

GOVERNMENT ROAD GREEN STREET FULTON HILL



115 South 15th Street
Suite 200
Richmond, VA 23219
804.343.7100

Project Summary:

THIS PROJECT IS A GREEN STREET RETROFIT THAT WILL CONVERT IMPERVIOUS AREA TO COMPOST AMENDED CONSERVATION LANDSCAPES, INSTALL THREE RAIN GARDENS, AND CONVERT IMPERVIOUS SURFACE TO PERMEABLE PAVEMENT..

ESC Quantities:

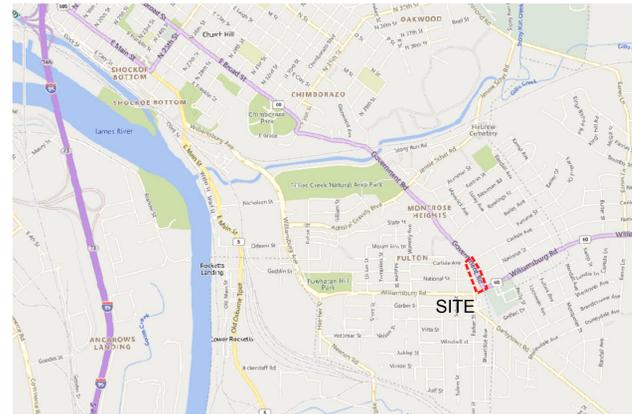
XX

Permits Required:

- LDIS
- STORM DRAIN PERMIT

Abbreviations:

&	AND	E	EAST	OA	OVERALL
@	AT	ELEC	ELECTRICAL	OPP	OPPOSITE
<	CENTERLINE	EL.	ELEVATION	PTD	PAINTED
~	DIAMETER OR ROUND	EQ.	EQUAL	PWD	PLYWOOD
#	NUMBER	EX.	EXISTING	PVC	POLYVINYL CHLORIDE
>	PROPERTY LINE	EXP.	EXPANSION	PSF	POUNDS PER SQUARE FOOT
		E.J.	EXPANSION JOINT	PSI	POUNDS PER SQUARE INCH
		FT	FEET OR FOOT	P.I.P.C.	POURED IN PLACE CONCRETE
		FF	FINISH FLOOR	P.C.C.	PRECAST CONCRETE
		FIN	FINISH (ED)	PT	PRESSURE TREATED
		FTG	FOOTING	PVMT.	PAVEMENT
		F.O.C.	FACE OF CURB	RAD	RADIUS
		GA	GAUGE	RCP	REINFORCED CONCRETE PIPE
		GALV.	GALVANIZED	REF	REFERENCE
		GC	GENERAL CONTRACTOR	REINF	REINFORC (ED) (ING)
		HT	HEIGHT	RND.	ROUND
		HP	HIGH POINT	SCH.	SCHEDULE
		HORIZ	HORIZONTAL	SECT.	SECTION
		HB	HOSE BIB	SIM	SIMILAR
		INCL.	INCLUDE (D) (ING)	SD	STORM DRAIN
		I.D.	INSIDE DIAMETER	S	SOUTH
		INV	INVERT	SFCMU	SPLIT FACE CONC. MASONRY UNIT
		JT	JOINT	SPEC.	SPECIFICATION (S)
		LF	LINEAR FOOT	SQ.	SQUARE
		LP	LOW POINT	S.S.	STAINLESS STEEL
		MH	MANHOLE	STD.	STANDARD
		MFR.	MANUFACTURE (R)	ST	STEEL
		MAS	MASONRY	THK	THICK
		MTL	METAL	T&G	TONGUE AND GROOVE
		MAX	MAXIMUM	T.O.C.	TOP OF CURB
		MED	MEDIUM	TS	TOP OF STEP
		MTL	METAL	T.O.W.	TOP OF WALL
		MIN	MINIMUM	TYP.	TYPICAL
		MISC	MISCELLANEOUS	U.O.N.	UNLESS OTHERWISE NOTED
		NO.	NUMBER	V.I.F.	VERIFY IN FIELD
		NOM	NOMINAL	VERT.	VERTICAL
		N	NORTH	W/	WITH
		N.I.C.	NOT IN CONTRACT	W/O	WITHOUT
		N.T.S.	NOT TO SCALE	WD.	WOOD
		O/C	ON CENTER	WWF	WELDED WIRE FABRIC
		O.D.	OUTSIDE DIAMETER		



VICINITY MAP

NORTH ▲
1" = 2,000'

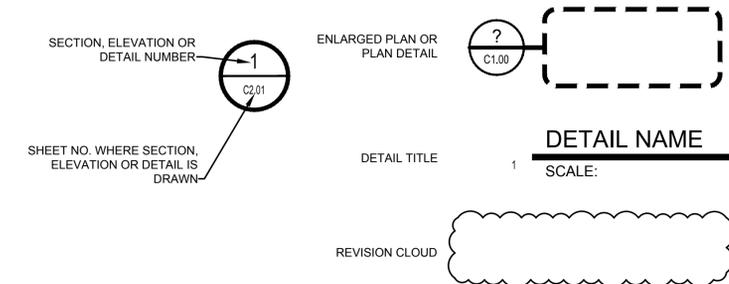
SHEET INDEX

SHEET NO.	SHEET TITLE
C0.00	COVER SHEET
C1.02	COMPILED EXISTING CONDITIONS
C1.10	DEMOLITION PLAN
C2.00	EROSION & SEDIMENT CONTROL PLAN PH1
C2.01	EROSION & SEDIMENT CONTROL PLAN PH2
C2.10	EROSION & SEDIMENT CONTROL NOTES
C2.11	EROSION & SEDIMENT CONTROL DETAILS
C3.00	SITE LAYOUT & MATERIALS PLAN
C5.00	GRADING AND DRAINAGE PLAN
C5.10	DRAINAGE PROFILE & SCHEDULE
C7.00	SITE DETAILS
C7.20	STORM DRAIN DETAILS
C8.00	DRAINAGE AREA MAP
L3.00	ILLUSTRATIVE SECTIONS
L5.00	PLANTING PLAN OVERVIEW
L5.11	PLANTING ENLARGEMENTS
L5.12	PLANTING ENLARGEMENTS
L5.20	PLANTING DETAILS & SCHEDULE

Site Data:

