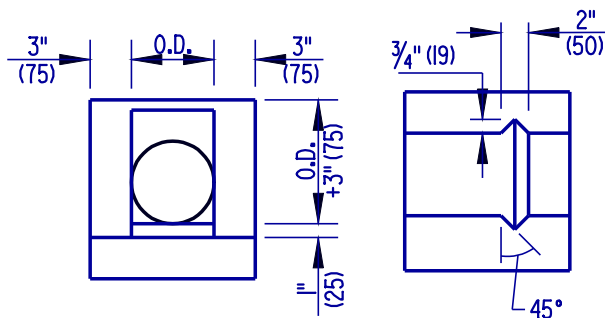
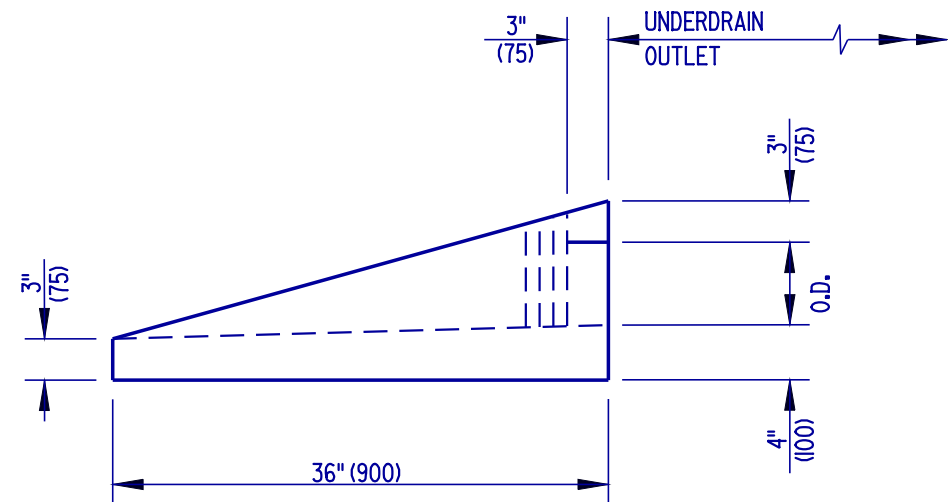
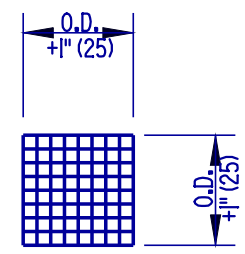


SCALE : N.T.S.

