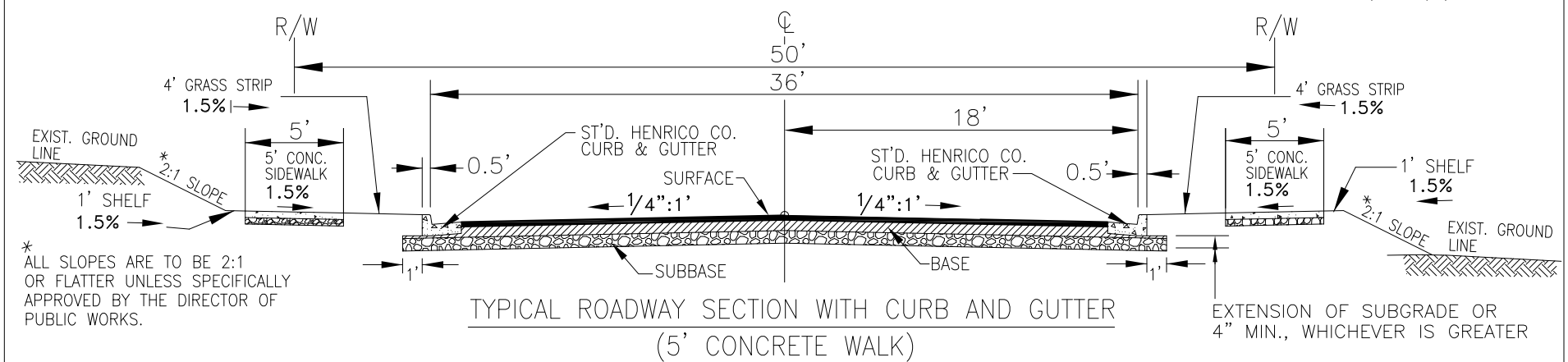
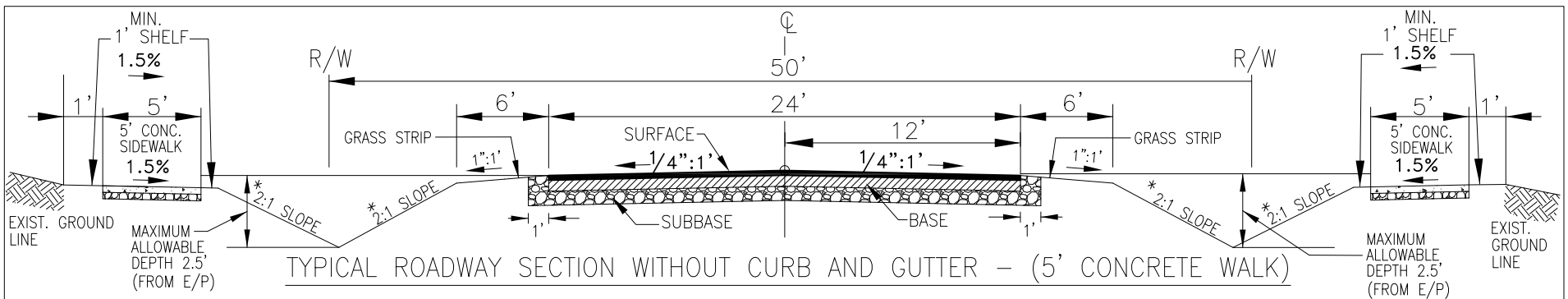

Appendix B – Road Sections

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1. THE SHOULDER WIDTH (NON CURB AND GUTTER SECTION) OR PEDESTRIAN SHELF (CURB AND GUTTER SECTION) WILL BE REQUIRED TO BE EXTENDED BEYOND THE RIGHT-OF-WAY, WITH A PERMANENT EASEMENT PROVIDED, TO ACCOMMODATE THE INSTALLATION OF GUARDRAIL, ROAD-SIDE DITCH, AND/OR SIDEWALK, WHERE REQUIRED BY THE COUNTY.
2. THE PAVEMENT DEPTHS ARE MINIMUM COMPACTED DEPTHS.
3. THE PAVEMENT DESIGN REQUIRED IS BASED ON A MINIMUM CBR VALUE OF 10. INCREASES TO THE DESIGN MAY BE REQUIRED BASED ON SOIL CONDITIONS AT THE TIME OF CONSTRUCTION. FINAL PAVEMENT DESIGNS MUST BE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.
4. UNDERDRAINS SHALL BE INSTALLED ON ALL ROADWAYS IN ACCORDANCE WITH VDOT SPECIFICATIONS AND THE REQUIREMENTS OF THIS MANUAL.
5. MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS AND STANDARDS, EXCEPT WHERE COUNTY STANDARDS ARE APPLICABLE.
6. IF AN IRRIGATION SYSTEM IS PROPOSED WITHIN THE RIGHT-OF-WAY LIMITS, A MAINTENANCE AGREEMENT MUST BE PROVIDED BETWEEN THE DEVELOPER AND THE COUNTY OF HENRICO.
7. A UNIFORM CROSS SECTION SLOPE AND PAVEMENT DESIGN ARE REQUIRED FOR ALL ROADWAYS. SLOPES WHICH EXTEND BEYOND THE RIGHT OF WAY SHALL BE IN PERMANENT EASEMENTS.
8. ALL ROADSIDE DITCHES SHALL BE SEEDED AND HAVE A PERMANENT STAND OF GRASS AS A MINIMUM. WHERE THE 10-YEAR DESIGN VELOCITY EXCEEDS FOUR (4) FEET PER SECOND, JUTE MESH OR OTHER CHANNEL LINING SHALL BE INSTALLED. IF THE 10-YEAR DESIGN VELOCITY EXCEEDS SEVEN (7) FEET PER SECOND, THE ROADSIDE DITCH SHALL BE LINED WITH EITHER RIPRAP OR CONCRETE. ALTERNATE CHANNEL LININGS MAY BE ACCEPTABLE BASED UPON SOIL SAMPLES AND CERTIFIED DESIGN BY A LICENSED PROFESSIONAL ENGINEER UPON APPROVAL BY THE COUNTY ENGINEER.
9. THE DEVELOPER/ENGINEER SHALL WORK WITH TRAFFIC ENGINEERING ON THE LOCATION OF BUMP OUTS. SEE DETAIL B-4 & B-5.
10. FOR MINIMUM PAVEMENT DESIGN REQUIREMENTS FOR TYPICAL SECTION CLASSIFICATIONS I-IV REFER SHEET B3 IN APPENDIX B.

TYPICAL SECTION - CLASSIFICATION I-IV

REV. NOV. 15, 2021

SEPTEMBER 1, 2021



County of Henrico
Department of Public Works

FHENTYPSEC-CL-1 thru 4-5SW-PUB-RW.DWG

**TYPICAL SECTION - CLASSIFICATION I
(0-250 VPD)**

MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
6" AGGREGATE SUBBASE MATERIAL	2" ASPHALT INTERMEDIATE BASE COURSE	2" ASPHALT SURFACE COURSE

**TYPICAL SECTION - CLASSIFICATION II
(251-400 VPD)**

MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
6" AGGREGATE SUBBASE MATERIAL	2" ASPHALT INTERMEDIATE BASE COURSE	2" ASPHALT SURFACE COURSE

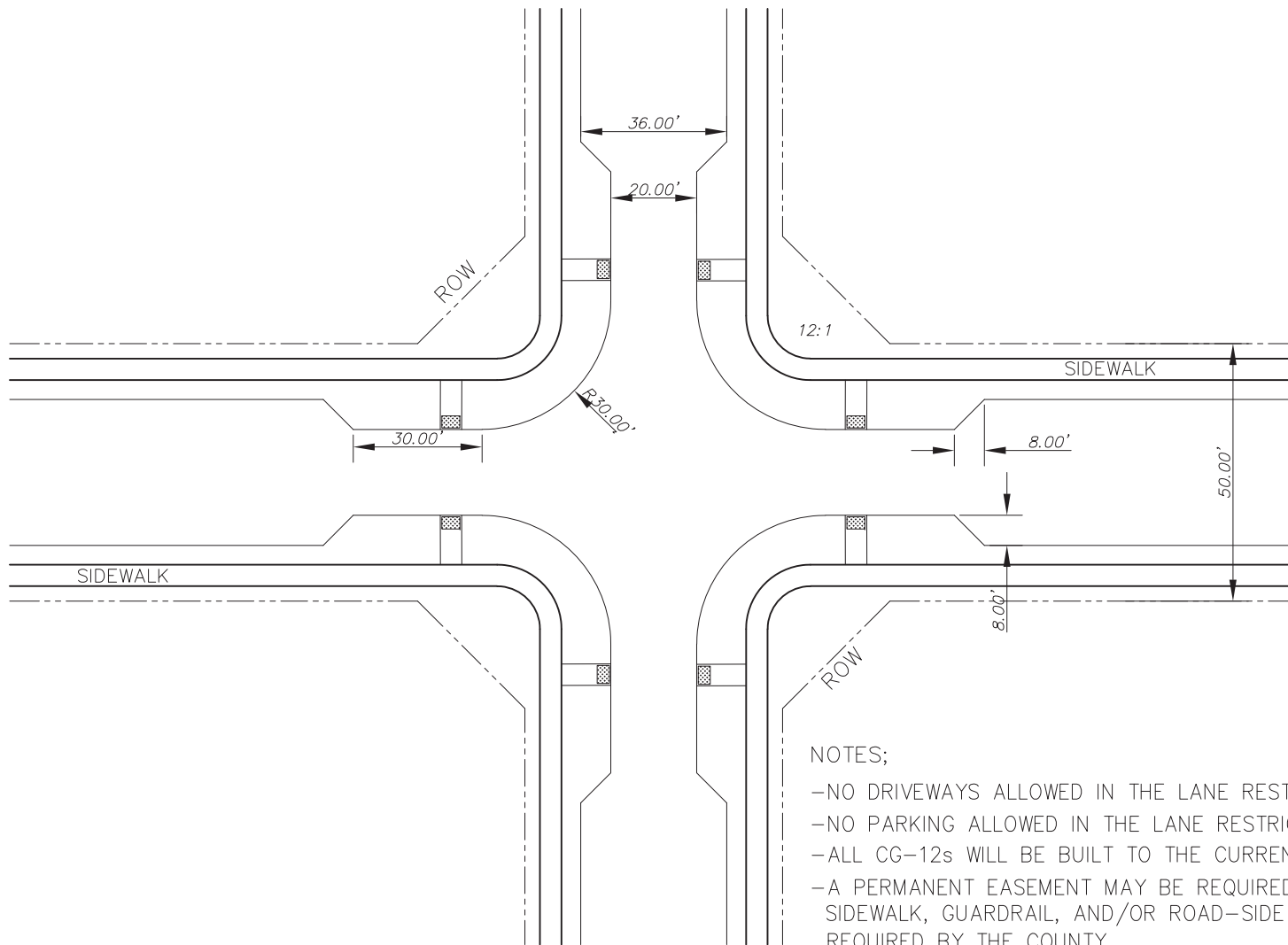
**TYPICAL SECTION - CLASSIFICATION III
(401-750 VPD)**

MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
7" AGGREGATE SUBBASE MATERIAL	2" ASPHALT INTERMEDIATE BASE COURSE	2" ASPHALT SURFACE COURSE

**TYPICAL SECTION - CLASSIFICATION IV
(751-1000 VPD)**

MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
8" AGGREGATE SUBBASE MATERIAL	2" ASPHALT INTERMEDIATE BASE COURSE	2" ASPHALT SURFACE COURSE





NOTES;

- NO DRIVEWAYS ALLOWED IN THE LANE RESTRICTION LOCATIONS
- NO PARKING ALLOWED IN THE LANE RESTRICTION LOCATIONS
- ALL CG-12s WILL BE BUILT TO THE CURRENT VDOT STANDARDS
- A PERMANENT EASEMENT MAY BE REQUIRED TO ACCOMODATE SIDEWALK, GUARDRAIL, AND/OR ROAD-SIDE DITCH, WHERE REQUIRED BY THE COUNTY