- OWNER / DEVELOPER:**
CITY OF RICHMOND, DEPARTMENT OF PUBLIC UTILITIES
C/O BILL BOSTON, CAPITAL IMPROVEMENT PROGRAM MANAGER
900 E. BROAD ST., RICHMOND, VA 23219
P: (804) 646-8161
E: WILLIAM.BOSTON2@RVA.GOV
- ENGINEER:**
VHB, C/O CHARLENE HARPER, PE
5701 GROVE AVE, RICHMOND, VA 23226
P: (804) 340-7500
E: CHARPER@VHB.COM
- PARCEL ID(S):**
XX
- ADDRESSES:**
XX
- ZONING:**
XX
- USE:**
EXISTING: COMMERCIAL & PUBLIC ROAD R.O.W.
PROPOSED: COMMERCIAL & PUBLIC ROAD R.O.W.
- AREAS:**
PROJECT AREA: 0.50 ACRES (PUBLIC R/W)
0.02 ACRES (PRIVATE)
- UTILITIES:**
WATER: CITY OF RICHMOND
SANITARY: CITY OF RICHMOND
GAS: CITY OF RICHMOND
ELECTRIC: DOMINION POWER
- SURVEY:**
COMBINATION OF FIELD SURVEY BY NYFELER ASSOCIATES & CITY GIS RECORD DATA

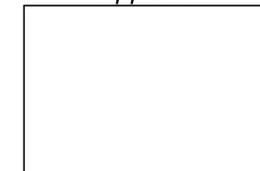
Symbol Legend:



General Notes:

- CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 811 AND HAVE ALL UNDERGROUND UTILITIES MARKED PRIOR TO ANY LAND DISTURBANCE OPERATIONS. IN ADDITION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE ALL PRIVATE UNDERGROUND UTILITIES MARKED PRIOR TO ANY DEMOLITION OR LAND DISTURBANCE OPERATIONS.
- CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE AND REPORT ALL DISCREPANCIES TO THE ENGINEER OF RECORD.
- LAYOUT - CONTRACTOR SHALL VERIFY ALL LAYOUT DATA PROVIDED. CONTRACTOR SHALL NOTIFY HG OF ANY DISCREPANCIES. NOTIFY HG DESIGN STUDIO AT THE COMPLETION OF FIELD STAKING FOR REVIEW AND COORDINATION.

Approval:



FULTON HILL - GREEN STREET

GOVERNMENT ROAD, RICHMOND, VA

REVISIONS:

No.	Description	Date

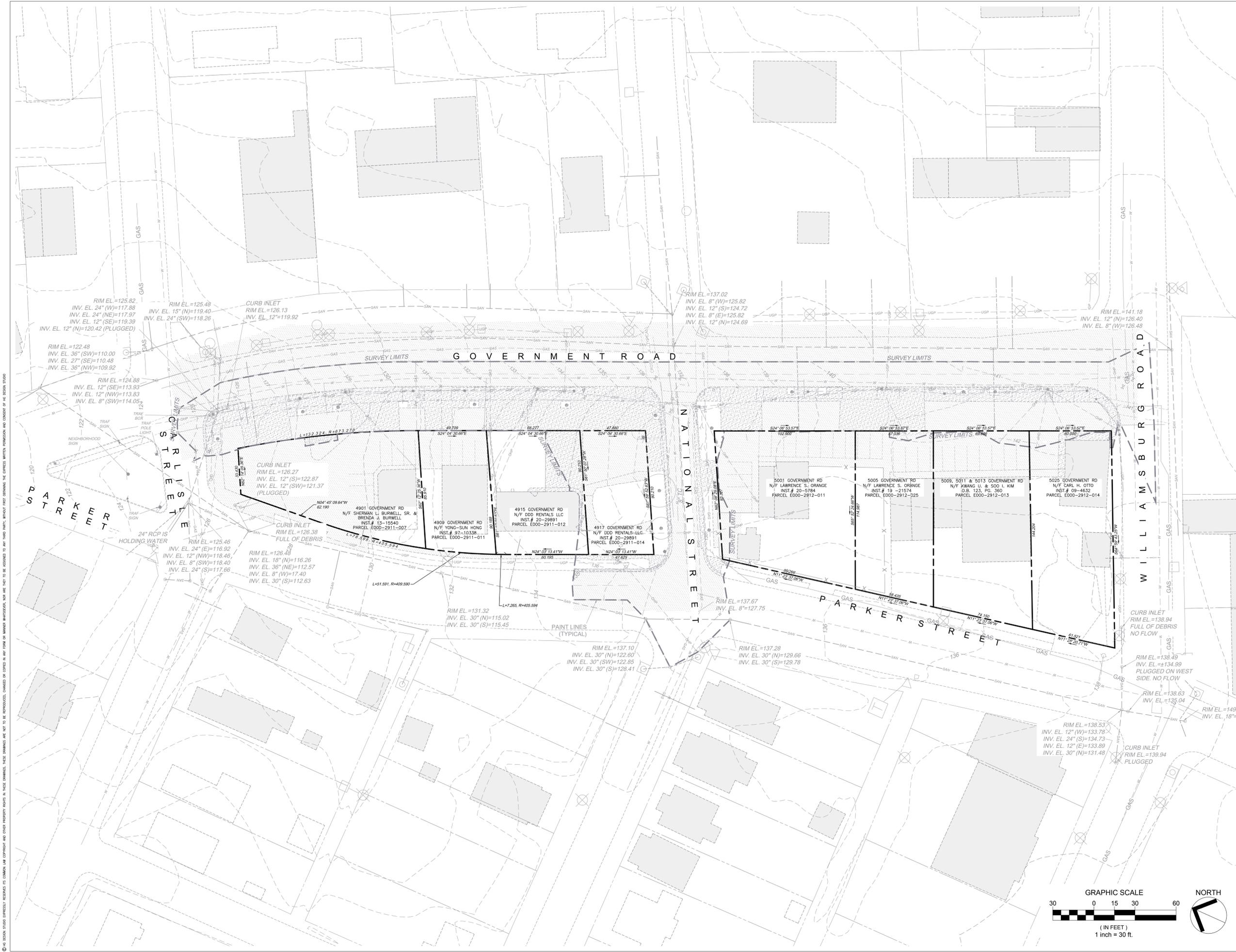
COVER SHEET

Designed By: CAH
 Drawn By: DSN
 Checked By: CAH
 QA/QC By: ELG
 Date: OCTOBER 12, 2022
 Project Number: M21012
 Sheet Number:

