

**CONSTRUCTION NOTE:**  
CONSTRUCTION OF THE STORMWATER MEASURES SHALL BE CONSISTENT WITH THE  
DESIGN SPECIFICATIONS FOUND AT THE FOLLOWING VIRGINIA STORMWATER BMP  
CLEARINGHOUSE WEBSITE: [HTTP://WWW.VWRRC.VT.EDU/SWC/NONPROPRIETARYBMPS.HTML](http://www.vwrrc.vt.edu/SWC/NONPROPRIETARYBMPS.HTML)  
AND VESCH 3RD EDITION HANDBOOK

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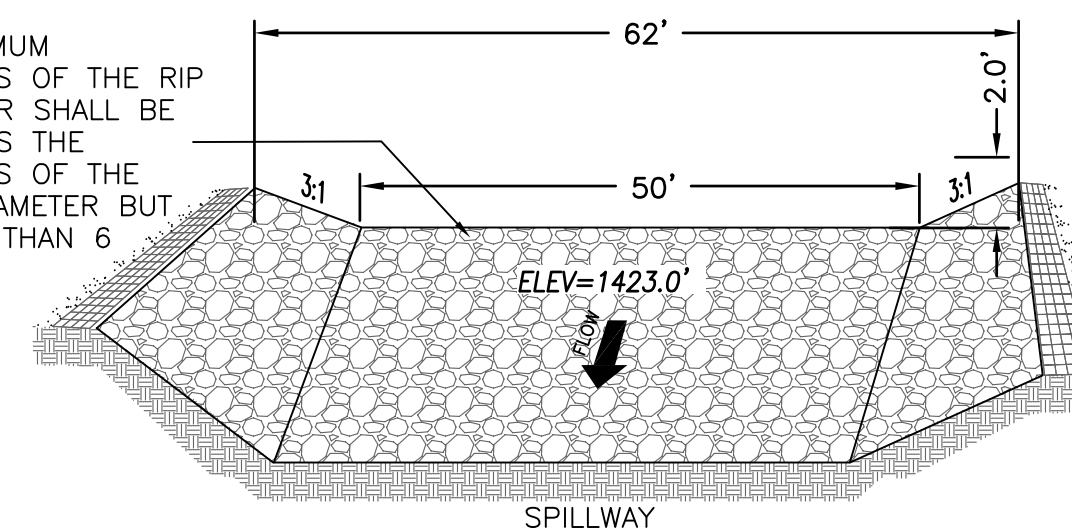
**SEDIMENT BASIN 'B' CROSS SECTION 'B'-'B1'**  
NOT TO SCALE

|                                 |                               |                                |
|---------------------------------|-------------------------------|--------------------------------|
| <b><u>SEDIMENT CLEANOUT</u></b> | <b><u>WET STORAGE</u></b>     | <b><u>DRY STORAGE</u></b>      |
| REQUIRED: 33x15.69=517.70CY     | REQUIRED: 67x15.69=1051.20 CY | REQUIRED: 67x15.69 = 1051.2 CY |
| PROVIDED: 529.5 CY @1416.60'    | PROVIDED: 1,059 CY @1417.70'  | PROVIDED: 1,059 CY @1419.50'   |

RISER Ø = 3.0'  
 RISER HEIGHT = 7.0'  
 ANTI-VORTEX HT. = 1.42'  
 TOTAL RISER HT. = 8.42' = L  
 RISER VOLUME (3.1416 x R<sup>2</sup> x L) πr<sup>2</sup>L  
 = 3.1416 x 1.5<sup>2</sup> x 8.42 x 1.25 (SAFETY FACTOR)  
 = 74.40 CF  
 BUOYANT FORCE = 74.40 CF ÷ 64LB/SF  
 = 4,761 LBS  
 MIN. REQ'D. ANCHOR = (4,761 LBS) ÷ 150 LBS/CF = 31.7CF  
 CONCRETE ANCHOR PROVIDED = 6 x 6 x 1.5 = 54 CF  
 54 CF > 31.7 NG = RISER ASSEMBLY IS NOT BUOYANT (OK)

