

TIME: 9:53

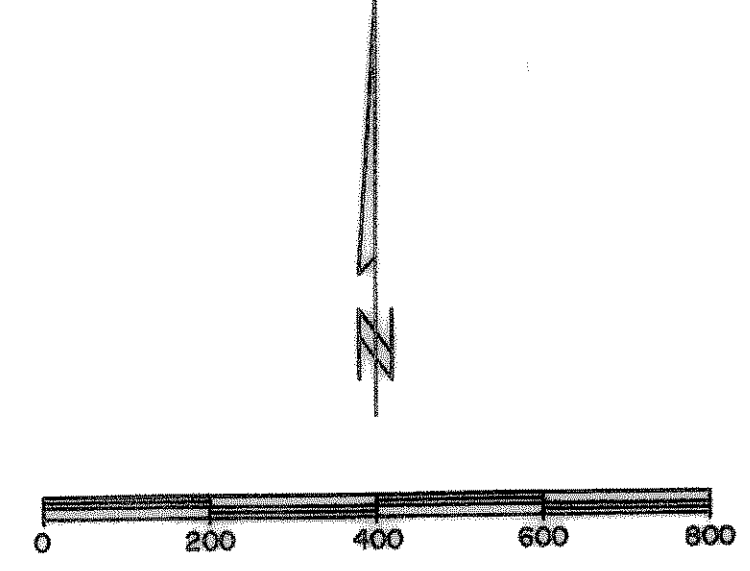
FILE: DAMAP-06037.dwg



BENCHMARKS:
 CITY MON. NO. 2
 LOCATED ON THE NORTHWEST CORNER
 OF THE BRIDGE @ I-30 AND F.M. 549
 ELEVATION 609.56
 "1" CUT IN THE CENTER OF A 4 FOOT
 HEADWALL LOCATED AT THE NORTHEAST
 CORNER OF F.M. 549 AND STATE
 HIGHWAY 276
 ELEVATION 592.75

