

# CITY OF RICHMOND, VIRGINIA

## DEPARTMENT OF PUBLIC WORKS

### ENGINEERING & TECHNICAL SERVICES



## FOREST HILL AVENUE SIGNAL DESIGN

### SEMMES AVENUE AT W 34TH STREET

FHWA REGION	STATE	FEDERAL PROJECT NUMBER	STATE PROJECT NUMBER
	VA	PE:	
		CN:	

#### REVISIONS

NO.	DATE	COMMENTS

#### CITY OF RICHMOND

##### APPROVED FOR CONSTRUCTION

DATE	SURVEYS SUPERINTENDENT
DATE	PROJECT MANAGER
DATE	MAINTENANCE ENGINEER
DATE	CITY TRANSPORTATION ENGINEER
DATE	CAPITAL PROJECTS ADMINISTRATOR
DATE	CITY ENGINEER
DATE	DIRECTOR OF PUBLIC WORKS



BEFORE YOU DIG CALL  
811  
PROTECT YOURSELF, GIVE THREE  
WORKING DAYS NOTICE

**30% COMPLETE -  
NOT FOR  
CONSTRUCTION**

**CITY OF RICHMOND**  
DEPARTMENT OF PUBLIC WORKS  
RICHMOND, VIRGINIA

DRAWING NO.: X-XXXXX



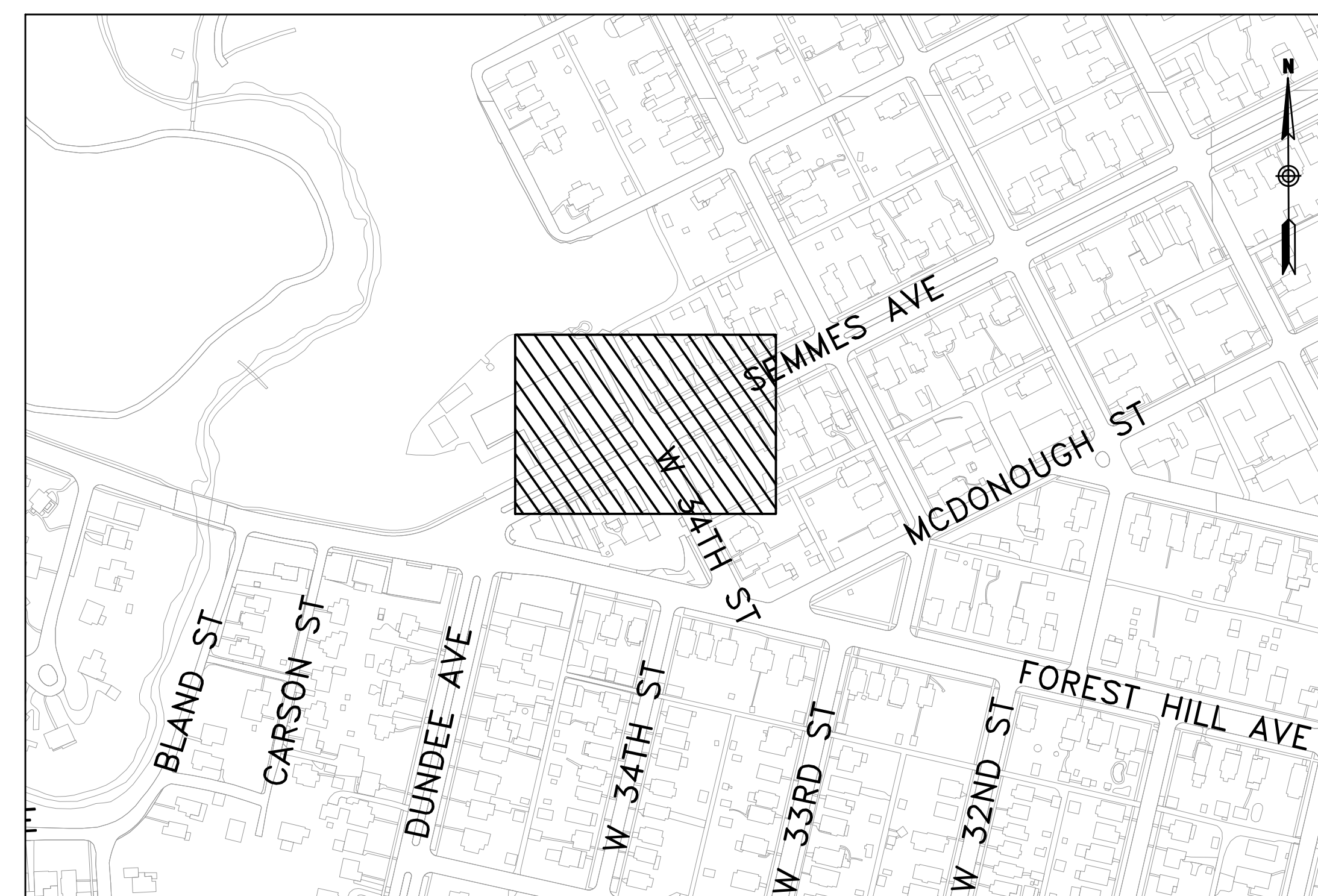
2100 EAST CARY STREET, SUITE 309  
RICHMOND, VIRGINIA 23223  
(P) 804 782-1903 (F) 804 782-2142