■ SEE SPILLWAY DETAILS AT RIGHT

THE MINIMUM THICKNESS OF THE RAP LAYER SHALL BE TWO TIMES THE THICKNESS OF THE STONE DIAMETER BUT NO LESS THAN 6 INCHES



**SEDIMENT BASIN 'B'**  
**SPILLWAY DETAIL**  
NOT TO SCALE

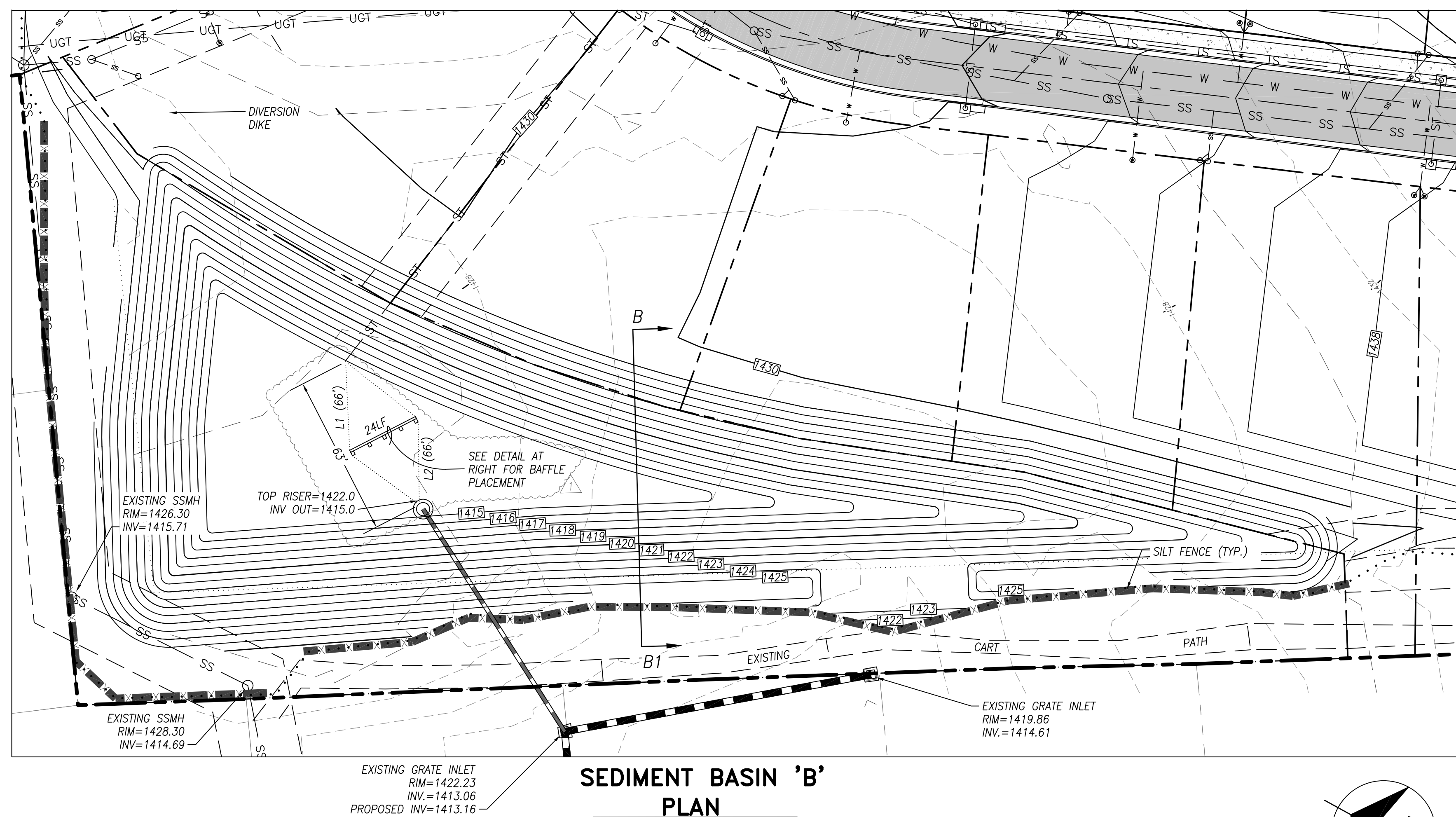
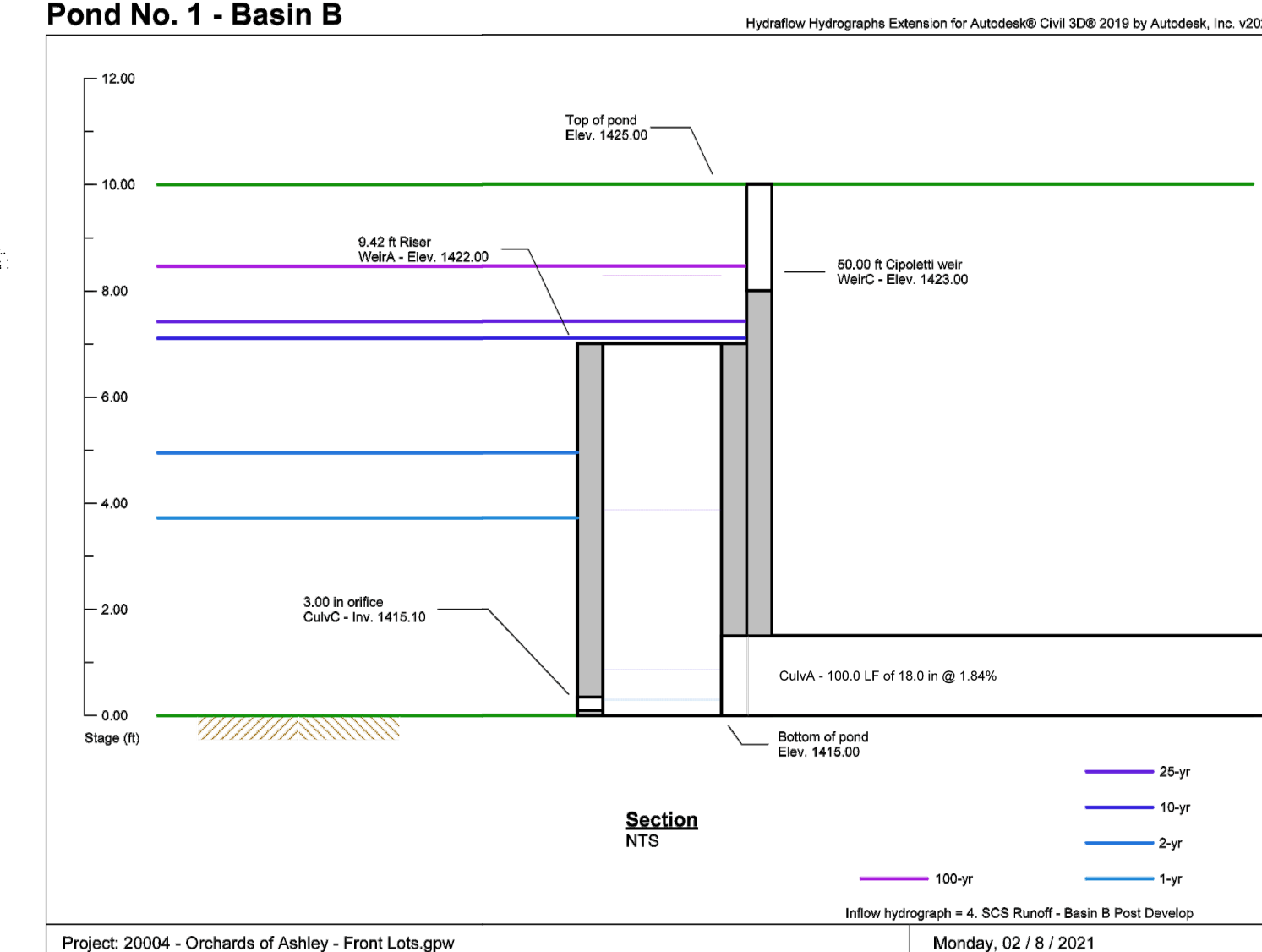
## SWM ROUTING DETAILS

