MISS UTILITY OF VIRGINIA:

THE CONTRACTOR SHALL CALL "MISS UTILITY" 48 HOURS PRIOR TO THE START OF EXCAVATION. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT THE ENGINEER IMMEDIATELY IF THE LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLAN, IF THERE APPEARS TO BE A CONFLICT, AND/OR UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON PLAN. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE RELOCATION OF ANY UTILITY WITHIN THE EXISTING AND/OR RIGHT OF WAY REQUIRED BY THE DEVELOPMENT. CONTACT MISS UTILITY OF VIRGINIA: 1-800-552-7001 (TOLL FREE)

GENERAL NOTES

1. OWNER WILL FURNISH SURVEY CONTROL OFF SET HUBS FOR ALL ROADS AND EASEMENTS FOR ALIGNMENT AND GRADE. ROADS WILL BE STAKED ON ONLY ONE SIDE. REPLACEMENT OF THESE HUBS AND ANY OTHER STAKING WILL BE DONE BY THE CONTRACTOR AT HIS EXPENSE. THE CONTRACTOR SHALL INSPECT THE CONTROL STAKING MENTIONED ABOVE AND VERIFY BEFORE CONSTRUCTION.
2. ALL GRADE STAKES DESTROYED BY THE CONTRACTOR, SHALL BE REPLACED AT HIS EXPENSE.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PRESERVE THE EXISTING RIGHT OF WAY STONES. ANY MARKERS DAMAGED SHALL BE REPLACED AT HIS EXPENSE.
4. CLEARING AND GRUBBING SHALL BE COMPLETED WITHIN THE RIGHT OF WAYS AS INDICATED ON LAYOUT PLAN.
5. ALL DRAINAGE EASEMENTS TO BE CLEARED, GRUBBED, AND GRADED TO CONTAIN WATER FROM PIPE CULVERTS AND TO EXTEND TO A NATURAL WATERCOURSE.
6. EXCESS EXCAVATION TO BE DISPOSED OF AS DIRECTED BY THE OWNER.
7. ALL FILLETS AT INTERSECTIONS TO HAVE 35' RADII UNLESS OTHERWISE NOTED.
8. GRADE LINES ON PROFILES DENOTE FINISHED GRADE OF CENTER LINE OF ROAD.
9. BASE MUST BE APPROVED BY VDOT FOR DEPTH, TEMPLATE, AND COMPACTION BEFORE SURFACE TREATMENT IS APPLIED.
10. PERMIT TO TIE INTO EXISTING ROADS, SHALL BE OBTAINED FROM RESIDENT ENGINEER PRIOR TO ROAD CONSTRUCTION.
11. ALL UTILITIES TO BE IN PLACE PRIOR TO LAYING BASE MATERIAL.
12. NO STRUCTURE SHALL BE CONSTRUCTED ON STATE MAINTAINED RIGHTS OF WAY UNLESS SAID STRUCTURES ARE SHOWN ON ROAD CONSTRUCTION PLANS APPROVED BY VDOT OR SUCH STRUCTURES ARE COVERED BY A VDOT LAND USE PERMIT (OR BY A LETTER OF INTENT FROM THE RESIDENT ENGINEER TO ISSUE SAID PERMIT AT THE TIME OF STATE ACCEPTANCE).