**RUMMEL, KLEPPER & KAHL, LLP**

#### INDEX OF SHEETS

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LOCATION MAP



Not To Scale



DECEMBER 2020

DESIGN FEATURES RELATING TO CONSTRUCTION OR TO REGULATION AND CONTROL OF TRAFFIC MAY BE SUBJECT TO CHANGE AS DEEMED NECESSARY BY THE CITY OF RICHMOND. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE 2020 VDOT ROAD AND BRIDGE SPECIFICATIONS, 2016 VDOT ROAD AND BRIDGE STANDARDS, 2009 FHWA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) WITH REVISIONS 1 AND 2 DATED MAY 2012, 2011 VIRGINIA SUPPLEMENT TO THE MUTCD, 2011 VIRGINIA WORK AREA PROTECTION MANUAL (REVISION 2, DATED SEPTEMBER 1, 2019), APPLICABLE CITY OF RICHMOND STANDARDS AND SPECIFICATIONS, AND AS AMENDED BY CONTRACT PROVISIONS AND THE COMPLETE ELECTRONIC VERSION OF THE PLAN ASSEMBLY.

NO ADDITIONAL RIGHT OF WAY REQUIRED FOR THIS PROJECT.

**SIGNALIZATION NOTES:**

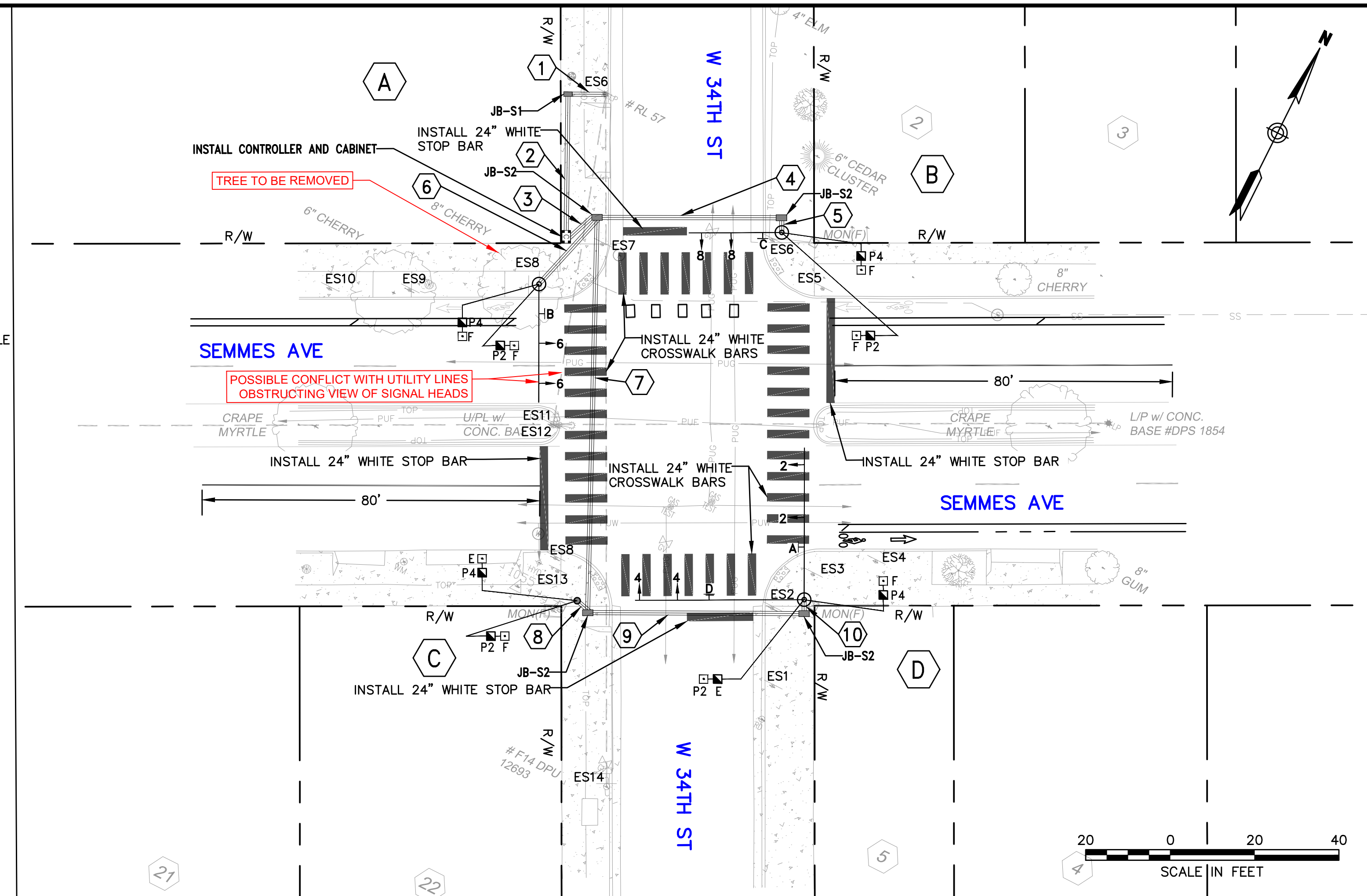
- (S) DENOTES CABLE TO BE SHIELDED. (M) DENOTES METAL CONDUIT.
