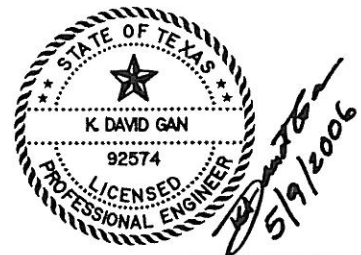


RUNOFF COMPUTATIONS

| DRAINAGE AREA | | PAVEMENT C = 0.90 | INDUSTRIAL C = 0.85 | BUSINESS C = 0.80 | APARTMENT C = 0.76 | SM BUS/ROW C = 0.7 | RESIDENTIAL C = 0.55 | CEM/PARK C = 0.25 | Composite C | Composite CA | To CAL (min) | To USED (min) | DES FREQ (yr) | I _s (In/hr) | Q _s (cfs) |
|---------------|----------------------|----------------------|------------------------|----------------------|-----------------------|-----------------------|-------------------------|----------------------|----------------|-----------------|--------------------|---------------------|---------------------|---------------------------|-------------------------|
| AREA ID | TOTAL AREA (acre) | | | | | | | | | | | | | | |
| A1 | 1.16 | 0.219 | | | | | | 0.938 | 0.616 | 0.713 | 4.60 | 10.00 | 5 | 6.93 | 4.94 |
| A2 | 1.02 | 0.555 | | | | | | 0.464 | 0.741 | 0.756 | 4.70 | 10.00 | 5 | 6.93 | 5.23 |
| A3 | 7.29 | | | | | | | 7.285 | 0.550 | 4.007 | 5.63 | 10.00 | 5 | 6.93 | 27.75 |
| A4 | 0.41 | 0.283 | | | | | | 0.124 | 0.794 | 0.322 | 3.10 | 10.00 | 5 | 6.93 | 2.23 |
| A5 | 3.32 | | | | | | | 3.320 | 0.550 | 1.826 | 9.90 | 10.00 | 5 | 6.93 | 12.65 |
| A6 | 0.20 | 0.175 | | | | | | 0.021 | 0.863 | 0.168 | 2.00 | 10.00 | 5 | 6.93 | 1.17 |
| A7 | 0.28 | | | | | | | 0.277 | 0.550 | 0.152 | 3.00 | 10.00 | 5 | 6.93 | 1.06 |
| A8 | 0.32 | 0.286 | | | | | | 0.036 | 0.861 | 0.277 | 3.00 | 10.00 | 5 | 6.93 | 1.92 |
| B1 | 0.69 | 0.546 | | | | | | 0.140 | 0.829 | 0.569 | 3.00 | 10.00 | 5 | 6.93 | 3.94 |
| B2 | 0.35 | 0.313 | | | | | | 0.034 | 0.865 | 0.301 | 3.00 | 10.00 | 5 | 6.93 | 2.08 |
| B3 | 0.33 | 0.295 | | | | | | 0.034 | 0.863 | 0.285 | 3.00 | 10.00 | 5 | 6.93 | 1.97 |
| B4 | 0.33 | 0.298 | | | | | | 0.032 | 0.866 | 0.286 | 3.00 | 10.00 | 5 | 6.93 | 1.98 |
| C1 | 0.22 | 0.200 | | | | | | 0.023 | 0.864 | 0.193 | 3.00 | 10.00 | 5 | 6.93 | 1.33 |
| C2 | 0.34 | 0.306 | | | | | | 0.033 | 0.866 | 0.294 | 3.00 | 10.00 | 5 | 6.93 | 2.04 |
| C3 | 0.22 | 0.197 | | | | | | 0.022 | 0.865 | 0.189 | 3.00 | 10.00 | 5 | 6.93 | 1.31 |
| C4 | 0.31 | 0.277 | | | | | | 0.031 | 0.865 | 0.266 | 3.00 | 10.00 | 5 | 6.93 | 1.85 |
| C5 | 0.39 | 0.276 | | | | | | 0.113 | 0.798 | 0.310 | 4.00 | 10.00 | 5 | 6.93 | 2.15 |
| C6 | 0.47 | 0.312 | | | | | | 0.157 | 0.783 | 0.367 | 5.00 | 10.00 | 5 | 6.93 | 2.54 |
| C7 | 0.06 | 0.058 | | | | | | | 0.900 | 0.052 | 1.00 | 10.00 | 5 | 6.93 | 0.36 |
| C8 | 0.15 | 0.091 | 0.059 | | | | | | 0.880 | 0.132 | 2.00 | 10.00 | 5 | 6.93 | 0.91 |
| D1 | 0.05 | 0.053 | | | | | | | 0.899 | 0.048 | 3.00 | 10.00 | 5 | 6.93 | 0.33 |
| D2 | 0.11 | 0.092 | | | | | | 0.014 | 0.854 | 0.090 | 3.00 | 10.00 | 5 | 6.93 | 0.62 |
| D3 | 0.19 | 0.165 | | | | | | 0.025 | 0.853 | 0.162 | 3.00 | 10.00 | 5 | 6.93 | 1.12 |
| D4 | 0.77 | 0.770 | | | | | | | 0.900 | 0.693 | 3.00 | 10.00 | 5 | 6.93 | 4.80 |
| D5 | 3.00 | | 3.001 | | | | | | 0.850 | 2.551 | 12.00 | 12.00 | 5 | 6.40 | 16.33 |
| D6 | 1.29 | 0.117 | 1.169 | | | | | | 0.855 | 1.100 | 8.00 | 10.00 | 5 | 6.93 | 7.62 |
| D7 | 3.71 | 0.019 | 3.693 | | | | | | 0.850 | 3.156 | 14.00 | 14.00 | 5 | 5.96 | 18.80 |
| D8 | 0.61 | 0.287 | 0.323 | | | | | | 0.874 | 0.533 | 8.00 | 10.00 | 5 | 6.93 | 3.69 |
| D9 | 0.97 | 0.258 | 0.711 | | | | | | 0.863 | 0.836 | 9.00 | 10.00 | 5 | 6.93 | 5.80 |
| D10 | 0.38 | 0.296 | 0.088 | | | | | | 0.889 | 0.341 | 3.00 | 10.00 | 5 | 6.93 | 2.36 |
| D11 | 9.62 | 0.033 | 9.583 | | | | | | 0.850 | 8.174 | 22.00 | 22.00 | 5 | 4.70 | 38.46 |
| D12 | 0.72 | 0.228 | 0.490 | | | | | | 0.866 | 0.623 | 3.00 | 10.00 | 5 | 6.93 | 4.31 |
| D13 | 0.55 | 0.202 | 0.344 | | | | | | 0.868 | 0.473 | 5.00 | 10.00 | 5 | 6.93 | 3.28 |
| E1 | 0.14 | | | | | | | 0.139 | 0.550 | 0.076 | 4.70 | 10.00 | 5 | 6.93 | 0.53 |
| E2 | 1.44 | 0.129 | | | | | | 1.306 | 0.581 | 0.834 | 3.00 | 10.00 | 5 | 6.93 | 5.78 |
| E3 | 0.38 | | | | | | | 0.377 | 0.550 | 0.207 | 3.00 | 10.00 | 5 | 6.93 | 1.44 |
| F1 | 0.26 | 0.173 | 0.087 | | | | | | 0.883 | 0.230 | 3.00 | 10.00 | 5 | 6.93 | 1.59 |
| F2 | 0.29 | 0.185 | 0.104 | | | | | | 0.882 | 0.255 | 3.00 | 10.00 | 5 | 6.93 | 1.76 |
| F3 | 0.65 | 0.653 | | | | | | | 0.900 | 0.588 | 5.00 | 10.00 | 5 | 6.93 | 4.07 |
| F4 | 0.13 | 0.132 | | | | | | | 0.900 | 0.119 | 1.00 | 10.00 | 5 | 6.93 | 0.82 |
| F5 | 0.42 | 0.063 | 0.353 | | | | | | 0.858 | 0.357 | 5.00 | 10.00 | 5 | 6.93 | 2.47 |
| F6 | 0.54 | 0.086 | 0.458 | | | | | | 0.858 | 0.467 | 5.00 | 10.00 | 5 | 6.93 | 3.23 |
| F7 | 0.49 | 0.074 | 0.415 | | | | | | 0.858 | 0.420 | 5.00 | 10.00 | 5 | 6.93 | 2.91 |
| F8 | 0.59 | 0.161 | 0.426 | | | | | | 0.864 | 0.508 | 6.00 | 10.00 | 5 | 6.93 | 3.52 |
| F9 | 0.33 | 0.120 | 0.210 | | | | | | 0.868 | 0.286 | 2.00 | 10.00 | 5 | 6.93 | 1.99 |
| F10 | 1.12 | | 1.121 | | | | | | 0.850 | 0.953 | 5.00 | 10.00 | 5 | 6.93 | 6.60 |
| F11 | 8.12 | | 8.120 | | | | | | 0.850 | 6.902 | 12.00 | 12.00 | 5 | 6.40 | 44.17 |
| F12 | 0.18 | 0.109 | 0.074 | | | | | | 0.880 | 0.161 | 3.00 | 10.00 | 5 | 6.93 | 1.11 |
| F13 | 0.99 | | 0.987 | | | | | | 0.850 | 0.839 | 8.00 | 10.00 | 5 | 6.93 | 5.81 |
| F14 | 0.59 | 0.154 | 0.434 | | | | | | 0.863 | 0.507 | 6.00 | 10.00 | 5 | 6.93 | 3.51 |
| F15 | 0.47 | | 0.472 | | | | | | 0.850 | 0.401 | 7.00 | 10.00 | 5 | 6.93 | 2.78 |
| F16 | 1.31 | | 1.310 | | | | | | 0.850 | 1.114 | 8.00 | 10.00 | 5 | 6.93 | 7.72 |
| F17 | 0.83 | 0.266 | 0.566 | | | | | | 0.866 | 0.721 | 8.00 | 10.00 | 5 | 6.93 | 4.99 |
| F18 | 0.95 | | 0.945 | | | | | | 0.850 | 0.803 | 5.00 | 10.00 | 5 | 6.93 | 5.57 |
| F19 | 0.37 | 0.216 | 0.151 | | | | | | 0.879 | 0.322 | 3.00 | 10.00 | 5 | 6.93 | 2.23 |
| F20 | 0.83 | 0.244 | 0.588 | | | | | | 0.865 | 0.720 | 8.00 | 10.00 | 5 | 6.93 | 4.98 |
| F21 | 0.39 | 0.251 | 0.135 | | | | | | 0.883 | 0.341 | 5.00 | 10.00 | 5 | 6.93 | 2.36 |
| F22 | 1.44 | 0.278 | 0.963 | | 0.200 | | | | 0.847 | 1.220 | 9.00 | 10.00 | 5 | 6.93 | 8.45 |
| F23 | 0.81 | 0.279 | 0.533 | | | | | | 0.867 | 0.704 | 8.00 | 10.00 | 5 | 6.93 | 4.88 |
| F25-1 | 5.41 | | 5.411 | | | | | | 0.850 | 4.599 | 10.00 | 10.00 | 5 | 6.93 | 31.86 |
| F25-2 | 2.71 | | 2.709 | | | | | | 0.850 | 2.303 | 11.00 | 11.00 | 5 | 6.65 | 15.32 |
| FJ | 0.40 | 0.291 | | 0.113 | | | | | 0.872 | 0.352 | 5.00 | 10.00 | 5 | 6.93 | 2.44 |



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SH 205

HYDRAULIC COMPUTATION SHEET

SHEET 1 OF 13

| | | |
|----------------|-------------------------|-------------|
| FED. PROJ. NO. | FEDERAL AID PROJECT NO. | HIGHWAY NO. |
| 6 | (SEE TITLE SHEET) | SH 205 |
| STATE | DIST. | COUNTY |
| TEXAS | DALLAS | ROCKWALL |
| CONT. | SECT. | JOB |
| 0451 | 01 | 032. ETC |

388

D:\N-G\1\JOBS\22451\0-SH205\Drawings\2451.ccd01.dgn, OK-CO-631
 5/9/2006 Plotted 03-MAY-2006 12:55

RUNOFF COMPUTATIONS

| DRAINAGE AREA | | PAVEMENT C = 0.90 | INDUSTRIAL C = 0.85 | BUSINESS C = 0.80 | APARTMENT C = 0.76 | SM BUS/ROW C = 0.7 | RESIDENTIAL C = 0.55 | CEM/PARK C = 0.25 | Composite C | Composite CA | To CAL (min) | To USED (min) | DES FREQ (yr) | I _s (in/hr) | Q _s (cfs) |
|---------------|----------------------|----------------------|------------------------|----------------------|-----------------------|-----------------------|-------------------------|----------------------|----------------|-----------------|--------------------|---------------------|---------------------|---------------------------|-------------------------|
| AREA ID | TOTAL AREA (acre) | | | | | | | | | | | | | | |
| G1 | 0.32 | 0.178 | 0.144 | | | | | | 0.878 | 0.283 | 6.00 | 10.00 | 5 | 6.93 | 1.96 |
| G2 | 0.37 | 0.229 | 0.136 | | | | | | 0.881 | 0.322 | 6.00 | 10.00 | 5 | 6.93 | 2.23 |
| G3 | 0.55 | 0.379 | 0.173 | | | | | | 0.884 | 0.488 | 8.00 | 10.00 | 5 | 6.93 | 3.38 |
| G4 | 0.46 | 0.052 | 0.410 | | | | | | 0.856 | 0.395 | 5.00 | 10.00 | 5 | 6.93 | 2.74 |
| G5 | 0.49 | 0.102 | 0.387 | | | | | | 0.860 | 0.421 | 6.00 | 10.00 | 5 | 6.93 | 2.92 |
| G6 | 0.25 | 0.107 | 0.140 | | | | | | 0.872 | 0.215 | 3.00 | 10.00 | 5 | 6.93 | 1.49 |
| H1 | 0.55 | 0.552 | | | | | | | 0.900 | 0.497 | 3.00 | 10.00 | 5 | 6.93 | 3.44 |
| H2 | 0.14 | 0.137 | | | | | | | 0.900 | 0.123 | 8.00 | 10.00 | 5 | 6.93 | 0.85 |
| I1 | 0.28 | 0.238 | 0.045 | | | | | | 0.892 | 0.252 | 5.00 | 10.00 | 5 | 6.93 | 1.75 |
| I2 | 0.30 | 0.112 | 0.190 | | | | | | 0.869 | 0.262 | 5.00 | 10.00 | 5 | 6.93 | 1.82 |
| I3 | 2.35 | | 2.351 | | | | | | 0.850 | 1.998 | 8.00 | 10.00 | 5 | 6.93 | 13.84 |
| I4 | 0.49 | 0.148 | 0.343 | | | | | | 0.865 | 0.426 | 5.00 | 10.00 | 5 | 6.93 | 2.95 |
| I5 | 0.27 | 0.097 | 0.170 | | | | | | 0.868 | 0.233 | 5.00 | 10.00 | 5 | 6.93 | 1.61 |
| I6 | 1.12 | 0.122 | 0.994 | | | | | | 0.855 | 0.954 | 8.00 | 10.00 | 5 | 6.93 | 6.61 |
| I7 | 0.10 | 0.060 | | 0.036 | | | | | 0.862 | 0.083 | 1.00 | 10.00 | 5 | 6.93 | 0.57 |
| I8 | 0.20 | 0.138 | | 0.063 | | | | | 0.869 | 0.174 | 1.00 | 10.00 | 5 | 6.93 | 1.21 |
| I8A | 0.84 | | | 0.836 | | | | | 0.800 | 0.669 | 5.00 | 10.00 | 5 | 6.93 | 4.63 |
| J2 | 0.22 | 0.179 | | 0.040 | | 0.001 | | | 0.881 | 0.194 | 2.00 | 10.00 | 5 | 6.93 | 1.34 |
| J3 | 1.94 | 1.944 | | | | | | | 0.900 | 1.750 | 9.00 | 10.00 | 5 | 6.93 | 12.12 |
| K1 | 0.71 | 0.359 | | 0.346 | | | | | 0.851 | 0.600 | 6.00 | 10.00 | 5 | 6.93 | 4.16 |
| K2 | 0.57 | 0.174 | | 0.393 | | | | | 0.831 | 0.471 | 6.00 | 10.00 | 5 | 6.93 | 3.26 |
| K3 | 0.59 | 0.402 | 0.184 | | | | | | 0.884 | 0.518 | 7.00 | 10.00 | 5 | 6.93 | 3.59 |
| K4 | 0.72 | 0.412 | | 0.305 | | | | | 0.857 | 0.614 | 8.00 | 10.00 | 5 | 6.93 | 4.26 |
| K5 | 0.54 | 0.441 | | 0.097 | | | | | 0.882 | 0.475 | 6.00 | 10.00 | 5 | 6.93 | 3.29 |
| K7 | 0.24 | 0.189 | 0.055 | | | | | | 0.889 | 0.217 | 3.00 | 10.00 | 5 | 6.93 | 1.50 |
| L1 | 31.35 | | | 31.346 | | | | | 0.800 | 25.077 | 20.00 | 20.00 | 5 | 4.96 | 124.35 |
| L2 | 0.76 | 0.425 | | 0.334 | | | | | 0.856 | 0.650 | 5.00 | 10.00 | 5 | 6.93 | 4.50 |
| L3 | 1.23 | | | 1.229 | | | | | 0.800 | 0.983 | 7.00 | 10.00 | 5 | 6.93 | 6.81 |
| L4 | 0.39 | 0.363 | | 0.022 | | | | | 0.894 | 0.344 | 4.00 | 10.00 | 5 | 6.93 | 2.38 |
| L5 | 0.38 | | | 0.381 | | | | | 0.800 | 0.305 | 8.00 | 10.00 | 5 | 6.93 | 2.11 |
| L6A | 0.13 | | | 0.128 | | | | | 0.800 | 0.102 | 1.00 | 10.00 | 5 | 6.93 | 0.71 |
| L6B | 0.43 | 0.385 | | 0.038 | | 0.008 | | | 0.888 | 0.383 | 4.00 | 10.00 | 5 | 6.93 | 2.65 |
| L7 | 1.16 | 1.155 | | | | | | | 0.900 | 1.040 | 8.00 | 10.00 | 5 | 6.93 | 7.20 |
| M1 | 1.02 | 0.082 | 0.687 | | 0.248 | | | | 0.832 | 0.846 | 7.00 | 10.00 | 5 | 6.93 | 5.86 |
| M2 | 0.47 | 0.168 | 0.301 | | | | | | 0.868 | 0.406 | 3.00 | 10.00 | 5 | 6.93 | 2.82 |
| M3 | 0.50 | 0.216 | 0.098 | | 0.183 | | | | 0.839 | 0.417 | 7.00 | 10.00 | 5 | 6.93 | 2.89 |
| M4 | 0.35 | 0.263 | 0.037 | | 0.048 | | | | 0.875 | 0.305 | 3.00 | 10.00 | 5 | 6.93 | 2.11 |
| M5 | 0.42 | 0.224 | | | 0.193 | | | | 0.835 | 0.348 | 4.00 | 10.00 | 5 | 6.93 | 2.41 |
| M6 | 0.41 | 0.212 | | | 0.202 | | | | 0.832 | 0.344 | 4.00 | 10.00 | 5 | 6.93 | 2.38 |
| M7 | 0.51 | 0.396 | | | 0.086 | | | 0.026 | 0.843 | 0.428 | 5.00 | 10.00 | 5 | 6.93 | 2.97 |
| M8 | 0.22 | 0.192 | | | | | | 0.023 | 0.829 | 0.178 | 2.00 | 10.00 | 5 | 6.93 | 1.24 |
| N1 | 0.31 | | | 0.305 | | | | | 0.760 | 0.232 | 3.00 | 10.00 | 5 | 6.93 | 1.61 |
| N2 | 4.12 | 0.489 | | 3.632 | | | | | 0.777 | 3.202 | 10.00 | 10.00 | 5 | 6.93 | 22.17 |
| O1 | 0.36 | 0.162 | | | | 0.194 | | | 0.791 | 0.282 | 3.00 | 10.00 | 5 | 6.93 | 1.95 |
| O2 | 0.39 | | | | | 0.391 | | | 0.700 | 0.274 | 3.00 | 10.00 | 5 | 6.93 | 1.90 |
| O3 | 0.39 | 0.300 | 0.054 | | | 0.039 | | | 0.873 | 0.343 | 3.00 | 10.00 | 5 | 6.93 | 2.38 |
| O4 | 4.66 | | | 4.633 | | 0.030 | | | 0.799 | 3.726 | 12.00 | 12.00 | 5 | 6.40 | 23.85 |
| O5 | 0.58 | 0.322 | | 0.262 | | | | | 0.855 | 0.499 | 10.00 | 10.00 | 5 | 6.93 | 3.46 |
| O6A | 0.01 | 0.005 | | 0.007 | | | | | 0.842 | 0.010 | 1.00 | 10.00 | 5 | 6.93 | 0.07 |
| O6B | 1.10 | 0.364 | | 0.733 | | | | | 0.833 | 0.914 | 7.00 | 10.00 | 5 | 6.93 | 6.33 |
| O7 | 15.16 | | | 15.157 | | | | | 0.800 | 12.126 | 15.00 | 15.00 | 5 | 5.76 | 69.83 |
| O8 | 0.34 | 0.200 | 0.136 | | | | | | 0.880 | 0.296 | 3.00 | 10.00 | 5 | 6.93 | 2.05 |
| O9 | 0.80 | 0.190 | | 0.607 | | | | | 0.824 | 0.657 | 3.00 | 10.00 | 5 | 6.93 | 4.55 |
| O10 | 0.59 | 0.291 | | 0.297 | | | | | 0.849 | 0.499 | 7.00 | 10.00 | 5 | 6.93 | 3.46 |
| O11 | 0.40 | 0.148 | | 0.257 | | | | | 0.837 | 0.338 | 5.00 | 10.00 | 5 | 6.93 | 2.34 |
| O12 | 0.71 | 0.159 | 0.554 | | | | | | 0.861 | 0.614 | 3.00 | 10.00 | 5 | 6.93 | 4.25 |
| P1 | 0.31 | 0.276 | | | | | | 0.033 | 0.830 | 0.257 | 3.00 | 10.00 | 5 | 6.93 | 1.78 |
| P2 | 0.73 | 0.617 | 0.018 | | | | | 0.091 | 0.817 | 0.593 | 5.00 | 10.00 | 5 | 6.93 | 4.11 |
| Q1 | 0.31 | 0.273 | | | 0.037 | | | | 0.876 | 0.272 | 3.00 | 10.00 | 5 | 6.93 | 1.88 |
| Q2 | 0.73 | 0.617 | | | 0.109 | | | | 0.870 | 0.632 | 6.00 | 10.00 | 5 | 6.93 | 4.37 |
| R1 | 0.20 | 0.174 | | | | | | 0.022 | 0.827 | 0.162 | 2.00 | 10.00 | 5 | 6.93 | 1.13 |
| R2 | 0.49 | 0.158 | | | 0.329 | 0.005 | | | 0.763 | 0.375 | 6.00 | 10.00 | 5 | 6.93 | 2.60 |
| R3 | 4.06 | | | 3.006 | 1.054 | | | | 0.661 | 2.684 | 11.00 | 11.00 | 5 | 6.65 | 17.85 |
| S1 | 1.10 | 1.095 | | | | | | | 0.900 | 0.986 | 8.00 | 10.00 | 5 | 6.93 | 6.82 |