SEWER AND WATER NOTES

1. ALL MATERIALS FOR SEWER AND WATER SYSTEMS SHOWN SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE LATEST APPLICABLE SPECIFICATION OF PRINCE GEORGE COUNTY.
2. ALL WORK SHALL BE SUBJECT TO INSPECTION BY UTILITY DEPARTMENT OFFICIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION OF APPROPRIATE COUNTY OFFICIALS 48 HOURS PRIOR TO START OF WORK.
3. MINIMUM CLEAR COVER FOR ALL WATER PIPE SHALL BE 3.5 FEET.
4. THE UTILITY OWNER IS RESPONSIBLE FOR OBTAINING ANY HIGHWAY PERMITS AND FOR SENDING A COPY TO THE COUNTY PRIOR TO START OF CONSTRUCTION.
5. ANY LOT WITH LESS THAN 50 FEET OF FRONTAGE SHALL HAVE FRONT CORNERS OR END OF 6' CONNECTION STAKED PRIOR TO CONSTRUCTION OF A 6' SEWER SERVICE.
6. SEWER PIPE SHALL BE PVC. ALL SEWER JOINTS SHALL BE CLASS A. BEDDING SHALL BE CLASS B MINIMUM; BEDDING SHALL BE AS SHOWN IN DETAIL ON SHEET 2.
7. SEWER GRADES ARE BASED ON AERIAL PHOTOGRAPHY BY LOUISA AERIAL SURVEYS USING NAVD88 DATUM
8. CONTRACTOR SHALL INSTALL 6" SEWER SERVICE CONNECTIONS TO ALL LOTS (R/W LINE OR EDGE OF EASEMENT) AS SHOWN.
9. ALL WATER SERVICES ARE TO BE PVC ROLL PLASTIC, CTS.
10. THE CONTRACTOR WILL INSTALL ALL WATER CONNECTIONS AND METER BOXES.
11. FIRE HYDRANT PUMPER CONNECTIONS SHALL FACE IN THE DIRECTION OF THE ARROW.
12. THE EXACT MANHOLE TOP SHALL BE ON THE SAME GRADE AS THE FINISHED ROAD GRADE AND AS NOTED ON SEWER CUT SHEETS. THE USE OF HEIGHT ADJUSTMENT RINGS IS PROHIBITED.
13. BACKFILL FOR ALL UTILITIES WITHIN PROPOSED SUBDIVISION STREETS SHALL BE PLACED GENERALLY IN ACCORDANCE WITH PRINCE GEORGE COUNTY SPECIFICATIONS, AND THE FOLLOWING CRITERIA: (1.) NO TRENCH SHALL BE BACKFILLED UNTIL AUTHORIZED BY THE COUNTY. MATERIALS USED FOR BACKFILL FROM THE BOTTOM OF THE TRENCH TO 12" (TWELVE INCHES) ABOVE THE PIPE SHALL BE SELECT MATERIAL, FREE FROM FROST, LARGE CLODS, STONES AND DEBRIS, AND SHALL BE THOROUGHLY AND CAREFULLY COMPACTED. 2. BACKFILL SHALL BE COMPACTED BY MECHANICAL TAMPING THROUGHOUT THE DEPTH OF THE TRENCH TO INSURE A SUITABLE SUBBASE. ACCEPTABLE TO THE ROAD ENGINEER. IF THE MATERIAL IS TAKEN FROM THE DITCH IS NOT SUITABLE FOR BACKFILLING IT SHALL BE REMOVED AND ACCEPTABLE MATERIAL USED FOR BACKFILLING THE TRENCH.
14. THE ENGINEER WILL CERTIFY THAT THE ROADS ARE WITHIN 6" OF SUBGRADE BEFORE WATERLINE CONSTRUCTION CAN BEGIN.
15. FOR SEWER AND WATER INSTALLATION WITHIN EXISTING VDOT R/W, UTILITY CONTRACTORS SHALL NOTIFY VDOT 48 HOURS IN ADVANCE WHEN INSTALLATION BEGINS SO THAT DENSITY CAN BE TESTED (95% @ OPTIMUM MOISTURE +-20%).
16. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHOWN ON THE PLANS IN AREAS OF CONSTRUCTION PRIOR TO STARTING WORK. CONTACT ENGINEER IMMEDIATELY, IF: LOCATION OR ELEVATION IS DIFFERENT FROM THAT SHOWN ON THE PLAN, OR IF: THERE APPEARS TO BE A CONFLICT, AND UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THE PLAN. TO MISS THE UTILITY CALL "MISS UTILITY" OF CENTRAL VIRGINIA: 1-800-552-7001 (TOLL FREE).
17. THE INSTALLATION OF BACK FLOW DEVICE IS REQUIRED IN ALL HOUSES WHERE THE FINISHED FLOOR ELEVATION IS LOWER THAN UPGRADE MANHOLES. THIS DEVICE WILL BE INSPECTED BY THE COUNTY BUILDING INSPECTOR.
18. INDIVIDUAL WATER SERVICES TO BE 3/4".
19. ALL WATERLINE VALVES MUST BE LOCATED ON THE TEE OR CROSS WHEN APPLICABLE.
20. ALL MANHOLES IN UTILITY EASEMENTS ARE TO HAVE THE CONCRETE SECTION EXTENDED ONE FOOT ABOVE THE GROUND.
21. A SMOOTH TRANSITION OF DROP MANHOLE MUST BE PROVIDED FOR EACH LATERAL OR SANITARY SEWER ENTERING A SANITARY MANHOLE.
22. ALL FIRE HYDRANTS SHALL BE O.S.H.A. RED IN COLOR.
23. METER BOXES PROVIDED SHALL BE CAST IRON 12"x18"x24" HIGH WITH CAST IRON LIDS. THE METER ASSEMBLIES ARE TO BE SUPPLIED WITH NEPTUNE PROREAD ENCODERS AND R900I PIT MIU (RF) ATTACHED TO THE LID. METERS ARE TO BE COMPATIBLE WITH THE PROPOSED SYSTEM. A WAND TYPE VISUAL READER COMPATIBLE WITH THE PROREAD SYSTEM WILL BE SUPPLIED TO THE UTILITY DEPARTMENT WITH THE WATER METERS.
24. FIRE HYDRANTS ARE TO BE MUELLER TYPE BE INSTALLED USING TEES.
25. ALL SANITARY LATERALS THAT ARE LOCATED OUTSIDE OF THE RIGHT OF WAY ARE TO HAVE THE CLEANOUT INSTALLED TO THE EDGE OF THE EASEMENT. A CARSONITE MARKER SHALL ALSO BE INSTALLED TO INDICATE THEIR LOCATION.
26. ALL HYDRANTS SHALL BE EQUIPPED WITH A MUELLER HYDRANT DEFENDER, SECURING THE OPERATING NUT AND IT SHALL BE SUPPLIED WITH 4 CODED KEYS THAT WILL WORK WITH ALL NOZZLE CAPS. THE CODED LOCK/KEY COMBINATION. KEYS SHALL BE SENT DIRECTLY TO THE COUNTY ENGINEER AT PRINCE GEORGE COUNTY.
27. ALL HYDRANTS AND BENDS SHALL BE EQUIPPED WITH MEGA LUGS, KICKERS AND THRUST BLOCKS.
28. PRESSURE REDUCING VALVES ARE NOT REQUIRED FOR ANY LOT WITHIN SECTION 4 OF THIS SUBDIVISION.
29. CLEANOUTS SHALL BE INSTALLED ON ALL SANITARY LATERALS IN ACCORDANCE WITH PRINCE GEORGE COUNTY SPECIFICATIONS. THESE CLEANOUTS SHOULD BE INSTALLED AT THE EDGE OF THE RIGHT OF WAY.
30. 2" AND 3" FORCE MAIN PIPING TO BE HDPE SDR II PRESSURE CLASS 160 WITH FUSED CONNECTIONS.
31. OMITTED.
32. LOTS 7-12 ARE TO HAVE INDIVIDUAL GRINDER PUMPS FOR EACH HOUSE AND A FORCE MAIN HOUSE CONNECTION PROVIDED AS DETAILED ON SHEET C1.1.
33. UTILITY INSPECTOR SHALL BE CONTACTED BEFORE INDIVIDUAL SERVICE CONNECTIONS ARE COVERED.
34. ALL MANHOLES WITHIN 1,000 FT OF A FORCE MAIN DISCHARGE SHALL BE COATED AS MANUFACTURED BY RAVEN.
35. ALL INDIVIDUAL WATER SERVICES AND SEWER CONNECTIONS SHALL BE MADE USING DOUBLE BANDED EPOXY COATED STAINLESS STEEL SADDLES.
36. A "W" AND "S" SHALL BE STAMPED INTO THE CURB WHILE THE CONCRETE IS STILL WET. THESE MARKS SHALL INDICATE THE ACTUAL LOCATION OF THE WATER AND SEWER CONNECTIONS FOR EACH LOT.
37. ALL MANHOLES SHALL BE SEALED AT THE JOINTS WITH AN EXTERNAL RUBBER SLEEVE SIMILAR TO INFI-SHIELD SEAL WRAP AS MANUFACTURED BY SEALING SYSTEMS, INC. THE SEAL SHALL BE MADE OF EPDM (ETHYLENE PROPYLENE DIENE MONOMER) RUBBER WITH A MINIMUM THICKNESS OF 65 MILS. EACH UNIT SHALL HAVE A 2-INCH WIDE MASTIC STRIP ON THE TOP AND BOTTOM EDGE OF THE RUBBER WRAP. THE MASTIC SHALL BE NON-HARDENING BUTYL RUBBER SEALANT WITH A MINIMUM THICKNESS OF 125 MILS.
38. THE BOXES FOR THE SEWER CONNECTIONS MUST BE MARKED AS SEWER CONNECTIONS RATHER THAN WATER METER.
39. ALL INDIVIDUAL GRINDER PUMPS SHALL BE E-ONE PUMPS OF LIKE TYPE AND HORSEPOWER. PUMPS MUST BE CAPABLE OF A MINIMUM OF 11 GPM AT 150' OF HEAD.
40. ALL WATER LINE VALVES LOCATED OUTSIDE THE PAVEMENT NEED TO BE ENCLOSED IN A 12"x12"x6" CONCRETE ENCLOSURE.
41. A GEO TECH ENGINEER WILL BE REQUIRED TO TEST ALL UTILITY TRENCHES.
42. ALL FILL AREAS WILL NEED TO BE COMPACTED TO 95% COMPACTION AND TESTED IN PLACE.
43. ALL MANHOLES WITHIN 1000 FEET OF A FORCE MAIN DISCHARGE SHALL BE COATED PER PRINCE GEORGE COUNTY SEWER SPECIFICATIONS. THIS APPLIES TO MANHOLE NUMBERS 1 & 2.
44. ALL GRAVITY SEWER LINES SHALL HAVE FILTER FABRIC INSTALLED ON TOP OF THE STONE OR PIPE AS REQUIRED.

CERTIFICATION

I, WE HEREBY CERTIFY THAT THE LOT LINES, LOT NUMBERS, BLOCK NUMBERS AND THE STREET NAMES SHOWN ON THESE PLANS ARE IDENTICAL TO THOSE SHOWN ON THE OFFICIAL RECORDED PLAT, AND NO CHANGES WILL BE MADE WITHOUT PRIOR APPROVAL FROM THE UTILITY DEPARTMENT. IF ANY CHANGES ARE APPROVED, REVISED WATER AND/OR SEWER PLANS WILL BE SUBMITTED WITHIN 48 HOURS AFTER APPROVAL.

SIGNATURE: Kathleen Halpaus

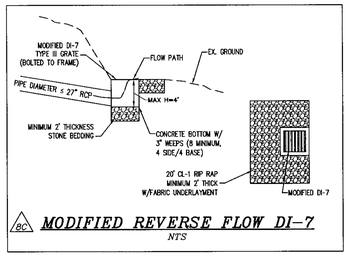
STORM SEWER SCHEDULE

NOTES:
1. PIPE LENGTHS ARE MEASURED FROM CENTER TO CENTER OF STRUCTURE
2. VDOT STD. ST-1 STEPS ARE REQUIRED FOR ALL STRUCTURES WITH A HEIGHT GREATER THAN OR EQUAL TO 4.0 FT.
3. INSTALL GEOTEXTILE FILTER FABRIC AROUND THE WEEP HOLE FOR ALL SAG DRGP INLETS (DI-3CS).

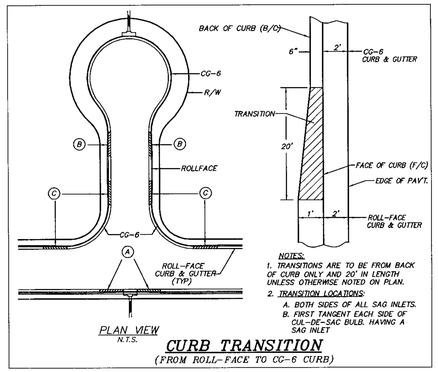
1	DI-3B; L=10', TOP = 121.38, H = 4.13'
2	32.00 L.F. 15" CLASS III RCP @ 1.47% INV. IN = 117.25, INV. OUT = 116.78
3	DI-3B; L=8', TOP = 121.38, H = 4.70', W/IS-1
4	84.09 L.F. 15" CLASS III RCP @ 6.81% INV. IN = 116.68, INV. OUT = 110.84
5	DI-3C; L=10', TOP = 114.84, H = 8.28', W/ IS-1
6	72.00 L.F. 15" CLASS III RCP @ 12.00% INV. IN = 106.56, INV. OUT = 97.92
7	MH-1, TOP = 101.92, H = 9.38', W/ IS-1
8	32.00 L.F. 15" CLASS III RCP @ 13.50% INV. IN = 89.34, INV. OUT = 85.02
8A	MH-1, TOP = 91.44, H = 7.82', W/ IS-1
8B	32.00 L.F. 18" CLASS III RCP @ 0.76% INV. IN = 83.62, INV. OUT = 83.38
8C	MODIFIED DI-7, TOP = 86.00, H = 2.62' SEE DETAIL ON THIS SHEET
9	DI-3B; L=6', TOP = 132.01, H = 4.02'
10	32.00 L.F. 15" CLASS III RCP @ 0.50% INV. IN = 127.99, INV. OUT = 127.83
11	DI-3B; L=6', TOP = 132.01, H = 4.28', W/IS-1
12	76.41 L.F. 15" CLASS III RCP @ 0.96% INV. IN = 127.73, INV. OUT = 127.00
13	DI-3C; L=8', TOP = 131.49, H = 4.59', W/IS-1
14	136.00 L.F. 15" CLASS III RCP @ 2.25% INV. IN = 126.90, INV. OUT = 123.84
15	MH-1, TOP = 128.76, H = 5.02', W/ IS-1
16	88.00 L.F. 18" CLASS III RCP @ 1.00% INV. IN = 123.74, INV. OUT = 122.86

SANITARY SEWER SCHEDULE

MH-MH	BEARING	DISTANCE
2-1	S64°30'36"E	238.33'
1-EX22	S64°30'36"E	325.00'
EX22-3	S64°30'36"E	69.69'
3-4	S64°30'36"E	130.66'
4-5	S64°30'36"E	400.00'



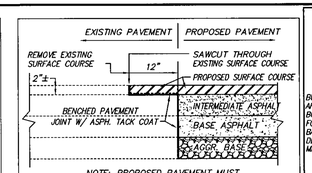
8C MODIFIED REVERSE FLOW DI-7
NTS



PLAN VIEW
N.T.S.

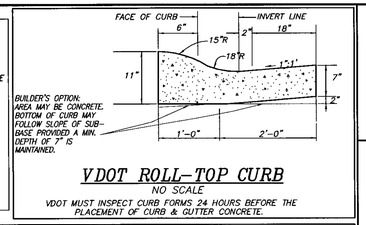
NOTES:
1. TRANSITIONS ARE TO BE FROM BACK OF CURB ONLY AND 20' IN LENGTH UNLESS OTHERWISE NOTED ON PLAN.
2. TRANSITION LOCATIONS:
A. BOTH SIDES OF ALL SAG INLETS.
B. FIRST TANGENT EACH SIDE OF CUL-DE-SAC BULB. HAVING A SAG INLET

CURB TRANSITION
(FROM ROLL-FACE TO CG-6 CURB)

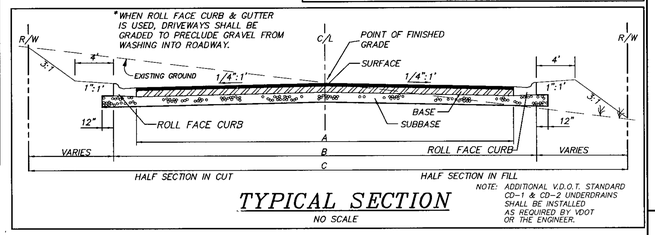


NOTE: PROPOSED PAVEMENT MUST TIE IN WITH EXISTING PAVEMENT

PAVEMENT JOINT DETAIL



VDOT ROLL-TOP CURB
NO SCALE
VDOT MUST INSPECT CURB FORMS 24 HOURS BEFORE THE PLACEMENT OF CURB & GUTTER CONCRETE.

