

JOB NO. 126.09
STRN DODSON-89/013

TECHNICAL APPENDIX

COMPREHENSIVE FLOOD PROTECTION PLAN
FOR
SOUTHERN MONTGOMERY COUNTY, TEXAS

San Jacinto River Watershed

by

Dodson & Associates, Inc.
5629 FM 1960 West, Suite 314
Houston, Texas 77069
(713)440-3787

TABLE OF CONTENTS

APPENDIX

| | | |
|-----|-------|--|
| A-1 | HEC-1 | Computer Program Output, San Jacinto River Watershed, Existing |
| A-2 | HEC-1 | Computer Program Output, San Jacinto River Watershed, Interim |
| A-3 | HEC-1 | Computer Program Output, San Jacinto River Watershed, Ultimate |
| B-1 | HEC-1 | Computer Program Output, Study Area, Existing |
| B-2 | HEC-1 | Computer Program Output, Study Area, Interim |
| B-3 | HEC-1 | Computer Program Output, Study Area, Ultimate |
| C-1 | HEC-2 | Computer Program Output, DD #6 Channel III, Existing |
| C-2 | HEC-2 | Computer Program Output, DD #6 Channel III, Interim |
| C-3 | HEC-2 | Computer Program Output, DD #6 Channel III, Ultimate |
| D-1 | HEC-2 | Computer Program Output, Spring Oaks Channel, Existing |
| D-2 | HEC-2 | Computer Program Output, Spring Oaks Channel, Interim |
| D-3 | HEC-2 | Computer Program Output, Spring Oaks Channel, Ultimate |
| E-1 | HEC-2 | Computer Program Output, Sam Bell Gully, Existing |
| E-2 | HEC-2 | Computer Program Output, Sam Bell Gully, Ultimate |
| F-1 | HEC-2 | Computer Program Output, DD #6 Channel II, Existing |
| F-2 | HEC-2 | Computer Program Output, DD #6 Channel II, Ultimate |
| G-1 | HEC-2 | Computer Program Output, Woodson's Gully, Existing |
| G-2 | HEC-2 | Computer Program Output, Woodson's Gully, Ultimate |
| H-1 | HEC-2 | Computer Program Output, White Oak Creek, Existing |
| H-2 | HEC-2 | Computer Program Output, White Oak Creek, Interim |
| H-3 | HEC-2 | Computer Program Output, White Oak Creek, Ultimate |
| I-1 | HEC-2 | Computer Program Output, Harper's Horsepen Branch, Existing |
| I-2 | HEC-2 | Computer Program Output, Harper's Horsepen Branch, Interim |
| I-3 | HEC-2 | Computer Program Output, Harper's Horsepen Branch, Ultimate |
| J-1 | HEC-2 | Computer Program Output, Carter's Slough, Existing |
| J-2 | HEC-2 | Computer Program Output, Carter's Slough, Ultimate |
| K-1 | HEC-2 | Computer Program Output, M.U.D. 15 Channel, Existing |
| K-2 | HEC-2 | Computer Program Output, M.U.D. 15 Channel, Ultimate |
| L-1 | HEC-2 | Computer Program Output, Trade Center Channel, Existing |
| L-2 | HEC-2 | Computer Program Output, Trade Center Channel, Ultimate |

| | | | | | | | | | | | |
|------|----|---|---|--------|--------|--------|--------|--------|--------|--------|--|
| LINE | ID |1.....2.....3.....4.....5.....6.....7.....8.....9.....10 | | | | | | | | | |
| 1 | ID | | SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY | | | | | | | | |
| 2 | ID | | DODSON & ASSOCIATES, INC. SEPTEMBER, 1989 | | | | | | | | |
| 3 | ID | | SAN JACINTO RIVER WATERSHED | | | | | | | | |
| 4 | ID | | 100-YEAR, 48-HOUR STORM EVENT REVISED EXISTING CONDITIONS | | | | | | | | |
| 5 | ID | | FILENAME = SJREX.IH1 | | | | | | | | |
| | | | * | | | | | | | | |
| 6 | ID | | MODEL BASED ON COE LAKE CREEK RESERVOIR STUDY | | | | | | | | |
| 7 | ID | | COE MODEL OF SAN JACINTO RIVER WATERSHED U/S OF BUFFALO BAYOU | | | | | | | | |
| 8 | ID | | DATA FOR PLAN 2 = 1986 CONDITIONS WITH LAKE CONROE AND LAKE HOUSTON | | | | | | | | |
| | | | * | | | | | | | | |
| 9 | IT | 60 | 21AUG89 | 0000 | 200 | | | | | | |
| 10 | IO | | 5 | | | | | | | | |
| 11 | KK | | 41 | | | | | | | | |
| 12 | KM | | BEGIN WEST FORK SAN JACINTO RIVER | | | | | | | | |
| 13 | IN | 120 | 21AUG89 | 0000 | | | | | | | |
| 14 | PB | | 12.95 | | | | | | | | |
| 15 | PI | .12 | .13 | .14 | .15 | .17 | .19 | .28 | .33 | .38 | |
| 16 | PI | .82 | 1.58 | 4.29 | 1.03 | .70 | .43 | .35 | .30 | .20 | |
| 17 | PI | .16 | .15 | .14 | .13 | | | | | | |
| 18 | BA | | 184 | | | | | | | | |
| 19 | LU | 1.0 | .10 | 1.4 | | | | | | | |
| 20 | UC | 16.7 | 7.6 | | | | | | | | |
| 21 | KK | | 42 | | | | | | | | |
| 22 | KM | | ROUTE FROM 41 TO 42 | | | | | | | | |
| 23 | KM | | FOR PLAN 2,3, AND 4 USE 2/3 OF SV TO SHOW LAKE EFFECTS ON TRAVEL TIME | | | | | | | | |
| 24 | RS | 4 | FLOW | -1 | | | | | | | |
| 25 | SV | 0 | 1001 | 2020 | 3937 | 9038 | 14746 | 20380 | 30337 | 39187 | |
| 26 | SV | 65518 | 81246 | 134065 | 174074 | 209945 | | | | | |
| 27 | SQ | 0 | 1000 | 2500 | 5000 | 10000 | 15000 | 20000 | 30000 | 40000 | |
| 28 | SQ | 75000 | 100000 | 200000 | 300000 | 400000 | | | | | |
| 29 | KK | | 42 | | | | | | | | |
| 30 | KM | | COMPUTE RUNOFF FROM AREA 420 AT 42 | | | | | | | | |
| 31 | BA | | 267 | | | | | | | | |
| 32 | LU | 1.0 | .10 | 16.4 | | | | | | | |
| 33 | UC | 16.7 | 7.6 | | | | | | | | |
| 34 | KK | | 42 | | | | | | | | |
| 35 | KM | | COMBINE TWO AT 42 | | | | | | | | |
| 36 | HC | | 2 | | | | | | | | |
| 37 | KK | | 42 | | | | | | | | |
| 38 | KM | | LAKE CONROE ROUTING | | | | | | | | |
| 39 | RS | 1 | STOR | 409500 | | | | | | | |
| 40 | SV | 0 | 370 | 65000 | 175000 | 430260 | 440000 | 445000 | 450000 | 465000 | |
| 41 | SV | 490000 | 500000 | 510000 | 532000 | 545000 | 567000 | 595000 | 620000 | 650000 | |
| 42 | SQ | 0 | 0 | 0 | 0 | 0 | 1000 | 1500 | 2000 | 2500 | |
| 43 | SQ | 11500 | 13300 | 17200 | 144000 | 148000 | 155000 | 162000 | 169000 | 177000 | |

| LINE | ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------|----|------------------------------------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| 44 | KK | 44 | | | | | | | | | |
| 45 | KM | ROUTE FROM 42 TO 44 | | | | | | | | | |
| 46 | RS | 4 | FLOW | -1 | | | | | | | |
| 47 | SV | 0 | 716 | 1385 | 2619 | 5913 | 9491 | 13046 | 18801 | 23792 | 29018 |
| 48 | SV | 39227 | 48121 | 77587 | 99273 | 118263 | | | | | |
| 49 | SQ | 0 | 1000 | 2500 | 5000 | 10000 | 15000 | 20000 | 30000 | 40000 | 50000 |
| 50 | SQ | 75000 | 100000 | 200000 | 300000 | 400000 | | | | | |
| 51 | KK | 44 | | | | | | | | | |
| 52 | KM | COMPUTE RUNOFF FROM AREA 440 AT 44 | | | | | | | | | |
| 53 | BA | 35 | | | | | | | | | |
| 54 | LU | 1.0 | .10 | 4.2 | | | | | | | |
| 55 | UC | 6.6 | 4.0 | | | | | | | | |
| 56 | KK | 44 | | | | | | | | | |
| 57 | KM | COMBINE TWO AT 44 | | | | | | | | | |
| 58 | HC | 2 | | | | | | | | | |
| 59 | KK | 31 | | | | | | | | | |
| 60 | KM | BEGIN LAKE CREEK | | | | | | | | | |
| 61 | KM | COMPUTE RUNOFF FROM AREA 310 AT 31 | | | | | | | | | |
| 62 | BA | 115 | | | | | | | | | |
| 63 | LU | 1.0 | .10 | 0.3 | | | | | | | |
| 64 | UC | 31.8 | 11.0 | | | | | | | | |
| 65 | KK | 32 | | | | | | | | | |
| 66 | KM | ROUTE FROM 31 TO 32 | | | | | | | | | |
| 67 | RS | 4 | FLOW | -1 | | | | | | | |
| 68 | SV | 0 | 712 | 1165 | 1914 | 3205 | 4675 | 5919 | 7719 | 10794 | 14701 |
| 69 | SV | 19244 | 22967 | 26390 | 34122 | 40927 | | | | | |
| 70 | SQ | 0 | 500 | 1000 | 2000 | 4000 | 7000 | 10000 | 15000 | 25000 | 40000 |
| 71 | SQ | 60000 | 80000 | 100000 | 150000 | 200000 | | | | | |
| 72 | KK | 32 | | | | | | | | | |
| 73 | KM | COMPUTE RUNOFF FROM AREA 320 AT 32 | | | | | | | | | |
| 74 | BA | 116 | | | | | | | | | |
| 75 | LU | 1.0 | .10 | 0.4 | | | | | | | |
| 76 | UC | 25.5 | 9.5 | | | | | | | | |
| 77 | KK | 32 | | | | | | | | | |
| 78 | KM | COMBINE TWO AT 32 | | | | | | | | | |
| 79 | HC | 2 | | | | | | | | | |
| 80 | KK | 33 | | | | | | | | | |
| 81 | KM | ROUTE FROM 32 TO 33 | | | | | | | | | |
| 82 | RS | 6 | FLOW | -1 | | | | | | | |
| 83 | SV | 0 | 830 | 1366 | 2798 | 6692 | 12162 | 16568 | 22897 | 33449 | 46415 |
| 84 | SV | 61386 | 75246 | 88324 | 118287 | 145466 | | | | | |
| 85 | SQ | 0 | 500 | 1000 | 2000 | 4000 | 7000 | 10000 | 15000 | 25000 | 40000 |
| 86 | SQ | 60000 | 80000 | 100000 | 150000 | 200000 | | | | | |

| | |
|------|---|
| LINE | ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10 |
| 129 | KK 49 |
| 130 | KM ROUTE FROM 45 TO 49 |
| 131 | RS 2 FLOW -1 |
| 132 | SV 0 253 520 865 1806 3332 4869 7729 10276 12522 |
| 133 | SV 17278 21363 36567 49065 60324 |
| 134 | SQ 0 1000 2500 5000 10000 15000 20000 30000 40000 50000 |
| 135 | SQ 75000 100000 200000 300000 400000 |
| 136 | KK 49 |
| 137 | KM COMPUTE RUNOFF FROM 490 AT 49 |
| 138 | BA 43 |
| 139 | LU 1.0 .10 10 |
| 140 | UC 6.2 4.1 |
| 141 | KK 49 |
| 142 | KM COMBINE TWO AT 49 |
| 143 | HC 2 |
| | * |
| | * ***** |
| | * WOODLANDS TRADE CENTER DITCH WATERSHED |
| | * ***** |
| | * |
| 144 | KK F132A |
| 145 | KM WOODLANDS TRADE CENTER DITCH: SUB-AREA A RUNOFF HYDROGRAPH |
| 146 | BA 0.97 |
| 147 | LE 0.2 2.5 2.0 0.55 2 |
| 148 | UC 6.01 2.65 |
| 149 | KK F132#1 |
| 150 | KM ROUTE FROM IH-45 TO MOUTH OF WOODLANDS TRADE CENTER DITCH |
| 151 | RS 2 STOR -1 |
| 152 | SV 0 25 41 54 68 82 97 |
| 153 | SQ 0 130 270 400 540 670 800 |
| 154 | KK F132B |
| 155 | KM WOODLANDS TRADE CENTER DITCH: SUB-AREA B RUNOFF HYDROGRAPH |
| 156 | BA 1.68 |
| 157 | LE 0.2 2.5 2.0 0.55 26 |
| 158 | UC 3.46 2.44 |
| 159 | KK F132#1 |
| 160 | KM COMBINED HYDROGRAPH AT MOUTH OF WOODLANDS TRADE CENTER DITCH |
| 161 | HC 2 |
| | * |
| | * ***** |
| | * GLENEAGLES DIVERSION DITCH WATERSHED |
| | * ***** |
| | * |

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

```

162 KK F131A
163 KM GLENEAGLES DIVERSION DITCH: RUNOFF HYDROGRAPH
164 BA 1.46
165 LE 0.2 2.5 2.0 0.55 18
166 UC 3.39 4.39

167 KK 49
168 KM COMBINE THREE AT 49
169 HC 3

170 KK 46
171 KM ROUTE FROM 49 TO 46
172 RS 2 FLOW -1
173 SV 0 253 520 865 1806 3332 4869 7729 10276 12522
174 SV 17278 21363 36567 49065 60324
175 SQ 0 1000 2500 5000 10000 15000 20000 30000 40000 50000
176 SQ 75000 100000 200000 300000 400000

177 KK 46
178 KM COMPUTE RUNOFF FROM 460 AT 46
179 BA 53
180 LU 1.0 .10 2.9
181 UC 14.7 7.3

182 KK 46
183 KM COMBINE TWO AT 46
184 HC 2
*
* *****
* CARTER'S SLOUGH WATERSHED
* *****
*

185 KK F128A
186 KM CARTER'S SLOUGH: RUNOFF HYDROGRAPH
187 BA 1.82
188 LE 0.2 2.5 2.0 0.55 7
189 UC 6.96 5.56
*
* *****
* WHITE OAK CREEK - HARPER'S HORSEPEN BRANCH WATERSHED
* *****
*

190 KK F121A
191 KM WHITE OAK CREEK: SUB-AREA A RUNOFF HYDROGRAPH
192 BA 2.70
193 LE 0.2 2.5 2.0 0.55 11
194 UC 6.83 5.01
    
```

| LINE | ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------|----|--|-------|-----|------|------|------|------|---|---|----|
| 195 | KK | F12102A | | | | | | | | | |
| 196 | KM | HARPER'S HORSEPEN BRANCH: SUB-AREA A RUNOFF HYDROGRAPH | | | | | | | | | |
| 197 | BA | 2.38 | | | | | | | | | |
| 198 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 3 | | | | | |
| 199 | UC | 7.45 | 4.63 | | | | | | | | |
| 200 | KK | F12102#1 | | | | | | | | | |
| 201 | KM | ROUTE HARPER'S HORSEPEN BR. SUB-AREA A HYD. TO CONF. WITH F121-02-01 | | | | | | | | | |
| 202 | RS | 11 | STOR | -1 | | | | | | | |
| 203 | SV | 0 | 224 | 419 | 652 | 949 | 1300 | 1465 | | | |
| 204 | SQ | 0 | 260 | 510 | 770 | 1020 | 1280 | 1540 | | | |
| 205 | KK | F12102B | | | | | | | | | |
| 206 | KM | HARPER'S HORSEPEN BRANCH: SUB-AREA B RUNOFF HYDROGRAPH | | | | | | | | | |
| 207 | BA | 1.55 | | | | | | | | | |
| 208 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 6 | | | | | |
| 209 | UC | 8.34 | 8.82 | | | | | | | | |
| 210 | KK | F12102#1 | | | | | | | | | |
| 211 | KM | COMBINED HARPER'S HORSEPEN BR. HYDROGRAPH ABOVE CONF. WITH F121-02-01 | | | | | | | | | |
| 212 | HC | 2 | | | | | | | | | |
| 213 | KK | F1210201A | | | | | | | | | |
| 214 | KM | HARPER'S HORSEPEN BRANCH - TRIBUTARY F121-02-01: RUNOFF HYDROGRAPH | | | | | | | | | |
| 215 | BA | 1.72 | | | | | | | | | |
| 216 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 7 | | | | | |
| 217 | UC | 8.74 | 5.93 | | | | | | | | |
| 218 | KK | F12102#1 | | | | | | | | | |
| 219 | KM | COMBINED HARPER'S HORSEPEN BR. HYDROGRAPH BELOW CONF. WITH F121-02-01 | | | | | | | | | |
| 220 | HC | 2 | | | | | | | | | |
| 221 | KK | F121#1 | | | | | | | | | |
| 222 | KM | ROUTE COMBINED HARPER'S HORSEPEN BR. HYD. TO CONF. WITH WHITE OAK CREEK | | | | | | | | | |
| 223 | RS | 10 | STOR | -1 | | | | | | | |
| 224 | SV | 0 | 329 | 555 | 770 | 1000 | 1208 | 1397 | | | |
| 225 | SQ | 0 | 310 | 620 | 930 | 1240 | 1550 | 1860 | | | |
| 226 | KK | F12102C | | | | | | | | | |
| 227 | KM | HARPER'S HORSEPEN BRANCH: SUB-AREA C RUNOFF HYDROGRAPH | | | | | | | | | |
| 228 | BA | 1.28 | | | | | | | | | |
| 229 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 2 | | | | | |
| 230 | UC | 8.99 | 14.67 | | | | | | | | |
| 231 | KK | F121#1 | | | | | | | | | |
| 232 | KM | COMBINED HARPER'S HORSEPEN BRANCH HYDROGRAPH AT WHITE OAK CREEK | | | | | | | | | |
| 233 | HC | 2 | | | | | | | | | |
| 234 | KK | F121#1 | | | | | | | | | |
| 235 | KM | COMBINED WHITE OAK CR. HYDROGRAPH BELOW CONF. WITH HARPER'S HORSEPEN BR. | | | | | | | | | |
| 236 | HC | 2 | | | | | | | | | |

| | |
|------|---|
| LINE | ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10 |
| 237 | KK F121#2 |
| 238 | KM ROUTE COMBINED HYDROGRAPH TO MOUTH OF WHITE OAK CREEK |
| 239 | RS 3 STOR -1 |
| 240 | SV 0 106 209 310 410 511 615 |
| 241 | SQ 0 420 840 1260 1680 2100 2520 |
| 242 | KK F121B |
| 243 | KM WHITE OAK CREEK: SUB-AREA B RUNOFF HYDROGRAPH |
| 244 | BA 1.17 |
| 245 | LE 0.2 2.5 2.0 0.55 2 |
| 246 | UC 8.30 4.62 |
| 247 | KK F121#2 |
| 248 | KM COMBINED WHITE OAK CREEK HYDROGRAPH AT MOUTH |
| 249 | HC 2 |
| 250 | KK 46 |
| 251 | KM COMBINE THREE AT 46 |
| 252 | HC 3 |
| 253 | KK 47 |
| 254 | KM ROUTE FROM 46 TO 47 |
| 255 | RS 6 FLOW -1 |
| 256 | SV 0 1680 3290 5428 9787 14365 18713 27319 37105 47302 |
| 257 | SV 71126 93029 173233 240575 303803 |
| 258 | SQ 0 1000 2500 5000 10000 15000 20000 30000 40000 50000 |
| 259 | SQ 75000 100000 200000 300000 400000 |
| 260 | KK 47 |
| 261 | KM COMPUTE RUNOFF FROM AREA 470 AT 47 |
| 262 | BA 44 |
| 263 | LU 1.0 .10 3.3 |
| 264 | UC 11.3 6.0 |
| 265 | KK 47-WE2 |
| 266 | KM COMBINE TWO AT 47.TOTAL FLOW FROM WEST FORK U/S OF SPRING CR |
| 267 | HC 2 |
| | * |
| | * |
| | ***** |
| | WOODSON'S GULLY - TANTROUGH GULLY WATERSHED |
| | ***** |
| | * |
| 268 | KK F109A |
| 269 | KM WOODSON'S GULLY: SUB-AREA A RUNOFF HYDROGRAPH |
| 270 | BA 2.80 |
| 271 | LE 0.2 2.5 2.0 0.55 2 |
| 272 | UC 8.61 11.73 |

| LINE | ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------|----|--|-------|-------|-------|-------|-------|--------|-------|-------|--------|
| 317 | KK | F109#3 | | | | | | | | | |
| 318 | KM | COMBINED HYDROGRAPH AT MOUTH OF WOODSON'S GULLY | | | | | | | | | |
| 319 | HC | 2 | | | | | | | | | |
| 320 | KK | 47-WE2 | | | | | | | | | |
| 321 | KM | COMBINE TWO AT 47.TOTAL FLOW FROM WEST FORK U/S OF SPRING CR | | | | | | | | | |
| 322 | HC | 2 | | | | | | | | | |
| 323 | KK | 9 | | | | | | | | | |
| 324 | KM | BEGIN CYPRESS CREEK | | | | | | | | | |
| 325 | KM | COMPUTE RUNOFF FROM AREA 90 AT 9 | | | | | | | | | |
| 326 | BA | 101 | | | | | | | | | |
| 327 | LU | 1.0 | .10 | 1.3 | | | | | | | |
| 328 | UC | 19.3 | 8.4 | | | | | | | | |
| 329 | KK | 9 | | | | | | | | | |
| 330 | KM | DIVERT FLOW TO SOUTHERN DIVIDE | | | | | | | | | |
| 331 | DT | DIVERT | | | | | | | | | |
| 332 | DI | 0 | 5000 | 9500 | 16700 | 41971 | 77291 | 180000 | | | |
| 333 | DQ | 0 | 0 | 2500 | 6700 | 26971 | 57291 | 150000 | | | |
| 334 | KK | 10 | | | | | | | | | |
| 335 | KM | ROUTE FROM 9 TO 10 | | | | | | | | | |
| 336 | RS | 4 | FLOW | -1 | | | | | | | |
| 337 | SV | 0 | 5578 | 8644 | 13147 | 20330 | 26239 | 36269 | 45645 | 54538 | |
| 338 | SQ | 0 | 5000 | 8000 | 12000 | 18000 | 25000 | 40000 | 55000 | 70000 | |
| 339 | KK | 10 | | | | | | | | | |
| 340 | KM | COMPUTE RUNOFF FROM AREA 100 AT 10 | | | | | | | | | |
| 341 | BA | 39 | | | | | | | | | |
| 342 | LU | 1.0 | .10 | 1.3 | | | | | | | |
| 343 | UC | 10.7 | 5.3 | | | | | | | | |
| 344 | KK | 10 | | | | | | | | | |
| 345 | KM | COMBINE TWO AT 10 | | | | | | | | | |
| 346 | HC | 2 | | | | | | | | | |
| 347 | KK | 10 | | | | | | | | | |
| 348 | KM | DIVERT FLOW | | | | | | | | | |
| 349 | DT | DIVERT | | | | | | | | | |
| 350 | DI | 0 | 15000 | 80650 | | | | | | | |
| 351 | DQ | 0 | 0 | 60650 | | | | | | | |
| 352 | KK | 11 | | | | | | | | | |
| 353 | KM | ROUTE FROM 10 TO 11 | | | | | | | | | |
| 354 | RS | 4 | FLOW | -1 | | | | | | | |
| 355 | SV | 0 | 3616 | 5439 | 7763 | 10678 | 13877 | 20525 | 27030 | 33491 | 56419 |
| 356 | SQ | 0 | 5000 | 8000 | 12000 | 18000 | 25000 | 40000 | 55000 | 70000 | 130000 |

| LINE | ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------|----|--|-------|--------|--------|--------|-------|-------|-------|-------|--------|
| 398 | KK | 13 | | | | | | | | | |
| 399 | KM | COMBINE TWO AT 13 | | | | | | | | | |
| 400 | HC | 2 | | | | | | | | | |
| 401 | KK | 26 | | | | | | | | | |
| 402 | KM | ROUTE FROM 13 TO 26 | | | | | | | | | |
| 403 | RS | 4 | FLOW | -1 | | | | | | | |
| 404 | SV | 0 | 2284 | 3584 | 5651 | 8890 | 12515 | 19488 | 26013 | 31925 | 53479 |
| 405 | SQ | 0 | 5000 | 8000 | 12000 | 18000 | 25000 | 40000 | 55000 | 70000 | 130000 |
| 406 | KK | 26 | | | | | | | | | |
| 407 | KM | COMPUTE RUNOFF FROM 140 AT 26 | | | | | | | | | |
| 408 | BA | 35 | | | | | | | | | |
| 409 | LU | 1.0 | .10 | 7.1 | | | | | | | |
| 410 | UC | 6.5 | 4.2 | | | | | | | | |
| 411 | KK | 26 | | | | | | | | | |
| 412 | KM | COMBINE TWO AT 26 (TOTAL FLOW FROM CYPRESS CR) | | | | | | | | | |
| 413 | HC | 2 | | | | | | | | | |
| 414 | KK | 21 | | | | | | | | | |
| 415 | KM | BEGIN SPRINGCREEK WATERSHED | | | | | | | | | |
| 416 | KM | COMPUTE RUNOFF FROM AREA 210 AT 21 | | | | | | | | | |
| 417 | BA | 109 | | | | | | | | | |
| 418 | LU | 1.0 | .10 | 1.1 | | | | | | | |
| 419 | UC | 19.6 | 8.4 | | | | | | | | |
| 420 | KK | 21 | | | | | | | | | |
| 421 | KM | COMPUTE RUNOFF FROM 220 AT 21 | | | | | | | | | |
| 422 | BA | 95 | | | | | | | | | |
| 423 | LU | 1.0 | .10 | 1.9 | | | | | | | |
| 424 | UC | 19.5 | 8.8 | | | | | | | | |
| 425 | KK | 21 | | | | | | | | | |
| 426 | KM | COMBINE TWO AT 21 | | | | | | | | | |
| 427 | HC | 2 | | | | | | | | | |
| 428 | KK | 22 | | | | | | | | | |
| 429 | KM | ROUTE FROM 21 TO 22 | | | | | | | | | |
| 430 | RS | 4 | FLOW | -1 | | | | | | | |
| 431 | SV | 0 | 501 | 997 | 1923 | 3536 | 5545 | 7309 | 9966 | 14642 | 20841 |
| 432 | SV | 29522 | 35897 | 41809 | 55713 | 68044 | | | | | |
| 433 | SQ | 0 | 500 | 1000 | 2000 | 4000 | 7000 | 10000 | 15000 | 25000 | 40000 |
| 434 | SQ | 60000 | 80000 | 100000 | 150000 | 200000 | | | | | |
| 435 | KK | 23 | | | | | | | | | |
| 436 | KM | ROUTE FROM 22 TO 23 | | | | | | | | | |
| 437 | RS | 4 | FLOW | -1 | | | | | | | |
| 438 | SV | 0 | 1072 | 1983 | 3915 | 7666 | 12607 | 16829 | 23005 | 33697 | 47762 |
| 439 | SV | 66552 | 84312 | 100630 | 137064 | 169932 | | | | | |
| 440 | SQ | 0 | 500 | 1000 | 2000 | 4000 | 7000 | 10000 | 15000 | 25000 | 40000 |
| 441 | SQ | 60000 | 80000 | 100000 | 150000 | 200000 | | | | | |

```

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

442      KK      23
443      KM      COMPUTE RUNOFF FROM 230 AT 23
444      BA      112
445      LU      1.0      .10      2.3
446      UC      24.3      10.6

447      KK      23
448      KM      COMPUTE RUNOFF FROM 240 AT 23
449      BA      58
450      LU      1.0      .10      3.3
451      UC      11.3      6.0

452      KK      23
453      KM      COMBINE HYDROGRAPHS AT 23
454      HC      3

455      KK      25
456      KM      ROUTE FROM 23 TO 25
457      RS      2      FLOW      -1
458      SV      0      256      482      1076      2344      4050      5606      7720      11276      15761
459      SV      21200      27461      32844      44172      54042
460      SQ      0      500      1000      2000      4000      7000      10000      15000      25000      40000
461      SQ      60000      80000      100000      150000      200000

462      KK      25
463      KM      COMPUTE RUNOFF FROM 250 AT 25
464      BA      46
465      LU      1.0      .10      6.4
466      UC      9.5      5.6

467      KK      25
468      KM      COMBINE TWO AT 25
469      KM      SPRING CREEK NEAR SPRING 08068520
470      HC      2
*
* *****
* DRAINAGE DISTRICT #6 CHANNEL II WATERSHED
* *****
*

471      KK      A111A
472      KM      DRAINAGE DISTRICT #6 CHANNEL II: RUNOFF HYDROGRAPH
473      BA      0.80
474      LE      0.2      2.5      2.0      0.55      35
475      UC      2.14      1.33
*
* *****
* SAM BELL GULLY WATERSHED
* *****
*

```

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

```

476 KK A110A
477 KM SAM BELL GULLY: RUNOFF HYDROGRAPH
478 BA 0.88
479 LE 0.2 2.5 2.0 0.55 15
480 UC 5.20 3.08
*
* *****
* DRAINAGE DISTRICT #6 CHANNEL III - SPRING OAKS CHANNEL WATERSHED
* *****
*

481 KK A109A
482 KM DRAINAGE DISTRICT #6 CHANNEL III: SUB-AREA A RUNOFF HYDROGRAPH
483 BA 1.36
484 LE 0.2 2.5 2.0 0.55 22
485 UC 3.37 2.20

486 KK A10903A
487 KM SPRING OAKS CHANNEL: RUNOFF HYDROGRAPH
488 BA 2.47
489 LE 0.2 2.5 2.0 0.55 27
490 UC 2.57 1.96

491 KK A109#1
492 KM COMBINED DD#6 CHANNEL III HYD. BELOW CONFLUENCE WITH SPRING OAKS CHANNEL
493 HC 2

494 KK A109#2
495 KM ROUTE COMBINED DD#6 CHANNEL III HYDROGRAPH TO RAYFORD ROAD
496 RS 1 STOR -1
497 SV 0 100 158 208 274 489 866
498 SQ 0 800 1600 2400 3200 4000 4800

499 KK A109B
500 KM DRAINAGE DISTRICT #6 CHANNEL III: SUB-AREA B RUNOFF HYDROGRAPH
501 BA 2.06
502 LE 0.2 2.5 2.0 0.55 16
503 UC 3.01 4.92

504 KK A109#2
505 KM COMBINED DD#6 CHANNEL III HYDROGRAPH AT RAYFORD ROAD
506 HC 2

507 KK A109#3
508 KM ROUTE COMBINED DD#6 CHANNEL III HYDROGRAPH TO MOUTH
509 RS 1 STOR -1
510 SV 0 93 152 204 253 319 426
511 SQ 0 960 1920 2880 3840 4800 5760
    
```

 *
 * FLOOD HYDROGRAPH PACKAGE (HEC-1) *
 * BY THE COE IN FEBRUARY 1981 *
 * REVISED 02 AUG 88 *
 *
 * RUN DATE 09/01/1989 TIME 14:48:08 *
 *

 *
 * DODSON AND ASSOCIATES, INC. *
 * HYDROLOGIST AND CIVIL ENGINEERS *
 * 7015 W TIDWELL SUITE 107 *
 * HOUSTON, TEXAS 77092 *
 * (713) 895-8322 *
 *

SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 DODSON & ASSOCIATES, INC. SEPTEMBER, 1989
 SAN JACINTO RIVER WATERSHED
 100-YEAR, 48-HOUR STORM EVENT REVISED EXISTING CONDITIONS
 FILENAME = SJREX.IH1
 MODEL BASED ON COE LAKE CREEK RESERVOIR STUDY
 COE MODEL OF SAN JACINTO RIVER WATERSHED U/S OF BUFFALO BAYOU
 DATA FOR PLAN 2 = 1986 CONDITIONS WITH LAKE CONROE AND LAKE HOUSTON

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

IT HYDROGRAPH TIME DATA
 NMIN 60 MINUTES IN COMPUTATION INTERVAL
 IDATE 21AUG89 STARTING DATE
 ITIME 0000 STARTING TIME
 NQ 200 NUMBER OF HYDROGRAPH ORDINATES
 NDDATE 29AUG89 ENDING DATE
 NDTIME 0700 ENDING TIME
 ICENT 19 CENTURY MARK

COMPUTATION INTERVAL 1.00 HOURS
 TOTAL TIME BASE 199.00 HOURS

ENGLISH UNITS

DRAINAGE AREA SQUARE MILES
 PRECIPITATION DEPTH INCHES
 LENGTH, ELEVATION FEET
 FLOW CUBIC FEET PER SECOND
 STORAGE VOLUME ACRE-Feet
 SURFACE AREA ACRES
 TEMPERATURE DEGREES FAHRENHEIT

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

| OPERATION | STATION | PEAK FLOW | TIME OF PEAK | AVERAGE FLOW FOR MAXIMUM PERIOD | | | BASIN AREA | MAXIMUM STAGE | TIME OF MAX STAGE |
|---------------|---------|-----------|--------------|---------------------------------|---------|---------|------------|---------------|-------------------|
| | | | | 6-HOUR | 24-HOUR | 72-HOUR | | | |
| HYDROGRAPH AT | 41 | 53475. | 38.00 | 51926. | 36502. | 14317. | 184.00 | | |
| ROUTED TO | 42 | 42474. | 48.00 | 41473. | 32469. | 14305. | 184.00 | | |
| HYDROGRAPH AT | 42 | 80088. | 38.00 | 77836. | 55395. | 22291. | 267.00 | | |
| 2 COMBINED AT | 42 | 99158. | 40.00 | 97316. | 80166. | 36519. | 451.00 | | |
| ROUTED TO | 42 | 77927. | 48.00 | 74989. | 51285. | 25150. | 451.00 | | |
| ROUTED TO | 44 | 70043. | 55.00 | 67405. | 48574. | 24994. | 451.00 | | |
| HYDROGRAPH AT | 44 | 17998. | 30.00 | 15956. | 7926. | 2761. | 35.00 | | |
| 2 COMBINED AT | 44 | 70099. | 55.00 | 67470. | 48625. | 25322. | 486.00 | | |
| HYDROGRAPH AT | 31 | 20942. | 48.00 | 20742. | 17947. | 8841. | 115.00 | | |
| ROUTED TO | 32 | 20727. | 52.00 | 20527. | 17718. | 8771. | 115.00 | | |
| HYDROGRAPH AT | 32 | 25187. | 44.00 | 24829. | 20157. | 8972. | 116.00 | | |
| 2 COMBINED AT | 32 | 43216. | 47.00 | 42635. | 35853. | 17619. | 231.00 | | |
| ROUTED TO | 33 | 39780. | 58.00 | 39290. | 33102. | 17374. | 231.00 | | |
| HYDROGRAPH AT | 33 | 26228. | 39.00 | 25564. | 18497. | 7383. | 95.00 | | |
| 2 COMBINED AT | 33 | 44424. | 56.00 | 43861. | 37572. | 23879. | 326.00 | | |
| ROUTED TO | 44 | 43930. | 58.00 | 43370. | 37424. | 23839. | 326.00 | | |
| HYDROGRAPH AT | 44 | 5199. | 29.00 | 4287. | 1834. | 622. | 8.00 | | |
| 2 COMBINED AT | 44 | 43930. | 58.00 | 43371. | 37426. | 24233. | 334.00 | | |
| 2 COMBINED AT | 44 | 111815. | 56.00 | 109240. | 86014. | 49555. | 820.00 | | |
| ROUTED TO | 45 | 108261. | 59.00 | 105340. | 84766. | 49228. | 820.00 | | |
| HYDROGRAPH AT | 45 | 5661. | 28.00 | 4413. | 1855. | 631. | 8.00 | | |
| 2 COMBINED AT | 45 | 108261. | 59.00 | 105340. | 84767. | 49395. | 828.00 | | |
| ROUTED TO | 49 | 106420. | 61.00 | 103673. | 84103. | 49259. | 828.00 | | |
| HYDROGRAPH AT | 49 | 22530. | 30.00 | 19798. | 9886. | 3491. | 43.00 | | |
| 2 COMBINED AT | 49 | 106440. | 61.00 | 103696. | 84126. | 51237. | 871.00 | | |
| HYDROGRAPH AT | F132A | 546. | 30.00 | 471. | 217. | 77. | .97 | | |

| | | | | | | | |
|---------------|--------|---------|-------|---------|--------|--------|--------|
| ROUTED TO | F132#1 | 529. | 31.00 | 460. | 216. | 77. | .97 |
| HYDROGRAPH AT | F132B | 1167. | 28.00 | 911. | 404. | 148. | 1.68 |
| 2 COMBINED AT | F132#1 | 1511. | 28.00 | 1304. | 616. | 225. | 2.65 |
| HYDROGRAPH AT | F131A | 772. | 28.00 | 661. | 336. | 124. | 1.46 |
| 3 COMBINED AT | 49 | 106445. | 61.00 | 103702. | 84132. | 51499. | 875.11 |
| ROUTED TO | 46 | 104711. | 63.00 | 102296. | 83492. | 51264. | 875.11 |
| HYDROGRAPH AT | 46 | 16513. | 37.00 | 15928. | 10782. | 4154. | 53.00 |
| 2 COMBINED AT | 46 | 105456. | 63.00 | 102963. | 84024. | 54963. | 928.11 |
| HYDROGRAPH AT | F128A | 756. | 31.00 | 687. | 394. | 148. | 1.82 |
| HYDROGRAPH AT | F121A | 1190. | 31.00 | 1077. | 599. | 223. | 2.70 |
| HYDROGRAPH AT | F12102 | 1044. | 31.00 | 945. | 518. | 189. | 2.38 |
| ROUTED TO | F12102 | 803. | 43.00 | 779. | 504. | 189. | 2.38 |
| HYDROGRAPH AT | F12102 | 488. | 33.00 | 461. | 307. | 125. | 1.55 |
| 2 COMBINED AT | F12102 | 1051. | 41.00 | 1032. | 780. | 314. | 3.93 |
| HYDROGRAPH AT | F12102 | 655. | 32.00 | 609. | 368. | 139. | 1.72 |
| 2 COMBINED AT | F12102 | 1396. | 36.00 | 1384. | 1131. | 454. | 5.65 |
| ROUTED TO | F121#1 | 1363. | 46.00 | 1348. | 1088. | 454. | 5.65 |
| HYDROGRAPH AT | F12102 | 289. | 34.00 | 277. | 212. | 100. | 1.28 |
| 2 COMBINED AT | F121#1 | 1543. | 45.00 | 1524. | 1250. | 553. | 6.93 |
| 2 COMBINED AT | F121#1 | 1796. | 43.00 | 1773. | 1590. | 774. | 9.63 |
| ROUTED TO | F121#2 | 1776. | 45.00 | 1757. | 1575. | 774. | 9.63 |
| HYDROGRAPH AT | F121B | 497. | 32.00 | 456. | 254. | 93. | 1.17 |
| 2 COMBINED AT | F121#2 | 1868. | 44.00 | 1853. | 1747. | 866. | 10.80 |
| 3 COMBINED AT | 46 | 106122. | 63.00 | 103572. | 84554. | 55903. | 940.73 |
| ROUTED TO | 47 | 94704. | 75.00 | 93457. | 80881. | 55238. | 940.73 |
| HYDROGRAPH AT | 47 | 16404. | 34.00 | 15526. | 9417. | 3455. | 44.00 |
| 2 COMBINED AT | 47-WE2 | 94706. | 75.00 | 93459. | 80887. | 56476. | 984.73 |
| HYDROGRAPH AT | F109A | 734. | 33.00 | 700. | 505. | 221. | 2.80 |
| ROUTED TO | F109#1 | 710. | 37.00 | 682. | 496. | 221. | 2.80 |
| HYDROGRAPH AT | F109B | 863. | 32.00 | 816. | 555. | 229. | 2.90 |

| | | | | | | | |
|---------------|--------|--------|-------|--------|--------|--------|--------|
| 2 COMBINED AT | F109#1 | 1457. | 35.00 | 1411. | 1024. | 449. | 5.70 |
| ROUTED TO | F109#2 | 1369. | 43.00 | 1318. | 981. | 449. | 5.70 |
| HYDROGRAPH AT | F109C | 411. | 35.00 | 393. | 277. | 116. | 1.46 |
| 2 COMBINED AT | F109#2 | 1630. | 42.00 | 1574. | 1171. | 561. | 7.16 |
| HYDROGRAPH AT | F10902 | 581. | 33.00 | 549. | 388. | 166. | 2.10 |
| 2 COMBINED AT | F109#2 | 1983. | 42.00 | 1910. | 1472. | 726. | 9.26 |
| ROUTED TO | F109#3 | 1912. | 45.00 | 1855. | 1462. | 725. | 9.26 |
| HYDROGRAPH AT | F109D | 578. | 32.00 | 541. | 340. | 132. | 1.66 |
| 2 COMBINED AT | F109#3 | 2099. | 45.00 | 2046. | 1686. | 854. | 10.92 |
| 2 COMBINED AT | 47-WE2 | 95064. | 75.00 | 93818. | 81196. | 57203. | 995.65 |
| HYDROGRAPH AT | 9 | 26455. | 40.00 | 25858. | 19215. | 7855. | 101.00 |
| DIVERSION TO | DIVERT | 14525. | 40.00 | 14046. | 9036. | 3124. | 101.00 |
| HYDROGRAPH AT | 9 | 11930. | 40.00 | 11812. | 10179. | 4730. | 101.00 |
| ROUTED TO | 10 | 10397. | 53.00 | 10305. | 9151. | 4711. | 101.00 |
| HYDROGRAPH AT | 10 | 15465. | 33.00 | 14529. | 8458. | 3033. | 39.00 |
| 2 COMBINED AT | 10 | 17385. | 34.00 | 16574. | 13443. | 7700. | 140.00 |
| DIVERSION TO | DIVERT | 2203. | 34.00 | 1473. | 379. | 126. | 140.00 |
| HYDROGRAPH AT | 10 | 15182. | 34.00 | 15101. | 13064. | 7574. | 140.00 |
| ROUTED TO | 11 | 14362. | 42.00 | 14091. | 12548. | 7537. | 140.00 |
| HYDROGRAPH AT | 11 | 6741. | 33.00 | 6333. | 3687. | 1322. | 17.00 |
| 2 COMBINED AT | 11 | 17423. | 40.00 | 17068. | 14417. | 8798. | 157.00 |
| DIVERSION TO | DIVERT | 398. | 40.00 | 239. | 60. | 20. | 157.00 |
| HYDROGRAPH AT | 11 | 17025. | 40.00 | 16829. | 14357. | 8778. | 157.00 |
| ROUTED TO | 12 | 16717. | 44.00 | 16438. | 14097. | 8753. | 157.00 |
| HYDROGRAPH AT | 12 | 23358. | 38.00 | 22654. | 15897. | 6265. | 80.00 |
| 2 COMBINED AT | 12 | 36996. | 40.00 | 35671. | 27654. | 14872. | 237.00 |
| DIVERSION TO | DIVERT | 0. | 40.00 | 0. | 0. | 0. | 237.00 |
| HYDROGRAPH AT | 12 | 36996. | 40.00 | 35671. | 27654. | 14872. | 237.00 |
| ROUTED TO | 13 | 32295. | 49.00 | 31692. | 25820. | 14716. | 237.00 |
| HYDROGRAPH AT | 13 | 27466. | 29.00 | 23632. | 11173. | 3912. | 48.00 |

| | | | | | | | |
|---------------|--------|--------|-------|--------|--------|--------|--------|
| 2 COMBINED AT | 13 | 32781. | 48.00 | 32169. | 26497. | 17979. | 285.00 |
| ROUTED TO | 26 | 31287. | 54.00 | 30769. | 26166. | 17893. | 285.00 |
| HYDROGRAPH AT | 26 | 17793. | 30.00 | 15804. | 7964. | 2800. | 35.00 |
| 2 COMBINED AT | 26 | 32187. | 33.00 | 31274. | 27056. | 20373. | 320.00 |
| HYDROGRAPH AT | 21 | 28343. | 40.00 | 27717. | 20675. | 8468. | 109.00 |
| HYDROGRAPH AT | 21 | 24374. | 40.00 | 23839. | 17864. | 7408. | 95.00 |
| 2 COMBINED AT | 21 | 52717. | 40.00 | 51556. | 38539. | 15875. | 204.00 |
| ROUTED TO | 22 | 50275. | 45.00 | 49186. | 37364. | 15847. | 204.00 |
| ROUTED TO | 23 | 40475. | 57.00 | 39746. | 31937. | 15574. | 204.00 |
| HYDROGRAPH AT | 23 | 24063. | 44.00 | 23707. | 19194. | 8724. | 112.00 |
| HYDROGRAPH AT | 23 | 21623. | 34.00 | 20466. | 12414. | 4555. | 58.00 |
| 3 COMBINED AT | 23 | 53841. | 54.00 | 53109. | 45492. | 28065. | 374.00 |
| ROUTED TO | 25 | 52613. | 57.00 | 51952. | 45228. | 27827. | 374.00 |
| HYDROGRAPH AT | 25 | 18729. | 33.00 | 17474. | 10084. | 3667. | 46.00 |
| 2 COMBINED AT | 25 | 53092. | 57.00 | 52446. | 46610. | 31110. | 420.00 |
| HYDROGRAPH AT | A111A | 740. | 27.00 | 496. | 199. | 73. | .80 |
| HYDROGRAPH AT | A110A | 506. | 29.00 | 428. | 204. | 74. | .88 |
| HYDROGRAPH AT | A109A | 976. | 28.00 | 752. | 324. | 118. | 1.36 |
| HYDROGRAPH AT | A10903 | 1915. | 27.00 | 1424. | 598. | 219. | 2.47 |
| 2 COMBINED AT | A109#1 | 2815. | 27.00 | 2176. | 922. | 337. | 3.83 |
| ROUTED TO | A109#2 | 2646. | 28.00 | 2113. | 919. | 337. | 3.83 |
| HYDROGRAPH AT | A109B | 1043. | 28.00 | 893. | 467. | 174. | 2.06 |
| 2 COMBINED AT | A109#2 | 3689. | 28.00 | 3006. | 1385. | 511. | 5.89 |
| ROUTED TO | A109#3 | 3596. | 29.00 | 2930. | 1381. | 511. | 5.89 |
| HYDROGRAPH AT | A109C | 827. | 28.00 | 652. | 296. | 107. | 1.27 |
| 2 COMBINED AT | A109#3 | 4333. | 29.00 | 3574. | 1675. | 618. | 7.16 |
| 4 COMBINED AT | 25 | 53132. | 57.00 | 52493. | 46848. | 31776. | 428.84 |
| ROUTED TO | 26 | 50853. | 66.00 | 50398. | 46397. | 31552. | 428.84 |
| HYDROGRAPH AT | 26 | 9876. | 32.00 | 9063. | 4913. | 1754. | 22.00 |
| 2 COMBINED AT | 26 | 50858. | 66.00 | 50403. | 46486. | 32672. | 450.84 |

| | | | | | | | |
|---------------|----|---------|-------|---------|---------|---------|---------|
| 2 COMBINED AT | 26 | 74299. | 61.00 | 74226. | 72336. | 52825. | 770.84 |
| ROUTED TO | 47 | 74264. | 63.00 | 74198. | 72174. | 52668. | 770.84 |
| HYDROGRAPH AT | 47 | 3440. | 28.00 | 2748. | 1151. | 390. | 5.00 |
| 2 COMBINED AT | 47 | 74264. | 63.00 | 74198. | 72174. | 52854. | 775.84 |
| 2 COMBINED AT | 47 | 157780. | 73.00 | 156109. | 140098. | 109253. | 1771.49 |
| HYDROGRAPH AT | 71 | 75015. | 42.00 | 73688. | 57861. | 25506. | 325.00 |
| ROUTED TO | 72 | 60695. | 57.00 | 59814. | 50393. | 25173. | 325.00 |
| HYDROGRAPH AT | 72 | 18821. | 37.00 | 18183. | 12369. | 4771. | 61.00 |
| 2 COMBINED AT | 72 | 62701. | 57.00 | 61866. | 52701. | 29336. | 386.00 |
| HYDROGRAPH AT | 51 | 29711. | 38.00 | 28884. | 20607. | 8230. | 105.00 |
| ROUTED TO | 52 | 24097. | 51.00 | 23650. | 18801. | 8213. | 105.00 |
| HYDROGRAPH AT | 52 | 24868. | 36.00 | 23971. | 16124. | 6207. | 79.00 |
| 2 COMBINED AT | 52 | 31296. | 46.00 | 31190. | 29214. | 14371. | 184.00 |
| HYDROGRAPH AT | 61 | 32725. | 38.00 | 31830. | 22852. | 9191. | 117.00 |
| ROUTED TO | 52 | 30283. | 44.00 | 29503. | 21999. | 9187. | 117.00 |
| HYDROGRAPH AT | 52 | 17688. | 33.00 | 16563. | 9560. | 3441. | 44.00 |
| 2 COMBINED AT | 52 | 35177. | 42.00 | 34647. | 28699. | 12618. | 161.00 |
| 2 COMBINED AT | 52 | 66241. | 42.00 | 65798. | 57544. | 26986. | 345.00 |
| ROUTED TO | 72 | 65986. | 44.00 | 65478. | 57187. | 26980. | 345.00 |
| HYDROGRAPH AT | 72 | 12124. | 32.00 | 11183. | 6196. | 2218. | 28.00 |
| 2 COMBINED AT | 72 | 68571. | 42.00 | 68149. | 60812. | 29179. | 373.00 |
| 2 COMBINED AT | 72 | 111904. | 52.00 | 110884. | 100981. | 58269. | 759.00 |
| HYDROGRAPH AT | 81 | 31855. | 38.00 | 30970. | 22025. | 8737. | 112.00 |
| ROUTED TO | 82 | 22219. | 56.00 | 21869. | 18008. | 8631. | 112.00 |
| HYDROGRAPH AT | 82 | 31463. | 39.00 | 30705. | 22492. | 9097. | 117.00 |
| 2 COMBINED AT | 82 | 34520. | 42.00 | 34066. | 31546. | 17547. | 229.00 |
| 3 COMBINED AT | 82 | 264559. | 52.00 | 262562. | 244473. | 183475. | 2759.49 |
| ROUTED TO | 82 | 257197. | 59.00 | 255791. | 241253. | 177718. | 2759.49 |
| HYDROGRAPH AT | 91 | 43634. | 32.00 | 40125. | 22203. | 8086. | 98.00 |
| 2 COMBINED AT | 91 | 257533. | 59.00 | 256163. | 241832. | 178991. | 2857.49 |

| | | | | | | | |
|---------------|--------|---------|-------|---------|---------|---------|---------|
| ROUTED TO | 91 | 255692. | 61.00 | 254299. | 239247. | 171298. | 2857.49 |
| ROUTED TO | 92 | 254063. | 64.00 | 252506. | 236860. | 170367. | 2857.49 |
| HYDROGRAPH AT | 92 | 5912. | 28.00 | 4561. | 1891. | 651. | 8.00 |
| 2 COMBINED AT | 92-SJ1 | 254063. | 64.00 | 252506. | 236860. | 170367. | 2865.49 |
| ROUTED TO | 93 | 250312. | 70.00 | 248615. | 233230. | 166819. | 2865.49 |
| HYDROGRAPH AT | 93 | 25055. | 32.00 | 23071. | 12953. | 4761. | 57.00 |
| 2 COMBINED AT | 93 | 250327. | 70.00 | 248627. | 233241. | 166830. | 2922.49 |

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

| | | | | | | | | | | | |
|------|---------|---|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| LINE | ID..... | 1..... | 2..... | 3..... | 4..... | 5..... | 6..... | 7..... | 8..... | 9..... | 10 |
| 1 | ID | SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY | | | | | | | | | |
| 2 | ID | DODSON & ASSOCIATES, INC. SEPTEMBER, 1989 | | | | | | | | | |
| 3 | ID | SAN JACINTO RIVER WATERSHED | | | | | | | | | |
| 4 | ID | 100-YEAR, 48-HOUR STORM EVENT INTERIM CONDITIONS IN STUDY AREA | | | | | | | | | |
| 5 | ID | FILENAME = SJRINT.IH1 | | | | | | | | | |
| | * | | | | | | | | | | |
| 6 | ID | MODEL BASED ON COE LAKE CREEK RESERVOIR STUDY | | | | | | | | | |
| 7 | ID | COE MODEL OF SAN JACINTO RIVER WATERSHED U/S OF BUFFALO BAYOU | | | | | | | | | |
| 8 | ID | DATA FOR PLAN 2 = 1986 CONDITIONS WITH LAKE CONROE AND LAKE HOUSTON | | | | | | | | | |
| | * | | | | | | | | | | |
| 9 | IT | 60 | 21AUG89 | 0000 | 200 | | | | | | |
| 10 | IO | 5 | | | | | | | | | |
| 11 | KK | 41 | | | | | | | | | |
| 12 | KM | BEGIN WEST FORK SAN JACINTO RIVER | | | | | | | | | |
| 13 | IN | 120 | 21AUG89 | 0000 | | | | | | | |
| 14 | PB | 12.95 | | | | | | | | | |
| 15 | PI | .12 | .13 | .14 | .15 | .17 | .19 | .28 | .33 | .38 | .62 |
| 16 | PI | .82 | 1.58 | 4.29 | 1.03 | .70 | .43 | .35 | .30 | .20 | .18 |
| 17 | PI | .16 | .15 | .14 | .13 | | | | | | |
| 18 | BA | 184 | | | | | | | | | |
| 19 | LU | 1.0 | .10 | 1.4 | | | | | | | |
| 20 | UC | 16.7 | 7.6 | | | | | | | | |
| 21 | KK | 42 | | | | | | | | | |
| 22 | KM | ROUTE FROM 41 TO 42 | | | | | | | | | |
| 23 | KM | FOR PLAN 2,3, AND 4 USE 2/3 OF SV TO SHOW LAKE EFFECTS ON TRAVEL TIME | | | | | | | | | |
| 24 | RS | 4 | FLOW | -1 | | | | | | | |
| 25 | SV | 0 | 1001 | 2020 | 3937 | 9038 | 14746 | 20380 | 30337 | 39187 | 47642 |
| 26 | SV | 65518 | 81246 | 134065 | 174074 | 209945 | | | | | |
| 27 | SQ | 0 | 1000 | 2500 | 5000 | 10000 | 15000 | 20000 | 30000 | 40000 | 50000 |
| 28 | SQ | 75000 | 100000 | 200000 | 300000 | 400000 | | | | | |
| 29 | KK | 42 | | | | | | | | | |
| 30 | KM | COMPUTE RUNOFF FROM AREA 420 AT 42 | | | | | | | | | |
| 31 | BA | 267 | | | | | | | | | |
| 32 | LU | 1.0 | .10 | 16.4 | | | | | | | |
| 33 | UC | 16.7 | 7.6 | | | | | | | | |
| 34 | KK | 42 | | | | | | | | | |
| 35 | KM | COMBINE TWO AT 42 | | | | | | | | | |
| 36 | HC | 2 | | | | | | | | | |
| 37 | KK | 42 | | | | | | | | | |
| 38 | KM | LAKE CONROE ROUTING | | | | | | | | | |
| 39 | RS | 1 | STOR | 409500 | | | | | | | |
| 40 | SV | 0 | 370 | 65000 | 175000 | 430260 | 440000 | 445000 | 450000 | 465000 | 475000 |
| 41 | SV | 490000 | 500000 | 510000 | 532000 | 545000 | 567000 | 595000 | 620000 | 650000 | |
| 42 | SQ | 0 | 0 | 0 | 0 | 0 | 1000 | 1500 | 2000 | 2500 | 6100 |
| 43 | SQ | 11500 | 13300 | 17200 | 144000 | 148000 | 155000 | 162000 | 169000 | 177000 | |

| LINE | ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------|----|------------------------------------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| 44 | KK | 44 | | | | | | | | | |
| 45 | KM | ROUTE FROM 42 TO 44 | | | | | | | | | |
| 46 | RS | 4 | FLOW | -1 | | | | | | | |
| 47 | SV | 0 | 716 | 1385 | 2619 | 5913 | 9491 | 13046 | 18801 | 23792 | 29018 |
| 48 | SV | 39227 | 48121 | 77587 | 99273 | 118263 | | | | | |
| 49 | SQ | 0 | 1000 | 2500 | 5000 | 10000 | 15000 | 20000 | 30000 | 40000 | 50000 |
| 50 | SQ | 75000 | 100000 | 200000 | 300000 | 400000 | | | | | |
| 51 | KK | 44 | | | | | | | | | |
| 52 | KM | COMPUTE RUNOFF FROM AREA 440 AT 44 | | | | | | | | | |
| 53 | BA | 35 | | | | | | | | | |
| 54 | LU | 1.0 | .10 | 4.2 | | | | | | | |
| 55 | UC | 6.6 | 4.0 | | | | | | | | |
| 56 | KK | 44 | | | | | | | | | |
| 57 | KM | COMBINE TWO AT 44 | | | | | | | | | |
| 58 | HC | 2 | | | | | | | | | |
| 59 | KK | 31 | | | | | | | | | |
| 60 | KM | BEGIN LAKE CREEK | | | | | | | | | |
| 61 | KM | COMPUTE RUNOFF FROM AREA 310 AT 31 | | | | | | | | | |
| 62 | BA | 115 | | | | | | | | | |
| 63 | LU | 1.0 | .10 | 0.3 | | | | | | | |
| 64 | UC | 31.8 | 11.0 | | | | | | | | |
| 65 | KK | 32 | | | | | | | | | |
| 66 | KM | ROUTE FROM 31 TO 32 | | | | | | | | | |
| 67 | RS | 4 | FLOW | -1 | | | | | | | |
| 68 | SV | 0 | 712 | 1165 | 1914 | 3205 | 4675 | 5919 | 7719 | 10794 | 14701 |
| 69 | SV | 19244 | 22967 | 26390 | 34122 | 40927 | | | | | |
| 70 | SQ | 0 | 500 | 1000 | 2000 | 4000 | 7000 | 10000 | 15000 | 25000 | 40000 |
| 71 | SQ | 60000 | 80000 | 100000 | 150000 | 200000 | | | | | |
| 72 | KK | 32 | | | | | | | | | |
| 73 | KM | COMPUTE RUNOFF FROM AREA 320 AT 32 | | | | | | | | | |
| 74 | BA | 116 | | | | | | | | | |
| 75 | LU | 1.0 | .10 | 0.4 | | | | | | | |
| 76 | UC | 25.5 | 9.5 | | | | | | | | |
| 77 | KK | 32 | | | | | | | | | |
| 78 | KM | COMBINE TWO AT 32 | | | | | | | | | |
| 79 | HC | 2 | | | | | | | | | |
| 80 | KK | 33 | | | | | | | | | |
| 81 | KM | ROUTE FROM 32 TO 33 | | | | | | | | | |
| 82 | RS | 6 | FLOW | -1 | | | | | | | |
| 83 | SV | 0 | 830 | 1366 | 2798 | 6692 | 12162 | 16568 | 22897 | 33449 | 46415 |
| 84 | SV | 61386 | 75246 | 88324 | 118287 | 145466 | | | | | |
| 85 | SQ | 0 | 500 | 1000 | 2000 | 4000 | 7000 | 10000 | 15000 | 25000 | 40000 |
| 86 | SQ | 60000 | 80000 | 100000 | 150000 | 200000 | | | | | |

| LINE | ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------|----|--|------|-----|------|------|------|------|---|---|----|
| 195 | KK | F126#1 | | | | | | | | | |
| 196 | KM | ROUTE HARPER'S HORSEPEN BR. SUB-AREA A HYD. TO CONF. WITH F126-01-00 | | | | | | | | | |
| 197 | RS | 45 | STOR | -1 | | | | | | | |
| 198 | SV | 0 | 224 | 419 | 652 | 949 | 1300 | 1465 | | | |
| 199 | SQ | 0 | 260 | 510 | 770 | 1020 | 1280 | 1540 | | | |
| 200 | KK | F126B | | | | | | | | | |
| 201 | KM | HARPER'S HORSEPEN BRANCH: SUB-AREA B RUNOFF HYDROGRAPH | | | | | | | | | |
| 202 | BA | 1.55 | | | | | | | | | |
| 203 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 6 | | | | | |
| 204 | UC | 8.34 | 8.82 | | | | | | | | |
| 205 | KK | F126#1 | | | | | | | | | |
| 206 | KM | COMBINED HARPER'S HORSEPEN BR. HYDROGRAPH ABOVE CONF. WITH F126-01-00 | | | | | | | | | |
| 207 | HC | 2 | | | | | | | | | |
| 208 | KK | F12601A | | | | | | | | | |
| 209 | KM | HARPER'S HORSEPEN BRANCH - TRIBUTARY F126-01-00: RUNOFF HYDROGRAPH | | | | | | | | | |
| 210 | BA | 1.72 | | | | | | | | | |
| 211 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 7 | | | | | |
| 212 | UC | 8.74 | 5.93 | | | | | | | | |
| 213 | KK | F126#1 | | | | | | | | | |
| 214 | KM | COMBINED HARPER'S HORSEPEN BR. HYDROGRAPH BELOW CONF. WITH F126-01-00 | | | | | | | | | |
| 215 | HC | 2 | | | | | | | | | |
| 216 | KK | F126#2 | | | | | | | | | |
| 217 | KM | ROUTE COMBINED HARPER'S HORSEPEN BR. HYD. TO CONF. WITH WEST FORK S.J.R. | | | | | | | | | |
| 218 | RM | 5 | 1.1 | 0.2 | | | | | | | |
| 219 | KK | F126C | | | | | | | | | |
| 220 | KM | HARPER'S HORSEPEN BRANCH: SUB-AREA C RUNOFF HYDROGRAPH | | | | | | | | | |
| 221 | BA | .87 | | | | | | | | | |
| 222 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 2 | | | | | |
| 223 | UC | 4.59 | 4.05 | | | | | | | | |
| 224 | KK | F126#2 | | | | | | | | | |
| 225 | KM | COMBINED HARPER'S HORSEPEN BR. HYDROGRAPH AT WEST FORK SAN JACINTO R. | | | | | | | | | |
| 226 | HC | 2 | | | | | | | | | |
| | * | | | | | | | | | | |
| | * | ***** | | | | | | | | | |
| | * | WHITE OAK CREEK WATERSHED | | | | | | | | | |
| | * | ***** | | | | | | | | | |
| | * | | | | | | | | | | |
| 227 | KK | F121A | | | | | | | | | |
| 228 | KM | WHITE OAK CREEK: SUB-AREA A RUNOFF HYDROGRAPH | | | | | | | | | |
| 229 | BA | 2.70 | | | | | | | | | |
| 230 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 11 | | | | | |
| 231 | UC | 3.42 | 2.51 | | | | | | | | |

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

```

232 KK F12102A
233 KM TRIBUTARY F121-02-00: RUNOFF HYDROGRAPH
234 BA 0.99
235 LE 0.2 2.5 2.0 0.55 2
236 UC 8.99 14.67

237 KK F121#1
238 KM COMBINED WHITE OAK CR. HYDROGRAPH BELOW CONF. WITH F121-02-00
239 HC 2

240 KK F121#2
241 KM ROUTE COMBINED HYDROGRAPH TO MOUTH OF WHITE OAK CREEK
242 RM 4 1.0 0.2

243 KK F121B
244 KM WHITE OAK CREEK: SUB-AREA B RUNOFF HYDROGRAPH
245 BA 1.17
246 LE 0.2 2.5 2.0 0.55 2
247 UC 3.79 2.11

248 KK F121#2
249 KM COMBINED WHITE OAK CREEK HYDROGRAPH AT MOUTH
250 HC 2

251 KK 46
252 KM COMBINE FOUR AT 46
253 HC 4

254 KK 47
255 KM ROUTE FROM 46 TO 47
256 RS 6 FLOW -1
257 SV 0 1680 3290 5428 9787 14365 18713 27319 37105 47302
258 SV 71126 93029 173233 240575 303803
259 SQ 0 1000 2500 5000 10000 15000 20000 30000 40000 50000
260 SQ 75000 100000 200000 300000 400000

261 KK 47
262 KM COMPUTE RUNOFF FROM AREA 470 AT 47
263 BA 43.4
264 LU 1.0 .10 3.3
265 UC 11.3 6.0

266 KK 47-WE2
267 KM COMBINE TWO AT 47.TOTAL FLOW FROM WEST FORK U/S OF SPRING CR
268 HC 2
*
* *****
* WOODSON'S GULLY - TAN TROUGH GULLY WATERSHED
* *****
*

```

| LINE | ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------|----|---|-------|------|------|------|------|------|---|---|----|
| 269 | KK | F109A | | | | | | | | | |
| 270 | KM | WOODSON'S GULLY: SUB-AREA A RUNOFF HYDROGRAPH | | | | | | | | | |
| 271 | BA | 2.80 | | | | | | | | | |
| 272 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 2 | | | | | |
| 273 | UC | 8.61 | 11.73 | | | | | | | | |
| 274 | KK | F109#1 | | | | | | | | | |
| 275 | KM | ROUTE TO CONFLUENCE WITH F109-03-00 (BELOW RILEY-FUSSEL ROAD) | | | | | | | | | |
| 276 | RS | 5 | STOR | -1 | | | | | | | |
| 277 | SV | 0 | 94 | 148 | 202 | 255 | 303 | 349 | | | |
| 278 | SQ | 0 | 200 | 400 | 600 | 800 | 1000 | 1200 | | | |
| 279 | KK | F109B | | | | | | | | | |
| 280 | KM | WOODSON'S GULLY: SUB-AREA B RUNOFF HYDROGRAPH | | | | | | | | | |
| 281 | BA | 2.90 | | | | | | | | | |
| 282 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 2 | | | | | |
| 283 | UC | 7.84 | 9.70 | | | | | | | | |
| 284 | KK | F109#1 | | | | | | | | | |
| 285 | KM | COMBINED WOODSON'S GULLY HYDROGRAPH BELOW CONFLUENCE WITH F109-03-00 | | | | | | | | | |
| 286 | HC | 2 | | | | | | | | | |
| 287 | KK | F109#2 | | | | | | | | | |
| 288 | KM | ROUTE COMBINED HYD. TO CONFLUENCE WITH TAN TROUGH GULLY (F109-02-00) | | | | | | | | | |
| 289 | RS | 10 | STOR | -1 | | | | | | | |
| 290 | SV | 0 | 383 | 689 | 945 | 1178 | 1384 | 1579 | | | |
| 291 | SQ | 0 | 380 | 770 | 1150 | 1540 | 1920 | 2300 | | | |
| 292 | KK | F109C | | | | | | | | | |
| 293 | KM | WOODSON'S GULLY: SUB-AREA C RUNOFF HYDROGRAPH | | | | | | | | | |
| 294 | BA | 1.46 | | | | | | | | | |
| 295 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 2 | | | | | |
| 296 | UC | 11.53 | 9.44 | | | | | | | | |
| 297 | KK | F109#2 | | | | | | | | | |
| 298 | KM | COMBINED WOODSON'S GULLY HYDROGRAPH ABOVE CONF. WITH TAN TROUGH GULLY | | | | | | | | | |
| 299 | HC | 2 | | | | | | | | | |
| 300 | KK | F10902A | | | | | | | | | |
| 301 | KM | TAN TROUGH GULLY: RUNOFF HYDROGRAPH | | | | | | | | | |
| 302 | BA | 2.10 | | | | | | | | | |
| 303 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 2 | | | | | |
| 304 | UC | 8.37 | 10.85 | | | | | | | | |
| 305 | KK | F109#2 | | | | | | | | | |
| 306 | KM | COMBINED WOODSON'S GULLY HYDROGRAPH BELOW CONF. WITH TAN TROUGH GULLY | | | | | | | | | |
| 307 | HC | 2 | | | | | | | | | |
| 308 | KK | F109#3 | | | | | | | | | |
| 309 | KM | ROUTE COMBINED HYDROGRAPH TO MOUTH OF WOODSON'S GULLY | | | | | | | | | |
| 310 | RS | 3 | STOR | -1 | | | | | | | |
| 311 | SV | 0 | 179 | 309 | 436 | 568 | 699 | 822 | | | |
| 312 | SQ | 0 | 530 | 1050 | 1580 | 2100 | 2630 | 3160 | | | |

| LINE | ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------|----|--|-------|-------|-------|-------|-------|--------|-------|-------|----|
| 313 | KK | F109D | | | | | | | | | |
| 314 | KM | WOODSON'S GULLY: SUB-AREA D RUNOFF HYDROGRAPH | | | | | | | | | |
| 315 | BA | 1.66 | | | | | | | | | |
| 316 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 2 | | | | | |
| 317 | UC | 8.46 | 7.09 | | | | | | | | |
| 318 | KK | F109#3 | | | | | | | | | |
| 319 | KM | COMBINED HYDROGRAPH AT MOUTH OF WOODSON'S GULLY | | | | | | | | | |
| 320 | HC | 2 | | | | | | | | | |
| 321 | KK | 47-WE2 | | | | | | | | | |
| 322 | KM | COMBINE TWO AT 47.TOTAL FLOW FROM WEST FORK U/S OF SPRING CR | | | | | | | | | |
| 323 | HC | 2 | | | | | | | | | |
| 324 | KK | 9 | | | | | | | | | |
| 325 | KM | BEGIN CYPRESS CREEK | | | | | | | | | |
| 326 | KM | COMPUTE RUNOFF FROM AREA 90 AT 9 | | | | | | | | | |
| 327 | BA | 101 | | | | | | | | | |
| 328 | LU | 1.0 | .10 | 1.3 | | | | | | | |
| 329 | UC | 19.3 | 8.4 | | | | | | | | |
| 330 | KK | 9 | | | | | | | | | |
| 331 | KM | DIVERT FLOW TO SOUTHERN DIVIDE | | | | | | | | | |
| 332 | DT | DIVERT | | | | | | | | | |
| 333 | DI | 0 | 5000 | 9500 | 16700 | 41971 | 77291 | 180000 | | | |
| 334 | DQ | 0 | 0 | 2500 | 6700 | 26971 | 57291 | 150000 | | | |
| 335 | KK | 10 | | | | | | | | | |
| 336 | KM | ROUTE FROM 9 TO 10 | | | | | | | | | |
| 337 | RS | 4 | FLOW | -1 | | | | | | | |
| 338 | SV | 0 | 5578 | 8644 | 13147 | 20330 | 26239 | 36269 | 45645 | 54538 | |
| 339 | SQ | 0 | 5000 | 8000 | 12000 | 18000 | 25000 | 40000 | 55000 | 70000 | |
| 340 | KK | 10 | | | | | | | | | |
| 341 | KM | COMPUTE RUNOFF FROM AREA 100 AT 10 | | | | | | | | | |
| 342 | BA | 39 | | | | | | | | | |
| 343 | LU | 1.0 | .10 | 1.3 | | | | | | | |
| 344 | UC | 10.7 | 5.3 | | | | | | | | |
| 345 | KK | 10 | | | | | | | | | |
| 346 | KM | COMBINE TWO AT 10 | | | | | | | | | |
| 347 | HC | 2 | | | | | | | | | |
| 348 | KK | 10 | | | | | | | | | |
| 349 | KM | DIVERT FLOW | | | | | | | | | |
| 350 | DT | DIVERT | | | | | | | | | |
| 351 | DI | 0 | 15000 | 80650 | | | | | | | |
| 352 | DQ | 0 | 0 | 60650 | | | | | | | |

| LINE | ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------|----|------------------------------------|-------|-------|-------|--------|--------|--------|-------|--------|--------|
| 353 | KK | 11 | | | | | | | | | |
| 354 | KM | ROUTE FROM 10 TO 11 | | | | | | | | | |
| 355 | RS | 4 | FLOW | -1 | | | | | | | |
| 356 | SV | 0 | 3616 | 5439 | 7763 | 10678 | 13877 | 20525 | 27030 | 33491 | 56419 |
| 357 | SQ | 0 | 5000 | 8000 | 12000 | 18000 | 25000 | 40000 | 55000 | 70000 | 130000 |
| 358 | KK | 11 | | | | | | | | | |
| 359 | KM | COMPUTE RUNOFF FROM AREA 110 AT 11 | | | | | | | | | |
| 360 | BA | 17 | | | | | | | | | |
| 361 | LU | 1.0 | .10 | 1.3 | | | | | | | |
| 362 | UC | 10.7 | 5.3 | | | | | | | | |
| 363 | KK | 11 | | | | | | | | | |
| 364 | KM | COMBINE TWO HYDROGRAPHS AT 11 | | | | | | | | | |
| 365 | HC | 2 | | | | | | | | | |
| 366 | KK | 11 | | | | | | | | | |
| 367 | KM | DIVERT FLOW TO SOUTH | | | | | | | | | |
| 368 | DT | DIVERT | | | | | | | | | |
| 369 | DI | 0 | 16600 | 19311 | 32755 | 78724 | 134000 | 194683 | | | |
| 370 | DQ | 0 | 0 | 1311 | 7756 | 38724 | 78592 | 124700 | | | |
| 371 | KK | 12 | | | | | | | | | |
| 372 | KM | ROUTE FROM 11 TO 12 | | | | | | | | | |
| 373 | RS | 4 | FLOW | -1 | | | | | | | |
| 374 | SV | 0 | 2184 | 5328 | 7294 | 9784 | 15182 | 19861 | 24171 | 39302 | |
| 375 | SQ | 0 | 5000 | 12000 | 18000 | 25000 | 40000 | 55000 | 70000 | 130000 | |
| 376 | KK | 12 | | | | | | | | | |
| 377 | KM | COMPUTE RUNOFF FROM AREA 120 AT 12 | | | | | | | | | |
| 378 | BA | 80 | | | | | | | | | |
| 379 | LU | 1.0 | .10 | 2.7 | | | | | | | |
| 380 | UC | 16.2 | 7.8 | | | | | | | | |
| 381 | KK | 12 | | | | | | | | | |
| 382 | KM | COMBINE TWO AT 12 | | | | | | | | | |
| 383 | HC | 2 | | | | | | | | | |
| 384 | KK | 12 | | | | | | | | | |
| 385 | KM | DIVERT FLOW TO SOUTH | | | | | | | | | |
| 386 | DT | DIVERT | | | | | | | | | |
| 387 | DI | 0 | 54000 | 55643 | 77371 | 250937 | | | | | |
| 388 | DQ | 0 | 0 | 643 | 7371 | 120900 | | | | | |
| 389 | KK | 13 | | | | | | | | | |
| 390 | KM | ROUTE FROM 12 TO 13 | | | | | | | | | |
| 391 | RS | 4 | FLOW | -1 | | | | | | | |
| 392 | SV | 0 | 4497 | 11014 | 15983 | 21234 | 31034 | 39068 | 46371 | 56051 | 73268 |
| 393 | SQ | 0 | 5000 | 12000 | 18000 | 25000 | 40000 | 55000 | 70000 | 100000 | 130000 |

| LINE | ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------|----|--|-------|--------|--------|--------|-------|-------|-------|-------|--------|
| 394 | KK | 13 | | | | | | | | | |
| 395 | KM | COMPUTE RUNOFF FROM AREA 130 AT 13 | | | | | | | | | |
| 396 | BA | 48 | | | | | | | | | |
| 397 | LU | 1.0 | .10 | 11.0 | | | | | | | |
| 398 | UC | 5.2 | 3.6 | | | | | | | | |
| 399 | KK | 13 | | | | | | | | | |
| 400 | KM | COMBINE TWO AT 13 | | | | | | | | | |
| 401 | HC | 2 | | | | | | | | | |
| 402 | KK | 26 | | | | | | | | | |
| 403 | KM | ROUTE FROM 13 TO 26 | | | | | | | | | |
| 404 | RS | 4 | FLOW | -1 | | | | | | | |
| 405 | SV | 0 | 2284 | 3584 | 5651 | 8890 | 12515 | 19488 | 26013 | 31925 | 53479 |
| 406 | SQ | 0 | 5000 | 8000 | 12000 | 18000 | 25000 | 40000 | 55000 | 70000 | 130000 |
| 407 | KK | 26 | | | | | | | | | |
| 408 | KM | COMPUTE RUNOFF FROM 140 AT 26 | | | | | | | | | |
| 409 | BA | 35 | | | | | | | | | |
| 410 | LU | 1.0 | .10 | 7.1 | | | | | | | |
| 411 | UC | 6.5 | 4.2 | | | | | | | | |
| 412 | KK | 26 | | | | | | | | | |
| 413 | KM | COMBINE TWO AT 26 (TOTAL FLOW FROM CYPRESS CR) | | | | | | | | | |
| 414 | HC | 2 | | | | | | | | | |
| 415 | KK | 21 | | | | | | | | | |
| 416 | KM | BEGIN SPRINGCREEK WATERSHED | | | | | | | | | |
| 417 | KM | COMPUTE RUNOFF FROM AREA 210 AT 21 | | | | | | | | | |
| 418 | BA | 109 | | | | | | | | | |
| 419 | LU | 1.0 | .10 | 1.1 | | | | | | | |
| 420 | UC | 19.6 | 8.4 | | | | | | | | |
| 421 | KK | 21 | | | | | | | | | |
| 422 | KM | COMPUTE RUNOFF FROM 220 AT 21 | | | | | | | | | |
| 423 | BA | 95 | | | | | | | | | |
| 424 | LU | 1.0 | .10 | 1.9 | | | | | | | |
| 425 | UC | 19.5 | 8.8 | | | | | | | | |
| 426 | KK | 21 | | | | | | | | | |
| 427 | KM | COMBINE TWO AT 21 | | | | | | | | | |
| 428 | HC | 2 | | | | | | | | | |
| 429 | KK | 22 | | | | | | | | | |
| 430 | KM | ROUTE FROM 21 TO 22 | | | | | | | | | |
| 431 | RS | 4 | FLOW | -1 | | | | | | | |
| 432 | SV | 0 | 501 | 997 | 1923 | 3536 | 5545 | 7309 | 9966 | 14642 | 20841 |
| 433 | SV | 29522 | 35897 | 41809 | 55713 | 68044 | | | | | |
| 434 | SQ | 0 | 500 | 1000 | 2000 | 4000 | 7000 | 10000 | 15000 | 25000 | 40000 |
| 435 | SQ | 60000 | 80000 | 100000 | 150000 | 200000 | | | | | |

| LINE | ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------|----|--|-------|--------|--------|--------|-------|-------|-------|-------|-------|
| 436 | KK | 23 | | | | | | | | | |
| 437 | KM | ROUTE FROM 22 TO 23 | | | | | | | | | |
| 438 | RS | 4 | FLOW | -1 | | | | | | | |
| 439 | SV | 0 | 1072 | 1983 | 3915 | 7666 | 12607 | 16829 | 23005 | 33697 | 47762 |
| 440 | SV | 66552 | 84312 | 100630 | 137064 | 169932 | | | | | |
| 441 | SQ | 0 | 500 | 1000 | 2000 | 4000 | 7000 | 10000 | 15000 | 25000 | 40000 |
| 442 | SQ | 60000 | 80000 | 100000 | 150000 | 200000 | | | | | |
| 443 | KK | 23 | | | | | | | | | |
| 444 | KM | COMPUTE RUNOFF FROM 230 AT 23 | | | | | | | | | |
| 445 | BA | 112 | | | | | | | | | |
| 446 | LU | 1.0 | .10 | 2.3 | | | | | | | |
| 447 | UC | 24.3 | 10.6 | | | | | | | | |
| 448 | KK | 23 | | | | | | | | | |
| 449 | KM | COMPUTE RUNOFF FROM 240 AT 23 | | | | | | | | | |
| 450 | BA | 58 | | | | | | | | | |
| 451 | LU | 1.0 | .10 | 3.3 | | | | | | | |
| 452 | UC | 11.3 | 6.0 | | | | | | | | |
| 453 | KK | 23 | | | | | | | | | |
| 454 | KM | COMBINE HYDROGRAPHS AT 23 | | | | | | | | | |
| 455 | HC | 3 | | | | | | | | | |
| 456 | KK | 25 | | | | | | | | | |
| 457 | KM | ROUTE FROM 23 TO 25 | | | | | | | | | |
| 458 | RS | 2 | FLOW | -1 | | | | | | | |
| 459 | SV | 0 | 256 | 482 | 1076 | 2344 | 4050 | 5606 | 7720 | 11276 | 15761 |
| 460 | SV | 21200 | 27461 | 32844 | 44172 | 54042 | | | | | |
| 461 | SQ | 0 | 500 | 1000 | 2000 | 4000 | 7000 | 10000 | 15000 | 25000 | 40000 |
| 462 | SQ | 60000 | 80000 | 100000 | 150000 | 200000 | | | | | |
| 463 | KK | 25 | | | | | | | | | |
| 464 | KM | COMPUTE RUNOFF FROM 250 AT 25 | | | | | | | | | |
| 465 | BA | 46 | | | | | | | | | |
| 466 | LU | 1.0 | .10 | 6.4 | | | | | | | |
| 467 | UC | 9.5 | 5.6 | | | | | | | | |
| 468 | KK | 25 | | | | | | | | | |
| 469 | KM | COMBINE TWO AT 25 | | | | | | | | | |
| 470 | KM | SPRING CREEK NEAR SPRING 08068520 | | | | | | | | | |
| 471 | HC | 2 | | | | | | | | | |
| | * | | | | | | | | | | |
| | * | ***** | | | | | | | | | |
| | * | DRAINAGE DISTRICT #6 CHANNEL II WATERSHED | | | | | | | | | |
| | * | ***** | | | | | | | | | |
| | * | | | | | | | | | | |
| 472 | KK | A111A | | | | | | | | | |
| 473 | KM | DRAINAGE DISTRICT #6 CHANNEL II: RUNOFF HYDROGRAPH | | | | | | | | | |
| 474 | BA | 0.80 | | | | | | | | | |
| 475 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 35 | | | | | |
| 476 | UC | 2.14 | 1.33 | | | | | | | | |
| | * | | | | | | | | | | |
| | * | ***** | | | | | | | | | |

* SAM BELL GULLY WATERSHED
* *****
*

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

```

477 KK A110A
478 KM SAM BELL GULLY: RUNOFF HYDROGRAPH
479 BA 0.88
480 LE 0.2 2.5 2.0 0.55 15
481 UC 5.20 3.08
*
* *****
* DRAINAGE DISTRICT #6 CHANNEL III - SPRING OAKS CHANNEL WATERSHED
* *****
*

482 KK A109A
483 KM DRAINAGE DISTRICT #6 CHANNEL III: SUB-AREA A RUNOFF HYDROGRAPH
484 BA 1.36
485 LE 0.2 2.5 2.0 0.55 22
486 UC 2.78 1.82

487 KK A10903A
488 KM SPRING OAKS CHANNEL: RUNOFF HYDROGRAPH
489 BA 2.47
490 LE 0.2 2.5 2.0 0.55 27
491 UC 2.06 1.58

492 KK A109#1
493 KM COMBINED DD#6 CHANNEL III HYD. BELOW CONFLUENCE WITH SPRING OAKS CHANNEL
494 HC 2

495 KK A109#2
496 KM ROUTE COMBINED DD#6 CHANNEL III HYDROGRAPH TO RAYFORD ROAD
497 RM 4 0.9 0.2

498 KK A109B
499 KM DRAINAGE DISTRICT #6 CHANNEL III: SUB-AREA B RUNOFF HYDROGRAPH
500 BA 2.06
501 LE 0.2 2.5 2.0 0.55 16
502 UC 2.60 4.24

503 KK A109#2
504 KM COMBINED DD#6 CHANNEL III HYDROGRAPH AT RAYFORD ROAD
505 HC 2

506 KK A109#3
507 KM ROUTE COMBINED DD#6 CHANNEL III HYDROGRAPH TO MOUTH
508 RM 3 0.8 0.2

509 KK A109C
510 KM DRAINAGE DISTRICT #6 CHANNEL III: SUB-AREA C RUNOFF HYDROGRAPH
511 BA 1.27
512 LE 0.2 2.5 2.0 0.55 16
513 UC 2.96 2.76
    
```

 * * * * *
 * FLOOD HYDROGRAPH PACKAGE (HEC-1) *
 * BY THE COE IN FEBRUARY 1981 *
 * REVISED 02 AUG 88 *
 * * * * *
 * RUN DATE 09/01/1989 TIME 15:21:14 *
 * * * * *

 * * * * *
 * DODSON AND ASSOCIATES, INC. *
 * HYDROLOGIST AND CIVIL ENGINEERS *
 * 7015 W TIDWELL SUITE 107 *
 * HOUSTON, TEXAS 77092 *
 * (713) 895-8322 *
 * * * * *

SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 DODSON & ASSOCIATES, INC. SEPTEMBER, 1989
 SAN JACINTO RIVER WATERSHED
 100-YEAR, 48-HOUR STORM EVENT INTERIM CONDITIONS IN STUDY AREA
 FILENAME = SJRINT.IH1
 MODEL BASED ON COE LAKE CREEK RESERVOIR STUDY
 COE MODEL OF SAN JACINTO RIVER WATERSHED U/S OF BUFFALO BAYOU
 DATA FOR PLAN 2 = 1986 CONDITIONS WITH LAKE CONROE AND LAKE HOUSTON

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

IT HYDROGRAPH TIME DATA
 NMIN 60 MINUTES IN COMPUTATION INTERVAL
 IDATE 21AUG89 STARTING DATE
 ITIME 0000 STARTING TIME
 NQ 200 NUMBER OF HYDROGRAPH ORDINATES
 NDDATE 29AUG89 ENDING DATE
 NDTIME 0700 ENDING TIME
 ICENT 19 CENTURY MARK

COMPUTATION INTERVAL 1.00 HOURS
 TOTAL TIME BASE 199.00 HOURS

ENGLISH UNITS
 DRAINAGE AREA SQUARE MILES
 PRECIPITATION DEPTH INCHES
 LENGTH, ELEVATION FEET
 FLOW CUBIC FEET PER SECOND
 STORAGE VOLUME ACRE-FEET
 SURFACE AREA ACRES
 TEMPERATURE DEGREES FAHRENHEIT

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

| OPERATION | STATION | PEAK FLOW | TIME OF PEAK | AVERAGE FLOW FOR MAXIMUM PERIOD | | | BASIN AREA | MAXIMUM STAGE | TIME OF MAX STAGE |
|---------------|---------|-----------|--------------|---------------------------------|---------|---------|------------|---------------|-------------------|
| | | | | 6-HOUR | 24-HOUR | 72-HOUR | | | |
| HYDROGRAPH AT | 41 | 53475. | 38.00 | 51926. | 36502. | 14317. | 184.00 | | |
| ROUTED TO | 42 | 42474. | 48.00 | 41473. | 32469. | 14305. | 184.00 | | |
| HYDROGRAPH AT | 42 | 80088. | 38.00 | 77836. | 55395. | 22291. | 267.00 | | |
| 2 COMBINED AT | 42 | 99158. | 40.00 | 97316. | 80166. | 36519. | 451.00 | | |
| ROUTED TO | 42 | 77927. | 48.00 | 74989. | 51285. | 25150. | 451.00 | | |
| ROUTED TO | 44 | 70043. | 55.00 | 67405. | 48574. | 24994. | 451.00 | | |
| HYDROGRAPH AT | 44 | 17998. | 30.00 | 15956. | 7926. | 2761. | 35.00 | | |
| 2 COMBINED AT | 44 | 70099. | 55.00 | 67470. | 48625. | 25322. | 486.00 | | |
| HYDROGRAPH AT | 31 | 20942. | 48.00 | 20742. | 17947. | 8841. | 115.00 | | |
| ROUTED TO | 32 | 20727. | 52.00 | 20527. | 17718. | 8771. | 115.00 | | |
| HYDROGRAPH AT | 32 | 25187. | 44.00 | 24829. | 20157. | 8972. | 116.00 | | |
| 2 COMBINED AT | 32 | 43216. | 47.00 | 42635. | 35853. | 17619. | 231.00 | | |
| ROUTED TO | 33 | 39780. | 58.00 | 39290. | 33102. | 17374. | 231.00 | | |
| HYDROGRAPH AT | 33 | 26228. | 39.00 | 25564. | 18497. | 7383. | 95.00 | | |
| 2 COMBINED AT | 33 | 44424. | 56.00 | 43861. | 37572. | 23879. | 326.00 | | |
| ROUTED TO | 44 | 43930. | 58.00 | 43370. | 37424. | 23839. | 326.00 | | |
| HYDROGRAPH AT | 44 | 5199. | 29.00 | 4287. | 1834. | 622. | 8.00 | | |
| 2 COMBINED AT | 44 | 43930. | 58.00 | 43371. | 37426. | 24233. | 334.00 | | |
| 2 COMBINED AT | 44 | 111815. | 56.00 | 109240. | 86014. | 49555. | 820.00 | | |
| ROUTED TO | 45 | 108261. | 59.00 | 105340. | 84766. | 49228. | 820.00 | | |
| HYDROGRAPH AT | 45 | 5661. | 28.00 | 4413. | 1855. | 631. | 8.00 | | |
| 2 COMBINED AT | 45 | 108261. | 59.00 | 105340. | 84767. | 49395. | 828.00 | | |
| ROUTED TO | 49 | 106420. | 61.00 | 103673. | 84103. | 49259. | 828.00 | | |
| HYDROGRAPH AT | 49 | 22530. | 30.00 | 19798. | 9886. | 3491. | 43.00 | | |
| 2 COMBINED AT | 49 | 106440. | 61.00 | 103696. | 84126. | 51237. | 871.00 | | |
| HYDROGRAPH AT | F132A | 546. | 30.00 | 471. | 217. | 77. | .97 | | |

| | | | | | | | |
|---------------|--------|---------|-------|---------|--------|--------|--------|
| ROUTED TO | F132#1 | 529. | 31.00 | 460. | 216. | 77. | .97 |
| HYDROGRAPH AT | F132B | 1167. | 28.00 | 911. | 404. | 148. | 1.68 |
| 2 COMBINED AT | F132#1 | 1511. | 28.00 | 1304. | 616. | 225. | 2.65 |
| HYDROGRAPH AT | F131A | 772. | 28.00 | 661. | 336. | 124. | 1.46 |
| 3 COMBINED AT | 49 | 106445. | 61.00 | 103702. | 84132. | 51499. | 875.11 |
| ROUTED TO | 46 | 104711. | 63.00 | 102296. | 83492. | 51264. | 875.11 |
| HYDROGRAPH AT | 46 | 16513. | 37.00 | 15928. | 10782. | 4154. | 53.00 |
| 2 COMBINED AT | 46 | 105456. | 63.00 | 102963. | 84024. | 54963. | 928.11 |
| HYDROGRAPH AT | F128A | 756. | 31.00 | 687. | 394. | 148. | 1.82 |
| HYDROGRAPH AT | F126A | 1044. | 31.00 | 945. | 518. | 189. | 2.38 |
| ROUTED TO | F126#1 | 915. | 45.00 | 864. | 515. | 189. | 2.38 |
| HYDROGRAPH AT | F126B | 488. | 33.00 | 461. | 307. | 125. | 1.55 |
| 2 COMBINED AT | F126#1 | 1114. | 45.00 | 1088. | 786. | 314. | 3.93 |
| HYDROGRAPH AT | F12601 | 655. | 32.00 | 609. | 368. | 139. | 1.72 |
| 2 COMBINED AT | F126#1 | 1379. | 39.00 | 1369. | 1139. | 454. | 5.65 |
| ROUTED TO | F126#2 | 1380. | 39.00 | 1369. | 1138. | 454. | 5.65 |
| HYDROGRAPH AT | F126C | 447. | 29.00 | 383. | 192. | 69. | .87 |
| 2 COMBINED AT | F126#2 | 1517. | 34.00 | 1503. | 1300. | 523. | 6.52 |
| HYDROGRAPH AT | F121A | 1813. | 28.00 | 1413. | 622. | 223. | 2.70 |
| HYDROGRAPH AT | F12102 | 224. | 34.00 | 215. | 164. | 77. | .99 |
| 2 COMBINED AT | F121#1 | 1922. | 28.00 | 1546. | 760. | 298. | 3.69 |
| ROUTED TO | F121#2 | 1897. | 29.00 | 1537. | 759. | 298. | 3.69 |
| HYDROGRAPH AT | F121B | 804. | 28.00 | 621. | 263. | 93. | 1.17 |
| 2 COMBINED AT | F121#2 | 2633. | 29.00 | 2134. | 1018. | 391. | 4.86 |
| 4 COMBINED AT | 46 | 105642. | 63.00 | 103128. | 84162. | 55812. | 941.31 |
| ROUTED TO | 47 | 94221. | 75.00 | 92963. | 80442. | 55148. | 941.31 |
| HYDROGRAPH AT | 47 | 16180. | 34.00 | 15314. | 9289. | 3408. | 43.40 |
| 2 COMBINED AT | 47-WE2 | 94223. | 75.00 | 92965. | 80448. | 56425. | 984.71 |
| HYDROGRAPH AT | F109A | 734. | 33.00 | 700. | 505. | 221. | 2.80 |
| ROUTED TO | F109#1 | 710. | 37.00 | 682. | 496. | 221. | 2.80 |

| | | | | | | | |
|---------------|--------|--------|-------|--------|--------|--------|--------|
| HYDROGRAPH AT | F109B | 863. | 32.00 | 816. | 555. | 229. | 2.90 |
| 2 COMBINED AT | F109#1 | 1457. | 35.00 | 1411. | 1024. | 449. | 5.70 |
| ROUTED TO | F109#2 | 1369. | 43.00 | 1318. | 981. | 449. | 5.70 |
| HYDROGRAPH AT | F109C | 411. | 35.00 | 393. | 277. | 116. | 1.46 |
| 2 COMBINED AT | F109#2 | 1630. | 42.00 | 1574. | 1171. | 561. | 7.16 |
| HYDROGRAPH AT | F10902 | 581. | 33.00 | 549. | 388. | 166. | 2.10 |
| 2 COMBINED AT | F109#2 | 1983. | 42.00 | 1910. | 1472. | 726. | 9.26 |
| ROUTED TO | F109#3 | 1912. | 45.00 | 1855. | 1462. | 725. | 9.26 |
| HYDROGRAPH AT | F109D | 578. | 32.00 | 541. | 340. | 132. | 1.66 |
| 2 COMBINED AT | F109#3 | 2099. | 45.00 | 2046. | 1686. | 854. | 10.92 |
| 2 COMBINED AT | 47-WE2 | 94580. | 75.00 | 93324. | 80756. | 57166. | 995.63 |
| HYDROGRAPH AT | 9 | 26455. | 40.00 | 25858. | 19215. | 7855. | 101.00 |
| DIVERSION TO | DIVERT | 14525. | 40.00 | 14046. | 9036. | 3124. | 101.00 |
| HYDROGRAPH AT | 9 | 11930. | 40.00 | 11812. | 10179. | 4730. | 101.00 |
| ROUTED TO | 10 | 10397. | 53.00 | 10305. | 9151. | 4711. | 101.00 |
| HYDROGRAPH AT | 10 | 15465. | 33.00 | 14529. | 8458. | 3033. | 39.00 |
| 2 COMBINED AT | 10 | 17385. | 34.00 | 16574. | 13443. | 7700. | 140.00 |
| DIVERSION TO | DIVERT | 2203. | 34.00 | 1473. | 379. | 126. | 140.00 |
| HYDROGRAPH AT | 10 | 15182. | 34.00 | 15101. | 13064. | 7574. | 140.00 |
| ROUTED TO | 11 | 14362. | 42.00 | 14091. | 12548. | 7537. | 140.00 |
| HYDROGRAPH AT | 11 | 6741. | 33.00 | 6333. | 3687. | 1322. | 17.00 |
| 2 COMBINED AT | 11 | 17423. | 40.00 | 17068. | 14417. | 8798. | 157.00 |
| DIVERSION TO | DIVERT | 398. | 40.00 | 239. | 60. | 20. | 157.00 |
| HYDROGRAPH AT | 11 | 17025. | 40.00 | 16829. | 14357. | 8778. | 157.00 |
| ROUTED TO | 12 | 16717. | 44.00 | 16438. | 14097. | 8753. | 157.00 |
| HYDROGRAPH AT | 12 | 23358. | 38.00 | 22654. | 15897. | 6265. | 80.00 |
| 2 COMBINED AT | 12 | 36996. | 40.00 | 35671. | 27654. | 14872. | 237.00 |
| DIVERSION TO | DIVERT | 0. | 40.00 | 0. | 0. | 0. | 237.00 |
| HYDROGRAPH AT | 12 | 36996. | 40.00 | 35671. | 27654. | 14872. | 237.00 |
| ROUTED TO | 13 | 32295. | 49.00 | 31692. | 25820. | 14716. | 237.00 |

| | | | | | | | |
|---------------|--------|--------|-------|--------|--------|--------|--------|
| HYDROGRAPH AT | 13 | 27466. | 29.00 | 23632. | 11173. | 3912. | 48.00 |
| 2 COMBINED AT | 13 | 32781. | 48.00 | 32169. | 26497. | 17979. | 285.00 |
| ROUTED TO | 26 | 31287. | 54.00 | 30769. | 26166. | 17893. | 285.00 |
| HYDROGRAPH AT | 26 | 17793. | 30.00 | 15804. | 7964. | 2800. | 35.00 |
| 2 COMBINED AT | 26 | 32187. | 33.00 | 31274. | 27056. | 20373. | 320.00 |
| HYDROGRAPH AT | 21 | 28343. | 40.00 | 27717. | 20675. | 8468. | 109.00 |
| HYDROGRAPH AT | 21 | 24374. | 40.00 | 23839. | 17864. | 7408. | 95.00 |
| 2 COMBINED AT | 21 | 52717. | 40.00 | 51556. | 38539. | 15875. | 204.00 |
| ROUTED TO | 22 | 50275. | 45.00 | 49186. | 37364. | 15847. | 204.00 |
| ROUTED TO | 23 | 40475. | 57.00 | 39746. | 31937. | 15574. | 204.00 |
| HYDROGRAPH AT | 23 | 24063. | 44.00 | 23707. | 19194. | 8724. | 112.00 |
| HYDROGRAPH AT | 23 | 21623. | 34.00 | 20466. | 12414. | 4555. | 58.00 |
| 3 COMBINED AT | 23 | 53841. | 54.00 | 53109. | 45492. | 28065. | 374.00 |
| ROUTED TO | 25 | 52613. | 57.00 | 51952. | 45228. | 27827. | 374.00 |
| HYDROGRAPH AT | 25 | 18729. | 33.00 | 17474. | 10084. | 3667. | 46.00 |
| 2 COMBINED AT | 25 | 53092. | 57.00 | 52446. | 46610. | 31110. | 420.00 |
| HYDROGRAPH AT | A111A | 740. | 27.00 | 496. | 199. | 73. | .80 |
| HYDROGRAPH AT | A110A | 506. | 29.00 | 428. | 204. | 74. | .88 |
| HYDROGRAPH AT | A109A | 1051. | 27.00 | 785. | 325. | 118. | 1.36 |
| HYDROGRAPH AT | A10903 | 2160. | 27.00 | 1479. | 600. | 219. | 2.47 |
| 2 COMBINED AT | A109#1 | 3212. | 27.00 | 2248. | 925. | 337. | 3.83 |
| ROUTED TO | A109#2 | 3128. | 28.00 | 2245. | 925. | 337. | 3.83 |
| HYDROGRAPH AT | A109B | 1133. | 28.00 | 947. | 473. | 174. | 2.06 |
| 2 COMBINED AT | A109#2 | 4261. | 28.00 | 3177. | 1395. | 511. | 5.89 |
| ROUTED TO | A109#3 | 4181. | 29.00 | 3177. | 1394. | 511. | 5.89 |
| HYDROGRAPH AT | A109C | 843. | 28.00 | 663. | 297. | 107. | 1.27 |
| 2 COMBINED AT | A109#3 | 4915. | 29.00 | 3833. | 1690. | 618. | 7.16 |
| 4 COMBINED AT | 25 | 53111. | 57.00 | 52469. | 46802. | 31762. | 428.84 |
| ROUTED TO | 26 | 50830. | 66.00 | 50374. | 46352. | 31539. | 428.84 |
| HYDROGRAPH AT | 26 | 9876. | 32.00 | 9063. | 4913. | 1754. | 22.00 |

| | | | | | | | |
|---------------|----|---------|-------|---------|---------|---------|---------|
| 2 COMBINED AT | 26 | 50834. | 66.00 | 50379. | 46441. | 32668. | 450.84 |
| 2 COMBINED AT | 26 | 74257. | 61.00 | 74180. | 72273. | 52824. | 770.84 |
| ROUTED TO | 47 | 74222. | 63.00 | 74152. | 72111. | 52667. | 770.84 |
| HYDROGRAPH AT | 47 | 3440. | 28.00 | 2748. | 1151. | 390. | 5.00 |
| 2 COMBINED AT | 47 | 74222. | 63.00 | 74153. | 72112. | 52853. | 775.84 |
| 2 COMBINED AT | 47 | 157178. | 73.00 | 155496. | 139504. | 109249. | 1771.47 |
| HYDROGRAPH AT | 71 | 75015. | 42.00 | 73688. | 57861. | 25506. | 325.00 |
| ROUTED TO | 72 | 60695. | 57.00 | 59814. | 50393. | 25173. | 325.00 |
| HYDROGRAPH AT | 72 | 18821. | 37.00 | 18183. | 12369. | 4771. | 61.00 |
| 2 COMBINED AT | 72 | 62701. | 57.00 | 61866. | 52701. | 29336. | 386.00 |
| HYDROGRAPH AT | 51 | 29711. | 38.00 | 28884. | 20607. | 8230. | 105.00 |
| ROUTED TO | 52 | 24097. | 51.00 | 23650. | 18801. | 8213. | 105.00 |
| HYDROGRAPH AT | 52 | 24868. | 36.00 | 23971. | 16124. | 6207. | 79.00 |
| 2 COMBINED AT | 52 | 31296. | 46.00 | 31190. | 29214. | 14371. | 184.00 |
| HYDROGRAPH AT | 61 | 32725. | 38.00 | 31830. | 22852. | 9191. | 117.00 |
| ROUTED TO | 52 | 30283. | 44.00 | 29503. | 21999. | 9187. | 117.00 |
| HYDROGRAPH AT | 52 | 17688. | 33.00 | 16563. | 9560. | 3441. | 44.00 |
| 2 COMBINED AT | 52 | 35177. | 42.00 | 34647. | 28699. | 12618. | 161.00 |
| 2 COMBINED AT | 52 | 66241. | 42.00 | 65798. | 57544. | 26986. | 345.00 |
| ROUTED TO | 72 | 65986. | 44.00 | 65478. | 57187. | 26980. | 345.00 |
| HYDROGRAPH AT | 72 | 12124. | 32.00 | 11183. | 6196. | 2218. | 28.00 |
| 2 COMBINED AT | 72 | 68571. | 42.00 | 68149. | 60812. | 29179. | 373.00 |
| 2 COMBINED AT | 72 | 111904. | 52.00 | 110884. | 100981. | 58269. | 759.00 |
| HYDROGRAPH AT | 81 | 31855. | 38.00 | 30970. | 22025. | 8737. | 112.00 |
| ROUTED TO | 82 | 22219. | 56.00 | 21869. | 18008. | 8631. | 112.00 |
| HYDROGRAPH AT | 82 | 31463. | 39.00 | 30705. | 22492. | 9097. | 117.00 |
| 2 COMBINED AT | 82 | 34520. | 42.00 | 34066. | 31546. | 17547. | 229.00 |
| 3 COMBINED AT | 82 | 264633. | 52.00 | 262641. | 244527. | 183480. | 2759.47 |
| ROUTED TO | 82 | 257340. | 59.00 | 255907. | 241219. | 177711. | 2759.47 |
| HYDROGRAPH AT | 91 | 43634. | 32.00 | 40125. | 22203. | 8086. | 98.00 |

| | | | | | | | |
|---------------|--------|---------|-------|---------|---------|---------|---------|
| 2 COMBINED AT | 91 | 257675. | 59.00 | 256310. | 241798. | 178990. | 2857.47 |
| ROUTED TO | 91 | 255842. | 61.00 | 254374. | 239095. | 171272. | 2857.47 |
| ROUTED TO | 92 | 254190. | 64.00 | 252605. | 236652. | 170336. | 2857.47 |
| HYDROGRAPH AT | 92 | 5912. | 28.00 | 4561. | 1891. | 651. | 8.00 |
| 2 COMBINED AT | 92-SJ1 | 254190. | 64.00 | 252605. | 236652. | 170337. | 2865.47 |
| ROUTED TO | 93 | 250391. | 70.00 | 248637. | 233014. | 166765. | 2865.47 |
| HYDROGRAPH AT | 93 | 25055. | 32.00 | 23071. | 12953. | 4761. | 57.00 |
| 2 COMBINED AT | 93 | 250405. | 70.00 | 248654. | 233025. | 166776. | 2922.47 |

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

| LINE | ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------|----|--|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | ID | SOUTH MONTGOMERY COUNTY FLOOD PROTECTION STUDY | | | | | | | | | |
| 2 | ID | DODSON & ASSOCIATES, INC. SEPTEMBER, 1989 | | | | | | | | | |
| 3 | ID | SAN JACINTO RIVER WATERSHED | | | | | | | | | |
| 4 | ID | 100-YEAR, 48-HOUR STORM EVENT ULTIMATE CONDITIONS IN STUDY AREA | | | | | | | | | |
| 5 | ID | FILENAME = SJRULT.IH1 | | | | | | | | | |
| | * | | | | | | | | | | |
| 6 | ID | MODEL BASED ON COE LAKE CREEK RESERVOIR STUDY | | | | | | | | | |
| 7 | ID | COE MODEL OF SAN JACINTO RIVER WATERSHED U/S OF BUFFALO BAYOU | | | | | | | | | |
| 8 | ID | DATA FOR PLAN 2 = 1986 CONDITIONS WITH LAKE CONROE AND LAKE HOUSTON | | | | | | | | | |
| | * | | | | | | | | | | |
| 9 | IT | 60 | 21AUG89 | 0000 | 200 | | | | | | |
| 10 | IO | 5 | | | | | | | | | |
| 11 | KK | 41 | | | | | | | | | |
| 12 | KM | BEGIN WEST FORK SAN JACINTO RIVER | | | | | | | | | |
| 13 | IN | 120 | 21AUG89 | 0000 | | | | | | | |
| 14 | PB | 12.95 | | | | | | | | | |
| 15 | PI | .12 | .13 | .14 | .15 | .17 | .19 | .28 | .33 | .38 | .62 |
| 16 | PI | .82 | 1.58 | 4.29 | 1.03 | .70 | .43 | .35 | .30 | .20 | .18 |
| 17 | PI | .16 | .15 | .14 | .13 | | | | | | |
| 18 | BA | 184 | | | | | | | | | |
| 19 | LU | 1.0 | .10 | 1.4 | | | | | | | |
| 20 | UC | 16.7 | 7.6 | | | | | | | | |
| 21 | KK | 42 | | | | | | | | | |
| 22 | KM | ROUTE FROM 41 TO 42 | | | | | | | | | |
| 23 | KM | FOR PLAN 2, 3, AND 4 USE 2/3 OF SV TO SHOW LAKE EFFECTS ON TRAVEL TIME | | | | | | | | | |
| 24 | RS | 4 | FLOW | -1 | | | | | | | |
| 25 | SV | 0 | 1001 | 2020 | 3937 | 9038 | 14746 | 20380 | 30337 | 39187 | 47642 |
| 26 | SV | 65518 | 81246 | 134065 | 174074 | 209945 | | | | | |
| 27 | SQ | 0 | 1000 | 2500 | 5000 | 10000 | 15000 | 20000 | 30000 | 40000 | 50000 |
| 28 | SQ | 75000 | 100000 | 200000 | 300000 | 400000 | | | | | |
| 29 | KK | 42 | | | | | | | | | |
| 30 | KM | COMPUTE RUNOFF FROM AREA 420 AT 42 | | | | | | | | | |
| 31 | BA | 267 | | | | | | | | | |
| 32 | LU | 1.0 | .10 | 16.4 | | | | | | | |
| 33 | UC | 16.7 | 7.6 | | | | | | | | |
| 34 | KK | 42 | | | | | | | | | |
| 35 | KM | COMBINE TWO AT 42 | | | | | | | | | |
| 36 | HC | 2 | | | | | | | | | |
| 37 | KK | 42 | | | | | | | | | |
| 38 | KM | LAKE CONROE ROUTING | | | | | | | | | |
| 39 | RS | 1 | STOR | 409500 | | | | | | | |
| 40 | SV | 0 | 370 | 65000 | 175000 | 430260 | 440000 | 445000 | 450000 | 465000 | 475000 |
| 41 | SV | 490000 | 500000 | 510000 | 532000 | 545000 | 567000 | 595000 | 620000 | 650000 | |
| 42 | SQ | 0 | 0 | 0 | 0 | 0 | 1000 | 1500 | 2000 | 2500 | 6100 |
| 43 | SQ | 11500 | 13300 | 17200 | 144000 | 148000 | 155000 | 162000 | 169000 | 177000 | |

| LINE | ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------|----|------------------------------------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| 44 | KK | 44 | | | | | | | | | |
| 45 | KM | ROUTE FROM 42 TO 44 | | | | | | | | | |
| 46 | RS | 4 | FLOW | -1 | | | | | | | |
| 47 | SV | 0 | 716 | 1385 | 2619 | 5913 | 9491 | 13046 | 18801 | 23792 | 29018 |
| 48 | SV | 39227 | 48121 | 77587 | 99273 | 118263 | | | | | |
| 49 | SQ | 0 | 1000 | 2500 | 5000 | 10000 | 15000 | 20000 | 30000 | 40000 | 50000 |
| 50 | SQ | 75000 | 100000 | 200000 | 300000 | 400000 | | | | | |
| 51 | KK | 44 | | | | | | | | | |
| 52 | KM | COMPUTE RUNOFF FROM AREA 440 AT 44 | | | | | | | | | |
| 53 | BA | 35 | | | | | | | | | |
| 54 | LU | 1.0 | .10 | 4.2 | | | | | | | |
| 55 | UC | 6.6 | 4.0 | | | | | | | | |
| 56 | KK | 44 | | | | | | | | | |
| 57 | KM | COMBINE TWO AT 44 | | | | | | | | | |
| 58 | HC | 2 | | | | | | | | | |
| 59 | KK | 31 | | | | | | | | | |
| 60 | KM | BEGIN LAKE CREEK | | | | | | | | | |
| 61 | KM | COMPUTE RUNOFF FROM AREA 310 AT 31 | | | | | | | | | |
| 62 | BA | 115 | | | | | | | | | |
| 63 | LU | 1.0 | .10 | 0.3 | | | | | | | |
| 64 | UC | 31.8 | 11.0 | | | | | | | | |
| 65 | KK | 32 | | | | | | | | | |
| 66 | KM | ROUTE FROM 31 TO 32 | | | | | | | | | |
| 67 | RS | 4 | FLOW | -1 | | | | | | | |
| 68 | SV | 0 | 712 | 1165 | 1914 | 3205 | 4675 | 5919 | 7719 | 10794 | 14701 |
| 69 | SV | 19244 | 22967 | 26390 | 34122 | 40927 | | | | | |
| 70 | SQ | 0 | 500 | 1000 | 2000 | 4000 | 7000 | 10000 | 15000 | 25000 | 40000 |
| 71 | SQ | 60000 | 80000 | 100000 | 150000 | 200000 | | | | | |
| 72 | KK | 32 | | | | | | | | | |
| 73 | KM | COMPUTE RUNOFF FROM AREA 320 AT 32 | | | | | | | | | |
| 74 | BA | 116 | | | | | | | | | |
| 75 | LU | 1.0 | .10 | 0.4 | | | | | | | |
| 76 | UC | 25.5 | 9.5 | | | | | | | | |
| 77 | KK | 32 | | | | | | | | | |
| 78 | KM | COMBINE TWO AT 32 | | | | | | | | | |
| 79 | HC | 2 | | | | | | | | | |
| 80 | KK | 33 | | | | | | | | | |
| 81 | KM | ROUTE FROM 32 TO 33 | | | | | | | | | |
| 82 | RS | 6 | FLOW | -1 | | | | | | | |
| 83 | SV | 0 | 830 | 1366 | 2798 | 6692 | 12162 | 16568 | 22897 | 33449 | 46415 |
| 84 | SV | 61386 | 75246 | 88324 | 118287 | 145466 | | | | | |
| 85 | SQ | 0 | 500 | 1000 | 2000 | 4000 | 7000 | 10000 | 15000 | 25000 | 40000 |
| 86 | SQ | 60000 | 80000 | 100000 | 150000 | 200000 | | | | | |

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

```

168 KK F132#1
169 KM COMBINED HYDROGRAPH AT MOUTH OF WOODLANDS TRADE CENTER DITCH
170 HC 2
*
* *****
* GLENEAGLES DIVERSION DITCH WATERSHED
* *****
*

171 KK F131A
172 KM GLENEAGLES DIVERSION DITCH: RUNOFF HYDROGRAPH
173 BA 1.01
174 LE 0.2 2.5 2.0 0.55 42
175 UC 1.18 1.46

176 KK 49
177 KM COMBINE THREE AT 49
178 HC 3

179 KK 46
180 KM ROUTE FROM 49 TO 46
181 RS 2 FLOW -1
182 SV 0 253 520 865 1806 3332 4869 7729 10276 12522
183 SV 17278 21363 36567 49065 60324
184 SQ 0 1000 2500 5000 10000 15000 20000 30000 40000 50000
185 SQ 75000 100000 200000 300000 400000

186 KK 46
187 KM COMPUTE RUNOFF FROM 460 AT 46
188 BA 53
189 LU 1.0 .10 2.9
190 UC 14.7 7.3

191 KK 46
192 KM COMBINE TWO AT 46
193 HC 2
*
* *****
* CARTER'S SLOUGH WATERSHED
* *****
*

194 KK F128A
195 KM CARTER'S SLOUGH: RUNOFF HYDROGRAPH
196 BA 1.96
197 LE 0.2 2.5 2.0 0.55 32
198 UC 2.38 1.91
*
* *****
* HARPER'S HORSEPEN BRANCH WATERSHED
* *****
*
    
```

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

```

199  KK  F126A
200  KM      HARPER'S HORSEPEN BRANCH:  SUB-AREA A RUNOFF HYDROGRAPH
201  BA      1.97
202  LE      0.2      2.5      2.0      0.55      64
203  UC      1.18      1.04

204  KK  F12601A
205  KM      HARPER'S HORSEPEN BRANCH - TRIBUTARY F126-01-00:  RUNOFF HYDROGRAPH
206  BA      1.47
207  LE      0.2      2.5      2.0      0.55      61
208  UC      1.02      .70

209  KK  F126#1
210  KM      COMBINED HARPER'S HORSEPEN BR. HYDROGRAPH BELOW CONF. WITH F126-01-00
211  HC      2

212  KK  F126#2
213  KM      ROUTE FROM F126#1 TO F126#2
214  RM      1      .7      .2

215  KK  F126B
216  KM      HARPER'S HORSEPEN BRANCH:  SUB-AREA B RUNOFF HYDROGRAPH
217  BA      1.44
218  LE      0.2      2.5      2.0      0.55      47
219  UC      1.20      1.96

220  KK  F126#2
221  KM      COMBINED HARPERS HORSEPEN BRANCH HYDROGRAPH AT F126#2
222  HC      2

223  KK  F126#3
224  KM      ROUTE FROM F126#2 TO F126#3
225  RM      1      .5      .2

226  KK  F126C
227  KM      HARPER'S HORSEPEN BRANCH:  SUB-AREA C RUNOFF HYDROGRAPH
228  BA      0.80
229  LE      0.2      2.5      2.0      0.55      19
230  UC      2.62      2.09

231  KK  F121#3
232  KM      COMBINED HARPERS HORSEPEN BRANCH HYDROGRAPH AT MOUTH
233  HC      2
*
*      *****
*      DITCH F124-00-00 WATERSHED
*      *****
*

```

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

```

234 KK F124A
235 KM DITCH A124-00-00 WATERSHED: RUNOFF HYDROGRAPH
236 BA 0.80
237 LE 0.2 2.5 2.0 0.55 23
238 UC 1.91 1.19
*
* *****
* WHITE OAK CREEK WATERSHED
* *****
*

239 KK F121A
240 KM WHITE OAK CREEK: SUB-AREA A RUNOFF HYDROGRAPH
241 BA 3.19
242 LE 0.2 2.5 2.0 0.55 43
243 UC 2.06 1.51

244 KK F121#1
245 KM ROUTE COMBINED HYDROGRAPH TO MOUTH OF WHITE OAK CREEK
246 RM 1 .8 .2

247 KK F121B
248 KM WHITE OAK CREEK: SUB-AREA B RUNOFF HYDROGRAPH
249 BA 1.50
250 LE 0.2 2.5 2.0 0.55 33
251 UC 2.50 1.39

252 KK F121#1
253 KM COMBINED WHITE OAK CREEK HYDROGRAPH AT MOUTH
254 HC 2

255 KK 46
256 KM COMBINE FIVE AT 46
257 HC 5

258 KK 47
259 KM ROUTE FROM 46 TO 47
260 RS 6 FLOW -1
261 SV 0 1680 3290 5428 9787 14365 18713 27319 37105 47302
262 SV 71126 93029 173233 240575 303803
263 SQ 0 1000 2500 5000 10000 15000 20000 30000 40000 50000
264 SQ 75000 100000 200000 300000 400000

265 KK 47
266 KM COMPUTE RUNOFF FROM AREA 470 AT 47
267 BA 40.6
268 LU 1.0 .10 3.3
269 UC 11.3 6.0
    
```

| | |
|------|---|
| LINE | ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10 |
| 270 | KK 47-WE2 |
| 271 | KM COMBINE TWO AT 47.TOTAL FLOW FROM WEST FORK U/S OF SPRING CR |
| 272 | HC 2 |
| | * |
| | * |
| | ***** |
| | WOODSON'S GULLY - TANROUGH GULLY WATERSHED |
| | ***** |
| | * |
| 273 | KK F109A |
| 274 | KM WOODSON'S GULLY: SUB-AREA A RUNOFF HYDROGRAPH |
| 275 | BA 0.61 |
| 276 | LE 0.2 2.5 2.0 0.55 40 |
| 277 | UC 1.07 1.46 |
| 278 | KK F109#1 |
| 279 | KM ROUTE TO F109#1 |
| 280 | RM 1 1.1 .2 |
| 281 | KK F109B |
| 282 | KM WOODSON'S GULLY: SUB-AREA B RUNOFF HYDROGRAPH |
| 283 | BA 1.44 |
| 284 | LE 0.2 2.5 2.0 0.55 59 |
| 285 | UC .96 1.25 |
| 286 | KK F109#1 |
| 287 | KM COMBINED WOODSON'S GULLY HYDROGRAPH AT F109#1 |
| 288 | HC 2 |
| 289 | KK F109#2 |
| 290 | KM ROUTE FROM F109#1 TO F109#2 |
| 291 | RM 1 .9 .2 |
| 292 | KK F109C |
| 293 | KM WOODSON'S GULLY: SUB-AREA C RUNOFF HYDROGRAPH |
| 294 | BA 3.23 |
| 295 | LE 0.2 2.5 2.0 0.55 51 |
| 296 | UC 1.30 1.60 |
| 297 | KK F109#2 |
| 298 | KM COMBINED WOODSON'S GULLY HYDROGRAPH AT F109#2 |
| 299 | HC 2 |
| 300 | KK F109#3 |
| 301 | KM ROUTE COMBINED HYD. TO CONFLUENCE WITH TANROUGH GULLY (F109-02-00) |
| 302 | RM 1 .9 .2 |
| 303 | KK F109D |
| 304 | KM WOODSON'S GULLY: SUB-AREA D RUNOFF HYDROGRAPH |
| 305 | BA 2.07 |
| 306 | LE 0.2 2.5 2.0 0.55 48 |
| 307 | UC 1.66 1.36 |

| LINE | ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------|----|---|------|------|-------|-------|-------|--------|-------|-------|----|
| 308 | KK | F109#3 | | | | | | | | | |
| 309 | KM | COMBINED WOODSON'S GULLY HYDROGRAPH ABOVE CONF. WITH TANROUGH GULLY | | | | | | | | | |
| 310 | HC | 2 | | | | | | | | | |
| 311 | KK | F10902A | | | | | | | | | |
| 312 | KM | TANROUGH GULLY: RUNOFF HYDROGRAPH | | | | | | | | | |
| 313 | BA | 2.16 | | | | | | | | | |
| 314 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 51 | | | | | |
| 315 | UC | 1.23 | 1.59 | | | | | | | | |
| 316 | KK | F109#3 | | | | | | | | | |
| 317 | KM | COMBINED WOODSON'S GULLY HYDROGRAPH BELOW CONF. WITH TANROUGH GULLY | | | | | | | | | |
| 318 | HC | 2 | | | | | | | | | |
| 319 | KK | F109#4 | | | | | | | | | |
| 320 | KM | ROUTE COMBINED HYDROGRAPH TO MOUTH OF WOODSON'S GULLY | | | | | | | | | |
| 321 | RM | 1 | .7 | .2 | | | | | | | |
| 322 | KK | F109E | | | | | | | | | |
| 323 | KM | WOODSON'S GULLY: SUB-AREA E RUNOFF HYDROGRAPH | | | | | | | | | |
| 324 | BA | 1.36 | | | | | | | | | |
| 325 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 30 | | | | | |
| 326 | UC | 2.62 | 2.20 | | | | | | | | |
| 327 | KK | F109#4 | | | | | | | | | |
| 328 | KM | COMBINED HYDROGRAPH AT MOUTH OF WOODSON'S GULLY | | | | | | | | | |
| 329 | HC | 2 | | | | | | | | | |
| 330 | KK | 47-WE2 | | | | | | | | | |
| 331 | KM | COMBINE TWO AT 47. TOTAL FLOW FROM WEST FORK U/S OF SPRING CR | | | | | | | | | |
| 332 | HC | 2 | | | | | | | | | |
| 333 | KK | 9 | | | | | | | | | |
| 334 | KM | BEGIN CYPRESS CREEK | | | | | | | | | |
| 335 | KM | COMPUTE RUNOFF FROM AREA 90 AT 9 | | | | | | | | | |
| 336 | BA | 101 | | | | | | | | | |
| 337 | LU | 1.0 | .10 | 1.3 | | | | | | | |
| 338 | UC | 19.3 | 8.4 | | | | | | | | |
| 339 | KK | 9 | | | | | | | | | |
| 340 | KM | DIVERT FLOW TO SOUTHERN DIVIDE | | | | | | | | | |
| 341 | DT | DIVERT | | | | | | | | | |
| 342 | DI | 0 | 5000 | 9500 | 16700 | 41971 | 77291 | 180000 | | | |
| 343 | DQ | 0 | 0 | 2500 | 6700 | 26971 | 57291 | 150000 | | | |
| 344 | KK | 10 | | | | | | | | | |
| 345 | KM | ROUTE FROM 9 TO 10 | | | | | | | | | |
| 346 | RS | 4 | FLOW | -1 | | | | | | | |
| 347 | SV | 0 | 5578 | 8644 | 13147 | 20330 | 26239 | 36269 | 45645 | 54538 | |
| 348 | SQ | 0 | 5000 | 8000 | 12000 | 18000 | 25000 | 40000 | 55000 | 70000 | |

| LINE | ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------|----|-------------------------------|-------|--------|--------|--------|-------|-------|-------|-------|-------|
| 430 | KK | 21 | | | | | | | | | |
| 431 | KM | COMPUTE RUNOFF FROM 220 AT 21 | | | | | | | | | |
| 432 | BA | 95 | | | | | | | | | |
| 433 | LU | 1.0 | .10 | 1.9 | | | | | | | |
| 434 | UC | 19.5 | 8.8 | | | | | | | | |
| 435 | KK | 21 | | | | | | | | | |
| 436 | KM | COMBINE TWO AT 21 | | | | | | | | | |
| 437 | HC | 2 | | | | | | | | | |
| 438 | KK | 22 | | | | | | | | | |
| 439 | KM | ROUTE FROM 21 TO 22 | | | | | | | | | |
| 440 | RS | 4 | FLOW | -1 | | | | | | | |
| 441 | SV | 0 | 501 | 997 | 1923 | 3536 | 5545 | 7309 | 9966 | 14642 | 20841 |
| 442 | SV | 29522 | 35897 | 41809 | 55713 | 68044 | | | | | |
| 443 | SQ | 0 | 500 | 1000 | 2000 | 4000 | 7000 | 10000 | 15000 | 25000 | 40000 |
| 444 | SQ | 60000 | 80000 | 100000 | 150000 | 200000 | | | | | |
| 445 | KK | 23 | | | | | | | | | |
| 446 | KM | ROUTE FROM 22 TO 23 | | | | | | | | | |
| 447 | RS | 4 | FLOW | -1 | | | | | | | |
| 448 | SV | 0 | 1072 | 1983 | 3915 | 7666 | 12607 | 16829 | 23005 | 33697 | 47762 |
| 449 | SV | 66552 | 84312 | 100630 | 137064 | 169932 | | | | | |
| 450 | SQ | 0 | 500 | 1000 | 2000 | 4000 | 7000 | 10000 | 15000 | 25000 | 40000 |
| 451 | SQ | 60000 | 80000 | 100000 | 150000 | 200000 | | | | | |
| 452 | KK | 23 | | | | | | | | | |
| 453 | KM | COMPUTE RUNOFF FROM 230 AT 23 | | | | | | | | | |
| 454 | BA | 112 | | | | | | | | | |
| 455 | LU | 1.0 | .10 | 2.3 | | | | | | | |
| 456 | UC | 24.3 | 10.6 | | | | | | | | |
| 457 | KK | 23 | | | | | | | | | |
| 458 | KM | COMPUTE RUNOFF FROM 240 AT 23 | | | | | | | | | |
| 459 | BA | 58 | | | | | | | | | |
| 460 | LU | 1.0 | .10 | 3.3 | | | | | | | |
| 461 | UC | 11.3 | 6.0 | | | | | | | | |
| 462 | KK | 23 | | | | | | | | | |
| 463 | KM | COMBINE HYDROGRAPHS AT 23 | | | | | | | | | |
| 464 | HC | 3 | | | | | | | | | |
| 465 | KK | 25 | | | | | | | | | |
| 466 | KM | ROUTE FROM 23 TO 25 | | | | | | | | | |
| 467 | RS | 2 | FLOW | -1 | | | | | | | |
| 468 | SV | 0 | 256 | 482 | 1076 | 2344 | 4050 | 5606 | 7720 | 11276 | 15761 |
| 469 | SV | 21200 | 27461 | 32844 | 44172 | 54042 | | | | | |
| 470 | SQ | 0 | 500 | 1000 | 2000 | 4000 | 7000 | 10000 | 15000 | 25000 | 40000 |
| 471 | SQ | 60000 | 80000 | 100000 | 150000 | 200000 | | | | | |

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

| | | | | | | | | | | | |
|-----|----|-----|---------|--------|------|-----|----|----|--|--|--|
| 472 | KK | 25 | | | | | | | | | |
| 473 | KM | | COMPUTE | RUNOFF | FROM | 250 | AT | 25 | | | |
| 474 | BA | 46 | | | | | | | | | |
| 475 | LU | 1.0 | .10 | 6.4 | | | | | | | |
| 476 | UC | 9.5 | 5.6 | | | | | | | | |

| | | | | | | | | | | | |
|-----|----|----|---------|-------|------|--------|----------|--|--|--|--|
| 477 | KK | 25 | | | | | | | | | |
| 478 | KM | | COMBINE | TWO | AT | 25 | | | | | |
| 479 | KM | | SPRING | CREEK | NEAR | SPRING | 08068520 | | | | |
| 480 | HC | 2 | | | | | | | | | |

*
*
* *****
* DRAINAGE DISTRICT #6 CHANNEL II WATERSHED
* *****
*

| | | | | | | | | | | | |
|-----|----|-------|----------|----------|------|---------|-----|--------|------------|--|--|
| 481 | KK | A111A | | | | | | | | | |
| 482 | KM | | DRAINAGE | DISTRICT | #6 | CHANNEL | II: | RUNOFF | HYDROGRAPH | | |
| 483 | BA | .93 | | | | | | | | | |
| 484 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 53 | | | | | |
| 485 | UC | 1.09 | .68 | | | | | | | | |

*
*
* *****
* SAM BELL GULLY WATERSHED
* *****
*

| | | | | | | | | | | | |
|-----|----|-------|------|------|--------|--------|------------|--|--|--|--|
| 486 | KK | A110A | | | | | | | | | |
| 487 | KM | | SAM | BELL | GULLY: | RUNOFF | HYDROGRAPH | | | | |
| 488 | BA | 1.11 | | | | | | | | | |
| 489 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 25 | | | | | |
| 490 | UC | 1.73 | 1.03 | | | | | | | | |

*
*
* *****
* DRAINAGE DISTRICT #6 CHANNEL III - SPRING OAKS CHANNEL WATERSHED
* *****
*

| | | | | | | | | | | | |
|-----|----|-------|----------|----------|------|---------|------|----------|---|--------|------------|
| 491 | KK | A109A | | | | | | | | | |
| 492 | KM | | DRAINAGE | DISTRICT | #6 | CHANNEL | III: | SUB-AREA | A | RUNOFF | HYDROGRAPH |
| 493 | BA | 1.62 | | | | | | | | | |
| 494 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 58 | | | | | |
| 495 | UC | 1.22 | .80 | | | | | | | | |

| | | | | | | | | | | | |
|-----|----|---------|--------|------|----------|--------|------------|--|--|--|--|
| 496 | KK | A10903A | | | | | | | | | |
| 497 | KM | | SPRING | OAKS | CHANNEL: | RUNOFF | HYDROGRAPH | | | | |
| 498 | BA | 2.44 | | | | | | | | | |
| 499 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 32 | | | | | |
| 500 | UC | 1.84 | 1.41 | | | | | | | | |

| LINE | ID..... | 1..... | 2..... | 3..... | 4..... | 5..... | 6..... | 7..... | 8..... | 9..... | 10 |
|------|---------|--|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| 501 | KK | A109#1 | | | | | | | | | |
| 502 | KM | COMBINED DD#6 CHANNEL III HYD. BELOW CONFLUENCE WITH SPRING OAKS CHANNEL | | | | | | | | | |
| 503 | HC | 2 | | | | | | | | | |
| 504 | KK | A109#2 | | | | | | | | | |
| 505 | KM | ROUTE COMBINED DD#6 CHANNEL III HYDROGRAPH TO RAYFORD ROAD | | | | | | | | | |
| 506 | RM | 1 | .9 | .2 | | | | | | | |
| 507 | KK | A109B | | | | | | | | | |
| 508 | KM | DRAINAGE DISTRICT #6 CHANNEL III: SUB-AREA B RUNOFF HYDROGRAPH | | | | | | | | | |
| 509 | BA | 2.40 | | | | | | | | | |
| 510 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 48 | | | | | |
| 511 | UC | 1.25 | 2.03 | | | | | | | | |
| 512 | KK | A109#2 | | | | | | | | | |
| 513 | KM | COMBINED DD#6 CHANNEL III HYDROGRAPH AT RAYFORD ROAD | | | | | | | | | |
| 514 | HC | 2 | | | | | | | | | |
| 515 | KK | A109#3 | | | | | | | | | |
| 516 | KM | ROUTE COMBINED DD#6 CHANNEL III HYDROGRAPH TO MOUTH | | | | | | | | | |
| 517 | RM | 1 | .7 | .2 | | | | | | | |
| 518 | KK | A109C | | | | | | | | | |
| 519 | KM | DRAINAGE DISTRICT #6 CHANNEL III: SUB-AREA C RUNOFF HYDROGRAPH | | | | | | | | | |
| 520 | BA | 1.42 | | | | | | | | | |
| 521 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 57 | | | | | |
| 522 | UC | 1.15 | 1.07 | | | | | | | | |
| 523 | KK | A109#3 | | | | | | | | | |
| 524 | KM | COMBINED DRAINAGE DISTRICT #6 CHANNEL III HYDROGRAPH AT MOUTH | | | | | | | | | |
| 525 | HC | 2 | | | | | | | | | |
| 526 | KK | 25 | | | | | | | | | |
| 527 | KM | COMBINE FOUR AT 25 | | | | | | | | | |
| 528 | KM | SPRING CREEK NEAR SPRING 08068520 | | | | | | | | | |
| 529 | HC | 4 | | | | | | | | | |
| 530 | KK | 26 | | | | | | | | | |
| 531 | KM | ROUTE FROM 25 TO 26 | | | | | | | | | |
| 532 | RS | 6 | FLOW | -1 | | | | | | | |
| 533 | SV | 0 | 770 | 1234 | 1997 | 3460 | 5689 | 8191 | 12609 | 21745 | 34597 |
| 534 | SV | 49655 | 63411 | 76786 | 111955 | 144558 | | | | | |
| 535 | SQ | 0 | 500 | 1000 | 2000 | 4000 | 7000 | 10000 | 15000 | 25000 | 40000 |
| 536 | SQ | 60000 | 80000 | 100000 | 150000 | 200000 | | | | | |
| 537 | KK | 26 | | | | | | | | | |
| 538 | KM | COMPUTE RUNOFF FROM AREA 260 AT 26 | | | | | | | | | |
| 539 | BA | 22 | | | | | | | | | |
| 540 | LU | 1.0 | .10 | 6.3 | | | | | | | |
| 541 | UC | 8.2 | 4.9 | | | | | | | | |

 *
 * FLOOD HYDROGRAPH PACKAGE (HEC-1) *
 * BY THE COE IN FEBRUARY 1981 *
 * REVISED 02 AUG 88 *
 *
 * RUN DATE 09/01/1989 TIME 15:44:21 *
 *

 *
 * DODSON AND ASSOCIATES, INC. *
 * HYDROLOGIST AND CIVIL ENGINEERS *
 * 7015 W TIDWELL SUITE 107 *
 * HOUSTON, TEXAS 77092 *
 * (713) 895-8322 *
 *

SOUTH MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 DODSON & ASSOCIATES, INC. SEPTEMBER, 1989
 SAN JACINTO RIVER WATERSHED
 100-YEAR, 48-HOUR STORM EVENT ULTIMATE CONDITIONS IN STUDY AREA
 FILENAME = SJRULT.IH1
 MODEL BASED ON COE LAKE CREEK RESERVOIR STUDY
 COE MODEL OF SAN JACINTO RIVER WATERSHED U/S OF BUFFALO BAYOU
 DATA FOR PLAN 2 = 1986 CONDITIONS WITH LAKE CONROE AND LAKE HOUSTON

10 IO

OUTPUT CONTROL VARIABLES

IPRNT 5 PRINT CONTROL
 IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

IT

HYDROGRAPH TIME DATA

NMIN 60 MINUTES IN COMPUTATION INTERVAL
 IDATE 21AUG89 STARTING DATE
 ITIME 0000 STARTING TIME
 NQ 200 NUMBER OF HYDROGRAPH ORDINATES
 NDDATE 29AUG89 ENDING DATE
 NDTIME 0700 ENDING TIME
 ICENT 19 CENTURY MARK

COMPUTATION INTERVAL 1.00 HOURS
 TOTAL TIME BASE 199.00 HOURS

ENGLISH UNITS

DRAINAGE AREA SQUARE MILES
 PRECIPITATION DEPTH INCHES
 LENGTH, ELEVATION FEET
 FLOW CUBIC FEET PER SECOND
 STORAGE VOLUME ACRE-FEET
 SURFACE AREA ACRES
 TEMPERATURE DEGREES FAHRENHEIT