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192 Dallas, TX 75207

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|-----------------------------|-------------|----------|-----------|
| SH 205 | | | |
| HYDRAULIC COMPUTATION SHEET | | | |
| SHEET 2 OF 13 | | | |
| FED. AID PROJECT NO. | HIGHWAY NO. | | |
| 6 | SH 205 | | |
| STATE | DIST. | COUNTY | SHEET NO. |
| TEXAS | DALLAS | ROCKWALL | 389 |
| CONT. | SECT. | JOB | |
| 0451 | 01 | 032. ETC | |

RUNOFF COMPUTATIONS

| DRAINAGE AREA | TOTAL AREA | PAVEMENT | INDUSTRIAL | BUSINESS | APARTMENT | SM BUS/ROW | RESIDENTIAL | CEM/PARK | Composite C | Composite CA | To CAL (min) | To USED (min) | DES FREQ (yr) | I _p (in/hr) | Q _p (cfs) |
|---------------|------------|----------|------------|----------|-----------|------------|-------------|----------|-------------|--------------|--------------|---------------|---------------|------------------------|----------------------|
| AREA ID | (acre) | C = 0.90 | C = 0.85 | C = 0.80 | C = 0.76 | C = 0.7 | C = 0.55 | C = 0.25 | | | | | | | |
| AA2 | 0.48 | 0.246 | | 0.236 | | | | | 0.851 | 0.410 | 7.00 | 10.00 | 5 | 6.93 | 2.84 |
| AA3 | 0.69 | 0.202 | | 0.484 | | 0.001 | 0.001 | | 0.829 | 0.570 | 7.00 | 10.00 | 5 | 6.93 | 3.95 |
| AA4 | 0.44 | 0.125 | | 0.318 | | | | | 0.828 | 0.366 | 6.50 | 10.00 | 5 | 6.93 | 2.53 |
| AA5 | 0.36 | 0.162 | | 0.190 | | | 0.003 | | 0.844 | 0.300 | 7.00 | 10.00 | 5 | 6.93 | 2.08 |
| AA6 | 0.44 | 0.170 | | 0.268 | | | 0.005 | | 0.835 | 0.370 | 7.00 | 10.00 | 5 | 6.93 | 2.56 |
| AA7 | 0.86 | 0.267 | | 0.464 | | 0.130 | 0.001 | | 0.816 | 0.703 | 15.20 | 15.20 | 5 | 5.72 | 4.02 |
| AA8 | 0.26 | 0.043 | | | | 0.211 | 0.001 | | 0.734 | 0.187 | 8.00 | 10.00 | 5 | 6.93 | 1.30 |
| AA9 | 0.38 | 0.058 | | | | 0.321 | 0.004 | | 0.729 | 0.277 | 10.60 | 10.60 | 5 | 6.76 | 1.87 |
| BB1 | 1.49 | 0.118 | | | | | 1.372 | | 0.578 | 0.861 | 12.00 | 12.00 | 5 | 6.40 | 5.51 |
| BB2 | 0.13 | 0.062 | | | | | 0.066 | | 0.720 | 0.092 | 1.00 | 10.00 | 5 | 6.93 | 0.64 |
| CC1 | 0.56 | 0.286 | | 0.271 | | | | | 0.851 | 0.474 | 10.80 | 10.80 | 5 | 6.70 | 3.18 |
| CC2 | 0.44 | 0.347 | | 0.087 | | | | | 0.880 | 0.383 | 10.00 | 10.00 | 5 | 6.93 | 2.65 |
| CC3 | 0.29 | 0.247 | | 0.018 | | 0.024 | | | 0.878 | 0.253 | 10.00 | 10.00 | 5 | 6.93 | 1.75 |
| CC4 | 0.57 | 0.162 | | | | 0.245 | 0.160 | | 0.715 | 0.405 | 10.65 | 10.65 | 5 | 6.75 | 2.74 |
| CC5 | 0.37 | 0.200 | | | | 0.165 | 0.001 | | 0.809 | 0.296 | 8.00 | 10.00 | 5 | 6.93 | 2.05 |
| DD1 | 0.52 | 0.292 | | 0.224 | | | | | 0.857 | 0.443 | 5.00 | 10.00 | 5 | 6.93 | 3.07 |
| DD2 | 0.34 | 0.150 | | 0.188 | | | | | 0.844 | 0.284 | 8.00 | 10.00 | 5 | 6.93 | 1.97 |
| DD3 | 0.46 | 0.271 | | 0.188 | | | | | 0.859 | 0.393 | 6.00 | 10.00 | 5 | 6.93 | 2.73 |
| DD4 | 0.48 | 0.321 | | 0.040 | | 0.118 | | | 0.842 | 0.403 | 8.00 | 10.00 | 5 | 6.93 | 2.79 |
| DD5 | 0.23 | 0.227 | | | | 0.005 | | | 0.896 | 0.208 | 3.00 | 10.00 | 5 | 6.93 | 1.44 |
| EE1 | 0.42 | 0.213 | | 0.203 | | | | | 0.851 | 0.354 | 4.00 | 10.00 | 5 | 6.93 | 2.45 |
| EE2 | 0.62 | 0.235 | | 0.382 | | | | | 0.838 | 0.517 | 4.00 | 10.00 | 5 | 6.93 | 3.58 |
| EE3 | 0.82 | 0.142 | | 0.676 | | | | | 0.817 | 0.668 | 6.00 | 10.00 | 5 | 6.93 | 4.63 |
| EE4 | 0.55 | 0.001 | | 0.416 | | 0.133 | | | 0.776 | 0.427 | 8.00 | 10.00 | 5 | 6.93 | 2.96 |
| EE5 | 0.77 | 0.339 | | 0.352 | | 0.080 | | | 0.834 | 0.643 | 8.00 | 10.00 | 5 | 6.93 | 4.45 |
| EE6 | 0.28 | 0.276 | | 0.003 | | 0.001 | | | 0.898 | 0.251 | 5.00 | 10.00 | 5 | 6.93 | 1.74 |
| FF1 | 0.90 | 0.364 | | | | 0.536 | | | 0.781 | 0.703 | 10.00 | 10.00 | 5 | 6.93 | 4.87 |
| FF2 | 3.17 | 0.469 | | | | 2.700 | | | 0.730 | 2.313 | 16.00 | 16.00 | 5 | 5.58 | 12.89 |
| FF3 | 0.22 | 0.189 | | | | 0.031 | | | 0.872 | 0.191 | 5.00 | 10.00 | 5 | 6.93 | 1.33 |
| FF4 | 0.38 | 0.258 | | | | 0.126 | | | 0.834 | 0.320 | 8.00 | 10.00 | 5 | 6.93 | 2.22 |
| GG1 | 0.41 | 0.179 | | 0.227 | | | | | 0.844 | 0.343 | 6.00 | 10.00 | 5 | 6.93 | 2.38 |
| GG2 | 0.77 | 0.045 | | 0.721 | | | | | 0.806 | 0.617 | 9.00 | 10.00 | 5 | 6.93 | 4.28 |
| GG3 | 0.68 | 0.327 | | 0.348 | | | | | 0.848 | 0.572 | 9.00 | 10.00 | 5 | 6.93 | 3.97 |
| GG4 | 0.69 | 0.432 | | 0.254 | | | | | 0.863 | 0.592 | 9.00 | 10.00 | 5 | 6.93 | 4.10 |
| HH1 | 0.29 | 0.286 | | | | | | | 0.900 | 0.257 | 5.00 | 10.00 | 5 | 6.93 | 1.78 |
| HH2 | 0.20 | 0.196 | | | | | | | 0.900 | 0.176 | 3.00 | 10.00 | 5 | 6.93 | 1.22 |
| HH3 | 0.14 | 0.139 | | | | | | | 0.900 | 0.125 | 5.00 | 10.00 | 5 | 6.93 | 0.86 |
| JJ1 | 0.82 | | | 0.819 | | | | | 0.800 | 0.655 | 10.80 | 10.80 | 5 | 6.70 | 4.40 |
| JJ1A | 0.55 | | | 0.548 | | | | | 0.800 | 0.438 | 7.00 | 10.00 | 5 | 6.93 | 3.04 |
| JJ1B | 0.20 | 0.196 | | | | | | | 0.900 | 0.176 | 5.00 | 10.00 | 5 | 6.93 | 1.22 |
| JJ2A | 1.04 | | | 1.038 | | | | | 0.800 | 0.830 | 7.00 | 10.00 | 5 | 6.93 | 5.75 |
| JJ2B | 0.25 | 0.148 | | 0.106 | | | | | 0.858 | 0.218 | 5.00 | 10.00 | 5 | 6.93 | 1.51 |
| JJ2C | 0.82 | 0.001 | | 0.819 | | | | | 0.800 | 0.655 | 4.00 | 10.00 | 5 | 6.93 | 4.54 |
| JJ3 | 0.03 | 0.032 | | | | | | | 0.900 | 0.029 | 1.00 | 10.00 | 5 | 6.93 | 0.20 |
| JJ4 | 0.12 | 0.116 | | | | | | | 0.900 | 0.104 | 3.00 | 10.00 | 5 | 6.93 | 0.72 |
| JJ5 | 0.08 | 0.076 | | | | | | | 0.900 | 0.068 | 2.00 | 10.00 | 5 | 6.93 | 0.47 |
| KK1 | 0.11 | 0.106 | | | | | | | 0.900 | 0.095 | 4.00 | 10.00 | 5 | 6.93 | 0.66 |
| KK2 | 0.22 | 0.220 | | | | 0.004 | | | 0.897 | 0.201 | 7.00 | 10.00 | 5 | 6.93 | 1.39 |
| KK3 | 0.33 | 0.188 | | | 0.139 | | | | 0.840 | 0.275 | 4.00 | 10.00 | 5 | 6.93 | 1.91 |
| LL1 | 0.26 | 0.139 | | | 0.119 | | | | 0.835 | 0.215 | 5.00 | 10.00 | 5 | 6.93 | 1.49 |
| LL1A | 0.51 | | | | 0.508 | | | | 0.760 | 0.386 | 5.00 | 10.00 | 5 | 6.93 | 2.67 |
| LL2A | 0.03 | 0.034 | | | | | | | 0.900 | 0.031 | 1.00 | 10.00 | 5 | 6.93 | 0.21 |
| LL2B | 0.04 | 0.038 | | | | | | | 0.900 | 0.034 | 1.00 | 10.00 | 5 | 6.93 | 0.24 |
| LL2C | 0.04 | 0.039 | | | | | | | 0.899 | 0.035 | 1.00 | 10.00 | 5 | 6.93 | 0.24 |
| LL3 | 0.04 | 0.039 | | | | | | | 0.900 | 0.035 | 1.00 | 10.00 | 5 | 6.93 | 0.24 |
| LL4 | 0.60 | 0.158 | | | 0.437 | | | | 0.797 | 0.474 | 10.00 | 10.00 | 5 | 6.93 | 3.28 |
| LL5 | 0.89 | | | 0.885 | | | | | 0.800 | 0.708 | 11.00 | 11.00 | 5 | 6.65 | 4.71 |



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SH 205
 HYDRAULIC COMPUTATION SHEET

SHEET 3 OF 13

| | | |
|----------------|-------------------------|-------------|
| FED. DIST. NO. | FEDERAL AID PROJECT NO. | HIGHWAY NO. |
| 6 | (SEE TITLE SHEET) | SH 205 |
| STATE | DIST. | COUNTY |
| TEXAS | DALLAS | ROCKWALL |
| CONT. | SECT. | JOB |
| 0451 | 01 | 032. ETC |

390

D:\N-G\JOB\S\22451C-SH205\Drawings\2451.ccd003.dgn, ON=LO-637
 5/9/2006 P:\rtd 03-MAT-2006 12:55

RUNOFF COMPUTATIONS

| DRAINAGE AREA | | | | | | | | | Composite | | To | To | DES | I _a | Q _s |
|---------------|----------------------|----------------------|------------------------|----------------------|-----------------------|-----------------------|-------------------------|----------------------|-----------|-------|--------------|---------------|--------------|----------------|----------------|
| AREA ID | TOTAL AREA (acre) | PAVEMENT C = 0.90 | INDUSTRIAL C = 0.85 | BUSINESS C = 0.80 | APARTMENT C = 0.76 | SM BUS/ROW C = 0.7 | RESIDENTIAL C = 0.55 | CEM/PARK C = 0.25 | C | CA | CAL (min) | USED (min) | FREQ (yr) | (In/hr) | (cfs) |
| MM1 | 0.04 | 0.038 | | | | | | | 0.897 | 0.034 | 6.00 | 10.00 | 5 | 6.93 | 0.24 |
| MM1A | 0.56 | | | | 0.556 | | | | 0.760 | 0.423 | 6.00 | 10.00 | 5 | 6.93 | 2.93 |
| MM2 | 0.06 | 0.061 | | | | | | | 0.899 | 0.055 | 6.00 | 10.00 | 5 | 6.93 | 0.38 |
| MM3A | 0.08 | 0.083 | | | | | | | 0.900 | 0.075 | 1.00 | 10.00 | 5 | 6.93 | 0.52 |
| MM3B | 0.66 | 0.103 | | | 0.556 | 0.001 | | | 0.782 | 0.516 | 12.80 | 12.80 | 5 | 6.21 | 3.20 |
| MM4 | 0.04 | 0.036 | | | | | | | 0.900 | 0.032 | 1.00 | 10.00 | 5 | 6.93 | 0.22 |
| MM4A | 0.68 | 0.034 | | | | 0.646 | | | 0.710 | 0.483 | 8.00 | 10.00 | 5 | 6.93 | 3.34 |
| MM5 | 0.04 | 0.044 | | | | | | | 0.900 | 0.040 | 1.00 | 10.00 | 5 | 6.93 | 0.27 |
| MM6 | 0.05 | 0.051 | | | | | | | 0.900 | 0.046 | 2.00 | 10.00 | 5 | 6.93 | 0.32 |
| MM7 | 0.27 | 0.082 | | | | 0.186 | | | 0.761 | 0.204 | 10.00 | 10.00 | 5 | 6.93 | 1.41 |
| MM8 | 0.49 | 0.085 | | | | 0.401 | | | 0.735 | 0.357 | 10.60 | 10.60 | 5 | 6.76 | 2.41 |
| MM9 | 0.42 | 0.126 | | | | 0.297 | | | 0.760 | 0.321 | 9.00 | 10.00 | 5 | 6.93 | 2.22 |
| MM10 | 0.91 | 0.117 | | | | 0.791 | | | 0.726 | 0.659 | 12.60 | 12.60 | 5 | 6.26 | 4.13 |
| MM11 | 0.07 | 0.058 | | | | 0.009 | | | 0.873 | 0.058 | 3.00 | 10.00 | 5 | 6.93 | 0.40 |
| MM12 | 0.28 | 0.173 | | | | 0.104 | | | 0.825 | 0.229 | 7.00 | 10.00 | 5 | 6.93 | 1.58 |
| MM13 | 0.94 | 0.141 | | | | 0.796 | | | 0.730 | 0.683 | 16.80 | 16.80 | 5 | 5.44 | 3.72 |
| MM14 | 0.88 | 0.066 | | | | 0.811 | | | 0.715 | 0.626 | 16.80 | 16.80 | 5 | 5.44 | 3.41 |
| MM15 | 0.75 | 0.019 | | | | 0.734 | | | 0.705 | 0.531 | 13.20 | 13.20 | 5 | 6.12 | 3.25 |
| MM16 | 1.00 | 0.100 | | | | 0.902 | | | 0.720 | 0.721 | 11.40 | 11.40 | 5 | 6.55 | 4.73 |
| MM16A | 0.35 | 0.110 | | | | 0.243 | | | 0.762 | 0.269 | 2.00 | 10.00 | 5 | 6.93 | 1.86 |
| MM16B | 0.27 | 0.152 | | | | 0.119 | | | 0.812 | 0.220 | 2.00 | 10.00 | 5 | 6.93 | 1.52 |
| MM17 | 0.42 | 0.127 | | | | 0.293 | | | 0.760 | 0.319 | 2.00 | 10.00 | 5 | 6.93 | 2.21 |
| MM18 | 1.51 | | | | | | 1.510 | | 0.550 | 0.831 | 13.80 | 13.80 | 5 | 6.00 | 4.98 |
| MM19 | 0.35 | 0.004 | | 0.350 | | | | | 0.801 | 0.284 | 5.00 | 10.00 | 5 | 6.93 | 1.97 |
| MM20 | 1.68 | 0.079 | | 1.597 | | | | | 0.805 | 1.349 | 12.00 | 12.00 | 5 | 6.40 | 8.63 |
| MM21 | 1.68 | 0.079 | | 1.597 | | | | | 0.805 | 1.349 | 1.00 | 10.00 | 5 | 6.93 | 9.34 |
| MM23 | 0.35 | 0.004 | | 0.350 | | | | | 0.801 | 0.284 | 1.00 | 10.00 | 5 | 6.93 | 1.97 |
| NN1 | 0.10 | 0.096 | | | | | | | 0.900 | 0.086 | 2.00 | 10.00 | 5 | 6.93 | 0.60 |
| NN2 | 0.25 | 0.247 | | | | 0.004 | | | 0.897 | 0.225 | 6.00 | 10.00 | 5 | 6.93 | 1.56 |
| NN3 | 0.20 | 0.201 | | | | 0.004 | | | 0.896 | 0.183 | 4.00 | 10.00 | 5 | 6.93 | 1.27 |
| NN4 | 0.33 | 0.302 | | | | 0.025 | | | 0.885 | 0.289 | 6.00 | 10.00 | 5 | 6.93 | 2.00 |
| NN5 | 0.20 | 0.191 | | | | 0.004 | | | 0.896 | 0.175 | 5.00 | 10.00 | 5 | 6.93 | 1.21 |
| NN6 | 0.43 | 0.066 | | 0.364 | | | | | 0.815 | 0.350 | 5.00 | 10.00 | 5 | 6.93 | 2.43 |
| NN7 | 0.21 | 0.195 | | 0.011 | | | | | 0.895 | 0.184 | 4.00 | 10.00 | 5 | 6.93 | 1.27 |
| NN8 | 0.54 | 0.023 | | 0.514 | | | | | 0.804 | 0.432 | 7.00 | 10.00 | 5 | 6.93 | 2.99 |
| NN9 | 0.19 | 0.183 | | 0.006 | | | | | 0.897 | 0.170 | 5.00 | 10.00 | 5 | 6.93 | 1.18 |
| NN10 | 0.19 | 0.179 | | 0.015 | | | | | 0.892 | 0.173 | 4.00 | 10.00 | 5 | 6.93 | 1.20 |
| NN11 | 0.10 | 0.274 | | | | 0.010 | | | 0.880 | 0.090 | 4.00 | 10.00 | 5 | 6.93 | 0.62 |
| NN12 | 0.12 | 0.101 | | 0.020 | | | | | 0.883 | 0.108 | 5.00 | 10.00 | 5 | 6.93 | 0.75 |
| NN13 | 0.37 | 0.317 | | 0.053 | | | | | 0.886 | 0.327 | 5.00 | 10.00 | 5 | 6.93 | 2.27 |
| PP1 | 0.12 | 0.104 | | | | 0.018 | | | 0.870 | 0.105 | 3.00 | 10.00 | 5 | 6.93 | 0.73 |
| PP2 | 0.06 | 0.049 | | | | 0.015 | | | 0.853 | 0.055 | 3.00 | 10.00 | 5 | 6.93 | 0.38 |
| PP3 | 0.12 | 0.115 | | | | 0.002 | | | 0.897 | 0.104 | 5.00 | 10.00 | 5 | 6.93 | 0.72 |
| PP4 | 0.17 | 0.168 | | | | 0.001 | | | 0.898 | 0.152 | 5.00 | 10.00 | 5 | 6.93 | 1.05 |
| PP5 | 0.39 | 0.253 | | 0.013 | | 0.124 | | | 0.833 | 0.325 | 5.00 | 10.00 | 5 | 6.93 | 2.25 |
| PP6 | 0.26 | 0.224 | | 0.032 | | | | | 0.887 | 0.227 | 7.00 | 10.00 | 5 | 6.93 | 1.57 |
| PP7 | 0.24 | 0.214 | | 0.030 | | | | | 0.888 | 0.216 | 5.00 | 10.00 | 5 | 6.93 | 1.50 |
| QQ1 | 0.53 | 0.448 | | | | 0.078 | | | 0.870 | 0.458 | 3.00 | 10.00 | 5 | 6.93 | 3.17 |



