Drainage Report

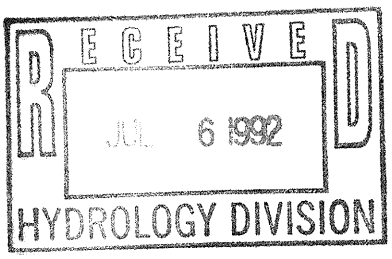
for

Lot 19, Block 10, Tract 2, Unit 1

North Albuquerque Acres

Submitted to
Bernalillo County Public Works

25 June 1992



WILSON
&COMPANY

DRAINAGE REPORT
KORMAN RESIDENCE LOT 19, NORTH ALBUQUERQUE ACRES

Site Location

The site is located between Wilshire Avenue and Signal Avenue about one mile west of Tramway Blvd. The site is currently vacant. The site generally slopes from east to west at slopes of about 4% to Browning Street.

Methodology

For this site, the April 1990 Bernalillo County Drainage Ordinance was used to calculate peak runoff. The site is located in precipitation zone 4 as determined from Figure A, and has a 100-year 6-hour storm event of 2.90 inches.

Existing Conditions

The La Cueva Tributary B Arroyo, which has a 100 year flow of 1150 cfs according to the "Review and Refinement of the Northeast Heights Drainage Management Plan" by Espey-Huston in May 1980, is approximately 70 feet north of the site north boundary. A southern tributary (C) of the La Cueva Arroyo runs across the southern portion of the lot with a 100 year flow of 740 cfs. Since the lot is currently vacant, land treatment "C" was selected. This yields 1.13 inches of excess precipitation. The runoff volume for the lot is 0.083 acre-feet and the peak discharge is 3.5 cfs.

Developed Conditions

The site will be used as a lot for a singe family residential home. Approximately 22% of the land will now be impervious or land treatment "D" and will produce excess precipitation of 1.45 inches. The runoff volume for the developed site is 0.107 acre-feet and the peak discharge is 3.83 cfs.

Manning's roughness coefficient (n) was calculated for the channel through the property using equation 3.9 in the Draft Sediment and Erosion Design Guide for AMAFCA by RCE dated March 1992. The Manning's n for the arroyo is .035. For every hundred cfs of flow, the house must be set back 6 feet from a floodplain. For this reason, the house is set back 45 feet (7.4 x 6) from the edge of the floodplain on the property and also more than 69 (11.5 x 6) feet from the La Cueva Arroyo floodplain boundary north of the property. The finished floor is set at the Energy Grade Line plus the required Freeboard according to section 22.3 of the DPM at cross-section 5. The pad is oriented at 45° angle to the direction of flow to allow water to flow around the house (like a boat). Stem walls (6.5 feet in depth) are placed along the northeast and southeast sides of the house to protect the foundation against scour. There are no doors or full length windows on these sides of the house.

The HEC-2 computer program was used to determine the water surface profile through the property in existing and developed conditions and for the La Cueva Tributary B located north of the property. Cross-sections at eight different locations 275 feet east of the eastern property line to the western property line were plotted. The elevations at each cross-section along with the 100-year flow were then inputed into the HEC 2

program. It was determined that the flow through the property is supercritical during existing conditions and during developed conditions. At cross-section 5 (at the upstream end of the pad) the Froude number is 1.11. The water surface profile at each of the eight cross-sections was plotted. It was determined that the water inundates the lot. The energy grade line at cross-section 5 (5838.52) plus freeboard (2.1 feet) was used to set the finished floor elevation. According to the water surface profile run for the developed case the depth of frlow at the western property line decreases from 33.17 to 33.07 and the energy grade line increases slightly from 33.64 to 33.70. Therefore there are only slight differences in flow characteristics from existing conditions to developed conditions. A water surface profile for the La Cueva Tributary B north of the property was computed to determine if stormflows impacted the site. From the analysis it appears that flows from the La Cueva Tributary B do not impact the property.

Local scour around the eastern corner of the house was calculated using eq.(3-9), Drainage and Flood Control Design Guidelines and Criteria, Simons and Li, June, 1981: $Y_s/Y=4(Fr)^{0.33}$ where Y_s is the equilibrium scour depth, Y is the upstream flow depth, and Fr is the upstream Froude number. The values at cross-section 5, (which goes through the house) were used in the calculation. The depth was 1.24 feet, the velocity was 4.29 fps, and the Froude number was 1.11. These values gave a scour depth of 5.14 feet. Also Contraction Scour was calculated from equation 3.37 in the Draft Sediment and Erosion Design Guide and from the water surface depths in existing and developed conditions at cross-section 6 which runs through the middle of the structure. The calculation using equation 3.37 yielded 1.24 feet of contraction scour. The total scour (local + contraction) is 6.34 feet. Therefore a ^.5 foot stem wall along the northeastern and southeastern walls of the house will be installed to protect the foundation against scour.

COMP. | CK. | DATE

WILSON &COMPANY

LOC. | FILE | PROJ. | SHEET | SUBJ. | OF

COMPUTE MANNING's n for CHANNEL

$n = (n_b + n_1 + n_2 + n_3 + n_4)m$

$n_b = .022$ bed material = 0.5mm median

$n_1 = .008$ moderate Irregularity

$n_2 = .001$ Alternating Occassionally

$n_3 = .004$ Obstructions negligible

$n_4 = .004$ Vegetation Small

$m = 1.0$ Minor SINUOSITY

$n = .039$ = USE .035

COMPUTE THE FREEBOARD FOR THE CHANNEL

FREEBOARD = $2.0 + .025 V \sqrt[3]{d}$

AT X-SECTION 5 $V = 4.29$ FPS $d = 1.24$

FREEBOARD = $2.0 + .025(4.29)\sqrt[3]{1.24}$

= 2.1 FT

AT X-SECTION 5 WSEL = 38.29

ENERGY GRADE = 38.52

EG + FREEBOARD = FF ELEVATION

38.52 + 2.1 = 40.6 FINISH FLOOR

COMP. | CK. | DATE

WILSON &COMPANY

LOC. | PROJ. | SUBJ. | FILE | SHEET | OF

CALCULATE LOCAL SCOUR

AT X-SECTION 5

$A = 172.35$ SF

$T = 373.50$ FT

$V = 4.29$ FPS

$Y_1 = 1.29$ FT

$$D = \frac{A}{T} = \frac{172.35}{373.50} = 0.4614$$

$$FF = \frac{V}{\sqrt{gD}} = \frac{4.29}{\sqrt{32.2(.4614)}} = 1.11$$

DEPTH OF SCOUR

SIMONS + LI, EQ 3-9

$$\frac{Y_s}{Y_1} = 4\,FF_1^{0.33}$$

$$Y_s = 4(1.11)^{0.33}\,1.29$$

$$Y_s = 5.14 \text{ FT}$$

CALCULATE CONTRACTION SCOUR

$$\frac{Y_2}{Y_1} = \left(\frac{Q_{mc2}}{Q_{mc1}}\right)^{6/7}\left(\frac{W_1}{W_2}\right)^{K_1}\left(\frac{n_2}{n_1}\right)^{K_2}$$

$Q_{mc1} = Q_{mc2} = 740$ CFS

$W_1 = 300$ $\qquad Y_1 = 0.87$

$W_2 = 200$

$n_1 = .035$

$n_2 = .055$ (increased for obstruction

$K_1 = 0.64$

$K_2 = 0.21$

$$Y_2 = 0.87(1)\left(\frac{300}{200}\right)^{0.64}\left(\frac{.055}{.035}\right)^{0.21} = 1.29$$

COMP. | LOC. | FILE

CK. | PROJ. | SHEET

DATE | SUBJ. | OF

WILSON & COMPANY

FROM HEC 2 RUNS

$Y_2 = 1.37$ $Y_1 = 0.87$

$Y_S = 1.37 - 0.87 = 0.5$ FT

TOTAL SCOUR

$5.1 + 1.24 = 6.34$ FT

NEED TO PROTECT FOUNDATION TO ELEVATION

$5840.6 - 6.34 = 5834.3$

INSTALL A 6.5 FT STEM WALL
TO PROTECT AGAINST SCOUR

EXISTING CONDITIONS

```
T1      KORMAN RESIDENCE NORTH ALB ACRES
T2      CROSS SECTIONS THROUGH PROPERTY AND UPSTREAM
T3      FOR PREMIER HOMES
J1    0      0      0      1     -1      0      0    740      0      0
J2    0      0     10      0      0      0     -1      0      0
0
J3   38     42      1      2     43     13     14     15      8      4
J3   25     26      3     75      0      0      0      0      0
0
J5  -10    -10
NC .035   .035   .035      0      0      0      0      0      0      0
X1    1      9      0    360   100.   100.   100.      0      0
1
GR 49.3      0   48.5     20   48.5     50   47.8     70   48.2     90
GR 47.9    125   48.1    150   50.0    300   50.0    360
X1    2      9      0    380  135.0  135.0  135.0      0      0      1
GR 46.0      0   46.0    5.0   45.5   52.0   43.5    100   44.0
130
GR 44.0    160   43.9    170   46.2    300   46.0    380
X1    3     13      0    300     40     40     40      0      0      1
GR 42.1      0   42.0     10   41.0     13   41.0     60   40.0
85
GR 39.0     90   39.2    120   40.0    125   40.5    180   40.0    240
GR 39.8    255   40.0    270   40.7    300
X1    4     14      0    400     25     25     25      0      0      1
GR 40.3      0   40.2     25   40.0     45   38.9     50   40.0
54
GR 40.0     60   37.7     88   38.1     94   38.0    120   38.9    160
GR 37.9    260   39.0    300   39.6    330   40.0    400
X1    5     10      0    400     50     50     50      0      0      1
GR 39.5      0   39.5     10   38.0     20   38.0     80   37.0
100
GR 38.0    180   37.5    300   38.0    320   38.0    380   38.4    400
X1    6     10      0    370     50     50     50      0      0
1
GR 38.0      0   37.8     60   36.5     70   36.8     80   36.0    100
GR 35.5    140   36.0    165   35.5    220   36.0    300   36.5
370
X1    7      9      0    360     40     40     40      0      0      1
GR 36.0      0   36.0     10   35.0     20   35.0     90   34.0
105
GR 34.0    190   32.8    255   34.0    290   36.0    360
X1    8     15      0    340      0      0      0      0      0      1
GR 34.0      0   34.1     10   35.0     22   34.7     45   34.0
60
GR 34.0     95   32.5    112   33.2    122   31.7    150   32.2    160
GR 32.0    170   33.2    185   31.8    230   33.0    290   34.3
340
EJ


ER
```

EXISTING CONDITIONS

```
1*****************************************
*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *                    *  U.S. ARMY CORPS OF ENGINEERS
*
 *                                        *                    *  HYDROLOGIC ENGINEERING CENTER
*
 *  Version   4.5.1;  September 1990      *                    *  609 SECOND STREET, SUITE D
*
 *                                        *                    *  DAVIS, CALIFORNIA 95616-4687
*
 *  RUN DATE    24JUN92    TIME   12:26:26 *                    *        (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
```

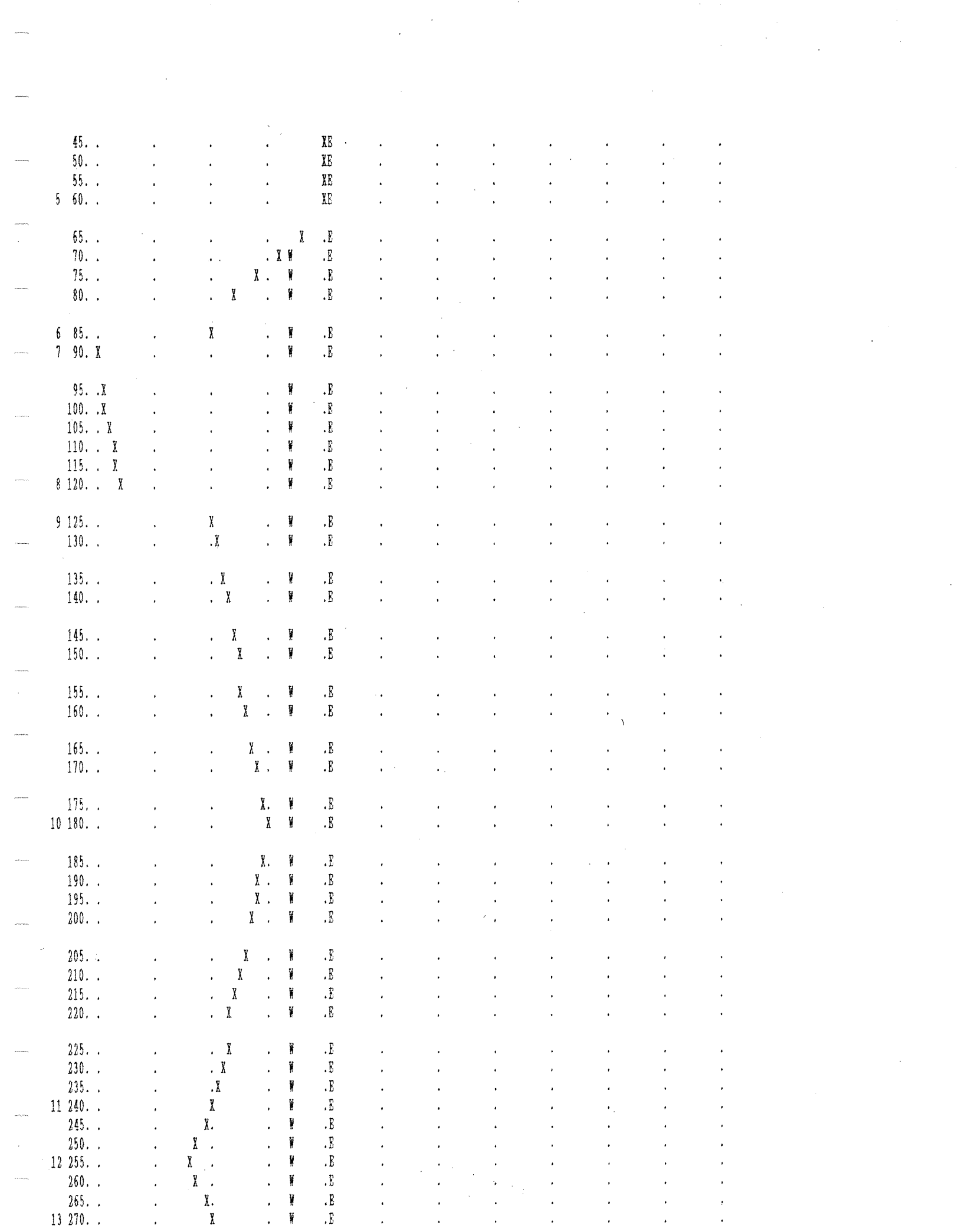
```
END OF BANNER
1
   24JUN92      12:26:27                                                                    PAGE    1


                                                                  THIS RUN EXECUTED 24JUN92    12:26:27
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.5.1;  September 1990
 ************************************


 T1      KORMAN RESIDENCE NORTH ALB ACRES
 T2      CROSS SECTIONS THROUGH PROPERTY AND UPSTREAM
 T3      FOR PREMIER HOMES

 J1  ICHECK    INQ      NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0        0         0         1        -1         0         0       740         0         0

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      0         0        10         0         0         0        -1         0         0         0


 J3  VARIABLE CODES FOR SUMMARY PRINTOUT
```

```
     38        42         1         2        43         13         14         15         8         4
     25        26         3        75         0          0          0          0         0         0

J5  LPRNT    NUMSEC                  ********REQUESTED SECTION NUMBERS********

    -10       -10

NC    .035      .035      .035         0         0         0         0         0         0         0
X1       1         9         0       360      100.      100.      100.         0         0         1
GR    49.3         0      48.5        20      48.5        50      47.8        70      48.2        90
GR    47.9       125      48.1       150      50.0       300      50.0       360

X1       2         9         0       380     135.0     135.0     135.0         0         0         1
GR    46.0         0      46.0       5.0      45.5      52.0      43.5       100      44.0       130
GR    44.0       160      43.9       170      46.2       300      46.0       380

X1       3        13         0       300        40        40        40         0         0         1
GR    42.1         0      42.0        10      41.0        13      41.0        60      40.0        85
GR    39.0        90      39.2       120      40.0       125      40.5       180      40.0       240
GR    39.8       255      40.0       270      40.7       300

X1       4        14         0       400        25        25        25         0         0         1
GR    40.3         0      40.2        25      40.0        45      38.9        50      40.0        54
GR    40.0        60      37.7        88      38.1        94      38.0       120      38.9       160
GR    37.9       260      39.0       300      39.6       330      40.0       400
1
   24JUN92     12:26:27                                                                    PAGE    2


X1       5        10         0       400        50        50        50         0         0         1
GR    39.5         0      39.5        10      38.0        20      38.0        80      37.0       100
GR    38.0       180      37.5       300      38.0       320      38.0       380      38.4       400

X1       6        10         0       370        50        50        50         0         0         1
GR    38.0         0      37.8        60      36.5        70      36.8        80      36.0       100
GR    35.5       140      36.0       165      35.5       220      36.0       300      36.5       370

X1       7         9         0       360        40        40        40         0         0         1
GR    36.0         0      36.0        10      35.0        20      35.0        90      34.0       105
GR    34.0       190      32.8       255      34.0       290      36.0       360

X1       8        15         0       340         0         0         0         0         0         1
GR    34.0         0      34.1        10      35.0        22      34.7        45      34.0        60
GR    34.0        95      32.5       112      33.2       122      31.7       150      32.2       160
GR    32.0       170      33.2       185      31.8       230      33.0       290      34.3       340


1
CROSS SECTION      1.00

STREAM  FOR PREMIER HOMES
DISCHARGE=       740.



PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL
```

```
ELEV  47.8     48.3     48.8     49.3     49.8     50.3     50.8     51.3     51.8     52.3     52.8

   STA-FEET

 2   0. .       .        .        X E      .        .        .        .        .        .        .   BANK.

     10. .      .        . X W    . E      .        .        .        .        .        .        .    .
 3   20. .      .  X     .  W     . E      .        .        .        .        .        .        .    .
     30. .      .  X     .  W     . E      .        .        .        .        .        .        .    .
     40. .      .  X     .  W     . E      .        .        .        .        .        .        .    .

 4   50. .      .  X     .  W     . E      .        .        .        .        .        .        .    .
     60. .    X .        .  W     . E      .        .        .        .        .        .        .    .
 5   70. X      .        .  W     . E      .        .        .        .        .        .        .    .
     80. .  X   .        .  W     . E      .        .        .        .        .        .        .    .

 6   90. .    X .        .  W     . E      .        .        .        .        .        .        .    .
    100. .   X  .        .  W     . E      .        .        .        .        .        .        .    .
    110. .  X   .        .  W     . E      .        .        .        .        .        .        .    .
 7  120. . X     .        .  W     . E      .        .        .        .        .        .        .    .

    130. .  X    .        .  W     . E      .        .        .        .        .        .        .    .
    140. .   X   .        .  W     . E      .        .        .        .        .        .        .    .
 8  150. .    X  .        .  W     . E      .        .        .        .        .        .        .    .
    160. .     X.        .  W     . E      .        .        .        .        .        .        .    .

    170. .    .X         .  W     . E      .        .        .        .        .        .        .    .
    180. .      .  X     .  W     . E      .        .        .        .        .        .        .    .

    190. .      .    X   .  W     . E      .        .        .        .        .        .        .    .
    200. .      .      X. .  W     . E      .        .        .        .        .        .        .    .

    210. .      .      .X .  W     . E      .        .        .        .        .        .        .    .
    220. .      .      . XW     . E      .        .        .        .        .        .        .    .
    230. .      .      .   X    . E      .        .        .        .        .        .        .    .
    240. .      .      .     X. E      .        .        .        .        .        .        .    .

    250. .      .      .      .XE      .        .        .        .        .        .        .    .
    260. .      .      .      .  X     .        .        .        .        .        .        .    .

    270. .      .      .      .    X   .        .        .        .        .        .        .    .
    280. .      .      .      .     X. .        .        .        .        .        .        .    .

    290. .      .      .      .      .X .        .        .        .        .        .        .    .
 9  300. .      .      .      .      . X .        .        .        .        .        .        .    .

    310. .      .      .      .      . X .        .        .        .        .        .        .    .
    320. .      .      .      .      . X .        .        .        .        .        .        .    .
    330. .      .      .      .      . X .        .        .        .        .        .        .    .
    340. .      .      .      .      . X .        .        .        .        .        .        .    .

    350. .      .      .      .      . X .        .        .        .        .        .        .    .
10  360. .      .      .      .      . X .        .        .        .        .        .        .   BANK.

NRD=       0 ELLC=  9999999.00 ELTRD=  9999999.00
```

```
 EL(I),STA(I)
    49.30       .00      48.50      20.00      48.50      50.00      47.80      70.00      48.20      90.00
    47.90    125.00      48.10     150.00      50.00     300.00      50.00     360.00

1
 CROSS SECTION      2.00
 STREAM  FOR PREMIER HOMES
 DISCHARGE=      740.


 PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL


 ELEV   43.5      44.0      44.5      45.0      45.5      46.0      46.5      47.0      47.5      48.0      48.5


    STA-FEET


 3   0. .       .       .                 .         X       .       .       .       .       .   BANK.

    10. .       .       .                 .       X .       .       .       .       .       .       .
    20. .       .       .                 .     X   .       .       .       .       .       .       .
    30. .       .       .                 .   X E   .       .       .       .       .       .       .
    40. .       .       .                .X   E     .       .       .       .       .       .       .

 4  50. .       .       .                 X   E     .       .       .       .       .       .       .
    60. .       .       .         X       .   E     .       .       .       .       .       .       .

    70. .       .       .  X      C       .   E     .       .       .       .       .       .       .
    80. .       .   X   .  W      C       .   E     .       .       .       .       .       .       .

    90. .     X .       .  W      C       .   E     .       .       .       .       .       .       .
 5 100. X       .       .  W      C       .   E     .       .       .       .       .       .       .
   110. .  X    .       .  W      C       .   E     .       .       .       .       .       .       .
   120. .     X .       .  W      C       .   E     .       .       .       .       .       .       .

 6 130. .       X       .  W      C       .   E     .       .       .       .       .       .       .
   140. .       X       .  W      C       .   E     .       .       .       .       .       .       .

   150. .       X       .  W      C       .   E     .       .       .       .       .       .       .
 7 160. .       X       .  W      C       .   E     .       .       .       .       .       .       .

 8 170. .     X .       .  W      C       .   E     .       .       .       .       .       .       .
   180. .       . X     .  W      C       .   E     .       .       .       .       .       .       .

   190. .       .   X   .  W      C       .   E     .       .       .       .       .       .       .
   200. .       .     X.   W      C       .   E     .       .       .       .       .       .       .

   210. .       .       . XW      C       .   E     .       .       .       .       .       .       .
   220. .       .       .    X    C       .   E     .       .       .       .       .       .       .
   230. .       .       .         XC      .   E     .       .       .       .       .       .       .
   240. .       .       .           X     .   E     .       .       .       .       .       .       .

   250. .       .       .                 X .   E     .       .       .       .       .       .       .
```

```
   260. .       .       .              X   E  .       .       .       .       .       .       .
   270. .       .       .              . X E  .       .       .       .       .       .       .
   280. .       .       .              .   X  .       .       .       .       .       .       .

   290. .       .       .              .      X       .       .       .       .       .       .
 9 300. .       .       .              .       .  X    .       .       .       .       .       .

   310. .       .       .              .       . X     .       .       .       .       .       .
   320. .       .       .              .       . X     .       .       .       .       .       .

   330. .       .       .              .       . X     .       .       .       .       .       .
   340. .       .       .              .       .X      .       .       .       .       .       .
   350. .       .       .              .       .X      .       .       .       .       .       .
   360. .       .       .              .       .X      .       .       .       .       .       .

   370. .       .       .              .       .X      .       .       .       .       .       .
10 380. .       .       .              .       X       .       .       .       .       .    BANK.


NRD=       0 ELLC=  9999999.00 ELTRD=  9999999.00


  EL(I),STA(I)

     46.00       .00      46.00       5.00      45.50      52.00      43.50     100.00      44.00     130.00
     44.00    160.00      43.90     170.00      46.20     300.00      46.00     380.00

1
 CROSS SECTION      3.00

 STREAM  FOR PREMIER HOMES
 DISCHARGE=      740.



 PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL


 ELEV   39.0      39.5      40.0      40.5      41.0      41.5      42.0      42.5      43.0      43.5      44.0


    STA-FEET


 2   0. .       .       .       .       .       .       . X     .       .       .       .    BANK.

     5. .       .       .       .       .       .       .X      .       .       .       .       .
 3  10. .       .       .       .       .       .       X       .       .       .       .       .

 4  15. .       .       .       .      XE       .       .       .       .       .       .       .
    20. .       .       .       .      XE       .       .       .       .       .       .       .

    25. .       .       .       .      XE       .       .       .       .       .       .       .
    30. .       .       .       .      XE       .       .       .       .       .       .       .
    35. .       .       .       .      XE       .       .       .       .       .       .       .
    40. .       .       .       .      XE       .       .       .       .       .       .       .
```


