

12-NOV-09
17:17:04

GEORGIA DEPARTMENT OF TRANSPORTATION
PRECONSTRUCTION DIVISION - OFFICE OF BRIDGE & STRUCTURAL DESIGN
THE ANALYSIS AND DESIGN OF PIERS FOR BRIDGES - V 4.2.07 - AASHTO SPECS 1984 INTERIM
REVISED: JUNE 30, 2008
41' CURB-CURB; 6 BEAMS; 140' SPAN; 70' TALL; BRIDGE 17 ; PIER 26

PROB. NO. 0001

| DESIGN NO. | NO. CAN | NO. COL | NO. LLC | SKEW D | ANG M | F'C PSI | FC PSI | N | FY PSI | FS PSI | DESIGN DATA | | CONC. | Z | * * * CAP | | | REINFORCING STEEL | | * * * CAP | | | | | | |
|------------|---------|---------|---------|--------|-------|---------|---------|-------|--------|--------|-------------|--------|--------|--------|-----------|---------|-----|-------------------|-----|-----------|-----|-----|-------|------|------|------|
| OPTIONS | | | | | | | | | | | EC KSI | ES KSI | STRAIN | FACT | MAIN SIZE | STR TOP | MAX | MAX | MIN | MIN | TOP | MIN | DEPTH | BOT | | |
| D | D | D | L | 2 | 1 | 13 | 0-00-00 | 3500. | 1400. | 8. | 60000. | 24000. | 3409. | 29000. | 0.0030 | 170. | 11 | 5 | 16 | 16 | 11 | 2 | 2.00 | 4.00 | 3.00 | 2.00 |

CAP DATA

| CN | C | L | A | DE | BC | BE | DH | LH | XB1 | XB2 | XB3 | XB4 | XB5 | XB6 | XB7 | XB8 |
|----|---|----------------------|-------|-------|-------|-------|-------|--------|--------|-------|-------|-----|-----|-----|-----|-----|
| 11 | L | 22.140 | 6.500 | 4.000 | 6.000 | 6.000 | 4.000 | 15.640 | 18.515 | 7.406 | 4.609 | | | | | |
| 12 | 2 | SAME AS CANTILEVER 1 | | | | | | | | | | | | | | |

COLUMN DATA

| CN | P | I | T | S | HT | A | DT | BT | DB | BB | DL | FLEX | ND | NB | SZ | ND | NB | SZ | ND | NB | SZ | SLOPE | EP | AP | | | |
|----|---|---|---|---|--------|-------|--------|-------|--------|-------|-------|-------|----|----|----|----|----|----|----|----|----|-------|----|----|-------|-------|-------|
| 21 | 1 | C | T | | 70.000 | 0.000 | 13.000 | 6.000 | 13.000 | 6.000 | 6.000 | 0.000 | 13 | 6 | 11 | 13 | 6 | 11 | 37 | 16 | 11 | 37 | 16 | 11 | 0.000 | 0.000 | 0.000 |

FOOTING DATA

| CN | S/P | B | D | T | DEL.B | DEL.D | DEL.T | R.B/D | R.D/B | S.HT. | NP | SYM. | BP | DP | SET. |
|----|-----|--------|--------|-------|-------|-------|-------|-------|-------|-------|----|------|-------|-------|-------|
| 31 | P | 15.000 | 15.000 | 3.000 | 0.500 | 0.500 | 0.250 | 1.000 | 1.000 | 2.500 | 4 | 3 | 0.000 | 0.000 | 0.000 |

GROUP II WIND INTENSITIES

| WIND FT1 | FL1 | FT2 | FL2 | FT3 | FL3 | FT4 | FL4 | FT5 | FL5 | * WIND FORCE APT | * WIND ON PIER PL | | | | | |
|----------|-------|-----|-----|-----|-----|-----|-----|-----|-----|------------------|-------------------|----|-------|-------|-------|--------|
| 1365. | 2730. | 1 | 50 | 0 | 44 | 6 | 41 | 12 | 33 | 16 | 17 | 19 | 7.375 | 7.375 | 8.876 | 26.620 |

