CITY OF RICHMOND, VIRGINIA

DEPARTMENT OF PUBLIC WORKS TRANSPORTATION ENGINEERING DIVISION



BIKE LANE Williamsburg Avenue

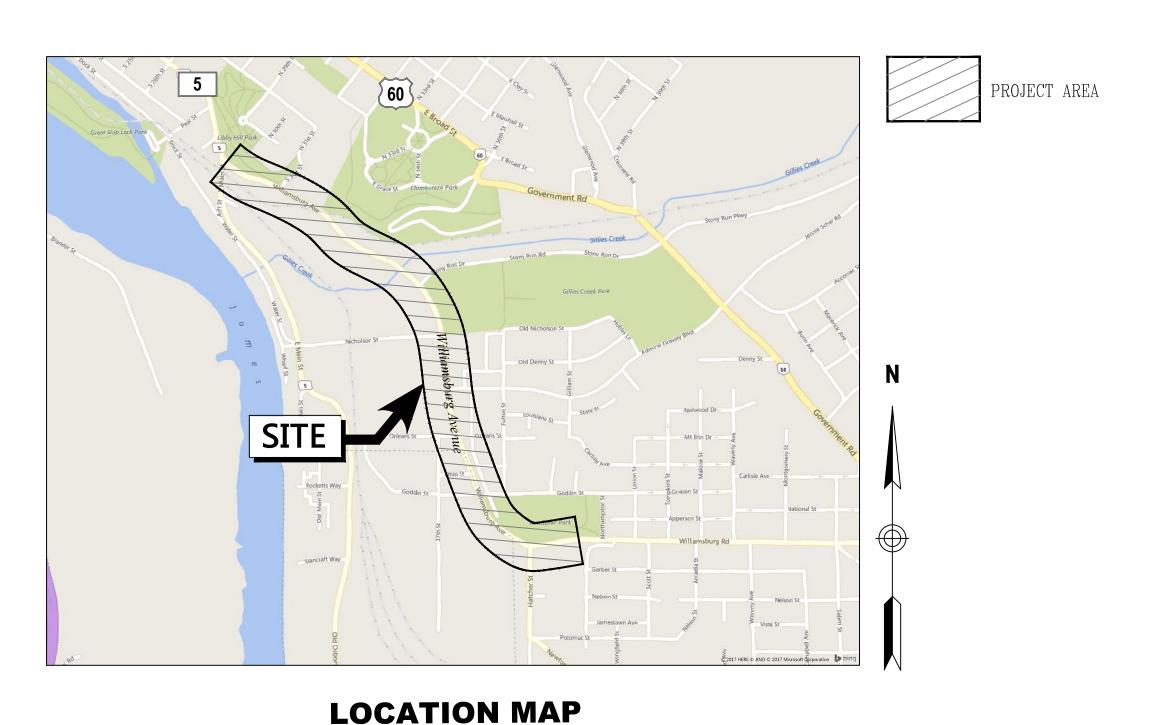
VHB PROJECT NO. 33965.12

INDEX OF SHEETS

Sheet Title	Sheet No.		
LEGEND AND GENERAL NOTES	C1.00		
OVERALL EXISTING CONDITIONS PLAN	C2.00		
EXISTING CONDITIONS PLAN	C2.01 - C2.03		
OVERALL PAVEMENT MARKING AND SIGNAGE PLAN	C3.00		
PAVEMENT MARKING AND SIGNAGE PLAN	C3.01 - C3.03		
DETAILS	C4.01		
DETAILS	C4.02		

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.

THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE 2016 VDOT ROAD AND BRIDGE SPECIFICATIONS, 2016 VDOT ROAD AND BRIDGE STANDARDS, 2009 FHWA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2011 VIRGINIA SUPPLEMENT TO THE MUTCD, 2011 VIRGINIA WORK AREA PROTECTION MANUAL, APPLICABLE CITY OF RICHMOND STANDARDS AND SPECIFICATIONS, AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE ELECTRONIC VERSION OF THE PLAN ASSEMBLY.



1000 0 1000 2000 GRAPHIC SCALE (FEET)

1" = 1000'

August 7, 2017

CITY OF RICHMOND

APF	PROVED FOR CONSTRUCTION
DATE	SURVEYS SUPERINTENDENT
DATE	PROJECT MANAGER
DATE	MAINTENANCE ENGINEER
DATE	CITY TRANSPORTATION ENGINEER
DATE	CAPITAL PROJECTS ADMINISTRATOR
DATE	CITY ENGINEER
DATE -	DIRECTOR OF PUBLIC WORKS

REVISIONS

		147 / 101011/0
NO.	DATE	COMMENTS



CITY OF RICHMOND

DEPARTMENT OF PUBLIC WORKS
RICHMOND, VIRGINIA
DRAWING NO: O-XXXXX



115 South 15th Street
Suite 200
Richmond, VA 23219
804.343.7100 **vhb.com**

Legend				
Exist.	Prop.			
		RIGHT-OF-WAY/PROPERTY LINE		
	•	FACE OF CURB		
(1111111		BUILDING		
0	•	FLEXIBLE DELINEATOR		
D	D	DUMPSTER PAD		
-	•	SIGN		
	=	DOUBLE SIGN		
		DOUBLE YELLOW LINE		
		STOP LINE		
		CROSSWALK		
		CROSSBIKE		
		ACCESSIBLE CURB RAMP		
Ě.	گ	ACCESSIBLE PARKING		
VAN	VAN	VAN-ACCESSIBLE PARKING		
HYD	HYD ⊙	FIRE HYDRANT		
OTT		TRAFFIC SIGNAL		
S		SIGNALED INTERSECTION		
-0-	-	UTILITY POLE		
Match	lline	MATCHLINE		

Abbreviations

General	
ADJ	ADJUST
APPROX	APPROXIMATE
BWLL	BROKEN WHITE LANE LINE
DYCL	DOUBLE YELLOW CENTER LINE
EX	EXISTING
EXIST	EXISTING
MAX	MAXIMUM
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
SWEL	SOLID WHITE EDGE LINE
SWLL	SOLID WHITE LANE LINE
TYP	TYPICAL

Notes

General 1. CONTRACTOR SHALL CONTACT MISS

- CONTRACTOR SHALL CONTACT MISS UTILITY AT 811, 1-800-552-7100, OR
 HTTP://WWW.MISSUTILITYOFVIRGINIA.COM NO LESS THAN 72 HOURS PRIOR TO EXCAVATION AND SHALL NOT
 DISTURB THE SOIL UNTIL DIG TICKET HAS BEEN PROCESSED.
- 2. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
- 3. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).
- 4. WORK WITHIN THE LOCAL RIGHT-OF-WAY SHALL CONFORM TO CITY OF RICHMOND STANDARDS.
- 5. UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
- 6. TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- CONTRACTOR SHALL DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.
- 8. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- 9. DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
- 10. THIS PROJECT IS NOT SUBJECT TO THE CITY OF RICHMOND STORMWATER MANAGEMENT PERMIT (RSMP) AS THERE IS NO LAND DISTURBANCE.
- 11. CONTRACTOR SHALL PHASE WORK TO MINIMIZE TIME BETWEEN REMOVING EXISTING MARKINGS AND TRAFFIC
- CONTROL DEVICES AND INSTALLATION OF NEW MARKINGS AND TRAFFIC CONTROL DEVICES.

