6	9374.1	1507.5	9390.1	1508.1	9419.3	1508.5	9439.1
GR	1507.7	9463.3	1507.5	9479.3	1506.2	9500.7	1505.8	9518.5	1504.6	9523.0
GR	1505.8	9529.1	1506.2	9560.1	1505.0	9576.0	1505.8	9587.2	1506.0	9626.0
GR	1506.4	9681.3	1504.9	9684.5	1506.0	9692.8	1506.3	9709.5	1504.9	9716.5
GR	1506.3	9722.2	1506.7	9767.1	1507.3	9800.4	1506.9	9824.1	1507.7	9850.1
GR	1508.0	9897.4	1508.7	9950.9	1507.9	9960.4	1505.5	9980.8	1505.5	9980.8
GR	1505.5	10000.0	1505.6	10000.0	1506.9	10030.8	1507.2	10084.3	1506.1	10115.3
GR	1507.9	10124.3	1508.2	10154.2	1509.2	10173.2	1509.3	10224.6	1509.0	10233.5
GR	1509.1	10287.3	1508.9	10320.8	1507.9	10330.5	1508.6	10341.3	1508.9	10398.1
GR	1508.4	10440.2	1508.6	10480.6	1508.5	10528.1	1507.7	10534.4	1508.4	10547.3
GR	1508.8	10561.6	1508.9	10590.9	1509.1	10640.9	1509.4	10695.7	1509.4	10789.2

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NH	4	0.050	9863.8	0.055	9954.2	0.040	10095.4	0.055	10550.4	
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ET				9.1					9530.0	10140.0
X1	2.134	73	9954.2	10095.4	530	500	500			
GR	1512.2	8810.0	1510.0	8960.0	1509.5	8965.0	1509.8	8980.0	1509.2	9000.0
GR	1510.1	9040.0	1509.0	9075.0	1509.5	9100.0	1509.0	9145.0	1510.0	9170.0
GR	1511.3	9231.6	1510.6	9262.0	1510.8	9280.2	1509.7	9304.4	1509.7	9313.8
GR	1509.0	9322.2	1509.3	9330.9	1507.9	9330.9	1509.9	9354.1	1509.8	9388.7
GR	1508.4	9405.4	1509.0	9413.7	1508.9	9429.3	1510.0	9450.5	1510.6	9462.6
GR	1510.9	9482.1	1509.3	9497.6	1510.0	9514.2	1510.6	9533.5	1510.6	9563.7
GR	1510.3	9584.6	1509.7	9610.2	1508.4	9621.9	1508.7	9629.2	1508.1	9641.7
GR	1508.4	9647.8	1507.6	9659.4	1508.9	9670.6	1509.1	9692.1	1507.5	9699.6
GR	1509.0	9705.0	1509.7	9718.6	1508.8	9725.6	1509.4	9731.4	1509.4	9763.5
GR	1508.9	9769.7	1509.5	9777.0	1509.8	9802.0	1510.3	9815.2	1510.8	9840.6
GR	1511.0	9863.8	1510.8	9873.1	1510.9	9893.6	1510.9	9923.5	1511.0	9954.2
GR	1509.4	9964.0	1508.5	10000.0	1508.0	10034.3	1509.8	10047.8	1510.6	10064.7
GR	1511.3	10095.4	1511.2	10133.2	1511.4	10178.2	1511.2	10235.4	1511.1	10257.1
GR	1511.3	10277.1	1511.4	10335.7	1511.7	10390.2	1511.7	10416.7	1511.9	10442.7
GR	1511.9	10470.5	1511.9	10513.4	1511.9	10550.4				

NC	0.050	0.055	0.040	0.1	0.3					
ET		7.1		9.1			8800.0		9550.0	10115.0
X1	2.230	51	9890.9	10079.6	545	495	505			
GR	1514.5	8520.0	1513.8	8600.0	1513.0	8650.0	1513.2	8680.0	1514.0	8735.0
GR	1514.9	8800.0	1514.0	8875.0	1510.7	9015.0	1513.0	9130.0	1512.3	9195.0
GR	1513.8	9352.7	1513.5	9394.0	1513.0	9430.0	1512.6	9450.6	1512.2	9472.6
GR	1512.7	9480.4	1512.8	9495.9	1512.3	9535.0	1511.8	9562.5	1511.6	9588.1
GR	1511.7	9617.5	1510.2	9626.6	1511.4	9633.0	1512.1	9657.9	1510.5	9664.5
GR	1511.7	9672.7	1511.2	9680.4	1511.6	9687.3	1511.6	9717.6	1512.4	9761.2
GR	1513.0	9813.5	1513.6	9853.8	1513.8	9890.9	1513.5	9941.6	1512.3	9947.2
GR	1513.2	9958.2	1513.3	9964.8	1510.1	9976.9	1510.5	10000.0	1510.6	10014.6
GR	1511.6	10039.7	1513.7	10052.4	1513.9	10079.6	1513.1	10118.7	1514.1	10161.5
GR	1514.7	10189.6	1515.2	10238.8	1514.8	10283.6	1514.5	10311.4	1514.7	10345.4
GR	1514.8	10392.4								

ET		7.1		9.1			9172.7		9500.0	10052.0
X1	2.328	49	9918.3	10051.3	510	520	520			
GR	1517.5	8370.0	1515.5	8465.0	1516.2	8495.0	1513.5	8540.0	1516.0	8620.0
GR	1516.1	8660.0	1515.0	8740.0	1516.0	8800.0	1517.0	8880.0	1515.5	9010.0
GR	1517.5	9110.2	1517.5	9172.7	1516.2	9220.7	1515.4	9253.8	1515.1	9309.9
GR	1514.7	9343.9	1514.0	9350.9	1514.9	9362.4	1515.1	9389.1	1514.5	9397.3
GR	1514.9	9405.5	1515.1	9443.2	1515.1	9501.1	1515.0	9547.6	1515.9	9565.2
GR	1515.5	9581.6	1515.1	9589.8	1514.8	9607.1	1515.0	9629.3	1516.2	9651.3
GR	1515.9	9674.5	1516.8	9701.2	1516.7	9713.1	1516.1	9733.9	1515.7	9751.7
GR	1515.8	9766.2	1516.2	9789.1	1515.9	9837.4	1516.3	9850.6	1516.4	9889.2
GR	1516.8	9918.3	1514.3	9933.9	1514.4	9959.9	1513.6	9987.0	1513.0	10000.0
GR	1512.5	10013.3	1516.6	10020.0	1517.2	10051.3	1517.5	10082.2		

NC	0.050	0.055	0.040	0.1	0.3				9550.0	10130.0
ET				9.1						

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\*\*\* DIRT ROAD TO HIDDEN TANK STOCK POND CROSSES TANK WASH NEAR RIVER MILE 2.38 \*\*\*

X1	2.425	53	9972.4	10041.2	510	500	510			
GR	1521.0	9019.6	1520.1	9069.5	1518.6	9114.4	1518.2	9161.4	1517.4	9181.0
GR	1517.9	9186.2	1517.9	9204.0	1517.4	9216.3	1517.8	9226.4	1517.2	9250.5
GR	1517.7	9259.3	1518.1	9303.7	1517.8	9346.0	1517.3	9356.0	1517.9	9364.6
GR	1517.9	9386.8	1517.7	9396.5	1516.4	9402.0	1517.4	9407.7	1517.6	9429.7
GR	1516.5	9435.3	1517.6	9449.0	1517.7	9473.5	1518.2	9495.2	1518.9	9527.2
GR	1519.0	9549.3	1518.5	9588.5	1517.8	9617.1	1517.5	9636.0	1517.9	9657.8
GR	1518.0	9693.2	1517.9	9709.2	1518.2	9730.3	1519.5	9773.2	1519.9	9804.6
GR	1520.1	9835.9	1520.0	9849.0	1519.3	9874.1	1519.1	9899.0	1519.2	9941.1
GR	1519.3	9972.4	1515.2	9983.8	1515.5	10000.0	1515.7	10024.2	1518.7	10041.2
GR	1518.7	10067.1	1516.5	10074.6	1518.3	10086.0	1519.2	10147.5	1519.4	10168.9
GR	1519.1	10176.9	1519.9	10219.1	1520.1	10230.0				

NC	0.055	0.055	0.040	0.1	0.3					
ET		7.1		9.1			9287.2		9640.0	10080.0
X1	2.520	61	9835.8	10075.1	515	515	515			
GR	1523.2	8602.2	1523.7	8618.8	1523.0	8652.3	1522.8	8710.1	1522.7	8759.9
GR	1522.4	8801.6	1522.2	8833.7	1522.4	8850.3	1522.2	8893.7	1521.5	8916.0
GR	1520.7	8921.1	1521.3	8934.5	1521.7	8954.2	1521.5	8970.1	1521.0	8979.1
GR	1521.4	9009.4	1521.9	9043.0	1521.9	9102.7	1521.7	9145.1	1520.9	9154.4
GR	1521.2	9160.9	1521.7	9201.1	1522.0	9242.5	1522.2	9287.2	1521.6	9326.6
GR	1520.6	9333.8	1521.7	9342.7	1522.0	9350.9	1521.2	9378.2	1521.1	9413.1
GR	1520.8	9440.4	1520.3	9445.5	1520.7	9451.9	1520.9	9489.8	1520.7	9541.8
GR	1520.7	9584.5	1520.6	9608.4	1521.6	9639.8	1521.8	9675.7	1522.0	9722.5
GR	1522.0	9747.6	1522.8	9786.1	1522.9	9809.2	1522.3	9835.8	1521.5	9852.8
GR	1519.1	9862.5	1519.1	9894.9	1520.4	9904.6	1519.8	9980.8	1518.9	9987.4
GR	1518.7	10000.0	1518.2	10012.4	1520.9	10020.9	1520.9	10029.8	1519.7	10037.4
GR	1521.3	10048.8	1522.1	10075.1	1522.7	10092.1	1523.0	10140.2	1522.8	10191.7
GR	1523.3	10242.0								

ET		7.1		9.1			9375.0		9830.0	10180.0
X1	2.609	43	9907.9	10059.9	480	470	470			
GR	1526.4	9221.7	1526.3	9258.3	1525.5	9299.3	1525.6	9322.8	1526.3	9352.2
GR	1526.8	9375.0	1526.4	9414.3	1525.3	9447.2	1524.8	9476.4	1524.3	9501.5
GR	1524.3	9527.1	1523.9	9531.1	1524.1	9542.0	1524.5	9574.4	1524.9	9619.4
GR	1524.7	9671.7	1524.2	9729.9	1523.7	9794.0	1524.1	9810.4	1524.3	9838.3
GR	1523.2	9859.6	1521.5	9872.1	1521.2	9895.3	1524.2	9907.9	1523.9	9924.9
GR	1521.6	9936.1	1521.5	9971.8	1520.5	9977.1	1520.6	10000.0	1520.8	10008.0
GR	1521.3	10015.8	1521.2	10048.2	1523.9	10059.9	1523.9	10081.7	1523.3	10092.9
GR	1524.3	10122.9	1525.2	10160.9	1525.4	10186.7	1524.9	10210.7	1524.0	10228.1
GR	1524.6	10255.7	1525.9	10296.8	1526.2	10330.9				

NH	4	0.055	9935.8	0.040	10089.7	0.045	10141.7	0.055	10370.0	
ET		7.1		9.1			9497.4	10200.0	9725.0	10105.0

X1	2.709	48	9935.8	10089.7	520	510	530			
GR	1530.3	9070.5	1529.8	15105.6	1529.3	9129.2	1528.7	9190.3	1527.7	9283.3
GR	1526.6	9288.5	1527.4	9295.9	1527.9	9327.5	1528.2	9372.1	1528.6	9441.3
GR	1529.0	9476.3	1529.0	9497.4	1528.3	9535.5	1527.8	9581.2	1527.4	9597.6
GR	1526.3	9626.2	1525.4	9674.8	1525.1	9731.3	1524.0	9741.5	1525.1	9753.5
GR	1522.4	9772.2	1524.6	9780.0	1524.7	9801.3	1525.7	9817.3	1525.6	9850.0

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GR	1525.4	9863.5	1523.8	9868.7	1526.5	9879.2	1525.8	9889.0	1526.9	9914.8
GR	1527.4	9935.8	1526.7	9972.9	1523.5	9980.4	1523.5	10000.0	1523.4	10015.6
GR	1525.5	10029.3	1525.4	10051.8	1524.4	10078.1	1527.7	10089.7	1527.7	10110.2
GR	1525.8	10124.1	1527.7	10133.6	1527.7	10141.7	1527.2	10149.7	1528.8	10171.2
GR	1528.8	10199.1	1528.0	10230.0	1528.7	10370.0				

NH	5	0.055	9967.1	0.040	10044.6	0.050	10124.4	0.045	10201.3	0.055
NH	10320.									
ET			9.1						9730.0	10210.0
X1	2.805	35	9967.1	10044.6	515	505	505			
GR	1531.6	9225.0	1530.7	9381.7	1529.5	9434.2	1529.1	9479.1	1528.9	9494.2
GR	1528.3	9507.1	1528.1	9571.3	1527.8	9577.6	1528.3	9601.5	1528.9	9618.9
GR	1529.3	9644.9	1529.3	9667.2	1530.1	9688.8	1530.9	9734.0	1530.9	9756.7
GR	1530.2	9811.0	1529.8	9847.5	1528.6	9902.8	1526.1	9908.6	1529.0	9915.6
GR	1529.3	9967.1	1526.1	9980.8	1526.1	10000.0	1526.3	10025.9	1529.4	10044.6
GR	1529.3	10090.4	1529.1	10124.4	1528.0	10150.8	1529.5	10167.5	1529.8	10183.7
GR	1530.0	10201.3	1529.5	10211.9	1530.2	10234.8	1530.6	10262.2	1531.2	10320.0

NH	6	0.055	9220.0	0.045	9510.0	0.050	9710.5	0.045	9974.1	0.040
NH	10066.	0.055	10252.4							
QT	3	6900	6900	6900						
ET		7.1	9.1				9510.0		9715.0	10170.0
X1	2.900	31	9974.1	10066.0	500	510	500			
GR	1535.0	9100.0	1534.0	9220.0	1530.1	9365.0	1533.9	9510.0	1533.2	9570.0
GR	1533.6	9644.8	1533.4	9710.5	1532.5	9767.9	1531.7	9806.3	1530.6	9815.3
GR	1531.9	9823.0	1532.7	9852.0	1530.8	9860.8	1532.3	9868.6	1532.7	9900.5
GR	1532.7	9935.7	1532.5	9974.1	1528.9	9985.4	1529.1	10000.0	1528.9	10021.0
GR	1530.0	10026.5	1530.4	10039.6	1531.7	10054.1	1532.2	10066.0	1532.2	10114.8
GR	1532.0	10131.5	1532.9	10154.3	1533.7	10176.0	1534.6	10203.9	1534.9	10215.6
GR	1534.5	10252.4								

NH	6	0.055	8950.0	0.045	9280.0	0.050	9495.4	0.045	9948.2	0.040
NH	10100.	0.055	10269.0							
ET		7.1	9.1				9447.3		9750.0	10102.0
X1	2.995	39	9948.2	10100.0	500	500	500			
GR	1539.0	8880.0	1538.0	8950.0	1536.0	9025.0	1532.9	9125.0	1535.0	9175.0
GR	1532.5	9215.0	1534.5	9225.0	1533.5	9240.0	1536.0	9280.0	1537.0	9360.0
GR	1537.2	9447.3	1537.0	9495.4	1535.8	9539.8	1533.2	9588.3	1533.5	9598.2
GR	1533.2	9614.2	1534.4	9634.0	1535.2	9654.0	1535.4	9687.9	1534.0	9723.3
GR	1533.9	9739.8	1534.6	9748.1	1534.0	9764.9	1534.0	9811.4	1533.8	9833.2
GR	1534.1	9846.9	1534.8	9900.5	1535.7	9948.2	1535.3	9970.1	1531.5	9983.1
GR	1531.3	10000.0	1531.4	10024.1	1535.6	10036.5	1535.3	10074.0	1537.2	10100.0
GR	1536.6	10142.9	1536.9	10168.5	1536.9	10208.7	1537.3	10269.0		

NC	0.050	0.050	0.040	0.1	0.3					
ET		7.1	9.1				9255.0	10187.2	9730.0	10080.0
X1	3.091	55	9967.0	10061.5	525	505	505			
GR	1541.4	8960.0	1541.1	8980.0	1540.0	9030.0	1538.0	9080.0	1539.0	9090.0
GR	1538.0	9105.0	1538.3	9115.0	1537.3	9125.0	1540.0	9175.0	1540.2	9255.0
GR	1539.5	9312.2	1539.5	9360.2	1539.1	9381.7	1538.0	9403.6	1537.9	9415.8
GR	1537.0	9422.6	1537.4	9428.3	1537.3	9449.6	1536.9	9455.5	1537.3	9480.0
GR	1538.6	9506.5	1538.6	9526.8	1537.9	9546.0	1536.7	9561.6	1537.6	9594.3
GR	1536.2	9602.3	1537.8	9611.2	1537.4	9633.2	1537.5	9655.2	1538.6	9678.6
GR	1538.6	9726.2	1538.4	9771.4	1538.6	9794.5	1537.5	9815.8	1537.7	9853.3

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GR	1536.7	9877.3	1537.3	9893.8	1538.3	9942.1	1538.2	9967.0	1533.9	9985.3
GR	1533.5	10000.0	1533.3	10016.3	1536.0	10032.8	1537.1	10044.1	1538.1	10061.5
GR	1537.6	10091.9	1538.7	10104.7	1539.1	10128.5	1539.1	10187.2	1538.8	10229.5
GR	1539.1	10253.2	1539.3	10284.2	1538.9	10294.6	1539.3	10320.3	1539.7	10384.0

ET		7.1	9.1					10193.6	9775.0	10150.0
X1	3.186	44	9889.0	10093.3	480	490	500			
GR	1543.6	9255.0	1543.0	9333.7	1542.3	9413.5	1540.8	9485.8	1540.4	9522.6
GR	1540.3	9557.7	1540.5	9568.4	1540.9	9611.0	1541.0	9642.8	1538.8	9648.5
GR	1540.7	9666.6	1540.6	9675.4	1539.1	9681.6	1541.2	9703.7	1541.8	9737.4
GR	1541.5	9769.3	1541.2	9810.6	1541.0	9820.8	1541.2	9852.8	1541.5	9889.0
GR	1541.3	9924.1	1539.9	9932.2	1540.9	9941.0	1541.3	9953.3	1536.1	9983.0
GR	1536.3	10000.0	1536.5	10017.0	1537.3	10031.1	1539.7	10055.5	1539.8	10069.8
GR	1541.2	10078.5	1541.4	10093.3	1541.0	10116.2	1540.7	10132.2	1538.7	10141.5
GR	1540.2	10150.1	1542.2	10183.2	1542.2	10193.6	1541.0	10215.0	1541.4	10219.4
GR	1541.9	10244.0	1542.7	10287.6	1542.9	10356.2	1543.1	10409.9		

ET			9.1						9710.0	10195.0
X1	3.281	45	9950.4	10052.1	540	510	500			
GR	1545.7	9290.1	1544.8	9379.7	1544.2	9444.8	1543.6	9459.6	1544.1	9470.0
GR	1544.1	9483.8	1543.3	9501.6	1543.5	9527.0	1543.3	9537.4	1541.8	9544.2
GR	1543.2	9549.6	1543.4	9591.6	1543.6	9632.1	1543.5	9682.8	1545.3	9703.7
GR	1545.4	9725.3	1545.5	9784.7	1544.4	9813.1	1543.6	9841.1	1543.5	9861.3
GR	1543.9	9886.2	1543.6	9905.1	1544.3	9926.8	1544.7	9950.4	1544.2	9976.5
GR	1537.7	9990.6	1537.6	10000.0	1537.5	10012.2	1539.3	10022.8	1543.8	10035.0
GR	1544.5	10052.1	1543.8	10080.4	1544.4	10094.9	1544.4	10121.4	1543.8	10154.9
GR	1544.4	10167.4	1544.6	10191.3	1545.0	10208.1	1544.8	10249.2	1544.6	10284.3
GR	1543.8	10293.9	1544.4	10309.5	1544.9	10324.3	1545.5	10357.8	1546.0	10416.4

ET		7.1	9.1				9265.0	10211.0	9690.0	10195.0
X1	3.375	40	9962.0	10055.1	505	495	495			
GR	1549.1	9120.0	1547.3	9235.0	1548.0	9265.0	1546.9	9340.0	1546.9	9355.0

GR	1547.2	9426.7	1546.6	9487.2	1545.7	9570.9	1545.7	9606.3	1545.8	9637.1
GR	1546.5	9672.3	1547.2	9736.3	1547.5	9779.3	1547.7	9842.0	1548.0	9871.5
GR	1548.4	9905.4	1548.3	9935.0	1548.2	9962.0	1547.3	9974.2	1548.3	9990.9
GR	1540.2	10000.0	1539.9	10012.5	1545.5	10026.9	1547.0	10043.9	1547.6	10055.1
GR	1546.8	10081.5	1546.1	10100.0	1546.3	10122.4	1546.6	10143.9	1548.2	10176.0
GR	1548.8	10196.2	1548.9	10211.0	1548.7	10236.2	1548.0	10278.4	1547.8	10313.0
GR	1547.3	10319.6	1547.7	10326.8	1548.0	10355.3	1548.6	10389.0	1548.8	10426.0
ET		7.1		9.1			9570.0		9825.0	10175.0
X1	3.470	33	9967.2	10174.3	500	500	500			
GR	1552.0	8890.0	1550.2	9090.0	1551.0	9265.0	1551.2	9380.0	1552.1	9455.0
GR	1550.8	9530.8	1550.0	9603.1	1549.2	9683.3	1548.5	9742.1	1549.0	9773.9
GR	1550.0	9810.3	1551.2	9837.9	1551.8	9874.4	1551.8	9920.6	1551.3	9938.7
GR	1549.6	9967.2	1543.4	9982.1	1543.3	10000.0	1542.8	10020.0	1548.4	10037.8
GR	1548.8	10064.4	1548.5	10086.0	1547.9	10093.4	1548.9	10121.4	1548.9	10146.5
GR	1550.4	10174.3	1551.5	10198.0	1551.9	10222.8	1551.7	10285.7	1551.4	10357.4
GR	1551.2	10425.2	1551.7	10483.5	1552.3	10523.5				

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NC	0.055	0.055	0.040	0.1	0.3					
ET		7.1		9.1			9650.0		9880.0	10110.0
X1	3.568	45	9935.5	10084.5	510	490	510			
GR	1557.0	9330.0	1553.0	9440.0	1550.0	9520.0	1552.0	9530.0	1550.0	9550.0
GR	1554.5	9613.3	1554.7	9650.2	1553.8	9686.4	1552.4	9719.6	1552.5	9737.0
GR	1551.9	9767.0	1552.4	9805.3	1549.6	9813.4	1551.6	9817.5	1552.4	9843.2
GR	1552.8	9863.0	1552.6	9889.2	1551.9	9902.7	1551.5	9935.5	1550.6	9949.8
GR	1547.9	9962.0	1547.6	9973.1	1546.7	9980.8	1546.9	9992.7	1546.7	10000.0
GR	1547.0	10008.4	1546.6	10025.7	1547.9	10030.0	1548.3	10045.7	1549.7	10053.7
GR	1550.0	10067.4	1553.3	10084.5	1553.4	10097.2	1552.8	10126.2	1553.0	10142.2
GR	1552.5	10160.9	1552.4	10183.1	1554.1	10209.3	1554.3	10228.5	1554.1	10237.1
GR	1554.6	10248.9	1554.8	10273.4	1554.7	10319.8	1554.7	10373.0	1554.6	10417.0
NH	4	0.055	9702.3	0.045	9942.7	0.040	10062.3	0.055	10252.1	
ET		7.1		9.1			9503.2		9800.0	10075.0
X1	3.668	44	9942.7	10062.3	500	480	530			
GR	1558.4	9216.8	1557.8	9282.9	1556.9	9336.5	1555.9	9383.1	1555.1	9390.3
GR	1555.3	9407.7	1553.4	9414.3	1555.0	9422.3	1555.4	9439.6	1555.4	9460.5
GR	1555.7	9503.2	1555.0	9564.0	1555.1	9606.7	1554.4	9629.7	1555.3	9649.3
GR	1555.4	9679.6	1555.4	9702.3	1549.5	9710.4	1549.5	9722.8	1553.7	9735.0
GR	1550.4	9748.6	1554.7	9761.5	1554.2	9784.2	1555.0	9812.5	1555.1	9820.4
GR	1554.6	9861.9	1554.8	9878.3	1552.1	9897.9	1554.8	9911.7	1554.8	9942.7
GR	1551.9	9965.2	1551.5	9973.1	1549.9	9978.7	1550.1	10000.0	1550.1	10023.6
GR	1550.8	10027.5	1552.4	10046.1	1555.1	10062.3	1555.2	10091.9	1555.9	10117.2
GR	1557.0	10154.6	1557.3	10176.7	1557.1	10223.4	1556.9	10252.1		
NH	5	0.055	9052.1	0.045	9323.4	0.050	9970.2	0.040	10095.6	0.055
NH	10177.3									
ET		7.1		9.1			9603.3		9750.0	10100.0
X1	3.785	53	9970.2	10095.6	530	630	620			
GR	1561.2	8968.6	1560.8	9012.5	1560.3	9052.1	1559.0	9109.8	1557.7	9161.9
GR	1556.7	9181.0	1554.6	9187.4	1557.4	9202.6	1552.5	9214.0	1552.5	9223.0
GR	1557.6	9231.1	1558.0	9241.5	1557.1	9254.8	1554.7	9264.5	1557.1	9271.7
GR	1557.5	9293.7	1558.4	9323.4	1558.3	9357.9	1558.7	9413.5	1559.0	9452.2
GR	1559.1	9493.2	1558.2	9521.2	1558.6	9531.3	1559.0	9550.8	1559.6	9603.3
GR	1558.8	9635.5	1557.9	9648.9	1556.3	9654.1	1557.9	9662.1	1558.2	9692.4
GR	1558.2	9699.0	1558.8	9725.3	1559.0	9742.8	1558.1	9773.1	1555.9	9793.6
GR	1558.3	9804.2	1558.7	9832.0	1557.7	9861.9	1557.8	9877.9	1558.1	9899.5
GR	1558.8	9922.1	1559.4	9943.3	1559.3	9970.2	1553.8	9986.3	1553.8	10000.0
GR	1553.9	10021.0	1555.6	10031.1	1555.4	10073.8	1557.9	10095.6	1558.0	10112.6
GR	1560.4	10124.2	1559.8	10162.4	1559.6	10177.7				
NH	5	0.055	8910.1	0.045	9284.0	0.050	9897.2	0.040	10105.8	0.055
NH	10298.3									
ET		7.1		9.1			9862.1		9890.0	10110.0
X1	3.880	60	9897.2	10105.8	520	500	500			
GR	1564.3	8706.4	1564.9	8751.0	1565.0	8787.6	1564.6	8805.8	1563.9	8830.3
GR	1563.4	8866.8	1563.2	8910.1	1562.6	8936.8	1561.1	8965.7	1560.2	8995.4
GR	1560.1	9013.7	1560.3	9036.9	1555.2	9049.7	1555.4	9063.1	1560.5	9076.4
GR	1560.8	9105.0	1561.0	9148.6	1560.8	9169.5	1561.2	9193.8	1561.3	9219.7
GR	1562.0	9253.7	1562.2	9284.0	1561.9	9310.9	1561.3	9319.7	1562.1	9329.3
GR	1563.1	9363.7	1563.6	9411.3	1563.4	9436.2	1563.7	9478.1	1563.3	9527.0

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GR	1562.9	9581.3	1562.2	9597.8	1562.7	9642.3	1562.4	9683.4	1562.5	9729.8
GR	1562.4	9755.1	1561.8	9765.0	1562.2	9776.4	1563.0	9807.1	1563.1	9828.1
GR	1563.2	9862.1	1563.0	9897.2	1562.2	9906.0	1559.4	9917.5	1559.2	9935.7
GR	1559.2	9970.4	1557.7	9976.0	1557.8	10000.0	1557.9	10030.2	1559.1	10037.4
GR	1561.3	10058.7	1560.9	10077.7	1562.2	10095.4	1562.6	10105.8	1562.7	10135.3
GR	1562.3	10176.6	1563.3	10211.2	1563.7	10233.1	1564.6	10266.6	1564.7	10298.0
NH	7	0.055	8815.5	0.045	9423.7	0.050	9669.6	0.045	9925.0	0.040
NH	10075.3	0.045	10165.0	0.055	10250.0					
ET		7.1		9.1			9669.6	10165.0	9775.0	10125.0
X1	4.003	58	9925.0	10075.0	525	675	650			
GR	1567.7	8675.7	1567.9	8707.5	1568.0	8741.8	1567.6	8775.2	1566.1	8815.5
GR	1564.3	8875.0	1563.3	8919.7	1561.7	8924.8	1563.4	8932.9	1564.6	8965.3
GR	1565.0	8983.5	1564.6	9005.7	1563.8	9045.5	1563.5	9077.9	1563.3	9094.5
GR	1563.3	9124.4	1563.6	9144.7	1564.1	9180.5	1558.0	9193.4	1558.1	9201.7
GR	1562.5	9213.7	1562.5	9224.8	1563.7	9250.6	1563.8	9257.0	1561.0	9268.8
GR	1564.1	9282.7	1564.5	9295.2	1565.2	9338.0	1565.8	9381.6	1566.0	9423.7
GR	1566.1	9479.6	1566.1	9535.6	1566.3	9571.6	1566.6	9626.5	1566.7	9669.6
GR	1566.0	9740.0	1564.0	9785.0	1562.9	9800.0	1562.9	9825.0	1564.0	9840.0
GR	1566.0	9895.0	1566.8	9925.0	1566.0	9960.0	1564.0	9990.0	1563.0	10010.0
GR	1563.0	10015.0	1564.0	10030.0	1566.0	10040.0	1566.5	10075.0	1566.0	10080.0

GR	1564.0	10110.0	1563.8	10120.0	1564.0	10130.0	1566.0	10135.0	1567.5	10165.0
GR	1567.4	10190.0	1567.4	10230.0	1568.0	10250.0				
NH	5	0.050	9929.7	0.040	10028.3	0.050	10062.3	0.045	10121.7	0.050
NH	10522.									
ET		7.1		9.1			9869.6		9900.0	10210.0

\*\*\* 700 CFS (OUT OF TOTAL 6100 CFS) BREAKS OUT OF NORTH OVERBANK AT XSECTN 4.117 AND FLOWS TO UNNAMED TRIBUTARY COMING IN FROM NORTH. THIS BREAKOUT FLOW REJOINS MAIN CHANNEL ALONG WITH TRIBUTARY FLOW AT XSECTN 3.668 \*\*\*

X1	4.117	74	9929.7	10121.7	575	575	600			
GR	1569.6	8751.9	1568.5	8821.2	1567.6	8868.4	1567.3	8902.4	1567.5	8922.4
GR	1566.2	8938.5	1567.5	8947.7	1567.5	8966.4	1567.1	8979.1	1568.1	9011.8
GR	1568.6	9028.5	1568.6	9051.8	1568.6	9080.5	1568.0	9115.4	1566.9	9163.8
GR	1565.9	9210.0	1566.0	9238.1	1566.2	9256.1	1566.1	9276.4	1566.9	9311.2
GR	1560.4	9332.8	1560.3	9336.5	1566.0	9345.7	1567.2	9378.3	1568.0	9412.3
GR	1568.3	9433.6	1568.3	9473.9	1568.6	9511.5	1568.8	9545.6	1569.2	9575.4
GR	1569.4	9597.0	1569.0	9615.9	1568.9	9675.5	1568.6	9707.1	1568.3	9740.9
GR	1568.8	9766.6	1569.6	9792.1	1570.0	9809.8	1570.3	9835.8	1570.4	9869.6
GR	1570.3	9899.7	1569.5	9919.8	1569.8	9929.7	1568.3	9943.0	1568.1	9975.0
GR	1564.7	9988.8	1564.5	10000.0	1564.4	10012.3	1568.6	10028.3	1568.8	10045.3
GR	1568.9	10062.3	1566.1	10076.6	1566.0	10089.4	1568.0	10101.0	1569.2	10121.7
GR	1568.6	10137.8	1569.1	10151.4	1569.4	10164.5	1569.4	10189.7	1568.7	10208.6
GR	1567.7	10216.7	1566.9	10232.8	1566.3	10253.6	1568.1	10262.2	1568.7	10283.2
GR	1569.1	10301.9	1569.1	10348.4	1568.5	10354.9	1569.1	10363.1	1569.8	10394.9
GR	1569.9	10429.5	1570.5	10457.0	1570.8	10488.1	1570.9	10522.1		

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NC	0.055	0.050	0.043	0.1	0.3					
QT	3	6100	6100	6100						
ET				9.1					9930.0	10230.0
X1	4.211	38	9976.6	10188.7	495	485	495			
GR	1574.1	9638.1	1574.0	9672.4	1573.0	9726.8	1572.1	9775.0	1571.7	9812.3
GR	1571.8	9847.8	1572.5	9888.0	1573.1	9917.6	1573.3	9942.6	1572.3	9976.6
GR	1567.7	9988.5	1567.5	10000.0	1567.7	10014.5	1570.8	10023.3	1572.3	10037.1
GR	1572.3	10065.4	1572.0	10095.2	1570.9	10102.7	1571.8	10117.2	1571.8	10132.9
GR	1570.1	10141.5	1570.0	10159.6	1571.8	10166.1	1572.4	10188.7	1572.6	10224.9
GR	1572.4	10256.4	1572.2	10269.1	1572.3	10284.8	1572.4	10315.6	1572.3	10352.6
GR	1571.9	10401.7	1571.6	10445.0	1571.6	10476.6	1570.1	10481.8	1571.8	10491.2
GR	1572.4	10512.7	1573.3	10534.4	1573.5	10564.0				

NH	4	0.055	9605.8	0.045	9929.8	0.040	10094.7	0.050	10653.2	
ET				9.1					9810.0	10150.0
X1	4.314	51	9929.8	10094.7	525	545	560			
GR	1577.4	9432.5	1577.4	9468.2	1576.6	9526.9	1575.7	9569.4	1575.5	9605.8
GR	1575.4	9642.0	1575.2	9689.2	1575.0	9722.5	1575.3	9746.3	1575.2	9768.4
GR	1574.5	9806.4	1573.3	9819.4	1570.8	9830.4	1570.7	9834.4	1574.2	9844.1
GR	1574.7	9854.9	1575.3	9877.1	1575.3	9929.8	1574.7	9941.1	1572.5	9951.6
GR	1572.5	9959.7	1573.7	9970.7	1573.7	9980.3	1572.9	9989.8	1572.6	10000.0
GR	1572.5	10012.3	1573.9	10019.8	1574.7	10052.9	1573.4	10060.5	1572.9	10083.2
GR	1576.0	10094.7	1576.1	10123.9	1576.2	10174.8	1576.3	10244.1	1575.6	10263.6
GR	1575.7	10272.4	1576.0	10290.4	1576.1	10327.0	1575.7	10357.9	1575.7	10372.3
GR	1575.8	10378.8	1576.0	10383.9	1575.8	10409.6	1575.3	10433.8	1576.0	10459.7
GR	1576.1	10491.3	1576.2	10500.4	1576.1	10507.8	1575.8	10534.3	1576.2	10598.7
GR	1577.0	10653.2								

NC	0.050	0.050	0.040	0.1	0.3					
ET				9.1					9710.0	10100.0
X1	4.409	46	9942.8	10097.4	495	475	495			
GR	1580.9	9152.4	1580.6	9220.4	1579.9	9268.6	1579.5	9292.6	1579.4	9336.9
GR	1579.0	9372.6	1578.2	9421.5	1577.2	9472.0	1577.8	9498.0	1573.0	9504.0
GR	1577.4	9508.5	1576.9	9516.9	1577.0	9535.4	1576.2	9542.9	1577.6	9557.9
GR	1578.2	9591.9	1578.3	9618.6	1577.4	9637.6	1577.1	9660.3	1574.5	9680.2
GR	1576.3	9690.7	1576.5	9723.3	1576.9	9749.2	1577.1	9780.0	1577.2	9801.9
GR	1578.6	9824.6	1578.8	9853.6	1578.1	9874.0	1578.5	9909.0	1578.4	9942.8
GR	1577.5	9964.7	1575.6	9987.4	1575.2	10000.0	1575.5	10014.2	1575.8	10047.6
GR	1576.9	10055.0	1577.4	10069.7	1578.4	10080.7	1578.4	10097.4	1579.3	10113.4
GR	1579.5	10152.2	1580.0	10169.1	1580.2	10201.7	1580.5	10223.4	1580.9	10245.2
GR	1581.0	10277.0								

NH	6	0.055	9250.7	0.045	9431.7	0.055	9613.9	0.045	9918.7	0.040
ET	10022.	0.055	10130.2						9770.0	10050.0
X1	4.506	49	9918.7	10022.0	580	510	510			
GR	1583.3	9117.8	1582.9	9173.3	1581.7	9230.1	1581.1	9243.5	1581.5	9250.7
GR	1579.2	9257.8	1581.2	9260.9	1581.7	9283.7	1578.7	9288.7	1581.6	9296.6
GR	1581.5	9317.2	1581.5	9342.5	1579.2	9350.7	1581.0	9359.3	1581.6	9376.9
GR	1581.7	9395.8	1582.2	9409.8	1582.7	9431.7	1582.4	9442.9	1582.9	9458.4
GR	1582.7	9497.3	1582.7	9535.0	1582.4	9562.8	1582.7	9584.4	1582.5	9613.9
GR	1580.8	9627.7	1578.7	9634.1	1579.6	9642.0	1580.2	9684.4	1580.7	9718.5
GR	1580.6	9752.0	1580.3	9793.3	1579.6	9812.2	1579.4	9826.2	1580.3	9843.6

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GR	1580.6	9858.5	1580.6	9874.5	1580.0	9888.3	1580.4	9918.7	1580.2	9945.1
GR	1579.5	9964.8	1578.6	9978.5	1577.6	9987.8	1577.4	10000.0	1577.5	10014.3
GR	1581.3	10022.0	1582.4	10051.7	1582.7	10092.7	1583.0	10130.2		

NH	4	0.055	9429.3	0.050	9966.2	0.040	10069.8	0.055	10158.3	
ET		7.1		9.1			9402.9		9820.0	10077.0
X1	4.599	46	9966.2	10069.8	525	495	495			
GR	1586.2	8895.0	1586.0	8965.0	1584.0	9030.0	1585.5	9060.0	1585.6	9100.0
GR	1583.5	9125.0	1585.5	9205.0	1585.6	9265.0	1585.2	9285.0	1586.0	9340.0
GR	1586.7	9402.9	1586.7	9429.3	1585.4	9474.2	1584.1	9507.4	1583.4	9513.6

GR	1584.8	9522.9	1585.1	9547.1	1583.8	9565.5	1582.2	9577.7	1583.3	9593.4
GR	1584.1	9616.3	1583.2	9655.5	1582.4	9670.8	1583.4	9678.9	1584.1	9701.8
GR	1584.5	9728.9	1584.3	9741.5	1583.8	9763.6	1584.0	9782.1	1583.8	9809.2
GR	1584.1	9826.8	1583.7	9857.8	1584.1	9879.1	1583.2	9907.2	1582.9	9931.2
GR	1583.3	9966.2	1579.9	9980.1	1579.8	10000.0	1579.8	10027.0	1582.6	10041.2
GR	1582.4	10051.8	1585.4	10069.8	1586.0	10091.5	1586.0	10112.5	1586.2	10126.7
GR	1586.2	10158.3								

NC	0.050	0.055	0.040	0.1	0.3					
ET		7.1		9.1			9340.0		9775.0	10041.0

\*\*\* DIRT ROAD ON RANGE LINE 5 WEST - 6 WEST CROSSES TANK WASH AT RIVER MILE 4.64 \*\*\*

X1	4.710	47	9868.8	10040.2	565	585	575			
GR	1590.1	8940.0	1590.0	8990.0	1588.9	9025.0	1588.9	9080.0	1588.6	9130.0
GR	1588.5	9178.8	1587.9	9230.1	1588.1	9272.9	1588.2	9305.3	1588.6	9340.0
GR	1587.5	9363.2	1587.2	9376.7	1587.5	9382.4	1588.2	9402.5	1587.6	9422.8
GR	1586.8	9456.3	1585.8	9462.8	1587.4	9471.9	1587.6	9488.7	1587.4	9516.6
GR	1588.0	9539.4	1588.8	9568.5	1588.9	9589.6	1588.2	9624.5	1587.6	9650.0
GR	1586.9	9670.3	1587.1	9677.2	1586.8	9689.9	1587.4	9715.3	1586.2	9734.4
GR	1586.3	9746.0	1586.4	9762.6	1588.1	9773.4	1587.3	9794.7	1587.3	9802.4
GR	1588.0	9813.2	1588.6	9847.9	1588.8	9868.8	1588.1	9904.2	1586.6	9932.0
GR	1585.8	9966.0	1583.7	9982.1	1583.6	10000.0	1582.9	10018.0	1589.2	10040.2
GR	1589.3	10065.4	1589.4	10098.3						

NC	0.055	0.055	0.040	0.1	0.3					
ET		7.1		9.1			9689.1		9875.0	10166.0
X1	4.797	40	9879.6	10165.8	480	450	470			
GR	1592.2	9229.1	1592.3	9295.1	1591.2	9362.9	1591.2	9421.9	1591.1	9485.4
GR	1591.5	9519.9	1591.3	9564.8	1590.9	9579.3	1589.3	9586.4	1591.1	9596.7
GR	1591.7	9617.7	1590.5	9641.3	1591.5	9666.3	1591.7	9689.1	1591.2	9710.0
GR	1590.7	9723.7	1591.2	9736.2	1592.2	9755.4	1592.5	9772.3	1592.4	9790.4
GR	1591.8	9813.4	1591.3	9844.0	1591.5	9879.6	1590.2	9948.0	1585.8	9964.8
GR	1585.3	9984.1	1585.3	10000.0	1585.1	10014.0	1587.3	10024.2	1587.6	10046.8
GR	1587.1	10057.8	1587.1	10081.9	1586.7	10094.0	1588.3	10115.3	1588.7	10130.6
GR	1590.0	10149.1	1590.8	10165.8	1589.7	10189.1	1589.7	10206.8	1591.9	10222.1

NC	0.055	0.050	0.040	0.1	0.3					
ET		7.1		9.1			9800.0		9900.0	10135.0

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X1	4.898	41	9902.9	10114.1	535	525	535			
GR	1594.8	9529.9	1594.9	9624.2	1594.8	9643.9	1592.8	9654.5	1594.0	9658.6
GR	1594.6	9678.3	1594.8	9714.1	1595.4	9742.5	1595.9	9782.0	1595.9	9799.7
GR	1595.3	9847.0	1593.7	9882.4	1592.6	9902.9	1592.4	9926.1	1588.2	9939.3
GR	1588.2	9948.7	1591.8	9962.0	1594.2	9972.8	1589.0	9988.2	1588.8	10000.0
GR	1589.0	10018.0	1589.5	10021.5	1589.5	10028.4	1590.2	10032.9	1591.2	10051.7
GR	1591.8	10073.7	1592.9	10094.1	1593.4	10114.1	1593.5	10128.5	1592.9	10133.7
GR	1593.0	10154.2	1592.5	10165.7	1591.9	10177.7	1592.1	10206.9	1591.7	10213.2
GR	1592.0	10221.8	1592.4	10241.8	1595.2	10285.3	1595.3	10303.9	1595.2	10343.5
GR	1595.2	10405.4								

NH	5	0.055	9702.1	0.045	9816.3	0.050	9932.9	0.045	10225.0	0.055
NH	10500.									
ET		7.1		9.1			9687.2		9925.0	10230.0

\*\*\* ELECT TRANS LINE MAINT ROAD CROSSES TANK WASH AT MILE 4.95 \*\*\*

X1	4.997	41	9932.9	10225.0	525	515	525			
GR	1598.5	9561.9	1598.2	9625.5	1596.9	9659.1	1597.8	9675.5	1597.9	9687.2
GR	1597.1	9702.1	1594.3	9727.4	1590.6	9735.4	1590.6	9745.1	1595.5	9753.1
GR	1595.7	9782.7	1596.4	9794.3	1596.7	9816.3	1596.5	9838.0	1595.3	9856.7
GR	1596.0	9896.3	1597.0	9932.9	1594.7	9942.3	1594.0	9967.4	1593.6	9975.8
GR	1593.6	10000.0	1592.9	10031.4	1597.2	10047.8	1597.6	10070.7	1596.0	10093.7
GR	1596.2	10115.4	1595.2	10150.0	1592.5	10158.0	1592.2	10177.5	1595.6	10185.6
GR	1596.6	10225.0	1596.4	10274.4	1597.4	10293.5	1597.6	10309.0	1597.1	10341.3
GR	1596.1	10376.2	1595.3	10383.6	1596.3	10391.6	1596.6	10407.9	1597.4	10444.7
GR	1598.0	10500.0								

NH	7	0.055	9605.9	0.045	9764.2	0.055	9931.8	0.040	10028.9	0.050
NH	10185.	0.045	10235.7	0.055	10534.8					
QT	3	3800	4300	4300						
ET		7.1		9.1			9916.1		9930.0	10236.0

X1	5.091	51	9931.8	10235.7	495	495	495			
GR	1600.3	9448.3	1600.7	9502.4	1600.0	9568.7	1599.9	9578.0	1598.9	9588.2
GR	1599.8	9605.9	1593.4	9623.5	1593.0	9637.5	1598.0	9651.5	1598.5	9674.9
GR	1596.8	9688.0	1597.4	9696.8	1597.3	9715.8	1597.9	9740.7	1599.9	9764.2
GR	1600.4	9780.2	1600.8	9808.8	1600.1	9841.6	1600.3	9860.2	1599.7	9863.7
GR	1599.8	9881.1	1600.4	9889.1	1600.5	9899.3	1600.8	9916.1	1600.3	9931.8
GR	1599.7	9953.3	1595.7	9971.0	1595.7	10000.0	1595.3	10015.1	1598.7	10028.9
GR	1598.1	10068.4	1598.2	10085.1	1597.7	10093.5	1598.3	10108.0	1598.8	10129.9
GR	1598.3	10146.6	1597.6	10157.6	1597.6	10185.0	1594.6	10205.2	1594.6	10214.5
GR	1597.6	10221.1	1600.3	10235.7	1600.7	10265.4	1600.3	10296.6	1600.3	10325.0
GR	1599.9	10373.1	1599.3	10417.6	1599.8	10436.5	1600.5	10475.4	1600.7	10507.8
GR	1600.9	10534.8								