LEGEND

- FLOW ARROW
- DRAINAGE DIVIDE
- INLET & LATERAL
- TRUNK LINE
- TEMP. WYE
- H.P. HIGH POINT
- L.P. LOW POINT



DRAINAGE AREA CALCULATIONS

| COORDINATION | AREA | NEUTRAL | INDIVIDUAL | 100 YR. CONC. | 100 YR. (CONC) | 100 YR. (CONC) | 100 YR. (CONC) | 100 YR. (CONC) | 100 YR. (CONC) | 100 YR. (CONC) | REMARKS |
|--------------|-------|---------|------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------------------------|
| A-1 | 1.11 | 0.24 | 0.78 | 10 | 9.8 | 8.4 | 7.4 | 7.6 | 8.3 | 8.7 | |
| A-2 | 0.48 | 0.25 | 0.25 | 10 | 9.8 | 8.4 | 7.4 | 3.3 | 2.8 | 2.5 | CROSSER ROAD IN RSP STRUCTURE |
| A-3 | 2.5 | 0.77 | 1.73 | 10 | 9.8 | 8.4 | 7.4 | 4.0 | 3.4 | 3.0 | |
| A-4 | 0.58 | 0.41 | 0.17 | 10 | 9.8 | 8.4 | 7.4 | 4.0 | 6.5 | 5.7 | |
| A-5 | 1.0 | 0.77 | 0.23 | 10 | 9.8 | 8.4 | 7.4 | 4.2 | 10.8 | 9.5 | |
| A-6 | 0.84 | 0.29 | 0.55 | 10 | 9.8 | 8.4 | 7.4 | 4.7 | 4.0 | 3.4 | |
| A-7 | 0.88 | 0.48 | 0.40 | 10 | 9.8 | 8.4 | 7.4 | 4.7 | 4.1 | 3.6 | |
| A-8 | 0.69 | 0.29 | 0.40 | 10 | 9.8 | 8.4 | 7.4 | 4.2 | 4.4 | 3.9 | |
| A-9 | 0.63 | 0.45 | 0.18 | 10 | 9.8 | 8.4 | 7.4 | 6.3 | 6.6 | 6.1 | |
| A-10 | 0.99 | 0.29 | 0.70 | 10 | 9.8 | 8.4 | 7.4 | 11.8 | 10.6 | 9.0 | |
| A-11 | 0.44 | 0.10 | 0.34 | 10 | 9.8 | 8.4 | 7.4 | 9.9 | 8.5 | 7.5 | |
| A-12 | 1.74 | 0.22 | 1.52 | 10 | 9.8 | 8.4 | 7.4 | 4.2 | 4.4 | 3.9 | |
| A-13 | 0.37 | 0.55 | 0.18 | 10 | 9.8 | 8.4 | 7.4 | 3.9 | 3.4 | 3.0 | |
| A-14 | 0.57 | 0.40 | 0.17 | 10 | 9.8 | 8.4 | 7.4 | 3.5 | 3.5 | 3.1 | |
| A-15 | 0.59 | 0.41 | 0.18 | 10 | 9.8 | 8.4 | 7.4 | 4.3 | 4.3 | 3.9 | |
| A-16 | 0.38 | 0.89 | 0.51 | 10 | 9.8 | 8.4 | 7.4 | 6.7 | 5.8 | 5.1 | |
| A-17 | 0.38 | 0.27 | 0.11 | 10 | 9.8 | 8.4 | 7.4 | 44.0 | 37.7 | 33.8 | |
| A-18 | 0.41 | 0.49 | 0.12 | 10 | 9.8 | 8.4 | 7.4 | 13.9 | 11.9 | 10.5 | |
| A-19 | 0.03 | 1.42 | 1.39 | 10 | 9.8 | 8.4 | 7.4 | 2.4 | 5.1 | 4.5 | |
| A-20 | 0.7 | 0.18 | 0.52 | 10 | 9.8 | 8.4 | 7.4 | 1.2 | 1.0 | 0.9 | |
| A-21 | 0.86 | 1.39 | 0.53 | 10 | 9.8 | 8.4 | 7.4 | 13.5 | 12.6 | 11.3 | |
| B-1 | 0.27 | 0.27 | 0.27 | 10 | 9.8 | 8.4 | 7.4 | 19.2 | 16.5 | 14.5 | |
| B-2 | 0.94 | 0.24 | 0.70 | 10 | 9.8 | 8.4 | 7.4 | 78.1 | 23.9 | 20.8 | CROSSER ROAD IN RSP STRUCTURE |
| B-3 | 0.48 | 0.25 | 0.23 | 10 | 9.8 | 8.4 | 7.4 | 67.0 | 59.0 | 52.0 | CROSSER ROAD IN RSP STRUCTURE |
| B-4 | 2.29 | 0.77 | 1.52 | 10 | 9.8 | 8.4 | 7.4 | 21.4 | 18.3 | 16.2 | |
| B-5 | 1.76 | 0.23 | 1.53 | 10 | 9.8 | 8.4 | 7.4 | 10.3 | 9.1 | 8.1 | |
| B-6 | 0.35 | 0.23 | 0.12 | 10 | 9.8 | 8.4 | 7.4 | 1.9 | 1.7 | 1.5 | |
| B-7 | 0.44 | 0.31 | 0.13 | 10 | 9.8 | 8.4 | 7.4 | 6.9 | 5.9 | 5.2 | |
| B-8 | 1.02 | 0.29 | 0.73 | 10 | 9.8 | 8.4 | 7.4 | 1.9 | 1.6 | 1.4 | |
| B-9 | 0.27 | 0.29 | 0.29 | 10 | 9.8 | 8.4 | 7.4 | 1.9 | 1.6 | 1.4 | |
| B-10 | 0.27 | 0.29 | 0.29 | 10 | 9.8 | 8.4 | 7.4 | 11.2 | 9.6 | 8.4 | |
| B-11 | 0.63 | 1.14 | 0.51 | 10 | 9.8 | 8.4 | 7.4 | 28.1 | 23.9 | 20.8 | |
| B-12 | 0.58 | 0.27 | 0.31 | 10 | 9.8 | 8.4 | 7.4 | 17.6 | 15.1 | 13.0 | |
| B-13 | 0.33 | 0.49 | 0.16 | 10 | 9.8 | 8.4 | 7.4 | 14.2 | 12.5 | 11.0 | |
| B-14 | 0.59 | 0.23 | 0.36 | 10 | 9.8 | 8.4 | 7.4 | 2.3 | 1.9 | 1.7 | |
| B-15 | 0.38 | 0.23 | 0.15 | 10 | 9.8 | 8.4 | 7.4 | 4.3 | 3.4 | 3.0 | |
| B-16 | 0.38 | 0.23 | 0.15 | 10 | 9.8 | 8.4 | 7.4 | 1.5 | 1.6 | 1.4 | |
| B-17 | 0.38 | 0.23 | 0.15 | 10 | 9.8 | 8.4 | 7.4 | 1.9 | 1.9 | 1.7 | |
| B-18 | 0.27 | 0.29 | 0.29 | 10 | 9.8 | 8.4 | 7.4 | 11.0 | 9.4 | 8.3 | |
| B-19 | 0.53 | 0.39 | 0.14 | 10 | 9.8 | 8.4 | 7.4 | 6.9 | 5.8 | 5.1 | |
| B-20 | 0.93 | 0.27 | 0.66 | 10 | 9.8 | 8.4 | 7.4 | 3.9 | 3.2 | 2.8 | |
| C-1 | 1.26 | 0.65 | 0.61 | 10 | 9.8 | 8.4 | 7.4 | 60.4 | 55.4 | 48.4 | |
| C-2 | 0.84 | 0.24 | 0.60 | 10 | 9.8 | 8.4 | 7.4 | 245.5 | 210.4 | 185.4 | DRAIN TO EXISTING TXDOT S.D. SYSTEM |
| C-3 | 0.43 | 0.29 | 0.14 | 10 | 9.8 | 8.4 | 7.4 | 5.8 | 4.9 | 4.4 | DRAIN TO EXISTING TXDOT S.D. SYSTEM |
| C-4 | 0.12 | 0.29 | 0.10 | 10 | 9.8 | 8.4 | 7.4 | 2.8 | 2.5 | 2.2 | DRAIN TO EXISTING TXDOT S.D. SYSTEM |
| D-1 | 13.94 | 0.68 | 13.26 | 10 | 9.8 | 8.4 | 7.4 | 2.9 | 5.7 | 6.5 | DRAIN TO EXISTING TXDOT S.D. SYSTEM |
| D-2 | 31.07 | 0.75 | 30.32 | 10 | 9.8 | 8.4 | 7.4 | 85.6 | 82.0 | 78.2 | DRAIN TO EXISTING TXDOT S.D. SYSTEM |
| D-3 | 5.32 | 0.75 | 4.57 | 10 | 9.8 | 8.4 | 7.4 | 185.2 | 180.9 | 176.2 | DRAIN TO EXISTING TXDOT S.D. SYSTEM |
| D-4 | 9.59 | 0.75 | 8.84 | 10 | 9.8 | 8.4 | 7.4 | 56.5 | 53.4 | 50.6 | DRAIN TO EXISTING TXDOT S.D. SYSTEM |
| D-4a | 0.94 | 0.75 | 0.19 | 10 | 9.8 | 8.4 | 7.4 | 68.8 | 65.4 | 61.7 | DRAINAGE FROM LOT 4, BLOCK C |
| D-7 | 5.22 | 0.75 | 4.47 | 10 | 9.8 | 8.4 | 7.4 | 2.3 | 2.1 | 1.9 | DRAINAGE DIRECTLY TO DETENTION POND |
| D-7a | 0.27 | 0.75 | 0.48 | 10 | 9.8 | 8.4 | 7.4 | 39.2 | 35.0 | 32.0 | DRAINAGE DIRECTLY TO DETENTION POND |
| D-7b | 1.43 | 0.75 | 0.68 | 10 | 9.8 | 8.4 | 7.4 | 35.8 | 32.6 | 29.1 | DRAINAGE DIRECTLY TO DETENTION POND |
| D-7c | 0.12 | 0.75 | 0.63 | 10 | 9.8 | 8.4 | 7.4 | 7.1 | 6.0 | 5.3 | DETENTION POND IS OPEN AREA 1 |