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SH 205
HYDRAULIC COMPUTATION SHEET
SHEET 4 OF 13

| | | |
|--------------------|-------------------------|-------------|
| FED. AID DIST. NO. | FEDERAL AID PROJECT NO. | HIGHWAY NO. |
| 6 | (SEE TITLE SHEET) | SH 205 |
| STATE | DIST. | COUNTY |
| TEXAS | DALLAS | ROCKWALL |
| CONT. | SECT. | JOB |
| 0451 | 01 | 032. ETC |

D:\G-1\JOBS\22451C-SH205\Drawings\2451 cad\04.dgn, CN=CO-631
 5/10/2006 Plotted TO-MA1-2006 09:23

INLET COMPUTATIONS

| Inlet ID | Drainage Area ID | Inlet Location | Curb Dep (ft) | Curb Open In Height (ft) | Curb Dep Width (ft) | Spread X-sect Slope (%) | Inlet Length (ft) | Curb or Grate Inlet on Grade | | | | Curb Inlet In Sag | | | | Drop Inlet | | | | Allow Head (ft) | Actual Head (ft) | Discharge (cfs) | Capacity (cfs) | By Pass Flow (cfs) | By Pass Flow to Node | Spread N | | |
|----------|------------------|----------------------------------|---------------|--------------------------|---------------------|-------------------------|-------------------|------------------------------|-------------------------|--------------------------------|--------------------------------|-------------------|----------------------------|-----------------------------|------------------------------|-------------------------------|-----------------|-------------------------|------------------------|-----------------|------------------|-----------------|----------------|--------------------|----------------------|----------|-------------------------------------|--------------------------|
| | | | | | | | | Allowable Ponding width (ft) | Longl Slope (grade) (%) | Comp Ponded Width (Grade) (ft) | Comp Ponded Depth (Grade) (ft) | Inlet Length (ft) | Longl Slope Left (sag) (%) | Longl Slope Right (sag) (%) | Ponded Width Left (sag) (ft) | Ponded Width Right (sag) (ft) | Number of Grate | Grate Inlet Length (ft) | Grate Inlet Width (ft) | | | | | | | | Grate Inlet Area (ft ²) | Grate Inlet Per Imr (ft) |
| CI-NN13 | NN13 | 42.00' LT SH205CL STA 95+00.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 3.00 | 7.80 | 0.16 | 9.85 | | | | | | | | | 0.24 | 0.16 | 2.27 | 2.27 | | | 0.015 | |
| CI-NN12 | NN12 | 42.00' LT SH205CL STA 96+12.00 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 12.0 | 0.94 | 6.40 | 0.13 | 3.59 | | | | | | | | | 0.24 | 0.13 | 0.75 | 0.75 | | | 0.015 | |
| CI-NN11 | NN11 | 42.00' RT SH205CL STA 96+48.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | | | | | 0.90 | 0.90 | 10.13 | 11.79 | | | | | 0.24 | 0.07 | 0.62 | 4.17 | | | 0.15 | |
| CI-NN10 | NN10 | 42.00' RT SH205CL STA 97+56.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 2.25 | 6.54 | 0.13 | 5.90 | | | | | | | | | 0.24 | 0.13 | 1.23 | 1.23 | | | 0.015 | |
| CI-NN9 | NN9 | 42.00' RT SH205CL STA 99+25.00 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 12.0 | 2.25 | 6.44 | 0.13 | 5.70 | | | | | | | | | 0.24 | 0.13 | 1.18 | 1.15 | 0.03 | CI-NN10 | 0.015 | |
| CI-NN8 | NN8 | 65.00' RT SH205CL STA 100+96.56 | 0.25 | 0.25 | 3.0 | 2.19 | 10 | 12.0 | | | | | 3.85 | 4.85 | 4.27 | 6.87 | | | | | 0.24 | 0.19 | 2.99 | 4.17 | | | 0.015 | |
| CI-NN7 | NN7 | 42.00' RT SH205CL STA 100+96.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 2.25 | 6.63 | 0.13 | 6.07 | | | | | | | | | 0.24 | 0.13 | 1.27 | 1.27 | | | 0.015 | |
| CI-NN6 | NN6 | 68.00' RT SH205CL STA 102+27.26 | 0.25 | 0.25 | 3.0 | 4.65 | 10 | 12.0 | 1.00 | 5.80 | 0.27 | 8.12 | | | | | | | | | 0.30 | 0.27 | 2.43 | 2.43 | | | 0.015 | |
| CI-NN5 | NN5 | 42.00' RT SH205CL STA 102+67.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 2.25 | 7.28 | 0.15 | 7.37 | | | | | | | | | 0.24 | 0.15 | 1.63 | 1.63 | | | 0.015 | |
| CI-NN4 | NN4 | 42.00' RT SH205CL STA 104+55.00 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 12.0 | 2.25 | 7.86 | 0.16 | 8.64 | | | | | | | | | 0.24 | 0.16 | 2.00 | 1.58 | 0.42 | CI-NN5 | 0.015 | |
| CI-NN3 | NN3 | 42.00' RT SH205CL STA 107+58.00 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 12.0 | 0.45 | 9.02 | 0.18 | 5.04 | | | | | | | | | 0.50 | 0.18 | 1.30 | 1.30 | | | 0.015 | |
| CI-NN2 | NN2 | 42.00' RT SH205CL STA 109+58.00 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 12.0 | 0.35 | 10.13 | 0.20 | 5.57 | | | | | | | | | 0.24 | 0.20 | 1.56 | 1.53 | 0.03 | CI-NN3 | 0.015 | |
| CI-NN1 | NN1 | 42.00' RT SH205CL STA 112+07.00 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 12.0 | 0.35 | 7.08 | 0.14 | 2.70 | | | | | | | | | 0.24 | 0.14 | 0.60 | 0.60 | | | 0.015 | |
| CI-QQ1 | QQ1 | 42.00' RT SH205CL STA 95+95.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 1.38 | 10.23 | 0.21 | 11.43 | | | | | | | | | 0.24 | 0.21 | 3.17 | 3.17 | | | 0.015 | |
| CI-PP7 | PP7 | 42.00' LT SH205CL STA 97+28.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 2.11 | 7.13 | 0.14 | 6.84 | | | | | | | | | 0.24 | 0.14 | 1.50 | 1.50 | | | 0.015 | |
| CI-PP6 | PP6 | 42.00' LT SH205CL STA 99+35.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 2.25 | 7.18 | 0.14 | 7.17 | | | | | | | | | 0.24 | 0.14 | 1.57 | 1.57 | | | 0.015 | |
| CI-PP5 | PP5 | 42.00' LT SH205CL STA 100+90.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 2.25 | 8.21 | 0.16 | 9.44 | | | | | | | | | 0.24 | 0.16 | 2.25 | 2.25 | | | 0.015 | |
| CI-PP4 | PP4 | 42.00' LT SH205CL STA 101+72.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 2.25 | 6.18 | 0.12 | 5.23 | | | | | | | | | 0.24 | 0.12 | 1.05 | 1.05 | | | 0.015 | |
| CI-PP3 | PP3 | 23.50' RT FM740 STA 18+58.39 | 0.25 | 0.25 | 3.0 | 4.55 | 5 | 12.0 | 3.45 | 2.96 | 0.14 | 4.08 | | | | | | | | | 0.24 | 0.14 | 0.72 | 0.72 | | | 0.015 | |
| CI-PP2 | PP2 | 22.50' LT FM740 STA 18+98.00 | 0.25 | 0.25 | 3.0 | 0.90 | 5 | 12.0 | | | | | 0.35 | 0.35 | 9.64 | 3.20 | | | | | 0.24 | 0.06 | 0.38 | 2.81 | | | 0.015 | |
| CI-PP1 | PP1 | 42.00' LT SH205CL STA 103+43.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | | | | | 5.00 | 2.50 | 3.58 | 4.08 | | | | | 0.24 | 0.08 | 0.73 | 4.17 | | | 0.015 | |
| DI-MM18 | MM18 | 46.50' LT FM740 STA 17+00.00 | | | | | | | | | | | | | | | 3 | 7.50 | 2 | 10.07 | 14.42 | 1.00 | 0.37 | 4.98 | 22.26 | | | 0.015 |
| CI-MM17 | MM17 | 36.40' LT FM740 STA 17+85.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 2.35 | 8.09 | 0.16 | 9.38 | | | | | | | | | 0.24 | 0.16 | 2.21 | 2.21 | | | 0.015 | |
| CI-MM16B | MM16B | 70.65' LT FM740 STA 18+18.20 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 1.00 | 8.26 | 0.17 | 6.32 | | | | | | | | | 0.24 | 0.17 | 1.52 | 1.52 | | | 0.015 | |
| CI-MM16A | MM16A | 82.00' LT FM740 STA 18+43.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 1.00 | 8.91 | 0.18 | 7.37 | | | | | | | | | 0.24 | 0.18 | 1.86 | 1.86 | | | 0.015 | |
| CI-MM16 | MM16 | 100.22' LT SH205CL STA 103+40.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | | | | | 0.40 | 0.40 | 11.47 | 11.64 | | | | | 0.24 | 0.22 | 4.73 | 5.52 | | | 0.015 | |
| CI-MM15 | MM15 | 87.50' LT SH205CL STA 103+72.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 1.75 | 9.88 | 0.20 | 12.04 | | | | | | | | | 0.24 | 0.20 | 3.25 | 3.25 | | | 0.015 | |
| CI-MM14 | MM14 | 71.75' LT SH205CL STA 104+16.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 3.00 | 9.09 | 0.18 | 13.43 | | | | | | | | | 0.24 | 0.18 | 3.41 | 3.41 | | | 0.015 | |
| CI-MM13 | MM13 | 55.92' LT SH205CL STA 104+67.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 2.59 | 9.85 | 0.20 | 14.63 | | | | | | | | | 0.24 | 0.20 | 3.93 | 3.93 | | | 0.015 | |
| CI-MM12 | MM12 | 42.00' LT SH205CL STA 105+69.00 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 12.0 | 2.25 | 7.27 | 0.15 | 7.36 | | | | | | | | | 0.24 | 0.15 | 1.63 | 1.42 | 0.21 | CI-MM13 | 0.015 | |
| CI-MM11 | MM11 | 14.00' RT BOURN STA 13+28.50 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 12.0 | 4.53 | 3.78 | 0.08 | 2.52 | | | | | | | | | 0.24 | 0.08 | 0.40 | 0.40 | | | 0.015 | |
| CI-MM10 | MM10 | 14.00' LT BOURN STA 13+23.50 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 4.34 | 9.11 | 0.18 | 16.29 | | | | | | | | | 0.24 | 0.18 | 4.13 | 4.08 | 0.04 | CI-MM12 | 0.015 | |
| CI-MM9 | MM9 | 42.00' LT SH205CL STA 107+58.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 0.45 | 11.04 | 0.22 | 7.50 | | | | | | | | | 0.24 | 0.22 | 2.22 | 2.22 | | | 0.015 | |
| CI-MM8 | MM8 | 42.00' LT SH205CL STA 108+60.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 0.35 | 11.94 | 0.24 | 7.65 | | | | | | | | | 0.24 | 0.24 | 2.41 | 2.41 | | | 0.015 | |
| CI-MM7 | MM7 | 42.00' LT SH205CL STA 109+38.00 | 0.25 | 0.25 | 3.0 | 1.92 | 10 | 12.0 | 0.35 | 10.02 | 0.19 | 5.22 | | | | | | | | | 0.24 | 0.19 | 1.41 | 1.41 | | | 0.015 | |
| CI-MM6 | MM6 | 42.00' LT SH205CL STA 109+98.00 | 0.25 | 0.25 | 3.0 | 0.74 | 5 | 12.0 | 0.35 | 10.38 | 0.08 | 1.75 | | | | | | | | | 0.24 | 0.08 | 0.32 | 0.32 | | | 0.015 | |
| CI-MM5 | MM5 | 7.00' LT SH205CL STA 110+63.00 | 0.25 | 0.25 | 3.0 | 0.62 | 5 | 12.0 | 0.35 | 11.00 | 0.07 | 1.58 | | | | | | | | | 0.24 | 0.07 | 0.27 | 0.27 | | | 0.015 | |
| CI-MM4 | MM4 | 7.00' LT SH205CL STA 111+15.00 | 0.25 | 0.25 | 3.0 | 0.62 | 5 | 12.0 | 0.35 | 10.20 | 0.06 | 1.32 | | | | | | | | | 0.24 | 0.06 | 0.22 | 0.22 | | | 0.015 | |
| CI-MM3B | MM3B | 14.00' LT ROSS STA 13+32.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 6.57 | 7.67 | 0.15 | 14.19 | | | | | | | | | 0.24 | 0.15 | 3.20 | 3.20 | | | 0.015 | |
| CI-MM3A | MM3A | 14.00' RT ROSS STA 13+35.00 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 12.0 | 6.57 | 3.87 | 0.08 | 3.22 | | | | | | | | | 0.24 | 0.08 | 0.52 | 0.52 | | | 0.015 | |
| CI-MM2 | MM2 | 3.00' RT SH205CL STA 112+15.50 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 0.35 | 5.99 | 0.12 | 1.89 | | | | | | | | | 0.24 | 0.12 | 0.38 | 0.38 | | | 0.015 | |
| CI-MM1 | MM1 | 3.00' RT SH205CL STA 112+69.00 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 12.0 | 0.15 | 5.93 | 0.12 | 1.18 | | | | | | | | | 0.24 | 0.12 | 0.24 | 0.24 | | | 0.015 | |
| CI-KK3 | KK3 | 17.50' RT BOYDSTON STA 15+47.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 2.87 | 7.37 | 0.15 | 8.57 | | | | | | | | | 0.24 | 0.15 | 1.91 | 1.91 | | | 0.015 | |
| CI-KK2 | KK2 | 42.00' RT SH205CL STA 115+78.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 0.35 | 9.71 | 0.19 | 5.12 | | | | | | | | | 0.24 | 0.19 | 1.39 | 1.39 | | | 0.015 | |
| CI-KK1 | KK1 | 42.00' RT SH205CL STA 114+00.00 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 12.0 | 0.35 | 7.34 | 0.15 | 2.91 | | | | | | | | | 0.24 | 0.15 | 0.66 | 0.66 | | | 0.015 | |
| CI-LL5 | LL5 | 16.00' LT BOYDSTON STA 13+31.50 | 0.25 | 0.25 | 3.0 | 1.70 | 15 | 12.0 | 4.80 | 10.40 | 0.18 | 18.67 | | | | | | | | | 0.24 | 0.18 | 4.71 | 4.46 | 0.25 | CI-HH3 | 0.015 | |
| CI-LL4 | LL4 | 16.00' RT BOYDSTON STA 13+31.50 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 4.80 | 8.21 | 0.16 | 13.90 | | | | | | | | | 0.24 | 0.16 | 3.28 | 3.28 | | | 0.015 | |
| CI-LL3 | LL3 | 7.00' LT SH205CL STA 115+70.00 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 12.0 | 0.35 | 5.03 | 0.10 | 1.30 | | | | | | | | | 0.24 | 0.10 | 0.24 | 0.24 | | | 0.015 | |
| CI-LL2C | LL2C | 7.00' LT SH205CL STA 115+30.00 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 12.0 | 0.35 | 5.06 | 0.10 | 1.31 | | | | | | | | | 0.24 | 0.10 | 0.24 | 0.24 | | | 0.015 | |
| CI-LL2B | LL2B | 7.00' LT SH205CL STA 114+90.00 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 12.0 | 0.35 | 5.01 | 0.10 | 1.28 | | | | | | | | | 0.24 | 0.10 | 0.24 | 0.24 | | | 0.015 | |
| CI-LL2A | LL2A | 7.00' LT SH205CL STA 114+50.00 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 12.0 | 0.35 | 4.78 | 0.10 | 1.16 | | | | | | | | | 0.24 | 0.10 | 0.21 | 0.21 | | | 0.015 | |
| CI-LL1 | LL1 | 3.00' RT SH205CL STA 113+66.00 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 12.0 | | | | | 0.30 | 0.30 | 8.91 | 6.64 | | | | | 0.50 | 0.16 | 1.49 | 8.46 | | | 0.015 | |

NOTE: 50% CLOGGING FACTOR WAS APPLIED TO GRATE INLET COMPUTATIONS

D:\GIS\22451\C-SH205\Drawings\2451\cd07.dgn, ON=10-63J
 5/10/2006 Plotted 10-MAY-2006 09:23