GROUP III WIND INTENSITIES

| STD. WIND FT1 | * WIND ON SUPERSTRUCTURE TRANS. | INTENSITIES FL1 | FL2 | FL3 | FL4 | FL5 | * STD. WIND FT1 | * WIND ON LIVE LOAD TRANS. | INTENSITIES FL1 | FL2 | FL3 | FL4 | FL5 | * LENGTHS OF TRANS. | LL LONGI. | * WIND ON LL APT | LL APL | | | | | | | | |
|---------------|---------------------------------|-----------------|-----|-----|-----|-----|-----------------|----------------------------|-----------------|-----|-----|-----|-----|---------------------|-----------|------------------|--------|----|----|----|----|-------|-------|--------|--------|
| 1 | 50 | 0 | 44 | 6 | 41 | 12 | 33 | 16 | 17 | 19 | 1 | 100 | 0 | 88 | 12 | 82 | 24 | 66 | 32 | 34 | 38 | 140.0 | 280.0 | 15.583 | 15.583 |

MISCELLANEOUS FORCES

| CENTRI. FT | TRACTION FL | FORCE APT | AND ARMS APL | EXPANSION COEFFICIENT | SHRINKAGE COEFFICIENT | STREAM PT | FLOW PL |
|------------|-------------|-----------|--------------|-----------------------|-----------------------|-----------|---------|
| 0.000 | 9.860 | 15.583 | 15.583 | 0.00018000 | 0.00044000 | 0.000 | 0.000 |

DEAD LOAD SUPERSTRUCTURE AND LIVE LOAD CASES

| I.D. | NL | P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 | P9 | P10 | P11 | P12 |
|------|----|---------|---------|-------|---------|-------|---------|---------|----|----|-----|-----|-----|
| D.L. | 0 | 268.412 | 305.848 | 0.000 | 611.695 | 0.000 | 305.848 | 268.412 | | | | | |
| LL 1 | 1 | 81.749 | 55.662 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | | | | | |
| LL 2 | 2 | 81.749 | 100.303 | 0.000 | 92.770 | 0.000 | 0.000 | 0.000 | | | | | |
| LL 3 | 3 | 81.749 | 100.303 | 0.000 | 195.096 | 0.000 | 35.085 | 0.000 | | | | | |
| LL 4 | 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 55.662 | 81.749 | | | | | |
| LL 5 | 2 | 0.000 | 0.000 | 0.000 | 92.770 | 0.000 | 100.303 | 81.749 | | | | | |
| LL 6 | 3 | 0.000 | 35.085 | 0.000 | 195.096 | 0.000 | 100.303 | 81.749 | | | | | |
| LL 7 | 1 | 0.000 | 27.831 | 0.000 | 109.580 | 0.000 | 0.000 | 0.000 | | | | | |
| LL 8 | 2 | 51.895 | 109.580 | 0.000 | 113.347 | 0.000 | 0.000 | 0.000 | | | | | |
| LL 9 | 3 | 51.895 | 109.580 | 0.000 | 198.862 | 0.000 | 51.895 | 0.000 | | | | | |
| LL10 | 2 | 0.000 | 39.863 | 0.000 | 195.096 | 0.000 | 39.863 | 0.000 | | | | | |
| LL11 | 3 | 72.194 | 105.081 | 0.000 | 195.096 | 0.000 | 39.863 | 0.000 | | | | | |
| LL12 | 2 | 81.749 | 55.662 | 0.000 | 0.000 | 0.000 | 55.662 | 81.749 | | | | | |
| LL13 | 3 | 81.749 | 100.303 | 0.000 | 92.770 | 0.000 | 55.662 | 81.749 | | | | | |

COLUMN MOMENTS(KIP-FEET), SHEARS(KIPS), REACTIONS(KIPS)