- NOTES:**
- DRAINAGE AREAS C-1, C-3, D-2 & D-3 DRAIN TO EXISTING TXDOT SYSTEMS.
 - THE INTERIOR UNDERGROUND STORM SYSTEM IS DESIGNED FOR THE 100 YR. STORM EVENT. CAPACITY OF R.O.W. PLUS THE SYSTEM IS SUFFICIENT TO CONVEY THE 100 YR. STORM EVENT.
 - OUTLET WORKS OF DETENTION POND ARE DESIGNED FOR NON-GATED RELEASE OF RESIDENTIAL FLOW. RESIDENTIAL FLOW, C(factor) = 0.5.
 - DRAINAGE AREA D-3 DRAINS TO AN EXISTING ROADWAY DITCH. THE DEVELOPER OF THIS PROPERTY WILL BE REQUIRED TO ADDRESS INCREASING RUNOFF TO THE EXISTING DRAINAGE SYSTEM.
 - DRAINAGE AREA D-2 DRAINS TO AN EXISTING TXDOT STRUCTURE. THE DEVELOPER OF THIS PROPERTY WILL BE REQUIRED TO ADDRESS INCREASED RUN OFF TO THIS STRUCTURE.
 - DRAINAGE AREA D-1 CURRENTLY DRAINS TO A SWAIL THAT CONVERGES WITH THE EXISTING CREEK TO THE NORTH. THE DEVELOPER OF THIS PROPERTY WILL BE RESPONSIBLE FOR ADDRESSING INCREASING RUNOFF.
 - DRAINAGE AREA D-4 CURRENTLY DRAINS TO AN EXISTING CREEK BY SHEET FLOW. THE DEVELOPER OF THIS PROPERTY WILL BE RESPONSIBLE FOR ADDRESSING INCREASING RUNOFF.
 - DRAINAGE AREA D-5 CURRENTLY DRAINS TO THE EXISTING CREEK WEST OF THE PROPERTY. DETENTION POND A IS SIZED TO ALLOW FUTURE DEVELOPED FLOWS FROM THIS AREA.
 - DRAINAGE AREAS D-6 AND D-7 WILL DRAIN DIRECTLY INTO ON SITE DETENTION POND IN THE TEMPORARY AND FUTURE CONDITIONS.

