

# DRAINAGE PLAN SOUTHWEST PASSAGADDITION Wichita, Sedgewick County, Kansas

BENCH MARK: CHISELED "+" ON WEST HUBBARD OF R.C.B.C. 125' S. OF NE CORNER SECTION 1-1285-R2W. ELEV = 1337.94 M.S.L.

ON-SITE BENCH MARK: TOP OF RUGLES & BOHM BRASS CORNER, NW 1/4 SECTION 1-1285-R2W. ELEV = 1337.84 M.S.L.

SWS BASIN INFORMATION

| BASIN | ACRES | C <sub>1</sub> | C <sub>2</sub> | C <sub>3</sub> | C <sub>4</sub> | C <sub>5</sub> | C <sub>6</sub> | Q <sub>1</sub> cfs | Q <sub>2</sub> cfs | Q <sub>3</sub> cfs |
|-------|-------|----------------|----------------|----------------|----------------|----------------|----------------|--------------------|--------------------|--------------------|
| A     | 2.82  | 0.7            | 3.73           | 7.37           | 4.8            | 14.5           | 14.5           |                    |                    |                    |
| B     | 0.82  | 0.46           | 3.73           | 7.37           | 1.4            | 4.2            | 4.2            |                    |                    |                    |
| C     | 0.43  | 0.46           | 3.73           | 7.37           | 0.7            | 2.2            | 2.2            |                    |                    |                    |
| D     | 2.57  | 0.46           | 3.73           | 7.37           | 4.4            | 13.3           | 13.3           |                    |                    |                    |
| E     | 5.19  | 0.46           | 3.73           | 7.37           | 8.9            | 26.8           | 26.8           |                    |                    |                    |
| F     | 2.89  | 0.46           | 3.73           | 7.37           | 5.0            | 14.9           | 14.9           |                    |                    |                    |
| G     | 2.50  | 0.46           | 3.73           | 7.37           | 4.3            | 12.9           | 12.9           |                    |                    |                    |
| H     | 3.03  | 0.46           | 3.73           | 7.37           | 5.2            | 15.6           | 15.6           |                    |                    |                    |
| I     | 0.59  | 0.46           | 3.73           | 7.37           | 1.0            | 3.0            | 3.0            |                    |                    |                    |

Tc of 15 minutes used for basin calculations

| BLOCK | LOT NO.          | ELEVATION (N.G.V.D.) |
|-------|------------------|----------------------|
| 3     | 1, 2             | 1334.5               |
| 4     | 1, 2, 3, 4, 5, 6 | 1336.5               |

MINIMUM BUILDING PAD ELEVATION FOR LOWEST OPENING INTO STRUCTURES

Northwest Pond  
Area = 3.46 Ac @ Static Pool  
Static = 1326.22  
For 100 year overall storm (including offsite flows):  
100 Water Surface = 1332.9  
Q<sub>100</sub> In = 1975.0 cfs  
Q<sub>100</sub> Out = 1973.3 cfs

Northwest Pond  
Area = 1.17 Ac @ Static Pool  
Static = 1328.00  
For 100 year overall storm (including offsite flows):  
100 Water Surface = 1334.0  
Q<sub>100</sub> In = 1966.9 cfs  
Q<sub>100</sub> Out = 1966.5 cfs

North Offsite Basin  
Area = 3.62 sq. miles  
SCS Lag = 225 minutes  
Q<sub>100</sub> In = 1964 cfs

Note: 23rd Street Ditch carries flow from R/W only. All onsite drainage flows to southeast

24" RCP  
U.S. FL = 1335.20  
D.S. FL = 1335.00  
Area = 1.2 acres  
Q<sub>100</sub> = 5 cfs

Note: Existing 24" RCP is 50% blocked with silt. North ditch has been regraded to carry all north side flow to the east.

RUNOFF COMPARISON

| Basin             | Existing 2 | Developed 2 | Existing 3 | Developed 3 | Existing 5 | Developed 5 | Existing 100 | Developed 100 |
|-------------------|------------|-------------|------------|-------------|------------|-------------|--------------|---------------|
| West Onsite Pond  | 14         | 22          | 22         | 31          | 48         | 68          | 88           | 100           |
| Onsite West Pond  | N/A        | N/A         | N/A        | N/A         | N/A        | N/A         | N/A          | N/A           |
| Overall West Pond | N/A        | 22          | 22         | 31          | 48         | 68          | 88           | 100           |
| East Onsite Pond  | 50         | 82          | 82         | 75          | 116        | 166         | 166          | 197           |
| Onsite East Pond  | N/A        | N/A         | N/A        | N/A         | N/A        | N/A         | N/A          | N/A           |
| Overall East Pond | N/A        | 50          | 82         | 75          | 116        | 166         | 166          | 197           |
| Offsite Total     | 50         | 82          | 82         | 75          | 116        | 166         | 166          | 197           |
| Onsite Total      | 66         | 101         | 101        | 101         | 101        | 101         | 101          | 101           |
| Overall Total     | 116        | 183         | 183        | 177         | 217        | 332         | 332          | 398           |