C0.00



115 South 15th Street
Suite 200
Richmond, VA 23219
804.343.7100



FULTON HILL - GREEN STREET

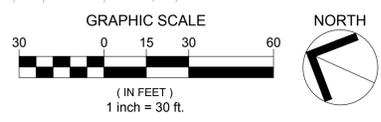
GOVERNMENT ROAD, RICHMOND, VA

REVISIONS:

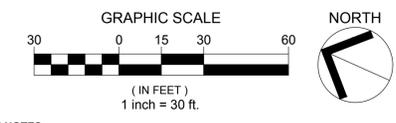
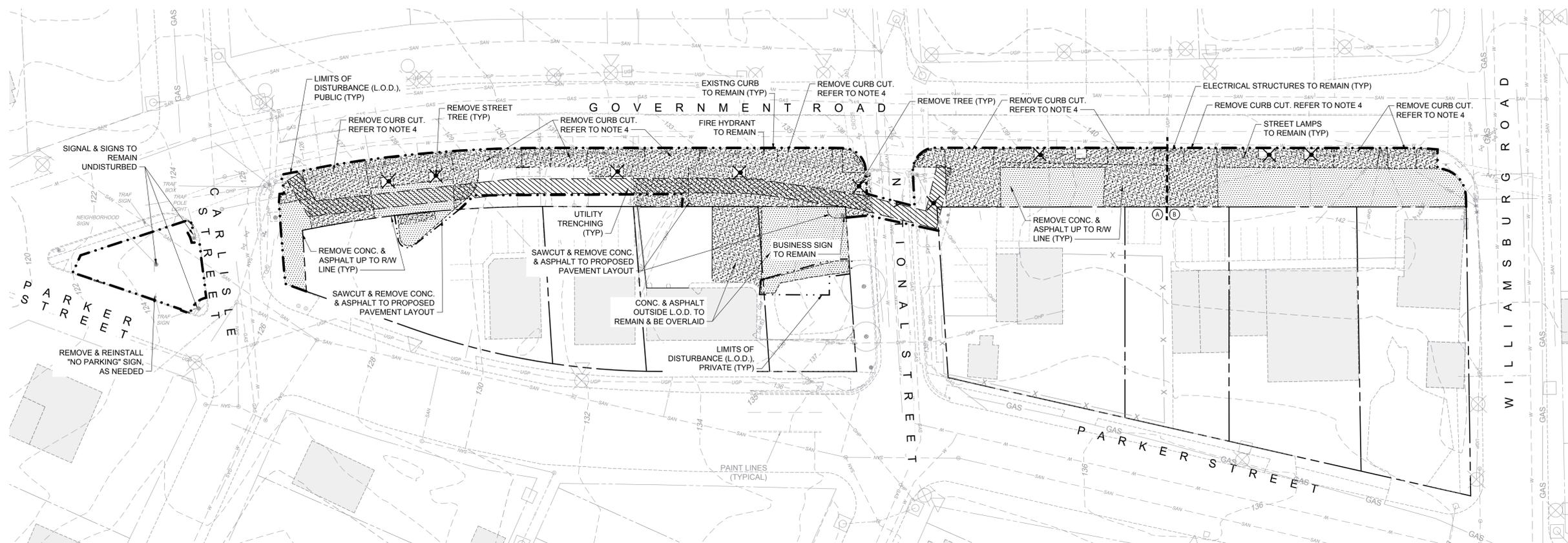
No.	Description	Date

COMPILED EXISTING CONDITIONS

Designed By:	CAH
Drawn By:	DSN
Checked By:	CAH
QA/QC By:	ELG
Date:	OCTOBER 12, 2022
Project Number:	M21012
Sheet Number:	C1.02



© 2022 VHB CORPORATION. ALL RIGHTS RESERVED. THIS DOCUMENT IS THE PROPERTY OF VHB CORPORATION. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. ANY REPRODUCTION OR TRANSMISSION OF THIS DOCUMENT IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION AND CONSENT OF VHB CORPORATION, IS STRICTLY PROHIBITED.



- DEMOLITION NOTES**
- REFER TO EROSION AND SEDIMENT CONTROL PLANS FOR SEQUENCE OF CONSTRUCTION.
 - DEMOLITION CANNOT COMMENCE UNTIL ALL PRELIMINARY E&S MEASURES ARE IN PLACE, AND APPROVED BY THE ENVIRONMENTAL INSPECTOR.
 - ITEMS INDICATED ON THE PLAN REPRESENT GENERAL EXTENT OF DEMOLITION. DEMOLISH ALL ELEMENTS WITHIN THE LIMITS OF DISTURBANCE TO THE EXTENT NECESSARY TO ACCOMMODATE PROPOSED IMPROVEMENTS AND PROVIDE SMOOTH TRANSITIONS BETWEEN EXISTING AND PROPOSED ELEMENTS.
 - PROPERTIES WILL CONTINUE TO OPERATE DURING CONSTRUCTION. COORDINATE CURB CUT CLOSURES TO ENSURE CONTINUOUS ACCESS TO BUSINESS OPERATIONS. AREA A OF THE 5000 BLOCK MUST BE COMPLETED PRIOR TO DEMOLITION OF AREA B. DURING CLOSURES, BUSINESSES MUST REMAIN ACCESSIBLE TO PEDESTRIANS AT ALL TIMES.
 - DISPOSE OF ALL REMOVED MATERIAL OFF SITE IN AN APPROVED/PERMITTED MANNER UNLESS OTHERWISE SPECIFIED. SECURELY STORE AND PROTECT FROM DAMAGE ANY ITEMS TO BE REINSTALLED OR RETURNED TO OWNER.
 - INFORM OWNER AND ENGINEER OF ANY UTILITIES FOUND UNEXPECTEDLY PRIOR TO ACTION.
 - SAWCUT ALL HARDSCAPE SURFACES TO BE REMOVED AT THE EDGES OF AREA TO BE REMOVED. SAWCUT CONCRETE AT/T/O NEAREST JOINT. SAWCUTS SHALL BE STRAIGHT, SQUARE AND TRUE.
 - WHERE ASPHALT IS TO BE REPLACED AND/OR WHERE PROPOSED ASPHALT ABUTS TO EXISTING ASPHALT, STEP SAWCUT FROM LAYER TO LAYER TO ALLOW FOR A STAGGERED SEAM. REFER TO DETAIL 3 ON SHEET C7.00.
 - CONDUCT DEMOLITION OPERATION IN A MANNER THAT WILL PREVENT DAMAGE TO ADJACENT STRUCTURES, UTILITIES, PAVEMENTS, AND OTHER FACILITIES TO REMAIN. REPAIR ANY DAMAGE TO IMPROVEMENTS TO REMAIN CAUSED BY CONSTRUCTION OPERATIONS AT NO EXPENSE TO THE OWNER.
 - PHASE SIDEWALK DEMOLITION TO ALLOW FOR CONTINUOUS PEDESTRIAN CIRCULATION AROUND/PAST THE SITE AT ALL TIMES. INSTALL PEDESTRIAN SIGNS AT NEAREST CROSSWALK TO DIVERT FOOT TRAFFIC.
 - COORDINATE ANY REQUIRED UTILITY OUTAGES WITH THE OWNER AND UTILITY PROVIDER. COORDINATE ANY TRAFFIC DISRUPTIONS WITH THE OWNER AND AUTHORITY HAVING JURISDICTION.
 - MAINTAIN MINIMUM REQUIRED COVER OVER EXISTING UTILITIES AT ALL TIMES DURING DEMOLITION AND CONSTRUCTION.