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

| OPERATION | STATION | PEAK FLOW | TIME OF PEAK | AVERAGE FLOW FOR MAXIMUM PERIOD | | | BASIN AREA | MAXIMUM STAGE | TIME OF MAX STAGE |
|---------------|---------|-----------|--------------|---------------------------------|---------|---------|------------|---------------|-------------------|
| | | | | 6-HOUR | 24-HOUR | 72-HOUR | | | |
| HYDROGRAPH AT | 41 | 53475. | 38.00 | 51926. | 36502. | 14317. | 184.00 | | |
| ROUTED TO | 42 | 42474. | 48.00 | 41473. | 32469. | 14305. | 184.00 | | |
| HYDROGRAPH AT | 42 | 80088. | 38.00 | 77836. | 55395. | 22291. | 267.00 | | |
| 2 COMBINED AT | 42 | 99158. | 40.00 | 97316. | 80166. | 36519. | 451.00 | | |
| ROUTED TO | 42 | 77927. | 48.00 | 74989. | 51285. | 25150. | 451.00 | | |
| ROUTED TO | 44 | 70043. | 55.00 | 67405. | 48574. | 24994. | 451.00 | | |
| HYDROGRAPH AT | 44 | 17998. | 30.00 | 15956. | 7926. | 2761. | 35.00 | | |
| 2 COMBINED AT | 44 | 70099. | 55.00 | 67470. | 48625. | 25322. | 486.00 | | |
| HYDROGRAPH AT | 31 | 20942. | 48.00 | 20742. | 17947. | 8841. | 115.00 | | |
| ROUTED TO | 32 | 20727. | 52.00 | 20527. | 17718. | 8771. | 115.00 | | |
| HYDROGRAPH AT | 32 | 25187. | 44.00 | 24829. | 20157. | 8972. | 116.00 | | |
| 2 COMBINED AT | 32 | 43216. | 47.00 | 42635. | 35853. | 17619. | 231.00 | | |
| ROUTED TO | 33 | 39780. | 58.00 | 39290. | 33102. | 17374. | 231.00 | | |
| HYDROGRAPH AT | 33 | 26228. | 39.00 | 25564. | 18497. | 7383. | 95.00 | | |
| 2 COMBINED AT | 33 | 44424. | 56.00 | 43861. | 37572. | 23879. | 326.00 | | |
| ROUTED TO | 44 | 43930. | 58.00 | 43370. | 37424. | 23839. | 326.00 | | |
| HYDROGRAPH AT | 44 | 5199. | 29.00 | 4287. | 1834. | 622. | 8.00 | | |
| 2 COMBINED AT | 44 | 43930. | 58.00 | 43371. | 37426. | 24233. | 334.00 | | |
| 2 COMBINED AT | 44 | 111815. | 56.00 | 109240. | 86014. | 49555. | 820.00 | | |
| ROUTED TO | 45 | 108261. | 59.00 | 105340. | 84766. | 49228. | 820.00 | | |
| HYDROGRAPH AT | 45 | 5661. | 28.00 | 4413. | 1855. | 631. | 8.00 | | |
| 2 COMBINED AT | 45 | 108261. | 59.00 | 105340. | 84767. | 49395. | 828.00 | | |
| ROUTED TO | 49 | 106420. | 61.00 | 103673. | 84103. | 49259. | 828.00 | | |
| HYDROGRAPH AT | 49 | 22530. | 30.00 | 19798. | 9886. | 3491. | 43.00 | | |
| 2 COMBINED AT | 49 | 106440. | 61.00 | 103696. | 84126. | 51237. | 871.00 | | |
| HYDROGRAPH AT | F132A1 | 425. | 28.00 | 338. | 146. | 52. | .65 | | |

| | | | | | | | |
|---------------|--------|---------|-------|---------|--------|--------|--------|
| ROUTED TO | F132#1 | 417. | 29.00 | 335. | 146. | 52. | .65 |
| HYDROGRAPH AT | F132A2 | 3042. | 26.00 | 1584. | 623. | 236. | 2.30 |
| 2 COMBINED AT | F132#1 | 3236. | 26.00 | 1799. | 763. | 288. | 2.95 |
| ROUTED TO | F132#2 | 2790. | 27.00 | 1781. | 762. | 288. | 2.95 |
| HYDROGRAPH AT | F132B | 2354. | 26.00 | 1358. | 542. | 206. | 1.99 |
| 2 COMBINED AT | F132#1 | 4677. | 26.00 | 3103. | 1302. | 494. | 4.94 |
| HYDROGRAPH AT | F131A | 940. | 26.00 | 631. | 256. | 95. | 1.01 |
| 3 COMBINED AT | 49 | 106440. | 61.00 | 103697. | 84127. | 51504. | 876.95 |
| ROUTED TO | 46 | 104706. | 63.00 | 102291. | 83485. | 51286. | 876.95 |
| HYDROGRAPH AT | 46 | 16513. | 37.00 | 15928. | 10782. | 4154. | 53.00 |
| 2 COMBINED AT | 46 | 105451. | 63.00 | 102958. | 84018. | 55024. | 929.95 |
| HYDROGRAPH AT | F128A | 1579. | 27.00 | 1145. | 482. | 177. | 1.96 |
| HYDROGRAPH AT | F126A | 2130. | 26.00 | 1315. | 531. | 201. | 1.97 |
| HYDROGRAPH AT | F12601 | 1812. | 26.00 | 999. | 394. | 149. | 1.47 |
| 2 COMBINED AT | F126#1 | 3941. | 26.00 | 2314. | 925. | 350. | 3.44 |
| ROUTED TO | F126#2 | 3615. | 27.00 | 2294. | 924. | 350. | 3.44 |
| HYDROGRAPH AT | F126B | 1197. | 27.00 | 872. | 369. | 138. | 1.44 |
| 2 COMBINED AT | F126#2 | 4813. | 27.00 | 3167. | 1293. | 488. | 4.88 |
| ROUTED TO | F126#3 | 4558. | 27.00 | 3138. | 1293. | 488. | 4.88 |
| HYDROGRAPH AT | F126C | 593. | 27.00 | 450. | 189. | 68. | .80 |
| 2 COMBINED AT | F121#3 | 5151. | 27.00 | 3576. | 1481. | 557. | 5.68 |
| HYDROGRAPH AT | F124A | 744. | 27.00 | 492. | 192. | 70. | .80 |
| HYDROGRAPH AT | F121A | 2895. | 27.00 | 1978. | 810. | 301. | 3.19 |
| ROUTED TO | F121#1 | 2679. | 28.00 | 1955. | 809. | 301. | 3.19 |
| HYDROGRAPH AT | F121B | 1328. | 27.00 | 915. | 370. | 136. | 1.50 |
| 2 COMBINED AT | F121#1 | 3831. | 28.00 | 2860. | 1180. | 437. | 4.69 |
| 5 COMBINED AT | 46 | 105451. | 63.00 | 102958. | 84018. | 55624. | 943.08 |
| ROUTED TO | 47 | 94014. | 75.00 | 92747. | 80228. | 54991. | 943.08 |
| HYDROGRAPH AT | 47 | 15136. | 34.00 | 14326. | 8690. | 3188. | 40.60 |
| 2 COMBINED AT | 47-WE2 | 94016. | 75.00 | 92749. | 80233. | 56358. | 983.68 |

| | | | | | | | |
|---------------|--------|--------|-------|--------|--------|--------|--------|
| HYDROGRAPH AT | F109A | 578. | 26.00 | 380. | 154. | 57. | .61 |
| ROUTED TO | F109#1 | 513. | 27.00 | 372. | 154. | 57. | .61 |
| HYDROGRAPH AT | F109B | 1498. | 26.00 | 939. | 382. | 145. | 1.44 |
| 2 COMBINED AT | F109#1 | 1874. | 26.00 | 1302. | 536. | 202. | 2.05 |
| ROUTED TO | F109#2 | 1758. | 27.00 | 1278. | 535. | 202. | 2.05 |
| HYDROGRAPH AT | F109C | 2858. | 26.00 | 2028. | 838. | 314. | 3.23 |
| 2 COMBINED AT | F109#2 | 4604. | 27.00 | 3288. | 1373. | 516. | 5.28 |
| ROUTED TO | F109#3 | 4278. | 28.00 | 3238. | 1372. | 516. | 5.28 |
| HYDROGRAPH AT | F109D | 1914. | 27.00 | 1313. | 533. | 199. | 2.07 |
| 2 COMBINED AT | F109#3 | 5969. | 27.00 | 4497. | 1904. | 715. | 7.35 |
| HYDROGRAPH AT | F10902 | 1946. | 26.00 | 1358. | 560. | 210. | 2.16 |
| 2 COMBINED AT | F109#3 | 7869. | 27.00 | 5793. | 2465. | 926. | 9.51 |
| ROUTED TO | F109#4 | 7537. | 28.00 | 5769. | 2464. | 926. | 9.51 |
| HYDROGRAPH AT | F109E | 1005. | 27.00 | 773. | 332. | 122. | 1.36 |
| 2 COMBINED AT | F109#4 | 8518. | 28.00 | 6541. | 2795. | 1047. | 10.87 |
| 2 COMBINED AT | 47-WE2 | 94016. | 75.00 | 92749. | 80233. | 56514. | 994.55 |
| HYDROGRAPH AT | 9 | 26455. | 40.00 | 25858. | 19215. | 7855. | 101.00 |
| DIVERSION TO | DIVERT | 14525. | 40.00 | 14046. | 9036. | 3124. | 101.00 |
| HYDROGRAPH AT | 9 | 11930. | 40.00 | 11812. | 10179. | 4730. | 101.00 |
| ROUTED TO | 10 | 10397. | 53.00 | 10305. | 9151. | 4711. | 101.00 |
| HYDROGRAPH AT | 10 | 15465. | 33.00 | 14529. | 8458. | 3033. | 39.00 |
| 2 COMBINED AT | 10 | 17385. | 34.00 | 16574. | 13443. | 7700. | 140.00 |
| DIVERSION TO | DIVERT | 2203. | 34.00 | 1473. | 379. | 126. | 140.00 |
| HYDROGRAPH AT | 10 | 15182. | 34.00 | 15101. | 13064. | 7574. | 140.00 |
| ROUTED TO | 11 | 14362. | 42.00 | 14091. | 12548. | 7537. | 140.00 |
| HYDROGRAPH AT | 11 | 6741. | 33.00 | 6333. | 3687. | 1322. | 17.00 |
| 2 COMBINED AT | 11 | 17423. | 40.00 | 17068. | 14417. | 8798. | 157.00 |
| DIVERSION TO | DIVERT | 398. | 40.00 | 239. | 60. | 20. | 157.00 |
| HYDROGRAPH AT | 11 | 17025. | 40.00 | 16829. | 14357. | 8778. | 157.00 |
| ROUTED TO | 12 | 16717. | 44.00 | 16438. | 14097. | 8753. | 157.00 |

| | | | | | | | |
|---------------|--------|--------|-------|--------|--------|--------|--------|
| HYDROGRAPH AT | 12 | 23358. | 38.00 | 22654. | 15897. | 6265. | 80.00 |
| 2 COMBINED AT | 12 | 36996. | 40.00 | 35671. | 27654. | 14872. | 237.00 |
| DIVERSION TO | DIVERT | 0. | 40.00 | 0. | 0. | 0. | 237.00 |
| HYDROGRAPH AT | 12 | 36996. | 40.00 | 35671. | 27654. | 14872. | 237.00 |
| ROUTED TO | 13 | 32295. | 49.00 | 31692. | 25820. | 14716. | 237.00 |
| HYDROGRAPH AT | 13 | 27466. | 29.00 | 23632. | 11173. | 3912. | 48.00 |
| 2 COMBINED AT | 13 | 32781. | 48.00 | 32169. | 26497. | 17979. | 285.00 |
| ROUTED TO | 26 | 31287. | 54.00 | 30769. | 26166. | 17893. | 285.00 |
| HYDROGRAPH AT | 26 | 17793. | 30.00 | 15804. | 7964. | 2800. | 35.00 |
| 2 COMBINED AT | 26 | 32187. | 33.00 | 31274. | 27056. | 20373. | 320.00 |
| HYDROGRAPH AT | 21 | 28343. | 40.00 | 27717. | 20675. | 8468. | 109.00 |
| HYDROGRAPH AT | 21 | 24374. | 40.00 | 23839. | 17864. | 7408. | 95.00 |
| 2 COMBINED AT | 21 | 52717. | 40.00 | 51556. | 38539. | 15875. | 204.00 |
| ROUTED TO | 22 | 50275. | 45.00 | 49186. | 37364. | 15847. | 204.00 |
| ROUTED TO | 23 | 40475. | 57.00 | 39746. | 31937. | 15574. | 204.00 |
| HYDROGRAPH AT | 23 | 24063. | 44.00 | 23707. | 19194. | 8724. | 112.00 |
| HYDROGRAPH AT | 23 | 21623. | 34.00 | 20466. | 12414. | 4555. | 58.00 |
| 3 COMBINED AT | 23 | 53841. | 54.00 | 53109. | 45492. | 28065. | 374.00 |
| ROUTED TO | 25 | 52613. | 57.00 | 51952. | 45228. | 27827. | 374.00 |
| HYDROGRAPH AT | 25 | 18729. | 33.00 | 17474. | 10084. | 3667. | 46.00 |
| 2 COMBINED AT | 25 | 53092. | 57.00 | 52446. | 46610. | 31110. | 420.00 |
| HYDROGRAPH AT | A111A | 1130. | 26.00 | 624. | 244. | 91. | .93 |
| HYDROGRAPH AT | A110A | 1046. | 27.00 | 691. | 269. | 98. | 1.11 |
| HYDROGRAPH AT | A109A | 1857. | 26.00 | 1089. | 430. | 162. | 1.62 |
| HYDROGRAPH AT | A10903 | 2207. | 27.00 | 1499. | 601. | 221. | 2.44 |
| 2 COMBINED AT | A109#1 | 3830. | 26.00 | 2563. | 1031. | 383. | 4.06 |
| ROUTED TO | A109#2 | 3586. | 27.00 | 2513. | 1030. | 383. | 4.06 |
| HYDROGRAPH AT | A109B | 1980. | 27.00 | 1446. | 617. | 231. | 2.40 |
| 2 COMBINED AT | A109#2 | 5567. | 27.00 | 3951. | 1647. | 614. | 6.46 |
| ROUTED TO | A109#3 | 5300. | 28.00 | 3932. | 1647. | 614. | 6.46 |

| | | | | | | | |
|---------------|--------|---------|-------|---------|---------|---------|---------|
| HYDROGRAPH AT | A109C | 1516. | 26.00 | 935. | 375. | 141. | 1.42 |
| 2 COMBINED AT | A109#3 | 6159. | 27.00 | 4784. | 2020. | 756. | 7.88 |
| 4 COMBINED AT | 25 | 53094. | 57.00 | 52450. | 46780. | 31836. | 429.92 |
| ROUTED TO | 26 | 50810. | 66.00 | 50354. | 46324. | 31602. | 429.92 |
| HYDROGRAPH AT | 26 | 9876. | 32.00 | 9063. | 4913. | 1754. | 22.00 |
| 2 COMBINED AT | 26 | 50814. | 66.00 | 50359. | 46412. | 32794. | 451.92 |
| 2 COMBINED AT | 26 | 74225. | 61.00 | 74151. | 72224. | 52985. | 771.92 |
| ROUTED TO | 47 | 74192. | 63.00 | 74124. | 72063. | 52822. | 771.92 |
| HYDROGRAPH AT | 47 | 3440. | 28.00 | 2748. | 1151. | 390. | 5.00 |
| 2 COMBINED AT | 47 | 74192. | 63.00 | 74124. | 72064. | 53016. | 776.92 |
| 2 COMBINED AT | 47 | 156480. | 73.00 | 154785. | 138611. | 108957. | 1771.47 |
| HYDROGRAPH AT | 71 | 75015. | 42.00 | 73688. | 57861. | 25506. | 325.00 |
| ROUTED TO | 72 | 60695. | 57.00 | 59814. | 50393. | 25173. | 325.00 |
| HYDROGRAPH AT | 72 | 18821. | 37.00 | 18183. | 12369. | 4771. | 61.00 |
| 2 COMBINED AT | 72 | 62701. | 57.00 | 61866. | 52701. | 29336. | 386.00 |
| HYDROGRAPH AT | 51 | 29711. | 38.00 | 28884. | 20607. | 8230. | 105.00 |
| ROUTED TO | 52 | 24097. | 51.00 | 23650. | 18801. | 8213. | 105.00 |
| HYDROGRAPH AT | 52 | 24868. | 36.00 | 23971. | 16124. | 6207. | 79.00 |
| 2 COMBINED AT | 52 | 31296. | 46.00 | 31190. | 29214. | 14371. | 184.00 |
| HYDROGRAPH AT | 61 | 32725. | 38.00 | 31830. | 22852. | 9191. | 117.00 |
| ROUTED TO | 52 | 30283. | 44.00 | 29503. | 21999. | 9187. | 117.00 |
| HYDROGRAPH AT | 52 | 17688. | 33.00 | 16563. | 9560. | 3441. | 44.00 |
| 2 COMBINED AT | 52 | 35177. | 42.00 | 34647. | 28699. | 12618. | 161.00 |
| 2 COMBINED AT | 52 | 66241. | 42.00 | 65798. | 57544. | 26986. | 345.00 |
| ROUTED TO | 72 | 65986. | 44.00 | 65478. | 57187. | 26980. | 345.00 |
| HYDROGRAPH AT | 72 | 12124. | 32.00 | 11183. | 6196. | 2218. | 28.00 |
| 2 COMBINED AT | 72 | 68571. | 42.00 | 68149. | 60812. | 29179. | 373.00 |
| 2 COMBINED AT | 72 | 111904. | 52.00 | 110884. | 100981. | 58269. | 759.00 |
| HYDROGRAPH AT | 81 | 31855. | 38.00 | 30970. | 22025. | 8737. | 112.00 |
| ROUTED TO | 82 | 22219. | 56.00 | 21869. | 18008. | 8631. | 112.00 |

| | | | | | | | |
|---------------|--------|---------|-------|---------|---------|---------|---------|
| HYDROGRAPH AT | 82 | 31463. | 39.00 | 30705. | 22492. | 9097. | 117.00 |
| 2 COMBINED AT | 82 | 34520. | 42.00 | 34066. | 31546. | 17547. | 229.00 |
| 3 COMBINED AT | 82 | 261858. | 52.00 | 259937. | 242669. | 183523. | 2759.47 |
| ROUTED TO | 82 | 254924. | 59.00 | 253562. | 239517. | 177830. | 2759.47 |
| HYDROGRAPH AT | 91 | 43634. | 32.00 | 40125. | 22203. | 8086. | 98.00 |
| 2 COMBINED AT | 91 | 255259. | 59.00 | 253965. | 240096. | 179203. | 2857.47 |
| ROUTED TO | 91 | 253587. | 61.00 | 252226. | 237649. | 171415. | 2857.47 |
| ROUTED TO | 92 | 252049. | 64.00 | 250607. | 235362. | 170467. | 2857.47 |
| HYDROGRAPH AT | 92 | 5912. | 28.00 | 4561. | 1891. | 651. | 8.00 |
| 2 COMBINED AT | 92-SJ1 | 252049. | 64.00 | 250607. | 235363. | 170468. | 2865.47 |
| ROUTED TO | 93 | 248505. | 70.00 | 246940. | 231808. | 166926. | 2865.47 |
| HYDROGRAPH AT | 93 | 25055. | 32.00 | 23071. | 12953. | 4761. | 57.00 |
| 2 COMBINED AT | 93 | 248519. | 70.00 | 246957. | 231819. | 166940. | 2922.47 |

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

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

1 ID SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 2 ID DODSON & ASSOCIATES, INC. SEPTEMBER, 1989
 3 ID 100-YEAR STORM EVENT EXISTING WATERSHED CONDITIONS
 4 ID FILENAME = SMCEX100.IH1
 5 IT 15 01JAN89 0000 300
 6 IO 5
 7 JD 12.2 .01
 8 PH 1 0.9 2.0 4.5 5.9 6.7 8.3 10.3 12.2
 9 JD 10
 10 JD 25

*
 * *****
 * WOODLANDS TRADE CENTER DITCH WATERSHED
 * *****
 *

11 KK F132A
 12 KM WOODLANDS TRADE CENTER DITCH: SUB-AREA A RUNOFF HYDROGRAPH
 13 BA 0.97
 14 LE 0.2 2.5 2.0 0.55 2
 15 UC 6.01 2.65

16 KK F132#1
 17 KM ROUTE FROM IH-45 TO MOUTH OF WOODLANDS TRADE CENTER DITCH
 18 RS 8 STOR -1
 19 SV 0 25 41 54 68 82 97
 20 SQ 0 130 270 400 540 670 800

21 KK F132B
 22 KM WOODLANDS TRADE CENTER DITCH: SUB-AREA B RUNOFF HYDROGRAPH
 23 BA 1.68
 24 LE 0.2 2.5 2.0 0.55 26
 25 UC 3.46 2.44

26 KK F132#1
 27 KM COMBINED HYDROGRAPH AT MOUTH OF WOODLANDS TRADE CENTER DITCH
 28 HC 2

*
 * *****
 * GLENEAGLES DIVERSION DITCH WATERSHED
 * *****
 *

29 KK F131A
 30 KM GLENEAGLES DIVERSION DITCH: RUNOFF HYDROGRAPH
 31 BA 1.46
 32 LE 0.2 2.5 2.0 0.55 18
 33 UC 3.39 4.39

*
 * *****
 * CARTER'S SLOUGH WATERSHED
 * *****
 *

| | |
|------|--|
| LINE | ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10 |
| 34 | KK F128A |
| 35 | KM CARTER'S SLOUGH: RUNOFF HYDROGRAPH |
| 36 | BA 1.82 |
| 37 | LE 0.2 2.5 2.0 0.55 7 |
| 38 | UC 6.96 5.56 |
| | * |
| | * ***** |
| | * WHITE OAK CREEK - HARPER'S HORSEPEN BRANCH WATERSHED |
| | * ***** |
| | * |
| 39 | KK F121A |
| 40 | KM WHITE OAK CREEK: SUB-AREA A RUNOFF HYDROGRAPH |
| 41 | BA 2.70 |
| 42 | LE 0.2 2.5 2.0 0.55 11 |
| 43 | UC 6.83 5.01 |
| 44 | KK F12102A |
| 45 | KM HARPER'S HORSEPEN BRANCH: SUB-AREA A RUNOFF HYDROGRAPH |
| 46 | BA 2.38 |
| 47 | LE 0.2 2.5 2.0 0.55 3 |
| 48 | UC 7.45 4.63 |
| 49 | KK F12102#1 |
| 50 | KM ROUTE HARPER'S HORSEPEN BR. SUB-AREA A HYD. TO CONF. WITH F121-02-01 |
| 51 | RS 45 STOR -1 |
| 52 | SV 0 224 419 652 949 1300 1465 |
| 53 | SQ 0 260 510 770 1020 1280 1540 |
| 54 | KK F12102B |
| 55 | KM HARPER'S HORSEPEN BRANCH: SUB-AREA B RUNOFF HYDROGRAPH |
| 56 | BA 1.55 |
| 57 | LE 0.2 2.5 2.0 0.55 6 |
| 58 | UC 8.34 8.82 |
| 59 | KK F12102#1 |
| 60 | KM COMBINED HARPER'S HORSEPEN BR. HYDROGRAPH ABOVE CONF. WITH F121-02-01 |
| 61 | HC 2 |
| 62 | KK F1210201A |
| 63 | KM HARPER'S HORSEPEN BRANCH - TRIBUTARY F121-02-01: RUNOFF HYDROGRAPH |
| 64 | BA 1.72 |
| 65 | LE 0.2 2.5 2.0 0.55 7 |
| 66 | UC 8.74 5.93 |
| 67 | KK F12102#1 |
| 68 | KM COMBINED HARPER'S HORSEPEN BR. HYDROGRAPH BELOW CONF. WITH F121-02-01 |
| 69 | HC 2 |

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

| | | | | | | | | | | | |
|----|----|--------|---|-----|-----|------|------|------|--|--|--|
| 70 | KK | F121#1 | | | | | | | | | |
| 71 | KM | | ROUTE COMBINED HARPER'S HORSEPEN BR. HYD. TO CONF. WITH WHITE OAK CREEK | | | | | | | | |
| 72 | RS | 38 | STOR | -1 | | | | | | | |
| 73 | SV | 0 | 329 | 555 | 770 | 1000 | 1208 | 1397 | | | |
| 74 | SQ | 0 | 310 | 620 | 930 | 1240 | 1550 | 1860 | | | |

| | | | | | | | | | | | |
|----|----|---------|--|-----|------|---|--|--|--|--|--|
| 75 | KK | F12102C | | | | | | | | | |
| 76 | KM | | HARPER'S HORSEPEN BRANCH: SUB-AREA C RUNOFF HYDROGRAPH | | | | | | | | |
| 77 | BA | 1.28 | | | | | | | | | |
| 78 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 2 | | | | | |
| 79 | UC | 8.99 | 14.67 | | | | | | | | |

| | | | | | | | | | | | |
|----|----|--------|--|--|--|--|--|--|--|--|--|
| 80 | KK | F121#1 | | | | | | | | | |
| 81 | KM | | COMBINED HARPERS HORSEPEN BRANCH HYDROGRAPH AT WHITE OAK CREEK | | | | | | | | |
| 82 | HC | 2 | | | | | | | | | |

| | | | | | | | | | | | |
|----|----|--------|--|--|--|--|--|--|--|--|--|
| 83 | KK | F121#1 | | | | | | | | | |
| 84 | KM | | COMBINED WHITE OAK CR. HYDROGRAPH BELOW CONF. WITH HARPER'S HORSEPEN BR. | | | | | | | | |
| 85 | HC | 2 | | | | | | | | | |

| | | | | | | | | | | | |
|----|----|--------|---|-----|------|------|------|------|--|--|--|
| 86 | KK | F121#2 | | | | | | | | | |
| 87 | KM | | ROUTE COMBINED HYDROGRAPH TO MOUTH OF WHITE OAK CREEK | | | | | | | | |
| 88 | RS | 10 | STOR | -1 | | | | | | | |
| 89 | SV | 0 | 106 | 209 | 310 | 410 | 511 | 615 | | | |
| 90 | SQ | 0 | 420 | 840 | 1260 | 1680 | 2100 | 2520 | | | |

| | | | | | | | | | | | |
|----|----|-------|---|-----|------|---|--|--|--|--|--|
| 91 | KK | F121B | | | | | | | | | |
| 92 | KM | | WHITE OAK CREEK: SUB-AREA B RUNOFF HYDROGRAPH | | | | | | | | |
| 93 | BA | 1.17 | | | | | | | | | |
| 94 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 2 | | | | | |
| 95 | UC | 8.30 | 4.62 | | | | | | | | |

| | | | | | | | | | | | |
|----|----|--------|--|--|--|--|--|--|--|--|--|
| 96 | KK | F121#2 | | | | | | | | | |
| 97 | KM | | COMBINED WHITE OAK CREEK HYDROGRAPH AT MOUTH | | | | | | | | |
| 98 | HC | 2 | | | | | | | | | |
| | * | | | | | | | | | | |
| | * | | ***** | | | | | | | | |
| | * | | WOODSON'S GULLY - TAN TROUGH GULLY WATERSHED | | | | | | | | |
| | * | | ***** | | | | | | | | |
| | * | | | | | | | | | | |

| | | | | | | | | | | | |
|-----|----|-------|---|-----|------|---|--|--|--|--|--|
| 99 | KK | F109A | | | | | | | | | |
| 100 | KM | | WOODSON'S GULLY: SUB-AREA A RUNOFF HYDROGRAPH | | | | | | | | |
| 101 | BA | 2.80 | | | | | | | | | |
| 102 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 2 | | | | | |
| 103 | UC | 8.61 | 11.73 | | | | | | | | |

| | | | | | | | | | | | |
|-----|----|--------|---|-----|-----|-----|------|------|--|--|--|
| 104 | KK | F109#1 | | | | | | | | | |
| 105 | KM | | ROUTE TO CONFLUENCE WITH F109-03-00 (BELOW RILEY-FUSSEL ROAD) | | | | | | | | |
| 106 | RS | 18 | STOR | -1 | | | | | | | |
| 107 | SV | 0 | 94 | 148 | 202 | 255 | 303 | 349 | | | |
| 108 | SQ | 0 | 200 | 400 | 600 | 800 | 1000 | 1200 | | | |

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

```

109 KK F109B
110 KM WOODSON'S GULLY: SUB-AREA B RUNOFF HYDROGRAPH
111 BA 2.90
112 LE 0.2 2.5 2.0 0.55 2
113 UC 7.84 9.70

114 KK F109#1
115 KM COMBINED WOODSON'S GULLY HYDROGRAPH BELOW CONFLUENCE WITH F109-03-00
116 HC 2

117 KK F109#2
118 KM ROUTE COMBINED HYD. TO CONFLUENCE WITH TANROUGH GULLY (F109-02-00)
119 RS 39 STOR -1
120 SV 0 383 689 945 1178 1384 1579
121 SQ 0 380 770 1150 1540 1920 2300

122 KK F109C
123 KM WOODSON'S GULLY: SUB-AREA C RUNOFF HYDROGRAPH
124 BA 1.46
125 LE 0.2 2.5 2.0 0.55 2
126 UC 11.53 9.44

127 KK F109#2
128 KM COMBINED WOODSON'S GULLY HYDROGRAPH ABOVE CONF. WITH TANROUGH GULLY
129 HC 2

130 KK F10902A
131 KM TANROUGH GULLY: RUNOFF HYDROGRAPH
132 BA 2.10
133 LE 0.2 2.5 2.0 0.55 2
134 UC 8.37 10.85

135 KK F109#2
136 KM COMBINED WOODSON'S GULLY HYDROGRAPH BELOW CONF. WITH TANROUGH GULLY
137 HC 2

138 KK F109#3
139 KM ROUTE COMBINED HYDROGRAPH TO MOUTH OF WOODSON'S GULLY
140 RS 13 STOR -1
141 SV 0 179 309 436 568 699 822
142 SQ 0 530 1050 1580 2100 2630 3160

143 KK F109D
144 KM WOODSON'S GULLY: SUB-AREA D RUNOFF HYDROGRAPH
145 BA 1.66
146 LE 0.2 2.5 2.0 0.55 2
147 UC 8.46 7.09

148 KK F109#3
149 KM COMBINED HYDROGRAPH AT MOUTH OF WOODSON'S GULLY
150 HC 2

```

```

*
* *****
* DRAINAGE DISTRICT #6 CHANNEL II WATERSHED
* *****
*

```

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

```

151 KK A111A
152 KM DRAINAGE DISTRICT #6 CHANNEL II: RUNOFF HYDROGRAPH
153 BA 0.80
154 LE 0.2 2.5 2.0 0.55 35
155 UC 2.14 1.33
*
* *****
* SAM BELL GULLY WATERSHED
* *****
*

156 KK A110A
157 KM SAM BELL GULLY: RUNOFF HYDROGRAPH
158 BA 0.88
159 LE 0.2 2.5 2.0 0.55 15
160 UC 5.20 3.08
*
* *****
* DRAINAGE DISTRICT #6 CHANNEL III - SPRING OAKS CHANNEL WATERSHED
* *****
*

161 KK A109A
162 KM DRAINAGE DISTRICT #6 CHANNEL III: SUB-AREA A RUNOFF HYDROGRAPH
163 BA 1.36
164 LE 0.2 2.5 2.0 0.55 22
165 UC 3.37 2.20

166 KK A10903A
167 KM SPRING OAKS CHANNEL: RUNOFF HYDROGRAPH
168 BA 2.47
169 LE 0.2 2.5 2.0 0.55 27
170 UC 2.57 1.96

171 KK A109#1
172 KM COMBINED DD#6 CHANNEL III HYD. BELOW CONFLUENCE WITH SPRING OAKS CHANNEL
173 HC 2

174 KK A109#2
175 KM ROUTE COMBINED DD#6 CHANNEL III HYDROGRAPH TO RAYFORD ROAD
176 RS 5 STOR -1
177 SV 0 100 158 208 274 489 866
178 SQ 0 800 1600 2400 3200 4000 4800

179 KK A109B
180 KM DRAINAGE DISTRICT #6 CHANNEL III: SUB-AREA B RUNOFF HYDROGRAPH
181 BA 2.06
182 LE 0.2 2.5 2.0 0.55 16
183 UC 3.01 4.92
    
```

| | | | | | | | | | | | |
|------|----|--|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| LINE | ID |1 |2 |3 |4 |5 |6 |7 |8 |9 |10 |
| 184 | KK | A109#2 | | | | | | | | | |
| 185 | KM | COMBINED DD#6 CHANNEL III HYDROGRAPH AT RAYFORD ROAD | | | | | | | | | |
| 186 | HC | 2 | | | | | | | | | |
| 187 | KK | A109#3 | | | | | | | | | |
| 188 | KM | ROUTE COMBINED DD#6 CHANNEL III HYDROGRAPH TO MOUTH | | | | | | | | | |
| 189 | RS | 4 | STOR | -1 | | | | | | | |
| 190 | SV | 0 | 93 | 152 | 204 | 253 | 319 | 426 | | | |
| 191 | SQ | 0 | 960 | 1920 | 2880 | 3840 | 4800 | 5760 | | | |
| 192 | KK | A109C | | | | | | | | | |
| 193 | KM | DRAINAGE DISTRICT #6 CHANNEL III: SUB-AREA C RUNOFF HYDROGRAPH | | | | | | | | | |
| 194 | BA | 1.27 | | | | | | | | | |
| 195 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 16 | | | | | |
| 196 | UC | 3.10 | 2.89 | | | | | | | | |
| 197 | KK | A109#3 | | | | | | | | | |
| 198 | KM | COMBINED DRAINAGE DISTRICT #6 CHANNEL III HYDROGRAPH AT MOUTH | | | | | | | | | |
| 199 | HC | 2 | | | | | | | | | |
| 200 | ZZ | | | | | | | | | | |

 * FLOOD HYDROGRAPH PACKAGE (HEC-1) *
 * BY THE COE IN FEBRUARY 1981 *
 * REVISED 02 AUG 88 *
 * RUN DATE 09/01/1989 TIME 14:53:30 *

 * DODSON AND ASSOCIATES, INC. *
 * HYDROLOGIST AND CIVIL ENGINEERS *
 * 7015 W TIDWELL SUITE 107 *
 * HOUSTON, TEXAS 77092 *
 * (713) 895-8322 *

SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 DODSON & ASSOCIATES, INC. SEPTEMBER, 1989
 100-YEAR STORM EVENT EXISTING WATERSHED CONDITIONS
 FILENAME = SMCEX100.IH1

6 IO OUTPUT CONTROL VARIABLES

IPRNT 5 PRINT CONTROL
 IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA

NMIN 15 MINUTES IN COMPUTATION INTERVAL
 IDATE 1JAN89 STARTING DATE
 ITIME 0000 STARTING TIME
 NQ 300 NUMBER OF HYDROGRAPH ORDINATES
 NDDATE 4JAN89 ENDING DATE
 NDTIME 0245 ENDING TIME
 ICENT 19 CENTURY MARK

COMPUTATION INTERVAL .25 HOURS
 TOTAL TIME BASE 74.75 HOURS

ENGLISH UNITS

DRAINAGE AREA SQUARE MILES
 PRECIPITATION DEPTH INCHES
 LENGTH, ELEVATION FEET
 FLOW CUBIC FEET PER SECOND
 STORAGE VOLUME ACRE-FEET
 SURFACE AREA ACRES
 TEMPERATURE DEGREES FAHRENHEIT

7 JD INDEX STORM NO. 1

STRM 12.20 PRECIPITATION DEPTH
 TRDA .01 TRANSPOSITION DRAINAGE AREA

8 PI PRECIPITATION PATTERN

| | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|------|------|-----|
| .03 | .03 | .03 | .03 | .03 | .03 | .03 | .04 | .04 | .04 |
| .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .05 |
| .05 | .05 | .05 | .05 | .07 | .07 | .07 | .07 | .08 | .08 |
| .08 | .09 | .09 | .09 | .10 | .10 | .11 | .12 | .12 | .13 |
| .14 | .16 | .18 | .21 | .30 | .36 | .58 | 1.22 | 2.00 | .69 |
| .41 | .33 | .22 | .19 | .17 | .15 | .14 | .13 | .12 | .11 |
| .11 | .10 | .10 | .09 | .09 | .08 | .08 | .08 | .08 | .07 |
| .07 | .07 | .05 | .05 | .05 | .05 | .05 | .05 | .04 | .04 |
| .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .03 |
| .03 | .03 | .03 | .03 | .03 | .03 | | | | |

9 JD

INDEX STORM NO. 2

STRM 12.05 PRECIPITATION DEPTH
TRDA 10.00 TRANSPOSITION DRAINAGE AREA

8 PI

PRECIPITATION PATTERN

| | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|------|------|-----|
| .03 | .03 | .03 | .03 | .03 | .03 | .03 | .04 | .04 | .04 |
| .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .05 | .05 |
| .05 | .05 | .05 | .05 | .07 | .07 | .07 | .07 | .08 | .08 |
| .08 | .09 | .09 | .09 | .10 | .10 | .11 | .12 | .12 | .13 |
| .15 | .16 | .18 | .21 | .30 | .36 | .58 | 1.14 | 1.87 | .69 |
| .41 | .33 | .22 | .19 | .17 | .15 | .14 | .13 | .12 | .11 |
| .11 | .10 | .10 | .09 | .09 | .08 | .08 | .08 | .08 | .07 |
| .07 | .07 | .05 | .05 | .05 | .05 | .05 | .05 | .04 | .04 |
| .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 |
| .03 | .03 | .03 | .03 | .03 | .03 | | | | |

10 JD

INDEX STORM NO. 3

STRM 11.86 PRECIPITATION DEPTH
TRDA 25.00 TRANSPOSITION DRAINAGE AREA

8 PI

PRECIPITATION PATTERN

| | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|------|------|-----|
| .03 | .03 | .03 | .03 | .03 | .03 | .04 | .04 | .04 | .04 |
| .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .05 | .05 |
| .05 | .05 | .05 | .05 | .07 | .07 | .07 | .08 | .08 | .08 |
| .08 | .09 | .09 | .10 | .10 | .10 | .11 | .12 | .13 | .13 |
| .15 | .16 | .19 | .21 | .31 | .36 | .58 | 1.04 | 1.70 | .68 |
| .41 | .33 | .23 | .20 | .17 | .15 | .14 | .13 | .12 | .11 |
| .11 | .10 | .10 | .09 | .09 | .09 | .08 | .08 | .08 | .07 |
| .07 | .07 | .05 | .05 | .05 | .05 | .05 | .05 | .05 | .04 |
| .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 |
| .04 | .03 | .03 | .03 | .03 | .03 | | | | |

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

| OPERATION | STATION | PEAK FLOW | TIME OF PEAK | AVERAGE FLOW FOR MAXIMUM PERIOD | | | BASIN AREA | MAXIMUM STAGE | TIME OF MAX STAGE |
|---------------|---------|-----------|--------------|---------------------------------|---------|---------|------------|---------------|-------------------|
| | | | | 6-HOUR | 24-HOUR | 72-HOUR | | | |
| HYDROGRAPH AT | F132A | 673. | 17.00 | 559. | 228. | 76. | .97 | | |
| ROUTED TO | F132#1 | 665. | 18.25 | 555. | 228. | 76. | .97 | | |
| HYDROGRAPH AT | F132B | 1509. | 15.00 | 1106. | 427. | 144. | 1.68 | | |
| 2 COMBINED AT | F132#1 | 1871. | 15.50 | 1550. | 650. | 220. | 2.65 | | |
| HYDROGRAPH AT | F131A | 957. | 15.25 | 780. | 355. | 122. | 1.46 | | |
| HYDROGRAPH AT | F128A | 881. | 18.25 | 788. | 416. | 146. | 1.82 | | |
| HYDROGRAPH AT | F121A | 1395. | 18.25 | 1239. | 632. | 219. | 2.70 | | |
| HYDROGRAPH AT | F12102 | 1222. | 18.50 | 1090. | 546. | 188. | 2.38 | | |
| ROUTED TO | F12102 | 1045. | 33.50 | 979. | 543. | 188. | 2.38 | | |
| HYDROGRAPH AT | F12102 | 555. | 20.00 | 515. | 325. | 124. | 1.55 | | |
| 2 COMBINED AT | F12102 | 1220. | 32.75 | 1181. | 826. | 311. | 3.93 | | |
| HYDROGRAPH AT | F12102 | 756. | 19.75 | 694. | 389. | 138. | 1.72 | | |
| 2 COMBINED AT | F12102 | 1451. | 26.25 | 1427. | 1199. | 448. | 5.65 | | |
| ROUTED TO | F121#1 | 1437. | 34.00 | 1419. | 1176. | 448. | 5.65 | | |
| HYDROGRAPH AT | F12102 | 320. | 21.00 | 306. | 223. | 99. | 1.28 | | |
| 2 COMBINED AT | F121#1 | 1606. | 33.00 | 1589. | 1335. | 547. | 6.93 | | |
| 2 COMBINED AT | F121#1 | 1901. | 28.00 | 1847. | 1638. | 765. | 9.63 | | |
| ROUTED TO | F121#2 | 1879. | 31.00 | 1839. | 1633. | 764. | 9.63 | | |
| HYDROGRAPH AT | F121B | 579. | 19.00 | 524. | 268. | 92. | 1.17 | | |
| 2 COMBINED AT | F121#2 | 2101. | 20.75 | 1934. | 1806. | 854. | 10.80 | | |
| HYDROGRAPH AT | F109A | 821. | 20.50 | 774. | 532. | 219. | 2.80 | | |
| ROUTED TO | F109#1 | 809. | 23.50 | 767. | 526. | 218. | 2.80 | | |
| HYDROGRAPH AT | F109B | 977. | 19.50 | 910. | 586. | 228. | 2.90 | | |
| 2 COMBINED AT | F109#1 | 1626. | 22.25 | 1568. | 1075. | 445. | 5.70 | | |
| ROUTED TO | F109#2 | 1602. | 29.00 | 1537. | 1056. | 439. | 5.70 | | |
| HYDROGRAPH AT | F109C | 459. | 22.50 | 436. | 292. | 115. | 1.46 | | |

| | | | | | | | |
|---------------|--------|-------|-------|-------|-------|------|-------|
| 2 COMBINED AT | F109#2 | 1909. | 28.50 | 1818. | 1231. | 553. | 7.16 |
| HYDROGRAPH AT | F10902 | 652. | 20.25 | 612. | 410. | 165. | 2.10 |
| 2 COMBINED AT | F109#2 | 2304. | 28.25 | 2183. | 1536. | 717. | 9.26 |
| ROUTED TO | F109#3 | 2267. | 31.50 | 2153. | 1534. | 712. | 9.26 |
| HYDROGRAPH AT | F109D | 664. | 19.75 | 611. | 360. | 131. | 1.66 |
| 2 COMBINED AT | F109#3 | 2461. | 31.25 | 2329. | 1769. | 841. | 10.92 |
| HYDROGRAPH AT | A111A | 1064. | 13.75 | 605. | 211. | 71. | .80 |
| HYDROGRAPH AT | A110A | 624. | 16.50 | 511. | 215. | 73. | .88 |
| HYDROGRAPH AT | A109A | 1280. | 15.00 | 913. | 342. | 115. | 1.36 |
| HYDROGRAPH AT | A10903 | 2635. | 14.25 | 1732. | 632. | 213. | 2.47 |
| 2 COMBINED AT | A109#1 | 3842. | 14.50 | 2635. | 972. | 327. | 3.83 |
| ROUTED TO | A109#2 | 3371. | 16.75 | 2612. | 971. | 327. | 3.83 |
| HYDROGRAPH AT | A109B | 1270. | 15.00 | 1048. | 493. | 171. | 2.06 |
| 2 COMBINED AT | A109#2 | 4487. | 16.25 | 3652. | 1458. | 497. | 5.89 |
| ROUTED TO | A109#3 | 4478. | 16.75 | 3628. | 1457. | 497. | 5.89 |
| HYDROGRAPH AT | A109C | 1062. | 15.00 | 790. | 312. | 105. | 1.27 |
| 2 COMBINED AT | A109#3 | 5310. | 16.00 | 4367. | 1766. | 602. | 7.16 |

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

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

1 ID SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 2 ID DODSON & ASSOCIATES, INC. SEPTEMBER, 1989
 3 ID 100-YEAR STORM EVENT INTERIM WATERSHED CONDITIONS
 4 ID FILENAME = SMCIN100.IH1
 5 IT 15 01JAN89 0000 300
 6 IO 5
 7 JD 12.2 .01
 8 PH 1 0.9 2.0 4.5 5.9 6.7 8.3 10.3 12.2
 9 JD 10
 10 JD 25

*
 * *****
 * WOODLANDS TRADE CENTER DITCH WATERSHED
 * *****
 *

11 KK F132A
 12 KM WOODLANDS TRADE CENTER DITCH: SUB-AREA A RUNOFF HYDROGRAPH
 13 BA 0.97
 14 LE 0.2 2.5 2.0 0.55 2
 15 UC 6.01 2.65

16 KK F132#1
 17 KM ROUTE FROM IH-45 TO MOUTH OF WOODLANDS TRADE CENTER DITCH
 18 RS 8 STOR -1
 19 SV 0 25 41 54 68 82 97
 20 SQ 0 130 270 400 540 670 800

21 KK F132B
 22 KM WOODLANDS TRADE CENTER DITCH: SUB-AREA B RUNOFF HYDROGRAPH
 23 BA 1.68
 24 LE 0.2 2.5 2.0 0.55 26
 25 UC 3.46 2.44

26 KK F132#1
 27 KM COMBINED HYDROGRAPH AT MOUTH OF WOODLANDS TRADE CENTER DITCH
 28 HC 2

*
 * *****
 * GLENEAGLES DIVERSION DITCH WATERSHED
 * *****
 *

29 KK F131A
 30 KM GLENEAGLES DIVERSION DITCH: RUNOFF HYDROGRAPH
 31 BA 1.46
 32 LE 0.2 2.5 2.0 0.55 18
 33 UC 3.39 4.39

*
 * *****
 * CARTER'S SLOUGH WATERSHED
 * *****
 *

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

```

34 KK F128A
35 KM CARTER'S SLOUGH: RUNOFF HYDROGRAPH
36 BA 1.82
37 LE 0.2 2.5 2.0 0.55 7
38 UC 6.96 5.56
*
* *****
* HARPER'S HORSEPEN BRANCH WATERSHED
* *****
*

39 KK F126A
40 KM HARPER'S HORSEPEN BRANCH: SUB-AREA A RUNOFF HYDROGRAPH
41 BA 2.38
42 LE 0.2 2.5 2.0 0.55 3
43 UC 7.45 4.63

44 KK F126#1
45 KM ROUTE HARPER'S HORSEPEN BR. SUB-AREA A HYD. TO CONF. WITH F126-01-00
46 RS 45 STOR -1
47 SV 0 224 419 652 949 1300 1465
48 SQ 0 260 510 770 1020 1280 1540

49 KK F126B
50 KM HARPER'S HORSEPEN BRANCH: SUB-AREA B RUNOFF HYDROGRAPH
51 BA 1.55
52 LE 0.2 2.5 2.0 0.55 6
53 UC 8.34 8.82

54 KK F126#1
55 KM COMBINED HARPER'S HORSEPEN BR. HYDROGRAPH ABOVE CONF. WITH F126-01-00
56 HC 2

57 KK F12601A
58 KM HARPER'S HORSEPEN BRANCH - TRIBUTARY F126-01-00: RUNOFF HYDROGRAPH
59 BA 1.72
60 LE 0.2 2.5 2.0 0.55 7
61 UC 8.74 5.93

62 KK F126#1
63 KM COMBINED HARPER'S HORSEPEN BR. HYDROGRAPH BELOW CONF. WITH F126-01-00
64 HC 2

65 KK F126#2
66 KM ROUTE COMBINED HARPER'S HORSEPEN BR. HYD. TO CONF. WITH WEST FORK SJR
67 RM 5 1.1 0.2

68 KK F126C
69 KM HARPER'S HORSEPEN BRANCH: SUB-AREA C RUNOFF HYDROGRAPH
70 BA .87
71 LE 0.2 2.5 2.0 0.55 2
72 UC 4.59 4.05
    
```

| | |
|------|--|
| LINE | ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10 |
| 73 | KK F126#2 |
| 74 | KM COMBINED HARPER'S HORSEPEN BR. HYDROGRAPH AT WEST FORK SAN JACINTO R. |
| 75 | HC 2 |
| | * |
| | * ***** |
| | * WHITE OAK CREEK WATERSHED |
| | * ***** |
| | * |
| 76 | KK F121A |
| 77 | KM WHITE OAK CREEK: SUB-AREA A RUNOFF HYDROGRAPH |
| 78 | BA 2.70 |
| 79 | LE 0.2 2.5 2.0 0.55 11 |
| 80 | UC 3.42 2.51 |
| 81 | KK F12102A |
| 82 | KM TRIBUTARY F121-02-00: RUNOFF HYDROGRAPH |
| 83 | BA 0.99 |
| 84 | LE 0.2 2.5 2.0 0.55 2 |
| 85 | UC 8.99 14.67 |
| 86 | KK F121#1 |
| 87 | KM COMBINED WHITE OAK CR. HYDROGRAPH BELOW CONF. WITH F121-02-00 |
| 88 | HC 2 |
| 89 | KK F121#2 |
| 90 | KM ROUTE COMBINED HYDROGRAPH TO MOUTH OF WHITE OAK CREEK |
| 91 | RM 4 1.0 0.2 |
| 92 | KK F121B |
| 93 | KM WHITE OAK CREEK: SUB-AREA B RUNOFF HYDROGRAPH |
| 94 | BA 1.17 |
| 95 | LE 0.2 2.5 2.0 0.55 2 |
| 96 | UC 3.79 2.11 |
| 97 | KK F121#2 |
| 98 | KM COMBINED WHITE OAK CREEK HYDROGRAPH AT MOUTH |
| 99 | HC 2 |
| | * |
| | * ***** |
| | * WOODSON'S GULLY - TAN TROUGH GULLY WATERSHED |
| | * ***** |
| | * |
| 100 | KK F109A |
| 101 | KM WOODSON'S GULLY: SUB-AREA A RUNOFF HYDROGRAPH |
| 102 | BA 2.80 |
| 103 | LE 0.2 2.5 2.0 0.55 2 |
| 104 | UC 8.61 11.73 |

| | |
|------|---|
| LINE | ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10 |
| 149 | KK F109#3 |
| 150 | KM COMBINED HYDROGRAPH AT MOUTH OF WOODSON'S GULLY |
| 151 | HC 2 |
| | * |
| | * |
| | ***** |
| | DRAINAGE DISTRICT #6 CHANNEL II WATERSHED |
| | ***** |
| | * |
| 152 | KK A111A |
| 153 | KM DRAINAGE DISTRICT #6 CHANNEL II: RUNOFF HYDROGRAPH |
| 154 | BA 0.80 |
| 155 | LE 0.2 2.5 2.0 0.55 35 |
| 156 | UC 2.14 1.33 |
| | * |
| | * |
| | ***** |
| | SAM BELL GULLY WATERSHED |
| | ***** |
| | * |
| 157 | KK A110A |
| 158 | KM SAM BELL GULLY: RUNOFF HYDROGRAPH |
| 159 | BA 0.88 |
| 160 | LE 0.2 2.5 2.0 0.55 15 |
| 161 | UC 5.20 3.08 |
| | * |
| | * |
| | ***** |
| | DRAINAGE DISTRICT #6 CHANNEL III - SPRING OAKS CHANNEL WATERSHED |
| | ***** |
| | * |
| 162 | KK A109A |
| 163 | KM DRAINAGE DISTRICT #6 CHANNEL III: SUB-AREA A RUNOFF HYDROGRAPH |
| 164 | BA 1.36 |
| 165 | LE 0.2 2.5 2.0 0.55 22 |
| 166 | UC 2.78 1.82 |
| 167 | KK A10903A |
| 168 | KM SPRING OAKS CHANNEL: RUNOFF HYDROGRAPH |
| 169 | BA 2.47 |
| 170 | LE 0.2 2.5 2.0 0.55 27 |
| 171 | UC 2.06 1.58 |
| 172 | KK A109#1 |
| 173 | KM COMBINED DD#6 CHANNEL III HYD. BELOW CONFLUENCE WITH SPRING OAKS CHANNEL |
| 174 | HC 2 |
| 175 | KK A109#2 |
| 176 | KM ROUTE COMBINED DD#6 CHANNEL III HYDROGRAPH TO RAYFORD ROAD |
| 177 | RM 4 0.9 0.2 |

| LINE | ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------|----|--|------|-----|------|----|---|---|---|---|----|
| 178 | KK | A109B | | | | | | | | | |
| 179 | KM | DRAINAGE DISTRICT #6 CHANNEL III: SUB-AREA B RUNOFF HYDROGRAPH | | | | | | | | | |
| 180 | BA | 2.06 | | | | | | | | | |
| 181 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 16 | | | | | |
| 182 | UC | 2.60 | 4.24 | | | | | | | | |
| 183 | KK | A109#2 | | | | | | | | | |
| 184 | KM | COMBINED DD#6 CHANNEL III HYDROGRAPH AT RAYFORD ROAD | | | | | | | | | |
| 185 | HC | 2 | | | | | | | | | |
| 186 | KK | A109#3 | | | | | | | | | |
| 187 | KM | ROUTE COMBINED DD#6 CHANNEL III HYDROGRAPH TO MOUTH | | | | | | | | | |
| 188 | RM | 3 | 0.8 | 0.2 | | | | | | | |
| 189 | KK | A109C | | | | | | | | | |
| 190 | KM | DRAINAGE DISTRICT #6 CHANNEL III: SUB-AREA C RUNOFF HYDROGRAPH | | | | | | | | | |
| 191 | BA | 1.27 | | | | | | | | | |
| 192 | LE | 0.2 | 2.5 | 2.0 | 0.55 | 16 | | | | | |
| 193 | UC | 2.96 | 2.76 | | | | | | | | |
| 194 | KK | A109#3 | | | | | | | | | |
| 195 | KM | COMBINED DRAINAGE DISTRICT #6 CHANNEL III HYDROGRAPH AT MOUTH | | | | | | | | | |
| 196 | HC | 2 | | | | | | | | | |
| 197 | ZZ | | | | | | | | | | |

 * * * * *
 * FLOOD HYDROGRAPH PACKAGE (HEC-1) *
 * BY THE COE IN FEBRUARY 1981 *
 * REVISED 02 AUG 88 *
 * * * * *
 * RUN DATE 09/01/1989 TIME 15:25:27 *
 * * * * *

 * * * * *
 * DODSON AND ASSOCIATES, INC. *
 * HYDROLOGIST AND CIVIL ENGINEERS *
 * 7015 W TIDWELL SUITE 107 *
 * HOUSTON, TEXAS 77092 *
 * (713) 895-8322 *
 * * * * *

SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 DODSON & ASSOCIATES, INC. SEPTEMBER, 1989
 100-YEAR STORM EVENT INTERIM WATERSHED CONDITIONS
 FILENAME = SMCIN100.IH1

6 IO OUTPUT CONTROL VARIABLES

IPRNT 5 PRINT CONTROL
 IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA

NMIN 15 MINUTES IN COMPUTATION INTERVAL
 IDATE 1JAN89 STARTING DATE
 ITIME 0000 STARTING TIME
 NQ 300 NUMBER OF HYDROGRAPH ORDINATES
 NDDATE 4JAN89 ENDING DATE
 NDTIME 0245 ENDING TIME
 ICENT 19 CENTURY MARK

COMPUTATION INTERVAL .25 HOURS
 TOTAL TIME BASE 74.75 HOURS

ENGLISH UNITS

DRAINAGE AREA SQUARE MILES
 PRECIPITATION DEPTH INCHES
 LENGTH, ELEVATION FEET
 FLOW CUBIC FEET PER SECOND
 STORAGE VOLUME ACRE-FEET
 SURFACE AREA ACRES
 TEMPERATURE DEGREES FAHRENHEIT

7 JD INDEX STORM NO. 1

STRM 12.20 PRECIPITATION DEPTH
 TRDA .01 TRANSPOSITION DRAINAGE AREA

8 PI PRECIPITATION PATTERN

| | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|------|------|
| .03 | .03 | .03 | .03 | .03 | .03 | .04 | .04 | .04 |
| .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .05 |
| .05 | .05 | .05 | .05 | .07 | .07 | .07 | .07 | .08 |
| .08 | .09 | .09 | .09 | .10 | .10 | .11 | .12 | .13 |
| .14 | .16 | .18 | .21 | .30 | .36 | .58 | 1.22 | 2.00 |
| .41 | .33 | .22 | .19 | .17 | .15 | .14 | .13 | .12 |
| .11 | .10 | .10 | .09 | .09 | .08 | .08 | .08 | .07 |
| .07 | .07 | .05 | .05 | .05 | .05 | .05 | .05 | .04 |
| .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 |
| .03 | .03 | .03 | .03 | .03 | .03 | | | |

9 JD

INDEX STORM NO. 2

STRM 12.05 PRECIPITATION DEPTH
TRDA 10.00 TRANSPOSITION DRAINAGE AREA

8 PI

PRECIPITATION PATTERN

| | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|------|------|-----|
| .03 | .03 | .03 | .03 | .03 | .03 | .03 | .04 | .04 | .04 |
| .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .05 | .05 |
| .05 | .05 | .05 | .05 | .07 | .07 | .07 | .07 | .08 | .08 |
| .08 | .09 | .09 | .09 | .10 | .10 | .11 | .12 | .12 | .13 |
| .15 | .16 | .18 | .21 | .30 | .36 | .58 | 1.14 | 1.87 | .69 |
| .41 | .33 | .22 | .19 | .17 | .15 | .14 | .13 | .12 | .11 |
| .11 | .10 | .10 | .09 | .09 | .08 | .08 | .08 | .08 | .07 |
| .07 | .07 | .05 | .05 | .05 | .05 | .05 | .05 | .04 | .04 |
| .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 |
| .03 | .03 | .03 | .03 | .03 | .03 | | | | |

10 JD

INDEX STORM NO. 3

STRM 11.86 PRECIPITATION DEPTH
TRDA 25.00 TRANSPOSITION DRAINAGE AREA

8 PI

PRECIPITATION PATTERN

| | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|------|------|-----|
| .03 | .03 | .03 | .03 | .03 | .03 | .04 | .04 | .04 | .04 |
| .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .05 | .05 |
| .05 | .05 | .05 | .05 | .07 | .07 | .07 | .08 | .08 | .08 |
| .08 | .09 | .09 | .10 | .10 | .10 | .11 | .12 | .13 | .13 |
| .15 | .16 | .19 | .21 | .31 | .36 | .58 | 1.04 | 1.70 | .68 |
| .41 | .33 | .23 | .20 | .17 | .15 | .14 | .13 | .12 | .11 |
| .11 | .10 | .10 | .09 | .09 | .09 | .08 | .08 | .08 | .07 |
| .07 | .07 | .05 | .05 | .05 | .05 | .05 | .05 | .05 | .04 |
| .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 |
| .04 | .03 | .03 | .03 | .03 | .03 | | | | |

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

| OPERATION | STATION | PEAK FLOW | TIME OF PEAK | AVERAGE FLOW FOR MAXIMUM PERIOD | | | BASIN AREA | MAXIMUM STAGE | TIME OF MAX STAGE |
|---------------|---------|-----------|--------------|---------------------------------|---------|---------|------------|---------------|-------------------|
| | | | | 6-HOUR | 24-HOUR | 72-HOUR | | | |
| HYDROGRAPH AT | F132A | 673. | 17.00 | 559. | 228. | 76. | .97 | | |
| ROUTED TO | F132#1 | 665. | 18.25 | 555. | 228. | 76. | .97 | | |
| HYDROGRAPH AT | F132B | 1509. | 15.00 | 1106. | 427. | 144. | 1.68 | | |
| 2 COMBINED AT | F132#1 | 1871. | 15.50 | 1550. | 650. | 220. | 2.65 | | |
| HYDROGRAPH AT | F131A | 957. | 15.25 | 780. | 355. | 122. | 1.46 | | |
| HYDROGRAPH AT | F128A | 881. | 18.25 | 788. | 416. | 146. | 1.82 | | |
| HYDROGRAPH AT | F126A | 1222. | 18.50 | 1090. | 546. | 188. | 2.38 | | |
| ROUTED TO | F126#1 | 1045. | 33.50 | 979. | 543. | 188. | 2.38 | | |
| HYDROGRAPH AT | F126B | 555. | 20.00 | 515. | 325. | 124. | 1.55 | | |
| 2 COMBINED AT | F126#1 | 1220. | 32.75 | 1181. | 826. | 311. | 3.93 | | |
| HYDROGRAPH AT | F12601 | 756. | 19.75 | 694. | 389. | 138. | 1.72 | | |
| 2 COMBINED AT | F126#1 | 1451. | 26.25 | 1427. | 1199. | 448. | 5.65 | | |
| ROUTED TO | F126#2 | 1449. | 27.25 | 1426. | 1198. | 448. | 5.65 | | |
| HYDROGRAPH AT | F126C | 547. | 16.25 | 453. | 202. | 69. | .87 | | |
| 2 COMBINED AT | F126#2 | 1623. | 20.50 | 1573. | 1369. | 516. | 6.52 | | |
| HYDROGRAPH AT | F121A | 2338. | 15.00 | 1713. | 653. | 219. | 2.70 | | |
| HYDROGRAPH AT | F12102 | 248. | 21.00 | 237. | 173. | 77. | .99 | | |
| 2 COMBINED AT | F121#1 | 2426. | 15.00 | 1839. | 799. | 296. | 3.69 | | |
| ROUTED TO | F121#2 | 2370. | 16.00 | 1826. | 798. | 296. | 3.69 | | |
| HYDROGRAPH AT | F121B | 1047. | 15.25 | 757. | 276. | 92. | 1.17 | | |
| 2 COMBINED AT | F121#2 | 3322. | 15.75 | 2539. | 1069. | 387. | 4.86 | | |
| HYDROGRAPH AT | F109A | 821. | 20.50 | 774. | 532. | 219. | 2.80 | | |
| ROUTED TO | F109#1 | 809. | 23.50 | 767. | 526. | 218. | 2.80 | | |
| HYDROGRAPH AT | F109B | 977. | 19.50 | 910. | 586. | 228. | 2.90 | | |
| 2 COMBINED AT | F109#1 | 1626. | 22.25 | 1568. | 1075. | 445. | 5.70 | | |
| ROUTED TO | F109#2 | 1602. | 29.00 | 1537. | 1056. | 439. | 5.70 | | |

| | | | | | | | |
|---------------|--------|-------|-------|-------|-------|------|-------|
| HYDROGRAPH AT | F109C | 459. | 22.50 | 436. | 292. | 115. | 1.46 |
| 2 COMBINED AT | F109#2 | 1909. | 28.50 | 1818. | 1231. | 553. | 7.16 |
| HYDROGRAPH AT | F10902 | 652. | 20.25 | 612. | 410. | 165. | 2.10 |
| 2 COMBINED AT | F109#2 | 2304. | 28.25 | 2183. | 1536. | 717. | 9.26 |
| ROUTED TO | F109#3 | 2267. | 31.50 | 2153. | 1534. | 712. | 9.26 |
| HYDROGRAPH AT | F109D | 664. | 19.75 | 611. | 360. | 131. | 1.66 |
| 2 COMBINED AT | F109#3 | 2461. | 31.25 | 2329. | 1769. | 841. | 10.92 |
| HYDROGRAPH AT | A111A | 1064. | 13.75 | 605. | 211. | 71. | .80 |
| HYDROGRAPH AT | A110A | 624. | 16.50 | 511. | 215. | 73. | .88 |
| HYDROGRAPH AT | A109A | 1463. | 14.50 | 957. | 343. | 115. | 1.36 |
| HYDROGRAPH AT | A10903 | 3038. | 14.00 | 1801. | 633. | 213. | 2.47 |
| 2 COMBINED AT | A109#1 | 4417. | 14.00 | 2746. | 974. | 327. | 3.83 |
| ROUTED TO | A109#2 | 4252. | 15.00 | 2731. | 973. | 327. | 3.83 |
| HYDROGRAPH AT | A109B | 1417. | 14.75 | 1127. | 498. | 171. | 2.06 |
| 2 COMBINED AT | A109#2 | 5631. | 15.00 | 3850. | 1464. | 497. | 5.89 |
| ROUTED TO | A109#3 | 5482. | 15.75 | 3827. | 1464. | 497. | 5.89 |
| HYDROGRAPH AT | A109C | 1100. | 14.75 | 803. | 312. | 105. | 1.27 |
| 2 COMBINED AT | A109#3 | 6424. | 15.75 | 4591. | 1774. | 602. | 7.16 |

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


```

LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
1         ID          SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
2         ID          DODSON & ASSOCIATES, INC.          SEPTEMBER, 1989
3         ID          100-YEAR STORM EVENT                ULTIMATE WATERSHED CONDITIONS
4         ID          FILENAME = SMCUL100.IH1
5         IT          15 01JAN89    0000    300
6         IO          5
7         JD          12.2    .01
8         PH          1          0.9    2.0    4.5    5.9    6.7    8.3    10.3    12.2
9         JD          10
10        JD          25
*
*          *****
*          WOODLANDS TRADE CENTER DITCH WATERSHED
*          *****
*
11        KK F132A1
12        KM          WOODLANDS TRADE CENTER DITCH:  SUB-AREA A-1 RUNOFF HYDROGRAPH
13        BA          0.65
14        LE          0.2    2.5    2.0    0.55    2
15        UC          4.05    2.32

16        KK F132#1
17        KM          ROUTE FROM IH-45 TO MOUTH OF WOODLANDS TRADE CENTER DITCH
18        RM          3          .7    .2

19        KK F132A2
20        KM          WOODLANDS TRADE CENTER DITCH:  SUB-AREA A-2 RUNOFF HYDROGRAPH
21        BA          2.30
22        LE          0.2    2.5    2.0    0.55    64
23        UC          .94    .49

24        KK F132#1
25        KM          COMBINED HYDROGRAPH AT INTERSTATE HIGHWAY 45
26        HC          2

27        KK F132#2
28        KM          ROUTE FROM IH-45 TO MOUTH OF WOODLANDS TRADE CENTER DITCH
29        RM          4          .9    .2

30        KK F132B
31        KM          WOODLANDS TRADE CENTER DITCH:  SUB-AREA B RUNOFF HYDROGRAPH
32        BA          1.99
33        LE          0.2    2.5    2.0    0.55    67
34        UC          1.05    .84

35        KK F132#1
36        KM          COMBINED HYDROGRAPH AT MOUTH OF WOODLANDS TRADE CENTER DITCH
37        HC          2
*
*          *****
*          GLENEAGLES DIVERSION DITCH WATERSHED
*          *****
*

```



```

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

38      KK  F131A
39      KM      GLENEAGLES DIVERSION DITCH:  RUNOFF HYDROGRAPH
40      BA      1.01
41      LE      0.2    2.5    2.0    0.55    42
42      UC      1.18   1.46
      *
      *      *****
      *      CARTER'S SLOUGH WATERSHED
      *      *****
      *

43      KK  F128A
44      KM      CARTER'S SLOUGH:  RUNOFF HYDROGRAPH
45      BA      1.96
46      LE      0.2    2.5    2.0    0.55    32
47      UC      2.38   1.91
      *
      *      *****
      *      HARPER'S HORSEPEN BRANCH WATERSHED
      *      *****
      *

48      KK  F126A
49      KM      HARPER'S HORSEPEN BRANCH:  SUB-AREA A RUNOFF HYDROGRAPH
50      BA      1.97
51      LE      0.2    2.5    2.0    0.55    64
52      UC      1.18   1.04

53      KK  F12601A
54      KM      HARPER'S HORSEPEN BRANCH - TRIBUTARY F126-01-00:  RUNOFF HYDROGRAPH
55      BA      1.47
56      LE      0.2    2.5    2.0    0.55    61
57      UC      1.02   .70

58      KK  F126#1
59      KM      COMBINED HARPER'S HORSEPEN BR. HYDROGRAPH BELOW CONF. WITH F126-01-00
60      HC      2

61      KK  F126#2
62      KM      ROUTE FROM F126#1 TO F126#2
63      RM      3      .7      .2

64      KK  F126B
65      KM      HARPER'S HORSEPEN BRANCH:  SUB-AREA B RUNOFF HYDROGRAPH
66      BA      1.44
67      LE      0.2    2.5    2.0    0.55    47
68      UC      1.20   1.96

69      KK  F126#2
70      KM      COMBINED HARPERS HORSEPEN BRANCH HYDROGRAPH AT F126#2
71      HC      2
    
```

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

```

72      KK  F126#3
73      KM          ROUTE FROM F126#2 TO F126#3
74      RM          2      .5      .2

75      KK  F126C
76      KM          HARPER'S HORSEPEN BRANCH:  SUB-AREA C RUNOFF HYDROGRAPH
77      BA          0.80
78      LE          0.2      2.5      2.0      0.55      19
79      UC          2.62      2.09

80      KK  F121#3
81      KM          COMBINED HARPERS HORSEPEN BRANCH HYDROGRAPH AT MOUTH
82      HC          2
      *
      *          *****
      *          DITCH F124-00-00 WATERSHED
      *          *****
      *

83      KK  F124A
84      KM          DITCH A124-00-00 WATERSHED:  RUNOFF HYDROGRAPH
85      BA          0.80
86      LE          0.2      2.5      2.0      0.55      23
87      UC          1.91      1.19
      *
      *          *****
      *          WHITE OAK CREEK WATERSHED
      *          *****
      *

88      KK  F121A
89      KM          WHITE OAK CREEK:  SUB-AREA A RUNOFF HYDROGRAPH
90      BA          3.19
91      LE          0.2      2.5      2.0      0.55      43
92      UC          2.06      1.51

93      KK  F121#1
94      KM          ROUTE COMBINED HYDROGRAPH TO MOUTH OF WHITE OAK CREEK
95      RM          3      .8      .2

96      KK  F121B
97      KM          WHITE OAK CREEK:  SUB-AREA B RUNOFF HYDROGRAPH
98      BA          1.50
99      LE          0.2      2.5      2.0      0.55      33
100     UC          2.50      1.39

101     KK  F121#1
102     KM          COMBINED WHITE OAK CREEK HYDROGRAPH AT MOUTH
103     HC          2
      *
      *          *****
      *          WOODSON'S GULLY - TAN TROUGH GULLY WATERSHED
      *          *****
      *
  
```


| | |
|------|--|
| LINE | ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10 |
| 147 | KK F109#3 |
| 148 | KM COMBINED WOODSON'S GULLY HYDROGRAPH BELOW CONF. WITH TANROUGH GULLY |
| 149 | HC 2 |
| 150 | KK F109#4 |
| 151 | KM ROUTE COMBINED HYDROGRAPH TO MOUTH OF WOODSON'S GULLY |
| 152 | RM 3 .7 .2 |
| 153 | KK F109E |
| 154 | KM WOODSON'S GULLY: SUB-AREA E RUNOFF HYDROGRAPH |
| 155 | BA 1.36 |
| 156 | LE 0.2 2.5 2.0 0.55 30 |
| 157 | UC 2.62 2.20 |
| 158 | KK F109#4 |
| 159 | KM COMBINED HYDROGRAPH AT MOUTH OF WOODSON'S GULLY |
| 160 | HC 2 |
| | * * ***** * DRAINAGE DISTRICT #6 CHANNEL II WATERSHED * ***** * |
| 161 | KK A111A |
| 162 | KM DRAINAGE DISTRICT #6 CHANNEL II: RUNOFF HYDROGRAPH |
| 163 | BA .93 |
| 164 | LE 0.2 2.5 2.0 0.55 53 |
| 165 | UC 1.09 .68 |
| | * * ***** * SAM BELL GULLY WATERSHED * ***** * |
| 166 | KK A110A |
| 167 | KM SAM BELL GULLY: RUNOFF HYDROGRAPH |
| 168 | BA 1.11 |
| 169 | LE 0.2 2.5 2.0 0.55 25 |
| 170 | UC 1.73 1.03 |
| | * * ***** * DRAINAGE DISTRICT #6 CHANNEL III - SPRING OAKS CHANNEL WATERSHED * ***** * |
| 171 | KK A109A |
| 172 | KM DRAINAGE DISTRICT #6 CHANNEL III: SUB-AREA A RUNOFF HYDROGRAPH |
| 173 | BA 1.62 |
| 174 | LE 0.2 2.5 2.0 0.55 58 |
| 175 | UC 1.22 .80 |

 * FLOOD HYDROGRAPH PACKAGE (HEC-1) *
 * BY THE COE IN FEBRUARY 1981 *
 * REVISED 02 AUG 88 *
 * RUN DATE 09/01/1989 TIME 15:48:05 *

 * DODSON AND ASSOCIATES, INC. *
 * HYDROLOGIST AND CIVIL ENGINEERS *
 * 7015 W TIDWELL SUITE 107 *
 * HOUSTON, TEXAS 77092 *
 * (713) 895-8322 *

SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 DODSON & ASSOCIATES, INC. SEPTEMBER, 1989
 100-YEAR STORM EVENT ULTIMATE WATERSHED CONDITIONS
 FILENAME = SMCUL100.IH1

6 IO OUTPUT CONTROL VARIABLES

IPRNT 5 PRINT CONTROL
 IPLOT 0 PLOT CONTROL
 QSCAL 0. HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA

NMIN 15 MINUTES IN COMPUTATION INTERVAL
 IDATE 1JAN89 STARTING DATE
 ITIME 0000 STARTING TIME
 NQ 300 NUMBER OF HYDROGRAPH ORDINATES
 NDDATE 4JAN89 ENDING DATE
 NDTIME 0245 ENDING TIME
 ICENT 19 CENTURY MARK

COMPUTATION INTERVAL .25 HOURS
 TOTAL TIME BASE 74.75 HOURS

ENGLISH UNITS

DRAINAGE AREA SQUARE MILES
 PRECIPITATION DEPTH INCHES
 LENGTH, ELEVATION FEET
 FLOW CUBIC FEET PER SECOND
 STORAGE VOLUME ACRE-FEET
 SURFACE AREA ACRES
 TEMPERATURE DEGREES FAHRENHEIT

7 JD INDEX STORM NO. 1

STRM 12.20 PRECIPITATION DEPTH
 TRDA .01 TRANSPOSITION DRAINAGE AREA

8 PI PRECIPITATION PATTERN

| | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|------|------|-----|
| .03 | .03 | .03 | .03 | .03 | .03 | .03 | .04 | .04 | .04 |
| .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .05 |
| .05 | .05 | .05 | .05 | .07 | .07 | .07 | .07 | .08 | .08 |
| .08 | .09 | .09 | .09 | .10 | .10 | .11 | .12 | .12 | .13 |
| .14 | .16 | .18 | .21 | .30 | .36 | .58 | 1.22 | 2.00 | .69 |
| .41 | .33 | .22 | .19 | .17 | .15 | .14 | .13 | .12 | .11 |
| .11 | .10 | .10 | .09 | .09 | .08 | .08 | .08 | .08 | .07 |
| .07 | .07 | .05 | .05 | .05 | .05 | .05 | .05 | .04 | .04 |
| .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .03 |
| .03 | .03 | .03 | .03 | .03 | .03 | | | | |

9 JD

INDEX STORM NO. 2

STRM 12.05 PRECIPITATION DEPTH
TRDA 10.00 TRANSPOSITION DRAINAGE AREA

8 PI

PRECIPITATION PATTERN

| | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|------|------|-----|
| .03 | .03 | .03 | .03 | .03 | .03 | .03 | .04 | .04 | .04 |
| .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .05 | .05 |
| .05 | .05 | .05 | .05 | .07 | .07 | .07 | .07 | .08 | .08 |
| .08 | .09 | .09 | .09 | .10 | .10 | .11 | .12 | .12 | .13 |
| .15 | .16 | .18 | .21 | .30 | .36 | .58 | 1.14 | 1.87 | .69 |
| .41 | .33 | .22 | .19 | .17 | .15 | .14 | .13 | .12 | .11 |
| .11 | .10 | .10 | .09 | .09 | .08 | .08 | .08 | .08 | .07 |
| .07 | .07 | .05 | .05 | .05 | .05 | .05 | .05 | .04 | .04 |
| .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 |
| .03 | .03 | .03 | .03 | .03 | .03 | | | | |

10 JD

INDEX STORM NO. 3

STRM 11.86 PRECIPITATION DEPTH
TRDA 25.00 TRANSPOSITION DRAINAGE AREA

8 PI

PRECIPITATION PATTERN

| | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|------|------|-----|
| .03 | .03 | .03 | .03 | .03 | .03 | .04 | .04 | .04 | .04 |
| .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .05 | .05 |
| .05 | .05 | .05 | .05 | .07 | .07 | .07 | .08 | .08 | .08 |
| .08 | .09 | .09 | .10 | .10 | .10 | .11 | .12 | .13 | .13 |
| .15 | .16 | .19 | .21 | .31 | .36 | .58 | 1.04 | 1.70 | .68 |
| .41 | .33 | .23 | .20 | .17 | .15 | .14 | .13 | .12 | .11 |
| .11 | .10 | .10 | .09 | .09 | .09 | .08 | .08 | .08 | .07 |
| .07 | .07 | .05 | .05 | .05 | .05 | .05 | .05 | .05 | .04 |
| .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 | .04 |
| .04 | .03 | .03 | .03 | .03 | .03 | | | | |

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

| OPERATION | STATION | PEAK FLOW | TIME OF PEAK | AVERAGE FLOW FOR MAXIMUM PERIOD | | | BASIN AREA | MAXIMUM STAGE | TIME OF MAX STAGE |
|---------------|---------|-----------|--------------|---------------------------------|---------|---------|------------|---------------|-------------------|
| | | | | 6-HOUR | 24-HOUR | 72-HOUR | | | |
| HYDROGRAPH AT | F132A1 | 549. | 15.50 | 410. | 153. | 51. | .65 | | |
| ROUTED TO | F132#1 | 542. | 16.25 | 408. | 153. | 51. | .65 | | |
| HYDROGRAPH AT | F132A2 | 5348. | 12.75 | 1891. | 668. | 224. | 2.30 | | |
| 2 COMBINED AT | F132#1 | 5445. | 12.75 | 2164. | 813. | 274. | 2.95 | | |
| ROUTED TO | F132#2 | 4786. | 13.75 | 2156. | 813. | 274. | 2.95 | | |
| HYDROGRAPH AT | F132B | 3845. | 13.00 | 1630. | 581. | 195. | 1.99 | | |
| 2 COMBINED AT | F132#1 | 7577. | 13.50 | 3738. | 1391. | 469. | 4.94 | | |
| HYDROGRAPH AT | F131A | 1455. | 13.25 | 769. | 273. | 92. | 1.01 | | |
| HYDROGRAPH AT | F128A | 2171. | 14.25 | 1398. | 510. | 172. | 1.96 | | |
| HYDROGRAPH AT | F126A | 3371. | 13.25 | 1591. | 570. | 191. | 1.97 | | |
| HYDROGRAPH AT | F12601 | 3043. | 13.00 | 1199. | 422. | 141. | 1.47 | | |
| 2 COMBINED AT | F126#1 | 6346. | 13.00 | 2778. | 991. | 332. | 3.44 | | |
| ROUTED TO | F126#2 | 5838. | 13.75 | 2773. | 990. | 332. | 3.44 | | |
| HYDROGRAPH AT | F126B | 1778. | 13.25 | 1062. | 393. | 133. | 1.44 | | |
| 2 COMBINED AT | F126#2 | 7480. | 13.75 | 3824. | 1381. | 464. | 4.88 | | |
| ROUTED TO | F126#3 | 7174. | 14.25 | 3816. | 1381. | 464. | 4.88 | | |
| HYDROGRAPH AT | F126C | 818. | 14.50 | 548. | 200. | 67. | .80 | | |
| 2 COMBINED AT | F121#3 | 7977. | 14.25 | 4357. | 1579. | 531. | 5.68 | | |
| HYDROGRAPH AT | F124A | 1130. | 13.75 | 599. | 203. | 68. | .80 | | |
| HYDROGRAPH AT | F121A | 4086. | 13.75 | 2400. | 861. | 290. | 3.19 | | |
| ROUTED TO | F121#1 | 3909. | 14.75 | 2389. | 861. | 290. | 3.19 | | |
| HYDROGRAPH AT | F121B | 1870. | 14.25 | 1119. | 393. | 132. | 1.50 | | |
| 2 COMBINED AT | F121#1 | 5657. | 14.50 | 3485. | 1251. | 421. | 4.69 | | |
| HYDROGRAPH AT | F109A | 883. | 13.25 | 464. | 164. | 55. | .61 | | |
| ROUTED TO | F109#1 | 812. | 14.25 | 462. | 164. | 55. | .61 | | |
| HYDROGRAPH AT | F109B | 2333. | 13.00 | 1142. | 410. | 138. | 1.44 | | |

| | | | | | | | |
|---------------|--------|--------|-------|-------|-------|-------|-------|
| 2 COMBINED AT | F109#1 | 2656. | 13.25 | 1585. | 572. | 193. | 2.05 |
| ROUTED TO | F109#2 | 2549. | 14.25 | 1578. | 572. | 193. | 2.05 |
| HYDROGRAPH AT | F109C | 4406. | 13.25 | 2458. | 893. | 301. | 3.23 |
| 2 COMBINED AT | F109#2 | 6387. | 13.75 | 4009. | 1463. | 493. | 5.28 |
| ROUTED TO | F109#3 | 6165. | 14.75 | 3992. | 1462. | 493. | 5.28 |
| HYDROGRAPH AT | F109D | 2938. | 13.50 | 1594. | 569. | 191. | 2.07 |
| 2 COMBINED AT | F109#3 | 8283. | 14.50 | 5517. | 2027. | 683. | 7.35 |
| HYDROGRAPH AT | F10902 | 2991. | 13.25 | 1648. | 598. | 201. | 2.16 |
| 2 COMBINED AT | F109#3 | 10517. | 14.25 | 7122. | 2621. | 883. | 9.51 |
| ROUTED TO | F109#4 | 10313. | 15.00 | 7095. | 2621. | 883. | 9.51 |
| HYDROGRAPH AT | F109E | 1379. | 14.50 | 939. | 351. | 118. | 1.36 |
| 2 COMBINED AT | F109#4 | 11585. | 14.75 | 7997. | 2965. | 1000. | 10.87 |
| HYDROGRAPH AT | A111A | 1911. | 13.00 | 750. | 261. | 87. | .93 |
| HYDROGRAPH AT | A110A | 1705. | 13.50 | 841. | 284. | 95. | 1.11 |
| HYDROGRAPH AT | A109A | 3028. | 13.00 | 1310. | 461. | 155. | 1.62 |
| HYDROGRAPH AT | A10903 | 3266. | 13.75 | 1820. | 636. | 214. | 2.44 |
| 2 COMBINED AT | A109#1 | 5963. | 13.25 | 3104. | 1094. | 368. | 4.06 |
| ROUTED TO | A109#2 | 5621. | 14.25 | 3095. | 1094. | 368. | 4.06 |
| HYDROGRAPH AT | A109B | 2884. | 13.25 | 1758. | 656. | 222. | 2.40 |
| 2 COMBINED AT | A109#2 | 7997. | 14.25 | 4835. | 1747. | 588. | 6.46 |
| ROUTED TO | A109#3 | 7739. | 15.00 | 4817. | 1747. | 588. | 6.46 |
| HYDROGRAPH AT | A109C | 2389. | 13.25 | 1134. | 403. | 135. | 1.42 |
| 2 COMBINED AT | A109#3 | 8829. | 14.75 | 5851. | 2144. | 723. | 7.88 |

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

THIS RUN EXECUTED 9/ 1/89 16:19: 0

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
T3 A109-00-00 DD 6 CHANNEL III
T4 100-YEAR STORM FREQUENCY EXISTING CONDITIONS
T5 FILENAME = A109RVEX.IH2

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL FQ
2 .0011 99.8

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38 43 1 23 24 42 26 3 39 4
37 30 65

J5 LPRNT NUMSEC *****REQUESTED SECTION NUMBERS*****
-10 -10

J6 IHLEQ ICOPY SUBDIV STRTDS RMILE
1

NC .15 .15 .06 .1 .3
QT 1 5260
X1 500.00 8 933.0 1075.0 500.0 500.0 500.0
X3 10. .00 .00
GR 100.2 896.0 100.20 933.0 87.40 973.0 85.90 988.0 81.90 1000.0
GR 85.0 1012.0 87.10 1036.0 100.60 1075.0
X1 3900.0 13 940.0 1069.0 3400 3400 3400
GR 105.0 600 102.8 915.0 103.40 940.0 95.60 960.0 91.80 976.0
GR 90.40 993.0 85.6 1000.0 89.50 1007.0 91.50 1038.0 102.30 1069.0
GR 103.00 1169.0 103.2 1199.0 105.0 2100

| | | | | | | | | | | |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| QT | 1 | 4890 | | | | | | | | |
| X1 | 5035.0 | 15 | 905.2 | 1026.7 | 1135.0 | 1135.0 | 1135.0 | | | |
| GR | 110 | 100 | 103.2 | 872.0 | 102.85 | 878.1 | 105.65 | 905.2 | 96.45 | 927.9 |
| GR | 89.35 | 955.9 | 89.0 | 976.0 | 87.95 | 983.9 | 88.75 | 990.0 | 92.55 | 1004.8 |
| GR | 98.85 | 1011.8 | 104.1 | 1026.7 | 103.25 | 1114.1 | 102.45 | 1201.5 | 110 | 2400 |
| NC | .15 | .15 | .05 | | | | | | | |
| X1 | 6170.0 | 15 | 910.0 | 1049.0 | 1135.0 | 1135.0 | 1135.0 | | | |
| GR | 110 | 700 | 105.5 | 872.0 | 105.20 | 879.0 | 108.00 | 910.0 | 98.80 | 936.0 |
| GR | 91.70 | 968.0 | 91.3 | 991.0 | 90.30 | 1000.0 | 91.10 | 1007.0 | 94.90 | 1024.0 |
| GR | 101.20 | 1032.0 | 106.4 | 1049.0 | 105.60 | 1149.0 | 104.80 | 1249.0 | 110 | 1350 |
| QT | 1 | 4600 | | | | | | | | |
| X1 | 9275.0 | 14 | 905.0 | 1082.0 | 3105 | 3105 | 3105.0 | | | |
| GR | 123.6 | 825.0 | 117.60 | 881.0 | 117.00 | 905.0 | 101.70 | 921.0 | 99.90 | 940.0 |
| GR | 96.3 | 981.0 | 95.30 | 1000.0 | 96.60 | 1019.0 | 98.30 | 1037.0 | 104.70 | 1049.0 |
| GR | 108.9 | 1065.0 | 114.70 | 1082.0 | 114.50 | 1101.0 | 114.30 | 1201.0 | | |
| X1 | 9869.0 | 10 | 935.6 | 1100.7 | 594.0 | 594.0 | 594.0 | | | |
| GR | 110.3 | 922.0 | 110.30 | 935.6 | 100.50 | 961.6 | 98.10 | 1006.6 | 94.40 | 1028.4 |
| GR | 98.3 | 1050.2 | 102.90 | 1076.1 | 104.00 | 1085.7 | 109.50 | 1100.7 | 110.20 | 1126.6 |
| X1 | 10463. | 10 | 932.0 | 1053.0 | 594.0 | 594.0 | 594.0 | | | |
| GR | 109.4 | 922.0 | 109.40 | 932.0 | 99.60 | 951.0 | 97.20 | 984.0 | 93.50 | 1000.0 |
| GR | 97.4 | 1016.0 | 102.00 | 1035.0 | 103.10 | 1042.0 | 108.60 | 1053.0 | 109.30 | 1072.0 |
| NC | .15 | .15 | .03 | .3 | .5 | | | | | |
| QT | 1 | 4510 | | | | | | | | |
| RAYFORD ROAD STA. 105+56 - 17 DEGREE SKEW | | | | | | | | | | |
| X1 | 10556. | 22 | 939.0 | 1047.0 | 93.0 | 93.0 | 93.0 | | | |
| X3 | 10. | | | | | | | 110.8 | 109.7 | |
| GR | 111.6 | 522.0 | 111.90 | 617.0 | 111.70 | 713.0 | 111.40 | 809.0 | 111.30 | 904.0 |
| GR | 111.3 | 916.0 | 106.80 | 916.0 | 106.80 | 939.0 | 99.60 | 951.0 | 97.20 | 984.0 |
| GR | 93.5 | 1000.0 | 97.40 | 1016.0 | 102.00 | 1035.0 | 103.10 | 1042.0 | 106.80 | 1047.0 |
| GR | 106.8 | 1060.0 | 111.20 | 1060.0 | 111.20 | 1096.0 | 110.80 | 1191.0 | 110.50 | 1287.0 |
| GR | 110.3 | 1383.0 | 110.20 | 1478.0 | | | | | | |
| SB | 1.250 | 1.56 | 3.00 | .00 | 30.00 | 5.36 | 815.00 | 2.700 | 93.50 | 93.50 |
| X1 | 10647. | 22 | 939.0 | 1047.0 | 91.0 | 91.0 | 91.0 | | | |
| X2 | 0. | .00 | 1. | 106.80 | 110.20 | .00 | | .000 | | .000 |
| X3 | 10. | | | | | | | 111.30 | 110.20 | |
| BT | -18 | 522.0 | 111.60 | .00 | 617.0 | 111.90 | .00 | 713.0 | 111.70 | .00 |
| BT | 0 | 809.0 | 111.40 | .00 | 904.0 | 111.30 | .00 | 916.0 | 111.30 | .00 |
| BT | 0 | 916.0 | 114.70 | .00 | 937.0 | 114.70 | .00 | 937.0 | 113.50 | .00 |
| BT | 0 | 1039.0 | 113.50 | .00 | 1039.0 | 114.60 | .00 | 1060.0 | 114.60 | .00 |
| BT | 0 | 1060.0 | 111.20 | .00 | 1096.0 | 111.20 | .00 | 1191.0 | 110.80 | .00 |
| BT | 0 | 1287.0 | 110.50 | .00 | 1383.0 | 110.30 | .00 | 1478.0 | 110.20 | .00 |
| GR | 111.6 | 522.0 | 111.90 | 617.0 | 111.70 | 713.0 | 111.40 | 809.0 | 111.30 | 904.0 |
| GR | 111.3 | 916.0 | 106.80 | 916.0 | 106.80 | 939.0 | 99.60 | 951.0 | 97.20 | 984.0 |
| GR | 93.5 | 1000.0 | 97.40 | 1016.0 | 102.00 | 1035.0 | 103.10 | 1042.0 | 106.80 | 1047.0 |
| GR | 106.8 | 1060.0 | 111.20 | 1060.0 | 111.20 | 1096.0 | 110.80 | 1191.0 | 110.50 | 1287.0 |
| GR | 110.3 | 1383.0 | 110.20 | 1478.0 | | | | | | |

| | | | | | | | | | | |
|-----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| NC | .12 | .15 | .04 | | | | | | | |
| X1 | 10750. | 12 | 932.0 | 1053.0 | 103.0 | 103.0 | 103.0 | | | |
| GR | 111.7 | 100.0 | 109.40 | 922.0 | 109.40 | 932.0 | 99.60 | 951.0 | 97.20 | 984.0 |
| GR | 93.5 | 1000.0 | 97.40 | 1016.0 | 102.00 | 1035.0 | 103.10 | 1042.0 | 108.60 | 1053.0 |
| GR | 109.3 | 1072.0 | 111.2 | 1096 | | | | | | |
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 4400 | | | | | | | | |
| X1 | 12300. | 13 | 937.0 | 1059.0 | 1550.0 | 1650 | 1550.0 | | | |
| GR | 115 | 700 | 108.50 | 917.0 | 109.20 | 937.0 | 99.70 | 954.0 | 97.20 | 980.0 |
| GR | 95.7 | 1000.0 | 98.20 | 1020.0 | 100.50 | 1041.0 | 108.80 | 1059.0 | 108.20 | 1077.0 |
| GR | 109.8 | 1177.0 | 110 | 1700 | 112.2 | 3400 | | | | |
| X1 | 14550. | 15 | 2030 | 2141 | 2400 | 2300 | 2250.0 | | | |
| GR | 113.0 | 400 | 109.70 | 2007 | 109.10 | 2030 | 100.90 | 2047 | 99.10 | 2066 |
| GR | 98.6 | 2094 | 97.40 | 2100 | 98.70 | 2106 | 100.70 | 2124 | 108.40 | 2141 |
| GR | 109.7 | 2168 | 109.20 | 2268 | 110 | 2600 | 110 | 3250 | 115 | 4300 |
| QT | 1 | 4190 | | | | | | | | |
| X1 | 16295. | 15 | 978.3 | 1102.2 | 1800 | 1300 | 1745.0 | | | |
| GR | 113.7 | .0 | 111.65 | 723.1 | 110.65 | 826.4 | 111.45 | 929.7 | 111.05 | 978.3 |
| GR | 102.3 | 1007.2 | 100.05 | 1020.6 | 98.75 | 1033.0 | 99.65 | 1045.4 | 101.95 | 1068.1 |
| GR | 111.1 | 1102.2 | 111.75 | 1136.3 | 110.85 | 1239.6 | 111.45 | 1342.9 | 113.65 | 2375.9 |
| X1 | 18040. | 15 | 947.0 | 1067.0 | 1800 | 1300 | 1745.0 | | | |
| GR | 115.0 | .0 | 113.00 | 700.0 | 112.00 | 800.0 | 112.80 | 900.0 | 112.40 | 947.0 |
| GR | 103.7 | 975.0 | 101.40 | 988.0 | 100.10 | 1000.0 | 101.00 | 1012.0 | 103.30 | 1034.0 |
| GR | 112.4 | 1067.0 | 113.10 | 1100.0 | 112.20 | 1200.0 | 112.80 | 1300.0 | 115.00 | 2400 |
| NC | .12 | .12 | .03 | .3 | .5 | | | | | |
| QT | 1 | 4080 | | | | | | | | |
| W WELSFORD ROAD STA. 180+90 | | | | | | | | | | |
| X1 | 18090. | 17 | 962.0 | 1052.0 | 50.0 | 50.0 | 50.0 | | | |
| X3 | 10. | | | | | | | 111.70 | 111.80 | |
| GR | 115.0 | .0 | 113.00 | 700.0 | 112.00 | 800.0 | 112.80 | 900.0 | 112.80 | 962.0 |
| GR | 107.7 | 962.0 | 103.70 | 975.0 | 101.40 | 988.0 | 100.10 | 1000.0 | 101.00 | 1012.0 |
| GR | 103.3 | 1034.0 | 108.10 | 1052.0 | 112.90 | 1052.0 | 113.10 | 1100.0 | 112.20 | 1200.0 |
| GR | 112.8 | 1300.0 | 115.00 | 2400 | | | | | | |
| SB | 1.250 | 1.56 | 3.00 | .00 | 36.00 | 2.33 | 714.00 | 2.390 | 100.10 | 100.10 |
| X1 | 18127. | 17 | 962.0 | 1052.0 | 37.0 | 37.0 | 37.0 | | | |
| X2 | 0. | .00 | 1. | 111.40 | 112.00 | .00 | | .000 | | .000 |
| X3 | 10. | | | | | | | 112.00 | 112.20 | |
| BT | -13 | .0 | 115.00 | .00 | 700.0 | 113.00 | .00 | 800.0 | 112.00 | .00 |
| BT | 0 | 900.0 | 112.80 | .00 | 962.0 | 112.80 | .00 | 962.0 | 113.40 | .00 |
| BT | 0 | 1007.0 | 113.80 | .00 | 1052.0 | 113.50 | .00 | 1052.0 | 112.90 | .00 |
| BT | 0 | 1100.0 | 113.10 | .00 | 1200.0 | 112.20 | .00 | 1300.0 | 112.80 | .00 |
| BT | 0 | 2300.0 | 115.00 | .00 | | | | | | |
| GR | 115.0 | .0 | 113.00 | 700.0 | 112.00 | 800.0 | 112.80 | 900.0 | 112.80 | 962.0 |
| GR | 107.7 | 962.0 | 103.70 | 975.0 | 101.40 | 988.0 | 100.10 | 1000.0 | 101.00 | 1012.0 |
| GR | 103.3 | 1034.0 | 108.10 | 1052.0 | 112.90 | 1052.0 | 113.10 | 1100.0 | 112.20 | 1200.0 |
| GR | 112.8 | 1300.0 | 115.00 | 2400 | | | | | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| NC | .12 | .12 | .04 | | | | | | | |
| X1 | 18177. | 15 | 947.0 | 1067.0 | 50.0 | 50.0 | 50.0 | | | |
| GR | 115.0 | .0 | 113.00 | 700.0 | 112.00 | 800.0 | 112.80 | 900.0 | 112.40 | 947.0 |
| GR | 103.7 | 975.0 | 101.40 | 988.0 | 100.10 | 1000.0 | 101.00 | 1012.0 | 103.30 | 1034.0 |
| GR | 112.4 | 1067.0 | 113.10 | 1100.0 | 112.20 | 1200.0 | 112.80 | 1300.0 | 115.00 | 2400 |
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 3910 | | | | | | | | |
| X1 | 21000. | 16 | 2940.0 | 3043.0 | 2823 | 2823 | 2823.0 | | | |
| GR | 120.0 | 500 | 115.00 | 1500 | 115.00 | 1700.0 | 115.20 | 2817.0 | 116.70 | 2917.0 |
| GR | 115.3 | 2929.0 | 115.90 | 2940.0 | 105.60 | 2966.0 | 103.80 | 2985.0 | 99.00 | 3000.0 |
| GR | 102.9 | 3015.0 | 116.01 | 3043.0 | 117.00 | 3068.0 | 115.60 | 3138.0 | 118.20 | 3178.0 |
| GR | 120 | 5800 | | | | | | | | |
| X1 | 21700. | 14 | 2674.5 | 2770.0 | 680 | 700.0 | 700.0 | | | |
| GR | 118.9 | 400.0 | 113.35 | 2529.8 | 114.65 | 2619.1 | 112.55 | 2659.3 | 114.05 | 2674.5 |
| GR | 103.8 | 2695.9 | 100.95 | 2719.1 | 100.05 | 2721.8 | 100.95 | 2724.5 | 104.75 | 2747.7 |
| GR | 114.3 | 2770.0 | 112.85 | 2783.4 | 113.85 | 2791.5 | 120 | 5222 | | |
| X1 | 22400. | 14 | 2947.0 | 3054.0 | 680 | 700.0 | 700.0 | | | |
| GR | 120.0 | 600 | 114.40 | 2785.0 | 115.70 | 2885.0 | 113.60 | 2930.0 | 115.10 | 2947.0 |
| GR | 104.9 | 2971.0 | 102.00 | 2997.0 | 101.10 | 3000.0 | 102.00 | 3003.0 | 105.80 | 3029.0 |
| GR | 115.3 | 3054.0 | 113.90 | 3069.0 | 114.90 | 3078.0 | 120.00 | 4400 | | |
| QT | 1 | 3840 | | | | | | | | |
| X1 | 22673. | 14 | 2954.7 | 3059.9 | 170 | 450 | 273.0 | | | |
| GR | 119.3 | 600.0 | 113.95 | 2934.7 | 112.85 | 2945.7 | 114.45 | 2954.7 | 105.65 | 2978.7 |
| GR | 103.0 | 2996.8 | 101.75 | 3004.8 | 103.55 | 3012.8 | 106.85 | 3034.9 | 109.95 | 3046.9 |
| GR | 116.2 | 3059.9 | 115.25 | 3070.9 | 117.05 | 3091.0 | 118.45 | 4507.8 | | |
| NC | .15 | .15 | .04 | | | | | | | |
| QT | 1 | 1280 | | | | | | | | |
| X1 | 22947. | 14 | 2950.0 | 3055.0 | 170 | 450 | 274.0 | | | |
| GR | 120.0 | 600.0 | 114.60 | 2930.0 | 113.50 | 2941.0 | 115.10 | 2950.0 | 106.30 | 2974.0 |
| GR | 103.7 | 2992.0 | 102.40 | 3000.0 | 104.20 | 3008.0 | 107.50 | 3030.0 | 110.60 | 3042.0 |
| GR | 116.8 | 3055.0 | 115.90 | 3066.0 | 117.70 | 3086.0 | 119.10 | 4500.0 | | |
| X1 | 25347. | 17 | 957.0 | 1047.0 | 2200 | 2400.0 | 2400.0 | | | |
| GR | 125.0 | 300.0 | 120.00 | 400.0 | 115.20 | 927.0 | 114.10 | 948.0 | 116.10 | 957.0 |
| GR | 108.2 | 972.0 | 107.00 | 990.0 | 106.50 | 1000.0 | 107.20 | 1010.0 | 109.20 | 1035.0 |
| GR | 115.5 | 1047.0 | 114.20 | 1057.0 | 115.50 | 1067.0 | 115.90 | 1167.0 | 116.70 | 1197.0 |
| GR | 120.0 | 1700.0 | 125 | 2000 | | | | | | |
| QT | 1 | 1180 | | | | | | | | |
| X1 | 26222. | 15 | 1026.5 | 1125.5 | 875.0 | 875.0 | 875.0 | | | |
| GR | 123.2 | .0 | 116.70 | 994.2 | 115.50 | 1015.7 | 117.70 | 1026.5 | 110.80 | 1042.6 |
| GR | 107.9 | 1063.1 | 107.30 | 1076.0 | 108.10 | 1088.9 | 110.90 | 1105.1 | 120.70 | 1125.5 |
| GR | 117.0 | 1141.6 | 117.60 | 1163.2 | 117.70 | 1270.8 | 119.20 | 1560.2 | 124.20 | 1721.6 |

| | | | | | | | | | | |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| NC | .12 | .12 | .04 | .1 | .3 | | | | | |
| X1 | 27097. | 15 | 954.0 | 1046.0 | 875 | 875 | 875 | | | |
| GR | 124.0 | .0 | 117.50 | 924.0 | 116.30 | 944.0 | 118.50 | 954.0 | 111.60 | 969.0 |
| GR | 108.7 | 988.0 | 108.10 | 1000.0 | 108.90 | 1012.0 | 111.70 | 1027.0 | 121.50 | 1046.0 |
| GR | 117.8 | 1061.0 | 118.40 | 1081.0 | 118.50 | 1181.0 | 120.00 | 1450.0 | 125.00 | 1600.0 |
| QT | 1 | 1120 | | | | | | | | |
| X1 | 28362. | 17 | 2083.0 | 2158.5 | 1200 | 1260.0 | 1265.0 | | | |
| GR | 118.4 | 700.0 | 117.20 | 2050.1 | 117.10 | 2053.4 | 116.80 | 2067.7 | 118.50 | 2083.0 |
| GR | 112.4 | 2093.9 | 110.50 | 2118.0 | 109.70 | 2123.5 | 111.10 | 2129.0 | 112.90 | 2146.5 |
| GR | 117.5 | 2158.5 | 115.50 | 2170.6 | 116.40 | 2187.0 | 117.50 | 2215.5 | 118.40 | 2671.0 |
| GR | 118.4 | 2835.3 | 123.40 | 2999.5 | | | | | | |
| X1 | 29627. | 17 | 1963.0 | 2032.0 | 1200 | 1260.0 | 1265.0 | | | |
| GR | 120.0 | 700.0 | 118.80 | 1933.0 | 118.70 | 1936.0 | 118.40 | 1949.0 | 120.10 | 1963.0 |
| GR | 114.0 | 1973.0 | 112.10 | 1995.0 | 111.30 | 2000.0 | 112.70 | 2005.0 | 114.50 | 2021.0 |
| GR | 119.1 | 2032.0 | 117.10 | 2043.0 | 118.00 | 2058.0 | 119.10 | 2084.0 | 120.00 | 2500.0 |
| GR | 120.0 | 2650.0 | 125.00 | 2800.0 | | | | | | |
| NC | .12 | .12 | .024 | .3 | .5 | | | | | |
| QT | 1 | 1090 | | | | | | | | |
| ROBINSON ROAD STA. 296+67 - 3 9'x 6' B.C. | | | | | | | | | | |
| CULVERTS ARE ASSUMED TO HAVE 1.7 FEET OF SILT | | | | | | | | | | |
| X1 | 29667. | 18 | 1983.0 | 2013.0 | 40.0 | 40.0 | 40.0 | | | |
| X3 | 10. | | | | | | | 118.30 | 118.50 | |
| GR | 120.0 | 700.0 | 119.40 | 1498.0 | 119.50 | 1598.0 | 119.20 | 1698.0 | 119.40 | 1798.0 |
| GR | 119.5 | 1898.0 | 119.60 | 1983.0 | 111.40 | 1983.0 | 111.40 | 2013.0 | 119.60 | 2013.0 |
| GR | 119.5 | 2098.0 | 119.70 | 2198.0 | 119.80 | 2298.0 | 119.90 | 2398.0 | 120.10 | 2498.0 |
| GR | 120.0 | 2500.0 | 120.00 | 2650.0 | 125.00 | 2800.0 | | | | |
| SB | 1.250 | 1.56 | 3.00 | .00 | 30.00 | 1.40 | 123.00 | .010 | 113.10 | 113.10 |
| X1 | 29731. | 18 | 1983.0 | 2013.0 | 64.0 | 64.0 | 64.0 | | | |
| X2 | 0. | .00 | 1. | 117.40 | 119.20 | .00 | | .000 | | .000 |
| X3 | 10. | | | | | | | 119.5 | 119.50 | |
| BT | -16 | 700.0 | 120.00 | .00 | 1498.0 | 119.40 | .00 | 1598.0 | 119.50 | .00 |
| BT | 0 | 1698.0 | 119.20 | .00 | 1798.0 | 119.40 | .00 | 1898.0 | 119.50 | .00 |
| BT | 0 | 1983.0 | 119.60 | .00 | 2013.0 | 119.60 | .00 | 2098.0 | 119.50 | .00 |
| BT | 0 | 2198.0 | 119.70 | .00 | 2298.0 | 119.80 | .00 | 2398.0 | 119.90 | .00 |
| BT | 0 | 2498.0 | 120.10 | .00 | 2500.0 | 120.00 | .00 | 2650.0 | 120.00 | .00 |
| BT | 0 | 2800.0 | 125.00 | .00 | | | | | | |
| GR | 120.0 | 700.0 | 119.40 | 1498.0 | 119.50 | 1598.0 | 119.20 | 1698.0 | 119.40 | 1798.0 |
| GR | 119.5 | 1898.0 | 119.60 | 1983.0 | 111.40 | 1983.0 | 111.40 | 2013.0 | 119.60 | 2013.0 |
| GR | 119.5 | 2098.0 | 119.70 | 2198.0 | 119.80 | 2298.0 | 119.90 | 2398.0 | 120.10 | 2498.0 |
| GR | 120.0 | 2500.0 | 120.00 | 2650.0 | 125.00 | 2800.0 | | | | |
| X1 | 29831 | 15 | 1967.0 | 2040.0 | 100 | 100 | 100 | | | |
| GR | 120.0 | 700.0 | 119.20 | 1883.0 | 119.80 | 1933.0 | 118.20 | 1954.0 | 120.60 | 1967.0 |
| GR | 112.4 | 1990.0 | 110.90 | 2000.0 | 112.10 | 2010.0 | 114.30 | 2028.0 | 120.40 | 2040.0 |
| GR | 117.6 | 2051.0 | 118.70 | 2069.0 | 120.00 | 2500.0 | 120.00 | 2650.0 | 125.00 | 2800.0 |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| NC | .15 | .15 | .04 | | | | | | | |
| X1 | 33257. | 9 | 963.0 | 1039.0 | 30.0 | 30.0 | 30.0 | | | |
| GR | 132.2 | 926.0 | 130.90 | 942.0 | 132.70 | 963.0 | 123.50 | 990.0 | 122.50 | 1000.0 |
| GR | 123.6 | 1010.0 | 132.70 | 1039.0 | 130.80 | 1057.0 | 133.40 | 1089.0 | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| NC | | | .1 | .3 | | | | | | |
| X1 | 33327. | 9 | 963.0 | 1039.0 | 70.0 | 70.0 | 70.0 | | | |
| GR | 132.2 | 926.0 | 130.90 | 942.0 | 132.70 | 963.0 | 123.50 | 990.0 | 122.50 | 1000.0 |
| GR | 123.6 | 1010.0 | 132.70 | 1039.0 | 130.80 | 1057.0 | 133.40 | 1089.0 | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 34135. | 15 | 1960.0 | 2044.0 | 808.0 | 808.0 | 808.0 | | | |
| GR | 140.0 | 700.0 | 133.80 | 1944.0 | 133.10 | 1950.0 | 133.40 | 1960.0 | 130.00 | 1972.0 |
| GR | 123.4 | 1987.0 | 123.30 | 2000.0 | 123.30 | 2013.0 | 130.90 | 2033.0 | 133.40 | 2044.0 |
| GR | 132.9 | 2053.0 | 133.30 | 2077.0 | 135.00 | 4000.0 | 135.00 | 4600.0 | 140.00 | 4800.0 |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| NC | .15 | .15 | .024 | .3 | .5 | | | | | |
| QT | 1 | 990 | | | | | | | | |
| X1 | 34185. | 57 | 988.0 | 1012.0 | 50.0 | 50.0 | 50.0 | | | |
| X3 | 10. | | | | | | | 134.50 | 134.50 | |
| GR | 134.4 | 500.0 | 134.40 | 600.0 | 134.20 | 700.0 | 134.30 | 800.0 | 134.30 | 900.0 |
| GR | 133.8 | 944.0 | 133.10 | 950.0 | 133.40 | 960.0 | 130.00 | 972.0 | 126.30 | 988.0 |
| GR | 125.5 | 988.1 | 124.80 | 988.4 | 124.18 | 988.9 | 123.70 | 989.5 | 123.40 | 990.2 |
| GR | 123.3 | 991.0 | 123.40 | 991.8 | 123.70 | 992.5 | 124.18 | 993.1 | 124.80 | 993.6 |
| GR | 125.5 | 993.9 | 126.30 | 994.0 | 126.30 | 997.0 | 125.52 | 997.1 | 124.80 | 997.4 |
| GR | 124.2 | 997.9 | 123.70 | 998.5 | 123.40 | 999.2 | 123.30 | 1000.0 | 123.40 | 1000.8 |
| GR | 123.7 | 1001.5 | 124.18 | 1002.1 | 124.80 | 1002.6 | 125.52 | 1002.9 | 126.30 | 1003.0 |
| GR | 126.3 | 1006.0 | 125.52 | 1006.1 | 124.80 | 1006.4 | 124.18 | 1006.9 | 123.70 | 1007.5 |
| GR | 123.4 | 1008.2 | 123.30 | 1009.0 | 123.40 | 1009.8 | 123.70 | 1010.5 | 124.18 | 1011.1 |
| GR | 124.8 | 1011.6 | 125.52 | 1011.9 | 126.30 | 1012.0 | 130.90 | 1033.0 | 133.40 | 1044.0 |
| GR | 132.9 | 1053.0 | 133.30 | 1077.0 | 135.10 | 1100.0 | 137.20 | 1200.0 | 139.60 | 1300.0 |
| GR | 139.9 | 1400.0 | 138.70 | 1500.0 | | | | | | |

HANNA ROAD STA. 341+86 - 3 72" RCP

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 34186. | 57 | 988.0 | 1012.0 | 1.0 | 1.0 | 1.0 | | | |
| X3 | 10. | | | | | | | 134.50 | 134.50 | |
| BT | -57 | 500.0 | 139.80 | 134.40 | 600.0 | 139.70 | 134.40 | 700.0 | 139.70 | 134.20 |
| BT | 0 | 800.0 | 139.70 | 134.30 | 900.0 | 139.70 | 134.30 | 944.0 | 139.60 | 133.80 |
| BT | 0 | 950.0 | 139.60 | 133.10 | 960.0 | 139.60 | 133.40 | 972.0 | 139.60 | 130.00 |
| BT | 0 | 988.0 | 139.60 | 126.30 | 988.1 | 139.60 | 127.08 | 988.4 | 139.60 | 127.80 |
| BT | 0 | 988.9 | 139.60 | 128.42 | 989.5 | 139.60 | 128.90 | 990.2 | 139.60 | 129.20 |
| BT | 0 | 991.0 | 139.60 | 129.30 | 991.8 | 139.60 | 129.20 | 992.5 | 139.60 | 128.90 |
| BT | 0 | 993.1 | 139.60 | 128.42 | 993.6 | 139.60 | 127.80 | 993.9 | 139.60 | 127.08 |
| BT | 0 | 994.0 | 139.60 | 126.30 | 997.0 | 139.60 | 126.30 | 997.1 | 139.60 | 127.08 |
| BT | 0 | 997.4 | 139.60 | 127.80 | 997.9 | 139.60 | 128.42 | 998.5 | 139.60 | 128.90 |
| BT | 0 | 999.2 | 139.60 | 129.20 | 1000.0 | 139.60 | 129.30 | 1000.8 | 139.60 | 129.20 |
| BT | 0 | 1001.5 | 139.60 | 128.90 | 1002.1 | 139.60 | 128.42 | 1002.6 | 139.60 | 127.80 |
| BT | 0 | 1002.9 | 139.60 | 127.08 | 1003.0 | 139.60 | 126.30 | 1006.0 | 139.60 | 126.30 |
| BT | 0 | 1006.1 | 139.60 | 127.08 | 1006.4 | 139.60 | 127.80 | 1006.9 | 139.60 | 128.42 |
| BT | 0 | 1007.5 | 139.60 | 128.90 | 1008.2 | 139.60 | 129.20 | 1009.0 | 139.60 | 129.30 |
| BT | 0 | 1009.8 | 139.60 | 129.20 | 1010.5 | 139.60 | 128.90 | 1011.1 | 139.60 | 128.42 |
| BT | 0 | 1011.6 | 139.60 | 127.80 | 1011.9 | 139.60 | 127.08 | 1012.0 | 139.60 | 126.30 |
| BT | 0 | 1033.0 | 139.60 | 130.90 | 1044.0 | 139.60 | 133.40 | 1053.0 | 139.60 | 132.90 |
| BT | 0 | 1077.0 | 139.60 | 133.30 | 1100.0 | 139.60 | 135.10 | 1200.0 | 139.70 | 137.20 |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| BT | 0 | 1300.0 | 139.70 | 139.60 | 1400.0 | 139.90 | 139.90 | 1500.0 | 139.70 | 138.70 |
| GR | 134.4 | 500.0 | 134.40 | 600.0 | 134.20 | 700.0 | 134.30 | 800.0 | 134.30 | 900.0 |
| GR | 133.8 | 944.0 | 133.10 | 950.0 | 133.40 | 960.0 | 130.00 | 972.0 | 126.30 | 988.0 |
| GR | 125.5 | 988.1 | 124.80 | 988.4 | 124.18 | 988.9 | 123.70 | 989.5 | 123.40 | 990.2 |
| GR | 123.3 | 991.0 | 123.40 | 991.8 | 123.70 | 992.5 | 124.18 | 993.1 | 124.80 | 993.6 |
| GR | 125.5 | 993.9 | 126.30 | 994.0 | 126.30 | 997.0 | 125.52 | 997.1 | 124.80 | 997.4 |
| GR | 124.2 | 997.9 | 123.70 | 998.5 | 123.40 | 999.2 | 123.30 | 1000.0 | 123.40 | 1000.8 |
| GR | 123.7 | 1001.5 | 124.18 | 1002.1 | 124.80 | 1002.6 | 125.52 | 1002.9 | 126.30 | 1003.0 |
| GR | 126.3 | 1006.0 | 125.52 | 1006.1 | 124.80 | 1006.4 | 124.18 | 1006.9 | 123.70 | 1007.5 |
| GR | 123.4 | 1008.2 | 123.30 | 1009.0 | 123.40 | 1009.8 | 123.70 | 1010.5 | 124.18 | 1011.1 |
| GR | 124.8 | 1011.6 | 125.52 | 1011.9 | 126.30 | 1012.0 | 130.90 | 1033.0 | 133.40 | 1044.0 |
| GR | 132.9 | 1053.0 | 133.30 | 1077.0 | 135.10 | 1100.0 | 137.20 | 1200.0 | 139.60 | 1300.0 |
| GR | 139.9 | 1400.0 | 138.70 | 1500.0 | | | | | | |
| X1 | 34361. | 58 | 988.0 | 1012.0 | 175 | 175 | 175 | | | |
| X3 | 10. | | | | | | | 139.60 | 139.60 | |
| BT | -58 | 500 | 139.8 | 139.8 | 600 | 139.7 | 139.7 | 700 | 139.7 | 139.7 |
| BT | | 800 | 139.7 | 139.7 | 900 | 139.7 | 139.7 | 929 | 139.7 | 134.5 |
| BT | | 948 | 139.6 | 133.2 | 956 | 139.6 | 135.3 | 968 | 139.6 | 132 |
| BT | | 988 | 139.6 | 128.3 | 988.1 | 139.6 | 129.08 | 988.4 | 139.6 | 129.8 |
| BT | | 988.88 | 139.6 | 130.42 | 989.5 | 139.6 | 130.9 | 990.22 | 139.6 | 131.2 |
| BT | | 991 | 139.6 | 131.3 | 991.78 | 139.6 | 131.2 | 992.5 | 139.6 | 130.9 |
| BT | | 993.12 | 139.6 | 130.42 | 993.6 | 139.6 | 129.8 | 993.9 | 139.6 | 129.08 |
| BT | | 994 | 139.6 | 128.3 | 997 | 139.6 | 128.3 | 997.1 | 139.6 | 129.08 |
| BT | | 997.4 | 139.6 | 129.8 | 997.88 | 139.6 | 130.42 | 998.5 | 139.6 | 130.9 |
| BT | | 999.22 | 139.6 | 131.2 | 1000 | 139.6 | 131.3 | 1000.7 | 139.6 | 131.2 |
| BT | | 1001.5 | 139.6 | 130.9 | 1002.1 | 139.6 | 130.42 | 1002.6 | 139.6 | 129.8 |
| BT | | 1002.9 | 139.6 | 129.08 | 1003 | 139.6 | 128.3 | 1006 | 139.6 | 128.3 |
| BT | | 1006.1 | 139.6 | 129.08 | 1006.4 | 139.6 | 129.8 | 1006.8 | 139.6 | 130.42 |
| BT | | 1007.5 | 139.6 | 130.9 | 1008.2 | 139.6 | 131.2 | 1009 | 139.6 | 131.3 |
| BT | | 1009.7 | 139.6 | 131.2 | 1010.5 | 139.6 | 130.9 | 1011.1 | 139.6 | 130.42 |
| BT | | 1011.6 | 139.6 | 129.8 | 1011.9 | 139.6 | 129.08 | 1012 | 139.6 | 128.3 |
| BT | | 1033 | 139.6 | 132.6 | 1038 | 139.6 | 135 | 1050 | 139.6 | 134.1 |
| BT | | 1062 | 139.6 | 135.1 | 1100 | 139.6 | 139.6 | 1200 | 139.6 | 139.6 |
| BT | | 1300 | 139.7 | 139.7 | 1400 | 139.7 | 139.7 | 1500 | 139.7 | 139.7 |
| BT | | 2350 | 140 | 140 | | | | | | |
| GR | 139.8 | 500 | 139.7 | 600 | 139.7 | 700 | 139.7 | 800 | 139.7 | 900 |
| GR | 134.50 | 929.0 | 133.20 | 948.0 | 135.30 | 956.0 | 132.00 | 968.0 | 128.3 | 988 |
| GR | 127.52 | 988.1 | 126.8 | 988.4 | 126.18 | 988.88 | 125.7 | 989.5 | 125.4 | 990.22 |
| GR | 125.3 | 991 | 125.4 | 991.78 | 125.7 | 992.5 | 126.18 | 993.12 | 126.8 | 993.6 |
| GR | 127.52 | 993.9 | 128.3 | 994 | 128.3 | 997 | 127.52 | 997.1 | 126.8 | 997.4 |
| GR | 126.18 | 997.88 | 125.7 | 998.5 | 125.4 | 999.22 | 125.3 | 1000 | 125.4 | 1000.7 |
| GR | 125.7 | 1001.5 | 126.18 | 1002.1 | 126.8 | 1002.6 | 127.52 | 1002.9 | 128.3 | 1003 |
| GR | 128.3 | 1006 | 127.52 | 1006.1 | 126.8 | 1006.4 | 126.18 | 1006.8 | 125.7 | 1007.5 |
| GR | 125.4 | 1008.2 | 125.3 | 1009 | 125.4 | 1009.7 | 125.7 | 1010.5 | 126.18 | 1011.1 |
| GR | 126.8 | 1011.6 | 127.52 | 1011.9 | 128.3 | 1012 | 132.60 | 1033.0 | 135.00 | 1038.0 |
| GR | 134.1 | 1050.0 | 135.10 | 1062.0 | 139.6 | 1100 | 139.6 | 1200 | 139.7 | 1300 |
| GR | 139.7 | 1400 | 139.7 | 1500 | 140.00 | 2350.0 | | | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 34362 | 58 | 956.0 | 1038 | 1 | 1 | 1 | | | |
| X3 | 10. | | | | | | | 139.60 | 139.60 | |
| GR | 139.8 | 500 | 139.7 | 600 | 139.7 | 700 | 139.7 | 800 | 139.7 | 900 |
| GR | 134.50 | 929.0 | 133.20 | 948.0 | 135.30 | 956.0 | 132.00 | 968.0 | 128.3 | 988 |
| GR | 127.52 | 988.1 | 126.8 | 988.4 | 126.18 | 988.88 | 125.7 | 989.5 | 125.4 | 990.22 |
| GR | 125.3 | 991 | 125.4 | 991.78 | 125.7 | 992.5 | 126.18 | 993.12 | 126.8 | 993.6 |
| GR | 127.52 | 993.9 | 128.3 | 994 | 128.3 | 997 | 127.52 | 997.1 | 126.8 | 997.4 |
| GR | 126.18 | 997.88 | 125.7 | 998.5 | 125.4 | 999.22 | 125.3 | 1000 | 125.4 | 1000.7 |
| GR | 125.7 | 1001.5 | 126.18 | 1002.1 | 126.8 | 1002.6 | 127.52 | 1002.9 | 128.3 | 1003 |
| GR | 128.3 | 1006 | 127.52 | 1006.1 | 126.8 | 1006.4 | 126.18 | 1006.8 | 125.7 | 1007.5 |
| GR | 125.4 | 1008.2 | 125.3 | 1009 | 125.4 | 1009.7 | 125.7 | 1010.5 | 126.18 | 1011.1 |
| GR | 126.8 | 1011.6 | 127.52 | 1011.9 | 128.3 | 1012 | 132.60 | 1033.0 | 135.00 | 1038.0 |
| GR | 134.1 | 1050.0 | 135.10 | 1062.0 | 139.6 | 1100 | 139.6 | 1200 | 139.7 | 1300 |
| GR | 139.7 | 1400 | 139.7 | 1500 | 140.00 | 2350.0 | | | | |

| | | | | | | | | | | |
|----|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| NC | .12 | .15 | .04 | | | | | | | |
| X1 | 34412 | 13 | 956.0 | 1038.0 | 50.0 | 50.0 | 50.0 | | | |
| GR | 139.0 | 100.0 | 134.50 | 929.0 | 133.20 | 948.0 | 135.30 | 956.0 | 132.00 | 968.0 |
| GR | 125.4 | 988.0 | 125.30 | 1000.0 | 125.20 | 1012.0 | 132.60 | 1033.0 | 135.00 | 1038.0 |
| GR | 134.1 | 1050.0 | 135.10 | 1062.0 | 140.00 | 2350.0 | | | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| NC | | | | .1 | .3 | | | | | |
| X1 | 35234. | 12 | 961.0 | 1039.0 | 822 | 822 | 822 | | | |
| GR | 137.0 | 846.0 | 136.40 | 871.0 | 136.90 | 931.0 | 133.60 | 947.0 | 135.40 | 961.0 |
| GR | 127.9 | 989.0 | 127.80 | 1000.0 | 128.00 | 1011.0 | 135.30 | 1039.0 | 133.20 | 1056.0 |
| GR | 136.3 | 1072.0 | 137.30 | 1091.0 | | | | | | |

| | | | | | | | | | | |
|----|-----|-----|-----|----|----|--|--|--|--|--|
| NC | .12 | .15 | .04 | .3 | .5 | | | | | |
| QT | 1 | 950 | | | | | | | | |

WOODSON ROAD STA. 352+64 - 2 8'x 5' B.C.

