

CITY OF RICHMOND, VIRGINIA
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION ENGINEERING DIVISION



BUFFERED BIKE LANE IMPROVEMENTS PROJECT
GOVERNMENT ROAD (N. 36TH STREET TO WILLIAMSBURG ROAD)

FHWA REGION	STATE	FEDERAL PROJECT NUMBER	STATE PROJECT NUMBER
3	VA.	N/A	N/A

CIP #: 040-290-8222
PROJECT NO: 500309/100642
DRAWING NO: 0-28793

REVISIONS

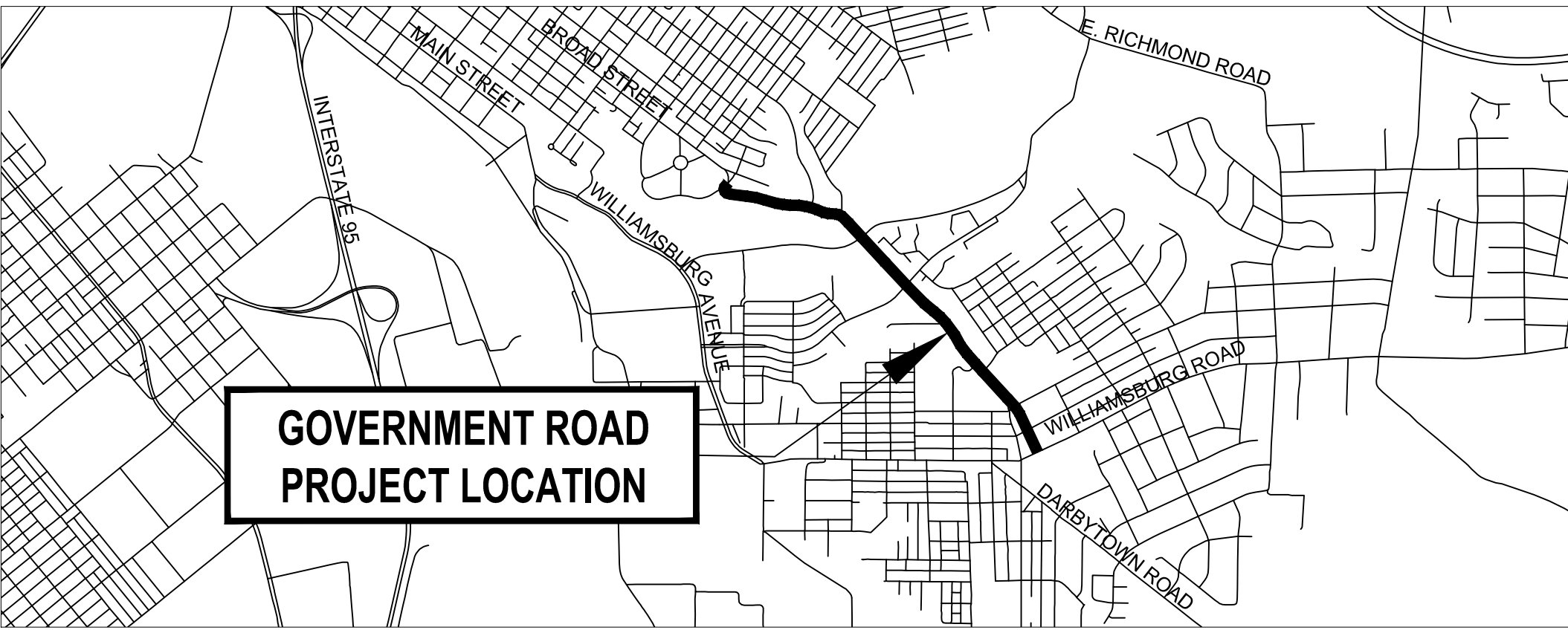
NO.	DATE	COMMENTS

CITY OF RICHMOND

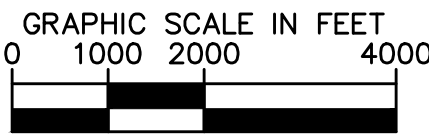
APPROVED FOR CONSTRUCTION	
DATE	SURVEY SUPERINTENDENT
DATE	PROJECT MANAGER
DATE	MAINTENANCE ENGINEER
DATE	CITY TRAFFIC ENGINEER
DATE	CAPITAL PROJECTS ADMINISTRATOR
DATE	CITY ENGINEER
DATE	DIRECTOR OF PUBLIC WORKS

INDEX OF SHEETS

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LOCATION MAP



PROJECT AREA



THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DEPARTMENT'S 2016 ROAD AND BRIDGE SPECIFICATIONS, 2016 ROAD AND BRIDGE STANDARDS, 2015 WORK AREA PROTECTION MANUAL AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE ELECTRONIC .TIF VERSION OF THE PLAN ASSEMBLY.

NO ADDITIONAL RIGHT OF WAY REQUIRED.

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE CITY OF RICHMOND.

JULY 27, 2017

Kimley»Horn

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TRAFFIC ENGINEER






Drawing name: K:\RIC_IPTD\113257_RIC_On_Coll\010_Buffered Bike Lanes\Project Data\Design\CAD\Plan Sheets\2 General Notes - Government.dwg Aug 11, 2017 9:51am by: danielle.seidono
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GENERAL NOTES

- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM WITH THE LATEST CITY STANDARDS, THE LATEST STANDARDS AND SPECIFICATIONS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT), AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), EXCEPT AS NOTED ON THE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE CITY OF RICHMOND PRIOR TO COMMENCING CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER 24 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- THE LOCATION OF EXISTING SEWER, WATER OR GAS LINES, CONDUITS, OR OTHER STRUCTURES ACROSS, UNDERNEATH, OR OTHERWISE ALONG THE LINE OF PROPOSED WORK ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE LIABLE FOR ALL DAMAGE DONE TO ANY STRUCTURES OR PROPERTY THROUGH HIS NEGLIGENCE OR CARELESSNESS.
- ALL UTILITY CLEARANCES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE OBTAINED PRIOR TO CONSTRUCTION.
- ANY DEVIATIONS FROM THE APPROVED PLANS AND/OR STANDARDS AND SPECIFICATIONS MUST BE APPROVED BY THE PROJECT MANAGER IN WRITING, PRIOR TO START OF WORK.
- IF A CONFLICT IS FOUND TO EXIST, THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER BEFORE ANY WORK IS STARTED IN ORDER TO COORDINATE THE REMAINDER OF THE WORK TO BE DONE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND SHALL REPLACE AT NO ADDITIONAL COST, IF DAMAGED, AS DIRECTED BY THE CITY. EXISTING UTILITIES THAT ARE IN CONFLICT AND MAY NEED TO BE REMOVED OR RELOCATED, WILL BE COORDINATED BY THE CITY. RELOCATIONS OF CITY FACILITIES WILL BE ADMINISTERED BY THE CITY DEPARTMENT OF PUBLIC UTILITIES. IN CASE OF EMERGENCIES OF UTILITY BREAKAGE/CONFLICT CONTACT:

UTILITY	TELEPHONE NUMBERS
GAS	646-8300, 646-8309, 646-8310
WATER	646-8300, 646-8309, 646-8310
SEWER	646-8600, 646-8426
POWER	888-667-3000
TRAFFIC SIGNAL	311, 646-7000
- INSTALLATION DIMENSIONS SHOWN WITHIN THE PLANS ARE TYPICAL. MODIFICATION SHALL BE MADE AS REQUIRED UNDER APPROVAL FROM THE ENGINEER. THE CITY WILL MEET WITH THE CONTRACTOR TO FIELD VERIFY THE LOCATIONS OF THE SHARROW AND BICYCLIST SYMBOL PAVEMENT MARKINGS PRIOR TO INSTALLATION.
- DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE CITY OF RICHMOND.
- THE TOTAL DISTURBED AREA FOR THE PROJECT IS LESS THAN 10,000 SF, THIS PROJECT IS THEREFORE EXEMPT FROM THE NEED FOR A FORMAL E & S CONTROL PLAN.

LEGEND

-  EXISTING SIGNAL POLE
-  EXISTING MAST ARM
-  EXISTING UTILITY POLE
-  EXISTING LIGHT POLE
-  EXISTING GROUND MOUNTED SIGN
- PROPOSED GROUND MOUNTED SIGN
- PROPOSED FLEXI-POST