45. . . . . XE . . . . . .
50. . . . . XE . . . . . .
55. . . . . XE . . . . . .
5 60. . . . . XE . . . . . .
65. . . . . X .E . . . . . .
70. . . . . X W .E . . . . . .
75. . . . X . W .E . . . . . .
80. . . . X . W .E . . . . . .
6 85. . . X . W .E . . . . . .
7 90. X . . . W .E . . . . . .
95. .X . . . W .E . . . . . .
100. .X . . . W .E . . . . . .
105. . X . . . W .E . . . . . .
110. . X . . . W .E . . . . . .
115. . X . . . W .E . . . . . .
8 120. . X . . . W .E . . . . . .
9 125. . . X . W .E . . . . . .
130. . . .X . W .E . . . . . .
135. . . . X . W .E . . . . . .
140. . . . X . W .E . . . . . .
145. . . . X . W .E . . . . . .
150. . . . X . W .E . . . . . .
155. . . . X . W .E . . . . . .
160. . . . X . W .E . . . . . .
165. . . . X . W .E . . . . . .
170. . . . X . W .E . . . . . .
175. . . . X. W .E . . . . . .
10 180. . . . X W .E . . . . . .
185. . . . X. W .E . . . . . .
190. . . . X . W .E . . . . . .
195. . . . X . W .E . . . . . .
200. . . . X . W .E . . . . . .
205. . . . X . W .E . . . . . .
210. . . . X . W .E . . . . . .
215. . . . X . W .E . . . . . .
220. . . . X . W .E . . . . . .
225. . . . X . W .E . . . . . .
230. . . . X . W .E . . . . . .
235. . . .X . W .E . . . . . .
11 240. . . X . W .E . . . . . .
245. . . X. . W .E . . . . . .
250. . . X . . W .E . . . . . .
12 255. . . X . . W .E . . . . . .
260. . . X . . W .E . . . . . .
265. . . X. . W .E . . . . . .
13 270. . . X . W .E . . . . . .

```
   275. .       .       . X     .  W    .E      .       .       .       .       .       .       .
   280. .       .       .   X   .  W    .E      .       .       .       .       .       .       .
   285. .       .       .     X .  W    .E      .       .       .       .       .       .       .
   290. .       .       .       X.  W    .E      .       .       .       .       .       .       .

   295. .       .       . .       . X W    .E      .       .       .       .       .       .       .
14 300. .       .       .         .  X    .E      .       .       .       .       .       .   BANK.

MRD=      0 ELLC=  9999999.00 ELTRD=  9999999.00

  EL(I),STA(I)
     42.10       .00      42.00      10.00      41.00      13.00      41.00      60.00      40.00      85.00
     39.00     90.00      39.20     120.00      40.00     125.00      40.50     180.00      40.00     240.00
     39.80    255.00      40.00     270.00      40.70     300.00
1

CROSS SECTION     4.00
STREAM  FOR PREMIER HOMES

DISCHARGE=     740.



PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT.C=CRITICAL WSEL


ELEV  37.7     38.2     38.7     39.2     39.7     40.2     40.7     41.2     41.7     42.2     42.7




   STA-FEET


 2   0. .       .       .       .       .       . X     .       .       .       .       .   BANK.
    10. .       .       .       .       .       .X      .       .       .       .       .       .

 3  20. .       .       .       .       .       X       .       .       .       .       .       .
    30. .       .       .       .       .     X .       .       .       .       .       .       .

 4  40. .       .       .       .       .   X   .       .       .       .       .       .       .
 6  50. .       .       .  XXXXXXXXXXXXXXXXXXXXXXX      .       .       .       .       .       .

 7  60. .       .       .       .       .   X   .       .       .       .       .       .       .
    70. .       .       .       X       E .     .       .       .       .       .       .       .

    80. .       . X     . W   C .       E .     .       .       .       .       .       .       .
 9  90. XXXXXXXXX .     . W   C .       E .     .       .       .       .       .       .       .

   100. .     X .       . W   C .       E .     .       .       .       .       .       .       .
   110. .    X  .       . W   C .       E .     .       .       .       .       .       .       .

10 120. .    X  .       . W   C .       E .     .       .       .       .       .       .       .
   130. .       X       . W   C .       E .     .       .       .       .       .       .       .
   140. .       .   X   . W   C .       E .     .       .       .       .       .       .       .
   150. .       .       X W   C .       E .     .       .       .       .       .       .       .
```

```
11 160. .        .        .  X  C .      E .      .        .        .        .        .        .        .
   170. .        .        . X   C .      E .      .        .        .        .        .        .        .
   180. .        .        X W   C .      E .      .        .        .        .        .        .        .
   190. .        .      X . W   C .      E .      .        .        .        .        .        .        .

   200. .        .    X   . W   C .      E .      .        .        .        .        .        .        .
   210. .        .  X     . W   C .      E .      .        .        .        .        .        .        .
   220. .        . X      . W   C .      E .      .        .        .        .        .        .        .
   230. .        X        . W   C .      E .      .        .        .        .        .        .        .

   240. .      X .        . W   C .      E .      .        .        .        .        .        .        .
   250. .    X   .        . W   C .      E .      .        .        .        .        .        .        .
12 260. .  X     .        . W   C .      E .      .        .        .        .        .        .        .
   270. .        X        . W   C .      E .      .        .        .        .        .        .        .

   280. .        .   X    . W   C .      E .      .        .        .        .        .        .        .
   290. .        .        X W   C .      E .      .        .        .        .        .        .        .
13 300. .        .        .    XC .      E .      .        .        .        .        .        .        .
   310. .        .        .       X      E .      .        .        .        .        .        .        .

   320. .        .        .         .  X  E .      .        .        .        .        .        .        .
14 330. .        .        .         .     X .      .        .        .        .        .        .        .

   340. .        .        .         .      X.      .        .        .        .        .        .        .
   350. .        .        .         .       X      .        .        .        .        .        .        .

   360. .        .        .         .       .X     .        .        .        .        .        .        .
   370. .        .        .         .       . X    .        .        .        .        .        .        .
   380. .        .        .         .       .  X   .        .        .        .        .        .        .
   390. .        .        .         .       .   X  .        .        .        .        .        .        .

15 400. .        .        .         .       .    X .        .        .        .        .        .    BANK.
```

NRD= 0 ELLC= 9999999.00 ELTRD= 9999999.00

EL(I),STA(I)

40.30	.00	40.20	25.00	40.00	45.00	38.90	50.00	40.00	54.00
40.00	60.00	37.70	88.00	38.10	94.00	38.00	120.00	38.90	160.00
37.90	260.00	39.00	300.00	39.60	330.00	40.00	400.00		

1

CROSS SECTION 5.00

STREAM FOR PREMIER HOMES
DISCHARGE= 740.

PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL

ELEV	37.0	37.5	38.0	38.5	39.0	39.5	40.0	40.5	41.0	41.5	42.0

```
STA-FEET

2   0. .       .       .                   .       X       .       .       .       .       .   BANK.

3  10. .       .       .                   .       X       .       .       .       .       .       .
4  20. .       .       X   W   E           .       .       .       .       .       .       .       .
   30. .       .       X   W   E           .       .       .       .       .       .       .       .
   40. .       .       X   W   E           .       .       .       .       .       .       .       .

   50. .       .       X   W   E           .       .       .       .       .       .       .       .
   60. .       .       X   W   E           .       .       .       .       .       .       .       .
   70. .       .       X   W   E           .       .       .       .       .       .       .       .
5  80. .       .       X   W   E           .       .       .       .       .       .       .       .

   90. .       X       .   W   E           .       .       .       .       .       .       .       .
6 100. X       .       .   W   E           .       .       .       .       .       .       .       .
  110. .  X    .       .   W   E           .       .       .       .       .       .       .       .
  120. .    X  .       .   W   E           .       .       .       .       .       .       .       .

  130. .      X.       .   W   E           .       .       .       .       .       .       .       .
  140. .       X       .   W   E           .       .       .       .       .       .       .       .
  150. .       .X      .   W   E           .       .       .       .       .       .       .       .
  160. .       .  X    .   W   E           .       .       .       .       .       .       .       .

  170. .       .     X .   W   E           .       .       .       .       .       .       .       .
7 180. .       .       X   W   E           .       .       .       .       .       .       .       .

  190. .       .       X.  W   E           .       .       .       .       .       .       .       .
  200. .       .     X .   W   E           .       .       .       .       .       .       .       .

  210. .       .     X .   W   E           .       .       .       .       .       .       .       .
  220. .       .    X  .   W   E           .       .       .       .       .       .       .       .
  230. .       .   X   .   W   E           .       .       .       .       .       .       .       .
  240. .       .  X    .   W   E           .       .       .       .       .       .       .       .

  250. .       .  X    .   W   E           .       .       .       .       .       .       .       .
  260. .       .X      .   W   E           .       .       .       .       .       .       .       .

  270. .       .X      .   W   E           .       .       .       .       .       .       .       .
  280. .       .X      .   W   E           .       .       .       .       .       .       .       .

  290. .       .X      .   W   E           .       .       .       .       .       .       .       .
8 300. .       X       .   W   E           .       .       .       .       .       .       .       .

  310. .       .  X    .   W   E           .       .       .       .       .       .       .       .
9 320. .       .       X   W   E           .       .       .       .       .       .       .       .
  330. .       .       X   W   E           .       .       .       .       .       .       .       .
  340. .       .       X   W   E           .       .       .       .       .       .       .       .

  350. .       .       X   W   E           .       .       .       .       .       .       .       .
  360. .       .       X   W   E           .       .       .       .       .       .       .       .
  370. .       .       X   W   E           .       .       .       .       .       .       .       .
10 380. .      .       X   W   E           .       .       .       .       .       .       .       .

  390. .       .       .  XW   E           .       .       .       .       .       .       .       .
11 400. .      .       .     X E           .       .       .       .       .       .       .   BANK.
```

NRD= 0 ELLC= 9999999.00 ELTRD= 9999999.00

EL(I),STA(I)

39.50	.00	39.50	10.00	38.00	20.00	38.00	80.00	37.00	100.00
38.00	180.00	37.50	300.00	38.00	320.00	38.00	380.00	38.40	400.00

1

CROSS SECTION 6.00
STREAM FOR PREMIER HOMES
DISCHARGE= 740.

PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL

```
ELEV   35.5     36.0     36.5     37.0     37.5     38.0     38.5     39.0     39.5     40.0     40.5


   STA-FEET

 2   0. .       .                .        .       X        .        .        .        .        .   BANK.

    10. .       .                .        .       X.       .        .        .        .        .       .
    20. .       .                .        .       X.       .        .        .        .        .       .

    30. .       .                .        .      X .       .        .        .        .        .       .
    40. .       .                .        .     X  .       .        .        .        .        .       .

    50. .       .                .        .     X  .       .        .        .        .        .       .
 3  60. .       .                .        .    X   .       .        .        .        .        .       .
 4  70. .       .       X        E .      .       .       .        .        .        .        .       .
 5  80. .       .               XE .      .       .       .        .        .        .        .       .

    90. .       .      X C       E .      .       .       .        .        .        .        .       .
 6 100. .       X      W C       E .      .       .       .        .        .        .        .       .

   110. .      X .     W C       E .      .       .       .        .        .        .        .       .
   120. .    X   .     W C       E .      .       .       .        .        .        .        .       .

   130. .  X     .     W C       E .      .       .       .        .        .        .        .       .
 7 140. X        .     W C       E .      .       .       .        .        .        .        .       .

   150. .   X    .     W C       E .      .       .       .        .        .        .        .       .
 8 160. .       X      W C       E .      .       .       .        .        .        .        .       .

   170. .      X .     W C       E .      .       .       .        .        .        .        .       .
   180. .    X   .     W C       E .      .       .       .        .        .        .        .       .
   190. .   X    .     W C       E .      .       .       .        .        .        .        .       .
   200. .  X     .     W C       E .      .       .       .        .        .        .        .       .

   210. .X       .     W C       E .      .       .       .        .        .        .        .       .
 9 220. X        .     W C       E .      .       .       .        .        .        .        .       .
   230. .X       .     W C       E .      .       .       .        .        .        .        .       .
   240. .  X     .     W C       E .      .       .       .        .        .        .        .       .
```

```
    250. .  X    .     W  C     E  .       .       .       .       .       .       .       .       .
    260. .   X   .     W  C     E  .       .       .       .       .       .       .       .       .

    270. .    X  .     W  C     E  .       .       .       .       .       .       .       .       .
    280. .     X .     W  C     E  .       .       .       .       .       .       .       .       .

    290. .      X.     W  C.    E  .       .       .       .       .       .       .       .       .
 10 300. .       X     W  C     E  .       .       .       .       .       .       .       .       .
    310. .      .X     W  C     E  .       .       .       .       .       .       .       .       .
    320. .      . X    W  C     E  .       .       .       .       .       .       .       .       .

    330. .      .  X   W  C     E  .       .       .       .       .       .       .       .       .
    340. .      .    XW  C     E  .       .       .       .       .       .       .       .       .
    350. .      .     X  C     E  .       .       .       .       .       .       .       .       .
    360. .      .       XC     E  .       .       .       .       .       .       .       .       .

 11 370. .      .        X     E  .       .       .       .       .       .       .       .    BANK.


NRD=       0 ELLC=  9999999.00 ELTRD=  9999999.00


  EL(I),STA(I)
     38.00        .00      37.80      60.00      36.50      70.00      36.80      80.00      36.00     100.00

     35.50     140.00      36.00     165.00      35.50     220.00      36.00     300.00      36.50     370.00
1

CROSS SECTION      7.00
STREAM  FOR PREMIER HOMES

DISCHARGE=      740.


PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL


ELEV   32.8      33.3      33.8      34.3      34.8      35.3      35.8      36.3      36.8      37.3      37.8



   STA-FEET


  2   0. .       .       .       .       .       .       .  X    .       .       .       .    BANK.
  3  10. .       .       .       .       .       .       .  X    .       .       .       .       .

  4  20. .       .       .       .       .  X    .       .       .       .       .       .       .
     30. .       .       .       .       .  X    .       .       .       .       .       .       .
     40. .       .       .       .       .  X    .       .       .       .       .       .       .
     50. .       .       .       .       .  X    .       .       .       .       .       .       .
     60. .       .       .       .       .  X    .       .       .       .       .       .       .
     70. .       .       .       .       .  X    .       .       .       .       .       .       .
     80. .       .       .       .       .  X    .       .       .       .       .       .       .
  5  90. .       .       .       .       .  X    .       .       .       .       .       .       .
```

```
  6 100. .       .       .  X    .W C    . E    .       .       .       .       .       .       .
    110. .       .       .  X    .W C    . E    .       .       .       .       .       .       .
    120. .       .       .  X    .W C    . E    .       .       .       .       .       .       .
    130. .       .       .  X    .W C    . E    .       .       .       .       .       .       .

    140. .       .       .  X    .W C    . E    .       .       .       .       .       .       .
    150. .       .       . . X    .W C    . E    .       .       .       .       .       .       .

    160. .       .       .  X    .W C    . E    .       .       .       .       .       .       .
    170. .       .       .  X    .W C    . E    .       .       .       .       .       .       .
    180. .       .       .  X    .W C    . E    .       .       .       .       .       .       .
  7 190. .       .       .  X    .W C    . E    .       .       .       .       .       .       .
    200. .       .      X       .W C    . E    .       .       .       .       .       .       .
    210. .       .    X  .       .W C    . E    .       .       .       .       .       .       .

    220. .       . X     .       .W C    . E    .       .       .       .       .       .       .
    230. .      X.       .       .W C    . E    .       .       .       .       .       .       .

    240. .    X  .       .       .W C    . E    .       .       .       .       .       .       .
  8 250. X       .       .       .W C    . E    .       .       .       .       .       .       .

    260. .     X .       .       .W C    . E    .       .       .       .       .       .       .
    270. .       .  X    .       .W C    . E    .       .       .       .       .       .       .

    280. .       .      .X       .W C    . E    .       .       .       .       .       .       .
  9 290. .       .       .  X    .W C    . E    .       .       .       .       .       .       .

    300. .       .       .       XW C    . E    .       .       .       .       .       .       .
    310. .       .       .       .   X   . E    .       .       .       .       .       .       .

    320. .       .       .       .       .XE    .       .       .       .       .       .       .
    330. .       .       .       .       .    X . .       .       .       .       .       .       .

    340. .       .       .       .       .       . X     .       .       .       .       .       .
    350. .       .       .       .       .       .    X  .       .       .       .       .       .
 10 360. .       .       .       .       .       .      . X     .       .       .       .    BANK.


 NRD=       0 ELLC=  9999999.00 ELTRD=  9999999.00

   EL(I),STA(I)
      36.00        .00      36.00      10.00      35.00      20.00      35.00      90.00      34.00     105.00

      34.00     190.00      32.80     255.00      34.00     290.00      36.00     360.00
1
 CROSS SECTION      8.00
 STREAM  FOR PREMIER HOMES

 DISCHARGE=      740.


 PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL


 ELEV   31.7      32.2      32.7      33.2      33.7      34.2      34.7      35.2      35.7      36.2      36.7
```

```
    STA-FEET

 2   0. .         .         .                   .     X   .         .         .         .         .         .     BANK.
     5. .         .         .                   .      X  .         .         .         .         .         .         .
 3  10. .         .         .                   .       X .         .         .         .         .         .         .
    15. .         .         .                   .         .    X    .         .         .         .         .         .
 4  20. .         .         .                   .         .         .     X   .         .         .         .         .
    25. .         .         .                   .         .         .    X    .         .         .         .         .

    30. .         .         .                   .         .         .  X      .         .         .         .         .
    35. .         .         .                   .         .         . X       .         .         .         .         .
    40. .         .         .                   .         .         .X        .         .         .         .         .
 5  45. .         .         .                   .         .         X         .         .         .         .         .

    50. .         .         .                   .         .    X    .         .         .         .         .         .
    55. .         .         .                   .         .X        .         .         .         .         .         .

 6  60. .         .         .                   .     X   .         .         .         .         .         .         .
    65. .         .         .                   .     X   .         .         .         .         .         .         .

    70. .         .         .                   .     X   .         .         .         .         .         .         .
    75. .         .         .                   .     X   .         .         .         .         .         .         .

    80. .         .         .                   .     X   .         .         .         .         .         .         .
    85. .         .         .                   .     X   .         .         .         .         .         .         .

    90. .         .         .                   .     X   .         .         .         .         .         .         .
 7  95. .         .         .                   .     X   .         .         .         .         .         .         .

   100. .         .         .                X E.         .         .         .         .         .         .         .
   105. .         .         .       X WC       E.         .         .         .         .         .         .         .

 8 110. .         .     X   .         WC       E.         .         .         .         .         .         .         .
   115. .         .         .  X      WC       E.         .         .         .         .         .         .         .

 9 120. .         .         .         XC       E.         .         .         .         .         .         .         .
   125. .         .         .    X    WC       E.         .         .         .         .         .         .         .

   130. .         .        X.         WC       E.         .         .         .         .         .         .         .
   135. .         .   X     .         WC       E.         .         .         .         .         .         .         .

   140. .        X.         .         WC       E.         .         .         .         .         .         .         .
   145. .  X      .         .         WC       E.         .         .         .         .         .         .         .

10 150. X         .         .         WC       E.         .         .         .         .         .         .         .
   155. .    X    .         .         WC       E.         .         .         .         .         .         .         .

11 160. .         X         .         WC       E.         .         .         .         .         .         .         .
   165. .       X .         .         WC       E.         .         .         .         .         .         .         .

12 170. .     X   .         .         WC       E.         .         .         .         .         .         .         .
   175. .         .   X     .         WC       E.         .         .         .         .         .         .         .
   180. .         .         . X       WC       E.         .         .         .         .         .         .         .
13 185. .         .         .         XC       E.         .         .         .         .         .         .         .

   190. .         .         .      X  WC       E.         .         .         .         .         .         .         .
   195. .         .         .   X     WC       E.         .         .         .         .         .         .         .
```

```
   200. .       .       .X      WC      E.      .       .       .       .       .       .       .
   205. .       .     X .       WC      E.      .       .       .       .       .       .       .

   210. .       .  X    .       WC      E.      .       .       .       .       .       .       .
   215. .       .X      .       WC      E.      .       .       .       .       .       .       .
   220. .     X .       .       WC      E.      .       .       .       .       .       .       .
   225. .   X   .       . .     WC      E.      .       .       .       .       .       .       .

14 230. . X     .       .       WC      E.      .       .       .       .       .       .       .
   235. .  X    .       .       WC      E.      .       .       .       .       .       .       .
   240. .    X  .       .       WC      E.      .       .       .       .       .       .       .
   245. .     X .       .       WC      E.      .       .       .       .       .       .       .

   250. .       X       .       WC      E.      .       .       .       .       .       .       .
   255. .       . X     .       WC      E.      .       .       .       .       .       .       .
   260. .       .  X    .       WC      E.      .       .       .       .       .       .       .
   265. .       .    X  .       WC      E.      .       .       .       .       .       .       .

   270. .       .     X .       WC      E.      .       .       .       .       .       .       .
   275. .       .       X       WC      E.      .       .       .       .       .       .       .

   280. .       .       . X     WC      E.      .       .       .       .       .       .       .
   285. .       .       .  X    WC      E.      .       .       .       .       .       .       .

15 290. .       .       .   X   WC      E.      .       .       .       .       .       .       .
   295. .       .       .     XWC     E.      .       .       .       .       .       .       .
   300. .       .       .      X      E.      .       .       .       .       .       .       .
   305. .       .       .        X    E.      .       .       .       .       .       .       .

   310. .       .       .          X  E.      .       .       .       .       .       .       .
   315. .       .       .             X.      .       .       .       .       .       .       .

   320. .       .       .            . X      .       .       .       .       .       .       .
   325. .       .       .             .  X    .       .       .       .       .       .       .

   330. .       .       .             .    X  .       .       .       .       .       .       .
   335. .       .       .             .      X.      .       .       .       .       .       .

16 340. .       .       .             .       . X     .       .       .       .       .  BANK.


NRD=       0 ELLC=  9999999.00 ELTRD=  9999999.00


  EL(I),STA(I)
     34.00       .00      34.10      10.00      35.00      22.00      34.70      45.00      34.00      60.00
     34.00     95.00      32.50     112.00      33.20     122.00      31.70     150.00      32.20     160.00
     32.00    170.00      33.20     185.00      31.80     230.00      33.00     290.00      34.30     340.00

1
PROFILE FOR STREAM  FOR PREMIER HOMES


PLOTTED POINTS (BY PRIORITY) E-ENERGY,W-WATER SURFACE,I-INVERT,C-CRITICAL W.S.,L-LEFT BANK,R-RIGHT BANK,M-LOWER END STA
```

```
ELEVATION  -50.     -40.     -30.     -20.     -10.       0.      10.      20.      30.      40.
   SECNO  CUMDIS

    1.00     0.  .        .        .        .        .        .        .        .        .        .      IER
            10.  .        .        .        .        .        .        .        .        .        .     I ER
            20.  .        .        .        .        .        .        .        .        .        .     IWE.
            30.  .        .        .        .        .        .        .        .        .        .     IER.
            40.  .        .        .        .        .        .        .        .        .        .    IWE .
            50.  .        .        .        .        .        .        .        .        .        .    IWE .
            60.  .        .        .        .        .        .        .        .        .        .   IWBR .
            70.  .        .        .        .        .        .        .        .        .        .    IWE .
            80.  .        .        .        .        .        .        .        .        .        .   I WE .
            90.  .        .        .        .        .        .        .        .        .        .   IWE  .
    2.00   100.  .        .        .        .        .        .        .        .        .        .   IWE  .
           110.  .        .        .        .        .        .        .        .        .        .  IWEL  .
           120.  .        .        .        .        .        .        .        .        .        .  IWE  .
           130.  .        .        .        .        .        .        .        .        .        .  IWE  .
           140.  .        .        .        .        .        .        .        .        .        . IWEL  .
           150.  .        .        .        .        .        .        .        .        .        . IWEL  .
           160.  .        .        .        .        .        .        .        .        .        . IWE   .
           170.  .        .        .        .        .        .        .        .        .        .I EL   .
           180.  .        .        .        .        .        .        .        .        .        .IWEL   .
           190.  .        .        .        .        .        .        .        .        .        .IWE    .
           200.  .        .        .        .        .        .        .        .        .        I EL    .
           210.  .        .        .        .        .        .        .        .        .        IWEL    .
           220.  .        .        .        .        .        .        .        .        .        IWEL    .
           230.  .        .        .        .        .        .        .        .        .       I.EL     .
    3.00   240.  .        .        .        .        .        .        .        .        .       I.EL     .
           250.  .        .        .        .        .        .        .        .        .       IWEL     .
           260.  .        .        .        .        .        .        .        .        .      I EL      .
           270.  .        .        .        .        .        .        .        .        .      IWEL      .
    4.00   280.  .        .        .        .        .        .        .        .        .      IWE       .
           290.  .        .        .        .        .        .        .        .        .     I EL       .
    5.00   300.  .        .        .        .        .        .        .        .        .     IWEL       .
           310.  .        .        .        .        .        .        .        .        .     IEL.       .
           320.  .        .        .        .        .        .        .        .        .    IWEL.       .
           330.  .        .        .        .        .        .        .        .        .    IWEL.       .
           340.  .        .        .        .        .        .        .        .        .    IEL .       .
    6.00   350.  .        .        .        .        .        .        .        .        .    WEL .       .
           360.  .        .        .        .        .        .        .        .        .   IE L .       .
           370.  .        .        .        .        .        .        .        .        .   I EL  .       .
           380.  .        .        .        .        .        .        .        .        .   IWEL  .       .
           390.  .        .        .        .        .        .        .        .        . I EL   .       .
    7.00   400.  .        .        .        .        .        .        .        .        . IWEL   .       .
           410.  .        .        .        .        .        .        .        .        . IWEL   .       .
           420.  .        .        .        .        .        .        .        .        .I EL    .       .
           430.  .        .        .        .        .        .        .        .        .IWEL    .       .
    8.00   440.  .        .        .        .        .        .        .        .        .IWE     .       .
```

1

THIS RUN EXECUTED 24JUN92 12:26:36

****

HEC-2 WATER SURFACE PROFILES

Version 4.5.1; September 1990
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

FOR PREMIER HOMES

SUMMARY PRINTOUT

	SECNO	ELMIN	CWSEL	CRIWS	Q	QLOB	QCH	QROB	DEPTH	TOPWID	AREA	VCH	EG	
*	1.000	47.80	49.04	49.04	740.00	.00	740.00	.00	1.24	217.92	154.42	4.79	49.40	
*	2.000	43.50	44.65	45.01	740.00	.00	740.00	.00	1.15	140.10	85.46	8.66	45.82	
*	3.000	39.00	40.71	40.71	740.00	.00	740.00	.00	1.71	232.78	154.47	4.79	41.07	
*	4.000	37.70	38.80	39.05	740.00	.00	740.00	.00	1.10	204.59	102.69	7.21	39.60	
*	5.000	37.00	38.24	38.26	740.00	.00	740.00	.00	1.24	373.50	172.35	4.29	38.52	⇐
	6.000	35.50	36.37	36.49	740.00	.00	740.00	.00	.87	260.74	134.81	5.49	36.84	
	7.000	32.80	34.33	34.46	740.00	.00	740.00	.00	1.53	201.54	123.93	5.97	34.89	
	8.000	31.70	33.17	33.24	740.00	.00	740.00	.00	1.47	190.54	135.40	5.47	33.64	

1

FOR PREMIER HOMES

SUMMARY PRINTOUT

	TVOLI
*	.000
*	.000
*	.000
*	.000
*	.000
	.000
	.000
	.000

1

DEVELOPED CONDITIONS

```
T1      KORMAN RESIDENCE NORTH ALB ACRES
T2      CROSS SECTIONS THROUGH PROPERTY AND UPSTREAM
T3      FOR PREMIER HOMES
J1     0      0      0      1     -1      0      0    740      0      0
J2     0      0     10      0      0      0     -1      0      0      0
J3    38     42      1      2     43     13     14     15      8      4
J3    25     26      3     75      0      0      0      0      0      0
J5   -10    -10
NC  .035   .035   .035      0      0      0      0      0      0      0
X1     1      9      0    360    100.   100.   100.      0      0      1
GR  49.3      0   48.5     20   48.5     50   47.8     70   48.2     90
GR  47.9    125   48.1    150   50.0    300   50.0    360
X1     2      9      0    380  135.0  135.0  135.0      0      0      1
GR  46.0      0   46.0    5.0   45.5   52.0   43.5    100   44.0    130
GR  44.0    160   43.9    170   46.2    300   46.0    380
X1     3     13      0    300     40     40     40      0      0      1
GR  42.1      0   42.0     10   41.0     13   41.0     60   40.0     85
GR  39.0     90   39.2    120   40.0    125   40.5    180   40.0    240
GR  39.8    255   40.0    270   40.7    300
X1     4     14      0    400     25     25     25      0      0      1
GR  40.3      0   40.2     25   40.0     45   38.9     50   40.0     54
GR  40.0     60   37.7     88   38.1     94   38.0    120   38.9    160
GR  37.9    260   39.0    300   39.6    330   40.0    400
X1     5     10      0    400     50     50     50      0      0      1
GR  39.5      0   39.5     10   38.0     20   38.0     80   37.0    100
GR  38.0    180   37.5    300   38.0    320   38.0    380   38.4    400
X1     6     11      0    370     50     50     50      0      0      1
GR  38.0      0   37.8     60   36.5     70   36.8     80   36.0    100
GR  35.5    140   36.0    165   40.6    190   40.6    260   36.0    280
GR  36.5    370
X1     7     12      0    360     40     40     40      0      0      1
GR  36.0      0   36.0     10   35.0     20   35.0     90   34.0    105
GR  34.0    190   33.5    210   37.0    230   35.0    245   35.0    285
GR  34.0    290   36.0    360
X1     8     15      0    340      0      0      0      0      0      1
GR  34.0      0   34.1     10   35.0     22   34.7     45   34.0     60
GR  34.0     95   32.5    112   33.2    122   31.7    150   32.2    160
GR  32.0    170   33.2    185   31.8    230   33.0    290   34.3    340
EJ


ER
```

DEVELOPED CONDITIONS

```
1*****************************************
*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *                          *  U.S. ARMY CORPS OF ENGINEERS
*
 *                                        *                          *  HYDROLOGIC ENGINEERING CENTER
*
 *  Version  4.5.1;  September 1990       *                          *  609 SECOND STREET, SUITE D
*
 *                                        *                          *  DAVIS, CALIFORNIA 95616-4687
*
 *  RUN DATE   24JUN92    TIME  13:13:24  *                          *        (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
 END OF BANNER
1
    24JUN92      13:13:24                                                                    PAGE    1


                                                                    THIS RUN EXECUTED 24JUN92    13:13:25
 ***************************************
  HEC-2 WATER SURFACE PROFILES

  Version  4.5.1;  September 1990
 ***************************************


 T1      KORMAN RESIDENCE NORTH ALB ACRES
 T2      CROSS SECTIONS THROUGH PROPERTY AND UPSTREAM
 T3      FOR PREMIER HOMES

 J1  ICHECK    INQ      NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0        0         0         1        -1         0         0      740         0         0

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      0         0        10         0         0         0        -1         0         0         0


 J3  VARIABLE CODES FOR SUMMARY PRINTOUT
```