CULVERTS ARE ASSUMED TO HAVE 2.1 FEET OF SILT

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 35264. | 16 | 991.0 | 1009.0 | 30.0 | 30.0 | 30.0 | | | |
| X3 | 10. | | | | | | | 137.00 | 137.00 | |
| GR | 139.0 | 700.0 | 136.70 | 800.0 | 136.60 | 900.0 | 136.70 | 931.0 | 133.60 | 947.0 |
| GR | 135.4 | 961.0 | 130.70 | 991.0 | 127.80 | 991.0 | 127.80 | 1009.0 | 130.70 | 1009.0 |
| GR | 135.3 | 1039.0 | 133.20 | 1056.0 | 136.30 | 1072.0 | 136.80 | 1100.0 | 137.00 | 1200.0 |
| GR | 140.0 | 2550.0 | | | | | | | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SB | 1.250 | 1.56 | 3.00 | .00 | 18.00 | 2.00 | 46.40 | .010 | 127.80 | 127.80 |
| X1 | 35327. | 16 | 991.0 | 1009.0 | 63.0 | 63.0 | 63.0 | | | |
| X2 | 0. | .00 | 1. | 130.70 | 136.60 | .00 | | .000 | | .000 |
| X3 | 10. | | | | | | | 137.40 | 137.40 | |
| BT | -10 | 650.0 | 140.50 | .00 | 700.0 | 137.90 | .00 | 800.0 | 136.70 | .00 |
| BT | 0 | 900.0 | 136.60 | .00 | 1000.0 | 137.00 | .00 | 1100.0 | 136.80 | .00 |
| BT | 0 | 1200.0 | 137.00 | .00 | 1300.0 | 136.90 | .00 | 1400.0 | 136.80 | .00 |
| BT | 0 | 1500.0 | 136.90 | .00 | | | | | | |
| GR | 139.0 | 700.0 | 136.70 | 800.0 | 136.60 | 900.0 | 136.70 | 931.0 | 133.60 | 947.0 |
| GR | 135.4 | 961.0 | 130.70 | 991.0 | 127.80 | 991.0 | 127.80 | 1009.0 | 130.70 | 1009.0 |
| GR | 135.3 | 1039.0 | 133.20 | 1056.0 | 136.30 | 1072.0 | 136.80 | 1100.0 | 137.00 | 1200.0 |
| GR | 140.0 | 2550.0 | | | | | | | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| QT | 1 | 455 | | | | | | | | |
| X1 | 37277. | 11 | 969.0 | 1034.0 | 292 | 292 | 292.0 | | | |
| GR | 145.0 | 500.0 | 142.90 | 957.0 | 142.40 | 963.0 | 142.90 | 969.0 | 133.10 | 995.0 |
| GR | 132.5 | 1000.0 | 133.50 | 1005.0 | 142.50 | 1034.0 | 141.70 | 1044.0 | 142.00 | 1047.0 |
| GR | 145.0 | 1850.0 | | | | | | | | |
| X1 | 37902. | 9 | 909.2 | 961.2 | 625.0 | 625.0 | 625.0 | | | |
| GR | 144.1 | 100.0 | 140.05 | 893.4 | 141.65 | 909.2 | 133.85 | 928.7 | 133.45 | 935.2 |
| GR | 134.3 | 941.7 | 140.85 | 961.2 | 140.05 | 977.9 | 144.05 | 1956.0 | | |
| QT | 1 | 440 | | | | | | | | |
| X1 | 38527. | 9 | 972.0 | 1028.0 | 625.0 | 625.0 | 625.0 | | | |
| GR | 145.0 | 100.0 | 141.00 | 955.0 | 142.60 | 972.0 | 134.80 | 993.0 | 134.40 | 1000.0 |
| GR | 135.2 | 1007.0 | 141.80 | 1028.0 | 141.00 | 1046.0 | 145.00 | 2100.0 | | |
| X1 | 38757. | 12 | 1912.1 | 1960.9 | 230.0 | 230.0 | 230.0 | | | |
| GR | 144.3 | 500.0 | 140.63 | 1895.8 | 140.33 | 1902.5 | 141.33 | 1912.1 | 135.23 | 1929.3 |
| GR | 134.7 | 1937.0 | 135.33 | 1944.7 | 141.03 | 1960.9 | 140.03 | 1972.4 | 140.93 | 1985.9 |
| GR | 139.3 | 2320.2 | 144.33 | 2607.6 | | | | | | |
| X1 | 38987. | 12 | 2006.4 | 2058.6 | 230.0 | 230.0 | 230.0 | | | |
| GR | 145.3 | 500.0 | 141.63 | 1989.1 | 141.33 | 1996.2 | 142.33 | 2006.4 | 136.23 | 2024.8 |
| GR | 135.7 | 2033.0 | 136.33 | 2041.2 | 142.03 | 2058.6 | 141.03 | 2070.8 | 141.93 | 2085.1 |
| GR | 140.3 | 2441.8 | 145.33 | 2748.4 | | | | | | |
| QT | 1 | 430 | | | | | | | | |
| X1 | 39217. | 12 | 1974.0 | 2025.0 | 230.0 | 230.0 | 230.0 | | | |
| GR | 145.0 | 500.0 | 141.30 | 1957.0 | 141.00 | 1964.0 | 142.00 | 1974.0 | 135.90 | 1992.0 |
| GR | 135.4 | 2000.0 | 136.00 | 2008.0 | 141.70 | 2025.0 | 140.70 | 2037.0 | 141.60 | 2051.0 |
| GR | 140.0 | 2400.0 | 145.00 | 2700.0 | | | | | | |

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 1/89 16:19:53

HEC2 RELEASE DATED SEPT 88

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

A109-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|---------|---------|--------|-----|------|
| 500.000 | 5260.00 | 99.90 | 100.20 | 100.60 | 81.90 | 3.75 | 100.12 | .00 | 139.06 | .00 | .01 | .00 |
| 3900.000 | 5260.00 | 103.83 | 103.40 | 102.30 | 85.60 | 3.93 | 104.06 | 3400.00 | 744.51 | 34.48 | .01 | .00 |
| 5035.000 | 4890.00 | 105.03 | 105.65 | 104.10 | 87.95 | 3.44 | 105.20 | 1135.00 | 939.67 | 56.42 | .01 | .00 |
| 6170.000 | 4890.00 | 105.92 | 108.00 | 106.40 | 90.30 | 3.73 | 106.14 | 1135.00 | 324.49 | 72.89 | .01 | .00 |
| 9275.000 | 4600.00 | 108.28 | 117.00 | 114.70 | 95.30 | 3.40 | 108.46 | 3105.00 | 148.51 | 89.75 | .01 | .00 |
| 9869.000 | 4600.00 | 108.72 | 110.30 | 109.50 | 94.40 | 3.42 | 108.90 | 594.00 | 158.79 | 91.85 | .01 | .00 |
| 10463.000 | 4600.00 | 109.19 | 109.40 | 108.60 | 93.50 | 4.00 | 109.44 | 594.00 | 136.29 | 93.86 | .01 | .00 |
| * 10556.000 | 4510.00 | 109.23 | 106.80 | 106.80 | 93.50 | 4.02 | 109.48 | 93.00 | 108.00 | 94.12 | .01 | .00 |
| 10647.000 | 4510.00 | 109.74 | 106.80 | 106.80 | 93.50 | 3.83 | 109.97 | 91.00 | 108.00 | 94.35 | .01 | .00 |
| 10750.000 | 4510.00 | 109.80 | 109.40 | 108.60 | 93.50 | 3.68 | 110.01 | 103.00 | 301.03 | 94.83 | .01 | .00 |
| 12300.000 | 4400.00 | 110.48 | 109.20 | 108.80 | 95.70 | 3.28 | 110.64 | 1550.00 | 1219.50 | 123.07 | .01 | .00 |
| 14550.000 | 4400.00 | 111.30 | 109.10 | 108.40 | 97.40 | 3.31 | 111.45 | 2250.00 | 2296.74 | 216.79 | .01 | .00 |
| 16295.000 | 4190.00 | 112.10 | 111.05 | 111.10 | 98.75 | 3.80 | 112.31 | 1745.00 | 1079.35 | 275.34 | .01 | .00 |
| 18040.000 | 4190.00 | 113.24 | 112.40 | 112.40 | 100.10 | 4.07 | 113.49 | 1745.00 | 899.88 | 310.38 | .01 | .00 |
| 18090.000 | 4080.00 | 113.24 | 112.80 | 112.90 | 100.10 | 4.36 | 113.53 | 50.00 | 907.85 | 311.41 | .01 | .00 |
| 18127.000 | 4080.00 | 113.24 | 112.80 | 112.90 | 100.10 | 4.36 | 113.53 | 37.00 | 907.64 | 312.18 | .01 | .00 |
| 18177.000 | 4080.00 | 113.35 | 112.40 | 112.40 | 100.10 | 3.87 | 113.58 | 50.00 | 1000.66 | 313.28 | .01 | .00 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|-------|--------|---------|---------|--------|-----|------|
| 21000.000 | 3910.00 | 115.29 | 115.90 | 116.01 | 99.00 | 4.27 | 115.57 | 2823.00 | 1481.56 | 393.71 | .01 | .00 |
| 21700.000 | 3910.00 | 115.79 | 114.05 | 114.30 | 100.05 | 3.34 | 115.94 | 700.00 | 1966.55 | 420.85 | .01 | .00 |
| 22400.000 | 3910.00 | 116.07 | 115.10 | 115.30 | 101.10 | 3.61 | 116.26 | 700.00 | 1248.33 | 446.25 | .01 | .00 |
| 22673.000 | 3840.00 | 116.21 | 114.45 | 116.20 | 101.75 | 3.61 | 116.40 | 273.00 | 1132.32 | 452.27 | .01 | .00 |
| 22947.000 | 1280.00 | 116.42 | 115.10 | 116.80 | 102.40 | 1.33 | 116.45 | 274.00 | 922.38 | 456.63 | .01 | .00 |
| * 25347.000 | 1280.00 | 116.69 | 116.10 | 115.50 | 106.50 | 1.78 | 116.74 | 2400.00 | 432.59 | 491.67 | .01 | .00 |
| 26222.000 | 1180.00 | 116.85 | 117.70 | 120.70 | 107.30 | 2.00 | 116.92 | 875.00 | 140.68 | 497.43 | .01 | .00 |
| 27097.000 | 1180.00 | 117.10 | 118.50 | 121.50 | 108.10 | 2.34 | 117.19 | 875.00 | 97.45 | 499.82 | .01 | .00 |
| 28362.000 | 1120.00 | 117.71 | 118.50 | 117.50 | 109.70 | 2.76 | 117.83 | 1265.00 | 841.96 | 512.99 | .01 | .00 |
| 29627.000 | 1120.00 | 118.78 | 120.10 | 119.10 | 111.30 | 3.48 | 118.97 | 1265.00 | 126.73 | 526.58 | .01 | .00 |
| 29667.000 | 1090.00 | 118.72 | 119.60 | 119.60 | 111.40 | 4.96 | 119.10 | 40.00 | 30.00 | 526.65 | .01 | .00 |
| 29731.000 | 1090.00 | 119.37 | 119.60 | 119.60 | 111.40 | 4.56 | 119.69 | 64.00 | 30.00 | 526.69 | .01 | .00 |
| * 29831.000 | 1090.00 | 119.68 | 120.60 | 120.40 | 110.90 | 2.75 | 119.79 | 100.00 | 1187.49 | 528.09 | .01 | .00 |
| * 30380.000 | 1090.00 | 119.91 | 120.90 | 122.80 | 112.00 | 3.05 | 120.05 | 549.00 | 65.93 | 536.44 | .01 | .00 |
| * 30963.000 | 1090.00 | 121.10 | 125.30 | 127.20 | 116.40 | 4.89 | 121.47 | 583.00 | 71.62 | 537.36 | .01 | .00 |
| * 31546.000 | 1090.00 | 122.43 | 125.30 | 127.20 | 116.40 | 3.41 | 122.61 | 583.00 | 75.71 | 538.35 | .01 | .00 |
| * 32127.000 | 1020.00 | 122.93 | 124.20 | 126.10 | 115.30 | 2.46 | 123.02 | 581.00 | 75.70 | 539.36 | .01 | .00 |
| 33077.000 | 1020.00 | 123.50 | 130.60 | 133.00 | 116.10 | 2.92 | 123.63 | 950.00 | 71.13 | 540.96 | .01 | .00 |
| 33157.000 | 1020.00 | 123.56 | 130.60 | 133.00 | 116.10 | 2.89 | 123.69 | 80.00 | 71.38 | 541.09 | .01 | .00 |
| 33207.000 | 1000.00 | 123.47 | 124.60 | 124.60 | 116.80 | 5.00 | 123.85 | 50.00 | 30.00 | 541.15 | .01 | .00 |
| * 33227.000 | 1000.00 | 129.77 | 131.00 | 131.00 | 122.80 | 10.44 | 131.47 | 20.00 | 30.00 | 541.16 | .01 | .00 |
| * 33257.000 | 1000.00 | 131.87 | 132.70 | 132.70 | 122.50 | 2.56 | 131.97 | 30.00 | 117.45 | 541.22 | .01 | .00 |
| 33327.000 | 1000.00 | 131.91 | 132.70 | 132.70 | 122.50 | 2.55 | 132.01 | 70.00 | 119.42 | 541.41 | .01 | .00 |
| 34135.000 | 1000.00 | 132.29 | 133.40 | 133.40 | 123.30 | 2.30 | 132.37 | 808.00 | 75.16 | 543.21 | .01 | .00 |
| * 34185.000 | 990.00 | 132.12 | 126.30 | 126.30 | 123.30 | 5.45 | 132.59 | 50.00 | 24.00 | 543.27 | .01 | .00 |
| * 34186.000 | 990.00 | 131.28 | 126.30 | 126.30 | 123.30 | 11.81 | 133.44 | 1.00 | 24.00 | 543.27 | .01 | .00 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|--------|--------|--------|--------|--------|-------|--------|--------|---------|--------|-----|------|
| 34361.000 | 990.00 | 135.03 | 128.30 | 128.30 | 125.30 | 11.80 | 137.19 | 175.00 | 24.00 | 543.36 | .01 | .00 |
| * 34362.000 | 990.00 | 137.79 | 135.30 | 135.00 | 125.30 | 1.53 | 137.83 | 1.00 | 82.00 | 543.37 | .01 | .00 |
| 34412.000 | 990.00 | 137.82 | 135.30 | 135.00 | 125.20 | 1.03 | 137.84 | 50.00 | 1461.28 | 544.25 | .01 | .00 |
| * 35234.000 | 990.00 | 137.88 | 135.40 | 135.30 | 127.80 | 1.61 | 137.92 | 822.00 | 245.00 | 560.35 | .01 | .00 |
| * 35264.000 | 950.00 | 137.86 | 130.70 | 130.70 | 127.80 | 3.04 | 137.95 | 30.00 | 844.36 | 560.73 | .01 | .00 |
| 35327.000 | 950.00 | 137.86 | 130.70 | 130.70 | 127.80 | 3.04 | 137.95 | 63.00 | 842.83 | 561.95 | .01 | .00 |
| * 35377.000 | 950.00 | 137.94 | 135.40 | 135.30 | 127.80 | 1.51 | 137.97 | 50.00 | 660.10 | 562.81 | .01 | .00 |
| * 35957.000 | 950.00 | 138.03 | 138.20 | 137.70 | 127.80 | 2.27 | 138.11 | 580.00 | 709.95 | 571.93 | .01 | .00 |
| 36017.000 | 465.00 | 138.05 | 132.30 | 132.30 | 127.80 | 2.18 | 138.12 | 60.00 | 723.32 | 572.92 | .01 | .00 |
| * 36027.000 | 465.00 | 137.65 | 137.30 | 137.30 | 131.30 | 6.64 | 138.33 | 10.00 | 24.70 | 573.00 | .01 | .00 |
| * 36103.000 | 465.00 | 138.50 | 139.80 | 140.00 | 131.50 | 2.52 | 138.60 | 76.00 | 238.46 | 573.23 | .01 | .00 |
| 36397.000 | 465.00 | 138.74 | 142.15 | 141.75 | 131.80 | 2.57 | 138.84 | 294.00 | 47.05 | 574.20 | .01 | .00 |
| 36691.000 | 465.00 | 139.04 | 143.15 | 142.75 | 132.80 | 3.18 | 139.20 | 294.00 | 41.94 | 574.50 | .01 | .00 |
| 36985.000 | 465.00 | 139.45 | 143.15 | 142.75 | 132.80 | 2.84 | 139.57 | 294.00 | 44.29 | 574.79 | .01 | .00 |
| 37277.000 | 455.00 | 139.74 | 142.90 | 142.50 | 132.50 | 2.40 | 139.83 | 292.00 | 47.71 | 575.09 | .01 | .00 |
| 37902.000 | 455.00 | 140.19 | 141.65 | 140.85 | 133.45 | 2.46 | 140.28 | 625.00 | 109.78 | 576.22 | .01 | .00 |
| 38527.000 | 440.00 | 140.67 | 142.60 | 141.80 | 134.40 | 2.48 | 140.76 | 625.00 | 47.18 | 577.35 | .01 | .00 |
| 38757.000 | 440.00 | 140.86 | 141.33 | 141.03 | 134.70 | 2.10 | 140.92 | 230.00 | 571.14 | 578.98 | .01 | .00 |
| * 38987.000 | 440.00 | 141.02 | 142.33 | 142.03 | 135.70 | 2.84 | 141.14 | 230.00 | 246.03 | 581.14 | .01 | .00 |
| 39217.000 | 430.00 | 141.28 | 142.00 | 141.70 | 135.40 | 2.22 | 141.35 | 230.00 | 428.58 | 582.92 | .01 | .00 |

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 10556.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 25347.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 29831.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 30380.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 30963.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 31546.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 32127.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 33227.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 33227.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO= 33257.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 34185.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 34186.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 34362.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 35234.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 35264.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 35377.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 35957.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 36027.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 36103.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 38987.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

THIS RUN EXECUTED 9/ 1/89 16:59:56

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
 T3 A109-00-00 DD 6 CHANNEL III
 T4 100-YEAR STORM FREQUENCY INTERIM CONDITIONS
 T5 FILENAME = A109INT.IH2

| | | | | | | | | | | |
|----|--------|--------|-------|-------|-------|--------|-------|-----|-------|--------|
| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
| | | 2 | | | .0005 | | | | 100 | |
| J2 | NPROF | IPLLOT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
| | -1 | | -1 | | | | | | | |

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

| | | | | | | | | | |
|----|----|----|----|----|----|----|---|----|---|
| 38 | 43 | 1 | 23 | 24 | 42 | 26 | 3 | 39 | 4 |
| 37 | 30 | 65 | | | | | | | |

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

-10 -10

J6 IHLEQ ICOPY SUBDIV STRTDS RMILE

1

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|
| NC | .15 | .15 | .04 | .1 | .3 | | | | | |
| QT | 1 | 6400 | | | | | | | | |
| X1 | 500.00 | 9 | 933.0 | 1075.0 | 500.0 | 500.0 | 500.0 | | | |
| CI | -1 | 81.9 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 100.2 | 896.0 | 100.20 | 933.0 | 87.40 | 973.0 | 85.90 | 988.0 | 81.90 | 1000.0 |
| GR | 85.0 | 1012.0 | 87.10 | 1036.0 | 100.60 | 1075.0 | 100.6 | 1100 | | |
| QT | 1 | 6100 | | | | | | | | |
| X1 | 3900.0 | 13 | 940.0 | 1069.0 | 3400 | 3400 | 3400 | | | |
| CI | -1 | 83.60 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 105.0 | 600 | 102.8 | 915.0 | 103.40 | 940.0 | 95.60 | 960.0 | 91.80 | 976.0 |
| GR | 90.40 | 993.0 | 85.6 | 1000.0 | 89.50 | 1007.0 | 91.50 | 1038.0 | 102.30 | 1069.0 |
| GR | 103.00 | 1169.0 | 103.2 | 1199.0 | 105.0 | 2100 | | | | |

| | | | | | | | | | | | |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| QT | 1 | 6000 | | | | | | | | | |
| X1 | 5035.0 | 15 | 905.2 | 1026.7 | 1135.0 | 1135.0 | 1135.0 | | | | |
| CI | -1 | 84.17 | 0.04 | 4 | 4 | 20 | | | | | |
| GR | 110 | 100 | 103.2 | 872.0 | 102.85 | 878.1 | 105.65 | 905.2 | 96.45 | 927.9 | |
| GR | 89.35 | 955.9 | 89.0 | 976.0 | 87.95 | 983.9 | 88.75 | 990.0 | 92.55 | 1004.8 | |
| GR | 98.85 | 1011.8 | 104.1 | 1026.7 | 103.25 | 1114.1 | 102.45 | 1201.5 | 110 | 2400 | |
| X1 | 5135 | 15 | 905.2 | 1026.7 | 100 | 100 | 100 | | | | |
| CI | -1 | 84.22 | 0.04 | 4 | 4 | 20 | | | | | |
| GR | 110 | 100 | 103.2 | 872.0 | 102.85 | 878.1 | 105.65 | 905.2 | 96.45 | 927.9 | |
| GR | 89.35 | 955.9 | 89.0 | 976.0 | 87.95 | 983.9 | 88.75 | 990.0 | 92.55 | 1004.8 | |
| GR | 98.85 | 1011.8 | 104.1 | 1026.7 | 103.25 | 1114.1 | 102.45 | 1201.5 | 110 | 2400 | |
| QT | 1 | 5900 | | | | | | | | | |
| NC | .15 | .15 | .04 | | | | | | | | |
| X1 | 6170.0 | 15 | 910.0 | 1049.0 | 1035 | 1035 | 1035 | | | | |
| CI | -1 | 84.74 | 0.04 | 4 | 4 | 20 | | | | | |
| GR | 110 | 700 | 105.5 | 872.0 | 105.20 | 879.0 | 108.00 | 910.0 | 98.80 | 936.0 | |
| GR | 91.70 | 968.0 | 91.3 | 991.0 | 90.30 | 1000.0 | 91.10 | 1007.0 | 94.90 | 1024.0 | |
| GR | 101.20 | 1032.0 | 106.4 | 1049.0 | 105.60 | 1149.0 | 104.80 | 1249.0 | 110 | 1350 | |
| QT | 1 | 5700 | | | | | | | | | |
| X1 | 9275.0 | 15 | 905.0 | 1082.0 | 3105 | 3105 | 3105.0 | | | | |
| CI | -1 | 86.29 | 0.04 | 4 | 4 | 20 | | | | | |
| GR | 123.6 | 800 | 123.6 | 825.0 | 117.60 | 881.0 | 117.00 | 905.0 | 101.70 | 921.0 | |
| GR | 99.90 | 940.0 | 96.3 | 981.0 | 95.30 | 1000.0 | 96.60 | 1019.0 | 98.30 | 1037.0 | |
| GR | 104.70 | 1049.0 | 108.9 | 1065.0 | 114.70 | 1082.0 | 114.50 | 1101.0 | 114.30 | 1201.0 | |
| X1 | 9869.0 | 12 | 935.6 | 1100.7 | 594.0 | 594.0 | 594.0 | | | | |
| CI | -1 | 86.58 | 0.04 | 4 | 4 | 20 | | | | | |
| GR | 110.3 | 900 | 110.3 | 922.0 | 110.30 | 935.6 | 100.50 | 961.6 | 98.10 | 1006.6 | |
| GR | 94.40 | 1028.4 | 98.3 | 1050.2 | 102.90 | 1076.1 | 104.00 | 1085.7 | 109.50 | 1100.7 | |
| GR | 110.20 | 1126.6 | 110.2 | 1150 | | | | | | | |
| X1 | 10463. | 12 | 932.0 | 1053.0 | 594.0 | 594.0 | 594.0 | | | | |
| CI | -1 | 86.88 | 0.04 | 4 | 4 | 20 | | | | | |
| GR | 109.4 | 880 | 109.4 | 922.0 | 109.40 | 932.0 | 99.60 | 951.0 | 97.20 | 984.0 | |
| GR | 93.50 | 1000.0 | 97.4 | 1016.0 | 102.00 | 1035.0 | 103.10 | 1042.0 | 108.60 | 1053.0 | |
| GR | 109.30 | 1072.0 | 109.3 | 1120 | | | | | | | |
| NC | .15 | .15 | .03 | .3 | .5 | | | | | | |
| QT | 1 | 5630 | | | | | | | | | |
| RAYFORD ROAD STA. 105+56 | | | | | | | | | | | |
| X1 | 10556. | 22 | 939.0 | 1047.0 | 93.0 | 93.0 | 93.0 | | | | |
| CI | 988 | 86.93 | 0.04 | 2.8 | 2.8 | 10 | | | | | |
| X3 | 10. | | | | | | | 110.8 | 109.7 | | |
| GR | 111.6 | 522.0 | 111.90 | 617.0 | 111.70 | 713.0 | 111.40 | 809.0 | 111.30 | 904.0 | |
| GR | 111.3 | 916.0 | 106.80 | 916.0 | 106.80 | 939.0 | 99.60 | 951.0 | 97.20 | 984.0 | |
| GR | 93.5 | 1000.0 | 97.40 | 1016.0 | 102.00 | 1035.0 | 103.10 | 1042.0 | 106.80 | 1047.0 | |
| GR | 106.8 | 1060.0 | 111.20 | 1060.0 | 111.20 | 1096.0 | 110.80 | 1191.0 | 110.50 | 1287.0 | |
| GR | 110.3 | 1383.0 | 110.20 | 1478.0 | | | | | | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SB | 1.250 | 1.56 | 3.00 | .00 | 10 | 5.36 | 1190 | 2.8 | 86.97 | 86.93 |
| X1 | 10647. | 22 | 939.0 | 1047.0 | 91.0 | 91.0 | 91.0 | | | |
| CI | 990 | 86.97 | 0.04 | 2.8 | 2.8 | 10 | | | | |
| X2 | 0. | .00 | 1. | 106.80 | 110.20 | .00 | | .000 | | .000 |
| X3 | 10. | | | | | | | 111.30 | 110.20 | |
| BT | -18 | 522.0 | 111.60 | .00 | 617.0 | 111.90 | .00 | 713.0 | 111.70 | .00 |
| BT | 0 | 809.0 | 111.40 | .00 | 904.0 | 111.30 | .00 | 916.0 | 111.30 | .00 |
| BT | 0 | 916.0 | 114.70 | .00 | 937.0 | 114.70 | .00 | 937.0 | 113.50 | .00 |
| BT | 0 | 1039.0 | 113.50 | .00 | 1039.0 | 114.60 | .00 | 1060.0 | 114.60 | .00 |
| BT | 0 | 1060.0 | 111.20 | .00 | 1096.0 | 111.20 | .00 | 1191.0 | 110.80 | .00 |
| BT | 0 | 1287.0 | 110.50 | .00 | 1383.0 | 110.30 | .00 | 1478.0 | 110.20 | .00 |
| GR | 111.6 | 522.0 | 111.90 | 617.0 | 111.70 | 713.0 | 111.40 | 809.0 | 111.30 | 904.0 |
| GR | 111.3 | 916.0 | 106.80 | 916.0 | 106.80 | 939.0 | 99.60 | 951.0 | 97.20 | 984.0 |
| GR | 93.5 | 1000.0 | 97.40 | 1016.0 | 102.00 | 1035.0 | 103.10 | 1042.0 | 106.80 | 1047.0 |
| GR | 106.8 | 1060.0 | 111.20 | 1060.0 | 111.20 | 1096.0 | 110.80 | 1191.0 | 110.50 | 1287.0 |
| GR | 110.3 | 1383.0 | 110.20 | 1478.0 | | | | | | |
| NC | .12 | .15 | .04 | | | | | | | |
| X1 | 10750. | 13 | 932.0 | 1053.0 | 103.0 | 103.0 | 103.0 | | | |
| CI | -1 | 87.03 | 0.04 | 4 | 4 | 10 | | | | |
| GR | 111.7 | 100.0 | 109.40 | 922.0 | 109.40 | 932.0 | 99.60 | 951.0 | 97.20 | 984.0 |
| GR | 93.5 | 1000.0 | 97.40 | 1016.0 | 102.00 | 1035.0 | 103.10 | 1042.0 | 108.60 | 1053.0 |
| GR | 109.3 | 1072.0 | 111.2 | 1096 | 111.2 | 1150 | | | | |
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 5400 | | | | | | | | |
| X1 | 12300. | 13 | 937.0 | 1059.0 | 1550.0 | 1650 | 1550.0 | | | |
| CI | -1 | 87.80 | 0.04 | 4 | 4 | 10 | | | | |
| GR | 115 | 700 | 108.50 | 917.0 | 109.20 | 937.0 | 99.70 | 954.0 | 97.20 | 980.0 |
| GR | 95.7 | 1000.0 | 98.20 | 1020.0 | 100.50 | 1041.0 | 108.80 | 1059.0 | 108.20 | 1077.0 |
| GR | 109.8 | 1177.0 | 110 | 1700 | 112.2 | 3400 | | | | |
| QT | 1 | 5200 | | | | | | | | |
| X1 | 14550. | 15 | 2030 | 2141 | 2400 | 2300 | 2250.0 | | | |
| CI | -1 | 88.93 | 0.04 | 4 | 4 | 10 | | | | |
| GR | 113.0 | 400 | 109.70 | 2007 | 109.10 | 2030 | 100.90 | 2047 | 99.10 | 2066 |
| GR | 98.6 | 2094 | 97.40 | 2100 | 98.70 | 2106 | 100.70 | 2124 | 108.40 | 2141 |
| GR | 109.7 | 2168 | 109.20 | 2268 | 110 | 2600 | 110 | 3250 | 115 | 4300 |
| X1 | 14650 | 15 | 2030 | 2141 | 100 | 100 | 100 | | | |
| CI | -1 | 88.98 | 0.04 | 4 | 4 | 10 | | | | |
| GR | 113.0 | 400 | 109.70 | 2007 | 109.10 | 2030 | 100.90 | 2047 | 99.10 | 2066 |
| GR | 98.6 | 2094 | 97.40 | 2100 | 98.70 | 2106 | 100.70 | 2124 | 108.40 | 2141 |
| GR | 109.7 | 2168 | 109.20 | 2268 | 110 | 2600 | 110 | 3250 | 115 | 4300 |
| QT | 1 | 5000 | | | | | | | | |
| X1 | 16295. | 15 | 978.3 | 1102.2 | 1700 | 1200 | 1645 | | | |
| CI | -1 | 89.80 | 0.04 | 4 | 4 | 10 | | | | |
| GR | 113.7 | .0 | 111.65 | 723.1 | 110.65 | 826.4 | 111.45 | 929.7 | 111.05 | 978.3 |
| GR | 102.3 | 1007.2 | 100.05 | 1020.6 | 98.75 | 1033.0 | 99.65 | 1045.4 | 101.95 | 1068.1 |
| GR | 111.1 | 1102.2 | 111.75 | 1136.3 | 110.85 | 1239.6 | 111.45 | 1342.9 | 113.65 | 2375.9 |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| QT | 1 | 4800 | | | | | | | | |
| X1 | 18040. | 15 | 947.0 | 1067.0 | 1800 | 1300 | 1745.0 | | | |
| CI | -1 | 90.67 | 0.04 | 4 | 4 | 10 | | | | |
| GR | 115.0 | .0 | 113.00 | 700.0 | 112.00 | 800.0 | 112.80 | 900.0 | 112.40 | 947.0 |
| GR | 103.7 | 975.0 | 101.40 | 988.0 | 100.10 | 1000.0 | 101.00 | 1012.0 | 103.30 | 1034.0 |
| GR | 112.4 | 1067.0 | 113.10 | 1100.0 | 112.20 | 1200.0 | 112.80 | 1300.0 | 115.00 | 2400 |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 18041 | 15 | 947.0 | 1067.0 | 1 | 1 | 1 | | | |
| CI | -1 | 94.70 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 115.0 | .0 | 113.00 | 700.0 | 112.00 | 800.0 | 112.80 | 900.0 | 112.40 | 947.0 |
| GR | 103.7 | 975.0 | 101.40 | 988.0 | 100.10 | 1000.0 | 101.00 | 1012.0 | 103.30 | 1034.0 |
| GR | 112.4 | 1067.0 | 113.10 | 1100.0 | 112.20 | 1200.0 | 112.80 | 1300.0 | 115.00 | 2400 |

| | | | | | | | | | | |
|----|-----|-----|-----|----|----|--|--|--|--|--|
| NC | .12 | .12 | .03 | .3 | .5 | | | | | |
|----|-----|-----|-----|----|----|--|--|--|--|--|

W WELSFORD ROAD STA. 180+90

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 18090. | 17 | 962.0 | 1052.0 | 49 | 49 | 49 | | | |
| CI | 1006 | 94.72 | 0.04 | 3 | 3 | 10 | | | | |
| X3 | 10. | | | | | | | 111.70 | 111.80 | |
| GR | 115.0 | .0 | 113.00 | 700.0 | 112.00 | 800.0 | 112.80 | 900.0 | 112.80 | 962.0 |
| GR | 107.7 | 962.0 | 103.70 | 975.0 | 101.40 | 988.0 | 100.10 | 1000.0 | 101.00 | 1012.0 |
| GR | 103.3 | 1034.0 | 108.10 | 1052.0 | 112.90 | 1052.0 | 113.10 | 1100.0 | 112.20 | 1200.0 |
| GR | 112.8 | 1300.0 | 115.00 | 2400 | | | | | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SB | 1.250 | 1.56 | 3.00 | .00 | 10 | 2.33 | 960 | 3 | 94.74 | 94.72 |
| X1 | 18127. | 17 | 962.0 | 1052.0 | 37.0 | 37.0 | 37.0 | | | |
| CI | 1006 | 94.74 | 0.04 | 3 | 3 | 10 | | | | |
| X2 | 0. | .00 | 1. | 111.40 | 112.00 | .00 | | .000 | | .000 |
| X3 | 10. | | | | | | | 112.00 | 112.20 | |
| BT | -13 | .0 | 115.00 | .00 | 700.0 | 113.00 | .00 | 800.0 | 112.00 | .00 |
| BT | 0 | 900.0 | 112.80 | .00 | 962.0 | 112.80 | .00 | 962.0 | 113.40 | .00 |
| BT | 0 | 1007.0 | 113.80 | .00 | 1052.0 | 113.50 | .00 | 1052.0 | 112.90 | .00 |
| BT | 0 | 1100.0 | 113.10 | .00 | 1200.0 | 112.20 | .00 | 1300.0 | 112.80 | .00 |
| BT | 0 | 2300.0 | 115.00 | .00 | | | | | | |
| GR | 115.0 | .0 | 113.00 | 700.0 | 112.00 | 800.0 | 112.80 | 900.0 | 112.80 | 962.0 |
| GR | 107.7 | 962.0 | 103.70 | 975.0 | 101.40 | 988.0 | 100.10 | 1000.0 | 101.00 | 1012.0 |
| GR | 103.3 | 1034.0 | 108.10 | 1052.0 | 112.90 | 1052.0 | 113.10 | 1100.0 | 112.20 | 1200.0 |
| GR | 112.8 | 1300.0 | 115.00 | 2400 | | | | | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| NC | .12 | .12 | .04 | | | | | | | |
| X1 | 18177. | 15 | 947.0 | 1067.0 | 50.0 | 50.0 | 50.0 | | | |
| CI | -1 | 94.77 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 115.0 | .0 | 113.00 | 700.0 | 112.00 | 800.0 | 112.80 | 900.0 | 112.40 | 947.0 |
| GR | 103.7 | 975.0 | 101.40 | 988.0 | 100.10 | 1000.0 | 101.00 | 1012.0 | 103.30 | 1034.0 |
| GR | 112.4 | 1067.0 | 113.10 | 1100.0 | 112.20 | 1200.0 | 112.80 | 1300.0 | 115.00 | 2400 |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 4500 | | | | | | | | |
| X1 | 21000. | 16 | 2940.0 | 3043.0 | 2823 | 2823 | 2823.0 | | | |
| CI | -1 | 96.18 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 120.0 | 500 | 115.00 | 1500 | 115.00 | 1700.0 | 115.20 | 2817.0 | 116.70 | 2917.0 |
| GR | 115.3 | 2929.0 | 115.90 | 2940.0 | 105.60 | 2966.0 | 103.80 | 2985.0 | 99.00 | 3000.0 |
| GR | 102.9 | 3015.0 | 116.01 | 3043.0 | 117.00 | 3068.0 | 115.60 | 3138.0 | 118.20 | 3178.0 |

| | | | | | | | | | | |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| GR | 120 | 5800 | | | | | | | | |
| X1 | 21700. | 14 | 2674.5 | 2770.0 | 680 | 700.0 | 700.0 | | | |
| CI | -1 | 96.53 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 118.9 | 400.0 | 113.35 | 2529.8 | 114.65 | 2619.1 | 112.55 | 2659.3 | 114.05 | 2674.5 |
| GR | 103.8 | 2695.9 | 100.95 | 2719.1 | 100.05 | 2721.8 | 100.95 | 2724.5 | 104.75 | 2747.7 |
| GR | 114.3 | 2770.0 | 112.85 | 2783.4 | 113.85 | 2791.5 | 120 | 5222 | | |
| QT | 1 | 4420 | | | | | | | | |
| X1 | 22400. | 14 | 2947.0 | 3054.0 | 680 | 700.0 | 700.0 | | | |
| CI | -1 | 96.88 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 120.0 | 600 | 114.40 | 2785.0 | 115.70 | 2885.0 | 113.60 | 2930.0 | 115.10 | 2947.0 |
| GR | 104.9 | 2971.0 | 102.00 | 2997.0 | 101.10 | 3000.0 | 102.00 | 3003.0 | 105.80 | 3029.0 |
| GR | 115.3 | 3054.0 | 113.90 | 3069.0 | 114.90 | 3078.0 | 120.00 | 4400 | | |
| DROP STRUCTURE | | | | | | | | | | |
| X1 | 22401 | 14 | 2947.0 | 3054.0 | 1 | 1 | 1 | | | |
| CI | -1 | 100.90 | 0.04 | 3 | 3 | 40 | | | | |
| GR | 120.0 | 600 | 114.40 | 2785.0 | 115.70 | 2885.0 | 113.60 | 2930.0 | 115.10 | 2947.0 |
| GR | 104.9 | 2971.0 | 102.00 | 2997.0 | 101.10 | 3000.0 | 102.00 | 3003.0 | 105.80 | 3029.0 |
| GR | 115.3 | 3054.0 | 113.90 | 3069.0 | 114.90 | 3078.0 | 120.00 | 4400 | | |
| QT | 1 | 1460 | | | | | | | | |
| X1 | 22673. | 14 | 2954.7 | 3059.9 | 170 | 450 | 272 | | | |
| CI | -1 | 101.17 | 0.04 | 3 | 3 | 20 | | | | |
| GR | 119.3 | 600.0 | 113.95 | 2934.7 | 112.85 | 2945.7 | 114.45 | 2954.7 | 105.65 | 2978.7 |
| GR | 103.0 | 2996.8 | 101.75 | 3004.8 | 103.55 | 3012.8 | 106.85 | 3034.9 | 109.95 | 3046.9 |
| GR | 116.2 | 3059.9 | 115.25 | 3070.9 | 117.05 | 3091.0 | 118.45 | 4507.8 | | |
| NC | .15 | .15 | .04 | | | | | | | |
| QT | 1 | 1440 | | | | | | | | |
| X1 | 22947. | 14 | 2950.0 | 3055.0 | 170 | 450 | 274 | | | |
| CI | -1 | 101.45 | 0.04 | 3 | 3 | 20 | | | | |
| GR | 120.0 | 600.0 | 114.60 | 2930.0 | 113.50 | 2941.0 | 115.10 | 2950.0 | 106.30 | 2974.0 |
| GR | 103.7 | 2992.0 | 102.40 | 3000.0 | 104.20 | 3008.0 | 107.50 | 3030.0 | 110.60 | 3042.0 |
| GR | 116.8 | 3055.0 | 115.90 | 3066.0 | 117.70 | 3086.0 | 119.10 | 4500.0 | | |
| QT | 1 | 1360 | | | | | | | | |
| X1 | 25347. | 17 | 957.0 | 1047.0 | 2200 | 2400.0 | 2400 | | | |
| CI | -1 | 103.85 | 0.04 | 3 | 3 | 20 | | | | |
| GR | 125.0 | 300.0 | 120.00 | 400.0 | 115.20 | 927.0 | 114.10 | 948.0 | 116.10 | 957.0 |
| GR | 108.2 | 972.0 | 107.00 | 990.0 | 106.50 | 1000.0 | 107.20 | 1010.0 | 109.20 | 1035.0 |
| GR | 115.5 | 1047.0 | 114.20 | 1057.0 | 115.50 | 1067.0 | 115.90 | 1167.0 | 116.70 | 1197.0 |
| GR | 120.0 | 1700.0 | 125 | 2000 | | | | | | |
| QT | 1 | 1320 | | | | | | | | |
| X1 | 26222. | 15 | 1026.5 | 1125.5 | 875.0 | 875.0 | 875.0 | | | |
| CI | -1 | 104.72 | 0.04 | 3 | 3 | 20 | | | | |
| GR | 123.2 | .0 | 116.70 | 994.2 | 115.50 | 1015.7 | 117.70 | 1026.5 | 110.80 | 1042.6 |
| GR | 107.9 | 1063.1 | 107.30 | 1076.0 | 108.10 | 1088.9 | 110.90 | 1105.1 | 120.70 | 1125.5 |
| GR | 117.0 | 1141.6 | 117.60 | 1163.2 | 117.70 | 1270.8 | 119.20 | 1560.2 | 124.20 | 1721.6 |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| QT | 1 | 1290 | | | | | | | | |
| NC | .12 | .12 | .04 | .1 | .3 | | | | | |
| X1 | 27097. | 15 | 954.0 | 1046.0 | 875 | 875 | 875 | | | |
| CI | -1 | 105.60 | 0.04 | 3 | 3 | 20 | | | | |
| GR | 124.0 | .0 | 117.50 | 924.0 | 116.30 | 944.0 | 118.50 | 954.0 | 111.60 | 969.0 |
| GR | 108.7 | 988.0 | 108.10 | 1000.0 | 108.90 | 1012.0 | 111.70 | 1027.0 | 121.50 | 1046.0 |
| GR | 117.8 | 1061.0 | 118.40 | 1081.0 | 118.50 | 1181.0 | 120.00 | 1450.0 | 125.00 | 1600.0 |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| QT | 1 | 1250 | | | | | | | | |
| X1 | 28362. | 17 | 2083.0 | 2158.5 | 1200 | 1260.0 | 1265.0 | | | |
| CI | -1 | 106.86 | 0.04 | 3 | 3 | 20 | | | | |
| GR | 118.4 | 700.0 | 117.20 | 2050.1 | 117.10 | 2053.4 | 116.80 | 2067.7 | 118.50 | 2083.0 |
| GR | 112.4 | 2093.9 | 110.50 | 2118.0 | 109.70 | 2123.5 | 111.10 | 2129.0 | 112.90 | 2146.5 |
| GR | 117.5 | 2158.5 | 115.50 | 2170.6 | 116.40 | 2187.0 | 117.50 | 2215.5 | 118.40 | 2671.0 |
| GR | 118.4 | 2835.3 | 123.40 | 2999.5 | | | | | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| QT | 1 | 1200 | | | | | | | | |
| X1 | 29627. | 17 | 1963.0 | 2032.0 | 1200 | 1260.0 | 1265.0 | | | |
| CI | -1 | 108.13 | 0.04 | 3 | 3 | 20 | | | | |
| GR | 120.0 | 700.0 | 118.80 | 1933.0 | 118.70 | 1936.0 | 118.40 | 1949.0 | 120.10 | 1963.0 |
| GR | 114.0 | 1973.0 | 112.10 | 1995.0 | 111.30 | 2000.0 | 112.70 | 2005.0 | 114.50 | 2021.0 |
| GR | 119.1 | 2032.0 | 117.10 | 2043.0 | 118.00 | 2058.0 | 119.10 | 2084.0 | 120.00 | 2500.0 |
| GR | 120.0 | 2650.0 | 125.00 | 2800.0 | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 29628 | 17 | 1963.0 | 2032.0 | 1 | 1 | 1 | | | |
| CI | | | | | | .01 | | | | |
| GR | 120.0 | 700.0 | 118.80 | 1933.0 | 118.70 | 1936.0 | 118.40 | 1949.0 | 120.10 | 1963.0 |
| GR | 114.0 | 1973.0 | 112.10 | 1995.0 | 111.30 | 2000.0 | 112.70 | 2005.0 | 114.50 | 2021.0 |
| GR | 119.1 | 2032.0 | 117.10 | 2043.0 | 118.00 | 2058.0 | 119.10 | 2084.0 | 120.00 | 2500.0 |
| GR | 120.0 | 2650.0 | 125.00 | 2800.0 | | | | | | |

| | | | | | | | | | | |
|----|-----|-----|------|----|----|--|--|--|--|--|
| NC | .12 | .12 | .015 | .3 | .5 | | | | | |
|----|-----|-----|------|----|----|--|--|--|--|--|

ROBINSON ROAD STA. 296+67

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 29667. | 18 | 1983.0 | 2013.0 | 39 | 39 | 39 | | | |
| X3 | 10. | | | | | | | 118.30 | 118.50 | |
| GR | 120.0 | 700.0 | 119.40 | 1498.0 | 119.50 | 1598.0 | 119.20 | 1698.0 | 119.40 | 1798.0 |
| GR | 119.5 | 1898.0 | 119.60 | 1983.0 | 111.40 | 1983.0 | 111.40 | 2013.0 | 119.60 | 2013.0 |
| GR | 119.5 | 2098.0 | 119.70 | 2198.0 | 119.80 | 2298.0 | 119.90 | 2398.0 | 120.10 | 2498.0 |
| GR | 120.0 | 2500.0 | 120.00 | 2650.0 | 125.00 | 2800.0 | | | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SB | 1.250 | 1.56 | 3.00 | .00 | 30.00 | 1.40 | 162 | 0 | 111.4 | 111.4 |
| X1 | 29731. | 18 | 1983.0 | 2013.0 | 64.0 | 64.0 | 64.0 | | | |
| X2 | 0. | .00 | 1. | 117.40 | 119.20 | .00 | | .000 | | .000 |
| X3 | 10. | | | | | | | 119.5 | 119.50 | |
| BT | -16 | 700.0 | 120.00 | .00 | 1498.0 | 119.40 | .00 | 1598.0 | 119.50 | .00 |
| BT | 0 | 1698.0 | 119.20 | .00 | 1798.0 | 119.40 | .00 | 1898.0 | 119.50 | .00 |
| BT | 0 | 1983.0 | 119.60 | .00 | 2013.0 | 119.60 | .00 | 2098.0 | 119.50 | .00 |
| BT | 0 | 2198.0 | 119.70 | .00 | 2298.0 | 119.80 | .00 | 2398.0 | 119.90 | .00 |
| BT | 0 | 2498.0 | 120.10 | .00 | 2500.0 | 120.00 | .00 | 2650.0 | 120.00 | .00 |
| BT | 0 | 2800.0 | 125.00 | .00 | | | | | | |
| GR | 120.0 | 700.0 | 119.40 | 1498.0 | 119.50 | 1598.0 | 119.20 | 1698.0 | 119.40 | 1798.0 |
| GR | 119.5 | 1898.0 | 119.60 | 1983.0 | 111.40 | 1983.0 | 111.40 | 2013.0 | 119.60 | 2013.0 |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| GR | 119.5 | 2098.0 | 119.70 | 2198.0 | 119.80 | 2298.0 | 119.90 | 2398.0 | 120.10 | 2498.0 |
| GR | 120.0 | 2500.0 | 120.00 | 2650.0 | 125.00 | 2800.0 | | | | |
| X1 | 29831 | 15 | 1967.0 | 2040.0 | 100 | 100 | 100 | | | |
| CI | -1 | 111.55 | 0.04 | 3 | 3 | 30 | | | | |
| X3 | | 111.55 | | | | | | | | |
| GR | 120.0 | 700.0 | 119.20 | 1883.0 | 119.80 | 1933.0 | 118.20 | 1954.0 | 120.60 | 1967.0 |
| GR | 112.4 | 1990.0 | 110.90 | 2000.0 | 112.10 | 2010.0 | 114.30 | 2028.0 | 120.40 | 2040.0 |
| GR | 117.6 | 2051.0 | 118.70 | 2069.0 | 120.00 | 2500.0 | 120.00 | 2650.0 | 125.00 | 2800.0 |
| NC | .12 | .12 | .04 | .10000 | .30000 | | | | | |
| QT | 1 | 1180 | | | | | | | | |
| X1 | 30380. | 11 | 950.5 | 1018.4 | 600.0 | 550 | 549 | | | |
| CI | -1 | 112.40 | 0.04 | 3 | 3 | 30 | | | | |
| X3 | | 112.40 | | | | | | | | |
| GR | 123.2 | 917.0 | 119.70 | 939.1 | 120.90 | 950.5 | 115.60 | 956.3 | 112.90 | 975.9 |
| GR | 112.0 | 984.9 | 112.70 | 993.9 | 114.30 | 1006.2 | 122.80 | 1018.4 | 121.20 | 1027.4 |
| GR | 123.1 | 1047.9 | | | | | | | | |
| QT | 1 | 1170 | | | | | | | | |
| X1 | 30963. | 11 | 961.0 | 1050.2 | 600.0 | 550 | 583.0 | | | |
| CI | -1 | 113.30 | 0.04 | 3 | 3 | 30 | | | | |
| GR | 127.6 | 917.0 | 124.10 | 946.0 | 125.30 | 961.0 | 120.00 | 968.6 | 117.30 | 994.3 |
| GR | 116.4 | 1006.1 | 117.10 | 1018.0 | 118.70 | 1034.1 | 127.20 | 1050.2 | 125.60 | 1062.0 |
| GR | 127.5 | 1088.8 | | | | | | | | |
| QT | 1 | 1150 | | | | | | | | |
| X1 | 31546. | 11 | 960.8 | 1049.6 | 600.0 | 550 | 583.0 | | | |
| CI | -1 | 114.20 | 0.04 | 3 | 3 | 30 | | | | |
| GR | 127.6 | 917.0 | 124.10 | 945.9 | 125.30 | 960.8 | 120.00 | 968.3 | 117.30 | 994.0 |
| GR | 116.4 | 1005.7 | 117.10 | 1017.5 | 118.70 | 1033.5 | 127.20 | 1049.6 | 125.60 | 1061.3 |
| GR | 127.5 | 1088.0 | | | | | | | | |
| NC | .15 | .15 | .04 | | | | | | | |
| QT | 1 | 1130 | | | | | | | | |
| X1 | 32127. | 11 | 958.0 | 1041.0 | 600.0 | 550 | 581.0 | | | |
| CI | -1 | 115.10 | 0.04 | 3 | 3 | 30 | | | | |
| GR | 126.5 | 917.0 | 123.00 | 944.0 | 124.20 | 958.0 | 118.90 | 965.0 | 116.20 | 989.0 |
| GR | 115.3 | 1000.0 | 116.00 | 1011.0 | 117.60 | 1026.0 | 126.10 | 1041.0 | 124.50 | 1052.0 |
| GR | 126.4 | 1077.0 | | | | | | | | |
| QT | 1 | 1100 | | | | | | | | |
| X1 | 33077. | 12 | 956.0 | 1064.0 | 950.0 | 950.0 | 950.0 | | | |
| CI | -1 | 116.57 | 0.04 | 3 | 3 | 30 | | | | |
| GR | 130.7 | 931.0 | 129.60 | 940.0 | 130.60 | 956.0 | 123.50 | 969.0 | 118.80 | 984.0 |
| GR | 116.1 | 1000.0 | 116.90 | 1016.0 | 117.80 | 1027.0 | 125.60 | 1045.0 | 133.00 | 1064.0 |
| GR | 132.2 | 1074.0 | 134.90 | 1092.0 | | | | | | |
| X1 | 33157. | 12 | 956.0 | 1064.0 | 80.0 | 80.0 | 80.0 | | | |
| CI | -1 | 116.69 | 0.04 | 3 | 3 | 30 | | | | |
| GR | 130.7 | 931.0 | 129.60 | 940.0 | 130.60 | 956.0 | 123.50 | 969.0 | 118.80 | 984.0 |
| GR | 116.1 | 1000.0 | 116.90 | 1016.0 | 117.80 | 1027.0 | 125.60 | 1045.0 | 133.00 | 1064.0 |
| GR | 132.2 | 1074.0 | 134.90 | 1092.0 | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 33207. | 13 | 989 | 1021.0 | 50.0 | 50.0 | 50.0 | | | |
| CI | -1 | 116.77 | 0.04 | 3 | 3 | 30 | | | | |
| GR | 130.7 | 931.0 | 129.60 | 940.0 | 130.60 | 956.0 | 124.60 | 989 | 124.60 | 990 |
| GR | 116.8 | 990 | 116.80 | 1020.0 | 124.60 | 1020.0 | 124.60 | 1021.0 | 133.00 | 1064.0 |
| GR | 132.2 | 1074.0 | 134.90 | 1092.0 | 134.9 | 1200 | | | | |
| X1 | 33226 | 13 | 989 | 1021 | 19 | 19 | 19 | | | |
| CI | -1 | 116.80 | 0.04 | 3 | 3 | 30 | | | | |
| GR | 130.7 | 931.0 | 129.60 | 940.0 | 130.60 | 956.0 | 124.60 | 989 | 124.60 | 990 |
| GR | 116.8 | 990 | 116.80 | 1020.0 | 124.60 | 1020.0 | 124.60 | 1021.0 | 133.00 | 1064.0 |
| GR | 132.2 | 1074.0 | 134.90 | 1092.0 | 134.9 | 1200 | | | | |
| X1 | 33227. | 16 | 984 | 1016 | 1 | 1 | 1 | | | |
| CI | -1 | 121.9 | 0.04 | 3 | 3 | 30 | | | | |
| X5 | -1 | 6.5 | | | | | | | | |
| GR | 132.2 | 926.0 | 130.90 | 942.0 | 132.70 | 963.0 | 131.00 | 984 | 131.00 | 985 |
| GR | 127.0 | 985 | 127.00 | 998.5 | 122.80 | 998.5 | 122.80 | 1001.5 | 127.00 | 1001.5 |
| GR | 127.0 | 1015 | 131.00 | 1015 | 131.00 | 1016 | 132.70 | 1039.0 | 130.80 | 1057.0 |
| GR | 133.4 | 1089.0 | | | | | | | | |
| NC | .15 | .15 | .04 | | | | | | | |
| X1 | 33257. | 9 | 963.0 | 1039.0 | 30.0 | 30.0 | 30.0 | | | |
| CI | -1 | 121.95 | 0.04 | 3 | 3 | 30 | | | | |
| GR | 132.2 | 926.0 | 130.90 | 942.0 | 132.70 | 963.0 | 123.50 | 990.0 | 122.50 | 1000.0 |
| GR | 123.6 | 1010.0 | 132.70 | 1039.0 | 130.80 | 1057.0 | 133.40 | 1089.0 | | |
| NC | | | | .1 | .3 | | | | | |
| X1 | 33327. | 9 | 963.0 | 1039.0 | 70.0 | 70.0 | 70.0 | | | |
| CI | -1 | 122.05 | 0.04 | 3 | 3 | 30 | | | | |
| GR | 132.2 | 926.0 | 130.90 | 942.0 | 132.70 | 963.0 | 123.50 | 990.0 | 122.50 | 1000.0 |
| GR | 123.6 | 1010.0 | 132.70 | 1039.0 | 130.80 | 1057.0 | 133.40 | 1089.0 | | |
| QT | 1 | 1080 | | | | | | | | |
| X1 | 34135. | 15 | 1960.0 | 2044.0 | 808.0 | 808.0 | 808.0 | | | |
| CI | -1 | 123.26 | 0.04 | 3 | 3 | 30 | | | | |
| GR | 140.0 | 700.0 | 133.80 | 1944.0 | 133.10 | 1950.0 | 133.40 | 1960.0 | 130.00 | 1972.0 |
| GR | 123.4 | 1987.0 | 123.30 | 2000.0 | 123.30 | 2013.0 | 130.90 | 2033.0 | 133.40 | 2044.0 |
| GR | 132.9 | 2053.0 | 133.30 | 2077.0 | 135.00 | 4000.0 | 135.00 | 4600.0 | 140.00 | 4800.0 |
| NC | .15 | .15 | .024 | .3 | .5 | | | | | |
| X1 | 34185. | 83 | 960 | 1044 | 50.0 | 50.0 | 50.0 | | | |
| CI | | | | | | .01 | | | | |
| X3 | 10. | | | | | | | 134.50 | 134.50 | |
| GR | 134.4 | 500.0 | 134.40 | 600.0 | 134.20 | 700.0 | 134.30 | 800.0 | 134.30 | 900.0 |
| GR | 133.8 | 944.0 | 133.10 | 950.0 | 133.40 | 960.0 | 130.00 | 972.0 | 126.3 | 979 |
| GR | 125.52 | 979.1 | 124.8 | 979.4 | 124.18 | 979.88 | 123.7 | 980.5 | 123.4 | 981.22 |
| GR | 123.3 | 982 | 123.4 | 982.78 | 123.7 | 983.5 | 124.18 | 984.12 | 124.8 | 984.6 |
| GR | 125.52 | 984.9 | 126.3 | 985 | 126.30 | 988.0 | 125.5 | 988.1 | 124.80 | 988.4 |
| GR | 124.18 | 988.9 | 123.70 | 989.5 | 123.40 | 990.2 | 123.3 | 991.0 | 123.40 | 991.8 |
| GR | 123.70 | 992.5 | 124.18 | 993.1 | 124.80 | 993.6 | 125.5 | 993.9 | 126.30 | 994.0 |
| GR | 126.30 | 997.0 | 125.52 | 997.1 | 124.80 | 997.4 | 124.2 | 997.9 | 123.70 | 998.5 |
| GR | 123.40 | 999.2 | 123.30 | 1000.0 | 123.40 | 1000.8 | 123.7 | 1001.5 | 124.18 | 1002.1 |

| | | | | | | | | | | |
|----|--------|---------|--------|---------|--------|--------|--------|---------|--------|---------|
| GR | 124.80 | 1002.6 | 125.52 | 1002.9 | 126.30 | 1003.0 | 126.3 | 1006.0 | 125.52 | 1006.1 |
| GR | 124.80 | 1006.4 | 124.18 | 1006.9 | 123.70 | 1007.5 | 123.4 | 1008.2 | 123.30 | 1009.0 |
| GR | 123.40 | 1009.8 | 123.70 | 1010.5 | 124.18 | 1011.1 | 124.8 | 1011.6 | 125.52 | 1011.9 |
| GR | 126.30 | 1012.0 | 126.3 | 1015 | 125.52 | 1015.1 | 124.8 | 1015.4 | 124.18 | 1015.88 |
| GR | 123.7 | 1016.5 | 123.4 | 1017.22 | 123.3 | 1018 | 123.4 | 1018.78 | 123.7 | 1019.5 |
| GR | 124.18 | 1020.12 | 124.8 | 1020.6 | 125.52 | 1020.9 | 126.3 | 1021 | 130.90 | 1033.0 |
| GR | 133.40 | 1044.0 | 132.9 | 1053.0 | 133.30 | 1077.0 | 135.10 | 1100.0 | 137.20 | 1200.0 |
| GR | 139.60 | 1300.0 | 139.9 | 1400.0 | 138.70 | 1500.0 | | | | |

HANNA ROAD STA. 341+86

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 34186. | 83 | 979 | 1021 | 1.0 | 1.0 | 1.0 | | | |
| X3 | 10. | | | | | | | 134.50 | 134.50 | |
| BT | -83 | 500.0 | 139.80 | 134.40 | 600.0 | 139.70 | 134.40 | 700.0 | 139.70 | 134.20 |
| BT | | 800.0 | 139.70 | 134.30 | 900.0 | 139.70 | 134.30 | 944.0 | 139.60 | 133.80 |
| BT | | 950.0 | 139.60 | 133.10 | 960.0 | 139.60 | 133.40 | 972.0 | 139.60 | 130.00 |
| BT | | 979 | 139.6 | 126.3 | 979.1 | 139.6 | 127.08 | 979.4 | 139.6 | 127.8 |
| BT | | 979.88 | 139.6 | 128.42 | 980.5 | 139.6 | 128.9 | 981.22 | 139.6 | 129.2 |
| BT | | 982 | 139.6 | 129.3 | 982.78 | 139.6 | 129.2 | 983.5 | 139.6 | 128.9 |
| BT | | 984.12 | 139.6 | 128.42 | 984.6 | 139.6 | 127.8 | 984.9 | 139.6 | 127.08 |
| BT | | 985 | 139.6 | 126.3 | 988.0 | 139.60 | 126.30 | 988.1 | 139.60 | 127.08 |
| BT | | 988.4 | 139.60 | 127.80 | 988.9 | 139.60 | 128.42 | 989.5 | 139.60 | 128.90 |
| BT | | 990.2 | 139.60 | 129.20 | 991.0 | 139.60 | 129.30 | 991.8 | 139.60 | 129.20 |
| BT | | 992.5 | 139.60 | 128.90 | 993.1 | 139.60 | 128.42 | 993.6 | 139.60 | 127.80 |
| BT | | 993.9 | 139.60 | 127.08 | 994.0 | 139.60 | 126.30 | 997.0 | 139.60 | 126.30 |
| BT | | 997.1 | 139.60 | 127.08 | 997.4 | 139.60 | 127.80 | 997.9 | 139.60 | 128.42 |
| BT | | 998.5 | 139.60 | 128.90 | 999.2 | 139.60 | 129.20 | 1000.0 | 139.60 | 129.30 |
| BT | | 1000.8 | 139.60 | 129.20 | 1001.5 | 139.60 | 128.90 | 1002.1 | 139.60 | 128.42 |
| BT | | 1002.6 | 139.60 | 127.80 | 1002.9 | 139.60 | 127.08 | 1003.0 | 139.60 | 126.30 |
| BT | | 1006.0 | 139.60 | 126.30 | 1006.1 | 139.60 | 127.08 | 1006.4 | 139.60 | 127.80 |
| BT | | 1006.9 | 139.60 | 128.42 | 1007.5 | 139.60 | 128.90 | 1008.2 | 139.60 | 129.20 |
| BT | | 1009.0 | 139.60 | 129.30 | 1009.8 | 139.60 | 129.20 | 1010.5 | 139.60 | 128.90 |
| BT | | 1011.1 | 139.60 | 128.42 | 1011.6 | 139.60 | 127.80 | 1011.9 | 139.60 | 127.08 |
| BT | | 1012.0 | 139.60 | 126.30 | 1015 | 139.60 | 126.30 | 1015.1 | 139.60 | 127.08 |
| BT | | 1015.4 | 139.60 | 127.80 | 1015.9 | 139.60 | 128.42 | 1016.5 | 139.60 | 128.90 |
| BT | | 1017.2 | 139.60 | 129.20 | 1018 | 139.60 | 129.30 | 1018.8 | 139.60 | 129.20 |
| BT | | 1019.5 | 139.60 | 128.90 | 1020.1 | 139.60 | 128.42 | 1020.6 | 139.60 | 127.80 |
| BT | | 1020.9 | 139.60 | 127.08 | 1021 | 139.60 | 126.30 | 1033.0 | 139.60 | 130.90 |
| BT | | 1044.0 | 139.60 | 133.40 | 1053.0 | 139.60 | 132.90 | 1077.0 | 139.60 | 133.30 |
| BT | | 1100.0 | 139.60 | 135.10 | 1200.0 | 139.70 | 137.20 | 1300.0 | 139.70 | 139.60 |
| BT | | 1400.0 | 139.90 | 139.90 | 1500.0 | 139.70 | 138.70 | | | |
| GR | 134.4 | 500.0 | 134.40 | 600.0 | 134.20 | 700.0 | 134.30 | 800.0 | 134.30 | 900.0 |
| GR | 133.8 | 944.0 | 133.10 | 950.0 | 133.40 | 960.0 | 130.00 | 972.0 | 126.3 | 979 |
| GR | 125.52 | 979.1 | 124.8 | 979.4 | 124.18 | 979.88 | 123.7 | 980.5 | 123.4 | 981.22 |
| GR | 123.3 | 982 | 123.4 | 982.78 | 123.7 | 983.5 | 124.18 | 984.12 | 124.8 | 984.6 |
| GR | 125.52 | 984.9 | 126.3 | 985 | 126.30 | 988.0 | 125.5 | 988.1 | 124.80 | 988.4 |
| GR | 124.18 | 988.9 | 123.70 | 989.5 | 123.40 | 990.2 | 123.3 | 991.0 | 123.40 | 991.8 |
| GR | 123.70 | 992.5 | 124.18 | 993.1 | 124.80 | 993.6 | 125.5 | 993.9 | 126.30 | 994.0 |
| GR | 126.30 | 997.0 | 125.52 | 997.1 | 124.80 | 997.4 | 124.2 | 997.9 | 123.70 | 998.5 |
| GR | 123.40 | 999.2 | 123.30 | 1000.0 | 123.40 | 1000.8 | 123.7 | 1001.5 | 124.18 | 1002.1 |
| GR | 124.80 | 1002.6 | 125.52 | 1002.9 | 126.30 | 1003.0 | 126.3 | 1006.0 | 125.52 | 1006.1 |
| GR | 124.80 | 1006.4 | 124.18 | 1006.9 | 123.70 | 1007.5 | 123.4 | 1008.2 | 123.30 | 1009.0 |
| GR | 123.40 | 1009.8 | 123.70 | 1010.5 | 124.18 | 1011.1 | 124.8 | 1011.6 | 125.52 | 1011.9 |
| GR | 126.30 | 1012.0 | 126.3 | 1015 | 125.52 | 1015.1 | 124.8 | 1015.4 | 124.18 | 1015.9 |
| GR | 123.7 | 1016.5 | 123.4 | 1017.2 | 123.3 | 1018 | 123.4 | 1018.8 | 123.7 | 1019.5 |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| GR | 124.18 | 1020.1 | 124.8 | 1020.6 | 125.52 | 1020.9 | 126.3 | 1021 | 130.90 | 1033.0 |
| GR | 133.40 | 1044.0 | 132.9 | 1053.0 | 133.30 | 1077.0 | 135.10 | 1100.0 | 137.20 | 1200.0 |
| GR | 139.60 | 1300.0 | 139.9 | 1400.0 | 138.70 | 1500.0 | | | | |
| X1 | 34361. | 84 | 979 | 1021 | 175 | 175 | 175 | | | |
| X3 | 10. | | | | | | | 139.60 | 139.60 | |
| BT | -84 | 500 | 139.8 | 139.8 | 600 | 139.7 | 139.7 | 700 | 139.7 | 139.7 |
| BT | | 800 | 139.7 | 139.7 | 900 | 139.7 | 139.7 | 929 | 139.7 | 134.5 |
| BT | | 948 | 139.6 | 133.2 | 956 | 139.6 | 135.3 | 968 | 139.6 | 132 |
| BT | | 979 | 139.6 | 128.3 | 979.1 | 139.6 | 129.08 | 979.4 | 139.6 | 129.8 |
| BT | | 979.88 | 139.6 | 130.42 | 980.5 | 139.6 | 130.9 | 981.22 | 139.6 | 131.2 |
| BT | | 982 | 139.6 | 131.3 | 982.78 | 139.6 | 131.2 | 983.5 | 139.6 | 130.9 |
| BT | | 984.12 | 139.6 | 130.42 | 984.6 | 139.6 | 129.8 | 984.9 | 139.6 | 129.08 |
| BT | | 985 | 139.6 | 128.3 | 988 | 139.6 | 128.3 | 988.1 | 139.6 | 129.08 |
| BT | | 988.4 | 139.6 | 129.8 | 988.88 | 139.6 | 130.42 | 989.5 | 139.6 | 130.9 |
| BT | | 990.22 | 139.6 | 131.2 | 991 | 139.6 | 131.3 | 991.78 | 139.6 | 131.2 |
| BT | | 992.5 | 139.6 | 130.9 | 993.12 | 139.6 | 130.42 | 993.6 | 139.6 | 129.8 |
| BT | | 993.9 | 139.6 | 129.08 | 994 | 139.6 | 128.3 | 997 | 139.6 | 128.3 |
| BT | | 997.1 | 139.6 | 129.08 | 997.4 | 139.6 | 129.8 | 997.88 | 139.6 | 130.42 |
| BT | | 998.5 | 139.6 | 130.9 | 999.22 | 139.6 | 131.2 | 1000 | 139.6 | 131.3 |
| BT | | 1000.7 | 139.6 | 131.2 | 1001.5 | 139.6 | 130.9 | 1002.1 | 139.6 | 130.42 |
| BT | | 1002.6 | 139.6 | 129.8 | 1002.9 | 139.6 | 129.08 | 1003 | 139.6 | 128.3 |
| BT | | 1006 | 139.6 | 128.3 | 1006.1 | 139.6 | 129.08 | 1006.4 | 139.6 | 129.8 |
| BT | | 1006.8 | 139.6 | 130.42 | 1007.5 | 139.6 | 130.9 | 1008.2 | 139.6 | 131.2 |
| BT | | 1009 | 139.6 | 131.3 | 1009.7 | 139.6 | 131.2 | 1010.5 | 139.6 | 130.9 |
| BT | | 1011.1 | 139.6 | 130.42 | 1011.6 | 139.6 | 129.8 | 1011.9 | 139.6 | 129.08 |
| BT | | 1012 | 139.6 | 128.3 | 1015 | 139.6 | 128.3 | 1015.1 | 139.6 | 129.08 |
| BT | | 1015.4 | 139.6 | 129.8 | 1015.9 | 139.6 | 130.42 | 1016.5 | 139.6 | 130.9 |
| BT | | 1017.2 | 139.6 | 131.2 | 1018 | 139.6 | 131.3 | 1018.8 | 139.6 | 131.2 |
| BT | | 1019.5 | 139.6 | 130.9 | 1020.1 | 139.6 | 130.42 | 1020.6 | 139.6 | 129.8 |
| BT | | 1020.9 | 139.6 | 129.08 | 1021 | 139.6 | 128.3 | 1033 | 139.6 | 132.6 |
| BT | | 1038 | 139.6 | 135 | 1050 | 139.6 | 134.1 | 1062 | 139.6 | 135.1 |
| BT | | 1100 | 139.6 | 139.6 | 1200 | 139.6 | 139.6 | 1300 | 139.7 | 139.7 |
| BT | | 1400 | 139.7 | 139.7 | 1500 | 139.7 | 139.7 | 2350 | 140 | 140 |
| GR | 139.8 | 500 | 139.7 | 600 | 139.7 | 700 | 139.7 | 800 | 139.7 | 900 |
| GR | 134.50 | 929.0 | 133.20 | 948.0 | 135.30 | 956.0 | 132.00 | 968.0 | 128.3 | 979 |
| GR | 127.52 | 979.1 | 126.8 | 979.4 | 126.18 | 979.88 | 125.7 | 980.5 | 125.4 | 981.22 |
| GR | 125.3 | 982 | 125.4 | 982.78 | 125.7 | 983.5 | 126.18 | 984.12 | 126.8 | 984.6 |
| GR | 127.52 | 984.9 | 128.3 | 985 | 128.3 | 988 | 127.52 | 988.1 | 126.8 | 988.4 |
| GR | 126.18 | 988.88 | 125.7 | 989.5 | 125.4 | 990.22 | 125.3 | 991 | 125.4 | 991.78 |
| GR | 125.7 | 992.5 | 126.18 | 993.12 | 126.8 | 993.6 | 127.52 | 993.9 | 128.3 | 994 |
| GR | 128.3 | 997 | 127.52 | 997.1 | 126.8 | 997.4 | 126.18 | 997.88 | 125.7 | 998.5 |
| GR | 125.4 | 999.22 | 125.3 | 1000 | 125.4 | 1000.7 | 125.7 | 1001.5 | 126.18 | 1002.1 |
| GR | 126.8 | 1002.6 | 127.52 | 1002.9 | 128.3 | 1003 | 128.3 | 1006 | 127.52 | 1006.1 |
| GR | 126.8 | 1006.4 | 126.18 | 1006.8 | 125.7 | 1007.5 | 125.4 | 1008.2 | 125.3 | 1009 |
| GR | 125.4 | 1009.7 | 125.7 | 1010.5 | 126.18 | 1011.1 | 126.8 | 1011.6 | 127.52 | 1011.9 |
| GR | 128.3 | 1012 | 128.3 | 1015 | 127.52 | 1015.1 | 126.8 | 1015.4 | 126.18 | 1015.9 |
| GR | 125.7 | 1016.5 | 125.4 | 1017.2 | 125.3 | 1018 | 125.4 | 1018.8 | 125.7 | 1019.5 |
| GR | 126.18 | 1020.1 | 126.8 | 1020.6 | 127.52 | 1020.9 | 128.3 | 1021 | 132.60 | 1033.0 |
| GR | 135.00 | 1038.0 | 134.1 | 1050.0 | 135.10 | 1062.0 | 139.6 | 1100 | 139.6 | 1200 |
| GR | 139.7 | 1300 | 139.7 | 1400 | 139.7 | 1500 | 140.00 | 2350.0 | | |

| | | | | | | | | | | |
|--------------------------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 34362 | 84 | 956.0 | 1038 | 1 | 1 | 1 | | | |
| X3 | 10. | | | | | | | 139.60 | 139.60 | |
| GR | 139.8 | 500 | 139.7 | 600 | 139.7 | 700 | 139.7 | 800 | 139.7 | 900 |
| GR | 134.50 | 929.0 | 133.20 | 948.0 | 135.30 | 956.0 | 132.00 | 968.0 | 128.3 | 979 |
| GR | 127.52 | 979.1 | 126.8 | 979.4 | 126.18 | 979.88 | 125.7 | 980.5 | 125.4 | 981.22 |
| GR | 125.3 | 982 | 125.4 | 982.78 | 125.7 | 983.5 | 126.18 | 984.12 | 126.8 | 984.6 |
| GR | 127.52 | 984.9 | 128.3 | 985 | 128.3 | 988 | 127.52 | 988.1 | 126.8 | 988.4 |
| GR | 126.18 | 988.88 | 125.7 | 989.5 | 125.4 | 990.22 | 125.3 | 991 | 125.4 | 991.78 |
| GR | 125.7 | 992.5 | 126.18 | 993.12 | 126.8 | 993.6 | 127.52 | 993.9 | 128.3 | 994 |
| GR | 128.3 | 997 | 127.52 | 997.1 | 126.8 | 997.4 | 126.18 | 997.88 | 125.7 | 998.5 |
| GR | 125.4 | 999.22 | 125.3 | 1000 | 125.4 | 1000.7 | 125.7 | 1001.5 | 126.18 | 1002.1 |
| GR | 126.8 | 1002.6 | 127.52 | 1002.9 | 128.3 | 1003 | 128.3 | 1006 | 127.52 | 1006.1 |
| GR | 126.8 | 1006.4 | 126.18 | 1006.8 | 125.7 | 1007.5 | 125.4 | 1008.2 | 125.3 | 1009 |
| GR | 125.4 | 1009.7 | 125.7 | 1010.5 | 126.18 | 1011.1 | 126.8 | 1011.6 | 127.52 | 1011.9 |
| GR | 128.3 | 1012 | 128.3 | 1015 | 127.52 | 1015.1 | 126.8 | 1015.4 | 126.18 | 1015.8 |
| GR | 125.7 | 1016.5 | 125.4 | 1017.2 | 125.3 | 1018 | 125.4 | 1018.7 | 125.7 | 1019.5 |
| GR | 126.18 | 1020.12 | 126.8 | 1020.6 | 127.52 | 1020.9 | 128.3 | 1021 | 132.60 | 1033.0 |
| GR | 135.00 | 1038.0 | 134.1 | 1050.0 | 135.10 | 1062.0 | 139.6 | 1100 | 139.6 | 1200 |
| GR | 139.7 | 1300 | 139.7 | 1400 | 139.7 | 1500 | 140.00 | 2350.0 | | |
| NC | .12 | .15 | .04 | | | | | | | |
| X1 | 34412 | 13 | 956.0 | 1038.0 | 50.0 | 50.0 | 50.0 | | | |
| CI | -1 | -1 | .04 | 3 | 3 | 30 | | | | |
| GR | 139.0 | 100.0 | 134.50 | 929.0 | 133.20 | 948.0 | 135.30 | 956.0 | 132.00 | 968.0 |
| GR | 125.4 | 988.0 | 125.30 | 1000.0 | 125.20 | 1012.0 | 132.60 | 1033.0 | 135.00 | 1038.0 |
| GR | 134.1 | 1050.0 | 135.10 | 1062.0 | 140.00 | 2350.0 | | | | |
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 1030 | | | | | | | | |
| X1 | 35234. | 12 | 961.0 | 1039.0 | 822 | 822 | 822 | | | |
| CI | -1 | 126.62 | .04 | 3 | 3 | 30 | | | | |
| GR | 137.0 | 846.0 | 136.40 | 871.0 | 136.90 | 931.0 | 133.60 | 947.0 | 135.40 | 961.0 |
| GR | 127.9 | 989.0 | 127.80 | 1000.0 | 128.00 | 1011.0 | 135.30 | 1039.0 | 133.20 | 1056.0 |
| GR | 136.3 | 1072.0 | 137.30 | 1091.0 | | | | | | |
| NC | .12 | .15 | .04 | .3 | .5 | | | | | |
| WOODSON ROAD STA. 352+64 | | | | | | | | | | |
| X1 | 35264. | 16 | 991.0 | 1009 | 30.0 | 30.0 | 30.0 | | | |
| CI | 1000 | 126.66 | .04 | 3 | 3 | 30 | | | | |
| X3 | 10. | | | | | | | 137.00 | 137.00 | |
| GR | 139.0 | 700.0 | 136.70 | 800.0 | 136.60 | 900.0 | 136.70 | 931.0 | 133.60 | 947.0 |
| GR | 135.4 | 961.0 | 130.70 | 991.0 | 127.8 | 991.0 | 127.8 | 1009 | 130.70 | 1009 |
| GR | 135.3 | 1039.0 | 133.20 | 1056.0 | 136.30 | 1072.0 | 136.80 | 1100.0 | 137.00 | 1200.0 |
| GR | 140.0 | 2550.0 | | | | | | | | |
| SB | 1.250 | 1.56 | 3.00 | .00 | 30 | 1.0 | 440 | 3 | 126.76 | 126.66 |
| X1 | 35327. | 16 | 991.0 | 1009 | 63.0 | 63.0 | 63.0 | | | |
| CI | 1000 | 126.76 | .04 | 3 | 3 | 30 | | | | |
| X2 | | | 1. | 135 | 136.60 | | | | | |
| X3 | 10. | | | | | | | 137.40 | 137.40 | |
| BT | -10 | 650.0 | 140.50 | .00 | 700.0 | 137.90 | .00 | 800.0 | 136.70 | .00 |
| BT | 0 | 900.0 | 136.60 | .00 | 1000.0 | 137.00 | .00 | 1100.0 | 136.80 | .00 |
| BT | 0 | 1200.0 | 137.00 | .00 | 1300.0 | 136.90 | .00 | 1400.0 | 136.80 | .00 |

| | | | | | | | | | | |
|----|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| BT | 0 | 1500.0 | 136.90 | .00 | | | | | | |
| GR | 139.0 | 700.0 | 136.70 | 800.0 | 136.60 | 900.0 | 136.70 | 931.0 | 133.60 | 947.0 |
| GR | 135.4 | 961.0 | 130.70 | 991.0 | 127.8 | 991.0 | 127.8 | 1009 | 130.70 | 1009 |
| GR | 135.3 | 1039.0 | 133.20 | 1056.0 | 136.30 | 1072.0 | 136.80 | 1100.0 | 137.00 | 1200.0 |
| GR | 140.0 | 2550.0 | | | | | | | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| NC | .12 | .15 | .04 | | | | | | | |
| X1 | 35377. | 14 | 961.0 | 1039.0 | 50.0 | 50.0 | 50.0 | | | |
| CI | -1 | 126.83 | .04 | 3 | 3 | 30 | | | | |
| GR | 139.0 | 700.0 | 137.00 | 846.0 | 136.40 | 871.0 | 136.90 | 931.0 | 133.60 | 947.0 |
| GR | 135.4 | 961.0 | 127.90 | 989.0 | 127.80 | 1000.0 | 128.00 | 1011.0 | 135.30 | 1039.0 |
| GR | 133.2 | 1056.0 | 136.30 | 1072.0 | 137.30 | 1091.0 | 140.00 | 2550.0 | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| QT | 1 | 530 | | | | | | | | |
| NC | | | | .1 | .3 | | | | | |
| X1 | 35957. | 14 | 963.0 | 1031.0 | 580.0 | 580.0 | 580.0 | | | |
| CI | -1 | 127.71 | .04 | 3 | 3 | 30 | | | | |
| GR | 142.0 | 350.0 | 139.00 | 350.0 | 137.50 | 935.0 | 136.90 | 949.0 | 138.20 | 963.0 |
| GR | 133.0 | 979.0 | 128.80 | 991.0 | 127.80 | 1000.0 | 128.80 | 1009.0 | 133.00 | 1020.0 |
| GR | 137.7 | 1031.0 | 136.80 | 1043.0 | 137.30 | 1048.0 | 140.00 | 2500.0 | | |

| | | | | | | | | | | |
|----|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 36017. | 15 | 991 | 1009 | 60.0 | 60.0 | 60.0 | | | |
| CI | -1 | 127.8 | .04 | 3 | 3 | 6 | | | | |
| GR | 142.0 | 350.0 | 139.00 | 350.0 | 137.50 | 935.0 | 136.90 | 949.0 | 138.20 | 963.0 |
| GR | 132.3 | 987 | 132.30 | 991 | 127.80 | 991 | 127.80 | 1009 | 132.30 | 1009 |
| GR | 132.3 | 1013 | 137.70 | 1031.0 | 136.80 | 1043.0 | 137.30 | 1048.0 | 140.00 | 2500.0 |

DROP STRUCTURE

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| X1 | 36027. | 19 | 991 | 1009 | 10.0 | 10.0 | 10.0 | | | |
| CI | -1 | 130.6 | .04 | 3 | 3 | 6 | | | | |
| X5 | -1 | 3.0 | | | | | | | | |
| GR | 142.0 | 350.0 | 139.00 | 350.0 | 138.30 | 956.0 | 137.80 | 963.0 | 139.80 | 976.0 |
| GR | 137.3 | 987 | 137.30 | 991 | 134.30 | 991 | 134.30 | 998.5 | 131.30 | 998.5 |
| GR | 131.3 | 1001.5 | 134.30 | 1001.5 | 134.30 | 1009 | 137.30 | 1009 | 137.30 | 1013 |
| GR | 140.0 | 1031.0 | 138.80 | 1042.0 | 139.10 | 1048.0 | 140.00 | 2500.0 | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| NC | .12 | .15 | .04 | | | | | | | |
| X1 | 36103. | 12 | 976.0 | 1031.0 | 76.0 | 76.0 | 76.0 | | | |
| CI | 1002 | 130.71 | .04 | 3 | 3 | 6 | | | | |
| GR | 142.0 | 350.0 | 139.00 | 350.0 | 138.30 | 956.0 | 137.80 | 963.0 | 139.80 | 976.0 |
| GR | 131.8 | 996.0 | 131.50 | 1000.0 | 131.90 | 1004.0 | 140.00 | 1031.0 | 138.80 | 1042.0 |
| GR | 139.1 | 1048.0 | 140.00 | 2500.0 | | | | | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| NC | | | | .1 | .3 | | | | | |
| X1 | 36397. | 11 | 977.0 | 1043.1 | 294 | 294 | 294.0 | | | |
| CI | 1009 | 131.16 | .04 | 3 | 3 | 6 | | | | |
| GR | 144.3 | 500.0 | 142.15 | 964.8 | 141.65 | 970.9 | 142.15 | 977.0 | 132.35 | 1003.4 |
| GR | 131.8 | 1008.5 | 132.75 | 1013.6 | 141.75 | 1043.1 | 140.95 | 1053.2 | 141.25 | 1056.3 |
| GR | 144.3 | 1872.9 | | | | | | | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 36691. | 11 | 966.2 | 1030.8 | 294 | 294 | 294.0 | | | |
| CI | -1 | 131.60 | .04 | 3 | 3 | 6 | | | | |
| GR | 145.3 | 500.0 | 143.15 | 954.3 | 142.65 | 960.2 | 143.15 | 966.2 | 133.35 | 992.0 |
| GR | 132.8 | 997.0 | 133.75 | 1002.0 | 142.75 | 1030.8 | 141.95 | 1040.7 | 142.25 | 1043.7 |
| GR | 145.3 | 1841.9 | | | | | | | | |
| QT | 1 | 490 | | | | | | | | |
| X1 | 36985. | 11 | 966.2 | 1030.8 | 294 | 294 | 294.0 | | | |
| CI | -1 | 132.04 | .04 | 3 | 3 | 6 | | | | |
| GR | 145.3 | 500.0 | 143.15 | 954.3 | 142.65 | 960.2 | 143.15 | 966.2 | 133.35 | 992.0 |
| GR | 132.8 | 997.0 | 133.75 | 1002.0 | 142.75 | 1030.8 | 141.95 | 1040.7 | 142.25 | 1043.7 |
| GR | 145.3 | 1841.9 | | | | | | | | |
| X1 | 37277. | 11 | 969.0 | 1034.0 | 292 | 292 | 292.0 | | | |
| CI | | | | | | .01 | | | | |
| GR | 145.0 | 500.0 | 142.90 | 957.0 | 142.40 | 963.0 | 142.90 | 969.0 | 133.10 | 995.0 |
| GR | 132.5 | 1000.0 | 133.50 | 1005.0 | 142.50 | 1034.0 | 141.70 | 1044.0 | 142.00 | 1047.0 |
| GR | 145.0 | 1850.0 | | | | | | | | |
| QT | 1 | 450 | | | | | | | | |
| X1 | 37902. | 9 | 909.2 | 961.2 | 625.0 | 625.0 | 625.0 | | | |
| GR | 144.1 | 100.0 | 140.05 | 893.4 | 141.65 | 909.2 | 133.85 | 928.7 | 133.45 | 935.2 |
| GR | 134.3 | 941.7 | 140.85 | 961.2 | 140.05 | 977.9 | 144.05 | 1956.0 | | |
| QT | 1 | 430 | | | | | | | | |
| X1 | 38527. | 9 | 972.0 | 1028.0 | 625.0 | 625.0 | 625.0 | | | |
| GR | 145.0 | 100.0 | 141.00 | 955.0 | 142.60 | 972.0 | 134.80 | 993.0 | 134.40 | 1000.0 |
| GR | 135.2 | 1007.0 | 141.80 | 1028.0 | 141.00 | 1046.0 | 145.00 | 2100.0 | | |
| X1 | 38757. | 12 | 1912.1 | 1960.9 | 230.0 | 230.0 | 230.0 | | | |
| X3 | 10 | | | | | | | | | |
| GR | 144.3 | 500.0 | 140.63 | 1895.8 | 140.33 | 1902.5 | 141.33 | 1912.1 | 135.23 | 1929.3 |
| GR | 134.7 | 1937.0 | 135.33 | 1944.7 | 141.03 | 1960.9 | 140.03 | 1972.4 | 140.93 | 1985.9 |
| GR | 139.3 | 2320.2 | 144.33 | 2607.6 | | | | | | |
| X1 | 38987. | 12 | 2006.4 | 2058.6 | 230.0 | 230.0 | 230.0 | | | |
| X3 | 10 | | | | | | | | | |
| GR | 145.3 | 500.0 | 141.63 | 1989.1 | 141.33 | 1996.2 | 142.33 | 2006.4 | 136.23 | 2024.8 |
| GR | 135.7 | 2033.0 | 136.33 | 2041.2 | 142.03 | 2058.6 | 141.03 | 2070.8 | 141.93 | 2085.1 |
| GR | 140.3 | 2441.8 | 145.33 | 2748.4 | | | | | | |
| QT | 1 | 400 | | | | | | | | |
| X1 | 39217. | 12 | 1974.0 | 2025.0 | 230.0 | 230.0 | 230.0 | | | |
| X3 | 10 | | | | | | | | | |
| GR | 145.0 | 500.0 | 141.30 | 1957.0 | 141.00 | 1964.0 | 142.00 | 1974.0 | 135.90 | 1992.0 |
| GR | 135.4 | 2000.0 | 136.00 | 2008.0 | 141.70 | 2025.0 | 140.70 | 2037.0 | 141.60 | 2051.0 |
| GR | 140.0 | 2400.0 | 145.00 | 2700.0 | | | | | | |

IHLQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 1/89 17: 0:45

HEC2 RELEASE DATED SEPT 88

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

A109-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|-------|------|--------|---------|--------|-------|-------|--------|
| 500.000 | 6400.00 | 100.00 | 100.20 | 100.60 | 81.90 | 3.83 | 100.23 | .00 | 164.80 | .00 | 20.00 | .00 |
| 3900.000 | 6100.00 | 101.65 | 102.86 | 102.45 | 83.60 | 3.67 | 101.86 | 3400.00 | 164.40 | 12.85 | 20.00 | 59.20 |
| 5035.000 | 6000.00 | 102.17 | 103.08 | 103.83 | 84.17 | 3.62 | 102.38 | 1135.00 | 164.02 | 17.13 | 20.00 | 89.89 |
| 5135.000 | 6000.00 | 102.22 | 103.09 | 103.83 | 84.22 | 3.62 | 102.42 | 100.00 | 163.99 | 17.50 | 20.00 | 92.80 |
| 6170.000 | 5900.00 | 102.69 | 105.77 | 106.19 | 84.74 | 3.58 | 102.89 | 1035.00 | 163.56 | 21.39 | 20.00 | 125.99 |
| 9275.000 | 5700.00 | 104.05 | 121.86 | 114.47 | 86.29 | 3.52 | 104.25 | 3105.00 | 162.19 | 33.00 | 20.00 | 270.48 |
| 9869.000 | 5700.00 | 104.31 | 110.30 | 110.08 | 86.58 | 3.53 | 104.50 | 594.00 | 161.87 | 35.21 | 20.00 | 299.88 |
| 10463.000 | 5700.00 | 104.57 | 109.40 | 109.30 | 86.88 | 3.55 | 104.77 | 594.00 | 161.51 | 37.42 | 20.00 | 326.32 |
| * 10556.000 | 5630.00 | 104.51 | 111.30 | 111.20 | 86.93 | 5.38 | 104.96 | 93.00 | 110.13 | 37.71 | 10.00 | 329.32 |
| 10647.000 | 5630.00 | 104.60 | 106.80 | 111.20 | 86.97 | 5.37 | 105.05 | 91.00 | 108.74 | 37.94 | 10.00 | 330.83 |
| * 10750.000 | 5630.00 | 104.96 | 109.47 | 110.99 | 87.03 | 3.84 | 105.19 | 103.00 | 153.46 | 38.25 | 10.00 | 333.69 |
| 12300.000 | 5400.00 | 105.79 | 108.73 | 108.33 | 87.80 | 3.66 | 106.00 | 1550.00 | 153.94 | 43.72 | 10.00 | 388.69 |
| 14550.000 | 5200.00 | 106.89 | 109.72 | 109.67 | 88.93 | 3.54 | 107.08 | 2250.00 | 153.65 | 51.66 | 10.00 | 463.54 |
| 14650.000 | 5200.00 | 106.93 | 109.72 | 109.67 | 88.98 | 3.54 | 107.13 | 100.00 | 153.63 | 52.01 | 10.00 | 466.98 |
| 16295.000 | 5000.00 | 107.69 | 111.29 | 111.68 | 89.80 | 3.43 | 107.87 | 1645.00 | 153.10 | 57.80 | 10.00 | 528.49 |
| 18040.000 | 4800.00 | 108.44 | 112.68 | 113.09 | 90.67 | 3.33 | 108.62 | 1745.00 | 152.19 | 63.92 | 10.00 | 603.12 |
| 18041.000 | 4800.00 | 108.42 | 112.67 | 113.09 | 94.70 | 3.69 | 108.63 | 1.00 | 149.73 | 63.92 | 40.00 | 603.16 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|---------|--------|-------|-------|--------|
| * 18090.000 | 4800.00 | 108.20 | 112.80 | 112.96 | 94.72 | 7.06 | 108.97 | 49.00 | 91.43 | 64.06 | 10.00 | 604.39 |
| 18127.000 | 4800.00 | 108.30 | 112.80 | 112.96 | 94.74 | 6.97 | 109.06 | 37.00 | 91.69 | 64.14 | 10.00 | 604.77 |
| * 18177.000 | 4800.00 | 109.09 | 112.67 | 113.10 | 94.77 | 3.45 | 109.27 | 50.00 | 154.54 | 64.28 | 40.00 | 606.01 |
| 21000.000 | 4500.00 | 110.38 | 116.31 | 116.50 | 96.18 | 3.27 | 110.55 | 2823.00 | 153.59 | 74.26 | 40.00 | 735.67 |
| 21700.000 | 4500.00 | 110.68 | 113.95 | 113.90 | 96.53 | 3.29 | 110.85 | 700.00 | 153.25 | 76.73 | 40.00 | 767.95 |
| 22400.000 | 4420.00 | 110.99 | 114.54 | 114.96 | 96.88 | 3.25 | 111.15 | 700.00 | 152.81 | 79.19 | 40.00 | 795.95 |
| * 22401.000 | 4420.00 | 110.64 | 114.47 | 114.59 | 100.90 | 6.56 | 111.30 | 1.00 | 98.43 | 79.19 | 40.00 | 795.98 |
| 22673.000 | 1460.00 | 111.46 | 114.45 | 116.03 | 101.17 | 2.60 | 111.56 | 272.00 | 87.16 | 79.77 | 20.00 | 797.62 |
| 22947.000 | 1440.00 | 111.57 | 115.10 | 116.57 | 101.45 | 2.70 | 111.69 | 274.00 | 84.42 | 80.31 | 20.00 | 798.44 |
| 25347.000 | 1360.00 | 112.86 | 115.87 | 115.50 | 103.85 | 2.91 | 112.99 | 2400.00 | 78.82 | 84.81 | 20.00 | 807.06 |
| 26222.000 | 1320.00 | 113.45 | 117.70 | 119.55 | 104.72 | 3.16 | 113.61 | 875.00 | 75.78 | 86.36 | 20.00 | 810.95 |
| 27097.000 | 1290.00 | 114.15 | 118.14 | 119.84 | 105.60 | 3.25 | 114.31 | 875.00 | 72.19 | 87.84 | 20.00 | 815.84 |
| 28362.000 | 1250.00 | 115.23 | 117.90 | 117.04 | 106.86 | 3.31 | 115.40 | 1265.00 | 70.24 | 89.91 | 20.00 | 823.99 |
| 29627.000 | 1200.00 | 116.35 | 119.08 | 118.11 | 108.13 | 3.27 | 116.52 | 1265.00 | 69.35 | 91.94 | 20.00 | 833.93 |
| * 29628.000 | 1200.00 | 115.66 | 120.10 | 119.10 | 111.30 | 9.06 | 116.94 | 1.00 | 53.50 | 91.94 | .01 | 833.93 |
| * 29667.000 | 1200.00 | 115.77 | 119.60 | 119.60 | 111.40 | 9.15 | 117.07 | 39.00 | 30.00 | 91.98 | .01 | 833.93 |
| * 29731.000 | 1200.00 | 116.10 | 119.60 | 119.60 | 111.40 | 8.52 | 117.22 | 64.00 | 30.00 | 92.02 | .01 | 833.93 |
| 29831.000 | 1200.00 | 117.34 | 119.93 | 119.67 | 111.55 | 4.36 | 117.64 | 100.00 | 64.75 | 92.13 | 30.00 | 834.51 |
| 30380.000 | 1180.00 | 118.41 | 120.38 | 121.38 | 112.40 | 4.01 | 118.66 | 549.00 | 66.07 | 92.96 | 30.00 | 835.90 |
| 30963.000 | 1170.00 | 119.38 | 124.89 | 126.03 | 113.30 | 3.99 | 119.63 | 583.00 | 66.50 | 93.84 | 30.00 | 839.37 |
| 31546.000 | 1150.00 | 120.35 | 125.05 | 126.27 | 114.20 | 3.83 | 120.58 | 583.00 | 70.82 | 94.76 | 30.00 | 843.96 |
| 32127.000 | 1130.00 | 121.20 | 124.15 | 125.44 | 115.10 | 3.50 | 121.39 | 581.00 | 70.86 | 95.71 | 30.00 | 846.32 |
| 33077.000 | 1100.00 | 122.45 | 130.44 | 132.34 | 116.10 | 3.63 | 122.65 | 950.00 | 70.27 | 97.25 | 30.00 | 849.08 |
| 33157.000 | 1100.00 | 122.56 | 130.46 | 132.36 | 116.10 | 3.59 | 122.76 | 80.00 | 70.57 | 97.37 | 30.00 | 849.39 |
| 33207.000 | 1100.00 | 122.61 | 130.21 | 132.70 | 116.77 | 3.96 | 122.85 | 50.00 | 65.04 | 97.45 | 30.00 | 849.84 |
| 33226.000 | 1100.00 | 122.64 | 130.21 | 132.70 | 116.80 | 3.96 | 122.89 | 19.00 | 65.03 | 97.48 | 30.00 | 850.11 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|--------|--------|--------|-------|--------|
| * 33227.000 | 1100.00 | 129.14 | 131.99 | 132.03 | 121.90 | 2.94 | 129.28 | 1.00 | 73.45 | 97.48 | 30.00 | 850.12 |
| 33257.000 | 1100.00 | 129.16 | 132.07 | 131.96 | 121.95 | 2.95 | 129.30 | 30.00 | 73.33 | 97.53 | 30.00 | 850.49 |
| 33327.000 | 1100.00 | 129.21 | 132.09 | 131.98 | 122.05 | 2.98 | 129.35 | 70.00 | 73.00 | 97.65 | 30.00 | 851.03 |
| 34135.000 | 1080.00 | 129.91 | 133.31 | 133.24 | 123.26 | 3.25 | 130.08 | 808.00 | 69.91 | 98.98 | 30.00 | 855.43 |
| 34185.000 | 1080.00 | 129.90 | 133.40 | 133.40 | 123.30 | 4.32 | 130.19 | 50.00 | 58.20 | 99.05 | .01 | 855.43 |
| * 34186.000 | 1080.00 | 129.58 | 126.30 | 126.30 | 123.30 | 7.73 | 130.51 | 1.00 | 42.00 | 99.05 | .01 | 855.43 |
| 34361.000 | 1080.00 | 131.07 | 128.30 | 128.30 | 125.30 | 7.81 | 132.02 | 175.00 | 42.00 | 99.22 | .01 | 855.43 |
| * 34362.000 | 1080.00 | 131.97 | 135.30 | 135.00 | 125.30 | 4.11 | 132.23 | 1.00 | 63.12 | 99.22 | .01 | 855.43 |
| 34412.000 | 1080.00 | 132.16 | 134.67 | 134.79 | 125.20 | 3.05 | 132.31 | 50.00 | 71.78 | 99.30 | 30.00 | 855.58 |
| 35234.000 | 1030.00 | 132.94 | 135.18 | 135.12 | 126.62 | 3.33 | 133.11 | 822.00 | 67.93 | 100.62 | 30.00 | 858.48 |
| 35264.000 | 1030.00 | 132.97 | 135.19 | 135.13 | 126.66 | 3.34 | 133.15 | 30.00 | 67.86 | 100.66 | 30.00 | 858.66 |
| 35327.000 | 1030.00 | 132.98 | 135.22 | 135.15 | 126.76 | 3.40 | 133.16 | 63.00 | 67.33 | 100.76 | 30.00 | 859.15 |
| 35377.000 | 1030.00 | 133.04 | 135.24 | 135.17 | 126.83 | 3.41 | 133.22 | 50.00 | 67.26 | 100.84 | 30.00 | 859.43 |
| 35957.000 | 530.00 | 133.53 | 137.29 | 137.03 | 127.71 | 1.92 | 133.58 | 580.00 | 64.89 | 101.72 | 30.00 | 862.78 |
| * 36017.000 | 530.00 | 133.49 | 135.58 | 137.60 | 127.80 | 3.70 | 133.71 | 60.00 | 40.16 | 101.79 | 6.00 | 863.06 |
| * 36027.000 | 530.00 | 136.49 | 139.11 | 139.98 | 130.60 | 3.80 | 136.72 | 10.00 | 41.36 | 101.80 | 6.00 | 863.09 |
| 36103.000 | 530.00 | 136.66 | 139.35 | 139.85 | 130.71 | 3.74 | 136.88 | 76.00 | 41.68 | 101.87 | 6.00 | 863.37 |
| 36397.000 | 530.00 | 137.26 | 141.89 | 141.71 | 131.16 | 3.57 | 137.46 | 294.00 | 42.63 | 102.16 | 6.00 | 863.94 |
| 36691.000 | 530.00 | 137.80 | 142.79 | 142.48 | 131.60 | 3.47 | 137.99 | 294.00 | 43.22 | 102.45 | 6.00 | 864.76 |
| 36985.000 | 490.00 | 138.30 | 142.88 | 142.57 | 132.04 | 3.16 | 138.45 | 294.00 | 43.53 | 102.74 | 6.00 | 865.66 |
| 37277.000 | 490.00 | 138.73 | 142.90 | 142.50 | 132.50 | 3.39 | 138.91 | 292.00 | 41.81 | 103.02 | .01 | 865.66 |
| 37902.000 | 450.00 | 139.61 | 141.65 | 140.85 | 133.45 | 2.82 | 139.74 | 625.00 | 43.23 | 103.63 | .01 | 865.66 |
| 38527.000 | 430.00 | 140.28 | 142.60 | 141.80 | 134.40 | 2.69 | 140.39 | 625.00 | 44.92 | 104.27 | .01 | 865.66 |
| 38757.000 | 430.00 | 140.51 | 141.33 | 141.03 | 134.70 | 2.64 | 140.62 | 230.00 | 45.07 | 104.50 | .01 | 865.66 |
| 38987.000 | 430.00 | 140.77 | 142.33 | 142.03 | 135.70 | 3.08 | 140.92 | 230.00 | 43.66 | 104.74 | .01 | 865.66 |
| 39217.000 | 400.00 | 141.08 | 142.00 | 141.70 | 135.40 | 2.43 | 141.17 | 230.00 | 46.44 | 104.98 | .01 | 865.66 |

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 10556.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 10750.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 18090.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 18177.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 22401.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 29628.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 29628.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 29628.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO= 29667.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 29731.000 PROFILE= 1 HYDRAULIC JUMP D.S.

NOTE SECNO= 33227.000 PROFILE= 1 WSEL BASED ON X5 CARD

WARNING SECNO= 33227.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 34186.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 34362.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 36017.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE SECNO= 36027.000 PROFILE= 1 WSEL BASED ON X5 CARD

THIS RUN EXECUTED 9/ 4/89 9: 6:22

 HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
 T3 A109-00-00 DD 6 CHANNEL III
 T4 100-YEAR STORM FREQUENCY ULTIMATE CONDITIONS
 T5 FILENAME = A109ULT.IH2

| | | | | | | | | | | |
|----|--------|-----|------|------|-------|--------|-------|---|------|----|
| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
| | | 2 | | | .0005 | | | | 100 | |

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

| | | | | | | | | | |
|----|----|----|----|----|----|----|---|----|---|
| 38 | 43 | 1 | 23 | 24 | 42 | 26 | 3 | 39 | 4 |
| 37 | 30 | 65 | | | | | | | |

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

-10 -10

J6 IHLEQ ICOFY SUBDIV STRTDS RMILE

1

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|
| NC | .15 | .15 | .04 | .1 | .3 | | | | | |
| QT | 1 | 8790 | | | | | | | | |
| X1 | 500.00 | 9 | 933.0 | 1075.0 | 500.0 | 500.0 | 500.0 | | | |
| CI | -1 | 81.9 | 0.04 | 4 | 4 | 50 | | | | |
| GR | 100.2 | 896.0 | 100.20 | 933.0 | 87.40 | 973.0 | 85.90 | 988.0 | 81.90 | 1000.0 |
| GR | 85.0 | 1012.0 | 87.10 | 1036.0 | 100.60 | 1075.0 | 100.6 | 1100 | | |
| QT | 1 | 8510 | | | | | | | | |
| X1 | 3900.0 | 13 | 940.0 | 1069.0 | 3400 | 3400 | 3400 | | | |
| CI | -1 | 83.60 | 0.04 | 4 | 4 | 50 | | | | |
| GR | 105.0 | 600 | 102.8 | 915.0 | 103.40 | 940.0 | 95.60 | 960.0 | 91.80 | 976.0 |
| GR | 90.40 | 993.0 | 85.6 | 1000.0 | 89.50 | 1007.0 | 91.50 | 1038.0 | 102.30 | 1069.0 |
| GR | 103.00 | 1169.0 | 103.2 | 1199.0 | 105.0 | 2100 | | | | |

| | | | | | | | | | | |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| QT | 1 | 8420 | | | | | | | | |
| X1 | 5035.0 | 15 | 905.2 | 1026.7 | 1135.0 | 1135.0 | 1135.0 | | | |
| CI | -1 | 84.17 | 0.04 | 4 | 4 | 50 | | | | |
| GR | 110 | 100 | 103.2 | 872.0 | 102.85 | 878.1 | 105.65 | 905.2 | 96.45 | 927.9 |
| GR | 89.35 | 955.9 | 89.0 | 976.0 | 87.95 | 983.9 | 88.75 | 990.0 | 92.55 | 1004.8 |
| GR | 98.85 | 1011.8 | 104.1 | 1026.7 | 103.25 | 1114.1 | 102.45 | 1201.5 | 110 | 2400 |
| X1 | 5135 | 15 | 905.2 | 1026.7 | 100 | 100 | 100 | | | |
| CI | -1 | 84.22 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 110 | 100 | 103.2 | 872.0 | 102.85 | 878.1 | 105.65 | 905.2 | 96.45 | 927.9 |
| GR | 89.35 | 955.9 | 89.0 | 976.0 | 87.95 | 983.9 | 88.75 | 990.0 | 92.55 | 1004.8 |
| GR | 98.85 | 1011.8 | 104.1 | 1026.7 | 103.25 | 1114.1 | 102.45 | 1201.5 | 110 | 2400 |
| QT | 1 | 8340 | | | | | | | | |
| NC | .15 | .15 | .04 | | | | | | | |
| X1 | 6170.0 | 15 | 910.0 | 1049.0 | 1035 | 1035 | 1035 | | | |
| CI | -1 | 84.74 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 110 | 700 | 105.5 | 872.0 | 105.20 | 879.0 | 108.00 | 910.0 | 98.80 | 936.0 |
| GR | 91.70 | 968.0 | 91.3 | 991.0 | 90.30 | 1000.0 | 91.10 | 1007.0 | 94.90 | 1024.0 |
| GR | 101.20 | 1032.0 | 106.4 | 1049.0 | 105.60 | 1149.0 | 104.80 | 1249.0 | 110 | 1350 |
| QT | 1 | 8100 | | | | | | | | |
| X1 | 9275.0 | 15 | 905.0 | 1082.0 | 3105 | 3105 | 3105.0 | | | |
| CI | -1 | 86.29 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 123.6 | 800 | 123.6 | 825.0 | 117.60 | 881.0 | 117.00 | 905.0 | 101.70 | 921.0 |
| GR | 99.90 | 940.0 | 96.3 | 981.0 | 95.30 | 1000.0 | 96.60 | 1019.0 | 98.30 | 1037.0 |
| GR | 104.70 | 1049.0 | 108.9 | 1065.0 | 114.70 | 1082.0 | 114.50 | 1101.0 | 114.30 | 1201.0 |
| X1 | 9869.0 | 12 | 935.6 | 1100.7 | 594.0 | 594.0 | 594.0 | | | |
| CI | -1 | 86.58 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 110.3 | 900 | 110.3 | 922.0 | 110.30 | 935.6 | 100.50 | 961.6 | 98.10 | 1006.6 |
| GR | 94.40 | 1028.4 | 98.3 | 1050.2 | 102.90 | 1076.1 | 104.00 | 1085.7 | 109.50 | 1100.7 |
| GR | 110.20 | 1126.6 | 110.2 | 1150 | | | | | | |
| X1 | 10463. | 12 | 932.0 | 1053.0 | 594.0 | 594.0 | 594.0 | | | |
| CI | -1 | 86.88 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 109.4 | 880 | 109.4 | 922.0 | 109.40 | 932.0 | 99.60 | 951.0 | 97.20 | 984.0 |
| GR | 93.50 | 1000.0 | 97.4 | 1016.0 | 102.00 | 1035.0 | 103.10 | 1042.0 | 108.60 | 1053.0 |
| GR | 109.30 | 1072.0 | 109.3 | 1120 | | | | | | |
| NC | .15 | .15 | .03 | .3 | .5 | | | | | |
| QT | 1 | 8000 | | | | | | | | |
| RAYFORD ROAD STA. 105+56 | | | | | | | | | | |
| X1 | 10556. | 22 | 939.0 | 1047.0 | 93.0 | 93.0 | 93.0 | | | |
| CI | 988 | 86.93 | 0.04 | 2.3 | 2.3 | 30 | | | | |
| X3 | 10. | | | | | | 110.8 | 109.7 | | |
| GR | 111.6 | 522.0 | 111.90 | 617.0 | 111.70 | 713.0 | 111.40 | 809.0 | 111.30 | 904.0 |
| GR | 111.3 | 916.0 | 106.80 | 916.0 | 106.80 | 939.0 | 99.60 | 951.0 | 97.20 | 984.0 |
| GR | 93.5 | 1000.0 | 97.40 | 1016.0 | 102.00 | 1035.0 | 103.10 | 1042.0 | 106.80 | 1047.0 |
| GR | 106.8 | 1060.0 | 111.20 | 1060.0 | 111.20 | 1096.0 | 110.80 | 1191.0 | 110.50 | 1287.0 |
| GR | 110.3 | 1383.0 | 110.20 | 1478.0 | | | | | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SB | 1.250 | 1.56 | 3.00 | .00 | 30 | 5.36 | 1380 | 2.3 | 86.97 | 86.93 |
| X1 | 10647. | 22 | 939.0 | 1047.0 | 91.0 | 91.0 | 91.0 | | | |
| CI | 990 | 86.97 | 0.04 | 2.3 | 2.3 | 30 | | | | |
| X2 | 0. | .00 | 1. | 106.80 | 110.20 | .00 | | .000 | | .000 |
| X3 | 10. | | | | | | | 111.30 | 110.20 | |
| BT | -18 | 522.0 | 111.60 | .00 | 617.0 | 111.90 | .00 | 713.0 | 111.70 | .00 |
| BT | 0 | 809.0 | 111.40 | .00 | 904.0 | 111.30 | .00 | 916.0 | 111.30 | .00 |
| BT | 0 | 916.0 | 114.70 | .00 | 937.0 | 114.70 | .00 | 937.0 | 113.50 | .00 |
| BT | 0 | 1039.0 | 113.50 | .00 | 1039.0 | 114.60 | .00 | 1060.0 | 114.60 | .00 |
| BT | 0 | 1060.0 | 111.20 | .00 | 1096.0 | 111.20 | .00 | 1191.0 | 110.80 | .00 |
| BT | 0 | 1287.0 | 110.50 | .00 | 1383.0 | 110.30 | .00 | 1478.0 | 110.20 | .00 |
| GR | 111.6 | 522.0 | 111.90 | 617.0 | 111.70 | 713.0 | 111.40 | 809.0 | 111.30 | 904.0 |
| GR | 111.3 | 916.0 | 106.80 | 916.0 | 106.80 | 939.0 | 99.60 | 951.0 | 97.20 | 984.0 |
| GR | 93.5 | 1000.0 | 97.40 | 1016.0 | 102.00 | 1035.0 | 103.10 | 1042.0 | 106.80 | 1047.0 |
| GR | 106.8 | 1060.0 | 111.20 | 1060.0 | 111.20 | 1096.0 | 110.80 | 1191.0 | 110.50 | 1287.0 |
| GR | 110.3 | 1383.0 | 110.20 | 1478.0 | | | | | | |
| NC | .12 | .15 | .04 | | | | | | | |
| X1 | 10750. | 13 | 932.0 | 1053.0 | 103.0 | 103.0 | 103.0 | | | |
| CI | -1 | 87.03 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 111.7 | 100.0 | 109.40 | 922.0 | 109.40 | 932.0 | 99.60 | 951.0 | 97.20 | 984.0 |
| GR | 93.5 | 1000.0 | 97.40 | 1016.0 | 102.00 | 1035.0 | 103.10 | 1042.0 | 108.60 | 1053.0 |
| GR | 109.3 | 1072.0 | 111.2 | 1096 | 111.2 | 1150 | | | | |
| NC | | | .1 | .3 | | | | | | |
| QT | 1 | 7660 | | | | | | | | |
| X1 | 12300. | 13 | 937.0 | 1059.0 | 1550.0 | 1650 | 1550.0 | | | |
| CI | -1 | 87.80 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 115 | 700 | 108.50 | 917.0 | 109.20 | 937.0 | 99.70 | 954.0 | 97.20 | 980.0 |
| GR | 95.7 | 1000.0 | 98.20 | 1020.0 | 100.50 | 1041.0 | 108.80 | 1059.0 | 108.20 | 1077.0 |
| GR | 109.8 | 1177.0 | 110 | 1700 | 112.2 | 3400 | | | | |
| QT | 1 | 7250 | | | | | | | | |
| X1 | 14550. | 15 | 2030 | 2141 | 2400 | 2300 | 2250.0 | | | |
| CI | -1 | 88.93 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 113.0 | 400 | 109.70 | 2007 | 109.10 | 2030 | 100.90 | 2047 | 99.10 | 2066 |
| GR | 98.6 | 2094 | 97.40 | 2100 | 98.70 | 2106 | 100.70 | 2124 | 108.40 | 2141 |
| GR | 109.7 | 2168 | 109.20 | 2268 | 110 | 2600 | 110 | 3250 | 115 | 4300 |
| X1 | 14650 | 15 | 2030 | 2141 | 100 | 100 | 100 | | | |
| CI | -1 | 88.98 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 113.0 | 400 | 109.70 | 2007 | 109.10 | 2030 | 100.90 | 2047 | 99.10 | 2066 |
| GR | 98.6 | 2094 | 97.40 | 2100 | 98.70 | 2106 | 100.70 | 2124 | 108.40 | 2141 |
| GR | 109.7 | 2168 | 109.20 | 2268 | 110 | 2600 | 110 | 3250 | 115 | 4300 |
| QT | 1 | 6950 | | | | | | | | |
| X1 | 16295. | 15 | 978.3 | 1102.2 | 1700 | 1200 | 1645 | | | |
| CI | -1 | 89.80 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 113.7 | .0 | 111.65 | 723.1 | 110.65 | 826.4 | 111.45 | 929.7 | 111.05 | 978.3 |
| GR | 102.3 | 1007.2 | 100.05 | 1020.6 | 98.75 | 1033.0 | 99.65 | 1045.4 | 101.95 | 1068.1 |
| GR | 111.1 | 1102.2 | 111.75 | 1136.3 | 110.85 | 1239.6 | 111.45 | 1342.9 | 113.65 | 2375.9 |

| | | | | | | | | | | |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 21700. | 14 | 2674.5 | 2770.0 | 680 | 700.0 | 700.0 | | | |
| CI | -1 | 92.50 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 118.9 | 400.0 | 113.35 | 2529.8 | 114.65 | 2619.1 | 112.55 | 2659.3 | 114.05 | 2674.5 |
| GR | 103.8 | 2695.9 | 100.95 | 2719.1 | 100.05 | 2721.8 | 100.95 | 2724.5 | 104.75 | 2747.7 |
| GR | 114.3 | 2770.0 | 112.85 | 2783.4 | 113.85 | 2791.5 | 120 | 5222 | | |
| QT | 1 | 5980 | | | | | | | | |
| X1 | 22400. | 14 | 2947.0 | 3054.0 | 680 | 700.0 | 700.0 | | | |
| CI | -1 | 92.85 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 120.0 | 600 | 114.40 | 2785.0 | 115.70 | 2885.0 | 113.60 | 2930.0 | 115.10 | 2947.0 |
| GR | 104.9 | 2971.0 | 102.00 | 2997.0 | 101.10 | 3000.0 | 102.00 | 3003.0 | 105.80 | 3029.0 |
| GR | 115.3 | 3054.0 | 113.90 | 3069.0 | 114.90 | 3078.0 | 120.00 | 4400 | | |
| DROP STRUCTURE | | | | | | | | | | |
| X1 | 22401 | 14 | 2947.0 | 3054.0 | 1 | 1 | 1 | | | |
| CI | -1 | 98.50 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 120.0 | 600 | 114.40 | 2785.0 | 115.70 | 2885.0 | 113.60 | 2930.0 | 115.10 | 2947.0 |
| GR | 104.9 | 2971.0 | 102.00 | 2997.0 | 101.10 | 3000.0 | 102.00 | 3003.0 | 105.80 | 3029.0 |
| GR | 115.3 | 3054.0 | 113.90 | 3069.0 | 114.90 | 3078.0 | 120.00 | 4400 | | |
| QT | 1 | 2990 | | | | | | | | |
| X1 | 22673. | 14 | 2954.7 | 3059.9 | 170 | 450 | 272 | | | |
| CI | -1 | 98.77 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 119.3 | 600.0 | 113.95 | 2934.7 | 112.85 | 2945.7 | 114.45 | 2954.7 | 105.65 | 2978.7 |
| GR | 103.0 | 2996.8 | 101.75 | 3004.8 | 103.55 | 3012.8 | 106.85 | 3034.9 | 109.95 | 3046.9 |
| GR | 116.2 | 3059.9 | 115.25 | 3070.9 | 117.05 | 3091.0 | 118.45 | 4507.8 | | |
| NC | .15 | .15 | .04 | | | | | | | |
| QT | 1 | 2920 | | | | | | | | |
| X1 | 22947. | 14 | 2950.0 | 3055.0 | 170 | 450 | 274 | | | |
| CI | -1 | 99.05 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 120.0 | 600.0 | 114.60 | 2930.0 | 113.50 | 2941.0 | 115.10 | 2950.0 | 106.30 | 2974.0 |
| GR | 103.7 | 2992.0 | 102.40 | 3000.0 | 104.20 | 3008.0 | 107.50 | 3030.0 | 110.60 | 3042.0 |
| GR | 116.8 | 3055.0 | 115.90 | 3066.0 | 117.70 | 3086.0 | 119.10 | 4500.0 | | |
| QT | 1 | 2380 | | | | | | | | |
| X1 | 25347. | 17 | 957.0 | 1047.0 | 2200 | 2400.0 | 2400 | | | |
| CI | -1 | 101.45 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 125.0 | 300.0 | 120.00 | 400.0 | 115.20 | 927.0 | 114.10 | 948.0 | 116.10 | 957.0 |
| GR | 108.2 | 972.0 | 107.00 | 990.0 | 106.50 | 1000.0 | 107.20 | 1010.0 | 109.20 | 1035.0 |
| GR | 115.5 | 1047.0 | 114.20 | 1057.0 | 115.50 | 1067.0 | 115.90 | 1167.0 | 116.70 | 1197.0 |
| GR | 120.0 | 1700.0 | 125 | 2000 | | | | | | |
| QT | 1 | 2210 | | | | | | | | |
| X1 | 26222. | 15 | 1026.5 | 1125.5 | 875.0 | 875.0 | 875.0 | | | |
| CI | -1 | 102.32 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 123.2 | .0 | 116.70 | 994.2 | 115.50 | 1015.7 | 117.70 | 1026.5 | 110.80 | 1042.6 |
| GR | 107.9 | 1063.1 | 107.30 | 1076.0 | 108.10 | 1088.9 | 110.90 | 1105.1 | 120.70 | 1125.5 |
| GR | 117.0 | 1141.6 | 117.60 | 1163.2 | 117.70 | 1270.8 | 119.20 | 1560.2 | 124.20 | 1721.6 |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| QT | 1 | 2050 | | | | | | | | |
| NC | .12 | .12 | .04 | .1 | .3 | | | | | |
| X1 | 27097. | 15 | 954.0 | 1046.0 | 875 | 875 | 875 | | | |
| CI | -1 | 103.20 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 124.0 | .0 | 117.50 | 924.0 | 116.30 | 944.0 | 118.50 | 954.0 | 111.60 | 969.0 |
| GR | 108.7 | 988.0 | 108.10 | 1000.0 | 108.90 | 1012.0 | 111.70 | 1027.0 | 121.50 | 1046.0 |
| GR | 117.8 | 1061.0 | 118.40 | 1081.0 | 118.50 | 1181.0 | 120.00 | 1450.0 | 125.00 | 1600.0 |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| QT | 1 | 1850 | | | | | | | | |
| X1 | 28362. | 17 | 2083.0 | 2158.5 | 1200 | 1260.0 | 1265.0 | | | |
| CI | -1 | 104.46 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 118.4 | 700.0 | 117.20 | 2050.1 | 117.10 | 2053.4 | 116.80 | 2067.7 | 118.50 | 2083.0 |
| GR | 112.4 | 2093.9 | 110.50 | 2118.0 | 109.70 | 2123.5 | 111.10 | 2129.0 | 112.90 | 2146.5 |
| GR | 117.5 | 2158.5 | 115.50 | 2170.6 | 116.40 | 2187.0 | 117.50 | 2215.5 | 118.40 | 2671.0 |
| GR | 118.4 | 2835.3 | 123.40 | 2999.5 | | | | | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| QT | 1 | 1660 | | | | | | | | |
| X1 | 29627. | 17 | 1963.0 | 2032.0 | 1200 | 1260.0 | 1265.0 | | | |
| CI | -1 | 105.73 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 120.0 | 700.0 | 118.80 | 1933.0 | 118.70 | 1936.0 | 118.40 | 1949.0 | 120.10 | 1963.0 |
| GR | 114.0 | 1973.0 | 112.10 | 1995.0 | 111.30 | 2000.0 | 112.70 | 2005.0 | 114.50 | 2021.0 |
| GR | 119.1 | 2032.0 | 117.10 | 2043.0 | 118.00 | 2058.0 | 119.10 | 2084.0 | 120.00 | 2500.0 |
| GR | 120.0 | 2650.0 | 125.00 | 2800.0 | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 29628 | 17 | 1963.0 | 2032.0 | 1 | 1 | 1 | | | |
| CI | | | | | | .01 | | | | |
| GR | 120.0 | 700.0 | 118.80 | 1933.0 | 118.70 | 1936.0 | 118.40 | 1949.0 | 120.10 | 1963.0 |
| GR | 114.0 | 1973.0 | 112.10 | 1995.0 | 111.30 | 2000.0 | 112.70 | 2005.0 | 114.50 | 2021.0 |
| GR | 119.1 | 2032.0 | 117.10 | 2043.0 | 118.00 | 2058.0 | 119.10 | 2084.0 | 120.00 | 2500.0 |
| GR | 120.0 | 2650.0 | 125.00 | 2800.0 | | | | | | |

| | | | | | | | | | | |
|----|-----|-----|------|----|----|--|--|--|--|--|
| NC | .12 | .12 | .015 | .3 | .5 | | | | | |
|----|-----|-----|------|----|----|--|--|--|--|--|

ROBINSON ROAD STA. 296+67

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 29667. | 18 | 1983.0 | 2013.0 | 39 | 39 | 39 | | | |
| X3 | 10. | | | | | | | 118.30 | 118.50 | |
| GR | 120.0 | 700.0 | 119.40 | 1498.0 | 119.50 | 1598.0 | 119.20 | 1698.0 | 119.40 | 1798.0 |
| GR | 119.5 | 1898.0 | 119.60 | 1983.0 | 111.40 | 1983.0 | 111.40 | 2013.0 | 119.60 | 2013.0 |
| GR | 119.5 | 2098.0 | 119.70 | 2198.0 | 119.80 | 2298.0 | 119.90 | 2398.0 | 120.10 | 2498.0 |
| GR | 120.0 | 2500.0 | 120.00 | 2650.0 | 125.00 | 2800.0 | | | | |
| SB | 1.250 | 1.56 | 3.00 | .00 | 30.00 | 1.40 | 162 | 0 | 111.4 | 111.4 |
| X1 | 29731. | 18 | 1983.0 | 2013.0 | 64.0 | 64.0 | 64.0 | | | |
| X2 | 0. | .00 | 1. | 117.40 | 119.20 | .00 | | .000 | | .000 |
| X3 | 10. | | | | | | | 119.5 | 119.50 | |
| BT | -16 | 700.0 | 120.00 | .00 | 1498.0 | 119.40 | .00 | 1598.0 | 119.50 | .00 |
| BT | 0 | 1698.0 | 119.20 | .00 | 1798.0 | 119.40 | .00 | 1898.0 | 119.50 | .00 |
| BT | 0 | 1983.0 | 119.60 | .00 | 2013.0 | 119.60 | .00 | 2098.0 | 119.50 | .00 |
| BT | 0 | 2198.0 | 119.70 | .00 | 2298.0 | 119.80 | .00 | 2398.0 | 119.90 | .00 |
| BT | 0 | 2498.0 | 120.10 | .00 | 2500.0 | 120.00 | .00 | 2650.0 | 120.00 | .00 |
| BT | 0 | 2800.0 | 125.00 | .00 | | | | | | |
| GR | 120.0 | 700.0 | 119.40 | 1498.0 | 119.50 | 1598.0 | 119.20 | 1698.0 | 119.40 | 1798.0 |
| GR | 119.5 | 1898.0 | 119.60 | 1983.0 | 111.40 | 1983.0 | 111.40 | 2013.0 | 119.60 | 2013.0 |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| GR | 119.5 | 2098.0 | 119.70 | 2198.0 | 119.80 | 2298.0 | 119.90 | 2398.0 | 120.10 | 2498.0 |
| GR | 120.0 | 2500.0 | 120.00 | 2650.0 | 125.00 | 2800.0 | | | | |
| X1 | 29831 | 15 | 1967.0 | 2040.0 | 100 | 100 | 100 | | | |
| CI | -1 | 111.55 | 0.04 | 4 | 4 | 40 | | | | |
| X3 | | 111.55 | | | | | | | | |
| GR | 120.0 | 700.0 | 119.20 | 1883.0 | 119.80 | 1933.0 | 118.20 | 1954.0 | 120.60 | 1967.0 |
| GR | 112.4 | 1990.0 | 110.90 | 2000.0 | 112.10 | 2010.0 | 114.30 | 2028.0 | 120.40 | 2040.0 |
| GR | 117.6 | 2051.0 | 118.70 | 2069.0 | 120.00 | 2500.0 | 120.00 | 2650.0 | 125.00 | 2800.0 |
| NC | .12 | .12 | .04 | .10000 | .30000 | | | | | |
| QT | 1 | 1560 | | | | | | | | |
| X1 | 30380. | 11 | 950.5 | 1018.4 | 600.0 | 550 | 549 | | | |
| CI | -1 | 112.40 | 0.04 | 4 | 4 | 40 | | | | |
| X3 | | 112.40 | | | | | | | | |
| GR | 123.2 | 917.0 | 119.70 | 939.1 | 120.90 | 950.5 | 115.60 | 956.3 | 112.90 | 975.9 |
| GR | 112.0 | 984.9 | 112.70 | 993.9 | 114.30 | 1006.2 | 122.80 | 1018.4 | 121.20 | 1027.4 |
| GR | 123.1 | 1047.9 | | | | | | | | |
| QT | 1 | 1480 | | | | | | | | |
| X1 | 30963. | 11 | 961.0 | 1050.2 | 600.0 | 550 | 583.0 | | | |
| CI | -1 | 113.30 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 127.6 | 917.0 | 124.10 | 946.0 | 125.30 | 961.0 | 120.00 | 968.6 | 117.30 | 994.3 |
| GR | 116.4 | 1006.1 | 117.10 | 1018.0 | 118.70 | 1034.1 | 127.20 | 1050.2 | 125.60 | 1062.0 |
| GR | 127.5 | 1088.8 | | | | | | | | |
| QT | 1 | 1410 | | | | | | | | |
| X1 | 31546. | 11 | 960.8 | 1049.6 | 600.0 | 550 | 583.0 | | | |
| CI | -1 | 114.20 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 127.6 | 917.0 | 124.10 | 945.9 | 125.30 | 960.8 | 120.00 | 968.3 | 117.30 | 994.0 |
| GR | 116.4 | 1005.7 | 117.10 | 1017.5 | 118.70 | 1033.5 | 127.20 | 1049.6 | 125.60 | 1061.3 |
| GR | 127.5 | 1088.0 | | | | | | | | |
| NC | .15 | .15 | .04 | | | | | | | |
| QT | 1 | 1340 | | | | | | | | |
| X1 | 32127. | 11 | 958.0 | 1041.0 | 600.0 | 550 | 581.0 | | | |
| CI | -1 | 115.10 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 126.5 | 917.0 | 123.00 | 944.0 | 124.20 | 958.0 | 118.90 | 965.0 | 116.20 | 989.0 |
| GR | 115.3 | 1000.0 | 116.00 | 1011.0 | 117.60 | 1026.0 | 126.10 | 1041.0 | 124.50 | 1052.0 |
| GR | 126.4 | 1077.0 | | | | | | | | |
| QT | 1 | 1240 | | | | | | | | |
| X1 | 33077. | 12 | 956.0 | 1064.0 | 950.0 | 950.0 | 950.0 | | | |
| CI | -1 | 116.57 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 130.7 | 931.0 | 129.60 | 940.0 | 130.60 | 956.0 | 123.50 | 969.0 | 118.80 | 984.0 |
| GR | 116.1 | 1000.0 | 116.90 | 1016.0 | 117.80 | 1027.0 | 125.60 | 1045.0 | 133.00 | 1064.0 |
| GR | 132.2 | 1074.0 | 134.90 | 1092.0 | | | | | | |
| X1 | 33157. | 12 | 956.0 | 1064.0 | 80.0 | 80.0 | 80.0 | | | |
| CI | -1 | 116.69 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 130.7 | 931.0 | 129.60 | 940.0 | 130.60 | 956.0 | 123.50 | 969.0 | 118.80 | 984.0 |
| GR | 116.1 | 1000.0 | 116.90 | 1016.0 | 117.80 | 1027.0 | 125.60 | 1045.0 | 133.00 | 1064.0 |
| GR | 132.2 | 1074.0 | 134.90 | 1092.0 | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 33207. | 13 | 989 | 1021.0 | 50.0 | 50.0 | 50.0 | | | |
| CI | -1 | 116.77 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 130.7 | 931.0 | 129.60 | 940.0 | 130.60 | 956.0 | 124.60 | 989 | 124.60 | 990 |
| GR | 116.8 | 990 | 116.80 | 1020.0 | 124.60 | 1020.0 | 124.60 | 1021.0 | 133.00 | 1064.0 |
| GR | 132.2 | 1074.0 | 134.90 | 1092.0 | 134.9 | 1200 | | | | |
| X1 | 33226 | 13 | 989 | 1021 | 19 | 19 | 19 | | | |
| CI | -1 | 116.80 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 130.7 | 931.0 | 129.60 | 940.0 | 130.60 | 956.0 | 124.60 | 989 | 124.60 | 990 |
| GR | 116.8 | 990 | 116.80 | 1020.0 | 124.60 | 1020.0 | 124.60 | 1021.0 | 133.00 | 1064.0 |
| GR | 132.2 | 1074.0 | 134.90 | 1092.0 | 134.9 | 1200 | | | | |
| X1 | 33227. | 16 | 984 | 1016 | 1 | 1 | 1 | | | |
| CI | -1 | 121.9 | 0.04 | 3 | 3 | 30 | | | | |
| X5 | -1 | 6.5 | | | | | | | | |
| GR | 132.2 | 926.0 | 130.90 | 942.0 | 132.70 | 963.0 | 131.00 | 984 | 131.00 | 985 |
| GR | 127.0 | 985 | 127.00 | 998.5 | 122.80 | 998.5 | 122.80 | 1001.5 | 127.00 | 1001.5 |
| GR | 127.0 | 1015 | 131.00 | 1015 | 131.00 | 1016 | 132.70 | 1039.0 | 130.80 | 1057.0 |
| GR | 133.4 | 1089.0 | | | | | | | | |
| NC | .15 | .15 | .04 | | | | | | | |
| X1 | 33257. | 9 | 963.0 | 1039.0 | 30.0 | 30.0 | 30.0 | | | |
| CI | -1 | 121.95 | 0.04 | 3 | 3 | 30 | | | | |
| GR | 132.2 | 926.0 | 130.90 | 942.0 | 132.70 | 963.0 | 123.50 | 990.0 | 122.50 | 1000.0 |
| GR | 123.6 | 1010.0 | 132.70 | 1039.0 | 130.80 | 1057.0 | 133.40 | 1089.0 | | |
| NC | | | .1 | .3 | | | | | | |
| X1 | 33327. | 9 | 963.0 | 1039.0 | 70.0 | 70.0 | 70.0 | | | |
| CI | -1 | 122.05 | 0.04 | 3 | 3 | 30 | | | | |
| GR | 132.2 | 926.0 | 130.90 | 942.0 | 132.70 | 963.0 | 123.50 | 990.0 | 122.50 | 1000.0 |
| GR | 123.6 | 1010.0 | 132.70 | 1039.0 | 130.80 | 1057.0 | 133.40 | 1089.0 | | |
| QT | 1 | 1130 | | | | | | | | |
| X1 | 34135. | 15 | 1960.0 | 2044.0 | 808.0 | 808.0 | 808.0 | | | |
| CI | -1 | 123.26 | 0.04 | 3 | 3 | 30 | | | | |
| GR | 140.0 | 700.0 | 133.80 | 1944.0 | 133.10 | 1950.0 | 133.40 | 1960.0 | 130.00 | 1972.0 |
| GR | 123.4 | 1987.0 | 123.30 | 2000.0 | 123.30 | 2013.0 | 130.90 | 2033.0 | 133.40 | 2044.0 |
| GR | 132.9 | 2053.0 | 133.30 | 2077.0 | 135.00 | 4000.0 | 135.00 | 4600.0 | 140.00 | 4800.0 |
| NC | .15 | .15 | .024 | .3 | .5 | | | | | |
| X1 | 34185. | 83 | 960 | 1044 | 50.0 | 50.0 | 50.0 | | | |
| CI | | | | | | .01 | | | | |
| X3 | 10. | | | | | | | 134.50 | 134.50 | |
| GR | 134.4 | 500.0 | 134.40 | 600.0 | 134.20 | 700.0 | 134.30 | 800.0 | 134.30 | 900.0 |
| GR | 133.8 | 944.0 | 133.10 | 950.0 | 133.40 | 960.0 | 130.00 | 972.0 | 126.3 | 979 |
| GR | 125.52 | 979.1 | 124.8 | 979.4 | 124.18 | 979.88 | 123.7 | 980.5 | 123.4 | 981.22 |
| GR | 123.3 | 982 | 123.4 | 982.78 | 123.7 | 983.5 | 124.18 | 984.12 | 124.8 | 984.6 |
| GR | 125.52 | 984.9 | 126.3 | 985 | 126.30 | 988.0 | 125.5 | 988.1 | 124.80 | 988.4 |
| GR | 124.18 | 988.9 | 123.70 | 989.5 | 123.40 | 990.2 | 123.3 | 991.0 | 123.40 | 991.8 |
| GR | 123.70 | 992.5 | 124.18 | 993.1 | 124.80 | 993.6 | 125.5 | 993.9 | 126.30 | 994.0 |
| GR | 126.30 | 997.0 | 125.52 | 997.1 | 124.80 | 997.4 | 124.2 | 997.9 | 123.70 | 998.5 |
| GR | 123.40 | 999.2 | 123.30 | 1000.0 | 123.40 | 1000.8 | 123.7 | 1001.5 | 124.18 | 1002.1 |

| | | | | | | | | | | |
|----|--------|---------|--------|---------|--------|--------|--------|---------|--------|---------|
| GR | 124.80 | 1002.6 | 125.52 | 1002.9 | 126.30 | 1003.0 | 126.3 | 1006.0 | 125.52 | 1006.1 |
| GR | 124.80 | 1006.4 | 124.18 | 1006.9 | 123.70 | 1007.5 | 123.4 | 1008.2 | 123.30 | 1009.0 |
| GR | 123.40 | 1009.8 | 123.70 | 1010.5 | 124.18 | 1011.1 | 124.8 | 1011.6 | 125.52 | 1011.9 |
| GR | 126.30 | 1012.0 | 126.3 | 1015 | 125.52 | 1015.1 | 124.8 | 1015.4 | 124.18 | 1015.88 |
| GR | 123.7 | 1016.5 | 123.4 | 1017.22 | 123.3 | 1018 | 123.4 | 1018.78 | 123.7 | 1019.5 |
| GR | 124.18 | 1020.12 | 124.8 | 1020.6 | 125.52 | 1020.9 | 126.3 | 1021 | 130.90 | 1033.0 |
| GR | 133.40 | 1044.0 | 132.9 | 1053.0 | 133.30 | 1077.0 | 135.10 | 1100.0 | 137.20 | 1200.0 |
| GR | 139.60 | 1300.0 | 139.9 | 1400.0 | 138.70 | 1500.0 | | | | |

HANNA ROAD STA. 341+86

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 34186. | 83 | 979 | 1021 | 1.0 | 1.0 | 1.0 | | | |
| X3 | 10. | | | | | | | 134.50 | 134.50 | |
| BT | -83 | 500.0 | 139.80 | 134.40 | 600.0 | 139.70 | 134.40 | 700.0 | 139.70 | 134.20 |
| BT | | 800.0 | 139.70 | 134.30 | 900.0 | 139.70 | 134.30 | 944.0 | 139.60 | 133.80 |
| BT | | 950.0 | 139.60 | 133.10 | 960.0 | 139.60 | 133.40 | 972.0 | 139.60 | 130.00 |
| BT | | 979 | 139.6 | 126.3 | 979.1 | 139.6 | 127.08 | 979.4 | 139.6 | 127.8 |
| BT | | 979.88 | 139.6 | 128.42 | 980.5 | 139.6 | 128.9 | 981.22 | 139.6 | 129.2 |
| BT | | 982 | 139.6 | 129.3 | 982.78 | 139.6 | 129.2 | 983.5 | 139.6 | 128.9 |
| BT | | 984.12 | 139.6 | 128.42 | 984.6 | 139.6 | 127.8 | 984.9 | 139.6 | 127.08 |
| BT | | 985 | 139.6 | 126.3 | 988.0 | 139.60 | 126.30 | 988.1 | 139.60 | 127.08 |
| BT | | 988.4 | 139.60 | 127.80 | 988.9 | 139.60 | 128.42 | 989.5 | 139.60 | 128.90 |
| BT | | 990.2 | 139.60 | 129.20 | 991.0 | 139.60 | 129.30 | 991.8 | 139.60 | 129.20 |
| BT | | 992.5 | 139.60 | 128.90 | 993.1 | 139.60 | 128.42 | 993.6 | 139.60 | 127.80 |
| BT | | 993.9 | 139.60 | 127.08 | 994.0 | 139.60 | 126.30 | 997.0 | 139.60 | 126.30 |
| BT | | 997.1 | 139.60 | 127.08 | 997.4 | 139.60 | 127.80 | 997.9 | 139.60 | 128.42 |
| BT | | 998.5 | 139.60 | 128.90 | 999.2 | 139.60 | 129.20 | 1000.0 | 139.60 | 129.30 |
| BT | | 1000.8 | 139.60 | 129.20 | 1001.5 | 139.60 | 128.90 | 1002.1 | 139.60 | 128.42 |
| BT | | 1002.6 | 139.60 | 127.80 | 1002.9 | 139.60 | 127.08 | 1003.0 | 139.60 | 126.30 |
| BT | | 1006.0 | 139.60 | 126.30 | 1006.1 | 139.60 | 127.08 | 1006.4 | 139.60 | 127.80 |
| BT | | 1006.9 | 139.60 | 128.42 | 1007.5 | 139.60 | 128.90 | 1008.2 | 139.60 | 129.20 |
| BT | | 1009.0 | 139.60 | 129.30 | 1009.8 | 139.60 | 129.20 | 1010.5 | 139.60 | 128.90 |
| BT | | 1011.1 | 139.60 | 128.42 | 1011.6 | 139.60 | 127.80 | 1011.9 | 139.60 | 127.08 |
| BT | | 1012.0 | 139.60 | 126.30 | 1015 | 139.60 | 126.30 | 1015.1 | 139.60 | 127.08 |
| BT | | 1015.4 | 139.60 | 127.80 | 1015.9 | 139.60 | 128.42 | 1016.5 | 139.60 | 128.90 |
| BT | | 1017.2 | 139.60 | 129.20 | 1018 | 139.60 | 129.30 | 1018.8 | 139.60 | 129.20 |
| BT | | 1019.5 | 139.60 | 128.90 | 1020.1 | 139.60 | 128.42 | 1020.6 | 139.60 | 127.80 |
| BT | | 1020.9 | 139.60 | 127.08 | 1021 | 139.60 | 126.30 | 1033.0 | 139.60 | 130.90 |
| BT | | 1044.0 | 139.60 | 133.40 | 1053.0 | 139.60 | 132.90 | 1077.0 | 139.60 | 133.30 |
| BT | | 1100.0 | 139.60 | 135.10 | 1200.0 | 139.70 | 137.20 | 1300.0 | 139.70 | 139.60 |
| BT | | 1400.0 | 139.90 | 139.90 | 1500.0 | 139.70 | 138.70 | | | |
| GR | 134.4 | 500.0 | 134.40 | 600.0 | 134.20 | 700.0 | 134.30 | 800.0 | 134.30 | 900.0 |
| GR | 133.8 | 944.0 | 133.10 | 950.0 | 133.40 | 960.0 | 130.00 | 972.0 | 126.3 | 979 |
| GR | 125.52 | 979.1 | 124.8 | 979.4 | 124.18 | 979.88 | 123.7 | 980.5 | 123.4 | 981.22 |
| GR | 123.3 | 982 | 123.4 | 982.78 | 123.7 | 983.5 | 124.18 | 984.12 | 124.8 | 984.6 |
| GR | 125.52 | 984.9 | 126.3 | 985 | 126.30 | 988.0 | 125.5 | 988.1 | 124.80 | 988.4 |
| GR | 124.18 | 988.9 | 123.70 | 989.5 | 123.40 | 990.2 | 123.3 | 991.0 | 123.40 | 991.8 |
| GR | 123.70 | 992.5 | 124.18 | 993.1 | 124.80 | 993.6 | 125.5 | 993.9 | 126.30 | 994.0 |
| GR | 126.30 | 997.0 | 125.52 | 997.1 | 124.80 | 997.4 | 124.2 | 997.9 | 123.70 | 998.5 |
| GR | 123.40 | 999.2 | 123.30 | 1000.0 | 123.40 | 1000.8 | 123.7 | 1001.5 | 124.18 | 1002.1 |
| GR | 124.80 | 1002.6 | 125.52 | 1002.9 | 126.30 | 1003.0 | 126.3 | 1006.0 | 125.52 | 1006.1 |
| GR | 124.80 | 1006.4 | 124.18 | 1006.9 | 123.70 | 1007.5 | 123.4 | 1008.2 | 123.30 | 1009.0 |
| GR | 123.40 | 1009.8 | 123.70 | 1010.5 | 124.18 | 1011.1 | 124.8 | 1011.6 | 125.52 | 1011.9 |
| GR | 126.30 | 1012.0 | 126.3 | 1015 | 125.52 | 1015.1 | 124.8 | 1015.4 | 124.18 | 1015.9 |
| GR | 123.7 | 1016.5 | 123.4 | 1017.2 | 123.3 | 1018 | 123.4 | 1018.8 | 123.7 | 1019.5 |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| GR | 124.18 | 1020.1 | 124.8 | 1020.6 | 125.52 | 1020.9 | 126.3 | 1021 | 130.90 | 1033.0 |
| GR | 133.40 | 1044.0 | 132.9 | 1053.0 | 133.30 | 1077.0 | 135.10 | 1100.0 | 137.20 | 1200.0 |
| GR | 139.60 | 1300.0 | 139.9 | 1400.0 | 138.70 | 1500.0 | | | | |
| X1 | 34361. | 84 | 979 | 1021 | 175 | 175 | 175 | | | |
| X3 | 10. | | | | | | | 139.60 | 139.60 | |
| BT | -84 | 500 | 139.8 | 139.8 | 600 | 139.7 | 139.7 | 700 | 139.7 | 139.7 |
| BT | | 800 | 139.7 | 139.7 | 900 | 139.7 | 139.7 | 929 | 139.7 | 134.5 |
| BT | | 948 | 139.6 | 133.2 | 956 | 139.6 | 135.3 | 968 | 139.6 | 132 |
| BT | | 979 | 139.6 | 128.3 | 979.1 | 139.6 | 129.08 | 979.4 | 139.6 | 129.8 |
| BT | | 979.88 | 139.6 | 130.42 | 980.5 | 139.6 | 130.9 | 981.22 | 139.6 | 131.2 |
| BT | | 982 | 139.6 | 131.3 | 982.78 | 139.6 | 131.2 | 983.5 | 139.6 | 130.9 |
| BT | | 984.12 | 139.6 | 130.42 | 984.6 | 139.6 | 129.8 | 984.9 | 139.6 | 129.08 |
| BT | | 985 | 139.6 | 128.3 | 988 | 139.6 | 128.3 | 988.1 | 139.6 | 129.08 |
| BT | | 988.4 | 139.6 | 129.8 | 988.88 | 139.6 | 130.42 | 989.5 | 139.6 | 130.9 |
| BT | | 990.22 | 139.6 | 131.2 | 991 | 139.6 | 131.3 | 991.78 | 139.6 | 131.2 |
| BT | | 992.5 | 139.6 | 130.9 | 993.12 | 139.6 | 130.42 | 993.6 | 139.6 | 129.8 |
| BT | | 993.9 | 139.6 | 129.08 | 994 | 139.6 | 128.3 | 997 | 139.6 | 128.3 |
| BT | | 997.1 | 139.6 | 129.08 | 997.4 | 139.6 | 129.8 | 997.88 | 139.6 | 130.42 |
| BT | | 998.5 | 139.6 | 130.9 | 999.22 | 139.6 | 131.2 | 1000 | 139.6 | 131.3 |
| BT | | 1000.7 | 139.6 | 131.2 | 1001.5 | 139.6 | 130.9 | 1002.1 | 139.6 | 130.42 |
| BT | | 1002.6 | 139.6 | 129.8 | 1002.9 | 139.6 | 129.08 | 1003 | 139.6 | 128.3 |
| BT | | 1006 | 139.6 | 128.3 | 1006.1 | 139.6 | 129.08 | 1006.4 | 139.6 | 129.8 |
| BT | | 1006.8 | 139.6 | 130.42 | 1007.5 | 139.6 | 130.9 | 1008.2 | 139.6 | 131.2 |
| BT | | 1009 | 139.6 | 131.3 | 1009.7 | 139.6 | 131.2 | 1010.5 | 139.6 | 130.9 |
| BT | | 1011.1 | 139.6 | 130.42 | 1011.6 | 139.6 | 129.8 | 1011.9 | 139.6 | 129.08 |
| BT | | 1012 | 139.6 | 128.3 | 1015 | 139.6 | 128.3 | 1015.1 | 139.6 | 129.08 |
| BT | | 1015.4 | 139.6 | 129.8 | 1015.9 | 139.6 | 130.42 | 1016.5 | 139.6 | 130.9 |
| BT | | 1017.2 | 139.6 | 131.2 | 1018 | 139.6 | 131.3 | 1018.8 | 139.6 | 131.2 |
| BT | | 1019.5 | 139.6 | 130.9 | 1020.1 | 139.6 | 130.42 | 1020.6 | 139.6 | 129.8 |
| BT | | 1020.9 | 139.6 | 129.08 | 1021 | 139.6 | 128.3 | 1033 | 139.6 | 132.6 |
| BT | | 1038 | 139.6 | 135 | 1050 | 139.6 | 134.1 | 1062 | 139.6 | 135.1 |
| BT | | 1100 | 139.6 | 139.6 | 1200 | 139.6 | 139.6 | 1300 | 139.7 | 139.7 |
| BT | | 1400 | 139.7 | 139.7 | 1500 | 139.7 | 139.7 | 2350 | 140 | 140 |
| GR | 139.8 | 500 | 139.7 | 600 | 139.7 | 700 | 139.7 | 800 | 139.7 | 900 |
| GR | 134.50 | 929.0 | 133.20 | 948.0 | 135.30 | 956.0 | 132.00 | 968.0 | 128.3 | 979 |
| GR | 127.52 | 979.1 | 126.8 | 979.4 | 126.18 | 979.88 | 125.7 | 980.5 | 125.4 | 981.22 |
| GR | 125.3 | 982 | 125.4 | 982.78 | 125.7 | 983.5 | 126.18 | 984.12 | 126.8 | 984.6 |
| GR | 127.52 | 984.9 | 128.3 | 985 | 128.3 | 988 | 127.52 | 988.1 | 126.8 | 988.4 |
| GR | 126.18 | 988.88 | 125.7 | 989.5 | 125.4 | 990.22 | 125.3 | 991 | 125.4 | 991.78 |
| GR | 125.7 | 992.5 | 126.18 | 993.12 | 126.8 | 993.6 | 127.52 | 993.9 | 128.3 | 994 |
| GR | 128.3 | 997 | 127.52 | 997.1 | 126.8 | 997.4 | 126.18 | 997.88 | 125.7 | 998.5 |
| GR | 125.4 | 999.22 | 125.3 | 1000 | 125.4 | 1000.7 | 125.7 | 1001.5 | 126.18 | 1002.1 |
| GR | 126.8 | 1002.6 | 127.52 | 1002.9 | 128.3 | 1003 | 128.3 | 1006 | 127.52 | 1006.1 |
| GR | 126.8 | 1006.4 | 126.18 | 1006.8 | 125.7 | 1007.5 | 125.4 | 1008.2 | 125.3 | 1009 |
| GR | 125.4 | 1009.7 | 125.7 | 1010.5 | 126.18 | 1011.1 | 126.8 | 1011.6 | 127.52 | 1011.9 |
| GR | 128.3 | 1012 | 128.3 | 1015 | 127.52 | 1015.1 | 126.8 | 1015.4 | 126.18 | 1015.9 |
| GR | 125.7 | 1016.5 | 125.4 | 1017.2 | 125.3 | 1018 | 125.4 | 1018.8 | 125.7 | 1019.5 |
| GR | 126.18 | 1020.1 | 126.8 | 1020.6 | 127.52 | 1020.9 | 128.3 | 1021 | 132.60 | 1033.0 |
| GR | 135.00 | 1038.0 | 134.1 | 1050.0 | 135.10 | 1062.0 | 139.6 | 1100 | 139.6 | 1200 |
| GR | 139.7 | 1300 | 139.7 | 1400 | 139.7 | 1500 | 140.00 | 2350.0 | | |

| | | | | | | | | | | |
|--------------------------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 34362 | 84 | 956.0 | 1038 | 1 | 1 | 1 | | | |
| X3 | 10. | | | | | | | 139.60 | 139.60 | |
| GR | 139.8 | 500 | 139.7 | 600 | 139.7 | 700 | 139.7 | 800 | 139.7 | 900 |
| GR | 134.50 | 929.0 | 133.20 | 948.0 | 135.30 | 956.0 | 132.00 | 968.0 | 128.3 | 979 |
| GR | 127.52 | 979.1 | 126.8 | 979.4 | 126.18 | 979.88 | 125.7 | 980.5 | 125.4 | 981.22 |
| GR | 125.3 | 982 | 125.4 | 982.78 | 125.7 | 983.5 | 126.18 | 984.12 | 126.8 | 984.6 |
| GR | 127.52 | 984.9 | 128.3 | 985 | 128.3 | 988 | 127.52 | 988.1 | 126.8 | 988.4 |
| GR | 126.18 | 988.88 | 125.7 | 989.5 | 125.4 | 990.22 | 125.3 | 991 | 125.4 | 991.78 |
| GR | 125.7 | 992.5 | 126.18 | 993.12 | 126.8 | 993.6 | 127.52 | 993.9 | 128.3 | 994 |
| GR | 128.3 | 997 | 127.52 | 997.1 | 126.8 | 997.4 | 126.18 | 997.88 | 125.7 | 998.5 |
| GR | 125.4 | 999.22 | 125.3 | 1000 | 125.4 | 1000.7 | 125.7 | 1001.5 | 126.18 | 1002.1 |
| GR | 126.8 | 1002.6 | 127.52 | 1002.9 | 128.3 | 1003 | 128.3 | 1006 | 127.52 | 1006.1 |
| GR | 126.8 | 1006.4 | 126.18 | 1006.8 | 125.7 | 1007.5 | 125.4 | 1008.2 | 125.3 | 1009 |
| GR | 125.4 | 1009.7 | 125.7 | 1010.5 | 126.18 | 1011.1 | 126.8 | 1011.6 | 127.52 | 1011.9 |
| GR | 128.3 | 1012 | 128.3 | 1015 | 127.52 | 1015.1 | 126.8 | 1015.4 | 126.18 | 1015.8 |
| GR | 125.7 | 1016.5 | 125.4 | 1017.2 | 125.3 | 1018 | 125.4 | 1018.7 | 125.7 | 1019.5 |
| GR | 126.18 | 1020.12 | 126.8 | 1020.6 | 127.52 | 1020.9 | 128.3 | 1021 | 132.60 | 1033.0 |
| GR | 135.00 | 1038.0 | 134.1 | 1050.0 | 135.10 | 1062.0 | 139.6 | 1100 | 139.6 | 1200 |
| GR | 139.7 | 1300 | 139.7 | 1400 | 139.7 | 1500 | 140.00 | 2350.0 | | |
| NC | .12 | .15 | .04 | | | | | | | |
| X1 | 34412 | 13 | 956.0 | 1038.0 | 50.0 | 50.0 | 50.0 | | | |
| CI | -1 | -1 | .04 | 3 | 3 | 30 | | | | |
| GR | 139.0 | 100.0 | 134.50 | 929.0 | 133.20 | 948.0 | 135.30 | 956.0 | 132.00 | 968.0 |
| GR | 125.4 | 988.0 | 125.30 | 1000.0 | 125.20 | 1012.0 | 132.60 | 1033.0 | 135.00 | 1038.0 |
| GR | 134.1 | 1050.0 | 135.10 | 1062.0 | 140.00 | 2350.0 | | | | |
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 1030 | | | | | | | | |
| X1 | 35234. | 12 | 961.0 | 1039.0 | 822 | 822 | 822 | | | |
| CI | -1 | 126.62 | .04 | 3 | 3 | 30 | | | | |
| GR | 137.0 | 846.0 | 136.40 | 871.0 | 136.90 | 931.0 | 133.60 | 947.0 | 135.40 | 961.0 |
| GR | 127.9 | 989.0 | 127.80 | 1000.0 | 128.00 | 1011.0 | 135.30 | 1039.0 | 133.20 | 1056.0 |
| GR | 136.3 | 1072.0 | 137.30 | 1091.0 | | | | | | |
| NC | .12 | .15 | .04 | .3 | .5 | | | | | |
| WOODSON ROAD STA. 352+64 | | | | | | | | | | |
| X1 | 35264. | 16 | 991.0 | 1009 | 30.0 | 30.0 | 30.0 | | | |
| CI | 1000 | 126.66 | .04 | 3 | 3 | 30 | | | | |
| X3 | 10. | | | | | | | 137.00 | 137.00 | |
| GR | 139.0 | 700.0 | 136.70 | 800.0 | 136.60 | 900.0 | 136.70 | 931.0 | 133.60 | 947.0 |
| GR | 135.4 | 961.0 | 130.70 | 991.0 | 127.8 | 991.0 | 127.8 | 1009 | 130.70 | 1009 |
| GR | 135.3 | 1039.0 | 133.20 | 1056.0 | 136.30 | 1072.0 | 136.80 | 1100.0 | 137.00 | 1200.0 |
| GR | 140.0 | 2550.0 | | | | | | | | |
| SB | 1.250 | 1.56 | 3.00 | .00 | 30 | 1.0 | 440 | 3 | 126.76 | 126.66 |
| X1 | 35327. | 16 | 991.0 | 1009 | 63.0 | 63.0 | 63.0 | | | |
| CI | 1000 | 126.76 | .04 | 3 | 3 | 30 | | | | |
| X2 | | | 1. | 135 | 136.60 | | | | | |
| X3 | 10. | | | | | | | 137.40 | 137.40 | |
| BT | -10 | 650.0 | 140.50 | .00 | 700.0 | 137.90 | .00 | 800.0 | 136.70 | .00 |
| BT | 0 | 900.0 | 136.60 | .00 | 1000.0 | 137.00 | .00 | 1100.0 | 136.80 | .00 |
| BT | 0 | 1200.0 | 137.00 | .00 | 1300.0 | 136.90 | .00 | 1400.0 | 136.80 | .00 |

| | | | | | | | | | | |
|----|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| BT | 0 | 1500.0 | 136.90 | .00 | | | | | | |
| GR | 139.0 | 700.0 | 136.70 | 800.0 | 136.60 | 900.0 | 136.70 | 931.0 | 133.60 | 947.0 |
| GR | 135.4 | 961.0 | 130.70 | 991.0 | 127.8 | 991.0 | 127.8 | 1009 | 130.70 | 1009 |
| GR | 135.3 | 1039.0 | 133.20 | 1056.0 | 136.30 | 1072.0 | 136.80 | 1100.0 | 137.00 | 1200.0 |
| GR | 140.0 | 2550.0 | | | | | | | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| NC | .12 | .15 | .04 | | | | | | | |
| X1 | 35377. | 14 | 961.0 | 1039.0 | 50.0 | 50.0 | 50.0 | | | |
| CI | -1 | 126.83 | .04 | 3 | 3 | 30 | | | | |
| GR | 139.0 | 700.0 | 137.00 | 846.0 | 136.40 | 871.0 | 136.90 | 931.0 | 133.60 | 947.0 |
| GR | 135.4 | 961.0 | 127.90 | 989.0 | 127.80 | 1000.0 | 128.00 | 1011.0 | 135.30 | 1039.0 |
| GR | 133.2 | 1056.0 | 136.30 | 1072.0 | 137.30 | 1091.0 | 140.00 | 2550.0 | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| QT | 1 | 530 | | | | | | | | |
| NC | | | | .1 | .3 | | | | | |
| X1 | 35957. | 14 | 963.0 | 1031.0 | 580.0 | 580.0 | 580.0 | | | |
| CI | -1 | 127.71 | .04 | 3 | 3 | 30 | | | | |
| GR | 142.0 | 350.0 | 139.00 | 350.0 | 137.50 | 935.0 | 136.90 | 949.0 | 138.20 | 963.0 |
| GR | 133.0 | 979.0 | 128.80 | 991.0 | 127.80 | 1000.0 | 128.80 | 1009.0 | 133.00 | 1020.0 |
| GR | 137.7 | 1031.0 | 136.80 | 1043.0 | 137.30 | 1048.0 | 140.00 | 2500.0 | | |

| | | | | | | | | | | |
|----|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| X1 | 36017. | 15 | 991 | 1009 | 60.0 | 60.0 | 60.0 | | | |
| CI | -1 | 127.8 | .04 | 3 | 3 | 6 | | | | |
| GR | 142.0 | 350.0 | 139.00 | 350.0 | 137.50 | 935.0 | 136.90 | 949.0 | 138.20 | 963.0 |
| GR | 132.3 | 987 | 132.30 | 991 | 127.80 | 991 | 127.80 | 1009 | 132.30 | 1009 |
| GR | 132.3 | 1013 | 137.70 | 1031.0 | 136.80 | 1043.0 | 137.30 | 1048.0 | 140.00 | 2500.0 |

