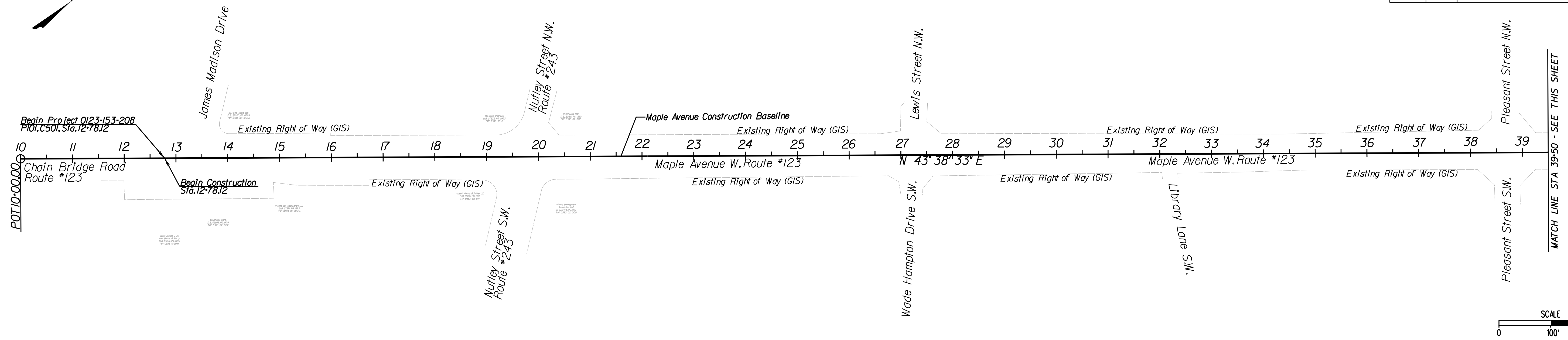


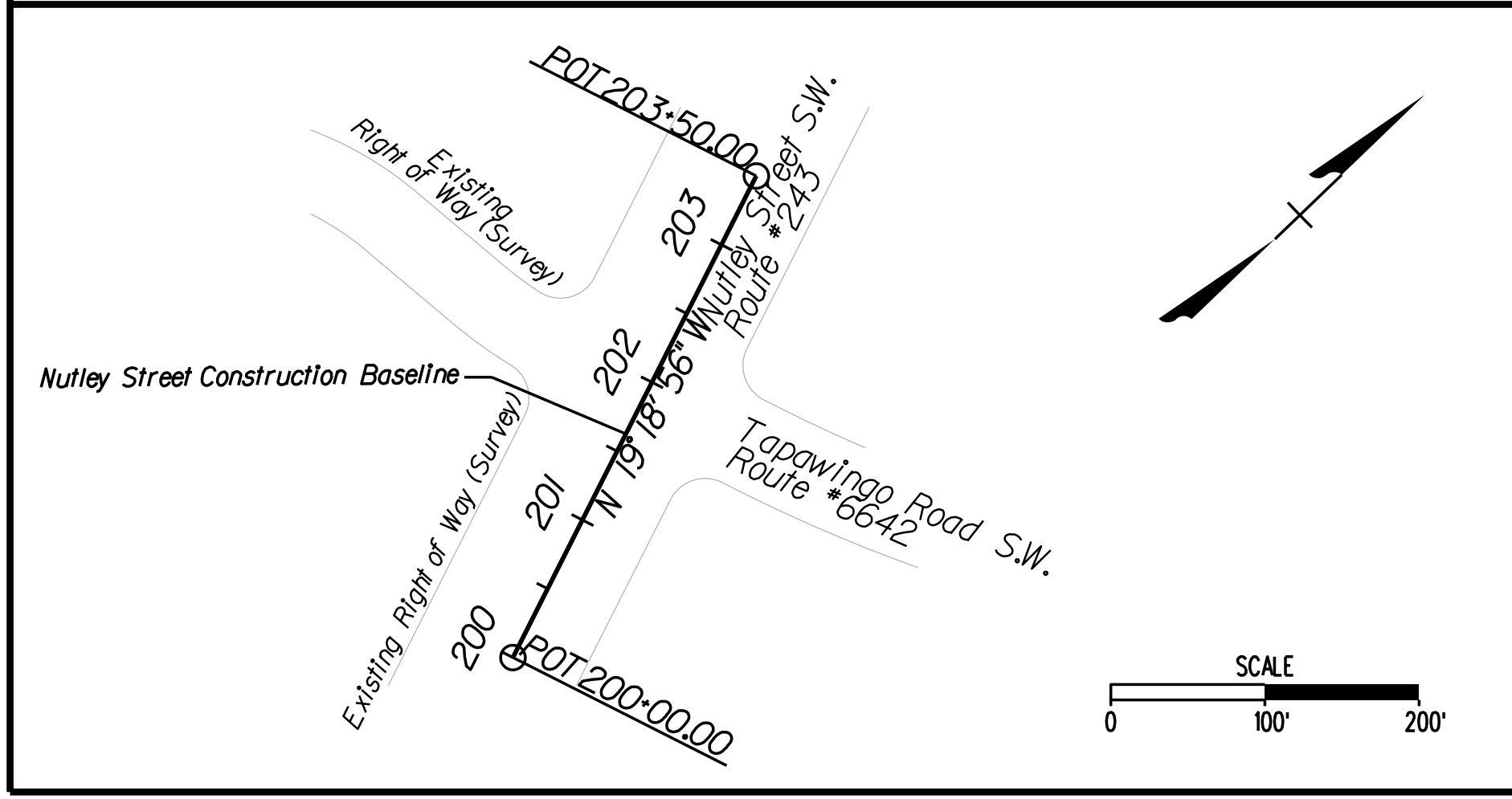
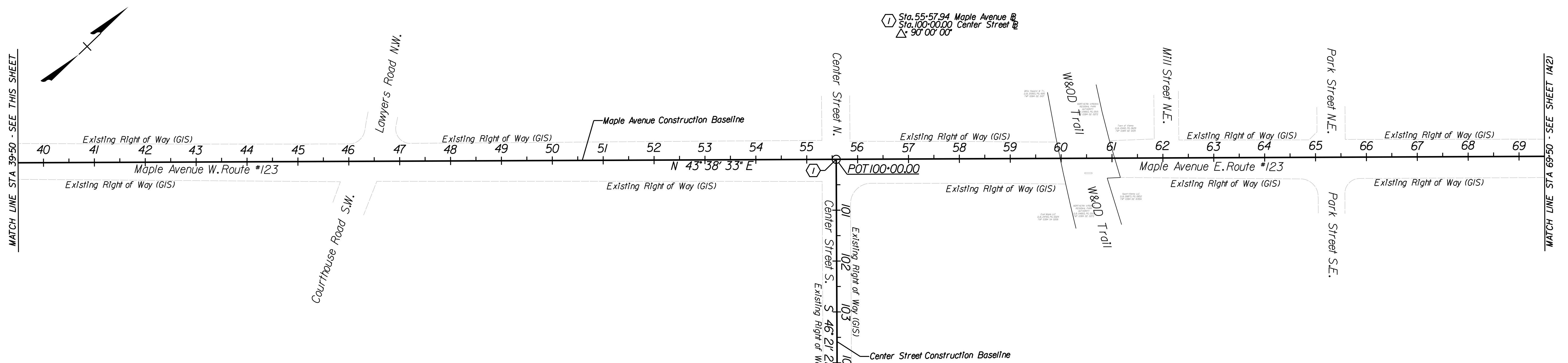


CONSTRUCTION ALIGNMENT DATA

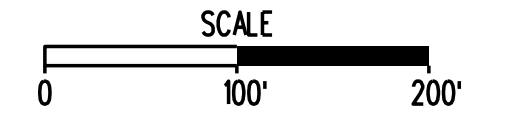
STATE	ROUTE	TOWN OF VIENNA	SHEET NO.
VA.	123 243	PROJECT (INFO)123-153-208 PI01.R201.C501	1A(1)



TOWN OF VIENNA



Note: See sheet 1A(2) for alignment data.



Revisions	
Date	Initial

COMMONWEALTH OF VIRGINIA
 DANA TRONE OZLIN
 Lic. No. 045607
 PROFESSIONAL ENGINEER

ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES CONSTRUCTION ALIGNMENT DATA SHEET			
Town of Vienna, Virginia			
DATE:			February 2023
DRAWN: SB	DESIGNED: SB	CHECKED: DT	
PLAN NO.	PROJECT	FILE NO.	SHEET NO. 1A(1)

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

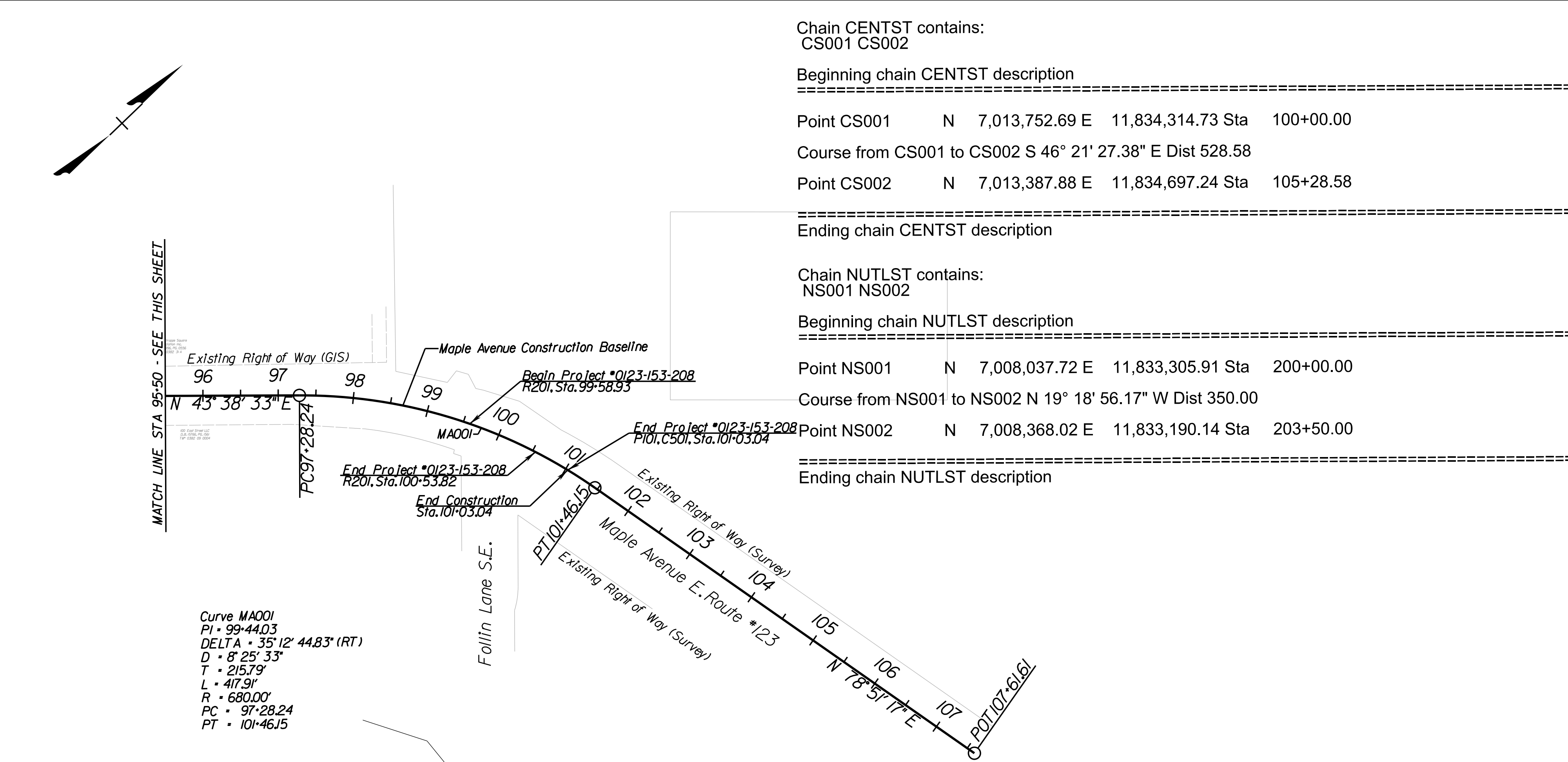


CONSTRUCTION ALIGNMENT DATA

STATE	ROUTE	TOWN OF VIENNA PROJECT	SHEET NO.
VA.	123 243	(INFO)0123-153-208 PI01,R201,C501	1A(2)



TOWN OF VIENNA



Curve MA001
 P.I. = 99+44.03
 DELTA = 35° 12' 44.83" (RT)
 D = 8° 25' 33"
 T = 215.79'
 L = 417.91'
 R = 680.00'
 P.C. = 97+28.24
 P.T. = 101+46.15

Chain CENTST contains:
 CS001 CS002

Beginning chain CENTST description
 =====

Point CS001 N 7,013,752.69 E 11,834,314.73 Sta 100+00.00
 Course from CS001 to CS002 S 46° 21' 27.38" E Dist 528.58

Point CS002 N 7,013,387.88 E 11,834,697.24 Sta 105+28.58

Ending chain CENTST description
 =====

Chain NUTLST contains:
 NS001 NS002

Beginning chain NUTLST description
 =====

Point NS001 N 7,008,037.72 E 11,833,305.91 Sta 200+00.00
 Course from NS001 to NS002 N 19° 18' 56.17" W Dist 350.00

Point NS002 N 7,008,368.02 E 11,833,190.14 Sta 203+50.00

Ending chain NUTLST description
 =====

Chain MAPLEAVE contains:
 MA001 CUR MA001 MA004

Beginning chain MAPLEAVE description
 =====

Point MA001 N 7,010,454.28 E 11,831,169.04 Sta 10+00.00
 Course from MA001 to PC MA001 N 43° 38' 32.62" E Dist 8,728.24

Curve Data

Curve MA001
 P.I. Station 99+44.03 N 7,016,926.73 E 11,837,341.81
 Delta = 35° 12' 44.83" (RT)
 Degree = 8° 25' 33.06"
 Tangent = 215.79
 Length = 417.91
 Radius = 680.00
 External = 33.42
 Long Chord = 411.36
 Mid. Ord. = 31.85
 P.C. Station 97+28.24 N 7,016,770.58 E 11,837,192.88
 P.T. Station 101+46.15 N 7,016,968.45 E 11,837,553.53
 C.C. N 7,016,301.27 E 11,837,684.97
 Back = N 43° 38' 32.62" E
 Ahead = N 78° 51' 17.45" E
 Chord Bear = N 61° 14' 55.04" E

Course from PT MA001 to MA004 N 78° 51' 17.45" E Dist 615.46

Point MA004 N 7,017,087.41 E 11,838,157.38 Sta 107+61.61

Ending chain MAPLEAVE description
 =====

Revisions	
Date	Initial



ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES CONSTRUCTION ALIGNMENT DATA SHEET			
Town of Vienna, Virginia			
DRAWN: SB			DATE: February 2023
DESIGNED: SB		CHECKED: DT	
PLAN NO.	PROJECT	FILE NO.	SHEET NO. 1A(2)

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



TOWN OF VIENNA

TRANSPORTATION MANAGEMENT PLAN

STATE	ROUTE	TOWN OF VIENNA	SHEET NO.
		PROJECT	
VA.	123 243	(INFO)123-153-208 P101,R201,C501	IC

PROJECT DESCRIPTION

THIS TASK CONSISTS OF THE INSTALLATION OF SIGNAL INTERCONNECT EQUIPMENT AT VARIOUS INTERSECTIONS ALONG ROUTES 243 AND 123 IN THE TOWN OF VIENNA.

ALLOWABLE HOURS FOR CLOSURES

THE CONTRACTOR SHOULD MAKE EVERY EFFORT TO MAINTAIN THE EXISTING TRAVEL LANES OPEN TO TRAFFIC AT ALL TIMES. LANE CLOSURES FOR CONSTRUCTION SHALL BE PERMITTED DURING THE FOLLOWING HOURS:

	SINGLE LANE CLOSURES* OR SHOULDER
MONDAY TO THURSDAY	9:00AM TO 3:30PM
FRIDAY	9:00AM TO 2:00PM
FRIDAY TO SATURDAY	10:00PM TO 9:00AM
SATURDAY TO SUNDAY	9:00PM TO 9:00AM
SUNDAY TO MONDAY	10:00PM TO 5:00AM

* SINGLE-LANE CLOSURES ARE ONLY PERMITTED FOR MULTIPLE-LANE ROADWAYS.

EXCEPT AS NECESSARY TO MAINTAIN TRAFFIC, WORK SHALL NOT BE PERFORMED ON THE FOLLOWING HOLIDAYS WITHOUT THE APPROVAL FROM THE TOWN OF VIENNA: NEW YEAR'S DAY, MARTIN LUTHER KING, JR. DAY, LEE JACKSON DAY, PRESIDENTS DAY, EASTER, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY, THANKSGIVING DAY, AND CHRISTMAS DAY. LANE CLOSURES WILL NOT BE PERMITTED FROM NOON THE DAY BEFORE A HOLIDAY UNTIL NOON THE DAY AFTER A HOLIDAY UNLESS OTHERWISE APPROVED BY THE TOWN OF VIENNA. WHEN A HOLIDAY FALLS ON A FRIDAY, LANE CLOSURES ARE NOT PERMITTED FROM NOON THURSDAY UNTIL NOON ON MONDAY. WHEN THE HOLIDAY FALLS ON MONDAY, LANE CLOSURES ARE NOT PERMITTED FROM NOON FRIDAY UNTIL NOON ON TUESDAY. ADDITIONAL STATE HOLIDAYS MAY BE ADDED TO THIS LIST AT THE DIRECTION OF THE TOWN OF VIENNA.

ACCESS TO AND FROM ALL ADJACENT PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.

THE CONTRACTOR SHALL CONSULT WITH THE TOWN OF VIENNA FOR ANY PLANNED CLOSURE SCENARIO NOT ANTICIPATED BY THIS TRANSPORTATION MANAGEMENT PLAN.

PUBLIC COMMUNICATIONS PLAN


THE CONTRACTOR SHALL SUBMIT A REQUEST FOR ALL LANE CLOSURES TO THE TOWN 10 DAYS IN ADVANCE OF THE CLOSURE. THE TOWN MAY COMMUNICATE WITH THE TOWN COUNCIL, SCHOOLS IN CLOSE PROXIMITY, EMERGENCY SERVICES, VDOT, AND THE TRAFFIC OPERATIONS CENTER, AS DETERMINED APPROPRIATE.

CONTRACTOR SHALL PROVIDE INTERMEDIATE FLAGGERS TO ALLOW ACCESS OUT OF ENTRANCES WITHIN WORKZONE.

GENERAL NOTES

1. THE TRANSPORTATION MANAGEMENT PLAN FOR THIS PROJECT IS CATEGORIZED AS TYPE A, CATEGORY 1.
2. THE TMP/MOT, DURING CONSTRUCTION, SHALL BE IN ACCORDANCE WITH THE VDOT ROAD AND BRIDGE SPECIFICATIONS DATED 2020, THE LATEST REVISION TO THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL DATED NOVEMBER 2020, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION, AND THE 2011 VIRGINIA SUPPLEMENT TO THE MUTCD, REVISION 1 DATED SEPTEMBER 2013.
3. FOR DETAILS OF PERMANENT CONSTRUCTION, REFER TO THE CONSTRUCTION PLANS (SHEETS SERIES 3-5).
4. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE TOWN FOR APPROVAL. THE CONTRACTOR SHOULD REFER TO VIRGINIA'S WORK AREA PROTECTION MANUAL REV 2.1. TYPICAL APPLICATIONS FOR THIS PROJECT ARE ANTICIPATED TO INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING WORK AREA PROTECTION MANUAL FIGURES:
 TTC-4.2 - STATIONARY OPERATION ON A SHOULDER
 TTC-5.2 - SHOULDER OPERATION WITH MINOR ENCROACHMENT
 TTC-15.2 - SHORT DURATION OPERATION ON A MULTI-LANE ROADWAY
 TTC-16.2 - OUTSIDE LANE CLOSURE ON OPERATION ON A FOUR-LANE ROADWAY
 TTC-26.2 - LANE CLOSURE OPERATION - NEAR SIDE OF AN INTERSECTION
 TTC-27.2 - LANE CLOSURE OPERATION - FAR SIDE OF AN INTERSECTION
 TTC-28.2 - LANE CLOSURE OPERATION IN AN INTERSECTION
 TTC-35.1 - SIDEWALK CLOSURE AND BYPASS SIDEWALK OPERATIONS
 TTC-53.0 - SIGNING FOR PROJECT LIMITS
 TTC-68.0 - LANE CLOSURE OPERATION FOR FLAGGING OPERATION ON AN INTERSECTING ROADWAY
5. PAVEMENT MARKINGS IN CONFLICT WITH THE LANE CONFIGURATIONS DURING CONSTRUCTION SHALL BE COVERED WITH NON-REFLECTIVE REMOVABLE BACK TAPE, AND RESTRIPE AS NECESSARY.
6. THE CONTRACTOR SHALL MAINTAIN SAFE PASSAGE FOR PEDESTRIANS AND BICYCLISTS DURING CONSTRUCTION WHERE EXISTING FACILITIES ARE PRESENT.
7. THE CONTRACTOR SHALL MAINTAIN ALL SIGNAGE WITHIN THE LIMITS OF CONSTRUCTION, SHOWN OR OTHERWISE, UNLESS DIRECTED BY THE TOWN.
8. THE CONTRACTOR IS TO ENSURE POSITIVE DRAINAGE FOR THE DURATION OF THE PROJECT. ADDITIONAL TEMPORARY MEASURES MAY BE NEEDED TO FACILITATE PROPER POSITIVE DRAINAGE.
9. THE CONTRACTOR SHALL SCHEDULE ALL PHASES OF CONSTRUCTION IN SUCH A MANNER THAT WATER, SEWER, CABLE, POWER, AND ANY OVERHANGING UTILITY AND ANY UNDERGROUND UTILITY SERVICES WILL NOT BE INTERRUPTED. THE COST OF ANY TEMPORARY CONNECTION, IN PART OR WHOLE, SHALL BE INCIDENTAL TO THE UTILITY RELOCATION/CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE THE UTILITY ADJUSTMENTS/RELOCATION ACTIVITIES WITH THE OWNER OF THE UTILITY.
10. DISPOSAL SITE AND STAGING AREA LOCATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO WORK SHALL BE PERFORMED UNTIL SUCH SITES HAVE BEEN ACCEPTED BY THE TOWN.
11. TEMPORARY LANE WIDTHS SHALL NOT BE LESS THAN 11 FEET.
12. ACCESS TO TEMPORARY BUS STOPS AND REASONABLE SAFE TRAVEL ACROSS INTERSECTIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE CONSIDERED DURING CONSTRUCTION.
13. EQUIPMENT AND/OR MATERIALS SHALL NOT BE STORED WITHIN THE ESTABLISHED CLEAR ZONE OF EITHER THE TRAVEL LANES, AND/OR THE DEFLECTION ZONE OF PHYSICAL BARRIERS USED DURING CONSTRUCTION.
14. ALL TRAFFIC CONTROL DEVICES AND SIGNS NECESSARY FOR MAINTENANCE OF TRAFFIC ARE TO BE INSTALLED, MAINTAINED AND REMOVED BY THE CONTRACTOR.
15. WHEN TOWN OF VIENNA POLICE PRESENCE IS REQUIRED FOR A LANE CLOSURE OPERATION, THE CONTRACTOR SHALL CONTACT THE TOWN OF VIENNA POLICE DEPARTMENT, 301 CENTER STREET, VIENNA, VIRGINIA, 22180. TELEPHONE 703-255-6366 TO REQUEST POLICE SUPPORT AND GIVE THE TOWN POLICE A MINIMUM OF 5 DAYS ADVANCE NOTICE. THE CONTRACTOR SHALL NOTIFY THE TOWN POLICE OF ANY CANCELLATION AT LEAST 24 HOURS IN ADVANCE TO AVOID ADDITIONAL CHARGES.

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

Revisions			ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES TRAFFIC SIGNAL MODIFICATION TRANSPORTATION MANAGEMENT PLAN <i>Town of Vienna, Virginia</i>			
Date	Initial		DATE:		February 2023	
		Dana T Ozlin 2023.04.26 09:27:15 -04'00' Whitman Requardt & Associates Richmond, Virginia TRAFFIC ENGINEER	DRAWN: SB		DESIGNED: SB	
			FILE NO.		CHECKED: DT	
					SHEET NO. IC	



Whitman, Requaardt & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033

TOWN OF VIENNA

TRAFFIC SIGNAL GENERAL NOTES

STATE	ROUTE	TOWN OF VIENNA	SHEET NO.
VA.	123 243	(INFO)0123-153-208 P101.R201.C501	2

GENERAL NOTES - SIGNAL

- ALL WORK SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE CURRENT EDITION OF THE VIRGINIA SUPPLEMENT TO THE MUTCD, THE CURRENT EDITION OF THE VDOT ROAD AND BRIDGE STANDARDS, THE CURRENT EDITION OF VDOT ROAD AND BRIDGE SPECIFICATIONS, AND SPECIAL PROVISIONS.
- TEN (10) WORKING DAYS PRIOR TO BEGINNING ANY SIGNALIZATION WORK AT ANY LOCATION IN THE TOWN OF VIENNA, THE CONTRACTOR MUST NOTIFY THE TOWN OF VIENNA DEPARTMENT OF PUBLIC WORKS IN WRITING, WITH THE FOLLOWING: TYPE AND DETAILS OF CONSTRUCTION AND WORK SCHEDULE.
 - CONTRACTORS NAME, DAYTIME AND EMERGENCY PHONE NUMBER.
 - LOCATION OF INTERSECTION WHERE WORK IS TAKING PLACE.
 - TYPE OF CONSTRUCTION AND WORK SCHEDULE.
 - IF ADJUSTMENTS TO POLE LOCATIONS ARE REQUIRED, THE CONTRACTOR SHALL NOTIFY THE TOWN'S ENGINEER PRIOR TO COMMENCING WORK.
- UTILITIES SHOWN ON THE PLANS ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL UTILITIES WITHIN THE PROJECT LIMITS ARE IDENTIFIED AND LOCATED BEFORE BEGINNING WORK INCLUDING SIGNAL EQUIPMENT MAINTAINED BY THE TOWN OF VIENNA. THE CONTRACTOR SHALL CONTACT MISS UTILITY OF VIRGINIA AT 1-800-522-7001 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES AS TO THE LOCATION OF EXISTING AND APPROVED PLANS OF FUTURE UTILITY LINES. CONTRACTOR SHALL ALSO ENSURE ALL EXISTING UTILITIES ARE MARKED BY EXAMINING THE SITE FOR SURFACE EVIDENCE OF UNMARKED UTILITIES, AND SHALL DIG TEST HOLES AT UTILITY CROSSINGS IF IT IS ANTICIPATED THAT THE BORING OPERATION WILL BE WITHIN TWO (2) FEET FOR EXISTING UTILITY. ANY DISRUPTION OF ANY UTILITY SERVICE IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL NOT IMPACT EXISTING UTILITIES WHEN INSTALLING ANY COMPONENT OF THE PROPOSED SIGNAL. ANY DISRUPTION TO ANY UTILITY SERVICE SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL PERFORM TEST PITS AND EXERCISE CARE IN PLACEMENT OF SIGNAL POLE FOUNDATIONS TO PRECLUDE UTILITY CONFLICTS. POLE AND CONTROLLER PLACEMENTS SHALL BE VERIFIED BY THE TOWN'S ENGINEER 30 DAYS PRIOR TO INSTALLATION. ALL CATALOG CUTS, POLE CALCULATIONS, FOUNDATION SHOP DRAWINGS, ETC. MUST BE SUBMITTED TO AND APPROVED BY THE TOWN OF VIENNA PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
- WHEN ANY PERSON DAMAGES A UTILITY LINE OR PROTECTIVE COATING DURING EXCAVATION OR DEMOLITION, THE ON-SITE TOWN, COUNTY, OR STATE INSPECTOR AND THE AFFECTED UTILITY OWNER SHALL BE NOTIFIED IMMEDIATELY.
- THE CONTRACTOR SHALL IMPLEMENT ALL EROSION AND SEDIMENT CONTROLS AS REQUIRED BY THE TOWN OF VIENNA AND VIRGINIA DCR. THE CONTRACTOR, IF REQUESTED BY THE TOWN, SHALL SUBMIT A PLAN TO THE TOWN FOR APPROVAL PRIOR TO THE START OF PROJECT AT NO ADDITIONAL COST TO THE PROJECT. ALL ITEMS AND LABOR REQUIRED TO IMPLEMENT (INSTALL AND REMOVE) EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INCIDENTAL TO THE OVERALL PROJECT AND NOT BE PAID FOR AS A SEPARATE ITEM.
- MAINTENANCE AND REPAIR OF THE TRAFFIC SIGNAL AND ANY NECESSARY TEMPORARY MODIFICATIONS DURING CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR UNTIL THE TRAFFIC SIGNAL IS ACCEPTED INTO THE TOWN'S TRAFFIC SIGNAL SYSTEM.
- THE CONTRACTOR SHALL COORDINATE WITH THE TOWN OF VIENNA REGARDING WHAT MATERIALS SHALL BE RETURNED TO THE TOWN AT A LOCATION OF THE TOWN'S CHOICE AND WHAT IS TO BE PROPERLY DISPOSED OF PER THE TOWN'S REQUEST. FOR MATERIALS TO BE DISPOSED, THE CONTRACTOR IS TO REMOVE/DISPOSE OFF-SITE THE EXISTING SIGNAL COMPONENTS/INFRASTRUCTURE, INCLUDING BUT NOT LIMITED TO, CONTROLLER CABINETS, MAST ARM POLES, MAST ARMS, SIGNAL HEADS, FOUNDATIONS AS SHOWN ON THE PLANS.
- THE CONTRACTOR SHALL MAINTAIN ALL EXISTING TRAFFIC SIGNAL EQUIPMENT (INCLUDING POWER AND COMMUNICATIONS) UNLESS OTHERWISE NOTED ON THE PLANS. INSTALLATION OF EQUIPMENT SHALL NOT DISRUPT OPERATION OF EXISTING SIGNAL UNLESS APPROVED BY THE TOWN'S ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DETECTION ON ALL APPROACHES TO ALL INTERSECTIONS AT ALL TIMES AND THROUGHOUT ALL PHASES OF CONSTRUCTION. COORDINATED SIGNAL OPERATIONS SHALL BE MAINTAINED AT ALL TIMES, ONCE MODIFICATIONS ARE STARTED. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR UNTIL THE TRAFFIC SIGNAL IS ACCEPTED INTO THE TOWN'S SIGNAL SYSTEM.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL MOT ASSOCIATED WITH THE INSTALLATION OF THE PROPOSED TRAFFIC SIGNAL EQUIPMENT.

SIGNAL NOTES

A. POLES AND FOUNDATIONS

- MAST ARM LENGTHS ARE TO BE INSTALLED AS SHOWN ON PLAN AND ALL MAST ARMS ARE TO BE FIELD DRILLED ONLY. MAST ARM LENGTH IS SHOWN NEXT TO EACH MAST ARM IN THE PLAN VIEW.
- SIGNAL POLES SHALL BE IN ACCORDANCE WITH VDOT ST'D.MP-3.
- SIGNAL MAST ARM POLE FOUNDATIONS SHALL BE IN ACCORDANCE WITH VDOT ST'D.PF-8 AND ST'D.AB-1.
- ALL PEDESTAL POLES, ST'D PF-2, FOR PEDESTRIAN EQUIPMENT, SHALL BE 12 FT.
- MAST ARMS, MAST ARM POLES, AND PEDESTAL POLES SHALL BE POWDER COATED IN ACCORDANCE WITH THE TOWN'S REQUIREMENTS.

B. CONTROLLER AND FOUNDATION

- CONTROLLERS SHALL BE MCCAIN ATC EX2 NEMA CONTROLLER IN ACCORDANCE WITH THE TOWN'S REQUIREMENTS. CONTROLLER CABINETS SHALL BE MCCAIN 3251 ATC CABINET WITH RISER IN ACCORDANCE WITH THE TOWN'S REQUIREMENTS. UNINTERRUPTIBLE POWER SUPPLY (UPS) SHALL BE TYPE 2 AND SHALL MOUNT DIRECTLY TO THE CONTROLLER CABINET. UPS SHALL BE CLARY CORPORATION UPS SYSTEM IN ACCORDANCE WITH THE TOWN'S REQUIREMENTS.
- THE CONTROLLER CABINET FOUNDATION SHALL BE ST'D.CF-3 TO INCLUDE TWO 4" CONDUITS AND ONE SPARE 3" CONDUIT TIED INTO THE JB-S3. THE CONTROLLER CABINET FOUNDATION SHALL HAVE A SEPARATE 1-1/4" CONDUIT (M) TIED INTO THE SERVICE METER EQUIPMENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING POWER TO THE CONTROLLER AT ALL TIMES. THE CONTRACTOR IS RESPONSIBLE FOR ANY COSTS RELATED TO MAINTAINING POWER TO THE TRAFFIC SIGNAL.

C. TRAFFIC SIGNAL HEADS

- ALL TRAFFIC SIGNAL HEADS SHALL BE CAST ALUMINUM. TRAFFIC SIGNAL HEAD SECTIONS SHALL BE IN ACCORDANCE WITH THE TOWN'S REQUIREMENTS
- ALL SIGNAL HEADS SHALL HAVE HIGH VISIBILITY SIGNAL BACKPLATES. BACKPLATE HARDWARE SHALL BE STAINLESS STEEL.
- PEDESTRIAN SIGNAL HEADS SHALL BE IN ACCORDANCE WITH STANDARD SP-8. PEDESTRIAN SIGNAL HEADS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD SMB-3.
- ALL PEDESTRIAN PUSHBUTTONS (AS SPECIFIED ON THE PLAN) SHALL BE INSTALLED AS ACCESSIBLE PEDESTRIAN SIGNALS AND ACCESSIBLE PEDESTRIAN PUSHBUTTONS WITH ALL SIGNS, WIRING, INDICATIONS, TONES, AND OTHER ELEMENTS INSTALLED IN ACCORDANCE WITH THE TOWN'S REQUIREMENTS. CONTRACTOR SHALL COORDINATE WITH THE TOWN ENGINEER REGARDING PROGRAMMING OF APS UNITS
- INSTALL NEW APS PUSHBUTTONS BETWEEN 3'-4" AND 3'-10" ABOVE THE PEDESTRIAN PATH AT EACH PUSHBUTTON LOCATION. IN LOCATIONS WHERE AN EXISTING PUSHBUTTON IS BEING REPLACED WITH AN APS UNIT, THE NEW APS PUSHBUTTON HOUSING MAY BE LARGER THAN THE EXISTING PUSHBUTTON HOUSING. IF THE EXISTING SIGN LOCATION CONFLICTS WITH THE MOUNTING HEIGHT OF THE NEW PUSHBUTTON, THE CONTRACTOR SHALL RELOCATE SIGN DIRECTLY ABOVE THE NEW APS PUSHBUTTON HOUSING.

D. COMMUNICATIONS

- A COMBINATION OF 24 STRAND SINGLE-MODE FIBER OPTIC CABLE AND 5.8 GHZ WIRELESS BROADBAND RADIO COMMUNICATIONS SYSTEM SHALL BE INSTALLED AS INDICATED ON THE TRAFFIC SIGNAL INTERCONNECT PLAN TO PROVIDE A WIRELESS BACKHAUL TO THE TOWN OF VIENNA TOWN HALL.
- 5.8 GHZ WIRELESS BROADBAND RADIOS SHALL BE INSTALLED AS DENOTED ON THE PLANS AND IN ACCORDANCE WITH TOWN REQUIREMENTS AND MEETING SECTION 807 OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS.
- FIBER OPTIC CABLE SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 808 OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS AND AS SPECIFIED ON THE PLANS.

E. DETECTORS, CAMERAS AND PRE-EMPTION

- VIDEO DETECTION CAMERAS SHALL BE IN ACCORDANCE WITH THE TOWN'S REQUIREMENTS AND SPECIAL PROVISIONS. VIDEO DETECTION ZONES SHALL BE IN ACCORDANCE WITH THE VIDEO DETECTION ZONES DEPICTED ON THE DETECTOR CHANNEL ASSIGNMENT SHEETS 3(5) - 3(11). STOP BAR VIDEO DETECTION ZONES SHALL BE PLACED 5 FEET IN FRONT OF THE STOP BAR.
- CCTV CAMERAS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 803 OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS. CONTRACTOR SHALL COORDINATE THE LOCATION OF THE CAMERAS WITH THE TOWN'S ENGINEER.
- EXISTING OPTICOM GPS EMERGENCY PREEMPTION EQUIPMENT AND ANTENNA SHALL BE RELOCATED AS DENOTED ON THE PLANS. NEW OPTICOM GPS RADIO ANTENNA CABLE SHALL BE INSTALLED. CONTACT TOWN OF VIENNA ONCE OPTICOM GPS IS INSTALLED TO COORDINATE TESTING AND VERIFY FUNCTIONALITY.

F. SIGNS AND PAVEMENT MARKINGS

- ALL MAST ARM MOUNTED SIGNS SHALL BE MOUNTED IN ACCORDANCE WITH ST'D.SMD-2.
- ANY EXISTING PAVEMENT MARKINGS IMPACTED BY CONSTRUCTION SHALL BE REPLACED IN KIND AT NO ADDITIONAL COST TO THE PROJECT.

G. CONDUIT, CONDUCTORS, AND ELECTRICAL

- THE PROJECT SHALL BE RESPONSIBLE FOR MAINTAINING ELECTRICAL SERVICE TO THE CONTROLLER AT ALL TIMES. THE PROJECT SHALL BE RESPONSIBLE FOR ANY COSTS ASSOCIATED WITH MAINTAINING ELECTRICAL SERVICE TO THE TRAFFIC SIGNAL. THE PROJECT SHALL BE RESPONSIBLE FOR COORDINATING THE LOCATION AND THE INSTALLATION OF THE ELECTRICAL SERVICE FOR THE TRAFFIC SIGNAL WITH THE LOCAL UTILITY COMPANY. ELECTRICAL SERVICE SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD SE-3 AND SE-5 AS SHOWN ON THE PLAN AND SECTION 238.02(H) OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS. ELECTRICAL SERVICE SHALL BE METERED.
- JUNCTION BOX COVERS SHALL HAVE THE LETTERS "TRAF" CAST IN THE TOP SURFACE DEPRESSION FOR ALL THE SIGNAL RELATED JUNCTION BOXES CONTAINING CABLE WITH LESS THAN 50 VOLTS. ALL OTHER JUNCTION BOX COVERS SHALL HAVE THE LETTERS "ELEC" CAST IN THE TOP SURFACE DEPRESSION.
- ALL JUNCTION BOXES SHALL BE INSTALLED IN ACCORDANCE WITH ST'D JB-S2 UNLESS OTHERWISE NOTED.
- NO JB-S1, S2, OR S3 SHALL BE INSTALLED IN A PAVED SHOULDER, SIDEWALK, OR MULTI-PURPOSE TRAIL.
- (S) DENOTES SHIELDED CABLE. (M) DENOTES METAL CONDUIT. (EGC) DENOTES EQUIPMENT GROUNDING CONDUCTOR. (E) DENOTES EXISTING.
- ALL UNDERGROUND CONDUITS SHALL BE INSTALLED IN ACCORDANCE WITH ST'D.ECI-1 AND ST'D ECI-2.
- FOR INSTALLATION OF CONDUIT, NO OPEN CUT WILL BE ALLOWED IN ROADWAY SURFACE.
- ALL EXISTING CONDUIT NOT SHOWN FOR REUSE SHALL BE CAPPED AND ABANDONED.
- ALL EXISTING WIRING NOT SHOWN FOR REUSE SHALL BE COMPLETELY REMOVED.
- ALL PULL ROPE SHALL BE RATED AT 1100 LBS.