NH	4	0.045	9650.2	0.050	9952.2	0.045	10123.3	0.055	10422.7	0.050
ET		7.1		9.1			9804.6		9857.0	10124.0

X1	5.187	50	9952.2	10123.3	505	525	505			
GR	1604.6	9359.5	1604.2	9380.3	1604.7	9413.1	1604.7	9436.5	1603.9	9461.3
GR	1603.4	9491.6	1600.7	9500.4	1602.0	9505.4	1601.2	9529.2	1601.6	9539.4
GR	1597.3	9560.3	1597.3	9569.1	1596.3	9581.7	1596.1	9599.4	1599.4	9609.9
GR	1599.4	9619.2	1598.4	9624.5	1603.0	9637.2	1603.5	9650.2	1604.1	9695.5
GR	1604.0	9703.7	1603.9	9719.5	1604.2	9731.0	1604.4	9782.1	1604.5	9804.6
GR	1604.2	9842.6	1602.9	9865.9	1603.0	9883.8	1603.4	9897.2	1603.1	9925.8

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GR	1603.1	9952.2	1602.6	9961.0	1600.1	9972.9	1599.5	9983.8	1598.6	10000.0
GR	1598.5	10017.1	1603.3	10037.1	1599.0	10052.3	1599.1	10069.9	1600.5	10088.8
GR	1601.8	10100.8	1603.1	10123.3	1603.9	10156.4	1604.4	10204.2	1604.6	10231.2
GR	1604.2	10263.1	1603.6	10310.0	1604.6	10353.8	1605.0	10382.0	1605.0	10422.7
NH	5	0.055	9234.9	0.045	9519.4	0.050	9953.8	0.045	10391.2	0.055
NH	10429.									
ET		7.1		9.1			9857.1		9920.0	10289.0
X1	5.283	74	9953.8	10288.3	505	555	505			
GR	1608.6	8975.7	1607.4	9055.1	1606.2	9074.5	1606.9	9089.0	1605.8	9110.5
GR	1606.1	9124.0	1605.3	9148.1	1604.3	9178.2	1604.7	9192.9	1604.8	9212.4
GR	1604.3	9234.9	1601.4	9248.6	1599.7	9263.7	1599.6	9271.0	1604.1	9278.8
GR	1606.0	9292.3	1605.6	9321.6	1604.9	9358.9	1604.2	9375.0	1604.4	9397.1
GR	1603.1	9403.2	1604.8	9411.4	1602.2	9422.3	1604.2	9429.4	1603.5	9449.3
GR	1601.9	9453.4	1603.9	9462.8	1605.3	9501.3	1605.2	9507.3	1605.5	9519.4
GR	1606.9	9535.3	1607.4	9557.3	1607.5	9589.6	1607.9	9664.8	1607.9	9691.9
GR	1607.0	9719.2	1606.5	9746.1	1607.0	9754.0	1607.2	9767.3	1606.2	9779.9
GR	1606.9	9793.2	1606.1	9803.5	1607.2	9821.4	1607.6	9838.0	1607.9	9857.1
GR	1608.0	9894.5	1606.6	9931.7	1606.4	9953.8	1606.1	9970.8	1605.3	9981.6
GR	1602.3	9990.4	1602.3	10000.0	1602.3	10007.6	1603.5	10017.5	1603.8	10034.4
GR	1603.5	10047.6	1602.4	10060.6	1602.4	10067.5	1603.6	10076.8	1604.1	10090.2
GR	1604.1	10108.5	1603.9	10139.1	1604.3	10163.7	1604.3	10187.5	1605.1	10222.9
GR	1604.4	10237.3	1605.8	10260.9	1606.3	10288.3	1606.3	10306.6	1605.9	10355.9
GR	1604.2	10364.6	1606.0	10374.6	1607.0	10391.2	1606.9	10429.3		
NC	0.050	0.055	0.040	0.1	0.3					
ET		7.1		9.1			9849.6		9900.0	10088.0

\*\*\* 500 CFS (OUT OF TOTAL 4300 CFS) BREAKS OUT OF NORTH OVERBANK AT XSECTN 5.381 AND FLOWS TO UNNAMED TRIBUTARY COMING IN FROM NORTH. THIS BREAKOUT FLOW REJOINS MAIN CHANNEL ALONG WITH TRIBUTARY FLOW AT XSECTN 4.997 \*\*\*

X1	5.381	50	9921.2	10087.8	505	515	515			
GR	1610.1	9178.3	1609.3	9217.0	1609.0	9252.3	1608.1	9271.0	1607.7	9302.3
GR	1608.2	9319.0	1607.1	9328.4	1607.7	9339.4	1608.1	9353.3	1608.7	9391.3
GR	1609.1	9413.4	1609.0	9433.8	1609.6	9466.2	1609.4	9496.6	1609.2	9525.1
GR	1608.7	9574.1	1608.2	9586.1	1609.1	9599.2	1609.3	9619.0	1608.9	9634.1
GR	1609.5	9664.2	1610.1	9715.6	1610.2	9757.0	1610.1	9773.7	1610.0	9803.0
GR	1610.5	9830.8	1610.8	9849.6	1610.7	9872.6	1610.1	9887.8	1607.5	9921.2
GR	1606.1	9927.7	1607.6	9934.6	1608.0	9951.6	1608.2	9971.2	1606.3	9984.6
GR	1606.3	10000.0	1606.3	10020.6	1608.4	10033.7	1606.6	10041.7	1606.5	10060.8
GR	1608.2	10068.2	1609.2	10087.8	1609.3	10123.8	1609.9	10142.7	1609.6	10161.3
GR	1608.8	10173.6	1609.6	10194.8	1610.1	10218.4	1611.2	10246.6	1610.9	10317.1
QT	3	4300	4300	4300						
ET				9.1					9830.0	10045.0
X1	5.475	27	9923.5	10044.4	495	505	495			
GR	1614.7	9339.9	1614.1	9397.9	1613.3	9454.8	1612.7	9504.1	1612.4	9549.0
GR	1612.0	9588.1	1612.3	9643.8	1612.3	9676.5	1612.0	9711.8	1612.1	9746.5
GR	1609.7	9752.1	1611.7	9763.7	1612.5	9787.4	1612.9	9809.4	1610.8	9841.5
GR	1611.0	9850.2	1608.8	9860.8	1610.7	9872.8	1611.2	9899.1	1611.6	9923.5
GR	1611.4	9951.1	1608.9	9968.3	1608.8	9986.6	1608.4	10000.0	1608.3	10019.5
GR	1612.1	10044.4	1614.1	10140.0						

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ET		7.1		9.1			9679.4		9880.0	10080.0
X1	5.571	47	9975.7	10057.5	505	505	505			
GR	1617.8	9246.4	1617.2	9303.5	1616.8	9360.5	1616.0	9387.8	1616.5	9403.0
GR	1616.6	9417.7	1615.3	9449.1	1615.2	9481.4	1614.8	9524.1	1614.7	9573.6
GR	1613.3	9585.9	1614.5	9595.2	1614.8	9604.5	1612.6	9612.3	1614.6	9624.1
GR	1614.9	9652.2	1614.3	9666.2	1615.1	9679.4	1614.7	9708.4	1613.9	9715.3
GR	1614.5	9721.5	1615.3	9751.7	1615.6	9780.2	1615.1	9789.3	1615.7	9820.4
GR	1616.3	9841.0	1615.7	9861.0	1615.9	9880.3	1615.2	9888.7	1615.9	9900.4
GR	1615.9	9914.2	1614.5	9928.4	1614.2	9946.3	1614.6	9975.7	1609.9	9989.6
GR	1609.9	10000.0	1610.0	10015.8	1615.2	10031.1	1615.8	10057.5	1615.7	10072.6
GR	1616.2	10080.0	1616.4	10097.6	1615.9	10112.6	1614.8	10127.8	1615.6	10140.0
GR	1615.9	10159.8	1616.5	10210.5						
ET		7.1		9.1			9743.3		9865.8	10075.0
X1	5.665	54	9960.0	10048.5	510	510	510			
GR	1621.0	9170.9	1620.3	9242.7	1619.8	9302.8	1619.3	9359.1	1618.6	9406.3
GR	1618.2	9415.9	1618.6	9435.9	1617.3	9445.2	1618.6	9454.4	1618.8	9521.9
GR	1618.5	9528.1	1618.2	9545.7	1618.6	9560.7	1618.2	9574.1	1618.4	9581.2
GR	1618.8	9622.3	1618.8	9648.2	1618.3	9670.7	1619.3	9686.0	1619.8	9709.5
GR	1619.8	9743.3	1619.4	9798.3	1619.4	9818.2	1619.8	9843.9	1619.9	9863.8
GR	1619.9	9865.8	1619.6	9904.7	1618.8	9946.9	1618.8	9960.0	1617.9	9976.3
GR	1612.3	9987.5	1612.4	10000.0	1612.3	10010.5	1616.8	10021.1	1615.2	10026.9
GR	1618.4	10037.3	1618.8	10048.5	1618.5	10088.3	1619.3	10107.3	1619.7	10124.3
GR	1619.6	10144.2	1618.1	10170.9	1618.0	10178.3	1616.1	10187.7	1617.5	10193.5
GR	1616.0	10202.6	1617.9	10211.8	1619.3	10232.8	1620.7	10253.5	1620.9	10270.1
GR	1620.2	10282.0	1620.3	10305.9	1620.5	10340.6	1620.7	10402.4		
NC	0.055	0.055	0.046	0.1	0.3					
ET		7.1		9.1			9841.6		9925.0	10313.0

\*\*\* CONFLUENCE TANK WASH AND SOUTH BRANCH TANK WASH AT MILE 5.70 \*\*\*

X1	5.763	52	9933.0	10312.6	520	470	510			
GR	1623.0	9480.8	1622.6	9529.6	1622.4	9579.4	1622.1	9628.3	1621.8	9683.0
GR	1621.8	9718.4	1621.5	9748.2	1622.1	9784.3	1622.9	9808.8	1623.7	9832.9
GR	1623.9	9841.6	1623.1	9878.1	1622.6	9933.0	1621.0	9966.7	1618.5	9980.8
GR	1619.3	9991.0	1615.1	9995.3	1615.2	10000.0	1615.4	10008.6	1617.0	10023.0
GR	1620.7	10034.3	1622.3	10053.4	1622.9	10065.5	1623.1	10087.3	1622.8	10098.4
GR	1622.6	10101.6	1621.5	10149.6	1621.3	10184.0	1618.2	10194.0	1618.1	10200.0

GR	1618.5	10207.9	1619.1	10236.0	1618.0	10256.2	1618.0	10265.7	1621.3	10273.8
GR	1621.9	10312.6	1621.8	10339.9	1621.4	10364.7	1621.5	10406.9	1621.4	10443.2
GR	1621.6	10479.7	1621.7	10518.1	1621.8	10533.9	1621.4	10556.6	1621.6	10590.3
GR	1621.4	10620.0	1620.0	10635.8	1622.0	10648.3	1622.9	10664.6	1622.7	10684.5
GR	1623.6	10696.6	1623.7	10753.0						
NC	0.055	0.055	0.050	0.1	0.3					
QT	3	3400	3400	3400						
ET				9.1					9900.0	10075.0
X1	5.853	33	9968.4	10027.3	470	480	475			
GR	1625.9	9615.8	1625.5	9651.8	1625.2	9701.8	1624.4	9749.7	1624.4	9771.4
GR	1624.4	9804.8	1624.2	9836.7	1623.3	9884.0	1623.1	9913.0	1622.7	9939.6
GR	1622.2	9947.4	1623.2	9955.5	1623.5	9968.4	1618.2	9995.5	1618.3	10000.0
GR	1617.8	10008.0	1622.5	10018.7	1623.4	10027.3	1624.0	10051.8	1624.6	10077.7

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GR	1624.9	10105.1	1625.0	10128.6	1624.4	10149.8	1623.5	10162.7	1624.1	10178.6
GR	1623.9	10197.3	1621.4	10211.3	1623.3	10220.0	1623.2	10231.8	1624.9	10251.8
GR	1623.8	10264.2	1625.8	10277.3	1626.4	10303.0				

ET		7.1		9.1				10248.4	9900.0	10075.0
X1	5.948	28	9980.8	10031.4	490	510	500			
GR	1628.5	9660.0	1627.7	9741.3	1627.0	9794.3	1626.7	9831.2	1625.6	9873.5
GR	1625.6	9898.7	1625.4	9926.7	1625.4	9958.1	1625.8	9980.8	1624.2	9990.8
GR	1620.1	9996.7	1620.0	10000.0	1620.1	10003.8	1625.4	10013.2	1626.0	10031.4
GR	1626.6	10061.1	1627.4	10086.5	1628.4	10107.3	1628.1	10130.5	1626.3	10154.7
GR	1626.8	10169.1	1627.6	10186.6	1627.6	10215.5	1628.6	10248.4	1628.2	10269.7
GR	1626.7	10320.0	1626.7	10360.0	1628.6	10540.0				

ET				9.1					9910.0	10075.0
X1	6.042	26	9986.9	10026.8	495	495	495			
GR	1631.7	9565.4	1631.8	9628.5	1631.4	9720.1	1630.6	9778.8	1629.8	9836.2
GR	1628.8	9909.2	1627.7	9946.5	1628.5	9953.9	1628.1	9965.0	1628.8	9986.9
GR	1622.8	9996.0	1622.7	10000.0	1622.5	10004.5	1628.9	10013.7	1629.3	10026.8
GR	1628.4	10038.0	1628.7	10054.5	1628.7	10074.5	1627.3	10079.7	1628.5	10093.3
GR	1628.8	10117.2	1629.9	10141.4	1630.8	10170.5	1632.6	10200.1	1632.6	10233.3
GR	1632.8	10313.8								

ET				9.1					9890.0	10090.0
X1	6.137	37	9982.1	10009.8	510	490	500			
GR	1636.3	9508.9	1636.1	9549.4	1635.3	9585.7	1635.2	9628.3	1634.5	9668.9
GR	1633.8	9710.7	1633.4	9748.4	1633.2	9797.1	1632.5	9831.1	1631.9	9861.0
GR	1631.4	9865.4	1631.7	9872.5	1631.3	9878.9	1631.8	9887.1	1630.8	9895.2
GR	1631.4	9901.1	1631.8	9912.9	1631.4	9921.5	1631.8	9931.3	1631.7	9946.8
GR	1631.8	9982.1	1625.8	9996.0	1625.8	10000.0	1625.8	10003.8	1632.2	10009.8
GR	1631.5	10034.8	1631.4	10057.9	1631.5	10099.2	1632.0	10117.3	1633.1	10134.8
GR	1633.5	10149.0	1632.8	10171.4	1632.5	10210.9	1631.2	10219.9	1632.8	10226.9
GR	1633.7	10252.8	1635.9	10296.9						

ET				9.1					9840.0	10065.0
X1	6.241	34	9978.2	10031.7	595	525	565			
GR	1638.5	9518.0	1637.7	9578.9	1636.5	9625.8	1635.9	9660.8	1635.8	9697.7
GR	1635.1	9724.3	1634.3	9740.0	1634.4	9751.4	1634.8	9761.5	1634.5	9777.2
GR	1633.6	9786.3	1634.3	9803.0	1634.5	9824.5	1633.2	9834.6	1634.3	9841.3
GR	1634.7	9869.1	1634.8	9898.3	1634.1	9904.5	1634.8	9917.5	1635.2	9960.1
GR	1634.0	9966.7	1635.4	9978.2	1629.8	9994.7	1629.8	10000.0	1629.8	10004.3
GR	1635.2	10022.0	1635.5	10031.7	1634.6	10051.9	1634.8	10074.6	1634.8	10102.1
GR	1635.8	10142.5	1636.8	10181.1	1637.6	10227.9	1638.8	10334.2		

ET				9.1					9875.0	10075.0
X1	6.336	28	9988.2	10022.5	500	500	500			
GR	1640.8	9508.8	1640.5	9576.1	1640.2	9644.6	1639.9	9694.3	1639.0	9702.0
GR	1639.5	9709.8	1639.6	9749.3	1639.4	9784.3	1638.7	9841.5	1638.4	9876.4
GR	1638.3	9917.9	1638.2	9953.8	1638.8	9988.2	1632.9	9996.7	1632.9	10000.0
GR	1632.8	10004.6	1638.8	10010.6	1639.0	10022.5	1638.3	10035.3	1638.3	10085.3
GR	1638.5	10126.7	1638.6	10163.7	1639.4	10194.2	1639.9	10232.4	1640.1	10269.9
GR	1640.2	10321.1	1640.1	10375.5	1640.6	10427.9				

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ET		7.1		9.1				10250.0	9875.0	10100.0
X1	6.432	29	9987.2	10012.3	525	485	505			
GR	1645.0	9620.3	1645.1	9657.4	1644.5	9700.0	1643.5	9751.2	1642.5	9789.1
GR	1642.1	9816.1	1642.0	9840.9	1641.4	9907.8	1640.0	9915.7	1640.0	9928.9
GR	1641.0	9935.1	1641.3	9951.0	1641.5	9987.2	1635.6	9997.5	1635.6	10000.0
GR	1635.5	10005.1	1642.0	10012.3	1641.6	10035.1	1641.4	10071.8	1641.6	10113.6
GR	1641.9	10158.6	1642.5	10189.4	1643.0	10229.9	1643.0	10262.2	1643.1	10295.4
GR	1643.0	10347.1	1643.1	10373.7	1643.7	10417.0	1644.3	10480.1		

ET				9.1					9885.0	10050.0
X1	6.530	35	9986.0	10012.0	505	525	515			
GR	1649.7	9488.3	1649.8	9526.0	1649.0	9556.2	1648.3	9588.8	1647.8	9644.8
GR	1647.5	9680.3	1646.7	9720.4	1646.7	9747.3	1646.0	9780.7	1645.2	9820.7
GR	1644.5	9845.6	1644.4	9873.4	1644.3	9901.9	1644.5	9927.9	1644.8	9964.5
GR	1644.8	9986.0	1638.8	9996.0	1638.7	10000.0	1638.6	10003.9	1645.3	10012.0
GR	1644.5	10027.0	1644.4	10056.8	1644.8	10094.1	1645.4	10123.0	1645.8	10150.4
GR	1646.9	10179.4	1647.3	10204.2	1647.3	10224.8	1647.1	10260.8	1647.2	10298.3
GR	1647.2	10330.4	1647.3	10375.1	1648.3	10406.4	1648.8	10438.2	1649.7	10492.3

ET				9.1					9925.0	10090.0
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\*\*\* XSECTN 6.625 IS UPSTREAM LIMIT TANK WASH STUDY \*\*\*

X1	6.625	35	9978.8	10014.3	510	490	500			
GR	1653.1	9628.8	1651.9	9677.8	1651.1	9718.2	1650.6	9751.8	1649.9	9785.1
GR	1650.3	9797.9	1650.0	9820.1	1649.1	9837.6	1648.4	9855.7	1648.2	9887.0

GR	1647.6	9908.8	1647.2	9941.8	1646.6	9949.4	1647.5	9962.3	1647.5	9978.8
GR	1641.9	9995.3	1641.9	10000.0	1641.8	10004.7	1647.8	10014.3	1647.5	10044.7
GR	1647.8	10075.4	1648.2	10110.0	1648.8	10132.6	1649.6	10152.9	1649.5	10172.3
GR	1648.7	10187.5	1648.7	10209.0	1646.5	10218.6	1649.0	10222.7	1649.1	10237.4
GR	1649.8	10253.0	1650.6	10300.4	1651.1	10330.1	1651.8	10365.5	1652.1	10426.0

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

\*PROF 1  
0

CCHV= .100 CEHV= .300  
\*SECNO .980

\*\*\* XSECTN 0.980 IS UPSTREAM LIMIT OF WOOD/PATEL STAR WASH STUDY AND DOWNSTREAM LIMIT OF STANLEY CONSULTANTS TANK WASH STUDY. GR AND ENCROACHMENT STATIONS FOR 0.980 ARE FROM WOOD/PATEL STUDY \*\*\*

.980	4.13	1480.03	.00	1480.03	1480.19	.16	.00	.00	1479.90
6600.0	4473.9	1961.1	165.0	1630.1	468.4	103.2	.0	.0	1479.40
.00	2.74	4.19	1.60	.055	.040	.055	.000	1475.90	8671.50
.004534	0.	0.	0.	0	0	0	.00	1552.64	10224.14

FLOW DISTRIBUTION FOR SECNO= .98 CWSEL= 1480.03

STA=	8671.	8805.	8864.	8961.	9005.	9025.	9062.	9096.	9132.	9155.	9188.	9226.	9247.
PER Q=	3.7	4.3	3.7	4.1	3.1	3.8	3.8	4.9	3.7	4.7	4.2	3.9	
AREA=	105.9	103.4	116.3	89.8	56.4	81.5	77.6	93.9	67.1	88.4	86.8	65.7	
VEL=	2.3	2.7	2.1	3.0	3.6	3.1	3.2	3.4	3.7	3.5	3.2	3.9	
DEPTH=	.8	1.7	1.2	2.1	2.8	2.2	2.3	2.6	2.9	2.7	2.3	3.1	
STA=	9247.	9283.	9330.	9379.	9481.	9659.	9859.	10075.	10224.				
PER Q=	4.4	4.2	3.2	3.5	3.3	1.3	29.7	2.5					
AREA=	88.7	95.2	83.0	114.8	137.9	77.5	468.4	103.2					
VEL=	3.3	2.9	2.6	2.0	1.6	1.1	4.2	1.6					
DEPTH=	2.4	2.0	1.7	1.1	.8	.4	2.2	.7					

1490 NH CARD USED  
\*SECNO 1.073

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .70

3470 ENCROACHMENT STATIONS=	9250.0	10282.0	TYPE=	1	TARGET=	1032.000							
1.073	6.04	1482.74	.00	.00	1483.32	.57	3.00	.12	1482.20				
6700.0	2227.6	4466.1	6.3	736.0	627.4	6.5	19.0	13.0	1482.30				
.02	3.03	7.12	.97	.055	.041	.055	.000	1476.70	9292.80				
.009597	450.	490.	500.	3	0	0	.00	898.82	10191.62				

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

FLOW DISTRIBUTION FOR SECNO= 1.07 CWSEL= 1482.74

STA=	9293.	9362.	9415.	9488.	9603.	9652.	9739.	9845.	9945.	10079.	10162.	10192.
PER Q=	3.8	5.4	3.8	4.2	4.1	4.8	4.2	3.0	47.3	19.4	.1	
AREA=	75.4	93.0	85.6	109.8	76.6	106.0	104.9	84.6	412.0	215.4	6.5	
VEL=	3.3	3.9	3.0	2.6	3.6	3.0	2.7	2.4	7.7	6.0	1.0	
DEPTH=	1.1	1.8	1.2	1.0	1.6	1.2	1.0	.8	3.1	2.6	.2	

CCHV= .100 CEHV= .300  
\*SECNO 1.170

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.79

3470 ENCROACHMENT STATIONS=	9438.1	10654.3	TYPE=	1	TARGET=	1216.200							
1.170	7.00	1485.60	.00	.00	1485.84	.24	2.49	.03	1484.40				
6700.0	1748.3	2193.9	2757.8	792.0	371.3	1093.4	40.0	24.8	1484.10				
.06	2.21	5.91	2.52	.055	.040	.055	.000	1478.60	9481.97				
.002992	510.	510.	490.	3	0	0	.00	1151.22	10633.19				

FLOW DISTRIBUTION FOR SECNO= 1.17 CWSEL= 1485.60

STA=	9482.	9606.	9656.	9729.	9810.	9853.	9882.	9963.	10036.	10099.	10143.	10201.	10254.
PER Q=	4.1	3.0	4.3	4.6	4.4	3.2	2.4	32.7	3.6	3.5	4.5	4.9	
AREA=	147.8	90.7	132.8	142.3	107.7	76.6	94.0	371.3	111.7	95.5	121.7	124.1	
VEL=	1.9	2.2	2.2	2.2	2.8	2.8	1.7	5.9	2.2	2.5	2.5	2.6	
DEPTH=	1.2	1.8	1.8	1.8	2.5	2.6	1.2	5.0	1.8	2.2	2.1	2.3	

STA=	10254.	10299.	10418.	10514.	10538.	10547.	10564.	10633.					
PER Q=	4.4	4.5	3.9	4.1	3.4	3.6	.7						
AREA=	109.1	162.9	133.5	82.2	49.2	64.9	38.5						

VEL= 2.7 1.8 2.0 3.4 4.7 3.7 1.2  
 DEPTH= 2.4 1.4 1.4 3.4 5.7 3.8 .6

\*SECNO 1.265

3265 DIVIDED FLOW

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .55

1.265	7.17	1487.97	.00	.00	1488.41	.44	2.50	.06	1487.50
6700.0	870.9	2932.5	2896.6	311.5	416.4	789.9	61.7	38.5	1488.10
.09	2.80	7.04	3.67	.055	.040	.055	.000	1480.80	9557.03
.010049	500.	500.	500.	2	0	0	.00	1234.86	10795.35

FLOW DISTRIBUTION FOR SECNO= 1.26 CWSEL= 1487.97

STA=	9557.	9643.	9734.	9823.	9870.	10029.	10100.	10153.	10337.	10457.	10554.	10592.	10609.
PER Q=	3.5	4.6	3.6	1.4	43.8	4.2	3.8	3.2	3.3	4.0	4.8	4.3	
AREA=	80.5	103.7	88.9	38.3	416.4	81.8	72.7	98.1	84.9	94.2	72.5	51.6	
VEL=	2.9	3.0	2.7	2.4	7.0	3.4	3.5	2.2	2.6	2.8	4.5	5.6	
DEPTH=	.9	1.1	1.0	.8	2.6	1.1	1.4	.5	.7	1.0	1.9	3.1	

STA=	10609.	10692.	10760.	10769.	10795.
PER Q=	3.3	4.8	4.6	2.9	
AREA=	82.4	70.4	41.1	40.3	
VEL=	2.7	4.6	7.6	4.7	
DEPTH=	1.0	1.0	4.7	1.5	

CCHV= .100 CEHV= .300  
 \*SECNO 1.360

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.59

3470 ENCROACHMENT STATIONS= 9864.1 11031.9 TYPE= 1 TARGET= -9864.100

1.360	7.34	1490.94	.00	.00	1491.25	.31	2.83	.01	1489.50
6700.0	72.0	3943.7	2684.3	42.8	710.0	1201.5	80.0	50.6	1489.80
.12	1.68	5.55	2.23	.055	.045	.055	.000	1483.60	9900.82
.003993	500.	500.	430.	2	0	0	.00	1106.50	11007.32

FLOW DISTRIBUTION FOR SECNO= 1.36 CWSEL= 1490.94

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

STA=	9901.	9949.	10110.	10219.	10329.	10377.	10429.	10545.	10605.	10706.	10767.	10816.	10924.
PER Q=	1.1	58.9	3.6	3.5	5.0	3.1	3.2	4.5	3.2	3.3	3.2	3.2	4.6
AREA=	42.8	710.0	127.2	123.3	111.6	86.6	120.7	111.8	116.1	93.6	83.8	138.0	
VEL=	1.7	5.6	1.9	1.9	3.0	2.4	1.8	2.7	1.9	2.4	2.5	2.2	
DEPTH=	.9	4.4	1.2	1.1	2.3	1.7	1.0	1.9	1.1	1.6	1.7	1.3	

STA=	10924.	11007.
PER Q=	2.8	
AREA=	88.8	
VEL=	2.1	
DEPTH=	1.1	

1490 NH CARD USED

\*SECNO 1.454

1.454	6.47	1492.77	.00	.00	1493.02	.25	1.76	.01	1491.10
6700.0	4088.1	1273.4	1338.5	878.7	371.7	722.6	100.9	61.7	1492.70
.16	4.65	3.43	1.85	.048	.045	.055	.000	1486.30	9794.78
.003416	505.	495.	425.	3	0	0	.00	1054.47	10849.25

FLOW DISTRIBUTION FOR SECNO= 1.45 CWSEL= 1492.77

STA=	9795.	9817.	9829.	9840.	9862.	9894.	9931.	9955.	9977.	9994.	10016.	10172.	10302.
PER Q=	8.8	7.5	5.9	7.1	6.8	7.2	6.0	5.1	3.2	3.3	19.0	3.5	
AREA=	106.6	75.8	62.8	101.5	112.8	124.3	93.3	82.6	55.8	63.3	371.7	138.7	
VEL=	5.5	6.6	6.3	4.7	4.1	3.9	4.3	4.2	3.9	3.5	3.4	1.7	
DEPTH=	4.8	6.3	5.9	4.5	3.6	3.4	3.9	3.7	3.3	2.9	2.4	1.1	

STA=	10302.	10393.	10534.	10574.	10698.	10802.	10849.
PER Q=	3.1	3.3	3.6	3.0	3.5	.1	
AREA=	109.7	138.7	90.1	120.2	114.0	11.2	
VEL=	1.9	1.6	2.7	1.7	2.0	.6	
DEPTH=	1.2	1.0	2.2	1.0	1.1	.2	

1490 NH CARD USED

FLOW DISTRIBUTION FOR SECNO= 5.09 CWSEL= 1600.16

STA= 9937. 10029. 10185. 10236. 10456.
PER Q= 44.5 28.0 26.1 1.4
AREA= 290.5 309.4 178.2 44.0
VEL= 5.8 3.4 5.6 1.2
DEPTH= 3.2 2.0 3.6 .2

1490 NH CARD USED
\*SECNO 5.187

3470 ENCROACHMENT STATIONS= 9804.6 10422.7 TYPE= 1 TARGET= -9804.600
5.187 7.45 1603.55 .00 .00 1604.32 .77 3.69 .12 1603.10
3800.0 69.3 3726.3 4.3 39.9 525.1 4.2 781.7 449.0 1603.10
1.34 1.74 7.10 1.03 .050 .045 .055 .000 1596.10 9854.21
.010485 505. 505. 525. 3 0 0 .00 287.81 10142.02

FLOW DISTRIBUTION FOR SECNO= 5.19 CWSEL= 1603.55

STA= 9854. 9952. 10123. 10142.
PER Q= 1.8 98.1 .1
AREA= 39.9 525.1 4.2
VEL= 1.7 7.1 1.0
DEPTH= .4 3.1 .2

1490 NH CARD USED
\*SECNO 5.283

3280 CROSS SECTION 5.28 EXTENDED .14 FEET

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.72

3470 ENCROACHMENT STATIONS= 9857.1 10429.3 TYPE= 1 TARGET= -9857.100
5.283 7.43 1607.03 .00 .00 1607.25 .22 2.88 .05 1606.40
3800.0 15.7 3549.7 234.6 14.5 919.8 109.1 791.1 453.7 1606.30
1.37 1.08 3.86 2.15 .050 .045 .045 .000 1599.60 9919.98
.003556 505. 505. 555. 3 0 0 .00 509.31 10429.30

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SECNO DEPTH CWSEL CRIWS WSELK EG HV HL OLOSS L-BANK ELEV
Q QLOB QCH QROB ALOB ACH AROB VOL TWA R-BANK ELEV
TIME VLOB VCH VROB XNL XNCH XNR WTN ELMIN SSTA
SLOPE XLOBL XLCH XLOBR ITRIAL IDC ICONT CORAR TOPWID ENDST

FLOW DISTRIBUTION FOR SECNO= 5.28 CWSEL= 1607.03

STA= 9920. 9954. 10288. 10365. 10429.
PER Q= .4 93.4 4.3 1.9
AREA= 14.5 919.8 77.3 31.9
VEL= 1.1 3.9 2.1 2.3
DEPTH= .4 2.7 1.0 .5

CCHV= .100 CEHV= .300
\*SECNO 5.381

3265 DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9849.6 10317.1 TYPE= 1 TARGET= -9849.600

\*\*\* 500 CFS (OUT OF TOTAL 4300 CFS) BREAKS OUT OF NORTH OVBANK AT
XSECTN 5.381 AND FLOWS TO UNNAMED TRIBUTARY COMING IN FROM NORTH.
THIS BREAKOUT FLOW REJOINS MAIN CHANNEL ALONG WITH TRIBUTARY FLOW
AT XSECTN 4.997 \*\*\*

5.381 3.78 1609.88 1609.88 .00 1610.86 .98 3.21 .23 1607.50
3800.0 141.7 3538.9 119.4 36.4 433.1 55.1 800.4 458.6 1609.20
1.39 3.89 8.17 2.17 .050 .040 .055 .000 1606.10 9890.62
.013650 505. 515. 515. 2 8 0 .00 315.63 10208.05

FLOW DISTRIBUTION FOR SECNO= 5.38 CWSEL= 1609.88

STA= 9891. 9921. 10088. 10124. 10142. 10161. 10174. 10195. 10208.
PER Q= 3.7 93.1 1.4 .2 .1 .5 .9 .0
AREA= 36.4 433.1 22.7 5.3 2.4 8.4 14.4 1.9
VEL= 3.9 8.2 2.3 1.4 .9 2.4 2.4 .9
DEPTH= 1.2 2.6 .6 .3 .1 .7 .7 .1

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SECNO DEPTH CWSEL CRIWS WSELK EG HV HL OLOSS L-BANK ELEV



DEPTH= .7  
 CCHV= .100 CEHV= .300  
 \*SECNO 4.409  
 4.409 6.33 1579.33 .00 .00 1579.65 .31 2.53 .01 1578.40  
 6100.0 3836.8 2252.2 11.0 1014.7 407.9 7.8 670.6 395.6 1578.40  
 1.12 3.78 5.52 1.40 .050 .040 .050 1573.00 9343.01  
 .006073 495. 495. 475. 3 0 0 .00 776.50 10119.51

FLOW DISTRIBUTION FOR SECNO= 4.41 CWSEL= 1579.33

STA= 9343. 9472. 9504. 9535. 9558. 9619. 9660. 9680. 9691. 9723. 9749. 9780. 9802.  
 PER Q= 5.5 4.6 5.6 4.0 3.5 4.3 6.2 3.9 7.4 4.9 4.8 3.1  
 AREA= 123.1 71.2 81.0 57.0 77.6 75.4 70.3 41.3 95.6 68.2 71.8 47.8  
 VEL= 2.7 3.9 4.2 4.3 2.8 3.5 5.3 5.7 4.7 4.4 4.1 3.9  
 DEPTH= 1.0 2.2 2.6 2.5 1.3 1.8 3.5 3.9 2.9 2.6 2.3 2.2

STA= 9802. 9909. 9943. 10097. 10120.  
 PER Q= 4.1 1.0 36.9 .2  
 AREA= 104.9 29.8 407.9 7.8  
 VEL= 2.4 2.1 5.5 1.4  
 DEPTH= 1.0 .9 2.6 .4

1490 NH CARD USED  
 \*SECNO 4.506

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 9458.4 10130.2 TYPE= 1 TARGET= -9458.400

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	
4.506	5.24	1582.64	.00	.00	1583.16	.52	3.45	.06	1580.40	
6100.0	3484.8	2569.5	45.7	729.4	370.1	27.5	686.9	404.0	1581.30	
1.15	4.78	6.94	1.66	.045	.040	.055	.000	1577.40	9540.44	
.006448	580.	510.	510.	3	0	0	.00	531.34	10084.67	

FLOW DISTRIBUTION FOR SECNO= 4.51 CWSEL= 1582.64

STA= 9540. 9642. 9684. 9719. 9752. 9793. 9812. 9826. 9844. 9875. 9919. 10022. 10085.  
 PER Q= 5.0 9.9 5.5 4.6 6.6 4.3 4.1 4.2 4.7 8.3 42.1 .7  
 AREA= 66.0 116.2 74.7 66.7 90.5 50.9 44.0 48.6 65.3 106.5 370.1 27.5  
 VEL= 4.6 5.2 4.5 4.2 4.5 5.1 5.7 5.3 4.4 4.8 6.9 1.7  
 DEPTH= .7 2.7 2.2 2.0 2.2 2.7 3.1 2.8 2.1 2.4 3.6 .4

1490 NH CARD USED  
 \*SECNO 4.599

3470 ENCROACHMENT STATIONS= 9402.9 10158.3 TYPE= 1 TARGET= -9402.900  
 4.599 5.80 1585.60 .00 .00 1586.09 .49 2.92 .00 1583.30  
 6100.0 2905.2 3194.5 .3 879.0 452.7 .7 701.5 410.8 1585.40  
 1.17 3.31 7.06 .42 .050 .040 .055 .000 1579.80 9467.24  
 .005110 525. 495. 495. 2 0 0 .00 609.84 10077.08

FLOW DISTRIBUTION FOR SECNO= 4.60 CWSEL= 1585.60

STA= 9467. 9566. 9593. 9656. 9679. 9729. 9782. 9827. 9879. 9931. 9966. 10070. 10077.  
 PER Q= 3.3 5.2 6.5 4.4 3.7 3.8 3.7 4.4 7.0 5.6 52.4 .0  
 AREA= 91.4 76.5 120.0 64.7 77.7 80.9 75.2 89.0 116.1 87.5 452.7 .7  
 VEL= 2.2 4.2 3.3 4.2 2.9 2.8 3.0 3.0 3.7 3.9 7.1 .4  
 DEPTH= .9 2.7 1.9 2.8 1.6 1.5 1.7 1.7 2.2 2.5 4.4 .1

CCHV= .100 CEHV= .300  
 \*SECNO 4.710

3470 ENCROACHMENT STATIONS= 9340.0 10098.3 TYPE= 1 TARGET= -9340.000

\*\*\* DIRT ROAD ON RANGE LINE 5 WEST - 6 WEST CROSSES TANK WASH AT RIVER MILE 4.64 \*\*\*

4.710	6.19	1589.09	.00	.00	1589.55	.46	3.47	.00	1588.80	
6100.0	2753.7	3346.3	.0	757.2	509.7	.0	718.4	419.3	1589.20	
1.20	3.64	6.57	.00	.050	.040	.000	.000	1582.90	9340.00	
.007342	565.	575.	585.	3	0	0	.00	699.82	10039.82	

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

FLOW DISTRIBUTION FOR SECNO= 4.71 CWSEL= 1589.09

STA= 9340. 9382. 9456. 9472. 9517. 9650. 9677. 9715. 9746. 9763. 9802. 9869. 10040.

PER Q=	3.0	6.4	3.2	4.1	4.4	3.3	5.2	6.2	3.7	3.6	2.0	54.9
AREA=	57.7	112.6	40.8	71.2	106.4	51.9	77.8	78.4	45.5	63.4	51.3	509.7
VEL=	3.2	3.5	4.8	3.5	2.5	3.9	4.1	4.8	5.0	3.5	2.4	6.6
DEPTH=	1.4	1.5	2.6	1.6	.8	1.9	2.0	2.6	2.7	1.6	.8	3.0

CCHV= .100 CEHV= .300  
 \*SECNO 4.797

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 9689.1 10222.1 TYPE= 1 TARGET= -9689.100  
 4.797 6.63 1591.73 .00 .00 1592.23 .50 2.66 .01 1591.50  
 6100.0 52.1 5836.4 211.5 46.8 1013.8 84.9 731.5 425.6 1590.80  
 1.23 1.11 5.76 2.49 .055 .040 .055 .000 1585.10 9689.10  
 .004468 480. 470. 450. 2 0 0 .00 460.77 10220.94

FLOW DISTRIBUTION FOR SECNO= 4.80 CWSEL= 1591.73

STA=	9689.	9710.	9724.	9736.	9746.	9844.	9880.	10166.	10189.	10207.	10221.
PER Q=	.1	.3	.2	.0	.1	.2	.2	95.7	1.3	1.7	.4
AREA=	5.9	10.7	9.8	2.7	5.7	11.9	1013.8	34.6	36.0	14.4	
VEL=	.8	1.5	1.5	.7	.7	.9	5.8	2.3	2.9	1.8	
DEPTH=	.3	.8	.8	.3	.1	.3	3.5	1.5	2.0	1.0	

CCHV= .100 CEHV= .300  
 \*SECNO 4.898

3470 ENCROACHMENT STATIONS= 9800.0 10405.4 TYPE= 1 TARGET= -9800.000  
 4.898 6.29 1594.49 .00 .00 1595.10 .61 2.84 .03 1592.60  
 6100.0 80.0 4915.7 1104.3 34.3 728.0 291.7 745.0 430.9 1593.40  
 1.25 2.34 6.75 3.79 .055 .040 .050 .000 1588.20 9864.99  
 .006441 535. 535. 525. 1 0 0 .00 409.23 10274.22

FLOW DISTRIBUTION FOR SECNO= 4.90 CWSEL= 1594.49

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

STA=	9865.	9903.	10114.	10166.	10207.	10242.	10274.
PER Q=	1.3	80.6	3.7	7.1	6.0	1.4	
AREA=	34.3	728.0	73.1	100.1	84.7	33.8	
VEL=	2.3	6.8	3.1	4.3	4.3	2.5	
DEPTH=	.9	3.4	1.4	2.4	2.4	1.0	

1490 NH CARD USED  
 \*SECNO 4.997

3470 ENCROACHMENT STATIONS= 9687.2 10500.0 TYPE= 1 TARGET= -9687.200

\*\*\* ELECT TRANS LINE MAINT ROAD CROSSES TANK WASH AT MILE 4.95 \*\*\*

4.997	7.14	1597.74	.00	.00	1598.02	.28	2.89	.03	1597.00
6100.0	2187.1	3475.8	437.1	501.4	789.4	218.1	760.4	438.1	1596.60
1.29	4.36	4.40	2.00	.046	.045	.055	.000	1590.60	9690.14
.004768	525.	525.	515.	2	0	0	.00	786.08	10476.23

FLOW DISTRIBUTION FOR SECNO= 5.00 CWSEL= 1597.74

STA=	9690.	9727.	9735.	9745.	9753.	9783.	9838.	9896.	9933.	10225.	10376.	10476.
PER Q=	3.2	4.5	9.6	3.5	3.9	3.1	6.3	1.8	57.0	4.2	3.0	
AREA=	55.5	42.3	69.3	37.5	63.4	70.6	117.3	45.5	789.4	133.7	84.4	
VEL=	3.5	6.5	8.5	5.7	3.8	2.6	3.3	2.4	4.4	1.9	2.2	
DEPTH=	1.5	5.3	7.1	4.7	2.1	1.3	2.0	1.2	2.7	.9	.8	

1490 NH CARD USED  
 \*SECNO 5.091

3265 DIVIDED FLOW

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .59

3470 ENCROACHMENT STATIONS= 9916.1 10534.8 TYPE= 1 TARGET= -9916.100  
 5.091 7.16 1600.16 .00 .00 1600.51 .36 2.47 .02 1600.30  
 3800.0 .0 3746.0 54.0 .0 778.1 44.0 773.6 444.9 1600.30  
 1.32 .00 4.81 1.23 .000 .043 .055 .000 1593.00 9936.86  
 .005369 495. 495. 495. 2 0 0 .00 412.51 10456.43

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

VEL= 2.2 3.0 3.9 4.0 3.1 1.6 1.9 6.8 1.2  
DEPTH= .9 1.5 2.3 2.4 1.6 .6 .2 3.8 .4

CCHV= .100 CEHV= .300  
\*SECNO 3.568

3470 ENCROACHMENT STATIONS= 9650.0 10417.0 TYPE= 1 TARGET= -9650.000  
3.568 7.11 1553.71 .00 .00 1554.49 .78 2.70 .05 1551.50  
6900.0 926.0 5810.6 163.4 360.9 761.1 94.8 548.9 332.5 1553.30  
.88 2.57 7.63 1.72 .055 .040 .055 .000 1546.60 9688.45  
.004844 510. 510. 490. 2 0 0 .00 514.89 10203.34

FLOW DISTRIBUTION FOR SECNO= 3.57 CWSEL= 1553.71

STA= 9688. 9805. 9843. 9936. 10085. 10203.  
PER Q= 5.0 3.5 4.9 84.2 2.4  
AREA= 147.7 78.8 134.4 761.1 94.8  
VEL= 2.3 3.1 2.5 7.6 1.7  
DEPTH= 1.3 2.1 1.5 5.1 .8

1490 NH CARD USED  
\*SECNO 3.668

3470 ENCROACHMENT STATIONS= 9503.2 10252.1 TYPE= 1 TARGET= -9503.200  
3.668 6.82 1556.32 .00 .00 1556.77 .45 2.24 .03 1554.80  
6900.0 3110.7 3695.5 93.8 840.1 568.5 57.1 564.7 339.1 1555.10  
.91 3.70 6.50 1.64 .046 .040 .055 .000 1549.50 9503.20  
.003865 500. 530. 480. 2 0 0 .00 628.26 10131.46

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SECNO	DEPTH	CWSEL	CRISWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

FLOW DISTRIBUTION FOR SECNO= 3.67 CWSEL= 1556.32

STA= 9503. 9630. 9710. 9723. 9735. 9749. 9762. 9813. 9878. 9898. 9943. 10062. 10131.  
PER Q= 4.1 4.1 9.0 4.6 4.5 3.4 4.0 3.8 3.4 4.2 53.6 1.4  
AREA= 149.2 110.4 84.6 57.6 58.1 48.6 91.1 97.6 56.2 86.7 568.5 57.1  
VEL= 1.9 2.6 7.4 5.6 5.3 4.8 3.0 2.7 4.1 3.3 6.5 1.6  
DEPTH= 1.2 1.4 6.8 4.7 4.3 3.8 1.8 1.5 2.9 1.9 4.8 .8

1490 NH CARD USED  
\*SECNO 3.785

3265 DIVIDED FLOW

7185 MINIMUM SPECIFIC ENERGY  
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9603.3 10177.7 TYPE= 1 TARGET= -9603.300  
3.785 6.76 1559.26 1559.26 .00 1560.19 .92 3.11 .14 1559.30  
5400.0 1095.5 4230.5 74.0 334.5 495.7 26.2 580.0 346.1 1557.90  
.93 3.27 8.54 2.82 .050 .040 .055 .000 1552.50 9616.79  
.008544 530. 620. 630. 2 6 0 .00 470.15 10118.71

FLOW DISTRIBUTION FOR SECNO= 3.79 CWSEL= 1559.26

STA= 9617. 9662. 9725. 9794. 9862. 9900. 9939. 10096. 10119.  
PER Q= 3.1 3.4 5.1 4.5 3.4 .9 78.3 1.4  
AREA= 45.2 64.0 74.5 76.1 52.6 22.2 495.7 26.2  
VEL= 3.7 2.8 3.7 3.2 3.4 2.2 8.5 2.8  
DEPTH= 1.0 1.0 1.1 1.1 1.4 .6 4.0 1.1

1490 NH CARD USED  
\*SECNO 3.880

3470 ENCROACHMENT STATIONS= 9862.1 10298.0 TYPE= 1 TARGET= -9862.100  
3.880 8.03 1563.23 .00 .00 1564.00 .77 3.80 .02 1563.00  
5400.0 3.1 5294.4 102.5 4.8 744.6 63.0 589.7 350.9 1562.60  
.95 .65 7.11 1.63 .050 .040 .055 .000 1555.20 9862.10  
.006751 520. 500. 500. 2 0 0 .00 346.93 10209.03

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SECNO	DEPTH	CWSEL	CRISWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

FLOW DISTRIBUTION FOR SECNO= 3.88 CWSEL= 1563.23

STA= 9862. 9897. 10106. 10209.  
PER Q= .1 98.0 1.9  
AREA= 4.8 744.6 63.0  
VEL= .6 7.1 1.6  
DEPTH= .1 3.6 .6

1490 NH CARD USED  
\*SECNO 4.003

3470 ENCROACHMENT STATIONS= 9669.6 10165.0 TYPE= 1 TARGET= 495.400  
4.003 9.46 1567.46 .00 .00 1567.83 .36 3.78 .04 1566.80  
5400.0 2922.2 1622.1 855.7 591.8 339.7 185.2 603.3 356.8 1566.50  
.99 4.94 4.78 4.62 .045 .040 .045 .000 1558.00 9669.60  
.005574 525. 650. 675. 3 0 0 .00 494.72 10164.32

FLOW DISTRIBUTION FOR SECNO= 4.00 CWSEL= 1567.46

STA= 9670. 9740. 9785. 9800. 9825. 9840. 9895. 9925. 10075. 10110. 10120. 10130. 10164.  
PER Q= 3.8 9.2 6.9 14.3 6.9 11.3 1.5 30.0 6.5 3.8 3.8 1.8  
AREA= 78.6 111.0 60.2 114.2 60.2 135.6 32.0 339.7 80.1 35.7 35.7 33.8  
VEL= 2.6 4.5 6.2 6.8 6.2 4.5 2.6 4.8 4.4 5.8 5.8 2.8  
DEPTH= 1.1 2.5 4.0 4.6 4.0 2.5 1.1 2.3 2.3 3.6 3.6 1.0

1490 NH CARD USED  
\*SECNO 4.117

3470 ENCROACHMENT STATIONS= 9869.6 10522.1 TYPE= 1 TARGET= -9869.600

\*\*\* 700 CFS (OUT OF TOTAL 6100 CFS) BREAKS OUT OF NORTH OVERBANK AT  
XSECTN 4.117 AND FLOWS TO UNNAMED TRIBUTARY COMING IN FROM NORTH.  
THIS BREAKOUT FLOW REJOINS MAIN CHANNEL ALONG WITH TRIBUTARY FLOW  
AT XSECTN 3.668 \*\*\*

4.117 10.29 1570.59 .00 .00 1570.97 .37 3.14 .00 1569.80  
5400.0 48.2 3413.1 1938.8 30.5 610.0 558.8 618.9 364.1 1569.20  
1.02 1.58 5.60 3.47 .050 .041 .050 .000 1560.30 9869.60  
.005131 575. 600. 575. 3 0 0 .00 596.90 10466.50

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SECNO DEPTH CWSEL CRIWS WSELK EG HV HL OLOSS L-BANK ELEV  
Q QLOB QCH QROB ALOB ACH AROB VOL TWA R-BANK ELEV  
TIME VLOB VCH VROB XNL XNCH XNR WTN ELMIN SSTA  
SLOPE XLOBL XLCH XLOBR ITRIAL IDC ICONT CORAR TOPWID ENDST

FLOW DISTRIBUTION FOR SECNO= 4.12 CWSEL= 1570.59

STA= 9870. 9930. 10028. 10062. 10122. 10165. 10217. 10233. 10254. 10283. 10348. 10395. 10467.  
PER Q= .9 42.4 3.6 17.2 3.7 4.2 4.6 8.2 5.6 5.3 3.1 1.1  
AREA= 30.5 363.0 61.8 185.2 68.5 78.5 53.0 83.0 75.2 101.0 62.6 36.9  
VEL= 1.6 6.3 3.2 5.0 2.9 2.9 4.7 5.4 4.0 2.9 2.7 1.6  
DEPTH= .5 3.7 1.8 3.1 1.6 1.5 3.3 4.0 2.5 1.5 1.3 .5

CCHV= .100 CEHV= .300

\*SECNO 4.211

3280 CROSS SECTION 4.21 EXTENDED .16 FEET

4.211 6.17 1573.67 .00 .00 1574.03 .36 3.06 .00 1572.30  
6100.0 935.1 3313.9 1851.0 325.8 573.7 530.2 633.7 372.4 1572.40  
1.05 2.87 5.78 3.49 .055 .043 .050 .000 1567.50 9690.87  
.007505 495. 495. 485. 3 0 0 .00 873.13 10564.00

FLOW DISTRIBUTION FOR SECNO= 4.21 CWSEL= 1573.67

STA= 9691. 9812. 9848. 9888. 9977. 10189. 10256. 10316. 10402. 10445. 10477. 10491. 10564.  
PER Q= 6.1 4.0 3.1 2.2 54.3 3.7 4.1 6.8 5.4 4.4 3.3 2.7  
AREA= 131.0 67.8 60.7 66.2 573.7 78.6 79.8 125.1 82.7 65.1 40.1 58.8  
VEL= 2.8 3.6 3.1 2.0 5.8 2.8 3.1 3.3 4.0 4.2 5.0 2.8  
DEPTH= 1.1 1.9 1.5 .7 2.7 1.2 1.3 1.5 1.9 2.1 2.7 .8

1490 NH CARD USED

\*SECNO 4.314

4.314 6.12 1576.82 .00 .00 1577.11 .29 3.08 .01 1575.30  
6100.0 2501.8 2827.7 770.5 706.8 530.3 435.6 653.0 384.8 1576.00  
1.09 3.54 5.33 1.77 .046 .040 .050 .000 1570.70 9510.57  
.004375 525. 560. 545. 3 0 0 .00 1130.54 10641.11

FLOW DISTRIBUTION FOR SECNO= 4.31 CWSEL= 1576.82

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SECNO DEPTH CWSEL CRIWS WSELK EG HV HL OLOSS L-BANK ELEV  
Q QLOB QCH QROB ALOB ACH AROB VOL TWA R-BANK ELEV  
TIME VLOB VCH VROB XNL XNCH XNR WTN ELMIN SSTA  
SLOPE XLOBL XLCH XLOBR ITRIAL IDC ICONT CORAR TOPWID ENDST

STA= 9511. 9642. 9689. 9746. 9806. 9830. 9844. 9877. 9930. 10095. 10272. 10384. 10491.  
PER Q= 4.3 3.4 5.0 5.9 8.0 6.8 3.8 3.8 46.4 3.2 3.1 3.6  
AREA= 124.6 71.9 97.2 109.7 90.5 66.7 66.1 80.2 530.3 123.8 102.1 109.3  
VEL= 2.1 2.9 3.1 3.3 5.4 6.2 3.5 2.9 5.3 1.6 1.9 2.0  
DEPTH= .9 1.5 1.7 1.8 3.8 4.9 2.0 1.5 3.2 .7 .9 1.0

STA= 10491. 10641.