DROP STRUCTURE

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| X1 | 36027. | 19 | 991 | 1009 | 10.0 | 10.0 | 10.0 | | | |
| CI | -1 | 130.6 | .04 | 3 | 3 | 6 | | | | |
| X5 | -1 | 3.0 | | | | | | | | |
| GR | 142.0 | 350.0 | 139.00 | 350.0 | 138.30 | 956.0 | 137.80 | 963.0 | 139.80 | 976.0 |
| GR | 137.3 | 987 | 137.30 | 991 | 134.30 | 991 | 134.30 | 998.5 | 131.30 | 998.5 |
| GR | 131.3 | 1001.5 | 134.30 | 1001.5 | 134.30 | 1009 | 137.30 | 1009 | 137.30 | 1013 |
| GR | 140.0 | 1031.0 | 138.80 | 1042.0 | 139.10 | 1048.0 | 140.00 | 2500.0 | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| NC | .12 | .15 | .04 | | | | | | | |
| X1 | 36103. | 12 | 976.0 | 1031.0 | 76.0 | 76.0 | 76.0 | | | |
| CI | 1002 | 130.71 | .04 | 3 | 3 | 6 | | | | |
| GR | 142.0 | 350.0 | 139.00 | 350.0 | 138.30 | 956.0 | 137.80 | 963.0 | 139.80 | 976.0 |
| GR | 131.8 | 996.0 | 131.50 | 1000.0 | 131.90 | 1004.0 | 140.00 | 1031.0 | 138.80 | 1042.0 |
| GR | 139.1 | 1048.0 | 140.00 | 2500.0 | | | | | | |

| | | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| NC | | | | .1 | .3 | | | | | |
| X1 | 36397. | 11 | 977.0 | 1043.1 | 294 | 294 | 294.0 | | | |
| CI | 1009 | 131.16 | .04 | 3 | 3 | 6 | | | | |
| GR | 144.3 | 500.0 | 142.15 | 964.8 | 141.65 | 970.9 | 142.15 | 977.0 | 132.35 | 1003.4 |
| GR | 131.8 | 1008.5 | 132.75 | 1013.6 | 141.75 | 1043.1 | 140.95 | 1053.2 | 141.25 | 1056.3 |
| GR | 144.3 | 1872.9 | | | | | | | | |

THIS RUN EXECUTED 9/ 4/89 9: 7:12

HEC2 RELEASE DATED SEPT 88

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

A109-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|-------|------|--------|---------|--------|-------|-------|--------|
| 500.000 | 8790.00 | 99.59 | 100.20 | 99.65 | 81.90 | 4.11 | 99.86 | .00 | 191.55 | .00 | 50.00 | .00 |
| 3900.000 | 8510.00 | 101.28 | 102.89 | 102.55 | 83.60 | 3.99 | 101.53 | 3400.00 | 191.44 | 14.95 | 50.00 | 130.00 |
| 5035.000 | 8420.00 | 101.82 | 103.27 | 103.69 | 84.17 | 3.95 | 102.06 | 1135.00 | 191.28 | 19.93 | 50.00 | 184.87 |
| 5135.000 | 8420.00 | 101.84 | 103.22 | 103.74 | 84.22 | 4.33 | 102.13 | 100.00 | 180.97 | 20.36 | 40.00 | 189.56 |
| 6170.000 | 8340.00 | 102.45 | 105.27 | 106.11 | 84.74 | 4.25 | 102.73 | 1035.00 | 181.67 | 24.67 | 40.00 | 238.18 |
| 9275.000 | 8100.00 | 104.15 | 123.60 | 114.45 | 86.29 | 4.07 | 104.40 | 3105.00 | 182.85 | 37.66 | 40.00 | 444.07 |
| 9869.000 | 8100.00 | 104.45 | 110.30 | 110.20 | 86.58 | 4.06 | 104.71 | 594.00 | 183.03 | 40.15 | 40.00 | 485.78 |
| 10463.000 | 8100.00 | 104.76 | 109.40 | 109.30 | 86.88 | 4.06 | 105.01 | 594.00 | 183.01 | 42.65 | 40.00 | 522.38 |
| * 10556.000 | 8000.00 | 104.64 | 106.80 | 106.80 | 86.93 | 6.37 | 105.27 | 93.00 | 111.83 | 42.97 | 30.00 | 526.49 |
| 10647.000 | 8000.00 | 104.76 | 106.80 | 111.20 | 86.97 | 6.34 | 105.39 | 91.00 | 111.85 | 43.20 | 30.00 | 528.66 |
| * 10750.000 | 8000.00 | 105.29 | 109.50 | 111.20 | 87.03 | 4.25 | 105.57 | 103.00 | 176.10 | 43.54 | 30.00 | 532.78 |
| 12300.000 | 7660.00 | 106.16 | 109.07 | 108.50 | 87.80 | 4.03 | 106.42 | 1550.00 | 176.92 | 49.82 | 30.00 | 613.13 |
| 14550.000 | 7250.00 | 107.29 | 109.74 | 109.62 | 88.93 | 3.82 | 107.51 | 2250.00 | 176.85 | 58.96 | 30.00 | 722.66 |
| 14650.000 | 7250.00 | 107.30 | 109.73 | 109.65 | 88.98 | 4.24 | 107.58 | 100.00 | 166.58 | 59.35 | 20.00 | 727.26 |
| 16295.000 | 6950.00 | 108.27 | 111.33 | 111.74 | 89.80 | 4.01 | 108.52 | 1645.00 | 167.77 | 65.66 | 20.00 | 801.69 |
| 18040.000 | 6650.00 | 109.18 | 112.73 | 113.04 | 90.67 | 3.82 | 109.41 | 1745.00 | 168.18 | 72.39 | 20.00 | 890.52 |
| * 18090.000 | 6650.00 | 108.96 | 112.80 | 112.94 | 90.70 | 7.00 | 109.72 | 50.00 | 94.01 | 72.54 | 10.00 | 892.28 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|-------|--------|---------|--------|--------|-------|---------|
| 18127.000 | 6650.00 | 109.05 | 112.80 | 112.94 | 90.71 | 6.94 | 109.80 | 37.00 | 94.38 | 72.62 | 10.00 | 892.92 |
| * 18177.000 | 6650.00 | 109.80 | 112.72 | 113.04 | 90.74 | 3.63 | 110.00 | 50.00 | 172.45 | 72.78 | 20.00 | 894.67 |
| 21000.000 | 6180.00 | 110.96 | 116.22 | 116.39 | 92.15 | 3.45 | 111.14 | 2823.00 | 170.44 | 83.89 | 20.00 | 1064.04 |
| 21700.000 | 6180.00 | 111.23 | 114.35 | 113.92 | 92.50 | 3.47 | 111.42 | 700.00 | 169.92 | 86.62 | 20.00 | 1106.07 |
| 22400.000 | 5980.00 | 111.51 | 114.89 | 114.98 | 92.85 | 3.39 | 111.69 | 700.00 | 169.23 | 89.35 | 20.00 | 1143.47 |
| * 22401.000 | 5980.00 | 111.15 | 113.61 | 114.52 | 98.50 | 6.69 | 111.85 | 1.00 | 121.23 | 89.35 | 20.00 | 1143.51 |
| 22673.000 | 2990.00 | 111.97 | 113.64 | 116.97 | 98.77 | 3.11 | 112.12 | 272.00 | 125.59 | 90.12 | 20.00 | 1148.70 |
| 22947.000 | 2920.00 | 112.10 | 114.55 | 117.70 | 99.05 | 3.10 | 112.25 | 274.00 | 124.42 | 90.91 | 20.00 | 1154.45 |
| 25347.000 | 2380.00 | 113.30 | 114.54 | 115.50 | 101.45 | 2.98 | 113.43 | 2400.00 | 114.77 | 97.50 | 20.00 | 1201.23 |
| 26222.000 | 2210.00 | 113.74 | 115.67 | 117.10 | 102.32 | 2.95 | 113.88 | 875.00 | 111.33 | 99.77 | 20.00 | 1218.09 |
| 27097.000 | 2050.00 | 114.20 | 116.81 | 118.05 | 103.20 | 2.91 | 114.33 | 875.00 | 107.95 | 101.97 | 20.00 | 1237.46 |
| 28362.000 | 1850.00 | 114.88 | 116.94 | 115.80 | 104.46 | 2.88 | 115.01 | 1265.00 | 103.34 | 105.04 | 20.00 | 1264.38 |
| 29627.000 | 1660.00 | 115.58 | 118.71 | 117.89 | 105.73 | 2.84 | 115.71 | 1265.00 | 98.80 | 107.97 | 20.00 | 1291.11 |
| * 29628.000 | 1660.00 | 116.32 | 120.10 | 119.10 | 111.30 | 9.84 | 117.83 | 1.00 | 56.17 | 107.97 | .01 | 1291.11 |
| * 29667.000 | 1660.00 | 116.21 | 119.60 | 119.60 | 111.40 | 11.49 | 118.26 | 39.00 | 30.00 | 108.01 | .01 | 1291.11 |
| * 29731.000 | 1660.00 | 117.47 | 119.60 | 119.60 | 111.40 | 9.11 | 118.76 | 64.00 | 30.00 | 108.06 | .01 | 1291.11 |
| 29831.000 | 1660.00 | 119.03 | 118.51 | 118.02 | 111.55 | 3.17 | 119.19 | 100.00 | 236.64 | 108.36 | 40.00 | 1292.59 |
| 30380.000 | 1560.00 | 119.48 | 121.36 | 123.00 | 112.40 | 3.22 | 119.65 | 549.00 | 96.68 | 110.47 | 40.00 | 1296.91 |
| 30963.000 | 1480.00 | 120.03 | 124.94 | 126.87 | 113.30 | 3.29 | 120.20 | 583.00 | 93.84 | 111.75 | 40.00 | 1304.92 |
| 31546.000 | 1410.00 | 120.63 | 124.17 | 126.55 | 114.20 | 3.34 | 120.80 | 583.00 | 91.42 | 112.99 | 40.00 | 1314.79 |
| 32127.000 | 1340.00 | 121.27 | 123.25 | 125.06 | 115.10 | 3.36 | 121.44 | 581.00 | 89.35 | 114.19 | 40.00 | 1321.14 |
| 33077.000 | 1240.00 | 122.38 | 130.11 | 132.07 | 116.10 | 3.35 | 122.55 | 950.00 | 86.46 | 116.11 | 40.00 | 1332.50 |
| 33157.000 | 1240.00 | 122.47 | 129.99 | 132.19 | 116.10 | 3.36 | 122.65 | 80.00 | 86.25 | 116.27 | 40.00 | 1333.82 |
| 33207.000 | 1240.00 | 122.53 | 130.27 | 134.90 | 116.77 | 3.41 | 122.71 | 50.00 | 86.11 | 116.37 | 40.00 | 1334.93 |
| 33226.000 | 1240.00 | 122.55 | 130.30 | 134.90 | 116.80 | 3.42 | 122.74 | 19.00 | 86.03 | 116.41 | 40.00 | 1335.47 |
| * 33227.000 | 1240.00 | 129.05 | 131.99 | 132.03 | 121.90 | 3.37 | 129.23 | 1.00 | 72.93 | 116.41 | 30.00 | 1335.49 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|--------|--------|--------|-------|---------|
| 33257.000 | 1240.00 | 129.08 | 132.07 | 131.96 | 121.95 | 3.38 | 129.26 | 30.00 | 72.83 | 116.46 | 30.00 | 1335.85 |
| 33327.000 | 1240.00 | 129.15 | 132.09 | 131.98 | 122.05 | 3.40 | 129.33 | 70.00 | 72.62 | 116.57 | 30.00 | 1336.39 |
| 34135.000 | 1130.00 | 129.99 | 133.31 | 133.24 | 123.26 | 3.34 | 130.16 | 808.00 | 70.39 | 117.90 | 30.00 | 1340.79 |
| 34185.000 | 1130.00 | 129.98 | 133.40 | 133.40 | 123.30 | 4.44 | 130.28 | 50.00 | 58.55 | 117.97 | .01 | 1340.79 |
| * 34186.000 | 1130.00 | 129.63 | 126.30 | 126.30 | 123.30 | 8.09 | 130.64 | 1.00 | 42.00 | 117.98 | .01 | 1340.79 |
| 34361.000 | 1130.00 | 131.38 | 128.30 | 128.30 | 125.30 | 8.08 | 132.40 | 175.00 | 42.00 | 118.14 | .01 | 1340.79 |
| * 34362.000 | 1130.00 | 132.40 | 135.30 | 135.00 | 125.30 | 3.89 | 132.63 | 1.00 | 65.88 | 118.15 | .01 | 1340.79 |
| 34412.000 | 1130.00 | 132.57 | 134.67 | 134.79 | 125.20 | 2.94 | 132.70 | 50.00 | 74.20 | 118.23 | 30.00 | 1340.94 |
| 35234.000 | 1030.00 | 133.24 | 135.18 | 135.12 | 126.62 | 3.12 | 133.39 | 822.00 | 70.17 | 119.59 | 30.00 | 1343.84 |
| 35264.000 | 1030.00 | 133.26 | 135.19 | 135.13 | 126.66 | 3.13 | 133.42 | 30.00 | 69.60 | 119.64 | 30.00 | 1344.03 |
| 35327.000 | 1030.00 | 133.27 | 135.22 | 135.15 | 126.76 | 3.19 | 133.43 | 63.00 | 69.06 | 119.74 | 30.00 | 1344.51 |
| 35377.000 | 1030.00 | 133.32 | 135.24 | 135.17 | 126.83 | 3.21 | 133.48 | 50.00 | 70.50 | 119.82 | 30.00 | 1344.79 |
| 35957.000 | 530.00 | 133.74 | 137.29 | 137.03 | 127.71 | 1.83 | 133.79 | 580.00 | 66.17 | 120.73 | 30.00 | 1348.15 |
| * 36017.000 | 530.00 | 133.71 | 135.58 | 137.60 | 127.80 | 3.48 | 133.90 | 60.00 | 41.45 | 120.80 | 6.00 | 1348.42 |
| * 36027.000 | 530.00 | 136.71 | 139.11 | 139.98 | 130.60 | 3.57 | 136.91 | 10.00 | 42.65 | 120.81 | 6.00 | 1348.46 |
| 36103.000 | 530.00 | 136.85 | 139.35 | 139.85 | 130.71 | 3.54 | 137.05 | 76.00 | 42.83 | 120.88 | 6.00 | 1348.73 |
| 36397.000 | 530.00 | 137.38 | 141.89 | 141.71 | 131.16 | 3.45 | 137.56 | 294.00 | 43.34 | 121.18 | 6.00 | 1349.30 |
| 36691.000 | 530.00 | 137.87 | 142.79 | 142.48 | 131.60 | 3.40 | 138.05 | 294.00 | 43.64 | 121.47 | 6.00 | 1350.12 |
| 36985.000 | 490.00 | 138.34 | 142.88 | 142.57 | 132.04 | 3.12 | 138.49 | 294.00 | 43.82 | 121.76 | 6.00 | 1351.03 |
| 37277.000 | 490.00 | 138.77 | 142.90 | 142.50 | 132.50 | 3.35 | 138.94 | 292.00 | 42.04 | 122.05 | .01 | 1351.03 |
| 37902.000 | 450.00 | 139.63 | 141.65 | 140.85 | 133.45 | 2.81 | 139.75 | 625.00 | 43.31 | 122.66 | .01 | 1351.03 |
| 38527.000 | 430.00 | 140.29 | 142.60 | 141.80 | 134.40 | 2.69 | 140.40 | 625.00 | 44.97 | 123.30 | .01 | 1351.03 |
| 38757.000 | 430.00 | 140.52 | 141.33 | 141.03 | 134.70 | 2.63 | 140.63 | 230.00 | 45.11 | 123.54 | .01 | 1351.03 |
| 38987.000 | 430.00 | 140.78 | 142.33 | 142.03 | 135.70 | 3.07 | 140.92 | 230.00 | 43.69 | 123.77 | .01 | 1351.03 |
| 39217.000 | 400.00 | 141.08 | 142.00 | 141.70 | 135.40 | 2.43 | 141.18 | 230.00 | 46.46 | 124.01 | .01 | 1351.03 |

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 10556.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 10750.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 18090.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 18177.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 22401.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 29628.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 29628.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 29628.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO= 29667.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 29731.000 PROFILE= 1 HYDRAULIC JUMP D.S.

WARNING SECNO= 29731.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE SECNO= 33227.000 PROFILE= 1 WSEL BASED ON X5 CARD

WARNING SECNO= 34186.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 34362.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 36017.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE SECNO= 36027.000 PROFILE= 1 WSEL BASED ON X5 CARD

THIS RUN EXECUTED 9/ 1/89 16:21:55

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
 T3 A109-03-00 SPRING OAKS CHANNEL
 T4 100-YEAR STORM FREQUENCY EXISTING CONDITIONS
 T5 FILENAME = A10903EX.IH2

| | | | | | | | | | | |
|----|--------|-------|-------|-------|-------|--------|-------|-----|-------|--------|
| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
| | | 6 | | | .0003 | | | | 114 | |
| J2 | NPROF | IPLOT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
| | -1 | | -1 | | | | | | | |

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

| | | | | | | | | | |
|----|----|----|----|----|----|----|---|----|---|
| 38 | 43 | 1 | 23 | 24 | 42 | 26 | 3 | 39 | 4 |
| 37 | 30 | 65 | | | | | | | |

J5 LPRNT NUMSEC *****REQUESTED SECTION NUMBERS*****
 -10 -10

J6 IHLEQ ICOPY SUBDIV STRIDS RMILE
 1

| | | | | | | | | | | |
|----|-------|---------|--------|---------|-------|---------|-------|---------|-------|---------|
| NC | .15 | .15 | .04 | .1 | .3 | | | | | |
| QT | 5 | 920 | 1380 | 1710 | 2070 | 2640 | | | | |
| X1 | 120 | 11 | 9937.5 | 10051.5 | 120 | 120 | 120 | | | |
| GR | 117 | 9885.5 | 114.2 | 9911.5 | 114.5 | 9937.5 | 106.6 | 9961.5 | 103.5 | 9987.5 |
| GR | 102.7 | 10000 | 103.6 | 10012.5 | 107.9 | 10033.5 | 115.9 | 10051.5 | 114.5 | 10067.5 |
| GR | 120.7 | 10106.5 | | | | | | | | |
| QT | 5 | 820 | 1230 | 1480 | 1800 | 2390 | | | | |
| X1 | 1520 | 12 | 9944 | 10050 | 1400 | 1400 | 1400 | | | |
| GR | 117.6 | 9800 | 115 | 9900 | 115.2 | 9944 | 108.1 | 9965 | 107.3 | 9975 |
| GR | 104.2 | 9995 | 102.7 | 10000 | 105.3 | 10005 | 108.6 | 10019 | 115.3 | 10050 |
| GR | 116.1 | 10100 | 116.3 | 10200 | | | | | | |

| | | | | | | | | | | |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | | | .3 | | .5 | | | | | |
| MISSOURI PACIFIC RAILROAD | | | | | | | | | | |
| X1 | 1574 | 12 | 9957 | 10037 | 54 | 54 | 54 | | | |
| X3 | 10 | | | | | | | 120 | 120.3 | |
| GR | 117.6 | 9800 | 115 | 9900 | 117.6 | 9957 | 116.6 | 9957 | 107.9 | 9981 |
| GR | 106.1 | 9994 | 102.5 | 9999 | 106.3 | 10004 | 113.7 | 10037 | 117.6 | 10037 |
| GR | 116.1 | 10100 | 116.3 | 10200 | | | | | | |
| SB | 1.05 | 1.56 | 3.0 | | 6 | 4 | 591 | 2.45 | 102.5 | 102.5 |
| X1 | 1586 | 12 | 9957 | 10037 | 12 | 12 | 12 | | | |
| X2 | | | 1 | 117.6 | 122.4 | | | | | |
| X3 | 10 | | | | | | | 122.4 | 122.9 | |
| BT | -11 | 9500 | 122.4 | 0 | 9600 | 122.4 | 0 | 9700 | 122.5 | 0 |
| BT | | 9800 | 122.6 | 0 | 9900 | 122.8 | 0 | 10000 | 122.9 | 0 |
| BT | | 10100 | 123.1 | 0 | 10200 | 123.1 | 0 | 10300 | 123.1 | 0 |
| BT | | 10400 | 123 | 0 | 10500 | 122.9 | 0 | | | |
| GR | 117.6 | 9800 | 115 | 9900 | 117.6 | 9957 | 116.6 | 9957 | 107.9 | 9981 |
| GR | 106.1 | 9994 | 102.5 | 9999 | 106.3 | 10004 | 113.7 | 10037 | 117.6 | 10037 |
| GR | 116.1 | 10100 | 116.3 | 10200 | | | | | | |
| X1 | 1636 | 12 | 9944 | 10050 | 50 | 50 | 50 | | | |
| GR | 117.6 | 9800 | 115 | 9900 | 115.2 | 9944 | 108.1 | 9965 | 107.3 | 9975 |
| GR | 104.2 | 9995 | 103.1 | 10000 | 105.3 | 10005 | 108.6 | 10019 | 115.3 | 10050 |
| GR | 116.1 | 10100 | 116.3 | 10200 | | | | | | |
| NC | | | .03 | .1 | .3 | | | | | |
| QT | 5 | 720 | 1070 | 1310 | 1620 | 2080 | | | | |
| X1 | 3528 | 12 | 9975 | 10025 | 1892 | 1892 | 1892 | | | |
| GR | 122 | 8650 | 120 | 8650 | 120 | 9700 | 118.8 | 9974 | 115.9 | 9975 |
| GR | 104.1 | 9995 | 104.1 | 10000 | 104.1 | 10005 | 116.2 | 10025 | 117.6 | 10026 |
| GR | 120 | 11400 | 125 | 12000 | | | | | | |
| SLOPING DROP | | | | | | | | | | |
| X1 | 3538 | | | | 10 | 10 | 10 | | | |
| X1 | 3543 | 12 | 9975 | 10025 | 5 | 5 | 5 | | | |
| GR | 122 | 8650 | 120 | 8650 | 120 | 9700 | 118.8 | 9974 | 115.9 | 9975 |
| GR | 109.4 | 9995 | 109.4 | 10000 | 109.4 | 10005 | 116.2 | 10025 | 117.6 | 10026 |
| GR | 120 | 11400 | 125 | 12000 | | | | | | |
| X1 | 3553 | | | | 10 | 10 | 10 | | | |
| X1 | 3921 | 11 | 9974 | 10026 | 368 | 368 | 368 | | | |
| GR | 125 | 8300 | 120 | 9300 | 118.8 | 9974 | 115.7 | 9981 | 110.4 | 9992 |
| GR | 109.8 | 10000 | 110.4 | 10008 | 115.6 | 10020 | 117.6 | 10026 | 120 | 10900 |
| GR | 125 | 11400 | | | | | | | | |
| NC | | | .3 | .5 | | | | | | |
| X1 | 3961 | 17 | 9977 | 10023 | 40 | 40 | 40 | | | |
| X3 | 10 | | | | | | | 117.1 | 117.3 | |
| GR | 125 | 8300 | 120 | 9300 | 117.3 | 9700 | 117.7 | 9800 | 118.1 | 9900 |
| GR | 116.8 | 9977 | 115.3 | 9977 | 110.4 | 9989 | 109.8 | 10000 | 110.4 | 10009 |
| GR | 115.3 | 10023 | 116.8 | 10023 | 118.0 | 10100 | 117.7 | 10200 | 118.0 | 10300 |

GR 120 10900 125 11400

SPRING PINES ROAD - 41 DEGREE SKEW

X1 3962 1 1 1
 X3 10 117.1 117.3
 BT -11 9700 117.3 117.3 9800 117.7 117.7 9900 118.1 118.1
 BT 9977 118.7 116.8 9989 118.7 116.8 10000 118.7 116.8
 BT 10009 118.7 116.8 10023 118.7 116.8 10100 118 118
 BT 10200 117.7 117.7 10300 118 118

X1 3994 32 32 32
 X2 1
 X3 10 117.3 117.7

X1 3995 1 1 1
 X3 10 117.3 117.7

X1 4035 11 9974 10026 40 40 40
 GR 125 8300 120 9300 118.8 9974 115.7 9981 110.4 9992
 GR 109.8 10000 110.4 10008 115.6 10020 117.6 10026 120 10900
 GR 125 11400

NC .1 .3
 QT 5 670 990 1220 1510 1930
 X1 4558 11 9974.5 10024.5 523 523 523
 GR 125 9200 120 9700 119.5 9974.5 118.4 9978.5 111 9991.5
 GR 110.1 10000 111 10008.5 116.7 10018.5 118.7 10024.5 120 10500
 GR 125 11100

NC .3 .5
 X1 4608 11 9976 10023 50 50 50
 X3 10 118.5 118.5
 GR 125 9200 120 9700 119.4 9976 116 9976 111 9991.5
 GR 110.1 10000 111 10008.5 116 10023 119.4 10023 120 10500
 GR 125 11100

BASSWOOD ROAD - 32 DEGREE SKEW

X1 4609 1 1 1
 X3 10 118.5 118.5
 BT -5 9976 119.4 117.5 9991.5 119.4 117.5 10000 119.4 117.5
 BT 10008.5 119.4 117.5 10023 119.4 117.5

X1 4639 30 30 30
 X2 1
 X3 10 119.4 119.4

X1 4640 1 1 1
 X3 10 119.4 119.4

| | | | | | | | | | | |
|-----------------|-------|-------|--------|---------|-------|---------|-------|---------|-------|--------|
| X1 | 4690 | 11 | 9974.5 | 10024.5 | 50 | 50 | 50 | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.5 | 9974.5 | 118.4 | 9978.5 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116.7 | 10018.5 | 118.7 | 10024.5 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |
| NC | | | | .1 | .3 | | | | | |
| QT | 5 | 610 | 900 | 1100 | 1380 | 1780 | | | | |
| X1 | 5868 | 9 | 9973 | 10024 | 1178 | 1178 | 1178 | | | |
| GR | 125 | 9550 | 120.7 | 9973 | 120.3 | 9981 | 113.1 | 9991 | 113.0 | 10000 |
| GR | 112.8 | 10009 | 119.0 | 10019 | 120.2 | 10024 | 125 | 10480 | | |
| QT | 5 | 600 | 880 | 1080 | 1340 | 1720 | | | | |
| X1 | 6124 | 36 | 1055 | 1100 | 256 | 256 | 256 | | | |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 120.8 | 1055 | 113.0 | 1067 |
| GR | 113.0 | 1075 | 113.0 | 1087 | 121.2 | 1100 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |
| NC | | | .015 | .3 | .5 | | | | | |
| X1 | 6125 | 36 | 1055 | 1100 | 1 | 1 | 1 | | | |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 120.8 | 1055 | 114.5 | 1066 |
| GR | 114.5 | 1075 | 114.5 | 1088 | 121.2 | 1100 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |
| X1 | 6153 | 36 | 1053 | 1098 | 28 | 28 | 28 | | | |
| X3 | 10 | | | | | | | 120 | 120 | |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 119.4 | 1053 | 114.6 | 1064 |
| GR | 114.6 | 1075 | 114.6 | 1087 | 119.5 | 1098 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |
| MAPLEWOOD DRIVE | | | | | | | | | | |
| X1 | 6154 | 36 | 1053 | 1098 | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 120 | 120 | |
| BT | -36 | 0 | 125.0 | 124.7 | 99 | 122.7 | 122.5 | 198 | 121.7 | 121.4 |
| BT | | 297 | 120.5 | 120.5 | 310 | 120.5 | 120.5 | 396 | 120.5 | 120.2 |
| BT | | 495 | 120.4 | 119.9 | 594 | 120.4 | 119.9 | 629 | 120.7 | 119.6 |
| BT | | 634 | 120.8 | 120.8 | 642 | 120.8 | 115.3 | 645 | 120.8 | 115.3 |
| BT | | 649 | 120.8 | 115.3 | 657 | 121.3 | 121.3 | 700 | 121.0 | 121.0 |
| BT | | 800 | 120.7 | 119.5 | 900 | 121.0 | 119.2 | 1000 | 121.4 | 119.6 |

| | | | | | | | | | | |
|----|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| BT | | 1053 | 121.3 | 119.4 | 1053 | 123.7 | 119.4 | 1098 | 123.7 | 119.5 |
| BT | | 1098 | 121.3 | 119.5 | 1098 | 121.3 | 119.5 | 1200 | 121.2 | 119.0 |
| BT | | 1300 | 120.6 | 118.8 | 1400 | 120.7 | 119.1 | 1500 | 121.1 | 119.4 |
| BT | | 1600 | 121.7 | 120.3 | 1700 | 122.1 | 120.5 | 1800 | 123.3 | 121.9 |
| BT | | 1900 | 123.7 | 122.9 | 2000 | 124.3 | 123.1 | 2100 | 124.7 | 123.8 |
| BT | | 2200 | 124.7 | 123.8 | 2231 | 124.9 | 124.3 | 2300 | 124.5 | 123.5 |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 119.4 | 1053 | 114.6 | 1064 |
| GR | 114.6 | 1075 | 114.6 | 1087 | 119.5 | 1098 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |
| X1 | 6182 | 34 | 1053 | 1098 | 28 | 28 | 28 | | | |
| X3 | 10 | | | | | | | 120.4 | 120.6 | |
| BT | -33 | 0 | 125.0 | 125.0 | 99 | 122.7 | 122.5 | 198 | 121.7 | 121.7 |
| BT | | 297 | 120.5 | 120.1 | 396 | 120.5 | 120.4 | 495 | 120.4 | 120.1 |
| BT | | 594 | 120.4 | 120.2 | 608 | 120.5 | 120.2 | 642 | 120.8 | 120.0 |
| BT | | 655 | 120.8 | 119.9 | 700 | 120.7 | 119.6 | 800 | 120.7 | 119.8 |
| BT | | 900 | 121.0 | 119.9 | 1000 | 121.4 | 120.3 | 1053 | 121.3 | 119.4 |
| BT | | 1053 | 123.7 | 119.4 | 1098 | 123.7 | 119.5 | 1098 | 121.3 | 119.5 |
| BT | | 1100 | 121.3 | 119.6 | 1200 | 121.2 | 120.1 | 1300 | 120.6 | 119.7 |
| BT | | 1400 | 120.7 | 120.1 | 1500 | 121.1 | 119.9 | 1600 | 121.7 | 120.8 |
| BT | | 1700 | 122.1 | 121.2 | 1800 | 123.3 | 122.7 | 1806 | 123.3 | 122.7 |
| BT | | 1900 | 123.7 | 122.6 | 2000 | 124.3 | 123.1 | 2100 | 124.7 | 123.8 |
| BT | | 2200 | 124.7 | 123.7 | 2231 | 124.9 | 124.5 | 2300 | 124.5 | 123.6 |
| GR | 125.0 | 0 | 122.5 | 99 | 121.7 | 198 | 120.1 | 297 | 120.4 | 396 |
| GR | 120.1 | 495 | 120.2 | 594 | 120.2 | 608 | 120.0 | 642 | 119.9 | 655 |
| GR | 119.6 | 700 | 119.8 | 800 | 119.9 | 900 | 120.3 | 1000 | 119.4 | 1053 |
| GR | 114.7 | 1064 | 114.7 | 1075 | 114.7 | 1087 | 119.5 | 1098 | 119.6 | 1100 |
| GR | 120.1 | 1200 | 119.7 | 1300 | 120.1 | 1400 | 119.9 | 1500 | 120.8 | 1600 |
| GR | 121.2 | 1700 | 122.7 | 1800 | 122.7 | 1806 | 122.6 | 1900 | 123.1 | 2000 |
| GR | 123.8 | 2100 | 123.7 | 2200 | 124.5 | 2231 | 123.6 | 2300 | | |
| X1 | 6183 | 33 | 1053 | 1098 | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 120.4 | 120.6 | |
| GR | 125.0 | 0 | 122.5 | 99 | 121.7 | 198 | 120.1 | 297 | 120.4 | 396 |
| GR | 120.1 | 495 | 120.2 | 594 | 120.2 | 608 | 120.0 | 642 | 119.6 | 700 |
| GR | 119.8 | 800 | 119.9 | 900 | 120.3 | 1000 | 119.4 | 1053 | 114.7 | 1064 |
| GR | 114.7 | 1075 | 114.7 | 1087 | 119.5 | 1098 | 119.6 | 1100 | 120.1 | 1200 |
| GR | 119.7 | 1300 | 120.1 | 1400 | 119.9 | 1500 | 120.8 | 1600 | 121.2 | 1700 |
| GR | 122.7 | 1800 | 122.7 | 1806 | 122.6 | 1900 | 123.1 | 2000 | 123.8 | 2100 |
| GR | 123.7 | 2200 | 124.5 | 2231 | 123.6 | 2300 | | | | |
| X1 | 6233 | 33 | 1053 | 1098 | 50 | 50 | 50 | | | |
| GR | 125.0 | 0 | 122.5 | 99 | 121.7 | 198 | 120.1 | 297 | 120.4 | 396 |
| GR | 120.1 | 495 | 120.2 | 594 | 120.2 | 608 | 120.0 | 642 | 119.6 | 700 |
| GR | 119.8 | 800 | 119.9 | 900 | 120.3 | 1000 | 119.4 | 1053 | 114.7 | 1064 |
| GR | 114.7 | 1075 | 114.7 | 1087 | 119.5 | 1098 | 119.6 | 1100 | 120.1 | 1200 |
| GR | 119.7 | 1300 | 120.1 | 1400 | 119.9 | 1500 | 120.8 | 1600 | 121.2 | 1700 |
| GR | 122.7 | 1800 | 122.7 | 1806 | 122.6 | 1900 | 123.1 | 2000 | 123.8 | 2100 |
| GR | 123.7 | 2200 | 124.5 | 2231 | 123.6 | 2300 | | | | |

| | | | | | | | | | | |
|-----------------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | | | .1 | .3 | | | | | | |
| QT | 5 | 530 | 770 | 950 | 1190 | 1520 | | | | |
| X1 | 7360 | 19 | 609 | 639 | 1127 | 1127 | 1127 | | | |
| GR | 125.3 | 0 | 121.2 | 344 | 120.2 | 400 | 120.5 | 431 | 120.8 | 500 |
| GR | 122.7 | 606 | 122.2 | 609 | 116.5 | 619 | 116.5 | 625 | 116.5 | 631 |
| GR | 121.1 | 639 | 121.0 | 700 | 121.0 | 800 | 120.4 | 900 | 122.1 | 1185 |
| GR | 122.4 | 1217 | 123.4 | 1300 | 124.4 | 1400 | 125.8 | 1500 | | |
| QT | 5 | 470 | 680 | 840 | 1050 | 1340 | | | | |
| X1 | 8560 | 21 | 665 | 687 | 1200 | 1200 | 1200 | | | |
| GR | 128.3 | 0 | 126.5 | 25 | 126.4 | 118 | 126.3 | 125 | 126.0 | 225 |
| GR | 123.9 | 325 | 123.8 | 332 | 124.2 | 425 | 124.2 | 525 | 122.9 | 625 |
| GR | 121.8 | 665 | 117.7 | 673 | 117.7 | 682 | 121.8 | 687 | 122.8 | 725 |
| GR | 123.0 | 825 | 123.2 | 925 | 124.0 | 1025 | 125.8 | 1125 | 127.2 | 1190 |
| GR | 128.4 | 1240 | | | | | | | | |
| QT | 5 | 400 | 580 | 710 | 890 | 1130 | | | | |
| X1 | 10100 | 25 | 1581 | 1600 | 1540 | 1540 | 1540 | | | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 | 127.6 | 900 |
| GR | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 | 127.8 | 1400 |
| GR | 128.7 | 1500 | 129.6 | 1581 | 121.5 | 1586 | 121.5 | 1594 | 129.8 | 1600 |
| GR | 130.2 | 1605 | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 |
| NC | | | .3 | .5 | | | | | | |
| X1 | 10199 | 25 | 1581 | 1600 | 99 | 99 | 99 | | | |
| X3 | 10 | | | | | | | 126.0 | 129.5 | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 | 127.6 | 900 |
| GR | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 | 127.8 | 1400 |
| GR | 128.7 | 1500 | 129.6 | 1581 | 121.5 | 1586 | 121.5 | 1594 | 129.8 | 1600 |
| GR | 130.2 | 1605 | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 |
| RIDGEWOOD DRIVE | | | | | | | | | | |
| X1 | 10200 | 29 | 1581 | 1600 | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 126.0 | 129.5 | |
| BT | -27 | 0 | 130.6 | 129.9 | 100 | 129.1 | 128.7 | 200 | 128.2 | 127.8 |
| BT | | 300 | 127.1 | 127.0 | 400 | 126.4 | 126.2 | 484 | 126.9 | 126.1 |
| BT | | 500 | 126.9 | 126.1 | 600 | 126.5 | 125.9 | 700 | 126.4 | 125.8 |
| BT | | 800 | 127.2 | 126.4 | 900 | 128.5 | 127.6 | 1000 | 130.2 | 128.6 |
| BT | | 1100 | 129.9 | 128.4 | 1200 | 130.0 | 128.8 | 1300 | 129.4 | 128.3 |
| BT | | 1374 | 127.9 | 127.9 | 1400 | 129.6 | 127.8 | 1500 | 130.4 | 128.7 |
| BT | | 1581 | 130.7 | 129.6 | 1582 | 130.7 | 128.5 | 1599 | 130.7 | 128.5 |
| BT | | 1600 | 130.7 | 129.8 | 1605 | 130.7 | 130.2 | 1700 | 130.3 | 128.5 |
| BT | | 1800 | 130.0 | 128.5 | 1900 | 129.9 | 129.2 | 2000 | 130.4 | 130.2 |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 484 | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 |
| GR | 127.6 | 900 | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 |
| GR | 127.9 | 1374 | 127.8 | 1400 | 128.7 | 1500 | 129.6 | 1581 | 128.5 | 1582 |
| GR | 121.5 | 1586 | 121.5 | 1594 | 128.5 | 1599 | 129.8 | 1600 | 130.2 | 1605 |
| GR | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|
| NC | | | .3 | .5 | | | | | | |
| X1 | 11149 | 38 | 1544 | 1559 | 49 | 49 | 49 | | | |
| X3 | 10 | | | | | | | 128 | 130.2 | |
| GR | 130.2 | 0 | 130.5 | 100 | 131.1 | 200 | 130.6 | 266 | 130.4 | 300 |
| GR | 130.3 | 400 | 129.7 | 500 | 129.8 | 600 | 129.6 | 700 | 129.6 | 800 |
| GR | 129.8 | 900 | 129.8 | 1000 | 130.3 | 1100 | 129.7 | 1200 | 130.2 | 1300 |
| GR | 130.7 | 1400 | 131.5 | 1500 | 131.6 | 1535 | 125.6 | 1544.0 | 124.6 | 1544.5 |
| GR | 124.2 | 1545.5 | 124.0 | 1546.5 | 124.0 | 1547.5 | 124.0 | 1548.5 | 124.0 | 1549.5 |
| GR | 124.6 | 1550.5 | 125.6 | 1551 | 125.6 | 1552 | 124.6 | 1552.5 | 124.2 | 1553.5 |
| GR | 124.0 | 1554.5 | 124.0 | 1555.5 | 124.0 | 1556.5 | 124.2 | 1557.5 | 124.6 | 1558.5 |
| GR | 125.6 | 1559 | 130.6 | 1568 | 132.2 | 1600 | | | | |

| | | | | | | | | | | |
|----|---------------|--------|-------|--------|--------|--------|-------|--------|-------|--------|
| NC | | | .024 | | | | | | | |
| | ROBINSON ROAD | | | | | | | | | |
| X1 | 11150 | 38 | 1544 | 1559 | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 128 | 130.2 | |
| BT | -38 | 0 | 132.0 | 130.2 | 100 | 131.7 | 130.5 | 200 | 131.7 | 131.1 |
| BT | | 266 | 131.4 | 130.6 | 300 | 131.3 | 130.4 | 400 | 130.8 | 130.3 |
| BT | | 500 | 130.6 | 129.7 | 600 | 130.5 | 129.8 | 700 | 130.3 | 129.6 |
| BT | | 800 | 130.3 | 129.6 | 900 | 130.1 | 129.8 | 1000 | 130.0 | 129.8 |
| BT | | 1100 | 130.3 | 130.3 | 1200 | 130.1 | 129.7 | 1300 | 130.6 | 130.2 |
| BT | | 1400 | 131.0 | 130.7 | 1500 | 132.1 | 131.5 | 1535 | 132.3 | 131.6 |
| BT | | 1544 | 132.3 | 125.6 | 1544.5 | 132.3 | 127.0 | 1545.5 | 132.3 | 128.1 |
| BT | | 1546.5 | 132.3 | 128.6 | 1547.5 | 132.3 | 128.8 | 1548.5 | 132.3 | 128.6 |
| BT | | 1549.5 | 132.3 | 128.1 | 1550.5 | 132.3 | 127.0 | 1551 | 132.3 | 125.6 |
| BT | | 1552 | 132.3 | 125.6 | 1552.5 | 132.3 | 127.0 | 1553.5 | 132.3 | 128.1 |
| BT | | 1554.5 | 132.3 | 128.6 | 1555.5 | 132.3 | 128.8 | 1556.5 | 132.3 | 128.6 |
| BT | | 1557.5 | 132.3 | 128.1 | 1558.5 | 132.3 | 127.0 | 1559 | 132.3 | 125.6 |
| BT | | 1568 | 132.3 | 130.6 | 1600 | 132.2 | 132.2 | | | |
| GR | 130.2 | 0 | 130.5 | 100 | 131.1 | 200 | 130.6 | 266 | 130.4 | 300 |
| GR | 130.3 | 400 | 129.7 | 500 | 129.8 | 600 | 129.6 | 700 | 129.6 | 800 |
| GR | 129.8 | 900 | 129.8 | 1000 | 130.3 | 1100 | 129.7 | 1200 | 130.2 | 1300 |
| GR | 130.7 | 1400 | 131.5 | 1500 | 131.6 | 1535 | 125.6 | 1544.0 | 124.6 | 1544.5 |
| GR | 124.2 | 1545.5 | 124.0 | 1546.5 | 124.0 | 1547.5 | 124.0 | 1548.5 | 124.0 | 1549.5 |
| GR | 124.6 | 1550.5 | 125.6 | 1551 | 125.6 | 1552 | 124.6 | 1552.5 | 124.2 | 1553.5 |
| GR | 124.0 | 1554.5 | 124.0 | 1555.5 | 124.0 | 1556.5 | 124.2 | 1557.5 | 124.6 | 1558.5 |
| GR | 125.6 | 1559 | 130.6 | 1568 | 132.2 | 1600 | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| X1 | 11215 | 38 | 1548 | 1563 | 65 | 65 | 65 | | | |
| X3 | 10 | | | | | | | 130 | 132.2 | |
| BT | -38 | 0 | 132.0 | 130.3 | 100 | 131.7 | 131.3 | 200 | 131.7 | 130.8 |
| BT | | 266 | 131.4 | 131.1 | 300 | 131.3 | 131.2 | 400 | 130.8 | 130.5 |
| BT | | 500 | 130.6 | 130.5 | 600 | 130.5 | 130.1 | 700 | 130.3 | 129.9 |
| BT | | 800 | 130.3 | 129.9 | 900 | 130.1 | 129.3 | 1000 | 130.0 | 129.8 |
| BT | | 1100 | 130.3 | 130.3 | 1200 | 130.1 | 130.1 | 1300 | 130.6 | 130.3 |
| BT | | 1400 | 131.0 | 130.5 | 1500 | 132.1 | 131.4 | 1543 | 132.3 | 130.0 |
| BT | | 1548 | 132.3 | 126.2 | 1548.5 | 132.3 | 127.6 | 1549.5 | 132.3 | 128.7 |
| BT | | 1550.5 | 132.3 | 129.2 | 1551.5 | 132.3 | 129.4 | 1552.5 | 132.3 | 129.2 |
| BT | | 1553.5 | 132.3 | 128.7 | 1554.5 | 132.3 | 127.6 | 1555 | 132.3 | 126.2 |
| BT | | 1556 | 132.3 | 126.2 | 1556.5 | 132.3 | 127.6 | 1557.5 | 132.3 | 128.7 |
| BT | | 1558.5 | 132.3 | 129.2 | 1559.5 | 132.3 | 129.4 | 1560.5 | 132.3 | 129.2 |
| BT | | 1561.5 | 132.3 | 128.7 | 1562.5 | 132.3 | 127.6 | 1563 | 132.3 | 126.2 |
| BT | | 1568 | 132.3 | 130.7 | 1600 | 132.2 | 132.2 | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|
| GR | 130.3 | 0 | 131.3 | 100 | 130.8 | 200 | 131.1 | 266 | 131.2 | 300 |
| GR | 130.5 | 400 | 130.5 | 500 | 130.1 | 600 | 129.9 | 700 | 129.9 | 800 |
| GR | 129.3 | 900 | 129.8 | 1000 | 130.3 | 1100 | 130.1 | 1200 | 130.3 | 1300 |
| GR | 130.5 | 1400 | 131.4 | 1500 | 130.0 | 1543 | 126.2 | 1548 | 125.2 | 1548.5 |
| GR | 124.8 | 1549.5 | 124.6 | 1550.5 | 124.6 | 1551.5 | 124.6 | 1552.5 | 124.8 | 1553.5 |
| GR | 125.2 | 1554.5 | 126.2 | 1555 | 126.2 | 1556 | 125.2 | 1556.5 | 124.8 | 1557.5 |
| GR | 124.6 | 1558.5 | 124.6 | 1559.5 | 124.6 | 1560.5 | 124.8 | 1561.5 | 125.2 | 1562.5 |
| GR | 126.2 | 1563 | 130.7 | 1568 | 132.2 | 1600 | | | | |
| NC | | | .015 | | | | | | | |
| X1 | 11216 | 38 | 1548 | 1563 | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 130 | 132.2 | |
| GR | 130.3 | 0 | 131.3 | 100 | 130.8 | 200 | 131.1 | 266 | 131.2 | 300 |
| GR | 130.5 | 400 | 130.5 | 500 | 130.1 | 600 | 129.9 | 700 | 129.9 | 800 |
| GR | 129.3 | 900 | 129.8 | 1000 | 130.3 | 1100 | 130.1 | 1200 | 130.3 | 1300 |
| GR | 130.5 | 1400 | 131.4 | 1500 | 130.0 | 1543 | 126.2 | 1548 | 125.2 | 1548.5 |
| GR | 124.8 | 1549.5 | 124.6 | 1550.5 | 124.6 | 1551.5 | 124.6 | 1552.5 | 124.8 | 1553.5 |
| GR | 125.2 | 1554.5 | 126.2 | 1555 | 126.2 | 1556 | 125.2 | 1556.5 | 124.8 | 1557.5 |
| GR | 124.6 | 1558.5 | 124.6 | 1559.5 | 124.6 | 1560.5 | 124.8 | 1561.5 | 125.2 | 1562.5 |
| GR | 126.2 | 1563 | 130.7 | 1568 | 132.2 | 1600 | | | | |
| X1 | 11250 | 21 | 1543 | 1568 | 34 | 34 | 34 | | | |
| GR | 130.3 | 0 | 131.3 | 100 | 130.8 | 200 | 131.2 | 300 | 130.5 | 400 |
| GR | 130.5 | 500 | 130.1 | 600 | 129.9 | 700 | 129.9 | 800 | 129.3 | 900 |
| GR | 129.8 | 1000 | 130.3 | 1100 | 130.1 | 1200 | 130.3 | 1300 | 130.5 | 1400 |
| GR | 131.4 | 1500 | 130.0 | 1543 | 124.6 | 1553 | 124.6 | 1559 | 130.7 | 1568 |
| GR | 132.2 | 1600 | | | | | | | | |
| NC | | | .1 | .3 | | | | | | |
| X1 | 11750 | 24 | 1688 | 1712 | 500 | 500 | 500 | | | |
| GR | 133.5 | 0 | 132.4 | 100 | 132.4 | 200 | 132.8 | 300 | 133.2 | 400 |
| GR | 133.6 | 500 | 133.9 | 600 | 133.4 | 700 | 133.1 | 800 | 132.7 | 900 |
| GR | 131.9 | 1000 | 131.4 | 1100 | 130.9 | 1161 | 130.6 | 1200 | 130.9 | 1300 |
| GR | 131.2 | 1400 | 132.0 | 1500 | 131.9 | 1600 | 130.8 | 1688 | 125.2 | 1697 |
| GR | 125.2 | 1703 | 130.2 | 1712 | 133.1 | 1737 | 151.1 | 1737 | | |
| QT | 5 | 320 | 460 | 560 | 710 | 890 | | | | |
| X1 | 12350 | 25 | 1721 | 1745 | 600 | 600 | 600 | | | |
| GR | 136.7 | 0 | 136.7 | 100 | 136.1 | 200 | 136.1 | 300 | 137.1 | 400 |
| GR | 137.6 | 500 | 137.6 | 600 | 137.3 | 700 | 136.5 | 800 | 136.9 | 900 |
| GR | 137.5 | 1000 | 137.7 | 1100 | 136.6 | 1200 | 135.6 | 1267 | 135.1 | 1300 |
| GR | 134.1 | 1400 | 133.8 | 1500 | 134.6 | 1600 | 132.6 | 1721 | 125.5 | 1730 |
| GR | 125.5 | 1736 | 132.1 | 1745 | 133.9 | 1750 | 134.4 | 1771 | 148.4 | 1771 |

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 1/89 16:22:46

HEC2 RELEASE DATED SEPT 88

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

A109-03-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|------------|---------|--------|--------|--------|--------|------|--------|---------|---------|-------|-----|------|
| 120.000 | 2640.00 | 115.61 | 114.50 | 115.90 | 102.70 | 2.68 | 115.72 | .00 | 171.98 | .00 | .01 | .00 |
| * 1520.000 | 2390.00 | 116.13 | 115.20 | 115.30 | 102.70 | 3.09 | 116.28 | 1400.00 | 260.82 | 6.96 | .01 | .00 |
| * 1574.000 | 2390.00 | 116.09 | 117.60 | 117.60 | 102.50 | 4.51 | 116.41 | 54.00 | 78.60 | 7.17 | .01 | .00 |
| 1586.000 | 2390.00 | 116.14 | 117.60 | 117.60 | 102.50 | 4.48 | 116.45 | 12.00 | 78.73 | 7.19 | .01 | .00 |
| * 1636.000 | 2390.00 | 116.40 | 115.20 | 115.30 | 103.10 | 2.97 | 116.54 | 50.00 | 354.00 | 7.44 | .01 | .00 |
| 3528.000 | 2080.00 | 117.29 | 115.90 | 116.20 | 104.10 | 4.95 | 117.67 | 1892.00 | 51.25 | 16.24 | .01 | .00 |
| 3538.000 | 2080.00 | 117.30 | 115.90 | 116.20 | 104.10 | 4.94 | 117.68 | 10.00 | 51.26 | 16.25 | .01 | .00 |
| * 3543.000 | 2080.00 | 116.70 | 115.90 | 116.20 | 109.40 | 8.96 | 117.95 | 5.00 | 50.64 | 16.25 | .01 | .00 |
| 3553.000 | 2080.00 | 116.80 | 115.90 | 116.20 | 109.40 | 8.77 | 118.00 | 10.00 | 50.74 | 16.27 | .01 | .00 |
| 3921.000 | 2080.00 | 118.36 | 118.80 | 117.60 | 109.80 | 7.50 | 119.22 | 368.00 | 327.83 | 17.86 | .01 | .00 |
| * 3961.000 | 2080.00 | 119.13 | 116.80 | 116.80 | 109.80 | 4.93 | 119.44 | 40.00 | 1207.88 | 18.57 | .01 | .00 |
| * 3962.000 | 2080.00 | 119.27 | 116.80 | 116.80 | 109.80 | 4.63 | 119.47 | 1.00 | 1278.08 | 18.60 | .01 | .00 |
| 3994.000 | 2080.00 | 119.44 | 116.80 | 116.80 | 109.80 | 4.19 | 119.59 | 32.00 | 1350.95 | 19.56 | .01 | .00 |
| * 3995.000 | 2080.00 | 119.40 | 116.80 | 116.80 | 109.80 | 4.50 | 119.64 | 1.00 | 1330.47 | 19.59 | .01 | .00 |
| * 4035.000 | 2080.00 | 119.31 | 118.80 | 117.60 | 109.80 | 5.87 | 119.80 | 40.00 | 963.31 | 20.65 | .01 | .00 |
| 4558.000 | 1930.00 | 120.01 | 119.50 | 118.70 | 110.10 | 5.92 | 120.52 | 523.00 | 801.23 | 31.24 | .01 | .00 |
| 4608.000 | 1930.00 | 120.24 | 119.40 | 119.40 | 110.10 | 5.05 | 120.62 | 50.00 | 851.95 | 32.19 | .01 | .00 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|---------|---------|--------|-----|------|
| * 4609.000 | 1930.00 | 120.13 | 119.40 | 119.40 | 110.10 | 6.51 | 120.73 | 1.00 | 828.10 | 32.21 | .01 | .00 |
| * 4639.000 | 1930.00 | 120.69 | 119.40 | 119.40 | 110.10 | 4.90 | 120.98 | 30.00 | 952.01 | 32.82 | .01 | .00 |
| * 4640.000 | 1930.00 | 120.70 | 119.40 | 119.40 | 110.10 | 4.48 | 120.98 | 1.00 | 953.83 | 32.84 | .01 | .00 |
| 4690.000 | 1930.00 | 120.73 | 119.50 | 118.70 | 110.10 | 4.73 | 121.02 | 50.00 | 957.78 | 33.94 | .01 | .00 |
| * 5868.000 | 1780.00 | 121.90 | 120.70 | 120.20 | 112.80 | 5.81 | 122.41 | 1178.00 | 329.37 | 51.35 | .01 | .00 |
| * 6124.000 | 1720.00 | 122.49 | 120.80 | 121.20 | 113.00 | 2.22 | 122.53 | 256.00 | 1759.96 | 57.48 | .01 | .00 |
| 6125.000 | 1720.00 | 122.47 | 120.80 | 121.20 | 114.50 | 3.29 | 122.56 | 1.00 | 1754.44 | 57.53 | .01 | .00 |
| 6153.000 | 1720.00 | 122.47 | 119.40 | 119.50 | 114.60 | 3.20 | 122.56 | 28.00 | 1755.15 | 58.65 | .01 | .00 |
| * 6154.000 | 1720.00 | 122.44 | 119.40 | 119.50 | 114.60 | 4.74 | 122.60 | 1.00 | 1748.95 | 58.69 | .01 | .00 |
| 6182.000 | 1720.00 | 122.50 | 119.40 | 119.50 | 114.70 | 4.52 | 122.63 | 28.00 | 1687.11 | 59.80 | .01 | .00 |
| * 6183.000 | 1720.00 | 122.51 | 119.40 | 119.50 | 114.70 | 3.57 | 122.64 | 1.00 | 1688.20 | 59.84 | .01 | .00 |
| 6233.000 | 1720.00 | 122.52 | 119.40 | 119.50 | 114.70 | 3.54 | 122.64 | 50.00 | 1691.05 | 61.78 | .01 | .00 |
| * 7360.000 | 1520.00 | 122.73 | 122.20 | 121.10 | 116.50 | 7.03 | 123.23 | 1127.00 | 1028.39 | 96.96 | .01 | .00 |
| * 8560.000 | 1340.00 | 124.37 | 121.80 | 121.80 | 117.70 | 9.16 | 125.44 | 1200.00 | 742.83 | 121.35 | .01 | .00 |
| * 10100.000 | 1130.00 | 127.77 | 129.60 | 129.80 | 121.50 | 8.58 | 128.43 | 1540.00 | 729.25 | 147.37 | .01 | .00 |
| * 10199.000 | 1130.00 | 128.36 | 129.60 | 129.80 | 121.50 | 6.21 | 128.65 | 99.00 | 1030.15 | 149.37 | .01 | .00 |
| * 10200.000 | 1130.00 | 128.51 | 129.60 | 129.80 | 121.50 | 6.28 | 128.81 | 1.00 | 1194.99 | 149.40 | .01 | .00 |
| 10225.000 | 1130.00 | 128.41 | 129.90 | 129.80 | 121.70 | 7.93 | 128.98 | 25.00 | 811.95 | 149.97 | .01 | .00 |
| * 10226.000 | 1130.00 | 128.94 | 129.90 | 129.80 | 121.70 | 4.99 | 129.10 | 1.00 | 874.05 | 149.99 | .01 | .00 |
| 10300.000 | 1130.00 | 128.99 | 129.90 | 129.80 | 121.70 | 4.85 | 129.14 | 74.00 | 880.79 | 151.48 | .01 | .00 |
| * 10800.000 | 1130.00 | 128.47 | 132.00 | 132.30 | 121.10 | 9.78 | 129.95 | 500.00 | 163.35 | 157.48 | .01 | .00 |
| * 11100.000 | 1010.00 | 130.51 | 131.60 | 130.60 | 124.00 | 7.12 | 131.18 | 300.00 | 1211.08 | 162.21 | .01 | .00 |
| * 11149.000 | 1010.00 | 130.78 | 125.60 | 125.60 | 124.00 | 7.90 | 131.51 | 49.00 | 1349.80 | 163.65 | .01 | .00 |
| * 11150.000 | 1010.00 | 131.67 | 125.60 | 125.60 | 124.00 | 3.84 | 131.71 | 1.00 | 1589.35 | 163.68 | .01 | .00 |
| 11215.000 | 1010.00 | 131.83 | 126.20 | 126.20 | 124.60 | 3.24 | 131.86 | 65.00 | 1563.00 | 166.04 | .01 | .00 |
| * 11216.000 | 1010.00 | 131.72 | 126.20 | 126.20 | 124.60 | 5.36 | 131.96 | 1.00 | 1563.00 | 166.07 | .01 | .00 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|--------|---------|--------|-----|------|
| 11250.000 | 1010.00 | 131.86 | 130.00 | 130.70 | 124.60 | 4.13 | 132.00 | 34.00 | 1592.87 | 167.30 | .01 | .00 |
| * 11750.000 | 1010.00 | 131.60 | 130.80 | 130.20 | 125.20 | 8.93 | 132.75 | 500.00 | 488.69 | 179.25 | .01 | .00 |
| 12350.000 | 890.00 | 132.41 | 132.60 | 132.10 | 125.50 | 8.54 | 133.54 | 600.00 | 24.61 | 182.78 | .01 | .00 |

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 1520.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 1574.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 1636.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 3543.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 3961.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 3962.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 3995.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 4035.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 4609.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 4639.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 4640.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 5868.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 6124.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 6154.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 6183.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 7360.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 8560.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 8560.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 10100.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 10100.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 10199.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 10200.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 10200.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 10226.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 10800.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 11100.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 11100.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 11100.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 11149.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 11149.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 11150.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 11216.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 11750.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 11750.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY

THIS RUN EXECUTED 9/ 1/89 17: 5:58

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
 T3 A109-03-00 SPRING OAKS CHANNEL
 T4 100-YEAR STORM FREQUENCY INTERIM CONDITIONS
 T5 FILENAME = A10903IN.IH2

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL FQ
 2 .0006 113

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38 43 1 23 24 42 26 3 39 4
 37 30 65

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

-10 -10

J6 IHLEQ ICOPY SUBDIV STRTDS RMLE

1

| | | | | | | | | | | |
|----|-------|---------|--------|---------|-------|---------|-------|---------|-------|---------|
| NC | .15 | .15 | .04 | .1 | .3 | | | | | |
| QT | 1 | 3040 | | | | | | | | |
| X1 | 120 | 11 | 9937.5 | 10051.5 | 120 | 120 | 120 | | | |
| CI | -1 | 101.9 | .04 | 4 | 4 | 30 | | | | |
| GR | 117 | 9885.5 | 114.2 | 9911.5 | 114.5 | 9937.5 | 106.6 | 9961.5 | 103.5 | 9987.5 |
| GR | 102.7 | 10000 | 103.6 | 10012.5 | 107.9 | 10033.5 | 115.9 | 10051.5 | 114.5 | 10067.5 |
| GR | 120.7 | 10106.5 | | | | | | | | |
| QT | 1 | 2760 | | | | | | | | |
| X1 | 1520 | 12 | 9944 | 10050 | 1400 | 1400 | 1400 | | | |
| CI | -1 | 102.7 | .04 | 4 | 4 | 30 | | | | |
| GR | 117.6 | 9800 | 115 | 9900 | 115.2 | 9944 | 108.1 | 9965 | 107.3 | 9975 |
| GR | 104.2 | 9995 | 102.7 | 10000 | 105.3 | 10005 | 108.6 | 10019 | 115.3 | 10050 |
| GR | 116.1 | 10100 | 116.3 | 10200 | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | | | .015 | .3 | .5 | | | | | |
| X1 | 3961 | 17 | 9977 | 10023 | 40 | 40 | 40 | | | |
| CI | -1 | 107.92 | .015 | 1.5 | 1.5 | 24 | | | | |
| X3 | 10 | | | | | | | 117.1 | 117.3 | |
| GR | 125 | 8300 | 120 | 9300 | 117.3 | 9700 | 117.7 | 9800 | 118.1 | 9900 |
| GR | 116.8 | 9977 | 115.3 | 9977 | 110.4 | 9989 | 109.8 | 10000 | 110.4 | 10009 |
| GR | 115.3 | 10023 | 116.8 | 10023 | 118.0 | 10100 | 117.7 | 10200 | 118.0 | 10300 |
| GR | 120 | 10900 | 125 | 11400 | | | | | | |

SPRING PINES ROAD

| | | | | | | | | | | |
|----|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| X1 | 3962 | 17 | 9977 | 10023 | 1 | 1 | 1 | | | |
| CI | | | | | | .01 | | | | |
| X3 | 10 | | | | | | | 117.1 | 117.3 | |
| BT | -11 | 9700 | 117.3 | 117.3 | 9800 | 117.7 | 117.7 | 9900 | 118.1 | 118.1 |
| BT | | 9977 | 118.7 | 116.8 | 9988 | 118.7 | 116.8 | 10000 | 118.7 | 116.8 |
| BT | | 10012 | 118.7 | 116.8 | 10023 | 118.7 | 116.8 | 10100 | 118 | 118 |
| BT | | 10200 | 117.7 | 117.7 | 10300 | 118 | 118 | | | |
| GR | 125 | 8300 | 120 | 9300 | 117.3 | 9700 | 117.7 | 9800 | 118.1 | 9900 |
| GR | 116.8 | 9977 | 115.3 | 9977 | 107.92 | 9988 | 107.92 | 10000 | 107.92 | 10012 |
| GR | 115.3 | 10023 | 116.8 | 10023 | 118.0 | 10100 | 117.7 | 10200 | 118.0 | 10300 |
| GR | 120 | 10900 | 125 | 11400 | | | | | | |

| | | | | | | | | | | |
|----|------|--|--|--|----|----|----|-------|-------|--|
| X1 | 3994 | | | | 32 | 32 | 32 | | | |
| X2 | | | | | | | 1 | | | |
| X3 | 10 | | | | | | | 117.3 | 117.7 | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 3995 | 17 | 9977 | 10023 | 1 | 1 | 1 | | | |
| CI | -1 | 107.92 | .015 | 1.5 | 1.5 | 24 | | | | |
| X3 | 10 | | | | | | | 117.3 | 117.7 | |
| GR | 125 | 8300 | 120 | 9300 | 117.3 | 9700 | 117.7 | 9800 | 118.1 | 9900 |
| GR | 116.8 | 9977 | 115.3 | 9977 | 110.4 | 9989 | 109.8 | 10000 | 110.4 | 10009 |
| GR | 115.3 | 10023 | 116.8 | 10023 | 118.0 | 10100 | 117.7 | 10200 | 118.0 | 10300 |
| GR | 120 | 10900 | 125 | 11400 | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 4035 | 11 | 9974 | 10026 | 40 | 40 | 40 | | | |
| CI | -1 | 107.99 | .015 | 1.5 | 1.5 | 24 | | | | |
| GR | 125 | 8300 | 120 | 9300 | 118.8 | 9974 | 115.7 | 9981 | 110.4 | 9992 |
| GR | 109.8 | 10000 | 110.4 | 10008 | 115.6 | 10020 | 117.6 | 10026 | 120 | 10900 |
| GR | 125 | 11400 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|--------|---------|-------|---------|-------|---------|-----|--------|
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 2240 | | | | | | | | |
| X1 | 4558 | 11 | 9974.5 | 10024.5 | 523 | 523 | 523 | | | |
| CI | -1 | 108.52 | .015 | 1.5 | 1.5 | 24 | | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.5 | 9974.5 | 118.4 | 9978.5 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116.7 | 10018.5 | 118.7 | 10024.5 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|------|---------|-------|-------|-------|-------|-------|--------|
| NC | | | | .3 | .5 | | | | | |
| X1 | 4608 | 11 | 9976 | 10023 | 50 | 50 | 50 | | | |
| CI | -1 | 108.57 | .015 | 1.5 | 1.5 | 24 | | | | |
| X3 | 10 | | | | | | | 118.5 | 118.5 | |
| GR | 125 | 9200 | 120 | 9700 | 119.4 | 9976 | 116 | 9976 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116 | 10023 | 119.4 | 10023 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

BASSWOOD

| | | | | | | | | | | |
|----|--------|-------|--------|-------|-------|-------|-------|-------|--------|-------|
| X1 | 4609 | 11 | 9976 | 10023 | 1 | 1 | 1 | | | |
| CI | | | | | | .01 | | | | |
| X3 | 10 | | | | | | | 118.5 | 118.5 | |
| BT | -5 | 9976 | 119.4 | 117.5 | 9988 | 119.4 | 117.5 | 10000 | 119.4 | 117.5 |
| BT | | 10012 | 119.4 | 117.5 | 10023 | 119.4 | 117.5 | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.4 | 9976 | 116 | 9976 | 108.57 | 9988 |
| GR | 108.57 | 10000 | 108.57 | 10012 | 116 | 10023 | 119.4 | 10023 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

| | | | | | | | | | | |
|----|------|--|--|--|----|----|----|-------|-------|--|
| X1 | 4639 | | | | 30 | 30 | 30 | | | |
| X2 | | | | | | | 1 | | | |
| X3 | 10 | | | | | | | 119.4 | 119.4 | |

| | | | | | | | | | | |
|----|-------|--------|------|---------|-------|-------|-------|-------|-------|--------|
| X1 | 4640 | 11 | 9976 | 10023 | 1 | 1 | 1 | | | |
| CI | -1 | 108.57 | .015 | 1.5 | 1.5 | 24 | | | | |
| X3 | 10 | | | | | | | 119.4 | 119.4 | |
| GR | 125 | 9200 | 120 | 9700 | 119.4 | 9976 | 116 | 9976 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116 | 10023 | 119.4 | 10023 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

CONTROL STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|--------|---------|-------|---------|-------|---------|-----|--------|
| X1 | 4690 | 11 | 9974.5 | 10024.5 | 50 | 50 | 50 | | | |
| CI | -1 | 108.65 | .015 | 1.5 | 1.5 | 20 | | | | |
| X5 | -2 | 0.5 | 0.5 | | | | | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.5 | 9974.5 | 118.4 | 9978.5 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116.7 | 10018.5 | 118.7 | 10024.5 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|--------|---------|-------|---------|-------|---------|-----|--------|
| X1 | 4740 | 11 | 9974.5 | 10024.5 | 50 | 50 | 50 | | | |
| CI | -1 | 108.70 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.5 | 9974.5 | 118.4 | 9978.5 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116.7 | 10018.5 | 118.7 | 10024.5 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 2050 | | | | | | | | |
| X1 | 5868 | 9 | 9973 | 10024 | 1128 | 1128 | 1128 | | | |
| CI | -1 | 109.83 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125 | 9550 | 120.7 | 9973 | 120.3 | 9981 | 113.1 | 9991 | 113.0 | 10000 |
| GR | 112.8 | 10009 | 119.0 | 10019 | 120.2 | 10024 | 125 | 10480 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| QT | 1 | 2010 | | | | | | | | |
| X1 | 6124 | 36 | 1055 | 1100 | 256 | 256 | 256 | | | |
| CI | -1 | 110.08 | .015 | 1.5 | 1.5 | 20 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 120.8 | 1055 | 113.0 | 1067 |
| GR | 113.0 | 1075 | 113.0 | 1087 | 121.2 | 1100 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| NC | | | .015 | .3 | .5 | | | | | |
| X1 | 6125 | 36 | 1055 | 1100 | 1 | 1 | 1 | | | |
| CI | -1 | 110.08 | .015 | 1.5 | 1.5 | 20 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 120.8 | 1055 | 114.5 | 1066 |
| GR | 114.5 | 1075 | 114.5 | 1088 | 121.2 | 1100 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 6153 | 36 | 1053 | 1098 | 28 | 28 | 28 | | | |
| CI | -1 | 110.11 | .015 | 1.35 | 1.35 | 20 | | | | |
| X3 | 10 | | | | | | | 120 | 120 | |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 119.4 | 1053 | 114.6 | 1064 |
| GR | 114.6 | 1075 | 114.6 | 1087 | 119.5 | 1098 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |

MAPLEWOOD DRIVE

| | | | | | | | | | | |
|----|------|--------|-------|-------|------|-------|-------|------|-------|-------|
| X1 | 6154 | 36 | 1053 | 1098 | 1 | 1 | 1 | | | |
| CI | -1 | 110.11 | .015 | 1.35 | 1.35 | 20 | | | | |
| X2 | | | | | | | | | | |
| X3 | 10 | | | | | | | 120 | 120 | |
| BT | -36 | 0 | 125.0 | 124.7 | 99 | 122.7 | 122.5 | 198 | 121.7 | 121.4 |
| BT | | 297 | 120.5 | 120.5 | 310 | 120.5 | 120.5 | 396 | 120.5 | 120.2 |
| BT | | 495 | 120.4 | 119.9 | 594 | 120.4 | 119.9 | 629 | 120.7 | 119.6 |
| BT | | 634 | 120.8 | 120.8 | 642 | 120.8 | 115.3 | 645 | 120.8 | 115.3 |
| BT | | 649 | 120.8 | 115.3 | 657 | 121.3 | 121.3 | 700 | 121.0 | 121.0 |
| BT | | 800 | 120.7 | 119.5 | 900 | 121.0 | 119.2 | 1000 | 121.4 | 119.6 |
| BT | | 1053 | 121.3 | 119.4 | 1053 | 123.7 | 119.4 | 1098 | 123.7 | 119.5 |
| BT | | 1098 | 121.3 | 119.5 | 1098 | 121.3 | 119.5 | 1200 | 121.2 | 119.0 |
| BT | | 1300 | 120.6 | 118.8 | 1400 | 120.7 | 119.1 | 1500 | 121.1 | 119.4 |
| BT | | 1600 | 121.7 | 120.3 | 1700 | 122.1 | 120.5 | 1800 | 123.3 | 121.9 |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| BT | | 1900 | 123.7 | 122.9 | 2000 | 124.3 | 123.1 | 2100 | 124.7 | 123.8 |
| BT | | 2200 | 124.7 | 123.8 | 2231 | 124.9 | 124.3 | 2300 | 124.5 | 123.5 |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 119.4 | 1053 | 114.6 | 1064 |
| GR | 114.6 | 1075 | 114.6 | 1087 | 119.5 | 1098 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |
| X1 | 6182 | 34 | 1053 | 1098 | 28 | 28 | 28 | | | |
| CI | -1 | 110.14 | .015 | 1.35 | 1.35 | 20 | | | | |
| X2 | | | | | | | | | | |
| X3 | 10 | | | | | | | 120.0 | 120.0 | |
| BT | -33 | 0 | 125.0 | 125.0 | 99 | 122.7 | 122.5 | 198 | 121.7 | 121.7 |
| BT | | 297 | 120.5 | 120.1 | 396 | 120.5 | 120.4 | 495 | 120.4 | 120.1 |
| BT | | 594 | 120.4 | 120.2 | 608 | 120.5 | 120.2 | 642 | 120.8 | 120.0 |
| BT | | 655 | 120.8 | 119.9 | 700 | 120.7 | 119.6 | 800 | 120.7 | 119.8 |
| BT | | 900 | 121.0 | 119.9 | 1000 | 121.4 | 120.3 | 1053 | 121.3 | 119.4 |
| BT | | 1053 | 123.7 | 119.4 | 1098 | 123.7 | 119.5 | 1098 | 121.3 | 119.5 |
| BT | | 1100 | 121.3 | 119.6 | 1200 | 121.2 | 120.1 | 1300 | 120.6 | 119.7 |
| BT | | 1400 | 120.7 | 120.1 | 1500 | 121.1 | 119.9 | 1600 | 121.7 | 120.8 |
| BT | | 1700 | 122.1 | 121.2 | 1800 | 123.3 | 122.7 | 1806 | 123.3 | 122.7 |
| BT | | 1900 | 123.7 | 122.6 | 2000 | 124.3 | 123.1 | 2100 | 124.7 | 123.8 |
| BT | | 2200 | 124.7 | 123.7 | 2231 | 124.9 | 124.5 | 2300 | 124.5 | 123.6 |
| GR | 125.0 | 0 | 122.5 | 99 | 121.7 | 198 | 120.1 | 297 | 120.4 | 396 |
| GR | 120.1 | 495 | 120.2 | 594 | 120.2 | 608 | 120.0 | 642 | 119.9 | 655 |
| GR | 119.6 | 700 | 119.8 | 800 | 119.9 | 900 | 120.3 | 1000 | 119.4 | 1053 |
| GR | 114.7 | 1064 | 114.7 | 1075 | 114.7 | 1087 | 119.5 | 1098 | 119.6 | 1100 |
| GR | 120.1 | 1200 | 119.7 | 1300 | 120.1 | 1400 | 119.9 | 1500 | 120.8 | 1600 |
| GR | 121.2 | 1700 | 122.7 | 1800 | 122.7 | 1806 | 122.6 | 1900 | 123.1 | 2000 |
| GR | 123.8 | 2100 | 123.7 | 2200 | 124.5 | 2231 | 123.6 | 2300 | | |
| X1 | 6183 | 33 | 1053 | 1098 | 1 | 1 | 1 | | | |
| CI | -1 | 110.14 | .015 | 1.35 | 1.35 | 20 | | | | |
| X3 | 10 | | | | | | | 120.4 | 120.6 | |
| GR | 125.0 | 0 | 122.5 | 99 | 121.7 | 198 | 120.1 | 297 | 120.4 | 396 |
| GR | 120.1 | 495 | 120.2 | 594 | 120.2 | 608 | 120.0 | 642 | 119.6 | 700 |
| GR | 119.8 | 800 | 119.9 | 900 | 120.3 | 1000 | 119.4 | 1053 | 114.7 | 1064 |
| GR | 114.7 | 1075 | 114.7 | 1087 | 119.5 | 1098 | 119.6 | 1100 | 120.1 | 1200 |
| GR | 119.7 | 1300 | 120.1 | 1400 | 119.9 | 1500 | 120.8 | 1600 | 121.2 | 1700 |
| GR | 122.7 | 1800 | 122.7 | 1806 | 122.6 | 1900 | 123.1 | 2000 | 123.8 | 2100 |
| GR | 123.7 | 2200 | 124.5 | 2231 | 123.6 | 2300 | | | | |
| X1 | 6208 | 33 | 1053 | 1098 | 25 | 25 | 25 | | | |
| CI | -1 | 110.19 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125.0 | 0 | 122.5 | 99 | 121.7 | 198 | 120.1 | 297 | 120.4 | 396 |
| GR | 120.1 | 495 | 120.2 | 594 | 120.2 | 608 | 120.0 | 642 | 119.6 | 700 |
| GR | 119.8 | 800 | 119.9 | 900 | 120.3 | 1000 | 119.4 | 1053 | 114.7 | 1064 |
| GR | 114.7 | 1075 | 114.7 | 1087 | 119.5 | 1098 | 119.6 | 1100 | 120.1 | 1200 |
| GR | 119.7 | 1300 | 120.1 | 1400 | 119.9 | 1500 | 120.8 | 1600 | 121.2 | 1700 |
| GR | 122.7 | 1800 | 122.7 | 1806 | 122.6 | 1900 | 123.1 | 2000 | 123.8 | 2100 |
| GR | 123.7 | 2200 | 124.5 | 2231 | 123.6 | 2300 | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 6233 | 19 | 609 | 639 | 25 | 25 | 25 | | | -1.7 |
| CI | 625 | 110.24 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125.3 | 0 | 121.2 | 344 | 120.2 | 400 | 120.5 | 431 | 120.8 | 500 |
| GR | 122.7 | 606 | 122.2 | 609 | 116.5 | 619 | 116.5 | 625 | 116.5 | 631 |
| GR | 121.1 | 639 | 121.0 | 700 | 121.0 | 800 | 120.4 | 900 | 122.1 | 1185 |
| GR | 122.4 | 1217 | 123.4 | 1300 | 124.4 | 1400 | 125.8 | 1500 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 1780 | | | | | | | | |
| X1 | 7360 | 19 | 609 | 639 | 1127 | 1127 | 1127 | | | |
| CI | 625 | 111.32 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125.3 | 0 | 121.2 | 344 | 120.2 | 400 | 120.5 | 431 | 120.8 | 500 |
| GR | 122.7 | 606 | 122.2 | 609 | 116.5 | 619 | 116.5 | 625 | 116.5 | 631 |
| GR | 121.1 | 639 | 121.0 | 700 | 121.0 | 800 | 120.4 | 900 | 122.1 | 1185 |
| GR | 122.4 | 1217 | 123.4 | 1300 | 124.4 | 1400 | 125.8 | 1500 | | |

CONTROL STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 7410 | 19 | 609 | 639 | 50 | 50 | 50 | | | |
| CI | 625 | 111.37 | .015 | 1.5 | 1.5 | 16 | | | | |
| X5 | -2 | 0.5 | 0.5 | | | | | | | |
| GR | 125.3 | 0 | 121.2 | 344 | 120.2 | 400 | 120.5 | 431 | 120.8 | 500 |
| GR | 122.7 | 606 | 122.2 | 609 | 116.5 | 619 | 116.5 | 625 | 116.5 | 631 |
| GR | 121.1 | 639 | 121.0 | 700 | 121.0 | 800 | 120.4 | 900 | 122.1 | 1185 |
| GR | 122.4 | 1217 | 123.4 | 1300 | 124.4 | 1400 | 125.8 | 1500 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-----|-------|------|-------|------|-------|------|
| QT | 1 | 1570 | | | | | | | | |
| X1 | 8560 | 21 | 665 | 687 | 1150 | 1150 | 1150 | | | |
| CI | 677.5 | 112.52 | .015 | 1.5 | 1.5 | 16 | | | | |
| GR | 128.3 | 0 | 126.5 | 25 | 126.4 | 118 | 126.3 | 125 | 126.0 | 225 |
| GR | 123.9 | 325 | 123.8 | 332 | 124.2 | 425 | 124.2 | 525 | 122.9 | 625 |
| GR | 121.8 | 665 | 117.7 | 673 | 117.7 | 682 | 121.8 | 687 | 122.8 | 725 |
| GR | 123.0 | 825 | 123.2 | 925 | 124.0 | 1025 | 125.8 | 1125 | 127.2 | 1190 |
| GR | 128.4 | 1240 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-----|-------|------|-------|------|-------|------|
| QT | 1 | 1480 | | | | | | | | |
| X1 | 9099 | 21 | 665 | 687 | 539 | 539 | 539 | | 2.0 | |
| CI | 677.5 | 113.06 | .015 | 1.5 | 1.5 | 16 | | | | |
| GR | 128.3 | 0 | 126.5 | 25 | 126.4 | 118 | 126.3 | 125 | 126.0 | 225 |
| GR | 123.9 | 325 | 123.8 | 332 | 124.2 | 425 | 124.2 | 525 | 122.9 | 625 |
| GR | 121.8 | 665 | 117.7 | 673 | 117.7 | 682 | 121.8 | 687 | 122.8 | 725 |
| GR | 123.0 | 825 | 123.2 | 925 | 124.0 | 1025 | 125.8 | 1125 | 127.2 | 1190 |
| GR | 128.4 | 1240 | | | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|-------|-----|-------|------|-------|------|-------|------|
| X1 | 9100 | 21 | 665 | 687 | 1 | 1 | 1 | | 2.0 | |
| CI | 677.5 | 116.10 | .015 | 1.5 | 1.5 | 12 | | | | |
| X5 | -2 | 2.5 | 2.5 | | | | | | | |
| GR | 128.3 | 0 | 126.5 | 25 | 126.4 | 118 | 126.3 | 125 | 126.0 | 225 |
| GR | 123.9 | 325 | 123.8 | 332 | 124.2 | 425 | 124.2 | 525 | 122.9 | 625 |
| GR | 121.8 | 665 | 117.7 | 673 | 117.7 | 682 | 121.8 | 687 | 122.8 | 725 |
| GR | 123.0 | 825 | 123.2 | 925 | 124.0 | 1025 | 125.8 | 1125 | 127.2 | 1190 |
| GR | 128.4 | 1240 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| QT | 1 | 1320 | | | | | | | | |
| X1 | 10099 | 25 | 1581 | 1600 | 999 | 999 | 999 | | | |
| CI | 1590 | 117.10 | .015 | 1.5 | 1.5 | 12 | | | | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 | 127.6 | 900 |
| GR | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 | 127.8 | 1400 |
| GR | 128.7 | 1500 | 129.6 | 1581 | 121.5 | 1586 | 121.5 | 1594 | 129.8 | 1600 |
| GR | 130.2 | 1605 | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 10100 | 25 | 1581 | 1600 | 1 | 1 | 1 | | | |
| CI | 1590 | 120.10 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| X5 | -2 | 3.5 | 3.5 | | | | | | | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 | 127.6 | 900 |
| GR | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 | 127.8 | 1400 |
| GR | 128.7 | 1500 | 129.6 | 1581 | 121.5 | 1586 | 121.5 | 1594 | 129.8 | 1600 |
| GR | 130.2 | 1605 | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| NC | | | | .3 | .5 | | | | | |
| X1 | 10199 | 25 | 1581 | 1600 | 99 | 99 | 99 | | | |
| CI | 1590 | 120.20 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 | 127.6 | 900 |
| GR | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 | 127.8 | 1400 |
| GR | 128.7 | 1500 | 129.6 | 1581 | 121.5 | 1586 | 121.5 | 1594 | 129.8 | 1600 |
| GR | 130.2 | 1605 | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 |

LANE LANE - EXISTING BRIDGE REPLACED

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 10200 | 29 | 1581 | 1600 | 1 | 1 | 1 | | | |
| CI | 1590 | 120.20 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 484 | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 |
| GR | 127.6 | 900 | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 |
| GR | 127.9 | 1374 | 127.8 | 1400 | 128.7 | 1500 | 129.6 | 1581 | 128.5 | 1582 |
| GR | 121.5 | 1586 | 121.5 | 1594 | 128.5 | 1599 | 129.8 | 1600 | 130.2 | 1605 |
| GR | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 10225 | 29 | 1581 | 1600 | 25 | 25 | 25 | | | |
| CI | 1590 | 120.22 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.4 | 0 | 128.7 | 100 | 127.5 | 200 | 126.6 | 300 | 126.2 | 400 |
| GR | 126.5 | 484 | 126.5 | 500 | 126.3 | 600 | 125.6 | 700 | 126.8 | 800 |
| GR | 128.0 | 900 | 130.2 | 1000 | 129.9 | 1100 | 130.0 | 1200 | 129.3 | 1300 |
| GR | 129.2 | 1374 | 129.1 | 1400 | 129.9 | 1500 | 129.9 | 1581 | 128.7 | 1582 |
| GR | 121.7 | 1586 | 121.7 | 1594 | 128.7 | 1599 | 129.8 | 1600 | 130.3 | 1605 |
| GR | 129.7 | 1700 | 129.3 | 1800 | 129.7 | 1900 | 130.2 | 2000 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 10226 | 25 | 1581 | 1600 | 1 | 1 | 1 | | | |
| CI | 1590 | 120.22 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.4 | 0 | 128.7 | 100 | 127.5 | 200 | 126.6 | 300 | 126.2 | 400 |
| GR | 126.5 | 500 | 126.3 | 600 | 125.6 | 700 | 126.8 | 800 | 128.0 | 900 |
| GR | 130.2 | 1000 | 129.9 | 1100 | 130.0 | 1200 | 129.3 | 1300 | 129.1 | 1400 |
| GR | 129.9 | 1500 | 129.9 | 1581 | 121.7 | 1586 | 121.7 | 1594 | 129.8 | 1600 |
| GR | 130.3 | 1605 | 129.7 | 1700 | 129.3 | 1800 | 129.7 | 1900 | 130.2 | 2000 |
| X1 | 10300 | 25 | 1581 | 1600 | 74 | 74 | 74 | | | |
| CI | 1590 | 120.30 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.4 | 0 | 128.7 | 100 | 127.5 | 200 | 126.6 | 300 | 126.2 | 400 |
| GR | 126.5 | 500 | 126.3 | 600 | 125.6 | 700 | 126.8 | 800 | 128.0 | 900 |
| GR | 130.2 | 1000 | 129.9 | 1100 | 130.0 | 1200 | 129.3 | 1300 | 129.1 | 1400 |
| GR | 129.9 | 1500 | 129.9 | 1581 | 121.7 | 1586 | 121.7 | 1594 | 129.8 | 1600 |
| GR | 130.3 | 1605 | 129.7 | 1700 | 129.3 | 1800 | 129.7 | 1900 | 130.2 | 2000 |
| QT | 1 | 1230 | | | | | | | | |
| NC | | | | .1 | .3 | | | | | |
| X1 | 10800 | 23 | 1573 | 1606 | 500 | 500 | 500 | | | |
| CI | 1584 | 120.80 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.9 | 0 | 130.3 | 100 | 129.6 | 200 | 129.1 | 300 | 129.1 | 400 |
| GR | 129.1 | 425 | 128.6 | 500 | 128.3 | 600 | 128.5 | 700 | 128.7 | 800 |
| GR | 128.7 | 900 | 129.4 | 1000 | 129.6 | 1100 | 129.7 | 1200 | 130.2 | 1300 |
| GR | 131.1 | 1369 | 130.9 | 1400 | 131.9 | 1500 | 132.0 | 1573 | 121.1 | 1586 |
| GR | 121.1 | 1593 | 132.3 | 1606 | 136.6 | 1616 | | | | |
| QT | 1 | 1190 | | | | | | | | |
| X1 | 11100 | 21 | 1535 | 1568 | 300 | 300 | 300 | | | |
| CI | 1550 | 121.10 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.2 | 0 | 130.5 | 100 | 131.1 | 200 | 130.4 | 300 | 130.3 | 400 |
| GR | 129.7 | 500 | 129.8 | 600 | 129.6 | 700 | 129.6 | 800 | 129.8 | 900 |
| GR | 129.8 | 1000 | 130.3 | 1100 | 129.7 | 1200 | 130.2 | 1300 | 130.7 | 1400 |
| GR | 131.5 | 1500 | 131.6 | 1535 | 124.0 | 1547 | 124.0 | 1553 | 130.6 | 1568 |
| GR | 132.2 | 1600 | | | | | | | | |
| X1 | 11149 | 22 | 1535 | 1568 | 49 | 49 | 49 | | | |
| CI | 1550 | 121.15 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.2 | 0 | 130.5 | 100 | 131.1 | 200 | 130.6 | 266 | 130.4 | 300 |
| GR | 130.3 | 400 | 129.7 | 500 | 129.8 | 600 | 129.6 | 700 | 129.6 | 800 |
| GR | 129.8 | 900 | 129.8 | 1000 | 130.3 | 1100 | 129.7 | 1200 | 130.2 | 1300 |
| GR | 130.7 | 1400 | 131.5 | 1500 | 131.6 | 1535 | 124.0 | 1547 | 124.0 | 1553 |
| GR | 130.6 | 1568 | 132.2 | 1600 | | | | | | |

ROBINSON ROAD - EXISTING BRIDGE REPLACED

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 11150 | 22 | 1535 | 1568 | 1 | 1 | 1 | | | |
| CI | 1550 | 121.15 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.2 | 0 | 130.5 | 100 | 131.1 | 200 | 130.6 | 266 | 130.4 | 300 |
| GR | 130.3 | 400 | 129.7 | 500 | 129.8 | 600 | 129.6 | 700 | 129.6 | 800 |
| GR | 129.8 | 900 | 129.8 | 1000 | 130.3 | 1100 | 129.7 | 1200 | 130.2 | 1300 |
| GR | 130.7 | 1400 | 131.5 | 1500 | 131.6 | 1535 | 124.0 | 1547 | 124.0 | 1553 |
| GR | 130.6 | 1568 | 132.2 | 1600 | | | | | | |
| X1 | 11215 | 22 | 1543 | 1568 | 65 | 65 | 65 | | | |
| CI | 1556 | 121.22 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.3 | 0 | 131.3 | 100 | 130.8 | 200 | 131.1 | 266 | 131.2 | 300 |
| GR | 130.5 | 400 | 130.5 | 500 | 130.1 | 600 | 129.9 | 700 | 129.9 | 800 |
| GR | 129.3 | 900 | 129.8 | 1000 | 130.3 | 1100 | 130.1 | 1200 | 130.3 | 1300 |
| GR | 130.5 | 1400 | 131.4 | 1500 | 130.0 | 1543 | 124.6 | 1553 | 124.6 | 1559 |
| GR | 130.7 | 1568 | 132.2 | 1600 | | | | | | |
| X1 | 11216 | 22 | 1543 | 1568 | 1 | 1 | 1 | | | |
| CI | 1556 | 121.22 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.3 | 0 | 131.3 | 100 | 130.8 | 200 | 131.1 | 266 | 131.2 | 300 |
| GR | 130.5 | 400 | 130.5 | 500 | 130.1 | 600 | 129.9 | 700 | 129.9 | 800 |
| GR | 129.3 | 900 | 129.8 | 1000 | 130.3 | 1100 | 130.1 | 1200 | 130.3 | 1300 |
| GR | 130.5 | 1400 | 131.4 | 1500 | 130.0 | 1543 | 124.6 | 1553 | 124.6 | 1559 |
| GR | 130.7 | 1568 | 132.2 | 1600 | | | | | | |
| X1 | 11250 | 21 | 1543 | 1568 | 34 | 34 | 34 | | | |
| CI | 1556 | 121.25 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.3 | 0 | 131.3 | 100 | 130.8 | 200 | 131.2 | 300 | 130.5 | 400 |
| GR | 130.5 | 500 | 130.1 | 600 | 129.9 | 700 | 129.9 | 800 | 129.3 | 900 |
| GR | 129.8 | 1000 | 130.3 | 1100 | 130.1 | 1200 | 130.3 | 1300 | 130.5 | 1400 |
| GR | 131.4 | 1500 | 130.0 | 1543 | 124.6 | 1553 | 124.6 | 1559 | 130.7 | 1568 |
| GR | 132.2 | 1600 | | | | | | | | |
| QT | 1 | 1120 | | | | | | | | |
| X1 | 11750 | 23 | 1688 | 1712 | 500 | 500 | 500 | | | |
| CI | -1 | 121.75 | .015 | 1.5 | 1.5 | 8 | | | | |
| GR | 133.5 | 0 | 132.4 | 100 | 132.4 | 200 | 132.8 | 300 | 133.2 | 400 |
| GR | 133.6 | 500 | 133.9 | 600 | 133.4 | 700 | 133.1 | 800 | 132.7 | 900 |
| GR | 131.9 | 1000 | 131.4 | 1100 | 130.9 | 1161 | 130.6 | 1200 | 130.9 | 1300 |
| GR | 131.2 | 1400 | 132.0 | 1500 | 131.9 | 1600 | 130.8 | 1688 | 125.2 | 1697 |
| GR | 125.2 | 1703 | 130.2 | 1712 | 133.1 | 1737 | | | | |
| QT | 1 | 1050 | | | | | | | | |
| X1 | 12350 | 24 | 1721 | 1745 | 600 | 600 | 600 | | | |
| CI | -1 | 122.35 | .015 | 1.5 | 1.5 | 8 | | | | |
| GR | 136.7 | 0 | 136.7 | 100 | 136.1 | 200 | 136.1 | 300 | 137.1 | 400 |
| GR | 137.6 | 500 | 137.6 | 600 | 137.3 | 700 | 136.5 | 800 | 136.9 | 900 |
| GR | 137.5 | 1000 | 137.7 | 1100 | 136.6 | 1200 | 135.6 | 1267 | 135.1 | 1300 |
| GR | 134.1 | 1400 | 133.8 | 1500 | 134.6 | 1600 | 132.6 | 1721 | 125.5 | 1730 |

GR 125.5 1736 132.1 1745 133.9 1750 134.4 1771

IHLQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 1/89 17: 6:29

HEC2 RELEASE DATED SEPT 88

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

A109-03-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|------------|---------|--------|--------|--------|--------|------|--------|---------|--------|-------|-------|-------|
| 120.000 | 3040.00 | 113.62 | 114.41 | 114.99 | 101.90 | 3.37 | 113.80 | .00 | 123.79 | .00 | 30.00 | .00 |
| 1520.000 | 2760.00 | 114.42 | 115.15 | 115.51 | 102.70 | 3.06 | 114.57 | 1400.00 | 123.76 | 3.98 | 30.00 | 12.94 |
| 1574.000 | 2760.00 | 114.45 | 116.27 | 116.85 | 102.50 | 3.05 | 114.59 | 54.00 | 124.00 | 4.13 | 30.00 | 13.93 |
| 1636.000 | 2760.00 | 114.47 | 115.15 | 115.51 | 102.80 | 3.08 | 114.62 | 50.00 | 123.38 | 4.27 | 30.00 | 14.82 |
| 3528.000 | 2400.00 | 115.39 | 119.01 | 117.68 | 104.10 | 2.83 | 115.51 | 1892.00 | 120.31 | 9.57 | 30.00 | 52.66 |
| 3538.000 | 2400.00 | 115.39 | 119.01 | 117.68 | 104.10 | 2.83 | 115.52 | 10.00 | 120.35 | 9.59 | 30.00 | 52.94 |
| * 3543.000 | 2400.00 | 115.49 | 118.81 | 117.60 | 107.50 | 8.34 | 116.57 | 5.00 | 47.98 | 9.60 | 24.00 | 53.02 |
| 3553.000 | 2400.00 | 115.50 | 118.81 | 117.60 | 107.50 | 8.33 | 116.58 | 10.00 | 48.00 | 9.61 | 24.00 | 53.07 |
| 3921.000 | 2330.00 | 115.83 | 118.80 | 117.60 | 107.88 | 8.16 | 116.86 | 368.00 | 47.85 | 10.02 | 24.00 | 54.86 |
| 3961.000 | 2330.00 | 115.85 | 116.84 | 116.84 | 107.92 | 8.18 | 116.89 | 40.00 | 47.81 | 10.06 | 24.00 | 55.03 |
| 3962.000 | 2330.00 | 115.85 | 116.80 | 116.80 | 107.92 | 8.21 | 116.90 | 1.00 | 46.00 | 10.06 | .01 | 55.03 |
| 3994.000 | 2330.00 | 115.88 | 116.80 | 116.80 | 107.92 | 8.18 | 116.92 | 32.00 | 46.00 | 10.10 | .01 | 55.03 |
| 3995.000 | 2330.00 | 115.91 | 116.84 | 116.84 | 107.92 | 8.11 | 116.93 | 1.00 | 47.97 | 10.10 | 24.00 | 55.04 |
| 4035.000 | 2330.00 | 115.93 | 118.80 | 117.60 | 107.99 | 8.16 | 116.96 | 40.00 | 47.84 | 10.14 | 24.00 | 55.21 |
| 4558.000 | 2240.00 | 116.34 | 119.51 | 118.71 | 108.52 | 8.02 | 117.34 | 523.00 | 47.46 | 10.72 | 24.00 | 58.07 |
| 4608.000 | 2240.00 | 116.37 | 119.41 | 119.41 | 108.57 | 8.03 | 117.37 | 50.00 | 47.41 | 10.77 | 24.00 | 58.31 |
| 4609.000 | 2240.00 | 116.41 | 119.40 | 119.40 | 108.57 | 7.91 | 117.38 | 1.00 | 47.00 | 10.77 | .01 | 58.31 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|---------|--------|-------|-------|--------|
| 4639.000 | 2240.00 | 116.44 | 119.40 | 119.40 | 108.57 | 7.88 | 117.41 | 30.00 | 47.00 | 10.80 | .01 | 58.31 |
| 4640.000 | 2240.00 | 116.43 | 119.41 | 119.41 | 108.57 | 7.94 | 117.41 | 1.00 | 47.61 | 10.80 | 24.00 | 58.32 |
| * 4690.000 | 2240.00 | 116.93 | 119.50 | 118.70 | 108.65 | 8.34 | 118.01 | 50.00 | 44.85 | 10.86 | 20.00 | 58.52 |
| 4740.000 | 2240.00 | 116.97 | 119.50 | 118.70 | 108.70 | 8.36 | 118.05 | 50.00 | 44.81 | 10.91 | 20.00 | 58.72 |
| 5868.000 | 2050.00 | 117.91 | 120.71 | 120.20 | 109.83 | 7.90 | 118.88 | 1128.00 | 44.24 | 12.06 | 20.00 | 64.29 |
| 6124.000 | 2010.00 | 118.11 | 120.72 | 121.11 | 110.08 | 7.83 | 119.06 | 256.00 | 44.05 | 12.32 | 20.00 | 65.70 |
| 6125.000 | 2010.00 | 118.11 | 120.72 | 121.11 | 110.08 | 7.82 | 119.06 | 1.00 | 44.08 | 12.32 | 20.00 | 65.71 |
| 6153.000 | 2010.00 | 118.08 | 119.40 | 119.50 | 110.11 | 8.19 | 119.13 | 28.00 | 41.53 | 12.35 | 20.00 | 65.87 |
| 6154.000 | 2010.00 | 118.08 | 119.40 | 119.50 | 110.11 | 8.19 | 119.13 | 1.00 | 41.53 | 12.35 | 20.00 | 65.88 |
| 6182.000 | 2010.00 | 118.10 | 119.40 | 119.51 | 110.14 | 8.21 | 119.15 | 28.00 | 41.51 | 12.38 | 20.00 | 66.02 |
| 6183.000 | 2010.00 | 118.10 | 119.40 | 119.51 | 110.14 | 8.21 | 119.15 | 1.00 | 41.50 | 12.38 | 20.00 | 66.03 |
| 6208.000 | 2010.00 | 118.27 | 119.42 | 119.58 | 110.19 | 7.74 | 119.20 | 25.00 | 44.25 | 12.40 | 20.00 | 66.16 |
| 6233.000 | 2010.00 | 118.28 | 120.88 | 119.38 | 110.24 | 7.78 | 119.22 | 25.00 | 44.15 | 12.43 | 20.00 | 66.34 |
| 7360.000 | 1780.00 | 119.15 | 122.56 | 121.08 | 111.32 | 7.16 | 119.95 | 1127.00 | 43.49 | 13.56 | 20.00 | 76.64 |
| * 7410.000 | 1780.00 | 119.65 | 122.60 | 121.09 | 111.37 | 7.56 | 120.54 | 50.00 | 40.84 | 13.61 | 16.00 | 77.08 |
| 8560.000 | 1570.00 | 120.50 | 122.07 | 122.14 | 112.52 | 7.03 | 121.27 | 1150.00 | 39.94 | 14.68 | 16.00 | 86.36 |
| 9099.000 | 1480.00 | 120.85 | 124.13 | 124.20 | 113.06 | 6.87 | 121.59 | 539.00 | 39.35 | 15.17 | 16.00 | 91.38 |
| * 9100.000 | 1480.00 | 123.35 | 123.94 | 124.02 | 116.10 | 8.92 | 124.59 | 1.00 | 33.76 | 15.17 | 12.00 | 91.39 |
| 10099.000 | 1320.00 | 124.67 | 129.43 | 130.01 | 117.10 | 7.46 | 125.54 | 999.00 | 34.72 | 15.95 | 12.00 | 98.80 |
| * 10100.000 | 1320.00 | 128.17 | 129.50 | 130.13 | 120.10 | 8.13 | 129.20 | 1.00 | 32.22 | 15.95 | 8.00 | 98.81 |
| 10199.000 | 1320.00 | 128.27 | 129.50 | 130.13 | 120.20 | 8.15 | 129.30 | 99.00 | 32.18 | 16.03 | 8.00 | 99.19 |
| 10200.000 | 1320.00 | 128.27 | 129.50 | 130.13 | 120.20 | 8.14 | 129.30 | 1.00 | 32.20 | 16.03 | 8.00 | 99.19 |
| 10225.000 | 1320.00 | 128.30 | 129.90 | 130.27 | 120.22 | 8.13 | 129.32 | 25.00 | 32.22 | 16.05 | 8.00 | 99.29 |
| 10226.000 | 1320.00 | 128.30 | 129.90 | 130.27 | 120.22 | 8.12 | 129.33 | 1.00 | 32.23 | 16.05 | 8.00 | 99.30 |
| 10300.000 | 1320.00 | 128.37 | 129.90 | 130.27 | 120.30 | 8.14 | 129.40 | 74.00 | 32.21 | 16.10 | 8.00 | 99.59 |
| 10800.000 | 1230.00 | 129.15 | 131.99 | 132.30 | 120.80 | 6.24 | 129.76 | 500.00 | 34.88 | 16.49 | 8.00 | 101.42 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-----------|---------|--------|--------|--------|--------|------|--------|--------|--------|-------|------|--------|
| 11100.000 | 1190.00 | 129.18 | 131.59 | 130.61 | 121.10 | 7.32 | 130.01 | 300.00 | 32.24 | 16.72 | 8.00 | 102.44 |
| 11149.000 | 1190.00 | 129.21 | 131.59 | 130.61 | 121.15 | 7.35 | 130.05 | 49.00 | 32.18 | 16.75 | 8.00 | 102.61 |
| 11150.000 | 1190.00 | 129.21 | 131.59 | 130.61 | 121.15 | 7.34 | 130.05 | 1.00 | 32.19 | 16.76 | 8.00 | 102.61 |
| 11215.000 | 1190.00 | 129.26 | 130.14 | 131.01 | 121.22 | 7.37 | 130.10 | 65.00 | 32.13 | 16.80 | 8.00 | 102.85 |
| 11216.000 | 1190.00 | 129.26 | 130.14 | 131.01 | 121.22 | 7.38 | 130.11 | 1.00 | 32.12 | 16.80 | 8.00 | 102.85 |
| 11250.000 | 1190.00 | 129.29 | 130.14 | 131.01 | 121.25 | 7.38 | 130.13 | 34.00 | 32.11 | 16.83 | 8.00 | 102.99 |
| 11750.000 | 1120.00 | 129.75 | 130.87 | 130.86 | 121.75 | 7.00 | 130.51 | 500.00 | 32.00 | 17.20 | 8.00 | 105.00 |
| 12350.000 | 1050.00 | 130.22 | 132.73 | 134.01 | 122.35 | 6.73 | 130.93 | 600.00 | 31.62 | 17.63 | 8.00 | 107.72 |

SUMMARY OF ERRORS AND SPECIAL NOTES

NOTE SECNO= 3543.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 4690.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 7410.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 9100.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 10100.000 PROFILE= 1 WSEL BASED ON X5 CARD

THIS RUN EXECUTED 9/ 4/89 8:52: 1

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
T3 A109-03-00 SPRING OAKS CHANNEL
T4 100-YEAR STORM FREQUENCY ULTIMATE CONDITIONS
T5 FILENAME = A10903UL.IH2

| | | | | | | | | | | |
|----|--------|-------|-------|-------|-------|--------|-------|-----|-------|--------|
| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
| | | 2 | | | .0006 | | | | 113 | |
| J2 | NPROF | IPL0T | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
| | -1 | | -1 | | | | | | | |

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

| | | | | | | | | | |
|----|----|----|----|----|----|----|---|----|---|
| 38 | 43 | 1 | 23 | 24 | 42 | 26 | 3 | 39 | 4 |
| 37 | 30 | 65 | | | | | | | |

J5 LPRNT NUMSEC *****REQUESTED SECTION NUMBERS*****
-10 -10

J6 IHLEQ ICOPY SUBDIV STRTDS RMILE
1

| | | | | | | | | | | |
|----|-------|---------|--------|---------|-------|---------|-------|---------|-------|---------|
| NC | .15 | .15 | .04 | .1 | .3 | | | | | |
| QT | 1 | 3240 | | | | | | | | |
| X1 | 120 | 11 | 9937.5 | 10051.5 | 120 | 120 | 120 | | | |
| CI | -1 | 101.9 | .04 | 4 | 4 | 30 | | | | |
| GR | 117 | 9885.5 | 114.2 | 9911.5 | 114.5 | 9937.5 | 106.6 | 9961.5 | 103.5 | 9987.5 |
| GR | 102.7 | 10000 | 103.6 | 10012.5 | 107.9 | 10033.5 | 115.9 | 10051.5 | 114.5 | 10067.5 |
| GR | 120.7 | 10106.5 | | | | | | | | |
| QT | 1 | 2920 | | | | | | | | |
| X1 | 1520 | 12 | 9944 | 10050 | 1400 | 1400 | 1400 | | | |
| CI | -1 | 102.7 | .04 | 4 | 4 | 30 | | | | |
| GR | 117.6 | 9800 | 115 | 9900 | 115.2 | 9944 | 108.1 | 9965 | 107.3 | 9975 |
| GR | 104.2 | 9995 | 102.7 | 10000 | 105.3 | 10005 | 108.6 | 10019 | 115.3 | 10050 |
| GR | 116.1 | 10100 | 116.3 | 10200 | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | | | .015 | .3 | .5 | | | | | |
| X1 | 3961 | 17 | 9977 | 10023 | 40 | 40 | 40 | | | |
| CI | -1 | 107.92 | .015 | 1.5 | 1.5 | 24 | | | | |
| X3 | 10 | | | | | | | 117.1 | 117.3 | |
| GR | 125 | 8300 | 120 | 9300 | 117.3 | 9700 | 117.7 | 9800 | 118.1 | 9900 |
| GR | 116.8 | 9977 | 115.3 | 9977 | 110.4 | 9989 | 109.8 | 10000 | 110.4 | 10009 |
| GR | 115.3 | 10023 | 116.8 | 10023 | 118.0 | 10100 | 117.7 | 10200 | 118.0 | 10300 |
| GR | 120 | 10900 | 125 | 11400 | | | | | | |

SPRING PINES ROAD

| | | | | | | | | | | |
|----|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| X1 | 3962 | 17 | 9977 | 10023 | 1 | 1 | 1 | | | |
| CI | | | | | | .01 | | | | |
| X3 | 10 | | | | | | | 117.1 | 117.3 | |
| BT | -11 | 9700 | 117.3 | 117.3 | 9800 | 117.7 | 117.7 | 9900 | 118.1 | 118.1 |
| BT | | 9977 | 118.7 | 116.8 | 9988 | 118.7 | 116.8 | 10000 | 118.7 | 116.8 |
| BT | | 10012 | 118.7 | 116.8 | 10023 | 118.7 | 116.8 | 10100 | 118 | 118 |
| BT | | 10200 | 117.7 | 117.7 | 10300 | 118 | 118 | | | |
| GR | 125 | 8300 | 120 | 9300 | 117.3 | 9700 | 117.7 | 9800 | 118.1 | 9900 |
| GR | 116.8 | 9977 | 115.3 | 9977 | 107.92 | 9988 | 107.92 | 10000 | 107.92 | 10012 |
| GR | 115.3 | 10023 | 116.8 | 10023 | 118.0 | 10100 | 117.7 | 10200 | 118.0 | 10300 |
| GR | 120 | 10900 | 125 | 11400 | | | | | | |

| | | | | | | | | | | |
|----|------|--|--|--|----|----|----|-------|-------|--|
| X1 | 3994 | | | | 32 | 32 | 32 | | | |
| X2 | | | | | | | 1 | | | |
| X3 | 10 | | | | | | | 117.3 | 117.7 | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 3995 | 17 | 9977 | 10023 | 1 | 1 | 1 | | | |
| CI | -1 | 107.92 | .015 | 1.5 | 1.5 | 24 | | | | |
| X3 | 10 | | | | | | | 117.3 | 117.7 | |
| GR | 125 | 8300 | 120 | 9300 | 117.3 | 9700 | 117.7 | 9800 | 118.1 | 9900 |
| GR | 116.8 | 9977 | 115.3 | 9977 | 110.4 | 9989 | 109.8 | 10000 | 110.4 | 10009 |
| GR | 115.3 | 10023 | 116.8 | 10023 | 118.0 | 10100 | 117.7 | 10200 | 118.0 | 10300 |
| GR | 120 | 10900 | 125 | 11400 | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 4035 | 11 | 9974 | 10026 | 40 | 40 | 40 | | | |
| CI | -1 | 107.99 | .015 | 1.5 | 1.5 | 24 | | | | |
| GR | 125 | 8300 | 120 | 9300 | 118.8 | 9974 | 115.7 | 9981 | 110.4 | 9992 |
| GR | 109.8 | 10000 | 110.4 | 10008 | 115.6 | 10020 | 117.6 | 10026 | 120 | 10900 |
| GR | 125 | 11400 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|--------|---------|-------|---------|-------|---------|-----|--------|
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 2330 | | | | | | | | |
| X1 | 4558 | 11 | 9974.5 | 10024.5 | 523 | 523 | 523 | | | |
| CI | -1 | 108.52 | .015 | 1.5 | 1.5 | 24 | | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.5 | 9974.5 | 118.4 | 9978.5 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116.7 | 10018.5 | 118.7 | 10024.5 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|------|---------|-------|-------|-------|-------|-------|--------|
| NC | | | | .3 | .5 | | | | | |
| X1 | 4608 | 11 | 9976 | 10023 | 50 | 50 | 50 | | | |
| CI | -1 | 108.57 | .015 | 1.5 | 1.5 | 24 | | | | |
| X3 | 10 | | | | | | | 118.5 | 118.5 | |
| GR | 125 | 9200 | 120 | 9700 | 119.4 | 9976 | 116 | 9976 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116 | 10023 | 119.4 | 10023 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

BASSWOOD

| | | | | | | | | | | |
|----|--------|-------|--------|-------|-------|-------|-------|-------|--------|-------|
| X1 | 4609 | 11 | 9976 | 10023 | 1 | 1 | 1 | | | |
| CI | | | | | | .01 | | | | |
| X3 | 10 | | | | | | | 118.5 | 118.5 | |
| BT | -5 | 9976 | 119.4 | 117.5 | 9988 | 119.4 | 117.5 | 10000 | 119.4 | 117.5 |
| BT | | 10012 | 119.4 | 117.5 | 10023 | 119.4 | 117.5 | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.4 | 9976 | 116 | 9976 | 108.57 | 9988 |
| GR | 108.57 | 10000 | 108.57 | 10012 | 116 | 10023 | 119.4 | 10023 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

| | | | | | | | | | | |
|----|------|--|--|--|----|----|----|-------|-------|--|
| X1 | 4639 | | | | 30 | 30 | 30 | | | |
| X2 | | | | | | | 1 | | | |
| X3 | 10 | | | | | | | 119.4 | 119.4 | |

| | | | | | | | | | | |
|----|-------|--------|------|---------|-------|-------|-------|-------|-------|--------|
| X1 | 4640 | 11 | 9976 | 10023 | 1 | 1 | 1 | | | |
| CI | -1 | 108.57 | .015 | 1.5 | 1.5 | 24 | | | | |
| X3 | 10 | | | | | | | 119.4 | 119.4 | |
| GR | 125 | 9200 | 120 | 9700 | 119.4 | 9976 | 116 | 9976 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116 | 10023 | 119.4 | 10023 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

CONTROL STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|--------|---------|-------|---------|-------|---------|-----|--------|
| X1 | 4690 | 11 | 9974.5 | 10024.5 | 50 | 50 | 50 | | | |
| CI | -1 | 108.65 | .015 | 1.5 | 1.5 | 20 | | | | |
| X5 | -2 | 0.5 | 0.5 | | | | | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.5 | 9974.5 | 118.4 | 9978.5 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116.7 | 10018.5 | 118.7 | 10024.5 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|--------|---------|-------|---------|-------|---------|-----|--------|
| X1 | 4740 | 11 | 9974.5 | 10024.5 | 50 | 50 | 50 | | | |
| CI | -1 | 108.70 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.5 | 9974.5 | 118.4 | 9978.5 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116.7 | 10018.5 | 118.7 | 10024.5 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 2110 | | | | | | | | |
| X1 | 5868 | 9 | 9973 | 10024 | 1128 | 1128 | 1128 | | | |
| CI | -1 | 109.83 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125 | 9550 | 120.7 | 9973 | 120.3 | 9981 | 113.1 | 9991 | 113.0 | 10000 |
| GR | 112.8 | 10009 | 119.0 | 10019 | 120.2 | 10024 | 125 | 10480 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| QT | 1 | 2070 | | | | | | | | |
| X1 | 6124 | 36 | 1055 | 1100 | 256 | 256 | 256 | | | |
| CI | -1 | 110.08 | .015 | 1.5 | 1.5 | 20 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 120.8 | 1055 | 113.0 | 1067 |
| GR | 113.0 | 1075 | 113.0 | 1087 | 121.2 | 1100 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| NC | | | .015 | .3 | .5 | | | | | |
| X1 | 6125 | 36 | 1055 | 1100 | 1 | 1 | 1 | | | |
| CI | -1 | 110.08 | .015 | 1.5 | 1.5 | 20 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 120.8 | 1055 | 114.5 | 1066 |
| GR | 114.5 | 1075 | 114.5 | 1088 | 121.2 | 1100 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 6153 | 36 | 1053 | 1098 | 28 | 28 | 28 | | | |
| CI | -1 | 110.11 | .015 | 1.35 | 1.35 | 20 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 119.4 | 1053 | 114.6 | 1064 |
| GR | 114.6 | 1075 | 114.6 | 1087 | 119.5 | 1098 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |

MAPLEWOOD DRIVE

| | | | | | | | | | | |
|----|------|--------|-------|-------|------|-------|-------|------|-------|-------|
| X1 | 6154 | 36 | 1053 | 1098 | 1 | 1 | 1 | | | |
| CI | -1 | 110.11 | .015 | 1.35 | 1.35 | 20 | | | | |
| X2 | | | | | | | | | | |
| X3 | 10 | | | | | | | | | |
| BT | -36 | 0 | 125.0 | 124.7 | 99 | 122.7 | 122.5 | 198 | 121.7 | 121.4 |
| BT | | 297 | 120.5 | 120.5 | 310 | 120.5 | 120.5 | 396 | 120.5 | 120.2 |
| BT | | 495 | 120.4 | 119.9 | 594 | 120.4 | 119.9 | 629 | 120.7 | 119.6 |
| BT | | 634 | 120.8 | 120.8 | 642 | 120.8 | 115.3 | 645 | 120.8 | 115.3 |
| BT | | 649 | 120.8 | 115.3 | 657 | 121.3 | 121.3 | 700 | 121.0 | 121.0 |
| BT | | 800 | 120.7 | 119.5 | 900 | 121.0 | 119.2 | 1000 | 121.4 | 119.6 |
| BT | | 1053 | 121.3 | 119.4 | 1053 | 123.7 | 119.4 | 1098 | 123.7 | 119.5 |
| BT | | 1098 | 121.3 | 119.5 | 1098 | 121.3 | 119.5 | 1200 | 121.2 | 119.0 |
| BT | | 1300 | 120.6 | 118.8 | 1400 | 120.7 | 119.1 | 1500 | 121.1 | 119.4 |
| BT | | 1600 | 121.7 | 120.3 | 1700 | 122.1 | 120.5 | 1800 | 123.3 | 121.9 |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| BT | | 1900 | 123.7 | 122.9 | 2000 | 124.3 | 123.1 | 2100 | 124.7 | 123.8 |
| BT | | 2200 | 124.7 | 123.8 | 2231 | 124.9 | 124.3 | 2300 | 124.5 | 123.5 |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 119.4 | 1053 | 114.6 | 1064 |
| GR | 114.6 | 1075 | 114.6 | 1087 | 119.5 | 1098 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |
| X1 | 6182 | 34 | 1053 | 1098 | 28 | 28 | 28 | | | |
| CI | -1 | 110.14 | .015 | 1.35 | 1.35 | 20 | | | | |
| X2 | | | | | | | | | | |
| X3 | 10 | | | | | | | 120.0 | 120.0 | |
| BT | -33 | 0 | 125.0 | 125.0 | 99 | 122.7 | 122.5 | 198 | 121.7 | 121.7 |
| BT | | 297 | 120.5 | 120.1 | 396 | 120.5 | 120.4 | 495 | 120.4 | 120.1 |
| BT | | 594 | 120.4 | 120.2 | 608 | 120.5 | 120.2 | 642 | 120.8 | 120.0 |
| BT | | 655 | 120.8 | 119.9 | 700 | 120.7 | 119.6 | 800 | 120.7 | 119.8 |
| BT | | 900 | 121.0 | 119.9 | 1000 | 121.4 | 120.3 | 1053 | 121.3 | 119.4 |
| BT | | 1053 | 123.7 | 119.4 | 1098 | 123.7 | 119.5 | 1098 | 121.3 | 119.5 |
| BT | | 1100 | 121.3 | 119.6 | 1200 | 121.2 | 120.1 | 1300 | 120.6 | 119.7 |
| BT | | 1400 | 120.7 | 120.1 | 1500 | 121.1 | 119.9 | 1600 | 121.7 | 120.8 |
| BT | | 1700 | 122.1 | 121.2 | 1800 | 123.3 | 122.7 | 1806 | 123.3 | 122.7 |
| BT | | 1900 | 123.7 | 122.6 | 2000 | 124.3 | 123.1 | 2100 | 124.7 | 123.8 |
| BT | | 2200 | 124.7 | 123.7 | 2231 | 124.9 | 124.5 | 2300 | 124.5 | 123.6 |
| GR | 125.0 | 0 | 122.5 | 99 | 121.7 | 198 | 120.1 | 297 | 120.4 | 396 |
| GR | 120.1 | 495 | 120.2 | 594 | 120.2 | 608 | 120.0 | 642 | 119.9 | 655 |
| GR | 119.6 | 700 | 119.8 | 800 | 119.9 | 900 | 120.3 | 1000 | 119.4 | 1053 |
| GR | 114.7 | 1064 | 114.7 | 1075 | 114.7 | 1087 | 119.5 | 1098 | 119.6 | 1100 |
| GR | 120.1 | 1200 | 119.7 | 1300 | 120.1 | 1400 | 119.9 | 1500 | 120.8 | 1600 |
| GR | 121.2 | 1700 | 122.7 | 1800 | 122.7 | 1806 | 122.6 | 1900 | 123.1 | 2000 |
| GR | 123.8 | 2100 | 123.7 | 2200 | 124.5 | 2231 | 123.6 | 2300 | | |
| X1 | 6183 | 33 | 1053 | 1098 | 1 | 1 | 1 | | | |
| CI | -1 | 110.14 | .015 | 1.35 | 1.35 | 20 | | | | |
| X3 | 10 | | | | | | | 120.4 | 120.6 | |
| GR | 125.0 | 0 | 122.5 | 99 | 121.7 | 198 | 120.1 | 297 | 120.4 | 396 |
| GR | 120.1 | 495 | 120.2 | 594 | 120.2 | 608 | 120.0 | 642 | 119.6 | 700 |
| GR | 119.8 | 800 | 119.9 | 900 | 120.3 | 1000 | 119.4 | 1053 | 114.7 | 1064 |
| GR | 114.7 | 1075 | 114.7 | 1087 | 119.5 | 1098 | 119.6 | 1100 | 120.1 | 1200 |
| GR | 119.7 | 1300 | 120.1 | 1400 | 119.9 | 1500 | 120.8 | 1600 | 121.2 | 1700 |
| GR | 122.7 | 1800 | 122.7 | 1806 | 122.6 | 1900 | 123.1 | 2000 | 123.8 | 2100 |
| GR | 123.7 | 2200 | 124.5 | 2231 | 123.6 | 2300 | | | | |
| X1 | 6208 | 33 | 1053 | 1098 | 25 | 25 | 25 | | | |
| CI | -1 | 110.19 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125.0 | 0 | 122.5 | 99 | 121.7 | 198 | 120.1 | 297 | 120.4 | 396 |
| GR | 120.1 | 495 | 120.2 | 594 | 120.2 | 608 | 120.0 | 642 | 119.6 | 700 |
| GR | 119.8 | 800 | 119.9 | 900 | 120.3 | 1000 | 119.4 | 1053 | 114.7 | 1064 |
| GR | 114.7 | 1075 | 114.7 | 1087 | 119.5 | 1098 | 119.6 | 1100 | 120.1 | 1200 |
| GR | 119.7 | 1300 | 120.1 | 1400 | 119.9 | 1500 | 120.8 | 1600 | 121.2 | 1700 |
| GR | 122.7 | 1800 | 122.7 | 1806 | 122.6 | 1900 | 123.1 | 2000 | 123.8 | 2100 |
| GR | 123.7 | 2200 | 124.5 | 2231 | 123.6 | 2300 | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 6233 | 19 | 609 | 639 | 25 | 25 | 25 | | | -1.7 |
| CI | 625 | 110.24 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125.3 | 0 | 121.2 | 344 | 120.2 | 400 | 120.5 | 431 | 120.8 | 500 |
| GR | 122.7 | 606 | 122.2 | 609 | 116.5 | 619 | 116.5 | 625 | 116.5 | 631 |
| GR | 121.1 | 639 | 121.0 | 700 | 121.0 | 800 | 120.4 | 900 | 122.1 | 1185 |
| GR | 122.4 | 1217 | 123.4 | 1300 | 124.4 | 1400 | 125.8 | 1500 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 1780 | | | | | | | | |
| X1 | 7360 | 19 | 609 | 639 | 1127 | 1127 | 1127 | | | |
| CI | 625 | 111.32 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125.3 | 0 | 121.2 | 344 | 120.2 | 400 | 120.5 | 431 | 120.8 | 500 |
| GR | 122.7 | 606 | 122.2 | 609 | 116.5 | 619 | 116.5 | 625 | 116.5 | 631 |
| GR | 121.1 | 639 | 121.0 | 700 | 121.0 | 800 | 120.4 | 900 | 122.1 | 1185 |
| GR | 122.4 | 1217 | 123.4 | 1300 | 124.4 | 1400 | 125.8 | 1500 | | |

CONTROL STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 7410 | 19 | 609 | 639 | 50 | 50 | 50 | | | |
| CI | 625 | 111.37 | .015 | 1.5 | 1.5 | 16 | | | | |
| X5 | -2 | 0.5 | 0.5 | | | | | | | |
| GR | 125.3 | 0 | 121.2 | 344 | 120.2 | 400 | 120.5 | 431 | 120.8 | 500 |
| GR | 122.7 | 606 | 122.2 | 609 | 116.5 | 619 | 116.5 | 625 | 116.5 | 631 |
| GR | 121.1 | 639 | 121.0 | 700 | 121.0 | 800 | 120.4 | 900 | 122.1 | 1185 |
| GR | 122.4 | 1217 | 123.4 | 1300 | 124.4 | 1400 | 125.8 | 1500 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-----|-------|------|-------|------|-------|------|
| QT | 1 | 1530 | | | | | | | | |
| X1 | 8560 | 21 | 665 | 687 | 1150 | 1150 | 1150 | | | |
| CI | 677.5 | 112.52 | .015 | 1.5 | 1.5 | 16 | | | | |
| GR | 128.3 | 0 | 126.5 | 25 | 126.4 | 118 | 126.3 | 125 | 126.0 | 225 |
| GR | 123.9 | 325 | 123.8 | 332 | 124.2 | 425 | 124.2 | 525 | 122.9 | 625 |
| GR | 121.8 | 665 | 117.7 | 673 | 117.7 | 682 | 121.8 | 687 | 122.8 | 725 |
| GR | 123.0 | 825 | 123.2 | 925 | 124.0 | 1025 | 125.8 | 1125 | 127.2 | 1190 |
| GR | 128.4 | 1240 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-----|-------|------|-------|------|-------|------|
| QT | 1 | 1430 | | | | | | | | |
| X1 | 9099 | 21 | 665 | 687 | 539 | 539 | 539 | | 2.0 | |
| CI | 677.5 | 113.06 | .015 | 1.5 | 1.5 | 16 | | | | |
| GR | 128.3 | 0 | 126.5 | 25 | 126.4 | 118 | 126.3 | 125 | 126.0 | 225 |
| GR | 123.9 | 325 | 123.8 | 332 | 124.2 | 425 | 124.2 | 525 | 122.9 | 625 |
| GR | 121.8 | 665 | 117.7 | 673 | 117.7 | 682 | 121.8 | 687 | 122.8 | 725 |
| GR | 123.0 | 825 | 123.2 | 925 | 124.0 | 1025 | 125.8 | 1125 | 127.2 | 1190 |
| GR | 128.4 | 1240 | | | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|-------|-----|-------|------|-------|------|-------|------|
| X1 | 9100 | 21 | 665 | 687 | 1 | 1 | 1 | | 2.0 | |
| CI | 677.5 | 116.10 | .015 | 1.5 | 1.5 | 12 | | | | |
| X5 | -2 | 2.5 | 2.5 | | | | | | | |
| GR | 128.3 | 0 | 126.5 | 25 | 126.4 | 118 | 126.3 | 125 | 126.0 | 225 |
| GR | 123.9 | 325 | 123.8 | 332 | 124.2 | 425 | 124.2 | 525 | 122.9 | 625 |
| GR | 121.8 | 665 | 117.7 | 673 | 117.7 | 682 | 121.8 | 687 | 122.8 | 725 |
| GR | 123.0 | 825 | 123.2 | 925 | 124.0 | 1025 | 125.8 | 1125 | 127.2 | 1190 |
| GR | 128.4 | 1240 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| QT | 1 | 1260 | | | | | | | | |
| X1 | 10099 | 25 | 1581 | 1600 | 999 | 999 | 999 | | | |
| CI | 1590 | 117.10 | .015 | 1.5 | 1.5 | 12 | | | | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 | 127.6 | 900 |
| GR | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 | 127.8 | 1400 |
| GR | 128.7 | 1500 | 129.6 | 1581 | 121.5 | 1586 | 121.5 | 1594 | 129.8 | 1600 |
| GR | 130.2 | 1605 | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 10100 | 25 | 1581 | 1600 | 1 | 1 | 1 | | | |
| CI | 1590 | 120.10 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| X5 | -2 | 3.5 | 3.5 | | | | | | | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 | 127.6 | 900 |
| GR | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 | 127.8 | 1400 |
| GR | 128.7 | 1500 | 129.6 | 1581 | 121.5 | 1586 | 121.5 | 1594 | 129.8 | 1600 |
| GR | 130.2 | 1605 | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| NC | | | | .3 | .5 | | | | | |
| X1 | 10199 | 25 | 1581 | 1600 | 99 | 99 | 99 | | | |
| CI | 1590 | 120.20 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 | 127.6 | 900 |
| GR | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 | 127.8 | 1400 |
| GR | 128.7 | 1500 | 129.6 | 1581 | 121.5 | 1586 | 121.5 | 1594 | 129.8 | 1600 |
| GR | 130.2 | 1605 | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 |

