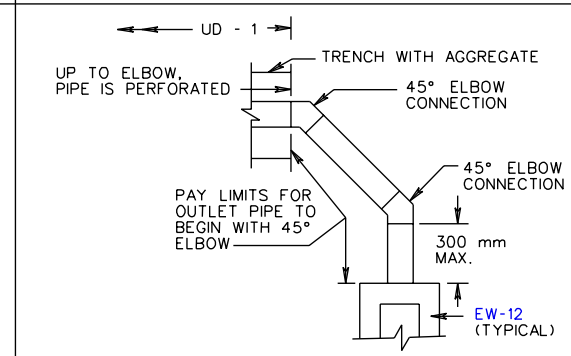
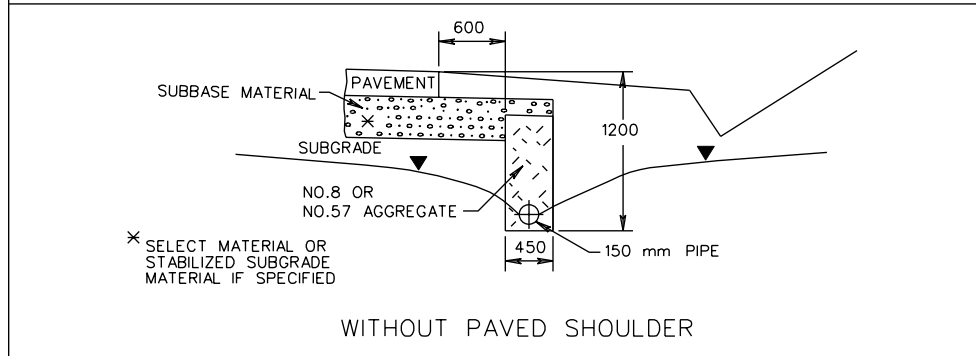
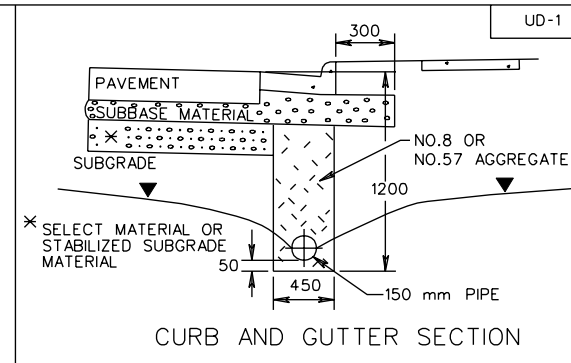
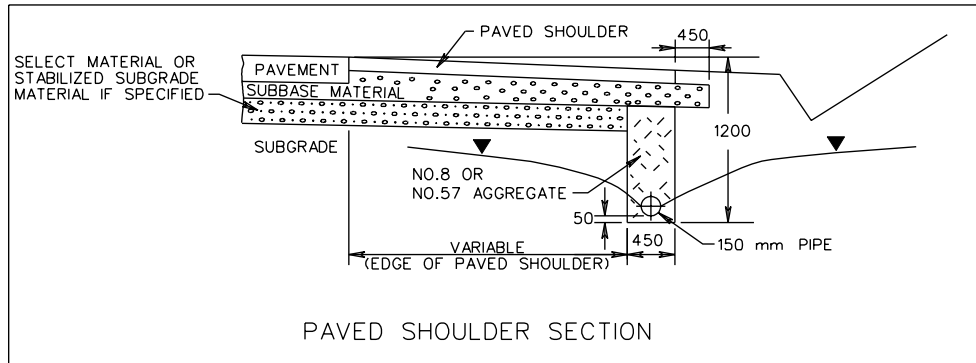


INSERTABLE SHEET MA80



NOTES:

1. WHEN THE LONGITUDINAL PIPE CONNECTS DIRECTLY INTO A DRAINAGE STRUCTURE (DROP INLET, MANHOLE, ECT.), NON-PERFORATED OUTLET PIPES ARE NOT REQUIRED.
2. INVERT ELEVATION AT OUTLET END OF OUTLET PIPE TO BE A MINIMUM OF 300 mm ABOVE INVERT ELEVATION OF RECEIVING DRAINAGE DITCH OR STRUCTURE.
3. ALL CONNECTIONS (ELBOWS, WYES, ETC.) WITHIN PAY LIMITS FOR OUTLET PIPE ARE TO BE OF THE SAME CRUSHING STRENGTH AS THE OUTLET PIPE.
4. OUTLET PIPE ARE TO BE INSTALLED ON 2% MIN./3% DESIRABLE GRADE.
5. THE NORMAL DEPTH OF UNDERDRAIN IS TO BE 1200 mm BELOW THE NEAR EDGE OF PAVEMENT AS SHOWN. THE LONGITUDINAL GRADE OF THE UNDERDRAIN SHALL FOLLOW THAT OF THE ROADWAY WITH A MINIMUM GRADE OF 0.2%.
6. WHERE THE BOTTOM OF SELECT MATERIAL IS GREATER THAN 1200 mm BELOW THE PAVEMENT, THE BOTTOM OF THE UNDERDRAIN IS TO BE COINCIDENT WITH THE BOTTOM OF SELECT MATERIAL AND THE TRENCH DEPTH AND BACKFILL QUANTITY INCREASED ACCORDINGLY.
7. WHEN USED WITH STABILIZED OPEN-GRADED DRAINAGE LAYER, THE BOTTOM OF THE CURB AND GUTTER SHALL BE CONSTRUCTED PARALLEL TO THE SLOPE OF SUBBASE COURSES OUT TO THE DEPTH OF THE PAVEMENT.
8. OUTLET PIPE TO BE SECURELY CONNECTED TO EW-12 OR OTHER DRAINAGE STRUCTURE.
9. ▼ DENOTES WATER TABLE.
10. OUTLET PIPE CONFIGURATION TO PROVIDE FOR PASSAGE OF INSPECTION CAMERA WITH 65 mm I. D. HEAD.

LONGITUDINAL PERFORATED PIPE

TYPE OF PIPE	CRUSHING STRENGTH	
	W.T.	150 mm NOMINAL DIAMETER
CORRUGATED ALUMINUM	1.22	
SMOOTH WALL PVC	3.90	
CORRUGATED PE		AASHTO M-252

NON-PERFORATED OUTLET PIPE

TYPE OF PIPE	CRUSHING STRENGTH	
	W.T.	150 mm NOMINAL DIAMETER
CORRUGATED ALUMINUM	1.22	
SMOOTH WALL PVC	3.90	
SMOOTH WALL PE		480 kPa ***

※ WALL THICKNESS (MIN) - mm
 *** TESTED ACCORDING TO ASTM D-2412 AT 5% DEFLECTION.