PER Q= 2.6  
AREA= 100.4  
VEL= 1.6

AREA= 66.1 61.2 89.7  
 VEL= 4.6 3.9 2.1  
 DEPTH= 2.5 1.9 .7

1490 NH CARD USED  
 \*SECNO 2.900

3470 ENCROACHMENT STATIONS= 9510.0 10252.4 TYPE= 1 TARGET= -9510.000  
 2.900 5.40 1534.30 .00 .00 1535.02 .73 3.47 .10 1532.50  
 6900.0 2729.7 3386.9 783.4 654.8 383.9 207.4 426.5 268.0 1532.20  
 .69 4.17 8.82 3.78 .046 .040 .055 .000 1528.90 9510.00  
 .008474 500. 500. 510. 2 0 0 .00 684.28 10194.28

FLOW DISTRIBUTION FOR SECNO= 2.90 CWSEL= 1534.30

STA=	9510.	9645.	9768.	9806.	9823.	9852.	9869.	9901.	9936.	9974.	10066.	10115.	10154.
PER Q=	3.9	5.9	6.2	4.8	4.0	3.6	3.7	3.4	4.1	49.1	6.0	4.5	
AREA=	110.9	128.8	84.1	51.7	57.7	43.7	57.1	56.0	64.9	383.9	102.0	78.5	
VEL=	2.4	3.1	5.1	6.4	4.8	5.7	4.5	4.1	4.3	8.8	4.1	3.9	
DEPTH=	.8	1.0	2.2	3.1	2.0	2.6	1.8	1.6	1.7	4.2	2.1	2.0	

STA= 10154. 10194.  
 PER Q= .9  
 AREA= 26.9  
 VEL= 2.2  
 DEPTH= .7

1490 NH CARD USED  
 \*SECNO 2.995

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SECNO	DEPTH	CWSEL	CRISWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3280 CROSS SECTION 2.99 EXTENDED .01 FEET

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.61

3470 ENCROACHMENT STATIONS= 9447.3 10269.0 TYPE= 1 TARGET= -9447.300  
 2.995 6.01 1537.31 .00 .00 1537.56 .25 2.49 .05 1535.70  
 6900.0 4672.1 2176.8 51.1 1226.7 478.5 61.0 443.8 276.7 1537.20  
 .73 3.81 4.55 .84 .045 .040 .055 .000 1531.30 9447.30  
 .003281 500. 500. 500. 3 0 0 .00 821.70 10269.00

FLOW DISTRIBUTION FOR SECNO= 2.99 CWSEL= 1537.31

STA=	9447.	9588.	9614.	9634.	9688.	9723.	9740.	9765.	9811.	9833.	9901.	9948.	10100.
PER Q=	8.6	7.0	4.4	5.5	4.8	3.4	4.4	9.4	4.6	11.3	4.4	31.5	
AREA=	186.8	102.6	69.5	118.3	92.4	55.4	76.0	153.9	74.3	199.3	98.3	478.5	
VEL=	3.2	4.7	4.4	3.2	3.6	4.2	4.0	4.2	4.3	3.9	3.1	4.5	
DEPTH=	1.3	4.0	3.5	2.2	2.6	3.4	3.0	3.3	3.4	3.0	2.1	3.2	

STA= 10100. 10269.  
 PER Q= .7  
 AREA= 61.0  
 VEL= .8  
 DEPTH= .4

CCHV= .100 CEHV= .300  
 \*SECNO 3.091

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .69

3470 ENCROACHMENT STATIONS= 9255.0 10187.2 TYPE= 1 TARGET= 932.200  
 3.091 6.18 1539.48 .00 .00 1540.04 .56 2.39 .09 1538.20  
 6900.0 3497.0 3128.6 274.4 959.4 392.4 102.8 463.0 286.5 1538.10  
 .76 3.64 7.97 2.67 .050 .040 .050 .000 1533.30 9361.24  
 .006979 525. 505. 505. 2 0 0 .00 825.96 10187.20

FLOW DISTRIBUTION FOR SECNO= 3.09 CWSEL= 1539.48

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SECNO	DEPTH	CWSEL	CRISWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

STA=	9361.	9428.	9456.	9480.	9546.	9594.	9633.	9679.	9795.	9853.	9877.	9942.	9967.
PER Q=	3.2	3.6	3.7	3.5	6.9	5.1	4.1	3.8	5.3	3.4	6.8	1.3	
AREA=	69.8	59.4	58.3	82.1	110.2	84.1	78.1	108.9	101.0	54.7	122.1	30.6	
VEL=	3.2	4.2	4.4	2.9	4.3	4.2	3.6	2.4	3.6	4.3	3.9	2.9	
DEPTH=	1.0	2.2	2.4	1.2	2.3	2.2	1.7	.9	1.7	2.3	1.9	1.2	

STA= 9967. 10062. 10105. 10187.  
 PER Q= 45.3 3.2 .8

AREA= 392.4 66.6 36.2  
 VEL= 8.0 3.3 1.5  
 DEPTH= 4.2 1.5 .4

\*SECNO 3.186  
 3.186 6.49 1542.59 .00 .00 1542.97 .38 2.91 .02 1541.50  
 6900.0 2346.9 4024.8 528.4 765.4 681.6 163.0 480.1 295.6 1541.40  
 .78 3.07 5.90 3.24 .050 .040 .050 .000 1536.10 9381.10  
 .005097 480. 500. 490. 3 0 0 .00 812.50 10193.60

FLOW DISTRIBUTION FOR SECNO= 3.19 CWSEL= 1542.59

STA= 9381. 9523. 9558. 9611. 9649. 9667. 9704. 9811. 9889. 10093. 10142. 10183. 10194.  
 PER Q= 5.9 4.1 5.0 3.1 3.1 4.8 3.9 4.1 58.3 4.1 3.5 .1  
 AREA= 152.4 78.4 103.6 67.3 51.3 87.8 117.3 107.3 681.6 86.3 72.8 4.0  
 VEL= 2.7 3.6 3.3 3.2 4.2 3.8 2.3 2.6 5.9 3.3 3.3 1.1  
 DEPTH= 1.1 2.2 1.9 1.8 2.8 2.4 1.1 1.4 3.3 1.8 1.7 .4

\*SECNO 3.281  
 3.281 8.02 1545.52 .00 .00 1546.03 .51 3.02 .04 1544.70  
 6900.0 2950.3 3146.3 803.4 841.7 411.2 304.6 499.1 306.9 1544.50  
 .81 3.51 7.65 2.64 .050 .040 .050 .000 1537.50 9307.69  
 .006790 540. 500. 510. 2 0 0 .00 1052.85 10360.53

FLOW DISTRIBUTION FOR SECNO= 3.28 CWSEL= 1545.52

SECNO	DEPTH	CWSEL	CRISWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

STA= 9308. 9460. 9502. 9527. 9550. 9592. 9632. 9683. 9841. 9886. 9927. 9950. 10052.  
 PER Q= 4.0 3.5 3.2 3.9 5.6 4.7 5.6 3.4 4.6 3.4 .9 45.6  
 AREA= 116.7 69.5 53.9 58.6 93.4 81.9 100.0 90.5 85.3 67.7 24.2 411.2  
 VEL= 2.4 3.4 4.0 4.6 4.2 3.9 3.9 2.6 3.7 3.4 2.5 7.7  
 DEPTH= .8 1.7 2.1 2.6 2.2 2.0 2.0 .6 1.9 1.7 1.0 4.0

STA= 10052. 10121. 10191. 10310. 10361.  
 PER Q= 3.8 3.8 3.5 .6  
 AREA= 89.3 89.9 101.6 23.8  
 VEL= 2.9 2.9 2.3 1.7  
 DEPTH= 1.3 1.3 .9 .5

\*SECNO 3.375

3470 ENCROACHMENT STATIONS= 9265.0 10211.0 TYPE= 1 TARGET= 946.000  
 3.375 8.66 1548.56 .00 .00 1548.96 .40 2.92 .01 1548.20  
 6900.0 3378.8 2849.6 671.7 1057.6 408.7 212.0 517.7 318.2 1547.60  
 .84 3.19 6.97 3.17 .050 .040 .050 .000 1539.90 9265.00  
 .005080 505. 495. 495. 2 0 0 .00 922.97 10187.97

FLOW DISTRIBUTION FOR SECNO= 3.38 CWSEL= 1548.56

STA= 9265. 9355. 9427. 9487. 9571. 9606. 9637. 9672. 9736. 9842. 9962. 10055. 10100.  
 PER Q= 3.8 4.4 4.3 11.1 6.2 5.3 4.7 4.8 3.6 .9 41.3 3.3  
 AREA= 107.8 108.0 100.2 201.4 101.1 86.4 84.7 109.2 111.8 47.2 408.7 74.7  
 VEL= 2.4 2.8 3.0 3.8 4.3 4.2 3.8 3.0 2.2 1.3 7.0 3.1  
 DEPTH= 1.2 1.5 1.7 2.4 2.9 2.8 2.4 1.7 1.1 .4 4.4 1.7

STA= 10100. 10144. 10188.  
 PER Q= 5.2 1.3  
 AREA= 98.0 39.2  
 VEL= 3.6 2.2  
 DEPTH= 2.2 .9

\*SECNO 3.470

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 9570.0 10523.5 TYPE= 1 TARGET= -9570.000

SECNO	DEPTH	CWSEL	CRISWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

3.470 8.33 1551.13 .00 .00 1551.74 .60 2.72 .06 1549.60  
 6900.0 1520.2 5373.1 6.7 458.2 784.9 5.8 534.5 326.5 1550.40  
 .86 3.32 6.85 1.16 .050 .040 .050 .000 1542.80 9570.00  
 .005826 500. 500. 500. 2 0 0 .00 514.93 10190.09

FLOW DISTRIBUTION FOR SECNO= 3.47 CWSEL= 1551.13

STA= 9570. 9603. 9683. 9742. 9774. 9810. 9836. 9967. 10174. 10190.  
 PER Q= 1.0 5.4 7.7 4.4 2.7 .3 .5 77.9 .1  
 AREA= 31.4 122.9 134.2 75.8 59.4 14.8 19.7 784.9 5.8

FLOW DISTRIBUTION FOR SECNO= 2.13 CWSEL= 1511.55

STA=	8854.	8980.	9040.	9075.	9145.	9232.	9322.	9354.	9405.	9429.	9482.	9534.	9610.
PER Q=	3.7	5.4	3.3	8.2	4.0	3.6	4.8	4.6	3.6	3.1	3.1	3.1	3.1
AREA=	120.3	117.4	70.2	161.5	107.3	101.7	85.6	100.1	64.4	75.6	78.5	91.9	
VEL=	2.1	3.1	3.2	3.5	2.5	2.4	3.8	3.2	3.8	2.8	2.7	2.3	
DEPTH=	1.0	2.0	2.0	2.3	1.2	1.1	2.7	2.0	2.7	1.4	1.5	1.2	

STA=	9610.	9642.	9659.	9692.	9719.	9764.	9802.	9954.	10095.	10364.
PER Q=	5.4	4.1	5.4	4.2	5.0	3.8	3.0	17.9	.8	
AREA=	90.7	61.4	92.0	72.3	99.6	79.8	119.6	298.0	68.2	
VEL=	4.0	4.6	4.0	3.9	3.4	3.2	1.7	4.1	.8	
DEPTH=	2.9	3.5	2.8	2.7	2.2	2.1	.8	2.1	.3	

CCHV= .100 CEHV= .300  
\*SECNO 2.230

3470 ENCROACHMENT STATIONS=	8800.0	10392.4	TYPE=	1	TARGET=	-8800.000				
2.230	4.04	1514.14	.00	.00	1514.31	.18	2.59	.00	1513.80	
6800.0	5468.6	1265.9	65.5	1676.3	327.3	47.8	292.4	194.4	1513.90	
.49	3.26	3.87	1.37	.050	.040	.055	.000	1510.10	8863.69	
.005231	545.	505.	495.	3	0	0	.00	1299.49	10163.17	

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

FLOW DISTRIBUTION FOR SECNO= 2.23 CWSEL= 1514.14

STA=	8864.	9015.	9130.	9195.	9353.	9473.	9535.	9588.	9618.	9633.	9658.	9680.	9718.
PER Q=	11.6	14.4	4.0	5.7	4.1	4.1	6.5	4.2	3.5	3.4	4.1	5.7	
AREA=	250.8	262.9	96.6	171.2	117.6	96.6	119.7	73.1	50.3	59.4	64.3	95.7	
VEL=	3.2	3.7	2.8	2.3	2.4	2.9	3.7	3.9	4.7	3.8	4.3	4.0	
DEPTH=	1.7	2.3	1.5	1.1	1.0	1.5	2.3	2.5	3.2	2.4	2.9	2.6	

STA=	9718.	9761.	9814.	9891.	10080.	10163.
PER Q=	4.9	3.0	1.2	18.6	1.0	
AREA=	93.1	75.1	49.8	327.3	47.8	
VEL=	3.6	2.7	1.7	3.9	1.4	
DEPTH=	2.1	1.4	.6	1.7	.6	

\*SECNO 2.328

3470 ENCROACHMENT STATIONS=	9172.7	10082.2	TYPE=	1	TARGET=	-9172.700			
2.328	4.76	1517.26	.00	.00	1517.60	.34	3.24	.05	1516.80
6800.0	4812.9	1987.0	.0	1213.5	332.0	.2	313.5	207.2	1517.20
.52	3.97	5.98	.24	.050	.040	.055	.000	1512.50	9181.44
.007771	510.	520.	520.	2	0	0	.00	876.38	10057.82

FLOW DISTRIBUTION FOR SECNO= 2.33 CWSEL= 1517.26

STA=	9181.	9310.	9344.	9362.	9389.	9443.	9501.	9548.	9582.	9607.	9629.	9675.	9766.
PER Q=	9.9	5.5	4.1	4.0	8.6	8.1	6.7	3.2	3.7	3.6	3.2	3.9	
AREA=	182.3	80.4	52.7	60.4	126.5	125.3	102.9	57.6	56.1	52.5	64.7	94.7	
VEL=	3.7	4.6	5.3	4.5	4.6	4.4	4.4	3.7	4.4	4.6	3.4	2.8	
DEPTH=	1.4	2.4	2.9	2.3	2.3	2.2	2.2	1.7	2.2	2.4	1.4	1.0	

STA=	9766.	9837.	9918.	10051.	10058.
PER Q=	3.9	2.5	29.2	.0	
AREA=	87.5	69.9	332.0	.2	
VEL=	3.0	2.4	6.0	.2	
DEPTH=	1.2	.9	2.5	.0	

CCHV= .100 CEHV= .300  
\*SECNO 2.425

3280 CROSS SECTION 2.42 EXTENDED .04 FEET

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\*\*\* DIRT ROAD TO HIDDEN TANK STOCK POND CROSSES TANK WASH NEAR RIVER MILE 2.38 \*\*\*

2.425	4.94	1520.14	.00	.00	1520.37	.22	2.76	.01	1519.30
6800.0	4731.1	1567.8	501.2	1563.0	270.7	227.5	334.6	219.1	1518.70
.56	3.03	5.79	2.20	.050	.040	.055	.000	1515.20	9067.04
.003987	510.	510.	500.	3	0	0	.00	1162.96	10230.00

FLOW DISTRIBUTION FOR SECNO= 2.42 CWSEL= 1520.14

STA=	9067.	9161.	9204.	9251.	9304.	9346.	9387.	9408.	9430.	9449.	9474.	9527.	9617.
PER Q=	4.1	4.8	6.2	6.0	4.3	4.8	3.2	3.1	3.5	3.1	4.1	5.2	
AREA=	117.7	98.9	120.1	123.4	92.8	97.6	58.3	58.2	59.7	61.1	98.6	138.1	
VEL=	2.4	3.3	3.5	3.3	3.2	3.4	3.7	3.6	4.0	3.5	2.9	2.6	
DEPTH=	1.2	2.3	2.6	2.3	2.2	2.4	2.8	2.6	3.1	2.5	1.8	1.5	

STA=	9617.	9658.	9693.	9730.	9941.	9972.	10041.	10086.	10169.	10230.
PER Q=	5.1	3.6	3.6	4.1	.7	23.1	3.6	3.1	.7	
AREA=	100.4	77.7	79.3	153.0	28.0	270.7	87.8	103.8	35.9	

VEL= 3.4 3.2 3.1 1.8 1.7 5.8 2.8 2.0 1.3  
DEPTH= 2.5 2.2 2.1 .7 .9 3.9 2.0 1.3 .6

CCHV= .100 CEHV= .300  
\*SECNO 2.520

3265 DIVIDED FLOW

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .70

3470 ENCROACHMENT STATIONS= 9287.2 10242.0 TYPE= 1 TARGET= -9287.200  
2.520 4.62 1522.82 .00 .00 1523.30 .48 2.86 .08 1522.30  
6800.0 2569.6 4219.9 10.5 747.4 646.6 8.6 355.1 230.8 1522.10  
.58 3.44 6.53 1.22 .055 .040 .055 .000 1518.20 9287.20  
.008249 515. 515. 515. 2 0 0 .00 813.57 10194.25

FLOW DISTRIBUTION FOR SECNO= 2.52 CWSEL= 1522.82

STA= 9287. 9378. 9440. 9490. 9542. 9585. 9608. 9676. 9836. 10075. 10194.  
PER Q= 4.3 5.8 6.1 6.1 5.4 3.2 4.4 2.6 62.1 .2  
AREA= 105.3 109.7 103.3 105.3 90.8 52.0 94.6 86.6 646.6 8.6  
VEL= 2.8 3.6 4.0 3.9 4.1 4.1 3.2 2.0 6.5 1.2  
DEPTH= 1.2 1.8 2.1 2.0 2.1 2.2 1.4 .5 2.7 .1

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

\*SECNO 2.609

3470 ENCROACHMENT STATIONS= 9375.0 10330.9 TYPE= 1 TARGET= -9375.000  
2.609 5.26 1525.76 .00 .00 1526.19 .43 2.88 .01 1524.20  
6800.0 2181.1 3985.9 633.0 754.1 618.1 272.2 371.7 240.0 1523.90  
.61 2.89 6.45 2.33 .055 .040 .055 .000 1520.50 9433.52  
.004668 480. 470. 470. 2 0 0 .00 858.78 10292.30

FLOW DISTRIBUTION FOR SECNO= 2.61 CWSEL= 1525.76

STA= 9434. 9542. 9672. 9794. 9860. 9895. 9908. 10060. 10123. 10256. 10292.  
PER Q= 3.7 4.3 7.1 4.7 10.1 2.2 58.6 5.2 3.7 .4  
AREA= 117.2 144.9 192.0 116.7 144.9 38.5 618.1 123.4 127.7 21.2  
VEL= 2.2 2.0 2.5 2.7 4.7 3.8 6.4 2.9 1.9 1.3  
DEPTH= 1.1 1.1 1.6 1.8 4.1 3.1 4.1 2.0 1.0 .6

1490 NH CARD USED  
\*SECNO 2.709

3470 ENCROACHMENT STATIONS= 9497.4 10200.0 TYPE= 1 TARGET= 702.600  
2.709 5.98 1528.38 .00 .00 1528.71 .33 2.52 .01 1527.40  
6800.0 3911.9 2705.9 182.1 992.8 484.6 74.3 390.9 248.9 1527.70  
.64 3.94 5.58 2.45 .055 .040 .046 .000 1522.40 9531.23  
.004950 520. 530. 510. 2 0 0 .00 634.31 10165.54

FLOW DISTRIBUTION FOR SECNO= 2.71 CWSEL= 1528.38

STA= 9531. 9675. 9731. 9754. 9772. 9801. 9817. 9850. 9869. 9889. 9936. 10090. 10166.  
PER Q= 8.5 10.6 5.8 6.7 8.3 3.1 4.9 3.5 3.1 3.2 39.8 2.7  
AREA= 194.5 176.8 85.0 86.6 117.5 50.9 89.2 58.5 55.7 78.1 484.6 74.3  
VEL= 3.0 4.1 4.6 5.2 4.8 4.1 3.7 4.1 3.7 2.8 5.6 2.5  
DEPTH= 1.4 3.1 3.8 4.6 4.0 3.2 2.7 3.1 2.7 1.7 3.1 1.0

1490 NH CARD USED  
\*SECNO 2.805

2.805 4.95 1531.05 .00 .00 1531.45 .40 2.72 .02 1529.30  
6800.0 3211.1 2389.7 1199.2 980.4 326.8 358.2 409.7 258.4 1529.40  
.67 3.28 7.31 3.35 .055 .040 .048 .000 1526.10 9319.92  
.005750 515. 505. 505. 2 0 0 .00 986.10 10306.02

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

FLOW DISTRIBUTION FOR SECNO= 2.81 CWSEL= 1531.05

STA= 9320. 9479. 9507. 9571. 9602. 9645. 9734. 9903. 9916. 9967. 10045. 10090. 10124.  
PER Q= 5.0 3.2 11.1 5.8 4.7 3.3 6.4 3.1 4.5 35.1 3.7 3.2  
AREA= 139.9 62.7 183.3 91.4 93.5 93.5 172.0 46.0 98.1 326.8 78.1 63.1  
VEL= 2.4 3.5 4.1 4.3 3.4 2.4 2.5 4.6 3.1 7.3 3.2 3.4  
DEPTH= .9 2.2 2.9 3.0 2.2 1.0 1.0 3.6 1.9 4.2 1.7 1.9

STA= 10124. 10151. 10184. 10306.  
PER Q= 4.5 3.5 2.8

3265 DIVIDED FLOW

1.552	6.26	1494.56	.00	.00	1494.74	.18	1.72	.01	1493.60
6700.0	2632.8	1079.4	2987.8	618.4	307.4	1217.3	124.2	74.3	1493.20
.20	4.26	3.51	2.45	.046	.045	.051	.000	1488.30	9629.02
.003393	525.	515.	465.	1	0	0	.00	1218.98	10862.80

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XLNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

FLOW DISTRIBUTION FOR SECNO= 1.55 CWSEL= 1494.56

STA=	9629.	9696.	9708.	9721.	9731.	9771.	9906.	10030.	10092.	10143.	10191.	10203.	10219.
PER Q=	7.4	7.0	7.7	4.0	8.6	4.7	16.1	3.5	3.4	4.5	3.5	4.1	
AREA=	127.8	74.4	80.0	48.6	134.2	153.3	307.4	99.9	89.2	99.5	49.5	58.2	
VEL=	3.9	6.3	6.4	5.5	4.3	2.0	3.5	2.4	2.5	3.0	4.8	4.7	
DEPTH=	1.9	5.9	6.1	5.0	3.4	1.1	2.5	1.6	1.8	2.1	4.0	3.9	

STA=	10219.	10323.	10366.	10489.	10577.	10646.	10733.	10863.					
PER Q=	4.8	3.1	3.8	3.3	5.0	3.4	2.1	2.1					
AREA=	130.7	84.9	139.5	117.0	133.9	117.3	97.7						
VEL=	2.5	2.5	1.8	1.9	2.5	1.9	1.5						
DEPTH=	1.3	2.0	1.1	1.3	1.9	1.3	.8						

1490 NH CARD USED  
\*SECNO 1.654

3265 DIVIDED FLOW

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .68

3470 ENCROACHMENT STATIONS=	9568.9	10860.7	TYPE=	1	TARGET=	-9568.900							
1.654	7.03	1497.03	.00	.00	1497.35	.32	2.57	.04	1496.10				
6700.0	3881.9	1545.6	1272.5	766.2	377.0	412.3	146.8	87.9	1496.50				
.23	5.07	4.10	3.09	.052	.045	.049	.000	1490.00	9607.13				
.007340	540.	540.	520.	2	0	0	.00	1022.93	10801.27				

FLOW DISTRIBUTION FOR SECNO= 1.65 CWSEL= 1497.03

STA=	9607.	9635.	9647.	9659.	9676.	9699.	9721.	9736.	9758.	9804.	9824.	9886.	10127.
PER Q=	3.5	3.5	4.7	7.8	5.3	4.6	3.7	5.9	7.8	3.3	7.7	23.1	
AREA=	56.7	43.0	53.3	79.0	68.7	60.8	46.4	70.1	113.5	48.7	125.8	377.0	
VEL=	4.2	5.5	6.0	6.6	5.2	5.0	5.3	5.6	4.6	4.6	4.1	4.1	
DEPTH=	2.0	3.7	4.3	4.9	2.9	2.8	3.1	3.3	2.4	2.4	2.0	1.7	

STA=	10127.	10226.	10269.	10275.	10297.	10713.	10801.						
PER Q=	3.2	3.3	3.0	3.2	3.9	2.3	2.3						
AREA=	88.8	49.7	26.7	43.0	138.7	65.5							
VEL=	2.4	4.5	7.6	5.0	1.9	2.3							
DEPTH=	.9	1.1	4.4	2.0	.3	.7							

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XLNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

1490 NH CARD USED  
\*SECNO 1.746

3470 ENCROACHMENT STATIONS=	9279.2	10896.0	TYPE=	1	TARGET=	-9279.200							
1.746	5.86	1500.26	.00	.00	1500.42	.16	3.05	.02	1499.70				
6700.0	3794.9	982.9	1922.2	1150.0	261.8	727.8	168.2	102.7	1499.70				
.28	3.30	3.75	2.64	.055	.040	.050	.000	1494.40	9281.16				
.005011	525.	485.	485.	4	0	0	.00	1553.66	10834.82				

FLOW DISTRIBUTION FOR SECNO= 1.75 CWSEL= 1500.26

STA=	9281.	9315.	9355.	9403.	9532.	9565.	9581.	9596.	9612.	9684.	9778.	9855.	9939.
PER Q=	5.7	10.2	4.4	3.6	3.3	4.8	4.2	6.5	3.4	3.6	3.1	3.5	
AREA=	99.2	148.9	96.6	115.8	70.8	66.6	60.3	77.7	93.8	108.6	93.5	103.8	
VEL=	3.9	4.6	3.0	2.1	3.2	4.8	4.7	5.6	2.4	2.2	2.2	2.2	
DEPTH=	2.9	3.8	2.0	.9	2.1	4.1	4.1	5.0	1.3	1.2	1.2	1.2	

STA=	9939.	9960.	10112.	10231.	10265.	10278.	10438.	10591.	10642.	10722.	10835.		
PER Q=	.3	14.7	5.7	3.7	3.9	3.3	3.4	3.5	4.2	1.0			
AREA=	14.4	261.8	133.3	66.9	48.4	106.3	122.6	85.5	114.8	50.1			
VEL=	1.5	3.8	2.9	3.7	5.4	2.1	1.9	2.7	2.5	1.3			
DEPTH=	.7	1.7	1.1	2.0	3.6	.7	.8	1.7	1.4	.4			

1490 NH CARD USED  
\*SECNO 1.842

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 8990.0 10771.0 TYPE= 1 TARGET= -8990.000  
 1.842 5.26 1503.16 .00 .00 1503.37 .21 2.94 .02 1502.10  
 6700.0 3176.3 1540.9 1982.8 1071.9 274.0 725.2 193.0 121.3 1502.70  
 .32 2.96 5.62 2.73 .055 .040 .051 .000 1497.90 9077.77  
 .006673 505. 505. 525. 3 0 0 .00 1607.54 10716.47

FLOW DISTRIBUTION FOR SECNO= 1.84 CWSEL= 1503.16

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SECNO	DEPTH	CWSEL	CRISWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV			
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV			
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA			
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST			
STA= 9078.	9190.	9280.	9325.	9484.	9520.	9561.	9605.	9617.	9726.	9809.	9913.	10021.
PER Q=	3.2	8.7	4.1	5.1	4.0	3.6	3.4	4.0	3.4	4.0	3.9	23.0
AREA=	100.0	172.0	83.0	130.6	74.0	73.3	68.8	49.3	105.5	102.9	112.5	274.0
VEL=	2.2	3.4	3.3	2.6	3.6	3.3	3.3	5.4	2.2	2.6	2.3	5.6
DEPTH=	.9	1.9	1.9	.8	2.1	1.8	1.6	3.8	1.0	1.2	1.1	2.5

STA= 10021.	10198.	10270.	10368.	10484.	10591.	10648.	10716.
PER Q=	3.5	3.0	7.1	4.4	4.5	5.4	1.7
AREA=	122.7	78.1	127.6	113.0	121.5	107.1	55.2
VEL=	1.9	2.6	3.7	2.6	2.5	3.4	2.1
DEPTH=	.7	1.1	1.3	1.0	1.1	1.9	.8

1490 NH CARD USED

\*SECNO 1.939  
 1.939 5.91 1506.31 .00 .00 1506.48 .17 3.11 .00 1505.60  
 6800.0 4493.4 1431.8 874.7 1480.1 321.9 350.9 217.9 141.9 1505.90  
 .36 3.04 4.45 2.49 .055 .040 .049 .000 1500.40 8918.39  
 .005536 500. 510. 550. 3 0 0 .00 1837.26 10755.65

FLOW DISTRIBUTION FOR SECNO= 1.94 CWSEL= 1506.31

STA= 8918.	9028.	9127.	9351.	9463.	9549.	9575.	9604.	9628.	9638.	9653.	9700.	9718.
PER Q=	4.5	3.0	3.6	3.2	7.0	4.7	5.7	4.7	3.6	3.2	5.6	3.7
AREA=	125.3	95.7	155.4	110.7	154.9	78.0	90.2	73.3	45.1	49.5	108.4	57.6
VEL=	2.4	2.2	1.6	2.0	3.1	4.1	4.3	4.3	5.4	4.4	3.5	4.3
DEPTH=	1.1	1.0	.7	1.0	1.8	2.9	3.1	3.2	4.6	3.3	2.3	3.3

STA= 9718.	9762.	9829.	9883.	9946.	10103.	10272.	10544.	10756.
PER Q=	3.1	4.1	4.4	2.0	21.1	6.5	3.4	2.9
AREA=	74.1	102.2	93.8	66.0	321.9	109.7	135.1	106.1
VEL=	2.8	2.8	3.2	2.1	4.4	4.0	1.7	1.9
DEPTH=	1.7	1.5	1.7	1.1	2.0	.6	.5	.5

CCHV= .100 CEHV= .300  
 \*SECNO 2.039

3265 DIVIDED FLOW

2.039 4.44 1509.04 .00 .00 1509.26 .23 2.76 .02 1508.70  
 6800.0 4803.4 1843.9 152.7 1287.0 443.3 126.9 242.3 160.7 1509.20  
 .40 3.73 4.16 1.20 .050 .040 .055 .000 1504.60 9262.18  
 .004917 530. 530. 530. 3 0 0 .00 1256.59 10625.24

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SECNO	DEPTH	CWSEL	CRISWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

FLOW DISTRIBUTION FOR SECNO= 2.04 CWSEL= 1509.04

STA= 9262.	9419.	9501.	9519.	9529.	9560.	9576.	9626.	9681.	9710.	9767.	9800.	9850.
PER Q=	3.7	4.3	3.5	3.0	6.1	3.8	10.9	9.6	5.8	9.5	3.3	4.2
AREA=	118.7	107.1	54.1	40.7	94.2	54.7	162.5	156.9	88.8	157.6	67.8	91.1
VEL=	2.1	2.8	4.4	5.0	4.4	4.7	4.6	4.2	4.5	4.1	3.3	3.1
DEPTH=	.8	1.3	3.0	3.8	3.0	3.4	3.2	2.8	3.2	2.7	2.0	1.8

STA= 9850.	9951.	10173.	10625.
PER Q=	2.8	27.1	2.2
AREA=	92.9	443.3	126.9
VEL=	2.1	4.2	1.2
DEPTH=	.9	2.0	.3

1490 NH CARD USED

\*SECNO 2.134  
 2.134 4.05 1511.55 .00 .00 1511.72 .17 2.45 .01 1511.00  
 6800.0 5531.5 1216.1 52.4 1790.0 298.0 68.2 266.4 177.2 1511.30  
 .44 3.09 4.08 .77 .050 .040 .055 .000 1507.50 8853.84  
 .004469 530. 500. 500. 2 0 0 .00 1510.39 10364.23

SOUTH BRANCH TANK WASH  
SUMMARY PRINTOUT

SECNO	Q	CWSEL	AREA	ELMIN	DEPTH	XLCH	STENCL	SSTA	ENDST	STENCR	TOPWID	TW
.176	2300.00	1625.98	574.25	1621.70	4.28	.00	.00	9695.56	10207.33	.00	492.00	.
.176	2300.00	1626.98	290.36	1621.70	5.28	.00	9942.00	9942.00	10022.00	10022.00	80.00	.
* .279	2300.00	1629.25	761.86	1624.10	5.15	545.00	9576.20	9582.47	10205.14	10226.10	622.67	6.
* .279	2300.00	1630.02	661.17	1624.10	5.92	545.00	9843.00	9843.00	10054.00	10054.00	211.00	1.
* .381	2300.00	1632.55	455.66	1626.90	5.65	540.00	9881.00	9892.91	10315.34	10323.60	414.88	13.
* .381	2300.00	1632.45	275.74	1626.90	5.55	540.00	9950.00	9950.00	10069.00	10069.00	119.00	3.
* .470	2300.00	1636.47	641.12	1629.70	6.77	470.00	9838.70	9843.51	10252.60	10252.60	409.08	17.
* .470	2300.00	1637.41	422.52	1629.70	7.71	470.00	9925.00	9925.00	10040.00	10040.00	115.00	5.
.573	2300.00	1639.81	492.17	1634.10	5.71	545.00	9898.40	9901.42	10152.60	10152.60	251.18	22.
.573	2300.00	1640.40	427.27	1634.10	6.30	545.00	9918.00	9918.00	10047.00	10047.00	129.00	6.
.678	2300.00	1643.41	547.88	1637.70	5.71	555.00	9838.10	9838.10	10186.00	10186.00	347.90	25.
.678	2300.00	1643.81	351.53	1637.70	6.11	555.00	9960.00	9960.00	10065.00	10065.00	105.00	8.
* .773	2300.00	1645.54	619.44	1641.00	4.54	500.00	9762.50	9786.12	10022.64	10024.00	236.52	29.
* .773	2300.00	1646.44	461.51	1641.00	5.44	500.00	9910.00	9910.00	10024.00	10024.00	114.00	9.
* .872	2300.00	1648.82	488.73	1642.90	5.92	520.00	.00	9712.63	10110.77	.00	398.14	33.
* .872	2300.00	1648.82	203.98	1642.90	5.92	520.00	9975.00	9975.00	10028.00	10028.00	53.00	10.

SOUTH BRANCH TANK WASH  
SUMMARY PRINTOUT

SECNO	Q	CWSEL	DIFWSP	EG	DIFEG	STENCL	STCHL	XLBEL	RBEL	STCHR	STENCR
.176	2300.00	1625.98	.00	1626.39	.00	.00	9942.80	1625.20	1625.10	10021.50	.00
.176	2300.00	1626.98	1.00	1627.97	1.57	9942.00	9942.80	1625.20	1625.10	10021.50	10022.00
* .279	2300.00	1629.25	.00	1629.45	.00	9576.20	9844.00	1628.50	1628.50	10053.70	10226.10
* .279	2300.00	1630.02	.77	1630.21	.76	9843.00	9844.00	1628.50	1628.50	10053.70	10054.00
* .381	2300.00	1632.55	.00	1633.10	.00	9881.00	9950.30	1631.70	1631.90	10068.00	10323.60
* .381	2300.00	1632.45	-.10	1633.54	.44	9950.00	9950.30	1631.70	1631.90	10068.00	10069.00
* .470	2300.00	1636.47	.00	1636.80	.00	9838.70	9970.30	1634.90	1635.20	10022.10	10252.60
* .470	2300.00	1637.41	.93	1637.96	1.15	9925.00	9970.30	1634.90	1635.20	10022.10	10040.00
.573	2300.00	1639.81	.00	1640.19	.00	9898.40	9918.60	1639.30	1638.90	10046.00	10152.60
.573	2300.00	1640.40	.60	1640.86	.66	9918.00	9918.60	1639.30	1638.90	10046.00	10047.00
.678	2300.00	1643.41	.00	1643.79	.00	9838.10	9977.60	1641.90	1643.40	10064.40	10186.00
.678	2300.00	1643.81	.40	1644.52	.73	9960.00	9977.60	1641.90	1643.40	10064.40	10065.00
* .773	2300.00	1645.54	.00	1645.78	.00	9762.50	9952.10	1643.40	1646.10	10023.50	10024.00
* .773	2300.00	1646.44	.90	1646.85	1.07	9910.00	9952.10	1643.40	1646.10	10023.50	10024.00
* .872	2300.00	1648.82	.00	1649.44	.00	.00	9975.20	1647.90	1648.20	10027.20	.00
* .872	2300.00	1648.82	.00	1650.80	1.36	9975.00	9975.20	1647.90	1648.20	10027.20	10028.00

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= .279 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= .381 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 CAUTION SECNO= .381 PROFILE= 2 CRITICAL DEPTH ASSUMED  
 CAUTION SECNO= .381 PROFILE= 2 MINIMUM SPECIFIC ENERGY  
 WARNING SECNO= .470 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= .470 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= .773 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= .773 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 CAUTION SECNO= .872 PROFILE= 1 CRITICAL DEPTH ASSUMED  
 CAUTION SECNO= .872 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY  
 CAUTION SECNO= .872 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL  
 CAUTION SECNO= .872 PROFILE= 2 CRITICAL DEPTH ASSUMED  
 CAUTION SECNO= .872 PROFILE= 2 MINIMUM SPECIFIC ENERGY

FLOODWAY DATA, SOUTH BRANCH TANK WASH  
 PROFILE NO. 2

STATION	----- WIDTH	FLOODWAY SECTION AREA	----- MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	SURFACE ELEVATION WITHOUT FLOODWAY	DIFFERENCE
.176	80.	290.	7.9	1627.0	1626.0	1.0
.279	211.	661.	3.5	1630.1	1629.3	.8
.381	119.	276.	8.3	1632.4	1632.5	-.1
.470	115.	423.	5.4	1637.4	1636.5	.9
.573	129.	427.	5.4	1640.4	1639.8	.6
.678	105.	352.	6.5	1643.8	1643.4	.4
.773	114.	462.	5.0	1646.4	1645.5	.9
.872	53.	204.	11.3	1648.8	1648.8	.0

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XLNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

\*PROF 2  
0

CCHV= .100 CEHV= .300  
\*SECNO .176  
3280 CROSS SECTION .18 EXTENDED .68 FEET

3470 ENCROACHMENT STATIONS= 9942.0 10022.0 TYPE= 1 TARGET= 80.000

\*\*\* XSECTN 0.176 IS THE FIRST XSECTN ON THE SOUTH BRANCH UPSTREAM FROM THE CONFLUENCE WITH TANK WASH \*\*\*

.176	5.28	1626.98	.00	1625.98	1627.97	.99	.00	.00	1625.20
2300.0	2.3	2296.3	1.4	1.4	288.0	.9	.0	.0	1625.10
.00	1.65	7.97	1.45	.055	.040	.050	.000	1621.70	9942.00
.008263	0.	0.	0.	0	0	0	.00	80.00	10022.00

1490 NH CARD USED  
\*SECNO .279  
3280 CROSS SECTION .28 EXTENDED .42 FEET

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.89

3470 ENCROACHMENT STATIONS= 9843.0 10054.0 TYPE= 1 TARGET= 211.000

.279	5.92	1630.02	.00	1629.25	1630.21	.19	2.16	.08	1628.50
2300.0	1.4	2298.4	.2	1.5	659.2	.5	6.0	1.8	1628.50
.04	.93	3.49	.52	.055	.044	.055	.000	1624.10	9843.00
.002320	545.	545.	545.	3	0	0	.00	211.00	10054.00

CCHV= .100 CEHV= .300  
\*SECNO .381

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY

1

28SEP93 11:47:53

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XLNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9950.0 10069.0 TYPE= 1 TARGET= 119.000

.381	5.55	1632.45	1632.45	1632.55	1633.54	1.08	2.82	.27	1631.70
2300.0	.3	2298.6	1.1	.2	275.0	.5	11.8	3.9	1631.90
.06	1.40	8.36	1.95	.055	.045	.055	.000	1626.90	9950.00
.020922	540.	540.	540.	3	10	0	.00	119.00	10069.00

\*SECNO .470  
3280 CROSS SECTION .47 EXTENDED .50 FEET

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.00

3470 ENCROACHMENT STATIONS= 9925.0 10040.0 TYPE= 1 TARGET= 115.000

.470	7.71	1637.41	.00	1636.47	1637.96	.55	4.37	.05	1634.90
2300.0	508.6	1658.7	132.7	130.1	250.4	42.0	15.5	5.1	1635.20
.08	3.91	6.63	3.16	.055	.045	.055	.000	1629.70	9925.00
.005210	480.	470.	470.	5	0	0	.00	115.00	10040.00

\*SECNO .573  
3280 CROSS SECTION .57 EXTENDED .11 FEET

3470 ENCROACHMENT STATIONS= 9918.0 10047.0 TYPE= 1 TARGET= 129.000

.573	6.30	1640.40	.00	1639.81	1640.86	.45	2.89	.01	1639.30
2300.0	.7	2297.2	2.1	.7	425.1	1.5	20.8	6.7	1638.90
.11	1.06	5.40	1.42	.055	.045	.055	.000	1634.10	9918.00
.005420	525.	545.	565.	4	0	0	.00	129.00	10047.00

\*SECNO .678

3470 ENCROACHMENT STATIONS= 9960.0 10065.0 TYPE= 1 TARGET= 105.000  
 .678 6.11 1643.81 .00 1643.41 1644.52 .71 3.58 .08 1641.90  
 2300.0 119.0 2180.7 .2 34.3 317.0 .2 25.8 8.1 1643.40  
 .13 3.47 6.88 .94 .055 .045 .055 .000 1637.70 9960.00  
 .007827 555. 555. 555. 2 0 0 .00 105.00 10065.00

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SECNO	DEPTH	CWSEL	CRISWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XLNCH	XNR	WTN	ELMIN	SSA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

1490 NH CARD USED  
 \*SECNO .773

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.61

3470 ENCROACHMENT STATIONS= 9910.0 10024.0 TYPE= 1 TARGET= 114.000  
 .773 5.44 1646.44 .00 1645.54 1646.85 .41 2.30 .03 1643.40  
 2300.0 554.7 1745.2 .1 142.2 319.2 .2 30.5 9.4 1646.10  
 .16 3.90 5.47 .51 .045 .040 .055 .000 1641.00 9910.00  
 .003034 500. 500. 500. 3 0 0 .00 114.00 10024.00

CCHV= .100 CEHV= .300  
 \*SECNO .872

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY  
 3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9975.0 10028.0 TYPE= 1 TARGET= 53.000

\*\*\* XSECTN 0.872 IS UPSTREAM LIMIT TANK WASH STUDY (SOUTH BRANCH) \*\*\*

.872	5.92	1648.82	1648.82	1648.82	1650.80	1.98	3.26	.47	1647.90
2300.0	.2	2298.9	.9	.2	203.3	.5	34.4	10.4	1648.20
.17	1.14	11.31	1.88	.055	.045	.055	.000	1642.90	9975.00
.019792	520.	520.	520.	3	8	0	.00	53.00	10028.00

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THIS RUN EXECUTED 28SEP93 11:47:56

\*\*\*\*\*  
 HEC-2 WATER SURFACE PROFILES  
 Version 4.6.2; May 1991  
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NOTE- ASTERISK (\*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

SOUTH BRANCH TANK WASH  
 SUMMARY PRINTOUT

SECNO	Q	CWSEL	CRISWS	QLOB	VLOB	K*XLN	QCH	VCH	K*XLNCH	QROB	VROB	K*X
.176	2300.00	1625.98	.00	241.01	1.83	55.00	1320.20	6.30	40.00	738.79	3.17	50.
.176	2300.00	1626.98	.00	2.35	1.65	55.00	2296.28	7.97	40.00	1.37	1.45	50.
.279	2300.00	1629.25	.00	220.15	1.41	55.00	1922.03	3.87	43.74	157.82	1.46	55.
*	.279	2300.00	1630.02	.00	1.41	.93	2298.35	3.49	43.86	.23	.52	55.
*	.381	2300.00	1632.55	1632.41	53.92	1.97	1856.78	6.48	45.00	389.30	2.74	55.
*	.381	2300.00	1632.45	1632.45	.31	1.40	2298.62	8.36	45.00	1.06	1.95	55.
*	.470	2300.00	1636.47	.00	431.12	2.72	1195.65	5.92	45.00	673.23	2.40	55.
*	.470	2300.00	1637.41	.00	508.60	3.91	1658.66	6.63	45.00	132.73	3.16	55.
.573	2300.00	1639.81	.00	3.96	.90	55.00	1861.10	5.34	45.00	434.94	3.12	55.
.573	2300.00	1640.40	.00	.70	1.06	55.00	2297.15	5.40	45.00	2.14	1.42	55.
.678	2300.00	1643.41	.00	648.15	2.97	55.00	1583.12	5.61	45.00	68.72	1.44	55.
.678	2300.00	1643.81	.00	119.03	3.47	55.00	2180.73	6.88	45.00	.23	.94	55.
*	.773	2300.00	1645.54	.00	1139.60	3.13	1160.40	4.55	40.00	.00	.00	55.
*	.773	2300.00	1646.44	.00	554.71	3.90	1745.20	5.47	40.00	.09	.51	55.
*	.872	2300.00	1648.82	1648.82	674.18	2.85	1525.82	7.50	45.00	100.00	2.06	55.
*	.872	2300.00	1648.82	1648.82	.21	1.14	2298.88	11.31	45.00	.91	1.88	55.