LANE LANE - EXISTING BRIDGE REPLACED

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 10200 | 29 | 1581 | 1600 | 1 | 1 | 1 | | | |
| CI | 1590 | 120.20 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 484 | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 |
| GR | 127.6 | 900 | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 |
| GR | 127.9 | 1374 | 127.8 | 1400 | 128.7 | 1500 | 129.6 | 1581 | 128.5 | 1582 |
| GR | 121.5 | 1586 | 121.5 | 1594 | 128.5 | 1599 | 129.8 | 1600 | 130.2 | 1605 |
| GR | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 10225 | 29 | 1581 | 1600 | 25 | 25 | 25 | | | |
| CI | 1590 | 120.22 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.4 | 0 | 128.7 | 100 | 127.5 | 200 | 126.6 | 300 | 126.2 | 400 |
| GR | 126.5 | 484 | 126.5 | 500 | 126.3 | 600 | 125.6 | 700 | 126.8 | 800 |
| GR | 128.0 | 900 | 130.2 | 1000 | 129.9 | 1100 | 130.0 | 1200 | 129.3 | 1300 |
| GR | 129.2 | 1374 | 129.1 | 1400 | 129.9 | 1500 | 129.9 | 1581 | 128.7 | 1582 |
| GR | 121.7 | 1586 | 121.7 | 1594 | 128.7 | 1599 | 129.8 | 1600 | 130.3 | 1605 |
| GR | 129.7 | 1700 | 129.3 | 1800 | 129.7 | 1900 | 130.2 | 2000 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 10226 | 25 | 1581 | 1600 | 1 | 1 | 1 | | | |
| CI | 1590 | 120.22 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.4 | 0 | 128.7 | 100 | 127.5 | 200 | 126.6 | 300 | 126.2 | 400 |
| GR | 126.5 | 500 | 126.3 | 600 | 125.6 | 700 | 126.8 | 800 | 128.0 | 900 |
| GR | 130.2 | 1000 | 129.9 | 1100 | 130.0 | 1200 | 129.3 | 1300 | 129.1 | 1400 |
| GR | 129.9 | 1500 | 129.9 | 1581 | 121.7 | 1586 | 121.7 | 1594 | 129.8 | 1600 |
| GR | 130.3 | 1605 | 129.7 | 1700 | 129.3 | 1800 | 129.7 | 1900 | 130.2 | 2000 |
| X1 | 10300 | 25 | 1581 | 1600 | 74 | 74 | 74 | | | |
| CI | 1590 | 120.30 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.4 | 0 | 128.7 | 100 | 127.5 | 200 | 126.6 | 300 | 126.2 | 400 |
| GR | 126.5 | 500 | 126.3 | 600 | 125.6 | 700 | 126.8 | 800 | 128.0 | 900 |
| GR | 130.2 | 1000 | 129.9 | 1100 | 130.0 | 1200 | 129.3 | 1300 | 129.1 | 1400 |
| GR | 129.9 | 1500 | 129.9 | 1581 | 121.7 | 1586 | 121.7 | 1594 | 129.8 | 1600 |
| GR | 130.3 | 1605 | 129.7 | 1700 | 129.3 | 1800 | 129.7 | 1900 | 130.2 | 2000 |
| QT | 1 | 1150 | | | | | | | | |
| NC | | | | .1 | .3 | | | | | |
| X1 | 10800 | 23 | 1573 | 1606 | 500 | 500 | 500 | | | |
| CI | 1584 | 120.80 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.9 | 0 | 130.3 | 100 | 129.6 | 200 | 129.1 | 300 | 129.1 | 400 |
| GR | 129.1 | 425 | 128.6 | 500 | 128.3 | 600 | 128.5 | 700 | 128.7 | 800 |
| GR | 128.7 | 900 | 129.4 | 1000 | 129.6 | 1100 | 129.7 | 1200 | 130.2 | 1300 |
| GR | 131.1 | 1369 | 130.9 | 1400 | 131.9 | 1500 | 132.0 | 1573 | 121.1 | 1586 |
| GR | 121.1 | 1593 | 132.3 | 1606 | 136.6 | 1616 | | | | |
| QT | 1 | 1110 | | | | | | | | |
| X1 | 11100 | 21 | 1535 | 1568 | 300 | 300 | 300 | | | |
| CI | 1550 | 121.10 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.2 | 0 | 130.5 | 100 | 131.1 | 200 | 130.4 | 300 | 130.3 | 400 |
| GR | 129.7 | 500 | 129.8 | 600 | 129.6 | 700 | 129.6 | 800 | 129.8 | 900 |
| GR | 129.8 | 1000 | 130.3 | 1100 | 129.7 | 1200 | 130.2 | 1300 | 130.7 | 1400 |
| GR | 131.5 | 1500 | 131.6 | 1535 | 124.0 | 1547 | 124.0 | 1553 | 130.6 | 1568 |
| GR | 132.2 | 1600 | | | | | | | | |
| X1 | 11149 | 22 | 1535 | 1568 | 49 | 49 | 49 | | | |
| CI | 1550 | 121.15 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.2 | 0 | 130.5 | 100 | 131.1 | 200 | 130.6 | 266 | 130.4 | 300 |
| GR | 130.3 | 400 | 129.7 | 500 | 129.8 | 600 | 129.6 | 700 | 129.6 | 800 |
| GR | 129.8 | 900 | 129.8 | 1000 | 130.3 | 1100 | 129.7 | 1200 | 130.2 | 1300 |
| GR | 130.7 | 1400 | 131.5 | 1500 | 131.6 | 1535 | 124.0 | 1547 | 124.0 | 1553 |
| GR | 130.6 | 1568 | 132.2 | 1600 | | | | | | |

ROBINSON ROAD - EXISTING BRIDGE REPLACED

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 11150 | 22 | 1535 | 1568 | 1 | 1 | 1 | | | |
| CI | 1550 | 121.15 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.2 | 0 | 130.5 | 100 | 131.1 | 200 | 130.6 | 266 | 130.4 | 300 |
| GR | 130.3 | 400 | 129.7 | 500 | 129.8 | 600 | 129.6 | 700 | 129.6 | 800 |
| GR | 129.8 | 900 | 129.8 | 1000 | 130.3 | 1100 | 129.7 | 1200 | 130.2 | 1300 |
| GR | 130.7 | 1400 | 131.5 | 1500 | 131.6 | 1535 | 124.0 | 1547 | 124.0 | 1553 |
| GR | 130.6 | 1568 | 132.2 | 1600 | | | | | | |
| X1 | 11215 | 22 | 1543 | 1568 | 65 | 65 | 65 | | | |
| CI | 1556 | 121.22 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.3 | 0 | 131.3 | 100 | 130.8 | 200 | 131.1 | 266 | 131.2 | 300 |
| GR | 130.5 | 400 | 130.5 | 500 | 130.1 | 600 | 129.9 | 700 | 129.9 | 800 |
| GR | 129.3 | 900 | 129.8 | 1000 | 130.3 | 1100 | 130.1 | 1200 | 130.3 | 1300 |
| GR | 130.5 | 1400 | 131.4 | 1500 | 130.0 | 1543 | 124.6 | 1553 | 124.6 | 1559 |
| GR | 130.7 | 1568 | 132.2 | 1600 | | | | | | |
| X1 | 11216 | 22 | 1543 | 1568 | 1 | 1 | 1 | | | |
| CI | 1556 | 121.22 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.3 | 0 | 131.3 | 100 | 130.8 | 200 | 131.1 | 266 | 131.2 | 300 |
| GR | 130.5 | 400 | 130.5 | 500 | 130.1 | 600 | 129.9 | 700 | 129.9 | 800 |
| GR | 129.3 | 900 | 129.8 | 1000 | 130.3 | 1100 | 130.1 | 1200 | 130.3 | 1300 |
| GR | 130.5 | 1400 | 131.4 | 1500 | 130.0 | 1543 | 124.6 | 1553 | 124.6 | 1559 |
| GR | 130.7 | 1568 | 132.2 | 1600 | | | | | | |
| X1 | 11250 | 21 | 1543 | 1568 | 34 | 34 | 34 | | | |
| CI | 1556 | 121.25 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.3 | 0 | 131.3 | 100 | 130.8 | 200 | 131.2 | 300 | 130.5 | 400 |
| GR | 130.5 | 500 | 130.1 | 600 | 129.9 | 700 | 129.9 | 800 | 129.3 | 900 |
| GR | 129.8 | 1000 | 130.3 | 1100 | 130.1 | 1200 | 130.3 | 1300 | 130.5 | 1400 |
| GR | 131.4 | 1500 | 130.0 | 1543 | 124.6 | 1553 | 124.6 | 1559 | 130.7 | 1568 |
| GR | 132.2 | 1600 | | | | | | | | |
| QT | 1 | 1020 | | | | | | | | |
| X1 | 11750 | 23 | 1688 | 1712 | 500 | 500 | 500 | | | |
| CI | -1 | 121.75 | .015 | 1.5 | 1.5 | 8 | | | | |
| GR | 133.5 | 0 | 132.4 | 100 | 132.4 | 200 | 132.8 | 300 | 133.2 | 400 |
| GR | 133.6 | 500 | 133.9 | 600 | 133.4 | 700 | 133.1 | 800 | 132.7 | 900 |
| GR | 131.9 | 1000 | 131.4 | 1100 | 130.9 | 1161 | 130.6 | 1200 | 130.9 | 1300 |
| GR | 131.2 | 1400 | 132.0 | 1500 | 131.9 | 1600 | 130.8 | 1688 | 125.2 | 1697 |
| GR | 125.2 | 1703 | 130.2 | 1712 | 133.1 | 1737 | | | | |
| QT | 1 | 950 | | | | | | | | |
| X1 | 12350 | 24 | 1721 | 1745 | 600 | 600 | 600 | | | |
| CI | -1 | 122.35 | .015 | 1.5 | 1.5 | 8 | | | | |
| GR | 136.7 | 0 | 136.7 | 100 | 136.1 | 200 | 136.1 | 300 | 137.1 | 400 |
| GR | 137.6 | 500 | 137.6 | 600 | 137.3 | 700 | 136.5 | 800 | 136.9 | 900 |
| GR | 137.5 | 1000 | 137.7 | 1100 | 136.6 | 1200 | 135.6 | 1267 | 135.1 | 1300 |
| GR | 134.1 | 1400 | 133.8 | 1500 | 134.6 | 1600 | 132.6 | 1721 | 125.5 | 1730 |

9/ 4/89

8:52: 1

GR 125.5 1736 132.1 1745 133.9 1750 134.4 1771

IHLQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 4/89 8:52:32

 HEC2 RELEASE DATED SEPT 88

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

A109-03-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|------------|---------|--------|--------|--------|--------|------|--------|---------|--------|-------|-------|-------|
| 120.000 | 3240.00 | 113.97 | 114.41 | 114.99 | 101.90 | 3.43 | 114.15 | .00 | 126.56 | .00 | 30.00 | .00 |
| 1520.000 | 2920.00 | 114.76 | 115.15 | 115.51 | 102.70 | 3.09 | 114.91 | 1400.00 | 126.51 | 4.07 | 30.00 | 12.94 |
| 1574.000 | 2920.00 | 114.79 | 116.27 | 116.85 | 102.50 | 3.08 | 114.94 | 54.00 | 126.75 | 4.22 | 30.00 | 13.93 |
| 1636.000 | 2920.00 | 114.81 | 115.15 | 115.51 | 102.80 | 3.11 | 114.96 | 50.00 | 126.13 | 4.37 | 30.00 | 14.82 |
| 3528.000 | 2520.00 | 115.72 | 119.01 | 117.68 | 104.10 | 2.84 | 115.84 | 1892.00 | 122.93 | 9.78 | 30.00 | 52.66 |
| 3538.000 | 2520.00 | 115.72 | 119.01 | 117.68 | 104.10 | 2.84 | 115.85 | 10.00 | 122.97 | 9.81 | 30.00 | 52.94 |
| * 3543.000 | 2520.00 | 115.82 | 118.81 | 117.60 | 107.50 | 8.30 | 116.89 | 5.00 | 49.24 | 9.82 | 24.00 | 53.02 |
| 3553.000 | 2520.00 | 115.83 | 118.81 | 117.60 | 107.50 | 8.29 | 116.90 | 10.00 | 49.26 | 9.83 | 24.00 | 53.07 |
| 3921.000 | 2440.00 | 116.14 | 118.80 | 117.60 | 107.88 | 8.11 | 117.17 | 368.00 | 48.79 | 10.24 | 24.00 | 54.86 |
| 3961.000 | 2440.00 | 116.17 | 116.84 | 116.84 | 107.92 | 8.13 | 117.20 | 40.00 | 48.76 | 10.29 | 24.00 | 55.03 |
| 3962.000 | 2440.00 | 116.16 | 116.80 | 116.80 | 107.92 | 8.18 | 117.20 | 1.00 | 46.00 | 10.29 | .01 | 55.03 |
| 3994.000 | 2440.00 | 116.19 | 116.80 | 116.80 | 107.92 | 8.16 | 117.23 | 32.00 | 46.00 | 10.32 | .01 | 55.03 |
| 3995.000 | 2440.00 | 116.23 | 116.84 | 116.84 | 107.92 | 8.06 | 117.23 | 1.00 | 48.92 | 10.32 | 24.00 | 55.04 |
| 4035.000 | 2440.00 | 116.25 | 118.80 | 117.60 | 107.99 | 8.11 | 117.27 | 40.00 | 48.79 | 10.37 | 24.00 | 55.21 |
| 4558.000 | 2330.00 | 116.65 | 119.51 | 118.71 | 108.52 | 7.92 | 117.62 | 523.00 | 48.38 | 10.95 | 24.00 | 58.07 |
| 4608.000 | 2330.00 | 116.68 | 119.41 | 119.41 | 108.57 | 7.94 | 117.66 | 50.00 | 48.33 | 11.01 | 24.00 | 58.31 |
| 4609.000 | 2330.00 | 116.71 | 119.40 | 119.40 | 108.57 | 7.84 | 117.66 | 1.00 | 47.00 | 11.01 | .01 | 58.31 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|---------|--------|-------|-------|--------|
| 4639.000 | 2330.00 | 116.73 | 119.40 | 119.40 | 108.57 | 7.82 | 117.68 | 30.00 | 47.00 | 11.04 | .01 | 58.31 |
| 4640.000 | 2330.00 | 116.73 | 119.41 | 119.41 | 108.57 | 7.87 | 117.69 | 1.00 | 48.50 | 11.04 | 24.00 | 58.32 |
| * 4690.000 | 2330.00 | 117.23 | 119.50 | 118.70 | 108.65 | 8.26 | 118.29 | 50.00 | 45.74 | 11.09 | 20.00 | 58.52 |
| 4740.000 | 2330.00 | 117.26 | 119.50 | 118.70 | 108.70 | 8.28 | 118.33 | 50.00 | 45.69 | 11.15 | 20.00 | 58.72 |
| 5868.000 | 2110.00 | 118.17 | 120.71 | 120.20 | 109.83 | 7.79 | 119.11 | 1128.00 | 45.01 | 12.32 | 20.00 | 64.29 |
| 6124.000 | 2070.00 | 118.35 | 120.72 | 121.11 | 110.08 | 7.73 | 119.28 | 256.00 | 44.79 | 12.59 | 20.00 | 65.70 |
| 6125.000 | 2070.00 | 118.35 | 120.72 | 121.11 | 110.08 | 7.73 | 119.28 | 1.00 | 44.80 | 12.59 | 20.00 | 65.71 |
| 6153.000 | 2070.00 | 118.32 | 119.40 | 119.50 | 110.11 | 8.11 | 119.34 | 28.00 | 42.17 | 12.61 | 20.00 | 65.87 |
| 6154.000 | 2070.00 | 118.32 | 119.40 | 119.50 | 110.11 | 8.11 | 119.34 | 1.00 | 42.17 | 12.62 | 20.00 | 65.88 |
| 6182.000 | 2070.00 | 118.34 | 119.40 | 119.51 | 110.14 | 8.12 | 119.37 | 28.00 | 42.15 | 12.64 | 20.00 | 66.02 |
| 6183.000 | 2070.00 | 118.34 | 119.40 | 119.51 | 110.14 | 8.12 | 119.37 | 1.00 | 42.14 | 12.64 | 20.00 | 66.03 |
| 6208.000 | 2070.00 | 118.50 | 119.42 | 119.58 | 110.19 | 7.67 | 119.42 | 25.00 | 44.94 | 12.67 | 20.00 | 66.16 |
| 6233.000 | 2070.00 | 118.51 | 120.88 | 119.38 | 110.24 | 7.71 | 119.44 | 25.00 | 48.10 | 12.70 | 20.00 | 66.34 |
| 7360.000 | 1780.00 | 119.37 | 122.56 | 121.08 | 111.32 | 6.89 | 120.11 | 1127.00 | 44.16 | 13.89 | 20.00 | 76.64 |
| * 7410.000 | 1780.00 | 119.87 | 122.60 | 121.09 | 111.37 | 7.28 | 120.69 | 50.00 | 41.50 | 13.94 | 16.00 | 77.08 |
| 8560.000 | 1530.00 | 120.66 | 122.07 | 122.14 | 112.52 | 6.67 | 121.35 | 1150.00 | 40.41 | 15.02 | 16.00 | 86.36 |
| 9099.000 | 1430.00 | 120.97 | 124.13 | 124.20 | 113.06 | 6.49 | 121.63 | 539.00 | 39.71 | 15.51 | 16.00 | 91.38 |
| * 9100.000 | 1430.00 | 123.47 | 123.94 | 124.02 | 116.10 | 8.41 | 124.57 | 1.00 | 34.12 | 15.52 | 12.00 | 91.39 |
| 10099.000 | 1260.00 | 124.63 | 129.43 | 130.01 | 117.10 | 7.17 | 125.43 | 999.00 | 34.61 | 16.30 | 12.00 | 98.80 |
| * 10100.000 | 1260.00 | 128.13 | 129.50 | 130.13 | 120.10 | 7.83 | 129.08 | 1.00 | 32.09 | 16.30 | 8.00 | 98.81 |
| 10199.000 | 1260.00 | 128.21 | 129.50 | 130.13 | 120.20 | 7.86 | 129.17 | 99.00 | 32.03 | 16.38 | 8.00 | 99.19 |
| 10200.000 | 1260.00 | 128.22 | 129.50 | 130.13 | 120.20 | 7.85 | 129.17 | 1.00 | 32.04 | 16.38 | 8.00 | 99.19 |
| 10225.000 | 1260.00 | 128.24 | 129.90 | 130.27 | 120.22 | 7.84 | 129.20 | 25.00 | 32.06 | 16.40 | 8.00 | 99.29 |
| 10226.000 | 1260.00 | 128.24 | 129.90 | 130.27 | 120.22 | 7.84 | 129.20 | 1.00 | 32.07 | 16.40 | 8.00 | 99.30 |
| 10300.000 | 1260.00 | 128.31 | 129.90 | 130.27 | 120.30 | 7.86 | 129.27 | 74.00 | 32.03 | 16.45 | 8.00 | 99.59 |
| 10800.000 | 1150.00 | 129.06 | 131.99 | 132.30 | 120.80 | 5.93 | 129.60 | 500.00 | 34.62 | 16.83 | 8.00 | 101.42 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-----------|---------|--------|--------|--------|--------|------|--------|--------|--------|-------|------|--------|
| 11100.000 | 1110.00 | 129.08 | 131.59 | 130.61 | 121.10 | 6.96 | 129.83 | 300.00 | 31.95 | 17.06 | 8.00 | 102.44 |
| 11149.000 | 1110.00 | 129.11 | 131.59 | 130.61 | 121.15 | 6.99 | 129.87 | 49.00 | 31.88 | 17.10 | 8.00 | 102.61 |
| 11150.000 | 1110.00 | 129.11 | 131.59 | 130.61 | 121.15 | 6.99 | 129.87 | 1.00 | 31.89 | 17.10 | 8.00 | 102.61 |
| 11215.000 | 1110.00 | 129.15 | 130.14 | 131.01 | 121.22 | 7.02 | 129.92 | 65.00 | 31.82 | 17.15 | 8.00 | 102.85 |
| 11216.000 | 1110.00 | 129.15 | 130.14 | 131.01 | 121.22 | 7.03 | 129.92 | 1.00 | 31.81 | 17.15 | 8.00 | 102.85 |
| 11250.000 | 1110.00 | 129.18 | 130.14 | 131.01 | 121.25 | 7.04 | 129.95 | 34.00 | 31.79 | 17.17 | 8.00 | 102.99 |
| 11750.000 | 1020.00 | 129.63 | 130.87 | 130.86 | 121.75 | 6.53 | 130.29 | 500.00 | 31.64 | 17.54 | 8.00 | 105.00 |
| 12350.000 | 950.00 | 130.04 | 132.73 | 134.01 | 122.35 | 6.34 | 130.66 | 600.00 | 31.04 | 17.97 | 8.00 | 107.72 |

SUMMARY OF ERRORS AND SPECIAL NOTES

NOTE SECNO= 3543.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 4690.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 7410.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 9100.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 10100.000 PROFILE= 1 WSEL BASED ON X5 CARD

THIS RUN EXECUTED 9/ 1/89 16:17:24

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
 T3 A110-00-00 SAM BELL GULLY
 T4 100-YEAR STORM FREQUENCY EXISTING CONDITIONS
 T5 FILENAME = A110RVEX.IH2

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL FQ
 2 .0012 96.1

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38 43 1 23 24 42 26 3 39 4
 37 30 65

J5 LPRNT NUMSEC *****REQUESTED SECTION NUMBERS*****
 -10 -10

J6 IHLEQ ICOFY SUBDIV STRTDS RMILE
 1

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| NC | .12 | .12 | .1 | .1 | .3 | | | | | |
| QT | 1 | 400 | | | | | | | | |
| X1 | 2035 | 17 | 789 | 815 | | | | | | |
| GR | 106 | 0 | 105 | 500 | 100 | 585 | 97.3 | 590 | 95 | 700 |
| GR | 94.3 | 789 | 88.5 | 790 | 87.75 | 795 | 87.5 | 800 | 88.25 | 805 |
| GR | 92 | 810 | 94.5 | 815 | 95 | 900 | 100.5 | 1000 | 100 | 1200 |
| GR | 105 | 1300 | 110 | 1400 | | | | | | |
| QT | 1 | 250 | | | | | | | | |
| X1 | 4102 | 24 | 1088 | 1115 | 2067 | 2067 | 2067 | | | |
| GR | 105 | 0 | 103 | 690 | 102 | 700 | 103.2 | 705 | 103.6 | 735 |
| GR | 102.3 | 800 | 99.8 | 895 | 97.5 | 1000 | 96.7 | 1088 | 91.1 | 1090 |
| GR | 90.4 | 1092 | 90 | 1100 | 90.5 | 1105 | 94.6 | 1112 | 97 | 1115 |
| GR | 97.6 | 1200 | 102.9 | 1300 | 105.7 | 1395 | 107 | 1495 | 104.4 | 1595 |
| GR | 105.6 | 1690 | 105.5 | 1795 | 105.8 | 1830 | 110 | 2100 | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| NC | | | | .3 | .5 | | | | | |
| X1 | 4151 | 24 | 1088 | 1115 | 49 | 49 | 49 | | | |
| X3 | 10 | | | | | | | 96.5 | 96.5 | |
| GR | 105 | 0 | 103 | 690 | 102 | 700 | 103.2 | 705 | 103.6 | 735 |
| GR | 102.3 | 800 | 99.8 | 895 | 97.5 | 1000 | 96.5 | 1088 | 91.1 | 1090 |
| GR | 90.4 | 1092 | 90 | 1100 | 90.5 | 1105 | 94.6 | 1112 | 96.5 | 1115 |
| GR | 97.6 | 1200 | 102.9 | 1300 | 105.7 | 1395 | 107 | 1495 | 104.4 | 1595 |
| GR | 105.6 | 1690 | 105.5 | 1795 | 105.8 | 1830 | 110 | 2100 | | |

Plum Creek Road

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 4152 | 24 | 1088 | 1115 | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 96.5 | 96.5 | |
| BT | -8 | 1088 | 96.5 | 96.5 | 1090 | 96.5 | 91.1 | 1092 | 96.5 | 90.4 |
| BT | | 1092 | 96.5 | 95.3 | 1105 | 96.5 | 95.3 | 1105 | 96.5 | 90.5 |
| BT | | 1112 | 96.5 | 94.6 | 1115 | 96.5 | 96.5 | | | |
| GR | 105 | 0 | 103 | 690 | 102 | 700 | 103.2 | 705 | 103.6 | 735 |
| GR | 102.3 | 800 | 99.8 | 895 | 97.5 | 1000 | 96.5 | 1088 | 91.1 | 1090 |
| GR | 90.4 | 1092 | 90 | 1100 | 90.5 | 1105 | 94.6 | 1112 | 96.5 | 1115 |
| GR | 97.6 | 1200 | 102.9 | 1300 | 105.7 | 1395 | 107 | 1495 | 104.4 | 1595 |
| GR | 105.6 | 1690 | 105.5 | 1795 | 105.8 | 1830 | 110 | 2100 | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 4177 | 24 | 1088 | 1115 | 25 | 25 | 25 | | | |
| X3 | 10 | | | | | | | 96.5 | 96.5 | |
| BT | -8 | 1088 | 96.5 | 96.5 | 1090 | 96.5 | 91.1 | 1092 | 96.5 | 90.4 |
| BT | | 1092 | 96.5 | 95.3 | 1105 | 96.5 | 95.3 | 1105 | 96.5 | 90.5 |
| BT | | 1112 | 96.5 | 94.6 | 1115 | 96.5 | 96.5 | | | |
| GR | 105 | 0 | 103 | 690 | 102 | 700 | 103.2 | 705 | 103.6 | 735 |
| GR | 102.3 | 800 | 99.8 | 895 | 97.5 | 1000 | 96.5 | 1088 | 91.1 | 1090 |
| GR | 90.4 | 1092 | 90 | 1100 | 90.5 | 1105 | 94.6 | 1112 | 96.5 | 1115 |
| GR | 97.6 | 1200 | 102.9 | 1300 | 105.7 | 1395 | 107 | 1495 | 104.4 | 1595 |
| GR | 105.6 | 1690 | 105.5 | 1795 | 105.8 | 1830 | 110 | 2100 | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 4178 | 24 | 1088 | 1115 | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 96.5 | 96.5 | |
| GR | 105 | 0 | 103 | 690 | 102 | 700 | 103.2 | 705 | 103.6 | 735 |
| GR | 102.3 | 800 | 99.8 | 895 | 97.5 | 1000 | 96.5 | 1088 | 91.1 | 1090 |
| GR | 90.4 | 1092 | 90 | 1100 | 90.5 | 1105 | 94.6 | 1112 | 96.5 | 1115 |
| GR | 97.6 | 1200 | 102.9 | 1300 | 105.7 | 1395 | 107 | 1495 | 104.4 | 1595 |
| GR | 105.6 | 1690 | 105.5 | 1795 | 105.8 | 1830 | 110 | 2100 | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 4202 | 24 | 1088 | 1115 | 24 | 24 | 24 | | | |
| GR | 105 | 0 | 103 | 690 | 102 | 700 | 103.2 | 705 | 103.6 | 735 |
| GR | 102.3 | 800 | 99.8 | 895 | 97.5 | 1000 | 96.7 | 1088 | 91.1 | 1090 |
| GR | 90.4 | 1092 | 90 | 1100 | 90.5 | 1105 | 94.6 | 1112 | 97 | 1115 |
| GR | 97.6 | 1200 | 102.9 | 1300 | 105.7 | 1395 | 107 | 1495 | 104.4 | 1595 |
| GR | 105.6 | 1690 | 105.5 | 1795 | 105.8 | 1830 | 110 | 2100 | | |

| | | | | | | | | | | |
|----|---|-----|--|----|----|--|--|--|--|--|
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 190 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 5422 | 24 | 885 | 912 | 1220 | 1220 | 1220 | | | |
| GR | 105 | 0 | 104.6 | 620 | 103.5 | 630 | 105 | 650 | 103.2 | 682 |
| GR | 103.6 | 710 | 101.2 | 810 | 100.4 | 885 | 93 | 890 | 91.8 | 900 |
| GR | 93 | 905 | 99.5 | 912 | 99.6 | 1018 | 100.1 | 1115 | 100.5 | 1155 |
| GR | 99.8 | 1160 | 101.2 | 1175 | 101.7 | 1195 | 99.9 | 1210 | 103.3 | 1215 |
| GR | 105 | 1250 | 110 | 1400 | 115 | 2400 | 115 | 4000 | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| NC | | | | .3 | .5 | | | | | |
| X1 | 5472 | 20 | 885 | 912 | 50 | 50 | 50 | | | |
| GR | 105 | 0 | 104.6 | 620 | 103.5 | 630 | 105 | 650 | 103.2 | 682 |
| GR | 103.6 | 710 | 101.9 | 781 | 101.9 | 885 | 100.4 | 885 | 93 | 890 |
| GR | 91.8 | 900 | 93 | 905 | 99.5 | 912 | 101.9 | 912 | 101.9 | 1213 |
| GR | 103.3 | 1215 | 105 | 1250 | 110 | 1400 | 115 | 2400 | 115 | 4000 |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 5522 | 24 | 885 | 912 | 50 | 50 | 50 | | | |
| GR | 105 | 0 | 104.6 | 620 | 103.5 | 630 | 105 | 650 | 103.2 | 682 |
| GR | 103.6 | 710 | 101.2 | 810 | 100.4 | 885 | 93 | 890 | 91.8 | 900 |
| GR | 93 | 905 | 99.5 | 912 | 99.6 | 1018 | 100.1 | 1115 | 100.5 | 1155 |
| GR | 99.8 | 1160 | 101.2 | 1175 | 101.7 | 1195 | 99.9 | 1210 | 103.3 | 1215 |
| GR | 105 | 1250 | 110 | 1400 | 115 | 2400 | 115 | 4000 | | |

| | | | | | | | | | | |
|----|-------|-------|-------|------|-------|------|-------|------|-------|------|
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 140 | | | | | | | | |
| X1 | 6789 | 33 | 595 | 607 | 1267 | 1267 | 1267 | | | |
| GR | 110 | 0 | 103.6 | 370 | 104.1 | 382 | 103.6 | 390 | 104.2 | 395 |
| GR | 103.9 | 425 | 102.1 | 430 | 103.6 | 450 | 104 | 470 | 102.9 | 595 |
| GR | 95.2 | 595.5 | 94 | 600 | 95.2 | 605 | 100.2 | 607 | 103.1 | 665 |
| GR | 99.98 | 718 | 102.4 | 770 | 103.1 | 862 | 104 | 930 | 102.9 | 940 |
| GR | 104.4 | 945 | 104.7 | 975 | 103 | 990 | 104.1 | 1000 | 105.9 | 1060 |
| GR | 114 | 1265 | 114.5 | 1305 | 113.5 | 1370 | 109 | 1470 | 107.3 | 1565 |
| GR | 110 | 1600 | 110 | 2600 | 115 | 4100 | | | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|--------|-------|---------|-------|------|
| X1 | 8059 | 11 | 2590 | 2620 | 1270 | 1270 | 1270 | | | |
| GR | 114.8 | 0 | 100.5 | 2590 | 100.5 | 2595.9 | 99.6 | 2596 | 98.7 | 2597 |
| GR | 98 | 2600 | 98.7 | 2603 | 99.6 | 2604 | 100.5 | 2604.01 | 101.4 | 2620 |
| GR | 109.8 | 5200 | | | | | | | | |

THIS RUN EXECUTED 9/ 4/89 9: 7:12

HEC2 RELEASE DATED SEPT 88

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

A109-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|-------|------|--------|---------|--------|-------|-------|--------|
| 500.000 | 8790.00 | 99.59 | 100.20 | 99.65 | 81.90 | 4.11 | 99.86 | .00 | 191.55 | .00 | 50.00 | .00 |
| 3900.000 | 8510.00 | 101.28 | 102.89 | 102.55 | 83.60 | 3.99 | 101.53 | 3400.00 | 191.44 | 14.95 | 50.00 | 130.00 |
| 5035.000 | 8420.00 | 101.82 | 103.27 | 103.69 | 84.17 | 3.95 | 102.06 | 1135.00 | 191.28 | 19.93 | 50.00 | 184.87 |
| 5135.000 | 8420.00 | 101.84 | 103.22 | 103.74 | 84.22 | 4.33 | 102.13 | 100.00 | 180.97 | 20.36 | 40.00 | 189.56 |
| 6170.000 | 8340.00 | 102.45 | 105.27 | 106.11 | 84.74 | 4.25 | 102.73 | 1035.00 | 181.67 | 24.67 | 40.00 | 238.18 |
| 9275.000 | 8100.00 | 104.15 | 123.60 | 114.45 | 86.29 | 4.07 | 104.40 | 3105.00 | 182.85 | 37.66 | 40.00 | 444.07 |
| 9869.000 | 8100.00 | 104.45 | 110.30 | 110.20 | 86.58 | 4.06 | 104.71 | 594.00 | 183.03 | 40.15 | 40.00 | 485.78 |
| 10463.000 | 8100.00 | 104.76 | 109.40 | 109.30 | 86.88 | 4.06 | 105.01 | 594.00 | 183.01 | 42.65 | 40.00 | 522.38 |
| * 10556.000 | 8000.00 | 104.64 | 106.80 | 106.80 | 86.93 | 6.37 | 105.27 | 93.00 | 111.83 | 42.97 | 30.00 | 526.49 |
| 10647.000 | 8000.00 | 104.76 | 106.80 | 111.20 | 86.97 | 6.34 | 105.39 | 91.00 | 111.85 | 43.20 | 30.00 | 528.66 |
| * 10750.000 | 8000.00 | 105.29 | 109.50 | 111.20 | 87.03 | 4.25 | 105.57 | 103.00 | 176.10 | 43.54 | 30.00 | 532.78 |
| 12300.000 | 7660.00 | 106.16 | 109.07 | 108.50 | 87.80 | 4.03 | 106.42 | 1550.00 | 176.92 | 49.82 | 30.00 | 613.13 |
| 14550.000 | 7250.00 | 107.29 | 109.74 | 109.62 | 88.93 | 3.82 | 107.51 | 2250.00 | 176.85 | 58.96 | 30.00 | 722.66 |
| 14650.000 | 7250.00 | 107.30 | 109.73 | 109.65 | 88.98 | 4.24 | 107.58 | 100.00 | 166.58 | 59.35 | 20.00 | 727.26 |
| 16295.000 | 6950.00 | 108.27 | 111.33 | 111.74 | 89.80 | 4.01 | 108.52 | 1645.00 | 167.77 | 65.66 | 20.00 | 801.69 |
| 18040.000 | 6650.00 | 109.18 | 112.73 | 113.04 | 90.67 | 3.82 | 109.41 | 1745.00 | 168.18 | 72.39 | 20.00 | 890.52 |
| * 18090.000 | 6650.00 | 108.96 | 112.80 | 112.94 | 90.70 | 7.00 | 109.72 | 50.00 | 94.01 | 72.54 | 10.00 | 892.28 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|-------|--------|---------|--------|--------|-------|---------|
| 18127.000 | 6650.00 | 109.05 | 112.80 | 112.94 | 90.71 | 6.94 | 109.80 | 37.00 | 94.38 | 72.62 | 10.00 | 892.92 |
| * 18177.000 | 6650.00 | 109.80 | 112.72 | 113.04 | 90.74 | 3.63 | 110.00 | 50.00 | 172.45 | 72.78 | 20.00 | 894.67 |
| 21000.000 | 6180.00 | 110.96 | 116.22 | 116.39 | 92.15 | 3.45 | 111.14 | 2823.00 | 170.44 | 83.89 | 20.00 | 1064.04 |
| 21700.000 | 6180.00 | 111.23 | 114.35 | 113.92 | 92.50 | 3.47 | 111.42 | 700.00 | 169.92 | 86.62 | 20.00 | 1106.07 |
| 22400.000 | 5980.00 | 111.51 | 114.89 | 114.98 | 92.85 | 3.39 | 111.69 | 700.00 | 169.23 | 89.35 | 20.00 | 1143.47 |
| * 22401.000 | 5980.00 | 111.15 | 113.61 | 114.52 | 98.50 | 6.69 | 111.85 | 1.00 | 121.23 | 89.35 | 20.00 | 1143.51 |
| 22673.000 | 2990.00 | 111.97 | 113.64 | 116.97 | 98.77 | 3.11 | 112.12 | 272.00 | 125.59 | 90.12 | 20.00 | 1148.70 |
| 22947.000 | 2920.00 | 112.10 | 114.55 | 117.70 | 99.05 | 3.10 | 112.25 | 274.00 | 124.42 | 90.91 | 20.00 | 1154.45 |
| 25347.000 | 2380.00 | 113.30 | 114.54 | 115.50 | 101.45 | 2.98 | 113.43 | 2400.00 | 114.77 | 97.50 | 20.00 | 1201.23 |
| 26222.000 | 2210.00 | 113.74 | 115.67 | 117.10 | 102.32 | 2.95 | 113.88 | 875.00 | 111.33 | 99.77 | 20.00 | 1218.09 |
| 27097.000 | 2050.00 | 114.20 | 116.81 | 118.05 | 103.20 | 2.91 | 114.33 | 875.00 | 107.95 | 101.97 | 20.00 | 1237.46 |
| 28362.000 | 1850.00 | 114.88 | 116.94 | 115.80 | 104.46 | 2.88 | 115.01 | 1265.00 | 103.34 | 105.04 | 20.00 | 1264.38 |
| 29627.000 | 1660.00 | 115.58 | 118.71 | 117.89 | 105.73 | 2.84 | 115.71 | 1265.00 | 98.80 | 107.97 | 20.00 | 1291.11 |
| * 29628.000 | 1660.00 | 116.32 | 120.10 | 119.10 | 111.30 | 9.84 | 117.83 | 1.00 | 56.17 | 107.97 | .01 | 1291.11 |
| * 29667.000 | 1660.00 | 116.21 | 119.60 | 119.60 | 111.40 | 11.49 | 118.26 | 39.00 | 30.00 | 108.01 | .01 | 1291.11 |
| * 29731.000 | 1660.00 | 117.47 | 119.60 | 119.60 | 111.40 | 9.11 | 118.76 | 64.00 | 30.00 | 108.06 | .01 | 1291.11 |
| 29831.000 | 1660.00 | 119.03 | 118.51 | 118.02 | 111.55 | 3.17 | 119.19 | 100.00 | 236.64 | 108.36 | 40.00 | 1292.59 |
| 30380.000 | 1560.00 | 119.48 | 121.36 | 123.00 | 112.40 | 3.22 | 119.65 | 549.00 | 96.68 | 110.47 | 40.00 | 1296.91 |
| 30963.000 | 1480.00 | 120.03 | 124.94 | 126.87 | 113.30 | 3.29 | 120.20 | 583.00 | 93.84 | 111.75 | 40.00 | 1304.92 |
| 31546.000 | 1410.00 | 120.63 | 124.17 | 126.55 | 114.20 | 3.34 | 120.80 | 583.00 | 91.42 | 112.99 | 40.00 | 1314.79 |
| 32127.000 | 1340.00 | 121.27 | 123.25 | 125.06 | 115.10 | 3.36 | 121.44 | 581.00 | 89.35 | 114.19 | 40.00 | 1321.14 |
| 33077.000 | 1240.00 | 122.38 | 130.11 | 132.07 | 116.10 | 3.35 | 122.55 | 950.00 | 86.46 | 116.11 | 40.00 | 1332.50 |
| 33157.000 | 1240.00 | 122.47 | 129.99 | 132.19 | 116.10 | 3.36 | 122.65 | 80.00 | 86.25 | 116.27 | 40.00 | 1333.82 |
| 33207.000 | 1240.00 | 122.53 | 130.27 | 134.90 | 116.77 | 3.41 | 122.71 | 50.00 | 86.11 | 116.37 | 40.00 | 1334.93 |
| 33226.000 | 1240.00 | 122.55 | 130.30 | 134.90 | 116.80 | 3.42 | 122.74 | 19.00 | 86.03 | 116.41 | 40.00 | 1335.47 |
| * 33227.000 | 1240.00 | 129.05 | 131.99 | 132.03 | 121.90 | 3.37 | 129.23 | 1.00 | 72.93 | 116.41 | 30.00 | 1335.49 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|--------|--------|--------|-------|---------|
| 33257.000 | 1240.00 | 129.08 | 132.07 | 131.96 | 121.95 | 3.38 | 129.26 | 30.00 | 72.83 | 116.46 | 30.00 | 1335.85 |
| 33327.000 | 1240.00 | 129.15 | 132.09 | 131.98 | 122.05 | 3.40 | 129.33 | 70.00 | 72.62 | 116.57 | 30.00 | 1336.39 |
| 34135.000 | 1130.00 | 129.99 | 133.31 | 133.24 | 123.26 | 3.34 | 130.16 | 808.00 | 70.39 | 117.90 | 30.00 | 1340.79 |
| 34185.000 | 1130.00 | 129.98 | 133.40 | 133.40 | 123.30 | 4.44 | 130.28 | 50.00 | 58.55 | 117.97 | .01 | 1340.79 |
| * 34186.000 | 1130.00 | 129.63 | 126.30 | 126.30 | 123.30 | 8.09 | 130.64 | 1.00 | 42.00 | 117.98 | .01 | 1340.79 |
| 34361.000 | 1130.00 | 131.38 | 128.30 | 128.30 | 125.30 | 8.08 | 132.40 | 175.00 | 42.00 | 118.14 | .01 | 1340.79 |
| * 34362.000 | 1130.00 | 132.40 | 135.30 | 135.00 | 125.30 | 3.89 | 132.63 | 1.00 | 65.88 | 118.15 | .01 | 1340.79 |
| 34412.000 | 1130.00 | 132.57 | 134.67 | 134.79 | 125.20 | 2.94 | 132.70 | 50.00 | 74.20 | 118.23 | 30.00 | 1340.94 |
| 35234.000 | 1030.00 | 133.24 | 135.18 | 135.12 | 126.62 | 3.12 | 133.39 | 822.00 | 70.17 | 119.59 | 30.00 | 1343.84 |
| 35264.000 | 1030.00 | 133.26 | 135.19 | 135.13 | 126.66 | 3.13 | 133.42 | 30.00 | 69.60 | 119.64 | 30.00 | 1344.03 |
| 35327.000 | 1030.00 | 133.27 | 135.22 | 135.15 | 126.76 | 3.19 | 133.43 | 63.00 | 69.06 | 119.74 | 30.00 | 1344.51 |
| 35377.000 | 1030.00 | 133.32 | 135.24 | 135.17 | 126.83 | 3.21 | 133.48 | 50.00 | 70.50 | 119.82 | 30.00 | 1344.79 |
| 35957.000 | 530.00 | 133.74 | 137.29 | 137.03 | 127.71 | 1.83 | 133.79 | 580.00 | 66.17 | 120.73 | 30.00 | 1348.15 |
| * 36017.000 | 530.00 | 133.71 | 135.58 | 137.60 | 127.80 | 3.48 | 133.90 | 60.00 | 41.45 | 120.80 | 6.00 | 1348.42 |
| * 36027.000 | 530.00 | 136.71 | 139.11 | 139.98 | 130.60 | 3.57 | 136.91 | 10.00 | 42.65 | 120.81 | 6.00 | 1348.46 |
| 36103.000 | 530.00 | 136.85 | 139.35 | 139.85 | 130.71 | 3.54 | 137.05 | 76.00 | 42.83 | 120.88 | 6.00 | 1348.73 |
| 36397.000 | 530.00 | 137.38 | 141.89 | 141.71 | 131.16 | 3.45 | 137.56 | 294.00 | 43.34 | 121.18 | 6.00 | 1349.30 |
| 36691.000 | 530.00 | 137.87 | 142.79 | 142.48 | 131.60 | 3.40 | 138.05 | 294.00 | 43.64 | 121.47 | 6.00 | 1350.12 |
| 36985.000 | 490.00 | 138.34 | 142.88 | 142.57 | 132.04 | 3.12 | 138.49 | 294.00 | 43.82 | 121.76 | 6.00 | 1351.03 |
| 37277.000 | 490.00 | 138.77 | 142.90 | 142.50 | 132.50 | 3.35 | 138.94 | 292.00 | 42.04 | 122.05 | .01 | 1351.03 |
| 37902.000 | 450.00 | 139.63 | 141.65 | 140.85 | 133.45 | 2.81 | 139.75 | 625.00 | 43.31 | 122.66 | .01 | 1351.03 |
| 38527.000 | 430.00 | 140.29 | 142.60 | 141.80 | 134.40 | 2.69 | 140.40 | 625.00 | 44.97 | 123.30 | .01 | 1351.03 |
| 38757.000 | 430.00 | 140.52 | 141.33 | 141.03 | 134.70 | 2.63 | 140.63 | 230.00 | 45.11 | 123.54 | .01 | 1351.03 |
| 38987.000 | 430.00 | 140.78 | 142.33 | 142.03 | 135.70 | 3.07 | 140.92 | 230.00 | 43.69 | 123.77 | .01 | 1351.03 |
| 39217.000 | 400.00 | 141.08 | 142.00 | 141.70 | 135.40 | 2.43 | 141.18 | 230.00 | 46.46 | 124.01 | .01 | 1351.03 |

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 10556.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 10750.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 18090.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 18177.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 22401.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 29628.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 29628.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 29628.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO= 29667.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 29731.000 PROFILE= 1 HYDRAULIC JUMP D.S.

WARNING SECNO= 29731.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE SECNO= 33227.000 PROFILE= 1 WSEL BASED ON X5 CARD

WARNING SECNO= 34186.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 34362.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 36017.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE SECNO= 36027.000 PROFILE= 1 WSEL BASED ON X5 CARD

THIS RUN EXECUTED 9/ 1/89 16:21:55

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
 T3 A109-03-00 SPRING OAKS CHANNEL
 T4 100-YEAR STORM FREQUENCY EXISTING CONDITIONS
 T5 FILENAME = A10903EX.IH2

| | | | | | | | | | | |
|----|--------|-------|-------|-------|-------|--------|-------|-----|-------|--------|
| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
| | | 6 | | | .0003 | | | | 114 | |
| J2 | NPROF | IPLOT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
| | -1 | | -1 | | | | | | | |

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

| | | | | | | | | | |
|----|----|----|----|----|----|----|---|----|---|
| 38 | 43 | 1 | 23 | 24 | 42 | 26 | 3 | 39 | 4 |
| 37 | 30 | 65 | | | | | | | |

J5 LPRNT NUMSEC *****REQUESTED SECTION NUMBERS*****
 -10 -10

J6 IHLEQ ICOPY SUBDIV STRIDS RMILE
 1

| | | | | | | | | | | |
|----|-------|---------|--------|---------|-------|---------|-------|---------|-------|---------|
| NC | .15 | .15 | .04 | .1 | .3 | | | | | |
| QT | 5 | 920 | 1380 | 1710 | 2070 | 2640 | | | | |
| X1 | 120 | 11 | 9937.5 | 10051.5 | 120 | 120 | 120 | | | |
| GR | 117 | 9885.5 | 114.2 | 9911.5 | 114.5 | 9937.5 | 106.6 | 9961.5 | 103.5 | 9987.5 |
| GR | 102.7 | 10000 | 103.6 | 10012.5 | 107.9 | 10033.5 | 115.9 | 10051.5 | 114.5 | 10067.5 |
| GR | 120.7 | 10106.5 | | | | | | | | |
| QT | 5 | 820 | 1230 | 1480 | 1800 | 2390 | | | | |
| X1 | 1520 | 12 | 9944 | 10050 | 1400 | 1400 | 1400 | | | |
| GR | 117.6 | 9800 | 115 | 9900 | 115.2 | 9944 | 108.1 | 9965 | 107.3 | 9975 |
| GR | 104.2 | 9995 | 102.7 | 10000 | 105.3 | 10005 | 108.6 | 10019 | 115.3 | 10050 |
| GR | 116.1 | 10100 | 116.3 | 10200 | | | | | | |

| | | | | | | | | | | |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | | | .3 | | .5 | | | | | |
| MISSOURI PACIFIC RAILROAD | | | | | | | | | | |
| X1 | 1574 | 12 | 9957 | 10037 | 54 | 54 | 54 | | | |
| X3 | 10 | | | | | | | 120 | 120.3 | |
| GR | 117.6 | 9800 | 115 | 9900 | 117.6 | 9957 | 116.6 | 9957 | 107.9 | 9981 |
| GR | 106.1 | 9994 | 102.5 | 9999 | 106.3 | 10004 | 113.7 | 10037 | 117.6 | 10037 |
| GR | 116.1 | 10100 | 116.3 | 10200 | | | | | | |
| SB | 1.05 | 1.56 | 3.0 | | 6 | 4 | 591 | 2.45 | 102.5 | 102.5 |
| X1 | 1586 | 12 | 9957 | 10037 | 12 | 12 | 12 | | | |
| X2 | | | 1 | 117.6 | 122.4 | | | | | |
| X3 | 10 | | | | | | | 122.4 | 122.9 | |
| BT | -11 | 9500 | 122.4 | 0 | 9600 | 122.4 | 0 | 9700 | 122.5 | 0 |
| BT | | 9800 | 122.6 | 0 | 9900 | 122.8 | 0 | 10000 | 122.9 | 0 |
| BT | | 10100 | 123.1 | 0 | 10200 | 123.1 | 0 | 10300 | 123.1 | 0 |
| BT | | 10400 | 123 | 0 | 10500 | 122.9 | 0 | | | |
| GR | 117.6 | 9800 | 115 | 9900 | 117.6 | 9957 | 116.6 | 9957 | 107.9 | 9981 |
| GR | 106.1 | 9994 | 102.5 | 9999 | 106.3 | 10004 | 113.7 | 10037 | 117.6 | 10037 |
| GR | 116.1 | 10100 | 116.3 | 10200 | | | | | | |
| X1 | 1636 | 12 | 9944 | 10050 | 50 | 50 | 50 | | | |
| GR | 117.6 | 9800 | 115 | 9900 | 115.2 | 9944 | 108.1 | 9965 | 107.3 | 9975 |
| GR | 104.2 | 9995 | 103.1 | 10000 | 105.3 | 10005 | 108.6 | 10019 | 115.3 | 10050 |
| GR | 116.1 | 10100 | 116.3 | 10200 | | | | | | |
| NC | | | .03 | .1 | .3 | | | | | |
| QT | 5 | 720 | 1070 | 1310 | 1620 | 2080 | | | | |
| X1 | 3528 | 12 | 9975 | 10025 | 1892 | 1892 | 1892 | | | |
| GR | 122 | 8650 | 120 | 8650 | 120 | 9700 | 118.8 | 9974 | 115.9 | 9975 |
| GR | 104.1 | 9995 | 104.1 | 10000 | 104.1 | 10005 | 116.2 | 10025 | 117.6 | 10026 |
| GR | 120 | 11400 | 125 | 12000 | | | | | | |
| SLOPING DROP | | | | | | | | | | |
| X1 | 3538 | | | | 10 | 10 | 10 | | | |
| X1 | 3543 | 12 | 9975 | 10025 | 5 | 5 | 5 | | | |
| GR | 122 | 8650 | 120 | 8650 | 120 | 9700 | 118.8 | 9974 | 115.9 | 9975 |
| GR | 109.4 | 9995 | 109.4 | 10000 | 109.4 | 10005 | 116.2 | 10025 | 117.6 | 10026 |
| GR | 120 | 11400 | 125 | 12000 | | | | | | |
| X1 | 3553 | | | | 10 | 10 | 10 | | | |
| X1 | 3921 | 11 | 9974 | 10026 | 368 | 368 | 368 | | | |
| GR | 125 | 8300 | 120 | 9300 | 118.8 | 9974 | 115.7 | 9981 | 110.4 | 9992 |
| GR | 109.8 | 10000 | 110.4 | 10008 | 115.6 | 10020 | 117.6 | 10026 | 120 | 10900 |
| GR | 125 | 11400 | | | | | | | | |
| NC | | | .3 | .5 | | | | | | |
| X1 | 3961 | 17 | 9977 | 10023 | 40 | 40 | 40 | | | |
| X3 | 10 | | | | | | | 117.1 | 117.3 | |
| GR | 125 | 8300 | 120 | 9300 | 117.3 | 9700 | 117.7 | 9800 | 118.1 | 9900 |
| GR | 116.8 | 9977 | 115.3 | 9977 | 110.4 | 9989 | 109.8 | 10000 | 110.4 | 10009 |
| GR | 115.3 | 10023 | 116.8 | 10023 | 118.0 | 10100 | 117.7 | 10200 | 118.0 | 10300 |

GR 120 10900 125 11400

SPRING PINES ROAD - 41 DEGREE SKEW

| | | | | | | | | | | |
|----|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 3962 | | | | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 117.1 | 117.3 | |
| BT | -11 | 9700 | 117.3 | 117.3 | 9800 | 117.7 | 117.7 | 9900 | 118.1 | 118.1 |
| BT | | 9977 | 118.7 | 116.8 | 9989 | 118.7 | 116.8 | 10000 | 118.7 | 116.8 |
| BT | | 10009 | 118.7 | 116.8 | 10023 | 118.7 | 116.8 | 10100 | 118 | 118 |
| BT | | 10200 | 117.7 | 117.7 | 10300 | 118 | 118 | | | |

| | | | | | | | | | | |
|----|------|--|--|--|----|----|----|-------|-------|--|
| X1 | 3994 | | | | 32 | 32 | 32 | | | |
| X2 | | | | | | | | | 1 | |
| X3 | 10 | | | | | | | 117.3 | 117.7 | |

| | | | | | | | | | | |
|----|------|--|--|--|---|---|---|-------|-------|--|
| X1 | 3995 | | | | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 117.3 | 117.7 | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 4035 | 11 | 9974 | 10026 | 40 | 40 | 40 | | | |
| GR | 125 | 8300 | 120 | 9300 | 118.8 | 9974 | 115.7 | 9981 | 110.4 | 9992 |
| GR | 109.8 | 10000 | 110.4 | 10008 | 115.6 | 10020 | 117.6 | 10026 | 120 | 10900 |
| GR | 125 | 11400 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|--------|---------|-------|---------|-------|---------|-----|--------|
| NC | | | | .1 | .3 | | | | | |
| QT | 5 | 670 | 990 | 1220 | 1510 | 1930 | | | | |
| X1 | 4558 | 11 | 9974.5 | 10024.5 | 523 | 523 | 523 | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.5 | 9974.5 | 118.4 | 9978.5 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116.7 | 10018.5 | 118.7 | 10024.5 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|------|---------|-------|-------|-------|-------|-------|--------|
| NC | | | | .3 | .5 | | | | | |
| X1 | 4608 | 11 | 9976 | 10023 | 50 | 50 | 50 | | | |
| X3 | 10 | | | | | | | 118.5 | 118.5 | |
| GR | 125 | 9200 | 120 | 9700 | 119.4 | 9976 | 116 | 9976 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116 | 10023 | 119.4 | 10023 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

BASSWOOD ROAD - 32 DEGREE SKEW

| | | | | | | | | | | |
|----|------|---------|-------|-------|--------|-------|-------|-------|-------|-------|
| X1 | 4609 | | | | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 118.5 | 118.5 | |
| BT | -5 | 9976 | 119.4 | 117.5 | 9991.5 | 119.4 | 117.5 | 10000 | 119.4 | 117.5 |
| BT | | 10008.5 | 119.4 | 117.5 | 10023 | 119.4 | 117.5 | | | |

| | | | | | | | | | | |
|----|------|--|--|--|----|----|----|-------|-------|--|
| X1 | 4639 | | | | 30 | 30 | 30 | | | |
| X2 | | | | | | | | | 1 | |
| X3 | 10 | | | | | | | 119.4 | 119.4 | |

| | | | | | | | | | | |
|----|------|--|--|--|---|---|---|-------|-------|--|
| X1 | 4640 | | | | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 119.4 | 119.4 | |

| | | | | | | | | | | |
|-----------------|-------|-------|--------|---------|-------|---------|-------|---------|-------|--------|
| X1 | 4690 | 11 | 9974.5 | 10024.5 | 50 | 50 | 50 | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.5 | 9974.5 | 118.4 | 9978.5 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116.7 | 10018.5 | 118.7 | 10024.5 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |
| NC | | | | .1 | .3 | | | | | |
| QT | 5 | 610 | 900 | 1100 | 1380 | 1780 | | | | |
| X1 | 5868 | 9 | 9973 | 10024 | 1178 | 1178 | 1178 | | | |
| GR | 125 | 9550 | 120.7 | 9973 | 120.3 | 9981 | 113.1 | 9991 | 113.0 | 10000 |
| GR | 112.8 | 10009 | 119.0 | 10019 | 120.2 | 10024 | 125 | 10480 | | |
| QT | 5 | 600 | 880 | 1080 | 1340 | 1720 | | | | |
| X1 | 6124 | 36 | 1055 | 1100 | 256 | 256 | 256 | | | |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 120.8 | 1055 | 113.0 | 1067 |
| GR | 113.0 | 1075 | 113.0 | 1087 | 121.2 | 1100 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |
| NC | | | .015 | .3 | .5 | | | | | |
| X1 | 6125 | 36 | 1055 | 1100 | 1 | 1 | 1 | | | |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 120.8 | 1055 | 114.5 | 1066 |
| GR | 114.5 | 1075 | 114.5 | 1088 | 121.2 | 1100 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |
| X1 | 6153 | 36 | 1053 | 1098 | 28 | 28 | 28 | | | |
| X3 | 10 | | | | | | | 120 | 120 | |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 119.4 | 1053 | 114.6 | 1064 |
| GR | 114.6 | 1075 | 114.6 | 1087 | 119.5 | 1098 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |
| MAPLEWOOD DRIVE | | | | | | | | | | |
| X1 | 6154 | 36 | 1053 | 1098 | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 120 | 120 | |
| BT | -36 | 0 | 125.0 | 124.7 | 99 | 122.7 | 122.5 | 198 | 121.7 | 121.4 |
| BT | | 297 | 120.5 | 120.5 | 310 | 120.5 | 120.5 | 396 | 120.5 | 120.2 |
| BT | | 495 | 120.4 | 119.9 | 594 | 120.4 | 119.9 | 629 | 120.7 | 119.6 |
| BT | | 634 | 120.8 | 120.8 | 642 | 120.8 | 115.3 | 645 | 120.8 | 115.3 |
| BT | | 649 | 120.8 | 115.3 | 657 | 121.3 | 121.3 | 700 | 121.0 | 121.0 |
| BT | | 800 | 120.7 | 119.5 | 900 | 121.0 | 119.2 | 1000 | 121.4 | 119.6 |

| | | | | | | | | | | |
|----|-------|------|-------|-------|-------|-------|-------|------|-------|-------|
| BT | | 1053 | 121.3 | 119.4 | 1053 | 123.7 | 119.4 | 1098 | 123.7 | 119.5 |
| BT | | 1098 | 121.3 | 119.5 | 1098 | 121.3 | 119.5 | 1200 | 121.2 | 119.0 |
| BT | | 1300 | 120.6 | 118.8 | 1400 | 120.7 | 119.1 | 1500 | 121.1 | 119.4 |
| BT | | 1600 | 121.7 | 120.3 | 1700 | 122.1 | 120.5 | 1800 | 123.3 | 121.9 |
| BT | | 1900 | 123.7 | 122.9 | 2000 | 124.3 | 123.1 | 2100 | 124.7 | 123.8 |
| BT | | 2200 | 124.7 | 123.8 | 2231 | 124.9 | 124.3 | 2300 | 124.5 | 123.5 |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 119.4 | 1053 | 114.6 | 1064 |
| GR | 114.6 | 1075 | 114.6 | 1087 | 119.5 | 1098 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 6182 | 34 | 1053 | 1098 | 28 | 28 | 28 | | | |
| X3 | 10 | | | | | | | 120.4 | 120.6 | |
| BT | -33 | 0 | 125.0 | 125.0 | 99 | 122.7 | 122.5 | 198 | 121.7 | 121.7 |
| BT | | 297 | 120.5 | 120.1 | 396 | 120.5 | 120.4 | 495 | 120.4 | 120.1 |
| BT | | 594 | 120.4 | 120.2 | 608 | 120.5 | 120.2 | 642 | 120.8 | 120.0 |
| BT | | 655 | 120.8 | 119.9 | 700 | 120.7 | 119.6 | 800 | 120.7 | 119.8 |
| BT | | 900 | 121.0 | 119.9 | 1000 | 121.4 | 120.3 | 1053 | 121.3 | 119.4 |
| BT | | 1053 | 123.7 | 119.4 | 1098 | 123.7 | 119.5 | 1098 | 121.3 | 119.5 |
| BT | | 1100 | 121.3 | 119.6 | 1200 | 121.2 | 120.1 | 1300 | 120.6 | 119.7 |
| BT | | 1400 | 120.7 | 120.1 | 1500 | 121.1 | 119.9 | 1600 | 121.7 | 120.8 |
| BT | | 1700 | 122.1 | 121.2 | 1800 | 123.3 | 122.7 | 1806 | 123.3 | 122.7 |
| BT | | 1900 | 123.7 | 122.6 | 2000 | 124.3 | 123.1 | 2100 | 124.7 | 123.8 |
| BT | | 2200 | 124.7 | 123.7 | 2231 | 124.9 | 124.5 | 2300 | 124.5 | 123.6 |
| GR | 125.0 | 0 | 122.5 | 99 | 121.7 | 198 | 120.1 | 297 | 120.4 | 396 |
| GR | 120.1 | 495 | 120.2 | 594 | 120.2 | 608 | 120.0 | 642 | 119.9 | 655 |
| GR | 119.6 | 700 | 119.8 | 800 | 119.9 | 900 | 120.3 | 1000 | 119.4 | 1053 |
| GR | 114.7 | 1064 | 114.7 | 1075 | 114.7 | 1087 | 119.5 | 1098 | 119.6 | 1100 |
| GR | 120.1 | 1200 | 119.7 | 1300 | 120.1 | 1400 | 119.9 | 1500 | 120.8 | 1600 |
| GR | 121.2 | 1700 | 122.7 | 1800 | 122.7 | 1806 | 122.6 | 1900 | 123.1 | 2000 |
| GR | 123.8 | 2100 | 123.7 | 2200 | 124.5 | 2231 | 123.6 | 2300 | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|-------|-------|------|
| X1 | 6183 | 33 | 1053 | 1098 | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 120.4 | 120.6 | |
| GR | 125.0 | 0 | 122.5 | 99 | 121.7 | 198 | 120.1 | 297 | 120.4 | 396 |
| GR | 120.1 | 495 | 120.2 | 594 | 120.2 | 608 | 120.0 | 642 | 119.6 | 700 |
| GR | 119.8 | 800 | 119.9 | 900 | 120.3 | 1000 | 119.4 | 1053 | 114.7 | 1064 |
| GR | 114.7 | 1075 | 114.7 | 1087 | 119.5 | 1098 | 119.6 | 1100 | 120.1 | 1200 |
| GR | 119.7 | 1300 | 120.1 | 1400 | 119.9 | 1500 | 120.8 | 1600 | 121.2 | 1700 |
| GR | 122.7 | 1800 | 122.7 | 1806 | 122.6 | 1900 | 123.1 | 2000 | 123.8 | 2100 |
| GR | 123.7 | 2200 | 124.5 | 2231 | 123.6 | 2300 | | | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 6233 | 33 | 1053 | 1098 | 50 | 50 | 50 | | | |
| GR | 125.0 | 0 | 122.5 | 99 | 121.7 | 198 | 120.1 | 297 | 120.4 | 396 |
| GR | 120.1 | 495 | 120.2 | 594 | 120.2 | 608 | 120.0 | 642 | 119.6 | 700 |
| GR | 119.8 | 800 | 119.9 | 900 | 120.3 | 1000 | 119.4 | 1053 | 114.7 | 1064 |
| GR | 114.7 | 1075 | 114.7 | 1087 | 119.5 | 1098 | 119.6 | 1100 | 120.1 | 1200 |
| GR | 119.7 | 1300 | 120.1 | 1400 | 119.9 | 1500 | 120.8 | 1600 | 121.2 | 1700 |
| GR | 122.7 | 1800 | 122.7 | 1806 | 122.6 | 1900 | 123.1 | 2000 | 123.8 | 2100 |
| GR | 123.7 | 2200 | 124.5 | 2231 | 123.6 | 2300 | | | | |

| | | | | | | | | | | |
|-----------------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | | | .1 | .3 | | | | | | |
| QT | 5 | 530 | 770 | 950 | 1190 | 1520 | | | | |
| X1 | 7360 | 19 | 609 | 639 | 1127 | 1127 | 1127 | | | |
| GR | 125.3 | 0 | 121.2 | 344 | 120.2 | 400 | 120.5 | 431 | 120.8 | 500 |
| GR | 122.7 | 606 | 122.2 | 609 | 116.5 | 619 | 116.5 | 625 | 116.5 | 631 |
| GR | 121.1 | 639 | 121.0 | 700 | 121.0 | 800 | 120.4 | 900 | 122.1 | 1185 |
| GR | 122.4 | 1217 | 123.4 | 1300 | 124.4 | 1400 | 125.8 | 1500 | | |
| QT | 5 | 470 | 680 | 840 | 1050 | 1340 | | | | |
| X1 | 8560 | 21 | 665 | 687 | 1200 | 1200 | 1200 | | | |
| GR | 128.3 | 0 | 126.5 | 25 | 126.4 | 118 | 126.3 | 125 | 126.0 | 225 |
| GR | 123.9 | 325 | 123.8 | 332 | 124.2 | 425 | 124.2 | 525 | 122.9 | 625 |
| GR | 121.8 | 665 | 117.7 | 673 | 117.7 | 682 | 121.8 | 687 | 122.8 | 725 |
| GR | 123.0 | 825 | 123.2 | 925 | 124.0 | 1025 | 125.8 | 1125 | 127.2 | 1190 |
| GR | 128.4 | 1240 | | | | | | | | |
| QT | 5 | 400 | 580 | 710 | 890 | 1130 | | | | |
| X1 | 10100 | 25 | 1581 | 1600 | 1540 | 1540 | 1540 | | | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 | 127.6 | 900 |
| GR | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 | 127.8 | 1400 |
| GR | 128.7 | 1500 | 129.6 | 1581 | 121.5 | 1586 | 121.5 | 1594 | 129.8 | 1600 |
| GR | 130.2 | 1605 | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 |
| NC | | | .3 | .5 | | | | | | |
| X1 | 10199 | 25 | 1581 | 1600 | 99 | 99 | 99 | | | |
| X3 | 10 | | | | | | | 126.0 | 129.5 | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 | 127.6 | 900 |
| GR | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 | 127.8 | 1400 |
| GR | 128.7 | 1500 | 129.6 | 1581 | 121.5 | 1586 | 121.5 | 1594 | 129.8 | 1600 |
| GR | 130.2 | 1605 | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 |
| RIDGEWOOD DRIVE | | | | | | | | | | |
| X1 | 10200 | 29 | 1581 | 1600 | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 126.0 | 129.5 | |
| BT | -27 | 0 | 130.6 | 129.9 | 100 | 129.1 | 128.7 | 200 | 128.2 | 127.8 |
| BT | | 300 | 127.1 | 127.0 | 400 | 126.4 | 126.2 | 484 | 126.9 | 126.1 |
| BT | | 500 | 126.9 | 126.1 | 600 | 126.5 | 125.9 | 700 | 126.4 | 125.8 |
| BT | | 800 | 127.2 | 126.4 | 900 | 128.5 | 127.6 | 1000 | 130.2 | 128.6 |
| BT | | 1100 | 129.9 | 128.4 | 1200 | 130.0 | 128.8 | 1300 | 129.4 | 128.3 |
| BT | | 1374 | 127.9 | 127.9 | 1400 | 129.6 | 127.8 | 1500 | 130.4 | 128.7 |
| BT | | 1581 | 130.7 | 129.6 | 1582 | 130.7 | 128.5 | 1599 | 130.7 | 128.5 |
| BT | | 1600 | 130.7 | 129.8 | 1605 | 130.7 | 130.2 | 1700 | 130.3 | 128.5 |
| BT | | 1800 | 130.0 | 128.5 | 1900 | 129.9 | 129.2 | 2000 | 130.4 | 130.2 |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 484 | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 |
| GR | 127.6 | 900 | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 |
| GR | 127.9 | 1374 | 127.8 | 1400 | 128.7 | 1500 | 129.6 | 1581 | 128.5 | 1582 |
| GR | 121.5 | 1586 | 121.5 | 1594 | 128.5 | 1599 | 129.8 | 1600 | 130.2 | 1605 |
| GR | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|
| NC | | | .3 | .5 | | | | | | |
| X1 | 11149 | 38 | 1544 | 1559 | 49 | 49 | 49 | | | |
| X3 | 10 | | | | | | | 128 | 130.2 | |
| GR | 130.2 | 0 | 130.5 | 100 | 131.1 | 200 | 130.6 | 266 | 130.4 | 300 |
| GR | 130.3 | 400 | 129.7 | 500 | 129.8 | 600 | 129.6 | 700 | 129.6 | 800 |
| GR | 129.8 | 900 | 129.8 | 1000 | 130.3 | 1100 | 129.7 | 1200 | 130.2 | 1300 |
| GR | 130.7 | 1400 | 131.5 | 1500 | 131.6 | 1535 | 125.6 | 1544.0 | 124.6 | 1544.5 |
| GR | 124.2 | 1545.5 | 124.0 | 1546.5 | 124.0 | 1547.5 | 124.0 | 1548.5 | 124.0 | 1549.5 |
| GR | 124.6 | 1550.5 | 125.6 | 1551 | 125.6 | 1552 | 124.6 | 1552.5 | 124.2 | 1553.5 |
| GR | 124.0 | 1554.5 | 124.0 | 1555.5 | 124.0 | 1556.5 | 124.2 | 1557.5 | 124.6 | 1558.5 |
| GR | 125.6 | 1559 | 130.6 | 1568 | 132.2 | 1600 | | | | |

| | | | | | | | | | | |
|----|---------------|--------|-------|--------|--------|--------|-------|--------|-------|--------|
| NC | | | .024 | | | | | | | |
| | ROBINSON ROAD | | | | | | | | | |
| X1 | 11150 | 38 | 1544 | 1559 | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 128 | 130.2 | |
| BT | -38 | 0 | 132.0 | 130.2 | 100 | 131.7 | 130.5 | 200 | 131.7 | 131.1 |
| BT | | 266 | 131.4 | 130.6 | 300 | 131.3 | 130.4 | 400 | 130.8 | 130.3 |
| BT | | 500 | 130.6 | 129.7 | 600 | 130.5 | 129.8 | 700 | 130.3 | 129.6 |
| BT | | 800 | 130.3 | 129.6 | 900 | 130.1 | 129.8 | 1000 | 130.0 | 129.8 |
| BT | | 1100 | 130.3 | 130.3 | 1200 | 130.1 | 129.7 | 1300 | 130.6 | 130.2 |
| BT | | 1400 | 131.0 | 130.7 | 1500 | 132.1 | 131.5 | 1535 | 132.3 | 131.6 |
| BT | | 1544 | 132.3 | 125.6 | 1544.5 | 132.3 | 127.0 | 1545.5 | 132.3 | 128.1 |
| BT | | 1546.5 | 132.3 | 128.6 | 1547.5 | 132.3 | 128.8 | 1548.5 | 132.3 | 128.6 |
| BT | | 1549.5 | 132.3 | 128.1 | 1550.5 | 132.3 | 127.0 | 1551 | 132.3 | 125.6 |
| BT | | 1552 | 132.3 | 125.6 | 1552.5 | 132.3 | 127.0 | 1553.5 | 132.3 | 128.1 |
| BT | | 1554.5 | 132.3 | 128.6 | 1555.5 | 132.3 | 128.8 | 1556.5 | 132.3 | 128.6 |
| BT | | 1557.5 | 132.3 | 128.1 | 1558.5 | 132.3 | 127.0 | 1559 | 132.3 | 125.6 |
| BT | | 1568 | 132.3 | 130.6 | 1600 | 132.2 | 132.2 | | | |
| GR | 130.2 | 0 | 130.5 | 100 | 131.1 | 200 | 130.6 | 266 | 130.4 | 300 |
| GR | 130.3 | 400 | 129.7 | 500 | 129.8 | 600 | 129.6 | 700 | 129.6 | 800 |
| GR | 129.8 | 900 | 129.8 | 1000 | 130.3 | 1100 | 129.7 | 1200 | 130.2 | 1300 |
| GR | 130.7 | 1400 | 131.5 | 1500 | 131.6 | 1535 | 125.6 | 1544.0 | 124.6 | 1544.5 |
| GR | 124.2 | 1545.5 | 124.0 | 1546.5 | 124.0 | 1547.5 | 124.0 | 1548.5 | 124.0 | 1549.5 |
| GR | 124.6 | 1550.5 | 125.6 | 1551 | 125.6 | 1552 | 124.6 | 1552.5 | 124.2 | 1553.5 |
| GR | 124.0 | 1554.5 | 124.0 | 1555.5 | 124.0 | 1556.5 | 124.2 | 1557.5 | 124.6 | 1558.5 |
| GR | 125.6 | 1559 | 130.6 | 1568 | 132.2 | 1600 | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|--------|-------|-------|--------|-------|-------|
| X1 | 11215 | 38 | 1548 | 1563 | 65 | 65 | 65 | | | |
| X3 | 10 | | | | | | | 130 | 132.2 | |
| BT | -38 | 0 | 132.0 | 130.3 | 100 | 131.7 | 131.3 | 200 | 131.7 | 130.8 |
| BT | | 266 | 131.4 | 131.1 | 300 | 131.3 | 131.2 | 400 | 130.8 | 130.5 |
| BT | | 500 | 130.6 | 130.5 | 600 | 130.5 | 130.1 | 700 | 130.3 | 129.9 |
| BT | | 800 | 130.3 | 129.9 | 900 | 130.1 | 129.3 | 1000 | 130.0 | 129.8 |
| BT | | 1100 | 130.3 | 130.3 | 1200 | 130.1 | 130.1 | 1300 | 130.6 | 130.3 |
| BT | | 1400 | 131.0 | 130.5 | 1500 | 132.1 | 131.4 | 1543 | 132.3 | 130.0 |
| BT | | 1548 | 132.3 | 126.2 | 1548.5 | 132.3 | 127.6 | 1549.5 | 132.3 | 128.7 |
| BT | | 1550.5 | 132.3 | 129.2 | 1551.5 | 132.3 | 129.4 | 1552.5 | 132.3 | 129.2 |
| BT | | 1553.5 | 132.3 | 128.7 | 1554.5 | 132.3 | 127.6 | 1555 | 132.3 | 126.2 |
| BT | | 1556 | 132.3 | 126.2 | 1556.5 | 132.3 | 127.6 | 1557.5 | 132.3 | 128.7 |
| BT | | 1558.5 | 132.3 | 129.2 | 1559.5 | 132.3 | 129.4 | 1560.5 | 132.3 | 129.2 |
| BT | | 1561.5 | 132.3 | 128.7 | 1562.5 | 132.3 | 127.6 | 1563 | 132.3 | 126.2 |
| BT | | 1568 | 132.3 | 130.7 | 1600 | 132.2 | 132.2 | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|
| GR | 130.3 | 0 | 131.3 | 100 | 130.8 | 200 | 131.1 | 266 | 131.2 | 300 |
| GR | 130.5 | 400 | 130.5 | 500 | 130.1 | 600 | 129.9 | 700 | 129.9 | 800 |
| GR | 129.3 | 900 | 129.8 | 1000 | 130.3 | 1100 | 130.1 | 1200 | 130.3 | 1300 |
| GR | 130.5 | 1400 | 131.4 | 1500 | 130.0 | 1543 | 126.2 | 1548 | 125.2 | 1548.5 |
| GR | 124.8 | 1549.5 | 124.6 | 1550.5 | 124.6 | 1551.5 | 124.6 | 1552.5 | 124.8 | 1553.5 |
| GR | 125.2 | 1554.5 | 126.2 | 1555 | 126.2 | 1556 | 125.2 | 1556.5 | 124.8 | 1557.5 |
| GR | 124.6 | 1558.5 | 124.6 | 1559.5 | 124.6 | 1560.5 | 124.8 | 1561.5 | 125.2 | 1562.5 |
| GR | 126.2 | 1563 | 130.7 | 1568 | 132.2 | 1600 | | | | |
| NC | | | .015 | | | | | | | |
| X1 | 11216 | 38 | 1548 | 1563 | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 130 | 132.2 | |
| GR | 130.3 | 0 | 131.3 | 100 | 130.8 | 200 | 131.1 | 266 | 131.2 | 300 |
| GR | 130.5 | 400 | 130.5 | 500 | 130.1 | 600 | 129.9 | 700 | 129.9 | 800 |
| GR | 129.3 | 900 | 129.8 | 1000 | 130.3 | 1100 | 130.1 | 1200 | 130.3 | 1300 |
| GR | 130.5 | 1400 | 131.4 | 1500 | 130.0 | 1543 | 126.2 | 1548 | 125.2 | 1548.5 |
| GR | 124.8 | 1549.5 | 124.6 | 1550.5 | 124.6 | 1551.5 | 124.6 | 1552.5 | 124.8 | 1553.5 |
| GR | 125.2 | 1554.5 | 126.2 | 1555 | 126.2 | 1556 | 125.2 | 1556.5 | 124.8 | 1557.5 |
| GR | 124.6 | 1558.5 | 124.6 | 1559.5 | 124.6 | 1560.5 | 124.8 | 1561.5 | 125.2 | 1562.5 |
| GR | 126.2 | 1563 | 130.7 | 1568 | 132.2 | 1600 | | | | |
| X1 | 11250 | 21 | 1543 | 1568 | 34 | 34 | 34 | | | |
| GR | 130.3 | 0 | 131.3 | 100 | 130.8 | 200 | 131.2 | 300 | 130.5 | 400 |
| GR | 130.5 | 500 | 130.1 | 600 | 129.9 | 700 | 129.9 | 800 | 129.3 | 900 |
| GR | 129.8 | 1000 | 130.3 | 1100 | 130.1 | 1200 | 130.3 | 1300 | 130.5 | 1400 |
| GR | 131.4 | 1500 | 130.0 | 1543 | 124.6 | 1553 | 124.6 | 1559 | 130.7 | 1568 |
| GR | 132.2 | 1600 | | | | | | | | |
| NC | | | .1 | .3 | | | | | | |
| X1 | 11750 | 24 | 1688 | 1712 | 500 | 500 | 500 | | | |
| GR | 133.5 | 0 | 132.4 | 100 | 132.4 | 200 | 132.8 | 300 | 133.2 | 400 |
| GR | 133.6 | 500 | 133.9 | 600 | 133.4 | 700 | 133.1 | 800 | 132.7 | 900 |
| GR | 131.9 | 1000 | 131.4 | 1100 | 130.9 | 1161 | 130.6 | 1200 | 130.9 | 1300 |
| GR | 131.2 | 1400 | 132.0 | 1500 | 131.9 | 1600 | 130.8 | 1688 | 125.2 | 1697 |
| GR | 125.2 | 1703 | 130.2 | 1712 | 133.1 | 1737 | 151.1 | 1737 | | |
| QT | 5 | 320 | 460 | 560 | 710 | 890 | | | | |
| X1 | 12350 | 25 | 1721 | 1745 | 600 | 600 | 600 | | | |
| GR | 136.7 | 0 | 136.7 | 100 | 136.1 | 200 | 136.1 | 300 | 137.1 | 400 |
| GR | 137.6 | 500 | 137.6 | 600 | 137.3 | 700 | 136.5 | 800 | 136.9 | 900 |
| GR | 137.5 | 1000 | 137.7 | 1100 | 136.6 | 1200 | 135.6 | 1267 | 135.1 | 1300 |
| GR | 134.1 | 1400 | 133.8 | 1500 | 134.6 | 1600 | 132.6 | 1721 | 125.5 | 1730 |
| GR | 125.5 | 1736 | 132.1 | 1745 | 133.9 | 1750 | 134.4 | 1771 | 148.4 | 1771 |

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 1/89 16:22:46

HEC2 RELEASE DATED SEPT 88

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

A109-03-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|------------|---------|--------|--------|--------|--------|------|--------|---------|---------|-------|-----|------|
| 120.000 | 2640.00 | 115.61 | 114.50 | 115.90 | 102.70 | 2.68 | 115.72 | .00 | 171.98 | .00 | .01 | .00 |
| * 1520.000 | 2390.00 | 116.13 | 115.20 | 115.30 | 102.70 | 3.09 | 116.28 | 1400.00 | 260.82 | 6.96 | .01 | .00 |
| * 1574.000 | 2390.00 | 116.09 | 117.60 | 117.60 | 102.50 | 4.51 | 116.41 | 54.00 | 78.60 | 7.17 | .01 | .00 |
| 1586.000 | 2390.00 | 116.14 | 117.60 | 117.60 | 102.50 | 4.48 | 116.45 | 12.00 | 78.73 | 7.19 | .01 | .00 |
| * 1636.000 | 2390.00 | 116.40 | 115.20 | 115.30 | 103.10 | 2.97 | 116.54 | 50.00 | 354.00 | 7.44 | .01 | .00 |
| 3528.000 | 2080.00 | 117.29 | 115.90 | 116.20 | 104.10 | 4.95 | 117.67 | 1892.00 | 51.25 | 16.24 | .01 | .00 |
| 3538.000 | 2080.00 | 117.30 | 115.90 | 116.20 | 104.10 | 4.94 | 117.68 | 10.00 | 51.26 | 16.25 | .01 | .00 |
| * 3543.000 | 2080.00 | 116.70 | 115.90 | 116.20 | 109.40 | 8.96 | 117.95 | 5.00 | 50.64 | 16.25 | .01 | .00 |
| 3553.000 | 2080.00 | 116.80 | 115.90 | 116.20 | 109.40 | 8.77 | 118.00 | 10.00 | 50.74 | 16.27 | .01 | .00 |
| 3921.000 | 2080.00 | 118.36 | 118.80 | 117.60 | 109.80 | 7.50 | 119.22 | 368.00 | 327.83 | 17.86 | .01 | .00 |
| * 3961.000 | 2080.00 | 119.13 | 116.80 | 116.80 | 109.80 | 4.93 | 119.44 | 40.00 | 1207.88 | 18.57 | .01 | .00 |
| * 3962.000 | 2080.00 | 119.27 | 116.80 | 116.80 | 109.80 | 4.63 | 119.47 | 1.00 | 1278.08 | 18.60 | .01 | .00 |
| 3994.000 | 2080.00 | 119.44 | 116.80 | 116.80 | 109.80 | 4.19 | 119.59 | 32.00 | 1350.95 | 19.56 | .01 | .00 |
| * 3995.000 | 2080.00 | 119.40 | 116.80 | 116.80 | 109.80 | 4.50 | 119.64 | 1.00 | 1330.47 | 19.59 | .01 | .00 |
| * 4035.000 | 2080.00 | 119.31 | 118.80 | 117.60 | 109.80 | 5.87 | 119.80 | 40.00 | 963.31 | 20.65 | .01 | .00 |
| 4558.000 | 1930.00 | 120.01 | 119.50 | 118.70 | 110.10 | 5.92 | 120.52 | 523.00 | 801.23 | 31.24 | .01 | .00 |
| 4608.000 | 1930.00 | 120.24 | 119.40 | 119.40 | 110.10 | 5.05 | 120.62 | 50.00 | 851.95 | 32.19 | .01 | .00 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|---------|---------|--------|-----|------|
| * 4609.000 | 1930.00 | 120.13 | 119.40 | 119.40 | 110.10 | 6.51 | 120.73 | 1.00 | 828.10 | 32.21 | .01 | .00 |
| * 4639.000 | 1930.00 | 120.69 | 119.40 | 119.40 | 110.10 | 4.90 | 120.98 | 30.00 | 952.01 | 32.82 | .01 | .00 |
| * 4640.000 | 1930.00 | 120.70 | 119.40 | 119.40 | 110.10 | 4.48 | 120.98 | 1.00 | 953.83 | 32.84 | .01 | .00 |
| 4690.000 | 1930.00 | 120.73 | 119.50 | 118.70 | 110.10 | 4.73 | 121.02 | 50.00 | 957.78 | 33.94 | .01 | .00 |
| * 5868.000 | 1780.00 | 121.90 | 120.70 | 120.20 | 112.80 | 5.81 | 122.41 | 1178.00 | 329.37 | 51.35 | .01 | .00 |
| * 6124.000 | 1720.00 | 122.49 | 120.80 | 121.20 | 113.00 | 2.22 | 122.53 | 256.00 | 1759.96 | 57.48 | .01 | .00 |
| 6125.000 | 1720.00 | 122.47 | 120.80 | 121.20 | 114.50 | 3.29 | 122.56 | 1.00 | 1754.44 | 57.53 | .01 | .00 |
| 6153.000 | 1720.00 | 122.47 | 119.40 | 119.50 | 114.60 | 3.20 | 122.56 | 28.00 | 1755.15 | 58.65 | .01 | .00 |
| * 6154.000 | 1720.00 | 122.44 | 119.40 | 119.50 | 114.60 | 4.74 | 122.60 | 1.00 | 1748.95 | 58.69 | .01 | .00 |
| 6182.000 | 1720.00 | 122.50 | 119.40 | 119.50 | 114.70 | 4.52 | 122.63 | 28.00 | 1687.11 | 59.80 | .01 | .00 |
| * 6183.000 | 1720.00 | 122.51 | 119.40 | 119.50 | 114.70 | 3.57 | 122.64 | 1.00 | 1688.20 | 59.84 | .01 | .00 |
| 6233.000 | 1720.00 | 122.52 | 119.40 | 119.50 | 114.70 | 3.54 | 122.64 | 50.00 | 1691.05 | 61.78 | .01 | .00 |
| * 7360.000 | 1520.00 | 122.73 | 122.20 | 121.10 | 116.50 | 7.03 | 123.23 | 1127.00 | 1028.39 | 96.96 | .01 | .00 |
| * 8560.000 | 1340.00 | 124.37 | 121.80 | 121.80 | 117.70 | 9.16 | 125.44 | 1200.00 | 742.83 | 121.35 | .01 | .00 |
| * 10100.000 | 1130.00 | 127.77 | 129.60 | 129.80 | 121.50 | 8.58 | 128.43 | 1540.00 | 729.25 | 147.37 | .01 | .00 |
| * 10199.000 | 1130.00 | 128.36 | 129.60 | 129.80 | 121.50 | 6.21 | 128.65 | 99.00 | 1030.15 | 149.37 | .01 | .00 |
| * 10200.000 | 1130.00 | 128.51 | 129.60 | 129.80 | 121.50 | 6.28 | 128.81 | 1.00 | 1194.99 | 149.40 | .01 | .00 |
| 10225.000 | 1130.00 | 128.41 | 129.90 | 129.80 | 121.70 | 7.93 | 128.98 | 25.00 | 811.95 | 149.97 | .01 | .00 |
| * 10226.000 | 1130.00 | 128.94 | 129.90 | 129.80 | 121.70 | 4.99 | 129.10 | 1.00 | 874.05 | 149.99 | .01 | .00 |
| 10300.000 | 1130.00 | 128.99 | 129.90 | 129.80 | 121.70 | 4.85 | 129.14 | 74.00 | 880.79 | 151.48 | .01 | .00 |
| * 10800.000 | 1130.00 | 128.47 | 132.00 | 132.30 | 121.10 | 9.78 | 129.95 | 500.00 | 163.35 | 157.48 | .01 | .00 |
| * 11100.000 | 1010.00 | 130.51 | 131.60 | 130.60 | 124.00 | 7.12 | 131.18 | 300.00 | 1211.08 | 162.21 | .01 | .00 |
| * 11149.000 | 1010.00 | 130.78 | 125.60 | 125.60 | 124.00 | 7.90 | 131.51 | 49.00 | 1349.80 | 163.65 | .01 | .00 |
| * 11150.000 | 1010.00 | 131.67 | 125.60 | 125.60 | 124.00 | 3.84 | 131.71 | 1.00 | 1589.35 | 163.68 | .01 | .00 |
| 11215.000 | 1010.00 | 131.83 | 126.20 | 126.20 | 124.60 | 3.24 | 131.86 | 65.00 | 1563.00 | 166.04 | .01 | .00 |
| * 11216.000 | 1010.00 | 131.72 | 126.20 | 126.20 | 124.60 | 5.36 | 131.96 | 1.00 | 1563.00 | 166.07 | .01 | .00 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|--------|---------|--------|-----|------|
| 11250.000 | 1010.00 | 131.86 | 130.00 | 130.70 | 124.60 | 4.13 | 132.00 | 34.00 | 1592.87 | 167.30 | .01 | .00 |
| * 11750.000 | 1010.00 | 131.60 | 130.80 | 130.20 | 125.20 | 8.93 | 132.75 | 500.00 | 488.69 | 179.25 | .01 | .00 |
| 12350.000 | 890.00 | 132.41 | 132.60 | 132.10 | 125.50 | 8.54 | 133.54 | 600.00 | 24.61 | 182.78 | .01 | .00 |

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 1520.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 1574.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 1636.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 3543.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 3961.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 3962.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 3995.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 4035.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 4609.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 4639.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 4640.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 5868.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 6124.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 6154.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 6183.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 7360.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 8560.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 8560.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 10100.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 10100.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 10199.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 10200.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 10200.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 10226.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 10800.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 11100.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 11100.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 11100.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 11149.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 11149.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 11150.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 11216.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 11750.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 11750.000 PROFILE= 1 MINIMUM SPECIFIC ENERGY

THIS RUN EXECUTED 9/ 1/89 17: 5:58

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
 T3 A109-03-00 SPRING OAKS CHANNEL
 T4 100-YEAR STORM FREQUENCY INTERIM CONDITIONS
 T5 FILENAME = A10903IN.IH2

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL FQ
 2 .0006 113

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38 43 1 23 24 42 26 3 39 4
 37 30 65

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

-10 -10

J6 IHLEQ ICOPY SUBDIV STRTDS RMLE

1

| | | | | | | | | | | |
|----|-------|---------|--------|---------|-------|---------|-------|---------|-------|---------|
| NC | .15 | .15 | .04 | .1 | .3 | | | | | |
| QT | 1 | 3040 | | | | | | | | |
| X1 | 120 | 11 | 9937.5 | 10051.5 | 120 | 120 | 120 | | | |
| CI | -1 | 101.9 | .04 | 4 | 4 | 30 | | | | |
| GR | 117 | 9885.5 | 114.2 | 9911.5 | 114.5 | 9937.5 | 106.6 | 9961.5 | 103.5 | 9987.5 |
| GR | 102.7 | 10000 | 103.6 | 10012.5 | 107.9 | 10033.5 | 115.9 | 10051.5 | 114.5 | 10067.5 |
| GR | 120.7 | 10106.5 | | | | | | | | |
| QT | 1 | 2760 | | | | | | | | |
| X1 | 1520 | 12 | 9944 | 10050 | 1400 | 1400 | 1400 | | | |
| CI | -1 | 102.7 | .04 | 4 | 4 | 30 | | | | |
| GR | 117.6 | 9800 | 115 | 9900 | 115.2 | 9944 | 108.1 | 9965 | 107.3 | 9975 |
| GR | 104.2 | 9995 | 102.7 | 10000 | 105.3 | 10005 | 108.6 | 10019 | 115.3 | 10050 |
| GR | 116.1 | 10100 | 116.3 | 10200 | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | | | .015 | .3 | .5 | | | | | |
| X1 | 3961 | 17 | 9977 | 10023 | 40 | 40 | 40 | | | |
| CI | -1 | 107.92 | .015 | 1.5 | 1.5 | 24 | | | | |
| X3 | 10 | | | | | | | 117.1 | 117.3 | |
| GR | 125 | 8300 | 120 | 9300 | 117.3 | 9700 | 117.7 | 9800 | 118.1 | 9900 |
| GR | 116.8 | 9977 | 115.3 | 9977 | 110.4 | 9989 | 109.8 | 10000 | 110.4 | 10009 |
| GR | 115.3 | 10023 | 116.8 | 10023 | 118.0 | 10100 | 117.7 | 10200 | 118.0 | 10300 |
| GR | 120 | 10900 | 125 | 11400 | | | | | | |

SPRING PINES ROAD

| | | | | | | | | | | |
|----|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| X1 | 3962 | 17 | 9977 | 10023 | 1 | 1 | 1 | | | |
| CI | | | | | | .01 | | | | |
| X3 | 10 | | | | | | | 117.1 | 117.3 | |
| BT | -11 | 9700 | 117.3 | 117.3 | 9800 | 117.7 | 117.7 | 9900 | 118.1 | 118.1 |
| BT | | 9977 | 118.7 | 116.8 | 9988 | 118.7 | 116.8 | 10000 | 118.7 | 116.8 |
| BT | | 10012 | 118.7 | 116.8 | 10023 | 118.7 | 116.8 | 10100 | 118 | 118 |
| BT | | 10200 | 117.7 | 117.7 | 10300 | 118 | 118 | | | |
| GR | 125 | 8300 | 120 | 9300 | 117.3 | 9700 | 117.7 | 9800 | 118.1 | 9900 |
| GR | 116.8 | 9977 | 115.3 | 9977 | 107.92 | 9988 | 107.92 | 10000 | 107.92 | 10012 |
| GR | 115.3 | 10023 | 116.8 | 10023 | 118.0 | 10100 | 117.7 | 10200 | 118.0 | 10300 |
| GR | 120 | 10900 | 125 | 11400 | | | | | | |

| | | | | | | | | | | |
|----|------|--|--|--|----|----|----|-------|-------|--|
| X1 | 3994 | | | | 32 | 32 | 32 | | | |
| X2 | | | | | | | 1 | | | |
| X3 | 10 | | | | | | | 117.3 | 117.7 | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 3995 | 17 | 9977 | 10023 | 1 | 1 | 1 | | | |
| CI | -1 | 107.92 | .015 | 1.5 | 1.5 | 24 | | | | |
| X3 | 10 | | | | | | | 117.3 | 117.7 | |
| GR | 125 | 8300 | 120 | 9300 | 117.3 | 9700 | 117.7 | 9800 | 118.1 | 9900 |
| GR | 116.8 | 9977 | 115.3 | 9977 | 110.4 | 9989 | 109.8 | 10000 | 110.4 | 10009 |
| GR | 115.3 | 10023 | 116.8 | 10023 | 118.0 | 10100 | 117.7 | 10200 | 118.0 | 10300 |
| GR | 120 | 10900 | 125 | 11400 | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 4035 | 11 | 9974 | 10026 | 40 | 40 | 40 | | | |
| CI | -1 | 107.99 | .015 | 1.5 | 1.5 | 24 | | | | |
| GR | 125 | 8300 | 120 | 9300 | 118.8 | 9974 | 115.7 | 9981 | 110.4 | 9992 |
| GR | 109.8 | 10000 | 110.4 | 10008 | 115.6 | 10020 | 117.6 | 10026 | 120 | 10900 |
| GR | 125 | 11400 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|--------|---------|-------|---------|-------|---------|-----|--------|
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 2240 | | | | | | | | |
| X1 | 4558 | 11 | 9974.5 | 10024.5 | 523 | 523 | 523 | | | |
| CI | -1 | 108.52 | .015 | 1.5 | 1.5 | 24 | | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.5 | 9974.5 | 118.4 | 9978.5 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116.7 | 10018.5 | 118.7 | 10024.5 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|------|---------|-------|-------|-------|-------|-------|--------|
| NC | | | | .3 | .5 | | | | | |
| X1 | 4608 | 11 | 9976 | 10023 | 50 | 50 | 50 | | | |
| CI | -1 | 108.57 | .015 | 1.5 | 1.5 | 24 | | | | |
| X3 | 10 | | | | | | | 118.5 | 118.5 | |
| GR | 125 | 9200 | 120 | 9700 | 119.4 | 9976 | 116 | 9976 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116 | 10023 | 119.4 | 10023 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

BASSWOOD

| | | | | | | | | | | |
|----|--------|-------|--------|-------|-------|-------|-------|-------|--------|-------|
| X1 | 4609 | 11 | 9976 | 10023 | 1 | 1 | 1 | | | |
| CI | | | | | | .01 | | | | |
| X3 | 10 | | | | | | | 118.5 | 118.5 | |
| BT | -5 | 9976 | 119.4 | 117.5 | 9988 | 119.4 | 117.5 | 10000 | 119.4 | 117.5 |
| BT | | 10012 | 119.4 | 117.5 | 10023 | 119.4 | 117.5 | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.4 | 9976 | 116 | 9976 | 108.57 | 9988 |
| GR | 108.57 | 10000 | 108.57 | 10012 | 116 | 10023 | 119.4 | 10023 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

| | | | | | | | | | | |
|----|------|--|--|--|----|----|----|-------|-------|--|
| X1 | 4639 | | | | 30 | 30 | 30 | | | |
| X2 | | | | | | | 1 | | | |
| X3 | 10 | | | | | | | 119.4 | 119.4 | |

| | | | | | | | | | | |
|----|-------|--------|------|---------|-------|-------|-------|-------|-------|--------|
| X1 | 4640 | 11 | 9976 | 10023 | 1 | 1 | 1 | | | |
| CI | -1 | 108.57 | .015 | 1.5 | 1.5 | 24 | | | | |
| X3 | 10 | | | | | | | 119.4 | 119.4 | |
| GR | 125 | 9200 | 120 | 9700 | 119.4 | 9976 | 116 | 9976 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116 | 10023 | 119.4 | 10023 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

CONTROL STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|--------|---------|-------|---------|-------|---------|-----|--------|
| X1 | 4690 | 11 | 9974.5 | 10024.5 | 50 | 50 | 50 | | | |
| CI | -1 | 108.65 | .015 | 1.5 | 1.5 | 20 | | | | |
| X5 | -2 | 0.5 | 0.5 | | | | | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.5 | 9974.5 | 118.4 | 9978.5 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116.7 | 10018.5 | 118.7 | 10024.5 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|--------|---------|-------|---------|-------|---------|-----|--------|
| X1 | 4740 | 11 | 9974.5 | 10024.5 | 50 | 50 | 50 | | | |
| CI | -1 | 108.70 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.5 | 9974.5 | 118.4 | 9978.5 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116.7 | 10018.5 | 118.7 | 10024.5 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 2050 | | | | | | | | |
| X1 | 5868 | 9 | 9973 | 10024 | 1128 | 1128 | 1128 | | | |
| CI | -1 | 109.83 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125 | 9550 | 120.7 | 9973 | 120.3 | 9981 | 113.1 | 9991 | 113.0 | 10000 |
| GR | 112.8 | 10009 | 119.0 | 10019 | 120.2 | 10024 | 125 | 10480 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| QT | 1 | 2010 | | | | | | | | |
| X1 | 6124 | 36 | 1055 | 1100 | 256 | 256 | 256 | | | |
| CI | -1 | 110.08 | .015 | 1.5 | 1.5 | 20 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 120.8 | 1055 | 113.0 | 1067 |
| GR | 113.0 | 1075 | 113.0 | 1087 | 121.2 | 1100 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| NC | | | .015 | .3 | .5 | | | | | |
| X1 | 6125 | 36 | 1055 | 1100 | 1 | 1 | 1 | | | |
| CI | -1 | 110.08 | .015 | 1.5 | 1.5 | 20 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 120.8 | 1055 | 114.5 | 1066 |
| GR | 114.5 | 1075 | 114.5 | 1088 | 121.2 | 1100 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 6153 | 36 | 1053 | 1098 | 28 | 28 | 28 | | | |
| CI | -1 | 110.11 | .015 | 1.35 | 1.35 | 20 | | | | |
| X3 | 10 | | | | | | | 120 | 120 | |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 119.4 | 1053 | 114.6 | 1064 |
| GR | 114.6 | 1075 | 114.6 | 1087 | 119.5 | 1098 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |

MAPLEWOOD DRIVE

| | | | | | | | | | | |
|----|------|--------|-------|-------|------|-------|-------|------|-------|-------|
| X1 | 6154 | 36 | 1053 | 1098 | 1 | 1 | 1 | | | |
| CI | -1 | 110.11 | .015 | 1.35 | 1.35 | 20 | | | | |
| X2 | | | | | | | | | | |
| X3 | 10 | | | | | | | 120 | 120 | |
| BT | -36 | 0 | 125.0 | 124.7 | 99 | 122.7 | 122.5 | 198 | 121.7 | 121.4 |
| BT | | 297 | 120.5 | 120.5 | 310 | 120.5 | 120.5 | 396 | 120.5 | 120.2 |
| BT | | 495 | 120.4 | 119.9 | 594 | 120.4 | 119.9 | 629 | 120.7 | 119.6 |
| BT | | 634 | 120.8 | 120.8 | 642 | 120.8 | 115.3 | 645 | 120.8 | 115.3 |
| BT | | 649 | 120.8 | 115.3 | 657 | 121.3 | 121.3 | 700 | 121.0 | 121.0 |
| BT | | 800 | 120.7 | 119.5 | 900 | 121.0 | 119.2 | 1000 | 121.4 | 119.6 |
| BT | | 1053 | 121.3 | 119.4 | 1053 | 123.7 | 119.4 | 1098 | 123.7 | 119.5 |
| BT | | 1098 | 121.3 | 119.5 | 1098 | 121.3 | 119.5 | 1200 | 121.2 | 119.0 |
| BT | | 1300 | 120.6 | 118.8 | 1400 | 120.7 | 119.1 | 1500 | 121.1 | 119.4 |
| BT | | 1600 | 121.7 | 120.3 | 1700 | 122.1 | 120.5 | 1800 | 123.3 | 121.9 |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| BT | | 1900 | 123.7 | 122.9 | 2000 | 124.3 | 123.1 | 2100 | 124.7 | 123.8 |
| BT | | 2200 | 124.7 | 123.8 | 2231 | 124.9 | 124.3 | 2300 | 124.5 | 123.5 |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 119.4 | 1053 | 114.6 | 1064 |
| GR | 114.6 | 1075 | 114.6 | 1087 | 119.5 | 1098 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |
| X1 | 6182 | 34 | 1053 | 1098 | 28 | 28 | 28 | | | |
| CI | -1 | 110.14 | .015 | 1.35 | 1.35 | 20 | | | | |
| X2 | | | | | | | | | | |
| X3 | 10 | | | | | | | 120.0 | 120.0 | |
| BT | -33 | 0 | 125.0 | 125.0 | 99 | 122.7 | 122.5 | 198 | 121.7 | 121.7 |
| BT | | 297 | 120.5 | 120.1 | 396 | 120.5 | 120.4 | 495 | 120.4 | 120.1 |
| BT | | 594 | 120.4 | 120.2 | 608 | 120.5 | 120.2 | 642 | 120.8 | 120.0 |
| BT | | 655 | 120.8 | 119.9 | 700 | 120.7 | 119.6 | 800 | 120.7 | 119.8 |
| BT | | 900 | 121.0 | 119.9 | 1000 | 121.4 | 120.3 | 1053 | 121.3 | 119.4 |
| BT | | 1053 | 123.7 | 119.4 | 1098 | 123.7 | 119.5 | 1098 | 121.3 | 119.5 |
| BT | | 1100 | 121.3 | 119.6 | 1200 | 121.2 | 120.1 | 1300 | 120.6 | 119.7 |
| BT | | 1400 | 120.7 | 120.1 | 1500 | 121.1 | 119.9 | 1600 | 121.7 | 120.8 |
| BT | | 1700 | 122.1 | 121.2 | 1800 | 123.3 | 122.7 | 1806 | 123.3 | 122.7 |
| BT | | 1900 | 123.7 | 122.6 | 2000 | 124.3 | 123.1 | 2100 | 124.7 | 123.8 |
| BT | | 2200 | 124.7 | 123.7 | 2231 | 124.9 | 124.5 | 2300 | 124.5 | 123.6 |
| GR | 125.0 | 0 | 122.5 | 99 | 121.7 | 198 | 120.1 | 297 | 120.4 | 396 |
| GR | 120.1 | 495 | 120.2 | 594 | 120.2 | 608 | 120.0 | 642 | 119.9 | 655 |
| GR | 119.6 | 700 | 119.8 | 800 | 119.9 | 900 | 120.3 | 1000 | 119.4 | 1053 |
| GR | 114.7 | 1064 | 114.7 | 1075 | 114.7 | 1087 | 119.5 | 1098 | 119.6 | 1100 |
| GR | 120.1 | 1200 | 119.7 | 1300 | 120.1 | 1400 | 119.9 | 1500 | 120.8 | 1600 |
| GR | 121.2 | 1700 | 122.7 | 1800 | 122.7 | 1806 | 122.6 | 1900 | 123.1 | 2000 |
| GR | 123.8 | 2100 | 123.7 | 2200 | 124.5 | 2231 | 123.6 | 2300 | | |
| X1 | 6183 | 33 | 1053 | 1098 | 1 | 1 | 1 | | | |
| CI | -1 | 110.14 | .015 | 1.35 | 1.35 | 20 | | | | |
| X3 | 10 | | | | | | | 120.4 | 120.6 | |
| GR | 125.0 | 0 | 122.5 | 99 | 121.7 | 198 | 120.1 | 297 | 120.4 | 396 |
| GR | 120.1 | 495 | 120.2 | 594 | 120.2 | 608 | 120.0 | 642 | 119.6 | 700 |
| GR | 119.8 | 800 | 119.9 | 900 | 120.3 | 1000 | 119.4 | 1053 | 114.7 | 1064 |
| GR | 114.7 | 1075 | 114.7 | 1087 | 119.5 | 1098 | 119.6 | 1100 | 120.1 | 1200 |
| GR | 119.7 | 1300 | 120.1 | 1400 | 119.9 | 1500 | 120.8 | 1600 | 121.2 | 1700 |
| GR | 122.7 | 1800 | 122.7 | 1806 | 122.6 | 1900 | 123.1 | 2000 | 123.8 | 2100 |
| GR | 123.7 | 2200 | 124.5 | 2231 | 123.6 | 2300 | | | | |
| X1 | 6208 | 33 | 1053 | 1098 | 25 | 25 | 25 | | | |
| CI | -1 | 110.19 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125.0 | 0 | 122.5 | 99 | 121.7 | 198 | 120.1 | 297 | 120.4 | 396 |
| GR | 120.1 | 495 | 120.2 | 594 | 120.2 | 608 | 120.0 | 642 | 119.6 | 700 |
| GR | 119.8 | 800 | 119.9 | 900 | 120.3 | 1000 | 119.4 | 1053 | 114.7 | 1064 |
| GR | 114.7 | 1075 | 114.7 | 1087 | 119.5 | 1098 | 119.6 | 1100 | 120.1 | 1200 |
| GR | 119.7 | 1300 | 120.1 | 1400 | 119.9 | 1500 | 120.8 | 1600 | 121.2 | 1700 |
| GR | 122.7 | 1800 | 122.7 | 1806 | 122.6 | 1900 | 123.1 | 2000 | 123.8 | 2100 |
| GR | 123.7 | 2200 | 124.5 | 2231 | 123.6 | 2300 | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 6233 | 19 | 609 | 639 | 25 | 25 | 25 | | -1.7 | |
| CI | 625 | 110.24 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125.3 | 0 | 121.2 | 344 | 120.2 | 400 | 120.5 | 431 | 120.8 | 500 |
| GR | 122.7 | 606 | 122.2 | 609 | 116.5 | 619 | 116.5 | 625 | 116.5 | 631 |
| GR | 121.1 | 639 | 121.0 | 700 | 121.0 | 800 | 120.4 | 900 | 122.1 | 1185 |
| GR | 122.4 | 1217 | 123.4 | 1300 | 124.4 | 1400 | 125.8 | 1500 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| NC | | | .1 | .3 | | | | | | |
| QT | 1 | 1780 | | | | | | | | |
| X1 | 7360 | 19 | 609 | 639 | 1127 | 1127 | 1127 | | | |
| CI | 625 | 111.32 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125.3 | 0 | 121.2 | 344 | 120.2 | 400 | 120.5 | 431 | 120.8 | 500 |
| GR | 122.7 | 606 | 122.2 | 609 | 116.5 | 619 | 116.5 | 625 | 116.5 | 631 |
| GR | 121.1 | 639 | 121.0 | 700 | 121.0 | 800 | 120.4 | 900 | 122.1 | 1185 |
| GR | 122.4 | 1217 | 123.4 | 1300 | 124.4 | 1400 | 125.8 | 1500 | | |

CONTROL STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 7410 | 19 | 609 | 639 | 50 | 50 | 50 | | | |
| CI | 625 | 111.37 | .015 | 1.5 | 1.5 | 16 | | | | |
| X5 | -2 | 0.5 | 0.5 | | | | | | | |
| GR | 125.3 | 0 | 121.2 | 344 | 120.2 | 400 | 120.5 | 431 | 120.8 | 500 |
| GR | 122.7 | 606 | 122.2 | 609 | 116.5 | 619 | 116.5 | 625 | 116.5 | 631 |
| GR | 121.1 | 639 | 121.0 | 700 | 121.0 | 800 | 120.4 | 900 | 122.1 | 1185 |
| GR | 122.4 | 1217 | 123.4 | 1300 | 124.4 | 1400 | 125.8 | 1500 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-----|-------|------|-------|------|-------|------|
| QT | 1 | 1570 | | | | | | | | |
| X1 | 8560 | 21 | 665 | 687 | 1150 | 1150 | 1150 | | | |
| CI | 677.5 | 112.52 | .015 | 1.5 | 1.5 | 16 | | | | |
| GR | 128.3 | 0 | 126.5 | 25 | 126.4 | 118 | 126.3 | 125 | 126.0 | 225 |
| GR | 123.9 | 325 | 123.8 | 332 | 124.2 | 425 | 124.2 | 525 | 122.9 | 625 |
| GR | 121.8 | 665 | 117.7 | 673 | 117.7 | 682 | 121.8 | 687 | 122.8 | 725 |
| GR | 123.0 | 825 | 123.2 | 925 | 124.0 | 1025 | 125.8 | 1125 | 127.2 | 1190 |
| GR | 128.4 | 1240 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-----|-------|------|-------|------|-------|------|
| QT | 1 | 1480 | | | | | | | | |
| X1 | 9099 | 21 | 665 | 687 | 539 | 539 | 539 | | 2.0 | |
| CI | 677.5 | 113.06 | .015 | 1.5 | 1.5 | 16 | | | | |
| GR | 128.3 | 0 | 126.5 | 25 | 126.4 | 118 | 126.3 | 125 | 126.0 | 225 |
| GR | 123.9 | 325 | 123.8 | 332 | 124.2 | 425 | 124.2 | 525 | 122.9 | 625 |
| GR | 121.8 | 665 | 117.7 | 673 | 117.7 | 682 | 121.8 | 687 | 122.8 | 725 |
| GR | 123.0 | 825 | 123.2 | 925 | 124.0 | 1025 | 125.8 | 1125 | 127.2 | 1190 |
| GR | 128.4 | 1240 | | | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|-------|-----|-------|------|-------|------|-------|------|
| X1 | 9100 | 21 | 665 | 687 | 1 | 1 | 1 | | 2.0 | |
| CI | 677.5 | 116.10 | .015 | 1.5 | 1.5 | 12 | | | | |
| X5 | -2 | 2.5 | 2.5 | | | | | | | |
| GR | 128.3 | 0 | 126.5 | 25 | 126.4 | 118 | 126.3 | 125 | 126.0 | 225 |
| GR | 123.9 | 325 | 123.8 | 332 | 124.2 | 425 | 124.2 | 525 | 122.9 | 625 |
| GR | 121.8 | 665 | 117.7 | 673 | 117.7 | 682 | 121.8 | 687 | 122.8 | 725 |
| GR | 123.0 | 825 | 123.2 | 925 | 124.0 | 1025 | 125.8 | 1125 | 127.2 | 1190 |
| GR | 128.4 | 1240 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| QT | 1 | 1320 | | | | | | | | |
| X1 | 10099 | 25 | 1581 | 1600 | 999 | 999 | 999 | | | |
| CI | 1590 | 117.10 | .015 | 1.5 | 1.5 | 12 | | | | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 | 127.6 | 900 |
| GR | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 | 127.8 | 1400 |
| GR | 128.7 | 1500 | 129.6 | 1581 | 121.5 | 1586 | 121.5 | 1594 | 129.8 | 1600 |
| GR | 130.2 | 1605 | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 10100 | 25 | 1581 | 1600 | 1 | 1 | 1 | | | |
| CI | 1590 | 120.10 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| X5 | -2 | 3.5 | 3.5 | | | | | | | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 | 127.6 | 900 |
| GR | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 | 127.8 | 1400 |
| GR | 128.7 | 1500 | 129.6 | 1581 | 121.5 | 1586 | 121.5 | 1594 | 129.8 | 1600 |
| GR | 130.2 | 1605 | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| NC | | | | .3 | .5 | | | | | |
| X1 | 10199 | 25 | 1581 | 1600 | 99 | 99 | 99 | | | |
| CI | 1590 | 120.20 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 | 127.6 | 900 |
| GR | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 | 127.8 | 1400 |
| GR | 128.7 | 1500 | 129.6 | 1581 | 121.5 | 1586 | 121.5 | 1594 | 129.8 | 1600 |
| GR | 130.2 | 1605 | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 |

LANE LANE - EXISTING BRIDGE REPLACED

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 10200 | 29 | 1581 | 1600 | 1 | 1 | 1 | | | |
| CI | 1590 | 120.20 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 484 | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 |
| GR | 127.6 | 900 | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 |
| GR | 127.9 | 1374 | 127.8 | 1400 | 128.7 | 1500 | 129.6 | 1581 | 128.5 | 1582 |
| GR | 121.5 | 1586 | 121.5 | 1594 | 128.5 | 1599 | 129.8 | 1600 | 130.2 | 1605 |
| GR | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 10225 | 29 | 1581 | 1600 | 25 | 25 | 25 | | | |
| CI | 1590 | 120.22 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.4 | 0 | 128.7 | 100 | 127.5 | 200 | 126.6 | 300 | 126.2 | 400 |
| GR | 126.5 | 484 | 126.5 | 500 | 126.3 | 600 | 125.6 | 700 | 126.8 | 800 |
| GR | 128.0 | 900 | 130.2 | 1000 | 129.9 | 1100 | 130.0 | 1200 | 129.3 | 1300 |
| GR | 129.2 | 1374 | 129.1 | 1400 | 129.9 | 1500 | 129.9 | 1581 | 128.7 | 1582 |
| GR | 121.7 | 1586 | 121.7 | 1594 | 128.7 | 1599 | 129.8 | 1600 | 130.3 | 1605 |
| GR | 129.7 | 1700 | 129.3 | 1800 | 129.7 | 1900 | 130.2 | 2000 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 10226 | 25 | 1581 | 1600 | 1 | 1 | 1 | | | |
| CI | 1590 | 120.22 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.4 | 0 | 128.7 | 100 | 127.5 | 200 | 126.6 | 300 | 126.2 | 400 |
| GR | 126.5 | 500 | 126.3 | 600 | 125.6 | 700 | 126.8 | 800 | 128.0 | 900 |
| GR | 130.2 | 1000 | 129.9 | 1100 | 130.0 | 1200 | 129.3 | 1300 | 129.1 | 1400 |
| GR | 129.9 | 1500 | 129.9 | 1581 | 121.7 | 1586 | 121.7 | 1594 | 129.8 | 1600 |
| GR | 130.3 | 1605 | 129.7 | 1700 | 129.3 | 1800 | 129.7 | 1900 | 130.2 | 2000 |
| X1 | 10300 | 25 | 1581 | 1600 | 74 | 74 | 74 | | | |
| CI | 1590 | 120.30 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.4 | 0 | 128.7 | 100 | 127.5 | 200 | 126.6 | 300 | 126.2 | 400 |
| GR | 126.5 | 500 | 126.3 | 600 | 125.6 | 700 | 126.8 | 800 | 128.0 | 900 |
| GR | 130.2 | 1000 | 129.9 | 1100 | 130.0 | 1200 | 129.3 | 1300 | 129.1 | 1400 |
| GR | 129.9 | 1500 | 129.9 | 1581 | 121.7 | 1586 | 121.7 | 1594 | 129.8 | 1600 |
| GR | 130.3 | 1605 | 129.7 | 1700 | 129.3 | 1800 | 129.7 | 1900 | 130.2 | 2000 |
| QT | 1 | 1230 | | | | | | | | |
| NC | | | | .1 | .3 | | | | | |
| X1 | 10800 | 23 | 1573 | 1606 | 500 | 500 | 500 | | | |
| CI | 1584 | 120.80 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.9 | 0 | 130.3 | 100 | 129.6 | 200 | 129.1 | 300 | 129.1 | 400 |
| GR | 129.1 | 425 | 128.6 | 500 | 128.3 | 600 | 128.5 | 700 | 128.7 | 800 |
| GR | 128.7 | 900 | 129.4 | 1000 | 129.6 | 1100 | 129.7 | 1200 | 130.2 | 1300 |
| GR | 131.1 | 1369 | 130.9 | 1400 | 131.9 | 1500 | 132.0 | 1573 | 121.1 | 1586 |
| GR | 121.1 | 1593 | 132.3 | 1606 | 136.6 | 1616 | | | | |
| QT | 1 | 1190 | | | | | | | | |
| X1 | 11100 | 21 | 1535 | 1568 | 300 | 300 | 300 | | | |
| CI | 1550 | 121.10 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.2 | 0 | 130.5 | 100 | 131.1 | 200 | 130.4 | 300 | 130.3 | 400 |
| GR | 129.7 | 500 | 129.8 | 600 | 129.6 | 700 | 129.6 | 800 | 129.8 | 900 |
| GR | 129.8 | 1000 | 130.3 | 1100 | 129.7 | 1200 | 130.2 | 1300 | 130.7 | 1400 |
| GR | 131.5 | 1500 | 131.6 | 1535 | 124.0 | 1547 | 124.0 | 1553 | 130.6 | 1568 |
| GR | 132.2 | 1600 | | | | | | | | |
| X1 | 11149 | 22 | 1535 | 1568 | 49 | 49 | 49 | | | |
| CI | 1550 | 121.15 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.2 | 0 | 130.5 | 100 | 131.1 | 200 | 130.6 | 266 | 130.4 | 300 |
| GR | 130.3 | 400 | 129.7 | 500 | 129.8 | 600 | 129.6 | 700 | 129.6 | 800 |
| GR | 129.8 | 900 | 129.8 | 1000 | 130.3 | 1100 | 129.7 | 1200 | 130.2 | 1300 |
| GR | 130.7 | 1400 | 131.5 | 1500 | 131.6 | 1535 | 124.0 | 1547 | 124.0 | 1553 |
| GR | 130.6 | 1568 | 132.2 | 1600 | | | | | | |

ROBINSON ROAD - EXISTING BRIDGE REPLACED

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 11150 | 22 | 1535 | 1568 | 1 | 1 | 1 | | | |
| CI | 1550 | 121.15 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.2 | 0 | 130.5 | 100 | 131.1 | 200 | 130.6 | 266 | 130.4 | 300 |
| GR | 130.3 | 400 | 129.7 | 500 | 129.8 | 600 | 129.6 | 700 | 129.6 | 800 |
| GR | 129.8 | 900 | 129.8 | 1000 | 130.3 | 1100 | 129.7 | 1200 | 130.2 | 1300 |
| GR | 130.7 | 1400 | 131.5 | 1500 | 131.6 | 1535 | 124.0 | 1547 | 124.0 | 1553 |
| GR | 130.6 | 1568 | 132.2 | 1600 | | | | | | |
| X1 | 11215 | 22 | 1543 | 1568 | 65 | 65 | 65 | | | |
| CI | 1556 | 121.22 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.3 | 0 | 131.3 | 100 | 130.8 | 200 | 131.1 | 266 | 131.2 | 300 |
| GR | 130.5 | 400 | 130.5 | 500 | 130.1 | 600 | 129.9 | 700 | 129.9 | 800 |
| GR | 129.3 | 900 | 129.8 | 1000 | 130.3 | 1100 | 130.1 | 1200 | 130.3 | 1300 |
| GR | 130.5 | 1400 | 131.4 | 1500 | 130.0 | 1543 | 124.6 | 1553 | 124.6 | 1559 |
| GR | 130.7 | 1568 | 132.2 | 1600 | | | | | | |
| X1 | 11216 | 22 | 1543 | 1568 | 1 | 1 | 1 | | | |
| CI | 1556 | 121.22 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.3 | 0 | 131.3 | 100 | 130.8 | 200 | 131.1 | 266 | 131.2 | 300 |
| GR | 130.5 | 400 | 130.5 | 500 | 130.1 | 600 | 129.9 | 700 | 129.9 | 800 |
| GR | 129.3 | 900 | 129.8 | 1000 | 130.3 | 1100 | 130.1 | 1200 | 130.3 | 1300 |
| GR | 130.5 | 1400 | 131.4 | 1500 | 130.0 | 1543 | 124.6 | 1553 | 124.6 | 1559 |
| GR | 130.7 | 1568 | 132.2 | 1600 | | | | | | |
| X1 | 11250 | 21 | 1543 | 1568 | 34 | 34 | 34 | | | |
| CI | 1556 | 121.25 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.3 | 0 | 131.3 | 100 | 130.8 | 200 | 131.2 | 300 | 130.5 | 400 |
| GR | 130.5 | 500 | 130.1 | 600 | 129.9 | 700 | 129.9 | 800 | 129.3 | 900 |
| GR | 129.8 | 1000 | 130.3 | 1100 | 130.1 | 1200 | 130.3 | 1300 | 130.5 | 1400 |
| GR | 131.4 | 1500 | 130.0 | 1543 | 124.6 | 1553 | 124.6 | 1559 | 130.7 | 1568 |
| GR | 132.2 | 1600 | | | | | | | | |
| QT | 1 | 1120 | | | | | | | | |
| X1 | 11750 | 23 | 1688 | 1712 | 500 | 500 | 500 | | | |
| CI | -1 | 121.75 | .015 | 1.5 | 1.5 | 8 | | | | |
| GR | 133.5 | 0 | 132.4 | 100 | 132.4 | 200 | 132.8 | 300 | 133.2 | 400 |
| GR | 133.6 | 500 | 133.9 | 600 | 133.4 | 700 | 133.1 | 800 | 132.7 | 900 |
| GR | 131.9 | 1000 | 131.4 | 1100 | 130.9 | 1161 | 130.6 | 1200 | 130.9 | 1300 |
| GR | 131.2 | 1400 | 132.0 | 1500 | 131.9 | 1600 | 130.8 | 1688 | 125.2 | 1697 |
| GR | 125.2 | 1703 | 130.2 | 1712 | 133.1 | 1737 | | | | |
| QT | 1 | 1050 | | | | | | | | |
| X1 | 12350 | 24 | 1721 | 1745 | 600 | 600 | 600 | | | |
| CI | -1 | 122.35 | .015 | 1.5 | 1.5 | 8 | | | | |
| GR | 136.7 | 0 | 136.7 | 100 | 136.1 | 200 | 136.1 | 300 | 137.1 | 400 |
| GR | 137.6 | 500 | 137.6 | 600 | 137.3 | 700 | 136.5 | 800 | 136.9 | 900 |
| GR | 137.5 | 1000 | 137.7 | 1100 | 136.6 | 1200 | 135.6 | 1267 | 135.1 | 1300 |
| GR | 134.1 | 1400 | 133.8 | 1500 | 134.6 | 1600 | 132.6 | 1721 | 125.5 | 1730 |

GR 125.5 1736 132.1 1745 133.9 1750 134.4 1771

IHLQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 1/89 17: 6:29

HEC2 RELEASE DATED SEPT 88

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

A109-03-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|------------|---------|--------|--------|--------|--------|------|--------|---------|--------|-------|-------|-------|
| 120.000 | 3040.00 | 113.62 | 114.41 | 114.99 | 101.90 | 3.37 | 113.80 | .00 | 123.79 | .00 | 30.00 | .00 |
| 1520.000 | 2760.00 | 114.42 | 115.15 | 115.51 | 102.70 | 3.06 | 114.57 | 1400.00 | 123.76 | 3.98 | 30.00 | 12.94 |
| 1574.000 | 2760.00 | 114.45 | 116.27 | 116.85 | 102.50 | 3.05 | 114.59 | 54.00 | 124.00 | 4.13 | 30.00 | 13.93 |
| 1636.000 | 2760.00 | 114.47 | 115.15 | 115.51 | 102.80 | 3.08 | 114.62 | 50.00 | 123.38 | 4.27 | 30.00 | 14.82 |
| 3528.000 | 2400.00 | 115.39 | 119.01 | 117.68 | 104.10 | 2.83 | 115.51 | 1892.00 | 120.31 | 9.57 | 30.00 | 52.66 |
| 3538.000 | 2400.00 | 115.39 | 119.01 | 117.68 | 104.10 | 2.83 | 115.52 | 10.00 | 120.35 | 9.59 | 30.00 | 52.94 |
| * 3543.000 | 2400.00 | 115.49 | 118.81 | 117.60 | 107.50 | 8.34 | 116.57 | 5.00 | 47.98 | 9.60 | 24.00 | 53.02 |
| 3553.000 | 2400.00 | 115.50 | 118.81 | 117.60 | 107.50 | 8.33 | 116.58 | 10.00 | 48.00 | 9.61 | 24.00 | 53.07 |
| 3921.000 | 2330.00 | 115.83 | 118.80 | 117.60 | 107.88 | 8.16 | 116.86 | 368.00 | 47.85 | 10.02 | 24.00 | 54.86 |
| 3961.000 | 2330.00 | 115.85 | 116.84 | 116.84 | 107.92 | 8.18 | 116.89 | 40.00 | 47.81 | 10.06 | 24.00 | 55.03 |
| 3962.000 | 2330.00 | 115.85 | 116.80 | 116.80 | 107.92 | 8.21 | 116.90 | 1.00 | 46.00 | 10.06 | .01 | 55.03 |
| 3994.000 | 2330.00 | 115.88 | 116.80 | 116.80 | 107.92 | 8.18 | 116.92 | 32.00 | 46.00 | 10.10 | .01 | 55.03 |
| 3995.000 | 2330.00 | 115.91 | 116.84 | 116.84 | 107.92 | 8.11 | 116.93 | 1.00 | 47.97 | 10.10 | 24.00 | 55.04 |
| 4035.000 | 2330.00 | 115.93 | 118.80 | 117.60 | 107.99 | 8.16 | 116.96 | 40.00 | 47.84 | 10.14 | 24.00 | 55.21 |
| 4558.000 | 2240.00 | 116.34 | 119.51 | 118.71 | 108.52 | 8.02 | 117.34 | 523.00 | 47.46 | 10.72 | 24.00 | 58.07 |
| 4608.000 | 2240.00 | 116.37 | 119.41 | 119.41 | 108.57 | 8.03 | 117.37 | 50.00 | 47.41 | 10.77 | 24.00 | 58.31 |
| 4609.000 | 2240.00 | 116.41 | 119.40 | 119.40 | 108.57 | 7.91 | 117.38 | 1.00 | 47.00 | 10.77 | .01 | 58.31 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|---------|--------|-------|-------|--------|
| 4639.000 | 2240.00 | 116.44 | 119.40 | 119.40 | 108.57 | 7.88 | 117.41 | 30.00 | 47.00 | 10.80 | .01 | 58.31 |
| 4640.000 | 2240.00 | 116.43 | 119.41 | 119.41 | 108.57 | 7.94 | 117.41 | 1.00 | 47.61 | 10.80 | 24.00 | 58.32 |
| * 4690.000 | 2240.00 | 116.93 | 119.50 | 118.70 | 108.65 | 8.34 | 118.01 | 50.00 | 44.85 | 10.86 | 20.00 | 58.52 |
| 4740.000 | 2240.00 | 116.97 | 119.50 | 118.70 | 108.70 | 8.36 | 118.05 | 50.00 | 44.81 | 10.91 | 20.00 | 58.72 |
| 5868.000 | 2050.00 | 117.91 | 120.71 | 120.20 | 109.83 | 7.90 | 118.88 | 1128.00 | 44.24 | 12.06 | 20.00 | 64.29 |
| 6124.000 | 2010.00 | 118.11 | 120.72 | 121.11 | 110.08 | 7.83 | 119.06 | 256.00 | 44.05 | 12.32 | 20.00 | 65.70 |
| 6125.000 | 2010.00 | 118.11 | 120.72 | 121.11 | 110.08 | 7.82 | 119.06 | 1.00 | 44.08 | 12.32 | 20.00 | 65.71 |
| 6153.000 | 2010.00 | 118.08 | 119.40 | 119.50 | 110.11 | 8.19 | 119.13 | 28.00 | 41.53 | 12.35 | 20.00 | 65.87 |
| 6154.000 | 2010.00 | 118.08 | 119.40 | 119.50 | 110.11 | 8.19 | 119.13 | 1.00 | 41.53 | 12.35 | 20.00 | 65.88 |
| 6182.000 | 2010.00 | 118.10 | 119.40 | 119.51 | 110.14 | 8.21 | 119.15 | 28.00 | 41.51 | 12.38 | 20.00 | 66.02 |
| 6183.000 | 2010.00 | 118.10 | 119.40 | 119.51 | 110.14 | 8.21 | 119.15 | 1.00 | 41.50 | 12.38 | 20.00 | 66.03 |
| 6208.000 | 2010.00 | 118.27 | 119.42 | 119.58 | 110.19 | 7.74 | 119.20 | 25.00 | 44.25 | 12.40 | 20.00 | 66.16 |
| 6233.000 | 2010.00 | 118.28 | 120.88 | 119.38 | 110.24 | 7.78 | 119.22 | 25.00 | 44.15 | 12.43 | 20.00 | 66.34 |
| 7360.000 | 1780.00 | 119.15 | 122.56 | 121.08 | 111.32 | 7.16 | 119.95 | 1127.00 | 43.49 | 13.56 | 20.00 | 76.64 |
| * 7410.000 | 1780.00 | 119.65 | 122.60 | 121.09 | 111.37 | 7.56 | 120.54 | 50.00 | 40.84 | 13.61 | 16.00 | 77.08 |
| 8560.000 | 1570.00 | 120.50 | 122.07 | 122.14 | 112.52 | 7.03 | 121.27 | 1150.00 | 39.94 | 14.68 | 16.00 | 86.36 |
| 9099.000 | 1480.00 | 120.85 | 124.13 | 124.20 | 113.06 | 6.87 | 121.59 | 539.00 | 39.35 | 15.17 | 16.00 | 91.38 |
| * 9100.000 | 1480.00 | 123.35 | 123.94 | 124.02 | 116.10 | 8.92 | 124.59 | 1.00 | 33.76 | 15.17 | 12.00 | 91.39 |
| 10099.000 | 1320.00 | 124.67 | 129.43 | 130.01 | 117.10 | 7.46 | 125.54 | 999.00 | 34.72 | 15.95 | 12.00 | 98.80 |
| * 10100.000 | 1320.00 | 128.17 | 129.50 | 130.13 | 120.10 | 8.13 | 129.20 | 1.00 | 32.22 | 15.95 | 8.00 | 98.81 |
| 10199.000 | 1320.00 | 128.27 | 129.50 | 130.13 | 120.20 | 8.15 | 129.30 | 99.00 | 32.18 | 16.03 | 8.00 | 99.19 |
| 10200.000 | 1320.00 | 128.27 | 129.50 | 130.13 | 120.20 | 8.14 | 129.30 | 1.00 | 32.20 | 16.03 | 8.00 | 99.19 |
| 10225.000 | 1320.00 | 128.30 | 129.90 | 130.27 | 120.22 | 8.13 | 129.32 | 25.00 | 32.22 | 16.05 | 8.00 | 99.29 |
| 10226.000 | 1320.00 | 128.30 | 129.90 | 130.27 | 120.22 | 8.12 | 129.33 | 1.00 | 32.23 | 16.05 | 8.00 | 99.30 |
| 10300.000 | 1320.00 | 128.37 | 129.90 | 130.27 | 120.30 | 8.14 | 129.40 | 74.00 | 32.21 | 16.10 | 8.00 | 99.59 |
| 10800.000 | 1230.00 | 129.15 | 131.99 | 132.30 | 120.80 | 6.24 | 129.76 | 500.00 | 34.88 | 16.49 | 8.00 | 101.42 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-----------|---------|--------|--------|--------|--------|------|--------|--------|--------|-------|------|--------|
| 11100.000 | 1190.00 | 129.18 | 131.59 | 130.61 | 121.10 | 7.32 | 130.01 | 300.00 | 32.24 | 16.72 | 8.00 | 102.44 |
| 11149.000 | 1190.00 | 129.21 | 131.59 | 130.61 | 121.15 | 7.35 | 130.05 | 49.00 | 32.18 | 16.75 | 8.00 | 102.61 |
| 11150.000 | 1190.00 | 129.21 | 131.59 | 130.61 | 121.15 | 7.34 | 130.05 | 1.00 | 32.19 | 16.76 | 8.00 | 102.61 |
| 11215.000 | 1190.00 | 129.26 | 130.14 | 131.01 | 121.22 | 7.37 | 130.10 | 65.00 | 32.13 | 16.80 | 8.00 | 102.85 |
| 11216.000 | 1190.00 | 129.26 | 130.14 | 131.01 | 121.22 | 7.38 | 130.11 | 1.00 | 32.12 | 16.80 | 8.00 | 102.85 |
| 11250.000 | 1190.00 | 129.29 | 130.14 | 131.01 | 121.25 | 7.38 | 130.13 | 34.00 | 32.11 | 16.83 | 8.00 | 102.99 |
| 11750.000 | 1120.00 | 129.75 | 130.87 | 130.86 | 121.75 | 7.00 | 130.51 | 500.00 | 32.00 | 17.20 | 8.00 | 105.00 |
| 12350.000 | 1050.00 | 130.22 | 132.73 | 134.01 | 122.35 | 6.73 | 130.93 | 600.00 | 31.62 | 17.63 | 8.00 | 107.72 |

SUMMARY OF ERRORS AND SPECIAL NOTES

NOTE SECNO= 3543.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 4690.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 7410.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 9100.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 10100.000 PROFILE= 1 WSEL BASED ON X5 CARD

THIS RUN EXECUTED 9/ 4/89 8:52: 1

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
 T3 A109-03-00 SPRING OAKS CHANNEL
 T4 100-YEAR STORM FREQUENCY ULTIMATE CONDITIONS
 T5 FILENAME = A10903UL.IH2

| | | | | | | | | | | |
|----|--------|------|-------|-------|-------|--------|-------|-----|-------|--------|
| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
| | | 2 | | | .0006 | | | | 113 | |
| J2 | NPROF | IPLT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
| | -1 | | -1 | | | | | | | |

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

| | | | | | | | | | |
|----|----|----|----|----|----|----|---|----|---|
| 38 | 43 | 1 | 23 | 24 | 42 | 26 | 3 | 39 | 4 |
| 37 | 30 | 65 | | | | | | | |

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

-10 -10

J6 IHLEQ ICOPY SUBDIV STRTDS RMILE

1

| | | | | | | | | | | |
|----|-------|---------|--------|---------|-------|---------|-------|---------|-------|---------|
| NC | .15 | .15 | .04 | .1 | .3 | | | | | |
| QT | 1 | 3240 | | | | | | | | |
| X1 | 120 | 11 | 9937.5 | 10051.5 | 120 | 120 | 120 | | | |
| CI | -1 | 101.9 | .04 | 4 | 4 | 30 | | | | |
| GR | 117 | 9885.5 | 114.2 | 9911.5 | 114.5 | 9937.5 | 106.6 | 9961.5 | 103.5 | 9987.5 |
| GR | 102.7 | 10000 | 103.6 | 10012.5 | 107.9 | 10033.5 | 115.9 | 10051.5 | 114.5 | 10067.5 |
| GR | 120.7 | 10106.5 | | | | | | | | |
| QT | 1 | 2920 | | | | | | | | |
| X1 | 1520 | 12 | 9944 | 10050 | 1400 | 1400 | 1400 | | | |
| CI | -1 | 102.7 | .04 | 4 | 4 | 30 | | | | |
| GR | 117.6 | 9800 | 115 | 9900 | 115.2 | 9944 | 108.1 | 9965 | 107.3 | 9975 |
| GR | 104.2 | 9995 | 102.7 | 10000 | 105.3 | 10005 | 108.6 | 10019 | 115.3 | 10050 |
| GR | 116.1 | 10100 | 116.3 | 10200 | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | | | .015 | .3 | .5 | | | | | |
| X1 | 3961 | 17 | 9977 | 10023 | 40 | 40 | 40 | | | |
| CI | -1 | 107.92 | .015 | 1.5 | 1.5 | 24 | | | | |
| X3 | 10 | | | | | | | 117.1 | 117.3 | |
| GR | 125 | 8300 | 120 | 9300 | 117.3 | 9700 | 117.7 | 9800 | 118.1 | 9900 |
| GR | 116.8 | 9977 | 115.3 | 9977 | 110.4 | 9989 | 109.8 | 10000 | 110.4 | 10009 |
| GR | 115.3 | 10023 | 116.8 | 10023 | 118.0 | 10100 | 117.7 | 10200 | 118.0 | 10300 |
| GR | 120 | 10900 | 125 | 11400 | | | | | | |