INLET COMPUTATIONS

| Inlet ID | Drainage Area ID | Inlet Location | Curb or Grate Inlet on Grade | | | | | | | | | | Curb Inlet In Sag | | | | Drop Inlet | | | | | By Pass Flow (cfs) | By Pass Flow to Node | Spread N | | | |
|----------|------------------|----------------------------------|------------------------------|--------------------------|---------------------|-------------------------|-------------------|------------------------------|-------------------------|----------------------------------|----------------------------------|-----------------------|----------------------------|-----------------------------|--------------------------------|---------------------------------|-----------------|-------------------------|------------------------|-------------------------------------|--------------------------|--------------------|----------------------|----------|-----------------|------------------|-----------------|
| | | | Curb Dep (ft) | Curb Open In Height (ft) | Curb Dep Width (ft) | Spread X-sect Slope (%) | Inlet Length (ft) | Allowable Ponding width (ft) | Longl Slope (grade) (%) | Comp Pondered Width (Grade) (ft) | Comp Pondered Depth (Grade) (ft) | Inlet Length Req (ft) | Longl Slope Left (sag) (%) | Longl Slope Right (sag) (%) | Pondered Width Left (sag) (ft) | Pondered Width Right (sag) (ft) | Number of Grate | Grate Inlet Length (ft) | Grate Inlet Width (ft) | Grate Inlet Area (ft ²) | Grate Inlet Perimtr (ft) | | | | Allow Head (ft) | Actual Head (ft) | Discharge (cfs) |
| CI-HH3 | HH3 | 17.50' LT BOYDSTON STA 15+00.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 2.87 | 6.03 | 0.12 | 5.62 | | | | | | | | | 0.24 | 0.12 | 1.12 | 1.12 | | | 0.015 |
| CI-HH2 | HH2 | 42.00' RT SH205CL STA 116+62.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 0.23 | 10.51 | 0.21 | 4.83 | | | | | | | | | 0.24 | 0.21 | 1.39 | 1.39 | | | 0.015 |
| CI-HH1 | HH1 | 42.00' RT SH205CL STA 118+80.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 2.00 | 7.69 | 0.15 | 7.79 | | | | | | | | | 0.24 | 0.15 | 1.78 | 1.78 | | | 0.015 |
| CI-JJ5 | JJ5 | 3.00' RT SH205CL STA 116+68.00 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 12.0 | 0.32 | 6.58 | 0.13 | 2.22 | | | | | | | | | 0.24 | 0.13 | 0.47 | 0.47 | | | 0.015 |
| CI-JJ4 | JJ4 | 3.00' RT SH205CL STA 117+05.00 | 0.25 | 0.25 | 3.0 | 1.03 | 10 | 12.0 | 0.90 | 9.65 | 0.10 | 3.72 | | | | | | | | | 0.24 | 0.10 | 0.72 | 0.72 | | | 0.015 |
| CI-JJ3 | JJ3 | 42.00' LT SH205CL STA 118+05.00 | 0.25 | 0.25 | 3.0 | 0.93 | 5 | 12.0 | 2.00 | 5.56 | 0.05 | 1.35 | | | | | | | | | 0.24 | 0.05 | 0.21 | 0.21 | | | 0.015 |
| DI-JJ2C | JJ2C | 67.00' LT SH205CL STA 118+62.50 | | | | 2.80 | 7.5 | 20.0 | 9.00 | 6.68 | 0.19 | | | | | | | | | | 0.24 | 0.19 | 4.54 | 3.52 | 1.03 | CI-JJ2B | 0.015 |
| CI-JJ2B | JJ2B | 42.00' LT SH205CL STA 118+40.00 | 0.25 | 0.25 | 3.0 | 1.62 | 10 | 12.0 | 2.00 | 10.02 | 0.16 | 10.48 | | | | | | | | | 0.24 | 0.16 | 2.54 | 2.53 | 0.01 | CI-JJ3 | 0.015 |
| CI-JJ2A | JJ2A | 57.45' LT SH205CL STA 119+29.95 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | | | | | 0.50 | 0.50 | 11.93 | 11.93 | | | | | 0.24 | 0.18 | 5.75 | 4.56 | | | 0.015 |
| CI-JJ1B | JJ1B | 42.00' LT SH205CL STA 119+35.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 2.00 | 6.68 | 0.13 | 5.81 | | | | | | | | | 0.24 | 0.13 | 1.22 | 1.22 | | | 0.015 |
| CI-JJ1A | JJ1A | 54.50' LT SH205CL STA 120+10.00 | 0.25 | 0.25 | 3.0 | 1.67 | 10 | 12.0 | | | | | 0.50 | 0.50 | 4.44 | 13.37 | | | | | 0.24 | 0.19 | 3.04 | 4.17 | | | 0.015 |
| CI-GG4 | GG4 | 34.00' LT SH205SB2 STA 128+44.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 2.54 | 10.16 | 0.20 | 15.40 | | | | | | | | | 0.24 | 0.20 | 4.23 | 4.22 | 0.01 | CI-EE6 | 0.015 |
| CI-GG3 | GG3 | 34.00' LT SH205SB2 STA 125+55.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 8.00 | 8.10 | 0.16 | 17.57 | | | | | | | | | 0.24 | 0.16 | 4.10 | 3.97 | 0.13 | CI-GG4 | 0.015 |
| CI-GG2 | GG2 | 13.00' RT KENWAY STA 13+08.50 | 0.25 | 0.25 | 3.0 | 0.50 | 15 | 25.0 | 0.85 | 21.20 | 0.16 | 16.66 | | | | | | | | | 0.24 | 0.16 | 4.28 | 4.21 | 0.07 | CI-GG3 | 0.015 |
| CI-GG1 | GG1 | 33.99' LT SH205SB2 STA 123+83.81 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 8.00 | 6.61 | 0.13 | 11.50 | | | | | | | | | 0.24 | 0.13 | 2.38 | 2.32 | 0.06 | CI-GG3 | 0.015 |
| CI-FF4 | FF4 | 34.00' RT SH205NB2 STA 128+60.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 2.16 | 10.23 | 0.21 | 14.36 | | | | | | | | | 0.24 | 0.21 | 3.97 | 3.97 | | | 0.015 |
| CI-FF3 | FF3 | 34.00' RT SH205NB2 STA 126+90.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 6.21 | 10.70 | 0.21 | 26.88 | | | | | | | | | 0.24 | 0.21 | 7.59 | 5.84 | 1.74 | CI-FF4 | 0.015 |
| CI-FF2 | FF2 | 14.00' RT STORRS STA 10+85.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 10.00 | 11.94 | 0.24 | 42.28 | | | | | | | | | 0.24 | 0.24 | 12.89 | 7.03 | 5.86 | CI-FF3 | 0.015 |
| CI-FF1 | FF1 | 34.00' RT SH205NB2 STA 125+55.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 8.00 | 8.64 | 0.17 | 20.03 | | | | | | | | | 0.24 | 0.17 | 4.87 | 4.46 | 0.41 | CI-FF3 | 0.015 |
| CI-EE6 | EE6 | 34.00' LT SH205SB2 STA 129+50.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | | | | | 4.00 | 3.75 | 5.19 | 5.25 | | | | | 0.24 | 0.14 | 1.76 | 4.17 | | | 0.015 |
| CI-EE5 | EE5 | 34.00' LT SH205SB2 STA 130+40.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 2.13 | 10.71 | 0.21 | 15.59 | | | | | | | | | 0.24 | 0.21 | 4.45 | 4.44 | 0.01 | CI-EE6 | 0.015 |
| CI-EE4 | EE4 | 34.00' LT SH205SB2 STA 132+75.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 7.50 | 7.39 | 0.15 | 14.07 | | | | | | | | | 0.24 | 0.15 | 3.10 | 3.10 | | | 0.015 |
| CI-EE3 | EE3 | 34.00' LT SH205SB2 STA 134+93.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 4.00 | 9.66 | 0.19 | 17.56 | | | | | | | | | 0.24 | 0.19 | 4.63 | 4.49 | 0.15 | CI-EE4 | 0.015 |
| CI-EE2 | EE2 | 34.00' LT SH205SB2 STA 136+45.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 5.59 | 8.24 | 0.17 | 15.14 | | | | | | | | | 0.24 | 0.17 | 3.58 | 3.58 | 0.00 | CI-EE3 | 0.015 |
| CI-EE1 | EE1 | 34.00' LT SH205SB2 STA 137+66.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 6.96 | 6.86 | 0.14 | 11.60 | | | | | | | | | 0.24 | 0.14 | 2.45 | 2.45 | | | 0.015 |
| CI-DD5 | DD5 | 34.00' RT SH205NB2 STA 129+50.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | | | | | 4.00 | 3.75 | 4.81 | 4.87 | | | | | 0.24 | 0.12 | 1.44 | 4.17 | | | 0.015 |
| CI-DD4 | DD4 | 34.00' RT SH205NB2 STA 130+40.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 2.13 | 8.99 | 0.18 | 11.05 | | | | | | | | | 0.24 | 0.18 | 2.79 | 2.79 | | | 0.015 |
| CI-DD3 | DD3 | 34.00' RT SH205NB2 STA 132+63.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 7.45 | 7.05 | 0.14 | 12.71 | | | | | | | | | 0.24 | 0.14 | 2.73 | 2.73 | | | 0.015 |
| CI-DD2 | DD2 | 34.00' RT SH205NB2 STA 134+93.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 7.50 | 6.23 | 0.13 | 9.84 | | | | | | | | | 0.24 | 0.13 | 1.97 | 1.97 | | | 0.015 |
| CI-DD1 | DD1 | 34.00' RT SH205NB2 STA 136+31.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 6.96 | 7.46 | 0.15 | 13.81 | | | | | | | | | 0.24 | 0.15 | 3.07 | 3.07 | | | 0.015 |
| CI-CC5 | CC5 | 23.00' LT SH205SB2 STA 148+63.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 2.00 | 8.11 | 0.16 | 8.67 | | | | | | | | | 0.24 | 0.16 | 2.05 | 2.05 | | | 0.015 |
| CI-CC4 | CC4 | 23.00' RT SH205NB2 STA 149+00.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 0.50 | 11.71 | 0.23 | 8.84 | | | | | | | | | 0.50 | 0.23 | 2.74 | 2.74 | | | 0.015 |
| CI-CC3 | CC3 | 23.00' RT SH205NB2 STA 147+15.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 0.50 | 9.90 | 0.20 | 6.38 | | | | | | | | | 0.24 | 0.20 | 1.75 | 1.75 | | | 0.015 |
| CI-CC2 | CC2 | 34.00' RT SH205NB2 STA 144+63.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 2.28 | 8.71 | 0.17 | 10.72 | | | | | | | | | 0.24 | 0.17 | 2.65 | 2.65 | | | 0.015 |
| CI-CC1 | CC1 | 34.00' RT SH205NB2 STA 141+57.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 2.60 | 9.09 | 0.18 | 12.50 | | | | | | | | | 0.24 | 0.18 | 3.18 | 3.18 | | | 0.015 |
| CI-BB2 | BB2 | 14.00' LT ALAMO STA 11+40.00 | 0.25 | 0.25 | 3.0 | 3.35 | 5 | 14.0 | | | | | 0.40 | 0.40 | 3.72 | 5.29 | | | | | 0.47 | 0.12 | 0.97 | 7.71 | | | 0.015 |
| CI-BB1 | BB1 | 14.00' RT ALAMO STA 11+46.00 | 0.25 | 0.25 | 3.0 | 3.34 | 15 | 14.0 | | | | | 0.40 | 0.40 | 10.07 | 7.33 | | | | | 0.47 | 0.24 | 5.51 | 15.12 | | | 0.015 |
| CI-AA9 | AA9 | 14.00' LT ALAMO STA 10+65.00 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 8.0 | 1.97 | 7.85 | 0.16 | 8.06 | | | | | | | | | 0.16 | 0.16 | 1.87 | 1.54 | 0.33 | CI-BB2 | 0.015 |
| CI-AA8 | AA8 | 37.83' LT SH205SB2 STA 147+71.68 | 0.25 | 0.25 | 3.0 | 2.00 | 5 | 12.0 | 0.13 | 11.38 | 0.23 | 4.23 | | | | | | | | | 0.24 | 0.23 | 1.30 | 1.30 | | | 0.015 |
| CI-AA7 | AA7 | 34.00' LT SH205SB2 STA 147+38.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 1.02 | 11.86 | 0.24 | 13.00 | | | | | | | | | 0.24 | 0.24 | 4.04 | 4.04 | | | 0.015 |
| CI-AA6 | AA6 | 34.00' LT SH205SB2 STA 146+79.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 2.56 | 8.41 | 0.17 | 10.61 | | | | | | | | | 0.24 | 0.17 | 2.56 | 2.55 | 0.02 | CI-AA7 | 0.015 |
| CI-AA5 | AA5 | 34.00' LT SH205SB2 STA 145+65.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 3.25 | 7.44 | 0.15 | 9.30 | | | | | | | | | 0.24 | 0.15 | 2.08 | 2.08 | | | 0.015 |
| CI-AA4 | AA4 | 18.50' LT KAUFMAN STA 17+37.00 | 0.25 | 0.25 | 3.0 | 2.00 | 10 | 12.0 | 1.41 | 9.37 | 0.19 | 9.71 | | | | | | | | | 0.24 | 0.19 | 2.53 | 2.53 | | | 0.015 |
| CI-AA3 | AA3 | 34.00' LT SH205SB2 STA 144+32.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 3.25 | 9.46 | 0.19 | 15.17 | | | | | | | | | 0.24 | 0.19 | 3.95 | 3.95 | 0.00 | CI-AA5 | 0.015 |
| CI-AA2 | AA2 | 34.00' LT SH205SB2 STA 142+90.00 | 0.25 | 0.25 | 3.0 | 2.00 | 15 | 12.0 | 3.25 | 8.37 | 0.17 | 11.84 | | | | | | | | | 0.24 | 0.17 | 2.84 | 2.84 | | | 0.015 |

NOTE: 50% CLOGGING FACTOR WAS APPLIED TO GRATE INLET COMPUTATIONS



PB Parsons Brinckerhoff Quade & Douglas, Inc.
2777 Stemmons Freeway
Suite 1333
122 Dallas, TX 75207

Texas Department of Transportation
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SH 205

HYDRAULIC COMPUTATION SHEET

SHEET 8 OF 13

| | | |
|----------------|-------------------------|---------------|
| FED. PROJ. NO. | FEDERAL AID PROJECT NO. | HIGHWAY NO. |
| 6 | (SEE TITLE SHEET) | SH 205 |
| STATE | DIST. | COUNTY |
| TEXAS | DALLAS | ROCKWALL |
| CONT. | SECT. | JOB |
| 0451 | 01 | 032, ETC |
| | | SHEET NO. 395 |