| <i>FRE-<br/>QUENCY</i> | <i>Q-PRE DEV.</i> | <i>Q-POST DEV.</i> | <i>WSEL</i> |
|------------------------|-------------------|--------------------|-------------|
| 1                      | 13.60 CFS         | 0.438 CFS          | 1418.72     |
| 2                      | 19.87 CFS         | 0.509 CFS          | 1419.95     |
| 10                     | 40.01 CFS         | 2.133 CFS          | 1422.11     |
| 25                     | 53.94 CFS         | 9.312 CFS          | 1422.42     |
| 100                    | 79.18 CFS         | 76.07 CFS          | 1423.46     |

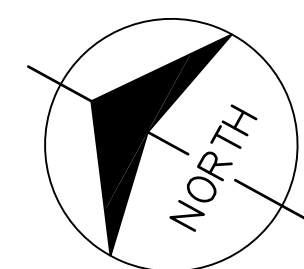
\*SEE WSEL SCHEMATIC TO THE RIGHT FOR POST-DEVELOPMENT WATER LEVELS.

SEDIMENT BASIN CONVERSION NOTES

- UPON COMPLETE STABILIZATION OF THE SITE, CONTRACTOR TO INSTALL A 3" ORIFICE AT EL. 1415.10'.
- CONTRACTOR TO PLUG 4" DEWATERING ORIFICE.