FLOW DISTRIBUTION FOR SECNO= .18 CWSEL= 1625.98

STA=	9696.	9812.	9877.	9943.	10022.	10056.	10086.	10109.	10135.	10155.	10187.	10207.
PER Q=	3.6	3.7	3.2	57.4	6.0	5.8	3.0	4.8	5.3	6.2	1.0	
AREA=	47.8	42.5	41.2	209.4	44.6	40.9	24.9	34.3	33.4	43.3	12.1	
VEL=	1.7	2.0	1.8	6.3	3.1	3.3	2.8	3.2	3.7	3.3	1.9	
DEPTH=	.4	.7	.6	2.7	1.3	1.4	1.1	1.3	1.6	1.4	.6	

1490 NH CARD USED  
\*SECNO .279

3470 ENCROACHMENT STATIONS=	9576.2	10226.1	TYPE=	1	TARGET=	-9576.200						
.279	5.15	1629.25	.00	.00	1629.45	.20	3.04	.02	1628.50			
2300.0	220.1	1922.0	157.8	156.7	496.8	108.4	8.4	7.0	1628.50			
.04	1.41	3.87	1.46	.055	.044	.055	.000	1624.10	9582.47			
.004142	545.	545.	545.	4	0	0	.00	622.67	10205.14			

FLOW DISTRIBUTION FOR SECNO= .28 CWSEL= 1629.25

STA=	9582.	9739.	9820.	9844.	9895.	9965.	10054.	10156.	10205.
PER Q=	3.9	4.4	1.2	22.7	20.8	40.1	5.4	1.5	
AREA=	72.2	65.5	19.0	131.6	150.1	215.1	81.7	26.7	
VEL=	1.3	1.5	1.5	4.0	3.2	4.3	1.5	1.3	
DEPTH=	.5	.8	.8	2.6	2.1	2.4	.8	.5	

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= .100 CEHV= .300  
\*SECNO .381

3265 DIVIDED FLOW

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .59

3470 ENCROACHMENT STATIONS=	9881.0	10323.6	TYPE=	1	TARGET=	-9881.000						
.381	5.65	1632.55	1632.41	.00	1633.10	.55	3.54	.10	1631.70			
2300.0	53.9	1856.8	389.3	27.3	286.3	142.0	15.9	13.4	1631.90			
.07	1.97	6.48	2.74	.055	.045	.055	.000	1626.90	9892.91			
.011928	540.	540.	540.	4	8	0	.00	414.88	10315.34			

FLOW DISTRIBUTION FOR SECNO= .38 CWSEL= 1632.55

STA=	9893.	9950.	10068.	10174.	10264.	10273.	10284.	10315.
PER Q=	2.3	80.7	3.2	3.9	3.4	4.2	2.1	
AREA=	27.3	286.3	39.0	43.5	17.1	21.0	21.3	
VEL=	2.0	6.5	1.9	2.1	4.6	4.7	2.3	
DEPTH=	.5	2.4	.4	.5	1.9	2.0	.7	

\*SECNO .470

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.47

3470 ENCROACHMENT STATIONS=	9838.7	10252.6	TYPE=	1	TARGET=	413.899						
.470	6.77	1636.47	.00	.00	1636.80	.33	3.69	.02	1634.90			
2300.0	431.1	1195.6	673.2	158.6	202.1	280.4	21.8	17.9	1635.20			
.10	2.72	5.92	2.40	.055	.045	.055	.000	1629.70	9843.51			
.005525	480.	470.	470.	3	0	0	.00	409.08	10252.60			

FLOW DISTRIBUTION FOR SECNO= .47 CWSEL= 1636.47

STA=	9844.	9907.	9926.	9936.	9953.	9970.	10022.	10060.	10087.	10150.	10219.	10253.
PER Q=	3.5	3.4	3.0	5.3	3.5	52.0	6.9	4.1	3.5	7.3	7.4	
AREA=	43.2	29.2	20.9	36.9	28.4	202.1	58.8	38.2	48.3	75.5	59.6	
VEL=	1.9	2.7	3.4	3.3	2.8	5.9	2.7	2.5	1.7	2.2	2.9	
DEPTH=	.7	1.5	2.2	2.1	1.7	3.9	1.6	1.4	.8	1.1	1.8	

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

\*SECNO .573

3470 ENCROACHMENT STATIONS=	9898.4	10152.6	TYPE=	1	TARGET=	254.199						
.573	5.71	1639.81	.00	.00	1640.19	.39	3.37	.02	1639.30			
2300.0	4.0	1861.1	434.9	4.4	348.6	139.2	29.0	22.0	1638.90			
.13	.90	5.34	3.12	.055	.045	.055	.000	1634.10	9901.42			
.006894	525.	545.	565.	3	0	0	.00	251.18	10152.60			

FLOW DISTRIBUTION FOR SECNO=.57 CWSEL= 1639.81

STA=	9901.	9919.	10046.	10062.	10076.	10086.	10100.	10113.	10139.	10153.
PER Q=	.2	80.9	1.5	4.1	4.5	4.3	2.9	1.6	.1	
AREA=	4.4	348.6	15.7	26.9	25.6	27.5	21.4	19.2	2.9	
VEL=	.9	5.3	2.2	3.5	4.1	3.6	3.1	1.9	.8	
DEPTH=	.3	2.7	1.0	2.0	2.5	2.0	1.6	.8	.2	

\*SECNO .678

3470 ENCROACHMENT STATIONS=	9838.1	10186.0	TYPE=	1	TARGET=	347.900				
.678	5.71	1643.41	.00	.00	1643.79	.38	3.59	.00	1641.90	
2300.0	648.2	1583.1	68.7	218.2	282.0	47.7	35.6	25.9	1643.40	
.16	2.97	5.61	1.44	.055	.045	.055	.000	1637.70	9838.10	
.006093	555.	555.	555.	2	0	0	.00	347.90	10186.00	

FLOW DISTRIBUTION FOR SECNO=.68 CWSEL= 1643.41

STA=	9838.	9878.	9899.	9909.	9951.	9978.	10064.	10098.	10115.	10131.	10155.	10186.
PER Q=	3.1	5.5	3.7	10.9	5.0	68.8	.2	1.2	1.0	.3	.2	
AREA=	36.4	39.5	22.9	78.5	40.9	282.0	6.2	14.7	12.7	7.5	6.5	
VEL=	2.0	3.2	3.7	3.2	2.8	5.6	.8	1.9	1.8	1.0	.7	
DEPTH=	.9	1.9	2.3	1.9	1.6	3.2	.2	.9	.8	.3	.2	

1490 NH CARD USED

\*SECNO .773

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.48

3470 ENCROACHMENT STATIONS= 9762.5 10024.0 TYPE= 1 TARGET= 261.500

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XLNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	
.773	4.54	1645.54	.00	.00	1645.78	.24	1.98	.01	1643.40	
2300.0	1139.6	1160.4	.0	364.2	255.2	.0	42.3	29.2	1646.10	
.20	3.13	4.55	.00	.046	.040	.000	.000	1641.00	9786.12	
.002773	500.	500.	500.	3	0	0	.00	236.52	10022.64	

FLOW DISTRIBUTION FOR SECNO=.77 CWSEL= 1645.54

STA=	9786.	9839.	9850.	9859.	9875.	9885.	9899.	9918.	9933.	9952.	10024.
PER Q=	4.0	3.4	5.0	6.1	4.7	7.3	7.7	5.7	5.5	50.5	
AREA=	56.8	26.1	30.3	41.7	29.5	45.8	51.7	40.2	42.2	255.2	
VEL=	1.6	3.0	3.8	3.4	3.6	3.7	3.4	3.3	3.0	4.5	
DEPTH=	1.1	2.4	3.3	2.7	3.0	3.1	2.8	2.6	2.2	3.6	

CCHV= .100 CEHV= .300

\*SECNO .872

3685 20 TRIALS ATTEMPTED WSEL,CWSEL  
3693 PROBABLE MINIMUM SPECIFIC ENERGY  
3720 CRITICAL DEPTH ASSUMED

\*\*\* XSECTN 0.872 IS UPSTREAM LIMIT TANK WASH STUDY (SOUTH BRANCH) \*\*\*

.872	5.92	1648.82	1648.82	.00	1649.44	.62	2.36	.11	1647.90	
2300.0	674.2	1525.8	100.0	236.8	203.4	48.5	48.9	33.0	1648.20	
.22	2.85	7.50	2.06	.055	.045	.055	.000	1642.90	9712.63	
.008712	520.	520.	520.	20	13	0	.00	398.14	10110.77	

FLOW DISTRIBUTION FOR SECNO=.87 CWSEL= 1648.82

STA=	9713.	9835.	9874.	9885.	9905.	9935.	9975.	10027.	10089.	10111.
PER Q=	3.1	7.8	4.3	3.8	4.6	5.7	66.3	3.9	.4	
AREA=	49.3	53.1	22.9	28.3	36.7	46.6	203.4	41.4	7.1	
VEL=	1.4	3.4	4.3	3.1	2.9	2.8	7.5	2.2	1.5	
DEPTH=	.4	1.3	2.2	1.4	1.2	1.2	3.9	.7	.3	

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T1 FLOOD CONTROL DISTRICT OF MARICOPA COUNTY  
T2 POWERLINE WASH AND TANK WASH FLOOD DELINEATION STUDY (FCD 92-09)  
T3 SOUTH BRANCH TANK WASH STANLEY CONSULTANTS # 11547 FILENAME: 11547T34

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		4							1626.98	
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	2		-1							

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 \* HEC-2 WATER SURFACE PROFILES \*  
 \* \*  
 \* Version 4.6.2; May 1991 \*  
 \* \*  
 \* RUN DATE 28SEP93 TIME 11:47:53 \*  
 \*\*\*\*\*

\*\*\*\*\*  
 \* U.S. ARMY CORPS OF ENGINEERS \*  
 \* HYDROLOGIC ENGINEERING CENTER \*  
 \* 609 SECOND STREET, SUITE D \*  
 \* DAVIS, CALIFORNIA 95616-4687 \*  
 \* (916) 756-1104 \*  
 \*\*\*\*\*

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X   X XXXXXXX XXXXX          XXXXX
X   X X          X   X      X   X
X   X X          X          X   X
XXXXXXXX XXXX   X          XXXXX
X   X X          X          X
X   X X          X   X      X
X   X XXXXXXX XXXXX          XXXXXXX

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PAGE 1

THIS RUN EXECUTED 28SEP93 11:47:53

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 HEC-2 WATER SURFACE PROFILES  
 Version 4.6.2; May 1991  
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- T1 FLOOD CONTROL DISTRICT OF MARICOPA COUNTY  
 T2 POWERLINE WASH AND TANK WASH FLOOD DELINEATION STUDY (FCD 92-09)  
 T3 SOUTH BRANCH TANK WASH STANLEY CONSULTANTS#11547 FILENAME: 11547T34  
 T4  
 T4 1. CROSS SECTIONS ORIENTED LEFT TO RIGHT LOOKING DOWNSTREAM  
 T4 2. HYDRAULIC BASELINE IS CROSS SECTION STATION 10,000  
 T4 3. GR DATA BASED ON KENNEY AERIAL TOPO, FLIGHT DATE 11-24-92  
 T4 VERTICAL DATUM IS NGVD 1929  
 T4 4. TANK WASH SOUTH BRANCH MILE 0.0 CORRESPONDS TO CONFLUENCE WITH  
 T4 TANK WASH (MAIN WASH)  
 T4 5. CHANNEL 'n' RANGES FROM 0.040 TO 0.050  
 T4 6. OVERBANK 'n' RANGES FROM 0.045 TO 0.055  
 T4 7. NH RECORD USED AT MULTI-CHANNEL XSECTNS  
 T4 8. FLOW RATES APPORTIONED BASED ON BURGESS-NIPLE JACKRABBIT WASH  
 T4 HYDROLOGY AS AMENDED BY FCD DATED 03-08-93  
 T4 9. INEFFECTIVE FLOW AREAS BLOCKED OUT USING ET RECORD ON NATURAL RUN  
 T4 10. STARTING WATER SURFACE FOR NATURAL RUN BASED ON SLOPE-AREA OPTION  
 T4 WITH ENERGY SLOPE ESTIMATED BASED ON CHANNEL BOTTOM SLOPE IN  
 T4 REACH FROM XSECTN 5.763 (TANK WASH) TO XSECTN 0.279 (SOUTH BRANCH)  
 T4 11. STARTING WATER SURFACE FOR ENCROACHMENT RUN IS 1.00 FT HIGHER THAN  
 T4 NATURAL STARTING SLOPE-AREA WATER SURFACE  
 T4 12. PROFILE 1 - NATURAL ; PROFILE 2 - TYPE 1 ENCROACHMENT  
 T4

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		2			0.0079					
J2	NPROF	IPLT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1		-1							15

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38	43	1	2	13	55	16	14	26	17
15	56	18		38	43	1	25	42	8
39	27	53	54	28	4	37		38	43
1	50	3	61	27	21	23	24	22	28

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NC	0.055	0.050	0.040	0.1	0.3				
QT	3	2300	2300	2300					
ET			10.4	9.1				9942.0	10022.0

\*\*\* XSECTN 0.176 IS THE FIRST XSECTN ON THE SOUTH BRANCH UPSTREAM FROM THE CONFLUENCE WITH TANK WASH \*\*\*

X1	0.176	31	9942.8	10021.5						
GR	1626.4	9680.0	1626.0	9695.0	1625.5	9710.0	1626.0	9735.0	1626.1	9749.0
GR	1626.1	9750.0	1625.1	9782.2	1625.0	9799.2	1625.4	9812.2	1625.5	9836.6
GR	1625.6	9861.4	1624.1	9869.8	1625.4	9877.4	1625.4	9911.1	1625.2	9942.8
GR	1623.7	9977.0	1621.9	9990.0	1621.7	10000.0	1621.7	10010.8	1625.1	10021.5
GR	1624.3	10056.3	1624.9	10085.9	1624.9	10108.9	1624.4	10134.7	1624.5	10144.5
GR	1624.0	10155.1	1624.7	10165.5	1624.8	10186.9	1626.5	10216.3	1626.6	10238.3
GR	1626.3	10275.0								
NH	5	0.055	9844.0	0.045	9895.2	0.050	9965.1	0.040	10053.7	0.055
NH	10226.									
ET		7.1		9.1			9576.2		9843.0	10054.0
X1	0.279	34	9844.0	10053.7	545	545	545			

GR	1628.6	9335.0	1628.0	9355.0	1628.0	9380.0	1628.8	9430.0	1628.3	9465.0
GR	1629.3	9576.2	1628.9	9622.6	1628.9	9651.3	1628.7	9686.0	1628.9	9710.5
GR	1627.7	9726.4	1628.5	9738.5	1628.6	9766.7	1628.6	9792.5	1627.9	9803.1
GR	1628.4	9820.1	1628.5	9844.0	1625.8	9857.4	1626.6	9869.3	1626.7	9895.2
GR	1627.3	9922.0	1627.3	9945.0	1626.7	9965.1	1625.6	9972.3	1625.1	9988.5
GR	1624.1	10000.0	1627.7	10006.5	1628.1	10031.2	1628.5	10053.7	1628.6	10083.2
GR	1628.5	10114.5	1628.1	10156.1	1629.1	10196.5	1629.6	10226.1		
NC	0.055	0.055	0.045	0.1	0.3					
ET		7.1		9.1			9881.0		9950.0	10069.0
X1	0.381	30	9950.3	10068.0	540	540	540			
GR	1633.1	9450.0	1631.4	9560.0	1632.2	9620.0	1631.6	9670.0	1632.7	9770.0
GR	1632.6	9800.5	1632.8	9857.3	1632.8	9881.0	1632.2	9909.4	1631.7	9950.3
GR	1631.2	9973.0	1628.8	9989.1	1626.9	9995.6	1627.0	10000.0	1627.0	10007.3
GR	1630.4	10017.7	1630.9	10033.4	1630.6	10053.3	1631.9	10068.0	1632.2	10085.9
GR	1632.4	10102.8	1632.6	10123.7	1632.1	10144.6	1631.6	10174.0	1632.5	10196.8
GR	1632.1	10238.8	1631.3	10264.4	1629.9	10273.2	1631.2	10283.7	1632.9	10323.6
ET		7.1		9.1			9838.7	10252.6	9925.0	10040.0
X1	0.470	33	9970.3	10022.1	480	470	470			
GR	1637.0	9430.0	1635.3	9530.0	1635.6	9575.0	1635.1	9625.0	1636.2	9715.0
GR	1636.3	9795.0	1636.5	9838.7	1636.4	9838.7	1635.2	9856.7	1635.2	9891.9
GR	1634.7	9926.0	1633.9	9935.6	1634.4	9942.7	1634.7	9953.3	1634.9	9970.3
GR	1634.7	9986.2	1629.8	9994.5	1629.8	10000.0	1629.7	10005.5	1635.2	10022.1
GR	1634.6	10059.5	1635.6	10087.3	1635.8	10107.6	1635.7	10138.4	1635.5	10150.2
GR	1635.9	10178.4	1634.4	10219.0	1635.0	10252.6	1634.0	10258.9	1634.8	10271.0
GR	1635.9	10309.7	1636.6	10347.3	1636.9	10363.3				

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ET		7.1		9.1			9898.4	10152.6	9918.0	10047.0
X1	0.573	36	9918.6	10046.0	525	565	545			
GR	1639.8	9100.0	1639.2	9190.0	1639.5	9265.0	1639.1	9340.0	1639.7	9390.0
GR	1638.4	9540.0	1639.2	9640.0	1639.1	9670.0	1639.3	9715.0	1640.0	9750.0
GR	1639.6	9768.7	1639.7	9815.9	1639.4	9832.3	1639.4	9863.5	1639.9	9898.4
GR	1639.3	9918.6	1637.0	9950.6	1637.4	9957.8	1637.5	9982.4	1634.1	9996.8
GR	1634.2	10000.0	1634.1	10004.7	1636.0	10013.0	1636.3	10020.9	1638.3	10034.2
GR	1638.9	10046.0	1638.8	10062.3	1636.9	10076.0	1637.8	10086.4	1637.8	10100.1
GR	1638.6	10113.4	1639.5	10138.7	1639.7	10152.6	1639.1	10182.1	1640.0	10209.4
GR	1640.3	10235.7								
ET		7.1		9.1			9838.1	10186.0	9960.0	10065.0
X1	0.678	30	9977.6	10064.4	555	555	555			
GR	1643.4	9180.0	1643.1	9280.0	1643.3	9370.0	1643.1	9460.0	1642.0	9590.0
GR	1643.2	9749.4	1642.9	9796.2	1642.8	9838.1	1642.2	9878.1	1640.9	9899.3
GR	1641.3	9909.2	1641.8	9951.4	1641.9	9977.6	1637.7	9991.5	1637.7	10000.0
GR	1637.8	10008.9	1639.1	10017.2	1640.6	10028.5	1642.1	10048.3	1643.4	10064.4
GR	1643.4	10074.6	1642.9	10098.1	1642.2	10115.2	1643.0	10130.8	1643.2	10155.0
GR	1643.2	10186.0	1642.9	10209.7	1642.3	10221.0	1643.0	10234.7	1643.5	10258.0
NH	4	0.055	9839.2	0.045	9952.1	0.040	10023.5	0.055	10154.3	
ET		7.1		9.1			9762.5	10024.0	9910.0	10024.0
X1	0.773	31	9952.1	10023.5	500	500	500			
GR	1646.6	9335.0	1646.0	9415.0	1646.0	9485.0	1646.6	9575.0	1646.5	9635.0
GR	1646.7	9698.9	1646.5	9737.9	1646.1	9750.2	1646.4	9762.5	1645.3	9792.8
GR	1643.6	9814.0	1644.2	9822.1	1644.6	9839.2	1641.7	9850.1	1642.8	9859.3
GR	1642.9	9874.8	1642.1	9884.5	1642.8	9899.3	1642.7	9917.8	1643.2	9933.3
GR	1643.4	9952.1	1642.1	9960.6	1642.4	9975.3	1641.5	9982.1	1641.3	10000.0
GR	1641.0	10015.6	1646.1	10023.5	1646.0	10051.1	1645.8	10086.0	1646.3	10116.7
GR	1646.5	10154.3								
NC	0.055	0.055	0.045	0.1	0.3				9975.0	10028.0
ET				9.1						

\*\*\* XSECTN 0.872 IS UPSTREAM LIMIT TANK WASH STUDY (SOUTH BRANCH) \*\*\*

X1	0.872	29	9975.2	10027.2	520	520	520			
GR	1650.1	9550.0	1649.3	9694.5	1648.5	9724.8	1648.6	9742.3	1648.2	9752.5
GR	1648.4	9761.4	1648.4	9778.8	1648.3	9792.5	1648.4	9816.7	1648.3	9834.7
GR	1647.9	9852.8	1646.0	9874.2	1647.2	9884.5	1647.7	9905.1	1647.7	9925.8
GR	1647.1	9935.3	1647.7	9949.8	1647.9	9975.2	1642.9	10000.0	1643.8	10005.8
GR	1643.8	10017.8	1648.2	10027.2	1648.6	10037.6	1648.4	10057.6	1647.5	10074.3
GR	1648.0	10089.3	1648.7	10103.4	1649.0	10121.6	1649.2	10145.4		

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SECNO	DEPTH	CWSEL	CRISWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

\*PROF 1

CCHV= .100 CEHV= .300  
 \*SECNO .176  
 2096 WSEL NOT GIVEN, AVG OF MAX, MIN USED

3265 DIVIDED FLOW

\*\*\* XSECTN 0.176 IS THE FIRST XSECTN ON THE SOUTH BRANCH UPSTREAM FROM THE CONFLUENCE WITH TANK WASH \*\*\*

.176	4.28	1625.98	.00	.00	1626.39	.41	.00	.00	1625.20
2300.0	241.0	1320.2	738.8	131.4	209.4	233.4	.0	.0	1625.10
.00	1.83	6.30	3.17	.055	.040	.050	.000	1621.70	9695.56





*	5.948	3400.00	1628.34	.00	1628.60	.00	.00	9980.80	1625.80	1626.00	10031.40	10248.40
	5.948	3400.00	1629.22	.88	1629.64	1.04	9900.00	9980.80	1625.80	1626.00	10031.40	10075.00
	6.042	3400.00	1630.95	.00	1631.27	.00	.00	9986.90	1628.80	1629.30	10026.80	.00
	6.042	3400.00	1631.77	.82	1632.26	.99	9910.00	9986.90	1628.80	1629.30	10026.80	10075.00
	6.137	3400.00	1633.85	.00	1634.15	.00	.00	9982.10	1631.80	1632.20	10009.80	.00
	6.137	3400.00	1634.63	.79	1635.08	.93	9890.00	9982.10	1631.80	1632.20	10009.80	10090.00
	6.241	3400.00	1636.71	.00	1636.92	.00	.00	9978.20	1635.40	1635.50	10031.70	.00
	6.241	3400.00	1637.59	.88	1637.96	1.05	9840.00	9978.20	1635.40	1635.50	10031.70	10065.00
*	6.336	3400.00	1640.03	.00	1640.47	.00	.00	9988.20	1638.80	1639.00	10022.50	.00
*	6.336	3400.00	1640.88	.85	1641.50	1.03	9875.00	9988.20	1638.80	1639.00	10022.50	10075.00
*	6.432	3400.00	1643.76	.00	1644.00	.00	.00	9987.20	1641.50	1642.00	10012.30	10250.00
*	6.432	3400.00	1644.46	.69	1644.80	.80	9875.00	9987.20	1641.50	1642.00	10012.30	10100.00
	6.530	3400.00	1646.57	.00	1647.03	.00	.00	9986.00	1644.80	1645.30	10012.00	.00
*	6.530	3400.00	1647.29	.72	1648.09	1.06	9885.00	9986.00	1644.80	1645.30	10012.00	10050.00
	6.625	3400.00	1649.91	.00	1650.28	.00	.00	9978.80	1647.50	1647.80	10014.30	.00
*	6.625	3400.00	1650.84	.93	1651.33	1.04	9925.00	9978.80	1647.50	1647.80	10014.30	10090.00

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SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 1.073 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 1.170 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 1.265 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 1.360 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 1.360 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 1.654 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 2.520 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 2.995 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 3.091 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 CAUTION SECNO= 3.785 PROFILE= 1 CRITICAL DEPTH ASSUMED  
 CAUTION SECNO= 3.785 PROFILE= 1 MINIMUM SPECIFIC ENERGY  
 WARNING SECNO= 4.314 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 4.797 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 4.898 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 4.997 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 5.091 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 5.187 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 5.283 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 5.283 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 CAUTION SECNO= 5.381 PROFILE= 1 CRITICAL DEPTH ASSUMED  
 CAUTION SECNO= 5.381 PROFILE= 1 MINIMUM SPECIFIC ENERGY  
 CAUTION SECNO= 5.381 PROFILE= 2 CRITICAL DEPTH ASSUMED  
 CAUTION SECNO= 5.381 PROFILE= 2 MINIMUM SPECIFIC ENERGY  
 WARNING SECNO= 5.475 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 5.475 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 CAUTION SECNO= 5.571 PROFILE= 1 CRITICAL DEPTH ASSUMED  
 CAUTION SECNO= 5.571 PROFILE= 1 MINIMUM SPECIFIC ENERGY  
 CAUTION SECNO= 5.571 PROFILE= 2 CRITICAL DEPTH ASSUMED  
 CAUTION SECNO= 5.571 PROFILE= 2 MINIMUM SPECIFIC ENERGY  
 WARNING SECNO= 5.665 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 5.853 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

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WARNING SECNO= 5.853 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 5.948 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 6.336 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 6.336 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 6.432 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 6.432 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE  
 WARNING SECNO= 6.530 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

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FLOODWAY DATA, TANK WASH 100-YR ST  
 PROFILE NO. 2

STATION	WIDTH	FLOODWAY SECTION AREA	MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WATER SURFACE ELEVATION WITHOUT FLOODWAY	ELEVATION DIFFERENCE
.980	734.	1465.	4.5	1480.9	1480.0	.9
1.073	540.	1421.	4.7	1483.6	1482.7	.9
1.170	520.	1473.	4.5	1486.0	1485.6	.4
1.265	525.	1199.	5.6	1488.9	1488.0	.9
1.360	441.	1432.	4.7	1491.7	1490.9	.8
1.454	430.	1574.	4.3	1493.6	1492.8	.8
1.552	570.	1640.	4.1	1495.2	1494.6	.6
1.654	674.	1553.	4.3	1497.3	1497.0	.3
1.746	725.	1431.	4.7	1500.7	1500.3	.4
1.842	805.	1711.	3.9	1504.0	1503.2	.8
1.939	665.	1443.	4.7	1507.0	1506.3	.7
2.039	580.	1565.	4.3	1509.9	1509.0	.9
2.134	610.	1510.	4.5	1512.3	1511.5	.8
2.230	565.	1524.	4.5	1515.0	1514.1	.9
2.328	552.	1318.	5.2	1518.0	1517.3	.7
2.425	580.	1497.	4.5	1521.0	1520.1	.9
2.520	440.	1176.	5.8	1523.7	1522.8	.9
2.609	350.	1209.	5.6	1526.3	1525.8	.5
2.709	380.	1339.	5.1	1528.9	1528.4	.5
2.805	480.	1205.	5.6	1531.6	1531.1	.5
2.900	455.	1313.	5.3	1534.8	1534.3	.5
2.995	352.	1154.	6.0	1537.6	1537.3	.3
3.091	350.	1145.	6.0	1540.5	1539.5	1.0
3.186	375.	1222.	5.6	1543.3	1542.6	.7
3.281	485.	1149.	6.0	1546.2	1545.5	.7
3.375	505.	1311.	5.3	1549.5	1548.6	.9
3.470	350.	1032.	6.7	1551.9	1551.1	.8
3.568	230.	980.	7.0	1554.2	1553.7	.5
3.668	275.	981.	7.0	1556.8	1556.3	.5
3.785	350.	1065.	5.7	1560.3	1559.3	1.0
3.880	220.	746.	8.2	1563.2	1563.2	.0
4.003	350.	1107.	5.5	1568.1	1567.5	.6
4.117	310.	980.	6.2	1571.3	1570.6	.7
4.211	300.	947.	6.4	1574.7	1573.7	1.0
4.314	340.	1176.	5.2	1577.7	1576.8	.9
4.409	390.	1067.	5.7	1580.1	1579.3	.8
4.506	280.	977.	6.2	1583.4	1582.6	.8
4.599	257.	920.	6.6	1586.2	1585.6	.6
4.710	266.	854.	7.1	1590.0	1589.1	.9
4.797	291.	1241.	4.9	1592.5	1591.7	.8
4.898	235.	743.	8.2	1594.4	1594.5	-.1
4.997	305.	1106.	5.5	1598.7	1597.7	1.0

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FLOODWAY DATA, TANK WASH 100-YR ST  
 PROFILE NO. 2

STATION	WIDTH	FLOODWAY SECTION AREA	MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WATER SURFACE ELEVATION WITHOUT FLOODWAY	ELEVATION DIFFERENCE
5.091	306.	1025.	4.2	1601.0	1600.2	.8
5.187	267.	521.	8.3	1603.4	1603.6	-.2
5.283	369.	1090.	3.9	1607.4	1607.0	.4
5.381	188.	481.	8.9	1610.0	1609.9	.1
5.475	215.	838.	5.1	1614.1	1613.5	.6
5.571	200.	519.	8.3	1616.7	1616.5	.2
5.665	209.	688.	6.2	1621.0	1620.2	.8
5.763	388.	1181.	3.6	1623.5	1622.9	.6
5.853	175.	498.	6.8	1625.2	1624.9	.3
5.948	175.	695.	4.9	1629.2	1628.3	.9
6.042	165.	639.	5.3	1631.8	1631.0	.8
6.137	200.	706.	4.8	1634.6	1633.8	.8
6.241	225.	757.	4.5	1637.6	1636.7	.9
6.336	200.	575.	5.9	1640.8	1640.0	.8
6.432	225.	795.	4.3	1644.5	1643.8	.7
6.530	165.	541.	6.3	1647.3	1646.6	.7
6.625	165.	676.	5.0	1650.8	1649.9	.9

	6.137	3400.00	1633.85	935.50	1625.80	8.05	500.00	.00	9707.78	10255.79	.00	548.01	508.
	6.137	3400.00	1634.63	706.23	1625.80	8.83	500.00	9890.00	9890.00	10090.00	10090.00	200.00	244.
	6.241	3400.00	1636.71	1066.38	1629.80	6.91	565.00	.00	9617.37	10177.84	.00	560.47	516.
	6.241	3400.00	1637.59	756.61	1629.80	7.79	565.00	9840.00	9840.00	10065.00	10065.00	225.00	247.
*	6.336	3400.00	1640.03	747.20	1632.80	7.23	500.00	.00	9673.06	10256.44	.00	583.38	522.
*	6.336	3400.00	1640.88	575.14	1632.80	8.08	500.00	9875.00	9875.00	10075.00	10075.00	200.00	249.
*	6.432	3400.00	1643.76	1026.02	1635.50	8.26	505.00	.00	9737.74	10229.90	10250.00	492.16	528.
*	6.432	3400.00	1644.46	794.59	1635.50	8.96	505.00	9875.00	9875.00	10100.00	10100.00	225.00	252.
*	6.530	3400.00	1646.57	763.81	1638.60	7.97	515.00	.00	9753.32	10170.80	.00	417.48	534.
*	6.530	3400.00	1647.29	541.14	1638.60	8.69	515.00	9885.00	9885.00	10050.00	10050.00	165.00	254.
*	6.625	3400.00	1649.91	866.00	1641.80	8.11	500.00	.00	9784.14	10260.13	.00	440.09	539.
*	6.625	3400.00	1650.84	675.83	1641.80	9.04	500.00	9925.00	9925.00	10090.00	10090.00	165.00	256.

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TANK WASH 100-YR ST  
SUMMARY PRINTOUT

	SECNO	Q	CWSEL	DIFWSP	EG	DIFEG	STENCL	STCHL	XLBEL	RBEL	STCHR	STENCR
	.980	6600.00	1480.03	.00	1480.19	.00	.00	9859.30	1479.90	1479.40	10075.20	.00
	.980	6600.00	1480.96	.93	1481.41	1.22	9490.00	9859.30	1479.90	1479.40	10075.20	10224.00
*	1.073	6700.00	1482.74	.00	1483.32	.00	9250.00	9945.20	1482.20	1482.30	10162.30	10282.00
	1.073	6700.00	1483.64	.90	1484.10	.79	9650.00	9945.20	1482.20	1482.30	10162.30	10190.00
*	1.170	6700.00	1485.60	.00	1485.84	.00	9438.10	9962.50	1484.40	1484.10	10036.10	10654.30
	1.170	6700.00	1486.00	.39	1486.52	.68	9800.00	9962.50	1484.40	1484.10	10036.10	10320.00
*	1.265	6700.00	1487.97	.00	1488.41	.00	.00	9870.10	1487.50	1488.10	10029.10	10802.40
	1.265	6700.00	1488.89	.93	1489.57	1.16	9850.00	9870.10	1487.50	1488.10	10029.10	10375.00
*	1.360	6700.00	1490.94	.00	1491.25	.00	9864.10	9949.10	1489.50	1489.80	10109.50	11031.90
*	1.360	6700.00	1491.71	.78	1492.16	.91	9949.00	9949.10	1489.50	1489.80	10109.50	10390.00
	1.454	6700.00	1492.77	.00	1493.02	.00	.00	10016.20	1491.10	1492.70	10172.30	.00
	1.454	6700.00	1493.52	.75	1493.82	.81	9810.00	10016.20	1491.10	1492.70	10172.30	10240.00
	1.552	6700.00	1494.56	.00	1494.74	.00	.00	9905.60	1493.60	1493.20	10029.90	.00
	1.552	6700.00	1495.16	.60	1495.43	.69	9680.00	9905.60	1493.60	1493.20	10029.90	10250.00
*	1.654	6700.00	1497.03	.00	1497.35	.00	9568.90	9886.40	1496.10	1496.50	10126.50	10860.70
	1.654	6700.00	1497.36	.34	1497.66	.32	9625.00	9886.40	1496.10	1496.50	10126.50	10300.00
	1.746	6700.00	1500.26	.00	1500.42	.00	9279.20	9959.50	1499.70	1499.70	10112.20	10896.00
	1.746	6700.00	1500.67	.42	1501.03	.61	9575.00	9959.50	1499.70	1499.70	10112.20	10300.00
	1.842	6700.00	1503.16	.00	1503.37	.00	8990.00	9912.90	1502.10	1502.70	10020.60	10771.00
	1.842	6700.00	1503.99	.83	1504.29	.92	9595.00	9912.90	1502.10	1502.70	10020.60	10400.00
	1.939	6800.00	1506.31	.00	1506.48	.00	.00	9945.60	1505.60	1505.90	10102.80	.00
	1.939	6800.00	1507.01	.70	1507.39	.91	9650.00	9945.60	1505.60	1505.90	10102.80	10315.00
	2.039	6800.00	1509.04	.00	1509.26	.00	.00	9950.90	1508.70	1509.20	10173.20	.00
	2.039	6800.00	1509.92	.89	1510.23	.97	9640.00	9950.90	1508.70	1509.20	10173.20	10220.00
	2.134	6800.00	1511.55	.00	1511.72	.00	.00	9954.20	1511.00	1511.30	10095.40	.00
	2.134	6800.00	1512.35	.80	1512.69	.98	9530.00	9954.20	1511.00	1511.30	10095.40	10140.00
	2.230	6800.00	1514.14	.00	1514.31	.00	8800.00	9890.90	1513.80	1513.90	10079.60	10392.40
	2.230	6800.00	1515.06	.93	1515.38	1.07	9550.00	9890.90	1513.80	1513.90	10079.60	10115.00
	2.328	6800.00	1517.26	.00	1517.60	.00	9172.70	9918.30	1516.80	1517.20	10051.30	10082.20
	2.328	6800.00	1517.98	.72	1518.46	.86	9500.00	9918.30	1516.80	1517.20	10051.30	10052.00
	2.425	6800.00	1520.14	.00	1520.37	.00	.00	9972.40	1519.30	1518.70	10041.20	.00
	2.425	6800.00	1521.05	.91	1521.49	1.13	9550.00	9972.40	1519.30	1518.70	10041.20	10130.00

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	SECNO	Q	CWSEL	DIFWSP	EG	DIFEG	STENCL	STCHL	XLBEL	RBEL	STCHR	STENCR
*	2.520	6800.00	1522.82	.00	1523.30	.00	9287.20	9835.80	1522.30	1522.10	10075.10	10242.00
	2.520	6800.00	1523.74	.91	1524.38	1.08	9640.00	9835.80	1522.30	1522.10	10075.10	10080.00
	2.609	6800.00	1525.76	.00	1526.19	.00	9375.00	9907.90	1524.20	1523.90	10059.90	10330.90
	2.609	6800.00	1526.28	.52	1526.88	.70	9830.00	9907.90	1524.20	1523.90	10059.90	10180.00
	2.709	6800.00	1528.38	.00	1528.71	.00	9497.40	9935.80	1527.40	1527.70	10089.70	10200.00
	2.709	6800.00	1528.91	.53	1529.34	.63	9725.00	9935.80	1527.40	1527.70	10089.70	10105.00
	2.805	6800.00	1531.05	.00	1531.45	.00	.00	9967.10	1529.30	1529.40	10044.60	.00
	2.805	6800.00	1531.60	.55	1532.33	.87	9730.00	9967.10	1529.30	1529.40	10044.60	10210.00
	2.900	6900.00	1534.30	.00	1535.02	.00	9510.00	9974.10	1532.50	1532.20	10066.00	10252.40
	2.900	6900.00	1534.82	.53	1535.38	.36	9715.00	9974.10	1532.50	1532.20	10066.00	10170.00
*	2.995	6900.00	1537.31	.00	1537.56	.00	9447.30	9948.20	1535.70	1537.20	10100.00	10269.00
	2.995	6900.00	1537.61	.30	1538.18	.61	9750.00	9948.20	1535.70	1537.20	10100.00	10102.00

*	3.091	6900.00	1539.48	.00	1540.04	.00	9255.00	9967.00	1538.20	1538.10	10061.50	10187.20
	3.091	6900.00	1540.49	1.00	1541.25	1.21	9730.00	9967.00	1538.20	1538.10	10061.50	10080.00
	3.186	6900.00	1542.59	.00	1542.97	.00	.00	9889.00	1541.50	1541.40	10093.30	10193.60
	3.186	6900.00	1543.31	.72	1543.89	.92	9775.00	9889.00	1541.50	1541.40	10093.30	10150.00
	3.281	6900.00	1545.52	.00	1546.03	.00	.00	9950.40	1544.70	1544.50	10052.10	.00
	3.281	6900.00	1546.17	.65	1547.01	.98	9710.00	9950.40	1544.70	1544.50	10052.10	10195.00
	3.375	6900.00	1548.56	.00	1548.96	.00	9265.00	9962.00	1548.20	1547.60	10055.10	10211.00
	3.375	6900.00	1549.46	.91	1550.13	1.17	9690.00	9962.00	1548.20	1547.60	10055.10	10195.00
	3.470	6900.00	1551.13	.00	1551.74	.00	9570.00	9967.20	1549.60	1550.40	10174.30	10523.50
	3.470	6900.00	1551.92	.79	1552.69	.95	9825.00	9967.20	1549.60	1550.40	10174.30	10175.00
	3.568	6900.00	1553.71	.00	1554.49	.00	9650.00	9935.50	1551.50	1553.30	10084.50	10417.00
	3.568	6900.00	1554.21	.49	1555.10	.60	9880.00	9935.50	1551.50	1553.30	10084.50	10110.00
	3.668	6900.00	1556.32	.00	1556.77	.00	9503.20	9942.70	1554.80	1555.10	10062.30	10252.10
	3.668	6900.00	1556.82	.50	1557.76	1.00	9800.00	9942.70	1554.80	1555.10	10062.30	10075.00
*	3.785	5400.00	1559.26	.00	1560.19	.00	9603.30	9970.20	1559.30	1557.90	10095.60	10177.70
	3.785	6100.00	1560.26	1.00	1560.95	.76	9750.00	9970.20	1559.30	1557.90	10095.60	10100.00
	3.880	5400.00	1563.23	.00	1564.00	.00	9862.10	9897.20	1563.00	1562.60	10105.80	10298.00
	3.880	6100.00	1563.22	-.01	1564.27	.27	9890.00	9897.20	1563.00	1562.60	10105.80	10110.00
	4.003	5400.00	1567.46	.00	1567.83	.00	9669.60	9925.00	1566.80	1566.50	10075.00	10165.00
	4.003	6100.00	1568.04	.58	1568.52	.69	9775.00	9925.00	1566.80	1566.50	10075.00	10125.00
	4.117	5400.00	1570.59	.00	1570.97	.00	9869.60	9929.70	1569.80	1569.20	10121.70	10522.10
	4.117	6100.00	1571.28	.69	1571.97	1.00	9900.00	9929.70	1569.80	1569.20	10121.70	10210.00

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	SECNO	Q	CWSEL	DIFWSP	EG	DIFEG	STENCL	STCHL	XLBEL	RBEL	STCHR	STENCR
	4.211	6100.00	1573.67	.00	1574.03	.00	.00	9976.60	1572.30	1572.40	10188.70	.00
	4.211	6100.00	1574.63	.96	1575.34	1.32	9930.00	9976.60	1572.30	1572.40	10188.70	10230.00
*	4.314	6100.00	1576.82	.00	1577.11	.00	.00	9929.80	1575.30	1576.00	10094.70	.00
	4.314	6100.00	1577.73	.91	1578.18	1.07	9810.00	9929.80	1575.30	1576.00	10094.70	10150.00
	4.409	6100.00	1579.33	.00	1579.65	.00	.00	9942.80	1578.40	1578.40	10097.40	.00
	4.409	6100.00	1580.09	.76	1580.67	1.03	9710.00	9942.80	1578.40	1578.40	10097.40	10100.00
	4.506	6100.00	1582.64	.00	1583.16	.00	9458.40	9918.70	1580.40	1581.30	10022.00	10130.20
	4.506	6100.00	1583.41	.77	1584.09	.93	9770.00	9918.70	1580.40	1581.30	10022.00	10050.00
	4.599	6100.00	1585.60	.00	1586.09	.00	9402.90	9966.20	1583.30	1585.40	10069.80	10158.30
	4.599	6100.00	1586.24	.64	1587.09	1.01	9820.00	9966.20	1583.30	1585.40	10069.80	10077.00
	4.710	6100.00	1589.09	.00	1589.55	.00	9340.00	9868.80	1588.80	1589.20	10040.20	10098.30
	4.710	6100.00	1590.03	.94	1590.93	1.38	9775.00	9868.80	1588.80	1589.20	10040.20	10041.00
*	4.797	6100.00	1591.73	.00	1592.23	.00	9689.10	9879.60	1591.50	1590.80	10165.80	10222.10
	4.797	6100.00	1592.51	.78	1592.89	.66	9875.00	9879.60	1591.50	1590.80	10165.80	10166.00
*	4.898	6100.00	1594.49	.00	1595.10	.00	9800.00	9902.90	1592.60	1593.40	10114.10	10405.40
	4.898	6100.00	1594.42	-.07	1595.51	.40	9900.00	9902.90	1592.60	1593.40	10114.10	10135.00
*	4.997	6100.00	1597.74	.00	1598.02	.00	9687.20	9932.90	1597.00	1596.60	10225.00	10500.00
	4.997	6100.00	1598.74	1.00	1599.22	1.20	9925.00	9932.90	1597.00	1596.60	10225.00	10230.00
*	5.091	3800.00	1600.16	.00	1600.51	.00	9916.10	9931.80	1600.30	1600.30	10235.70	10534.80
	5.091	4300.00	1600.96	.81	1601.24	.73	9930.00	9931.80	1600.30	1600.30	10235.70	10236.00
*	5.187	3800.00	1603.55	.00	1604.32	.00	9804.60	9952.20	1603.10	1603.10	10123.30	10422.70
	5.187	4300.00	1603.38	-.17	1604.52	.20	9857.00	9952.20	1603.10	1603.10	10123.30	10124.00
*	5.283	3800.00	1607.03	.00	1607.25	.00	9857.10	9953.80	1606.40	1606.30	10288.30	10429.30
*	5.283	4300.00	1607.46	.43	1607.71	.46	9920.00	9953.80	1606.40	1606.30	10288.30	10289.00
*	5.381	3800.00	1609.88	.00	1610.86	.00	9849.60	9921.20	1607.50	1609.20	10087.80	10317.10
*	5.381	4300.00	1609.96	.08	1611.25	.39	9900.00	9921.20	1607.50	1609.20	10087.80	10088.00
*	5.475	4300.00	1613.54	.00	1613.82	.00	.00	9923.50	1611.60	1612.10	10044.40	.00
*	5.475	4300.00	1614.15	.61	1614.60	.79	9830.00	9923.50	1611.60	1612.10	10044.40	10045.00
*	5.571	4300.00	1616.55	.00	1617.29	.00	9679.40	9975.70	1614.60	1615.80	10057.50	10210.50
*	5.571	4300.00	1616.70	.15	1618.07	.78	9880.00	9975.70	1614.60	1615.80	10057.50	10080.00
*	5.665	4300.00	1620.16	.00	1620.84	.00	9743.30	9960.00	1618.80	1618.80	10048.50	10402.40
	5.665	4300.00	1620.99	.83	1621.80	.96	9865.80	9960.00	1618.80	1618.80	10048.50	10075.00
	5.763	4300.00	1622.90	.00	1623.07	.00	9841.60	9933.00	1622.60	1621.90	10312.60	10753.00
	5.763	4300.00	1623.52	.62	1623.73	.66	9925.00	9933.00	1622.60	1621.90	10312.60	10313.00

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	SECNO	Q	CWSEL	DIFWSP	EG	DIFEG	STENCL	STCHL	XLBEL	RBEL	STCHR	STENCR
*	5.853	3400.00	1624.93	.00	1625.45	.00	.00	9968.40	1623.50	1623.40	10027.30	.00
*	5.853	3400.00	1625.24	.31	1626.16	.71	9900.00	9968.40	1623.50	1623.40	10027.30	10075.00

*	6.336	3400.00	1640.03	.00	1296.42	3.78	55.00	1011.81	7.73	50.00	1091.77	3.99	55.
*	6.336	3400.00	1640.88	.00	1469.88	5.17	55.00	1275.32	7.97	50.00	654.79	5.01	55.
*	6.432	3400.00	1643.76	.00	1415.20	3.00	55.00	883.95	5.81	50.00	1100.85	2.74	55.
*	6.432	3400.00	1644.46	.00	1452.74	3.91	55.00	1060.83	6.26	50.00	886.43	3.50	55.
*	6.530	3400.00	1646.57	.00	1403.16	3.72	55.00	1154.45	7.83	50.00	842.39	3.52	55.
*	6.530	3400.00	1647.29	.00	1398.24	5.09	55.00	1513.69	9.13	50.00	488.07	4.85	55.
*	6.625	3400.00	1649.91	.00	1003.33	3.28	55.00	1410.66	6.69	50.00	986.01	2.82	55.
*	6.625	3400.00	1650.84	.00	800.77	4.14	55.00	1683.15	6.91	50.00	916.08	3.84	55.