LEGEND:

	MISCELLANEOUS DEMOLITION		LIMITS OF DISTURBANCE (PUBLIC, R/W ONLY)
	CONCRETE DEMOLITION		LIMITS OF DISTURBANCE (PRIVATE)
	ASPHALT DEMOLITION		MISCELLANEOUS DEMOLITION

FULTON HILL - GREEN STREET

GOVERNMENT ROAD, RICHMOND, VA

REVISIONS:

No.	Description	Date

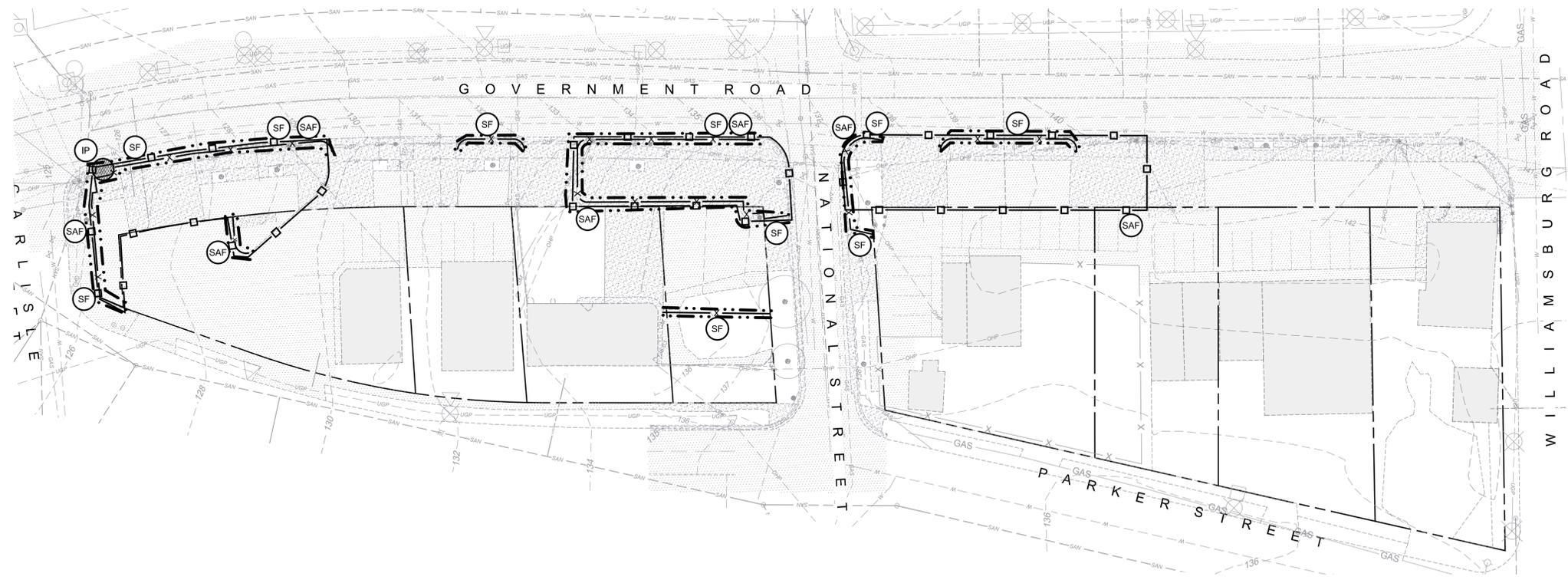
DEMOLITION PLAN

Designed By:	CAH
Drawn By:	DSN
Checked By:	CAH
QA/QC By:	ELG
Date:	OCTOBER 12, 2022
Project Number:	M21012
Sheet Number:	

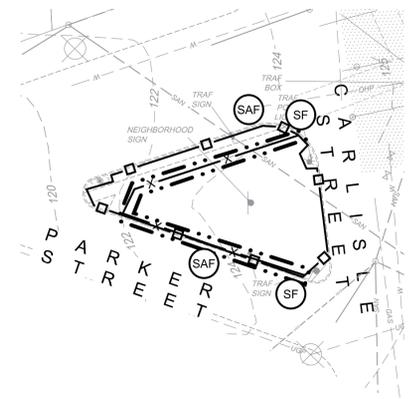
© 2022 HOK DESIGN STUDIO. ALL RIGHTS RESERVED. THIS DOCUMENT IS THE PROPERTY OF HOK DESIGN STUDIO. IT IS TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION AND CONSENT OF HOK DESIGN STUDIO.



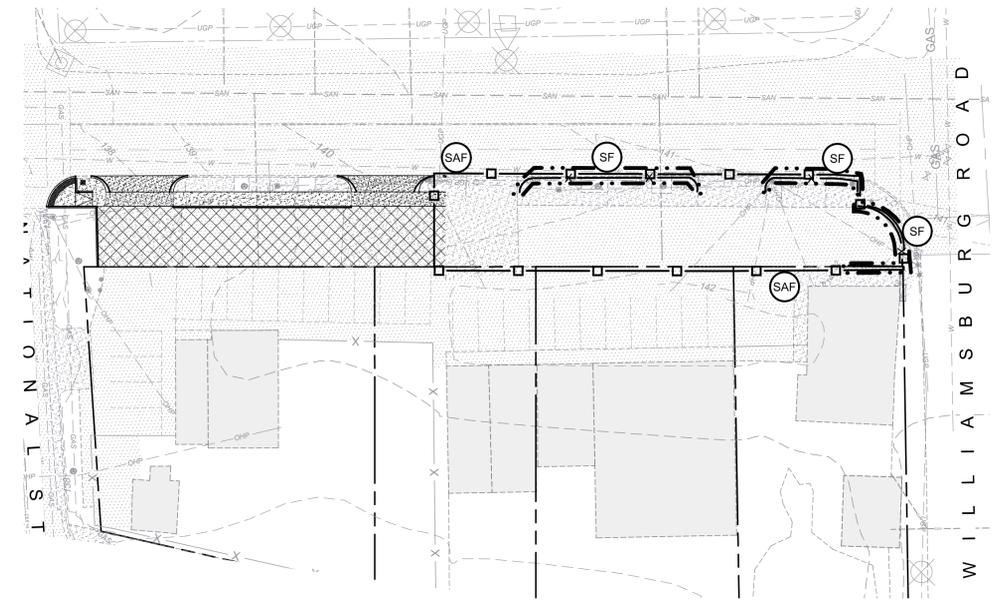
115 South 15th Street
Suite 200
Richmond, VA 23219
804.343.7100