MOT NOTES

- ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION AND SHALL BE REMOVED OR RELOCATED AS THE WORK IS COMPLETED OR WORK CONDITIONS CHANGE. THE CONTRACTOR SHALL ENSURE THAT ALL TEMPORARY TRAFFIC CONTROL DEVICES REMAIN IN PLACE AND OPERATING AT ALL TIMES.
- THE CONTRACTOR SHALL VERIFY PROPOSED GEOMETRICS PRIOR TO INSTALLING SIGNAL EQUIPMENT.
- ALL JUNCTION BOXES SHALL BE INSTALLED AT FINAL GRADE.
- THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING SIDEWALKS CAUSED BY THE INSTALLATION OF THE SIGNAL EQUIPMENT.
- ALL EXISTING SIGNS NOT RELOCATED OR REMOVED SHALL REMAIN UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL INSTALL CONDUIT AT SUFFICIENT DEPTH TO AVOID DISTURBANCE DURING ROADWAY CONSTRUCTION. CONDUIT SHALL BE INSTALLED PRIOR TO BEGINNING ROADWAY CONSTRUCTION.
- NEW TRAFFIC SIGNAL HEADS AND OVERHEAD TRAFFIC SIGNAL SIGNAGE SHALL BE COVERED WITH DURABLE NON-TRANSPARENT COVER UPON INSTALLATION. THE CONTRACTOR SHALL MAINTAIN THE COVERS UNTIL THE NEW TRAFFIC SIGNAL SYSTEM IS OPERATIONAL.
- THE CONTRACTOR SHALL NOT BLOCK THE VIEW OF EXISTING SIGNAL INDICATIONS DURING INSTALLATION OF THE MAST ARMS.
- MAINTENANCE AND REPAIR OF THE TRAFFIC SIGNAL AND ANY NECESSARY MODIFICATIONS DURING CONSTRUCTION SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

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

Revisions	
Date	Initial



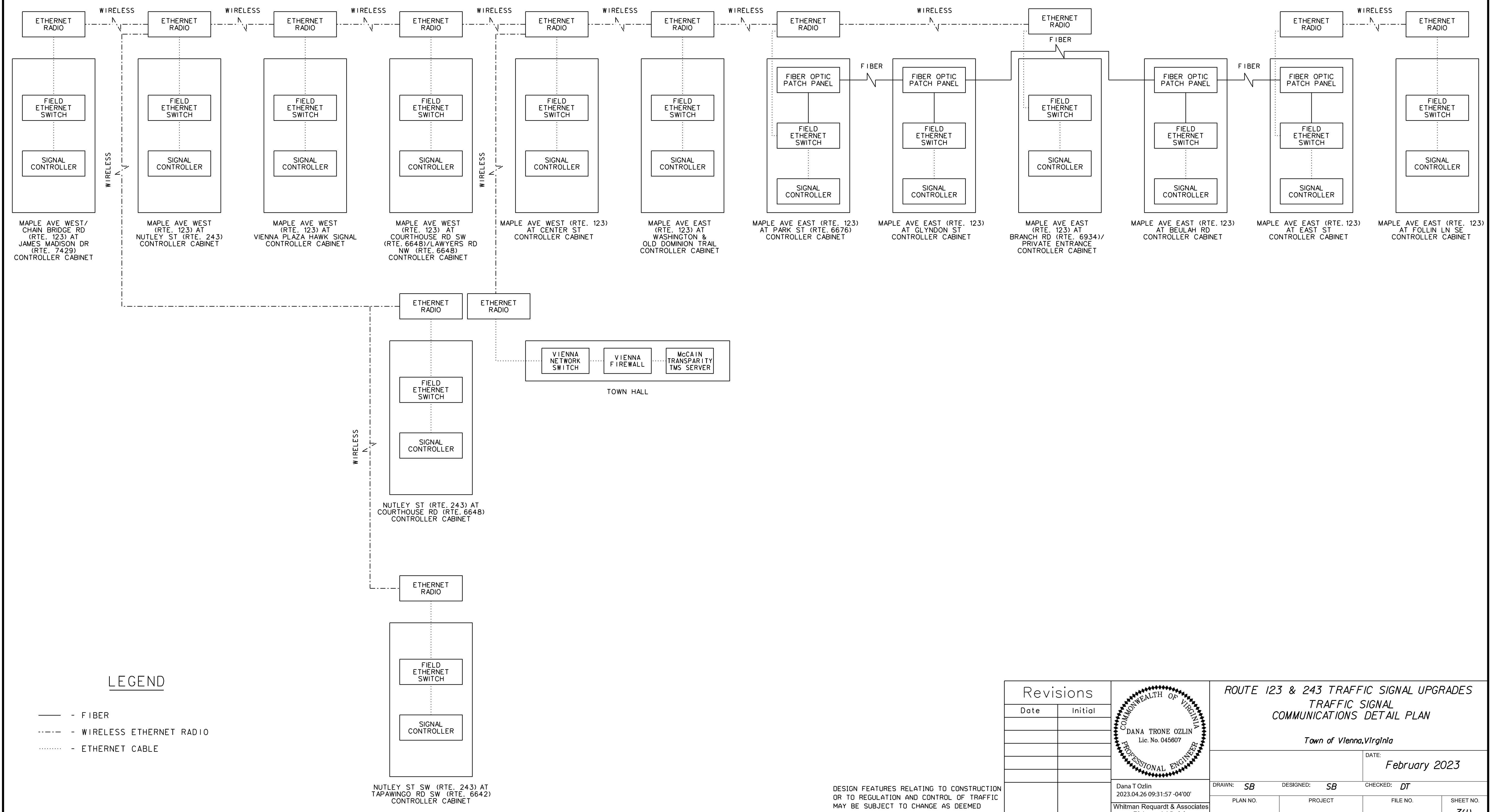
ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES			
TRAFFIC SIGNAL GENERAL NOTES			
Town of Vienna, Virginia			
DATE:			February 2023
DRAWN: SB	DESIGNED: SB	CHECKED: DT	
PLAN NO.	PROJECT	FILE NO.	SHEET NO.
			2

STANDARD TRAFFIC SIGNAL LEGEND

PLAN ITEM	PLAN SYMBOL	
	PROPOSED	EXISTING
Metal Signal Pole & Foundation and Mast Arm (As noted in Signal Pole Legend)		
Pedestal Pole and Foundation (ST'd, PF-2)		
Pedestal Pole and Foundation (ST'd, PA-3)		
Traffic Signal Head w/ Backplate		
Traffic Signal Head w/o Backplate		
Pedestrian Signal Head		
Pedestrian Pushbutton & Sign		
Traffic Signal Sign Mast Arm or Span Wire M'd. Pole Mounted		
CCTV Camera		
Video Detection Camera		
360 Video Detection Camera		
GPS Emergency Vehicle Pre-emption (EVP) Sensor w/ Conf. Light		
GPS Emergency Vehicle Pre-emption (EVP) Sensor w/o Conf. Light		
Wireless Radio		
Controller Cabinet & Foundation (Std.CF-3)		
Junction Box (ST'd, as noted on plans)		
Signal Luminaire (250 W) and Arm		
Signal Luminaire (400 W) and Arm		
Loop Detector (Size as noted on plans)		
Video Detection Zone (Size as noted on plans)		
Conduit		
Electrical Service Meter		
Electrical Service Safety Switch (Disconnect)		

LABELS	
Proposed Signal Head	
Existing Signal Head	
Proposed Pedestrian Signal Head	
Existing Pedestrian Signal Head	
Signal Pole or Controller	
Cable and Conduit	
Construction Notes	
Signal Phasing	$\emptyset 2$
Sign	S-1

STATE	ROUTE	TOWN OF VIENNA PROJECT	SHEET NO.
VA.	123 243	(INFO)123-153-208 PI01.R201.C501	3(1)



LEGEND

- FIBER
- - - WIRELESS ETHERNET RADIO
- ETHERNET CABLE

Revisions	
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COMMONWEALTH OF VIRGINIA
DANA TRONE OZLIN
Lic. No. 045807
PROFESSIONAL ENGINEER

Dana T Ozlin
2023.04.26 09:31:57 -04'00'
Whitman Requardt & Associates
Richmond, Virginia
TRAFFIC ENGINEER

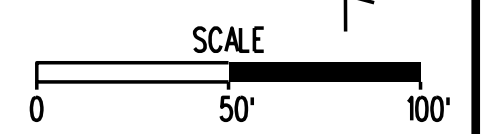
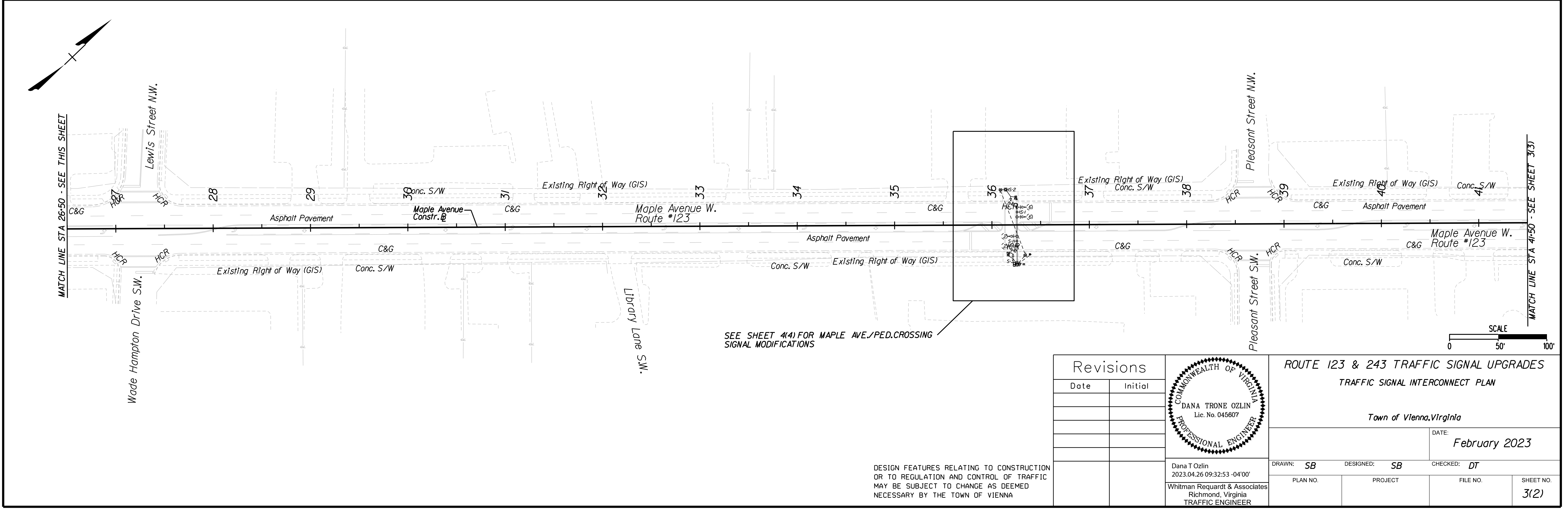
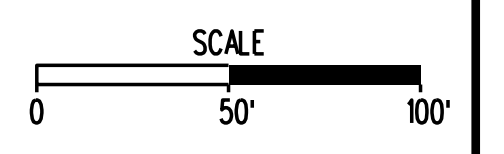
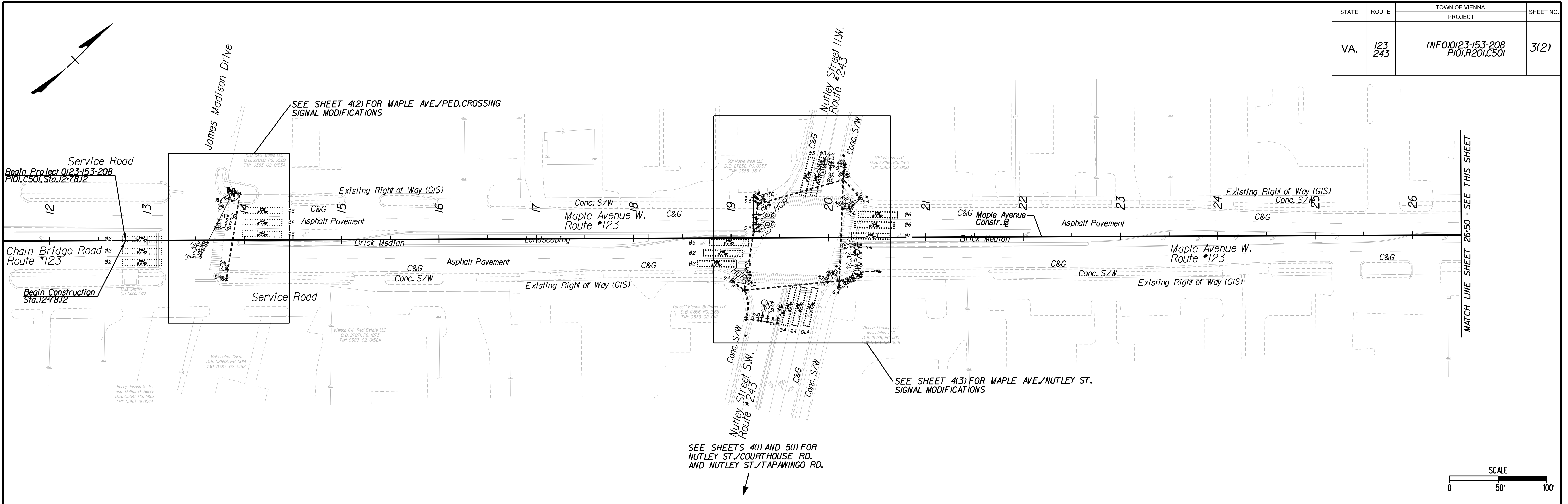
ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES TRAFFIC SIGNAL COMMUNICATIONS DETAIL PLAN			
Town of Vienna, Virginia			
DATE:			February 2023
DRAWN: SB	DESIGNED: SB	CHECKED: DT	
PLAN NO.	PROJECT	FILE NO.	SHEET NO. 3(1)

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



TOWN OF VIENNA

STATE	ROUTE	TOWN OF VIENNA PROJECT	SHEET NO.
VA.	123 243	(INFO)123-153-208 P101.R201.C501	3(2)



Revisions	
Date	Initial

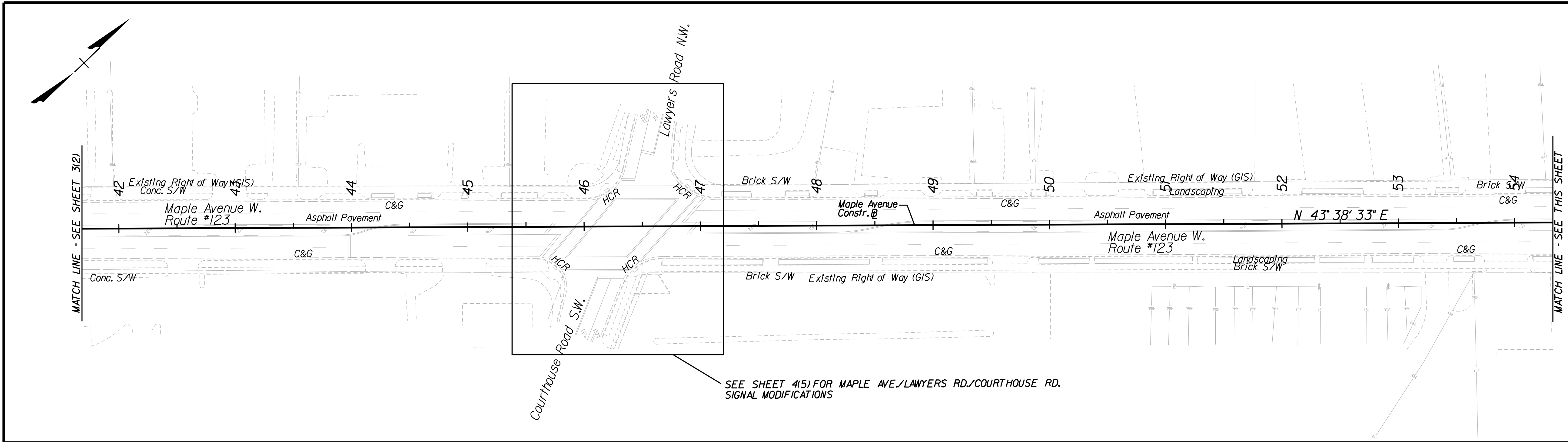
COMMONWEALTH OF VIRGINIA
DANA TRONE OZLIN
 Lic. No. 045807
 PROFESSIONAL ENGINEER

Dana T Ozlin
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 Whitman Requardt & Associates
 Richmond, Virginia
 TRAFFIC ENGINEER

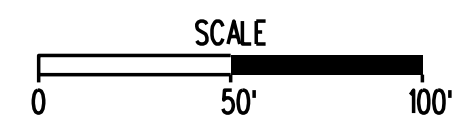
ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES TRAFFIC SIGNAL INTERCONNECT PLAN			
Town of Vienna, Virginia			
DATE:		February 2023	
DRAWN: SB	DESIGNED: SB	CHECKED: DT	
PLAN NO.	PROJECT	FILE NO.	SHEET NO. 3(2)

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

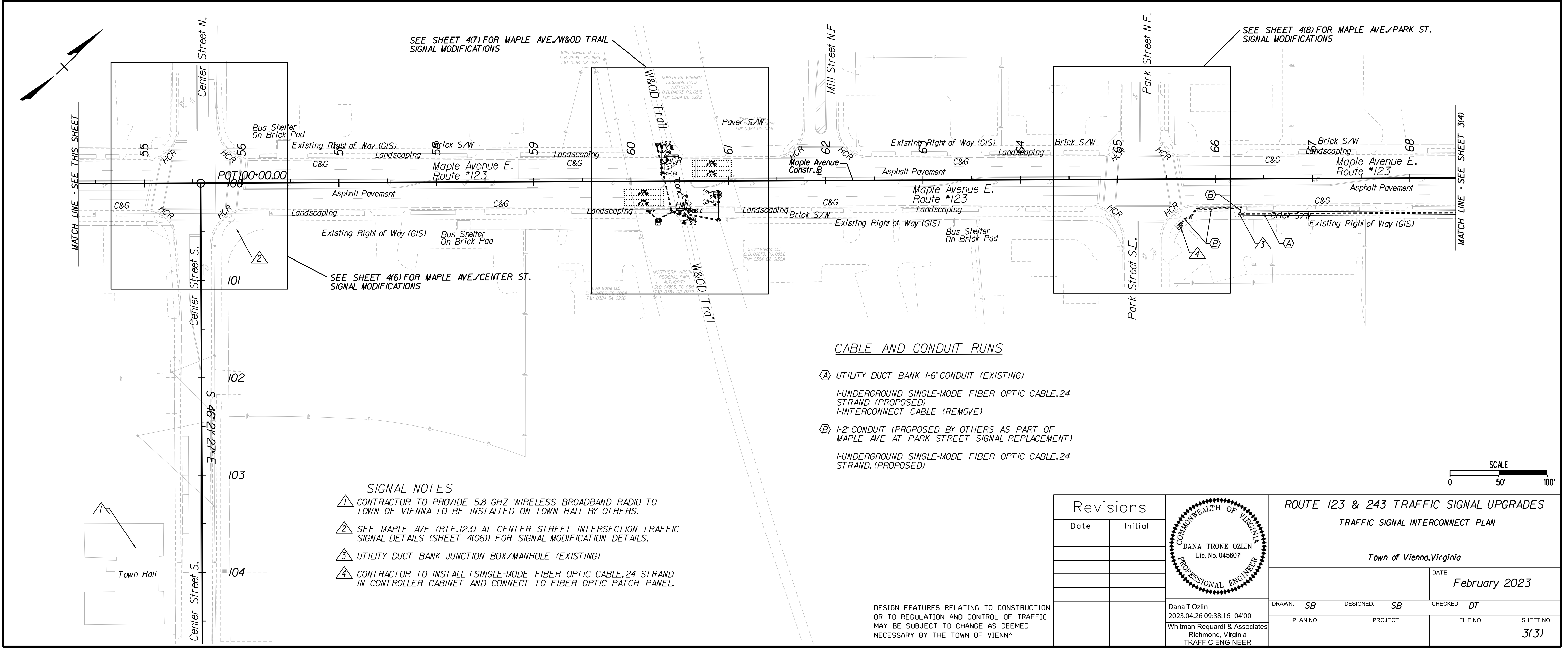
STATE	ROUTE	TOWN OF VIENNA PROJECT	SHEET NO.
VA.	123 243	(INFO)123-153-208 P101.R201.C501	3(3)



SEE SHEET 4(5) FOR MAPLE AVE./LAWYERS RD./COURTHOUSE RD. SIGNAL MODIFICATIONS



TOWN OF VIENNA



SEE SHEET 4(6) FOR MAPLE AVE./CENTER ST. SIGNAL MODIFICATIONS

SEE SHEET 4(7) FOR MAPLE AVE./W&D TRAIL SIGNAL MODIFICATIONS

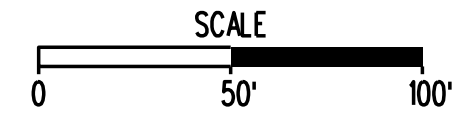
SEE SHEET 4(8) FOR MAPLE AVE./PARK ST. SIGNAL MODIFICATIONS

CABLE AND CONDUIT RUNS

- Ⓐ UTILITY DUCT BANK 1-6' CONDUIT (EXISTING)
 - 1-UNDERGROUND SINGLE-MODE FIBER OPTIC CABLE, 24 STRAND (PROPOSED)
 - 1-INTERCONNECT CABLE (REMOVE)
- Ⓑ 1-2" CONDUIT (PROPOSED BY OTHERS AS PART OF MAPLE AVE AT PARK STREET SIGNAL REPLACEMENT)
 - 1-UNDERGROUND SINGLE-MODE FIBER OPTIC CABLE, 24 STRAND (PROPOSED)

SIGNAL NOTES

- ⚠ CONTRACTOR TO PROVIDE 5.8 GHZ WIRELESS BROADBAND RADIO TO TOWN OF VIENNA TO BE INSTALLED ON TOWN HALL BY OTHERS.
- ⚠ SEE MAPLE AVE (RTE.123) AT CENTER STREET INTERSECTION TRAFFIC SIGNAL DETAILS (SHEET 4(06)) FOR SIGNAL MODIFICATION DETAILS.
- ⚠ UTILITY DUCT BANK JUNCTION BOX/MANHOLE (EXISTING)
- ⚠ CONTRACTOR TO INSTALL 1 SINGLE-MODE FIBER OPTIC CABLE, 24 STRAND IN CONTROLLER CABINET AND CONNECT TO FIBER OPTIC PATCH PANEL.



Revisions	
Date	Initial

COMMONWEALTH OF VIRGINIA
DANA TRONE OZLIN
Lic. No. 045607
PROFESSIONAL ENGINEER

Dana T Ozlin
2023.04.26 09:38:16 -04'00'
Whitman Requardt & Associates
Richmond, Virginia
TRAFFIC ENGINEER

ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES TRAFFIC SIGNAL INTERCONNECT PLAN			
Town of Vienna, Virginia			
DATE:			February 2023
DRAWN: SB	DESIGNED: SB	CHECKED: DT	
PLAN NO.	PROJECT	FILE NO.	SHEET NO. 3(3)

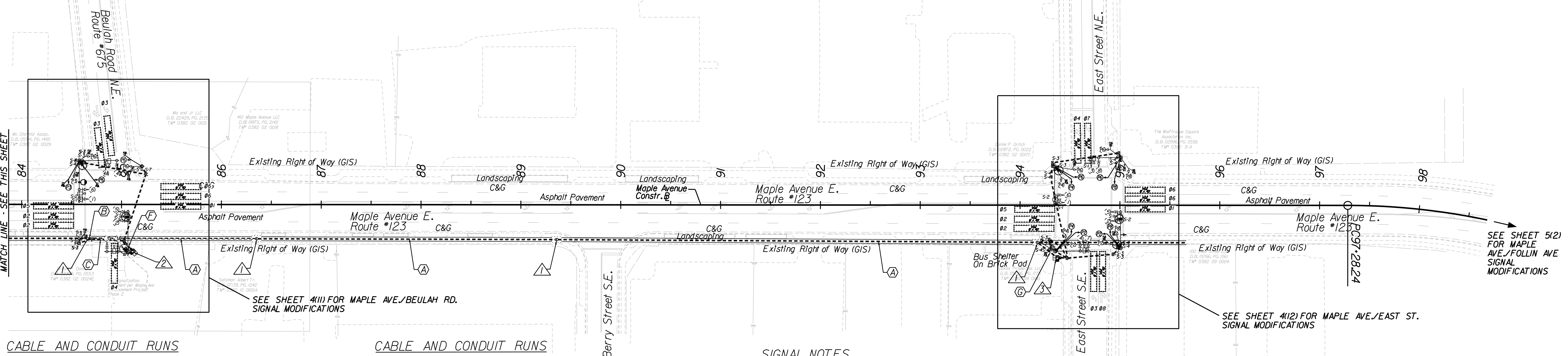
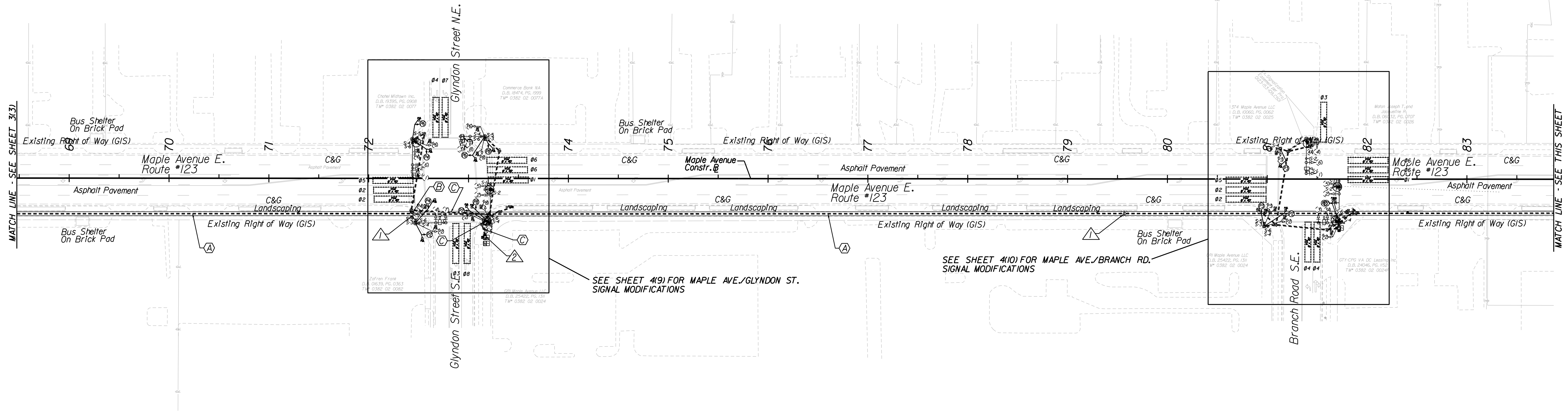
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE TOWN OF VIENNA



Whitman, Requardt & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033

TOWN OF VIENNA

STATE	ROUTE	TOWN OF VIENNA PROJECT	SHEET NO.
VA.	123 243	(INFO)123-153-208 P101,R201,C501	3(4)



CABLE AND CONDUIT RUNS

- (A) UTILITY DUCT BANK 1-6" CONDUIT (EXISTING)
1-UNDERGROUND SINGLE-MODE FIBER OPTIC CABLE, 24 STRAND (PROPOSED)
1-INTERCONNECT CABLE (REMOVE)
- (B) 1-2" CONDUIT (EXISTING)
2-UNDERGROUND SINGLE-MODE FIBER OPTIC CABLE, 24 STRAND (PROPOSED)
2-INTERCONNECT CABLE (REMOVE)
- (C) 1-4" CONDUIT (EXISTING)
2-UNDERGROUND SINGLE-MODE FIBER OPTIC CABLE, 24 STRAND (PROPOSED)
2-INTERCONNECT CABLE (REMOVE)
- (D) 2-3" CONDUIT (EXISTING)
1-2" CONDUIT (EXISTING)
2-UNDERGROUND SINGLE-MODE FIBER OPTIC CABLE, 24 STRAND (PROPOSED)
2-INTERCONNECT CABLE (REMOVE)

CABLE AND CONDUIT RUNS

- (E) 1-3" CONDUIT (EXISTING)
2-UNDERGROUND SINGLE-MODE FIBER OPTIC CABLE, 24 STRAND (PROPOSED)
2-INTERCONNECT CABLE (REMOVE)
- (F) 3-3" CONDUIT (EXISTING)
3-2" CONDUIT - 2 SPARES (EXISTING)
1-1" CONDUIT - SPARE (EXISTING)
2-UNDERGROUND SINGLE-MODE FIBER OPTIC CABLE, 24 STRAND (PROPOSED)
2-INTERCONNECT CABLE (REMOVE)
- (G) 1-2" CONDUIT (EXISTING)
1-UNDERGROUND SINGLE-MODE FIBER OPTIC CABLE, 24 STRAND (PROPOSED)
1-INTERCONNECT CABLE (REMOVE)

SIGNAL NOTES

- (A) UTILITY DUCT BANK JUNCTION BOX/MANHOLE (EXISTING)
- (B) CONTRACTOR TO INSTALL 2 SINGLE-MODE FIBER OPTIC CABLE, 24 STRAND IN CONTROLLER CABINET AND CONNECT TO FIBER OPTIC PATCH PANEL.
- (C) CONTRACTOR TO INSTALL 1 SINGLE-MODE FIBER OPTIC CABLE, 24 STRAND IN CONTROLLER CABINET AND CONNECT TO FIBER OPTIC PATCH PANEL.

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

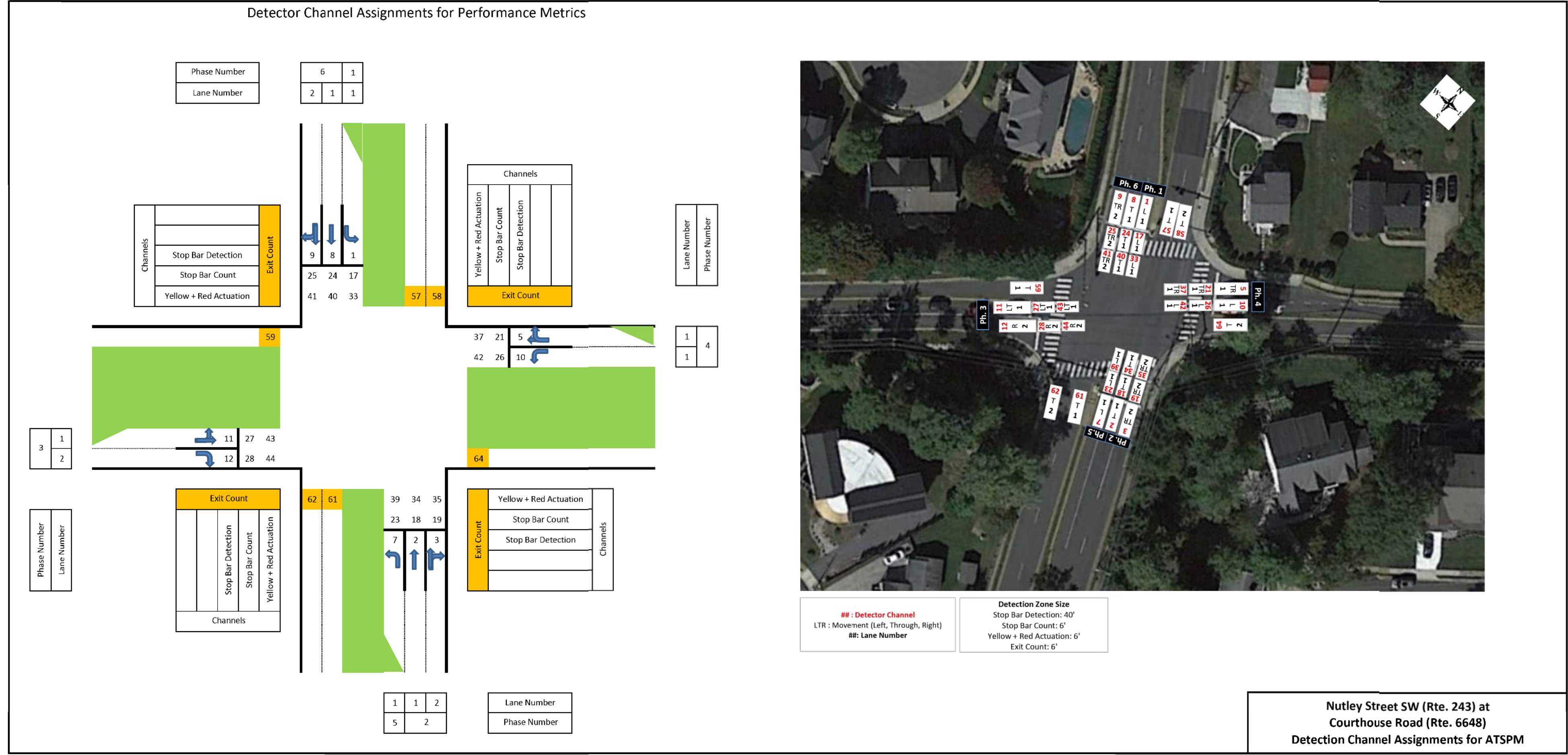
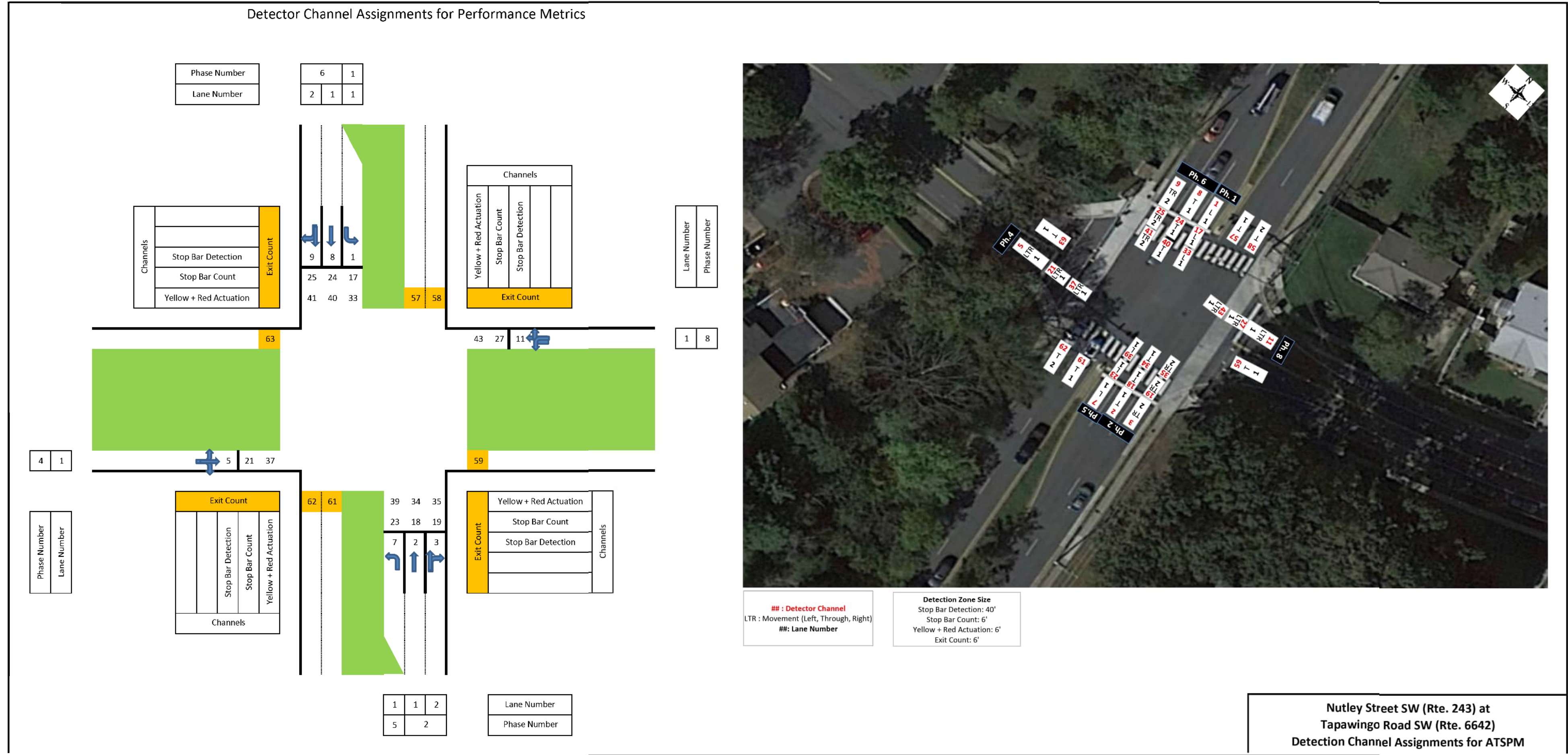
Revisions	
Date	Initial

COMMONWEALTH OF VIRGINIA
DANA TRONE OZLIN
Lic. No. 045807
PROFESSIONAL ENGINEER

Dana T Ozlin
2023.04.26 09:33:51 -04'00'
Whitman Requardt & Associates
Richmond, Virginia
TRAFFIC ENGINEER

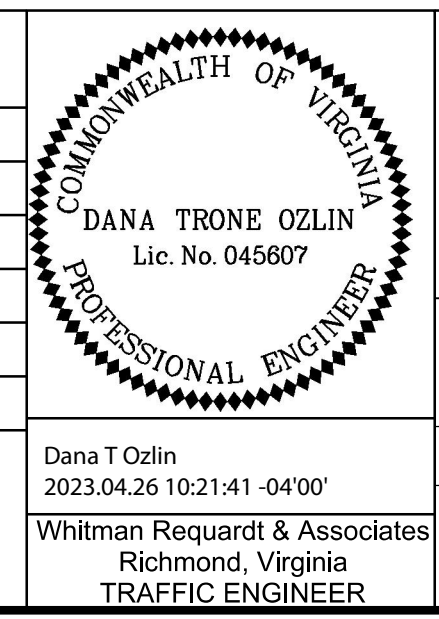
ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES TRAFFIC SIGNAL INTERCONNECT PLAN			
Town of Vienna, Virginia			
DATE:		February 2023	
DRAWN: SB	DESIGNED: SB	CHECKED: DT	
PLAN NO.	PROJECT	FILE NO.	SHEET NO. 3(4)

STATE	ROUTE	TOWN OF VIENNA	SHEET NO.
VA.	123 243	PROJECT (INFO)123-153-208 PI01.R201.C501	3(5)



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

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Date	Initial

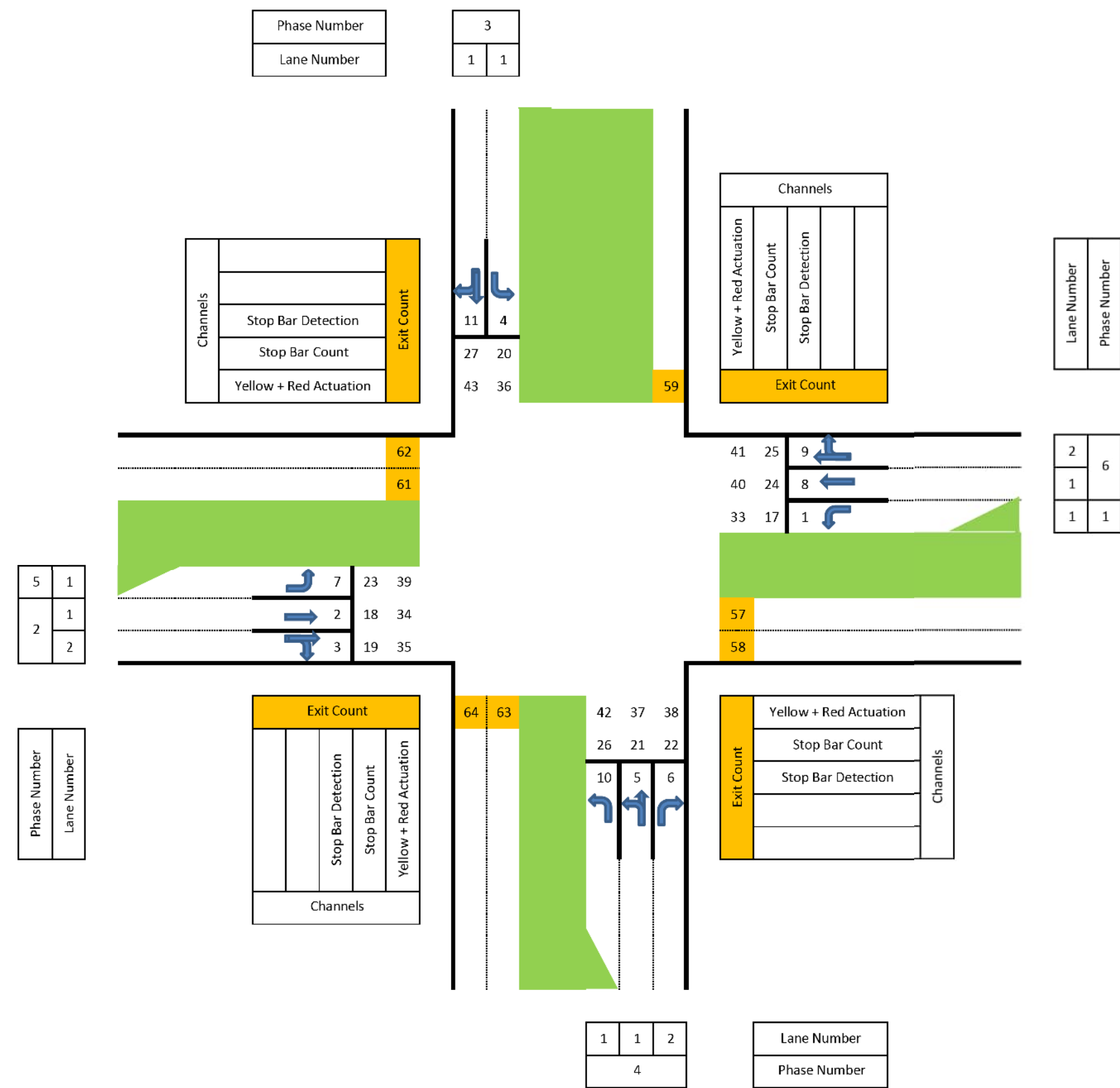


ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES DETECTOR CHANNEL ASSIGNMENTS			
Town of Vienna, Virginia			
DATE:			February 2023
DRAWN: SB	DESIGNED: SB	CHECKED: DT	
PLAN NO.	PROJECT	FILE NO.	SHEET NO. 3(5)

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

STATE	ROUTE	TOWN OF VIENNA	SHEET NO.
VA.	123 243	PROJECT (INFO)123-153-208 PI01.R201.C501	3(6)

Detector Channel Assignments for Performance Metrics

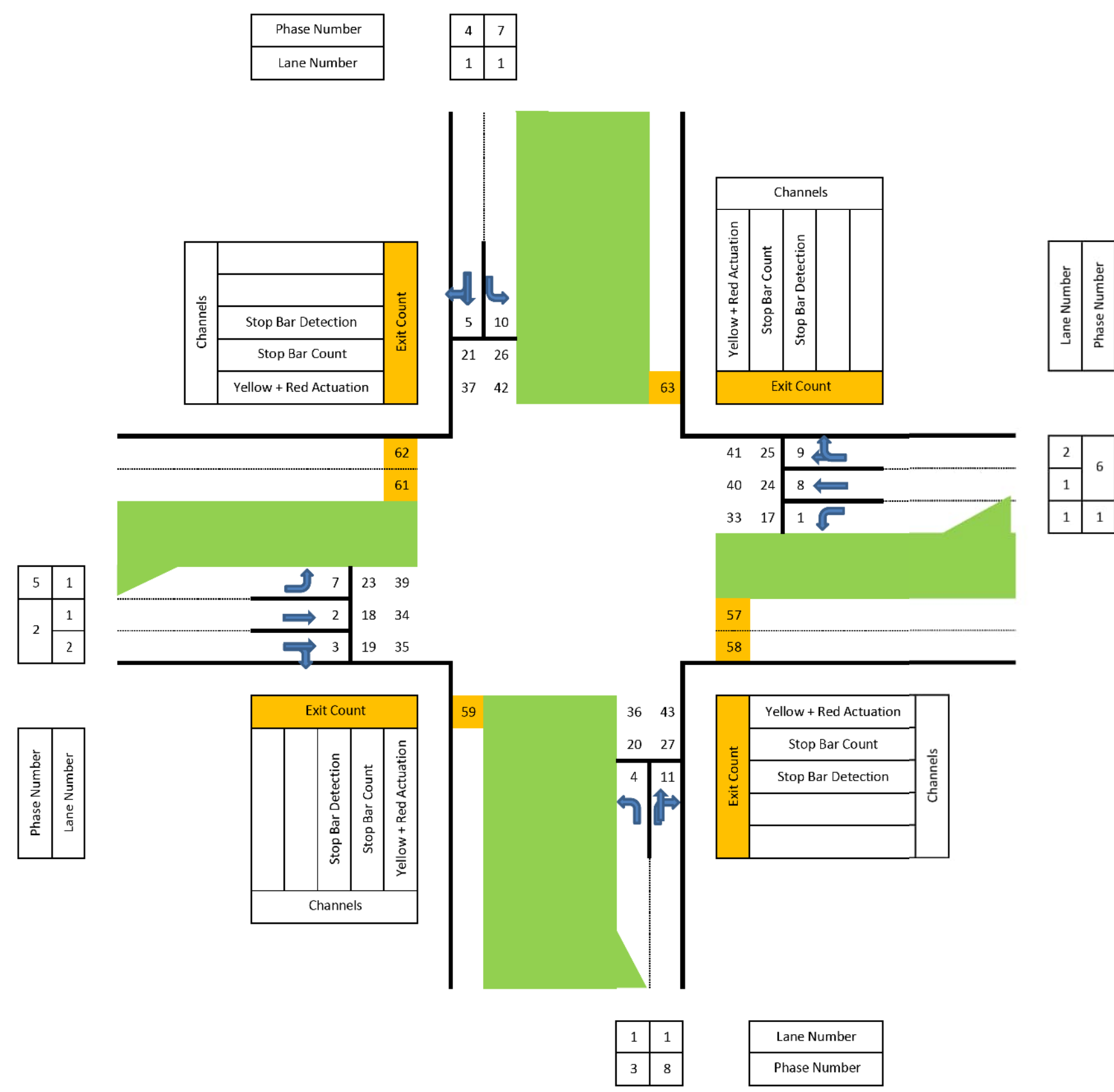


: Detector Channel
LTR : Movement (Left, Through, Right)
##: Lane Number

Detection Zone Size
Stop Bar Detection: 40'
Stop Bar Count: 6'
Yellow + Red Actuation: 6'
Exit Count: 6'

Maple Avenue West (Rte. 123) at
Nutley St (Rte. 243)
Detector Channel Assignments for ATSPM

Detector Channel Assignments for Performance Metrics



: Detector Channel
LTR : Movement (Left, Through, Right)
##: Lane Number

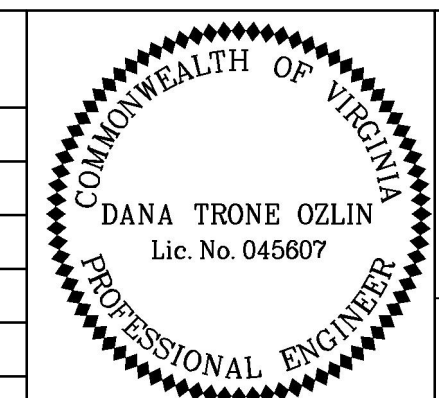
Detection Zone Size
Stop Bar Detection: 40'
Stop Bar Count: 6'
Yellow + Red Actuation: 6'
Exit Count: 6'

Maple Avenue West (Rte. 123) at
Courthouse Road SW/Lawyers Road NW (Rte. 6648)
Detector Channel Assignments for ATSPM

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

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

Revisions	
Date	Initial

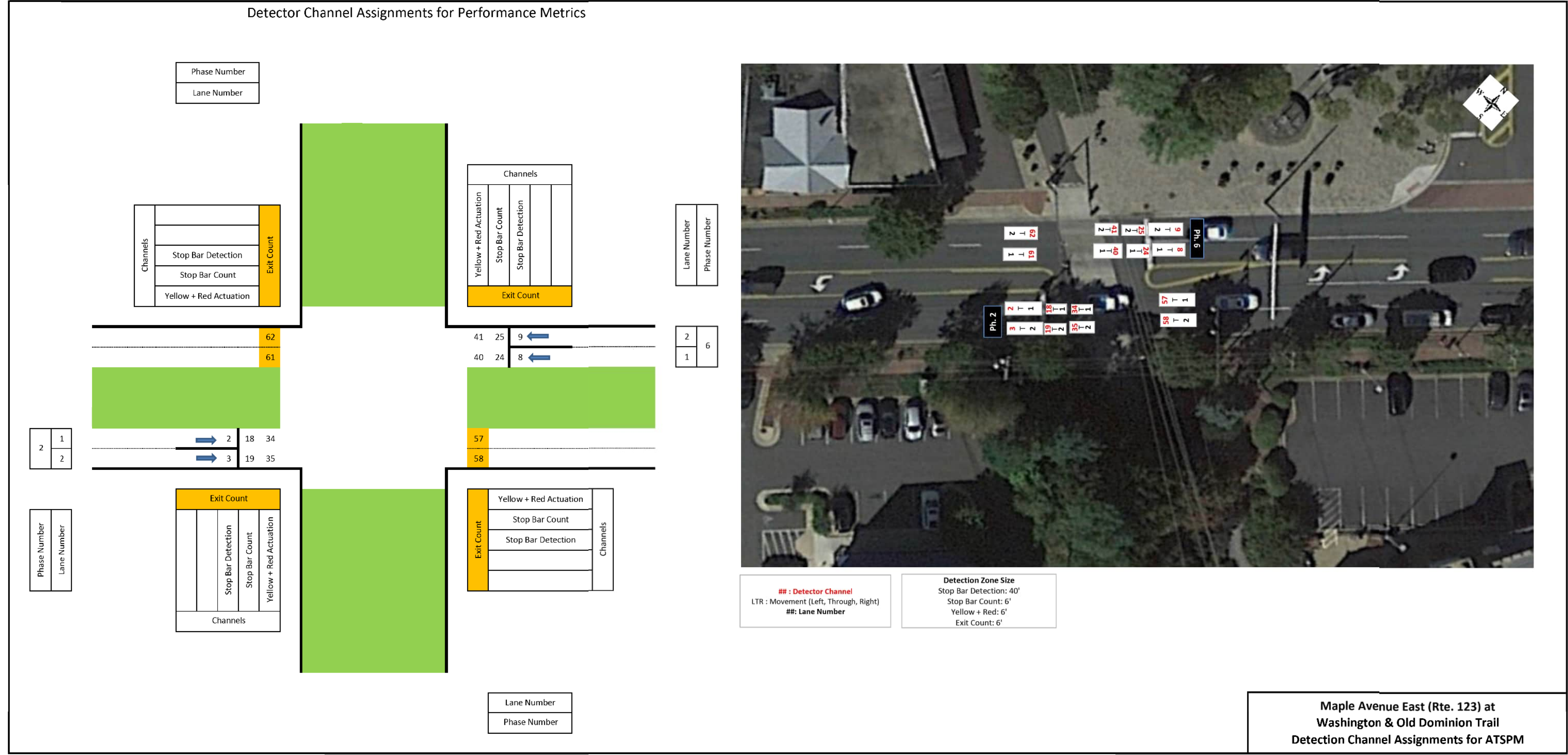
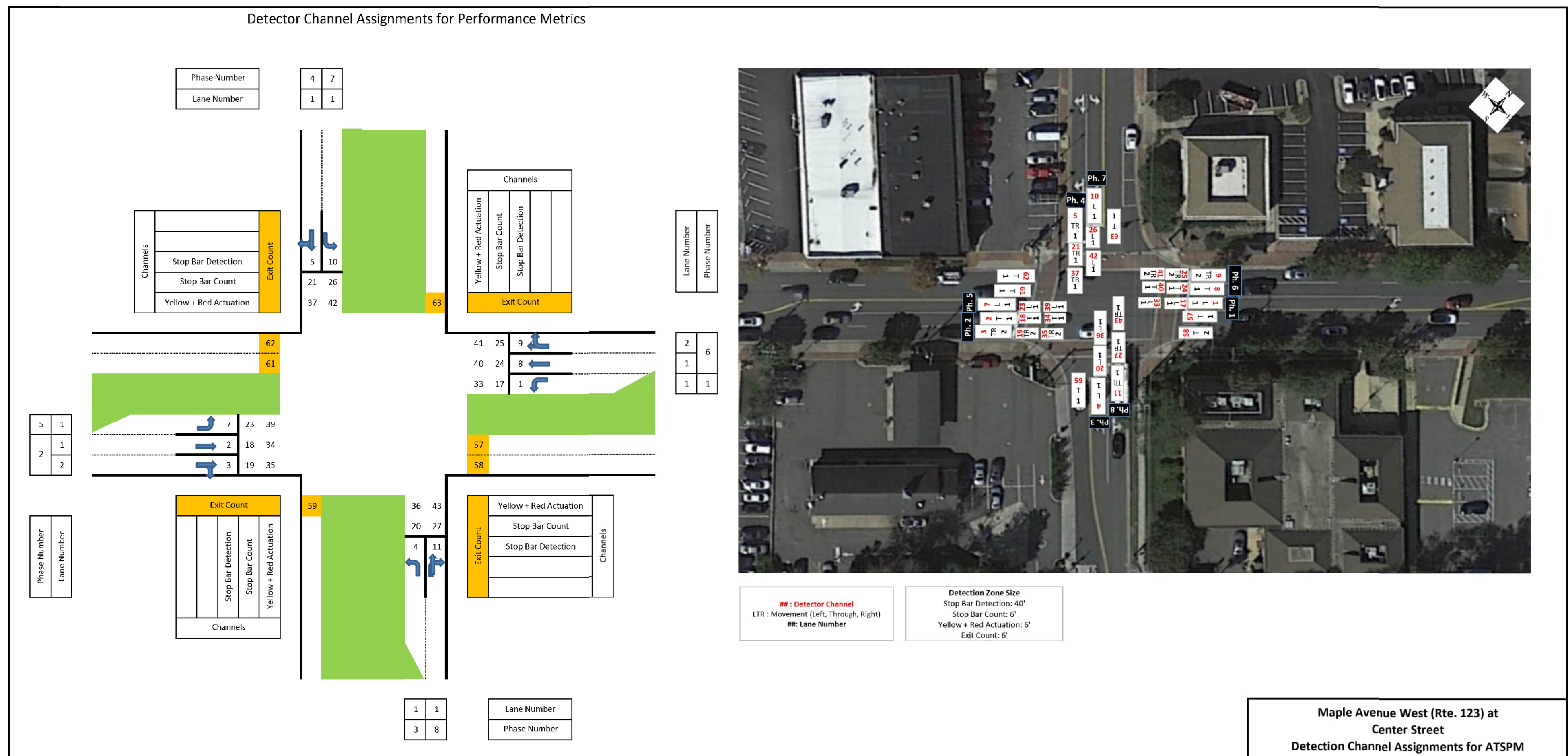


ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES
DETECTOR CHANNEL ASSIGNMENTS

Town of Vienna, Virginia		DATE: February 2023
DRAWN: SB	DESIGNED: SB	CHECKED: DT
PLAN NO.	PROJECT	FILE NO.
		SHEET NO. 3(6)

Dana T Ozlin
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Richmond, Virginia
TRAFFIC ENGINEER

STATE	ROUTE	TOWN OF VIENNA	SHEET NO.
VA.	123 243	(INFO)123-153-208 PI01.R201.C501	3(7)



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

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DANA TRONE OZLIN
Lic. No. 045807
PROFESSIONAL ENGINEER

Dana T Ozlin
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Whitman Requardt & Associates
Richmond, Virginia
TRAFFIC ENGINEER

ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES
DETECTOR CHANNEL ASSIGNMENTS

Town of Vienna, Virginia

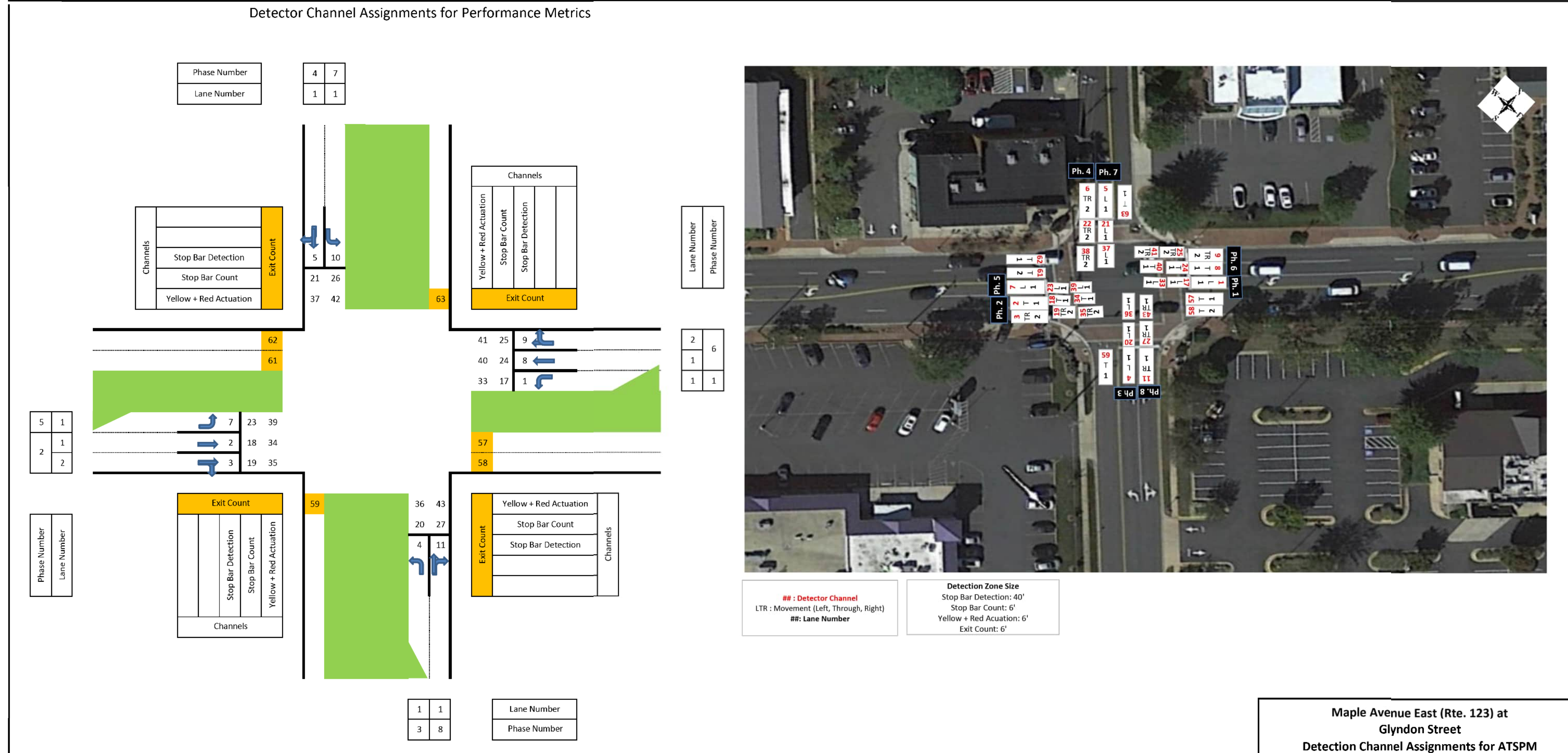
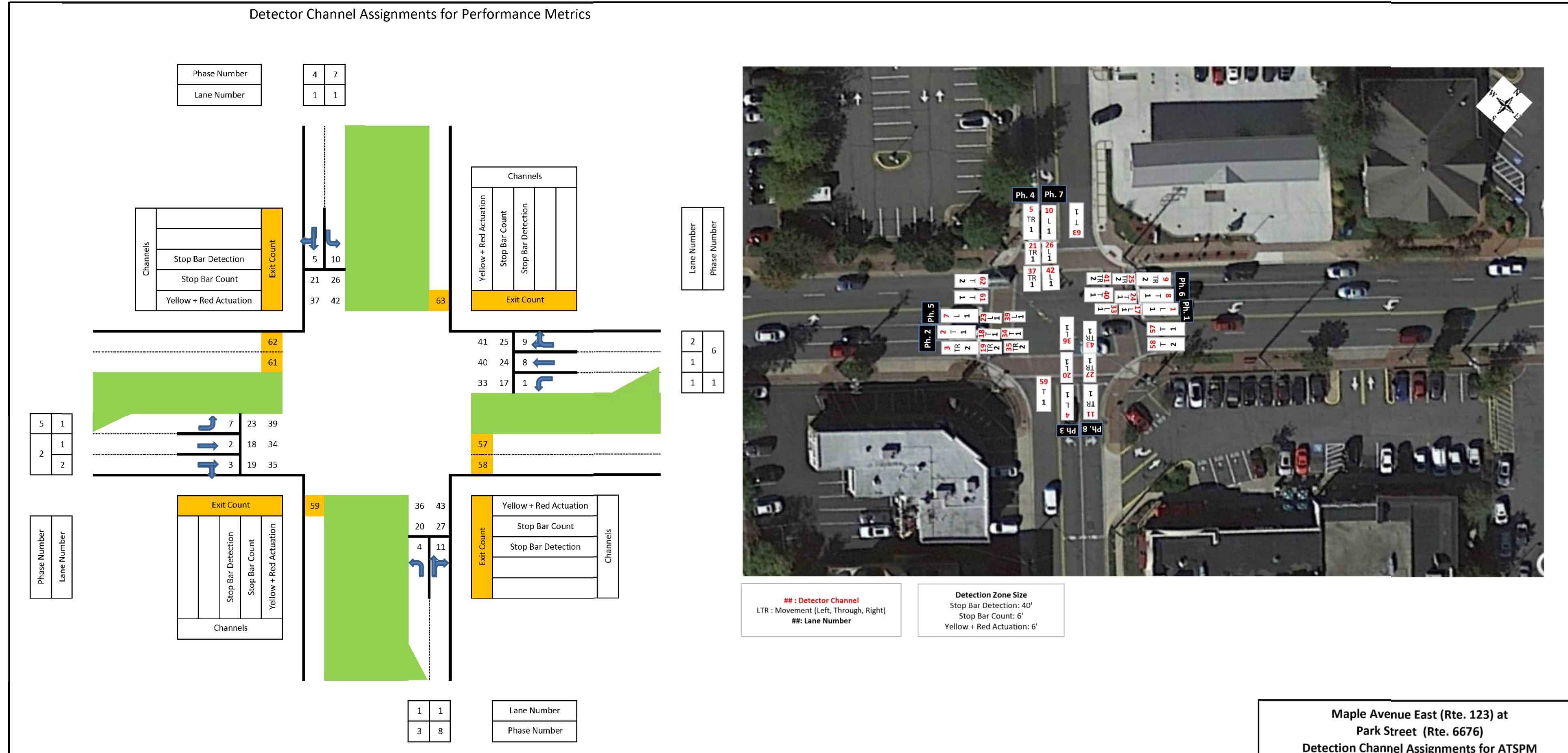
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PLAN NO.	PROJECT	FILE NO.	SHEET NO.
			3(7)

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

STATE	ROUTE	TOWN OF VIENNA	SHEET NO.
VA.	123 243	PROJECT (INFO)123-153-208 PI01R201C501	3(8)



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

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Date	Initial

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DANA TRONE OZLIN
 Lic. No. 045607
 PROFESSIONAL ENGINEER

Dana T Ozlin
 2023.04.26 10:35:01 -04'00'
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 Richmond, Virginia
 TRAFFIC ENGINEER

**ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES
DETECTOR CHANNEL ASSIGNMENTS**

Town of Vienna, Virginia

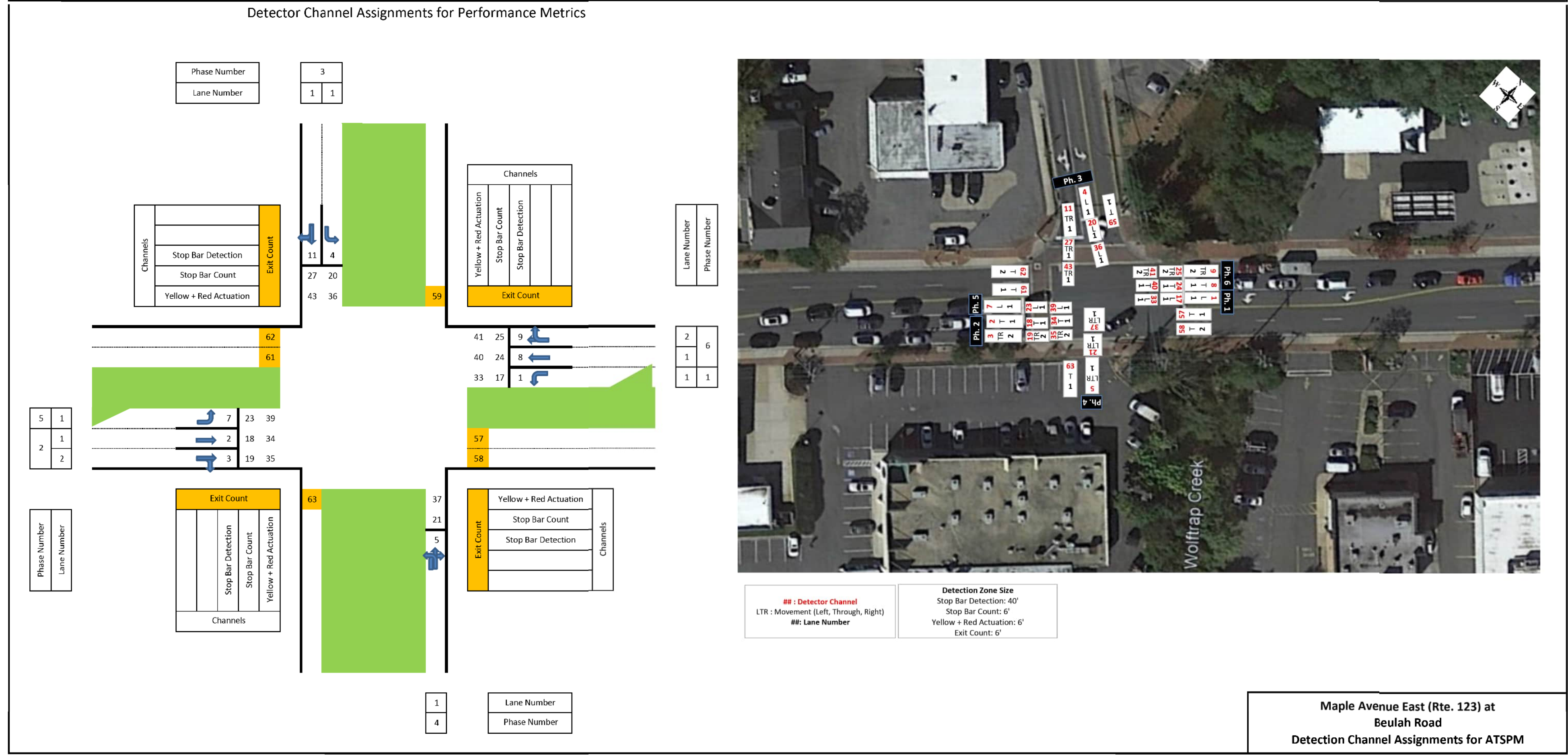
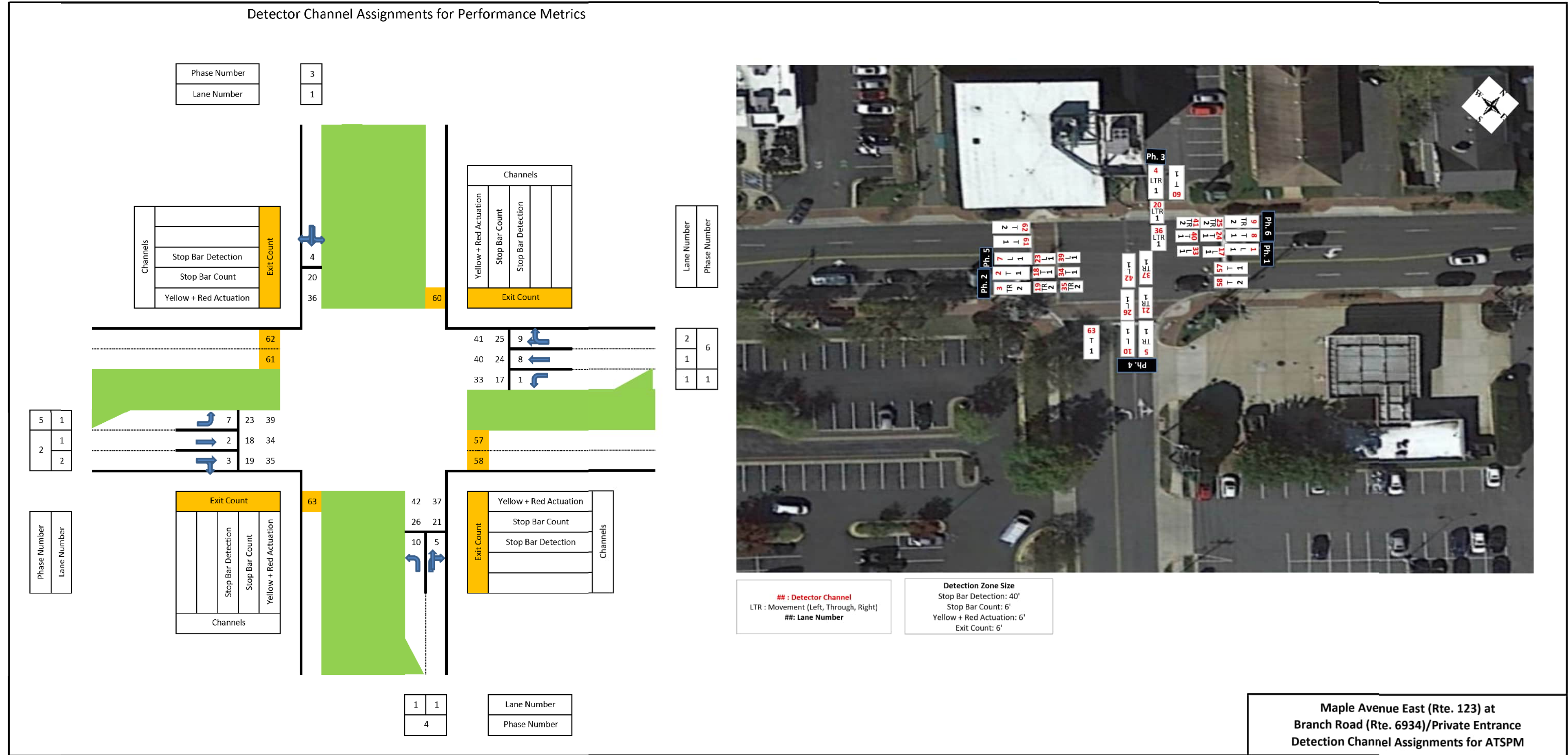
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PLAN NO.	PROJECT	FILE NO.	SHEET NO. 3(8)
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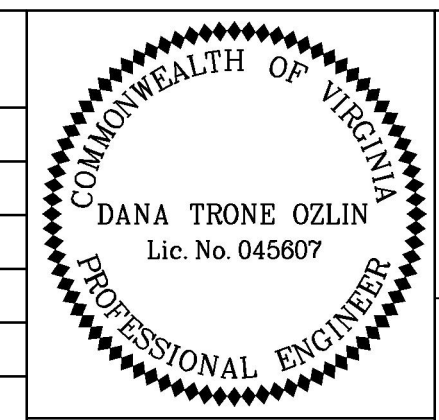
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STATE	ROUTE	TOWN OF VIENNA	SHEET NO.
VA.	123 243	PROJECT (INFO)123-153-208 PI01.R201.C501	3(9)



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

Revisions	
Date	Initial



ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES DETECTOR CHANNEL ASSIGNMENTS

Town of Vienna, Virginia

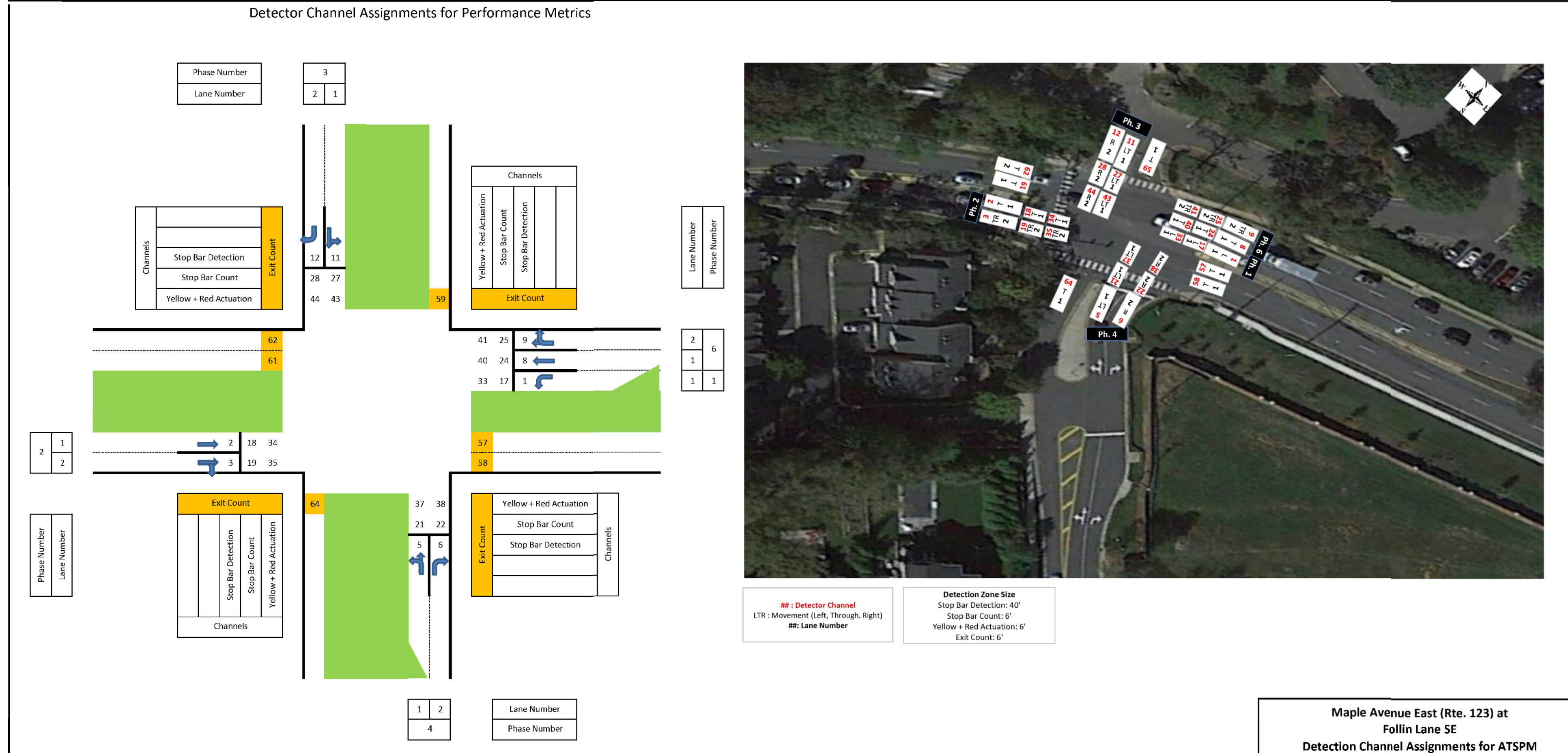
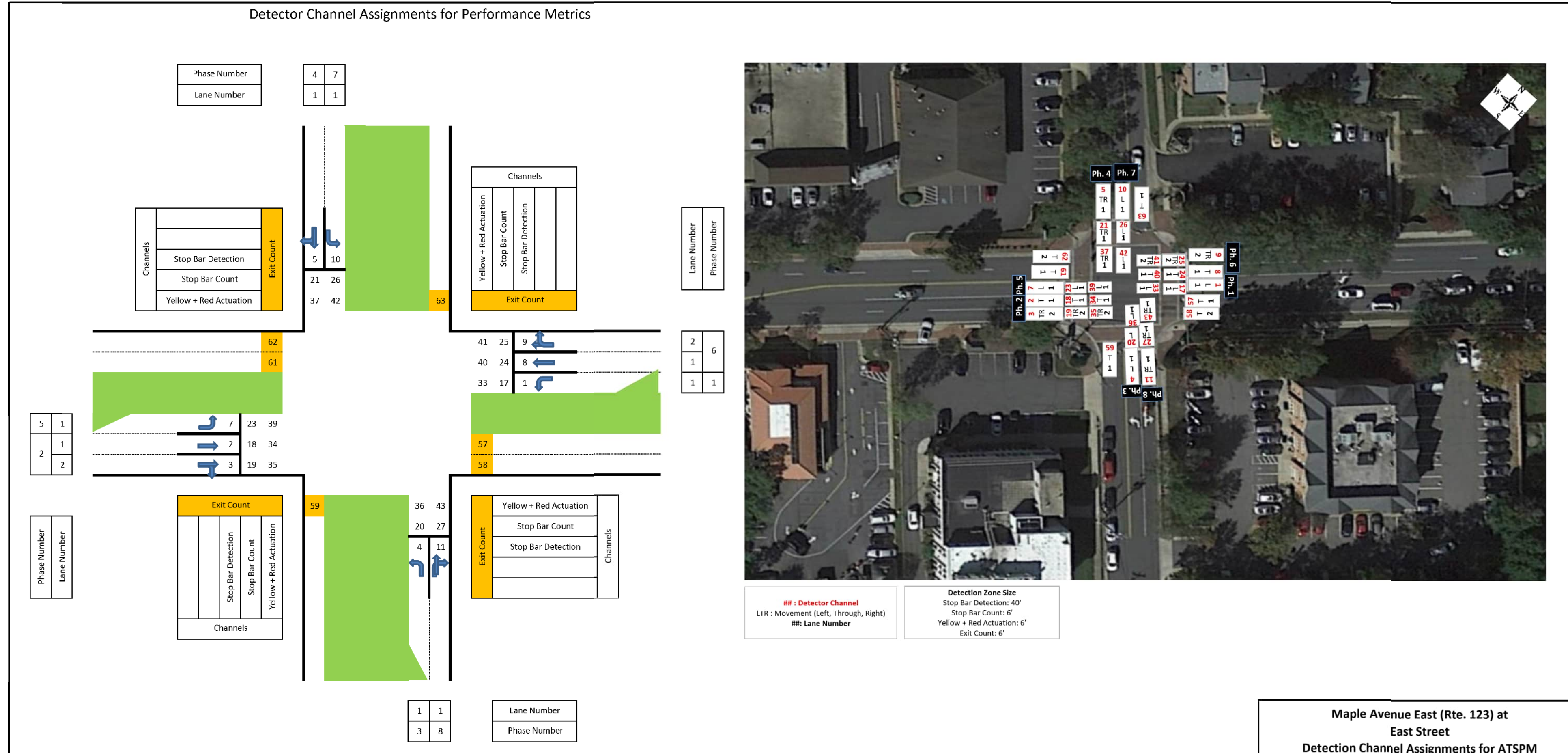
DATE:
February 2023

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Richmond, Virginia
TRAFFIC ENGINEER

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PLAN NO.	PROJECT	FILE NO.
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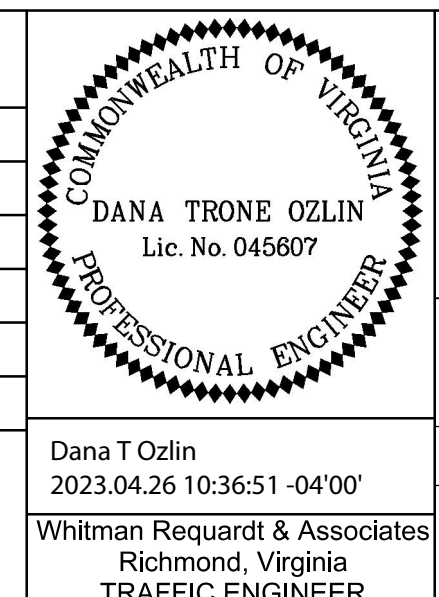
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STATE	ROUTE	TOWN OF VIENNA	SHEET NO.
VA.	123 243	PROJECT (INFO)123-153-208 PI01,R201,C501	3(10)



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

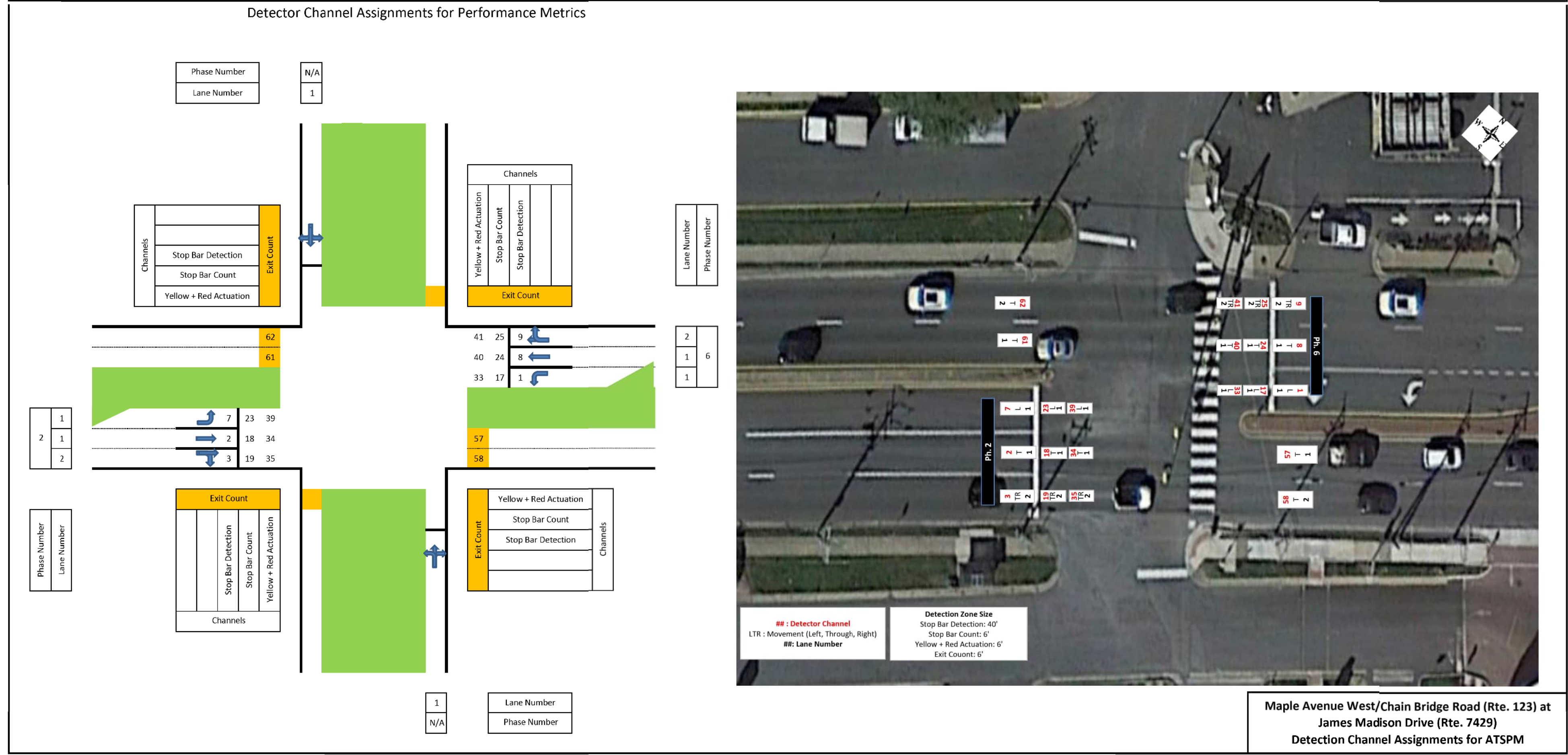
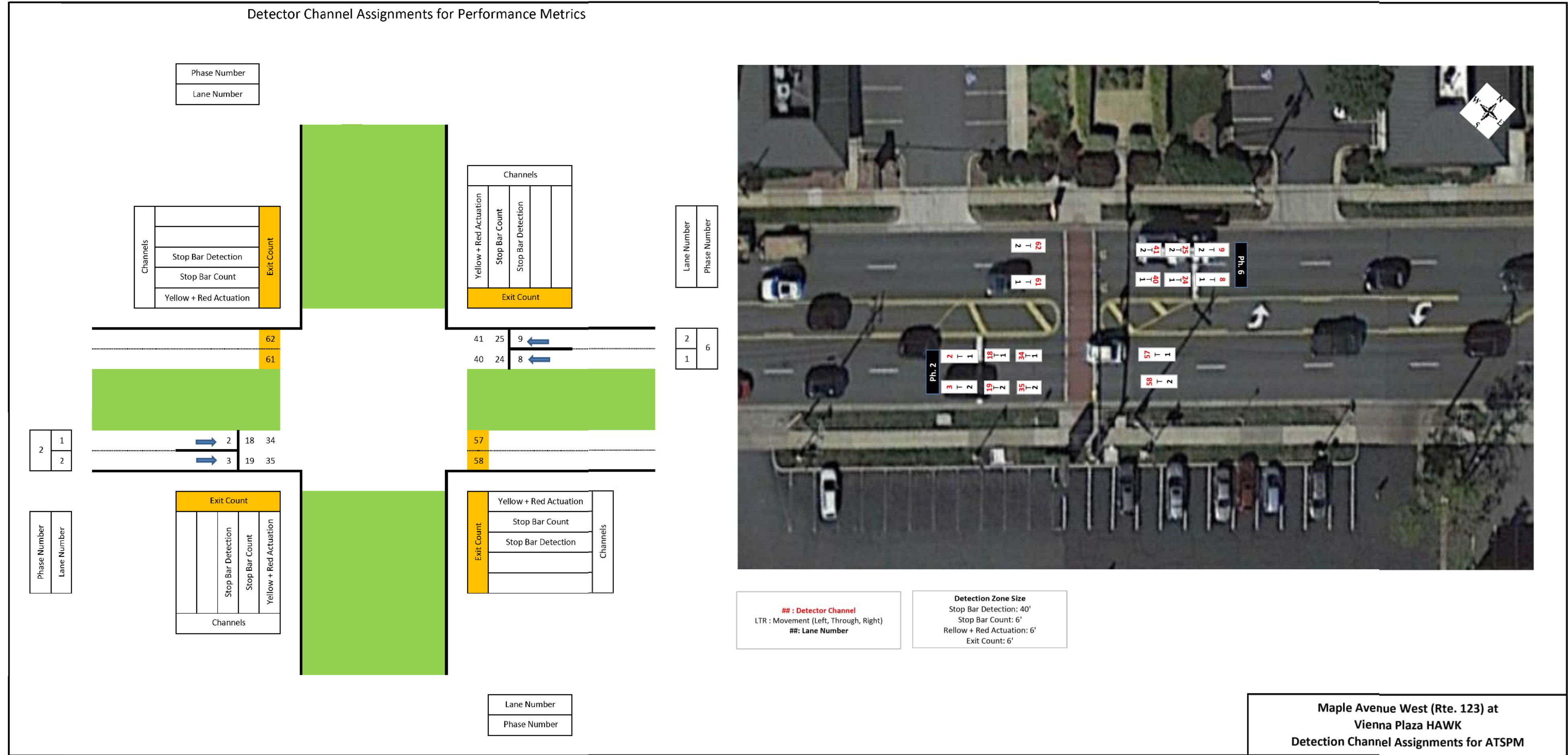
Revisions	
Date	Initial



ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES DETECTOR CHANNEL ASSIGNMENTS			
Town of Vienna, Virginia			
DATE:			February 2023
DRAWN: SB	DESIGNED: SB	CHECKED: DT	
PLAN NO.	PROJECT	FILE NO.	SHEET NO. 3(10)

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

STATE	ROUTE	TOWN OF VIENNA	SHEET NO.
VA.	123 243	PROJECT (INFO)123-153-208 P101,R201,C501	3(11)



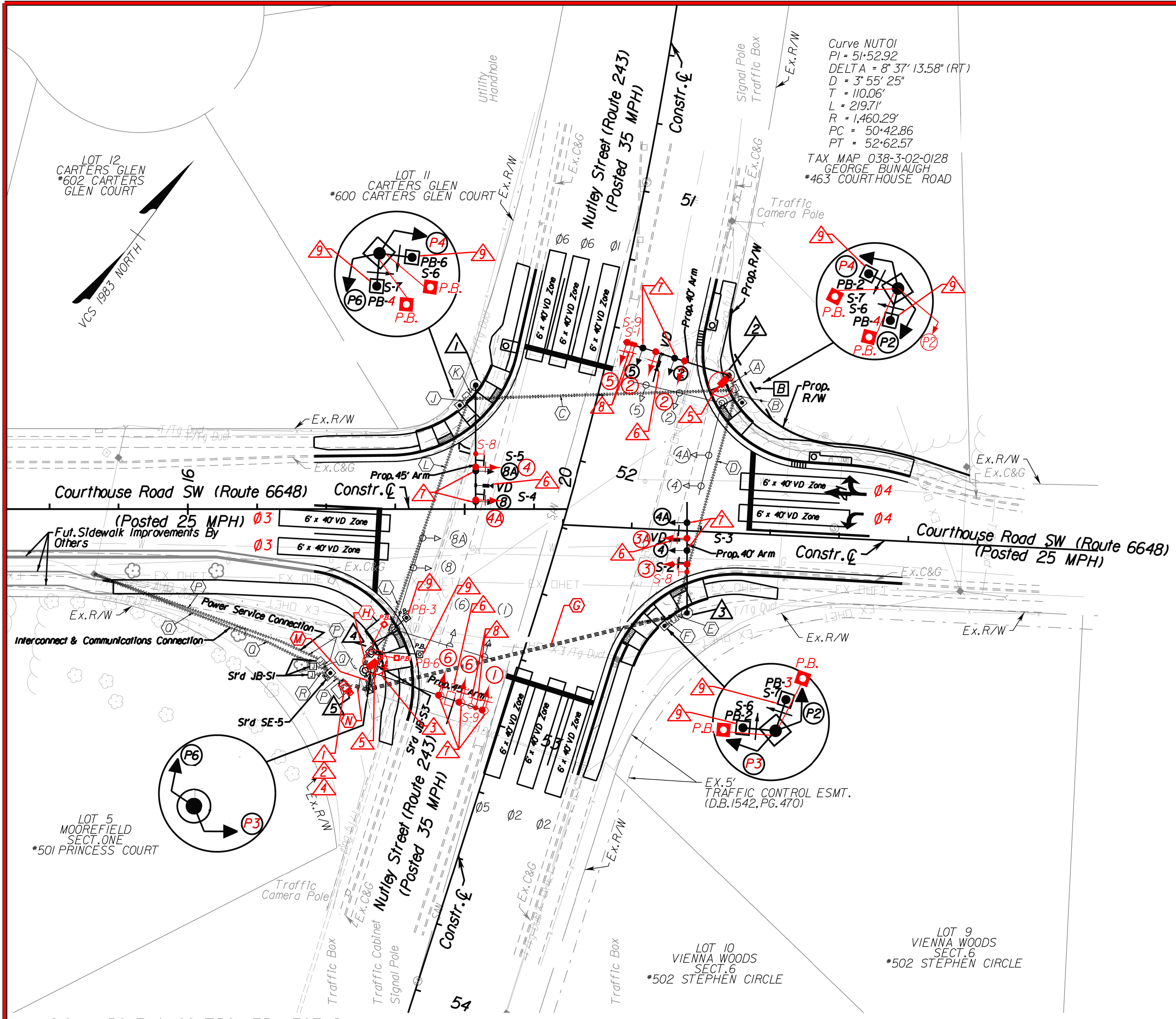
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Revisions	
Date	Initial

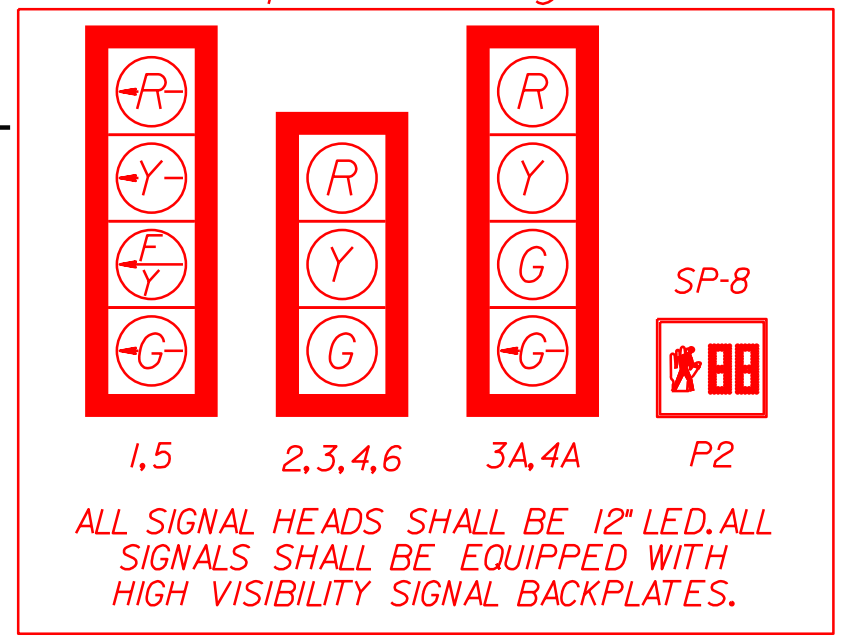


ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES DETECTOR CHANNEL ASSIGNMENTS			
Town of Vienna, Virginia			
DATE:			February 2023
DRAWN: SB	DESIGNED: SB	CHECKED: DT	
PLAN NO.	PROJECT	FILE NO.	SHEET NO. 3(11)

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



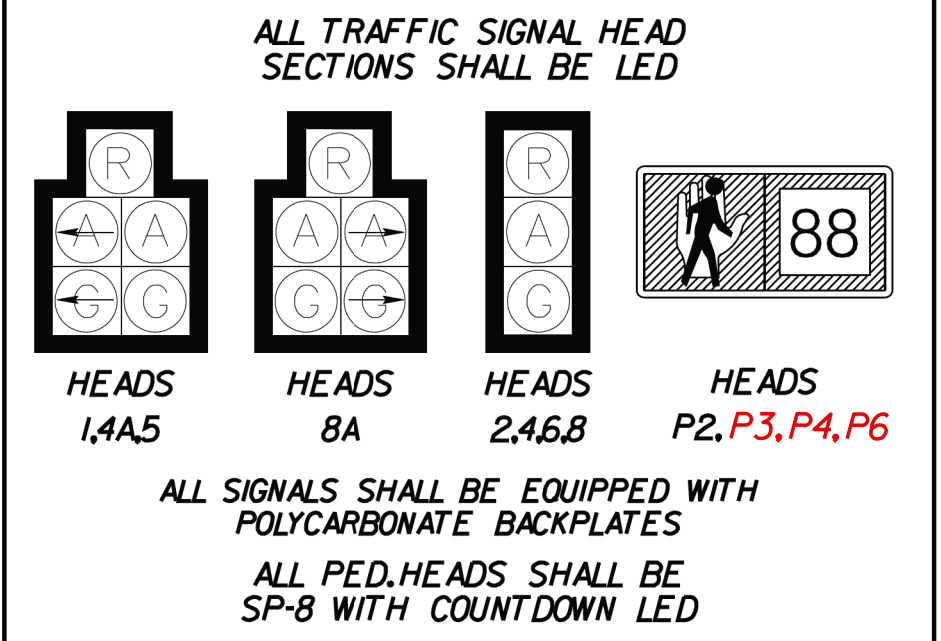
Proposed Signals



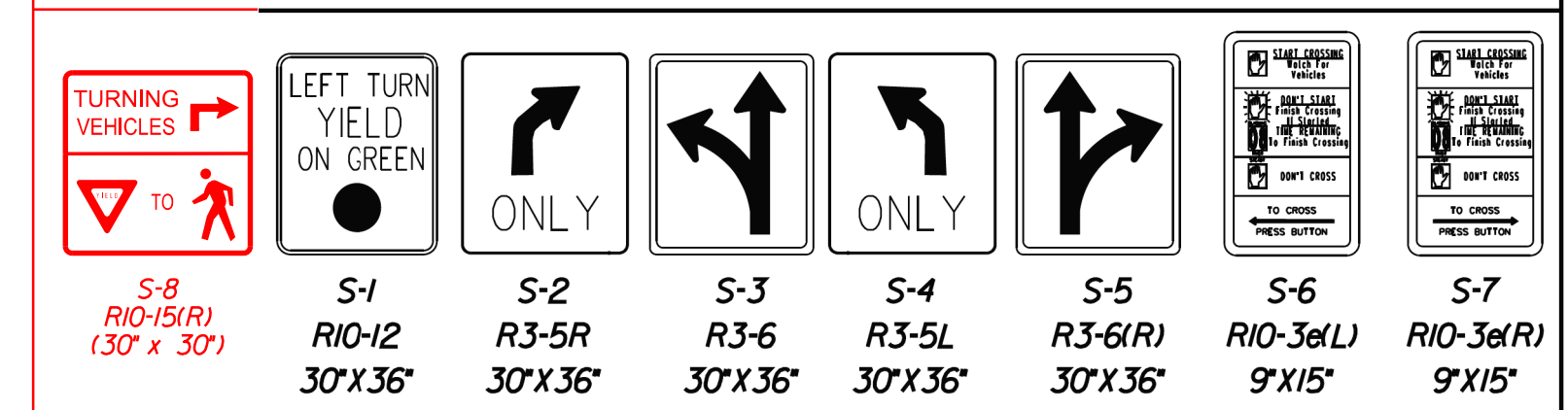
Proposed Signs



EXISTING SIGNAL HEADS



EXISTING SIGNAL SIGNS



SIGNAL NOTES

1. REMOVE EXISTING CONTROLLER AND CABINET.
2. INSTALL NEW MCCAIN 352I ATC CONTROLLER CABINET WITH RISER FOR RETROFIT. INSTALL NEW MCCAIN ATC EX2 CONTROLLER AND NEW ATTACHED UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEM ON EXISTING VDOT ST'D CF-1 FOUNDATION.
3. INSTALL 5.8 GHZ WIRELESS BROADBAND RADIO.
4. INSTALL 10-PORT MANAGED FIELD-ETHERNET SWITCH.
5. INSTALL 360° VIDEO DETECTION CAMERA MOUNTED ON SIGNAL POLE.
6. REMOVE EXISTING VIDEO DETECTION CAMERA.
7. REMOVE EXISTING TRAFFIC SIGNAL HEAD.
8. REMOVE EXISTING OVERHEAD MAST ARM MOUNTED S-1 AND INSTALL S-9.
9. REMOVE EXISTING PEDESTRIAN PUSHBUTTON.