SIGNING AND STRIPING

- THE CONTRACTOR SHALL PREPARE THE PAVEMENT SURFACE FOR THE PROPER ADHESION. ANY SWEEPING OR REMOVAL OF DEBRIS, GRAVEL, DIRT OR OTHER FOREIGN MATERIALS SHALL BE CONSIDERED AS INCIDENTAL TO THE INSTALLATION, AND NO SEPARATE PAYMENT THEREFORE.
- UNLESS SPECIFIED OTHERWISE, THE BASIS OF MEASUREMENT SHALL BE ALONG THE LONGITUDINAL CENTERLINE OF PAVEMENT MARKINGS. MEASUREMENT FOR LEGENDS SHALL BE PER MESSAGE, COMPLETE AND IN PLACE.
- ALL MARKINGS IMPROPERLY APPLIED OR LOCATED SHALL BE COMPLETELY REMOVED AND CORRECTLY REAPPLIED, AT THE SOLE EXPENSE OF THE CONTRACTOR.
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC UNLESS OTHERWISE SPECIFIED ON THE PLANS OR DIRECTED BY THE CITY OF RICHMOND ENGINEER.
- THERMOPLASTIC PAVEMENT MARKINGS SHALL NOT BE INSTALLED AT ANYTIME WITHIN A FORTY-EIGHT (48) HOUR PERIOD FOLLOWING A RAINFALL.
- COLORS SHALL CONFORM TO STANDARD HIGHWAY COLORS THROUGHOUT THE EXPECTED LIFE OF THE FILM.
- THE CONTRACTOR SHALL REMOVE COMPLETELY ALL PREVIOUS PAVEMENT MARKINGS, WHICH IN THE OPINION OF THE PROJECT MANAGER CONFLICT WITH THE NEW PAVEMENT MARKINGS.
- THE CONTRACTOR SHALL REMOVE COMPLETELY ALL PREVIOUS SIGNS, WHICH IN THE OPINION OF THE PROJECT MANAGER CONFLICT WITH THE NEW SIGNS.
- PRIOR TO APPLICATION, THE CONTRACTOR SHALL FIELD CHECK AND LOCATE ALL PAVEMENT MARKINGS TO THE SATISFACTION OF THE PROJECT MANAGER.
- MARKING MATERIAL SHALL BE APPLIED AT THE SPECIFIED DIMENSIONS AND AT A RATE TO RESULT IN A MARKING THICKNESS OF 90 MILS ±5 MILS (NOT INCLUDING GLASS BEAD TOP DRESSING).
- THE MARKINGS SHALL BE PROVIDED IN SPECIFIED WIDTHS AND SHAPES. PREFORMED WORKS AND SYMBOLS SHALL CONFORM TO THE APPLICABLE SHAPES AND SIZES AS OUTLINED IN THE MUTCD.
- UNLESS OTHERWISE SPECIFIED ON THE PLANS OR IN CONTRACT DOCUMENTS, ALL PAVEMENT MARKINGS AND LEGENDS IN THE PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH VDOT SPECIFICATIONS.
- SIGNS SHALL BE ERECTED WHERE DESIGNATED IN ACCORDANCE WITH THE PLANS. ALL SIGNS THAT REQUIRE MOUNTING SHALL BE ON U-CHANNEL POSTS INSTALLED DIRECTLY IN THE GROUND (2' MAXIMUM DEPTH - CONTRACTOR IS TO VERIFY LOCATION AND UTILITY CONFLICTS PRIOR TO INSTALLING).
- SIGN MOUNTING HEIGHT AND DISTANCE FROM FACE OF CURB SHALL CONFORM TO MUTCD GUIDELINES.
- FOR SIGN POST INSTALLATIONS INTO EXISTING CONCRETE OR BRICK SURFACES, NO SLEEVES SHALL BE USED. CONTRACTOR SHOULD CORE THROUGH SURFACE AND INSTALL U-CHANNEL POSTS AS SPECIFIED.
- METAL BANDS AND BRACKETS SHALL BE USED FOR MOUNTING SIGNS TO EXISTING POLES IN ACCORDANCE WITH TYPICAL DETAIL SHEET 3.
- SIGN ATTACHMENTS TO EXISTING POLES MAY BE MADE AT THE CONTRACTOR'S DISCRETION, HOWEVER THEY MUST BE CONFIRMED ACCEPTABLE BY THE PROJECT MANAGER OR THEIR DESIGNEE.
- THE PROJECT MANAGER OR HIS/HER DESIGNEE SHALL CONFIRM THAT ALL SIGN AND SIGN POSTS INSTALLATIONS ARE ACCEPTABLE TO THE CITY OF RICHMOND PRIOR TO PROJECT COMPLETION.
- PARKING AREAS SHALL BE NO CLOSER THAN 30' FROM A MARKED CROSSWALK, CURB RAMP, OR CURB RETURN WHERE THERE IS AN ADJACENT DEDICATED BIKE LANE. PARKING AREAS SHALL BE NO CLOSER THAN 20' FROM AN ALLEY OR DRIVEWAY WHERE THERE IS AN ADJACENT DEDICATED BIKE LANE. IF NO ADJACENT DEDICATED BIKE LANE IS PRESENT, PARKING AREAS SHALL BE NO CLOSER THAN 20' FROM A CROSSWALK, CURB RAMP, OR CURB RETURN. PARKING AREAS ARE NOT PERMITTED IN FRONT OF ALLEYS OR DRIVEWAYS, AND SHALL BE NO CLOSER THAN 15' FROM A FIRE HYDRANT.
- BUFFER AREA PAVEMENT MARKINGS SHALL NOT EXTEND INTO ALLEYS OR DRIVEWAYS.
- CROSSWALK MARKINGS AT SIGNALIZED INTERSECTIONS SHALL BE PLACED CENTERED WITH PEDESTRIAN RAMPS AND SHALL BE CITY OF CHARLOTTE PIANO STYLE 8" WIDE AS SHOWN ON THE PLANS AND ON TYPICAL DETAIL SHEET 3.
- IF ACTUAL ROADWAY CROSS SECTION IS LESS THAN THE WIDTH OF THE TYPICAL SECTION SHOWN ON THE PLANS, THE CONTRACTOR SHALL REDUCE THE WIDTH OF THE BUFFER BY THE DIFFERENCE IN WIDTH TO MAINTAIN 11' TRAVEL LANES.
- IF ACTUAL ROADWAY CROSS SECTION IS GREATER THAN THE WIDTH OF THE TYPICAL SECTION SHOWN ON THE PLANS, THE CONTRACTOR SHALL INCREASE THE WIDTH OF THE PARKING AREA BY THE DIFFERENCE IN WIDTH TO MAINTAIN 11' TRAVEL LANES. IF NO PARKING IS PRESENT, THE CONTRACTOR SHALL INCREASE THE WIDTH OF THE BUFFER BY THE DIFFERENCE IN WIDTH TO MAINTAIN 11' TRAVEL LANES.

MAINTENANCE OF TRAFFIC NOTES

- TEMPORARY TRAFFIC CONTROL AND DEVICES SHALL COMPLY WITH THE MOST RECENT VERSION OF THE VIRGINIA WORK AREA PROTECTION MANUAL, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, SPECIAL PROVISIONS OF CONTRACT DOCUMENTS, THE CITY OF RICHMOND'S "DEPARTMENT OF PUBLIC WORKS SPECIAL PROVISIONS" AND/OR AS DIRECTED BY THE PROJECT MANAGER.
- CONSTRUCTION SHALL BE PROHIBITED ON STREETS BETWEEN THE HOURS OF 7 AM TO 9 AM AND 4 PM TO 6 PM MONDAY THROUGH FRIDAY.
- THE CONTRACTOR SHALL SUBMIT A PROPOSED TRAFFIC CONTROL PLAN FOR APPROVAL BY THE CITY'S PROJECT MANAGER PRIOR TO BEGINNING CONSTRUCTION.
- RESIDENT AND EMERGENCY ACCESS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
- PEDESTRIAN ACCESS AT INTERSECTIONS AND TO ALL RESIDENCES AND BUSINESSES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL TRAFFIC CONTROL AND WORK-IN-STREETS PERMITS WITHIN THE CITY.
- THE COST OF ALL TRAFFIC CONTROL DEVICES SHALL BE PAID FOR BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL EXISTING AND TEMPORARY TRAFFIC CONTROL DEVICES ARE PROPERLY MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION. THE CITY PROJECT MANAGER WILL DETERMINE IF SIGNS ARE BEING MAINTAINED IN THE PROPER MANNER BY THE CONTRACTOR. THE CONTRACTOR WILL BE CHARGED FOR ANY COSTS INCURRED BY THE CITY OF RICHMOND AS A RESULT OF THE CONTRACTOR'S FAILURE TO PROPERLY MAINTAIN TEMPORARY TRAFFIC CONTROL DEVICES WITHIN THE PROJECT AREA.
- THE CONTRACTOR SHALL PROVIDE THE NAMES AND PHONE NUMBERS TO THE CITY PROJECT MANAGER OF PERSONS DESIGNATED BY THE CONTRACTOR TO BE CONTACTED AFTER WORKING HOURS CONCERNING ANY PROBLEMS WHICH MAY ARISE REGARDING TEMPORARY TRAFFIC CONTROL DEVICES ON THIS PROJECT.
- ALL MATERIALS AND EQUIPMENT SHALL BE DELIVERED, UNLOADED, AND STORED AT LOCATIONS APPROVED BY THE PROJECT MANAGER. THE CONTRACTOR SHALL MAKE ARRANGEMENTS TO STORE EQUIPMENT AND MATERIALS.
- PERSONAL VEHICLES OF THE CONTRACTOR'S EMPLOYEES SHALL NOT BE PARKED IN THE TRAVELED WAY OF ANY ROADWAY AT ANY TIME, INCLUDING ANY SECTION OF ROADWAY CLOSED TO TRAFFIC.

PROPOSED SIGNS LEGEND



R3-17
24" x 18"



R3-17bP
24" x 8"



W16-1P
18" x 24"



W11-1
30" x 30"



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DESIGN OF BIKE LANES / BUFFERED BIKE LANES

GENERAL NOTES

AUTHORITY: CITY OF RICHMOND, DEPARTMENT OF PUBLIC WORKS

DESIGN BY: DSB
DRAWN BY: JKS
CHECKED BY: DMC

REVIEWED BY: GDG

FIELD NOTES: DSB, JKS

SCALE: 1" = 50'