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TANK WASH 100-YR ST  
SUMMARY PRINTOUT

	SECNO	Q	CWSEL	AREA	ELMIN	DEPTH	XLCH	STENCL	SSTA	ENDST	STENCR	TOPWID	TW
	.980	6600.00	1480.03	2201.64	1475.90	4.13	.00	.00	8671.50	10224.14	.00	1552.64	.
	.980	6600.00	1480.96	1464.66	1475.90	5.06	.00	9490.00	9490.00	10224.00	10224.00	734.00	.
*	1.073	6700.00	1482.74	1369.90	1476.70	6.04	490.00	9250.00	9292.80	10191.62	10282.00	898.82	12.
	1.073	6700.00	1483.64	1420.60	1476.70	6.94	490.00	9650.00	9650.00	10190.00	10190.00	540.00	6.
*	1.170	6700.00	1485.60	2256.63	1478.60	7.00	510.00	9438.10	9481.97	10633.19	10654.30	1151.22	24.
	1.170	6700.00	1486.00	1473.06	1478.60	7.40	510.00	9800.00	9800.00	10320.00	10320.00	520.00	13.
*	1.265	6700.00	1487.97	1517.71	1480.80	7.17	500.00	.00	9557.03	10795.35	10802.40	1234.86	38.
	1.265	6700.00	1488.89	1198.82	1480.80	8.09	500.00	9850.00	9850.00	10375.00	10375.00	525.00	19.
*	1.360	6700.00	1490.94	1954.31	1483.60	7.34	500.00	9864.10	9900.82	11007.32	11031.90	1106.50	50.
*	1.360	6700.00	1491.71	1432.24	1483.60	8.11	500.00	9949.00	9949.00	10390.00	10390.00	441.00	24.
	1.454	6700.00	1492.77	1972.99	1486.30	6.47	495.00	.00	9794.78	10849.25	.00	1054.47	61.
	1.454	6700.00	1493.52	1574.19	1486.30	7.22	495.00	9810.00	9810.00	10240.00	10240.00	430.00	28.
	1.552	6700.00	1494.56	2143.04	1488.30	6.26	515.00	.00	9629.02	10862.80	.00	1218.98	74.
	1.552	6700.00	1495.16	1640.33	1488.30	6.86	515.00	9680.00	9680.00	10250.00	10250.00	570.00	34.
*	1.654	6700.00	1497.03	1555.44	1490.00	7.03	540.00	9568.90	9607.13	10801.27	10860.70	1022.93	87.
	1.654	6700.00	1497.36	1553.46	1490.00	7.36	540.00	9625.00	9625.00	10298.88	10300.00	673.88	42.
	1.746	6700.00	1500.26	2139.60	1494.40	5.86	485.00	9279.20	9281.16	10834.82	10896.00	1553.66	102.
	1.746	6700.00	1500.67	1431.28	1494.40	6.27	485.00	9575.00	9575.00	10300.00	10300.00	725.00	50.
	1.842	6700.00	1503.16	2071.05	1497.90	5.26	505.00	8990.00	9077.77	10716.47	10771.00	1607.54	121.
	1.842	6700.00	1503.99	1711.32	1497.90	6.09	505.00	9595.00	9595.00	10400.00	10400.00	805.00	59.
	1.939	6800.00	1506.31	2152.93	1500.40	5.91	510.00	.00	8918.39	10755.65	.00	1837.26	141.
	1.939	6800.00	1507.01	1443.32	1500.40	6.61	510.00	9650.00	9650.00	10315.00	10315.00	665.00	68.
	2.039	6800.00	1509.04	1857.20	1504.60	4.44	530.00	.00	9262.18	10625.24	.00	1256.59	160.
	2.039	6800.00	1509.92	1564.59	1504.60	5.32	530.00	9640.00	9640.00	10220.00	10220.00	580.00	75.
	2.134	6800.00	1511.55	2156.24	1507.50	4.05	500.00	.00	8853.84	10364.23	.00	1510.39	177.
	2.134	6800.00	1512.35	1509.90	1507.50	4.85	500.00	9530.00	9530.00	10140.00	10140.00	610.00	82.
	2.230	6800.00	1514.14	2051.38	1510.10	4.04	505.00	8800.00	8863.69	10163.17	10392.40	1299.49	194.
	2.230	6800.00	1515.06	1524.44	1510.10	4.96	505.00	9550.00	9550.00	10115.00	10115.00	565.00	89.
	2.328	6800.00	1517.26	1545.70	1512.50	4.76	520.00	9172.70	9181.44	10057.82	10082.20	876.38	207.
	2.328	6800.00	1517.98	1318.49	1512.50	5.48	520.00	9500.00	9500.00	10052.00	10052.00	552.00	96.
	2.425	6800.00	1520.14	2061.21	1515.20	4.94	510.00	.00	9067.04	10230.00	.00	1162.96	219.
	2.425	6800.00	1521.05	1496.54	1515.20	5.85	510.00	9550.00	9550.00	10130.00	10130.00	580.00	103.

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	SECNO	Q	CWSEL	AREA	ELMIN	DEPTH	XLCH	STENCL	SSTA	ENDST	STENCR	TOPWID	TW
*	2.520	6800.00	1522.82	1402.68	1518.20	4.62	515.00	9287.20	9287.20	10194.25	10242.00	813.57	230.
	2.520	6800.00	1523.74	1175.69	1518.20	5.54	515.00	9640.00	9640.00	10080.00	10080.00	440.00	109.
	2.609	6800.00	1525.76	1644.50	1520.50	5.26	470.00	9375.00	9433.52	10292.30	10330.90	858.78	239.
	2.609	6800.00	1526.28	1209.38	1520.50	5.78	470.00	9830.00	9830.00	10180.00	10180.00	350.00	113.
	2.709	6800.00	1528.38	1551.66	1522.40	5.98	530.00	9497.40	9531.23	10165.54	10200.00	634.31	248.
	2.709	6800.00	1528.91	1339.39	1522.40	6.51	530.00	9725.00	9725.00	10105.00	10105.00	380.00	117.
	2.805	6800.00	1531.05	1665.29	1526.10	4.95	505.00	.00	9319.92	10306.02	.00	986.10	258.
	2.805	6800.00	1531.60	1204.59	1526.10	5.50	505.00	9730.00	9730.00	10210.00	10210.00	480.00	122.
	2.900	6900.00	1534.30	1246.05	1528.90	5.40	500.00	9510.00	9510.00	10194.28	10252.40	684.28	268.
	2.900	6900.00	1534.82	1313.37	1528.90	5.92	500.00	9715.00	9715.00	10170.00	10170.00	455.00	128.
*	2.995	6900.00	1537.31	1766.29	1531.30	6.01	500.00	9447.30	9447.30	10269.00	10269.00	821.70	276.
	2.995	6900.00	1537.61	1154.24	1531.30	6.31	500.00	9750.00	9750.00	10102.00	10102.00	352.00	132.
*	3.091	6900.00	1539.48	1454.58	1533.30	6.18	505.00	9255.00	9361.24	10187.20	10187.20	825.96	286.
	3.091	6900.00	1540.49	1145.27	1533.30	7.19	505.00	9730.00	9730.00	10080.00	10080.00	350.00	136.
	3.186	6900.00	1542.59	1610.07	1536.10	6.49	500.00	.00	9381.10	10193.60	10193.60	812.50	295.
	3.186	6900.00	1543.31	1221.52	1536.10	7.21	500.00	9775.00	9775.00	10150.00	10150.00	375.00	141.

3.281	6900.00	1545.52	1557.50	1537.50	8.02	500.00	.00	9307.69	10360.53	.00	1052.85	306.	
3.281	6900.00	1546.17	1148.72	1537.50	8.67	500.00	9710.00	9710.00	10195.00	10195.00	485.00	146.	
3.375	6900.00	1548.56	1678.31	1539.90	8.66	495.00	9265.00	9265.00	10187.97	10211.00	922.97	318.	
3.375	6900.00	1549.46	1310.95	1539.90	9.56	495.00	9690.00	9690.00	10195.00	10195.00	505.00	151.	
3.470	6900.00	1551.13	1248.95	1542.80	8.33	500.00	9570.00	9570.00	10190.09	10523.50	514.93	326.	
3.470	6900.00	1551.92	1032.24	1542.80	9.12	500.00	9825.00	9825.00	10175.00	10175.00	350.00	156.	
3.568	6900.00	1553.71	1216.81	1546.60	7.11	510.00	9650.00	9688.45	10203.34	10417.00	514.89	100.	
3.568	6900.00	1554.21	980.00	1546.60	7.61	510.00	9880.00	9880.00	10110.00	10110.00	230.00	100.	
3.668	6900.00	1556.32	1465.61	1549.50	6.82	530.00	9503.20	9503.20	10131.46	10252.10	628.26	339.	
3.668	6900.00	1556.82	981.42	1549.50	7.32	530.00	9800.00	9800.00	10075.00	10075.00	275.00	163.	
*	3.785	5400.00	1559.26	856.42	1552.50	6.76	620.00	9603.30	9616.79	10118.71	10177.70	470.15	346.
	3.785	6100.00	1560.26	1064.65	1552.50	7.76	620.00	9750.00	9750.00	10100.00	10100.00	350.00	167.
3.880	5400.00	1563.23	812.37	1555.20	8.03	500.00	9862.10	9862.10	10209.03	10298.00	346.93	350.	
3.880	6100.00	1563.22	745.97	1555.20	8.02	500.00	9890.00	9890.00	10110.00	10110.00	220.00	170.	
4.003	5400.00	1567.46	1116.66	1558.00	9.46	650.00	9669.60	9669.60	10164.32	10165.00	494.72	356.	
4.003	6100.00	1568.04	1107.07	1558.00	10.04	650.00	9775.00	9775.00	10125.00	10125.00	350.00	174.	
4.117	5400.00	1570.59	1199.27	1560.30	10.29	600.00	9869.60	9869.60	10466.50	10522.10	596.90	364.	
4.117	6100.00	1571.28	979.76	1560.30	10.98	600.00	9900.00	9900.00	10210.00	10210.00	310.00	179.	

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SECNO	Q	CWSEL	AREA	ELMIN	DEPTH	XLCH	STENCL	SSTA	ENDST	STENCR	TOPWID	TW	
4.211	6100.00	1573.67	1429.73	1567.50	6.17	495.00	.00	9690.87	10564.00	.00	873.13	372.	
4.211	6100.00	1574.63	947.07	1567.50	7.13	495.00	9930.00	9930.00	10230.00	10230.00	300.00	182.	
*	4.314	6100.00	1576.82	1672.73	1570.70	6.12	.00	9510.57	10641.11	.00	1130.54	384.	
	4.314	6100.00	1577.73	1175.72	1570.70	7.03	560.00	9810.00	9810.00	10150.00	10150.00	340.00	186.
4.409	6100.00	1579.33	1430.41	1573.00	6.33	495.00	.00	9343.01	10119.51	.00	776.50	395.	
4.409	6100.00	1580.09	1066.72	1573.00	7.09	495.00	9710.00	9710.00	10100.00	10100.00	390.00	190.	
4.506	6100.00	1582.64	1127.05	1577.40	5.24	510.00	9458.40	9540.44	10084.67	10130.20	531.34	403.	
4.506	6100.00	1583.41	977.12	1577.40	6.01	510.00	9770.00	9770.00	10050.00	10050.00	280.00	194.	
4.599	6100.00	1585.60	1332.44	1579.80	5.80	495.00	9402.90	9467.24	10077.08	10158.30	609.84	410.	
4.599	6100.00	1586.24	919.76	1579.80	6.44	495.00	9820.00	9820.00	10077.00	10077.00	257.00	198.	
4.710	6100.00	1589.09	1266.88	1582.90	6.19	575.00	9340.00	9340.00	10039.82	10098.30	699.82	419.	
4.710	6100.00	1590.03	853.54	1582.90	7.13	575.00	9775.00	9775.00	10041.00	10041.00	266.00	200.	
*	4.797	6100.00	1591.73	1145.42	1585.10	6.63	470.00	9689.10	9689.10	10220.94	10222.10	460.77	400.
	4.797	6100.00	1592.51	1241.07	1585.10	7.41	470.00	9875.00	9875.00	10166.00	10166.00	291.00	204.
*	4.898	6100.00	1594.49	1053.96	1588.20	6.29	535.00	9800.00	9864.99	10274.22	10405.40	409.23	430.
	4.898	6100.00	1594.42	742.61	1588.20	6.22	535.00	9900.00	9900.00	10135.00	10135.00	235.00	207.
*	4.997	6100.00	1597.74	1508.94	1590.60	7.14	525.00	9687.20	9690.14	10476.23	10500.00	786.08	438.
	4.997	6100.00	1598.74	1106.44	1590.60	8.14	525.00	9925.00	9925.00	10230.00	10230.00	305.00	210.
*	5.091	3800.00	1600.16	822.03	1593.00	7.16	495.00	9916.10	9936.86	10456.43	10534.80	412.51	444.
	5.091	4300.00	1600.96	1024.62	1593.00	7.96	495.00	9930.00	9930.00	10236.00	10236.00	306.00	214.
*	5.187	3800.00	1603.55	569.27	1596.10	7.45	505.00	9804.60	9854.21	10142.02	10422.70	287.81	448.
	5.187	4300.00	1603.38	520.52	1596.10	7.28	505.00	9857.00	9857.20	10124.00	10124.00	264.89	217.
*	5.283	3800.00	1607.03	1043.50	1599.60	7.43	505.00	9857.10	9919.98	10429.30	10429.30	509.31	453.
*	5.283	4300.00	1607.46	1090.03	1599.60	7.86	505.00	9920.00	9920.00	10289.00	10289.00	369.00	221.
*	5.381	3800.00	1609.88	524.59	1606.10	3.78	515.00	9849.60	9890.62	10208.05	10317.10	315.63	458.
*	5.381	4300.00	1609.96	480.90	1606.10	3.86	515.00	9900.00	9900.00	10088.00	10088.00	188.00	224.
*	5.475	4300.00	1613.54	1226.55	1608.30	5.24	495.00	.00	9437.75	10113.22	.00	675.46	464.
*	5.475	4300.00	1614.15	838.41	1608.30	5.85	495.00	9830.00	9830.00	10045.00	10045.00	215.00	226.
*	5.571	4300.00	1616.55	809.60	1609.90	6.65	505.00	9679.40	9679.40	10210.50	10210.50	531.10	471.
*	5.571	4300.00	1616.70	519.07	1609.90	6.80	505.00	9880.00	9880.00	10080.00	10080.00	200.00	229.
*	5.665	4300.00	1620.16	846.37	1612.30	7.86	510.00	9743.30	9743.30	10245.51	10402.40	502.21	477.
	5.665	4300.00	1620.99	688.33	1612.30	8.69	510.00	9865.80	9865.80	10075.00	10075.00	209.20	231.
	5.763	4300.00	1622.90	1421.60	1615.10	7.80	510.00	9841.60	9899.89	10687.21	10753.00	758.33	484.
	5.763	4300.00	1623.52	1180.96	1615.10	8.42	510.00	9925.00	9925.00	10313.00	10313.00	388.00	235.

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SECNO	Q	CWSEL	AREA	ELMIN	DEPTH	XLCH	STENCL	SSTA	ENDST	STENCR	TOPWID	TW	
*	5.853	3400.00	1624.93	745.08	1617.80	7.13	475.00	.00	9718.17	10271.58	.00	533.53	470.
*	5.853	3400.00	1625.24	498.05	1617.80	7.44	475.00	9900.00	9900.00	10075.00	10075.00	175.00	230.
*	5.948	3400.00	1628.34	959.35	1620.00	8.34	500.00	.00	9676.94	10239.63	10248.40	556.13	497.
	5.948	3400.00	1629.22	695.01	1620.00	9.22	500.00	9900.00	9900.00	10075.00	10075.00	175.00	240.
	6.042	3400.00	1630.95	841.21	1622.50	8.45	495.00	.00	9752.91	10173.01	.00	420.11	503.
	6.042	3400.00	1631.77	638.93	1622.50	9.27	495.00	9910.00	9910.00	10075.00	10075.00	165.00	242.

NOTE- ASTERISK (\*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

TANK WASH 100-YR ST  
 SUMMARY PRINTOUT

SECNO	Q	CWSEL	CRWS	QLOB	VLOB	K*XL	QCH	VCH	K*XLNCH	QROB	VROB	K*X
.980	6600.00	1480.03	.00	4473.91	2.74	55.00	1961.11	4.19	40.00	164.98	1.60	55.
.980	6600.00	1480.96	.00	1604.95	2.90	55.00	4254.28	6.36	40.00	740.77	3.07	55.
* 1.073	6700.00	1482.74	.00	2227.62	3.03	55.00	4466.06	7.12	41.26	6.32	.97	55.
1.073	6700.00	1483.64	.00	1645.82	2.91	55.00	4990.70	6.06	41.42	63.48	2.01	55.
* 1.170	6700.00	1485.60	.00	1748.25	2.21	55.00	2193.94	5.91	40.00	2757.80	2.52	55.
1.170	6700.00	1486.00	.00	1187.47	3.28	55.00	3084.39	7.71	40.00	2428.14	3.41	55.
* 1.265	6700.00	1487.97	.00	870.91	2.80	55.00	2932.48	7.04	40.00	2896.61	3.67	55.
1.265	6700.00	1488.89	.00	95.79	3.09	55.00	4363.14	7.75	40.00	2241.07	3.71	55.
* 1.360	6700.00	1490.94	.00	72.01	1.68	55.00	3943.66	5.55	45.00	2684.33	2.23	55.
* 1.360	6700.00	1491.71	.00	.08	.35	55.00	5012.01	6.01	45.00	1687.91	2.82	55.
1.454	6700.00	1492.77	.00	4088.08	4.65	48.33	1273.42	3.43	45.00	1338.50	1.85	55.
1.454	6700.00	1493.52	.00	4569.90	4.71	48.66	1891.49	3.87	45.00	238.61	2.07	55.
1.552	6700.00	1494.56	.00	2632.80	4.26	45.54	1079.39	3.51	45.00	2987.80	2.45	51.
1.552	6700.00	1495.16	.00	3199.96	4.59	45.56	1513.92	3.96	45.00	1986.12	3.54	47.
* 1.654	6700.00	1497.03	.00	3881.90	5.07	51.69	1545.64	4.10	45.00	1272.46	3.09	49.
1.654	6700.00	1497.36	.00	3983.47	4.78	51.55	1707.70	3.76	45.00	1008.83	3.79	46.
1.746	6700.00	1500.26	.00	3794.92	3.30	55.00	982.86	3.75	40.00	1922.23	2.64	50.
1.746	6700.00	1500.67	.00	3112.24	4.19	55.00	1779.67	5.48	40.00	1808.09	4.97	46.
1.842	6700.00	1503.16	.00	3176.28	2.96	55.00	1540.90	5.62	40.00	1982.83	2.73	50.
1.842	6700.00	1503.99	.00	2190.03	3.31	55.00	2173.54	5.99	40.00	2336.43	3.41	48.
1.939	6800.00	1506.31	.00	4493.45	3.04	55.00	1431.81	4.45	40.00	874.74	2.49	48.
1.939	6800.00	1507.01	.00	2981.73	4.17	55.00	2609.86	6.04	40.00	1208.41	4.08	47.

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SECNO	Q	CWSEL	CRWS	QLOB	VLOB	K*XL	QCH	VCH	K*XLNCH	QROB	VROB	K*X
2.039	6800.00	1509.04	.00	4803.42	3.73	50.00	1843.90	4.16	40.00	152.68	1.20	55.
2.039	6800.00	1509.92	.00	3610.19	4.05	50.00	3146.33	4.90	40.00	43.48	1.36	55.
2.134	6800.00	1511.55	.00	5531.53	3.09	50.07	1216.10	4.08	40.00	52.37	.77	55.
2.134	6800.00	1512.35	.00	4433.80	4.22	50.37	2263.20	5.51	40.00	103.00	2.08	55.
2.230	6800.00	1514.14	.00	5468.65	3.26	50.00	1265.89	3.87	40.00	65.46	1.37	55.
2.230	6800.00	1515.06	.00	4177.15	4.32	50.00	2492.54	4.96	40.00	130.31	2.41	55.
2.328	6800.00	1517.26	.00	4812.93	3.97	50.00	1987.02	5.98	40.00	.05	.24	55.
2.328	6800.00	1517.98	.00	3861.34	4.34	50.00	2938.01	6.87	40.00	.65	1.19	55.
2.425	6800.00	1520.14	.00	4731.08	3.03	50.00	1567.76	5.79	40.00	501.16	2.20	55.
2.425	6800.00	1521.05	.00	3486.92	3.75	50.00	2461.19	7.40	40.00	851.89	3.63	55.
* 2.520	6800.00	1522.82	.00	2569.60	3.44	55.00	4219.87	6.53	40.00	10.53	1.22	55.
2.520	6800.00	1523.74	.00	883.26	2.91	55.00	5898.70	6.83	40.00	18.03	2.38	55.
2.609	6800.00	1525.76	.00	2181.10	2.89	55.00	3985.95	6.45	40.00	632.95	2.33	55.
2.609	6800.00	1526.28	.00	1247.64	4.47	55.00	4850.81	6.96	40.00	701.55	3.01	55.
2.709	6800.00	1528.38	.00	3911.93	3.94	55.00	2705.92	5.58	40.00	182.15	2.45	46.
2.709	6800.00	1528.91	.00	3347.60	4.44	55.00	3407.28	6.01	40.00	45.12	2.44	45.
2.805	6800.00	1531.05	.00	3211.11	3.28	55.00	2389.68	7.31	40.00	1199.22	3.35	48.
2.805	6800.00	1531.60	.00	1705.29	3.82	55.00	3249.25	8.81	40.00	1845.46	4.73	47.
2.900	6900.00	1534.30	.00	2729.66	4.17	45.71	3386.90	8.82	40.00	783.44	3.78	55.
2.900	6900.00	1534.82	.00	2739.75	4.37	45.00	3255.45	7.52	40.00	904.79	3.57	55.
* 2.995	6900.00	1537.31	.00	4672.14	3.81	45.01	2176.80	4.55	40.00	51.06	.84	55.
2.995	6900.00	1537.61	.00	3489.28	5.54	45.00	3409.86	6.51	40.00	.86	1.03	55.
* 3.091	6900.00	1539.48	.00	3497.01	3.64	50.00	3128.59	7.97	40.00	274.40	2.67	50.
3.091	6900.00	1540.49	.00	2633.26	4.31	50.00	4086.36	8.38	40.00	180.38	3.84	50.
3.186	6900.00	1542.59	.00	2346.89	3.07	50.00	4024.76	5.90	40.00	528.35	3.24	50.
3.186	6900.00	1543.31	.00	788.84	3.35	50.00	5496.13	6.61	40.00	615.03	3.98	50.
3.281	6900.00	1545.52	.00	2950.29	3.51	50.00	3146.28	7.65	40.00	803.42	2.64	50.
3.281	6900.00	1546.17	.00	1586.22	3.99	50.00	4223.15	8.86	40.00	1090.63	3.97	50.
3.375	6900.00	1548.56	.00	3378.78	3.19	50.00	2849.55	6.97	40.00	671.67	3.17	50.
3.375	6900.00	1549.46	.00	1554.78	3.24	50.00	3965.72	8.04	40.00	1379.50	4.08	50.

3.470	6900.00	1551.13	.00	1520.16	3.32	50.00	5373.13	6.85	40.00	6.71	1.16	50.
3.470	6900.00	1551.92	.00	165.81	2.00	50.00	6732.85	7.10	40.00	1.34	1.27	50.
3.568	6900.00	1553.71	.00	926.00	2.57	55.00	5810.56	7.63	40.00	163.44	1.72	55.
3.568	6900.00	1554.21	.00	378.64	3.08	55.00	6484.19	7.77	40.00	37.17	1.63	55.

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SECNO	Q	CWSEL	CRWS	QLOB	VLOB	K*XML	QCH	VCH	K*XML	QROB	VROB	K*X
3.668	6900.00	1556.32	.00	3110.72	3.70	46.38	3695.52	6.50	40.00	93.77	1.64	55.
3.668	6900.00	1556.82	.00	1492.39	4.51	45.00	5349.32	8.51	40.00	58.29	2.70	55.
* 3.785	5400.00	1559.26	1559.26	1095.47	3.27	50.00	4230.51	8.54	40.00	74.02	2.82	55.
3.785	6100.00	1560.26	.00	1480.92	3.42	50.00	4593.44	7.40	40.00	25.64	2.48	55.
3.880	5400.00	1563.23	.00	3.13	.65	50.00	5294.37	7.11	40.00	102.49	1.63	55.
3.880	6100.00	1563.22	.00	1.42	.96	50.00	6094.17	8.21	40.00	4.41	1.70	55.
4.003	5400.00	1567.46	.00	2922.17	4.94	45.00	1622.12	4.78	40.00	855.71	4.62	45.
4.003	6100.00	1568.04	.00	2993.11	5.76	45.00	2280.24	5.37	40.00	826.65	5.10	45.
4.117	5400.00	1570.59	.00	48.17	1.58	50.00	3413.07	5.60	40.90	1938.76	3.47	50.
4.117	6100.00	1571.28	.00	132.15	3.01	50.00	5210.57	7.00	41.41	757.28	3.94	50.
4.211	6100.00	1573.67	.00	935.05	2.87	55.00	3313.90	5.78	43.00	1851.05	3.49	50.
4.211	6100.00	1574.63	.00	262.88	3.30	55.00	5476.69	7.02	43.00	360.43	4.11	50.
* 4.314	6100.00	1576.82	.00	2501.76	3.54	45.52	2827.70	5.33	40.00	770.54	1.77	50.
4.314	6100.00	1577.73	.00	1919.37	4.75	45.00	3953.85	5.81	40.00	226.79	2.49	50.
4.409	6100.00	1579.33	.00	3836.82	3.78	50.00	2252.22	5.52	40.00	10.95	1.40	50.
4.409	6100.00	1580.09	.00	2422.88	4.51	50.00	3666.63	6.98	40.00	10.49	2.50	50.
4.506	6100.00	1582.64	.00	3484.83	4.78	45.01	2569.47	6.94	40.00	45.70	1.66	55.
4.506	6100.00	1583.41	.00	2627.60	5.44	45.00	3350.98	7.45	40.00	121.41	2.72	55.
4.599	6100.00	1585.60	.00	2905.21	3.31	50.00	3194.48	7.06	40.00	.31	.42	55.
4.599	6100.00	1586.24	.00	1772.44	4.48	50.00	4319.05	8.33	40.00	8.51	1.61	55.
4.710	6100.00	1589.09	.00	2753.68	3.64	50.00	3346.32	6.57	40.00	.00	.00	.
4.710	6100.00	1590.03	.00	737.51	4.06	50.00	5361.63	7.99	40.00	.86	1.29	55.
* 4.797	6100.00	1591.73	.00	52.12	1.11	55.00	5836.42	5.76	40.00	211.45	2.49	55.
4.797	6100.00	1592.51	.00	5.65	1.20	55.00	6094.20	4.93	40.00	.15	.43	55.
* 4.898	6100.00	1594.49	.00	80.03	2.34	55.00	4915.69	6.75	40.00	1104.28	3.79	50.
4.898	6100.00	1594.42	.00	14.85	2.93	55.00	6016.99	8.41	40.00	68.16	3.04	50.
* 4.997	6100.00	1597.74	.00	2187.07	4.36	46.27	3475.79	4.40	45.00	437.14	2.00	55.
4.997	6100.00	1598.74	.00	40.02	2.74	50.00	6032.94	5.58	45.00	27.03	2.51	55.
* 5.091	3800.00	1600.16	.00	.00	.00	.00	3745.98	4.81	42.68	54.02	1.23	55.
5.091	4300.00	1600.96	.00	1.05	.91	55.00	4298.85	4.20	43.77	.10	.52	55.
* 5.187	3800.00	1603.55	.00	69.33	1.74	50.00	3726.32	7.10	45.00	4.35	1.03	55.
5.187	4300.00	1603.38	1603.30	39.89	1.68	50.00	4259.88	8.58	45.00	.23	1.19	55.
* 5.283	3800.00	1607.03	.00	15.73	1.08	50.00	3549.71	3.86	45.00	234.56	2.15	45.
5.283	4300.00	1607.46	.00	43.81	1.52	50.00	4255.32	4.01	45.00	.87	1.07	45.

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SECNO	Q	CWSEL	CRWS	QLOB	VLOB	K*XML	QCH	VCH	K*XML	QROB	VROB	K*X
* 5.381	3800.00	1609.88	1609.88	141.70	3.89	50.00	3538.91	8.17	40.00	119.39	2.17	55.
5.381	4300.00	1609.96	1609.96	179.97	5.20	50.00	4119.87	9.24	40.00	.15	1.02	55.
* 5.475	4300.00	1613.54	.00	1886.29	2.60	50.00	2350.84	5.21	40.00	62.87	1.27	55.
5.475	4300.00	1614.15	.00	1227.29	3.93	50.00	3071.54	5.85	40.00	1.18	.96	55.
* 5.571	4300.00	1616.55	1616.55	1414.33	3.60	50.00	2684.06	8.35	40.00	201.61	2.12	55.
5.571	4300.00	1616.70	1616.70	829.31	5.01	50.00	3416.70	10.24	40.00	53.99	2.71	55.
* 5.665	4300.00	1620.16	.00	263.82	1.87	50.00	3058.20	7.61	40.00	977.98	3.22	55.
5.665	4300.00	1620.99	.00	441.58	2.90	50.00	3672.04	7.73	40.00	186.37	3.07	55.
5.763	4300.00	1622.90	.00	2.21	.44	55.00	3357.71	3.58	46.00	940.07	1.96	55.
5.763	4300.00	1623.52	.00	8.99	1.26	55.00	4290.57	3.66	46.00	.44	.68	55.
* 5.853	3400.00	1624.93	.00	870.20	3.17	55.00	1920.05	7.28	50.00	609.76	2.95	55.
5.853	3400.00	1625.24	.00	756.09	4.85	55.00	2441.66	8.66	50.00	202.25	3.36	55.
* 5.948	3400.00	1628.34	.00	1673.20	3.21	55.00	1248.61	5.45	50.00	478.19	2.29	55.
5.948	3400.00	1629.22	.00	1309.44	4.35	55.00	1661.72	6.07	50.00	428.84	3.57	55.
6.042	3400.00	1630.95	.00	1258.57	3.36	55.00	1164.18	6.13	50.00	977.24	3.53	.
6.042	3400.00	1631.77	.00	1243.49	4.65	55.00	1505.32	6.76	50.00	651.19	4.37	.
6.137	3400.00	1633.85	.00	1183.98	3.03	55.00	1061.70	6.55	50.00	1154.32	3.02	55.
6.137	3400.00	1634.63	.00	1117.78	4.04	55.00	1285.85	7.00	50.00	996.37	4.06	55.
6.241	3400.00	1636.71	.00	1808.01	2.83	55.00	1091.74	4.91	50.00	500.25	2.43	55.
6.241	3400.00	1637.59	.00	1497.37	3.77	55.00	1593.90	5.92	50.00	308.73	3.43	55.

4300.0	829.3	3416.7	54.0	165.5	333.7	19.9	653.2	229.4	1615.80
1.18	5.01	10.24	2.71	.050	.040	.055	.000	1609.90	9880.00
.011965	505.	505.	505.	3	11	0	.00	200.00	10080.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

\*SECNO 5.665  
3280 CROSS SECTION 5.66 EXTENDED .29 FEET

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.58

3470 ENCROACHMENT STATIONS=	9865.8	10075.0	TYPE=	1	TARGET=	209.200			
5.665	8.69	1620.99	.00	1620.16	1621.80	.81	3.67	.06	1618.80
4300.0	441.6	3672.0	186.4	152.4	475.2	60.7	660.3	231.8	1618.80
1.20	2.90	7.73	3.07	.050	.040	.055	.000	1612.30	9865.80
.004807	510.	510.	510.	3	0	0	.00	209.20	10075.00

CCHV= .100 CEHV= .300  
\*SECNO 5.763

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 9925.0 10313.0 TYPE= 1 TARGET= 388.000

\*\*\* CONFLUENCE TANK WASH AND SOUTH BRANCH TANK WASH AT MILE 5.70 \*\*\*

5.763	8.42	1623.52	.00	1622.90	1623.73	.21	1.87	.06	1622.60
4300.0	9.0	4290.6	.4	7.1	1173.2	.7	671.2	235.3	1621.90
1.24	1.26	3.66	.68	.055	.046	.055	.000	1615.10	9925.00
.002887	520.	510.	470.	3	0	0	.00	388.00	10313.00

CCHV= .100 CEHV= .300  
\*SECNO 5.853

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .41

3470 ENCROACHMENT STATIONS= 9900.0 10075.0 TYPE= 1 TARGET= 175.000

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

5.853	7.44	1625.24	.00	1624.93	1626.16	.93	2.22	.22	1623.50
3400.0	756.1	2441.7	202.2	156.0	281.9	60.1	680.4	238.4	1623.40
1.25	4.85	8.66	3.36	.055	.050	.055	.000	1617.80	9900.00
.010900	470.	475.	480.	2	0	0	.00	175.00	10075.00

\*SECNO 5.948  
3280 CROSS SECTION 5.95 EXTENDED .62 FEET

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.52

3470 ENCROACHMENT STATIONS=	9900.0	10075.0	TYPE=	1	TARGET=	175.000			
5.948	9.22	1629.22	.00	1628.34	1629.64	.42	3.42	.05	1625.80
3400.0	1309.4	1661.7	428.8	301.3	273.7	120.0	687.2	240.4	1626.00
1.28	4.35	6.07	3.57	.055	.050	.055	.000	1620.00	9900.00
.004721	490.	500.	510.	3	0	0	.00	175.00	10075.00

\*SECNO 6.042

3470 ENCROACHMENT STATIONS=	9910.0	10075.0	TYPE=	1	TARGET=	165.000			
6.042	9.27	1631.77	.00	1630.95	1632.26	.49	2.61	.02	1628.80
3400.0	1243.5	1505.3	651.2	267.5	222.6	148.9	694.8	242.3	1629.30
1.30	4.65	6.76	4.37	.055	.050	.055	.000	1622.50	9910.00
.005912	495.	495.	495.	3	0	0	.00	165.00	10075.00

\*SECNO 6.137

3470 ENCROACHMENT STATIONS=	9890.0	10090.0	TYPE=	1	TARGET=	200.000			
6.137	8.83	1634.63	.00	1633.85	1635.08	.45	2.81	.00	1631.80
3400.0	1117.8	1285.9	996.4	277.0	183.7	245.5	702.5	244.4	1632.20
1.33	4.04	7.00	4.06	.055	.050	.055	.000	1625.80	9890.00
.005329	510.	500.	490.	1	0	0	.00	200.00	10090.00

\*SECNO 6.241

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3470 ENCROACHMENT STATIONS=	9840.0	10065.0	TYPE=	1	TARGET=	225.000			
6.241	7.79	1637.59	.00	1636.71	1637.96	.37	2.88	.01	1635.40
3400.0	1497.4	1593.9	308.7	397.5	269.2	89.9	712.1	247.2	1635.50
1.37	3.77	5.92	3.43	.055	.050	.055	.000	1629.80	9840.00
.004802	595.	565.	525.	2	0	0	.00	225.00	10065.00

\*SECNO 6.336  
3280 CROSS SECTION 6.34 EXTENDED .28 FEET

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .67

3470 ENCROACHMENT STATIONS=	9875.0	10075.0	TYPE=	1	TARGET=	200.000			
6.336	8.08	1640.88	.00	1640.03	1641.50	.62	3.46	.08	1638.80
3400.0	1469.9	1275.3	654.8	284.4	160.0	130.8	719.7	249.6	1639.00
1.39	5.17	7.97	5.01	.055	.050	.055	.000	1632.80	9875.00
.010825	500.	500.	500.	2	0	0	.00	200.00	10075.00

\*SECNO 6.432  
3280 CROSS SECTION 6.43 EXTENDED .16 FEET

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.60

3470 ENCROACHMENT STATIONS=	9875.0	10100.0	TYPE=	1	TARGET=	225.000			
6.432	8.96	1644.46	.00	1643.76	1644.80	.34	3.27	.03	1641.50
3400.0	1452.7	1060.8	886.4	371.7	169.5	253.4	727.7	252.1	1642.00
1.42	3.91	6.26	3.50	.055	.050	.055	.000	1635.50	9875.00
.004245	525.	505.	485.	3	0	0	.00	225.00	10100.00

\*SECNO 6.530

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .66

3470 ENCROACHMENT STATIONS=	9885.0	10050.0	TYPE=	1	TARGET=	165.000			
6.530	8.69	1647.29	.00	1646.57	1648.09	.79	3.15	.14	1644.80
3400.0	1398.2	1513.7	488.1	274.7	165.8	100.7	735.6	254.4	1645.30
1.44	5.09	9.13	4.85	.055	.050	.055	.000	1638.60	9885.00
.009682	505.	515.	525.	2	0	0	.00	165.00	10050.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

\*SECNO 6.625

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.46

3470 ENCROACHMENT STATIONS=	9925.0	10090.0	TYPE=	1	TARGET=	165.000			
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\*\*\* XSECTN 6.625 IS UPSTREAM LIMIT TANK WASH STUDY \*\*\*

6.625	9.04	1650.84	.00	1649.91	1651.33	.49	3.21	.03	1647.50
3400.0	800.8	1683.1	916.1	193.7	243.7	238.4	742.6	256.3	1647.80
1.47	4.14	6.91	3.84	.055	.050	.055	.000	1641.80	9925.00
.004553	510.	500.	490.	1	0	0	.00	165.00	10090.00

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CCHV= .100 CEHV= .300  
 \*SECNO 4.710  
 3280 CROSS SECTION 4.71 EXTENDED .64 FEET

3470 ENCROACHMENT STATIONS= 9775.0 10041.0 TYPE= 1 TARGET= 266.000

\*\*\* DIRT ROAD ON RANGE LINE 5 WEST - 6 WEST CROSSES TANK WASH AT RIVER MILE 4.64 \*\*\*

4.710	7.13	1590.03	.00	1589.09	1590.93	.90	3.82	.01	1588.80
6100.0	737.5	5361.6	.9	181.6	671.3	.7	563.6	201.5	1589.20
.96	4.06	7.99	1.29	.050	.040	.055	.000	1582.90	9775.00
.007550	565.	575.	585.	2	0	0	.00	266.00	10041.00

CCHV= .100 CEHV= .300  
 \*SECNO 4.797  
 3280 CROSS SECTION 4.80 EXTENDED .61 FEET

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.73

3470 ENCROACHMENT STATIONS= 9875.0 10166.0 TYPE= 1 TARGET= 291.000

4.797	7.41	1592.51	.00	1591.73	1592.89	.38	1.90	.05	1591.50
6100.0	5.7	6094.2	.1	4.7	1236.0	.3	574.9	204.5	1590.80
.99	1.20	4.93	.43	.055	.040	.055	.000	1585.10	9875.00
.002516	480.	470.	450.	3	0	0	.00	291.00	10166.00

CCHV= .100 CEHV= .300  
 \*SECNO 4.898

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .50

3470 ENCROACHMENT STATIONS= 9900.0 10135.0 TYPE= 1 TARGET= 235.000

4.898	6.22	1594.42	.00	1594.49	1595.51	1.09	2.41	.21	1592.60
6100.0	14.8	6017.0	68.2	5.1	715.1	22.4	587.1	207.7	1593.40
1.01	2.93	8.41	3.04	.055	.040	.050	.000	1588.20	9900.00
.010241	535.	535.	525.	2	0	0	.00	235.00	10135.00

1490 NH CARD USED  
 \*SECNO 4.997  
 3280 CROSS SECTION 5.00 EXTENDED .74 FEET

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.43

3470 ENCROACHMENT STATIONS= 9925.0 10230.0 TYPE= 1 TARGET= 305.000

\*\*\* ELECT TRANS LINE MAINT ROAD CROSSES TANK WASH AT MILE 4.95 \*\*\*

4.997	8.14	1598.74	.00	1597.74	1599.22	.48	3.65	.06	1597.00
6100.0	40.0	6032.9	27.0	14.6	1081.1	10.8	598.2	211.0	1596.60
1.03	2.74	5.58	2.51	.050	.045	.055	.000	1590.60	9925.00
.005035	525.	525.	515.	4	0	0	.00	305.00	10230.00

1490 NH CARD USED  
 \*SECNO 5.091  
 3280 CROSS SECTION 5.09 EXTENDED .07 FEET

3470 ENCROACHMENT STATIONS= 9930.0 10236.0 TYPE= 1 TARGET= 306.000

5.091	7.96	1600.96	.00	1600.16	1601.24	.27	2.00	.02	1600.30
4300.0	1.0	4298.8	.1	1.1	1023.3	.2	610.3	214.4	1600.30
1.07	.91	4.20	.52	.055	.044	.055	.000	1593.00	9930.00
.003061	495.	495.	495.	3	0	0	.00	306.00	10236.00