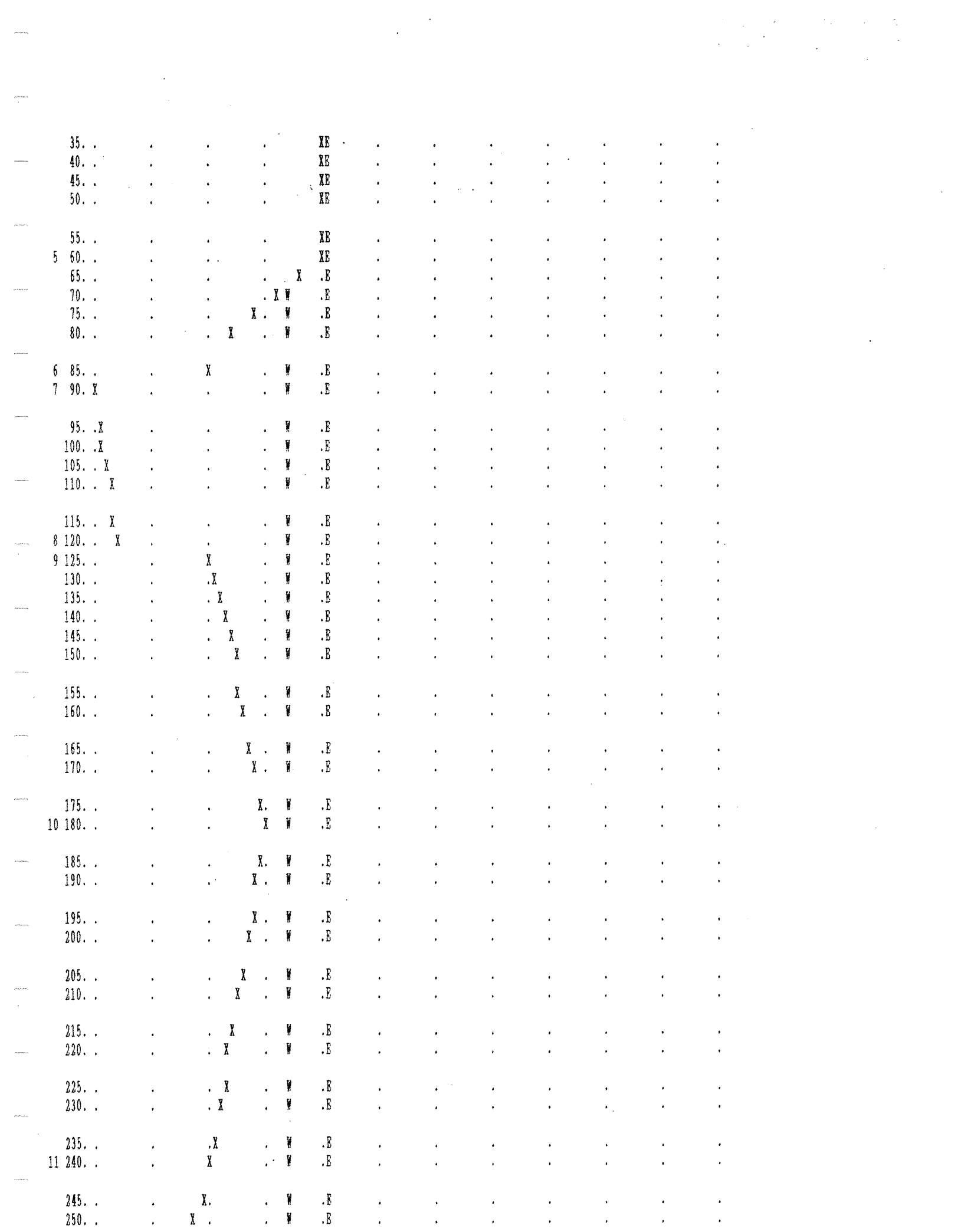
```
    38        42         1         2        43        13        14        15         8         4
    25        26         3        75         0         0         0         0         0         0

J5  LPRNT    NUMSEC                  ********REQUESTED SECTION NUMBERS********

    -10       -10

NC    .035      .035      .035         0         0         0         0         0         0         0
X1       1         9         0       360      100.      100.      100.         0         0         1
GR    49.3         0      48.5        20      48.5        50      47.8        70      48.2        90
GR    47.9       125      48.1       150      50.0       300      50.0       360

X1       2         9         0       380     135.0     135.0     135.0         0         0         1
GR    46.0         0      46.0       5.0      45.5      52.0      43.5       100      44.0       130
GR    44.0       160      43.9       170      46.2       300      46.0       380

X1       3        13         0       300        40        40        40         0         0         1
GR    42.1         0      42.0        10      41.0        13      41.0        60      40.0        85
GR    39.0        90      39.2       120      40.0       125      40.5       180      40.0       240
GR    39.8       255      40.0       270      40.7       300

X1       4        14         0       400        25        25        25         0         0         1
GR    40.3         0      40.2        25      40.0        45      38.9        50      40.0        54
GR    40.0        60      37.7        88      38.1        94      38.0       120      38.9       160
GR    37.9       260      39.0       300      39.6       330      40.0       400
1
   24JUN92     13:13:24                                                                  PAGE    2


X1       5        10         0       400        50        50        50         0         0         1
GR    39.5         0      39.5        10      38.0        20      38.0        80      37.0       100
GR    38.0       180      37.5       300      38.0       320      38.0       380      38.4       400

X1       6        11         0       370        50        50        50         0         0         1
GR    38.0         0      37.8        60      36.5        70      36.8        80      36.0       100
GR    35.5       140      36.0       165      40.6       190      40.6       260      36.0       280
GR    36.5       370

X1       7        12         0       360        40        40        40         0         0         1
GR    36.0         0      36.0        10      35.0        20      35.0        90      34.0       105
GR    34.0       190      33.5       210      37.0       230      35.0       245      35.0       285
GR    34.0       290      36.0       360

X1       8        15         0       340         0         0         0         0         0         1
GR    34.0         0      34.1        10      35.0        22      34.7        45      34.0        60
GR    34.0        95      32.5       112      33.2       122      31.7       150      32.2       160
GR    32.0       170      33.2       185      31.8       230      33.0       290      34.3       340


1
CROSS SECTION      1.00

STREAM  FOR PREMIER HOMES
DISCHARGE=       740.
```

PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL

```
ELEV   47.8      48.3      48.8      49.3      49.8      50.3      50.8      51.3      51.8      52.3      52.8

   STA-FEET

 2  0. .         .         .         X E       .         .         .         .         .         .         .    BANK.
   10. .         .         . X W     . E       .         .         .         .         .         .         .
 3 20. .         .  X      .   W     . E       .         .         .         .         .         .         .

   30. .         .  X      .   W     . E       .         .         .         .         .         .         .
   40. .         .  X      .   W     . E       .         .         .         .         .         .         .
 4 50. .         .  X      .   W     . E       .         .         .         .         .         .         .
   60. .      X  .         .   W     . E       .         .         .         .         .         .         .

 5 70. X         .         .   W     . E       .         .         .         .         .         .         .
   80. .   X     .         .   W     . E       .         .         .         .         .         .         .
 6 90. .      X  .         .   W     . E       .         .         .         .         .         .         .
  100. .    X    .         .   W     . E       .         .         .         .         .         .         .

  110. .    X    .         .   W     . E       .         .         .         .         .         .         .
 7 120. . X      .         .   W     . E       .         .         .         .         .         .         .

  130. .   X     .         .   W     . E       .         .         .         .         .         .         .
  140. .    X    .         .   W     . E       .         .         .         .         .         .         .

 8 150. .    X   .         .   W     . E       .         .         .         .         .         .         .
  160. .       X.         .   W     . E       .         .         .         .         .         .         .

  170. .        .X         .   W     . E       .         .         .         .         .         .         .
  180. .         .  X      .   W     . E       .         .         .         .         .         .         .

  190. .         .    X    .   W     . E       .         .         .         .         .         .         .
  200. .         .      X. .   W     . E       .         .         .         .         .         .         .
  210. .         .       .X .   W     . E       .         .         .         .         .         .         .
  220. .         .       .  XW    . E       .         .         .         .         .         .         .

  230. .         .       .    X    . E       .         .         .         .         .         .         .
  240. .         .       .      X. E       .         .         .         .         .         .         .

  250. .         .       .       .XE       .         .         .         .         .         .         .
  260. .         .       .       .  X      .         .         .         .         .         .         .

  270. .         .       .       .    X    .         .         .         .         .         .         .
  280. .         .       .       .      X. .         .         .         .         .         .         .

  290. .         .       .       .       .X .         .         .         .         .         .         .
 9 300. .         .       .       .       .  X      .         .         .         .         .         .
  310. .         .       .       .       .  X      .         .         .         .         .         .
  320. .         .       .       .       .  X      .         .         .         .         .         .

  330. .         .       .       .       .  X      .         .         .         .         .         .
  340. .         .       .       .       .  X      .         .         .         .         .         .

  350. .         .       .       .       .  X      .         .         .         .         .         .
10 360. .         .       .       .       .  X      .         .         .         .         .         .    BANK.
```

```
 NRD=       0 ELLC=  9999999.00 ELTRD=  9999999.00

  EL(I),STA(I)

      49.30        .00      48.50      20.00      48.50      50.00      47.80      70.00      48.20      90.00
      47.90     125.00      48.10     150.00      50.00     300.00      50.00     360.00

1
 CROSS SECTION      2.00

 STREAM  FOR PREMIER HOMES
 DISCHARGE=      740.


 PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL

 ELEV   43.5      44.0      44.5      45.0      45.5      46.0      46.5      47.0      47.5      48.0      48.5


    STA-FEET

 3   0. .        .         .                   .         X         .         .         .         .         .    BANK.

    10. .        .         .                   .       X .         .         .         .         .         .
    20. .        .         .                   .     X   .         .         .         .         .         .

    30. .        .         .                   .   X E   .         .         .         .         .         .
    40. .        .         .                  .X   E     .         .         .         .         .         .

 4  50. .        .         .                  X    E     .         .         .         .         .         .
    60. .        .         .           X      .    E     .         .         .         .         .         .

    70. .        .         . X     C          .    E     .         .         .         .         .         .
    80. .        .    X    . W     C          .    E     .         .         .         .         .         .

    90. .     X  .         . W     C          .    E     .         .         .         .         .         .
 5 100. X        .         . W     C          .    E     .         .         .         .         .         .

   110. .  X     .         . W     C          .    E     .         .         .         .         .         .
   120. .     X  .         . W     C          .    E     .         .         .         .         .         .

 6 130. .        X         . W     C          .    E     .         .         .         .         .         .
   140. .        X         . W     C          .    E     .         .         .         .         .         .

   150. .        X         . W     C          .    E     .         .         .         .         .         .
 7 160. .        X         . W     C          .    E     .         .         .         .         .         .

 8 170. .      X .         . W     C          .    E     .         .         .         .         .         .
   180. .        . X       . W     C          .    E     .         .         .         .         .         .

   190. .        .    X    . W     C          .    E     .         .         .         .         .         .
   200. .        .       X. W     C          .    E     .         .         .         .         .         .

   210. .        .         . XW    C          .    E     .         .         .         .         .         .
```

```
   220. .       .       .    X  C       .    E  .       .       .       .       .       .       .
   230. .       .       .       XC      .    E  .       .       .       .       .       .       .
   240. .       .       .          X    .    E  .       .       .       .       .       .       .
   250. .       .       .             X .    E  .       .       .       .       .       .       .
   260. .       .       .                X    E  .       .       .       .       .       .       .
   270. .       .       .                . X  E  .       .       .       .       .       .       .
   280. .       .       .                .    X  .       .       .       .       .       .       .
   290. .       .       .                .       X       .       .       .       .       .       .
 9 300. .       .       .                .          .  X .       .       .       .       .       .
   310. .       .       .                .          .  X .       .       .       .       .       .
   320. .       .       .                .          .  X .       .       .       .       .       .
   330. .       .       .                .          .  X .       .       .       .       .       .
   340. .       .       .                .          . X  .       .       .       .       .       .
   350. .       .       .                .          . X  .       .       .       .       .       .
   360. .       .       .                .          .X   .       .       .       .       .       .
   370. .       .       .                .          .X   .       .       .       .       .       .
10 380. .       .       .                .          X    .       .       .       .       .       . BANK.


NRD=       0 ELLC=  9999999.00 ELTRD=  9999999.00

  EL(I),STA(I)

      46.00        .00      46.00       5.00      45.50      52.00      43.50     100.00      44.00     130.00
      44.00     160.00      43.90     170.00      46.20     300.00      46.00     380.00

1
 CROSS SECTION      3.00

 STREAM  FOR PREMIER HOMES
 DISCHARGE=      740.


 PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL


 ELEV   39.0      39.5      40.0      40.5      41.0      41.5      42.0      42.5      43.0      43.5      44.0


    STA-FEET


 2   0. .       .       .       .       .       .       . X       .       .       .       . BANK.

     5. .       .       .       .       .       .       .X       .       .       .       .       .
 3  10. .       .       .       .       .       .       X        .       .       .       .       .

 4  15. .       .       .       .       XE      .       .       .       .       .       .       .
    20. .       .       .       .       XE      .       .       .       .       .       .       .

    25. .       .       .       .       XE      .       .       .       .       .       .       .
    30. .       .       .       .       XE      .       .       .       .       .       .       .
```