 12. CONTRACTOR SHALL SEAL ALL ASPHALT AND REPAIR SURFACES AS NECESSARY ALONG BIKE LANES WHERE MINOR CRACKS AND JOINTS IMPEDE NORMAL BICYCLE FLOW. LARGE SURFACE REPAIRS OR LAND DISTURBANCE ACTIVITIES, IF REQUIRED, SHALL BE PERFORMED UNDER SEPARATE CONTRACT. PLEASE NOTIFY
- 13. CONTRACTOR SHALL INSPECT ALL STOP BARS AT SIDE STREET INTERSECTIONS. ALL STOP BARS SHALL BE REFRESHED TO FULL VISIBILITY. IF A STOP BAR SHOWS SIGNS OF WEAR OR MISSING PAINT IT SHALL BE REPLACED IN ITS ENTIRETY.

Layout and Materials

- 1. DIMENSIONS ARE FROM THE FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.
- 2. PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LICENSED SURVEYOR.
- 3. ALL CONCRETE IF NOT SPECIFICALLY CALLED OUT SHALL BE A MINIMUM OF 3,000 PSI.

CITY ENGINEER WHERE MAJOR PAVEMENT REPAIRS ARE REQUIRED.

Maintenance of Traffic

- 1. THE PURPOSE OF THESE NOTES IS TO DESCRIBE GENERAL TRAFFIC OPERATION DURING CONSTRUCTION. IT IS NOT INTENDED TO PROVIDE ALL DETAILS RELATED TO MAINTENANCE OF TRAFFIC.
- 2. ALL MAINTENANCE OF TRAFFIC OPERATIONS AND MATERIALS SHALL MEET THE REQUIREMENTS OF THE VIRGINIA WORK AREA PROTECTION MANUAL, AUGUST 2011, AND PART IV OF THE MUTCD, INCLUDING ALL CHANGES AND REVISIONS TO DATE FOR THESE DOCUMENTS.
- 3. CONSTRUCTION WARNING SIGNS SHALL BE PLACED IN THE ADVANCE WARNING AREA AND THE TERMINATION AREA OF THE WORK ZONE. CONTRACTOR SHALL PROVIDE SIGNS AND ANY NECESSARY STANDS TO ENSURE AN UNRESTRICTED VIEW OF THE WARNINGS.
- 4. CONSTRUCTION IS ALLOWED MONDAY THROUGH SATURDAY DURING THE CONTRACT PERIOD. NO SUNDAY CLOSURES WILL BE ALLOWED UNLESS DIRECTED BY THE CITY TRANSPORTATION ENGINEER.
- 5. ALONG ALL PROJECT ROADWAYS, NO TEMPORARY LANE CLOSURES OR FLAGMEN OPERATIONS ARE PERMITTED BETWEEN THE HOURS OF 6:00 AM TO 9:00 AM AND 3:30 PM TO 6:00 PM, MONDAY THROUGH FRIDAY, OR AS DIRECTED BY THE PROJECT ENGINEER.
- 6. LANE CLOSURES WILL NOT BE PERMITTED ON HOLIDAYS OR ON THE DAY BEFORE OR AFTER, UNLESS OTHERWISE DIRECTED BY THE CITY TRANSPORTATION ENGINEER.
- 7. CONTRACTOR MUST SUBMIT THE MAINTENANCE OF TRAFFIC PLAN TO THE CITY TRAFFIC ENGINEER TWO WEEKS IN ADVANCE OF CONSTRUCTION FOR REVIEW AND APPROVAL.
- 8. CONTRACTOR MUST MAINTAIN SAFE ACCESS TO ALL DRIVEWAYS AND MAINTAIN PEDESTRIAN ACCESS AT THE
- 9. ALL WORK WITHIN 15 FEET OF THE OUTSIDE EDGE OF PAVEMENT SHALL BE SIGNED. UNDER NO CIRCUMSTANCE WILL CONCURRENT WORK LEFT AND RIGHT OF ANY LANE OF TRAFFIC BE ALLOWED.
- 10. NO TEMPORARY TRAFFIC CONTROL MEASURES WILL BE ALLOWED TO BE PLACED WITHIN THE RIGHT OF WAY PRIOR TO THE START OF CONSTRUCTION.
- 11. ANY FLAGGERS USED DURING CONSTRUCTION SHALL BE STATE CERTIFIED. CERTIFICATION SHALL BE AVAILABLE ON SITE AT ALL TIMES.
- 12. THE SIGNING, BARRICADING, PAVEMENT MARKING, AND OTHER TRAFFIC CONTROLS MAY BE CHANGED DURING THE PROJECT WHEN DEEMED NECESSARY BY THE CITY FOR BEST INTEREST OF THE GENERAL PUBLIC AND THE SAFE AND ORDERLY FLOW OF TRAFFIC.
- 13. FAILURE TO PROVIDE TEMPORARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL SHALL RESULT IN IMMEDIATE CORRECTIVE MEASURES BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY.

City of Richmond DPW (Related to Work within ROW)

- 1. ALL WORK IN THE STREETS AND SIDEWALKS SHALL BE PERFORMED UNDER A PERMIT AND MONITORED BY THE PERMIT INSPECTOR.
- 2. WORK SHALL NOT COMMENCE UNTIL THE PERMIT INSPECTOR HAS BEEN NOTIFIED, A PRE-CONSTRUCTION CONFERENCE HELD, AND MISS UTILITY CLEARS.
- 3. ANY DISTURBED SIDEWALK OR CURB SHALL BE REPAIRED AND REPLACED IN ACCORDANCE WITH CITY STANDARDS AS SHOWN ON THE PLANS.

Existing Conditions Information

BASE PLAN: THE PROPERTY LINES AND OTHER EXISTING CONDITIONS SHOWN ARE BASED ON INFORMATION COMPILED FROM CITY OF RICHMOND GIS AND AERIAL PHOTOGRAPHY. THEY ARE NOT WARRANTED TO BE EXACT. FIELD VERIFICATIONS OF PAVEMENT WIDTHS AND EXISTING SIGNAGE LOCATIONS WERE PERFORMED BY VHB IN AUGUST 2016 AND AGAIN IN JANUARY 2017.

Document Use

- 1. THESE PLANS AND CORRESPONDING CADD DOCUMENTS ARE INSTRUMENTS OF PROFESSIONAL SERVICE, AND SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE OTHER THAN FOR WHICH IT WAS CREATED WITHOUT THE EXPRESSED, WRITTEN CONSENT OF VHB. ANY UNAUTHORIZED USE, REUSE, MODIFICATION OR ALTERATION, INCLUDING AUTOMATED CONVERSION OF THIS DOCUMENT SHALL BE AT THE USER'S SOLE RISK WITHOUT LIABILITY OR LEGAL EXPOSURE TO VHB.
- 2. CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.
- 3. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.