SPECIFICATION REFERENCE
240
501
701

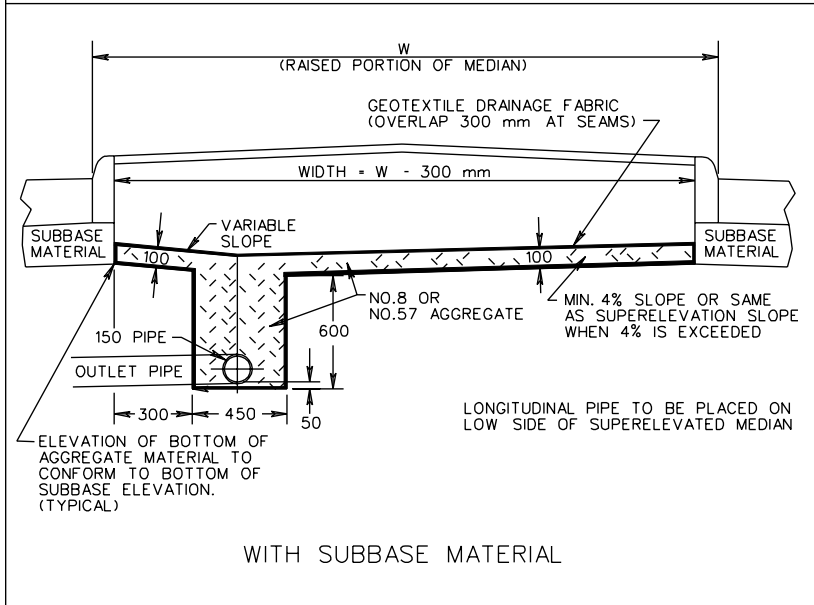
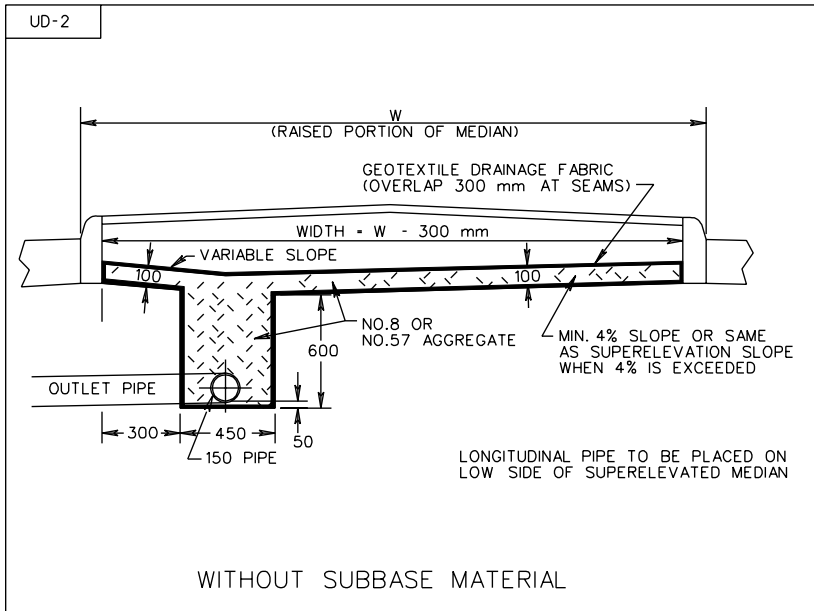
STANDARD GROUNDWATER UNDERDRAIN

VIRGINIA DEPARTMENT OF TRANSPORTATION

UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS

REV. 8-2000

108.01



LONGITUDINAL PERFORATED PIPE

TYPE OF PIPE	CRUSHING STRENGTH	
	W.T.	150 mm NOMINAL DIAMETER
CORRUGATED ALUMINUM	1.22	
SMOOTH WALL PVC	3.90	
CORRUGATED PE		AASHTO M-252

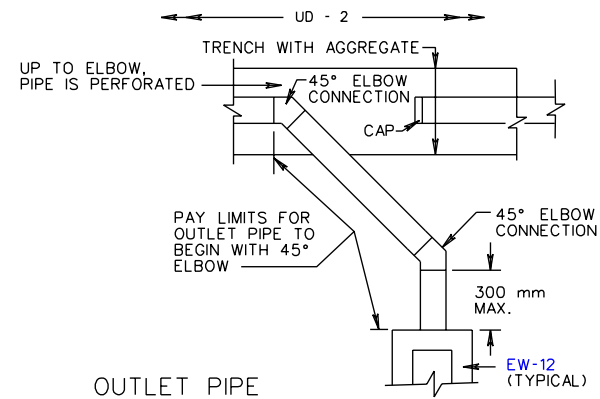
NON-PERFORATED OUTLET PIPE

TYPE OF PIPE	CRUSHING STRENGTH	
	W.T.	150 mm NOMINAL DIAMETER
CORRUGATED ALUMINUM	1.22	
SMOOTH WALL PVC	3.90	
SMOOTH WALL PE		480 kPa ***

* WALL THICKNESS (MIN) - mm
 *** TESTED ACCORDING TO ASTM D-2412 AT 5% DEFLECTION.

NOTES:

1. WHEN THE LONGITUDINAL PIPE CONNECTS DIRECTLY INTO A DRAINAGE STRUCTURE (DROP INLET, MANHOLE, ECT.), NON-PERFORATED OUTLET PIPES ARE NOT REQUIRED.
2. INVERT ELEVATION AT OUTLET END OF OUTLET PIPE TO BE A MINIMUM OF 300 mm ABOVE INVERT ELEVATION OF RECEIVING DRAINAGE DITCH OR STRUCTURE.
3. ALL CONNECTIONS (ELBOWS, WYES, ETC.) WITHIN PAY LIMITS FOR OUTLET PIPE ARE TO BE OF THE SAME CRUSHING STRENGTH AS THE OUTLET PIPE.
4. OUTLET PIPE ARE TO BE INSTALLED ON 2% MIN./3% DESIRABLE GRADE AND LOCATED AT A MAXIMUM OF 150 m APART.
5. OUTLET PIPE TO BE SECURELY CONNECTED TO EW-12 OR OTHER DRAINAGE STRUCTURE.
6. WHEN UNDERDRAIN MUST TRAVERSE UNDER CROSSOVER LOCATIONS, NON-PERFORATED OUTLET PIPE ONLY IS TO BE USED UNDER CROSSOVER PAVEMENT.



STANDARD UNDERDRAIN FOR USE WITH RAISED GRASS MEDIAN STRIPS

REV. 8-2000

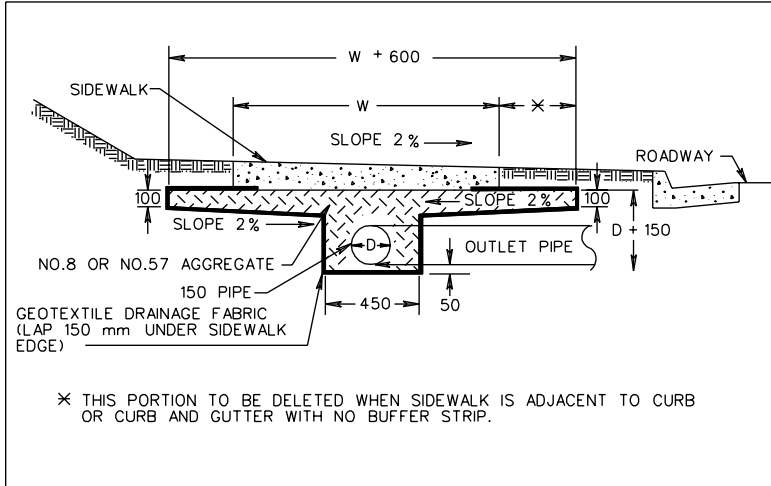
108.02 UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE

240
501
701

UD-3



NOTES:

1. WHEN THE LONGITUDINAL PIPE CONNECTS DIRECTLY INTO A DRAINAGE STRUCTURE (DROP INLET, MANHOLE, ECT.), NON-PERFORATED OUTLET PIPES ARE NOT REQUIRED.
2. INVERT ELEVATION AT OUTLET END OF OUTLET PIPE TO BE A MINIMUM OF 300 mm ABOVE INVERT ELEVATION OF RECEIVING DRAINAGE DITCH OR STRUCTURE.
3. ALL CONNECTIONS (ELBOWS, WYES, ETC.) WITHIN PAY LIMITS FOR OUTLET PIPE ARE TO BE OF THE SAME CRUSHING STRENGTH AS THE OUTLET PIPE.
4. OUTLET PIPE ARE TO BE INSTALLED ON 2% MIN./3% DESIRABLE GRADE.
5. OUTLET PIPE TO BE SECURELY CONNECTED TO EW-12 OR OTHER DRAINAGE STRUCTURE.
6. SIDEWALK UNDERDRAIN IS TO BE USED WHEN THE SIDEWALK LONGITUDINAL GRADIENT IS 3% OR MORE AND WHEN THE UNDERLYING SOIL HAS 34% OR MORE PASSING THE NO. 200 SIEVE, AND HAS A P10F 13 OR LESS, AND THE AREA HAS A HISTORY OF SIDEWALK UNDERMINING.
7. SIDEWALK UNDERDRAINS SHOULD BE TIED INTO THE STORM SEWER SYSTEM AT POINTS APPROXIMATELY A CITY BLOCK APART. UNDERDRAIN RUNS MUST NOT EXCEED 300 m IN LENGTH WITHOUT DISCHARGING INTO THE STORM DRAIN SYSTEM OR INTO AN OPEN DRAIN.
8. WITHIN THE LIMITS OF A COMMERCIAL ENTRANCE, NON-PERFORATED PIPE SHALL BE UTILIZED LIEU OF PERFORATED PIPE.