- SIGNING AND STRIPING ITEMS SHALL BE INSTALLED AS DEPICTED ON THIS SHEET AND ARE INCLUDED IN THIS CONTRACT.
- CONTRACTOR SHALL REPLACE ALL SURFACES (DIRT, CONCRETE/BRICK SIDEWALK, PAVEMENT) AT ALL LOCATIONS WHERE IT IS REMOVED OR DAMAGED AS A RESULT OF THE INSTALLATION OR REMOVAL OF ANY AND ALL ITEMS RELATED TO CONSTRUCTION.
- ELECTRICAL SERVICE SHALL BE VDOT STD. SE-3, TYPE B.
- THE TOPS OF ALL SIGNAL POLE AND PEDESTAL POLE FOUNDATIONS SHALL BE INSTALLED TO BE FLUSH WITH THE FINAL SIDEWALK GRADE AND 2" TO 4" REVEAL IF IN DIRT.
- CONTRACTOR TO DEENERGIZE ALL CIRCUITS PRIOR TO PERFORMING WORK ON JOINT USE (RICHMOND DPW AND DPU) POLES.
- POWER HOOK CONNECTION TO NEW TRAFFIC SIGNAL EQUIPMENT INSTALLED SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND ALSO TO COORDINATE WITH DOMINION VIRGINIA POWER WHEN THERE IS A NEW POWER SOURCE LOCATION.
- ALL PROPOSED JUNCTION BOXES ARE VDOT STD. JB-S2 UNLESS OTHERWISE NOTED.
- CONTRACTOR TO INSTALL METER BASE AND SAFETY SWITCH WITH (2) PADLOCKS TO SIGNAL POLE (STEM).