Existing Sign Summary

Existing Sign Summary Regulatory Sign Summary Warning Sign Summary							
	latory S		nary		ning Sig		ary
M.U.T.C.D. Number	Desc.	M.U.T.C.D. Number	Desc.	M.U.T.C.D. Number	Desc.	M.U.T.C.D. Number	Desc.
R1-1	STOP	R7-1	NO PARKING ANY TIME	W1-7	\	W11-1	
R1-2	YIELD	R7-6	NO PARKING LOADING ZONE	W1-8L		W11-V3	FOR TURNING VEHICLES
R2-1	SPEED LIMIT 50	R7-201a		W1-8R		W11-2	*
R2-6(M)	\$PEEDING \$200 ADDITIONAL FINE	R7-203	ENOW EMERGENCY ROUTE NO PARKING OR IMPEDING TRAFFIC FLOW BURNE EMERGENCY TOWNS EMFORCED	W2-4		W11-7	
R3-1	B	R7-2a	7AM TO 9AM TOW AWAY	W3-3		W11-8	
R3-2	9	R7-8	RESERVED PARKING	W3-5	SEED SEED SEED SEED SEED SEED SEED SEED	W12-2	15'-0
R3-4	(8)	R7-108	PARKING 8:30 AM 10 5:30 PM	W5-2	NARROW BRIDGE	W16-2a	250 FT
R3-5L	ONLY	R8-3a	B	W5-2	BRIDGE TRAFFIC LEFT LANE	W16-3a	BRIDGE 1/2 MILE
R3-5R	ONLY	R8-3a(M)	DURING CHURCH ACTIVITIES	W8-10	(F)	W16-5pL	←
R3-7L	LEFT LANE MUST TURN LEFT	R8-3b	PASSENGER LOADING ONLY	W9-1(MOD)	BIKE LANE ENDS	W16-6pR	
R3-7R	RIGHT LANE MUST TURN RIGHT	R9-6	YIELD TO PEDS	W9-2L	LANE ENDS MERGE LEFT	W16-7pR	*
R3-7LR	ONLY ONLY	R10-3e	THE CONTROL OF THE PARTY OF THE	W9-xx	BIKE MERGE	W16-7pL	K
R3-7bP	EXCEPT BICYCLES	R10-7	DO NOT BLOCK Intersection	W10-1	RR	W16-9p	AHEAD
R3-17	BIKE LANE	R10-11a	NO TURN ON RED	W10-12			
R4-4	BEGIN RICHT TURN LANE	R10-11b	NO TURN		Sign Su	mmary	
	YIELD TO BIKES		ON RED	M.U.T.C.D. Number	Desc.	M.U.T.C.D. Number	Desc.
R4-7	7	R10-13	EMERGENCY SIGNAL TURNING TRAFFIC	BIKE 1	P OTO CARS PARKING BICYCLES	M3-3	SOUTH
R4-11	MAY USE FULL LANE	R10-15	TRAFFIC MUST YIELD TO PEDESTRIANS TURNING PEDICES	D1-3	↑ Ganado ← Hayden Jerome →	M3-4	WEST
R5-1	ENTER	R10-15R	TO REQUEST GREEN	D-3	w Moeur RD	M4-5	ТО
R5-2	TRUCKS	R10-22	WEIGHT	I-6 (N)	STOP# 2174 indeptricom sed-Affic (ritz) NO PARING	M5-1L	
R5-2a	PROHIBITION AHEAD ON BROOK ROAD Williamsburg Road	R12-1	LIMIT 10 TONS	I-6 (O)	BUSSTOP FOR COMMENT FOR COMME	M5-1R	
R5-V3(M)	No Thru Trucks Local Deliveries Only	R12-4	2 TONS PER AXLE 10 TONS GROSS	M1-1	INTERSTATE 64	M6-1L	
R5-V3	PROHIBITED ON BROOK ROAD MILE AHEAD	R13-1	ALL TRUCKS COMMERCIAL VEHICLES NEXT RIGHT	M1-4	10	M6-1R	
R6-2R	WAY ONE	R15-1	3	M1-5	35	M6-3	
R6-2L	WAY	R15-2	TRACKS	M1-8	OFFE R2	M6-4	
				M1-9		OM-3L	
				M3-1	NORTH	S1-1	
				M3-2	EAST	S5-2	END SCHOOL ZONE



Richmond, VA 23219 804.343.7100

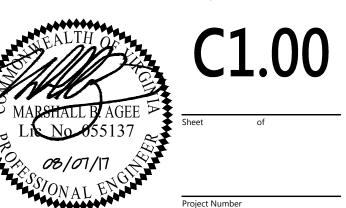
Suite 200

Williamsburg Avenue Bike Lanes

City of Richmond, Virginia

100% Package	August 7,	2017
Issued for	Date	
Designed by	Checked by	
No. Revision	Date	Appvd

Legend and
General Notes



33965.12

Saved Monday, August 07, 2017 6:37:54 PM MAGEE Plotted Monday, August 07, 2017 6:40:12 PM Agee, M