35. . . . . XE . . . . . .
40. . . . . XE . . . . . .
45. . . . . XE . . . . . .
50. . . . . XE . . . . . .
55. . . . . XE . . . . . .
5 60. . . . . XE . . . . . .
65. . . . . X .E . . . . . .
70. . . . . X W .E . . . . . .
75. . . . X . W .E . . . . . .
80. . . . X . W .E . . . . . .
6 85. . . X . W .E . . . . . .
7 90. X . . . W .E . . . . . .
95. .X . . . W .E . . . . . .
100. .X . . . W .E . . . . . .
105. . X . . . W .E . . . . . .
110. . X . . . W .E . . . . . .
115. . X . . . W .E . . . . . .
8 120. . X . . . W .E . . . . . .
9 125. . . X . W .E . . . . . .
130. . . .X . W .E . . . . . .
135. . . . X . W .E . . . . . .
140. . . . X . W .E . . . . . .
145. . . . X . W .E . . . . . .
150. . . . X . W .E . . . . . .
155. . . . X . W .E . . . . . .
160. . . . X . W .E . . . . . .
165. . . . X . W .E . . . . . .
170. . . . X . W .E . . . . . .
175. . . . X. W .E . . . . . .
10 180. . . . X W .E . . . . . .
185. . . . X. W .E . . . . . .
190. . . . X . W .E . . . . . .
195. . . . X . W .E . . . . . .
200. . . . X . W .E . . . . . .
205. . . . X . W .E . . . . . .
210. . . . X . W .E . . . . . .
215. . . . X . W .E . . . . . .
220. . . . X . W .E . . . . . .
225. . . . X . W .E . . . . . .
230. . . . X . W .E . . . . . .
235. . . . X . W .E . . . . . .
11 240. . . . X . W .E . . . . . .
245. . . . X. . W .E . . . . . .
250. . . . X . . W .E . . . . . .

```
12 255. .       .    X  .       .  W    .E      .       .       .       .       .       .       .
   260. .       .     X .       .  W    .E      .       .       .       .       .       .       .

   265. .       .      X.       .  W    .E      .       .       .       .       .       .       .
13 270. .       .       X       .  W    .E      .       .       .       .       .       .       .
   275. .       .       . X     .  W    .E      .       .       .       .       .       .       .
   280. .       .       .   X   .  W    .E      .       .       .       .       .       .       .

   285. .       .       .     X .  W    .E      .       .       .       .       .       .       .
   290. .       .       .       X.  W    .E      .       .       .       .       .       .       .
   295. .       .       .       . X W    .E      .       .       .       .       .       .       .
14 300. .       .       .       .  X    .E      .       .       .       .       .       .    BANK.


NRD=       0 ELLC=  9999999.00 ELTRD=  9999999.00

  EL(I),STA(I)

      42.10       .00      42.00      10.00      41.00      13.00      41.00      60.00      40.00      85.00
      39.00     90.00      39.20     120.00      40.00     125.00      40.50     180.00      40.00     240.00

      39.80     255.00     40.00     270.00     40.70     300.00
1

CROSS SECTION      4.00
STREAM  FOR PREMIER HOMES
DISCHARGE=      740.


PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL


ELEV   37.7      38.2      38.7      39.2      39.7      40.2      40.7      41.2      41.7      42.2      42.7



   STA-FEET


 2  0. .       .       .       .       .       . X     .       .       .       .       .    BANK.
   10. .       .       .       .       .       .X      .       .       .       .       .       .

 3 20. .       .       .       .       .       X       .       .       .       .       .       .
   30. .       .       .       .       .     X .       .       .       .       .       .       .

 4 40. .       .       .       .       .   X   .       .       .       .       .       .       .
 6 50. .       .       .  XXXXXXXXXXXXXXXXXXXXXXXX    .       .       .       .       .       .

 7 60. .       .       .       .       .   X   .       .       .       .       .       .       .
   70. .       .       .       .     X     E .       .       .       .       .       .       .

   80. .       . X     . W   C .     E .       .       .       .       .       .       .       .
 9 90. XXXXXXXXX .       . W   C .     E .       .       .       .       .       .       .       .

  100. .     X .       . W   C .     E .       .       .       .       .       .       .       .
```

```
   110. .    X  .        . W   C  .      E .       .       .       .       .       .       .       .
10 120. .    X  .        . W   C  .      E .       .       .       .       .       .       .       .
   130. .       X        . W   C  .      E .       .       .       .       .       .       .       .

   140. .       .   X    . W   C  .      E .       .       .       .       .       .       .       .
   150. .       .       X W   C  .      E .       .       .       .       .       .       .       .
11 160. .       .       . . X C  .      E .       .       .       .       .       .       .       .
   170. .       .       . X   C  .      E .       .       .       .       .       .       .       .
   180. .       .       X W   C  .      E .       .       .       .       .       .       .       .
   190. .       .     X . W   C  .      E .       .       .       .       .       .       .       .
   200. .       .   X   . W   C  .      E .       .       .       .       .       .       .       .
   210. .       .  X    . W   C  .      E .       .       .       .       .       .       .       .

   220. .       . X     . W   C  .      E .       .       .       .       .       .       .       .
   230. .       X       . W   C  .      E .       .       .       .       .       .       .       .
   240. .     X .       . W   C  .      E .       .       .       .       .       .       .       .
   250. .   X   .       . W   C  .      E .       .       .       .       .       .       .       .

12 260. .  X    .       . W   C  .      E .       .       .       .       .       .       .       .
   270. .       X       . W   C  .      E .       .       .       .       .       .       .       .

   280. .       .   X   . W   C  .      E .       .       .       .       .       .       .       .
   290. .       .       X W   C  .      E .       .       .       .       .       .       .       .
13 300. .       .       .   XC  .      E .       .       .       .       .       .       .       .
   310. .       .       .     X  .      E .       .       .       .       .       .       .       .
   320. .       .       .       . X    E .       .       .       .       .       .       .       .
14 330. .       .       .       .      X .       .       .       .       .       .       .       .

   340. .       .       .       .     X. .       .       .       .       .       .       .       .
   350. .       .       .       .      X .       .       .       .       .       .       .       .

   360. .       .       .       .     .X .       .       .       .       .       .       .       .
   370. .       .       .       .      . X       .       .       .       .       .       .       .

   380. .       .       .       .      . X       .       .       .       .       .       .       .
   390. .       .       .       .      .  X      .       .       .       .       .       .       .

15 400. .       .       .       .      .   X     .       .       .       .       .       .       BANK.


NRD=       0 ELLC=  9999999.00 ELTRD=  9999999.00


  EL(I),STA(I)
     40.30        .00       40.20       25.00       40.00       45.00       38.90       50.00       40.00       54.00

     40.00       60.00       37.70       88.00       38.10       94.00       38.00      120.00       38.90      160.00
     37.90      260.00       39.00      300.00       39.60      330.00       40.00      400.00

1
CROSS SECTION      5.00

STREAM  FOR PREMIER HOMES
DISCHARGE=      740.


PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL
```

```
ELEV   37.0      37.5      38.0      38.5      39.0      39.5      40.0      40.5      41.0      41.5      42.0

   STA-FEET

 2   0. .        .         .                     .         X         .         .         .         .         .    BANK.
 3  10. .        .         .                     .         X         .         .         .         .         .       .
 4  20. .        .         X         W     E     .         .         .         .         .         .         .       .

    30. .        .         X         W     E     .         .         .         .         .         .         .       .
    40. .        .         X         W     E     .         .         .         .         .         .         .       .
    50. .        .         X         W     E     .         .         .         .         .         .         .       .
    60. .        .         X         W     E     .         .         .         .         .         .         .       .

    70. .        .         X         W     E     .         .         .         .         .         .         .       .
 5  80. .        .         X         W     E     .         .         .         .         .         .         .       .
    90. .        X         .         W     E     .         .         .         .         .         .         .       .
 6 100. X        .         .         W     E     .         .         .         .         .         .         .       .

   110. .  X     .         .         W     E     .         .         .         .         .         .         .       .
   120. .    X   .         .         W     E     .         .         .         .         .         .         .       .

   130. .      X .         .         W     E     .         .         .         .         .         .         .       .
   140. .        X         .         W     E     .         .         .         .         .         .         .       .

   150. .        . X       .         W     E     .         .         .         .         .         .         .       .
   160. .        .   X     .         W     E     .         .         .         .         .         .         .       .

   170. .        .       X .         W     E     .         .         .         .         .         .         .       .
 7 180. .        .         X         W     E     .         .         .         .         .         .         .       .

   190. .        .         X.        W     E     .         .         .         .         .         .         .       .
   200. .        .       X .         W     E     .         .         .         .         .         .         .       .
   210. .        .       X .         W     E     .         .         .         .         .         .         .       .
   220. .        .     X   .         W     E     .         .         .         .         .         .         .       .

   230. .        .       X .         W     E     .         .         .         .         .         .         .       .
   240. .        .     X   .         W     E     .         .         .         .         .         .         .       .

   250. .        .   X     .         W     E     .         .         .         .         .         .         .       .
   260. .        . X       .         W     E     .         .         .         .         .         .         .       .

   270. .        . X       .         W     E     .         .         .         .         .         .         .       .
   280. .        .X        .         W     E     .         .         .         .         .         .         .       .

   290. .        .X        .         W     E     .         .         .         .         .         .         .       .
 8 300. .        X         .         W     E     .         .         .         .         .         .         .       .
   310. .        .   X     .         W     E     .         .         .         .         .         .         .       .
 9 320. .        .         X         W     E     .         .         .         .         .         .         .       .

   330. .        .         X         W     E     .         .         .         .         .         .         .       .
   340. .        .         X         W     E     .         .         .         .         .         .         .       .

   350. .        .         X         W     E     .         .         .         .         .         .         .       .
   360. .        .         X         W     E     .         .         .         .         .         .         .       .
```

```
   370. .       .       X   W   E       .       .       .       .       .       .       .       .
10 380. .       .       X   W   E       .       .       .       .       .       .       .       .

   390. .       .       .  XW   E       .       .       .       .       .       .       .       .
11 400. .       .       .       X E     .       .       .       .       .       .       .   BANK.


NRD=       0 ELLC=  9999999.00 ELTRD=  9999999.00


  EL(I),STA(I)

      39.50        .00      39.50      10.00      38.00      20.00      38.00      80.00      37.00     100.00
      38.00     180.00      37.50     300.00      38.00     320.00      38.00     380.00      38.40     400.00

1
CROSS SECTION      6.00

STREAM  FOR PREMIER HOMES
DISCHARGE=      740.


PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL

ELEV   35.5      36.0      36.5      37.0      37.5      38.0      38.5      39.0      39.5      40.0      40.5


    STA-FEET


 2   0. .       .       .       .       .       X       .       .       .       .       .   BANK.

    10. .       .       .       .       .       X.      .       .       .       .       .       .
    20. .       .       .       .       .       X.      .       .       .       .       .       .

    30. .       .       .       .       .      X .      .       .       .       .       .       .
    40. .       .       .       .       .      X .      .       .       .       .       .       .

    50. .       .       .       .       .      X .      .       .       .       .       .       .
 3  60. .       .       .       .       .      X .      .       .       .       .       .       .

 4  70. .       .       X      WC .    E .      .       .       .       .       .       .       .
 5  80. .       .       .      XWC .    E .      .       .       .       .       .       .       .

    90. .       .      X .     WC .    E .      .       .       .       .       .       .       .
 6 100. .       X       .      WC .    E .      .       .       .       .       .       .       .

   110. .      X .      .      WC .    E .      .       .       .       .       .       .       .
   120. .    X  .       .      WC .    E .      .       .       .       .       .       .       .

   130. .  X    .       .      WC .    E .      .       .       .       .       .       .       .
 7 140. X       .       .      WC .    E .      .       .       .       .       .       .       .

   150. .   X   .       .      WC .    E .      .       .       .       .       .       .       .
 8 160. .       X       .      WC .    E .      .       .       .       .       .       .       .
```

```
   170. .       .       .       .       .   X   .       .       .       .       .       .       .       .
   180. .       .       .       .       .       .       .       .       .   X   .       .       .       .

 9 190. .       .       .       .       .       .       .       .       .       .       .       .   X   .
   200. .       .       .       .       .       .       .       .       .       .       .       .   X   .
   210. .       .       .       .       .       .       .       .       .       .       .       .   X   .
   220. .       .       .       .       .       .       .       .       .       .       .       .   X   .

   230. .       .       .       .       .       .       .       .       .       .       .       .   X   .
   240. .       .       .       .       .       .       .       .       .       .       .       .   X   .

   250. .       .       .       .       .       .       .       .       .       .       .       .   X   .
10 260. .       .       .       .       .       .       .       .       .       .       .       .   X   .
   270. .       .       .       .       .       .       .   X   .       .       .       .       .       .
11 280. .       X       .     WC .    E .       .       .       .       .       .       .       .       .
   290. .       .X      .     WC .    E .       .       .       .       .       .       .       .       .
   300. .       . X     .     WC .    E .       .       .       .       .       .       .       .       .

   310. .       .  X    .     WC .    E .       .       .       .       .       .       .       .       .
   320. .       .   X   .     WC .    E .       .       .       .       .       .       .       .       .
   330. .       .    X  .     WC .    E .       .       .       .       .       .       .       .       .
   340. .       .     X .     WC .    E .       .       .       .       .       .       .       .       .

   350. .       .      X.     WC .    E .       .       .       .       .       .       .       .       .
   360. .       .       X     WC .    E .       .       .       .       .       .       .       .       .
12 370. .       .        X    WC .    E .       .       .       .       .       .       .       .   BANK.


NRD=       0 ELLC=  9999999.00 ELTRD=  9999999.00


  EL(I),STA(I)
      38.00        .00      37.80      60.00      36.50      70.00      36.80      80.00      36.00     100.00

      35.50     140.00      36.00     165.00      40.60     190.00      40.60     260.00      36.00     280.00
      36.50     370.00

1
 CROSS SECTION      7.00
 STREAM  FOR PREMIER HOMES
 DISCHARGE=      740.


PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL

ELEV   33.5      34.0      34.5      35.0      35.5      36.0      36.5      37.0      37.5      38.0      38.5


    STA-FEET

 2   0. .       .       .       .       .       X       .       .       .       .       .       .   BANK.

 3  10. .       .       .       .       .       X       .       .       .       .       .       .       .
```

```
 4  20. .       .       .       XC      . E     .       .       .       .       .       .       .
    30. .       .       .       XC      . E     .       .       .       .       .       .       .
    40. .       .       .       XC      . E     .       .       .       .       .       .       .
    50. .       .       .       XC      . E     .       .       .       .       .       .       .
    60. .       .       .       XC      . E     .       .       .       .       .       .       .

    70. .       .       .       XC      . E     .       .       .       .       .       .       .
    80. .       .       .       XC      . E     .       .       .       .       .       .       .
 5  90. .       .       .       XC      . E     .       .       .       .       .       .       .
 6 100. .       X       .   W   .C      . E     .       .       .       .       .       .       .
   110. .       X       .   W   .C      . E     .       .       .       .       .       .       .
   120. .       X       .   W   .C      . E     .       .       .       .       .       .       .

   130. .       X       .   W   .C      . E     .       .       .       .       .       .       .
   140. .       X       .   W   .C      . E     .       .       .       .       .       .       .

   150. .       X       .   W   .C      . E     .       .       .       .       .       .       .
   160. .       X       .   W   .C      . E     .       .       .       .       .       .       .
   170. .       X       .   W   .C      . E     .       .       .       .       .       .       .
   180. .       X       .   W   .C      . E     .       .       .       .       .       .       .

 7 190. .       X       .   W   .C      . E     .       .       .       .       .       .       .
   200. .   X   .       .   W   .C      . E     .       .       .       .       .       .       .
 8 210. X       .       .   W   .C      . E     .       .       .       .       .       .       .
   220. .       .       .       .   X   . E     .       .       .       .       .       .       .
 9 230. .       .       .       .       .       .       .       X       .       .       .       .
10 240. .       .       .       XC      . E     .       .       .       .       .       .       .
   250. .       .       .       XC      . E     .       .       .       .       .       .       .
   260. .       .       .       XC      . E     .       .       .       .       .       .       .

   270. .       .       .       XC      . E     .       .       .       .       .       .       .
11 280. .       .       .       XC      . E     .       .       .       .       .       .       .

12 290. .       X       .   W   .C      . E     .       .       .       .       .       .       .
   300. .       .   X   .   W   .C      . E     .       .       .       .       .       .       .

   310. .       .       .X  W   .C      . E     .       .       .       .       .       .       .
   320. .       .       .   X   .C      . E     .       .       .       .       .       .       .

   330. .       .       .       . X     . E     .       .       .       .       .       .       .
   340. .       .       .       .       X. E     .       .       .       .       .       .       .

   350. .       .       .       .       .   X   .       .       .       .       .       .       .
13 360. .       .       .       .       .       X       .       .       .       .       .   BANK.

NRD=       0 ELLC=  9999999.00 ELTRD=  9999999.00


 EL(I),STA(I)

      36.00        .00       36.00       10.00       35.00       20.00       35.00       90.00       34.00      105.00
      34.00     190.00       33.50      210.00       37.00      230.00       35.00      245.00       35.00      285.00

      34.00     290.00       36.00      360.00
```

CROSS SECTION 8.00
STREAM FOR PREMIER HOMES
DISCHARGE= 740.

PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL

```
ELEV   31.7     32.2     32.7     33.2     33.7     34.2     34.7     35.2     35.7     36.2     36.7

   STA-FEET

 2   0. .       .        .        .          X .      .        .        .        .        .      BANK.
     5. .       .        .        .          X .      .        .        .        .        .        .

 3  10. .       .        .        .          X .      .        .        .        .        .        .
    15. .       .        .        .            .  X   .        .        .        .        .        .

 4  20. .       .        .        .            .      .     X  .        .        .        .        .
    25. .       .        .        .            .      .    X   .        .        .        .        .
    30. .       .        .        .            .      .  X     .        .        .        .        .
    35. .       .        .        .            .      . X      .        .        .        .        .

    40. .       .        .        .            .      .X       .        .        .        .        .
 5  45. .       .        .        .            .      X        .        .        .        .        .
    50. .       .        .        .            .   X   .        .        .        .        .        .
    55. .       .        .        .            .X      .        .        .        .        .        .

 6  60. .       .        .        .          X .      .        .        .        .        .        .
    65. .       .        .        .          X .      .        .        .        .        .        .

    70. .       .        .        .          X .      .        .        .        .        .        .
    75. .       .        .        .          X .      .        .        .        .        .        .

    80. .       .        .        .          X .      .        .        .        .        .        .
    85. .       .        .        .          X .      .        .        .        .        .        .

    90. .       .        .        .          X .      .        .        .        .        .        .
 7  95. .       .        .        .          X .      .        .        .        .        .        .

   100. .       .        .        .      X E           .        .        .        .        .        .
   105. .       .        .      X .C       E           .        .        .        .        .        .

 8 110. .       .     X  .      W .C       E           .        .        .        .        .        .
   115. .       .        .  X   W .C       E           .        .        .        .        .        .

 9 120. .       .        .        XC       E           .        .        .        .        .        .
   125. .       .        .     X W .C      E           .        .        .        .        .        .

   130. .       .     X.         W .C      E           .        .        .        .        .        .
   135. .       .  X     .      W .C      E           .        .        .        .        .        .

   140. .    X.         .      W .C      E           .        .        .        .        .        .
   145. .  X    .        .      W .C      E           .        .        .        .        .        .
```

```
10 150. X       .       .     W .C      E       .       .       .       .       .       .       .
   155. .   X   .       .     W .C      E       .       .       .       .       .       .       .
11 160. .       X       .     W .C      E       .       .       .       .       .       .       .
   165. .     X .       .     W .C      E       .       .       .       .       .       .       .

12 170. .     X .       . .   W .C      E       .       .       .       .       .       .       .
   175. .       .  X    .     W .C      E       .       .       .       .       .       .       .
   180. .       .      . X   W .C      E       .       .       .       .       .       .       .
13 185. .       .       .       XC      E       .       .       .       .       .       .       .
   190. .       .       .     X .C      E       .       .       .       .       .       .       .
   195. .       .       .   X W .C      E       .       .       .       .       .       .       .
   200. .       .      .X     W .C      E       .       .       .       .       .       .       .
   205. .       .     X .     W .C      E       .       .       .       .       .       .       .

   210. .       .  X    .     W .C      E       .       .       .       .       .       .       .
   215. .      .X       .     W .C      E       .       .       .       .       .       .       .
   220. .     X .       .     W .C      E       .       .       .       .       .       .       .
   225. .   X   .       .     W .C      E       .       .       .       .       .       .       .

14 230. . X     .       .     W .C      E       .       .       .       .       .       .       .
   235. .  X    .       .     W .C      E       .       .       .       .       .       .       .

   240. .    X  .       .     W .C      E       .       .       .       .       .       .       .
   245. .     X .       .     W .C      E       .       .       .       .       .       .       .
   250. .       X       .     W .C      E       .       .       .       .       .       .       .
   255. .      . X      .     W .C      E       .       .       .       .       .       .       .
   260. .       .  X    .     W .C      E       .       .       .       .       .       .       .
   265. .       .    X  .     W .C      E       .       .       .       .       .       .       .

   270. .       .     X .     W .C      E       .       .       .       .       .       .       .
   275. .       .       X     W .C      E       .       .       .       .       .       .       .

   280. .       .      . X   W .C      E       .       .       .       .       .       .       .
   285. .       .       .  X W .C      E       .       .       .       .       .       .       .

15 290. .       .       .    XW .C      E       .       .       .       .       .       .       .
   295. .       .       .      X.C      E       .       .       .       .       .       .       .

   300. .       .       .       .X      E       .       .       .       .       .       .       .
   305. .       .       .       .  X    E       .       .       .       .       .       .       .

   310. .       .       .       .    X  E       .       .       .       .       .       .       .
   315. .       .       .       .      XE       .       .       .       .       .       .       .

   320. .       .       .       .         X     .       .       .       .       .       .       .
   325. .       .       .       .           X   .       .       .       .       .       .       .

   330. .       .       .       .             X .       .       .       .       .       .       .
   335. .       .       .       .               X.      .       .       .       .       .       .

16 340. .       .       .       .              . X      .       .       .       .       .  BANK.


NRD=       0 ELLC=  9999999.00 ELTRD=  9999999.00

 EL(I),STA(I)
    34.00       .00      34.10      10.00      35.00      22.00      34.70      45.00      34.00      60.00
```

34.00	95.00	32.50	112.00	33.20	122.00	31.70	150.00	32.20	160.00
32.00	170.00	33.20	185.00	31.80	230.00	33.00	290.00	34.30	340.00

1

PROFILE FOR STREAM FOR PREMIER HOMES

PLOTTED POINTS (BY PRIORITY) E-ENERGY,W-WATER SURFACE,I-INVERT,C-CRITICAL W.S.,L-LEFT BANK,R-RIGHT BANK,M-LOWER END STA

```
ELEVATION  -50.     -40.     -30.     -20.     -10.       0.      10.      20.      30.      40.
   SECNO  CUMDIS

    1.00     0.  .        .        .        .        .        .        .        .        .       IBR
            10.  .        .        .        .        .        .        .        .        .      I BR
            20.  .        .        .        .        .        .        .        .        .      IWE.
            30.  .        .        .        .        .        .        .        .        .      IBR.
            40.  .        .        .        .        .        .        .        .        .     IWE .
            50.  .        .        .        .        .        .        .        .        .     IWE .
            60.  .        .        .        .        .        .        .        .        .    IWER .
            70.  .        .        .        .        .        .        .        .        .    IWE  .
            80.  .        .        .        .        .        .        .        .        .   I WE  .
            90.  .        .        .        .        .        .        .        .        .   IWE   .
    2.00   100.  .        .        .        .        .        .        .        .        .   IWE   .
           110.  .        .        .        .        .        .        .        .        .  IWEL   .
           120.  .        .        .        .        .        .        .        .        .  IWE    .
           130.  .        .        .        .        .        .        .        .        .  IWE    .
           140.  .        .        .        .        .        .        .        .        . IWEL    .
           150.  .        .        .        .        .        .        .        .        . IWEL    .
           160.  .        .        .        .        .        .        .        .        . IWE     .
           170.  .        .        .        .        .        .        .        .        .I EL     .
           180.  .        .        .        .        .        .        .        .        .IWEL     .
           190.  .        .        .        .        .        .        .        .        .IWE      .
           200.  .        .        .        .        .        .        .        .        I EL      .
           210.  .        .        .        .        .        .        .        .        IWEL      .
           220.  .        .        .        .        .        .        .        .        IWEL      .
           230.  .        .        .        .        .        .        .        .       I.EL       .
    3.00   240.  .        .        .        .        .        .        .        .       I.EL       .
           250.  .        .        .        .        .        .        .        .       IWEL       .
           260.  .        .        .        .        .        .        .        .      I EL        .
           270.  .        .        .        .        .        .        .        .      IWEL        .
    4.00   280.  .        .        .        .        .        .        .        .      IWE         .
           290.  .        .        .        .        .        .        .        .     I EL         .
    5.00   300.  .        .        .        .        .        .        .        .     IWEL         .
           310.  .        .        .        .        .        .        .        .     IEL.         .
           320.  .        .        .        .        .        .        .        .    I EL.         .
           330.  .        .        .        .        .        .        .        .    IWEL.         .
           340.  .        .        .        .        .        .        .        .    IWE .         .
    6.00   350.  .        .        .        .        .        .        .        .    IEL .         .
           360.  .        .        .        .        .        .        .        .   IWEL .         .
           370.  .        .        .        .        .        .        .        .   IWE  .         .
           380.  .        .        .        .        .        .        .        .  I EL  .         .
           390.  .        .        .        .        .        .        .        .  IWE   .         .
    7.00   400.  .        .        .        .        .        .        .        .  IWE   .         .
           410.  .        .        .        .        .        .        .        . IWEL   .         .
```

THIS RUN EXECUTED 24JUN92 13:13:34

****
HEC-2 WATER SURFACE PROFILES

Version 4.5.1; September 1990
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

FOR PREMIER HOMES

SUMMARY PRINTOUT

	SECNO	ELMIN	CWSEL	CRIWS	Q	QLOB	QCH	QROB	DEPTH	TOPWID	AREA	VCH	EG
*	1.000	47.80	49.04	49.04	740.00	.00	740.00	.00	1.24	217.92	154.42	4.79	49.40
*	2.000	43.50	44.65	45.01	740.00	.00	740.00	.00	1.15	140.10	85.46	8.66	45.82
*	3.000	39.00	40.71	40.71	740.00	.00	740.00	.00	1.71	232.78	154.47	4.79	41.07
*	4.000	37.70	38.80	39.05	740.00	.00	740.00	.00	1.10	204.59	102.69	7.21	39.60
*	5.000	37.00	38.24	38.26	740.00	.00	740.00	.00	1.24	373.50	172.35	4.29	38.52
	6.000	35.50	36.87	36.89	740.00	.00	740.00	.00	1.37	196.37	144.62	5.12	37.28
*	7.000	33.50	34.70	35.07	740.00	.00	740.00	.00	1.20	150.88	97.40	7.60	35.60
	8.000	31.70	33.07	33.24	740.00	.00	740.00	.00	1.37	177.08	115.97	6.38	33.70