**EXISTING SIGN INVENTORY**

- ES1 CITY OF RICHMOND STYLE NO PARKING LEFT ARROW SIGN
- ES2 STOP SIGN, R1-1  
SCHOOL CROSSING SIGN, S1-1  
DIAGONAL LEFT ARROW SIGN, W16-7PL
- ES3 CITY OF RICHMOND STYLE STREET NAME SIGNS (W 34TH ST, SEMMES AV)
- ES4 BIKE LANE SIGN, R3-17
- ES5 GRTC BUS STOP SIGN, STOP ID: 2183
- ES6 CITY OF RICHMOND STYLE NO PARKING SCHOOL DAYS SIGN
- ES7 STOP SIGN, R1-1
- ES8 SCHOOL CROSSING SIGN, S1-1  
DIAGONAL LEFT ARROW SIGN, W16-7PL
- ES9 CITY OF RICHMOND STYLE NO PARKING SCHOOL DAYS SIGN  
NEIGHBORHOOD WATCH SIGN  
SNOW EMERGENCY ROUTE SIGN
- ES10 BIKE MERGE SIGN  
DISTANCE SIGN, W16-2aP (FLUORESCENT YELLOW)
- ES11 SCHOOL CROSSING SIGN, S1-1  
DIAGONAL RIGHT ARROW SIGN, W16-7PR
- ES12 SPEED LIMIT SIGN (30 MPH), R2-1  
SPEEDING \$200 ADDITIONAL FINE SIGN
- ES13 GRTC BUS STOP SIGN, STOP ID: 2182
- ES14 SPEED LIMIT SIGN (25 MPH), R2-1

**LEGEND**

- PROPOSED CONDUIT
- PROPOSED PEDESTRIAN SIGNAL
- PROPOSED LUMINAIRE ARM
- PROPOSED MAST ARM POLE
- PROPOSED PEDESTAL POLE
- PROPOSED TRAFFIC SIGNAL
- PROPOSED JUNCTION BOX
- PROPOSED CONTROLLER CABINET
- PROPOSED SIGN POST
- PROPOSED PEDESTRIAN PUSH BUTTON
- PROPOSED VIDEO DETECTOR
- PROPOSED MICROWAVE DETECTION ZONE
- PROPOSED MAST ARM MOUNTED SIGN
- EXISTING CONDUIT
- EXISTING LUMINAIRE ARM
- EXISTING POLE
- EXISTING POLE/SIGNAL
- EXISTING JUNCTION BOX
- EXISTING POLE-MOUNTED CONTROLLER CABINET
- REMOVE EXISTING PEDESTAL TRAFFIC SIGNAL POLE
- REMOVE PEDESTAL POLE SIGNAL HEAD
- M/D METER/DISCONNECT



**CABLE AND CONDUIT RUN**

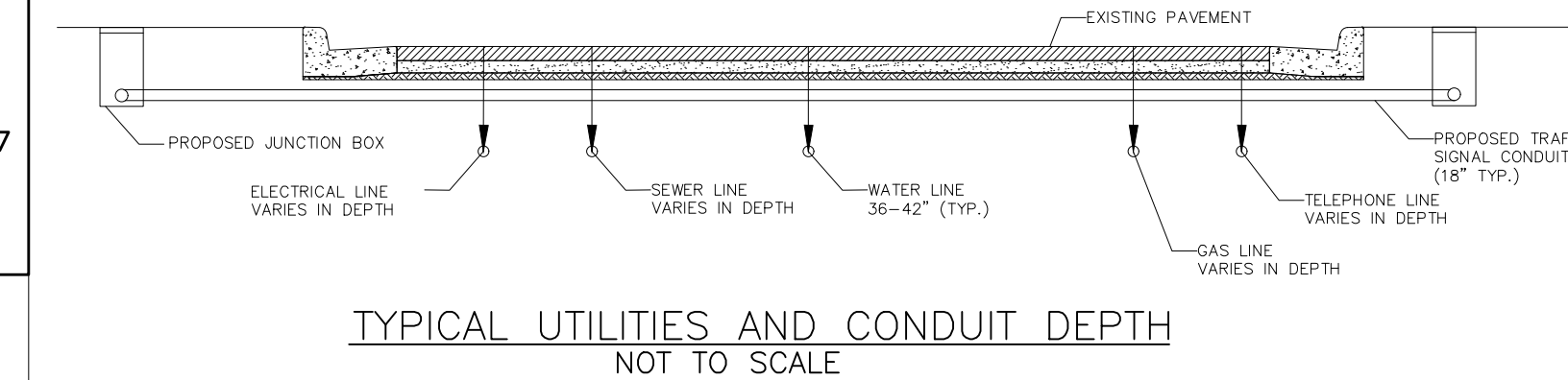
NOTE: FOR CONDUIT RUNS 3-14, THE SECOND CONDUIT IS A SPARE.