PHASE 1A



PHASE 1A



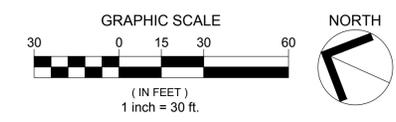
PHASE 1B

PHASE 1 SEQUENCE OF CONSTRUCTION:

1. SCHEDULE PRE-CONSTRUCTION CONFERENCE WITH ENGINEER AND ENVIRONMENTAL INSPECTOR AT LEAST 72 HOURS BEFORE BEGINNING CONSTRUCTION.
2. INSTALL CHAIN-LINK PERIMETER SAFETY FENCE WITH GATES AS SHOWN. SAFETY FENCE WITH WEIGHTED ANCHORS IS PREFERRED FOR HARDSCAPE SURFACES. INSTALL SIGNAGE TO ROUTE PEDESTRIANS AROUND SITE.
3. INSTALL INLET PROTECTION AS SHOWN.
4. INSTALL SILT FENCE AS SHOWN. ONLY DEMO SIDEWALK NECESSARY TO INSTALL SILT FENCE.
5. AFTER EROSION AND SEDIMENT CONTROL MEASURES ARE IN PLACE, BEGIN PHASE 2 WITH PERMISSION OF INSPECTOR.

EROSION CONTROL LEGEND

- INLET PROTECTION, 3.07 - 1EA
- SILT FENCE, 3.05 - 932 LF
- SAFETY FENCE, 3.01 - 1,254 LF
- LIMITS OF DISTURBANCE - 0.05 AC.



FULTON HILL - GREEN STREET

GOVERNMENT ROAD, RICHMOND, VA

REVISIONS:

No.	Description	Date

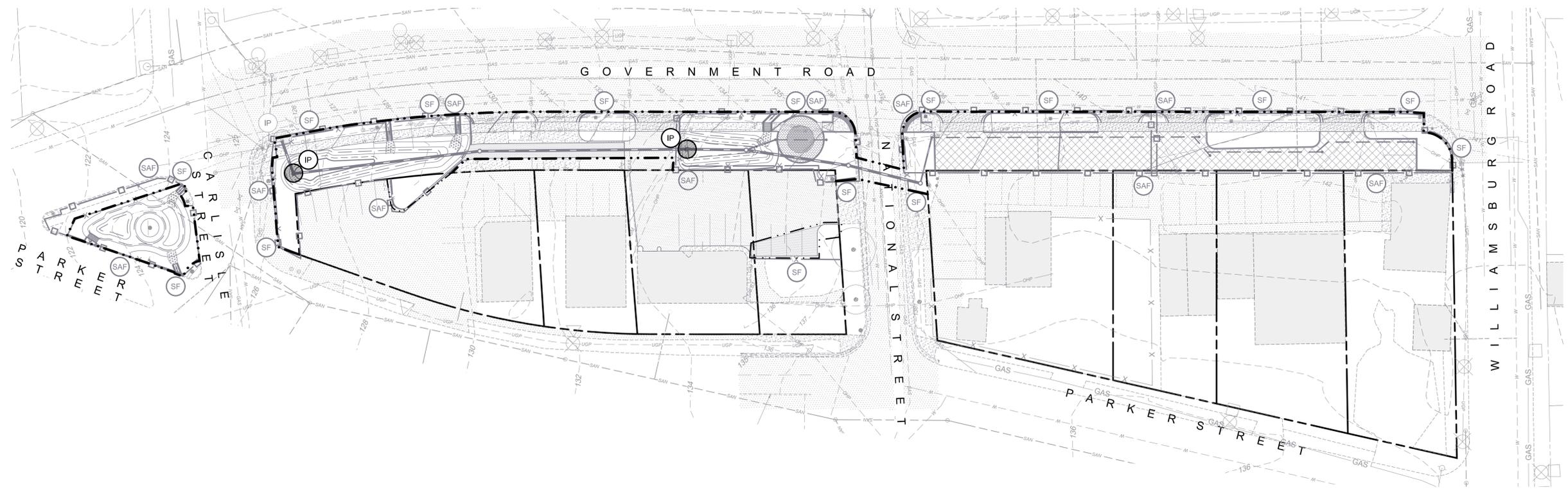
EROSION & SEDIMENT CONTROL PLAN PH1

Designed By:	CAH
Drawn By:	DSN
Checked By:	CAH
QA/QC By:	ELG
Date:	OCTOBER 12, 2022
Project Number:	M21012
Sheet Number:	C2.00

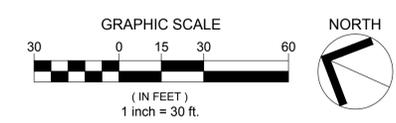
© 2022 VHB GROUP, INC. ALL RIGHTS RESERVED. THIS DOCUMENT IS THE PROPERTY OF VHB GROUP, INC. AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION AND CONSENT OF VHB GROUP, INC.



115 South 15th Street
Suite 200
Richmond, VA 23219
804.343.7100



© 2022 VHB GROUP, INC. ALL RIGHTS RESERVED. THIS DOCUMENT IS THE PROPERTY OF VHB GROUP, INC. AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION AND CONSENT OF VHB GROUP, INC.