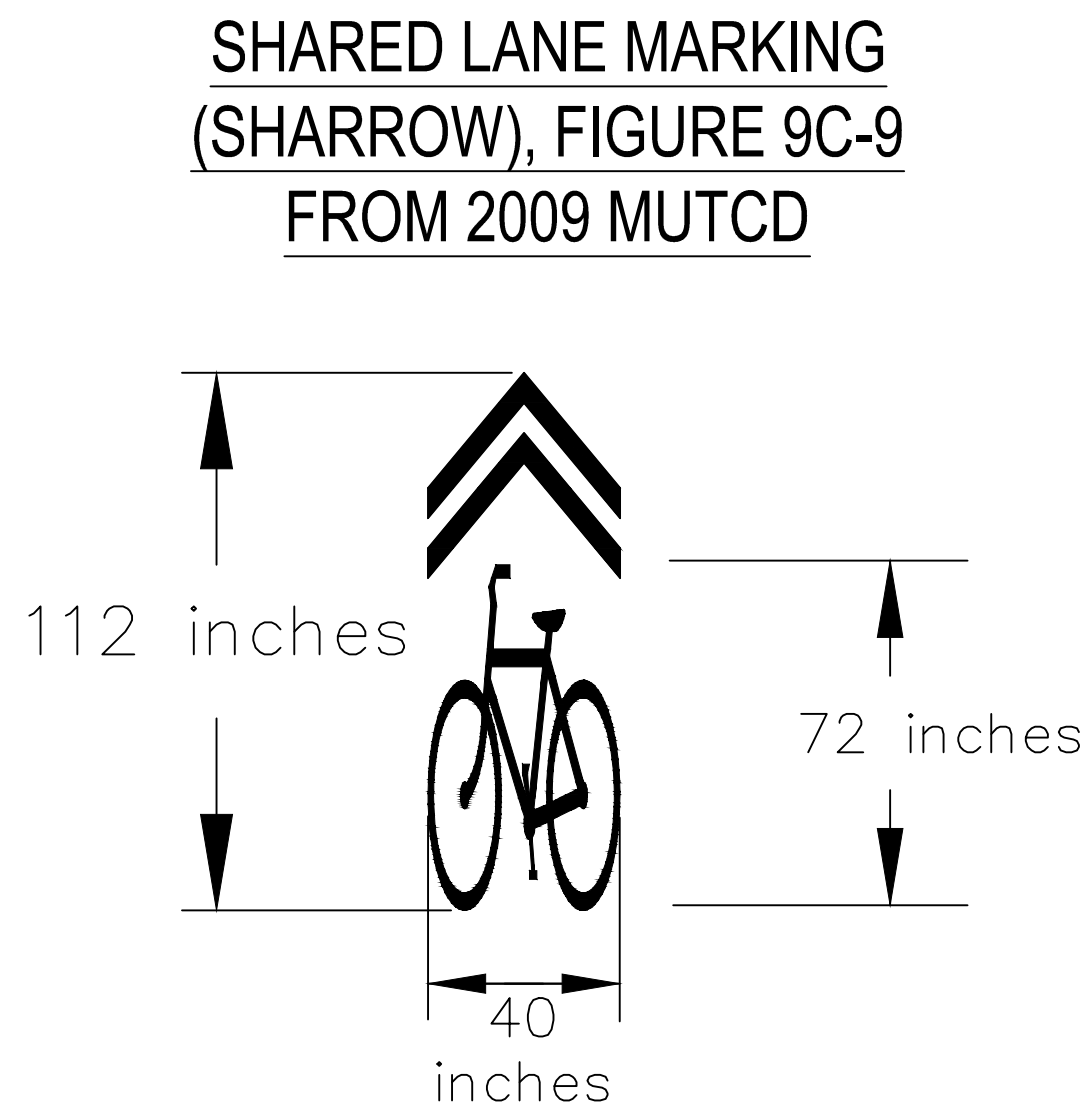
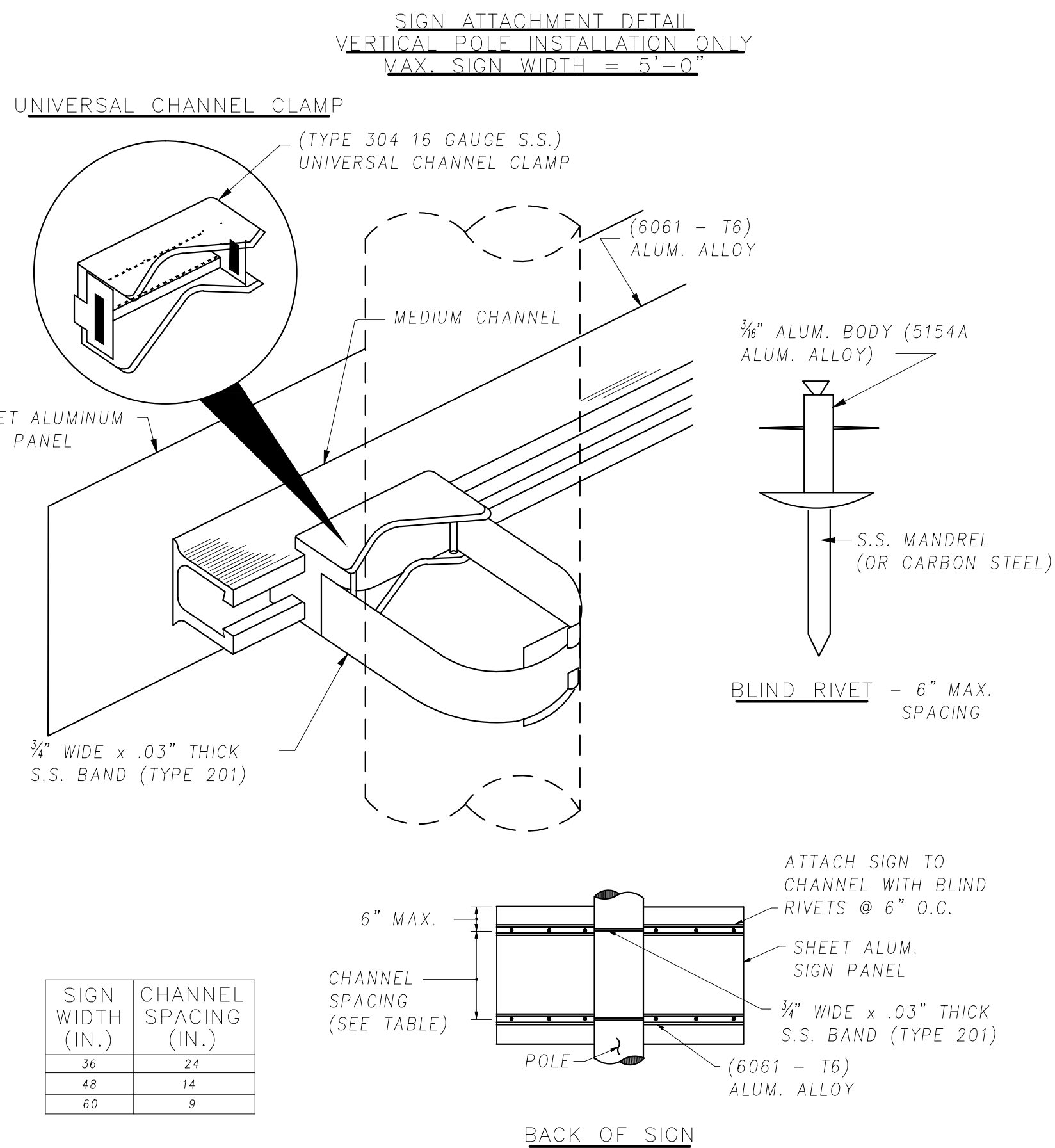
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PROJECT: SHEET

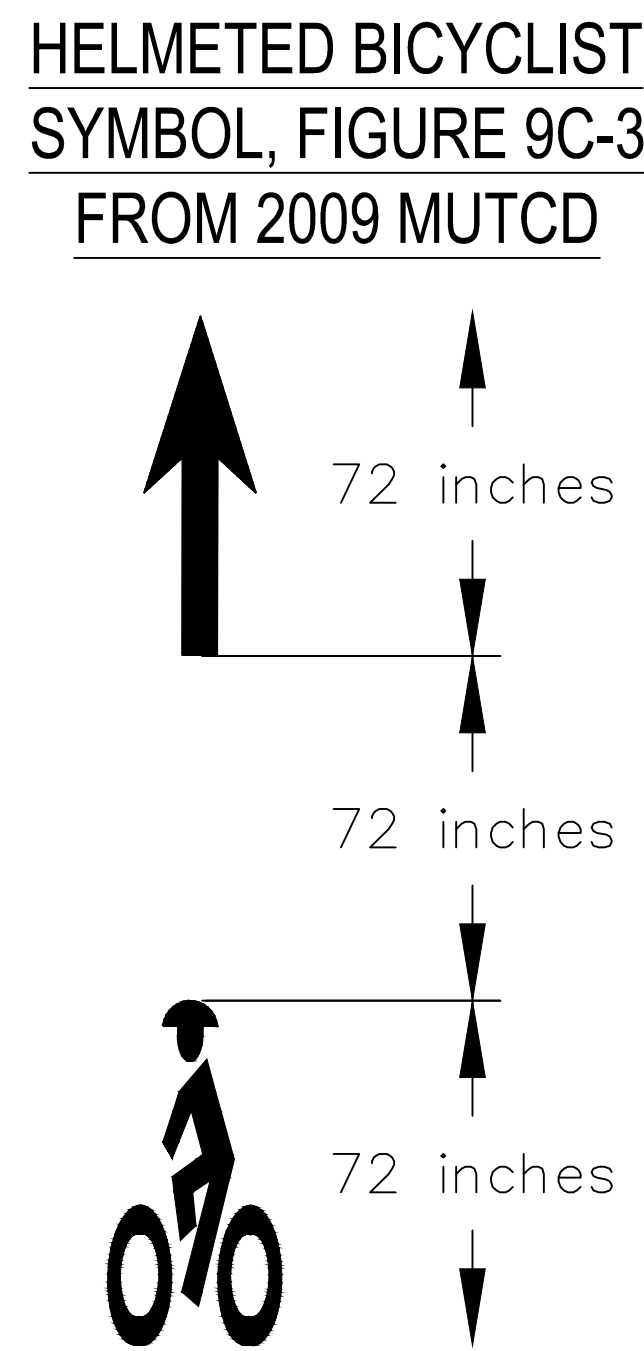
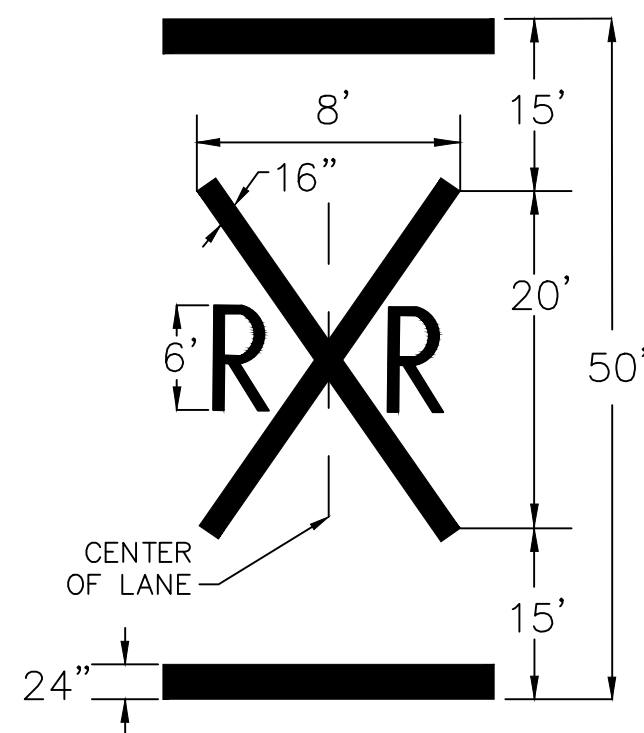
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DRAWING NO. 0-28793