FOR PREMIER HOMES

SUMMARY PRINTOUT

	TVOLI
*	.000
*	.000

LA CUEVA TRIBUTARY B

```
T1      KORMAN RESIDENCE NORTH ALB ACRES
T2      CROSS SECTIONS THROUGH LA CUEVA TRIBUTARY NORTH OF PROPERTY
T3      FOR PREMIER HOMES
J1     0      0      0      1     -1      0      0   1150      0      0
J2     0      0     10      0      0      0     -1      0      0      0
J3    38     42      1      2     43     13     14     15      8      4
J3    25     26      3     75      0      0      0      0      0      0
J5   -10    -10
NC  .035   .035   .035      0      0      0      0      0      0      0
X1     1     10      0    250   100.   100.   100.      0      0      1
GR  50.3      0   50.0     55   48.0     60   48.0     95   48.2    110
GR  47.9    170   50.0    180   48.5    190   50.0    235   52.0    250
X1     2     13      0    310  135.0  135.0  135.0      0      0      1
GR  46.5      0   46.0     80   44.0     85   44.0    120   43.6    140
GR  44.0    160   46.0    165   46.0    220   44.0    230   44.0    240
GR  46.0    250   46.0    285   48.0    310
X1     3     11      0    290     40     40     40      0      0      1
GR  40.5      0   40.5     30   40.0     60   40.0     95   38.5    115
GR  38.0    140   38.0    160   40.2    225   39.6    270   40.0    280
GR  42.0    290
X1     4     11      0    395     25     25     25      0      0      1
GR  39.2      0   40.0    110   36.0    150   37.0    190   39.6    240
GR  38.5    250   38.5    275   40.0    280   38.0    310   38.0    330
GR  41.0    395
X1     5     12      0    360     50     50     50      0      0      1
GR  37.5      0   38.4    100   38.0    125   35.7    135   35.7    175
GR  38.0    230   37.0    245   38.0    260   36.0    270   36.0    320
GR  38.0    335   40.0    360
X1     6      8      0    340     50     50     50      0      0      1
GR  36.0      0   36.5     70   36.0    110   34.0    120   33.5    155
GR  34.0    175   34.0    320   38.0    340
X1     7      9      0    340     40     40     40      0      0      1
GR  34.5      0   36.0     60   36.0     90   34.0    120   32.0    130
GR  31.0    140   32.0    170   32.0    290   36.0    340
X1     8     11      0    310      0      0      0      0      0      1
GR  33.0      0   34.0     30   34.0    100   32.0    125   30.0    135
GR  30.0    160   31.9    200   30.0    250   30.0    285   32.0    290
GR  34.0    310
EJ


ER
```

LA CUEVA TRIBUTARY B

```
1*****************************************
*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *                                  *  U.S. ARMY CORPS OF ENGINEERS
*
 *                                        *                                  *  HYDROLOGIC ENGINEERING CENTER
*
 *  Version   4.5.1:  September 1990      *                                  *  609 SECOND STREET, SUITE D
*
 *                                        *                                  *  DAVIS, CALIFORNIA 95616-4687
*
 *  RUN DATE    24JUN92    TIME   14:20:57 *                                  *         (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

 END OF BANNER
1
    24JUN92      14:20:57                                                                                  PAGE    1


                                                                                  THIS RUN EXECUTED 24JUN92    14:20:57
 ****************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.5.1:  September 1990
 ****************************************


 T1      KORMAN RESIDENCE NORTH ALB ACRES
 T2      CROSS SECTIONS THROUGH LA CUEVA TRIBUTARY NORTH OF PROPERTY
 T3      FOR PREMIER HOMES

 J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC    HVINS    Q        WSEL     FQ

       0        0        0        1       -1        0         0      1150       0        0

 J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM     ITRACE

      0        0       10        0        0        0        -1        0        0        0


 J3  VARIABLE CODES FOR SUMMARY PRINTOUT
```

```
    38        42         1         2        43         13         14         15         8         4
    25        26         3        75         0          0          0          0         0         0

J5  LPRNT    NUMSEC                  ********REQUESTED SECTION NUMBERS********

    -10       -10

NC     .035      .035      .035         0         0         0         0         0         0         0
X1        1        10         0       250     100.      100.      100.         0         0         1
GR     50.3         0      50.0        55      48.0        60      48.0        95      48.2       110
GR     47.9       170      50.0       180      48.5       190      50.0       235      52.0       250

X1        2        13         0       310     135.0     135.0     135.0         0         0         1
GR     46.5         0      46.0        80      44.0        85      44.0       120      43.6       140
GR     44.0       160      46.0       165      46.0       220      44.0       230      44.0       240
GR     46.0       250      46.0       285      48.0       310

X1        3        11         0       290        40        40        40         0         0         1
GR     40.5         0      40.5        30      40.0        60      40.0        95      38.5       115
GR     38.0       140      38.0       160      40.2       225      39.6       270      40.0       280
GR     42.0       290

X1        4        11         0       395        25        25        25         0         0         1
GR     39.2         0      40.0       110      36.0       150      37.0       190      39.6       240
GR     38.5       250      38.5       275      40.0       280      38.0       310      38.0       330
GR     41.0       395
1
   24JUN92     14:20:57                                                                    PAGE    2


X1        5        12         0       360        50        50        50         0         0         1
GR     37.5         0      38.4       100      38.0       125      35.7       135      35.7       175
GR     38.0       230      37.0       245      38.0       260      36.0       270      36.0       320
GR     38.0       335      40.0       360

X1        6         8         0       340        50        50        50         0         0         1
GR     36.0         0      36.5        70      36.0       110      34.0       120      33.5       155
GR     34.0       175      34.0       320      38.0       340

X1        7         9         0       340        40        40        40         0         0         1
GR     34.5         0      36.0        60      36.0        90      34.0       120      32.0       130
GR     31.0       140      32.0       170      32.0       290      36.0       340

X1        8        11         0       310         0         0         0         0         0         1
GR     33.0         0      34.0        30      34.0       100      32.0       125      30.0       135
GR     30.0       160      31.9       200      30.0       250      30.0       285      32.0       290
GR     34.0       310


1
 CROSS SECTION     1.00

 STREAM  FOR PREMIER HOMES
 DISCHARGE=     1150.
```

PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL

```
ELEV  47.9     48.4     48.9     49.4     49.9     50.4     50.9     51.4     51.9     52.4     52.9

   STA-FEET


2  0. .       .        .        .        .        X .      .        .        .        .        .  BANK.
   5. .       .        .        .        .       X  .      .        .        .        .        .
  10. .       .        .        .        .       X  .      .        .        .        .        .

  15. .       .        .        .        .      X   .      .        .        .        .        .
  20. .       .        .        .        .      X   .      .        .        .        .        .
  25. .       .        .        .        .     X    .      .        .        .        .        .
  30. .       .        .        .        .     X    .      .        .        .        .        .

  35. .       .        .        .        .    X     .      .        .        .        .        .
  40. .       .        .        .        .    X     .      .        .        .        .        .
  45. .       .        .        .        .   XE     .      .        .        .        .        .
  50. .       .        .        .        .   XE     .      .        .        .        .        .

3 55. .       .        .        .        .  X E     .      .        .        .        .        .
4 60. . X     .        .        . W      .    E     .      .        .        .        .        .

  65. . X     .        .        . W      .    E     .      .        .        .        .        .
  70. . X     .        .        . W      .    E     .      .        .        .        .        .

  75. . X     .        .        . W      .    E     .      .        .        .        .        .
  80. . X     .        .        . W      .    E     .      .        .        .        .        .

  85. . X     .        .        . W      .    E     .      .        .        .        .        .
  90. . X     .        .        . W      .    E     .      .        .        .        .        .

5 95. . X     .        .        . W      .    E     .      .        .        .        .        .
 100. .  X    .        .        . W      .    E     .      .        .        .        .        .

 105. .    X  .        .        . W      .    E     .      .        .        .        .        .
6 110. .     X .        .        . W      .    E     .      .        .        .        .        .
 115. .    X  .        .        . W      .    E     .      .        .        .        .        .
 120. .    X  .        .        . W      .    E     .      .        .        .        .        .

 125. .   X   .        .        . W      .    E     .      .        .        .        .        .
 130. .   X   .        .        . W      .    E     .      .        .        .        .        .

 135. .  X    .        .        . W      .    E     .      .        .        .        .        .
 140. .  X    .        .        . W      .    E     .      .        .        .        .        .

 145. .  X    .        .        . W      .    E     .      .        .        .        .        .
 150. . X     .        .        . W      .    E     .      .        .        .        .        .

 155. . X     .        .        . W      .    E     .      .        .        .        .        .
 160. .X      .        .        . W      .    E     .      .        .        .        .        .

 165. .X      .        .        . W      .    E     .      .        .        .        .        .
7 170. X      .        .        . W      .    E     .      .        .        .        .        .
```

```
   175. .       .       .X      . W      .  E    .       .       .       .       .       .       .
 8 180. .       .       .       .       . X E    .       .       .       .       .       .       .

   185. .       .       .    X  . W      .  E    .       .       .       .       .       .       .
 9 190. .     . X       .       . W      .  E    .       .       .       .       .       .       .

   195. .       .   X   . .     . W      .  E    .       .       .       .       .       .       .
   200. .       .     X.        . W      .  E    .       .       .       .       .       .       .
   205. .       .       . X     . W      .  E    .       .       .       .       .       .       .
   210. .       .       .   X   . W      .  E    .       .       .       .       .       .       .
   215. .       .       .     X. W      .  E    .       .       .       .       .       .       .
   220. .       .       .       . X      .  E    .       .       .       .       .       .       .

   225. .       .       .       .    X   .  E    .       .       .       .       .       .       .
   230. .       .       .       .      X. E    .       .       .       .       .       .       .
 10 235. .      .       .       .       . X E    .       .       .       .       .       .       .
   240. .       .       .       .       .       .   X   .       .       .       .       .       .

   245. .       .       .       .       .       .       .       X.      .       .       .       .
 11 250. .      .       .       .       .       .       .       .       . X     .       .    BANK.
```

```
NRD=       0 ELLC=  9999999.00 ELTRD=  9999999.00


  EL(I),STA(I)
      50.30        .00      50.00      55.00      48.00      60.00      48.00      95.00      48.20     110.00
      47.90     170.00      50.00     180.00      48.50     190.00      50.00     235.00      52.00     250.00

1
 CROSS SECTION      2.00

 STREAM  FOR PREMIER HOMES
 DISCHARGE=     1150.



 PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL


 ELEV   43.6      44.1      44.6      45.1      45.6      46.1      46.6      47.1      47.6      48.1      48.6


     STA-FEET


 2   0. .       .       .       .               .     X .     E .       .       .       .    BANK.

    10. .       .       .       .               .    X  .     E .       .       .       .       .
    20. .       .       .       .               .   X   .     E .       .       .       .       .

    30. .       .       .       .               .  X    .     E .       .       .       .       .
    40. .       .       .       .               . X     .     E .       .       .       .       .

    50. .       .       .       .               .X      .     E .       .       .       .       .
    60. .       .       .       .               .X      .     E .       .       .       .       .
```

```
    70. .       .       .       .                   X.      .       E .     .       .       .       .
 4  80. .      XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX .       .       E .     .       .       .       .

    90. .      X .      .       W .       C         .       .       E .     .       .       .       .
   100. .      X .      .       W .       C         .       .       E .     .       .       .       .
   110. .      X .      .       W .       C         .       .       E .     .       .       .       .
 5 120. .      X .      .       W .       C         .       .       E .     .       .       .       .

   130. .  X   .        .       W .       C         .       .       E .     .       .       .       .
 6 140. X      .        .       W .       C         .       .       E .     .       .       .       .

   150. .  X   .        .       W .       C         .       .       E .     .       .       .       .
 8 160. .      XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX .       .       E .     .       .       .       .

   170. .      .        .       .                   X .     .       E .     .       .       .       .
   180. .      .        .       .                   X .     .       E .     .       .       .       .
   190. .      .        .       .                   X .     .       E .     .       .       .       .
   200. .      .        .       .                   X .     .       E .     .       .       .       .

   210. .      .        .       .                   X .     .       E .     .       .       .       .
 9 220. .      .        .       .                   X .     .       E .     .       .       .       .
10 230. .      X .      .       W .       C         .       .       E .     .       .       .       .
11 240. .      X .      .       W .       C         .       .       E .     .       .       .       .
12 250. .      .        .       .                   X .     .       E .     .       .       .       .
   260. .      .        .       .                   X .     .       E .     .       .       .       .
   270. .      .        .       .                   X .     .       E .     .       .       .       .
13 280. .      .        .       .                   X .     .       E .     .       .       .       .
   290. .      .        .       .                   .       .   X   E .     .       .       .       .
   300. .      .        .       .                   .       .       .       X       .       .       .

14 310. .      .        .       .                   .       .       .       .       X .     .       BANK.
```

NRD= 0 ELLC= 9999999.00 ELTRD= 9999999.00

EL(I),STA(I)

46.50	.00	46.00	80.00	44.00	85.00	44.00	120.00	43.60	140.00
44.00	160.00	46.00	165.00	46.00	220.00	44.00	230.00	44.00	240.00
46.00	250.00	46.00	285.00	48.00	310.00				

1

CROSS SECTION 3.00

STREAM FOR PREMIER HOMES
DISCHARGE= 1150.

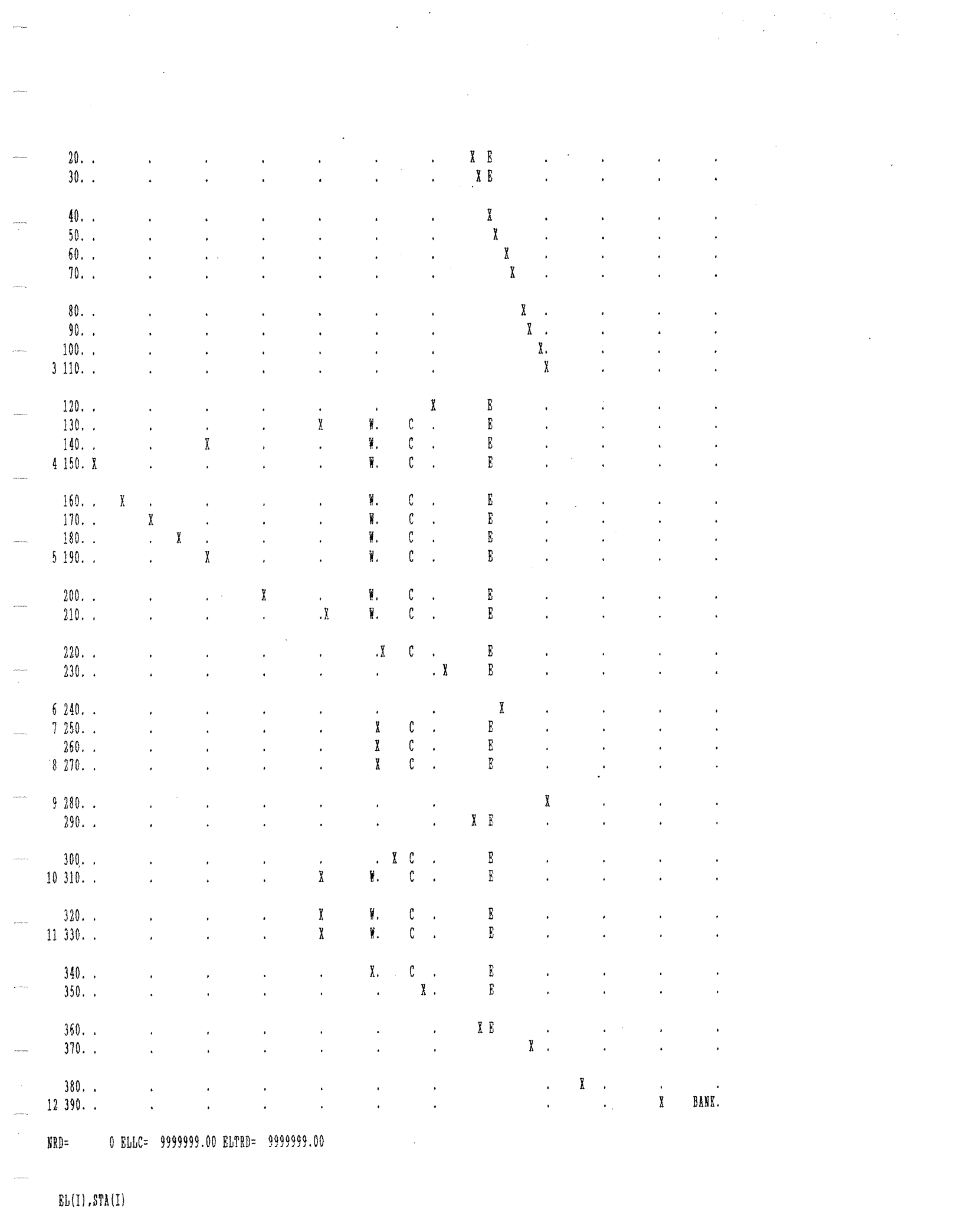
PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL

ELEV	38.0	38.5	39.0	39.5	40.0	40.5	41.0	41.5	42.0	42.5	43.0

STA-FEET

```
2   0. .       .       .       .       .       X   E   .       .       .       .       .   BANK.
    5. .       .       .       .       .       X   E   .       .       .       .       .     .
   10. .       .       .       .       .       X   E   .       .       .       .       .     .

   15. .       .       .       .       .       X   E   .       .       .       .       .     .
   20. .       .       .       .       .       X   E   .       .       .       .       .     .
   25. .       .       .       .       .       X   E   .       .       .       .       .     .
3  30. .       .       .       .       .       X   E   .       .       .       .       .     .

   35. .       .       .       .       .     X .   E   .       .       .       .       .     .
   40. .       .       .       .       .   X .   E   .       .       .       .       .     .

   45. .       .       .       .       .   X .   E   .       .       .       .       .     .
   50. .       .       .       .       . XC  .   E   .       .       .       .       .     .

   55. .       .       .       .       . X C .   E   .       .       .       .       .     .
4  60. .       .       .       .       X   C .   E   .       .       .       .       .     .
   65. .       .       .       .       X   C .   E   .       .       .       .       .     .
   70. .       .       .       .       X   C .   E   .       .       .       .       .     .

   75. .       .       .       .       X   C .   E   .       .       .       .       .     .
   80. .       .       .       .       X   C .   E   .       .       .       .       .     .
   85. .       .       .       .       X   C .   E   .       .       .       .       .     .
   90. .       .       .       .       X   C .   E   .       .       .       .       .     .

5  95. .       .       .       .       X   C .   E   .       .       .       .       .     .
  100. .       .       .     . X   W . C .   E   .       .       .       .       .     .
  105. .       .     . X     .     W . C .   E   .       .       .       .       .     .
  110. .       .   X .       .     W . C .   E   .       .       .       .       .     .

6 115. .     X       .       .     W . C .   E   .       .       .       .       .     .
  120. .   X .       .       .     W . C .   E   .       .       .       .       .     .

  125. . X   .       .       .     W . C .   E   .       .       .       .       .     .
  130. .X    .       .       .     W . C .   E   .       .       .       .       .     .

  135. .X    .       .       .     W . C .   E   .       .       .       .       .     .
7 140. X     .       .       .     W . C .   E   .       .       .       .       .     .

  145. X     .       .       .     W . C .   E   .       .       .       .       .     .
  150. X     .       .       .     W . C .   E   .       .       .       .       .     .

  155. X     .       .       .     W . C .   E   .       .       .       .       .     .
8 160. X     .       .       .     W . C .   E   .       .       .       .       .     .

  165. .X    .       .       .     W . C .   E   .       .       .       .       .     .
  170. .   X .       .       .     W . C .   E   .       .       .       .       .     .

  175. .     X       .       .     W . C .   E   .       .       .       .       .     .
  180. .     . X     .       .     W . C .   E   .       .       .       .       .     .

  185. .     .   X   .       .     W . C .   E   .       .       .       .       .     .
  190. .     .     X .       .     W . C .   E   .       .       .       .       .     .
```

```
    195. .       .       .  X    .      W .  C    .    E .       .       .       .       .       .
    200. .       .       .    X  .      W .  C    .    E .       .       .       .       .       .

    205. .       .       .      X       W .  C    .    E .       .       .       .       .       .
    210. .       .       .        .  X  W .  C    .    E .       .       .       .       .       .

    215. .       .       .  .     .     XW .  C    .    E .       .       .       .       .       .
    220. .       .       .        .       .X C    .    E .       .       .       .       .       .

  9 225. .       .       .        .       . X    .    E .       .       .       .       .       .
    230. .       .       .        .       . XC   .    E .       .       .       .       .       .
    235. .       .       .        .       .X C    .    E .       .       .       .       .       .
    240. .       .       .        .       X  C    .    E .       .       .       .       .       .

    245. .       .       .        .       X. C    .    E .       .       .       .       .       .
    250. .       .       .        .     XW . C    .    E .       .       .       .       .       .
    255. .       .       .        .    X W . C    .    E .       .       .       .       .       .
    260. .       .       .        .   X  W . C    .    E .       .       .       .       .       .

    265. .       .       .        . X    W . C    .    E .       .       .       .       .       .
  10 270. .       .       .        . X    W . C    .    E .       .       .       .       .       .

    275. .       .       .        .    X W . C    .    E .       .       .       .       .       .
  11 280. .       .       .        .      X  C    .    E .       .       .       .       .       .

    285. .       .       .        .      .       .      X .       .       .       .       .       .
  12 290. .       .       .        .      .       .      . .       .       X       .       .   BANK.

NRD=       0 ELLC=  9999999.00 ELTRD=  9999999.00


  EL(I),STA(I)
     40.50       .00      40.50      30.00      40.00      60.00      40.00      95.00      38.50     115.00
     38.00    140.00      38.00     160.00      40.20     225.00      39.60     270.00      40.00     280.00

     42.00    290.00
1

CROSS SECTION      4.00
STREAM  FOR PREMIER HOMES

DISCHARGE=     1150.


PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL


ELEV   36.0      36.5      37.0      37.5      38.0      38.5      39.0      39.5      40.0      40.5      41.0



    STA-FEET


  2   0. .       .       .       .       .       .      . X    E .       .       .   BANK.
     10. .       .       .       .       .       .      .  X   E .       .       .       .
```