804.343.7100



Williamsburg Avenue Bike Lanes

City of Richmond, Virginia

by Checked by

100% Package

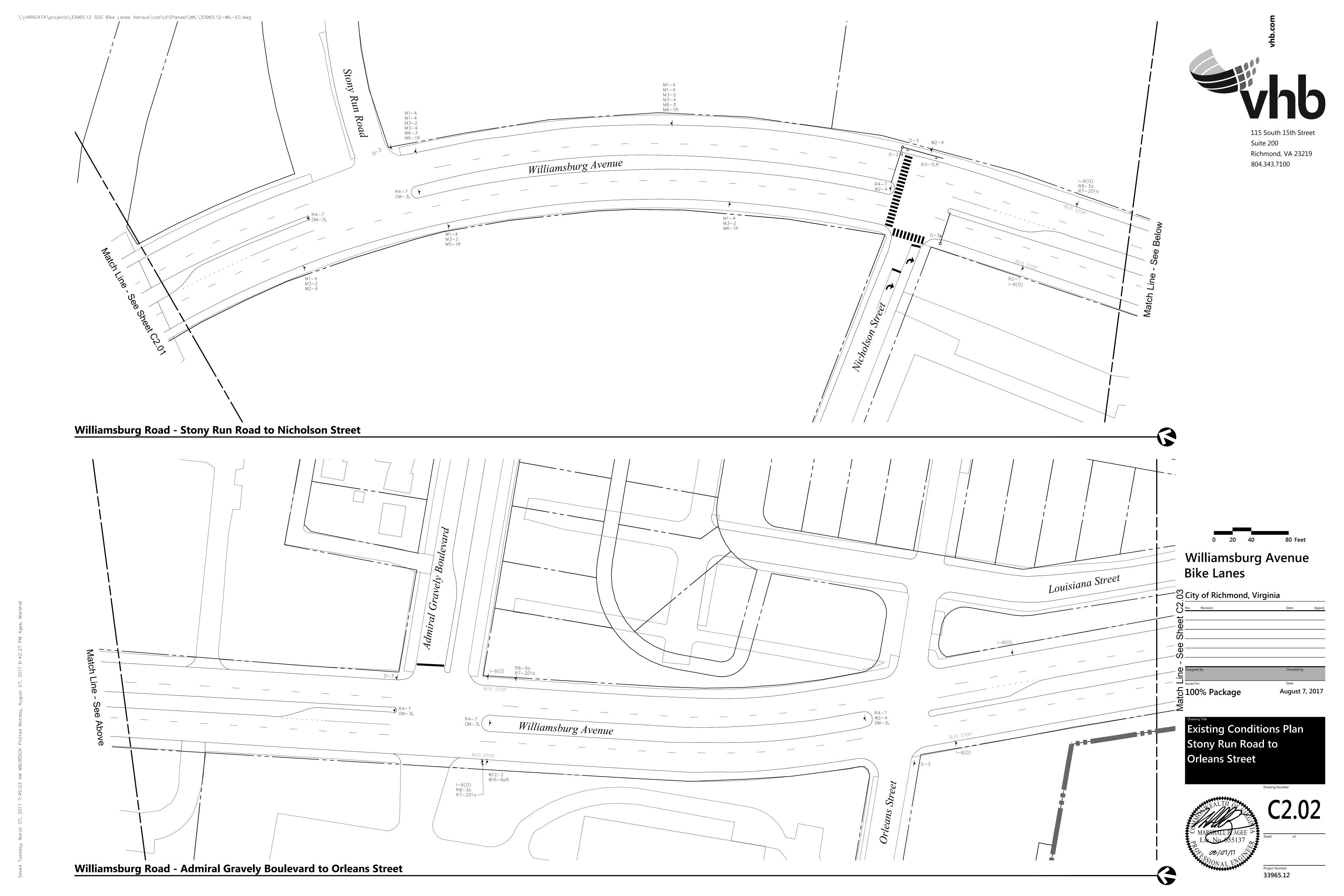
ge August 7, 2017

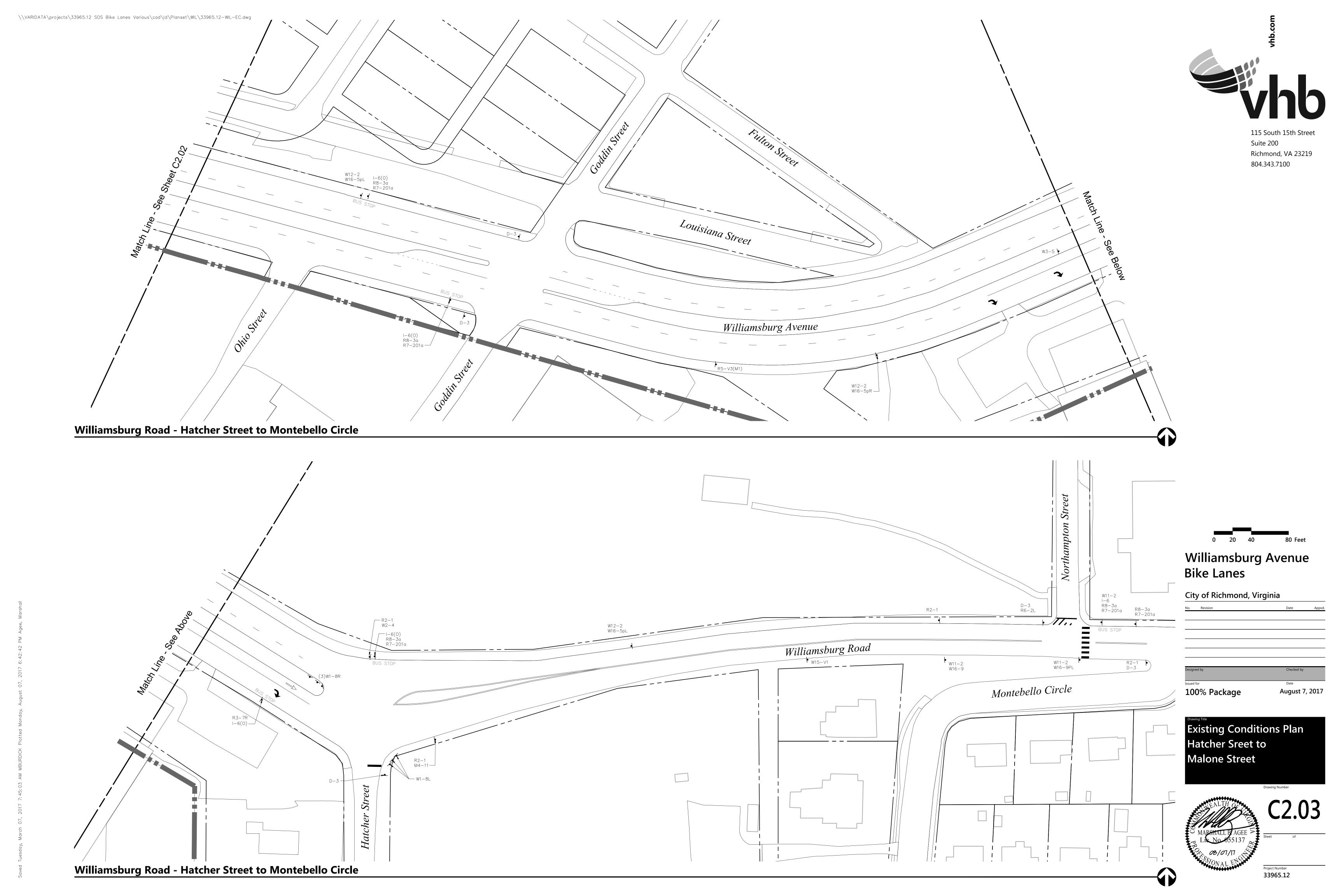
Overall Existing Conditions Plan



C2.00

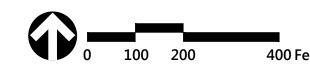












Williamsburg Avenue

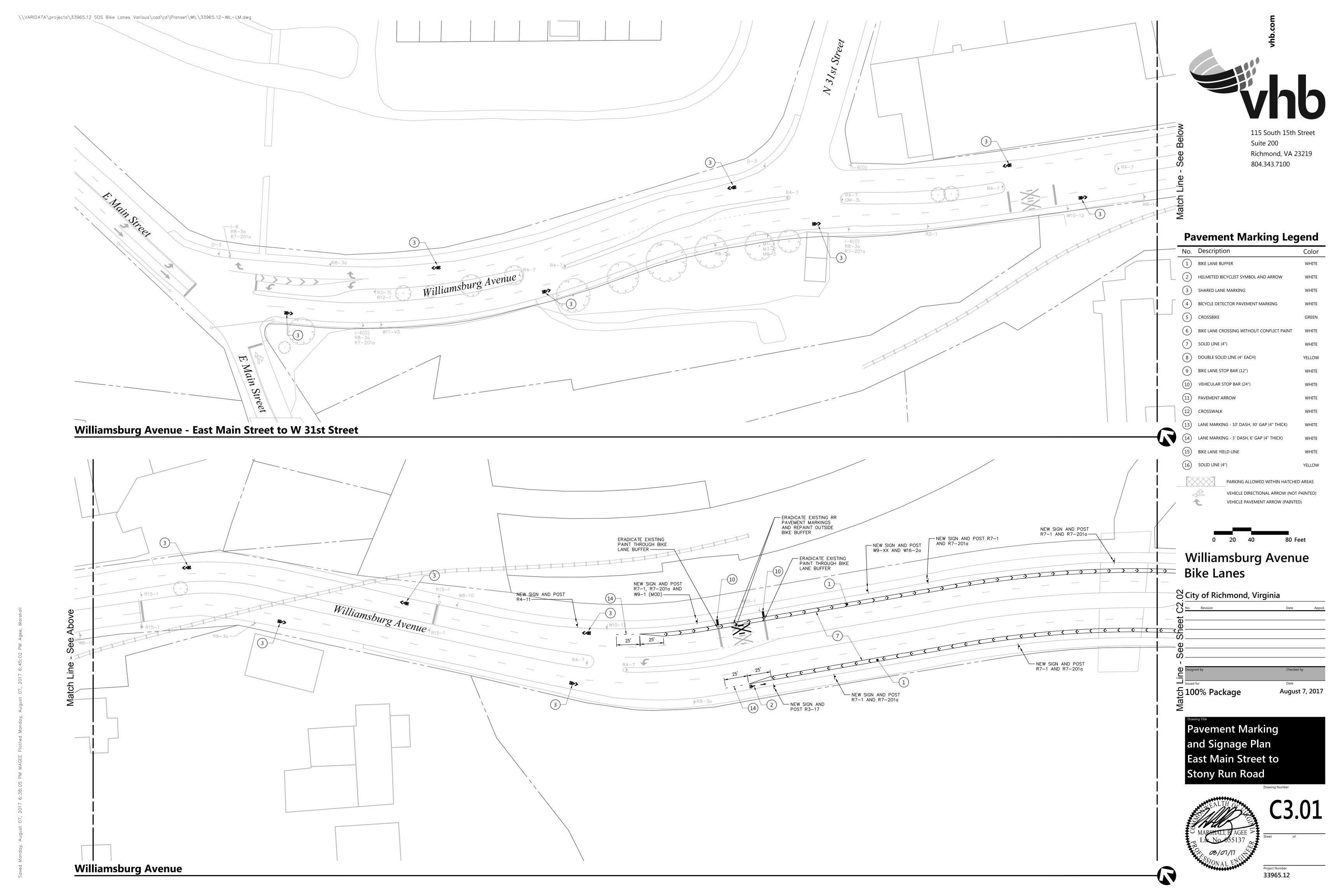
City of Richmond, Virginia

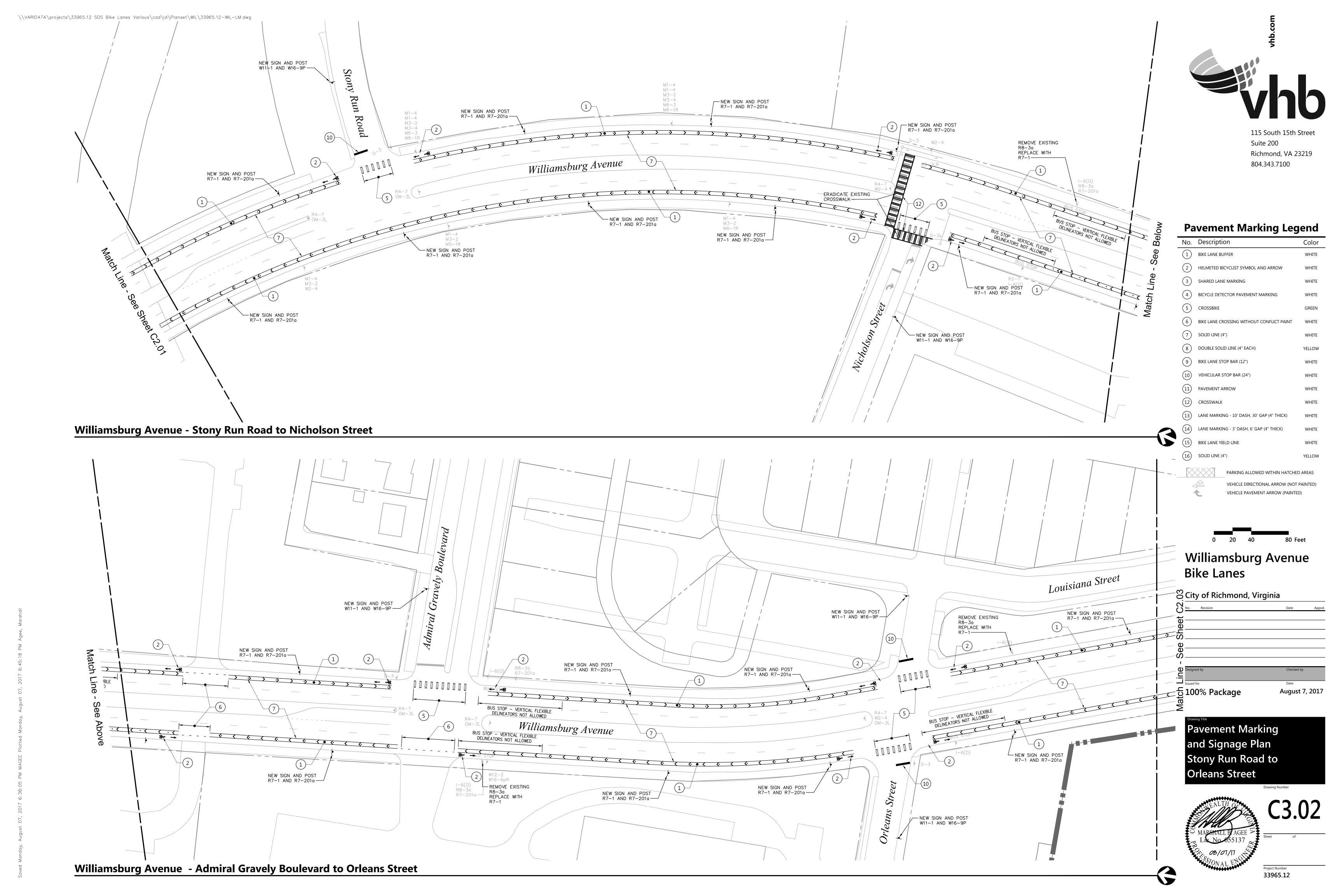
100% Package

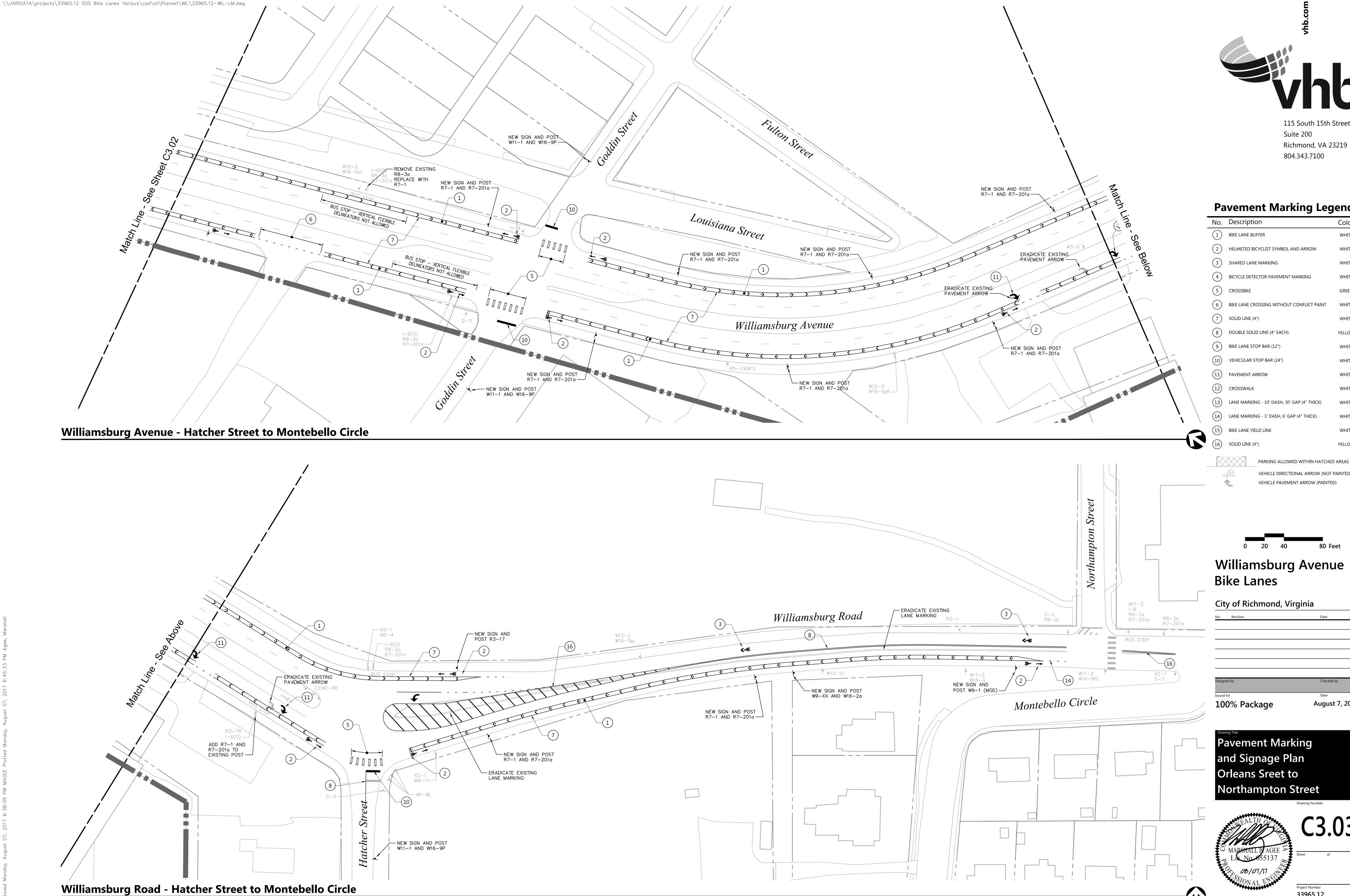
August 7, 2017

Overall Pavement Marking and Signage Plan









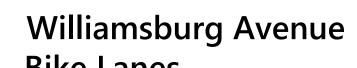


Suite 200 Richmond, VA 23219 804.343.7100

Dayomont Marking Logond

	Pa	vement Marking Leg	jend
•	No.	Description	Colo
	1	BIKE LANE BUFFER	WHITE