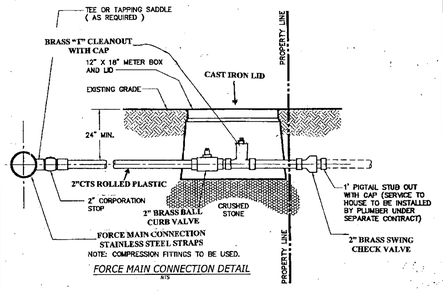


TYPICAL SECTION
NO SCALE
NOTE: ADDITIONAL V.D.O.T. STANDARD CD-1 & CD-2 UNDERDRAINS SHALL BE INSTALLED AS REQUIRED BY VDOT OR THE ENGINEER.

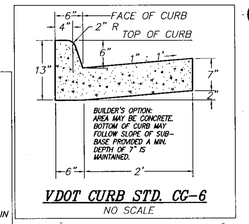
ROAD CLASSIFICATION SCHEDULE

ROAD NAMES ③ STA. TO STA.	VPD	PAVEMENT DESIGN ①② SUBBASE	BASE	SURFACE	"A" PVMT. WIDTH E/P - E/P	"B" B/C-B/C	"C" R/W WIDTH
LYNN CREEK DRIVE STA. 0+00 TO STA. 7+75	190		6" 21-B	2" SM-9.5A	23	29	50
LYNN CREEK DRIVE STA. 7+75 TO STA. 13+50	140		6" 21-B	2" SM-9.5A	23	29	50

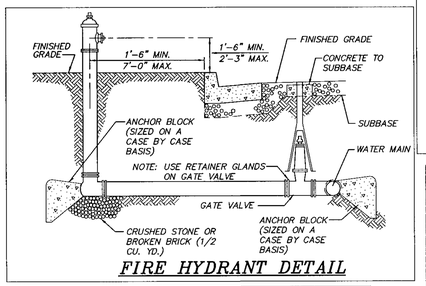
① PAVEMENT SECTIONS ARE BASED ON A MINIMUM DESIGN CBR VALUE OF 10. PAVEMENT DESIGN MAY BE REVISED DUE TO ACTUAL SUBGRADE CONDITIONS.
② A PRIME COAT SHALL BE APPLIED BETWEEN THE AGGREGATE BASE AND ASPHALT COURSES IN ACCORDANCE WITH V.D.O.T. STANDARDS.
REFER TO PLAN SHEET FOR THE END OF CURB AND GUTTER.