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV

TIME SLOPE	VLOB XLOBL	VCH XLCH	VROB XLOBR	XNL ITRIAL	XNCH IDC	XNR ICONT	WTN CORAR	ELMIN TOPWID	SSTA ENDST
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1490 NH CARD USED  
\*SECNO 5.187

3265 DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .43

3470 ENCROACHMENT STATIONS=	9857.0	10124.0	TYPE=	1	TARGET=	267.000			
5.187	7.28	1603.38	1603.30	1603.55	1604.52	1.13	3.02	.26	1603.10
4300.0	39.9	4259.9	.2	23.8	496.5	.2	619.3	217.7	1603.10
1.08	1.68	8.58	1.19	.050	.045	.055	.000	1596.10	9857.20
.016514	505.	505.	525.	5	12	0	.00	264.89	10124.00

1490 NH CARD USED  
\*SECNO 5.283

3280 CROSS SECTION 5.28 EXTENDED .56 FEET

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.28

3470 ENCROACHMENT STATIONS=	9920.0	10289.0	TYPE=	1	TARGET=	369.000			
5.283	7.86	1607.46	.00	1607.03	1607.71	.25	3.10	.09	1606.40
4300.0	43.8	4255.3	.9	28.7	1060.5	.8	628.6	221.4	1606.30
1.12	1.52	4.01	1.07	.050	.045	.045	.000	1599.60	9920.00
.003180	505.	505.	555.	4	0	0	.00	369.00	10289.00

CCHV= .100 CEHV= .300  
\*SECNO 5.381

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY

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SECNO Q	DEPTH QLOB	CWSEL QCH	CRISW QROB	WSELK ALOB	EG ACH	HV AROB	HL VOL	OLOSS TWA	L-BANK ELEV	R-BANK ELEV
TIME SLOPE	VLOB XLOBL	VCH XLCH	VROB XLOBR	XNL ITRIAL	XNCH IDC	XNR ICONT	WTN CORAR	ELMIN TOPWID	SSTA ENDST	

3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9900.0 10088.0 TYPE= 1 TARGET= 188.000

\*\*\* 500 CFS (OUT OF TOTAL 4300 CFS) BREAKS OUT OF NORTH OVERBANK AT XSECTN 5.381 AND FLOWS TO UNNAMED TRIBUTARY COMING IN FROM NORTH. THIS BREAKOUT FLOW REJOINS MAIN CHANNEL ALONG WITH TRIBUTARY FLOW AT XSECTN 4.997 \*\*\*

5.381	3.86	1609.96	1609.96	1609.88	1611.25	1.29	3.18	.31	1607.50
4300.0	180.0	4119.9	.2	34.6	446.1	.2	637.9	224.7	1609.20
1.13	5.20	9.24	1.02	.050	.040	.055	.000	1606.10	9900.00
.016756	505.	515.	515.	3	11	0	.00	188.00	10088.00

\*SECNO 5.475

3280 CROSS SECTION 5.47 EXTENDED .05 FEET

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.18

3470 ENCROACHMENT STATIONS=	9830.0	10045.0	TYPE=	1	TARGET=	215.000			
5.475	5.85	1614.15	.00	1613.54	1614.60	.45	3.27	.08	1611.60
4300.0	1227.3	3071.5	1.2	312.0	525.2	1.2	645.4	227.0	1612.10
1.16	3.93	5.85	.96	.050	.040	.055	.000	1608.30	9830.00
.003514	495.	495.	505.	5	0	0	.00	215.00	10045.00

\*SECNO 5.571

3280 CROSS SECTION 5.57 EXTENDED .20 FEET

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=	9880.0	10080.0	TYPE=	1	TARGET=	200.000			
5.571	6.80	1616.70	1616.70	1616.55	1618.07	1.37	2.99	.28	1614.60

6900.0	1586.2	4223.1	1090.6	397.6	476.7	274.4	388.4	146.2	1544.50
.65	3.99	8.86	3.97	.050	.040	.050	.000	1537.50	9710.00
.007477	540.	500.	510.	1	0	0	.00	485.00	10195.00

\*SECNO 3.375  
3280 CROSS SECTION 3.38 EXTENDED .66 FEET

3470 ENCROACHMENT STATIONS=	9690.0	10195.0	TYPE=	1	TARGET=	505.000			
3.375	9.56	1549.46	.00	1548.56	1550.13	.67	3.10	.02	1548.20
6900.0	1554.8	3965.7	1379.5	479.9	493.1	338.0	402.5	151.9	1547.60
.67	3.24	8.04	4.08	.050	.040	.050	.000	1539.90	9690.00
.005265	505.	495.	495.	2	0	0	.00	505.00	10195.00

\*SECNO 3.470

3470 ENCROACHMENT STATIONS=	9825.0	10175.0	TYPE=	1	TARGET=	350.000			
3.470	9.12	1551.92	.00	1551.13	1552.69	.76	2.53	.03	1549.60
6900.0	165.8	6732.9	1.3	82.7	948.5	1.1	416.0	156.8	1550.40
.69	2.00	7.10	1.27	.050	.040	.050	.000	1542.80	9825.00
.004868	500.	500.	500.	3	0	0	.00	350.00	10175.00

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

CCHV= .100 CEHV= .300  
\*SECNO 3.568

3470 ENCROACHMENT STATIONS=	9880.0	10110.0	TYPE=	1	TARGET=	230.000			
3.568	7.61	1554.21	.00	1553.71	1555.10	.89	2.37	.04	1551.50
6900.0	378.6	6484.2	37.2	122.9	834.2	22.8	427.7	160.2	1553.30
.71	3.08	7.77	1.63	.055	.040	.055	.000	1546.60	9880.00
.004443	510.	510.	490.	2	0	0	.00	230.00	10110.00

1490 NH CARD USED  
\*SECNO 3.668

3470 ENCROACHMENT STATIONS=	9800.0	10075.0	TYPE=	1	TARGET=	275.000			
3.668	7.32	1556.82	.00	1556.32	1557.76	.94	2.65	.02	1554.80
6900.0	1492.4	5349.3	58.3	331.1	628.7	21.6	439.5	163.1	1555.10
.73	4.51	8.51	2.70	.045	.040	.055	.000	1549.50	9800.00
.005788	500.	530.	480.	2	0	0	.00	275.00	10075.00

1490 NH CARD USED  
\*SECNO 3.785

3280 CROSS SECTION 3.79 EXTENDED .66 FEET

3470 ENCROACHMENT STATIONS=	9750.0	10100.0	TYPE=	1	TARGET=	350.000			
3.785	7.76	1560.26	.00	1559.26	1560.95	.68	3.16	.03	1559.30
6100.0	1480.9	4593.4	25.6	433.5	620.8	10.3	453.3	167.2	1557.90
.75	3.42	7.40	2.48	.050	.040	.055	.000	1552.50	9750.00
.004761	530.	620.	630.	2	0	0	.00	350.00	10100.00

1490 NH CARD USED  
\*SECNO 3.880

3470 ENCROACHMENT STATIONS=	9890.0	10110.0	TYPE=	1	TARGET=	220.000			
3.880	8.02	1563.22	.00	1563.23	1564.27	1.05	3.21	.11	1563.00
6100.0	1.4	6094.2	4.4	1.5	741.9	2.6	463.8	170.5	1562.60
.77	.96	8.21	1.70	.050	.040	.055	.000	1555.20	9890.00
.009053	520.	500.	500.	2	0	0	.00	220.00	10110.00

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

1490 NH CARD USED  
\*SECNO 4.003

3280 CROSS SECTION 4.00 EXTENDED .03 FEET

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=	9775.0	10125.0	TYPE=	1	TARGET=	350.000			
4.003	10.04	1568.04	.00	1567.46	1568.52	.47	4.19	.06	1566.80
6100.0	2993.1	2280.2	826.6	519.9	424.9	162.2	476.9	174.6	1566.50
.80	5.76	5.37	5.10	.045	.040	.045	.000	1558.00	9775.00
.005221	525.	650.	675.	3	0	0	.00	350.00	10125.00

1490 NH CARD USED  
 \*SECNO 4.117  
 3280 CROSS SECTION 4.12 EXTENDED .39 FEET

3470 ENCROACHMENT STATIONS= 9900.0 10210.0 TYPE= 1 TARGET= 310.000

\*\*\* 700 CFS (OUT OF TOTAL 6100 CFS) BREAKS OUT OF NORTH OVERBANK AT XSECTN 4.117 AND FLOWS TO UNNAMED TRIBUTARY COMING IN FROM NORTH. THIS BREAKOUT FLOW REJOINS MAIN CHANNEL ALONG WITH TRIBUTARY FLOW AT XSECTN 3.668 \*\*\*

4.117	10.98	1571.28	.00	1570.59	1571.97	.68	3.38	.06	1569.80
6100.0	132.1	5210.6	757.3	43.8	743.9	192.0	491.0	179.0	1569.20
.83	3.01	7.00	3.94	.050	.041	.050	.000	1560.30	9900.00
.006326	575.	600.	575.	1	0	0	.00	310.00	10210.00

CCHV= .100 CEHV= .300

\*SECNO 4.211  
 3280 CROSS SECTION 4.21 EXTENDED 1.13 FEET

3470 ENCROACHMENT STATIONS= 9930.0 10230.0 TYPE= 1 TARGET= 300.000

4.211	7.13	1574.63	.00	1573.67	1575.34	.71	3.37	.01	1572.30
6100.0	262.9	5476.7	360.4	79.7	779.8	87.6	501.9	182.5	1572.40
.85	3.30	7.02	4.11	.055	.043	.050	.000	1567.50	9930.00
.007371	495.	495.	485.	3	0	0	.00	300.00	10230.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

1490 NH CARD USED  
 \*SECNO 4.314  
 3280 CROSS SECTION 4.31 EXTENDED .73 FEET

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.41

3470 ENCROACHMENT STATIONS= 9810.0 10150.0 TYPE= 1 TARGET= 340.000

4.314	7.03	1577.73	.00	1576.82	1578.18	.45	2.81	.03	1575.30
6100.0	1919.4	3953.8	226.8	403.8	680.7	91.2	515.3	186.5	1576.00
.88	4.75	5.81	2.49	.045	.040	.050	.000	1570.70	9810.00
.003721	525.	560.	545.	1	0	0	.00	340.00	10150.00

CCHV= .100 CEHV= .300  
 \*SECNO 4.409

3470 ENCROACHMENT STATIONS= 9710.0 10100.0 TYPE= 1 TARGET= 390.000

4.409	7.09	1580.09	.00	1579.33	1580.67	.58	2.45	.04	1578.40
6100.0	2422.9	3666.6	10.5	537.3	525.2	4.2	528.1	190.7	1578.40
.90	4.51	6.98	2.50	.050	.040	.050	.000	1573.00	9710.00
.006929	495.	495.	475.	2	0	0	.00	390.00	10100.00

1490 NH CARD USED  
 \*SECNO 4.506  
 3280 CROSS SECTION 4.51 EXTENDED .41 FEET

3470 ENCROACHMENT STATIONS= 9770.0 10050.0 TYPE= 1 TARGET= 280.000

4.506	6.01	1583.41	.00	1582.64	1584.09	.67	3.39	.03	1580.40
6100.0	2627.6	3351.0	121.4	482.6	449.9	44.6	540.8	194.9	1581.30
.92	5.44	7.45	2.72	.045	.040	.055	.000	1577.40	9770.00
.005724	580.	510.	510.	3	0	0	.00	280.00	10050.00

1490 NH CARD USED  
 \*SECNO 4.599  
 3280 CROSS SECTION 4.60 EXTENDED .04 FEET

3470 ENCROACHMENT STATIONS= 9820.0 10077.0 TYPE= 1 TARGET= 257.000

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

4.599	6.44	1586.24	.00	1585.60	1587.09	.85	2.95	.05	1583.30
6100.0	1772.4	4319.1	8.5	396.0	518.5	5.3	551.9	198.0	1585.40
.94	4.48	8.33	1.61	.050	.040	.055	.000	1579.80	9820.00
.005944	525.	495.	495.	2	0	0	.00	257.00	10077.00

.006901 500. 510. 550. 3 0 0 .00 665.00 10315.00

CCHV= .100 CEHV= .300

\*SECNO 2.039

3280 CROSS SECTION 2.04 EXTENDED .53 FEET

3470 ENCROACHMENT STATIONS=	9640.0	10220.0	TYPE=	1	TARGET=	580.000			
2.039	5.32	1509.92	.00	1509.04	1510.23	.31	2.83	.01	1508.70
6800.0	3610.2	3146.3	43.5	891.0	641.6	32.0	189.9	75.6	1509.20
.32	4.05	4.90	1.36	.050	.040	.055	.000	1504.60	9640.00
.004254	530.	530.	530.	2	0	0	.00	580.00	10220.00

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

1490 NH CARD USED

\*SECNO 2.134

3280 CROSS SECTION 2.13 EXTENDED .46 FEET

3470 ENCROACHMENT STATIONS=	9530.0	10140.0	TYPE=	1	TARGET=	610.000			
2.134	4.85	1512.35	.00	1511.55	1512.69	.34	2.45	.01	1511.00
6800.0	4433.8	2263.2	103.0	1049.6	410.7	49.5	208.2	82.7	1511.30
.36	4.22	5.51	2.08	.050	.040	.055	.000	1507.50	9530.00
.005312	530.	500.	500.	2	0	0	.00	610.00	10140.00

CCHV= .100 CEHV= .300

\*SECNO 2.230

3280 CROSS SECTION 2.23 EXTENDED .26 FEET

3470 ENCROACHMENT STATIONS=	9550.0	10115.0	TYPE=	1	TARGET=	565.000			
2.230	4.96	1515.06	.00	1514.14	1515.38	.32	2.69	.00	1513.80
6800.0	4177.1	2492.5	130.3	967.8	502.6	54.1	226.7	89.9	1513.90
.39	4.32	4.96	2.41	.050	.040	.055	.000	1510.10	9550.00
.004853	545.	505.	495.	3	0	0	.00	565.00	10115.00

\*SECNO 2.328

3280 CROSS SECTION 2.33 EXTENDED .48 FEET

3470 ENCROACHMENT STATIONS=	9500.0	10052.0	TYPE=	1	TARGET=	552.000			
2.328	5.48	1517.98	.00	1517.26	1518.46	.48	3.03	.05	1516.80
6800.0	3861.3	2938.0	.6	890.0	427.9	.5	243.4	96.4	1517.20
.41	4.34	6.87	1.19	.050	.040	.055	.000	1512.50	9500.00
.007290	510.	520.	520.	2	0	0	.00	552.00	10052.00

CCHV= .100 CEHV= .300

\*SECNO 2.425

3280 CROSS SECTION 2.42 EXTENDED .94 FEET

3470 ENCROACHMENT STATIONS= 9550.0 10130.0 TYPE= 1 TARGET= 580.000

\*\*\* DIRT ROAD TO HIDDEN TANK STOCK POND CROSSES TANK WASH NEAR RIVER

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MILE 2.38 \*\*\*

2.425	5.85	1521.05	.00	1520.14	1521.49	.45	3.03	.00	1519.30
6800.0	3486.9	2461.2	851.9	929.3	332.6	234.6	259.9	103.1	1518.70
.44	3.75	7.40	3.63	.050	.040	.055	.000	1515.20	9550.00
.004947	510.	510.	500.	1	0	0	.00	580.00	10130.00

CCHV= .100 CEHV= .300

\*SECNO 2.520

3280 CROSS SECTION 2.52 EXTENDED .43 FEET

3470 ENCROACHMENT STATIONS=	9640.0	10080.0	TYPE=	1	TARGET=	440.000			
2.520	5.54	1523.74	.00	1522.82	1524.38	.64	2.83	.06	1522.30
6800.0	883.3	5898.7	18.0	304.0	864.1	7.6	275.7	109.1	1522.10
.47	2.91	6.83	2.38	.055	.040	.055	.000	1518.20	9640.00
.006131	515.	515.	515.	1	0	0	.00	440.00	10080.00

\*SECNO 2.609

3280 CROSS SECTION 2.61 EXTENDED .08 FEET

3470 ENCROACHMENT STATIONS=	9830.0	10180.0	TYPE=	1	TARGET=	350.000			
2.609	5.78	1526.28	.00	1525.76	1526.88	.61	2.50	.00	1524.20
6800.0	1247.6	4850.8	701.5	279.0	697.1	233.3	288.6	113.4	1523.90
.49	4.47	6.96	3.01	.055	.040	.055	.000	1520.50	9830.00

.004630 480. 470. 470. 2 0 0 .00 350.00 10180.00

1490 NH CARD USED

\*SECNO 2.709

3280 CROSS SECTION 2.71 EXTENDED .21 FEET

3470 ENCROACHMENT STATIONS=	9725.0	10105.0	TYPE=	1	TARGET=	380.000			
2.709	6.51	1528.91	.00	1528.38	1529.34	.43	2.44	.02	1527.40
6800.0	3347.6	3407.3	45.1	754.3	566.6	18.5	304.0	117.8	1527.70
.51	4.44	6.01	2.44	.055	.040	.045	.000	1522.40	9725.00
.004662	520.	530.	510.	2	0	0	.00	380.00	10105.00

1490 NH CARD USED

\*SECNO 2.805

3280 CROSS SECTION 2.81 EXTENDED .40 FEET

3470 ENCROACHMENT STATIONS= 9730.0 10210.0 TYPE= 1 TARGET= 480.000

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	
2.805	5.50	1531.60	.00	1531.05	1532.33	.73	2.89	.09	1529.30	
6800.0	1705.3	3249.3	1845.5	445.9	368.9	389.8	318.8	122.8	1529.40	
.54	3.82	8.81	4.73	.055	.040	.047	.000	1526.10	9730.00	
.007093	515.	505.	505.	2	0	0	.00	480.00	10210.00	

1490 NH CARD USED

\*SECNO 2.900

3280 CROSS SECTION 2.90 EXTENDED .33 FEET

3470 ENCROACHMENT STATIONS=	9715.0	10170.0	TYPE=	1	TARGET=	455.000			
2.900	5.92	1534.82	.00	1534.30	1535.38	.56	3.04	.02	1532.50
6900.0	2739.8	3255.5	904.8	626.7	433.1	253.5	333.4	128.2	1532.20
.56	4.37	7.52	3.57	.045	.040	.055	.000	1528.90	9715.00
.005235	500.	500.	510.	2	0	0	.00	455.00	10170.00

1490 NH CARD USED

\*SECNO 2.995

3280 CROSS SECTION 2.99 EXTENDED .31 FEET

3470 ENCROACHMENT STATIONS=	9750.0	10102.0	TYPE=	1	TARGET=	352.000			
2.995	6.31	1537.61	.00	1537.31	1538.18	.57	2.79	.00	1535.70
6900.0	3489.3	3409.9	.9	629.9	523.5	.8	347.5	132.8	1537.20
.58	5.54	6.51	1.03	.045	.040	.055	.000	1531.30	9750.00
.005968	500.	500.	500.	2	0	0	.00	352.00	10102.00

CCHV= .100 CEHV= .300

\*SECNO 3.091

3280 CROSS SECTION 3.09 EXTENDED .79 FEET

3470 ENCROACHMENT STATIONS=	9730.0	10080.0	TYPE=	1	TARGET=	350.000			
3.091	7.19	1540.49	.00	1539.48	1541.25	.76	3.02	.06	1538.20
6900.0	2633.3	4086.4	180.4	610.7	487.6	47.0	361.1	137.0	1538.10
.61	4.31	8.38	3.84	.050	.040	.050	.000	1533.30	9730.00
.005773	525.	505.	505.	1	0	0	.00	350.00	10080.00

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XLN	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

\*SECNO 3.186

3280 CROSS SECTION 3.19 EXTENDED .22 FEET

3470 ENCROACHMENT STATIONS=	9775.0	10150.0	TYPE=	1	TARGET=	375.000			
3.186	7.21	1543.31	.00	1542.59	1543.89	.58	2.63	.02	1541.50
6900.0	788.8	5496.1	615.0	235.6	831.4	154.6	374.5	141.1	1541.40
.63	3.35	6.61	3.98	.050	.040	.050	.000	1536.10	9775.00
.004902	480.	500.	490.	1	0	0	.00	375.00	10150.00

\*SECNO 3.281

3280 CROSS SECTION 3.28 EXTENDED .17 FEET

3470 ENCROACHMENT STATIONS=	9710.0	10195.0	TYPE=	1	TARGET=	485.000			
3.281	8.67	1546.17	.00	1545.52	1547.01	.84	3.04	.08	1544.70

\*\*\* XSECTN 6.625 IS UPSTREAM LIMIT TANK WASH STUDY \*\*\*

6.625	8.11	1649.91	.00	.00	1650.28	.37	3.25	.01	1647.50
3400.0	1003.3	1410.7	986.0	305.6	210.9	349.5	940.5	539.2	1647.80
1.81	3.28	6.69	2.82	.055	.050	.055	.000	1641.80	9784.14
.005179	510.	500.	490.	2	0	0	.00	440.09	10260.13

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

FLOW DISTRIBUTION FOR SECNO= 6.63 CWSEL= 1649.91

STA=	9784.	9887.	9909.	9942.	9962.	9979.	10014.	10045.	10075.	10110.	10172.	10219.	10260.
PER Q=	5.6	4.0	8.8	7.0	4.1	41.5	6.8	6.9	5.9	3.2	4.5	1.7	
AREA=	78.4	44.0	83.2	60.0	39.9	210.9	69.0	69.7	66.4	53.9	61.0	29.5	
VEL=	2.4	3.1	3.6	4.0	3.5	6.7	3.4	3.4	3.0	2.0	2.5	2.0	
DEPTH=	.8	2.0	2.5	2.9	2.4	5.9	2.3	2.3	1.9	.9	1.3	.7	

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T1 FLOOD CONTROL DISTRICT OF MARICOPA COUNTY  
 T2 POWERLINE WASH AND TANK WASH FLOOD DELINEATION STUDY (FCD 92-09)  
 T3 TANK WASH 100-YR STANLEY CONSULTANTS # 11547 FILENAME: 11547T35

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
		4							1480.96	
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	2		-1							

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SECNO	DEPTH	CWSEL	CRISW	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

\*PROF 2

0

CCHV= .100 CEHV= .300  
 \*SECNO .980

3470 ENCROACHMENT STATIONS= 9490.0 10224.0 TYPE= 1 TARGET= 734.000

\*\*\* XSECTN 0.980 IS UPSTREAM LIMIT OF WOOD/PATEL STAR WASH STUDY AND  
 DOWNSTREAM LIMIT OF STANLEY CONSULTANTS TANK WASH STUDY. GR AND  
 ENCROACHMENT STATIONS FOR 0.980 ARE FROM WOOD/PATEL STUDY \*\*\*

.980	5.06	1480.96	.00	1480.03	1481.41	.45	.00	.00	1479.90
6600.0	1604.9	4254.3	740.8	554.0	669.1	241.6	.0	.0	1479.40
.00	2.90	6.36	3.07	.055	.040	.055	.000	1475.90	9490.00
.006496	0.	0.	0.	0	0	0	.00	734.00	10224.00

1490 NH CARD USED

\*SECNO 1.073

3470 ENCROACHMENT STATIONS= 9650.0 10190.0 TYPE= 1 TARGET= 540.000

1.073	6.94	1483.64	.00	1482.74	1484.10	.46	2.69	.00	1482.20
6700.0	1645.8	4990.7	63.5	565.2	823.9	31.6	15.7	6.9	1482.30
.03	2.91	6.06	2.01	.055	.041	.055	.000	1476.70	9650.00
.004869	450.	490.	500.	2	0	0	.00	540.00	10190.00

CCHV= .100 CEHV= .300  
 \*SECNO 1.170

3470 ENCROACHMENT STATIONS= 9800.0 10320.0 TYPE= 1 TARGET= 520.000

1.170	7.40	1486.00	.00	1485.60	1486.52	.52	2.40	.02	1484.40
6700.0	1187.5	3084.4	2428.1	361.8	400.1	711.1	32.5	13.0	1484.10
.05	3.28	7.71	3.41	.055	.040	.055	.000	1478.60	9800.00
.004610	510.	510.	490.	3	0	0	.00	520.00	10320.00

\*SECNO 1.265

3470 ENCROACHMENT STATIONS= 9850.0 10375.0 TYPE= 1 TARGET= 525.000

1.265	8.09	1488.89	.00	1487.97	1489.57	.68	3.01	.05	1487.50
6700.0	95.8	4363.1	2241.1	31.0	563.1	604.7	47.8	19.0	1488.10
.07	3.09	7.75	3.71	.055	.040	.055	.000	1480.80	9850.00
.008168	500.	500.	500.	2	0	0	.00	525.00	10375.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= .100 CEHV= .300  
 \*SECNO 1.360  
 3280 CROSS SECTION 1.36 EXTENDED .41 FEET

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.47

3470 ENCROACHMENT STATIONS=	9949.0	10390.0	TYPE=	1	TARGET=	441.000		
1.360	8.11	1491.71	.00	1490.94	1492.16	.45	2.57	.02 1489.50
6700.0	.1	5012.0	1687.9	.2	833.3	598.7	62.0	24.1 1489.80
.10	.35	6.01	2.82	.055	.045	.055	.000	1483.60 9949.00
.003782	500.	500.	430.	2	0	0	.00	441.00 10390.00

1490 NH CARD USED  
 \*SECNO 1.454

3470 ENCROACHMENT STATIONS=	9810.0	10240.0	TYPE=	1	TARGET=	430.000		
1.454	7.22	1493.52	.00	1492.77	1493.82	.30	1.64	.01 1491.10
6700.0	4569.9	1891.5	238.6	969.9	489.0	115.2	78.6	28.7 1492.70
.13	4.71	3.87	2.07	.049	.045	.055	.000	1486.30 9810.00
.003019	505.	495.	425.	3	0	0	.00	430.00 10240.00

1490 NH CARD USED  
 \*SECNO 1.552

3280 CROSS SECTION 1.55 EXTENDED .36 FEET

3470 ENCROACHMENT STATIONS=	9680.0	10250.0	TYPE=	1	TARGET=	570.000		
1.552	6.86	1495.16	.00	1494.56	1495.43	.27	1.60	.00 1493.60
6700.0	3200.0	1513.9	1986.1	696.5	382.2	561.7	97.4	34.5 1493.20
.16	4.59	3.96	3.54	.046	.045	.047	.000	1488.30 9680.00
.003230	525.	515.	465.	2	0	0	.00	570.00 10250.00

1490 NH CARD USED  
 \*SECNO 1.654

3470 ENCROACHMENT STATIONS=	9625.0	10300.0	TYPE=	1	TARGET=	675.000		
1.654	7.36	1497.36	.00	1497.03	1497.66	.30	2.23	.01 1496.10
6700.0	3983.5	1707.7	1008.8	833.1	454.2	266.2	117.0	42.2 1496.50
.20	4.78	3.76	3.79	.052	.045	.047	.000	1490.00 9625.00
.005561	540.	540.	520.	2	0	0	.00	675.88 10298.88

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

1490 NH CARD USED  
 \*SECNO 1.746

3470 ENCROACHMENT STATIONS=	9575.0	10300.0	TYPE=	1	TARGET=	725.000		
1.746	6.27	1500.67	.00	1500.26	1501.03	.35	3.35	.02 1499.70
6700.0	3112.2	1779.7	1808.1	742.8	325.0	363.4	134.4	50.2 1499.70
.23	4.19	5.48	4.97	.055	.040	.046	.000	1494.40 9575.00
.007993	525.	485.	485.	4	0	0	.00	725.00 10300.00

1490 NH CARD USED  
 \*SECNO 1.842

3280 CROSS SECTION 1.84 EXTENDED .19 FEET

3470 ENCROACHMENT STATIONS=	9595.0	10400.0	TYPE=	1	TARGET=	805.000		
1.842	6.09	1503.99	.00	1503.16	1504.29	.30	3.25	.01 1502.10
6700.0	2190.0	2173.5	2336.4	662.5	363.2	685.7	152.8	59.2 1502.70
.26	3.31	5.99	3.41	.055	.040	.048	.000	1497.90 9595.00
.005189	505.	505.	525.	3	0	0	.00	805.00 10400.00

1490 NH CARD USED  
 \*SECNO 1.939

3280 CROSS SECTION 1.94 EXTENDED .21 FEET

3470 ENCROACHMENT STATIONS=	9650.0	10315.0	TYPE=	1	TARGET=	665.000		
1.939	6.61	1507.01	.00	1506.31	1507.39	.38	3.08	.02 1505.60
6800.0	2981.7	2609.9	1208.4	715.2	432.0	296.2	171.6	68.1 1505.90
.29	4.17	6.04	4.08	.055	.040	.047	.000	1500.40 9650.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

CCHV= .100 CEHV= .300  
 \*SECNO 5.853

3265 DIVIDED FLOW

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .50

5.853	7.13	1624.93	.00	.00	1625.45	.53	2.28	.11	1623.50
3400.0	870.2	1920.0	609.8	274.6	263.6	206.8	856.6	491.5	1623.40
1.54	3.17	7.28	2.95	.055	.050	.055	.000	1617.80	9718.17
.008429	470.	475.	480.	2	0	0	.00	533.53	10271.58

FLOW DISTRIBUTION FOR SECNO= 5.85 CWSEL= 1624.93

STA=	9718.	9884.	9913.	9940.	9956.	9968.	10027.	10078.	10197.	10211.	10220.	10252.	10272.
PER Q=	7.2	5.3	6.3	4.8	2.0	56.5	3.4	3.8	4.0	3.0	3.2	.6	
AREA=	112.9	50.1	53.9	37.4	20.3	263.6	46.3	57.7	31.9	22.4	37.3	11.3	
VEL=	2.2	3.6	4.0	4.4	3.4	7.3	2.5	2.2	4.2	4.6	2.9	1.7	
DEPTH=	.7	1.7	2.0	2.3	1.6	4.5	.9	.5	2.3	2.6	1.2	.6	

\*SECNO 5.948

3265 DIVIDED FLOW

5.948	8.34	1628.34	.00	.00	1628.60	.26	3.12	.03	1625.80
3400.0	1673.2	1248.6	478.2	521.9	229.0	208.4	866.3	497.7	1626.00
1.57	3.21	5.45	2.29	.055	.050	.055	.000	1620.00	9676.94
.004830	490.	500.	510.	3	0	0	.00	556.13	10239.63

FLOW DISTRIBUTION FOR SECNO= 5.95 CWSEL= 1628.34

STA=	9677.	9794.	9831.	9874.	9899.	9927.	9958.	9981.	10031.	10061.	10155.	10187.	10240.
PER Q=	3.4	3.9	8.6	7.4	8.8	10.4	6.7	36.7	5.4	4.2	3.3	1.2	
AREA=	72.5	54.7	92.4	68.9	79.3	92.1	62.0	229.0	60.4	72.5	45.5	30.0	
VEL=	1.6	2.4	3.2	3.7	3.8	3.8	3.7	5.5	3.0	2.0	2.4	1.4	
DEPTH=	.6	1.5	2.2	2.7	2.8	2.9	2.7	4.5	2.0	.8	1.4	.6	

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

\*SECNO 6.042

6.042	8.45	1630.95	.00	.00	1631.27	.32	2.66	.02	1628.80
3400.0	1258.6	1164.2	977.2	374.6	189.9	276.7	876.6	503.3	1629.30
1.60	3.36	6.13	3.53	.055	.050	.055	.000	1622.50	9752.91
.006004	495.	495.	495.	3	0	0	.00	420.11	10173.01

FLOW DISTRIBUTION FOR SECNO= 6.04 CWSEL= 1630.95

STA=	9753.	9909.	9947.	9965.	9987.	10027.	10055.	10075.	10093.	10117.	10141.	10173.
PER Q=	12.7	12.0	6.1	6.2	34.2	6.8	4.8	7.3	5.9	3.3	.8	
AREA=	168.4	100.8	50.6	54.8	189.9	63.2	45.1	56.9	55.0	38.8	17.7	
VEL=	2.6	4.1	4.1	3.9	6.1	3.6	3.6	4.3	3.7	2.9	1.5	
DEPTH=	1.1	2.7	2.7	2.5	4.8	2.3	2.3	3.0	2.3	1.6	.6	

\*SECNO 6.137

6.137	8.05	1633.85	.00	.00	1634.15	.31	2.88	.00	1631.80
3400.0	1184.0	1061.7	1154.3	390.8	162.1	382.7	886.8	508.8	1632.20
1.64	3.03	6.55	3.02	.055	.050	.055	.000	1625.80	9707.78
.005520	510.	500.	490.	3	0	0	.00	548.01	10255.79

FLOW DISTRIBUTION FOR SECNO= 6.14 CWSEL= 1633.85

STA=	9708.	9831.	9861.	9879.	9895.	9913.	9931.	9947.	9982.	10010.	10035.	10058.	10099.
PER Q=	3.3	4.1	4.2	4.2	4.6	4.2	3.1	7.2	31.2	4.7	5.9	10.5	
AREA=	70.1	49.3	41.0	39.5	42.8	41.4	32.5	74.1	162.1	50.0	55.4	99.1	
VEL=	1.6	2.8	3.5	3.6	3.6	3.4	3.3	3.3	6.6	3.2	3.6	3.6	
DEPTH=	.6	1.6	2.3	2.4	2.4	2.2	2.1	2.1	5.9	2.0	2.4	2.4	

STA= 10099. 10117. 10211. 10253. 10256.

PER Q=	3.7	5.8	3.5	.0
AREA=	38.0	93.5	46.4	.2
VEL=	3.3	2.1	2.5	.4
DEPTH=	2.1	1.0	1.1	.1

\*SECNO 6.241

6.241	6.91	1636.71	.00	.00	1636.92	.20	2.75	.01	1635.40
3400.0	1808.0	1091.7	500.3	638.8	222.2	205.5	899.8	516.1	1635.50

1.68 2.83 4.91 2.43 .055 .050 .055 .000 1629.80 9617.37  
 .004274 595. 565. 525. 3 0 0 .00 560.47 10177.84

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

FLOW DISTRIBUTION FOR SECNO= 6.24 CWSEL= 1636.71

STA=	9617.	9724.	9751.	9777.	9803.	9825.	9835.	9869.	9898.	9918.	9960.	9978.	10032.
PER Q=	4.2	5.1	4.6	7.1	4.5	3.0	7.6	4.7	3.9	5.4	3.1	32.1	
AREA=	84.6	58.6	53.8	70.4	49.8	28.9	81.5	57.4	43.5	73.1	37.1	222.2	
VEL=	1.7	3.0	2.9	3.4	3.1	3.5	3.2	2.8	3.0	2.5	2.8	4.9	
DEPTH=	.8	2.2	2.1	2.7	2.3	2.9	2.4	2.0	2.3	1.7	2.1	4.2	

STA=	10032.	10075.	10102.	10143.	10178.
PER Q=	6.2	4.2	3.7	.5	
AREA=	79.4	52.7	57.2	16.2	
VEL=	2.7	2.7	2.2	1.0	
DEPTH=	1.9	1.9	1.4	.5	

\*SECNO 6.336

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .57

6.336	7.23	1640.03	.00	.00	1640.47	.44	3.48	.07	1638.80
3400.0	1296.4	1011.8	1091.8	342.9	130.8	273.5	910.3	522.6	1639.00
1.71	3.78	7.73	3.99	.055	.050	.055	.000	1632.80	9673.06
.013309	500.	500.	500.	3	0	0	.00	583.38	10256.44

FLOW DISTRIBUTION FOR SECNO= 6.34 CWSEL= 1640.03

STA=	9673.	9842.	9876.	9918.	9954.	9988.	10023.	10085.	10127.	10164.	10232.	10256.
PER Q=	8.0	6.1	9.0	8.6	6.4	29.8	13.4	8.6	6.5	3.6	.0	
AREA=	105.2	51.6	69.6	63.8	52.6	130.8	104.0	67.4	54.7	45.8	1.5	
VEL=	2.6	4.0	4.4	4.6	4.1	7.7	4.4	4.3	4.0	2.7	.5	
DEPTH=	.6	1.5	1.7	1.8	1.5	3.8	1.7	1.6	1.5	.7	.1	

\*SECNO 6.432

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.77

6.432	8.26	1643.76	.00	.00	1644.00	.23	3.51	.02	1641.50
3400.0	1415.2	883.9	1100.8	471.8	152.1	402.1	920.6	528.9	1642.00
1.75	3.00	5.81	2.74	.055	.050	.055	.000	1635.50	9737.74
.004231	525.	505.	485.	4	0	0	.00	492.16	10229.90

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK	ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK	ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA	
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST	

FLOW DISTRIBUTION FOR SECNO= 6.43 CWSEL= 1643.76

STA=	9738.	9816.	9841.	9908.	9929.	9951.	9987.	10012.	10035.	10072.	10114.	10159.	10189.
PER Q=	3.9	3.1	11.6	8.8	6.4	7.8	26.0	3.6	7.4	8.4	7.5	3.4	
AREA=	70.2	42.5	138.0	73.9	61.8	85.5	152.1	44.8	83.0	94.6	90.6	48.1	
VEL=	1.9	2.5	2.8	4.1	3.5	3.1	5.8	2.8	3.0	3.0	2.8	2.4	
DEPTH=	.9	1.7	2.1	3.5	2.8	2.4	6.1	2.0	2.3	2.3	2.0	1.6	

STA=	10189.	10230.
PER Q=	2.1	
AREA=	41.0	
VEL=	1.8	
DEPTH=	1.0	

\*SECNO 6.530

6.530	7.97	1646.57	.00	.00	1647.03	.46	2.97	.07	1644.80
3400.0	1403.2	1154.4	842.4	377.2	147.4	239.2	931.1	534.2	1645.30
1.78	3.72	7.83	3.52	.055	.050	.055	.000	1638.60	9753.32
.008343	505.	515.	525.	1	0	0	.00	417.48	10170.80

FLOW DISTRIBUTION FOR SECNO= 6.53 CWSEL= 1646.57

STA=	9753.	9821.	9846.	9873.	9902.	9928.	9965.	9986.	10012.	10057.	10094.	10123.	10171.
PER Q=	3.0	4.5	7.1	7.8	6.9	7.9	4.1	34.0	10.2	8.4	4.0	2.2	
AREA=	46.8	42.9	59.0	63.4	56.5	70.4	38.1	147.4	88.4	73.6	42.6	34.6	
VEL=	2.2	3.5	4.1	4.2	4.1	3.8	3.6	7.8	3.9	3.9	3.2	2.2	
DEPTH=	.7	1.7	2.1	2.2	2.2	1.9	1.8	5.7	2.0	2.0	1.5	.7	

\*SECNO 6.625

3265 DIVIDED FLOW

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

**SECTION 6 - REFERENCE MATERIALS**

6.5 Bibliography

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
FCD 92-09**

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14. Addendum to Jackrabbit Wash Hydrology; Flood Control District of Maricopa County, Hydrology Division; May 1993.
15. Star Wash Floodplain Delineation Study; Flood Control District of Maricopa County; FCD 92-06; Wood, Patel and Associates, Inc.; 1993.
16. "Plan of Development Report for Arizona Proving Ground, Toyota Technical Center, USA, Inc."; Collar Williams and White Engineering; March 1990, Revised April 4, 1990.

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

**SECTION 7 - CROSS REFERENCING AND LABELING INFORMATION**

- 7.1 Other Studies Impacted
- 7.2 Key to Cross Section Labeling

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

**SECTION 7.1 - OTHER STUDIES IMPACTED**

The only impact of the Powerline Wash and Tank Wash Flood Delineation Study on other studies is with regard to hydrology. As mentioned in previous sections, the hydrology for Powerline Wash and Tank Wash was covered in the Burgess and Niple, Inc. Jackrabbit Wash Floodplain Delineation Study (FCD 90-05). This hydrology required amendment because it did not include a separate peak flow estimate for the South Branch of Tank Wash. This amendment was performed by FCD staff. The impact of the amendment is limited to Tank Wash and the South Branch of Tank Wash and affects no other hydrology.

**SECTION 7.2 - KEY TO CROSS SECTION LABELING**

HEC-2 cross sections for this study were digitized through aerial mapping and have been labeled with a river mile identification number. This number corresponds to the distance in miles upstream from the confluence of each wash with the downstream wash to which it is tributary. For flood insurance study purposes, HEC-2 cross sections also carry a letter identification. The letter identification is shown on the flood delineation sheets 2 through 17 of 17 along with the mile identification number and are also cross referenced with mile numbers in Floodway Data Table 5 in Section 8.

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

**SECTION 8 - AMENDMENTS TO MARICOPA COUNTY  
FLOOD INSURANCE STUDY**

- 8.1 Volume 1 - Narrative Report
- 8.2 Volume 2 - Floodway Data Table
- 8.3 Volume 3 - Flood Profiles

**POWERLINE WASH AND TANK WASH  
FLOOD DELINEATION STUDY  
(FCD 92-09)**

SECTION 8 - VOLUME 1, NARRATIVE REPORT

Insert 1, Volume 1 of 7, Section 1.2, insert at end of section:

Additional hydraulic analysis for Powerline Wash upstream from its confluence with Star Wash and additional hydraulic and hydrologic analysis for Tank Wash upstream from its confluence with Star Wash and for the South Branch of Tank Wash upstream from its confluence with Tank Wash was performed by Stanley Consultants, Inc. and FCDMC. This work was completed in November of 1993.

Insert 2, Volume 1 of 7, Table 1, insert after last entry:

<u>Flooding Source</u>	<u>Limits of Study</u>
Powerline Wash	From river mile 1.113 above confluence with Star Wash upstream to river mile 10.424 (1/2 mile upstream from Vulture Mine Road.)
Tank Wash	From river mile 0.980 above confluence with Star Wash upstream to river mile 6.625.
South Branch Tank Wash	From confluence with Tank Wash upstream to river mile 0.872

Insert 3, Volume 1 of 7, Section 2.2, insert after paragraph 19.

Powerline Wash and Tank Wash flow southeasterly to Star Wash. The South Branch of Tank Wash flows southeasterly to Tank Wash.

Insert 4, Volume 1 of 7, Table 3, insert after last entry:

<u>Flooding Source and Location</u>	<u>Drainage Area (Square Miles)</u>	<u>Peak Discharge (cfs)</u>			
		<u>10-Year</u>	<u>50-Year</u>	<u>100-Year</u>	<u>500-Year</u>
<b>Powerline Wash</b>					
Above Vulture Mine Road	23.95	--1	--1	5,700	--1
Above River Mile 2.846	33.09	--1	--1	5,300	--1
At Confluence with Star Wash Floodplain	34.88	--1	--1	5,100	--1
<b>Tank Wash</b>					
Above Confluence with South Branch of Tank Wash	12.55	--1	--1	3,400	--1
Below Confluence with South Branch of Tank Wash	20.29	--1	--1	4,300	--1
Above Range Line 5 West - 6 West	36.99	--1	--1	6,100	--1
Above River Mile 3.785	51.00	--1	--1	6,100	--1
Above Dirt Road to Hidden Tank	51.67	--1	--1	6,800	--1
At Confluence with Star Wash Floodplain	57.34	--1	--1	6,600	--1
<b>South Branch Tank Wash</b>					
At Confluence with Tank Wash	7.74	--1	--1	2,300	--1

<sup>1</sup> Not Computed

Insert 5, Volume 1 of 7, Section 3.2

Cross section data for Powerline Wash, Tank Wash and the South Branch of Tank Wash were developed digitally from 1" = 200', 2-foot contour interval topographic mapping which was compiled specifically for the Powerline Wash/Tank Wash FIS. Starting water surface elevations for Powerline Wash and Tank Wash were based on computed water surface elevations from the Star Wash FIS. The starting water surface for the South Branch of Tank Wash was based on the slope-area method.

Insert 6, Volume 1 of 7, Table 4, insert alphabetically:

<u>Flooding Source</u>	<u>Channel</u>	<u>Overbanks</u>
Powerline Wash	0.040 - 0.050	0.045 - 0.055
Tank Wash	0.040 - 0.050	0.045 - 0.055
South Branch Tank Wash	0.040 - 0.050	0.045 - 0.055

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
Cross Section	Distance *(Feet)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory (Ft NGVD)	Without Floodway (Ft NGVD)	With Floodway (Ft NGVD)	Increase (Feet)
Powerline Wash								
1.113 (A)	5880	653	1172	4.4	1446.4	1446.4	1447.3	.9
1.203 (B)	6355	656	1354	3.8	1449.8	1449.8	1450.6	.8
1.300 (C)	6865	649	1333	3.8	1452.6	1452.6	1453.4	.8
1.400 (D)	7395	900	1500	3.4	1455.4	1455.4	1456.1	.7
1.553 (E)	8205	1050	1477	3.5	1458.6	1458.6	1459.6	1.0
1.664 (F)	8790	680	1238	4.2	1462.0	1462.0	1462.8	.8
1.759 (G)	9290	550	1125	4.6	1465.8	1465.8	1466.5	.7
1.863 (H)	9840	500	1164	4.5	1469.3	1469.3	1470.1	.8
1.964 (I)	10375	520	1385	3.8	1471.8	1471.8	1472.7	.9
2.059 (J)	10875	400	1139	4.6	1474.5	1474.5	1475.2	.7
2.163 (K)	11425	330	1051	4.9	1477.2	1477.2	1478.1	.9
2.259 (L)	11930	340	1153	4.5	1479.8	1479.8	1480.8	1.0
2.357 (M)	12445	280	983	5.3	1482.5	1482.5	1483.4	.9
2.455 (N)	12960	298	1078	4.8	1485.2	1485.2	1486.2	1.0

\* Distance measured from confluence with Star Wash.

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY  
MARICOPA COUNTY, AZ (UNINCORPORATED)

FLOODWAY DATA

POWERLINE WASH (SHT 1 OF 7)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
Cross Section	Distance *(Feet)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory (Ft NGVD)	Without Floodway (Ft NGVD)	With Floodway (Ft NGVD)	Increase (Feet)
Powerline Wash Continued								
2.554 (O)	13485	240	968	5.4	1487.9	1487.9	1488.7	.8
2.649 (P)	13985	230	965	5.4	1490.3	1490.3	1491.1	.8
2.747 (Q)	14500	320	1140	4.6	1492.9	1492.9	1493.5	.6
2.846 (R)	15025	295	927	5.6	1495.3	1495.3	1496.0	.7
2.938 (S)	15510	305	961	5.5	1498.1	1498.1	1499.1	1.0
3.046 (T)	16080	260	785	6.7	1501.7	1501.7	1502.4	.7
3.143 (U)	16590	290	1164	4.6	1504.4	1504.4	1505.3	.9
3.232 (V)	17060	190	607	8.7	1507.2	1507.2	1507.3	.1
3.336 (W)	17610	240	878	6.0	1511.1	1511.1	1512.0	.9
3.431 (X)	18110	175	671	7.9	1514.1	1514.1	1514.7	.6
3.529 (Y)	18625	230	1045	5.1	1517.2	1517.2	1518.0	.8
3.624 (Z)	19140	180	718	7.4	1519.4	1519.4	1519.8	.4
3.718 (AA)	19635	240	889	6.0	1522.2	1522.2	1523.2	1.0
3.817 (AB)	20160	159	744	7.1	1525.3	1525.3	1525.7	.4
* Distance measured from confluence with Star Wash.								