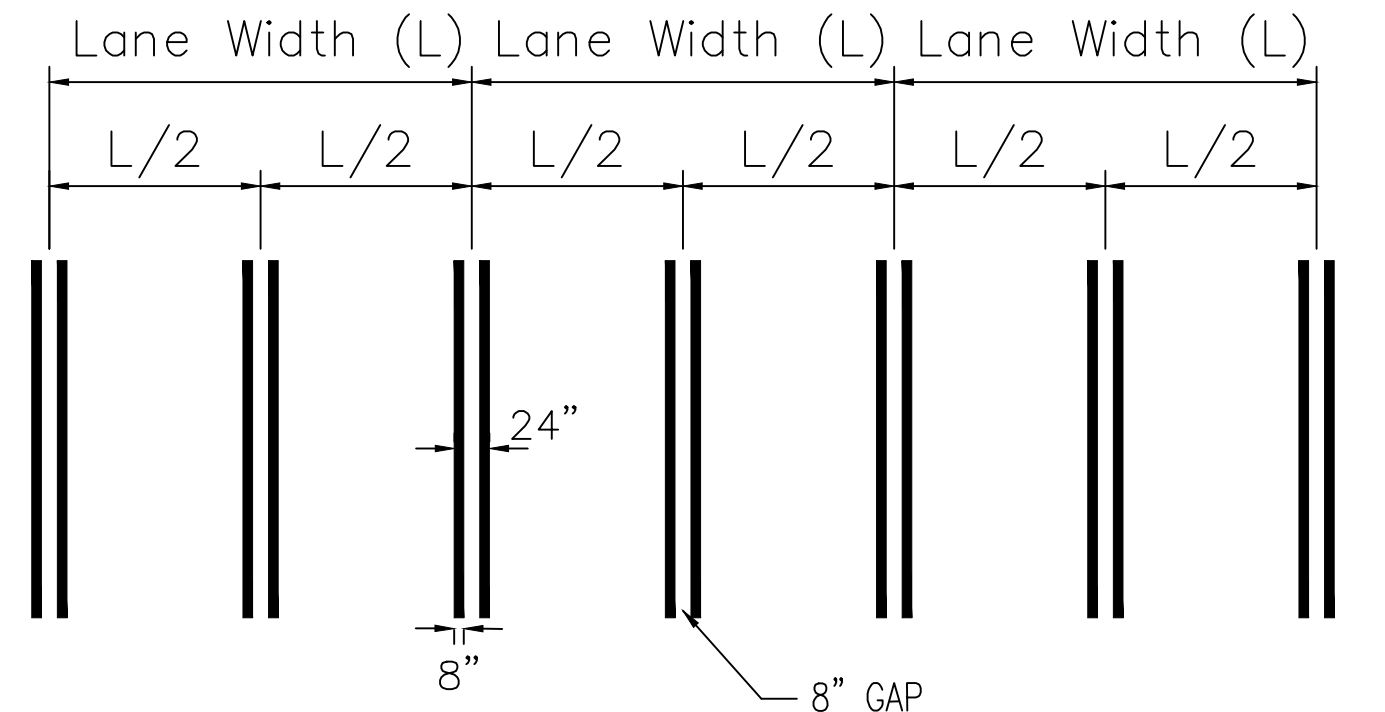
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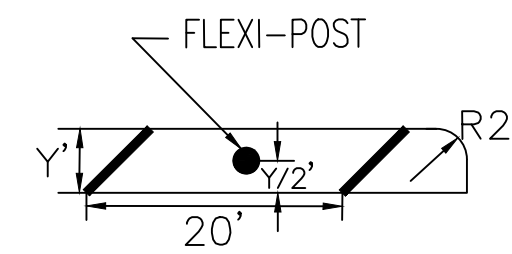
GRADE CROSSING PAVEMENT MARKING, FIGURE 8B-7 FROM 2009 MUTCD



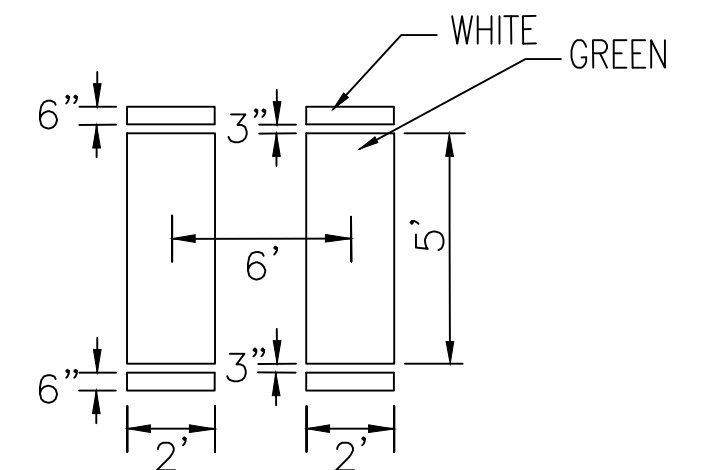
PIANO STYLE CROSSWALK (TYP.), FOR SIGNALIZED INTERSECTIONS FROM T.E. NO. 08-06-WLK-01, 2008 CITY OF CHARLOTTE DOT



INTERSECTION END TREATMENT (TYP.)



BICYCLE CROSSING MARKERS (TYP.)

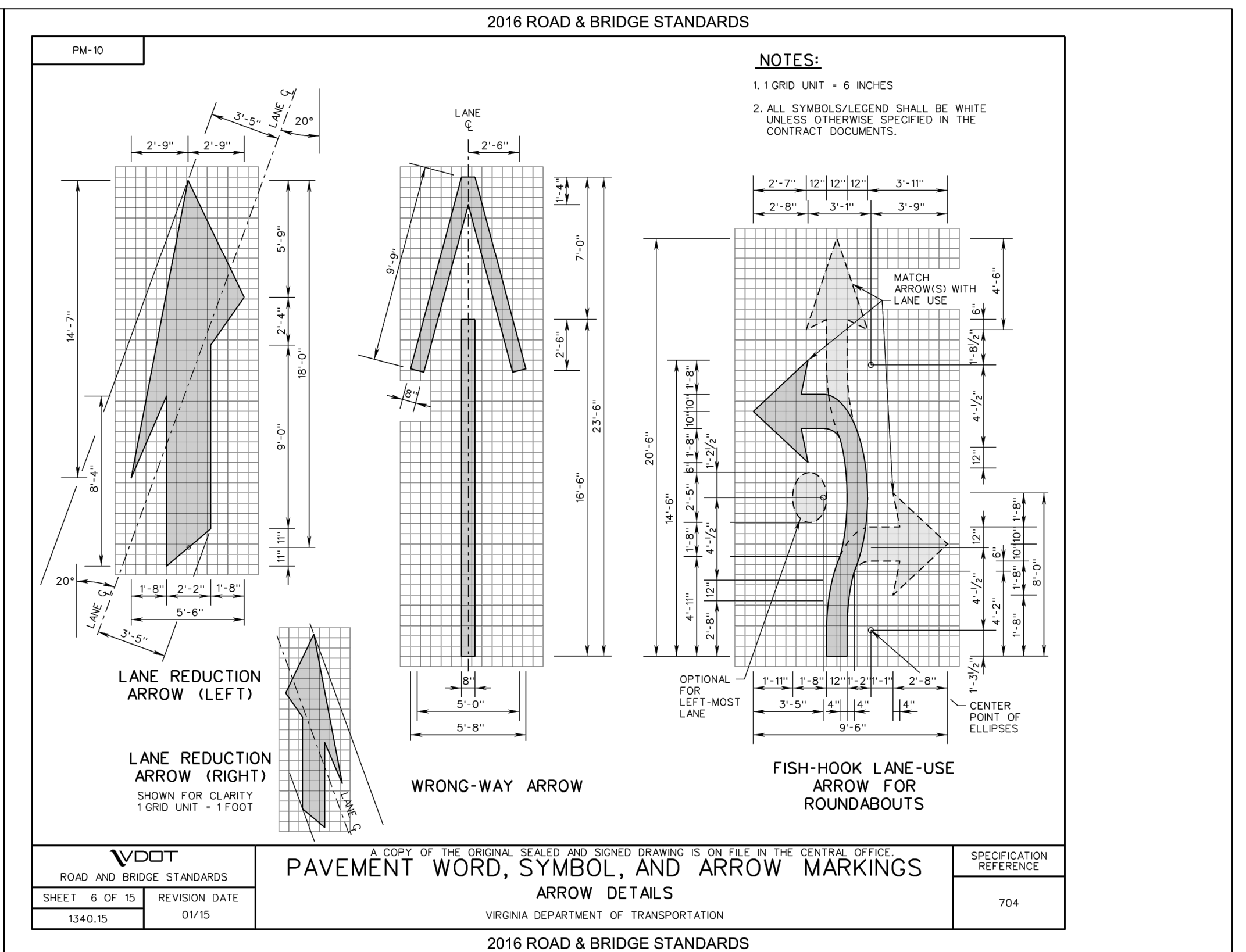
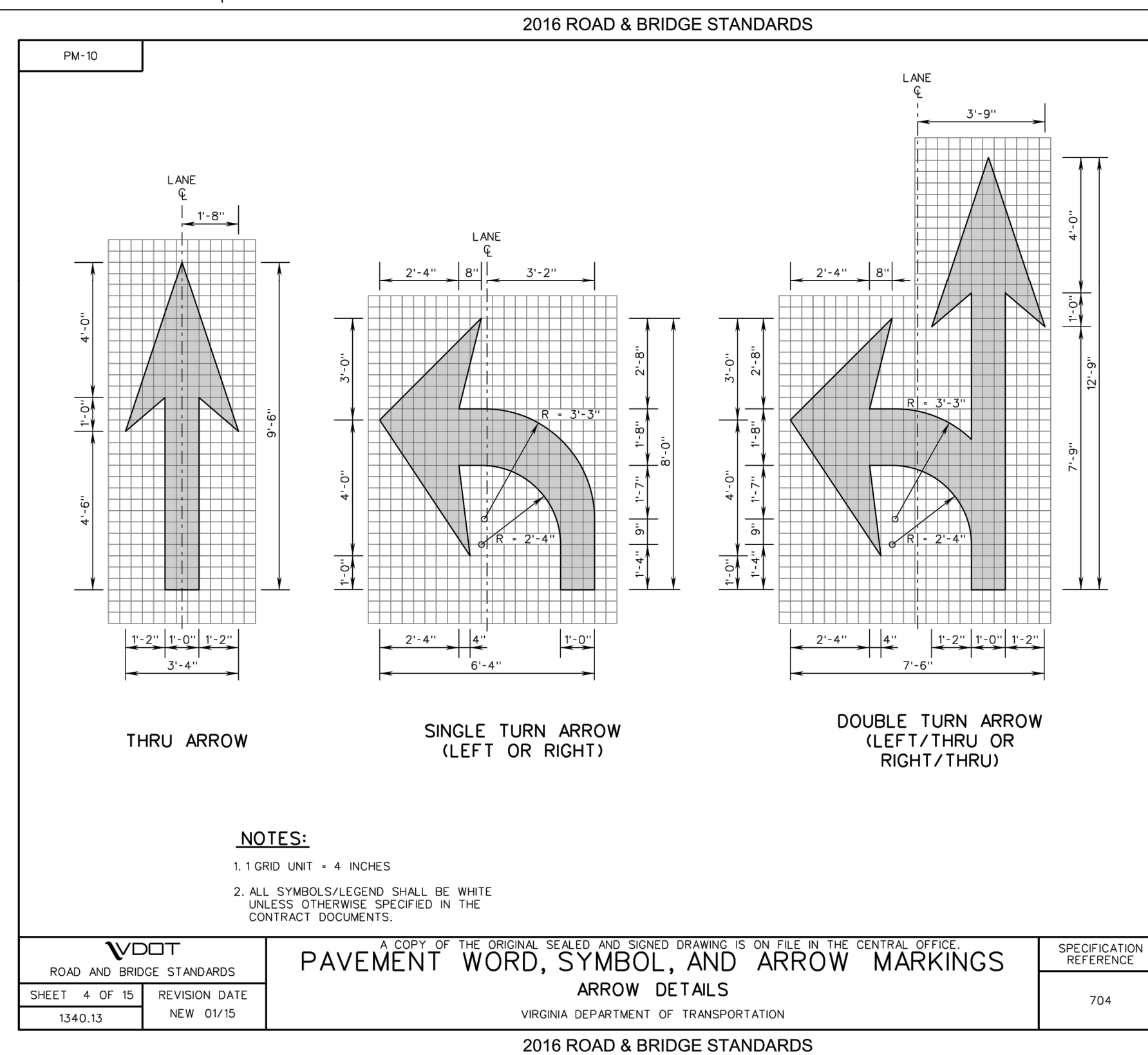