	2	HELMETED BICYCLIST SYMBOL AND ARROW	WHITE
	3	SHARED LANE MARKING	WHITE
	4	BICYCLE DETECTOR PAVEMENT MARKING	WHITE
	5	CROSSBIKE	GREEN
	6	BIKE LANE CROSSING WITHOUT CONFLICT PAINT	WHITE
	7	SOLID LINE (4")	WHITE
	8	DOUBLE SOLID LINE (4" EACH)	YELLOV
	9	BIKE LANE STOP BAR (12")	WHITE
	10	VEHICULAR STOP BAR (24")	WHITE
	(11)	PAVEMENT ARROW	WHITE
	(12)	CROSSWALK	WHITE
	13)	LANE MARKING - 10' DASH, 30' GAP (4" THICK)	WHITE
	(14)	LANE MARKING - 3' DASH, 6' GAP (4" THICK)	WHITE
_	(15)	BIKE LANE YIELD LINE	WHITE
	<u>(16)</u>	SOLID LINE (4")	YELLOV

VEHICLE DIRECTIONAL ARROW (NOT PAINTED) VEHICLE PAVEMENT ARROW (PAINTED)



City of Richmond, Virginia

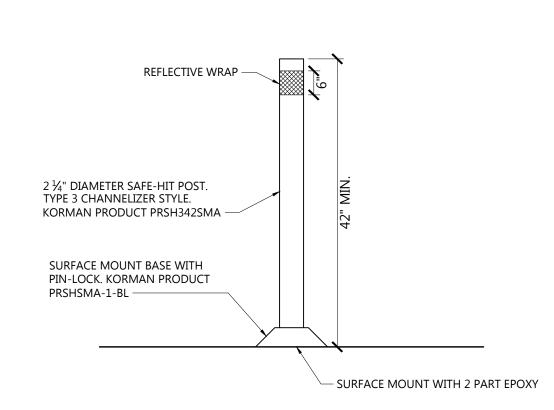
/	100% Package	August 7, 2017
	Issued for	Date