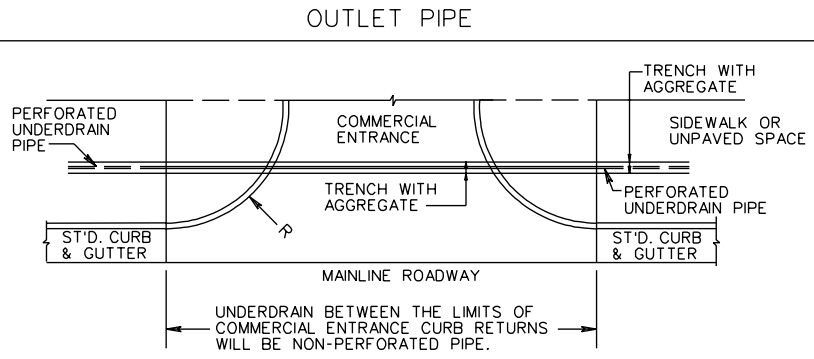
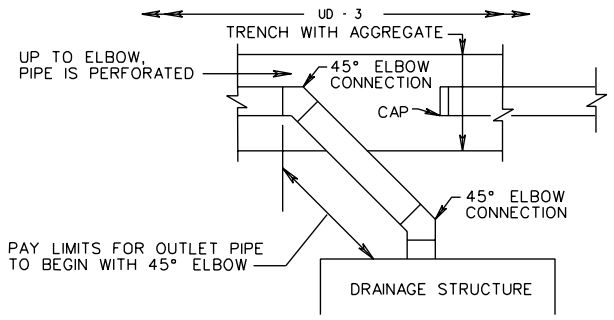
LONGITUDINAL PERFORATED PIPE

TYPE OF PIPE	CRUSHING STRENGTH	
	W.T.	150 mm NOMINAL DIAMETER
CORRUGATED ALUMINUM	1.22	
SMOOTH WALL PVC	3.90	
CORRUGATED PE		AASHTO M-252

NON-PERFORATED PIPE FOR USE UNDER COMMERCIAL ENTRANCES AND FOR OUTLETS

TYPE OF PIPE	CRUSHING STRENGTH	
	W.T.	150 mm NOMINAL DIAMETER
CORRUGATED ALUMINUM	1.22	
SMOOTH WALL PVC	3.90	
SMOOTH WALL PE		480 kPa ***

* WALL THICKNESS (MIN) - mm
 *** TESTED ACCORDING TO ASTM D-2412 AT 5% DEFLECTION.



SPECIFICATION REFERENCE
232
501
701

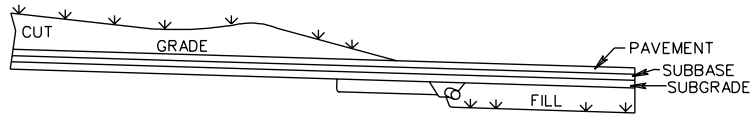
STANDARD SIDEWALK UNDERDRAIN

VIRGINIA DEPARTMENT OF TRANSPORTATION

NEW 8-2000

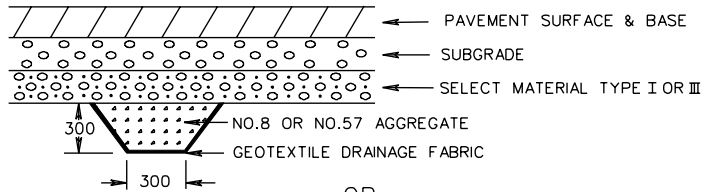
UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS 108.03

CD-1

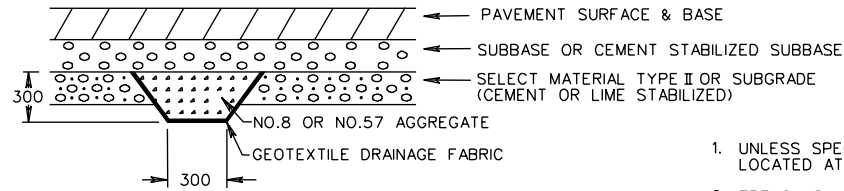


COMBINATION UNDERDRAIN CD-1 AT LOWER END OF CUTS
CENTER LINE SECTION
(WITH TYPE I SELECT MATERIAL)

TRENCH PLACEMENT



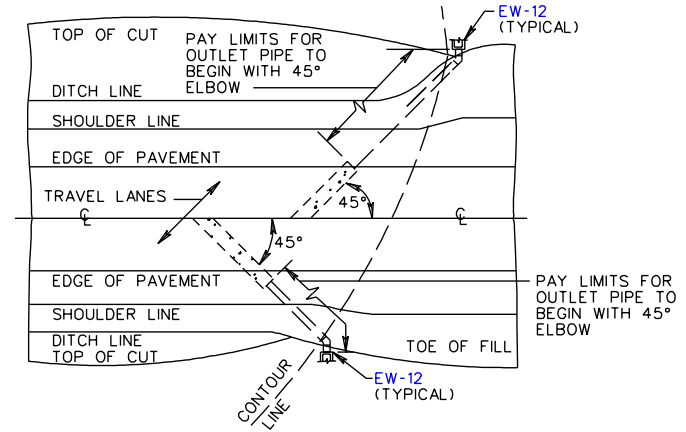
OR



NON-PERFORATED OUTLET PIPE

TYPE OF PIPE	CRUSHING STRENGTH			
	W.T.	100 mm NOM. DIA.	W.T.	150 mm NOM. DIA.
CORRUGATED ALUMINUM			1.22	
SMOOTH WALL PVC	2.62		3.90	
SMOOTH WALL PE		480 kPa ***		480 kPa ***

* WALL THICKNESS (MIN) - mm
*** TESTED ACCORDING TO ASTM D-2412 AT 5% DEFLECTION.



PLAN VIEW
(PLACEMENT OF CD-1 COMBINATION UNDERDRAIN)

GENERAL NOTES

- UNLESS SPECIFICALLY INDICATED, COMBINATION UNDERDRAIN WILL NOT BE LOCATED AT THIS POINT WHEN BOTH SUBBASE AND SUBGRADE ARE STABILIZED.
- TRENCH SHALL BE FILLED WITH AGGREGATE AND THOROUGHLY HAND TAMPED TO INSURE COMPACTNESS.
- OUTLET PIPE SHALL BEGIN AT THE EDGE OF THE TRAVEL LANE PAVEMENT AND SHALL BE PLACED ON A GRADE PARALLEL TO THE SHOULDER SLOPE (2% MIN./3 DESIRABLE GRADE).
- ON CURB AND GUTTER SECTIONS, WHERE IT IS IMPOSSIBLE TO OTHERWISE PROVIDE OUTLETS FOR UNDERDRAINS, THEY ARE TO BE LOCATED SO AS TO DRAIN INTO DROP INLETS OR MANHOLES.
- ON SUPERELEVATED SECTIONS, TRENCH IS TO BE UNDER ENTIRE PAVEMENT AREA WITH OUTLET PIPE ON LOW SIDE ONLY.
- INVERT ELEVATION AT OUTLET END OF OUTLET PIPE TO BE A MINIMUM OF 300 mm ABOVE INVERT ELEVATION OF RECEIVING DRAINAGE DITCH OR STRUCTURE.
- ALL CONNECTIONS (ELBOWS, WYES, ETC.) WITHIN PAY LIMITS FOR OUTLET PIPE ARE TO BE OF THE SAME CRUSHING STRENGTH AS THE OUTLET PIPE.
- OUTLET PIPE TO BE SECURELY CONNECTED TO EW-12 OR OTHER DRAINAGE STRUCTURE.