2016 ROAD & BRIDGE STANDARDS									
PM-10									
SQUARE FOOT AREAS OF PAVEMENT WORD MARKINGS									
LEGEND	6" HIGH	8" HIGH	6" HIGH	8" HIGH	LEGEND	6" HIGH	8" HIGH	6" HIGH	8" HIGH
AHEAD	17.5	30.5	42.0	75.0	ONLY	12.0	21.5	30.5	53.5
AREA	14.0	24.5	33.0	59.0	PEDESTRIAN	11.0	19.0	24.0	43.0
BIKE	13.0	23.0	28.5	51.0	SCHOOL	14.5	26.0	37.5	67.0
BUMP	15.0	26.5	33.0	59.0	SIGNAL	(SEE NOTES 1 AND 2)	34.5 (ONE LANE)	(SEE NOTES 1 AND 2)	91.0 (ONE LANE)
EAST	13.0	22.5	33.0	59.0	SLOW	15.5	28.0	46.5	83.0
ENDS	15.0	27.0	33.0	59.0	SOUTH	13.5	24.0	33.0	59.0
FT	5.0	9.0	15.0	27.0	STOP	16.5	29.0	42.0	75.0
HUMP	14.5	25.5	33.0	59.0	TO	12.5	22.5	33.0	59.0
LANE	13.5	23.5	33.0	59.0	TURNTURN	6.0	10.5	15.0	27.0
LEFT	11.0	20.0	33.0	59.0	US	13.5	24.0	33.0	59.0
MERGE	19.0	34.0	42.0	75.0	WEST	7.0	12.5	15.0	27.0
MPH	11.0	19.5	24.0	43.0	XING	14.0	24.5	33.0	59.0
NO	8.0	13.5	15.0	27.0	YIELD	12.0	21.0	28.5	51.0
NORTH	17.5	30.5	42.0	75.0		13.5	24.0	37.5	67.0

NOTES:
1. ONE-LANE APPLICATION OF "SCHOOL" SYMBOL IS 8" HIGH, WHEN INSTALLED IN A SINGLE LANE WITH A WIDTH LESS THAN 10.5', THE LETTERS SHALL BE SEPARATED BY THREE INCHES. WHEN INSTALLED IN A SINGLE LANE WITH A WIDTH GREATER THAN 10.5', THE LETTERS SHALL BE SEPARATED BY FOUR INCHES.
2. TWO-LANE APPLICATION OF "SCHOOL" SYMBOL IS 10" HIGH WITH PAINT APPLICATION AREA OF 53.5 SQ.FT. AND ERADICATION AREA OF 193.0 SQ.FT.
3. NON-LINEAR ERADICATION AREA IS BASED ON A THEORETICAL BOX DEFINED BY THE OUTERMOST LIMITS OF THE NON-LINEAR PAVEMENT MARKING THAT INCLUDES BOTH THE PAINTED AND NON-PAINTED AREAS THAT ENCOMPASS THE TOTAL WORD MESSAGE OR SYMBOL. SEE EXAMPLE.
4. ON UNDIVIDED ROADWAYS, SYMBOL AND MESSAGE PAVEMENT MARKINGS SHALL NOT EXTEND BEYOND THE CENTERLINE INTO OPPOSING TRAVEL LANES.

THEORETICAL BOX ERADICATION AREA EXAMPLE (8" LETTERS)

ERADICATION AREA = 8'-0" x 9'-4" = 74.7 SQ.FT.



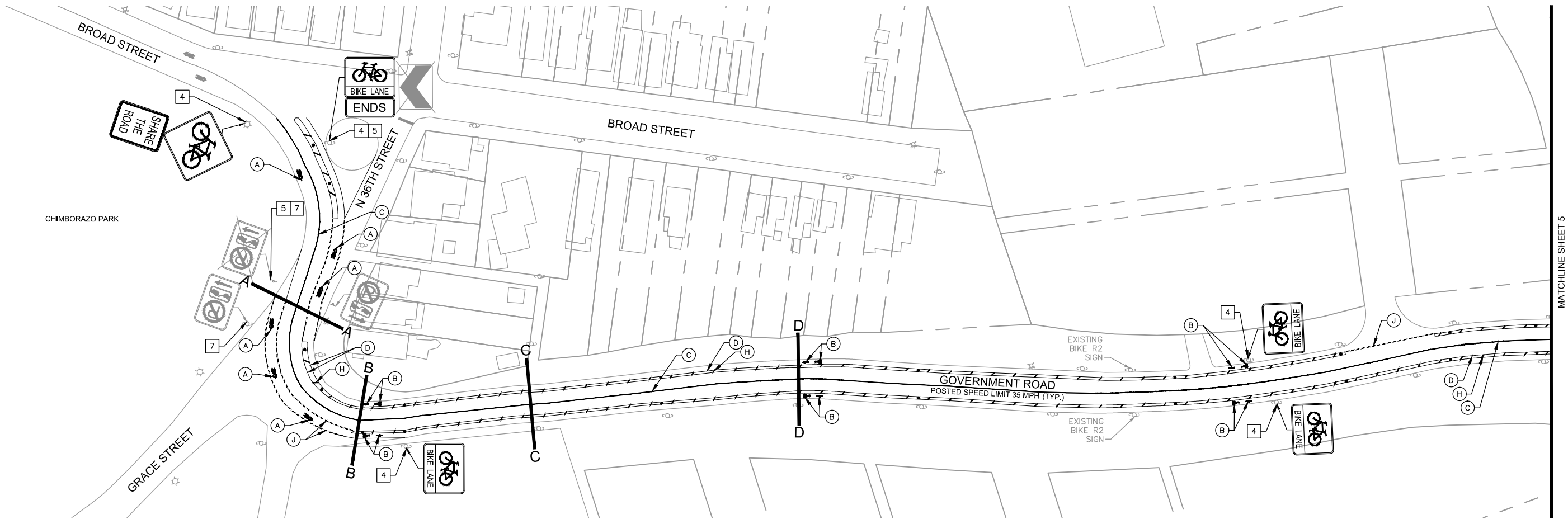
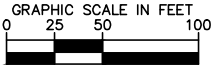
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DESIGN OF BIKE LANES / BUFFERED BIKE LANES
TYPICAL DETAILS

AUTHORITY: CITY OF RICHMOND, DEPARTMENT OF PUBLIC WORKS

DESIGN BY: DSB	REVIEWED BY: GDG	FIELD NOTES: DSB, JKS	SCALE: 1" = 50'	DATE: 7/27/2017	PROJECT: SHEET 3	DRAWING NO.: 0-28793
DRAWN BY: JKS	CHECKED BY: DMC					

Drawing name: K:\R\C\TPT0113257_RIC_On_Coll\010_Buffered Bike Lanes\Project Data\Design\CAD\Plan_Sheets\4 Government Road_Road.dwg Aug 11, 2017 9:52am by: donielle.soriano
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PAVEMENT MARKING LEGEND

- (A) INSTALL TYPE B CLASS I WHITE SHARROW PAVEMENT MARKING PER TYPICAL DETAIL SHEET 3.
- (B) INSTALL TYPE B CLASS I WHITE HELMETED BICYCLIST SYMBOL PAVEMENT MARKING PER TYPICAL DETAIL SHEET 3.
- (C) INSTALL 4" DOUBLE YELLOW TYPE B CLASS I PAVEMENT MARKING.
- (D) INSTALL 4" SOLID WHITE TYPE B CLASS I PAVEMENT MARKING.
- (E) INSTALL 8" SOLID WHITE TYPE B CLASS I PAVEMENT MARKING.
- (F) INSTALL 6" SOLID WHITE TYPE B CLASS I PAVEMENT MARKING.
- (G) INSTALL 24" SOLID WHITE TYPE B CLASS I PAVEMENT MARKING.
- (H) INSTALL 8" SOLID WHITE TYPE B CLASS I PAVEMENT MARKING ON 45° ANGLE WITH LONGITUDINAL LINES THEY INTERSECT.
- (I) INSTALL 24" SOLID GREEN TYPE B CLASS I PAVEMENT MARKING.
- (J) INSTALL 6" SOLID WHITE TYPE B CLASS I PAVEMENT MARKING, 2' LONG, 3' SPACING.
- (K) INSTALL 4" SOLID WHITE TYPE B CLASS I PAVEMENT MARKING, 10' LONG, 30' SPACING.
- (L) INSTALL 4" SOLID WHITE TYPE B CLASS I PAVEMENT MARKING, 2' LONG, 4' SPACING.
- (M) INSTALL 12" YIELD LINE MARKINGS.