Color Sequence Chart

SIGNAL	PHASES						COMBINATIONS				FLASH
	1	2	3	4	5	6	1-5	1-6	2-5	2-6	
1	-G	-FY					-G	-G	-FY	-FY	-Y*
2		G							G	G	Y
3			G								R
3A			G								R
4				G							R
4A				G							R
5					-G	-FY	-G	-FY	-G	-FY	-Y*
6						G	G	G	G	G	Y
P2	DW	W	DW	DW	DW	DW	DW	DW	W	W	BLANK
P3	DW	DW	W	DW	DW	DW	DW	DW	DW	DW	BLANK
P4	DW	DW	DW	W	DW	DW	DW	DW	DW	DW	BLANK
P6	DW	DW	DW	DW	DW	W	DW	W	DW	W	BLANK

Empty box denotes RED indication. The solid red arrow shall occur at the end of the solid yellow arrow for the Flashing Yellow Arrow (FYA) signal. All FYA signals shall have the red interval. * The Y arrow signal face (second from the top) shall flash during FLASH operation. They FY arrow signal face (third from the top) shall be blank during FLASH operation.

CABLE & CONDUIT RUNS

- (A) 1 3" Conduit
1 Video Detection Camera Cable (Proposed)
2 14/7C for Heads 2,5
1 Video Detection Camera Cable (Remove)
1 AWG (EGC)
- (B) 1 3" Conduit
2 14/2C for Ped Push Button PB-2,PB-8
2 14/7C for Ped Heads P2,P8
1 AWG (EGC)
- (C) 2 4" Conduit (BORED)
2 AWG (EGC)
- (D) 2 4" Conduit (BORED)
2 14/2C for Ped Push Button PB-2,PB-8
2 14/7C for Ped Heads P2,P8
1 Video Detection Camera Cable (Proposed)
1 Video Detection Camera Cable (Remove)
2 AWG (EGC)
- (E) 1 3" Conduit
2 14/7C for Heads 4,4A
1 Video Detection Camera Cable (Remove)
1 AWG (EGC)
- (F) 1 3" Conduit
2 14/2C for Ped Push Button PB-2,PB-4
2 14/7C for Ped Heads P2,P4
1 AWG (EGC)
- (G) 1-3" Conduit (E)
4-14/7C Signal Heads 2,5,8 & 8A (E)
2-14/2C For Ped Heads P-2,P-8 (E)
2-14/2C For Ped Push Button PB-2,PB-8 (E)
1-Video Detection Camera Cable (Proposed)
2-Video Detection Camera Cable (Remove)
1-6 Awg (EGC) (E)
- (H) 1-2" Conduit (E)
2-14/2C For Ped Push Button PB-3,PB-6 (E)
1-6 Awg (EGC) (E)
- (J) 1 3" Conduit
2 14/2C for Ped Push Button PB-6,PB-8
2 14/7C for Ped Heads P6,P8
1 AWG (EGC)
- (K) 1-3" Conduit (E)
2-14/7C Signal Heads 4 & 4A (E)
1-Video Detection Camera Cable (Remove)
1-6 Awg (EGC) (E)
- (L) 2 4" Conduit (BORED)
2 14/2C for Ped Push Button PB-6,PB-8
2 14/7C for Ped Heads P6,P8
1 Video Detection Camera Cable (Remove)
2 AWG (EGC)
- (M) 1 3" Conduit
1 CAT 5e Network Cable for Radio (Proposed)
2 14/2C for Ped Push Button PB-4,PB-6
2 14/7C for Ped Heads P4,P6
1 14/7C for Heads 1,5
1 Video Detection Camera Cable (Remove)
1 AWG (EGC)
- (N) 2 4" Conduit
2 14/2C for Ped Push Button PB-2,PB-4,PB-6,PB-8
2 14/7C for Ped Heads P2,P4,P6,P8
2 14/7C for Heads 1,2,4,4A,5,6,8,8A
2 Video Detection Camera Cable (Proposed)
4 Video Detection Camera Cable (Remove)
1 CAT 5e Network Cable for Radio (Proposed)
2 AWG (EGC)
1 3" Conduit (Spare)
- (P) 1 1-1/4" Conduit (M)
3 AWG for Electrical Service
- (Q) 1 2" Communication Conduit with 500lb Pull Rope
1 Interconnect Wire
- (R) 1 1" Conduit
1 AWG for System Grounding

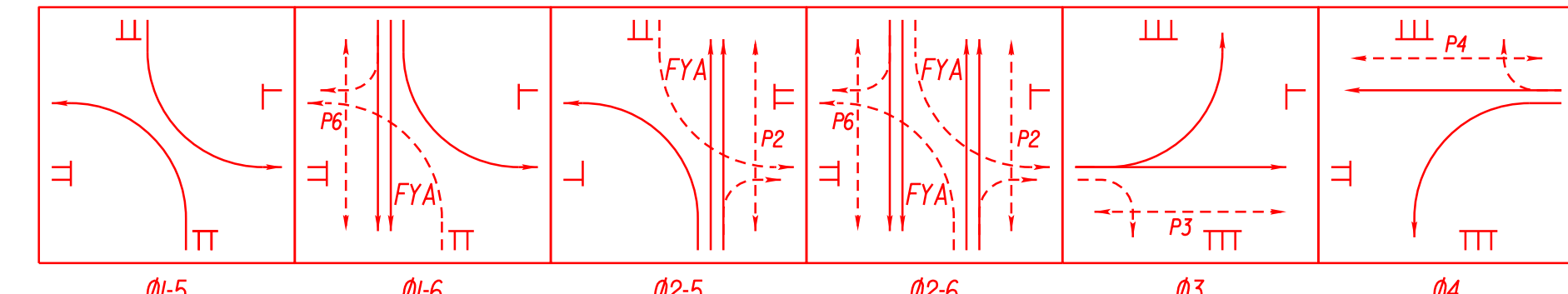
EGC = Equipment Grounding Conductor (Proposed) - Proposed (Remove) - Existing To Be Removed ***All Conduits/Cables Existing Unless Otherwise Noted

BLACK FEATURES AND TEXT ON THIS SHEET ARE FROM THE ORIGINAL RECORD SIGNAL PLAN. RED FEATURES AND TEXT DENOTE MODIFICATIONS TO THE RECORD SIGNAL PLAN AND PROPOSED MODIFICATIONS ASSOCIATED WITH THIS CONTRACT.

SIGNAL POLE & CONTROLLER LEGEND

- (ALL DIMENSIONS ARE TO CENTER OF POLE)
- 1 STANDARD MAST ARM POLE (MP-1)
44.88' LEFT of Courthouse Road Constr. Baseline Sta. 17+03.97
45' Arm 27° Angle to Courthouse Road Constr. Baseline
Signal Placement: 31.7', 42.1'
Sign Placement: 27.2', 39.4'
Video Detection Camera Placement: 36.3'
 - 2 STANDARD MAST ARM POLE (MP-1)
44.23' RIGHT of Nutley Street Constr. Baseline Sta. 5+57.34
40' Arm 85° Angle to Nutley Street Constr. Baseline
Signal Placement: 20.5', 32.6'
Sign Placement: 25.3'
Video Detection Camera Placement: 25.4'
 - 3 STANDARD MAST ARM POLE (MP-1)
29.62' RIGHT of Courthouse Road Constr. Baseline Sta. 20+46.44
40' Arm 87° Angle to Courthouse Road Constr. Baseline
Signal Placement: 22.5', 32.6'
Sign Placement: 18.7', 29.6'
Video Detection Camera Placement: 26.4'
 - 4 STANDARD MAST ARM POLE (MP-1)
52.16' RIGHT of Nutley Street Constr. Baseline Sta. 52+88.78
45' Arm 27° Angle to Nutley Street Constr. Baseline
Signal Placement: 28.1', 39.7'
Sign Placement: 35.6'
Video Detection Camera Placement: 31.7'
 - CONTROLLER CABINET & FOUNDATION (CF-1)
Cabinet door hinge located on left side of pod.

Phasing Diagram



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

Revisions

Date	Initial

COMMONWEALTH OF VIRGINIA
DANA TRONE OZLIN
Lic. No. 045607
PROFESSIONAL ENGINEER
Dana T Ozlin
2023.04.26 09:44:46 -04'00'
Whitman Requardt & Associates
Richmond, Virginia
TRAFFIC ENGINEER

ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES TRAFFIC SIGNAL MODIFICATION PLAN
Nutley Street (Rte. 243) at Courthouse Road (Rte. 6648)

Town of Vienna, Virginia

SCALE: 0 25' 50'

DATE: February 2023

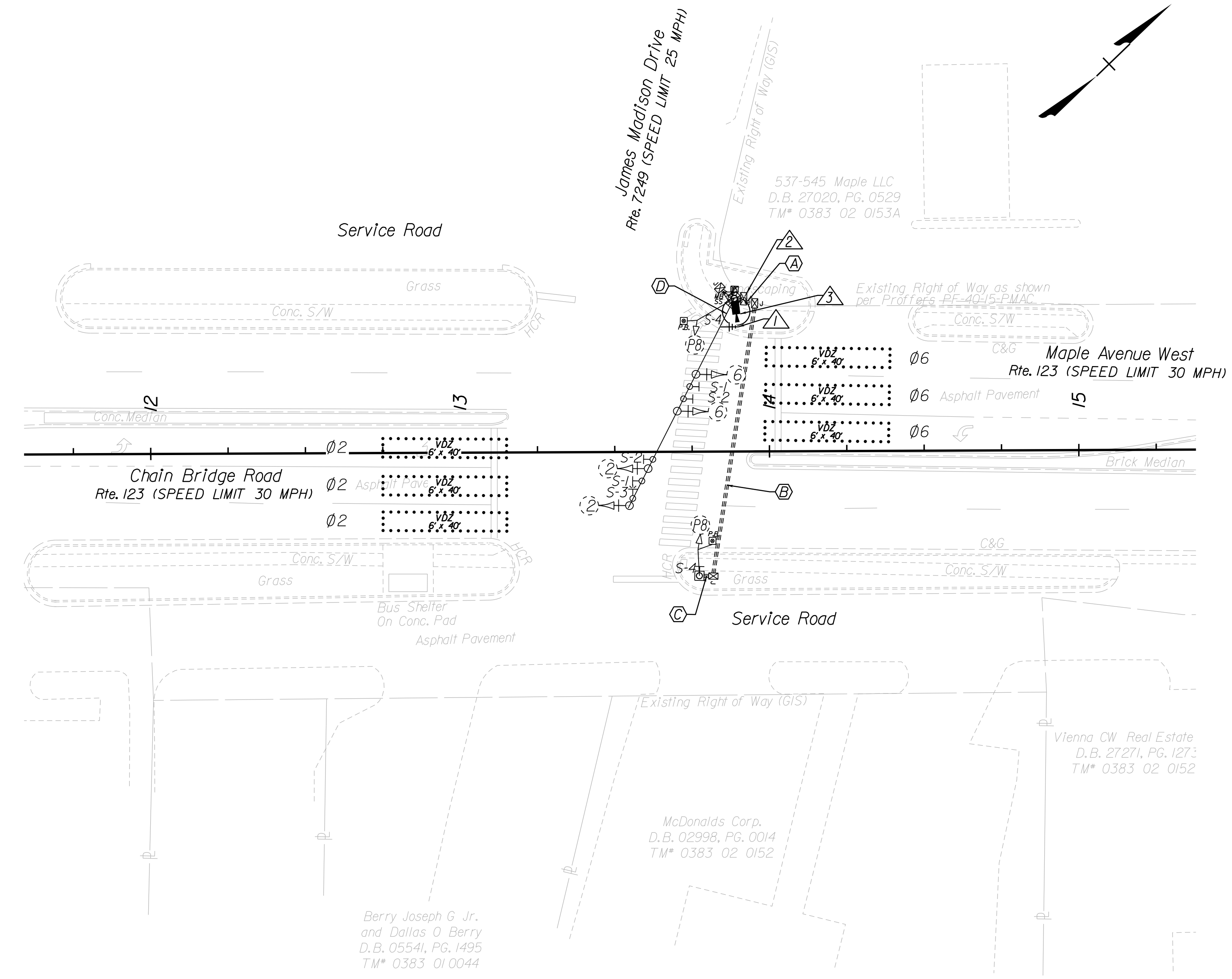
DRAWN: SB	DESIGNED: SB	CHECKED: DT	
PLAN NO.	PROJECT	FILE NO.	SHEET NO. 4(1)

STATE	ROUTE	TOWN OF VIENNA	SHEET NO.
VA.	123 243	PROJECT (INFO)123-153-208 P101,R201,C501	4(2)

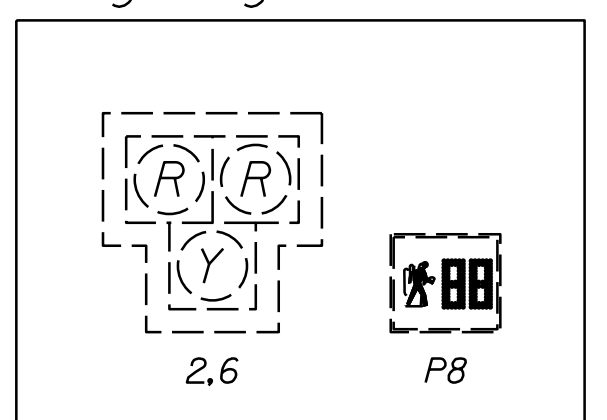
CABLE AND CONDUIT RUNS

- Ⓐ 2-4" Conduit
2-3" Conduit
2-2" Conduit
1" Conduit
1-14/7C Ped Heads PB
1-14/2C Ped Push Button PB-8
1-*6 AWG (EGC)
 - Ⓑ 1-3" Conduit
1-14/7C Ped Heads PB
1-14/2C Ped Push Button PB-8
1-*6 AWG (EGC)
 - Ⓒ 1-3" Conduit
1" Conduit
1-14/7C Ped Heads PB
1-14/2C Ped Push Button PB-8
1-*6 AWG (EGC)
 - Ⓓ Signal Pole/Mast Arm
2-14/7C Signal Heads 2.6
2-14/7C LED Sign
1-V/Video Detection Camera Cable (Proposed)
1-CAT 5e Network Cable For Radio (Proposed)
- ***All Conduits/Cables Existing Unless Otherwise Noted

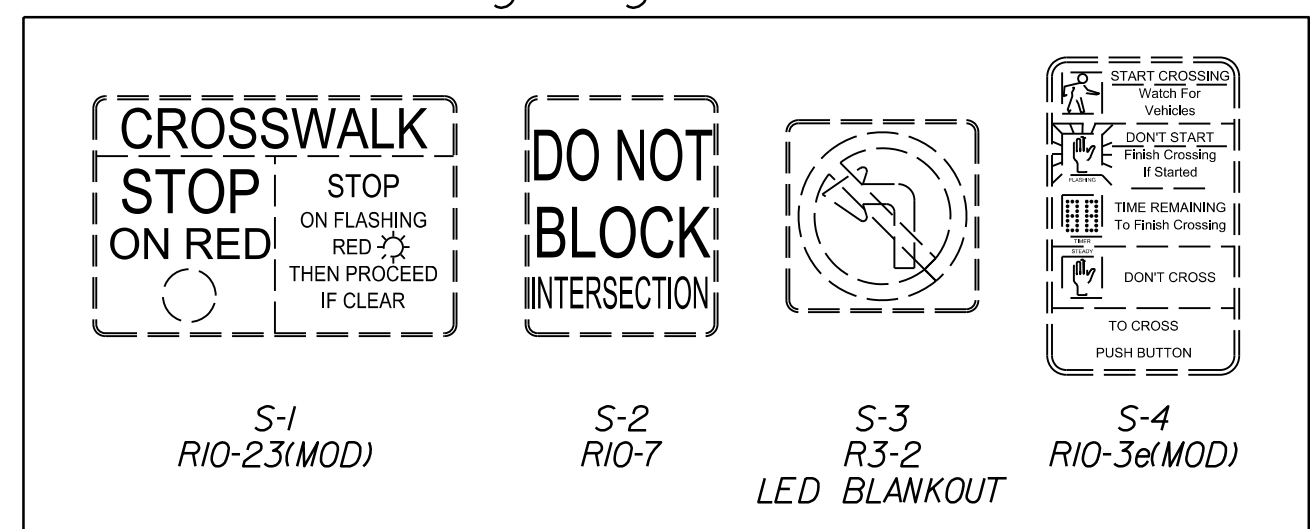
- SIGNAL NOTES**
- ⚠ INSTALL 5.8 GHZ WIRELESS BROADBAND RADIO.
 - ⚠ INSTALL 10-PORT MANAGED FIELD-ETHERNET SWITCH.
 - ⚠ INSTALL 360° VIDEO DETECTION CAMERA MOUNTED ON SIGNAL POLE.



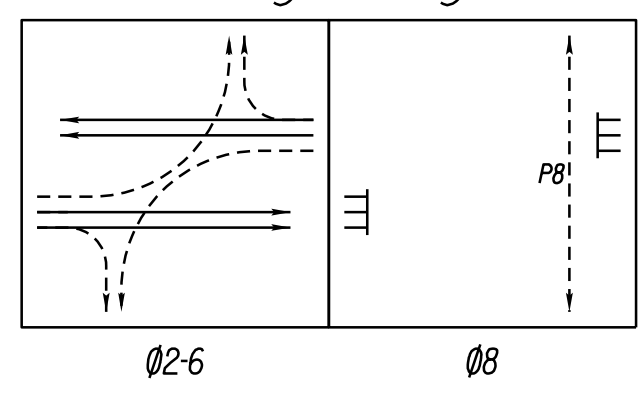
Existing Signals to Remain



Existing Signs to Remain



Phasing Diagram

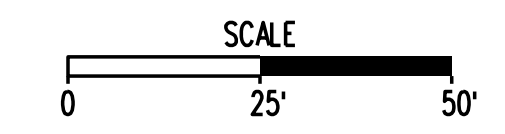


Color Sequence Chart

SIGNAL	PHASES			COMBINATIONS		FLASH
	2	6	8	2-6		
2	BLANK	BLANK	R	BLANK	BLANK	BLANK
6	BLANK	BLANK	R	BLANK	BLANK	BLANK
PB	DW	DW	W	DW	BLANK	BLANK

Signal is dark until pedestrian calls for signal. "WALK" indication displayed after pedestrian call is serviced, otherwise "DON'T WALK" indication is displayed.

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



Revisions	
Date	Initial

Dana T Ozlin
2023.04.26 09:46:38 -04'00'
Whitman Reardon & Associates
Richmond, Virginia
TRAFFIC ENGINEER

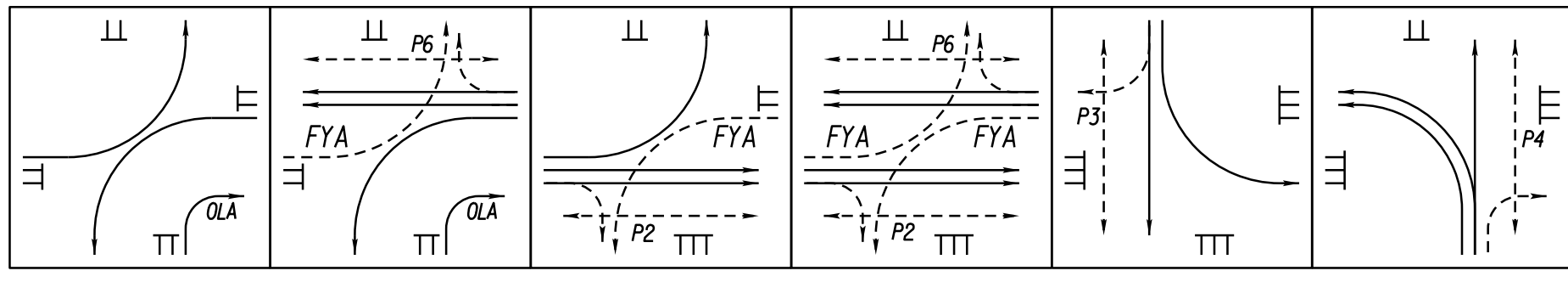
**ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES
TRAFFIC SIGNAL MODIFICATION PLAN
Maple Avenue West/Chain Bridge Road (Rte. 123) at
James Madison Drive (Rte. 7429)
Town of Vienna, Virginia**

DATE: February 2023

DRAWN: SB DESIGNED: SB CHECKED: DT

PLAN NO.	PROJECT	FILE NO.	SHEET NO. 4(2)
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Phasing Diagram



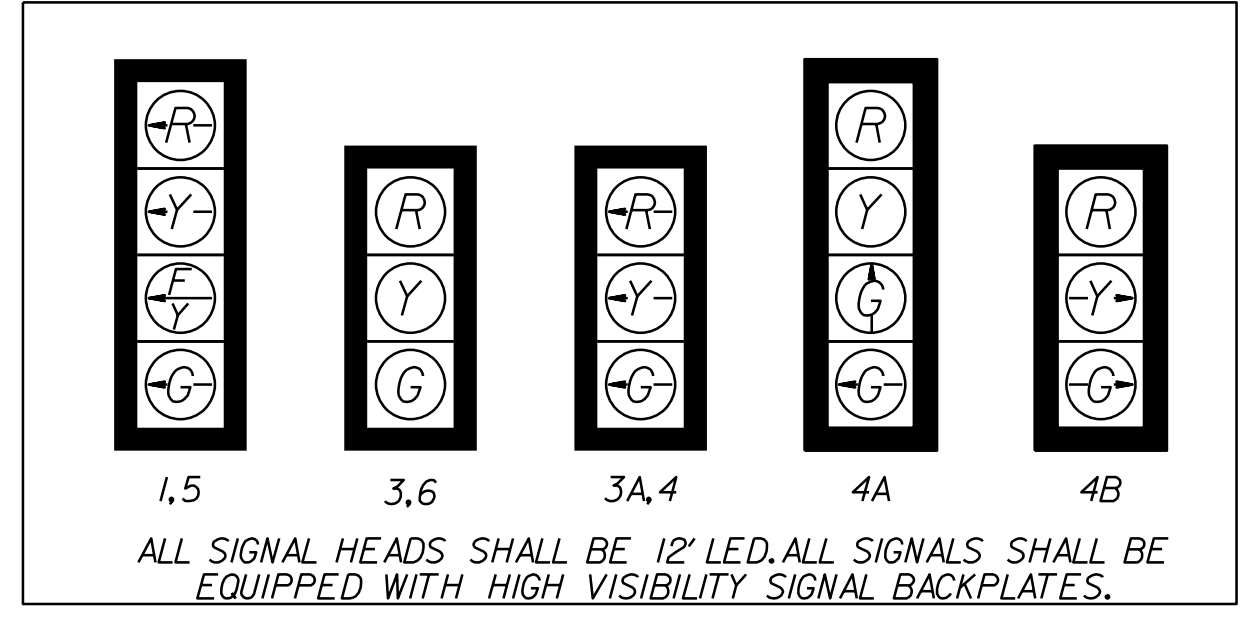
NOTE: THE RIGHT TURN ARROW INDICATION ON HEAD 4B IS NOT DISPLAYED IF PEDESTRIAN PHASE 4 IS ACTUATED.

Color Sequence Chart

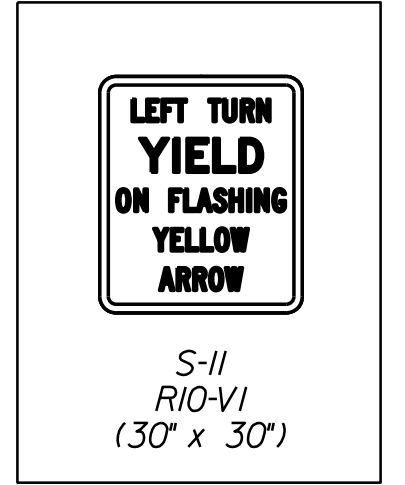
SIGNAL	PHASES						COMBINATIONS				FLASH
	1	2	3	4	5	6	1-5	1-6	2-5	2-6	
1	-G	-FY					-G	-G	-FY	-FY	-Y*
2		G							G	G	Y
3			G								R
3A			-G								-R
4				-G							-R
4A				G							R
4B				-G							R
5					-G	-FY	-G	-FY	-G	-FY	-Y*
6						G	G	G	G	G	Y
P2	DW	W	DW	DW	DW	DW	DW	DW	W	W	BLANK
P3	DW	DW	W	DW	DW	DW	DW	DW	DW	DW	BLANK
P4	DW	DW	DW	W	DW	DW	DW	DW	DW	DW	BLANK
P6	DW	DW	DW	DW	DW	W	DW	W	DW	W	BLANK

Empty box denotes RED indication.
The solid red arrow shall occur at the end of the solid yellow arrow for the Flashing Yellow Arrow (FYA) signal. All FYA signals shall have the red interval.
* The Y arrow signal face (second from the top) shall flash during FLASH operation. They FY arrow signal face (third from the top) shall be blank during FLASH operation.

Proposed Signals



Proposed Signs

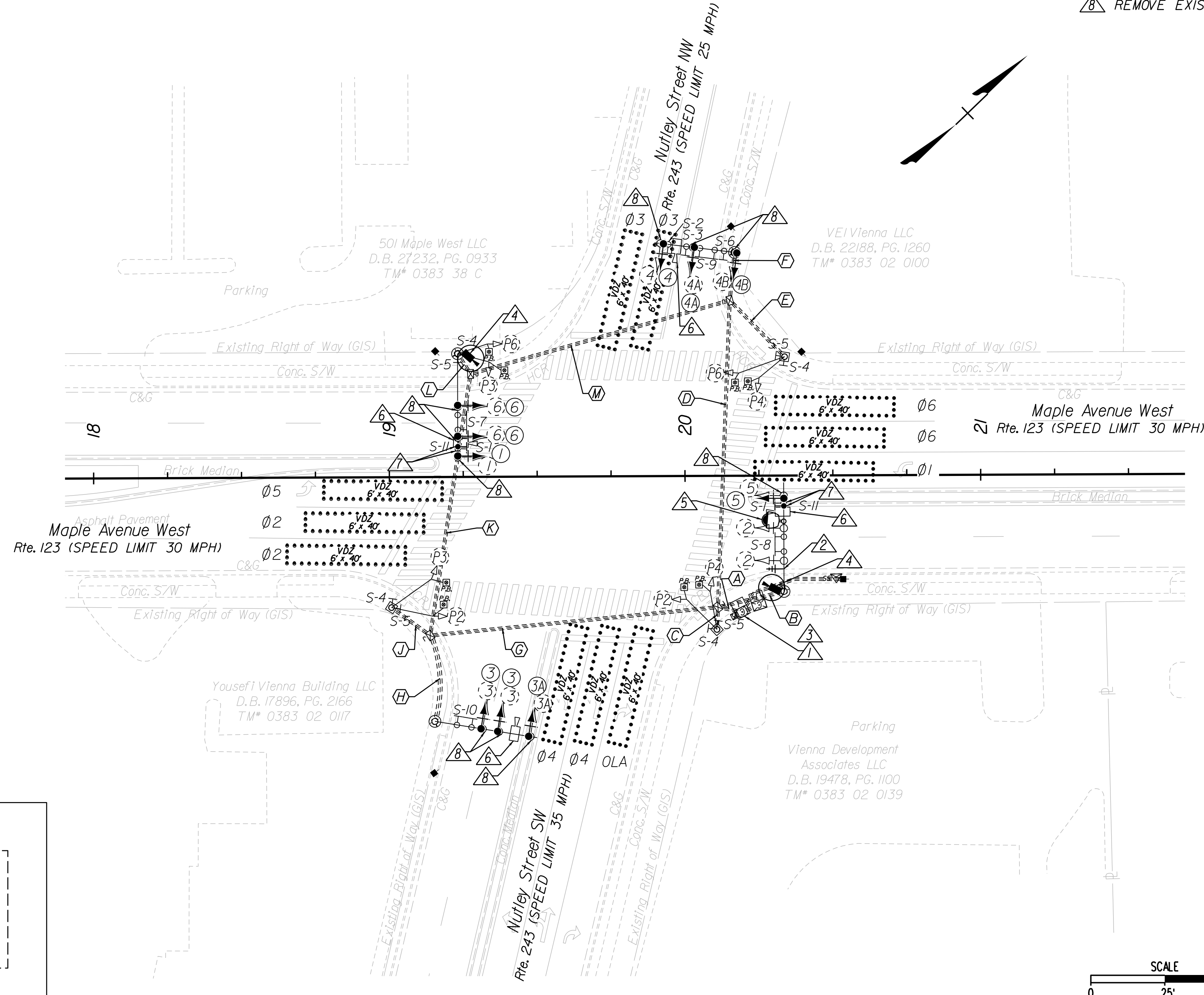


- SIGNAL NOTES**
- 1. REPLACE EXISTING UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEM WITH NEW ATTACHED UPS SYSTEM.
 - 2. INSTALL 5.8 GHZ WIRELESS BROADBAND RADIO.
 - 3. INSTALL 10-PORT MANAGED FIELD-ETHERNET SWITCH.
 - 4. INSTALL 360° VIDEO DETECTION CAMERA MOUNTED ON SIGNAL POLE.
 - 5. INSTALL CCTV CAMERA (DIGITAL) WITH PTZ CAPABILITIES.
 - 6. REMOVE EXISTING VIDEO DETECTION CAMERA.
 - 7. REMOVE EXISTING OVERHEAD MAST ARM MOUNTED S-1 AND INSTALL S-11.
 - 8. REMOVE EXISTING TRAFFIC SIGNAL HEAD.

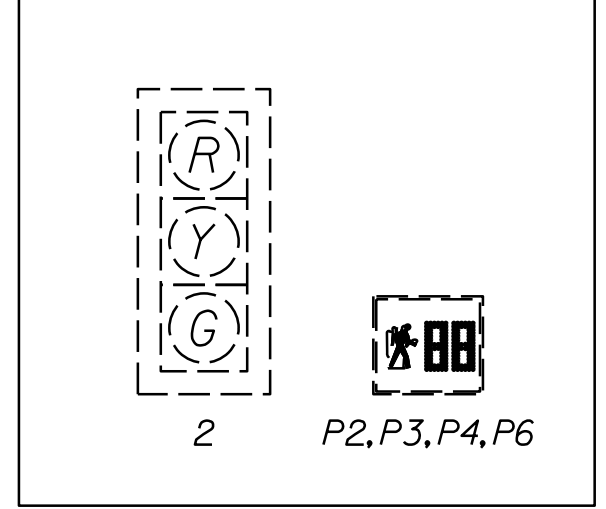
STATE	ROUTE	TOWN OF VIENNA PROJECT	SHEET NO.
VA.	123 243	(NFO)0123-153-208 P101,R201,C501	4(3)

CABLE AND CONDUIT RUNS

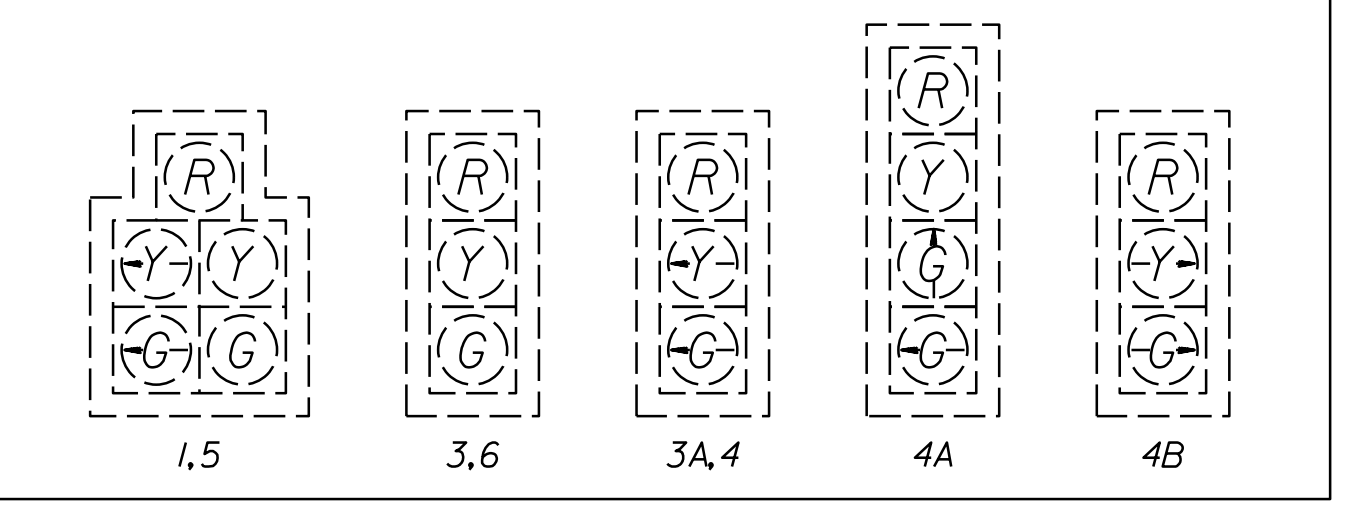
- (A)** 3-3" Conduit
2-2" Conduit (1 Spare)
1-1" Conduit (1 Spare)
5-14/7C Signal Heads 1,2,3,3A,4,4A,4B,5,6
8-14/4C Ped Heads P2,P4,P6,P8
8-14/2C Ped Push Buttons PB-2,PB-4,PB-6,PB-8
1-CCTV Camera Cable (Proposed)
1-CAT 5E Network Cable for Radio (Proposed)
2-Video Detection Camera Cables (Proposed)
4-Video Detection Camera Cable (Remove)
1-6 AWG (EGC)
4-Interconnect Wires
10-Loops (Remove)
 - (B)** 1-3" Conduit
2-2" Conduit (Spares)
1-14/7C Signal Heads 2,5
1-CCTV Camera Cable (Proposed)
1-CAT 5E Network Cable for Radio (Proposed)
1-Video Detection Camera Cable (Proposed)
1-Video Detection Camera Cable (Remove)
1-6 AWG (EGC)
 - (C)** 1-3" Conduit
2-14/4C Ped Heads P2,P4
2-14/2C Ped Push Button PB-2,PB-4
1-6 AWG (EGC)
 - (D)** 2-4" Conduit (Bored)
2-14/7C Signal Heads 4,4A,4B
2-14/4C Ped Heads P4,P6
2-14/2C Ped Push Buttons PB-4,PB-6
1-Video Detection Camera Cable (Remove)
1-6 AWG (EGC)
2-Interconnect
3-Loops (Remove)
 - (E)** 1-2" Conduit
2-14/4C Ped Heads P4,P6
2-14/2C Ped Push Buttons PB-4,PB-6
1-6 AWG (EGC)
 - (F)** 1-3" Conduit
2-2" Conduit (Spares)
2-14/7C Signal Heads 4,4A,4B
1-Video Detection Camera Cable (Remove)
1-6 AWG (EGC)
 - (G)** 2-4" Conduit (Bored)
2-14/7C Signal Heads 1,3,3A,6
4-14/4C Ped Heads P2,P3,P6
4-14/2C Ped Push Buttons PB-2,PB-3,PB-6
2-Video Detection Camera Cable (Proposed)
2-Video Detection Camera Cable (Remove)
1-6 AWG (EGC)
6 Loops (Remove)
 - (H)** 1-3" Conduit
2-2" Conduit (Spares)
1-14/7C Signal Heads 3,3A
1-6 AWG (EGC)
 - (J)** 1-3" Conduit
2-14/4C Ped Heads P2,P3
2-14/2C Ped Push Buttons PB-2,PB-3
1-6 AWG (EGC)
 - (K)** 2-4" Conduit (Bored)
1-14/7C Signal Heads 1,6
2-14/7C Ped Heads P3,P6
2-14/2C Ped Push Buttons PB-3,PB-6
1-Video Detection Camera Cable (Proposed)
1-Video Detection Camera Cable (Remove)
1-6 AWG (EGC)
 - (L)** 1-3" Conduit
1-2" Conduit (Spare)
2-14/7C Signal Heads 1,6
4-14/4C Ped Heads P3,P6
4-14/2C Ped Push Buttons PB-3,PB-6
1-Video Detection Camera Cable (Proposed)
1-Video Detection Camera Cable (Remove)
1-6 AWG (EGC)
 - (M)** C 2-4" Conduit (Bored)
1-Interconnect
- ***All Conduits/Cables Existing Unless Otherwise Noted



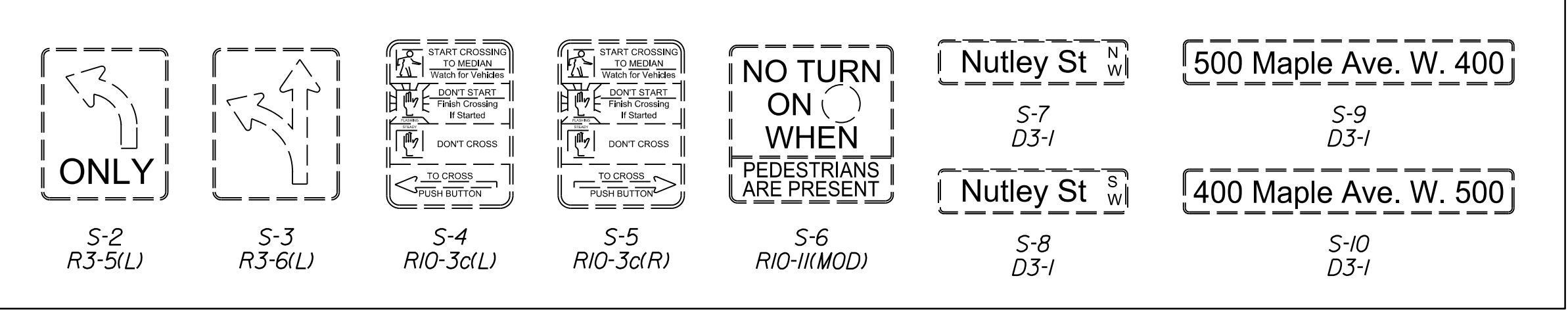
Existing Signals to Remain



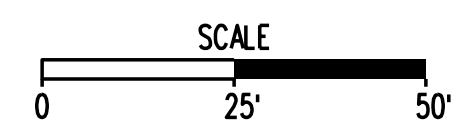
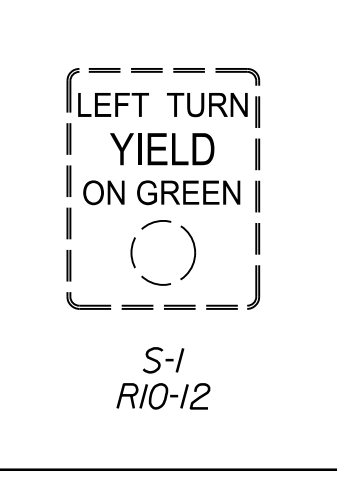
Existing Signals to be Removed



Existing Signs to Remain



Existing Signs to be Removed



Revisions

Date	Initial

COMMONWEALTH OF VIRGINIA
DANA TRONE OZLIN
Lic. No. 045807
PROFESSIONAL ENGINEER

Dana T Ozlin
2023.04.26 09:50:10 -04'00'
Whitman Requaardt & Associates
Richmond, Virginia
TRAFFIC ENGINEER

**ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES
TRAFFIC SIGNAL MODIFICATION PLAN
Maple Avenue West (Rte. 123)
at Nutley Street (Rte. 243)
Town of Vienna, Virginia**

DATE: February 2023

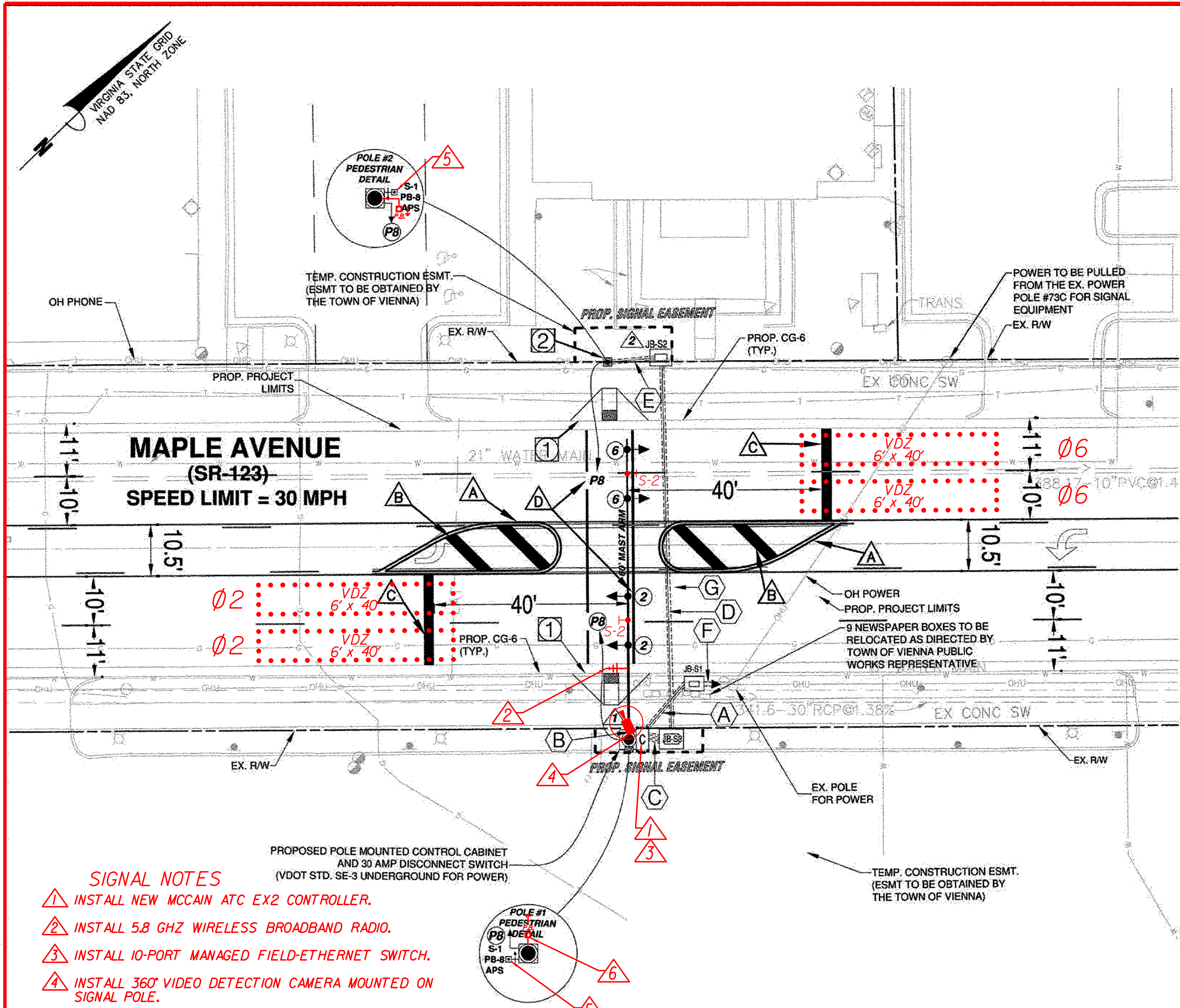
DRAWN: SB DESIGNED: SB CHECKED: DT

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
			4(3)

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

STATE	ROUTE	TOWN OF VIENNA	SHEET NO.
VA.	123 243	PROJECT (INFO)123-153-208 P101.R201.C501	4(4)

BLACK FEATURES AND TEXT ON THIS SHEET ARE FROM THE ORIGINAL RECORD SIGNAL PLAN. RED FEATURES AND TEXT DENOTE MODIFICATIONS TO THE RECORD SIGNAL PLAN AND PROPOSED MODIFICATIONS ASSOCIATED WITH THIS CONTRACT.



PROPOSED

	VDOT STD. CONTROLLER CABINET
	TOWN STD. TRAFFIC SIGNAL POLE AND FOUNDATION
	METER POLE WITH VDOT STD. PF-3 FOUNDATION & BREAK-AWAY BASE
	TOWN STD. PUSH-BUTTON PEDESTAL POLE WITH BREAK-AWAY BASE
	INDUCTIVE LOOP DETECTOR (SIZE AS SPECIFIED)
	JUNCTION BOX (VDOT STD. JB-S1, JB-S2, JB-S3)
	TRAFFIC SIGNAL HEAD

UTILITY LEGEND

ALL UTILITIES SHOWN ON THIS PLAN ARE BASED ON AVAILABLE RECORDS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL EXISTING UTILITIES BY CONTACTING UTILITY AGENCIES AND TO AVOID DAMAGING EXISTING UTILITIES DURING EXCAVATION OR THE ERECTION OF POLES. CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UNDERGROUND OR AERIAL UTILITIES BY CALLING "888 UTILITY" (1-800-552-7001) 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION OR CONSTRUCTION.