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY  
MARICOPA COUNTY, AZ (UNINCORPORATED)

FLOODWAY DATA

POWERLINE WASH (SHT 2 OF 7)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
Cross Section	Distance *(Feet)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory (Ft NGVD)	Without Floodway (Ft NGVD)	With Floodway (Ft NGVD)	Increase (Feet)
Powerline Wash Continued								
3.909 (AC)	20645	200	790	6.7	1527.6	1527.6	1528.4	.8
4.004 (AD)	21145	341	1203	4.4	1530.0	1530.0	1530.9	.9
4.104 (AE)	21675	195	696	7.6	1532.5	1532.5	1532.8	.3
4.200 (AF)	22180	240	987	5.4	1535.2	1535.2	1536.2	1.0
4.294 (AG)	22675	196	725	7.5	1537.9	1537.9	1538.6	.7
4.393 (AH)	23200	220	816	6.6	1541.3	1541.3	1542.2	.9
4.494 (AI)	23735	168	753	7.2	1544.4	1544.4	1545.1	.7
4.592 (AJ)	24250	184	627	8.6	1547.9	1547.9	1548.6	.7
4.693 (AK)	24785	396	1176	4.6	1552.1	1552.1	1552.7	.6
4.788 (AL)	25285	420	1078	5.0	1554.1	1554.1	1555.1	1.0
4.884 (AM)	25790	330	962	5.6	1557.3	1557.3	1558.3	1.0
4.986 (AN)	26330	200	752	7.2	1561.3	1561.3	1561.8	.5
5.081 (AO)	26830	249	936	5.8	1564.5	1564.5	1565.2	.7
5.174 (AP)	27320	170	656	8.2	1567.9	1567.9	1567.8	-.1

\* Distance measured from confluence with Star Wash.

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

FLOODWAY DATA

MARICOPA COUNTY, AZ (UNINCORPORATED)

POWERLINE WASH (SHT 3 OF 7)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
Cross Section	Distance *(Feet)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory (Ft NGVD)	Without Floodway (Ft NGVD)	With Floodway (Ft NGVD)	Increase (Feet)
Powerline Wash Continued								
5.245 (AQ)	27695	117	595	9.1	1569.8	1569.8	1570.6	.8
5.327 (AR)	28125	203	963	5.6	1572.8	1572.8	1573.3	.5
5.413 (AS)	28600	176	581	9.3	1574.8	1574.8	1575.1	.3
5.493 (AT)	29020	280	1161	4.6	1577.4	1577.4	1578.4	1.0
5.589 (AU)	29525	148	537	10.1	1580.0	1580.0	1579.8	-.2
5.682 (AV)	30015	190	848	6.5	1583.7	1583.7	1584.6	.9
5.771 (AW)	30485	216	839	6.6	1586.5	1586.5	1587.1	.6
5.865 (AX)	30975	143	646	8.5	1589.3	1589.3	1589.7	.4
5.961 (AY)	31480	188	823	6.7	1592.5	1592.5	1593.4	0.9
6.057 (AZ)	31985	130	618	8.9	1595.6	1595.6	1596.3	.7
6.150 (BA)	32475	127	663	8.3	1598.7	1598.7	1599.6	.9
6.248 (BB)	32990	120	565	9.7	1602.1	1602.1	1602.6	.5
6.347 (BC)	33515	245	1160	4.7	1605.3	1605.3	1606.2	.9
6.440 (BD)	34005	213	735	7.5	1607.3	1607.3	1607.5	.2

\* Distance measured from confluence with Star Wash.

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

FLOODWAY DATA

MARICOPA COUNTY, AZ (UNINCORPORATED)

POWERLINE WASH (SHT 4 OF 7)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
Cross Section	Distance *(Feet)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory (Ft NGVD)	Without Floodway (Ft NGVD)	With Floodway (Ft NGVD)	Increase (Feet)
Powerline Wash Continued								
6.538 (BE)	34520	165	590	9.3	1611.7	1611.7	1611.9	.2
6.630 (BF)	35005	245	1054	5.2	1615.6	1615.6	1616.5	.9
6.727 (BG)	35515	136	613	9.0	1618.6	1618.6	1618.8	.2
6.825 (BH)	36030	200	873	6.3	1621.8	1621.8	1622.7	.9
6.921 (BI)	36535	140	553	9.9	1624.7	1624.7	1625.3	.6
7.013 (BJ)	37020	180	898	6.1	1628.9	1628.9	1629.8	.9
7.106 (BK)	37510	250	912	6.1	1631.7	1631.7	1632.0	.3
7.200 (BL)	38020	292	886	6.3	1634.0	1634.0	1634.9	.9
7.297 (BM)	38530	150	650	8.6	1637.3	1637.3	1638.2	.9
7.391 (BN)	39025	199	847	6.6	1641.1	1641.1	1641.9	.8
7.488 (BO)	39535	134	613	9.1	1644.7	1644.7	1644.6	-.1
7.575 (BP)	39995	180	801	7.0	1647.9	1647.9	1648.1	.2
7.674 (BQ)	40520	230	961	5.8	1650.7	1650.7	1650.7	.0
7.771 (BR)	41030	164	637	8.8	1653.1	1653.1	1653.2	.1

\* Distance measured from confluence with Star Wash.

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

FLOODWAY DATA

MARICOPA COUNTY, AZ (UNINCORPORATED)

POWERLINE WASH (SHT 5 OF 7)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
Cross Section	Distance *(Feet)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory (Ft NGVD)	Without Floodway (Ft NGVD)	With Floodway (Ft NGVD)	Increase (Feet)
Powerline Wash Continued								
7.865 (BS)	41525	204	908	6.2	1656.6	1656.6	1657.2	.6
7.958 (BT)	42015	135	543	10.3	1659.7	1659.7	1659.7	.0
8.059 (BU)	42550	130	774	7.2	1663.4	1663.4	1664.3	.9
8.155 (BV)	43055	110	591	9.5	1666.2	1666.2	1666.7	.5
8.250 (BW)	43555	90	536	10.4	1670.0	1670.0	1670.3	.3
8.346 (BX)	44060	116	694	8.1	1673.6	1673.6	1674.1	.5
8.438 (BY)	44545	90	514	10.9	1676.2	1676.2	1676.3	.1
8.530 (BZ)	45030	110	672	8.5	1679.5	1679.5	1680.3	.8
8.626 (CA)	45535	160	767	7.4	1682.0	1682.0	1682.9	.9
8.722 (CB)	46040	147	718	7.9	1686.0	1686.0	1685.9	-.1
8.817 (CC)	46550	104	625	9.1	1688.2	1688.2	1688.8	.6
8.910 (CD)	47040	120	616	9.3	1691.3	1691.3	1692.0	.7
9.000 (CE)	47515	147	866	6.6	1695.0	1695.0	1695.7	.7
9.100 (CF)	48045	131	654	8.7	1697.2	1697.2	1698.0	.8

\* Distance measured from confluence with Star Wash.

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

FLOODWAY DATA

MARICOPA COUNTY, AZ (UNINCORPORATED)

POWERLINE WASH (SHT 6 OF 7)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
Cross Section	Distance *(Feet)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory (Ft NGVD)	Without Floodway (Ft NGVD)	With Floodway (Ft NGVD)	Increase (Feet)
Powerline Wash Continued								
9.192 (CG)	48530	103	602	9.5	1700.6	1700.6	1701.1	.5
9.286 (CH)	49035	184	907	6.3	1703.7	1703.7	1704.7	1.0
9.389 (CI)	49535	260	851	6.7	1706.6	1706.6	1707.0	.4
9.481 (CJ)	50065	170	593	9.6	1710.0	1710.0	1710.2	.2
9.575 (CK)	50560	192	977	5.8	1713.1	1713.1	1714.0	.9
9.672 (CL)	51070	150	604	9.4	1716.0	1716.0	1715.9	-.1
9.761 (CM)	51540	100	564	10.1	1719.2	1719.2	1720.1	.9
9.854 (CN)	52030	180	785	7.3	1723.5	1723.5	1724.3	.8
9.949 (CO)	52530	170	889	6.4	1726.0	1726.0	1726.6	.6
10.045 (CP)	53035	153	604	9.4	1729.0	1729.0	1729.0	.0
10.138 (CQ)	53530	215	1002	5.7	1732.1	1732.1	1733.0	.9
10.236 (CR)	54045	150	588	9.7	1734.8	1734.8	1734.9	.1
10.331 (CS)	54545	269	1089	5.2	1738.3	1738.3	1739.2	.9
10.424 (CT)	55035	70	413	13.8	1741.0	1741.0	1741.6	.6

\* Distance measured from confluence with Star Wash.

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

FLOODWAY DATA

MARICOPA COUNTY, AZ (UNINCORPORATED)

POWERLINE WASH (SHT 7 OF 7)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
Cross Section	Distance *(Feet)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory (Ft NGVD)	Without Floodway (Ft NGVD)	With Floodway (Ft NGVD)	Increase (Feet)
Tank Wash								
.980 (A)	5175	734	1465	4.5	1480.0	1480.0	1480.9	.9
1.073 (B)	5665	540	1421	4.7	1482.7	1482.7	1483.6	.9
1.170 (C)	6175	520	1473	4.5	1485.6	1485.6	1486.0	.4
1.265 (D)	6675	525	1199	5.6	1488.0	1488.0	1488.9	.9
1.360 (E)	7175	441	1432	4.7	1490.9	1490.9	1491.7	.8
1.454 (F)	7670	430	1574	4.3	1492.8	1492.8	1493.6	.8
1.552 (G)	8185	570	1640	4.1	1494.6	1494.6	1495.2	.6
1.654 (H)	8725	674	1553	4.3	1497.0	1497.0	1497.3	.3
1.746 (I)	9210	725	1431	4.7	1500.3	1500.3	1500.7	.4
1.842 (J)	9715	805	1711	3.9	1503.2	1503.2	1504.0	.8
1.939 (K)	10225	665	1443	4.7	1506.3	1506.3	1507.0	.7
2.039 (L)	10755	580	1565	4.3	1509.0	1509.0	1509.9	.9
2.134 (M)	11255	610	1510	4.5	1511.5	1511.5	1512.3	.8
2.230 (N)	11760	565	1524	4.5	1514.1	1514.1	1515.0	.9

\* Distance measured from confluence with Star Wash.

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARICOPA COUNTY, AZ (UNINCORPORATED)

FLOODWAY DATA

TANK WASH (SHT 1 OF 5)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
Cross Section	Distance *(Feet)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory (Ft NGVD)	Without Floodway (Ft NGVD)	With Floodway (Ft NGVD)	Increase (Feet)
Tank Wash Continued								
2.328 (O)	12280	552	1318	5.2	1517.3	1517.3	1518.0	.7
2.425 (P)	12790	580	1497	4.5	1520.1	1520.1	1521.0	.9
2.520 (Q)	13305	440	1176	5.8	1522.8	1522.8	1523.7	.9
2.609 (R)	13775	350	1209	5.6	1525.8	1525.8	1526.3	.5
2.709 (S)	14305	380	1339	5.1	1528.4	1528.4	1528.9	.5
2.805 (T)	14810	480	1205	5.6	1531.1	1531.1	1531.6	.5
2.900 (U)	15310	455	1313	5.3	1534.3	1534.3	1534.8	.5
2.995 (V)	15810	352	1154	6.0	1537.3	1537.3	1537.6	.3
3.091 (W)	16315	350	1145	6.0	1539.5	1539.5	1540.5	1.0
3.186 (X)	16815	375	1222	5.6	1542.6	1542.6	1543.3	.7
3.281 (Y)	17315	485	1149	6.0	1545.5	1545.5	1546.2	.7
3.375 (Z)	17810	505	1311	5.3	1548.6	1548.6	1549.5	.9
3.470 (AA)	18310	350	1032	6.7	1551.1	1551.1	1551.9	.8
3.568 (AB)	18820	230	980	7.0	1553.7	1553.7	1554.2	.5

\* Distance measured from confluence with Star Wash.

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

FLOODWAY DATA

MARICOPA COUNTY, AZ (UNINCORPORATED)

TANK WASH (SHT 2 OF 5)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
Cross Section	Distance *(Feet)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory (Ft NGVD)	Without Floodway (Ft NGVD)	With Floodway (Ft NGVD)	Increase (Feet)
Tank Wash Continued								
3.668 (AC)	19350	275	981	7.0	1556.3	1556.3	1556.8	.5
3.785 (AD)	19970	350	1065	5.7	1559.3	1559.3	1560.3	1.0
3.880 (AE)	20470	220	746	8.2	1563.2	1563.2	1563.2	.0
4.003 (AF)	21120	350	1107	5.5	1567.5	1567.5	1568.1	.6
4.117 (AG)	21720	310	980	6.2	1570.6	1570.6	1571.3	.7
4.211 (AH)	22215	300	947	6.4	1573.7	1573.7	1574.7	1.0
4.314 (AI)	22775	340	1176	5.2	1576.8	1576.8	1577.7	.9
4.409 (AJ)	23270	390	1067	5.7	1579.3	1579.3	1580.1	.8
4.506 (AK)	23780	280	977	6.2	1582.6	1582.6	1583.4	.8
4.599 (AL)	24275	257	920	6.6	1585.6	1585.6	1586.2	.6
4.710 (AM)	24850	266	854	7.1	1589.1	1589.1	1590.0	.9
4.797 (AN)	25320	291	1241	4.9	1591.7	1591.7	1592.5	.8
4.898 (AO)	25855	235	743	8.2	1594.5	1594.5	1594.4	-.1
4.997 (AP)	26380	305	1106	5.5	1597.7	1597.7	1598.7	1.0
* Distance measured from confluence with Star Wash.								

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

FLOODWAY DATA

MARICOPA COUNTY, AZ (UNINCORPORATED)

TANK WASH (SHT 3 OF 5)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
Cross Section	Distance *(Feet)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory (Ft NGVD)	Without Floodway (Ft NGVD)	With Floodway (Ft NGVD)	Increase (Feet)
Tank Wash Continued								
5.091 (AQ)	26875	306	1025	4.2	1600.2	1600.2	1601.0	.8
5.187 (AR)	27380	267	521	8.3	1603.6	1603.6	1603.4	-.2
5.283 (AS)	27855	369	1090	3.9	1607.0	1607.0	1607.4	.4
5.381 (AT)	28400	188	481	8.9	1609.9	1609.9	1610.0	.1
5.475 (AU)	28895	215	838	5.1	1613.5	1613.5	1614.1	.6
5.571 (AV)	29400	200	519	8.3	1616.5	1616.5	1616.7	.2
5.665 (AW)	29910	209	688	6.2	1620.2	1620.2	1621.0	.8
5.763 (AX)	30420	388	1181	3.6	1622.9	1622.9	1623.5	.6
5.853 (AY)	30895	175	498	6.8	1624.9	1624.9	1625.2	.3
5.948 (AZ)	31395	175	695	4.9	1628.3	1628.3	1629.2	.9
6.042 (BA)	31890	165	639	5.3	1631.0	1631.0	1631.8	.8
6.137 (BB)	32390	200	706	4.8	1633.8	1633.8	1634.6	.8
6.241 (BC)	32955	225	757	4.5	1636.7	1636.7	1637.6	.9
6.336 (BD)	33455	200	575	5.9	1640.0	1640.0	1640.8	.8

\* Distance measured from confluence with Star Wash.

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

FLOODWAY DATA

MARICOPA COUNTY, AZ (UNINCORPORATED)

TANK WASH (SHT 4 OF 5)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
Cross Section	Distance *(Feet)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory (Ft NGVD)	Without Floodway (Ft NGVD)	With Floodway (Ft NGVD)	Increase (Feet)
Tank Wash Continued								
6.432 (BE)	33960	225	795	4.3	1643.8	1643.8	1644.5	.7
6.530 (BF)	34475	165	541	6.3	1646.6	1646.6	1647.3	.7
6.625 (BG)	34975	165	676	5.0	1649.9	1649.9	1650.8	.9

\* Distance measured from confluence with Star Wash.

TABLE 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

FLOODWAY DATA

MARICOPA COUNTY, AZ (UNINCORPORATED)

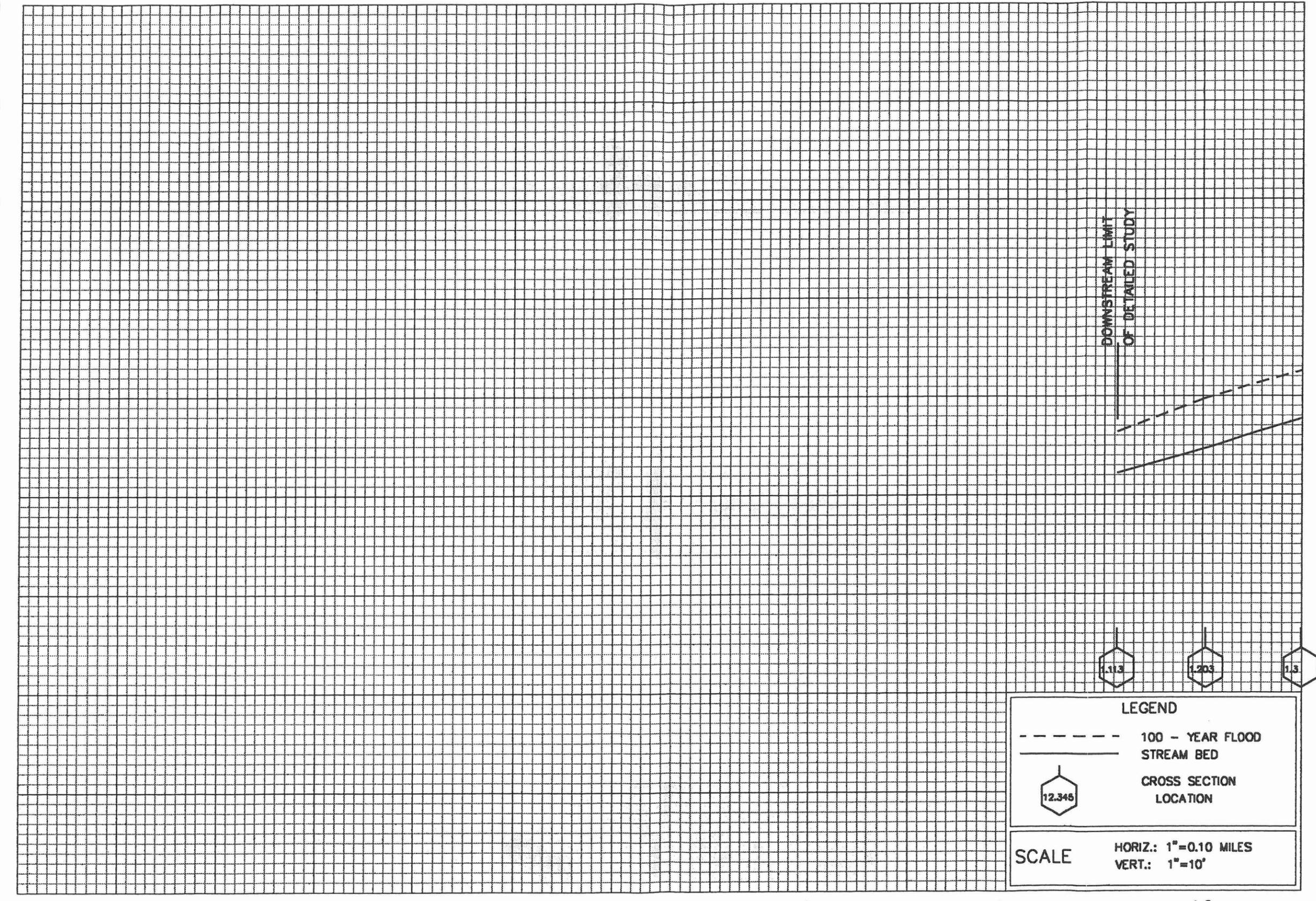
TANK WASH (SHT 5 OF 5)

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
Cross Section	Distance *(Feet)	Width (Feet)	Section Area (Square Feet)	Mean Velocity (Feet Per Second)	Regulatory (Ft NGVD)	Without Floodway (Ft NGVD)	With Floodway (Ft NGVD)	Increase (Feet)
South Branch Tank Wash								
0.176 (A)	930	80	290	7.9	1626.0	1626.0	1627.0	1.0
0.279 (B)	1475	211	661	3.5	1629.3	1629.3	1630.1	0.8
0.381 (C)	2015	119	276	8.3	1632.5	1632.5	1632.4	-.1
0.470 (D)	2485	115	423	5.4	1636.5	1636.5	1637.4	.9
0.573 (E)	3030	129	427	5.4	1639.8	1639.8	1640.4	.6
0.678 (F)	3585	105	352	6.5	1643.4	1643.4	1643.8	.4
0.773 (G)	4085	114	462	5.0	1645.5	1645.5	1646.4	.9
0.872 (H)	4605	53	204	11.3	1648.8	1648.8	1648.8	.0
* Distance measured from confluence with Tank Wash.								

TABLE 5	FEDERAL EMERGENCY MANAGEMENT AGENCY	FLOODWAY DATA
	MARICOPA COUNTY, AZ (UNINCORPORATED)	SOUTH BRANCH TANK WASH (SHT 1 OF 1)

ELEVATION (FEET, NGVD 1929)

1490  
1480  
1470  
1460  
1450  
1440  
1430  
1420  
1410  
1400



STREAM DISTANCE IN MILES ABOVE CONFLUENCE WITH STAR WASH

LEGEND	
	100 - YEAR FLOOD
	STREAM BED
	CROSS SECTION LOCATION

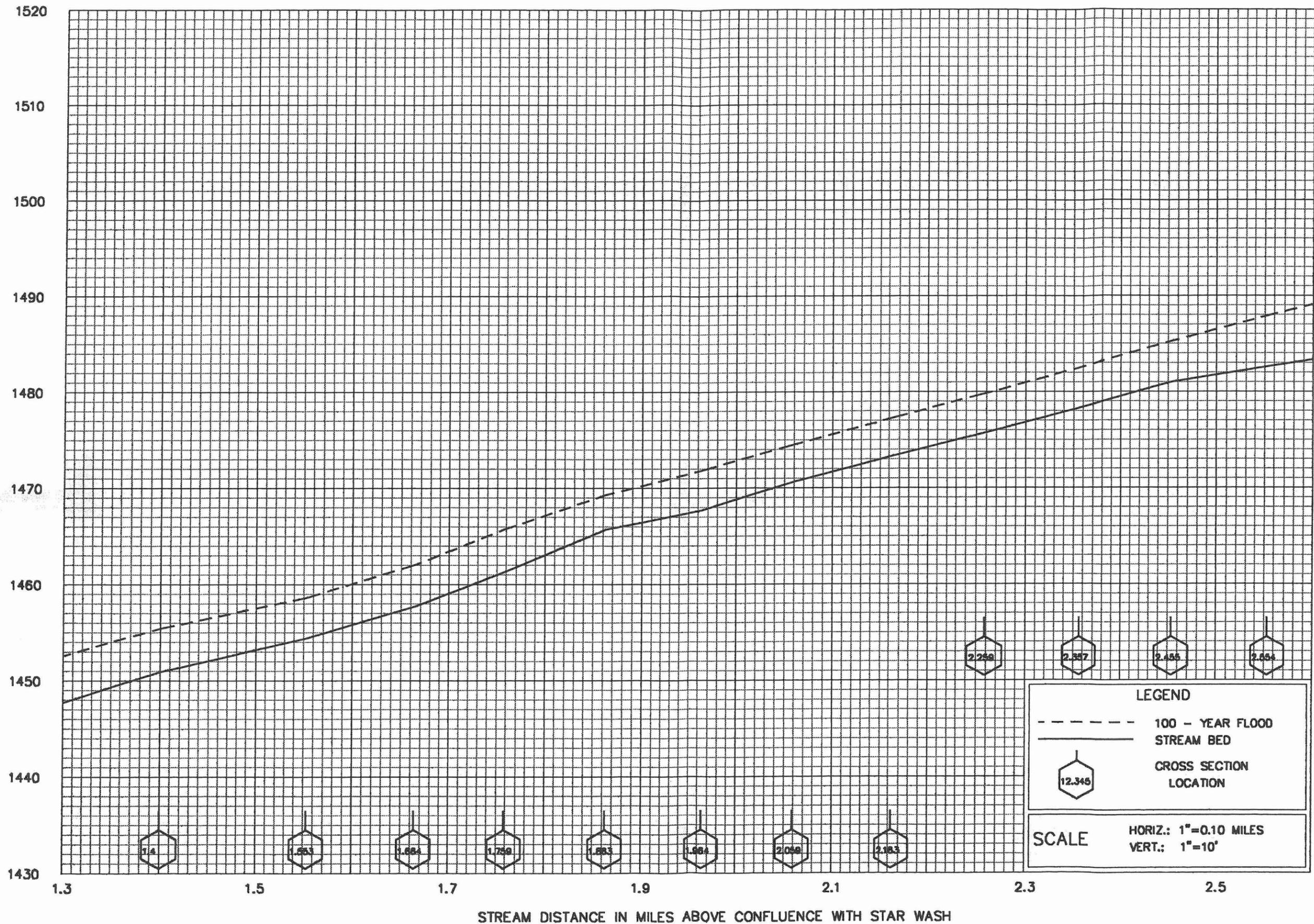
SCALE	
HORIZ:	1"=0.10 MILES
VERT.:	1"=10'

FLOOD PROFILES  
POWERLINE WASH

FEDERAL EMERGENCY MANAGEMENT AGENCY  
MARICOPA COUNTY, ARIZONA  
(UNINCORPORATED)

FIG 1A

ELEVATION (FEET, NGVD 1929)



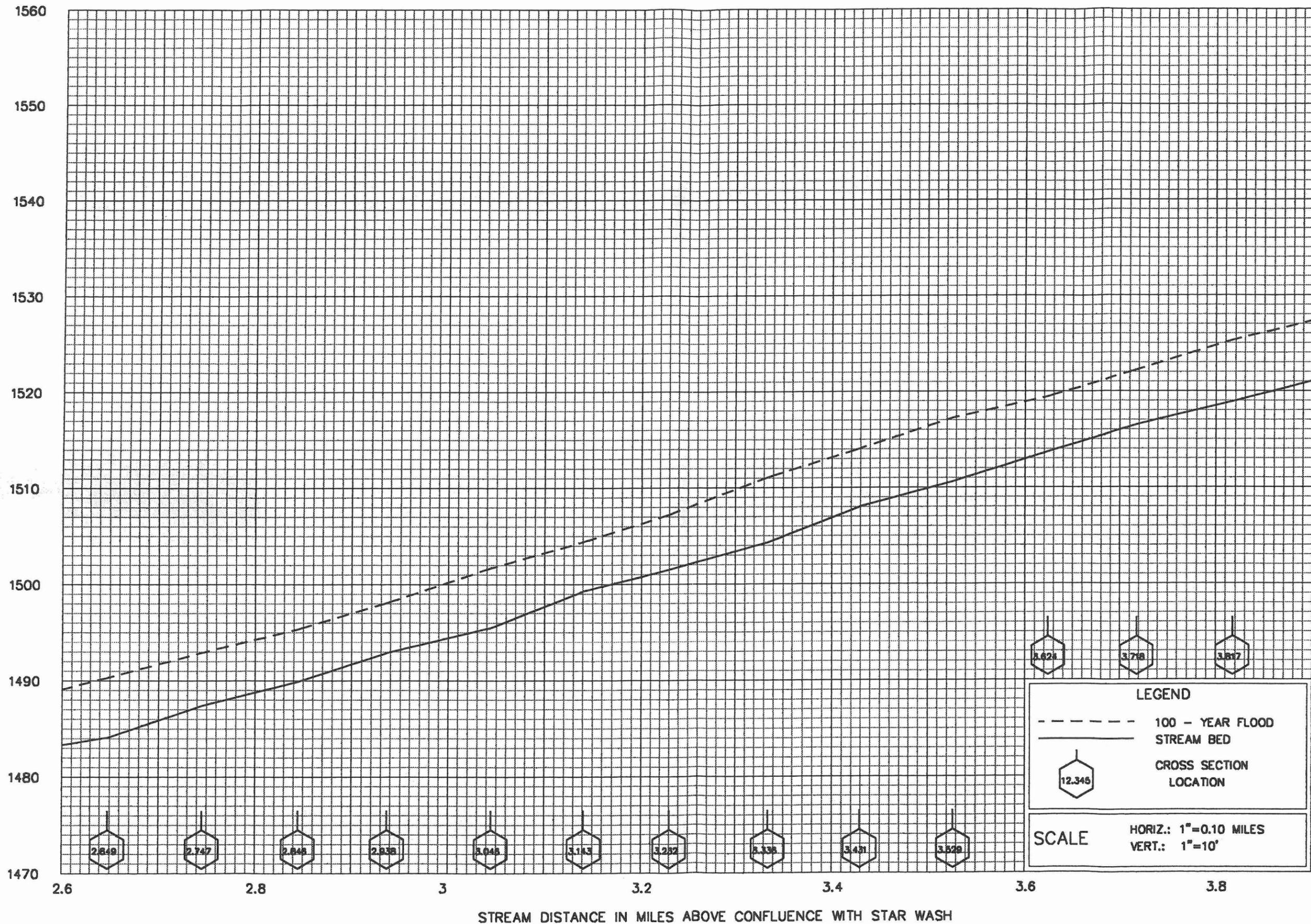
FLOOD PROFILES

POWERLINE WASH

FEDERAL EMERGENCY MANAGEMENT AGENCY  
MARICOPA COUNTY, ARIZONA  
(UNINCORPORATED)

FIG 1B

ELEVATION (FEET, NGVD 1929)



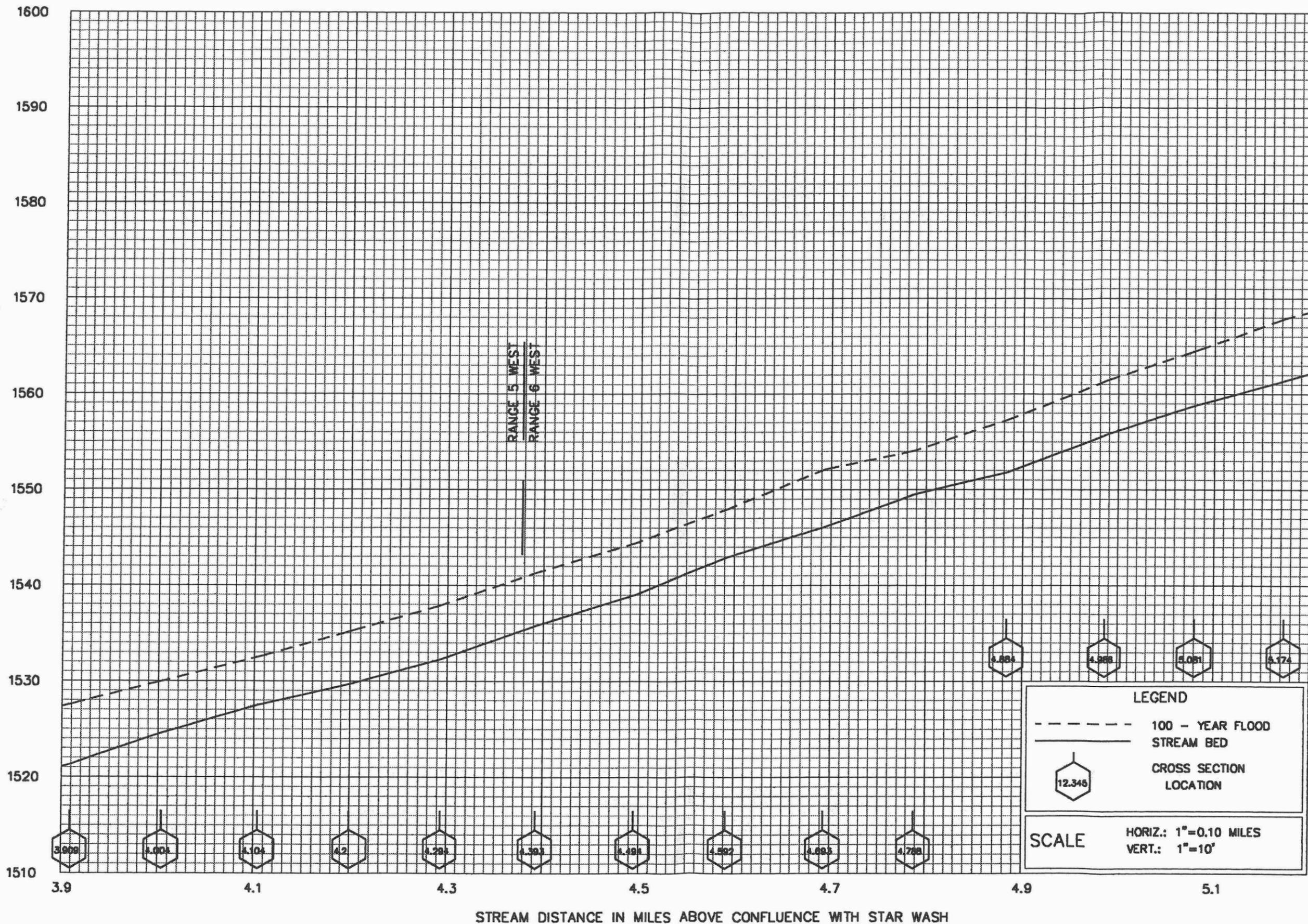
FLOOD PROFILES

POWERLINE WASH

FEDERAL EMERGENCY MANAGEMENT AGENCY  
MARICOPA COUNTY, ARIZONA  
(UNINCORPORATED)

FIG 1C

ELEVATION (FEET, NGVD 1929)



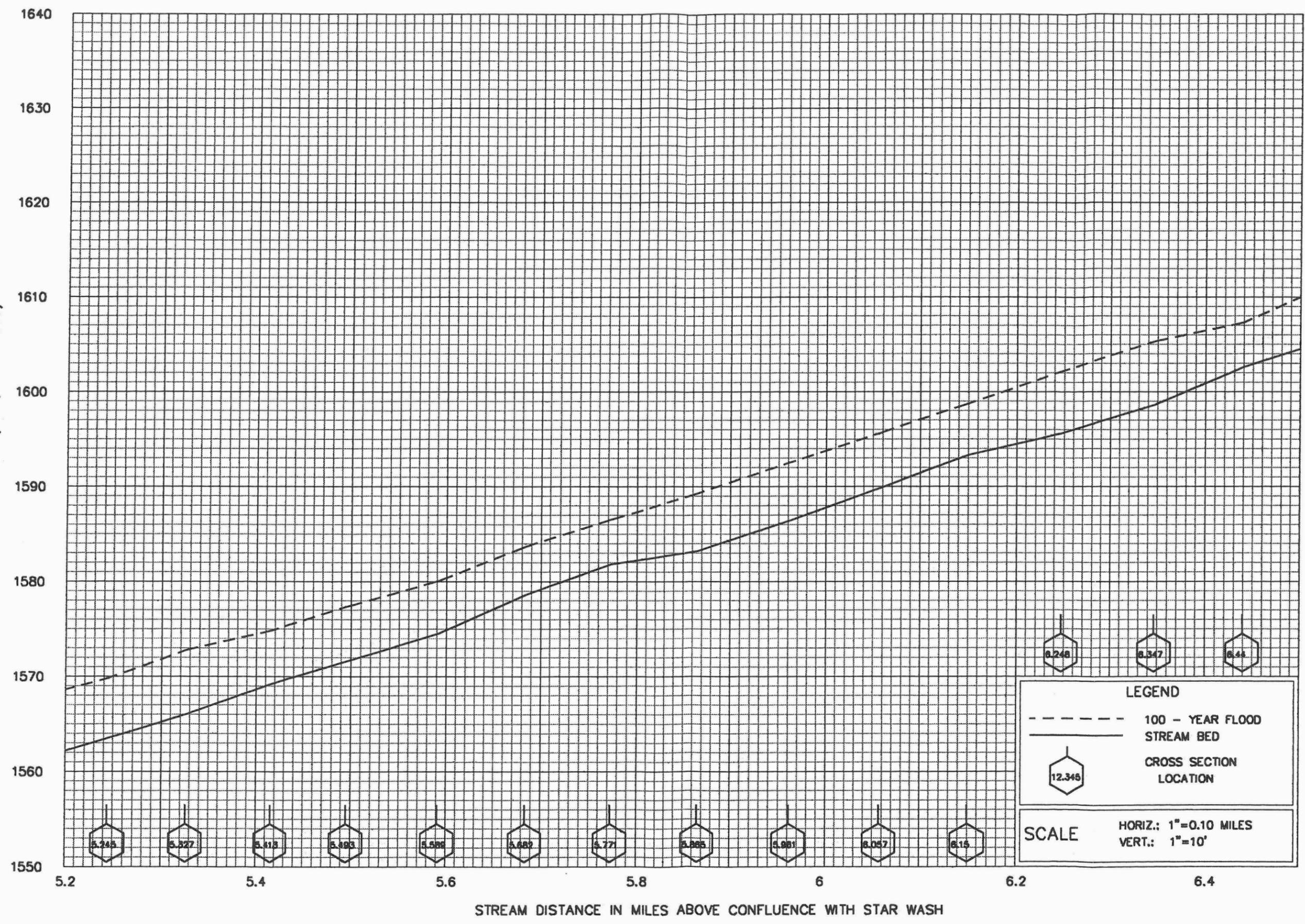
FLOOD PROFILES

POWERLINE WASH

FEDERAL EMERGENCY MANAGEMENT AGENCY  
MARICOPA COUNTY, ARIZONA  
(UNINCORPORATED)

FIG 1D

ELEVATION (FEET, NGVD 1929)

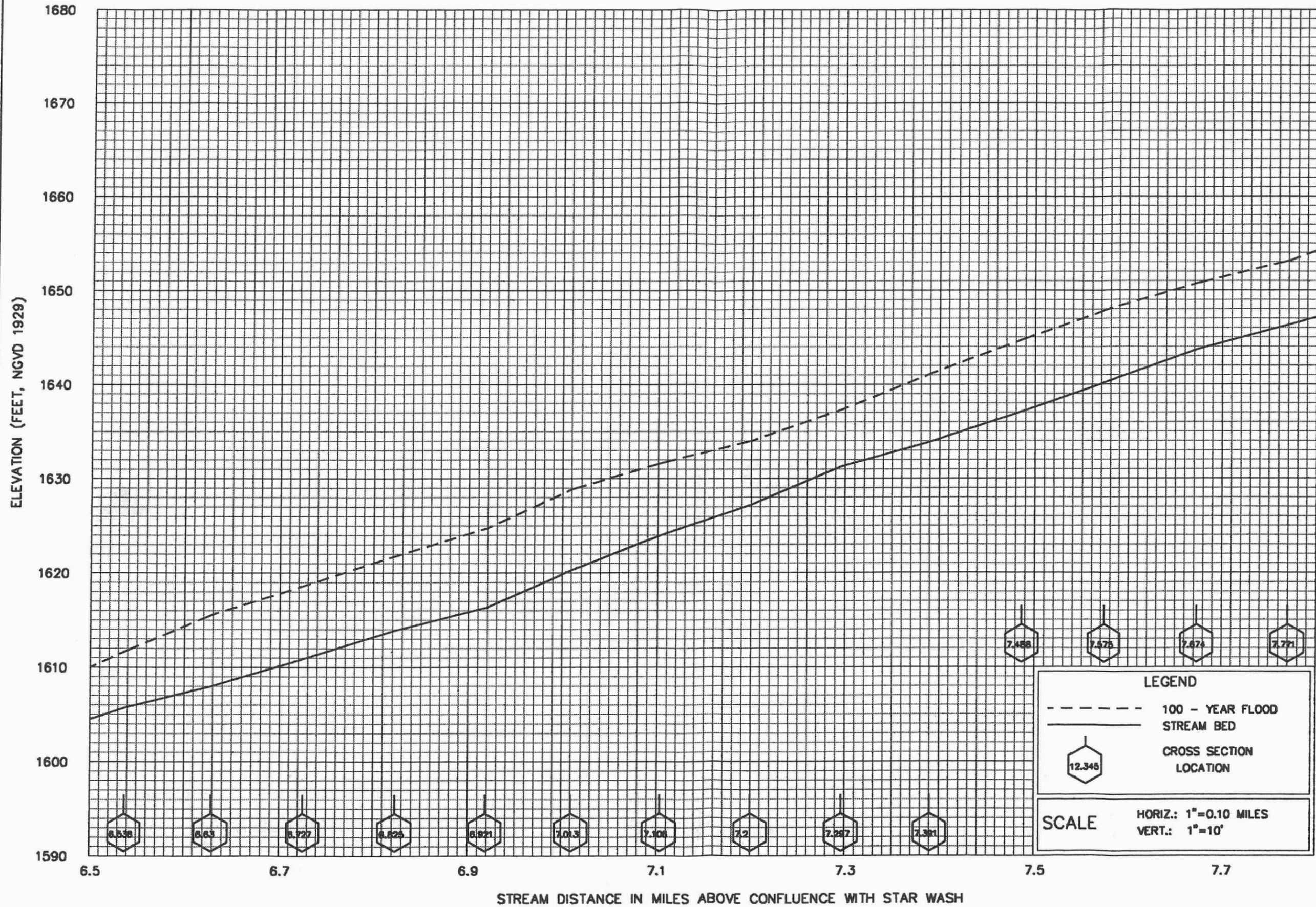


FLOOD PROFILES

POWERLINE WASH

FEDERAL EMERGENCY MANAGEMENT AGENCY  
MARICOPA COUNTY, ARIZONA  
(UNINCORPORATED)

FIG 1E

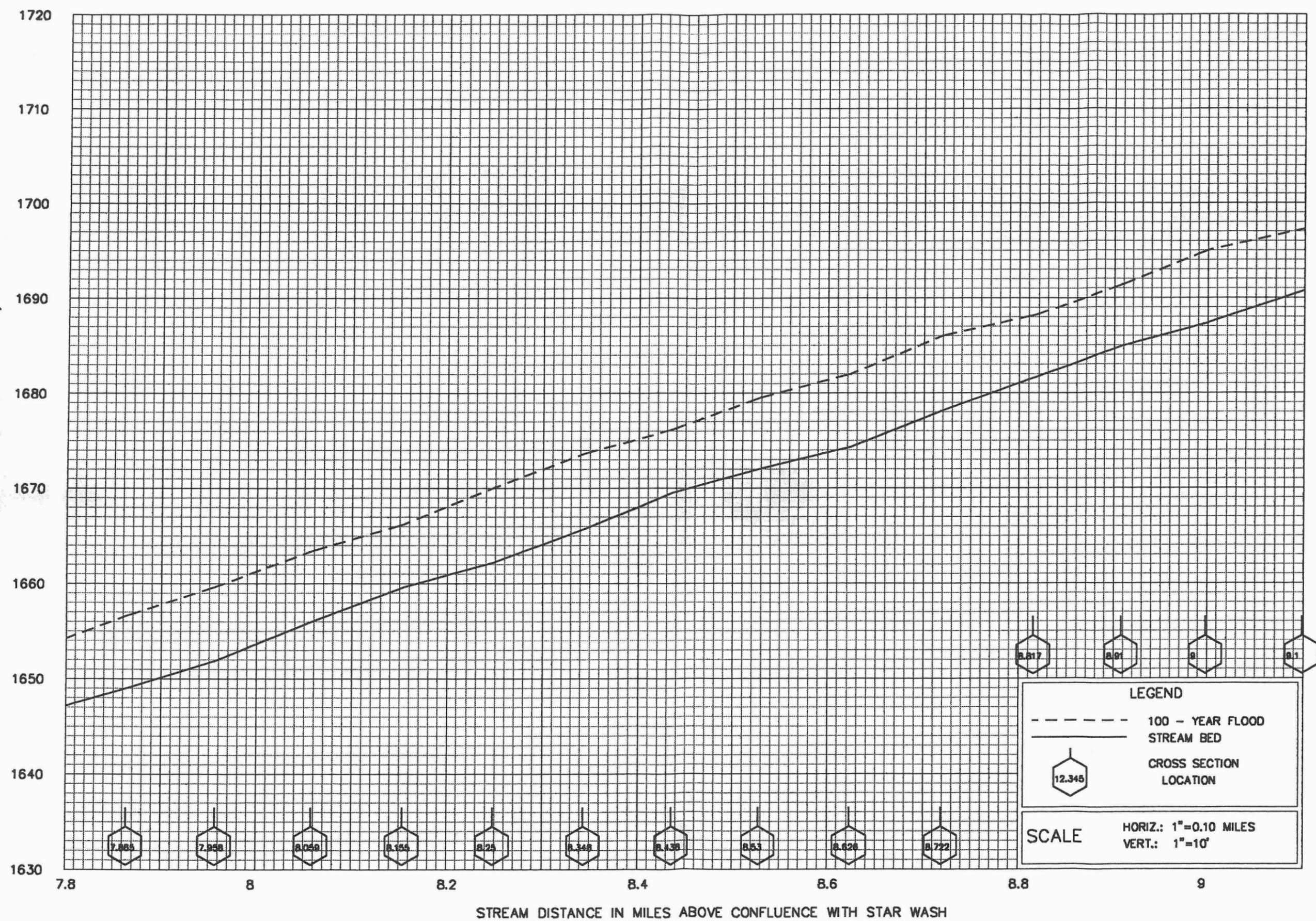


FLOOD PROFILES  
 POWERLINE WASH

FEDERAL EMERGENCY MANAGEMENT AGENCY  
 MARICOPA COUNTY, ARIZONA  
 (UNINCORPORATED)

FIG 1F

ELEVATION (FEET, NGVD 1929)