STANDARD COMBINATION UNDERDRAIN
(AT LOWER END OF CUTS)

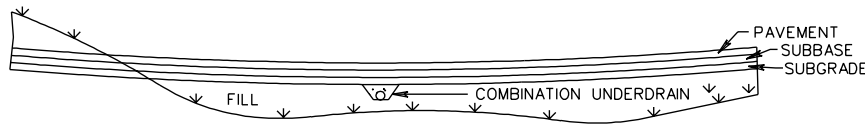
REV. 8/2000

108.04 UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS

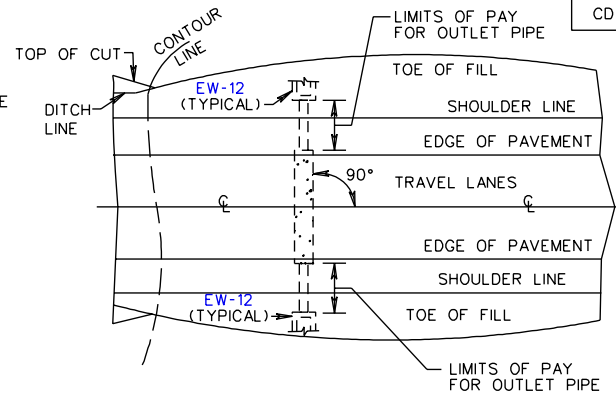
VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE

232
501
701

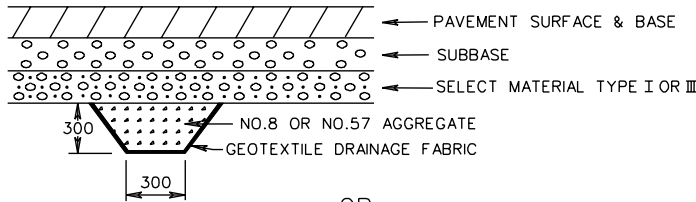


COMBINATION UNDERDRAIN CD-2 ON FILLS
CENTER LINE SECTION
(WITH TYPE 1 SELECT MATERIAL)

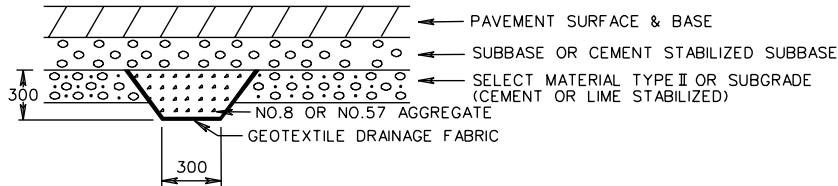


PLAN VIEW SHOWING PLACEMENT OF
CD-2 UNDERDRAIN

TRENCH PLACEMENT



OR



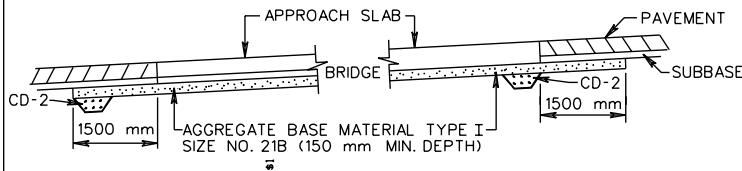
NON-PERFORATED OUTLET PIPE

TYPE OF PIPE	CRUSHING STRENGTH			
	W.T.	100 mm NOM. DIA.	W.T.	150 mm NOM. DIA.
CORRUGATED ALUMINUM			1.22	
SMOOTH WALL PVC	2.62		3.90	
SMOOTH WALL PE		480 kPa ***		480 kPa ***

* WALL THICKNESS (MIN) - mm
*** TESTED ACCORDING TO ASTM D-2412 AT 5% DEFLECTION.

GENERAL NOTES

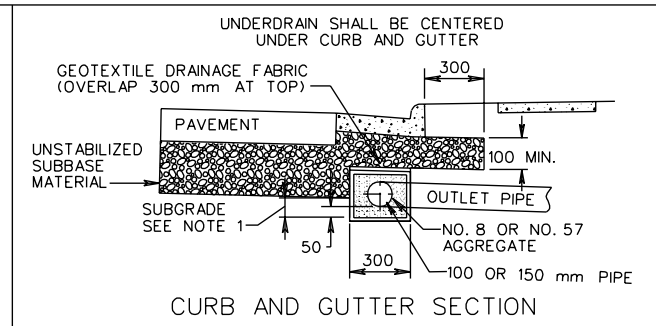
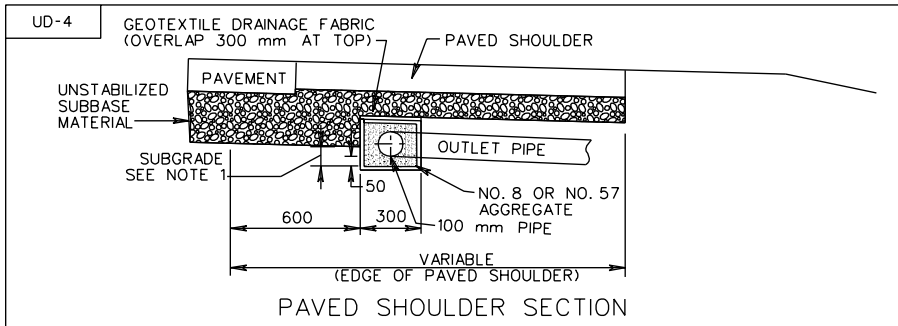
- TRENCH SHALL BE FILLED WITH AGGREGATE AND THOROUGHLY HAND TAMPED TO INSURE COMPACTNESS.
- OUTLET PIPE SHALL BEGIN AT THE EDGE OF THE TRAVEL LANE PAVEMENT AND SHALL BE PLACED ON A GRADE PARALLEL TO THE SHOULDER SLOPE (2% MIN./3% DESIRABLE GRADE).
- ON CURB AND GUTTER SECTIONS, WHERE IT IS IMPOSSIBLE TO OTHERWISE PROVIDE OUTLETS FOR UNDERDRAINS, THEY ARE TO BE LOCATED SO AS TO DRAIN INTO DROP INLETS OR MANHOLES.
- ON SUPERELEVATED SECTIONS, TRENCH IS TO BE UNDER ENTIRE PAVEMENT AREA WITH OUTLET PIPE ON LOW SIDE ONLY.
- INVERT ELEVATION AT OUTLET END OF OUTLET PIPE TO BE A MINIMUM OF 300 mm ABOVE INVERT ELEVATION OF RECEIVING DRAINAGE DITCH OR STRUCTURE.
- ALL CONNECTIONS (ELBOWS, WYES, ETC.) WITHIN PAY LIMITS FOR OUTLET PIPE ARE TO BE OF THE SAME CRUSHING STRENGTH AS THE OUTLET PIPE.
- OUTLET PIPE TO BE SECURELY CONNECTED TO EW-12 OR OTHER DRAINAGE STRUCTURE.



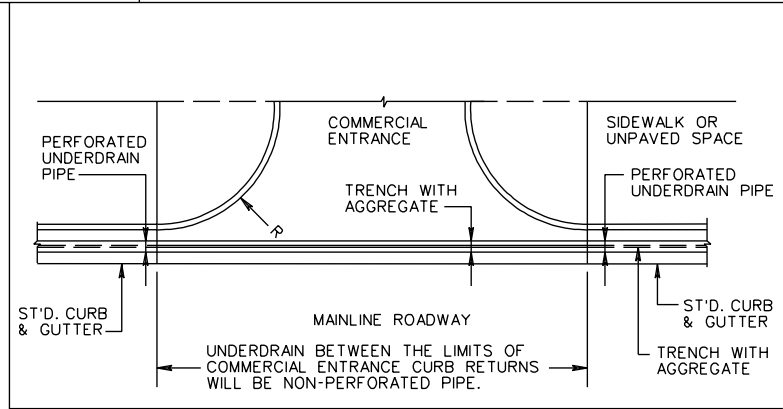
PLACEMENT OF CD-2 UNDERDRAIN AT
BRIDGE APPROACH SLABS

SPECIFICATION REFERENCE	STANDARD COMBINATION UNDERDRAIN (AT GRADE SAGS AND BRIDGE APPROACHES)		REV. 8/2000
232 501 701	VIRGINIA DEPARTMENT OF TRANSPORTATION		UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS
			108.05

INSERTABLE SHEET MA81



- NOTES:
- 100 mm MINIMUM, PROVIDED ATTAINING MINIMUM 100 mm OF AGGREGATE ON TOP OF PIPE.
 - WHEN THE LONGITUDINAL PIPE CONNECTS DIRECTLY INTO A DRAINAGE STRUCTURE (DROP INLET, MANHOLE, ECT.), NON-PERFORATED OUTLET PIPES ARE NOT REQUIRED.
 - INVERT ELEVATION AT OUTLET END OF OUTLET PIPE TO BE A MINIMUM OF 300 mm ABOVE INVERT ELEVATION OF RECEIVING DRAINAGE DITCH OR STRUCTURE.
 - ALL CONNECTIONS (ELBOWS, WYES, ETC.) WITHIN PAY LIMITS FOR OUTLET PIPE ARE TO BE OF THE SAME CRUSHING STRENGTH AS THE OUTLET PIPE.
 - OUTLET PIPES ARE TO BE INSTALLED ON 2% MIN./3% DESIRABLE GRADE AND LOCATED EVERY 105 m MAXIMUM OR AS NOTED ON PLANS.
 - OUTLET PIPE TO BE SECURELY CONNECTED TO EW-12 OR OTHER DRAINAGE STRUCTURE.
 - WITHIN THE LIMITS OF A COMMERCIAL ENTRANCE, NON-PERFORATED PIPE SHALL BE UTILIZED LIEU OF PERFORATED PIPE.
 - THE LENGTH OF PIPE BETWEEN THE WYE CONNECTION AND THE EW-12 SHALL BE LIMITED TO NO MORE THAN 300 mm TO PERMIT CAMERA INSPECTION OF THE MAIN LINE IN EITHER DIRECTION.