NRD= 0 ELLC= 9999999.00 ELTRD= 9999999.00

EL(I),STA(I)

```
      39.20       .00      40.00     110.00      36.00     150.00      37.00     190.00      39.60     240.00
      38.50     250.00     38.50     275.00      40.00     280.00      38.00     310.00      38.00     330.00

      41.00     395.00
1

 CROSS SECTION      5.00
 STREAM  FOR PREMIER HOMES
 DISCHARGE=     1150.


 PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL


 ELEV  35.7      36.2      36.7      37.2      37.7      38.2      38.7      39.2      39.7      40.2      40.7



    STA-FEET

 2   0. .        .         .         .    X    .         . E       .         .         .         .         .    BANK.
    10. .        .         .         .      X  .         . E       .         .         .         .         .       .

    20. .        .         .         .         X         . E       .         .         .         .         .       .
    30. .        .         .         .        .X         . E       .         .         .         .         .       .
    40. .        .         .         .         . X       . E       .         .         .         .         .       .
    50. .        .         .         .          .  X     . E       .         .         .         .         .       .

    60. .        .         .         .          .    X . E       .         .         .         .         .       .
    70. .        .         .         .          .      X. E       .         .         .         .         .       .

    80. .        .         .         .          .       X E       .         .         .         .         .       .
    90. .        .         .         .          .        .XE      .         .         .         .         .       .

 3 100. .        .         .         .          .        .  X     .         .         .         .         .       .
   110. .        .         .         .          .        .X E     .         .         .         .         .       .

 4 120. .        .         .         .          .     X  .. E     .         .         .         .         .       .
 5 130. X        .         .  W      .  C       .        . E      .         .         .         .         .       .

   140. X        .         .  W      .  C       .        . E      .         .         .         .         .       .
   150. X        .         .  W      .  C       .        . E      .         .         .         .         .       .

   160. X        .         .  W      .  C       .        . E      .         .         .         .         .       .
 6 170. X        .         .  W      .  C       .        . E      .         .         .         .         .       .
   180. .     X  .         .  W      .  C       .        . E      .         .         .         .         .       .
   190. .        .      X  .  W      .  C       .        . E      .         .         .         .         .       .

   200. .        .         .    X    .  C       .        . E      .         .         .         .         .       .
   210. .        .         .         .  X       .        . E      .         .         .         .         .       .

   220. .        .         .         .         . X       . E      .         .         .         .         .       .
 7 230. .        .         .         .          .    X    . E      .         .         .         .         .       .

 8 240. .        .         .      X  .  C       .        . E      .         .         .         .         .       .
   250. .        .         .         .         X.        . E      .         .         .         .         .       .

 9 260. .        .         .         .          .     X  . E      .         .         .         .         .       .
```

```
10 270. .    X  .       .  W    .  C    .       .  E    .       .       .       .       .       .
   280. .    X  .       .  W    .  C    .       .  E    .       .       .       .       .       .
   290. .    X  .       .  W    .  C    .       .  E    .       .       .       .       .       .

   300. .    X  .       .  W    .  C    .       .  E    .       .       .       .       .       .
   310. .    X  .       .  W    .  C    .       .  E    .       .       .       .       .       .

11 320. .    X  .       .  W    .  C    .       .  E    .       .       .       .       .       .
12 330. .       .       .       .       .    X  .  E    .       .       .       .       .       .

   340. .       .       .       .       .       .       .  X    .       .       .       .       .
   350. .       .       .       .       .       .       .       .    X  .       .       .       .
13 360. .       .       .       .       .       .       .       .       .    X  .       .    BANK.

NRD=       0 ELLC=  9999999.00 ELTRD=  9999999.00


  EL(I),STA(I)
     37.50        .00      38.40     100.00      38.00     125.00      35.70     135.00      35.70     175.00

     38.00     230.00      37.00     245.00      38.00     260.00      36.00     270.00      36.00     320.00
     38.00     335.00      40.00     360.00

1
CROSS SECTION      6.00
STREAM  FOR PREMIER HOMES
DISCHARGE=     1150.


PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL


ELEV   33.5      34.0      34.5      35.0      35.5      36.0      36.5      37.0      37.5      38.0      38.5


    STA-FEET


 2   0. .       .       .       .       .       X       .       .       .       .       .    BANK.

    10. .       .       .       .       .      .X       .       .       .       .       .       .
    20. .       .       .       .       .       . X     .       .       .       .       .       .

    30. .       .       .       .       .       .  X    .       .       .       .       .       .
    40. .       .       .       .       .       .   X   .       .       .       .       .       .

    50. .       .       .       .       .       .    X  .       .       .       .       .       .
    60. .       .       .       .       .       .     X.       .       .       .       .       .

 3  70. .       .       .       .       .       .      X       .       .       .       .       .
    80. .       .       .       .       .       .     X .      .       .       .       .       .

    90. .       .       .       .       .       .    X  .      .       .       .       .       .
   100. .       .       .       .       .       .   X   .      .       .       .       .       .
```

```
 4 110. .       .       .       .       .       X       .       .       .       .       .       .
 5 120. .       X       . W     C.      .E      .       .       .       .       .       .       .

   130. .     X .       . W     C.      .E      .       .       .       .       .       .       .
   140. .  X    .       . W     C.      .E      .       .       .       .       .       .       .

 6 150. X       .       . W     C.      .E      .       .       .       .       .       .       .
   160. .   X   .       . W     C.      .E      .       .       .       .       .       .       .

 7 170. .       X       . W     C.      .E      .       .       .       .       .       .       .
   180. .       X       . W     C.      .E      .       .       .       .       .       .       .
   190. .       X       . W     C.      .E      .       .       .       .       .       .       .
   200. .       X       . W     C.      .E      .       .       .       .       .       .       .

   210. .       X       . W     C.      .E      .       .       .       .       .       .       .
   220. .       X       . W     C.      .E      .       .       .       .       .       .       .

   230. .       X       . W     C.      .E      .       .       .       .       .       .       .
   240. .       X       . W     C.      .E      .       .       .       .       .       .       .

   250. .       X       . W     C.      .E      .       .       .       .       .       .       .
   260. .       X       . W     C.      .E      .       .       .       .       .       .       .
   270. .       X       . W     C.      .E      .       .       .       .       .       .       .
   280. .       X       . W     C.      .E      .       .       .       .       .       .       .

   290. .       X       . W     C.      .E      .       .       .       .       .       .       .
   300. .       X       . W     C.      .E      .       .       .       .       .       .       .
   310. .       X       . W     C.      .E      .       .       .       .       .       .       .
 8 320. .       X       . W     C.      .E      .       .       .       .       .       .       .
   330. .       .       .       .       .       X       .       .       .       .       .       .
 9 340. .       .       .       .       .       .       .       .       .       X       .    BANK.

NRD=       0 ELLC=  9999999.00 ELTRD=  9999999.00

  EL(I),STA(I)

     36.00        .00      36.50      70.00      36.00     110.00      34.00     120.00      33.50     155.00
     34.00     175.00      34.00     320.00      38.00     340.00

1
 CROSS SECTION      7.00

 STREAM  FOR PREMIER HOMES
 DISCHARGE=     1150.



 PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL

 .

 ELEV   31.0      31.5      32.0      32.5      33.0      33.5      34.0      34.5      35.0      35.5      36.0



    STA-FEET
```

```
2   0. .       .       .       .                 .       .       X       .       .       .       .    BANK.

   10. .       .       .       .                 .       .       .   X   .       .       .       .
   20. .       .       .       .                 .       .       .       X       .       .       .

   30. .       .       .       .                 .       .       .       .   X   .       .       .
   40. .       .       .       .                 .       .       .       .       X       .       .

   50. .       .       .       .                 .       .       .       .       .   X   .       .
3  60. .       .       .       .                 .       .       .       .       .       X       .
   70. .       .       .       .                 .       .       .       .       .       X       .
   80. .       .       .       .                 .       .       .       .       .       X       .

4  90. .       .       .       .                 .       .       .       .       .       X       .
  100. .       .       .       .                 .       .       .       .   X   .       .       .
  110. .       .       .       .                 .       .       .   X   .       .       .       .
5 120. .       .       .       .                 .       X       .       .       .       .       .

6 130. .       .       X       .     W  C        .  E    .       .       .       .       .       .
7 140. X       .       .       .     W  C        .  E    .       .       .       .       .       .

  150. .   X   .       .       .     W  C        .  E    .       .       .       .       .       .
  160. .       . X     .       .     W  C        .  E    .       .       .       .       .       .

8 170. .       .       X       .     W  C        .  E    .       .       .       .       .       .
  180. .       .       X       .     W  C        .  E    .       .       .       .       .       .
  190. .       .       X       .     W  C        .  E    .       .       .       .       .       .
  200. .       .       X       .     W  C        .  E    .       .       .       .       .       .

  210. .       .       X       .     W  C        .  E    .       .       .       .       .       .
  220. .       .       X       .     W  C        .  E    .       .       .       .       .       .
  230. .       .       X       .     W  C        .  E    .       .       .       .       .       .
  240. .       .       X       .     W  C        .  E    .       .       .       .       .       .

  250. .       .       X       .     W  C        .  E    .       .       .       .       .       .
  260. .       .       X       .     W  C        .  E    .       .       .       .       .       .
  270. .       .       X       .     W  C        .  E    .       .       .       .       .       .
  280. .       .       X       .     W  C        .  E    .       .       .       .       .       .

9 290. .       .       X       .     W  C        .  E    .       .       .       .       .       .
  300. .       .       .       .    XW  C        .  E    .       .       .       .       .       .

  310. .       .       .       .                 . XE    .       .       .       .       .       .
  320. .       .       .       .                 .       .   X   .       .       .       .       .

  330. .       .       .       .                 .       .       .       .   X   .       .       .
10 340. .      .       .       .                 .       .       .       .       .       X    BANK.


NRD=       0 ELLC=  9999999.00 ELTRD=  9999999.00


 EL(I),STA(I)

      34.50        .00       36.00       60.00       36.00       90.00       34.00      120.00       32.00      130.00
      31.00     140.00       32.00      170.00       32.00      290.00       36.00      340.00
```

CROSS SECTION 8.00

STREAM FOR PREMIER HOMES
DISCHARGE= 1150.

PLOTTED POINTS (BY PRIORITY)-B=BOTTOM BRIDGE,T=TOP BRIDGE,X=GROUND,W=WATER SUR,E=ENERGY GRADIENT,C=CRITICAL WSEL

```
ELEV   30.0     30.5     31.0     31.5     32.0     32.5     33.0     33.5     34.0     34.5     35.0

   STA-FEET

 2   0. .       .        .                 .        .       X        .        .        .        .    BANK.

    10. .       .        .                 .        .       .      X .        .        .        .        .
    20. .       .        .                 .        .       .        .  X     .        .        .        .
 3  30. .       .        .                 .        .       .        .        X        .        .        .
    40. .       .        .                 .        .       .        .        X        .        .        .

    50. .       .        .                 .        .       .        .        X        .        .        .
    60. .       .        .                 .        .       .        .        X        .        .        .

    70. .       .        .                 .        .       .        .        X        .        .        .
    80. .       .        .                 .        .       .        .        X        .        .        .

    90. .       .        .                 .        .       .        .        X        .        .        .
 4 100. .       .        .                 .        .       .        .        X        .        .        .
   110. .       .        .                 .        .       .      X .        .        .        .        .
 5 120. .       .        .                 .      X .     E .        .        .        .        .        .

 6 130. X       .        .         W   C   .        .     E .        .        .        .        .        .
   140. X       .        .         W   C   .        .     E .        .        .        .        .        .
   150. X       .        .         W   C   .        .     E .        .        .        .        .        .
 7 160. X       .        .         W   C   .        .     E .        .        .        .        .        .

   170. .       X        .         W   C   .        .     E .        .        .        .        .        .
   180. .       .      X .         W   C   .        .     E .        .        .        .        .        .

   190. .       .        .       X W   C   .        .     E .        .        .        .        .        .
 8 200. .       .        .                 .      X .     E .        .        .        .        .        .

   210. .       .        .         X   C   .        .     E .        .        .        .        .        .
   220. .       .        .   X     W   C   .        .     E .        .        .        .        .        .

   230. .       .    X   .         W   C   .        .     E .        .        .        .        .        .
   240. .     X .        .         W   C   .        .     E .        .        .        .        .        .

 9 250. X       .        .         W   C   .        .     E .        .        .        .        .        .
   260. X       .        .         W   C   .        .     E .        .        .        .        .        .

   270. X       .        .         W   C   .        .     E .        .        .        .        .        .
10 280. X       .        .         W   C   .        .     E .        .        .        .        .        .

11 290. .       :        .                 .      X .     E .        .        .        .        .        .
```

```
   300. .       .       .       .       .       .       X       .       .       .       .       .

12 310. .       .       .       .       .       .       .       .       X       .       .    BANK.


NRD=      0 ELLC=  9999999.00 ELTRD=  9999999.00


  EL(I),STA(I)
     33.00       .00      34.00      30.00      34.00     100.00      32.00     125.00      30.00     135.00
     30.00    160.00      31.90     200.00      30.00     250.00      30.00     285.00      32.00     290.00
     34.00    310.00

1
PROFILE FOR STREAM  FOR PREMIER HOMES


PLOTTED POINTS (BY PRIORITY) E-ENERGY,W-WATER SURFACE,I-INVERT,C-CRITICAL W.S.,L-LEFT BANK,R-RIGHT BANK,M-LOWER END STA


ELEVATION  -40.     -30.     -20.     -10.       0.      10.      20.      30.      40.      50.
   SECNO  CUMDIS

    1.00    0.  .       .       .       .       .       .       .       .       .     IWE R     .
           10.  .       .       .       .       .       .       .       .       .      I WE R   .
           20.  .       .       .       .       .       .       .       .       .      I ELR    .
           30.  .       .       .       .       .       .       .       .       .      IWE.R    .
           40.  .       .       .       .       .       .       .       .       .     I WER     .
           50.  .       .       .       .       .       .       .       .       .     IWCER     .
           60.  .       .       .       .       .       .       .       .       .    I WE R     .
           70.  .       .       .       .       .       .       .       .       .    IWCER.     .
           80.  .       .       .       .       .       .       .       .       .   I WLER.     .
           90.  .       .       .       .       .       .       .       .       .   IWCER .     .
    2.00  100.  .       .       .       .       .       .       .       .       .   IWCER .     .
          110.  .       .       .       .       .       .       .       .       .  I WLER .     .
          120.  .       .       .       .       .       .       .       .       .  IWCER  .     .
          130.  .       .       .       .       .       .       .       .       . I WLER  .     .
          140.  .       .       .       .       .       .       .       .       . IWCER   .     .
          150.  .       .       .       .       .       .       .       .       . IWCER   .     .
          160.  .       .       .       .       .       .       .       .       .I WER    .     .
          170.  .       .       .       .       .       .       .       .       .IWCER    .     .
          180.  .       .       .       .       .       .       .       .      I WER      .     .
          190.  .       .       .       .       .       .       .       .      I WER      .     .
          200.  .       .       .       .       .       .       .       .     I.WE R      .     .
          210.  .       .       .       .       .       .       .       .     I.WER       .     .
          220.  .       .       .       .       .       .       .       .     IWE R       .     .
          230.  .       .       .       .       .       .       .       .    I WER        .     .
    3.00  240.  .       .       .       .       .       .       .       .    I WER        .     .
          250.  .       .       .       .       .       .       .       .    I E R        .     .
          260.  .       .       .       .       .       .       .       .   I WE R        .     .
          270.  .       .       .       .       .       .       .       .   I WER         .     .
    4.00  280.  .       .       .       .       .       .       .       .  I WE.R        .     .
          290.  .       .       .       .       .       .       .       .  I WE.R        .     .
    5.00  300.  .       .       .       .       .       .       .       .  IWE R         .     .
          310.  .       .       .       .       .       .       .       . IWCE R         .     .
          320.  .       .       .       .       .       .       .       . IWE R.         .     .
```

```
        330.  .       .       .       .       .       .       .       .  I WE R.      .       .
        340.  .       .       .       .       .       .       .       .  IWE R .      .       .
   6.00 350.  .       .       .       .       .       .       .       .  IWE R .      .       .
        360.  .       .       .       .       .       .       .       . IWEL R .      .       .
        370.  .       .       .       .       .       .       .       . IWE R  .      .       .
        380.  .       .       .       .       .       .       .       .I EL R  .      .       .
        390.  .       .       .       .       .       .       .       . IWELR  .      .       .
   7.00 400.  .       .       .       .       .       .       .       .I WELR  .      .       .
        410.  .       .       .       .       .       .       .       .I EL R  .      .       .
        420.  .       .       .       .       .       .       .       .IWELR   .      .       .
        430.  .       .       .       .       .       .       .       I WE R   .      .       .
   8.00 440.  .       .       .       .       .       .       .       IWELR    .      .       .
1
   24JUN92     14:20:57                                                                PAGE    3


                                                                THIS RUN EXECUTED 24JUN92    14:21:06
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.5.1;  September 1990
 ************************************

 NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

 FOR PREMIER HOMES

 SUMMARY PRINTOUT

      SECNO     ELMIN     CWSEL     CRIWS      Q       QLOB      QCH       QROB      DEPTH     TOPWID    AREA      VCH       EG

 *    1.000     47.90     49.49     49.49    1150.00     .00    1150.00     .00      1.59      157.41    185.51    6.20      50.08

 *    2.000     43.60     45.01     45.61    1150.00     .00    1150.00     .00      1.41      100.16    101.58    11.32     47.00

 *    3.000     38.00     39.90     40.20    1150.00     .00    1150.00     .00      1.90      150.26    150.63    7.63      40.81

      4.000     36.00     38.44     38.78    1150.00     .00    1150.00     .00      2.44      128.31    139.83    8.22      39.49

      5.000     35.70     36.89     37.37    1150.00     .00    1150.00     .00      1.19      135.02    117.95    9.75      38.37

      6.000     33.50     34.66     34.93    1150.00     .00    1150.00     .00      1.16      206.71    150.29    7.65      35.57

      7.000     31.00     32.85     33.02    1150.00     .00    1150.00     .00      1.85      174.82    161.80    7.11      33.63

      8.000     30.00     31.49     31.72    1150.00     .00    1150.00     .00      1.49      141.65    150.05    7.66      32.41

1
   24JUN92     14:20:57                                                                PAGE    4

 FOR PREMIER HOMES
```

County of Bernalillo

State of New Mexico

ONE CIVIC PLAZA, N.W.
ALBUQUERQUE, NEW MEXICO 87102
ADMINISTRATION (505) 768-4000
COMMISSION (505) 768-4217
FAX (505) 768-4329

July 22, 1992

Dave Thompson, P.E.
Wilson & Company
6611 Gulton Court, NE
Albuquerque, New Mexico

RE: DRAINAGE PLAN FOR LOT 19, BLOCK 10, TRACT 2, UNIT 1, N.A.A., (C-22/D30) ENGINEER'S STAMP DATED JULY 2, 1992

Dear Mr. Thompson:

Based on the information received on July 2, and July 22, 1992 the plan is acceptable for Building Permit release.