- ① 1 - 3" PVC CONDUIT (TRENCHED)  
1 - 8/2C (POWER FROM UTILITY)  
1 - 8/1C (EGC)
- ② 1 - 3" PVC CONDUIT (TRENCHED)  
1 - 8/2C (POWER FROM UTILITY)  
1 - 8/1C (EGC)
- ③ 2 - 3" PVC CONDUIT (TRENCHED)  
4 - 14/7C (TRAFFIC SIGNAL)  
8 - 14/3C (PEDESTRIAN SIGNAL)  
8 - 14/2C (PUSH BUTTON)  
1 - 8/1C (EGC)
- ④ 2 - 3" PVC CONDUIT (BORED)  
1 - 14/7C (TRAFFIC SIGNAL)  
2 - 14/3C (PEDESTRIAN SIGNAL)  
2 - 14/2C (PUSH BUTTON)  
1 - 8/1C (EGC)
- ⑤ 2 - 3" PVC CONDUIT (TRENCHED)  
1 - 14/7C (TRAFFIC SIGNAL)  
2 - 14/3C (PEDESTRIAN SIGNAL)  
2 - 14/2C (PUSH BUTTON)  
1 - 8/1C (EGC)
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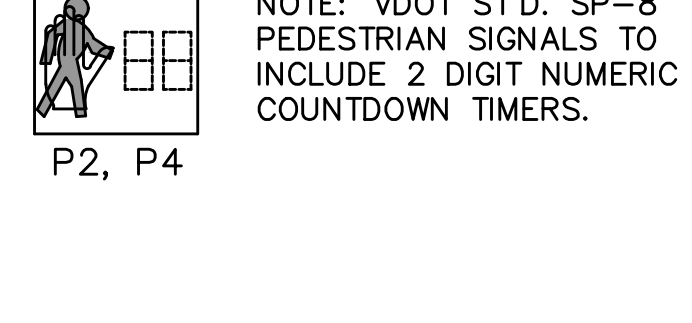
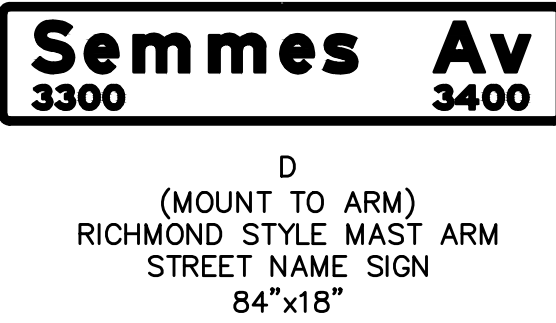
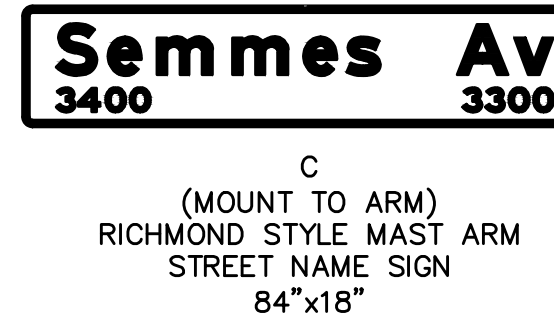
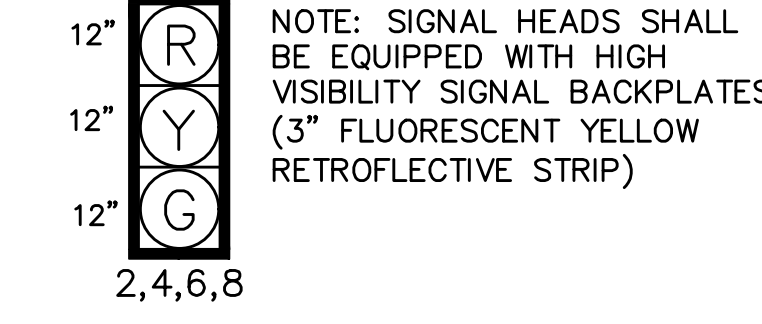
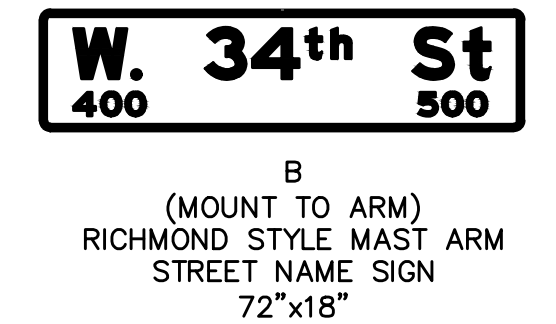
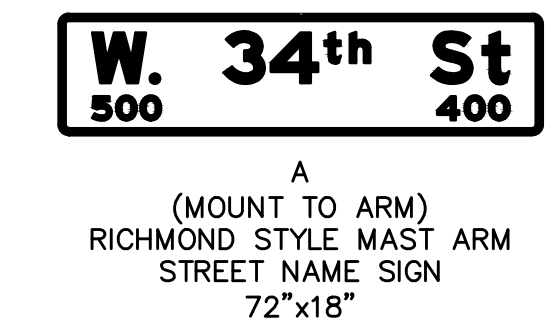
**POLE LEGEND**

