

MAXWELL ADDITION STORM DRAIN...32-83434-042
 PROFESSIONAL ENGINEERING CONSULTANTS, P.A.
 C.O.W. PROJ. NO. 468-76-245-81287-000-000-001
 S.W.S. NO. 251 100-YR ANALYSIS **RCP** MWB 9/12/83

STORM FREQUENCY = 100-YEAR

* * * H Y D R O L O G Y * * *

TRIBUTARY AREA

HYDROLOGY SUMMATION

CONDUIT DATA

| NODE | TO | C | AREA | SLOPE | LENGTH | TC(0) | I(0) | Q(0) | TC | I | Q | SUM | Q | SIZE | VELOCITY | LENGTH | TT | TT+TC |
|------|-----|------|------|-------|--------|-------|---------|-------|-------|---------|-------|-------|-------|------|----------|--------|-------|-------|
| | | | (AC) | (%) | (FT) | (MIN) | (IN/HR) | (CFS) | (MIN) | (IN/HR) | (CFS) | (CFS) | (CFS) | | (FT/SEC) | (FT) | (MIN) | (MIN) |
| 105 | 104 | 0.00 | 9.20 | 0.00 | 0.0 | 18.00 | 8.36 | 26.00 | 18.00 | 8.36 | 26.00 | 26.00 | 26.00 | 24" | 8.28 | 100.00 | .20 | 18.20 |
| 104 | 103 | .86 | .70 | 0.00 | 0.0 | 15.00 | 8.97 | 5.70 | 18.20 | 8.32 | 5.29 | 31.29 | 31.29 | 30" | 6.37 | 200.00 | .52 | 18.72 |
| 103 | 102 | 0.00 | 0.00 | 0.00 | 0.0 | 0.00 | 0.00 | 0.00 | 18.72 | 8.23 | 0.00 | 31.29 | 31.29 | 30" | 6.37 | 315.00 | .82 | 19.55 |
| 102 | 101 | 0.00 | 1.40 | 0.00 | 0.0 | 15.00 | 8.97 | 11.50 | 19.55 | 8.09 | 10.37 | 41.66 | 41.66 | 36" | 5.89 | 150.00 | .42 | 19.97 |

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* * * H Y D R A U L I C S * * *

| NODE | HYD-SLOPE | FRICTION | BEND | TRANSITION | MANHOLE | DEFLECTION | JUNCTION | TOTAL | HYD-GL | DESIRED | DIFF. |
|------|-----------|----------|--------|------------|---------|------------|----------|--------|----------|----------|-------|
| | (FT/FT) | (FT) | (FT) | (FT) | (FT) | (FT) | (FT) | (FT) | | | (FT) |
| 105 | .01321 | 1.3209 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 1.3209 | 173.4917 | 173.5000 | .01 |
| 104 | .00582 | 1.1636 | 0.0000 | .0866 | 0.0000 | .5318 | -.0743 | 1.7076 | 172.1708 | 172.5000 | .33 |
| 103 | .00582 | 1.8326 | 0.0000 | 0.0000 | .0315 | .3154 | .0291 | 2.2087 | 170.4632 | 173.7000 | 3.24 |

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59

TRIBUTARY AREA

HYDROLOGY SUMMATION

CONDUIT DATA

| NODE | TO | C | AREA (AC) | SLOPE (%) | LENGTH (FT) | TC (MIN) | I (IN/HR) | Q (CFS) | TC (MIN) | I (IN/HR) | Q (CFS) | SUM Q (CFS) | SIZE | VELOCITY (FT/SEC) | LENGTH (FT) | TT (MIN) | TT+TG (MIN) |
|------|-----|------|-----------|-----------|-------------|----------|-----------|---------|----------|-----------|---------|-------------|------|-------------------|-------------|----------|-------------|
| 105 | 104 | 0.00 | 9.20 | 0.00 | 0.0 | 18.00 | 8.36 | 26.00 | 18.00 | 8.36 | 26.00 | 26.00 | 24" | 8.28 | 100.00 | .20 | 18.20 |
| 104 | 103 | .86 | .70 | 0.00 | 0.0 | 15.00 | 8.97 | 5.70 | 18.20 | 8.32 | 5.29 | 31.29 | 30" | 6.37 | 200.00 | .52 | 18.72 |
| 103 | 102 | 0.00 | 0.00 | 0.00 | 0.0 | 0.00 | 0.00 | 0.00 | 18.72 | 8.23 | 0.00 | 31.29 | 30" | 6.37 | 315.00 | .82 | 19.55 |
| 102 | 101 | 0.00 | 1.40 | 0.00 | 0.0 | 15.00 | 8.97 | 11.50 | 19.55 | 8.09 | 10.37 | 41.66 | 36" | 5.89 | 150.00 | .42 | 19.97 |