SEWER COMPUTATIONS

| Link - ID | Upstream Node | Downstream Node | SIZE | Actual Length (ft) | Hydraulic Length (ft) | Manning's N Value | Slope (%) | Invert Upstream (ft) | Invert Downstream (ft) | Discharge (cfs) | Capacity (cfs) | Uniform Depth (ft) | Uniform Velocity (ft/s) | Critical Depth (ft) | Critical Velocity (ft/s) | Critical Slope (%) | Friction Slope (%) | Actual Velocity Downstream (ft/s) | Actual Velocity Upstream (ft/s) | Actual Depth Downstream (ft) | Actual Depth Upstream (ft) | HGL Downstream (ft) | HGL Upstream (ft) | EGL Downstream (ft) | EGL Upstream (ft) |
|------------|-----------------|-----------------|------|--------------------|-----------------------|-------------------|-----------|----------------------|------------------------|-----------------|----------------|--------------------|-------------------------|---------------------|--------------------------|--------------------|--------------------|-----------------------------------|---------------------------------|------------------------------|----------------------------|---------------------|-------------------|---------------------|-------------------|
| LINE A10 | JCT-A9-60° BEND | OUT-A1 | 42" | 45.50 | 45.50 | 0.012 | 4.18 | 516.80 | 514.90 | 54.76 | 222.73 | 1.18 | 19.15 | 2.32 | 8.10 | 0.004 | 0.042 | 5.69 | 6.40 | 3.50 | 2.92 | 519.60 | 519.72 | 520.10 | 520.22 |
| LINE A9 | MH-A9 | JCT-A9-60° BEND | 42" | 18.57 | 21.07 | 0.012 | 6.59 | 518.19 | 516.80 | 54.76 | 279.79 | 1.05 | 22.57 | 2.32 | 8.10 | 0.004 | 0.066 | 13.83 | 8.10 | 1.51 | 2.32 | 518.31 | 520.50 | 521.28 | 521.53 |
| LINE A8 | JCT-A8-60° Y | MH-A9 | 42" | 5.20 | 7.70 | 0.012 | 0.52 | 518.23 | 518.19 | 54.76 | 78.76 | 2.15 | 8.84 | 2.32 | 8.10 | 0.004 | 0.005 | 8.43 | 8.10 | 2.24 | 2.32 | 520.43 | 520.55 | 521.53 | 521.57 |
| LAT A8 | CI-A8 | JCT-A8-60° Y | 24" | 4.61 | 6.12 | 0.012 | 13.94 | 520.58 | 519.73 | 1.92 | 91.51 | 0.20 | 11.70 | 0.48 | 3.31 | 0.004 | 0.139 | 8.25 | 1.22 | 0.26 | 1.00 | 519.98 | 521.58 | 521.05 | 521.58 |
| LINE A7B | MH-A7 | JCT-A8-60° Y | 42" | 269.80 | 272.30 | 0.012 | 0.52 | 519.65 | 518.23 | 54.63 | 78.76 | 2.15 | 8.84 | 2.31 | 8.10 | 0.004 | 0.005 | 8.84 | 8.10 | 2.15 | 2.31 | 520.37 | 521.96 | 521.59 | 522.98 |
| LINE A7A | JCT-A6-60° Y | MH-A7 | 42" | 146.20 | 148.70 | 0.012 | 0.52 | 520.43 | 519.65 | 54.63 | 78.76 | 2.15 | 8.84 | 2.31 | 8.10 | 0.004 | 0.005 | 8.83 | 8.10 | 2.15 | 2.31 | 521.80 | 522.74 | 523.01 | 523.76 |
| LAT A6 | CI-A6 | JCT-A6-60° Y | 24" | 4.61 | 6.11 | 0.012 | 1.83 | 522.04 | 521.93 | 2.22 | 33.18 | 0.35 | 6.00 | 0.52 | 3.44 | 0.004 | 0.018 | 1.85 | 2.25 | 0.81 | 0.71 | 522.74 | 522.75 | 523.76 | 522.80 |
| LAT A7 | DI-A7 | CI-A6 | 24" | 22.50 | 25.00 | 0.012 | 1.05 | 522.30 | 522.04 | 1.06 | 25.05 | 0.28 | 3.95 | 0.35 | 2.81 | 0.004 | 0.010 | 1.07 | 0.67 | 0.71 | 1.00 | 522.75 | 523.30 | 522.80 | 523.30 |
| LINE A6 | MH-A5 | JCT-A6-60° Y | 42" | 132.80 | 135.30 | 0.012 | 0.52 | 521.13 | 520.43 | 52.81 | 78.82 | 2.10 | 8.78 | 2.27 | 7.98 | 0.004 | 0.005 | 8.76 | 7.98 | 2.10 | 2.27 | 522.53 | 523.41 | 523.72 | 524.40 |
| LINE A5 | JCT-A4-60° Y | MH-A5 | 36" | 41.20 | 43.70 | 0.012 | 1.72 | 522.38 | 521.63 | 40.16 | 94.66 | 1.36 | 12.84 | 2.06 | 7.75 | 0.005 | 0.017 | 10.79 | 7.75 | 1.56 | 2.06 | 523.20 | 524.45 | 525.01 | 525.38 |
| LAT A5 | JCT-A5-EX 18" | MH-A5 | 24" | 14.00 | 16.50 | 0.012 | 5.85 | 523.60 | 522.63 | 12.65 | 59.29 | 0.63 | 15.01 | 1.28 | 5.96 | 0.005 | 0.059 | 10.57 | 4.03 | 0.81 | 1.99 | 523.45 | 525.59 | 525.19 | 525.59 |
| LINE A4 | MH-A3 | JCT-A4-60° Y | 36" | 230.30 | 232.30 | 0.012 | 1.72 | 526.37 | 522.38 | 37.92 | 94.63 | 1.32 | 12.65 | 2.00 | 7.56 | 0.004 | 0.017 | 12.45 | 7.56 | 1.34 | 2.00 | 523.72 | 528.37 | 526.13 | 529.26 |
| LAT A4 | CI-A4 | JCT-A4-60° Y | 24" | 4.61 | 6.11 | 0.012 | 4.60 | 523.67 | 523.38 | 2.23 | 52.55 | 0.28 | 8.31 | 0.52 | 3.45 | 0.004 | 0.046 | 1.32 | 1.42 | 1.06 | 1.00 | 524.45 | 524.67 | 525.38 | 524.67 |
| LINE A3 | JCT-A2-60° Y | MH-A3 | 24" | 45.70 | 47.70 | 0.012 | 2.52 | 528.57 | 527.37 | 10.17 | 38.88 | 0.70 | 10.42 | 1.14 | 5.49 | 0.004 | 0.025 | 9.46 | 5.49 | 0.75 | 1.14 | 528.12 | 529.71 | 529.51 | 530.18 |
| LAT A3 | DI-A3 | MH-A3 | 36" | 24.00 | 27.00 | 0.012 | 1.60 | 526.80 | 526.37 | 27.75 | 91.37 | 1.13 | 11.34 | 1.70 | 6.70 | 0.004 | 0.016 | 9.18 | 4.30 | 1.33 | 2.57 | 527.70 | 529.37 | 529.01 | 529.37 |
| LINE A2 | MH-A1 | JCT-A2-60° Y | 24" | 260.80 | 262.30 | 0.012 | 2.52 | 535.17 | 528.57 | 4.94 | 38.88 | 0.48 | 8.48 | 0.78 | 4.33 | 0.004 | 0.025 | 8.48 | 4.33 | 0.48 | 0.78 | 529.05 | 535.95 | 530.17 | 536.24 |
| LAT A2 | CI-A2 | JCT-A2-60° Y | 24" | 4.61 | 6.12 | 0.012 | 1.77 | 528.68 | 528.57 | 5.23 | 32.59 | 0.54 | 7.61 | 0.81 | 4.41 | 0.004 | 0.018 | 2.82 | 2.81 | 1.14 | 1.15 | 529.71 | 529.82 | 530.18 | 529.84 |
| LINE A1 | CI-A1 | MH-A1 | 24" | 305.95 | 309.95 | 0.012 | 2.50 | 542.92 | 535.17 | 4.94 | 38.76 | 0.48 | 8.47 | 0.78 | 4.33 | 0.004 | 0.025 | 8.45 | 2.78 | 0.48 | 1.10 | 535.65 | 544.03 | 536.77 | 544.03 |
| LINE B4 | CI-B4 | OUT-B1 | 24" | 66.90 | 68.40 | 0.012 | 5.24 | 519.58 | 516.00 | 9.98 | 56.08 | 0.57 | 13.48 | 1.13 | 5.45 | 0.004 | 0.052 | 12.70 | 5.45 | 0.60 | 1.13 | 516.60 | 520.71 | 519.11 | 521.17 |
| LINE B3 | CI-B3 | CI-B4 | 24" | 275.00 | 280.00 | 0.012 | 1.06 | 522.55 | 519.58 | 8.00 | 25.22 | 0.77 | 7.12 | 1.01 | 5.05 | 0.004 | 0.011 | 7.12 | 5.05 | 0.78 | 1.01 | 520.36 | 523.55 | 521.14 | 523.95 |
| LINE B2 | CI-B2 | CI-B3 | 24" | 295.00 | 300.00 | 0.012 | 0.85 | 525.10 | 522.55 | 6.02 | 22.60 | 0.71 | 6.09 | 0.87 | 4.61 | 0.004 | 0.009 | 6.09 | 4.61 | 0.71 | 0.87 | 523.25 | 525.96 | 523.83 | 526.29 |
| LINE B1 | CI-B1 | CI-B2 | 24" | 300.00 | 305.00 | 0.012 | 1.21 | 528.78 | 525.10 | 3.94 | 26.94 | 0.52 | 6.12 | 0.70 | 4.05 | 0.004 | 0.012 | 6.12 | 2.51 | 0.52 | 1.00 | 525.61 | 529.78 | 526.20 | 529.78 |
| LINE C1A | JCT-C1-60° BEND | OUT-C1 | 24" | 45.44 | 45.44 | 0.012 | 4.84 | 518.10 | 515.90 | 12.50 | 53.93 | 0.66 | 13.97 | 1.27 | 5.93 | 0.005 | 0.048 | 3.98 | 4.59 | 2.00 | 1.62 | 519.60 | 519.72 | 519.85 | 519.96 |
| LINE C1B | CI-C1 | JCT-C1-60° BEND | 24" | 13.26 | 14.76 | 0.012 | 6.82 | 519.11 | 518.10 | 12.50 | 64.02 | 0.60 | 15.80 | 1.27 | 5.93 | 0.005 | 0.068 | 10.76 | 5.93 | 0.79 | 1.27 | 518.89 | 520.38 | 520.70 | 520.93 |
| LINE C2 | CI-C2 | CI-C1 | 24" | 195.00 | 200.00 | 0.012 | 1.35 | 521.80 | 519.11 | 11.16 | 28.44 | 0.87 | 8.51 | 1.20 | 5.68 | 0.005 | 0.013 | 8.49 | 5.68 | 0.87 | 1.20 | 519.98 | 523.00 | 521.10 | 523.50 |
| LINE C3 | CI-C3 | CI-C2 | 24" | 285.00 | 290.00 | 0.012 | 1.04 | 524.82 | 521.80 | 9.13 | 24.99 | 0.84 | 7.33 | 1.08 | 5.28 | 0.004 | 0.010 | 7.33 | 5.28 | 0.84 | 1.08 | 522.64 | 525.89 | 523.47 | 526.33 |
| LINE C4 | CI-C4 | CI-C3 | 24" | 185.00 | 190.00 | 0.012 | 1.06 | 526.83 | 524.82 | 7.81 | 25.23 | 0.76 | 7.08 | 1.00 | 5.01 | 0.004 | 0.011 | 7.08 | 5.01 | 0.77 | 1.00 | 525.58 | 527.82 | 526.36 | 528.21 |
| LINE C5 | CI-C5 | CI-C4 | 24" | 265.00 | 270.00 | 0.012 | 2.29 | 533.02 | 526.83 | 5.97 | 37.11 | 0.54 | 8.67 | 0.86 | 4.59 | 0.004 | 0.023 | 8.66 | 4.59 | 0.54 | 0.86 | 527.37 | 533.88 | 528.54 | 534.21 |
| LINE C6 | CI-C6 | CI-C5 | 24" | 265.00 | 270.00 | 0.012 | 3.00 | 541.12 | 533.02 | 3.82 | 42.45 | 0.41 | 8.38 | 0.69 | 4.02 | 0.004 | 0.030 | 8.36 | 4.02 | 0.41 | 0.69 | 533.43 | 541.81 | 534.52 | 542.06 |
| LINE C7 | CI-C7 | CI-C6 | 24" | 223.00 | 228.00 | 0.012 | 2.60 | 547.04 | 541.12 | 1.27 | 39.48 | 0.25 | 5.75 | 0.39 | 2.96 | 0.004 | 0.026 | 5.75 | 2.96 | 0.25 | 0.39 | 541.37 | 547.43 | 541.88 | 547.56 |
| LINE C8 | CI-C8 | CI-C7 | 24" | 294.21 | 299.21 | 0.012 | 1.22 | 550.68 | 547.04 | 0.91 | 27.04 | 0.25 | 3.99 | 0.33 | 2.71 | 0.004 | 0.012 | 3.99 | 0.58 | 0.25 | 1.00 | 547.29 | 551.68 | 547.54 | 551.68 |
| LINE D1A | MH-D1 | OUT-D1 | 48" | 40.22 | 42.72 | 0.012 | 3.14 | 518.24 | 516.90 | 86.04 | 275.90 | 1.53 | 19.40 | 2.81 | 9.12 | 0.004 | 0.031 | 14.07 | 9.12 | 1.96 | 2.81 | 518.86 | 521.06 | 521.94 | 522.35 |
| LINE D1B | JCT-D1-90° Y | MH-D1 | 48" | 7.00 | 10.00 | 0.012 | 0.73 | 518.32 | 518.24 | 86.04 | 132.46 | 2.35 | 11.22 | 2.81 | 9.12 | 0.004 | 0.007 | 9.79 | 9.12 | 2.64 | 2.81 | 520.88 | 521.13 | 522.37 | 522.42 |
| LAT D1 | CI-D1 | JCT-D1-90° Y | 24" | 4.00 | 5.50 | 0.012 | 15.05 | 521.14 | 520.32 | 0.33 | 95.09 | 0.09 | 7.05 | 0.20 | 2.07 | 0.004 | 0.151 | 6.27 | 0.21 | 0.09 | 1.00 | 520.41 | 522.14 | 521.04 | 522.14 |
| LINE D1C | JCT-D2-90° T | JCT-D1-90° T | 48" | 116.00 | 116.00 | 0.012 | 0.72 | 519.15 | 518.32 | 85.82 | 132.10 | 2.35 | 11.19 | 2.81 | 9.10 | 0.004 | 0.007 | 10.84 | 9.10 | 2.41 | 2.81 | 520.73 | 521.96 | 522.55 | 523.25 |
| LAT D2 | CI-D2 | JCT-D2-90° T | 24" | 4.00 | 5.50 | 0.012 | 7.22 | 521.55 | 521.15 | 0.62 | 65.85 | 0.14 | 6.62 | 0.27 | 2.44 | 0.004 | 0.072 | 0.53 | 0.40 | 0.81 | 1.00 | 521.96 | 522.55 | 523.25 | 525.55 |
| LINE D2 | JCT-D3-90° T | JCT-D2-90° T | 48" | 194.00 | 194.00 | 0.012 | 0.72 | 520.55 | 519.15 | 85.40 | 132.15 | 2.34 | 11.18 | 2.80 | 9.09 | 0.004 | 0.007 | 11.02 | 9.09 | 2.37 | 2.80 | 521.52 | 523.35 | 523.41 | 524.63 |
| LAT D3 | CI-D3 | JCT-D3-90° T | 24" | 4.00 | 5.50 | 0.012 | 3.22 | 522.73 | 522.55 | 1.12 | 43.97 | 0.22 | 5.97 | 0.37 | 2.86 | 0.004 | 0.032 | 0.96 | 0.72 | 0.80 | 1.00 | 523.35 | 523.73 | 524.63 | 523.73 |
| LINE D3 | MH-D4 | JCT-D3-90° T | 48" | 187.80 | 190.80 | 0.012 | 0.72 | 521.93 | 520.55 | 85.26 | 132.10 | 2.34 | 11.17 | 2.80 | 9.08 | 0.004 | 0.007 | 11.01 | 9.08 | 2.37 | 2.80 | 522.92 | 524.72 | 524.80 | 525.01 |
| LAT D4 | JCT-D7-60° Y | MH-D4 | 48" | 29.36 | 31.86 | 0.012 | 0.42 | 522.06 | 521.93 | 43.70 | 101.24 | 1.84 | 7.76 | 1.98 | 7.06 | 0.003 | 0.004 | 4.65 | 4.84 | 2.80 | 2.70 | 524.72 | 524.76 | 526.01 | 525.10 |
| LAT D5 | EX-JCT-D5A-BRK | JCT-D7-60° Y | 48" | 26.53 | 26.53 | 0.012 | 0.30 | 522.14 | 522.06 | 39.90 | 85.46 | 1.92 | 6.69 | 1.89 | 6.85 | 0.003 | 0.003 | 4.42 | 4.55 | 2.70 | 2.63 | 524.76 | 524.77 | 525.10 | 525.09 |
| EX LAT D5A | JCT-D5-60° Y | EX-JCT-D5A-BRK | 48" | 52.81 | 52.81 | 0.012 | 0.47 | 522.39 | 522.14 | 39.90 | 107.07 | 1.69 | 7.90 | 1.89 | 6.85 | 0.003 | 0.005 | 4.55 | 4.97 | 2.63 | 2.44 | 524.77 | 524.83 | 525.09 | 525.15 |
| LAT D5B</ | | | | | | | | | | | | | | | | | | | | | | | | | |

SEWER COMPUTATIONS

| Link - ID | Upstream Node | Downstream Node | SIZE | Actual Length (ft) | Hydraulic Length (ft) | Manning's N Value | Slope (%) | Invert Upstream (ft) | Invert Downstream (ft) | Discharge (cfs) | Capacity (cfs) | Uniform Depth (ft) | Uniform Velocity (ft/s) | Critical Depth (ft) | Critical Velocity (ft/s) | Critical Slope (%) | Friction Slope (%) | Actual Velocity Downstream (ft/s) | Actual Velocity Upstream (ft/s) | Actual Depth Downstream (ft) | Actual Depth Upstream (ft) | HGL Downstream (ft) | HGL Upstream (ft) | EGL Downstream (ft) | EGL Upstream (ft) |
|-----------|-----------------|-----------------|-------|--------------------|-----------------------|-------------------|-----------|----------------------|------------------------|-----------------|----------------|--------------------|-------------------------|---------------------|--------------------------|--------------------|--------------------|-----------------------------------|---------------------------------|------------------------------|----------------------------|---------------------|-------------------|---------------------|-------------------|
| LINE E1 | SET-E1 | SET-E0 | 24" | 75.00 | 75.00 | 0.012 | 2.13 | 517.60 | 516.00 | 7.75 | 35.80 | 0.63 | 9.10 | 0.99 | 5.00 | 0.004 | 0.021 | 2.47 | 2.63 | 2.00 | 1.78 | 519.30 | 519.38 | 519.40 | 519.47 |
| DITCH E2 | SET-E2 | SET-E1 | 24" | 120.39 | 120.39 | 0.012 | 4.03 | 522.45 | 517.60 | 7.22 | 338.82 | 0.47 | 9.25 | 0.77 | 3.51 | 0.003 | 0.040 | 9.20 | 3.51 | 0.47 | 0.77 | 518.07 | 523.22 | 519.40 | 523.41 |
| LINE E2 | SET-E3 | SET-E2 | 24" | 80.13 | 80.13 | 0.012 | 1.93 | 522.45 | 522.45 | 1.44 | 34.09 | 0.28 | 5.38 | 0.41 | 3.06 | 0.004 | 0.019 | 5.37 | 0.92 | 0.28 | 1.00 | 522.73 | 525.00 | 523.18 | 525.00 |
| LINE F1A | JCT-F0-15° BEND | OUT-F1 | 5'X4' | 15.79 | 15.79 | 0.012 | 1.83 | 542.83 | 542.54 | 165.92 | 359.40 | 1.89 | 17.57 | 3.25 | 10.22 | 0.004 | 0.018 | 12.38 | 10.22 | 2.68 | 3.25 | 545.22 | 546.08 | 547.60 | 547.70 |
| LINE F1B | JCT-FJ-90° T | JCT-F0-15° BEND | 5'X4' | 46.32 | 46.32 | 0.012 | 1.83 | 543.68 | 542.83 | 165.92 | 359.08 | 1.89 | 17.57 | 3.25 | 10.22 | 0.004 | 0.018 | 13.80 | 10.22 | 2.41 | 3.25 | 545.23 | 546.92 | 548.19 | 548.55 |
| LAT FJ | CI-FJ | JCT-FJ-90° T | 24" | 3.15 | 3.20 | 0.012 | 9.72 | 545.99 | 545.68 | 2.44 | 76.40 | 0.25 | 11.09 | 0.54 | 3.53 | 0.004 | 0.097 | 1.19 | 1.55 | 1.25 | 1.00 | 546.92 | 546.99 | 548.55 | 547.89 |
| LINE F1C | JCT-FH-90° T | JCT-FJ-90° T | 5'X4' | 48.56 | 48.56 | 0.012 | 1.83 | 544.56 | 543.68 | 164.05 | 358.88 | 1.87 | 17.51 | 3.22 | 10.18 | 0.004 | 0.018 | 13.84 | 10.18 | 2.37 | 3.22 | 546.05 | 547.78 | 549.02 | 549.39 |
| LINE F1D | JCT-FI-90° T | JCT-FH-90° T | 5'X4' | 87.60 | 87.60 | 0.012 | 1.83 | 546.16 | 544.56 | 160.75 | 358.96 | 1.85 | 17.42 | 3.18 | 10.11 | 0.004 | 0.018 | 14.80 | 10.11 | 2.17 | 3.18 | 546.73 | 549.34 | 550.14 | 550.93 |
| LAT F1 | CI-F1 | JCT-FI-90° T | 24" | 52.78 | 55.28 | 0.012 | 2.46 | 549.52 | 548.16 | 3.36 | 38.40 | 0.40 | 7.51 | 0.64 | 3.87 | 0.004 | 0.025 | 7.33 | 3.87 | 0.41 | 0.64 | 548.57 | 550.16 | 549.41 | 550.39 |
| LAT F2 | CI-F2 | CI-F1 | 24" | 161.01 | 166.01 | 0.012 | 0.41 | 550.20 | 549.52 | 1.76 | 15.69 | 0.45 | 3.30 | 0.46 | 3.23 | 0.004 | 0.004 | 3.30 | 1.12 | 0.45 | 1.00 | 549.97 | 551.20 | 550.14 | 551.20 |
| LINE F3 | MH-F3 | JCT-F1-90° T | 5'X4' | 122.44 | 125.44 | 0.012 | 0.41 | 546.67 | 546.16 | 158.95 | 169.91 | 3.20 | 9.93 | 3.16 | 10.08 | 0.004 | 0.004 | 10.00 | 9.93 | 3.18 | 3.20 | 549.34 | 549.88 | 550.93 | 551.41 |
| LAT F3A | JCT-F3 60° BEND | MH-F3 | 24" | 56.25 | 59.25 | 0.012 | 0.41 | 548.24 | 548.00 | 4.07 | 15.60 | 0.70 | 4.18 | 0.71 | 4.09 | 0.004 | 0.004 | 1.33 | 1.47 | 1.88 | 1.65 | 549.88 | 549.89 | 551.41 | 549.92 |
| LAT F3B | CI-F3 | JCT-F3 60° BEND | 24" | 79.13 | 81.63 | 0.012 | 0.40 | 548.57 | 548.24 | 4.07 | 15.48 | 0.70 | 4.15 | 0.71 | 4.09 | 0.004 | 0.004 | 1.47 | 1.81 | 1.65 | 1.35 | 549.89 | 549.91 | 549.92 | 549.95 |
| LINE F4 | JCT-F4 90° T | MH-F3 | 5'X4' | 124.00 | 127.00 | 0.012 | 0.36 | 547.12 | 546.67 | 143.47 | 158.33 | 3.12 | 9.19 | 2.95 | 9.74 | 0.004 | 0.004 | 8.96 | 9.15 | 3.20 | 3.14 | 549.88 | 550.26 | 551.41 | 551.56 |
| LAT F4 | CI-F4 | JCT-F4 90° T | 24" | 4.50 | 4.50 | 0.012 | 6.03 | 549.40 | 549.12 | 0.82 | 60.18 | 0.16 | 6.77 | 0.31 | 2.63 | 0.004 | 0.060 | 0.45 | 0.53 | 1.14 | 1.00 | 550.26 | 550.40 | 551.56 | 551.13 |
| LINE F5A | JCT-F5-45° Y | JCT-F4 90° T | 5'X4' | 68.60 | 68.60 | 0.012 | 0.33 | 547.35 | 547.12 | 143.38 | 152.50 | 3.21 | 8.92 | 2.95 | 9.74 | 0.004 | 0.003 | 9.15 | 9.01 | 3.14 | 3.18 | 550.26 | 550.53 | 551.56 | 551.80 |
| LINE F5B | MH-F5 | JCT-F5-45° Y | 5'X4' | 101.90 | 104.40 | 0.012 | 0.33 | 547.69 | 547.35 | 112.82 | 152.36 | 2.68 | 8.43 | 2.51 | 8.99 | 0.004 | 0.003 | 7.09 | 7.63 | 3.18 | 2.96 | 550.53 | 550.65 | 551.80 | 551.56 |
| LAT F5 | CI-F5 | MH-F5 | 24" | 15.98 | 20.48 | 0.012 | 1.56 | 550.01 | 549.69 | 2.47 | 30.63 | 0.38 | 5.85 | 0.55 | 3.55 | 0.004 | 0.016 | 1.66 | 1.57 | 0.96 | 1.00 | 550.65 | 551.01 | 551.56 | 551.01 |
| LINE F6 | JCT-F6-60° Y | MH-F5 | 48" | 59.11 | 61.61 | 0.012 | 0.82 | 548.20 | 547.69 | 110.92 | 140.88 | 2.68 | 12.42 | 3.18 | 10.34 | 0.005 | 0.008 | 11.68 | 10.34 | 2.83 | 3.18 | 550.52 | 551.38 | 552.64 | 553.04 |
| LAT F6 | CI-F6 | JCT-F6-60° Y | 24" | 16.18 | 17.68 | 0.012 | 0.30 | 550.25 | 550.20 | 3.23 | 13.42 | 0.67 | 3.52 | 0.63 | 3.83 | 0.004 | 0.003 | 1.67 | 1.76 | 1.18 | 1.13 | 551.38 | 551.39 | 553.04 | 551.43 |
| LINE F7 | JCT-F21-60° Y | JCT-F6-60° Y | 48" | 73.01 | 73.01 | 0.012 | 1.03 | 548.95 | 548.20 | 108.33 | 157.93 | 2.43 | 13.54 | 3.15 | 10.21 | 0.005 | 0.010 | 12.32 | 10.21 | 2.64 | 3.15 | 550.84 | 552.10 | 553.20 | 553.72 |
| LAT F7 | CI-F7 | JCT-F21-60° Y | 24" | 16.22 | 17.72 | 0.012 | 0.32 | 551.01 | 550.95 | 2.91 | 13.78 | 0.62 | 3.48 | 0.60 | 3.71 | 0.004 | 0.003 | 1.56 | 1.65 | 1.15 | 1.10 | 552.10 | 552.10 | 553.72 | 552.14 |
| LINE F8 | JCT-F8-60° Y | JCT-F21-60° Y | 48" | 77.01 | 77.01 | 0.012 | 0.90 | 549.65 | 548.95 | 106.07 | 147.94 | 2.51 | 12.80 | 3.12 | 10.09 | 0.005 | 0.009 | 11.92 | 10.09 | 2.67 | 3.12 | 551.62 | 552.76 | 553.83 | 554.35 |
| LAT F8 | CI-F8 | JCT-F8-60° Y | 24" | 16.19 | 17.69 | 0.012 | 0.89 | 551.80 | 551.65 | 3.52 | 23.06 | 0.53 | 5.30 | 0.66 | 3.92 | 0.004 | 0.009 | 1.95 | 2.24 | 1.12 | 1.00 | 552.76 | 552.80 | 554.35 | 552.83 |
| LINE F9 | JCT-F9-90° T | JCT-F8-60° Y | 48" | 165.02 | 165.02 | 0.012 | 0.97 | 551.25 | 549.65 | 103.63 | 153.42 | 2.41 | 13.11 | 3.08 | 9.97 | 0.005 | 0.010 | 12.61 | 9.97 | 2.49 | 3.08 | 552.14 | 554.33 | 554.61 | 555.88 |
| LAT F9 | CI-F9 | JCT-F9-90° T | 24" | 7.97 | 9.47 | 0.012 | 3.78 | 553.61 | 553.25 | 1.99 | 47.66 | 0.28 | 7.49 | 0.49 | 3.34 | 0.004 | 0.038 | 1.14 | 1.26 | 1.08 | 1.00 | 554.33 | 554.61 | 555.88 | 554.61 |
| LINE F10 | JCT-F10-90° T | JCT-F9-90° T | 48" | 50.91 | 50.91 | 0.012 | 0.90 | 551.71 | 551.25 | 102.05 | 147.77 | 2.44 | 12.69 | 3.06 | 9.89 | 0.005 | 0.009 | 11.50 | 9.89 | 2.66 | 3.06 | 553.91 | 554.77 | 555.97 | 556.29 |
| LAT F10 | CI-F10 | JCT-F10-90° T | 24" | 34.20 | 36.70 | 0.012 | 6.11 | 555.95 | 553.71 | 6.60 | 60.56 | 0.45 | 12.64 | 0.91 | 4.74 | 0.004 | 0.061 | 11.27 | 2.99 | 0.48 | 1.32 | 554.77 | 557.27 | 556.18 | 557.27 |
| LINE F11 | MH F11 | JCT-F10-90° T | 48" | 27.71 | 30.21 | 0.012 | 1.17 | 552.06 | 551.71 | 96.09 | 168.00 | 2.17 | 13.82 | 2.97 | 9.60 | 0.005 | 0.012 | 11.42 | 9.60 | 2.54 | 2.97 | 554.25 | 555.03 | 556.28 | 556.47 |
| LAT F11 | EX-JCT-F11-36° | MH F11 | 36" | 22.40 | 24.90 | 0.012 | 15.86 | 557.01 | 553.06 | 49.54 | 287.71 | 0.84 | 30.46 | 2.29 | 8.55 | 0.005 | 0.159 | 18.90 | 7.01 | 1.19 | 3.00 | 554.26 | 556.98 | 559.82 | 560.98 |
| LINE F12 | JCT-F12-90° T | MH F11 | 36" | 19.78 | 22.28 | 0.012 | 1.11 | 553.31 | 553.06 | 49.30 | 76.20 | 1.76 | 11.46 | 2.29 | 8.53 | 0.005 | 0.011 | 9.88 | 8.53 | 2.00 | 2.29 | 555.06 | 555.60 | 556.57 | 556.73 |
| LAT F12 | CI-F12 | JCT-F12-90° T | 24" | 4.00 | 5.50 | 0.012 | 6.27 | 554.65 | 554.31 | 1.11 | 61.38 | 0.19 | 7.51 | 0.36 | 2.85 | 0.004 | 0.063 | 0.52 | 0.71 | 1.29 | 1.00 | 555.60 | 555.65 | 556.73 | 555.65 |
| LINE F14 | JCT-F14-90° T | JCT-F12-90° T | 36" | 107.00 | 107.00 | 0.012 | 1.11 | 554.50 | 553.31 | 48.49 | 76.18 | 1.74 | 11.42 | 2.27 | 8.46 | 0.005 | 0.011 | 10.91 | 8.46 | 1.81 | 2.27 | 555.12 | 556.77 | 556.97 | 557.88 |
| LAT F14 | CI-F14 | JCT-F14-90° T | 24" | 4.00 | 5.50 | 0.012 | 5.26 | 555.79 | 555.50 | 3.51 | 56.21 | 0.34 | 9.96 | 0.66 | 3.92 | 0.004 | 0.053 | 1.67 | 2.24 | 1.27 | 1.00 | 556.77 | 556.79 | 557.88 | 556.81 |
| LINE F15 | MH F15 | JCT-F14-90° T | 36" | 26.00 | 28.00 | 0.012 | 1.11 | 554.81 | 554.50 | 45.09 | 76.19 | 1.66 | 11.23 | 2.19 | 8.16 | 0.005 | 0.011 | 9.75 | 8.16 | 1.87 | 2.19 | 556.37 | 557.00 | 557.84 | 558.03 |
| LAT F15 | CI-F15 | MH F15 | 24" | 52.50 | 56.00 | 0.012 | 1.69 | 556.76 | 555.81 | 2.78 | 31.90 | 0.40 | 6.24 | 0.58 | 3.67 | 0.004 | 0.017 | 6.14 | 1.77 | 0.40 | 1.00 | 556.21 | 557.76 | 556.80 | 557.76 |
| LINE F16 | JCT-F16-60° Y | MH F15 | 30" | 46.35 | 48.35 | 0.012 | 2.21 | 556.38 | 555.31 | 42.42 | 66.03 | 1.46 | 14.28 | 2.18 | 9.34 | 0.008 | 0.022 | 12.27 | 9.34 | 1.66 | 2.18 | 556.97 | 558.56 | 559.31 | 559.91 |
| LAT F16 | CI-F16 | JCT-F16-60° Y | 24" | 37.30 | 38.80 | 0.012 | 9.34 | 560.50 | 556.88 | 7.72 | 74.89 | 0.43 | 15.38 | 0.99 | 4.99 | 0.004 | 0.093 | 13.67 | 3.15 | 0.47 | 1.46 | 557.35 | 561.96 | 560.27 | 561.96 |
| LINE F17 | JCT-F17-90° T | JCT-F16-60° Y | 30" | 41.65 | 41.65 | 0.012 | 2.21 | 557.30 | 556.38 | 34.83 | 66.01 | 1.29 | 13.63 | 2.01 | 8.25 | 0.006 | 0.022 | 11.43 | 8.25 | 1.49 | 2.01 | 557.87 | 559.30 | 559.90 | 560.36 |
| LAT F17 | CI-F17 | JCT-F17-90° T | 24" | 4.00 | 5.50 | 0.012 | 2.02 | 557.91 | 557.80 | 4.99 | 34.82 | 0.51 | 7.87 | 0.79 | 4.35 | 0.004 | 0.020 | 1.97 | 2.13 | 1.51 | 1.40 | 559.30 | 559.31 | 560.36 | 559.37 |
| LINE F18 | MH F18 | JCT-F17-90° T | 30" | 213.50 | 215.00 | 0.012 | 2.21 | 562.04 | 557.30 | 30.00 | 66.03 | 1.18 | 13.13 | 1.87 | 7.63 | 0.006 | 0.022 | 12.94 | 7.63 | 1.20 | 1.87 | 558.49 | 563.91 | 561.10 | 564.82 |
| LAT F18 | CI-F18 | MH F18 | 24" | 35.61 | 39.11 | 0.012 | 6.66 | 565.15 | 562.54 | 5.57 | 63.26 | | | | | | | | | | | | | | |

