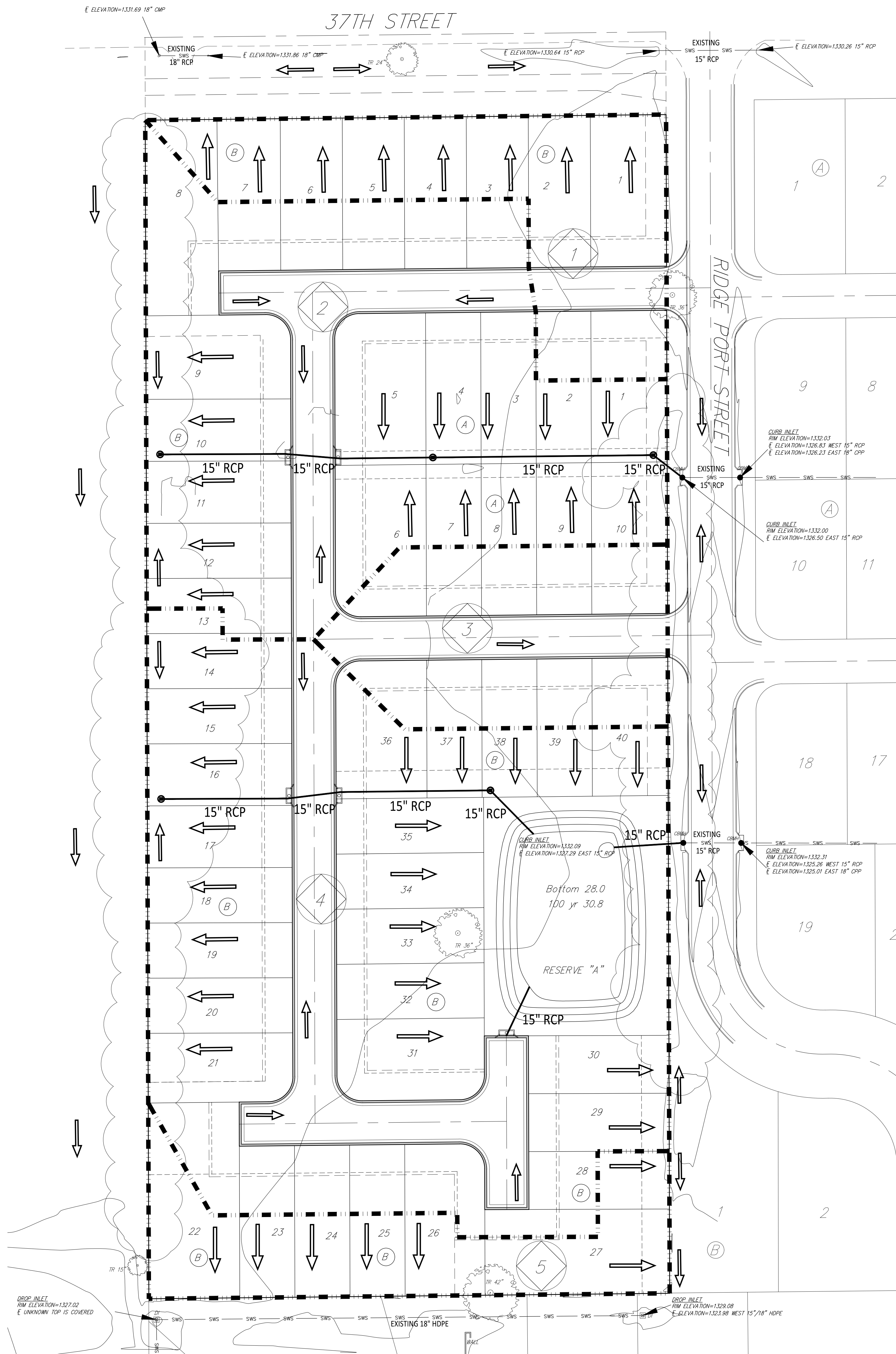


DRAINAGE CONCEPT

# RIDGE PORT NORTH 7TH

## WICHITA, SEDGWICK COUNTY, KANSAS



### DETENTION

This site will provide detention, as shown, in the dry pond to limit developed runoff peak flows to not exceed existing peak flow rates. The proposed pond will detain developed runoff.

### FEMA

There is no FEMA Floodway or Floodplain on this property.

### GRADING

All lots will be graded with a minimum 1% rear cross lot slope and a minimum 0.5% street slope. A minimum of 2' to the lowest opening will be maintained around the proposed detention areas. Dry pond side slopes will be at least 5:1. The site will accept all offsite runoff at its boundaries.

### STORM WATER SEWER

Storm water sewer is sized for at least the 5-year storm event. The HGL is located underground (under pressure) for the 5-year event throughout the proposed lines.

### WATER QUALITY

Water quality is achieved through the offsite BMP program.

| DRY POND (Bottom = 1328.0) |         |         |           |
|----------------------------|---------|---------|-----------|
| STAGE                      | INFLOW  | OUTFLOW | ELEVATION |
| 2 yr                       | 3.6 cfs | 2.2 cfs | 1328.8    |
| 5 yr                       | 7.4 cfs | 3.3 cfs | 1329.2    |
| 10 yr                      | 11 cfs  | 4.4 cfs | 1329.5    |
| 25 yr                      | 16 cfs  | 6.1 cfs | 1330.1    |
| 100 yr                     | 24 cfs  | 7.8 cfs | 1330.8    |

| STAGE (elev) | TOTAL STORAGE (ac-ft) | DISCHARGE (cfs) |
|--------------|-----------------------|-----------------|
| 1328         | 0.0                   | 0.0             |
| 1329         | 0.1                   | 2.9             |
| 1330         | 0.3                   | 5.9             |
| 1331         | 0.6                   | 8.3             |
| 1332         | 0.9                   | 10              |

Outfall: 15" RCP outfall @ 1328

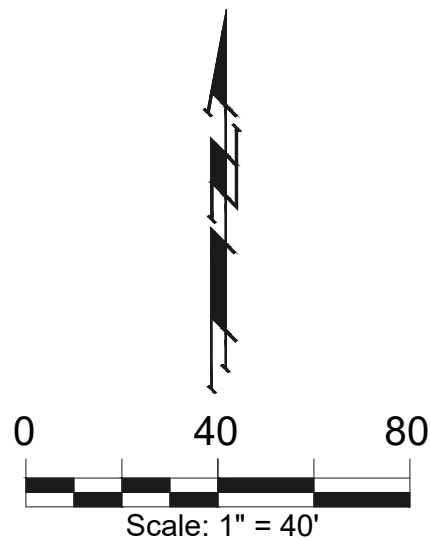
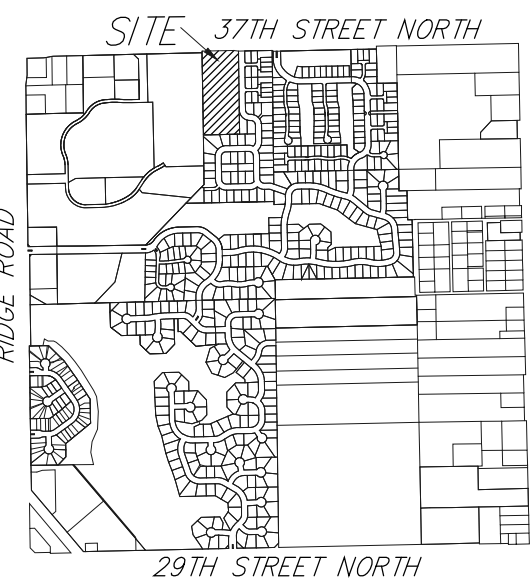
| Developed Intensity Rational C | 2yr  | 5yr  | 100yr |
|--------------------------------|------|------|-------|
|                                | 3.83 | 4.5  | 7.37  |
|                                | 0.54 | 0.54 | 0.54  |

| Basin ID | Area (acres) | Developed Flowrates |          |            |
|----------|--------------|---------------------|----------|------------|
|          |              | 2-yr cfs            | 5-yr cfs | 100-yr cfs |
| 1        | 0.8          | 1.7                 | 1.9      | 3.2        |
| 2        | 2.1          | 4.3                 | 5.1      | 8.4        |
| 3        | 0.7          | 1.4                 | 1.7      | 2.8        |
| 4        | 3.2          | 6.6                 | 7.8      | 13         |
| 5        | 0.6          | 1.2                 | 1.5      | 2.4        |
| TOTAL    | 7.4          | 15                  | 18       | 29         |

| TOTAL SITE RUNOFF |                  |
|-------------------|------------------|
| EXISTING          | PROPOSED         |
| Area = 7.4 acres  | Area = 7.4 acres |
| CN = 80           | CN = 84          |
| Tc = 17.1 min     | Tc = 15 min      |
| Q2 = 5.6 cfs      | Q2 = 6.1 cfs     |
| Q5 = 13 cfs       | Q5 = 12 cfs      |
| Q10 = 19 cfs      | Q10 = 17 cfs     |
| Q25 = 31 cfs      | Q25 = 25 cfs     |
| Q100 = 47 cfs     | Q100 = 36 cfs    |

Qc calculated using a basin slope of 0.8% over a 400' hydraulic length.

Values are post detention and include areas that are undetained.



### RIDGE PORT NORTH 7TH

May. 14, 26



**BAUGHMAN COMPANY**  
315 Ellis St. Wichita, KS 67211 316-262-7271  
BaughmanCo.com