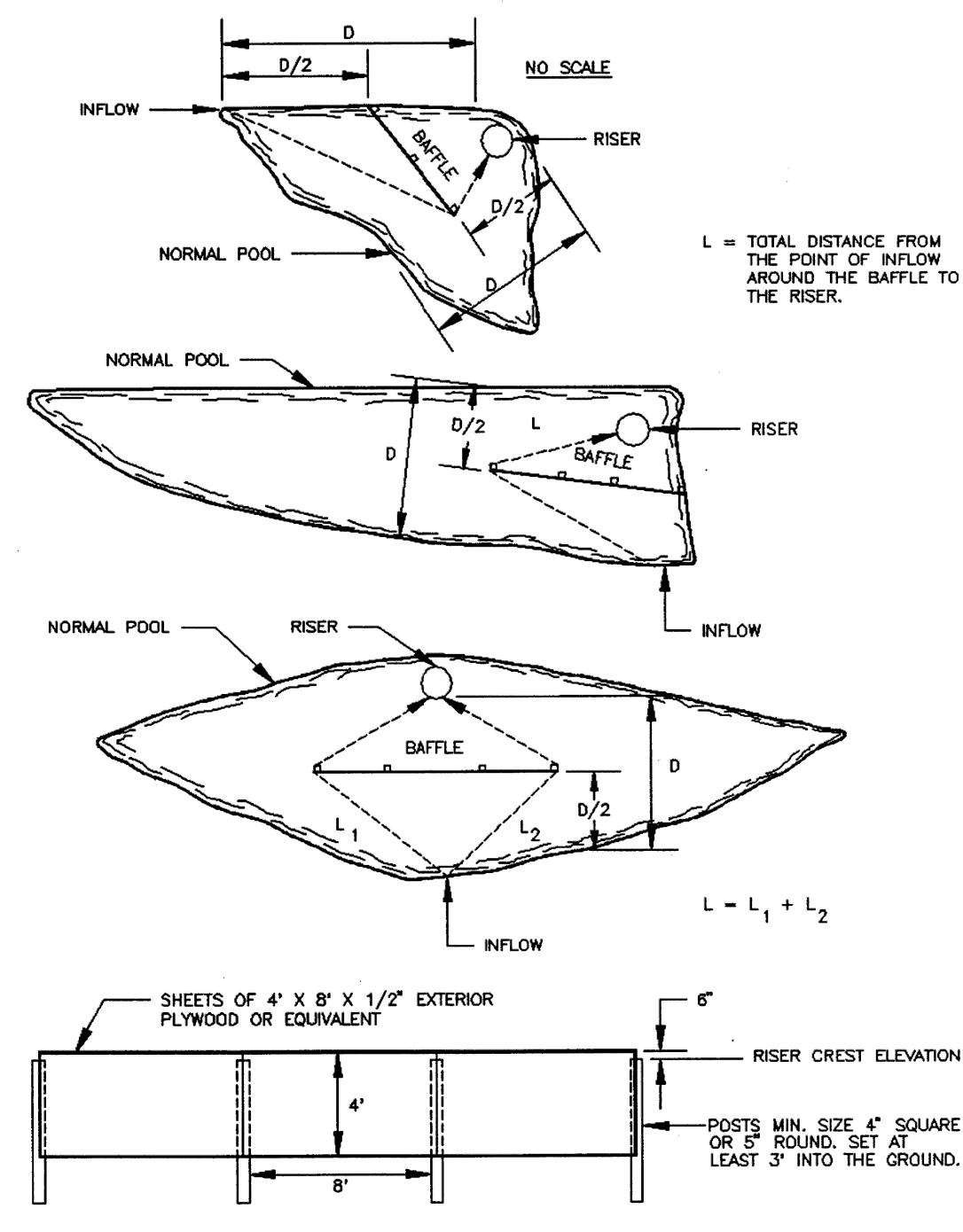
**SEDIMENT BASIN 'B'**  
**PLAN**  
NOT TO SCALE



1992

3.14

EXAMPLE PLAN VIEWS OF  
BAFFLE LOCATIONS IN  
SEDIMENT BASINS



Source: USDA-SCS

Plate 3.14-6



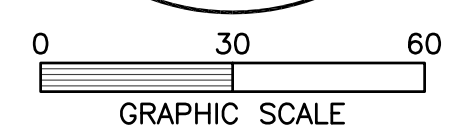
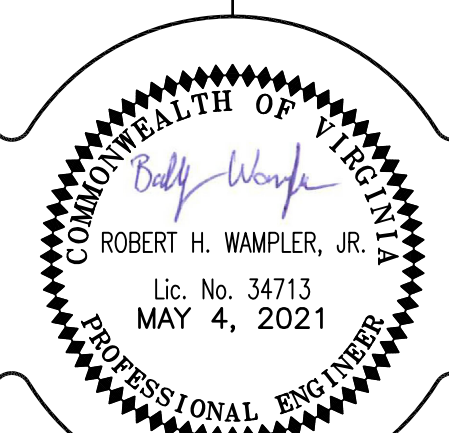
**ENGINEERING  
CONCEPTS, INC.**

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**PRESERVE AT ASHLEY  
BOTETOURT COUNTY**

## FRONT LOTS DEVELOPMENT FRONT BASIN DETAILS



|          |       |
|----------|-------|
| PROJECT: | 20004 |
|----------|-------|

**C09**