- (N) INSTALL ARROW MARKING PER TYPICAL DETAIL SHEET 3.
- (O) INSTALL "SCHOOL" MARKING PER TYPICAL DETAIL SHEET 3.
- (P) INSTALL "BUS ONLY" MARKING PER TYPICAL DETAIL SHEET 3.
- (Q) INSTALL GRADE CROSSING RAILROAD MARKING PER TYPICAL DETAIL SHEET 3.

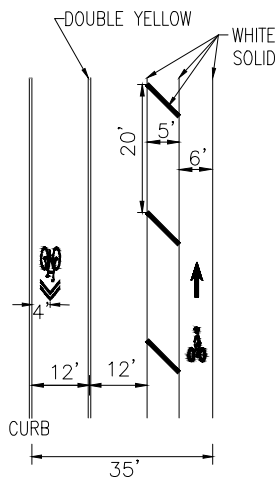
CONSTRUCTION NOTES

- [1] INSTALL PROPOSED SIGN AS SHOWN.
- [2] INSTALL U-TYPE STEEL SIGN POST.
- [3] INSTALL PROPOSED SIGN ON EXISTING SIGN POST.
- [4] INSTALL PROPOSED SIGN ON EXISTING UTILITY POLE.
- [5] REMOVE EXISTING SIGN.
- [6] INSTALL FLEXI-POST.
- [7] RELOCATE EXISTING SIGN.
- [8] INSTALL PARKING LEFT, BICYCLES RIGHT SIGN.

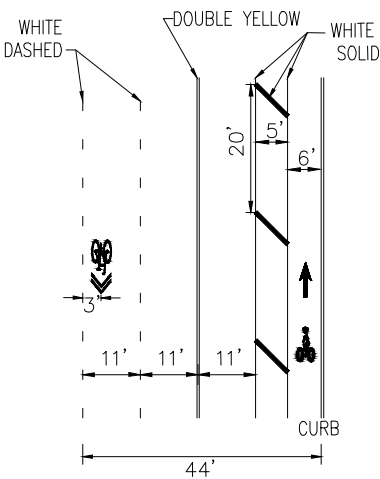
TYPICAL SECTIONS

Not to Scale

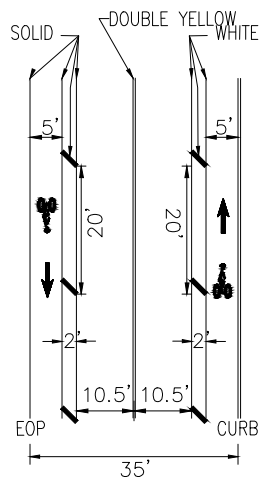
36TH STREET TO
CROSS SECTION A-A



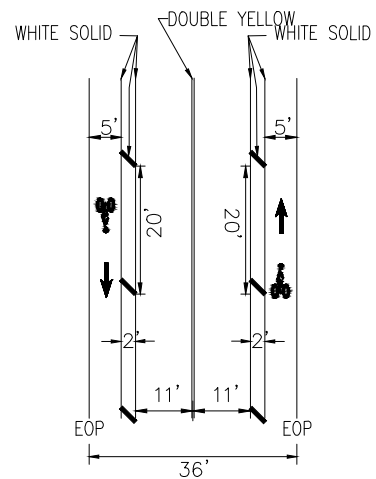
CROSS SECTION A-A
TO CROSS SECTION B-B



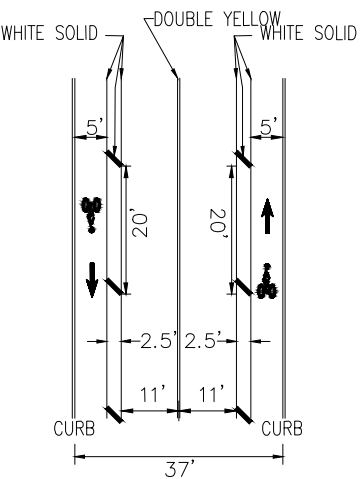
CROSS SECTION B-B
TO CROSS SECTION C-C



CROSS SECTION C-C
TO CROSS SECTION D-D



CROSS SECTION D-D
TO GLENWOOD AVENUE



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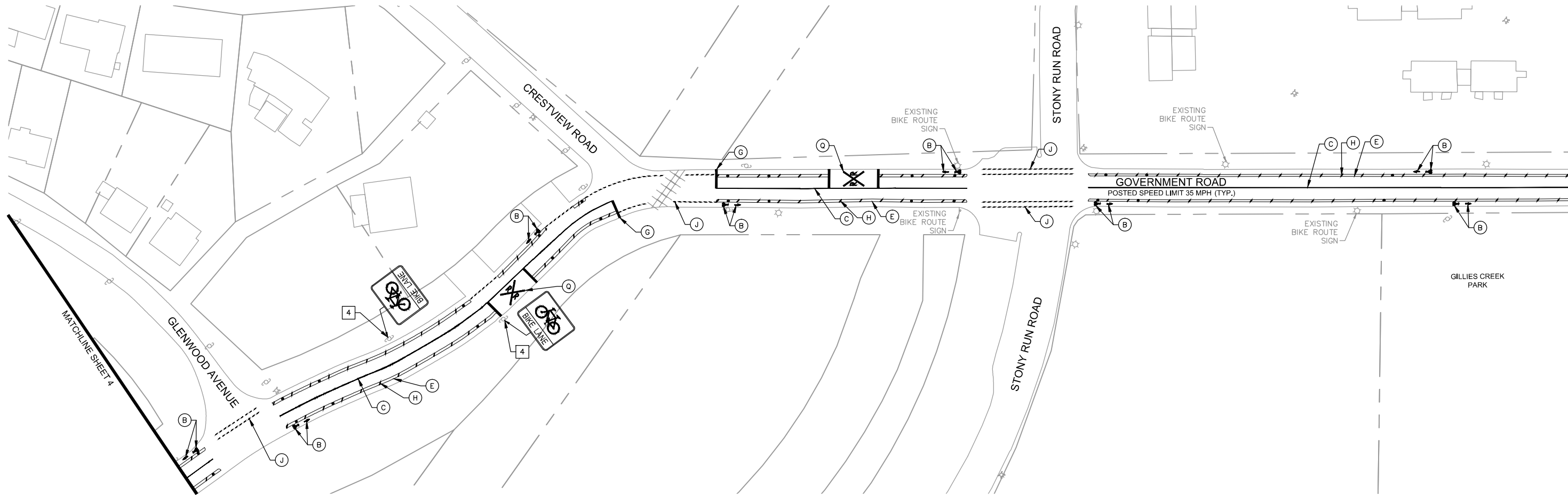
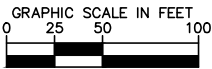
DESIGN OF BIKE LANES / BUFFERED BIKE LANES

GOVERNMENT ROAD

AUTHORITY: CITY OF RICHMOND, DEPARTMENT OF PUBLIC WORKS

DESIGN BY: DBS	REVIEWED BY: GDC	FIELD NOTES DBS, JKS	SCALE 1" = 50'	DATE 7/27/2017	PROJECT SHEET	4	DRAWING NO. 0-28793
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Drawing name: K:\R\C\TPT0113257_RIC_On_Cal\010_Buffered Bike Lanes\Project Data\Design\CAD\Plan_Sheets\5 Government Road.dwg Aug 11, 2017 9:52am by: danielle.soriano
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PAVEMENT MARKING LEGEND

- (A) INSTALL TYPE B CLASS I WHITE SHARROW PAVEMENT MARKING PER TYPICAL DETAIL SHEET 3.
- (B) INSTALL TYPE B CLASS I WHITE HELMETED BICYCLIST SYMBOL PAVEMENT MARKING PER TYPICAL DETAIL SHEET 3.
- (C) INSTALL 4" DOUBLE YELLOW TYPE B CLASS I PAVEMENT MARKING.
- (D) INSTALL 4" SOLID WHITE TYPE B CLASS I PAVEMENT MARKING.
- (E) INSTALL 8" SOLID WHITE TYPE B CLASS I PAVEMENT MARKING.
- (F) INSTALL 6" SOLID WHITE TYPE B CLASS I PAVEMENT MARKING.
- (G) INSTALL 24" SOLID WHITE TYPE B CLASS I PAVEMENT MARKING.
- (H) INSTALL 8" SOLID WHITE TYPE B CLASS I PAVEMENT MARKING ON 45° ANGLE WITH LONGITUDINAL LINES THEY INTERSECT.
- (I) INSTALL 24" SOLID GREEN TYPE B CLASS I PAVEMENT MARKING.
- (J) INSTALL 6" SOLID WHITE TYPE B CLASS I PAVEMENT MARKING, 2' LONG, 3' SPACING.
- (K) INSTALL 4" SOLID WHITE TYPE B CLASS I PAVEMENT MARKING, 10' LONG, 30' SPACING.
- (L) INSTALL 4" SOLID WHITE TYPE B CLASS I PAVEMENT MARKING, 2' LONG, 4' SPACING.
- (M) INSTALL 12" YIELD LINE MARKINGS.