SEWER COMPUTATIONS

| Link - ID | Upstream Node | Downstream Node | SIZE | Actual Length (ft) | Hydraulic Length (ft) | Manning's N Value | Slope (%) | Invert Upstream (ft) | Invert Downstream (ft) | Discharge (cfs) | Capacity (cfs) | Uniform Depth (ft) | Uniform Velocity (ft/s) | Critical Depth (ft) | Critical Velocity (ft/s) | Critical Slope (%) | Friction Slope (%) | Actual Velocity Downstream (ft/s) | Actual Velocity Upstream (ft/s) | Actual Depth Downstream (ft) | Actual Depth Upstream (ft) | HGL Downstream (ft) | HGL Upstream (ft) | EGL Downstream (ft) | EGL Upstream (ft) |
|-----------|-----------------|-----------------|------|--------------------|-----------------------|-------------------|-----------|----------------------|------------------------|-----------------|----------------|--------------------|-------------------------|---------------------|--------------------------|--------------------|--------------------|-----------------------------------|---------------------------------|------------------------------|----------------------------|---------------------|-------------------|---------------------|-------------------|
| LINE J2A | JCT-J2-90°T | OUT-J2 | 24" | 9.11 | 9.11 | 0.012 | 3.70 | 543.84 | 543.50 | 13.46 | 47.14 | 0.73 | 12.94 | 1.32 | 6.12 | 0.005 | 0.037 | 8.63 | 6.12 | 1.00 | 1.32 | 544.90 | 545.16 | 545.65 | 545.74 |
| LAT J2 | CI-J2 | JCT-J2-90°T | 24" | 4.50 | 6.00 | 0.012 | 6.08 | 544.20 | 543.84 | 1.34 | 60.45 | 0.21 | 7.86 | 0.40 | 3.00 | 0.004 | 0.061 | 0.61 | 0.85 | 1.32 | 1.00 | 545.16 | 545.20 | 545.74 | 545.20 |
| LINE J2B | MH-J3 | JCT-J2-90°T | 24" | 61.66 | 63.16 | 0.012 | 3.70 | 546.18 | 543.84 | 12.12 | 47.16 | 0.69 | 12.58 | 1.25 | 5.86 | 0.005 | 0.037 | 11.57 | 5.86 | 0.74 | 1.25 | 544.57 | 547.43 | 546.66 | 547.96 |
| LINE J3A | JCT-J3-60° BEND | MH-J3 | 24" | 329.66 | 331.16 | 0.012 | 2.72 | 555.18 | 546.18 | 12.12 | 40.42 | 0.75 | 11.24 | 1.25 | 5.86 | 0.005 | 0.027 | 11.24 | 5.86 | 0.75 | 1.25 | 546.93 | 556.43 | 548.90 | 556.97 |
| LINE J3B | DI-J3 | JCT-J3-60° BEND | 24" | 27.23 | 28.23 | 0.012 | 2.72 | 555.95 | 555.18 | 12.12 | 40.42 | 0.75 | 11.25 | 1.25 | 5.86 | 0.005 | 0.027 | 9.33 | 3.90 | 0.86 | 1.25 | 556.05 | 557.88 | 557.40 | 557.88 |
| LINE K1 | MH-K1 | OUT-K1 | 30" | 51.01 | 53.01 | 0.012 | 0.55 | 549.80 | 549.51 | 20.05 | 32.87 | 1.41 | 7.03 | 1.52 | 6.42 | 0.004 | 0.005 | 6.98 | 6.42 | 1.42 | 1.52 | 550.93 | 551.32 | 551.69 | 551.96 |
| LAT K1 | CI-K1 | MH-K1 | 24" | 25.80 | 29.30 | 0.012 | 0.58 | 550.47 | 550.30 | 4.16 | 18.67 | 0.64 | 4.78 | 0.72 | 4.12 | 0.004 | 0.006 | 2.58 | 2.65 | 1.02 | 1.00 | 551.32 | 551.47 | 551.96 | 551.47 |
| LINE K2A | JCT-K1-60° BEND | MH-K1 | 24" | 89.74 | 91.74 | 0.012 | 0.89 | 551.12 | 550.30 | 15.89 | 23.17 | 1.22 | 7.95 | 1.44 | 6.58 | 0.006 | 0.009 | 7.87 | 6.58 | 1.23 | 1.44 | 551.53 | 552.56 | 552.49 | 553.23 |
| LINE K2B | JCT-K2-90°T | JCT-K1-60° BEND | 24" | 11.00 | 11.00 | 0.012 | 0.89 | 551.22 | 551.12 | 15.89 | 23.18 | 1.22 | 7.95 | 1.44 | 6.58 | 0.006 | 0.009 | 7.27 | 6.58 | 1.31 | 1.44 | 552.43 | 552.66 | 553.26 | 553.33 |
| LAT K2 | CI-K2 | JCT-K2-90°T | 24" | 4.05 | 5.55 | 0.012 | 6.45 | 551.58 | 551.22 | 3.26 | 62.24 | 0.31 | 10.47 | 0.63 | 3.84 | 0.004 | 0.064 | 1.35 | 1.88 | 1.44 | 1.08 | 552.66 | 552.66 | 553.33 | 552.69 |
| LINE K3 | JCT-K3-90°T | JCT-K2-90°T | 24" | 160.14 | 160.14 | 0.012 | 0.89 | 552.65 | 551.22 | 12.63 | 23.16 | 1.05 | 7.53 | 1.28 | 5.96 | 0.005 | 0.009 | 7.51 | 5.96 | 1.06 | 1.28 | 552.27 | 553.93 | 553.15 | 554.48 |
| LAT K3 | CI-K3 | JCT-K3-90°T | 24" | 5.00 | 6.50 | 0.012 | 4.40 | 552.93 | 552.65 | 3.59 | 51.40 | 0.36 | 9.41 | 0.66 | 3.94 | 0.004 | 0.044 | 1.69 | 2.28 | 1.28 | 1.00 | 553.93 | 553.93 | 554.48 | 553.97 |
| LINE K4A | MH-K4 | JCT-K3-90°T | 24" | 58.50 | 60.00 | 0.012 | 0.89 | 553.18 | 552.65 | 9.04 | 23.16 | 0.87 | 6.92 | 1.07 | 5.26 | 0.004 | 0.009 | 6.78 | 5.26 | 0.88 | 1.07 | 553.53 | 554.26 | 554.25 | 554.69 |
| LINE K4B | JCT-K4-90°T | MH-K4 | 24" | 325.50 | 327.00 | 0.012 | 1.28 | 557.38 | 553.18 | 9.04 | 27.76 | 0.79 | 7.90 | 1.07 | 5.26 | 0.004 | 0.013 | 7.90 | 5.26 | 0.79 | 1.07 | 553.97 | 558.45 | 554.94 | 558.88 |
| LAT K4 | CI-K4 | JCT-K4-90°T | 24" | 4.00 | 5.50 | 0.012 | 4.76 | 557.64 | 557.38 | 4.26 | 53.49 | 0.38 | 10.18 | 0.72 | 4.15 | 0.004 | 0.048 | 2.48 | 2.70 | 1.07 | 1.00 | 558.45 | 558.64 | 558.88 | 558.64 |
| LINE K5A | MH-K5A | JCT-K4-90°T | 24" | 11.50 | 13.00 | 0.012 | 1.28 | 557.55 | 557.38 | 4.79 | 27.77 | 0.56 | 6.62 | 0.77 | 4.29 | 0.004 | 0.013 | 2.79 | 3.38 | 1.07 | 0.92 | 558.45 | 558.47 | 558.88 | 558.59 |
| LINE K5B | MH-K5B | MH-K5A | 24" | 297.00 | 300.00 | 0.012 | 2.39 | 564.70 | 557.55 | 4.79 | 37.86 | 0.48 | 8.25 | 0.77 | 4.29 | 0.004 | 0.024 | 8.25 | 4.29 | 0.48 | 0.77 | 558.03 | 565.47 | 559.08 | 565.76 |
| LINE K5C | JCT-K5-90°T | MH-K5B | 24" | 28.50 | 30.00 | 0.012 | 1.34 | 565.11 | 564.70 | 4.79 | 28.37 | 0.56 | 6.72 | 0.77 | 4.29 | 0.004 | 0.013 | 6.27 | 4.29 | 0.58 | 0.77 | 565.29 | 565.88 | 565.90 | 566.16 |
| LAT K5 | CI-K5 | JCT-K5-90°T | 24" | 4.00 | 5.50 | 0.012 | 3.42 | 565.29 | 565.11 | 3.29 | 45.31 | 0.37 | 8.39 | 0.63 | 3.84 | 0.004 | 0.034 | 5.85 | 2.09 | 0.47 | 1.00 | 565.58 | 566.29 | 566.11 | 566.29 |
| LINE K6 | MH-K6 | JCT-K5-90°T | 24" | 268.50 | 270.00 | 0.012 | 1.34 | 568.73 | 565.11 | 1.50 | 28.38 | 0.31 | 4.79 | 0.42 | 3.09 | 0.004 | 0.013 | 4.79 | 3.09 | 0.31 | 0.42 | 565.42 | 569.15 | 565.78 | 569.30 |
| LINE K7 | CI-K7 | MH-K6 | 24" | 81.52 | 85.52 | 0.012 | 1.49 | 570.00 | 568.73 | 1.50 | 29.95 | 0.30 | 4.97 | 0.42 | 3.09 | 0.004 | 0.015 | 4.97 | 0.96 | 0.31 | 1.00 | 569.03 | 571.00 | 569.42 | 571.00 |
| LINE L1 | CI-L2 | OUT-L1 | 24" | 8.08 | 9.58 | 0.012 | 0.30 | 549.95 | 549.92 | 4.50 | 13.42 | 0.80 | 3.85 | 0.75 | 4.21 | 0.004 | 0.003 | 3.85 | 2.72 | 0.80 | 1.04 | 550.72 | 550.99 | 550.95 | 550.99 |
| LINE L4 | JCT-L5-90°T | JCT-OL2 | 24" | 27.66 | 27.66 | 0.012 | 0.49 | 552.66 | 552.53 | 10.77 | 17.08 | 1.15 | 5.75 | 1.18 | 5.61 | 0.005 | 0.005 | 5.75 | 5.61 | 1.15 | 1.18 | 553.68 | 553.84 | 554.20 | 554.33 |
| LAT L5 | DI-L5 | JCT-L5-90°T | 24" | 18.39 | 19.39 | 0.012 | 1.73 | 553.00 | 552.66 | 1.51 | 32.26 | 0.30 | 5.25 | 0.43 | 3.10 | 0.004 | 0.017 | 0.79 | 0.96 | 1.18 | 1.00 | 553.84 | 554.00 | 554.33 | 554.00 |
| LINE L4B | CI-L4 | JCT-L5-90°T | 24" | 10.40 | 11.90 | 0.012 | 0.49 | 552.72 | 552.66 | 12.94 | 17.13 | 1.30 | 5.99 | 1.29 | 6.02 | 0.005 | 0.005 | 6.02 | 6.00 | 1.29 | 1.30 | 553.96 | 554.02 | 554.33 | 554.58 |
| LINE L5 | JCT-L6-60°Y | CI-L4 | 24" | 67.30 | 69.80 | 0.012 | 2.43 | 554.42 | 552.72 | 10.56 | 38.18 | 0.72 | 10.39 | 1.16 | 5.56 | 0.005 | 0.024 | 9.83 | 5.56 | 0.75 | 1.16 | 553.47 | 555.58 | 554.98 | 556.06 |
| LAT L7 | DI-L7 | JCT-L6-60°Y | 24" | 42.30 | 43.30 | 0.012 | 0.76 | 554.75 | 554.42 | 7.20 | 21.41 | 0.80 | 6.15 | 0.95 | 4.88 | 0.004 | 0.008 | 6.02 | 3.08 | 0.81 | 1.40 | 555.23 | 556.14 | 555.79 | 556.14 |
| LINE L6A | JCT-L6A-60°Y | JCT-L6-60°Y | 24" | 118.32 | 118.32 | 0.012 | 2.43 | 557.29 | 554.42 | 3.35 | 38.19 | 0.40 | 7.48 | 0.64 | 3.87 | 0.004 | 0.024 | 7.46 | 3.87 | 0.40 | 0.64 | 554.82 | 557.93 | 555.69 | 558.16 |
| LAT L6A | DI-L6A | JCT-L6A-60°Y | 24" | 20.86 | 21.86 | 0.012 | 5.54 | 558.50 | 557.29 | 0.71 | 57.69 | 0.16 | 6.27 | 0.29 | 2.53 | 0.004 | 0.055 | 6.12 | 0.45 | 0.16 | 1.00 | 557.45 | 559.50 | 558.04 | 559.50 |
| LINE L6B | CI-L6B | JCT-L6A-60°Y | 24" | 46.67 | 49.17 | 0.012 | 2.43 | 558.48 | 557.29 | 2.65 | 38.17 | 0.36 | 6.98 | 0.57 | 3.62 | 0.004 | 0.024 | 6.84 | 1.69 | 0.36 | 1.00 | 557.65 | 559.48 | 558.38 | 559.48 |
| LINE M1 | DI-M1 | CI-M2 | 24" | 12.50 | 15.00 | 0.012 | 10.85 | 575.70 | 574.07 | 5.86 | 80.72 | 0.37 | 14.96 | 0.86 | 4.57 | 0.004 | 0.108 | 11.16 | 2.90 | 0.45 | 1.23 | 574.52 | 576.93 | 576.47 | 576.93 |
| LINE M2A | CI-M2 | JCT-M2-60° BEND | 24" | 4.65 | 6.15 | 0.012 | 2.01 | 574.07 | 573.95 | 8.68 | 34.73 | 0.68 | 9.19 | 1.05 | 5.19 | 0.004 | 0.020 | 6.62 | 5.19 | 0.87 | 1.05 | 574.82 | 575.12 | 575.50 | 575.54 |
| LINE M2B | JCT-M2-60° BEND | JCT-M3-90°T | 24" | 119.10 | 119.10 | 0.012 | 2.01 | 573.95 | 571.56 | 8.68 | 34.70 | 0.68 | 9.18 | 1.05 | 5.19 | 0.004 | 0.020 | 9.07 | 5.19 | 0.69 | 1.05 | 572.25 | 575.00 | 573.53 | 575.42 |
| LAT M3 | CI-M3 | JCT-M3-90°T | 24" | 25.00 | 27.50 | 0.012 | 6.32 | 573.30 | 571.56 | 2.89 | 61.62 | 0.30 | 10.03 | 0.59 | 3.71 | 0.004 | 0.063 | 9.24 | 1.84 | 0.31 | 1.00 | 571.87 | 574.30 | 573.21 | 574.30 |
| LINE M3 | JCT-M3-90°T | JCT-M4-90°T | 24" | 113.91 | 113.91 | 0.012 | 2.01 | 571.56 | 569.28 | 11.57 | 34.70 | 0.80 | 9.94 | 1.22 | 5.76 | 0.005 | 0.020 | 9.74 | 5.76 | 0.81 | 1.22 | 570.09 | 572.78 | 571.56 | 573.30 |
| LAT M4 | CI-M4 | JCT-M4-90°T | 24" | 4.00 | 5.50 | 0.012 | 7.15 | 569.67 | 569.28 | 2.11 | 65.52 | 0.25 | 9.53 | 0.50 | 3.39 | 0.004 | 0.071 | 0.95 | 1.34 | 1.33 | 1.00 | 570.61 | 570.67 | 571.20 | 570.67 |
| LINE M4A | JCT-M4-90°T | MH-M4 | 24" | 63.50 | 65.00 | 0.012 | 2.01 | 569.28 | 567.98 | 13.67 | 34.70 | 0.87 | 10.39 | 1.33 | 6.16 | 0.005 | 0.020 | 9.71 | 6.16 | 0.92 | 1.33 | 568.89 | 570.61 | 570.36 | 571.20 |
| LINE M4B | MH-M4 | JCT-M5-90°T | 24" | 178.50 | 180.00 | 0.012 | 3.27 | 567.98 | 562.08 | 13.67 | 44.35 | 0.76 | 12.43 | 1.33 | 6.16 | 0.005 | 0.033 | 12.34 | 6.16 | 0.77 | 1.33 | 562.85 | 569.31 | 565.22 | 569.90 |
| LAT M5 | CI-M5 | JCT-M5-90°T | 24" | 4.00 | 5.50 | 0.012 | 7.06 | 562.47 | 562.08 | 2.41 | 65.09 | 0.26 | 9.87 | 0.54 | 3.52 | 0.004 | 0.071 | 0.99 | 1.43 | 1.45 | 1.06 | 563.53 | 563.53 | 564.21 | 563.54 |
| LINE M5A | JCT-M5-90°T | MH-M5 | 24" | 68.50 | 70.00 | 0.012 | 3.27 | 562.08 | 559.79 | 16.08 | 44.35 | 0.83 | 12.99 | 1.45 | 6.61 | 0.006 | 0.033 | 11.92 | 6.61 | 0.89 | 1.45 | 560.68 | 563.53 | 562.89 | 564.21 |
| LINE M5B | MH-M5 | JCT-M6-90°T | 24" | 168.50 | 170.00 | 0.012 | 3.30 | 559.79 | 554.18 | 16.08 | 44.52 | 0.83 | 13.03 | 1.45 | 6.61 | 0.006 | 0.033 | 12.86 | 6.61 | 0.84 | 1.45 | 555.02 | 561.24 | 557.60 | 561.91 |
| LAT M6 | CI-M6 | JCT-M6-90°T | 24" | 4.00 | 5.50 | 0.012 | 7.95 | 554.62 | 554.18 | 2.38 | 69.08 | 0.25 | 10.26 | 0.54 | 3.51 | 0.004 | 0.079 | 0.91 | 1.33 | 1.55 | 1.11 | 555.73 | 555.73 | 556.51 | |