TRANSVERSE * LONGITUDINAL

| LOAD | COL | PC | MT | V | MB | RF | ML | MR | MT | V | MB | MF |
|------------------|-----|----------|----------|--------|----------|----------|----------|-----------|----------|---------|-----------|-----------|
| UNIT F.AT CL.CAP | 1 | 0.000 | -6.000 | 1.000 | 70.000 | 0.000 | 0.000 | 0.000 | 6.000 | 1.000 | 70.000 | 70.000 |
| DEAD LOAD TOTAL | 1 | 2022.727 | -0.001 | 0.000 | 0.001 | 2771.527 | 9655.440 | -9655.439 | 0.000 | 0.000 | 0.000 | 0.000 |
| TRAC. FORCE 1 LN | 1 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | -212.808 | -9.860 | -843.848 | -843.848 |
| WIND ON SUBSTR. | 1 | 0.000 | -53.256 | 8.876 | 621.320 | 0.000 | 0.000 | 0.000 | -159.720 | -26.620 | -1863.400 | -1863.400 |
| GROUP 2 WIND 1 1 | 1 | 0.000 | -966.100 | 77.126 | 5902.164 | 0.000 | 0.000 | 0.000 | -159.720 | -26.620 | -1863.400 | -1863.400 |
| GROUP 2 WIND 1 2 | 1 | 0.000 | -966.100 | 77.126 | 5902.164 | 0.000 | 0.000 | 0.000 | 159.720 | 26.620 | 1863.400 | 1863.400 |
| GROUP 2 WIND 2 1 | 1 | 0.000 | -856.558 | 68.936 | 5268.462 | 0.000 | 0.000 | 0.000 | -378.803 | -43.000 | -3130.803 | -3130.803 |