	Designed by	Checked by
	Designed by	Checked by

Pavement Marking and Signage Plan **Orleans Sreet to** Northampton Street



- * THIS DIMENSION SHALL BE A MINIMUM OF 5' FOR ACCESSIBLE
- * * THIS DIMENSION SHALL BE A MAXIMUM OF 8' FOR ACCESSIBLE

Sign Post - Type 'A' 1/16 LD_701 Source: VHB REV



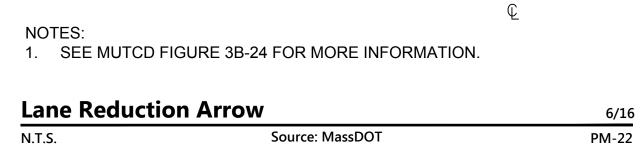
NOTES

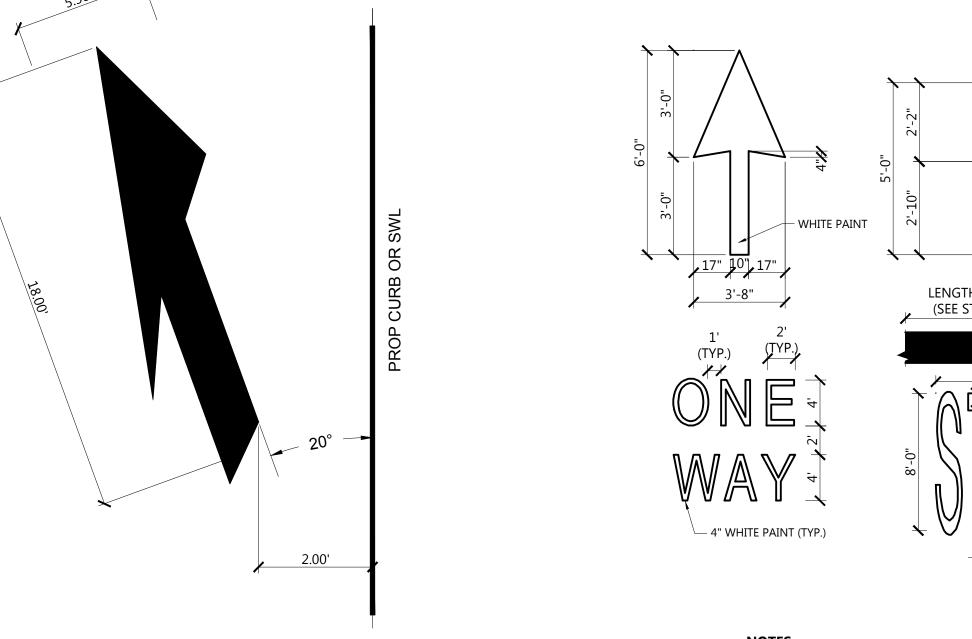
Vertical Flexible Delineator

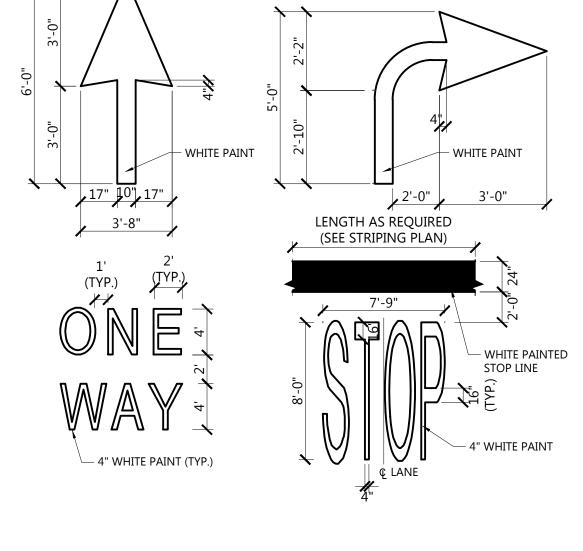
N.T.S.

- POSTS TO BE INSTALLED 5' FROM BEGINNING AND END OF EACH BIKE LANE BUFFER. OTHERWISE, 30' ON CENTER FOR FULL LENGTH OF BUFFER.
- 2. SAFE-HIT POST AND REFLECTIVE WRAP TO BE SAME COLOR. MATCH WHITE OR YELLOW BASED ON PAVEMENT MARKING COLOR OF BUFFER.

Source: Korman Signs Inc.