SEWER COMPUTATIONS

| Link - ID | Upstream Node | Downstream Node | SIZE | Actual Length (ft) | Hydraulic Length (ft) | Manning's N Value | Slope (%) | Invert Upstream (ft) | Invert Downstream (ft) | Discharge (cfs) | Capacity (cfs) | Uniform Depth (ft) | Uniform Velocity (ft/s) | Critical Depth (ft) | Critical Velocity (ft/s) | Critical Slope (%) | Friction Slope (%) | Actual Velocity Downstream (ft/s) | Actual Velocity Upstream (ft/s) | Actual Depth Downstream (ft) | Actual Depth Upstream (ft) | HGL Downstream (ft) | HGL Upstream (ft) | EGL Downstream (ft) | EGL Upstream (ft) |
|------------|------------------|------------------|-------|--------------------|-----------------------|-------------------|-----------|----------------------|------------------------|-----------------|----------------|--------------------|-------------------------|---------------------|--------------------------|--------------------|--------------------|-----------------------------------|---------------------------------|------------------------------|----------------------------|---------------------|-------------------|---------------------|-------------------|
| LINE P1 | CI-P1 | CI-R1 | 24" | 77.00 | 82.00 | 0.012 | 1.38 | 548.03 | 546.90 | 5.89 | 28.74 | 0.61 | 7.19 | 0.86 | 4.57 | 0.004 | 0.014 | 7.09 | 4.57 | 0.62 | 0.86 | 547.52 | 548.89 | 548.30 | 549.21 |
| LINE P2 | CI-P2 | CI-P1 | 24" | 265.00 | 270.00 | 0.012 | 1.22 | 551.32 | 548.03 | 4.11 | 27.07 | 0.53 | 6.22 | 0.71 | 4.10 | 0.004 | 0.012 | 6.22 | 2.62 | 0.53 | 1.00 | 548.55 | 552.32 | 549.16 | 549.25 |
| LINE Q1 | CI-Q1 | CI-R2 | 24" | 77.00 | 82.00 | 0.012 | 0.88 | 548.03 | 547.31 | 6.25 | 22.98 | 0.71 | 6.22 | 0.89 | 4.66 | 0.004 | 0.009 | 6.18 | 4.66 | 0.72 | 0.89 | 548.02 | 548.91 | 548.62 | 549.25 |
| LINE Q2 | CI-Q2 | CI-Q1 | 24" | 265.00 | 270.00 | 0.012 | 1.22 | 551.32 | 548.03 | 4.37 | 27.07 | 0.54 | 6.35 | 0.74 | 4.18 | 0.004 | 0.012 | 6.33 | 2.71 | 0.54 | 1.02 | 548.57 | 552.34 | 549.20 | 549.25 |
| LINE R1 | CI-R1 | OUT-R1 | 5'X4' | 17.25 | 18.75 | 0.012 | 0.53 | 544.90 | 544.80 | 181.59 | 193.84 | 3.21 | 11.33 | 3.45 | 10.53 | 0.004 | 0.005 | 11.01 | 10.53 | 3.30 | 3.45 | 548.10 | 548.35 | 549.98 | 550.07 |
| LINE R2A | JCT-RM | CI-R1 | 5'X4' | 4.00 | 5.50 | 0.012 | 0.44 | 544.92 | 544.90 | 175.94 | 175.94 | 3.37 | 10.44 | 3.38 | 10.42 | 0.004 | 0.004 | 10.21 | 10.21 | 3.45 | 3.45 | 548.35 | 548.37 | 550.07 | 549.99 |
| LINE R2B | MH-R2 | JCT-RM | 5'X4' | 67.50 | 70.00 | 0.012 | 0.30 | 545.14 | 544.92 | 138.79 | 146.50 | 3.23 | 8.59 | 2.88 | 9.63 | 0.004 | 0.003 | 8.05 | 8.22 | 3.45 | 3.38 | 548.37 | 548.52 | 549.99 | 549.99 |
| LINE R2C | CI-R2 | MH-R2 | 36" | 2.50 | 6.50 | 0.012 | 2.62 | 546.31 | 546.14 | 26.33 | 116.86 | 0.97 | 13.35 | 1.66 | 6.57 | 0.004 | 0.026 | 4.38 | 4.70 | 2.38 | 2.22 | 548.52 | 548.53 | 549.56 | 549.56 |
| LINE R3 | DI-R3 | CI-R2 | 36" | 13.50 | 16.00 | 0.012 | 4.35 | 547.00 | 546.31 | 17.85 | 150.40 | 0.70 | 14.30 | 1.35 | 5.77 | 0.003 | 0.043 | 3.19 | 3.65 | 2.22 | 1.96 | 548.53 | 548.96 | 548.82 | 548.82 |
| LINE QO1 | CI-QO1 | CI-NN11 | 24" | 48.00 | 53.00 | 0.012 | 0.69 | 555.37 | 555.01 | 3.17 | 20.29 | 0.54 | 4.70 | 0.62 | 3.81 | 0.004 | 0.007 | 1.19 | 1.56 | 1.59 | 1.23 | 556.59 | 556.60 | 557.42 | 556.63 |
| LINE PP1 | JCT-PP1 | JCT-PP1 | 24" | 32.24 | 32.24 | 0.012 | 2.24 | 569.19 | 568.47 | 0.73 | 36.71 | 0.20 | 4.62 | 0.29 | 2.55 | 0.004 | 0.022 | 4.58 | 0.47 | 0.20 | 1.00 | 568.66 | 570.19 | 568.99 | 570.19 |
| LINE PP2 | LAT-PP2 | JCT-PP1 | 24" | 57.57 | 57.57 | 0.012 | 2.24 | 568.47 | 567.17 | 1.11 | 36.70 | 0.24 | 5.24 | 0.29 | 2.85 | 0.004 | 0.022 | 5.22 | 2.85 | 0.24 | 0.36 | 567.41 | 568.83 | 567.84 | 568.99 |
| LAT PP3 | CI-PP3 | JCT-PP2 | 24" | 17.70 | 19.20 | 0.012 | 0.97 | 568.65 | 568.47 | 0.38 | 24.08 | 0.18 | 2.82 | 0.21 | 2.14 | 0.004 | 0.010 | 2.82 | 0.24 | 0.18 | 1.00 | 568.64 | 569.65 | 568.76 | 569.65 |
| LINE PP3 | JCT-PP2 | CI-PP4 | 24" | 16.34 | 17.84 | 0.012 | 0.86 | 568.70 | 567.17 | 0.72 | 71.69 | 0.14 | 7.34 | 0.29 | 2.54 | 0.004 | 0.086 | 7.10 | 0.46 | 0.15 | 1.00 | 567.32 | 569.70 | 568.12 | 569.70 |
| LINE PP4 | CI-PP4 | CI-PP5 | 24" | 81.70 | 81.70 | 0.012 | 2.24 | 567.17 | 565.34 | 1.83 | 36.71 | 0.30 | 6.09 | 0.47 | 3.26 | 0.004 | 0.022 | 6.08 | 3.26 | 0.30 | 0.47 | 565.65 | 567.64 | 566.22 | 567.81 |
| LINE PP5 | CI-PP5 | CI-PP6 | 24" | 79.64 | 79.64 | 0.012 | 1.69 | 565.34 | 564.00 | 2.89 | 31.85 | 0.41 | 6.30 | 0.59 | 3.70 | 0.004 | 0.017 | 6.26 | 3.70 | 0.41 | 0.59 | 564.40 | 565.93 | 565.02 | 566.15 |
| LINE PP6 | CI-PP6 | CI-PP7 | 24" | 154.99 | 154.99 | 0.012 | 2.25 | 564.00 | 560.51 | 5.13 | 36.76 | 0.51 | 8.25 | 0.80 | 4.39 | 0.004 | 0.023 | 8.23 | 4.39 | 0.51 | 0.80 | 561.01 | 564.79 | 562.07 | 565.09 |
| LINE PP7 | CI-PP7 | MH-NN1 | 24" | 208.67 | 208.67 | 0.012 | 2.23 | 560.51 | 555.85 | 6.71 | 36.60 | 0.58 | 8.87 | 0.92 | 4.77 | 0.004 | 0.022 | 8.87 | 4.77 | 0.58 | 0.92 | 556.44 | 561.43 | 557.66 | 561.78 |
| LINE NN1 | CI-NN1 | CI-NN2 | 24" | 95.78 | 100.28 | 0.012 | 1.58 | 555.85 | 554.27 | 8.20 | 30.82 | 0.71 | 8.30 | 1.02 | 5.09 | 0.004 | 0.016 | 8.18 | 5.09 | 0.71 | 1.02 | 554.98 | 556.88 | 556.02 | 557.28 |
| LINE NN2 | CI-NN2 | CI-NN3 | 24" | 244.00 | 249.00 | 0.012 | 0.35 | 579.50 | 578.62 | 0.60 | 14.50 | 0.28 | 2.27 | 0.27 | 2.42 | 0.004 | 0.003 | 0.87 | 0.38 | 0.54 | 1.00 | 579.17 | 580.50 | 579.32 | 580.50 |
| LINE NN3 | CI-NN3 | CI-NN4 | 24" | 195.00 | 200.00 | 0.012 | 0.30 | 578.62 | 578.02 | 2.16 | 13.42 | 0.54 | 3.13 | 0.51 | 3.41 | 0.004 | 0.003 | 2.45 | 3.13 | 0.65 | 0.54 | 578.67 | 579.17 | 578.91 | 579.32 |
| LINE NN4 | CI-NN4 | CI-NN5 | 24" | 290.95 | 290.95 | 0.012 | 2.17 | 578.02 | 571.71 | 3.43 | 36.11 | 0.42 | 7.24 | 0.65 | 3.89 | 0.004 | 0.022 | 7.24 | 3.89 | 0.42 | 0.65 | 572.12 | 578.67 | 572.94 | 578.91 |
| LINE NN5A | CI-NN5 | JCT-NN1 | 24" | 176.95 | 176.95 | 0.012 | 2.39 | 571.71 | 567.48 | 5.43 | 37.89 | 0.51 | 8.56 | 0.82 | 4.46 | 0.004 | 0.024 | 8.55 | 4.46 | 0.51 | 0.82 | 567.99 | 572.53 | 569.13 | 572.84 |
| LAT NN6 | CI-NN6 | JCT-NN1 | 24" | 34.96 | 34.96 | 0.012 | 3.02 | 567.48 | 566.42 | 6.63 | 42.59 | 0.53 | 9.86 | 0.91 | 4.75 | 0.004 | 0.030 | 8.80 | 4.75 | 0.58 | 0.91 | 567.00 | 568.39 | 568.21 | 568.74 |
| LINE NN5B | JCT-NN1 | CI-NN7 | 24" | 24.50 | 27.00 | 0.012 | 0.97 | 566.68 | 566.42 | 2.43 | 24.08 | 0.43 | 4.91 | 0.54 | 3.53 | 0.004 | 0.010 | 1.41 | 1.55 | 1.08 | 1.00 | 567.50 | 567.68 | 567.93 | 567.68 |
| LAT NN8 | CI-NN8 | CI-NN7 | 24" | 125.54 | 125.54 | 0.012 | 3.02 | 566.42 | 562.63 | 9.06 | 42.59 | 0.63 | 10.77 | 1.08 | 5.27 | 0.004 | 0.030 | 10.64 | 5.27 | 0.63 | 1.08 | 563.26 | 567.50 | 565.03 | 567.93 |
| LINE NN7 | CI-NN7 | CI-NN9 | 24" | 20.06 | 24.06 | 0.012 | 0.83 | 562.83 | 562.63 | 2.99 | 22.33 | 0.49 | 4.95 | 0.60 | 3.74 | 0.004 | 0.008 | 1.37 | 1.65 | 1.31 | 1.12 | 563.95 | 563.95 | 564.52 | 563.98 |
| LINE NN9 | CI-NN9 | CI-NN10 | 24" | 160.49 | 160.49 | 0.012 | 1.46 | 562.63 | 560.28 | 13.33 | 29.64 | 0.94 | 9.18 | 1.31 | 6.09 | 0.005 | 0.015 | 9.12 | 6.09 | 0.95 | 1.31 | 561.23 | 563.95 | 562.52 | 564.52 |
| LINE NN10 | CI-NN10 | CI-NN11 | 24" | 158.56 | 158.56 | 0.012 | 2.40 | 560.28 | 556.48 | 14.50 | 37.95 | 0.86 | 11.27 | 1.37 | 6.31 | 0.005 | 0.024 | 11.14 | 6.31 | 0.87 | 1.37 | 557.35 | 561.66 | 559.28 | 562.27 |
| LINE NN11A | CI-NN11 | CI-NN11 | 24" | 101.98 | 106.98 | 0.012 | 1.38 | 556.48 | 555.01 | 15.70 | 28.77 | 1.05 | 9.36 | 1.43 | 6.54 | 0.006 | 0.014 | 9.16 | 6.54 | 1.07 | 1.43 | 556.08 | 557.91 | 557.38 | 558.57 |
| LINE NN11B | MH-NN1 | JCT-NN2 | 24" | 75.69 | 79.19 | 0.012 | 0.93 | 555.01 | 554.27 | 20.07 | 23.65 | 1.42 | 8.45 | 1.61 | 7.41 | 0.007 | 0.009 | 8.37 | 7.41 | 1.43 | 1.61 | 555.70 | 556.62 | 556.79 | 557.47 |
| LAT NN12 | CI-NN12 | JCT-NN2 | 24" | 16.31 | 18.31 | 0.012 | 0.30 | 553.27 | 553.21 | 28.28 | 39.58 | 1.88 | 6.08 | 1.72 | 6.74 | 0.004 | 0.003 | 5.88 | 5.92 | 1.93 | 1.92 | 555.14 | 555.19 | 555.71 | 555.73 |
| LINE NN12 | JCT-NN2 | JCT-NN3 | 36" | 112.00 | 112.00 | 0.012 | 0.30 | 553.21 | 552.88 | 29.02 | 39.58 | 1.91 | 6.12 | 1.74 | 6.81 | 0.004 | 0.003 | 5.82 | 6.04 | 1.99 | 1.00 | 555.14 | 555.67 | 555.71 | 555.71 |
| LAT NN13A | CI-NN13 | JCT-NN3 | 24" | 4.62 | 6.12 | 0.012 | 5.60 | 554.22 | 553.88 | 2.27 | 57.98 | 0.27 | 8.94 | 0.52 | 3.46 | 0.004 | 0.056 | 1.46 | 1.44 | 0.99 | 1.00 | 554.87 | 555.14 | 555.48 | 555.71 |
| LINE NN13A | JCT-NN3 | MH-NN2 | 36" | 53.71 | 55.71 | 0.012 | 0.30 | 552.88 | 552.71 | 31.29 | 39.58 | 2.01 | 6.21 | 1.81 | 7.00 | 0.004 | 0.003 | 6.37 | 6.28 | 1.97 | 1.99 | 554.68 | 554.87 | 555.31 | 555.48 |
| LINE NN13B | MH-NN2 | OUT-NN0 | 36" | 76.22 | 78.22 | 0.012 | 0.31 | 552.71 | 552.47 | 31.29 | 40.10 | 1.99 | 6.27 | 1.81 | 7.00 | 0.004 | 0.003 | 7.00 | 6.37 | 1.81 | 1.97 | 554.28 | 554.68 | 555.05 | 555.31 |
| LINE MM1 | CI-MM1 | CI-MM2 | 24" | 48.50 | 53.50 | 0.012 | 1.20 | 580.63 | 579.99 | 0.24 | 26.85 | 0.13 | 2.65 | 0.17 | 1.89 | 0.005 | 0.012 | 2.65 | 0.15 | 0.13 | 1.00 | 580.12 | 581.63 | 580.23 | 581.63 |
| LINE MM2 | CI-MM2 | JCT-MM3-90° T | 24" | 63.45 | 65.94 | 0.012 | 0.35 | 579.99 | 579.75 | 0.62 | 14.52 | 0.28 | 2.30 | 0.27 | 2.45 | 0.004 | 0.004 | 0.40 | 0.56 | 1.00 | 0.77 | 580.75 | 580.75 | 581.05 | 580.76 |
| LAT MM3B | CI-MM3A | JCT-MM3-90° T | 24" | 23.20 | 26.20 | 0.012 | 0.75 | 582.11 | 581.91 | 5.83 | 21.26 | 0.72 | 5.77 | 0.85 | 4.56 | 0.004 | 0.008 | 5.55 | 2.89 | 0.74 | 1.23 | 582.65 | 583.34 | 583.13 | 583.34 |
| LINE MM3 | JCT-MM3-90° T | CI-MM4 | 24" | 60.85 | 63.35 | 0.012 | 3.41 | 581.91 | 579.75 | 6.28 | 45.25 | 0.50 | 10.13 | 0.89 | 4.67 | 0.004 | 0.034 | 9.73 | 4.67 | 0.52 | 0.89 | 580.27 | 582.80 | 581.75 | 583.14 |
| LINE MM4 | CI-MM4 | CI-MM5 | 24" | 32.58 | 35.08 | 0.012 | 0.30 | 579.75 | 579.65 | 6.81 | 13.42 | 1.01 | 4.29 | 0.93 | 4.79 | 0.004 | 0.003 | 4.71 | 4.34 | 0.94 | 1.00 | 580.59 | 580.75 | 580.95 | 581.05 |
| LINE MM5 | CI-MM5 | JCT-MM5-60° BEND | 24" | 47.00 | 52.00 | 0.012 | 0.93 | 579.65 | 579.17 | 6.97 | 23.62 | 0.74 | 6.54 | 0.94 | 4.83 | 0.004 | 0.009 | 6.38 | 4.83 | 0.76 | 0.94 | 579.92 | 580.59 | 580.56 | 580.95 |
| LINE MM6 | JCT-MM5-60° BEND | CI-MM6 | 24" | 36.38 | 37.88 | 0.012 | 0.44 | 579.17 | 579.00 | 7.18 | 16.25 | 0.93 | 5.01 | 0.95 | 4.87 | 0.004 | 0.004 | 3.83 | 4.21 | 1.15 | 1.07 | 580.15 | 580.23 | 580.33 | 580.46 |
| LINE MM7 | CI-MM6 | CI-MM7 | 24" | 44.30 | 46.80 | 0.012 | 0.44 | 579.00 | 578.79 | 7.18 | 16.28 | 0.93 | 5.02 | 0.95 | 4.87 | 0.004 | 0.004 | 3.36 | 3.83 | 1.29 | 1.15 | 580.08 | 580.15 | 580.44 | 580.33 |
| LINE MM8 | CI-MM7 | CI-MM8 | 24" | 55.00 | 60.00 | 0.012 | 0.35 | 578.79 | 578.58 | 10.31 | 14.54 | 1.24 | 5.02 | 1.15 | 5.52 | 0.004 | 0.004 | 4.50 | 4.83 | 1.37 | 1.29 | 579.95 | 580.08 | 580.34 | 580.44 |
| LINE MM9 | CI-MM8 | CI-MM9 | 24" | 73.00 | 78.00 | 0.012 | 0.39 | 578.58 | 578.28 | 11.46 | 15.20 | 1.30 | 5.32 | 1.22 | 5.74 | 0.005 | 0.004 | 4.49 | 5.01 | 1.51 | 1.37 | 579.79 | 579.95 | 580.23 | 580.34 |
| LINE MM10 | CI-MM9 | MH-MM11 | 24" | 97.00 | 102.00 | 0.012 | 0.35 | 578.28 | 577.92 | 13.49 | 14.57 | 1.52 | 5.27 | 1.32 | 6.12 | 0.005 | 0.004 | 5.35 | 5.29 | 1.50 | 1.51 | 579.42 | 579.79 | 579.92 | 580.23 |