SPRING PINES ROAD

| | | | | | | | | | | |
|----|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| X1 | 3962 | 17 | 9977 | 10023 | 1 | 1 | 1 | | | |
| CI | | | | | | .01 | | | | |
| X3 | 10 | | | | | | | 117.1 | 117.3 | |
| BT | -11 | 9700 | 117.3 | 117.3 | 9800 | 117.7 | 117.7 | 9900 | 118.1 | 118.1 |
| BT | | 9977 | 118.7 | 116.8 | 9988 | 118.7 | 116.8 | 10000 | 118.7 | 116.8 |
| BT | | 10012 | 118.7 | 116.8 | 10023 | 118.7 | 116.8 | 10100 | 118 | 118 |
| BT | | 10200 | 117.7 | 117.7 | 10300 | 118 | 118 | | | |
| GR | 125 | 8300 | 120 | 9300 | 117.3 | 9700 | 117.7 | 9800 | 118.1 | 9900 |
| GR | 116.8 | 9977 | 115.3 | 9977 | 107.92 | 9988 | 107.92 | 10000 | 107.92 | 10012 |
| GR | 115.3 | 10023 | 116.8 | 10023 | 118.0 | 10100 | 117.7 | 10200 | 118.0 | 10300 |
| GR | 120 | 10900 | 125 | 11400 | | | | | | |

| | | | | | | | | | | |
|----|------|--|--|--|----|----|----|-------|-------|--|
| X1 | 3994 | | | | 32 | 32 | 32 | | | |
| X2 | | | | | | | 1 | | | |
| X3 | 10 | | | | | | | 117.3 | 117.7 | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 3995 | 17 | 9977 | 10023 | 1 | 1 | 1 | | | |
| CI | -1 | 107.92 | .015 | 1.5 | 1.5 | 24 | | | | |
| X3 | 10 | | | | | | | 117.3 | 117.7 | |
| GR | 125 | 8300 | 120 | 9300 | 117.3 | 9700 | 117.7 | 9800 | 118.1 | 9900 |
| GR | 116.8 | 9977 | 115.3 | 9977 | 110.4 | 9989 | 109.8 | 10000 | 110.4 | 10009 |
| GR | 115.3 | 10023 | 116.8 | 10023 | 118.0 | 10100 | 117.7 | 10200 | 118.0 | 10300 |
| GR | 120 | 10900 | 125 | 11400 | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 4035 | 11 | 9974 | 10026 | 40 | 40 | 40 | | | |
| CI | -1 | 107.99 | .015 | 1.5 | 1.5 | 24 | | | | |
| GR | 125 | 8300 | 120 | 9300 | 118.8 | 9974 | 115.7 | 9981 | 110.4 | 9992 |
| GR | 109.8 | 10000 | 110.4 | 10008 | 115.6 | 10020 | 117.6 | 10026 | 120 | 10900 |
| GR | 125 | 11400 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|--------|---------|-------|---------|-------|---------|-----|--------|
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 2330 | | | | | | | | |
| X1 | 4558 | 11 | 9974.5 | 10024.5 | 523 | 523 | 523 | | | |
| CI | -1 | 108.52 | .015 | 1.5 | 1.5 | 24 | | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.5 | 9974.5 | 118.4 | 9978.5 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116.7 | 10018.5 | 118.7 | 10024.5 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|------|---------|-------|-------|-------|-------|-------|--------|
| NC | | | .3 | .5 | | | | | | |
| X1 | 4608 | 11 | 9976 | 10023 | 50 | 50 | 50 | | | |
| CI | -1 | 108.57 | .015 | 1.5 | 1.5 | 24 | | | | |
| X3 | 10 | | | | | | | 118.5 | 118.5 | |
| GR | 125 | 9200 | 120 | 9700 | 119.4 | 9976 | 116 | 9976 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116 | 10023 | 119.4 | 10023 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

BASSWOOD

| | | | | | | | | | | |
|----|--------|-------|--------|-------|-------|-------|-------|-------|--------|-------|
| X1 | 4609 | 11 | 9976 | 10023 | 1 | 1 | 1 | | | |
| CI | | | | | | .01 | | | | |
| X3 | 10 | | | | | | | 118.5 | 118.5 | |
| BT | -5 | 9976 | 119.4 | 117.5 | 9988 | 119.4 | 117.5 | 10000 | 119.4 | 117.5 |
| BT | | 10012 | 119.4 | 117.5 | 10023 | 119.4 | 117.5 | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.4 | 9976 | 116 | 9976 | 108.57 | 9988 |
| GR | 108.57 | 10000 | 108.57 | 10012 | 116 | 10023 | 119.4 | 10023 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

| | | | | | | | | | | |
|----|------|--|--|--|----|----|----|-------|-------|--|
| X1 | 4639 | | | | 30 | 30 | 30 | | | |
| X2 | | | | | | | 1 | | | |
| X3 | 10 | | | | | | | 119.4 | 119.4 | |

| | | | | | | | | | | |
|----|-------|--------|------|---------|-------|-------|-------|-------|-------|--------|
| X1 | 4640 | 11 | 9976 | 10023 | 1 | 1 | 1 | | | |
| CI | -1 | 108.57 | .015 | 1.5 | 1.5 | 24 | | | | |
| X3 | 10 | | | | | | | 119.4 | 119.4 | |
| GR | 125 | 9200 | 120 | 9700 | 119.4 | 9976 | 116 | 9976 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116 | 10023 | 119.4 | 10023 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

CONTROL STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|--------|---------|-------|---------|-------|---------|-----|--------|
| X1 | 4690 | 11 | 9974.5 | 10024.5 | 50 | 50 | 50 | | | |
| CI | -1 | 108.65 | .015 | 1.5 | 1.5 | 20 | | | | |
| X5 | -2 | 0.5 | 0.5 | | | | | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.5 | 9974.5 | 118.4 | 9978.5 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116.7 | 10018.5 | 118.7 | 10024.5 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|--------|---------|-------|---------|-------|---------|-----|--------|
| X1 | 4740 | 11 | 9974.5 | 10024.5 | 50 | 50 | 50 | | | |
| CI | -1 | 108.70 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125 | 9200 | 120 | 9700 | 119.5 | 9974.5 | 118.4 | 9978.5 | 111 | 9991.5 |
| GR | 110.1 | 10000 | 111 | 10008.5 | 116.7 | 10018.5 | 118.7 | 10024.5 | 120 | 10500 |
| GR | 125 | 11100 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | | | .1 | .3 | | | | | | |
| QT | 1 | 2110 | | | | | | | | |
| X1 | 5868 | 9 | 9973 | 10024 | 1128 | 1128 | 1128 | | | |
| CI | -1 | 109.83 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125 | 9550 | 120.7 | 9973 | 120.3 | 9981 | 113.1 | 9991 | 113.0 | 10000 |
| GR | 112.8 | 10009 | 119.0 | 10019 | 120.2 | 10024 | 125 | 10480 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| QT | 1 | 2070 | | | | | | | | |
| X1 | 6124 | 36 | 1055 | 1100 | 256 | 256 | 256 | | | |
| CI | -1 | 110.08 | .015 | 1.5 | 1.5 | 20 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 120.8 | 1055 | 113.0 | 1067 |
| GR | 113.0 | 1075 | 113.0 | 1087 | 121.2 | 1100 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| NC | | | .015 | .3 | .5 | | | | | |
| X1 | 6125 | 36 | 1055 | 1100 | 1 | 1 | 1 | | | |
| CI | -1 | 110.08 | .015 | 1.5 | 1.5 | 20 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 120.8 | 1055 | 114.5 | 1066 |
| GR | 114.5 | 1075 | 114.5 | 1088 | 121.2 | 1100 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 6153 | 36 | 1053 | 1098 | 28 | 28 | 28 | | | |
| CI | -1 | 110.11 | .015 | 1.35 | 1.35 | 20 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 119.4 | 1053 | 114.6 | 1064 |
| GR | 114.6 | 1075 | 114.6 | 1087 | 119.5 | 1098 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |

MAPLEWOOD DRIVE

| | | | | | | | | | | |
|----|------|--------|-------|-------|------|-------|-------|------|-------|-------|
| X1 | 6154 | 36 | 1053 | 1098 | 1 | 1 | 1 | | | |
| CI | -1 | 110.11 | .015 | 1.35 | 1.35 | 20 | | | | |
| X2 | | | | | | | | | | |
| X3 | 10 | | | | | | | | | |
| BT | -36 | 0 | 125.0 | 124.7 | 99 | 122.7 | 122.5 | 198 | 121.7 | 121.4 |
| BT | | 297 | 120.5 | 120.5 | 310 | 120.5 | 120.5 | 396 | 120.5 | 120.2 |
| BT | | 495 | 120.4 | 119.9 | 594 | 120.4 | 119.9 | 629 | 120.7 | 119.6 |
| BT | | 634 | 120.8 | 120.8 | 642 | 120.8 | 115.3 | 645 | 120.8 | 115.3 |
| BT | | 649 | 120.8 | 115.3 | 657 | 121.3 | 121.3 | 700 | 121.0 | 121.0 |
| BT | | 800 | 120.7 | 119.5 | 900 | 121.0 | 119.2 | 1000 | 121.4 | 119.6 |
| BT | | 1053 | 121.3 | 119.4 | 1053 | 123.7 | 119.4 | 1098 | 123.7 | 119.5 |
| BT | | 1098 | 121.3 | 119.5 | 1098 | 121.3 | 119.5 | 1200 | 121.2 | 119.0 |
| BT | | 1300 | 120.6 | 118.8 | 1400 | 120.7 | 119.1 | 1500 | 121.1 | 119.4 |
| BT | | 1600 | 121.7 | 120.3 | 1700 | 122.1 | 120.5 | 1800 | 123.3 | 121.9 |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| BT | | 1900 | 123.7 | 122.9 | 2000 | 124.3 | 123.1 | 2100 | 124.7 | 123.8 |
| BT | | 2200 | 124.7 | 123.8 | 2231 | 124.9 | 124.3 | 2300 | 124.5 | 123.5 |
| GR | 124.7 | 0 | 122.5 | 99 | 121.4 | 198 | 120.5 | 297 | 120.5 | 310 |
| GR | 120.2 | 396 | 119.9 | 495 | 119.9 | 594 | 119.6 | 629 | 120.8 | 634 |
| GR | 115.3 | 642 | 115.3 | 645 | 115.3 | 649 | 121.3 | 657 | 121.0 | 700 |
| GR | 119.5 | 800 | 119.2 | 900 | 119.6 | 1000 | 119.4 | 1053 | 114.6 | 1064 |
| GR | 114.6 | 1075 | 114.6 | 1087 | 119.5 | 1098 | 119.0 | 1200 | 118.8 | 1300 |
| GR | 119.1 | 1400 | 119.4 | 1500 | 120.3 | 1600 | 120.5 | 1700 | 121.9 | 1800 |
| GR | 122.9 | 1900 | 123.1 | 2000 | 123.8 | 2100 | 123.8 | 2200 | 124.3 | 2231 |
| GR | 123.5 | 2300 | | | | | | | | |
| X1 | 6182 | 34 | 1053 | 1098 | 28 | 28 | 28 | | | |
| CI | -1 | 110.14 | .015 | 1.35 | 1.35 | 20 | | | | |
| X2 | | | | | | | | | | |
| X3 | 10 | | | | | | | 120.0 | 120.0 | |
| BT | -33 | 0 | 125.0 | 125.0 | 99 | 122.7 | 122.5 | 198 | 121.7 | 121.7 |
| BT | | 297 | 120.5 | 120.1 | 396 | 120.5 | 120.4 | 495 | 120.4 | 120.1 |
| BT | | 594 | 120.4 | 120.2 | 608 | 120.5 | 120.2 | 642 | 120.8 | 120.0 |
| BT | | 655 | 120.8 | 119.9 | 700 | 120.7 | 119.6 | 800 | 120.7 | 119.8 |
| BT | | 900 | 121.0 | 119.9 | 1000 | 121.4 | 120.3 | 1053 | 121.3 | 119.4 |
| BT | | 1053 | 123.7 | 119.4 | 1098 | 123.7 | 119.5 | 1098 | 121.3 | 119.5 |
| BT | | 1100 | 121.3 | 119.6 | 1200 | 121.2 | 120.1 | 1300 | 120.6 | 119.7 |
| BT | | 1400 | 120.7 | 120.1 | 1500 | 121.1 | 119.9 | 1600 | 121.7 | 120.8 |
| BT | | 1700 | 122.1 | 121.2 | 1800 | 123.3 | 122.7 | 1806 | 123.3 | 122.7 |
| BT | | 1900 | 123.7 | 122.6 | 2000 | 124.3 | 123.1 | 2100 | 124.7 | 123.8 |
| BT | | 2200 | 124.7 | 123.7 | 2231 | 124.9 | 124.5 | 2300 | 124.5 | 123.6 |
| GR | 125.0 | 0 | 122.5 | 99 | 121.7 | 198 | 120.1 | 297 | 120.4 | 396 |
| GR | 120.1 | 495 | 120.2 | 594 | 120.2 | 608 | 120.0 | 642 | 119.9 | 655 |
| GR | 119.6 | 700 | 119.8 | 800 | 119.9 | 900 | 120.3 | 1000 | 119.4 | 1053 |
| GR | 114.7 | 1064 | 114.7 | 1075 | 114.7 | 1087 | 119.5 | 1098 | 119.6 | 1100 |
| GR | 120.1 | 1200 | 119.7 | 1300 | 120.1 | 1400 | 119.9 | 1500 | 120.8 | 1600 |
| GR | 121.2 | 1700 | 122.7 | 1800 | 122.7 | 1806 | 122.6 | 1900 | 123.1 | 2000 |
| GR | 123.8 | 2100 | 123.7 | 2200 | 124.5 | 2231 | 123.6 | 2300 | | |
| X1 | 6183 | 33 | 1053 | 1098 | 1 | 1 | 1 | | | |
| CI | -1 | 110.14 | .015 | 1.35 | 1.35 | 20 | | | | |
| X3 | 10 | | | | | | | 120.4 | 120.6 | |
| GR | 125.0 | 0 | 122.5 | 99 | 121.7 | 198 | 120.1 | 297 | 120.4 | 396 |
| GR | 120.1 | 495 | 120.2 | 594 | 120.2 | 608 | 120.0 | 642 | 119.6 | 700 |
| GR | 119.8 | 800 | 119.9 | 900 | 120.3 | 1000 | 119.4 | 1053 | 114.7 | 1064 |
| GR | 114.7 | 1075 | 114.7 | 1087 | 119.5 | 1098 | 119.6 | 1100 | 120.1 | 1200 |
| GR | 119.7 | 1300 | 120.1 | 1400 | 119.9 | 1500 | 120.8 | 1600 | 121.2 | 1700 |
| GR | 122.7 | 1800 | 122.7 | 1806 | 122.6 | 1900 | 123.1 | 2000 | 123.8 | 2100 |
| GR | 123.7 | 2200 | 124.5 | 2231 | 123.6 | 2300 | | | | |
| X1 | 6208 | 33 | 1053 | 1098 | 25 | 25 | 25 | | | |
| CI | -1 | 110.19 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125.0 | 0 | 122.5 | 99 | 121.7 | 198 | 120.1 | 297 | 120.4 | 396 |
| GR | 120.1 | 495 | 120.2 | 594 | 120.2 | 608 | 120.0 | 642 | 119.6 | 700 |
| GR | 119.8 | 800 | 119.9 | 900 | 120.3 | 1000 | 119.4 | 1053 | 114.7 | 1064 |
| GR | 114.7 | 1075 | 114.7 | 1087 | 119.5 | 1098 | 119.6 | 1100 | 120.1 | 1200 |
| GR | 119.7 | 1300 | 120.1 | 1400 | 119.9 | 1500 | 120.8 | 1600 | 121.2 | 1700 |
| GR | 122.7 | 1800 | 122.7 | 1806 | 122.6 | 1900 | 123.1 | 2000 | 123.8 | 2100 |
| GR | 123.7 | 2200 | 124.5 | 2231 | 123.6 | 2300 | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 6233 | 19 | 609 | 639 | 25 | 25 | 25 | | | -1.7 |
| CI | 625 | 110.24 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125.3 | 0 | 121.2 | 344 | 120.2 | 400 | 120.5 | 431 | 120.8 | 500 |
| GR | 122.7 | 606 | 122.2 | 609 | 116.5 | 619 | 116.5 | 625 | 116.5 | 631 |
| GR | 121.1 | 639 | 121.0 | 700 | 121.0 | 800 | 120.4 | 900 | 122.1 | 1185 |
| GR | 122.4 | 1217 | 123.4 | 1300 | 124.4 | 1400 | 125.8 | 1500 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| NC | | | .1 | .3 | | | | | | |
| QT | 1 | 1780 | | | | | | | | |
| X1 | 7360 | 19 | 609 | 639 | 1127 | 1127 | 1127 | | | |
| CI | 625 | 111.32 | .015 | 1.5 | 1.5 | 20 | | | | |
| GR | 125.3 | 0 | 121.2 | 344 | 120.2 | 400 | 120.5 | 431 | 120.8 | 500 |
| GR | 122.7 | 606 | 122.2 | 609 | 116.5 | 619 | 116.5 | 625 | 116.5 | 631 |
| GR | 121.1 | 639 | 121.0 | 700 | 121.0 | 800 | 120.4 | 900 | 122.1 | 1185 |
| GR | 122.4 | 1217 | 123.4 | 1300 | 124.4 | 1400 | 125.8 | 1500 | | |

CONTROL STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 7410 | 19 | 609 | 639 | 50 | 50 | 50 | | | |
| CI | 625 | 111.37 | .015 | 1.5 | 1.5 | 16 | | | | |
| X5 | -2 | 0.5 | 0.5 | | | | | | | |
| GR | 125.3 | 0 | 121.2 | 344 | 120.2 | 400 | 120.5 | 431 | 120.8 | 500 |
| GR | 122.7 | 606 | 122.2 | 609 | 116.5 | 619 | 116.5 | 625 | 116.5 | 631 |
| GR | 121.1 | 639 | 121.0 | 700 | 121.0 | 800 | 120.4 | 900 | 122.1 | 1185 |
| GR | 122.4 | 1217 | 123.4 | 1300 | 124.4 | 1400 | 125.8 | 1500 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-----|-------|------|-------|------|-------|------|
| QT | 1 | 1530 | | | | | | | | |
| X1 | 8560 | 21 | 665 | 687 | 1150 | 1150 | 1150 | | | |
| CI | 677.5 | 112.52 | .015 | 1.5 | 1.5 | 16 | | | | |
| GR | 128.3 | 0 | 126.5 | 25 | 126.4 | 118 | 126.3 | 125 | 126.0 | 225 |
| GR | 123.9 | 325 | 123.8 | 332 | 124.2 | 425 | 124.2 | 525 | 122.9 | 625 |
| GR | 121.8 | 665 | 117.7 | 673 | 117.7 | 682 | 121.8 | 687 | 122.8 | 725 |
| GR | 123.0 | 825 | 123.2 | 925 | 124.0 | 1025 | 125.8 | 1125 | 127.2 | 1190 |
| GR | 128.4 | 1240 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-----|-------|------|-------|------|-------|------|
| QT | 1 | 1430 | | | | | | | | |
| X1 | 9099 | 21 | 665 | 687 | 539 | 539 | 539 | | 2.0 | |
| CI | 677.5 | 113.06 | .015 | 1.5 | 1.5 | 16 | | | | |
| GR | 128.3 | 0 | 126.5 | 25 | 126.4 | 118 | 126.3 | 125 | 126.0 | 225 |
| GR | 123.9 | 325 | 123.8 | 332 | 124.2 | 425 | 124.2 | 525 | 122.9 | 625 |
| GR | 121.8 | 665 | 117.7 | 673 | 117.7 | 682 | 121.8 | 687 | 122.8 | 725 |
| GR | 123.0 | 825 | 123.2 | 925 | 124.0 | 1025 | 125.8 | 1125 | 127.2 | 1190 |
| GR | 128.4 | 1240 | | | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|-------|-----|-------|------|-------|------|-------|------|
| X1 | 9100 | 21 | 665 | 687 | 1 | 1 | 1 | | 2.0 | |
| CI | 677.5 | 116.10 | .015 | 1.5 | 1.5 | 12 | | | | |
| X5 | -2 | 2.5 | 2.5 | | | | | | | |
| GR | 128.3 | 0 | 126.5 | 25 | 126.4 | 118 | 126.3 | 125 | 126.0 | 225 |
| GR | 123.9 | 325 | 123.8 | 332 | 124.2 | 425 | 124.2 | 525 | 122.9 | 625 |
| GR | 121.8 | 665 | 117.7 | 673 | 117.7 | 682 | 121.8 | 687 | 122.8 | 725 |
| GR | 123.0 | 825 | 123.2 | 925 | 124.0 | 1025 | 125.8 | 1125 | 127.2 | 1190 |
| GR | 128.4 | 1240 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| QT | 1 | 1260 | | | | | | | | |
| X1 | 10099 | 25 | 1581 | 1600 | 999 | 999 | 999 | | | |
| CI | 1590 | 117.10 | .015 | 1.5 | 1.5 | 12 | | | | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 | 127.6 | 900 |
| GR | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 | 127.8 | 1400 |
| GR | 128.7 | 1500 | 129.6 | 1581 | 121.5 | 1586 | 121.5 | 1594 | 129.8 | 1600 |
| GR | 130.2 | 1605 | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 10100 | 25 | 1581 | 1600 | 1 | 1 | 1 | | | |
| CI | 1590 | 120.10 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| X5 | -2 | 3.5 | 3.5 | | | | | | | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 | 127.6 | 900 |
| GR | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 | 127.8 | 1400 |
| GR | 128.7 | 1500 | 129.6 | 1581 | 121.5 | 1586 | 121.5 | 1594 | 129.8 | 1600 |
| GR | 130.2 | 1605 | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| NC | | | | .3 | .5 | | | | | |
| X1 | 10199 | 25 | 1581 | 1600 | 99 | 99 | 99 | | | |
| CI | 1590 | 120.20 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 | 127.6 | 900 |
| GR | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 | 127.8 | 1400 |
| GR | 128.7 | 1500 | 129.6 | 1581 | 121.5 | 1586 | 121.5 | 1594 | 129.8 | 1600 |
| GR | 130.2 | 1605 | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 |

LANE LANE - EXISTING BRIDGE REPLACED

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 10200 | 29 | 1581 | 1600 | 1 | 1 | 1 | | | |
| CI | 1590 | 120.20 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 129.9 | 0 | 128.7 | 100 | 127.8 | 200 | 127.0 | 300 | 126.2 | 400 |
| GR | 126.1 | 484 | 126.1 | 500 | 125.9 | 600 | 125.8 | 700 | 126.4 | 800 |
| GR | 127.6 | 900 | 128.6 | 1000 | 128.4 | 1100 | 128.8 | 1200 | 128.3 | 1300 |
| GR | 127.9 | 1374 | 127.8 | 1400 | 128.7 | 1500 | 129.6 | 1581 | 128.5 | 1582 |
| GR | 121.5 | 1586 | 121.5 | 1594 | 128.5 | 1599 | 129.8 | 1600 | 130.2 | 1605 |
| GR | 128.5 | 1700 | 128.5 | 1800 | 129.2 | 1900 | 130.2 | 2000 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 10225 | 29 | 1581 | 1600 | 25 | 25 | 25 | | | |
| CI | 1590 | 120.22 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.4 | 0 | 128.7 | 100 | 127.5 | 200 | 126.6 | 300 | 126.2 | 400 |
| GR | 126.5 | 484 | 126.5 | 500 | 126.3 | 600 | 125.6 | 700 | 126.8 | 800 |
| GR | 128.0 | 900 | 130.2 | 1000 | 129.9 | 1100 | 130.0 | 1200 | 129.3 | 1300 |
| GR | 129.2 | 1374 | 129.1 | 1400 | 129.9 | 1500 | 129.9 | 1581 | 128.7 | 1582 |
| GR | 121.7 | 1586 | 121.7 | 1594 | 128.7 | 1599 | 129.8 | 1600 | 130.3 | 1605 |
| GR | 129.7 | 1700 | 129.3 | 1800 | 129.7 | 1900 | 130.2 | 2000 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 10226 | 25 | 1581 | 1600 | 1 | 1 | 1 | | | |
| CI | 1590 | 120.22 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.4 | 0 | 128.7 | 100 | 127.5 | 200 | 126.6 | 300 | 126.2 | 400 |
| GR | 126.5 | 500 | 126.3 | 600 | 125.6 | 700 | 126.8 | 800 | 128.0 | 900 |
| GR | 130.2 | 1000 | 129.9 | 1100 | 130.0 | 1200 | 129.3 | 1300 | 129.1 | 1400 |
| GR | 129.9 | 1500 | 129.9 | 1581 | 121.7 | 1586 | 121.7 | 1594 | 129.8 | 1600 |
| GR | 130.3 | 1605 | 129.7 | 1700 | 129.3 | 1800 | 129.7 | 1900 | 130.2 | 2000 |
| X1 | 10300 | 25 | 1581 | 1600 | 74 | 74 | 74 | | | |
| CI | 1590 | 120.30 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.4 | 0 | 128.7 | 100 | 127.5 | 200 | 126.6 | 300 | 126.2 | 400 |
| GR | 126.5 | 500 | 126.3 | 600 | 125.6 | 700 | 126.8 | 800 | 128.0 | 900 |
| GR | 130.2 | 1000 | 129.9 | 1100 | 130.0 | 1200 | 129.3 | 1300 | 129.1 | 1400 |
| GR | 129.9 | 1500 | 129.9 | 1581 | 121.7 | 1586 | 121.7 | 1594 | 129.8 | 1600 |
| GR | 130.3 | 1605 | 129.7 | 1700 | 129.3 | 1800 | 129.7 | 1900 | 130.2 | 2000 |
| QT | 1 | 1150 | | | | | | | | |
| NC | | | | .1 | .3 | | | | | |
| X1 | 10800 | 23 | 1573 | 1606 | 500 | 500 | 500 | | | |
| CI | 1584 | 120.80 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.9 | 0 | 130.3 | 100 | 129.6 | 200 | 129.1 | 300 | 129.1 | 400 |
| GR | 129.1 | 425 | 128.6 | 500 | 128.3 | 600 | 128.5 | 700 | 128.7 | 800 |
| GR | 128.7 | 900 | 129.4 | 1000 | 129.6 | 1100 | 129.7 | 1200 | 130.2 | 1300 |
| GR | 131.1 | 1369 | 130.9 | 1400 | 131.9 | 1500 | 132.0 | 1573 | 121.1 | 1586 |
| GR | 121.1 | 1593 | 132.3 | 1606 | 136.6 | 1616 | | | | |
| QT | 1 | 1110 | | | | | | | | |
| X1 | 11100 | 21 | 1535 | 1568 | 300 | 300 | 300 | | | |
| CI | 1550 | 121.10 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.2 | 0 | 130.5 | 100 | 131.1 | 200 | 130.4 | 300 | 130.3 | 400 |
| GR | 129.7 | 500 | 129.8 | 600 | 129.6 | 700 | 129.6 | 800 | 129.8 | 900 |
| GR | 129.8 | 1000 | 130.3 | 1100 | 129.7 | 1200 | 130.2 | 1300 | 130.7 | 1400 |
| GR | 131.5 | 1500 | 131.6 | 1535 | 124.0 | 1547 | 124.0 | 1553 | 130.6 | 1568 |
| GR | 132.2 | 1600 | | | | | | | | |
| X1 | 11149 | 22 | 1535 | 1568 | 49 | 49 | 49 | | | |
| CI | 1550 | 121.15 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.2 | 0 | 130.5 | 100 | 131.1 | 200 | 130.6 | 266 | 130.4 | 300 |
| GR | 130.3 | 400 | 129.7 | 500 | 129.8 | 600 | 129.6 | 700 | 129.6 | 800 |
| GR | 129.8 | 900 | 129.8 | 1000 | 130.3 | 1100 | 129.7 | 1200 | 130.2 | 1300 |
| GR | 130.7 | 1400 | 131.5 | 1500 | 131.6 | 1535 | 124.0 | 1547 | 124.0 | 1553 |
| GR | 130.6 | 1568 | 132.2 | 1600 | | | | | | |

ROBINSON ROAD - EXISTING BRIDGE REPLACED

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 11150 | 22 | 1535 | 1568 | 1 | 1 | 1 | | | |
| CI | 1550 | 121.15 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.2 | 0 | 130.5 | 100 | 131.1 | 200 | 130.6 | 266 | 130.4 | 300 |
| GR | 130.3 | 400 | 129.7 | 500 | 129.8 | 600 | 129.6 | 700 | 129.6 | 800 |
| GR | 129.8 | 900 | 129.8 | 1000 | 130.3 | 1100 | 129.7 | 1200 | 130.2 | 1300 |
| GR | 130.7 | 1400 | 131.5 | 1500 | 131.6 | 1535 | 124.0 | 1547 | 124.0 | 1553 |
| GR | 130.6 | 1568 | 132.2 | 1600 | | | | | | |
| X1 | 11215 | 22 | 1543 | 1568 | 65 | 65 | 65 | | | |
| CI | 1556 | 121.22 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.3 | 0 | 131.3 | 100 | 130.8 | 200 | 131.1 | 266 | 131.2 | 300 |
| GR | 130.5 | 400 | 130.5 | 500 | 130.1 | 600 | 129.9 | 700 | 129.9 | 800 |
| GR | 129.3 | 900 | 129.8 | 1000 | 130.3 | 1100 | 130.1 | 1200 | 130.3 | 1300 |
| GR | 130.5 | 1400 | 131.4 | 1500 | 130.0 | 1543 | 124.6 | 1553 | 124.6 | 1559 |
| GR | 130.7 | 1568 | 132.2 | 1600 | | | | | | |
| X1 | 11216 | 22 | 1543 | 1568 | 1 | 1 | 1 | | | |
| CI | 1556 | 121.22 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.3 | 0 | 131.3 | 100 | 130.8 | 200 | 131.1 | 266 | 131.2 | 300 |
| GR | 130.5 | 400 | 130.5 | 500 | 130.1 | 600 | 129.9 | 700 | 129.9 | 800 |
| GR | 129.3 | 900 | 129.8 | 1000 | 130.3 | 1100 | 130.1 | 1200 | 130.3 | 1300 |
| GR | 130.5 | 1400 | 131.4 | 1500 | 130.0 | 1543 | 124.6 | 1553 | 124.6 | 1559 |
| GR | 130.7 | 1568 | 132.2 | 1600 | | | | | | |
| X1 | 11250 | 21 | 1543 | 1568 | 34 | 34 | 34 | | | |
| CI | 1556 | 121.25 | .015 | 1.5 | 1.5 | 8 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 130.3 | 0 | 131.3 | 100 | 130.8 | 200 | 131.2 | 300 | 130.5 | 400 |
| GR | 130.5 | 500 | 130.1 | 600 | 129.9 | 700 | 129.9 | 800 | 129.3 | 900 |
| GR | 129.8 | 1000 | 130.3 | 1100 | 130.1 | 1200 | 130.3 | 1300 | 130.5 | 1400 |
| GR | 131.4 | 1500 | 130.0 | 1543 | 124.6 | 1553 | 124.6 | 1559 | 130.7 | 1568 |
| GR | 132.2 | 1600 | | | | | | | | |
| QT | 1 | 1020 | | | | | | | | |
| X1 | 11750 | 23 | 1688 | 1712 | 500 | 500 | 500 | | | |
| CI | -1 | 121.75 | .015 | 1.5 | 1.5 | 8 | | | | |
| GR | 133.5 | 0 | 132.4 | 100 | 132.4 | 200 | 132.8 | 300 | 133.2 | 400 |
| GR | 133.6 | 500 | 133.9 | 600 | 133.4 | 700 | 133.1 | 800 | 132.7 | 900 |
| GR | 131.9 | 1000 | 131.4 | 1100 | 130.9 | 1161 | 130.6 | 1200 | 130.9 | 1300 |
| GR | 131.2 | 1400 | 132.0 | 1500 | 131.9 | 1600 | 130.8 | 1688 | 125.2 | 1697 |
| GR | 125.2 | 1703 | 130.2 | 1712 | 133.1 | 1737 | | | | |
| QT | 1 | 950 | | | | | | | | |
| X1 | 12350 | 24 | 1721 | 1745 | 600 | 600 | 600 | | | |
| CI | -1 | 122.35 | .015 | 1.5 | 1.5 | 8 | | | | |
| GR | 136.7 | 0 | 136.7 | 100 | 136.1 | 200 | 136.1 | 300 | 137.1 | 400 |
| GR | 137.6 | 500 | 137.6 | 600 | 137.3 | 700 | 136.5 | 800 | 136.9 | 900 |
| GR | 137.5 | 1000 | 137.7 | 1100 | 136.6 | 1200 | 135.6 | 1267 | 135.1 | 1300 |
| GR | 134.1 | 1400 | 133.8 | 1500 | 134.6 | 1600 | 132.6 | 1721 | 125.5 | 1730 |

9/ 4/89

8:52: 1

GR 125.5 1736 132.1 1745 133.9 1750 134.4 1771

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 4/89 8:52:32

 HEC2 RELEASE DATED SEPT 88

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

A109-03-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|------------|---------|--------|--------|--------|--------|------|--------|---------|--------|-------|-------|-------|
| 120.000 | 3240.00 | 113.97 | 114.41 | 114.99 | 101.90 | 3.43 | 114.15 | .00 | 126.56 | .00 | 30.00 | .00 |
| 1520.000 | 2920.00 | 114.76 | 115.15 | 115.51 | 102.70 | 3.09 | 114.91 | 1400.00 | 126.51 | 4.07 | 30.00 | 12.94 |
| 1574.000 | 2920.00 | 114.79 | 116.27 | 116.85 | 102.50 | 3.08 | 114.94 | 54.00 | 126.75 | 4.22 | 30.00 | 13.93 |
| 1636.000 | 2920.00 | 114.81 | 115.15 | 115.51 | 102.80 | 3.11 | 114.96 | 50.00 | 126.13 | 4.37 | 30.00 | 14.82 |
| 3528.000 | 2520.00 | 115.72 | 119.01 | 117.68 | 104.10 | 2.84 | 115.84 | 1892.00 | 122.93 | 9.78 | 30.00 | 52.66 |
| 3538.000 | 2520.00 | 115.72 | 119.01 | 117.68 | 104.10 | 2.84 | 115.85 | 10.00 | 122.97 | 9.81 | 30.00 | 52.94 |
| * 3543.000 | 2520.00 | 115.82 | 118.81 | 117.60 | 107.50 | 8.30 | 116.89 | 5.00 | 49.24 | 9.82 | 24.00 | 53.02 |
| 3553.000 | 2520.00 | 115.83 | 118.81 | 117.60 | 107.50 | 8.29 | 116.90 | 10.00 | 49.26 | 9.83 | 24.00 | 53.07 |
| 3921.000 | 2440.00 | 116.14 | 118.80 | 117.60 | 107.88 | 8.11 | 117.17 | 368.00 | 48.79 | 10.24 | 24.00 | 54.86 |
| 3961.000 | 2440.00 | 116.17 | 116.84 | 116.84 | 107.92 | 8.13 | 117.20 | 40.00 | 48.76 | 10.29 | 24.00 | 55.03 |
| 3962.000 | 2440.00 | 116.16 | 116.80 | 116.80 | 107.92 | 8.18 | 117.20 | 1.00 | 46.00 | 10.29 | .01 | 55.03 |
| 3994.000 | 2440.00 | 116.19 | 116.80 | 116.80 | 107.92 | 8.16 | 117.23 | 32.00 | 46.00 | 10.32 | .01 | 55.03 |
| 3995.000 | 2440.00 | 116.23 | 116.84 | 116.84 | 107.92 | 8.06 | 117.23 | 1.00 | 48.92 | 10.32 | 24.00 | 55.04 |
| 4035.000 | 2440.00 | 116.25 | 118.80 | 117.60 | 107.99 | 8.11 | 117.27 | 40.00 | 48.79 | 10.37 | 24.00 | 55.21 |
| 4558.000 | 2330.00 | 116.65 | 119.51 | 118.71 | 108.52 | 7.92 | 117.62 | 523.00 | 48.38 | 10.95 | 24.00 | 58.07 |
| 4608.000 | 2330.00 | 116.68 | 119.41 | 119.41 | 108.57 | 7.94 | 117.66 | 50.00 | 48.33 | 11.01 | 24.00 | 58.31 |
| 4609.000 | 2330.00 | 116.71 | 119.40 | 119.40 | 108.57 | 7.84 | 117.66 | 1.00 | 47.00 | 11.01 | .01 | 58.31 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|---------|--------|-------|-------|--------|
| 4639.000 | 2330.00 | 116.73 | 119.40 | 119.40 | 108.57 | 7.82 | 117.68 | 30.00 | 47.00 | 11.04 | .01 | 58.31 |
| 4640.000 | 2330.00 | 116.73 | 119.41 | 119.41 | 108.57 | 7.87 | 117.69 | 1.00 | 48.50 | 11.04 | 24.00 | 58.32 |
| * 4690.000 | 2330.00 | 117.23 | 119.50 | 118.70 | 108.65 | 8.26 | 118.29 | 50.00 | 45.74 | 11.09 | 20.00 | 58.52 |
| 4740.000 | 2330.00 | 117.26 | 119.50 | 118.70 | 108.70 | 8.28 | 118.33 | 50.00 | 45.69 | 11.15 | 20.00 | 58.72 |
| 5868.000 | 2110.00 | 118.17 | 120.71 | 120.20 | 109.83 | 7.79 | 119.11 | 1128.00 | 45.01 | 12.32 | 20.00 | 64.29 |
| 6124.000 | 2070.00 | 118.35 | 120.72 | 121.11 | 110.08 | 7.73 | 119.28 | 256.00 | 44.79 | 12.59 | 20.00 | 65.70 |
| 6125.000 | 2070.00 | 118.35 | 120.72 | 121.11 | 110.08 | 7.73 | 119.28 | 1.00 | 44.80 | 12.59 | 20.00 | 65.71 |
| 6153.000 | 2070.00 | 118.32 | 119.40 | 119.50 | 110.11 | 8.11 | 119.34 | 28.00 | 42.17 | 12.61 | 20.00 | 65.87 |
| 6154.000 | 2070.00 | 118.32 | 119.40 | 119.50 | 110.11 | 8.11 | 119.34 | 1.00 | 42.17 | 12.62 | 20.00 | 65.88 |
| 6182.000 | 2070.00 | 118.34 | 119.40 | 119.51 | 110.14 | 8.12 | 119.37 | 28.00 | 42.15 | 12.64 | 20.00 | 66.02 |
| 6183.000 | 2070.00 | 118.34 | 119.40 | 119.51 | 110.14 | 8.12 | 119.37 | 1.00 | 42.14 | 12.64 | 20.00 | 66.03 |
| 6208.000 | 2070.00 | 118.50 | 119.42 | 119.58 | 110.19 | 7.67 | 119.42 | 25.00 | 44.94 | 12.67 | 20.00 | 66.16 |
| 6233.000 | 2070.00 | 118.51 | 120.88 | 119.38 | 110.24 | 7.71 | 119.44 | 25.00 | 48.10 | 12.70 | 20.00 | 66.34 |
| 7360.000 | 1780.00 | 119.37 | 122.56 | 121.08 | 111.32 | 6.89 | 120.11 | 1127.00 | 44.16 | 13.89 | 20.00 | 76.64 |
| * 7410.000 | 1780.00 | 119.87 | 122.60 | 121.09 | 111.37 | 7.28 | 120.69 | 50.00 | 41.50 | 13.94 | 16.00 | 77.08 |
| 8560.000 | 1530.00 | 120.66 | 122.07 | 122.14 | 112.52 | 6.67 | 121.35 | 1150.00 | 40.41 | 15.02 | 16.00 | 86.36 |
| 9099.000 | 1430.00 | 120.97 | 124.13 | 124.20 | 113.06 | 6.49 | 121.63 | 539.00 | 39.71 | 15.51 | 16.00 | 91.38 |
| * 9100.000 | 1430.00 | 123.47 | 123.94 | 124.02 | 116.10 | 8.41 | 124.57 | 1.00 | 34.12 | 15.52 | 12.00 | 91.39 |
| 10099.000 | 1260.00 | 124.63 | 129.43 | 130.01 | 117.10 | 7.17 | 125.43 | 999.00 | 34.61 | 16.30 | 12.00 | 98.80 |
| * 10100.000 | 1260.00 | 128.13 | 129.50 | 130.13 | 120.10 | 7.83 | 129.08 | 1.00 | 32.09 | 16.30 | 8.00 | 98.81 |
| 10199.000 | 1260.00 | 128.21 | 129.50 | 130.13 | 120.20 | 7.86 | 129.17 | 99.00 | 32.03 | 16.38 | 8.00 | 99.19 |
| 10200.000 | 1260.00 | 128.22 | 129.50 | 130.13 | 120.20 | 7.85 | 129.17 | 1.00 | 32.04 | 16.38 | 8.00 | 99.19 |
| 10225.000 | 1260.00 | 128.24 | 129.90 | 130.27 | 120.22 | 7.84 | 129.20 | 25.00 | 32.06 | 16.40 | 8.00 | 99.29 |
| 10226.000 | 1260.00 | 128.24 | 129.90 | 130.27 | 120.22 | 7.84 | 129.20 | 1.00 | 32.07 | 16.40 | 8.00 | 99.30 |
| 10300.000 | 1260.00 | 128.31 | 129.90 | 130.27 | 120.30 | 7.86 | 129.27 | 74.00 | 32.03 | 16.45 | 8.00 | 99.59 |
| 10800.000 | 1150.00 | 129.06 | 131.99 | 132.30 | 120.80 | 5.93 | 129.60 | 500.00 | 34.62 | 16.83 | 8.00 | 101.42 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-----------|---------|--------|--------|--------|--------|------|--------|--------|--------|-------|------|--------|
| 11100.000 | 1110.00 | 129.08 | 131.59 | 130.61 | 121.10 | 6.96 | 129.83 | 300.00 | 31.95 | 17.06 | 8.00 | 102.44 |
| 11149.000 | 1110.00 | 129.11 | 131.59 | 130.61 | 121.15 | 6.99 | 129.87 | 49.00 | 31.88 | 17.10 | 8.00 | 102.61 |
| 11150.000 | 1110.00 | 129.11 | 131.59 | 130.61 | 121.15 | 6.99 | 129.87 | 1.00 | 31.89 | 17.10 | 8.00 | 102.61 |
| 11215.000 | 1110.00 | 129.15 | 130.14 | 131.01 | 121.22 | 7.02 | 129.92 | 65.00 | 31.82 | 17.15 | 8.00 | 102.85 |
| 11216.000 | 1110.00 | 129.15 | 130.14 | 131.01 | 121.22 | 7.03 | 129.92 | 1.00 | 31.81 | 17.15 | 8.00 | 102.85 |
| 11250.000 | 1110.00 | 129.18 | 130.14 | 131.01 | 121.25 | 7.04 | 129.95 | 34.00 | 31.79 | 17.17 | 8.00 | 102.99 |
| 11750.000 | 1020.00 | 129.63 | 130.87 | 130.86 | 121.75 | 6.53 | 130.29 | 500.00 | 31.64 | 17.54 | 8.00 | 105.00 |
| 12350.000 | 950.00 | 130.04 | 132.73 | 134.01 | 122.35 | 6.34 | 130.66 | 600.00 | 31.04 | 17.97 | 8.00 | 107.72 |

SUMMARY OF ERRORS AND SPECIAL NOTES

NOTE SECNO= 3543.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 4690.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 7410.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 9100.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 10100.000 PROFILE= 1 WSEL BASED ON X5 CARD

THIS RUN EXECUTED 9/ 1/89 16:17:24

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
T3 A110-00-00 SAM BELL GULLY
T4 100-YEAR STORM FREQUENCY EXISTING CONDITIONS
T5 FILENAME = A110RVEX.IH2

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL FQ
2 .0012 96.1

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38 43 1 23 24 42 26 3 39 4
37 30 65

J5 LPRNT NUMSEC *****REQUESTED SECTION NUMBERS*****
-10 -10

J6 IHLEQ ICOFY SUBDIV STRTDS RMILE
1

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| NC | .12 | .12 | .1 | .1 | .3 | | | | | |
| QT | 1 | 400 | | | | | | | | |
| X1 | 2035 | 17 | 789 | 815 | | | | | | |
| GR | 106 | 0 | 105 | 500 | 100 | 585 | 97.3 | 590 | 95 | 700 |
| GR | 94.3 | 789 | 88.5 | 790 | 87.75 | 795 | 87.5 | 800 | 88.25 | 805 |
| GR | 92 | 810 | 94.5 | 815 | 95 | 900 | 100.5 | 1000 | 100 | 1200 |
| GR | 105 | 1300 | 110 | 1400 | | | | | | |
| QT | 1 | 250 | | | | | | | | |
| X1 | 4102 | 24 | 1088 | 1115 | 2067 | 2067 | 2067 | | | |
| GR | 105 | 0 | 103 | 690 | 102 | 700 | 103.2 | 705 | 103.6 | 735 |
| GR | 102.3 | 800 | 99.8 | 895 | 97.5 | 1000 | 96.7 | 1088 | 91.1 | 1090 |
| GR | 90.4 | 1092 | 90 | 1100 | 90.5 | 1105 | 94.6 | 1112 | 97 | 1115 |
| GR | 97.6 | 1200 | 102.9 | 1300 | 105.7 | 1395 | 107 | 1495 | 104.4 | 1595 |
| GR | 105.6 | 1690 | 105.5 | 1795 | 105.8 | 1830 | 110 | 2100 | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| NC | | | | .3 | .5 | | | | | |
| X1 | 4151 | 24 | 1088 | 1115 | 49 | 49 | 49 | | | |
| X3 | 10 | | | | | | | 96.5 | 96.5 | |
| GR | 105 | 0 | 103 | 690 | 102 | 700 | 103.2 | 705 | 103.6 | 735 |
| GR | 102.3 | 800 | 99.8 | 895 | 97.5 | 1000 | 96.5 | 1088 | 91.1 | 1090 |
| GR | 90.4 | 1092 | 90 | 1100 | 90.5 | 1105 | 94.6 | 1112 | 96.5 | 1115 |
| GR | 97.6 | 1200 | 102.9 | 1300 | 105.7 | 1395 | 107 | 1495 | 104.4 | 1595 |
| GR | 105.6 | 1690 | 105.5 | 1795 | 105.8 | 1830 | 110 | 2100 | | |

Plum Creek Road

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 4152 | 24 | 1088 | 1115 | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 96.5 | 96.5 | |
| BT | -8 | 1088 | 96.5 | 96.5 | 1090 | 96.5 | 91.1 | 1092 | 96.5 | 90.4 |
| BT | | 1092 | 96.5 | 95.3 | 1105 | 96.5 | 95.3 | 1105 | 96.5 | 90.5 |
| BT | | 1112 | 96.5 | 94.6 | 1115 | 96.5 | 96.5 | | | |
| GR | 105 | 0 | 103 | 690 | 102 | 700 | 103.2 | 705 | 103.6 | 735 |
| GR | 102.3 | 800 | 99.8 | 895 | 97.5 | 1000 | 96.5 | 1088 | 91.1 | 1090 |
| GR | 90.4 | 1092 | 90 | 1100 | 90.5 | 1105 | 94.6 | 1112 | 96.5 | 1115 |
| GR | 97.6 | 1200 | 102.9 | 1300 | 105.7 | 1395 | 107 | 1495 | 104.4 | 1595 |
| GR | 105.6 | 1690 | 105.5 | 1795 | 105.8 | 1830 | 110 | 2100 | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 4177 | 24 | 1088 | 1115 | 25 | 25 | 25 | | | |
| X3 | 10 | | | | | | | 96.5 | 96.5 | |
| BT | -8 | 1088 | 96.5 | 96.5 | 1090 | 96.5 | 91.1 | 1092 | 96.5 | 90.4 |
| BT | | 1092 | 96.5 | 95.3 | 1105 | 96.5 | 95.3 | 1105 | 96.5 | 90.5 |
| BT | | 1112 | 96.5 | 94.6 | 1115 | 96.5 | 96.5 | | | |
| GR | 105 | 0 | 103 | 690 | 102 | 700 | 103.2 | 705 | 103.6 | 735 |
| GR | 102.3 | 800 | 99.8 | 895 | 97.5 | 1000 | 96.5 | 1088 | 91.1 | 1090 |
| GR | 90.4 | 1092 | 90 | 1100 | 90.5 | 1105 | 94.6 | 1112 | 96.5 | 1115 |
| GR | 97.6 | 1200 | 102.9 | 1300 | 105.7 | 1395 | 107 | 1495 | 104.4 | 1595 |
| GR | 105.6 | 1690 | 105.5 | 1795 | 105.8 | 1830 | 110 | 2100 | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 4178 | 24 | 1088 | 1115 | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 96.5 | 96.5 | |
| GR | 105 | 0 | 103 | 690 | 102 | 700 | 103.2 | 705 | 103.6 | 735 |
| GR | 102.3 | 800 | 99.8 | 895 | 97.5 | 1000 | 96.5 | 1088 | 91.1 | 1090 |
| GR | 90.4 | 1092 | 90 | 1100 | 90.5 | 1105 | 94.6 | 1112 | 96.5 | 1115 |
| GR | 97.6 | 1200 | 102.9 | 1300 | 105.7 | 1395 | 107 | 1495 | 104.4 | 1595 |
| GR | 105.6 | 1690 | 105.5 | 1795 | 105.8 | 1830 | 110 | 2100 | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 4202 | 24 | 1088 | 1115 | 24 | 24 | 24 | | | |
| GR | 105 | 0 | 103 | 690 | 102 | 700 | 103.2 | 705 | 103.6 | 735 |
| GR | 102.3 | 800 | 99.8 | 895 | 97.5 | 1000 | 96.7 | 1088 | 91.1 | 1090 |
| GR | 90.4 | 1092 | 90 | 1100 | 90.5 | 1105 | 94.6 | 1112 | 97 | 1115 |
| GR | 97.6 | 1200 | 102.9 | 1300 | 105.7 | 1395 | 107 | 1495 | 104.4 | 1595 |
| GR | 105.6 | 1690 | 105.5 | 1795 | 105.8 | 1830 | 110 | 2100 | | |

| | | | | | | | | | | |
|----|---|-----|--|----|----|--|--|--|--|--|
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 190 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 5422 | 24 | 885 | 912 | 1220 | 1220 | 1220 | | | |
| GR | 105 | 0 | 104.6 | 620 | 103.5 | 630 | 105 | 650 | 103.2 | 682 |
| GR | 103.6 | 710 | 101.2 | 810 | 100.4 | 885 | 93 | 890 | 91.8 | 900 |
| GR | 93 | 905 | 99.5 | 912 | 99.6 | 1018 | 100.1 | 1115 | 100.5 | 1155 |
| GR | 99.8 | 1160 | 101.2 | 1175 | 101.7 | 1195 | 99.9 | 1210 | 103.3 | 1215 |
| GR | 105 | 1250 | 110 | 1400 | 115 | 2400 | 115 | 4000 | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| NC | | | | .3 | .5 | | | | | |
| X1 | 5472 | 20 | 885 | 912 | 50 | 50 | 50 | | | |
| GR | 105 | 0 | 104.6 | 620 | 103.5 | 630 | 105 | 650 | 103.2 | 682 |
| GR | 103.6 | 710 | 101.9 | 781 | 101.9 | 885 | 100.4 | 885 | 93 | 890 |
| GR | 91.8 | 900 | 93 | 905 | 99.5 | 912 | 101.9 | 912 | 101.9 | 1213 |
| GR | 103.3 | 1215 | 105 | 1250 | 110 | 1400 | 115 | 2400 | 115 | 4000 |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 5522 | 24 | 885 | 912 | 50 | 50 | 50 | | | |
| GR | 105 | 0 | 104.6 | 620 | 103.5 | 630 | 105 | 650 | 103.2 | 682 |
| GR | 103.6 | 710 | 101.2 | 810 | 100.4 | 885 | 93 | 890 | 91.8 | 900 |
| GR | 93 | 905 | 99.5 | 912 | 99.6 | 1018 | 100.1 | 1115 | 100.5 | 1155 |
| GR | 99.8 | 1160 | 101.2 | 1175 | 101.7 | 1195 | 99.9 | 1210 | 103.3 | 1215 |
| GR | 105 | 1250 | 110 | 1400 | 115 | 2400 | 115 | 4000 | | |

| | | | | | | | | | | |
|----|-------|-------|-------|------|-------|------|-------|------|-------|------|
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 140 | | | | | | | | |
| X1 | 6789 | 33 | 595 | 607 | 1267 | 1267 | 1267 | | | |
| GR | 110 | 0 | 103.6 | 370 | 104.1 | 382 | 103.6 | 390 | 104.2 | 395 |
| GR | 103.9 | 425 | 102.1 | 430 | 103.6 | 450 | 104 | 470 | 102.9 | 595 |
| GR | 95.2 | 595.5 | 94 | 600 | 95.2 | 605 | 100.2 | 607 | 103.1 | 665 |
| GR | 99.98 | 718 | 102.4 | 770 | 103.1 | 862 | 104 | 930 | 102.9 | 940 |
| GR | 104.4 | 945 | 104.7 | 975 | 103 | 990 | 104.1 | 1000 | 105.9 | 1060 |
| GR | 114 | 1265 | 114.5 | 1305 | 113.5 | 1370 | 109 | 1470 | 107.3 | 1565 |
| GR | 110 | 1600 | 110 | 2600 | 115 | 4100 | | | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|--------|-------|---------|-------|------|
| X1 | 8059 | 11 | 2590 | 2620 | 1270 | 1270 | 1270 | | | |
| GR | 114.8 | 0 | 100.5 | 2590 | 100.5 | 2595.9 | 99.6 | 2596 | 98.7 | 2597 |
| GR | 98 | 2600 | 98.7 | 2603 | 99.6 | 2604 | 100.5 | 2604.01 | 101.4 | 2620 |
| GR | 109.8 | 5200 | | | | | | | | |

IHLQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 1/89 16:17:31

HEC2 RELEASE DATED SEPT 88

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

A110-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|------------|--------|--------|--------|--------|-------|------|--------|---------|--------|-------|-----|------|
| 2035.000 | 400.00 | 96.06 | 94.30 | 94.50 | 87.50 | 1.55 | 96.09 | .00 | 269.91 | .00 | .01 | .00 |
| 4102.000 | 250.00 | 98.00 | 96.70 | 97.00 | 90.00 | 1.22 | 98.02 | 2067.00 | 231.12 | 11.89 | .01 | .00 |
| 4151.000 | 250.00 | 98.04 | 96.50 | 96.50 | 90.00 | 1.13 | 98.06 | 49.00 | 233.75 | 12.15 | .01 | .00 |
| * 4152.000 | 250.00 | 98.05 | 96.50 | 96.50 | 90.00 | 1.17 | 98.06 | 1.00 | 233.20 | 12.15 | .01 | .00 |
| 4177.000 | 250.00 | 98.12 | 96.50 | 96.50 | 90.00 | 1.10 | 98.13 | 25.00 | 238.00 | 12.29 | .01 | .00 |
| * 4178.000 | 250.00 | 98.12 | 96.50 | 96.50 | 90.00 | 1.09 | 98.13 | 1.00 | 238.18 | 12.29 | .01 | .00 |
| 4202.000 | 250.00 | 98.13 | 96.70 | 97.00 | 90.00 | 1.15 | 98.15 | 24.00 | 238.89 | 12.43 | .01 | .00 |
| * 5422.000 | 190.00 | 99.28 | 100.40 | 99.50 | 91.80 | 1.38 | 99.31 | 1220.00 | 26.00 | 16.14 | .01 | .00 |
| 5472.000 | 190.00 | 99.34 | 101.90 | 101.90 | 91.80 | 1.36 | 99.37 | 50.00 | 26.11 | 16.17 | .01 | .00 |
| 5522.000 | 190.00 | 99.40 | 100.40 | 99.50 | 91.80 | 1.35 | 99.43 | 50.00 | 26.22 | 16.20 | .01 | .00 |
| * 6789.000 | 140.00 | 101.45 | 102.90 | 100.20 | 94.00 | 1.55 | 101.48 | 1267.00 | 93.64 | 17.94 | .01 | .00 |
| * 8059.000 | 140.00 | 102.40 | 100.50 | 101.40 | 98.00 | .49 | 102.40 | 1270.00 | 683.48 | 29.27 | .01 | .00 |

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 4152.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 4178.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 5422.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 6789.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 8059.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

THIS RUN EXECUTED 9/ 4/89 9: 8:16

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
 T3 A110-00-00 SAM BELL GULLY
 T4 100-YEAR STORM FREQUENCY ULTIMATE CONDITIONS
 T5 FILENAME = A110ULT.IH2

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL FQ
 2 .0015 92

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38 43 1 23 24 42 26 3 39 4
 37 30 65

J5 LPRNT NUMSEC *****REQUESTED SECTION NUMBERS*****
 -10 -10

J6 IHLEQ ICOPY SUBDIV STRTDS RMILE
 1

NC .12 .12 .04 .1 .3
 QT 1 1700
 X1 100 17 789 815 -2.0
 CI -1 82.0 0.04 3 3 10
 GR 106 0 105 500 100 585 97.3 590 95 700
 GR 94.3 789 88.5 790 87.75 795 87.5 800 88.25 805
 GR 92 810 94.5 815 95 900 100.5 1000 100 1200
 GR 105 1300 110 1400

QT 1 1640
 SPRING CREEK DRIVE
 X1 600 17 789 815 500 500 500 -1.3
 CI -1 82.75 0.04 3 3 10
 GR 106 0 105 500 100 585 97.3 590 95 700
 GR 94.3 789 88.5 790 87.75 795 87.5 800 88.25 805
 GR 92 810 94.5 815 95 900 100.5 1000 100 1200

GR

105

1300

110

1400

| | | | | | | | | | | | |
|----|------|-------|------|------|-------|-----|-------|------|-------|------|------|
| X1 | 660 | 17 | 789 | 815 | 60 | 60 | 60 | | | | |
| CI | -1 | 82.84 | 0.04 | 3 | 3 | 10 | | | | | -1.3 |
| GR | 106 | 0 | 105 | 500 | 100 | 585 | 97.3 | 590 | 95 | 700 | |
| GR | 94.3 | 789 | 88.5 | 790 | 87.75 | 795 | 87.5 | 800 | 88.25 | 805 | |
| GR | 92 | 810 | 94.5 | 815 | 95 | 900 | 100.5 | 1000 | 100 | 1200 | |
| GR | 105 | 1300 | 110 | 1400 | | | | | | | |

| | | | | | | | | | | | |
|----|------|-------|------|------|-------|-----|-------|------|-------|------|--|
| QT | 1 | 1550 | | | | | | | | | |
| X1 | 1470 | 17 | 789 | 815 | 810 | 810 | 810 | | | | |
| CI | -1 | 84.06 | 0.04 | 3 | 3 | 10 | | | | | |
| GR | 106 | 0 | 105 | 500 | 100 | 585 | 97.3 | 590 | 95 | 700 | |
| GR | 94.3 | 789 | 88.5 | 790 | 87.75 | 795 | 87.5 | 800 | 88.25 | 805 | |
| GR | 92 | 810 | 94.5 | 815 | 95 | 900 | 100.5 | 1000 | 100 | 1200 | |
| GR | 105 | 1300 | 110 | 1400 | | | | | | | |

| | | | | | | | | | | | |
|----|------|-------|------|------|-------|-----|-------|------|-------|------|-----|
| QT | 1 | 1460 | | | | | | | | | |
| X1 | 2350 | 17 | 789 | 815 | 880 | 880 | 880 | | | | 1.3 |
| CI | -1 | 85.38 | 0.04 | 3 | 3 | 10 | | | | | |
| GR | 106 | 0 | 105 | 500 | 100 | 585 | 97.3 | 590 | 95 | 700 | |
| GR | 94.3 | 789 | 88.5 | 790 | 87.75 | 795 | 87.5 | 800 | 88.25 | 805 | |
| GR | 92 | 810 | 94.5 | 815 | 95 | 900 | 100.5 | 1000 | 100 | 1200 | |
| GR | 105 | 1300 | 110 | 1400 | | | | | | | |

| | | | | | | | | | | | |
|----|------|-------|------|------|-------|-----|-------|------|-------|------|-----|
| QT | 1 | 900 | | | | | | | | | |
| X1 | 2450 | 17 | 789 | 815 | 100 | 100 | 100 | | | | 1.3 |
| CI | -1 | 85.53 | 0.04 | 3 | 3 | 6 | | | | | |
| GR | 106 | 0 | 105 | 500 | 100 | 585 | 97.3 | 590 | 95 | 700 | |
| GR | 94.3 | 789 | 88.5 | 790 | 87.75 | 795 | 87.5 | 800 | 88.25 | 805 | |
| GR | 92 | 810 | 94.5 | 815 | 95 | 900 | 100.5 | 1000 | 100 | 1200 | |
| GR | 105 | 1300 | 110 | 1400 | | | | | | | |

| | | | | | | | | | | | |
|----|-------|-------|-------|------|-------|------|-------|------|-------|------|--|
| QT | 1 | 880 | | | | | | | | | |
| X1 | 3200 | 24 | 1088 | 1115 | 750 | 750 | 750 | | | | |
| CI | -1 | 86.65 | 0.04 | 3 | 3 | 6 | | | | | |
| GR | 105 | 0 | 103 | 690 | 102 | 700 | 103.2 | 705 | 103.6 | 735 | |
| GR | 102.3 | 800 | 99.8 | 895 | 97.5 | 1000 | 96.7 | 1088 | 91.1 | 1090 | |
| GR | 90.4 | 1092 | 90 | 1100 | 90.5 | 1105 | 94.6 | 1112 | 97 | 1115 | |
| GR | 97.6 | 1200 | 102.9 | 1300 | 105.7 | 1395 | 107 | 1495 | 104.4 | 1595 | |
| GR | 105.6 | 1690 | 105.5 | 1795 | 105.8 | 1830 | 110 | 2100 | | | |

DROP STRUCTURE

| | | | | | | | | | | | |
|----|-------|-------|-------|------|-------|------|-------|------|-------|------|--|
| X1 | 3210 | 24 | 1088 | 1115 | 10 | 10 | 10 | | | | |
| CI | -1 | 88.20 | 0.04 | 3 | 3 | 6 | | | | | |
| GR | 105 | 0 | 103 | 690 | 102 | 700 | 103.2 | 705 | 103.6 | 735 | |
| GR | 102.3 | 800 | 99.8 | 895 | 97.5 | 1000 | 96.7 | 1088 | 91.1 | 1090 | |
| GR | 90.4 | 1092 | 90 | 1100 | 90.5 | 1105 | 94.6 | 1112 | 97 | 1115 | |
| GR | 97.6 | 1200 | 102.9 | 1300 | 105.7 | 1395 | 107 | 1495 | 104.4 | 1595 | |
| GR | 105.6 | 1690 | 105.5 | 1795 | 105.8 | 1830 | 110 | 2100 | | | |

PLUM CREEK DRIVE

| | | | | | | | | | | | |
|----|-------|-------|-------|------|-------|------|-------|------|-------|------|--|
| X1 | 3230 | 24 | 1088 | 1115 | 20 | 20 | 20 | | | | |
| CI | -1 | 88.23 | 0.04 | 3 | 3 | 6 | | | | | |
| GR | 105 | 0 | 103 | 690 | 102 | 700 | 103.2 | 705 | 103.6 | 735 | |
| GR | 102.3 | 800 | 99.8 | 895 | 97.5 | 1000 | 96.5 | 1088 | 91.1 | 1090 | |
| GR | 90.4 | 1092 | 90 | 1100 | 90.5 | 1105 | 94.6 | 1112 | 96.5 | 1115 | |
| GR | 97.6 | 1200 | 102.9 | 1300 | 105.7 | 1395 | 107 | 1495 | 104.4 | 1595 | |
| GR | 105.6 | 1690 | 105.5 | 1795 | 105.8 | 1830 | 110 | 2100 | | | |

| | | | | | | | | | | | |
|----|-------|-------|-------|------|-------|------|-------|------|-------|------|--|
| X1 | 3290 | 24 | 1088 | 1115 | 60 | 60 | 60 | | | | |
| CI | -1 | 88.32 | 0.04 | 3 | 3 | 6 | | | | | |
| X5 | -1 | 1.1 | | | | | | | | | |
| GR | 105 | 0 | 103 | 690 | 102 | 700 | 103.2 | 705 | 103.6 | 735 | |
| GR | 102.3 | 800 | 99.8 | 895 | 97.5 | 1000 | 96.5 | 1088 | 91.1 | 1090 | |
| GR | 90.4 | 1092 | 90 | 1100 | 90.5 | 1105 | 94.6 | 1112 | 96.5 | 1115 | |
| GR | 97.6 | 1200 | 102.9 | 1300 | 105.7 | 1395 | 107 | 1495 | 104.4 | 1595 | |
| GR | 105.6 | 1690 | 105.5 | 1795 | 105.8 | 1830 | 110 | 2100 | | | |

| | | | | | | | | | | | |
|----|-------|-------|-------|------|-------|------|-------|------|-------|------|--|
| X1 | 3310 | 24 | 1088 | 1115 | 20 | 20 | 20 | | | | |
| CI | -1 | 88.35 | 0.04 | 3 | 3 | 6 | | | | | |
| GR | 105 | 0 | 103 | 690 | 102 | 700 | 103.2 | 705 | 103.6 | 735 | |
| GR | 102.3 | 800 | 99.8 | 895 | 97.5 | 1000 | 96.7 | 1088 | 91.1 | 1090 | |
| GR | 90.4 | 1092 | 90 | 1100 | 90.5 | 1105 | 94.6 | 1112 | 97 | 1115 | |
| GR | 97.6 | 1200 | 102.9 | 1300 | 105.7 | 1395 | 107 | 1495 | 104.4 | 1595 | |
| GR | 105.6 | 1690 | 105.5 | 1795 | 105.8 | 1830 | 110 | 2100 | | | |

| | | | | | | | | | | | |
|----|-------|-------|-------|------|-------|------|-------|------|-------|------|--|
| QT | 1 | 450 | | | | | | | | | |
| X1 | 4570 | 24 | 885 | 912 | 1260 | 1260 | 1260 | | | | |
| CI | -1 | 90.24 | 0.04 | 3 | 3 | 6 | | | | | |
| GR | 105 | 0 | 104.6 | 620 | 103.5 | 630 | 105 | 650 | 103.2 | 682 | |
| GR | 103.6 | 710 | 101.2 | 810 | 100.4 | 885 | 93 | 890 | 91.8 | 900 | |
| GR | 93 | 905 | 99.5 | 912 | 99.6 | 1018 | 100.1 | 1115 | 100.5 | 1155 | |
| GR | 99.8 | 1160 | 101.2 | 1175 | 101.7 | 1195 | 99.9 | 1210 | 103.3 | 1215 | |
| GR | 105 | 1250 | 110 | 1400 | 115 | 2400 | 115 | 4000 | | | |

DROP STRUCTURE

| | | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|--|
| X1 | 4580 | 24 | 885 | 912 | 10 | 10 | 10 | | | | |
| CI | -1 | 91.8 | 0.04 | 3 | 3 | 6 | | | | | |
| GR | 105 | 0 | 104.6 | 620 | 103.5 | 630 | 105 | 650 | 103.2 | 682 | |
| GR | 103.6 | 710 | 101.2 | 810 | 100.4 | 885 | 93 | 890 | 91.8 | 900 | |
| GR | 93 | 905 | 99.5 | 912 | 99.6 | 1018 | 100.1 | 1115 | 100.5 | 1155 | |
| GR | 99.8 | 1160 | 101.2 | 1175 | 101.7 | 1195 | 99.9 | 1210 | 103.3 | 1215 | |
| GR | 105 | 1250 | 110 | 1400 | 115 | 2400 | 115 | 4000 | | | |

UNNAMED ROAD

| | | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|--|
| X1 | 4600 | 20 | 885 | 912 | 20 | 20 | 20 | | | | |
| CI | -1 | -1 | 0.04 | 3 | 3 | 6 | | | | | |
| GR | 105 | 0 | 104.6 | 620 | 103.5 | 630 | 105 | 650 | 103.2 | 682 | |
| GR | 103.6 | 710 | 101.9 | 781 | 101.9 | 885 | 100.4 | 885 | 93 | 890 | |
| GR | 91.8 | 900 | 93 | 905 | 99.5 | 912 | 101.9 | 912 | 101.9 | 1213 | |
| GR | 103.3 | 1215 | 105 | 1250 | 110 | 1400 | 115 | 2400 | 115 | 4000 | |

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 4/89 9: 8:27

HEC2 RELEASE DATED SEPT 88

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

A110-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|------------|---------|-------|--------|--------|-------|------|-------|---------|--------|------|-------|-------|
| 100.000 | 1700.00 | 91.76 | 92.48 | 92.64 | 82.00 | 4.43 | 92.07 | .00 | 68.59 | .00 | 10.00 | .00 |
| 600.000 | 1640.00 | 92.52 | 93.18 | 93.34 | 82.75 | 4.27 | 92.80 | 500.00 | 68.65 | .79 | 10.00 | 5.60 |
| 660.000 | 1640.00 | 92.60 | 93.18 | 93.34 | 82.84 | 4.27 | 92.89 | 60.00 | 68.61 | .88 | 10.00 | 6.26 |
| 1470.000 | 1550.00 | 93.73 | 94.48 | 94.64 | 84.06 | 4.10 | 93.99 | 810.00 | 68.08 | 2.15 | 10.00 | 15.17 |
| 2350.000 | 1460.00 | 94.89 | 95.78 | 95.94 | 85.38 | 3.99 | 95.13 | 880.00 | 67.04 | 3.52 | 10.00 | 24.92 |
| 2450.000 | 900.00 | 95.12 | 95.76 | 95.92 | 85.53 | 2.70 | 95.23 | 100.00 | 63.52 | 3.67 | 6.00 | 25.93 |
| 3200.000 | 880.00 | 95.64 | 96.88 | 97.15 | 86.65 | 2.97 | 95.77 | 750.00 | 59.91 | 4.73 | 6.00 | 32.67 |
| * 3210.000 | 880.00 | 95.55 | 96.84 | 97.11 | 88.20 | 4.27 | 95.83 | 10.00 | 50.09 | 4.74 | 6.00 | 32.74 |
| 3230.000 | 880.00 | 95.59 | 96.67 | 96.69 | 88.23 | 4.26 | 95.87 | 20.00 | 50.13 | 4.77 | 6.00 | 32.84 |
| * 3290.000 | 880.00 | 96.69 | 96.67 | 96.69 | 88.32 | 3.38 | 96.87 | 60.00 | 58.72 | 4.84 | 6.00 | 33.12 |
| 3310.000 | 880.00 | 96.71 | 96.84 | 97.11 | 88.35 | 3.37 | 96.89 | 20.00 | 56.25 | 4.87 | 6.00 | 33.22 |
| 4570.000 | 450.00 | 97.72 | 100.62 | 99.52 | 90.24 | 2.12 | 97.79 | 1260.00 | 50.87 | 6.42 | 6.00 | 40.71 |
| * 4580.000 | 450.00 | 97.67 | 100.57 | 99.51 | 91.80 | 3.22 | 97.83 | 10.00 | 41.22 | 6.43 | 6.00 | 40.76 |
| 4600.000 | 450.00 | 97.70 | 101.90 | 101.90 | 91.80 | 3.20 | 97.86 | 20.00 | 41.38 | 6.45 | 6.00 | 40.85 |
| * 4660.000 | 450.00 | 99.30 | 101.90 | 101.90 | 91.80 | 2.09 | 99.37 | 60.00 | 51.02 | 6.51 | 6.00 | 41.21 |
| 4680.000 | 450.00 | 99.31 | 100.57 | 99.51 | 91.80 | 2.08 | 99.38 | 20.00 | 51.14 | 6.53 | 6.00 | 41.30 |
| * 5910.000 | 230.00 | 99.89 | 103.11 | 101.12 | 94.00 | 1.65 | 99.94 | 1230.00 | 41.37 | 7.84 | 6.00 | 47.05 |

9/ 4/89

9: 8:16

PAGE 7

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|------------|--------|--------|--------|--------|-------|------|--------|---------|--------|------|------|-------|
| * 7210.000 | 120.00 | 100.49 | 100.53 | 101.31 | 96.20 | 1.49 | 100.52 | 1300.00 | 31.70 | 8.93 | 6.00 | 52.51 |

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 3210.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE SECNO= 3290.000 PROFILE= 1 WSEL BASED ON X5 CARD

WARNING SECNO= 4580.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE SECNO= 4660.000 PROFILE= 1 WSEL BASED ON X5 CARD

WARNING SECNO= 4660.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 5910.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 7210.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

THIS RUN EXECUTED 9/ 1/89 16:15:39

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
 T3 A111-00-00 DD 6 CHANNEL II
 T4 100-YEAR STORM FREQUENCY EXISTING CONDITIONS
 T5 FILENAME = A111RVEX.IH2

| | | | | | | | | | | |
|----|--------|-----|------|------|-------|--------|-------|---|------|----|
| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
| | | 2 | | | .0048 | | | | 81.2 | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|----|-------|-----|-------|--------|
| J2 | NPROF | IPL0T | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
| | -1 | | -1 | | | | | | | |

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

| | | | | | | | | | |
|----|----|----|----|----|----|----|---|----|---|
| 38 | 43 | 1 | 23 | 24 | 42 | 26 | 3 | 39 | 4 |
| 37 | 30 | 65 | | | | | | | |

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

-10 -10

J6 IHLEQ ICOPY SUBDIV STRTDS RMILE

1

| | | | | | | | | | | |
|----|------|-------|------|-------|------|-------|------|-------|------|-------|
| NC | .15 | .15 | .08 | .1 | .3 | | | | | |
| QT | 1 | 1060 | | | | | | | | |
| X1 | 80 | 10 | 9962 | 10026 | 80 | 80 | 80 | | | |
| GR | 90.8 | 9841 | 87.7 | 9941 | 85.2 | 9962 | 75.3 | 9978 | 74.7 | 9990 |
| GR | 73.6 | 10000 | 75.3 | 10010 | 81.3 | 10023 | 85.1 | 10026 | 91.5 | 10049 |
| X1 | 126 | 14 | 9965 | 10057 | 46 | 46 | 46 | | | |
| GR | 90.3 | 9715 | 90.5 | 9765 | 90.7 | 9815 | 90.5 | 9865 | 91.4 | 9915 |
| GR | 89.7 | 9965 | 74.6 | 9983 | 75.1 | 9989 | 74.2 | 10000 | 74.4 | 10011 |
| GR | 78.6 | 10019 | 86.9 | 10033 | 91.2 | 10057 | 92.8 | 10107 | | |
| X1 | 220 | 12 | 9953 | 10024 | 94 | 94 | 94 | | | |
| GR | 91.6 | 9929 | 90.3 | 9935 | 91.2 | 9941 | 89.1 | 9953 | 78.3 | 9964 |
| GR | 77.9 | 9990 | 74.9 | 9993 | 74.4 | 10000 | 75.4 | 10007 | 87.5 | 10024 |
| GR | 90.5 | 10039 | 90.8 | 10089 | | | | | | |

| | | | | | | | | | | |
|--------------------|-------|--------|--------|---------|---------|-------|---------|-------|-------|-------|
| X1 | 505 | 13 | 9973 | 10025 | 285 | 285 | 285 | | | |
| GR | 87.1 | 9944 | 84.5 | 9955 | 86 | 9961 | 85.7 | 9973 | 83.9 | 9982 |
| GR | 78.3 | 9990 | 77.1 | 9995 | 75.7 | 10000 | 76.5 | 10005 | 84.4 | 10017 |
| GR | 86.2 | 10025 | 85 | 10043 | 85.8 | 10053 | | | | |
| NC | | | | .3 | .5 | | | | | |
| NH | 5 | .15 | 9974 | .015 | 9995.3 | .024 | 10004.7 | .015 | 10026 | .15 |
| NH | 10326 | | | | | | | | | |
| QT | 1 | 1010 | | | | | | | | |
| X1 | 599 | 24 | 9995.3 | 10004.7 | 94 | 94 | 94 | | | |
| X3 | 10 | | | | | | | 84.5 | 84.5 | |
| GR | 93.6 | 9724 | 92 | 9774 | 91.1 | 9824 | 89.9 | 9874 | 88.4 | 9924 |
| GR | 87.9 | 9974 | 79.82 | 9995.3 | 78.24 | 9996 | 77.65 | 9997 | 77.39 | 9998 |
| GR | 77.24 | 9999 | 77.19 | 10000 | 77.24 | 10001 | 77.39 | 10002 | 77.65 | 10003 |
| GR | 78.24 | 10004 | 79.82 | 10004.7 | 88.0 | 10026 | 90.7 | 10076 | 90.9 | 10126 |
| GR | 91.3 | 10176 | 91.2 | 10226 | 91.5 | 10276 | 91.6 | 10326 | | |
| NH | 5 | .15 | 9974 | .015 | 9995.3 | .024 | 10004.7 | .015 | 10026 | .15 |
| NH | 10326 | | | | | | | | | |
| LOW WATER CROSSING | | | | | | | | | | |
| X1 | 600 | | | | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 84.5 | 84.5 | |
| BT | -24 | 9724 | 93.6 | 93.6 | 9774 | 92 | 92 | 9824 | 91.1 | 91.1 |
| BT | | 9874 | 89.9 | 89.9 | 9924 | 88.4 | 88.4 | 9974 | 87.9 | 87.9 |
| BT | | 9995.3 | 85.6 | 79.82 | 9996 | 85.6 | 81.31 | 9997 | 85.6 | 82.39 |
| BT | | 9998 | 85.6 | 83.01 | 9999 | 85.6 | 83.34 | 10000 | 85.6 | 83.44 |
| BT | | 10001 | 85.6 | 83.34 | 10002 | 85.6 | 83.01 | 10003 | 85.6 | 82.39 |
| BT | | 10004 | 85.6 | 81.31 | 10004.7 | 85.6 | 79.82 | 10026 | 88.0 | 88.0 |
| BT | | 10076 | 90.7 | 90.7 | 10126 | 90.9 | 90.9 | 10176 | 91.3 | 91.3 |
| BT | | 10226 | 91.2 | 91.2 | 10276 | 91.5 | 91.5 | 10326 | 91.6 | 91.6 |
| NH | 5 | .15 | 9974 | .015 | 9995.3 | .024 | 10004.7 | .015 | 10026 | .15 |
| NH | 10326 | | | | | | | | | |
| X1 | 631 | | | | 31 | 31 | 31 | | | |
| X2 | | | | | | | 1 | | | |
| X3 | 10 | | | | | | | 85.6 | 85.6 | |
| NH | 5 | .15 | 9974 | .015 | 9995.3 | .024 | 10004.7 | .015 | 10026 | .15 |
| NH | 10326 | | | | | | | | | |
| X1 | 632 | | | | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 85.6 | 85.6 | |
| NC | .15 | .15 | .08 | | | | | | | |
| X1 | 682 | 19 | 9973 | 10025 | 50 | 50 | 50 | | | |
| GR | 93.6 | 9724 | 92 | 9774 | 91.1 | 9824 | 89.9 | 9874 | 88.4 | 9924 |
| GR | 87.4 | 9973 | 85.6 | 9982 | 80.0 | 9990 | 78.8 | 9995 | 77.4 | 10000 |
| GR | 78.2 | 10005 | 86.1 | 10017 | 87.9 | 10025 | 90.7 | 10076 | 90.9 | 10126 |
| GR | 91.3 | 10176 | 91.2 | 10226 | 91.5 | 10276 | 91.6 | 10326 | | |

| | | | | | | | | | | |
|----|--------------------|----------|-------|----------|--------|----------|---------|---------|-------|----------|
| NC | | | .1 | .3 | | | | | | |
| X1 | 1690 | 12 | 9969 | 10027 | 1076 | 1076 | 1076 | | | |
| GR | 94.6 | 9951 | 93.2 | 9961 | 93.9 | 9969 | 92.6 | 9976 | 86.1 | 9983 |
| GR | 82.3 | 9996 | 81.7 | 10000 | 82.3 | 10004 | 85.7 | 10010 | 90.7 | 10015 |
| GR | 93.5 | 10027 | 93.7 | 10043 | | | | | | |
| NC | | | .015 | .3 | .5 | | | | | |
| | BEGIN SLOPING DROP | | | | | | | | | |
| X1 | 1860 | 11 | 9979 | 10020.5 | 170 | 170 | 170 | | | |
| GR | 105 | 9730 | 94.6 | 9951 | 95.1 | 9979 | 90.4 | 9993 | 87.4 | 9997.5 |
| GR | 87.4 | 10002 | 90.4 | 10006.5 | 95.1 | 10020.5 | 93.7 | 10043 | 95 | 10300 |
| GR | 100 | 10480 | | | | | | | | |
| X1 | 1880 | 11 | 9982 | 10017.5 | 20 | 20 | 20 | | | |
| GR | 105 | 9730 | 94.6 | 9951 | 95.1 | 9982 | 90.7 | 9993 | 87.5 | 9997.5 |
| GR | 87.5 | 10002 | 90.7 | 10006.5 | 95.1 | 10017.5 | 93.7 | 10043 | 95 | 10300 |
| GR | 100 | 10480 | | | | | | | | |
| X1 | 1886 | 14 | 9983 | 10016.5 | 6 | 6 | 6 | | | |
| GR | 105 | 9730 | 95.9 | 9928 | 95.2 | 9962 | 95.1 | 9983 | 92.1 | 9993 |
| GR | 89.1 | 9997.5 | 89.1 | 10002 | 92.1 | 10006.5 | 95.1 | 10016.5 | 95.8 | 10044 |
| GR | 95.2 | 10064 | 96.1 | 10094 | 95 | 10300 | 100 | 10480 | | |
| X1 | 1896 | 14 | 9983 | 10016.5 | 10 | 10 | 10 | | | |
| GR | 105 | 9730 | 95.9 | 9928 | 95.2 | 9962 | 95.1 | 9983 | 92.1 | 9993 |
| GR | 89.1 | 9997.5 | 89.1 | 10002 | 92.1 | 10006.5 | 95.1 | 10016.5 | 95.8 | 10044 |
| GR | 95.2 | 10064 | 96.1 | 10094 | 95 | 10300 | 100 | 10480 | | |
| NC | | | .08 | .1 | .3 | | | | | |
| QT | 1 | 940 | | | | | | | | |
| X1 | 1950 | 16 | 9973 | 10020 | 54 | 54 | 54 | | | |
| GR | 105 | 9730 | 95.9 | 9928 | 95.2 | 9962 | 96.2 | 9973 | 92.4 | 9987 |
| GR | 91.9 | 9992 | 90.2 | 9996 | 88.1 | 10000 | 90.5 | 10004 | 91.8 | 10008 |
| GR | 95.5 | 10020 | 95.8 | 10044 | 95.2 | 10064 | 96.1 | 10094 | 95 | 10300 |
| GR | 100 | 10480 | | | | | | | | |
| X1 | 2650 | 15 | 9979 | 10024 | 700 | 700 | 700 | | | |
| GR | 104 | 9913 | 100.8 | 9925 | 98.9 | 9955 | 99.7 | 9979 | 95.6 | 9993 |
| GR | 92.9 | 9997 | 92.3 | 10000 | 92.9 | 10003 | 95.8 | 10010 | 99.5 | 10024 |
| GR | 98.2 | 10040 | 98.8 | 10065 | 100 | 10165 | 100 | 10365 | 105 | 10435 |
| NC | | | | .3 | .5 | | | | | |
| NH | 5 | .15 | 9977 | .015 | 9994.5 | .024 | 10005.5 | .015 | 10023 | .15 |
| NH | 10435 | | | | | | | | | |
| X1 | 2689 | 51 | 9977 | 10023 | 39 | 39 | 39 | | | |
| X3 | 10 | | | | | | | 96.1 | 96.1 | |
| GR | 104 | 9913 | 100.8 | 9925 | 98.9 | 9955 | 99.5 | 9977 | 97.1 | 9992 |
| GR | 94.2 | 9994.5 | 93.81 | 9994.55 | 93.45 | 9994.7 | 93.14 | 9994.94 | 92.9 | 9995.25 |
| GR | 92.75 | 9995.61 | 92.7 | 9996 | 92.75 | 9996.39 | 92.9 | 9996.75 | 93.14 | 9997.06 |
| GR | 93.45 | 9997.3 | 93.81 | 9997.45 | 94.2 | 9997.5 | 94.2 | 9998.5 | 93.81 | 9998.55 |
| GR | 93.45 | 9998.7 | 93.14 | 9998.94 | 92.9 | 9999.25 | 92.75 | 9999.61 | 92.7 | 10000 |
| GR | 92.75 | 10000.39 | 92.9 | 10000.75 | 93.14 | 10001.06 | 93.45 | 10001.3 | 93.81 | 10001.45 |
| GR | 94.2 | 10001.5 | 94.2 | 10002.5 | 93.81 | 10002.55 | 93.45 | 10002.7 | 93.14 | 10002.94 |

| | | | | | | | | | | |
|----|-------|----------|-------|----------|-------|----------|-------|----------|------|----------|
| GR | 92.9 | 10003.25 | 92.75 | 10003.61 | 92.7 | 10004 | 92.75 | 10004.39 | 92.9 | 10004.75 |
| GR | 93.14 | 10005.06 | 93.45 | 10005.3 | 93.81 | 10005.45 | 94.2 | 10005.5 | 97.1 | 10008 |
| GR | 99.5 | 10023 | 98.2 | 10040 | 98.8 | 10065 | 100 | 10165 | 100 | 10365 |
| GR | 105 | 10435 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|-----|------|------|--------|------|---------|------|-------|-----|
| NH | 5 | .15 | 9977 | .015 | 9994.5 | .024 | 10005.5 | .015 | 10023 | .15 |
| NH | 10435 | | | | | | | | | |

LOW WATER CROSSING

| | | | | | | | | | | |
|----|------|----------|------|-------|----------|-------|-------|----------|------|-------|
| X1 | 2690 | | | | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 96.1 | 96.1 | |
| BT | -48 | 9913 | 104 | 104 | 9925 | 100.8 | 100.8 | 9955 | 98.9 | 98.9 |
| BT | | 9977 | 99.5 | 99.5 | 9992 | 97.1 | 97.1 | 9994.5 | 96.5 | 94.2 |
| BT | | 9994.55 | 96.5 | 94.59 | 9994.7 | 96.5 | 94.95 | 9994.94 | 96.5 | 95.26 |
| BT | | 9995.25 | 96.5 | 95.5 | 9995.61 | 96.5 | 95.65 | 9996 | 96.5 | 95.7 |
| BT | | 9996.39 | 96.5 | 95.65 | 9996.75 | 96.5 | 95.5 | 9997.06 | 96.5 | 95.26 |
| BT | | 9997.3 | 96.5 | 94.95 | 9997.45 | 96.5 | 94.59 | 9997.5 | 96.5 | 94.2 |
| BT | | 9998.5 | 96.5 | 94.2 | 9998.55 | 96.5 | 94.59 | 9998.7 | 96.5 | 94.95 |
| BT | | 9998.94 | 96.5 | 95.26 | 9999.25 | 96.5 | 95.5 | 9999.61 | 96.5 | 95.65 |
| BT | | 10000 | 96.5 | 95.7 | 10000.39 | 96.5 | 95.65 | 10000.75 | 96.5 | 95.5 |
| BT | | 10001.06 | 96.5 | 95.26 | 10001.3 | 96.5 | 94.95 | 10001.45 | 96.5 | 94.59 |
| BT | | 10001.5 | 96.5 | 94.2 | 10002.5 | 96.5 | 94.2 | 10002.55 | 96.5 | 94.59 |
| BT | | 10002.7 | 96.5 | 94.95 | 10002.94 | 96.5 | 95.26 | 10003.25 | 96.5 | 95.5 |
| BT | | 10003.61 | 96.5 | 95.65 | 10004 | 96.5 | 95.7 | 10004.39 | 96.5 | 95.65 |
| BT | | 10004.75 | 96.5 | 95.5 | 10005.06 | 96.5 | 95.26 | 10005.3 | 96.5 | 94.95 |
| BT | | 10005.45 | 96.5 | 94.59 | 10005.5 | 96.5 | 94.2 | 10008 | 97.1 | 97.1 |
| BT | | 10023 | 99.5 | 99.5 | 10040 | 98.2 | 98.2 | 10065 | 98.8 | 98.8 |

| | | | | | | | | | | |
|----|-------|-----|------|------|--------|------|---------|------|-------|-----|
| NH | 5 | .15 | 9977 | .015 | 9994.5 | .024 | 10005.5 | .015 | 10023 | .15 |
| NH | 10435 | | | | | | | | | |

| | | | | | | | | | | |
|----|------|--|--|--|----|----|----|------|------|--|
| X1 | 2711 | | | | 21 | 21 | 21 | | | |
| X2 | | | | | | | | 1 | | |
| X3 | 10 | | | | | | | 96.5 | 96.5 | |

| | | | | | | | | | | |
|----|-------|-----|------|------|--------|------|---------|------|-------|-----|
| NH | 5 | .15 | 9977 | .015 | 9994.5 | .024 | 10005.5 | .015 | 10023 | .15 |
| NH | 10435 | | | | | | | | | |

| | | | | | | | | | | |
|----|------|--|--|--|---|---|---|------|------|--|
| X1 | 2712 | | | | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 96.5 | 96.5 | |

| | | | | | | | | | | |
|----|------|-------|-------|-------|------|-------|------|-------|------|-------|
| NC | .12 | .12 | .04 | | | | | | | |
| X1 | 2762 | 15 | 9979 | 10024 | 50 | 50 | 50 | | | |
| GR | 104 | 9913 | 100.8 | 9925 | 98.9 | 9955 | 99.7 | 9979 | 95.6 | 9993 |
| GR | 92.9 | 9997 | 92.3 | 10000 | 92.9 | 10003 | 95.8 | 10010 | 99.5 | 10024 |
| GR | 98.2 | 10040 | 98.8 | 10065 | 100 | 10165 | 100 | 10365 | 105 | 10435 |

| | | | | | | | | | | |
|----|--|--|----|----|--|--|--|--|--|--|
| NC | | | .1 | .3 | | | | | | |
|----|--|--|----|----|--|--|--|--|--|--|

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 860 | | | | | | | | |
| X1 | 3550 | 21 | 9964 | 10033 | 788 | 788 | 788 | | | |
| GR | 109.8 | 9816 | 106.5 | 9866 | 105.2 | 9916 | 103.6 | 9951 | 104.4 | 9964 |
| GR | 95.3 | 9996 | 93.7 | 10000 | 95.1 | 10004 | 102.1 | 10033 | 101.4 | 10040 |
| GR | 101.6 | 10066 | 101.2 | 10116 | 101.2 | 10166 | 101.8 | 10216 | 102.6 | 10266 |
| GR | 103.4 | 10316 | 104.4 | 10366 | 104.7 | 10416 | 105.3 | 10466 | 105.7 | 10516 |
| GR | 106.3 | 10566 | | | | | | | | |

| | | | | | | | | | | |
|----|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 810 | | | | | | | | |
| X1 | 4530 | 17 | 9960 | 10045 | 980 | 980 | 980 | | | |
| GR | 110 | 8199 | 104.4 | 9549 | 104.9 | 9649 | 105.3 | 9749 | 105.8 | 9849 |
| GR | 105.5 | 9949 | 106.4 | 9960 | 96.7 | 9993 | 95.5 | 10000 | 96.3 | 10007 |
| GR | 107 | 10045 | 105.2 | 10065 | 106.8 | 10079 | 108.1 | 10179 | 108.7 | 10279 |
| GR | 108.1 | 10379 | 107.4 | 10479 | | | | | | |
| NC | | | .015 | .3 | .5 | | | | | |
| | RICHARD ROAD | | | | | | | | | |
| X1 | 4574 | 17 | 9949 | 10045 | 44 | 44 | 44 | | | |
| X3 | 10 | | | | | | | 102.0 | 102.4 | |
| GR | 110 | 8199 | 104.4 | 9549 | 104.9 | 9649 | 105.3 | 9749 | 105.8 | 9849 |
| GR | 106.6 | 9949 | 99.6 | 9992 | 94.6 | 9992 | 94.6 | 10009 | 99.6 | 10009 |
| GR | 106.2 | 10045 | 105.2 | 10065 | 106.8 | 10079 | 108.1 | 10179 | 108.7 | 10279 |
| GR | 108.1 | 10379 | 107.4 | 10479 | | | | | | |
| SB | 1.25 | 1.56 | 3.0 | | 17 | 1 | 80 | .01 | 94.6 | 94.6 |
| X1 | 4619 | | | | 45 | 45 | 45 | | | |
| X2 | | | 1 | 99.6 | 104.4 | | | | | |
| X3 | 10 | | | | | | | 104.4 | 105.2 | |
| BT | -13 | 9549 | 104.4 | 0 | 9649 | 104.9 | 0 | 9749 | 105.3 | 0 |
| BT | | 9849 | 105.8 | 0 | 9949 | 106.6 | 0 | 10000 | 106.2 | 0 |
| BT | | 10045 | 106.2 | 0 | 10065 | 105.2 | 0 | 10079 | 106.8 | 0 |
| BT | | 10179 | 108.1 | 0 | 10279 | 108.7 | 0 | 10379 | 108.1 | 0 |
| BT | | 10479 | 107.4 | 0 | | | | | | |
| X1 | 4660 | 17 | 9960 | 10045 | 41 | 41 | 41 | | | |
| GR | 110 | 8199 | 104.4 | 9549 | 104.9 | 9649 | 105.3 | 9749 | 105.8 | 9849 |
| GR | 105.5 | 9949 | 106.4 | 9960 | 96.7 | 9993 | 95.5 | 10000 | 96.3 | 10007 |
| GR | 107 | 10045 | 105.2 | 10065 | 106.8 | 10079 | 108.1 | 10179 | 108.7 | 10279 |
| GR | 108.1 | 10379 | 107.4 | 10479 | | | | | | |
| NC | | | .04 | .1 | .3 | | | | | |
| QT | 1 | 760 | | | | | | | | |
| X1 | 5750 | 17 | 9959 | 10047 | 1090 | 1090 | 1090 | | | |
| GR | 105.9 | 9695 | 107 | 9745 | 106.9 | 9795 | 110 | 9845 | 107.9 | 9895 |
| GR | 107.2 | 9945 | 106.3 | 9950 | 108.2 | 9959 | 97.2 | 9994 | 96.5 | 10000 |
| GR | 97.1 | 10006 | 110.1 | 10047 | 107.8 | 10064 | 108.5 | 10079 | 109.9 | 10129 |
| GR | 110 | 10179 | 111.5 | 10229 | | | | | | |
| NC | | | .03 | .3 | .5 | | | | | |
| X1 | 5947 | 18 | 9959 | 10047 | 197 | 197 | 197 | | | |
| GR | 105.9 | 9695 | 107 | 9745 | 106.9 | 9795 | 110 | 9845 | 107.9 | 9895 |
| GR | 107.2 | 9945 | 106.3 | 9950 | 108.2 | 9959 | 102 | 9980 | 96 | 9998 |
| GR | 96 | 10002 | 102 | 10020 | 110.1 | 10047 | 107.8 | 10064 | 108.5 | 10079 |
| GR | 109.9 | 10129 | 110 | 10179 | 111.5 | 10229 | | | | |
| X1 | 5969 | 18 | 9959 | 10047 | 22 | 22 | 22 | | | |
| GR | 105.9 | 9695 | 107 | 9745 | 106.9 | 9795 | 110 | 9845 | 107.9 | 9895 |
| GR | 107.2 | 9945 | 106.3 | 9950 | 108.2 | 9959 | 102 | 9980 | 96 | 9998 |
| GR | 96 | 10002 | 102 | 10020 | 110.1 | 10047 | 107.8 | 10064 | 108.5 | 10079 |
| GR | 109.9 | 10129 | 110 | 10179 | 111.5 | 10229 | | | | |

BEGIN SLOPING DROP

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 5976 | 9 | 9970 | 10026 | 7 | 7 | 7 | | | |
| GR | 109.4 | 9902 | 110.2 | 9962 | 110.6 | 9970 | 103.7 | 9984 | 99 | 9998 |
| GR | 99 | 10002 | 103.7 | 10016 | 107.9 | 10026 | 112.2 | 10063 | | |
| X1 | 5997 | 9 | 9970 | 10026 | 21 | 21 | 21 | | | |
| GR | 109.4 | 9902 | 110.2 | 9962 | 110.6 | 9970 | 103.7 | 9984 | 99 | 9998 |
| GR | 99 | 10002 | 103.7 | 10016 | 107.9 | 10026 | 112.2 | 10063 | | |
| NC | | | .04 | .1 | .3 | | | | | |
| QT | 1 | 730 | | | | | | | | |
| X1 | 6400 | 8 | 9970 | 10026 | 403 | 403 | 403 | | | |
| GR | 109.4 | 9902 | 110.2 | 9962 | 110.6 | 9970 | 102 | 9994 | 100.4 | 10000 |
| GR | 101.6 | 10006 | 107.9 | 10026 | 112.2 | 10063 | | | | |

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 1/89 16:16:21

HEC2 RELEASE DATED SEPT 88

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

A111-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VENT |
|------------|---------|--------|-------|-------|-------|-------|--------|---------|--------|-------|-----|------|
| 80.000 | 1060.00 | 81.31 | 85.20 | 85.10 | 73.60 | 3.73 | 81.52 | .00 | 54.71 | .00 | .01 | .00 |
| 126.000 | 1060.00 | 81.52 | 89.70 | 91.20 | 74.20 | 3.91 | 81.76 | 46.00 | 49.20 | .05 | .01 | .00 |
| 220.000 | 1060.00 | 82.07 | 89.10 | 87.50 | 74.40 | 4.07 | 82.32 | 94.00 | 56.20 | .17 | .01 | .00 |
| 505.000 | 1060.00 | 84.50 | 85.70 | 86.20 | 75.70 | 5.49 | 84.97 | 285.00 | 38.42 | .48 | .01 | .00 |
| * 599.000 | 1010.00 | 84.53 | 79.82 | 79.82 | 77.19 | 8.75 | 85.60 | 94.00 | 34.13 | .56 | .01 | .00 |
| * 600.000 | 1010.00 | 88.25 | 79.82 | 79.82 | 77.19 | 6.71 | 89.09 | 1.00 | 91.95 | .56 | .01 | .00 |
| * 631.000 | 1010.00 | 88.97 | 79.82 | 79.82 | 77.19 | 4.44 | 89.32 | 31.00 | 139.01 | .64 | .01 | .00 |
| * 632.000 | 1010.00 | 89.30 | 79.82 | 79.82 | 77.19 | 2.80 | 89.39 | 1.00 | 156.15 | .64 | .01 | .00 |
| * 682.000 | 1010.00 | 89.34 | 87.40 | 87.90 | 77.40 | 2.77 | 89.46 | 50.00 | 158.88 | .82 | .01 | .00 |
| 1690.000 | 1010.00 | 92.35 | 93.90 | 93.50 | 81.70 | 3.52 | 92.54 | 1076.00 | 45.83 | 3.35 | .01 | .00 |
| * 1860.000 | 1010.00 | 93.62 | 95.10 | 95.10 | 87.40 | 9.98 | 95.16 | 170.00 | 32.66 | 3.51 | .01 | .00 |
| * 1880.000 | 1010.00 | 93.94 | 95.10 | 95.10 | 87.50 | 10.20 | 95.56 | 20.00 | 82.52 | 3.53 | .01 | .00 |
| * 1886.000 | 1010.00 | 95.31 | 95.10 | 95.10 | 89.10 | 9.63 | 96.75 | 6.00 | 145.55 | 3.55 | .01 | .00 |
| * 1896.000 | 1010.00 | 96.35 | 95.10 | 95.10 | 89.10 | 6.70 | 97.00 | 10.00 | 430.51 | 3.61 | .01 | .00 |
| * 1950.000 | 940.00 | 97.07 | 96.20 | 95.50 | 88.10 | 2.60 | 97.14 | 54.00 | 472.00 | 4.17 | .01 | .00 |
| * 2650.000 | 940.00 | 100.35 | 99.70 | 99.50 | 92.30 | 3.83 | 100.52 | 700.00 | 437.75 | 11.48 | .01 | .00 |
| * 2689.000 | 940.00 | 100.30 | 99.50 | 99.50 | 92.70 | 5.37 | 100.71 | 39.00 | 436.25 | 11.87 | .01 | .00 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|------------|--------|--------|--------|--------|--------|------|--------|---------|--------|-------|-----|------|
| * 2690.000 | 940.00 | 100.25 | 99.50 | 99.50 | 92.70 | 6.02 | 100.75 | 1.00 | 434.96 | 11.88 | .01 | .00 |
| 2711.000 | 940.00 | 100.40 | 99.50 | 99.50 | 92.70 | 5.60 | 100.82 | 21.00 | 439.41 | 12.10 | .01 | .00 |
| * 2712.000 | 940.00 | 100.50 | 99.50 | 99.50 | 92.70 | 4.95 | 100.84 | 1.00 | 442.44 | 12.11 | .01 | .00 |
| 2762.000 | 940.00 | 100.82 | 99.70 | 99.50 | 92.30 | 3.37 | 100.95 | 50.00 | 451.66 | 12.62 | .01 | .00 |
| 3550.000 | 860.00 | 101.87 | 104.40 | 102.10 | 93.70 | 3.62 | 102.07 | 788.00 | 243.78 | 18.91 | .01 | .00 |
| 4530.000 | 810.00 | 103.20 | 106.40 | 107.00 | 95.50 | 3.15 | 103.35 | 980.00 | 60.62 | 22.33 | .01 | .00 |
| * 4574.000 | 810.00 | 103.19 | 106.60 | 106.20 | 94.60 | 3.67 | 103.40 | 44.00 | 58.67 | 22.39 | .01 | .00 |
| * 4619.000 | 810.00 | 105.03 | 106.60 | 106.20 | 94.60 | 2.31 | 105.11 | 45.00 | 362.69 | 22.61 | .01 | .00 |
| 4660.000 | 810.00 | 105.05 | 106.40 | 107.00 | 95.50 | 2.12 | 105.12 | 41.00 | 362.94 | 22.95 | .01 | .00 |
| * 5750.000 | 760.00 | 105.35 | 108.20 | 110.10 | 96.50 | 2.41 | 105.44 | 1090.00 | 63.94 | 28.29 | .01 | .00 |
| 5947.000 | 760.00 | 105.43 | 108.20 | 110.10 | 96.00 | 2.47 | 105.52 | 197.00 | 62.96 | 28.58 | .01 | .00 |
| 5969.000 | 760.00 | 105.43 | 108.20 | 110.10 | 96.00 | 2.46 | 105.53 | 22.00 | 63.08 | 28.61 | .01 | .00 |
| * 5976.000 | 760.00 | 105.26 | 110.60 | 107.90 | 99.00 | 5.43 | 105.72 | 7.00 | 38.89 | 28.62 | .01 | .00 |
| 5997.000 | 760.00 | 105.33 | 110.60 | 107.90 | 99.00 | 5.33 | 105.77 | 21.00 | 39.20 | 28.64 | .01 | .00 |
| * 6400.000 | 730.00 | 106.65 | 110.60 | 107.90 | 100.40 | 5.31 | 107.09 | 403.00 | 41.06 | 29.01 | .01 | .00 |

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 599.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 600.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 600.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 600.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO= 631.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 632.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 682.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 1860.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1860.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1860.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 1880.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1880.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1880.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 1886.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1886.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1886.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO= 1896.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL
WARNING SECNO= 1896.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 1950.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 2650.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 2689.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 2690.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 2712.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 4574.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 4619.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 5750.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 5976.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 6400.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

THIS RUN EXECUTED 9/ 4/89 9: 9:35

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
 T3 A111-00-00 DD 6 CHANNEL II
 T4 100-YEAR STORM FREQUENCY ULTIMATE CONDITIONS
 T5 FILENAME = A111ULT.IH2

| | | | | | | | | | | |
|----|--------|-----|------|------|------|--------|-------|---|------|----|
| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
| | | 2 | | | .001 | | | | 85 | |

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

| | | | | | | | | | |
|----|----|----|----|----|----|----|---|----|---|
| 38 | 43 | 1 | 23 | 24 | 42 | 26 | 3 | 39 | 4 |
| 37 | 30 | 65 | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------------------------------------|--|--|--|--|--|--|--|
| J5 | LPRNT | NUMSEC | *****REQUESTED SECTION NUMBERS***** | | | | | | | |
| | -10 | -10 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|--------|--------|-------|--|--|--|--|--|
| J6 | IHLEQ | ICOPY | SUBDIV | STRIDS | RMILE | | | | | |
| | 1 | | | | | | | | | |

| | | | | | | | | | | |
|----|------|-------|------|-------|------|-------|------|-------|------|-------|
| NC | .15 | .15 | .05 | .1 | .3 | | | | | |
| QT | 1 | 1900 | | | | | | | | |
| X1 | 80 | 10 | 9962 | 10026 | 80 | 80 | 80 | | | |
| GR | 90.8 | 9841 | 87.7 | 9941 | 85.2 | 9962 | 75.3 | 9978 | 74.7 | 9990 |
| GR | 73.6 | 10000 | 75.3 | 10010 | 81.3 | 10023 | 85.1 | 10026 | 91.5 | 10049 |
| X1 | 126 | 14 | 9965 | 10057 | 46 | 46 | 46 | | | |
| GR | 90.3 | 9715 | 90.5 | 9765 | 90.7 | 9815 | 90.5 | 9865 | 91.4 | 9915 |
| GR | 89.7 | 9965 | 74.6 | 9983 | 75.1 | 9989 | 74.2 | 10000 | 74.4 | 10011 |
| GR | 78.6 | 10019 | 86.9 | 10033 | 91.2 | 10057 | 92.8 | 10107 | | |
| X1 | 220 | 12 | 9953 | 10024 | 94 | 94 | 94 | | | |
| GR | 91.6 | 9929 | 90.3 | 9935 | 91.2 | 9941 | 89.1 | 9953 | 78.3 | 9964 |
| GR | 77.9 | 9990 | 74.9 | 9993 | 74.4 | 10000 | 75.4 | 10007 | 87.5 | 10024 |
| GR | 90.5 | 10039 | 90.8 | 10089 | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|------|-------|------|-------|------|-------|------|-------|
| NC | .15 | .15 | .04 | .1 | .3 | | | | | |
| X1 | 270 | 12 | 9953 | 10024 | 50 | 50 | 50 | | | |
| CI | 10000 | -1 | 0.04 | 3 | 3 | -10 | | | | |
| GR | 91.6 | 9929 | 90.3 | 9935 | 91.2 | 9941 | 89.1 | 9953 | 78.3 | 9964 |
| GR | 77.9 | 9990 | 74.9 | 9993 | 74.4 | 10000 | 75.4 | 10007 | 87.5 | 10024 |
| GR | 90.5 | 10039 | 90.8 | 10089 | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|------|-------|------|-------|------|-------|------|-------|
| QT | 1 | 1830 | | | | | | | | |
| X1 | 505 | 13 | 9973 | 10025 | 235 | 235 | 235 | | | |
| CI | 10000 | 74.69 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 87.1 | 9944 | 84.5 | 9955 | 86 | 9961 | 85.7 | 9973 | 83.9 | 9982 |
| GR | 78.3 | 9990 | 77.1 | 9995 | 75.7 | 10000 | 76.5 | 10005 | 84.4 | 10017 |
| GR | 86.2 | 10025 | 85 | 10043 | 85.8 | 10053 | | | | |

SPRING CREEK DRIVE

| | | | | | | | | | | |
|----|-------|-------|-------|---------|-------|-------|-------|-------|-------|-------|
| X1 | 585 | 24 | 9974 | 10026 | 80 | 80 | 80 | | | |
| CI | -1 | 74.77 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 93.6 | 9724 | 92 | 9774 | 91.1 | 9824 | 89.9 | 9874 | 88.4 | 9924 |
| GR | 87.9 | 9974 | 79.82 | 9995.3 | 78.24 | 9996 | 77.65 | 9997 | 77.39 | 9998 |
| GR | 77.24 | 9999 | 77.19 | 10000 | 77.24 | 10001 | 77.39 | 10002 | 77.65 | 10003 |
| GR | 78.24 | 10004 | 79.82 | 10004.7 | 88.0 | 10026 | 90.7 | 10076 | 90.9 | 10126 |
| GR | 91.3 | 10176 | 91.2 | 10226 | 91.5 | 10276 | 91.6 | 10326 | | |

| | | | | | | | | | | |
|----|-------|-------|-------|---------|-------|-------|-------|-------|-------|-------|
| X1 | 645 | 24 | 9974 | 10026 | 60 | 60 | 60 | | | |
| CI | -1 | 74.83 | 0.04 | 3 | 3 | 10 | | | | |
| X5 | -1 | 1.9 | | | | | | | | |
| GR | 93.6 | 9724 | 92 | 9774 | 91.1 | 9824 | 89.9 | 9874 | 88.4 | 9924 |
| GR | 87.9 | 9974 | 79.82 | 9995.3 | 78.24 | 9996 | 77.65 | 9997 | 77.39 | 9998 |
| GR | 77.24 | 9999 | 77.19 | 10000 | 77.24 | 10001 | 77.39 | 10002 | 77.65 | 10003 |
| GR | 78.24 | 10004 | 79.82 | 10004.7 | 88.0 | 10026 | 90.7 | 10076 | 90.9 | 10126 |
| GR | 91.3 | 10176 | 91.2 | 10226 | 91.5 | 10276 | 91.6 | 10326 | | |

| | | | | | | | | | | |
|----|------|-------|------|-------|------|-------|------|-------|------|-------|
| X1 | 682 | 19 | 9973 | 10025 | 37 | 37 | 37 | | | |
| CI | -1 | 74.86 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 93.6 | 9724 | 92 | 9774 | 91.1 | 9824 | 89.9 | 9874 | 88.4 | 9924 |
| GR | 87.4 | 9973 | 85.6 | 9982 | 80.0 | 9990 | 78.8 | 9995 | 77.4 | 10000 |
| GR | 78.2 | 10005 | 86.1 | 10017 | 87.9 | 10025 | 90.7 | 10076 | 90.9 | 10126 |
| GR | 91.3 | 10176 | 91.2 | 10226 | 91.5 | 10276 | 91.6 | 10326 | | |

| | | | | | | | | | | |
|----|------|-------|------|-------|------|-------|------|-------|------|-------|
| QT | 1 | 1750 | | | | | | | | |
| X1 | 1100 | 19 | 9973 | 10025 | 418 | 418 | 418 | | 1.7 | |
| CI | -1 | 75.28 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 93.6 | 9724 | 92 | 9774 | 91.1 | 9824 | 89.9 | 9874 | 88.4 | 9924 |
| GR | 87.4 | 9973 | 85.6 | 9982 | 80.0 | 9990 | 78.8 | 9995 | 77.4 | 10000 |
| GR | 78.2 | 10005 | 86.1 | 10017 | 87.9 | 10025 | 90.7 | 10076 | 90.9 | 10126 |
| GR | 91.3 | 10176 | 91.2 | 10226 | 91.5 | 10276 | 91.6 | 10326 | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|------|------|------|-------|------|------|------|------|------|-------|
| X1 | 1101 | 19 | 9973 | 10025 | 1 | 1 | 1 | | 1.7 | |
| CI | -1 | 78.3 | 0.04 | 3 | 3 | 10 | | | | |
| X5 | -1 | 1.5 | | | | | | | | |
| GR | 93.6 | 9724 | 92 | 9774 | 91.1 | 9824 | 89.9 | 9874 | 88.4 | 9924 |
| GR | 87.4 | 9973 | 85.6 | 9982 | 80.0 | 9990 | 78.8 | 9995 | 77.4 | 10000 |

| | | | | | | | | | | |
|----------------|------|--------|-------|---------|------|---------|------|---------|------|--------|
| GR | 78.2 | 10005 | 86.1 | 10017 | 87.9 | 10025 | 90.7 | 10076 | 90.9 | 10126 |
| GR | 91.3 | 10176 | 91.2 | 10226 | 91.5 | 10276 | 91.6 | 10326 | | |
| QT | 1 | 1660 | | | | | | | | |
| X1 | 1690 | 14 | 9969 | 10027 | 589 | 589 | 589 | | | |
| CI | -1 | 78.89 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 94.6 | 9900 | 94.6 | 9951 | 93.2 | 9961 | 93.9 | 9969 | 92.6 | 9976 |
| GR | 86.1 | 9983 | 82.3 | 9996 | 81.7 | 10000 | 82.3 | 10004 | 85.7 | 10010 |
| GR | 90.7 | 10015 | 93.5 | 10027 | 93.7 | 10043 | 93.7 | 10100 | | |
| X1 | 1860 | 11 | 9979 | 10020.5 | 170 | 170 | 170 | | | |
| CI | -1 | 79.06 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 105 | 9730 | 94.6 | 9951 | 95.1 | 9979 | 90.4 | 9993 | 87.4 | 9997.5 |
| GR | 87.4 | 10002 | 90.4 | 10006.5 | 95.1 | 10020.5 | 93.7 | 10043 | 95 | 10300 |
| GR | 100 | 10480 | | | | | | | | |
| X1 | 1880 | 11 | 9982 | 10017.5 | 20 | 20 | 20 | | | |
| CI | -1 | 79.08 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 105 | 9730 | 94.6 | 9951 | 95.1 | 9982 | 90.7 | 9993 | 87.5 | 9997.5 |
| GR | 87.5 | 10002 | 90.7 | 10006.5 | 95.1 | 10017.5 | 93.7 | 10043 | 95 | 10300 |
| GR | 100 | 10480 | | | | | | | | |
| DROP STRUCTURE | | | | | | | | | | |
| X1 | 1886 | 14 | 9983 | 10016.5 | 6 | 6 | 6 | | | |
| CI | -1 | 83.1 | 0.04 | 3 | 3 | 10 | | | | |
| X5 | -1 | 4.5 | | | | | | | | |
| GR | 105 | 9730 | 95.9 | 9928 | 95.2 | 9962 | 95.1 | 9983 | 92.1 | 9993 |
| GR | 89.1 | 9997.5 | 89.1 | 10002 | 92.1 | 10006.5 | 95.1 | 10016.5 | 95.8 | 10044 |
| GR | 95.2 | 10064 | 96.1 | 10094 | 95 | 10300 | 100 | 10480 | | |
| X1 | 1896 | 14 | 9983 | 10016.5 | 10 | 10 | 10 | | | |
| CI | -1 | 83.11 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 105 | 9730 | 95.9 | 9928 | 95.2 | 9962 | 95.1 | 9983 | 92.1 | 9993 |
| GR | 89.1 | 9997.5 | 89.1 | 10002 | 92.1 | 10006.5 | 95.1 | 10016.5 | 95.8 | 10044 |
| GR | 95.2 | 10064 | 96.1 | 10094 | 95 | 10300 | 100 | 10480 | | |
| QT | 1 | 1630 | | | | | | | | |
| X1 | 1950 | 16 | 9973 | 10020 | 54 | 54 | 54 | | | |
| CI | -1 | 83.16 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 105 | 9730 | 95.9 | 9928 | 95.2 | 9962 | 96.2 | 9973 | 92.4 | 9987 |
| GR | 91.9 | 9992 | 90.2 | 9996 | 88.1 | 10000 | 90.5 | 10004 | 91.8 | 10008 |
| GR | 95.5 | 10020 | 95.8 | 10044 | 95.2 | 10064 | 96.1 | 10094 | 95 | 10300 |
| GR | 100 | 10480 | | | | | | | | |
| QT | 1 | 1540 | | | | | | | | |
| X1 | 2650 | 15 | 9979 | 10024 | 700 | 700 | 700 | | | |
| CI | -1 | 83.86 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 104 | 9913 | 100.8 | 9925 | 98.9 | 9955 | 99.7 | 9979 | 95.6 | 9993 |
| GR | 92.9 | 9997 | 92.3 | 10000 | 92.9 | 10003 | 95.8 | 10010 | 99.5 | 10024 |
| GR | 98.2 | 10040 | 98.8 | 10065 | 100 | 10165 | 100 | 10365 | 105 | 10435 |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 3551 | 21 | 9964 | 10033 | 1 | 1 | 1 | | | |
| CI | -1 | 90.80 | 0.04 | 3 | 3 | 10 | | | | |
| X5 | -1 | 2.8 | | | | | | | | |
| GR | 109.8 | 9816 | 106.5 | 9866 | 105.2 | 9916 | 103.6 | 9951 | 104.4 | 9964 |
| GR | 95.3 | 9996 | 93.7 | 10000 | 95.1 | 10004 | 102.1 | 10033 | 101.4 | 10040 |
| GR | 101.6 | 10066 | 101.2 | 10116 | 101.2 | 10166 | 101.8 | 10216 | 102.6 | 10266 |
| GR | 103.4 | 10316 | 104.4 | 10366 | 104.7 | 10416 | 105.3 | 10466 | 105.7 | 10516 |
| GR | 106.3 | 10566 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 1320 | | | | | | | | |
| X1 | 4530 | 17 | 9960 | 10045 | 979 | 979 | 979 | | | |
| CI | -1 | 91.78 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 110 | 8199 | 104.4 | 9549 | 104.9 | 9649 | 105.3 | 9749 | 105.8 | 9849 |
| GR | 105.5 | 9949 | 106.4 | 9960 | 96.7 | 9993 | 95.5 | 10000 | 96.3 | 10007 |
| GR | 107 | 10045 | 105.2 | 10065 | 106.8 | 10079 | 108.1 | 10179 | 108.7 | 10279 |
| GR | 108.1 | 10379 | 107.4 | 10479 | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 4531 | 17 | 9960 | 10045 | 1 | 1 | 1 | | | |
| CI | 10000 | 94.6 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 110 | 8199 | 104.4 | 9549 | 104.9 | 9649 | 105.3 | 9749 | 105.8 | 9849 |
| GR | 105.5 | 9949 | 106.4 | 9960 | 96.7 | 9993 | 95.5 | 10000 | 96.3 | 10007 |
| GR | 107 | 10045 | 105.2 | 10065 | 106.8 | 10079 | 108.1 | 10179 | 108.7 | 10279 |
| GR | 108.1 | 10379 | 107.4 | 10479 | | | | | | |

| | | | | | | | | | | |
|----|--|--|------|----|----|--|--|--|--|--|
| NC | | | .015 | .3 | .5 | | | | | |
|----|--|--|------|----|----|--|--|--|--|--|

RICHARD ROAD

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 4574 | 17 | 9949 | 10045 | 44 | 44 | 44 | | | |
| CI | | | | | | .01 | | | | |
| X3 | 10 | | | | | | | 102.0 | 102.4 | |
| GR | 110 | 8199 | 104.4 | 9549 | 104.9 | 9649 | 105.3 | 9749 | 105.8 | 9849 |
| GR | 106.6 | 9949 | 99.6 | 9992 | 94.6 | 9992 | 94.6 | 10009 | 99.6 | 10009 |
| GR | 106.2 | 10045 | 105.2 | 10065 | 106.8 | 10079 | 108.1 | 10179 | 108.7 | 10279 |
| GR | 108.1 | 10379 | 107.4 | 10479 | | | | | | |

| | | | | | | | | | | |
|----|------|-------|-------|------|-------|-------|-----|-------|-------|------|
| SB | 1.25 | 1.56 | 3.0 | | 26 | 2 | 120 | 0 | 94.6 | 94.6 |
| X1 | 4619 | | | | 45 | 45 | 45 | | | |
| X2 | | | 1 | 99.6 | 104.4 | | | | | |
| X3 | 10 | | | | | | | 104.4 | 105.2 | |
| BT | -13 | 9549 | 104.4 | 0 | 9649 | 104.9 | 0 | 9749 | 105.3 | 0 |
| BT | | 9849 | 105.8 | 0 | 9949 | 106.6 | 0 | 10000 | 106.2 | 0 |
| BT | | 10045 | 106.2 | 0 | 10065 | 105.2 | 0 | 10079 | 106.8 | 0 |
| BT | | 10179 | 108.1 | 0 | 10279 | 108.7 | 0 | 10379 | 108.1 | 0 |
| BT | | 10479 | 107.4 | 0 | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 4660 | 17 | 9960 | 10045 | 41 | 41 | 41 | | | |
| CI | 10000 | 94.64 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 110 | 8199 | 104.4 | 9549 | 104.9 | 9649 | 105.3 | 9749 | 105.8 | 9849 |
| GR | 105.5 | 9949 | 106.4 | 9960 | 96.7 | 9993 | 95.5 | 10000 | 96.3 | 10007 |
| GR | 107 | 10045 | 105.2 | 10065 | 106.8 | 10079 | 108.1 | 10179 | 108.7 | 10279 |
| GR | 108.1 | 10379 | 107.4 | 10479 | | | | | | |

| | | | | | | | | | | |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | | | .04 | .1 | .3 | | | | | |
| QT | 1 | 1190 | | | | | | | | |
| X1 | 5750 | 17 | 9959 | 10047 | 1090 | 1090 | 1090 | | | |
| CI | 10000 | 95.77 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 105.9 | 9695 | 107 | 9745 | 106.9 | 9795 | 110 | 9845 | 107.9 | 9895 |
| GR | 107.2 | 9945 | 106.3 | 9950 | 108.2 | 9959 | 97.2 | 9994 | 96.5 | 10000 |
| GR | 97.1 | 10006 | 110.1 | 10047 | 107.8 | 10064 | 108.5 | 10079 | 109.9 | 10129 |
| GR | 110 | 10179 | 111.5 | 10229 | | | | | | |
| X1 | 5947 | 18 | 9959 | 10047 | 197 | 197 | 197 | | | |
| CI | 10000 | 95.98 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 105.9 | 9695 | 107 | 9745 | 106.9 | 9795 | 110 | 9845 | 107.9 | 9895 |
| GR | 107.2 | 9945 | 106.3 | 9950 | 108.2 | 9959 | 102 | 9980 | 96 | 9998 |
| GR | 96 | 10002 | 102 | 10020 | 110.1 | 10047 | 107.8 | 10064 | 108.5 | 10079 |
| GR | 109.9 | 10129 | 110 | 10179 | 111.5 | 10229 | | | | |
| X1 | 5969 | 18 | 9959 | 10047 | 22 | 22 | 22 | | | |
| CI | 10000 | 96.00 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 105.9 | 9695 | 107 | 9745 | 106.9 | 9795 | 110 | 9845 | 107.9 | 9895 |
| GR | 107.2 | 9945 | 106.3 | 9950 | 108.2 | 9959 | 102 | 9980 | 96 | 9998 |
| GR | 96 | 10002 | 102 | 10020 | 110.1 | 10047 | 107.8 | 10064 | 108.5 | 10079 |
| GR | 109.9 | 10129 | 110 | 10179 | 111.5 | 10229 | | | | |
| DROP STRUCTURE | | | | | | | | | | |
| X1 | 5976 | 9 | 9970 | 10026 | 7 | 7 | 7 | | | |
| CI | 10000 | 99.00 | 0.04 | 3 | 3 | 10 | | | | |
| X5 | -1 | 3.0 | | | | | | | | |
| GR | 109.4 | 9902 | 110.2 | 9962 | 110.6 | 9970 | 103.7 | 9984 | 99 | 9998 |
| GR | 99 | 10002 | 103.7 | 10016 | 107.9 | 10026 | 112.2 | 10063 | | |
| X1 | 5997 | 9 | 9970 | 10026 | 21 | 21 | 21 | | | |
| CI | 10000 | 99.02 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 109.4 | 9902 | 110.2 | 9962 | 110.6 | 9970 | 103.7 | 9984 | 99 | 9998 |
| GR | 99 | 10002 | 103.7 | 10016 | 107.9 | 10026 | 112.2 | 10063 | | |
| QT | 1 | 1130 | | | | | | | | |
| X1 | 6400 | 8 | 9970 | 10026 | 403 | 403 | 403 | | | |
| CI | 10000 | 99.42 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 109.4 | 9902 | 110.2 | 9962 | 110.6 | 9970 | 102 | 9994 | 100.4 | 10000 |
| GR | 101.6 | 10006 | 107.9 | 10026 | 112.2 | 10063 | | | | |

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 4/89 9: 9:54

HEC2 RELEASE DATED SEPT 88

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

A111-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VENT |
|------------|---------|-------|-------|-------|-------|------|-------|--------|--------|------|-------|-------|
| 80.000 | 1900.00 | 85.34 | 85.20 | 85.10 | 73.60 | 3.62 | 85.54 | .00 | 66.05 | .00 | .01 | .00 |
| 126.000 | 1900.00 | 85.37 | 89.70 | 91.20 | 74.20 | 3.95 | 85.61 | 46.00 | 60.25 | .07 | .01 | .00 |
| 220.000 | 1900.00 | 85.49 | 89.10 | 87.50 | 74.40 | 4.07 | 85.75 | 94.00 | 64.48 | .20 | .01 | .00 |
| 270.000 | 1900.00 | 85.57 | 89.87 | 90.59 | 74.40 | 3.91 | 85.81 | 50.00 | 76.99 | .28 | 10.00 | .00 |
| 505.000 | 1830.00 | 85.82 | 86.00 | 85.39 | 74.69 | 3.79 | 86.04 | 235.00 | 102.22 | .77 | 10.00 | 1.43 |
| 585.000 | 1830.00 | 85.89 | 88.09 | 89.20 | 74.77 | 3.79 | 86.11 | 80.00 | 76.75 | .93 | 10.00 | 2.36 |
| * 645.000 | 1830.00 | 87.79 | 88.09 | 89.19 | 74.83 | 2.89 | 87.92 | 60.00 | 87.77 | 1.04 | 10.00 | 3.24 |
| 682.000 | 1830.00 | 87.81 | 87.76 | 89.09 | 74.86 | 2.89 | 87.94 | 37.00 | 90.34 | 1.12 | 10.00 | 3.76 |
| 1100.000 | 1750.00 | 88.00 | 89.54 | 91.04 | 75.28 | 2.86 | 88.13 | 418.00 | 86.33 | 1.97 | 10.00 | 10.50 |
| * 1101.000 | 1750.00 | 89.50 | 89.35 | 90.45 | 78.30 | 3.58 | 89.70 | 1.00 | 84.42 | 1.97 | 10.00 | 10.51 |
| 1690.000 | 1660.00 | 90.00 | 94.60 | 93.70 | 78.89 | 3.45 | 90.18 | 589.00 | 76.66 | 3.06 | 10.00 | 17.91 |
| 1860.000 | 1660.00 | 90.13 | 94.76 | 93.73 | 79.06 | 3.47 | 90.32 | 170.00 | 76.47 | 3.36 | 10.00 | 21.67 |
| 1880.000 | 1660.00 | 90.15 | 94.75 | 93.73 | 79.08 | 3.47 | 90.34 | 20.00 | 76.42 | 3.39 | 10.00 | 22.23 |
| * 1886.000 | 1660.00 | 94.65 | 95.28 | 95.77 | 83.10 | 3.22 | 94.81 | 6.00 | 79.30 | 3.40 | 10.00 | 22.36 |
| 1896.000 | 1660.00 | 94.66 | 95.28 | 95.77 | 83.11 | 3.22 | 94.82 | 10.00 | 79.28 | 3.42 | 10.00 | 22.53 |
| 1950.000 | 1630.00 | 94.70 | 95.35 | 95.74 | 83.16 | 3.17 | 94.85 | 54.00 | 79.19 | 3.52 | 10.00 | 23.44 |
| 2650.000 | 1540.00 | 95.15 | 99.18 | 98.45 | 83.86 | 3.11 | 95.30 | 700.00 | 77.74 | 4.78 | 10.00 | 38.36 |

| | SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|---|----------|---------|--------|--------|--------|-------|-------|--------|---------|--------|-------|-------|-------|
| * | 2651.000 | 1540.00 | 97.65 | 99.07 | 98.21 | 86.90 | 3.39 | 97.83 | 1.00 | 74.48 | 4.78 | 10.00 | 38.38 |
| | 2690.000 | 1540.00 | 97.68 | 99.00 | 98.28 | 86.94 | 3.40 | 97.86 | 39.00 | 74.41 | 4.85 | 10.00 | 39.02 |
| | 2711.000 | 1540.00 | 97.69 | 99.01 | 98.28 | 86.96 | 3.40 | 97.87 | 21.00 | 74.41 | 4.88 | 10.00 | 39.38 |
| | 2762.000 | 1540.00 | 97.73 | 99.08 | 98.20 | 87.01 | 3.40 | 97.91 | 50.00 | 74.35 | 4.97 | 10.00 | 40.20 |
| | 3550.000 | 1430.00 | 98.36 | 103.86 | 101.43 | 87.80 | 3.25 | 98.52 | 788.00 | 73.40 | 6.31 | 10.00 | 54.38 |
| * | 3551.000 | 1430.00 | 101.16 | 103.81 | 101.76 | 90.80 | 3.36 | 101.34 | 1.00 | 72.17 | 6.31 | 10.00 | 54.40 |
| | 4530.000 | 1320.00 | 101.95 | 105.98 | 106.42 | 91.78 | 3.21 | 102.11 | 979.00 | 71.01 | 7.92 | 10.00 | 64.86 |
| * | 4531.000 | 1320.00 | 101.67 | 106.37 | 107.00 | 94.60 | 5.97 | 102.23 | 1.00 | 52.46 | 7.92 | 10.00 | 64.87 |
| | 4574.000 | 1320.00 | 101.30 | 106.60 | 106.20 | 94.60 | 10.10 | 102.88 | 44.00 | 36.72 | 7.96 | .01 | 64.87 |
| * | 4619.000 | 1320.00 | 103.83 | 106.60 | 106.20 | 94.60 | 5.05 | 104.23 | 45.00 | 66.16 | 8.02 | .01 | 64.87 |
| * | 4660.000 | 1320.00 | 104.12 | 106.38 | 107.00 | 94.64 | 3.61 | 104.32 | 41.00 | 68.21 | 8.08 | 10.00 | 64.95 |
| | 5750.000 | 1190.00 | 105.20 | 108.03 | 110.00 | 95.77 | 3.29 | 105.37 | 1090.00 | 66.60 | 9.77 | 10.00 | 67.34 |
| | 5947.000 | 1190.00 | 105.38 | 108.11 | 110.07 | 95.98 | 3.31 | 105.55 | 197.00 | 66.43 | 10.07 | 10.00 | 67.81 |
| | 5969.000 | 1190.00 | 105.39 | 108.12 | 110.07 | 96.00 | 3.32 | 105.57 | 22.00 | 66.37 | 10.10 | 10.00 | 67.86 |
| * | 5976.000 | 1190.00 | 108.39 | 110.19 | 108.92 | 99.00 | 3.32 | 108.57 | 7.00 | 66.37 | 10.11 | 10.00 | 67.88 |
| | 5997.000 | 1190.00 | 108.41 | 110.19 | 108.91 | 99.00 | 3.32 | 108.58 | 21.00 | 66.36 | 10.14 | 10.00 | 67.95 |
| | 6400.000 | 1130.00 | 108.77 | 110.23 | 108.69 | 99.42 | 3.17 | 108.93 | 403.00 | 66.57 | 10.76 | 10.00 | 69.60 |

SUMMARY OF ERRORS AND SPECIAL NOTES

NOTE SECNO= 645.000 PROFILE= 1 WSEL BASED ON X5 CARD
WARNING SECNO= 645.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE SECNO= 1101.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 1886.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 2651.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 3551.000 PROFILE= 1 WSEL BASED ON X5 CARD

WARNING SECNO= 4531.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 4619.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 4660.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE SECNO= 5976.000 PROFILE= 1 WSEL BASED ON X5 CARD

THIS RUN EXECUTED 9/ 1/89 16:14:28

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
T3 F109-00-00 WOODSON'S GULLY
T4 100-YEAR STORM FREQUENCY EXISTING CONDITIONS
T5 FILENAME = F109RVEX.IH2

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL FQ
3 .0026 71.6

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT
38 43 1 23 24 42 26 3 39 4
37 30 65

J5 LPRNT NUMSEC *****REQUESTED SECTION NUMBERS*****
-10 -10

J6 IHLEQ ICOPY SUBDIV STRTDS RMLE
1

NC .15 .15 .1 .1 .3
QT 2 1710 2410
X1 3540 22 9940 10040
GR 73.8 8800 73.8 9080 72 9320 71.7 9510 70 9790
GR 68 9940 62.9 10000 68 10040 70 10200 72 10320
GR 74 10450 76 10560 76.9 10880 76 11190 74 11220
GR 74 11420 76 11460 78 11500 80 11540 82 11570
GR 82.3 12070 83.7 12460

QT 2 1690 2380
X1 6960 29 1250 1345 3200 3440 3420
GR 83 0 81.4 200 78.5 400 77.7 600 78.7 800
GR 77.6 1000 75.3 1250 75.3 1258 74.4 1266 74.6 1285
GR 71.9 1292 71.7 1297 72.6 1301 73.9 1321 74.8 1331
GR 76.1 1345 75.9 1368 76.8 1650 84.1 1770 85.9 1850
GR 86.3 2050 84.6 2250 84.9 2450 85.6 2660 86.1 2860

GR 87.6 3060 88.7 3260 86.7 3460 89.1 3650

| | | | | | | | | | | |
|----|-------|-------|------|-------|-------|-------|-------|-------|------|-------|
| QT | 2 | 1670 | 2330 | | | | | | | |
| X1 | 9320 | 24 | 2420 | 2448 | 2960 | 2000 | 2360 | | | |
| GR | 86.2 | 0 | 85.5 | 280 | 85 | 560 | 85.2 | 835 | 84.4 | 1120 |
| GR | 84.4 | 1400 | 84.4 | 1680 | 85.1 | 1960 | 85.1 | 2190 | 83.4 | 2305 |
| GR | 80.6 | 2390 | 80.3 | 2409 | 79.4 | 2420 | 78.1 | 2425 | 77.8 | 2430 |
| GR | 78.1 | 2433 | 78.1 | 2445 | 79.9 | 2448 | 80.8 | 2464 | 80.6 | 2472 |
| GR | 82.5 | 2570 | 85.1 | 2760 | 86 | 3080 | 85.6 | 3300 | | |
| QT | 2 | 1660 | 2310 | | | | | | | |
| X1 | 10320 | 20 | 9600 | 10770 | 800 | 1100 | 1000 | | | |
| GR | 89.5 | 5420 | 88.5 | 5740 | 88 | 5910 | 87.6 | 6340 | 87.4 | 6800 |
| GR | 98 | 7510 | 98 | 7710 | 85.8 | 7950 | 85.5 | 8940 | 84 | 9600 |
| GR | 79.0 | 10000 | 84 | 10550 | 86 | 10770 | 88 | 10830 | 90 | 10860 |
| GR | 92 | 10920 | 94 | 10960 | 96 | 11050 | 98 | 12000 | 98.3 | 12170 |
| QT | 2 | 1650 | 2300 | | | | | | | |
| X1 | 13480 | 26 | 9440 | 10280 | 2700 | 3100 | 3160 | | | |
| GR | 89.5 | 7440 | 88.5 | 7770 | 88 | 8000 | 87.6 | 8360 | 87.4 | 8810 |
| GR | 86.8 | 9440 | 82.8 | 10000 | 88 | 10280 | 90 | 10380 | 90 | 10510 |
| GR | 90.5 | 10760 | 90 | 11000 | 88 | 11030 | 88 | 11150 | 90 | 11180 |
| GR | 92 | 11200 | 92.3 | 11230 | 92 | 11290 | 91 | 11560 | 90 | 11650 |
| GR | 88 | 11700 | 88 | 11790 | 90 | 11830 | 92 | 11850 | 94 | 11910 |
| GR | 96 | 11980 | | | | | | | | |
| QT | 2 | 1360 | 1880 | | | | | | | |
| X1 | 15180 | 21 | 9310 | 10470 | 1800 | 1600 | 1700 | | | |
| GR | 89.9 | 7880 | 89.6 | 8550 | 88 | 9180 | 88 | 9310 | 84.9 | 10000 |
| GR | 88 | 10470 | 90 | 10690 | 92 | 10860 | 94 | 10930 | 94 | 11180 |
| GR | 94 | 11290 | 94.5 | 11400 | 94 | 11600 | 94 | 11710 | 95.5 | 11760 |
| GR | 94 | 11820 | 93.5 | 12520 | 94 | 12770 | 96 | 12910 | 97 | 12960 |
| GR | 98 | 13130 | | | | | | | | |
| QT | 2 | 1320 | 1810 | | | | | | | |
| X1 | 18520 | 23 | 4241 | 4724 | 2600 | 3360 | 3340 | | | |
| GR | 92.4 | 2547 | 92.4 | 2693 | 90.1 | 2829 | 90.7 | 3039 | 91 | 3285 |
| GR | 91.4 | 3510 | 89.5 | 3565 | 91.5 | 3711 | 91.5 | 3882 | 90.5 | 4046 |
| GR | 90.5 | 4153 | 91.2 | 4196 | 91.1 | 4241 | 88.9 | 4304 | 88.9 | 4472 |
| GR | 89.2 | 4524 | 90 | 4584 | 91.6 | 4724 | 95.4 | 4956 | 97.2 | 5101 |
| GR | 98.9 | 5255 | 98.4 | 5392 | 98.4 | 5527 | | | | |
| QT | 2 | 1260 | 1700 | | | | | | | |
| X1 | 24500 | 24 | 9760 | 10210 | 6200 | 5900 | 5980 | | | |
| GR | 97.5 | 7220 | 96.0 | 7270 | 94.0 | 7330 | 94.0 | 7980 | 95.6 | 8510 |
| GR | 94 | 8680 | 94 | 8900 | 95.8 | 9070 | 94 | 9110 | 96 | 9140 |
| GR | 94 | 9180 | 94 | 9250 | 95 | 9330 | 94 | 9410 | 93.8 | 9760 |
| GR | 92.0 | 10000 | 94 | 10210 | 96 | 10450 | 96 | 10570 | 96 | 10620 |
| GR | 98 | 10830 | 100 | 10920 | 100.1 | 11380 | 101.1 | 11820 | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|------|-------|------|-------|-------|-------|
| QT | 2 | 1210 | 1630 | | | | | | | |
| X1 | 28640 | 24 | 9850 | 10220 | 4100 | 4200 | 4140 | | | |
| GR | 107.5 | 7590 | 106 | 7750 | 104 | 8150 | 104 | 8250 | 105.5 | 8450 |
| GR | 104 | 8520 | 102 | 8830 | 102 | 8880 | 102 | 8990 | 101.7 | 9100 |
| GR | 100 | 9270 | 99 | 9660 | 98 | 9730 | 96 | 9850 | 94 | 9970 |
| GR | 94 | 10170 | 96 | 10220 | 98 | 10300 | 100 | 10380 | 102 | 10600 |
| GR | 104 | 10700 | 104.2 | 10760 | 104 | 10820 | 103 | 11210 | | |

| | | | | | | | | | | |
|----|-------|--------|-------|--------|-------|------|-------|--------|-------|--------|
| NC | | | | .1 | .3 | | | | | |
| QT | 2 | 1050 | 1410 | | | | | | | |
| X1 | 31569 | 51 | 1500 | 1838 | 3000 | 3100 | 2929 | | | |
| GR | 108.7 | 800 | 107.8 | 800.1 | 106.1 | 1000 | 106.3 | 1100 | 105.1 | 1145 |
| GR | 105.3 | 1300 | 104 | 1400 | 102.4 | 1500 | 99.2 | 1588 | 98.7 | 1600 |
| GR | 98.8 | 1638 | 98.7 | 1663 | 97.7 | 1671 | 95.8 | 1672 | 95.8 | 1672.6 |
| GR | 95.8 | 1673.4 | 95.7 | 1674.2 | 95.7 | 1675 | 95.7 | 1675.8 | 95.85 | 1676.6 |
| GR | 95.95 | 1677.4 | 96.2 | 1680 | 97.7 | 1683 | 97.7 | 1702 | 99.12 | 1720.2 |
| GR | 100.5 | 1738 | 100.7 | 1800 | 102.1 | 1838 | 104 | 2038 | 103.6 | 2238 |
| GR | 103.4 | 2438 | 102.4 | 2638 | 100.2 | 2738 | 98.8 | 2938 | 98 | 2953 |
| GR | 98.7 | 2983 | 99.3 | 2986 | 97.3 | 2989 | 97.2 | 2991 | 97.6 | 2995 |
| GR | 98.3 | 3000 | 98.3 | 3022 | 99 | 3153 | 99.2 | 3353 | 101.6 | 3553 |
| GR | 104 | 3753 | 105.4 | 3953 | 104 | 4112 | 104.8 | 4153 | 106.2 | 4353 |
| GR | 108.7 | 4753 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|--------|-------|------|-------|--------|-------|--------|
| NC | | | .024 | .3 | .5 | | | | | |
| X1 | 31669 | 51 | 1500 | 1838 | 100 | 100 | 100 | | | |
| X3 | 10 | | | | | | | 99.2 | 99.2 | |
| GR | 108.7 | 800 | 107.8 | 800.1 | 106.1 | 1000 | 106.3 | 1100 | 105.1 | 1145 |
| GR | 105.3 | 1300 | 104 | 1400 | 102.4 | 1500 | 99.2 | 1588 | 98.7 | 1600 |
| GR | 98.8 | 1638 | 98.7 | 1663 | 97.7 | 1671 | 95.8 | 1672 | 95.8 | 1672.6 |
| GR | 95.8 | 1673.4 | 95.7 | 1674.2 | 95.7 | 1675 | 95.7 | 1675.8 | 95.85 | 1676.6 |
| GR | 95.95 | 1677.4 | 96.2 | 1680 | 97.7 | 1683 | 97.7 | 1702 | 99.12 | 1720.2 |
| GR | 100.5 | 1738 | 100.7 | 1800 | 102.1 | 1838 | 104 | 2038 | 103.6 | 2238 |
| GR | 103.4 | 2438 | 102.4 | 2638 | 100.2 | 2738 | 98.8 | 2938 | 98 | 2953 |
| GR | 98.7 | 2983 | 99.3 | 2986 | 97.3 | 2989 | 97.2 | 2991 | 97.6 | 2995 |
| GR | 98.3 | 3000 | 98.3 | 3022 | 99 | 3153 | 99.2 | 3353 | 101.6 | 3553 |
| GR | 104 | 3753 | 105.4 | 3953 | 104 | 4112 | 104.8 | 4153 | 106.2 | 4353 |
| GR | 108.7 | 4753 | | | | | | | | |