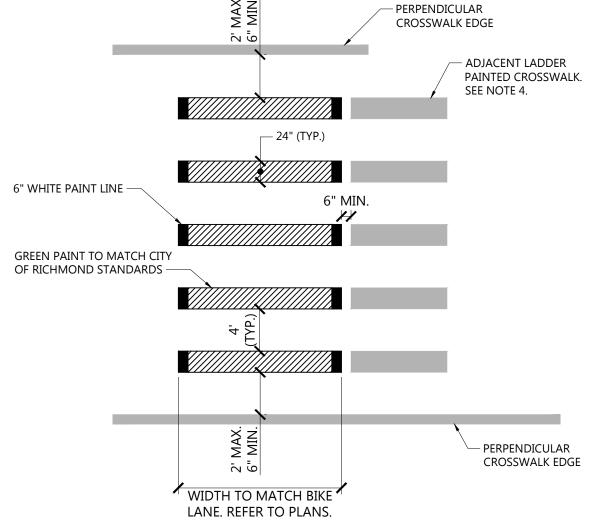




NOTES

PAVEMENT MARKINGS TO BE INSTALLED FOR ON SITE WORK IN LOCATIONS SHOWN.

Painted Pavement Markings - On Site 1/16 N.T.S. LD_554 Source: VHB REV



NOTES

Crossbike

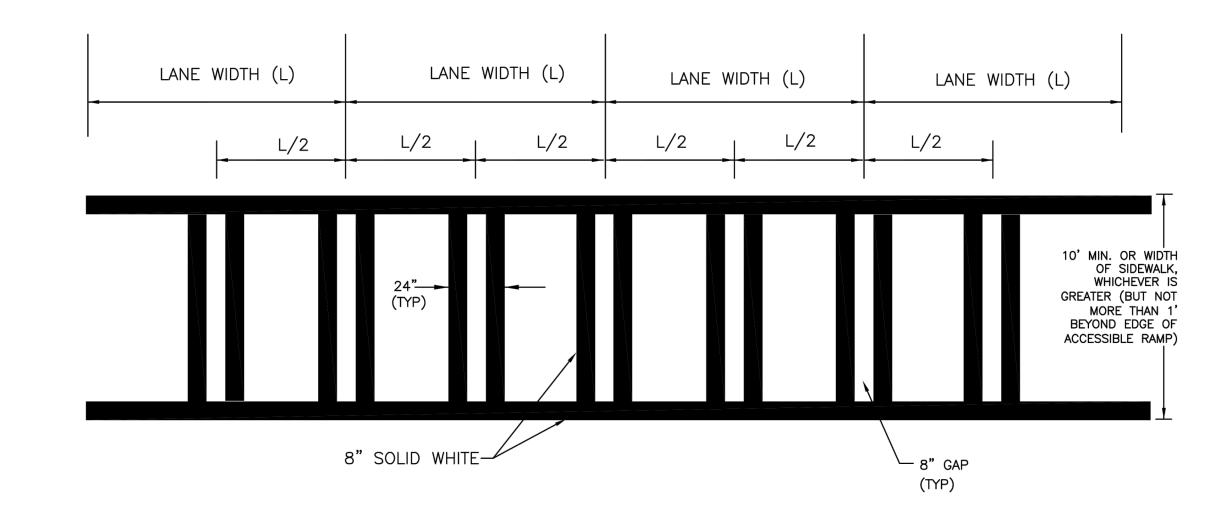
N.T.S.

- 1. TWENTY-FOUR INCH (24") LINES SHALL BE APPLIED IN ONE APPLICATION. NO COMBINATION OF LINES (TWO - 12 INCH LINES, ETC) WILL BE ACCEPTED.
- 2. LONGITUDINAL LINES TO BE PARALLEL TO CURBLINE.
- 3. ALL LINES TO BE THE SAME LENGTH AND PROPERLY ALIGNED.
- 4. WHERE ADJACENT TO LADDER PAINTED CROSSWALK, CROSSBIKE STRIPE THICKNESS AND SPACING SHALL MATCH CROSSWALK AND PROVIDE 6" SEPARATION MINIMUM BETWEEN CROSSBIKE AND CROSSWALK.

Source: VHB

Crosswalk

N.T.S. Source: City of Charlotte, NC 50.14

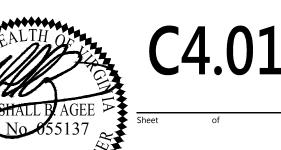


NOTES:

- 1. PER MUTCD STANDARDS, WHEN CROSSWALK LINES ARE USED THEY SHALL CONSIST OF SOLID WHITE LINES THAT MARK THE CROSSWALK. THEY SHALL BE NOT LESS THAN 150 MM (6 IN) NOR GREATER THAN 600 MM (24 IN) IN WIDTH.
- 2. IF TRANSVERSE LINES ARE USED TO MARK A CROSSWALK, THE GAP BETWEEN THE LINES SHOULD NOT BE LESS THAN 1.8 M (6 FT). IF DIAGONAL OR LONGITUDINAL LINES ARE USED WITHOUT TRANSVERSE LINES TO MARK A CROSSWALK, THE CROSSWALK SHOULD NOT BE LESS THAN 1.8 M (6 FT) WIDE.
- 3. IF USED, THE DIAGONAL OR LONGITUDINAL LINES SHOULD BE 300 TO 600 MM (12 TO 24 IN) WIDE AND SPACED 300 TO 1500 MM (12 TO 60 IN) APART. THE MARKING DESIGN SHOULD AVOID THE WHEEL PATHS, AND THE SPACING SHOULD NOT EXCEED 2.5 TIMES THE LINE WIDTH.

