Conditional Letter of Map Revision Based on Fill (CLOMR-F) for Union Hills Maintenance Service Center

Prepared For

STREET TRANSPORTATION DEPARTMENT
CITY OF PHOENIX
200 WEST WASHINGTON STREET
5TH FLOOR
PHOENIX, ARIZONA 85003

Prepared by:

Aspen Consulting Engineers
426 N. 44th Street, Suite 370
Phoenix, Arizona, 85008

Registered Professional Engineer (Civil)
CERTIFICATE NO.
30493
PEDRO A.
CALZA
Date Signed 12-9-05
ARIZONA, U.S.A.

City of Phoenix Project No: PW24470004
ACE Project No: P1002-3

December 2005

February 9, 2006

FEMA DEPOT
3601 Eisenhower Avenue
Alexandria, Virginia 22304

ATTN: LOMR Depot

RE: CONDITIONAL LETTER OF MAP REVISION – BASED ON FILL (CLOMR-F)
UNION HILLS MAINTENANCE SERVICE CENTER, PHOENIX, AZ
PANEL 04013C1215K, SEPTEMBER 30, 2005

Please find enclosed a Conditional Letter of Map Revision Based On - Fill (CLOMR-F) application for Union Hills Maintenance Service Center in Phoenix, Arizona. The following items are included with this application.

ITEMS:

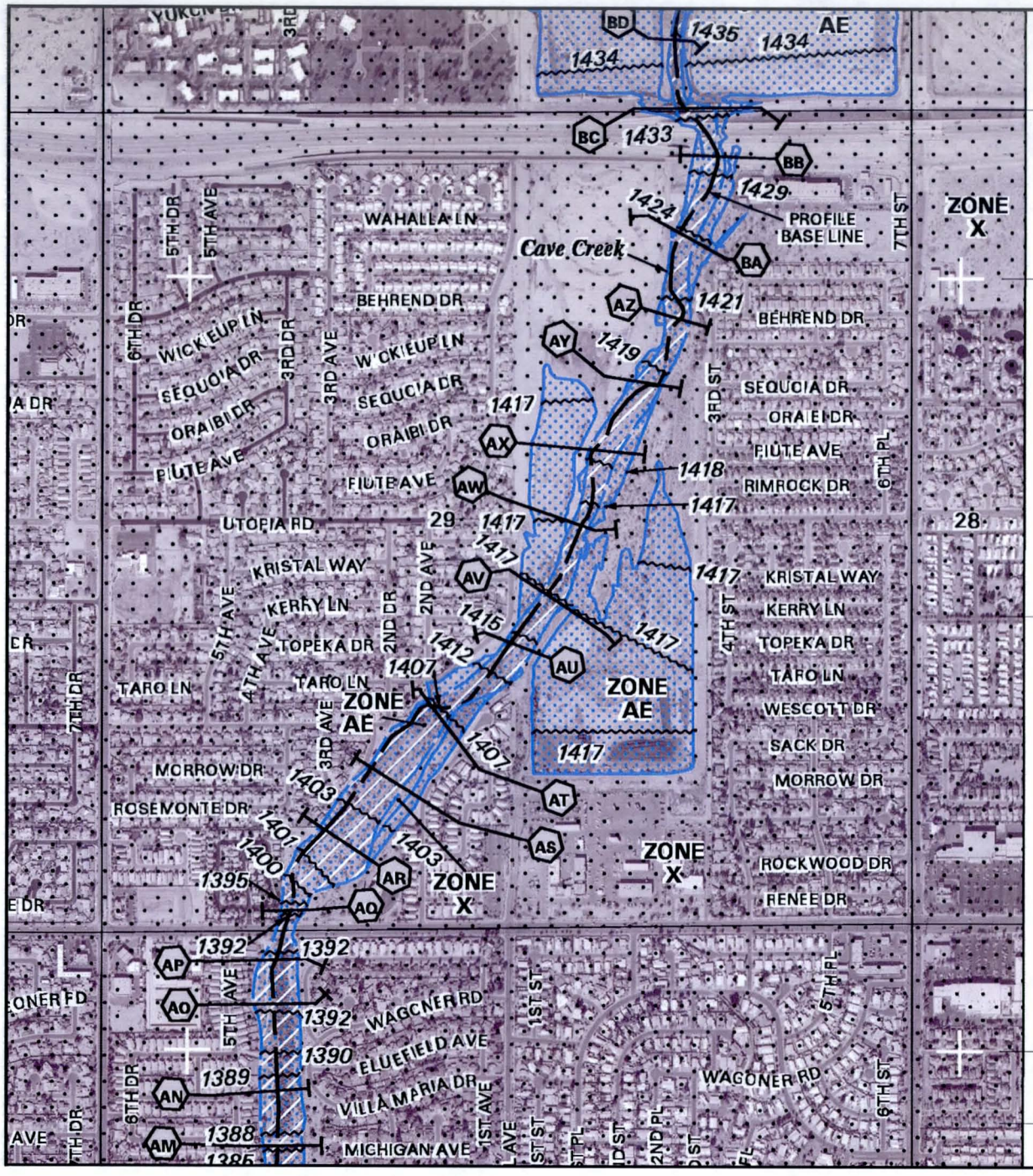
1- Check for $500.
2- Property Information Form (Appendix C).
3- Elevation Form (Appendix C).
4- Community Acknowledgement Form (Appendix C).
5- Payment Information Form (Appendix C).
6- Ownership Information.
7- Copy of Effective FIRM.

If you have any technical questions regarding this project, please contact Mr. Philip Lowe, P.E., Aspen Consulting Engineers, phone number 602-231-9221, fax 602-231-8977. If you have any other questions, please contact this office at 602-262-4960.

Sincerely,

Hasan Mushtaq, Ph.D., P.E., CFM
Floodplain Manager

Cc: Mr. Brian Cosson, CFM, Arizona Department of Water Resources
Mr. Tim Murphy, P.E., CFM, Flood Control District of Maricopa County
Mr. Philip Lowe, P.E., Aspen Consulting Engineers



MAP SCALE 1" = 1000'

0 1000 2000 FEET

0 300 600 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1215K

FIRM
FLOOD INSURANCE RATE MAP
MARICOPA COUNTY, ARIZONA
AND INCORPORATED AREAS

PANEL 1215 OF 4350

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
PHOENIX, CITY OF	040051	1215	K

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
04013C1215K

MAP REVISED
SEPTEMBER 30, 2005

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Conditional Letter of Map Revision Based on Fill (CLOMR-F) for Union Hills Maintenance Service Center

Prepared For

STREET TRANSPORTATION DEPARTMENT
CITY OF PHOENIX
200 WEST WASHINGTON STREET
5TH FLOOR
PHOENIX, ARIZONA 85003

Prepared by:

Aspen Consulting Engineers
426 N. 44th Street, Suite 370
Phoenix, Arizona, 85008

Registered Professional Engineer (Civil)
CERTIFICATE NO.
30493
PEDRO A.
CALZA
Date Signed 12-9-05
ARIZONA, U.S.A.

City of Phoenix Project No: PW24470004
ACE Project No: P1002-3

December 2005

Conditional Letter of Map Revision Based on Fill (CLOMR-F) for Union Hills Maintenance Service Center

1. INTRODUCTION 1

2. SCOPE OF WORK..... 1

3. HYDROLOGY 2

4. HYDRAULICS 2

5. FEMA SUBMITTAL 2

6. SUMMARY 2

7. REFERENCES 3

Registered Professional Engineer (Civil)
CERTIFICATE NO.
30493
PEDRO A.
CALZA
Date Signed 12-9-05
ARIZONA, U.S.A.

APPENDIXES

1. APPENDIX A.....SCOPE OF WORK

2. APPENDIX B.....HEC- 2 TABLES

3. APPENDIX C.....FEMA SUBMITTAL & FORMS

December 8, 2005

Conditional Letter of Map Revision
Based on Fill (CLOMR-F) for
Union Hills Maintenance Service Center

Introduction

The Federal Emergency Management Agency (FEMA) publishes maps, called Flood Insurance Rate Maps (FIRMs) The purpose of a FIRM is to show the areas in your community that have a 1% or greater chance of flooding in any given year, known as Special Flood Hazard Areas (SFHAs). FIRMs are the result of engineering studies that are performed by engineering companies, other Federal agencies, or the community and are reviewed and approved by FEMA.

The placement of fill may elevate small areas within the SFHA boundaries to an elevation at or above the flood elevation. When this happens, the property owner or lessee may apply for a Letter of Map Revision - based on Fill (LOMR-F). Conditional Letter of Map Revision - based on Fill (CLOMR-F). CLOMR-Fs and LOMR-Fs are documents issued by FEMA that officially remove a property and/or structure from the SFHA. To obtain a CLOMR-F or LOMR-F, the applicant must submit mapping and survey data for the property, and an Elevation Certificate for the property.

A LOMR-F is submitted for properties on which fill has been placed to raise the structure or lot to or above the 1% annual chance flood elevation. National Flood Insurance Program (NFIP) regulations require that the lowest adjacent grade of the structure be at or above the 1% annual chance flood elevation for a LOMR F to be issued removing the structure from the SFHA. The participating community must also determine that the land and any existing or proposed structures to be removed from the SFHA are "reasonably safe from flooding". To remove the entire lot and structure, both the lowest point on the lot and the lowest floor of the structure must be at or above the 1% annual chance flood elevation.

The procedure for submitting a Conditional Letter of Map Revision based on Fill (CLOMR-F) is the same as for that for submitting a LOMR-F with the exception that the Fill does not have to be in place for FEMA approval of a CLOMR-F.

Scope of Work

Aspen Consulting Engineers will assist the City of Phoenix in obtaining a CLOMR-F for the City property immediately North of the Union Hills Maintenance Service Center. Aspen Consulting Engineers will prepare any exhibits required and fill out the FEMA Forms required for obtaining the CLOMR-F. See Appendix A

Hydrology

Aspen Consulting Engineers (ACE) will use the hydrology developed by the FIS contractor for the current delineation. The FIS Hydrology is to be provided by the City of Phoenix.

Hydraulics

Aspen Consulting Engineers will use the existing FIS hydraulic model as the base, which will be modified to reflect the proposed fill. The results of the Existing and Proposed Development HEC-2 Models are included in Appendix B.

FEMA Submittal

Aspen Consulting Engineers will provide a Grading and Drainage Plan showing the area that is being proposed in the CLOMR-F. The grading plan will include both plan and profile as well as typical cross sections of the proposed area.

FEMA Forms MT-1 Forms will be filled out by Aspen Consulting Engineers. The MT-1 Forms include:

MT-1 Form 1.....Property Information Form
MT-1 Form 2.....Elevation Form
MT-1 Form 3.....Community Acknowledgement Form

Summary

Aspen Consulting Engineers has prepared drawings for the CLOMR-F for Parcel Number 209-12-004 owned by the City of Phoenix in 3 Phases.

Phase 1 will require that the City place approximately 233,628 cubic yards of fill at a minimum of 95% compaction and build two detention basins as shown on Sheet 7, see Appendix C. After the fill is in place the City of Phoenix will submit "As-Built" plans to FEMA and apply for a LOMR-F.

Phases 2 & 3 will follow the same procedure as outlined in Phase 1.

REFERENCES

1. Burgess & Niple, Inc., March 1991, *Middle Cave Creek Floodplain Delineation Study*

2. Flood Control District of Maricopa County, December 1, 2003 ,*Consultant Guidelines, Third Edition - - Revision 1.*

3. FEMA, April 2003, *Guidelines and Specifications for Flood Mapping Partners*

4. FIA Document 12, December 1993, *Appeals, Revisions, and Amendments to Flood Insurance Maps*

5. City of Phoenix, 2005, *Bid Schedule and Planholder Lists, Preliminary Bid Results and Formal Bid Tabulations*

6. Maricopa County Assessor, 2005, *http://www.maricopa.gov/assessor/*

Conditional Letter of Map Revision
Based on Fill (CLOMR-F) for
Union Hills Maintenance Service Center

APPENDIX A

December 8, 2005

Conditional Letter of Map Revision based on Fill (CLOMR-F) Scope of Work

General

The Federal Emergency Management Agency (FEMA) publishes maps, called Flood Insurance Rate Maps (FIRMs) The purpose of a FIRM is to show the areas in your community that have a 1% or greater chance of flooding in any given year, known as Special Flood Hazard Areas (SFHAs). FIRMs are the result of engineering studies that are performed by engineering companies, other Federal agencies, or the community and are reviewed and approved by FEMA.

The placement of fill may elevate small areas within the SFHA boundaries to an elevation at or above the flood elevation. When this happens, the property owner or lessee may apply for a Letter of Map Amendment (LOMA) or a Letter of Map Revision - based on Fill (LOMR-F). LOMAs and LOMR-Fs are documents issued by FEMA that officially remove a property and/or structure from the SFHA. To obtain a LOMA or LOMR-F, the applicant must submit mapping and survey data for the property, and an Elevation Certificate for the property.

A LOMR-F is submitted for properties on which fill has been placed to raise the structure or lot to or above the 1% annual chance flood elevation. National Flood Insurance Program (NFIP) regulations require that the lowest adjacent grade of the structure be at or above the 1% annual chance flood elevation for a LOMR F to be issued removing the structure from the SFHA. The participating community must also determine that the land and any existing or proposed structures to be removed from the SFHA are "reasonably safe from flooding". To remove the entire lot and structure, both the lowest point on the lot and the lowest floor of the structure must be at or above the 1% annual chance flood elevation.

The following items should be submitted in support of all LOMR-F applications:

1. A copy of a recorded Plat Map for the property or a copy of the recorded deed for the property and a copy of the local tax assessor's map of the neighborhood in question (or other map which shows both property lines and local roads and watercourses).
2. A certified Elevation Information Form or a topographic map or other information indicating existing ground elevations and the date of fill.
3. A signed community acknowledgement of fill placement form which provides written assurance by the participating community that they have complied with the appropriate minimum floodplain management requirements under NFIP regulations, at 44 Code of Federal Regulations, section 60.3.

Hydrology

Aspen Consulting Engineers (ACE) will use the hydrology developed by the FIS contractor for the current delineation. The FIS Hydrology is to be provided by the City of Phoenix.

Hydraulics

Aspen Consulting Engineers will use the existing FIS hydraulic model as the base, which will be modified to reflect the proposed fill.

Grading and Drainage Plan

A Grading and Drainage Plan shall be developed to include the following information at a minimum:

1. All watercourses on the subject lot or within 300 feet of existing or proposed buildings.
2. Subject lot boundary dimensions with drawing scale and north orientation arrow.
3. Proposed structure location, including its external dimensions.
4. Any existing structure location, including its external dimensions.
5. Adjacent alleys, roads, streets or means of access.
6. Location of driveway(s) and distance to nearest property line.
7. Building setback distances (measured from nearest top of bank) - erosion hazard (if applicable).
8. Distance(s) from existing and proposed buildings to property line.
9. Distance(s) between buildings (if applicable).
10. Location of septic systems (if applicable).
11. Location of all on-site utility poles, meters (and elevations), lines, etc.
12. Terrain slope - local drainage flow directions.
13. Slope information (may be given in units of feet per foot or percentage of slope).
    A. Indicate high point and low point of subject lot if terrain slopes.
    B. Indicate by arrow or contour the direction of terrain slope.
    C. Indicate difference in elevation between high point and low point of lot.
    D. Field photographs with scale of watercourse.
14. All road cuts or fills within 50 feet of the subject parcel, roadside ditches and culverts (Including size).
15. Location and type of walls and fences (and adjacent property), existing and proposed.
16. Minimum LFE (Lowest floor elevation).
17. Two cross sections of the parcel drawn to an appropriate scale. Both cross sections will include building sites, and at least one of the cross sections should include the watercourse(s).
18. Grading limits.
19. FEMA (Federal Emergency Management Agency) Floodplain Boundaries.
20. Administrative floodplain limits.
21. All easements.

22. Temporary Benchmark.
Note: All measurements must be in English Units (i.e., feet).

FEMA Forms

FEMA Forms MT-1 Forms will be filled out by Aspen Consulting Engineers. The MT-1 Forms include:

MT-1 Form 1.....Property Information Form
MT-1 Form 2.....Elevation Form
MT-1 Form 3.....Community Acknowledgement Form

Submittal to FEMA

The procedure for submitting a Conditional Letter of Map Revision based on Fill (CLOMR-F) is the same as for that for submitting a LOMR-F with the exception that the CLOMR-F does not have to be in place for FEMA approval. This Scope of Work is for obtaining a CLOMR-F for the Union Hills North Area RFS and the City property immediately North of the facility. After review and approval of the Conditional Letter of Map Revision Package by the City of Phoenix, Aspen Consulting Engineers will submit the CLOMR-F to FEMA for review and approval.

Aspen Consulting Engineers estimates that it will take 3 months to prepare the CLOMR-F submittal to FEMA and approximately 6 months for FEMA review and approval.

.

404 Processing

Aspen Consulting will process a 404 Permit with the United States Army Corps of Engineers on behalf of the City of Phoenix. It is not possible to tell at this time if a Nationwide, Regional or General Permit would be applicable or if an Individual Permit is required. The difference in effort required for each type of permit is substantial so Aspen Consulting Engineers is offering a cost range in our fee proposal. If a Permit is required Aspen would modify the Scope of work to accommodate the specific permit required and would then offer a fee proposal for the approval of the City of Phoenix.

Conditional Letter of Map Revision
Based on Fill (CLOMR-F) for
Union Hills Maintenance Service Center

APPENDIX B

December 8, 2005

11AUG05 13:26:00

Existing FEMA HEC-2

FLOODWAY DATA, CAVE CREEK WASH
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WATER SURFACE ELEVATION WITHOUT FLOODWAY	DIFFERENC
21.742	200.	852.	6.6	1396.3	1395.3	1.0
21.840	200.	697.	8.0	1397.9	1398.0	-.1
21.895	245.	712.	7.9	1399.8	1399.7	.1
21.933	420.	1585.	3.5	1401.5	1400.9	.6
21.953	421.	827.	6.8	1401.3	1401.1	.2
22.065	410.	1179.	4.8	1404.5	1404.1	.4
22.165	400.	1268.	4.4	1406.1	1405.3	.8
22.273	377.	892.	6.3	1407.7	1406.7	1.0
22.410	180.	569.	9.8	1414.2	1414.3	-.1
22.483	160.	1304.	4.3	1416.8	1416.5	.3
22.578	96.	780.	7.2	1417.3	1416.4	.9
22.675	198.	1424.	3.9	1418.8	1418.1	.7
22.794	183.	1191.	4.7	1419.6	1418.6	1.0
22.880	169.	788.	7.1	1420.6	1420.1	.5
22.990	136.	648.	8.6	1424.7	1423.7	1.0
23.097	132.	568.	9.9	1430.6	1429.9	.7
23.168	310.	1340.	4.2	1433.8	1433.1	.7
23.253	45.	250.	13.6	1434.5	1434.5	.0
23.334	67.	355.	9.6	1440.4	1440.4	.0
23.416	59.	318.	10.7	1443.8	1443.8	.0
23.514	57.	365.	9.3	1448.1	1448.1	.0
23.544	55.	309.	11.0	1448.9	1448.9	.0
23.555	63.	614.	5.5	1454.5	1452.6	1.9
23.591	75.	603.	5.6	1454.8	1453.1	1.7
23.691	65.	405.	8.4	1455.8	1455.2	.6
23.815	86.	519.	8.6	1459.0	1459.0	.0
23.912	76.	626.	8.8	1461.1	1461.1	.0
23.989	99.	851.	6.5	1462.8	1462.8	.0
24.086	72.	732.	7.5	1463.8	1463.8	.0
24.096	72.	835.	6.6	1465.2	1465.2	.0
24.106	100.	971.	5.7	1465.5	1465.7	-.2
24.195	100.	1180.	4.7	1466.2	1466.2	.0
24.322	140.	1837.	3.0	1466.6	1466.4	.2
24.444	153.	1209.	4.5	1466.8	1466.4	.4
24.542	210.	686.	8.0	1467.6	1466.7	.9
24.635	120.	496.	11.1	1472.1	1471.9	.2

12AUG05 13:19:13

Revised to reflect the Fill for the CLOMR-F

FLOODWAY DATA, CAVE CREEK WASH
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WATER SURFACE ELEVATION WITHOUT FLOODWAY	DIFFERENCE
21.742	200.	852.	6.6	1396.3	1395.3	1.0
21.840	200.	697.	8.0	1397.9	1398.0	-.1
21.895	245.	712.	7.9	1399.8	1399.7	.1
21.933	420.	1585.	3.5	1401.5	1400.9	.6
21.953	421.	827.	6.8	1401.3	1401.1	.2
22.065	410.	1179.	4.8	1404.5	1404.1	.4
22.165	400.	1268.	4.4	1406.1	1405.3	.8
22.273	377.	892.	6.3	1407.7	1406.7	1.0
22.410	162.	541.	10.4	1414.0	1414.2	-.2
22.483	160.	1316.	4.3	1416.9	1416.6	.3
22.578	95.	775.	7.2	1417.4	1416.5	.9
22.675	198.	1436.	3.9	1418.8	1418.1	.7
22.794	183.	1198.	4.7	1419.7	1418.7	1.0
22.880	169.	791.	7.1	1420.6	1420.1	.5
22.990	136.	647.	8.7	1424.7	1423.7	1.0
23.097	132.	569.	9.8	1430.6	1429.9	.7
23.168	310.	1340.	4.2	1433.8	1433.1	.7
23.253	45.	250.	13.6	1434.5	1434.5	.0
23.334	67.	355.	9.6	1440.4	1440.4	.0
23.416	59.	318.	10.7	1443.8	1443.8	.0
23.514	57.	365.	9.3	1448.1	1448.1	.0
23.544	55.	309.	11.0	1448.9	1448.9	.0
23.555	63.	614.	5.5	1454.5	1452.6	1.9
23.591	75.	603.	5.6	1454.8	1453.1	1.7
23.691	65.	405.	8.4	1455.8	1455.2	.6
23.815	86.	519.	8.6	1459.0	1459.0	.0
23.912	76.	626.	8.8	1461.1	1461.1	.0
23.989	99.	851.	6.5	1462.8	1462.8	.0
24.086	72.	732.	7.5	1463.8	1463.8	.0
24.096	72.	835.	6.6	1465.2	1465.2	.0
24.106	100.	971.	5.7	1465.5	1465.7	-.2
24.195	100.	1180.	4.7	1466.2	1466.2	.0
24.322	140.	1837.	3.0	1466.6	1466.4	.2
24.444	153.	1209.	4.5	1466.8	1466.4	.4
24.542	210.	686.	8.0	1467.6	1466.7	.9
24.635	120.	496.	11.1	1472.1	1471.9	.2

```
T1      MIDDLE CAVE CREEK FLOODPLAIN DELINEATION STUDY, ACDC TO DAM
T2      FLOOD CONTROL DISTRICT OF MARICOPA CO. 1989 BY BURGESS & NIPLE
T3      CAVE CREEK WASH          10 YEAR
*
*       CAVE BUTTE DAM CONTROLS DISCHARGES UP TO THE 100 YEAR FLOOD.
*       ABOVE THE 100 YEAR FLOOD, THE EMERGENCY SPILLWAY WILL PASS FLOWS.
*       AS THE EFFORT TO COMPUTE 500 YEAR HYDROLOGY (WHICH WOULD REQUIRE
*       ANALYSIS OF THE ENTIRE WATERSHED ABOVE THE DAM) IS NOT JUSTIFIED
*       BY THE VALUE OF 500 YEAR FLOODPLAIN INFORMATION, THE FLOOD CONTROL
*       DISTRICT HAS BEEN GRANTED PERMISSION BY FEMA TO DELETE THE 500 YEAR
*       FLOOD FROM THE RESTUDY OF CAVE CREEK WASH.  ONLY THE WATERSHED BELOW
*       THE DAM HAS BEEN CONSIDERED FOR HYDROLOGIC COMPUTATIONS OF THE 10, 50,
*       AND 100 YEAR FLOODS.
*
*       FILE LAST MODIFIED 1/26/90
*
*       SUPERCRITICAL   FROM ACDC TO SPILLWAY OF SEDIMENENT BASIN
*       FOR SECTIONS 17.206 TO 16.988 AND 15.204 TO 15.015, REFER
*       TO SUBCRITICAL RUN
*
J1            2.              1.     -1.                        1271.19
J2    1.              -1.
J3   38.     42.      1.     53.     54.      4.      8.     43.     10.     51.
J3   46.     40.     41.
NC 0.015   0.015   0.015     0.1     0.3
QT    3.  10200.  15700.  18000.
*
*       UPSTREAM EDGE OF SEDIMENT BASIN SPILLWAY, CRITICAL DEPTH ASSUMED
*       USE COE RATING CURVE FOR ELEV. IN BASIN - SEE SUBCRITICAL RUN
*
X117.206      4.   9875.  10125.    769.    769.    769.
GR 1279.   9875.   1267.   9900.   1267.  10100.   1279.  10125.
X117.061      8.  9938.3 10064.7    385.    385.    385.
GR1271.3  9938.3  1261.1  9958.7 1260.51  9988.2 1256.61   9996. 1256.61  10004.
GR1260.5 10011.8  1261.1 10041.3 1271.79 10064.7
*
*       CACTUS ROAD (SPECIAL BRIDGE)
*
X116.988      8.  9938.3 10063.9     90.     90.     90.
GR1269.7  9938.3 1259.48  9958.7 1258.83  9991.1 1256.41   9996. 1256.41  10004.
GR1258.8 10008.9 1259.48 10041.3 1270.17 10063.9
SB   0.9    1.56      3.    100.   82.57      6.   1513.    1.61 1258.71 1258.33
X116.971      8.  9938.3 10064.7    364.    364.    364.
*       ELTRD IS 1275.25 + 2.6 HV = 1277.8
X2                  1. 1273.75  1277.8
GR1269.3  9938.3 1259.09  9958.7 1258.43  9991.2 1256.36   9996. 1256.36  10004.
GR1258.4 10007.9 1259.09 10041.3 1270.78 10064.7
X116.902      9.   9940.  10063.    417.    417.    417.
GR1268.8   9940. 1257.58  9962.5 1256.93  9994.5 1256.19   9996. 1256.19  10004.
GR1256.9 10005.5 1257.58 10037.5 1269.33 10062.2 1270.33  10063.
X116.823      7.   9945.  10056.    681.    681.    681.           2.88
GR1263.9   9945. 1262.92  9945.8 1252.92   9967. 1252.26  10000. 1252.92  10033.
GR1263.4 10055.2 1264.42  10056.
X116.694                            491.    491.    491.          -2.88
X116.601      7.   9945.  10052.    634.    634.    634.           2.67
GR1261.2   9945. 1260.17  9945.8 1248.17   9971. 1247.59  10000. 1248.17  10029.
GR1259.7  10052.  1261.3  10087.
X116.481      6.   9945.  10052.    570.    570.    570.
GR1261.2   9945. 1260.17  9945.8 1248.17   9971. 1247.59  10000. 1248.17  10029.
GR1259.7  10052.
QT    3.  10300.  16100.  18500.
X116.373      7.   9946.  10053.    576.    576.    576.           7.81
GR1252.5   9946. 1251.45  9946.8 1237.95   9975. 1237.45  10000. 1237.95  10025.
GR1250.9 10052.2 1251.95  10053.
X116.264                            612.    612.    612.          -2.43
X116.148                            660.    660.    660.          -2.59
X116.023                            444.    444.    444.          -2.79
*       PEORIA ROAD (SPECIAL BRIDGE)
X115.939      5.   9938.  10062.     90.     90.     90.           1.35
GR1244.7   9938. 1234.71   9958. 1233.87  10000. 1234.71  10042. 1244.71  10062.
SB   0.9    1.56      3.    100.   82.32      6.   1447.    1.84 1235.45 1235.07
X115.921                            227.    227.    227.          -0.38
*       ELTRD IS 1251.1 + 2.5 HV = 1253.6
X2                  1.  1249.6  1253.6                    1.33
X115.878                           1045.   1045.   1045.          -0.97
X115.680      5.  9941.5 10060.5    792.    792.    792.           3.35
GR1237.5  9941.5 1226.98  9962.5  1226.2  10000. 1226.95 10037.5 1238.45 10060.5
X115.530                            400.    400.    400.          -3.35
```

```
X115.454      5.  9967.5 10032.6    762.    762.    762.            0.38
GR1229.5  9967.5 1207.53  9967.6 1206.88  10000. 1207.53 10032.5   1230. 10032.6
X115.310                              560.    560.    560.          -0.38
*       SECTION 15.310 IS THE LAST IN CAVE CREEK CHANNEL.  THE CONFLUENCE
*       OCCURS AT RM 15.263.  THE FOLLOWING SECTIONS ARE IN THE ACDC
X115.204      5.   9945.  10055.    500.    500.    500.             0.5
GR1228.3   9945. 1206.79  9945.1 1205.69  10000. 1206.79  10055. 1226.29 10055.1
X115.109                              500.    500.    500.          -0.25
X115.015                                                            -0.25
EJ
T1      MIDDLE CAVE CREEK FLOODPLAIN DELINEATION STUDY, ACDC TO DAM
T2      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY 1989 BY BURGESS & NIPLE
T3      CAVE CREEK WASH          50 YEAR
J1            3.              1.     -1.                        1272.53
J2    2.             -1.
T1      MIDDLE CAVE CREEK FLOODPLAIN DELINEATIONSTUDY, ACDC TO DAM
T2      FLOOD CONTROL DISTRICT OF MARICOPA CO. 1989 BY  BURGESS & NIPLE
T3      CAVE CREEK WASH         100 YEAR
J1            4.              1.     -1.                        1273.13
J2   15.             -1.
ER
```

```
1*****************************************
***************************************
 *  HEC-2 WATER SURFACE PROFILES            *                                        *  U.S.
ARMY CORPS OF ENGINEERS       *
 *                                          *                                        *
HYDROLOGIC ENGINEERING CENTER      *
 *  Version   4.6.2;  May 1991              *                                        *  609
SECOND STREET, SUITE D         *
 *                                          *                                        *  DAVIS,
CALIFORNIA 95616-4687       *
 *  RUN DATE    11AUG05    TIME   13:11:25  *                                        *
(916) 756-1104            *
 *****************************************
***************************************
```

```
X     X  XXXXXXX   XXXXX              XXXXX
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  XXXXXXX   XXXXX            XXXXXXX
```

```
1
    11AUG05      13:11:25
         PAGE    1
```

THIS RUN EXECUTED

```
11AUG05    13:11:25
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************
```

```
 T1      MIDDLE CAVE CREEK FLOODPLAIN DELINEATION STUDY, ACDC TO DAM
 T2      FLOOD CONTROL DISTRICT OF MARICOPA CO. 1989 BY BURGESS & NIPLE
 T3      CAVE CREEK WASH          10 YEAR

         CAVE BUTTE DAM CONTROLS DISCHARGES UP TO THE 100 YEAR FLOOD.
         ABOVE THE 100 YEAR FLOOD, THE EMERGENCY SPILLWAY WILL PASS FLOWS.
         AS THE EFFORT TO COMPUTE 500 YEAR HYDROLOGY (WHICH WOULD REQUIRE
         ANALYSIS OF THE ENTIRE WATERSHED ABOVE THE DAM) IS NOT JUSTIFIED
         BY THE VALUE OF 500 YEAR FLOODPLAIN INFORMATION, THE FLOOD CONTROL
         DISTRICT HAS BEEN GRANTED PERMISSION BY FEMA TO DELETE THE 500 YEAR
         FLOOD FROM THE RESTUDY OF CAVE CREEK WASH.  ONLY THE WATERSHED BELOW
         THE DAM HAS BEEN CONSIDERED FOR HYDROLOGIC COMPUTATIONS OF THE 10, 50,
         AND 100 YEAR FLOODS.

         FILE LAST MODIFIED 1/26/90

         SUPERCRITICAL   FROM ACDC TO SPILLWAY OF SEDIMENENT BASIN
         FOR SECTIONS 17.206 TO 16.988 AND 15.204 TO 15.015, REFER
         TO SUBCRITICAL RUN

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                2.                  1.       -1.                                  1271.19

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      1.                -1.

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

     38.       42.       1.        53.       54.       4.        8.        43.       10.
51.
```

```
    46.        40.        41.

NC    0.015      0.015      0.015       0.1        0.3

QT       3.     10200.     15700.     18000.

        UPSTREAM EDGE OF SEDIMENT BASIN SPILLWAY, CRITICAL DEPTH ASSUMED
        USE COE RATING CURVE FOR ELEV. IN BASIN - SEE SUBCRITICAL RUN

1
    11AUG05      13:11:25
        PAGE     2

X1   17.206         4.      9875.     10125.        769.        769.        769.

GR    1279.      9875.      1267.      9900.       1267.      10100.       1279.      10125.

X1   17.061         8.     9938.3    10064.7        385.        385.        385.

GR   1271.3     9938.3     1261.1     9958.7     1260.51      9988.2     1256.61       9996.     1256.61
    10004.
GR   1260.5    10011.8     1261.1    10041.3     1271.79     10064.7

        CACTUS ROAD (SPECIAL BRIDGE)

X1   16.988         8.     9938.3    10063.9         90.         90.         90.

GR   1269.7     9938.3    1259.48     9958.7     1258.83      9991.1     1256.41       9996.     1256.41
    10004.
GR   1258.8    10008.9    1259.48    10041.3     1270.17     10063.9

SB       0.9      1.56         3.       100.      82.57          6.       1513.        1.61     1258.71
   1258.33
X1   16.971         8.     9938.3    10064.7        364.        364.        364.

        ELTRD IS 1275.25 + 2.6 HV = 1277.8
X2                             1.    1273.75      1277.8

GR   1269.3     9938.3    1259.09     9958.7     1258.43      9991.2     1256.36       9996.     1256.36
    10004.
GR   1258.4    10007.9    1259.09    10041.3     1270.78     10064.7

X1   16.902         9.      9940.     10063.        417.        417.        417.

GR   1268.8      9940.    1257.58     9962.5     1256.93      9994.5     1256.19       9996.     1256.19
    10004.
GR   1256.9    10005.5    1257.58    10037.5     1269.33     10062.2     1270.33      10063.

X1   16.823         7.      9945.     10056.        681.        681.        681.                     2.88

GR   1263.9      9945.    1262.92     9945.8     1252.92       9967.     1252.26      10000.     1252.92
    10033.
GR   1263.4    10055.2    1264.42     10056.

X1   16.694                                        491.        491.        491.                    -2.88

X1   16.601         7.      9945.     10052.        634.        634.        634.                     2.67

GR   1261.2      9945.    1260.17     9945.8     1248.17       9971.     1247.59      10000.     1248.17
    10029.
GR   1259.7     10052.     1261.3     10087.

X1   16.481         6.      9945.     10052.        570.        570.        570.

GR   1261.2      9945.    1260.17     9945.8     1248.17       9971.     1247.59      10000.     1248.17
    10029.
GR   1259.7     10052.
```

```
QT        3.      10300.      16100.      18500.

X1   16.373         7.       9946.      10053.        576.        576.        576.                    7.81

GR   1252.5      9946.    1251.45       9946.8     1237.95       9975.    1237.45      10000.     1237.95
    10025.
GR   1250.9    10052.2    1251.95      10053.

X1   16.264                                          612.        612.        612.                   -2.43

X1   16.148                                          660.        660.        660.                   -2.59

X1   16.023                                          444.        444.        444.                   -2.79

        PEORIA ROAD (SPECIAL BRIDGE)
1
    11AUG05      13:11:25
        PAGE     3


X1   15.939         5.       9938.      10062.         90.         90.         90.                    1.35

GR   1244.7      9938.    1234.71       9958.     1233.87      10000.    1234.71      10042.     1244.71
    10062.

SB       0.9       1.56         3.        100.      82.32          6.       1447.        1.84     1235.45
    1235.07
X1   15.921                                          227.        227.        227.                   -0.38

        ELTRD IS 1251.1 + 2.5 HV = 1253.6
X2                                 1.     1249.6     1253.6                                1.33

X1   15.878                                         1045.       1045.       1045.                   -0.97

X1   15.680         5.       9941.5     10060.5        792.        792.        792.                    3.35

GR   1237.5     9941.5    1226.98       9962.5     1226.2      10000.    1226.95     10037.5     1238.45
    10060.5

X1   15.530                                          400.        400.        400.                   -3.35

X1   15.454         5.       9967.5     10032.6        762.        762.        762.                    0.38

GR   1229.5     9967.5    1207.53       9967.6     1206.88      10000.    1207.53     10032.5       1230.
    10032.6

X1   15.310                                          560.        560.        560.                   -0.38

        SECTION 15.310 IS THE LAST IN CAVE CREEK CHANNEL.  THE CONFLUENCE
        OCCURS AT RM 15.263.  THE FOLLOWING SECTIONS ARE IN THE ACDC

X1   15.204         5.       9945.      10055.        500.        500.        500.                    0.5

GR   1228.3      9945.    1206.79       9945.1     1205.69      10000.    1206.79      10055.     1226.29
    10055.1

X1   15.109                                          500.        500.        500.                   -0.25

X1   15.015                                                                                          -0.25
1
    11AUG05      13:11:25
        PAGE     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      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE      XLOBL      XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST

 *PROF 1
0

 CCHV=      .100 CEHV=      .300
 *SECNO 17.206
 3720 CRITICAL DEPTH ASSUMED
    17.206      4.26   1271.26   1271.26   1271.19   1273.30      2.04       .00       .00   1279.00
   10200.0        .0   10200.0        .0        .0     888.9        .0        .0        .0   1279.00
       .00       .00     11.47       .00      .000      .015      .000      .000   1267.00   9891.13
   .002080        0.        0.        0.         0         4         0       .00    217.73  10108.87

 *SECNO 17.061

 3301 HV CHANGED MORE THAN HVINS

    17.061      9.76   1266.37   1267.44       .00   1271.06      4.69      1.98       .26   1271.30
   10200.0        .0   10200.0        .0        .0     587.0        .0      13.0       2.8   1271.79
       .01       .00     17.38       .00      .000      .015      .000      .000   1256.61   9948.15
   .003256      769.      769.      769.         5        23         0       .00    104.69  10052.84

 *SECNO 16.988
    16.988      8.56   1264.97   1266.12       .00   1269.77      4.80      1.28       .01   1269.70
   10200.0        .0   10200.0        .0        .0     580.1        .0      18.2       3.8   1270.17
       .02       .00     17.58       .00      .000      .015      .000      .000   1256.41   9947.74
   .003383      385.      385.      385.         8         5         0       .00    105.18  10052.91

 SPECIAL BRIDGE

 5290 UPSTREAM ELEV IS    1268.31 ,NOT    1264.97 NEW BACKWATER REQUIRED

 SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
       .90      1.56      3.00    100.00     82.57      6.00   1513.00      1.61   1258.71   1258.33

 *SECNO 16.971
 CLASS B LOW FLOW

 3420 BRIDGE W.S.=    1266.26 BRIDGE VELOCITY=      14.79     CALCULATED CHANNEL AREA=       670.
1
    11AUG05      13:11:25
         PAGE    5

     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


  EGPRS      EGLWC      H3        QWEIR     QLOW      BAREA     TRAPEZOID      ELLC      ELTRD     WEIRLN
                                                                  AREA
       .00   1269.55       .00        0.    10200.     1513.     1516.     1273.75   1277.80        0.


    16.971      8.16   1264.52       .00       .00   1269.55      5.03       .22       .00   1269.30
   10200.0        .0   10200.0        .0        .0     566.5        .0      19.4       4.0   1270.78
       .02       .00     18.00       .00      .000      .015      .000      .000   1256.36   9947.85
   .003616       90.       90.       90.         0         0         0       .00    104.33  10052.17

 *SECNO 16.902

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
    16.902      8.71   1264.90   1264.90       .00   1268.25      3.35       .92       .49   1268.80
   10200.0        .0   10200.0        .0        .0     694.0        .0      24.6       4.9   1270.33
```

```
      .03        .00      14.70       .00       .000       .015       .000       .000    1256.19    9947.83
   .001859       364.       364.      364.         20          8          0        .00     105.05   10052.88

*SECNO 16.823

3301 HV CHANGED MORE THAN HVINS

   16.823       8.09    1263.23   1263.76        .00    1267.31       4.08        .86        .07    1266.78
  10200.0         .0   10200.0        .0         .0      629.4         .0       31.0        5.8    1267.30
      .03        .00      16.21       .00       .000       .015       .000       .000    1255.14    9951.24
   .002329       417.       417.      417.          4          5          0        .00      97.50   10048.74

*SECNO 16.694

3301 HV CHANGED MORE THAN HVINS

   16.694       7.01    1259.27   1260.89        .00    1265.11       5.84       2.03        .18    1263.90
  10200.0         .0   10200.0        .0         .0      526.0         .0       40.0        7.3    1264.42
      .04        .00      19.39       .00       .000       .015       .000       .000    1252.26    9953.55
   .003953       681.       681.      681.          7          8          0        .00      92.90   10046.44
```

1

11AUG05 13:11:25
PAGE 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 16.601

3301 HV CHANGED MORE THAN HVINS

   16.601       8.47    1258.73   1259.45        .00    1263.18       4.45       1.51        .42    1263.87
  10200.0         .0   10200.0        .0         .0      602.7         .0       46.4        8.4    1262.37
      .05        .00      16.92       .00       .000       .015       .000       .000    1250.26    9954.41
   .002450       491.       491.      491.          8         11          0        .00      90.34   10044.76

*SECNO 16.481

3301 HV CHANGED MORE THAN HVINS

   16.481       7.53    1255.12   1256.78        .00    1261.12       6.00       1.91        .15    1261.20
  10200.0         .0   10200.0        .0         .0      519.1         .0       54.5        9.6    1259.70
      .06        .00      19.65       .00       .000       .015       .000       .000    1247.59    9956.40
   .003786       634.       634.      634.          7          8          0        .00      86.47   10042.87

*SECNO 16.373

3301 HV CHANGED MORE THAN HVINS

   16.373       9.02    1254.28   1255.09        .00    1259.00       4.72       1.73        .38    1260.31
  10300.0         .0   10300.0        .0         .0      590.7         .0       61.8       10.8    1259.76
      .07        .00      17.44       .00       .000       .015       .000       .000    1245.26    9957.20
   .002504       570.       570.      570.          8         11          0        .00      85.70   10042.90

*SECNO 16.264

3301 HV CHANGED MORE THAN HVINS

   16.264       8.15    1250.98   1252.67        .00    1257.13       6.15       1.73        .14    1257.88
  10300.0         .0   10300.0        .0         .0      517.4         .0       69.1       11.9    1257.33
      .08        .00      19.91       .00       .000       .015       .000       .000    1242.83    9959.02
   .003661       576.       576.      576.          7          8          0        .00      82.04   10041.06

*SECNO 16.148
   16.148       7.95    1248.19   1250.07        .00    1254.74       6.55       2.34        .04    1255.29
```

```
   10300.0        .0   10300.0        .0        .0     501.3        .0      76.3      13.0   1254.74
       .09       .00     20.55       .00      .000      .015      .000      .000   1240.24   9959.44
   .004010      612.      612.      612.         7        11         0       .00     81.21  10040.65


1
   11AUG05      13:11:25
       PAGE     7

    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 16.023
   16.023       7.88   1245.33   1247.28        .00   1252.04       6.71       2.69        .02   1252.50
   10300.0        .0   10300.0        .0        .0     495.5        .0       83.8       14.3   1251.95
       .09       .00     20.79       .00      .000      .015      .000      .000   1237.45   9959.58
   .004147      660.      660.      660.         7        11         0       .00     80.91  10040.50


 *SECNO 15.939

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.45

   15.939       5.11   1240.33   1242.97        .00   1249.24       8.91       2.58        .22   1246.05
   10300.0        .0   10300.0        .0        .0     429.9        .0       88.5       15.2   1246.06
       .10       .00     23.96       .00      .000      .015      .000      .000   1235.22   9949.46
   .008713      444.      444.      444.         7         5         0       .00    101.07  10050.53


 SPECIAL BRIDGE

 SB  XK        XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
       .90      1.56       3.00     100.00     82.32       6.00    1447.00       1.84    1235.45    1235.07

 *SECNO 15.921

 3301 HV CHANGED MORE THAN HVINS

 CLASS C LOW FLOW

 3420 BRIDGE W.S.=     1241.11 BRIDGE VELOCITY=       20.23     CALCULATED CHANNEL AREA=        491.

  EGPRS      EGLWC      H3         QWEIR      QLOW       BAREA      TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                      AREA
       .00   1247.67       .00        0.     10300.      1447.      1448.      1249.60    1253.60         0.


   15.921       5.56   1240.40        .00        .00   1247.67       7.27       1.57        .00   1245.67
   10300.0        .0   10300.0        .0        .0     476.1        .0       89.5       15.4   1245.68
       .10       .00     21.63       .00      .000      .015      .000      .000   1234.84   9948.56
   .006364       90.       90.       90.         0         0         0       .00    102.88  10051.44


1
   11AUG05      13:11:25
       PAGE     8

    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 15.878

 3301 HV CHANGED MORE THAN HVINS
```

```
    15.878      5.88   1239.75   1241.66       .00   1246.09      6.34      1.30       .28   1244.70
   10300.0        .0   10300.0       .0        .0     509.7       .0      92.0      15.9   1244.71
       .10       .00     20.21       .00      .000      .015      .000      .000   1233.87   9947.91
   .005163      227.      227.      227.         8        11         0       .00    104.18  10052.08

*SECNO 15.680

3301 HV CHANGED MORE THAN HVINS

    15.680      7.09   1236.64   1237.78       .00   1241.48      4.84      4.16       .45   1240.85
   10300.0        .0   10300.0       .0        .0     583.2       .0     105.2      18.4   1241.80
       .12       .00     17.66       .00      .000      .015      .000      .000   1229.55   9949.90
   .003161     1045.     1045.     1045.         5        11         0       .00    100.28  10050.18

*SECNO 15.530

3301 HV CHANGED MORE THAN HVINS

    15.530      6.61   1232.81   1234.45       .00   1238.56      5.75      2.83       .09   1237.50
   10300.0        .0   10300.0       .0        .0     535.4       .0     115.3      20.2   1238.45
       .13       .00     19.24       .00      .000      .015      .000      .000   1226.20   9950.86
   .004086      792.      792.      792.         7         8         0       .00     98.36  10049.22

*SECNO 15.454

3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.44

    15.454      4.56   1211.82   1216.79       .00   1233.66     21.84      3.29      1.61   1229.88
   10300.0        .0   10300.0       .0        .0     274.7       .0     119.0      20.9   1230.38
       .14       .00     37.50       .00      .000      .015      .000      .000   1207.26   9967.58
   .024363      400.      400.      400.         6        11         0       .00     64.94  10032.52

1
   11AUG05      13:11:25
        PAGE    9

     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 15.310

3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .46

    15.310      7.30   1214.18   1216.38       .00   1222.22      8.04      7.30      4.14   1229.50
   10300.0        .0   10300.0       .0        .0     452.5       .0     125.4      22.1   1230.00
       .14       .00     22.76       .00      .000      .015      .000      .000   1206.88   9967.57
   .005081      762.      762.      762.         6        17         0       .00     64.96  10032.53

*SECNO 15.204
    15.204      4.76   1210.95   1213.22       .00   1218.64      7.69      3.47       .11   1228.80
   10300.0        .0   10300.0       .0        .0     463.0       .0     131.3      23.2   1207.29
       .15       .00     22.25       .09      .000      .015      .015      .000   1206.19   9945.08
   .007746      560.      560.      560.         7         8         0       .00    109.94  10055.02

*SECNO 15.109

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
```

```
3720 CRITICAL DEPTH ASSUMED
    15.109      7.04   1212.98   1212.98       .00   1216.22      3.24      1.69      1.78   1228.55
   10300.0        .0   10300.0       .0        .0    712.8        .1     138.0      24.5   1207.04
       .16       .00     14.45       .04      .000      .015      .015      .000   1205.94   9945.07
   .001887      500.      500.      500.        20        11         0       .00    109.96  10055.03


*SECNO 15.015
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    15.015      7.01   1212.70   1212.70       .00   1215.97      3.27       .95       .58   1228.30
   10300.0        .0   10300.0       .0        .0    709.9        .1     146.2      25.7   1206.79
       .17       .00     14.51       .04      .000      .015      .015      .000   1205.69   9945.07
   .001912      500.      500.      500.        20         5         0       .00    109.96  10055.03


1
   11AUG05      13:11:25
        PAGE   10


T1      MIDDLE CAVE CREEK FLOODPLAIN DELINEATION STUDY, ACDC TO DAM
T2      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY 1989 BY BURGESS & NIPLE
T3      CAVE CREEK WASH          50 YEAR

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                3.                  1.       -1.                                1272.53

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     2.                 -1.

1
   11AUG05      13:11:25
        PAGE   11


    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


*PROF 2
0

CCHV=     .100 CEHV=     .300
*SECNO 17.206
3720 CRITICAL DEPTH ASSUMED
    17.206      5.65   1272.65   1272.65   1272.53   1275.32      2.68       .00       .00   1279.00
   15700.0        .0   15700.0       .0        .0    1196.1        .0        .0        .0   1279.00
       .00       .00     13.13       .00      .000      .015      .000      .000   1267.00   9888.23
   .001904        0.        0.        0.         0         4         0       .00    223.54  10111.77


*SECNO 17.061

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    17.061     13.13   1269.74   1269.74       .00   1273.87      4.13      1.41       .98   1271.30
   15700.0        .0   15700.0       .0        .0     962.9        .0      19.1       3.0   1271.79
       .01       .00     16.30       .00      .000      .015      .000      .000   1256.61   9941.42
   .001772      769.      769.      769.        20        20         0       .00    118.78  10060.21


*SECNO 16.988

3301 HV CHANGED MORE THAN HVINS

    16.988     10.75   1267.16   1268.39       .00   1272.86      5.70       .85       .16   1269.70
   15700.0        .0   15700.0       .0        .0     819.4        .0      26.9       4.1   1270.17
       .02       .00     19.16       .00      .000      .015      .000      .000   1256.41   9943.38
```

```
   .002849      385.      385.      385.        6        11         0       .00    114.15  10057.53


 SPECIAL BRIDGE

 5290 UPSTREAM ELEV IS    1271.18 ,NOT    1267.16 NEW BACKWATER REQUIRED

1
   11AUG05      13:11:25
        PAGE   12

     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

 SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
       .90       1.56       3.00     100.00      82.57       6.00    1513.00       1.61    1258.71    1258.33

 *SECNO 16.971

 3301 HV CHANGED MORE THAN HVINS

 CLASS B LOW FLOW

 3420 BRIDGE W.S.=    1268.66 BRIDGE VELOCITY=      16.67     CALCULATED CHANNEL AREA=       921.

  EGPRS      EGLWC       H3         QWEIR      QLOW       BAREA      TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                       AREA
       .00   1272.77       .00         0.     15700.      1513.      1516.      1273.75    1277.80         0.


    16.971      10.15   1266.51       .00        .00    1272.77       6.25        .09        .00    1269.30
   15700.0        .0   15700.0        .0         .0     782.4         .0       28.6        4.3    1270.78
       .02        .00     20.07       .00       .000      .015       .000       .000    1256.36    9943.87
   .003247       90.       90.       90.          0         0          0        .00     112.30   10056.16


 *SECNO 16.902

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3710 WSEL ASSUMED BASED ON MIN DIFF
    16.902      10.63   1266.82   1267.26        .00    1271.51       4.69        .92        .41    1268.80
   15700.0        .0   15700.0        .0         .0     903.3         .0       35.6        5.2    1270.33
       .03        .00     17.38       .00       .000      .015       .000       .000    1256.19    9943.98
   .002029      364.      364.      364.         20         8          0        .00     112.94   10056.92


 *SECNO 16.823
    16.823      10.50   1265.64   1266.21        .00    1270.62       4.98        .86        .03    1266.78
   15700.0        .0   15700.0        .0         .0     876.9         .0       44.2        6.3    1267.30
       .03        .00     17.90       .00       .000      .015       .000       .000    1255.14    9946.13
   .002104      417.      417.      417.          5         8          0        .00     107.73   10053.85


 *SECNO 16.694

 3301 HV CHANGED MORE THAN HVINS

1
   11AUG05      13:11:25
        PAGE   13

     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
```

```
   16.694      9.09   1261.35   1263.33       .00   1268.55      7.20      1.84       .22   1263.90
  15700.0        .0   15700.0       .0        .0     728.9        .0      56.7       7.9   1264.42
      .04       .00     21.54       .00      .000      .015      .000      .000   1252.26   9949.13
  .003594      681.      681.      681.         8         8         0       .00    101.73  10050.86

*SECNO 16.601

3301 HV CHANGED MORE THAN HVINS

   16.601     11.01   1261.27   1262.01       .00   1266.64      5.37      1.36       .55   1263.87
  15700.0        .0   15700.0       .0        .0     843.9        .0      65.6       9.1   1262.37
      .05       .00     18.60       .00      .000      .015      .000      .000   1250.26   9949.11
  .002205      491.      491.      491.         9        11         0       .00    100.68  10049.79

*SECNO 16.481

3301 HV CHANGED MORE THAN HVINS

   16.481      9.74   1257.33   1259.37       .00   1264.71      7.38      1.73       .20   1261.20
  15700.0        .0   15700.0       .0        .0     720.0        .0      77.0      10.5   1259.70
      .06       .00     21.81       .00      .000      .015      .000      .000   1247.59   9951.76
  .003473      634.      634.      634.         9         8         0       .00     95.51  10047.27

*SECNO 16.373

3301 HV CHANGED MORE THAN HVINS

   16.373     12.47   1257.73   1257.91       .00   1262.57      4.84      1.38       .76   1260.31
  16100.0        .0   16100.0       .0        .0     912.0        .0      87.6      11.8   1259.76
      .07       .00     17.65       .00      .000      .015      .000      .000   1245.26   9949.98
  .001792      570.      570.      570.         9        11         0       .00    100.18  10050.16

*SECNO 16.264

3301 HV CHANGED MORE THAN HVINS

   16.264     10.62   1253.45   1255.52       .00   1260.93      7.49      1.37       .26   1257.88
  16100.0        .0   16100.0       .0        .0     733.3        .0      98.5      13.0   1257.33
      .07       .00     21.96       .00      .000      .015      .000      .000   1242.83   9953.85
  .003310      576.      576.      576.         7         5         0       .00     92.41  10046.26

1
   11AUG05      13:11:25
        PAGE   14

     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 16.148

3301 HV CHANGED MORE THAN HVINS

   16.148     10.27   1250.51   1252.89       .00   1258.70      8.20      2.16       .07   1255.29
  16100.0        .0   16100.0       .0        .0     700.7        .0     108.6      14.3   1254.74
      .08       .00     22.98       .00      .000      .015      .000      .000   1240.24   9954.60
  .003764      612.      612.      612.         7        11         0       .00     90.92  10045.52

*SECNO 16.023
   16.023     10.10   1247.55   1250.10       .00   1256.11      8.55      2.56       .04   1252.50
  16100.0        .0   16100.0       .0        .0     686.0        .0     119.1      15.7   1251.95
      .09       .00     23.47       .00      .000      .015      .000      .000   1237.45   9954.94
  .003999      660.      660.      660.         7        11         0       .00     90.24  10045.17

*SECNO 15.939

3301 HV CHANGED MORE THAN HVINS
```

```
3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.42

    15.939      6.66   1241.88   1245.36       .00   1253.38     11.50      2.44       .29   1246.05
   16100.0        .0   16100.0       .0        .0     591.7        .0     125.6      16.7   1246.06
       .09       .00     27.21       .00      .000      .015      .000      .000   1235.22   9946.35
   .008009      444.      444.      444.         8         5         0       .00    107.28  10053.63


SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
      .90      1.56      3.00     100.00    82.32      6.00   1447.00      1.84   1235.45   1235.07

*SECNO 15.921

3301 HV CHANGED MORE THAN HVINS

CLASS C LOW FLOW

3420 BRIDGE W.S.=    1242.86 BRIDGE VELOCITY=      23.45     CALCULATED CHANNEL AREA=       667.
1
   11AUG05      13:11:25
        PAGE   15


     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


  EGPRS      EGLWC      H3        QWEIR     QLOW      BAREA   TRAPEZOID      ELLC      ELTRD     WEIRLN
                                                                AREA
   1244.88   1251.54       .00        0.   16100.     1447.     1448.     1249.60   1253.60        0.


    15.921      7.20   1242.04       .00       .00   1251.54      9.50      1.83       .00   1245.67
   16100.0        .0   16100.0       .0        .0     651.0        .0     126.9      16.9   1245.68
       .09       .00     24.73       .00      .000      .015      .000      .000   1234.84   9945.26
   .005999       90.       90.       90.         0         0         0       .00    109.47  10054.73


*SECNO 15.878

3301 HV CHANGED MORE THAN HVINS

    15.878      7.48   1241.35   1244.02       .00   1250.03      8.68      1.27       .25   1244.70
   16100.0        .0   16100.0       .0        .0     681.0        .0     130.4      17.5   1244.71
       .10       .00     23.64       .00      .000      .015      .000      .000   1233.87   9944.71
   .005237      227.      227.      227.        12        11         0       .00    110.56  10055.27


*SECNO 15.680

3301 HV CHANGED MORE THAN HVINS

    15.680      8.98   1238.53   1240.27       .00   1245.15      6.62      4.26       .62   1240.85
   16100.0        .0   16100.0       .0        .0     779.6        .0     147.9      20.1   1241.80
       .11       .00     20.65       .00      .000      .015      .000      .000   1229.55   9946.13
   .003259     1045.     1045.     1045.         7        11         0       .00    107.83  10053.96


*SECNO 15.530

3301 HV CHANGED MORE THAN HVINS

    15.530      8.54   1234.74   1236.89       .00   1242.24      7.50      2.82       .09   1237.50
   16100.0        .0   16100.0       .0        .0     732.5        .0     161.6      22.1   1238.45
       .12       .00     21.98       .00      .000      .015      .000      .000   1226.20   9947.01
   .003918      792.      792.      792.         7        11         0       .00    106.07  10053.08
```

1

11AUG05 13:11:25
PAGE 16

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 15.454

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.07

15.454	6.65	1213.91	1219.99	.00	1237.76	23.85	2.85	1.63	1229.88
16100.0	.0	16100.0	.0	.0	410.8	.0	166.9	22.9	1230.38
.12	.00	39.19	.00	.000	.015	.000	.000	1207.26	9967.57
.016757	400.	400.	400.	11	11	0	.00	64.95	10032.53

*SECNO 15.310

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .55

15.310	9.67	1216.55	1219.59	.00	1227.47	10.92	6.41	3.88	1229.50
16100.0	.0	16100.0	.0	.0	607.2	.0	175.8	24.0	1230.00
.13	.00	26.52	.00	.000	.015	.000	.000	1206.88	9967.56
.005042	762.	762.	762.	6	14	0	.00	64.98	10032.54

*SECNO 15.204

3301 HV CHANGED MORE THAN HVINS

15.204	5.89	1212.08	1215.47	.00	1223.76	11.68	3.64	.08	1228.80
16100.0	.0	16100.0	.0	.0	587.1	.1	183.4	25.1	1207.29
.14	.00	27.42	.09	.000	.015	.015	.000	1206.19	9945.08
.008687	560.	560.	560.	8	8	0	.00	109.95	10055.02

*SECNO 15.109

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .54

1
11AUG05 13:11:25
PAGE 17

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

15.109	8.34	1214.28	1215.19	.00	1219.76	5.48	2.14	1.86	1228.55
16100.0	.0	16100.0	.0	.0	856.9	.1	191.7	26.4	1207.04
.14	.00	18.79	.35	.000	.015	.015	.000	1205.94	9945.07
.002533	500.	500.	500.	5	14	0	.00	109.97	10055.04

*SECNO 15.015

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL

```
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    15.015      9.26   1214.95   1214.95       .00   1219.34      4.39      1.05       .32   1228.30
   16100.0        .0   16099.9        .1        .0     957.7        .2     202.2      27.6   1206.79
       .15       .00     16.81       .32      .000      .015      .015      .000   1205.69   9945.06
   .001767      500.      500.      500.        20         8         0       .00    109.98  10055.04


1
   11AUG05      13:11:25
        PAGE   18


 T1      MIDDLE CAVE CREEK FLOODPLAIN DELINEATIONSTUDY, ACDC TO DAM
 T2      FLOOD CONTROL DISTRICT OF MARICOPA CO. 1989 BY  BURGESS & NIPLE
 T3      CAVE CREEK WASH          100 YEAR

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                4.                  1.       -1.                                  1273.13

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     15.                 -1.

1
   11AUG05      13:11:25
        PAGE   19


     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


 *PROF 3
0

 CCHV=     .100 CEHV=     .300
 *SECNO 17.206
 3720 CRITICAL DEPTH ASSUMED
    17.206      6.16   1273.16   1273.16   1273.13   1276.09      2.92       .00       .00   1279.00
   18000.0        .0   18000.0        .0        .0    1311.8        .0        .0        .0   1279.00
       .00       .00     13.72       .00      .000      .015      .000      .000   1267.00   9887.16
   .001866        0.        0.        0.         0         4         0       .00    225.68  10112.84


 *SECNO 17.061

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
    17.061     13.97   1270.58   1270.58       .00   1275.02      4.44      1.38       .41   1271.30
   18000.0        .0   18000.0        .0        .0    1065.0        .0      21.0       3.1   1271.79
       .01       .00     16.90       .00      .000      .015      .000      .000   1256.61   9939.73
   .001735      769.      769.      769.        20        20         0       .00    122.33  10062.06


 *SECNO 16.988

 3301 HV CHANGED MORE THAN HVINS

    16.988     11.51   1267.92   1269.25       .00   1274.02      6.10       .83       .17   1269.70
   18000.0        .0   18000.0        .0        .0     908.2        .0      29.7       4.1   1270.17
       .02       .00     19.82       .00      .000      .015      .000      .000   1256.41   9941.85
   .002763      385.      385.      385.         6        11         0       .00    117.30  10059.15


 SPECIAL BRIDGE

 5290 UPSTREAM ELEV IS    1272.23 ,NOT    1267.92 NEW BACKWATER REQUIRED

1
```

```
   11AUG05      13:11:25
        PAGE   20

     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

 SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
       .90       1.56       3.00     100.00      82.57       6.00    1513.00       1.61    1258.71    1258.33

 *SECNO 16.971

 3301 HV CHANGED MORE THAN HVINS

 CLASS B LOW FLOW

 3420 BRIDGE W.S.=     1269.56 BRIDGE VELOCITY=       17.29     CALCULATED CHANNEL AREA=       1020.

  EGPRS       EGLWC       H3         QWEIR      QLOW       BAREA      TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                       AREA
    1271.35   1273.95       .00        0.      18000.      1513.      1516.      1273.75    1277.80        0.