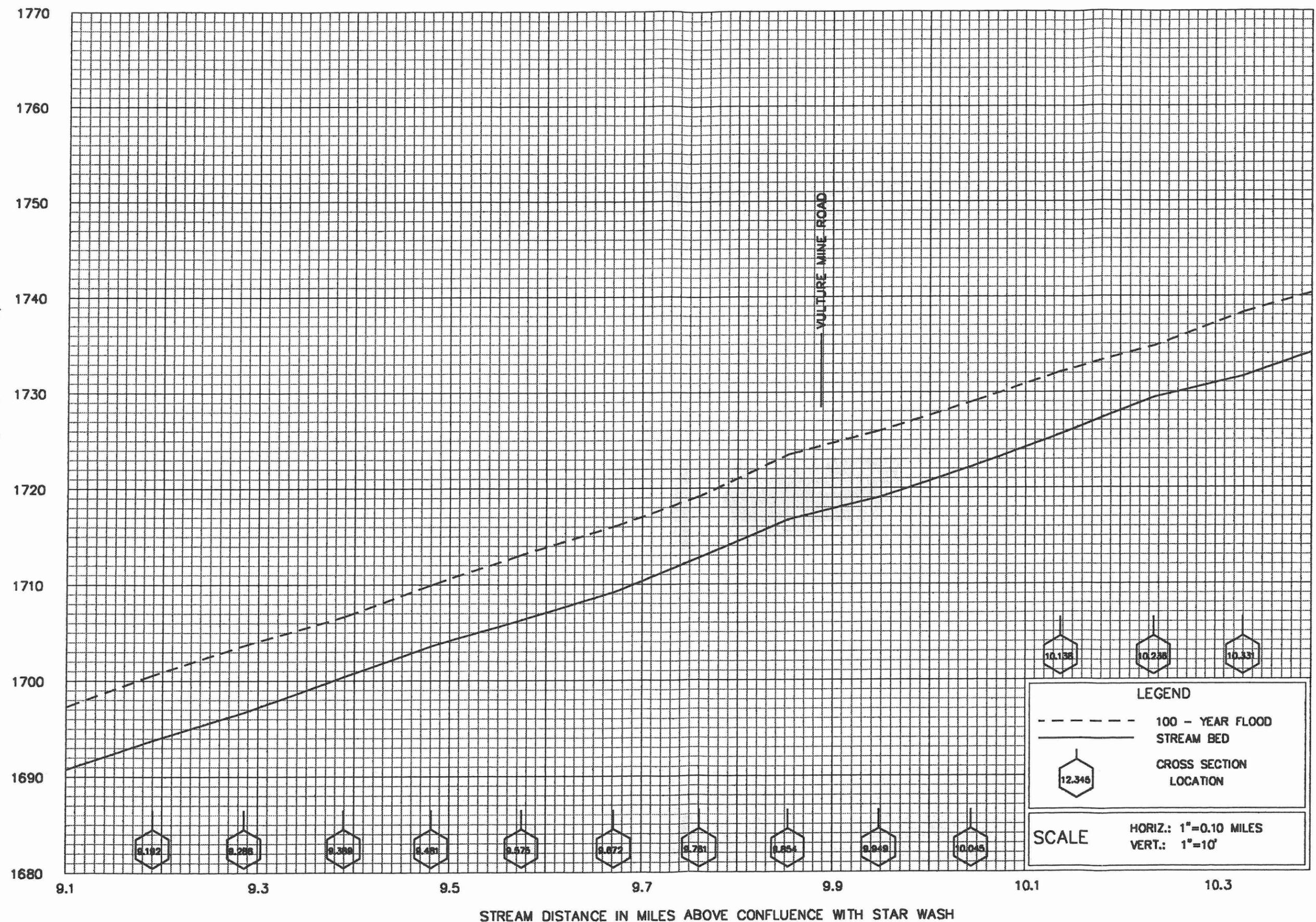
FLOOD PROFILES

POWERLINE WASH

FEDERAL EMERGENCY MANAGEMENT AGENCY  
MARICOPA COUNTY, ARIZONA  
(UNINCORPORATED)

FIG 1G

ELEVATION (FEET, NGVD 1929)



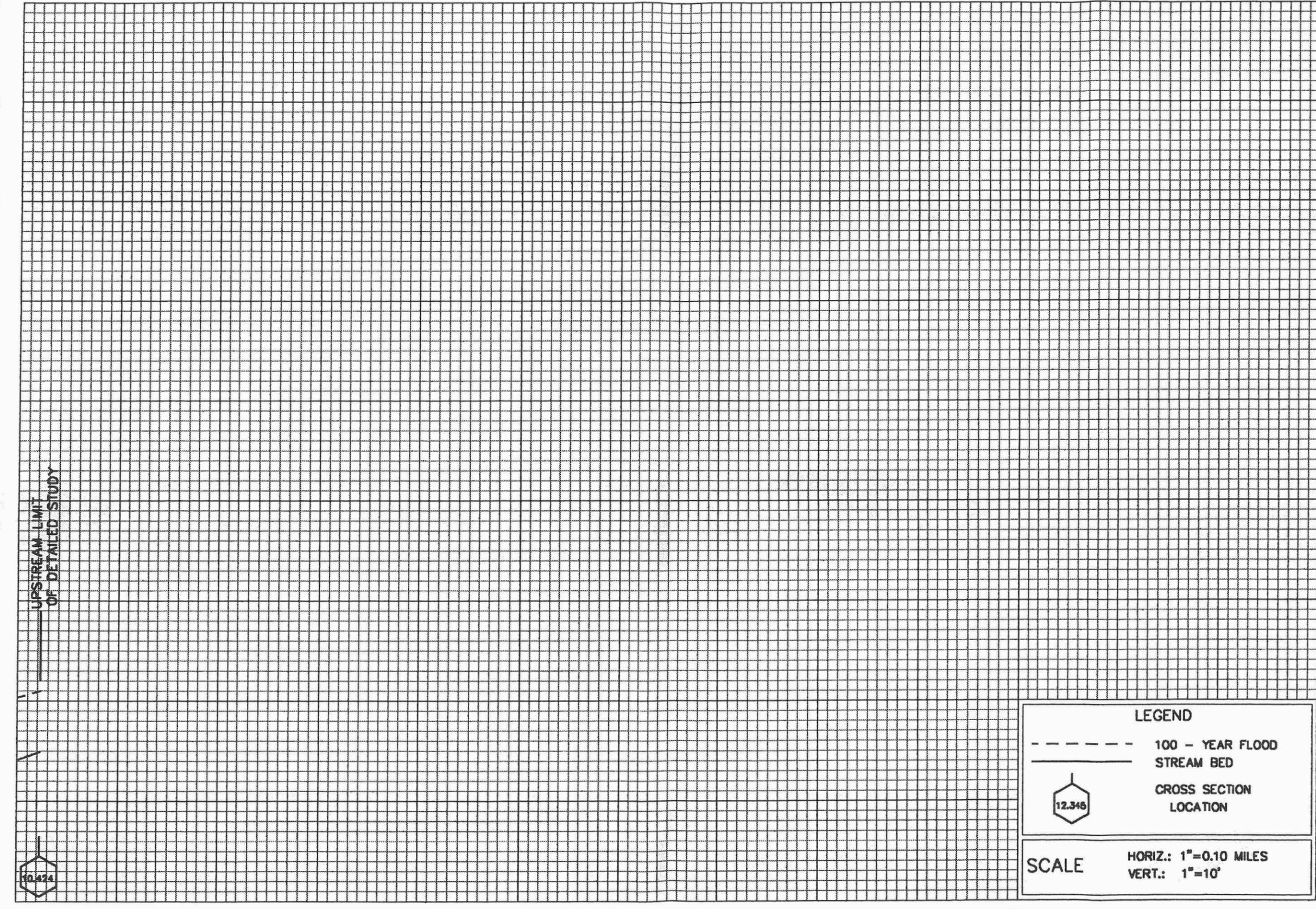
FLOOD PROFILES  
POWERLINE WASH

FEDERAL EMERGENCY MANAGEMENT AGENCY  
MARICOPA COUNTY, ARIZONA  
(UNINCORPORATED)

FIG 1H

ELEVATION (FEET, NGVD 1929)

1810  
1800  
1790  
1780  
1770  
1760  
1750  
1740  
1730  
1720



10.4                      10.6                      10.8                      11                      11.2                      11.4                      11.6

STREAM DISTANCE IN MILES ABOVE CONFLUENCE WITH STAR WASH

LEGEND	
---	100 - YEAR FLOOD
—	STREAM BED
	CROSS SECTION LOCATION

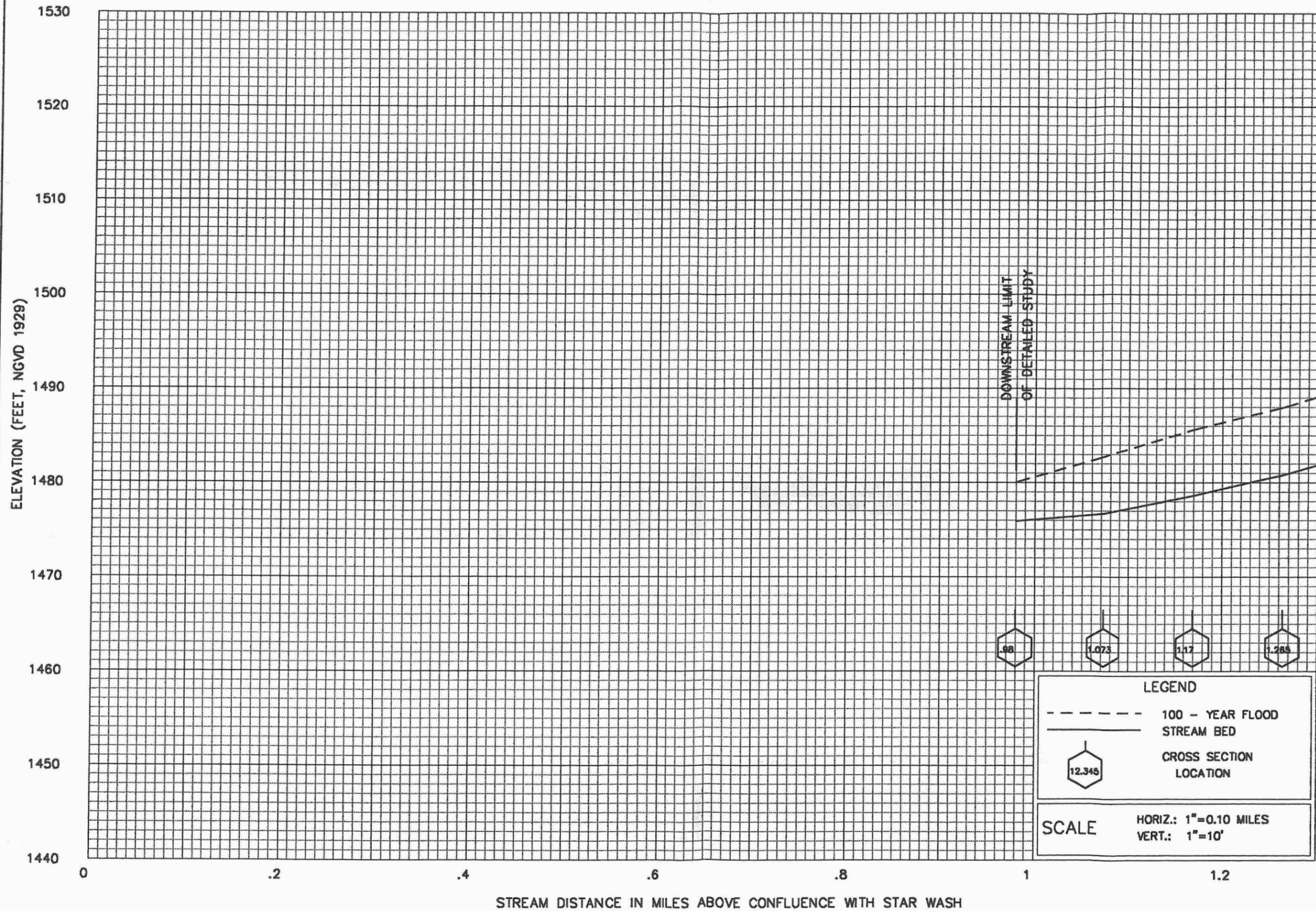
SCALE	
HORIZ.:	1"=0.10 MILES
VERT.:	1"=10'

FLOOD PROFILES

POWERLINE WASH

FEDERAL EMERGENCY MANAGEMENT AGENCY  
MARICOPA COUNTY, ARIZONA  
(UNINCORPORATED)

FIG 11

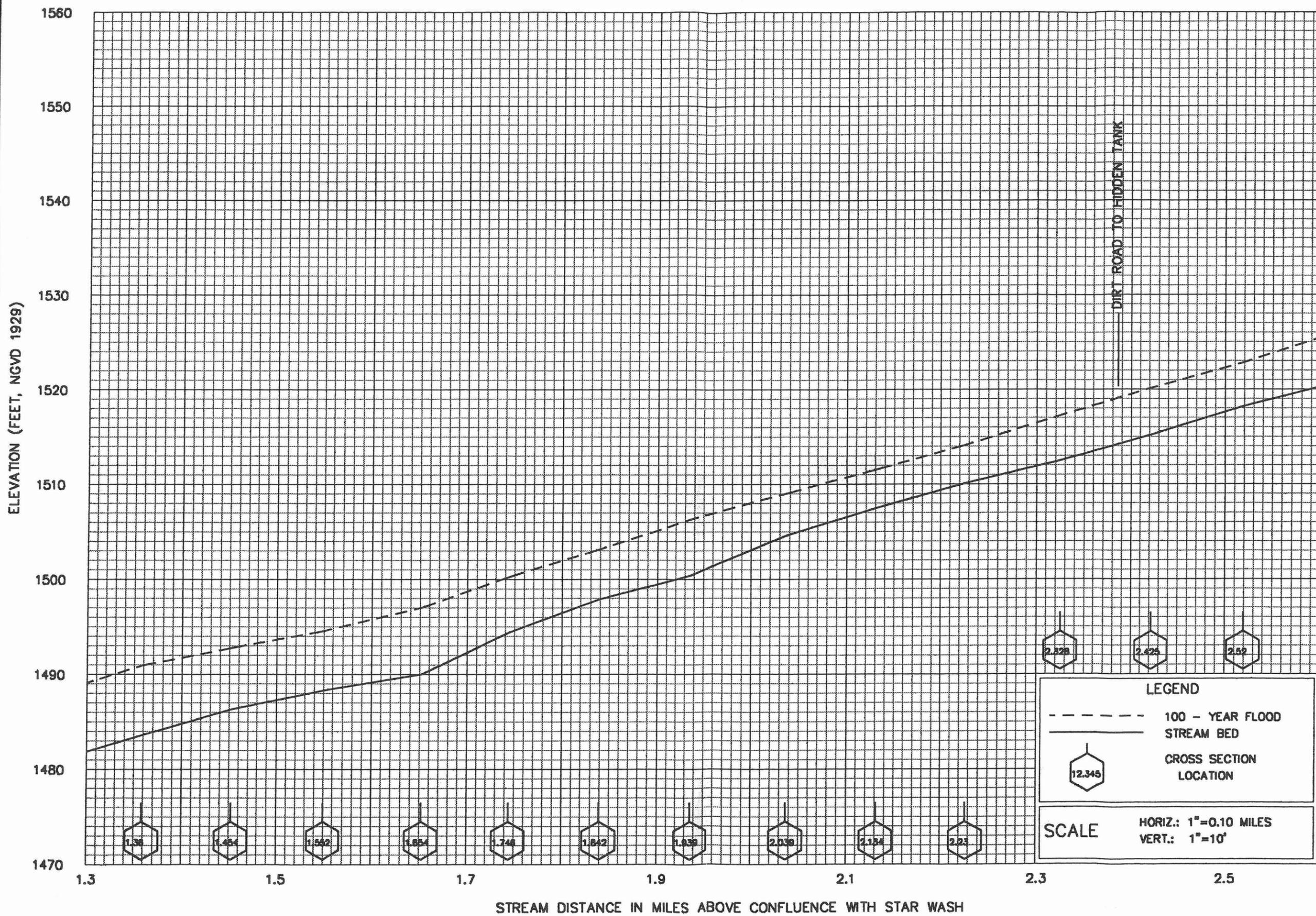


FLOOD PROFILES

TANK WASH

FEDERAL EMERGENCY MANAGEMENT AGENCY  
MARICOPA COUNTY, ARIZONA  
(UNINCORPORATED)

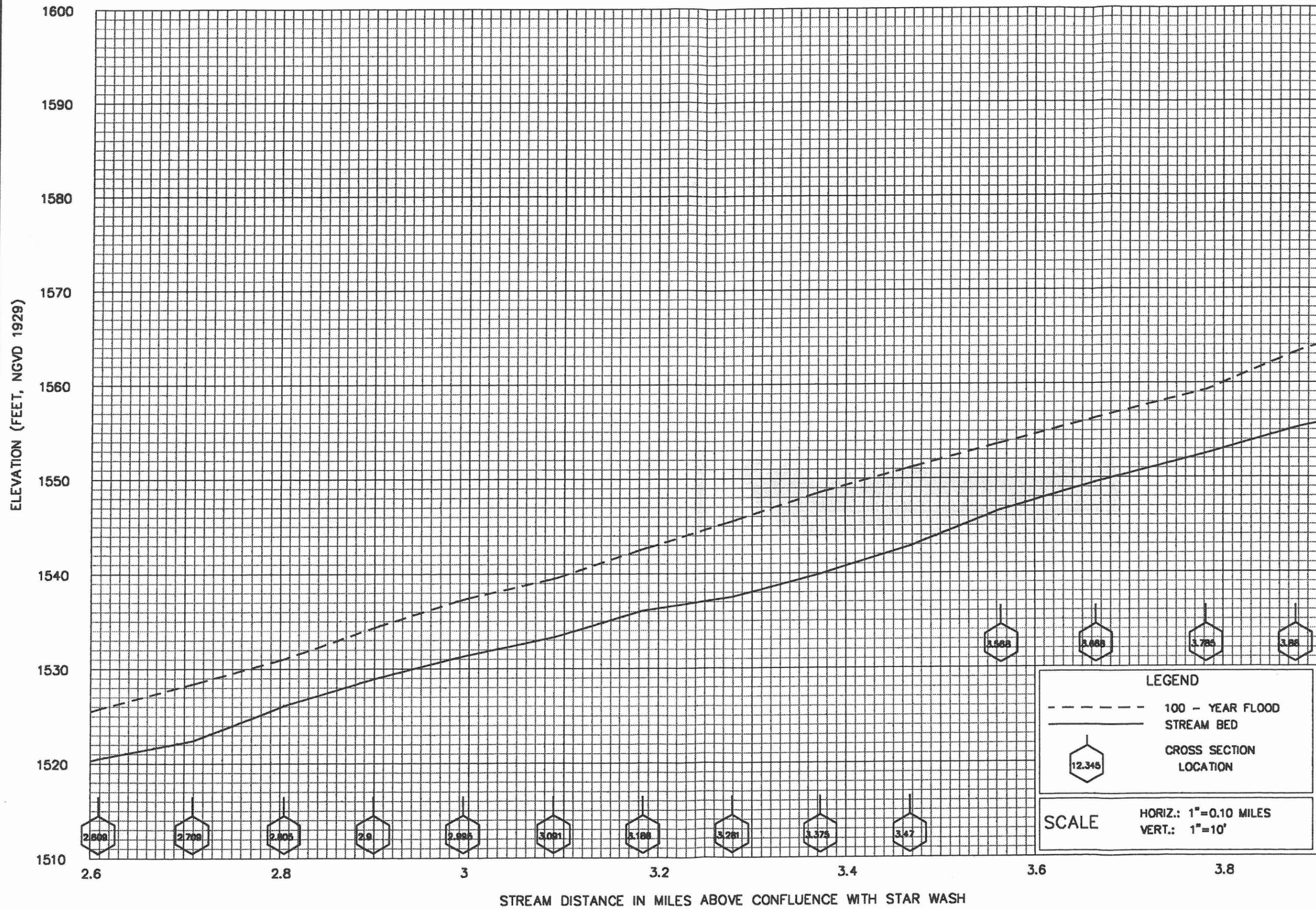
FIG 1J



FLOOD PROFILES  
TANK WASH

FEDERAL EMERGENCY MANAGEMENT AGENCY  
MARICOPA COUNTY, ARIZONA  
(UNINCORPORATED)

FIG 1K



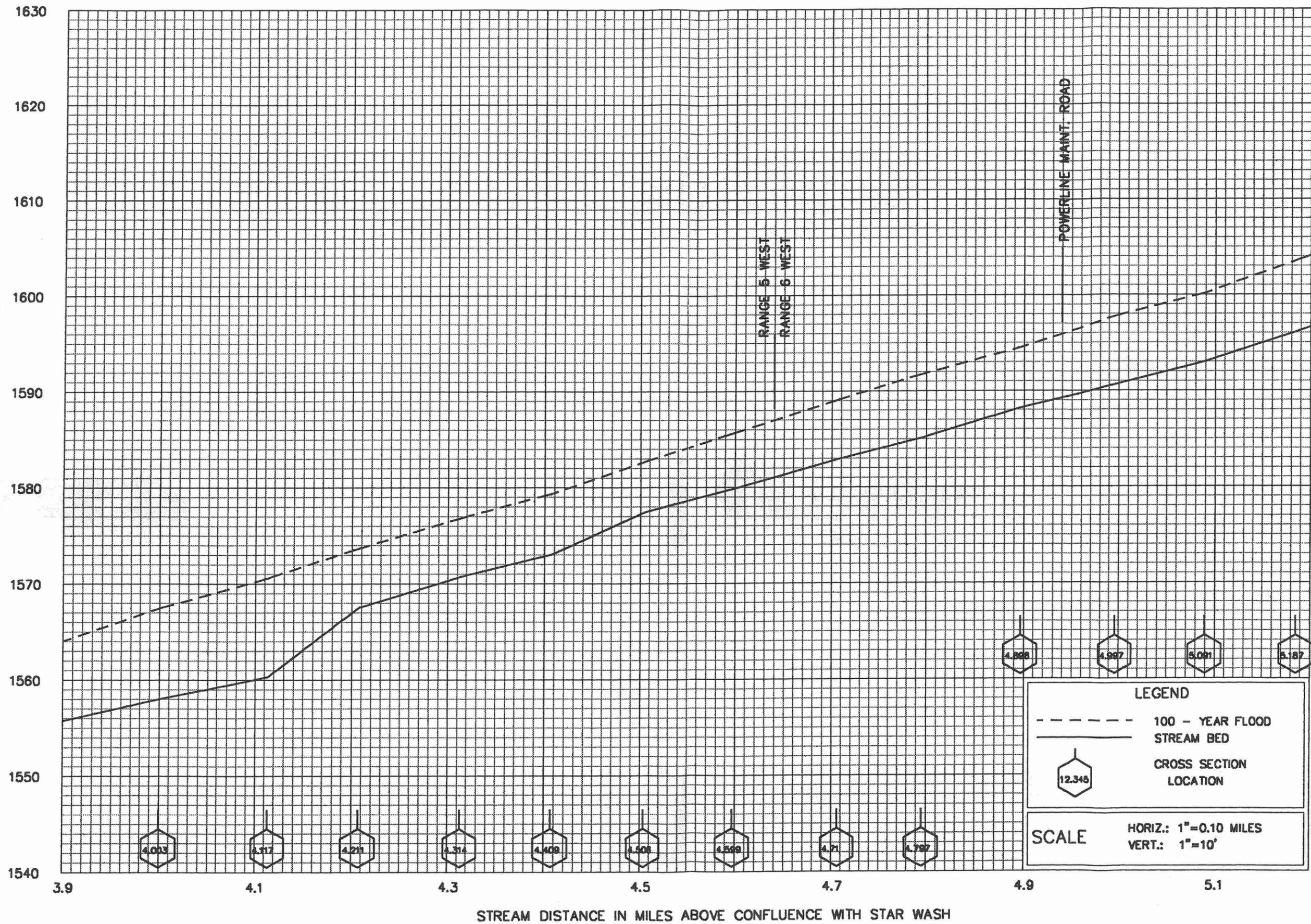
FLOOD PROFILES

TANK WASH

FEDERAL EMERGENCY MANAGEMENT AGENCY  
 MARICOPA COUNTY, ARIZONA  
 (UNINCORPORATED)

FIG 1L

ELEVATION (FEET, NGVD 1929)



**LEGEND**

- 100 - YEAR FLOOD
- STREAM BED
- ⬡ CROSS SECTION LOCATION

**SCALE**

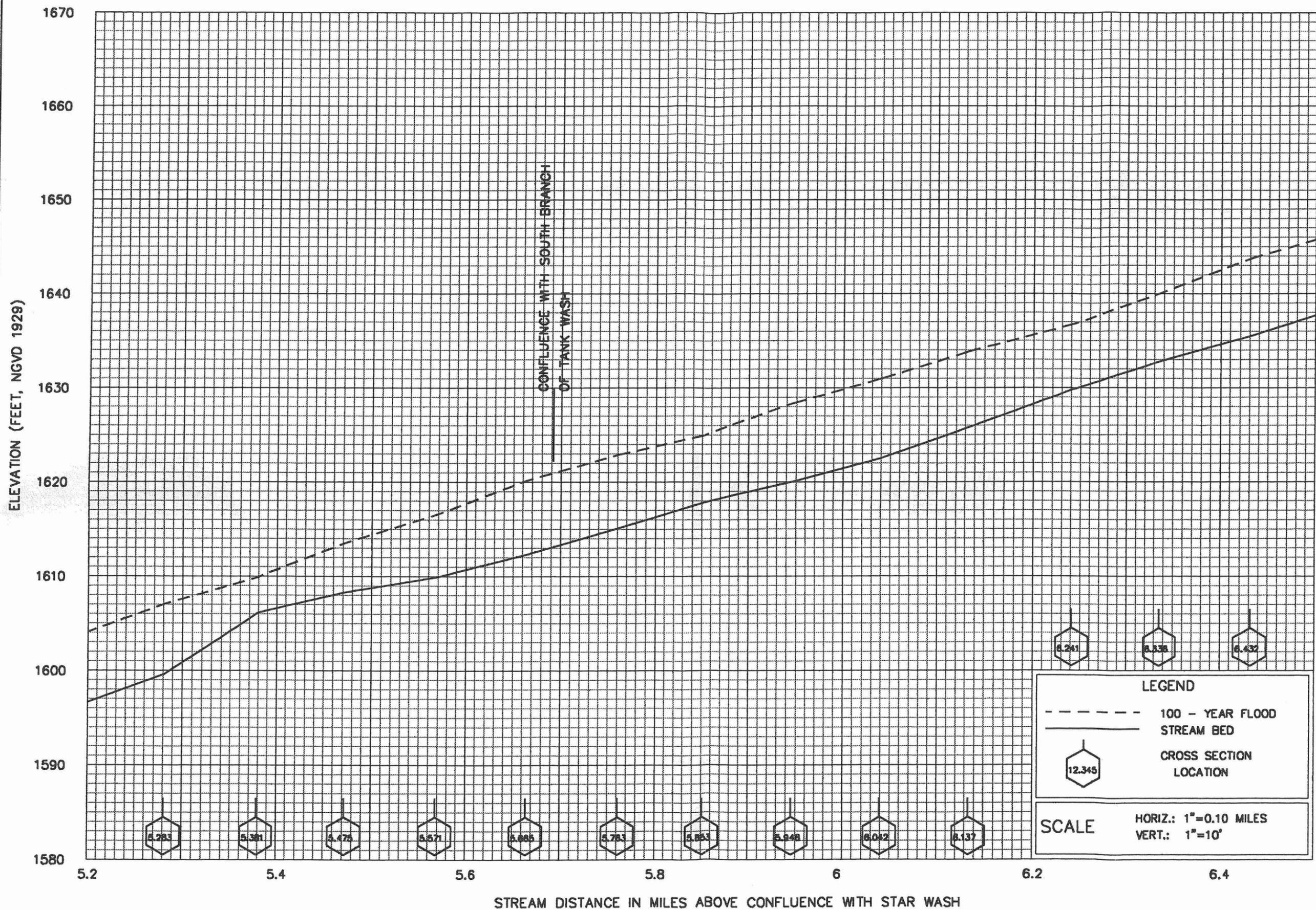
HORIZ.: 1"=0.10 MILES  
VERT.: 1"=10'

FLOOD PROFILES

TANK WASH

FEDERAL EMERGENCY MANAGEMENT AGENCY  
MARICOPA COUNTY, ARIZONA  
(UNINCORPORATED)

FIG 1M

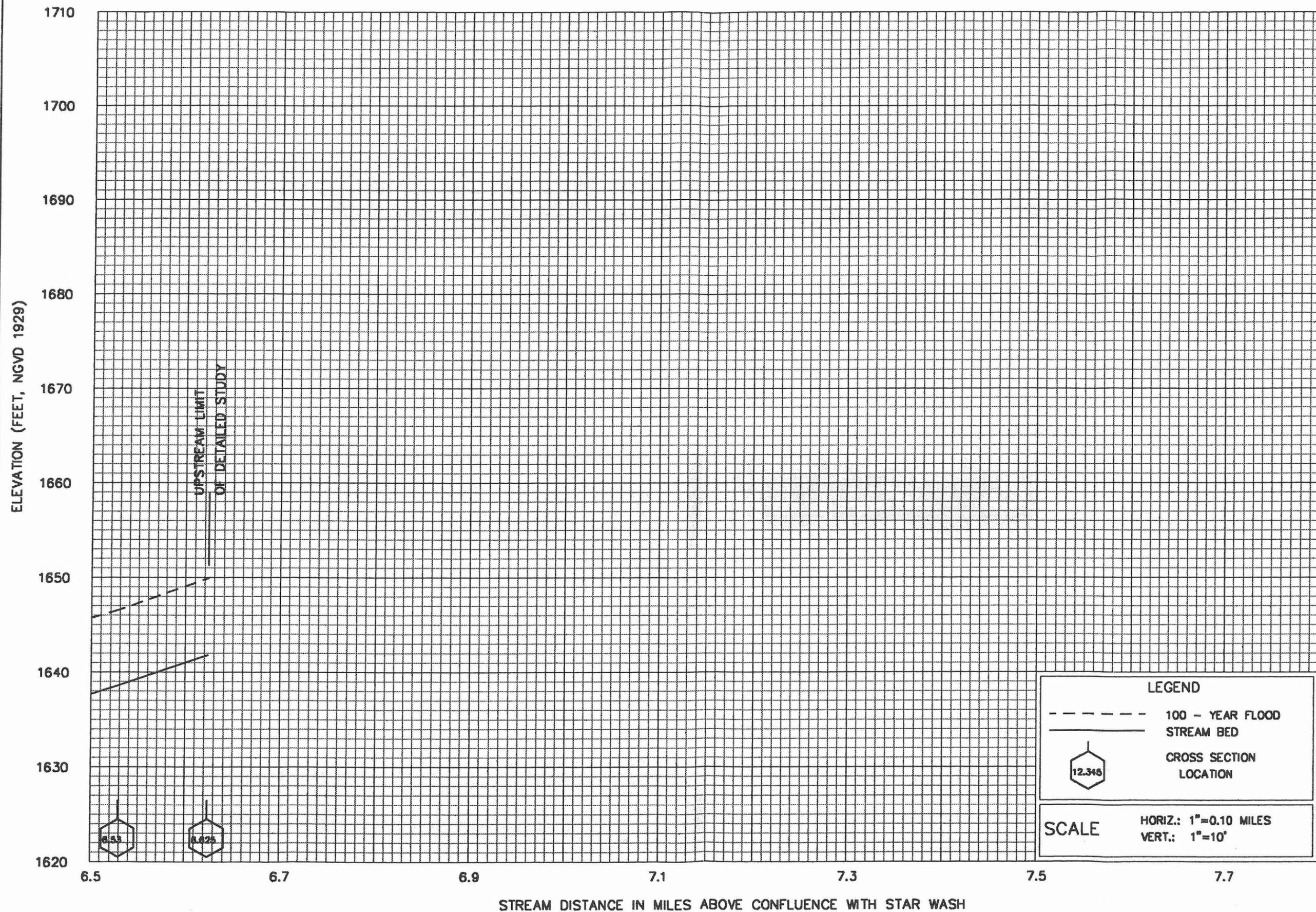


FLOOD PROFILES

TANK WASH

FEDERAL EMERGENCY MANAGEMENT AGENCY  
MARICOPA COUNTY, ARIZONA  
(UNINCORPORATED)

FIG 1N

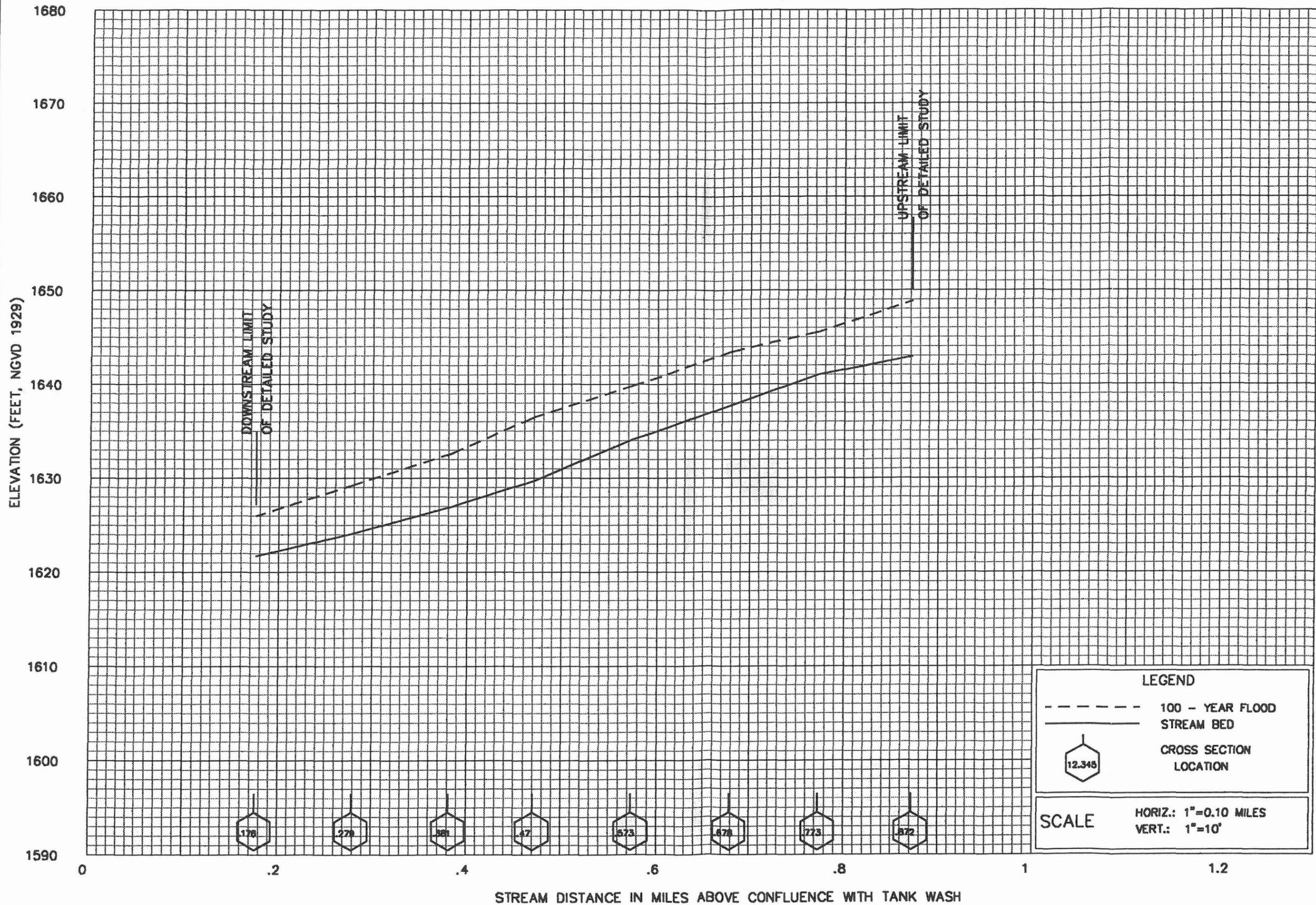


FLOOD PROFILES

TANK WASH

FEDERAL EMERGENCY MANAGEMENT AGENCY  
MARICOPA COUNTY, ARIZONA  
(UNINCORPORATED)

FIG 10

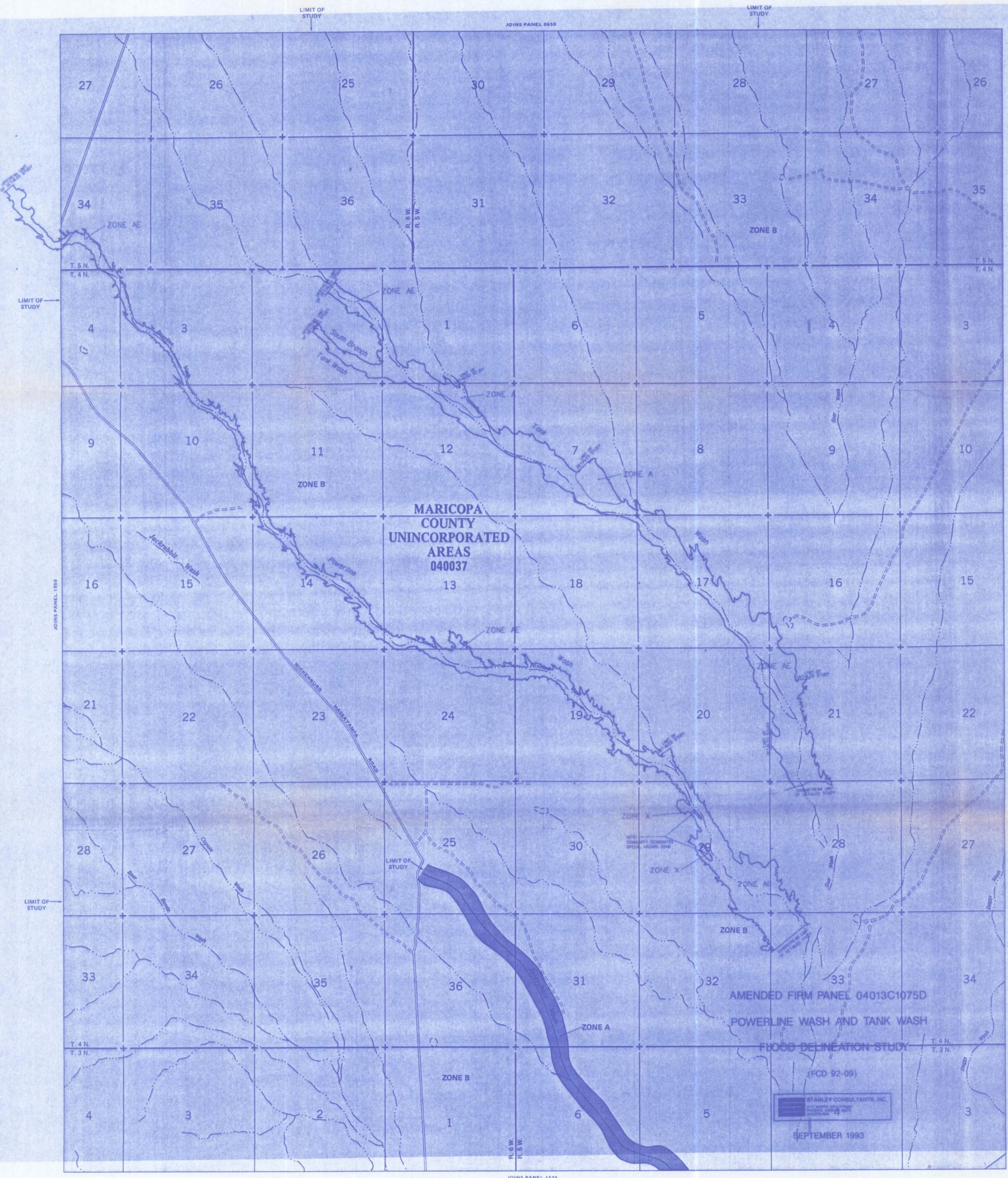


FLOOD PROFILES

TANK WASH (SOUTH BRANCH)

FEDERAL EMERGENCY MANAGEMENT AGENCY  
MARICOPA COUNTY, ARIZONA  
(UNINCORPORATED)

FIG 1P



**KEY TO MAP**

500-Year Flood Boundary	—	<b>ZONE B</b>
100-Year Flood Boundary	—	<b>ZONE B</b>
Zone Designations		
100-Year Flood Boundary	—	<b>ZONE B</b>
500-Year Flood Boundary	—	<b>ZONE B</b>
Base Flood Elevation Line With Elevation In Feet**	— 51.3	
Base Flood Elevation in Feet Where Uniform Within Zone**	(EL 987)	
Elevation Reference Mark	RM7x	
Zone D Boundary	—	
River Mile	*M1.5	

\*\*Referenced to the National Geodetic Vertical Datum of 1929

**EXPLANATION OF ZONE DESIGNATIONS**

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

**NOTES TO USER**

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas.

Certain areas not in the Special Flood Hazard Areas (zones A and V) may be protected by flood control structures.

Coastal base flood elevations apply only landward of the shoreline.

Corporate limits shown are current as of the date of this map. The user should contact appropriate community officials to determine if corporate limits have changed subsequent to the issuance of the map.

For community map revision history prior to countywide mapping, see Section 5.4 of the Flood Insurance Study Report.

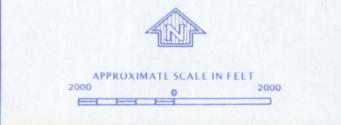
For adjoining map panels, see separately printed Map Index.

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP: APRIL 15, 1988

EFFECTIVE DATE (S) OF REVISION (S) TO THIS PANEL:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.



**NATIONAL FLOOD INSURANCE PROGRAM**

**FIRM FLOOD INSURANCE RATE MAP**

**MARICOPA COUNTY, ARIZONA AND INCORPORATED AREAS**

**PANEL 1075 OF 4350**

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MARICOPA COUNTY, UNINCORPORATED AREAS	040037	1075	D

**MAP NUMBER 04013C1075 D**

**EFFECTIVE DATE: APRIL 15, 1988**

Federal Emergency Management Agency

AMENDED FIRM PANEL 04013C1075D

POWERLINE WASH AND TANK WASH

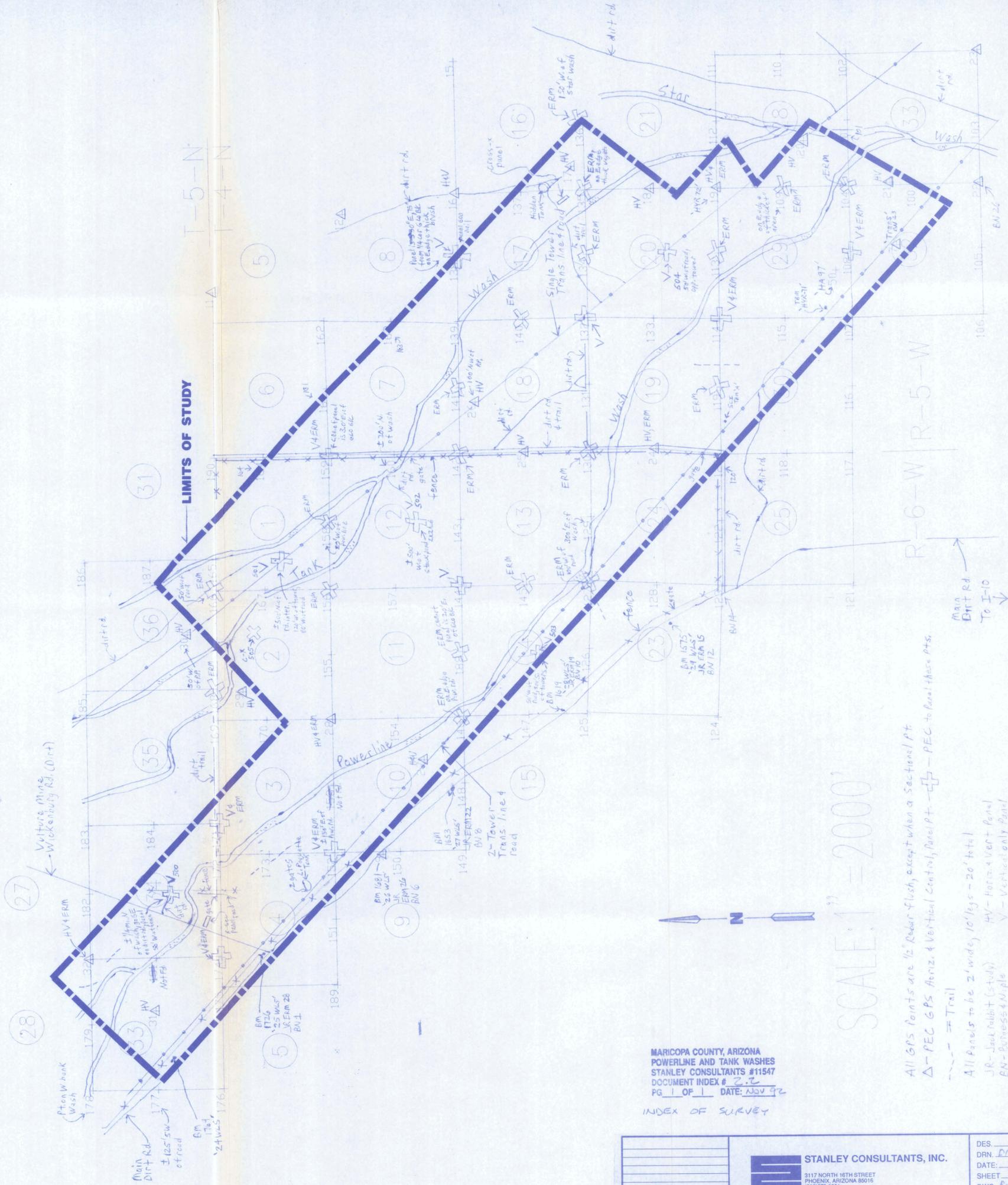
FLOOD DELINEATION STUDY

(FCD 92-09)

STANLEY CONSULTANTS, INC.  
1111 NORTH CENTRAL AVENUE  
PHOENIX, ARIZONA 85004

SEPTEMBER 1993

Valley"



LIMITS OF STUDY

SCALE: 1" = 200'

MARICOPA COUNTY, ARIZONA  
 POWERLINE AND TANK WASHES  
 STANLEY CONSULTANTS #11547  
 DOCUMENT INDEX # 2.2  
 PG 1 OF 1 DATE: Nov 92

INDEX OF SURVEY

All GPS points are 1/2" Reduc. flush, except when a Sectional Pt.  
 Δ - PEC GPS Horiz. & Vertical Control, Panel Pt. —+— PEC to Panel these Pts.  
 --- = Trail

All Panels to be 2' wide, 10' lgs - 20' total  
 JR - Joint Hubbit (study) HV - Horiz. & Vert. Panel  
 EN - Business Multiple V - Vertical only Panel

+ - Panel oriented N-S, E-W = Horiz. & Vert. Pts. and Vertical only Pts.  
 X - Panel oriented @ 45° N.W.S.E. = ERM only or Connection Pts.

Total of 48 Pts.

DES. _____	CKD. _____
DRN. <u>DM</u>	APP. _____
DATE: <u>Nov 1992</u>	
SHEET <u>1</u> OF <u>1</u>	
DWG. <u>Panel Scheme</u>	
PROJ. NO. <u>11547</u>	

**STANLEY CONSULTANTS, INC.**  
 3117 NORTH 16TH STREET  
 PHOENIX, ARIZONA 85016  
 (602)279-0901

REVISIONS: DATE: