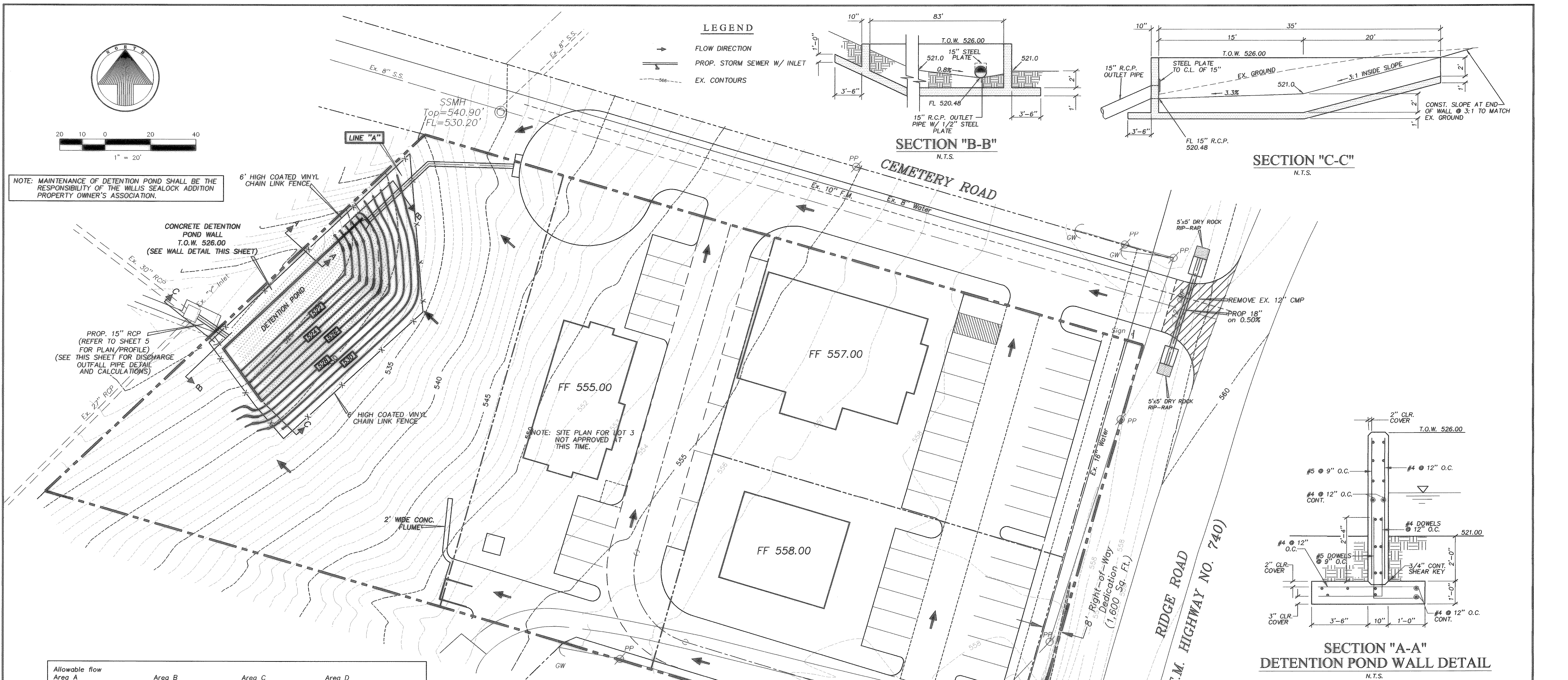
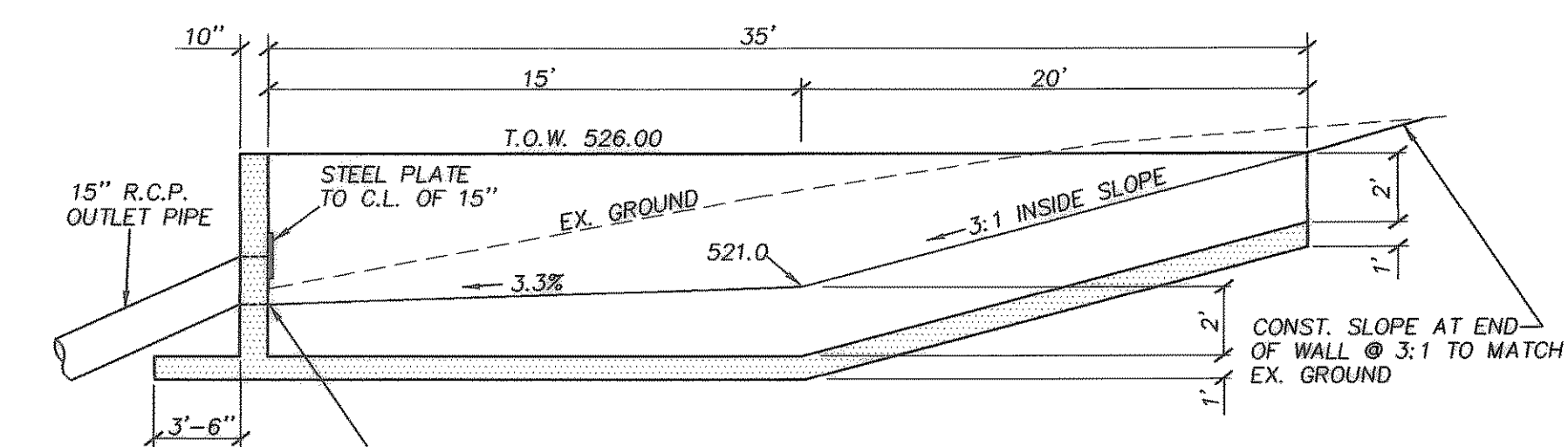
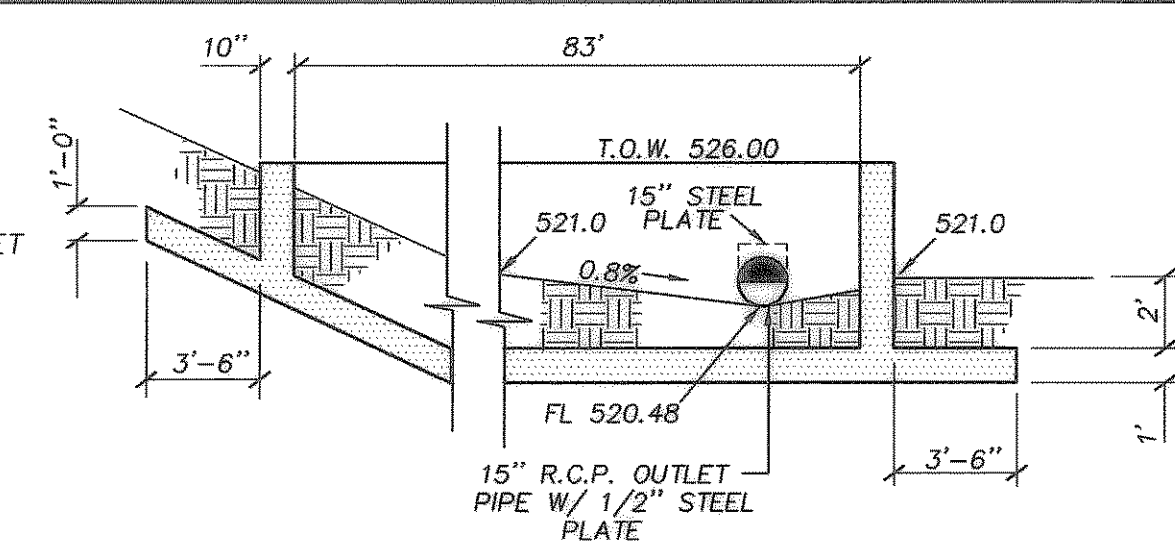


NOTE: MAINTENANCE OF DETENTION POND SHALL BE THE RESPONSIBILITY OF THE WILLIS SEALOCK ADDITION PROPERTY OWNER'S ASSOCIATION.

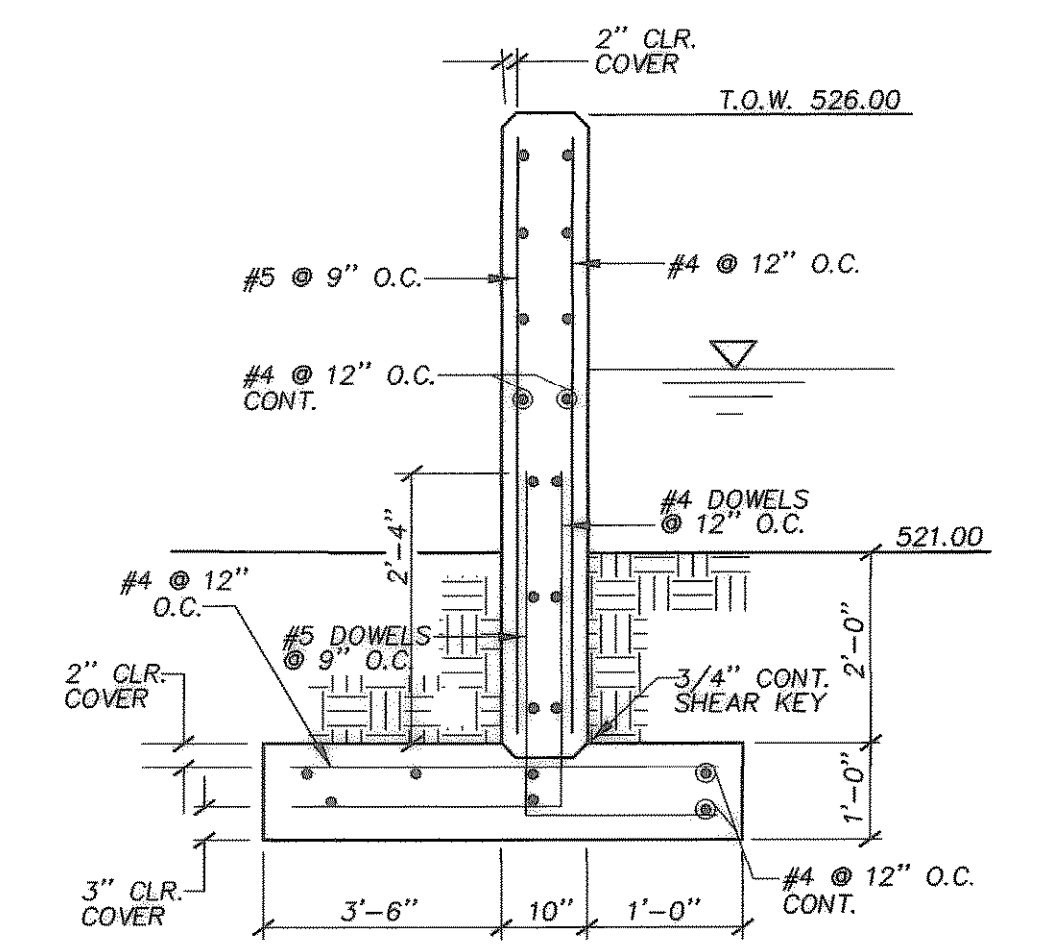
**LEGEND**

- FLOW DIRECTION
- PROP. STORM SEWER W/ INLET
- - - EX. CONTOURS



**SECTION "C-C"**  
N.T.S.

**SECTION "A-A"**  
DETENTION POND WALL DETAIL  
N.T.S.



| Allowable flow | Area A | Area B | Area C | Area D |
|----------------|--------|--------|--------|--------|
| Area           | 1.11   | 0.34   | 0.26   | 0.23   |
| C              | 0.35   | 0.9    | 0.35   | 0.35   |
| Tc             | 20     | 10     | 20     | 20     |
| I100           | 8.3    | 9.8    | 8.3    | 8.3    |
| Q100           | 3.22   | 3.00   | 0.76   | 0.67   |
| Q100 total =   | 7.65   |        |        |        |

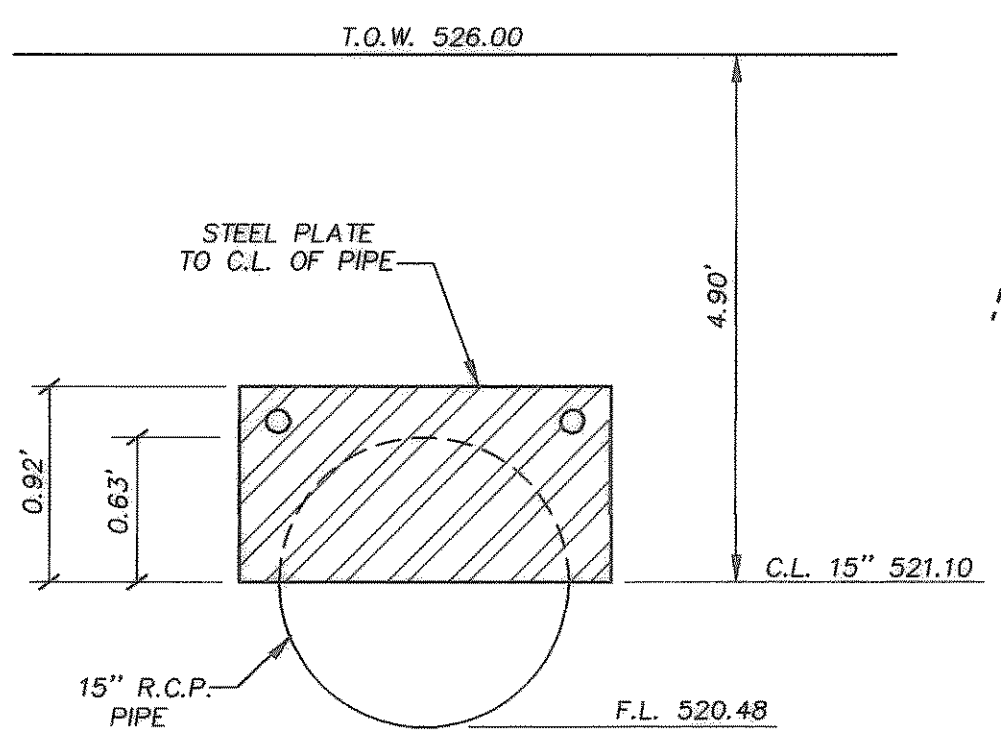
| Developed Conditions | Area A | Area B | Area C | Area D |
|----------------------|--------|--------|--------|--------|
| Area                 | 1.11   | 0.34   | 0.26   | 0.23   |
| C                    | 0.9    | 0.9    | 0.35   | 0.35   |
| Tc                   | 10     | 10     | 20     | 20     |
| I100                 | 9.8    | 9.8    | 8.3    | 8.3    |
| Q100                 | 9.79   | 3.00   | 0.76   | 0.67   |
| Qmax =               | 14.21  |        |        |        |

| Rockwall IDF - Max Inflow | Duration | I100 | Area A | Area B | Area C | Area D | cA  | cB   | cC   | cD    | Q100 |
|---------------------------|----------|------|--------|--------|--------|--------|-----|------|------|-------|------|
| 10                        | 9.80     | 1.11 | 0.34   | 0.26   | 0.23   | 0.9    | 0.9 | 0.35 | 0.35 | 14.47 |      |
| 15                        | 9.50     | 1.11 | 0.34   | 0.26   | 0.23   | 0.9    | 0.9 | 0.35 | 0.35 | 14.03 |      |
| 20                        | 8.30     | 1.11 | 0.34   | 0.26   | 0.23   | 0.9    | 0.9 | 0.35 | 0.35 | 12.25 |      |
| 30                        | 6.90     | 1.11 | 0.34   | 0.26   | 0.23   | 0.9    | 0.9 | 0.35 | 0.35 | 10.19 |      |
| 40                        | 5.80     | 1.11 | 0.34   | 0.26   | 0.23   | 0.9    | 0.9 | 0.35 | 0.35 | 8.56  |      |
| 50                        | 5.00     | 1.11 | 0.34   | 0.26   | 0.23   | 0.9    | 0.9 | 0.35 | 0.35 | 7.38  |      |
| 60                        | 4.45     | 1.11 | 0.34   | 0.26   | 0.23   | 0.9    | 0.9 | 0.35 | 0.35 | 6.57  |      |
| 70                        | 4.16     | 1.11 | 0.34   | 0.26   | 0.23   | 0.9    | 0.9 | 0.35 | 0.35 | 6.14  |      |
| 80                        | 3.87     | 1.11 | 0.34   | 0.26   | 0.23   | 0.9    | 0.9 | 0.35 | 0.35 | 5.71  |      |
| 90                        | 3.57     | 1.11 | 0.34   | 0.26   | 0.23   | 0.9    | 0.9 | 0.35 | 0.35 | 5.27  |      |

| Detention Volume (Modified Rational Method) |     |    |       |    |       |
|---|-----|----|-------|----|-------|
| 10  | 0.5 | 10 | 14.47 | 60 | 8682  |
| 15  | 0.5 | 15 | 14.03 | 60 | 12624 |
| 20  | 0.5 | 20 | 12.25 | 60 | 14706 |
| 30  | 0.5 | 30 | 10.19 | 60 | 18338 |
| 40  | 0.5 | 40 | 8.56  | 60 | 20553 |
| 50  | 0.5 | 50 | 7.38  | 60 | 22148 |
| 60  | 0.5 | 60 | 6.57  | 60 | 23654 |
| 70  | 0.5 | 70 | 6.14  | 60 | 25797 |
| 80  | 0.5 | 80 | 5.71  | 60 | 27427 |
| 90  | 0.5 | 90 | 5.27  | 60 | 28646 |

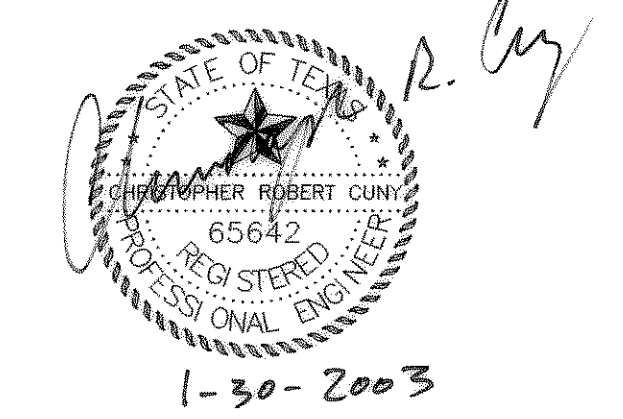
Pond Storage Volume Required = 9,162 cubic feet  
Pond Storage Volume Provided = 9,560 cubic feet

NOTE: DRAINAGE AREAS "C" & "D" WERE DESIGNED TO REMAIN AS UNDEVELOPED AREAS. PROPERTY OWNER AGREES THAT NO DEVELOPMENT IN THIS AREA IS TO BE DONE WITHOUT MODIFICATIONS TO OR ADDITION OF DETENTION FACILITIES.



DISCHARGE FLOW ORIFICE EQUATION  
 $C \times A \times \sqrt{2gh}$   
 $0.70 \times 1.23 \times 17.76 = 15.28$  TOTAL CFS FOR 15" PIPE  
 $\frac{15.28}{2} = 7.64$  cfs

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY CHRISTOPHER R. CUNY, P.E. 65642



**CONSTRUCTION RECORD DRAWING**

| DETENTION POND  |             |       |           |              |            |
|---|-------------|-------|-----------|--------------|------------|
| <b>WILLIS SEALOCK ADDITION</b>                                    |             |       |           |              |            |
| CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS                          |             |       |           |              |            |
| Michael Willis  |             |       |           |              |            |
| 2235 Ridge Road • Rockwall, Texas 75087 • (972) 722-1846          |             |       |           |              |            |
| <b>F.C. CUNY CORPORATION</b>                                      |             |       |           |              |            |
| 4222 Rosehill Rd, Suite 7 • Garland, Texas 75043 • (972) 240-7700 |             |       |           |              |            |
| Drawn By:   | Checked By: | Date: | Scale:    | Project No.: | Sheet No.: |
| DM  | C.C.        | 01/03 | R: 1"=20' | 01-000       | 6 of 10    |

BENCHMARK: RAILROAD SPIKE EMBEDDED IN THE EAST SIDE OF POWER POLE LOCATED AT THE NORTHWEST CORNER OF CEMETERY ROAD AND F.M. 740 (RIDGE ROAD)