     16.971     10.91    1267.27       .00        .00    1273.95       6.68        .08        .00    1269.30
    18000.0       .0    18000.0        .0         .0      867.8        .0       31.5        4.4    1270.78
       .02       .00      20.74       .00       .000       .015       .000       .000    1256.36    9942.37
    .003137     90.        90.       90.          0          0          0        .00     115.30   10057.67

 *SECNO 16.902

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3710 WSEL ASSUMED BASED ON MIN DIFF
     16.902     11.47    1267.66    1268.14       .00    1272.69       5.03        .90        .50    1268.80
    18000.0       .0    18000.0        .0         .0     1000.5        .0       39.3        5.3    1270.33
       .02       .00      17.99       .00       .000       .015       .000       .000    1256.19    9942.28
    .001981    364.       364.      364.         20          8          0        .00     116.42   10058.70

 *SECNO 16.823
     16.823     11.43    1266.57    1267.05       .00    1271.83       5.27        .83        .02    1266.78
    18000.0       .0    18000.0        .0         .0      977.4        .0       48.8        6.4    1267.30
       .03       .00      18.42       .00       .000       .015       .000       .000    1255.14    9945.17
    .002000    417.       417.      417.          5          8          0        .00     110.25   10055.42

 *SECNO 16.694

 3301 HV CHANGED MORE THAN HVINS

1
   11AUG05      13:11:25
        PAGE   21

     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

     16.694      9.85    1262.11    1264.17       .00    1269.82       7.71       1.77        .24    1263.90
    18000.0       .0    18000.0        .0         .0      807.7        .0       62.8        8.1    1264.42
       .04       .00      22.28       .00       .000       .015       .000       .000    1252.26    9947.51
    .003506    681.       681.      681.          8          8          0        .00     104.97   10052.48

 *SECNO 16.601

 3301 HV CHANGED MORE THAN HVINS
```

```
    16.601      11.91   1262.17   1263.00       .00   1267.90       5.73       1.33        .59   1263.87
   18000.0         .0   18000.0        .0        .0    937.0         .0       72.6        9.3   1262.37
       .05        .00     19.21       .00      .000      .015       .000       .000    1250.26   9947.20
   .002152       491.      491.      491.        12        11          0        .00     104.40  10051.61

*SECNO 16.481

3301 HV CHANGED MORE THAN HVINS

    16.481      10.56   1258.15   1260.26       .00   1266.00       7.85       1.69        .21   1261.20
   18000.0         .0   18000.0        .0        .0    800.7         .0       85.2       10.8   1259.70
       .05        .00     22.48       .00      .000      .015       .000       .000    1247.59   9950.02
   .003368       634.      634.      634.         9         8          0        .00      98.91  10048.93

*SECNO 16.373

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3710 WSEL ASSUMED BASED ON MIN DIFF
    16.373      13.38   1258.64   1258.91       .00   1263.91       5.28       1.37        .76   1260.31
   18500.0         .0   18500.0        .0        .0   1003.6         .0       97.0       12.1   1259.76
       .06        .00     18.43       .00      .000      .015       .000       .000    1245.26   9948.10
   .001811       570.      570.      570.        20        11          0        .00     103.94  10052.04

*SECNO 16.264

3301 HV CHANGED MORE THAN HVINS

    16.264      11.51   1254.34   1256.53       .00   1262.29       7.94       1.36        .27   1257.88
   18500.0         .0   18500.0        .0        .0    818.0         .0      109.1       13.4   1257.33
       .07        .00     22.62       .00      .000      .015       .000       .000    1242.83   9951.98
   .003211       576.      576.      576.         8         5          0        .00      96.17  10048.15

1
   11AUG05      13:11:25
        PAGE   22

     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 16.148

3301 HV CHANGED MORE THAN HVINS

    16.148      11.11   1251.35   1253.89       .00   1260.10       8.75       2.10        .08   1255.29
   18500.0         .0   18500.0        .0        .0    779.4         .0      120.3       14.8   1254.74
       .08        .00     23.74       .00      .000      .015       .000       .000    1240.24   9952.82
   .003680       612.      612.      612.         8        11          0        .00      94.47  10047.30

*SECNO 16.023
    16.023      10.92   1248.37   1251.10       .00   1257.55       9.18       2.51        .04   1252.50
   18500.0         .0   18500.0        .0        .0    760.9         .0      132.0       16.2   1251.95
       .08        .00     24.31       .00      .000      .015       .000       .000    1237.45   9953.23
   .003938       660.      660.      660.         7        11          0        .00      93.65  10046.88

*SECNO 15.939

3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.40

    15.939       7.24   1242.46   1246.21       .00   1254.84      12.38       2.39        .32   1246.05
   18500.0         .0   18500.0        .0        .0    655.2         .0      139.2       17.2   1246.06
       .09        .00     28.23       .00      .000      .015       .000       .000    1235.22   9945.18
```

.007766	444.	444.	444.	8	5	0	.00	109.63	10054.81

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	.90	1.56	3.00	100.00	82.32	6.00	1447.00	1.84	1235.45	1235.07

*SECNO 15.921

3301 HV CHANGED MORE THAN HVINS

CLASS C LOW FLOW

3420 BRIDGE W.S.= 1243.52 BRIDGE VELOCITY= 24.46 CALCULATED CHANNEL AREA= 736.

1
11AUG05 13:11:25
PAGE 23

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

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1246.42	1252.92	.00	0.	18500.	1447.	1448.	1249.60	1253.60	0.

15.921	7.83	1242.67	.00	.00	1252.92	10.26	1.92	.00	1245.67
18500.0	.0	18500.0	.0	.0	719.9	.0	140.6	17.4	1245.68
.09	.00	25.70	.00	.000	.015	.000	.000	1234.84	9944.01
.005852	90.	90.	90.	0	0	0	.00	111.96	10055.97

*SECNO 15.878

3301 HV CHANGED MORE THAN HVINS

15.878	8.08	1241.95	1244.85	.00	1251.44	9.49	1.25	.23	1244.70
18500.0	.0	18500.0	.0	.0	748.2	.0	144.4	18.0	1244.71
.09	.00	24.72	.00	.000	.015	.000	.000	1233.87	9943.51
.005211	227.	227.	227.	13	11	0	.00	112.97	10056.48

*SECNO 15.680

3301 HV CHANGED MORE THAN HVINS

15.680	9.65	1239.20	1241.15	.00	1246.51	7.30	4.28	.66	1240.85
18500.0	.0	18500.0	.0	.0	853.2	.0	163.7	20.7	1241.80
.11	.00	21.68	.00	.000	.015	.000	.000	1229.55	9944.79
.003301	1045.	1045.	1045.	7	11	0	.00	110.52	10055.31

*SECNO 15.530

3301 HV CHANGED MORE THAN HVINS

15.530	9.23	1235.43	1237.77	.00	1243.59	8.16	2.83	.09	1237.50
18500.0	.0	18500.0	.0	.0	807.2	.0	178.7	22.7	1238.45
.12	.00	22.92	.00	.000	.015	.000	.000	1226.20	9945.62
.003883	792.	792.	792.	7	11	0	.00	108.85	10054.47

1
11AUG05 13:11:25
PAGE 24

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 15.454

 3301 HV CHANGED MORE THAN HVINS

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.96

     15.454      7.51   1214.77   1221.20       .00   1239.23     24.47      2.73       1.63   1229.88
    18500.0        .0   18500.0       .0        .0     466.1       .0      184.6       23.5   1230.38
       .12        .00     39.69       .00      .000      .015      .000      .000    1207.26   9967.57
    .014962      400.      400.      400.        12        11         0       .00      64.96  10032.53

 *SECNO 15.310

 3301 HV CHANGED MORE THAN HVINS

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .58

     15.310     10.63   1217.51   1220.78       .00   1229.37     11.85      6.08       3.78   1229.50
    18500.0        .0   18500.0       .0        .0     669.6       .0      194.5       24.6   1230.00
       .13        .00     27.63       .00      .000      .015      .000      .000    1206.88   9967.55
    .004951      762.      762.      762.         6        14         0       .00      64.99  10032.54

 *SECNO 15.204

 3301 HV CHANGED MORE THAN HVINS

     15.204      6.34   1212.53   1216.32       .00   1225.62     13.09      3.62        .12   1228.80
    18500.0        .0   18500.0       .0        .0     637.2        .1      202.9       25.8   1207.29
       .13        .00     29.04       .09      .000      .015      .015      .000    1206.19   9945.08
    .008778      560.      560.      560.         8         8         0       .00     109.95  10055.03

 *SECNO 15.109

 3301 HV CHANGED MORE THAN HVINS

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .59

1
    11AUG05      13:11:25
         PAGE   25

     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

     15.109      8.59   1214.53   1216.03       .00   1221.34      6.81      2.40       1.88   1228.55
    18500.0        .0   18499.9       .1        .0     883.5       .1      211.7       27.0   1207.04
       .14        .00     20.94       .39      .000      .015      .015      .000    1205.94   9945.06
    .003029      500.      500.      500.         7        14         0       .00     109.97  10055.04

 *SECNO 15.015

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
     15.015     10.13   1215.82   1215.82       .00   1220.61      4.79      1.12        .49   1228.30
    18500.0        .0   18499.9       .1        .0    1053.6       .2      222.8       28.3   1206.79
       .15        .00     17.56       .33      .000      .015      .015      .000    1205.69   9945.06
    .001714      500.      500.      500.        20         8         0       .00     109.99  10055.05
```

1
11AUG05 13:11:25
PAGE 26

THIS RUN EXECUTED

11AUG05 13:11:25
****
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

CAVE CREEK WASH

SUMMARY PRINTOUT

	SECNO	ELMIN	CWSEL	SSTA	ENDST	TOPWID	DEPTH	Q	HV	DIFWSX
QWEIR	ELTRD	ELLC								
*	17.206	1267.00	1271.26	9891.13	10108.87	217.73	4.26	10200.00	2.04	.00
.00	.00	.00								
*	17.206	1267.00	1272.65	9888.23	10111.77	223.54	5.65	15700.00	2.68	.00
.00	.00	.00								
*	17.206	1267.00	1273.16	9887.16	10112.84	225.68	6.16	18000.00	2.92	.00
.00	.00	.00								
	17.061	1256.61	1266.37	9948.15	10052.84	104.69	9.76	10200.00	4.69	-4.88
.00	.00	.00								
*	17.061	1256.61	1269.74	9941.42	10060.21	118.78	13.13	15700.00	4.13	-2.91
.00	.00	.00								
*	17.061	1256.61	1270.58	9939.73	10062.06	122.33	13.97	18000.00	4.44	-2.58
.00	.00	.00								
	16.988	1256.41	1264.97	9947.74	10052.91	105.18	8.56	10200.00	4.80	-1.40
.00	.00	.00								
	16.988	1256.41	1267.16	9943.38	10057.53	114.15	10.75	15700.00	5.70	-2.58
.00	.00	.00								
	16.988	1256.41	1267.92	9941.85	10059.15	117.30	11.51	18000.00	6.10	-2.66
.00	.00	.00								
*	16.971	1256.36	1264.52	9947.85	10052.17	104.33	8.16	10200.00	5.03	-.45
.00	1277.80	1273.75								
*	16.971	1256.36	1266.51	9943.87	10056.16	112.30	10.15	15700.00	6.25	-.64
.00	1277.80	1273.75								
*	16.971	1256.36	1267.27	9942.37	10057.67	115.30	10.91	18000.00	6.68	-.66
.00	1277.80	1273.75								
*	16.902	1256.19	1264.90	9947.83	10052.88	105.05	8.71	10200.00	3.35	.37
.00	.00	.00								
*	16.902	1256.19	1266.82	9943.98	10056.92	112.94	10.63	15700.00	4.69	.30
.00	.00	.00								
*	16.902	1256.19	1267.66	9942.28	10058.70	116.42	11.47	18000.00	5.03	.40
.00	.00	.00								
	16.823	1255.14	1263.23	9951.24	10048.74	97.50	8.09	10200.00	4.08	-1.66
.00	.00	.00								
	16.823	1255.14	1265.64	9946.13	10053.85	107.73	10.50	15700.00	4.98	-1.18
.00	.00	.00								
	16.823	1255.14	1266.57	9945.17	10055.42	110.25	11.43	18000.00	5.27	-1.09
.00	.00	.00								
	16.694	1252.26	1259.27	9953.55	10046.44	92.90	7.01	10200.00	5.84	-3.97
.00	.00	.00								
	16.694	1252.26	1261.35	9949.13	10050.86	101.73	9.09	15700.00	7.20	-4.29
.00	.00	.00								
	16.694	1252.26	1262.11	9947.51	10052.48	104.97	9.85	18000.00	7.71	-4.46
.00	.00	.00								
	16.601	1250.26	1258.73	9954.41	10044.76	90.34	8.47	10200.00	4.45	-.53
.00	.00	.00								

```
      16.601   1250.26   1261.27   9949.11  10049.79    100.68     11.01  15700.00      5.37      -.08
   .00       .00       .00
      16.601   1250.26   1262.17   9947.20  10051.61    104.40     11.91  18000.00      5.73       .06
   .00       .00       .00

1
   11AUG05      13:11:25
        PAGE   27

      SECNO     ELMIN     CWSEL     SSTA      ENDST    TOPWID    DEPTH      Q         HV      DIFWSX
QWEIR     ELTRD     ELLC

      16.481   1247.59   1255.12   9956.40  10042.87     86.47      7.53  10200.00      6.00     -3.61
   .00       .00       .00
      16.481   1247.59   1257.33   9951.76  10047.27     95.51      9.74  15700.00      7.38     -3.94
   .00       .00       .00
      16.481   1247.59   1258.15   9950.02  10048.93     98.91     10.56  18000.00      7.85     -4.02
   .00       .00       .00

      16.373   1245.26   1254.28   9957.20  10042.90     85.70      9.02  10300.00      4.72      -.84
   .00       .00       .00
      16.373   1245.26   1257.73   9949.98  10050.16    100.18     12.47  16100.00      4.84       .40
   .00       .00       .00
*     16.373   1245.26   1258.64   9948.10  10052.04    103.94     13.38  18500.00      5.28       .48
   .00       .00       .00

      16.264   1242.83   1250.98   9959.02  10041.06     82.04      8.15  10300.00      6.15     -3.30
   .00       .00       .00
      16.264   1242.83   1253.45   9953.85  10046.26     92.41     10.62  16100.00      7.49     -4.28
   .00       .00       .00
      16.264   1242.83   1254.34   9951.98  10048.15     96.17     11.51  18500.00      7.94     -4.29
   .00       .00       .00

      16.148   1240.24   1248.19   9959.44  10040.65     81.21      7.95  10300.00      6.55     -2.79
   .00       .00       .00
      16.148   1240.24   1250.51   9954.60  10045.52     90.92     10.27  16100.00      8.20     -2.94
   .00       .00       .00
      16.148   1240.24   1251.35   9952.82  10047.30     94.47     11.11  18500.00      8.75     -2.99
   .00       .00       .00

      16.023   1237.45   1245.33   9959.58  10040.50     80.91      7.88  10300.00      6.71     -2.86
   .00       .00       .00
      16.023   1237.45   1247.55   9954.94  10045.17     90.24     10.10  16100.00      8.55     -2.95
   .00       .00       .00
      16.023   1237.45   1248.37   9953.23  10046.88     93.65     10.92  18500.00      9.18     -2.98
   .00       .00       .00

*     15.939   1235.22   1240.33   9949.46  10050.53    101.07      5.11  10300.00      8.91     -5.00
   .00       .00       .00
*     15.939   1235.22   1241.88   9946.35  10053.63    107.28      6.66  16100.00     11.50     -5.68
   .00       .00       .00
*     15.939   1235.22   1242.46   9945.18  10054.81    109.63      7.24  18500.00     12.38     -5.90
   .00       .00       .00

      15.921   1234.84   1240.40   9948.56  10051.44    102.88      5.56  10300.00      7.27       .07
   .00   1253.60  1249.60
      15.921   1234.84   1242.04   9945.26  10054.73    109.47      7.20  16100.00      9.50       .17
   .00   1253.60  1249.60
      15.921   1234.84   1242.67   9944.01  10055.97    111.96      7.83  18500.00     10.26       .20
   .00   1253.60  1249.60

      15.878   1233.87   1239.75   9947.91  10052.08    104.18      5.88  10300.00      6.34      -.65
   .00       .00       .00
      15.878   1233.87   1241.35   9944.71  10055.27    110.56      7.48  16100.00      8.68      -.70
   .00       .00       .00
      15.878   1233.87   1241.95   9943.51  10056.48    112.97      8.08  18500.00      9.49      -.72
   .00       .00       .00

      15.680   1229.55   1236.64   9949.90  10050.18    100.28      7.09  10300.00      4.84     -3.11
   .00       .00       .00
      15.680   1229.55   1238.53   9946.13  10053.96    107.83      8.98  16100.00      6.62     -2.82
   .00       .00       .00
      15.680   1229.55   1239.20   9944.79  10055.31    110.52      9.65  18500.00      7.30     -2.74
   .00       .00       .00

      15.530   1226.20   1232.81   9950.86  10049.22     98.36      6.61  10300.00      5.75     -3.83
   .00       .00       .00
      15.530   1226.20   1234.74   9947.01  10053.08    106.07      8.54  16100.00      7.50     -3.79
```

```
   .00        .00       .00
      15.530   1226.20   1235.43   9945.62  10054.47    108.85      9.23  18500.00      8.16     -3.77
   .00        .00       .00

 *    15.454   1207.26   1211.82   9967.58  10032.52     64.94      4.56  10300.00     21.84    -20.99
   .00        .00       .00
 *    15.454   1207.26   1213.91   9967.57  10032.53     64.95      6.65  16100.00     23.85    -20.83
   .00        .00       .00
 *    15.454   1207.26   1214.77   9967.57  10032.53     64.96      7.51  18500.00     24.47    -20.67
   .00        .00       .00

 *    15.310   1206.88   1214.18   9967.57  10032.53     64.96      7.30  10300.00      8.04      2.36
   .00        .00       .00
 *    15.310   1206.88   1216.55   9967.56  10032.54     64.98      9.67  16100.00     10.92      2.64
   .00        .00       .00
 *    15.310   1206.88   1217.51   9967.55  10032.54     64.99     10.63  18500.00     11.85      2.75
   .00        .00       .00

      15.204   1206.19   1210.95   9945.08  10055.02    109.94      4.76  10300.00      7.69     -3.22
   .00        .00       .00
      15.204   1206.19   1212.08   9945.08  10055.02    109.95      5.89  16100.00     11.68     -4.47
   .00        .00       .00
      15.204   1206.19   1212.53   9945.08  10055.03    109.95      6.34  18500.00     13.09     -4.98
   .00        .00       .00

1
   11AUG05      13:11:25
        PAGE   28

      SECNO      ELMIN      CWSEL      SSTA      ENDST    TOPWID     DEPTH       Q        HV     DIFWSX
 QWEIR      ELTRD      ELLC

 *    15.109   1205.94   1212.98   9945.07  10055.03    109.96      7.04  10300.00      3.24      2.02
   .00        .00       .00
 *    15.109   1205.94   1214.28   9945.07  10055.04    109.97      8.34  16100.00      5.48      2.20
   .00        .00       .00
 *    15.109   1205.94   1214.53   9945.06  10055.04    109.97      8.59  18500.00      6.81      1.99
   .00        .00       .00

 *    15.015   1205.69   1212.70   9945.07  10055.03    109.96      7.01  10300.00      3.27      -.28
   .00        .00       .00
 *    15.015   1205.69   1214.95   9945.06  10055.04    109.98      9.26  16100.00      4.39       .67
   .00        .00       .00
 *    15.015   1205.69   1215.82   9945.06  10055.05    109.99     10.13  18500.00      4.79      1.30
   .00        .00       .00

1
   11AUG05      13:11:25
        PAGE   29


  SUMMARY OF ERRORS AND SPECIAL NOTES

 CAUTION SECNO=      17.206  PROFILE=  1  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      17.206  PROFILE=  2  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      17.206  PROFILE=  3  CRITICAL DEPTH ASSUMED

 CAUTION SECNO=      17.061  PROFILE=  2  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      17.061  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=      17.061  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL
 CAUTION SECNO=      17.061  PROFILE=  3  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      17.061  PROFILE=  3  PROBABLE MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=      17.061  PROFILE=  3  20 TRIALS ATTEMPTED TO BALANCE WSEL

 CAUTION SECNO=      16.971  PROFILE=  1  BRIDGE DROWNS U.S. PROFILE
                                          NEW BACKWATER REQUIRED
 CAUTION SECNO=      16.971  PROFILE=  2  BRIDGE DROWNS U.S. PROFILE
                                          NEW BACKWATER REQUIRED
 CAUTION SECNO=      16.971  PROFILE=  3  BRIDGE DROWNS U.S. PROFILE
                                          NEW BACKWATER REQUIRED

 CAUTION SECNO=      16.902  PROFILE=  1  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      16.902  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=      16.902  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
 CAUTION SECNO=      16.902  PROFILE=  2  WSEL ASSUMED BASED ON MIN DIFF
```

```
CAUTION SECNO=     16.902  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=     16.902  PROFILE=  3  WSEL ASSUMED BASED ON MIN DIFF
CAUTION SECNO=     16.902  PROFILE=  3  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=     16.373  PROFILE=  3  WSEL ASSUMED BASED ON MIN DIFF
CAUTION SECNO=     16.373  PROFILE=  3  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=     15.939  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     15.939  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     15.939  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     15.454  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     15.454  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     15.454  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     15.310  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     15.310  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     15.310  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=     15.109  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     15.109  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     15.109  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
WARNING SECNO=     15.109  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     15.109  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=     15.015  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     15.015  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     15.015  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=     15.015  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     15.015  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     15.015  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=     15.015  PROFILE=  3  CRITICAL DEPTH ASSUMED
1
   11AUG05      13:11:25
        PAGE   30

CAUTION SECNO=     15.015  PROFILE=  3  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     15.015  PROFILE=  3  20 TRIALS ATTEMPTED TO BALANCE WSEL
```

```
T1      MIDDLE CAVE CREEK FLOODPLAIN DELINEATION STUDY, ACDC TO DEER VALLEY RD.
T2      FLOOD CONTROL DISTRICT OF MARICOPA CO. 1989 BY BURGESS & NIPLE
T3      CAVE CREEK WASH         NATURAL 100 YR FOR "FUTURE COND" COE Q'S
*
*       SUBCRITICAL RUN FROM ACDC TO DEER VALLEY RD.
*       FLOODWAY RUN FROM SEDIMENT BASIN TO DEER VALLEY RD.
*
*       FOR SECTIONS 15.310 TO 16.971, REFER TO A SEPARATE SUPERCRITICAL
*       RUN FOR THE CORPS OF ENGINEERS' CONCRETE LINED CHANNEL. (NATURAL PROF)
*
*       FLOW IS WITHIN THE CORPS OF ENGINEER'S CHANNEL, SEDIMENT BASIN, OR
*       BROAD CRESTED WEIR INLET FROM RM15.015 TO 17.492, THEREFORE NO FLOODWAY
*       IS RUN FOR THIS REACH.
*
*
*
*       FILE LAST MODIFIED 1/28/90
*
*
*      ************************************************
*      *        NOTE:  THIS IS NOT THE CURRENT        *
*      *        CONDITION 100 YEAR MODEL.  THIS       *
*      *        RUN REPRESENTS PREVIOUSLY COMPU-      *
*      *        TED 100 YEAR DISCHARGES FOR A         *
*      *        "FUTURE CONDITION" FLOOD.  THESE      *
*      *        FLOOD ELEVATIONS MAY BE HIGHER        *
*      *        OR LOWER THAN 100 YEAR ELEVA-         *
*      *        TIONS FOR CURRENT CONDITIONS.         *
*      *        FLOODWAY LIMITS HAVE BEEN SET         *
*      *        EQUAL TO THE LIMITS COMPUTED FOR      *
*      *        THE CURRENT CONDITIONS MODEL          *
*      *        WHICH WAS DEVELOPED USING FEMA        *
*      *        STANDARDS.                            *
*      ************************************************
*
*
J1            2.                  0.0005
J2    1.             -1.                                                  15.
J3   38.     42.      1.     53.     54.      4.      8.     43.     10.     51.
J3   46.     40.     41.            110.            200.
NC 0.015   0.015   0.015     0.1     0.3
QT    2.  16000.  16000.
*
*       THE FOLLOWING 3 SECTIONS ARE IN THE ACDC SPACED AT 500 FEET TO
*       ESTABLISH A STARTING ELEVATION AND DOWNSTREAM HYDRAULIC JUMP ELEVATION.
*       THE ACDC HAS BEEN DESIGNED BY THE COE TO CONTAIN THE ENTIRE 100 YEAR
*       FLOOD WITHIN THE CONCRETE LINED CHANNEL.  THE 100 YEAR FLOOD ELEVATION
*       PROVIDED BY THE COE FOR THEIR ACDC CHANNEL WILL BE PLOTTED AS BACKWATER
*       ON THE CAVE CREEK WASH PROFILE.  THE LOCATION OF THE HYDRAULIC JUMP WILL
*       NOT BE SHOWN.
*
*
X115.015      5.   9945.  10055.
GR1228.3   9945. 1206.79  9945.1 1205.69  10000. 1206.79  10055. 1226.29 10055.1
X115.109                            500.    500.    500.            0.25
X115.204                            500.    500.    500.            0.25
*
*       15.310 IS THE FIRST SECTION IN CAVE CREEK WASH.  THE CONFLUENCE OCCURS
*       AT RM 15.263
*
X115.310      5.  9967.5 10032.6    560.    560.    560.
GR1229.5  9967.5 1207.53  9967.6 1206.88  10000. 1207.53 10032.5   1230. 10032.6
X115.454                            760.    760.    760.            0.38
X115.530      5.  9941.5 10060.5    400.    400.    400.
GR1237.5  9941.5 1226.98  9962.5  1226.2  10000. 1226.95 10037.5 1238.45 10060.5
X115.680                            792.    792.    792.            3.35
X115.878      5.   9938.  10062.   1045.   1045.   1045.
GR1244.7   9938. 1234.71   9958. 1233.87  10000. 1234.71  10042. 1244.71  10062.
*
*       PEORIA AVENUE  (SPECIAL BRIDGE)
*
*
X115.920                            225.    225.    225.            0.97
SB   0.9    1.56      3.    100.   82.32      6.   1447.    1.84 1235.45 1235.07
X115.940                            100.    100.    100.            0.38
*
*       ELTRD IS 1251.1+2.5HV = 1253.6
*
X2                  1.  1249.6  1253.6                     1.33
```

```
X116.023      7.   9946.  10053.    441.    441.    441.
GR1252.5   9946. 1251.45  9946.8 1237.95   9975. 1237.45  10000. 1237.95  10025.
GR1250.9 10052.2 1251.95  10053.
X116.148                            660.    660.    660.            2.79
X116.264                            612.    612.    612.            2.59
X116.373                            576.    576.    576.            2.43
X116.481      6.   9945.  10052.    570.    570.    570.
GR1261.2   9945. 1260.17  9945.8 1248.17   9971. 1247.59  10000. 1248.17  10029.
GR1259.7  10052.
X116.601      7.   9945.  10052.    634.    634.    634.            2.67
GR1261.2   9945. 1260.17  9945.8 1248.17   9971. 1247.59  10000. 1248.17  10029.
GR1259.7  10052.  1261.3  10087.
X116.694      7.   9945.  10056.    491.    491.    491.
GR1263.9   9945. 1262.92  9945.8 1252.92   9967. 1252.26  10000. 1252.92  10033.
GR1263.4 10055.2 1264.42  10056.
X116.823                            681.    681.    681.            2.88
X116.902      9.   9940.  10063.    417.    417.    417.
GR1268.8   9940. 1257.58  9962.5 1256.93  9994.5 1256.19   9996. 1256.19  10004.
GR1256.9 10005.5 1257.58 10037.5 1269.33 10062.2 1270.33  10063.
*
*       CACTUS ROAD  (SPECIAL BRIDGE)
*
X116.970      8.  9938.3 10064.7    359.    359.    359.
GR1269.3  9938.3 1259.09  9958.7 1258.43  9991.2 1256.36   9996. 1256.36  10004.
GR1258.4 10007.9 1259.09 10041.3 1270.78 10064.7
SB   0.9    1.56      3.    100.   82.57      6.   1513.    1.61 1258.71 1258.33
X116.988      8.  9938.3 10063.9     90.     90.     90.
*
*       ELTRD IS 1275.25+2.6HV = 1277.8
*
X2                    1. 1273.75  1277.8
GR1269.7  9938.3 1259.48  9958.7 1258.83  9991.1 1256.41   9996. 1256.41  10004.
GR1258.8 10008.9 1259.48 10041.3 1270.17 10063.9
X117.061      8.  9938.3 10064.7    380.    380.    380.
GR1271.3  9938.3  1261.1  9958.7 1260.51  9988.2 1256.61   9996. 1256.61  10004.
GR1260.5 10011.8  1261.1 10041.3 1271.79 10064.7
*
*       UPSTREAM EDGE OF SEDIMENT BASIN OUTFLOW SPILLWAY.
*
X117.206      4.   9875.  10125.    769.    769.    769.
GR 1279.   9875.   1267.   9900.   1267.  10100.   1279.  10125.
*
*       SECTION IN SEDIMENTATION BASIN. X5 CARD BASED ON ELEVATION OUTFLOW
*       TABLE PROVIDED BY THE CORPS OF ENGINEERS.
*
NC  0.03    0.03    0.03
X117.360     12.   9480.  10427.    820.    830.    813.
X5    2.  1275.4  1275.4
GR1282.2   9480.  1280.6   9497.  1257.8   9610.  1257.2   9632.  1257.4   9877.
GR1256.7   9974.  1256.9  10000.  1257.7  10092.  1257.7  10263.  1258.2  10281.
GR1281.9  10406.  1281.8  10427.
QT    2.  14000.  14000.
X117.494     14.   9904.  10062.    750.    670.    707.
GR1284.9   9809.  1279.1   9904.  1273.4   9967.  1270.3  10000.  1272.1  10008.
GR1278.5  10062.  1278.8  10087.  1276.1  10109.  1278.7  10161.  1279.5  10167.
GR1281.5  10304.  1281.6  10392.  1282.5  10461.  1283.1  10472.
NC  0.04    0.04    0.04
*
*       BEGIN ENCROACHMENTS UPSTREAM OF THE SEDIMENT BASIN
*
ET                   4.1  9955.2  10193.
X117.588     25.   9982.  10193.    440.    560.    496.
GR1291.4   9666.  1290.3   9746.  1275.6   9817.  1275.2   9835.  1273.5   9854.
GR1277.8   9873.  1279.7   9889.  1277.3   9896.  1278.2   9909.  1281.6   9922.
GR1281.9   9939.  1282.2   9964.  1278.1   9982.  1269.6   9992.  1270.6  10000.
GR1270.9  10009.  1272.6  10014.  1273.6  10039.  1273.6  10079.  1271.2  10144.
GR1271.2  10170.  1276.4  10193.  1290.5  10264.  1291.3  10328.   1291.  10495.
ET                   4.1   9900.  10150.
X117.662     23.   9941.  10130.    380.    400.    391.
GR1293.1   9731.  1293.1   9781.  1291.6   9791.  1282.7   9835.  1278.1   9844.
GR1279.2   9871.  1277.3   9911.  1276.4   9941.  1272.5   9986.  1271.6  10000.
GR1274.6  10016.  1277.5  10033.  1278.8  10063.  1278.9  10086.  1276.8  10099.
GR1275.7  10111.  1281.6  10130.  1285.2  10161.  1293.1  10208.   1294.  10221.
GR1293.7  10281.   1294.  10400.  1294.5  10432.
ET                   4.1   9921.  10064.
X117.783     18.   9921.  10064.    540.    500.    639.
GR1295.2   9812.   1294.   9837.  1291.3   9861.  1286.9   9895.  1280.5   9921.
GR1276.8   9938.  1278.3   9954.  1277.6   9973.  1275.4  10000.  1276.3  10019.
GR1277.4  10033.  1277.7  10045.  1281.1  10064.  1281.3  10074.  1284.6  10097.
```

```
GR1289.8  10122.  1291.5  10143.  1291.9  10153.
ET                  4.1   9956.  10066.
X117.932     23.   9956.  10066.    790.    780.    787.
GR1294.8   9675.  1294.7   9732.  1295.5   9750.  1293.6   9766.  1297.5   9792.
GR1297.5   9837.  1298.3   9869.  1291.9   9896.  1289.7   9956.  1283.6   9966.
GR1283.5   9971.  1277.9   9986.  1278.2  10000.  1278.2  10006.  1279.5  10008.
GR1279.9  10022.  1280.2  10032.  1285.5  10054.  1290.2  10066.  1290.6  10083.
GR1298.5  10131.  1299.7  10159.  1299.7  10193.
*
*       THUNDERBIRD ROAD BRIDGE - ALTHOUGH THE ROAD IS LOWEST IN THE RIGHT
*       OVERBANK, HIGH BANKS UPSTREAM PREVENT THIS AREA FROM BECOMING EFFECTIVE,
*       THEREFORE, ONLY THE BRIDGE OPENING IS CONSIDERED ON THE GR CARDS AND
*       ONLY THE BRIDGE LENGTH IS CONSIDERED FOR THE BT CARDS.  ENDS OF THE
*       SECTIONS ARE ARTIFICIALLY EXTENDED.  BT'S ARE RAISED 0.5' FROM CENTER-
*       LINE OF ROAD ELEVATIONS AT THE BRIDGE. TO ACCOUNT FOR THE RAILING.
*
NC 0.035   0.035   0.025     0.3     0.5
ET                  4.1  9951.610048.38
X118.042      8.   9951.  10049.    620.    550.    581.             2.4
GR 1305.   9951.  1283.4   9952.  1282.9   9979.  1279.9   9980.  1279.9  10020.
GR1281.9  10021.  1284.2  10048.   1305.  10049.
SB  1.05    1.56      3.             75.      4.   1059.    0.81  1280.2  1279.9
NC  0.03    0.03   0.025
ET                 4.11  9951.5 10048.5
X118.061                            101.    101.    101.             0.8
*
*       ELTRD IS 1298.4+3.2HV =  1301.6
*
X2                    1.  1293.2  1301.6
BT    4.   9951.   1305.      0.   9952.  1298.4      0.  10048.  1298.4      0.
BT10049.   1305.      0.
NC 0.035   0.035   0.035
ET                  4.1   9900.  10085.
X118.081     11.   9942.  10045.     80.    130.    106.
GR1300.5   9819.  1300.2   9866.  1298.2   9899.  1286.6   9942.  1282.7   9960.
GR1281.4  10000.  1281.1  10008.  1282.7  10030.  1284.9  10045.  1297.3  10088.
GR1300.2  10112.
NC                      0.1     0.3
ET                  4.1   9857.  10125.
X118.174     29.   9919.  10073.    500.    490.    491.
GR1303.6   9673.  1304.6   9713.  1307.3   9757.  1302.5   9801.   1302.   9850.
GR 1288.   9904.  1287.3   9915.  1288.7   9919.   1284.   9927.  1283.5   9956.
GR1282.6   9975.  1283.5   9985.  1281.8   9992.  1281.7  10000.   1282.  10006.
GR1282.3  10011.  1282.7  10020.  1294.6  10073.   1297.  10093.  1296.2  10113.
GR1293.7  10142.  1293.7  10182.  1296.8  10236.  1299.3  10270.  1298.9  10295.
GR 1298.  10340.  1299.8  10364.   1298.  10396.  1301.1  10478.
ET                  4.1  9882.2  10110.
X118.269     12.   9942.  10060.    500.    500.    502.
GR1303.8   9868.  1288.1   9928.  1288.4   9942.  1285.3   9952.  1283.8   9979.
GR1283.8  10000.  1283.8  10010.  1285.6  10023.  1292.4  10060.   1294.  10071.
GR1303.2  10130.  1303.7  10144.
ET                  4.1  9895.6 10107.8
X118.362     20.   9942.  10060.    490.    510.    491.
GR1315.5   9728.  1315.4   9758.  1315.8   9780.  1310.6   9807.  1307.1   9862.
GR1298.6   9905.   1290.   9942.  1287.8   9952.   1288.   9967.  1286.1   9971.
GR1285.3  10000.  1286.8  10022.  1286.8  10036.  1290.6  10060.  1303.8  10124.
GR1307.7  10151.  1307.5  10169.  1306.8  10183.  1308.1  10240.  1308.8  10283.
*
*       DOWNSTREAM GOLF CART CROSSING ON A SINGLE 78" CMP WITH PROTRUDING
*       ENDS AND EMBANKMENT SLOPES  (NO WINGWALLS).
*
ET                  4.1   9885.  10110.
X118.445     13.   9992.  10005.    470.    460.    440.
X3   10.                                                  1297.   1297.
GR1315.1   9796.  1306.2   9880.   1300.   9920.  1299.5   9978.   1290.   9992.
GR1287.3  10000.   1290.  10005.   1300.  10040.   1302.  10060.   1303.  10097.
GR 1305.  10200.  1305.6  10310.  1309.4  10330.
SB   0.9    2.34     3.0      0.    6.11     1.0    33.2      0.  1287.7  1287.4
ET                 4.11   9885.  10110.
X118.456                             60.     60.     60.             0.4
*
*       ELTRD IS 1198.8+0.7HV = 1199.5
*
X2                    1.  1294.2  1299.5
X3   10.                                                  1298.8  1298.8
BT   10.   9796.  1315.5      0.   9880.  1306.6      0.   9928.  1301.9      0.
BT 9991.  1299.1      0.  10000.  1298.8      0.  10046.  1301.9      0.  10097.
BT1303.4      0.  10200.  1305.4      0.  10310.   1306.      0.  10330.  1309.8
BT    0.
```

```
ET                    4.1  9881.4 10169.8
X118.545     21.   9951.  10058.    440.    480.    466.
GR1324.2   9716.  1323.1   9748.  1324.4   9765.  1321.9   9790.  1318.3   9810.
GR 1317.   9839.  1306.7   9889.  1294.1   9951.  1291.5   9972.  1289.3   9993.
GR1289.7  10000.  1289.7  10018.  1290.5  10040.  1293.8  10058.  1298.8  10073.
GR1299.8  10094.  1303.4  10108.  1303.9  10121.   1303.  10135.  1310.1  10182.
GR1310.2  10194.
*
*       UPSTREAM GOLF CART CROSSING ON 2 - 72" RCP WITH FLUSH INLETS AND
*       45 DEGREE WINGWALLS.
*
ET                    4.1  9880.7 10170.8
X118.575     21.   9972.  10000.    160.    160.    160.
X3   10.                                                   1297.   1297.
GR1324.2   9716.  1323.1   9748.  1324.4   9765.  1321.9   9790.  1318.3   9810.
GR 1317.   9839.  1306.7   9889.  1294.1   9951.  1291.5   9972.  1289.3   9993.
GR1289.7  10000.  1289.7  10018.  1290.5  10040.  1293.8  10058.  1298.8  10073.
GR1299.8  10094.  1303.4  10108.  1303.9  10121.   1303.  10135.  1310.1  10182.
GR1310.2  10194.
SB  1.25    1.56     3.0      0.    10.4     1.0    56.5      0.  1289.4  1289.3
ET                   4.11  9876.1 10177.2
X118.583                              40.     40.     40.             0.1
*
*       ELTRD IS 1298.4+0.6HV = 1299.0
*
X2                    1.  1295.4   1299.
X3   10.                                                   1298.4  1298.4
BT    9.   9880.   1310.      0.   9965.   1300.      0.  10000.  1298.4      0.
BT10037.   1300.      0.  10065.   1302.      0.  10085.   1304.      0.  10122.
BT 1306.      0.  10160.   1308.      0.  10170.   1310.      0.
ET                    4.1  9879.6 10134.7
X118.640     17.   9955.  10033.    300.    310.    301.
GR1322.5   9707.  1323.7   9729.  1320.1   9768.  1313.8   9827.  1312.3   9858.
GR1308.4   9887.  1302.6   9920.  1294.6   9955.  1292.8   9966.  1290.2   9993.
GR1291.5  10000.  1291.8  10009.  1293.4  10033.  1307.8  10111.   1309.  10132.
GR1312.1  10153.  1313.2  10167.
ET                    4.1  9883.2 10111.7
X118.734     19.   9938.  10062.    490.    500.    496.
GR1320.7   9713.  1316.3   9762.  1316.6   9809.  1319.2   9819.  1317.9   9841.
GR1308.7   9888.  1298.6   9938.  1293.4   9971.  1294.2   9981.  1292.4   9992.
GR1294.5  10000.  1294.4  10025.  1300.8  10062.   1309.  10094.  1307.6  10104.
GR1312.9  10124.   1314.  10143.  1317.1  10178.  1319.9  10201.
ET                    4.1  9891.8  10107.
X118.832     21.   9929.  10046.    480.    540.    517.
GR1326.2   9779.   1328.   9788.  1320.6   9826.   1316.   9853.  1312.5   9880.
GR1302.8   9929.  1296.1   9960.  1293.5   9982.  1293.2  10000.  1293.2  10005.
GR1294.8  10008.  1295.5  10027.  1297.1  10046.  1307.7  10095.  1314.1  10128.
GR1314.1  10141.  1317.1  10187.  1320.3  10221.  1319.9  10247.  1318.6  10271.
GR1319.2  10278.
ET                    4.1  9887.7 10087.5
X118.925     14.   9941.  10048.    480.    500.    491.
GR1329.1   9741.  1315.9   9866.  1297.6   9941.  1297.3   9960.  1295.3   9989.
GR 1295.  10000.  1296.1  10006.  1295.4  10022.  1294.6  10025.  1296.3  10034.
GR 1300.  10048.  1310.5  10087.  1320.1  10132.  1321.3  10161.
ET                    4.1  9866.3 10038.5
X119.018     20.   9903.  10030.    460.    520.    491.
GR 1331.   9681.  1321.2   9775.  1313.9   9847.  1305.1   9903.  1298.1   9930.
GR 1298.   9948.  1298.1   9957.  1297.6   9974.   1299.  10000.  1308.4  10030.
GR1325.3  10088.   1327.  10101.  1325.5  10109.  1330.2  10118.  1330.9  10124.
GR 1327.  10145.  1326.8  10211.  1328.8  10218.  1332.6  10260.  1331.8  10268.
ET                    4.1  9942.1 10061.9
X119.117     10.   9973.  10026.    490.    560.    523.
GR1333.9   9803.  1331.8   9872.   1323.   9908.  1302.9   9973.  1299.2   9997.
GR1298.7  10000.  1298.6  10010.  1301.5  10026.  1328.9  10116.   1333.  10144.
ET                    4.1  9923.1  10081.
X119.210     16.   9945.  10060.    500.    490.    491.
GR1333.2   9669.  1330.6   9853.  1328.7   9874.   1312.   9945.   1310.   9954.
GR1303.8   9978.  1301.4   9991.  1300.2  10000.  1301.3  10010.  1303.4  10026.
GR 1312.  10060.  1321.3  10098.   1327.  10127.  1332.5  10166.  1335.3  10191.
GR1335.6  10192.
*
*       19TH AVENUE  (SPECIAL BRIDGE)
*
NC                          0.3     0.5
ET                    4.1   9948.  10057.
X119.283     12.   9948.  10057.    390.    390.    386.             11.2
X3   10.                                                   1324.   1324.
GR1333.2   9669.  1330.6   9853.  1328.7   9874.   1312.   9945.  1300.5   9948.
GR1300.5  10057.   1312.  10060.  1321.3  10098.   1327.  10127.  1332.5  10166.
```

```
GR1335.3  10191.  1335.6  10192.
SB   0.9    1.56      3.          109.     4.5   1304.      0.  1311.7  1311.7
ET                 4.11   9948.  10057.
X119.299                          86.     86.     86.
*
*       ELTRD IS 1324.5+2HV = 1326.5
*
X2                    1.  1324.2  1326.5
X3   10.                                                   1325.   1325.
BT    6.   9500.   1326.      0.   9650.  1324.5      0.   9855.  1325.3      0.
BT10000.  1325.7      0.  10275.  1324.9      0.  10460.   1326.      0.
ET                   4.1  9944.4  10104.
X119.313     20.   9932.  10112.     75.     75.     74.
GR 1329.   9853.  1326.7   9859.  1327.6   9866.  1327.9   9932.  1314.5   9968.
GR1312.2   9980.  1311.7   9988.  1313.1   9996.  1313.1  10000.  1313.4  10017.
GR 1312.  10029.  1313.7  10044.  1311.7  10054.  1313.7  10069.  1325.5  10112.
GR1325.4  10137.  1324.3  10180.  1324.9  10219.  1325.2  10325.  1326.6  10464.
NC                      0.1     0.3
ET                   4.1  9955.1 10117.8
X119.418     19.   9948.  10120.    570.    530.    554.
GR1330.8   9898.  1328.8   9902.  1330.6   9910.  1330.2   9938.   1328.   9948.
GR1313.1   9992.  1313.1  10000.   1313.  10004.  1316.1  10022.  1314.6  10058.
GR1315.5  10076.  1320.1  10094.  1326.1  10120.  1327.6  10138.  1327.5  10186.
GR1326.2  10276.   1327.  10322.  1328.3  10376.  1328.6  10401.
*
*       SECTION 19.56  IS JUST DOWNSTREAM OF THE CONFLUENCE WITH THE EAST
*       FORK.  THIS SECTION IS USED TO BEGIN THE TRIBUTARY RUN FOR THE
*       EAST FORK OF CAVE CREEK.  THE CONFLUENCE OCCURS AT RM 19.608
*
ET                   4.1  9931.4  10061.
X1 19.56     17.   9929.  10065.    730.    720.    729.
GR1346.1   9801.  1329.7   9902.  1329.7   9929.  1316.5   9950.  1316.8   9978.
GR1315.6  10000.  1315.6  10008.  1316.6  10026.  1316.4  10035.  1317.5  10043.
GR1330.6  10065.  1330.8  10099.  1330.5  10146.  1330.2  10195.  1330.9  10208.
GR1331.2  10223.  1332.1  10301.
*
*       GREENWAY BRIDGE  (SPECIAL BRIDGE).  LARGE SKEW ACCOUNTED FOR PRIOR
*       TO DATA INPUT BY ADJUSTING BWC ETC.  DUE TO COMPLEX CHANNEL GEOMETRY
*       DOWNSTREAM AT THE CONFLUENCE WITH THE EAST FORK, IT WAS MOST APPROPRIATE
*       TO USE THE UPSTREAM SECTION, REPEATED AT THE DOWNSTREAM FACE.  GR CARDS
*       FROM SECTION 19.742 ARE REPEATED FOR 19.625 WITH PSXECE = -1.7
*
QT    2.   5800.   5800.
NC 0.035   0.035   0.015     0.3     0.5
ET                   4.1   9965.  10025.
X119.625     11.   9965.  10025.    580.     70.    364.            -1.7
X3   10.                                                   1332.   1332.
GR1335.7   9834.  1335.1   9893.  1333.4   9922.  1331.8   9937.  1331.6   9948.
GR1319.3   9965.  1319.3  10025.   1331.  10042.  1339.2  10055.  1337.7  10060.
GR1338.8  10100.
SB  1.05    1.56      3.    100.     60.      2.    564.      0.  1318.6  1317.6
ET                 4.11   9965.  10025.
X119.691                          330.    430.    350.             1.0
*
*       ELTRD IS 1332.8+2HV = 1334.8
*
X2                    1.  1328.3  1334.8
X3   10.                                                   1333.   1333.
ET                   4.1   9953.  10038.
X119.742     13.   9948.  10042.     80.    470.    269.
GR1335.7   9834.  1335.1   9893.  1333.4   9922.  1331.8   9937.  1331.6   9948.
GR1319.1   9967.  1319.2  10000.  1319.7  10017.  1319.7  10027.   1331.  10042.
GR1339.2  10055.  1337.7  10060.  1338.8  10100.
NC 0.035   0.035   0.035     0.1     0.3
ET                   4.1   9957.  10043.
X119.847     22.   9929.  10062.    570.    520.    554.
GR1339.8   9621.  1338.7   9726.  1341.6   9738.  1338.8   9759.   1339.   9806.
GR1337.7   9915.  1336.1   9921.  1336.3   9929.  1320.2   9974.  1318.8   9989.
GR1320.8  10000.  1320.5  10017.  1321.3  10023.  1328.8  10040.  1335.8  10062.
GR1336.1  10070.  1336.6  10084.  1335.8  10150.   1336.  10160.  1338.3  10175.
GR1339.2  10195.  1339.2  10198.
ET                   4.1   9958.  10031.
X119.960     24.   9958.  10031.    640.    560.    597.
GR1340.4   9544.  1339.1   9638.  1336.7   9736.  1337.2   9768.  1338.2   9807.
GR1338.9   9836.  1338.4   9908.  1340.1   9911.  1337.7   9917.  1339.1   9924.
GR1337.2   9935.   1330.   9958.  1327.8   9964.  1326.1   9977.  1324.6   9990.
GR1324.7  10000.  1326.1  10008.  1326.8  10023.   1330.  10031.  1340.6  10059.
GR1340.8  10072.  1340.7  10099.  1340.1  10194.  1339.9  10251.
*
```

```
*       TIERRA BUENA  (SPECIAL BRIDGE)
*
*
*       DUE TO HIGHER DEPTHS THAN ANTICIPATED, XNCH HAS BEEN REDUCED
*       FROM 0.04 (PER MANNINGS n VALUE REPORT) TO 0.035 BETWEEN GREENWAY ROAD
*       AND UNION HILLS DRIVE
*
NC  0.04    0.04   0.035     0.3     0.5
ET                   4.1   9969.  10020.
X119.974     10.   9969.  10020.    105.     65.     74.
X3   10.                                                1336.   1336.
GR1340.1   9911.  1337.7   9917.  1339.1   9924.  1337.2   9935.   1330.   9958.
GR1323.8   9969.  1323.8  10020.   1330.  10031.  1340.6  10059.  1340.8  10072.
SB  1.25    1.56      3.              51.      3.    480.      0.  1324.1  1323.8
ET                  4.11   9969.  10020.
X119.986                              61.     61.     61.
*
*       ELTRD IS 1336.9+1HV = 1337.9
*
X2                    1.  1334.1  1337.9
X3   10.                                                1337.   1337.
BT    3.   9560.   1340.      0.  10000.  1336.9      0.  10230.   1340.      0.
ET                   4.1   9975.  10025.
X120.049     37.   9954.  10027.    305.    345.    333.
X3   10.                                                1340.
GR1344.7   9266.  1345.2   9300.  1342.4   9304.  1340.8   9328.  1332.6   9344.
GR1333.1   9400.  1333.3   9490.   1334.   9563.  1334.8   9606.  1333.2   9728.
GR 1335.   9767.  1331.4   9805.   1331.   9820.  1331.5   9854.  1331.5   9901.
GR1332.1   9920.  1341.1   9938.  1340.5   9950.  1343.4   9954.  1339.8   9969.
GR1327.4   9991.  1327.1   9997.  1327.1  10000.  1328.4  10008.  1339.4  10027.
GR 1340.  10047.  1342.3  10075.  1342.4  10097.  1340.2  10114.  1342.3  10131.
GR 1343.  10142.  1341.5  10162.  1342.7  10175.  1342.9  10210.  1343.3  10307.
GR1342.5  10378.   1343.  10477.
NC                           0.1     0.3
ET                   4.1   9972.  10029.
X120.144     38.   9955.  10025.    490.    500.    502.
X3   10.                                                1344.
GR1346.6   9136.  1347.4   9206.  1348.2   9208.  1348.4   9215.  1347.1   9235.
GR1342.5   9239.  1341.7   9258.  1334.6   9278.   1332.   9297.  1332.6   9357.
GR1333.7   9417.  1333.1   9457.  1334.1   9479.  1334.9   9499.  1335.3   9554.
GR1334.4   9582.  1335.7   9631.  1335.6   9698.  1336.1   9745.  1334.6   9779.
GR1329.6   9788.  1330.5   9820.  1329.4   9847.  1328.5   9881.  1328.5   9912.
GR1341.6   9931.  1343.1   9951.  1344.6   9955.   1342.   9968.  1330.9   9986.
GR1330.9  10000.  1330.9  10010.  1340.8  10025.  1342.2  10040.  1345.9  10053.
GR1346.5  10073.   1347.  10128.   1347.  10198.
ET                   4.1   9964.  10035.
X120.242     32.   9953.  10029.    470.    560.    517.
X3   10.                                                1348.
GR1346.6   9200.  1347.9   9269.  1348.7   9271.  1348.7   9277.  1346.6   9330.
GR1347.7   9377.  1342.3   9383.  1342.7   9400.  1332.4   9422.  1333.6   9470.
GR1333.7   9529.  1334.9   9573.  1334.2   9626.  1334.9   9648.  1335.1   9651.
GR 1336.   9785.   1336.   9842.  1338.6   9846.  1339.3   9895.  1339.2   9935.
GR1347.2   9953.  1343.7   9970.  1333.3   9988.  1333.7  10000.  1333.5  10012.
GR1342.8  10029.  1343.2  10041.  1348.3  10061.  1349.2  10076.  1349.9  10107.
GR1350.1  10201.  1350.3  10202.
ET                   4.1   9963.  10036.
X120.335     27.   9958.  10032.    510.    470.    491.
GR1349.5   9230.  1351.4   9312.  1349.1   9322.  1350.7   9340.   1351.   9476.
GR1351.2   9592.  1350.4   9726.  1350.1   9808.  1351.1   9820.  1351.4   9850.
GR1351.8   9928.  1347.7   9950.   1344.   9958.  1337.7   9971.  1337.3   9987.
GR1337.4  10000.  1338.3  10021.   1344.  10032.   1349.  10042.  1351.8  10056.
GR1351.1  10100.  1351.6  10141.   1350.  10144.   1350.  10166.   1350.  10240.
GR1350.8  10328.  1351.4  10406.
*
*       11TH AVENUE  (SPECIAL BRIDGE)
*
NC                           0.3     0.5
ET                   4.1   9970.  10021.
X120.347     25.   9970.  10021.      1.    150.     63.
X3   10.                                                1351.5  1351.5
GR1349.5   9230.  1351.4   9312.  1349.1   9322.  1350.7   9340.   1351.   9476.
GR1351.2   9592.  1350.4   9726.  1350.1   9808.  1351.1   9820.  1351.4   9850.
GR1351.8   9928.  1347.7   9950.   1344.   9958.  1337.2   9970.  1337.2  10021.
GR 1344.  10032.   1349.  10042.  1351.8  10056.  1351.1  10100.  1351.6  10141.
GR 1350.  10144.   1350.  10166.   1350.  10240.  1350.8  10328.  1351.4  10406.
SB  1.25    1.56     3.0    100.     51.      3.    576.      0.  1337.7  1337.2
ET                  4.11   9970.  10021.
X120.366                              100.    100.    100.
*
```

```
*       ELTRD IS 1352.5+2HV = 1354.5
*
X2                    1.  1349.7  1354.5
X3   10.                                                  1352.5  1352.5
ET                  4.1   9958.  10072.
X120.423     21.   9975.  10045.    415.    205.    301.
GR1354.3   9418.  1353.8   9613.  1355.3   9653.  1354.6   9696.  1353.3   9711.
GR1353.6   9724.  1353.5   9931.   1352.   9950.   1345.   9975.   1338.  10000.
GR1339.4  10027.  1339.7  10037.  1344.3  10045.   1345.  10055.  1353.3  10085.
GR1353.5  10100.  1354.7  10127.  1354.4  10214.  1354.3  10273.  1353.3  10300.
GR1353.5  10333.
*
*       10TH AVENUE  (SPECIAL BRIDGE)
*
ET                  4.1   9985.  10036.
X120.430     20.   9985.  10036.      1.     65.     37.
X3   10.                                                  1352.5  1352.5
GR1354.3   9418.  1353.8   9613.  1355.3   9653.  1354.6   9696.  1353.3   9711.
GR1353.6   9724.  1353.5   9931.   1352.   9950.   1345.   9975.  1339.3   9985.
GR1339.3  10036.  1344.3  10045.   1345.  10055.  1353.3  10085.  1353.5  10100.
GR1354.7  10127.  1354.4  10214.  1354.3  10273.  1353.3  10300.  1353.5  10333.
SB  1.25    1.56     3.0    100.     51.      3.    576.      0.  1339.3  1339.3
ET                 4.11   9985.  10036.
X120.444                          70.     70.     70.
*
*       ELTRD IS 1353.5+2HV = 1355.5
*
X2                    1.  1351.3  1355.5
X3   10.                                                  1353.5  1353.5
ET                  4.1   9930.  10069.
X120.529     19.   9947.  10055.    545.    375.    449.
GR 1354.   9570.  1353.7   9764.  1354.8   9836.   1355.   9885.  1354.7   9898.
GR1350.7   9910.  1350.2   9947.  1343.4   9963.  1343.4   9990.  1343.3  10000.
GR 1343.  10025.  1348.6  10041.  1350.4  10055.  1350.8  10090.   1355.  10105.
GR1354.4  10159.   1355.  10192.   1355.  10302.  1355.2  10313.
NC                           0.1     0.3
ET                  4.1   9935.  10065.
X120.628     16.   9909.  10076.    530.    520.    523.
GR1357.3   9532.  1357.3   9624.  1356.8   9754.  1357.2   9808.  1357.1   9909.
GR1351.5   9922.  1350.2   9947.  1343.3   9959.  1343.6   9991.  1343.6  10000.
GR1343.7  10044.  1356.3  10076.   1357.  10082.  1357.1  10137.  1357.2  10282.
GR 1358.  10337.
ET                  4.1   9962.  10026.
X120.725     20.   9951.  10036.    510.    520.    512.
GR1360.3   9544.  1361.1   9631.  1361.3   9734.   1361.   9783.   1362.   9858.
GR1360.8   9940.  1360.4   9951.  1350.4   9970.  1350.4   9981.  1348.3   9984.
GR1347.4   9992.  1347.2  10000.  1347.4  10010.   1361.  10036.  1363.4  10046.
GR1363.8  10101.  1364.1  10156.  1364.7  10184.  1365.1  10212.  1364.7  10291.
*
*       PHELPS ROAD  (SPECIAL BRIDGE)
*
NC                           0.3     0.5
ET                  4.1   9968.  10019.
X120.737     16.   9968.  10019.     80.     80.     80.             3.4
X3   10.                                                   1363.   1363.
GR1360.3   9544.  1361.1   9631.  1361.3   9734.   1361.   9783.   1362.   9858.
GR1360.8   9940.  1360.4   9951.  1347.5   9968.  1347.5  10019.   1361.  10036.
GR1363.4  10046.  1363.8  10101.  1364.1  10156.  1364.7  10184.  1365.1  10212.
GR1364.7  10291.
SB  1.25    1.56     3.0    100.     51.      3.    576.      0.  1351.0  1350.9
ET                 4.11   9968.  10019.
X120.750                          71.     71.     71.             0.1
*
*       ELTRD IS 1364+2HV = 1366.0
*
X2                    1.   1363.   1366.
X3   10.                                                   1364.   1364.
*
*       BELL ROAD  (SPECIAL BRIDGE)  A SECTION TAKEN UPSTREAM OF BELL ROAD AT
*       RM 20.845 IS USED TO MODEL THE BELL ROAD BRIDGE.  GR CARDS ARE REPEATED
*       AT THE DOWNSTREAM FACE WITH PSXECE = -0.9.  TO MORE APPROPRIATELY MODEL
*       CONTRACTION LOSSES, THE UPSTREAM SECTION IS PRESENTED AT RM 20.860
*       INSTEAD OF RM 20.845 WHERE THE AERIAL SECTION WAS TAKEN.
*
ET                  4.1   9965.  10043.
X120.819     12.   9965.  10043.    375.    345.    365.            -0.9
X3   10.                                                  1366.9  1366.9
GR1366.5   9554.  1365.4   9663.  1365.5   9777.  1365.5   9846.  1365.3   9942.
GR1357.4   9965.  1357.4  10043.  1367.6  10066.  1366.2  10107.  1366.2  10146.
```

```
GR 1367.  10166.  1367.2  10169.
SB  1.05    1.56     3.0    100.    77.3     3.3    655.      0.  1357.4  1356.5
ET                  4.11   9965.  10043.
X120.841                           115.    115.    115.            0.9
*
*       ELTRD IS 1367.9+2HV = 1369.9
*
X2                     1.  1365.4  1369.9
X3   10.                                                   1367.9  1367.9
ET                    4.1   9904.  10060.
X120.860     14.   9942.  10066.     90.    110.    100.
X3   10.                                                   1365.3  1367.6
GR 1370.   9800.  1365.5   9801.  1365.5   9846.  1365.3   9942.  1357.8   9975.
GR1356.3   9991.  1356.4  10000.  1357.2  10015.   1357.  10040.  1367.6  10066.
GR1366.2  10107.  1366.2  10146.   1367.  10166.  1367.2  10169.
NC  0.04   0.035   0.035     0.1     0.3
ET                    4.1   9860.  10110.
X120.942     26.   9854.  10024.    530.    490.    433.
GR1372.5   9619.  1367.2   9630.  1368.7   9643.  1369.8   9663.  1369.4   9719.
GR1367.6   9792.  1367.6   9836.  1368.6   9854.  1360.2   9867.  1359.8   9879.
GR1359.8   9891.  1364.6   9904.  1365.2   9942.  1363.7   9970.   1366.   9977.
GR1360.3   9998.  1359.6  10000.  1366.5  10024.  1364.7  10027.  1364.5  10053.
GR1365.7  10070.  1364.5  10114.  1361.6  10153.  1368.3  10171.  1368.3  10194.
GR1368.3  10204.
NC  0.04    0.04   0.035
ET                    4.1   9810.  10060.
X121.036     19.   9912.  10020.    490.    490.    496.
GR1376.1   9530.   1372.   9541.   1372.   9561.  1371.3   9665.  1371.9   9728.
GR1371.6   9758.  1370.9   9867.  1370.7   9912.  1367.3   9917.  1367.5   9952.
GR1366.3   9980.  1363.5   9994.  1363.6  10000.  1364.3  10009.  1370.4  10020.
GR1371.2  10041.  1371.2  10075.  1371.8  10089.   1378.  10090.
ET                    4.1   9900.  10060.
X121.127     13.   9974.  10067.    400.    500.    480.
X3   10.                                                   1374.
GR1378.9   9623.  1373.6   9634.  1373.6   9666.  1373.4   9759.  1373.5   9860.
GR1373.7   9913.  1374.2   9974.  1366.9   9990.  1366.7  10000.  1367.5  10015.
GR1367.8  10039.   1375.  10067.   1375.  10077.
ET                    4.1   9900.  10125.
X121.230     28.   9967.  10048.    560.    500.    544.
GR1381.5   9741.  1381.5   9764.  1381.5   9786.  1380.7   9813.  1379.3   9835.
GR1379.3   9852.  1379.9   9862.  1378.2   9870.  1379.8   9879.  1378.9   9891.
GR1379.5   9916.  1379.6   9930.  1378.9   9944.  1379.2   9955.  1379.3   9967.
GR1374.7   9982.  1372.4   9992.   1372.  10000.  1373.2  10014.  1375.6  10023.
GR1379.3  10037.  1380.6  10048.   1378.  10062.  1377.5  10083.  1377.4  10102.
GR1377.7  10117.  1377.8  10126.   1385.  10127.
ET                    4.1   9939.  10105.
X121.363     55.   9928.  10088.    740.    700.    702.
GR1384.8   9135.  1384.7   9160.  1383.9   9189.  1384.6   9215.  1383.9   9245.
GR1384.4   9279.  1383.8   9313.   1384.   9345.  1384.1   9374.  1383.8   9405.
GR1383.5   9428.  1384.5   9459.   1385.   9498.  1384.7   9527.   1385.   9549.
GR1382.2   9561.   1381.   9570.  1382.1   9583.  1383.9   9596.  1384.3   9628.
GR1384.3   9657.   1384.   9697.  1383.6   9739.  1384.1   9779.  1383.9   9811.
GR1383.1   9822.  1383.6   9848.  1383.3   9886.  1383.5   9907.  1384.1   9916.
GR1383.2   9922.  1384.4   9928.  1383.6   9939.  1379.2   9954.  1377.7   9977.
GR 1375.   9996.  1374.8  10000.   1375.  10016.  1374.2  10037.  1374.1  10045.
GR1377.5  10066.  1382.1  10088.  1383.8  10108.   1384.  10125.  1384.5  10147.
GR1382.7  10174.  1383.2  10202.  1383.1  10224.  1383.1  10245.  1383.3  10265.
GR1384.3  10285.  1383.4  10301.   1383.  10319.   1383.  10334.   1383.  10337.
ET                    4.1   9852.  10077.
X121.484     33.   9932.  10026.    650.    520.    639.
GR1386.8   9487.  1385.8   9527.  1385.8   9572.  1385.4   9614.  1384.8   9647.
GR1385.2   9678.  1385.6   9709.  1386.7   9746.  1385.9   9776.  1384.5   9805.
GR1383.9   9837.  1384.4   9867.   1384.   9892.  1386.5   9919.  1386.9   9932.
GR1386.2   9943.  1383.5   9964.  1380.2   9970.  1379.7   9988.  1378.5   9994.
GR1378.6  10000.  1381.2  10014.  1386.5  10026.  1386.6  10053.  1387.8  10056.
GR1385.5  10060.  1388.2  10068.  1385.8  10075.  1387.4  10079.  1387.4  10101.
GR1387.6  10116.  1387.5  10131.  1387.4  10134.
ET                    4.1   9940.  10165.
X121.576     43.   9980.  10087.    320.    480.    486.
GR1388.7   9388.  1388.6   9414.  1388.2   9461.  1388.5   9500.  1389.3   9532.
GR1388.7   9570.  1388.5   9607.  1387.9   9643.  1388.6   9664.  1388.8   9705.
GR1389.1   9743.  1388.9   9780.   1388.   9821.  1388.4   9852.  1388.7   9889.
GR1389.1   9922.  1389.7   9952.  1390.1   9968.   1390.   9980.  1382.5   9994.
GR1382.1  10000.  1382.2  10008.  1383.8  10015.  1385.1  10038.  1385.2  10056.
GR1384.1  10065.  1384.6  10073.  1388.3  10087.  1387.1  10114.  1387.1  10140.
GR1387.8  10162.  1387.7  10199.  1388.4  10243.  1388.7  10281.  1389.3  10300.
GR1390.3  10307.  1389.2  10313.  1390.7  10320.  1387.6  10329.  1388.9  10335.
GR1389.7  10348.  1390.2  10360.  1390.3  10386.
QT    2.   5600.   5600.
```

```
ET                    4.1   9890.  10115.
X121.669     35.   9962.  10031.    440.    470.    491.
GR1393.2   9392.   1393.   9426.  1392.7   9446.  1392.3   9515.  1392.9   9562.
GR1392.2   9606.  1392.8   9663.  1392.7   9710.  1393.1   9742.  1393.5   9777.
GR1393.3   9819.  1392.7   9858.  1392.2   9893.  1391.6   9925.   1392.   9949.
GR1393.8   9962.  1392.7   9974.  1392.2   9982.   1385.   9989.   1384.   9997.
GR1384.5  10000.  1385.1  10011.  1388.7  10023.   1392.  10031.  1391.2  10045.
GR 1392.  10074.  1391.7  10124.  1391.9  10182.   1392.  10245.  1392.1  10303.
GR1391.9  10361.   1392.  10395.  1392.6  10401.  1391.6  10404.  1393.3  10414.
ET                    4.1   9940.  10140.
X121.742     25.   9975.  10091.    430.    390.    385.
GR 1396.   9733.  1394.6   9753.  1395.1   9777.   1395.   9802.   1395.   9839.
GR1395.6   9885.  1395.1   9930.  1395.3   9940.  1394.7   9975.  1387.4   9991.
GR1386.4  10000.  1386.9  10015.  1392.2  10035.  1391.9  10052.  1389.9  10062.
GR1391.5  10080.  1394.2  10091.  1394.2  10126.  1394.9  10176.   1395.  10240.
GR1394.6  10281.  1394.8  10324.  1395.2  10355.  1395.3  10367.  1397.3  10376.
ET                    4.1   9900.  10100.
X121.840     22.   9946.  10054.    430.    430.    517.
GR1401.5   9827.  1402.1   9842.  1397.3   9860.  1395.5   9882.   1395.   9913.
GR1395.3   9931.  1396.2   9946.  1395.7   9953.  1392.1   9967.  1392.6   9984.
GR1393.7   9997.  1393.3  10000.  1392.5  10020.  1391.1  10033.  1393.5  10045.
GR 1397.  10054.  1396.5  10097.  1397.3  10145.  1397.8  10186.  1397.5  10227.
GR1397.6  10273.  1398.3  10308.
ET                    4.1   9835.  10080.
X121.895     31.   9975.  10031.    330.    220.    290.
GR1402.6   9807.  1402.6   9825.  1398.4   9839.  1397.2   9857.  1396.7   9885.
GR1396.7   9919.  1397.7   9939.  1397.9   9960.   1398.   9975.  1397.1   9981.
GR 1393.   9990.  1391.9  10000.  1392.3  10010.   1394.  10021.  1397.7  10031.
GR1398.6  10046.   1399.  10078.  1398.4  10113.  1398.6  10149.  1398.7  10187.
GR1398.5  10225.  1398.1  10251.  1398.6  10292.  1398.6  10333.  1399.3  10364.
GR1398.8  10399.  1399.5  10428.  1400.5  10446.  1400.5  10458.  1399.7  10463.
GR1400.9  10470.
*
*       UNION HILLS RD:   PIPES BENEATH LOW CROSSING WERE MODELLED AS AN AREA
*       (BAREA) WITH AN ORIFICE COEFFICIENT.  THE 100 YEAR FLOW THROUGH THE
*       PIPES WAS NEGLIGIBLE (18 CFS).  UNION HILLS IS THEREFORE MORE
*       APPROPRIATELY MODELLED AS A NORMAL SECTION USING GR CARDS.
*
ET                    4.1   9650.  10070.
X121.933     12.   9865.  10140.    210.    210.    210.
GR 1402.   9060.  1400.3   9440.   1400.   9590.   1398.   9680.  1397.4   9725.
GR 1398.   9780.  1399.4   9840.   1398.   9865.  1396.8  10000.   1398.  10140.
GR 1400.  10285.   1406.  10286.
NC 0.045   0.045   0.045
ET                    4.1   9630.  10051.
X121.953     39.   9969.  10029.     75.     75.     74.
GR 1402.   9320.  1400.5   9487.  1400.8   9527.  1401.4   9557.  1400.2   9580.
GR1401.7   9599.  1401.1   9621.  1400.2   9647.  1399.6   9678.  1398.8   9699.
GR1398.3   9714.  1397.6   9720.  1396.6   9725.  1398.8   9735.  1399.3   9745.
GR1398.8   9759.  1397.3   9768.  1398.9   9782.  1398.9   9810.  1400.1   9832.
GR1402.1   9851.  1401.7   9870.  1403.3   9884.  1403.7   9893.  1403.4   9912.
GR1402.3   9939.   1401.   9956.  1399.7   9965.  1400.2   9969.  1395.6   9986.
GR1394.4   9997.  1394.1  10000.   1394.  10010.  1394.9  10018.  1398.3  10029.
GR1400.1  10044.  1401.6  10058.  1401.4  10064.   1407.  10065.
ET                    4.1   9620.  10030.
X122.065     39.   9961.  10028.    430.    630.    591.
GR1404.2   9230.   1404.   9250.   1402.   9270.   1402.   9500.  1403.1   9594.
GR1403.6   9604.  1400.4   9627.  1400.1   9645.  1400.6   9657.  1400.3   9680.
GR1400.5   9700.  1401.9   9717.  1403.3   9731.  1403.7   9746.  1403.9   9761.
GR1400.1   9776.   1400.   9785.  1401.1   9796.   1401.   9816.  1403.7   9829.
GR1403.7   9843.  1400.7   9861.  1399.7   9869.  1402.7   9890.  1403.5   9899.
GR1404.1   9915.  1404.8   9934.  1403.6   9950.  1404.1   9961.  1401.4   9977.
GR 1398.   9989.  1395.8   9995.  1395.8  10000.  1395.9  10006.  1399.4  10010.
GR 1402.  10028.  1402.6  10043.  1406.6  10061.  1407.1  10085.
ET                    4.1   9620.  10020.
X122.165     63.   9983.  10018.    530.    530.    528.
GR 1406.   9130.  1405.2   9138.   1405.   9151.  1404.4   9164.  1402.8   9176.
GR1402.7   9184.  1400.8   9204.  1399.8   9213.  1399.3   9222.  1401.2   9232.
GR 1403.   9256.  1403.8   9282.  1403.8   9308.  1404.3   9334.  1404.2   9364.
GR1404.1   9396.   1404.   9425.  1404.9   9463.  1405.2   9499.  1405.3   9526.
GR1404.9   9548.  1403.8   9565.  1402.8   9579.  1404.6   9595.  1404.8   9608.
GR1402.4   9624.   1400.   9637.  1399.7   9645.  1400.6   9657.   1402.   9669.
GR1403.1   9686.  1404.5   9701.  1405.8   9714.  1406.2   9728.  1406.1   9741.
GR 1404.   9753.  1403.8   9760.  1405.2   9772.  1405.6   9784.  1405.3   9793.
GR1402.9   9806.  1402.7   9820.  1402.6   9834.  1402.6   9843.  1401.8   9849.
GR1401.9   9862.  1402.8   9872.  1403.8   9876.   1405.   9894.  1406.1   9909.
GR1405.4   9919.  1403.1   9930.   1403.   9946.  1402.1   9967.  1400.9   9983.
GR1395.3   9994.   1395.  10000.  1396.1  10007.  1403.7  10018.  1404.8  10038.
GR1405.2  10053.  1405.2  10060.  1405.7  10065.
```

```
ET                    4.1   9650.  10027.
X122.273     57.   9933.  10028.    470.    580.    570.
GR1418.7   9227.  1418.7   9238.  1412.4   9262.  1411.6   9274.  1410.9   9284.
GR 1409.   9292.  1407.6   9300.  1407.3   9314.  1406.3   9325.  1403.5   9335.
GR1403.1   9344.   1403.   9350.  1404.3   9359.  1405.4   9369.  1405.8   9386.
GR1406.7   9408.  1407.1   9427.  1407.4   9444.  1407.2   9460.  1406.4   9473.
GR1406.5   9485.  1406.9   9502.  1407.7   9520.  1408.2   9532.  1407.1   9558.
GR1404.4   9574.  1404.3   9598.   1406.   9622.   1407.   9657.  1407.3   9686.
GR1406.2   9708.  1406.4   9727.  1406.4   9745.  1405.6   9754.  1402.6   9766.
GR1402.8   9774.  1406.7   9789.  1409.4   9801.  1408.5   9827.  1407.9   9851.
GR1408.8   9869.  1406.3   9887.   1407.   9902.   1404.   9915.  1404.1   9933.
GR1403.2   9948.  1401.8   9961.  1400.6   9977.  1400.1   9992.  1399.4   9999.
GR1399.8  10000.  1401.2  10011.   1404.  10021.  1406.9  10028.   1408.  10050.
GR1408.3  10080.  1408.7  10109.
ET                    4.1   9860.  10040.
X122.410     25.   9973.  10027.    750.    630.    723.
GR 1418.   8805.    1418   9817.   1418.   9825.    1418   9838.    1418   9850.
GR  1418   9860.  1413.9   9879.   1412.   9890.  1413.4   9903.  1414.5   9914.
GR1416.1   9922.   1414.   9931.  1412.4   9941.  1411.4   9954.  1411.2   9967.
GR1410.7   9973.  1405.7   9987.  1404.9   9997.   1404.  10000.  1404.7  10007.
GR1407.6  10017.  1411.3  10027.  1413.5  10042.  1413.8  10057.  1414.4  10071.
ET                    4.1   9890.  10050.
X122.483     19.   9941.  10105.    380.    390.    385.
GR 1421.   9823.  1420.2   9843.  1416.7   9873.  1414.4   9891.  1413.1   9915.
GR1411.1   9941.  1407.8   9961.  1406.2   9984.  1405.5  10000.  1405.5  10027.
GR1406.4  10056.  1408.3  10084.  1411.2  10105.  1412.3  10120.  1412.6  10138.
GR1412.6  10156.  1411.9  10175.  1412.7  10191.  1419.8  10208.
ET                    4.1   9968.  10064.
X122.578     13.   9968.  10072.    540.    490.    502.
GR  1420   9223.    1418   9358.   1418   9873.    1418   9968.  1406.7   9983.
GR1406.7   9993.  1407.5  10000.  1408.5  10024.  1408.5  10040.  1408.8  10050.
GR1415.6  10063.  1421.2  10072.  1421.4  10090.
ET                    4.1   9830.  10028.
X122.675     19.   9736.  10032.    570.    480.    512.
GR1419.9   9671.  1419.9   9710.  1419.8   9736.  1410.6   9759.  1411.1   9783.
GR1410.6   9809.  1409.7   9828.  1410.8   9850.  1411.5   9873.  1413.4   9892.
GR1412.2   9922.   1411.   9950.   1411.   9976.  1410.7  10000.  1410.6  10015.
GR 1420.  10032.  1428.3  10047.  1426.6  10055.   1426.  10060.
ET                    4.1   9977.  10160.
X122.794     20.   9983.  10169.    460.    500.    628.
GR1420.6   9968.  1417.8   9983.  1413.6   9998.  1412.4  10000.  1412.3  10013.
GR1410.7  10041.  1411.6  10065.  1413.7  10080.  1413.8  10103.  1414.2  10119.
GR1411.7  10136.  1413.8  10151.  1416.1  10169.  1417.2  10189.  1420.3  10202.
GR1423.1  10219.   1427.  10244.  1429.9  10261.  1429.8  10278.  1429.8  10282.
ET                    4.1   9951.  10120.
X122.880     34.   9927.  10167.    440.    480.    454.
GR1427.3   9791.   1427.   9807.  1426.5   9815.  1424.8   9827.  1424.6   9838.
GR1424.8   9863.  1424.8   9883.  1424.5   9903.  1424.7   9917.  1426.4   9927.
GR1423.9   9934.  1421.4   9947.  1418.5   9958.  1416.1   9968.   1415.   9984.
GR 1414.   9999.  1414.3  10000.  1414.5  10012.  1415.2  10024.  1416.1  10048.
GR1416.5  10067.  1416.4  10101.  1416.2  10125.  1415.5  10143.  1413.2  10152.
GR 1413.  10156.  1414.8  10160.  1424.2  10167.  1426.6  10188.  1428.4  10200.
GR1430.9  10214.  1433.5  10230.  1433.8  10241.  1433.5  10248.
ET                    4.1   9890.  10026.
X122.990     35.   9739.  10034.    480.    530.    581.
GR1427.7   9668.  1427.6   9697.  1425.6   9719.  1425.3   9730.  1425.4   9739.
GR1423.9   9751.  1422.5   9767.  1422.4   9785.  1421.5   9804.  1421.3   9817.
GR1421.3   9829.  1420.8   9843.  1419.5   9855.  1418.9   9864.  1417.9   9873.
GR1419.4   9886.   1420.   9903.  1420.6   9921.  1420.8   9935.  1420.3   9949.
GR 1420.   9963.  1419.1   9977.  1419.1   9995.  1419.1  10000.  1418.7  10014.
GR1420.3  10020.  1427.9  10034.  1427.3  10044.  1428.3  10060.  1430.5  10076.
GR1435.7  10094.  1437.4  10108.  1438.7  10119.  1436.3  10126.  1435.1  10133.
ET                    4.1   9958.  10090.
X123.097     48.   9951.  10121.    640.    490.    565.
GR1433.9   9713.  1433.9   9740.  1433.8   9758.  1432.3   9772.  1432.1   9778.
GR1433.5   9794.  1433.5   9811.  1433.5   9835.  1433.4   9849.  1431.1   9864.
GR 1430.   9878.  1430.1   9885.   1431.   9892.  1429.6   9901.  1429.1   9916.
GR1429.6   9925.  1431.3   9935.  1432.2   9945.  1432.3   9951.  1427.9   9964.
GR1426.4   9977.  1425.6   9988.  1425.1   9999.  1425.1  10000.   1426.  10012.
GR1426.1  10021.  1426.5  10044.  1426.5  10063.  1426.5  10073.  1426.5  10082.
GR1425.5  10093.  1426.4  10101.  1428.5  10112.  1430.8  10121.  1430.1  10135.
GR 1430.  10150.  1431.6  10163.  1432.8  10176.   1433.  10198.  1432.7  10221.
GR1431.6  10247.  1430.9  10267.  1430.6  10286.  1431.5  10296.  1433.4  10310.
GR1438.3  10337.  1439.7  10353.  1440.5  10363.
*
*       THE BEARDSLEY ROAD LOW CROSSING IS MODELLED WITH GR CARDS AS A NORMAL
*       CROSS SECTION.  THE BEARDSLEY ROAD CENTERLINE IS AT RM 23.168
*
ET                    4.1   9830.  10140.
```

```
X123.168     22.   9777.  10116.    330.    300.    375.
GR1435.4   9358.  1435.5   9412.  1435.6   9477.  1434.7   9533.  1433.2   9598.
GR1431.8   9657.  1430.8   9718.  1429.5   9777.  1428.9   9827.   1429.   9877.
GR1429.1   9942.   1429.   9999.  1429.1  10000.  1429.8  10053.  1430.3  10116.
GR1431.8  10176.  1433.6  10230.  1434.3  10274.  1434.9  10326.  1435.5  10363.
GR1435.6  10399.  1435.8  10409.
*
*       DUE TO BREAKOUTS (SPLIT FLOWS) BETWEEN RM 23.55 AND RM 23.8, THE
*       FUTURE CONDITION  Q  IS REDUCED PER THE FOLLOWING TABLE.
*
*       NO ENCROACHMENTS ARE COMPUTED FOR THE FOLLOWING REACH BETWEEN RM 23.253
*       AND 7TH STREET.  FOR PURPOSES OF A FLOODWAY, A 100 FT CORRIDOR IS MAIN-
*       TAINED OUTSIDE OF THE LEVEES (WHICH ARE LIKELY TO BE ERODABLE) TO PASS
*       THE SPLIT FLOWS WHICH HAVE BEEN REMOVED FROM THE MODEL, AS DISCUSSED
*       WITH CITY OF PHOENIX AND FLOOD CONTROL DISTRICT REPRESENTATIVES. IF THIS
*       CORRIDOR IS NOT MAINTAINED, THE REDUCTION IN Q FOR THIS MODEL IS NOT
*       VALID, RESULTING IN A FLOODWAY PROFILE ABOVE THE NATURAL PROFILE BY MORE
*       THAN THE STATUTORY 1.0 FT.
*
*
*                          FULL Q        REDUCED Q
*
*               100 YEAR   5600.            3400
*
*       THE 10 YEAR Q (3200 CFS) IS UNAFFECTED
*
QT    2.   3400.   3400.
NC 0.035    0.05    0.04
ET                   4.1  9978.5 10023.2
X123.253      8.   9973.  10038.    470.    450.    459.
GR1437.5   9973.  1425.5   9995.  1425.2  10000.  1427.4  10008.  1429.2  10015.
GR1444.2  10038.  1444.9  10052.   1445.  10060.
ET                   4.1   9969.  10036.
X123.334     10.   9962.  10055.    400.    420.    417.
GR1443.8   9962.  1435.6   9979.  1433.2   9990.  1432.6  10000.  1433.2  10012.
GR1435.4  10022.  1438.5  10032.  1444.2  10044.  1449.8  10055.  1449.6  10063.
ET                   4.1   9981.  10040.
X123.416     10.   9974.  10053.    400.    430.    433.
GR1447.7   9958.  1447.8   9974.  1439.2   9989.  1436.5   9999.  1436.6  10000.
GR1437.2  10017.  1437.6  10030.  1444.4  10041.  1450.2  10053.  1450.4  10066.
ET                   4.1   9977.  10035.
X123.514      8.   9973.  10039.    560.    470.    517.
GR1451.5   9965.  1451.4   9973.  1439.8   9989.  1439.6  10000.  1440.1  10012.
GR1441.5  10022.  1443.6  10029.  1451.1  10039.
*
*       SPECIAL BRIDGE IS USED TO MODEL EMBANKMENT PLACED IN THE CHANNEL TO
*       ALLOW VEHICULAR ACCESS BETWEEN THE LANDFILL ON THE LEFT AND THE GRAVEL
*       PIT ON THE RIGHT.  THE EMBANKMENT MAY WASH OUT, BUT FOR THIS STUDY, IT
*       IS ASSUMED TO REMAIN.  LOW FLOWS PASS THROUGH 2-36" CMP'S.
*
ET                   4.1  9978.9 10033.7
X123.544                          190.    150.    158.            1.8
X3   10.                                                 1445.   1445.
SB  1.25    2.48     3.2      0.     5.7      1.    14.1      0.   1442.  1441.4
ET                  4.11 9974.5910037.86
X123.555                           60.     60.     60.            0.6
*
*       ELTRD IS 1448.4+0.6HV = 1449
*
X2                     1.   1445.   1449.
X3   10.                                                 1480.   1480.
BT   10.   9930.   1452.      0.   9939.  1451.2      0.   9951.  1451.1      0.
BT 9967.  1449.8      0.   9987.  1448.4      0.  10000.  1448.4      0.  10019.
BT1448.6      0.  10041.  1449.5      0.  10055.   1450.      0.  10070.   1452.
BT    0.
ET                   4.1   9968.10043.49
X123.591     17.   9968.  10045.    100.    210.    190.
*
*       ARTIFICIAL LEVEES ARE SET VERY HIGH ON THE LEFT AND RIGHT OVERBANKS
*       USING THE X3 CARD TO CONSIDER ONLY THE CHANNEL AREA AS EFFECTIVE.  SPLIT
*       FLOW THAT BREAKS OUT UPSTREAM IS ACCOUNTED FOR BY THE REDUCED Q.  FLOWS
*       ARE RETURNED TO CAVE CREEK DOWNSTREAM AT BEARDSLEY ROAD.
*
X3   10.                                                 1480.   1480.
GR 1460.   9700.   1448.   9760.   1448.   9850.  1452.9   9959.  1452.9   9968.
GR1446.8   9982.  1444.6   9993.  1444.2  10000.  1444.2  10013.  1444.9  10023.
GR1449.9  10036.  1453.8  10045.  1451.9  10048.   1448.  10070.   1448.  10430.
GR 1450.  10770.   1452.  11200.
ET                   4.1 9970.3910035.72
```

```
X123.691     43.   9965.  10036.    510.    540.    528.
*
*       HIGH ARTIFICIAL LEVEE
*
X3   10.                                                        1480.   1480.
GR1461.1   9722.  1449.4   9747.  1449.4   9767.  1449.5   9784.  1449.1   9800.
GR1448.3   9819.  1448.6   9832.  1448.3   9866.   1449.   9894.  1449.3   9913.
GR1450.2   9925.  1453.5   9936.  1456.1   9944.  1455.4   9951.  1457.3   9955.
GR1457.6   9965.  1450.8   9980.  1448.5   9985.  1447.2   9991.  1446.6   9999.
GR1446.4  10000.   1447.  10011.  1449.6  10017.  1451.3  10028.  1455.3  10036.
GR1453.2  10045.  1452.4  10054.  1451.3  10057.  1452.2  10062.  1452.4  10077.
GR1452.2  10094.  1451.7  10108.  1452.6  10117.  1451.4  10123.  1452.7  10128.
GR 1451.  10138.  1452.3  10143.  1451.7  10147.  1453.4  10155.  1452.1  10160.
GR 1452.  10320.   1454.  10560.   1456.  10730.
*
*       Q IS NOW CHANGED TO BE THE AVERAGE OF THE FULL Q UPSTREAM OF THE
*       BREAKOUT AND OF THE REDUCED Q DOWNSTREAM OF THE BREAKOUT.
*
QT    2.   4450.   4450.
ET                   4.1   9951.  10037.
X123.815     31.   9951.  10037.    650.    680.    655.
*
*       HIGH ARTIFICIAL LEVEE
*
X3   10.                                                        1480.   1480.
GR 1470.   9650.  1459.3   9716.  1453.5   9738.  1453.1   9772.  1453.4   9812.
GR1454.5   9857.  1455.1   9890.   1455.   9914.  1455.4   9941.  1458.9   9951.
GR 1458.   9963.  1451.4   9979.  1449.7   9988.  1449.9   9996.  1449.7  10000.
GR1449.7  10017.  1454.6  10028.  1457.8  10037.  1456.8  10043.  1456.8  10060.
GR1456.9  10081.  1457.1  10110.  1458.2  10140.  1458.4  10157.  1459.5  10172.
GR1458.5  10182.   1456.  10195.  1457.2  10215.  1458.7  10226.  1457.1  10235.
GR1465.5  10249.
*
*       Q IS NOW CHANGED TO BE THE FULL Q UPSTREAM OF THE BREAKOUT
*
QT    2.   5500.   5500.
ET                   4.1 9967.41  10043.
X123.912     12.   9967.  10043.    480.    510.    512.
*
*       HIGH ARTIFICIAL LEVEE
*
X3   10.                                                        1480.   1480.
GR1463.9   9868.  1461.7   9878.  1460.6   9898.  1460.7   9925.  1461.4   9950.
GR1461.3   9967.  1451.3   9983.  1447.9   9994.   1448.  10000.  1447.9  10010.
GR1454.9  10026.  1460.9  10043.
ET                   4.1 9944.7710043.68
X123.989      9.   9937.  10049.    400.    410.    407.
GR1465.6   9937.  1457.9   9957.  1452.6   9977.  1450.8   9989.  1449.7  10000.
GR1450.5  10014.  1452.5  10024.   1458.  10036.  1465.8  10049.
*
*       7TH STREET  (SPECIAL BRIDGE).  THE GR CARDS FROM SECTION 24.106 TAKEN
*       UPSTREAM OF 7TH STREET ARE REPEATED AT THE DOWNSTREAM FACE OF THE BRIDGE
*       AS SECTION 24.086 WITH PSXECE = -1.3.
*
NC                            0.3     0.5
ET                   4.1   9972.  10044.
X124.086     12.   9972.  10044.    450.    560.    512.            -1.3
X3   10.                                                        1463.7  1463.7
GR1470.1   9942.  1464.1   9955.  1454.9   9972.  1454.9  10044.   1456.  10052.
GR1458.5  10064.  1461.9  10091.  1463.7  10108.  1465.7  10123.  1466.1  10136.
GR1466.4  10155.  1467.4  10310.
SB   0.9    1.56      3.    100.    71.6      3.    590.      0.  1453.6  1453.6
ET                   4.1   9972.  10044.
X124.096                              56.     56.     56.
*
*       ELTRD IS 1464.7+2HV = 1466.7
*
X2                    1.  1462.2  1466.7
X3   10.                                                        1466.   1466.
ET                   4.1   9955.  10055.
X124.106     13.   9955.  10064.     80.     20.     53.
GR1470.1   9942.  1464.1   9955.  1455.2   9972.  1454.7   9997.  1454.2  10000.
GR1454.9  10028.   1456.  10052.  1458.5  10064.  1461.9  10091.  1463.7  10108.
GR1465.7  10123.  1466.1  10136.  1466.4  10155.
NC                            0.1     0.3
ET                   4.1   9950.  10050.
X124.195     13.   9933.  10142.    470.    460.    470.
GR1498.7   9862.  1497.1   9889.  1470.4   9933.  1454.1   9961.  1453.6   9996.
GR1453.6  10000.  1453.9  10032.  1455.5  10052.  1456.3  10073.  1458.8  10093.
```

```
GR1462.3  10117.  1466.4  10142.  1468.9  10164.
ET                  4.1   9940.  10080.
X124.322     11.   9871.  10064.    640.    630.    671.
GR1473.7   9820.  1463.5   9871.  1453.2   9895.  1451.6   9972.  1452.1  10000.
GR1454.5  10042.  1456.8  10064.  1457.7  10134.  1459.6  10177.  1465.2  10220.
GR1470.9  10262.
NC 0.045   0.045   0.045
ET                  4.1   9927.  10080.
X124.444     16.   9928.  10122.    640.    600.    644.
GR1478.8   9885.  1478.7   9906.   1465.   9928.  1457.6   9939.   1458.   9972.
GR1457.3   9995.  1457.7  10000.  1459.1  10027.  1460.4  10064.  1459.3  10097.
GR1461.7  10122.  1458.9  10142.  1460.7  10166.  1460.3  10180.  1468.5  10215.
GR1474.2  10230.
ET                  4.1   9950.  10160.
X124.542     20.   9914.  10187.    470.    530.    517.
GR1488.2   9844.   1464.   9914.  1463.2   9948.  1460.4   9968.  1459.8   9996.
GR1459.8  10000.  1461.4  10017.  1462.3  10033.  1470.7  10056.  1470.3  10083.
GR1472.2  10112.  1470.9  10127.  1464.4  10141.  1462.5  10166.   1463.  10171.
GR1464.7  10175.  1467.8  10187.  1473.8  10237.  1475.2  10268.  1478.9  10283.
*
*       THE DEER VALLEY ROAD LOW CROSSING IS MODELLED WITH GR CARDS AS A NORMAL
*       CROSS SECTION.  THE DEER VALLEY ROAD CENTERLINE IS AT RM 24.635.
*
ET                  4.1   9940.  10060.
X124.635      8.   9876.  10111.    650.    220.    491.
GR1480.9   9752.  1474.5   9876.   1467.   9983.  1466.8  10000.  1467.9  10037.
GR1472.4  10111.  1478.6  10193.  1480.1  10247.
*
*       "FUTURE CONDITIONS" 100 YEAR DISCHARGES WERE NOT PUBLISHED BY THE
*       CORPS OF ENGINEERS FOR CAVE CREEK WASH ABOVE DEER VALLEY ROAD.
*       THIS MODEL THEREFORE TERMINATES AT DEER VALLEY ROAD, ALTHOUGH A SEPARATE
*       MODEL FOR CURRENT CONDITIONS (PER FEMA STANDARDS) CONTINUES ON TO CAVE
*       BUTTE DAM.
*
EJ
T1      MIDDLE CAVE CREEK FLOODPLAIN DELINEATION STUDY, ACDC TO DEER VALLEY RD.
T2      FLOOD CONTROL DISTRICT OF MARICOPA COUNTY 1989 BY BURGESS & NIPLE
T3      CAVE CREEK WASH         FLOODWAY FOR "FUTURE COND" COE Q'S
J1            3.                  0.0005
J2   15.            -1.
ER
```

```
1*****************************************
***************************************
 *  HEC-2 WATER SURFACE PROFILES            *                                          *  U.S.
ARMY CORPS OF ENGINEERS        *
 *                                          *                                          *
HYDROLOGIC ENGINEERING CENTER       *
 *  Version   4.6.2;  May 1991              *                                          *  609
SECOND STREET, SUITE D          *
 *                                          *                                          *  DAVIS,
CALIFORNIA 95616-4687        *
 *  RUN DATE    12AUG05    TIME   13:19:13  *                                          *
(916) 756-1104              *
 *****************************************
***************************************
```

```
X     X  XXXXXXX   XXXXX              XXXXX
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  XXXXXXX   XXXXX              XXXXXXX
```

```
1
    12AUG05      13:19:13
         PAGE    1
```

```
                                                                                THIS RUN EXECUTED
12AUG05    13:19:13
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************


 T1      MIDDLE CAVE CREEK FLOODPLAIN DELINEATION STUDY, ACDC TO DEER VALLEY RD.
 T2      FLOOD CONTROL DISTRICT OF MARICOPA CO. 1989 BY BURGESS & NIPLE
 T3      CAVE CREEK WASH         NATURAL 100 YR FOR "FUTURE COND" COE Q'S

         SUBCRITICAL RUN FROM ACDC TO DEER VALLEY RD.
         FLOODWAY RUN FROM SEDIMENT BASIN TO DEER VALLEY RD.

         FOR SECTIONS 15.310 TO 16.971, REFER TO A SEPARATE SUPERCRITICAL
         RUN FOR THE CORPS OF ENGINEERS' CONCRETE LINED CHANNEL. (NATURAL PROF)

         FLOW IS WITHIN THE CORPS OF ENGINEER'S CHANNEL, SEDIMENT BASIN, OR
         BROAD CRESTED WEIR INLET FROM RM15.015 TO 17.492, THEREFORE NO FLOODWAY
         IS RUN FOR THIS REACH.


         FILE LAST MODIFIED 1/28/90

       ************************************************
       *        NOTE:  THIS IS NOT THE CURRENT        *
       *        CONDITION 100 YEAR MODEL.  THIS       *
       *        RUN REPRESENTS PREVIOUSLY COMPU-      *
       *        TED 100 YEAR DISCHARGES FOR A         *
       *        "FUTURE CONDITION" FLOOD.  THESE      *
       *        FLOOD ELEVATIONS MAY BE HIGHER        *
       *        OR LOWER THAN 100 YEAR ELEVA-         *
       *        TIONS FOR CURRENT CONDITIONS.         *
       *        FLOODWAY LIMITS HAVE BEEN SET         *
       *        EQUAL TO THE LIMITS COMPUTED FOR      *
       *        THE CURRENT CONDITIONS MODEL          *
       *        WHICH WAS DEVELOPED USING FEMA        *
       *        STANDARDS.                            *
       ************************************************
```

```
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ
              2.                            0.0005

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE
     1.                 -1.                                                                     15.

1
    12AUG05       13:19:13
        PAGE      2


J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    38.       42.       1.        53.       54.       4.        8.        43.       10.
51.
    46.       40.       41.                 110.                200.

NC    0.015     0.015     0.015       0.1       0.3

QT      2.     16000.    16000.

        THE FOLLOWING 3 SECTIONS ARE IN THE ACDC SPACED AT 500 FEET TO
        ESTABLISH A STARTING ELEVATION AND DOWNSTREAM HYDRAULIC JUMP ELEVATION.
        THE ACDC HAS BEEN DESIGNED BY THE COE TO CONTAIN THE ENTIRE 100 YEAR
        FLOOD WITHIN THE CONCRETE LINED CHANNEL.  THE 100 YEAR FLOOD ELEVATION
        PROVIDED BY THE COE FOR THEIR ACDC CHANNEL WILL BE PLOTTED AS BACKWATER
        ON THE CAVE CREEK WASH PROFILE.  THE LOCATION OF THE HYDRAULIC JUMP WILL
        NOT BE SHOWN.

X1   15.015        5.      9945.     10055.

GR   1228.3      9945.    1206.79    9945.1    1205.69     10000.    1206.79     10055.    1226.29
   10055.1

X1   15.109                                      500.        500.       500.                  0.25

X1   15.204                                      500.        500.       500.                  0.25

        15.310 IS THE FIRST SECTION IN CAVE CREEK WASH.  THE CONFLUENCE OCCURS
        AT RM 15.263

X1   15.310        5.      9967.5   10032.6      560.        560.       560.

GR   1229.5     9967.5    1207.53    9967.6    1206.88     10000.    1207.53     10032.5     1230.
   10032.6

X1   15.454                                      760.        760.       760.                  0.38

X1   15.530        5.      9941.5   10060.5      400.        400.       400.

GR   1237.5     9941.5    1226.98    9962.5     1226.2     10000.    1226.95     10037.5    1238.45
   10060.5

X1   15.680                                      792.        792.       792.                  3.35

X1   15.878        5.      9938.     10062.      1045.       1045.      1045.

GR   1244.7      9938.    1234.71    9958.     1233.87     10000.    1234.71     10042.    1244.71
   10062.

        PEORIA AVENUE  (SPECIAL BRIDGE)

X1   15.920                                      225.        225.       225.                  0.97
```

```
1
   12AUG05       13:19:13
        PAGE     3

SB       0.9       1.56        3.       100.      82.32         6.      1447.       1.84    1235.45
   1235.07
X1    15.940                                     100.        100.       100.                  0.38

        ELTRD IS 1251.1+2.5HV = 1253.6

X2                              1.     1249.6    1253.6                            1.33

X1    16.023        7.      9946.     10053.      441.        441.       441.

GR    1252.5     9946.    1251.45     9946.8   1237.95       9975.   1237.45     10000.   1237.95
    10025.
GR    1250.9   10052.2    1251.95     10053.

X1    16.148                                     660.        660.       660.                  2.79

X1    16.264                                     612.        612.       612.                  2.59

X1    16.373                                     576.        576.       576.                  2.43

X1    16.481        6.      9945.     10052.      570.        570.       570.

GR    1261.2     9945.    1260.17     9945.8   1248.17       9971.   1247.59     10000.   1248.17
    10029.
GR    1259.7    10052.

X1    16.601        7.      9945.     10052.      634.        634.       634.                  2.67

GR    1261.2     9945.    1260.17     9945.8   1248.17       9971.   1247.59     10000.   1248.17
    10029.
GR    1259.7    10052.     1261.3     10087.

X1    16.694        7.      9945.     10056.      491.        491.       491.

GR    1263.9     9945.    1262.92     9945.8   1252.92       9967.   1252.26     10000.   1252.92
    10033.
GR    1263.4   10055.2    1264.42     10056.

X1    16.823                                     681.        681.       681.                  2.88

X1    16.902        9.      9940.     10063.      417.        417.       417.

GR    1268.8     9940.    1257.58     9962.5   1256.93     9994.5   1256.19      9996.   1256.19
    10004.
GR    1256.9   10005.5    1257.58    10037.5   1269.33    10062.2   1270.33     10063.

        CACTUS ROAD  (SPECIAL BRIDGE)

X1    16.970        8.      9938.3    10064.7      359.        359.       359.

GR    1269.3    9938.3    1259.09     9958.7   1258.43     9991.2   1256.36      9996.   1256.36
    10004.
GR    1258.4   10007.9    1259.09    10041.3   1270.78    10064.7

SB       0.9       1.56        3.       100.      82.57         6.      1513.       1.61    1258.71
   1258.33
X1    16.988        8.      9938.3    10063.9       90.         90.        90.

        ELTRD IS 1275.25+2.6HV = 1277.8
```

```
X2                                  1.    1273.75      1277.8

GR   1269.7      9938.3    1259.48      9958.7     1258.83      9991.1     1256.41       9996.     1256.41
    10004.
GR   1258.8     10008.9    1259.48     10041.3     1270.17     10063.9

1
    12AUG05      13:19:13
         PAGE    4


X1   17.061          8.     9938.3     10064.7         380.         380.         380.

GR   1271.3      9938.3     1261.1      9958.7     1260.51      9988.2     1256.61       9996.     1256.61
    10004.
GR   1260.5     10011.8     1261.1     10041.3     1271.79     10064.7

         UPSTREAM EDGE OF SEDIMENT BASIN OUTFLOW SPILLWAY.

X1   17.206          4.      9875.     10125.         769.         769.         769.

GR    1279.      9875.      1267.      9900.       1267.     10100.        1279.      10125.

         SECTION IN SEDIMENTATION BASIN. X5 CARD BASED ON ELEVATION OUTFLOW
         TABLE PROVIDED BY THE CORPS OF ENGINEERS.

NC     0.03       0.03       0.03

X1   17.360         12.      9480.     10427.         820.         830.         813.

X5       2.     1275.4     1275.4

GR   1282.2       9480.     1280.6      9497.     1257.8       9610.     1257.2       9632.     1257.4
     9877.
GR   1256.7       9974.     1256.9     10000.     1257.7      10092.     1257.7      10263.     1258.2
    10281.
GR   1281.9     10406.      1281.8     10427.

QT       2.     14000.     14000.

X1   17.494         14.      9904.     10062.         750.         670.         707.

GR   1284.9       9809.     1279.1      9904.     1273.4       9967.     1270.3      10000.     1272.1
    10008.
GR   1278.5      10062.     1278.8     10087.     1276.1      10109.     1278.7      10161.     1279.5
    10167.
GR   1281.5      10304.     1281.6     10392.     1282.5      10461.     1283.1      10472.

NC     0.04       0.04       0.04

         BEGIN ENCROACHMENTS UPSTREAM OF THE SEDIMENT BASIN

ET                                  4.1     9955.2     10193.

X1   17.588         25.      9982.     10193.         440.         560.         496.

GR   1291.4       9666.     1290.3      9746.     1275.6       9817.     1275.2       9835.     1273.5
     9854.
GR   1277.8       9873.     1279.7      9889.     1277.3       9896.     1278.2       9909.     1281.6
     9922.
GR   1281.9       9939.     1282.2      9964.     1278.1       9982.     1269.6       9992.     1270.6
    10000.
GR   1270.9      10009.     1272.6     10014.     1273.6      10039.     1273.6      10079.     1271.2
    10144.
GR   1271.2      10170.     1276.4     10193.     1290.5      10264.     1291.3      10328.      1291.
    10495.

ET                                  4.1      9900.     10150.

X1   17.662         23.      9941.     10130.         380.         400.         391.
```

```
GR   1293.1      9731.     1293.1      9781.     1291.6      9791.     1282.7      9835.     1278.1
     9844.
GR   1279.2      9871.     1277.3      9911.     1276.4      9941.     1272.5      9986.     1271.6
    10000.
GR   1274.6     10016.     1277.5     10033.     1278.8     10063.     1278.9     10086.     1276.8
    10099.
GR   1275.7     10111.     1281.6     10130.     1285.2     10161.     1293.1     10208.      1294.
    10221.
GR   1293.7     10281.      1294.     10400.     1294.5     10432.

ET                           4.1      9921.     10064.

X1   17.783        18.     9921.     10064.       540.       500.       639.

GR   1295.2      9812.      1294.      9837.     1291.3      9861.     1286.9      9895.     1280.5
     9921.
GR   1276.8      9938.     1278.3      9954.     1277.6      9973.     1275.4     10000.     1276.3
    10019.
GR   1277.4     10033.     1277.7     10045.     1281.1     10064.     1281.3     10074.     1284.6
    10097.
GR   1289.8     10122.     1291.5     10143.     1291.9     10153.

1
    12AUG05      13:19:13
        PAGE     5


ET                           4.1      9956.     10066.

X1   17.932        23.     9956.     10066.       790.       780.       787.

GR   1294.8      9675.     1294.7      9732.     1295.5      9750.     1293.6      9766.     1297.5
     9792.
GR   1297.5      9837.     1298.3      9869.     1291.9      9896.     1289.7      9956.     1283.6
     9966.
GR   1283.5      9971.     1277.9      9986.     1278.2     10000.     1278.2     10006.     1279.5
    10008.
GR   1279.9     10022.     1280.2     10032.     1285.5     10054.     1290.2     10066.     1290.6
    10083.
GR   1298.5     10131.     1299.7     10159.     1299.7     10193.

        THUNDERBIRD ROAD BRIDGE - ALTHOUGH THE ROAD IS LOWEST IN THE RIGHT
        OVERBANK, HIGH BANKS UPSTREAM PREVENT THIS AREA FROM BECOMING EFFECTIVE,
        THEREFORE, ONLY THE BRIDGE OPENING IS CONSIDERED ON THE GR CARDS AND
        ONLY THE BRIDGE LENGTH IS CONSIDERED FOR THE BT CARDS.  ENDS OF THE
        SECTIONS ARE ARTIFICIALLY EXTENDED.  BT'S ARE RAISED 0.5' FROM CENTER-
        LINE OF ROAD ELEVATIONS AT THE BRIDGE. TO ACCOUNT FOR THE RAILING.

NC    0.035      0.035      0.025        0.3        0.5

ET                           4.1     9951.6    10048.38

X1   18.042         8.     9951.     10049.       620.       550.       581.                   2.4

GR    1305.      9951.     1283.4      9952.     1282.9      9979.     1279.9      9980.     1279.9
    10020.
GR   1281.9     10021.     1284.2     10048.      1305.     10049.

SB     1.05      1.56         3.                    75.        4.      1059.       0.81     1280.2
    1279.9
NC     0.03      0.03      0.025

ET                          4.11     9951.5    10048.5

X1   18.061                                       101.       101.       101.                   0.8

        ELTRD IS 1298.4+3.2HV =  1301.6

X2                           1.     1293.2     1301.6

BT      4.      9951.      1305.        0.      9952.     1298.4         0.     10048.     1298.4
        0.
```

```
BT   10049.      1305.        0.

NC    0.035      0.035      0.035

ET                           4.1      9900.      10085.

X1   18.081        11.      9942.     10045.         80.        130.        106.

GR   1300.5      9819.     1300.2      9866.      1298.2       9899.      1286.6       9942.      1282.7
     9960.
GR   1281.4     10000.     1281.1     10008.      1282.7      10030.      1284.9      10045.      1297.3
    10088.
GR   1300.2     10112.

NC                                   0.1        0.3

ET                           4.1      9857.      10125.

X1   18.174        29.      9919.     10073.        500.        490.        491.

GR   1303.6      9673.     1304.6      9713.      1307.3       9757.      1302.5       9801.       1302.
     9850.
GR    1288.      9904.     1287.3      9915.      1288.7       9919.       1284.       9927.      1283.5
     9956.
GR   1282.6      9975.     1283.5      9985.      1281.8       9992.      1281.7      10000.       1282.
    10006.
GR   1282.3     10011.     1282.7     10020.      1294.6      10073.       1297.      10093.      1296.2
    10113.
GR   1293.7     10142.     1293.7     10182.      1296.8      10236.      1299.3      10270.      1298.9
    10295.
GR    1298.     10340.     1299.8     10364.       1298.      10396.      1301.1      10478.
```