RILEY FUSSELL ROAD

| | | | | | | | | | | |
|----|-------|--------|-------|--------|--------|------|-------|--------|-------|--------|
| X1 | 31670 | 51 | 1638 | 1738 | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 99.2 | 99.2 | |
| BT | -17 | 1588 | 99.2 | 99.2 | 1600 | 99.2 | 98.7 | 1638 | 99.2 | 98.8 |
| BT | | 1663 | 99.2 | 98.7 | 1671 | 99.2 | 97.7 | 1672 | 99.2 | 95.8 |
| BT | | 1672.6 | 99.2 | 95.8 | 1673.4 | 99.2 | 98.1 | 1674.2 | 99.2 | 98.5 |
| BT | | 1675 | 99.2 | 98.7 | 1675.8 | 99.2 | 98.5 | 1676.6 | 99.2 | 98.1 |
| BT | | 1677.4 | 99.2 | 96.0 | 1680 | 99.2 | 96.2 | 1683 | 99.2 | 97.7 |
| BT | | 1702 | 99.2 | 97.7 | 1720.2 | 99.2 | 99.1 | | | |
| GR | 108.7 | 800 | 107.8 | 800.1 | 106.1 | 1000 | 106.3 | 1100 | 105.1 | 1145 |
| GR | 105.3 | 1300 | 104 | 1400 | 102.4 | 1500 | 99.2 | 1588 | 98.7 | 1600 |
| GR | 98.8 | 1638 | 98.7 | 1663 | 97.7 | 1671 | 95.8 | 1672 | 95.8 | 1672.6 |
| GR | 95.8 | 1673.4 | 95.7 | 1674.2 | 95.7 | 1675 | 95.7 | 1675.8 | 95.85 | 1676.6 |
| GR | 95.95 | 1677.4 | 96.2 | 1680 | 97.7 | 1683 | 97.7 | 1702 | 99.12 | 1720.2 |
| GR | 100.5 | 1738 | 100.7 | 1800 | 102.1 | 1838 | 104 | 2038 | 103.6 | 2238 |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 2 | 660 | 870 | | | | | | | |
| X1 | 39500 | 11 | 775 | 2340 | 3360 | 3300 | 3520 | | | |
| GR | 110.1 | 0 | 109.1 | 385 | 106.4 | 775 | 105.3 | 1170 | 105.2 | 1565 |
| GR | 104.8 | 1945 | 112.7 | 2340 | 108.1 | 2730 | 112.5 | 3115 | 113 | 3505 |
| GR | 110.2 | 3900 | | | | | | | | |
| QT | 2 | 540 | 710 | | | | | | | |
| X1 | 42040 | 14 | 8430 | 9490 | 2440 | 2560 | 2540 | | | |
| GR | 111.6 | 7800 | 110 | 8060 | 108 | 8430 | 107.7 | 8910 | 108 | 9490 |
| GR | 108 | 9880 | 108 | 10080 | 110 | 10350 | 110 | 10440 | 110 | 10730 |
| GR | 111.6 | 10950 | 110 | 11020 | 110 | 11580 | 112 | 11700 | | |
| X1 | 44080 | 15 | 9860 | 10120 | 2080 | 2040 | 2040 | | | |
| GR | 115 | 9320 | 113.9 | 9610 | 112 | 9820 | 110 | 9860 | 108 | 9920 |
| GR | 107.7 | 10000 | 108 | 10080 | 110 | 10120 | 112 | 10170 | 113.9 | 10250 |
| GR | 112 | 10300 | 112 | 10400 | 114 | 10460 | 116 | 10660 | 116.6 | 10690 |
| QT | 2 | 410 | 530 | | | | | | | |
| X1 | 46200 | 19 | 2300 | 3045 | 2040 | 2160 | 2120 | | | |
| GR | 115 | 872 | 113.9 | 1135 | 110.9 | 1305 | 109.5 | 1395 | 109 | 1675 |
| GR | 110.2 | 1740 | 111.5 | 2178 | 111.5 | 2300 | 110 | 2505 | 109.5 | 2610 |
| GR | 108.8 | 2875 | 111.7 | 3045 | 112.7 | 3365 | 113.1 | 3420 | 112.5 | 3480 |
| GR | 113 | 3915 | 113.7 | 4060 | 116.2 | 4220 | 116.1 | 4350 | | |

IHLQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 1/89 16:14:45

HEC2 RELEASE DATED SEPT 88

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

F109-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|---------|---------|---------|-----|------|
| 3540.000 | 2410.00 | 71.54 | 68.00 | 68.00 | 62.90 | 2.54 | 71.61 | .00 | 756.92 | .00 | .01 | .00 |
| 6960.000 | 2380.00 | 79.07 | 75.30 | 76.10 | 71.70 | 1.88 | 79.09 | 3420.00 | 1326.50 | 78.66 | .01 | .00 |
| 9320.000 | 2330.00 | 85.20 | 79.40 | 79.90 | 77.80 | 2.96 | 85.25 | 2360.00 | 2353.61 | 195.22 | .01 | .00 |
| * 10320.000 | 2310.00 | 85.67 | 84.00 | 86.00 | 79.00 | .54 | 85.68 | 1000.00 | 2364.78 | 242.42 | .01 | .00 |
| * 13480.000 | 2300.00 | 87.72 | 86.80 | 88.00 | 82.80 | .96 | 87.74 | 3160.00 | 2011.29 | 388.38 | .01 | .00 |
| 15180.000 | 1880.00 | 88.94 | 88.00 | 88.00 | 84.90 | .63 | 88.95 | 1700.00 | 1765.57 | 463.90 | .01 | .00 |
| * 18520.000 | 1810.00 | 92.00 | 91.10 | 91.60 | 88.90 | .97 | 92.01 | 3340.00 | 2032.67 | 592.33 | .01 | .00 |
| * 24500.000 | 1700.00 | 95.77 | 93.80 | 94.00 | 92.00 | .59 | 95.77 | 5980.00 | 3135.60 | 956.96 | .01 | .00 |
| * 28640.000 | 1630.00 | 98.25 | 96.00 | 96.00 | 94.00 | 1.10 | 98.27 | 4140.00 | 598.12 | 1133.40 | .01 | .00 |
| 31569.000 | 1410.00 | 101.39 | 102.40 | 102.10 | 95.70 | .78 | 101.39 | 2929.00 | 1141.99 | 1193.87 | .01 | .00 |
| * 31669.000 | 1410.00 | 101.42 | 102.40 | 102.10 | 95.70 | 1.62 | 101.45 | 100.00 | 1148.30 | 1196.50 | .01 | .00 |
| * 31670.000 | 1410.00 | 101.42 | 98.80 | 100.50 | 95.70 | 2.50 | 101.46 | 1.00 | 1148.45 | 1196.52 | .01 | .00 |
| 31693.000 | 1410.00 | 101.43 | 98.80 | 100.50 | 95.70 | 2.50 | 101.47 | 23.00 | 1149.28 | 1197.13 | .01 | .00 |
| 31694.000 | 1410.00 | 101.42 | 100.20 | 101.20 | 99.10 | 3.02 | 101.49 | 1.00 | 1434.45 | 1197.16 | .01 | .00 |
| 31747.000 | 1410.00 | 101.55 | 99.80 | 99.70 | 95.40 | .95 | 101.56 | 53.00 | 1141.06 | 1198.73 | .01 | .00 |
| 33880.000 | 1220.00 | 103.46 | 102.00 | 102.00 | 97.90 | 1.06 | 103.48 | 2133.00 | 916.31 | 1248.33 | .01 | .00 |
| 35980.000 | 1220.00 | 105.44 | 102.80 | 101.90 | 100.30 | 1.17 | 105.45 | 2100.00 | 702.15 | 1285.91 | .01 | .00 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|--------|--------|--------|--------|--------|-----|--------|---------|---------|---------|-----|------|
| 39500.000 | 870.00 | 107.15 | 106.40 | 112.70 | 104.80 | .39 | 107.15 | 3520.00 | 1395.91 | 1369.09 | .01 | .00 |
| * 42040.000 | 710.00 | 108.88 | 108.00 | 108.00 | 107.70 | .49 | 108.88 | 2540.00 | 1932.82 | 1465.99 | .01 | .00 |
| 44080.000 | 710.00 | 111.06 | 110.00 | 110.00 | 107.70 | .98 | 111.07 | 2040.00 | 307.70 | 1518.54 | .01 | .00 |
| * 46200.000 | 530.00 | 111.60 | 111.50 | 111.70 | 108.80 | .25 | 111.60 | 2120.00 | 1774.95 | 1568.26 | .01 | .00 |

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 10320.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 13480.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 18520.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 24500.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 28640.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 31669.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 31670.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 42040.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 46200.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

THIS RUN EXECUTED 9/ 4/89 8:50:33

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
 T3 F109-00-00 WOODSON'S GULLY
 T4 100-YEAR STORM FREQUENCY ULTIMATE CONDITIONS
 T5 FILENAME = F109ULT.IH2

| | | | | | | | | | | |
|----|--------|-----|------|------|-------|--------|-------|---|------|----|
| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
| | | 2 | | | .0005 | | | | 72 | |

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

| | | | | | | | | | |
|----|----|----|----|----|----|----|---|----|---|
| 38 | 43 | 1 | 23 | 24 | 42 | 26 | 3 | 39 | 4 |
| 37 | 30 | 65 | | | | | | | |

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

-10 -10

J6 IHLEQ ICOPY SUBDIV STRTDS RMILE

1

| | | | | | | | | | | |
|----|------|-------|------|-------|------|-------|------|-------|------|-------|
| NC | .15 | .15 | .04 | .1 | .3 | | | | | |
| QT | 1 | 11580 | | | | | | | | |
| X1 | 100 | 22 | 9940 | 10040 | | | | | -6.0 | |
| CI | -1 | 56.0 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 73.8 | 8800 | 73.8 | 9080 | 72 | 9320 | 71.7 | 9510 | 70 | 9790 |
| GR | 68 | 9940 | 62.9 | 10000 | 68 | 10040 | 70 | 10200 | 72 | 10320 |
| GR | 74 | 10450 | 76 | 10560 | 76.9 | 10880 | 76 | 11190 | 74 | 11220 |
| GR | 74 | 11420 | 76 | 11460 | 78 | 11500 | 80 | 11540 | 82 | 11570 |
| GR | 82.3 | 12070 | 83.7 | 12460 | | | | | | |

| | | | | | | | | | | |
|----|------|-------|------|-------|------|-------|------|-------|----|-------|
| QT | 1 | 11390 | | | | | | | | |
| X1 | 2110 | 22 | 9940 | 10040 | 2010 | 2010 | 2010 | | | |
| CI | -1 | 57.01 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 73.8 | 8800 | 73.8 | 9080 | 72 | 9320 | 71.7 | 9510 | 70 | 9790 |
| GR | 68 | 9940 | 62.9 | 10000 | 68 | 10040 | 70 | 10200 | 72 | 10320 |
| GR | 74 | 10450 | 76 | 10560 | 76.9 | 10880 | 76 | 11190 | 74 | 11220 |

GR

74

11420

76

11460

78

11500

80

11540

82

11570

| | | | | | | | | | | |
|----|-------|-------|------|-------|------|-------|------|-------|------|-------|
| GR | 82.3 | 12070 | 83.7 | 12460 | | | | | | |
| QT | 1 | 11090 | | | | | | | | |
| X1 | 5400 | 29 | 1250 | 1345 | 3290 | 3290 | 3290 | | | |
| CI | -1 | 58.65 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 83 | 0 | 81.4 | 200 | 78.5 | 400 | 77.7 | 600 | 78.7 | 800 |
| GR | 77.6 | 1000 | 75.3 | 1250 | 75.3 | 1258 | 74.4 | 1266 | 74.6 | 1285 |
| GR | 71.9 | 1292 | 71.7 | 1297 | 72.6 | 1301 | 73.9 | 1321 | 74.8 | 1331 |
| GR | 76.1 | 1345 | 75.9 | 1368 | 76.8 | 1650 | 84.1 | 1770 | 85.9 | 1850 |
| GR | 86.3 | 2050 | 84.6 | 2250 | 84.9 | 2450 | 85.6 | 2660 | 86.1 | 2860 |
| GR | 87.6 | 3060 | 88.7 | 3260 | 86.7 | 3460 | 89.1 | 3650 | | |
| QT | 1 | 10900 | | | | | | | | |
| X1 | 7570 | 24 | 2420 | 2448 | 2170 | 2170 | 2170 | | | |
| CI | -1 | 59.74 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 86.2 | 0 | 85.5 | 280 | 85 | 560 | 85.2 | 835 | 84.4 | 1120 |
| GR | 84.4 | 1400 | 84.4 | 1680 | 85.1 | 1960 | 85.1 | 2190 | 83.4 | 2305 |
| GR | 80.6 | 2390 | 80.3 | 2409 | 79.4 | 2420 | 78.1 | 2425 | 77.8 | 2430 |
| GR | 78.1 | 2433 | 78.1 | 2445 | 79.9 | 2448 | 80.8 | 2464 | 80.6 | 2472 |
| GR | 82.5 | 2570 | 85.1 | 2760 | 86 | 3080 | 85.6 | 3300 | | |
| QT | 1 | 10800 | | | | | | | | |
| X1 | 8680 | 22 | 9990 | 10010 | 1110 | 1110 | 1110 | | | |
| CI | 10000 | 60.29 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 89.5 | 5420 | 88.5 | 5740 | 88 | 5910 | 87.6 | 6340 | 87.4 | 6800 |
| GR | 98 | 7510 | 98 | 7710 | 85.8 | 7950 | 85.5 | 8940 | 84 | 9600 |
| GR | 79.0 | 9990 | 79.0 | 10000 | 79.0 | 10010 | 84 | 10550 | 86 | 10770 |
| GR | 88 | 10830 | 90 | 10860 | 92 | 10920 | 94 | 10960 | 96 | 11050 |
| GR | 98 | 12000 | 98.3 | 12170 | | | | | | |
| QT | 1 | 10520 | | | | | | | | |
| X1 | 11860 | 28 | 9990 | 10010 | 3180 | 3180 | 3180 | | | |
| CI | 10000 | 61.88 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 89.5 | 7440 | 88.5 | 7770 | 88 | 8000 | 87.6 | 8360 | 87.4 | 8810 |
| GR | 86.8 | 9440 | 82.8 | 9990 | 82.8 | 10000 | 82.8 | 10010 | 88 | 10280 |
| GR | 90 | 10380 | 90 | 10510 | 90.5 | 10760 | 90 | 11000 | 88 | 11030 |
| GR | 88 | 11150 | 90 | 11180 | 92 | 11200 | 92.3 | 11230 | 92 | 11290 |
| GR | 91 | 11560 | 90 | 11650 | 88 | 11700 | 88 | 11790 | 90 | 11830 |
| GR | 92 | 11850 | 94 | 11910 | 96 | 11980 | | | | |
| QT | 1 | 8270 | | | | | | | | |
| X1 | 11960 | 28 | 9990 | 10010 | 100 | 100 | 100 | | | |
| CI | -1 | 61.93 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 89.5 | 7440 | 88.5 | 7770 | 88 | 8000 | 87.6 | 8360 | 87.4 | 8810 |
| GR | 86.8 | 9440 | 82.8 | 9990 | 82.8 | 10000 | 82.8 | 10010 | 88 | 10280 |
| GR | 90 | 10380 | 90 | 10510 | 90.5 | 10760 | 90 | 11000 | 88 | 11030 |
| GR | 88 | 11150 | 90 | 11180 | 92 | 11200 | 92.3 | 11230 | 92 | 11290 |
| GR | 91 | 11560 | 90 | 11650 | 88 | 11700 | 88 | 11790 | 90 | 11830 |
| GR | 92 | 11850 | 94 | 11910 | 96 | 11980 | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|-------|------|-------|------|-------|------|-------|------|-------|
| X1 | 11961 | 28 | 9990 | 10010 | 1 | 1 | 1 | | | |
| CI | -1 | 65.90 | 0.04 | 4 | 4 | 60 | | | | |
| X5 | -1 | 3.0 | | | | | | | | |
| GR | 89.5 | 7440 | 88.5 | 7770 | 88 | 8000 | 87.6 | 8360 | 87.4 | 8810 |
| GR | 86.8 | 9440 | 82.8 | 9990 | 82.8 | 10000 | 82.8 | 10010 | 88 | 10280 |
| GR | 90 | 10380 | 90 | 10510 | 90.5 | 10760 | 90 | 11000 | 88 | 11030 |
| GR | 88 | 11150 | 90 | 11180 | 92 | 11200 | 92.3 | 11230 | 92 | 11290 |
| GR | 91 | 11560 | 90 | 11650 | 88 | 11700 | 88 | 11790 | 90 | 11830 |
| GR | 92 | 11850 | 94 | 11910 | 96 | 11980 | | | | |

| | | | | | | | | | | |
|----|-------|-------|------|-------|------|-------|------|-------|------|-------|
| QT | 1 | 8000 | | | | | | | | |
| X1 | 13550 | 23 | 9990 | 10010 | 1590 | 1590 | 1590 | | | |
| CI | 10000 | 66.70 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 89.9 | 7880 | 89.6 | 8550 | 88 | 9180 | 88 | 9310 | 84.9 | 9990 |
| GR | 84.9 | 10000 | 84.9 | 10010 | 88 | 10470 | 90 | 10690 | 92 | 10860 |
| GR | 94 | 10930 | 94 | 11180 | 94 | 11290 | 94.5 | 11400 | 94 | 11600 |
| GR | 94 | 11710 | 95.5 | 11760 | 94 | 11820 | 93.5 | 12520 | 94 | 12770 |
| GR | 96 | 12910 | 97 | 12960 | 98 | 13130 | | | | |

| | | | | | | | | | | |
|----|-------|-------|------|------|------|------|------|------|------|------|
| QT | 1 | 7460 | | | | | | | | |
| X1 | 16810 | 23 | 4304 | 4472 | 3260 | 3260 | 3260 | | | |
| CI | -1 | 68.33 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 92.4 | 2547 | 92.4 | 2693 | 90.1 | 2829 | 90.7 | 3039 | 91 | 3285 |
| GR | 91.4 | 3510 | 89.5 | 3565 | 91.5 | 3711 | 91.5 | 3882 | 90.5 | 4046 |
| GR | 90.5 | 4153 | 91.2 | 4196 | 91.1 | 4241 | 88.9 | 4304 | 88.9 | 4472 |
| GR | 89.2 | 4524 | 90 | 4584 | 91.6 | 4724 | 95.4 | 4956 | 97.2 | 5101 |
| GR | 98.9 | 5255 | 98.4 | 5392 | 98.4 | 5527 | | | | |

| | | | | | | | | | | |
|----|-------|-------|------|-------|------|-------|------|-------|-------|-------|
| QT | 1 | 7180 | | | | | | | | |
| X1 | 18600 | 26 | 9990 | 10010 | 1790 | 1790 | 1790 | | | |
| CI | -1 | 69.22 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 97.5 | 7220 | 96.0 | 7270 | 94.0 | 7330 | 94.0 | 7980 | 95.6 | 8510 |
| GR | 94 | 8680 | 94 | 8900 | 95.8 | 9070 | 94 | 9110 | 96 | 9140 |
| GR | 94 | 9180 | 94 | 9250 | 95 | 9330 | 94 | 9410 | 93.8 | 9760 |
| GR | 92 | 9990 | 92.0 | 10000 | 92 | 10010 | 94 | 10210 | 96 | 10450 |
| GR | 96 | 10570 | 96 | 10620 | 98 | 10830 | 100 | 10920 | 100.1 | 11380 |
| GR | 101.1 | 11820 | | | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|-------|------|-------|------|-------|------|-------|-------|-------|
| X1 | 18601 | 26 | 9990 | 10010 | 1 | 1 | 1 | | | |
| CI | -1 | 74.20 | 0.04 | 4 | 4 | 40 | | | | |
| X5 | -1 | 6.0 | | | | | | | | |
| GR | 97.5 | 7220 | 96.0 | 7270 | 94.0 | 7330 | 94.0 | 7980 | 95.6 | 8510 |
| GR | 94 | 8680 | 94 | 8900 | 95.8 | 9070 | 94 | 9110 | 96 | 9140 |
| GR | 94 | 9180 | 94 | 9250 | 95 | 9330 | 94 | 9410 | 93.8 | 9760 |
| GR | 92 | 9990 | 92.0 | 10000 | 92 | 10010 | 94 | 10210 | 96 | 10450 |
| GR | 96 | 10570 | 96 | 10620 | 98 | 10830 | 100 | 10920 | 100.1 | 11380 |
| GR | 101.1 | 11820 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|------|-------|-------|-------|------|-------|-------|-------|
| QT | 1 | 6790 | | | | | | | | |
| X1 | 21260 | 25 | 9970 | 10030 | 2659 | 2659 | 2659 | | | |
| CI | 10070 | 75.53 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 107.5 | 7590 | 106 | 7750 | 104 | 8150 | 104 | 8250 | 105.5 | 8450 |
| GR | 104 | 8520 | 102 | 8830 | 102 | 8880 | 102 | 8990 | 101.7 | 9100 |
| GR | 100 | 9270 | 99 | 9660 | 98 | 9730 | 96 | 9850 | 94 | 9970 |
| GR | 94 | 10030 | 94 | 10170 | 96 | 10220 | 98 | 10300 | 100 | 10380 |
| GR | 102 | 10600 | 104 | 10700 | 104.2 | 10760 | 104 | 10820 | 103 | 11210 |

| | | | | | | | | | | |
|----|-------|--------|-------|--------|-------|------|-------|--------|-------|--------|
| QT | 1 | 6400 | | | | | | | | |
| X1 | 24030 | 51 | 1671 | 1683 | 2770 | 2770 | 2770 | | | |
| CI | -1 | 76.91 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 108.7 | 800 | 107.8 | 800.1 | 106.1 | 1000 | 106.3 | 1100 | 105.1 | 1145 |
| GR | 105.3 | 1300 | 104 | 1400 | 102.4 | 1500 | 99.2 | 1588 | 98.7 | 1600 |
| GR | 98.8 | 1638 | 98.7 | 1663 | 97.7 | 1671 | 95.8 | 1672 | 95.8 | 1672.6 |
| GR | 95.8 | 1673.4 | 95.7 | 1674.2 | 95.7 | 1675 | 95.7 | 1675.8 | 95.85 | 1676.6 |
| GR | 95.95 | 1677.4 | 96.2 | 1680 | 97.7 | 1683 | 97.7 | 1702 | 99.12 | 1720.2 |
| GR | 100.5 | 1738 | 100.7 | 1800 | 102.1 | 1838 | 104 | 2038 | 103.6 | 2238 |
| GR | 103.4 | 2438 | 102.4 | 2638 | 100.2 | 2738 | 98.8 | 2938 | 98 | 2953 |
| GR | 98.7 | 2983 | 99.3 | 2986 | 97.3 | 2989 | 97.2 | 2991 | 97.6 | 2995 |
| GR | 98.3 | 3000 | 98.3 | 3022 | 99 | 3153 | 99.2 | 3353 | 101.6 | 3553 |
| GR | 104 | 3753 | 105.4 | 3953 | 104 | 4112 | 104.8 | 4153 | 106.2 | 4353 |
| GR | 108.7 | 4753 | | | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|-------|--------|-------|------|-------|--------|-------|--------|
| X1 | 24031 | 51 | 1671 | 1683 | 1 | 1 | 1 | | | |
| CI | -1 | 81.90 | 0.04 | 4 | 4 | 40 | | | | |
| X5 | -1 | 4.5 | | | | | | | | |
| GR | 108.7 | 800 | 107.8 | 800.1 | 106.1 | 1000 | 106.3 | 1100 | 105.1 | 1145 |
| GR | 105.3 | 1300 | 104 | 1400 | 102.4 | 1500 | 99.2 | 1588 | 98.7 | 1600 |
| GR | 98.8 | 1638 | 98.7 | 1663 | 97.7 | 1671 | 95.8 | 1672 | 95.8 | 1672.6 |
| GR | 95.8 | 1673.4 | 95.7 | 1674.2 | 95.7 | 1675 | 95.7 | 1675.8 | 95.85 | 1676.6 |
| GR | 95.95 | 1677.4 | 96.2 | 1680 | 97.7 | 1683 | 97.7 | 1702 | 99.12 | 1720.2 |
| GR | 100.5 | 1738 | 100.7 | 1800 | 102.1 | 1838 | 104 | 2038 | 103.6 | 2238 |
| GR | 103.4 | 2438 | 102.4 | 2638 | 100.2 | 2738 | 98.8 | 2938 | 98 | 2953 |
| GR | 98.7 | 2983 | 99.3 | 2986 | 97.3 | 2989 | 97.2 | 2991 | 97.6 | 2995 |
| GR | 98.3 | 3000 | 98.3 | 3022 | 99 | 3153 | 99.2 | 3353 | 101.6 | 3553 |
| GR | 104 | 3753 | 105.4 | 3953 | 104 | 4112 | 104.8 | 4153 | 106.2 | 4353 |
| GR | 108.7 | 4753 | | | | | | | | |

RILEY FUSSEL ROAD

| | | | | | | | | | | |
|----|-------|--------|-------|--------|-------|------|-------|--------|-------|--------|
| X1 | 24130 | 51 | 1671 | 1683 | 99 | 99 | 99 | | | |
| CI | -1 | 81.95 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 108.7 | 800 | 107.8 | 800.1 | 106.1 | 1000 | 106.3 | 1100 | 105.1 | 1145 |
| GR | 105.3 | 1300 | 104 | 1400 | 102.4 | 1500 | 99.2 | 1588 | 98.7 | 1600 |
| GR | 98.8 | 1638 | 98.7 | 1663 | 97.7 | 1671 | 95.8 | 1672 | 95.8 | 1672.6 |
| GR | 95.8 | 1673.4 | 95.7 | 1674.2 | 95.7 | 1675 | 95.7 | 1675.8 | 95.85 | 1676.6 |
| GR | 95.95 | 1677.4 | 96.2 | 1680 | 97.7 | 1683 | 97.7 | 1702 | 99.12 | 1720.2 |
| GR | 100.5 | 1738 | 100.7 | 1800 | 102.1 | 1838 | 104 | 2038 | 103.6 | 2238 |
| GR | 103.4 | 2438 | 102.4 | 2638 | 100.2 | 2738 | 98.8 | 2938 | 98 | 2953 |
| GR | 98.7 | 2983 | 99.3 | 2986 | 97.3 | 2989 | 97.2 | 2991 | 97.6 | 2995 |
| GR | 98.3 | 3000 | 98.3 | 3022 | 99 | 3153 | 99.2 | 3353 | 101.6 | 3553 |
| GR | 104 | 3753 | 105.4 | 3953 | 104 | 4112 | 104.8 | 4153 | 106.2 | 4353 |

| | | | | | | | | | | |
|----|-------|-------|-------|------|-------|------|-------|------|-------|------|
| QT | 1 | 3110 | | | | | | | | |
| X1 | 31680 | 13 | 1940 | 1950 | 3220 | 3220 | 3220 | | | |
| CI | -1 | 85.72 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 110.1 | 0 | 109.1 | 385 | 106.4 | 775 | 105.3 | 1170 | 105.2 | 1565 |
| GR | 104.8 | 1940 | 104.8 | 1945 | 104.8 | 1950 | 112.7 | 2340 | 108.1 | 2730 |
| GR | 112.5 | 3115 | 113 | 3505 | 110.2 | 3900 | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|-------|-------|------|-------|------|-------|------|-------|------|
| X1 | 31681 | 13 | 1940 | 1950 | 1 | 1 | 1 | | | |
| CI | -1 | 90.70 | 0.04 | 4 | 4 | 20 | | | | |
| X5 | -1 | 3.5 | | | | | | | | |
| GR | 110.1 | 0 | 109.1 | 385 | 106.4 | 775 | 105.3 | 1170 | 105.2 | 1565 |
| GR | 104.8 | 1940 | 104.8 | 1945 | 104.8 | 1950 | 112.7 | 2340 | 108.1 | 2730 |
| GR | 112.5 | 3115 | 113 | 3505 | 110.2 | 3900 | | | | |

| | | | | | | | | | | |
|----|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 2400 | | | | | | | | |
| X1 | 34190 | 16 | 8900 | 8920 | 2509 | 2509 | 2509 | | | |
| CI | -1 | 91.95 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 111.6 | 7800 | 110 | 8060 | 108 | 8430 | 107.7 | 8900 | 107.7 | 8910 |
| GR | 107.7 | 8920 | 108 | 9490 | 108 | 9880 | 108 | 10080 | 110 | 10350 |
| GR | 110 | 10440 | 110 | 10730 | 111.6 | 10950 | 110 | 11020 | 110 | 11580 |
| GR | 112 | 11700 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 34290 | 16 | 8900 | 8920 | 100 | 100 | 100 | | | |
| CI | -1 | 92.00 | 0.04 | 4 | 4 | 10 | | | | |
| GR | 111.6 | 7800 | 110 | 8060 | 108 | 8430 | 107.7 | 8900 | 107.7 | 8910 |
| GR | 107.7 | 8920 | 108 | 9490 | 108 | 9880 | 108 | 10080 | 110 | 10350 |
| GR | 110 | 10440 | 110 | 10730 | 111.6 | 10950 | 110 | 11020 | 110 | 11580 |
| GR | 112 | 11700 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|------|-------|-----|-------|
| QT | 1 | 1870 | | | | | | | | |
| X1 | 36340 | 17 | 9990 | 10010 | 2050 | 2050 | 2050 | | | |
| CI | -1 | 93.03 | 0.04 | 4 | 4 | 10 | | | | |
| GR | 115 | 9320 | 113.9 | 9610 | 112 | 9820 | 110 | 9860 | 108 | 9920 |
| GR | 107.7 | 9990 | 107.7 | 10000 | 107.7 | 10010 | 108 | 10080 | 110 | 10120 |
| GR | 112 | 10170 | 113.9 | 10250 | 112 | 10300 | 112 | 10400 | 114 | 10460 |
| GR | 116 | 10660 | 116.6 | 10690 | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-----|-------|-----|-------|
| X1 | 36440 | 17 | 9990 | 10010 | 100 | 100 | 100 | | | |
| CI | -1 | 93.08 | 0.04 | 4 | 4 | 6 | | | | |
| GR | 115 | 9320 | 113.9 | 9610 | 112 | 9820 | 110 | 9860 | 108 | 9920 |
| GR | 107.7 | 9990 | 107.7 | 10000 | 107.7 | 10010 | 108 | 10080 | 110 | 10120 |
| GR | 112 | 10170 | 113.9 | 10250 | 112 | 10300 | 112 | 10400 | 114 | 10460 |
| GR | 116 | 10660 | 116.6 | 10690 | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|------|-------|------|-------|------|-------|------|
| QT | 1 | 1420 | | | | | | | | |
| X1 | 38720 | 21 | 2870 | 2880 | 2280 | 2280 | 2280 | | | |
| CI | -1 | 94.22 | 0.04 | 4 | 4 | 6 | | | | |
| GR | 115 | 872 | 113.9 | 1135 | 110.9 | 1305 | 109.5 | 1395 | 109 | 1675 |
| GR | 110.2 | 1740 | 111.5 | 2178 | 111.5 | 2300 | 110 | 2505 | 109.5 | 2610 |
| GR | 108.8 | 2870 | 108.8 | 2875 | 108.8 | 2880 | 111.7 | 3045 | 112.7 | 3365 |
| GR | 113.1 | 3420 | 112.5 | 3480 | 113 | 3915 | 113.7 | 4060 | 116.2 | 4220 |
| GR | 116.1 | 4350 | | | | | | | | |

IHLQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 4/89 8:50:52

HEC2 RELEASE DATED SEPT 88

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

F109-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|----------|-------|--------|--------|-------|------|-------|---------|---------|--------|-------|---------|
| 100.000 | 11580.00 | 70.40 | 62.06 | 62.05 | 56.00 | 4.56 | 70.58 | .00 | 2317.66 | .00 | 60.00 | .00 |
| * 2110.000 | 11390.00 | 71.66 | 68.34 | 68.32 | 57.01 | 6.42 | 72.28 | 2010.00 | 784.01 | 71.56 | 60.00 | 42.61 |
| 5400.000 | 11090.00 | 75.20 | 75.77 | 75.99 | 58.65 | 5.31 | 75.64 | 3290.00 | 192.40 | 108.43 | 60.00 | 221.54 |
| 7570.000 | 10900.00 | 76.98 | 83.23 | 82.19 | 59.74 | 4.90 | 77.35 | 2170.00 | 197.89 | 118.16 | 60.00 | 426.71 |
| 8680.000 | 10800.00 | 77.76 | 80.28 | 79.91 | 60.29 | 4.76 | 78.11 | 1110.00 | 199.77 | 123.22 | 60.00 | 543.69 |
| 11860.000 | 10520.00 | 79.75 | 83.58 | 84.96 | 61.88 | 4.48 | 80.06 | 3180.00 | 202.99 | 137.92 | 60.00 | 884.37 |
| 11960.000 | 8270.00 | 79.93 | 83.58 | 84.96 | 61.93 | 3.48 | 80.12 | 100.00 | 204.01 | 138.39 | 60.00 | 896.04 |
| * 11961.000 | 8270.00 | 82.93 | 83.46 | 84.63 | 65.90 | 3.79 | 83.15 | 1.00 | 196.25 | 138.39 | 60.00 | 896.14 |
| 13550.000 | 8000.00 | 83.62 | 85.33 | 85.54 | 66.70 | 3.70 | 83.83 | 1590.00 | 195.32 | 145.54 | 60.00 | 1035.48 |
| 16810.000 | 7460.00 | 84.94 | 90.05 | 89.07 | 68.33 | 3.55 | 85.14 | 3260.00 | 192.91 | 160.07 | 60.00 | 1362.21 |
| 18600.000 | 7180.00 | 85.64 | 92.90 | 93.16 | 69.22 | 3.48 | 85.83 | 1790.00 | 191.36 | 167.96 | 60.00 | 1577.74 |
| * 18601.000 | 7180.00 | 91.64 | 92.66 | 92.85 | 74.20 | 3.75 | 91.86 | 1.00 | 179.52 | 167.97 | 40.00 | 1577.84 |
| 21260.000 | 6790.00 | 92.81 | 94.00 | 94.00 | 75.53 | 3.60 | 93.01 | 2659.00 | 178.22 | 178.89 | 40.00 | 1781.88 |
| 24030.000 | 6400.00 | 93.95 | 100.06 | 100.67 | 76.91 | 3.47 | 94.13 | 2770.00 | 176.30 | 190.16 | 40.00 | 2036.02 |
| * 24031.000 | 6400.00 | 98.45 | 99.21 | 100.61 | 81.90 | 3.64 | 98.65 | 1.00 | 262.30 | 190.16 | 40.00 | 2036.11 |
| 24130.000 | 6400.00 | 98.49 | 99.20 | 100.61 | 81.95 | 3.64 | 98.70 | 99.00 | 272.68 | 190.77 | 40.00 | 2042.78 |
| 24155.000 | 6400.00 | 98.50 | 100.78 | 101.10 | 81.96 | 3.64 | 98.71 | 25.00 | 172.34 | 190.90 | 40.00 | 2044.56 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|-------|------|--------|---------|--------|--------|-------|---------|
| 24208.000 | 6400.00 | 98.53 | 99.99 | 100.07 | 81.99 | 3.64 | 98.73 | 53.00 | 312.50 | 191.19 | 40.00 | 2048.27 |
| 26350.000 | 5170.00 | 99.39 | 100.73 | 100.73 | 83.06 | 3.01 | 99.53 | 2142.00 | 170.60 | 203.07 | 40.00 | 2184.72 |
| 26450.000 | 5170.00 | 99.40 | 100.57 | 100.57 | 83.11 | 3.34 | 99.57 | 100.00 | 160.31 | 203.45 | 30.00 | 2190.69 |
| 28460.000 | 4230.00 | 100.14 | 103.38 | 101.97 | 84.11 | 2.81 | 100.26 | 2010.00 | 158.13 | 210.80 | 30.00 | 2313.94 |
| 31680.000 | 3110.00 | 100.95 | 104.89 | 106.70 | 85.72 | 2.25 | 101.02 | 3220.00 | 151.80 | 222.25 | 30.00 | 2546.77 |
| * 31681.000 | 3110.00 | 104.45 | 104.87 | 106.15 | 90.70 | 3.02 | 104.59 | 1.00 | 129.96 | 222.26 | 20.00 | 2546.83 |
| 34190.000 | 2400.00 | 105.37 | 107.74 | 107.73 | 91.95 | 2.43 | 105.46 | 2509.00 | 127.33 | 229.67 | 20.00 | 2659.75 |
| 34290.000 | 2400.00 | 105.38 | 107.74 | 107.73 | 92.00 | 2.82 | 105.50 | 100.00 | 117.04 | 229.95 | 10.00 | 2664.29 |
| 36340.000 | 1870.00 | 106.13 | 107.93 | 107.93 | 93.03 | 2.29 | 106.21 | 2050.00 | 114.73 | 235.40 | 10.00 | 2746.49 |
| 36440.000 | 1870.00 | 106.15 | 107.92 | 107.92 | 93.08 | 2.45 | 106.25 | 100.00 | 110.64 | 235.66 | 6.00 | 2750.14 |
| 38720.000 | 1420.00 | 106.83 | 108.95 | 109.86 | 94.22 | 1.99 | 106.89 | 2280.00 | 106.90 | 241.35 | 6.00 | 2831.48 |

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 2110.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE SECNO= 11961.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 18601.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 24031.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 31681.000 PROFILE= 1 WSEL BASED ON X5 CARD

WARNING SECNO= 31681.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

THIS RUN EXECUTED 9/ 1/89 16:13:24

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
 T3 F121-00-00 WHITE OAK CREEK
 T4 100-YEAR STORM FREQUENCY EXISTING CONDITIONS
 T5 FILENAME = F121RVEX.IH2

| | | | | | | | | | | |
|----|--------|-----|------|------|------|--------|-------|---|------|----|
| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
| | | 2 | | | .002 | | | | 87.2 | |

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

| | | | | | | | | | |
|----|----|----|----|----|----|----|---|----|---|
| 38 | 43 | 1 | 23 | 24 | 42 | 26 | 3 | 39 | 4 |
| 37 | 30 | 65 | | | | | | | |

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

-10 -10

J6 IHLEQ ICOPY SUBDIV STRTDS RMLE

1

| | | | | | | | | | | |
|----|-------|-------|------|-------|------|-------|------|-------|------|-------|
| NC | .15 | .15 | .1 | .1 | .3 | | | | | |
| QT | 1 | 2100 | | | | | | | | |
| X1 | 120 | 17 | 9970 | 10030 | 120 | 120 | 120 | | | |
| GR | 89.7 | 9070 | 88 | 9300 | 88.5 | 9370 | 88 | 9430 | 86 | 9780 |
| GR | 84 | 9800 | 84 | 9930 | 84 | 9970 | 82 | 9980 | 74.3 | 10000 |
| GR | 82 | 10030 | 84 | 10050 | 86 | 10100 | 87.5 | 10480 | 88 | 10830 |
| GR | 90 | 10880 | 91.7 | 11000 | | | | | | |
| X1 | 2220 | 11 | 6730 | 6800 | 1600 | 1840 | 2100 | | | |
| GR | 91.5 | 6300 | 90.2 | 6700 | 89.4 | 6730 | 79.4 | 6760 | 92.3 | 6800 |
| GR | 92.7 | 7400 | 95.5 | 7500 | 92.7 | 7600 | 91.6 | 8100 | 94.4 | 8400 |
| GR | 108.4 | 8900 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 2010 | | | | | | | | |
| X1 | 4500 | 24 | 9980 | 10010 | 2040 | 2000 | 2400 | | | |
| GR | 101.5 | 8630 | 100 | 9070 | 98 | 9140 | 98 | 9300 | 100 | 9390 |
| GR | 100.5 | 9520 | 100 | 9670 | 98 | 9925 | 96 | 9940 | 94 | 9960 |
| GR | 92 | 9980 | 85.3 | 10000 | 92 | 10010 | 94 | 10060 | 96 | 10290 |
| GR | 98 | 10400 | 100 | 10530 | 100.5 | 10660 | 100 | 11060 | 102 | 11100 |
| GR | 104 | 11120 | 106 | 11140 | 108 | 11170 | 110 | 11200 | | |
| X1 | 5940 | 32 | 9990 | 10020 | 1420 | 1300 | 1440 | | | |
| GR | 114 | 7550 | 114 | 7700 | 112 | 7900 | 111.2 | 8170 | 112.5 | 8550 |
| GR | 112.1 | 8760 | 112 | 8900 | 113 | 9120 | 112 | 9220 | 110 | 9320 |
| GR | 108 | 9550 | 106 | 9650 | 104 | 9710 | 102 | 9770 | 100 | 9800 |
| GR | 100 | 9910 | 98 | 9970 | 96 | 9990 | 88.8 | 10000 | 96 | 10020 |
| GR | 98 | 10050 | 100 | 10160 | 102 | 10220 | 104 | 10290 | 106 | 10340 |
| GR | 108 | 10410 | 110 | 10480 | 112 | 10550 | 112 | 10730 | 114 | 10870 |
| GR | 116 | 11210 | 117 | 11420 | | | | | | |
| QT | 1 | 1990 | | | | | | | | |
| X1 | 7760 | 26 | 9980 | 10020 | 1760 | 1700 | 1820 | | | |
| GR | 113 | 9260 | 112 | 9430 | 112 | 9520 | 112.5 | 9580 | 112 | 9630 |
| GR | 110 | 9670 | 108 | 9690 | 106 | 9700 | 104 | 9730 | 102 | 9770 |
| GR | 101 | 9880 | 100 | 9980 | 98 | 9990 | 93.2 | 10000 | 98 | 10010 |
| GR | 100 | 10020 | 102 | 10070 | 104 | 10120 | 106 | 10150 | 108 | 10190 |
| GR | 110 | 10260 | 111.7 | 10500 | 110 | 10660 | 110 | 10780 | 112 | 10850 |
| GR | 113 | 11120 | | | | | | | | |
| NC | .15 | .15 | .1 | | | | | | | |
| X1 | 9460 | 28 | 1531 | 1564 | 1440 | 1680 | 1700 | | | |
| GR | 114.2 | 855 | 113.3 | 915 | 113.5 | 990 | 112.7 | 1080 | 112.3 | 1150 |
| GR | 112 | 1205 | 112.1 | 1265 | 113.8 | 1310 | 111.3 | 1365 | 103.9 | 1510 |
| GR | 103.8 | 1531 | 98.8 | 1538 | 97.6 | 1541 | 97.1 | 1545 | 97.4 | 1551 |
| GR | 100.7 | 1554 | 105.3 | 1564 | 105 | 1585 | 105.4 | 1680 | 103.3 | 1740 |
| GR | 105.3 | 1765 | 103.4 | 1810 | 105.7 | 1825 | 105.6 | 1940 | 108.5 | 2035 |
| GR | 112.1 | 2130 | 113.1 | 2250 | 114.2 | 2355 | | | | |
| QT | 1 | 1910 | | | | | | | | |
| X1 | 11740 | 20 | 9980 | 10030 | 2520 | 2000 | 2280 | | | |
| GR | 114 | 8510 | 112 | 9080 | 110 | 9280 | 110 | 9570 | 108 | 9660 |
| GR | 106 | 9980 | 104 | 9990 | 101.8 | 10000 | 104 | 10010 | 106 | 10030 |
| GR | 108 | 10050 | 110 | 10180 | 112 | 10250 | 112.8 | 10300 | 112 | 10340 |
| GR | 110.5 | 10530 | 111 | 10870 | 112 | 11200 | 114 | 11380 | 114.4 | 11570 |
| QT | 1 | 1900 | | | | | | | | |
| X1 | 13260 | 19 | 9980 | 10020 | 1360 | 1500 | 1520 | | | |
| GR | 113.5 | 8500 | 112.5 | 8850 | 112 | 9140 | 111.3 | 9340 | 112 | 9560 |
| GR | 112.7 | 9630 | 112 | 9700 | 110 | 9870 | 108 | 9980 | 104.9 | 10000 |
| GR | 108 | 10020 | 110 | 10070 | 111.7 | 10130 | 112 | 10400 | 114 | 10650 |
| GR | 113.1 | 11060 | 114 | 11230 | 116 | 11330 | 116.6 | 11690 | | |

| | | | | | | | | | | |
|-----------------------|-------|---------|-------|------|-------|------|-------|------|-------|---------|
| NC | .15 | .15 | .08 | | | | | | | |
| QT | 1 | 1210 | | | | | | | | |
| X1 | 15140 | 25 | 1742 | 1757 | 2100 | 1580 | 1880 | | | |
| GR | 116 | 300 | 114 | 560 | 112.2 | 1000 | 112.5 | 1265 | 111.6 | 1380 |
| GR | 111 | 1485 | 110.4 | 1610 | 111.7 | 1695 | 111.2 | 1730 | 111.4 | 1742 |
| GR | 109.1 | 1745 | 108.7 | 1747 | 109.1 | 1749 | 110.1 | 1750 | 112.6 | 1757 |
| GR | 111.8 | 1777 | 111.5 | 1850 | 111.9 | 1975 | 112.1 | 2110 | 112.3 | 2230 |
| GR | 113.2 | 2365 | 113.4 | 2460 | 113.7 | 2560 | 114.2 | 2630 | 115.2 | 2725 |
| QT | 1 | 950 | | | | | | | | |
| CHATEAU WOODS PARKWAY | | | | | | | | | | |
| X1 | 17920 | 23 | 1175 | 1250 | 1900 | 2700 | 2780 | | | |
| GR | 117 | 760 | 116.4 | 835 | 115.4 | 935 | 115.2 | 965 | 115.1 | 980 |
| GR | 115 | 1020 | 114 | 1090 | 113.8 | 1175 | 113.8 | 1200 | 109.4 | 1200.01 |
| GR | 113.8 | 1200.02 | 113.8 | 1250 | 115.5 | 1300 | 114.3 | 1340 | 114 | 1410 |
| GR | 114.5 | 1485 | 114 | 1560 | 114.9 | 1605 | 115.3 | 1725 | 116.1 | 1825 |
| GR | 116.4 | 1925 | 117.8 | 2055 | 119.8 | 2180 | | | | |

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 1/89 16:13:31

HEC2 RELEASE DATED SEPT 88

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

F121-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|---------|---------|--------|-----|------|
| 120.000 | 2100.00 | 87.14 | 84.00 | 82.00 | 74.30 | 2.64 | 87.21 | .00 | 807.76 | .00 | .01 | .00 |
| 2220.000 | 2100.00 | 92.30 | 89.40 | 92.30 | 79.40 | 3.12 | 92.42 | 2100.00 | 896.02 | 34.12 | .01 | .00 |
| 4500.000 | 2010.00 | 98.04 | 92.00 | 92.00 | 85.30 | 2.77 | 98.10 | 2400.00 | 646.81 | 70.29 | .01 | .00 |
| 5940.000 | 2010.00 | 101.62 | 96.00 | 96.00 | 88.80 | 3.54 | 101.72 | 1440.00 | 432.95 | 87.11 | .01 | .00 |
| * 7760.000 | 1990.00 | 105.33 | 100.00 | 100.00 | 93.20 | 2.19 | 105.37 | 1820.00 | 430.08 | 104.38 | .01 | .00 |
| 9460.000 | 1990.00 | 108.08 | 103.80 | 105.30 | 97.10 | 2.40 | 108.12 | 1700.00 | 593.34 | 123.10 | .01 | .00 |
| 11740.000 | 1910.00 | 110.98 | 106.00 | 106.00 | 101.80 | 1.62 | 111.00 | 2280.00 | 1426.44 | 175.12 | .01 | .00 |
| 13260.000 | 1900.00 | 112.88 | 108.00 | 108.00 | 104.90 | 2.11 | 112.90 | 1520.00 | 1792.12 | 227.24 | .01 | .00 |
| 15140.000 | 1210.00 | 114.12 | 111.40 | 112.60 | 108.70 | .82 | 114.12 | 1880.00 | 2073.33 | 312.21 | .01 | .00 |
| * 17920.000 | 950.00 | 116.14 | 113.80 | 113.80 | 109.40 | 1.33 | 116.15 | 2780.00 | 977.49 | 392.97 | .01 | .00 |

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 7760.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 17920.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

| | | | | | | | | | | |
|----|-------|-------|------|------|------|------|------|------|------|------|
| X1 | 2500 | 11 | 6730 | 6800 | 520 | 520 | 520 | | 1.6 | |
| CI | -1 | 75.73 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 91.5 | 6300 | 90.2 | 6700 | 89.4 | 6730 | 79.4 | 6760 | 92.3 | 6800 |
| GR | 92.7 | 7400 | 95.5 | 7500 | 92.7 | 7600 | 91.6 | 8100 | 94.4 | 8400 |
| GR | 108.4 | 8900 | | | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|-------|------|------|------|------|------|------|------|------|
| X1 | 2501 | 11 | 6730 | 6800 | 1 | 1 | 1 | | 1.6 | |
| CI | -1 | 79.70 | 0.04 | 4 | 4 | 30 | | | | |
| X5 | -1 | 3.0 | | | | | | | | |
| GR | 91.5 | 6300 | 90.2 | 6700 | 89.4 | 6730 | 79.4 | 6760 | 92.3 | 6800 |
| GR | 92.7 | 7400 | 95.5 | 7500 | 92.7 | 7600 | 91.6 | 8100 | 94.4 | 8400 |
| GR | 108.4 | 8900 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|------|-------|-------|-------|------|-------|-----|-------|
| QT | 1 | 3000 | | | | | | | | |
| X1 | 3870 | 24 | 9980 | 10010 | 1369 | 1369 | 1369 | | | |
| CI | -1 | 81.07 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 101.5 | 8630 | 100 | 9070 | 98 | 9140 | 98 | 9300 | 100 | 9390 |
| GR | 100.5 | 9520 | 100 | 9670 | 98 | 9925 | 96 | 9940 | 94 | 9960 |
| GR | 92 | 9980 | 85.3 | 10000 | 92 | 10010 | 94 | 10060 | 96 | 10290 |
| GR | 98 | 10400 | 100 | 10530 | 100.5 | 10660 | 100 | 11060 | 102 | 11100 |
| GR | 104 | 11120 | 106 | 11140 | 108 | 11170 | 110 | 11200 | | |

| | | | | | | | | | | |
|----|-------|-------|------|-------|------|-------|-------|-------|-------|-------|
| QT | 1 | 2900 | | | | | | | | |
| X1 | 5220 | 32 | 9990 | 10020 | 1350 | 1350 | 1350 | | | |
| CI | -1 | 82.42 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 114 | 7550 | 114 | 7700 | 112 | 7900 | 111.2 | 8170 | 112.5 | 8550 |
| GR | 112.1 | 8760 | 112 | 8900 | 113 | 9120 | 112 | 9220 | 110 | 9320 |
| GR | 108 | 9550 | 106 | 9650 | 104 | 9710 | 102 | 9770 | 100 | 9800 |
| GR | 100 | 9910 | 98 | 9970 | 96 | 9990 | 88.8 | 10000 | 96 | 10020 |
| GR | 98 | 10050 | 100 | 10160 | 102 | 10220 | 104 | 10290 | 106 | 10340 |
| GR | 108 | 10410 | 110 | 10480 | 112 | 10550 | 112 | 10730 | 114 | 10870 |
| GR | 116 | 11210 | 117 | 11420 | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|-------|------|-------|-----|-------|-------|-------|-------|-------|
| X1 | 5221 | 32 | 9990 | 10020 | 1 | 1 | 1 | | | |
| CI | -1 | 86.40 | 0.04 | 4 | 4 | 30 | | | | |
| X5 | -1 | 4.0 | | | | | | | | |
| GR | 114 | 7550 | 114 | 7700 | 112 | 7900 | 111.2 | 8170 | 112.5 | 8550 |
| GR | 112.1 | 8760 | 112 | 8900 | 113 | 9120 | 112 | 9220 | 110 | 9320 |
| GR | 108 | 9550 | 106 | 9650 | 104 | 9710 | 102 | 9770 | 100 | 9800 |
| GR | 100 | 9910 | 98 | 9970 | 96 | 9990 | 88.8 | 10000 | 96 | 10020 |
| GR | 98 | 10050 | 100 | 10160 | 102 | 10220 | 104 | 10290 | 106 | 10340 |
| GR | 108 | 10410 | 110 | 10480 | 112 | 10550 | 112 | 10730 | 114 | 10870 |
| GR | 116 | 11210 | 117 | 11420 | | | | | | |

| | | | | | | | | | | |
|----|------|-------|------|-------|------|-------|-------|-------|-----|-------|
| QT | 1 | 2790 | | | | | | | | |
| X1 | 6920 | 26 | 9980 | 10020 | 1699 | 1699 | 1699 | | | |
| CI | -1 | 88.10 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 113 | 9260 | 112 | 9430 | 112 | 9520 | 112.5 | 9580 | 112 | 9630 |
| GR | 110 | 9670 | 108 | 9690 | 106 | 9700 | 104 | 9730 | 102 | 9770 |
| GR | 101 | 9880 | 100 | 9980 | 98 | 9990 | 93.2 | 10000 | 98 | 10010 |
| GR | 100 | 10020 | 102 | 10070 | 104 | 10120 | 106 | 10150 | 108 | 10190 |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| GR | 110 | 10260 | 111.7 | 10500 | 110 | 10660 | 110 | 10780 | 112 | 10850 |
| GR | 113 | 11120 | | | | | | | | |
| QT | 1 | 2690 | | | | | | | | |
| X1 | 8480 | 28 | 1531 | 1564 | 1560 | 1560 | 1560 | | | |
| CI | -1 | 89.66 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 114.2 | 855 | 113.3 | 915 | 113.5 | 990 | 112.7 | 1080 | 112.3 | 1150 |
| GR | 112 | 1205 | 112.1 | 1265 | 113.8 | 1310 | 111.3 | 1365 | 103.9 | 1510 |
| GR | 103.8 | 1531 | 98.8 | 1538 | 97.6 | 1541 | 97.1 | 1545 | 97.4 | 1551 |
| GR | 100.7 | 1554 | 105.3 | 1564 | 105 | 1585 | 105.4 | 1680 | 103.3 | 1740 |
| GR | 105.3 | 1765 | 103.4 | 1810 | 105.7 | 1825 | 105.6 | 1940 | 108.5 | 2035 |
| GR | 112.1 | 2130 | 113.1 | 2250 | 114.2 | 2355 | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|-------|-------|------|-------|------|-------|------|-------|------|
| X1 | 8481 | 28 | 1531 | 1564 | 1 | 1 | 1 | | | |
| CI | -1 | 93.70 | 0.04 | 4 | 4 | 30 | | | | |
| X3 | 10 | | | | | | | | | |
| X5 | -1 | 4.5 | | | | | | | | |
| GR | 114.2 | 855 | 113.3 | 915 | 113.5 | 990 | 112.7 | 1080 | 112.3 | 1150 |
| GR | 112 | 1205 | 112.1 | 1265 | 113.8 | 1310 | 111.3 | 1365 | 103.9 | 1510 |
| GR | 103.8 | 1531 | 98.8 | 1538 | 97.6 | 1541 | 97.1 | 1545 | 97.4 | 1551 |
| GR | 100.7 | 1554 | 105.3 | 1564 | 105 | 1585 | 105.4 | 1680 | 103.3 | 1740 |
| GR | 105.3 | 1765 | 103.4 | 1810 | 105.7 | 1825 | 105.6 | 1940 | 108.5 | 2035 |
| GR | 112.1 | 2130 | 113.1 | 2250 | 114.2 | 2355 | | | | |

| | | | | | | | | | | |
|----|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 2550 | | | | | | | | |
| X1 | 10620 | 20 | 9980 | 10030 | 2139 | 2139 | 2139 | | | |
| CI | -1 | 95.84 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 114 | 8510 | 112 | 9080 | 110 | 9280 | 110 | 9570 | 108 | 9660 |
| GR | 106 | 9980 | 104 | 9990 | 101.8 | 10000 | 104 | 10010 | 106 | 10030 |
| GR | 108 | 10050 | 110 | 10180 | 112 | 10250 | 112.8 | 10300 | 112 | 10340 |
| GR | 110.5 | 10530 | 111 | 10870 | 112 | 11200 | 114 | 11380 | 114.4 | 11570 |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 2470 | | | | | | | | |
| X1 | 12120 | 19 | 9980 | 10020 | 1500 | 1500 | 1500 | | | |
| CI | -1 | 97.34 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 113.5 | 8500 | 112.5 | 8850 | 112 | 9140 | 111.3 | 9340 | 112 | 9560 |
| GR | 112.7 | 9630 | 112 | 9700 | 110 | 9870 | 108 | 9980 | 104.9 | 10000 |
| GR | 108 | 10020 | 110 | 10070 | 111.7 | 10130 | 112 | 10400 | 114 | 10650 |
| GR | 113.1 | 11060 | 114 | 11230 | 116 | 11330 | 116.6 | 11690 | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 2430 | | | | | | | | |
| X1 | 12500 | 19 | 9980 | 10020 | 380 | 380 | 380 | | .6 | |
| CI | -1 | 97.72 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 113.5 | 8500 | 112.5 | 8850 | 112 | 9140 | 111.3 | 9340 | 112 | 9560 |
| GR | 112.7 | 9630 | 112 | 9700 | 110 | 9870 | 108 | 9980 | 104.9 | 10000 |
| GR | 108 | 10020 | 110 | 10070 | 111.7 | 10130 | 112 | 10400 | 114 | 10650 |
| GR | 113.1 | 11060 | 114 | 11230 | 116 | 11330 | 116.6 | 11690 | | |

DROP STRUCTURE

| | | | | | | | | | | |
|-----------------------|-------|---------|-------|-------|-------|-------|-------|-------|-------|---------|
| X1 | 12501 | 19 | 9980 | 10020 | 1 | 1 | 1 | | .6 | |
| CI | -1 | 99.72 | 0.04 | 4 | 4 | 30 | | | | |
| X5 | -1 | 1.5 | | | | | | | | |
| GR | 113.5 | 8500 | 112.5 | 8850 | 112 | 9140 | 111.3 | 9340 | 112 | 9560 |
| GR | 112.7 | 9630 | 112 | 9700 | 110 | 9870 | 108 | 9980 | 104.9 | 10000 |
| GR | 108 | 10020 | 110 | 10070 | 111.7 | 10130 | 112 | 10400 | 114 | 10650 |
| GR | 113.1 | 11060 | 114 | 11230 | 116 | 11330 | 116.6 | 11690 | | |
| QT | 1 | 2310 | | | | | | | | |
| X1 | 12700 | 19 | 9980 | 10020 | 199 | 199 | 199 | | 1.0 | |
| CI | -1 | 99.92 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 113.5 | 8500 | 112.5 | 8850 | 112 | 9140 | 111.3 | 9340 | 112 | 9560 |
| GR | 112.7 | 9630 | 112 | 9700 | 110 | 9870 | 108 | 9980 | 104.9 | 10000 |
| GR | 108 | 10020 | 110 | 10070 | 111.7 | 10130 | 112 | 10400 | 114 | 10650 |
| GR | 113.1 | 11060 | 114 | 11230 | 116 | 11330 | 116.6 | 11690 | | |
| QT | 1 | 1920 | | | | | | | | |
| X1 | 14400 | 25 | 1742 | 1757 | 1700 | 1700 | 1700 | | | |
| CI | -1 | 101.62 | 0.04 | 4 | 4 | 30 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 116 | 300 | 114 | 560 | 112.2 | 1000 | 112.5 | 1265 | 111.6 | 1380 |
| GR | 111 | 1485 | 110.4 | 1610 | 111.7 | 1695 | 111.2 | 1730 | 111.4 | 1742 |
| GR | 109.1 | 1745 | 108.7 | 1747 | 109.1 | 1749 | 110.1 | 1750 | 112.6 | 1757 |
| GR | 111.8 | 1777 | 111.5 | 1850 | 111.9 | 1975 | 112.1 | 2110 | 112.3 | 2230 |
| GR | 113.2 | 2365 | 113.4 | 2460 | 113.7 | 2560 | 114.2 | 2630 | 115.2 | 2725 |
| X1 | 14500 | 25 | 1742 | 1757 | 100 | 100 | 100 | | | |
| CI | -1 | 101.72 | 0.04 | 4 | 4 | 20 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 116 | 300 | 114 | 560 | 112.2 | 1000 | 112.5 | 1265 | 111.6 | 1380 |
| GR | 111 | 1485 | 110.4 | 1610 | 111.7 | 1695 | 111.2 | 1730 | 111.4 | 1742 |
| GR | 109.1 | 1745 | 108.7 | 1747 | 109.1 | 1749 | 110.1 | 1750 | 112.6 | 1757 |
| GR | 111.8 | 1777 | 111.5 | 1850 | 111.9 | 1975 | 112.1 | 2110 | 112.3 | 2230 |
| GR | 113.2 | 2365 | 113.4 | 2460 | 113.7 | 2560 | 114.2 | 2630 | 115.2 | 2725 |
| QT | 1 | 1520 | | | | | | | | |
| CHATEAU WOODS PARKWAY | | | | | | | | | | |
| X1 | 16410 | 23 | 1175 | 1250 | 1910 | 1910 | 1910 | | | |
| CI | 1200 | 103.63 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 117 | 760 | 116.4 | 835 | 115.4 | 935 | 115.2 | 965 | 115.1 | 980 |
| GR | 115 | 1020 | 114 | 1090 | 113.8 | 1175 | 113.8 | 1200 | 109.4 | 1200.01 |
| GR | 113.8 | 1200.02 | 113.8 | 1250 | 115.5 | 1300 | 114.3 | 1340 | 114 | 1410 |
| GR | 114.5 | 1485 | 114 | 1560 | 114.9 | 1605 | 115.3 | 1725 | 116.1 | 1825 |
| GR | 116.4 | 1925 | 117.8 | 2055 | 119.8 | 2180 | | | | |
| X1 | 16450 | 23 | 1175 | 1250 | 40 | 40 | 40 | | | |
| CI | 1200 | 103.67 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 117 | 760 | 116.4 | 835 | 115.4 | 935 | 115.2 | 965 | 115.1 | 980 |
| GR | 115 | 1020 | 114 | 1090 | 113.8 | 1175 | 113.8 | 1200 | 109.4 | 1200.01 |
| GR | 113.8 | 1200.02 | 113.8 | 1250 | 115.5 | 1300 | 114.3 | 1340 | 114 | 1410 |
| GR | 114.5 | 1485 | 114 | 1560 | 114.9 | 1605 | 115.3 | 1725 | 116.1 | 1825 |
| GR | 116.4 | 1925 | 117.8 | 2055 | 119.8 | 2180 | | | | |

| | | | | | | | | | | |
|----|-------|---------|-------|------|-------|------|-------|------|-------|---------|
| QT | 1 | 1200 | | | | | | | | |
| X1 | 18600 | 23 | 1175 | 1250 | 2150 | 2150 | 2150 | | 0.8 | |
| CI | 1200 | 105.82 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 117 | 760 | 116.4 | 835 | 115.4 | 935 | 115.2 | 965 | 115.1 | 980 |
| GR | 115 | 1020 | 114 | 1090 | 113.8 | 1175 | 113.8 | 1200 | 109.4 | 1200.01 |
| GR | 113.8 | 1200.02 | 113.8 | 1250 | 115.5 | 1300 | 114.3 | 1340 | 114 | 1410 |
| GR | 114.5 | 1485 | 114 | 1560 | 114.9 | 1605 | 115.3 | 1725 | 116.1 | 1825 |
| GR | 116.4 | 1925 | 117.8 | 2055 | 119.8 | 2180 | | | | |

—
IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF
PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR
DETAILS.

THIS RUN EXECUTED 9/ 1/89 16:56:15

HEC2 RELEASE DATED SEPT 88

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

F121-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|---------|--------|-------|-------|--------|
| 120.000 | 3310.00 | 86.63 | 84.00 | 83.80 | 74.30 | 3.73 | 86.83 | .00 | 590.04 | .00 | 20.00 | .00 |
| 1980.000 | 3150.00 | 87.84 | 90.21 | 92.33 | 75.42 | 3.64 | 88.04 | 1860.00 | 119.33 | 15.15 | 20.00 | 39.22 |
| 2500.000 | 3150.00 | 88.20 | 91.83 | 93.93 | 75.73 | 3.61 | 88.41 | 520.00 | 119.80 | 16.57 | 20.00 | 58.25 |
| * 2501.000 | 3150.00 | 91.20 | 91.75 | 93.92 | 79.70 | 3.60 | 91.41 | 1.00 | 122.04 | 16.58 | 30.00 | 58.29 |
| 3870.000 | 3000.00 | 92.19 | 98.10 | 94.02 | 81.07 | 3.62 | 92.39 | 1369.00 | 118.95 | 20.36 | 30.00 | 98.04 |
| 5220.000 | 2900.00 | 93.21 | 99.63 | 98.63 | 82.42 | 3.67 | 93.42 | 1350.00 | 116.33 | 24.01 | 30.00 | 152.44 |
| * 5221.000 | 2900.00 | 97.21 | 99.02 | 98.32 | 86.40 | 3.66 | 97.42 | 1.00 | 116.49 | 24.01 | 30.00 | 152.47 |
| 6920.000 | 2790.00 | 98.57 | 100.44 | 102.03 | 88.10 | 3.71 | 98.78 | 1699.00 | 113.76 | 28.50 | 30.00 | 201.31 |
| 8480.000 | 2690.00 | 99.88 | 106.11 | 105.17 | 89.66 | 3.71 | 100.09 | 1560.00 | 111.75 | 32.54 | 30.00 | 261.64 |
| * 8481.000 | 2690.00 | 104.38 | 105.07 | 105.10 | 93.70 | 3.46 | 104.56 | 1.00 | 115.43 | 32.54 | 30.00 | 261.68 |
| 10620.000 | 2550.00 | 105.97 | 106.20 | 108.31 | 95.84 | 3.57 | 106.17 | 2139.00 | 111.07 | 38.10 | 30.00 | 314.66 |
| 12120.000 | 2470.00 | 107.19 | 108.74 | 109.79 | 97.34 | 3.61 | 107.40 | 1500.00 | 108.83 | 41.89 | 30.00 | 354.68 |
| 12500.000 | 2430.00 | 107.52 | 109.36 | 110.43 | 97.72 | 3.59 | 107.72 | 380.00 | 108.32 | 42.84 | 30.00 | 365.57 |
| * 12501.000 | 2430.00 | 109.02 | 109.20 | 110.05 | 99.72 | 3.89 | 109.25 | 1.00 | 104.36 | 42.84 | 30.00 | 365.60 |
| 12700.000 | 2310.00 | 109.24 | 109.61 | 110.49 | 99.92 | 3.69 | 109.45 | 199.00 | 104.54 | 43.32 | 30.00 | 369.74 |
| 14400.000 | 1920.00 | 110.68 | 111.69 | 111.69 | 101.62 | 3.20 | 110.84 | 1700.00 | 102.46 | 47.35 | 30.00 | 409.39 |
| 14500.000 | 1920.00 | 110.72 | 111.63 | 111.71 | 101.72 | 3.81 | 110.95 | 100.00 | 92.03 | 47.58 | 20.00 | 411.73 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-----------|---------|--------|--------|--------|--------|------|--------|---------|--------|-------|-------|--------|
| 16410.000 | 1520.00 | 112.52 | 113.86 | 113.83 | 103.63 | 3.08 | 112.67 | 1910.00 | 91.11 | 51.59 | 20.00 | 453.95 |
| 16450.000 | 1520.00 | 112.55 | 113.86 | 113.82 | 103.67 | 3.08 | 112.70 | 40.00 | 91.09 | 51.68 | 20.00 | 454.86 |
| 18600.000 | 1200.00 | 114.07 | 114.65 | 114.60 | 105.82 | 2.75 | 114.18 | 2150.00 | 85.98 | 56.05 | 20.00 | 498.59 |

SUMMARY OF ERRORS AND SPECIAL NOTES

NOTE SECNO= 2501.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 5221.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 8481.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 12501.000 PROFILE= 1 WSEL BASED ON X5 CARD

THIS RUN EXECUTED 9/ 4/89 8:11:18

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
 T3 F121-00-00 WHITE OAK CREEK
 T4 100-YEAR STORM FREQUENCY ULTIMATE CONDITIONS
 T5 FILENAME = F121ULT.IH2

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL FQ
 2 .0006 90

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38 43 1 23 24 42 26 3 39 4
 37 30 65

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

-10 -10

J6 IHLEQ ICOPIY SUBDIV STRTDS RMILE

1

NC .15 .15 0.04 .1 .3
 QT 1 5640
 X1 120 17 9970 10030 120 120 120
 CI -1 -1 0.04 4 4 30
 GR 89.7 9070 88 9300 88.5 9370 88 9430 86 9780
 GR 84 9800 84 9930 84 9970 82 9980 74.3 10000
 GR 82 10030 84 10050 86 10100 87.5 10480 88 10830
 GR 90 10880 91.7 11000

QT 1 5350
 X1 1980 11 6730 6800 1860 1860 1860
 CI -1 75.42 0.04 4 4 30
 GR 91.5 6300 90.2 6700 89.4 6730 79.4 6760 92.3 6800
 GR 92.7 7400 95.5 7500 92.7 7600 91.6 8100 94.4 8400
 GR 108.4 8900

| | | | | | | | | | | |
|----|-------|-------|------|-------|-------|-------|------|-------|-----|-------|
| QT | 1 | 5070 | | | | | | | | |
| X1 | 3870 | 24 | 9980 | 10010 | 1890 | 1890 | 1890 | | | |
| CI | -1 | 76.55 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 101.5 | 8630 | 100 | 9070 | 98 | 9140 | 98 | 9300 | 100 | 9390 |
| GR | 100.5 | 9520 | 100 | 9670 | 98 | 9925 | 96 | 9940 | 94 | 9960 |
| GR | 92 | 9980 | 85.3 | 10000 | 92 | 10010 | 94 | 10060 | 96 | 10290 |
| GR | 98 | 10400 | 100 | 10530 | 100.5 | 10660 | 100 | 11060 | 102 | 11100 |
| GR | 104 | 11120 | 106 | 11140 | 108 | 11170 | 110 | 11200 | | |

| | | | | | | | | | | |
|----|-------|-------|------|-------|------|-------|-------|-------|-------|-------|
| QT | 1 | 4870 | | | | | | | | |
| X1 | 5220 | 32 | 9990 | 10020 | 1350 | 1350 | 1350 | | | |
| CI | -1 | 77.36 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 114 | 7550 | 114 | 7700 | 112 | 7900 | 111.2 | 8170 | 112.5 | 8550 |
| GR | 112.1 | 8760 | 112 | 8900 | 113 | 9120 | 112 | 9220 | 110 | 9320 |
| GR | 108 | 9550 | 106 | 9650 | 104 | 9710 | 102 | 9770 | 100 | 9800 |
| GR | 100 | 9910 | 98 | 9970 | 96 | 9990 | 88.8 | 10000 | 96 | 10020 |
| GR | 98 | 10050 | 100 | 10160 | 102 | 10220 | 104 | 10290 | 106 | 10340 |
| GR | 108 | 10410 | 110 | 10480 | 112 | 10550 | 112 | 10730 | 114 | 10870 |
| GR | 116 | 11210 | 117 | 11420 | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|-------|------|-------|-----|-------|-------|-------|-------|-------|
| X1 | 5221 | 32 | 9990 | 10020 | 1 | 1 | 1 | | | |
| CI | -1 | 82.4 | 0.04 | 4 | 4 | 30 | | | | |
| X5 | -1 | 6.0 | | | | | | | | |
| GR | 114 | 7550 | 114 | 7700 | 112 | 7900 | 111.2 | 8170 | 112.5 | 8550 |
| GR | 112.1 | 8760 | 112 | 8900 | 113 | 9120 | 112 | 9220 | 110 | 9320 |
| GR | 108 | 9550 | 106 | 9650 | 104 | 9710 | 102 | 9770 | 100 | 9800 |
| GR | 100 | 9910 | 98 | 9970 | 96 | 9990 | 88.8 | 10000 | 96 | 10020 |
| GR | 98 | 10050 | 100 | 10160 | 102 | 10220 | 104 | 10290 | 106 | 10340 |
| GR | 108 | 10410 | 110 | 10480 | 112 | 10550 | 112 | 10730 | 114 | 10870 |
| GR | 116 | 11210 | 117 | 11420 | | | | | | |

| | | | | | | | | | | |
|----|------|-------|-------|-------|------|-------|-------|-------|-----|-------|
| QT | 1 | 4640 | | | | | | | | |
| X1 | 6920 | 26 | 9980 | 10020 | 1699 | 1699 | 1699 | | | |
| CI | -1 | 83.42 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 113 | 9260 | 112 | 9430 | 112 | 9520 | 112.5 | 9580 | 112 | 9630 |
| GR | 110 | 9670 | 108 | 9690 | 106 | 9700 | 104 | 9730 | 102 | 9770 |
| GR | 101 | 9880 | 100 | 9980 | 98 | 9990 | 93.2 | 10000 | 98 | 10010 |
| GR | 100 | 10020 | 102 | 10070 | 104 | 10120 | 106 | 10150 | 108 | 10190 |
| GR | 110 | 10260 | 111.7 | 10500 | 110 | 10660 | 110 | 10780 | 112 | 10850 |
| GR | 113 | 11120 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|------|-------|------|-------|------|-------|------|
| QT | 1 | 4440 | | | | | | | | |
| X1 | 8480 | 28 | 1531 | 1564 | 1560 | 1560 | 1560 | | | |
| CI | -1 | 84.36 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 114.2 | 855 | 113.3 | 915 | 113.5 | 990 | 112.7 | 1080 | 112.3 | 1150 |
| GR | 112 | 1205 | 112.1 | 1265 | 113.8 | 1310 | 111.3 | 1365 | 103.9 | 1510 |
| GR | 103.8 | 1531 | 98.8 | 1538 | 97.6 | 1541 | 97.1 | 1545 | 97.4 | 1551 |
| GR | 100.7 | 1554 | 105.3 | 1564 | 105 | 1585 | 105.4 | 1680 | 103.3 | 1740 |
| GR | 105.3 | 1765 | 103.4 | 1810 | 105.7 | 1825 | 105.6 | 1940 | 108.5 | 2035 |
| GR | 112.1 | 2130 | 113.1 | 2250 | 114.2 | 2355 | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 8481 | 28 | 1531 | 1564 | 1 | 1 | 1 | | | |
| CI | -1 | 89.4 | 0.04 | 4 | 4 | 30 | | | | |
| X5 | -1 | 5.0 | | | | | | | | |
| GR | 114.2 | 855 | 113.3 | 915 | 113.5 | 990 | 112.7 | 1080 | 112.3 | 1150 |
| GR | 112 | 1205 | 112.1 | 1265 | 113.8 | 1310 | 111.3 | 1365 | 103.9 | 1510 |
| GR | 103.8 | 1531 | 98.8 | 1538 | 97.6 | 1541 | 97.1 | 1545 | 97.4 | 1551 |
| GR | 100.7 | 1554 | 105.3 | 1564 | 105 | 1585 | 105.4 | 1680 | 103.3 | 1740 |
| GR | 105.3 | 1765 | 103.4 | 1810 | 105.7 | 1825 | 105.6 | 1940 | 108.5 | 2035 |
| GR | 112.1 | 2130 | 113.1 | 2250 | 114.2 | 2355 | | | | |

| | | | | | | | | | | |
|----|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 4180 | | | | | | | | |
| X1 | 10620 | 20 | 9980 | 10030 | 2139 | 2139 | 2139 | | | |
| CI | -1 | 90.68 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 114 | 8510 | 112 | 9080 | 110 | 9280 | 110 | 9570 | 108 | 9660 |
| GR | 106 | 9980 | 104 | 9990 | 101.8 | 10000 | 104 | 10010 | 106 | 10030 |
| GR | 108 | 10050 | 110 | 10180 | 112 | 10250 | 112.8 | 10300 | 112 | 10340 |
| GR | 110.5 | 10530 | 111 | 10870 | 112 | 11200 | 114 | 11380 | 114.4 | 11570 |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 3760 | | | | | | | | |
| X1 | 12120 | 19 | 9980 | 10020 | 1500 | 1500 | 1500 | | | |
| CI | -1 | 91.58 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 113.5 | 8500 | 112.5 | 8850 | 112 | 9140 | 111.3 | 9340 | 112 | 9560 |
| GR | 112.7 | 9630 | 112 | 9700 | 110 | 9870 | 108 | 9980 | 104.9 | 10000 |
| GR | 108 | 10020 | 110 | 10070 | 111.7 | 10130 | 112 | 10400 | 114 | 10650 |
| GR | 113.1 | 11060 | 114 | 11230 | 116 | 11330 | 116.6 | 11690 | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 12220 | 19 | 9980 | 10020 | 100 | 100 | 100 | | | |
| CI | -1 | 91.58 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 113.5 | 8500 | 112.5 | 8850 | 112 | 9140 | 111.3 | 9340 | 112 | 9560 |
| GR | 112.7 | 9630 | 112 | 9700 | 110 | 9870 | 108 | 9980 | 104.9 | 10000 |
| GR | 108 | 10020 | 110 | 10070 | 111.7 | 10130 | 112 | 10400 | 114 | 10650 |
| GR | 113.1 | 11060 | 114 | 11230 | 116 | 11330 | 116.6 | 11690 | | |

| | | | | | | | | | | |
|----|-------|-------|-------|------|-------|------|-------|------|-------|------|
| QT | 1 | 2920 | | | | | | | | |
| X1 | 14400 | 25 | 1742 | 1757 | 2180 | 2180 | 2180 | | | |
| CI | -1 | 92.89 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 116 | 300 | 114 | 560 | 112.2 | 1000 | 112.5 | 1265 | 111.6 | 1380 |
| GR | 111 | 1485 | 110.4 | 1610 | 111.7 | 1695 | 111.2 | 1730 | 111.4 | 1742 |
| GR | 109.1 | 1745 | 108.7 | 1747 | 109.1 | 1749 | 110.1 | 1750 | 112.6 | 1757 |
| GR | 111.8 | 1777 | 111.5 | 1850 | 111.9 | 1975 | 112.1 | 2110 | 112.3 | 2230 |
| GR | 113.2 | 2365 | 113.4 | 2460 | 113.7 | 2560 | 114.2 | 2630 | 115.2 | 2725 |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 14401 | 25 | 1742 | 1757 | 1 | 1 | 1 | | | |
| CI | -1 | 97.9 | 0.04 | 4 | 4 | 20 | | | | |
| X5 | -1 | 3.5 | | | | | | | | |
| GR | 116 | 300 | 114 | 560 | 112.2 | 1000 | 112.5 | 1265 | 111.6 | 1380 |
| GR | 111 | 1485 | 110.4 | 1610 | 111.7 | 1695 | 111.2 | 1730 | 111.4 | 1742 |
| GR | 109.1 | 1745 | 108.7 | 1747 | 109.1 | 1749 | 110.1 | 1750 | 112.6 | 1757 |
| GR | 111.8 | 1777 | 111.5 | 1850 | 111.9 | 1975 | 112.1 | 2110 | 112.3 | 2230 |
| GR | 113.2 | 2365 | 113.4 | 2460 | 113.7 | 2560 | 114.2 | 2630 | 115.2 | 2725 |

| | | | | | | | | | | | |
|----|-------|-----------------------|-------|------|-------|------|-------|------|-------|---------|--|
| QT | 1 | 2340 | | | | | | | | | |
| | | CHATEAU WOODS PARKWAY | | | | | | | | | |
| X1 | 16410 | 23 | 1175 | 1250 | 2009 | 2009 | 2009 | | | | |
| CI | 1200 | 99.11 | 0.04 | 4 | 4 | 20 | | | | | |
| GR | 117 | 760 | 116.4 | 835 | 115.4 | 935 | 115.2 | 965 | 115.1 | 980 | |
| GR | 115 | 1020 | 114 | 1090 | 113.8 | 1175 | 113.8 | 1200 | 109.4 | 1200.01 | |
| GR | 113.8 | 1200.02 | 113.8 | 1250 | 115.5 | 1300 | 114.3 | 1340 | 114 | 1410 | |
| GR | 114.5 | 1485 | 114 | 1560 | 114.9 | 1605 | 115.3 | 1725 | 116.1 | 1825 | |
| GR | 116.4 | 1925 | 117.8 | 2055 | 119.8 | 2180 | | | | | |
| X1 | 16450 | 23 | 1175 | 1250 | 40 | 40 | 40 | | | | |
| CI | 1200 | 99.13 | 0.04 | 4 | 4 | 10 | | | | | |
| GR | 117 | 760 | 116.4 | 835 | 115.4 | 935 | 115.2 | 965 | 115.1 | 980 | |
| GR | 115 | 1020 | 114 | 1090 | 113.8 | 1175 | 113.8 | 1200 | 109.4 | 1200.01 | |
| GR | 113.8 | 1200.02 | 113.8 | 1250 | 115.5 | 1300 | 114.3 | 1340 | 114 | 1410 | |
| GR | 114.5 | 1485 | 114 | 1560 | 114.9 | 1605 | 115.3 | 1725 | 116.1 | 1825 | |
| GR | 116.4 | 1925 | 117.8 | 2055 | 119.8 | 2180 | | | | | |
| QT | 1 | 1910 | | | | | | | | | |
| | | FALVEY LAKE OUTFALL | | | | | | | | | |
| X1 | 18600 | 23 | 1175 | 1250 | 2150 | 2150 | 2150 | | 0.8 | | |
| CI | 1200 | 100.42 | 0.04 | 4 | 4 | 10 | | | | | |
| GR | 117 | 760 | 116.4 | 835 | 115.4 | 935 | 115.2 | 965 | 115.1 | 980 | |
| GR | 115 | 1020 | 114 | 1090 | 113.8 | 1175 | 113.8 | 1200 | 109.4 | 1200.01 | |
| GR | 113.8 | 1200.02 | 113.8 | 1250 | 115.5 | 1300 | 114.3 | 1340 | 114 | 1410 | |
| GR | 114.5 | 1485 | 114 | 1560 | 114.9 | 1605 | 115.3 | 1725 | 116.1 | 1825 | |
| GR | 116.4 | 1925 | 117.8 | 2055 | 119.8 | 2180 | | | | | |

IHQEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 4/89 8:11:28

HEC2 RELEASE DATED SEPT 88

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

F121-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|---------|---------|-------|-------|--------|
| 120.000 | 5640.00 | 88.24 | 84.00 | 84.18 | 74.30 | 4.27 | 88.48 | .00 | 1500.44 | .00 | 30.00 | .00 |
| 1980.000 | 5350.00 | 89.51 | 90.23 | 92.33 | 75.42 | 4.40 | 89.81 | 1860.00 | 142.72 | 35.08 | 30.00 | 48.02 |
| 3870.000 | 5070.00 | 90.97 | 98.25 | 94.18 | 76.55 | 4.01 | 91.22 | 1890.00 | 145.36 | 41.33 | 30.00 | 143.29 |
| 5220.000 | 4870.00 | 91.86 | 100.00 | 99.03 | 77.36 | 3.82 | 92.08 | 1350.00 | 145.97 | 45.85 | 30.00 | 240.25 |
| * 5221.000 | 4870.00 | 97.86 | 99.63 | 98.64 | 82.40 | 3.43 | 98.04 | 1.00 | 153.65 | 45.85 | 30.00 | 240.31 |
| 6920.000 | 4640.00 | 98.63 | 100.64 | 102.92 | 83.42 | 3.36 | 98.80 | 1699.00 | 151.67 | 51.80 | 30.00 | 330.50 |
| 8480.000 | 4440.00 | 99.32 | 107.47 | 105.26 | 84.36 | 3.30 | 99.49 | 1560.00 | 149.75 | 57.20 | 30.00 | 439.77 |
| * 8481.000 | 4440.00 | 104.32 | 106.18 | 105.17 | 89.40 | 3.31 | 104.49 | 1.00 | 219.16 | 57.20 | 30.00 | 439.83 |
| 10620.000 | 4180.00 | 105.27 | 106.33 | 108.64 | 90.68 | 3.25 | 105.43 | 2139.00 | 146.65 | 66.19 | 30.00 | 545.97 |
| 12120.000 | 3760.00 | 105.90 | 109.19 | 110.60 | 91.58 | 3.01 | 106.04 | 1500.00 | 144.57 | 71.20 | 30.00 | 630.65 |
| 12220.000 | 3760.00 | 105.92 | 109.09 | 110.44 | 91.58 | 3.39 | 106.10 | 100.00 | 134.72 | 71.52 | 20.00 | 636.35 |
| 14400.000 | 2920.00 | 106.90 | 111.26 | 111.56 | 92.89 | 2.74 | 107.01 | 2180.00 | 132.08 | 78.20 | 20.00 | 765.84 |
| * 14401.000 | 2920.00 | 110.40 | 111.55 | 111.65 | 97.90 | 3.34 | 110.57 | 1.00 | 119.97 | 78.20 | 20.00 | 765.89 |
| 16410.000 | 2340.00 | 111.42 | 113.90 | 114.54 | 99.11 | 2.74 | 111.54 | 2009.00 | 118.52 | 83.70 | 20.00 | 847.01 |
| 16450.000 | 2340.00 | 111.41 | 113.89 | 114.34 | 99.13 | 3.22 | 111.57 | 40.00 | 108.27 | 83.80 | 10.00 | 848.62 |
| 18600.000 | 1910.00 | 112.56 | 114.69 | 115.06 | 100.42 | 2.69 | 112.68 | 2150.00 | 107.15 | 89.12 | 10.00 | 926.79 |

SUMMARY OF ERRORS AND SPECIAL NOTES

NOTE SECNO= 5221.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 8481.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 14401.000 PROFILE= 1 WSEL BASED ON X5 CARD

THIS RUN EXECUTED 9/ 1/89 16:11:26

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
T3 F121-02-00 HARPER'S HORSEPEN BRANCH
T4 100-YEAR STORM FREQUENCY EXISTING CONDITIONS
T5 FILENAME = F12102EX.IH2

| | | | | | | | | | | |
|----|--------|-----|------|------|-------|--------|-------|---|-------|----|
| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
| | | 2 | | | .0019 | | | | 112.3 | |

| | | | | | | | | | | |
|----|-------|------|-------|-------|-------|----|-------|-----|-------|--------|
| J2 | NPROF | IPLT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
| | -1 | | -1 | | | | | | | |

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

| | | | | | | | | | |
|----|----|----|----|----|----|----|---|----|---|
| 38 | 43 | 1 | 23 | 24 | 42 | 26 | 3 | 39 | 4 |
| 37 | 30 | 65 | | | | | | | |

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

-10 -10

J6 IHLEQ ICOPY SUBDIV STRTDS RMILE

1

| | | | | | | | | | | |
|----|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 1610 | | | | | | | | |
| NC | .15 | .15 | .1 | .1 | .3 | | | | | |
| X1 | 460 | 11 | 9910 | 10110 | 460 | 460 | 460 | | | |
| GR | 113 | 8890 | 112 | 9540 | 111.3 | 9660 | 110 | 9910 | 108 | 9980 |
| GR | 108 | 10010 | 110 | 10110 | 111.7 | 10460 | 111.7 | 10810 | 112 | 11030 |
| GR | 113 | 11500 | | | | | | | | |
| X1 | 1540 | 13 | 9870 | 10050 | 800 | 960 | 1080 | | | |
| GR | 115 | 8420 | 114 | 9270 | 113 | 9400 | 112 | 9870 | 110 | 9970 |
| GR | 110 | 10020 | 112 | 10050 | 112.5 | 10190 | 113 | 10680 | 113.5 | 11150 |
| GR | 113.7 | 11490 | 114 | 11760 | 115 | 12260 | | | | |

| | | | | | | | | | | |
|--------------------|--------|-------|--------|--------|--------|-------|--------|-------|--------|--------|
| QT | 1 | 1590 | | | | | | | | |
| X1 | 2669 | 14 | 9970 | 10020 | 1240 | 960 | 1129 | | | |
| GR | 117.7 | 7810 | 116 | 8170 | 115.7 | 9450 | 114 | 9970 | 112 | 9990 |
| GR | 110.3 | 10000 | 112 | 10010 | 114 | 10020 | 114.5 | 10430 | 114.7 | 10980 |
| GR | 115.5 | 11280 | 116 | 12100 | 118 | 12720 | 119 | 13080 | | |
| NC | | | | .3 | .5 | | | | | |
| NH | 5 | .15 | 9987 | .024 | 9993 | .1 | 10007 | .024 | 10013 | .15 |
| NH | 13080 | | | | | | | | | |
| X1 | 2719 | 34 | 9987 | 10013 | 50 | 50 | 50 | | | |
| X3 | 10 | | | | | | | 114.9 | 114.5 | |
| GR | 117.7 | 7810 | 116 | 8170 | 115.7 | 9450 | 115.2 | 9600 | 114.9 | 9700 |
| GR | 114.6 | 9800 | 114.2 | 9900 | 114 | 9970 | 111.65 | 9987 | 110.52 | 9988 |
| GR | 110.35 | 9989 | 110.3 | 9990 | 110.35 | 9991 | 110.52 | 9992 | 111.65 | 9993 |
| GR | 111.75 | 10000 | 111.85 | 10007 | 110.72 | 10008 | 110.55 | 10009 | 110.5 | 10010 |
| GR | 110.55 | 10011 | 110.72 | 10012 | 111.85 | 10013 | 114 | 10020 | 114.1 | 10100 |
| GR | 114.2 | 10200 | 114.3 | 10300 | 114.5 | 10400 | 114.5 | 10430 | 114.7 | 10980 |
| GR | 115.5 | 11280 | 116 | 12100 | 118 | 12720 | 119 | 13080 | | |
| NH | 5 | .15 | 9987 | .024 | 9993 | .1 | 10007 | .024 | 10013 | .15 |
| NH | 13080 | | | | | | | | | |
| SLEEPY HOLLOW ROAD | | | | | | | | | | |
| X1 | 2720 | | | | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 114.9 | 114.5 | |
| BT | -26 | 9600 | 115.2 | 115.2 | 9700 | 114.9 | 114.9 | 9800 | 115.0 | 114.6 |
| BT | | 9900 | 116.1 | 114.2 | 9970 | 115.7 | 114 | 9987 | 115.7 | 111.65 |
| BT | | 9988 | 115.7 | 113.45 | 9989 | 115.7 | 114.05 | 9990 | 115.7 | 114.22 |
| BT | | 9991 | 115.7 | 114.05 | 9992 | 115.7 | 113.45 | 9993 | 115.7 | 111.65 |
| BT | | 10000 | 115.7 | 111.75 | 10007 | 115.7 | 111.85 | 10008 | 115.7 | 113.65 |
| BT | | 10009 | 115.7 | 114.25 | 10010 | 115.7 | 114.42 | 10011 | 115.7 | 114.25 |
| BT | | 10012 | 115.7 | 113.65 | 10013 | 115.7 | 111.85 | 10020 | 115.7 | 114 |
| BT | | 10100 | 114.8 | 114.1 | 10200 | 114.6 | 114.2 | 10300 | 114.8 | 114.3 |
| BT | | 10400 | 114.9 | 114.5 | 10430 | 114.5 | 114.5 | | | |
| NH | 5 | .15 | 9987 | .024 | 9993 | .1 | 10007 | .024 | 10013 | .15 |
| NH | 13080 | | | | | | | | | |
| X1 | 2748 | | | | 28 | 28 | 28 | | | |
| X2 | | | | | | | 1 | | | |
| X3 | 10 | | | | | | | 114.9 | 114.5 | |
| NH | 5 | .15 | 9987 | .024 | 9993 | .1 | 10007 | .024 | 10013 | .15 |
| NH | 13080 | | | | | | | | | |
| X1 | 2749 | | | | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 114.9 | 114.5 | |
| NC | .15 | .15 | .1 | | | | | | | |
| X1 | 2800 | 14 | 9970 | 10020 | 51 | 51 | 51 | | | |
| GR | 117.7 | 7810 | 116 | 8170 | 115.7 | 9450 | 114 | 9970 | 112 | 9990 |
| GR | 110.3 | 10000 | 112 | 10010 | 114 | 10020 | 114.5 | 10430 | 114.7 | 10980 |
| GR | 115.5 | 11280 | 116 | 12100 | 118 | 12720 | 119 | 13080 | | |

| | | | | | | | | | | |
|----|--------|---------|--------|---------|--------|---------|--------|---------|--------|---------|
| NC | | | | .1 | .3 | | | | | |
| X1 | 4320 | 15 | 9960 | 10050 | 1220 | 1160 | 1520 | | | |
| GR | 117.7 | 7820 | 116 | 8070 | 115 | 8520 | 115 | 8740 | 116 | 9220 |
| GR | 117.7 | 9490 | 116 | 9580 | 114 | 9960 | 112.5 | 10000 | 114 | 10050 |
| GR | 116 | 10160 | 117 | 10400 | 117 | 10660 | 118 | 10850 | 119 | 11100 |
| X1 | 4780 | 14 | 9960 | 10060 | 880 | 100 | 460 | | | |
| GR | 117 | 8830 | 116 | 9300 | 116.7 | 9530 | 115 | 9720 | 114 | 9960 |
| GR | 112.8 | 10000 | 114 | 10060 | 116 | 10090 | 118 | 10110 | 118.5 | 10170 |
| GR | 118 | 10210 | 117 | 10690 | 118 | 10880 | 119 | 11130 | | |
| X1 | 5700 | 16 | 9900 | 10140 | 1640 | 700 | 920 | | | |
| GR | 120.5 | 4630 | 120 | 4650 | 118 | 4670 | 118 | 5110 | 118 | 8200 |
| GR | 118.3 | 8410 | 118 | 8660 | 117.5 | 8800 | 117 | 9260 | 116 | 9900 |
| GR | 114 | 9980 | 113.6 | 10000 | 114 | 10020 | 116 | 10140 | 118 | 10290 |
| GR | 119 | 10450 | | | | | | | | |
| QT | 1 | 1520 | | | | | | | | |
| X1 | 7089 | 42 | 9988 | 10010 | 1380 | 1020 | 1389 | | | |
| GR | 121.5 | 4580 | 120 | 4630 | 118 | 4930 | 119 | 5280 | 118.5 | 5850 |
| GR | 119 | 6420 | 118.5 | 6880 | 118 | 7500 | 117 | 8200 | 127 | 8230 |
| GR | 127 | 8730 | 117 | 8760 | 117 | 8920 | 117.7 | 9010 | 117.3 | 9440 |
| GR | 118 | 9700 | 118.3 | 9860 | 118 | 9890 | 116.2 | 9950 | 116.2 | 9972 |
| GR | 115.7 | 9980 | 116.1 | 9988 | 115.4 | 9994 | 114.4 | 9996 | 114.1 | 9998 |
| GR | 114.0 | 10001 | 114.4 | 10003 | 115.3 | 10005 | 116.1 | 10010 | 117 | 10020 |
| GR | 117.6 | 10030 | 118 | 10037 | 117.3 | 10050 | 117.5 | 10330 | 117.5 | 10860 |
| GR | 118 | 10960 | 118.3 | 11330 | 118 | 11710 | 117.5 | 12300 | 118 | 12600 |
| GR | 120 | 12640 | 120.5 | 12660 | | | | | | |
| NC | | | | .3 | .5 | | | | | |
| NH | 5 | .15 | 9982 | .024 | 9986 | .1 | 10014 | .024 | 10018 | .15 |
| NH | 12660 | | | | | | | | | |
| X1 | 7139 | 67 | 9982 | 10018 | 50 | 50 | 50 | | | |
| X3 | 10 | | | | | | | 117.2 | 117.6 | |
| GR | 121.5 | 4580 | 120 | 4630 | 118 | 4930 | 119 | 5280 | 118.5 | 5850 |
| GR | 119 | 6420 | 118.5 | 6880 | 118 | 7500 | 117 | 8200 | 127 | 8230 |
| GR | 127 | 8730 | 117 | 8760 | 117 | 8920 | 117.7 | 9010 | 117.3 | 9440 |
| GR | 117.8 | 9600 | 117.3 | 9700 | 117.2 | 9800 | 117.5 | 9900 | 117.5 | 9916 |
| GR | 116.2 | 9950 | 116.2 | 9972 | 116 | 9978 | 115.7 | 9980 | 116 | 9982 |
| GR | 115.48 | 9982.1 | 115 | 9982.3 | 114.59 | 9982.6 | 114.27 | 9983 | 114.07 | 9983.5 |
| GR | 114 | 9984 | 114.07 | 9984.5 | 114.27 | 9985 | 114.59 | 9985.4 | 115 | 9985.7 |
| GR | 115.48 | 9985.9 | 116 | 9986 | 116 | 10000 | 116 | 10014 | 115.48 | 10014.1 |
| GR | 115 | 10014.3 | 114.59 | 10014.6 | 114.27 | 10015 | 114.07 | 10015.5 | 114 | 10016 |
| GR | 114.07 | 10016.5 | 114.27 | 10017 | 114.59 | 10017.4 | 115 | 10017.7 | 115.48 | 10017.9 |
| GR | 116 | 10018 | 117 | 10020 | 117.6 | 10030 | 118 | 10037 | 117.3 | 10050 |
| GR | 117.6 | 10100 | 117.6 | 10200 | 117.6 | 10300 | 117.7 | 10400 | 117.5 | 10860 |
| GR | 118 | 10960 | 118.3 | 11330 | 118 | 11710 | 117.5 | 12300 | 118 | 12600 |
| GR | 120 | 12640 | 120.5 | 12660 | | | | | | |

| | | | | | | | | | | |
|----|--------------|---------|-------|-------|---------|-------|--------|---------|-------|-------|
| NH | 5 | .15 | 9982 | .024 | 9986 | .1 | 10014 | .024 | 10018 | .15 |
| NH | 12660 | | | | | | | | | |
| | PIN OAK ROAD | | | | | | | | | |
| X1 | 7140 | | | | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 117.2 | 117.6 | |
| BT | -44 | 9600 | 117.8 | 117.8 | 9700 | 117.3 | 117.3 | 9800 | 117.2 | 117.2 |
| BT | | 9900 | 117.5 | 117.5 | 9916 | 117.5 | 117.5 | 9950 | 117.9 | 116.2 |
| BT | | 9972 | 117.9 | 116.2 | 9978 | 117.9 | 116 | 9980 | 117.9 | 115.7 |
| BT | | 9982 | 117.9 | 116 | 9982.1 | 117.9 | 116.52 | 9982.3 | 117.9 | 117 |
| BT | | 9982.6 | 117.9 | 117.4 | 9983 | 117.9 | 117.7 | 9983.5 | 117.9 | 117.9 |
| BT | | 9984 | 118 | 118 | 9984.5 | 117.9 | 117.9 | 9985 | 117.9 | 117.7 |
| BT | | 9985.4 | 117.9 | 117.4 | 9985.7 | 117.9 | 117 | 9985.9 | 117.9 | 116.5 |
| BT | | 9986 | 117.9 | 116 | 10000 | 117.9 | 116 | 10014 | 117.9 | 116 |
| BT | | 10014.1 | 117.9 | 116.5 | 10014.3 | 117.9 | 117 | 10014.6 | 117.9 | 117.4 |
| BT | | 10015 | 117.9 | 117.7 | 10015.5 | 117.9 | 117.9 | 10016 | 118 | 118 |
| BT | | 10016.5 | 117.9 | 117.9 | 10017 | 117.9 | 117.7 | 10017.4 | 117.9 | 117.4 |
| BT | | 10017.7 | 117.9 | 117 | 10017.9 | 117.9 | 116.5 | 10018 | 117.9 | 116 |
| BT | | 10020 | 117.9 | 117 | 10030 | 117.9 | 117.6 | 10037 | 118 | 118 |
| BT | | 10050 | 117.9 | 117.3 | 10100 | 117.6 | 117.6 | 10200 | 117.6 | 117.6 |
| BT | | 10300 | 117.6 | 117.6 | 10400 | 117.7 | 117.7 | | | |

| | | | | | | | | | | |
|----|-------|-----|------|------|------|----|-------|-------|-------|-----|
| NH | 5 | .15 | 9982 | .024 | 9986 | .1 | 10014 | .024 | 10018 | .15 |
| NH | 12660 | | | | | | | | | |
| X1 | 7164 | | | | 24 | 24 | 24 | | | |
| X2 | | | | | | | 1 | | | |
| X3 | 10 | | | | | | | 117.2 | 117.6 | |

| | | | | | | | | | | |
|----|-------|-----|------|------|------|----|-------|-------|-------|-----|
| NH | 5 | .15 | 9982 | .024 | 9986 | .1 | 10014 | .024 | 10018 | .15 |
| NH | 12660 | | | | | | | | | |
| X1 | 7165 | | | | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 117.2 | 117.6 | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | .15 | .15 | .1 | | | | | | | |
| X1 | 7215 | 42 | 9988 | 10010 | 50 | 50 | 50 | | | |
| GR | 121.5 | 4580 | 120 | 4630 | 118 | 4930 | 119 | 5280 | 118.5 | 5850 |
| GR | 119 | 6420 | 118.5 | 6880 | 118 | 7500 | 117 | 8200 | 127 | 8230 |
| GR | 127 | 8730 | 117 | 8760 | 117 | 8920 | 117.7 | 9010 | 117.3 | 9440 |
| GR | 118 | 9700 | 118.3 | 9860 | 118 | 9890 | 116.2 | 9950 | 116.2 | 9972 |
| GR | 115.7 | 9980 | 116.1 | 9988 | 115.4 | 9994 | 114.4 | 9996 | 114.1 | 9998 |
| GR | 114.0 | 10001 | 114.4 | 10003 | 115.3 | 10005 | 116.1 | 10010 | 117 | 10020 |
| GR | 117.6 | 10030 | 118 | 10037 | 117.3 | 10050 | 117.5 | 10330 | 117.5 | 10860 |
| GR | 118 | 10960 | 118.3 | 11330 | 118 | 11710 | 117.5 | 12300 | 118 | 12600 |
| GR | 120 | 12640 | 120.5 | 12660 | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| NC | | | .1 | .3 | | | | | | |
| QT | 1 | 1500 | | | | | | | | |
| X1 | 9100 | 21 | 9630 | 10280 | 1000 | 2420 | 1885 | | | |
| GR | 121.5 | 5060 | 120 | 5140 | 118 | 5460 | 119 | 5780 | 118.5 | 6350 |
| GR | 119 | 6930 | 118.5 | 7380 | 120 | 7520 | 118.3 | 8220 | 118 | 8440 |
| GR | 116.5 | 8740 | 117 | 8960 | 127 | 9000 | 127 | 9590 | 116 | 9630 |
| GR | 115.5 | 10000 | 116 | 10280 | 117 | 10430 | 118 | 10800 | 120 | 11000 |
| GR | 121.7 | 11190 | | | | | | | | |

| | | | | | | | | | | |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 10320 | 13 | 9620 | 10210 | 1440 | 1120 | 1220 | | | |
| GR | 121 | 5900 | 118.3 | 8600 | 118 | 8930 | 117.5 | 9230 | 117.4 | 9620 |
| GR | 116 | 9830 | 116 | 10000 | 116 | 10170 | 118 | 10210 | 119.5 | 10580 |
| GR | 120 | 11020 | 122 | 11130 | 122.5 | 11160 | | | | |
| QT | 1 | 1480 | | | | | | | | |
| X1 | 12260 | 14 | 9710 | 10390 | 760 | 2300 | 1940 | | | |
| GR | 121 | 5870 | 119.5 | 7190 | 119.5 | 7680 | 119 | 8500 | 118 | 9160 |
| GR | 117.8 | 9210 | 118 | 9300 | 118.5 | 9510 | 118 | 9710 | 117 | 10000 |
| GR | 118 | 10390 | 119 | 11100 | 120 | 11220 | 121.7 | 11410 | | |
| NC | .15 | .15 | .1 | | | | | | | |
| QT | 1 | 1220 | | | | | | | | |
| X1 | 17340 | 38 | 2612 | 3326 | 6020 | 4620 | 5080 | | | |
| GR | 124.5 | 0 | 124.2 | 236 | 123.2 | 475 | 124.7 | 547 | 124.4 | 627 |
| GR | 122.3 | 721 | 124.4 | 838 | 122.6 | 870 | 121.8 | 885 | 121 | 900 |
| GR | 121.3 | 915 | 122.1 | 930 | 124.8 | 951 | 124 | 978 | 122.4 | 1026 |
| GR | 122.4 | 1166 | 123.3 | 1205 | 122.6 | 1286 | 122.1 | 1452 | 122.7 | 1605 |
| GR | 121.8 | 1686 | 121.8 | 1919 | 121.8 | 2129 | 121.5 | 2413 | 121.2 | 2612 |
| GR | 120.7 | 2757 | 119.8 | 2801 | 119.6 | 2883 | 119.9 | 3005 | 120.2 | 3130 |
| GR | 120 | 3199 | 121 | 3326 | 121.3 | 3543 | 122.4 | 3731 | 121.9 | 3894 |
| GR | 123.3 | 3989 | 124.4 | 4151 | 125.2 | 4264 | | | | |
| X1 | 19320 | 13 | 9420 | 10860 | 2040 | 1800 | 1980 | | | |
| GR | 126.2 | 6370 | 126 | 6520 | 125.7 | 6700 | 125.6 | 7310 | 124.2 | 7720 |
| GR | 123 | 9420 | 121 | 10000 | 123 | 10860 | 124 | 11370 | 125 | 11800 |
| GR | 125 | 12270 | 126 | 12700 | 128 | 12750 | | | | |
| X1 | 20950 | 32 | 5246 | 5271 | 2100 | 1400 | 1630 | | | |
| X3 | | | | 5179 | | 5339 | | | | |
| GR | 127.5 | 500 | 127 | 1210 | 126.2 | 2000 | 126 | 2211 | 124.3 | 2530 |
| GR | 123.9 | 2723 | 126.2 | 2786 | 124.6 | 2869 | 124.2 | 3195 | 123.6 | 3485 |
| GR | 124.6 | 3818 | 123 | 4062 | 122.9 | 4499 | 122.2 | 4974 | 121.7 | 5231 |
| GR | 122 | 5246 | 121.1 | 5253 | 120.8 | 5261 | 121.9 | 5271 | 121.5 | 5311 |
| GR | 121.6 | 5331 | 122.5 | 5551 | 123.3 | 5825 | 123.1 | 5960 | 125 | 6006 |
| GR | 123 | 6051 | 122.9 | 6394 | 123.2 | 6637 | 123.2 | 6859 | 123.8 | 7100 |
| GR | 124 | 7270 | 128 | 8220 | | | | | | |
| NC | | | | .3 | .5 | | | | | |
| MISSOURI PACIFIC RAILROAD | | | | | | | | | | |
| X1 | 21000 | 34 | 5240 | 5280 | 50 | 50 | 50 | | | |
| X3 | 10 | | | | | | | 126.8 | 126.8 | |
| GR | 127.5 | 500 | 127 | 1210 | 126.2 | 2000 | 126 | 2211 | 124.3 | 2530 |
| GR | 123.9 | 2723 | 126.2 | 2786 | 124.6 | 2869 | 124.2 | 3195 | 123.6 | 3485 |
| GR | 124.6 | 3818 | 123 | 4062 | 122.9 | 4499 | 122.2 | 4974 | 121.7 | 5231 |
| GR | 121.9 | 5240 | 122 | 5246 | 121.1 | 5253 | 120.8 | 5261 | 121.9 | 5271 |
| GR | 121.8 | 5280 | 121.5 | 5311 | 121.6 | 5331 | 122.5 | 5551 | 123.3 | 5825 |
| GR | 123.1 | 5960 | 125 | 6006 | 123 | 6051 | 122.9 | 6394 | 123.2 | 6637 |
| GR | 123.2 | 6859 | 123.8 | 7100 | 124 | 7270 | 128 | 8220 | | |

| | | | | | | | | | | |
|----|-------|------|-------|-------|-------|------|-------|-------|-------|-------|
| SB | 1.05 | 1.56 | 3.0 | 5100 | 23 | 1 | 126 | 2.13 | 120.8 | 120.8 |
| X1 | 21014 | 34 | 5240 | 5280 | 14 | 14 | 14 | | | |
| X2 | | | 1 | 124.8 | 128.8 | | | | | |
| X3 | 10 | | | | | | | 128.9 | 128.9 | |
| GR | 127.5 | 500 | 127 | 1210 | 126.2 | 2000 | 126 | 2211 | 124.3 | 2530 |
| GR | 123.9 | 2723 | 126.2 | 2786 | 124.6 | 2869 | 124.2 | 3195 | 123.6 | 3485 |
| GR | 124.6 | 3818 | 123 | 4062 | 122.9 | 4499 | 122.2 | 4974 | 121.7 | 5231 |
| GR | 121.9 | 5240 | 122 | 5246 | 121.1 | 5253 | 120.8 | 5261 | 121.9 | 5271 |
| GR | 121.8 | 5280 | 121.5 | 5311 | 121.6 | 5331 | 122.5 | 5551 | 123.3 | 5825 |
| GR | 123.1 | 5960 | 125 | 6006 | 123 | 6051 | 122.9 | 6394 | 123.2 | 6637 |
| GR | 123.2 | 6859 | 123.8 | 7100 | 124 | 7270 | 128 | 8220 | | |

| | | | | | | | | | | |
|----|-------|-------|-------|------|-------|------|-------|-------|-------|-------|
| X1 | 21054 | 36 | 6246 | 6271 | 40 | 40 | 40 | | | |
| X3 | | | | 6239 | | 6279 | | | | |
| GR | 131 | 150 | 127.5 | 1500 | 127 | 2210 | 126.2 | 3000 | 126 | 3211 |
| GR | 124.3 | 3530 | 123.9 | 3723 | 126.2 | 3786 | 124.6 | 3869 | 124.2 | 4195 |
| GR | 123.6 | 4485 | 124.6 | 4818 | 123 | 5062 | 122.9 | 5499 | 122.2 | 5974 |
| GR | 121.7 | 6231 | 122 | 6246 | 121.1 | 6253 | 120.8 | 6262 | 121.9 | 6271 |
| GR | 121.5 | 6311 | 121.6 | 6331 | 122.5 | 6551 | 123.3 | 6825 | 123.1 | 6960 |
| GR | 125 | 7006 | 123 | 7051 | 122.9 | 7394 | 123.2 | 7637 | 123.2 | 7859 |
| GR | 123.8 | 8100 | 124 | 8270 | 128 | 9220 | 126 | 11940 | 128 | 12090 |
| GR | 130 | 12140 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|------|-------|-------|-------|-----|-------|
| NC | | | | .1 | .3 | | | | | |
| X1 | 23420 | 19 | 9350 | 11150 | 2400 | 2400 | 2366 | | | |
| GR | 130 | 5970 | 128 | 5990 | 128 | 6290 | 128.5 | 6520 | 128 | 6580 |
| GR | 127.5 | 6840 | 127 | 7220 | 127 | 8080 | 126 | 8600 | 125 | 9350 |
| GR | 124 | 10000 | 124.5 | 11150 | 125 | 11630 | 125 | 11850 | 126 | 12020 |
| GR | 127 | 12220 | 126 | 12440 | 126 | 12550 | 129 | 12820 | | |

INTERSTATE HIGHWAY 45

| | | | | | | | | | | |
|----|-------|-------|-------|-------|------|-------|-------|-------|-----|-------|
| X1 | 24840 | 19 | 9350 | 11150 | 1420 | 1420 | 1420 | | 2.0 | |
| GR | 130 | 5970 | 128 | 5990 | 128 | 6290 | 128.5 | 6520 | 128 | 6580 |
| GR | 127.5 | 6840 | 127 | 7220 | 127 | 8080 | 126 | 8600 | 125 | 9350 |
| GR | 124 | 10000 | 124.5 | 11150 | 125 | 11630 | 125 | 11850 | 126 | 12020 |
| GR | 127 | 12220 | 126 | 12440 | 126 | 12550 | 129 | 12820 | | |

IMLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 1/89 16:11:47

HEC2 RELEASE DATED SEPT 88

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

F121-02-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|------------|---------|--------|--------|--------|--------|------|--------|---------|---------|--------|-----|------|
| 460.000 | 1610.00 | 112.26 | 110.00 | 110.00 | 108.00 | 1.47 | 112.28 | .00 | 1777.78 | .00 | .01 | .00 |
| 1540.000 | 1610.00 | 113.95 | 112.00 | 112.00 | 110.00 | 1.27 | 113.96 | 1080.00 | 2442.70 | 44.95 | .01 | .00 |
| 2669.000 | 1590.00 | 115.92 | 114.00 | 114.00 | 110.30 | 1.65 | 115.94 | 1129.00 | 3528.93 | 117.97 | .01 | .00 |
| 2719.000 | 1590.00 | 116.01 | 111.65 | 111.85 | 110.30 | 2.30 | 116.03 | 50.00 | 3939.28 | 122.25 | .01 | .00 |
| * 2720.000 | 1590.00 | 116.03 | 111.65 | 111.85 | 110.30 | 1.24 | 116.03 | 1.00 | 3940.54 | 122.34 | .01 | .00 |
| 2748.000 | 1590.00 | 116.14 | 111.65 | 111.85 | 110.30 | 1.07 | 116.14 | 28.00 | 3996.19 | 124.89 | .01 | .00 |
| * 2749.000 | 1590.00 | 116.14 | 111.65 | 111.85 | 110.30 | 2.01 | 116.15 | 1.00 | 4003.44 | 124.98 | .01 | .00 |
| 2800.000 | 1590.00 | 116.20 | 114.00 | 114.00 | 110.30 | 1.22 | 116.21 | 51.00 | 4034.77 | 129.69 | .01 | .00 |
| 4320.000 | 1590.00 | 117.19 | 114.00 | 114.00 | 112.50 | .92 | 117.19 | 1520.00 | 2689.69 | 222.42 | .01 | .00 |
| 4780.000 | 1590.00 | 117.73 | 114.00 | 114.00 | 112.80 | 1.20 | 117.74 | 460.00 | 1764.10 | 255.94 | .01 | .00 |
| * 5700.000 | 1590.00 | 118.53 | 116.00 | 116.00 | 113.60 | .75 | 118.53 | 920.00 | 5708.50 | 385.51 | .01 | .00 |
| 7089.000 | 1520.00 | 119.00 | 116.10 | 116.10 | 114.00 | .64 | 119.00 | 1389.00 | 7292.30 | 579.73 | .01 | .00 |
| 7139.000 | 1520.00 | 119.02 | 116.00 | 116.00 | 114.00 | .64 | 119.02 | 50.00 | 7295.56 | 588.10 | .01 | .00 |
| 7140.000 | 1520.00 | 119.02 | 116.00 | 116.00 | 114.00 | .34 | 119.02 | 1.00 | 7294.91 | 588.27 | .01 | .00 |
| 7164.000 | 1520.00 | 119.02 | 116.00 | 116.00 | 114.00 | .34 | 119.03 | 24.00 | 7296.23 | 592.29 | .01 | .00 |
| 7165.000 | 1520.00 | 119.02 | 116.00 | 116.00 | 114.00 | .64 | 119.03 | 1.00 | 7296.37 | 592.45 | .01 | .00 |
| 7215.000 | 1520.00 | 119.04 | 116.10 | 116.10 | 114.00 | .61 | 119.04 | 50.00 | 7298.98 | 600.83 | .01 | .00 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|---------|---------|---------|-----|------|
| * 9100.000 | 1500.00 | 119.33 | 116.00 | 116.00 | 115.50 | .39 | 119.33 | 1885.00 | 4695.41 | 798.53 | .01 | .00 |
| 10320.000 | 1500.00 | 119.56 | 117.40 | 118.00 | 116.00 | .50 | 119.56 | 1220.00 | 3286.48 | 923.39 | .01 | .00 |
| 12260.000 | 1480.00 | 119.95 | 118.00 | 118.00 | 117.00 | .44 | 119.95 | 1940.00 | 4417.92 | 1029.78 | .01 | .00 |
| * 17340.000 | 1220.00 | 122.31 | 121.20 | 121.00 | 119.60 | .67 | 122.32 | 5080.00 | 2413.86 | 1464.75 | .01 | .00 |
| 19320.000 | 1220.00 | 123.63 | 123.00 | 123.00 | 121.00 | .50 | 123.64 | 1980.00 | 2654.33 | 1579.54 | .01 | .00 |
| * 20950.000 | 1220.00 | 126.08 | 122.00 | 121.90 | 120.80 | 2.56 | 126.13 | 1630.00 | 160.00 | 1636.35 | .01 | .00 |
| * 21000.000 | 1220.00 | 126.25 | 121.90 | 121.80 | 120.80 | 6.43 | 126.89 | 50.00 | 40.00 | 1636.46 | .01 | .00 |
| * 21014.000 | 1220.00 | 128.20 | 121.90 | 121.80 | 120.80 | 4.56 | 128.52 | 14.00 | 40.00 | 1636.47 | .01 | .00 |
| 21054.000 | 1220.00 | 128.50 | 122.00 | 121.90 | 120.80 | 5.50 | 128.90 | 40.00 | 40.00 | 1636.51 | .01 | .00 |
| * 23420.000 | 1220.00 | 128.96 | 125.00 | 124.50 | 124.00 | .09 | 128.96 | 2366.00 | 6836.07 | 1825.22 | .01 | .00 |
| * 24840.000 | 1220.00 | 129.00 | 127.00 | 126.50 | 126.00 | .19 | 129.00 | 1420.00 | 4547.03 | 2010.76 | .01 | .00 |

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 2720.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 2749.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 5700.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 9100.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 17340.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 20950.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 21000.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 21014.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 23420.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 24840.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

THIS RUN EXECUTED 9/ 1/89 16:52:43

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
 T3 F126-00-00 HARPER'S HORSEPEN BRANCH
 T4 100-YEAR STORM FREQUENCY INTERIM CONDITIONS
 T5 FILENAME = F126INT.IH2

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL FQ
 2 .0005 109
 J2 NPROF IPLOT PRFVS XSECV XSECH FN ALLDC IBW CHNIM ITRACE
 -1 -1

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38 43 1 23 24 42 26 3 39 4
 37 30 65

J5 LPRNT NUMSEC *****REQUESTED SECTION NUMBERS*****
 -10 -10

J6 IHLEQ ICOPY SUBDIV STRTDS RMILE
 1

| | | | | | | | | | | | |
|----|------|-------|------|-------|------|-------|------|-------|------|-------|--|
| QT | 1 | 1600 | | | | | | | | | |
| NC | .15 | .15 | .04 | .1 | .3 | | | | | | |
| X1 | 1300 | 5 | 9990 | 10010 | 1300 | 1300 | 1300 | | | | |
| CI | -1 | 88.0 | 0.04 | 3 | 3 | 40 | | | | | |
| GR | 96.5 | 9550 | 97.5 | 9990 | 97.5 | 10000 | 97.5 | 10010 | 97.0 | 10330 | |
| QT | 1 | 1590 | | | | | | | | | |
| X1 | 3000 | 7 | 9990 | 10010 | 1700 | 1700 | 1700 | | | | |
| CI | -1 | 88.85 | 0.04 | 3 | 3 | 40 | | | | | |
| GR | 98.3 | 9420 | 98.5 | 9830 | 98.5 | 9990 | 98.5 | 10000 | 98.5 | 10010 | |
| GR | 98.5 | 10320 | 98.0 | 10545 | | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 1580 | | | | | | | | |
| X1 | 4700 | 9 | 9990 | 10010 | 1700 | 1700 | 1700 | | | |
| CI | -1 | 89.70 | 0.04 | 3 | 3 | 40 | | | | |
| GR | 102.5 | 9450 | 102.0 | 9520 | 100.0 | 9770 | 100.0 | 9990 | 100.0 | 10000 |
| GR | 100.0 | 10010 | 100.0 | 10025 | 102.0 | 10065 | 103.0 | 10340 | | |

| | | | | | | | | | | |
|----|-------|-------|------|-------|------|-------|------|-------|-----|-------|
| QT | 1 | 1560 | | | | | | | | |
| X1 | 5800 | 5 | 9990 | 10010 | 1100 | 1100 | 1100 | | | |
| CI | -1 | 90.25 | 0.04 | 3 | 3 | 40 | | | | |
| GR | 100.0 | 9800 | 100 | 9990 | 100 | 10000 | 100 | 10010 | 100 | 10200 |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 6000 | 5 | 9990 | 10010 | 200 | 200 | 200 | | | |
| CI | -1 | 90.35 | 0.04 | 3 | 3 | 40 | | | | |
| GR | 114.0 | 9800 | 114.0 | 9990 | 114.0 | 10000 | 114.0 | 10010 | 114.0 | 10200 |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 6001 | 5 | 9990 | 10010 | 1 | 1 | 1 | | | |
| CI | -1 | 95.35 | 0.04 | 3 | 3 | 40 | | | | |
| X5 | -1 | 5.0 | | | | | | | | |
| GR | 114.0 | 9800 | 114.0 | 9990 | 114.0 | 10000 | 114.0 | 10010 | 114.0 | 10200 |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| X1 | 6400 | 7 | 9990 | 10010 | 399 | 399 | 399 | | | |
| CI | -1 | 95.55 | 0.04 | 3 | 3 | 40 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 114.0 | 9550 | 115.5 | 9900 | 115.5 | 9990 | 115.5 | 10000 | 115.5 | 10010 |
| GR | 115.5 | 10300 | 115.2 | 10530 | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|------|-------|-------|-------|-------|
| X1 | 6401 | 7 | 9990 | 10010 | 1 | 1 | 1 | | | |
| CI | -1 | 100.55 | 0.04 | 3 | 3 | 40 | | | | |
| X3 | 10 | | | | | | | | | |
| X5 | -1 | 5.0 | | | | | | | | |
| GR | 114.0 | 9550 | 115.5 | 9900 | 115.5 | 9990 | 115.5 | 10000 | 115.5 | 10010 |
| GR | 115.5 | 10300 | 115.2 | 10530 | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|------|-------|-------|-------|-------|
| X1 | 6800 | 7 | 9990 | 10010 | 399 | 399 | 399 | | | |
| CI | -1 | 100.75 | 0.04 | 3 | 3 | 40 | | | | |
| X3 | 10 | | | | | | | | | |
| GR | 114.0 | 9550 | 115.5 | 9900 | 115.5 | 9990 | 115.5 | 10000 | 115.5 | 10010 |
| GR | 115.5 | 10300 | 115.2 | 10530 | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|------|-------|-------|-------|-------|
| X1 | 6801 | 7 | 9990 | 10010 | 1 | 1 | 1 | | | |
| CI | -1 | 105.75 | 0.04 | 3 | 3 | 40 | | | | |
| X3 | 10 | | | | | | | | | |
| X5 | -1 | 5.0 | | | | | | | | |
| GR | 114.0 | 9550 | 115.5 | 9900 | 115.5 | 9990 | 115.5 | 10000 | 115.5 | 10010 |
| GR | 115.5 | 10300 | 115.2 | 10530 | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 1530 | | | | | | | | |
| X1 | 8100 | 6 | 9990 | 10010 | 1299 | 1299 | 1299 | | | |
| CI | -1 | 106.40 | 0.04 | 3 | 3 | 40 | | | | |
| GR | 116.5 | 9570 | 116.8 | 9990 | 116.8 | 10000 | 116.8 | 10010 | 117.0 | 10170 |
| GR | 117.0 | 10600 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 1510 | | | | | | | | |
| X1 | 9500 | 8 | 9990 | 10010 | 1400 | 1400 | 1400 | | | |
| CI | -1 | 107.1 | 0.04 | 3 | 3 | 40 | | | | |
| GR | 119.0 | 9230 | 119.0 | 9770 | 118.7 | 9990 | 118.7 | 10000 | 118.7 | 10010 |
| GR | 118.5 | 10125 | 118.5 | 10370 | 118.8 | 10740 | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 1500 | | | | | | | | |
| X1 | 10800 | 5 | 9990 | 10010 | 1300 | 1300 | 1300 | | | |
| CI | -1 | 107.75 | 0.04 | 3 | 3 | 40 | | | | |
| GR | 119.5 | 9630 | 119.5 | 9990 | 119.5 | 10000 | 119.5 | 10010 | 119.5 | 10370 |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|------|-------|-------|-------|-------|
| QT | 1 | 1490 | | | | | | | | |
| X1 | 11800 | 6 | 9990 | 10010 | 1000 | 1000 | 1000 | | | |
| CI | -1 | 108.25 | 0.04 | 3 | 3 | 40 | | | | |
| GR | 119.5 | 9420 | 119.5 | 9910 | 119.5 | 9990 | 119.5 | 10000 | 119.5 | 10010 |
| GR | 119.5 | 10400 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 1480 | | | | | | | | |
| X1 | 12900 | 5 | 9990 | 10010 | 1100 | 1100 | 1100 | | | |
| CI | -1 | 108.80 | 0.04 | 3 | 3 | 40 | | | | |
| GR | 119.5 | 9680 | 119.2 | 9990 | 119.2 | 10000 | 119.2 | 10010 | 119.0 | 10220 |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|------|-------|-----|-------|
| QT | 1 | 1470 | | | | | | | | |
| X1 | 13900 | 16 | 9990 | 10010 | 1000 | 1000 | 1000 | | | |
| CI | -1 | 109.30 | 0.04 | 3 | 3 | 40 | | | | |
| GR | 121 | 5870 | 119.5 | 7190 | 119.5 | 7680 | 119 | 8500 | 118 | 9160 |
| GR | 117.8 | 9210 | 118 | 9300 | 118.5 | 9510 | 118 | 9710 | 117 | 9990 |
| GR | 117 | 10000 | 117 | 10010 | 118 | 10390 | 119 | 11100 | 120 | 11220 |
| GR | 121.7 | 11410 | | | | | | | | |

| | | | | | | | | | | |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|
| NC | .15 | .15 | .10 | | | | | | | |
| DROP STRUCTURE | | | | | | | | | | |
| X1 | 13901 | 14 | 9710 | 10390 | 1 | 1 | 1 | | | |
| CI | 10000 | 115.3 | .10 | 3 | 3 | 6 | | | | |
| X5 | -1 | 1.0 | | | | | | | | |
| GR | 121 | 5870 | 119.5 | 7190 | 119.5 | 7680 | 119 | 8500 | 118 | 9160 |
| GR | 117.8 | 9210 | 118 | 9300 | 118.5 | 9510 | 118 | 9710 | 117 | 10000 |
| GR | 118 | 10390 | 119 | 11100 | 120 | 11220 | 121.7 | 11410 | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|
| NC | .15 | .15 | .10 | | | | | | | |
| QT | 1 | 1450 | | | | | | | | |
| X1 | 15400 | 14 | 9710 | 10390 | 1500 | 1500 | 1500 | | .8 | |
| CI | | | | | | .01 | | | | |
| GR | 121 | 5870 | 119.5 | 7190 | 119.5 | 7680 | 119 | 8500 | 118 | 9160 |
| GR | 117.8 | 9210 | 118 | 9300 | 118.5 | 9510 | 118 | 9710 | 117 | 10000 |
| GR | 118 | 10390 | 119 | 11100 | 120 | 11220 | 121.7 | 11410 | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| NC | .15 | .15 | .10 | | | | | | | |
| QT | 1 | 1220 | | | | | | | | |
| X1 | 18500 | 38 | 2612 | 3326 | 3100 | 3100 | 3100 | | | |
| GR | 124.5 | 0 | 124.2 | 236 | 123.2 | 475 | 124.7 | 547 | 124.4 | 627 |
| GR | 122.3 | 721 | 124.4 | 838 | 122.6 | 870 | 121.8 | 885 | 121 | 900 |
| GR | 121.3 | 915 | 122.1 | 930 | 124.8 | 951 | 124 | 978 | 122.4 | 1026 |
| GR | 122.4 | 1166 | 123.3 | 1205 | 122.6 | 1286 | 122.1 | 1452 | 122.7 | 1605 |
| GR | 121.8 | 1686 | 121.8 | 1919 | 121.8 | 2129 | 121.5 | 2413 | 121.2 | 2612 |
| GR | 120.7 | 2757 | 119.8 | 2801 | 119.6 | 2883 | 119.9 | 3005 | 120.2 | 3130 |
| GR | 120 | 3199 | 121 | 3326 | 121.3 | 3543 | 122.4 | 3731 | 121.9 | 3894 |
| GR | 123.3 | 3989 | 124.4 | 4151 | 125.2 | 4264 | | | | |

| | | | | | | | | | | |
|----|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 1220 | | | | | | | | |
| X1 | 20480 | 13 | 9420 | 10860 | 2040 | 1800 | 1980 | | | |
| GR | 126.2 | 6370 | 126 | 6520 | 125.7 | 6700 | 125.6 | 7310 | 124.2 | 7720 |
| GR | 123 | 9420 | 121 | 10000 | 123 | 10860 | 124 | 11370 | 125 | 11800 |
| GR | 125 | 12270 | 126 | 12700 | 128 | 12750 | | | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 22110 | 32 | 5246 | 5271 | 2100 | 1400 | 1630 | | | |
| X3 | | | | 5179 | | 5339 | | | | |
| GR | 127.5 | 500 | 127 | 1210 | 126.2 | 2000 | 126 | 2211 | 124.3 | 2530 |
| GR | 123.9 | 2723 | 126.2 | 2786 | 124.6 | 2869 | 124.2 | 3195 | 123.6 | 3485 |
| GR | 124.6 | 3818 | 123 | 4062 | 122.9 | 4499 | 122.2 | 4974 | 121.7 | 5231 |
| GR | 122 | 5246 | 121.1 | 5253 | 120.8 | 5261 | 121.9 | 5271 | 121.5 | 5311 |
| GR | 121.6 | 5331 | 122.5 | 5551 | 123.3 | 5825 | 123.1 | 5960 | 125 | 6006 |
| GR | 123 | 6051 | 122.9 | 6394 | 123.2 | 6637 | 123.2 | 6859 | 123.8 | 7100 |
| GR | 124 | 7270 | 128 | 8220 | | | | | | |

| | | | | | | | | | | |
|---------------------------|-------|------|-------|------|-------|------|-------|-------|-------|------|
| NC | | | .3 | .5 | | | | | | |
| QT | 1 | 1220 | | | | | | | | |
| MISSOURI PACIFIC RAILROAD | | | | | | | | | | |
| X1 | 22160 | 34 | 5240 | 5280 | 50 | 50 | 50 | | | |
| X3 | 10 | | | | | | | 126.8 | 126.8 | |
| GR | 127.5 | 500 | 127 | 1210 | 126.2 | 2000 | 126 | 2211 | 124.3 | 2530 |
| GR | 123.9 | 2723 | 126.2 | 2786 | 124.6 | 2869 | 124.2 | 3195 | 123.6 | 3485 |
| GR | 124.6 | 3818 | 123 | 4062 | 122.9 | 4499 | 122.2 | 4974 | 121.7 | 5231 |
| GR | 121.9 | 5240 | 122 | 5246 | 121.1 | 5253 | 120.8 | 5261 | 121.9 | 5271 |
| GR | 121.8 | 5280 | 121.5 | 5311 | 121.6 | 5331 | 122.5 | 5551 | 123.3 | 5825 |
| GR | 123.1 | 5960 | 125 | 6006 | 123 | 6051 | 122.9 | 6394 | 123.2 | 6637 |
| GR | 123.2 | 6859 | 123.8 | 7100 | 124 | 7270 | 128 | 8220 | | |

| | | | | | | | | | | |
|----|-------|------|-------|-------|-------|------|-------|-------|-------|-------|
| SB | 1.05 | 1.56 | 3.0 | 5100 | 23 | 1 | 126 | 2.13 | 120.8 | 120.8 |
| X1 | 22174 | 34 | 5240 | 5280 | 14 | 14 | 14 | | | |
| X2 | | | 1 | 124.8 | 128.8 | | | | | |
| X3 | 10 | | | | | | | 128.9 | 128.9 | |
| GR | 127.5 | 500 | 127 | 1210 | 126.2 | 2000 | 126 | 2211 | 124.3 | 2530 |
| GR | 123.9 | 2723 | 126.2 | 2786 | 124.6 | 2869 | 124.2 | 3195 | 123.6 | 3485 |
| GR | 124.6 | 3818 | 123 | 4062 | 122.9 | 4499 | 122.2 | 4974 | 121.7 | 5231 |
| GR | 121.9 | 5240 | 122 | 5246 | 121.1 | 5253 | 120.8 | 5261 | 121.9 | 5271 |
| GR | 121.8 | 5280 | 121.5 | 5311 | 121.6 | 5331 | 122.5 | 5551 | 123.3 | 5825 |
| GR | 123.1 | 5960 | 125 | 6006 | 123 | 6051 | 122.9 | 6394 | 123.2 | 6637 |
| GR | 123.2 | 6859 | 123.8 | 7100 | 124 | 7270 | 128 | 8220 | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 22214 | 36 | 6246 | 6271 | 40 | 40 | 40 | | | |
| X3 | | | | 6239 | | | 6279 | | | |
| GR | 131 | 150 | 127.5 | 1500 | 127 | 2210 | 126.2 | 3000 | 126 | 3211 |
| GR | 124.3 | 3530 | 123.9 | 3723 | 126.2 | 3786 | 124.6 | 3869 | 124.2 | 4195 |
| GR | 123.6 | 4485 | 124.6 | 4818 | 123 | 5062 | 122.9 | 5499 | 122.2 | 5974 |
| GR | 121.7 | 6231 | 122 | 6246 | 121.1 | 6253 | 120.8 | 6262 | 121.9 | 6271 |
| GR | 121.5 | 6311 | 121.6 | 6331 | 122.5 | 6551 | 123.3 | 6825 | 123.1 | 6960 |
| GR | 125 | 7006 | 123 | 7051 | 122.9 | 7394 | 123.2 | 7637 | 123.2 | 7859 |
| GR | 123.8 | 8100 | 124 | 8270 | 128 | 9220 | 126 | 11940 | 128 | 12090 |
| GR | 130 | 12140 | | | | | | | | |
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 1200 | | | | | | | | |
| X1 | 24580 | 19 | 9350 | 11150 | 2400 | 2400 | 2366 | | | |
| GR | 130 | 5970 | 128 | 5990 | 128 | 6290 | 128.5 | 6520 | 128 | 6580 |
| GR | 127.5 | 6840 | 127 | 7220 | 127 | 8080 | 126 | 8600 | 125 | 9350 |
| GR | 124 | 10000 | 124.5 | 11150 | 125 | 11630 | 125 | 11850 | 126 | 12020 |
| GR | 127 | 12220 | 126 | 12440 | 126 | 12550 | 129 | 12820 | | |
| X1 | 26000 | 19 | 9350 | 11150 | 1420 | 1420 | 1420 | | 2.0 | |
| GR | 130 | 5970 | 128 | 5990 | 128 | 6290 | 128.5 | 6520 | 128 | 6580 |
| GR | 127.5 | 6840 | 127 | 7220 | 127 | 8080 | 126 | 8600 | 125 | 9350 |
| GR | 124 | 10000 | 124.5 | 11150 | 125 | 11630 | 125 | 11850 | 126 | 12020 |
| GR | 127 | 12220 | 126 | 12440 | 126 | 12550 | 129 | 12820 | | |