W	W	W	WATER LINE
S	S	S	SANITARY SEWER
G	G	G	GAS LINE
T	T	T	UNDERGROUND TELEPHONE
OHE	OHE	OHE	OVERHEAD ELECTRIC
OHU	OHU	OHU	OVERHEAD UTILITIES
CATV	CATV	CATV	CABLE TV LINE

CONDUIT & CABLE

A	1-1/2" (M) CONDUIT 3-#6 ELECTRICAL SERVICE CABLE
B	IN SIGNAL POLE 2-147C SIGNAL HEADS 2.6 1-147C PEDESTRIAN HEADS PB 1-142C PEDESTRIAN PUSH BUTTONS PB-8 1-VIDEO DETECTION CAMERA CABLE (PROPOSED) 1-CATV NETWORK CABLE FOR RADIO (PROPOSED) 1-#6 AWG (EGC) FOR SYSTEM GROUNDING
C	2-4" CONDUITS 1-3" CONDUIT (SPARE) 1-147C PEDESTRIAN SIGNAL PB 1-142C PEDESTRIAN PUSH BUTTON PB-8 1-#6 AWG (EGC) FOR SYSTEM GROUNDING
D	1-4" CONDUIT (DIRECT BORE) 1-147C PEDESTRIAN SIGNAL PB 1-142C PEDESTRIAN PUSH BUTTON PB-8 1-#6 AWG (EGC) FOR SYSTEM GROUNDING
E	1-3" CONDUIT 1-147C PEDESTRIAN SIGNAL PB 1-142C PEDESTRIAN PUSH BUTTON PB-8 1-#6 AWG (EGC) FOR SYSTEM GROUNDING
F	2" STUB OUT FOR POWER (BY DOMINION VIRGINIA POWER) PULL ROPE
G	1-4" CONDUIT (DIRECT BORE) (SPARE) 1-147C PEDESTRIAN SIGNAL PB (SPARE) 1-142C PEDESTRIAN PUSH BUTTON PB-8 (SPARE) 1-#6 AWG (EGC) FOR SYSTEM GROUNDING (SPARE)

***ALL CONDUITS/CABLES EXISTING UNLESS OTHERWISE NOTED

- SIGNAL NOTES**
- 1 INSTALL NEW MCCAIN ATC EX2 CONTROLLER.
 - 2 INSTALL 5.8 GHZ WIRELESS BROADBAND RADIO.
 - 3 INSTALL 10-PORT MANAGED FIELD-ETHERNET SWITCH.
 - 4 INSTALL 360 VIDEO DETECTION CAMERA MOUNTED ON SIGNAL POLE.
 - 5 REMOVE EXISTING PEDESTRIAN PUSHBUTTON.
 - 6 INSTALL APS PUSHBUTTON. PUSHBUTTON ARROW SHALL BE ORIENTED POINTING UP.

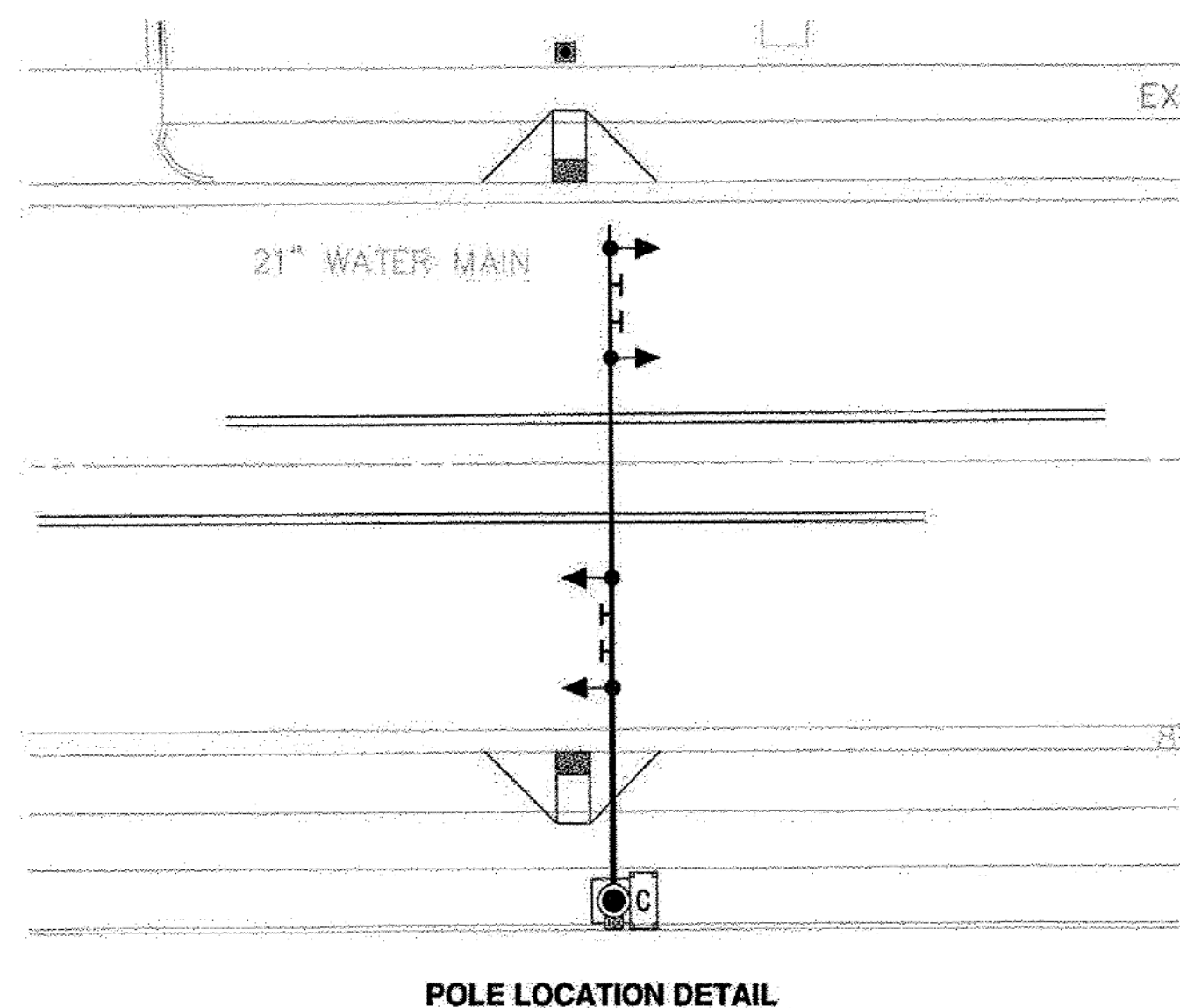
PAVEMENT MARKING LEGEND

	VDOT STANDARD TYPE B, CLASS VI, 4" DOUBLE YELLOW
	VDOT STANDARD TYPE B, CLASS I, 24" YELLOW, SOLID, 45 DEGREES, 10' SPACE BETWEEN
	VDOT STANDARD TYPE B, CLASS I, 24" WHITE
	VDOT STANDARD TYPE B, CLASS VI, 6" WHITE

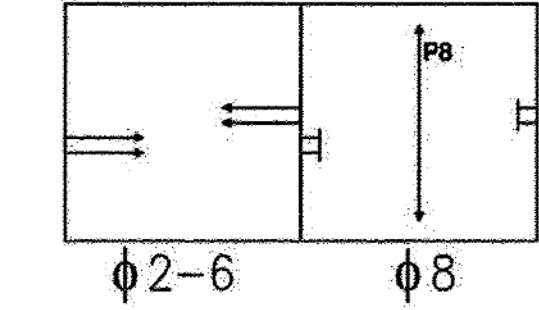
COLOR SEQUENCE CHART

PHASE	2	4	1	PB
SIGNAL	R/W	R/W	R/W	FLASH
2	BLANK	BLANK	BLANK	BLANK
6	BLANK	BLANK	BLANK	BLANK
PB	R	R	WALK	BLANK

NOTE: WALK INDICATION DISPLAYED AFTER PEDESTRIAN CALL IS SERVICED; OTHERWISE "DON'T WALK" INDICATION IS DISPLAYED. SIGNAL IS DARK UNTIL PEDESTRIAN CALLS FOR THE SIGNAL.

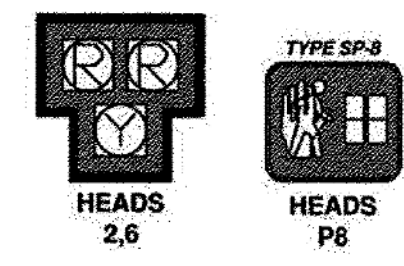


PROPOSED PHASING DIAGRAM

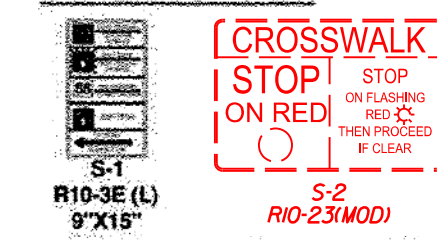


EXISTING FLASHING BEACON AND PEDESTRIAN SIGNALS

ALL BEACONS SHALL BE EQUIPPED WITH POLYCARBONATE BACKPLATES. ALL SIGNAL HEAD BULBS SHALL BE LED EXCEPT FOR YELLOW BULB, WHICH SHALL BE INCANDESCENT. INSTALL 2" WIDE YELLOW REFLECTIVE TAPE AROUND PERIMETER OF BACKPLATE. PEDESTRIAN SIGNALS SHALL BE LED. SIGNAL INDICATION TYPE SP-8 (VDOT STANDARD). AN APS SPEAKER SHALL BE MOUNTED ON THE TOP OF EACH PEDESTRIAN SIGNAL HEAD PROVIDING AN AUDIBLE SPEECH MESSAGE DURING THE WALK INTERVAL.



EXISTING SIGNS



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

ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES TRAFFIC SIGNAL MODIFICATION PLAN
Maple Avenue West (Rte. 123) at Vienna Plaza HAWK Signal
Town of Vienna, Virginia

NOT TO SCALE DATE: February 2023

Dana T Ozlin
2023.04.26 09:51:11 -04'00'

Whitman Reardon & Associates
Richmond, Virginia
TRAFFIC ENGINEER

DRAWN: SB	DESIGNED: SB	CHECKED: DT
PLAN NO.	PROJECT	FILE NO.
		SHEET NO. 4(4)

Proposed Signals

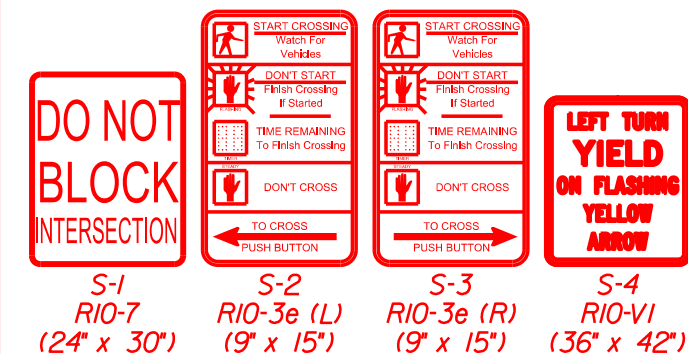


ALL SIGNAL HEADS SHALL BE 12" LED. ALL SIGNALS SHALL BE EQUIPPED WITH HIGH VISIBILITY SIGNAL BACKPLATES.

SIGNAL POLE & CONTROLLER LEGEND

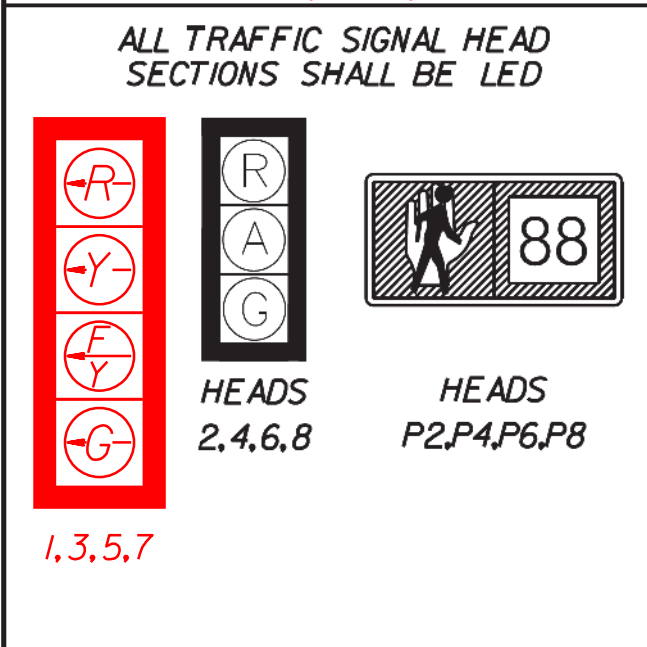
- (ALL DIMENSIONS ARE TO CENTER OF POLE)
- 1 STANDARD MAST ARM POLE (MP-1) 39.9' LEFT of Maple Avenue West Constr. Baseline Sta. 11+77.9 50' Arm 270° Angle to Maple Avenue West Constr. Baseline Signal Placement: 20.3', 29.9', 40.6' Sign Placement: 35.3' Video Detection Camera Placement: As Directed by Town
 - 2 STANDARD MAST ARM POLE (MP-1) 42.5' LEFT of Maple Avenue West Constr. Baseline Sta. 13+22.46 60' Arm 180° Angle to Maple Avenue West Constr. Baseline Signal Placement: 39.0', 46.5', 55.1' Sign Placement: 50.2' Video Detection Camera Placement: As Directed By Town
 - 3 STANDARD MAST ARM POLE (MP-1) 44.2' RIGHT of Maple Avenue West Constr. Baseline Sta. 12+77.30 50' Arm 90° Angle to Maple Avenue West Constr. Baseline Signal Placement: 24.4', 34.0', 43.7' Sign Placement: 40.1' Video Detection Camera Placement: As Directed By Town
 - 4 STANDARD MAST ARM POLE (MP-1) 43.9' RIGHT of Maple Avenue West Constr. Baseline Sta. 11+89.38 50' Arm 0° Angle to Maple Avenue West Constr. Baseline Signal Placement: 26.6', 35.4', 44.2' Sign Placement: 39.2' Video Detection Camera Placement: As Directed By Town
 - 5 CONTROLLER CABINET & FOUNDATION (CF-1) Cabinet door hinge located on left side of pod. Existing Cabinet shall be removed, but existing controller device is to remain and be relocated to new Cabinet. Battery Back-Up shall be attached to the Cabinet in Type B Cabinet.

Existing Signs



BLACK FEATURES AND TEXT ON THIS SHEET ARE FROM THE ORIGINAL RECORD SIGNAL PLAN. RED FEATURES AND TEXT DENOTE MODIFICATIONS TO THE RECORD SIGNAL PLAN AND PROPOSED MODIFICATIONS ASSOCIATED WITH THIS CONTRACT.

Existing Signals



R/W	CLEARANCE			NEXT PHASE
	1	2	PHASE	
G	G	G	G	G
G	A	R	R	R
←G	←A	←R	←R	←R
←G	←G	←G	←G	←G
W	W	W	W	W
W	FDW	DW	DW	DW

Color Sequence Chart

SIGNAL	PHASES								COMBINATIONS								FLASH
	1	2	3	4	5	6	7	8	1-5	1-6	2-5	2-6	3-7	3-8	4-7	4-8	
1	-G	-FY							-G	-G	-FY	-FY					-Y*
2	G								G	G							Y
3		-G	-FY								-G	-G	-FY	-FY			-R
4			G										G	G			R
5				-G	-FY				-G	-FY	-G	-FY					-Y*
6					G						G	G					Y
7						-G	-FY						-G	-FY	-G	-FY	-R
8							G						G	G			R
P2	DW	W	DW	DW	DW	DW	DW	DW	DW	DW	W	W	DW	DW	DW	DW	BLANK
P4	DW	DW	DW	W	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	W	BLANK
P6	DW	DW	DW	DW	DW	W	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	BLANK
P8	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	BLANK

Empty box denotes RED indication. The solid red arrow shall occur at the end of the solid yellow arrow for the Flashing Yellow Arrow (FYA) signal. All FYA signals shall have the red interval. *The Y arrow signal face (second from the top) shall flash during FLASH operation. They FY arrow signal face (third from the top) shall be blank during FLASH operation.

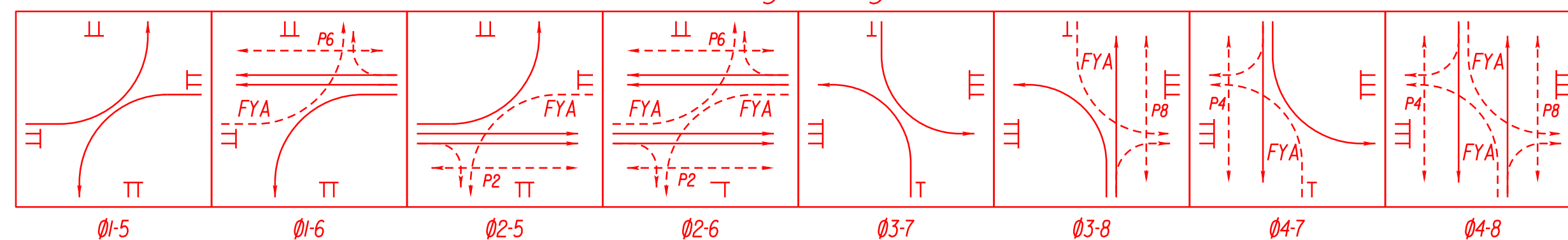
SIGNAL NOTES

- 1 REPLACE EXISTING UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEM WITH NEW ATTACHED UPS SYSTEM.
- 2 INSTALL 5.8 GHZ WIRELESS BROADBAND RADIO.
- 3 INSTALL 10-PORT MANAGED FIELD-ETHERNET SWITCH.
- 4 INSTALL 360° VIDEO DETECTION CAMERA MOUNTED ON SIGNAL POLE.
- 5 REMOVE EXISTING VIDEO DETECTION CAMERA.
- 6 REMOVE EXISTING TRAFFIC SIGNAL HEAD.
- 7 REMOVE EXISTING PEDESTRIAN PUSHBUTTON.



Note: Easements shown on this plan were acquired under VDOT Proj. #0123-053-983 m501

Phasing Diagram



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

REVISED	STATE	ROUTE	TOWN OF VIENNA PROJECT	SHEET NO.
2014-03-31	VA.	123 243	(NFO)0123-153-208 P101,P201,C501	4(5)

CABLE & CONDUIT RUNS

- A 1 3" Conduit
1 2" Conduit
1 1" Conduit
2 14/7C for Heads 1,6
1 Video Detection Camera Cable (Proposed)
1 Video Detection Camera Cable (Remove)
2 *6 AWG (EGC)
- B 1 3" Conduit
1 1" Conduit
2 14/2C for Ped Push Button PB-4,PB-6
2 14/7C for Ped Heads P4,P6
1 *6 AWG (EGC)
- C 2 4" Conduit (BORED)
14/2C for Ped Push Button PB-4,PB-6
14/7C for Ped Heads P4,P6
2 14/7C for Heads 1,6
1 Video Detection Camera Cable (Proposed)
1 Video Detection Camera Cable (Remove)
2 *6 AWG (EGC)
- D 2 4" Conduit (BORED)
2 *6 AWG (EGC)
- E 1 3" Conduit
1 2" Conduit
2 14/2C for Ped Push Button PB-2,PB-4
2 14/7C for Ped Heads P2,P4
2 14/7C for Heads 4,7
1 Video Detection Camera Cable (Remove)
1 *6 AWG (EGC)
- F 2 4" Conduit (BORED)
14/2C for Ped Push Button PB-2,PB-4
14/7C for Ped Heads P2,P4
2 14/7C for Heads 4,7
1 Video Detection Camera Cable (Remove)
1 *6 AWG (EGC)
- G 2 4" Conduit (BORED)
14/2C for Ped Push Button PB-2,PB-4
4 14/7C for Ped Heads P4,P6,P8
4 14/7C for Heads 1,3,6,8
1 Video Detection Camera Cable (Proposed)
1 Video Detection Camera Cable (Remove)
2 *6 AWG (EGC)
- H 1 3" Conduit
1 2" Conduit
2 14/7C for Heads 3,8
1 Video Detection Camera Cable (Remove)
1 *6 AWG (EGC)
- I 2 4" Conduit (BORED)
14/2C for Ped Push Button PB-4,PB-6,PB-8
4 14/7C for Ped Heads P4,P6,P8
4 14/7C for Heads 1,3,6,8
1 Video Detection Camera Cable (Proposed)
1 Video Detection Camera Cable (Remove)
2 *6 AWG (EGC)
- J 1-3" Conduit
2-14/7C Signal Heads 2,5
1-CAT 5e Network Cable (Proposed)
1-Video Detection Camera Cable (Proposed)
1-Video Detection Camera Cable (Remove)
1-Opticom Pre-emption Cable
1-6 AWG (EGC)
- K 1-3" Conduit
6-14/7C Signal Heads 1,2,3,5,6,8
6-14/7C Ped Heads P2,P4,P6,P8
6-14/2C Ped Push Buttons PB-2,PB-4,PB-6,PB-8
1-CAT 5e Network Cable (Proposed)
2-Video Detection Camera Cables (Proposed)
3-Video Detection Camera Cable (Remove)
1-Opticom Pre-emption Cable
1-6 AWG (EGC)
- L 1 3" Conduit
1 1" Conduit
2 14/2C for Ped Push Button PB-2,PB-8
2 14/7C for Ped Heads P2,P8
1 *6 AWG (EGC)
- M 1-4" Conduit
1-3" Conduit
8-14/7C Signal Heads 1,2,3,4,5,6,7,8
8-14/7C Ped Heads P2,P4,P6,P8
8-14/2C Ped Push Buttons PB-2,PB-4,PB-6,PB-8
1-CAT 5e Network Cable (Proposed)
2-Video Detection Camera Cables (Proposed)
3-Video Detection Camera Cable (Remove)
1-Opticom Pre-emption Cable
2-*6 AWG (EGC)
- N 1 1-1/4" Conduit (M)
3 *6 AWG for Electrical Service
- O 1 1" Conduit
1 *6 AWG for System Grounding
- P 1 2" Communication Conduit with 500lb Pull Rope with Interconnect Wire
- Q 1 2" Communication Conduit with 500lb Pull Rope (BORED Under S/W) with Interconnect Wire
- R 1 1-1/4" Conduit (M)
3 *6 AWG for Electrical Service

CABLE & CONDUIT RUNS (Cont.)

- P 1 1-1/4" Conduit (M) (BORED Under S/W)
3 *6 AWG for Electrical Service
 - O 1 1" Conduit
1 *6 AWG for System Grounding
 - P 1 2" Communication Conduit with 500lb Pull Rope with Interconnect Wire
 - Q 1 2" Communication Conduit with 500lb Pull Rope (BORED Under S/W) with Interconnect Wire
- ***All Conduits/Cables Existing Unless Otherwise Noted

Revisions

Date	Initial

COMMONWEALTH OF VIRGINIA
DANA TRONE OZLIN
Lic. No. 045607
PROFESSIONAL ENGINEER

Dana T Ozlin
2023.04.26 10:19:32 -04'00'
Whitman Requaert & Associates
Richmond, Virginia
TRAFFIC ENGINEER

ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES
TRAFFIC SIGNAL MODIFICATION PLAN
Maple Avenue West (Rte.123) at
Courthouse Road SW (Rte.6648)/Lawyers Road NW (Rte.6648)

Town of Vienna, Virginia

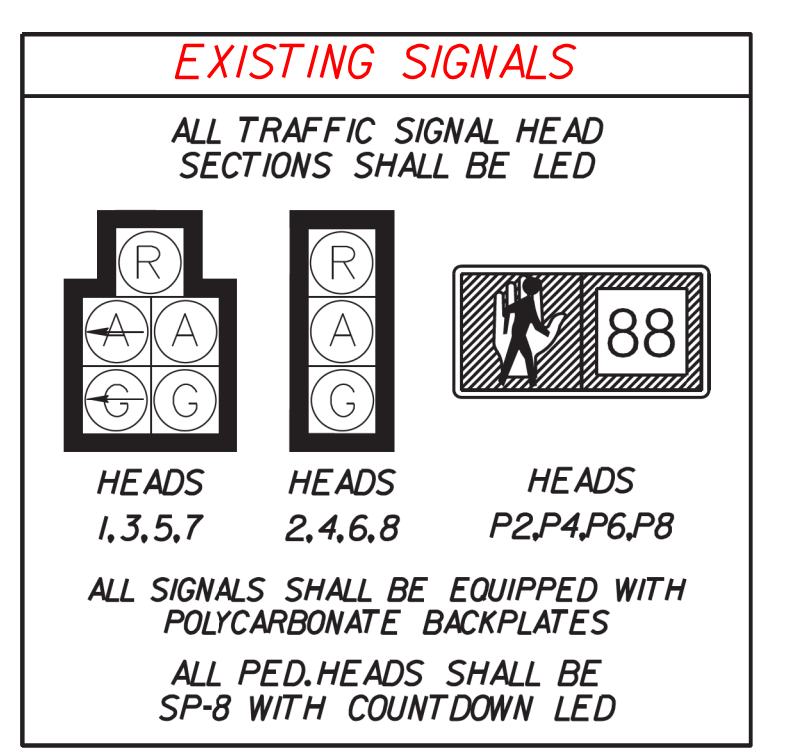
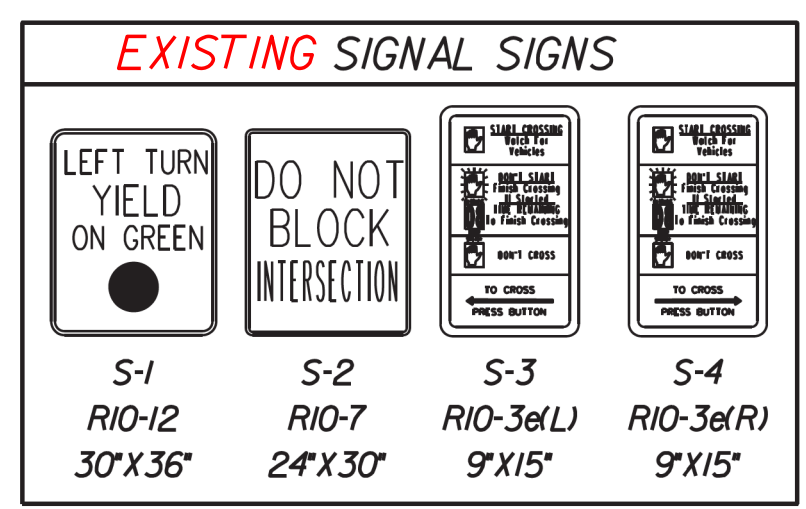
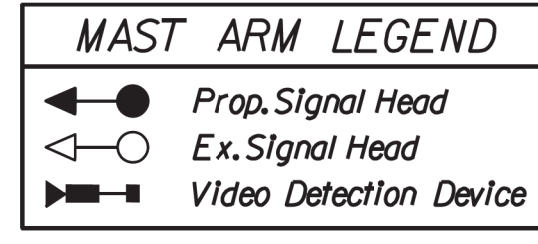
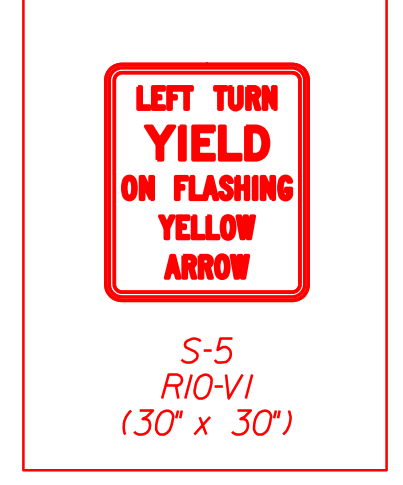
February 2023

SCALE: 0 25' 50'

DRAWN: SB DESIGNED: SB CHECKED: DT

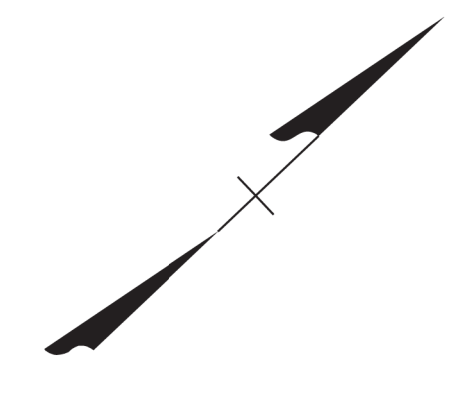
PLAN NO.	PROJECT	FILE NO.	SHEET NO.
			4(5)

Proposed Signs



SIGNAL POLE & CONTROLLER LEGEND

- (ALL DIMENSIONS ARE TO CENTER OF POLE)
- ▲ STANDARD MAST ARM POLE (MP-1)
40.06' LEFT of Maple Avenue West Constr. Baseline Sta. 22+10.43
50' Arm 27° Angle to Maple Avenue West Constr. Baseline
Signal Placement: 23.4', 33.4'
Sign Placement: 23.4', 43.4'
Video Detection Camera Placement: As Directed by Town
 - ▲ STANDARD MAST ARM POLE (MP-1)
40.75' LEFT of Maple Avenue East Constr. Baseline Sta. 22+90.32
50' Arm 18° Angle to Maple Avenue East Constr. Baseline
Signal Placement: 27.8', 37.8'
Sign Placement: 22.8', 42.8'
Video Detection Camera Placement: As Directed by Town
 - ▲ STANDARD MAST ARM POLE (MP-1)
44.00' RIGHT of Maple Avenue East Constr. Baseline Sta. 23+12.30
50' Arm 30° Angle to Maple Avenue East Constr. Baseline
Signal Placement: 25.1', 35.1'
Sign Placement: 20.1', 40.1'
Video Detection Camera Placement: As Directed By Town
 - ▲ STANDARD MAST ARM POLE (MP-1)
57.22' RIGHT of Maple Avenue West Constr. Baseline Sta. 22+18.78
50' Arm 0° Angle to Maple Avenue West Constr. Baseline
Signal Placement: 24.9', 34.9'
Sign Placement: 19.9', 29.9'
Video Detection Camera Placement: As Directed By Town
 - ▲ CONTROLLER CABINET & FOUNDATION (CF-1)
Cabinet door hinge located on left side of pod. Existing Cabinet shall be removed, but existing controller device is to remain and be relocated to new Cabinet. Battery Back-Up shall be attached to the Cabinet in Type B Cabinet.



SIGNAL NOTES

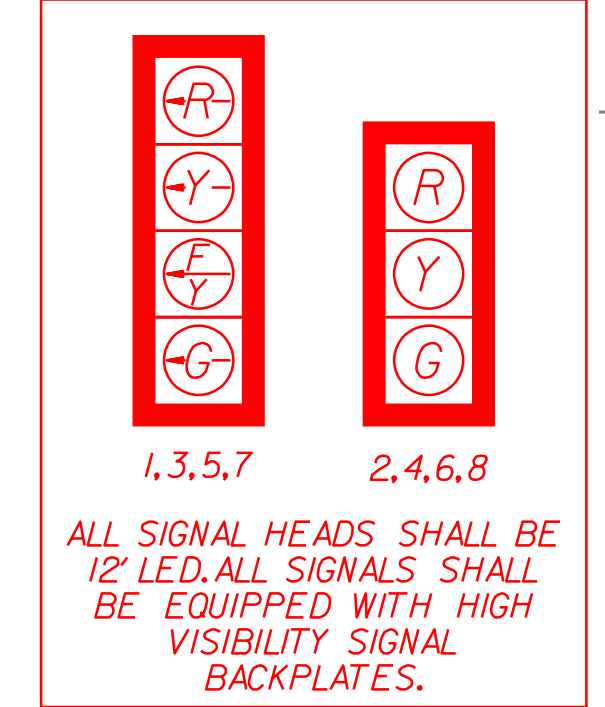
- ▲ INSTALL NEW MCCAIN ATC EX2 CONTROLLER IN EXISTING CABINET. REPLACE EXISTING UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEM WITH NEW ATTACHED UPS SYSTEM ON EXISTING VDOT ST'D CF-1 FOUNDATION.
- ▲ INSTALL 5.8 GHZ WIRELESS BROADBAND RADIO.
- ▲ INSTALL 10-PORT MANAGED FIELD-ETHERNET SWITCH.
- ▲ INSTALL 360° VIDEO DETECTION CAMERA MOUNTED ON SIGNAL POLE.
- ▲ INSTALL CCTV CAMERA (DIGITAL) WITH PTZ CAPABILITIES.
- ▲ REMOVE EXISTING VIDEO DETECTION CAMERA.
- ▲ REMOVE EXISTING PEDESTRIAN PUSHBUTTON.
- ▲ REMOVE EXISTING TRAFFIC SIGNAL HEAD.
- ▲ REMOVE EXISTING OVERHEAD MAST ARM MOUNTED S-1 AND INSTALL S-5.
- ▲ RELOCATE EXISTING OVERHEAD MAST ARM MOUNTED SIGN.

REVISED	STATE	ROUTE	TOWN OF VIENNA PROJECT	SHEET NO.
2014-03-31	VA.	123 243	(INFO)123-153-208 P101,P201,C501	4(6)

CABLE & CONDUIT RUNS

- (A) 1 3" Conduit
1 2" Conduit
1 Opticom Cable
2 14/7C for Heads 1,5
1 Video Detection Camera Cable (Proposed)
1 Video Detection Camera Cable (Remove)
1 *6 AWG (EGC)
- (B) 1 3" Conduit
1 1" Conduit
2 14/2C for Ped Push Button PB-4,PB-6
2 14/7C for Ped Heads P4,P6
1 *6 AWG (EGC)
- (C) 2-4" Conduit
4-14/7C Signal Heads 1,4,6,7
4-14/7C Ped Heads P2,P4,P6
4-14/2C Ped Push Buttons PB-2,PB-4,PB-6
2-Opticom Cable
1-Video Detection Camera Cable (Proposed)
2-Video Detection Camera Cables (Remove)
1-*6 AWG (EGC)
- (D) 2-4" Conduit (1 Spare)
2-14/7C Signal Heads 4,7
2-14/7C Ped Heads P2,P4
2-14/2C Ped Push Buttons PB-2,PB-4
1-MSA 14/3/19/1 STR (Remove)
1-*6 AWG (EGC)
- (E) 1 3" Conduit
1 2" Conduit
1 Opticom Cable
2 14/7C for Heads 3,8
1 Video Detection Camera Cable (Remove)
1 *6 AWG (EGC)
- (F) 1 3" Conduit
1 1" Conduit
2 14/2C for Ped Push Button PB-6,PB-8
2 14/7C for Ped Heads P6,P8
1 *6 AWG (EGC)
- (G) 2-4" Conduit
6-14/7C Signal Heads 1,3,4,6,7,8
6-14/7C Ped Heads P2,P4,P6,P8
6-14/2C Ped Push Buttons PB-2,PB-4,PB-6,PB-8
3-Opticom Cable
1-Video Detection Camera Cable (Proposed)
3-Video Detection Camera Cables (Remove)
1-*6 AWG (EGC)
- (H) 1 3" Conduit
1 1" Conduit
2 14/2C for Ped Push Button PB-2,PB-4
2 14/7C for Ped Heads P2,P4
1 *6 AWG (EGC)
- (J) 1 3" Conduit
1 2" Conduit
1 1" Conduit
2 14/7C for Heads 4,7
1 Video Detection Camera Cable (Remove)
1 *6 AWG (EGC)
1 Opticom Cable
- (K) Not Used
- (L) 1-3" Conduit
1-2" Conduit
1-14/7C for Heads 1,2,3,4,5,6,7,8
1-14/7C for Ped Heads P2,P4,P6,P8
1-14/2C for Push Buttons PB-2,PB-4,PB-6,PB-8
3-Opticom Cable
2-Video Detection Camera Cables (Proposed)
1-Video Detection Camera Cable (Remove)
1-CCTV Camera Cable (Proposed)
1-CAT 5e Network Cable (Proposed)
1-CAT 5e Network Cable (Proposed)
1-GPS Pre-emption Cable
1-*6 AWG (EGC)
- (M) 1 3" Conduit
1 1" Conduit
2 14/2C for Ped Push Button PB-2,PB-8
2 14/7C for Ped Heads P2,P8
1 *6 AWG (EGC)
- (N) Empty

Proposed Signals



PLAN LABEL LEGEND

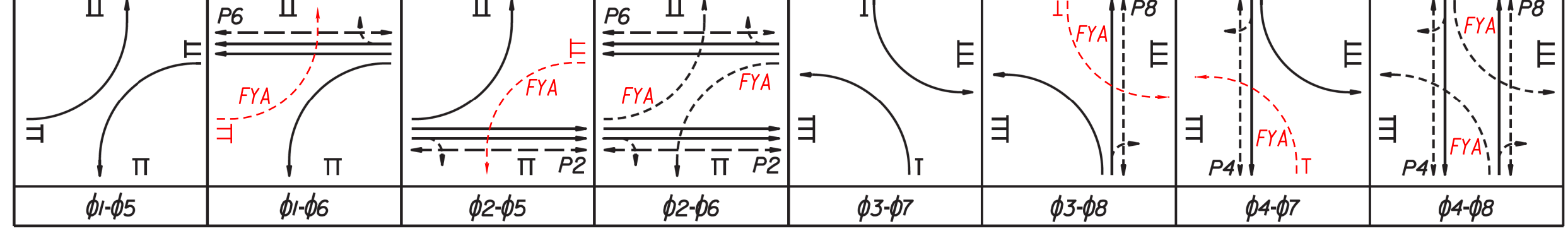
- (A) Prop. Public Street, Sidewalk, & Utilities Easement
- (B) Ex. Curb Ramp
- (C) Temporary Construction Easement

COLOR SEQUENCE CHART

PHASE	1	2	3	4	5	6	7	8	1-5	1-6	2-5	2-6	3-7	3-8	4-7	4-8	FLASH
SIGNAL	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	FLASH
1	-G	-FY							-G	-G	G	G					Y
2		G											-G	-G	-FY	-FY	R
3			-G	-FY											G	G	R
4				G													Y
5					-G	-FY			-G	-FY	-G	-FY					-Y
6						G			-G	-FY	G	G					R
7							-G	-FY					-G	-FY	-G	-FY	R
8								G									R
P2		*WALK									*WALK	*WALK					
P4				*WALK									*WALK	*WALK			
P6					*WALK												
P8						*WALK											

* Walk indication displayed after pedestrian call is services; otherwise, "Don't Walk" indication is displayed. The solid red arrow shall occur at the end of the solid yellow arrow for the Flashing Yellow Arrow (FYA) signal. All FYA signals shall have the red interval.
 ** The Y arrow signal face (second from the top) shall flash during FLASH operation. They FY arrow signal face (third from the top) shall be blank during FLASH operation.
 Note: Blank spaces represent a red display.

PHASING DIAGRAM



BLACK FEATURES AND TEXT ON THIS SHEET ARE FROM THE ORIGINAL RECORD SIGNAL PLAN. RED FEATURES AND TEXT DENOTE MODIFICATIONS TO THE RECORD SIGNAL PLAN AND PROPOSED MODIFICATIONS ASSOCIATED WITH THIS CONTRACT.

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

Revisions

Date	Initial

COMMONWEALTH OF VIRGINIA
DANA TRONE OZLIN
 Lic. No. 045807
 PROFESSIONAL ENGINEER

Dana T Ozlin
 2023.04.26 10:18:00 -04'00'
 Whitman Requardt & Associates
 Richmond, Virginia
 TRAFFIC ENGINEER

ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES
 TRAFFIC SIGNAL MODIFICATION PLAN

Maple Avenue West (Rte.123) at Center Street

Town of Vienna, Virginia

SCALE: 1" = 25'

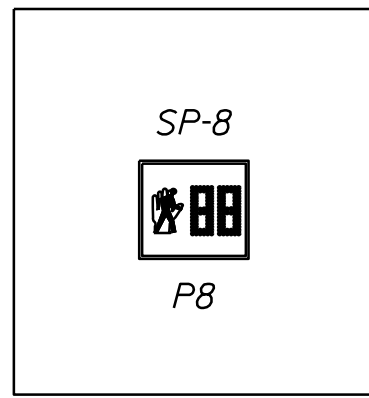
DATE: February 2023

DRAWN: SB DESIGNED: SB CHECKED: DT

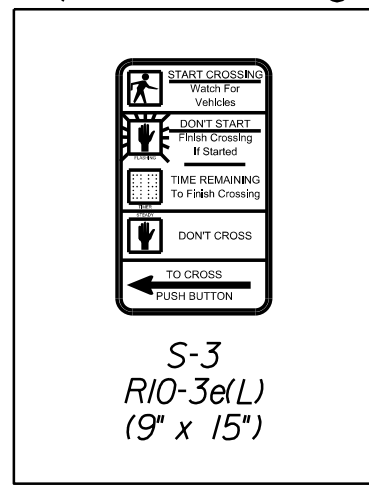
PLAN NO.	PROJECT	FILE NO.	SHEET NO.
			4(6)

STATE	ROUTE	TOWN OF VIENNA	SHEET NO.
VA.	123 243	PROJECT (INFO)123-153-208 P101,R201,C501	4(7)

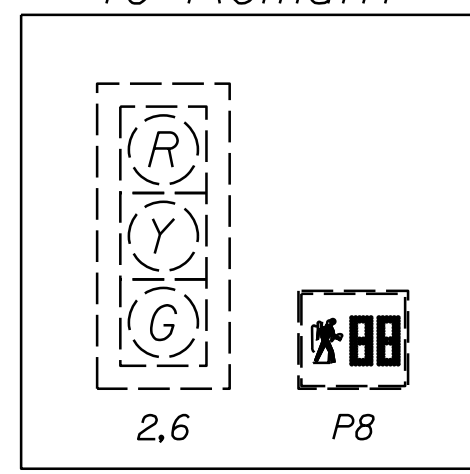
Proposed Signals



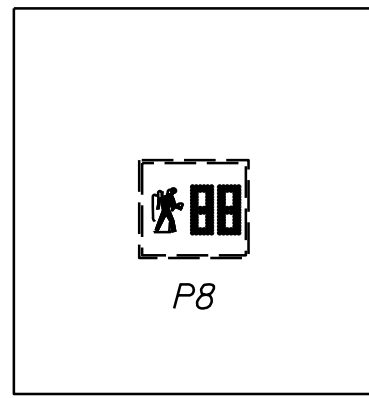
Proposed Signs



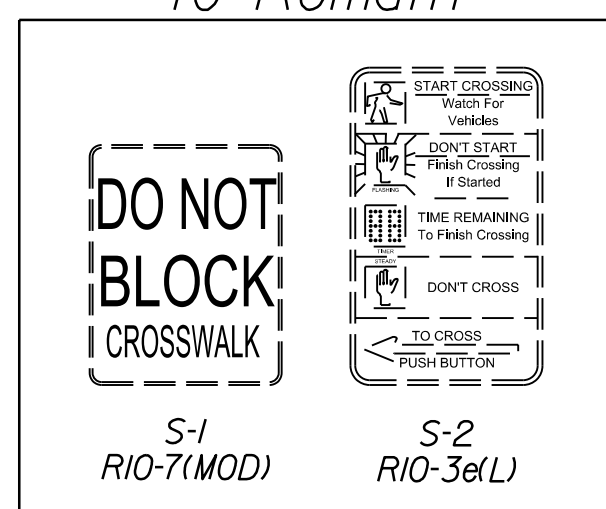
Existing Signals to Remain



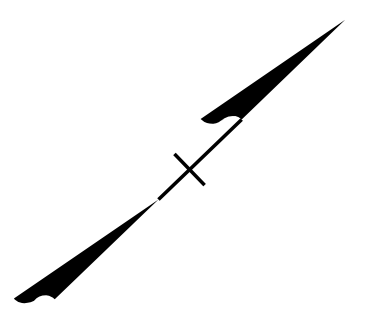
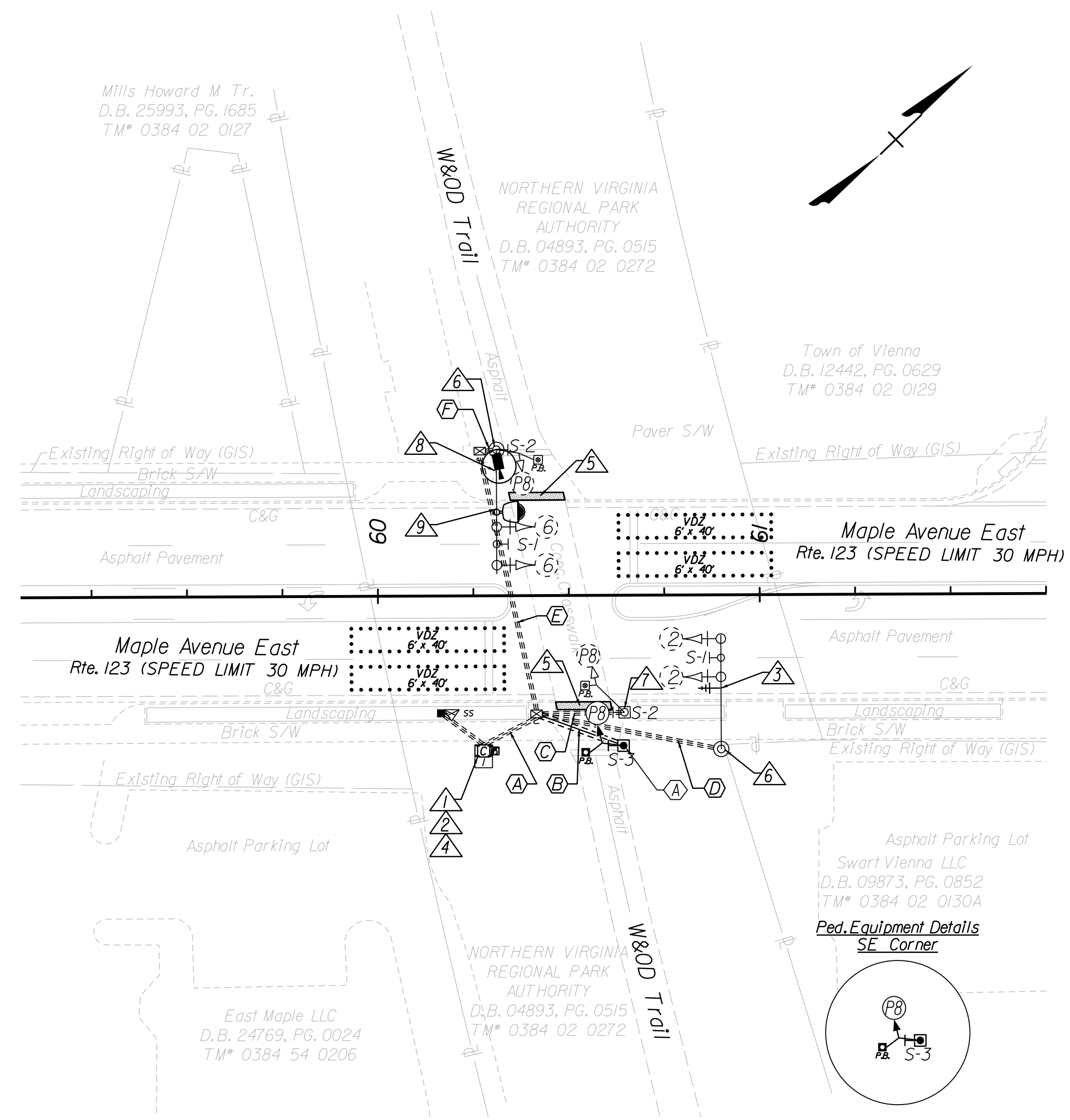
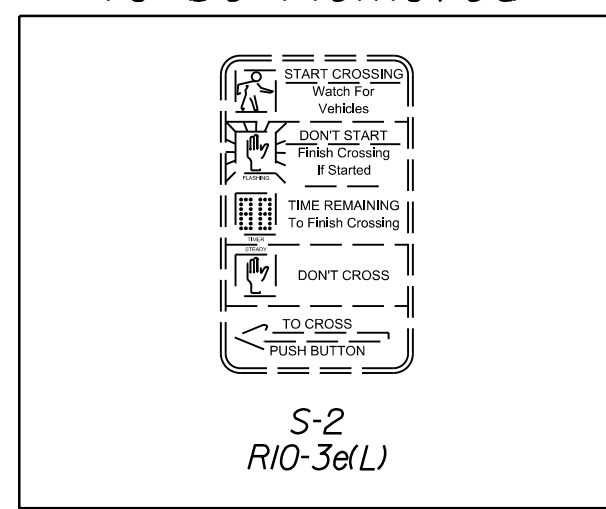
Existing Signals to be Removed



Existing Signs to Remain



Existing Signs to be Removed



CABLE AND CONDUIT RUNS

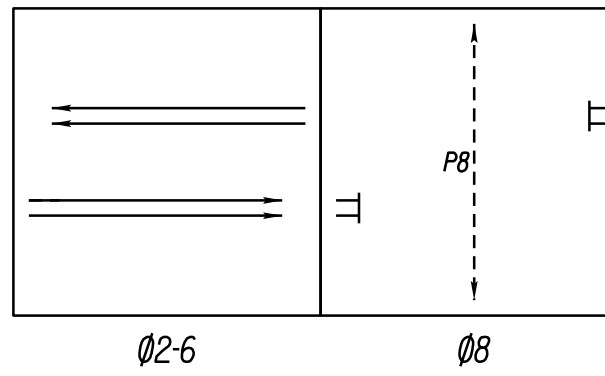
- (A) 5-2' Conduit
1-1' Conduit - Spare
2-14/7C Signal Heads 2.6
1-14/7C Ped Heads P8 & Ped Push Button PB-8 (Remove)
1-14/7C Ped Heads P8 (Proposed)
1-14/2C Ped Push Button PB-8 (Proposed)
1-14/2C Ped Push Button PB-8 (Proposed)
1-CCTV Camera Cable (Proposed)
1-CAT 5e Network Cable (Proposed)
1-Video Deflection Camera Cable (Proposed)
1-*6 AWG (EGC) (Proposed)
4-Interconnect Wires (2 cut)
1-*6 AWG (EGC)
- (B) 1-3' Conduit (Proposed)
1-1' Conduit (Proposed)
1-14/7C Ped Heads P8 (Proposed)
1-14/2C Ped Push Button PB-8 (Proposed)
1-*6 AWG (EGC) (Proposed)
- (C) 1-2' Conduit (Remove)
1-14/7C Ped Heads P8 & Ped Push Button PB-8 (Remove)
- (D) 1-2' Conduit
1-14/7C Signal Head 2
1-CAT 5e Network Cable (Proposed)
- (E) 1-2' Conduit
1-14/7C Signal Head 6
1-14/7C Ped Head P8 & Ped Push Button PB-8
1-Video Deflection Camera Cable (Proposed)
1-CCTV Camera Cable (Proposed)
- (F) 1-2' Conduit
1-14/7C Signal Head 6
1-14/7C Ped Head P8 & Ped Push Button PB-8
1-Video Deflection Camera Cable (Proposed)
1-CCTV Camera Cable (Proposed)

***All Conduits/Cables Existing Unless Otherwise Noted

SIGNAL NOTES

- △ REMOVE EXISTING CONTROLLER AND CABINET.
- △ INSTALL NEW MCCAIN 3521 ATC CONTROLLER CABINET WITH RISER FOR RETROFIT, INSTALL MCCAIN ATC EX2 CONTROLLER AND NEW ATTACHED UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEM ON EXISTING VDOT ST'D CF-1 FOUNDATION.
- △ INSTALL 5.8 GHZ WIRELESS BROADBAND RADIO.
- △ INSTALL 10-PORT MANAGED FIELD-ETHERNET SWITCH.
- △ INSTALL NEW DETECTABLE WARNING SURFACE IN ACCORDANCE WITH VDOT ST'D CG-12 TO EXISTING ADA RAMP.
- △ REPAINT EXISTING SIGNAL POLES AND MAST ARMS.
- △ REMOVE EXISTING PEDESTAL POLE, PEDESTRIAN SIGNAL HEAD, PUSHBUTTON, SIGN AND FOUNDATION.
- △ INSTALL 360° VIDEO DETECTION CAMERA MOUNTED ON SIGNAL POLE.
- △ INSTALL CCTV CAMERA (DIGITAL) WITH PTZ CAPABILITIES.