1
12AUG05 13:19:13
PAGE 6

```
ET                           4.1      9882.2     10110.

X1   18.269        12.      9942.     10060.        500.        500.        502.

GR   1303.8      9868.     1288.1      9928.      1288.4       9942.      1285.3       9952.      1283.8
     9979.
GR   1283.8     10000.     1283.8     10010.      1285.6      10023.      1292.4      10060.       1294.
    10071.
GR   1303.2     10130.     1303.7     10144.

ET                           4.1      9895.6     10107.8

X1   18.362        20.      9942.     10060.        490.        510.        491.

GR   1315.5      9728.     1315.4      9758.      1315.8       9780.      1310.6       9807.      1307.1
     9862.
GR   1298.6      9905.      1290.      9942.      1287.8       9952.       1288.       9967.      1286.1
     9971.
GR   1285.3     10000.     1286.8     10022.      1286.8      10036.      1290.6      10060.      1303.8
    10124.
GR   1307.7     10151.     1307.5     10169.      1306.8      10183.      1308.1      10240.      1308.8
    10283.
```

DOWNSTREAM GOLF CART CROSSING ON A SINGLE 78" CMP WITH PROTRUDING
ENDS AND EMBANKMENT SLOPES (NO WINGWALLS).

```
ET                           4.1      9885.      10110.

X1   18.445        13.      9992.     10005.        470.        460.        440.

X3      10.                                                                          1297.       1297.

GR   1315.1      9796.     1306.2      9880.       1300.       9920.      1299.5       9978.       1290.
     9992.
GR   1287.3     10000.      1290.     10005.       1300.      10040.       1302.      10060.       1303.
    10097.
GR    1305.     10200.     1305.6     10310.      1309.4      10330.
```

```
SB      0.9       2.34        3.0        0.       6.11        1.0       33.2        0.     1287.7
   1287.4
ET                            4.11     9885.     10110.

X1   18.456                                        60.        60.        60.                   0.4

        ELTRD IS 1198.8+0.7HV = 1199.5

X2                              1.     1294.2     1299.5

X3      10.                                                                          1298.8     1298.8

BT      10.      9796.     1315.5        0.       9880.     1306.6        0.       9928.     1301.9
        0.
BT    9991.     1299.1        0.    10000.     1298.8        0.     10046.     1301.9        0.
   10097.
BT   1303.4        0.    10200.     1305.4        0.     10310.      1306.        0.     10330.
   1309.8
BT       0.

ET                              4.1     9881.4    10169.8

X1   18.545        21.      9951.    10058.       440.       480.       466.

GR   1324.2      9716.     1323.1     9748.     1324.4      9765.     1321.9      9790.     1318.3
     9810.
GR    1317.      9839.     1306.7     9889.     1294.1      9951.     1291.5      9972.     1289.3
     9993.
GR   1289.7     10000.     1289.7    10018.     1290.5     10040.     1293.8     10058.     1298.8
   10073.
GR   1299.8     10094.     1303.4    10108.     1303.9     10121.      1303.     10135.     1310.1
   10182.
GR   1310.2     10194.

        UPSTREAM GOLF CART CROSSING ON 2 - 72" RCP WITH FLUSH INLETS AND
        45 DEGREE WINGWALLS.

1
   12AUG05       13:19:13
        PAGE     7


ET                              4.1     9880.7    10170.8

X1   18.575        21.      9972.    10000.       160.       160.       160.

X3      10.                                                                          1297.      1297.

GR   1324.2      9716.     1323.1     9748.     1324.4      9765.     1321.9      9790.     1318.3
     9810.
GR    1317.      9839.     1306.7     9889.     1294.1      9951.     1291.5      9972.     1289.3
     9993.
GR   1289.7     10000.     1289.7    10018.     1290.5     10040.     1293.8     10058.     1298.8
   10073.
GR   1299.8     10094.     1303.4    10108.     1303.9     10121.      1303.     10135.     1310.1
   10182.
GR   1310.2     10194.

SB     1.25       1.56        3.0        0.       10.4        1.0       56.5        0.     1289.4
   1289.3
ET                            4.11     9876.1    10177.2

X1   18.583                                        40.        40.        40.                   0.1

        ELTRD IS 1298.4+0.6HV = 1299.0

X2                              1.     1295.4      1299.

X3      10.                                                                          1298.4     1298.4

BT       9.      9880.      1310.        0.       9965.      1300.        0.      10000.     1298.4
```

```
          0.
BT   10037.      1300.        0.     10065.      1302.        0.     10085.      1304.        0.
    10122.
BT    1306.         0.    10160.      1308.         0.    10170.      1310.         0.

ET                            4.1     9879.6     10134.7

X1   18.640        17.     9955.     10033.       300.      310.       301.

GR   1322.5      9707.    1323.7      9729.     1320.1      9768.    1313.8      9827.     1312.3
     9858.
GR   1308.4      9887.    1302.6      9920.     1294.6      9955.    1292.8      9966.     1290.2
     9993.
GR   1291.5     10000.    1291.8     10009.     1293.4     10033.    1307.8     10111.      1309.
    10132.
GR   1312.1     10153.    1313.2     10167.

ET                            4.1     9883.2     10111.7

X1   18.734        19.     9938.     10062.       490.      500.       496.

GR   1320.7      9713.    1316.3      9762.     1316.6      9809.    1319.2      9819.     1317.9
     9841.
GR   1308.7      9888.    1298.6      9938.     1293.4      9971.    1294.2      9981.     1292.4
     9992.
GR   1294.5     10000.    1294.4     10025.     1300.8     10062.     1309.     10094.     1307.6
    10104.
GR   1312.9     10124.     1314.     10143.     1317.1     10178.    1319.9     10201.

ET                            4.1     9891.8     10107.

X1   18.832        21.     9929.     10046.       480.      540.       517.

GR   1326.2      9779.     1328.      9788.     1320.6      9826.     1316.      9853.     1312.5
     9880.
GR   1302.8      9929.    1296.1      9960.     1293.5      9982.    1293.2     10000.     1293.2
    10005.
GR   1294.8     10008.    1295.5     10027.     1297.1     10046.    1307.7     10095.     1314.1
    10128.
GR   1314.1     10141.    1317.1     10187.     1320.3     10221.    1319.9     10247.     1318.6
    10271.
GR   1319.2     10278.

ET                            4.1     9887.7     10087.5

X1   18.925        14.     9941.     10048.       480.      500.       491.

GR   1329.1      9741.    1315.9      9866.     1297.6      9941.    1297.3      9960.     1295.3
     9989.
GR    1295.     10000.    1296.1     10006.     1295.4     10022.    1294.6     10025.     1296.3
    10034.
GR    1300.     10048.    1310.5     10087.     1320.1     10132.    1321.3     10161.
```



```
ET                            4.1     9866.3     10038.5

X1   19.018        20.     9903.     10030.       460.      520.       491.

GR    1331.      9681.    1321.2      9775.     1313.9      9847.    1305.1      9903.     1298.1
     9930.
GR    1298.      9948.    1298.1      9957.     1297.6      9974.     1299.     10000.     1308.4
    10030.
GR   1325.3     10088.     1327.     10101.     1325.5     10109.    1330.2     10118.     1330.9
    10124.
GR    1327.     10145.    1326.8     10211.     1328.8     10218.    1332.6     10260.     1331.8
    10268.

ET                            4.1     9942.1     10061.9

X1   19.117        10.     9973.     10026.       490.      560.       523.
```

```
GR   1333.9      9803.     1331.8      9872.       1323.       9908.      1302.9      9973.      1299.2
     9997.
GR   1298.7     10000.     1298.6     10010.      1301.5      10026.      1328.9     10116.       1333.
    10144.

ET                           4.1      9923.1      10081.

X1   19.210        16.      9945.     10060.        500.        490.        491.

GR   1333.2      9669.     1330.6      9853.      1328.7       9874.       1312.      9945.      1310.
     9954.
GR   1303.8      9978.     1301.4      9991.      1300.2      10000.      1301.3     10010.      1303.4
    10026.
GR    1312.     10060.     1321.3     10098.       1327.      10127.      1332.5     10166.      1335.3
    10191.
GR   1335.6     10192.

        19TH AVENUE  (SPECIAL BRIDGE)

NC                                       0.3         0.5

ET                           4.1      9948.      10057.

X1   19.283        12.      9948.     10057.        390.        390.        386.                   11.2

X3      10.                                                                                 1324.      1324.

GR   1333.2      9669.     1330.6      9853.      1328.7       9874.       1312.      9945.      1300.5
     9948.
GR   1300.5     10057.      1312.     10060.      1321.3      10098.       1327.     10127.      1332.5
    10166.
GR   1335.3     10191.     1335.6     10192.

SB      0.9      1.56         3.                    109.        4.5       1304.         0.      1311.7
    1311.7
ET                          4.11      9948.      10057.

X1   19.299                                         86.         86.         86.

        ELTRD IS 1324.5+2HV = 1326.5

X2                           1.      1324.2      1326.5

X3      10.                                                                                 1325.      1325.

BT       6.      9500.      1326.        0.       9650.      1324.5         0.      9855.      1325.3
         0.
BT   10000.      1325.7        0.     10275.      1324.9         0.     10460.      1326.         0.

ET                           4.1      9944.4      10104.

X1   19.313        20.      9932.     10112.         75.         75.         74.

GR    1329.      9853.     1326.7      9859.      1327.6       9866.      1327.9      9932.      1314.5
     9968.
GR   1312.2      9980.     1311.7      9988.      1313.1       9996.      1313.1     10000.      1313.4
    10017.
GR    1312.     10029.     1313.7     10044.      1311.7      10054.      1313.7     10069.      1325.5
    10112.
GR   1325.4     10137.     1324.3     10180.      1324.9      10219.      1325.2     10325.      1326.6
    10464.
1
   12AUG05      13:19:13
       PAGE     9

NC                                       0.1         0.3

ET                           4.1      9955.1      10117.8

X1   19.418        19.      9948.     10120.        570.        530.        554.
```

```
GR   1330.8      9898.     1328.8      9902.      1330.6      9910.      1330.2      9938.      1328.
     9948.
GR   1313.1      9992.     1313.1     10000.       1313.     10004.      1316.1     10022.      1314.6
    10058.
GR   1315.5     10076.     1320.1     10094.      1326.1     10120.      1327.6     10138.      1327.5
    10186.
GR   1326.2     10276.      1327.     10322.      1328.3     10376.      1328.6     10401.

        SECTION 19.56  IS JUST DOWNSTREAM OF THE CONFLUENCE WITH THE EAST
        FORK.  THIS SECTION IS USED TO BEGIN THE TRIBUTARY RUN FOR THE
        EAST FORK OF CAVE CREEK.  THE CONFLUENCE OCCURS AT RM 19.608

ET                              4.1     9931.4      10061.

X1    19.56        17.      9929.     10065.        730.        720.        729.

GR   1346.1      9801.     1329.7      9902.      1329.7      9929.      1316.5      9950.      1316.8
     9978.
GR   1315.6     10000.     1315.6     10008.      1316.6     10026.      1316.4     10035.      1317.5
    10043.
GR   1330.6     10065.     1330.8     10099.      1330.5     10146.      1330.2     10195.      1330.9
    10208.
GR   1331.2     10223.     1332.1     10301.

        GREENWAY BRIDGE  (SPECIAL BRIDGE).  LARGE SKEW ACCOUNTED FOR PRIOR
        TO DATA INPUT BY ADJUSTING BWC ETC.  DUE TO COMPLEX CHANNEL GEOMETRY
        DOWNSTREAM AT THE CONFLUENCE WITH THE EAST FORK, IT WAS MOST APPROPRIATE
        TO USE THE UPSTREAM SECTION, REPEATED AT THE DOWNSTREAM FACE.  GR CARDS
        FROM SECTION 19.742 ARE REPEATED FOR 19.625 WITH PSXECE = -1.7

QT       2.      5800.      5800.

NC    0.035      0.035      0.015        0.3        0.5

ET                              4.1      9965.      10025.

X1   19.625        11.      9965.     10025.        580.         70.        364.                  -1.7

X3      10.                                                                                 1332.      1332.

GR   1335.7      9834.     1335.1      9893.      1333.4      9922.      1331.8      9937.      1331.6
     9948.
GR   1319.3      9965.     1319.3     10025.       1331.     10042.      1339.2     10055.      1337.7
    10060.
GR   1338.8     10100.

SB     1.05      1.56         3.       100.         60.          2.        564.         0.      1318.6
    1317.6
ET                             4.11      9965.      10025.

X1   19.691                                          330.        430.        350.                   1.0

        ELTRD IS 1332.8+2HV = 1334.8

X2                              1.     1328.3      1334.8

X3      10.                                                                                 1333.      1333.

ET                              4.1      9953.      10038.

X1   19.742        13.      9948.     10042.         80.        470.        269.

GR   1335.7      9834.     1335.1      9893.      1333.4      9922.      1331.8      9937.      1331.6
     9948.
GR   1319.1      9967.     1319.2     10000.      1319.7     10017.      1319.7     10027.       1331.
    10042.
GR   1339.2     10055.     1337.7     10060.      1338.8     10100.
```

1
12AUG05 13:19:13
PAGE 10

```
NC    0.035     0.035     0.035       0.1       0.3

ET                          4.1      9957.     10043.

X1   19.847       22.      9929.    10062.       570.       520.       554.

GR   1339.8     9621.    1338.7     9726.    1341.6      9738.    1338.8     9759.      1339.
     9806.
GR   1337.7     9915.    1336.1     9921.    1336.3      9929.    1320.2     9974.    1318.8
     9989.
GR   1320.8    10000.    1320.5    10017.    1321.3     10023.    1328.8    10040.    1335.8
    10062.
GR   1336.1    10070.    1336.6    10084.    1335.8     10150.     1336.    10160.    1338.3
    10175.
GR   1339.2    10195.    1339.2    10198.

ET                          4.1      9958.     10031.

X1   19.960       24.      9958.    10031.       640.       560.       597.

GR   1340.4     9544.    1339.1     9638.    1336.7      9736.    1337.2     9768.    1338.2
     9807.
GR   1338.9     9836.    1338.4     9908.    1340.1      9911.    1337.7     9917.    1339.1
     9924.
GR   1337.2     9935.     1330.     9958.    1327.8      9964.    1326.1     9977.    1324.6
     9990.
GR   1324.7    10000.    1326.1    10008.    1326.8     10023.     1330.    10031.    1340.6
    10059.
GR   1340.8    10072.    1340.7    10099.    1340.1     10194.    1339.9    10251.

        TIERRA BUENA  (SPECIAL BRIDGE)

        DUE TO HIGHER DEPTHS THAN ANTICIPATED, XNCH HAS BEEN REDUCED
        FROM 0.04 (PER MANNINGS n VALUE REPORT) TO 0.035 BETWEEN GREENWAY ROAD
        AND UNION HILLS DRIVE

NC     0.04      0.04     0.035       0.3       0.5

ET                          4.1      9969.     10020.

X1   19.974       10.      9969.    10020.       105.        65.        74.

X3      10.                                                                  1336.      1336.

GR   1340.1     9911.    1337.7     9917.    1339.1      9924.    1337.2     9935.      1330.
     9958.
GR   1323.8     9969.    1323.8    10020.     1330.     10031.    1340.6    10059.    1340.8
    10072.

SB    1.25      1.56        3.                 51.         3.       480.        0.    1324.1
    1323.8
ET                         4.11      9969.     10020.

X1   19.986                                     61.        61.        61.

        ELTRD IS 1336.9+1HV = 1337.9

X2                          1.     1334.1     1337.9

X3      10.                                                                  1337.      1337.

BT       3.     9560.     1340.        0.     10000.    1336.9         0.    10230.    1340.
         0.

ET                          4.1      9975.     10025.

X1   20.049       37.      9954.    10027.       305.       345.       333.

X3      10.                                                                  1340.

GR   1344.7     9266.    1345.2     9300.    1342.4      9304.    1340.8     9328.    1332.6
     9344.
```

```
GR   1333.1      9400.     1333.3      9490.      1334.      9563.     1334.8      9606.     1333.2
     9728.
GR    1335.      9767.     1331.4      9805.      1331.      9820.     1331.5      9854.     1331.5
     9901.
GR   1332.1      9920.     1341.1      9938.     1340.5      9950.     1343.4      9954.     1339.8
     9969.
GR   1327.4      9991.     1327.1      9997.     1327.1     10000.     1328.4     10008.     1339.4
    10027.
GR    1340.     10047.     1342.3     10075.     1342.4     10097.     1340.2     10114.     1342.3
    10131.
GR    1343.     10142.     1341.5     10162.     1342.7     10175.     1342.9     10210.     1343.3
    10307.
GR   1342.5     10378.      1343.     10477.

1
    12AUG05      13:19:13
        PAGE    11


NC                                       0.1        0.3

ET                            4.1      9972.     10029.

X1   20.144        38.      9955.     10025.       490.       500.       502.

X3      10.                                                                          1344.

GR   1346.6      9136.     1347.4      9206.     1348.2      9208.     1348.4      9215.     1347.1
     9235.
GR   1342.5      9239.     1341.7      9258.     1334.6      9278.      1332.      9297.     1332.6
     9357.
GR   1333.7      9417.     1333.1      9457.     1334.1      9479.     1334.9      9499.     1335.3
     9554.
GR   1334.4      9582.     1335.7      9631.     1335.6      9698.     1336.1      9745.     1334.6
     9779.
GR   1329.6      9788.     1330.5      9820.     1329.4      9847.     1328.5      9881.     1328.5
     9912.
GR   1341.6      9931.     1343.1      9951.     1344.6      9955.      1342.      9968.     1330.9
     9986.
GR   1330.9     10000.     1330.9     10010.     1340.8     10025.     1342.2     10040.     1345.9
    10053.
GR   1346.5     10073.      1347.     10128.      1347.     10198.

ET                            4.1      9964.     10035.

X1   20.242        32.      9953.     10029.       470.       560.       517.

X3      10.                                                                          1348.

GR   1346.6      9200.     1347.9      9269.     1348.7      9271.     1348.7      9277.     1346.6
     9330.
GR   1347.7      9377.     1342.3      9383.     1342.7      9400.     1332.4      9422.     1333.6
     9470.
GR   1333.7      9529.     1334.9      9573.     1334.2      9626.     1334.9      9648.     1335.1
     9651.
GR    1336.      9785.      1336.      9842.     1338.6      9846.     1339.3      9895.     1339.2
     9935.
GR   1347.2      9953.     1343.7      9970.     1333.3      9988.     1333.7     10000.     1333.5
    10012.
GR   1342.8     10029.     1343.2     10041.     1348.3     10061.     1349.2     10076.     1349.9
    10107.
GR   1350.1     10201.     1350.3     10202.

ET                            4.1      9963.     10036.

X1   20.335        27.      9958.     10032.       510.       470.       491.

GR   1349.5      9230.     1351.4      9312.     1349.1      9322.     1350.7      9340.      1351.
     9476.
GR   1351.2      9592.     1350.4      9726.     1350.1      9808.     1351.1      9820.     1351.4
     9850.
GR   1351.8      9928.     1347.7      9950.      1344.      9958.     1337.7      9971.     1337.3
     9987.
GR   1337.4     10000.     1338.3     10021.      1344.     10032.      1349.     10042.     1351.8
    10056.
GR   1351.1     10100.     1351.6     10141.      1350.     10144.      1350.     10166.      1350.
```

```
     10240.
GR    1350.8     10328.     1351.4     10406.

        11TH AVENUE  (SPECIAL BRIDGE)

NC                                       0.3        0.5

ET                            4.1      9970.      10021.

X1   20.347        25.      9970.     10021.         1.        150.        63.

X3      10.                                                                          1351.5      1351.5

GR   1349.5      9230.     1351.4      9312.     1349.1      9322.     1350.7      9340.       1351.
     9476.
GR   1351.2      9592.     1350.4      9726.     1350.1      9808.     1351.1      9820.      1351.4
     9850.
GR   1351.8      9928.     1347.7      9950.      1344.      9958.     1337.2      9970.      1337.2
     10021.
GR    1344.     10032.      1349.     10042.     1351.8     10056.     1351.1     10100.      1351.6
     10141.
GR    1350.     10144.      1350.     10166.      1350.     10240.     1350.8     10328.      1351.4
     10406.

SB     1.25       1.56        3.0       100.        51.         3.       576.         0.      1337.7
     1337.2
ET                            4.11      9970.      10021.

X1   20.366                                        100.       100.       100.

        ELTRD IS 1352.5+2HV = 1354.5

X2                             1.      1349.7      1354.5

1
   12AUG05      13:19:13
        PAGE   12

X3      10.                                                                          1352.5      1352.5

ET                            4.1      9958.      10072.

X1   20.423        21.      9975.     10045.        415.        205.        301.

GR   1354.3      9418.     1353.8      9613.     1355.3      9653.     1354.6      9696.      1353.3
     9711.
GR   1353.6      9724.     1353.5      9931.      1352.      9950.      1345.      9975.       1338.
     10000.
GR   1339.4     10027.     1339.7     10037.     1344.3     10045.      1345.     10055.      1353.3
     10085.
GR   1353.5     10100.     1354.7     10127.     1354.4     10214.     1354.3     10273.      1353.3
     10300.
GR   1353.5     10333.

        10TH AVENUE  (SPECIAL BRIDGE)

ET                            4.1      9985.      10036.

X1   20.430        20.      9985.     10036.         1.         65.         37.

X3      10.                                                                          1352.5      1352.5

GR   1354.3      9418.     1353.8      9613.     1355.3      9653.     1354.6      9696.      1353.3
     9711.
GR   1353.6      9724.     1353.5      9931.      1352.      9950.      1345.      9975.      1339.3
     9985.
GR   1339.3     10036.     1344.3     10045.      1345.     10055.     1353.3     10085.      1353.5
     10100.
GR   1354.7     10127.     1354.4     10214.     1354.3     10273.     1353.3     10300.      1353.5
     10333.

SB     1.25       1.56        3.0       100.        51.         3.       576.         0.      1339.3
```

```
    1339.3
ET                          4.11      9985.      10036.

X1   20.444                                        70.        70.        70.

        ELTRD IS 1353.5+2HV = 1355.5

X2                           1.      1351.3      1355.5

X3      10.                                                                          1353.5      1353.5

ET                          4.1       9930.      10069.

X1   20.529        19.      9947.     10055.        545.       375.       449.

GR    1354.      9570.     1353.7     9764.      1354.8      9836.      1355.      9885.      1354.7
     9898.
GR   1350.7      9910.     1350.2     9947.      1343.4      9963.     1343.4      9990.      1343.3
    10000.
GR    1343.     10025.     1348.6    10041.      1350.4     10055.     1350.8     10090.       1355.
    10105.
GR   1354.4     10159.      1355.    10192.       1355.     10302.     1355.2     10313.

NC                                      0.1         0.3

ET                          4.1       9935.      10065.

X1   20.628        16.      9909.     10076.        530.       520.       523.

GR   1357.3      9532.     1357.3     9624.      1356.8      9754.     1357.2      9808.      1357.1
     9909.
GR   1351.5      9922.     1350.2     9947.      1343.3      9959.     1343.6      9991.      1343.6
    10000.
GR   1343.7     10044.     1356.3    10076.       1357.     10082.     1357.1     10137.      1357.2
    10282.
GR    1358.     10337.

ET                          4.1       9962.      10026.

X1   20.725        20.      9951.     10036.        510.       520.       512.

GR   1360.3      9544.     1361.1     9631.      1361.3      9734.      1361.      9783.       1362.
     9858.
GR   1360.8      9940.     1360.4     9951.      1350.4      9970.     1350.4      9981.      1348.3
     9984.
GR   1347.4      9992.     1347.2    10000.      1347.4     10010.      1361.     10036.      1363.4
    10046.
GR   1363.8     10101.     1364.1    10156.      1364.7     10184.     1365.1     10212.      1364.7
    10291.

        PHELPS ROAD  (SPECIAL BRIDGE)

1
   12AUG05      13:19:13
        PAGE   13


NC                                      0.3         0.5

ET                          4.1       9968.      10019.

X1   20.737        16.      9968.     10019.         80.        80.        80.                    3.4

X3      10.                                                                          1363.       1363.

GR   1360.3      9544.     1361.1     9631.      1361.3      9734.      1361.      9783.       1362.
     9858.
GR   1360.8      9940.     1360.4     9951.      1347.5      9968.     1347.5     10019.       1361.
    10036.
GR   1363.4     10046.     1363.8    10101.      1364.1     10156.     1364.7     10184.      1365.1
    10212.
GR   1364.7     10291.
```

```
SB     1.25       1.56        3.0       100.        51.         3.        576.         0.      1351.0
    1350.9
ET                            4.11      9968.      10019.

X1   20.750                                          71.        71.         71.                     0.1

        ELTRD IS 1364+2HV = 1366.0

X2                             1.      1363.       1366.

X3      10.                                                                                   1364.      1364.

        BELL ROAD  (SPECIAL BRIDGE)  A SECTION TAKEN UPSTREAM OF BELL ROAD AT
        RM 20.845 IS USED TO MODEL THE BELL ROAD BRIDGE.  GR CARDS ARE REPEATED
        AT THE DOWNSTREAM FACE WITH PSXECE = -0.9.  TO MORE APPROPRIATELY MODEL
        CONTRACTION LOSSES, THE UPSTREAM SECTION IS PRESENTED AT RM 20.860
        INSTEAD OF RM 20.845 WHERE THE AERIAL SECTION WAS TAKEN.

ET                             4.1      9965.      10043.

X1   20.819        12.       9965.     10043.        375.       345.        365.                    -0.9

X3      10.                                                                                   1366.9     1366.9

GR   1366.5      9554.      1365.4      9663.      1365.5      9777.      1365.5      9846.      1365.3
     9942.
GR   1357.4      9965.      1357.4     10043.      1367.6     10066.      1366.2     10107.      1366.2
    10146.
GR    1367.     10166.      1367.2     10169.

SB     1.05       1.56        3.0       100.        77.3        3.3        655.         0.      1357.4
    1356.5
ET                            4.11      9965.      10043.

X1   20.841                                         115.       115.        115.                     0.9

        ELTRD IS 1367.9+2HV = 1369.9

X2                             1.      1365.4      1369.9

X3      10.                                                                                   1367.9     1367.9

ET                             4.1      9904.      10060.

X1   20.860        14.       9942.     10066.         90.       110.        100.

X3      10.                                                                                   1365.3     1367.6

GR    1370.      9800.      1365.5      9801.      1365.5      9846.      1365.3      9942.      1357.8
     9975.
GR   1356.3      9991.      1356.4     10000.      1357.2     10015.       1357.     10040.      1367.6
    10066.
GR   1366.2     10107.      1366.2     10146.       1367.     10166.      1367.2     10169.
```

1
12AUG05 13:19:13
PAGE 14

```
NC     0.04      0.035       0.035       0.1         0.3

ET                             4.1      9860.      10110.

X1   20.942        26.       9854.     10024.        530.       490.        433.

GR   1372.5      9619.      1367.2      9630.      1368.7      9643.      1369.8      9663.      1369.4
     9719.
GR   1367.6      9792.      1367.6      9836.      1368.6      9854.      1360.2      9867.      1359.8
     9879.
GR   1359.8      9891.      1364.6      9904.      1365.2      9942.      1363.7      9970.       1366.
     9977.
GR   1360.3      9998.      1359.6     10000.      1366.5     10024.      1364.7     10027.      1364.5
```

```
     10053.
GR    1365.7     10070.     1364.5     10114.     1361.6     10153.     1368.3     10171.     1368.3
     10194.
GR    1368.3     10204.

NC      0.04       0.04      0.035

ET                            4.1       9810.     10060.

X1    21.036        19.      9912.     10020.       490.       490.       496.

GR    1376.1      9530.      1372.      9541.      1372.      9561.     1371.3      9665.     1371.9
      9728.
GR    1371.6      9758.     1370.9      9867.     1370.7      9912.     1367.3      9917.     1367.5
      9952.
GR    1366.3      9980.     1363.5      9994.     1363.6     10000.     1364.3     10009.     1370.4
     10020.
GR    1371.2     10041.     1371.2     10075.     1371.8     10089.      1378.     10090.

ET                            4.1       9900.     10060.

x1    21.127        13.      9974.     10067.       400.       500.       480.

X3       10.                                                                        1374.

GR    1378.9      9623.     1373.6      9634.     1373.6      9666.     1373.4      9759.     1373.5
      9860.
GR    1373.7      9913.     1374.2      9974.     1366.9      9990.     1366.7     10000.     1367.5
     10015.
GR    1367.8     10039.      1375.     10067.      1375.     10077.

ET                            4.1       9900.     10125.

X1    21.230        28.      9967.     10048.       560.       500.       544.

GR    1381.5      9741.     1381.5      9764.     1381.5      9786.     1380.7      9813.     1379.3
      9835.
GR    1379.3      9852.     1379.9      9862.     1378.2      9870.     1379.8      9879.     1378.9
      9891.
GR    1379.5      9916.     1379.6      9930.     1378.9      9944.     1379.2      9955.     1379.3
      9967.
GR    1374.7      9982.     1372.4      9992.      1372.     10000.     1373.2     10014.     1375.6
     10023.
GR    1379.3     10037.     1380.6     10048.      1378.     10062.     1377.5     10083.     1377.4
     10102.
GR    1377.7     10117.     1377.8     10126.      1385.     10127.

ET                            4.1       9939.     10105.

X1    21.363        55.      9928.     10088.       740.       700.       702.

GR    1384.8      9135.     1384.7      9160.     1383.9      9189.     1384.6      9215.     1383.9
      9245.
GR    1384.4      9279.     1383.8      9313.      1384.      9345.     1384.1      9374.     1383.8
      9405.
GR    1383.5      9428.     1384.5      9459.      1385.      9498.     1384.7      9527.      1385.
      9549.
GR    1382.2      9561.      1381.      9570.     1382.1      9583.     1383.9      9596.     1384.3
      9628.
GR    1384.3      9657.      1384.      9697.     1383.6      9739.     1384.1      9779.     1383.9
      9811.
GR    1383.1      9822.     1383.6      9848.     1383.3      9886.     1383.5      9907.     1384.1
      9916.
GR    1383.2      9922.     1384.4      9928.     1383.6      9939.     1379.2      9954.     1377.7
      9977.
GR     1375.      9996.     1374.8     10000.      1375.     10016.     1374.2     10037.     1374.1
     10045.
GR    1377.5     10066.     1382.1     10088.     1383.8     10108.      1384.     10125.     1384.5
     10147.
GR    1382.7     10174.     1383.2     10202.     1383.1     10224.     1383.1     10245.     1383.3
     10265.
GR    1384.3     10285.     1383.4     10301.      1383.     10319.      1383.     10334.      1383.
     10337.
1
   12AUG05      13:19:13
```

```
ET                          4.1      9852.     10077.

X1   21.484        33.      9932.    10026.       650.       520.       639.

GR   1386.8      9487.    1385.8     9527.    1385.8      9572.    1385.4      9614.     1384.8
     9647.
GR   1385.2      9678.    1385.6     9709.    1386.7      9746.    1385.9      9776.     1384.5
     9805.
GR   1383.9      9837.    1384.4     9867.     1384.      9892.    1386.5      9919.     1386.9
     9932.
GR   1386.2      9943.    1383.5     9964.    1380.2      9970.    1379.7      9988.     1378.5
     9994.
GR   1378.6     10000.    1381.2    10014.    1386.5     10026.    1386.6     10053.     1387.8
    10056.
GR   1385.5     10060.    1388.2    10068.    1385.8     10075.    1387.4     10079.     1387.4
    10101.
GR   1387.6     10116.    1387.5    10131.    1387.4     10134.

ET                          4.1      9940.     10165.

X1   21.576        43.      9980.    10087.       320.       480.       486.

GR   1388.7      9388.    1388.6     9414.    1388.2      9461.    1388.5      9500.     1389.3
     9532.
GR   1388.7      9570.    1388.5     9607.    1387.9      9643.    1388.6      9664.     1388.8
     9705.
GR   1389.1      9743.    1388.9     9780.     1388.      9821.    1388.4      9852.     1388.7
     9889.
GR   1389.1      9922.    1389.7     9952.    1390.1      9968.     1390.      9980.     1382.5
     9994.
GR   1382.1     10000.    1382.2    10008.    1383.8     10015.    1385.1     10038.     1385.2
    10056.
GR   1384.1     10065.    1384.6    10073.    1388.3     10087.    1387.1     10114.     1387.1
    10140.
GR   1387.8     10162.    1387.7    10199.    1388.4     10243.    1388.7     10281.     1389.3
    10300.
GR   1390.3     10307.    1389.2    10313.    1390.7     10320.    1387.6     10329.     1388.9
    10335.
GR   1389.7     10348.    1390.2    10360.    1390.3     10386.

QT       2.      5600.     5600.

ET                          4.1      9890.     10115.

X1   21.669        35.      9962.    10031.       440.       470.       491.

GR   1393.2      9392.     1393.     9426.    1392.7      9446.    1392.3      9515.     1392.9
     9562.
GR   1392.2      9606.    1392.8     9663.    1392.7      9710.    1393.1      9742.     1393.5
     9777.
GR   1393.3      9819.    1392.7     9858.    1392.2      9893.    1391.6      9925.      1392.
     9949.
GR   1393.8      9962.    1392.7     9974.    1392.2      9982.     1385.      9989.      1384.
     9997.
GR   1384.5     10000.    1385.1    10011.    1388.7     10023.     1392.     10031.     1391.2
    10045.
GR    1392.     10074.    1391.7    10124.    1391.9     10182.     1392.     10245.     1392.1
    10303.
GR   1391.9     10361.     1392.    10395.    1392.6     10401.    1391.6     10404.     1393.3
    10414.

ET                          4.1      9940.     10140.

X1   21.742        25.      9975.    10091.       430.       390.       385.

GR    1396.      9733.    1394.6     9753.    1395.1      9777.     1395.      9802.      1395.
     9839.
GR   1395.6      9885.    1395.1     9930.    1395.3      9940.    1394.7      9975.     1387.4
     9991.
GR   1386.4     10000.    1386.9    10015.    1392.2     10035.    1391.9     10052.     1389.9
    10062.
GR   1391.5     10080.    1394.2    10091.    1394.2     10126.    1394.9     10176.      1395.
    10240.
```

```
GR   1394.6     10281.     1394.8     10324.     1395.2     10355.     1395.3     10367.     1397.3
    10376.

ET                          4.1       9900.     10100.

X1   21.840        22.      9946.     10054.       430.       430.       517.

GR   1401.5      9827.     1402.1      9842.     1397.3      9860.     1395.5      9882.      1395.
     9913.
GR   1395.3      9931.     1396.2      9946.     1395.7      9953.     1392.1      9967.     1392.6
     9984.
GR   1393.7      9997.     1393.3     10000.     1392.5     10020.     1391.1     10033.     1393.5
    10045.
GR    1397.     10054.     1396.5     10097.     1397.3     10145.     1397.8     10186.     1397.5
    10227.
GR   1397.6     10273.     1398.3     10308.
```

1
12AUG05 13:19:13
PAGE 16

```
ET                          4.1       9835.     10080.

X1   21.895        31.      9975.     10031.       330.       220.       290.

GR   1402.6      9807.     1402.6      9825.     1398.4      9839.     1397.2      9857.     1396.7
     9885.
GR   1396.7      9919.     1397.7      9939.     1397.9      9960.      1398.      9975.     1397.1
     9981.
GR    1393.      9990.     1391.9     10000.     1392.3     10010.      1394.     10021.     1397.7
    10031.
GR   1398.6     10046.      1399.     10078.     1398.4     10113.     1398.6     10149.     1398.7
    10187.
GR   1398.5     10225.     1398.1     10251.     1398.6     10292.     1398.6     10333.     1399.3
    10364.
GR   1398.8     10399.     1399.5     10428.     1400.5     10446.     1400.5     10458.     1399.7
    10463.
GR   1400.9     10470.
```

UNION HILLS RD: PIPES BENEATH LOW CROSSING WERE MODELLED AS AN AREA (BAREA) WITH AN ORIFICE COEFFICIENT. THE 100 YEAR FLOW THROUGH THE PIPES WAS NEGLIGIBLE (18 CFS). UNION HILLS IS THEREFORE MORE APPROPRIATELY MODELLED AS A NORMAL SECTION USING GR CARDS.

```
ET                          4.1       9650.     10070.

X1   21.933        12.      9865.     10140.       210.       210.       210.

GR    1402.      9060.     1400.3      9440.      1400.      9590.      1398.      9680.     1397.4
     9725.
GR    1398.      9780.     1399.4      9840.      1398.      9865.     1396.8     10000.      1398.
    10140.
GR    1400.     10285.      1406.     10286.

NC    0.045      0.045      0.045

ET                          4.1       9630.     10051.

X1   21.953        39.      9969.     10029.        75.        75.        74.

GR    1402.      9320.     1400.5      9487.     1400.8      9527.     1401.4      9557.     1400.2
     9580.
GR   1401.7      9599.     1401.1      9621.     1400.2      9647.     1399.6      9678.     1398.8
     9699.
GR   1398.3      9714.     1397.6      9720.     1396.6      9725.     1398.8      9735.     1399.3
     9745.
GR   1398.8      9759.     1397.3      9768.     1398.9      9782.     1398.9      9810.     1400.1
     9832.
GR   1402.1      9851.     1401.7      9870.     1403.3      9884.     1403.7      9893.     1403.4
     9912.
GR   1402.3      9939.      1401.      9956.     1399.7      9965.     1400.2      9969.     1395.6
     9986.
GR   1394.4      9997.     1394.1     10000.      1394.     10010.     1394.9     10018.     1398.3
    10029.
```

```
GR   1400.1     10044.     1401.6     10058.     1401.4     10064.     1407.     10065.

ET                          4.1       9620.      10030.

X1   22.065        39.      9961.     10028.       430.       630.      591.

GR   1404.2      9230.      1404.      9250.      1402.      9270.     1402.      9500.     1403.1
     9594.
GR   1403.6      9604.     1400.4      9627.     1400.1      9645.    1400.6      9657.     1400.3
     9680.
GR   1400.5      9700.     1401.9      9717.     1403.3      9731.    1403.7      9746.     1403.9
     9761.
GR   1400.1      9776.      1400.      9785.     1401.1      9796.     1401.      9816.     1403.7
     9829.
GR   1403.7      9843.     1400.7      9861.     1399.7      9869.    1402.7      9890.     1403.5
     9899.
GR   1404.1      9915.     1404.8      9934.     1403.6      9950.    1404.1      9961.     1401.4
     9977.
GR    1398.      9989.     1395.8      9995.     1395.8     10000.    1395.9     10006.     1399.4
    10010.
GR    1402.     10028.     1402.6     10043.     1406.6     10061.    1407.1     10085.

ET                          4.1       9620.      10020.

X1   22.165        63.      9983.     10018.       530.       530.      528.

GR    1406.      9130.     1405.2      9138.      1405.      9151.    1404.4      9164.     1402.8
     9176.
GR   1402.7      9184.     1400.8      9204.     1399.8      9213.    1399.3      9222.     1401.2
     9232.
GR    1403.      9256.     1403.8      9282.     1403.8      9308.    1404.3      9334.     1404.2
     9364.
GR   1404.1      9396.      1404.      9425.     1404.9      9463.    1405.2      9499.     1405.3
     9526.
GR   1404.9      9548.     1403.8      9565.     1402.8      9579.    1404.6      9595.     1404.8
     9608.
GR   1402.4      9624.      1400.      9637.     1399.7      9645.    1400.6      9657.      1402.
     9669.
1
   12AUG05      13:19:13
       PAGE    17

GR   1403.1      9686.     1404.5      9701.     1405.8      9714.    1406.2      9728.     1406.1
     9741.
GR    1404.      9753.     1403.8      9760.     1405.2      9772.    1405.6      9784.     1405.3
     9793.
GR   1402.9      9806.     1402.7      9820.     1402.6      9834.    1402.6      9843.     1401.8
     9849.
GR   1401.9      9862.     1402.8      9872.     1403.8      9876.     1405.      9894.     1406.1
     9909.
GR   1405.4      9919.     1403.1      9930.      1403.      9946.    1402.1      9967.     1400.9
     9983.
GR   1395.3      9994.      1395.     10000.     1396.1     10007.    1403.7     10018.     1404.8
    10038.
GR   1405.2     10053.     1405.2     10060.     1405.7     10065.

ET                          4.1       9650.      10027.

X1   22.273        57.      9933.     10028.       470.       580.      570.

GR   1418.7      9227.     1418.7      9238.     1412.4      9262.    1411.6      9274.     1410.9
     9284.
GR    1409.      9292.     1407.6      9300.     1407.3      9314.    1406.3      9325.     1403.5
     9335.
GR   1403.1      9344.      1403.      9350.     1404.3      9359.    1405.4      9369.     1405.8
     9386.
GR   1406.7      9408.     1407.1      9427.     1407.4      9444.    1407.2      9460.     1406.4
     9473.
GR   1406.5      9485.     1406.9      9502.     1407.7      9520.    1408.2      9532.     1407.1
     9558.
GR   1404.4      9574.     1404.3      9598.      1406.      9622.     1407.      9657.     1407.3
     9686.
GR   1406.2      9708.     1406.4      9727.     1406.4      9745.    1405.6      9754.     1402.6
     9766.
GR   1402.8      9774.     1406.7      9789.     1409.4      9801.    1408.5      9827.     1407.9
```

```
     9851.
GR   1408.8      9869.      1406.3      9887.       1407.       9902.       1404.       9915.       1404.1
     9933.
GR   1403.2      9948.      1401.8      9961.      1400.6       9977.      1400.1       9992.      1399.4
     9999.
GR   1399.8     10000.      1401.2     10011.       1404.      10021.      1406.9      10028.       1408.
    10050.
GR   1408.3     10080.      1408.7     10109.

ET                           4.1       9860.      10040.

X1   22.410        25.      9973.     10027.        750.        630.        723.

GR    1418.      8805.       1418      9817.       1418.       9825.        1418       9838.        1418
     9850.
GR     1418      9860.      1413.9      9879.       1412.       9890.      1413.4       9903.      1414.5
     9914.
GR   1416.1      9922.       1414.      9931.      1412.4       9941.      1411.4       9954.      1411.2
     9967.
GR   1410.7      9973.      1405.7      9987.      1404.9       9997.       1404.      10000.      1404.7
    10007.
GR   1407.6     10017.      1411.3     10027.      1413.5      10042.      1413.8      10057.      1414.4
    10071.

ET                           4.1       9890.      10050.

X1   22.483        19.      9941.     10105.        380.        390.        385.

GR    1421.      9823.      1420.2      9843.      1416.7       9873.      1414.4       9891.      1413.1
     9915.
GR   1411.1      9941.      1407.8      9961.      1406.2       9984.      1405.5      10000.      1405.5
    10027.
GR   1406.4     10056.      1408.3     10084.      1411.2      10105.      1412.3      10120.      1412.6
    10138.
GR   1412.6     10156.      1411.9     10175.      1412.7      10191.      1419.8      10208.

ET                           4.1       9968.      10064.

X1   22.578        13.      9968.     10072.        540.        490.        502.

GR     1420      9223.       1418      9358.       1418       9873.        1418       9968.      1406.7
     9983.
GR   1406.7      9993.      1407.5     10000.      1408.5      10024.      1408.5      10040.      1408.8
    10050.
GR   1415.6     10063.      1421.2     10072.      1421.4      10090.

ET                           4.1       9830.      10028.

X1   22.675        19.      9736.     10032.        570.        480.        512.

GR   1419.9      9671.      1419.9      9710.      1419.8       9736.      1410.6       9759.      1411.1
     9783.
GR   1410.6      9809.      1409.7      9828.      1410.8       9850.      1411.5       9873.      1413.4
     9892.
GR   1412.2      9922.       1411.      9950.       1411.       9976.      1410.7      10000.      1410.6
    10015.
GR    1420.     10032.      1428.3     10047.      1426.6      10055.       1426.      10060.
```

1
12AUG05 13:19:13
PAGE 18

```
ET                           4.1       9977.      10160.

X1   22.794        20.      9983.     10169.        460.        500.        628.

GR   1420.6      9968.      1417.8      9983.      1413.6       9998.      1412.4      10000.      1412.3
    10013.
GR   1410.7     10041.      1411.6     10065.      1413.7      10080.      1413.8      10103.      1414.2
    10119.
GR   1411.7     10136.      1413.8     10151.      1416.1      10169.      1417.2      10189.      1420.3
    10202.
GR   1423.1     10219.       1427.     10244.      1429.9      10261.      1429.8      10278.      1429.8
    10282.
```

```
ET                          4.1      9951.     10120.

X1   22.880        34.      9927.    10167.       440.       480.       454.

GR   1427.3      9791.      1427.     9807.    1426.5      9815.    1424.8      9827.     1424.6
     9838.
GR   1424.8      9863.    1424.8     9883.    1424.5      9903.    1424.7      9917.     1426.4
     9927.
GR   1423.9      9934.    1421.4     9947.    1418.5      9958.    1416.1      9968.      1415.
     9984.
GR    1414.      9999.    1414.3    10000.    1414.5     10012.    1415.2     10024.     1416.1
    10048.
GR   1416.5     10067.    1416.4    10101.    1416.2     10125.    1415.5     10143.     1413.2
    10152.
GR    1413.     10156.    1414.8    10160.    1424.2     10167.    1426.6     10188.     1428.4
    10200.
GR   1430.9     10214.    1433.5    10230.    1433.8     10241.    1433.5     10248.

ET                          4.1      9890.     10026.

X1   22.990        35.      9739.    10034.       480.       530.       581.

GR   1427.7      9668.    1427.6     9697.    1425.6      9719.    1425.3      9730.     1425.4
     9739.
GR   1423.9      9751.    1422.5     9767.    1422.4      9785.    1421.5      9804.     1421.3
     9817.
GR   1421.3      9829.    1420.8     9843.    1419.5      9855.    1418.9      9864.     1417.9
     9873.
GR   1419.4      9886.     1420.     9903.    1420.6      9921.    1420.8      9935.     1420.3
     9949.
GR    1420.      9963.    1419.1     9977.    1419.1      9995.    1419.1     10000.     1418.7
    10014.
GR   1420.3     10020.    1427.9    10034.    1427.3     10044.    1428.3     10060.     1430.5
    10076.
GR   1435.7     10094.    1437.4    10108.    1438.7     10119.    1436.3     10126.     1435.1
    10133.

ET                          4.1      9958.     10090.

X1   23.097        48.      9951.    10121.       640.       490.       565.

GR   1433.9      9713.    1433.9     9740.    1433.8      9758.    1432.3      9772.     1432.1
     9778.
GR   1433.5      9794.    1433.5     9811.    1433.5      9835.    1433.4      9849.     1431.1
     9864.
GR    1430.      9878.    1430.1     9885.     1431.      9892.    1429.6      9901.     1429.1
     9916.
GR   1429.6      9925.    1431.3     9935.    1432.2      9945.    1432.3      9951.     1427.9
     9964.
GR   1426.4      9977.    1425.6     9988.    1425.1      9999.    1425.1     10000.      1426.
    10012.
GR   1426.1     10021.    1426.5    10044.    1426.5     10063.    1426.5     10073.     1426.5
    10082.
GR   1425.5     10093.    1426.4    10101.    1428.5     10112.    1430.8     10121.     1430.1
    10135.
GR    1430.     10150.    1431.6    10163.    1432.8     10176.     1433.     10198.     1432.7
    10221.
GR   1431.6     10247.    1430.9    10267.    1430.6     10286.    1431.5     10296.     1433.4
    10310.
GR   1438.3     10337.    1439.7    10353.    1440.5     10363.

        THE BEARDSLEY ROAD LOW CROSSING IS MODELLED WITH GR CARDS AS A NORMAL
        CROSS SECTION.  THE BEARDSLEY ROAD CENTERLINE IS AT RM 23.168

ET                          4.1      9830.     10140.

X1   23.168        22.      9777.    10116.       330.       300.       375.

GR   1435.4      9358.    1435.5     9412.    1435.6      9477.    1434.7      9533.     1433.2
     9598.
GR   1431.8      9657.    1430.8     9718.    1429.5      9777.    1428.9      9827.      1429.
     9877.
GR   1429.1      9942.     1429.     9999.    1429.1     10000.    1429.8     10053.     1430.3
    10116.
GR   1431.8     10176.    1433.6    10230.    1434.3     10274.    1434.9     10326.     1435.5
```

```
     10363.
GR    1435.6     10399.     1435.8     10409.

        DUE TO BREAKOUTS (SPLIT FLOWS) BETWEEN RM 23.55 AND RM 23.8, THE
1
   12AUG05      13:19:13
        PAGE   19

        FUTURE CONDITION  Q  IS REDUCED PER THE FOLLOWING TABLE.

        NO ENCROACHMENTS ARE COMPUTED FOR THE FOLLOWING REACH BETWEEN RM 23.253
        AND 7TH STREET.  FOR PURPOSES OF A FLOODWAY, A 100 FT CORRIDOR IS MAIN-
        TAINED OUTSIDE OF THE LEVEES (WHICH ARE LIKELY TO BE ERODABLE) TO PASS
        THE SPLIT FLOWS WHICH HAVE BEEN REMOVED FROM THE MODEL, AS DISCUSSED
        WITH CITY OF PHOENIX AND FLOOD CONTROL DISTRICT REPRESENTATIVES. IF THIS
        CORRIDOR IS NOT MAINTAINED, THE REDUCTION IN Q FOR THIS MODEL IS NOT
        VALID, RESULTING IN A FLOODWAY PROFILE ABOVE THE NATURAL PROFILE BY MORE
        THAN THE STATUTORY 1.0 FT.

                              FULL Q        REDUCED Q

                     100 YEAR  5600.            3400

        THE 10 YEAR Q (3200 CFS) IS UNAFFECTED

QT        2.       3400.      3400.

NC     0.035       0.05       0.04

ET                            4.1      9978.5     10023.2

X1    23.253         8.      9973.     10038.       470.       450.       459.

GR    1437.5      9973.     1425.5      9995.     1425.2     10000.     1427.4     10008.     1429.2
     10015.
GR    1444.2     10038.     1444.9     10052.      1445.     10060.

ET                            4.1      9969.     10036.

X1    23.334        10.      9962.     10055.       400.       420.       417.

GR    1443.8      9962.     1435.6      9979.     1433.2      9990.     1432.6     10000.     1433.2
     10012.
GR    1435.4     10022.     1438.5     10032.     1444.2     10044.     1449.8     10055.     1449.6
     10063.

ET                            4.1      9981.     10040.

X1    23.416        10.      9974.     10053.       400.       430.       433.

GR    1447.7      9958.     1447.8      9974.     1439.2      9989.     1436.5      9999.     1436.6
     10000.
GR    1437.2     10017.     1437.6     10030.     1444.4     10041.     1450.2     10053.     1450.4
     10066.

ET                            4.1      9977.     10035.

X1    23.514         8.      9973.     10039.       560.       470.       517.

GR    1451.5      9965.     1451.4      9973.     1439.8      9989.     1439.6     10000.     1440.1
     10012.
GR    1441.5     10022.     1443.6     10029.     1451.1     10039.

        SPECIAL BRIDGE IS USED TO MODEL EMBANKMENT PLACED IN THE CHANNEL TO
        ALLOW VEHICULAR ACCESS BETWEEN THE LANDFILL ON THE LEFT AND THE GRAVEL
        PIT ON THE RIGHT.  THE EMBANKMENT MAY WASH OUT, BUT FOR THIS STUDY, IT
        IS ASSUMED TO REMAIN.  LOW FLOWS PASS THROUGH 2-36" CMP'S.

ET                            4.1      9978.9     10033.7

X1    23.544                                        190.       150.       158.                  1.8
```

```
X3      10.                                                                                  1445.       1445.

1
   12AUG05      13:19:13
        PAGE   20


SB     1.25       2.48        3.2         0.         5.7          1.        14.1          0.       1442.
   1441.4
ET                            4.11    9974.59    10037.86

X1   23.555                                          60.         60.         60.                      0.6

        ELTRD IS 1448.4+0.6HV = 1449

X2                              1.      1445.       1449.

X3      10.                                                                                  1480.       1480.

BT      10.      9930.      1452.         0.       9939.      1451.2          0.       9951.      1451.1
        0.
BT    9967.     1449.8         0.      9987.      1448.4          0.      10000.      1448.4          0.
   10019.
BT   1448.6         0.     10041.     1449.5          0.      10055.       1450.          0.     10070.
     1452.
BT       0.

ET                              4.1      9968.    10043.49

X1   23.591        17.      9968.     10045.        100.        210.        190.

        ARTIFICIAL LEVEES ARE SET VERY HIGH ON THE LEFT AND RIGHT OVERBANKS
        USING THE X3 CARD TO CONSIDER ONLY THE CHANNEL AREA AS EFFECTIVE.  SPLIT
        FLOW THAT BREAKS OUT UPSTREAM IS ACCOUNTED FOR BY THE REDUCED Q.  FLOWS
        ARE RETURNED TO CAVE CREEK DOWNSTREAM AT BEARDSLEY ROAD.

X3      10.                                                                                  1480.       1480.

GR    1460.      9700.      1448.      9760.       1448.      9850.      1452.9       9959.      1452.9
    9968.
GR   1446.8      9982.     1444.6      9993.      1444.2     10000.      1444.2      10013.      1444.9
   10023.
GR   1449.9     10036.     1453.8     10045.      1451.9     10048.       1448.     10070.       1448.
   10430.
GR    1450.     10770.      1452.     11200.

ET                              4.1    9970.39    10035.72

X1   23.691        43.      9965.     10036.        510.        540.        528.

        HIGH ARTIFICIAL LEVEE

X3      10.                                                                                  1480.       1480.

GR   1461.1      9722.     1449.4      9747.      1449.4      9767.      1449.5       9784.      1449.1
    9800.
GR   1448.3      9819.     1448.6      9832.      1448.3      9866.       1449.       9894.      1449.3
    9913.
GR   1450.2      9925.     1453.5      9936.      1456.1      9944.      1455.4       9951.      1457.3
    9955.
GR   1457.6      9965.     1450.8      9980.      1448.5      9985.      1447.2       9991.      1446.6
    9999.
GR   1446.4     10000.      1447.     10011.      1449.6     10017.      1451.3      10028.      1455.3
   10036.
GR   1453.2     10045.     1452.4     10054.      1451.3     10057.      1452.2      10062.      1452.4
   10077.
GR   1452.2     10094.     1451.7     10108.      1452.6     10117.      1451.4      10123.      1452.7
   10128.
GR    1451.     10138.     1452.3     10143.      1451.7     10147.      1453.4      10155.      1452.1
   10160.
GR    1452.     10320.      1454.     10560.       1456.     10730.
```

```
        Q IS NOW CHANGED TO BE THE AVERAGE OF THE FULL Q UPSTREAM OF THE
        BREAKOUT AND OF THE REDUCED Q DOWNSTREAM OF THE BREAKOUT.

QT       2.      4450.      4450.

ET                           4.1      9951.      10037.

1
   12AUG05      13:19:13
        PAGE   21

X1   23.815        31.      9951.     10037.       650.       680.       655.

        HIGH ARTIFICIAL LEVEE

X3      10.                                                                  1480.      1480.

GR    1470.      9650.     1459.3      9716.     1453.5      9738.     1453.1      9772.     1453.4
     9812.
GR   1454.5      9857.     1455.1      9890.      1455.      9914.     1455.4      9941.     1458.9
     9951.
GR    1458.      9963.     1451.4      9979.     1449.7      9988.     1449.9      9996.     1449.7
    10000.
GR   1449.7     10017.     1454.6     10028.     1457.8     10037.     1456.8     10043.     1456.8
    10060.
GR   1456.9     10081.     1457.1     10110.     1458.2     10140.     1458.4     10157.     1459.5
    10172.
GR   1458.5     10182.      1456.     10195.     1457.2     10215.     1458.7     10226.     1457.1
    10235.
GR   1465.5     10249.

        Q IS NOW CHANGED TO BE THE FULL Q UPSTREAM OF THE BREAKOUT

QT       2.      5500.      5500.

ET                           4.1    9967.41      10043.

X1   23.912        12.      9967.     10043.       480.       510.       512.

        HIGH ARTIFICIAL LEVEE

X3      10.                                                                  1480.      1480.

GR   1463.9      9868.     1461.7      9878.     1460.6      9898.     1460.7      9925.     1461.4
     9950.
GR   1461.3      9967.     1451.3      9983.     1447.9      9994.      1448.     10000.     1447.9
    10010.
GR   1454.9     10026.     1460.9     10043.

ET                           4.1    9944.77    10043.68

X1   23.989         9.      9937.     10049.       400.       410.       407.

GR   1465.6      9937.     1457.9      9957.     1452.6      9977.     1450.8      9989.     1449.7
    10000.
GR   1450.5     10014.     1452.5     10024.      1458.     10036.     1465.8     10049.

        7TH STREET  (SPECIAL BRIDGE).  THE GR CARDS FROM SECTION 24.106 TAKEN
        UPSTREAM OF 7TH STREET ARE REPEATED AT THE DOWNSTREAM FACE OF THE BRIDGE
        AS SECTION 24.086 WITH PSXECE = -1.3.

NC                                       0.3        0.5

ET                           4.1      9972.      10044.

X1   24.086        12.      9972.     10044.       450.       560.       512.                  -1.3

X3      10.                                                                  1463.7     1463.7

GR   1470.1      9942.     1464.1      9955.     1454.9      9972.     1454.9     10044.      1456.
```

```
     10052.
GR    1458.5     10064.     1461.9     10091.     1463.7     10108.     1465.7     10123.     1466.1
     10136.
GR    1466.4     10155.     1467.4     10310.

SB       0.9       1.56         3.       100.       71.6         3.       590.         0.     1453.6
     1453.6
ET                            4.1      9972.     10044.

X1   24.096                                        56.        56.        56.

         ELTRD IS 1464.7+2HV = 1466.7

X2                            1.     1462.2     1466.7

X3       10.                                                                          1466.      1466.

1
    12AUG05      13:19:13
         PAGE   22


ET                            4.1      9955.     10055.

X1   24.106        13.      9955.     10064.        80.        20.        53.

GR    1470.1      9942.     1464.1      9955.     1455.2      9972.     1454.7      9997.     1454.2
     10000.
GR    1454.9     10028.      1456.     10052.     1458.5     10064.     1461.9     10091.     1463.7
     10108.
GR    1465.7     10123.     1466.1     10136.     1466.4     10155.

NC                                        0.1        0.3

ET                            4.1      9950.     10050.

X1   24.195        13.      9933.     10142.       470.       460.       470.

GR    1498.7      9862.     1497.1      9889.     1470.4      9933.     1454.1      9961.     1453.6
      9996.
GR    1453.6     10000.     1453.9     10032.     1455.5     10052.     1456.3     10073.     1458.8
     10093.
GR    1462.3     10117.     1466.4     10142.     1468.9     10164.

ET                            4.1      9940.     10080.

X1   24.322        11.      9871.     10064.       640.       630.       671.

GR    1473.7      9820.     1463.5      9871.     1453.2      9895.     1451.6      9972.     1452.1
     10000.
GR    1454.5     10042.     1456.8     10064.     1457.7     10134.     1459.6     10177.     1465.2
     10220.
GR    1470.9     10262.

NC     0.045      0.045      0.045

ET                            4.1      9927.     10080.

X1   24.444        16.      9928.     10122.       640.       600.       644.

GR    1478.8      9885.     1478.7      9906.      1465.      9928.     1457.6      9939.      1458.
      9972.
GR    1457.3      9995.     1457.7     10000.     1459.1     10027.     1460.4     10064.     1459.3
     10097.
GR    1461.7     10122.     1458.9     10142.     1460.7     10166.     1460.3     10180.     1468.5
     10215.
GR    1474.2     10230.

ET                            4.1      9950.     10160.

X1   24.542        20.      9914.     10187.       470.       530.       517.
```

```
GR   1488.2      9844.      1464.      9914.      1463.2      9948.      1460.4      9968.      1459.8
     9996.
GR   1459.8     10000.     1461.4     10017.      1462.3     10033.      1470.7     10056.      1470.3
    10083.
GR   1472.2     10112.     1470.9     10127.      1464.4     10141.      1462.5     10166.       1463.
    10171.
GR   1464.7     10175.     1467.8     10187.      1473.8     10237.      1475.2     10268.      1478.9
    10283.

        THE DEER VALLEY ROAD LOW CROSSING IS MODELLED WITH GR CARDS AS A NORMAL
        CROSS SECTION.  THE DEER VALLEY ROAD CENTERLINE IS AT RM 24.635.


ET                              4.1      9940.      10060.

X1   24.635         8.      9876.     10111.        650.        220.        491.

GR   1480.9      9752.     1474.5      9876.       1467.       9983.      1466.8     10000.      1467.9
    10037.
GR   1472.4     10111.     1478.6     10193.      1480.1     10247.

        "FUTURE CONDITIONS" 100 YEAR DISCHARGES WERE NOT PUBLISHED BY THE
        CORPS OF ENGINEERS FOR CAVE CREEK WASH ABOVE DEER VALLEY ROAD.
        THIS MODEL THEREFORE TERMINATES AT DEER VALLEY ROAD, ALTHOUGH A SEPARATE
        MODEL FOR CURRENT CONDITIONS (PER FEMA STANDARDS) CONTINUES ON TO CAVE
        BUTTE DAM.

1
    12AUG05      13:19:13
        PAGE   23

     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

 *PROF 1

 CCHV=      .100 CEHV=      .300
 *SECNO 15.015
 2096 WSEL NOT GIVEN, AVG OF MAX, MIN USED
     15.015     13.40   1219.09       .00        .00   1221.08       1.99        .00        .00   1228.30
    16000.0        .0   15999.9        .1         .0    1412.5         .4         .0         .0   1206.79
       .00        .00     11.33       .22       .000      .015       .015       .000    1205.69   9945.04
    .000500        0.        0.        0.          0         0          4        .00     110.02  10055.06

 FLOW DISTRIBUTION FOR SECNO=     15.02          CWSEL=   1219.09

 STA=    9945.   10055.   10055.
   PER Q=    100.0       .0
    AREA=   1412.5       .4
     VEL=     11.3       .2
   DEPTH=     12.8      6.1

 *SECNO 15.109
     15.109     13.40   1219.34       .00        .00   1221.33       1.99        .25        .00   1228.55
    16000.0        .0   15999.9        .1         .0    1412.5         .4       16.2        1.3   1207.04
       .01        .00     11.33       .22       .000      .015       .015       .000    1205.94   9945.04
    .000500      500.      500.      500.          0         0          0        .00     110.02  10055.06

 FLOW DISTRIBUTION FOR SECNO=     15.11          CWSEL=   1219.34

 STA=    9945.   10055.   10055.
   PER Q=    100.0       .0
    AREA=   1412.5       .4
     VEL=     11.3       .2
   DEPTH=     12.8      6.1

 *SECNO 15.204
     15.204     13.40   1219.59       .00        .00   1221.58       1.99        .25        .00   1228.80
    16000.0        .0   15999.9        .1         .0    1412.5         .4       32.4        2.5   1207.29
       .02        .00     11.33       .22       .000      .015       .015       .000    1206.19   9945.04
```

```
    .000500      500.      500.      500.         0         0         0       .00    110.02  10055.06

1
    12AUG05      13:19:13
         PAGE   24

     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=     15.20          CWSEL=   1219.59

 STA=    9945.   10055.   10055.
   PER Q=    100.0       .0
    AREA=   1412.5       .4
     VEL=     11.3       .2
   DEPTH=     12.8      6.1

 *SECNO 15.310

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
    15.310     12.69   1219.57   1219.57       .00   1225.73      6.17       .51      1.25   1229.50
   16000.0        .0   16000.0        .0        .0     802.9        .0      46.7       3.7   1230.00
       .03       .00     19.93       .00      .000      .015      .000      .000   1206.88   9967.54
    .002154     560.      560.      560.        20         8         0       .00     65.01  10032.55

 FLOW DISTRIBUTION FOR SECNO=     15.31          CWSEL=   1219.57

 STA=    9968.   10033.
   PER Q=    100.0
    AREA=    802.9
     VEL=     19.9
   DEPTH=     12.4

 *SECNO 15.454

 3301 HV CHANGED MORE THAN HVINS

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.42

    15.454     15.99   1223.25       .00       .00   1227.09      3.84      1.12       .23   1229.88
   16000.0        .0   16000.0        .0        .0    1017.5        .0      62.6       4.8   1230.38
       .05       .00     15.72       .00      .000      .015      .000      .000   1207.26   9967.53
    .001076     760.      760.      760.         4         0         0       .00     65.04  10032.57

1
    12AUG05      13:19:13
         PAGE   25

     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=     15.45          CWSEL=   1223.25

 STA=    9968.   10033.
   PER Q=    100.0
    AREA=   1017.5
     VEL=     15.7
   DEPTH=     15.6
```

```
*SECNO 15.530
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    15.530     10.66   1236.86   1236.86       .00   1241.12      4.26       .54       .13   1237.50
   16000.0        .0   16000.0        .0        .0     966.0        .0      71.7       5.6   1238.45
       .05       .00     16.56       .00      .000      .015      .000      .000   1226.20   9942.79
   .001717      400.      400.      400.        20        14         0       .00    114.53  10057.31

FLOW DISTRIBUTION FOR SECNO=     15.53          CWSEL=   1236.86

STA=    9943.   10061.
  PER Q=    100.0
   AREA=    966.0
    VEL=     16.6
  DEPTH=      8.4

*SECNO 15.680
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    15.680     10.66   1240.21   1240.21       .00   1244.47      4.26      1.36       .00   1240.85
   16000.0        .0   16000.0        .0        .0     966.4        .0      89.2       7.7   1241.80
       .07       .00     16.56       .00      .000      .015      .000      .000   1229.55   9942.78
   .001715      792.      792.      792.        20         5         0       .00    114.54  10057.32

FLOW DISTRIBUTION FOR SECNO=     15.68          CWSEL=   1240.21

STA=    9943.   10061.
  PER Q=    100.0
   AREA=    966.4
    VEL=     16.6
  DEPTH=      8.4

1
   12AUG05      13:19:13
        PAGE   26


    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 15.878
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    15.878     10.12   1243.99   1243.99       .00   1248.07      4.08      1.79       .02   1244.70
   16000.0        .0   16000.0        .0        .0     987.3        .0     112.7      10.5   1244.71
       .08       .00     16.21       .00      .000      .015      .000      .000   1233.87   9939.42
   .001711     1045.     1045.     1045.        20         8         0       .00    121.15  10060.56

FLOW DISTRIBUTION FOR SECNO=     15.88          CWSEL=   1243.99

STA=    9939.   10062.
  PER Q=    100.0
   AREA=    987.3
    VEL=     16.2
  DEPTH=      8.1

*SECNO 15.920
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    15.920     10.09   1244.93   1244.93       .00   1249.04      4.11       .39       .01   1245.67
   16000.0        .0   16000.0        .0        .0     983.6        .0     117.8      11.1   1245.68
       .09       .00     16.27       .00      .000      .015      .000      .000   1234.84   9939.48
   .001730      225.      225.      225.        20         5         0       .00    121.02  10060.50

FLOW DISTRIBUTION FOR SECNO=     15.92          CWSEL=   1244.93
```

```
 STA=    9939.   10062.
   PER Q=    100.0
    AREA=    983.6
     VEL=     16.3
   DEPTH=      8.1

1
    12AUG05      13:19:13
         PAGE   27

     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


 SPECIAL BRIDGE

 5227 DOWNSTREAM ELEV IS    1243.33 , NOT    1244.93 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW
CONTROLS)

 SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
       .90       1.56       3.00     100.00      82.32       6.00    1447.00       1.84    1235.45    1235.07

 *SECNO 15.940
 3280 CROSS SECTION     15.94 EXTENDED      1.84 FEET


 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.54

 CLASS B LOW FLOW

 3420 BRIDGE W.S.=    1245.43 BRIDGE VELOCITY=      16.55     CALCULATED CHANNEL AREA=       945.

  EGPRS      EGLWC      H3         QWEIR      QLOW       BAREA      TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                      AREA
   1247.89   1250.24       .00        0.     16000.      1447.      1448.      1249.60    1253.60         0.


    15.940      12.67   1247.89       .00        .00   1250.24       2.34       1.20        .00    1246.05
   16000.0        .0   16000.0        .0        .0    1302.6         .0      120.4       11.4    1246.06
       .09       .00     12.28       .00       .000      .015       .000       .000    1235.22    9938.00
   .000729      100.      100.      100.          0         0          0        .00     124.00   10062.00

 FLOW DISTRIBUTION FOR SECNO=     15.94          CWSEL=   1247.89

 STA=    9938.   10062.
   PER Q=    100.0
    AREA=   1302.6
     VEL=     12.3
   DEPTH=     10.5

 *SECNO 16.023

 3301 HV CHANGED MORE THAN HVINS

1
    12AUG05      13:19:13
         PAGE   28

     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


 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
```

```
3720 CRITICAL DEPTH ASSUMED
    16.023      12.60   1250.05   1250.05       .00   1254.70      4.65       .47       .69   1252.50
   16000.0         .0   16000.0        .0        .0     924.2        .0     131.7      12.6   1251.95
       .10        .00     17.31       .00      .000      .015      .000      .000   1237.45   9949.72
   .001705       441.      441.      441.        20         5         0       .00    100.69  10050.42

FLOW DISTRIBUTION FOR SECNO=     16.02          CWSEL=   1250.05

STA=    9950.   10053.
  PER Q=    100.0
   AREA=    924.2
    VEL=     17.3
  DEPTH=      9.2

*SECNO 16.148
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    16.148      12.61   1252.85   1252.85       .00   1257.49      4.64      1.12       .00   1255.29
   16000.0         .0   16000.0        .0        .0     925.6        .0     145.7      14.1   1254.74
       .11        .00     17.29       .00      .000      .015      .000      .000   1240.24   9949.69
   .001698       660.      660.      660.        20         5         0       .00    100.75  10050.44

FLOW DISTRIBUTION FOR SECNO=     16.15          CWSEL=   1252.85

STA=    9950.   10053.
  PER Q=    100.0
   AREA=    925.6
    VEL=     17.3
  DEPTH=      9.2

*SECNO 16.264
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    16.264      12.61   1255.44   1255.44       .00   1260.08      4.64      1.04       .00   1257.88
   16000.0         .0   16000.0        .0        .0     925.4        .0     158.7      15.5   1257.33
       .12        .00     17.29       .00      .000      .015      .000      .000   1242.83   9949.70
   .001699       612.      612.      612.        20         5         0       .00    100.74  10050.44


1
   12AUG05      13:19:13
        PAGE   29


    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=     16.26          CWSEL=   1255.44

STA=    9950.   10053.
  PER Q=    100.0
   AREA=    925.4
    VEL=     17.3
  DEPTH=      9.2

*SECNO 16.373
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    16.373      12.61   1257.87   1257.87       .00   1262.51      4.64       .98       .00   1260.31
   16000.0         .0   16000.0        .0        .0     925.5        .0     170.9      16.8   1259.76
       .13        .00     17.29       .00      .000      .015      .000      .000   1245.26   9949.70
   .001699       576.      576.      576.        20         5         0       .00    100.74  10050.44

FLOW DISTRIBUTION FOR SECNO=     16.37          CWSEL=   1257.87

STA=    9950.   10053.
  PER Q=    100.0
   AREA=    925.5
```

```
    VEL=      17.3
  DEPTH=       9.2

*SECNO 16.481
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    16.481     11.91   1259.50   1259.50       .00   1264.03      4.53       .97       .01   1261.20
   16000.0        .0   16000.0        .0        .0     936.5       .0     183.1      18.2   1259.70
       .14       .00     17.08       .00      .000      .015      .000      .000   1247.59   9947.21
   .001703      570.      570.      570.        20        11         0       .00    104.38  10051.60


FLOW DISTRIBUTION FOR SECNO=     16.48          CWSEL=   1259.50

STA=    9947.   10052.
  PER Q=    100.0
   AREA=    936.5
    VEL=     17.1
  DEPTH=      9.0

1
   12AUG05      13:19:13
        PAGE   30


    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 16.601
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    16.601     11.88   1262.14   1262.14       .00   1266.70      4.56      1.08       .01   1263.87
   16000.0        .0   16000.0        .0        .0     934.0       .0     196.7      19.7   1262.37
       .15       .00     17.13       .00      .000      .015      .000      .000   1250.26   9947.26
   .001716      634.      634.      634.        20         5         0       .00    104.29  10051.55


FLOW DISTRIBUTION FOR SECNO=     16.60          CWSEL=   1262.14

STA=    9947.   10052.
  PER Q=    100.0
   AREA=    934.0
    VEL=     17.1
  DEPTH=      9.0

*SECNO 16.694
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    16.694     11.19   1263.45   1263.45       .00   1267.84      4.39       .84       .02   1263.90
   16000.0        .0   16000.0        .0        .0     951.2       .0     207.3      20.9   1264.42
       .15       .00     16.82       .00      .000      .015      .000      .000   1252.26   9945.37
   .001718      491.      491.      491.         4        11         0       .00    109.87  10055.24


FLOW DISTRIBUTION FOR SECNO=     16.69          CWSEL=   1263.45

STA=    9945.   10056.
  PER Q=    100.0
   AREA=    951.2
    VEL=     16.8
  DEPTH=      8.7

*SECNO 16.823
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    16.823     11.20   1266.34   1266.34       .00   1270.72      4.38      1.17       .00   1266.78
   16000.0        .0   16000.0        .0        .0     952.5       .0     222.2      22.6   1267.30
       .17       .00     16.80       .00      .000      .015      .000      .000   1255.14   9945.36
   .001711      681.      681.      681.        20         5         0       .00    109.89  10055.25
```

```
1
    12AUG05       13:19:13
         PAGE    31

     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=     16.82          CWSEL=   1266.34

 STA=    9945.   10056.
   PER Q=    100.0
    AREA=    952.5
     VEL=     16.8
   DEPTH=      8.7

 *SECNO 16.902
 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
     16.902     11.19   1267.38   1267.38       .00   1271.62      4.25       .72       .01   1268.80
    16000.0        .0   16000.0       .0        .0     967.3        .0     231.4      23.7   1270.33
        .17       .00     16.54       .00      .000      .015      .000      .000   1256.19   9942.86
    .001727      417.      417.      417.         2         5         0       .00    115.24  10058.09

 FLOW DISTRIBUTION FOR SECNO=     16.90          CWSEL=   1267.38

 STA=    9943.   10063.
   PER Q=    100.0
    AREA=    967.3
     VEL=     16.5
   DEPTH=      8.4

 *SECNO 16.970
 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
     16.970     11.83   1268.19   1268.19       .00   1272.36      4.18       .62       .01   1269.30
    16000.0        .0   16000.0       .0        .0      975.7        .0     239.4      24.7   1270.78
        .18       .00     16.40       .00      .000      .015      .000      .000   1256.36   9940.53
    .001755      359.      359.      359.         2         8         0       .00    118.98  10059.51

 FLOW DISTRIBUTION FOR SECNO=     16.97          CWSEL=   1268.19

 STA=    9941.   10065.
   PER Q=    100.0
    AREA=    975.7
     VEL=     16.4
   DEPTH=      8.2

1
    12AUG05       13:19:13
         PAGE    32

     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

 SPECIAL BRIDGE

 5227 DOWNSTREAM ELEV IS    1266.61 , NOT    1268.19 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW
CONTROLS)

 SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
       .90       1.56       3.00     100.00      82.57       6.00    1513.00       1.61    1258.71    1258.33

 *SECNO 16.988
 3280 CROSS SECTION     16.99 EXTENDED      1.43 FEET
```

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.54

CLASS B LOW FLOW

3420 BRIDGE W.S.= 1268.78 BRIDGE VELOCITY= 16.75 CALCULATED CHANNEL AREA= 934.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1273.47	.00	0.	16000.	1513.	1516.	1273.75	1277.80	0.

16.988	14.72	1271.13	.00	.00	1273.47	2.34	1.11	.00	1269.70
16000.0	.0	16000.0	.0	.0	1302.4	.0	241.8	24.9	1270.17
.18	.00	12.29	.00	.000	.015	.000	.000	1256.41	9938.30
.000741	90.	90.	90.	0	0	0	.00	125.60	10063.90

FLOW DISTRIBUTION FOR SECNO= 16.99 CWSEL= 1271.13

STA= 9938. 10064.
PER Q= 100.0
AREA= 1302.4
VEL= 12.3
DEPTH= 10.4

*SECNO 17.061

3301 HV CHANGED MORE THAN HVINS

1
12AUG05 13:19:13
PAGE 33

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

17.061	14.18	1270.79	.00	.00	1274.13	3.34	.36	.30	1271.30
16000.0	.0	16000.0	.0	.0	1090.8	.0	252.2	26.0	1271.79
.19	.00	14.67	.00	.000	.015	.000	.000	1256.61	9939.31
.001278	380.	380.	380.	3	0	0	.00	123.21	10062.52

FLOW DISTRIBUTION FOR SECNO= 17.06 CWSEL= 1270.79

STA= 9939. 10065.
PER Q= 100.0
AREA= 1090.8
VEL= 14.7
DEPTH= 8.9

*SECNO 17.206

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

17.206	5.70	1272.70	1272.70	.00	1275.43	2.73	1.19	.06	1279.00
16000.0	.0	16000.0	.0	.0	1206.8	.0	272.5	29.1	1279.00
.20	.00	13.26	.00	.000	.015	.000	.000	1267.00	9888.13
.001922	769.	769.	769.	4	18	0	.00	223.73	10111.87

FLOW DISTRIBUTION FOR SECNO= 17.21 CWSEL= 1272.70

STA= 9888. 10125.
PER Q= 100.0
AREA= 1206.8
VEL= 13.3

```
  DEPTH=       5.4

 *SECNO 17.360
  WATER EL=X5 CARD=   1275.400

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO = 11.77

    17.360     18.70   1275.40       .00       .00   1275.42       .02       .04       .27   1282.20
   16000.0        .0   16000.0        .0        .0   13645.7        .0     411.1      39.1   1281.80
       .40       .00      1.17       .00      .000      .030      .000      .000   1256.70   9522.77
   .000014      820.      813.      830.         0         0         0       .00    848.95  10371.72


1
   12AUG05      13:19:13
        PAGE   34

     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=     17.36          CWSEL=   1275.40

 STA=    9523.   10427.
   PER Q=    100.0
    AREA=  13645.7
     VEL=      1.2
   DEPTH=     16.1

 *SECNO 17.494

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
    17.494     10.46   1280.76   1280.76       .00   1282.72      1.96       .03       .58   1279.10
   14000.0      72.8   11397.2    2530.0      22.6     949.9     365.1     532.5      49.0   1278.50
       .41      3.22     12.00      6.93      .030      .030      .030      .000   1270.30   9876.77
   .005411      750.      707.      670.        20        11         0       .00    376.72  10253.49


 FLOW DISTRIBUTION FOR SECNO=     17.49          CWSEL=   1280.76

 STA=    9877.    9904.   10062.   10087.   10109.   10161.   10167.   10253.
   PER Q=       .5     81.4      2.3      4.2     10.2       .4      1.0
    AREA=     22.6    949.9     52.8     72.9    174.9     10.0     54.6
     VEL=      3.2     12.0      6.0      8.1      8.2      5.1      2.7
   DEPTH=       .8      6.0      2.1      3.3      3.4      1.7       .6

 *SECNO 17.588

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.77

    17.588     13.74   1283.34       .00       .00   1283.64       .30       .76       .17   1278.10
   14000.0    2997.5   10731.8     270.7     945.4    2263.3     121.2     558.8      53.7   1276.40
       .45      3.17      4.74      2.23      .040      .040      .040      .000   1269.60   9779.63
   .000707      440.      496.      560.         2         0         0       .00    448.30  10227.93


1
   12AUG05      13:19:13
        PAGE   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
```

```
FLOW DISTRIBUTION FOR SECNO=     17.59          CWSEL=   1283.34

STA=    9780.    9835.    9854.    9873.    9909.    9982.   10193.   10228.
  PER Q=      6.5      5.2      3.9      3.7      2.1     76.7      1.9
   AREA=    287.4    170.8    146.1    179.9    161.2   2263.3    121.2
    VEL=      3.2      4.3      3.8      2.9      1.8      4.7      2.2
  DEPTH=      5.2      9.0      7.7      5.0      2.2     10.7      3.5

*SECNO 17.662

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .49

    17.662     11.87   1283.47       .00       .00   1284.29       .82       .50       .15   1276.40
   14000.0    3560.8   10409.9      29.2     567.1    1375.8      15.1     582.4      57.1   1281.60
       .46      6.28      7.57      1.93      .040      .040      .040      .000   1271.60   9831.17
   .002979      380.      391.      400.         3         0         0       .00    314.97  10146.14


FLOW DISTRIBUTION FOR SECNO=     17.66          CWSEL=   1283.47

STA=    9831.    9835.    9844.    9871.    9911.    9941.   10130.   10146.
  PER Q=       .0       .8      5.4      9.1     10.1     74.4       .2
   AREA=      1.5     27.7    130.3    209.0    198.7   1375.8     15.1
    VEL=      1.1      4.0      5.8      6.1      7.1      7.6      1.9
  DEPTH=       .4      3.1      4.8      5.2      6.6      7.3       .9

*SECNO 17.783

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .67

    17.783      9.85   1285.25       .00       .00   1287.34      2.09      2.67       .38   1280.50
   14000.0     243.2   13164.3     592.5      45.9    1110.4      94.5     605.1      60.6   1281.10
       .48      5.30     11.86      6.27      .040      .040      .040      .000   1275.40   9901.70
   .006681      540.      639.      500.         3         0         0       .00    198.44  10100.13


1
    12AUG05      13:19:13
         PAGE   36

     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=     17.78          CWSEL=   1285.25

STA=    9902.    9921.   10064.   10074.   10097.   10100.
  PER Q=      1.7     94.0      2.2      2.0       .0
   AREA=     45.9   1110.4     40.5     52.9      1.0
    VEL=      5.3     11.9      7.7      5.3      1.4
  DEPTH=      2.4      7.8      4.1      2.3       .3

*SECNO 17.932

3301 HV CHANGED MORE THAN HVINS

    17.932     12.63   1290.53   1289.66       .00   1293.88      3.35      6.17       .38   1289.70
   14000.0      19.0   13978.5      2.6       9.5     951.1       2.4     625.1      63.7   1290.20
       .49      2.00     14.70      1.09      .040      .040      .040      .000   1277.90   9933.27
   .009316      790.      787.      780.         6        11         0       .00    146.91  10080.18


FLOW DISTRIBUTION FOR SECNO=     17.93          CWSEL=   1290.53

STA=    9933.    9956.   10066.   10080.
  PER Q=       .1     99.8       .0
```

```
   AREA=      9.5    951.1      2.4
    VEL=      2.0     14.7      1.1
  DEPTH=       .4      8.6       .2

CCHV=     .300 CEHV=     .500
*SECNO 18.042

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.54

    18.042     11.50   1293.80       .00       .00   1297.31      3.51      3.35       .08   1307.40
   14000.0       .0   14000.0        .0        .0     931.8        .0     637.7      65.3   1307.40
       .50       .00     15.03       .00      .000      .025      .000      .000   1282.30   9951.63
   .003914      620.      581.      550.         4         0         0       .00     96.72  10048.35


FLOW DISTRIBUTION FOR SECNO=     18.04          CWSEL=   1293.80

STA=    9952.   10049.
  PER Q=    100.0
   AREA=    931.8
    VEL=     15.0
  DEPTH=      9.6

1
   12AUG05      13:19:13
        PAGE   37


    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


SPECIAL BRIDGE

SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     1.05       1.56       3.00        .00      75.00       4.00    1059.00       .81    1280.20    1279.90

*SECNO 18.061
CLASS A LOW FLOW

3420 BRIDGE W.S.=    1293.57 BRIDGE VELOCITY=      12.63     CALCULATED CHANNEL AREA=      1094.

 EGPRS      EGLWC       H3        QWEIR      QLOW       BAREA    TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                    AREA
   1298.04   1298.17     1.02        0.     14000.      1059.     1060.     1293.20    1301.60        0.


    18.061     11.72   1294.82       .00       .00   1298.17      3.35       .86       .00   1308.20
   14000.0       .0   14000.0        .0        .0     952.6        .0     639.9      65.6   1308.20
       .50       .00     14.70       .00      .000      .025      .000      .000   1283.10   9951.62
   .003653      101.      101.      101.         0         0         0       .00     96.74  10048.36


FLOW DISTRIBUTION FOR SECNO=     18.06          CWSEL=   1294.82

STA=    9952.   10049.
  PER Q=    100.0
   AREA=    952.6
    VEL=     14.7
  DEPTH=      9.8

*SECNO 18.081

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.22

    18.081     17.29   1298.39       .00       .00   1299.11       .72       .15       .79   1286.60
   14000.0     959.6   11709.6    1330.8     257.8    1619.4     318.3     643.7      65.9   1284.90
       .51      3.72      7.23      4.18      .035      .035      .035      .000   1281.10   9895.90
   .000743       80.      106.      130.         3         0         0       .00    201.10  10097.00
```

```
1
    12AUG05       13:19:13
         PAGE    38

     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=     18.08          CWSEL=   1298.39

 STA=    9896.     9942.    10045.    10088.    10097.
   PER Q=       6.9      83.6       9.5        .0
    AREA=     257.8    1619.4     313.4       4.9
     VEL=       3.7       7.2       4.2        .8
   DEPTH=       5.6      15.7       7.3        .5

 CCHV=     .100 CEHV=     .300
 *SECNO 18.174

 3265 DIVIDED FLOW

     18.174     17.38   1299.08       .00       .00   1299.43       .34       .28       .04   1288.70
    14000.0    1401.8   11002.5    1595.7     407.0    2155.4     756.2     674.8      70.0   1294.60
        .54      3.44      5.10      2.11      .035      .035      .035      .000   1281.70   9861.25
    .000439      500.      491.      490.         2         0         0       .00    524.56  10424.64

 FLOW DISTRIBUTION FOR SECNO=     18.17          CWSEL=   1299.08

 STA=    9861.     9904.     9915.     9919.    10073.    10142.    10182.    10236.    10425.
   PER Q=       4.6       4.1       1.3      78.6       3.5       4.2       3.2        .5
    AREA=     236.9     125.8      44.3    2155.4     235.2     215.3     207.0      98.7
     VEL=       2.7       4.5       4.3       5.1       2.1       2.7       2.2        .7
   DEPTH=       5.5      11.4      11.1      14.0       3.4       5.4       3.8        .5

 *SECNO 18.269

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .66

     18.269     15.30   1299.10       .00       .00   1299.88       .77       .32       .13   1288.40
    14000.0    1953.1   11555.0     491.9     383.2    1550.7     148.4     705.9      74.3   1292.40
        .56      5.10      7.45      3.32      .035      .035      .035      .000   1283.80   9885.96
    .001007      500.      502.      500.         2         0         0       .00    217.76  10103.72

 FLOW DISTRIBUTION FOR SECNO=     18.27          CWSEL=   1299.10

 STA=    9886.     9928.     9942.    10060.    10071.    10104.
   PER Q=       6.8       7.2      82.5       2.0       1.5
    AREA=     231.3     151.9    1550.7      64.9      83.4
     VEL=       4.1       6.6       7.5       4.4       2.5
   DEPTH=       5.5      10.9      13.1       5.9       2.6

1
    12AUG05       13:19:13
         PAGE    39

     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 18.362
     18.362     14.22   1299.52       .00       .00   1300.52      1.00       .57       .07   1290.00
    14000.0     900.4   12288.7     810.9     195.3    1465.3     192.9     728.2      76.7   1290.60
        .57      4.61      8.39      4.20      .035      .035      .035      .000   1285.30   9900.34
    .001372      490.      491.      510.         2         0         0       .00    202.91  10103.25

 FLOW DISTRIBUTION FOR SECNO=     18.36          CWSEL=   1299.52
```

```
STA=    9900.    9905.    9942.   10060.   10103.
  PER Q=       .0      6.4     87.8      5.8
   AREA=      2.1    193.2   1465.3    192.9
    VEL=       .9      4.7      8.4      4.2
  DEPTH=       .5      5.2     12.4      4.5

*SECNO 18.445

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    18.445     17.73   1305.03   1305.03       .00   1307.09      2.07      1.01       .32   1290.00
   14000.0    4648.2    3602.1    5749.7     531.4     212.9     630.6     744.9      79.4   1290.00
       .59      8.75     16.92      9.12      .035      .035      .035      .000   1287.30   9887.57
   .004266      470.      440.      460.        20        11         0       .00    317.19  10204.77

FLOW DISTRIBUTION FOR SECNO=     18.44          CWSEL=   1305.03

STA=    9888.    9920.    9978.    9992.   10005.   10040.   10060.   10097.   10200.
  PER Q=      3.0     18.4     11.9     25.7     31.5      4.0      3.4      2.1
   AREA=     81.5    306.0    143.9    212.9    350.9     80.5     93.5    105.7
    VEL=      5.1      8.4     11.6     16.9     12.6      7.0      5.1      2.8
  DEPTH=      2.5      5.3     10.3     16.4     10.0      4.0      2.5      1.0

1
   12AUG05      13:19:13
        PAGE   40

    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


SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
      .90      2.34      3.00       .00      6.11      1.00     33.20       .00   1287.70   1287.40

*SECNO 18.456

3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.50

PRESSURE AND WEIR FLOW,  Weir Submergence Based on TRAPEZOIDAL Shape

 EGPRS      EGLWC       H3       QWEIR      QPR       BAREA   TRAPEZOID      ELLC      ELTRD     WEIRLN
                                                              AREA
   7766.18   1308.05      .96    13709.      299.       33.       33.     1294.20   1299.50      453.

    18.456     19.35   1307.05       .00       .00   1307.98       .93       .89       .00   1290.40
   14000.0    4707.5    2811.5    6481.0     710.4     234.1    1100.4     747.3      79.9   1290.40
       .59      6.63     12.01      5.89      .035      .035      .035      .000   1287.70   9875.70
   .001894       60.       60.       60.         3         0         8       .00    439.86  10315.56

FLOW DISTRIBUTION FOR SECNO=     18.46          CWSEL=   1307.05

STA=    9876.    9920.    9978.    9992.   10005.   10040.   10060.   10097.   10200.   10310.   10316.
  PER Q=      4.3     19.2     10.1     20.1     27.0      4.7      5.2      6.9      2.4       .0
   AREA=    143.2    400.5    166.7    234.1    407.9    113.1    153.8    273.5    149.1      2.9
    VEL=      4.2      6.7      8.5     12.0      9.3      5.8      4.8      3.5      2.3      1.2
  DEPTH=      3.2      6.9     11.9     18.0     11.7      5.7      4.2      2.7      1.4       .5

*SECNO 18.545

3301 HV CHANGED MORE THAN HVINS
```

```
3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.14

    18.545     18.67   1307.97       .00       .00   1308.39       .41       .36       .05   1294.10
   14000.0    1543.1   10379.0    2078.0     473.5    1824.0     647.9     773.9      83.8   1293.80
       .61      3.26      5.69      3.21      .035      .035      .035      .000   1289.30   9882.82
   .000412      440.      466.      480.         2         0         0       .00    285.11  10167.92


1
   12AUG05      13:19:13
        PAGE   41

     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=     18.55          CWSEL=   1307.97

 STA=    9883.    9889.    9951.   10058.   10073.   10094.   10108.   10121.   10135.   10168.
   PER Q=      .0     11.0     74.1      5.4      4.7      1.8       .9      1.1       .9
    AREA=     3.9    469.6   1824.0    175.1    182.1     89.2     56.2     63.3     81.9
     VEL=      .6      3.3      5.7      4.3      3.6      2.9      2.3      2.4      1.6
   DEPTH=      .6      7.6     17.0     11.7      8.7      6.4      4.3      4.5      2.5

 *SECNO 18.575
    18.575     18.80   1308.10       .00       .00   1308.46       .36       .06       .01   1291.50
   14000.0    3224.5    2900.3    7875.2     803.5     501.9    1676.2     784.8      84.9   1289.70
       .62      4.01      5.78      4.70      .035      .035      .035      .000   1289.30   9882.20
   .000397      160.      160.      160.         2         0         0       .00    286.56  10168.76


 FLOW DISTRIBUTION FOR SECNO=     18.58          CWSEL=   1308.10

 STA=    9882.    9951.    9972.   10000.   10018.   10040.   10058.   10073.   10094.   10135.   10169.
   PER Q=     11.1     11.9     20.7     14.0     16.4     10.9      5.4      4.8      3.9      1.0
    AREA=    482.2    321.3    501.9    331.2    396.0    287.1    177.0    184.8    214.0     86.1
     VEL=      3.2      5.2      5.8      5.9      5.8      5.3      4.2      3.6      2.6      1.6
   DEPTH=      7.0     15.3     17.9     18.4     18.0     16.0     11.8      8.8      5.2      2.6


 SPECIAL BRIDGE

 SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
      1.25      1.56      3.00       .00     10.40      1.00     56.50       .00   1289.40   1289.30

 *SECNO 18.583
 PRESSURE AND WEIR FLOW,  Weir Submergence Based on TRAPEZOIDAL Shape

  EGPRS      EGLWC      H3        QWEIR     QPR       BAREA     TRAPEZOID      ELLC      ELTRD     WEIRLN
                                                                 AREA
   2795.40   1308.53       .07    13587.     410.       57.       56.      1295.40   1299.00      282.


    18.583     19.67   1309.07       .00       .00   1309.38       .30       .92       .00   1291.60
   14000.0    3311.6    2810.4    7878.0     883.9     526.4    1826.4     787.6      85.1   1289.80
       .63      3.75      5.34      4.31      .035      .035      .035      .000   1289.40   9877.96
   .000318       40.       40.       40.         2         0         7       .00    296.60  10174.55


1
   12AUG05      13:19:13
        PAGE   42

     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=     18.58          CWSEL=   1309.07

STA=    9878.    9951.    9972.   10000.   10018.   10040.   10058.   10073.   10094.   10121.   10175.
  PER Q=     12.0     11.7     20.1     13.5     15.9     10.6      5.4      5.0      3.2      2.6
   AREA=    544.2    339.7    526.4    347.0    415.3    302.9    190.1    203.2    172.5    195.5
    VEL=      3.1      4.8      5.3      5.4      5.4      4.9      4.0      3.4      2.6      1.9
  DEPTH=      7.5     16.2     18.8     19.3     18.9     16.8     12.7      9.7      6.4      3.7

*SECNO 18.640
    18.640     18.81   1309.01      .00      .00   1309.59      .58      .13      .08   1294.60
   14000.0    2075.2    9094.0   2830.8    481.8    1318.6    669.1    807.6     87.1   1293.40
       .64      4.31      6.90     4.23     .035      .035     .035     .000  1290.20   9882.44
   .000613      300.      301.     310.        2         0        0      .00   249.64  10132.09


FLOW DISTRIBUTION FOR SECNO=     18.64          CWSEL=   1309.01

STA=    9882.    9920.    9955.   10033.   10111.   10132.
  PER Q=      2.0     12.8     65.0     20.2       .1
   AREA=    117.3    364.4   1318.6    656.2     12.9
    VEL=      2.4      4.9      6.9      4.3       .8
  DEPTH=      3.1     10.4     16.9      8.4       .6

*SECNO 18.734
    18.734     16.85   1309.25      .00      .00   1310.01      .76      .37      .05   1298.60
   14000.0    1123.0   12391.7    485.2    280.7    1694.4    153.8    833.8     89.8   1300.80
       .66      4.00      7.31     3.16     .035      .035     .035     .000  1292.40   9885.20
   .000922      490.      496.     500.        1         0        0      .00   225.02  10110.22


FLOW DISTRIBUTION FOR SECNO=     18.73          CWSEL=   1309.25

STA=    9885.    9938.   10062.   10094.   10104.   10110.
  PER Q=      8.0     88.5      3.3       .1       .0
   AREA=    280.7   1694.4    139.1      9.5      5.1
    VEL=      4.0      7.3      3.4      1.2      1.1
  DEPTH=      5.3     13.7      4.3       .9       .8

*SECNO 18.832
    18.832     16.53   1309.73      .00      .00   1310.50      .77      .48      .00   1302.80
   14000.0     357.3   11888.9   1753.8    121.2    1603.8    369.7    858.8     92.3   1297.10
       .68      2.95      7.41     4.74     .035      .035     .035     .000  1293.20   9894.00
   .000943      480.      517.     540.        2         0        0      .00   211.45  10105.46


1
   12AUG05      13:19:13
        PAGE   43

    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=     18.83          CWSEL=   1309.73

STA=    9894.    9929.   10046.   10095.   10105.
  PER Q=      2.6     84.9     12.4       .1
   AREA=    121.2   1603.8    359.1     10.6
    VEL=      2.9      7.4      4.8      1.3
  DEPTH=      3.5     13.7      7.3      1.0

*SECNO 18.925
    18.925     15.55   1310.15      .00      .00   1311.03      .88      .50      .03   1297.60
   14000.0    1503.6   11725.8    770.6    322.8    1471.8    191.4    881.8     94.6   1300.00
       .70      4.66      7.97     4.03     .035      .035     .035     .000  1294.60   9889.56
   .001081      480.      491.     500.        2         0        0      .00   196.14  10085.70


FLOW DISTRIBUTION FOR SECNO=     18.92          CWSEL=   1310.15

STA=    9890.    9941.   10048.   10086.
  PER Q=     10.7     83.8      5.5
   AREA=    322.8   1471.8    191.4
```

```
    VEL=       4.7       8.0       4.0
  DEPTH=       6.3      13.8       5.1

*SECNO 19.018

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .62

    19.018      12.81   1310.41       .00       .00   1312.07      1.66       .80       .23   1305.10
   14000.0      382.7   13602.1      15.2      89.7    1301.2       6.9     900.8      96.7   1308.40
       .71       4.27     10.45      2.19      .035      .035      .035      .000   1297.60   9869.21
   .002792       460.      491.      520.         2         0         0       .00    167.69  10036.90


FLOW DISTRIBUTION FOR SECNO=     19.02          CWSEL=   1310.41

STA=    9869.     9903.    10030.    10037.
  PER Q=       2.7      97.2        .1
   AREA=      89.7    1301.2       6.9
    VEL=       4.3      10.5       2.2
  DEPTH=       2.7      10.2       1.0

1
    12AUG05      13:19:13
         PAGE   44


     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 19.117

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    19.117      13.26   1311.86   1311.86       .00   1316.05      4.19      2.16       .76   1302.90
   14000.0     1191.5   11024.4    1784.1     129.7     619.1     176.2     914.7      98.4   1301.50
       .72       9.18     17.81     10.13      .035      .035      .035      .000   1298.60   9944.03
   .006733       490.      523.      560.        20         8         0       .00    115.99  10060.02


FLOW DISTRIBUTION FOR SECNO=     19.12          CWSEL=   1311.86

STA=    9944.     9973.    10026.    10060.
  PER Q=       8.5      78.7      12.7
   AREA=     129.7     619.1     176.2
    VEL=       9.2      17.8      10.1
  DEPTH=       4.5      11.7       5.2

*SECNO 19.210

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.61

    19.210      16.31   1316.51       .00       .00   1318.23      1.73      1.94       .25   1312.00
   14000.0      157.7   13691.0     151.3      43.2    1286.0      41.5     927.7      99.9   1312.00
       .73       3.65     10.65      3.64      .035      .035      .035      .000   1300.20   9925.83
   .002589       500.      491.      490.         3         0         0       .00    152.59  10078.42


FLOW DISTRIBUTION FOR SECNO=     19.21          CWSEL=   1316.51

STA=    9926.     9945.    10060.    10078.
  PER Q=       1.1      97.8       1.1
   AREA=      43.2    1286.0      41.5
    VEL=       3.6      10.6       3.6
  DEPTH=       2.3      11.2       2.3
```

```
1
    12AUG05      13:19:13
         PAGE   45

     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=     .300 CEHV=     .500
 *SECNO 19.283

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1324.00 ELREA=      1324.00

     19.283      7.99   1319.69   1319.69       .00   1323.70      4.01      1.69      1.14   1311.70
    14000.0       .0   14000.0        .0        .0    870.8        .0     937.6     101.0   1311.70
       .74       .00     16.08       .00      .000      .035      .000      .000   1311.70   9948.00
    .008978     390.      386.      390.        20        11         0       .00    109.00  10057.00

 FLOW DISTRIBUTION FOR SECNO=     19.28          CWSEL=   1319.69

 STA=    9948.   10057.
   PER Q=    100.0
    AREA=    870.8
     VEL=     16.1
   DEPTH=      8.0

 SPECIAL BRIDGE

 5227 DOWNSTREAM ELEV IS    1318.52 , NOT    1319.69 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW
CONTROLS)

 SB  XK        XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
       .90      1.56       3.00        .00    109.00       4.50    1304.00       .00    1311.70    1311.70

 *SECNO 19.299

 3301 HV CHANGED MORE THAN HVINS

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.47

 CLASS B LOW FLOW

1
    12AUG05      13:19:13
         PAGE   46

     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

 3420 BRIDGE W.S.=     1319.93 BRIDGE VELOCITY=       16.28     CALCULATED CHANNEL AREA=        860.

  EGPRS       EGLWC       H3         QWEIR      QLOW       BAREA      TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                        AREA
    1322.48   1324.30       .00         0.    14000.      1304.      1306.      1324.20    1326.50         0.

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1325.00 ELREA=      1325.00
```

```
    19.299      10.07   1321.77       .00        .00   1324.30      2.53       .59       .00   1311.70
   14000.0         .0   14000.0        .0         .0    1097.6        .0     939.6     101.3   1311.70
       .74        .00     12.76       .00       .000      .035      .000      .000   1311.70   9948.00
   .004150        86.       86.       86.          0         0         0       .00    109.00  10057.00

FLOW DISTRIBUTION FOR SECNO=     19.30          CWSEL=   1321.77

STA=    9948.   10057.
  PER Q=    100.0
   AREA=   1097.6
    VEL=     12.8
  DEPTH=     10.1

*SECNO 19.313

3301 HV CHANGED MORE THAN HVINS

    19.313      11.19   1322.89       .00        .00   1324.80      1.90       .31       .19   1327.90
   14000.0         .0   14000.0        .0         .0    1264.4        .0     941.6     101.5   1325.50
       .74        .00     11.07       .00       .000      .035      .000      .000   1311.70   9945.47
   .004343        75.       74.       75.          3         0         0       .00    157.00  10102.47

FLOW DISTRIBUTION FOR SECNO=     19.31          CWSEL=   1322.89

STA=    9945.   10112.
  PER Q=    100.0
   AREA=   1264.4
    VEL=     11.1
  DEPTH=      8.1

1
    12AUG05      13:19:13
         PAGE   47

     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 19.418
    19.418      12.34   1325.34       .00        .00   1327.13      1.79      2.32       .01   1328.00
   14000.0         .0   14000.0        .0         .0    1302.3        .0     957.9     103.5   1326.10
       .76        .00     10.75       .00       .000      .035      .000      .000   1313.00   9955.86
   .004058       570.      554.      530.          2         0         0       .00    160.84  10116.70

FLOW DISTRIBUTION FOR SECNO=     19.42          CWSEL=   1325.34

STA=    9956.   10120.
  PER Q=    100.0
   AREA=   1302.3
    VEL=     10.8
  DEPTH=      8.1

*SECNO 19.560
    19.560      12.37   1327.97       .00        .00   1329.83      1.87      2.68       .02   1329.70
   14000.0         .0   14000.0        .0         .0    1276.0        .0     979.5     105.9   1330.60
       .78        .00     10.97       .00       .000      .035      .000      .000   1315.60   9931.76
   .003346       730.      729.      720.          3         0         0       .00    128.82  10060.58

FLOW DISTRIBUTION FOR SECNO=     19.56          CWSEL=   1327.97

STA=    9932.   10065.
  PER Q=    100.0
   AREA=   1276.0
    VEL=     11.0
  DEPTH=      9.9

CCHV=      .300 CEHV=      .500
*SECNO 19.625
```

```
3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.51

1
   12AUG05      13:19:13
        PAGE   48

    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


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1332.00 ELREA=      1332.00

    19.625     11.84   1329.44       .00        .00   1330.47       1.04        .39        .25   1317.60
    5800.0        .0   5800.0        .0         .0     710.2         .0      987.8      106.7   1317.60
       .79       .00      8.17       .00       .000      .015       .000       .000    1317.60   9965.00
   .000252      580.      364.       70.          2         0          0        .00      60.00  10025.00

FLOW DISTRIBUTION FOR SECNO=     19.63          CWSEL=   1329.44

STA=    9965.   10025.
  PER Q=    100.0
   AREA=    710.2
    VEL=      8.2
  DEPTH=     11.8


SPECIAL BRIDGE

SB  XK        XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     1.05      1.56       3.00     100.00      60.00       2.00     564.00        .00    1318.60    1317.60

*SECNO 19.691
PRESSURE FLOW

 EGPRS      EGLWC      H3         QWEIR      QPR        BAREA   TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                   AREA
  1332.00   1330.75       .10        0.      5800.       564.      563.     1328.30    1334.80         0.


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1333.00 ELREA=      1333.00

    19.691     12.46   1331.06       .00        .00   1332.00        .93       1.53        .00   1318.60
    5800.0        .0   5800.0        .0         .0     748.3         .0      993.6      107.2   1318.60
       .80       .00      7.75       .00       .000      .015       .000       .000    1318.60   9965.00
   .000212      330.      350.      430.          2         0          0        .00      60.00  10025.00

FLOW DISTRIBUTION FOR SECNO=     19.69          CWSEL=   1331.06

1
   12AUG05      13:19:13
        PAGE   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=    9965.   10025.
  PER Q=    100.0
   AREA=    748.3
    VEL=      7.8
  DEPTH=     12.5
```

```
*SECNO 19.742
    19.742      12.47   1331.57       .00       .00   1332.16       .58       .05       .10   1331.60
    5800.0        .0    5799.9        .1        .0     946.7        .3     998.8     107.7   1331.00
       .81       .00      6.13       .23      .000      .015      .035      .000   1319.10   9948.04
   .000195       80.      269.      470.         2         0         0       .00     94.88  10042.91

FLOW DISTRIBUTION FOR SECNO=     19.74          CWSEL=   1331.57

STA=    9948.   10042.   10043.
  PER Q=    100.0       .0
   AREA=    946.7       .3
    VEL=      6.1       .2
  DEPTH=     10.1       .3

CCHV=     .100 CEHV=     .300
*SECNO 19.847

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .36

    19.847      12.95   1331.75       .00       .00   1332.42       .67       .23       .03   1336.30
    5800.0        .0    5800.0        .0        .0     882.7        .0    1010.5     109.0   1335.80
       .84       .00      6.57       .00      .000      .035      .000      .000   1318.80   9941.73
   .001525      570.      554.      520.         2         0         0       .00    107.54  10049.26

FLOW DISTRIBUTION FOR SECNO=     19.85          CWSEL=   1331.75

STA=    9942.   10062.
  PER Q=    100.0
   AREA=    882.7
    VEL=      6.6
  DEPTH=      8.2

1
    12AUG05      13:19:13
         PAGE   50

    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 19.960

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    19.960       7.66   1332.26   1332.26       .00   1335.02      2.76      1.86       .63   1330.00
    5800.0       35.9    5734.8      29.3       8.2     428.3       6.8    1019.6     110.3   1330.00
       .85       4.39     13.39      4.33      .035      .035      .035      .000   1324.60   9950.77
   .009627       640.      597.      560.         2        14         0       .00     86.21  10036.98

FLOW DISTRIBUTION FOR SECNO=     19.96          CWSEL=   1332.26

STA=    9951.    9958.   10031.   10037.
  PER Q=       .6     98.9       .5
   AREA=      8.2    428.3      6.8
    VEL=      4.4     13.4      4.3
  DEPTH=      1.1      5.9      1.1

CCHV=     .300 CEHV=     .500
*SECNO 19.974

3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.61

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1336.00 ELREA=      1336.00
```

```
    19.974      9.68   1333.48       .00       .00   1335.62      2.15       .42       .18   1323.80
    5800.0        .0    5800.0        .0        .0    493.5        .0    1020.4     110.4   1323.80
       .85       .00     11.75       .00      .000     .035      .000      .000   1323.80   9969.00
   .003717      105.       74.       65.         3        0         0       .00     51.00  10020.00

 FLOW DISTRIBUTION FOR SECNO=     19.97          CWSEL=   1333.48

 STA=    9969.   10020.
   PER Q=    100.0
    AREA=    493.5
     VEL=     11.8
   DEPTH=      9.7

1
    12AUG05      13:19:13
         PAGE   51

     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


 SPECIAL BRIDGE

 SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
      1.25       1.56       3.00        .00      51.00       3.00     480.00        .00    1324.10    1323.80

 *SECNO 19.986

 3301 HV CHANGED MORE THAN HVINS

 PRESSURE FLOW

  EGPRS       EGLWC       H3         QWEIR      QPR        BAREA      TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                        AREA
    1337.01   1336.18       .91         0.      5800.       480.       480.       1334.10    1337.90         0.


 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1337.00 ELREA=      1337.00

    19.986     11.76   1335.56       .00       .00   1337.01      1.45      1.39       .00   1323.80
    5800.0        .0    5800.0        .0        .0    599.7        .0    1021.1     110.5   1323.80
       .85       .00      9.67       .00      .000     .035      .000      .000   1323.80   9969.00
   .001940       61.       61.       61.         8        0         0       .00     51.00  10020.00

 FLOW DISTRIBUTION FOR SECNO=     19.99          CWSEL=   1335.56

 STA=    9969.   10020.
   PER Q=    100.0
    AREA=    599.7
     VEL=      9.7
   DEPTH=     11.8

 *SECNO 20.049

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
1
    12AUG05      13:19:13
         PAGE   52

     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


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1340.00 ELREA=      1339.40

    20.049     11.36   1338.46   1338.46       .00   1342.02       3.56       1.27       1.06   1343.40
    5800.0       .0    5800.0       .0        .0     382.9         .0     1024.9      110.9   1339.40
       .86      .00     15.15       .00      .000      .035       .000       .000    1327.10   9971.38
   .010686     305.      333.      345.        20        10          0        .00      53.99  10025.37


FLOW DISTRIBUTION FOR SECNO=     20.05          CWSEL=   1338.46

STA=    9971.   10027.
  PER Q=    100.0
   AREA=    382.9
    VEL=     15.1
  DEPTH=      7.1

CCHV=     .100 CEHV=     .300
*SECNO 20.144

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.69


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1344.00 ELREA=      1340.80

    20.144     12.69   1343.59       .00       .00   1345.18       1.59       2.97        .20   1344.60
    5800.0       .0    5677.5     122.5        .0     555.8       34.8     1030.5      111.7   1340.80
       .87      .00     10.21      3.52      .000      .035       .040       .000    1330.90   9960.03
   .003741     490.      502.      500.         2         0          0        .00      84.87  10044.90


FLOW DISTRIBUTION FOR SECNO=     20.14          CWSEL=   1343.59

STA=    9960.   10025.   10040.   10045.
  PER Q=     97.9      2.0       .1
   AREA=    555.8     31.4      3.4
    VEL=     10.2      3.7      1.7
  DEPTH=      8.6      2.1       .7

1
    12AUG05      13:19:13
         PAGE   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       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*SECNO 20.242

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1348.00 ELREA=      1342.80

    20.242     12.30   1345.60       .00       .00   1347.17       1.58       1.99        .00   1347.20
    5800.0       .0    5633.8     166.2        .0     552.3       42.5     1037.6      112.7   1342.80
       .89      .00     10.20      3.91      .000      .035       .040       .000    1333.30   9960.78
   .003927     470.      517.      560.         3         0          0        .00      89.63  10050.41


FLOW DISTRIBUTION FOR SECNO=     20.24          CWSEL=   1345.60

STA=    9961.   10029.   10041.   10050.
  PER Q=     97.1      2.4       .5
   AREA=    552.3     31.2     11.3
    VEL=     10.2      4.4      2.6
  DEPTH=      8.1      2.6      1.2

*SECNO 20.335
    20.335     10.23   1347.53       .00       .00   1348.72       1.18       1.51        .04   1344.00
    5800.0      34.1    5734.7      31.2      13.5     653.3       12.5     1044.7      113.7   1344.00
```

```
      .90       2.53       8.78       2.50       .040       .035       .040       .000   1337.30   9950.36
  .002464       510.       491.       470.          2          0          0        .00     88.70  10039.06

FLOW DISTRIBUTION FOR SECNO=     20.33          CWSEL=   1347.53

STA=    9950.    9958.   10032.   10039.
  PER Q=        .6      98.9        .5
   AREA=      13.5     653.3      12.5
    VEL=       2.5       8.8       2.5
  DEPTH=       1.8       8.8       1.8

CCHV=     .300 CEHV=     .500
*SECNO 20.347

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1351.50 ELREA=      1351.50

1
   12AUG05      13:19:13
        PAGE   54

    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

    20.347     10.12    1347.32        .00        .00    1349.28      1.96        .18        .39    1337.20
    5800.0        .0    5800.0         .0         .0      516.3        .0     1045.6      113.8    1337.20
       .91       .00     11.23        .00       .000       .035      .000       .000    1337.20    9970.00
  .003197        1.       63.       150.          2          0         0        .00      51.00   10021.00

FLOW DISTRIBUTION FOR SECNO=     20.35          CWSEL=   1347.32

STA=    9970.   10021.
  PER Q=    100.0
   AREA=    516.3
    VEL=     11.2
  DEPTH=     10.1

SPECIAL BRIDGE

SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     1.25       1.56       3.00     100.00      51.00       3.00     576.00        .00    1337.70    1337.20

*SECNO 20.366
PRESSURE FLOW

 EGPRS      EGLWC      H3         QWEIR      QPR        BAREA    TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                    AREA
  1349.78   1349.77       .75        0.      5800.       576.       576.     1349.70    1354.50        0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1352.50 ELREA=      1352.50

    20.366     10.88    1348.08        .00        .00    1349.78      1.70        .50        .00    1337.20
    5800.0        .0    5800.0         .0         .0      555.1        .0     1046.8      114.0    1337.20
       .91       .00     10.45        .00       .000       .035      .000       .000    1337.20    9970.00
  .002510      100.      100.       100.          3          0         0        .00      51.00   10021.00

FLOW DISTRIBUTION FOR SECNO=     20.37          CWSEL=   1348.08

STA=    9970.   10021.
  PER Q=    100.0
   AREA=    555.1
    VEL=     10.4
  DEPTH=     10.9
```

```
1
    12AUG05       13:19:13
         PAGE    55

     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 20.423

 3301 HV CHANGED MORE THAN HVINS

     20.423     11.71   1349.71       .00        .00   1350.65       .94        .64        .23   1345.00
     5800.0     109.1    5342.8     348.1       39.6     665.6      90.6     1051.5      114.5   1344.30
        .92      2.76      8.03      3.84       .040      .035      .040       .000    1338.00   9958.19
    .001850      415.      301.      205.          3         0         0        .00     113.82  10072.01

 FLOW DISTRIBUTION FOR SECNO=     20.42          CWSEL=   1349.71

 STA=    9958.    9975.   10045.   10055.   10072.
   PER Q=      1.9     92.1      4.1      1.9
    AREA=     39.6    665.6     50.6     40.0
     VEL=      2.8      8.0      4.7      2.8
   DEPTH=      2.4      9.5      5.1      2.4

 *SECNO 20.430

 3301 HV CHANGED MORE THAN HVINS

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1352.50 ELREA=      1352.50

     20.430      9.96   1349.26       .00        .00   1351.28      2.02        .09        .54   1339.30
     5800.0        .0    5800.0        .0         .0     507.9        .0     1052.0      114.6   1339.30
        .92       .00     11.42       .00       .000      .035      .000       .000    1339.30   9985.00
    .003375        1.       37.       65.          2         0         0        .00      51.00  10036.00

 FLOW DISTRIBUTION FOR SECNO=     20.43          CWSEL=   1349.26

 STA=    9985.   10036.
   PER Q=    100.0
    AREA=    507.9
     VEL=     11.4
   DEPTH=     10.0

1
    12AUG05       13:19:13
         PAGE    56

     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


 SPECIAL BRIDGE

 SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
      1.25       1.56       3.00     100.00      51.00       3.00     576.00        .00    1339.30    1339.30

 *SECNO 20.444
 CLASS A LOW FLOW

 3420 BRIDGE W.S.=     1348.71 BRIDGE VELOCITY=       12.84     CALCULATED CHANNEL AREA=       452.

  EGPRS      EGLWC      H3         QWEIR      QLOW       BAREA      TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                      AREA
    1351.71   1351.79       .80        0.      5800.       576.       576.      1351.30    1355.50        0.
```

```
3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1353.50 ELREA=      1353.50

    20.444      10.76   1350.06       .00       .00   1351.79      1.74       .51       .00   1339.30
    5800.0         .0    5800.0        .0        .0     548.6        .0    1052.9     114.7   1339.30
       .92        .00     10.57       .00      .000      .035      .000      .000   1339.30   9985.00
   .002611        70.       70.       70.         0         0         0       .00     51.00  10036.00


FLOW DISTRIBUTION FOR SECNO=     20.44          CWSEL=   1350.06

STA=    9985.   10036.
  PER Q=    100.0
   AREA=    548.6
    VEL=     10.6
  DEPTH=     10.8

*SECNO 20.529

3301 HV CHANGED MORE THAN HVINS

    20.529       9.40   1352.40       .00       .00   1353.09       .69       .98       .32   1350.20
    5800.0      185.3    5460.1     154.6      76.5     800.5      67.5    1060.6     115.9   1350.40
       .94       2.42      6.82      2.29      .040      .035      .040      .000   1343.00   9904.90
   .001840       545.      449.      375.         3         0         0       .00    190.81  10095.71


1
    12AUG05      13:19:13
         PAGE    57

     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=     20.53          CWSEL=   1352.40

STA=    9905.    9910.    9947.   10055.   10090.   10096.
  PER Q=       .1      3.1     94.1      2.6       .1
   AREA=      4.3     72.1    800.5     63.0      4.6
    VEL=      1.4      2.5      6.8      2.4      1.3
  DEPTH=       .8      1.9      7.4      1.8       .8

CCHV=     .100 CEHV=     .300
*SECNO 20.628
    20.628      10.12   1353.42       .00       .00   1353.85       .43       .74       .03   1357.10
    5800.0         .0    5800.0        .0        .0    1106.1        .0    1072.9     118.0   1356.30
       .97        .00      5.24       .00      .000      .035      .000      .000   1343.30   9917.54
   .001113       530.      523.      520.         2         0         0       .00    151.15  10068.69


FLOW DISTRIBUTION FOR SECNO=     20.63          CWSEL=   1353.42

STA=    9918.   10076.
  PER Q=    100.0
   AREA=   1106.1
    VEL=      5.2
  DEPTH=      7.3

*SECNO 20.725

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    20.725       8.92   1356.12   1356.12       .00   1359.20      3.08      1.30       .80   1360.40
    5800.0         .0    5800.0        .0        .0     411.6        .0    1081.8     119.3   1361.00
       .98        .00     14.09       .00      .000      .035      .000      .000   1347.20   9959.14
   .010732       510.      512.      520.        20        11         0       .00     67.52  10026.66
```

```
 FLOW DISTRIBUTION FOR SECNO=     20.73          CWSEL=   1356.12

 STA=    9959.   10036.
   PER Q=    100.0
    AREA=    411.6
     VEL=     14.1
   DEPTH=      6.1

1
    12AUG05      13:19:13
         PAGE   58

     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=     .300 CEHV=     .500
 *SECNO 20.737

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1363.00 ELREA=      1363.00

     20.737      7.35   1358.25   1358.25       .00   1361.97      3.72       .80       .32   1350.90
     5800.0        .0    5800.0        .0        .0     374.9        .0    1082.6     119.4   1350.90
        .98       .00     15.47       .00      .000      .035      .000      .000   1350.90   9968.00
    .009291       80.       80.       80.        20        15         0       .00     51.00  10019.00

 FLOW DISTRIBUTION FOR SECNO=     20.74          CWSEL=   1358.25

 STA=    9968.   10019.
   PER Q=    100.0
    AREA=    374.9
     VEL=     15.5
   DEPTH=      7.4

 SPECIAL BRIDGE

 5227 DOWNSTREAM ELEV IS    1357.00 , NOT    1358.25 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW
CONTROLS)

 SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
      1.25       1.56       3.00     100.00      51.00       3.00     576.00        .00    1351.00    1350.90

 *SECNO 20.750

 3301 HV CHANGED MORE THAN HVINS

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.59

 CLASS B LOW FLOW

1
    12AUG05      13:19:13
         PAGE   59

     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

 3420 BRIDGE W.S.=    1358.63 BRIDGE VELOCITY=      15.73     CALCULATED CHANNEL AREA=       366.
```

