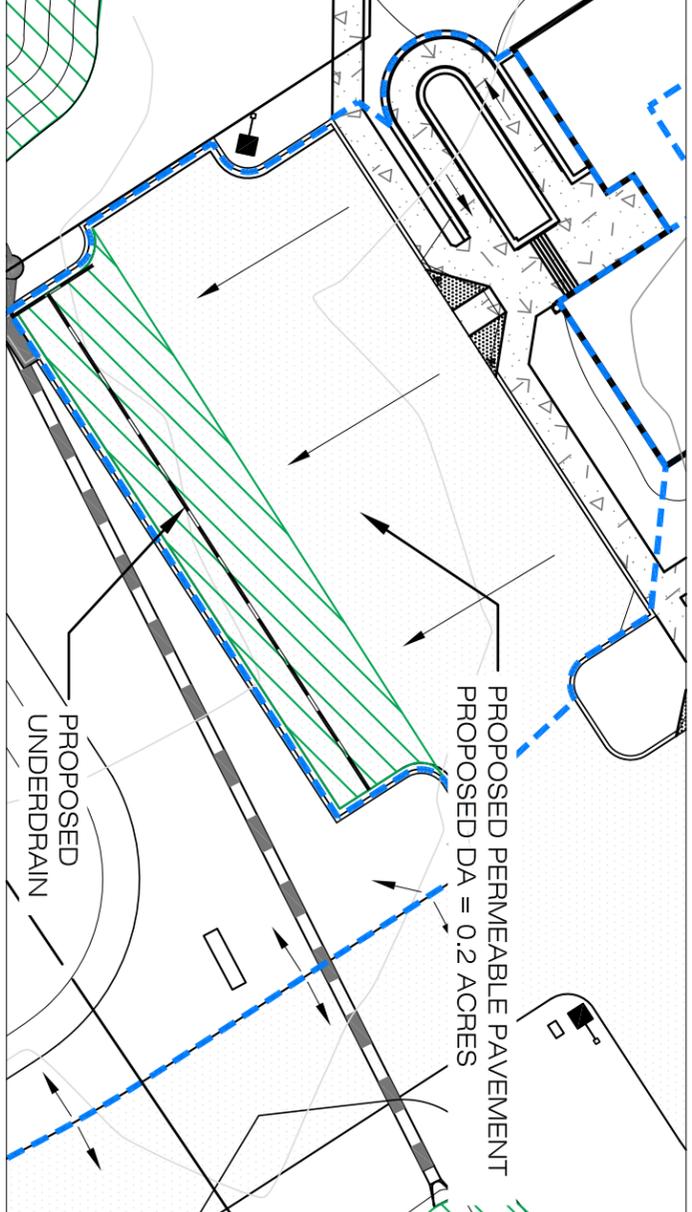
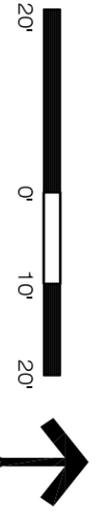


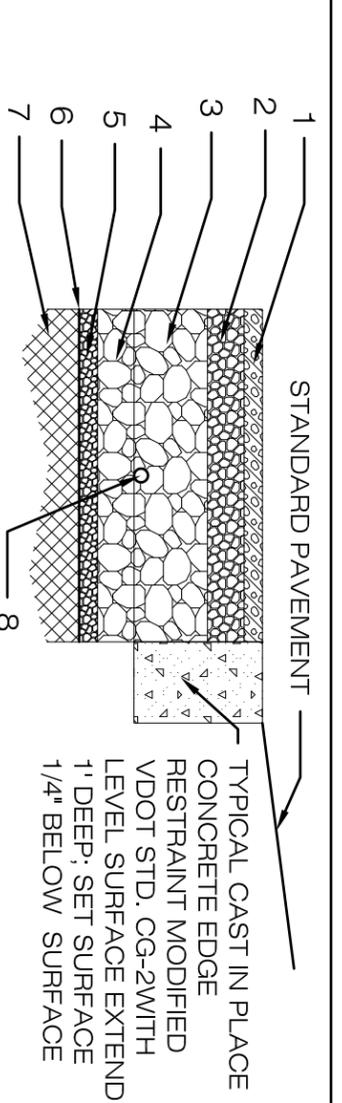
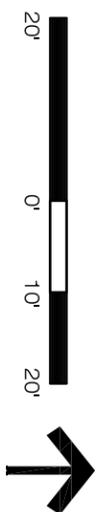
**PROPOSED DA 4 CHARACTERISTICS:**  
 AREA = 0.3 ACRES  
 IMPERVIOUS ACREAGE = 0.3 ACRES  
 CURVE NUMBER: 98  
 TIME OF CONCENTRATION: 5 MINUTES  
 1 YR DISCHARGE = 0.42 CFS  
 10 YR DISCHARGE = 1.57 CFS

**PHOSPHOROUS REDUCTION CALCULATIONS:**  
 LOAD TO BMP = 0.65 LBS  
 EFFICIENCY OF BMP = 25%  
 VOLUME TO BMP = 1035 C.F.F.  
 RUNOFF REDUCTION BY PRACTICE = 466 C.F.F.  
 TOTAL PHOSPHOROUS LOAD REDUCTION = 0.38 LB/YR  
 TOTAL PHOSPHOROUS LOAD REMAINING = 0.27 LBS

**PERMEABLE PAVEMENT SIZING:**  
 DESIGNED IN ACCORDANCE WITH LEVEL 1 DESIGN GUIDELINES  
 CONTRIBUTING TOTAL AREA = 0.3 ACRES  
 SURFACE AREA PROVIDED = 3,030 S.F.  
 TV PROVIDED = 196 C.F.F.



**PROPOSED DA 7 CHARACTERISTICS:**  
 AREA = 0.2 ACRES  
 IMPERVIOUS ACREAGE = 0.2 ACRES  
 CURVE NUMBER: 98  
 TIME OF CONCENTRATION: 5 MINUTES  
 1 YR DISCHARGE = 0.60 CFS  
 10 YR DISCHARGE = 1.41 CFS



PAVEMENT LAYERS		PERMEABLE PAVEMENT TYPICAL CROSS-SECTION	
1	SURFACE LAYER	POROUS ASPHALT	
2	BEDDING	4" NO. 57 STONE	
3	RESERVOIR	12" NO. 2 STONE	
4	INFILTRATION SUMP	SAME AS RESERVOIR LAYER	
5	BOTTOM FILTER	4" NO. 8 STONE	
6	IMPERMEABLE LINER	NECESSARY DUE TO PLACEMENT ON FILL	
7	UNCOMPACTED SYBGRADE	4" TO BE SCARIFIED PRIOR TO INSTALLATION	
8	UNDERDRAIN	6" PVC, SCHEDULE 40	

APRIL 2014

SMALLTOWN, VIRGINIA  
 DEPARTMENT OF PUBLIC WORKS

SITE PLANNING DIVISION

EXERCISE 5  
 T&L COMMERCIAL DEVELOPMENT  
 PERMEABLE PAVEMENT DESIGN

DEQ TRAINING CASE STUDY

REVISIONS	DESCRIPTION	BY	APPROVED	DATE

SCALE 1"=40'  
 DESIGNED BY: K PRPST  
 DRAFTED BY: K PRPST  
 CHECKED BY: J SMITH