Phasing Diagram



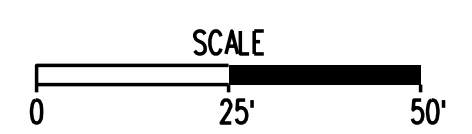
Color Sequence Chart

SIGNAL	PHASES	COMBINATIONS	FLASH
2	2 6 8	2-6	Y
6	6	6	Y
P8	DW DW W	DW	BLANK

Empty box denotes RED indication.

Signal Pole & Controller Legend

- (A) PEDESTAL POLE (PF-2), 12' 39.4' RT. of Maple Ave. Constr. @ Sta. 60+64



Revisions	
Date	Initial



ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES
TRAFFIC SIGNAL MODIFICATION PLAN
Maple Avenue East (Rte. 123)
at Washington & Old Dominion Trail
Town of Vienna, Virginia

DATE: February 2023

DRAWN: SB DESIGNED: SB CHECKED: DT

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
			4(7)

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

REVISED	STATE	ROUTE	TOWN OF VIENNA PROJECT	SHEET NO.
	VA.	123 243	(INFO)123-153-208 P101.P201.C501	4(8)

EXISTING SIGNAL SIGNS

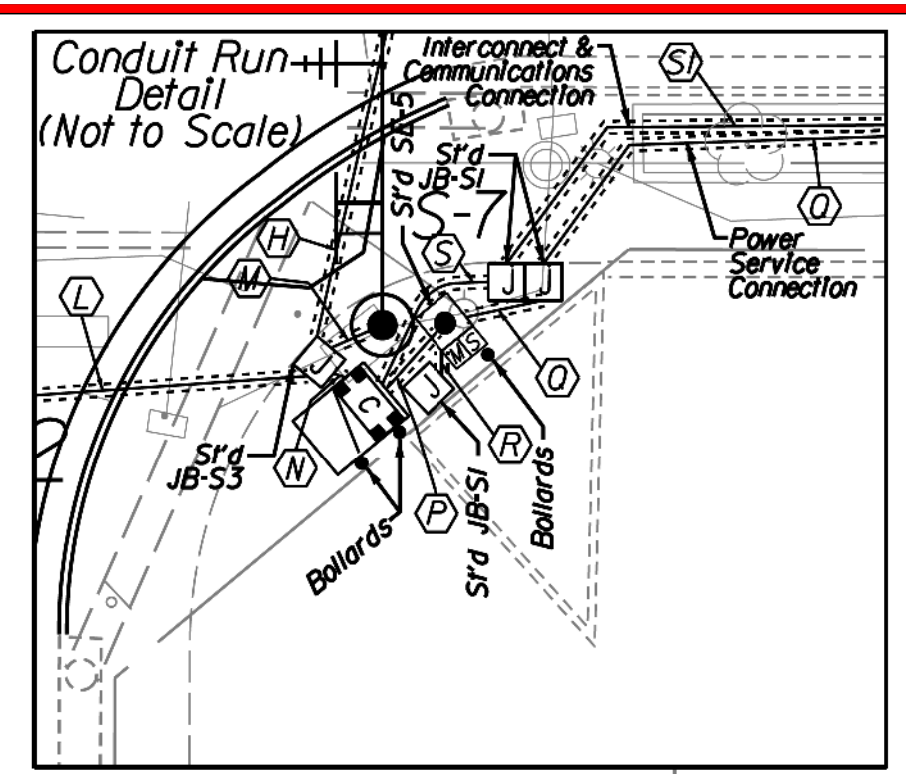
Maple Ave E
Park St NE
Park St SE

Signs S-5 and S-7 shall be mounted on the mast arm, such that sign starts two feet from vertical shaft of pole. See Sheet 4 for sign details.

SIGNAL POLE & CONTROLLER LEGEND

(ALL DIMENSIONS ARE TO CENTER OF POLE)

- STANDARD MAST ARM POLE (MP-3)
30'22" LEFT of Maple Avenue East Constr. Baseline Sta. 32+02.79
40' Arm 27° Angle to Maple Avenue East Constr. Baseline
Signal Placement: 9.5', 19.5', 29.5'
Sign Placement: 0', 14.5', 33.5'
- STANDARD MAST ARM POLE (MP-3)
42'45" LEFT of Maple Avenue East Constr. Baseline Sta. 32+87.18
49' Arm 180° Angle to Maple Avenue East Constr. Baseline
Signal Placement: 20.4', 28.4', 35.4'
Sign Placement: 18.4', 39.4'
- STANDARD MAST ARM POLE (MP-3)
41'87" RIGHT of Maple Avenue East Constr. Baseline Sta. 32+90.68
49' Arm 90° Angle to Maple Avenue East Constr. Baseline
Signal Placement: 21.6', 31.6', 41.6'
Sign Placement: 26.6', 45.6'
360° Video Detection Camera Placement: 36.6'
5.8 GHz Wireless Broadband Radio: 17'
- STANDARD MAST ARM POLE (MP-3)
45'91" RIGHT of Maple Avenue East Constr. Baseline Sta. 32+14.24
40' Arm 0° Angle to Maple Avenue East Constr. Baseline
Signal Placement: 18.5', 26.5', 32.5'
Sign Placement: 15.5', 35.5'
- CONTROLLER CABINET & FOUNDATION (CF-1)
Cabinet door hinge located on left side of pad.
Security lock on controller cabinet
10-Port Managed Field-Ethernet Switch



SIGNAL NOTES
SEE SHEET 3(2) FOR INTERCONNECT DETAILS

BLACK FEATURES AND TEXT ON THIS SHEET ARE FROM THE ORIGINAL RECORD SIGNAL PLAN. RED FEATURES AND TEXT DENOTE MODIFICATIONS TO THE RECORD SIGNAL PLAN AND PROPOSED MODIFICATIONS ASSOCIATED WITH THIS CONTRACT.

EXISTING SIGNALS

ALL TRAFFIC SIGNAL HEAD SECTIONS SHALL BE LED

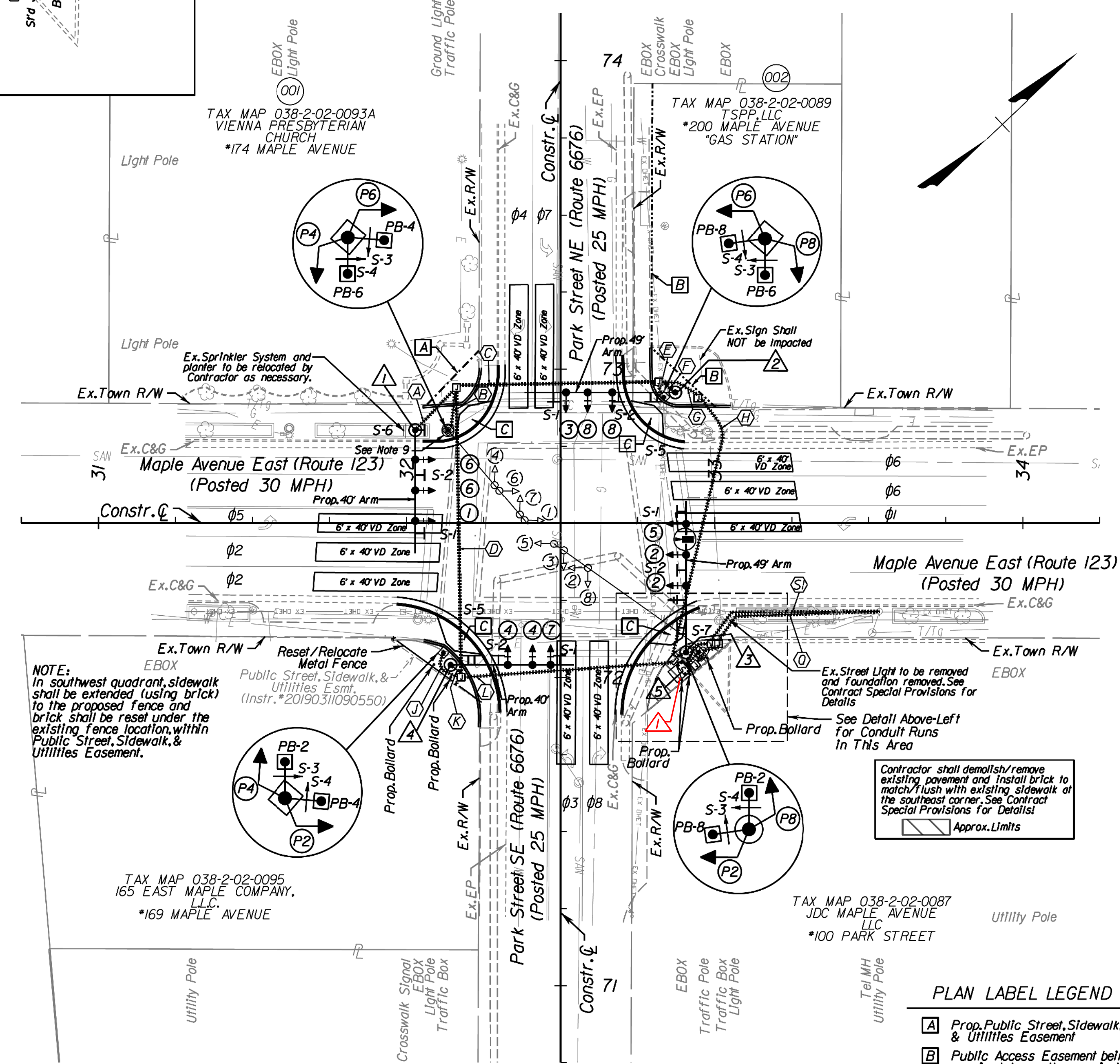
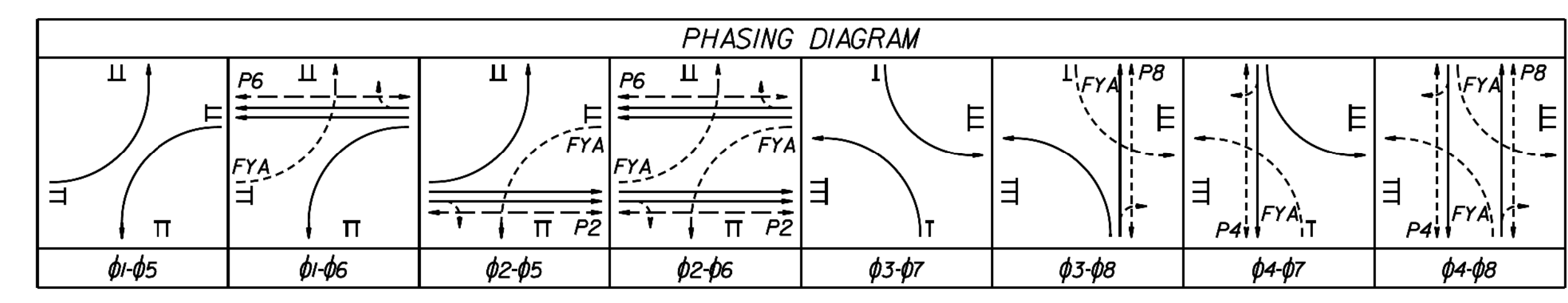
ALL SIGNALS SHALL BE LED AND BE EQUIPPED WITH RETRO-REFLECTIVE (HIGH VISIBILITY) SIGNAL BACKPLATES

ALL PED. HEADS SHALL BE SP-8 WITH COUNTDOWN LED

COLOR SEQUENCE CHART

PHASE	1	2	3	4	5	6	7	8	1-5	1-6	2-5	2-6	3-7	3-8	4-7	4-8	FLASH
SIGNAL	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	R/W	FLASH
1	←G	←Y							←G	←G							←Y**
2			←G	←Y							G	G					←Y
3					←G	←Y							←G	←G	←Y	←Y	←R
4						←G	←Y							←G	←Y	←Y	←R
5							←G	←Y	←G	←Y							←Y**
6								←G			G	G					←Y
7									←G	←Y			←G	←Y	←Y	←Y	←R
8											G	G					←R
P2		*WALK									*WALK	*WALK					
P4				*WALK											*WALK	*WALK	
P6					*WALK						*WALK	*WALK					
P8						*WALK							*WALK	*WALK			

Note: Blank spaces represent a red display. Walk Indication displayed after pedestrian call is serviced; otherwise "Don't Walk" Indication is displayed. The solid red arrow shall occur at the end of the solid yellow arrow for the Flashing Yellow Arrow (FYA) signal. All FYA signals have the red interval. The Y arrow signal face (second from the top) shall flash during FLASH operation. The FY arrow signal face (third from the top) shall be blank during Flash operation.



CABLE & CONDUIT RUNS (Cont.)

- (R) 1 1" Conduit
1 *6 AWG for System Grounding
- (S) 1 2" Communication Conduit with 100lb Pull Rope
1 Underground Single-Mode Fiber Optic Cable, 24 Strand (Proposed)
- (S) 1 2" Communication Conduit with 100lb Pull Rope (BORED)
1 Underground Single-Mode Fiber Optic Cable, 24 Strand (Proposed)
- EGC - Equipment Grounding Conductor
- ***All Conduits/Cables Existing Unless Otherwise Noted

PLAN LABEL LEGEND

- (A) Prop. Public Street, Sidewalk, & Utilities Easement
- (B) Public Access Easement being acquired by another project
- (C) Ex. Curb Ramp

CABLE & CONDUIT RUNS

- (A) 1 3" Conduit
1 2" Conduit
1 1" Conduit
2 14/7C for Heads 1,6
1 *6 AWG (EGC)
 - (B) 1 3" Conduit
1 1" Conduit
2 14/2C for Ped Push Button PB-4,PB-6
2 14/7C for Ped Heads P4,P6
1 *6 AWG (EGC)
 - (C) 2 4" Conduit (BORED) [1 Spare]
2 14/2C for Ped Push Button PB-4,PB-6
2 14/7C for Ped Heads P4,P6
2 14/7C for Heads 1,6
2 *6 AWG (EGC) [1 Spare]
 - (D) 2 4" Conduit (BORED) [2 Spare]
2 *6 AWG (EGC) [2 Spare]
 - (E) 1 3" Conduit
1 1" Conduit
2 14/2C for Ped Push Button PB-6,PB-8
2 14/7C for Ped Heads P6,P8
1 *6 AWG (EGC)
 - (F) 1 3" Conduit
1 2" Conduit
1 1" Conduit
2 14/7C for Heads 3,8
1 *6 AWG (EGC)
 - (G) 1 3" Conduit
1 1" Conduit
4 14/2C for Ped Push Button PB-4,PB-6,PB-8
4 14/7C for Ped Heads P4,P6,P8
4 14/7C for Heads 1,3,6,8
4 *6 AWG (EGC)
 - (H) 2 4" Conduit (BORED) [1 Spare]
4 14/2C for Ped Push Button PB-4,PB-6,PB-8
4 14/7C for Ped Heads P4,P6,P8
4 14/7C for Heads 1,3,6,8
2 *6 AWG (EGC) [1 Spare]
 - (J) 1 3" Conduit
1 1" Conduit
2 14/2C for Ped Push Button PB-2,PB-4
2 14/7C for Ped Heads P2,P4
2 *6 AWG (EGC)
 - (K) 1 3" Conduit
1 2" Conduit
1 1" Conduit
2 14/7C for Heads 4,7
1 *6 AWG (EGC)
 - (L) 2 4" Conduit (BORED) [1 Spare]
2 14/2C for Ped Push Button PB-2,PB-4
2 14/7C for Ped Heads P2,P4
2 14/7C for Heads 4,7
2 *6 AWG (EGC) [1 Spare]
 - (M) 1 3" Conduit
1 2" Conduit
1 1" Conduit
2 14/2C for Ped Push Button PB-2,PB-8
2 14/7C for Ped Heads P2,P8
2 14/7C for Heads 2,5
1 VD Camera Cable
1 CAT6 Shielded Outdoor Network Cable
1 *6 AWG (EGC)
 - (N) 2 4" Conduit [1 Spare]
2 14/2C for Ped Push Button PB-2,PB-4,PB-6,PB-8
8 14/7C for Ped Heads P2,P4,P6,P8
8 14/7C for Heads 1,2,3,4,5,6,7,8
1 VD Camera Cable
1 CAT6 Shielded Outdoor Network Cable
2 *6 AWG (EGC)
2 3" Conduit (Spare)
1 *6 AWG (EGC) for Spare
 - (P) 1 1-1/4" Conduit (M)
3 *6 AWG for Electrical Service
 - (Q) 1 1-1/4" Conduit (M) (BORED)
3 *6 AWG for Electrical Service
- ***All Conduits/Cables Existing Unless Otherwise Noted

Revisions

Date	Initial

ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES TRAFFIC SIGNAL MODIFICATION PLAN

Maple Avenue East (Rte. 123) at Park Street (Rte. 6676)

Town of Vienna, Virginia

February 2023

SCALE: 0 25' 50'

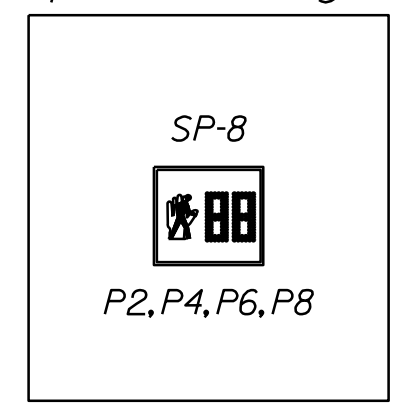
DRAWN: SB DESIGNED: SB CHECKED: DT

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
			4(8)

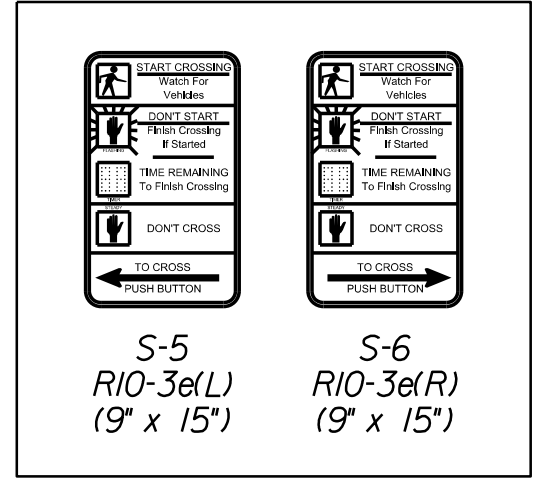
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE TOWN OF VIENNA

STATE	ROUTE	TOWN OF VIENNA	SHEET NO.
VA.	123 243	(INFO)123-153-208 P101,R201,C501	4(9)

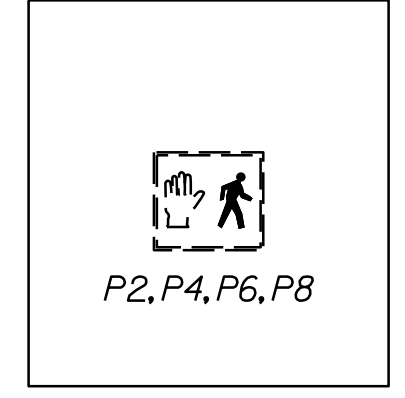
Proposed Signals



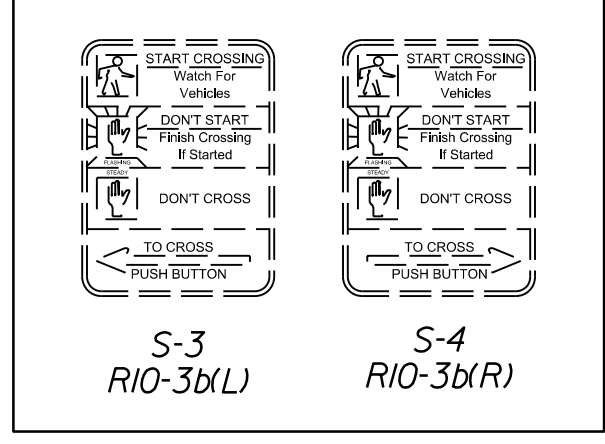
Proposed Signs



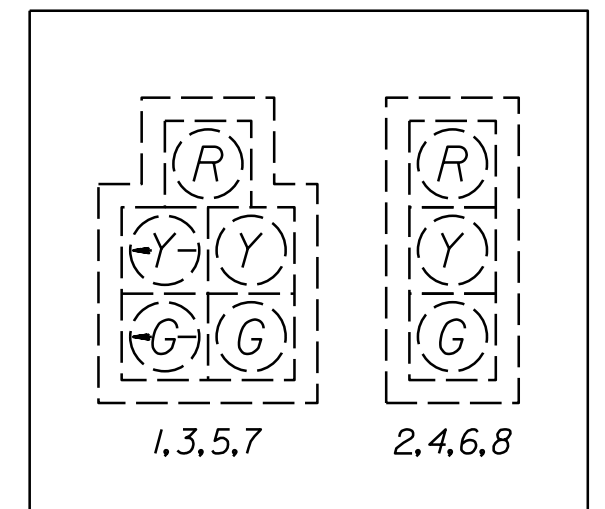
Existing Signals to be Removed



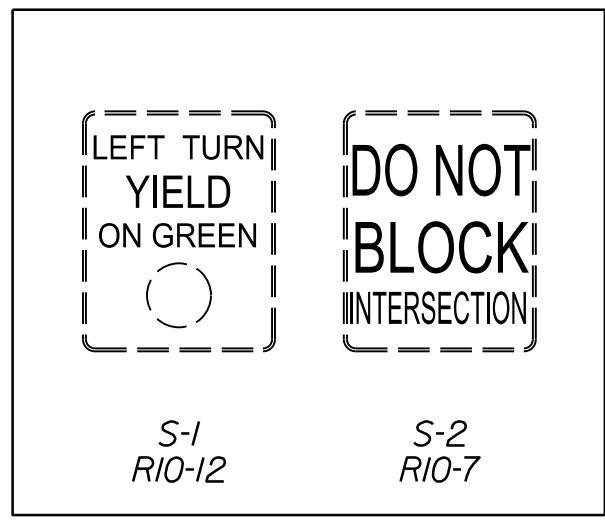
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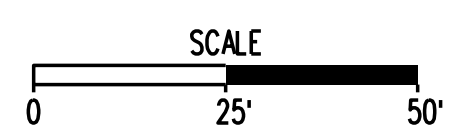
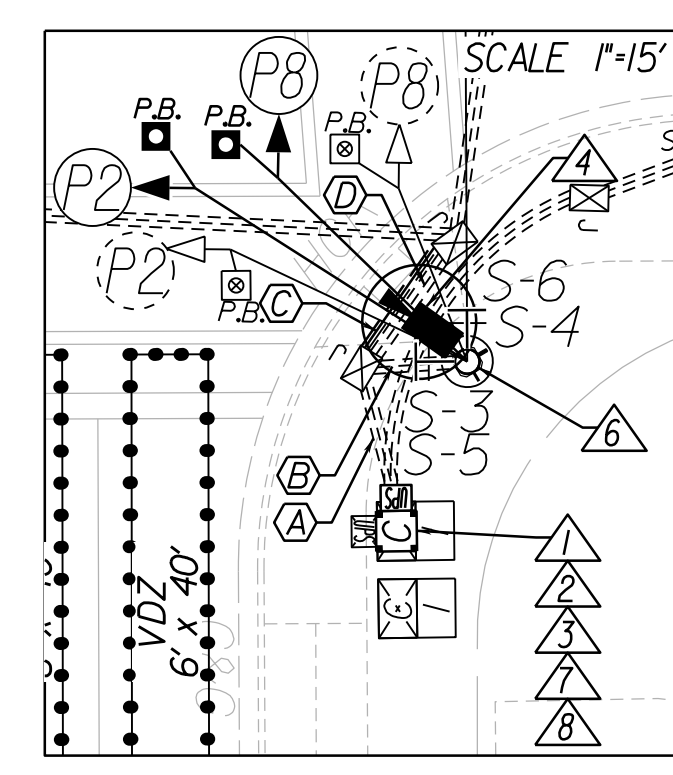
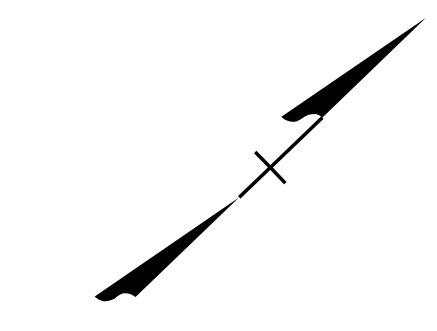
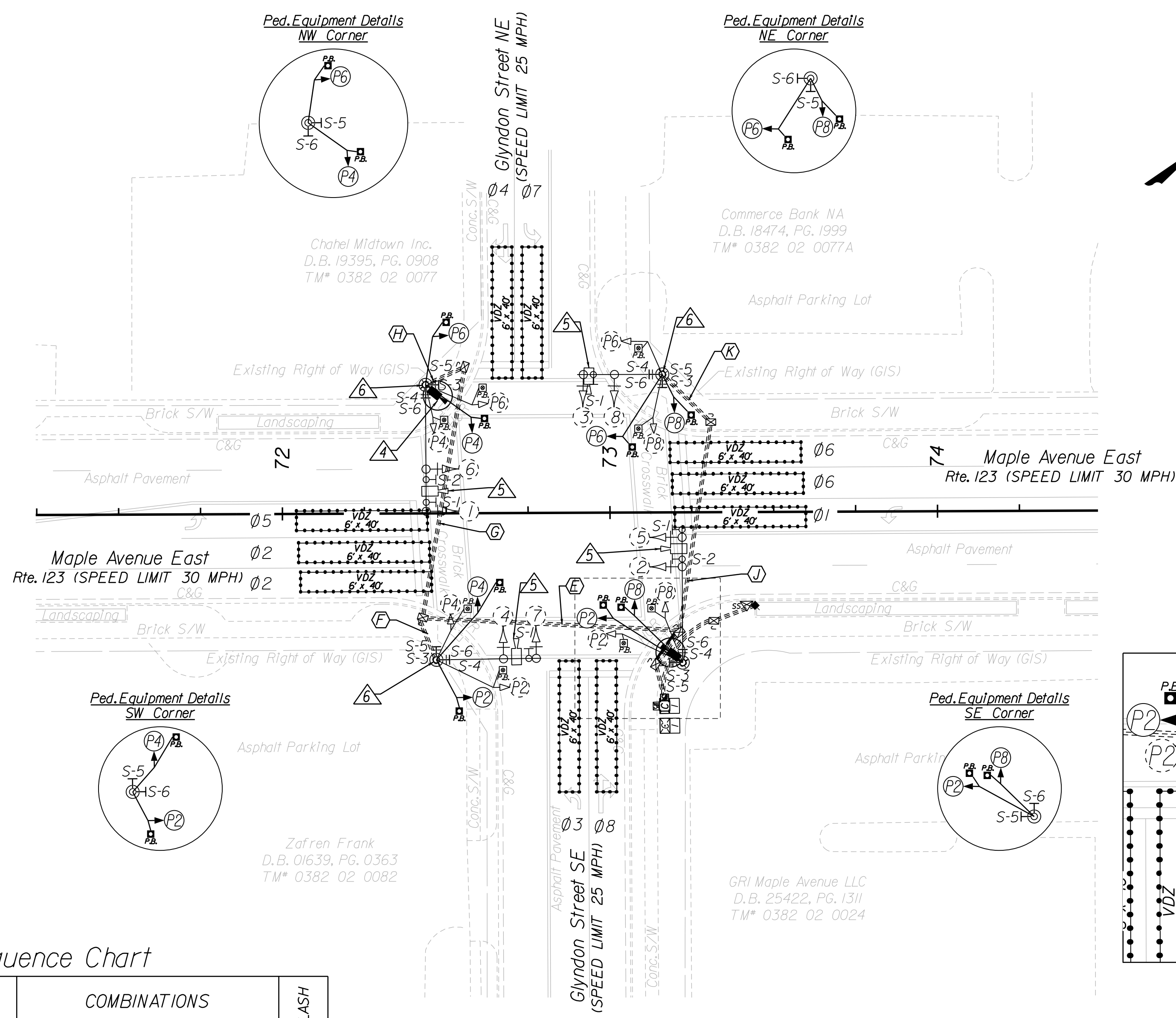
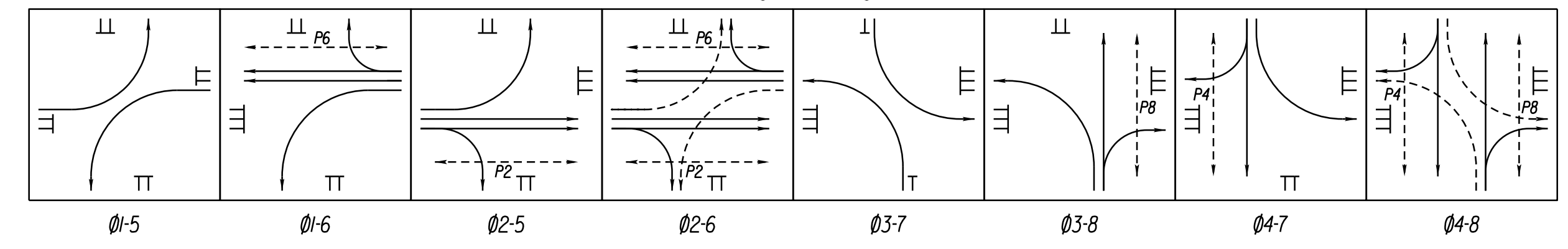
Existing Signals to Remain



Existing Signs to Remain



Phasing Diagram



Color Sequence Chart

SIGNAL	PHASES								COMBINATIONS								FLASH
	1	2	3	4	5	6	7	8	1-5	1-6	2-5	2-6	3-7	3-8	4-7	4-8	
1	-G	R				G			-G	R	-G	G					Y
2			G								G	G					Y
3				-G	R			G					-G	R	-G	G	R
4					G										G	G	R
5		G				-G	R				-G	R					Y
6							G				G	G					Y
7								-G	R				-G	R	-G	G	R
8										G				G	-G	G	R
P2	DN	W	DN	DN	DN	DN	DN	DN	DN	W	W	DN	DN	DN	DN	DN	BLANK
P4	DN	DN	DN	W	DN	DN	DN	DN	DN	DN	DN	DN	DN	DN	W	W	BLANK
P6	DN	DN	DN	DN	DN	W	DN	DN	DN	W	DN	W	DN	DN	DN	DN	BLANK
P8	DN	DN	DN	DN	DN	DN	W	DN	DN	DN	DN	DN	W	DN	W	BLANK	

Empty box denotes RED Indication.

SIGNAL NOTES

- 1 REMOVE EXISTING CONTROLLER AND CABINET.
- 2 INSTALL NEW MCCAIN 3521 ATC CONTROLLER CABINET WITH RISER FOR RETROFIT, REINSTALL EXISTING MCCAIN ATC EX2 CONTROLLER AND NEW ATTACHED UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEM ON EXISTING VDOT ST'D CF-1 FOUNDATION.
- 3 INSTALL 10-PORT MANAGED FIELD-ETHERNET SWITCH.
- 4 INSTALL 360 VIDEO DETECTION CAMERA MOUNTED ON SIGNAL POLE.
- 5 REMOVE EXISTING VIDEO DETECTION CAMERA.
- 6 REMOVE EXISTING PEDESTRIAN PUSHBUTTONS, PUSHBUTTON SIGNS, AND PEDESTRIAN SIGNALS.
- 7 INSTALL FIBER OPTIC PATCH PANEL.
- 8 SEE SHEET 3(4) FOR INTERCONNECT DETAILS.

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

Revisions

Date	Initial

COMMONWEALTH OF VIRGINIA
DANA TRONE OZLIN
Lic. No. 045807
PROFESSIONAL ENGINEER

ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES
TRAFFIC SIGNAL MODIFICATION PLAN
Maple Avenue East (Rte. 123)
at Glyndon Street
Town of Vienna, Virginia

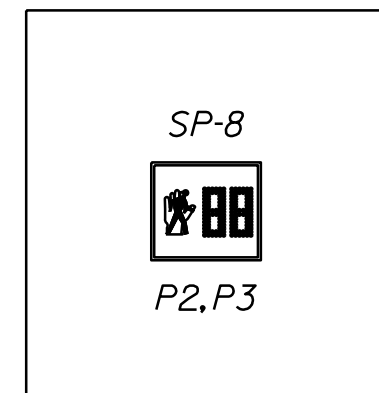
DATE: February 2023

DRAWN: SB DESIGNED: SB CHECKED: DT

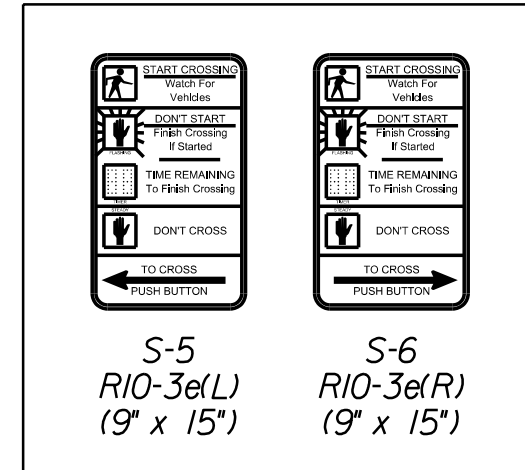
PLAN NO.	PROJECT	FILE NO.	SHEET NO.
			4(9)

STATE	ROUTE	TOWN OF VIENNA	SHEET NO.
VA.	123 243	(INFO)123-153-208 P101,R201,C501	4(10)

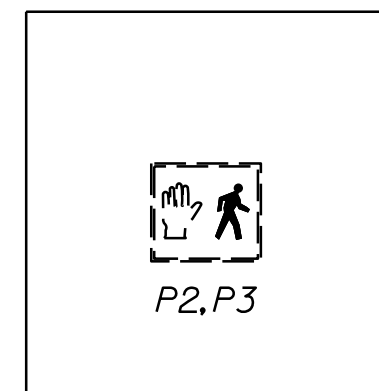
Proposed Signals



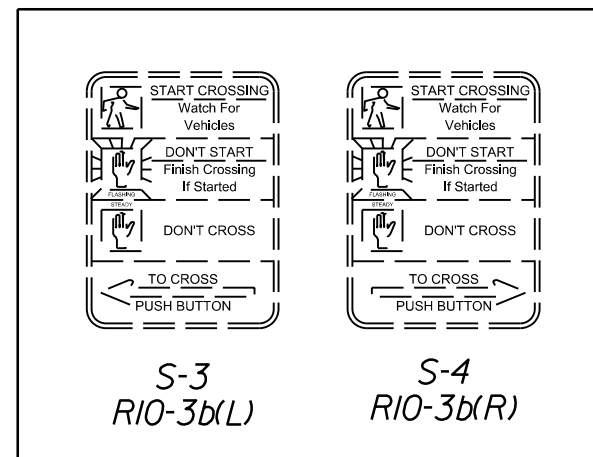
Proposed Signs



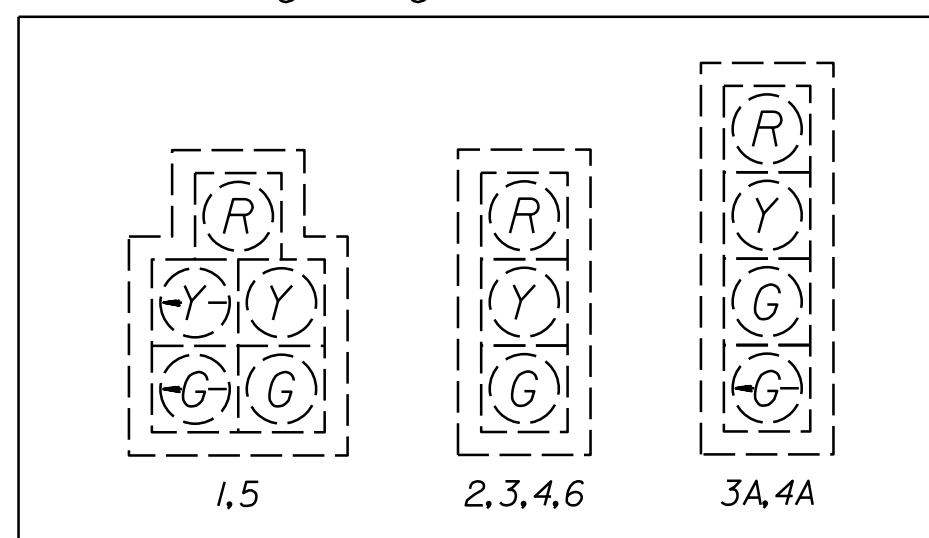
Existing Signals to be Removed



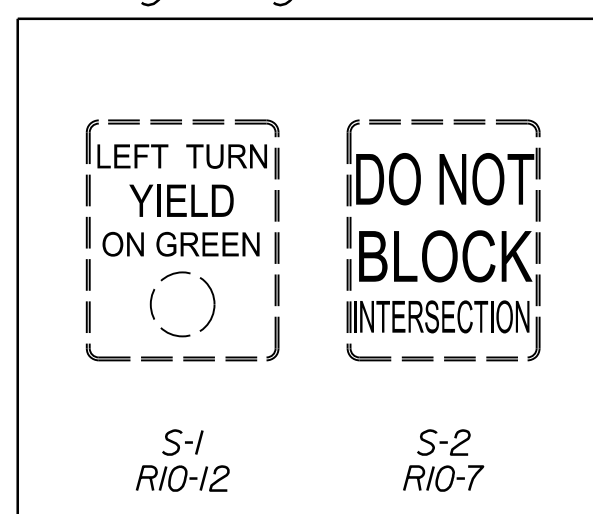
Existing Signs to be Removed



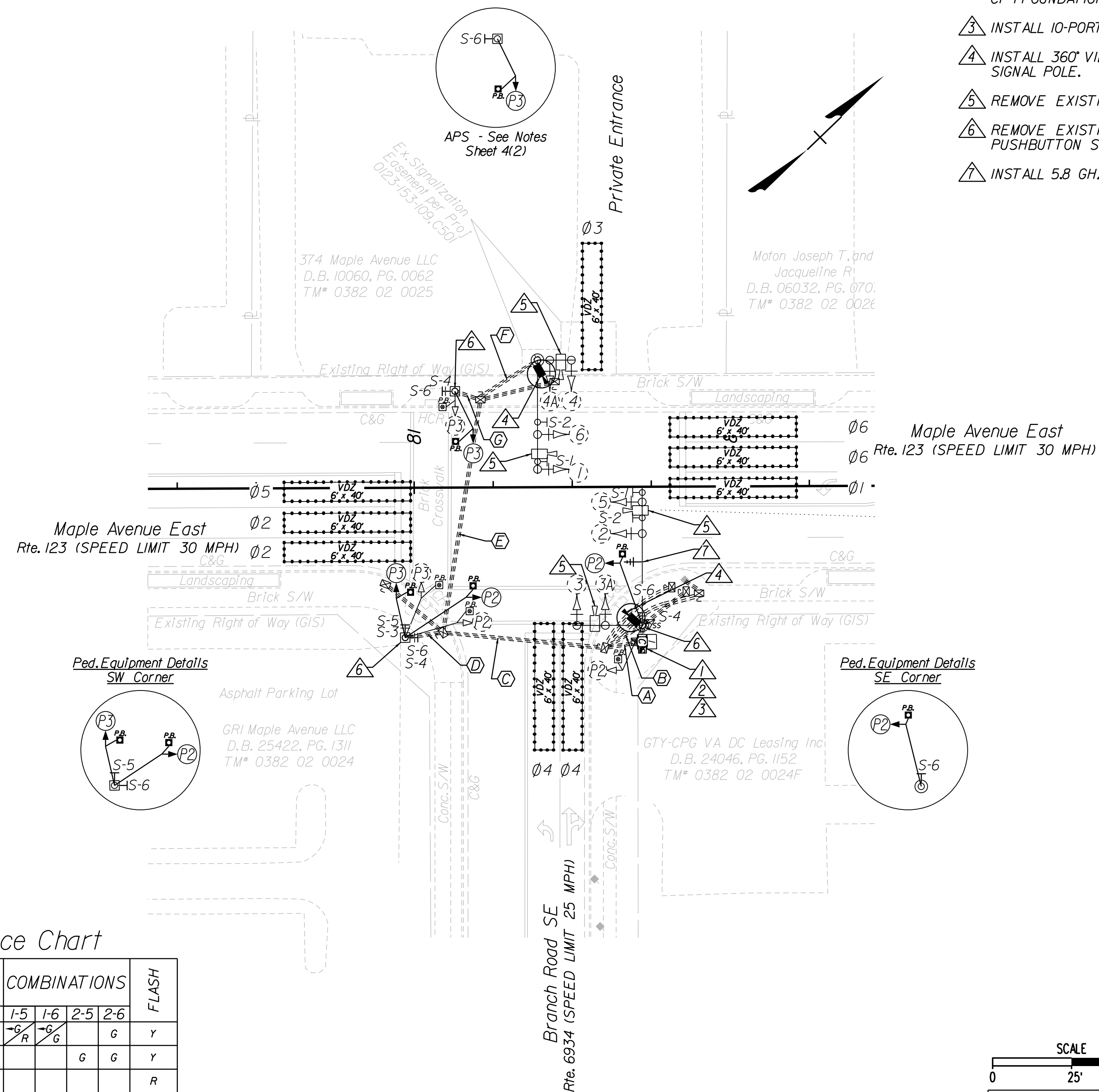
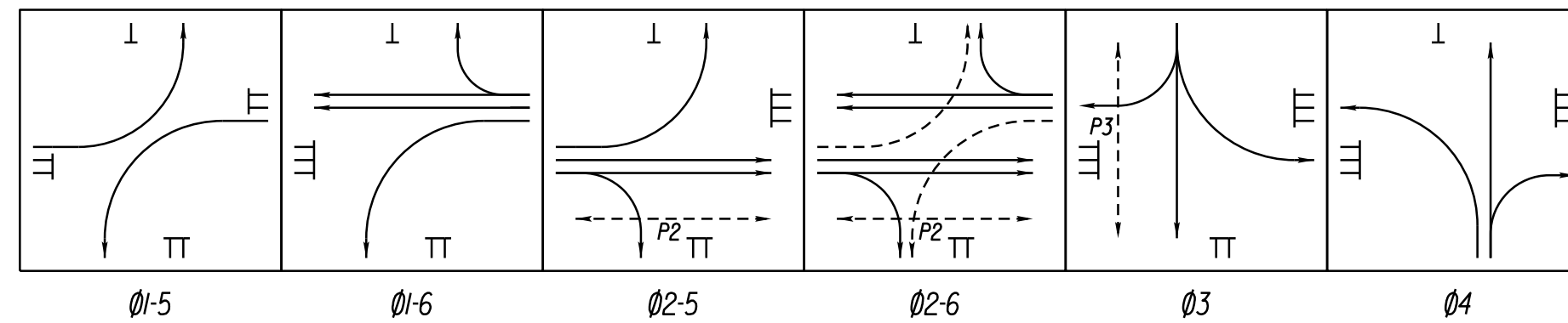
Existing Signals to Remain



Existing Signs to Remain



Phasing Diagram



SIGNAL NOTES

- △ REMOVE EXISTING CONTROLLER AND CABINET.
- △ INSTALL NEW MCCAIN 3521 ATC CONTROLLER CABINET WITH RISER FOR RETROFIT, MCCAIN ATC EX2 CONTROLLER AND NEW ATTACHED UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEM ON EXISTING VDOT ST'D CF-1 FOUNDATION.
- △ INSTALL 10-PORT MANAGED FIELD-ETHERNET SWITCH.
- △ INSTALL 360° VIDEO DETECTION CAMERA MOUNTED ON SIGNAL POLE.
- △ REMOVE EXISTING VIDEO DETECTION CAMERA.
- △ REMOVE EXISTING PEDESTRIAN PUSHBUTTONS, PUSHBUTTON SIGNS, AND PEDESTRIAN SIGNALS.
- △ INSTALL 5.8 GHZ WIRELESS BROADBAND RADIO.