- Ⓐ SIGNAL POLE MP-3 ONE ARM  
28' MAST ARM, 90° ANGLE TO WESTBOUND SEMMES AVE. APPROACH  
- SIGNAL PLACEMENT: 14', 23.5'  
- SIGN PLACEMENT: 7'(B)
- Ⓑ SIGNAL POLE MP-3 ONE ARM  
22' MAST ARM, 90° ANGLE TO NORTHBOUND W 34TH ST. APPROACH  
- SIGNAL PLACEMENT: 12', 19'  
- SIGN PLACEMENT: 4.5'(C)
- Ⓒ VDOT STD. PF-2, 8' PEDESTAL SIGNAL POLE
- Ⓓ SIGNAL POLE MP-3 TWO ARMS  
40' MAST ARM, 90° ANGLE TO SOUTHBOUND W 34TH ST. APPROACH  
- SIGNAL PLACEMENT: 30', 39'  
- SIGN PLACEMENT: 22.5'(D)  
36' MAST ARM, 90° ANGLE TO EASTBOUND SEMMES AVE. APPROACH  
- SIGNAL PLACEMENT: 19.5', 32'  
- SIGN PLACEMENT: 12.5'(A)

NOTE: IF TYPICALLY REQUIRED CLEARANCES AND/OR SEPARATION WITH EXISTING DPU INFRASTRUCTURE CANNOT BE ACCOMPLISHED PLEASE CONTACT THE APPROPRIATE DPU SECTION TO REACH AN ACCEPTABLE RESOLUTION:  
 • WATER: 804.646.8316/804.646.8346/804.646.8327  
 • SEWER: 804.646.8247/804.646.8463  
 • GAS: 804.646.8342  
 • STREETLIGHTS: 804.646.8568/804.646.8565