PHASE 2 SEQUENCE OF CONSTRUCTION:

1. BEGIN SITE DEMOLITION.
2. BEGIN SITE CONSTRUCTION.
3. ENSURE ALL RUNOFF FROM SITE IS DIRECTED TO AN EROSION AND SEDIMENT CONTROL DEVICE DOWNSTREAM.
4. UTILIZE DEWATERING BAG AND PUMP TO REMOVE SEDIMENT LADEN WATER FROM SITE. MOVE AS NEEDED TO TREAT PONDING WATER.
5. ONCE CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED, AND ONLY WITH THE APPROVAL OF THE ENVIRONMENTAL INSPECTOR, REMOVE EROSION AND SEDIMENT CONTROL (ESC) MEASURES. STABILIZE ESC MEASURE AREAS AS NEEDED.

EROSION CONTROL LEGEND

- IP INLET PROTECTION, 3.07 - 1EA
PHASE 2 - 2 EA.
- SF SILT FENCE, 3.05 - 932 LF
- SAF SAFETY FENCE, 3.01 - 1,254 LF
- LIMITS OF DISTURBANCE - 0.05 AC.
PHASE 2 - 0.52 AC.

**FULTON HILL -
GREEN STREET**

GOVERNMENT ROAD, RICHMOND, VA

REVISIONS:

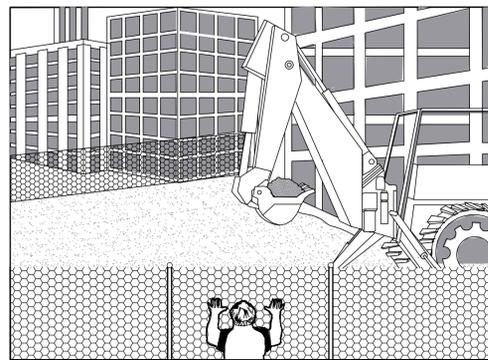
No.	Description	Date

**EROSION & SEDIMENT
CONTROL PLAN PH2**

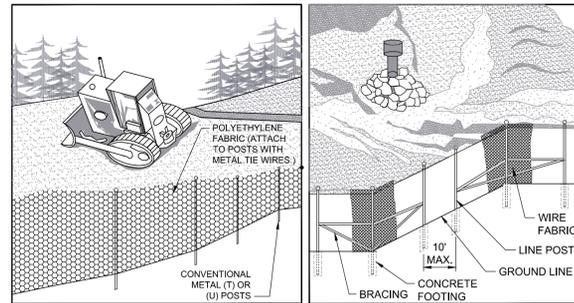
Designed By: CAH
 Drawn By: DSN
 Checked By: CAH
 QA/QC By: ELG
 Date: OCTOBER 12, 2022
 Project Number: M21012
 Sheet Number:

C2.01

SAFETY FENCE



PERSPECTIVE VIEW



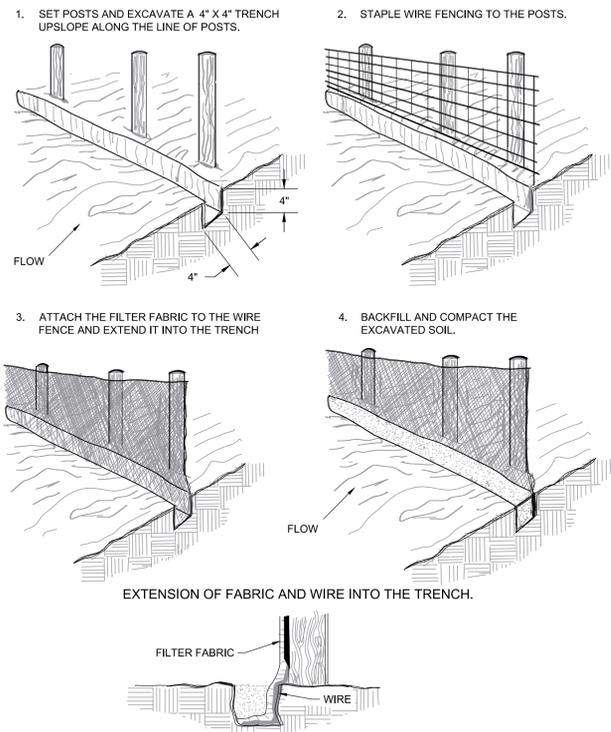
PERSPECTIVE VIEW
PLASTIC FENCE

PERSPECTIVE VIEW
METAL FENCE

SOURCE: ADAPTED FROM CONVEYED PLASTICS AND VDOT ROAD AND BRIDGE STANDARDS PLATE 3.01-1

SAF SAFETY FENCE 3.01

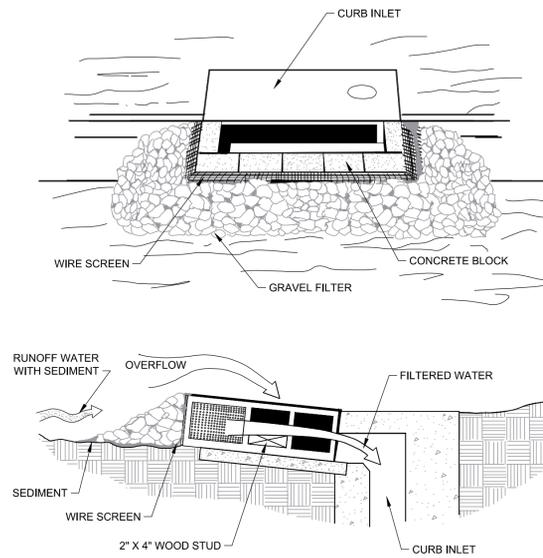
CONSTRUCTION OF A SILT FENCE (WITH WIRE SUPPORT)



SOURCE: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood & Wyant PLATE 3.05-1

SF SILT FENCE 3.05

BLOCK & GRAVEL CURB INLET SEDIMENT FILTER



SPECIAL APPLICATION

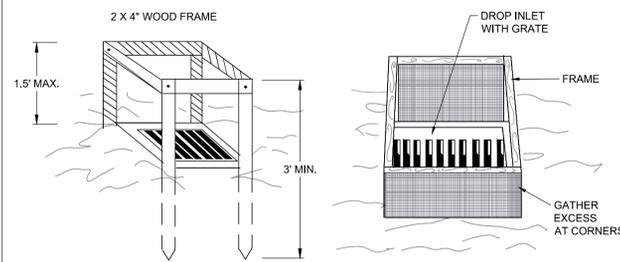
THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE AN OVERFLOW CAPABILITY IS NECESSARY TO PREVENT EXCESSIVE PONDING IN FRONT OF THE STRUCTURE.