| PIER-41-6-140-70.OUT | | | | | | | | | | | | | | | |
|----------------------|------|---|---|---|---------|-----------|--------|----------|---------|----------|-------|----------|---------|-----------|-----------|
| GROUP | WIND | 2 | 2 | 1 | 0.000 | -856.558 | 68.936 | 5268.462 | 0.000 | 0.000 | 0.000 | 378.803 | 43.000 | 3130.803 | 3130.803 |
| GROUP 2 | WIND | 3 | 1 | 1 | 0.000 | -801.788 | 64.841 | 4951.612 | 0.000 | 0.000 | 0.000 | -597.885 | -59.380 | -4398.205 | -4398.205 |
| GROUP 2 | WIND | 3 | 2 | 1 | 0.000 | -801.788 | 64.841 | 4951.612 | 0.000 | 0.000 | 0.000 | 597.885 | 59.380 | 4398.205 | 4398.205 |
| GROUP 2 | WIND | 4 | 1 | 1 | 0.000 | -655.733 | 53.921 | 4106.677 | 0.000 | 0.000 | 0.000 | -743.940 | -70.300 | -5243.140 | -5243.140 |
| GROUP 2 | WIND | 4 | 2 | 1 | 0.000 | -655.733 | 53.921 | 4106.677 | 0.000 | 0.000 | 0.000 | 743.940 | 70.300 | 5243.140 | 5243.140 |
| GROUP 2 | WIND | 5 | 1 | 1 | 0.000 | -363.623 | 32.081 | 2416.807 | 0.000 | 0.000 | 0.000 | -853.481 | -78.490 | -5876.841 | -5876.841 |
| GROUP 2 | WIND | 5 | 2 | 1 | 0.000 | -363.623 | 32.081 | 2416.807 | 0.000 | 0.000 | 0.000 | 853.481 | 78.490 | 5876.841 | 5876.841 |
| GROUP 3 | WIND | 1 | 1 | 1 | 0.000 | -591.992 | 37.138 | 2968.811 | 0.000 | 0.000 | 0.000 | -47.916 | -7.986 | -559.020 | -559.020 |
| GROUP 3 | WIND | 1 | 2 | 1 | 0.000 | -591.992 | 37.138 | 2968.811 | 0.000 | 0.000 | 0.000 | 47.916 | 7.986 | 559.020 | 559.020 |
| GROUP 3 | WIND | 2 | 1 | 1 | 0.000 | -522.870 | 33.001 | 2634.921 | 0.000 | 0.000 | 0.000 | -186.160 | -16.260 | -1226.800 | -1226.800 |
| GROUP 3 | WIND | 2 | 2 | 1 | 0.000 | -522.870 | 33.001 | 2634.921 | 0.000 | 0.000 | 0.000 | 186.160 | 16.260 | 1226.800 | 1226.800 |
| GROUP 3 | WIND | 3 | 1 | 1 | 0.000 | -488.309 | 30.932 | 2467.976 | 0.000 | 0.000 | 0.000 | -324.403 | -24.534 | -1894.579 | -1894.579 |
| GROUP 3 | WIND | 3 | 2 | 1 | 0.000 | -488.309 | 30.932 | 2467.976 | 0.000 | 0.000 | 0.000 | 324.403 | 24.534 | 1894.579 | 1894.579 |
| GROUP 3 | WIND | 4 | 1 | 1 | 0.000 | -396.147 | 25.416 | 2022.790 | 0.000 | 0.000 | 0.000 | -416.566 | -30.050 | -2339.766 | -2339.766 |
| GROUP 3 | WIND | 4 | 2 | 1 | 0.000 | -396.147 | 25.416 | 2022.790 | 0.000 | 0.000 | 0.000 | 416.566 | 30.050 | 2339.766 | 2339.766 |
| GROUP 3 | WIND | 5 | 1 | 1 | 0.000 | -211.822 | 14.384 | 1132.417 | 0.000 | 0.000 | 0.000 | -485.688 | -34.187 | -2673.656 | -2673.656 |
| GROUP 3 | WIND | 5 | 2 | 1 | 0.000 | -211.822 | 14.384 | 1132.417 | 0.000 | 0.000 | 0.000 | 485.688 | 34.187 | 2673.656 | 2673.656 |
| LIVE LOAD | LL | 1 | 1 | 1 | 137.411 | -2131.932 | 0.000 | 2131.932 | 137.411 | 2131.932 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LIVE LOAD | LL | 2 | 1 | 1 | 274.822 | -2627.849 | 0.000 | 2627.849 | 274.822 | 2627.849 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

□ COLUMN MOMENTS(KIP-FEET), SHEARS(KIPS), REACTIONS(KIPS)

| LOAD | COL | TRANSVERSE | | | | | | | * LONGITUDINAL | | | | |
|----------------|-----|------------|-----------|-------|-----------|---------|----------|-----------|----------------|-------|-------|-------|-------|
| | | PC | MT | V | MB | RF | ML | MR | MT | V | MB | MF | |
| LIVE LOAD LL 3 | 1 | 371.010 | -2014.280 | 0.000 | 2014.280 | 371.010 | 2365.064 | -350.783 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LIVE LOAD LL 4 | 1 | 137.411 | 2131.932 | 0.000 | -2131.932 | 137.411 | 0.000 | -2131.932 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LIVE LOAD LL 5 | 1 | 274.822 | 2627.849 | 0.000 | -2627.849 | 274.822 | 0.000 | -2627.849 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LIVE LOAD LL 6 | 1 | 371.010 | 2014.280 | 0.000 | -2014.280 | 371.010 | 350.783 | -2365.064 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LIVE LOAD LL 7 | 1 | 137.411 | -309.175 | 0.000 | 309.175 | 137.411 | 309.175 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LIVE LOAD LL 8 | 1 | 274.822 | -2178.160 | 0.000 | 2178.160 | 274.822 | 2178.160 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LIVE LOAD LL 9 | 1 | 371.009 | -1441.493 | 0.000 | 1441.493 | 371.009 | 1960.344 | -518.851 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LIVE LOAD LL10 | 1 | 274.822 | 0.000 | 0.000 | 0.000 | 274.822 | 442.838 | -442.838 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LIVE LOAD LL11 | 1 | 371.011 | -1855.061 | 0.000 | 1855.061 | 371.011 | 2253.615 | -398.554 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LIVE LOAD LL12 | 1 | 274.822 | 0.000 | 0.000 | 0.000 | 274.822 | 2131.932 | -2131.932 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| LIVE LOAD LL13 | 1 | 371.010 | -446.325 | 0.000 | 446.325 | 371.010 | 2365.064 | -1918.739 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