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* * * H Y D R A U L I C S * * *

| NODE | HYD-SLOPE (FT/FT) | FRICTION (FT) | BEND (FT) | TRANSITION (FT) | MANHOLE (FT) | DEFLECTION (FT) | JUNCTION (FT) | TOTAL (FT) | HYD-GL ELEVATION | DESIRED ELEVATION | DIFF. (FT) |
|------|-------------------|---------------|-----------|-----------------|--------------|-----------------|---------------|------------|------------------|-------------------|------------|
| 105 | .01321 | 1.3209 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 1.3209 | 173.4917 | 173.5000 | .01 |
| 104 | .00582 | 1.1636 | 0.0000 | .0866 | 0.0000 | .5318 | -.0743 | 1.7076 | 172.1708 | 172.5000 | .33 |
| 103 | .00582 | 1.8326 | 0.0000 | 0.0000 | .0315 | .3154 | .0291 | 2.2087 | 170.4632 | 173.7000 | 3.24 |
| 102 | .00390 | .5851 | 0.0000 | .0183 | 0.0000 | .1373 | .2638 | 1.0045 | 168.2545 | 169.5000 | 1.25 |
| 101 | 0.00000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 167.2500 | 173.2500 | 6.00 |

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STORM FREQUENCY = 100-YEAR

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 TRIBUTARY AREA *****
 HYDROLOGY SUMMATION *****
 CONDUIT DATA *****

| NODE TO | C | AREA | SLOPE (%) | LENGTH (FT) | TC (MIN) | I (IN/HR) | Q (CFS) | TC (MIN) | I (IN/HR) | Q (CFS) | Q (CFS) | SUM Q | SIZE | VELOCITY (FT/SEC) | LENGTH (FT) | TT (MIN) | TT+TC |
|---------|-----|------|-----------|-------------|----------|-----------|---------|----------|-----------|---------|---------|-------|------|-------------------|-------------|----------|-------|
| 105 | 104 | 0.00 | 9.20 | 0.00 | 0.0 | 18.00 | 8.36 | 26.00 | 18.00 | 8.36 | 26.00 | 26.00 | 24" | 8.28 | 100.00 | .20 | 18.20 |
| 104 | 103 | .86 | .70 | 0.00 | 0.0 | 15.00 | 8.97 | 5.70 | 18.20 | 8.32 | 5.29 | 31.29 | 42" | 3.25 | 200.00 | 1.03 | 19.23 |
| 103 | 102 | 0.00 | 0.00 | 0.00 | 0.0 | 0.00 | 0.00 | 0.00 | 19.23 | 8.15 | 0.00 | 31.29 | 42" | 3.25 | 315.00 | 1.61 | 20.84 |
| 102 | 101 | 0.00 | 1.40 | 0.00 | 0.0 | 15.00 | 8.97 | 11.50 | 20.84 | 7.89 | 10.12 | 41.40 | 48" | 3.29 | 150.00 | .76 | 21.60 |

S.W.S. NO. 251...100-YR ANALYSIS...MWB..9-15-83

* * * H Y D R A U L I C S * * *

| NODE | HYD-SLOPE (FT/FT) | FRICTION (FT) | BEND (FT) | TRANSITION (FT) | MANHOLE (FT) | DEFLECTION (FT) | JUNCTION (FT) | TOTAL (FT) | HYD-GL ELEVATION | DESIRED ELEVATION | DIFF. (FT) |
|------|-------------------|---------------|-----------|-----------------|--------------|-----------------|---------------|------------|------------------|-------------------|------------|
| 105 | .01321 | 1.3209 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 1.3209 | 171.7983 | 173.5000 | 1.70 |
| 104 | .00330 | .6591 | 0.0000 | .1799 | 0.0000 | .5318 | -.5118 | .8590 | 170.4774 | 172.5000 | 2.02 |
| 103 | .00330 | 1.0381 | 0.0000 | 0.0000 | .0082 | .0821 | .0165 | 1.1450 | 169.6184 | 173.7000 | 4.08 |
| 102 | .00330 | 4.347 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 4.347 | 170.7774 | 173.7000 | 2.92 |