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 1/89 16:52:57

HEC2 RELEASE DATED SEPT 88

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

F126-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|---------|---------|-------|-------|--------|
| 1300.000 | 1600.00 | 96.74 | 97.41 | 97.44 | 88.00 | 2.76 | 96.86 | .00 | 197.40 | .00 | 40.00 | .00 |
| 3000.000 | 1590.00 | 97.58 | 98.50 | 98.50 | 88.85 | 2.75 | 97.70 | 1700.00 | 92.43 | 5.66 | 40.00 | 41.34 |
| 4700.000 | 1580.00 | 98.42 | 100.00 | 101.52 | 89.70 | 2.73 | 98.54 | 1700.00 | 92.37 | 9.26 | 40.00 | 85.90 |
| 5800.000 | 1560.00 | 98.96 | 100.00 | 100.00 | 90.25 | 2.71 | 99.07 | 1100.00 | 92.27 | 11.59 | 40.00 | 114.93 |
| 6000.000 | 1560.00 | 99.05 | 114.00 | 114.00 | 90.35 | 2.71 | 99.17 | 200.00 | 92.23 | 12.02 | 40.00 | 127.15 |
| * 6001.000 | 1560.00 | 104.05 | 114.00 | 114.00 | 95.35 | 2.71 | 104.17 | 1.00 | 92.22 | 12.02 | 40.00 | 127.24 |
| 6400.000 | 1560.00 | 104.25 | 115.50 | 115.50 | 95.55 | 2.71 | 104.36 | 399.00 | 92.18 | 12.86 | 40.00 | 155.18 |
| * 6401.000 | 1560.00 | 109.25 | 115.50 | 115.50 | 100.55 | 2.71 | 109.36 | 1.00 | 92.18 | 12.87 | 40.00 | 155.24 |
| 6800.000 | 1560.00 | 109.44 | 115.50 | 115.50 | 100.75 | 2.72 | 109.55 | 399.00 | 92.14 | 13.71 | 40.00 | 173.79 |
| * 6801.000 | 1560.00 | 114.44 | 115.50 | 115.50 | 105.75 | 2.72 | 114.55 | 1.00 | 92.14 | 13.71 | 40.00 | 173.83 |
| 8100.000 | 1530.00 | 115.07 | 116.77 | 116.85 | 106.40 | 2.67 | 115.18 | 1299.00 | 92.02 | 16.46 | 40.00 | 207.89 |
| 9500.000 | 1510.00 | 115.72 | 118.76 | 118.62 | 107.10 | 2.66 | 115.83 | 1400.00 | 91.77 | 19.41 | 40.00 | 249.59 |
| 10800.000 | 1500.00 | 116.33 | 119.50 | 119.50 | 107.75 | 2.66 | 116.44 | 1300.00 | 91.50 | 22.15 | 40.00 | 291.75 |
| 11800.000 | 1490.00 | 116.81 | 119.50 | 119.50 | 108.25 | 2.65 | 116.91 | 1000.00 | 91.32 | 24.24 | 40.00 | 323.49 |
| 12900.000 | 1480.00 | 117.32 | 119.24 | 119.16 | 108.80 | 2.65 | 117.43 | 1100.00 | 91.14 | 26.55 | 40.00 | 355.48 |
| 13900.000 | 1470.00 | 117.78 | 117.12 | 117.09 | 109.30 | 2.62 | 117.89 | 1000.00 | 539.80 | 33.79 | 40.00 | 378.25 |
| * 13901.000 | 1470.00 | 118.78 | 118.00 | 118.00 | 115.30 | 1.27 | 118.80 | 1.00 | 2299.96 | 33.82 | 6.00 | 378.26 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|---------|---------|--------|-----|--------|
| * 15400.000 | 1450.00 | 120.37 | 118.80 | 118.80 | 117.80 | .58 | 120.37 | 1500.00 | 4037.82 | 142.94 | .01 | 378.26 |
| 18500.000 | 1220.00 | 122.35 | 121.20 | 121.00 | 119.60 | .65 | 122.35 | 3100.00 | 2467.80 | 374.43 | .01 | 378.26 |
| 20480.000 | 1220.00 | 123.63 | 123.00 | 123.00 | 121.00 | .50 | 123.63 | 1980.00 | 2647.48 | 490.27 | .01 | 378.26 |
| * 22110.000 | 1220.00 | 126.08 | 122.00 | 121.90 | 120.80 | 2.56 | 126.13 | 1630.00 | 160.00 | 546.93 | .01 | 378.26 |
| * 22160.000 | 1220.00 | 126.25 | 121.90 | 121.80 | 120.80 | 6.43 | 126.89 | 50.00 | 40.00 | 547.04 | .01 | 378.26 |
| * 22174.000 | 1220.00 | 128.20 | 121.90 | 121.80 | 120.80 | 4.56 | 128.52 | 14.00 | 40.00 | 547.06 | .01 | 378.26 |
| 22214.000 | 1220.00 | 128.50 | 122.00 | 121.90 | 120.80 | 5.50 | 128.90 | 40.00 | 40.00 | 547.09 | .01 | 378.26 |
| * 24580.000 | 1200.00 | 128.96 | 125.00 | 124.50 | 124.00 | .08 | 128.96 | 2366.00 | 6836.21 | 735.81 | .01 | 378.26 |
| * 26000.000 | 1200.00 | 129.00 | 127.00 | 126.50 | 126.00 | .19 | 129.00 | 1420.00 | 4547.60 | 921.36 | .01 | 378.26 |

SUMMARY OF ERRORS AND SPECIAL NOTES

NOTE SECNO= 6001.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 6401.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 6801.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 13901.000 PROFILE= 1 WSEL BASED ON X5 CARD

WARNING SECNO= 13901.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 15400.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 22110.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 22160.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 22174.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 24580.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 26000.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

THIS RUN EXECUTED 9/ 4/89 8: 5:23

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
T3 F126-00-00 HARPER'S HORSEPEN BRANCH
T4 100-YEAR STORM FREQUENCY ULTIMATE CONDITIONS
T5 FILENAME = F126ULT.IH2

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL FQ
2 .0005 109

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38 43 1 23 24 42 26 3 39 4
37 30 65

J5 LPRNT NUMSEC *****REQUESTED SECTION NUMBERS*****
-10 -10

J6 IHLEQ ICOFY SUBDIV STRTDS RMILE
1

QT 1 7890
NC .15 .15 .04 .1 .3
X1 1300 5 9990 10010 1300 1300 1300
CI -1 81.65 0.04 4 4 60
GR 96.5 9550 97.5 9990 97.5 10000 97.5 10010 97.0 10330

QT 1 7780
X1 3000 7 9990 10010 1700 1700 1700
CI -1 82.50 0.04 4 4 60
GR 98.3 9420 98.5 9830 98.5 9990 98.5 10000 98.5 10010
GR 98.5 10320 98.0 10545

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 7670 | | | | | | | | |
| X1 | 4700 | 9 | 9990 | 10010 | 1700 | 1700 | 1700 | | | |
| CI | -1 | 83.35 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 102.5 | 9450 | 102.0 | 9520 | 100.0 | 9770 | 100.0 | 9990 | 100.0 | 10000 |
| GR | 100.0 | 10010 | 100.0 | 10025 | 102.0 | 10065 | 103.0 | 10340 | | |

| | | | | | | | | | | |
|----|-------|-------|------|-------|------|-------|------|-------|-----|-------|
| QT | 1 | 7600 | | | | | | | | |
| X1 | 5800 | 5 | 9990 | 10010 | 1100 | 1100 | 1100 | | | |
| CI | -1 | 83.90 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 100.0 | 9800 | 100 | 9990 | 100 | 10000 | 100 | 10010 | 100 | 10200 |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 6000 | 5 | 9990 | 10010 | 200 | 200 | 200 | | | |
| CI | -1 | 84.00 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 114.0 | 9800 | 114.0 | 9990 | 114.0 | 10000 | 114.0 | 10010 | 114.0 | 10200 |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 6001 | 5 | 9990 | 10010 | 1 | 1 | 1 | | | |
| CI | -1 | 89.00 | 0.04 | 4 | 4 | 50 | | | | |
| X5 | -1 | 6.0 | | | | | | | | |
| GR | 114.0 | 9800 | 114.0 | 9990 | 114.0 | 10000 | 114.0 | 10010 | 114.0 | 10200 |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| X1 | 6400 | 7 | 9990 | 10010 | 400 | 400 | 400 | | | |
| CI | -1 | 89.20 | 0.04 | 4 | 4 | 50 | | | | |
| GR | 114.0 | 9550 | 115.5 | 9900 | 115.5 | 9990 | 115.5 | 10000 | 115.5 | 10010 |
| GR | 115.5 | 10300 | 115.2 | 10530 | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| X1 | 6401 | 7 | 9990 | 10010 | 1 | 1 | 1 | | | |
| CI | -1 | 94.20 | 0.04 | 4 | 4 | 40 | | | | |
| X5 | -1 | 6.0 | | | | | | | | |
| GR | 114.0 | 9550 | 115.5 | 9900 | 115.5 | 9990 | 115.5 | 10000 | 115.5 | 10010 |
| GR | 115.5 | 10300 | 115.2 | 10530 | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 7430 | | | | | | | | |
| X1 | 8100 | 6 | 9990 | 10010 | 1700 | 1700 | 1700 | | | |
| CI | -1 | 95.05 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 116.5 | 9570 | 116.8 | 9990 | 116.8 | 10000 | 116.8 | 10010 | 117.0 | 10170 |
| GR | 117.0 | 10600 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 7240 | | | | | | | | |
| X1 | 9500 | 8 | 9990 | 10010 | 1400 | 1400 | 1400 | | | |
| CI | -1 | 95.75 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 119.0 | 9230 | 119.0 | 9770 | 118.7 | 9990 | 118.7 | 10000 | 118.7 | 10010 |
| GR | 118.5 | 10125 | 118.5 | 10370 | 118.8 | 10740 | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 7070 | | | | | | | | |
| X1 | 10800 | 5 | 9990 | 10010 | 1300 | 1300 | 1300 | | | |
| CI | -1 | 96.40 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 119.5 | 9630 | 119.5 | 9990 | 119.5 | 10000 | 119.5 | 10010 | 119.5 | 10370 |

| | | | | | | | | | | |
|----------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 6940 | | | | | | | | |
| X1 | 11800 | 6 | 9990 | 10010 | 1000 | 1000 | 1000 | | | |
| CI | -1 | 96.90 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 119.5 | 9420 | 119.5 | 9910 | 119.5 | 9990 | 119.5 | 10000 | 119.5 | 10010 |
| GR | 119.5 | 10400 | | | | | | | | |
| QT | 1 | 6800 | | | | | | | | |
| X1 | 12900 | 5 | 9990 | 10010 | 1100 | 1100 | 1100 | | | |
| CI | -1 | 97.45 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 119.5 | 9680 | 119.2 | 9990 | 119.2 | 10000 | 119.2 | 10010 | 119.0 | 10220 |
| QT | 1 | 6630 | | | | | | | | |
| X1 | 14300 | 8 | 9990 | 10010 | 1400 | 1400 | 1400 | | | |
| CI | -1 | 98.15 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 119.0 | 9600 | 118.0 | 9740 | 117.0 | 9930 | 117.2 | 9990 | 117.2 | 10000 |
| GR | 117.2 | 10010 | 118.0 | 10210 | 120.0 | 10280 | | | | |
| QT | 1 | 6350 | | | | | | | | |
| X1 | 16600 | 38 | 2801 | 2883 | 2300 | 2300 | 2300 | | -1.2 | |
| CI | -1 | 99.30 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 124.5 | 0 | 124.2 | 236 | 123.2 | 475 | 124.7 | 547 | 124.4 | 627 |
| GR | 122.3 | 721 | 124.4 | 838 | 122.6 | 870 | 121.8 | 885 | 121 | 900 |
| GR | 121.3 | 915 | 122.1 | 930 | 124.8 | 951 | 124 | 978 | 122.4 | 1026 |
| GR | 122.4 | 1166 | 123.3 | 1205 | 122.6 | 1286 | 122.1 | 1452 | 122.7 | 1605 |
| GR | 121.8 | 1686 | 121.8 | 1919 | 121.8 | 2129 | 121.5 | 2413 | 121.2 | 2612 |
| GR | 120.7 | 2757 | 119.8 | 2801 | 119.6 | 2883 | 119.9 | 3005 | 120.2 | 3130 |
| GR | 120 | 3199 | 121 | 3326 | 121.3 | 3543 | 122.4 | 3731 | 121.9 | 3894 |
| GR | 123.3 | 3989 | 124.4 | 4151 | 125.2 | 4264 | | | | |
| QT | 1 | 3340 | | | | | | | | |
| X1 | 16700 | 38 | 2801 | 2883 | 100 | 100 | 100 | | -1.2 | |
| CI | -1 | 99.35 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 124.5 | 0 | 124.2 | 236 | 123.2 | 475 | 124.7 | 547 | 124.4 | 627 |
| GR | 122.3 | 721 | 124.4 | 838 | 122.6 | 870 | 121.8 | 885 | 121 | 900 |
| GR | 121.3 | 915 | 122.1 | 930 | 124.8 | 951 | 124 | 978 | 122.4 | 1026 |
| GR | 122.4 | 1166 | 123.3 | 1205 | 122.6 | 1286 | 122.1 | 1452 | 122.7 | 1605 |
| GR | 121.8 | 1686 | 121.8 | 1919 | 121.8 | 2129 | 121.5 | 2413 | 121.2 | 2612 |
| GR | 120.7 | 2757 | 119.8 | 2801 | 119.6 | 2883 | 119.9 | 3005 | 120.2 | 3130 |
| GR | 120 | 3199 | 121 | 3326 | 121.3 | 3543 | 122.4 | 3731 | 121.9 | 3894 |
| GR | 123.3 | 3989 | 124.4 | 4151 | 125.2 | 4264 | | | | |
| DROP STRUCTURE | | | | | | | | | | |
| X1 | 16701 | 38 | 2801 | 2883 | 1 | 1 | 1 | | -1.2 | |
| CI | -1 | 104.40 | 0.04 | 4 | 4 | 20 | | | | |
| X5 | -1 | 1.0 | | | | | | | | |
| GR | 124.5 | 0 | 124.2 | 236 | 123.2 | 475 | 124.7 | 547 | 124.4 | 627 |
| GR | 122.3 | 721 | 124.4 | 838 | 122.6 | 870 | 121.8 | 885 | 121 | 900 |
| GR | 121.3 | 915 | 122.1 | 930 | 124.8 | 951 | 124 | 978 | 122.4 | 1026 |
| GR | 122.4 | 1166 | 123.3 | 1205 | 122.6 | 1286 | 122.1 | 1452 | 122.7 | 1605 |
| GR | 121.8 | 1686 | 121.8 | 1919 | 121.8 | 2129 | 121.5 | 2413 | 121.2 | 2612 |
| GR | 120.7 | 2757 | 119.8 | 2801 | 119.6 | 2883 | 119.9 | 3005 | 120.2 | 3130 |
| GR | 120 | 3199 | 121 | 3326 | 121.3 | 3543 | 122.4 | 3731 | 121.9 | 3894 |
| GR | 123.3 | 3989 | 124.4 | 4151 | 125.2 | 4264 | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 2780 | | | | | | | | |
| X1 | 18880 | 38 | 2801 | 2883 | 2179 | 2179 | 2179 | | | |
| CI | -1 | 105.49 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 124.5 | 0 | 124.2 | 236 | 123.2 | 475 | 124.7 | 547 | 124.4 | 627 |
| GR | 122.3 | 721 | 124.4 | 838 | 122.6 | 870 | 121.8 | 885 | 121 | 900 |
| GR | 121.3 | 915 | 122.1 | 930 | 124.8 | 951 | 124 | 978 | 122.4 | 1026 |
| GR | 122.4 | 1166 | 123.3 | 1205 | 122.6 | 1286 | 122.1 | 1452 | 122.7 | 1605 |
| GR | 121.8 | 1686 | 121.8 | 1919 | 121.8 | 2129 | 121.5 | 2413 | 121.2 | 2612 |
| GR | 120.7 | 2757 | 119.8 | 2801 | 119.6 | 2883 | 119.9 | 3005 | 120.2 | 3130 |
| GR | 120 | 3199 | 121 | 3326 | 121.3 | 3543 | 122.4 | 3731 | 121.9 | 3894 |
| GR | 123.3 | 3989 | 124.4 | 4151 | 125.2 | 4264 | | | | |
| X1 | 18980 | 38 | 2801 | 2883 | 100 | 100 | 100 | | | |
| CI | -1 | 105.54 | 0.04 | 4 | 4 | 10 | | | | |
| GR | 124.5 | 0 | 124.2 | 236 | 123.2 | 475 | 124.7 | 547 | 124.4 | 627 |
| GR | 122.3 | 721 | 124.4 | 838 | 122.6 | 870 | 121.8 | 885 | 121 | 900 |
| GR | 121.3 | 915 | 122.1 | 930 | 124.8 | 951 | 124 | 978 | 122.4 | 1026 |
| GR | 122.4 | 1166 | 123.3 | 1205 | 122.6 | 1286 | 122.1 | 1452 | 122.7 | 1605 |
| GR | 121.8 | 1686 | 121.8 | 1919 | 121.8 | 2129 | 121.5 | 2413 | 121.2 | 2612 |
| GR | 120.7 | 2757 | 119.8 | 2801 | 119.6 | 2883 | 119.9 | 3005 | 120.2 | 3130 |
| GR | 120 | 3199 | 121 | 3326 | 121.3 | 3543 | 122.4 | 3731 | 121.9 | 3894 |
| GR | 123.3 | 3989 | 124.4 | 4151 | 125.2 | 4264 | | | | |
| QT | 1 | 2350 | | | | | | | | |
| X1 | 20880 | 15 | 9990 | 10010 | 1900 | 1900 | 1900 | | | |
| CI | 10000 | 106.49 | 0.04 | 4 | 4 | 10 | | | | |
| GR | 126.2 | 6370 | 126 | 6520 | 125.7 | 6700 | 125.6 | 7310 | 124.2 | 7720 |
| GR | 123 | 9420 | 121 | 9990 | 121 | 10000 | 121 | 10010 | 123 | 10860 |
| GR | 124 | 11370 | 125 | 11800 | 125 | 12270 | 126 | 12700 | 128 | 12750 |
| X1 | 20980 | 15 | 9990 | 10010 | 100 | 100 | 100 | | | |
| CI | -1 | 106.54 | 0.04 | 4 | 4 | 6 | | | | |
| GR | 126.2 | 6370 | 126 | 6520 | 125.7 | 6700 | 125.6 | 7310 | 124.2 | 7720 |
| GR | 123 | 9420 | 121 | 9990 | 121 | 10000 | 121 | 10010 | 123 | 10860 |
| GR | 124 | 11370 | 125 | 11800 | 125 | 12270 | 126 | 12700 | 128 | 12750 |
| QT | 1 | 2040 | | | | | | | | |
| X1 | 22550 | 32 | 5246 | 5271 | 1570 | 1570 | 1570 | | | |
| CI | -1 | 107.32 | 0.04 | 4 | 4 | 6 | | | | |
| GR | 127.5 | 500 | 127 | 1210 | 126.2 | 2000 | 126 | 2211 | 124.3 | 2530 |
| GR | 123.9 | 2723 | 126.2 | 2786 | 124.6 | 2869 | 124.2 | 3195 | 123.6 | 3485 |
| GR | 124.6 | 3818 | 123 | 4062 | 122.9 | 4499 | 122.2 | 4974 | 121.7 | 5231 |
| GR | 122 | 5246 | 121.1 | 5253 | 120.8 | 5261 | 121.9 | 5271 | 121.5 | 5311 |
| GR | 121.6 | 5331 | 122.5 | 5551 | 123.3 | 5825 | 123.1 | 5960 | 125 | 6006 |
| GR | 123 | 6051 | 122.9 | 6394 | 123.2 | 6637 | 123.2 | 6859 | 123.8 | 7100 |
| GR | 124 | 7270 | 128 | 8220 | | | | | | |
| NC | | | | .3 | .5 | | | | | |

IHLQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 4/89 8: 5:38

HEC2 RELEASE DATED SEPT 88

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

F126-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|---------|--------|-------|-------|---------|
| 1300.000 | 7890.00 | 97.61 | 97.31 | 97.37 | 81.65 | 3.96 | 97.85 | .00 | 780.00 | .00 | 60.00 | .00 |
| 3000.000 | 7780.00 | 98.46 | 98.50 | 98.50 | 82.50 | 3.93 | 98.70 | 1700.00 | 723.40 | 29.34 | 60.00 | 123.62 |
| 4700.000 | 7670.00 | 99.31 | 100.00 | 102.15 | 83.35 | 3.88 | 99.54 | 1700.00 | 187.69 | 47.11 | 60.00 | 256.03 |
| 5800.000 | 7600.00 | 99.84 | 100.00 | 100.00 | 83.90 | 3.85 | 100.07 | 1100.00 | 187.59 | 51.85 | 60.00 | 342.09 |
| 6000.000 | 7600.00 | 99.94 | 114.00 | 114.00 | 84.00 | 3.85 | 100.17 | 200.00 | 187.50 | 52.71 | 60.00 | 369.51 |
| * 6001.000 | 7600.00 | 105.94 | 114.00 | 114.00 | 89.00 | 3.81 | 106.16 | 1.00 | 185.49 | 52.72 | 50.00 | 369.68 |
| 6400.000 | 7600.00 | 106.12 | 115.37 | 115.50 | 89.20 | 3.82 | 106.35 | 400.00 | 185.39 | 54.42 | 50.00 | 427.67 |
| * 6401.000 | 7600.00 | 112.12 | 115.48 | 115.50 | 94.20 | 3.80 | 112.34 | 1.00 | 183.36 | 54.43 | 40.00 | 427.80 |
| 8100.000 | 7430.00 | 112.87 | 116.73 | 116.92 | 95.05 | 3.74 | 113.09 | 1700.00 | 182.65 | 61.57 | 40.00 | 598.79 |
| 9500.000 | 7240.00 | 113.48 | 118.84 | 118.52 | 95.75 | 3.68 | 113.69 | 1400.00 | 181.93 | 67.43 | 40.00 | 748.85 |
| 10800.000 | 7070.00 | 114.03 | 119.50 | 119.50 | 96.40 | 3.62 | 114.24 | 1300.00 | 181.13 | 72.84 | 40.00 | 895.25 |
| 11800.000 | 6940.00 | 114.45 | 119.50 | 119.50 | 96.90 | 3.59 | 114.65 | 1000.00 | 180.41 | 76.99 | 40.00 | 1006.46 |
| 12900.000 | 6800.00 | 114.90 | 119.29 | 119.11 | 97.45 | 3.55 | 115.09 | 1100.00 | 179.59 | 81.54 | 40.00 | 1122.77 |
| 14300.000 | 6630.00 | 115.46 | 117.14 | 117.55 | 98.15 | 3.51 | 115.65 | 1400.00 | 178.50 | 87.29 | 40.00 | 1251.92 |
| 16600.000 | 6350.00 | 116.36 | 119.56 | 118.54 | 99.30 | 3.44 | 116.55 | 2300.00 | 176.55 | 96.67 | 40.00 | 1443.52 |
| 16700.000 | 3340.00 | 116.53 | 119.55 | 118.54 | 99.35 | 1.79 | 116.58 | 100.00 | 177.42 | 97.07 | 40.00 | 1451.95 |
| * 16701.000 | 3340.00 | 117.53 | 119.17 | 118.46 | 104.40 | 3.51 | 117.72 | 1.00 | 125.02 | 97.08 | 20.00 | 1452.01 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-----------|---------|--------|--------|--------|--------|------|--------|---------|--------|--------|-------|---------|
| 18880.000 | 2780.00 | 118.68 | 120.38 | 119.66 | 105.49 | 2.90 | 118.81 | 2179.00 | 125.51 | 103.34 | 20.00 | 1540.21 |
| 18980.000 | 2780.00 | 118.70 | 120.27 | 119.65 | 105.54 | 3.37 | 118.87 | 100.00 | 115.26 | 103.62 | 10.00 | 1544.01 |
| 20880.000 | 2350.00 | 119.72 | 121.19 | 121.13 | 106.49 | 2.82 | 119.85 | 1900.00 | 115.87 | 108.66 | 10.00 | 1612.44 |
| 20980.000 | 2350.00 | 119.76 | 121.18 | 121.12 | 106.54 | 3.02 | 119.90 | 100.00 | 111.82 | 108.92 | 6.00 | 1616.00 |
| 22550.000 | 2040.00 | 120.50 | 121.76 | 121.54 | 107.32 | 2.64 | 120.60 | 1570.00 | 111.45 | 112.95 | 6.00 | 1669.37 |
| 22600.000 | 2040.00 | 120.52 | 121.76 | 121.54 | 107.35 | 2.64 | 120.62 | 50.00 | 111.35 | 113.07 | 6.00 | 1671.05 |
| 22614.000 | 2040.00 | 120.52 | 121.76 | 121.54 | 107.36 | 2.64 | 120.63 | 14.00 | 111.29 | 113.11 | 6.00 | 1671.51 |
| 22654.000 | 2040.00 | 120.54 | 121.76 | 121.54 | 107.38 | 2.64 | 120.65 | 40.00 | 111.26 | 113.21 | 6.00 | 1672.84 |
| 25760.000 | 1550.00 | 121.60 | 124.08 | 124.02 | 108.93 | 2.16 | 121.67 | 3106.00 | 107.32 | 121.00 | 6.00 | 1782.05 |
| 27500.000 | 1550.00 | 122.11 | 126.09 | 126.03 | 109.80 | 2.28 | 122.19 | 1740.00 | 104.50 | 125.23 | 6.00 | 1851.39 |

SUMMARY OF ERRORS AND SPECIAL NOTES

NOTE SECNO= 6001.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 6401.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 16701.000 PROFILE= 1 WSEL BASED ON X5 CARD

WARNING SECNO= 16701.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

THIS RUN EXECUTED 9/ 1/89 16: 8:20

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
T3 F128-00-00 CARTER'S SLOUGH
T4 100-YEAR STORM FREQUENCY EXISTING CONDITIONS
T5 FILENAME = F128RVEX.IH2

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL FQ
2 .0042 104.4

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38 43 1 23 24 42 26 3 39 4
37 30 65

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

-10 -10

J6 IHLEQ ICOPIY SUBDIV STRTDS RMILE

1

QT 1 660
NC .15 .15 .1
X1 5960 33 1096 1132 5960 5960 5960
GR 111 0 110.1 110 110.7 210 111.4 330 113.7 480
GR 115.8 610 111.3 710 108.3 820 105 910 103.8 980
GR 101.8 1070 102.2 1096 101.6 1106 97.1 1110 96.9 1116
GR 97.2 1120 98.9 1123 98.6 1127 101.9 1132 103.1 1155
GR 105.3 1206 109.6 1270 105.6 1486 114.9 1736 115.7 1835
GR 116.4 1900 116.1 1960 116 2080 116.7 2170 117.2 2320
GR 116.4 2480 116.8 2640 116.5 2800

QT 1 610
X1 7500 22 9870 10160 1540 1540 1540
GR 117 8970 116 9090 114 9230 114 9370 114 9410
GR 114 9480 112 9820 110 9850 108 9870 106 9900
GR 104 9950 103.5 10000 104 10060 106 10110 108 10160

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| GR | 116 | 10830 | 117.5 | 11080 | | | | | | |
| X1 | 8920 | 16 | 9730 | 10280 | 8170 | 8170 | 8170 | | | |
| GR | 117 | 9090 | 116 | 9200 | 114 | 9400 | 112 | 9730 | 110 | 9800 |
| GR | 108 | 9870 | 106 | 10000 | 108 | 10190 | 110 | 10230 | 112 | 10280 |
| GR | 114 | 10360 | 116 | 10420 | 118 | 10490 | 118 | 10640 | 120 | 10680 |
| GR | 120.5 | 10740 | | | | | | | | |
| X1 | 10340 | 11 | 9950 | 10070 | 1420 | 1420 | 1420 | | | |
| GR | 121 | 9270 | 120.4 | 9490 | 120 | 9840 | 118 | 9950 | 116 | 9970 |
| GR | 114.4 | 10000 | 116 | 10040 | 118 | 10070 | 120 | 10110 | 121 | 10530 |
| GR | 122 | 10700 | | | | | | | | |
| NC | .12 | .12 | .08 | | | | | | | |
| QT | 1 | 490 | | | | | | | | |
| X1 | 12130 | 36 | 1972 | 2022 | 1790 | 1790 | 1790 | | | |
| GR | 121.4 | 0 | 120.7 | 17 | 119.9 | 18 | 120.1 | 22 | 121 | 23 |
| GR | 120.9 | 115 | 120.8 | 315 | 120.1 | 515 | 120.1 | 615 | 121.6 | 815 |
| GR | 120.4 | 915 | 121.2 | 1115 | 121.2 | 1239 | 119.6 | 1243 | 120.7 | 1262 |
| GR | 120.3 | 1415 | 120.3 | 1416 | 121.1 | 1615 | 120.2 | 1815 | 118.6 | 1915 |
| GR | 118.7 | 1972 | 118.1 | 1984 | 116 | 1995 | 114 | 2003 | 113.9 | 2005 |
| GR | 115 | 2006 | 118.5 | 2022 | 120.1 | 2115 | 120.3 | 2256 | 121.1 | 2291 |
| GR | 120.3 | 2300 | 121.7 | 2315 | 121.7 | 2415 | 121.2 | 2515 | 121.7 | 2615 |
| GR | 123 | 2715 | | | | | | | | |

LEXINGTON DRIVE

| | | | | | | | | | | |
|----|-------|--------|-------|--------|--------|-------|-------|---------|-------|---------|
| X1 | 12230 | 29 | 1953 | 1973.2 | 100 | 100 | 100 | | | |
| X3 | 10 | | | | | | | 118.7 | 118.7 | |
| GR | 121.3 | 0 | 121.8 | 200 | 121.4 | 400 | 121.3 | 600 | 121.5 | 800 |
| GR | 121.9 | 1000 | 121.6 | 1200 | 121.5 | 1400 | 121.5 | 1535 | 121.3 | 1700 |
| GR | 120.7 | 1800 | 119.8 | 1900 | 119.7 | 1953 | 119.2 | 1953.01 | 115.7 | 1953.02 |
| GR | 115.5 | 1962.6 | 115.5 | 1963.6 | 114 | 1968 | 114.3 | 1971 | 119.2 | 1973.2 |
| GR | 119.7 | 1974 | 120 | 2000 | 121.3 | 2200 | 121.7 | 2400 | 122.5 | 2600 |
| GR | 123.3 | 2800 | 123.5 | 2952 | 123.1 | 3100 | 122 | 3246 | | |
| SB | 1.05 | 1.56 | 2.7 | | 8 | 1.0 | 52 | 1.5 | 114.0 | 114.0 |
| X1 | 12255 | 29 | 1953 | 1973.2 | 25 | 25 | 25 | | | |
| X2 | | | 1 | 118.1 | 119.2 | | | | | |
| X3 | 10 | | | | | | | 119.2 | 119.2 | |
| BT | -6 | 1953 | 119.2 | 118.1 | 1962.6 | 119.2 | 118.1 | 1962.6 | 119.2 | 115.5 |
| BT | | 1963.6 | 119.2 | 115.5 | 1963.6 | 119.2 | 118.1 | 1973.2 | 119.2 | 118.1 |
| GR | 121.3 | 0 | 121.8 | 200 | 121.4 | 400 | 121.3 | 600 | 121.5 | 800 |
| GR | 121.9 | 1000 | 121.6 | 1200 | 121.5 | 1400 | 121.5 | 1535 | 121.3 | 1700 |
| GR | 120.7 | 1800 | 119.8 | 1900 | 119.7 | 1953 | 119.2 | 1953.01 | 115.7 | 1953.02 |
| GR | 115.5 | 1962.6 | 115.5 | 1963.6 | 114 | 1968 | 114.3 | 1971 | 119.2 | 1973.2 |
| GR | 119.7 | 1974 | 120 | 2000 | 121.3 | 2200 | 121.7 | 2400 | 122.5 | 2600 |
| GR | 123.3 | 2800 | 123.5 | 2952 | 123.1 | 3100 | 122 | 3246 | | |
| X1 | 12305 | 43 | 1875 | 2025 | 50 | 50 | 50 | | | |
| GR | 120.4 | 0 | 121.2 | 14 | 120.8 | 24 | 119.5 | 30 | 120.6 | 33 |
| GR | 121.5 | 41 | 121 | 100 | 121 | 200 | 120.9 | 300 | 120.7 | 500 |
| GR | 120.2 | 700 | 120.8 | 740 | 120.4 | 900 | 120.8 | 1000 | 120 | 1100 |
| GR | 120.5 | 1122 | 120.4 | 1125 | 121.1 | 1129 | 121.3 | 1134 | 121 | 1139 |
| GR | 120.3 | 1142 | 121.5 | 1153 | 122.7 | 1200 | 122.7 | 1222 | 121 | 1300 |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| GR | 120.6 | 1400 | 121.1 | 1600 | 121 | 1700 | 120 | 1800 | 119.3 | 1860 |
| GR | 119.4 | 1875 | 118.6 | 1880 | 116 | 1891 | 115.1 | 1895 | 114.1 | 1902 |
| GR | 114.7 | 1910 | 116.6 | 1915 | 118.3 | 1924 | 120.2 | 2013 | 120.6 | 2025 |
| GR | 121.4 | 2300 | 120.6 | 2500 | 123.6 | 2700 | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|--------|-------|--------|-------|-------|-------|-------|
| X1 | 12760 | 24 | 1884 | 1895.6 | 415 | 415 | 415 | | | |
| GR | 121.7 | 0 | 121.9 | 100. | 122.9 | 300. | 122.9 | 600. | 122.7 | 900. |
| GR | 122.2 | 1200. | 122.1 | 1500. | 121.2 | 1700. | 121.1 | 1884. | 115.7 | 1884. |
| GR | 115.6 | 1888. | 116.7 | 1893. | 121.1 | 1895.6 | 121.3 | 2000. | 121.8 | 2300. |
| GR | 121.7 | 2600. | 121.2 | 2800. | 122.2 | 2934. | 121.8 | 2947. | 120.6 | 2954. |
| GR | 121.7 | 2959. | 122. | 3000. | 123.5 | 3100. | 123.8 | 3219. | | |

| | | | | | | | | | | |
|----|-------|-------|-------|--------|-------|--------|-------|-------|-------|-------|
| X1 | 12860 | 24 | 1884 | 1895.6 | 100 | 100 | 100 | | | |
| X3 | 10 | | | | | | | 120.5 | 120.5 | |
| GR | 121.7 | 0 | 121.9 | 100. | 122.9 | 300. | 122.9 | 600. | 122.7 | 900. |
| GR | 122.2 | 1200. | 122.1 | 1500. | 121.2 | 1700. | 121.1 | 1884. | 115.7 | 1884. |
| GR | 115.6 | 1888. | 116.7 | 1893. | 121.1 | 1895.6 | 121.3 | 2000. | 121.8 | 2300. |
| GR | 121.7 | 2600. | 121.2 | 2800. | 122.2 | 2934. | 121.8 | 2947. | 120.6 | 2954. |
| GR | 121.7 | 2959. | 122. | 3000. | 123.5 | 3100. | 123.8 | 3219. | | |

WHITE BIRCH DRIVE

| | | | | | | | | | | |
|----|-------|-------|-------|--------|-------|--------|-------|-------|-------|-------|
| X1 | 12861 | 24 | 1884 | 1895.6 | 1 | 1 | 1 | | | |
| X2 | | | | 120 | 121.1 | | | | | |
| GR | 121.7 | 0 | 121.9 | 100. | 122.9 | 300. | 122.9 | 600. | 122.7 | 900. |
| GR | 122.2 | 1200. | 122.1 | 1500. | 121.2 | 1700. | 121.1 | 1884. | 115.7 | 1884. |
| GR | 115.6 | 1888. | 116.7 | 1893. | 121.1 | 1895.6 | 121.3 | 2000. | 121.8 | 2300. |
| GR | 121.7 | 2600. | 121.2 | 2800. | 122.2 | 2934. | 121.8 | 2947. | 120.6 | 2954. |
| GR | 121.7 | 2959. | 122. | 3000. | 123.5 | 3100. | 123.8 | 3219. | | |

| | | | | | | | | | | |
|----|-------|-------|-------|--------|-------|--------|-------|-------|-------|-------|
| X1 | 12879 | | | | 18 | 18 | 18 | | | |
| X2 | | | | 120 | 121.1 | | | | | |
| X1 | 12880 | 24 | 1884 | 1895.6 | 1 | 1 | 1 | | | |
| X3 | 10 | | | | | | | 121.1 | 121.1 | |
| GR | 121.7 | 0 | 121.9 | 100. | 122.9 | 300. | 122.9 | 600. | 122.7 | 900. |
| GR | 122.2 | 1200. | 122.1 | 1500. | 121.2 | 1700. | 121.1 | 1884. | 115.7 | 1884. |
| GR | 115.6 | 1888. | 116.7 | 1893. | 121.1 | 1895.6 | 121.3 | 2000. | 121.8 | 2300. |
| GR | 121.7 | 2600. | 121.2 | 2800. | 122.2 | 2934. | 121.8 | 2947. | 120.6 | 2954. |
| GR | 121.7 | 2959. | 122. | 3000. | 123.5 | 3100. | 123.8 | 3219. | | |

| | | | | | | | | | | |
|----|-------|-------|-------|--------|-------|--------|-------|-------|-------|-------|
| X1 | 12930 | 24 | 1884 | 1895.6 | 50 | 50 | 50 | | | |
| GR | 121.7 | 0 | 121.9 | 100. | 122.9 | 300. | 122.9 | 600. | 122.7 | 900. |
| GR | 122.2 | 1200. | 122.1 | 1500. | 121.2 | 1700. | 121.1 | 1884. | 115.7 | 1884. |
| GR | 115.6 | 1888. | 116.7 | 1893. | 121.1 | 1895.6 | 121.3 | 2000. | 121.8 | 2300. |
| GR | 121.7 | 2600. | 121.2 | 2800. | 122.2 | 2934. | 121.8 | 2947. | 120.6 | 2954. |
| GR | 121.7 | 2959. | 122. | 3000. | 123.5 | 3100. | 123.8 | 3219. | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 12999 | 40 | 1862 | 1914 | 69 | 69 | 69 | | | |
| GR | 121.4 | 0 | 121.4 | 10 | 120.5 | 16 | 121 | 24 | 121.3 | 47 |
| GR | 120.6 | 100 | 122 | 200 | 122.1 | 400 | 122.1 | 600 | 122.1 | 800 |
| GR | 121.4 | 1000 | 121 | 1200 | 121.3 | 1400 | 122 | 1472 | 121 | 1680 |
| GR | 120.4 | 1700 | 119.6 | 1800 | 119 | 1862 | 117.9 | 1874 | 115.9 | 1881 |
| GR | 115.4 | 1886 | 115.6 | 1889 | 118.2 | 1893 | 120.7 | 1905 | 121.4 | 1914 |
| GR | 120.8 | 2000 | 121.9 | 2200 | 121.9 | 2400 | 120.1 | 2600 | 120.4 | 2800 |

| | | | | | | | | | | |
|----|-------|---------|-------|--------|-------|------|-------|--------|-------|--------|
| GR | 121.6 | 2907 | 120.4 | 2915 | 122 | 2925 | 122.3 | 2933 | 121.9 | 2941 |
| GR | 120.9 | 2950 | 121.8 | 2958 | 122.9 | 3000 | 124.1 | 3100 | 123.7 | 3219 |
| X1 | 13049 | 26 | 1884 | 1895.6 | 50 | 50 | 50 | | | |
| GR | 121.7 | 0 | 121.9 | 100 | 122.9 | 300 | 122.9 | 600 | 122.7 | 900 |
| GR | 122.2 | 1200 | 122.1 | 1500 | 121.2 | 1700 | 121.1 | 1884 | 115.7 | 1884 |
| GR | 119.6 | 1884.01 | 115.6 | 1888 | 116.7 | 1893 | 119.6 | 1895.6 | 121.1 | 1895.6 |
| GR | 121.3 | 2000 | 121.8 | 2300 | 121.7 | 2600 | 121.2 | 2800 | 122.2 | 2934 |
| GR | 121.8 | 2947 | 120.6 | 2954 | 121.7 | 2959 | 122 | 3000 | 123.5 | 3100 |
| GR | 123.8 | 3219 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 13099 | 33 | 1871 | 1985 | 50 | 50 | 50 | | | |
| GR | 122.3 | 603 | 122.1 | 900 | 121.7 | 1200 | 120.7 | 1400 | 121.7 | 1500 |
| GR | 121.6 | 1600 | 120.1 | 1800 | 120 | 1871 | 119.5 | 1886 | 117 | 1914 |
| GR | 115.8 | 1925 | 115.3 | 1934 | 115.6 | 1940 | 117.8 | 1942 | 119.5 | 1954 |
| GR | 120 | 1985 | 119.9 | 2000 | 121.8 | 2200 | 121 | 2300 | 121.4 | 2367 |
| GR | 121.2 | 2500 | 122.3 | 2700 | 120.2 | 2800 | 121.5 | 2900 | 121 | 2905 |
| GR | 120.2 | 2914 | 121.7 | 2925 | 122 | 2935 | 121.3 | 2945 | 120.3 | 2956 |
| GR | 120.8 | 2961 | 121.4 | 3000 | 123.2 | 3219 | | | | |

CONCORD DRIVE

| | | | | | | | | | | |
|----|-------|------|-------|------|-------|------|-------|------|-------|------|
| X1 | 13400 | 33 | 1871 | 1985 | 301 | 301 | 301 | | | |
| GR | 122.3 | 603 | 122.1 | 900 | 121.7 | 1200 | 120.7 | 1400 | 121.7 | 1500 |
| GR | 121.6 | 1600 | 120.1 | 1800 | 120 | 1871 | 119.5 | 1886 | 117 | 1914 |
| GR | 115.8 | 1925 | 115.3 | 1934 | 115.6 | 1940 | 117.8 | 1942 | 119.5 | 1954 |
| GR | 120 | 1985 | 119.9 | 2000 | 121.8 | 2200 | 121 | 2300 | 121.4 | 2367 |
| GR | 121.2 | 2500 | 122.3 | 2700 | 120.2 | 2800 | 121.5 | 2900 | 121 | 2905 |
| GR | 120.2 | 2914 | 121.7 | 2925 | 122 | 2935 | 121.3 | 2945 | 120.3 | 2956 |
| GR | 120.8 | 2961 | 121.4 | 3000 | 123.2 | 3219 | | | | |

IHLQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 1/89 16: 8:36

HEC2 RELEASE DATED SEPT 88

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

F128-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|--------|--------|--------|--------|--------|------|--------|---------|---------|--------|-----|------|
| 5960.000 | 660.00 | 104.21 | 102.20 | 101.90 | 96.90 | 2.59 | 104.28 | .00 | 224.32 | .00 | .01 | .00 |
| * 7500.000 | 610.00 | 107.23 | 108.00 | 108.00 | 103.50 | .96 | 107.24 | 1540.00 | 259.54 | 8.55 | .01 | .00 |
| * 8920.000 | 610.00 | 110.55 | 112.00 | 112.00 | 106.00 | .46 | 110.56 | 8170.00 | 462.96 | 76.31 | .01 | .00 |
| * 10340.000 | 610.00 | 116.75 | 118.00 | 118.00 | 114.40 | 5.30 | 117.18 | 1420.00 | 88.64 | 85.30 | .01 | .00 |
| * 12130.000 | 490.00 | 120.61 | 118.70 | 118.50 | 113.90 | 1.40 | 120.63 | 1790.00 | 1163.92 | 111.03 | .01 | .00 |
| * 12230.000 | 490.00 | 120.72 | 119.70 | 119.20 | 114.00 | 3.50 | 120.87 | 100.00 | 310.65 | 112.73 | .01 | .00 |
| * 12255.000 | 490.00 | 121.49 | 119.70 | 119.20 | 114.00 | 1.93 | 121.52 | 25.00 | 1248.30 | 113.17 | .01 | .00 |
| * 12305.000 | 490.00 | 121.53 | 119.40 | 120.60 | 114.10 | .50 | 121.53 | 50.00 | 2440.13 | 115.29 | .01 | .00 |
| * 12760.000 | 490.00 | 122.07 | 121.10 | 121.10 | 115.60 | 2.04 | 122.09 | 415.00 | 1609.50 | 134.58 | .01 | .00 |
| * 12860.000 | 490.00 | 122.24 | 121.10 | 121.10 | 115.60 | 1.45 | 122.25 | 100.00 | 2011.65 | 138.74 | .01 | .00 |
| 12861.000 | 490.00 | 122.25 | 121.10 | 121.10 | 115.60 | .88 | 122.25 | 1.00 | 2013.41 | 138.78 | .01 | .00 |
| 12879.000 | 490.00 | 122.28 | 121.10 | 121.10 | 115.60 | .83 | 122.28 | 18.00 | 2038.55 | 139.62 | .01 | .00 |
| 12880.000 | 490.00 | 122.27 | 121.10 | 121.10 | 115.60 | 1.37 | 122.28 | 1.00 | 2041.03 | 139.67 | .01 | .00 |
| 12930.000 | 490.00 | 122.32 | 121.10 | 121.10 | 115.60 | 1.25 | 122.33 | 50.00 | 2085.29 | 142.04 | .01 | .00 |
| * 12999.000 | 490.00 | 122.34 | 119.00 | 121.40 | 115.40 | .42 | 122.34 | 69.00 | 2978.58 | 146.05 | .01 | .00 |
| * 13049.000 | 490.00 | 122.36 | 121.10 | 121.10 | 115.60 | .97 | 122.36 | 50.00 | 2114.80 | 148.97 | .01 | .00 |
| * 13099.000 | 490.00 | 122.37 | 120.00 | 120.00 | 115.30 | .42 | 122.37 | 50.00 | 2515.79 | 151.63 | .01 | .00 |

9/ 1/89 16: 8:20

PAGE 7

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-----------|--------|--------|--------|--------|--------|-----|--------|--------|---------|--------|-----|------|
| 13400.000 | 490.00 | 122.39 | 120.00 | 120.00 | 115.30 | .41 | 122.39 | 301.00 | 2517.84 | 169.02 | .01 | .00 |

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 7500.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 8920.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 10340.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 12130.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 12230.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 12255.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 12305.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 12760.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 12860.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 12999.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 13049.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 13099.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

THIS RUN EXECUTED 9/ 4/89 8: 3:48

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
 T3 F128-00-00 CARTER'S SLOUGH
 T4 100-YEAR STORM FREQUENCY ULTIMATE CONDITIONS
 T5 FILENAME = F128ULT.IH2

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL FQ
 2 .0005 97

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38 43 1 23 24 42 26 3 39 4
 37 30 65

J5 LPRNT NUMSEC *****REQUESTED SECTION NUMBERS*****
 -10 -10

J6 IHLEQ ICOPY SUBDIV STRTDS RMILE
 1

QT 1 2080
 NC .15 .15 .04 .1 .3
 X1 600 5 9990 10010 600 600 600
 CI -1 83.3 0.04 3 3 10
 GR 97.0 9800 97.7 9990 97.7 10000 97.7 10010 99.0 10380

QT 1 1900
 X1 1850 5 9990 10010 1250 1250 1250
 CI -1 83.93 0.04 3 3 10
 GR 98.5 9700 97.7 9990 97.7 10000 97.7 10010 97.0 10330

QT 1 1720
 X1 3200 7 9990 10010 1350 1350 1350
 CI -1 84.60 0.04 3 3 10
 GR 99.0 9760 98.2 9990 98.2 10000 98.2 10010 98.0 10070
 GR 97.0 10320 97.5 10580

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 1650 | | | | | | | | |
| X1 | 3800 | 9 | 9990 | 10010 | 600 | 600 | 600 | | | |
| CI | -1 | 84.90 | 0.04 | 3 | 3 | 10 | | | | |
| GR | 112.5 | 9670 | 110.0 | 9820 | 100.0 | 9990 | 100.0 | 10000 | 100.0 | 10010 |
| GR | 104.0 | 10110 | 104.0 | 10370 | 110.0 | 10550 | 116.5 | 10850 | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 3801 | 9 | 9990 | 10010 | 600 | 600 | 600 | | | |
| CI | -1 | 88.90 | 0.04 | 3 | 3 | 6 | | | | |
| X5 | -1 | 3.0 | | | | | | | | |
| GR | 112.5 | 9670 | 110.0 | 9820 | 100.0 | 9990 | 100.0 | 10000 | 100.0 | 10010 |
| GR | 104.0 | 10110 | 104.0 | 10370 | 110.0 | 10550 | 116.5 | 10850 | | |

| | | | | | | | | | | |
|----|-------|-------|-------|------|-------|------|-------|------|-------|------|
| QT | 1 | 1590 | | | | | | | | |
| X1 | 4300 | 33 | 1096 | 1132 | 500 | 500 | 500 | | | |
| CI | -1 | 89.40 | .04 | 3 | 3 | 6 | | | | |
| GR | 111 | 0 | 110.1 | 110 | 110.7 | 210 | 111.4 | 330 | 113.7 | 480 |
| GR | 115.8 | 610 | 111.3 | 710 | 108.3 | 820 | 105 | 910 | 103.8 | 980 |
| GR | 101.8 | 1070 | 102.2 | 1096 | 101.6 | 1106 | 97.1 | 1110 | 96.9 | 1116 |
| GR | 97.2 | 1120 | 98.9 | 1123 | 98.6 | 1127 | 101.9 | 1132 | 103.1 | 1155 |
| GR | 105.3 | 1206 | 109.6 | 1270 | 105.6 | 1486 | 114.9 | 1736 | 115.7 | 1835 |
| GR | 116.4 | 1900 | 116.1 | 1960 | 116 | 2080 | 116.7 | 2170 | 117.2 | 2320 |
| GR | 116.4 | 2480 | 116.8 | 2640 | 116.5 | 2800 | | | | |

| | | | | | | | | | | |
|----|------|-------|-------|-------|-------|-------|-------|-------|-----|-------|
| QT | 1 | 1430 | | | | | | | | |
| X1 | 5800 | 24 | 9990 | 10010 | 1500 | 1500 | 1500 | | | |
| CI | -1 | 90.90 | .04 | 3 | 3 | 6 | | | | |
| GR | 117 | 8970 | 116 | 9090 | 114 | 9230 | 114 | 9370 | 114 | 9410 |
| GR | 114 | 9480 | 112 | 9820 | 110 | 9850 | 108 | 9870 | 106 | 9900 |
| GR | 104 | 9950 | 103.5 | 9990 | 103.5 | 10000 | 103.5 | 10010 | 104 | 10060 |
| GR | 106 | 10110 | 108 | 10160 | 108 | 10350 | 108 | 10640 | 110 | 10680 |
| GR | 112 | 10720 | 114 | 10750 | 116 | 10830 | 117.5 | 11080 | | |

| | | | | | | | | | | |
|----|------|-------|------|-------|-------|-------|------|-------|-----|-------|
| QT | 1 | 1310 | | | | | | | | |
| X1 | 7000 | 18 | 9990 | 10010 | 1200 | 1200 | 1200 | | | |
| CI | -1 | 92.10 | .04 | 3 | 3 | 6 | | | | |
| GR | 117 | 9090 | 116 | 9200 | 114 | 9400 | 112 | 9730 | 110 | 9800 |
| GR | 108 | 9870 | 106 | 9990 | 106 | 10000 | 106 | 10010 | 108 | 10190 |
| GR | 110 | 10230 | 112 | 10280 | 114 | 10360 | 116 | 10420 | 118 | 10490 |
| GR | 118 | 10640 | 120 | 10680 | 120.5 | 10740 | | | | |

| | | | | | | | | | | |
|----|------|-------|------|-------|-------|-------|-----|-------|-----|-------|
| QT | 1 | 1270 | | | | | | | | |
| X1 | 7400 | 18 | 9990 | 10010 | 400 | 400 | 400 | | 2.5 | |
| CI | -1 | 92.50 | .04 | 3 | 3 | 6 | | | | |
| GR | 117 | 9090 | 116 | 9200 | 114 | 9400 | 112 | 9730 | 110 | 9800 |
| GR | 108 | 9870 | 106 | 9990 | 106 | 10000 | 106 | 10010 | 108 | 10190 |
| GR | 110 | 10230 | 112 | 10280 | 114 | 10360 | 116 | 10420 | 118 | 10490 |
| GR | 118 | 10640 | 120 | 10680 | 120.5 | 10740 | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|------|-------|------|-------|-------|-------|-----|-------|-----|-------|
| X1 | 7401 | 18 | 9990 | 10010 | 1 | 1 | 1 | | 2.5 | |
| CI | -1 | 96.50 | .04 | 3 | 3 | 6 | | | | |
| X5 | -1 | 4.0 | | | | | | | | |
| GR | 117 | 9090 | 116 | 9200 | 114 | 9400 | 112 | 9730 | 110 | 9800 |
| GR | 108 | 9870 | 106 | 9990 | 106 | 10000 | 106 | 10010 | 108 | 10190 |
| GR | 110 | 10230 | 112 | 10280 | 114 | 10360 | 116 | 10420 | 118 | 10490 |
| GR | 118 | 10640 | 120 | 10680 | 120.5 | 10740 | | | | |

| | | | | | | | | | | |
|----|------|-------|------|-------|-------|-------|-----|-------|-----|-------|
| QT | 1 | 1230 | | | | | | | | |
| X1 | 7900 | 18 | 9990 | 10010 | 499 | 499 | 499 | | 6 | |
| CI | -1 | 97.00 | .04 | 3 | 3 | 6 | | | | |
| GR | 117 | 9090 | 116 | 9200 | 114 | 9400 | 112 | 9730 | 110 | 9800 |
| GR | 108 | 9870 | 106 | 9990 | 106 | 10000 | 106 | 10010 | 108 | 10190 |
| GR | 110 | 10230 | 112 | 10280 | 114 | 10360 | 116 | 10420 | 118 | 10490 |
| GR | 118 | 10640 | 120 | 10680 | 120.5 | 10740 | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|------|--------|------|-------|-------|-------|-----|-------|-----|-------|
| X1 | 7901 | 18 | 9990 | 10010 | 1 | 1 | 1 | | 6 | |
| CI | -1 | 101.00 | .04 | 3 | 3 | 6 | | | | |
| X5 | -1 | 4.0 | | | | | | | | |
| GR | 117 | 9090 | 116 | 9200 | 114 | 9400 | 112 | 9730 | 110 | 9800 |
| GR | 108 | 9870 | 106 | 9990 | 106 | 10000 | 106 | 10010 | 108 | 10190 |
| GR | 110 | 10230 | 112 | 10280 | 114 | 10360 | 116 | 10420 | 118 | 10490 |
| GR | 118 | 10640 | 120 | 10680 | 120.5 | 10740 | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-----|-------|-----|-------|-----|-------|
| QT | 1 | 1180 | | | | | | | | |
| X1 | 8400 | 11 | 9950 | 10070 | 499 | 499 | 499 | | | |
| CI | -1 | 101.50 | .04 | 3 | 3 | 6 | | | | |
| GR | 121 | 9270 | 120.4 | 9490 | 120 | 9840 | 118 | 9950 | 116 | 9970 |
| GR | 114.4 | 10000 | 116 | 10040 | 118 | 10070 | 120 | 10110 | 121 | 10530 |
| GR | 122 | 10700 | | | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-----|-------|-----|-------|-----|-------|
| X1 | 8401 | 11 | 9950 | 10070 | 1 | 1 | 1 | | | |
| CI | -1 | 105.00 | .04 | 3 | 3 | 6 | | | | |
| X5 | -1 | 3.5 | | | | | | | | |
| GR | 121 | 9270 | 120.4 | 9490 | 120 | 9840 | 118 | 9950 | 116 | 9970 |
| GR | 114.4 | 10000 | 116 | 10040 | 118 | 10070 | 120 | 10110 | 121 | 10530 |
| GR | 122 | 10700 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| QT | 1 | 1060 | | | | | | | | |
| X1 | 10100 | 36 | 1972 | 2022 | 1699 | 1699 | 1699 | | | |
| CI | -1 | 105.85 | .04 | 3 | 3 | 6 | | | | |
| GR | 121.4 | 0 | 120.7 | 17 | 119.9 | 18 | 120.1 | 22 | 121 | 23 |
| GR | 120.9 | 115 | 120.8 | 315 | 120.1 | 515 | 120.1 | 615 | 121.6 | 815 |
| GR | 120.4 | 915 | 121.2 | 1115 | 121.2 | 1239 | 119.6 | 1243 | 120.7 | 1262 |
| GR | 120.3 | 1415 | 120.3 | 1416 | 121.1 | 1615 | 120.2 | 1815 | 118.6 | 1915 |
| GR | 118.7 | 1972 | 118.1 | 1984 | 116 | 1995 | 114 | 2003 | 113.9 | 2005 |
| GR | 115 | 2006 | 118.5 | 2022 | 120.1 | 2115 | 120.3 | 2256 | 121.1 | 2291 |
| GR | 120.3 | 2300 | 121.7 | 2315 | 121.7 | 2415 | 121.2 | 2515 | 121.7 | 2615 |
| GR | 123 | 2715 | | | | | | | | |

| | | | | | | | | | | |
|--------------------------|-------|--------|-------|--------|-------|--------|-------|---------|-------|---------|
| QT | 1 | 770 | | | | | | | | |
| DROP STRUCTURE | | | | | | | | | | |
| X1 | 10110 | 36 | 1972 | 2022 | 10 | 10 | 10 | | | |
| CI | -1 | 107.85 | .04 | 3 | 3 | 6 | | | | |
| GR | 121.4 | 0 | 120.7 | 17 | 119.9 | 18 | 120.1 | 22 | 121 | 23 |
| GR | 120.9 | 115 | 120.8 | 315 | 120.1 | 515 | 120.1 | 615 | 121.6 | 815 |
| GR | 120.4 | 915 | 121.2 | 1115 | 121.2 | 1239 | 119.6 | 1243 | 120.7 | 1262 |
| GR | 120.3 | 1415 | 120.3 | 1416 | 121.1 | 1615 | 120.2 | 1815 | 118.6 | 1915 |
| GR | 118.7 | 1972 | 118.1 | 1984 | 116 | 1995 | 114 | 2003 | 113.9 | 2005 |
| GR | 115 | 2006 | 118.5 | 2022 | 120.1 | 2115 | 120.3 | 2256 | 121.1 | 2291 |
| GR | 120.3 | 2300 | 121.7 | 2315 | 121.7 | 2415 | 121.2 | 2515 | 121.7 | 2615 |
| GR | 123 | 2715 | | | | | | | | |
| 2 - 8' x 8' BOX CULVERTS | | | | | | | | | | |
| LEXINGTON DRIVE | | | | | | | | | | |
| X1 | 10190 | 29 | 1953 | 1973.2 | 80 | 80 | 80 | | | |
| CI | -1 | 107.89 | .04 | 3 | 3 | 6 | | | | |
| GR | 121.3 | 0 | 121.8 | 200 | 121.4 | 400 | 121.3 | 600 | 121.5 | 800 |
| GR | 121.9 | 1000 | 121.6 | 1200 | 121.5 | 1400 | 121.5 | 1535 | 121.3 | 1700 |
| GR | 120.7 | 1800 | 119.8 | 1900 | 119.7 | 1953 | 119.2 | 1953.01 | 115.7 | 1953.02 |
| GR | 115.5 | 1962.6 | 115.5 | 1963.6 | 114 | 1968 | 114.3 | 1971 | 119.2 | 1973.2 |
| GR | 119.7 | 1974 | 120 | 2000 | 121.3 | 2200 | 121.7 | 2400 | 122.5 | 2600 |
| GR | 123.3 | 2800 | 123.5 | 2952 | 123.1 | 3100 | 122 | 3246 | | |
| X1 | 10250 | 29 | 1953 | 1973.2 | 60 | 60 | 60 | | | |
| CI | -1 | 107.92 | .04 | 3 | 3 | 6 | | | | |
| X5 | -1 | 0.9 | | | | | | | | |
| GR | 121.3 | 0 | 121.8 | 200 | 121.4 | 400 | 121.3 | 600 | 121.5 | 800 |
| GR | 121.9 | 1000 | 121.6 | 1200 | 121.5 | 1400 | 121.5 | 1535 | 121.3 | 1700 |
| GR | 120.7 | 1800 | 119.8 | 1900 | 119.7 | 1953 | 119.2 | 1953.01 | 115.7 | 1953.02 |
| GR | 115.5 | 1962.6 | 115.5 | 1963.6 | 114 | 1968 | 114.3 | 1971 | 119.2 | 1973.2 |
| GR | 119.7 | 1974 | 120 | 2000 | 121.3 | 2200 | 121.7 | 2400 | 122.5 | 2600 |
| GR | 123.3 | 2800 | 123.5 | 2952 | 123.1 | 3100 | 122 | 3246 | | |
| X1 | 10285 | 43 | 1875 | 1924 | 35 | 35 | 35 | | | |
| CI | -1 | 107.94 | .04 | 3 | 3 | 6 | | | | |
| GR | 120.4 | 0 | 121.2 | 14 | 120.8 | 24 | 119.5 | 30 | 120.6 | 33 |
| GR | 121.5 | 41 | 121 | 100 | 121 | 200 | 120.9 | 300 | 120.7 | 500 |
| GR | 120.2 | 700 | 120.8 | 740 | 120.4 | 900 | 120.8 | 1000 | 120 | 1100 |
| GR | 120.5 | 1122 | 120.4 | 1125 | 121.1 | 1129 | 121.3 | 1134 | 121 | 1139 |
| GR | 120.3 | 1142 | 121.5 | 1153 | 122.7 | 1200 | 122.7 | 1222 | 121 | 1300 |
| GR | 120.6 | 1400 | 121.1 | 1600 | 121 | 1700 | 120 | 1800 | 119.3 | 1860 |
| GR | 119.4 | 1875 | 118.6 | 1880 | 116 | 1891 | 115.1 | 1895 | 114.1 | 1902 |
| GR | 114.7 | 1910 | 116.6 | 1915 | 118.3 | 1924 | 120.2 | 2013 | 120.6 | 2025 |
| GR | 121.4 | 2300 | 120.6 | 2500 | 123.6 | 2700 | | | | |
| QT | 1 | 740 | | | | | | | | |
| X1 | 10700 | 24 | 1884 | 1895.6 | 415 | 415 | 415 | | | |
| CI | -1 | 108.15 | .04 | 3 | 3 | 6 | | | | |
| GR | 121.7 | 0 | 121.9 | 100. | 122.9 | 300. | 122.9 | 600. | 122.7 | 900. |
| GR | 122.2 | 1200. | 122.1 | 1500. | 121.2 | 1700. | 121.1 | 1884. | 115.7 | 1884. |
| GR | 115.6 | 1888. | 116.7 | 1893. | 121.1 | 1895.6 | 121.3 | 2000. | 121.8 | 2300. |
| GR | 121.7 | 2600. | 121.2 | 2800. | 122.2 | 2934. | 121.8 | 2947. | 120.6 | 2954. |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 11039 | 33 | 1886 | 1954 | 50 | 50 | 50 | | | |
| CI | -1 | 108.32 | .04 | 3 | 3 | 6 | | | | |
| GR | 122.3 | 603 | 122.1 | 900 | 121.7 | 1200 | 120.7 | 1400 | 121.7 | 1500 |
| GR | 121.6 | 1600 | 120.1 | 1800 | 120 | 1871 | 119.5 | 1886 | 117 | 1914 |
| GR | 115.8 | 1925 | 115.3 | 1934 | 115.6 | 1940 | 117.8 | 1942 | 119.5 | 1954 |
| GR | 120 | 1985 | 119.9 | 2000 | 121.8 | 2200 | 121 | 2300 | 121.4 | 2367 |
| GR | 121.2 | 2500 | 122.3 | 2700 | 120.2 | 2800 | 121.5 | 2900 | 121 | 2905 |
| GR | 120.2 | 2914 | 121.7 | 2925 | 122 | 2935 | 121.3 | 2945 | 120.3 | 2956 |
| GR | 120.8 | 2961 | 121.4 | 3000 | 123.2 | 3219 | | | | |

QT 1 700
 2 - 8' x 8' BOX CULVERTS
 CONCORD DRIVE

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 11280 | 33 | 1886 | 1954 | 241 | 241 | 241 | | | |
| CI | -1 | 108.44 | .04 | 3 | 3 | 6 | | | | |
| GR | 122.3 | 603 | 122.1 | 900 | 121.7 | 1200 | 120.7 | 1400 | 121.7 | 1500 |
| GR | 121.6 | 1600 | 120.1 | 1800 | 120 | 1871 | 119.5 | 1886 | 117 | 1914 |
| GR | 115.8 | 1925 | 115.3 | 1934 | 115.6 | 1940 | 117.8 | 1942 | 119.5 | 1954 |
| GR | 120 | 1985 | 119.9 | 2000 | 121.8 | 2200 | 121 | 2300 | 121.4 | 2367 |
| GR | 121.2 | 2500 | 122.3 | 2700 | 120.2 | 2800 | 121.5 | 2900 | 121 | 2905 |
| GR | 120.2 | 2914 | 121.7 | 2925 | 122 | 2935 | 121.3 | 2945 | 120.3 | 2956 |
| GR | 120.8 | 2961 | 121.4 | 3000 | 123.2 | 3219 | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 11340 | 33 | 1886 | 1954 | 60 | 60 | 60 | | | |
| CI | -1 | 108.47 | .04 | 3 | 3 | 6 | | | | |
| X5 | -1 | 0.7 | | | | | | | | |
| GR | 122.3 | 603 | 122.1 | 900 | 121.7 | 1200 | 120.7 | 1400 | 121.7 | 1500 |
| GR | 121.6 | 1600 | 120.1 | 1800 | 120 | 1871 | 119.5 | 1886 | 117 | 1914 |
| GR | 115.8 | 1925 | 115.3 | 1934 | 115.6 | 1940 | 117.8 | 1942 | 119.5 | 1954 |
| GR | 120 | 1985 | 119.9 | 2000 | 121.8 | 2200 | 121 | 2300 | 121.4 | 2367 |
| GR | 121.2 | 2500 | 122.3 | 2700 | 120.2 | 2800 | 121.5 | 2900 | 121 | 2905 |
| GR | 120.2 | 2914 | 121.7 | 2925 | 122 | 2935 | 121.3 | 2945 | 120.3 | 2956 |
| GR | 120.8 | 2961 | 121.4 | 3000 | 123.2 | 3219 | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|------|-------|------|-------|------|-------|------|
| X1 | 11370 | 33 | 1871 | 1985 | 30 | 30 | 30 | | | |
| CI | -1 | 108.48 | .04 | 3 | 3 | 6 | | | | |
| GR | 122.3 | 603 | 122.1 | 900 | 121.7 | 1200 | 120.7 | 1400 | 121.7 | 1500 |
| GR | 121.6 | 1600 | 120.1 | 1800 | 120 | 1871 | 119.5 | 1886 | 117 | 1914 |
| GR | 115.8 | 1925 | 115.3 | 1934 | 115.6 | 1940 | 117.8 | 1942 | 119.5 | 1954 |
| GR | 120 | 1985 | 119.9 | 2000 | 121.8 | 2200 | 121 | 2300 | 121.4 | 2367 |
| GR | 121.2 | 2500 | 122.3 | 2700 | 120.2 | 2800 | 121.5 | 2900 | 121 | 2905 |
| GR | 120.2 | 2914 | 121.7 | 2925 | 122 | 2935 | 121.3 | 2945 | 120.3 | 2956 |
| GR | 120.8 | 2961 | 121.4 | 3000 | 123.2 | 3219 | | | | |

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 4/89 8: 4: 6

HEC2 RELEASE DATED SEPT 88

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

F128-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|---------|--------|-------|-------|--------|
| 600.000 | 2080.00 | 96.72 | 97.56 | 97.84 | 83.30 | 3.09 | 96.86 | .00 | 90.50 | .00 | 10.00 | .00 |
| 1850.000 | 1900.00 | 97.32 | 97.80 | 97.62 | 83.93 | 2.83 | 97.44 | 1250.00 | 236.00 | 4.68 | 10.00 | 34.10 |
| 3200.000 | 1720.00 | 97.86 | 98.33 | 98.08 | 84.60 | 2.56 | 97.96 | 1350.00 | 565.74 | 17.11 | 10.00 | 69.04 |
| 3800.000 | 1650.00 | 98.07 | 102.88 | 101.83 | 84.90 | 2.53 | 98.17 | 600.00 | 89.05 | 21.62 | 10.00 | 87.06 |
| * 3801.000 | 1650.00 | 101.07 | 101.88 | 101.20 | 88.90 | 3.19 | 101.23 | 600.00 | 79.04 | 22.78 | 6.00 | 102.68 |
| 4300.000 | 1590.00 | 101.40 | 101.86 | 103.25 | 89.40 | 3.16 | 101.55 | 500.00 | 77.99 | 23.68 | 6.00 | 111.46 |
| 5800.000 | 1430.00 | 102.37 | 103.90 | 103.82 | 90.90 | 3.09 | 102.52 | 1500.00 | 74.79 | 26.31 | 6.00 | 140.17 |
| 7000.000 | 1310.00 | 103.16 | 106.61 | 106.40 | 92.10 | 3.03 | 103.30 | 1200.00 | 72.31 | 28.33 | 6.00 | 167.81 |
| 7400.000 | 1270.00 | 103.42 | 109.22 | 108.97 | 92.50 | 3.00 | 103.56 | 400.00 | 71.50 | 28.99 | 6.00 | 179.43 |
| * 7401.000 | 1270.00 | 107.42 | 109.01 | 108.83 | 96.50 | 3.00 | 107.56 | 1.00 | 71.52 | 29.00 | 6.00 | 179.46 |
| 7900.000 | 1230.00 | 107.75 | 112.67 | 112.44 | 97.00 | 2.99 | 107.89 | 499.00 | 70.47 | 29.81 | 6.00 | 191.49 |
| * 7901.000 | 1230.00 | 111.75 | 112.46 | 112.30 | 101.00 | 2.99 | 111.89 | 1.00 | 70.49 | 29.81 | 6.00 | 191.51 |
| 8400.000 | 1180.00 | 112.08 | 118.00 | 118.00 | 101.50 | 2.96 | 112.22 | 499.00 | 69.46 | 30.61 | 6.00 | 201.81 |
| * 8401.000 | 1180.00 | 115.58 | 118.00 | 118.00 | 105.00 | 2.96 | 115.72 | 1.00 | 69.48 | 30.61 | 6.00 | 201.83 |
| 10100.000 | 1060.00 | 116.57 | 118.67 | 118.79 | 105.85 | 2.59 | 116.68 | 1699.00 | 70.34 | 33.34 | 6.00 | 228.58 |
| * 10110.000 | 770.00 | 116.57 | 118.68 | 118.68 | 107.85 | 2.74 | 116.69 | 10.00 | 58.37 | 33.35 | 6.00 | 228.72 |
| 10190.000 | 770.00 | 116.63 | 119.75 | 120.02 | 107.89 | 2.74 | 116.74 | 80.00 | 58.37 | 33.46 | 6.00 | 229.80 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|--------|--------|--------|--------|--------|------|--------|--------|--------|-------|------|--------|
| * 10250.000 | 770.00 | 117.53 | 119.75 | 120.02 | 107.92 | 2.30 | 117.61 | 60.00 | 63.64 | 33.55 | 6.00 | 230.70 |
| 10285.000 | 770.00 | 117.54 | 119.32 | 118.52 | 107.94 | 2.30 | 117.63 | 35.00 | 63.65 | 33.60 | 6.00 | 231.16 |
| 10700.000 | 740.00 | 117.73 | 121.12 | 121.17 | 108.15 | 2.22 | 117.81 | 415.00 | 63.47 | 34.20 | 6.00 | 237.54 |
| 10780.000 | 740.00 | 117.76 | 121.12 | 121.17 | 108.19 | 2.23 | 117.84 | 80.00 | 63.44 | 34.32 | 6.00 | 239.11 |
| * 10840.000 | 740.00 | 118.56 | 121.12 | 121.17 | 108.22 | 1.93 | 118.62 | 60.00 | 68.05 | 34.41 | 6.00 | 240.27 |
| 10870.000 | 740.00 | 118.57 | 121.12 | 121.17 | 108.23 | 1.93 | 118.63 | 30.00 | 68.06 | 34.46 | 6.00 | 240.86 |
| 10939.000 | 740.00 | 118.59 | 119.09 | 121.29 | 108.27 | 1.94 | 118.65 | 69.00 | 67.92 | 34.56 | 6.00 | 242.04 |
| 10989.000 | 740.00 | 118.61 | 121.12 | 121.17 | 108.29 | 1.94 | 118.66 | 50.00 | 67.89 | 34.64 | 6.00 | 242.91 |
| 11039.000 | 740.00 | 118.62 | 119.59 | 119.54 | 108.32 | 1.95 | 118.68 | 50.00 | 67.80 | 34.72 | 6.00 | 243.67 |
| 11280.000 | 700.00 | 118.69 | 119.58 | 119.54 | 108.44 | 1.86 | 118.75 | 241.00 | 67.50 | 35.09 | 6.00 | 246.28 |
| * 11340.000 | 700.00 | 119.39 | 119.58 | 119.54 | 108.47 | 1.65 | 119.44 | 60.00 | 71.54 | 35.19 | 6.00 | 246.92 |
| 11370.000 | 700.00 | 119.40 | 120.00 | 120.00 | 108.48 | 1.65 | 119.44 | 30.00 | 76.64 | 35.24 | 6.00 | 247.24 |

SUMMARY OF ERRORS AND SPECIAL NOTES

NOTE SECNO= 3801.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 7401.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 7901.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 8401.000 PROFILE= 1 WSEL BASED ON X5 CARD
WARNING SECNO= 10110.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
NOTE SECNO= 10250.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 10840.000 PROFILE= 1 WSEL BASED ON X5 CARD
NOTE SECNO= 11340.000 PROFILE= 1 WSEL BASED ON X5 CARD

THIS RUN EXECUTED 9/ 1/89 16: 7:17

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
 T3 F131-00-00 GLENEAGLES DIVERSION DITCH
 T4 100-YEAR STORM FREQUENCY EXISTING CONDITIONS
 T5 FILENAME = F131RVEX.IH2

| | | | | | | | | | | |
|----|--------|------|-------|-------|-------|--------|-------|-----|-------|--------|
| J1 | ICHECK | INQ | NINV | IDIR | STRT | METRIC | HVINS | Q | WSEL | FQ |
| | | 2 | | | .0014 | | | | 114.5 | |
| J2 | NPROF | IPLT | PRFVS | XSECV | XSECH | FN | ALLDC | IBW | CHNIM | ITRACE |
| | -1 | | -1 | | | | | | | |

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

| | | | | | | | | | |
|----|----|----|----|----|----|----|---|----|---|
| 38 | 43 | 1 | 23 | 24 | 42 | 26 | 3 | 39 | 4 |
| 37 | 30 | 65 | | | | | | | |

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

-10 -10

J6 IHLEQ ICOPY SUBDIV STRIDS RMILE

1

| | | | | | |
|----|-----|-----|-----|----|----|
| NC | .15 | .15 | .05 | .1 | .3 |
| QT | 1 | 960 | | | |

STATION 1+00 LOCATED 100 HUNDRED FEET UPSTREAM OF NEEDHAM RD. CL

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 100 | 9 | 9939 | 10067 | 100 | 100 | 100 | | | |
| GR | 122 | 9899 | 121.5 | 9939 | 106.2 | 9997 | 105.3 | 10000 | 106 | 10003 |
| GR | 123.1 | 10067 | 120.5 | 10117 | 119 | 10162 | 120.5 | 10197 | | |
| QT | 1 | 880 | | | | | | | | |
| X1 | 1300 | 11 | 9964 | 10042 | 1200 | 1200 | 1200 | | | |
| GR | 122 | 9926 | 121.7 | 9943 | 119.6 | 9964 | 110.5 | 9988 | 109 | 9995 |
| GR | 107 | 10000 | 108.1 | 10005 | 110.5 | 10025 | 118.4 | 10042 | 122.1 | 10066 |
| GR | 120.6 | 10119 | | | | | | | | |

IHLQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 1/89 16: 7:20

HEC2 RELEASE DATED SEPT 88

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

F131-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|----------|--------|--------|--------|--------|--------|------|--------|---------|--------|-------|-----|------|
| 100.000 | 960.00 | 114.50 | 121.50 | 123.10 | 105.30 | 3.01 | 114.64 | .00 | 69.28 | .00 | .01 | .00 |
| 1300.000 | 880.00 | 115.91 | 119.60 | 118.40 | 107.00 | 2.69 | 116.02 | 1200.00 | 62.91 | 1.82 | .01 | .00 |
| 2575.000 | 820.00 | 116.95 | 116.80 | 116.00 | 109.30 | 2.14 | 117.02 | 1275.00 | 113.81 | 4.41 | .01 | .00 |
| 4100.000 | 740.00 | 118.17 | 120.90 | 120.40 | 110.70 | 2.39 | 118.26 | 1525.00 | 72.96 | 7.68 | .01 | .00 |
| 5500.000 | 680.00 | 119.46 | 121.70 | 122.50 | 111.80 | 1.96 | 119.51 | 1400.00 | 74.28 | 10.04 | .01 | .00 |
| 7000.000 | 620.00 | 120.90 | 122.40 | 122.40 | 113.40 | 2.06 | 120.97 | 1500.00 | 73.82 | 12.59 | .01 | .00 |

SUMMARY OF ERRORS AND SPECIAL NOTES

THIS RUN EXECUTED 9/ 4/89 8: 0: 4

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
T3 F131-00-00 GLENEAGLES DIVERSION DITCH
T4 100-YEAR STORM FREQUENCY ULTIMATE CONDITIONS
T5 FILENAME = F131ULT.IH2

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL FQ
2 .0014 114.5

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38 43 1 23 24 42 26 3 39 4
37 30 65

J5 LPRNT NUMSEC *****REQUESTED SECTION NUMBERS*****
-10 -10

J6 IHLEQ ICOPY SUBDIV STRTDS RMILE
1

NC .15 .15 .04 .1 .3
QT 1 1460

STATION 1+00 LOCATED 100 HUNDRED FEET UPSTREAM OF NEEDHAM RD. CL

X1 100 9 9939 10067 100 100 100
GR 122 9899 121.5 9939 106.2 9997 105.3 10000 106 10003
GR 123.1 10067 120.5 10117 119 10162 120.5 10197
QT 1 1210
X1 1300 11 9964 10042 1200 1200 1200
GR 122 9926 121.7 9943 119.6 9964 110.5 9988 109 9995
GR 107 10000 108.1 10005 110.5 10025 118.4 10042 122.1 10066
GR 120.6 10119

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 4/89 8: 0: 7

HEC2 RELEASE DATED SEPT 88

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

F131-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|------------|---------|--------|--------|--------|--------|------|--------|---------|--------|-------|-----|------|
| 100.000 | 1460.00 | 115.20 | 121.50 | 123.10 | 105.30 | 3.95 | 115.45 | .00 | 74.58 | .00 | .01 | .00 |
| 1300.000 | 1210.00 | 116.55 | 119.60 | 118.40 | 107.00 | 3.29 | 116.72 | 1200.00 | 65.98 | 1.94 | .01 | .00 |
| 2575.000 | 1010.00 | 117.40 | 116.80 | 116.00 | 109.30 | 2.40 | 117.49 | 1275.00 | 139.36 | 4.94 | .01 | .00 |
| * 4100.000 | 810.00 | 118.28 | 120.90 | 120.40 | 110.70 | 2.56 | 118.38 | 1525.00 | 73.80 | 8.67 | .01 | .00 |
| 5500.000 | 670.00 | 119.08 | 121.70 | 122.50 | 111.80 | 2.09 | 119.15 | 1400.00 | 71.94 | 11.01 | .01 | .00 |
| * 7000.000 | 540.00 | 119.96 | 122.40 | 122.40 | 113.40 | 2.30 | 120.05 | 1500.00 | 66.85 | 13.40 | .01 | .00 |

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 4100.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 7000.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

THIS RUN EXECUTED 9/ 1/89 16: 5:15

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
 T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
 T3 F132-00-00 WOODLANDS TRADE CENTER DITCH
 T4 100-YEAR STORM FREQUENCY EXISTING CONDITIONS
 T5 FILENAME = F132RVEX.IH2

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL FQ
 2 .0026 105.6

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38 43 1 23 24 42 26 3 39 4
 37 30 65

J5 LPRNT NUMSEC *****REQUESTED SECTION NUMBERS*****
 -10 -10

J6 IHLEQ ICOFY SUBDIV STRTDS RMILE
 1

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | .15 | .15 | .06 | | | | | | | |
| QT | 1 | 1870 | | | | | | | | |
| X1 | 135 | 9 | 9955 | 10039 | 135 | 135 | 135 | | | |
| GR | 106 | 9805 | 104.2 | 9855 | 104.7 | 9905 | 105.3 | 9955 | 96.3 | 9994 |
| GR | 93.7 | 10000 | 96.4 | 10006 | 105.3 | 10039 | 106.4 | 10094 | | |
| X1 | 835 | 21 | 9960 | 10041 | 700 | 700 | 700 | | | |
| GR | 110 | 7400 | 105 | 7700 | 105 | 9100 | 104.5 | 9460 | 104.7 | 9560 |
| GR | 104.9 | 9660 | 105 | 9760 | 105 | 9860 | 105 | 9960 | 97.9 | 9988 |
| GR | 95.5 | 9989 | 96.3 | 10010 | 97.4 | 10011 | 105.6 | 10041 | 104.7 | 10141 |
| GR | 102.5 | 10291 | 105.5 | 10341 | 105 | 10441 | 104.5 | 10541 | 104.3 | 10641 |
| GR | 110 | 11600 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 1700 | 13 | 9962 | 10044 | 865 | 865 | 865 | | | |
| GR | 110 | 8700 | 105 | 9941 | 107.5 | 9950 | 107.2 | 9962 | 100.8 | 9983 |
| GR | 98.5 | 9995 | 95.7 | 9997 | 95.9 | 10003 | 97.8 | 10005 | 100.4 | 10025 |
| GR | 107.7 | 10044 | 107.3 | 10068 | 110.0 | 11180 | | | | |

| | | | | | | | | | | |
|----|------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| NC | | | .02 | | | | | | | |
| X1 | 1759 | 10 | 9962 | 10038 | 59 | 59 | 59 | | | |
| GR | 110 | 8700 | 105 | 9941 | 107.5 | 9950 | 105 | 9962 | 95.2 | 9995 |
| GR | 95.2 | 10005 | 105.6 | 10038 | 107.7 | 10044 | 107.3 | 10068 | 110 | 11180 |

| | | | | | | | | | | |
|------------------------|-------|---------|------|---------|-------|---------|-------|-------|-------|---------|
| NC | | | | .3 | .5 | | | | | |
| SLOPING DROP STRUCTURE | | | | | | | | | | |
| X1 | 1779 | 22 | 9962 | 10038 | 20 | 20 | 20 | | | |
| GR | 110 | 8700 | 105 | 9941 | 107.5 | 9950 | 105 | 9962 | 98.9 | 9982.5 |
| GR | 99.7 | 9982.5 | 99.7 | 9989.5 | 96.8 | 9989.5 | 95.2 | 9995 | 95.2 | 9996.5 |
| GR | 99.7 | 9996.5 | 99.7 | 10003.5 | 95.2 | 10003.5 | 95.2 | 10005 | 96.9 | 10010.5 |
| GR | 99.7 | 10010.5 | 99.7 | 10017.5 | 99.1 | 10017.5 | 105.6 | 10038 | 107.7 | 10044 |
| GR | 107.3 | 10068 | 110 | 11180 | | | | | | |

| | | | | | | | | | | |
|----|-------|---------|--------|---------|-------|---------|-------|---------|-------|---------|
| X1 | 1799 | 28 | 9969.5 | 10030.5 | 20 | 20 | 20 | | | |
| GR | 110 | 8850 | 105.6 | 9842 | 105.3 | 9892 | 106.1 | 9942 | 108.9 | 9954 |
| GR | 109.3 | 9966 | 108.6 | 9969.5 | 104.2 | 9982.5 | 104.5 | 9982.5 | 104.5 | 9989.5 |
| GR | 101.9 | 9989.5 | 100 | 9995 | 100 | 9996.5 | 104.5 | 9996.5 | 104.5 | 10003.5 |
| GR | 100 | 10003.5 | 100 | 10005 | 101.9 | 10010.5 | 104.5 | 10010.5 | 104.5 | 10017.5 |
| GR | 104.2 | 10017.5 | 108.6 | 10030.5 | 109.5 | 10034 | 109.2 | 10050 | 107.9 | 10053 |
| GR | 109.3 | 10103 | 109.4 | 10153 | 110 | 11050 | | | | |

| | | | | | | | | | | |
|----|-------|-------|--------|---------|-------|-------|-------|-------|-------|---------|
| X1 | 1824 | 16 | 9969.5 | 10030.5 | 25 | 25 | 25 | | | |
| GR | 110 | 8850 | 105.6 | 9842 | 105.3 | 9892 | 106.1 | 9942 | 108.9 | 9954 |
| GR | 109.3 | 9966 | 108.6 | 9969.5 | 100 | 9995 | 100 | 10005 | 108.6 | 10030.5 |
| GR | 109.5 | 10034 | 109.2 | 10050 | 107.9 | 10053 | 109.3 | 10103 | 109.4 | 10153 |
| GR | 110 | 11050 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | | | .06 | | | | | | | |
| QT | 1 | 1600 | | | | | | | | |
| X1 | 1850 | 16 | 9966 | 10034 | 26 | 26 | 26 | | | |
| GR | 110 | 8850 | 105.6 | 9842 | 105.3 | 9892 | 106.1 | 9942 | 108.9 | 9954 |
| GR | 109.3 | 9966 | 101 | 9994 | 99.3 | 9996 | 99.2 | 10004 | 101.5 | 10006 |
| GR | 109.5 | 10034 | 109.2 | 10050 | 107.9 | 10053 | 109.3 | 10103 | 109.4 | 10153 |
| GR | 110 | 11050 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | | | | .1 | .3 | | | | | |
| QT | 1 | 1350 | | | | | | | | |
| X1 | 3915 | 16 | 9960 | 10041 | 2065 | 2065 | 2065 | | | |
| GR | 112.2 | 9634 | 112.2 | 9684 | 112.3 | 9734 | 112.3 | 9784 | 112.4 | 9834 |
| GR | 112.4 | 9884 | 112.5 | 9934 | 113 | 9960 | 104.4 | 9982 | 103 | 9998 |
| GR | 101 | 10000 | 102.7 | 10001 | 104.1 | 10017 | 108.6 | 10033 | 112.9 | 10041 |
| GR | 112.1 | 10057 | | | | | | | | |

| | | | | | | | | | | |
|------------------------|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|
| QT | 1 | 1210 | | | | | | | | |
| X1 | 5200 | 18 | 9958 | 10048 | 1285 | 1285 | 1285 | | | |
| GR | 118.2 | 9783 | 117 | 9833 | 115.2 | 9883 | 114.8 | 9933 | 113.8 | 9938 |
| GR | 114.1 | 9946 | 114 | 9958 | 107.7 | 9980 | 105.9 | 9995 | 103.9 | 9997 |
| GR | 104.8 | 10003 | 105.9 | 10005 | 107.6 | 10027 | 114.1 | 10048 | 114 | 10057 |
| GR | 113.4 | 10064 | 115.1 | 10089 | 118 | 10139 | | | | |
| NC | | | .02 | | | | | | | |
| X1 | 5358 | 16 | 9958 | 10048 | 158 | 158 | 158 | | | |
| GR | 118.2 | 9783 | 117 | 9833 | 115.2 | 9883 | 114.8 | 9933 | 113.8 | 9938 |
| GR | 114.1 | 9946 | 114 | 9958 | 112.6 | 9962 | 101.6 | 9995 | 101.6 | 10005 |
| GR | 112.9 | 10038 | 114.1 | 10048 | 114 | 10057 | 113.4 | 10064 | 115.1 | 10089 |
| GR | 118 | 10139 | | | | | | | | |
| NC | | | .3 | .5 | | | | | | |
| SLOPING DROP STRUCTURE | | | | | | | | | | |
| X1 | 5378 | 28 | 9958 | 10048 | 20 | 20 | 20 | | | |
| X3 | | 105.2 | | | | | | | | |
| GR | 118.2 | 9783 | 117 | 9833 | 115.2 | 9883 | 114.8 | 9933 | 113.8 | 9938 |
| GR | 114.1 | 9946 | 114 | 9958 | 112.6 | 9962 | 105.7 | 9982.5 | 106.1 | 9982.5 |
| GR | 106.1 | 9989.5 | 103.4 | 9989.5 | 101.6 | 9995 | 101.6 | 9996.5 | 106.1 | 9996.5 |
| GR | 106.1 | 10003.5 | 101.6 | 10003.5 | 101.6 | 10005 | 103.5 | 10010.5 | 106.1 | 10010.5 |
| GR | 106.1 | 10017.5 | 105.9 | 10017.5 | 112.9 | 10038 | 114.1 | 10048 | 114 | 10057 |
| GR | 113.4 | 10064 | 115.1 | 10089 | 118 | 10139 | | | | |
| X1 | 5399 | 27 | 9957 | 10037 | 21 | 21 | 21 | | | |
| GR | 115.4 | 9883 | 114 | 9933 | 112.9 | 9938 | 114.5 | 9946 | 114.8 | 9957 |
| GR | 113.9 | 9969.5 | 109.5 | 9982.5 | 109.7 | 9982.5 | 109.7 | 9989.5 | 107.1 | 9989.5 |
| GR | 105.2 | 9995 | 105.2 | 9996.5 | 109.7 | 9996.5 | 109.7 | 10003.5 | 105.2 | 10003.5 |
| GR | 105.2 | 10005 | 107.1 | 10010.5 | 109.7 | 10010.5 | 109.7 | 10017.5 | 109.5 | 10017.5 |
| GR | 114 | 10030.5 | 115.9 | 10037 | 115.9 | 10047 | 114.6 | 10054 | 116.1 | 10062 |
| GR | 118.8 | 10112 | 119.9 | 10162 | | | | | | |
| NC | | | | | | | | | | |
| X1 | 5424 | 15 | 9957 | 10037 | 25 | 25 | 25 | | | |
| GR | 115.4 | 9883 | 114 | 9933 | 112.9 | 9938 | 114.5 | 9946 | 114.8 | 9957 |
| GR | 113.9 | 9969.5 | 105.2 | 9995 | 105.2 | 10005 | 114 | 10030.5 | 115.9 | 10037 |
| GR | 115.9 | 10047 | 114.6 | 10054 | 116.1 | 10062 | 118.8 | 10112 | 119.9 | 10162 |
| NC | | | .06 | | | | | | | |
| X1 | 5525 | 16 | 9957 | 10037 | 101 | 101 | 101 | | | |
| GR | 115.4 | 9883 | 114 | 9933 | 112.9 | 9938 | 114.5 | 9946 | 114.8 | 9957 |
| GR | 107.6 | 9976 | 106.7 | 9997 | 105.6 | 10000 | 106.4 | 10003 | 108.9 | 10022 |
| GR | 115.9 | 10037 | 115.9 | 10047 | 114.6 | 10054 | 116.1 | 10062 | 118.8 | 10112 |
| GR | 119.9 | 10162 | | | | | | | | |
| NC | | | .1 | .3 | | | | | | |
| QT | 1 | 1030 | | | | | | | | |
| X1 | 7150 | 19 | 9956 | 10033 | 1625 | 1625 | 1625 | | | |
| GR | 119.7 | 9743 | 118.8 | 9793 | 117.8 | 9843 | 116.3 | 9893 | 118.2 | 9943 |
| GR | 118.2 | 9956 | 111.3 | 9973 | 109.1 | 9990 | 108.1 | 9992 | 107.8 | 10007 |
| GR | 109 | 10009 | 111.4 | 10017 | 117 | 10033 | 117.1 | 10045 | 116.4 | 10049 |
| GR | 117 | 10057 | 117.5 | 10107 | 118.7 | 10157 | 119.4 | 10207 | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 12307 | 23 | 9953 | 10023 | 307 | 307 | 307 | | | |
| GR | 125 | 9200 | 121.7 | 9603 | 121.6 | 9653 | 121.7 | 9703 | 121.4 | 9753 |
| GR | 121.4 | 9803 | 120.6 | 9853 | 120.2 | 9903 | 122.3 | 9953 | 119 | 9978 |
| GR | 117.8 | 9991 | 117.7 | 9993 | 117.5 | 10006 | 117.9 | 10008 | 120.1 | 10023 |
| GR | 120.2 | 10073 | 120.6 | 10123 | 120.5 | 10173 | 120.7 | 10223 | 120.8 | 10273 |
| GR | 121.2 | 10323 | 121.3 | 10373 | 125 | 11150 | | | | |

IHLQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 1/89 16: 5:30

HEC2 RELEASE DATED SEPT 88

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

F132-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|------------|---------|--------|--------|--------|--------|------|--------|---------|---------|--------|-----|------|
| 135.000 | 1870.00 | 105.60 | 105.30 | 105.30 | 93.70 | 3.86 | 105.82 | .00 | 237.89 | .00 | .01 | .00 |
| * 835.000 | 1870.00 | 106.25 | 105.00 | 105.60 | 95.50 | 1.57 | 106.27 | 700.00 | 3345.21 | 28.79 | .01 | .00 |
| * 1700.000 | 1870.00 | 106.86 | 107.20 | 107.70 | 95.70 | 3.63 | 107.04 | 865.00 | 547.78 | 67.44 | .01 | .00 |
| * 1759.000 | 1870.00 | 106.90 | 105.00 | 105.60 | 95.20 | 3.27 | 107.06 | 59.00 | 566.90 | 68.20 | .01 | .00 |
| 1779.000 | 1870.00 | 106.89 | 105.00 | 105.60 | 95.20 | 3.60 | 107.08 | 20.00 | 563.62 | 68.46 | .01 | .00 |
| * 1799.000 | 1870.00 | 107.22 | 108.60 | 108.60 | 100.00 | 8.90 | 108.25 | 20.00 | 523.41 | 68.71 | .01 | .00 |
| * 1824.000 | 1870.00 | 108.07 | 108.60 | 108.60 | 100.00 | 5.58 | 108.47 | 25.00 | 730.17 | 69.07 | .01 | .00 |
| * 1850.000 | 1600.00 | 108.53 | 109.30 | 109.50 | 99.20 | 2.80 | 108.60 | 26.00 | 859.57 | 69.54 | .01 | .00 |
| 3915.000 | 1350.00 | 111.73 | 113.00 | 112.90 | 101.00 | 2.97 | 111.87 | 2065.00 | 75.59 | 91.71 | .01 | .00 |
| 5200.000 | 1210.00 | 113.52 | 114.00 | 114.10 | 103.90 | 2.66 | 113.63 | 1285.00 | 89.73 | 94.15 | .01 | .00 |
| * 5358.000 | 1210.00 | 113.58 | 114.00 | 114.10 | 101.60 | 2.22 | 113.66 | 158.00 | 89.39 | 94.47 | .01 | .00 |
| 5378.000 | 1210.00 | 113.57 | 114.00 | 114.10 | 105.20 | 2.67 | 113.68 | 20.00 | 88.83 | 94.51 | .01 | .00 |
| * 5399.000 | 1210.00 | 113.41 | 114.80 | 115.90 | 105.20 | 5.32 | 113.85 | 21.00 | 62.79 | 94.55 | .01 | .00 |
| * 5424.000 | 1210.00 | 113.66 | 114.80 | 115.90 | 105.20 | 4.13 | 113.92 | 25.00 | 66.53 | 94.58 | .01 | .00 |
| * 5525.000 | 1210.00 | 113.92 | 114.80 | 115.90 | 105.60 | 3.12 | 114.07 | 101.00 | 83.11 | 94.76 | .01 | .00 |
| 7150.000 | 1030.00 | 116.43 | 118.20 | 117.00 | 107.80 | 2.69 | 116.54 | 1625.00 | 79.14 | 97.78 | .01 | .00 |
| 8460.000 | 1030.00 | 118.21 | 119.30 | 119.30 | 110.00 | 2.75 | 118.33 | 1310.00 | 87.91 | 100.30 | .01 | .00 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|--------|--------|--------|--------|--------|------|--------|---------|--------|--------|-----|------|
| 9525.000 | 850.00 | 119.43 | 121.10 | 119.00 | 111.80 | 2.27 | 119.51 | 1065.00 | 194.04 | 103.74 | .01 | .00 |
| 9579.000 | 850.00 | 119.42 | 126.70 | 126.70 | 112.00 | 3.31 | 119.59 | 54.00 | 53.86 | 103.90 | .01 | .00 |
| 9594.000 | 850.00 | 119.45 | 126.70 | 126.70 | 112.00 | 3.29 | 119.62 | 15.00 | 53.98 | 103.92 | .01 | .00 |
| 9644.000 | 850.00 | 119.48 | 126.70 | 126.70 | 112.00 | 3.27 | 119.65 | 50.00 | 69.82 | 103.99 | .01 | .00 |
| 11000.000 | 750.00 | 120.59 | 125.70 | 126.00 | 114.30 | 1.91 | 120.64 | 1475.00 | 82.15 | 106.56 | .01 | .00 |
| 12000.000 | 690.00 | 121.33 | 124.50 | 125.90 | 113.00 | 1.97 | 121.39 | 1000.00 | 65.29 | 108.25 | .01 | .00 |
| * 12307.000 | 690.00 | 121.78 | 122.30 | 120.10 | 117.50 | 2.25 | 121.83 | 307.00 | 862.67 | 111.52 | .01 | .00 |

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 835.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 1700.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 1759.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 1799.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 1799.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 1799.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO= 1824.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 1850.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 5358.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 5399.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 5424.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 5525.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 12307.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

THIS RUN EXECUTED 9/ 4/89 7:58:42

HEC2 RELEASE DATED SEPT 88

T1 SOUTHERN MONTGOMERY COUNTY FLOOD PROTECTION STUDY
T2 DODSON AND ASSOCIATES, INC. SEPTEMBER, 1989
T3 F132-00-00 WOODLAND'S TRADE CENTER DITCH
T4 100-YEAR STORM FREQUENCY ULTIMATE CONDITIONS
T5 FILENAME = F132ULT.IH2

J1 ICHECK INQ NINV IDIR STRT METRIC HVINS Q WSEL FQ
2 .0005 108

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38 43 1 23 24 42 26 3 39 4
37 30 65

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

-10 -10

J6 IHLEQ ICOPY SUBDIV STRTDS RMILE

1

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | .15 | .15 | .04 | | | | | | | |
| QT | 1 | 7550 | | | | | | | | |
| X1 | 135 | 9 | 9955 | 10039 | 135 | 135 | 135 | | | |
| CI | -1 | 92.0 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 106 | 9805 | 104.2 | 9855 | 104.7 | 9905 | 105.3 | 9955 | 96.3 | 9994 |
| GR | 93.7 | 10000 | 96.4 | 10006 | 105.3 | 10039 | 106.4 | 10094 | | |
| X1 | 835 | 21 | 9960 | 10041 | 700 | 700 | 700 | | | |
| CI | -1 | 92.35 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 110 | 7400 | 105 | 7700 | 105 | 9100 | 104.5 | 9460 | 104.7 | 9560 |
| GR | 104.9 | 9660 | 105 | 9760 | 105 | 9860 | 105 | 9960 | 97.9 | 9988 |
| GR | 95.5 | 9989 | 96.3 | 10010 | 97.4 | 10011 | 105.6 | 10041 | 104.7 | 10141 |
| GR | 102.5 | 10291 | 105.5 | 10341 | 105 | 10441 | 104.5 | 10541 | 104.3 | 10641 |
| GR | 110 | 11600 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|---------|--------|---------|-------|---------|-------|---------|-------|---------|
| QT | 1 | 7250 | | | | | | | | |
| X1 | 1700 | 13 | 9962 | 10044 | 865 | 865 | 865 | | | |
| CI | -1 | 92.78 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 110 | 8700 | 105 | 9941 | 107.5 | 9950 | 107.2 | 9962 | 100.8 | 9983 |
| GR | 98.5 | 9995 | 95.7 | 9997 | 95.9 | 10003 | 97.8 | 10005 | 100.4 | 10025 |
| GR | 107.7 | 10044 | 107.3 | 10068 | 110.0 | 11180 | | | | |
| X1 | 1759 | 10 | 9962 | 10038 | 59 | 59 | 59 | | | |
| CI | -1 | 92.81 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 110 | 8700 | 105 | 9941 | 107.5 | 9950 | 105 | 9962 | 95.2 | 9995 |
| GR | 95.2 | 10005 | 105.6 | 10038 | 107.7 | 10044 | 107.3 | 10068 | 110 | 11180 |
| X1 | 1779 | 22 | 9962 | 10038 | 20 | 20 | 20 | | | |
| CI | -1 | 92.82 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 110 | 8700 | 105 | 9941 | 107.5 | 9950 | 105 | 9962 | 98.9 | 9982.5 |
| GR | 99.7 | 9982.5 | 99.7 | 9989.5 | 96.8 | 9989.5 | 95.2 | 9995 | 95.2 | 9996.5 |
| GR | 99.7 | 9996.5 | 99.7 | 10003.5 | 95.2 | 10003.5 | 95.2 | 10005 | 96.9 | 10010.5 |
| GR | 99.7 | 10010.5 | 99.7 | 10017.5 | 99.1 | 10017.5 | 105.6 | 10038 | 107.7 | 10044 |
| GR | 107.3 | 10068 | 110 | 11180 | | | | | | |
| X1 | 1799 | 28 | 9969.5 | 10030.5 | 20 | 20 | 20 | | | |
| CI | -1 | 92.83 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 110 | 8850 | 105.6 | 9842 | 105.3 | 9892 | 106.1 | 9942 | 108.9 | 9954 |
| GR | 109.3 | 9966 | 108.6 | 9969.5 | 104.2 | 9982.5 | 104.5 | 9982.5 | 104.5 | 9989.5 |
| GR | 101.9 | 9989.5 | 100 | 9995 | 100 | 9996.5 | 104.5 | 9996.5 | 104.5 | 10003.5 |
| GR | 100 | 10003.5 | 100 | 10005 | 101.9 | 10010.5 | 104.5 | 10010.5 | 104.5 | 10017.5 |
| GR | 104.2 | 10017.5 | 108.6 | 10030.5 | 109.5 | 10034 | 109.2 | 10050 | 107.9 | 10053 |
| GR | 109.3 | 10103 | 109.4 | 10153 | 110 | 11050 | | | | |
| X1 | 1824 | 16 | 9969.5 | 10030.5 | 25 | 25 | 25 | | | |
| CI | -1 | 92.84 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 110 | 8850 | 105.6 | 9842 | 105.3 | 9892 | 106.1 | 9942 | 108.9 | 9954 |
| GR | 109.3 | 9966 | 108.6 | 9969.5 | 100 | 9995 | 100 | 10005 | 108.6 | 10030.5 |
| GR | 109.5 | 10034 | 109.2 | 10050 | 107.9 | 10053 | 109.3 | 10103 | 109.4 | 10153 |
| GR | 110 | 11050 | | | | | | | | |
| X1 | 1850 | 16 | 9966 | 10034 | 26 | 26 | 26 | | | |
| CI | -1 | 92.86 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 110 | 8850 | 105.6 | 9842 | 105.3 | 9892 | 106.1 | 9942 | 108.9 | 9954 |
| GR | 109.3 | 9966 | 101 | 9994 | 99.3 | 9996 | 99.2 | 10004 | 101.5 | 10006 |
| GR | 109.5 | 10034 | 109.2 | 10050 | 107.9 | 10053 | 109.3 | 10103 | 109.4 | 10153 |
| GR | 110 | 11050 | | | | | | | | |
| QT | 1 | 6920 | | | | | | | | |
| X1 | 3500 | 17 | 9960 | 10041 | 1650 | 1650 | 1650 | | -0.4 | |
| CI | -1 | 93.68 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 112.2 | 9634 | 112.2 | 9684 | 112.3 | 9734 | 112.3 | 9784 | 112.4 | 9834 |
| GR | 112.4 | 9884 | 112.5 | 9934 | 113 | 9960 | 104.4 | 9982 | 103 | 9998 |
| GR | 101 | 10000 | 102.7 | 10001 | 104.1 | 10017 | 108.6 | 10033 | 112.9 | 10041 |
| GR | 112.1 | 10057 | 112.1 | 10200 | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 3501 | 17 | 9960 | 10041 | 1 | 1 | 1 | | | -0.4 |
| CI | -1 | 95.70 | 0.04 | 4 | 4 | 60 | | | | |
| X5 | -1 | 2.0 | | | | | | | | |
| GR | 112.2 | 9634 | 112.2 | 9684 | 112.3 | 9734 | 112.3 | 9784 | 112.4 | 9834 |
| GR | 112.4 | 9884 | 112.5 | 9934 | 113 | 9960 | 104.4 | 9982 | 103 | 9998 |
| GR | 101 | 10000 | 102.7 | 10001 | 104.1 | 10017 | 108.6 | 10033 | 112.9 | 10041 |
| GR | 112.1 | 10057 | 112.1 | 10200 | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 3915 | 17 | 9960 | 10041 | 414 | 414 | 414 | | | |
| CI | -1 | 95.91 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 112.2 | 9634 | 112.2 | 9684 | 112.3 | 9734 | 112.3 | 9784 | 112.4 | 9834 |
| GR | 112.4 | 9884 | 112.5 | 9934 | 113 | 9960 | 104.4 | 9982 | 103 | 9998 |
| GR | 101 | 10000 | 102.7 | 10001 | 104.1 | 10017 | 108.6 | 10033 | 112.9 | 10041 |
| GR | 112.1 | 10057 | 112.1 | 10200 | | | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 6710 | | | | | | | | |
| X1 | 4700 | 18 | 9958 | 10048 | 785 | 785 | 785 | | | -1.1 |
| CI | -1 | 96.30 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 118.2 | 9783 | 117 | 9833 | 115.2 | 9883 | 114.8 | 9933 | 113.8 | 9938 |
| GR | 114.1 | 9946 | 114 | 9958 | 107.7 | 9980 | 105.9 | 9995 | 103.9 | 9997 |
| GR | 104.8 | 10003 | 105.9 | 10005 | 107.6 | 10027 | 114.1 | 10048 | 114 | 10057 |
| GR | 113.4 | 10064 | 115.1 | 10089 | 118 | 10139 | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 4701 | 18 | 9958 | 10048 | 1 | 1 | 1 | | | -1.1 |
| CI | -1 | 98.30 | 0.04 | 4 | 4 | 60 | | | | |
| X5 | -1 | 2.0 | | | | | | | | |
| GR | 118.2 | 9783 | 117 | 9833 | 115.2 | 9883 | 114.8 | 9933 | 113.8 | 9938 |
| GR | 114.1 | 9946 | 114 | 9958 | 107.7 | 9980 | 105.9 | 9995 | 103.9 | 9997 |
| GR | 104.8 | 10003 | 105.9 | 10005 | 107.6 | 10027 | 114.1 | 10048 | 114 | 10057 |
| GR | 113.4 | 10064 | 115.1 | 10089 | 118 | 10139 | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 6620 | | | | | | | | |
| X1 | 5200 | 18 | 9958 | 10048 | 499 | 499 | 499 | | | |
| CI | -1 | 98.55 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 118.2 | 9783 | 117 | 9833 | 115.2 | 9883 | 114.8 | 9933 | 113.8 | 9938 |
| GR | 114.1 | 9946 | 114 | 9958 | 107.7 | 9980 | 105.9 | 9995 | 103.9 | 9997 |
| GR | 104.8 | 10003 | 105.9 | 10005 | 107.6 | 10027 | 114.1 | 10048 | 114 | 10057 |
| GR | 113.4 | 10064 | 115.1 | 10089 | 118 | 10139 | | | | |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 5358 | 16 | 9958 | 10048 | 158 | 158 | 158 | | | |
| CI | -1 | 98.63 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 118.2 | 9783 | 117 | 9833 | 115.2 | 9883 | 114.8 | 9933 | 113.8 | 9938 |
| GR | 114.1 | 9946 | 114 | 9958 | 112.6 | 9962 | 101.6 | 9995 | 101.6 | 10005 |
| GR | 112.9 | 10038 | 114.1 | 10048 | 114 | 10057 | 113.4 | 10064 | 115.1 | 10089 |
| GR | 118 | 10139 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|---------|-------|---------|-------|---------|-------|---------|-------|---------|
| X1 | 5378 | 28 | 9958 | 10048 | 20 | 20 | 20 | | | |
| CI | -1 | 98.64 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 118.2 | 9783 | 117 | 9833 | 115.2 | 9883 | 114.8 | 9933 | 113.8 | 9938 |
| GR | 114.1 | 9946 | 114 | 9958 | 112.6 | 9962 | 105.7 | 9982.5 | 106.1 | 9982.5 |
| GR | 106.1 | 9989.5 | 103.4 | 9989.5 | 101.6 | 9995 | 101.6 | 9996.5 | 106.1 | 9996.5 |
| GR | 106.1 | 10003.5 | 101.6 | 10003.5 | 101.6 | 10005 | 103.5 | 10010.5 | 106.1 | 10010.5 |
| GR | 106.1 | 10017.5 | 105.9 | 10017.5 | 112.9 | 10038 | 114.1 | 10048 | 114 | 10057 |
| GR | 113.4 | 10064 | 115.1 | 10089 | 118 | 10139 | | | | |
| X1 | 5398 | 27 | 9957 | 10037 | 20 | 20 | 20 | | | |
| CI | -1 | 98.65 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 115.4 | 9883 | 114 | 9933 | 112.9 | 9938 | 114.5 | 9946 | 114.8 | 9957 |
| GR | 113.9 | 9969.5 | 109.5 | 9982.5 | 109.7 | 9982.5 | 109.7 | 9989.5 | 107.1 | 9989.5 |
| GR | 105.2 | 9995 | 105.2 | 9996.5 | 109.7 | 9996.5 | 109.7 | 10003.5 | 105.2 | 10003.5 |
| GR | 105.2 | 10005 | 107.1 | 10010.5 | 109.7 | 10010.5 | 109.7 | 10017.5 | 109.5 | 10017.5 |
| GR | 114 | 10030.5 | 115.9 | 10037 | 115.9 | 10047 | 114.6 | 10054 | 116.1 | 10062 |
| GR | 118.8 | 10112 | 119.9 | 10162 | | | | | | |
| X1 | 5399 | 27 | 9957 | 10037 | 21 | 21 | 21 | | | |
| CI | -1 | 98.66 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 115.4 | 9883 | 114 | 9933 | 112.9 | 9938 | 114.5 | 9946 | 114.8 | 9957 |
| GR | 113.9 | 9969.5 | 109.5 | 9982.5 | 109.7 | 9982.5 | 109.7 | 9989.5 | 107.1 | 9989.5 |
| GR | 105.2 | 9995 | 105.2 | 9996.5 | 109.7 | 9996.5 | 109.7 | 10003.5 | 105.2 | 10003.5 |
| GR | 105.2 | 10005 | 107.1 | 10010.5 | 109.7 | 10010.5 | 109.7 | 10017.5 | 109.5 | 10017.5 |
| GR | 114 | 10030.5 | 115.9 | 10037 | 115.9 | 10047 | 114.6 | 10054 | 116.1 | 10062 |
| GR | 118.8 | 10112 | 119.9 | 10162 | | | | | | |
| X1 | 5424 | 15 | 9957 | 10037 | 25 | 25 | 25 | | | |
| CI | -1 | 98.67 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 115.4 | 9883 | 114 | 9933 | 112.9 | 9938 | 114.5 | 9946 | 114.8 | 9957 |
| GR | 113.9 | 9969.5 | 105.2 | 9995 | 105.2 | 10005 | 114 | 10030.5 | 115.9 | 10037 |
| GR | 115.9 | 10047 | 114.6 | 10054 | 116.1 | 10062 | 118.8 | 10112 | 119.9 | 10162 |
| X1 | 5525 | 16 | 9957 | 10037 | 101 | 101 | 101 | | | |
| CI | -1 | 98.72 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 115.4 | 9883 | 114 | 9933 | 112.9 | 9938 | 114.5 | 9946 | 114.8 | 9957 |
| GR | 107.6 | 9976 | 106.7 | 9997 | 105.6 | 10000 | 106.4 | 10003 | 108.9 | 10022 |
| GR | 115.9 | 10037 | 115.9 | 10047 | 114.6 | 10054 | 116.1 | 10062 | 118.8 | 10112 |
| GR | 119.9 | 10162 | | | | | | | | |
| QT | 1 | 6300 | | | | | | | | |
| X1 | 7150 | 19 | 9956 | 10033 | 1625 | 1625 | 1625 | | | |
| CI | -1 | 99.53 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 119.7 | 9743 | 118.8 | 9793 | 117.8 | 9843 | 116.3 | 9893 | 118.2 | 9943 |
| GR | 118.2 | 9956 | 111.3 | 9973 | 109.1 | 9990 | 108.1 | 9992 | 107.8 | 10007 |
| GR | 109 | 10009 | 111.4 | 10017 | 117 | 10033 | 117.1 | 10045 | 116.4 | 10049 |
| GR | 117 | 10057 | 117.5 | 10107 | 118.7 | 10157 | 119.4 | 10207 | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 7151 | 19 | 9956 | 10033 | 1 | 1 | 1 | | | |
| CI | -1 | 101.60 | 0.04 | 4 | 4 | 60 | | | | |
| X5 | -1 | 1.5 | | | | | | | | |
| GR | 119.7 | 9743 | 118.8 | 9793 | 117.8 | 9843 | 116.3 | 9893 | 118.2 | 9943 |
| GR | 118.2 | 9956 | 111.3 | 9973 | 109.1 | 9990 | 108.1 | 9992 | 107.8 | 10007 |
| GR | 109 | 10009 | 111.4 | 10017 | 117 | 10033 | 117.1 | 10045 | 116.4 | 10049 |
| GR | 117 | 10057 | 117.5 | 10107 | 118.7 | 10157 | 119.4 | 10207 | | |
| QT | 1 | 6090 | | | | | | | | |
| X1 | 8460 | 17 | 9971 | 10047 | 1309 | 1309 | 1309 | | | |
| CI | -1 | 102.26 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 118.5 | 9894 | 118.2 | 9944 | 116 | 9954 | 119.1 | 9962 | 119.3 | 9971 |
| GR | 111.1 | 9995 | 110 | 10000 | 111.2 | 10004 | 111.1 | 10024 | 113.1 | 10034 |
| GR | 119.3 | 10047 | 119.7 | 10097 | 120.8 | 10147 | 121.6 | 10197 | 123.3 | 10247 |
| GR | 124 | 10297 | 124.5 | 10347 | | | | | | |
| QT | 1 | 5920 | | | | | | | | |
| X1 | 9525 | 16 | 9960 | 10031 | 1065 | 1065 | 1065 | | | |
| CI | -1 | 102.79 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 124.3 | 9588 | 122.4 | 9688 | 120.4 | 9788 | 119.8 | 9888 | 119.1 | 9912 |
| GR | 121.6 | 9930 | 121.1 | 9960 | 112.3 | 9982 | 111.8 | 10000 | 112.9 | 10018 |
| GR | 119 | 10031 | 120.5 | 10043 | 118.3 | 10088 | 119.6 | 10188 | 119.6 | 10288 |
| GR | 122.8 | 10388 | | | | | | | | |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 9526 | 16 | 9960 | 10031 | 1 | 1 | 1 | | | |
| CI | -1 | 104.80 | 0.04 | 4 | 4 | 60 | | | | |
| X5 | -1 | 1.5 | | | | | | | | |
| GR | 124.3 | 9588 | 122.4 | 9688 | 120.4 | 9788 | 119.8 | 9888 | 119.1 | 9912 |
| GR | 121.6 | 9930 | 121.1 | 9960 | 112.3 | 9982 | 111.8 | 10000 | 112.9 | 10018 |
| GR | 119 | 10031 | 120.5 | 10043 | 118.3 | 10088 | 119.6 | 10188 | 119.6 | 10288 |
| GR | 122.8 | 10388 | | | | | | | | |

NC .3 .5

MISSOURI PACIFIC RAILROAD

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|--------|--------|
| X1 | 9579 | 16 | 9960 | 10040 | 54 | 54 | 54 | | | |
| CI | -1 | 104.83 | 0.04 | 4 | 4 | 60 | | | | |
| X3 | 10 | | | | | | | 129.0 | 129.1 | |
| GR | 124.3 | 9588 | 122.4 | 9688 | 120.4 | 9788 | 119.8 | 9888 | 119.1 | 9912 |
| GR | 121.6 | 9930 | 126.7 | 9960 | 125.3 | 9960 | 113.4 | 9986 | 112.0 | 10000 |
| GR | 114.1 | 10014 | 125 | 10040 | 126.7 | 10040 | 119.6 | 10188 | 119.6 | 10288 |
| GR | 122.8 | 10388 | | | | | | | | |
| SB | 1.05 | 1.56 | 3.0 | | 60 | 4.0 | 3140 | 4 | 104.84 | 104.83 |
| X1 | 9594 | 16 | 9960 | 10040 | 15 | 15 | 15 | | | |
| CI | -1 | 104.84 | 0.04 | 4 | 4 | 60 | | | | |
| X2 | | | 1 | 126.7 | 131.4 | | | | | |
| X3 | 10 | | | | | | | 131.4 | 131.5 | |
| BT | -9 | 9600 | 131.5 | 0 | 9700 | 131.4 | 0 | 9800 | 131.5 | 0 |
| BT | | 9900 | 131.4 | 0 | 10000 | 131.5 | 0 | 10100 | 131.5 | 0 |
| BT | | 10200 | 131.5 | 0 | 10300 | 131.5 | 0 | 10400 | 131.5 | 0 |
| GR | 124.3 | 9588 | 122.4 | 9688 | 120.4 | 9788 | 119.8 | 9888 | 119.1 | 9912 |

| | | | | | | | | | | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| GR | 121.6 | 9930 | 126.7 | 9960 | 125.3 | 9960 | 113.4 | 9986 | 112.0 | 10000 |
| GR | 114.1 | 10014 | 125 | 10040 | 126.7 | 10040 | 119.6 | 10188 | 119.6 | 10288 |
| GR | 122.8 | 10388 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 9644 | 16 | 9960 | 10040 | 50 | 50 | 50 | | | |
| CI | -1 | 104.86 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 124.3 | 9588 | 122.4 | 9688 | 120.4 | 9788 | 119.8 | 9888 | 119.1 | 9912 |
| GR | 121.6 | 9930 | 126.7 | 9960 | 125.3 | 9960 | 113.4 | 9986 | 112.0 | 10000 |
| GR | 114.1 | 10014 | 125 | 10040 | 126.7 | 10040 | 119.6 | 10188 | 119.6 | 10288 |
| GR | 122.8 | 10388 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| NC | | | .1 | .3 | | | | | | |
| QT | 1 | 5700 | | | | | | | | |
| X1 | 11000 | 16 | 9946 | 10058 | 1475 | 1475 | 1475 | | | |
| CI | -1 | 105.60 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 126 | 9823 | 126 | 9873 | 125.6 | 9923 | 125 | 9933 | 125.7 | 9946 |
| GR | 116.4 | 9972 | 114.9 | 9980 | 114.3 | 9982 | 114.3 | 10018 | 114.9 | 10020 |
| GR | 115.9 | 10029 | 126 | 10058 | 125.2 | 10066 | 126.4 | 10086 | 125.8 | 10136 |
| GR | 125.7 | 10186 | | | | | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 5550 | | | | | | | | |
| X1 | 12000 | 21 | 9955 | 10042 | 1000 | 1000 | 1000 | | | |
| CI | -1 | 106.10 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 126.3 | 9705 | 125.9 | 9755 | 125.2 | 9805 | 124.8 | 9855 | 124.2 | 9905 |
| GR | 124.5 | 9955 | 116.1 | 9979 | 115.1 | 9986 | 113 | 9988 | 113 | 10012 |
| GR | 115.8 | 10014 | 125.9 | 10042 | 125.3 | 10058 | 126.5 | 10072 | 126.9 | 10122 |
| GR | 126.9 | 10172 | 126.1 | 10222 | 126.8 | 10272 | 126.9 | 10322 | 124.7 | 10372 |
| GR | 124.5 | 10422 | | | | | | | | |

| | | | | | | | | | | |
|-----------------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| QT | 1 | 5500 | | | | | | | | |
| INTERSTATE HIGHWAY 45 | | | | | | | | | | |
| X1 | 12300 | 23 | 9953 | 10023 | 300 | 300 | 300 | | | |
| CI | -1 | 106.25 | 0.04 | 4 | 4 | 60 | | | | |
| GR | 125 | 9200 | 121.7 | 9603 | 121.6 | 9653 | 121.7 | 9703 | 121.4 | 9753 |
| GR | 121.4 | 9803 | 120.6 | 9853 | 120.2 | 9903 | 122.3 | 9953 | 119 | 9978 |
| GR | 117.8 | 9991 | 117.7 | 9993 | 117.5 | 10006 | 117.9 | 10008 | 120.1 | 10023 |
| GR | 120.2 | 10073 | 120.6 | 10123 | 120.5 | 10173 | 120.7 | 10223 | 120.8 | 10273 |
| GR | 121.2 | 10323 | 121.3 | 10373 | 125 | 11150 | | | | |

| | | | | | | | | | | |
|----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| X1 | 12700 | 23 | 9953 | 10023 | 400 | 400 | 400 | | 2.0 | |
| CI | -1 | 106.65 | 0.04 | 4 | 4 | 40 | | | | |
| X5 | -1 | 1.7 | | | | | | | | |
| GR | 125 | 9200 | 121.7 | 9603 | 121.6 | 9653 | 121.7 | 9703 | 121.4 | 9753 |
| GR | 121.4 | 9803 | 120.6 | 9853 | 120.2 | 9903 | 122.3 | 9953 | 119 | 9978 |
| GR | 117.8 | 9991 | 117.7 | 9993 | 117.5 | 10006 | 117.9 | 10008 | 120.1 | 10023 |
| GR | 120.2 | 10073 | 120.6 | 10123 | 120.5 | 10173 | 120.7 | 10223 | 120.8 | 10273 |
| GR | 121.2 | 10323 | 121.3 | 10373 | 125 | 11150 | | | | |

| | | | | | | | | | | |
|----|-------|--------|------|-------|-----|-------|-----|-------|-----|-------|
| QT | 1 | 4850 | | | | | | | | |
| X1 | 13200 | 5 | 9990 | 10010 | 500 | 500 | 500 | | | |
| CI | -1 | 107.15 | 0.04 | 4 | 4 | 40 | | | | |
| GR | 128 | 9800 | 128 | 9990 | 128 | 10000 | 128 | 10010 | 128 | 10200 |

DROP STRUCTURE

| | | | | | | | | | | |
|----|-------|--------|------|-------|------|-------|------|-------|-----|-------|
| X1 | 13201 | 5 | 9990 | 10010 | 1 | 1 | 1 | | | |
| CI | -1 | 112.15 | 0.04 | 4 | 4 | 30 | | | | |
| X5 | -1 | 5.0 | | | | | | | | |
| GR | 128 | 9800 | 128 | 9990 | 128 | 10000 | 128 | 10010 | 128 | 10200 |
| QT | 1 | 4250 | | | | | | | | |
| X1 | 13700 | 5 | 9990 | 10010 | 499 | 499 | 499 | | | |
| CI | -1 | 112.65 | 0.04 | 4 | 4 | 30 | | | | |
| GR | 134 | 9800 | 134 | 9990 | 134 | 10000 | 134 | 10010 | 134 | 10200 |
| X1 | 13800 | 5 | 9990 | 10010 | 100 | 100 | 100 | | | |
| CI | -1 | 112.75 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 134 | 9800 | 134 | 9990 | 134 | 10000 | 134 | 10010 | 134 | 10200 |
| QT | 1 | 3550 | | | | | | | | |
| X1 | 14400 | 5 | 9990 | 10010 | 600 | 600 | 600 | | | |
| CI | -1 | 113.35 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 134 | 9800 | 134 | 9990 | 134 | 10000 | 134 | 10010 | 134 | 10200 |
| QT | 1 | 2950 | | | | | | | | |
| X1 | 15100 | 5 | 9990 | 10010 | 700 | 700 | 700 | | | |
| CI | -1 | 114.05 | 0.04 | 4 | 4 | 20 | | | | |
| GR | 132 | 9800 | 132 | 9990 | 132 | 10000 | 132 | 10010 | 132 | 10200 |
| X1 | 15200 | 5 | 9990 | 10010 | 100 | 100 | 100 | | | |
| CI | -1 | 114.15 | 0.04 | 4 | 4 | 10 | | | | |
| GR | 132 | 9800 | 132 | 9990 | 132 | 10000 | 132 | 10010 | 132 | 10200 |
| QT | 1 | 2100 | | | | | | | | |
| X1 | 16400 | 5 | 9990 | 10010 | 1200 | 1200 | 1200 | | | |
| CI | -1 | 115.35 | 0.04 | 4 | 4 | 10 | | | | |
| GR | 130 | 9800 | 130 | 9990 | 130 | 10000 | 130 | 10010 | 130 | 10200 |
| QT | 1 | 1800 | | | | | | | | |
| X1 | 17000 | 5 | 9990 | 10010 | 600 | 600 | 600 | | | |
| CI | -1 | 115.95 | 0.04 | 4 | 4 | 10 | | | | |
| GR | 132 | 9800 | 132 | 9990 | 132 | 10000 | 132 | 10010 | 132 | 10200 |

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

THIS RUN EXECUTED 9/ 4/89 7:59: 4

HEC2 RELEASE DATED SEPT 88

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

F132-00-00

SUMMARY PRINTOUT

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|------------|---------|--------|--------|--------|-------|------|--------|---------|---------|--------|-------|--------|
| 135.000 | 7550.00 | 107.26 | 104.83 | 106.20 | 92.00 | 4.06 | 107.51 | .00 | 289.00 | .00 | 60.00 | .00 |
| * 835.000 | 7550.00 | 107.64 | 105.00 | 105.23 | 92.35 | 2.74 | 107.72 | 700.00 | 3662.48 | 31.75 | 60.00 | 26.87 |
| * 1700.000 | 7250.00 | 107.80 | 105.07 | 107.36 | 92.78 | 3.91 | 108.03 | 865.00 | 1026.25 | 78.30 | 60.00 | 61.62 |
| 1759.000 | 7250.00 | 107.83 | 105.08 | 107.35 | 92.81 | 3.92 | 108.06 | 59.00 | 1040.06 | 79.70 | 60.00 | 64.03 |
| 1779.000 | 7250.00 | 107.84 | 105.08 | 107.35 | 92.82 | 3.91 | 108.07 | 20.00 | 1051.50 | 80.18 | 60.00 | 64.83 |
| 1799.000 | 7250.00 | 107.84 | 105.72 | 109.08 | 92.83 | 3.93 | 108.08 | 20.00 | 754.47 | 80.60 | 60.00 | 65.83 |
| 1824.000 | 7250.00 | 107.86 | 105.72 | 109.07 | 92.84 | 3.92 | 108.09 | 25.00 | 756.55 | 81.03 | 60.00 | 67.30 |
| 1850.000 | 7250.00 | 107.87 | 105.72 | 109.07 | 92.86 | 3.93 | 108.10 | 26.00 | 759.55 | 81.48 | 60.00 | 68.80 |
| 3500.000 | 6920.00 | 108.71 | 112.03 | 111.70 | 93.68 | 3.84 | 108.93 | 1650.00 | 180.13 | 99.28 | 60.00 | 175.70 |
| * 3501.000 | 6920.00 | 110.71 | 112.04 | 111.70 | 95.70 | 3.84 | 110.93 | 1.00 | 180.04 | 99.28 | 60.00 | 175.77 |
| 3915.000 | 6920.00 | 110.92 | 112.44 | 112.10 | 95.91 | 3.84 | 111.15 | 414.00 | 180.05 | 101.00 | 60.00 | 199.60 |
| 4700.000 | 6710.00 | 111.32 | 113.94 | 115.12 | 96.30 | 3.72 | 111.53 | 785.00 | 180.13 | 104.24 | 60.00 | 246.53 |
| * 4701.000 | 6710.00 | 113.32 | 113.88 | 114.51 | 98.30 | 3.72 | 113.53 | 1.00 | 180.14 | 104.25 | 60.00 | 246.59 |
| 5200.000 | 6620.00 | 113.56 | 115.01 | 115.87 | 98.55 | 3.68 | 113.77 | 499.00 | 180.05 | 106.31 | 60.00 | 271.44 |
| 5358.000 | 6620.00 | 113.63 | 115.00 | 115.85 | 98.63 | 3.68 | 113.84 | 158.00 | 180.03 | 106.96 | 60.00 | 279.48 |
| 5378.000 | 6620.00 | 113.64 | 115.00 | 115.84 | 98.64 | 3.68 | 113.85 | 20.00 | 180.02 | 107.04 | 60.00 | 280.48 |
| 5398.000 | 6620.00 | 113.65 | 114.86 | 118.50 | 98.65 | 3.68 | 113.86 | 20.00 | 180.01 | 107.13 | 60.00 | 281.65 |

| SECNO | Q | CWSEL | XLBEL | RBEL | ELMIN | VCH | EG | XLCH | TOPWID | TWA | BW | VEXT |
|-------------|---------|--------|--------|--------|--------|------|--------|---------|--------|--------|-------|---------|
| 5399.000 | 6620.00 | 113.66 | 114.86 | 118.49 | 98.66 | 3.68 | 113.87 | 21.00 | 180.01 | 107.21 | 60.00 | 283.02 |
| 5424.000 | 6620.00 | 113.67 | 114.86 | 118.49 | 98.67 | 3.68 | 113.88 | 25.00 | 180.02 | 107.32 | 60.00 | 284.63 |
| 5525.000 | 6620.00 | 113.72 | 114.86 | 118.48 | 98.72 | 3.68 | 113.93 | 101.00 | 180.00 | 107.73 | 60.00 | 290.87 |
| 7150.000 | 6300.00 | 114.47 | 116.45 | 117.39 | 99.53 | 3.52 | 114.66 | 1625.00 | 179.53 | 114.44 | 60.00 | 396.16 |
| * 7151.000 | 6300.00 | 115.97 | 116.72 | 117.30 | 101.60 | 3.73 | 116.18 | 1.00 | 174.92 | 114.44 | 60.00 | 396.22 |
| 8460.000 | 6090.00 | 116.62 | 118.38 | 119.98 | 102.26 | 3.61 | 116.82 | 1309.00 | 174.87 | 119.70 | 60.00 | 472.92 |
| 9525.000 | 5920.00 | 117.12 | 119.49 | 118.32 | 102.79 | 3.52 | 117.31 | 1065.00 | 174.71 | 123.97 | 60.00 | 541.80 |
| * 9526.000 | 5920.00 | 118.62 | 119.22 | 118.65 | 104.80 | 3.72 | 118.83 | 1.00 | 201.69 | 123.98 | 60.00 | 541.86 |
| 9579.000 | 5920.00 | 118.65 | 119.18 | 123.58 | 104.83 | 3.72 | 118.86 | 54.00 | 170.53 | 124.21 | 60.00 | 545.35 |
| 9594.000 | 5920.00 | 118.66 | 119.19 | 123.58 | 104.84 | 3.72 | 118.87 | 15.00 | 170.54 | 124.27 | 60.00 | 546.48 |
| 9644.000 | 5920.00 | 118.68 | 119.19 | 123.59 | 104.86 | 3.71 | 118.90 | 50.00 | 170.59 | 124.46 | 60.00 | 550.25 |
| 11000.000 | 5700.00 | 119.44 | 125.86 | 126.07 | 105.60 | 3.57 | 119.64 | 1475.00 | 170.77 | 130.24 | 60.00 | 658.94 |
| 12000.000 | 5550.00 | 119.92 | 124.31 | 126.81 | 106.10 | 3.48 | 120.11 | 1000.00 | 170.55 | 134.16 | 60.00 | 731.55 |
| 12300.000 | 5500.00 | 120.06 | 120.21 | 120.21 | 106.25 | 3.46 | 120.24 | 300.00 | 170.48 | 135.33 | 60.00 | 751.37 |
| * 12700.000 | 5500.00 | 121.76 | 122.30 | 122.19 | 106.65 | 3.62 | 121.96 | 400.00 | 160.87 | 136.86 | 40.00 | 774.76 |
| 13200.000 | 4850.00 | 122.02 | 128.00 | 128.00 | 107.15 | 3.28 | 122.19 | 500.00 | 158.99 | 138.69 | 40.00 | 813.07 |
| * 13201.000 | 4850.00 | 127.02 | 128.00 | 128.00 | 112.15 | 3.64 | 127.23 | 1.00 | 148.99 | 138.70 | 30.00 | 813.15 |
| 13700.000 | 4250.00 | 127.31 | 134.00 | 134.00 | 112.65 | 3.27 | 127.47 | 499.00 | 147.27 | 140.39 | 30.00 | 849.60 |
| 13800.000 | 4250.00 | 127.33 | 134.00 | 134.00 | 112.75 | 3.72 | 127.54 | 100.00 | 136.61 | 140.72 | 20.00 | 858.29 |
| 14400.000 | 3550.00 | 127.70 | 134.00 | 134.00 | 113.35 | 3.19 | 127.86 | 600.00 | 134.83 | 142.59 | 20.00 | 906.62 |
| 15100.000 | 2950.00 | 128.03 | 132.00 | 132.00 | 114.05 | 2.78 | 128.15 | 700.00 | 131.83 | 144.73 | 20.00 | 955.45 |
| 15200.000 | 2950.00 | 128.04 | 132.00 | 132.00 | 114.15 | 3.24 | 128.21 | 100.00 | 121.15 | 145.02 | 10.00 | 961.19 |
| 16400.000 | 2100.00 | 128.61 | 130.00 | 130.00 | 115.35 | 2.51 | 128.71 | 1200.00 | 116.12 | 148.29 | 10.00 | 1015.81 |
| 17000.000 | 1800.00 | 128.82 | 132.00 | 132.00 | 115.95 | 2.27 | 128.90 | 600.00 | 112.98 | 149.87 | 10.00 | 1040.21 |

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 835.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 1700.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE SECNO= 3501.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 4701.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 7151.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 9526.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 12700.000 PROFILE= 1 WSEL BASED ON X5 CARD

NOTE SECNO= 13201.000 PROFILE= 1 WSEL BASED ON X5 CARD