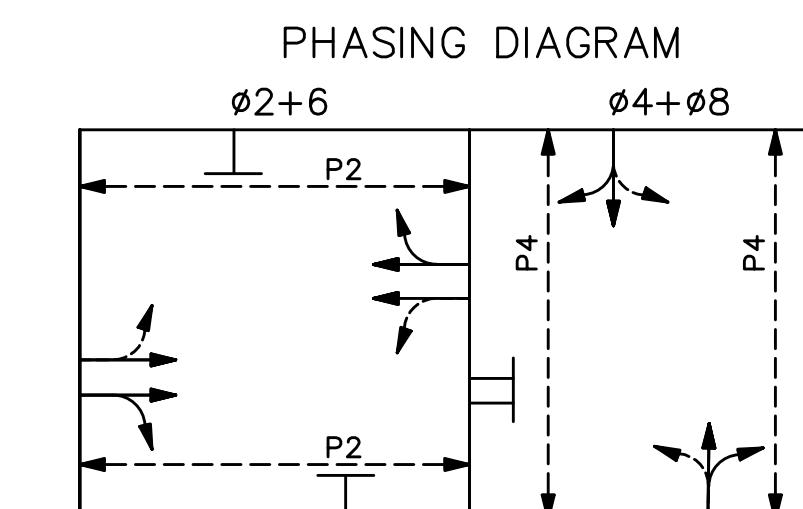
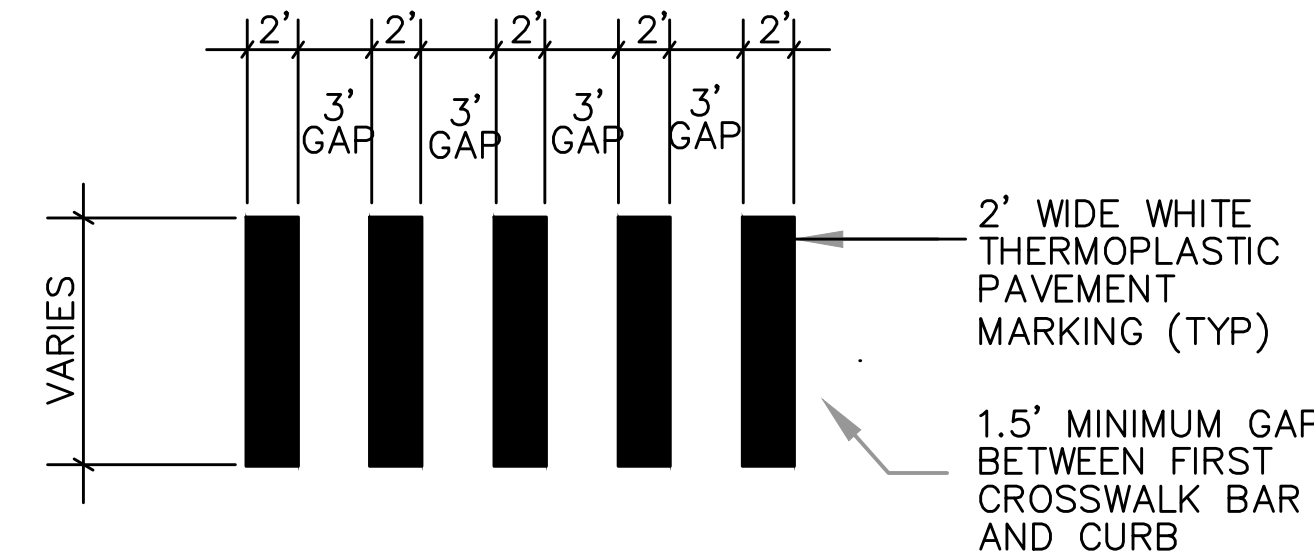
**PROPOSED SIGNS AND SIGNALS**



NOTE: SIGNAL HEADS SHALL BE EQUIPPED WITH HIGH VISIBILITY SIGNAL BACKPLATES (3" FLUORESCENT YELLOW RETROREFLECTIVE STRIP)

NOTE: VDOT STD. SP-8 PEDESTRIAN SIGNALS TO INCLUDE 2 DIGIT NUMERIC COUNTDOWN TIMERS.

**CITY OF RICHMOND CROSSWALK DETAIL**



**COLOR SEQUENCE CHART**

PHASE SIGNAL	02+06 R/W	04+08 R/W	FLASH
2	G	R	Y
4	R	G	R
6	G	R	Y
8	R	G	R
P2	W/FDW	DW	Blank
P4	DW	W/FDW	Blank

**CLEARANCE CHART**

R/W	CLEARANCE		NEXT
	1	2	
G	Y	R	R
W	CD	DW	DW

CD=COUNTDOWN (FLASHING DON'T WALK)

30% COMPLETE:  
NOT FOR CONSTRUCTION

**NOTES**

- Lot dimensions in parentheses are from deed.
- Property owners correct as of 12/1/2020.
- Ordinance Number \_\_\_\_\_
- Adopted \_\_\_\_\_
- Accepted \_\_\_\_\_

**REFERENCES**

**REVISIONS**

**LEGEND**

**Technical**

**Administrative**

**Richmond Virginia**

**Forest Hill Avenue Signal Design**  
SEMMES AVENUE AT W 34TH STREET  
SIGNAL OPTION 2 DESIGN

DESIGN BY: BMR  
DRAWN BY: KJF  
CHECKED BY: MMM

REVIEWED BY: \_\_\_\_\_  
FIELD NOTES: \_\_\_\_\_  
SCALE: \_\_\_\_\_  
DATE: DEC. 2020  
PROJECT: SHEET 2  
AUTHORITY: CITY OF RICHMOND  
VDOT PROJECT NO.: \_\_\_\_\_  
DRAWING NO.: X-XXXX