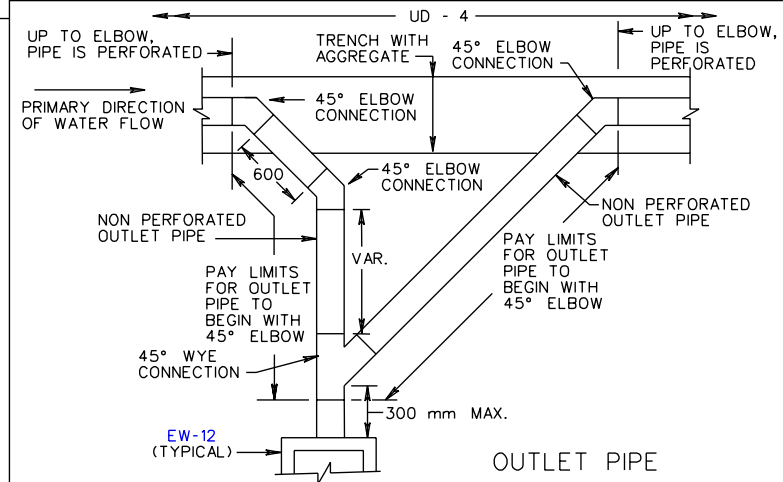
LONGITUDINAL PERFORATED PIPE

TYPE OF PIPE	CRUSHING STRENGTH	
	W.T.	100 mm NOM. DIA.
SMOOTH WALL PVC	2.62	
CORRUGATED PE		AASHTO M-252

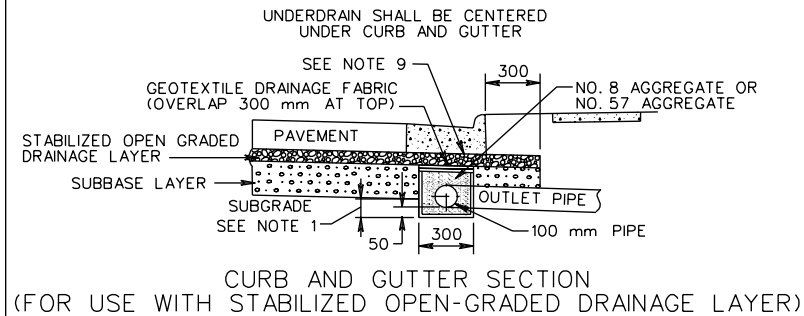
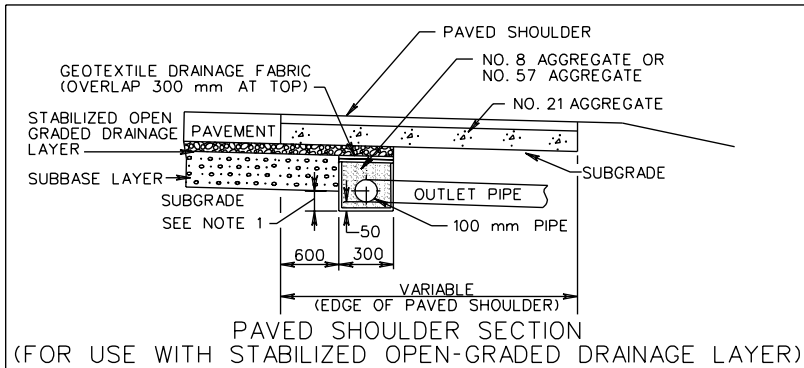
NON-PERFORATED OUTLET PIPE FOR USE UNDER COMMERCIAL ENTRANCES AND FOR OUTLETS

TYPE OF PIPE	CRUSHING STRENGTH	
	W.T.	100 mm NOM. DIA.
SMOOTH WALL PVC	2.62	
SMOOTH WALL PE		480 kPa ***

* WALL THICKNESS (MIN) - mm
 *** TESTED ACCORDING TO ASTM D-2412 AT 5% DEFLECTION.



INSERTABLE SHEET MA81



- NOTES:
- 100 mm MINIMUM, PROVIDED ATTAINING MINIMUM 100 mm OF AGGREGATE ON TOP OF PIPE.
 - WHEN THE LONGITUDINAL PIPE CONNECTS DIRECTLY INTO A DRAINAGE STRUCTURE (DROP INLET, MANHOLE, ECT.), NON-PERFORATED OUTLET PIPES ARE NOT REQUIRED.
 - INVERT ELEVATION AT OUTLET END OF OUTLET PIPE TO BE A MINIMUM OF 300 mm ABOVE INVERT ELEVATION OF RECEIVING DRAINAGE DITCH OR STRUCTURE.
 - ALL CONNECTIONS (ELBOWS, WYES, ETC.) WITHIN PAY LIMITS FOR OUTLET PIPE ARE TO BE OF THE SAME CRUSHING STRENGTH AS THE OUTLET PIPE.
 - OUTLET PIPES ARE TO BE INSTALLED ON 2% MIN./3% DESIRABLE GRADE AND LOCATED EVERY 105 m MAXIMUM OR AS NOTED ON PLANS.
 - OUTLET PIPE TO BE SECURELY CONNECTED TO EW-12 OR OTHER DRAINAGE STRUCTURE.
 - WITHIN THE LIMITS OF A COMMERCIAL ENTRANCE, NON-PERFORATED PIPE SHALL BE UTILIZED IN LIEU OF PERFORATED PIPE.
 - THE LENGTH OF PIPE BETWEEN THE WYE CONNECTION AND THE EW-12 SHALL BE LIMITED TO NO MORE THAN 300 mm TO PERMIT CAMERA INSPECTION OF THE MAIN LINE IN EITHER DIRECTION.
 - IN SITUATIONS WHEN FULL DEPTH OF STABILIZED OPEN-GRADED MATERIAL CANNOT BE MAINTAINED UNDER CURB AND GUTTER, NO. 21B AGGREGATE SHALL BE USED. UNDER CURB AND GUTTER, NO. 21B AGGREGATE MAY ALSO BE USED FROM TOP OF STABILIZED OPEN-GRADED MATERIAL LAYER AND CURB AND GUTTER.

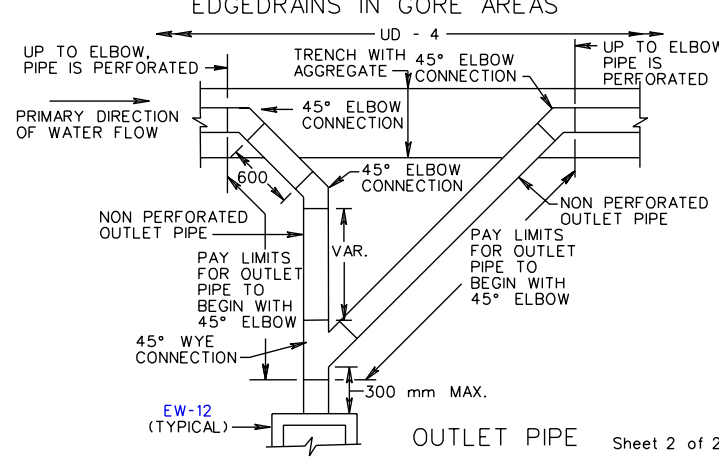
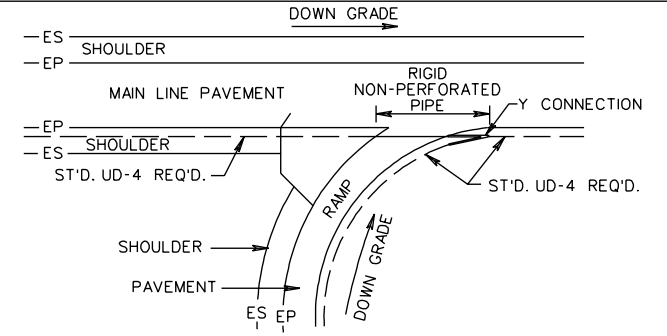
LONGITUDINAL PERFORATED PIPE UD-4

TYPE OF PIPE	CRUSHING STRENGTH
SMOOTH WALL PVC	W.T. 100 mm NOM. DIA. 2.62
CORRUGATED PE	AASHTO M-252 480 kPa ***

NON-PERFORATED OUTLET PIPE FOR USE UNDER COMMERCIAL ENTRANCES AND FOR OUTLETS

TYPE OF PIPE	CRUSHING STRENGTH
SMOOTH WALL PVC	W.T. 100 mm NOM. DIA. 2.62
SMOOTH WALL PE	480 kPa ***

* WALL THICKNESS (MIN) - mm
 *** TESTED ACCORDING TO ASTM D-2412 AT 5% DEFLECTION.