□ CAP ANALYSIS AND DESIGN DATA

| POINT | CAP MOMENTS AND SHEARS | | | | | | | | ** SHEARS (KIPS) | | | | | | | |
|-------|------------------------|------------|------------|------------|------------|------------|------------|----------|------------------|----------|----------|-----------|-----------|--|--|--|
| | D.L. TOT. | G1 MAX.+ | G1 MAX.- | G2 MAX.+ | G2 MAX.- | G3 MAX.+ | G3 MAX.- | DL T.LT | DL T.RT | G1 + LT | G1 + RT | G1 - LT | G1 - RT | | | |
| P 1 | -33.125 | -33.125 | -33.125 | -33.125 | -33.125 | -33.125 | -33.125 | -18.931 | -367.867 | -18.931 | -367.867 | -18.931 | -545.344 | | | |
| P 2 | -2935.897 | -2935.897 | -4250.292 | -2935.897 | -2935.897 | -2935.897 | -3722.960 | -418.766 | -816.369 | -418.766 | -816.369 | -596.244 | -1211.604 | | | |
| P 3 | -6788.192 | -6788.192 | -9924.225 | -6788.192 | -6788.192 | -6788.192 | -8666.056 | -856.331 | -856.331 | -856.331 | -856.331 | -1251.566 | -1251.566 | | | |
| C 1L | -12552.072 | -12552.072 | -18257.131 | -12552.072 | -12552.072 | -12552.072 | -15968.275 | -917.171 | | -917.171 | | -1312.406 | | | | |
| C 1R | -12552.071 | -12552.071 | -18257.131 | -12552.071 | -12552.071 | -12552.071 | -15968.274 | | 917.171 | | 1312.406 | | 917.171 | | | |
| P 5 | -6788.191 | -6788.191 | -9924.224 | -6788.191 | -6788.191 | -6788.191 | -8666.056 | 856.331 | 856.331 | 1251.566 | 1251.566 | 856.331 | 856.331 | | | |
| P 6 | -2935.896 | -2935.896 | -4250.292 | -2935.896 | -2935.896 | -2935.896 | -3722.960 | 816.369 | 418.766 | 1211.604 | 596.244 | 816.369 | 418.766 | | | |
| P 7 | -33.124 | -33.123 | -33.124 | -33.124 | -33.124 | -33.123 | -33.124 | 367.867 | 18.931 | 545.344 | 18.931 | 367.867 | 18.931 | | | |