* GRAVEL SHALL BE VDOT #3, #357 OR #5 COARSE AGGREGATE

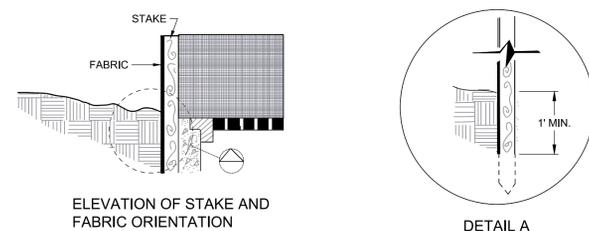
SOURCE: VA. DSWC PLATE 3.07-8

IP CURB INLET PROTECTION 3.07

SILT FENCE DROP INLET PROTECTION



PERSPECTIVE VIEWS



ELEVATION OF STAKE AND FABRIC ORIENTATION

DETAIL A

SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPE NO GREATER THAN 5%) WHERE THE INLET SHEET OR OVERLAND FLOWS (NOT EXCEEDING 1 C.F.S.) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

SOURCE: N.C. Erosion and Sediment Control Planning and Design Manual, 1988 PLATE 3.07-1

IP DROP INLET PROTECTION 3.07



115 South 15th Street
Suite 200
Richmond, VA 23219
804.343.7100

FULTON HILL - GREEN STREET

GOVERNMENT ROAD, RICHMOND, VA

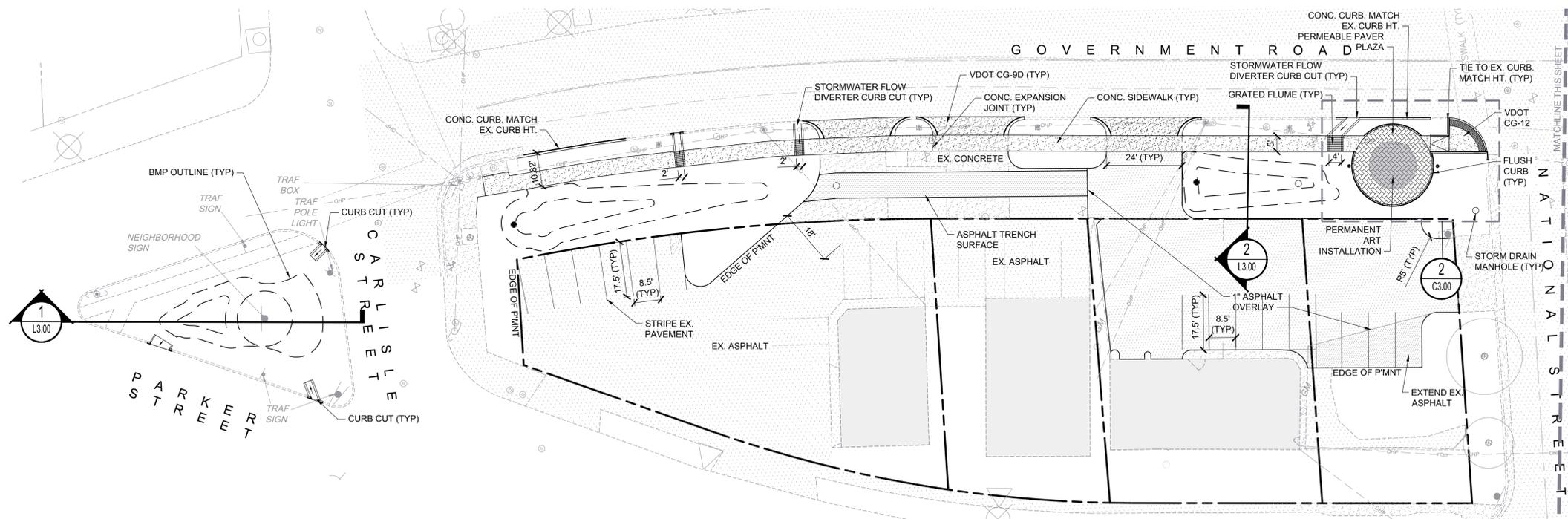
REVISIONS:

No.	Description	Date

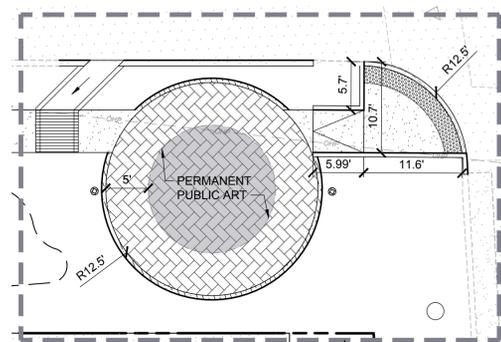
EROSION & SEDIMENT CONTROL DETAILS

Designed By: CAH
 Drawn By: DSN
 Checked By: CAH
 QA/QC By: ELG
 Date: OCTOBER 12, 2022
 Project Number: M21012
 Sheet Number: C2.11

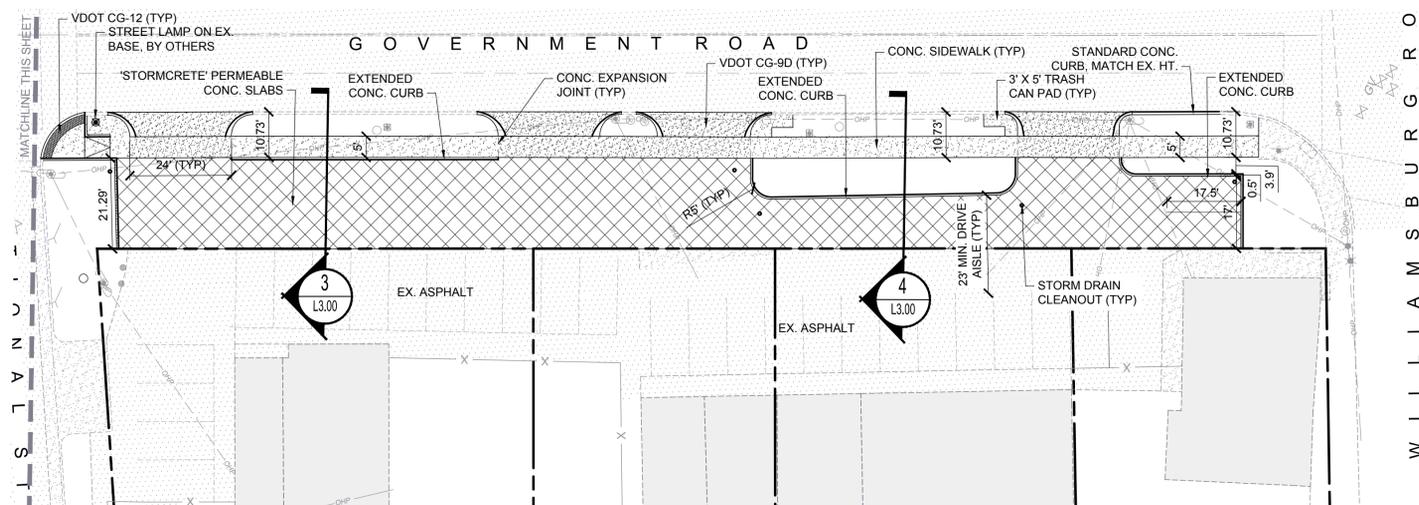
© 16 DESIGN STUDIO. EXISTING IS COMMON. USE CONTOUR AND OTHER PROPERTY BOUNDS IN THESE DRAWINGS. THESE DRAWINGS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY, WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN PERMISSION AND CONSENT OF THE DESIGN STUDIO.