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1362.84	.00	0.	5800.	576.	576.	1363.00	1366.00	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1364.00 ELREA= 1364.00

20.750	9.71	1360.71	.00	.00	1362.84	2.13	.87	.00	1351.00
5800.0	.0	5800.0	.0	.0	495.2	.0	1083.3	119.5	1351.00
.98	.00	11.71	.00	.000	.035	.000	.000	1351.00	9968.00
.003673	71.	71.	71.	0	0	0	.00	51.00	10019.00

FLOW DISTRIBUTION FOR SECNO= 20.75 CWSEL= 1360.71

STA= 9968. 10019.
PER Q= 100.0
AREA= 495.2
VEL= 11.7
DEPTH= 9.7

*SECNO 20.819

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .68

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1366.90 ELREA= 1366.90

20.819	5.97	1362.47	.00	.00	1364.88	2.41	1.90	.14	1356.50
5800.0	.0	5800.0	.0	.0	465.5	.0	1087.3	120.0	1356.50
.99	.00	12.46	.00	.000	.035	.000	.000	1356.50	9965.00
.007956	375.	365.	345.	3	0	0	.00	78.00	10043.00

FLOW DISTRIBUTION FOR SECNO= 20.82 CWSEL= 1362.47

STA= 9965. 10043.
PER Q= 100.0
AREA= 465.5
VEL= 12.5
DEPTH= 6.0

1
12AUG05 13:19:13
PAGE 60

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

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 1361.25 , NOT 1362.47 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	3.00	100.00	77.30	3.30	655.00	.00	1357.40	1356.50

*SECNO 20.841

3301 HV CHANGED MORE THAN HVINS

CLASS B LOW FLOW

3420 BRIDGE W.S.= 1362.70 BRIDGE VELOCITY= 13.62 CALCULATED CHANNEL AREA= 393.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1364.37	1366.18	.00	0.	5800.	655.	592.	1365.40	1369.90	0.

```
3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1367.90 ELREA=      1367.90

    20.841      7.06   1364.46       .00       .00   1366.18      1.72      1.30       .00   1357.40
    5800.0        .0    5800.0        .0        .0     551.0       .0    1088.6     120.2   1357.40
       .99       .00     10.53       .00      .000      .035      .000      .000   1357.40   9965.00
   .004534      115.      115.      115.         0         0         0       .00     78.00  10043.00

FLOW DISTRIBUTION FOR SECNO=     20.84          CWSEL=   1364.46

STA=    9965.   10043.
  PER Q=    100.0
   AREA=    551.0
    VEL=     10.5
  DEPTH=      7.1

*SECNO 20.860

3301 HV CHANGED MORE THAN HVINS

1
   12AUG05      13:19:13
        PAGE   61

    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


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.54

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1365.30 ELREA=      1367.60

    20.860      9.79   1366.09       .00       .00   1366.78       .69       .28       .31   1365.30
    5800.0     113.3    5686.7        .0      92.4    847.2        .0    1090.3     120.6   1367.60
      1.00      1.23      6.71       .00      .040      .035      .000      .000   1356.30   9800.87
   .001907       90.      100.      110.         2         0         0       .00    261.42  10062.29

FLOW DISTRIBUTION FOR SECNO=     20.86          CWSEL=   1366.09

STA=    9801.    9846.    9942.   10066.
  PER Q=       .5      1.4     98.0
   AREA=     26.4     65.9    847.2
    VEL=      1.1      1.3      6.7
  DEPTH=       .6       .7      7.0

CCHV=     .100 CEHV=     .300
*SECNO 20.942

3265 DIVIDED FLOW

    20.942      7.77   1367.37       .00       .00   1367.80       .43      1.00       .03   1368.60
    5800.0        .0    3776.6    2023.4        .2     686.9     429.2    1100.9     123.7   1366.50
      1.02       .30      5.50      4.71      .040      .035      .035      .000   1359.60   9629.64
   .002674      530.      433.      490.         2         0         0       .00    314.44  10168.50

FLOW DISTRIBUTION FOR SECNO=     20.94          CWSEL=   1367.37

STA=    9630.    9631.   10024.   10027.   10053.   10070.   10114.   10153.   10169.
  PER Q=       .0     65.1       .3      5.4      2.5      6.5     16.9      3.3
   AREA=       .1    686.9      5.3     72.1     38.6     99.9    168.5     44.7
    VEL=       .4      5.5      2.9      4.3      3.8      3.8      5.8      4.3
  DEPTH=       .1      4.1      1.8      2.8      2.3      2.3      4.3      2.9

*SECNO 21.036
1
   12AUG05      13:19:13
        PAGE   62

    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

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
     21.036      8.51    1372.01    1372.01        .00    1373.11      1.10       1.71        .20    1370.70
     5800.0     419.3     5236.6      144.0      207.5      593.3      59.9     1112.1      128.6    1370.40
       1.04      2.02       8.83       2.40       .040       .035      .040       .000    1363.50    9540.98
    .004622      490.       496.       490.         20         11         0        .00     548.05   10089.03


 FLOW DISTRIBUTION FOR SECNO=     21.04          CWSEL=   1372.01

 STA=    9541.    9665.    9728.    9758.    9867.    9912.   10020.   10041.   10075.   10089.
   PER Q=      .8       .6       .1      3.0      2.7     90.3      1.3      1.0       .2
    AREA=    37.3     25.6      7.7     82.5     54.3    593.3     25.3     27.4      7.1
     VEL=     1.3      1.4      1.0      2.1      2.9      8.8      2.9      2.2      1.6
   DEPTH=      .3       .4       .3       .8      1.2      5.5      1.2       .8       .5

 *SECNO 21.127
 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1374.00 ELREA=      1375.00

     21.127      8.08    1374.78    1374.78        .00    1375.78      1.00       2.11        .01    1374.20
     5800.0    1127.6     4672.4         .0      404.7      528.3        .0     1121.5      133.4    1375.00
       1.05      2.79       8.84        .00       .040       .035      .000       .000    1366.70    9631.56
    .004382      400.       480.       500.          3         10         0        .00     434.58   10066.13


 FLOW DISTRIBUTION FOR SECNO=     21.13          CWSEL=   1374.78

 STA=    9632.    9634.    9666.    9759.    9860.    9913.    9974.   10067.
   PER Q=      .0      1.8      5.9      6.9      2.9      1.9     80.6
    AREA=     1.4     37.7    118.8    134.0     62.4     50.4    528.3
     VEL=     1.6      2.7      2.9      3.0      2.7      2.2      8.8
   DEPTH=      .6      1.2      1.3      1.3      1.2       .8      5.7

1
    12AUG05      13:19:13
         PAGE   63


     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 21.230

 3265 DIVIDED FLOW

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
     21.230      8.49    1380.49    1380.49        .00    1381.70      1.21       2.89        .06    1379.30
     5800.0     589.6     4020.6     1189.8      172.9      402.2     201.5     1132.1      138.0    1380.60
       1.07      3.41      10.00       5.90       .040       .035      .040       .000    1372.00    9816.25
    .006651      560.       544.       500.         20          9         0        .00     308.65   10126.37


 FLOW DISTRIBUTION FOR SECNO=     21.23          CWSEL=   1380.49

 STA=    9816.    9879.    9930.    9967.   10048.   10083.   10102.   10117.   10126.
   PER Q=      3.7      3.5      3.0     69.3      6.9      6.3      4.7      2.5
    AREA=    65.4     59.3     48.2    402.2     74.3     57.8     44.1     25.2
     VEL=     3.3      3.4      3.6     10.0      5.4      6.4      6.2      5.8
```

```
  DEPTH=      1.0      1.2      1.3      5.0      2.1      3.0      2.9      2.7

*SECNO 21.363

3265 DIVIDED FLOW

3280 CROSS SECTION     21.36 EXTENDED       .36 FEET


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.95

    21.363      9.26   1383.36       .00       .00   1383.91       .55      2.15       .07   1384.40
    5800.0     100.2    5662.9      36.9      50.8     939.6      46.9    1146.9     143.6   1382.10
      1.11      1.97      6.03       .79      .040      .035      .040      .000   1374.10   9556.03
   .001741      740.      702.      700.         2         0         0       .00    368.53  10337.00


FLOW DISTRIBUTION FOR SECNO=     21.36          CWSEL=   1383.36

1
   12AUG05      13:19:13
        PAGE   64


    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=    9556.    9923.   10088.   10337.
  PER Q=      1.7     97.6       .6
   AREA=     50.8    939.6     46.9
    VEL=      2.0      6.0       .8
  DEPTH=       .1      6.3       .2

*SECNO 21.484

3265 DIVIDED FLOW

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    21.484      8.04   1386.54   1386.54       .00   1387.48       .93      1.94       .11   1386.90
    5800.0    2096.9    3696.1       7.0     516.9     401.3       4.3    1161.2     149.9   1386.50
      1.13      4.06      9.21      1.62      .040      .035      .040      .000   1378.50   9497.28
   .006501      650.      639.      520.        20        12         0       .00    520.92  10076.86


FLOW DISTRIBUTION FOR SECNO=     21.48          CWSEL=   1386.54

STA=    9497.    9614.    9647.    9678.    9805.    9837.    9867.    9892.    9920.   10026.   10077.
  PER Q=      3.7      3.1      3.3      5.1      6.8      6.6      5.3      2.1     63.7       .1
   AREA=     84.1     47.6     47.8     97.1     75.0     71.8     58.6     34.9    401.3      4.3
    VEL=      2.5      3.8      4.0      3.0      5.3      5.4      5.3      3.5      9.2      1.6
  DEPTH=       .7      1.4      1.5       .8      2.3      2.4      2.3      1.2      4.5       .1

*SECNO 21.576

3265 DIVIDED FLOW

3280 CROSS SECTION     21.58 EXTENDED       .56 FEET

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    21.576      7.16   1389.26   1389.26       .00   1390.04       .78      2.54       .02   1390.00
    5800.0     756.7    4047.2     996.1     346.9     490.0     290.6    1171.0     155.9   1388.30
      1.15      2.18      8.26      3.43      .040      .035      .040      .000   1382.10   9388.00
   .005047      320.      486.      480.         2        12         0       .00    872.76  10340.87


1
   12AUG05      13:19:13
        PAGE   65
```

```
     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=     21.58          CWSEL=   1389.26

 STA=    9388.    9500.    9643.    9821.    9930.   10087.   10140.   10199.   10281.   10341.
   PER Q=      3.7      3.1      3.4      2.8     69.8      6.9      6.0      3.7       .5
    AREA=     91.9     84.2     99.0     71.8    490.0     98.3     95.8     80.3     16.1
     VEL=      2.3      2.2      2.0      2.3      8.3      4.0      3.7      2.7      1.9
   DEPTH=       .8       .6       .6       .7      4.6      1.9      1.6      1.0       .3

 *SECNO 21.669

 3265 DIVIDED FLOW

 3280 CROSS SECTION     21.67 EXTENDED       .19 FEET

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
     21.669      9.39   1393.39   1393.39       .00   1394.00       .61      2.30       .02   1393.80
     5600.0     936.5    2815.5    1848.0     398.2     338.9     564.1    1184.0     165.6   1392.00
       1.17      2.35      8.31      3.28      .040      .035      .040      .000   1384.00   9392.00
    .004579      440.      491.      470.        20        16         0       .00    981.92  10414.00


 FLOW DISTRIBUTION FOR SECNO=     21.67          CWSEL=   1393.39

 STA=    9392.    9515.    9663.    9893.    9949.    9959.   10031.   10074.   10124.   10182.   10245.
 10303.   10361.
   PER Q=      3.1      5.0      3.3      5.1       .2     50.3      5.1      4.6      5.6      5.2
4.2      4.5
    AREA=     82.1    124.9     98.5     85.9      7.0    338.9     77.0     77.0     92.2     90.7
77.7     80.6
     VEL=      2.1      2.2      1.9      3.3      2.0      8.3      3.7      3.4      3.4      3.2
3.1      3.1
   DEPTH=       .7       .8       .4      1.5       .7      5.3      1.8      1.5      1.6      1.4
1.3      1.4

 STA=   10361.   10401.   10414.
   PER Q=      3.1       .6
    AREA=     55.5     13.3
     VEL=      3.1      2.5
   DEPTH=      1.4      1.0

 *SECNO 21.742

 3265 DIVIDED FLOW

1
    12AUG05      13:19:13
         PAGE   66


     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

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
     21.742      8.88   1395.28   1395.28       .00   1396.42      1.14      1.87       .16   1394.70
     5600.0      52.4    5248.9     298.7     45.2     595.3     149.7    1193.6     172.8   1394.20
       1.18      1.16      8.82      2.00      .040      .035      .040      .000   1386.40   9743.25
    .005037      430.      385.      390.         2         8         0       .00    566.72  10364.86
```

```
 FLOW DISTRIBUTION FOR SECNO=     21.74          CWSEL=   1395.28

 STA=    9743.    9975.   10091.   10176.   10365.
   PER Q=       .9     93.7      3.3      2.1
    AREA=     45.2    595.3     74.5     75.2
     VEL=      1.2      8.8      2.5      1.5
   DEPTH=       .2      5.1       .9       .4

 *SECNO 21.840
     21.840      6.92   1398.02       .00       .00   1398.86       .84      2.42       .03   1396.20
     5600.0     959.5    4248.7     391.8     208.1     522.2     168.7    1203.0     178.0   1397.00
       1.20      4.61      8.14      2.32      .040      .035      .040      .000   1391.10   9857.30
    .004577      430.      517.      430.         2         0         0       .00    436.66  10293.96


 FLOW DISTRIBUTION FOR SECNO=     21.84          CWSEL=   1398.02

 STA=    9857.    9860.    9882.    9913.    9931.    9946.   10054.   10097.   10145.   10186.   10227.
 10273.   10294.
   PER Q=       .0      2.2      7.6      4.7      2.6     75.9      2.9      2.6       .5       .3
.6       .1
    AREA=      1.0     35.6     85.8     51.6     34.0    522.2     54.6     53.7     19.2     15.1
21.6       4.4
     VEL=      1.2      3.5      5.0      5.1      4.3      8.1      2.9      2.7      1.5      1.3
1.5       .9
   DEPTH=       .4      1.6      2.8      2.9      2.3      4.8      1.3      1.1       .5       .4
.5       .2

 *SECNO 21.895
 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
     21.895      7.80   1399.70   1399.70       .00   1400.50       .80      1.37       .00   1398.00
     5600.0    1584.6    2883.3    1132.0     331.9     313.7     410.5    1209.3     181.0   1397.70
       1.22      4.77      9.19      2.76      .040      .035      .040      .000   1391.90   9834.67
    .004915      330.      290.      220.         2         8         0       .00    596.90  10431.57


1
    12AUG05      13:19:13
         PAGE   67

     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=     21.90          CWSEL=   1399.70

 STA=    9835.    9885.    9919.    9939.    9975.   10031.   10113.   10187.   10251.   10292.   10364.
 10432.
   PER Q=      9.6      9.9      4.3      4.6     51.5      4.3      4.2      4.2      3.1      3.1
1.3
    AREA=    113.9    101.9     50.0     66.1    313.7     86.9     83.0     78.1     55.3     68.2
38.9
     VEL=      4.7      5.4      4.8      3.9      9.2      2.8      2.8      3.0      3.2      2.6
1.9
   DEPTH=      2.3      3.0      2.5      1.8      5.6      1.1      1.1      1.2      1.3       .9
.6

 *SECNO 21.933

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.00

     21.933      4.09   1400.89       .00       .00   1401.02       .14       .46       .07   1398.00
     5600.0    1780.4    3276.5     543.0     823.0     958.7     273.6    1216.8     184.8   1398.00
       1.24      2.16      3.42      1.99      .040      .035      .040      .000   1396.80   9308.97
    .001226      210.      210.      210.         2         0         0       .00    976.18  10285.15


 FLOW DISTRIBUTION FOR SECNO=     21.93          CWSEL=   1400.89
```

```
STA=     9309.     9440.     9590.     9680.     9725.     9780.     9840.     9865.    10140.    10285.
  PER Q=       .4       2.1       6.0       7.2       8.8       5.1       2.1      58.5       9.7
   AREA=     38.4     110.4     169.8     143.4     175.2     131.2      54.7     958.7     273.5
    VEL=       .6       1.1       2.0       2.8       2.8       2.2       2.2       3.4       2.0
  DEPTH=       .3        .7       1.9       3.2       3.2       2.2       2.2       3.5       1.9

*SECNO 21.953

3265 DIVIDED FLOW


3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    21.953      7.09   1401.09   1401.09       .00   1402.04       .94       .20       .24   1400.20
    5600.0    2441.6    3010.1     148.3     482.8     314.9      33.0    1219.3     186.1   1398.30
      1.24      5.06      9.56      4.49      .045      .045      .045      .000   1394.00   9420.76
   .009439       75.       74.       75.        20        14         0       .00    468.31  10053.29


1
    12AUG05       13:19:13
         PAGE    68

     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=     21.95          CWSEL=   1401.09

 STA=     9421.     9678.     9699.     9714.     9725.     9735.     9759.     9768.     9782.     9810.     9965.
  9969.    10029.
   PER Q=      4.3       3.5       4.1       5.2       4.3       4.5       3.3       5.0       5.9       3.2
.3      53.8
    AREA=    101.0      39.8      38.2      38.8      33.9      49.1      27.4      41.9      61.5      46.6
4.6     314.9
     VEL=      2.4       4.9       6.0       7.4       7.1       5.2       6.7       6.6       5.4       3.9
3.5       9.6
   DEPTH=       .4       1.9       2.5       3.5       3.4       2.0       3.0       3.0       2.2        .3
1.1       5.2

 STA=    10029.    10053.
   PER Q=      2.6
    AREA=     33.0
     VEL=      4.5
   DEPTH=      1.4

 *SECNO 22.065

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.94

    22.065      8.31   1404.11       .00       .00   1404.28       .17      2.17       .08   1404.10
    5600.0    4240.0    1286.5      73.4    1409.4     296.1      32.2    1233.2     192.6   1402.00
      1.28      3.01      4.34      2.28      .045      .045      .045      .000   1395.80   9239.21
   .002510       430.      591.      630.         4         0         0       .00    782.57  10049.79


 FLOW DISTRIBUTION FOR SECNO=     22.07          CWSEL=   1404.11

 STA=     9239.     9500.     9594.     9645.     9657.     9680.     9700.     9731.     9785.     9816.     9869.
  9890.     9961.
   PER Q=     24.2       5.8       7.6       3.2       5.9       5.2       3.8       4.5       6.5       4.9
3.7        .4
    AREA=    507.6     146.4     125.5      45.1      84.1      74.2      70.5      81.9     100.3      94.2
61.1      18.6
     VEL=      2.7       2.2       3.4       4.0       3.9       4.0       3.0       3.1       3.6       2.9
```

```
3.3      1.2
   DEPTH=      1.9      1.6      2.5      3.8      3.7      3.7      2.3      1.5      3.2      1.8
2.9       .3

 STA=    9961.   10028.   10050.
   PER Q=     23.0      1.3
    AREA=    296.1     32.2
     VEL=      4.3      2.3
   DEPTH=      4.4      1.5

1
    12AUG05      13:19:13
         PAGE   69

     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 22.165

 3265 DIVIDED FLOW

     22.165     10.28   1405.28       .00       .00   1405.49       .21      1.20       .01   1400.90
     5600.0    4120.9    1444.7      34.4    1410.4     267.2      25.5    1254.2     202.4   1403.70
       1.32      2.92      5.41      1.35      .045      .045      .045      .000   1395.00   9137.16
    .002047      530.      528.      530.         3         0         0       .00    841.22  10060.84

 FLOW DISTRIBUTION FOR SECNO=     22.17          CWSEL=   1405.28

 STA=    9137.    9204.    9213.    9222.    9232.    9256.    9308.    9425.    9595.    9637.    9645.
  9657.    9669.
   PER Q=      6.3      3.5      4.4      3.9      4.4      3.3      4.0      3.4      4.7      3.6
4.9       3.2
    AREA=    121.1     44.9     51.6     50.3     76.4     87.5    135.1    114.0     87.6     43.5
61.6      47.8
     VEL=      2.9      4.3      4.8      4.3      3.2      2.1      1.6      1.6      3.0      4.6
4.4       3.7
   DEPTH=      1.8      5.0      5.7      5.0      3.2      1.7      1.2       .7      2.1      5.4
5.1       4.0

 STA=    9669.    9701.    9834.    9862.    9946.    9983.   10018.   10061.
   PER Q=      3.2      4.7      5.0      4.3      6.9     25.8       .6
    AREA=     68.7    114.0     87.3    100.9    117.9    267.2     25.5
     VEL=      2.6      2.3      3.2      2.4      3.3      5.4      1.3
   DEPTH=      2.1       .9      3.1      1.2      3.2      7.6       .6

 *SECNO 22.273

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .54

     22.273      7.30   1406.70       .00       .00   1407.42       .72      1.77       .15   1404.10
     5600.0    2029.0    3571.0        .0     448.1     457.3        .0    1269.1     209.5   1406.90
       1.34      4.53      7.81       .00      .045      .045      .000      .000   1399.40   9320.61
    .006959      470.      570.      580.         2         0         0       .00    425.37  10027.51

 FLOW DISTRIBUTION FOR SECNO=     22.27          CWSEL=   1406.70

1
    12AUG05      13:19:13
         PAGE   70

     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=    9321.     9344.     9359.     9574.     9598.     9745.     9766.     9774.     9915.     9933.    10028.
  PER Q=      4.7       5.4       3.5       4.9       3.0       3.1       4.0       3.2       4.5      63.8
   AREA=     49.5      49.3      67.3      56.4      61.2      37.5      32.0      47.3      47.7     457.3
    VEL=      5.3       6.1       2.9       4.9       2.8       4.6       6.9       3.7       5.3       7.8
  DEPTH=      2.1       3.3        .3       2.3        .4       1.8       4.0        .3       2.6       4.8

*SECNO 22.410

3265 DIVIDED FLOW


3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    22.410     10.23   1414.23   1414.23       .00   1416.11      1.88      5.81       .35   1410.70
    5600.0     729.5    4719.3     151.3     136.2     400.9      38.3    1281.5     214.5   1411.30
      1.36      5.36     11.77      3.95      .045      .045      .045      .000   1404.00   9877.47
   .009243      750.      723.      630.         3        11         0       .00    170.88  10067.05


FLOW DISTRIBUTION FOR SECNO=     22.41          CWSEL=   1414.23

STA=    9877.     9941.     9954.     9967.     9973.    10027.    10067.
  PER Q=      3.1       3.0       4.4       2.5      84.3       2.7
   AREA=     48.1      30.3      38.1      19.7     400.9      38.3
    VEL=      3.6       5.6       6.5       7.0      11.8       3.9
  DEPTH=       .8       2.3       2.9       3.3       7.4       1.0

*SECNO 22.483

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  4.74

    22.483     11.09   1416.59       .00       .00   1416.72       .12       .43       .18   1411.10
    5600.0     317.6    4607.1     675.4     204.0    1546.4     388.6    1293.5     216.7   1411.20
      1.40      1.56      2.98      1.74      .045      .045      .045      .000   1405.50   9873.82
   .000411      380.      385.      390.         3         0         0       .00    326.50  10200.33


1
   12AUG05      13:19:13
        PAGE   71

    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=     22.48          CWSEL=   1416.59

STA=    9874.     9891.     9915.     9941.    10105.    10120.    10138.    10156.    10175.    10191.    10200.
  PER Q=       .2       1.6       3.8      82.3       2.5       2.3       2.2       2.6       2.2        .3
   AREA=     18.9      68.3     116.9    1546.4      72.7      74.6      71.9      82.6      68.7      18.2
    VEL=       .7       1.3       1.8       3.0       1.9       1.7       1.7       1.8       1.8       1.0
  DEPTH=      1.1       2.8       4.5       9.4       4.8       4.1       4.0       4.3       4.3       1.9

*SECNO 22.578

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .30

    22.578      9.75   1416.45       .00       .00   1417.48      1.02       .49       .27   1418.00
    5600.0        .0    5600.0        .0        .0     689.8        .0    1309.9     219.2   1421.20
      1.42       .00      8.12       .00      .000      .045      .000      .000   1406.70   9970.06
   .004575      540.      502.      490.         3         0         0       .00     94.31  10064.36
```

```
FLOW DISTRIBUTION FOR SECNO=     22.58          CWSEL=   1416.45

STA=    9970.   10072.
  PER Q=    100.0
   AREA=    689.8
    VEL=      8.1
  DEPTH=      7.3

*SECNO 22.675

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.63

    22.675      8.44   1418.14       .00       .00   1418.27       .14       .71       .09   1419.80
    5600.0        .0    5600.0        .0        .0    1896.4        .0    1325.1     221.4   1420.00
      1.47       .00      2.95       .00      .000      .045      .000      .000   1409.70   9740.16
   .000660      570.      512.      480.         2         0         0       .00    288.47  10028.63


1
   12AUG05      13:19:13
        PAGE   72


    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=     22.67          CWSEL=   1418.14

STA=    9740.   10032.
  PER Q=    100.0
   AREA=   1896.4
    VEL=      3.0
  DEPTH=      6.6

*SECNO 22.794

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .51

    22.794      7.97   1418.67       .00       .00   1419.08       .42       .72       .08   1417.80
    5600.0       1.9    5485.4     112.7       2.0    1050.2      44.9    1346.6     225.0   1416.10
      1.50       .94      5.22      2.51      .045      .045      .045      .000   1410.70   9978.35
   .002516      460.      628.      500.         2         0         0       .00    216.81  10195.16


FLOW DISTRIBUTION FOR SECNO=     22.79          CWSEL=   1418.67

STA=    9978.    9983.   10169.   10189.   10195.
  PER Q=       .0     98.0      1.9       .1
   AREA=      2.0   1050.2     40.4      4.5
    VEL=       .9      5.2      2.6      1.3
  DEPTH=       .4      5.6      2.0       .7

*SECNO 22.880
    22.880      7.11   1420.11       .00       .00   1420.69       .58      1.56       .05   1426.40
    5600.0        .0    5600.0        .0        .0     916.3        .0    1357.1     227.2   1424.20
      1.52       .00      6.11       .00      .000      .045      .000      .000   1413.00   9951.87
   .004991      440.      454.      480.         2         0         0       .00    212.09  10163.96


FLOW DISTRIBUTION FOR SECNO=     22.88          CWSEL=   1420.11

STA=    9952.   10167.
  PER Q=    100.0
   AREA=    916.3
    VEL=      6.1
  DEPTH=      4.3

1
   12AUG05      13:19:13
        PAGE   73
```

```
     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 22.990
     22.990       5.77   1423.67        .00        .00   1424.30        .63       3.59        .01   1425.40
     5600.0        .0    5600.0         .0         .0     879.7         .0     1369.0      230.5   1427.90
       1.55       .00      6.37        .00       .000      .045       .000       .000    1417.90   9753.64
    .007846      480.      581.       530.          3         0          0        .00     272.57  10026.21


 FLOW DISTRIBUTION FOR SECNO=     22.99          CWSEL=   1423.67

 STA=     9754.    10034.
   PER Q=     100.0
    AREA=     879.7
     VEL=       6.4
   DEPTH=       3.2

 *SECNO 23.097

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
     23.097       4.82   1429.92   1429.92        .00   1431.51       1.59       6.51        .29   1432.30
     5600.0       42.9    5557.1        .0       14.3     546.5         .0     1378.4      233.5   1430.80
       1.56       3.00     10.17       .00       .045      .045       .000       .000    1425.10   9898.95
    .018502       640.      565.      490.         10        11          0        .00     187.44  10117.55


 FLOW DISTRIBUTION FOR SECNO=     23.10          CWSEL=   1429.92

 STA=     9899.     9916.     9925.     9927.    10121.
   PER Q=       .5        .3        .0      99.2
    AREA=      8.9       5.1        .3     546.5
     VEL=      3.0       3.1      1.3      10.2
   DEPTH=       .5        .6        .2       3.4

 *SECNO 23.168
1
    12AUG05       13:19:13
         PAGE    74


     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 =  3.12

     23.168       4.20   1433.10        .00        .00   1433.27        .17       1.61        .14   1429.50
     5600.0      786.4    4501.2      312.4      319.0    1285.3      148.1     1388.1      236.7   1430.30
       1.59       2.47      3.50       2.11       .045      .045       .045       .000    1428.90   9602.33
    .001902       330.      375.       300.          5         0          0        .00     612.58  10214.92


 FLOW DISTRIBUTION FOR SECNO=     23.17          CWSEL=   1433.10

 STA=     9602.     9657.     9718.     9777.    10116.    10176.    10215.
   PER Q=       .7       4.2       9.2      80.4       5.1        .5
    AREA=      35.5     109.6     173.9    1285.3     122.8      25.2
```

```
    VEL=      1.1      2.1      3.0      3.5      2.3      1.1
  DEPTH=       .6      1.8      2.9      3.8      2.0       .6

*SECNO 23.253

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    23.253      9.33   1434.53   1434.53       .00   1437.36      2.83      1.53       .80   1437.50
    3400.0        .0    3400.0        .0        .0     251.7        .0    1398.6     240.2   1444.20
      1.60       .00     13.51       .00      .000      .040      .000      .000   1425.20   9978.45
   .014963      470.      459.      450.        20        17         0       .00     44.72  10023.17


FLOW DISTRIBUTION FOR SECNO=     23.25          CWSEL=   1434.53

STA=    9978.   10038.
  PER Q=    100.0
   AREA=    251.7
    VEL=     13.5
  DEPTH=      5.6

1
    12AUG05      13:19:13
         PAGE   75


     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 23.334

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.40

    23.334      7.80   1440.40       .00       .00   1441.83      1.43      4.33       .14   1443.80
    3400.0        .0    3400.0        .0        .0     353.9        .0    1401.5     240.7   1449.80
      1.62       .00      9.61       .00      .000      .040      .000      .000   1432.60   9969.06
   .007627      400.      417.      420.         2         0         0       .00     66.93  10035.99


FLOW DISTRIBUTION FOR SECNO=     23.33          CWSEL=   1440.40

STA=    9969.   10055.
  PER Q=    100.0
   AREA=    353.9
    VEL=      9.6
  DEPTH=      5.3

*SECNO 23.416
    23.416      7.32   1443.82       .00       .00   1445.60      1.77      3.66       .10   1447.80
    3400.0        .0    3400.0        .0        .0     318.2        .0    1404.9     241.4   1450.20
      1.63       .00     10.68       .00      .000      .040      .000      .000   1436.50   9980.93
   .009446      400.      433.      430.         3         0         0       .00     59.13  10040.07


FLOW DISTRIBUTION FOR SECNO=     23.42          CWSEL=   1443.82

STA=    9981.   10053.
  PER Q=    100.0
   AREA=    318.2
    VEL=     10.7
  DEPTH=      5.4

*SECNO 23.514
    23.514      8.51   1448.11       .00       .00   1449.46      1.35      3.82       .04   1451.40
    3400.0        .0    3400.0        .0        .0     364.8        .0    1408.9     242.1   1451.10
      1.64       .00      9.32       .00      .000      .040      .000      .000   1439.60   9977.54
   .005936      560.      517.      470.         2         0         0       .00     57.47  10035.01
```

```
1
    12AUG05       13:19:13
         PAGE    76

     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=     23.51          CWSEL=   1448.11

 STA=    9978.   10039.
   PER Q=    100.0
    AREA=    364.8
     VEL=      9.3
   DEPTH=      6.3

 *SECNO 23.544

 3301 HV CHANGED MORE THAN HVINS

     23.544      7.51   1448.91       .00        .00   1450.79       1.88       1.17        .16   1453.20
     3400.0        .0    3400.0        .0         .0     309.4         .0     1410.2      242.3   1452.90
       1.65       .00     10.99       .00       .000      .040       .000       .000    1441.40   9978.90
    .009551      190.      158.      150.          2         0          0        .00      54.80  10033.70

 FLOW DISTRIBUTION FOR SECNO=     23.54          CWSEL=   1448.91

 STA=    9979.   10039.
   PER Q=    100.0
    AREA=    309.4
     VEL=     11.0
   DEPTH=      5.6

 SPECIAL BRIDGE

 SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
      1.25       2.48       3.20        .00       5.70       1.00      14.10        .00    1442.00    1441.40

 *SECNO 23.555

 3301 HV CHANGED MORE THAN HVINS

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.95

 PRESSURE AND WEIR FLOW,  Weir Submergence Based on TRAPEZOIDAL Shape

1
    12AUG05       13:19:13
         PAGE    77

     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

   EGPRS      EGLWC      H3         QWEIR      QPR        BAREA      TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                        AREA
    3688.08   1453.59      2.80      3249.      152.        14.        14.      1445.00    1449.00       140.

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1480.00 ELREA=      1480.00

     23.555     10.64   1452.64       .00        .00   1453.37        .74       2.58        .00   1453.80
     3400.0        .0    3400.0        .0         .0     493.8         .0     1410.7      242.3   1453.50
```

```
      1.65       .00       6.89       .00       .000       .040       .000       .000   1442.00   9974.59
   .002505       60.        60.       60.          2          0          8        .00     63.27  10037.86

FLOW DISTRIBUTION FOR SECNO=     23.56          CWSEL=   1452.64

STA=    9975.   10039.
  PER Q=    100.0
   AREA=    493.8
    VEL=      6.9
  DEPTH=      7.8

*SECNO 23.591
3280 CROSS SECTION     23.59 EXTENDED      1.15 FEET

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1480.00 ELREA=      1480.00

    23.591      8.95   1453.15       .00        .00   1453.93       .78        .54       .01   1452.90
    3400.0        .0    3400.0        .0         .0    478.5        .0     1412.8     242.6   1453.80
      1.66       .00      7.11       .00       .000      .040      .000       .000   1444.20   9968.00
   .003292      100.      190.      210.          3         0         0        .00     75.49  10043.49

FLOW DISTRIBUTION FOR SECNO=     23.59          CWSEL=   1453.15

STA=    9968.   10045.
  PER Q=    100.0
   AREA=    478.5
    VEL=      7.1
  DEPTH=      6.3

1
    12AUG05      13:19:13
         PAGE   78

     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 23.691

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1480.00 ELREA=      1480.00

    23.691      8.75   1455.15       .00        .00   1456.48      1.33       2.39       .16   1457.60
    3400.0        .0    3400.0        .0         .0    367.9        .0     1418.0     243.5   1455.30
      1.67       .00      9.24       .00       .000      .040      .000       .000   1446.40   9970.39
   .006585      510.      528.      540.          2         0         0        .00     65.33  10035.72

FLOW DISTRIBUTION FOR SECNO=     23.69          CWSEL=   1455.15

STA=    9970.   10036.
  PER Q=    100.0
   AREA=    367.9
    VEL=      9.2
  DEPTH=      5.6

*SECNO 23.815

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.51

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1480.00 ELREA=      1480.00

    23.815      9.33   1459.03       .00        .00   1460.15      1.12       3.65       .02   1458.90
    4450.0        .0    4450.0        .0         .0    522.9        .0     1424.7     244.6   1457.80
      1.69       .00      8.51       .00       .000      .040      .000       .000   1449.70   9951.00
   .004958      650.      655.      680.          3         0         0        .00     86.00  10037.00
```

```
FLOW DISTRIBUTION FOR SECNO=     23.82          CWSEL=   1459.03

STA=    9951.   10037.
  PER Q=    100.0
   AREA=    522.9
    VEL=      8.5
  DEPTH=      6.1

1
   12AUG05      13:19:13
        PAGE   79

    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 23.912
3280 CROSS SECTION     23.91 EXTENDED       .23 FEET

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.43

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1480.00 ELREA=      1480.00

    23.912     13.23   1461.13       .00        .00   1462.33       1.20       2.15        .02   1461.30
    5500.0       .0    5500.0        .0        .0     625.6         .0     1431.4      245.6   1460.90
      1.71      .00      8.79       .00       .000      .040       .000       .000    1447.90   9967.27
   .003716     480.      512.      510.          3         0          0        .00      75.73  10043.00

FLOW DISTRIBUTION FOR SECNO=     23.91          CWSEL=   1461.13

STA=    9967.   10043.
  PER Q=    100.0
   AREA=    625.6
    VEL=      8.8
  DEPTH=      8.3

*SECNO 23.989

3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.42

    23.989     13.07   1462.77       .00        .00   1463.42        .65       1.03        .06   1465.60
    5500.0       .0    5500.0        .0        .0     850.8         .0     1438.3      246.4   1465.80
      1.73      .00      6.46       .00       .000      .040       .000       .000    1449.70   9944.36
   .001839     400.      407.      410.          2         0          0        .00      99.59  10043.95

FLOW DISTRIBUTION FOR SECNO=     23.99          CWSEL=   1462.77

STA=    9944.   10049.
  PER Q=    100.0
   AREA=    850.8
    VEL=      6.5
  DEPTH=      8.5

1
   12AUG05      13:19:13
        PAGE   80

    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=     .300 CEHV=     .500
```

```
*SECNO 24.086
    24.086      10.18    1463.78       .00        .00   1464.17       .39       .68       .08   1453.60
    5500.0      368.4     4040.8    1090.8       96.0     733.2     348.9    1450.3     248.0   1453.60
      1.76       3.84       5.51      3.13       .035      .040      .050      .000   1453.60   9952.87
   .000997       450.       512.      560.          2         0         0       .00    165.50  10118.37

FLOW DISTRIBUTION FOR SECNO=     24.09          CWSEL=   1463.78

STA=    9953.    9955.    9972.   10044.   10052.   10064.   10091.   10108.   10118.
  PER Q=       .0      6.7     73.5      5.9      6.2      6.4      1.1       .1
   AREA=      1.0     94.9    733.2     77.1     94.0    131.8     38.8      7.2
    VEL=       .8      3.9      5.5      4.2      3.6      2.7      1.6       .7
  DEPTH=       .5      5.6     10.2      9.6      7.8      4.9      2.3       .7

SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
      .90      1.56      3.00    100.00     71.60      3.00    590.00       .00   1453.60   1453.60

*SECNO 24.096
PRESSURE FLOW

 EGPRS      EGLWC       H3       QWEIR      QPR       BAREA   TRAPEZOID      ELLC      ELTRD     WEIRLN
                                                               AREA
   1465.89   1464.67       .02        0.     5500.      590.      590.     1462.20   1466.70        0.


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1466.00 ELREA=      1466.00

    24.096      11.62   1465.22       .00        .00   1465.89       .67      1.71       .00   1453.60
    5500.0         .0    5500.0        .0         .0     836.6        .0    1451.6     248.1   1453.60
      1.76        .00      6.57       .00       .000      .040      .000      .000   1453.60   9972.00
   .001190        56.       56.       56.          2         0         0       .00     72.00  10044.00

FLOW DISTRIBUTION FOR SECNO=     24.10          CWSEL=   1465.22

STA=    9972.   10044.
  PER Q=    100.0
   AREA=    836.6
    VEL=      6.6
  DEPTH=     11.6

1
    12AUG05      13:19:13
         PAGE   81

    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 24.106
    24.106      11.52   1465.72       .00        .00   1466.04       .32       .05       .11   1464.10
    5500.0        2.8    5013.4     483.8        2.9    1067.7     214.3    1452.9     248.3   1458.50
      1.76        .97      4.70      2.26       .035      .040      .050      .000   1454.20   9951.48
   .000786        80.       53.       20.          2         0         0       .00    172.36  10123.83

FLOW DISTRIBUTION FOR SECNO=     24.11          CWSEL=   1465.72

STA=    9951.    9955.   10064.   10091.   10108.   10123.
  PER Q=       .1     91.2      7.0      1.5       .2
   AREA=      2.9   1067.7    149.2     49.7     15.4
    VEL=      1.0      4.7      2.6      1.7       .8
  DEPTH=       .8      9.8      5.5      2.9      1.0

CCHV=     .100 CEHV=     .300
*SECNO 24.195

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.45
```

```
    24.195      12.56   1466.16       .00       .00   1466.30       .14       .25       .02   1470.40
    5500.0         .0    5500.0        .0        .0    1800.1        .0     1469.5     250.3   1466.40
      1.80        .00      3.06       .00      .000      .040      .000      .000   1453.60   9940.28
   .000372       470.      470.      460.         2         0         0       .00    200.25  10140.54

 FLOW DISTRIBUTION FOR SECNO=     24.19          CWSEL=   1466.16

 STA=    9940.   10142.
   PER Q=    100.0
    AREA=   1800.1
     VEL=      3.1
   DEPTH=      9.0

 *SECNO 24.322

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.21

    24.322      14.77   1466.37       .00       .00   1466.41       .04       .10       .01   1463.50
    5500.0        9.6    4319.3    1171.1      20.6    2459.6    1146.2    1510.7     254.6   1456.80
      1.92        .47      1.76      1.02      .035      .040      .050      .000   1451.60   9856.65
   .000076       640.      671.      630.         2         0         0       .00    371.98  10228.63


1
    12AUG05      13:19:13
         PAGE    82


     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=     24.32          CWSEL=   1466.37

 STA=    9857.    9871.   10064.   10134.   10177.   10220.   10229.
   PER Q=       .2      78.5      13.2       6.1       2.0        .0
    AREA=     20.6    2459.6     638.4     332.0     170.7       5.0
     VEL=       .5       1.8       1.1       1.0        .6        .2
   DEPTH=      1.4      12.7       9.1       7.7       4.0        .6

 *SECNO 24.444

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .35

    24.444       9.11   1466.41       .00       .00   1466.55       .14       .11       .03   1465.00
    5500.0         .9    4345.2    1153.9       1.6    1413.1     443.2    1550.5     259.3   1461.70
      1.98        .59      3.07      2.60      .045      .045      .045      .000   1457.30   9925.74
   .000625       640.      644.      600.         2         0         0       .00    280.34  10206.07

 FLOW DISTRIBUTION FOR SECNO=     24.44          CWSEL=   1466.41

 STA=    9926.    9928.   10122.   10142.   10166.   10180.   10206.
   PER Q=       .0      79.0       6.1       8.4       4.1       2.5
    AREA=      1.6    1413.1     122.2     158.6      82.7      79.6
     VEL=       .6       3.1       2.7       2.9       2.7       1.7
   DEPTH=       .7       7.3       6.1       6.6       5.9       3.1

 *SECNO 24.542

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .29

    24.542       6.91   1466.71       .00       .00   1467.52       .82       .77       .20   1464.00
    5500.0       35.1    5464.9        .0      10.6     750.7        .0    1566.1     262.1   1467.80
      2.00       3.31      7.28       .00      .045      .045      .000      .000   1459.80   9906.17
   .007245       470.      517.      530.         2         0         0       .00    185.63  10182.77
```

```
1
    12AUG05       13:19:13
         PAGE    83

     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=     24.54          CWSEL=   1466.71

 STA=    9906.    9914.   10187.
   PER Q=       .6     99.4
    AREA=     10.6    750.7
     VEL=      3.3      7.3
   DEPTH=      1.4      4.2

 *SECNO 24.635

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
     24.635      5.12   1471.92   1471.92       .00   1473.42      1.50      5.66       .21   1474.50
     5500.0        .0    5500.0        .0        .0     559.2        .0    1573.5     264.2   1472.40
       2.01       .00      9.84       .00      .000      .045      .000      .000   1466.80   9912.87
    .021106      650.      491.      220.        11        19         0       .00    190.17  10103.04

 FLOW DISTRIBUTION FOR SECNO=     24.64          CWSEL=   1471.92

 STA=    9913.   10111.
   PER Q=    100.0
    AREA=    559.2
     VEL=      9.8
   DEPTH=      2.9

1
    12AUG05       13:19:13
         PAGE    84

 T1       MIDDLE CAVE CREEK FLOODPLAIN DELINEATION STUDY, ACDC TO DEER VALLEY RD.
 T2       FLOOD CONTROL DISTRICT OF MARICOPA COUNTY 1989 BY BURGESS & NIPLE
 T3       CAVE CREEK WASH          FLOODWAY FOR "FUTURE COND" COE Q'S

 J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ

                 3.                             0.0005

 J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW        CHNIM      ITRACE

     15.                   -1.

1
    12AUG05       13:19:13
         PAGE    85

     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

 *PROF 2

 CCHV=      .100 CEHV=      .300
 *SECNO 15.015
 2096 WSEL NOT GIVEN, AVG OF MAX, MIN USED
     15.015     13.40   1219.09       .00       .00   1221.08      1.99       .00       .00   1228.30
    16000.0        .0   15999.9        .1        .0    1412.5        .4        .0        .0   1206.79
```

```
       .00       .00     11.33       .22      .000      .015      .015      .000   1205.69   9945.04
   .000500        0.        0.        0.         0         0         4       .00    110.02  10055.06

*SECNO 15.109
    15.109     13.40   1219.34       .00       .00   1221.33      1.99       .25       .00   1228.55
   16000.0        .0   15999.9        .1        .0    1412.5        .4      16.2       1.3   1207.04
       .01       .00     11.33       .22      .000      .015      .015      .000   1205.94   9945.04
   .000500      500.      500.      500.         0         0         0       .00    110.02  10055.06

*SECNO 15.204
    15.204     13.40   1219.59       .00       .00   1221.58      1.99       .25       .00   1228.80
   16000.0        .0   15999.9        .1        .0    1412.5        .4      32.4       2.5   1207.29
       .02       .00     11.33       .22      .000      .015      .015      .000   1206.19   9945.04
   .000500      500.      500.      500.         0         0         0       .00    110.02  10055.06

*SECNO 15.310

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    15.310     12.69   1219.57   1219.57       .00   1225.73      6.17       .51      1.25   1229.50
   16000.0        .0   16000.0        .0        .0     802.9        .0      46.7       3.7   1230.00
       .03       .00     19.93       .00      .000      .015      .000      .000   1206.88   9967.54
   .002154      560.      560.      560.        20         8         0       .00     65.01  10032.55

*SECNO 15.454

3301 HV CHANGED MORE THAN HVINS

1
   12AUG05      13:19:13
        PAGE    86

    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


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.42

    15.454     15.99   1223.25       .00       .00   1227.09      3.84      1.12       .23   1229.88
   16000.0        .0   16000.0        .0        .0    1017.5        .0      62.6       4.8   1230.38
       .05       .00     15.72       .00      .000      .015      .000      .000   1207.26   9967.53
   .001076      760.      760.      760.         4         0         0       .00     65.04  10032.57

*SECNO 15.530
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    15.530     10.66   1236.86   1236.86       .00   1241.12      4.26       .54       .13   1237.50
   16000.0        .0   16000.0        .0        .0     966.0        .0      71.7       5.6   1238.45
       .05       .00     16.56       .00      .000      .015      .000      .000   1226.20   9942.79
   .001717      400.      400.      400.        20        14         0       .00    114.53  10057.31

*SECNO 15.680
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    15.680     10.66   1240.21   1240.21       .00   1244.47      4.26      1.36       .00   1240.85
   16000.0        .0   16000.0        .0        .0     966.4        .0      89.2       7.7   1241.80
       .07       .00     16.56       .00      .000      .015      .000      .000   1229.55   9942.78
   .001715      792.      792.      792.        20         5         0       .00    114.54  10057.32

*SECNO 15.878
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
```

```
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
    15.878     10.12   1243.99   1243.99       .00   1248.07      4.08      1.79       .02   1244.70
   16000.0        .0   16000.0        .0        .0     987.3        .0     112.7      10.5   1244.71
       .08       .00     16.21       .00      .000      .015      .000      .000   1233.87   9939.42
   .001711     1045.     1045.     1045.        20         8         0       .00    121.15  10060.56


 *SECNO 15.920
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
1
    12AUG05      13:19:13
         PAGE   87


     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


    15.920      10.09   1244.93   1244.93       .00   1249.04      4.11       .39       .01   1245.67
   16000.0        .0   16000.0        .0        .0     983.6        .0     117.8      11.1   1245.68
       .09       .00     16.27       .00      .000      .015      .000      .000   1234.84   9939.48
   .001730      225.      225.      225.        20         5         0       .00    121.02  10060.50


 SPECIAL BRIDGE

 5227 DOWNSTREAM ELEV IS    1243.33 , NOT    1244.93 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW
CONTROLS)

 SB  XK        XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
       .90      1.56       3.00     100.00      82.32      6.00    1447.00      1.84    1235.45    1235.07

 *SECNO 15.940
 3280 CROSS SECTION     15.94 EXTENDED      1.84 FEET


 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.54

 CLASS B LOW FLOW

 3420 BRIDGE W.S.=    1245.43 BRIDGE VELOCITY=      16.55     CALCULATED CHANNEL AREA=       945.

  EGPRS      EGLWC      H3         QWEIR      QLOW       BAREA      TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                      AREA
   1247.89   1250.24       .00        0.     16000.      1447.      1448.      1249.60    1253.60         0.


    15.940      12.67   1247.89       .00       .00   1250.24      2.34       1.20       .00   1246.05
   16000.0        .0   16000.0        .0        .0    1302.6        .0     120.4      11.4   1246.06
       .09       .00     12.28       .00      .000      .015      .000      .000   1235.22   9938.00
   .000729      100.      100.      100.         0         0         0       .00    124.00  10062.00


 *SECNO 16.023

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
1
    12AUG05      13:19:13
         PAGE   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

    16.023      12.60    1250.05    1250.05       .00    1254.70      4.65       .47       .69    1252.50
   16000.0        .0   16000.0        .0         .0     924.2        .0     131.7      12.6    1251.95
       .10       .00      17.31       .00      .000      .015      .000      .000   1237.45    9949.72
   .001705      441.       441.      441.        20         5         0       .00    100.69   10050.42

 *SECNO 16.148
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
    16.148      12.61    1252.85    1252.85       .00    1257.49      4.64      1.12       .00    1255.29
   16000.0        .0   16000.0        .0         .0     925.6        .0     145.7      14.1    1254.74
       .11       .00      17.29       .00      .000      .015      .000      .000   1240.24    9949.69
   .001698      660.       660.      660.        20         5         0       .00    100.75   10050.44

 *SECNO 16.264
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
    16.264      12.61    1255.44    1255.44       .00    1260.08      4.64      1.04       .00    1257.88
   16000.0        .0   16000.0        .0         .0     925.4        .0     158.7      15.5    1257.33
       .12       .00      17.29       .00      .000      .015      .000      .000   1242.83    9949.70
   .001699      612.       612.      612.        20         5         0       .00    100.74   10050.44

 *SECNO 16.373
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
    16.373      12.61    1257.87    1257.87       .00    1262.51      4.64       .98       .00    1260.31
   16000.0        .0   16000.0        .0         .0     925.5        .0     170.9      16.8    1259.76
       .13       .00      17.29       .00      .000      .015      .000      .000   1245.26    9949.70
   .001699      576.       576.      576.        20         5         0       .00    100.74   10050.44

 *SECNO 16.481
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
    16.481      11.91    1259.50    1259.50       .00    1264.03      4.53       .97       .01    1261.20
   16000.0        .0   16000.0        .0         .0     936.5        .0     183.1      18.2    1259.70
       .14       .00      17.08       .00      .000      .015      .000      .000   1247.59    9947.21
   .001703      570.       570.      570.        20        11         0       .00    104.38   10051.60

1
    12AUG05      13:19:13
         PAGE    89

     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 16.601
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
    16.601      11.88    1262.14    1262.14       .00    1266.70      4.56      1.08       .01    1263.87
   16000.0        .0   16000.0        .0         .0     934.0        .0     196.7      19.7    1262.37
       .15       .00      17.13       .00      .000      .015      .000      .000   1250.26    9947.26
   .001716      634.       634.      634.        20         5         0       .00    104.29   10051.55

 *SECNO 16.694
 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
    16.694      11.19    1263.45    1263.45       .00    1267.84      4.39       .84       .02    1263.90
   16000.0        .0   16000.0        .0         .0     951.2        .0     207.3      20.9    1264.42
```

```
      .15       .00     16.82       .00      .000      .015      .000      .000   1252.26   9945.37
  .001718      491.      491.      491.         4        11         0       .00    109.87  10055.24

*SECNO 16.823
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
   16.823     11.20   1266.34   1266.34       .00   1270.72      4.38      1.17       .00   1266.78
  16000.0        .0   16000.0        .0        .0     952.5        .0     222.2      22.6   1267.30
      .17       .00     16.80       .00      .000      .015      .000      .000   1255.14   9945.36
  .001711      681.      681.      681.        20         5         0       .00    109.89  10055.25

*SECNO 16.902
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
   16.902     11.19   1267.38   1267.38       .00   1271.62      4.25       .72       .01   1268.80
  16000.0        .0   16000.0        .0        .0     967.3        .0     231.4      23.7   1270.33
      .17       .00     16.54       .00      .000      .015      .000      .000   1256.19   9942.86
  .001727      417.      417.      417.         2         5         0       .00    115.24  10058.09

*SECNO 16.970
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
   16.970     11.83   1268.19   1268.19       .00   1272.36      4.18       .62       .01   1269.30
  16000.0        .0   16000.0        .0        .0     975.7        .0     239.4      24.7   1270.78
      .18       .00     16.40       .00      .000      .015      .000      .000   1256.36   9940.53
  .001755      359.      359.      359.         2         8         0       .00    118.98  10059.51

1
   12AUG05      13:19:13
        PAGE    90

    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

 SPECIAL BRIDGE

 5227 DOWNSTREAM ELEV IS    1266.61 , NOT    1268.19 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW
CONTROLS)

 SB  XK        XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
      .90       1.56       3.00     100.00      82.57       6.00    1513.00       1.61    1258.71    1258.33

 *SECNO 16.988
 3280 CROSS SECTION     16.99 EXTENDED      1.43 FEET

 3301 HV CHANGED MORE THAN HVINS

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.54

 CLASS B LOW FLOW

 3420 BRIDGE W.S.=    1268.78 BRIDGE VELOCITY=      16.75     CALCULATED CHANNEL AREA=       934.

  EGPRS      EGLWC      H3         QWEIR      QLOW       BAREA      TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                      AREA
      .00    1273.47       .00         0.    16000.      1513.      1516.      1273.75    1277.80         0.

   16.988     14.72   1271.13       .00       .00   1273.47      2.34       1.11       .00   1269.70
  16000.0        .0   16000.0        .0        .0    1302.4        .0     241.8      24.9   1270.17
      .18       .00     12.29       .00      .000      .015      .000      .000   1256.41   9938.30
  .000741       90.       90.       90.         0         0         0       .00    125.60  10063.90

 *SECNO 17.061
```

```
 3301 HV CHANGED MORE THAN HVINS

    17.061      14.18   1270.79       .00       .00   1274.13      3.34       .36       .30   1271.30
   16000.0         .0   16000.0        .0        .0    1090.8        .0     252.2      26.0   1271.79
       .19        .00     14.67       .00      .000      .015      .000      .000   1256.61   9939.31
   .001278       380.      380.      380.         3         0         0       .00    123.21  10062.52


 *SECNO 17.206
1
   12AUG05      13:19:13
        PAGE   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


 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
    17.206       5.70   1272.70   1272.70       .00   1275.43      2.73      1.19       .06   1279.00
   16000.0         .0   16000.0        .0        .0    1206.8        .0     272.5      29.1   1279.00
       .20        .00     13.26       .00      .000      .015      .000      .000   1267.00   9888.13
   .001922       769.      769.      769.         4        18         0       .00    223.73  10111.87


 *SECNO 17.360
  WATER EL=X5 CARD=   1275.400

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO = 11.77

    17.360      18.70   1275.40       .00       .00   1275.42       .02       .04       .27   1282.20
   16000.0         .0   16000.0        .0        .0   13645.7        .0     411.1      39.1   1281.80
       .40        .00      1.17       .00      .000      .030      .000      .000   1256.70   9522.77
   .000014       820.      813.      830.         0         0         0       .00    848.95  10371.72


 *SECNO 17.494

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
    17.494      10.46   1280.76   1280.76       .00   1282.72      1.96       .03       .58   1279.10
   14000.0        72.8   11397.2    2530.0      22.6     949.9     365.1     532.5      49.0   1278.50
       .41        3.22     12.00      6.93      .030      .030      .030      .000   1270.30   9876.77
   .005411       750.      707.      670.        20        11         0       .00    376.72  10253.49


 *SECNO 17.588

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.12

1
   12AUG05      13:19:13
        PAGE   92


     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=     9955.2   10193.0  TYPE=      1  TARGET=      237.800
    17.588     13.80   1283.40      .00   1283.34   1283.97      .57      1.11      .14   1278.10
   14000.0     177.6   13822.4       .0      69.6    2276.9       .0     553.7     52.6 100000.00
       .44      2.55      6.07      .00      .040      .040     .000      .000   1269.60   9955.20
   .001199      440.      496.     560.         2         0        0       .00    237.80  10193.00

*SECNO 17.662

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .60

3470 ENCROACHMENT STATIONS=     9900.0   10150.0  TYPE=      1  TARGET=      250.000
    17.662     12.21   1283.81      .00   1283.47   1284.84     1.03      .73      .14   1276.40
   14000.0    2017.4   11933.8     48.9     278.1    1441.6     21.3     572.0     54.7   1281.60
       .45      7.26      8.28     2.30      .040      .040     .040      .000   1271.60   9900.00
   .003350      380.      391.     400.         2         0        0       .00    249.14  10149.14

*SECNO 17.783

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=     9921.0   10064.0  TYPE=      1  TARGET=      143.000
    17.783     10.50   1285.90      .00   1285.25   1288.00     2.10     2.84      .32   1280.50
   14000.0        .0   14000.0       .0        .0    1202.6       .0     593.3     57.5 100000.00
       .47       .00     11.64      .00      .000      .040     .000      .000   1275.40   9921.00
   .006345      540.      639.     500.         3         0        0       .00    143.00  10064.00

*SECNO 17.932

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=     9956.0   10066.0  TYPE=      1  TARGET=      110.000
    17.932     13.00   1290.90      .00   1290.53   1293.99     3.10     5.70      .30   1289.70
   14000.0        .0   14000.0       .0        .0     991.0       .0     613.1     59.8 100000.00
       .48       .00     14.13      .00      .000      .040     .000      .000   1277.90   9956.00
   .008331      790.      787.     780.         3         0        0       .00    110.00  10066.00

1
   12AUG05      13:19:13
        PAGE   93

     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=     .300 CEHV=     .500
*SECNO 18.042

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.48

3470 ENCROACHMENT STATIONS=     9951.6   10048.4  TYPE=      1  TARGET=       96.780
    18.042     11.58   1293.88      .00   1293.80   1297.33     3.45     3.16      .18 100000.00
   14000.0        .0   14000.0       .0        .0     938.8       .0     625.9     61.2 100000.00
       .49       .00     14.91      .00      .000      .025     .000      .000   1282.30   9951.63
   .003823      620.      581.     550.         4         0        0       .00     96.72  10048.35


SPECIAL BRIDGE

SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     1.05       1.56       3.00        .00     75.00       4.00    1059.00       .81    1280.20    1279.90

*SECNO 18.061
BTCARD, BRIDGE STENCL=    9951.50   STENCR=   10048.50
CLASS A LOW FLOW
```

```
3420 BRIDGE W.S.=     1293.65 BRIDGE VELOCITY=       12.55     CALCULATED CHANNEL AREA=       1102.

 EGPRS       EGLWC        H3        QWEIR       QLOW       BAREA    TRAPEZOID       ELLC      ELTRD      WEIRLN
                                                                       AREA
   1298.11   1298.19       .98         0.     14000.      1059.      1060.     1293.20    1301.60          0.


3470 ENCROACHMENT STATIONS=      9951.5   10048.5  TYPE=       1  TARGET=        97.000
    18.061     11.76   1294.86       .00   1294.82   1298.19      3.33        .86        .00 100000.00
   14000.0        .0   14000.0        .0        .0     956.5        .0      628.1       61.4 100000.00
       .49       .00     14.64       .00      .000      .025      .000       .000    1283.10    9951.62
   .003608      101.      101.      101.         0         0         0        .00      96.74   10048.36


*SECNO 18.081

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.20

1
   12AUG05       13:19:13
        PAGE    94


     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=      9900.0   10085.0  TYPE=       1  TARGET=       185.000
    18.081     17.30   1298.40       .00   1298.39   1299.12       .72        .15        .78   1286.60
   14000.0     966.3   11715.0    1318.6     257.1    1619.4     308.8      632.0       61.8   1284.90
       .50      3.76      7.23      4.27      .035      .035      .035       .000    1281.10   9900.00
   .000743       80.      106.      130.         3         0         0        .00     185.00  10085.00


CCHV=      .100 CEHV=      .300
*SECNO 18.174

3470 ENCROACHMENT STATIONS=      9857.0   10125.0  TYPE=       1  TARGET=       268.000
    18.174     17.29   1298.99       .00   1299.08   1299.45       .46        .31        .03   1288.70
   14000.0    1540.2   12164.7     295.2     401.9    2141.8     151.5      659.5       64.3   1294.60
       .52      3.83      5.68      1.95      .035      .035      .035       .000    1281.70   9861.59
   .000548      500.      491.      490.         2         0         0        .00     263.41  10125.00


*SECNO 18.269

3470 ENCROACHMENT STATIONS=      9882.2   10110.0  TYPE=       1  TARGET=       227.800
    18.269     15.34   1299.14       .00   1299.10   1299.91       .77        .36        .09   1288.40
   14000.0    1957.1   11546.2     496.7     385.5    1555.5     150.1      687.1       67.1   1292.40
       .54      5.08      7.42      3.31      .035      .035      .035       .000    1283.80   9885.80
   .000995      500.      502.      500.         2         0         0        .00     218.17  10103.98


*SECNO 18.362

3470 ENCROACHMENT STATIONS=      9895.6   10107.8  TYPE=       1  TARGET=       212.200
    18.362     14.26   1299.56       .00   1299.52   1300.54       .99        .57        .07   1290.00
   14000.0     905.7   12279.4     814.9     196.8    1469.4     194.4      709.4       69.5   1290.60
       .56      4.60      8.36      4.19      .035      .035      .035       .000    1285.30   9900.17
   .001358      490.      491.      510.         2         0         0        .00     203.25  10103.42


*SECNO 18.445

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
1
```

12AUG05 13:19:13
PAGE 95

```
     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=     9885.0   10110.0  TYPE=      1  TARGET=      225.000
    18.445     17.41   1304.71   1304.71   1305.03   1307.27      2.55       1.06        .47   1290.00
   14000.0    4624.0    3794.0    5582.1     499.1     208.8     516.9      725.4       71.7   1290.00
       .57      9.26     18.17     10.80      .035      .035      .035       .000    1287.30   9889.58
   .005045      470.      440.      460.        20        12         0        .00     220.42  10110.00


 SPECIAL BRIDGE

 SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
       .90      2.34       3.00        .00       6.11       1.00       33.20       .00    1287.70    1287.40

 *SECNO 18.456
 BTCARD, BRIDGE STENCL=    9885.00   STENCR=   10110.00

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.82

 PRESSURE AND WEIR FLOW,  Weir Submergence Based on TRAPEZOIDAL Shape

  EGPRS      EGLWC      H3         QWEIR      QPR        BAREA      TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                      AREA
   7765.86   1308.69     1.42      13645.      364.        33.        33.      1294.20    1299.50      225.


 3470 ENCROACHMENT STATIONS=     9885.0   10110.0  TYPE=      1  TARGET=      225.000
    18.456     20.41   1308.11       .00   1307.05   1309.07       .97       1.81        .00   1290.40
   14000.0    5328.1    2777.6    5894.3     817.9     247.8     831.3      727.6       72.0   1290.40
       .57      6.51     11.21      7.09      .035      .035      .035       .000    1287.70   9885.00
   .001530       60.       60.       60.         3         0         7        .00     225.00  10110.00

 *SECNO 18.545

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.22
```