Details

100% Package



33965.12

August 7, 2017

115 South 15th Street

Richmond, VA 23219

Suite 200

804.343.7100

Williamsburg Avenue

City of Richmond, Virginia

Bike Lanes

Panel Style: warning_Rectangular.ssi M.U.T.C.D.: 2009 Edition

W9-1(MOD) Bike Lane Ends Warning Sign

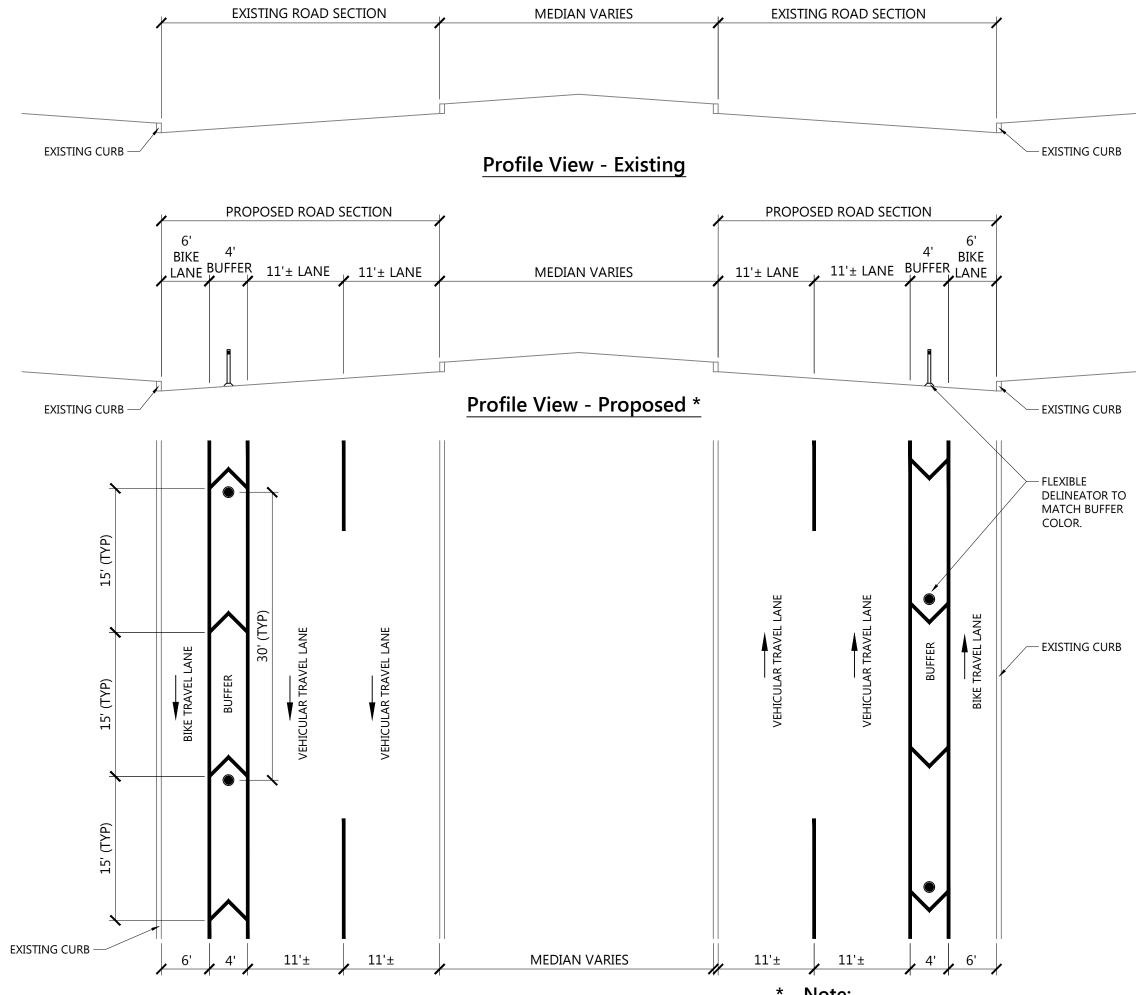
N.T.S. Source: NCUTCD 01/17 16-BIK-02

13.9"

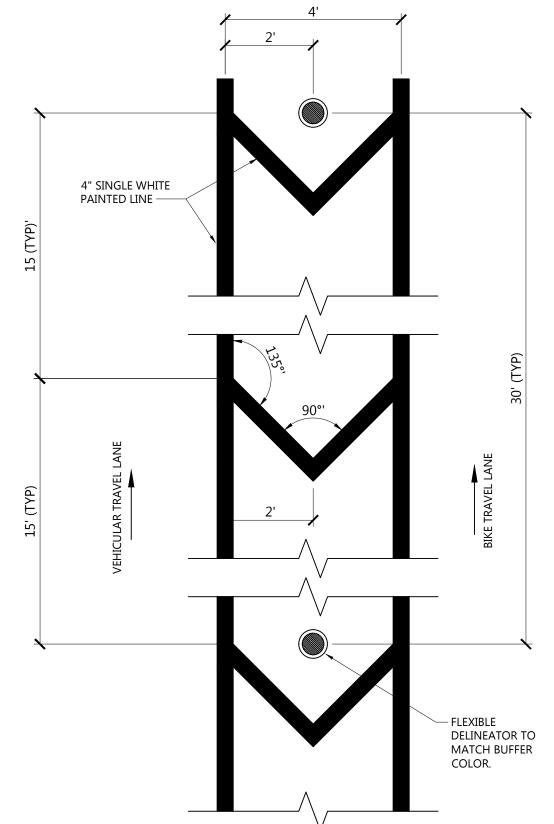
Panel Style: warning.ssi M.U.T.C.D.: 2009 Edition

20.8" 10"

W9-XX Bike Merge Warning Sign 01/17 16-BIK-02 Source: NCUTCD

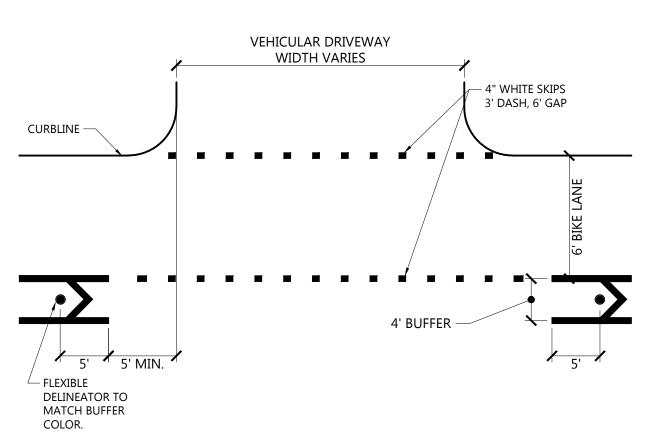


Typical Roadway Dimensions and Section



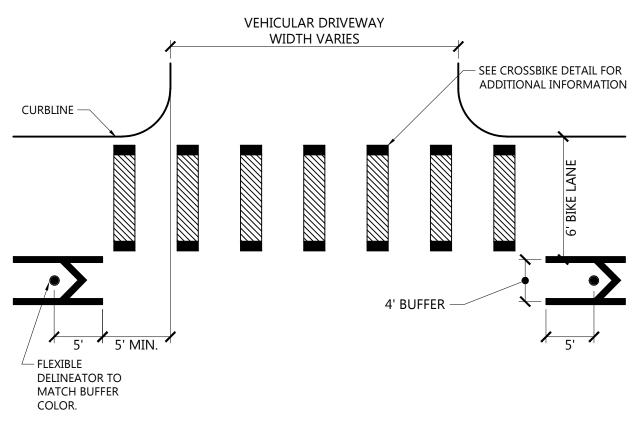
Bike Lane Buffer Striping
N.T.S. Sou Source: VHB — WHITE THERMOPLASTIC SHARED LANE MARKING. FIGURE 9C-9 PER MUTCD

Source: VHB



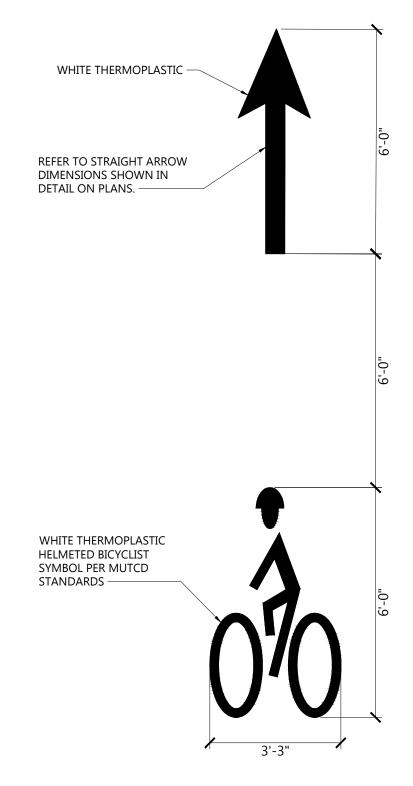
Bike Lane Driveway Crossing

N.T.S. Source: VHB



Bike Lane Street Crossing

Source: VHB



Helmeted Bicyclist and Arrow

N.T.S. Source: VHB



Richmond, VA 23219

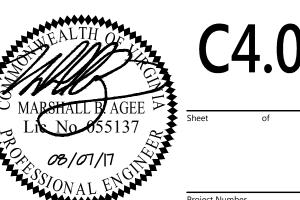
804.343.7100

Williamsburg Avenue Bike Lanes

City of Richmond, Virginia

100% Package August 7, 2017





* Note: SECTION IS TYPICAL AND MAY NOT REPRESENT ACTUAL FIELD DIMENSIONS. ADJUST VEHICULAR TRAVEL LANES AS NEEDED TO

Source: VHB

Plan View - Proposed *

Shared Lane Marking
N.T.S.