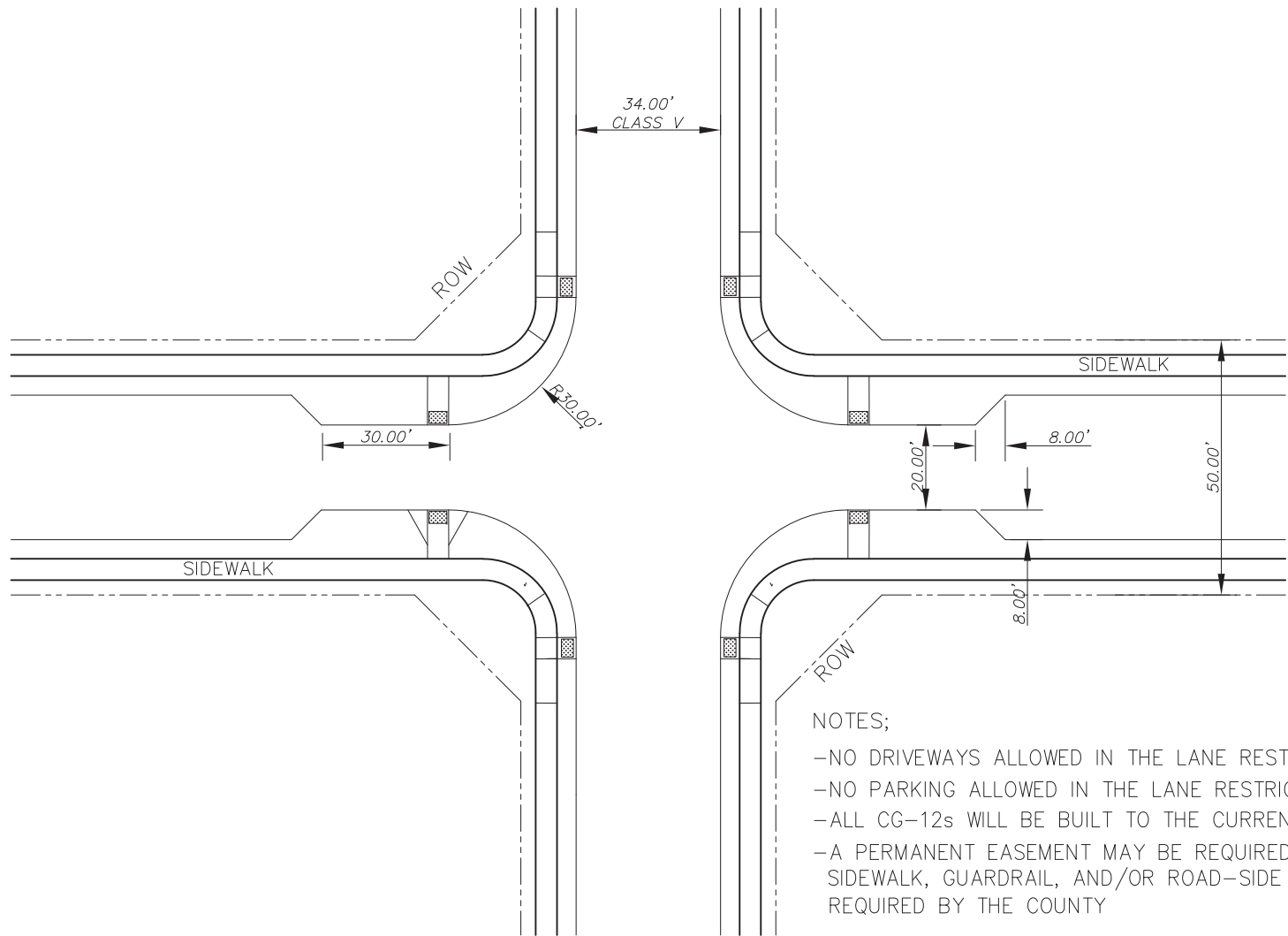
SUBDIVISION INTERSECTION DESIGN CLASS I-IV INTERSECTING WITH CLASS I-IV

County of Henrico
Department of Public Works

REV/SEPTEMBER 10, 2021

SEPTEMBER 1, 2021

B-4.DWG

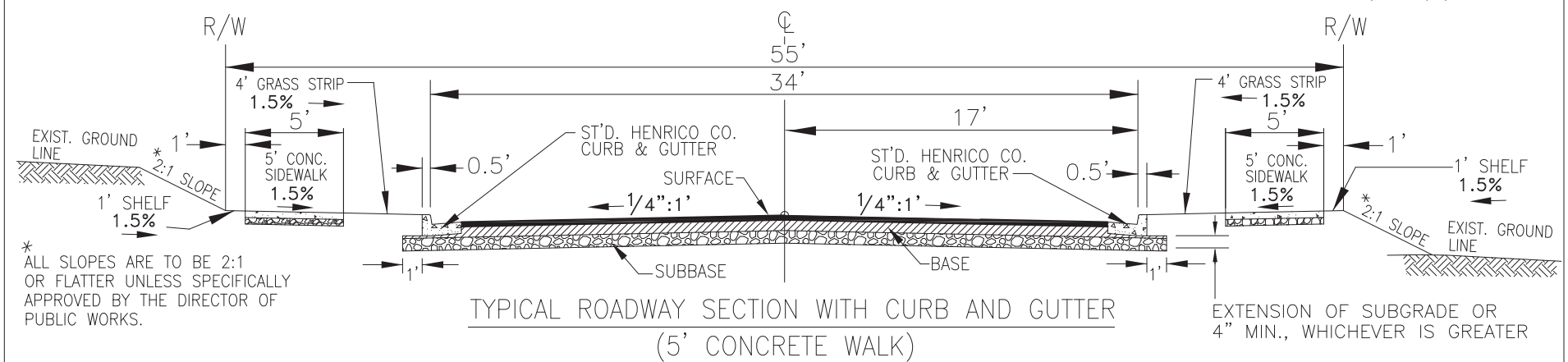
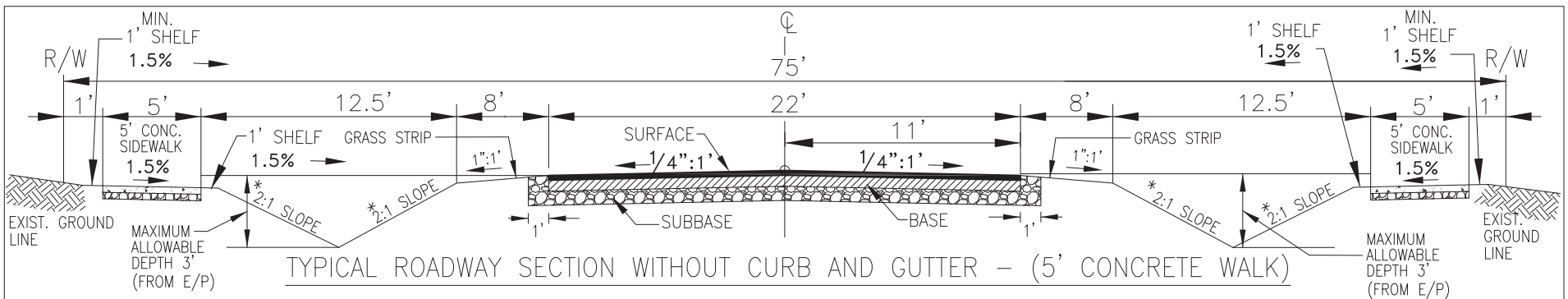


- NOTES;
- NO DRIVEWAYS ALLOWED IN THE LANE RESTRICTION LOCATIONS
 - NO PARKING ALLOWED IN THE LANE RESTRICTION LOCATIONS
 - ALL CG-12s WILL BE BUILT TO THE CURRENT VDOT STANDARDS
 - A PERMANENT EASEMENT MAY BE REQUIRED TO ACCOMODATE SIDEWALK, GUARDRAIL, AND/OR ROAD-SIDE DITCH, WHERE REQUIRED BY THE COUNTY



SUBDIVISION INTERSECTION DESIGN
 CLASS I-IV INTERSECTING WITH CLASS V
 County of Henrico
 Department of Public Works

REV/SEPTEMBER 10, 2021
SEPTEMBER 1, 2021
B-5.DWG



* ALL SLOPES ARE TO BE 2:1 OR FLATTER UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
8" AGGREGATE BASE MATERIAL	4" ASPHALT BASE COURSE	2" ASPHALT SURFACE COURSE

1. THE SHOULDER WIDTH (NON CURB AND GUTTER SECTION) OR PEDESTRIAN SHELF (CURB AND GUTTER SECTION) WILL BE REQUIRED TO BE EXTENDED BEYOND THE RIGHT-OF-WAY, WITH A PERMANENT EASEMENT PROVIDED, TO ACCOMMODATE THE INSTALLATION OF GUARDRAIL, WHERE NEEDED.
2. THE PAVEMENT DEPTHS ARE MINIMUM COMPACTED DEPTHS.
3. THE PAVEMENT DESIGN REQUIRED IS BASED ON A MINIMUM CBR VALUE OF 10. INCREASES TO THE DESIGN MAY BE REQUIRED BASED ON SOIL CONDITIONS AT THE TIME OF CONSTRUCTION. FINAL PAVEMENT DESIGNS MUST BE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.
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6. IF AN IRRIGATION SYSTEM IS PROPOSED WITHIN THE RIGHT-OF-WAY LIMITS, A MAINTENANCE AGREEMENT MUST BE PROVIDED BETWEEN THE DEVELOPER AND THE COUNTY OF HENRICO.
7. A UNIFORM CROSS SECTION SLOPE AND PAVEMENT DESIGN ARE REQUIRED FOR ALL ROADWAYS. SLOPES WHICH EXTEND BEYOND THE RIGHT OF WAY SHALL BE IN PERMANENT EASEMENTS.
8. ALL ROADSIDE DITCHES SHALL BE SEEDED AND HAVE A PERMANENT STAND OF GRASS AS A MINIMUM. WHERE THE 10-YEAR DESIGN VELOCITY EXCEEDS FOUR (4) FEET PER SECOND, JUTE MESH OR OTHER CHANNEL LINING SHALL BE INSTALLED. IF THE 10-YEAR DESIGN VELOCITY EXCEEDS SEVEN (7) FEET PER SECOND, THE ROADSIDE DITCH SHALL BE LINED WITH EITHER RIPRAP OR CONCRETE. ALTERNATE CHANNEL LININGS MAY BE ACCEPTABLE BASED UPON SOIL SAMPLES AND CERTIFIED DESIGN BY A LICENSED PROFESSIONAL ENGINEER UPON APPROVAL BY THE COUNTY ENGINEER.

TYPICAL SECTION - CLASSIFICATION V (1001-5000 VPD)

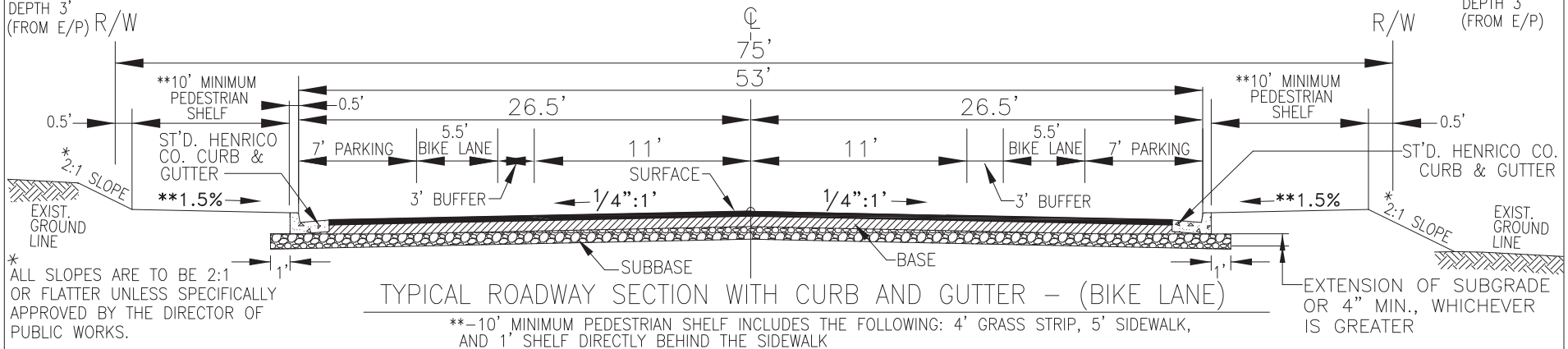
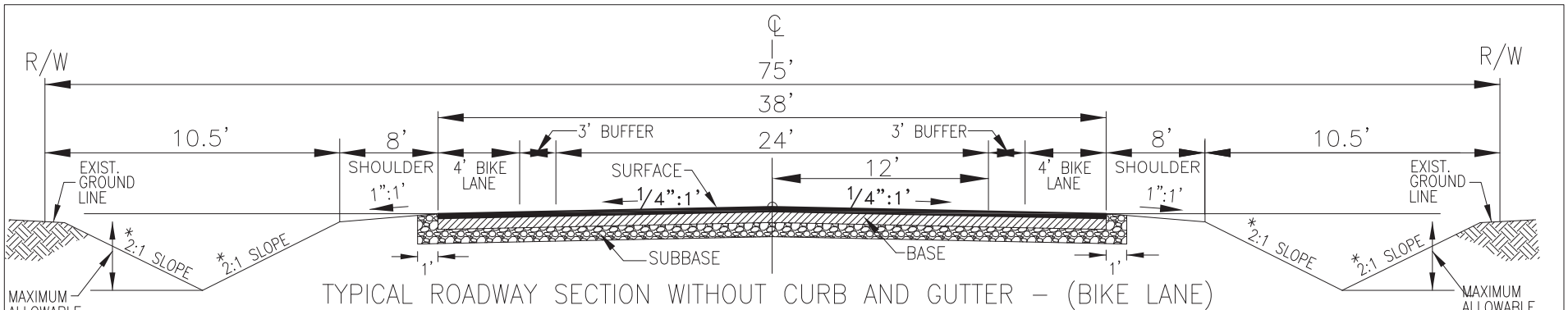
(5' CONCRETE WALK WITHIN PUBLIC RIGHT-OF-WAY)

County of Henrico
Department of Public Works

SEPTEMBER 1, 2021

HENTYPSEC-CL-5-5SW-PUB-RW.DWG





* ALL SLOPES ARE TO BE 2:1 OR FLATTER UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

** - 10' MINIMUM PEDESTRIAN SHELF INCLUDES THE FOLLOWING: 4' GRASS STRIP, 5' SIDEWALK, AND 1' SHELF DIRECTLY BEHIND THE SIDEWALK

EXTENSION OF SUBGRADE OR 4" MIN., WHICHEVER IS GREATER

MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
8" AGGREGATE BASE MATERIAL	4" ASPHALT BASE COURSE	2" ASPHALT SURFACE COURSE

1. THE SHOULDER WIDTH (NON CURB AND GUTTER SECTION) OR PEDESTRIAN SHELF (CURB AND GUTTER SECTION) WILL BE REQUIRED TO BE EXTENDED BEYOND THE RIGHT-OF-WAY, WITH A PERMANENT EASEMENT PROVIDED, TO ACCOMMODATE THE INSTALLATION OF GUARDRAIL, WHERE NEEDED.
2. THE PAVEMENT DEPTHS ARE MINIMUM COMPACTED DEPTHS.
3. THE PAVEMENT DESIGN REQUIRED IS BASED ON A MINIMUM CBR VALUE OF 10. INCREASES TO THE DESIGN MAY BE REQUIRED BASED ON SOIL CONDITIONS AT THE TIME OF CONSTRUCTION. FINAL PAVEMENT DESIGNS MUST BE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.
4. UNDERDRAINS SHALL BE INSTALLED ON ALL ROADWAYS IN ACCORDANCE WITH VDOT SPECIFICATIONS AND THE REQUIREMENTS OF THIS MANUAL.

5. MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS AND STANDARDS, EXCEPT WHERE COUNTY STANDARDS ARE APPLICABLE.
6. IF AN IRRIGATION SYSTEM IS PROPOSED WITHIN THE RIGHT-OF-WAY LIMITS, A MAINTENANCE AGREEMENT MUST BE PROVIDED BETWEEN THE DEVELOPER AND THE COUNTY OF HENRICO.
7. A UNIFORM CROSS SECTION SLOPE AND PAVEMENT DESIGN ARE REQUIRED FOR ALL ROADWAYS. SLOPES WHICH EXTEND BEYOND THE RIGHT OF WAY SHALL BE IN PERMANENT EASEMENTS.
8. ALL ROADSIDE DITCHES SHALL BE SEEDED AND HAVE A PERMANENT STAND OF GRASS AS A MINIMUM. WHERE THE 10-YEAR DESIGN VELOCITY EXCEEDS FOUR (4) FEET PER SECOND, JUTE MESH OR OTHER CHANNEL LINING SHALL BE INSTALLED. IF THE 10-YEAR DESIGN VELOCITY EXCEEDS SEVEN (7) FEET PER SECOND, THE ROADSIDE DITCH SHALL BE LINED WITH EITHER RIPRAP OR CONCRETE. ALTERNATE CHANNEL LININGS MAY BE ACCEPTABLE BASED UPON SOIL SAMPLES AND CERTIFIED DESIGN BY A LICENSED PROFESSIONAL ENGINEER UPON APPROVAL BY THE COUNTY ENGINEER.

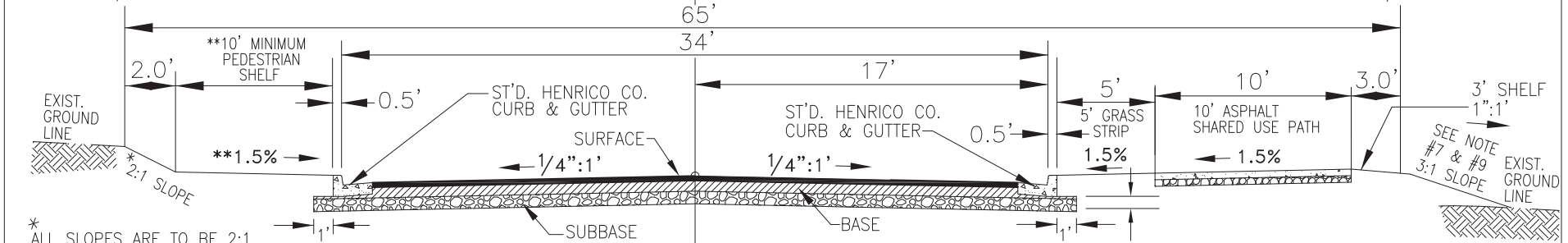
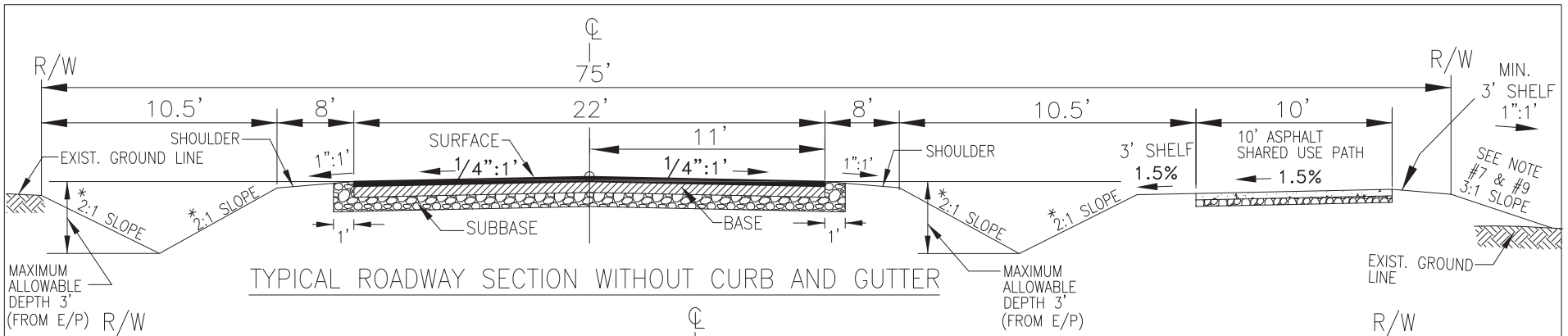


TYPICAL SECTION - CLASSIFICATION V (1001-5000 VPD)

(BIKE LANE WITHIN PUBLIC RIGHT-OF-WAY)
County of Henrico
Department of Public Works

SEPTEMBER 1, 2021

FHENTYPSEC-CL-5-BL-PUB-RW.DWG



* ALL SLOPES ARE TO BE 2:1 OR FLATTER UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

**-10' MINIMUM PEDESTRIAN SHELF INCLUDES THE FOLLOWING:
4' GRASS STRIP, 5' SIDEWALK, AND 1' SHELF DIRECTLY BEHIND THE SIDEWALK

MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
8" AGGREGATE BASE MATERIAL	4" ASPHALT BASE COURSE	2" ASPHALT SURFACE COURSE

1. THE SHOULDER WIDTH (NON CURB AND GUTTER SECTION) OR PEDESTRIAN SHELF (CURB AND GUTTER SECTION) WILL BE REQUIRED TO BE EXTENDED BEYOND THE RIGHT-OF-WAY, WITH A PERMANENT EASEMENT PROVIDED, TO ACCOMMODATE THE INSTALLATION OF GUARDRAIL OR HANDRAIL, WHERE NEEDED.
2. THE PAVEMENT DEPTHS ARE MINIMUM COMPACTED DEPTHS.
3. THE PAVEMENT DESIGN REQUIRED IS BASED ON A MINIMUM CBR VALUE OF 10. INCREASES TO THE DESIGN MAY BE REQUIRED BASED ON SOIL CONDITIONS AT THE TIME OF CONSTRUCTION. FINAL PAVEMENT DESIGNS MUST BE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.
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6. IF AN IRRIGATION SYSTEM IS PROPOSED WITHIN THE RIGHT-OF-WAY LIMITS, A MAINTENANCE AGREEMENT MUST BE PROVIDED BETWEEN THE DEVELOPER AND THE COUNTY OF HENRICO.
7. A UNIFORM CROSS SECTION SLOPE AND PAVEMENT DESIGN ARE REQUIRED FOR ALL ROADWAYS. SLOPES WHICH EXTEND BEYOND THE RIGHT OF WAY SHALL BE IN PERMANENT EASEMENTS.
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9. FOR SLOPE HEIGHTS GREATER THAN 6' OR STEEPER THAN 3:1 AN APPROVED SAFETY RAIL SHALL BE REQUIRED.
10. BUMPOUTS SHALL BE REQUIRED WITHIN RESIDENTIAL NEIGHBORHOODS. SEE DETAIL B-4 & B-5.

TYPICAL SECTION - CLASSIFICATION V (1001-5000 VPD)

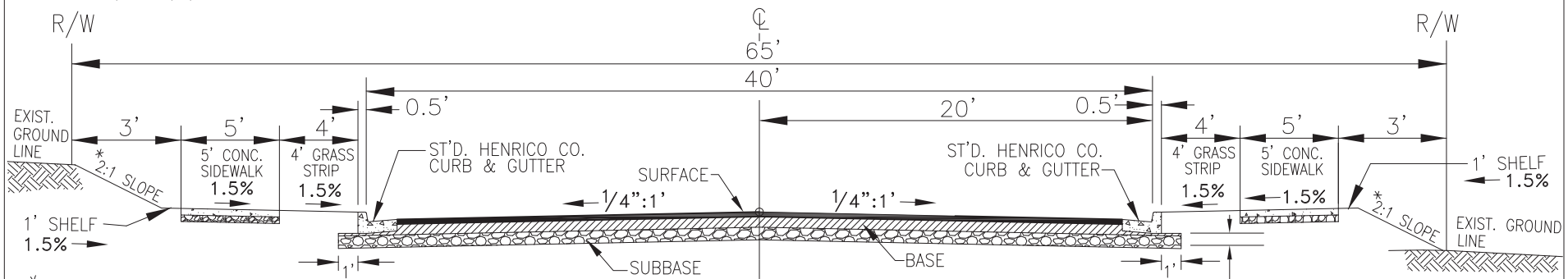
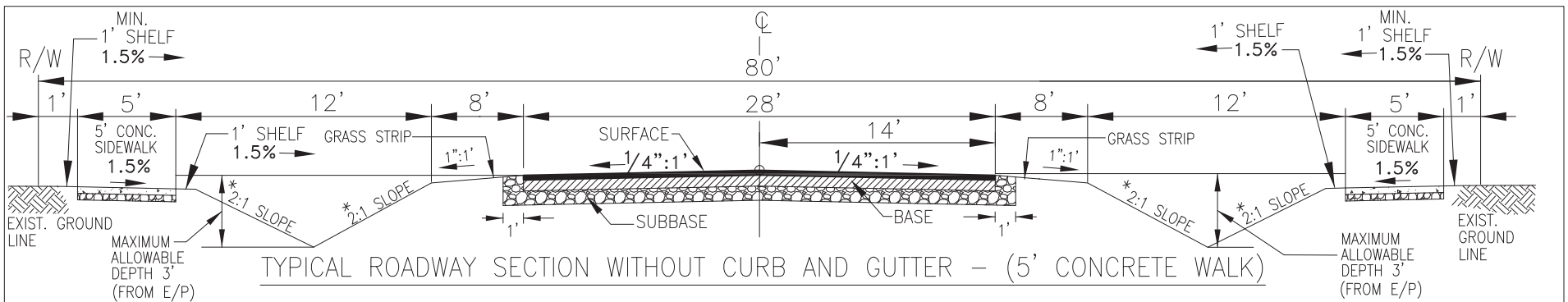
(10' SHARED USE ASPHALT PATH IN PUBLIC RIGHT-OF-WAY)

County of Henrico
Department of Public Works

SEPTEMBER 1, 2021

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* ALL SLOPES ARE TO BE 2:1 OR FLATTER UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

EXTENSION OF SUBGRADE OR 4" MIN., WHICHEVER IS GREATER

MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
9" AGGREGATE BASE MATERIAL	5" ASPHALT BASE COURSE	2" ASPHALT SURFACE COURSE

1. THE SHOULDER WIDTH (NON CURB AND GUTTER SECTION) OR PEDESTRIAN SHELF (CURB AND GUTTER SECTION) WILL BE REQUIRED TO BE EXTENDED BEYOND THE RIGHT-OF-WAY, WITH A PERMANENT EASEMENT PROVIDED, TO ACCOMMODATE THE INSTALLATION OF GUARDRAIL, WHERE NEEDED.
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TYPICAL SECTION - CLASSIFICATION VI (5001-14000 VPD)

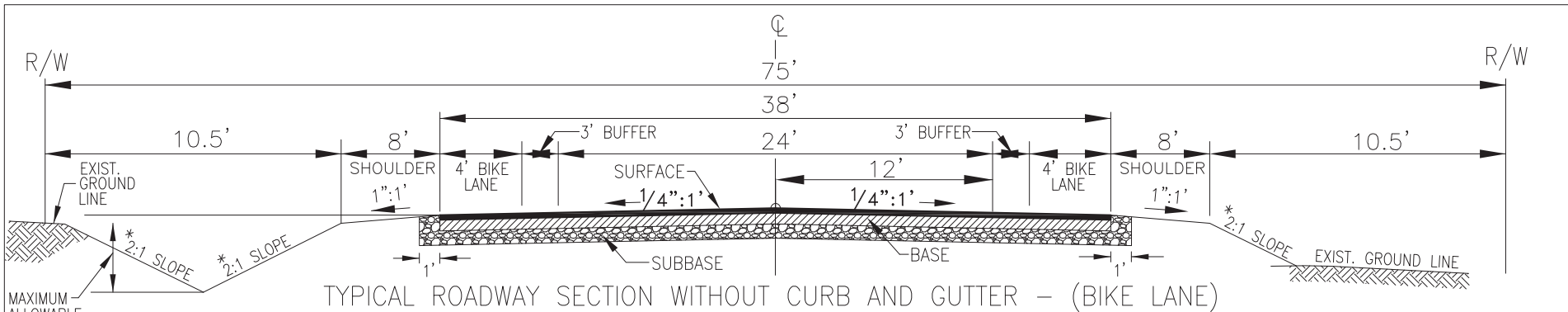
(5' CONCRETE WALK WITHIN PUBLIC RIGHT-OF-WAY)

County of Henrico
Department of Public Works

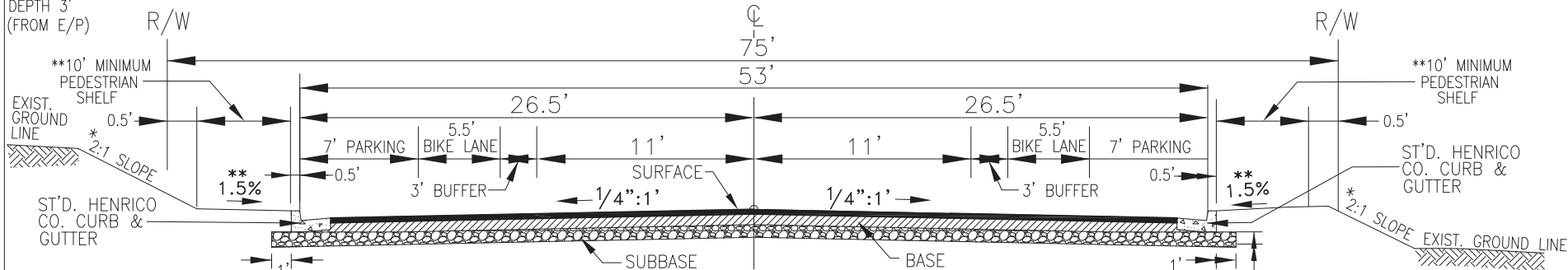
SEPTEMBER 1, 2021

FHENTYPSEC-CL-6-5SW-PUB-RW.DWG





TYPICAL ROADWAY SECTION WITHOUT CURB AND GUTTER - (BIKE LANE)



TYPICAL ROADWAY SECTION WITH CURB AND GUTTER - (BIKE LANE)

* ALL SLOPES ARE TO BE 2:1 OR FLATTER UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

** -10' MINIMUM PEDESTRIAN SHELF INCLUDES THE FOLLOWING: 4' GRASS STRIP, 5' SIDEWALK, AND 1' SHELF DIRECTLY BEHIND THE SIDEWALK

EXTENSION OF SUBGRADE OR 4" MIN., WHICHEVER IS GREATER

MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
9" AGGREGATE BASE MATERIAL	5" ASPHALT BASE COURSE	2" ASPHALT SURFACE COURSE

1. THE SHOULDER WIDTH (NON CURB AND GUTTER SECTION) OR PEDESTRIAN SHELF (CURB AND GUTTER SECTION) WILL BE REQUIRED TO BE EXTENDED BEYOND THE RIGHT-OF-WAY, WITH A PERMANENT EASEMENT PROVIDED, TO ACCOMMODATE THE INSTALLATION OF GUARDRAIL, WHERE NEEDED.
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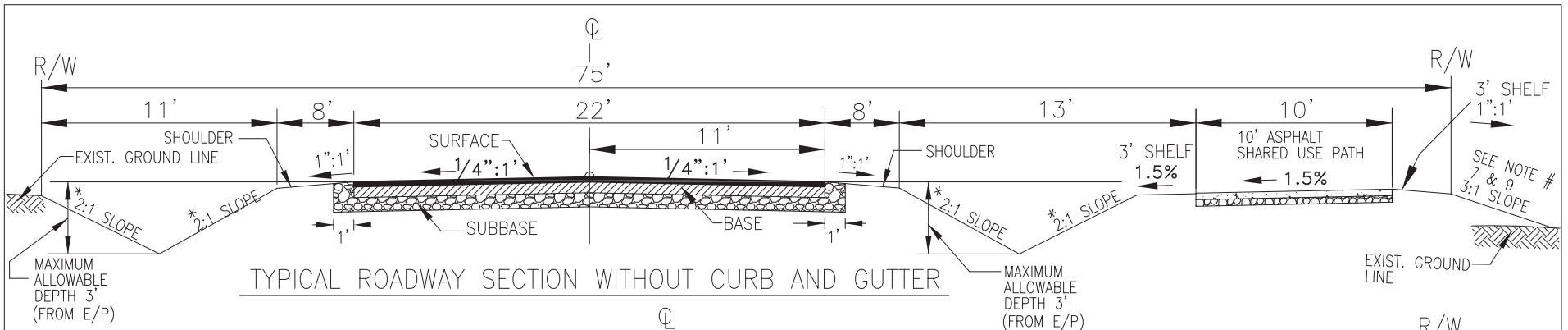
TYPICAL SECTION - CLASSIFICATION VI (5001-14000 VPD)

(BIKE LANE WITHIN PUBLIC RIGHT-OF-WAY)
County of Henrico
Department of Public Works

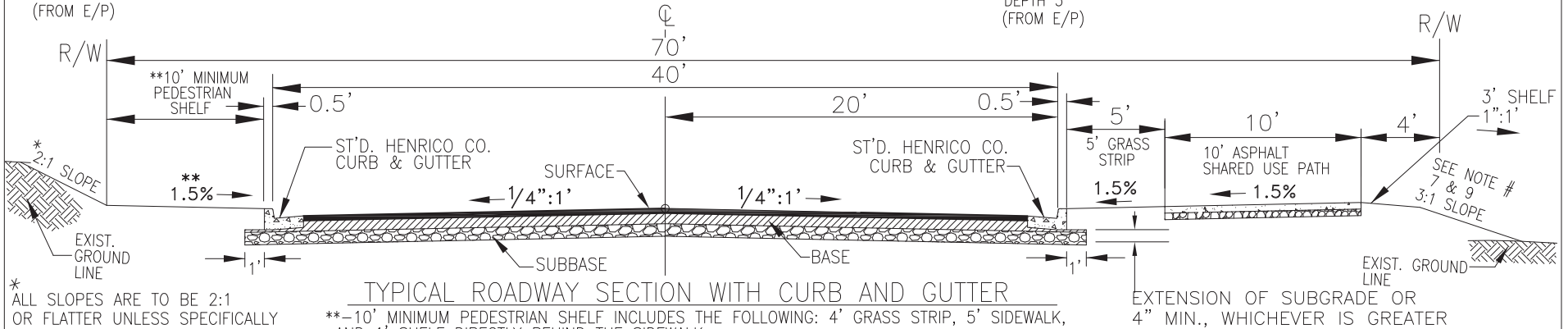
SEPTEMBER 1, 2021

FHENTYPSEC-CL-6-BL-PUB-RW.DWG

B-10



TYPICAL ROADWAY SECTION WITHOUT CURB AND GUTTER



TYPICAL ROADWAY SECTION WITH CURB AND GUTTER

* ALL SLOPES ARE TO BE 2:1 OR FLATTER UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

**-10' MINIMUM PEDESTRIAN SHELF INCLUDES THE FOLLOWING: 4' GRASS STRIP, 5' SIDEWALK, AND 1' SHELF DIRECTLY BEHIND THE SIDEWALK

EXTENSION OF SUBGRADE OR 4" MIN., WHICHEVER IS GREATER

MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
9" AGGREGATE BASE MATERIAL	5" ASPHALT BASE COURSE	2" ASPHALT SURFACE COURSE

1. THE SHOULDER WIDTH (NON CURB AND GUTTER SECTION) OR PEDESTRIAN SHELF (CURB AND GUTTER SECTION) WILL BE REQUIRED TO BE EXTENDED BEYOND THE RIGHT-OF-WAY, WITH A PERMANENT EASEMENT PROVIDED, TO ACCOMMODATE THE INSTALLATION OF GUARDRAIL OR HANDRAIL, WHERE NEEDED.
2. THE PAVEMENT DEPTHS ARE MINIMUM COMPACTED DEPTHS.
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9. FOR SLOPE HEIGHTS GREATER THAN 6' OR STEEPER THAN 3:1 AN APPROVED SAFETY RAIL SHALL BE REQUIRED.

TYPICAL SECTION - CLASSIFICATION VI (5001-14000 VPD)

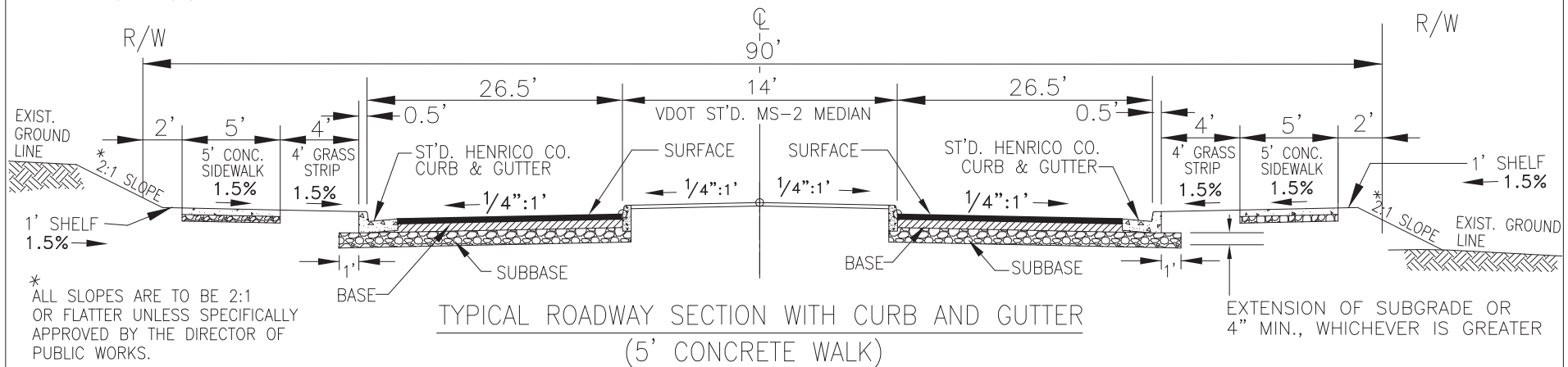
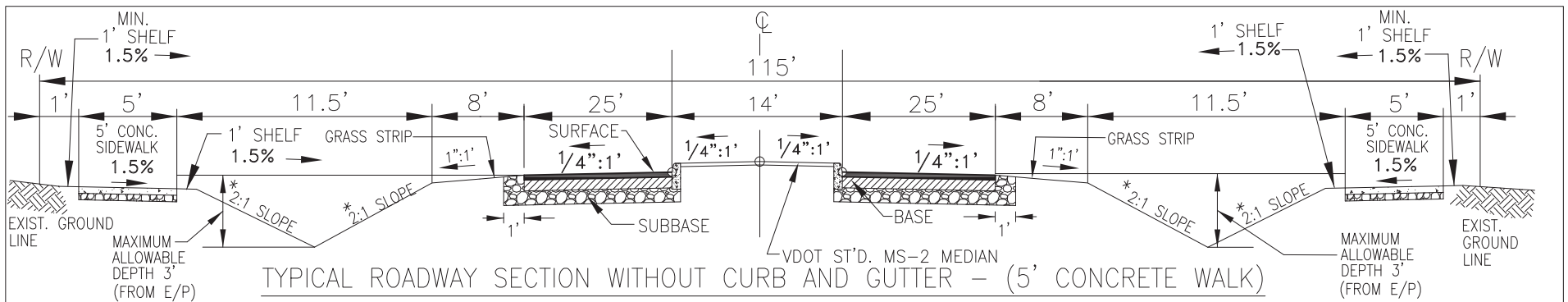
(10' SHARED USE ASPHALT PATH IN PUBLIC RIGHT-OF-WAY)

County of Henrico
Department of Public Works

SEPTEMBER 1, 2021

FHENTYPSEC-CL-6-10SU-PUB-RW.DWG





* ALL SLOPES ARE TO BE 2:1 OR FLATTER UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
11" AGGREGATE BASE MATERIAL	6" ASPHALT BASE COURSE	2" ASPHALT SURFACE COURSE

1. THE SHOULDER WIDTH (NON CURB AND GUTTER SECTION) OR PEDESTRIAN SHELF (CURB AND GUTTER SECTION) WILL BE REQUIRED TO BE EXTENDED BEYOND THE RIGHT-OF-WAY, WITH A PERMANENT EASEMENT PROVIDED, TO ACCOMMODATE THE INSTALLATION OF GUARDRAIL, WHERE NEEDED.
2. THE PAVEMENT DEPTHS ARE MINIMUM COMPACTED DEPTHS.
3. THE PAVEMENT DESIGN REQUIRED IS BASED ON A MINIMUM CBR VALUE OF 10. INCREASES TO THE DESIGN MAY BE REQUIRED BASED ON SOIL CONDITIONS AT THE TIME OF CONSTRUCTION. FINAL PAVEMENT DESIGNS MUST BE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.
4. UNDERDRAINS SHALL BE INSTALLED ON ALL ROADWAYS IN ACCORDANCE WITH VDOT SPECIFICATIONS AND THE REQUIREMENTS OF THIS MANUAL.

5. MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS AND STANDARDS, EXCEPT WHERE COUNTY STANDARDS ARE APPLICABLE.
6. IF AN IRRIGATION SYSTEM IS PROPOSED WITHIN THE RIGHT-OF-WAY LIMITS, A MAINTENANCE AGREEMENT MUST BE PROVIDED BETWEEN THE DEVELOPER AND THE COUNTY OF HENRICO.
7. A UNIFORM CROSS SECTION SLOPE AND PAVEMENT DESIGN ARE REQUIRED FOR ALL ROADWAYS. SLOPES WHICH EXTEND BEYOND THE RIGHT OF WAY SHALL BE IN PERMANENT EASEMENTS.
8. ALL ROADSIDE DITCHES SHALL BE SEEDED AND HAVE A PERMANENT STAND OF GRASS AS A MINIMUM. WHERE THE 10-YEAR DESIGN VELOCITY EXCEEDS FOUR (4) FEET PER SECOND, JUTE MESH OR OTHER CHANNEL LINING SHALL BE INSTALLED. IF THE 10-YEAR DESIGN VELOCITY EXCEEDS SEVEN (7) FEET PER SECOND, THE ROADSIDE DITCH SHALL BE LINED WITH EITHER RIPRAP OR CONCRETE. ALTERNATE CHANNEL LININGS MAY BE ACCEPTABLE BASED UPON SOIL SAMPLES AND CERTIFIED DESIGN BY A LICENSED PROFESSIONAL ENGINEER UPON APPROVAL BY THE COUNTY ENGINEER.
9. SOLID CONCRETE MEDIAN, ST'D. MS-1 REQUIRED WHERE THE MEDIAN WIDTH IS 6'-0" OR LESS.

TYPICAL SECTION - CLASSIFICATION VII (14001-30000 VPD)

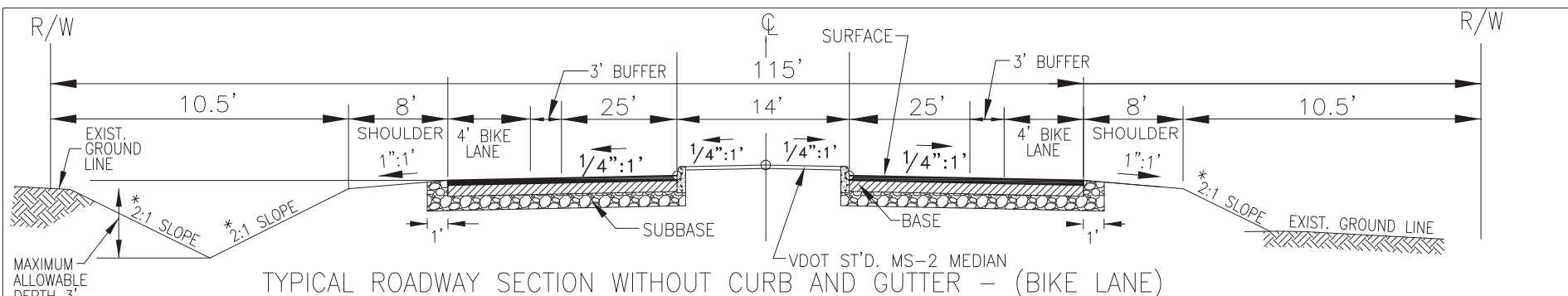
(5' CONCRETE WALK WITHIN PUBLIC RIGHT-OF-WAY)

County of Henrico
Department of Public Works

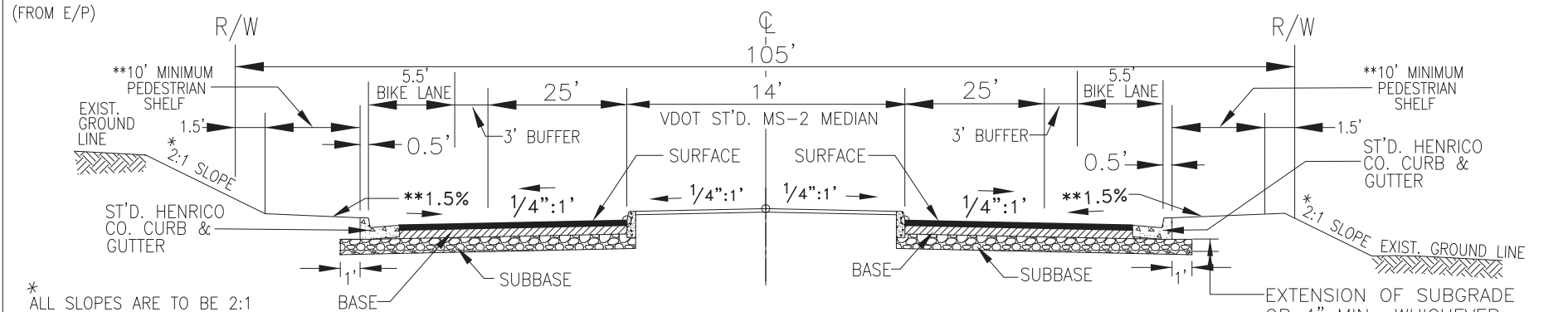
SEPTEMBER 1, 2021

FHENTYPSEC-CL-7-5SW-PUB-RW-rev.DWG





TYPICAL ROADWAY SECTION WITHOUT CURB AND GUTTER - (BIKE LANE)



TYPICAL ROADWAY SECTION WITH CURB AND GUTTER - (BIKE LANE)

* ALL SLOPES ARE TO BE 2:1 OR FLATTER UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

** - 10' MINIMUM PEDESTRIAN SHELF INCLUDES THE FOLLOWING: 4' GRASS STRIP, 5' SIDEWALK, AND 1' SHELF DIRECTLY BEHIND THE SIDEWALK

MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
11" AGGREGATE BASE MATERIAL	6" ASPHALT BASE COURSE	2" ASPHALT SURFACE COURSE

1. THE SHOULDER WIDTH (NON CURB AND GUTTER SECTION) OR PEDESTRIAN SHELF (CURB AND GUTTER SECTION) WILL BE REQUIRED TO BE EXTENDED BEYOND THE RIGHT-OF-WAY, WITH A PERMANENT EASEMENT PROVIDED, TO ACCOMMODATE THE INSTALLATION OF GUARDRAIL, WHERE NEEDED.
2. THE PAVEMENT DEPTHS ARE MINIMUM COMPACTED DEPTHS.
3. THE PAVEMENT DESIGN REQUIRED IS BASED ON A MINIMUM CBR VALUE OF 10. INCREASES TO THE DESIGN MAY BE REQUIRED BASED ON SOIL CONDITIONS AT THE TIME OF CONSTRUCTION. FINAL PAVEMENT DESIGNS MUST BE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.
4. UNDERDRAINS SHALL BE INSTALLED ON ALL ROADWAYS IN ACCORDANCE WITH VDOT SPECIFICATIONS AND THE REQUIREMENTS OF THIS MANUAL.

5. MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS AND STANDARDS, EXCEPT WHERE COUNTY STANDARDS ARE APPLICABLE.
6. IF AN IRRIGATION SYSTEM IS PROPOSED WITHIN THE RIGHT-OF-WAY LIMITS, A MAINTENANCE AGREEMENT MUST BE PROVIDED BETWEEN THE DEVELOPER AND THE COUNTY OF HENRICO.
7. A UNIFORM CROSS SECTION SLOPE AND PAVEMENT DESIGN ARE REQUIRED FOR ALL ROADWAYS. SLOPES WHICH EXTEND BEYOND THE RIGHT OF WAY SHALL BE IN PERMANENT EASEMENTS.
8. ALL ROADSIDE DITCHES SHALL BE SEEDED AND HAVE A PERMANENT STAND OF GRASS AS A MINIMUM. WHERE THE 10-YEAR DESIGN VELOCITY EXCEEDS FOUR (4) FEET PER SECOND, JUTE MESH OR OTHER CHANNEL LINING SHALL BE INSTALLED. IF THE 10-YEAR DESIGN VELOCITY EXCEEDS SEVEN (7) FEET PER SECOND, THE ROADSIDE DITCH SHALL BE LINED WITH EITHER RIPRAP OR CONCRETE. ALTERNATE CHANNEL LININGS MAY BE ACCEPTABLE BASED UPON SOIL SAMPLES AND CERTIFIED DESIGN BY A LICENSED PROFESSIONAL ENGINEER UPON APPROVAL BY THE COUNTY ENGINEER.
9. SOLID CONCRETE MEDIAN, ST'D. MS-1 REQUIRED WHERE THE MEDIAN WIDTH IS 6'-0" OR LESS.

TYPICAL SECTION - CLASSIFICATION VII (14001-30000 VPD)

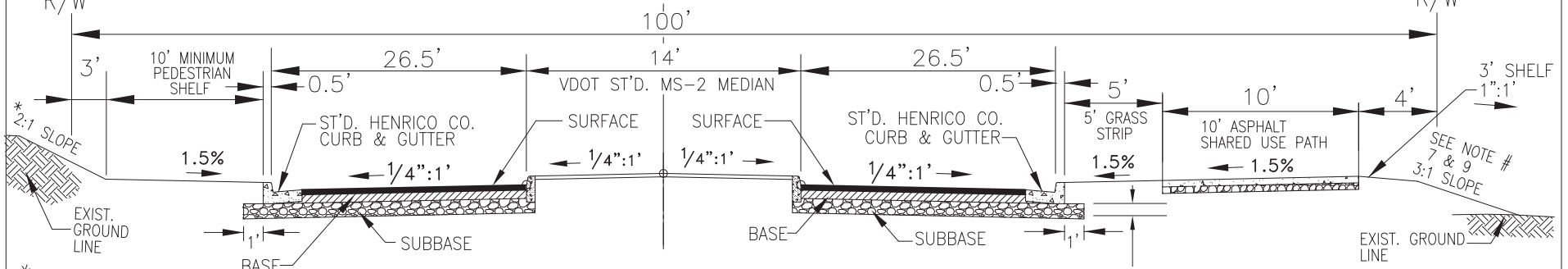
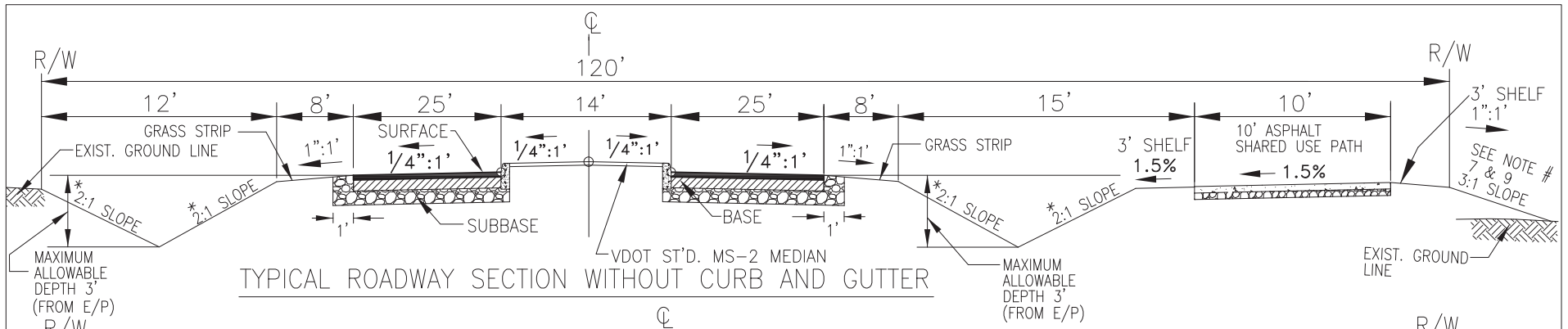
(BIKE LANE WITHIN PUBLIC RIGHT-OF-WAY)

County of Henrico
Department of Public Works

SEPTEMBER 1, 2021

FHENTYPSEC-CL-7-BL-PUB-RW-rev.DWG





* ALL SLOPES ARE TO BE 2:1 OR FLATTER UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
11" AGGREGATE BASE MATERIAL	6" ASPHALT BASE COURSE	2" ASPHALT SURFACE COURSE

1. THE SHOULDER WIDTH (NON CURB AND GUTTER SECTION) OR PEDESTRIAN SHELF (CURB AND GUTTER SECTION) WILL BE REQUIRED TO BE EXTENDED BEYOND THE RIGHT-OF-WAY, WITH A PERMANENT EASEMENT PROVIDED, TO ACCOMMODATE THE INSTALLATION OF GUARDRAIL, WHERE NEEDED.
2. THE PAVEMENT DEPTHS ARE MINIMUM COMPACTED DEPTHS.
3. THE PAVEMENT DESIGN REQUIRED IS BASED ON A MINIMUM CBR VALUE OF 10. INCREASES TO THE DESIGN MAY BE REQUIRED BASED ON SOIL CONDITIONS AT THE TIME OF CONSTRUCTION. FINAL PAVEMENT DESIGNS MUST BE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.
4. UNDERDRAINS SHALL BE INSTALLED ON ALL ROADWAYS IN ACCORDANCE WITH VDOT SPECIFICATIONS AND THE REQUIREMENTS OF THIS MANUAL.

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6. IF AN IRRIGATION SYSTEM IS PROPOSED WITHIN THE RIGHT-OF-WAY LIMITS, A MAINTENANCE AGREEMENT MUST BE PROVIDED BETWEEN THE DEVELOPER AND THE COUNTY OF HENRICO.
7. A UNIFORM CROSS SECTION SLOPE AND PAVEMENT DESIGN ARE REQUIRED FOR ALL ROADWAYS. SLOPES WHICH EXTEND BEYOND THE RIGHT OF WAY SHALL BE IN PERMANENT EASEMENTS.
8. ALL ROADSIDE DITCHES SHALL BE SEEDED AND HAVE A PERMANENT STAND OF GRASS AS A MINIMUM. WHERE THE 10-YEAR DESIGN VELOCITY EXCEEDS FOUR (4) FEET PER SECOND, JUTE MESH OR OTHER CHANNEL LINING SHALL BE INSTALLED. IF THE 10-YEAR DESIGN VELOCITY EXCEEDS SEVEN (7) FEET PER SECOND, THE ROADSIDE DITCH SHALL BE LINED WITH EITHER RIPRAP OR CONCRETE. ALTERNATE CHANNEL LININGS MAY BE ACCEPTABLE BASED UPON SOIL SAMPLES AND CERTIFIED DESIGN BY A LICENSED PROFESSIONAL ENGINEER UPON APPROVAL BY THE COUNTY ENGINEER.
9. FOR SLOPE HEIGHTS GREATER THAN 6' OR STEEPER THAN 3:1 AN APPROVED SAFETY RAIL MAY BE REQUIRED.
10. SOLID CONCRETE MEDIAN, ST'D. MS-1 REQUIRED WHERE THE MEDIAN WIDTH IS 6'-0" OR LESS.

TYPICAL SECTION - CLASSIFICATION VII (14001-30000 VPD)

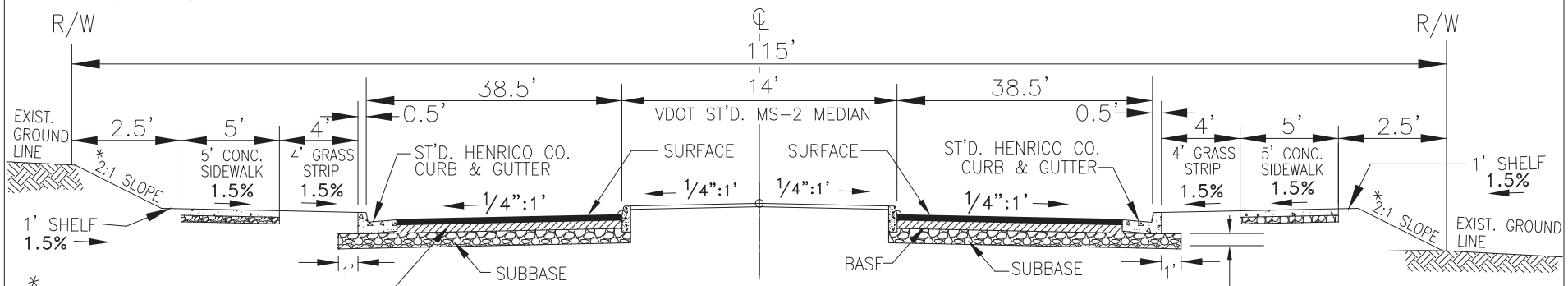
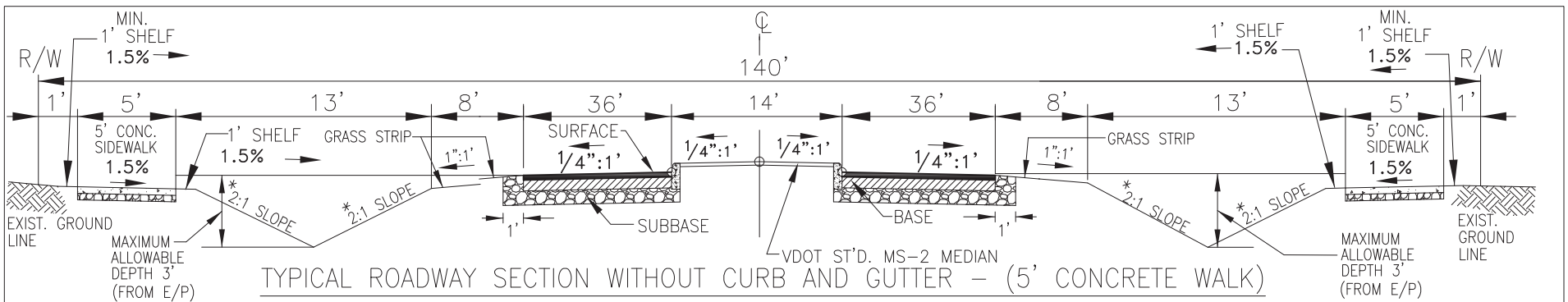
(10' SHARED USE PATH IN PUBLIC RIGHT-OF-WAY)

County of Henrico
Department of Public Works

SEPTEMBER 1, 2021

FHENTYPSEC-CL-7-10SU-PUB-RW-rev.DWG





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EXTENSION OF SUBGRADE OR 4" MIN., WHICHEVER IS GREATER

MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
SPECIAL DESIGN	***SPECIAL DESIGN***	***SPECIAL DESIGN***

1. THE SHOULDER WIDTH (NON CURB AND GUTTER SECTION) OR PEDESTRIAN SHELF (CURB AND GUTTER SECTION) WILL BE REQUIRED TO BE EXTENDED BEYOND THE RIGHT-OF-WAY, WITH A PERMANENT EASEMENT PROVIDED, TO ACCOMMODATE THE INSTALLATION OF GUARDRAIL, WHERE NEEDED.
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6. IF AN IRRIGATION SYSTEM IS PROPOSED WITHIN THE RIGHT-OF-WAY LIMITS, A MAINTENANCE AGREEMENT MUST BE PROVIDED BETWEEN THE DEVELOPER AND THE COUNTY OF HENRICO.
7. A UNIFORM CROSS SECTION SLOPE AND PAVEMENT DESIGN ARE REQUIRED FOR ALL ROADWAYS. SLOPES WHICH EXTEND BEYOND THE RIGHT OF WAY SHALL BE IN PERMANENT EASEMENTS.
8. ALL ROADSIDE DITCHES SHALL BE SEEDED AND HAVE A PERMANENT STAND OF GRASS AS A MINIMUM. WHERE THE 10-YEAR DESIGN VELOCITY EXCEEDS FOUR (4) FEET PER SECOND, JUTE MESH OR OTHER CHANNEL LINING SHALL BE INSTALLED. IF THE 10-YEAR DESIGN VELOCITY EXCEEDS SEVEN (7) FEET PER SECOND, THE ROADSIDE DITCH SHALL BE LINED WITH EITHER RIPRAP OR CONCRETE. ALTERNATE CHANNEL LININGS MAY BE ACCEPTABLE BASED UPON SOIL SAMPLES AND CERTIFIED DESIGN BY A LICENSED PROFESSIONAL ENGINEER UPON APPROVAL BY THE COUNTY ENGINEER.
9. SOLID CONCRETE MEDIAN, ST'D. MS-1 REQUIRED WHERE THE MEDIAN WIDTH IS 6'-0" OR LESS.

TYPICAL SECTION - CLASSIFICATION VIII (30001 + VPD)

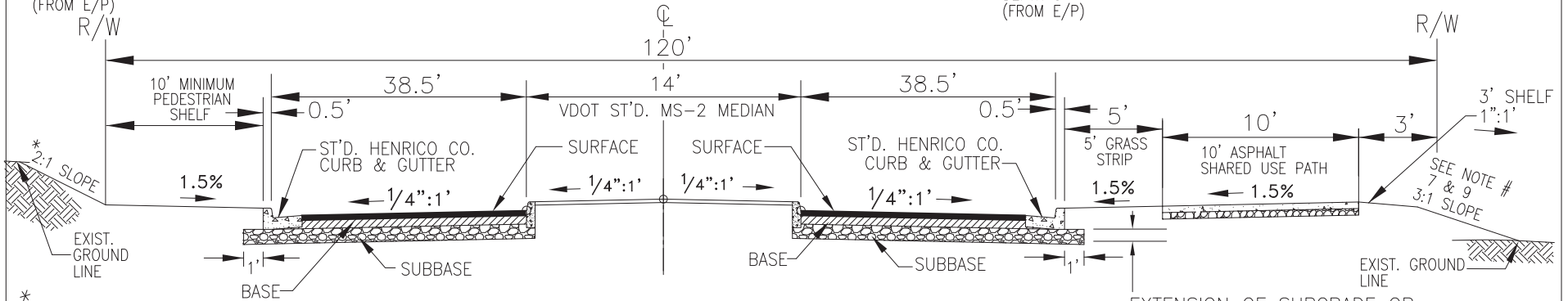
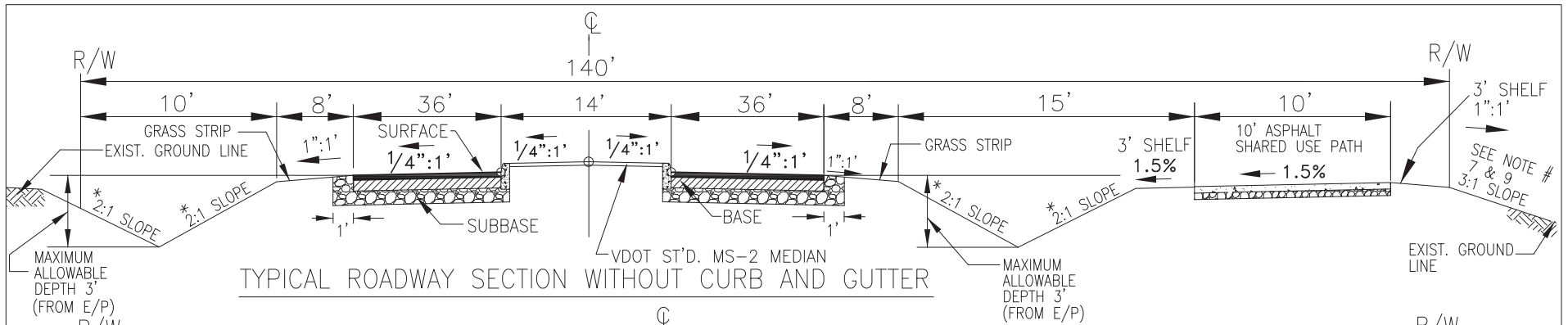
(5' CONCRETE WALK WITHIN PUBLIC RIGHT-OF-WAY)

County of Henrico
Department of Public Works

SEPTEMBER 1, 2021

FHENTYPSEC-CL-8-5SW-PUB-RW-rev.DWG





* ALL SLOPES ARE TO BE 2:1 OR FLATTER UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
SPECIAL DESIGN	***SPECIAL DESIGN***	***SPECIAL DESIGN***

1. THE SHOULDER WIDTH (NON CURB AND GUTTER SECTION) OR PEDESTRIAN SHELF (CURB AND GUTTER SECTION) WILL BE REQUIRED TO BE EXTENDED BEYOND THE RIGHT-OF-WAY, WITH A PERMANENT EASEMENT PROVIDED, TO ACCOMMODATE THE INSTALLATION OF GUARDRAIL, WHERE NEEDED.
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9. FOR SLOPE HEIGHTS GREATER THAN 6' OR STEEPER THAN 3:1 AN APPROVED SAFETY RAIL MAY BE REQUIRED.
10. SOLID CONCRETE MEDIAN, ST'D. MS-1 REQUIRED WHERE THE MEDIAN WIDTH IS 6'-0" OR LESS.

TYPICAL SECTION - CLASSIFICATION VIII (30001 + VPD)

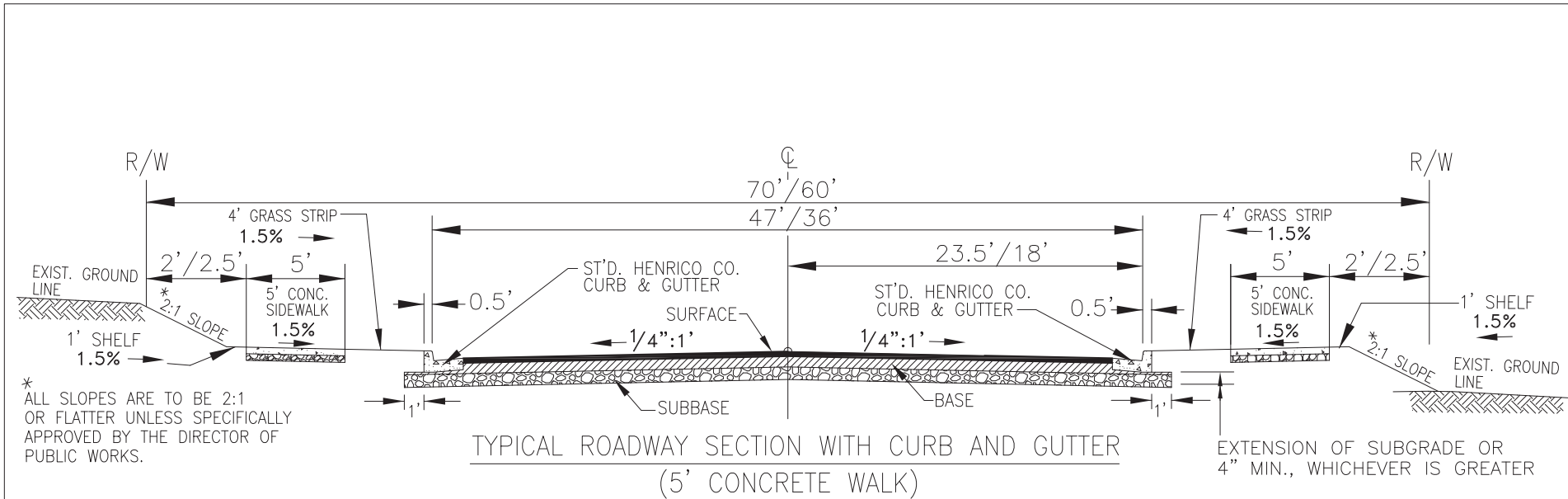
(10' SHARED USE PATH IN PUBLIC RIGHT-OF-WAY)

County of Henrico
Department of Public Works

SEPTEMBER 1, 2021

FHENTYPSEC-CL-8-10SU-PUB-RW-rev.DWG





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EXTENSION OF SUBGRADE OR 4" MIN., WHICHEVER IS GREATER

MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
SPECIAL DESIGN	***SPECIAL DESIGN***	***SPECIAL DESIGN***

1. THE SHOULDER WIDTH (NON CURB AND GUTTER SECTION) OR PEDESTRIAN SHELF (CURB AND GUTTER SECTION) WILL BE REQUIRED TO BE EXTENDED BEYOND THE RIGHT-OF-WAY, WITH A PERMANENT EASEMENT PROVIDED, TO ACCOMMODATE THE INSTALLATION OF GUARDRAIL, WHERE NEEDED.
2. THE PAVEMENT DEPTHS ARE MINIMUM COMPACTED DEPTHS.
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7. A UNIFORM CROSS SECTION SLOPE AND PAVEMENT DESIGN ARE REQUIRED FOR ALL ROADWAYS. SLOPES WHICH EXTEND BEYOND THE RIGHT OF WAY SHALL BE IN PERMANENT EASEMENTS.
8. ALL ROADSIDE DITCHES SHALL BE SEEDED AND HAVE A PERMANENT STAND OF GRASS AS A MINIMUM. WHERE THE 10-YEAR DESIGN VELOCITY EXCEEDS FOUR (4) FEET PER SECOND, JUTE MESH OR OTHER CHANNEL LINING SHALL BE INSTALLED. IF THE 10-YEAR DESIGN VELOCITY EXCEEDS SEVEN (7) FEET PER SECOND, THE ROADSIDE DITCH SHALL BE LINED WITH EITHER RIPRAP OR CONCRETE. ALTERNATE CHANNEL LININGS MAY BE ACCEPTABLE BASED UPON SOIL SAMPLES AND CERTIFIED DESIGN BY A LICENSED PROFESSIONAL ENGINEER UPON APPROVAL BY THE COUNTY ENGINEER.
9. A RIGHT-OF-WAY OF 70' SHALL BE USED ON THROUGH STREETS, CONNECTORS TO ARTERIALS OR ROADS PROVIDING DIRECT PUBLIC ACCESS. A 60' RIGHT-OF-WAY MAYBE USED ON CUL-DE-SACS, NON-THROUGH ROADS OR INTERNAL CONNECTOR ROADWAYS.