$Q_{50} = C_{10}A = 6(16)(14.04) = 50.5 \text{ cfs}$
 $Q_{100} = C_{100}A = 6(9.8)(14.04) = 82.5 \text{ cfs}$

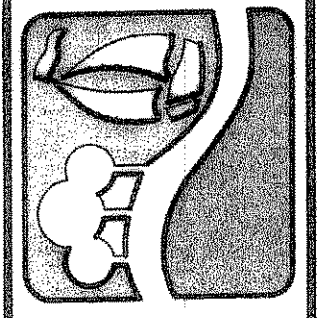
* HYDROLOGY INFORMATION TAKEN FROM TXDOT PLANS FOR CONSTRUCTION OF S.H. 276 DATED 1968.

**FOR REFERENCE ONLY
 NOT FOR CONSTRUCTION**

REVISED CALCULATIONS AND ANALYSIS OF DRAINAGE AREAS D-4, D-4a, D-7 AND D-7a FOR POND B REVISIONS

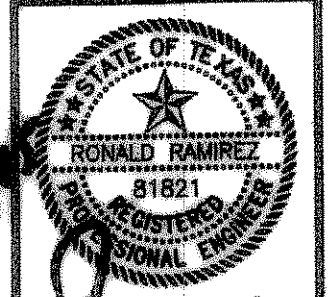
**SHEET REVISED AS AMENDMENT
 TO ROCKWALL TECHNOLOGY PARK
 15 FEB 2005**

PREPARED BY:
WIER & ASSOCIATES, INC.
 ENGINEERS SURVEYORS LAND PLANNERS
 4300 BELLEVUE PLACE, SUITE 130 ARLINGTON, TEXAS 76015 METRO (817)467-7700
 1380 U.S. HIGHWAY 87 N. SUITE 101 WANSFORD, TEXAS 79063 METRO (817)477-5000
 6849 ELM STREET FRIEDO, TEXAS 75004 METRO (214)387-8000
 www.wierassociates.com



**ROCKWALL TECHNOLOGY PARK
 PHASE I
 DRAINAGE AREA MAP**

**ROCKWALL TECH PARK
 DRAINAGE AREA MAP**



COPYRIGHT © WIER & ASSOCIATES, INC.
 LAST SHEET EDIT
 DATE 10-12-2009
 WA# 98041
SHEET NO. 17

PREPARED BY:
WIER & ASSOCIATES, INC.
 ENGINEERS SURVEYORS LAND PLANNERS
 701 HIGHLANDER BLVD., SUITE 300 ARLINGTON, TEXAS 76015 METRO (817)467-7700
 6849 ELM STREET FRIEDO, TEXAS 75004 METRO (214)387-8000
 Texas Firm Registration No. F-2776
 www.wierassociates.com



**ROCKWALL TECHNOLOGY PARK
 PHASE I
 DRAINAGE AREA MAP**

**ROCKWALL TECH PARK
 DRAINAGE AREA MAP**



COPYRIGHT © WIER & ASSOCIATES, INC.
 LAST SHEET EDIT
 DATE 10-12-2009
 WA# 08037
SHEET NO. R101

RECORD DRAWING