- (N) INSTALL ARROW MARKING PER TYPICAL DETAIL SHEET 3.
- (O) INSTALL "SCHOOL" MARKING PER TYPICAL DETAIL SHEET 3.
- (P) INSTALL "BUS ONLY" MARKING PER TYPICAL DETAIL SHEET 3.
- (Q) INSTALL GRADE CROSSING RAILROAD MARKING PER TYPICAL DETAIL SHEET 3.

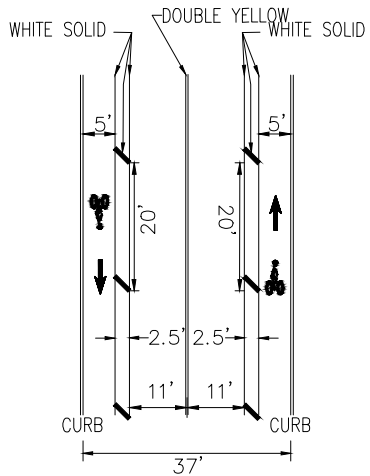
CONSTRUCTION NOTES

1. INSTALL PROPOSED SIGN AS SHOWN.
2. INSTALL U-TYPE STEEL SIGN POST.
3. INSTALL PROPOSED SIGN ON EXISTING SIGN POST.
4. INSTALL PROPOSED SIGN ON EXISTING UTILITY POLE.
5. REMOVE EXISTING SIGN.
6. INSTALL FLEXI-POST.
7. RELOCATE EXISTING SIGN.
8. INSTALL PARKING LEFT, BICYCLES RIGHT SIGN.

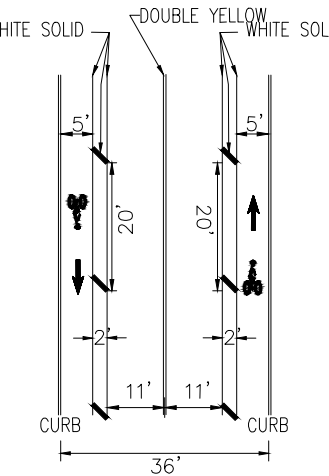
TYPICAL SECTIONS

Not to Scale

GLENWOOD AVENUE TO STONY RUN ROAD



STONY RUN ROAD TO JENNIE SCHER ROAD



Kimley-Horn

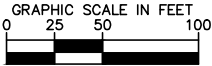
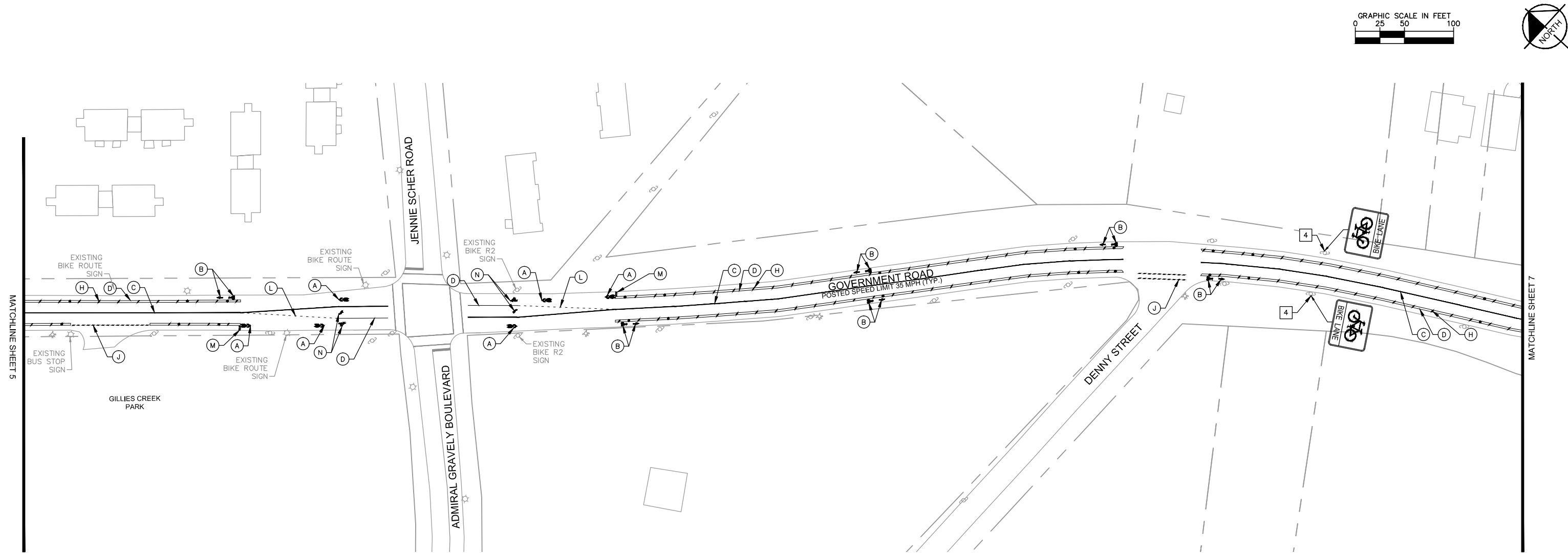
Kimley-Horn and Associates, Inc.
1700 WILLOW LAWN DR, SUITE 200
RICHMOND, VIRGINIA 23230
Tel. 804.673-3882

DESIGN OF BIKE LANES / BUFFERED BIKE LANES
GOVERNMENT ROAD

AUTHORITY: CITY OF RICHMOND, DEPARTMENT OF PUBLIC WORKS

DESIGN BY: DBS	REVIEWED BY: GDC	FIELD NOTES DBS, JKS	SCALE 1" = 50'	DATE 7/27/2017	PROJECT SHEET 5	DRAWING NO. 0-28793
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Drawing name: K:\RIC_TPT0113257_RIC_On_Coll\010_Buffered Bike Lanes\Project Data\Design\CAD\Plan Sheets\6 Government Road.dwg 6 Government Road Aug 11, 2017 9:52am by: donielle.soriano
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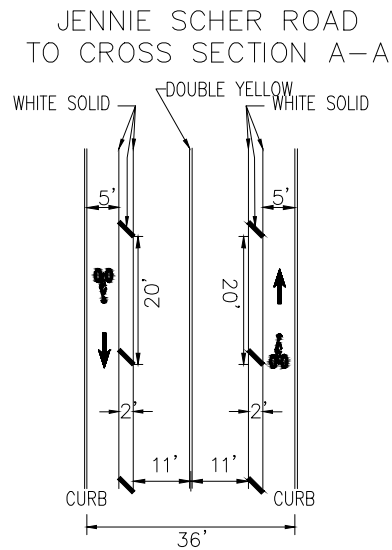
- (N) INSTALL ARROW MARKING PER TYPICAL DETAIL SHEET 3.
- (O) INSTALL "SCHOOL" MARKING PER TYPICAL DETAIL SHEET 3.
- (P) INSTALL "BUS ONLY" MARKING PER TYPICAL DETAIL SHEET 3.
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CONSTRUCTION NOTES

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- 6 INSTALL FLEXI-POST.
- 7 RELOCATE EXISTING SIGN.
- 8 INSTALL PARKING LEFT, BICYCLES RIGHT SIGN.

TYPICAL SECTIONS

Not to Scale



Kimley-Horn

Kimley-Horn and Associates, Inc.
1700 WILLOW LAWN DR, SUITE 200
RICHMOND, VIRGINIA 23230
Tel. 804-673-2980

DESIGN OF BIKE LANES / BUFFERED BIKE LANES
GOVERNMENT ROAD

AUTHORITY: CITY OF RICHMOND, DEPARTMENT OF PUBLIC WORKS

DESIGN BY:
DRAWN BY:
CHECKED BY:

DSB
JES
DMC

REVIEWED BY:
GDG

FIELD NOTES
DSB, JKS

SCALE
1" = 50'

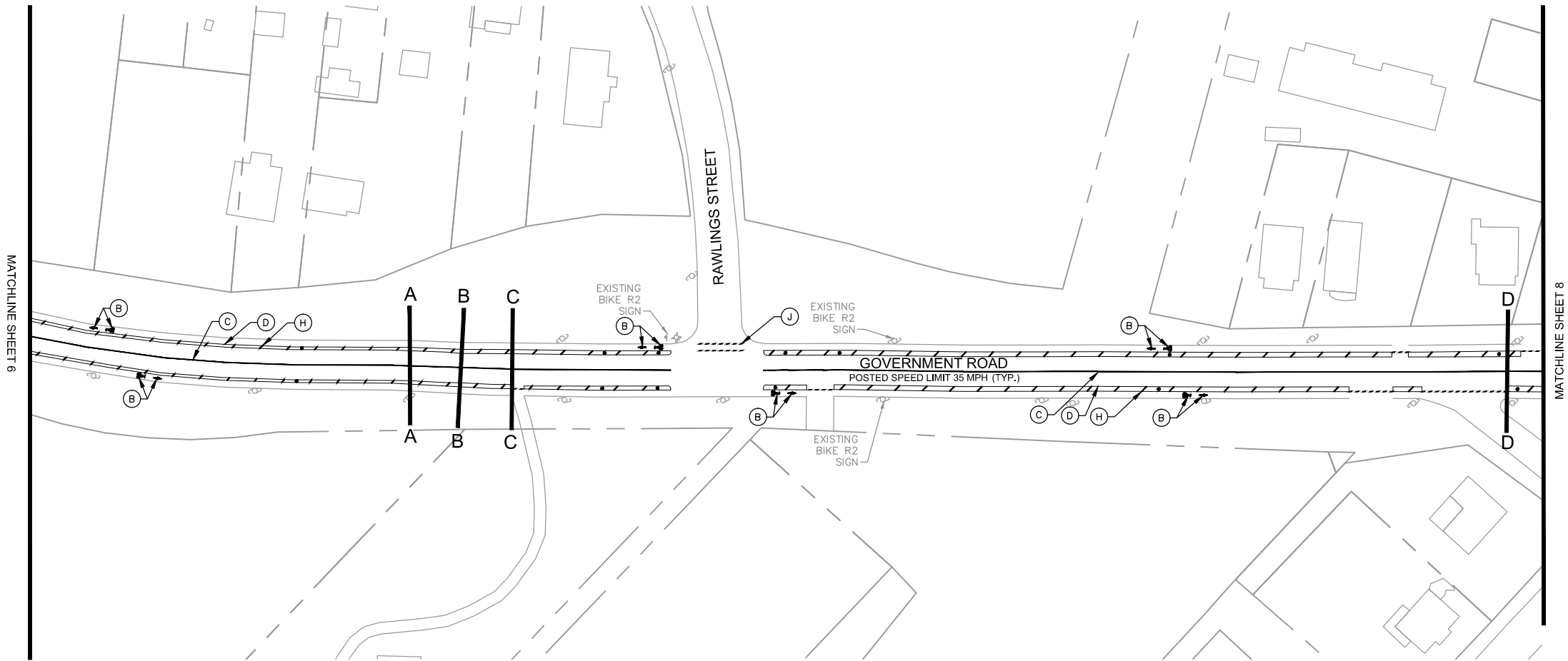
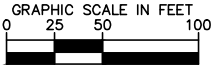
DATE
7/27/2017