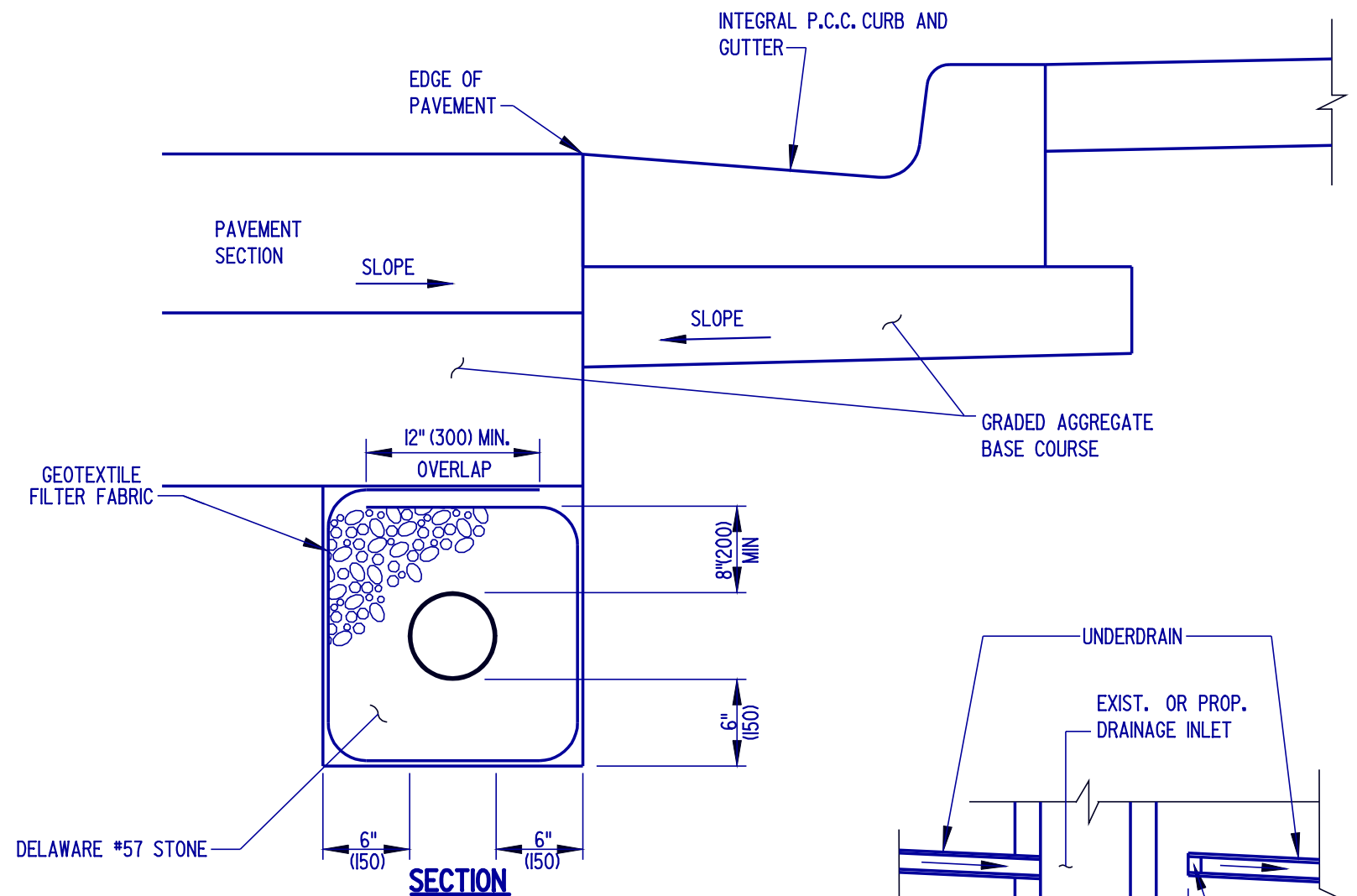


FRONT VIEW
TOP VIEW
SLOTTED HEADWALL DETAIL

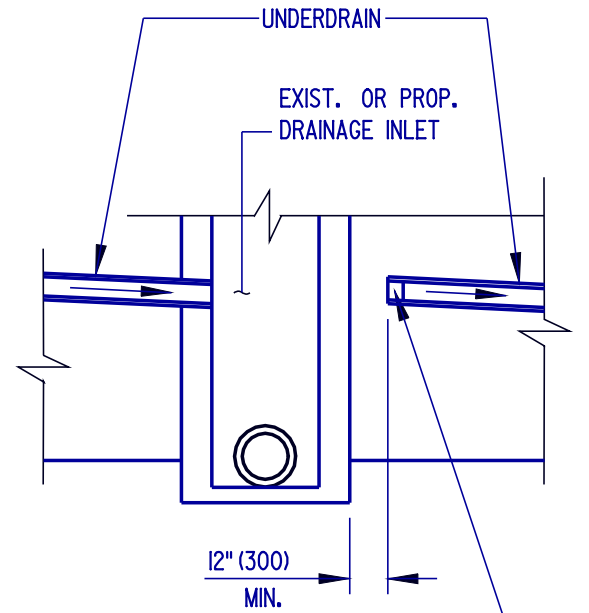


FRONT VIEW
RODENT SCREEN

CONCRETE HEADWALL FOR UNDERDRAIN OUTLET
NOT TO SCALE




SECTION



ELEVATION

PERFORATED PIPE UNDERDRAIN
NOT TO SCALE

- NOTES:**
1. GEOTEXTILE FILTER FABRIC SHALL BE PLACED ENTIRELY OVER THE TOP OF UNDERDRAIN TRENCH AND LAPPED AS SHOWN.
 2. SLOPE OF UNDERDRAINS SHALL MATCH ROADWAY GRADE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
 3. OUTLET PIPE CONFIGURATIONS SHALL USE 45 DEGREE ELBOWS OR SHALL USE STRAIGHT PIPE WITH A MINIMUM RADIUS OF 3' (900) TO DIRECT UNDERDRAIN PIPE INTO SIDE OF DRAINAGE INLET OR TO POSITIVE GRADE. PIPE SHALL ALSO BE NON-PERFORATED AND HAVE A SMOOTH INTERIOR.
 4. RODENT SCREEN SHALL SNUGLY FIT THE PROVIDED SLOT WITH THE SCREEN LIP FITTING TIGHT TO THE BOTTOM FLOW LINE.
 5. A 4' (1200) FLEXIBLE DELINEATOR SHALL BE FURNISHED AND INSTALLED AT THE DIRECTION OF THE ENGINEER TO MARK THE LOCATION OF THE CONCRETE HEADWALL. COST INCIDENTAL TO DOWNSPOUT SPLASH APRONS ITEM.
 6. WHEN TWO LINES OF PIPE UNDERDRAIN DRAIN TO A LOW POINT, EACH PIPE MUST HAVE ITS OWN OUTLET.

 DELAWARE DEPARTMENT OF TRANSPORTATION	PERFORATED PIPE UNDERDRAIN DETAIL			APPROVED <i>Carolann Wicks</i> 1/10/05 <small>CHIEF ENGINEER DATE</small>
	STANDARD NO. D-9 (2004)	SHT. 1	OF 1	RECOMMENDED <i>Dennis M. O'Flaherty</i> 1/13/05 <small>DESIGN ENGINEER DATE</small>