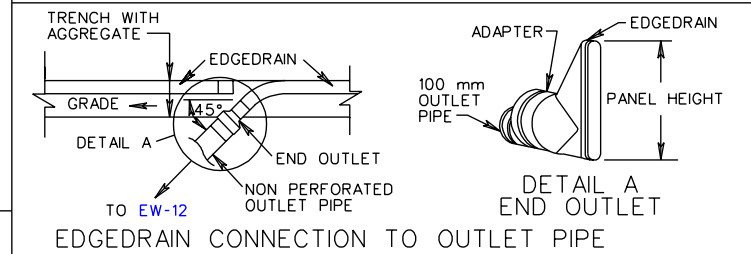
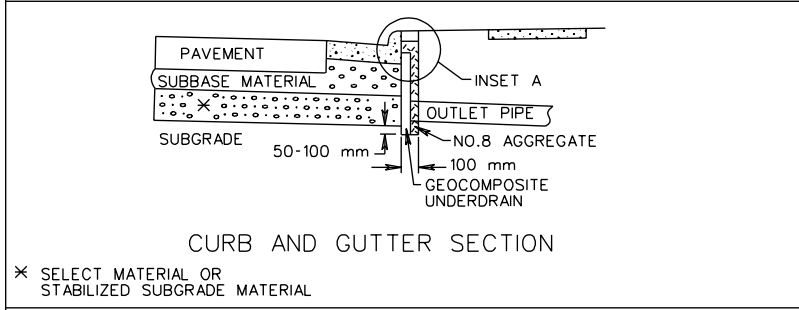
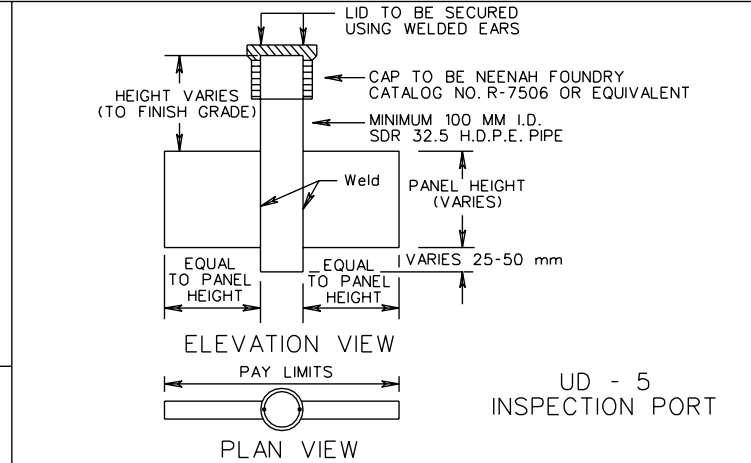
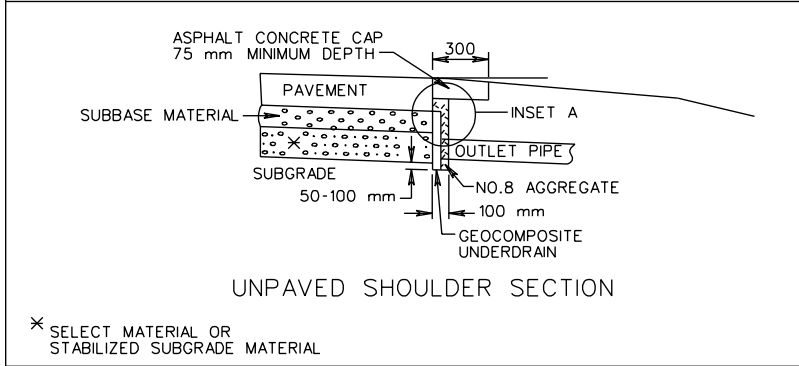
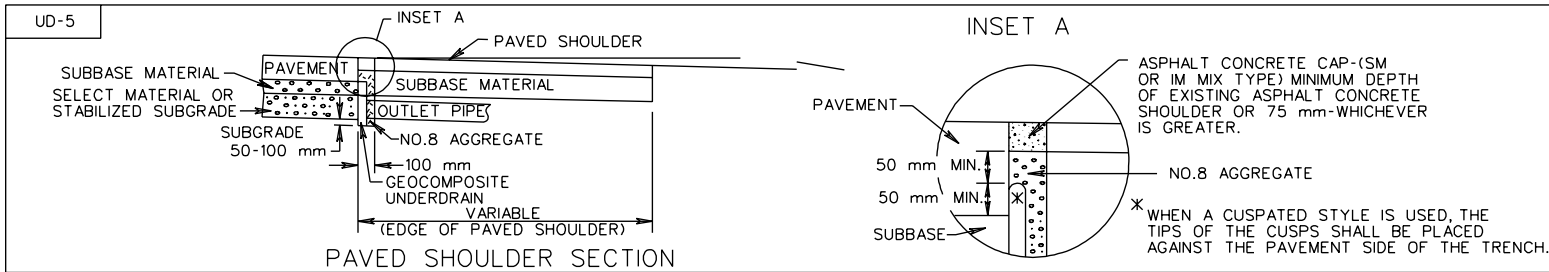
SPECIFICATION REFERENCE
240
258
501
701

STANDARD PAVEMENT EDGEDRAIN

VIRGINIA DEPARTMENT OF TRANSPORTATION

UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS 108.07

REV. 8/2000



- NOTES:
1. INVERT ELEVATION AT OUTLET END OF OUTLET PIPE TO BE A MINIMUM OF 300 mm ABOVE INVERT ELEVATION OF RECEIVING DRAINAGE DITCH OR STRUCTURE.
 2. ALL CONNECTIONS (ELBOWS, WYES, ETC.) WITHIN PAY LIMITS FOR OUTLET PIPE ARE TO BE OF THE SAME CRUSHING STRENGTH AS THE OUTLET PIPE.
 3. OUTLET PIPES ARE TO BE INSTALLED ON 2% MIN./3% DESIRABLE GRADE AND LOCATED EVERY 105 m MAXIMUM OR AS NOTED ON PLANS.
 4. OUTLET PIPE TO BE SECURELY CONNECTED TO EW-12 OR OTHER DRAINAGE STRUCTURE.
 5. UD-5 INSPECTION PORTS ARE TO BE LOCATED WHERE SPECIFIED ON THE PLANS.

NON-PERFORATED OUTLET PIPE

TYPE OF PIPE	CRUSHING STRENGTH
SMOOTH WALL PVC	2.62
SMOOTH WALL PE	480 kPa ***

* WALL THICKNESS (MIN) - mm
*** TESTED ACCORDING TO ASTM D-2412 AT 5% DEFLECTION.

