

# STORMWATER DETENTION AS-BUILTS FOR BUCKROCK SUBDIVISION

FILED  
Date: 12/7/2012 By: NW  
This survey consists of:  
Map: DS-143 thru DS-145  
Narrative: \_\_\_\_\_  
Corner Rpt: \_\_\_\_\_  
DOUGLAS COUNTY  
SURVEYOR

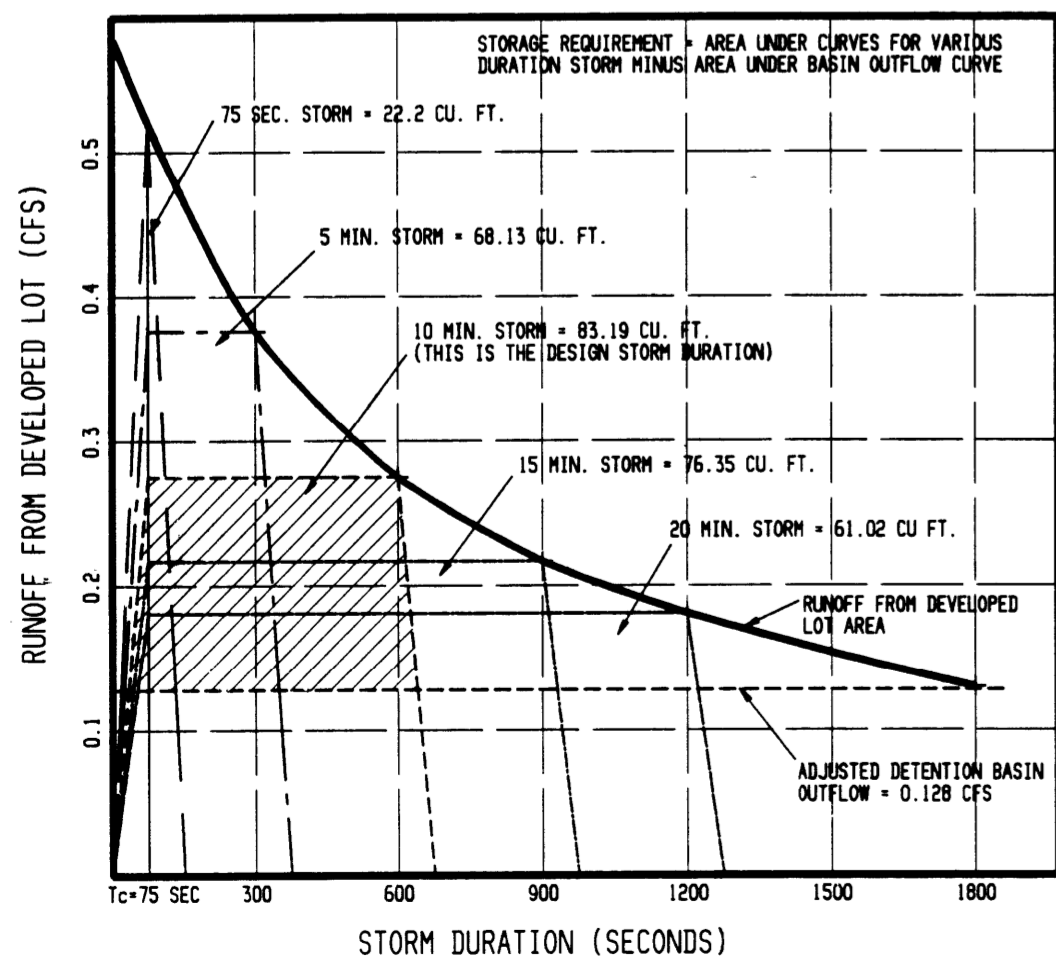
## SPECIFICATIONS

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION", 1990, BY THE OREGON CHAPTER OF THE AMERICAN PUBLIC WORKS ASSOCIATION.
2. EACH DETENTION FACILITY SHOULD BE SITED TO BEST SERVE THE INDIVIDUAL LOT. SUGGESTED LOCATIONS ARE SHOWN, BUT RELOCATION IS ALLOWED IF ALL OF THE OTHER DESIGN FEATURES ARE ADHERED TO. MINIMUM DEPTH IS SHOWN ON THE PLANS, BUT IF DRIVEWAYS ARE ANTICIPATED OVER THE DETENTION FACILITY, THE INFILTRATOR UNITS SHOULD BE PLACED DEEPER TO