CABLE AND CONDUIT RUNS

- Ⓐ 2-3" Conduit
2-2" Conduit
2-1" Conduit
6-14/7C Signal Heads 1,2,3,3A,4,4A,5,6
4-14/7C Ped Heads P2,P3
4-14/2C Ped Push Buttons PB-2,PB-3
2-Video Detection Cameras (Proposed)
1-Video Detection Camera (Remove)
1-CAT 5e Network Cable (Proposed)
4-6 AWG (EGC)
2-Interconnect Wires
9-Loops (Remove)
 - Ⓑ 1-3" Conduit
1-2" Conduit (Spare)
1-1" Conduit
3-14/7C Signal Heads 2,3,3A,5
1-14/7C Ped Head P2
1-14/2C Ped Push Button PB-2
1-Video Detection Camera (Proposed)
2-Video Detection Cameras (Remove)
1-CAT 5e Network Cable (Proposed)
1-6 AWG (EGC)
 - Ⓒ 1-4" Conduit (Bored)
3-14/7C Signal Heads 1,4,4A,6
4-14/7C Ped Heads P2,P3
3-14/2C Ped Push Button PB-2,PB-3
1-Video Detection Camera (Proposed)
1-Video Detection Camera (Remove)
1-6 AWG (EGC)
4-Loop Wires (Remove)
 - Ⓓ 1-3" Conduit
2-14/7C Ped Heads P2,P3
2-14/2C Ped Push Buttons PB-2,PB-3
1-6 AWG (EGC)
 - Ⓔ 1-4" Conduit (Bored)
3-14/7C Signal Heads 1,4,4A,6
1-14/7C Ped Head P3
1-14/2C Ped Push Button PB-3
1-Video Detection Camera (Proposed)
2-Video Detection Cameras (Remove)
1-6 AWG (EGC)
1- Loop Wires (Remove)
 - Ⓕ 1-3" Conduit
1-2" Conduit (Spare)
1-1" Conduit
3-14/7C Signal Heads 1,4,4A,6
1-Video Detection Camera (Proposed)
2-Video Detection Cameras (Remove)
1-6 AWG (EGC)
 - Ⓖ 1-3" Conduit
1-2" Conduit (Spare)
1-14/7C Ped Head P3
1-14/2C Ped Push Button PB-3
1-6 AWG (EGC)
- ***All Conduits/Cables Existing Unless Otherwise Noted

Color Sequence Chart

SIGNAL	PHASES						COMBINATIONS				FLASH
	1	2	3	4	5	6	1-5	1-6	2-5	2-6	
1	-G	R				G	-G	-G		G	Y
2		G							G	G	Y
3			G								R
3A			-G								R
4				G							R
4A				-G							R
5		G			-G	-G	-G	-G	G	G	Y
6						G		G	G	G	Y
P2	DW	W	DW	DW	DW	DW	DW	DW	W	W	BLANK
P3	DW	DW	W	DW	DW	DW	DW	DW	DW	DW	BLANK

Empty box denotes RED Indication.



Revisions	
Date	Initial

Professional Engineer Seal for Dana Trone Ozlin, License No. 045607.

ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES
TRAFFIC SIGNAL MODIFICATION PLAN
Maple Avenue East (Rte. 123)
at Branch Road (Rte. 6934)/Private Entrance
Town of Vienna, Virginia

DATE: February 2023

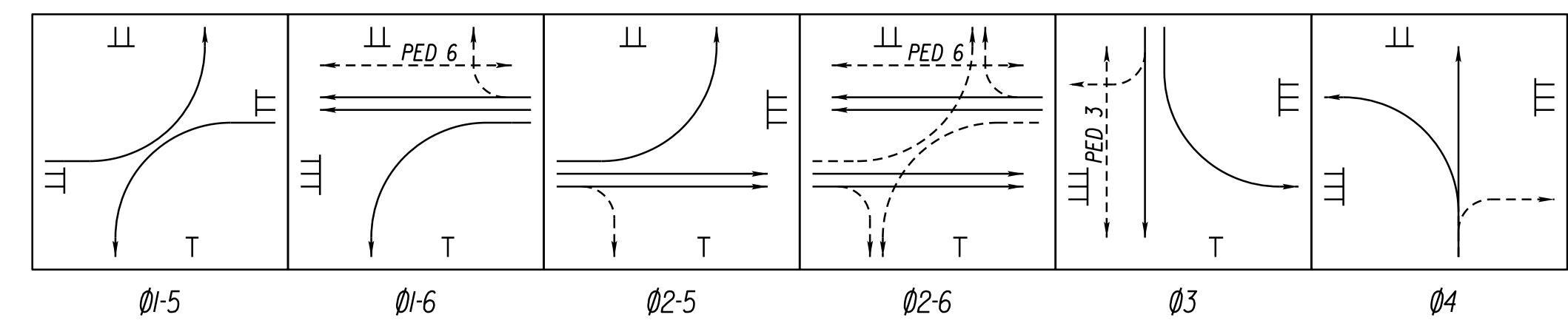
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PLAN NO. PROJECT FILE NO. SHEET NO. 4(10)

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

STATE	ROUTE	TOWN OF VIENNA	SHEET NO.
VA.	123 243	PROJECT (INFO)123-153-208 P101.R201.C501	4(11)

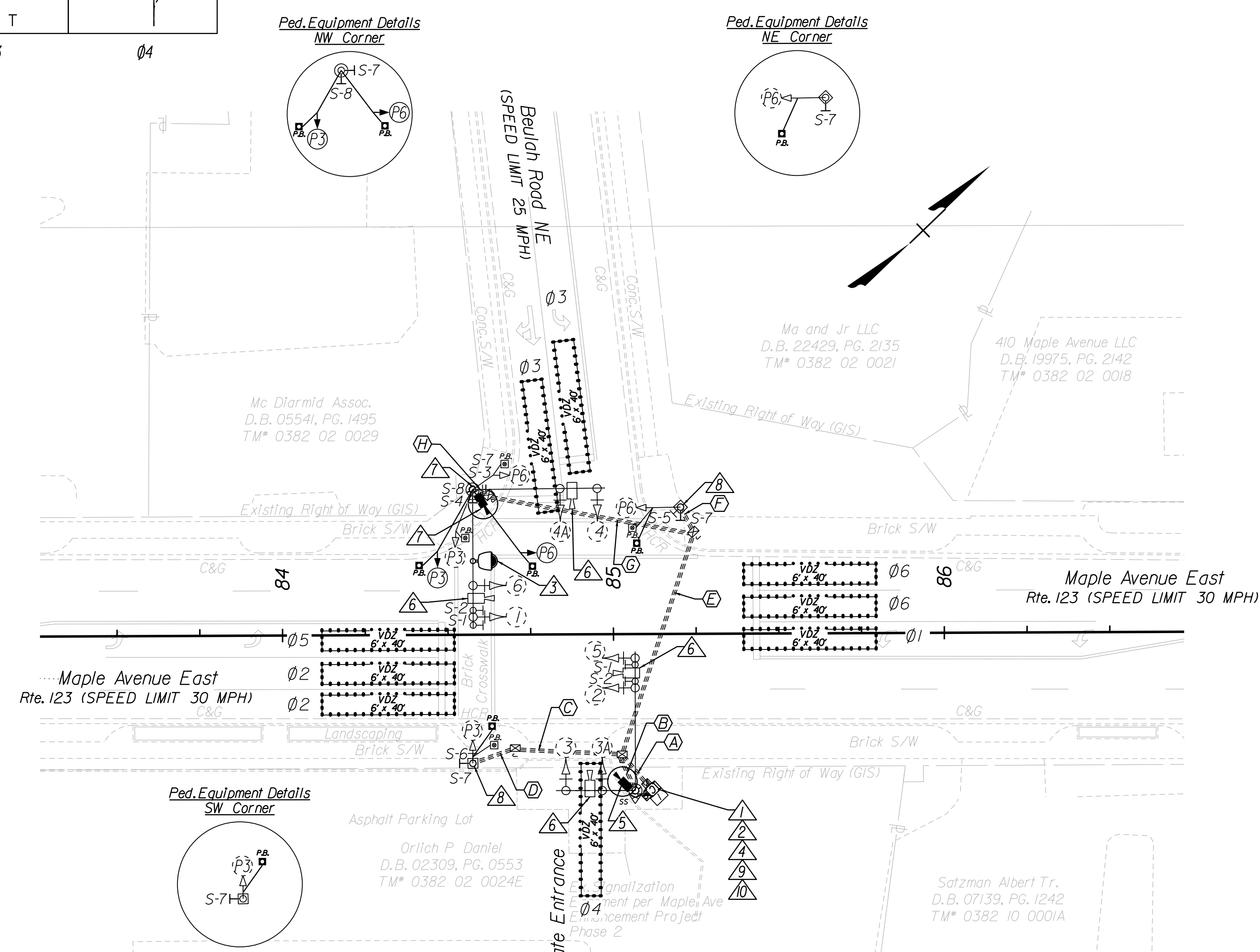
Phasing Diagram



Color Sequence Chart

SIGNAL	PHASES						COMBINATIONS				FLASH
	1	2	3	4	5	6	1-5	1-6	2-5	2-6	
1	G					G	G	G	G	G	Y
2		G						G	G	G	Y
3			G								R
3A			G								R
4				G							R
4A				G							R
5		G			G	G	G	G	G	G	Y
6						G	G	G	G	G	Y
P3	DW	DW	W	DW	DW	DW	DW	DW	DW	DW	BLANK
P6	DW	DW	DW	DW	DW	W	DW	W	DW	W	BLANK

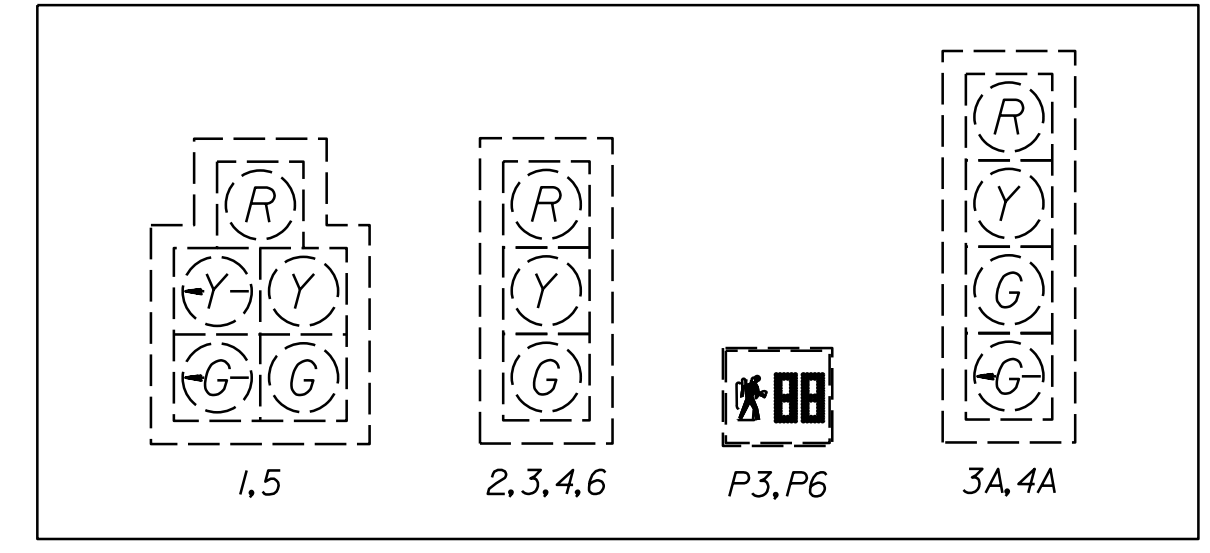
Empty box denotes RED indication.



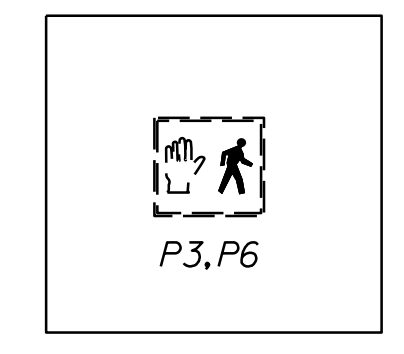
CABLE AND CONDUIT RUNS

- (A) 3-3" Conduit
3-2" Conduit - 2 Spares
1-1.5" Conduit - Power
1-1" Conduit - Spare
6-14/7C Signal Heads 1,2,3,3A,4,4A,5,6
4-14/7C Ped Heads P3,P6
4-14/2C Ped Push Buttons PB-3,PB-6
2-Video Detection Camera Cables (Proposed)
4-Video Detection Camera Cables (Remove)
1-CCTV Camera Cable (Proposed)
1-6 AWG (EGC)
2-Interconnect Wires
9-Loops (Remove)
 - (B) 1-3" Conduit
3-14/7C Signal Heads 2,3,3A,5
1-Video Detection Camera Cable (Proposed)
2-Video Detection Camera Cables (Remove)
1-6 AWG (EGC)
 - (C) 1-4" Conduit
1-14/7C Ped Head P3
1-14/2C Ped Push Button PB-3
1-6 AWG (EGC)
2 - Interconnect Wires
3 - Loop Wires (Remove)
 - (D) 1-3" Conduit
1-14/7C Ped Head P3
1-14/2C Ped Push Button PB-3
1-6 AWG (EGC)
 - (E) 1-4" Conduit
3-14/7C Signal Heads 1,4,4A,6
3-14/7C Ped Heads P3,P6
3-14/2C Ped Push Button PB-3,PB-6
1-Video Detection Camera Cable (Proposed)
2-Video Detection Camera Cables (Remove)
1-CCTV Camera Cable (Proposed)
1-6 AWG (EGC)
5 - Loop Wires (Remove)
 - (F) 1-3" Conduit
1-14/7C Ped Head P6
1-14/2C Ped Push Button PB-6
1-6 AWG (EGC)
 - (G) 1-4" Conduit
3-14/7C Signal Heads 1,4,4A,6
2-14/7C Ped Heads P3,P6
2-14/2C Ped Push Button PB-3,PB-6
1-Video Detection Camera Cable (Proposed)
2-Video Detection Camera Cables (Remove)
1-CCTV Camera Cable (Proposed)
1-6 AWG (EGC)
2 - Loop Wires (Remove)
 - (H) 1-3" Conduit
2-2" Conduit Spare
3-14/7C Signal Heads 1,4,4A,6
2-14/7C Ped Heads P3,P6
2-14/2C Ped Push Button PB-3,PB-6
1-Video Detection Camera Cable (Proposed)
2-Video Detection Camera Cables (Remove)
1-CCTV Camera Cable (Proposed)
1-6 AWG (EGC)
- ***All Conduits/Cables Existing Unless Otherwise Noted

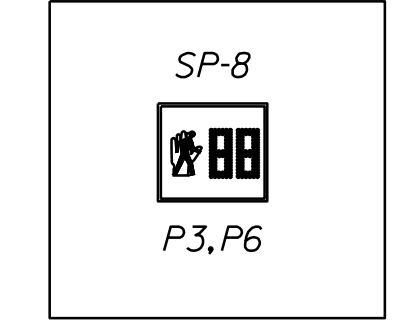
Existing Signals to Remain



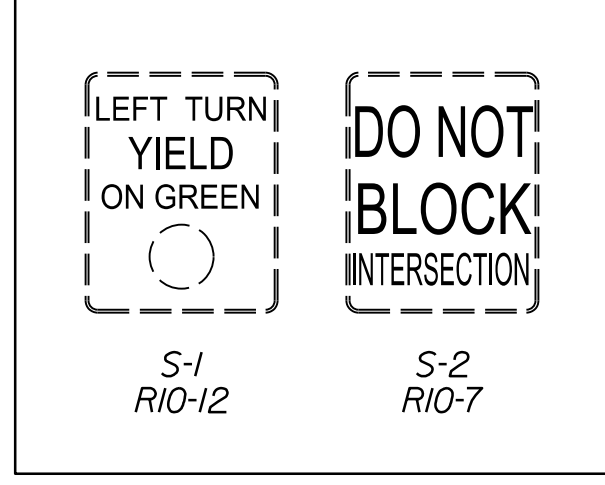
Existing Signals to be Removed



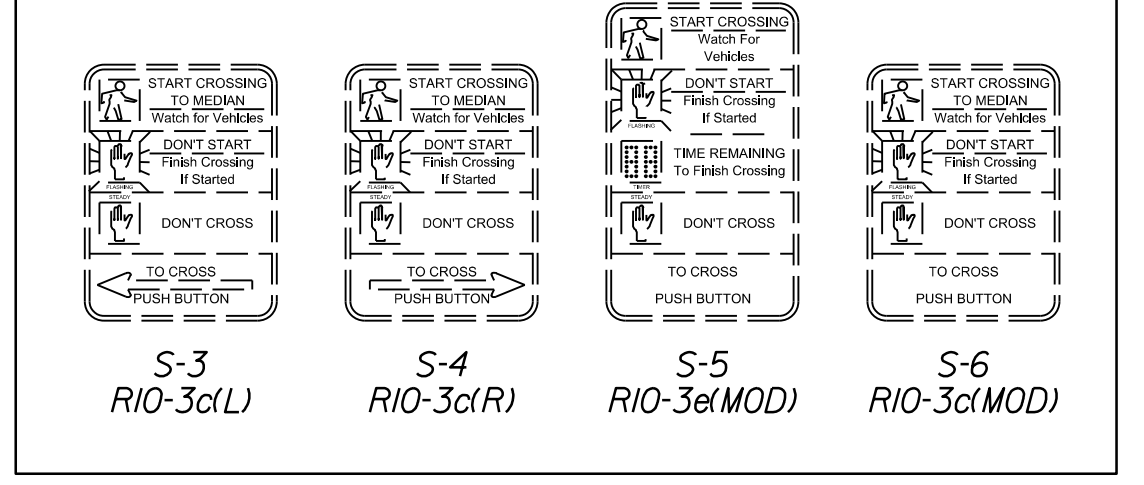
Proposed Signals



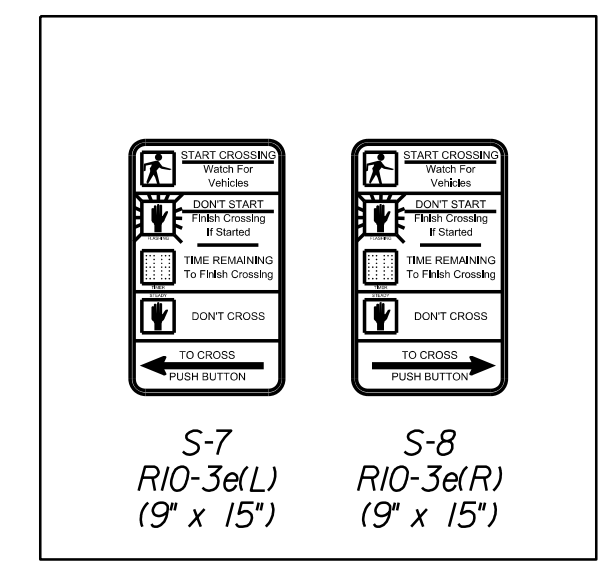
Existing Signs to Remain



Existing Signs to be Removed

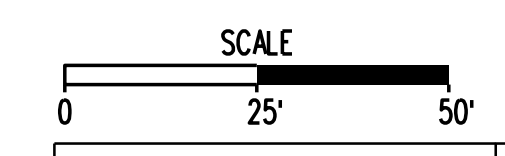


Proposed Signs

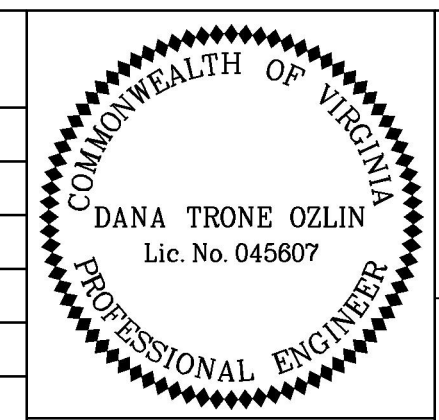


- SIGNAL NOTES**
- 1 REMOVE EXISTING CONTROLLER AND CABINET.
 - 2 INSTALL NEW MCCAIN 3521 ATC CONTROLLER CABINET WITH RISER FOR RETROFIT. REINSTALL EXISTING MCCAIN ATC EX2 CONTROLLER AND NEW ATTACHED UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEM ON EXISTING VDOT ST'D CF-1 FOUNDATION.
 - 3 INSTALL CCTV CAMERA (DIGITAL) WITH PTZ CAPABILITIES.
 - 4 INSTALL 10-PORT MANAGED FIELD-ETHERNET SWITCH.
 - 5 INSTALL 360° VIDEO DETECTION CAMERA MOUNTED ON SIGNAL POLE.
 - 6 REMOVE EXISTING VIDEO DETECTION CAMERA.
 - 7 REMOVE EXISTING PEDESTRIAN SIGNAL HEAD, PUSHBUTTON, AND SIGN.
 - 8 REMOVE EXISTING PEDESTRIAN PUSHBUTTON AND SIGN.
 - 9 INSTALL FIBER OPTIC PATCH PANEL.
 - 10 SEE SHEET 3(4) FOR INTERCONNECT DETAILS.

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



Revisions	
Date	Initial



Dana T Ozlin
2023.04.26 10:01:53 -04'00'
Whitman Requardt & Associates
Richmond, Virginia
TRAFFIC ENGINEER

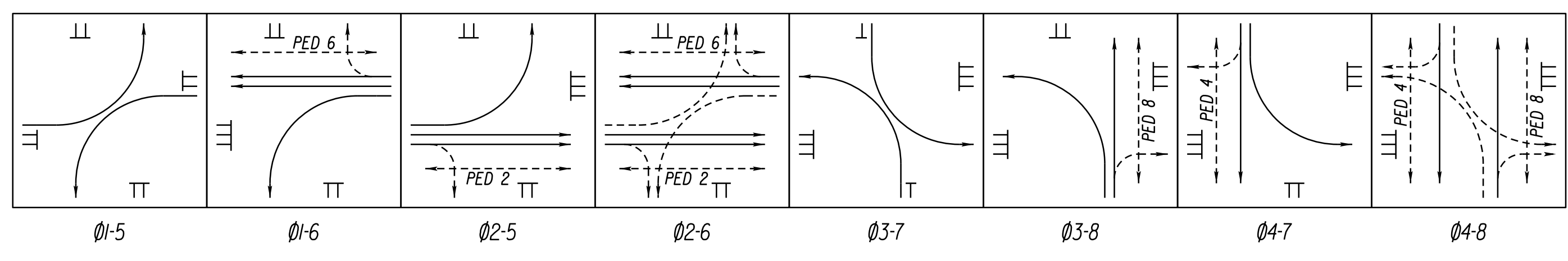
ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES
TRAFFIC SIGNAL MODIFICATION PLAN
Maple Avenue East (Rte.123)
at Beulah Road
Town of Vienna, Virginia

DATE: February 2023

DRAWN: DESIGNED: SB CHECKED: SHEET NO. 4(11)

STATE	ROUTE	TOWN OF VIENNA PROJECT	SHEET NO.
VA.	123 243	(NFO)0123-153-208 P101,R201,C501	4(12)

Phasing Diagram

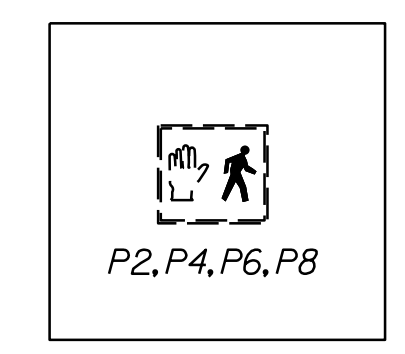


Color Sequence Chart

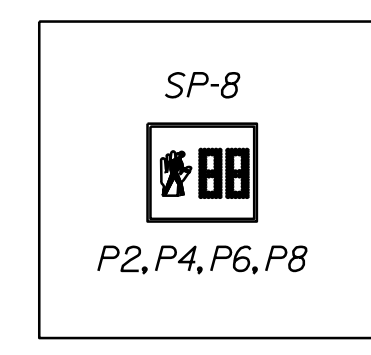
SIGNAL	PHASES								COMBINATIONS								FLASH
	1	2	3	4	5	6	7	8	1-5	1-6	2-5	2-6	3-7	3-8	4-7	4-8	
1	-G	R						G	-G	-G	G	G					Y
2		G									G	G					Y
3			-G	R				G			-G	-G	G	G	G	R	R
4				G									-G	-G	G	G	R
5					G				-G	R	-G	G					Y
6						G					G	G					Y
7							-G	R					-G	-G	G	R	R
8								G					G	G	G	R	R
P2	DW	W	DW	DW	DW	DW	DW	DW	DW	W	DW	DW	DW	DW	DW	BLANK	
P4	DW	DW	DW	W	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	W	BLANK	
P6	DW	DW	DW	DW	DW	W	DW	DW	DW	W	DW	DW	DW	DW	DW	BLANK	
P8	DW	DW	DW	DW	DW	DW	W	DW	DW	DW	DW	DW	DW	W	W	BLANK	

Empty box denotes RED Indication.

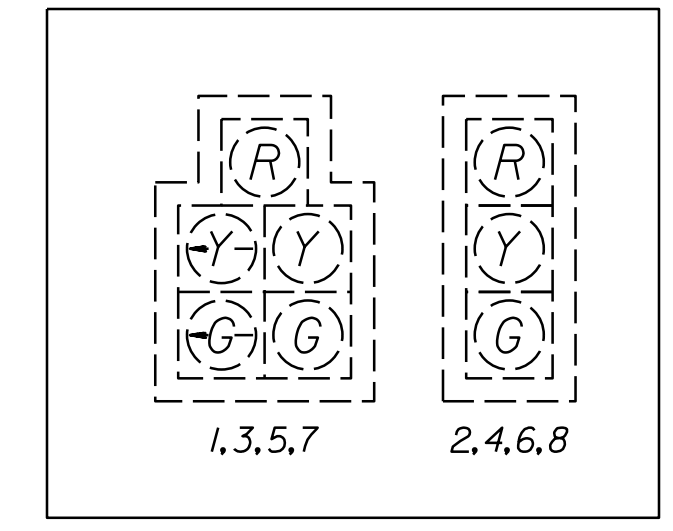
Existing Signals to be Removed



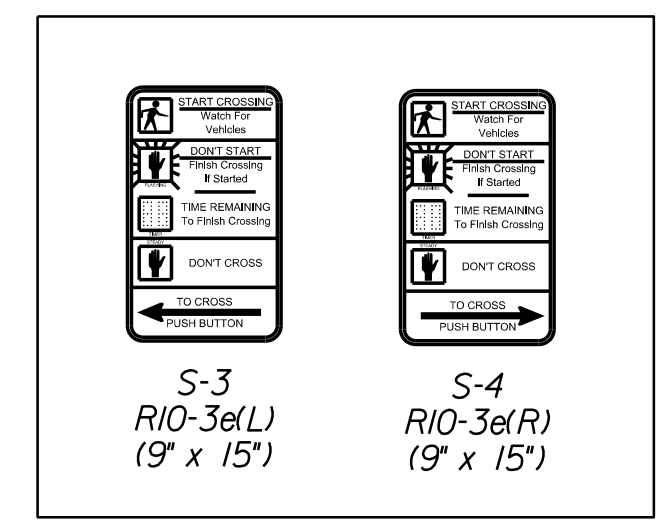
Proposed Signals



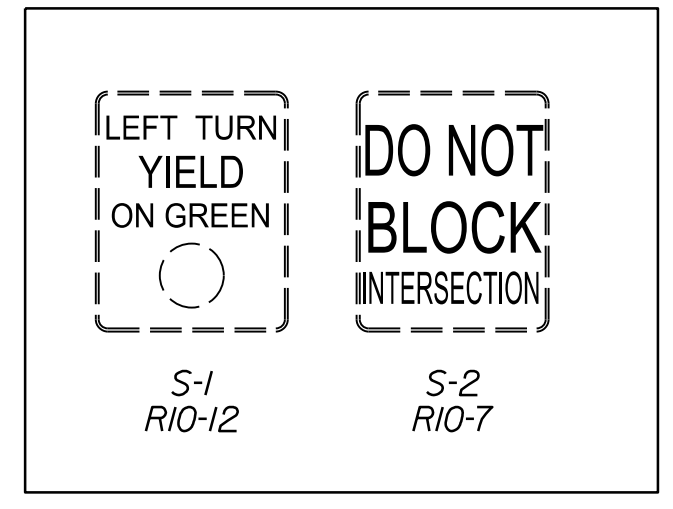
Existing Signals to Remain



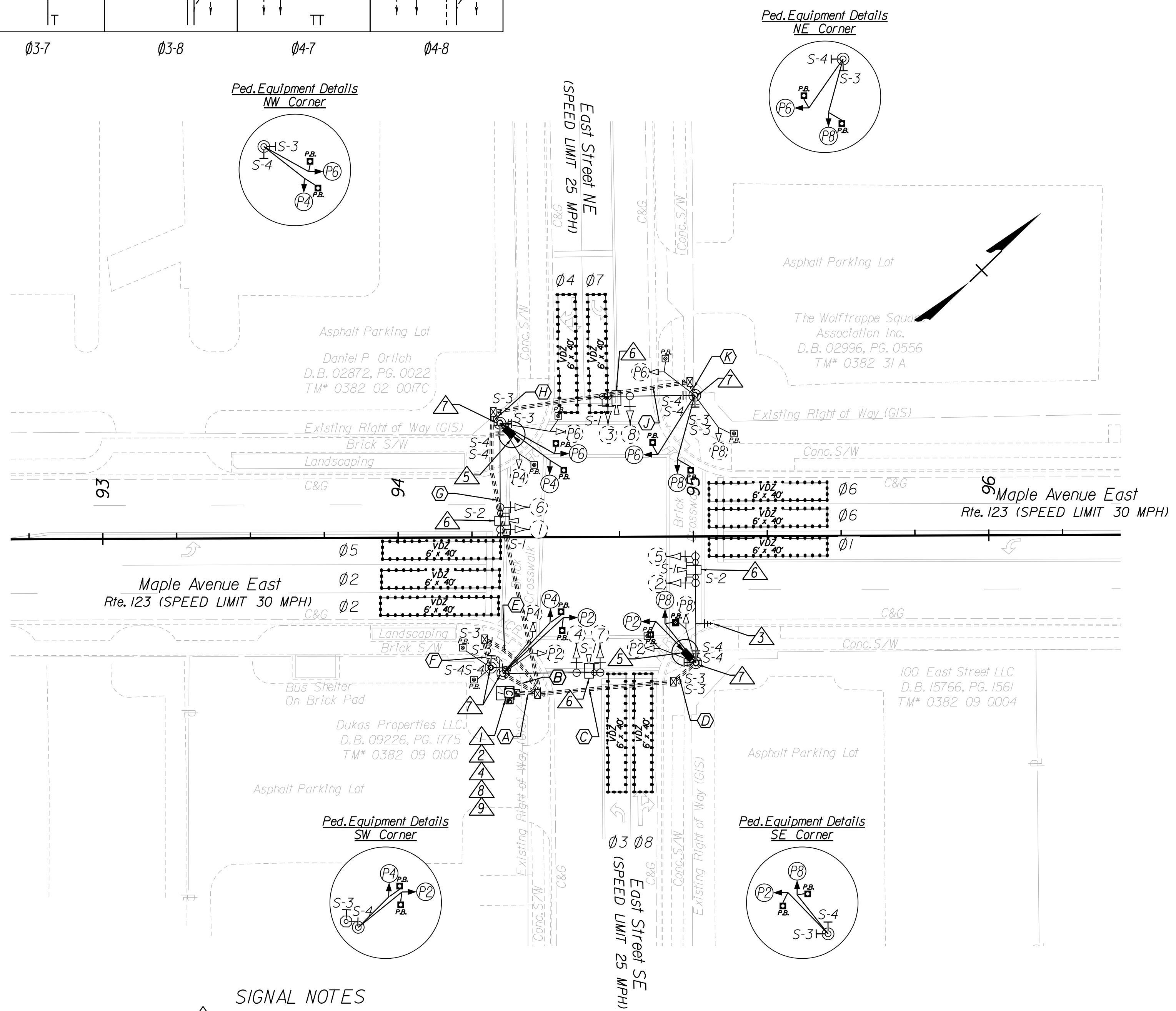
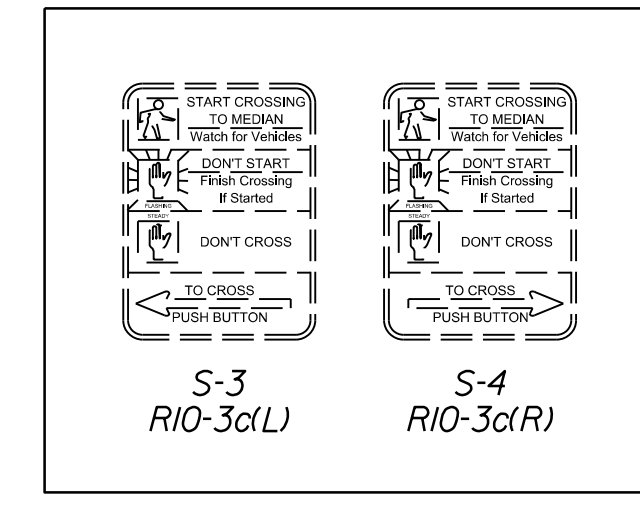
Proposed Signs



Existing Signs to Remain

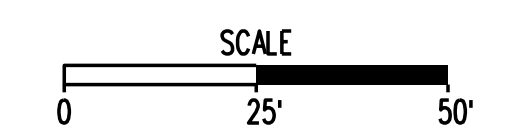


Existing Signs to be Removed



- SIGNAL NOTES**
- 1. REMOVE EXISTING CONTROLLER AND CABINET.
 - 2. INSTALL NEW MCCAIN 3521 ATC CONTROLLER CABINET WITH RISER FOR RETROFIT, MCCAIN ATC EX2 CONTROLLER AND NEW ATTACHED UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEM ON EXISTING VDOT ST'D CF-1 FOUNDATION.
 - 3. INSTALL 5.8 GHZ WIRELESS BROADBAND RADIO.
 - 4. INSTALL 10-PORT MANAGED FIELD-ETHERNET SWITCH.
 - 5. INSTALL 360° VIDEO DETECTION CAMERA MOUNTED ON SIGNAL POLE.
 - 6. REMOVE EXISTING VIDEO DETECTION CAMERA.
 - 7. REMOVE EXISTING PEDESTRIAN PUSHBUTTONS, PUSHBUTTON SIGNS, AND PEDESTRIAN SIGNALS.
 - 8. INSTALL FIBER OPTIC PATCH PANEL.
 - 9. SEE SHEET 3(4) FOR INTERCONNECT DETAILS.

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



Revisions	
Date	Initial



ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES TRAFFIC SIGNAL MODIFICATION PLAN			
Maple Avenue East (Rte.123) at East Street			
Town of Vienna, Virginia			
DRAWN:			DATE: February 2023
DESIGNED:	CHECKED:	FILE NO.	SHEET NO. 4(12)

CABLE AND CONDUIT RUNS

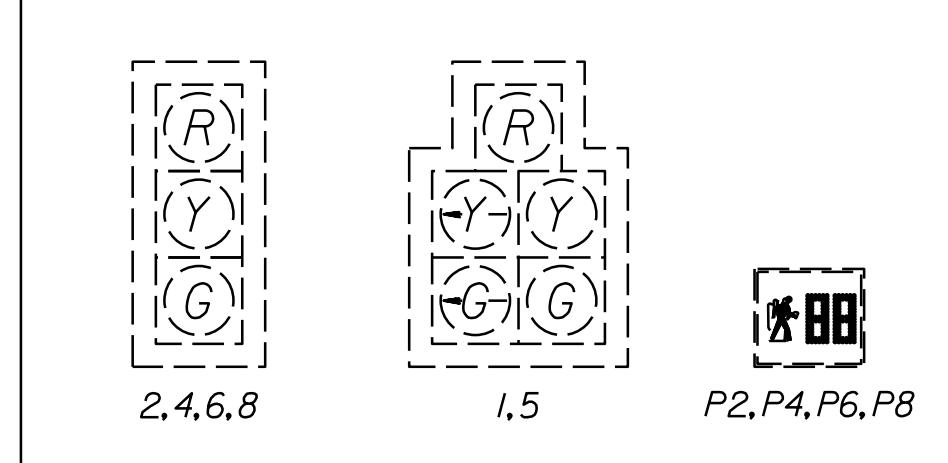
- A 2-3" Conduit
2-2" Conduit
1-1.5" Conduit - Power
8-14/7C Signal Heads 1,2,3,4,5,6,7,8
8-14/7C Ped Heads P2,P4,P6,P8
8-14/2C Ped Push Buttons PB-2,PB-4,PB-6,PB-8
2-Video Detection Camera Cables (Proposed)
4-4-Video Detection Camera Cables (Remove)
1-CAT 5e Network Cable (Proposed)
1-6 AWG (EGC)
2-Interconnect Wires
10-Loops (Remove)
 - B 1-3" Conduit
2-2" Conduit (1 Spare)
2-14/7C Signal Heads 4,7
2-14/7C Ped Heads P2,P4
1-Video Detection Camera Cable (Remove)
1-6 AWG (EGC)
 - C 1-4" Conduit
2-14/7C Signal Heads 2,5
2-14/7C Ped Heads P2,P8
2-14/2C Ped Push Buttons PB-2,PB-8
1-Video Detection Camera Cable (Proposed)
1-Video Detection Camera Cable (Remove)
1-CAT 5e Network Cable (Proposed)
1-6 AWG (EGC)
2 - Loop Wires (Remove)
 - D 1-3" Conduit
2-2" Conduit (1 Spare)
1-1" Conduit
2-14/7C Signal Heads 2,5
2-14/7C Ped Heads P2,P8
2-14/2C Ped Push Buttons PB-2,PB-8
1-Video Detection Camera Cable (Proposed)
1-Video Detection Camera Cable (Remove)
1-CAT 5e Network Cable (Proposed)
1-6 AWG (EGC)
 - E 1-3" Conduit
2-14/2C Ped Push Buttons PB-2,PB-4
1-6 AWG (EGC)
3 Loops (Remove)
 - F 1-2" Conduit
2-14/2C Ped Push Buttons PB-2,PB-4
1-6 AWG (EGC)
 - G 1-4" Conduit
4-14/7C Signal Heads 1,3,6,8
4-14/7C Ped Heads P4,P6,P8
4-14/2C Ped Push Buttons PB-4,PB-6,PB-8
1-Video Detection Camera Cable (Proposed)
2-Video Detection Camera Cables (Remove)
1-6 AWG (EGC)
5 Loops (Remove)
 - H 1-3" Conduit
2-2" Conduit (1 Spare)
1-1" Conduit
2-14/7C Signal Heads 1,6
2-14/7C Ped Heads P4,P6
2-14/2C Ped Push Buttons PB-4,PB-6
1-Video Detection Camera Cable (Proposed)
1-Video Detection Camera Cable (Remove)
1-6 AWG (EGC)
 - J 1-4" Conduit
2-14/7C Signal Heads 3,8
2-14/7C Ped Heads P6,P8
2-14/2C Ped Push Buttons PB-6,PB-8
1-Video Detection Camera Cable (Remove)
1-6 AWG (EGC)
3 Loops (Remove)
 - K 1-3" Conduit
2-2" Conduit (1 Spare)
1-1" Conduit
2-14/7C Signal Heads 3,8
2-14/7C Ped Heads P6,P8
2-14/2C Ped Push Buttons PB-6,PB-8
1-Video Detection Camera Cable (Remove)
1-6 AWG (EGC)
- ***All Conduits/Cables Existing Unless Otherwise Noted



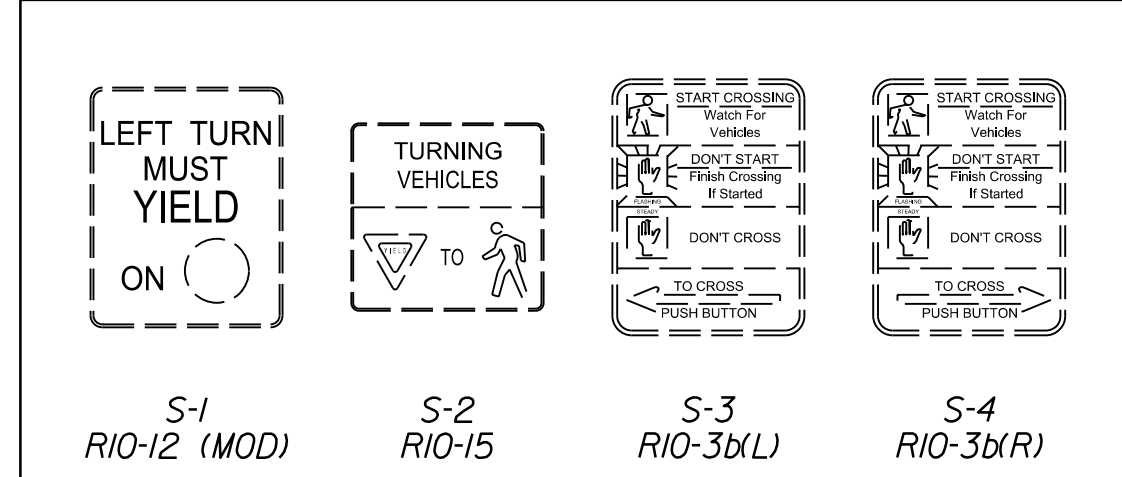
Whitman, Requardt & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033

TOWN OF VIENNA

Existing Signals to be Removed



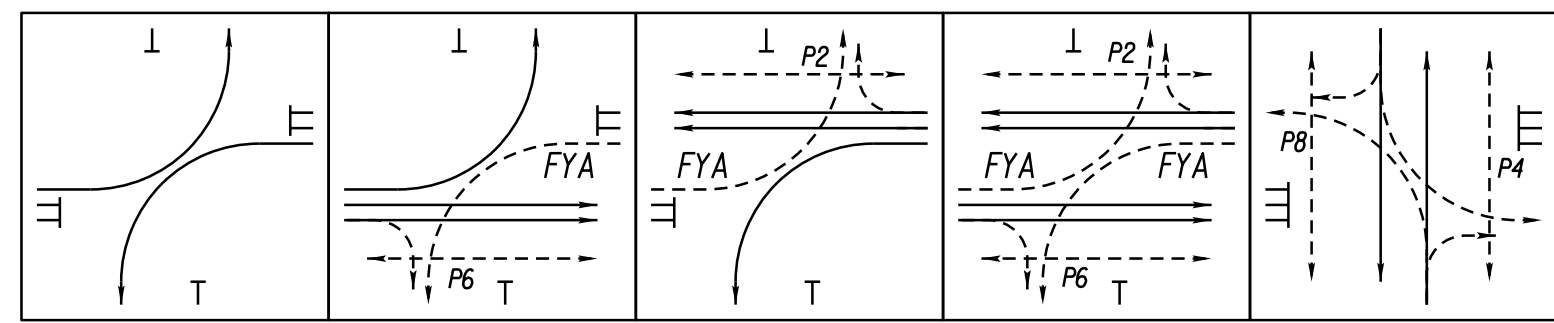
Existing Signs to be Removed



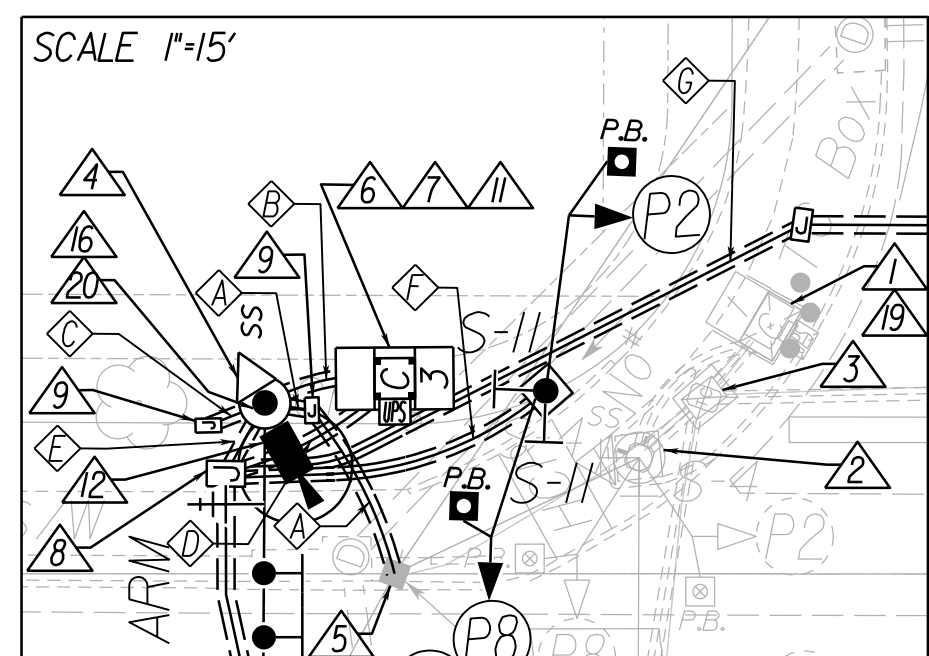
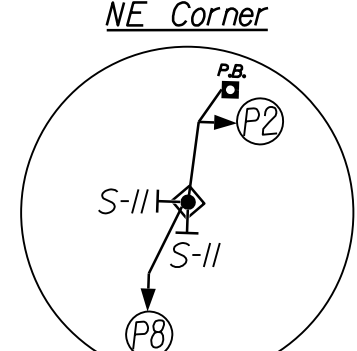
SIGNAL NOTES

- 1. REMOVE EXISTING CONTROLLER CABINET, CONTROLLER, UPS SYSTEM, UPS CABINET, AND FOUNDATION.
- 2. REMOVE EXISTING SIGNAL POLES, MAST ARMS, SIGNS, SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, PUSH BUTTONS AND FOUNDATIONS.
- 3. REMOVE EXISTING JUNCTION BOX.
- 4. INSTALL VDOT ST'D SE-3 ELECTRICAL SERVICE (METERED).
- 5. CONTRACTOR TO COORDINATE ELECTRICAL SERVICE INSTALLATION FROM DOMINION POWER POLE *COS18/*68BBB.
- 6. INSTALL VDOT ST'D CF-3 CONTROLLER FOUNDATION.
- 7. INSTALL NEW MCCAIN 3521 ATC CONTROLLER CABINET WITH RISER, MCCAIN ATC EX2 CONTROLLER, AND ATTACHED UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEM.
- 8. INSTALL VDOT ST'D JB-S3 JUNCTION BOX.
- 9. INSTALL VDOT ST'D JB-S1 JUNCTION BOX.
- 10. INSTALL 5.8 GHZ WIRELESS BROADBAND RADIO.
- 11. INSTALL 10-PORT MANAGED FIELD-ETHERNET SWITCH.
- 12. INSTALL 360° VIDEO DETECTION CAMERA MOUNTED ON SIGNAL POLE.
- 13. INSTALL CCTV CAMERA (DIGITAL) WITH PTZ CAPABILITIES.
- 14. REMOVE EXISTING SIGNAL POLES, MAST ARMS, SIGNS, SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS AND INSTALL PEDESTRIAN POLE AT LOCATION OF EXISTING SIGNAL FOUNDATION.
- 15. CONTRACTOR SHALL REMOVE FOUNDATION TO A SUFFICIENT DEPTH TO INSTALL PROPOSED PEDESTRIAN POLE.
- 16. CONTRACTOR TO COORDINATE WITH UTILITY OWNER REGARDING THE EXISTING UTILITY LINE THAT IS RESTING ON THE EXISTING MAST ARM DURING BOTH THE REMOVAL OF THE EXISTING MAST ARM AND INSTALLATION OF POLE A TO MAINTAIN ADEQUATE CLEARANCES TO THE PROPOSED MAST ARM.
- 17. TRAFFIC SIGNAL INDICATIONS (R,Y,G) FOR HEADS 4 & 8 SHALL HAVE LOUVERED INDICATIONS. COST FOR LOUVERS SHALL BE INCIDENTAL TO COST OF TRAFFIC SIGNAL HEADS.
- 18. RELOCATE EXISTING OPTICOM GPS RADIO ANTENNA TO NEW MAST ARM POLE WITH NEW OPTICOM GPS CABLE.
- 19. RELOCATE EXISTING OPTICOM GPS EQUIPMENT TO PROPOSED CABINET.
- 20. MAST ARM POLES SHALL BE DESIGNED TO THE PROPER HEIGHT TO ACCOMMODATE OVERHEAD UTILITIES AND INSTALLED IN ACCORDANCE WITH TOWN OF VIENNA STANDARDS.