PREFABRICATED GEOCOMPOSITE RETROFIT PAVEMENT EDGEDRAIN

REV. 8/2000

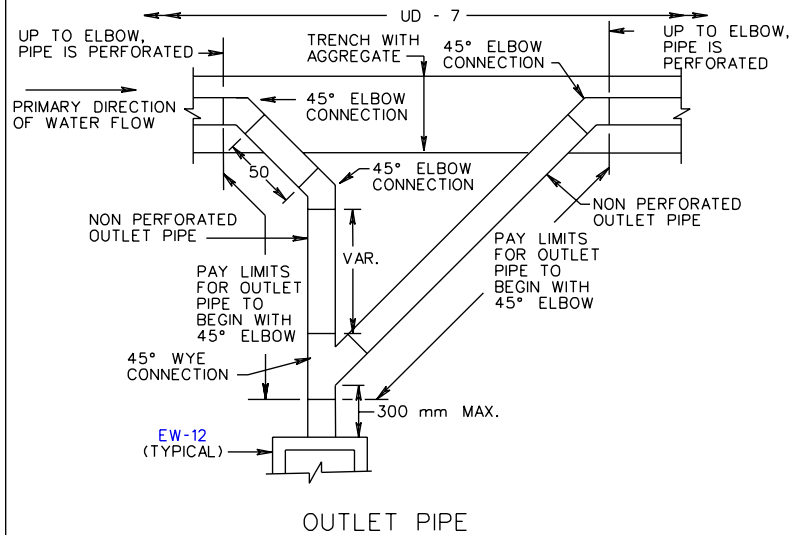
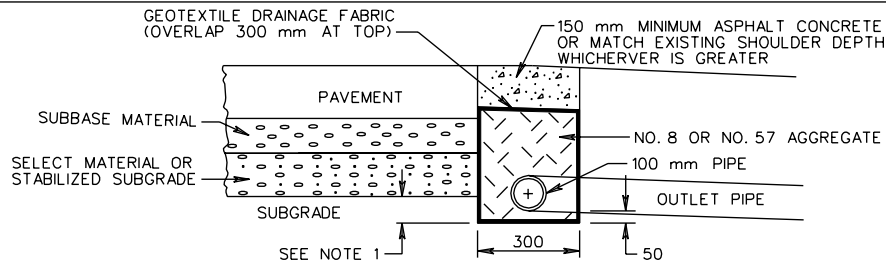
108.08 UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION REFERENCE

240
501
701

UD-7



NOTES:

1. 100 mm MIN., PROVIDED ATTAINING 100 mm OF AGGREGATE ON TOP OF PIPE.
2. WHEN THE LONGITUDINAL PIPE CONNECTS DIRECTLY INTO A DRAINAGE STRUCTURE (DROP INLET, MANHOLE, ECT.), NON-PERFORATED OUTLET PIPES ARE NOT REQUIRED.
3. INVERT ELEVATION AT OUTLET END OF OUTLET PIPE TO BE A MINIMUM OF 300 mm ABOVE INVERT ELEVATION OF RECEIVING DRAINAGE DITCH OR STRUCTURE.
4. ALL CONNECTIONS (ELBOWS, WYES, ETC.) WITHIN PAY LIMITS FOR OUTLET PIPE ARE TO BE OF THE SAME CRUSHING STRENGTH AS THE OUTLET PIPE.
5. OUTLET PIPES ARE TO BE INSTALLED ON 2% MIN./3% DESIRABLE GRADE AND LOCATED EVERY 105 m MAXIMUM OR AS NOTED ON PLANS.
6. OUTLET PIPE TO BE SECURELY CONNECTED TO EW-12 OR OTHER DRAINAGE STRUCTURE.
7. WITHIN THE LIMITS OF A COMMERCIAL ENTRANCES, NON-PERFORATED PIPE SHALL BE UTILIZED LIEU OF PERFORATED PIPE.
8. THE LENGTH OF PIPE BETWEEN THE WYE CONNECTION AND THE EW-12 SHALL BE LIMITED TO NO MORE THAN 300 mm TO PERMIT CAMERA INSPECTION OF THE MAIN LINE IN EITHER DIRECTION.
9. EXISTING ASPHALT SHOULDER TO BE SAWED TO ACHIEVE A SMOOTH JOINT.

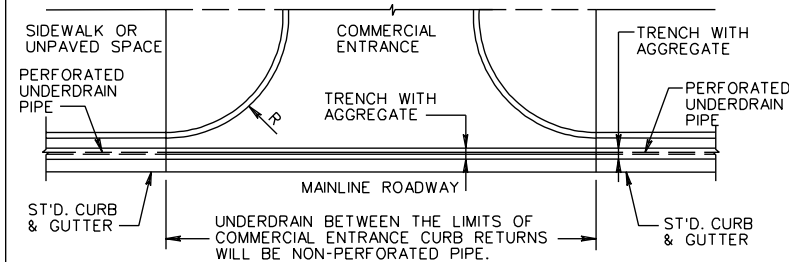
LONGITUDINAL PERFORATED PIPE

TYPE OF PIPE	CRUSHING STRENGTH	
	W.T.	100 mm NOM. DIA.
SMOOTH WALL PVC	2.62	
CORRUGATED PE		AASHTO M-252

NON-PERFORATED OUTLET PIPE FOR USE UNDER COMMERCIAL ENTRANCES AND FOR OUTLETS

TYPE OF PIPE	CRUSHING STRENGTH	
	W.T.	100 mm NOM. DIA.
SMOOTH WALL PVC	2.62	
SMOOTH WALL PE		480 kPa ***

* WALL THICKNESS (MIN) - mm
 *** TESTED ACCORDING TO ASTM D-2412 AT 5% DEFLECTION.