1

12AUG05 13:19:13
PAGE 96

```
     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=     9881.4   10169.8  TYPE=      1  TARGET=      288.399
    18.545     19.78   1309.08       .00   1307.97   1309.41       .34        .27        .06   1294.10
   14000.0    1689.9   10006.9    2303.3     550.1    1942.1     771.0      755.0       74.7   1293.80
       .60      3.07      5.15      2.99      .035      .035      .035       .000    1289.30   9881.40
   .000311      440.      466.      480.         2         0         0        .00     288.40  10169.80

 *SECNO 18.575
```

```
3470 ENCROACHMENT STATIONS=     9880.7   10170.8  TYPE=      1  TARGET=      290.100
    18.575     19.87   1309.17      .00   1308.10   1309.47      .29       .05      .00   1291.50
   14000.0    3327.9    2789.0   7883.1     901.2     531.9   1859.0     767.1     75.8   1289.70
       .61      3.69      5.24     4.24      .035      .035     .035      .000  1289.30   9880.70
   .000303      160.      160.     160.         2         0        0       .00    290.10  10170.80


SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     1.25      1.56      3.00       .00     10.40      1.00     56.50      .00   1289.40   1289.30

*SECNO 18.583
BTCARD, BRIDGE STENCL=    9876.10   STENCR=   10177.20
PRESSURE AND WEIR FLOW,  Weir Submergence Based on TRAPEZOIDAL Shape

 EGPRS      EGLWC      H3       QWEIR      QPR       BAREA   TRAPEZOID      ELLC     ELTRD     WEIRLN
                                                              AREA
   2796.47   1309.52      .06    13761.     306.       57.       56.     1295.40   1299.00      288.


3470 ENCROACHMENT STATIONS=     9876.1   10177.2  TYPE=      1  TARGET=      301.101
    18.583     20.21   1309.61      .00   1309.07   1309.88      .27       .42      .00   1291.60
   14000.0    3360.1    2758.1   7881.8     934.8     541.4   1920.6     770.1     76.1   1289.80
       .61      3.59      5.09     4.10      .035      .035     .035      .000  1289.40   9876.10
   .000279       40.       40.      40.         2         0        8       .00    301.10  10177.20

*SECNO 18.640

3470 ENCROACHMENT STATIONS=     9879.6   10134.7  TYPE=      1  TARGET=      255.101
    18.640     19.35   1309.55      .00   1309.01   1310.07      .52       .11      .07   1294.60
   14000.0    2149.7    8913.1   2937.2     522.0    1360.8    723.5     791.1     78.0   1293.40
       .63      4.12      6.55     4.06      .035      .035     .035      .000  1290.20   9879.60
   .000530      300.      301.     310.         2         0        0       .00    255.10  10134.70


1
    12AUG05      13:19:13
         PAGE    97

     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 18.734

3470 ENCROACHMENT STATIONS=     9883.2   10111.7  TYPE=      1  TARGET=      228.500
    18.734     17.36   1309.76      .00   1309.25   1310.44      .68       .32      .05   1298.60
   14000.0    1207.4   12237.1   555.5     308.0    1757.1    178.6     818.7     80.8   1300.80
       .65      3.92      6.96     3.11      .035      .035     .035      .000  1292.40   9883.20
   .000796      490.      496.     500.         0         0        0       .00    228.50  10111.70

*SECNO 18.832

3470 ENCROACHMENT STATIONS=     9891.8   10107.0  TYPE=      1  TARGET=      215.200
    18.832     16.96   1310.16      .00   1309.73   1310.87      .71       .42      .01   1302.80
   14000.0     395.1   11781.2  1823.7     136.8    1654.3    395.8     845.0     83.4   1297.10
       .67      2.89      7.12     4.61      .035      .035     .035      .000  1293.20   9891.82
   .000835      480.      517.     540.         2         0        0       .00    215.18  10107.00

*SECNO 18.925

3470 ENCROACHMENT STATIONS=     9887.7   10087.5  TYPE=      1  TARGET=      199.800
    18.925     15.93   1310.53      .00   1310.15   1311.34      .82       .44      .03   1297.60
   14000.0    1545.0   11647.0   808.0     342.5    1512.2    205.9     868.9     85.7   1300.00
       .69      4.51      7.70     3.92      .035      .035     .035      .000  1294.60   9888.02
   .000974      480.      491.     500.         2         0        0       .00    199.12  10087.13
```

```
*SECNO 19.018

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .63


3470 ENCROACHMENT STATIONS=     9866.3   10038.5  TYPE=      1  TARGET=      172.200
    19.018     13.14   1310.74       .00   1310.41   1312.28      1.54       .72       .22   1305.10
   14000.0     425.5   13552.9      21.6     101.4    1343.8       9.4     888.6      87.8   1308.40
       .71      4.20     10.09      2.29      .035      .035      .035      .000   1297.60   9867.08
   .002490      460.      491.      520.         2         0         0       .00    170.97  10038.05


1
    12AUG05      13:19:13
         PAGE   98

     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 19.117

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     9942.1   10061.9  TYPE=      1  TARGET=      119.801
    19.117     13.25   1311.85   1311.85   1311.86   1316.05      4.20      2.02       .80   1302.90
   14000.0    1190.1   11027.3   1782.6     129.5     618.6     175.9     902.9      89.5   1301.50
       .71      9.19     17.83     10.14      .035      .035      .035      .000   1298.60   9944.06
   .006755      490.      523.      560.        20         5         0       .00    115.93  10059.99


*SECNO 19.210

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.62


3470 ENCROACHMENT STATIONS=     9923.1   10081.0  TYPE=      1  TARGET=      157.900
    19.210     16.31   1316.51       .00   1316.51   1318.24      1.72      1.94       .25   1312.00
   14000.0     157.9   13690.5     151.6      43.3    1286.4      41.6     915.9      91.0   1312.00
       .73      3.65     10.64      3.64      .035      .035      .035      .000   1300.20   9925.81
   .002586      500.      491.      490.         3         0         0       .00    152.62  10078.44


CCHV=     .300 CEHV=     .500
*SECNO 19.283

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     9948.0   10057.0  TYPE=      1  TARGET=      109.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1324.00 ELREA=      1324.00

1
    12AUG05      13:19:13
         PAGE   99

     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

     19.283       7.99   1319.69    1319.69    1319.69    1323.70       4.02       1.75       1.15    1311.70
    14000.0         .0   14000.0         .0         .0      870.5         .0      925.8       92.2  100000.00
        .73        .00     16.08        .00       .000       .035       .000       .000    1311.70    9948.00
    .009874       390.      386.       390.         20         11          0        .00     109.00   10057.00


 SPECIAL BRIDGE

 5227 DOWNSTREAM ELEV IS    1318.52 , NOT    1319.69 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW
CONTROLS)

 SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
       .90       1.56       3.00        .00     109.00       4.50    1304.00        .00    1311.70    1311.70

 *SECNO 19.299
 BTCARD, BRIDGE STENCL=    9948.00   STENCR=   10057.00

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.45

 CLASS B LOW FLOW

 3420 BRIDGE W.S.=    1319.93 BRIDGE VELOCITY=      16.28     CALCULATED CHANNEL AREA=       860.

  EGPRS      EGLWC      H3         QWEIR      QLOW       BAREA      TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                       AREA
    1322.48   1324.30       .00         0.    14000.     1304.       1306.     1324.20    1326.50         0.


 3470 ENCROACHMENT STATIONS=     9948.0   10057.0  TYPE=      1  TARGET=      109.000

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1325.00 ELREA=      1325.00

     19.299      10.07   1321.77       .00   1321.77   1324.30       2.53        .59        .00    1311.70
    14000.0         .0   14000.0         .0         .0    1097.6         .0      927.7       92.4  100000.00
        .74        .00     12.76        .00       .000       .035       .000       .000    1311.70    9948.00
    .004669        86.       86.        86.          0          0          0        .00     109.00   10057.00


 *SECNO 19.313
1
    12AUG05      13:19:13
         PAGE  100


     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


 3470 ENCROACHMENT STATIONS=     9944.4   10104.0  TYPE=      1  TARGET=      159.600
     19.313      11.24   1322.94       .00   1322.89   1324.82       1.88        .33        .19  100000.00
    14000.0         .0   14000.0         .0         .0    1271.4         .0      929.8       92.6  100000.00
        .74        .00     11.01        .00       .000       .035       .000       .000    1311.70    9945.35
    .004274        75.       74.        75.          3          0          0        .00     157.29   10102.64


 CCHV=      .100 CEHV=      .300
 *SECNO 19.418

 3470 ENCROACHMENT STATIONS=     9955.1   10117.8  TYPE=      1  TARGET=      162.700
```

```
    19.418      12.34   1325.34       .00   1325.34   1327.13      1.79      2.31       .01 100000.00
   14000.0         .0   14000.0        .0        .0    1302.7        .0     946.1      94.6 100000.00
       .75        .00     10.75       .00      .000      .035      .000      .000   1313.00   9955.85
   .004054       570.      554.      530.         2         0         0       .00    160.86  10116.71


*SECNO 19.560

3470 ENCROACHMENT STATIONS=     9931.4   10061.0  TYPE=      1  TARGET=      129.600
    19.560      12.37   1327.97       .00   1327.97   1329.84      1.87      2.68       .02 100000.00
   14000.0         .0   14000.0        .0        .0    1276.1        .0     967.7      97.1 100000.00
       .77        .00     10.97       .00      .000      .035      .000      .000   1315.60   9931.76
   .003345       730.      729.      720.         3         0         0       .00    128.82  10060.58


CCHV=      .300 CEHV=      .500
*SECNO 19.625

3301 HV CHANGED MORE THAN HVINS


3470 ENCROACHMENT STATIONS=     9965.0   10025.0  TYPE=      1  TARGET=       60.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1332.00 ELREA=      1332.00

    19.625      11.91   1329.51       .00   1329.44   1330.53      1.02       .44       .25   1317.60
    5800.0         .0    5800.0        .0        .0     714.4        .0     976.0      97.9 100000.00
       .78        .00      8.12       .00      .000      .015      .000      .000   1317.60   9965.00
   .000314       580.      364.       70.         2         0         0       .00     60.00  10025.00


1
   12AUG05      13:19:13
        PAGE  101


     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


SPECIAL BRIDGE

SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     1.05       1.56       3.00     100.00      60.00       2.00     564.00       .00    1318.60    1317.60

*SECNO 19.691
PRESSURE FLOW


 EGPRS       EGLWC       H3         QWEIR      QPR        BAREA    TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                      AREA
   1332.07    1330.80       .09        0.       5800.      564.      563.      1328.30    1334.80        0.


3470 ENCROACHMENT STATIONS=     9965.0   10025.0  TYPE=      1  TARGET=       60.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1333.00 ELREA=      1333.00

    19.691      12.55   1331.15       .00   1331.06   1332.07       .92      1.54       .00   1318.60
    5800.0         .0    5800.0        .0        .0     753.2        .0     981.9      98.3 100000.00
       .80        .00      7.70       .00      .000      .015      .000      .000   1318.60   9965.00
   .000267       330.      350.      430.         2         0         0       .00     60.00  10025.00


*SECNO 19.742

3470 ENCROACHMENT STATIONS=     9953.0   10038.0  TYPE=      1  TARGET=       85.000
    19.742      12.53   1331.63       .00   1331.57   1332.22       .60       .06       .10 100000.00
    5800.0         .0    5800.0        .0        .0     934.7        .0     987.1      98.8 100000.00
       .81        .00      6.21       .00      .000      .015      .000      .000   1319.10   9953.00
   .000193        80.      269.      470.         2         0         0       .00     85.00  10038.00
```

```
CCHV=     .100 CEHV=     .300
*SECNO 19.847

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .36


3470 ENCROACHMENT STATIONS=     9957.0   10043.0  TYPE=      1  TARGET=       86.000
    19.847     12.95   1331.75       .00   1331.75   1332.50       .75       .23       .05 100000.00
    5800.0        .0    5800.0        .0        .0     835.2        .0     998.4      99.9 100000.00
       .83       .00      6.94       .00      .000      .035      .000      .000   1318.80   9957.00
   .001506      570.      554.      520.         0         0         0       .00     86.00  10043.00


1
   12AUG05      13:19:13
        PAGE  102


    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 19.960

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     9958.0   10031.0  TYPE=      1  TARGET=       73.000
    19.960      7.57   1332.17   1332.17   1332.26   1335.11      2.94      1.93       .66   1330.00
    5800.0        .0    5800.0        .0        .0     421.5        .0    1007.0     101.0 100000.00
       .84       .00     13.76       .00      .000      .035      .000      .000   1324.60   9958.00
   .011209      640.      597.      560.         2        14         0       .00     73.00  10031.00


CCHV=     .300 CEHV=     .500
*SECNO 19.974

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.65


3470 ENCROACHMENT STATIONS=     9969.0   10020.0  TYPE=      1  TARGET=       51.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1336.00 ELREA=      1336.00

    19.974     10.11   1333.91       .00   1333.48   1335.87      1.97       .47       .29   1323.80
    5800.0        .0    5800.0        .0        .0     515.2        .0    1007.8     101.1 100000.00
       .84       .00     11.26       .00      .000      .035      .000      .000   1323.80   9969.00
   .004097      105.       74.       65.         3         0         0       .00     51.00  10020.00


SPECIAL BRIDGE

SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     1.25       1.56       3.00        .00      51.00       3.00     480.00       .00    1324.10    1323.80

*SECNO 19.986
BTCARD, BRIDGE STENCL=    9969.00   STENCR=   10020.00

3301 HV CHANGED MORE THAN HVINS

1
   12AUG05      13:19:13
        PAGE  103


    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

PRESSURE FLOW

 EGPRS      EGLWC      H3       QWEIR      QPR       BAREA   TRAPEZOID      ELLC      ELTRD     WEIRLN
                                                              AREA
   1337.44   1336.36      .75        0.     5800.      480.      480.     1334.10   1337.90        0.

3470 ENCROACHMENT STATIONS=     9969.0   10020.0  TYPE=      1  TARGET=       51.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1337.00 ELREA=      1337.00

    19.986     12.32   1336.12       .00   1335.56   1337.44      1.32      1.57       .00   1323.80
    5800.0        .0    5800.0        .0        .0     628.3        .0    1008.6     101.1 100000.00
       .85       .00      9.23       .00      .000      .035      .000      .000   1323.80   9969.00
   .002217       61.       61.       61.         3         0         0       .00     51.00  10020.00

*SECNO 20.049

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     9975.0   10025.0  TYPE=      1  TARGET=       50.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1340.00 ELREA=    100000.00

    20.049     11.20   1338.30   1338.30   1338.46   1342.09      3.79      1.41      1.24 100000.00
    5800.0        .0    5800.0        .0        .0     371.0        .0    1012.4     101.5 100000.00
       .85       .00     15.63       .00      .000      .035      .000      .000   1327.10   9975.00
   .011167      305.      333.      345.        20        11         0       .00     50.00  10025.00

CCHV=     .100 CEHV=     .300
*SECNO 20.144

3301 HV CHANGED MORE THAN HVINS

1
   12AUG05      13:19:13
        PAGE  104

    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

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.73

3470 ENCROACHMENT STATIONS=     9972.0   10029.0  TYPE=      1  TARGET=       57.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1344.00 ELREA=      1340.80

    20.144     12.59   1343.49       .00   1343.59   1345.30      1.82      3.01       .20 100000.00
    5800.0        .0    5769.2      30.8        .0     532.3      10.0    1017.7     102.1   1340.80
       .86       .00     10.84      3.08      .000      .035      .040      .000   1330.90   9972.00
   .003736      490.      502.      500.         2         0         0       .00     57.00  10029.00

*SECNO 20.242

3470 ENCROACHMENT STATIONS=     9964.0   10035.0  TYPE=      1  TARGET=       71.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1348.00 ELREA=      1342.80
```

```
    20.242      12.32   1345.62       .00   1345.60   1347.28      1.66      1.97       .02 100000.00
    5800.0        .0    5742.1      57.9        .0     553.0      16.3    1024.3     102.9   1342.80
       .88        .00     10.38      3.54      .000      .035      .040      .000   1333.30   9964.00
   .003873      470.      517.      560.         3         0         0       .00     71.00  10035.00


 *SECNO 20.335

 3470 ENCROACHMENT STATIONS=     9963.0   10036.0  TYPE=      1  TARGET=       73.000
    20.335      10.34   1347.64       .00   1347.53   1348.91      1.27      1.59       .04 100000.00
    5800.0        .0    5770.4      29.6        .0     637.1      10.6    1031.1     103.7   1344.00
       .89        .00     9.06      2.80      .000      .035      .040      .000   1337.30   9963.00
   .002737      510.      491.      470.         2         0         0       .00     73.00  10036.00


 CCHV=     .300 CEHV=     .500
 *SECNO 20.347

 3301 HV CHANGED MORE THAN HVINS


 3470 ENCROACHMENT STATIONS=     9970.0   10021.0  TYPE=      1  TARGET=       51.000
1
    12AUG05      13:19:13
         PAGE  105


     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


 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1351.50 ELREA=      1351.50

    20.347      10.34   1347.54       .00   1347.32   1349.42      1.88       .20       .31   1337.20
    5800.0        .0    5800.0        .0        .0     527.3        .0    1032.0     103.8 100000.00
       .89        .00     11.00       .00      .000      .035      .000      .000   1337.20   9970.00
   .003810        1.       63.      150.         2         0         0       .00     51.00  10021.00


 SPECIAL BRIDGE

 SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
      1.25       1.56       3.00     100.00      51.00       3.00     576.00       .00   1337.70   1337.20

 *SECNO 20.366
 PRESSURE FLOW


  EGPRS       EGLWC       H3         QWEIR      QPR        BAREA    TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                      AREA
   1349.99   1349.88        .68        0.      5800.       576.       576.      1349.70   1354.50        0.


 3470 ENCROACHMENT STATIONS=     9970.0   10021.0  TYPE=      1  TARGET=       51.000

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1352.50 ELREA=      1352.50

    20.366      11.19   1348.39       .00   1348.08   1349.99      1.60       .58       .00   1337.20
    5800.0        .0    5800.0        .0        .0     570.9        .0    1033.3     103.9 100000.00
       .90        .00     10.16       .00      .000      .035      .000      .000   1337.20   9970.00
   .002979      100.      100.      100.         3         0         0       .00     51.00  10021.00


 *SECNO 20.423

 3301 HV CHANGED MORE THAN HVINS


 3470 ENCROACHMENT STATIONS=     9958.0   10072.0  TYPE=      1  TARGET=      114.000
    20.423      12.00   1350.00       .00   1349.71   1350.86       .86       .65       .22   1345.00
    5800.0     123.7    5304.1     372.3      44.6     686.5      98.7    1038.0     104.5   1344.30
       .91      2.77      7.73      3.77      .040      .035      .040      .000   1338.00   9958.00
```

```
   .001645      415.      301.      205.         2         0         0       .00    114.00  10072.00

1
   12AUG05      13:19:13
        PAGE  106

    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 20.430

 3301 HV CHANGED MORE THAN HVINS

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .65

 3470 ENCROACHMENT STATIONS=     9985.0   10036.0  TYPE=      1  TARGET=      51.000

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1352.50 ELREA=      1352.50

    20.430     10.27   1349.57       .00   1349.26   1351.47      1.90       .09       .52   1339.30
    5800.0        .0    5800.0        .0        .0     524.0        .0    1038.6     104.6 100000.00
       .91       .00     11.07       .00      .000      .035      .000      .000   1339.30   9985.00
   .003886        1.       37.       65.         2         0         0       .00     51.00  10036.00


 SPECIAL BRIDGE

 SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
      1.25      1.56      3.00    100.00     51.00      3.00    576.00       .00   1339.30   1339.30

 *SECNO 20.444
 PRESSURE FLOW

  EGPRS      EGLWC      H3        QWEIR     QPR       BAREA   TRAPEZOID      ELLC      ELTRD     WEIRLN
                                                              AREA
   1352.03   1351.94      .70        0.     5800.      576.      576.     1351.30   1355.50        0.


 3470 ENCROACHMENT STATIONS=     9985.0   10036.0  TYPE=      1  TARGET=      51.000

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1353.50 ELREA=      1353.50

    20.444     11.10   1350.40       .00   1350.06   1352.03      1.63       .55       .00   1339.30
    5800.0        .0    5800.0        .0        .0     566.0        .0    1039.5     104.6 100000.00
       .91       .00     10.25       .00      .000      .035      .000      .000   1339.30   9985.00
   .003059       70.       70.       70.         3         0         0       .00     51.00  10036.00

1
   12AUG05      13:19:13
        PAGE  107

    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 20.529

 3301 HV CHANGED MORE THAN HVINS

 3470 ENCROACHMENT STATIONS=     9930.0   10069.0  TYPE=      1  TARGET=     139.000
```

```
    20.529      9.63   1352.63       .00   1352.40   1353.33       .70      1.02       .28   1350.20
    5800.0      99.3    5629.2      71.5      39.4     825.7      30.1    1047.1     105.6   1350.40
       .93      2.52      6.82      2.37      .040      .035      .040      .000   1343.00   9930.00
   .001764      545.      449.      375.         2         0         0       .00    139.00  10069.00


 CCHV=     .100 CEHV=     .300
 *SECNO 20.628

 3470 ENCROACHMENT STATIONS=     9935.0   10065.0  TYPE=      1  TARGET=      130.000
    20.628     10.30   1353.60       .00   1353.42   1354.03       .44       .68       .03 100000.00
    5800.0        .0    5800.0        .0        .0    1092.3        .0    1059.0     107.2 100000.00
       .96       .00      5.31       .00      .000      .035      .000      .000   1343.30   9935.00
   .000990      530.      523.      520.         2         0         0       .00    130.00  10065.00


 *SECNO 20.725

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED

 3470 ENCROACHMENT STATIONS=     9962.0   10026.0  TYPE=      1  TARGET=       64.000
    20.725      8.81   1356.01   1356.01   1356.12   1359.23      3.22      1.20       .83 100000.00
    5800.0        .0    5800.0        .0        .0     402.8        .0    1067.8     108.4 100000.00
       .97       .00     14.40       .00      .000      .035      .000      .000   1347.20   9962.00
   .011035      510.      512.      520.        20        15         0       .00     64.00  10026.00


 CCHV=     .300 CEHV=     .500
 *SECNO 20.737
 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
1
    12AUG05      13:19:13
         PAGE  108


     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=     9968.0   10019.0  TYPE=      1  TARGET=       51.000

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1363.00 ELREA=      1363.00

    20.737      7.38   1358.28   1358.28   1358.25   1361.97      3.69       .88       .23   1350.90
    5800.0        .0    5800.0        .0        .0     376.3        .0    1068.5     108.5 100000.00
       .97       .00     15.41       .00      .000      .035      .000      .000   1350.90   9968.00
   .010981       80.       80.       80.        20        11         0       .00     51.00  10019.00


 SPECIAL BRIDGE

 5227 DOWNSTREAM ELEV IS    1357.00 , NOT    1358.28 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW
CONTROLS)

 SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
      1.25       1.56       3.00     100.00      51.00       3.00     576.00       .00   1351.00   1350.90

 *SECNO 20.750

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.54

 CLASS B LOW FLOW

 3420 BRIDGE W.S.=    1358.63 BRIDGE VELOCITY=      15.73     CALCULATED CHANNEL AREA=       366.
```

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1362.84	.00	0.	5800.	576.	576.	1363.00	1366.00	0.

3470 ENCROACHMENT STATIONS= 9968.0 10019.0 TYPE= 1 TARGET= 51.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1364.00 ELREA= 1364.00

20.750	9.71	1360.71	.00	1360.71	1362.84	2.13	.87	.00	1351.00
5800.0	.0	5800.0	.0	.0	495.2	.0	1069.2	108.6	100000.00
.97	.00	11.71	.00	.000	.035	.000	.000	1351.00	9968.00
.004634	71.	71.	71.	0	0	0	.00	51.00	10019.00

1
12AUG05 13:19:13
PAGE 109

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 20.819

3470 ENCROACHMENT STATIONS= 9965.0 10043.0 TYPE= 1 TARGET= 78.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1366.90 ELREA= 1366.90

20.819	6.30	1362.80	.00	1362.47	1364.96	2.16	2.11	.02	1356.50
5800.0	.0	5800.0	.0	.0	491.2	.0	1073.3	109.1	100000.00
.98	.00	11.81	.00	.000	.035	.000	.000	1356.50	9965.00
.007374	375.	365.	345.	4	0	0	.00	78.00	10043.00

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 1361.25 , NOT 1362.80 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	3.00	100.00	77.30	3.30	655.00	.00	1357.40	1356.50

*SECNO 20.841
CLASS B LOW FLOW

3420 BRIDGE W.S.= 1362.71 BRIDGE VELOCITY= 13.62 CALCULATED CHANNEL AREA= 393.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1364.70	1366.18	.00	0.	5800.	655.	592.	1365.40	1369.90	0.

3470 ENCROACHMENT STATIONS= 9965.0 10043.0 TYPE= 1 TARGET= 78.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1367.90 ELREA= 1367.90

20.841	7.06	1364.46	.00	1364.46	1366.18	1.72	1.22	.00	1357.40
5800.0	.0	5800.0	.0	.0	551.0	.0	1074.7	109.3	100000.00
.98	.00	10.53	.00	.000	.035	.000	.000	1357.40	9965.00
.005089	115.	115.	115.	0	0	0	.00	78.00	10043.00

*SECNO 20.860

3301 HV CHANGED MORE THAN HVINS

1
12AUG05 13:19:13
PAGE 110

```
     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


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.61


 3470 ENCROACHMENT STATIONS=     9904.0   10060.0  TYPE=      1  TARGET=      156.000

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1365.30 ELREA=      1367.60

     20.860      9.76   1366.06       .00   1366.09   1366.78       .72       .30       .30   1365.30
     5800.0      35.8    5764.2        .0      27.4     842.9        .0    1076.3     109.6 100000.00
        .99      1.31      6.84       .00      .040      .035      .000      .000   1356.30   9904.00
    .001959       90.      100.      110.         3         0         0       .00    156.00  10060.00


 CCHV=     .100 CEHV=     .300
 *SECNO 20.942

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .66


 3470 ENCROACHMENT STATIONS=     9860.0   10110.0  TYPE=      1  TARGET=      250.000
     20.942      7.71   1367.31       .00   1367.37   1368.03       .72      1.25       .00 100000.00
     5800.0        .0    4804.5     995.5        .0     673.4     200.4    1085.2     111.7   1366.50
       1.00       .00      7.13      4.97      .000      .035      .035      .000   1359.60   9860.00
    .004542      530.      433.      490.         2         0         0       .00    250.00  10110.00


 *SECNO 21.036

 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED

 3470 ENCROACHMENT STATIONS=     9810.0   10060.0  TYPE=      1  TARGET=      250.000
     21.036      8.03   1371.53   1371.53   1372.01   1373.15      1.62      2.79       .27   1370.70
     5800.0     131.7    5619.5      48.8      58.6     542.0      21.7    1093.7     114.5   1370.40
       1.02      2.25     10.37      2.25      .040      .035      .040      .000   1363.50   9810.00
    .007193      490.      496.      490.        20         8         0       .00    250.00  10060.00


1
    12AUG05      13:19:13
         PAGE  111

     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 21.127

 3470 ENCROACHMENT STATIONS=     9900.0   10060.0  TYPE=      1  TARGET=      160.000

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1374.00 ELREA=    100000.00

     21.127      7.96   1374.66   1374.33   1374.78   1376.50      1.84      3.29       .07   1374.20
     5800.0     141.5    5658.5        .0      56.4     513.7        .0    1100.1     116.6 100000.00
       1.03      2.51     11.01       .00      .040      .035      .000      .000   1366.70   9900.00
    .006573      400.      480.      500.         4         8         0       .00    160.00  10060.00


 *SECNO 21.230
```

```
3265 DIVIDED FLOW

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     9900.0   10125.0  TYPE=      1  TARGET=      225.000
    21.230      8.40   1380.40   1380.40   1380.49   1381.94      1.54      3.94       .03   1379.30
    5800.0     263.8    4336.3    1199.8      73.8     394.4     190.9    1107.7     119.0   1380.60
      1.05      3.57     11.00      6.29      .040      .035      .040      .000   1372.00   9900.00
   .008146      560.      544.      500.         2         8         0       .00    222.17  10125.00


*SECNO 21.363
3280 CROSS SECTION     21.36 EXTENDED       .65 FEET


3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.27


3470 ENCROACHMENT STATIONS=     9939.0   10105.0  TYPE=      1  TARGET=      166.000
    21.363      9.54   1383.64       .00   1383.36   1384.17       .54      2.14       .10 100000.00
    5800.0        .0    5781.9      18.1        .0     982.2      14.0    1121.1     122.2   1382.10
      1.08       .00      5.89      1.29      .000      .035      .040      .000   1374.10   9939.00
   .001579      740.      702.      700.         3         0         0       .00    166.00  10105.00


1
    12AUG05      13:19:13
         PAGE  112

     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 21.484

3265 DIVIDED FLOW


3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     9852.0   10077.0  TYPE=      1  TARGET=      225.000
    21.484      8.64   1387.14   1387.14   1386.54   1388.60      1.46      1.90       .28   1386.90
    5800.0     996.2    4739.2      64.6     173.3     456.5      27.2    1133.2     124.9   1386.50
      1.10      5.75     10.38      2.38      .040      .035      .040      .000   1378.50   9852.00
   .007532      650.      639.      520.        20        10         0       .00    215.98  10077.00


*SECNO 21.576

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.40


3470 ENCROACHMENT STATIONS=     9940.0   10165.0  TYPE=      1  TARGET=      225.000
    21.576      8.12   1390.22       .00   1389.26   1391.12       .90      2.46       .06   1390.00
    5800.0      19.6    4794.6     985.8      14.8     592.1     217.4    1141.1     127.1   1388.30
      1.12      1.32      8.10      4.54      .040      .035      .040      .000   1382.10   9940.00
   .003842      320.      486.      480.         2         0         0       .00    225.00  10165.00


*SECNO 21.669
3280 CROSS SECTION     21.67 EXTENDED       .53 FEET
```

```
 3301 HV CHANGED MORE THAN HVINS

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
1
    12AUG05      13:19:13
         PAGE  113

     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=     9890.0   10115.0  TYPE=      1  TARGET=      225.000
     21.669      9.83   1393.83   1393.83   1393.39   1395.30      1.46      2.55       .17   1393.80
     5600.0     625.0    4040.6     934.4     127.8     368.7     176.4    1149.3     129.6   1392.00
       1.13      4.89     10.96      5.30      .040      .035      .040      .000   1384.00   9890.00
    .007748      440.      491.      470.        20         8         0       .00    225.00  10115.00


 *SECNO 21.742

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.67


 3470 ENCROACHMENT STATIONS=     9940.0   10140.0  TYPE=      1  TARGET=      200.000
     21.742      9.86   1396.26       .00   1395.28   1397.05       .79      1.68       .07   1394.70
     5600.0      98.3    5197.1     304.6      44.0     708.3      99.4    1156.2     131.5   1394.20
       1.14      2.23      7.34      3.06      .040      .035      .040      .000   1386.40   9940.00
    .002767      430.      385.      390.         2         0         0       .00    200.00  10140.00


 *SECNO 21.840

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .68


 3470 ENCROACHMENT STATIONS=     9900.0   10100.0  TYPE=      1  TARGET=      200.000
     21.840      6.87   1397.97       .00   1398.02   1399.15      1.18      1.98       .12   1396.20
     5600.0     644.3    4770.1     185.6     121.7     517.7      57.2    1165.1     133.7   1397.00
       1.16      5.30      9.21      3.25      .040      .035      .040      .000   1391.10   9900.00
    .005937      430.      517.      430.         2         0         0       .00    200.00  10100.00


 *SECNO 21.895

 3470 ENCROACHMENT STATIONS=     9835.0   10080.0  TYPE=      1  TARGET=      245.000
     21.895      7.86   1399.76       .00   1399.70   1401.09      1.33      1.89       .05   1398.00
     5600.0    1941.7    3463.2     195.1     339.4     316.7      56.0    1169.9     135.2   1397.70
       1.17      5.72     10.94      3.48      .040      .035      .040      .000   1391.90   9835.00
    .006870      330.      290.      220.         3         0         0       .00    245.00  10080.00


1
    12AUG05      13:19:13
         PAGE  114

     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 21.933

 3301 HV CHANGED MORE THAN HVINS
```

```
3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.29

3470 ENCROACHMENT STATIONS=     9650.0   10070.0  TYPE=      1  TARGET=      420.000
    21.933      4.73   1401.53       .00   1400.89   1401.73       .20       .53       .11   1398.00
    5600.0    2164.8    3435.2        .0     718.1     866.4        .0    1175.4     136.8 100000.00
      1.19      3.01      3.96       .00      .040      .035      .000      .000   1396.80   9650.00
   .001311      210.      210.      210.         2         0         0       .00    420.00  10070.00

*SECNO 21.953

3265 DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .40

3470 ENCROACHMENT STATIONS=     9630.0   10051.0  TYPE=      1  TARGET=      421.000
    21.953      7.25   1401.25       .00   1401.09   1402.14       .89       .20       .20   1400.20
    5600.0    2479.2    2958.7     162.1     465.7     324.6      36.3    1177.5     137.4   1398.30
      1.19      5.32      9.11      4.47      .045      .045      .045      .000   1394.00   9630.00
   .008245       75.       74.       75.         3         0         0       .00    311.33  10051.00

*SECNO 22.065

3265 DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.48
```

1
12AUG05 13:19:13
PAGE 115

```
     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=     9620.0   10030.0  TYPE=      1  TARGET=      410.000
    22.065      8.71   1404.51       .00   1404.11   1404.87       .37      2.69       .05   1404.10
    5600.0    3771.5    1817.8      10.7     850.6     323.0       4.9    1188.6     141.2   1402.00
      1.22      4.43      5.63      2.17      .045      .045      .045      .000   1395.80   9620.00
   .003752      430.      591.      630.         3         0         0       .00    398.21  10030.00

*SECNO 22.165

3265 DIVIDED FLOW

3280 CROSS SECTION     22.17 EXTENDED       .41 FEET

3470 ENCROACHMENT STATIONS=     9620.0   10020.0  TYPE=      1  TARGET=      400.000
    22.165     11.10   1406.10       .00   1405.28   1406.47       .36      1.59       .00   1400.90
    5600.0    3712.7    1879.2       8.2     967.7     296.0       4.7    1203.5     146.0   1403.70
      1.25      3.84      6.35      1.74      .045      .045      .045      .000   1395.00   9620.00
   .002462      530.      528.      530.         3         0         0       .00    384.53  10020.00

*SECNO 22.273

3265 DIVIDED FLOW
```

```
3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .69

3470 ENCROACHMENT STATIONS=     9650.0   10027.0  TYPE=      1  TARGET=      377.000
    22.273      8.25   1407.65       .00   1406.70   1408.37       .72       1.80       .11   1404.10
    5600.0    1486.5    4113.5        .0     344.9     546.8        .0     1216.1     149.8 100000.00
      1.27      4.31      7.52       .00      .045      .045      .000       .000   1399.40   9650.00
   .005131      470.      570.      580.         2         0         0        .00    292.96  10027.00

*SECNO 22.410

3265 DIVIDED FLOW

1
   12AUG05      13:19:13
        PAGE  116

    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

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     9860.0   10040.0  TYPE=      1  TARGET=      180.000
    22.410     10.08   1414.08   1414.08   1414.23   1416.14      2.06       5.13       .40   1410.70
    5600.0     680.1    4807.2     112.6     124.5     392.5      23.7     1228.2     153.4   1411.30
      1.29      5.46     12.25      4.75      .045      .045      .045       .000   1404.00   9878.19
   .010289      750.      723.      630.         5        11         0        .00    140.90  10040.00

*SECNO 22.483

3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  3.25

3470 ENCROACHMENT STATIONS=     9890.0   10050.0  TYPE=      1  TARGET=      160.000
    22.483     11.39   1416.89       .00   1416.59   1417.19       .30       .88       .18   1411.10
    5600.0     531.9    5068.1        .0     202.3    1114.1        .0     1236.3     154.8 100000.00
      1.31      2.63      4.55       .00      .045      .045      .000       .000   1405.50   9890.00
   .000973      380.      385.      390.         3         0         0        .00    160.00  10050.00

*SECNO 22.578

3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .55

3470 ENCROACHMENT STATIONS=     9968.0   10064.0  TYPE=      1  TARGET=       96.000
    22.578     10.65   1417.35       .00   1416.45   1418.16       .81       .81       .15   1418.00
    5600.0        .0    5600.0        .0        .0     774.6        .0     1248.5     156.3 100000.00
      1.33       .00      7.23       .00      .000      .045      .000       .000   1406.70   9968.87
   .003200      540.      502.      490.         3         0         0        .00     95.13  10064.00

1
   12AUG05      13:19:13
        PAGE  117

    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 22.675

3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.72

3470 ENCROACHMENT STATIONS=     9830.0   10028.0  TYPE=      1  TARGET=      198.000
    22.675      9.16   1418.86       .00   1418.14   1419.10       .24       .88       .06 100000.00
    5600.0        .0    5600.0        .0        .0    1435.8        .0    1261.5     158.0 100000.00
      1.37       .00      3.90       .00      .000      .045      .000      .000   1409.70   9830.00
   .001076      570.      512.      480.         2         0         0       .00    198.00  10028.00

*SECNO 22.794

3470 ENCROACHMENT STATIONS=     9977.0   10160.0  TYPE=      1  TARGET=      183.000
    22.794      8.92   1419.62       .00   1418.67   1419.96       .34       .83       .03   1417.80
    5600.0      10.9    5589.1        .0       7.6    1190.1        .0    1280.4     160.7 100000.00
      1.41      1.45      4.70       .00      .045      .045      .000      .000   1410.70   9977.00
   .001668      460.      628.      500.         2         0         0       .00    183.00  10160.00

*SECNO 22.880

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .52

3470 ENCROACHMENT STATIONS=     9951.0   10120.0  TYPE=      1  TARGET=      169.000
    22.880      7.62   1420.62       .00   1420.11   1421.40       .78      1.31       .13 100000.00
    5600.0        .0    5600.0        .0        .0     790.7        .0    1290.8     162.5 100000.00
      1.43       .00      7.08       .00      .000      .045      .000      .000   1413.00   9951.00
   .006127      440.      454.      480.         2         0         0       .00    169.00  10120.00

*SECNO 22.990

3470 ENCROACHMENT STATIONS=     9890.0   10026.0  TYPE=      1  TARGET=      136.000
    22.990      6.77   1424.67       .00   1423.67   1425.83      1.16      4.32       .12 100000.00
    5600.0        .0    5600.0        .0        .0     647.2        .0    1300.4     164.6 100000.00
      1.44       .00      8.65       .00      .000      .045      .000      .000   1417.90   9890.00
   .009202      480.      581.      530.         2         0         0       .00    136.00  10026.00

1
   12AUG05      13:19:13
        PAGE  118

    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 23.097

3470 ENCROACHMENT STATIONS=     9958.0   10090.0  TYPE=      1  TARGET=      132.000
    23.097      5.56   1430.66       .00   1429.92   1432.17      1.50      6.23       .10 100000.00
    5600.0        .0    5600.0        .0        .0     568.9        .0    1308.3     166.3 100000.00
      1.46       .00      9.84       .00      .000      .045      .000      .000   1425.10   9958.00
   .013461      640.      565.      490.         3         0         0       .00    132.00  10090.00

*SECNO 23.168

3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.41
```

```
3470 ENCROACHMENT STATIONS=     9830.0   10140.0  TYPE=      1  TARGET=      310.000
    23.168      4.85   1433.75      .00   1433.10   1434.02      .27      1.73       .12 100000.00
    5600.0       .0    5360.2    239.8        .0    1264.3     75.6    1316.4     168.2   1430.30
      1.48      .00      4.24     3.17      .000      .045     .045      .000   1428.90   9830.00
   .002323     330.      375.     300.         3         0        0       .00    310.00  10140.00


*SECNO 23.253

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     9978.5   10023.2  TYPE=      1  TARGET=       44.700
    23.253      9.28   1434.48   1434.48   1434.53   1437.36     2.88      1.80       .78 100000.00
    3400.0       .0    3400.0       .0        .0     249.8       .0    1324.8     170.1 100000.00
      1.49      .00     13.61      .00      .000      .040     .000      .000   1425.20   9978.53
   .015281     470.      459.     450.        20        17        0       .00     44.57  10023.10


*SECNO 23.334

3301 HV CHANGED MORE THAN HVINS

1
   12AUG05      13:19:13
        PAGE  119

    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


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.42

3470 ENCROACHMENT STATIONS=     9969.0   10036.0  TYPE=      1  TARGET=       67.000
    23.334      7.82   1440.42      .00   1440.40   1441.84     1.42      4.34       .15 100000.00
    3400.0       .0    3400.0       .0        .0      355.5       .0    1327.7     170.6 100000.00
      1.51      .00      9.57      .00      .000      .040     .000      .000   1432.60   9969.01
   .007528     400.      417.     420.         2         0        0       .00     66.99  10036.00


*SECNO 23.416

3470 ENCROACHMENT STATIONS=     9981.0   10040.0  TYPE=      1  TARGET=       59.000
    23.416      7.32   1443.82      .00   1443.82   1445.59     1.78      3.65       .11 100000.00
    3400.0       .0    3400.0       .0        .0      317.6       .0    1331.0     171.2 100000.00
      1.52      .00     10.70      .00      .000      .040     .000      .000   1436.50   9981.00
   .009483     400.      433.     430.         3         0        0       .00     59.00  10040.00


*SECNO 23.514

3470 ENCROACHMENT STATIONS=     9977.0   10035.0  TYPE=      1  TARGET=       58.000
    23.514      8.51   1448.11      .00   1448.11   1449.46     1.35      3.82       .04 100000.00
    3400.0       .0    3400.0       .0        .0      365.0       .0    1335.1     171.9 100000.00
      1.53      .00      9.32      .00      .000      .040     .000      .000   1439.60   9977.53
   .005926     560.      517.     470.         2         0        0       .00     57.46  10035.00


*SECNO 23.544

3301 HV CHANGED MORE THAN HVINS


3470 ENCROACHMENT STATIONS=     9978.9   10033.7  TYPE=      1  TARGET=       54.800
    23.544      7.52   1448.92      .00   1448.91   1450.79     1.87      1.17       .16 100000.00
    3400.0       .0    3400.0       .0        .0      309.5       .0    1336.3     172.1 100000.00
      1.54      .00     10.99      .00      .000      .040     .000      .000   1441.40   9978.90
   .009544     190.      158.     150.         2         0        0       .00     54.80  10033.70
```

```
1
   12AUG05      13:19:13
        PAGE  120

    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


 SPECIAL BRIDGE

 SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
      1.25      2.48      3.20       .00      5.70      1.00     14.10       .00   1442.00   1441.40

 *SECNO 23.555
 BTCARD, BRIDGE STENCL=    9974.59   STENCR=   10037.86

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.71

 PRESSURE AND WEIR FLOW,  Weir Submergence Based on TRAPEZOIDAL Shape

  EGPRS      EGLWC      H3       QWEIR      QPR       BAREA   TRAPEZOID      ELLC      ELTRD     WEIRLN
                                                               AREA
   3688.08   1453.58     2.79     3226.      178.       14.       14.     1445.00   1449.00       63.


 3470 ENCROACHMENT STATIONS=     9974.6   10037.9  TYPE=      1  TARGET=       63.271

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1480.00 ELREA=      1480.00

    23.555     12.54   1454.54       .00   1452.64   1455.02       .48      4.23       .00 100000.00
    3400.0       .0    3400.0        .0        .0     614.0        .0    1336.9     172.2 100000.00
      1.54       .00      5.54       .00      .000      .040      .000      .000   1442.00   9974.59
   .001301      60.       60.       60.         2         0         7       .00     63.27  10037.86


 *SECNO 23.591
 3280 CROSS SECTION     23.59 EXTENDED      2.80 FEET

 3470 ENCROACHMENT STATIONS=     9968.0   10043.5  TYPE=      1  TARGET=       75.490

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1480.00 ELREA=      1480.00

    23.591     10.60   1454.80       .00   1453.15   1455.30       .49       .27       .01   1452.90
    3400.0       .0    3400.0        .0        .0     603.2        .0    1339.6     172.5 100000.00
      1.55       .00      5.64       .00      .000      .040      .000      .000   1444.20   9968.00
   .001564      100.      190.      210.         2         0         0       .00     75.49  10043.49


1
   12AUG05      13:19:13
        PAGE  121

    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 23.691

 3301 HV CHANGED MORE THAN HVINS
```

```
3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .57

3470 ENCROACHMENT STATIONS=     9970.4   10035.7  TYPE=      1  TARGET=       65.330

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1480.00 ELREA=      1480.00

    23.691      9.33   1455.73       .00   1455.15   1456.82      1.09      1.35       .18 100000.00
    3400.0        .0    3400.0        .0        .0     405.3        .0    1345.7     173.4 100000.00
      1.57       .00      8.39       .00      .000      .040      .000      .000   1446.40   9970.39
   .004877      510.      528.      540.         2         0         0       .00     65.33  10035.72

*SECNO 23.815

3470 ENCROACHMENT STATIONS=     9951.0   10037.0  TYPE=      1  TARGET=       86.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1480.00 ELREA=      1480.00

    23.815      9.29   1458.99       .00   1459.03   1460.13      1.14      3.30       .01   1458.90
    4450.0        .0    4450.0        .0        .0     519.4        .0    1352.7     174.5 100000.00
      1.59       .00      8.57       .00      .000      .040      .000      .000   1449.70   9951.00
   .005159      650.      655.      680.         3         0         0       .00     86.00  10037.00

*SECNO 23.912
3280 CROSS SECTION     23.91 EXTENDED       .24 FEET

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.46

3470 ENCROACHMENT STATIONS=     9967.4   10043.0  TYPE=      1  TARGET=       75.590

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1480.00 ELREA=      1480.00

    23.912     13.24   1461.14       .00   1461.13   1462.33      1.20      2.18       .02 100000.00
    5500.0        .0    5500.0        .0        .0     626.1        .0    1359.4     175.4 100000.00
      1.60       .00      8.78       .00      .000      .040      .000      .000   1447.90   9967.41
   .003702      480.      512.      510.         3         0         0       .00     75.59  10043.00

1
   12AUG05      13:19:13
       PAGE  122

     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 23.989

3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.42

3470 ENCROACHMENT STATIONS=     9944.8   10043.7  TYPE=      1  TARGET=       98.910
    23.989     13.07   1462.77       .00   1462.77   1463.42       .65      1.03       .05 100000.00
    5500.0        .0    5500.0        .0        .0     850.7        .0    1366.3     176.3 100000.00
      1.62       .00      6.46       .00      .000      .040      .000      .000   1449.70   9944.77
   .001830      400.      407.      410.         2         0         0       .00     98.91  10043.68

CCHV=      .300 CEHV=      .500
*SECNO 24.086

3470 ENCROACHMENT STATIONS=     9972.0   10044.0  TYPE=      1  TARGET=       72.000
    24.086     10.16   1463.76       .00   1463.78   1464.64       .88      1.11       .11   1453.60
    5500.0        .0    5500.0        .0        .0     731.5        .0    1375.6     177.3 100000.00
      1.64       .00      7.52       .00      .000      .040      .000      .000   1453.60   9972.00
   .002593      450.      512.      560.         2         0         0       .00     72.00  10044.00
```

```
SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     .90      1.56      3.00     100.00     71.60      3.00    590.00      .00    1453.60   1453.60

*SECNO 24.096
3280 CROSS SECTION     24.10 EXTENDED       .39 FEET

PRESSURE FLOW

 EGPRS      EGLWC      H3        QWEIR     QPR       BAREA    TRAPEZOID     ELLC      ELTRD     WEIRLN
                                                              AREA
  1465.86   1464.70      .08        0.     5500.      590.      590.     1462.20   1466.70        0.


3470 ENCROACHMENT STATIONS=     9972.0   10044.0  TYPE=      1  TARGET=       72.000
1
   12AUG05      13:19:13
        PAGE  123

    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


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1466.00 ELREA=      1466.00

    24.096     11.59   1465.19       .00   1465.22   1465.86       .67      1.23       .00   1453.60
    5500.0        .0    5500.0        .0        .0    834.8        .0    1376.6     177.4 100000.00
      1.64       .00      6.59       .00      .000      .040      .000      .000   1453.60   9972.00
   .001462       56.       56.       56.         2         0         0       .00     72.00  10044.00


*SECNO 24.106

3470 ENCROACHMENT STATIONS=     9955.0   10055.0  TYPE=      1  TARGET=      100.000
    24.106     11.29   1465.49       .00   1465.72   1465.99       .50       .07       .05   1464.10
    5500.0        .0    5500.0        .0        .0    971.0        .0    1377.7     177.5 100000.00
      1.65       .00      5.66       .00      .000      .040      .000      .000   1454.20   9955.00
   .001314       80.       53.       20.         2         0         0       .00    100.00  10055.00


CCHV=     .100 CEHV=     .300
*SECNO 24.195

3470 ENCROACHMENT STATIONS=     9950.0   10050.0  TYPE=      1  TARGET=      100.000
    24.195     12.52   1466.12       .00   1466.16   1466.46       .34       .45       .02 100000.00
    5500.0        .0    5500.0        .0        .0   1180.4        .0    1389.3     178.5 100000.00
      1.67       .00      4.66       .00      .000      .040      .000      .000   1453.60   9950.00
   .000731      470.      470.      460.         1         0         0       .00    100.00  10050.00


*SECNO 24.322

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.70


3470 ENCROACHMENT STATIONS=     9940.0   10080.0  TYPE=      1  TARGET=      140.000
    24.322     15.00   1466.60       .00   1466.37   1466.75       .15       .27       .02 100000.00
    5500.0        .0    5255.9     244.1        .0    1681.9     155.1    1412.5     180.4   1456.80
      1.73       .00      3.13      1.57      .000      .040      .050      .000   1451.60   9940.00
   .000254      640.      671.      630.         2         0         0       .00    140.00  10080.00


*SECNO 24.444
1
   12AUG05      13:19:13
        PAGE  124
```

```
     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


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .44

 3470 ENCROACHMENT STATIONS=     9927.0   10080.0  TYPE=      1  TARGET=      153.000
     24.444      9.49   1466.79       .00   1466.41   1467.11       .32        .31        .05   1465.00
     5500.0       1.3    5498.7        .0       1.5    1207.4        .0     1434.9      182.5 100000.00
       1.77       .88      4.55       .00      .045      .045      .000       .000    1457.30   9927.00
    .001299      640.      644.      600.         2         0         0        .00     153.00  10080.00

 *SECNO 24.542

 3265 DIVIDED FLOW

 3301 HV CHANGED MORE THAN HVINS

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .44

 3470 ENCROACHMENT STATIONS=     9950.0   10160.0  TYPE=      1  TARGET=      210.000
     24.542      7.81   1467.61       .00   1466.71   1468.61      1.00       1.30        .20 100000.00
     5500.0        .0    5500.0        .0        .0     685.7        .0     1446.2      184.2 100000.00
       1.79       .00      8.02       .00      .000      .045      .000       .000    1459.80   9950.00
    .006748      470.      517.      530.         2         0         0        .00     123.50  10160.00

 *SECNO 24.635

 3301 HV CHANGED MORE THAN HVINS

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .61

 3470 ENCROACHMENT STATIONS=     9940.0   10060.0  TYPE=      1  TARGET=      120.000
     24.635      5.27   1472.07   1471.95   1471.92   1473.98      1.91       5.10        .27 100000.00
     5500.0        .0    5500.0        .0        .0     495.8        .0     1452.8      185.6 100000.00
       1.80       .00     11.09       .00      .000      .045      .000       .000    1466.80   9940.00
    .017975      650.      491.      220.         6        14         0        .00     120.00  10060.00


1
    12AUG05      13:19:13
         PAGE  125



                                                                                                THIS RUN EXECUTED
12AUG05    13:19:14
 ************************************
  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


 CAVE CREEK WASH

 SUMMARY PRINTOUT


       SECNO      ELMIN      CWSEL      SSTA       ENDST     TOPWID      DEPTH        Q         HV       DIFWSX
 QWEIR      ELTRD      ELLC
```

```
      15.015   1205.69   1219.09   9945.04  10055.06    110.02    13.40  16000.00      1.99       .00
   .00       .00       .00
      15.015   1205.69   1219.09   9945.04  10055.06    110.02    13.40  16000.00      1.99       .00
   .00       .00       .00

      15.109   1205.94   1219.34   9945.04  10055.06    110.02    13.40  16000.00      1.99       .25
   .00       .00       .00
      15.109   1205.94   1219.34   9945.04  10055.06    110.02    13.40  16000.00      1.99       .25
   .00       .00       .00

      15.204   1206.19   1219.59   9945.04  10055.06    110.02    13.40  16000.00      1.99       .25
   .00       .00       .00
      15.204   1206.19   1219.59   9945.04  10055.06    110.02    13.40  16000.00      1.99       .25
   .00       .00       .00

*     15.310   1206.88   1219.57   9967.54  10032.55     65.01    12.69  16000.00      6.17      -.02
   .00       .00       .00
*     15.310   1206.88   1219.57   9967.54  10032.55     65.01    12.69  16000.00      6.17      -.02
   .00       .00       .00

*     15.454   1207.26   1223.25   9967.53  10032.57     65.04    15.99  16000.00      3.84      3.68
   .00       .00       .00
*     15.454   1207.26   1223.25   9967.53  10032.57     65.04    15.99  16000.00      3.84      3.68
   .00       .00       .00

*     15.530   1226.20   1236.86   9942.79  10057.31    114.53    10.66  16000.00      4.26     13.61
   .00       .00       .00
*     15.530   1226.20   1236.86   9942.79  10057.31    114.53    10.66  16000.00      4.26     13.61
   .00       .00       .00

*     15.680   1229.55   1240.21   9942.78  10057.32    114.54    10.66  16000.00      4.26      3.35
   .00       .00       .00
*     15.680   1229.55   1240.21   9942.78  10057.32    114.54    10.66  16000.00      4.26      3.35
   .00       .00       .00

*     15.878   1233.87   1243.99   9939.42  10060.56    121.15    10.12  16000.00      4.08      3.78
   .00       .00       .00
*     15.878   1233.87   1243.99   9939.42  10060.56    121.15    10.12  16000.00      4.08      3.78
   .00       .00       .00

*     15.920   1234.84   1244.93   9939.48  10060.50    121.02    10.09  16000.00      4.11       .94
   .00       .00       .00
*     15.920   1234.84   1244.93   9939.48  10060.50    121.02    10.09  16000.00      4.11       .94
   .00       .00       .00

*     15.940   1235.22   1247.89   9938.00  10062.00    124.00    12.67  16000.00      2.34      2.96
   .00   1253.60  1249.60
*     15.940   1235.22   1247.89   9938.00  10062.00    124.00    12.67  16000.00      2.34      2.96
   .00   1253.60  1249.60

*     16.023   1237.45   1250.05   9949.72  10050.42    100.69    12.60  16000.00      4.65      2.16
   .00       .00       .00
*     16.023   1237.45   1250.05   9949.72  10050.42    100.69    12.60  16000.00      4.65      2.16
   .00       .00       .00

1
   12AUG05      13:19:13
        PAGE  126

      SECNO     ELMIN     CWSEL     SSTA      ENDST    TOPWID    DEPTH      Q         HV       DIFWSX
 QWEIR     ELTRD     ELLC

*     16.148   1240.24   1252.85   9949.69  10050.44    100.75    12.61  16000.00      4.64      2.80
   .00       .00       .00
*     16.148   1240.24   1252.85   9949.69  10050.44    100.75    12.61  16000.00      4.64      2.80
   .00       .00       .00

*     16.264   1242.83   1255.44   9949.70  10050.44    100.74    12.61  16000.00      4.64      2.59
   .00       .00       .00
*     16.264   1242.83   1255.44   9949.70  10050.44    100.74    12.61  16000.00      4.64      2.59
   .00       .00       .00

*     16.373   1245.26   1257.87   9949.70  10050.44    100.74    12.61  16000.00      4.64      2.43
   .00       .00       .00
*     16.373   1245.26   1257.87   9949.70  10050.44    100.74    12.61  16000.00      4.64      2.43
   .00       .00       .00

*     16.481   1247.59   1259.50   9947.21  10051.60    104.38    11.91  16000.00      4.53      1.62
```

```
    .00       .00       .00
 *    16.481   1247.59   1259.50   9947.21  10051.60    104.38     11.91  16000.00      4.53      1.62
    .00       .00       .00

 *    16.601   1250.26   1262.14   9947.26  10051.55    104.29     11.88  16000.00      4.56      2.65
    .00       .00       .00
 *    16.601   1250.26   1262.14   9947.26  10051.55    104.29     11.88  16000.00      4.56      2.65
    .00       .00       .00

 *    16.694   1252.26   1263.45   9945.37  10055.24    109.87     11.19  16000.00      4.39      1.30
    .00       .00       .00
 *    16.694   1252.26   1263.45   9945.37  10055.24    109.87     11.19  16000.00      4.39      1.30
    .00       .00       .00

 *    16.823   1255.14   1266.34   9945.36  10055.25    109.89     11.20  16000.00      4.38      2.89
    .00       .00       .00
 *    16.823   1255.14   1266.34   9945.36  10055.25    109.89     11.20  16000.00      4.38      2.89
    .00       .00       .00

 *    16.902   1256.19   1267.38   9942.86  10058.09    115.24     11.19  16000.00      4.25      1.04
    .00       .00       .00
 *    16.902   1256.19   1267.38   9942.86  10058.09    115.24     11.19  16000.00      4.25      1.04
    .00       .00       .00

 *    16.970   1256.36   1268.19   9940.53  10059.51    118.98     11.83  16000.00      4.18       .81
    .00       .00       .00
 *    16.970   1256.36   1268.19   9940.53  10059.51    118.98     11.83  16000.00      4.18       .81
    .00       .00       .00

 *    16.988   1256.41   1271.13   9938.30  10063.90    125.60     14.72  16000.00      2.34      2.94
    .00   1277.80  1273.75
 *    16.988   1256.41   1271.13   9938.30  10063.90    125.60     14.72  16000.00      2.34      2.94
    .00   1277.80  1273.75

      17.061   1256.61   1270.79   9939.31  10062.52    123.21     14.18  16000.00      3.34      -.33
    .00       .00       .00
      17.061   1256.61   1270.79   9939.31  10062.52    123.21     14.18  16000.00      3.34      -.33
    .00       .00       .00

 *    17.206   1267.00   1272.70   9888.13  10111.87    223.73      5.70  16000.00      2.73      1.90
    .00       .00       .00
 *    17.206   1267.00   1272.70   9888.13  10111.87    223.73      5.70  16000.00      2.73      1.90
    .00       .00       .00

 *    17.360   1256.70   1275.40   9522.77  10371.72    848.95     18.70  16000.00       .02      2.70
    .00       .00       .00
 *    17.360   1256.70   1275.40   9522.77  10371.72    848.95     18.70  16000.00       .02      2.70
    .00       .00       .00

 *    17.494   1270.30   1280.76   9876.77  10253.49    376.72     10.46  14000.00      1.96      5.36
    .00       .00       .00
 *    17.494   1270.30   1280.76   9876.77  10253.49    376.72     10.46  14000.00      1.96      5.36
    .00       .00       .00

 *    17.588   1269.60   1283.34   9779.63  10227.93    448.30     13.74  14000.00       .30      2.57
    .00       .00       .00
 *    17.588   1269.60   1283.40   9955.20  10193.00    237.80     13.80  14000.00       .57      2.64
    .00       .00       .00

 *    17.662   1271.60   1283.47   9831.17  10146.14    314.97     11.87  14000.00       .82       .14
    .00       .00       .00
 *    17.662   1271.60   1283.81   9900.00  10149.14    249.14     12.21  14000.00      1.03       .41
    .00       .00       .00

 *    17.783   1275.40   1285.25   9901.70  10100.13    198.44      9.85  14000.00      2.09      1.78
    .00       .00       .00
      17.783   1275.40   1285.90   9921.00  10064.00    143.00     10.50  14000.00      2.10      2.08
    .00       .00       .00

1
   12AUG05      13:19:13
        PAGE  127

      SECNO     ELMIN     CWSEL     SSTA      ENDST    TOPWID    DEPTH      Q         HV      DIFWSX
QWEIR     ELTRD     ELLC

      17.932   1277.90   1290.53   9933.27  10080.18    146.91     12.63  14000.00      3.35      5.28
    .00       .00       .00
```

```
      17.932   1277.90   1290.90   9956.00  10066.00    110.00     13.00  14000.00      3.10      5.00
   .00       .00       .00
 *    18.042   1282.30   1293.80   9951.63  10048.35     96.72     11.50  14000.00      3.51      3.27
   .00       .00       .00
 *    18.042   1282.30   1293.88   9951.63  10048.35     96.72     11.58  14000.00      3.45      2.98
   .00       .00       .00

      18.061   1283.10   1294.82   9951.62  10048.36     96.74     11.72  14000.00      3.35      1.02
   .00   1301.60  1293.20
      18.061   1283.10   1294.86   9951.62  10048.36     96.74     11.76  14000.00      3.33       .98
   .00   1301.60  1293.20

 *    18.081   1281.10   1298.39   9895.90  10097.00    201.10     17.29  14000.00       .72      3.57
   .00       .00       .00
 *    18.081   1281.10   1298.40   9900.00  10085.00    185.00     17.30  14000.00       .72      3.54
   .00       .00       .00

      18.174   1281.70   1299.08   9861.25  10424.64    524.56     17.38  14000.00       .34       .69
   .00       .00       .00
      18.174   1281.70   1298.99   9861.59  10125.00    263.41     17.29  14000.00       .46       .60
   .00       .00       .00

 *    18.269   1283.80   1299.10   9885.96  10103.72    217.76     15.30  14000.00       .77       .02
   .00       .00       .00
      18.269   1283.80   1299.14   9885.80  10103.98    218.17     15.34  14000.00       .77       .15
   .00       .00       .00

      18.362   1285.30   1299.52   9900.34  10103.25    202.91     14.22  14000.00      1.00       .42
   .00       .00       .00
      18.362   1285.30   1299.56   9900.17  10103.42    203.25     14.26  14000.00       .99       .41
   .00       .00       .00

 *    18.445   1287.30   1305.03   9887.57  10204.77    317.19     17.73  14000.00      2.07      5.51
   .00       .00       .00
 *    18.445   1287.30   1304.71   9889.58  10110.00    220.42     17.41  14000.00      2.55      5.16
   .00       .00       .00

 *    18.456   1287.70   1307.05   9875.70  10315.56    439.86     19.35  14000.00       .93      2.03
13709.37   1299.50  1294.20
 *    18.456   1287.70   1308.11   9885.00  10110.00    225.00     20.41  14000.00       .97      3.39
13645.47   1299.50  1294.20

 *    18.545   1289.30   1307.97   9882.82  10167.92    285.11     18.67  14000.00       .41       .92
   .00       .00       .00
 *    18.545   1289.30   1309.08   9881.40  10169.80    288.40     19.78  14000.00       .34       .97
   .00       .00       .00

      18.575   1289.30   1308.10   9882.20  10168.76    286.56     18.80  14000.00       .36       .13
   .00       .00       .00
      18.575   1289.30   1309.17   9880.70  10170.80    290.10     19.87  14000.00       .29       .10
   .00       .00       .00

      18.583   1289.40   1309.07   9877.96  10174.55    296.60     19.67  14000.00       .30       .97
13587.48   1299.00  1295.40
      18.583   1289.40   1309.61   9876.10  10177.20    301.10     20.21  14000.00       .27       .44
13761.18   1299.00  1295.40

      18.640   1290.20   1309.01   9882.44  10132.09    249.64     18.81  14000.00       .58      -.06
   .00       .00       .00
      18.640   1290.20   1309.55   9879.60  10134.70    255.10     19.35  14000.00       .52      -.06
   .00       .00       .00

      18.734   1292.40   1309.25   9885.20  10110.22    225.02     16.85  14000.00       .76       .24
   .00       .00       .00
      18.734   1292.40   1309.76   9883.20  10111.70    228.50     17.36  14000.00       .68       .20
   .00       .00       .00

      18.832   1293.20   1309.73   9894.00  10105.46    211.45     16.53  14000.00       .77       .47
   .00       .00       .00
      18.832   1293.20   1310.16   9891.82  10107.00    215.18     16.96  14000.00       .71       .40
   .00       .00       .00

      18.925   1294.60   1310.15   9889.56  10085.70    196.14     15.55  14000.00       .88       .42
   .00       .00       .00
      18.925   1294.60   1310.53   9888.02  10087.13    199.12     15.93  14000.00       .82       .37
   .00       .00       .00

 *    19.018   1297.60   1310.41   9869.21  10036.90    167.69     12.81  14000.00      1.66       .26
```

```
   .00        .00       .00
*     19.018   1297.60   1310.74   9867.08  10038.05    170.97     13.14  14000.00      1.54       .22
   .00        .00       .00

1
   12AUG05       13:19:13
        PAGE  128

      SECNO      ELMIN      CWSEL      SSTA      ENDST    TOPWID     DEPTH       Q        HV     DIFWSX
QWEIR      ELTRD      ELLC

*     19.117   1298.60   1311.86   9944.03  10060.02    115.99     13.26  14000.00      4.19      1.45
   .00        .00       .00
*     19.117   1298.60   1311.85   9944.06  10059.99    115.93     13.25  14000.00      4.20      1.10
   .00        .00       .00

*     19.210   1300.20   1316.51   9925.83  10078.42    152.59     16.31  14000.00      1.73      4.65
   .00        .00       .00
*     19.210   1300.20   1316.51   9925.81  10078.44    152.62     16.31  14000.00      1.72      4.66
   .00        .00       .00

*     19.283   1311.70   1319.69   9948.00  10057.00    109.00      7.99  14000.00      4.01      3.18
   .00        .00       .00
*     19.283   1311.70   1319.69   9948.00  10057.00    109.00      7.99  14000.00      4.02      3.17
   .00        .00       .00

*     19.299   1311.70   1321.77   9948.00  10057.00    109.00     10.07  14000.00      2.53      2.08
   .00   1326.50  1324.20
*     19.299   1311.70   1321.77   9948.00  10057.00    109.00     10.07  14000.00      2.53      2.08
   .00   1326.50  1324.20

      19.313   1311.70   1322.89   9945.47  10102.47    157.00     11.19  14000.00      1.90      1.12
   .00        .00       .00
      19.313   1311.70   1322.94   9945.35  10102.64    157.29     11.24  14000.00      1.88      1.17
   .00        .00       .00

      19.418   1313.00   1325.34   9955.86  10116.70    160.84     12.34  14000.00      1.79      2.45
   .00        .00       .00
      19.418   1313.00   1325.34   9955.85  10116.71    160.86     12.34  14000.00      1.79      2.40
   .00        .00       .00

      19.560   1315.60   1327.97   9931.76  10060.58    128.82     12.37  14000.00      1.87      2.63
   .00        .00       .00
      19.560   1315.60   1327.97   9931.76  10060.58    128.82     12.37  14000.00      1.87      2.63
   .00        .00       .00

*     19.625   1317.60   1329.44   9965.00  10025.00     60.00     11.84   5800.00      1.04      1.47
   .00        .00       .00
      19.625   1317.60   1329.51   9965.00  10025.00     60.00     11.91   5800.00      1.02      1.54
   .00        .00       .00

      19.691   1318.60   1331.06   9965.00  10025.00     60.00     12.46   5800.00       .93      1.63
   .00   1334.80  1328.30
      19.691   1318.60   1331.15   9965.00  10025.00     60.00     12.55   5800.00       .92      1.64
   .00   1334.80  1328.30

      19.742   1319.10   1331.57   9948.04  10042.91     94.88     12.47   5800.00       .58       .51
   .00        .00       .00
      19.742   1319.10   1331.63   9953.00  10038.00     85.00     12.53   5800.00       .60       .48
   .00        .00       .00

*     19.847   1318.80   1331.75   9941.73  10049.26    107.54     12.95   5800.00       .67       .17
   .00        .00       .00
*     19.847   1318.80   1331.75   9957.00  10043.00     86.00     12.95   5800.00       .75       .13
   .00        .00       .00

*     19.960   1324.60   1332.26   9950.77  10036.98     86.21      7.66   5800.00      2.76       .52
   .00        .00       .00
*     19.960   1324.60   1332.17   9958.00  10031.00     73.00      7.57   5800.00      2.94       .42
   .00        .00       .00

*     19.974   1323.80   1333.48   9969.00  10020.00     51.00      9.68   5800.00      2.15      1.21
   .00        .00       .00
*     19.974   1323.80   1333.91   9969.00  10020.00     51.00     10.11   5800.00      1.97      1.74
   .00        .00       .00

      19.986   1323.80   1335.56   9969.00  10020.00     51.00     11.76   5800.00      1.45      2.08
   .00   1337.90  1334.10
```

```
      19.986   1323.80   1336.12   9969.00  10020.00     51.00     12.32   5800.00      1.32      2.21
   .00   1337.90  1334.10

*     20.049   1327.10   1338.46   9971.38  10025.37     53.99     11.36   5800.00      3.56      2.90
   .00       .00       .00
*     20.049   1327.10   1338.30   9975.00  10025.00     50.00     11.20   5800.00      3.79      2.18
   .00       .00       .00

*     20.144   1330.90   1343.59   9960.03  10044.90     84.87     12.69   5800.00      1.59      5.14
   .00       .00       .00
*     20.144   1330.90   1343.49   9972.00  10029.00     57.00     12.59   5800.00      1.82      5.19
   .00       .00       .00

      20.242   1333.30   1345.60   9960.78  10050.41     89.63     12.30   5800.00      1.58      2.00
   .00       .00       .00
      20.242   1333.30   1345.62   9964.00  10035.00     71.00     12.32   5800.00      1.66      2.14
   .00       .00       .00

1
   12AUG05      13:19:13
        PAGE  129

      SECNO     ELMIN     CWSEL     SSTA      ENDST    TOPWID     DEPTH       Q        HV      DIFWSX
QWEIR     ELTRD     ELLC

      20.335   1337.30   1347.53   9950.36  10039.06     88.70     10.23   5800.00      1.18      1.94
   .00       .00       .00
      20.335   1337.30   1347.64   9963.00  10036.00     73.00     10.34   5800.00      1.27      2.02
   .00       .00       .00

      20.347   1337.20   1347.32   9970.00  10021.00     51.00     10.12   5800.00      1.96      -.21
   .00       .00       .00
      20.347   1337.20   1347.54   9970.00  10021.00     51.00     10.34   5800.00      1.88      -.10
   .00       .00       .00

      20.366   1337.20   1348.08   9970.00  10021.00     51.00     10.88   5800.00      1.70       .76
   .00   1354.50  1349.70
      20.366   1337.20   1348.39   9970.00  10021.00     51.00     11.19   5800.00      1.60       .85
   .00   1354.50  1349.70

      20.423   1338.00   1349.71   9958.19  10072.01    113.82     11.71   5800.00       .94      1.63
   .00       .00       .00
      20.423   1338.00   1350.00   9958.00  10072.00    114.00     12.00   5800.00       .86      1.61
   .00       .00       .00

      20.430   1339.30   1349.26   9985.00  10036.00     51.00      9.96   5800.00      2.02      -.45
   .00       .00       .00
*     20.430   1339.30   1349.57   9985.00  10036.00     51.00     10.27   5800.00      1.90      -.43
   .00       .00       .00

      20.444   1339.30   1350.06   9985.00  10036.00     51.00     10.76   5800.00      1.74       .80
   .00   1355.50  1351.30
      20.444   1339.30   1350.40   9985.00  10036.00     51.00     11.10   5800.00      1.63       .83
   .00   1355.50  1351.30

      20.529   1343.00   1352.40   9904.90  10095.71    190.81      9.40   5800.00       .69      2.34
   .00       .00       .00
      20.529   1343.00   1352.63   9930.00  10069.00    139.00      9.63   5800.00       .70      2.23
   .00       .00       .00

      20.628   1343.30   1353.42   9917.54  10068.69    151.15     10.12   5800.00       .43      1.02
   .00       .00       .00
      20.628   1343.30   1353.60   9935.00  10065.00    130.00     10.30   5800.00       .44       .97
   .00       .00       .00

*     20.725   1347.20   1356.12   9959.14  10026.66     67.52      8.92   5800.00      3.08      2.69
   .00       .00       .00
*     20.725   1347.20   1356.01   9962.00  10026.00     64.00      8.81   5800.00      3.22      2.42
   .00       .00       .00

*     20.737   1350.90   1358.25   9968.00  10019.00     51.00      7.35   5800.00      3.72      2.13
   .00       .00       .00
*     20.737   1350.90   1358.28   9968.00  10019.00     51.00      7.38   5800.00      3.69      2.27
   .00       .00       .00

*     20.750   1351.00   1360.71   9968.00  10019.00     51.00      9.71   5800.00      2.13      2.46
   .00   1366.00  1363.00
*     20.750   1351.00   1360.71   9968.00  10019.00     51.00      9.71   5800.00      2.13      2.43
```

```
   .00   1366.00  1363.00

*     20.819   1356.50   1362.47   9965.00  10043.00     78.00      5.97   5800.00      2.41      1.76
   .00       .00       .00
      20.819   1356.50   1362.80   9965.00  10043.00     78.00      6.30   5800.00      2.16      2.09
   .00       .00       .00

*     20.841   1357.40   1364.46   9965.00  10043.00     78.00      7.06   5800.00      1.72      1.99
   .00   1369.90  1365.40
*     20.841   1357.40   1364.46   9965.00  10043.00     78.00      7.06   5800.00      1.72      1.67
   .00   1369.90  1365.40

*     20.860   1356.30   1366.09   9800.87  10062.29    261.42      9.79   5800.00       .69      1.62
   .00       .00       .00
*     20.860   1356.30   1366.06   9904.00  10060.00    156.00      9.76   5800.00       .72      1.60
   .00       .00       .00

      20.942   1359.60   1367.37   9629.64  10168.50    314.44      7.77   5800.00       .43      1.28
   .00       .00       .00
*     20.942   1359.60   1367.31   9860.00  10110.00    250.00      7.71   5800.00       .72      1.25
   .00       .00       .00

*     21.036   1363.50   1372.01   9540.98  10089.03    548.05      8.51   5800.00      1.10      4.64
   .00       .00       .00
*     21.036   1363.50   1371.53   9810.00  10060.00    250.00      8.03   5800.00      1.62      4.22
   .00       .00       .00

*     21.127   1366.70   1374.78   9631.56  10066.13    434.58      8.08   5800.00      1.00      2.77
   .00       .00       .00
      21.127   1366.70   1374.66   9900.00  10060.00    160.00      7.96   5800.00      1.84      3.13
   .00       .00       .00

1
   12AUG05       13:19:13
        PAGE  130

      SECNO      ELMIN      CWSEL      SSTA      ENDST    TOPWID     DEPTH       Q        HV     DIFWSX
QWEIR      ELTRD      ELLC

*     21.230   1372.00   1380.49   9816.25  10126.37    308.65      8.49   5800.00      1.21      5.72
   .00       .00       .00
*     21.230   1372.00   1380.40   9900.00  10125.00    222.17      8.40   5800.00      1.54      5.73
   .00       .00       .00

*     21.363   1374.10   1383.36   9556.03  10337.00    368.53      9.26   5800.00       .55      2.86
   .00       .00       .00
*     21.363   1374.10   1383.64   9939.00  10105.00    166.00      9.54   5800.00       .54      3.24
   .00       .00       .00

*     21.484   1378.50   1386.54   9497.28  10076.86    520.92      8.04   5800.00       .93      3.18
   .00       .00       .00
*     21.484   1378.50   1387.14   9852.00  10077.00    215.98      8.64   5800.00      1.46      3.50
   .00       .00       .00

*     21.576   1382.10   1389.26   9388.00  10340.87    872.76      7.16   5800.00       .78      2.72
   .00       .00       .00
*     21.576   1382.10   1390.22   9940.00  10165.00    225.00      8.12   5800.00       .90      3.08
   .00       .00       .00

*     21.669   1384.00   1393.39   9392.00  10414.00    981.92      9.39   5600.00       .61      4.13
   .00       .00       .00
*     21.669   1384.00   1393.83   9890.00  10115.00    225.00      9.83   5600.00      1.46      3.61
   .00       .00       .00

*     21.742   1386.40   1395.28   9743.25  10364.86    566.72      8.88   5600.00      1.14      1.89
   .00       .00       .00
*     21.742   1386.40   1396.26   9940.00  10140.00    200.00      9.86   5600.00       .79      2.43
   .00       .00       .00

      21.840   1391.10   1398.02   9857.30  10293.96    436.66      6.92   5600.00       .84      2.74
   .00       .00       .00
*     21.840   1391.10   1397.97   9900.00  10100.00    200.00      6.87   5600.00      1.18      1.71
   .00       .00       .00

*     21.895   1391.90   1399.70   9834.67  10431.57    596.90      7.80   5600.00       .80      1.68
   .00       .00       .00
      21.895   1391.90   1399.76   9835.00  10080.00    245.00      7.86   5600.00      1.33      1.79
   .00       .00       .00
```

```
*     21.933   1396.80   1400.89   9308.97  10285.15    976.18      4.09   5600.00       .14      1.19
   .00       .00       .00
*     21.933   1396.80   1401.53   9650.00  10070.00    420.00      4.73   5600.00       .20      1.77
   .00       .00       .00

*     21.953   1394.00   1401.09   9420.76  10053.29    468.31      7.09   5600.00       .94       .21
   .00       .00       .00
*     21.953   1394.00   1401.25   9630.00  10051.00    311.33      7.25   5600.00       .89      -.28
   .00       .00       .00

*     22.065   1395.80   1404.11   9239.21  10049.79    782.57      8.31   5600.00       .17      3.01
   .00       .00       .00
*     22.065   1395.80   1404.51   9620.00  10030.00    398.21      8.71   5600.00       .37      3.26
   .00       .00       .00

      22.165   1395.00   1405.28   9137.16  10060.84    841.22     10.28   5600.00       .21      1.17
   .00       .00       .00
      22.165   1395.00   1406.10   9620.00  10020.00    384.53     11.10   5600.00       .36      1.60
   .00       .00       .00

*     22.273   1399.40   1406.70   9320.61  10027.51    425.37      7.30   5600.00       .72      1.42
   .00       .00       .00
*     22.273   1399.40   1407.65   9650.00  10027.00    292.96      8.25   5600.00       .72      1.55
   .00       .00       .00

*     22.410   1404.00   1414.23   9877.47  10067.05    170.88     10.23   5600.00      1.88      7.53
   .00       .00       .00
*     22.410   1404.00   1414.08   9878.19  10040.00    140.90     10.08   5600.00      2.06      6.42
   .00       .00       .00

*     22.483   1405.50   1416.59   9873.82  10200.33    326.50     11.09   5600.00       .12      2.36
   .00       .00       .00
*     22.483   1405.50   1416.89   9890.00  10050.00    160.00     11.39   5600.00       .30      2.81
   .00       .00       .00

*     22.578   1406.70   1416.45   9970.06  10064.36     94.31      9.75   5600.00      1.02      -.14
   .00       .00       .00
*     22.578   1406.70   1417.35   9968.87  10064.00     95.13     10.65   5600.00       .81       .46
   .00       .00       .00

*     22.675   1409.70   1418.14   9740.16  10028.63    288.47      8.44   5600.00       .14      1.69
   .00       .00       .00
*     22.675   1409.70   1418.86   9830.00  10028.00    198.00      9.16   5600.00       .24      1.52
   .00       .00       .00

1
   12AUG05       13:19:13
        PAGE  131

      SECNO      ELMIN      CWSEL      SSTA      ENDST    TOPWID     DEPTH       Q        HV     DIFWSX
QWEIR      ELTRD      ELLC

*     22.794   1410.70   1418.67   9978.35  10195.16    216.81      7.97   5600.00       .42       .53
   .00       .00       .00
      22.794   1410.70   1419.62   9977.00  10160.00    183.00      8.92   5600.00       .34       .76
   .00       .00       .00

      22.880   1413.00   1420.11   9951.87  10163.96    212.09      7.11   5600.00       .58      1.45
   .00       .00       .00
*     22.880   1413.00   1420.62   9951.00  10120.00    169.00      7.62   5600.00       .78      1.00
   .00       .00       .00

      22.990   1417.90   1423.67   9753.64  10026.21    272.57      5.77   5600.00       .63      3.56
   .00       .00       .00
      22.990   1417.90   1424.67   9890.00  10026.00    136.00      6.77   5600.00      1.16      4.05
   .00       .00       .00

*     23.097   1425.10   1429.92   9898.95  10117.55    187.44      4.82   5600.00      1.59      6.25
   .00       .00       .00
      23.097   1425.10   1430.66   9958.00  10090.00    132.00      5.56   5600.00      1.50      5.99
   .00       .00       .00

*     23.168   1428.90   1433.10   9602.33  10214.92    612.58      4.20   5600.00       .17      3.18
   .00       .00       .00
*     23.168   1428.90   1433.75   9830.00  10140.00    310.00      4.85   5600.00       .27      3.09
   .00       .00       .00
```

```
 *     23.253   1425.20   1434.53   9978.45  10023.17     44.72      9.33   3400.00      2.83      1.43
   .00       .00       .00
 *     23.253   1425.20   1434.48   9978.53  10023.10     44.57      9.28   3400.00      2.88       .73
   .00       .00       .00

 *     23.334   1432.60   1440.40   9969.06  10035.99     66.93      7.80   3400.00      1.43      5.87
   .00       .00       .00
 *     23.334   1432.60   1440.42   9969.01  10036.00     66.99      7.82   3400.00      1.42      5.94
   .00       .00       .00

       23.416   1436.50   1443.82   9980.93  10040.07     59.13      7.32   3400.00      1.77      3.43
   .00       .00       .00
       23.416   1436.50   1443.82   9981.00  10040.00     59.00      7.32   3400.00      1.78      3.40
   .00       .00       .00

       23.514   1439.60   1448.11   9977.54  10035.01     57.47      8.51   3400.00      1.35      4.29
   .00       .00       .00
       23.514   1439.60   1448.11   9977.53  10035.00     57.46      8.51   3400.00      1.35      4.30
   .00       .00       .00

       23.544   1441.40   1448.91   9978.90  10033.70     54.80      7.51   3400.00      1.88       .80
   .00       .00       .00
       23.544   1441.40   1448.92   9978.90  10033.70     54.80      7.52   3400.00      1.87       .80
   .00       .00       .00

 *     23.555   1442.00   1452.64   9974.59  10037.86     63.27     10.64   3400.00       .74      3.72
3249.50   1449.00  1445.00
 *     23.555   1442.00   1454.54   9974.59  10037.86     63.27     12.54   3400.00       .48      5.63
3226.41   1449.00  1445.00

       23.591   1444.20   1453.15   9968.00  10043.49     75.49      8.95   3400.00       .78       .51
   .00       .00       .00
       23.591   1444.20   1454.80   9968.00  10043.49     75.49     10.60   3400.00       .49       .26
   .00       .00       .00

       23.691   1446.40   1455.15   9970.39  10035.72     65.33      8.75   3400.00      1.33      2.01
   .00       .00       .00
 *     23.691   1446.40   1455.73   9970.39  10035.72     65.33      9.33   3400.00      1.09       .93
   .00       .00       .00

 *     23.815   1449.70   1459.03   9951.00  10037.00     86.00      9.33   4450.00      1.12      3.88
   .00       .00       .00
       23.815   1449.70   1458.99   9951.00  10037.00     86.00      9.29   4450.00      1.14      3.26
   .00       .00       .00

 *     23.912   1447.90   1461.13   9967.27  10043.00     75.73     13.23   5500.00      1.20      2.10
   .00       .00       .00
 *     23.912   1447.90   1461.14   9967.41  10043.00     75.59     13.24   5500.00      1.20      2.14
   .00       .00       .00

 *     23.989   1449.70   1462.77   9944.36  10043.95     99.59     13.07   5500.00       .65      1.64
   .00       .00       .00
 *     23.989   1449.70   1462.77   9944.77  10043.68     98.91     13.07   5500.00       .65      1.63
   .00       .00       .00

       24.086   1453.60   1463.78   9952.87  10118.37    165.50     10.18   5500.00       .39      1.01
   .00       .00       .00
       24.086   1453.60   1463.76   9972.00  10044.00     72.00     10.16   5500.00       .88       .99
   .00       .00       .00

1
   12AUG05      13:19:13
        PAGE  132

      SECNO     ELMIN     CWSEL     SSTA      ENDST    TOPWID     DEPTH       Q        HV      DIFWSX
 QWEIR     ELTRD     ELLC

       24.096   1453.60   1465.22   9972.00  10044.00     72.00     11.62   5500.00       .67      1.43
   .00   1466.70  1462.20
       24.096   1453.60   1465.19   9972.00  10044.00     72.00     11.59   5500.00       .67      1.43
   .00   1466.70  1462.20

       24.106   1454.20   1465.72   9951.48  10123.83    172.36     11.52   5500.00       .32       .51
   .00       .00       .00
       24.106   1454.20   1465.49   9955.00  10055.00    100.00     11.29   5500.00       .50       .30
   .00       .00       .00

 *     24.195   1453.60   1466.16   9940.28  10140.54    200.25     12.56   5500.00       .14       .44
```

```
   .00       .00       .00
      24.195   1453.60   1466.12   9950.00  10050.00    100.00     12.52   5500.00       .34       .63
   .00       .00       .00

 *    24.322   1451.60   1466.37   9856.65  10228.63    371.98     14.77   5500.00       .04       .21
   .00       .00       .00
 *    24.322   1451.60   1466.60   9940.00  10080.00    140.00     15.00   5500.00       .15       .48
   .00       .00       .00

 *    24.444   1457.30   1466.41   9925.74  10206.07    280.34      9.11   5500.00       .14       .04
   .00       .00       .00
 *    24.444   1457.30   1466.79   9927.00  10080.00    153.00      9.49   5500.00       .32       .19
   .00       .00       .00

 *    24.542   1459.80   1466.71   9906.17  10182.77    185.63      6.91   5500.00       .82       .30
   .00       .00       .00
 *    24.542   1459.80   1467.61   9950.00  10160.00    123.50      7.81   5500.00      1.00       .82
   .00       .00       .00

 *    24.635   1466.80   1471.92   9912.87  10103.04    190.17      5.12   5500.00      1.50      5.21
   .00       .00       .00
 *    24.635   1466.80   1472.07   9940.00  10060.00    120.00      5.27   5500.00      1.91      4.46
   .00       .00       .00

1
   12AUG05      13:19:13
        PAGE  133

 CAVE CREEK WASH

 SUMMARY PRINTOUT TABLE  110

       SECNO     CWSEL    DIFKWS      EG      TOPWID     QLOB      QCH      QROB     PERENC    STENCL
 STCHL     STCHR    STENCR

       15.015   1219.09       .00   1221.08    110.02       .00  15999.92       .08       .00       .00
9945.00  10055.00      .00
       15.015   1219.09       .00   1221.08    110.02       .00  15999.92       .08       .00       .00
9945.00  10055.00      .00

       15.109   1219.34       .00   1221.33    110.02       .00  15999.92       .08       .00       .00
9945.00  10055.00      .00
       15.109   1219.34       .00   1221.33    110.02       .00  15999.92       .08       .00       .00
9945.00  10055.00      .00

       15.204   1219.59       .00   1221.58    110.02       .00  15999.92       .08       .00       .00
9945.00  10055.00      .00
       15.204   1219.59       .00   1221.58    110.02       .00  15999.92       .08       .00       .00
9945.00  10055.00      .00

 *     15.310   1219.57       .00   1225.73     65.01       .00  16000.00       .00       .00       .00
9967.50  10032.60      .00
 *     15.310   1219.57       .00   1225.73     65.01       .00  16000.00       .00       .00       .00
9967.50  10032.60      .00

 *     15.454   1223.25       .00   1227.09     65.04       .00  16000.00       .00       .00       .00
9967.50  10032.60      .00
 *     15.454   1223.25       .00   1227.09     65.04       .00  16000.00       .00       .00       .00
9967.50  10032.60      .00

 *     15.530   1236.86       .00   1241.12    114.53       .00  16000.00       .00       .00       .00
9941.50  10060.50      .00
 *     15.530   1236.86       .00   1241.12    114.53       .00  16000.00       .00       .00       .00
9941.50  10060.50      .00

 *     15.680   1240.21       .00   1244.47    114.54       .00  16000.00       .00       .00       .00
9941.50  10060.50      .00
 *     15.680   1240.21       .00   1244.47    114.54       .00  16000.00       .00       .00       .00
9941.50  10060.50      .00

 *     15.878   1243.99       .00   1248.07    121.15       .00  16000.00       .00       .00       .00
9938.00  10062.00      .00
 *     15.878   1243.99       .00   1248.07    121.15       .00  16000.00       .00       .00       .00
9938.00  10062.00      .00

 *     15.920   1244.93       .00   1249.04    121.02       .00  16000.00       .00       .00       .00
9938.00  10062.00      .00
```

```
 *     15.920   1244.93        .00   1249.04    121.02        .00  16000.00        .00        .00        .00
9938.00  10062.00       .00

 *     15.940   1247.89        .00   1250.24    124.00        .00  16000.00        .00        .00        .00
9938.00  10062.00       .00
 *     15.940   1247.89        .00   1250.24    124.00        .00  16000.00        .00        .00        .00
9938.00  10062.00       .00

 *     16.023   1250.05        .00   1254.70    100.69        .00  16000.00        .00        .00        .00
9946.00  10053.00       .00
 *     16.023   1250.05        .00   1254.70    100.69        .00  16000.00        .00        .00        .00
9946.00  10053.00       .00

 *     16.148   1252.85        .00   1257.49    100.75        .00  16000.00        .00        .00        .00
9946.00  10053.00       .00
 *     16.148   1252.85        .00   1257.49    100.75        .00  16000.00        .00        .00        .00
9946.00  10053.00       .00

 *     16.264   1255.44        .00   1260.08    100.74        .00  16000.00        .00        .00        .00
9946.00  10053.00       .00
 *     16.264   1255.44        .00   1260.08    100.74        .00  16000.00        .00        .00        .00
9946.00  10053.00       .00

 *     16.373   1257.87        .00   1262.51    100.74        .00  16000.00        .00        .00        .00
9946.00  10053.00       .00
 *     16.373   1257.87        .00   1262.51    100.74        .00  16000.00        .00        .00        .00
9946.00  10053.00       .00

 *     16.481   1259.50        .00   1264.03    104.38        .00  16000.00        .00        .00        .00
9945.00  10052.00       .00
 *     16.481   1259.50        .00   1264.03    104.38        .00  16000.00        .00        .00        .00
9945.00  10052.00       .00

 *     16.601   1262.14        .00   1266.70    104.29        .00  16000.00        .00        .00        .00
9945.00  10052.00       .00
 *     16.601   1262.14        .00   1266.70    104.29        .00  16000.00        .00        .00        .00
9945.00  10052.00       .00

1
    12AUG05       13:19:13
         PAGE  134

       SECNO      CWSEL     DIFKWS       EG       TOPWID      QLOB       QCH       QROB      PERENC     STENCL
 STCHL      STCHR     STENCR

 *     16.694   1263.45        .00   1267.84    109.87        .00  16000.00        .00        .00        .00
9945.00  10056.00       .00
 *     16.694   1263.45        .00   1267.84    109.87        .00  16000.00        .00        .00        .00
9945.00  10056.00       .00

 *     16.823   1266.34        .00   1270.72    109.89        .00  16000.00        .00        .00        .00
9945.00  10056.00       .00
 *     16.823   1266.34        .00   1270.72    109.89        .00  16000.00        .00        .00        .00
9945.00  10056.00       .00

 *     16.902   1267.38        .00   1271.62    115.24        .00  16000.00        .00        .00        .00
9940.00  10063.00       .00
 *     16.902   1267.38        .00   1271.62    115.24        .00  16000.00        .00        .00        .00
9940.00  10063.00       .00

 *     16.970   1268.19        .00   1272.36    118.98        .00  16000.00        .00        .00        .00
9938.30  10064.70       .00
 *     16.970   1268.19        .00   1272.36    118.98        .00  16000.00        .00        .00        .00
9938.30  10064.70       .00

 *     16.988   1271.13        .00   1273.47    125.60        .00  16000.00        .00        .00        .00
9938.30  10063.90       .00
 *     16.988   1271.13        .00   1273.47    125.60        .00  16000.00        .00        .00        .00
9938.30  10063.90       .00

       17.061   1270.79        .00   1274.13    123.21        .00  16000.00        .00        .00        .00
9938.30  10064.70       .00
       17.061   1270.79        .00   1274.13    123.21        .00  16000.00        .00        .00        .00
9938.30  10064.70       .00

 *     17.206   1272.70        .00   1275.43    223.73        .00  16000.00        .00        .00        .00
9875.00  10125.00       .00
 *     17.206   1272.70        .00   1275.43    223.73        .00  16000.00        .00        .00        .00
```

```
9875.00  10125.00      .00

 *     17.360   1275.40       .00   1275.42    848.95       .00  16000.00       .00       .00       .00
9480.00  10427.00      .00
 *     17.360   1275.40       .00   1275.42    848.95       .00  16000.00       .00       .00       .00
9480.00  10427.00      .00

 *     17.494   1280.76       .00   1282.72    376.72     72.84  11397.17   2530.00       .00       .00
9904.00  10062.00      .00
 *     17.494   1280.76       .00   1282.72    376.72     72.84  11397.17   2530.00       .00       .00
9904.00  10062.00      .00

 *     17.588   1283.34       .00   1283.64    448.30   2997.49  10731.84    270.67       .00       .00
9982.00  10193.00      .00
 *     17.588   1283.40       .06   1283.97    237.80    177.60  13822.40       .00    237.80   9955.20
9982.00  10193.00 10193.00

 *     17.662   1283.47       .00   1284.29    314.97   3560.83  10409.93     29.25       .00       .00
9941.00  10130.00      .00
 *     17.662   1283.81       .34   1284.84    249.14   2017.37  11933.77     48.86    250.00   9900.00
9941.00  10130.00 10150.00

 *     17.783   1285.25       .00   1287.34    198.44    243.18  13164.29    592.52       .00       .00
9921.00  10064.00      .00
       17.783   1285.90       .64   1288.00    143.00       .00  14000.00       .00    143.00   9921.00
9921.00  10064.00 10064.00

       17.932   1290.53       .00   1293.88    146.91     18.95  13978.48      2.57       .00       .00
9956.00  10066.00      .00
       17.932   1290.90       .36   1293.99    110.00       .00  14000.00       .00    110.00   9956.00
9956.00  10066.00 10066.00

 *     18.042   1293.80       .00   1297.31     96.72       .00  14000.00       .00       .00       .00
9951.00  10049.00      .00
 *     18.042   1293.88       .07   1297.33     96.72       .00  14000.00       .00     96.78   9951.60
9951.00  10049.00 10048.38

       18.061   1294.82       .00   1298.17     96.74       .00  14000.00       .00       .00       .00
9951.00  10049.00      .00
       18.061   1294.86       .04   1298.19     96.74       .00  14000.00       .00     97.00   9951.50
9951.00  10049.00 10048.50

 *     18.081   1298.39       .00   1299.11    201.10    959.61  11709.59   1330.80       .00       .00
9942.00  10045.00      .00
 *     18.081   1298.40       .00   1299.12    185.00    966.34  11715.04   1318.63    185.00   9900.00
9942.00  10045.00 10085.00

       18.174   1299.08       .00   1299.43    524.56   1401.84  11002.46   1595.70       .00       .00
9919.00  10073.00      .00
       18.174   1298.99      -.09   1299.45    263.41   1540.18  12164.67    295.15    268.00   9857.00
9919.00  10073.00 10125.00

1
    12AUG05       13:19:13
          PAGE  135

       SECNO      CWSEL     DIFKWS       EG      TOPWID      QLOB       QCH       QROB     PERENC    STENCL
 STCHL      STCHR     STENCR

 *     18.269   1299.10       .00   1299.88    217.76   1953.12  11554.97    491.91       .00       .00
9942.00  10060.00      .00
       18.269   1299.14       .04   1299.91    218.17   1957.15  11546.18    496.66    227.80   9882.20
9942.00  10060.00 10110.00

       18.362   1299.52       .00   1300.52    202.91    900.44  12288.70    810.86       .00       .00
9942.00  10060.00      .00
       18.362   1299.56       .03   1300.54    203.25    905.72  12279.40    814.88    212.20   9895.60
9942.00  10060.00 10107.80

 *     18.445   1305.03       .00   1307.09    317.19   4648.15   3602.12   5749.73       .00       .00
9992.00  10005.00      .00
 *     18.445   1304.71      -.31   1307.27    220.42   4623.98   3793.95   5582.07    225.00   9885.00
9992.00  10005.00 10110.00

 *     18.456   1307.05       .00   1307.98    439.86   4707.49   2811.49   6481.02       .00       .00
9992.00  10005.00      .00
 *     18.456   1308.11      1.06   1309.07    225.00   5328.14   2777.59   5894.28    225.00   9885.00
9992.00  10005.00 10110.00
```

```
 *     18.545   1307.97       .00   1308.39    285.11   1543.08  10378.97   2077.95       .00       .00
9951.00  10058.00       .00
 *     18.545   1309.08      1.10   1309.41    288.40   1689.87  10006.87   2303.26    288.40   9881.40
9951.00  10058.00 10169.80

       18.575   1308.10       .00   1308.46    286.56   3224.52   2900.26   7875.23       .00       .00
9972.00  10000.00       .00
       18.575   1309.17      1.07   1309.47    290.10   3327.88   2789.01   7883.10    290.10   9880.70
9972.00  10000.00 10170.80

       18.583   1309.07       .00   1309.38    296.60   3311.62   2810.38   7878.00       .00       .00
9972.00  10000.00       .00
       18.583   1309.61       .53   1309.88    301.10   3360.08   2758.15   7881.78    301.10   9876.10
9972.00  10000.00 10177.20

       18.640   1309.01       .00   1309.59    249.64   2075.16   9093.99   2830.85       .00       .00
9955.00  10033.00       .00
       18.640   1309.55       .54   1310.07    255.10   2149.70   8913.14   2937.16    255.10   9879.60
9955.00  10033.00 10134.70

       18.734   1309.25       .00   1310.01    225.02   1123.03  12391.73    485.23       .00       .00
9938.00  10062.00       .00
       18.734   1309.76       .50   1310.44    228.50   1207.43  12237.05    555.51    228.50   9883.20
9938.00  10062.00 10111.70

       18.832   1309.73       .00   1310.50    211.45    357.33  11888.85   1753.82       .00       .00
9929.00  10046.00       .00
       18.832   1310.16       .43   1310.87    215.18    395.11  11781.23   1823.65    215.20   9891.80
9929.00  10046.00 10107.00

       18.925   1310.15       .00   1311.03    196.14   1503.61  11725.76    770.63       .00       .00
9941.00  10048.00       .00
       18.925   1310.53       .38   1311.34    199.12   1545.03  11647.01    807.96    199.80   9887.70
9941.00  10048.00 10087.50

 *     19.018   1310.41       .00   1312.07    167.69    382.72  13602.09     15.18       .00       .00
9903.00  10030.00       .00
 *     19.018   1310.74       .34   1312.28    170.97    425.46  13552.92     21.62    172.20   9866.30
9903.00  10030.00 10038.50

 *     19.117   1311.86       .00   1316.05    115.99   1191.48  11024.40   1784.12       .00       .00
9973.00  10026.00       .00
 *     19.117   1311.85      -.01   1316.05    115.93   1190.06  11027.34   1782.59    119.80   9942.10
9973.00  10026.00 10061.90

 *     19.210   1316.51       .00   1318.23    152.59    157.68  13691.00    151.32       .00       .00
9945.00  10060.00       .00
 *     19.210   1316.51       .00   1318.24    152.62    157.93  13690.52    151.55    157.90   9923.10
9945.00  10060.00 10081.00

 *     19.283   1319.69       .00   1323.70    109.00       .00  14000.00       .00       .00       .00
9948.00  10057.00       .00
 *     19.283   1319.69       .00   1323.70    109.00       .00  14000.00       .00    109.00   9948.00
9948.00  10057.00 10057.00

 *     19.299   1321.77       .00   1324.30    109.00       .00  14000.00       .00       .00       .00
9948.00  10057.00       .00
 *     19.299   1321.77       .00   1324.30    109.00       .00  14000.00       .00    109.00   9948.00
9948.00  10057.00 10057.00

       19.313   1322.89       .00   1324.80    157.00       .00  14000.00       .00       .00       .00
9932.00  10112.00       .00
       19.313   1322.94       .04   1324.82    157.29       .00  14000.00       .00    159.60   9944.40
9932.00  10112.00 10104.00

1
    12AUG05       13:19:13
         PAGE  136

       SECNO      CWSEL     DIFKWS       EG      TOPWID      QLOB       QCH       QROB     PERENC    STENCL
 STCHL      STCHR     STENCR

       19.418   1325.34       .00   1327.13    160.84       .00  14000.00       .00       .00       .00
9948.00  10120.00       .00
       19.418   1325.34       .00   1327.13    160.86       .00  14000.00       .00    162.70   9955.10
9948.00  10120.00 10117.80
```

```
       19.560   1327.97       .00   1329.83    128.82       .00  14000.00       .00       .00       .00
9929.00  10065.00       .00
       19.560   1327.97       .00   1329.84    128.82       .00  14000.00       .00    129.60   9931.40
9929.00  10065.00 10061.00

 *     19.625   1329.44       .00   1330.47     60.00       .00   5800.00       .00       .00       .00
9965.00  10025.00       .00
       19.625   1329.51       .07   1330.53     60.00       .00   5800.00       .00     60.00   9965.00
9965.00  10025.00 10025.00

       19.691   1331.06       .00   1332.00     60.00       .00   5800.00       .00       .00       .00
9965.00  10025.00       .00
       19.691   1331.15       .08   1332.07     60.00       .00   5800.00       .00     60.00   9965.00
9965.00  10025.00 10025.00

       19.742   1331.57       .00   1332.16     94.88       .00   5799.94       .06       .00       .00
9948.00  10042.00       .00
       19.742   1331.63       .05   1332.22     85.00       .00   5800.00       .00     85.00   9953.00
9948.00  10042.00 10038.00

 *     19.847   1331.75       .00   1332.42    107.54       .00   5800.00       .00       .00       .00
9929.00  10062.00       .00
 *     19.847   1331.75       .01   1332.50     86.00       .00   5800.00       .00     86.00   9957.00
9929.00  10062.00 10043.00

 *     19.960   1332.26       .00   1335.02     86.21     35.91   5734.79     29.30       .00       .00
9958.00  10031.00       .00
 *     19.960   1332.17      -.09   1335.11     73.00       .00   5800.00       .00     73.00   9958.00
9958.00  10031.00 10031.00

 *     19.974   1333.48       .00   1335.62     51.00       .00   5800.00       .00       .00       .00
9969.00  10020.00       .00
 *     19.974   1333.91       .43   1335.87     51.00       .00   5800.00       .00     51.00   9969.00
9969.00  10020.00 10020.00

       19.986   1335.56       .00   1337.01     51.00       .00   5800.00       .00       .00       .00
9969.00  10020.00       .00
       19.986   1336.12       .56   1337.44     51.00       .00   5800.00       .00     51.00   9969.00
9969.00  10020.00 10020.00

 *     20.049   1338.46       .00   1342.02     53.99       .00   5800.00       .00       .00       .00
9954.00  10027.00       .00
 *     20.049   1338.30      -.16   1342.09     50.00       .00   5800.00       .00     50.00   9975.00
9954.00  10027.00 10025.00

 *     20.144   1343.59       .00   1345.18     84.87       .00   5677.50    122.50       .00       .00
9955.00  10025.00       .00
 *     20.144   1343.49      -.11   1345.30     57.00       .00   5769.25     30.75     57.00   9972.00
9955.00  10025.00 10029.00

       20.242   1345.60       .00   1347.17     89.63       .00   5633.77    166.23       .00       .00
9953.00  10029.00       .00
       20.242   1345.62       .03   1347.28     71.00       .00   5742.12     57.88     71.00   9964.00
9953.00  10029.00 10035.00

       20.335   1347.53       .00   1348.72     88.70     34.07   5734.72     31.21       .00       .00
9958.00  10032.00       .00
       20.335   1347.64       .11   1348.91     73.00       .00   5770.44     29.56     73.00   9963.00
9958.00  10032.00 10036.00

       20.347   1347.32       .00   1349.28     51.00       .00   5800.00       .00       .00       .00
9970.00  10021.00       .00
       20.347   1347.54       .22   1349.42     51.00       .00   5800.00       .00     51.00   9970.00
9970.00  10021.00 10021.00

       20.366   1348.08       .00   1349.78     51.00       .00   5800.00       .00       .00       .00
9970.00  10021.00       .00
       20.366   1348.39       .31   1349.99     51.00       .00   5800.00       .00     51.00   9970.00
9970.00  10021.00 10021.00

       20.423   1349.71       .00   1350.65    113.82    109.08   5342.78    348.14       .00       .00
9975.00  10045.00       .00
       20.423   1350.00       .29   1350.86    114.00    123.66   5304.06    372.28    114.00   9958.00
9975.00  10045.00 10072.00

       20.430   1349.26       .00   1351.28     51.00       .00   5800.00       .00       .00       .00
9985.00  10036.00       .00
 *     20.430   1349.57       .32   1351.47     51.00       .00   5800.00       .00     51.00   9985.00
9985.00  10036.00 10036.00
```