PROJECT
SHEET

6

DRAWING NO.
0-28793

Drawing name: K:\R\C\TPT0113257_RIC_On_Coll\010_Buffered Bike Lanes\Project Data\Design\CAD\Plan_Sheets\7 Government Road.dwg Aug 11, 2017 9:53am by: danielle.sporano
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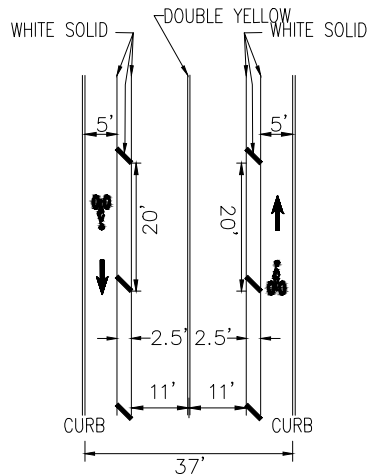
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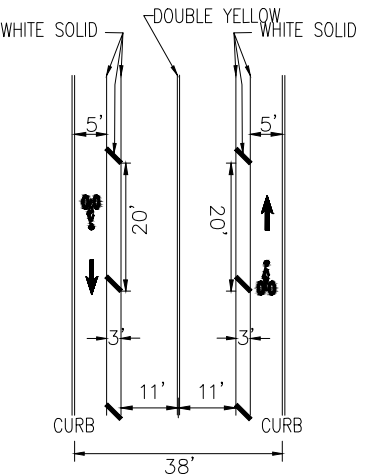
TYPICAL SECTIONS

Not to Scale

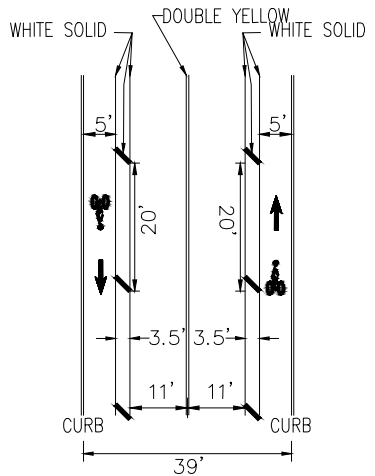
CROSS SECTION A-A
TO CROSS SECTION B-B



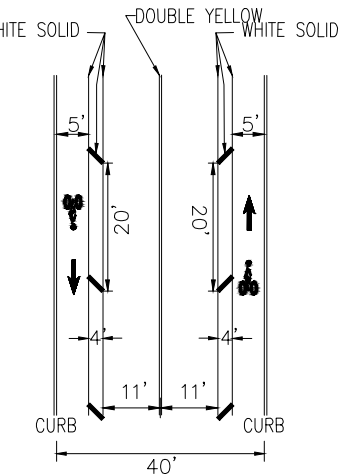
CROSS SECTION B-B
TO CROSS SECTION C-C



CROSS SECTION C-C
TO CROSS SECTION D-D



CROSS SECTION D-D
TO CARLISLE AVENUE



Kimley-Horn

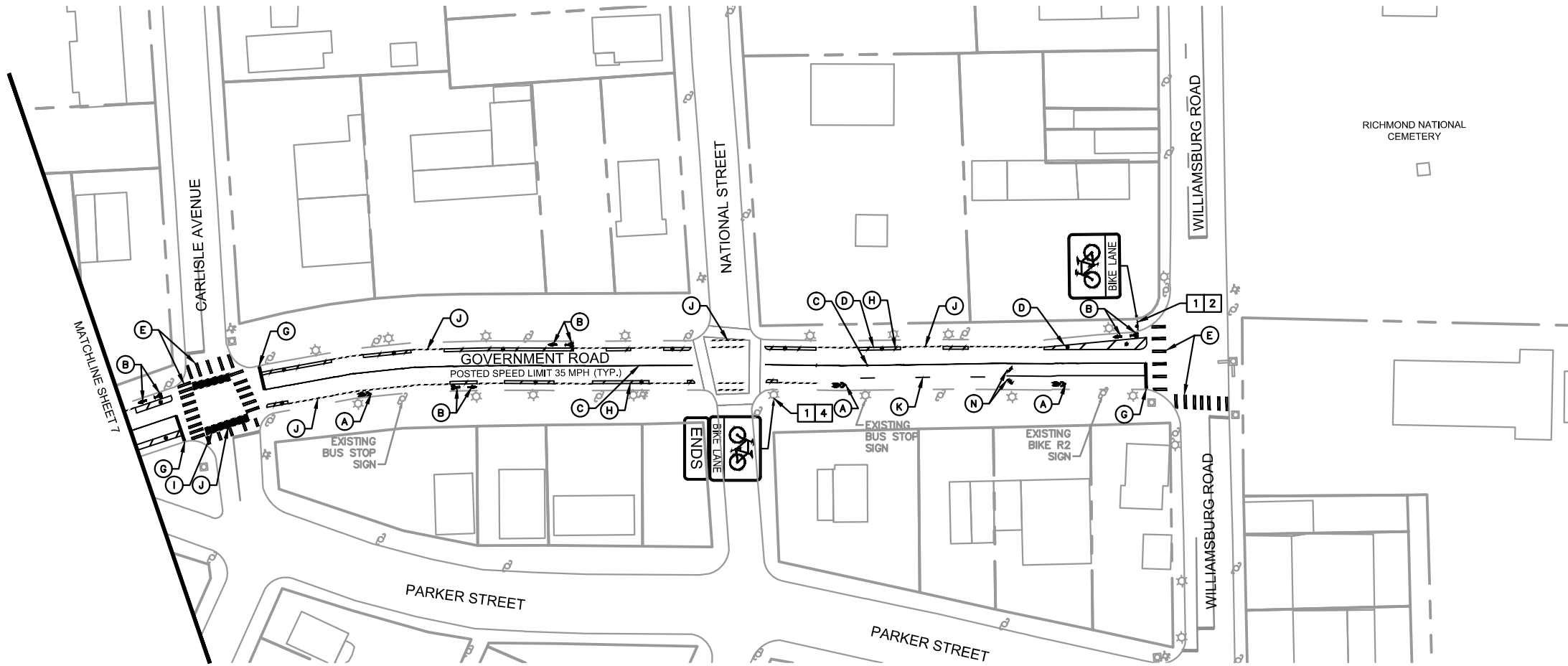
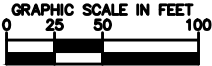
Kimley-Horn and Associates, Inc.
1700 WILLOW LAWN DR, SUITE 200
RICHMOND, VIRGINIA 23230
Tel. 804-673-2882

**DESIGN OF BIKE LANES / BUFFERED BIKE LANES
GOVERNMENT ROAD**

AUTHORITY: CITY OF RICHMOND, DEPARTMENT OF PUBLIC WORKS

DESIGN BY: DBS	REVIEWED BY: GDC	FIELD NOTES DBS, JKS	SCALE 1" = 50'	DATE 7/27/2017	PROJECT SHEET 7	DRAWING NO. 0-28793
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Drawing name: K:\RVC\TPTO\13257_RIC_On_Cal\010_Buffered Bike Lanes\Project Data\Design\CAD\Plan Sheets\8 Government Road.dwg Aug 11, 2017 9:53am by: daniel.e.sporano
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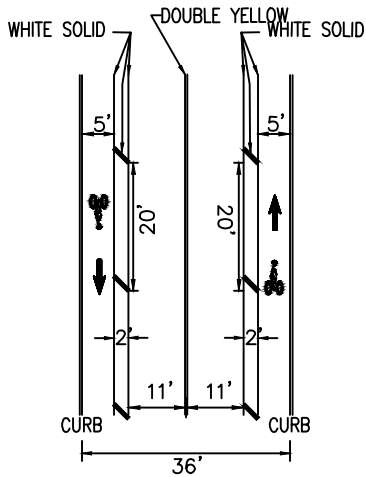
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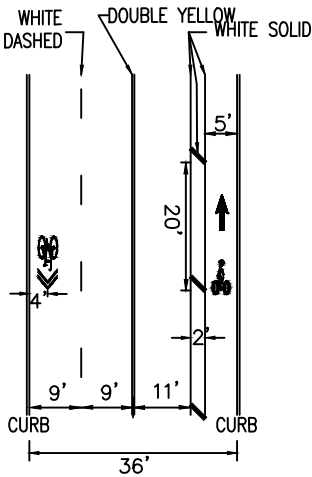
TYPICAL SECTIONS

Not to Scale

CARLISLE AVENUE TO NATIONAL STREET



NATIONAL STREET TO WILLIAMSBURG ROAD



Kimley-Horn

Kimley-Horn and Associates, Inc.
1700 WILLOW LAWN DR, SUITE 200
RICHMOND, VIRGINIA 23230
Tel. 804-673-3882

DESIGN OF BIKE LANES / BUFFERED BIKE LANES
GOVERNMENT ROAD

AUTHORITY: CITY OF RICHMOND, DEPARTMENT OF PUBLIC WORKS

DESIGN BY: DDB	DESIGNED BY: DDB	REVIEWED BY: GOG	FIELD NOTES: DDB, JMS	SCALE: 1" = 50'	DATE: 7/27/2017	PROJECT: SHEET	DRAWING NO.: 0-28793
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