ALLOW FOR DRIVEWAY CUTS. A MINIMUM OF 16 INCHES OF COVER ON THE DOWNHILL SIDE OF THE TRENCH SHALL BE PROVIDED IF A DRIVEWAY IS TO BE BUILT OVER THE DETENTION FACILITY.
3. DETENTION UNITS ARE "HIGH CAPACITY INFILTRATOR" (2.6 CU. FT. / FT.), RATED FOR H20 HIGHWAY LOADING, AS MANUFACTURED BY INFILTRATOR SYSTEMS INC., OLD SAYBROOK, CT.
4. DRAIN ROCK BACKFILL SHALL BE 2 1/2" - 2" CRUSHED ROCK. PLACE AS SHOWN.
5. DRAINAGE FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 2320 OF THE OSHD STANDARD SPECIFICATIONS, 1991.
6. P.V.C. PIPE AND FITTINGS SHALL BE ASTM D3034 RUBBER RING SEWER PIPE OR ASTM D2241 CLASS 160 BLUE JOINT WATER PIPE.

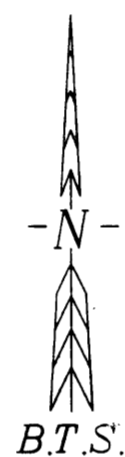
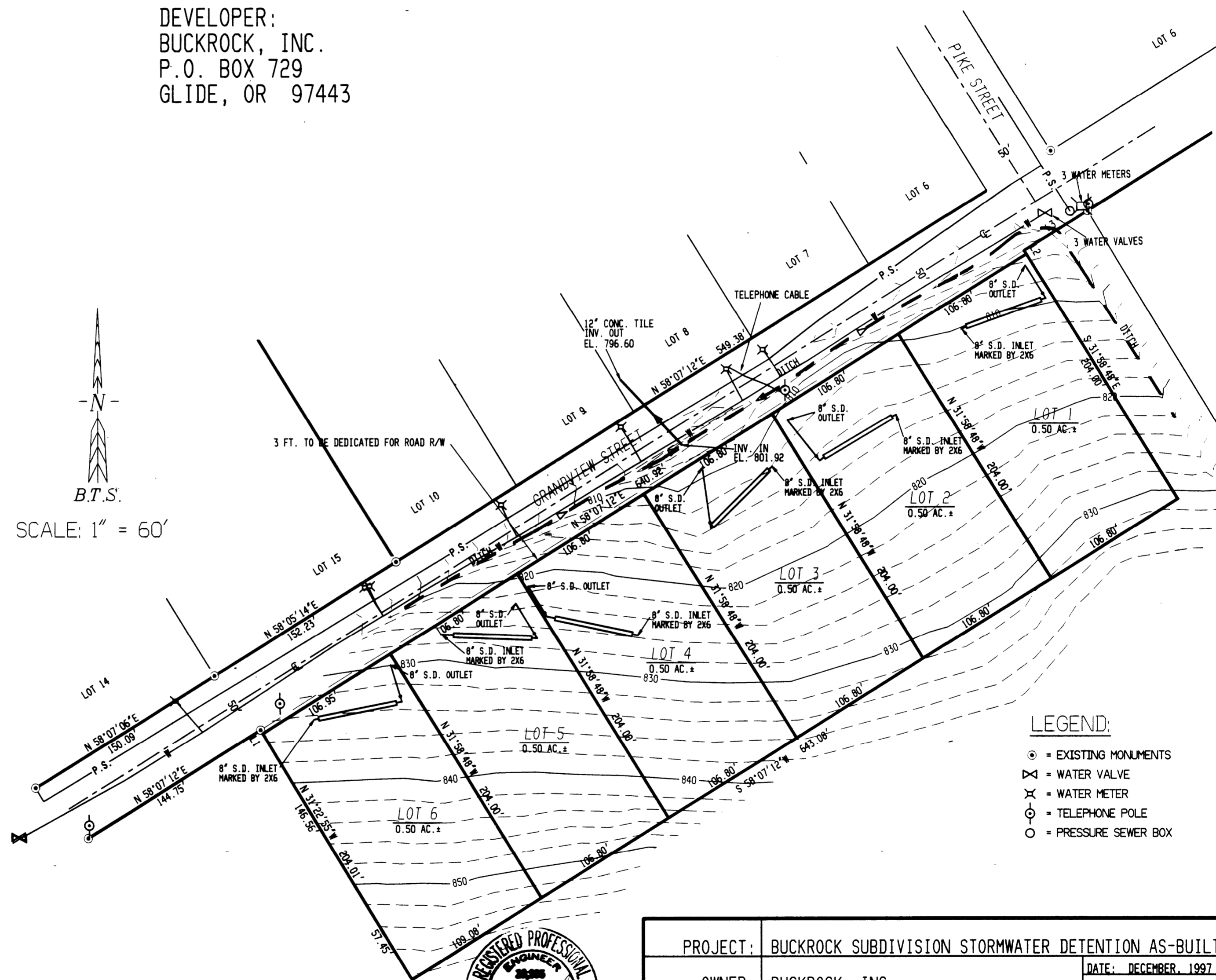
## DESIGN CRITERIA