SPECIFICATION REFERENCE
240 501 701

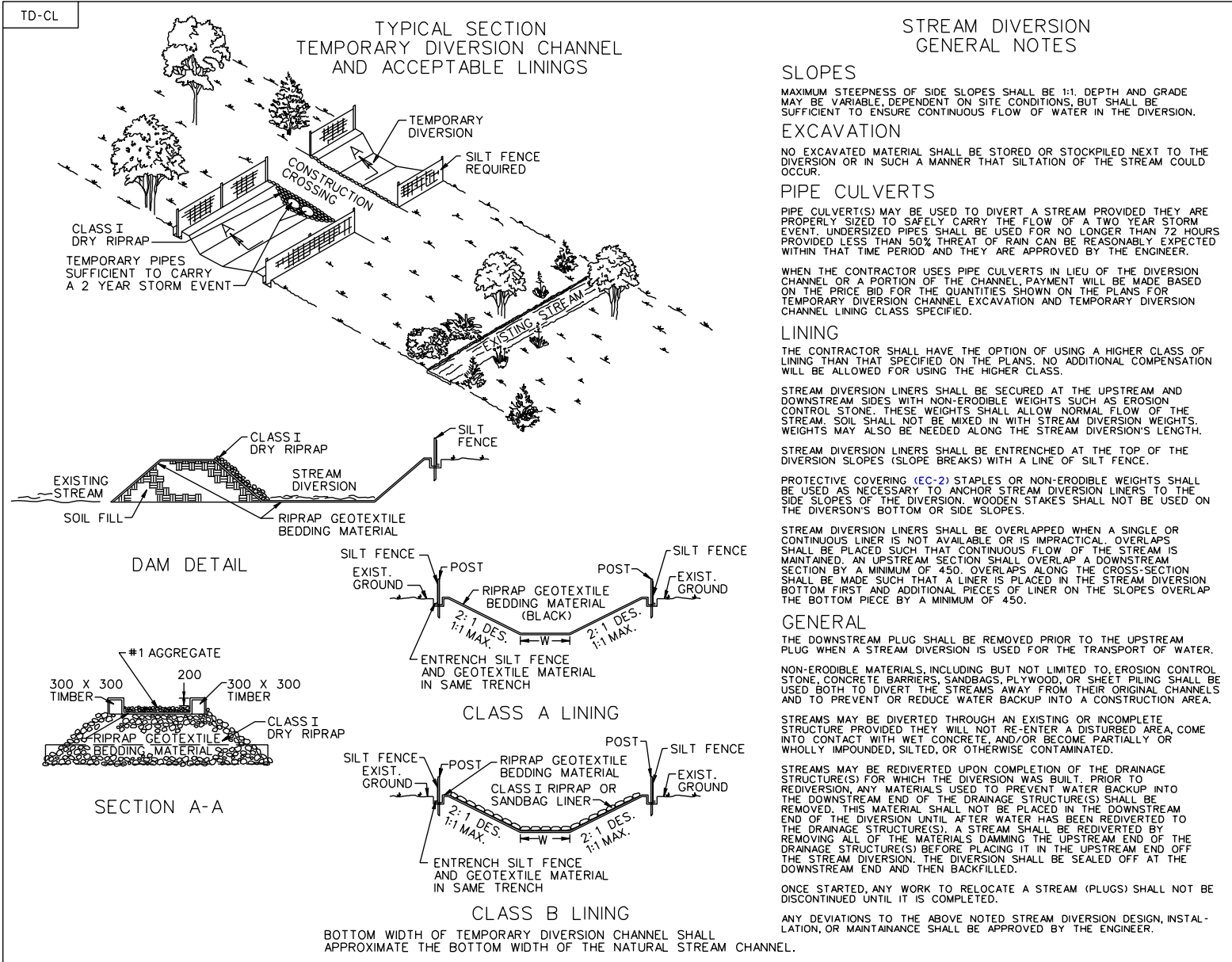
STANDARD RETROFIT EDGEDRAIN

VIRGINIA DEPARTMENT OF TRANSPORTATION

REV. 8/2000

UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS

108.09



TEMPORARY DIVERSION CHANNEL & ACCEPTABLE LININGS

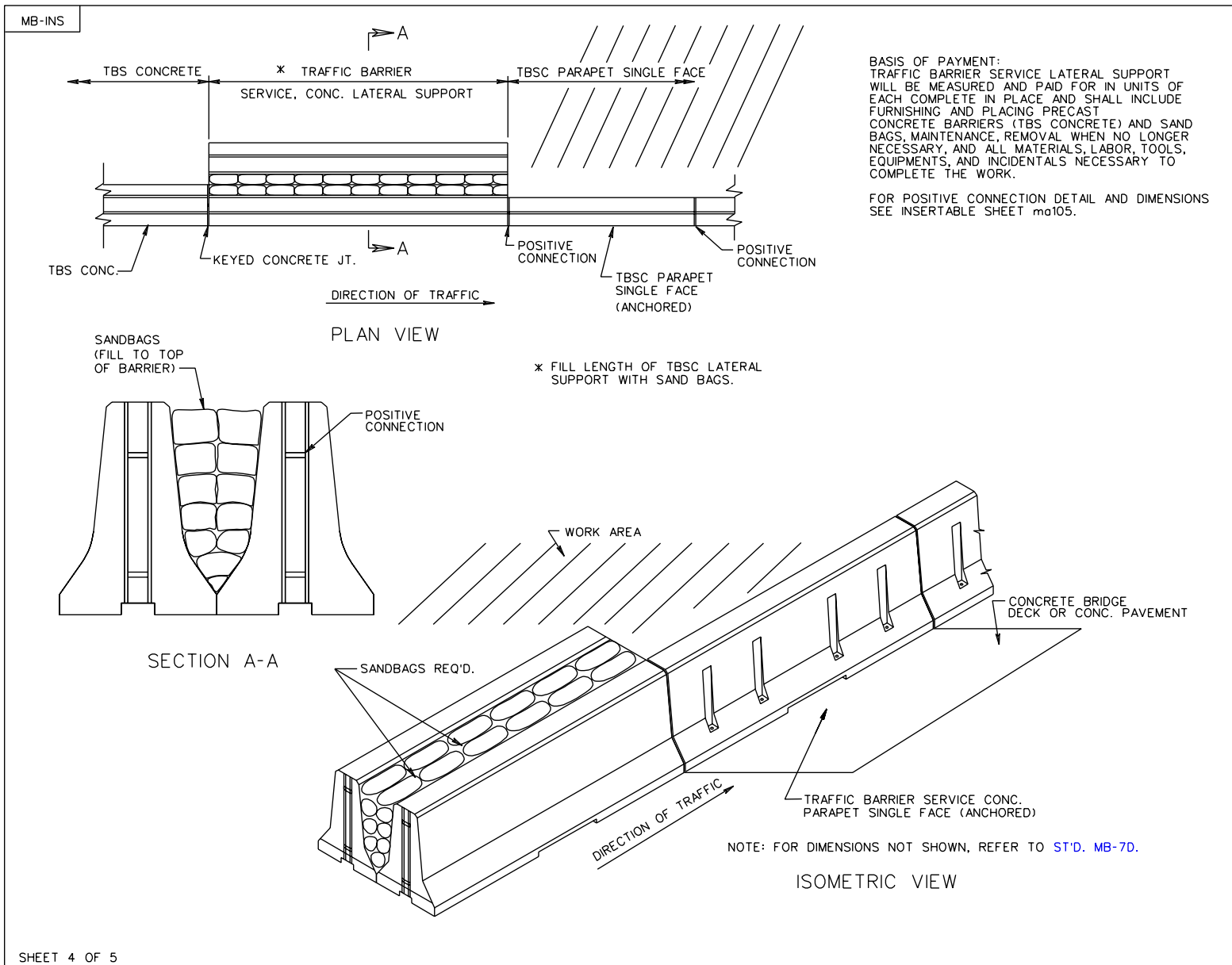
SPECIFICATION REFERENCE

302
303
414

113.01 UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS.

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REVISED ON 7/02



SHEET 4 OF 5

BUTTING TRAFFIC BARRIER SERVICE TO SINGLE FACE PARAPET SERVICE

REV. 8/2000

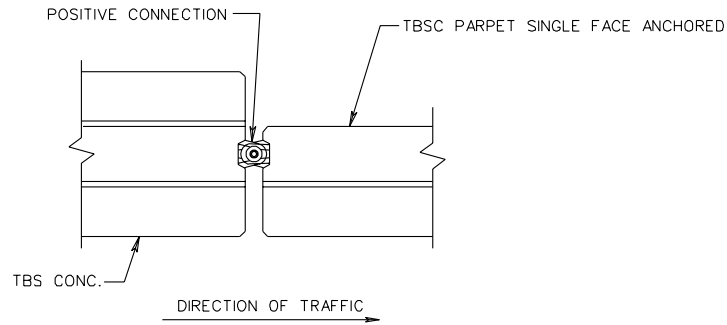
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VIRGINIA DEPARTMENT OF TRANSPORTATION

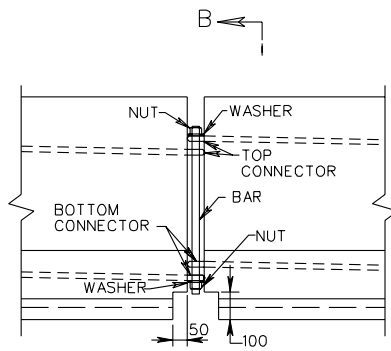
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REVISED ON 7/02

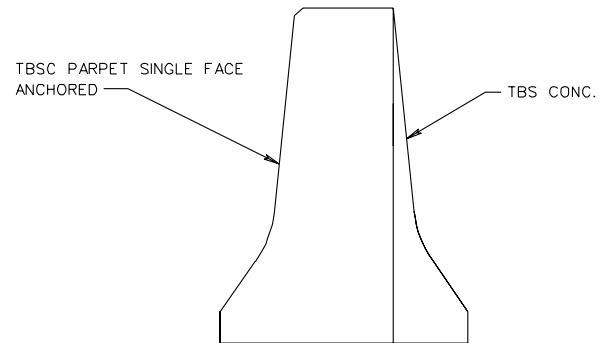
MB-INS



PLAN OF CONNECTION



ELEVATION OF CONNECTION



SECTION B-B

BASIS OF PAYMENT:
TRAFFIC BARRIER SERVICE LATERAL SUPPORT WILL BE MEASURED AND PAID FOR IN UNITS OF EACH COMPLETE IN PLACE AND SHALL INCLUDE FURNISHING AND PLACING PRECAST CONCRETE BARRIERS (TBS CONCRETE) AND SAND BAGS, MAINTENANCE, REMOVAL WHEN NO LONGER NECESSARY, AND ALL MATERIALS, LABOR, TOOLS, EQUIPMENTS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

FOR POSITIVE CONNECTION DETAIL AND DIMENSIONS SEE INSERTABLE SHEET md105.

SHEET 5 OF 5

SPECIFICATION REFERENCE

BUTTING TRAFFIC BARRIER SERVICE TO SINGLE FACE PARAPET SERVICE

VIRGINIA DEPARTMENT OF TRANSPORTATION

REV. 8/2000

UNLESS OTHERWISE NOTED, ALL DIMENSIONS ON THIS SHEET ARE IN MILLIMETERS.	501.71
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