SEWER COMPUTATIONS

| Link - ID | Upstream Node | Downstream Node | SIZE | Actual Length (ft) | Hydraulic Length (ft) | Manning's N Value | Slope (%) | Invert Upstream (ft) | Invert Downstream (ft) | Discharge (cfs) | Capacity (cfs) | Uniform Depth (ft) | Uniform Velocity (ft/s) | Critical Depth (ft) | Critical Velocity (ft/s) | Critical Slope (%) | Friction Slope (%) | Actual Velocity Downstream (ft/s) | Actual Velocity Upstream (ft/s) | Actual Depth Downstream (ft) | Actual Depth Upstream (ft) | HGL Downstream (ft) | HGL Upstream (ft) | EGL Downstream (ft) | EGL Upstream (ft) |
|------------|---------------|-----------------|------|--------------------|-----------------------|-------------------|-----------|----------------------|------------------------|-----------------|----------------|--------------------|-------------------------|---------------------|--------------------------|--------------------|--------------------|-----------------------------------|---------------------------------|------------------------------|----------------------------|---------------------|-------------------|---------------------|-------------------|
| LINE LL1 | CI-LL1 | CI-LL2A | 24" | 79.63 | 84.63 | 0.012 | 0.70 | 580.55 | 579.96 | 1.49 | 20.50 | 0.37 | 3.80 | 0.42 | 3.09 | 0.004 | 0.007 | 3.80 | 0.95 | 0.37 | 1.00 | 580.32 | 581.55 | 580.55 | 581.55 |
| LINE LL2A | CI-LL2A | CI-LL2B | 24" | 35.00 | 40.00 | 0.012 | 0.35 | 579.96 | 579.82 | 1.67 | 14.50 | 0.46 | 3.08 | 0.45 | 3.19 | 0.004 | 0.004 | 2.82 | 3.08 | 0.49 | 0.46 | 580.30 | 580.41 | 580.46 | 580.56 |
| LINE LL2B | CI-LL2B | CI-LL2C | 24" | 35.00 | 40.00 | 0.012 | 0.35 | 579.82 | 579.68 | 1.89 | 14.50 | 0.49 | 3.19 | 0.48 | 3.29 | 0.004 | 0.004 | 2.58 | 3.18 | 0.57 | 0.49 | 580.24 | 580.30 | 580.37 | 580.46 |
| LINE LL2C | CI-LL2C | CI-LL3 | 24" | 35.00 | 40.00 | 0.012 | 0.35 | 579.68 | 579.54 | 2.11 | 14.50 | 0.52 | 3.29 | 0.50 | 3.39 | 0.004 | 0.003 | 2.17 | 2.88 | 0.70 | 0.57 | 580.23 | 580.24 | 580.25 | 580.37 |
| LINE LL3A | CI-LL3 | MH-LL1 | 24" | 28.00 | 32.00 | 0.012 | 1.85 | 579.54 | 578.94 | 2.32 | 33.33 | 0.36 | 6.10 | 0.53 | 3.49 | 0.004 | 0.019 | 1.09 | 2.39 | 1.28 | 0.70 | 580.23 | 580.23 | 580.78 | 580.25 |
| LINE LL5A | CI-LL5 | CI-LL4 | 24" | 27.00 | 30.00 | 0.012 | 1.83 | 581.06 | 580.51 | 4.90 | 33.12 | 0.52 | 7.55 | 0.78 | 4.32 | 0.004 | 0.018 | 6.90 | 2.77 | 0.56 | 1.10 | 581.07 | 582.16 | 581.81 | 582.16 |
| LAT LL5B | CI-LL4 | MH-LL1 | 24" | 59.14 | 63.14 | 0.012 | 2.49 | 580.51 | 578.94 | 10.83 | 38.65 | 0.72 | 10.56 | 1.18 | 5.62 | 0.005 | 0.025 | 9.86 | 5.62 | 0.76 | 1.18 | 579.71 | 581.69 | 581.22 | 582.18 |
| LINE LL3B | MH-LL1 | MH-LL2 | 24" | 46.32 | 49.32 | 0.012 | 1.28 | 578.94 | 578.31 | 12.71 | 27.69 | 0.95 | 8.63 | 1.28 | 5.97 | 0.005 | 0.013 | 8.11 | 5.97 | 1.00 | 1.28 | 579.31 | 580.23 | 580.34 | 580.78 |
| EXIST LL3B | MH-LL2 | OUT-LL0 | 24" | 90.60 | 92.10 | 0.012 | 1.43 | 578.31 | 577.00 | 14.61 | 29.27 | 1.00 | 9.31 | 1.38 | 6.33 | 0.005 | 0.014 | 9.05 | 6.33 | 1.02 | 1.38 | 578.02 | 579.69 | 579.30 | 580.32 |
| LINE KK1 | CI-KK1 | CI-KK2 | 24" | 173.00 | 178.00 | 0.012 | 0.35 | 579.47 | 578.85 | 0.66 | 14.50 | 0.29 | 2.34 | 0.28 | 2.49 | 0.004 | 0.004 | 0.52 | 0.42 | 0.85 | 1.00 | 579.69 | 580.47 | 579.71 | 580.47 |
| LINE KK2 | CI-KK2 | MH-LL2 | 24" | 18.80 | 22.80 | 0.012 | 2.34 | 578.85 | 578.31 | 2.05 | 37.49 | 0.32 | 6.39 | 0.50 | 3.37 | 0.004 | 0.023 | 0.89 | 1.62 | 1.38 | 0.85 | 579.69 | 579.69 | 580.32 | 579.71 |
| LINE KK3 | CI-KK3 | OUT-KK3 | 24" | 5.50 | 7.00 | 0.012 | 1.45 | 577.00 | 577.00 | 1.91 | 29.50 | 0.34 | 5.28 | 0.48 | 3.30 | 0.004 | 0.014 | 4.47 | 1.21 | 0.39 | 1.00 | 577.39 | 578.10 | 577.70 | 578.10 |
| LINE HH1 | CI-HH1 | CI-HH2 | 24" | 213.00 | 218.00 | 0.012 | 1.54 | 582.02 | 578.66 | 1.78 | 30.43 | 0.33 | 5.29 | 0.46 | 3.24 | 0.004 | 0.015 | 5.29 | 1.14 | 0.33 | 1.00 | 578.99 | 583.02 | 579.43 | 583.02 |
| LINE HH2 | CI-HH2 | MH-JJ1 | 24" | 12.50 | 17.00 | 0.012 | 2.92 | 578.66 | 578.16 | 3.17 | 41.88 | 0.37 | 7.86 | 0.62 | 3.81 | 0.004 | 0.029 | 1.16 | 1.72 | 1.63 | 1.14 | 579.79 | 579.80 | 580.68 | 579.82 |
| LINE JJ1A | CI-JJ1A | JCT-JJ1A | 24" | 15.01 | 16.51 | 0.012 | 0.75 | 583.75 | 583.63 | 3.04 | 21.20 | 0.51 | 4.79 | 0.61 | 3.76 | 0.004 | 0.007 | 4.59 | 1.93 | 0.53 | 1.00 | 584.15 | 584.75 | 584.48 | 584.75 |
| LINE JJ1B | JCT-JJ1A | JCT-JJ1B | 24" | 65.00 | 67.50 | 0.012 | 0.75 | 583.63 | 583.12 | 3.04 | 21.22 | 0.51 | 4.79 | 0.61 | 3.76 | 0.004 | 0.007 | 4.78 | 3.76 | 0.51 | 0.61 | 583.63 | 584.24 | 583.99 | 584.45 |
| LINE JJ2A | CI-JJ1B | JCT-JJ1 | 24" | 19.50 | 22.00 | 0.012 | 1.86 | 583.12 | 582.71 | 4.26 | 33.46 | 0.48 | 7.31 | 0.73 | 4.15 | 0.004 | 0.019 | 2.32 | 4.03 | 1.13 | 0.74 | 583.84 | 583.86 | 584.31 | 583.94 |
| LAT JJ2 | CI-JJ2A | JCT-JJ1 | 24" | 23.25 | 24.75 | 0.012 | 8.85 | 584.90 | 582.71 | 5.75 | 72.89 | 0.38 | 13.84 | 0.85 | 4.54 | 0.004 | 0.088 | 11.66 | 2.88 | 0.43 | 1.22 | 583.14 | 586.12 | 585.26 | 586.12 |
| LINE JJ2B | JCT-JJ1 | JCT-JJ2 | 24" | 50.50 | 50.50 | 0.012 | 1.86 | 582.71 | 581.77 | 10.01 | 33.45 | 0.75 | 9.30 | 1.13 | 5.46 | 0.004 | 0.019 | 8.61 | 5.46 | 0.79 | 1.13 | 582.56 | 583.84 | 583.72 | 584.31 |
| LAT JJ2C | DI-JJ2C | JCT-JJ2 | 24" | 25.00 | 26.00 | 0.012 | 8.96 | 584.10 | 581.77 | 4.54 | 73.37 | 0.34 | 12.97 | 0.75 | 4.23 | 0.004 | 0.090 | 11.34 | 2.73 | 0.37 | 1.05 | 582.14 | 585.15 | 584.15 | 585.15 |
| LINE JJ2C | CI-JJ2B | JCT-JJ2 | 24" | 20.00 | 22.50 | 0.012 | 1.87 | 581.77 | 581.35 | 14.56 | 33.48 | 0.92 | 10.28 | 1.38 | 6.32 | 0.005 | 0.019 | 8.58 | 6.32 | 1.06 | 1.38 | 582.41 | 583.14 | 583.56 | 583.77 |
| LINE JJ3 | CI-JJ2B | CI-JJ3 | 24" | 30.00 | 35.00 | 0.012 | 1.33 | 581.35 | 580.88 | 16.07 | 28.26 | 1.08 | 9.28 | 1.45 | 6.65 | 0.006 | 0.014 | 9.20 | 6.65 | 1.10 | 1.45 | 580.50 | 582.34 | 581.82 | 583.03 |
| LINE JJ4 | CI-JJ4 | CI-JJ5 | 24" | 104.28 | 109.28 | 0.012 | 1.36 | 580.88 | 579.40 | 16.27 | 28.56 | 1.08 | 9.39 | 1.45 | 6.65 | 0.006 | 0.014 | 9.20 | 6.65 | 1.10 | 1.45 | 580.56 | 580.89 | 581.36 | 581.60 |
| LINE JJ5A | CI-JJ4 | CI-JJ5 | 24" | 32.00 | 37.00 | 0.012 | 0.68 | 579.40 | 579.15 | 16.99 | 20.15 | 1.41 | 7.19 | 1.49 | 6.79 | 0.006 | 0.007 | 7.16 | 6.79 | 1.41 | 1.49 | 579.24 | 580.66 | 580.83 | 581.39 |
| LINE JJ5B | CI-JJ5 | MH-JJ1 | 24" | 42.72 | 45.72 | 0.012 | 2.16 | 579.15 | 578.16 | 17.46 | 35.99 | 0.98 | 11.37 | 1.51 | 6.88 | 0.006 | 0.022 | 10.09 | 6.88 | 1.08 | 1.51 | 578.98 | 579.79 | 580.14 | 580.68 |
| LINE JJ5C | MH-JJ1 | JCT-JJ5B | 24" | 58.34 | 59.84 | 0.012 | 1.02 | 578.16 | 577.56 | 20.63 | 24.69 | 1.40 | 8.80 | 1.63 | 7.53 | 0.007 | 0.010 | 8.62 | 7.53 | 1.43 | 1.63 | 579.22 | 579.22 | 580.14 | 579.22 |
| LAT JJ5 | CI-HH3 | JCT-JJ5B | 24" | 6.41 | 7.91 | 0.012 | 1.84 | 577.56 | 577.56 | 0.86 | 33.22 | 0.22 | 4.53 | 0.32 | 2.67 | 0.004 | 0.018 | 0.31 | 0.34 | 1.66 | 1.51 | 579.07 | 579.22 | 580.10 | 580.14 |
| LINE JJ5D | JCT-JJ5B | MH-JJ2 | 24" | 4.05 | 5.55 | 0.012 | 1.03 | 577.56 | 577.50 | 21.50 | 24.84 | 1.44 | 8.90 | 1.66 | 7.72 | 0.008 | 0.010 | 8.13 | 7.72 | 1.57 | 1.66 | 579.07 | 579.16 | 579.47 | 580.08 |
| EXIST JJ5C | MH-JJ2 | OUT-JJ0 | 24" | 53.51 | 55.01 | 0.012 | 1.53 | 577.50 | 576.66 | 21.50 | 30.29 | 1.25 | 10.46 | 1.66 | 7.72 | 0.008 | 0.015 | 9.79 | 7.72 | 1.32 | 1.66 | 577.98 | 579.16 | 579.47 | 580.08 |
| LINE GG1A | CI-GG1 | JCT-GG1 | 24" | 27.45 | 29.95 | 0.012 | 9.90 | 573.96 | 570.99 | 2.38 | 77.09 | 0.24 | 11.07 | 0.54 | 3.51 | 0.004 | 0.099 | 10.54 | 1.51 | 0.25 | 1.00 | 571.24 | 574.96 | 572.99 | 574.96 |
| LAT GG2 | CI-GG2 | JCT-GG1 | 24" | 52.54 | 55.04 | 0.012 | 1.04 | 571.56 | 570.99 | 4.28 | 24.98 | 0.56 | 5.94 | 0.73 | 4.15 | 0.004 | 0.010 | 5.85 | 2.70 | 0.57 | 1.01 | 571.56 | 572.57 | 572.09 | 572.57 |
| LINE GG1B | JCT-GG1 | CI-GG3 | 24" | 139.73 | 142.23 | 0.012 | 9.89 | 570.99 | 566.92 | 6.65 | 77.09 | 0.40 | 15.03 | 0.91 | 4.75 | 0.004 | 0.099 | 14.97 | 4.75 | 0.40 | 0.91 | 557.32 | 571.91 | 566.83 | 572.26 |
| LINE GG3 | CI-GG3 | CI-GG4 | 24" | 283.46 | 288.46 | 0.012 | 6.54 | 566.92 | 538.05 | 10.62 | 62.68 | 0.56 | 14.86 | 1.17 | 5.58 | 0.005 | 0.065 | 14.83 | 5.58 | 0.56 | 1.17 | 538.61 | 558.09 | 542.04 | 558.57 |
| LINE GG4A | CI-GG4 | JCT-GG2 | 24" | 22.38 | 24.88 | 0.012 | 7.07 | 538.05 | 536.29 | 14.72 | 65.17 | 0.65 | 16.76 | 1.38 | 6.35 | 0.005 | 0.071 | 12.57 | 6.35 | 0.80 | 1.38 | 537.09 | 539.43 | 539.55 | 540.06 |
| LINE GG4B | JCT-GG2 | OUT-GG0 | 24" | 67.74 | 67.74 | 0.012 | 6.26 | 536.29 | 532.05 | 14.72 | 61.31 | 0.67 | 16.04 | 1.38 | 6.35 | 0.005 | 0.063 | 14.66 | 6.35 | 0.71 | 1.38 | 532.76 | 537.67 | 536.11 | 538.30 |
| LINE FF1A | JCT-GG2 | JCT-FF1 | 24" | 29.65 | 32.15 | 0.012 | 8.29 | 559.92 | 557.25 | 4.87 | 70.58 | 0.36 | 12.88 | 0.78 | 4.32 | 0.004 | 0.083 | 11.59 | 2.77 | 0.38 | 1.09 | 557.64 | 561.01 | 559.74 | 561.01 |
| LAT FF2 | CI-FF2 | JCT-FF1 | 24" | 29.68 | 32.18 | 0.012 | 0.76 | 557.50 | 557.25 | 12.89 | 21.42 | 1.12 | 7.13 | 1.29 | 6.01 | 0.005 | 0.008 | 5.19 | 4.10 | 1.48 | 2.00 | 558.73 | 559.52 | 559.44 | 559.52 |
| LINE FF1B | JCT-FF1 | CI-FF3 | 24" | 99.56 | 102.07 | 0.012 | 8.29 | 557.25 | 548.79 | 16.77 | 70.57 | 0.66 | 18.41 | 1.48 | 6.75 | 0.006 | 0.083 | 17.61 | 6.75 | 0.69 | 1.48 | 549.47 | 558.73 | 554.31 | 559.44 |
| LINE FF3 | CI-FF3 | CI-FF4 | 24" | 166.45 | 171.45 | 0.012 | 3.57 | 548.79 | 542.67 | 17.78 | 46.29 | 0.86 | 13.77 | 1.52 | 6.94 | 0.006 | 0.036 | 13.57 | 6.94 | 0.87 | 1.52 | 543.54 | 550.31 | 546.41 | 551.06 |
| LINE FF4 | CI-FF4 | OUT-FF0 | 24" | 73.79 | 76.29 | 0.012 | 2.74 | 542.67 | 540.59 | 19.44 | 40.54 | 0.98 | 12.77 | 1.59 | 7.28 | 0.007 | 0.027 | 11.81 | 7.28 | 1.04 | 1.59 | 541.62 | 544.26 | 543.80 | 545.08 |
| LINE EE1 | CI-EE1 | CI-EE2 | 24" | 125.25 | 125.25 | 0.012 | 5.56 | 580.35 | 573.39 | 2.45 | 57.77 | 0.28 | 9.13 | 0.55 | 3.54 | 0.004 | 0.056 | 9.13 | 1.56 | 0.28 | 1.00 | 573.67 | 581.35 | 574.96 | 581.35 |
| LINE EE2 | CI-EE2 | CI-EE3 | 24" | 163.13 | 163.13 | 0.012 | 5.55 | 573.39 | 564.33 | 6.03 | 57.74 | 0.44 | 11.91 | 0.87 | 4.61 | 0.004 | 0.056 | 11.90 | 4.61 | 0.44 | 0.87 | 564.77 | 574.26 | 566.98 | 574.59 |
| LINE EE3 | CI-EE3 | CI-EE4 | 24" | 200.45 | 200.45 | 0.012 | 5.79 | 564.33 | 552.74 | 10.66 | 58.94 | 0.58 | 14.24 | 1.17 | 5.58 | 0.005 | 0.058 | 14.19 | 5.58 | 0.58 | 1.17 | 553.31 | 565.50 | 556.46 | 565.98 |
| LINE EE4 | CI-EE4 | CI-EE5 | 24" | 218.43 | 218.43 | 0.012 | 5.08 | 552.74 | 541.65 | 13.62 | 55.21 | 0.68 | 14.56 | 1.33 | 6.15 | 0.005 | 0.051 | 14.52 | 6.15 | 0.68 | 1.33 | 542.33 | 554.06 | 545.62 | 554.65 |
| LINE EE5A | CI-EE5 | JCT-EE1 | 24" | 21.78 | 24.28 | 0.012 | 6.33 | 541.65 | 540.11 | 18.07 | 61.66 | 0.74 | 17.05 | 1.53 | 7.00 | 0.006 | 0.063 | 12.54 | 7.00 | 0.94 | 1.53 | 541.05 | 543.18 | 543.50 | 543.94 |
| LINE EE5B | JCT-EE1 | JCT-EE2 | 24" | 67.73 | 67.73 | 0.012 | 6.33 | 540.11 | 535.83 | 18.07 | 61.65 | 0.74 | 17.05 | 1.53 | 7.00 | 0.006 | 0.063 | 15.31 | 7.00 | 0.80 | 1.53 | 536.63 | 541.64 | 540.29 | 542.41 |
| LAT EE6 | CI-EE6 | JCT-EE2 | 24" | 4.58 | 6.08 | 0.012 | 14.29 | 536.70 | 535.83 | 1.74 | 92.64 | 0.19 | 11.46 | 0.46 | 3.22 | 0.004 | 0.143 | 0.65 | 1.11 | 1.60 | 1.00 | 537.43 | | | |