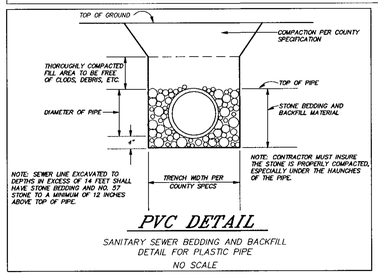
FORCE MAIN CONNECTION DETAIL
NTS



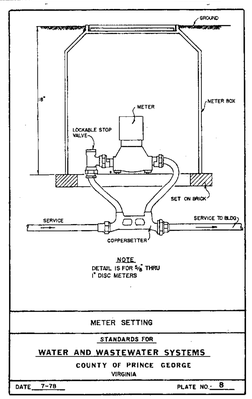
VDOT CURB STD. CG-6
NO SCALE

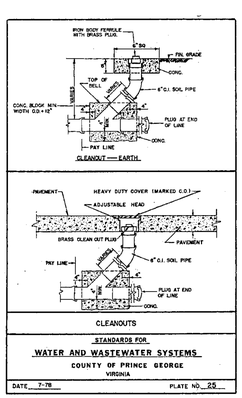


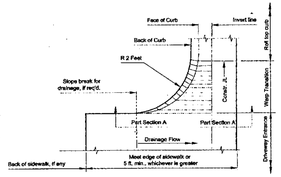
FIRE HYDRANT DETAIL



PVC DETAIL
SANITARY SEWER BEDDING AND BACKFILL DETAIL FOR PLASTIC PIPE
NO SCALE

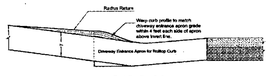






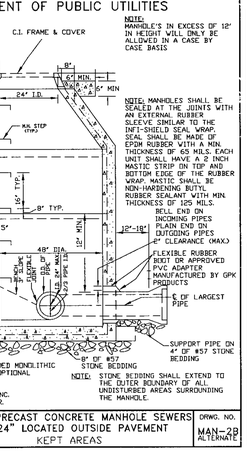
Part Plan of Entrance Transition

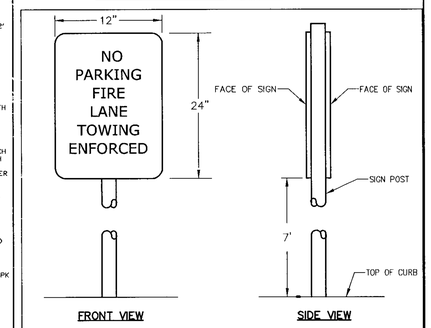
FIGURE 7 - ROLL TOP CURB ENTRANCE DETAIL



Part Section A-A

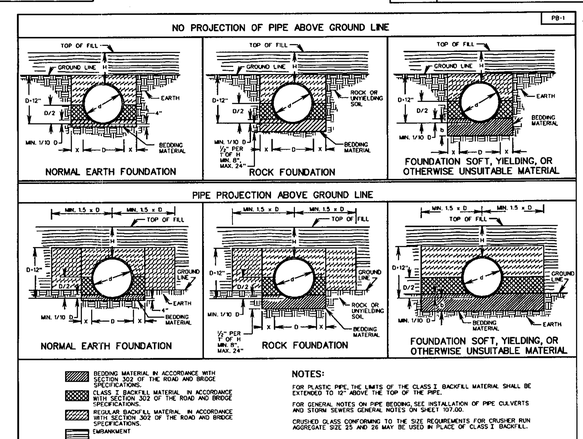
FIGURE 8 ROLLTOP CURB ENTRANCE DETAIL SECTION

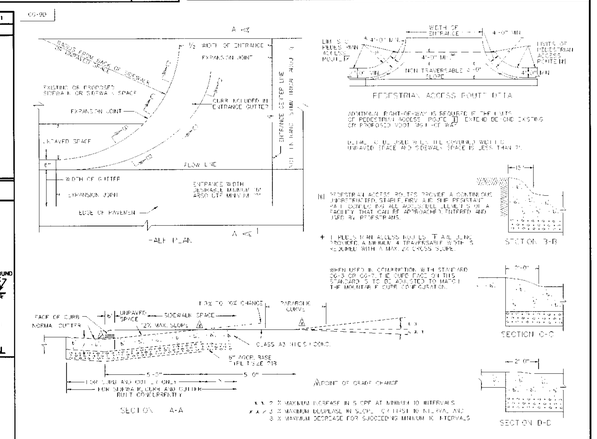




NOTES:
THIS DRAWING IS FOR GUIDANCE ONLY. FOR MORE ACCURATE DETAILS RELATED TO SIGN FABRICATION SPECIFICATIONS REFER TO THE VIRGINIA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
SIGN COLORS: RED LETTERS AND BORDER ON A REFLECTORIZED WHITE BACKGROUND.
LETTERS: TWO (2) INCH "C" SERIES.

FIRE LANE SIGN
NO SCALE





COMMONWEALTH OF VIRGINIA
DERRICK A. JOHNSON
Lic. No. 24761
1-21-08
PROFESSIONAL ENGINEER

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YOUR VISION ACHIEVED THROUGH OURS.

Site Development | Residential | Infrastructure | Technology

DATE	REVISION DESCRIPTION
11-12-07	COUNTY COMMENTS
01-21-08	COUNTY COMMENTS

DATE	31 AUG 2007
DRAWN BY	K. HALPAUS
DESIGNED BY	K. HALPAUS
CHECKED BY	D. JOHNSON
SCALE	NONE
JOB NO.	24423
SHEET NO.	C1.1

TIMMONS GROUP

MEADOWS AT PRINCE GEORGE - SECTION 4
BLAND DISTRICT * PRINCE GEORGE COUNTY, VIRGINIA
GENERAL NOTES AND TYPICAL SECTIONS

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