1
12AUG05 13:19:13
PAGE 137

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
20.444	1350.06	.00	1351.79	51.00	.00	5800.00	.00	.00	.00	9985.00	10036.00	.00
20.444	1350.40	.34	1352.03	51.00	.00	5800.00	.00	51.00	9985.00	9985.00	10036.00	10036.00
20.529	1352.40	.00	1353.09	190.81	185.34	5460.09	154.57	.00	.00	9947.00	10055.00	.00
20.529	1352.63	.23	1353.33	139.00	99.27	5629.23	71.49	139.00	9930.00	9947.00	10055.00	10069.00
20.628	1353.42	.00	1353.85	151.15	.00	5800.00	.00	.00	.00	9909.00	10076.00	.00
20.628	1353.60	.17	1354.03	130.00	.00	5800.00	.00	130.00	9935.00	9909.00	10076.00	10065.00
* 20.725	1356.12	.00	1359.20	67.52	.00	5800.00	.00	.00	.00	9951.00	10036.00	.00
* 20.725	1356.01	-.10	1359.23	64.00	.00	5800.00	.00	64.00	9962.00	9951.00	10036.00	10026.00
* 20.737	1358.25	.00	1361.97	51.00	.00	5800.00	.00	.00	.00	9968.00	10019.00	.00
* 20.737	1358.28	.03	1361.97	51.00	.00	5800.00	.00	51.00	9968.00	9968.00	10019.00	10019.00
* 20.750	1360.71	.00	1362.84	51.00	.00	5800.00	.00	.00	.00	9968.00	10019.00	.00
* 20.750	1360.71	.00	1362.84	51.00	.00	5800.00	.00	51.00	9968.00	9968.00	10019.00	10019.00
* 20.819	1362.47	.00	1364.88	78.00	.00	5800.00	.00	.00	.00	9965.00	10043.00	.00
20.819	1362.80	.33	1364.96	78.00	.00	5800.00	.00	78.00	9965.00	9965.00	10043.00	10043.00
* 20.841	1364.46	.00	1366.18	78.00	.00	5800.00	.00	.00	.00	9965.00	10043.00	.00
* 20.841	1364.46	.00	1366.18	78.00	.00	5800.00	.00	78.00	9965.00	9965.00	10043.00	10043.00
* 20.860	1366.09	.00	1366.78	261.42	113.32	5686.68	.00	.00	.00	9942.00	10066.00	.00
* 20.860	1366.06	-.03	1366.78	156.00	35.75	5764.25	.00	156.00	9904.00	9942.00	10066.00	10060.00
20.942	1367.37	.00	1367.80	314.44	.05	3776.57	2023.38	.00	.00	9854.00	10024.00	.00
* 20.942	1367.31	-.06	1368.03	250.00	.00	4804.48	995.52	250.00	9860.00	9854.00	10024.00	10110.00
* 21.036	1372.01	.00	1373.11	548.05	419.33	5236.63	144.03	.00	.00	9912.00	10020.00	.00
* 21.036	1371.53	-.47	1373.15	250.00	131.68	5619.48	48.84	250.00	9810.00	9912.00	10020.00	10060.00
* 21.127	1374.78	.00	1375.78	434.58	1127.64	4672.36	.00	.00	.00	9974.00	10067.00	.00
21.127	1374.66	-.11	1376.50	160.00	141.47	5658.53	.00	160.00	9900.00	9974.00	10067.00	10060.00
* 21.230	1380.49	.00	1381.70	308.65	589.59	4020.64	1189.77	.00	.00	9967.00	10048.00	.00
* 21.230	1380.40	-.10	1381.94	222.17	263.85	4336.31	1199.84	225.00	9900.00	9967.00	10048.00	10125.00
* 21.363	1383.36	.00	1383.91	368.53	100.22	5662.91	36.87	.00	.00	9928.00	10088.00	.00
* 21.363	1383.64	.28	1384.17	166.00	.00	5781.93	18.07	166.00	9939.00	9928.00	10088.00	10105.00

```
 *     21.484   1386.54        .00   1387.48    520.92   2096.89   3696.15      6.96       .00       .00
9932.00  10026.00       .00
 *     21.484   1387.14        .60   1388.60    215.98    996.19   4739.16     64.64    225.00   9852.00
9932.00  10026.00 10077.00

 *     21.576   1389.26        .00   1390.04    872.76    756.66   4047.22    996.12       .00       .00
9980.00  10087.00       .00
 *     21.576   1390.22        .96   1391.12    225.00     19.57   4794.58    985.85    225.00   9940.00
9980.00  10087.00 10165.00

 *     21.669   1393.39        .00   1394.00    981.92    936.50   2815.46   1848.04       .00       .00
9962.00  10031.00       .00
 *     21.669   1393.83        .44   1395.30    225.00    624.98   4040.57    934.45    225.00   9890.00
9962.00  10031.00 10115.00

1
    12AUG05       13:19:13
         PAGE  138

       SECNO      CWSEL     DIFKWS       EG      TOPWID      QLOB       QCH      QROB     PERENC    STENCL
 STCHL      STCHR     STENCR

 *     21.742   1395.28        .00   1396.42    566.72     52.41   5248.87    298.72       .00       .00
9975.00  10091.00       .00
 *     21.742   1396.26        .98   1397.05    200.00     98.26   5197.14    304.60    200.00   9940.00
9975.00  10091.00 10140.00

       21.840   1398.02        .00   1398.86    436.66    959.51   4248.69    391.79       .00       .00
9946.00  10054.00       .00
 *     21.840   1397.97       -.05   1399.15    200.00    644.30   4770.06    185.64    200.00   9900.00
9946.00  10054.00 10100.00

 *     21.895   1399.70        .00   1400.50    596.90   1584.65   2883.33   1132.02       .00       .00
9975.00  10031.00       .00
       21.895   1399.76        .06   1401.09    245.00   1941.74   3463.18    195.07    245.00   9835.00
9975.00  10031.00 10080.00

 *     21.933   1400.89        .00   1401.02    976.18   1780.45   3276.51    543.04       .00       .00
9865.00  10140.00       .00
 *     21.933   1401.53        .64   1401.73    420.00   2164.82   3435.18       .00    420.00   9650.00
9865.00  10140.00 10070.00

 *     21.953   1401.09        .00   1402.04    468.31   2441.63   3010.11    148.25       .00       .00
9969.00  10029.00       .00
 *     21.953   1401.25        .16   1402.14    311.33   2479.19   2958.66    162.15    421.00   9630.00
9969.00  10029.00 10051.00

 *     22.065   1404.11        .00   1404.28    782.57   4240.01   1286.54     73.45       .00       .00
9961.00  10028.00       .00
 *     22.065   1404.51        .40   1404.87    398.21   3771.47   1817.80     10.73    410.00   9620.00
9961.00  10028.00 10030.00

       22.165   1405.28        .00   1405.49    841.22   4120.87   1444.68     34.45       .00       .00
9983.00  10018.00       .00
       22.165   1406.10        .83   1406.47    384.53   3712.66   1879.16      8.17    400.00   9620.00
9983.00  10018.00 10020.00

 *     22.273   1406.70        .00   1407.42    425.37   2028.97   3571.02       .00       .00       .00
9933.00  10028.00       .00
 *     22.273   1407.65        .96   1408.37    292.96   1486.50   4113.50       .00    377.00   9650.00
9933.00  10028.00 10027.00

 *     22.410   1414.23        .00   1416.11    170.88    729.46   4719.29    151.25       .00       .00
9973.00  10027.00       .00
 *     22.410   1414.08       -.15   1416.14    140.90    680.11   4807.25    112.64    180.00   9860.00
9973.00  10027.00 10040.00

 *     22.483   1416.59        .00   1416.72    326.50    317.58   4607.07    675.35       .00       .00
9941.00  10105.00       .00
 *     22.483   1416.89        .29   1417.19    160.00    531.89   5068.11       .00    160.00   9890.00
9941.00  10105.00 10050.00

 *     22.578   1416.45        .00   1417.48     94.31       .00   5600.00       .00       .00       .00
9968.00  10072.00       .00
 *     22.578   1417.35        .89   1418.16     95.13       .00   5600.00       .00     96.00   9968.00
9968.00  10072.00 10064.00

 *     22.675   1418.14        .00   1418.27    288.47       .00   5600.00       .00       .00       .00
```

```
9736.00  10032.00      .00
 *     22.675   1418.86       .72   1419.10    198.00       .00   5600.00       .00    198.00   9830.00
9736.00  10032.00 10028.00

 *     22.794   1418.67       .00   1419.08    216.81      1.90   5485.39    112.71       .00       .00
9983.00  10169.00      .00
       22.794   1419.62       .95   1419.96    183.00     10.92   5589.08       .00    183.00   9977.00
9983.00  10169.00 10160.00

       22.880   1420.11       .00   1420.69    212.09       .00   5600.00       .00       .00       .00
9927.00  10167.00      .00
 *     22.880   1420.62       .51   1421.40    169.00       .00   5600.00       .00    169.00   9951.00
9927.00  10167.00 10120.00

       22.990   1423.67       .00   1424.30    272.57       .00   5600.00       .00       .00       .00
9739.00  10034.00      .00
       22.990   1424.67      1.00   1425.83    136.00       .00   5600.00       .00    136.00   9890.00
9739.00  10034.00 10026.00

 *     23.097   1429.92       .00   1431.51    187.44     42.89   5557.11       .00       .00       .00
9951.00  10121.00      .00
       23.097   1430.66       .74   1432.17    132.00       .00   5600.00       .00    132.00   9958.00
9951.00  10121.00 10090.00

 *     23.168   1433.10       .00   1433.27    612.58    786.37   4501.23    312.39       .00       .00
9777.00  10116.00      .00
 *     23.168   1433.75       .65   1434.02    310.00       .00   5360.21    239.78    310.00   9830.00
9777.00  10116.00 10140.00

1
    12AUG05       13:19:13
         PAGE  139

       SECNO      CWSEL     DIFKWS       EG      TOPWID      QLOB       QCH      QROB     PERENC    STENCL
 STCHL      STCHR     STENCR

 *     23.253   1434.53       .00   1437.36     44.72       .00   3400.00       .00       .00       .00
9973.00  10038.00      .00
 *     23.253   1434.48      -.04   1437.36     44.57       .00   3400.00       .00     44.70   9978.50
9973.00  10038.00 10023.20

 *     23.334   1440.40       .00   1441.83     66.93       .00   3400.00       .00       .00       .00
9962.00  10055.00      .00
 *     23.334   1440.42       .02   1441.84     66.99       .00   3400.00       .00     67.00   9969.00
9962.00  10055.00 10036.00

       23.416   1443.82       .00   1445.60     59.13       .00   3400.00       .00       .00       .00
9974.00  10053.00      .00
       23.416   1443.82      -.01   1445.59     59.00       .00   3400.00       .00     59.00   9981.00
9974.00  10053.00 10040.00

       23.514   1448.11       .00   1449.46     57.47       .00   3400.00       .00       .00       .00
9973.00  10039.00      .00
       23.514   1448.11       .00   1449.46     57.46       .00   3400.00       .00     58.00   9977.00
9973.00  10039.00 10035.00

       23.544   1448.91       .00   1450.79     54.80       .00   3400.00       .00       .00       .00
9973.00  10039.00      .00
       23.544   1448.92       .00   1450.79     54.80       .00   3400.00       .00     54.80   9978.90
9973.00  10039.00 10033.70

 *     23.555   1452.64       .00   1453.37     63.27       .00   3400.00       .00       .00       .00
9973.00  10039.00      .00
 *     23.555   1454.54      1.91   1455.02     63.27       .00   3400.00       .00     63.27   9974.59
9973.00  10039.00 10037.86

       23.591   1453.15       .00   1453.93     75.49       .00   3400.00       .00       .00       .00
9968.00  10045.00      .00
       23.591   1454.80      1.66   1455.30     75.49       .00   3400.00       .00     75.49   9968.00
9968.00  10045.00 10043.49

       23.691   1455.15       .00   1456.48     65.33       .00   3400.00       .00       .00       .00
9965.00  10036.00      .00
 *     23.691   1455.73       .58   1456.82     65.33       .00   3400.00       .00     65.33   9970.39
9965.00  10036.00 10035.72

 *     23.815   1459.03       .00   1460.15     86.00       .00   4450.00       .00       .00       .00
9951.00  10037.00      .00
```

```
        23.815   1458.99      -.04   1460.13     86.00       .00   4450.00       .00     86.00   9951.00
9951.00  10037.00 10037.00

 *      23.912   1461.13       .00   1462.33     75.73       .00   5500.00       .00       .00       .00
9967.00  10043.00      .00
 *      23.912   1461.14       .01   1462.33     75.59       .00   5500.00       .00     75.59   9967.41
9967.00  10043.00 10043.00

 *      23.989   1462.77       .00   1463.42     99.59       .00   5500.00       .00       .00       .00
9937.00  10049.00      .00
 *      23.989   1462.77       .00   1463.42     98.91       .00   5500.00       .00     98.91   9944.77
9937.00  10049.00 10043.68

        24.086   1463.78       .00   1464.17    165.50    368.41   4040.76   1090.83       .00       .00
9972.00  10044.00      .00
        24.086   1463.76      -.02   1464.64     72.00       .00   5500.00       .00     72.00   9972.00
9972.00  10044.00 10044.00

        24.096   1465.22       .00   1465.89     72.00       .00   5500.00       .00       .00       .00
9972.00  10044.00      .00
        24.096   1465.19      -.03   1465.86     72.00       .00   5500.00       .00     72.00   9972.00
9972.00  10044.00 10044.00

        24.106   1465.72       .00   1466.04    172.36      2.78   5013.39    483.83       .00       .00
9955.00  10064.00      .00
        24.106   1465.49      -.23   1465.99    100.00       .00   5500.00       .00    100.00   9955.00
9955.00  10064.00 10055.00

 *      24.195   1466.16       .00   1466.30    200.25       .00   5500.00       .00       .00       .00
9933.00  10142.00      .00
        24.195   1466.12      -.04   1466.46    100.00       .00   5500.00       .00    100.00   9950.00
9933.00  10142.00 10050.00

 *      24.322   1466.37       .00   1466.41    371.98      9.59   4319.29   1171.11       .00       .00
9871.00  10064.00      .00
 *      24.322   1466.60       .23   1466.75    140.00       .00   5255.89    244.10    140.00   9940.00
9871.00  10064.00 10080.00

 *      24.444   1466.41       .00   1466.55    280.34       .93   4345.15   1153.92       .00       .00
9928.00  10122.00      .00
 *      24.444   1466.79       .38   1467.11    153.00      1.29   5498.71       .00    153.00   9927.00
9928.00  10122.00 10080.00

1
    12AUG05      13:19:13
         PAGE  140


       SECNO      CWSEL     DIFKWS       EG      TOPWID      QLOB       QCH      QROB     PERENC    STENCL
 STCHL      STCHR     STENCR

 *      24.542   1466.71       .00   1467.52    185.63     35.10   5464.90       .00       .00       .00
9914.00  10187.00      .00
 *      24.542   1467.61       .91   1468.61    123.50       .00   5500.00       .00    210.00   9950.00
9914.00  10187.00 10160.00

 *      24.635   1471.92       .00   1473.42    190.17       .00   5500.00       .00       .00       .00
9876.00  10111.00      .00
 *      24.635   1472.07       .16   1473.98    120.00       .00   5500.00       .00    120.00   9940.00
9876.00  10111.00 10060.00

1
    12AUG05      13:19:13
         PAGE  141


  SUMMARY OF ERRORS AND SPECIAL NOTES


 CAUTION SECNO=      15.310  PROFILE=  1  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      15.310  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=      15.310  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
 CAUTION SECNO=      15.310  PROFILE=  2  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      15.310  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=      15.310  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

 WARNING SECNO=      15.454  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

```
WARNING SECNO=      15.454  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=      15.530  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      15.530  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      15.530  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=      15.530  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      15.530  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      15.530  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=      15.680  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      15.680  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      15.680  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=      15.680  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      15.680  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      15.680  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=      15.878  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      15.878  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      15.878  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=      15.878  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      15.878  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      15.878  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=      15.920  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      15.920  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      15.920  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=      15.920  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      15.920  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      15.920  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=      15.940  PROFILE=  1  HYDRAULIC JUMP D.S.
WARNING SECNO=      15.940  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
CAUTION SECNO=      15.940  PROFILE=  2  HYDRAULIC JUMP D.S.
WARNING SECNO=      15.940  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=      16.023  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      16.023  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      16.023  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=      16.023  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      16.023  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      16.023  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=      16.148  PROFILE=  1  CRITICAL DEPTH ASSUMED
1
   12AUG05      13:19:13
        PAGE  142

CAUTION SECNO=      16.148  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      16.148  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=      16.148  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      16.148  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      16.148  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=      16.264  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      16.264  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      16.264  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=      16.264  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      16.264  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      16.264  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=      16.373  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      16.373  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      16.373  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=      16.373  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      16.373  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      16.373  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=      16.481  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      16.481  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      16.481  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=      16.481  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      16.481  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      16.481  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=      16.601  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      16.601  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      16.601  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=      16.601  PROFILE=  2  CRITICAL DEPTH ASSUMED
```

```
CAUTION SECNO=     16.601  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     16.601  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=     16.694  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     16.694  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     16.694  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     16.694  PROFILE=  2  MINIMUM SPECIFIC ENERGY

CAUTION SECNO=     16.823  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     16.823  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     16.823  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=     16.823  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     16.823  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     16.823  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=     16.902  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     16.902  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     16.902  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     16.902  PROFILE=  2  MINIMUM SPECIFIC ENERGY

CAUTION SECNO=     16.970  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     16.970  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     16.970  PROFILE=  2  CRITICAL DEPTH ASSUMED
1
   12AUG05      13:19:13
        PAGE  143

CAUTION SECNO=     16.970  PROFILE=  2  MINIMUM SPECIFIC ENERGY

CAUTION SECNO=     16.988  PROFILE=  1  HYDRAULIC JUMP D.S.
WARNING SECNO=     16.988  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
CAUTION SECNO=     16.988  PROFILE=  2  HYDRAULIC JUMP D.S.
WARNING SECNO=     16.988  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=     17.206  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     17.206  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     17.206  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     17.206  PROFILE=  2  MINIMUM SPECIFIC ENERGY

NOTE    SECNO=     17.360  PROFILE=  1  WSEL BASED ON X5 CARD
WARNING SECNO=     17.360  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
NOTE    SECNO=     17.360  PROFILE=  2  WSEL BASED ON X5 CARD
WARNING SECNO=     17.360  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=     17.494  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     17.494  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     17.494  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=     17.494  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     17.494  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     17.494  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=     17.588  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     17.588  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     17.662  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     17.662  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     17.783  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     18.042  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     18.042  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     18.081  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     18.081  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     18.269  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=     18.445  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     18.445  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     18.445  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=     18.445  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     18.445  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     18.445  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=     18.456  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     18.456  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     18.545  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

```
WARNING SECNO=      18.545  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      19.018  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
   12AUG05      13:19:13
        PAGE  144


WARNING SECNO=      19.018  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=      19.117  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      19.117  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      19.117  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=      19.117  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      19.117  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      19.117  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=      19.210  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=      19.210  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=      19.283  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      19.283  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      19.283  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=      19.283  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      19.283  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      19.283  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=      19.299  PROFILE=  1  HYDRAULIC JUMP D.S.
WARNING SECNO=      19.299  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
CAUTION SECNO=      19.299  PROFILE=  2  HYDRAULIC JUMP D.S.
WARNING SECNO=      19.299  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      19.625  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      19.847  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=      19.847  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=      19.960  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      19.960  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      19.960  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      19.960  PROFILE=  2  MINIMUM SPECIFIC ENERGY

WARNING SECNO=      19.974  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=      19.974  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=      20.049  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      20.049  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      20.049  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=      20.049  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      20.049  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      20.049  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=      20.144  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=      20.144  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      20.430  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=      20.725  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      20.725  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      20.725  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=      20.725  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      20.725  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
1
   12AUG05      13:19:13
        PAGE  145


CAUTION SECNO=      20.725  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=      20.737  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      20.737  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      20.737  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=      20.737  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      20.737  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      20.737  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=      20.750  PROFILE=  1  HYDRAULIC JUMP D.S.
WARNING SECNO=      20.750  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
CAUTION SECNO=      20.750  PROFILE=  2  HYDRAULIC JUMP D.S.
```

```
WARNING SECNO=     20.750  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     20.819  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=     20.841  PROFILE=  1  HYDRAULIC JUMP D.S.
CAUTION SECNO=     20.841  PROFILE=  2  HYDRAULIC JUMP D.S.

WARNING SECNO=     20.860  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     20.860  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     20.942  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=     21.036  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     21.036  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     21.036  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=     21.036  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     21.036  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     21.036  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=     21.127  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     21.127  PROFILE=  1  MINIMUM SPECIFIC ENERGY

CAUTION SECNO=     21.230  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     21.230  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     21.230  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=     21.230  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     21.230  PROFILE=  2  MINIMUM SPECIFIC ENERGY

WARNING SECNO=     21.363  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     21.363  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=     21.484  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     21.484  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     21.484  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=     21.484  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     21.484  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     21.484  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=     21.576  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     21.576  PROFILE=  1  MINIMUM SPECIFIC ENERGY
WARNING SECNO=     21.576  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
   12AUG05      13:19:13
        PAGE  146

CAUTION SECNO=     21.669  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     21.669  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     21.669  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=     21.669  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     21.669  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     21.669  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=     21.742  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     21.742  PROFILE=  1  MINIMUM SPECIFIC ENERGY
WARNING SECNO=     21.742  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     21.840  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=     21.895  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     21.895  PROFILE=  1  MINIMUM SPECIFIC ENERGY

WARNING SECNO=     21.933  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     21.933  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=     21.953  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     21.953  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     21.953  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
WARNING SECNO=     21.953  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     22.065  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     22.065  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     22.273  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=     22.273  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=     22.410  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     22.410  PROFILE=  1  MINIMUM SPECIFIC ENERGY
```

```
CAUTION SECNO=      22.410  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      22.410  PROFILE=  2  MINIMUM SPECIFIC ENERGY

WARNING SECNO=      22.483  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=      22.483  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      22.578  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=      22.578  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      22.675  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=      22.675  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      22.794  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      22.880  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=      23.097  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      23.097  PROFILE=  1  MINIMUM SPECIFIC ENERGY

WARNING SECNO=      23.168  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=      23.168  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
   12AUG05      13:19:13
        PAGE  147


CAUTION SECNO=      23.253  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      23.253  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      23.253  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=      23.253  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      23.253  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      23.253  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=      23.334  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=      23.334  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      23.555  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=      23.555  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      23.691  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      23.815  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      23.912  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=      23.912  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      23.989  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=      23.989  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      24.195  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      24.322  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=      24.322  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      24.444  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=      24.444  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      24.542  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=      24.542  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=      24.635  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      24.635  PROFILE=  1  MINIMUM SPECIFIC ENERGY
WARNING SECNO=      24.635  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

1
   12AUG05      13:19:13
        PAGE  148


FLOODWAY DATA,   CAVE CREEK WASH
PROFILE NO.  2

            ------- FLOODWAY -------      WATER SURFACE ELEVATION
  STATION    WIDTH    SECTION    MEAN      WITH    WITHOUT  DIFFERENCE
                       AREA    VELOCITY  FLOODWAY  FLOODWAY
```

15.015	110.	1413.	11.3	1219.1	1219.1	.0
15.109	110.	1413.	11.3	1219.3	1219.3	.0
15.204	110.	1413.	11.3	1219.6	1219.6	.0
15.310	65.	803.	19.9	1219.6	1219.6	.0
15.454	65.	1018.	15.7	1223.2	1223.2	.0
15.530	115.	966.	16.6	1236.9	1236.9	.0
15.680	115.	966.	16.6	1240.2	1240.2	.0
15.878	121.	987.	16.2	1244.0	1244.0	.0
15.920	121.	984.	16.3	1244.9	1244.9	.0
15.940	124.	1303.	12.3	1247.9	1247.9	.0
16.023	101.	924.	17.3	1250.1	1250.1	.0
16.148	101.	926.	17.3	1252.9	1252.9	.0
16.264	101.	925.	17.3	1255.4	1255.4	.0
16.373	101.	925.	17.3	1257.9	1257.9	.0
16.481	104.	937.	17.1	1259.5	1259.5	.0
16.601	104.	934.	17.1	1262.1	1262.1	.0
16.694	110.	951.	16.8	1263.4	1263.4	.0
16.823	110.	953.	16.8	1266.3	1266.3	.0
16.902	115.	967.	16.5	1267.4	1267.4	.0
16.970	119.	976.	16.4	1268.2	1268.2	.0
16.988	126.	1302.	12.3	1271.1	1271.1	.0
17.061	123.	1091.	14.7	1270.8	1270.8	.0
17.206	224.	1207.	13.3	1272.7	1272.7	.0
17.360	849.	13646.	1.2	1275.4	1275.4	.0
17.494	377.	1338.	10.5	1280.8	1280.8	.0
17.588	238.	2347.	6.0	1283.4	1283.3	.1
17.662	249.	1741.	8.0	1283.8	1283.5	.3
17.783	143.	1203.	11.6	1285.9	1285.3	.6
17.932	110.	991.	14.1	1290.9	1290.5	.4
18.042	97.	939.	14.9	1293.9	1293.8	.1
18.061	97.	956.	14.6	1294.8	1294.8	.0
18.081	185.	2185.	6.4	1298.4	1298.4	.0
18.174	263.	2695.	5.2	1299.0	1299.1	-.1
18.269	218.	2091.	6.7	1299.1	1299.1	.0
18.362	203.	1861.	7.5	1299.5	1299.5	.0
18.445	220.	1225.	11.4	1304.7	1305.0	-.3
18.456	225.	1897.	7.4	1308.2	1307.1	1.1
18.545	288.	3263.	4.3	1309.1	1308.0	1.1
18.575	290.	3292.	4.3	1309.2	1308.1	1.1
18.583	301.	3397.	4.1	1309.6	1309.1	.5
18.640	255.	2606.	5.4	1309.5	1309.0	.5
18.734	228.	2244.	6.2	1309.8	1309.3	.5

1

12AUG05 13:19:13
PAGE 149

FLOODWAY DATA, CAVE CREEK WASH
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WATER SURFACE ELEVATION WITHOUT FLOODWAY	DIFFERENCE
18.832	215.	2187.	6.4	1310.1	1309.7	.4
18.925	199.	2061.	6.8	1310.6	1310.2	.4
19.018	171.	1455.	9.6	1310.7	1310.4	.3
19.117	116.	924.	15.2	1311.9	1311.9	.0
19.210	153.	1371.	10.2	1316.5	1316.5	.0
19.283	109.	871.	16.1	1319.7	1319.7	.0
19.299	109.	1098.	12.8	1321.8	1321.8	.0
19.313	157.	1271.	11.0	1322.9	1322.9	.0
19.418	161.	1303.	10.7	1325.3	1325.3	.0
19.560	129.	1276.	11.0	1328.0	1328.0	.0
19.625	60.	714.	8.1	1329.5	1329.4	.1
19.691	60.	753.	7.7	1331.2	1331.1	.1
19.742	85.	935.	6.2	1331.7	1331.6	.1
19.847	86.	835.	6.9	1331.7	1331.7	.0
19.960	73.	421.	13.8	1332.2	1332.3	-.1
19.974	51.	515.	11.3	1333.9	1333.5	.4
19.986	51.	628.	9.2	1336.2	1335.6	.6
20.049	50.	371.	15.6	1338.3	1338.5	-.2
20.144	57.	542.	10.7	1343.5	1343.6	-.1
20.242	71.	569.	10.2	1345.6	1345.6	.0
20.335	73.	648.	9.0	1347.6	1347.5	.1

20.347	51.	527.	11.0	1347.5	1347.3	.2
20.366	51.	571.	10.2	1348.4	1348.1	.3
20.423	114.	830.	7.0	1350.0	1349.7	.3
20.430	51.	524.	11.1	1349.6	1349.3	.3
20.444	51.	566.	10.2	1350.4	1350.1	.3
20.529	139.	895.	6.5	1352.6	1352.4	.2
20.628	130.	1092.	5.3	1353.6	1353.4	.2
20.725	64.	403.	14.4	1356.0	1356.1	-.1
20.737	51.	376.	15.4	1358.3	1358.3	.0
20.750	51.	495.	11.7	1360.7	1360.7	.0
20.819	78.	491.	11.8	1362.8	1362.5	.3
20.841	78.	551.	10.5	1364.5	1364.5	.0
20.860	156.	870.	6.7	1366.1	1366.1	.0
20.942	250.	874.	6.6	1367.3	1367.4	-.1
21.036	250.	622.	9.3	1371.5	1372.0	-.5
21.127	160.	570.	10.2	1374.7	1374.8	-.1
21.230	225.	659.	8.8	1380.4	1380.5	-.1
21.363	166.	996.	5.8	1383.7	1383.4	.3
21.484	225.	657.	8.8	1387.1	1386.5	.6
21.576	225.	824.	7.0	1390.3	1389.3	1.0
21.669	225.	673.	8.3	1393.8	1393.4	.4

1

12AUG05 13:19:13
PAGE 150

Revised to reflect the Fill for the CLOMR-F

FLOODWAY DATA, CAVE CREEK WASH
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WATER SURFACE ELEVATION WITHOUT FLOODWAY	DIFFERENCE
21.742	200.	852.	6.6	1396.3	1395.3	1.0
21.840	200.	697.	8.0	1397.9	1398.0	-.1
21.895	245.	712.	7.9	1399.8	1399.7	.1
21.933	420.	1585.	3.5	1401.5	1400.9	.6
21.953	421.	827.	6.8	1401.3	1401.1	.2
22.065	410.	1179.	4.8	1404.5	1404.1	.4
22.165	400.	1268.	4.4	1406.1	1405.3	.8
22.273	377.	892.	6.3	1407.7	1406.7	1.0
22.410	162.	541.	10.4	1414.0	1414.2	-.2
22.483	160.	1316.	4.3	1416.9	1416.6	.3
22.578	95.	775.	7.2	1417.4	1416.5	.9
22.675	198.	1436.	3.9	1418.8	1418.1	.7
22.794	183.	1198.	4.7	1419.7	1418.7	1.0
22.880	169.	791.	7.1	1420.6	1420.1	.5
22.990	136.	647.	8.7	1424.7	1423.7	1.0
23.097	132.	569.	9.8	1430.6	1429.9	.7
23.168	310.	1340.	4.2	1433.8	1433.1	.7
23.253	45.	250.	13.6	1434.5	1434.5	.0
23.334	67.	355.	9.6	1440.4	1440.4	.0
23.416	59.	318.	10.7	1443.8	1443.8	.0
23.514	57.	365.	9.3	1448.1	1448.1	.0
23.544	55.	309.	11.0	1448.9	1448.9	.0
23.555	63.	614.	5.5	1454.5	1452.6	1.9
23.591	75.	603.	5.6	1454.8	1453.1	1.7
23.691	65.	405.	8.4	1455.8	1455.2	.6
23.815	86.	519.	8.6	1459.0	1459.0	.0
23.912	76.	626.	8.8	1461.1	1461.1	.0
23.989	99.	851.	6.5	1462.8	1462.8	.0
24.086	72.	732.	7.5	1463.8	1463.8	.0
24.096	72.	835.	6.6	1465.2	1465.2	.0
24.106	100.	971.	5.7	1465.5	1465.7	-.2
24.195	100.	1180.	4.7	1466.2	1466.2	.0
24.322	140.	1837.	3.0	1466.6	1466.4	.2
24.444	153.	1209.	4.5	1466.8	1466.4	.4
24.542	210.	686.	8.0	1467.6	1466.7	.9
24.635	120.	496.	11.1	1472.1	1471.9	.2

Conditional Letter of Map Revision Based on Fill (CLOMR-F) for Union Hills Maintenance Service Center

APPENDIX C

December 8, 2005

Retention basin Area Calculation

East Basin

Land Use	Area sf	Area ac	C	CA
Park	308043	7.071694	0.3	2.121508
Undeveloped Desert	272473	6.255119	0.45	2.814804
Bldg	91900	2.109734	0.9	1.89876
Parking	269435	6.185376	0.95	5.876108
total	941851	21.62192		12.71118

West Basin

Area sf	Area ac	C	CA
0	0	0.3	0
306092	7.026905	0.45	3.162107
0	0	0.9	0
56485	1.296717	0.95	1.231881
362577	8.323623		4.393989

	East Basin	West Basin
Composite C	0.587884	0.527894
100-yr, 2-hr P	2.6 in	2.6 in
A	21.62192 ac	8.323623 ac
V=c*(P/12)*A	2.754089 ac.ft	0.952031 ac.ft
	119968.1 cf	41470.47 cf
Total Required Vol	161438.6 cf	

Retention Basin Design

	East Basin	West Basin
1415 WSEL	76186 sf	17217 sf
1412 Bottom	56963 sf	9505 sf
Avg Area	66574.5 sf	13361 sf
Depth	3 ft	3 ft
V	199723.5 cf	40083 cf
Total Vol	239806.5 cf, OK	

Earth Calculation

	East Basin	West Basin
1418 Top of Basin	97,912 sf	28730 sf
1412 Bottom of Basin	56,963 sf	9505 sf
Avg Dep	6 ft	6 ft
Vol	464,625 cf	114705 cf
	17,208 CY CUT	4248.333 cy CUT

Property Information

View GIS Maps

Parcel #: 209-12-004
Subdivision Name:
MCR #:
Lot #:
Property Address: 202 E UNION HILLS DR
PHOENIX 85024
Property Description: W2 SE4 EX RD P/D 84-277005 & EX BEG NE COR SD W2 S 20.59F TH NWLY ALG CUR CONC NELY 39.13F E TO POB P/D 87-357102 & EX RD P/D 91-296325
Section Township Range: 29 4N 3E
Associated Parcel:

Owner Information

View Tax Information

Owner: PHOENIX CITY OF
In Care Of:
Mailing Address: 251 W WASHINGTON ST 8TH FL
PHOENIX AZ 85003 USA
Deed #: 06343-0100
Sales Price: n/a *
Deed Date: 12/25/1958
Sales Date: n/a *

Property Information

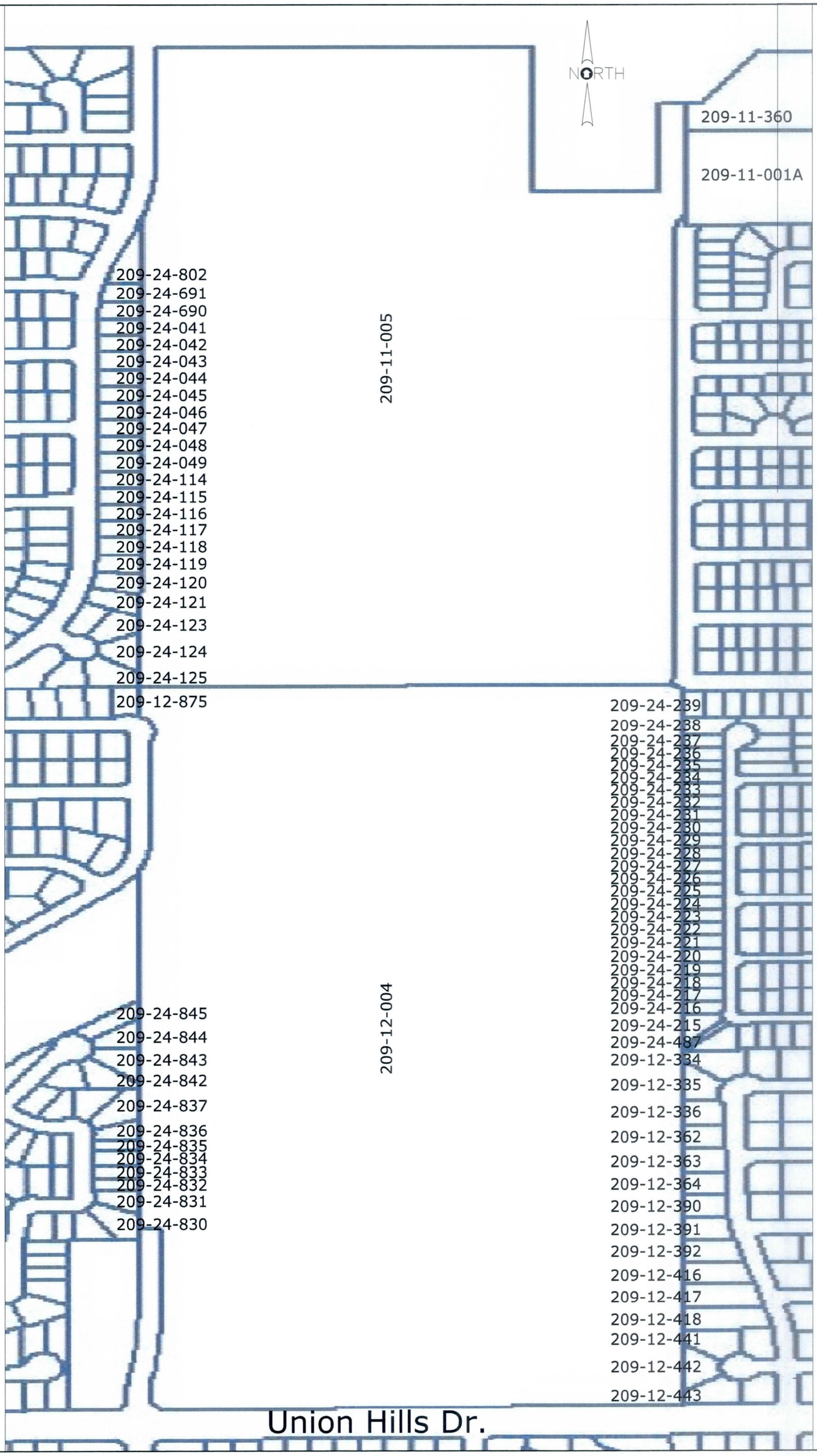
View GIS Maps

Parcel #: 209-11-005
Subdivision Name:
MCR #:
Lot #:
Property Address:
Property Description: W2 NE4 SEC 29 EX N 55F & EX E 25F SW4 NE4 SEC & EX RD P/D 90-154804 & EX RD P/D 92-0377417 EX RD P/F 97-773248
Section Township Range: 29 4N 3E
Associated Parcel:

Owner Information

View Tax Information

Owner: PHOENIX CITY OF
In Care Of:
Mailing Address: 251 W WASHINGTON ST 8TH FL
PHOENIX AZ 85003 USA
Deed #: 06343-0100
Sales Price: n/a *
Deed Date: 12/25/1958
Sales Date: n/a *


NORTH
209-11-360
209-11-001A
209-11-005
209-24-802
209-24-691
209-24-690
209-24-041
209-24-042
209-24-043
209-24-044
209-24-045
209-24-046
209-24-047
209-24-048
209-24-049
209-24-114
209-24-115
209-24-116
209-24-117
209-24-118
209-24-119
209-24-120
209-24-121
209-24-123
209-24-124
209-24-125
209-12-875
209-24-239
209-24-238
209-24-237
209-24-236
209-24-235
209-24-234
209-24-233
209-24-232
209-24-231
209-24-230
209-24-229
209-24-228
209-24-227
209-24-226
209-24-225
209-24-224
209-24-223
209-24-222
209-24-221
209-24-220
209-24-219
209-24-218
209-24-217
209-24-216
209-24-215
209-24-487
209-12-334
209-12-335
209-12-336
209-12-362
209-12-363
209-12-364
209-12-390
209-12-391
209-12-392
209-12-416
209-12-417
209-12-418
209-12-441
209-12-442
209-12-443
209-12-004
209-24-845
209-24-844
209-24-843
209-24-842
209-24-837
209-24-836
209-24-835
209-24-834
209-24-833
209-24-832
209-24-831
209-24-830
Union Hills Dr.

FEDERAL EMERGENCY MANAGEMENT AGENCY

PROPERTY INFORMATION FORM

O.M.B. NO. 3067-0147
Expires September 30, 2005

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 1.63 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless a valid OMB control number appears in the upper right corner of this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, SW, Washington DC 20472, Paperwork Reduction Project (3067-0147). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

This form may be completed by the property owner, property owner's agent, licensed land surveyor, or registered professional engineer to support a request for a Letter of Map Amendment (LOMA), Conditional Letter of Map Amendment (CLOMA), Letter of Map Revision Based on Fill (LOMR-F), or Conditional Letter of Map Revision Based on Fill (CLOMR-F) for existing or proposed, single or multiple lots/structures. Please check the item below that describes your request:

☐ LOMA	A letter from FEMA stating that an existing structure or parcel of land that has not been elevated by fill (natural grade) would not be inundated by the base flood.
☐ CLOMA	A letter from FEMA stating that a proposed structure that is not to be elevated by fill (natural grade) would not be inundated by the base flood if built as proposed.
☐ LOMR-F	A letter from FEMA stating that an **existing** structure or parcel of land that has been **elevated by fill** would not be inundated by the base flood.
☑ CLOMR-F	A letter from FEMA stating that a parcel of land or **proposed** structure that will be **elevated by fill** would not be inundated by the base flood if fill is placed on the parcel as proposed or the structure is built as proposed.

Fill is defined as material from any source placed to raise the ground to or above the Base Flood Elevation (BFE). The common construction practice of removing unsuitable existing material (topsoil) and backfilling with select structural material is not considered the placement of fill if the practice does not alter the existing (natural grade) elevation, which is at or above the BFE. **Fill that is placed before the date of the first National Flood Insurance Program (NFIP) map showing the area in a Special Flood Hazard Area (SFHA) is considered natural grade.**

Has fill been placed on your property? ☐ Yes ☑ No If yes, when was fill placed? / month/year

Will fill be placed on your property? ☑ Yes ☐ No If yes, when will fill be placed? 11 / 2006 month/year

1. Street Address of the Property (if request is for multiple structures, please attach additional sheet):
   202 E Union Hills Dr.,Phoenix, AZ 85024

2. Legal description of Property (Lot, Block, Subdivision) (if a street address cannot be provided):
   Parcel Number 209-12-004

3. Are you requesting that the SFHA designation be removed from (check one):

   ☐ the entire legally recorded property?
   ☑ a portion of land within the bounds of the property (a certified metes and bounds description and map of the area to be removed, certified by a licensed land surveyor or registered professional engineer, are required)?
   ☐ structures on the property? What are the dates of construction?

4. Is this request for a (check one):

   ☐ single structure
   ☑ single lot
   ☐ multiple structures (How many structures are involved in your request? List the number:)
   ☐ multiple lots (How many lots are involved in your request? List the number:)

In addition to this form (MT-1 Form 1), ALL requests must include the following:

- Copy of the Plat Map for the property (with recordation data and stamp of the Recorder's Office)
  OR
- Copy of the property Deed (with recordation data and stamp of the Recorder's Office), accompanied by a tax assessor's map or other certified map showing the surveyed location of the property relative to local streets and watercourses
- Copy of the effective FIRM panel and/or Flood Boundary and Floodway Map (FBFM) (if applicable) on which the property location has been accurately plotted (property inadvertently located in the NFIP regulatory floodway will require Section B of MT-1 Form 3)
- Form 2 – Elevation Form. If an Elevation Certificate has already been completed for this property, it may be submitted in addition to Form 2.

  Please include a map scale and North arrow on all maps submitted.