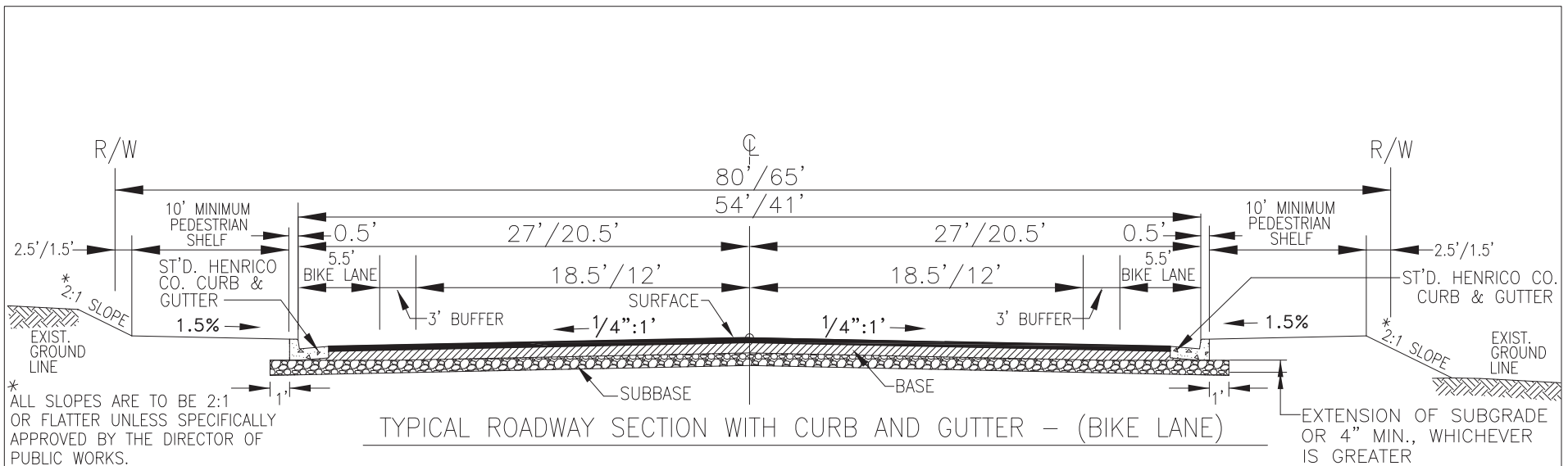
TYPICAL SECTION COMMERCIAL/INDUSTRIAL DEVELOPMENT

(5' CONCRETE WALK WITHIN PUBLIC RIGHT-OF-WAY)

County of Henrico
Department of Public Works

SEPTEMBER 1, 2021

FHENTYPSEC-CL-10-5SW-PUB-RW.DWG



MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
SPECIAL DESIGN	***SPECIAL DESIGN***	***SPECIAL DESIGN***

1. THE SHOULDER WIDTH (NON CURB AND GUTTER SECTION) OR PEDESTRIAN SHELF (CURB AND GUTTER SECTION) WILL BE REQUIRED TO BE EXTENDED BEYOND THE RIGHT-OF-WAY, WITH A PERMANENT EASEMENT PROVIDED, TO ACCOMMODATE THE INSTALLATION OF GUARDRAIL, WHERE NEEDED.
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6. IF AN IRRIGATION SYSTEM IS PROPOSED WITHIN THE RIGHT-OF-WAY LIMITS, A MAINTENANCE AGREEMENT MUST BE PROVIDED BETWEEN THE DEVELOPER AND THE COUNTY OF HENRICO.
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9. A RIGHT-OF-WAY OF 80' SHALL BE USED ON THROUGH STREETS, CONNECTORS TO ARTERIALS OR ROADS PROVIDING DIRECT PUBLIC ACCESS. A 70' RIGHT-OF-WAY MAYBE USED ON CUL-DE-SACS, NON-THROUGH ROADS OR INTERNAL CONNECTOR ROADWAYS.

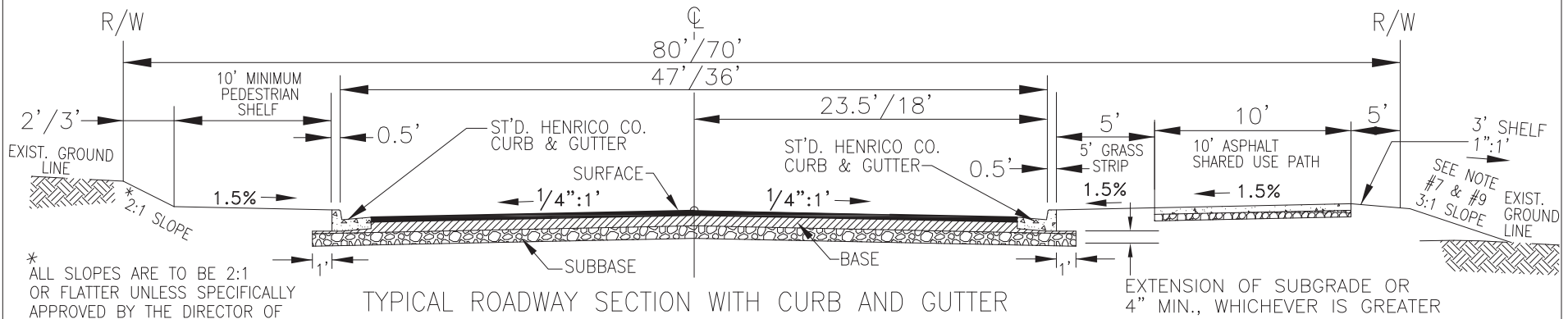


TYPICAL SECTION COMMERCIAL/INDUSTRIAL DEVELOPMENT

(BIKE LANE WITHIN PUBLIC RIGHT-OF-WAY)
County of Henrico
Department of Public Works

SEPTEMBER 1, 2021

FHENTYPSEC-CL-10-BL-PUB-RW.DWG



* ALL SLOPES ARE TO BE 2:1 OR FLATTER UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR OF PUBLIC WORKS.

MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
SPECIAL DESIGN	***SPECIAL DESIGN***	***SPECIAL DESIGN***

1. THE SHOULDER WIDTH (NON CURB AND GUTTER SECTION) OR PEDESTRIAN SHELF (CURB AND GUTTER SECTION) WILL BE REQUIRED TO BE EXTENDED BEYOND THE RIGHT-OF-WAY, WITH A PERMANENT EASEMENT PROVIDED, TO ACCOMMODATE THE INSTALLATION OF GUARDRAIL OR HANDRAIL, WHERE NEEDED.
2. THE PAVEMENT DEPTHS ARE MINIMUM COMPACTED DEPTHS.
3. THE PAVEMENT DESIGN REQUIRED IS BASED ON A MINIMUM CBR VALUE OF 10. INCREASES TO THE DESIGN MAY BE REQUIRED BASED ON SOIL CONDITIONS AT THE TIME OF CONSTRUCTION. FINAL PAVEMENT DESIGNS MUST BE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.
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9. FOR SLOPE HEIGHTS GREATER THAN 6' OR STEEPER THAN 3:1 AN APPROVED SAFETY RAIL MAY BE REQUIRED.
10. A RIGHT-OF-WAY OF EIGHTY FEET SHALL BE USED ON THROUGH STREETS, CONNECTORS TO ARTERIALS OR ROADS PROVIDING DIRECT PUBLIC ACCESS. A SEVENTY FOOT RIGHT-OF-WAY MAYBE USED ON CUL-DE-SACS, NON-THROUGH ROADS OR INTERNAL CONNECTOR ROADWAYS.

TYPICAL SECTION COMMERCIAL/INDUSTRIAL DEVELOPMENT

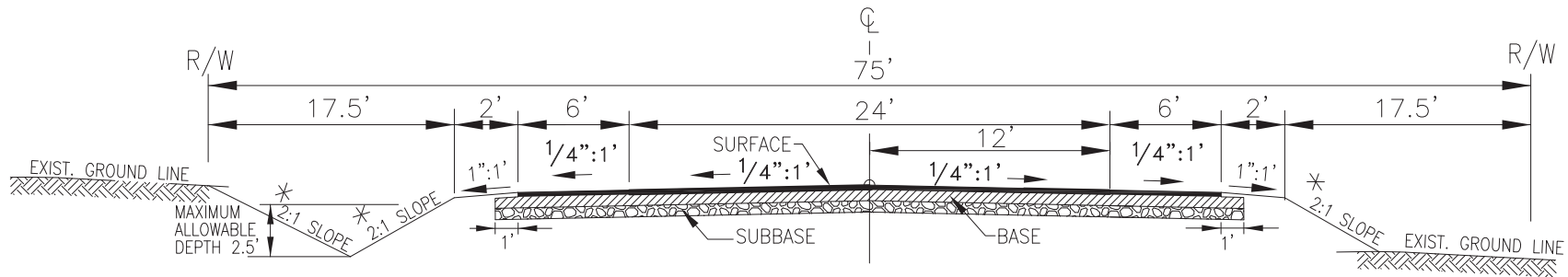
(10' SHARED USE ASPHALT PATH IN PUBLIC RIGHT-OF-WAY)

County of Henrico
Department of Public Works

SEPTEMBER 1, 2021

FHENTYPSEC-CL-10-10SU-PUB-RW.DWG





TYPICAL RURAL 2-LANE ROADWAY SECTION WITHOUT CURB AND GUTTER

MINIMUM PAVEMENT DESIGN REQUIREMENT		
SUBBASE	BASE	SURFACE
9" AGGREGATE BASE MATERIAL	5" ASPHALT BASE COURSE	2" ASPHALT SURFACE COURSE

1. THE SHOULDER WIDTH (NON CURB AND GUTTER SECTION) WILL BE REQUIRED TO BE EXTENDED BEYOND THE RIGHT-OF-WAY, WITH A PERMANENT EASEMENT PROVIDED, TO ACCOMMODATE THE INSTALLATION OF GUARDRAIL, WHERE NEEDED.
2. THE PAVEMENT DEPTHS ARE MINIMUM COMPACTED DEPTHS.
3. THE PAVEMENT DESIGN REQUIRED IS BASED ON A MINIMUM CBR VALUE OF 10. INCREASES TO THE DESIGN MAY BE REQUIRED BASED ON SOIL CONDITIONS AT THE TIME OF CONSTRUCTION. FINAL PAVEMENT DESIGNS MUST BE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.
4. UNDERDRAINS SHALL BE INSTALLED ON ALL ROADWAYS IN ACCORDANCE WITH VDOT SPECIFICATIONS AND THE REQUIREMENTS OF THIS MANUAL.
5. MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS AND STANDARDS, EXCEPT WHERE COUNTY STANDARDS ARE APPLICABLE.
6. CENTERLINE AND EDGE LINE RUMBLE STRIPS ARE REQUIRED.
7. IF AN IRRIGATION SYSTEM IS PROPOSED WITHIN THE RIGHT-OF-WAY LIMITS, A MAINTENANCE AGREEMENT MUST BE PROVIDED BETWEEN THE DEVELOPER AND THE COUNTY OF HENRICO.
8. A UNIFORM CROSS SECTION SLOPE AND PAVEMENT DESIGN ARE REQUIRED FOR ALL ROADWAYS. SLOPES WHICH EXTEND BEYOND THE RIGHT OF WAY SHALL BE IN PERMANENT EASEMENTS.
9. ALL ROADSIDE DITCHES SHALL BE SEEDED AND HAVE A PERMANENT STAND OF GRASS AS A MINIMUM. WHERE THE 10-YEAR DESIGN VELOCITY EXCEEDS FOUR (4) FEET PER SECOND, JUTE MESH OR OTHER CHANNEL LINING SHALL BE INSTALLED. IF THE 10-YEAR DESIGN VELOCITY EXCEEDS SEVEN (7) FEET PER SECOND, THE ROADSIDE DITCH SHALL BE LINED WITH EITHER RIPRAP OR CONCRETE. ALTERNATE CHANNEL LININGS MAY BE ACCEPTABLE BASED UPON SOIL SAMPLES AND CERTIFIED DESIGN BY A LICENSED PROFESSIONAL ENGINEER UPON APPROVAL BY THE COUNTY ENGINEER.
10. IF TRAFFIC VOLUME EXCEEDS 14000 VPD, THEN 4-LANES ARE REQUIRED.
11. FOR MINIMUM PAVEMENT DESIGN REQUIREMENTS FOR TYPICAL SECTION CLASSIFICATIONS I-IV REFER SHEET B3 IN APPENDIX B.



TYPICAL SECTION - RURAL 2-LANE (5001-14000 VPD)

SEPTEMBER 1, 2021

County of Henrico
Department of Public Works

FHENTYPSEC-RURAL-2-LANE.DWG