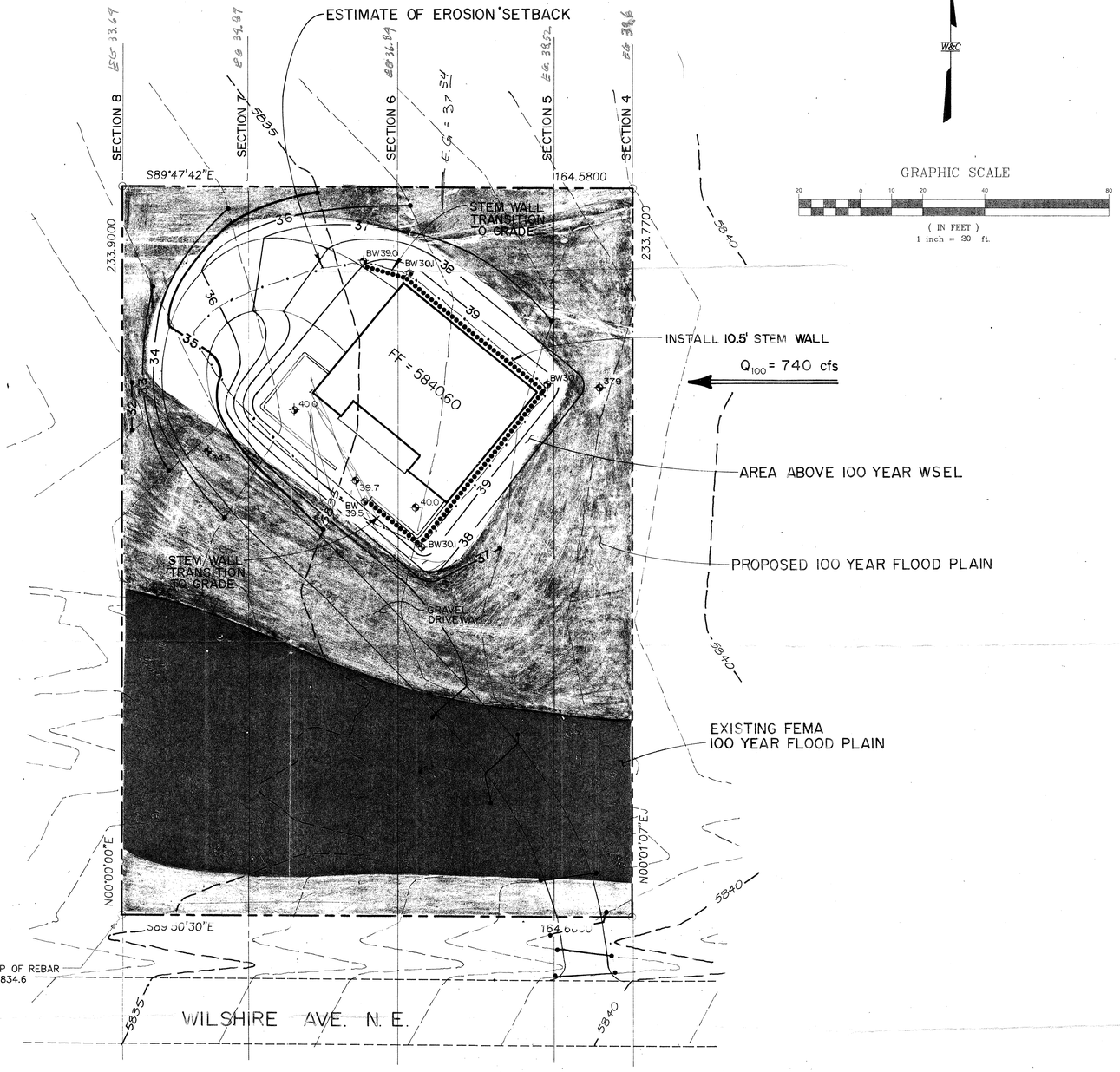
Please be advised that prior to final inspection by the County Building Department, an Engineer's Certification must be submitted and approved by this office. The Certification needs to include the footing depth as-builts.

If you should have any questions, please do not hesitate to call me at 768-2650.

Cordially,

Gilbert Aldaz, P.E. & P.S.
County Floodplain Administrator

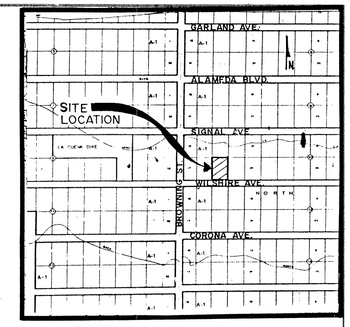
wp+3472



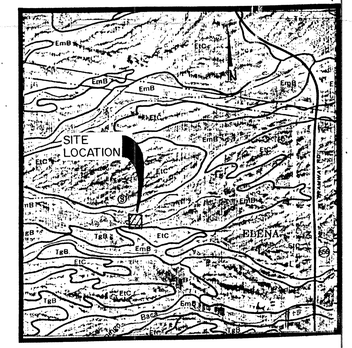
GRAPHIC SCALE

20 0 10 20 40 80

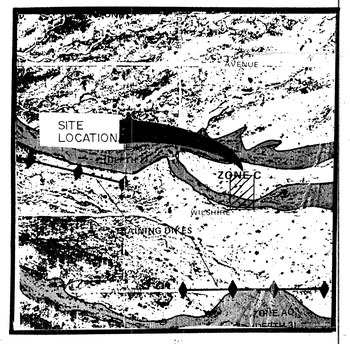
(IN FEET)
1 inch = 20 ft.



LOCATION MAP
ZONE ATLAS MAP NO. C-22



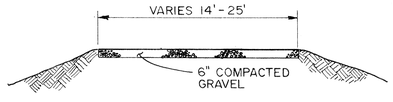
SOILS MAP
REFERENCE: SCS BERNALILLO COUNTY SOIL SURVEY
SHEET NO. 12



FLOOD INSURANCE MAP
REFERENCE: FLOOD INSURANCE STUDY
PANEL 11

LEGEND

- 5840 — EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- 35 — PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- 379 PROPOSED SPOT ELEVATION
- BW34.1 BOTTOM OF WALL ELEVATION



DRIVEWAY SECTION

NOTES:

1. TOPOGRAPHY PROVIDED BY WEISS-HINES ENGINEERING, INC., 1100 ALVARADO NE, ALBUQUERQUE, N.M. 87110.
2. THE CONTRACTOR MUST OBTAIN A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING EARTHWORK.
3. I, DAVID B. THOMPSON, A PROFESSIONAL ENGINEER IN THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT THE TOPOGRAPHY SHOWN ON THIS PLAN REFLECTS THE CONDITIONS ON SITE BASED ON A SITE VISIT MADE ON 6 MAY 1992. IT APPEARS THAT NO GRADING, FILLING OR EXCAVATION HAS OCCURED SINCE THE CONTOUR MAP WAS PREPARED.

LEGAL DESCRIPTION

LOT 19, BLOCK 10
TRACT 2 UNIT 1
NORTH ALBUQUERQUE ACRES

RECEIVED
JUL 22 1992
HYDROLOGY DIVISION

KORMAN RESIDENCE
GRADING & DRAINAGE PLAN

DESIGN	DRAWN	DATE
D.B.T.	K.I.S.	MAY 1992

REGISTERED PROFESSIONAL ENGINEER — DAVID B. THOMPSON — 5-25-92 — 6-26-92 — 7-2-92

WILSON & COMPANY
6611 GULTON CT
ALBUQUERQUE, NEW MEXICO
87109
(505) 345-5345

FILE NO. 92-524

SHEET NO. 1 OF 1

GRANT OF EASEMENT
FLOODWAY AND STORM DRAINAGE WORKS

ROBERT AND MARY TAMSYN KORMAN

(include marital status or state of corporation), Grantors, being the owner(s) of the property described herein, for good and valuable consideration, the receipt of which is hereby acknowledged, does grant, bargain, sell and convey unto the ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY, a political subdivision of the State of New Mexico, Grantee, and its successors and assigns, the permanent right and easement for drainage, flood control and conveyance of storm water and the construction, reconstruction, operation and maintenance of, and access to such facilities on, in, under, over and across the following described real estate:

The land in which the foregoing rights and easements are granted is located within Lot(s) 19 of Block 10 Tract 2 Unit 1 of North Albuquerque Acres in Bernalillo County, New Mexico and is more particularly described in Exhibit "A" attached hereto and incorporated herein by reference.

Except by the written approval of Grantee, no fence, wall, building, or other obstruction may be placed or maintained in said easement and there shall be no alteration of the grades or contours in said easement. The granting of this easement shall not obligate the Grantee to maintain natural arroyos, drainage channels, or facilities that do not meet the standards of the Grantee for design and construction, nor shall this granting require the protection of property lying outside of the easement granted. Grantee shall only maintain property and/or improvements that it specifically agrees, by written agreement filed for public record, to maintain. Unless Grantee specifically agrees, by such written agreement, to maintain property and/or improvements, such maintenance responsibility shall remain with the Grantor, its successors or assigns. Grantor shall not perform any maintenance without the prior approval of the Grantee, except in an emergency. In the event of an emergency, Grantor shall notify the Grantee as soon as practical. Safe locations for structures built on lands adjacent to the rights and easements described herein may be substantially outside of the described area.

TO HAVE AND TO HOLD the said right and easement for the uses and purposes aforesaid, unto the Grantee, its successors and assigns, forever, except that any portion of the easement granted herein shall revert to the Grantor, its successors or assigns, as and to the extent said portion is declared unnecessary for flood control or drainage by the Board of Directors of the Albuquerque Metropolitan Arroyo Flood Control Authority. Any reversion shall be conveyed by quitclaim deed.

THERE IS RESERVED to the Grantor, its successors and assigns, the right to use said lands for open space, landscaping and other purposes which will not interfere with the rights and easements hereby granted, provided that Grantor obtains Grantee's written approval for such use, not to be unreasonably withheld.

WITNESS ~~my~~ hand(s) and seal(s) this 29th day of June, 1992.

Robert Kramer

Mary L. Kramer

ACKNOWLEDGMENT FOR NATURAL PERSONS

STATE OF NEW MEXICO)
)SS
COUNTY OF BERNALILLO)

The foregoing instrument was acknowledged before me this 29th day of June, 1992 by Robert & Mary Kramer
(names)

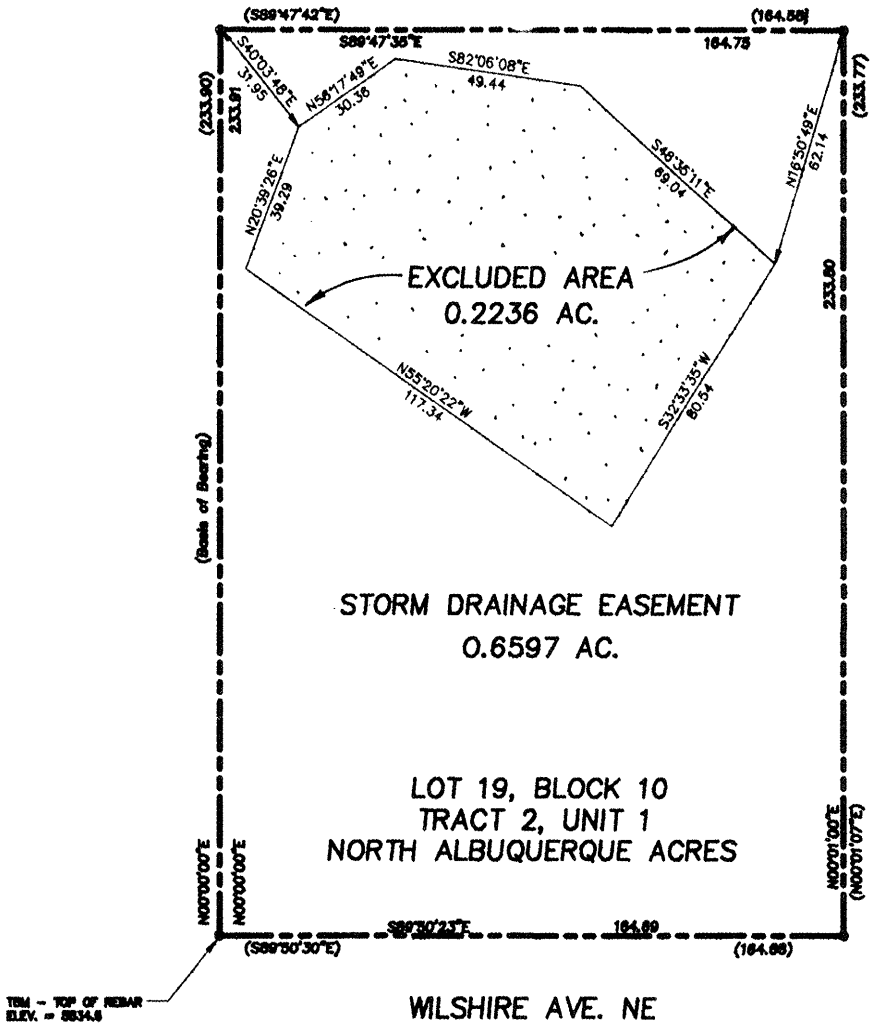
, Married.
(marital status)

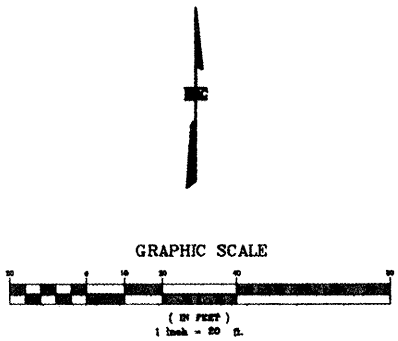
My commission expires:
9-12-93

Bonnie Ortiz
Notary Public

(SEAL)

OFFICIAL SEAL
BONNIE ORTIZ
NOTARY PUBLIC - STATE OF NEW MEXICO
Notary Bond Filed with Secretary of State
My Commission Expires 9-12-93





Field Survey Date: July 2, 1992

I, STEVEN J. METRO, a Registered Professional Surveyor in the State of New Mexico, certify specifically and only to the owner(s), that a field survey, under my supervision, was made on the ground using the normal standard of care of Professional Surveyors practicing in the State of New Mexico on this date. The field survey was made for the purpose of creating a Drainage Easement. All notes shown hereon are a part of this certification and this map accurately depicts the results of said survey. I further certify this plat meets the "New Mexico Minimum Standards for Land Surveying, November 1989",

Steven J. Metro — 7-3-92

STEVEN J. METRO NMPS NO.10025 — DATE

STEVEN J. METRO 10025 REGISTERED PROFESSIONAL LAND SURVEYOR

PLAT OF EASEMENT SURVEY WITHIN
LOT 19, BLOCK 10
TRACT 2, UNIT 1
NORTH ALBUQUERQUE ACRES
BERNALILLO COUNTY, NEW MEXICO
JULY 1992

EXHIBIT "A"

DESIGN	DRAWN		DATE
S.J.M.	K.J.S.	WILSON & COMPANY	JULY 1992
			FILE NO. 92-524
		6611 GULTON CT ALBUQUERQUE, NEW MEXICO 87109 (505) 345-5345	SHEET NO. 1 OF 1

Post-it™ brand fax transmittal memo 7671 | # of pages

To Doreen Price	From SPI
Co.	Co.
Dept.	Phone # 823-92
Fax # 848-1510	Fax #

IPS

ELEVATION CERTIFICATION

OWNER: SCOTT PATRICK, INC.

STREET ADDRESS: 11201 WILSHIRE AVENUE, N.E.

LEGAL DESCRIPTION: LOT 19, BLOCK 10, TRACT 2, UNIT 1
NORTH ALBUQUERQUE ACRES

FIRMA
COMMUNITY NO. AND PANEL : 35002 0011, DATED OCTOBER 14, 1983

FIRM ZONE AND BASE FLOOD ELEVATION: AO DEPTH 2

GRADING PLAN: DAVID THOMPSON, P.E. N.M.P.E. NO. 9677
DATED, JULY 02, 1992

PROJECT T.B.M.: SW PROPERTY CORNER, ELEV.= 5834.6

Construction of this residence is based on Bernalillo County Building Permit No. 94-828. The permit was issued based on an engineer certified and county approved Grading Plan which details the Finished Floor elevation for the residence together with building pad elevation and stem wall for basement.

The approved grading plan meets the Federal Emergency Management Agency requirements for construction within or adjacent to the referenced floodplain.

This elevation certification is based on the information contained in the referenced approved Grading Plan.

ASBUILT GRADES:

BASEMENT FLOOR= 5829.5

FINISHED FLOOR= 5840.7

GRADING PLAN GRADES:

BOTTOM OF WALL= 5830.1

FINISHED FLOOR= 5840.6

Based on the approved Grading Plan and as-built field survey performed on October 30, 1994, the elevation requirements as shown on the approved Grading Plan have been met. Further, the residence as located on the referenced lot is not within the 100 Year Floodway Boundary.

Surveyor's Certification:

I, Bernard W. Seitz, a Registered Professional Surveyor in the State of New Mexico, do hereby certify that I checked the as-built finished floor/stemwall elevations and location of the referenced residence on the subject lot and the results of that field survey are as shown on this Certification.

10-31-94

Bernard W. Seitz, P.E. N.M.P.S. No. 8478 Date

11200 Montgomery N.E., Suite 8 • Albuquerque, New Mexico 87111 • (505) 294-2609