| PT. | CAP DESIGN DATA | | TOP REINFORCE. | | BOT. REINFORCE. | | LEFT STIRRUPS | | RIGHT STIRRUPS | | D IN. | FC PSI | PS % | FS/FF RATIO | FS/FZ RATIO |
|-----|-----------------|---------------|----------------|---------------|-----------------|---------------|----------------------|----------------------|----------------------|-------|-------|--------|-------|-------------|-------------|
| | M+ UNF. K-FT. | M- UNF. K-FT. | AS NO. SIZE | AS NO. SIZE | AS NO. SIZE | AS NO. SIZE | M.SP. AV/IN BAR&SPAC | M.SP. AV/IN BAR&SPAC | | | | | | | |
| P 1 | -25.481 | -25.481 | 3.12 2 # 11 | 3.12 2 # 11 | 3.12 2 # 11 | 3.12 2 # 11 | 0.00 0.000 #5@ 0.00 | 24.00 0.060 #5@10.33 | 24.00 0.060 #5@10.33 | 59.12 | | 0.08 | 0.000 | 0.099 | |
| P 2 | -2258.383 | -2863.816 | 12.30 8 # 11 | 12.30 8 # 11 | 12.30 8 # 11 | 12.30 8 # 11 | 24.00 0.060 #5@10.33 | 24.00 0.161D#5@ 7.72 | 24.00 0.161D#5@ 7.72 | 81.85 | | 0.23 | 0.576 | 1.277 | |
| P 3 | -5221.687 | -6666.197 | 24.63 16 # 11 | 24.63 16 # 11 | 24.63 16 # 11 | 24.63 16 # 11 | 24.00 0.123 #5@ 5.05 | 24.00 0.123 #5@ 5.05 | 24.00 0.123 #5@ 5.05 | 96.00 | | 0.41 | 0.589 | 1.015 | |
| C 1 | -9655.439 | -12283.289 | 47.20 31 # 11 | 47.20 31 # 11 | 47.20 31 # 11 | 47.20 31 # 11 | 24.00 0.138 #5@ 4.50 | 24.00 0.138 #5@ 4.50 | 24.00 0.138 #5@ 4.50 | 96.00 | | 0.76 | 0.566 | 0.907 | |
| P 5 | -5221.686 | -6666.197 | 24.63 16 # 11 | 24.63 16 # 11 | 24.63 16 # 11 | 24.63 16 # 11 | 24.00 0.123 #5@ 5.05 | 24.00 0.123 #5@ 5.05 | 24.00 0.123 #5@ 5.05 | 96.00 | | 0.41 | 0.589 | 1.015 | |
| P 6 | -2258.382 | -2863.815 | 12.30 8 # 11 | 12.30 8 # 11 | 12.30 8 # 11 | 12.30 8 # 11 | 24.00 0.161D#5@ 7.72 | 24.00 0.060 #5@10.33 | 24.00 0.060 #5@10.33 | 81.85 | | 0.23 | 0.576 | 1.277 | |
| P 7 | -25.480 | -25.480 | 3.12 2 # 11 | 3.12 2 # 11 | 3.12 2 # 11 | 3.12 2 # 11 | 24.00 0.060 #5@10.33 | 0.00 0.000 #5@ 0.00 | 24.00 0.000 #5@ 0.00 | 59.12 | | 0.08 | 0.000 | 0.099 | |

NOTE: *** FS/FZ RATIO EXCEEDS 1.0! ***

COLUMN ANALYSIS AND DESIGN OUTPUT

| CRITICAL COLUMN LOADS | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|---|---|----|-----|-----|-----|---|---|---|--------|---------------|--------|--------|--------|---------|---------|---------|---------|-------|-------|--------|
| CN | T | B | GR | LLC | WC | R | E | C | S | PF | MTF | MLF | PM | MTM | MLM | PU | MTU | MLU | PU/PM | B | D |
| 1 | T | | 1 | LL | 2 | 0.0 | | | | 3226.2 | -5705.1 | 0.0 | 3226.2 | 6200.4 | 2937.2 | 15561.4 | 29932.3 | 14179.1 | 4.827 | 72.00 | 156.00 |
| 1 | B | | 2 | | 5.1 | | | | | 3603.0 | 3141.9-7639.9 | 3603.0 | 3603.0 | 5020.5 | 10702.7 | 7902.8 | 10977.0 | 23400.7 | 2.187 | 72.00 | 156.00 |