1. THESE DETENTION FACILITIES WERE DESIGNED TO SERVE AN INDIVIDUAL LOT WITH THE OBJECTIVE OF LIMITING PEAK RUNOFF DURING THE 50 YEAR STORM TO NO MORE THAN THE EXISTING PEAK RUNOFF FROM THE SAME STORM.
2. THE FOLLOWING ASSUMPTIONS WERE MADE:
  - A. ROOF AREA OF HOME TO BE CONSTRUCTED = 2000 SQ. FT.
  - B. AREA OF PAVED DRIVEWAY AND PARKING = 1500 SQ. FT.
  - C. ALL ROOF AND DRIVEWAY DRAINAGE (WITH THE EXCEPTION OF THE FIRST 30 FEET OF DRIVEWAY) WILL BE CONTAINED AND CONVEYED TO THE DETENTION FACILITY.
  - D. RATIONAL FORMULA RUNOFF COEFFICIENT PRE DEVELOPMENT = 0.35 (OSHD HYDRAULICS MANUAL)
  - E. RATIONAL FORMULA RUNOFF COEFFICIENT POST DEVELOPMENT = 0.90 (OSHD HYDRAULICS MANUAL)
  - F. TIME OF CONCENTRATION = 75 SECONDS.
3. USING THE RATIONAL RUNOFF FORMULA, THE PEAK RUNOFF DURING THE 50 YEAR STORM WAS CALCULATED TO BE 0.145 CFS BEFORE DEVELOPMENT (USING CITY OF ROSEBURG RAINFALL INTENSITY/DURATION CURVES). DETENTION AND OUTLET WERE SIZED TO LIMIT POST DEVELOPMENT RUNOFF FROM THE DETENTION FACILITIES TO THIS 0.145 CFS.
4. DETENTION VOLUME WAS CALCULATED USING AN APWA METHOD THAT USES THE RATIONAL RUNOFF FORMULA TO DETERMINE AN INFLOW HYDROGRAPH AND AN OUTFLOW RATE ADJUSTED FOR VARIATIONS IN HEAD. THE REQUIRED STORAGE IS THE DIFFERENCE IN INFLOW AND OUTFLOW FOR A GIVEN STORM DURATION.

RUNOFF RATE FOR VARYING STORM DURATIONS (50 YR STORM)



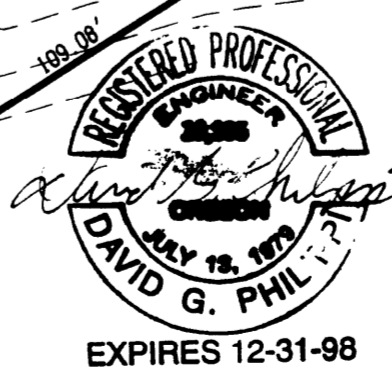
DEVELOPER:  
BUCKROCK, INC.  
P.O. BOX 729  
GLIDE, OR 97443



SCALE: 1" = 60'

### LEGEND:

- ⊙ = EXISTING MONUMENTS
- ⊗ = WATER VALVE
- ⊕ = WATER METER
- ⊙ = TELEPHONE POLE
- = PRESSURE SEWER BOX



PROJECT:	BUCKROCK SUBDIVISION STORMWATER DETENTION AS-BUILTS	
OWNER:	BUCKROCK, INC.	DATE: DECEMBER, 1997
SHEET TITLE:	DETENTION TITLE AS-BUILT	REV. 1:
<b>BTS</b> ENGINEERING & SURVEYING, INC. 431 S.E. MAIN ST., ROSEBURG, OR 97470 PHONE (503) 673-0966 FAX (503) 673-0105		REV. 2:
		REV. 3:
	JOB #: 95-089	SHEET 1 OF 3