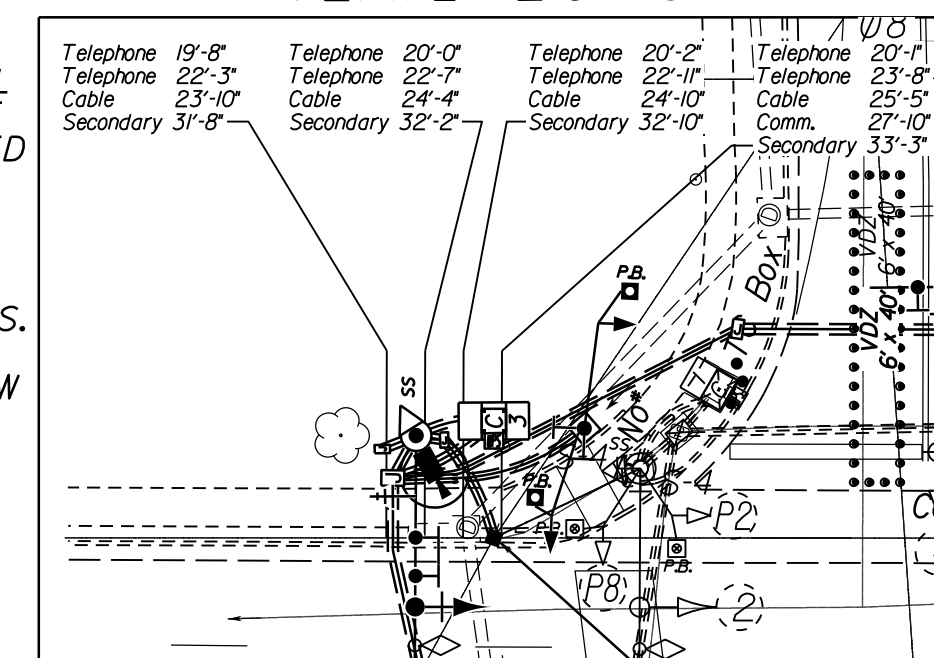
Phasing Diagram



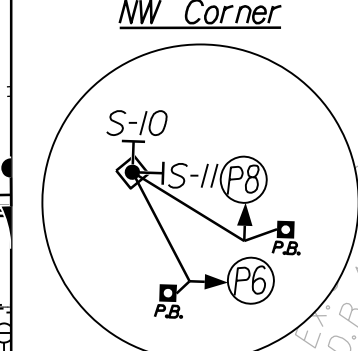
Ped. Equipment Details NE Corner



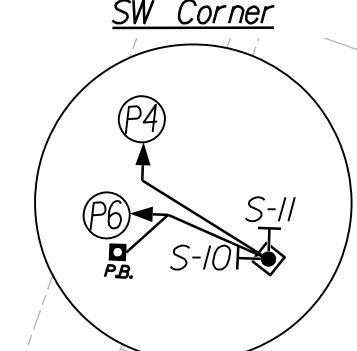
AERIAL HEIGHTS



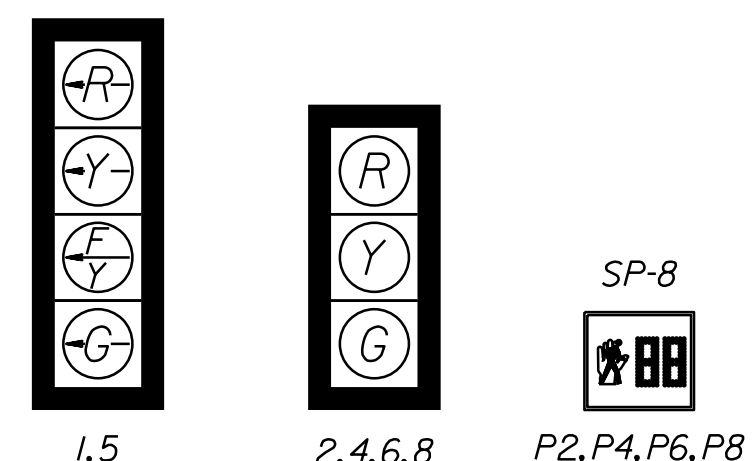
Ped. Equipment Details NW Corner



Ped. Equipment Details SW Corner



Proposed Signals



ALL SIGNAL HEADS SHALL BE 12' LED.
ALL SIGNALS SHALL HAVE HIGH VISIBILITY SIGNAL BACKPLATES.

Color Sequence Chart

SIGNAL	PHASES								COMBINATIONS					FLASH
	1	2	4	5	6	8	1-5	1-6	2-5	2-6	4-8			
1	-G	-FY					-G	-G	-FY	-FY		-Y*		
2		G						G	G		G	R		
4			G								G	R		
5				-G	-FY		-G	-FY	-G	-FY		-Y*		
6					G			G	G		G	R		
8						G					G	R		
P2	DW	W	DW	DW	DW	DW	DW	DW	W	W	DW	BLANK		
P4	DW	DW	W	DW	DW	DW	DW	DW	DW	DW	DW	BLANK		
P6	DW	DW	DW	DW	W	DW	DW	DW	DW	DW	DW	BLANK		
P8	DW	DW	DW	DW	DW	W	DW	DW	DW	DW	DW	BLANK		

Empty box denotes RED indication.
The solid red arrow shall occur at the end of the solid yellow arrow for the Flashing Yellow Arrow (FYA) signal. All FYA signals shall have the red interval.
* The Y arrow signal face (second from the top) shall flash during FLASH operation. The Y arrow signal face (third from the top) shall be blank during FLASH operation.

STATE	ROUTE	TOWN OF VIENNA PROJECT	SHEET NO.
VA.	123 243	(NFO)123-153-208 P101.P201.C501	5(1)

CABLE AND CONDUIT LEGEND

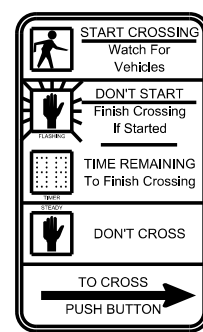
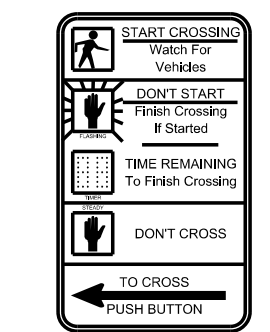
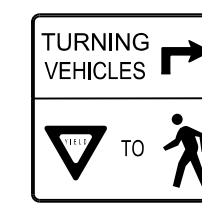
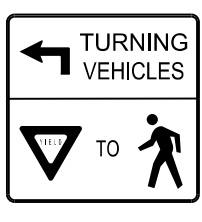
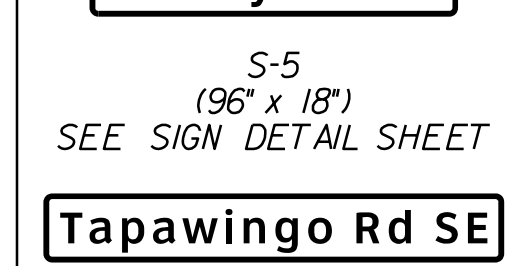
<ul style="list-style-type: none"> 1- 2" Conduit 1- Proposed Electrical Service Cable 	<ul style="list-style-type: none"> 1- 3" Conduit 1- 14/7C Signal Head 4 1- *6 Awg (EGC)
<ul style="list-style-type: none"> 1- 1 1/4" Conduit 3- *6 Cables For Electrical Service 	<ul style="list-style-type: none"> 1- 3" Conduit 2- 14/7C Ped Heads P2, P4 2- 14/2C Ped Pushbuttons 1- *6 Awg (EGC)
<ul style="list-style-type: none"> 1- 1" Conduit 1- *6 Cables For Electrical Service Grounding 	<ul style="list-style-type: none"> 1- 4" Conduit Bored 3- 14/7C Signal Heads 1, 6, 8 4- 14/7C Ped Heads P4, P6, P8 2- 14/2C Ped Pushbuttons 1- CCTV Camera Cable 1- Video Detection Camera Cable 1- *6 Awg (EGC)
<ul style="list-style-type: none"> 2- 4" Conduit 1- 3" Conduit (Spare) 6- 14/7C Signal Heads 1, 2, 4, 5, 6, 8 8- 14/7C Ped Heads P2, P3, P4, P6 8- 14/2C Ped Pushbuttons 1- CCTV Camera Cable 1- CAT 5e Network Cable 2- Video Detection Camera Cables 1- Opticom GPS Radio Antenna Cable 1- *6 Awg (EGC) 	<ul style="list-style-type: none"> 1- 3" Conduit 2- 14/7C Ped Heads P6, P8 2- 14/2C Ped Pushbuttons 1- *6 Awg (EGC)
<ul style="list-style-type: none"> 1- 3" Conduit 2- 14/7C Signal Heads 2, 5 1- CAT 5e Network Cable 1- Opticom GPS Radio Antenna Cable 1- Video Detection Camera Cable 1- *6 Awg (EGC) 	<ul style="list-style-type: none"> 1- 4" Conduit Bored 3- 14/7C Signal Heads 1, 6, 8 2- 14/7C Ped Heads P4, P6 2- 14/2C Ped Pushbuttons 1- CCTV Camera Cable 1- Video Detection Camera Cable 1- *6 Awg (EGC)
<ul style="list-style-type: none"> 1- 3" Conduit 2- 14/7C Ped Heads P2, P8 2- 14/2C Ped Pushbuttons 1- *6 Awg (EGC) 	<ul style="list-style-type: none"> 1- 3" Conduit 3- 14/7C Signal Heads 1, 6, 8 1- CCTV Camera Cable 1- Video Detection Camera Cable 1- *6 Awg (EGC)
<ul style="list-style-type: none"> 1- 4" Conduit 1- 14/7C Signal Head 4 2- 14/7C Ped Heads P2, P4 2- 14/2C Ped Pushbuttons 1- *6 Awg (EGC) 	<ul style="list-style-type: none"> 1- 3" Conduit 2- 14/7C Ped Heads P4, P6 2- 14/2C Ped Pushbuttons 1- *6 Awg (EGC)
<ul style="list-style-type: none"> 1- 4" Conduit Bored 1- 14/7C Signal Head 4 2- 14/7C Ped Heads P2, P4 2- 14/2C Ped Pushbuttons 1- *6 Awg (EGC) 	<ul style="list-style-type: none"> 1- 3" Conduit 2- 14/7C Ped Heads P4, P6 2- 14/2C Ped Pushbuttons 1- *6 Awg (EGC)

Signal Pole & Controller Legend

(ALL DIMENSIONS ARE TO CENTER OF POLE)

- A. MAST ARM POLE, TYPE A (MP-3)
 - 46.6' RT. of Nutley St. Constr. @ Sta. 202+58.5'
 - Video Detection Camera Placement: Pole
 - 49' Arm 270° Angle to Nutley St. Constr. @
 - Signal Placement: 22.5', 33.5', 44.0'
 - Sign Placement: 15.5', 40.0'
 - Wireless Broadband Radio Placement: 8.0'
 - Relocated Opticom GPS Radio Antenna Placement: 27.5'
- B. MAST ARM POLE, TYPE A (MP-3)
 - 66.6' RT. of Nutley St. Constr. @ Sta. 201+59
 - 40' Arm 0° Angle to Nutley St. Constr. @
 - Signal Placement: 21.0', 31.0'
 - Sign Placement: 12.0', 18.0', 34.5'
- C. MAST ARM POLE, TYPE C (MP-3)
 - 55.5' LT. of Nutley St. Constr. @ Sta. 201+62
 - Video Detection Camera Placement: Pole
 - 40' Arm 0° Angle to Nutley St. Constr. @
 - Signal Placement: 29.5', 39.5'
 - Sign Placement: 10.5', 25.0', 36.5'
 - 60' Arm 90° Angle to Nutley St. Constr. @
 - Signal Placement: 31.0', 42.0', 52.5'
 - Sign Placement: 24.0', 48.5'
 - CCTV Camera Placement: 58.5'
- D. CONTROLLER CABINET & FOUNDATION (CF-3)
 - Cabinet door hinge located on right side of pad.
 - 48.6' RT. of Nutley St. Constr. @ Sta. 202+48.8
- E. PEDESTAL POLE (PF-2), 12'
 - 47.6' RT. of Nutley St. Constr. @ Sta. 202+37
- F. PEDESTAL POLE (PF-2), 12'
 - 43.1' RT. of Nutley St. Constr. @ Sta. 201+57
- G. PEDESTAL POLE (PF-2), 12'
 - 50.2' LT. of Nutley St. Constr. @ Sta. 201+60
- H. PEDESTAL POLE (PF-2), 12'
 - 51.2' LT. of Nutley St. Constr. @ Sta. 202+30

Nutley St SW



S-5 (96' x 18')
SEE SIGN DETAIL SHEET

S-7 (36' x 42')
RIO-VI

S-8 (30' x 30')
RIO-15 (L)

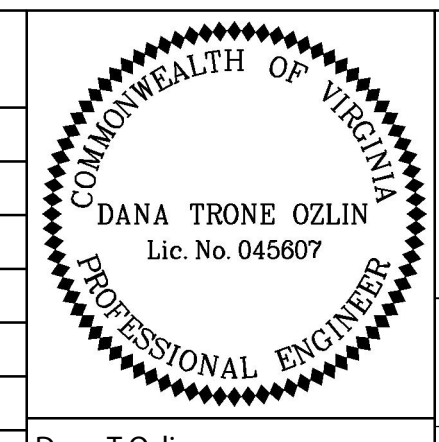
S-9 (30' x 30')
RIO-15 (R)

S-10 (9' x 15')
RIO-36(L)

S-11 (9' x 15')
RIO-36(R)

Revisions

Date	Initial

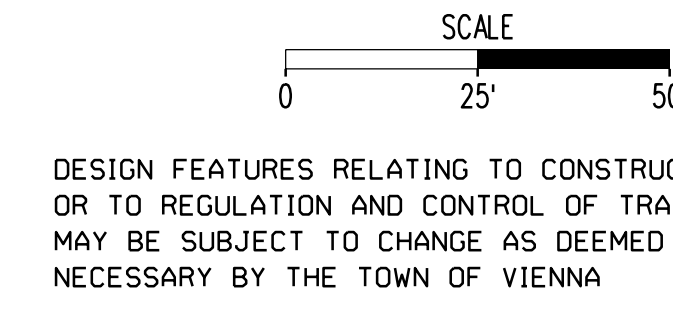


ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES
TRAFFIC SIGNAL REPLACEMENT PLAN
Nutley Street SW (Rte. 243) at
Tapawingo Road SW (Rte. 6642)
Town of Vienna, Virginia

DRAWN: SB DESIGNED: SB CHECKED: DT
DATE: January 2023

Dana T Ozlin
2023.04.26 10:04:44 -04'00'
Whitman Requardt & Associates
Richmond, Virginia
TRAFFIC ENGINEER

PLAN NO.	PROJECT	FILE NO.	SHEET NO.
			5(1)



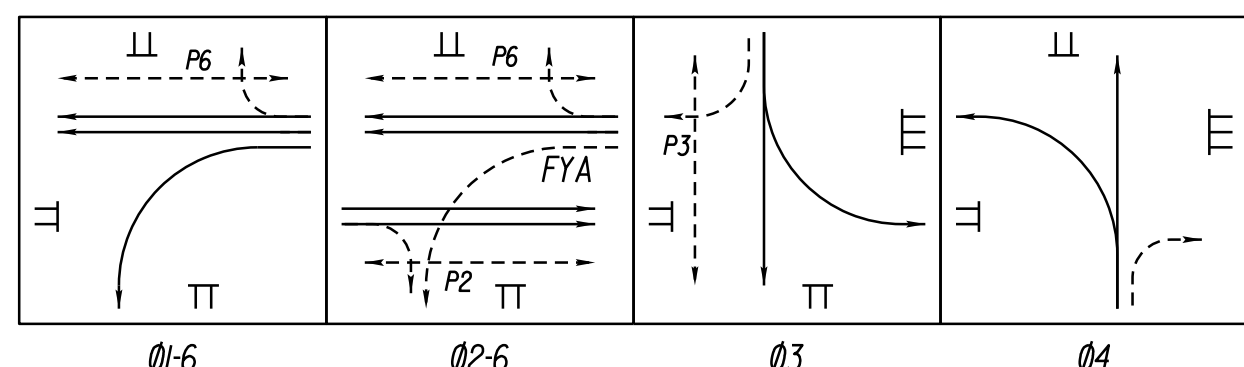
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE TOWN OF VIENNA



Whitman, Requirat & Associates, LLP
12700 Fair Lakes Circle, Suite 3000, Fairfax, Virginia 22033

TOWN OF VIENNA

Phasing Diagram



Color Sequence Chart

SIGNAL	PHASES						COMBINATIONS		FLASH
	1	2	3	4	5	6	1-6	2-6	
1	-G	-FY					-G	-FY	-Y*
2		G						G	Y
3			G						R
3A			-G						R
4				G					R
4A				-G					R
6					G	G	G	G	Y
P2	DW	W	DW	DW	DW	DW	DW	W	BLANK
P3	DW	DW	W	DW	DW	DW	DW	DW	BLANK
P6	DW	DW	DW	DW	DW	W	W	W	BLANK

Empty box denotes RED INDICATION.
The solid red arrow shall occur at the end of the solid yellow arrow for the Flashing Yellow Arrow (FYA) signal. All FYA signals shall have the red interval.
* The Y arrow signal face (second from the top) shall flash during FLASH operation. The FY arrow signal face (third from the top) shall be blank during FLASH operation.

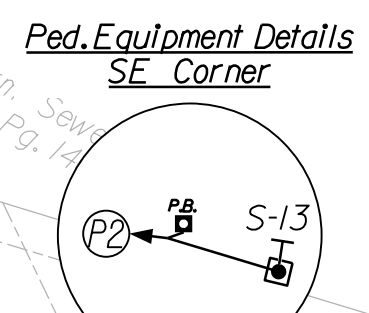
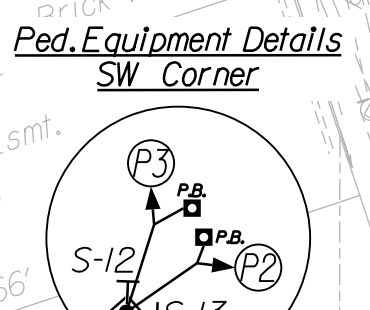
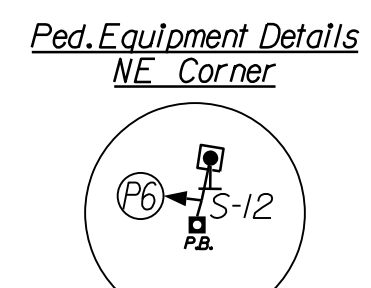
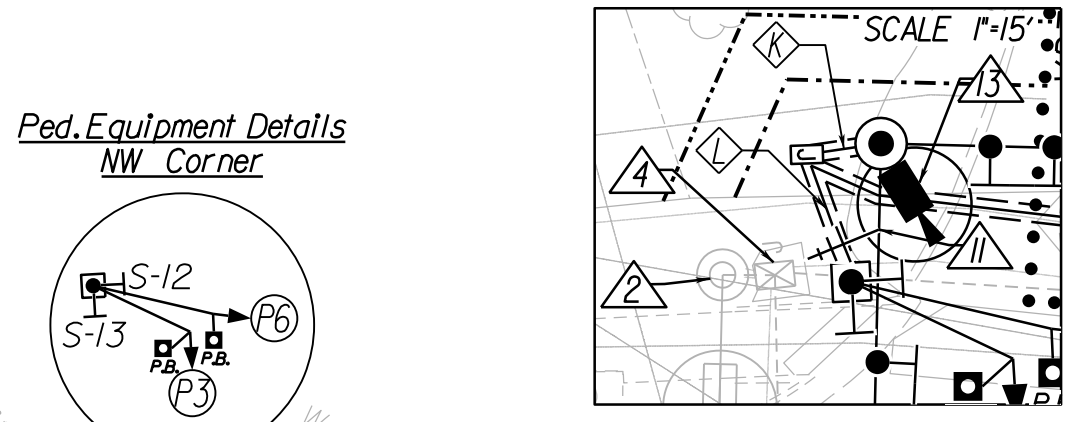


Signal Pole & Controller Legend

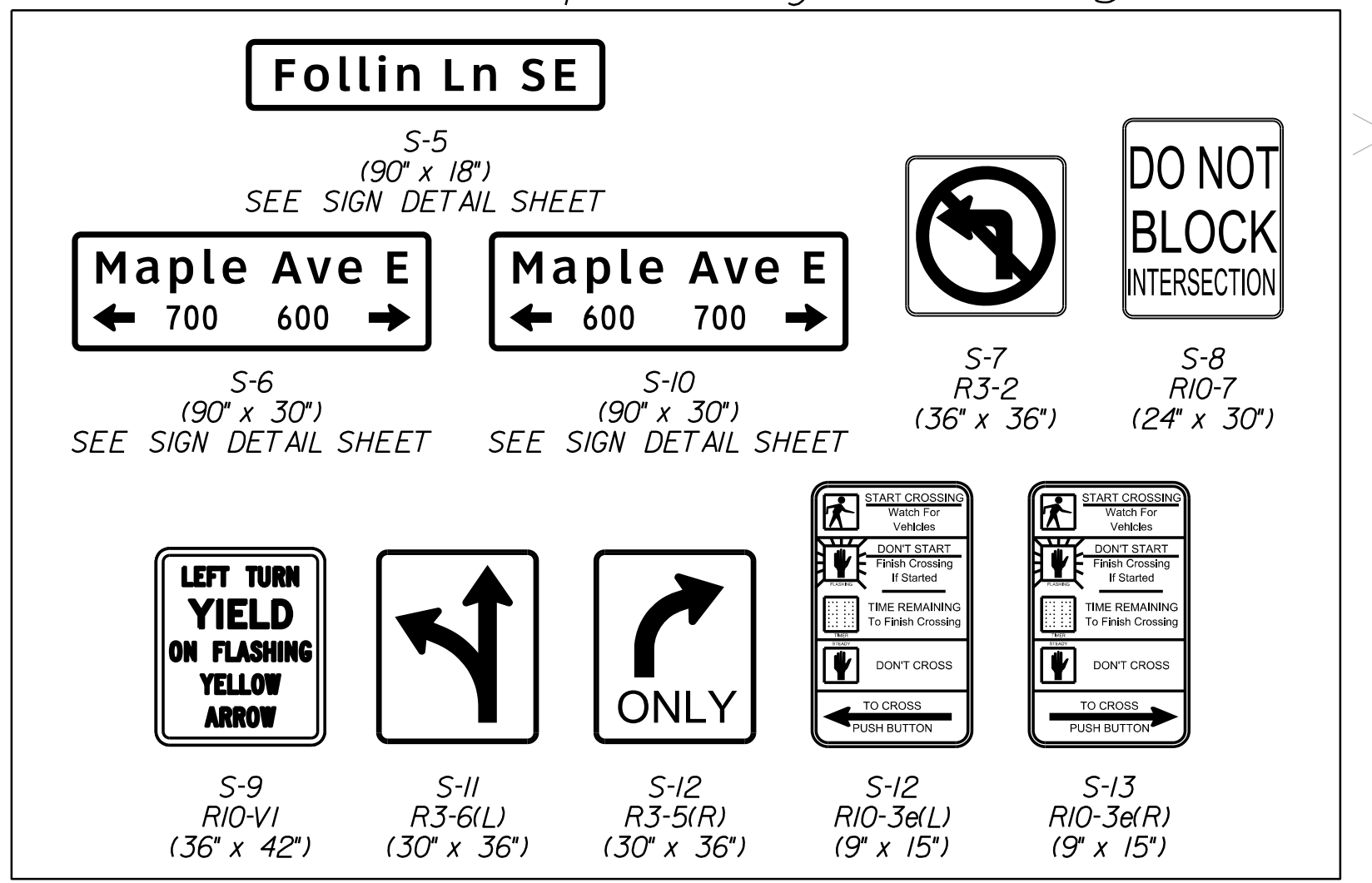
- (ALL DIMENSIONS ARE TO CENTER OF POLE)
- A** MAST ARM POLE, TYPE A (MP-3)
53.4' RT. of Maple Ave. Constr. @ Sta. 100-71
Video Detection Camera Placement: Pole
49' Arm 27° Angle to Maple Ave. Constr. @
Signal Placement: 29.5', 41.5'
Sign Placement: 19.5', 33.25', 45.75'
- B** MAST ARM POLE, TYPE A (MP-3)
54.2' RT. of Maple Ave. Constr. @ Sta. 99-78
40' Arm 0° Angle to Maple Ave. Constr. @
Signal Placement: 22.5', 34.5'
Sign Placement: 12', 18.5', 30.5'
- C** MAST ARM POLE, TYPE C (MP-3)
52.9' LT. of Maple Ave. Constr. @ Sta. 99-75
Video Detection Camera Placement: Pole
49' Arm 0° Angle to Maple Ave. Constr. @
Signal Placement: 31.25', 39.25'
Sign Placement: 11', 31.25', 39.25'
60' Arm 90° Angle to Maple Ave. Constr. @
Signal Placement: 30.5', 41.5', 44', 51.5'
Sign Placement: 19.5', 34.0', 48.0', 48.0'
Wireless Broadband Radio Placement: 6.5'
CCTV Camera Placement: 25.0'
Video Detection Camera Placement: 56.5'
Relocated Opticom GPS Radio Antenna Placement: 38.0'
- D** CONTROLLER CABINET & FOUNDATION (CF-3)
Cabinet door hinge located on right side of pad.
59.5' RT. of Maple Ave. Constr. @ Sta. 100-89
- E** PEDESTAL POLE 6'
57.7' RT. of Maple Ave. Constr. @ Sta. 100-99
Install Electrical Service, SE-5 (Metered) on Ped. Pole.
- F** PEDESTAL POLE (PF-2), 12'
42.6' RT. of Maple Ave. Constr. @ Sta. 100-81
- G** PEDESTAL POLE (PF-2), 12'
42.3' RT. of Maple Ave. Constr. @ Sta. 99-76
- H** PEDESTAL POLE (PF-2), 12'
42.0' LT. of Maple Ave. Constr. @ Sta. 99-73
- I** PEDESTAL POLE (PF-2), 12'
41.8' LT. of Maple Ave. Constr. @ Sta. 100-32

SIGNAL NOTES

- 1** REMOVE EXISTING CONTROLLER CABINET, CONTROLLER, UPS SYSTEM, UPS CABINET, AND FOUNDATION.
- 2** REMOVE EXISTING SIGNAL POLES, MAST ARMS, SIGNS, SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, AND FOUNDATIONS.
- 3** REMOVE EXISTING ELECTRICAL SERVICE.
- 4** REMOVE EXISTING JUNCTION BOX.
- 5** INSTALL VDOT ST'D SE-5 ELECTRICAL SERVICE (METERED).
- 6** CONTRACTOR TO COORDINATE ELECTRICAL SERVICE INSTALLATION FROM DOMINION POWER POLE *C0519/VK74.
- 7** INSTALL VDOT ST'D CF-3 CONTROLLER FOUNDATION.
- 8** INSTALL NEW MCCAIN 3521 ATC CONTROLLER CABINET WITH RISER, MCCAIN ATC EX2 CONTROLLER, AND ATTACHED UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEM.
- 9** INSTALL VDOT ST'D JB-S3 JUNCTION BOX.
- 10** INSTALL VDOT ST'D JB-S1 JUNCTION BOX.
- 11** INSTALL 5.8 GHZ WIRELESS BROADBAND RADIO.
- 12** INSTALL 10-PORT MANAGED FIELD-ETHERNET SWITCH.
- 13** INSTALL 360° VIDEO DETECTION CAMERA MOUNTED ON SIGNAL POLE.
- 14** INSTALL CCTV CAMERA (DIGITAL) WITH PTZ CAPABILITIES.
- 15** RELOCATE EXISTING OPTICOM GPS RADIO ANTENNA TO NEW MAST ARM POLE WITH NEW OPTICOM GPS CABLE.
- 16** RELOCATE EXISTING OPTICOM GPS EQUIPMENT TO PROPOSED CABINET.
- 17** INSTALL ELECTRICAL SERVICE WORK PAD.



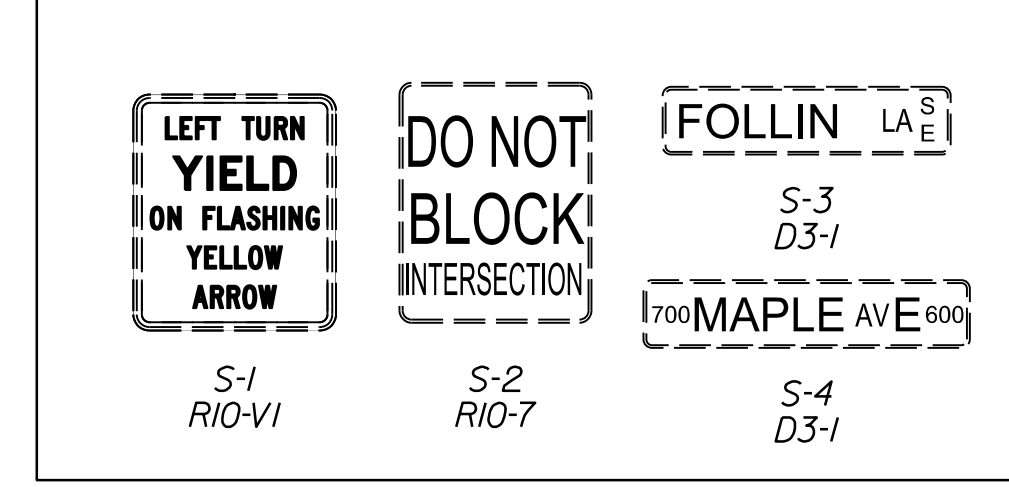
Proposed Signs



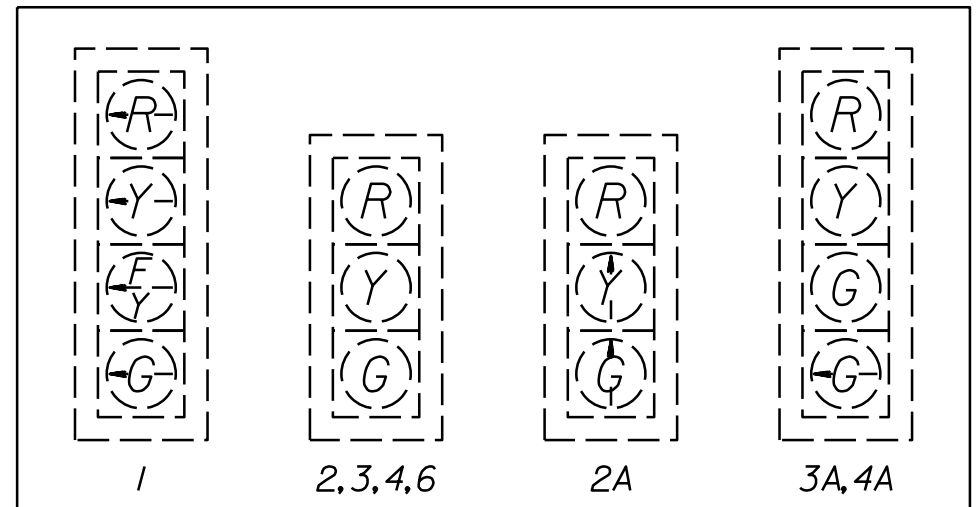
DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE TOWN OF VIENNA

STATE	ROUTE	TOWN OF VIENNA	SHEET NO.
VA.	123 243	PROJECT (NFO)0123-153-208 P101,P201,C501	5(2)

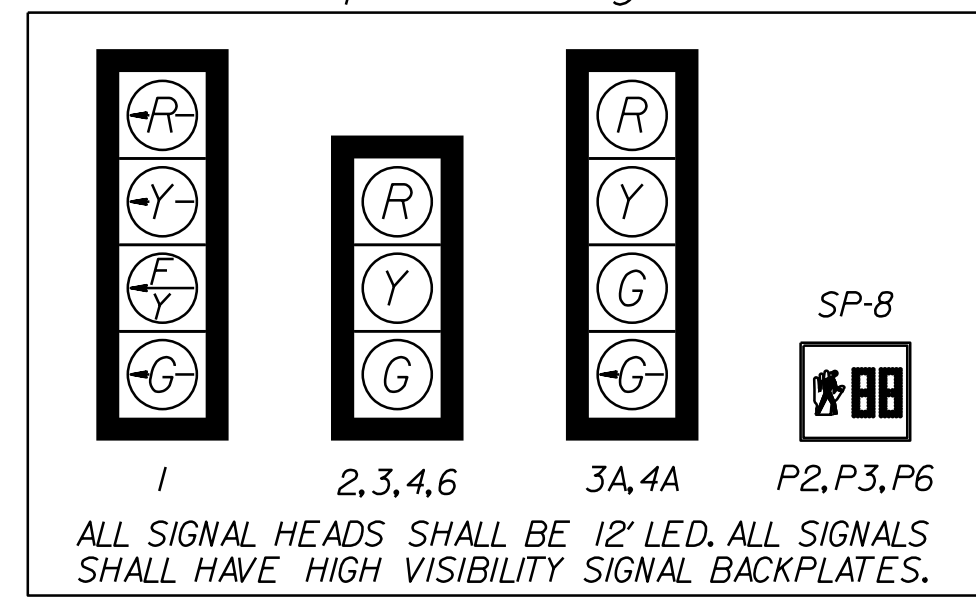
Existing Signs



Existing Signals



Proposed Signals



ALL SIGNAL HEADS SHALL BE 12" LED. ALL SIGNALS SHALL HAVE HIGH VISIBILITY SIGNAL BACKPLATES.

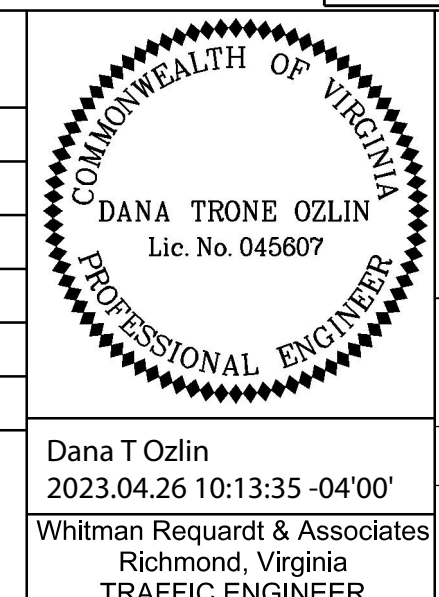
CABLE AND CONDUIT LEGEND

- A** 1-2" Conduit
1- Proposed Electrical Service Cable
- B** 1-1 1/4" Conduit (M)
3 - *6 Cables For Electrical Service
- C** 1-1" Conduit
1- *6 Cables For Electrical Service Grounding
- D** 2 - 4" Conduit
1- 3" (Spare)
8 - 14/7C Signal Heads 1,2,3,3A,4,4A,6
6 - 14/7C Ped Signals P2,P3,P6
6 - 14/2C Ped Pushbuttons
1- CCTV Camera Cable
1- CAT 5e Network Cable
2 - Video Detection Camera Cables
1- Opticom GPS Radio Antenna Cable
1- *6 Awg (EGC)
- E** 1-3" Conduit
1- 14/7C Ped Signal P2
1- 14/2C Ped Pushbutton
1- *6 Awg (EGC)
- F** 1-3" Conduit
1- 14/7C Signal Heads 2
1- Video Detection Camera Cable
1- *6 Awg (EGC)
- G** 1-4" Conduit Bored
7 - 14/7C Signal Heads 1,2,3,3A,4,4A,6
5 - 14/7C Ped Signals P2,P3,P6
5 - 14/2C Ped Pushbuttons
1- CCTV Camera Cable
1- CAT 5e Network Cable
1- Video Detection Camera Cable
1- Opticom GPS Radio Antenna Cable
1- *6 Awg (EGC)
- H** 1-4" Conduit Bored
5 - 14/7C Signal Heads 1,2,4,4A,6
3 - 14/7C Ped Signals P3,P6
3 - 14/2C Ped Pushbuttons
1- CCTV Camera Cable
1- CAT 5e Network Cable
1- Video Detection Camera Cable
1- Opticom GPS Radio Antenna Cable
1- *6 Awg (EGC)
- I** 1-3" Conduit
2 - 14/7C Ped Signals P3,P6
2 - 14/2C Ped Pushbuttons
1- *6 Awg (EGC)
- J** 1-3" Conduit
2 - 14/7C Signal Heads 3,3A
1- *6 Awg (EGC)
- K** 1-3" Conduit
2 - 14/7C Ped Signals P2,P3
2 - 14/2C Ped Pushbuttons
1- *6 Awg (EGC)
- L** 1-2" Conduit
3 - *6 Cables For Electrical Service

(EGC) - Electrical Grounding Cable (M) - Metal

Revisions

Date	Initial



ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES TRAFFIC SIGNAL REPLACEMENT PLAN Maple Avenue East (Rte. 123) at Follin Lane SE

Town of Vienna, Virginia

DATE: **January 2023**

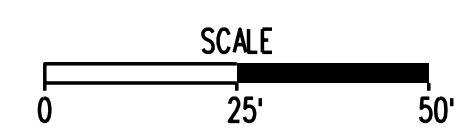
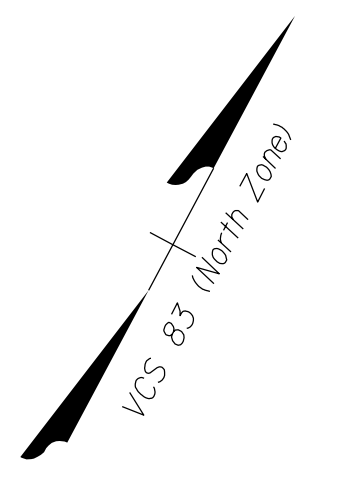
DRAWN: SB	DESIGNED: SB	CHECKED: DT
PLAN NO.	PROJECT	FILE NO.
		SHEET NO. 5(2)

Dana T Ozlin
2023.04.26 10:13:35 -0400'
Whitman Requirat & Associates
Richmond, Virginia
TRAFFIC ENGINEER

STATE	ROUTE	TOWN OF VIENNA	SHEET NO.
VA.	123 243	(NF01)0123-153-208 P101,R201,C501	5(2) RW



TOWN OF VIENNA



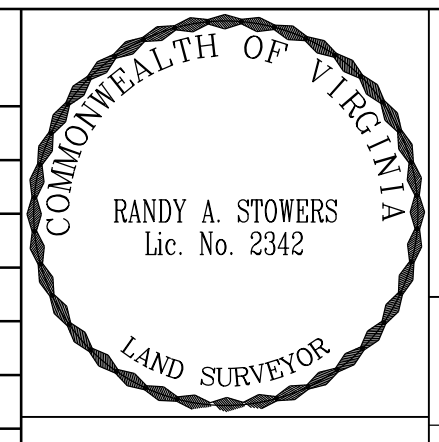
LEGEND:
51.02' / +00.15' • Proposed Permanent Easement
30.00' / +50.00' • Proposed Temporary Easement

PARCEL NUMBER	FEE TAKE	TOTAL		FEE TAKE	
		UTILITY EASEMENT	PERMANENT EASEMENT	NON-PRESCRIPTIVE R/W	PRESCRIPTIVE R/W
	SQ.FT.	SQ.FT.	SQ.FT.	SQ.FT.	SQ.FT.
001			51	662	

Curve MA001
 PI = 99+44.03
 DELTA = 8° 25' 35" (RT)
 D = 825.35'
 L = 41.91'
 PC = 680.00'
 PT = 97+28.24
 PI = 101+46.15

Revisions

Date	Initial



**ROUTE 123 & 243 TRAFFIC SIGNAL UPGRADES
 RIGHT-OF-WAY PLAN
 Maple Avenue East (Rte. 123) at Fallin Lane SE**

Town of Vienna, Virginia
 DATE: _____
 DRAWN: **RAS** DESIGNED: _____ CHECKED: **BLA**

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

Rice Associates Manassas, Virginia Land Surveyor	PLAN NO.	PROJECT	FILE NO.	SHEET NO. 5(2) RW
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