| COLUMN DESIGN DATA | | | | | | | | | | | | | | | | | | | | |
|--------------------|---|---|---------|---|---------|---|---------|---|---------|--------|-------|------|-------|-------|--------|-------|-------|-------|---|------|
| CN | T | B | FACE 1 | B | FACE 2 | D | FACE 3 | D | FACE 4 | AS | PS | BD12 | BD | SUMPU | SUMPC | DEL.T | DEL.L | CM | R | PHIC |
| 1 | T | | 16 # 11 | | 16 # 11 | | 21 # 11 | | 21 # 11 | 115.44 | 1.028 | 1.00 | 0.000 | 3713. | 46476. | 1.087 | 1.517 | 1.000 | 2 | 0.70 |
| 1 | B | | 16 # 11 | | 16 # 11 | | 21 # 11 | | 21 # 11 | 115.44 | 1.028 | 1.00 | 0.000 | 3116. | 46476. | 1.072 | 1.401 | 1.000 | 2 | 0.70 |

| FOOTING 1 DESIGN LOADS | | | | | | | | | | | | | | | | | | | |
|------------------------|---|------|-----|-----|---|---|----------|----------|------------------|---------|---------|---------|---------|---------|---------|--------|--------|--------|------|
| F | G | LLID | WC | ES | C | S | P | MT | VT | ML | VL | P4 | P3 | P2 | P1 | MTF | VBF | VPF | LOAD |
| 1 | 3 | LL | 3 | 3.1 | | | 3083.641 | 4162.501 | 30.932-4172.970 | -51.156 | 199.590 | 111.319 | 204.408 | 292.679 | 123.659 | 0.000 | 39.464 | MAX.P1 | |
| 1 | 2 | | 1.1 | | | | 3602.985 | 7672.813 | 100.264-2422.420 | -34.606 | 177.196 | 125.329 | 302.919 | 354.786 | 163.865 | 0.000 | 46.303 | MAX.MT | |
| 1 | 2 | | 4.1 | | | | 3602.985 | 5338.681 | 70.097-6816.082 | -91.390 | 250.840 | 105.662 | 229.274 | 374.452 | 149.260 | 0.000 | 46.303 | MAX.VT | |
| 1 | 3 | LL | 3 | 4.1 | | | 4008.733 | 4832.509 | 33.041-6003.603 | -73.674 | 272.263 | 145.259 | 252.934 | 379.938 | 157.146 | 0.000 | 51.304 | MAX.VP | |
| 1 | 3 | LL | 3 | 4.1 | | | 4008.733 | 4832.509 | 33.041-6003.603 | -73.674 | 272.263 | 145.259 | 252.934 | 379.938 | 447.644 | 72.741 | 51.304 | MAX.ML | |
| 1 | 3 | LL | 3 | 4.1 | | | 4008.733 | 4832.509 | 33.041-6003.603 | -73.674 | 272.263 | 145.259 | 252.934 | 379.938 | 447.644 | 72.741 | 51.304 | MAX.VL | |
| 1 | 2 | | 3.1 | | | | 2771.527 | 4951.613 | 64.841-4398.205 | -59.380 | 174.212 | 80.481 | 195.107 | 288.838 | 120.102 | 0.000 | 35.617 | MAX.P3 | |

| FOOTING 1 ANALYSIS/DESIGN RESULTS | | | | | | | | | | | | | |
|-----------------------------------|--------|-------|-------|-----------------------------|---------|---------|-----------|---------|--------|----------------------|--------|-------|--|
| FOOTING SIZE | | | | * BAR REINFORCEMENT STEEL * | | | | | | SECTION CAPACITIES * | | | |
| B | D | T | P1/PA | AS | NO.SIZE | SPAC. | PLACEMENT | MT. | VB | VP | DS | FC | |
| 21.250 | 21.250 | 6.500 | 0.996 | 0.80 | 39 # 6 | @ 6.500 | TOP TRAN | 219.982 | 73.879 | 147.758 | 61.215 | 0.000 | |
| | | | | 1.63 | 23 #11 | @11.000 | BOT.LONG | 462.544 | 75.183 | 150.365 | 62.295 | 0.000 | |

NUMBER OF PILES = 18 BP = 3.125 DP = 4.688