For LOMR-Fs and CLOMR-Fs, the following must be submitted in addition to the items listed above:

- Form 3 – Community Acknowledgment Form

Processing Fee (see instructions for appropriate mailing address; or, visit **http://www.fema.gov/fhm/frm_fees.shtm** for the most current fee schedule)

Revised fee schedules are published periodically, but no more than once annually, as noted in the Federal Register. Please note: single/multiple lot(s)/structure(s) LOMAs are fee exempt. The current review and processing fees are listed below:

Check the fee that applies to your request:

- [ ] $325 (single lot/structure LOMR-F following a CLOMR-F)
- [ ] $425 (single lot/structure LOMR-F)
- [x] $500 (single lot/structure CLOMA or CLOMR-F)
- [ ] $700 (multiple lot/structure LOMR-F following a CLOMR-F, or multiple lot/structure CLOMA)
- [ ] $800 (multiple lot/structure LOMR-F or CLOMR-F)

Please submit the Payment Information Form for remittance of applicable fees. Please make your check or money order payable to: National Flood Insurance Program.

All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Applicant's Name: Hasan Mushtaq,Phd.,P.E.,CFM
Please Print or Type

Company: City of Phoenix,AZ85003

Mailing Address: 200 W Washington St.,5th Floor
Phoenix, Arizona 85003

Daytime Telephone No.: 602-262-4960

E-Mail Address: hasan.mushtaq@phoenix.gov
(optional)

Fax No.: 602-262-7322

Date

Signature of Applicant (required)

If you have any questions concerning FEMA policy, or the NFIP in general, please contact the FEMA Map Assistance Center toll free at 1-877-FEMA MAP (1-877-336-2627), or visit the Flood Hazard Mapping website at **www.fema.gov/fhm/.**

FEDERAL EMERGENCY MANAGEMENT AGENCY

ELEVATION FORM

O.M.B. NO. 3067-0147
Expires September 30, 2005

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 1 hour per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless a valid OMB control number appears in the upper right corner of this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, SW, Washington DC 20472, Paperwork Reduction Project (3067-0147). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

This form must be completed for requests and must be completed and signed by a registered professional engineer or licensed land surveyor. **A FEMA National Flood Insurance Program (NFIP) Elevation Certificate may be submitted in addition to this form for single structure requests.**

For requests to remove a structure on natural grade OR on engineered fill from the Special Flood Hazard Area (SFHA), submit the lowest adjacent grade (the lowest ground touching the structure), including an attached deck or garage. For requests to remove an entire parcel of land from the SFHA, provide the lowest lot elevation; or, if the request involves an area described by metes and bounds, provide the lowest elevation within the metes and bounds description.

1. NFIP Community Number: 040051 Property Name or Address: 202 E. Union Hills Dr., Phoenix, AZ 85024

2. Are the elevations listed below based on ☐ existing or ☒ proposed conditions? (Check one)

3. What is the elevation datum? NGVD 29 If any of the elevations listed below were computed using a datum different than the datum used for the effective Flood Insurance Rate Map (FIRM) (e.g., NGVD 29 or NAVD 88), what was the conversion factor?

   Local Elevation +/- ft. = FIRM Datum

4. For the existing or proposed structures listed below, what are the types of construction? (check all that apply)
   ☐ crawl space ☐ slab on grade ☐ basement/enclosure ☒ other (explain) Compacted Fill to Base Flood Elevation

5. Has FEMA identified this area as subject to land subsidence or uplift? (see instructions) ☐ Yes ☒ No
   If yes, what is the date of the current releveling? / (month/year)

Lot Number	Block Number	Lowest Lot Elevation	Lowest Adjacent Grade To Structure	Base Flood Elevation	For FEMA Use Only
209-12-004		1418.0	1418.0	1417	

This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information. All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Certifier's Name: Pedro A Calza, P.E., CFM	License No.: 30493	**Expiration Date: 9-30-2008**
Company Name: ASpen Consulting Engineers	Telephone No.: 602-231-9221	**Fax No.: 602-231-8977**
Signature: Pedro Calza	Date: 9-21-2005	

Seal (optional)

Continued from Page 1.

Lot Number	Block Number	Lowest Lot Elevation	Lowest Adjacent Grade To Structure	Base Flood Elevation	For FEMA Use Only

This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information. All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Certifier's Name:	License No.:	Expiration Date:
Company Name:	Telephone No.:	Fax No.:
Signature:	Date:	

Seal (optional)

FEDERAL EMERGENCY MANAGEMENT AGENCY

COMMUNITY ACKNOWLEDGMENT FORM

O.M.B. NO. 3067-0147
Expires September 30, 2005

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 0.88 hour per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless a valid OMB control number appears in the upper right corner of this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, SW, Washington DC 20472, Paperwork Reduction Project (3067-0147). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

This form must be completed for requests involving the existing or proposed placement of fill (complete Section A) OR to provide acknowledgment of this request to remove a property from the SFHA which was previously located within the regulatory floodway (complete Section B).

This form must be completed and signed by the official responsible for floodplain management in the community. The community number and the subject property address must appear in the spaces provided below.

Community Number: 040051 Property Name or Address: 202 E Union Hills Dr., Phoenix, AZ 85024

A. REQUESTS INVOLVING THE PLACEMENT OF FILL

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this Letter of Map Revision Based on Fill (LOMR-F) or Conditional LOMR-F request. Based upon the community's review, we find the completed or proposed project meets or is designed to meet all of the community floodplain management requirements, including the requirement that no fill be placed in the regulatory floodway, and that all necessary Federal, State, and local permits have been, or in the case of a Conditional LOMR-F, will be obtained. In addition, we have determined that the land and any existing or proposed structures to be removed from the SFHA are or will be reasonably safe from flooding as defined in 44CFR 65.2(c), and that we have available upon request by FEMA, all analyses and documentation used to make this determination. For LOMR-F requests, we understand that this request is being forwarded to FEMA for a possible map revision.

Community Comments:

Community Official's Name and Title: (*Please Print or Type*)		Telephone No.:
Hasan Mushtaq,Phd.,P.E.,CFM Floodplain Manager		602-262-4960
Community Name: City of Phoenix, Arizona	Community Official's Signature: (required)	Date: 2/9/04

B. PROPERTY LOCATED WITHIN THE REGULATORY FLOODWAY

As the community official responsible for floodplain management, I hereby acknowledge that we have received and reviewed this request for a LOMA. We understand that this request is being forwarded to FEMA to determine if this property has been inadvertently included in the regulatory floodway. We acknowledge that no fill on this property has been or will be placed within the designated regulatory floodway. We find that the completed or proposed project meets or is designed to meet all of the community floodplain management requirements.

Community Comments:

Community Official's Name and Title: (*Please Print or Type*)		Telephone No.:
Community Name:	Community Official's Signature (required):	Date:

FEDERAL EMERGENCY MANAGEMENT AGENCY

PAYMENT INFORMATION FORM

Community Name: City of Phoenix

Project Identifier: Cave Creek Wash

THIS FORM MUST BE MAILED, ALONG WITH THE APPROPRIATE FEE, TO ONE OF TWO POST OFFICE BOXES (SEE BELOW) OR FAXED TO THE FAX NUMBER BELOW.

Type of Request:

MT-1 application fee
MT-2 application fee } (Insert **3173** as the P.O. Box number in the address below)

External Data Requests (EDRs) (Insert **398** as the P.O. Box number in the address below)

Federal Emergency Management Agency
Revisions Fee-Collection System Administrator
P.O. Box
Merrifield, Virginia 22116
Fax: (703) 849-0282
Phone: (703) 849-0432

Request No.: (if known) Amount:

☑ INITIAL FEE* ☐ FINAL FEE ☐ FEE BALANCE** ☐ MASTER CARD ☐ VISA ☑ CHECK ☐ MONEY ORDER

*Note: Applicable only for EDR and/or Alluvial Fan requests (as appropriate).

**Note: Applicable only if submitting a corrected fee for an ongoing request.

COMPLETE THIS SECTION ONLY IF PAYING BY CREDIT CARD

EXP. DATE

☐☐☐☐ — ☐☐☐☐ — ☐☐☐☐ — ☐☐☐☐ ☐☐ 1 — ☐ 2006

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 Month Year

CARD NUMBER

Date Signature

NAME *(AS IT APPEARS ON CARD)*:
(please print or type)

ADDRESS:
(for your credit card receipt-please print or type)

DAYTIME PHONE: 602-262-4960

New Search

Property Information

View GIS Maps

Parcel #: 209-12-004
MCR #:
Property Address: 202 E UNION HILLS DR PHOENIX 85024
Property Description: W2 SE4 EX RD P/D 84-277005 & EX BEG NE COR SD W2 S 20.59F TH NWLY ALG CUR CONC NELY 39.13F E TO POB P/D 87-357102 & EX RD P/D 91-296325
Section Township Range: 29 4N 3E

Subdivision Name:
Lot #:
Associated Parcel:

Owner Information

View Tax Information

Owner: PHOENIX CITY OF
In Care Of:
Mailing Address: 251 W WASHINGTON ST 8TH FL PHOENIX AZ 85003 USA
Deed #: 06343-0100
Deed Date: 12/25/1958

Sales Price: n/a
Sales Date: n/a

View Comparables (COMPS)

Tax Year:	2006	2005	2004
Full Cash Value (FCV):	$20,045,824	$10,479,876	$10,479,876
Limited Property Value (LPV):	$11,322,961	$8,415,340	$7,650,309
Legal Class:	2	2	2
Assessment Ratio:	16.0%	16.0%	16.0%
Assessed FCV:	$3,207,332	$1,676,780	$1,676,780
Assessed LPV:	$1,811,674	$1,346,454	$1,224,049
Property Use Code:	9780	9780	9780
Tax Area Code:	691300	691300	691300

Additional Component Information (for this parcel)

Valuation Characteristics

New Search

Helpful Information:

recorder glossary forms

Disclaimer

The data contained in this database is deemed reliable but not guaranteed. This information should be used for informational use only and does not constitute a legal document for the description of these properties. Every effort has been made to insure the accuracy of this data; however, this material may be slightly dated which would have an impact on its accuracy. The Maricopa County Assessor's Office disclaims any responsibility or liability for any direct or indirect damages resulting from the use of this data.

© 2006 Maricopa Cou

New Search

Property Information

View GIS Maps

Parcel #: 209-11-005
MCR #:
Property Address:
Property Description: W2 NE4 SEC 29 EX N 55F & EX E 25F SW4 NE4 SEC & EX RD P/D 90-154804 & EX RD P/D 92-0377417 EX RD P/F 97-773248
Section Township Range: 29 4N 3E

Subdivision Name:
Lot #:
Associated Parcel:

Owner Information

View Tax Information

Owner: PHOENIX CITY OF
In Care Of:
Mailing Address: 251 W WASHINGTON ST 8TH FL PHOENIX AZ 85003 USA
Deed #: 06343-0100
Deed Date: 12/25/1958

Sales Price: n/a
Sales Date: n/a

View Comparables (COMPS)

Tax Year:	2006	2005	2004
Full Cash Value (FCV):	$5,026,000	$2,108,500	$2,108,500
Limited Property Value (LPV):	$2,279,313	$1,363,750	$1,115,500
Legal Class:	2	2	2
Assessment Ratio:	16.0%	16.0%	16.0%
Assessed FCV:	$804,160	$337,360	$337,360
Assessed LPV:	$364,690	$218,200	$178,480
Property Use Code:	9700	9700	9700
Tax Area Code:	691300	691300	691300

Additional Component Information (for this parcel)

Valuation Characteristics

New Search

Helpful Information:

recorder glossary forms

Disclaimer
The data contained in this database is deemed reliable but not guaranteed. This information should be used for informational use only and does not constitute a legal document for the description of these properties. Every effort has been made to insure the accuracy of this data; however, this material may be slightly dated which would have an impact on its accuracy. The Maricopa County Assessor's Office disclaims any responsibility or liability for any direct or indirect damages resulting from the use of this data.

© 2006 Maricopa Cou

NOTES TO USERS

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. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles, Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' National Geodetic Vertical Datum of 1929 (NGVD 29). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was *Arizona State Plane Zone 3176 (central Arizona)*. The **horizontal datum** was *NAD83, GRS80 spheroid*. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the *National Geodetic Vertical Datum of 1929*. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

Spatial Reference System Division
National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(310) 713-3191

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was derived from multiple sources. Base map files were provided in digital format by Maricopa County. Orthophoto images were produced at a scale of 1:6000 using HARN for control. Aerial photography is dated December 2000 to December 2002.

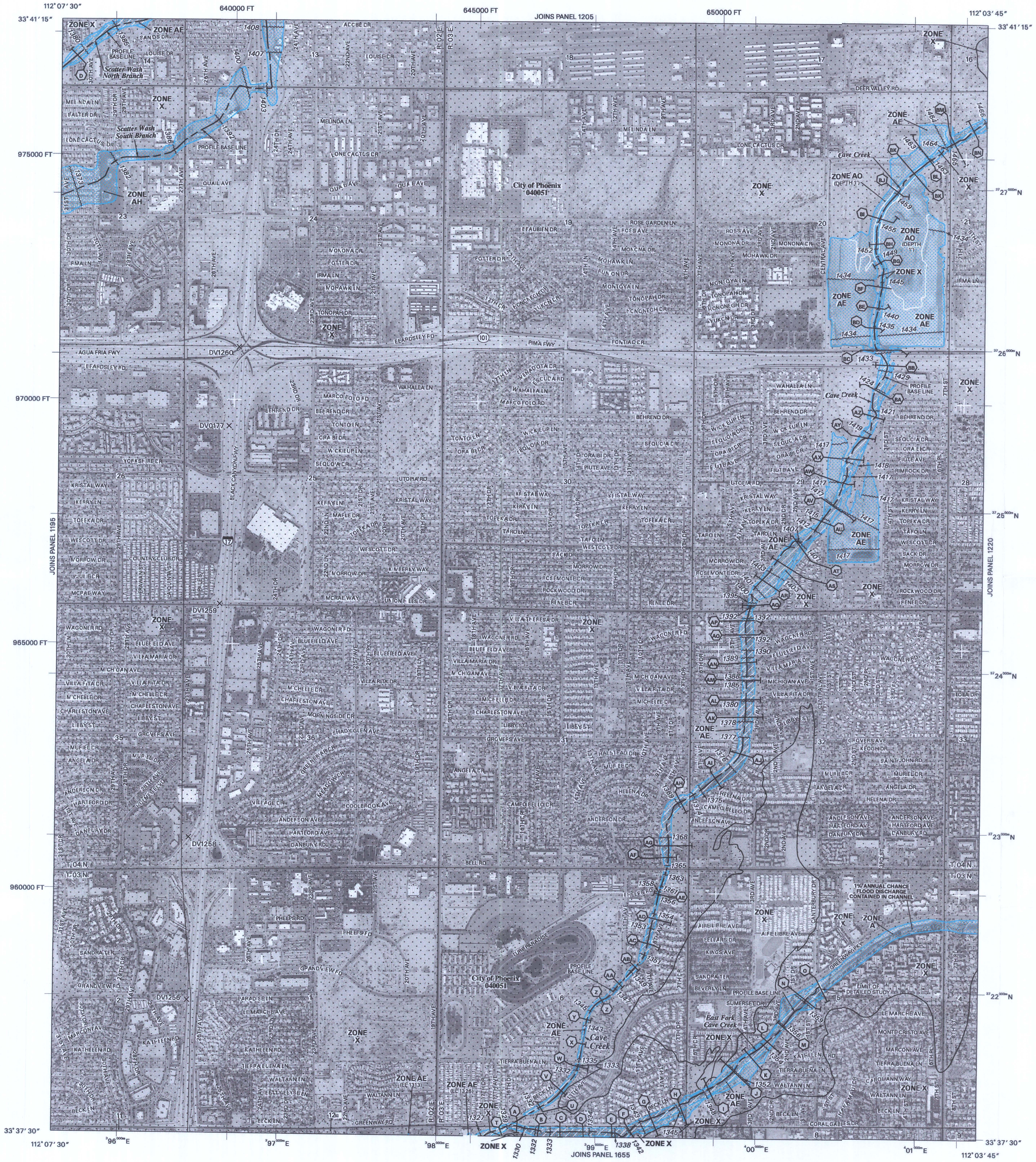
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMAMAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones, and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.

~~513~~~~	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the National Geodetic Vertical Datum of 1929

(A)——(A)	Cross section line
(2)- - - -(2)	Transect line
112° 07′ 08″, 33° 25′ 41″	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere.
$^{42}76^{000m}$E	1000-meter Universal Transverse Mercator grid tick values zone 12.
875000 FT	5000-foot grid tick values: Arizona State Plane coordinate system, central zone (FIPSZONE 3176) NAD83 (Transverse Mercator)
×DV2313	Bench mark (see explanation in Notes to Users section of this FIRM panel)
• M1.5	River Mile

MAP REPOSITORY
Refer to Repositories Listing on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
April 15, 1988

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
September 29, 1989, September 4, 1991, December 3, 1993, September 30, 1995, July 19, 2001

September 30, 2005 - to update corporate limits, to change Base Flood Elevations, to add Base Flood Elevations, to add Special Flood Hazard Areas, to change Special Flood Hazard Areas, to change zone designations, to add roads and road names, to incorporate previously issued Letters of Map Revision, and to incorporate previously issued Letters of Map Amendment.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
300 0 300 600 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1215K

FIRM
FLOOD INSURANCE RATE MAP
MARICOPA COUNTY, ARIZONA
AND INCORPORATED AREAS

PANEL 1215 OF 4350
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
PHOENIX, CITY OF	040051	1215	K

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
04013C1215K
MAP REVISED
SEPTEMBER 30, 2005

Federal Emergency Management Agency

NO.	REVISION	BY	DATE
3			
2			
1			

Registered Professional Engineer (Civil) CERTIFICATE NO. 30493 PEDRO A. CALZA Date Signed 12-15-05 ARIZONA, U.S.A.

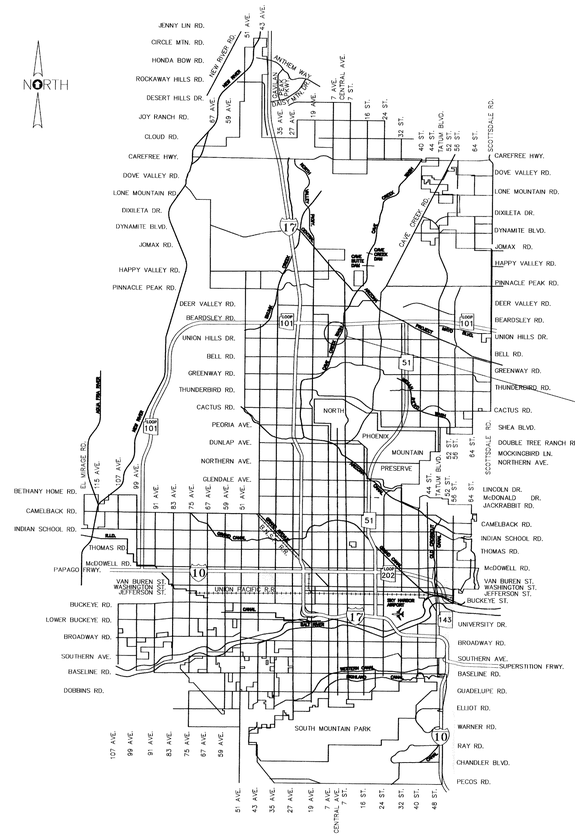
ASPEN CONSULTING ENGINEERS

PROJECT NO.	P1002-3	
	BY	DATE
PLANS	JCS	12/5/05
PLANS CHK.	PAC	12/7/05

SHEET 1 OF 10

CITY OF PHOENIX
STREET TRANSPORTATION DEPARTMENT
PLANNING, DESIGN, AND PROGRAMMING

UNION HILLS MAINTENANCE SERVICE CENTER
UNION HILLS DRIVE/CENTRAL AVENUE
PROJECT NO. PW24470004



VICINITY MAP

SEPTEMBER 2005

"PER CITY OF PHOENIX ORDINANCE G-4396, THESE PLANS ARE FOR OFFICIAL USE ONLY AND MAY NOT BE SHARED WITH OTHERS EXCEPT AS REQUIRED TO FULFILL THE OBLIGATIONS OF YOUR CONTRACT WITH THE CITY OF PHOENIX."

MAYOR
PHIL GORDON

CITY MANAGER
FRANK FAIRBANKS

CITY COUNCIL

DISTRICT NO 1.	DAVE SIEBERT
DISTRICT NO 2.	PEGGY NEELY
DISTRICT NO 3.	PEGGY BILSTEN
DISTRICT NO 4.	TOM SIMPLOT
DISTRICT NO 5.	CLAUDE MATTOX
DISTRICT NO 6.	GREG STANTON
DISTRICT NO 7.	DOUG LINGNER
DISTRICT NO 8.	MICHAEL JOHNSON

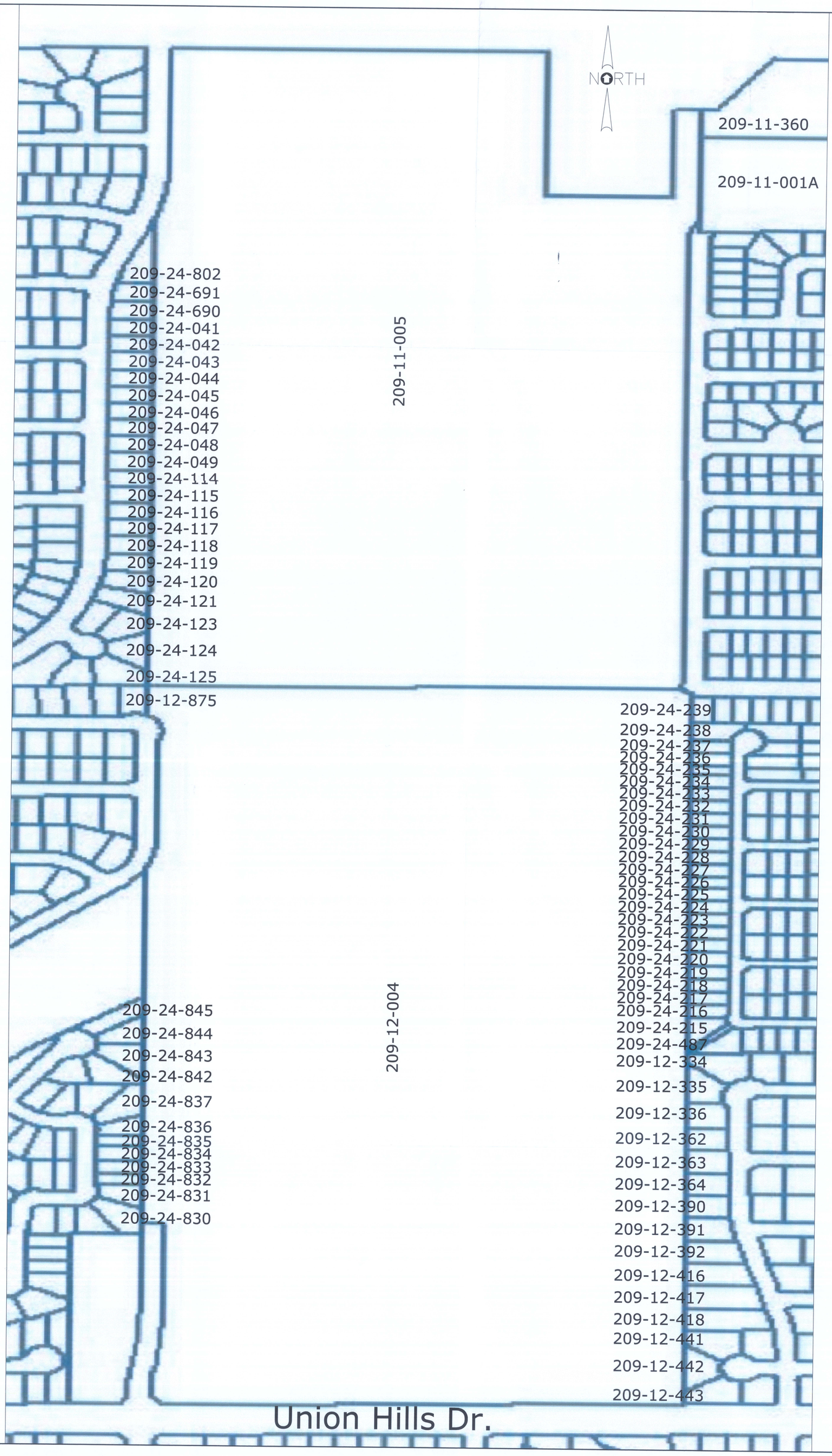
INDEX OF SHEETS

COVER	1
PROPERTY OWNERSHIP	2
EXISTING FLOODPLAIN DELINEATION	3
PROPOSED FLOODPLAIN DELINEATION	4-6
PROPOSED PHASES	7
PHASE 1	8
CROSS-SECTIONS	9-10

Two working days before you dig, CALL FOR THE BLUE STAKES 263-1100 Blue Stake Center

CONCEPTUAL PLANS

PROJECT NO.(S): PW24470004



NO.	REVISION	BY	DATE
3			
2			
1			

ASPEN CONSULTING ENGINEERS

PROJECT NO.	P1002-3	BY	DATE
PLANS		JCS	12/5/05
PLANS CHK.		PAC	12/7/05

SHEET 2 OF 10

Property Ownership

City of Phoenix Project No: PW24470004
Union Hills Maintenance Service Center
Union Hills Dr./Central Ave.

17. ERM EL. = 1416.40

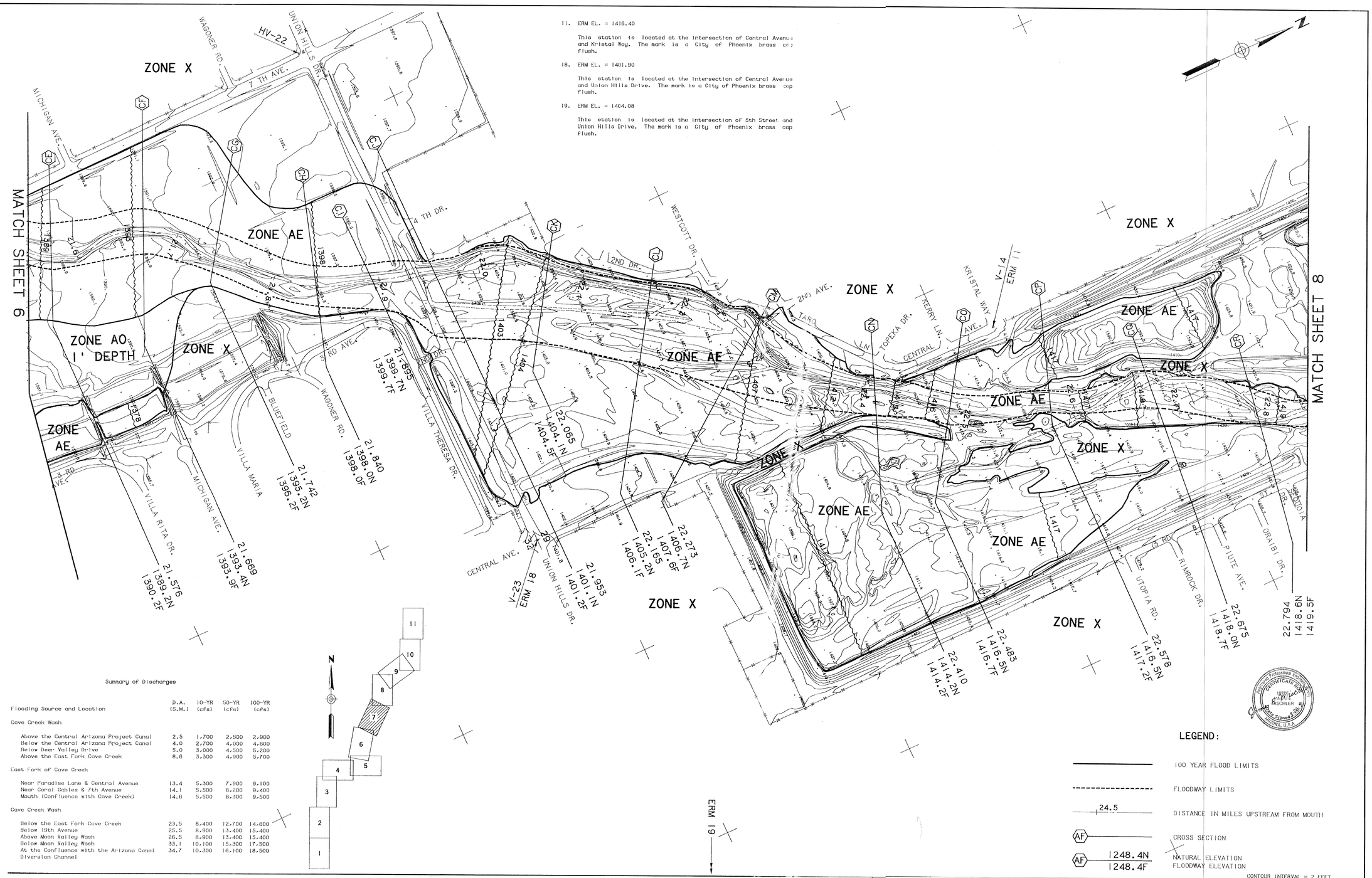
This station is located at the intersection of Central Avenue and Kristal Way. The mark is a City of Phoenix brass cap flush.

18. ERM EL. = 1401.90

This station is located at the intersection of Central Avenue and Union Hills Drive. The mark is a City of Phoenix brass cap flush.

19. ERM EL. = 1404.08

This station is located at the intersection of 5th Street and Union Hills Drive. The mark is a City of Phoenix brass cap flush.



Summary of Discharges

Flooding Source and Location	D.A. (S.M.)	10-YR (cfs)	50-YR (cfs)	100-YR (cfs)
Cave Creek Wash				
Above the Central Arizona Project Canal	2.5	1,700	2,500	2,900
Below the Central Arizona Project Canal	4.0	2,700	4,000	4,600
Below Deer Valley Drive	5.0	3,000	4,500	5,200
Above the East Fork Cave Creek	8.6	3,300	4,900	5,700
East Fork of Cave Creek				
Near Paradise Lane & Central Avenue	13.4	5,300	7,900	9,100
Near Coral Gables & 7th Avenue	14.1	5,500	8,200	9,400
Mouth (Confluence with Cave Creek)	14.6	5,500	8,300	9,500
Cave Creek Wash				
Below the East Fork Cave Creek	23.5	8,400	12,700	14,600
Below 19th Avenue	25.5	8,900	13,400	15,400
Above Moon Valley Wash	26.5	8,900	13,400	15,400
Below Moon Valley Wash	33.1	10,100	15,300	17,500
At the Confluence with the Arizona Canal Diversion Channel	34.7	10,300	16,100	18,500

LEGEND:

- 100 YEAR FLOOD LIMITS
- FLOODWAY LIMITS
- 24.5 — DISTANCE IN MILES UPSTREAM FROM MOUTH
- AF — CROSS SECTION
- AF 1248.4N / 1248.4F — NATURAL ELEVATION / FLOODWAY ELEVATION

CONTOUR INTERVAL = 2 FEET

NOTES

FLOODPLAIN DELINEATION WAS OBTAINED FROM BURGESS & NIPLE, INC.

Existing Floodplain Delineation

City of Phoenix Project No: PW24470004
Union Hills Maintenance Service Center
Union Hills Dr./Central Ave.

NO.	REVISION	BY	DATE
3			
2			
1			

ASPEN CONSULTING ENGINEERS

PROJECT NO.	P1002-3	
	BY	DATE
PLANS	JCS	12/5/05
PLANS CHK.	PAC	12/7/05

SHEET 3 OF 10

17. ERM EL. = 1416.40

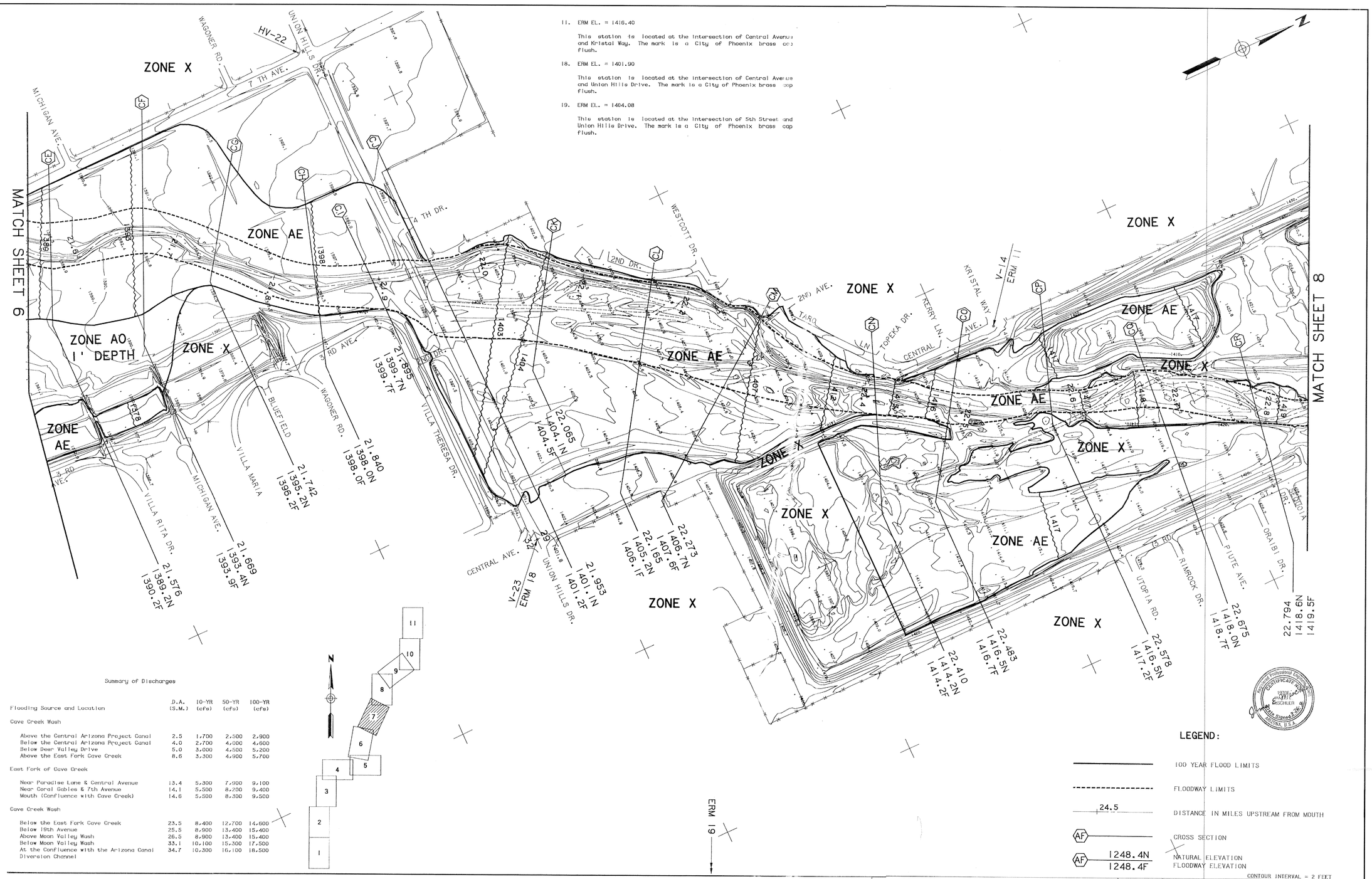
This station is located at the intersection of Central Avenue and Kristal Way. The mark is a City of Phoenix brass cap flush.

18. ERM EL. = 1401.90

This station is located at the intersection of Central Avenue and Union Hills Drive. The mark is a City of Phoenix brass cap flush.

19. ERM EL. = 1404.08

This station is located at the intersection of 5th Street and Union Hills Drive. The mark is a City of Phoenix brass cap flush.



Summary of Discharges

Flooding Source and Location	D.A. (S.M.)	10-YR (cfs)	50-YR (cfs)	100-YR (cfs)
Cave Creek Wash				
Above the Central Arizona Project Canal	2.5	1,700	2,500	2,900
Below the Central Arizona Project Canal	4.0	2,700	4,000	4,600
Below Deer Valley Drive	5.0	3,000	4,500	5,200
Above the East Fork Cave Creek	8.6	3,300	4,900	5,700
East Fork of Cave Creek				
Near Paradise Lane & Central Avenue	13.4	5,300	7,900	9,100
Near Coral Gables & 7th Avenue	14.1	5,500	8,200	9,400
Mouth (Confluence with Cave Creek)	14.6	5,500	8,300	9,500
Cave Creek Wash				
Below the East Fork Cave Creek	23.5	8,400	12,700	14,600
Below 19th Avenue	25.5	8,900	13,400	15,400
Above Moon Valley Wash	26.5	8,900	13,400	15,400
Below Moon Valley Wash	33.1	10,100	15,300	17,500
At the Confluence with the Arizona Canal Diversion Channel	34.7	10,300	16,100	18,500

LEGEND:

- 100 YEAR FLOOD LIMITS
- FLOODWAY LIMITS
- 24.5 — DISTANCE IN MILES UPSTREAM FROM MOUTH
- AF — CROSS SECTION
- AF 1248.4N / 1248.4F — NATURAL ELEVATION / FLOODWAY ELEVATION

CONTOUR INTERVAL = 2 FEET

NOTES

FLOODPLAIN DELINEATION WAS OBTAINED FROM BURGESS & NIPLE, INC.

Proposed Floodplain Delineation
Phase 1

City of Phoenix Project No:
PW24470004
Union Hills Maintenance
Service Center
Union Hills Dr./Central Ave.

NO.	REVISION	BY	DATE
3			
2			
1			

Registered Professional Engineer (Civil) CERTIFICATE NO. 30493 PEDRO A. CALZA Date Signed 12-15-05 ARIZONA, U.S.A.

ASPEN CONSULTING ENGINEERS

PROJECT NO.	P1002-3	
	BY	DATE
PLANS	JCS	12/5/05
PLANS CHK.	PAC	12/7/05

SHEET 4 OF 10

17. ERM EL. = 1416.40

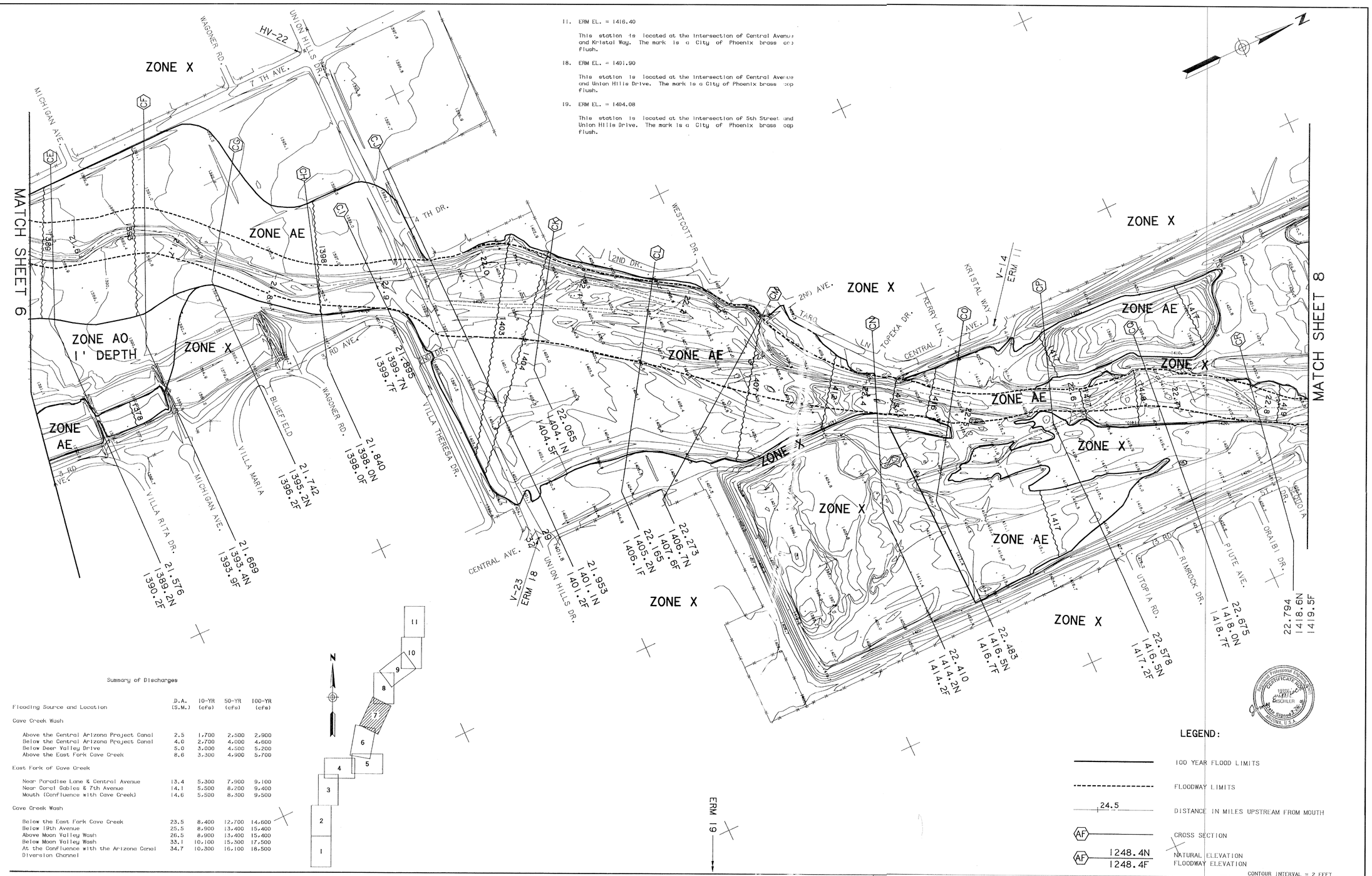
This station is located at the intersection of Central Avenue and Kristal Way. The mark is a City of Phoenix brass cap flush.

18. ERM EL. = 1401.90

This station is located at the intersection of Central Avenue and Union Hills Drive. The mark is a City of Phoenix brass cap flush.

19. ERM EL. = 1404.08

This station is located at the intersection of 5th Street and Union Hills Drive. The mark is a City of Phoenix brass cap flush.



Summary of Discharges

Flooding Source and Location	D.A. (S.M.)	10-YR (cfs)	50-YR (cfs)	100-YR (cfs)
Cave Creek Wash				
Above the Central Arizona Project Canal	2.5	1,700	2,500	2,900
Below the Central Arizona Project Canal	4.0	2,700	4,000	4,600
Below Deer Valley Drive	5.0	3,000	4,500	5,200
Above the East Fork Cave Creek	8.6	3,300	4,900	5,700
East Fork of Cave Creek				
Near Paradise Lane & Central Avenue	13.4	5,300	7,900	9,100
Near Coral Gables & 7th Avenue	14.1	5,500	8,200	9,400
Mouth (Confluence with Cave Creek)	14.6	5,500	8,300	9,500
Cave Creek Wash				
Below the East Fork Cave Creek	23.5	8,400	12,700	14,600
Below 19th Avenue	25.5	8,900	13,400	15,400
Above Moon Valley Wash	26.5	8,900	13,400	15,400
Below Moon Valley Wash	33.1	10,100	15,300	17,500
At the Confluence with the Arizona Canal Diversion Channel	34.7	10,300	16,100	18,500

LEGEND:

- 100 YEAR FLOOD LIMITS
- FLOODWAY LIMITS
- 24.5 — DISTANCE IN MILES UPSTREAM FROM MOUTH
- AF — CROSS SECTION
- AF 1248.4N / 1248.4F — NATURAL ELEVATION / FLOODWAY ELEVATION

CONTOUR INTERVAL = 2 FEET

NOTES

FLOODPLAIN DELINEATION WAS OBTAINED FROM BURGESS & NIPLE, INC.

Proposed Floodplain Delineation
Phase 2

City of Phoenix Project No:
PW24470004
Union Hills Maintenance
Service Center
Union Hills Dr./Central Ave.

NO.	REVISION	BY	DATE
3			
2			
1			

Registered Professional Engineer (Civil) CERTIFICATE NO. 30493 PEDRO A. CALZA Date Signed 12-15-05 ARIZONA, U.S.A.

ASPEN CONSULTING ENGINEERS

PROJECT NO.	P1002-3	
	BY	DATE
PLANS	JCS	12/5/05
PLANS CHK.	PAC	12/7/05

SHEET 5 OF 10

17. ERM EL. = 1416.40

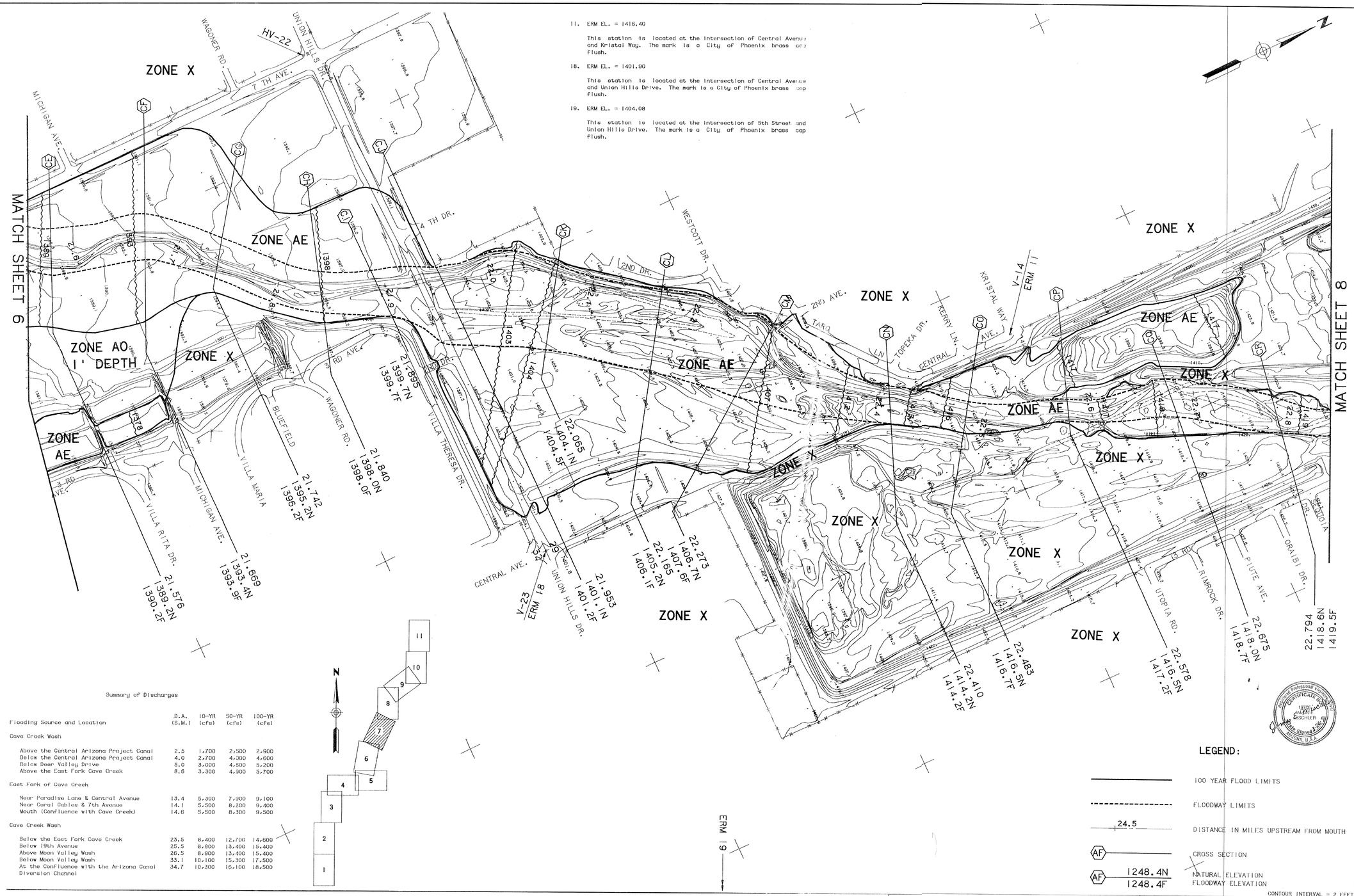
This station is located at the intersection of Central Avenue and Kristal Way. The mark is a City of Phoenix brass cap flush.

18. ERM EL. = 1401.90

This station is located at the intersection of Central Avenue and Union Hills Drive. The mark is a City of Phoenix brass cap flush.

19. ERM EL. = 1404.08

This station is located at the intersection of 5th Street and Union Hills Drive. The mark is a City of Phoenix brass cap flush.



Summary of Discharges

Flooding Source and Location	D.A. (S.M.)	10-YR (cfs)	50-YR (cfs)	100-YR (cfs)
Cave Creek Wash				
Above the Central Arizona Project Canal	2.5	1,700	2,500	2,900
Below the Central Arizona Project Canal	4.0	2,700	4,000	4,600
Below Deer Valley Drive	5.0	3,000	4,500	5,200
Above the East Fork Cave Creek	8.6	3,300	4,900	5,700
East Fork of Cave Creek				
Near Paradise Lane & Central Avenue	13.4	5,300	7,900	9,100
Near Coral Gables & 7th Avenue	14.1	5,500	8,200	9,400
Mouth (Confluence with Cave Creek)	14.6	5,500	8,300	9,500
Cave Creek Wash				
Below the East Fork Cave Creek	23.5	8,400	12,700	14,600
Below 19th Avenue	25.5	8,900	13,400	15,400
Above Moon Valley Wash	26.5	8,900	13,400	15,400
Below Moon Valley Wash	33.1	10,100	15,300	17,500
At the Confluence with the Arizona Canal Diversion Channel	34.7	10,300	16,100	18,500

LEGEND:

- 100 YEAR FLOOD LIMITS
- FLOODWAY LIMITS
- 24.5 — DISTANCE IN MILES UPSTREAM FROM MOUTH
- AF — CROSS SECTION
- AF 1248.4N / 1248.4F — NATURAL ELEVATION / FLOODWAY ELEVATION

CONTOUR INTERVAL = 2 FEET

NOTES

FLOODPLAIN DELINEATION WAS OBTAINED FROM BURGESS & NIPLE, INC.

Proposed Floodplain Delineation
Phase 3

City of Phoenix Project No:
PW24470004
Union Hills Maintenance
Service Center
Union Hills Dr./Central Ave.

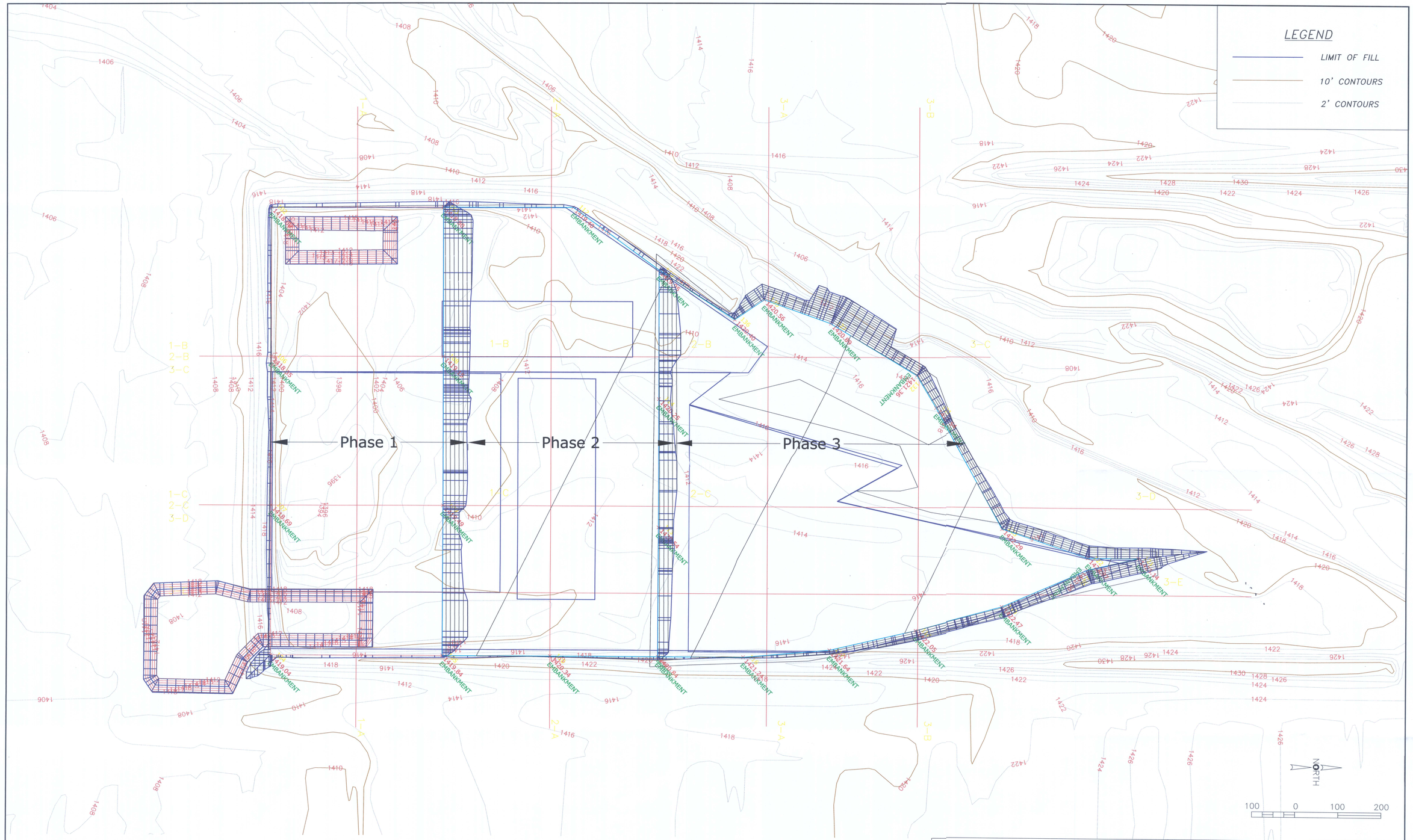
NO.	REVISION	BY	DATE
3			
2			
1			

Registered Professional Engineer (Civil) CERTIFICATE NO. 30493 PEDRO A. CALZA Date Signed 12.15.05 ARIZONA, U.S.A.

ASPEN CONSULTING ENGINEERS

PROJECT NO.	P1002-3	
	BY	DATE
PLANS	JCS	12/5/05
PLANS CHK.	PAC	12/7/05

SHEET 6 OF 10



NOTES

PHASE 1 VOLUME = 233,628 CY FILL

PHASE 2 VOLUME = 164,394 CY FILL

PHASE 3 VOLUME = 126,224 CY FILL

Proposed Phases

City of Phoenix Project No:
PW24470004
Union Hills Maintenance
Service Center
Union Hills Dr./Central Ave.

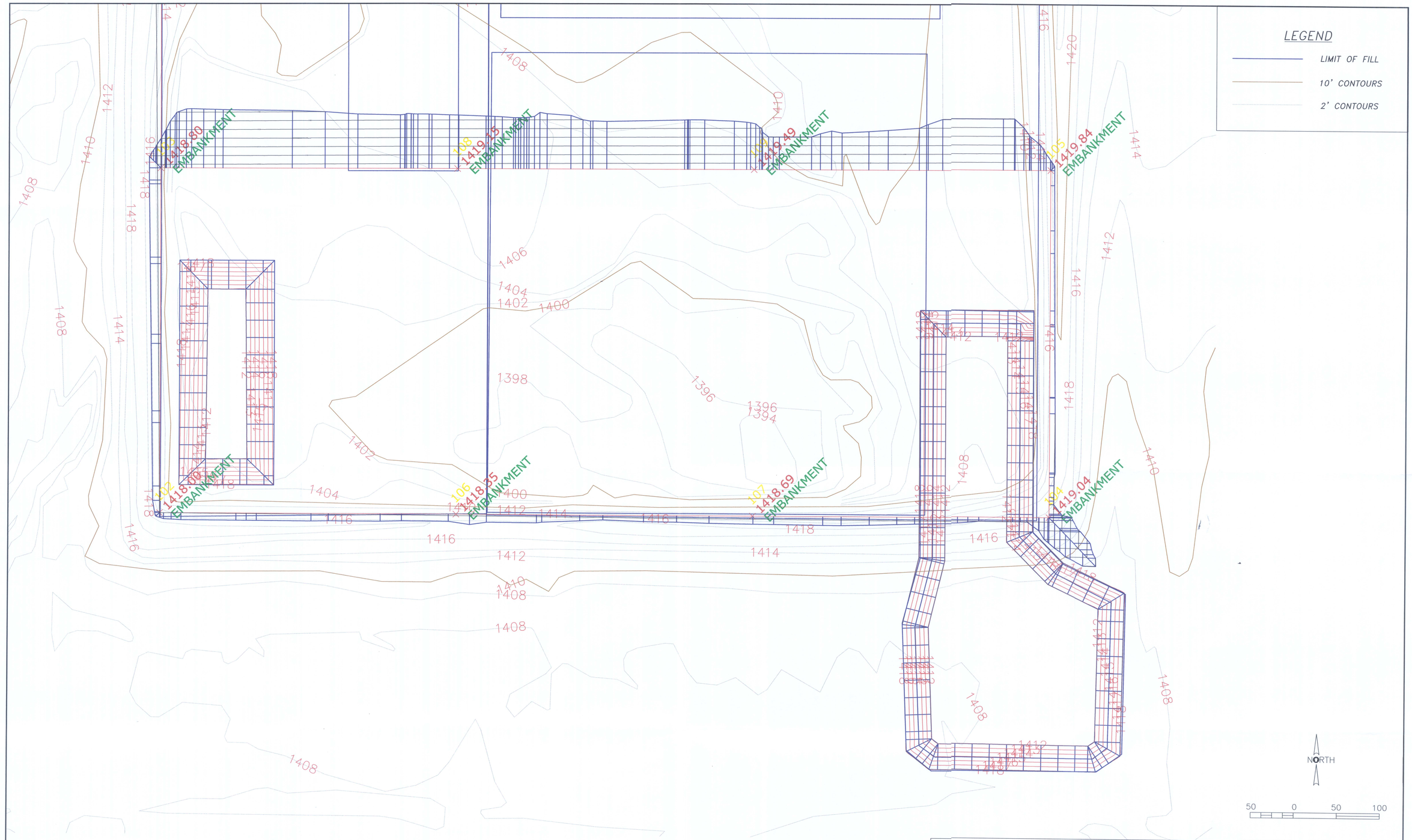
NO.	REVISION	BY	DATE
3			
2			
1			

Registered Professional Engineer (Civil) CERTIFICATE NO. 30493 PEDRO A. CALZA Date Signed 12-15-05 ARIZONA, U.S.A.

ASPEN CONSULTING ENGINEERS

PROJECT NO.	P1002-3	
	BY	DATE
PLANS	JCS	12/5/05
PLANS CHK.	PAC	12/7/05

SHEET 7 OF 10



NOTES

PHASE 1 VOLUME = 233,628 CY FILL

Phase 1

City of Phoenix Project No:
PW24470004
Union Hills Maintenance
Service Center
Union Hills Dr./Central Ave.

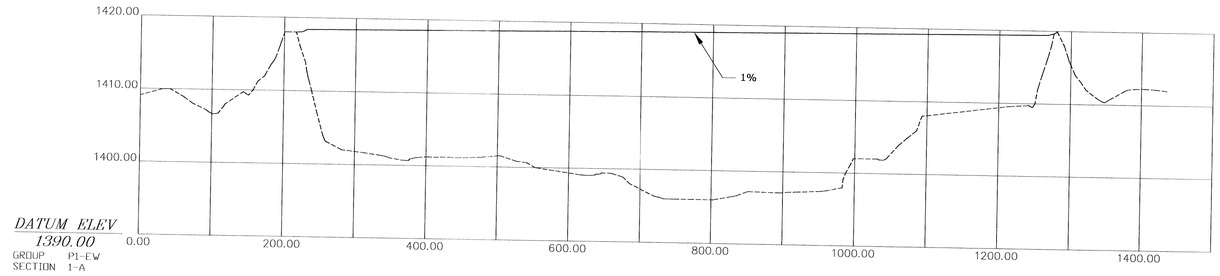
NO.	REVISION	BY	DATE
3			
2			
1			

Registered Professional Engineer (Civil)
CERTIFICATE NO. 30493
PEDRO A. CALZA
Date Signed 12.15.05
ARIZONA, U.S.A.

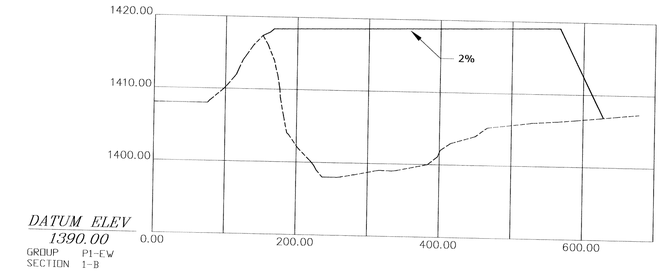
ASPEN CONSULTING ENGINEERS

PROJECT NO.	P1002-3	
	BY	DATE
PLANS	JCS	12/5/05
PLANS CHK.	PAC	12/7/05

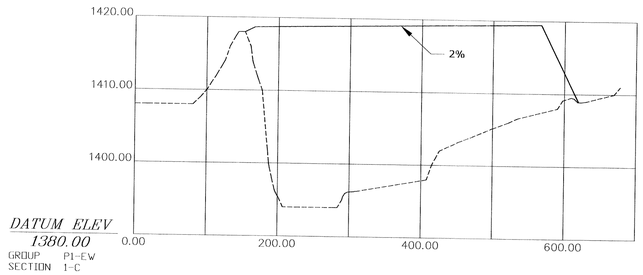
SHEET 8 OF 10



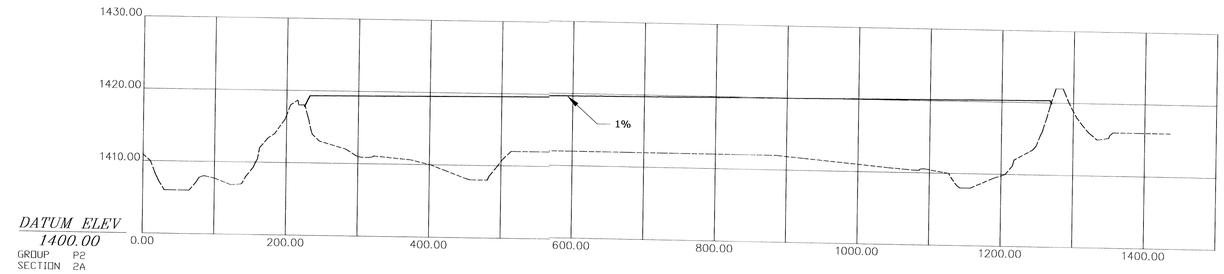
SECTION 1-A



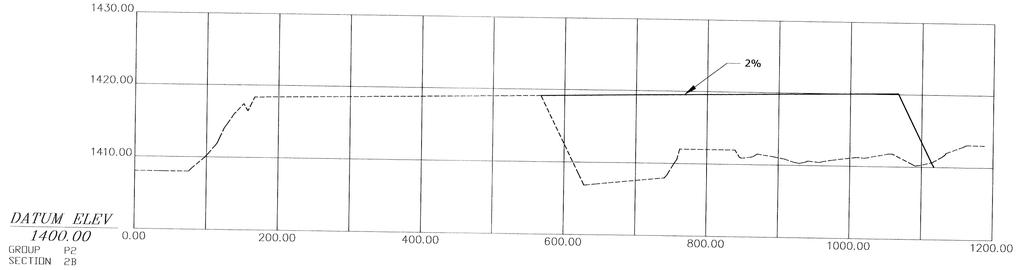
SECTION 1-B



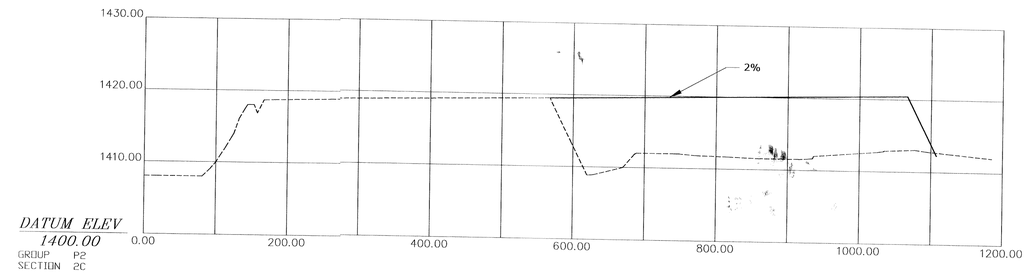
SECTION 1-C



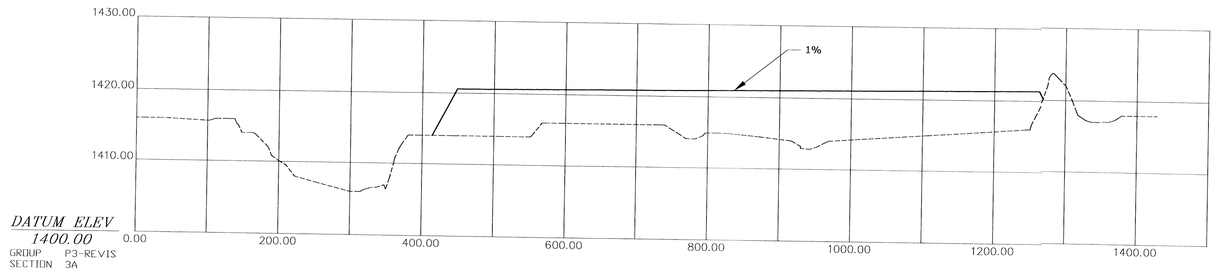
SECTION 2-A



SECTION 2-B



SECTION 2-C



SECTION 3-A

100 0 100 200

NOTES

FILL WILL NOT INCLUDE JUNK, TRASH, TIRES, GARBAGE, WOOD OR OTHER BUOYANT MATERIALS, OR HAZARDOUS, TOXIC OR DELETERIOUS WASTE. FILL COMPACTION WILL BE A MINIMUM OF 95%.

Cross-Sections

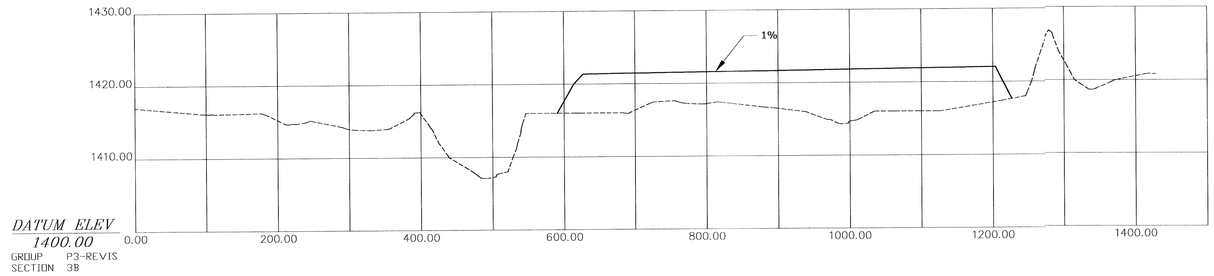
City of Phoenix Project No:
PW24470004
Union Hills Maintenance
Service Center
Union Hills Dr./Central Ave.

NO.	REVISION	BY	DATE
3			
2			
1			

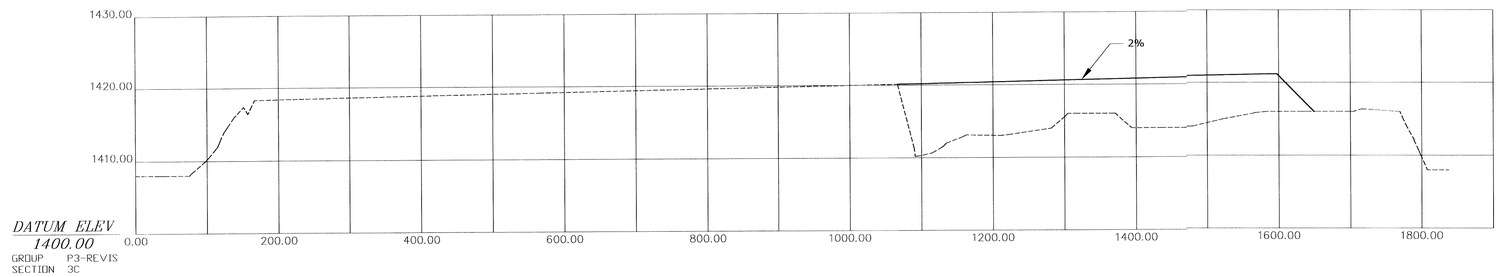
Registered Professional Engineer (Civil) CERTIFICATE NO. 30493 PEDRO A. CALZA Date Signed 12.15.05 ARIZONA, U.S.A.

ASPEN CONSULTING ENGINEERS

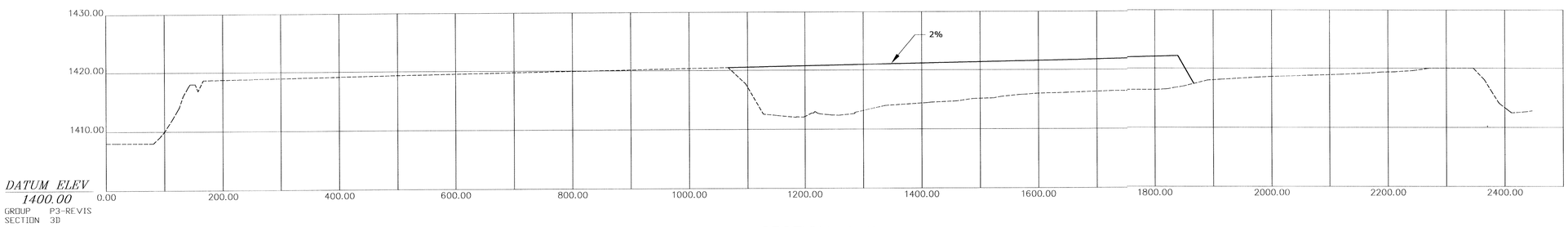
PROJECT NO.	P1002-3	
	BY	DATE
PLANS	JCS	12/5/05
PLANS CHK.	PAC	12/7/05



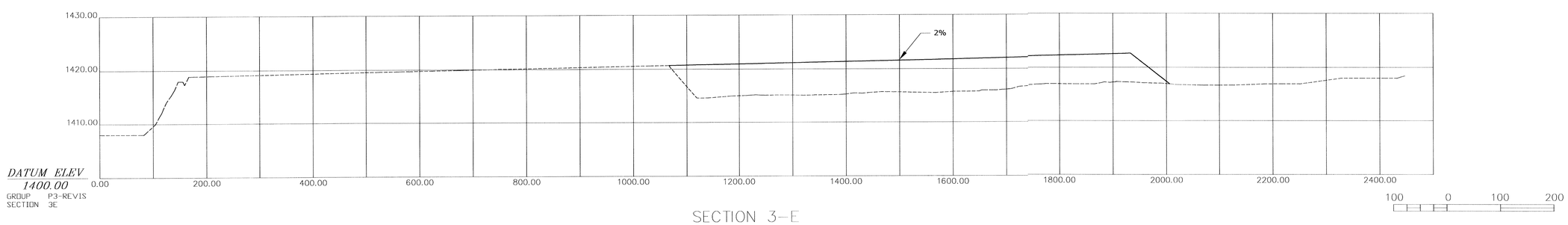
SECTION 3–B



SECTION 3–C



SECTION 3–D



SECTION 3–E

NOTES

FILL WILL NOT INCLUDE JUNK, TRASH, TIRES, GARBAGE, WOOD OR OTHER BUOYANT MATERIALS, OR HAZARDOUS, TOXIC OR DELETERIOUS WASTE. FILL COMPACTION WILL BE A MINIMUM OF 95%.

Cross–Sections

City of Phoenix Project No:
PW24470004
Union Hills Maintenance
Service Center
Union Hills Dr./Central Ave.

NO.	REVISION	BY	DATE
3			
2			
1			

Registered Professional Engineer (Civil) CERTIFICATE NO. 30493 PEDRO A. CALZA Date Signed 12/5/05 ARIZONA, U.S.A.

ASPEN CONSULTING ENGINEERS

PROJECT NO.	P1002–3	
	BY	DATE
PLANS	JCS	12/5/05
PLANS CHK.	PAC	12/7/05

SHEET 10 OF 10