4900 BLOCK



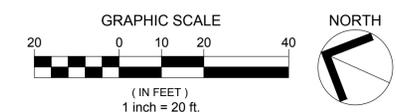
PLAZA INSET
SCALE: 1" = 10'



5000 BLOCK

MATERIALS LEGEND

- STANDARD DUTY ASPHALT
- 1" ASPHALT OVERLAY
- STANDARD DUTY CONCRETE
- HEAVY DUTY CONCRETE
- 'STORMCRETE' PERVIOUS CONCRETE
- PERMEABLE PAVERS



FULTON HILL - GREEN STREET

GOVERNMENT ROAD, RICHMOND, VA

REVISIONS:

No.	Description	Date

SITE LAYOUT & MATERIALS PLAN

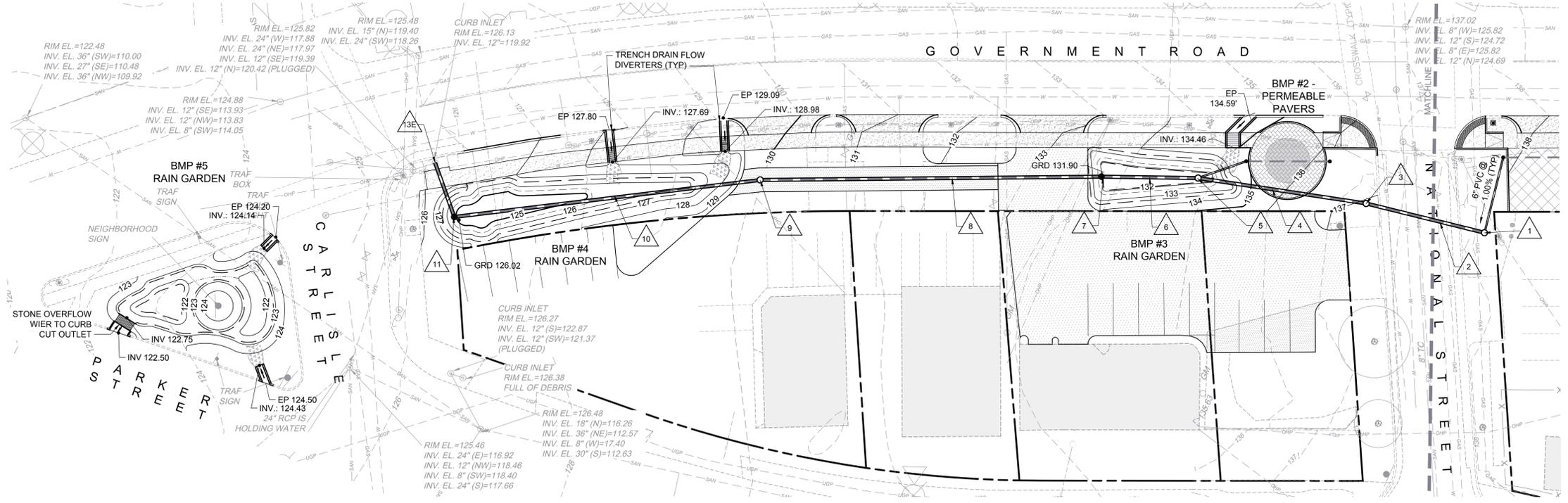
Designed By:	CAH
Drawn By:	DSN
Checked By:	CAH
QA/QC By:	ELG
Date:	OCTOBER 12, 2022
Project Number:	M21012
Sheet Number:	C3.00

C3.00

© 2022 VHB GROUP, INC. ALL RIGHTS RESERVED. THIS DOCUMENT IS THE PROPERTY OF VHB GROUP, INC. AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE EXPRESS WRITTEN PERMISSION AND CONSENT OF VHB GROUP, INC.



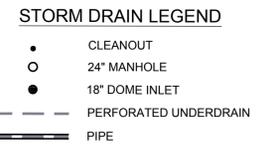
115 South 15th Street
Suite 200
Richmond, VA 23219
804.343.7100



4900 BLOCK

Structure Table			
STRUCTURE #	TOP	STRUCTURE HEIGHT	DESCRIPTION
1	138.17	7.84'	24" MANHOLE
3	137.02	8.02'	24" MANHOLE
5	132.00	5.52'	24" MANHOLE
7	132.40	6.34'	18" DOME INLET
9	129.71	8.37'	24" MANHOLE
11	125.52	5.30'	18" DOME INLET
21	134.88	3.13'	6" CLEANOUT
CO	137.97	3.52'	6" CLEANOUT

Pipe Table							
PIPE NAME	DIA	FROM - TO	UPSTREAM INVERT	DOWNSTREAM INVERT	SLOPE	LENGTH	DESCRIPTION
2	12"	1 - 3	130.33	129.10	3.00%	40.85 LF	DIP
4	12"	3 - 5	129.00	126.58	4.25%	56.99 LF	RCP
6	12"	5 - 7	126.48	126.16	1.00%	32.38 LF	RCP
8	12"	7 - 9	126.06	121.44	4.04%	114.41 LF	RCP
10	12"	9 - 11	121.34	120.31	1.00%	103.26 LF	RCP
12	12"	11 - 13E	120.21	120.02	1.00%	19.14 LF	RCP
22	6"	21 - 5	131.74	127.30	26.02%	17.08 LF	PVC
UDO	6"	CO - 1	134.45	133.90	2.13%	25.87 LF	PVC



FULTON HILL - GREEN STREET

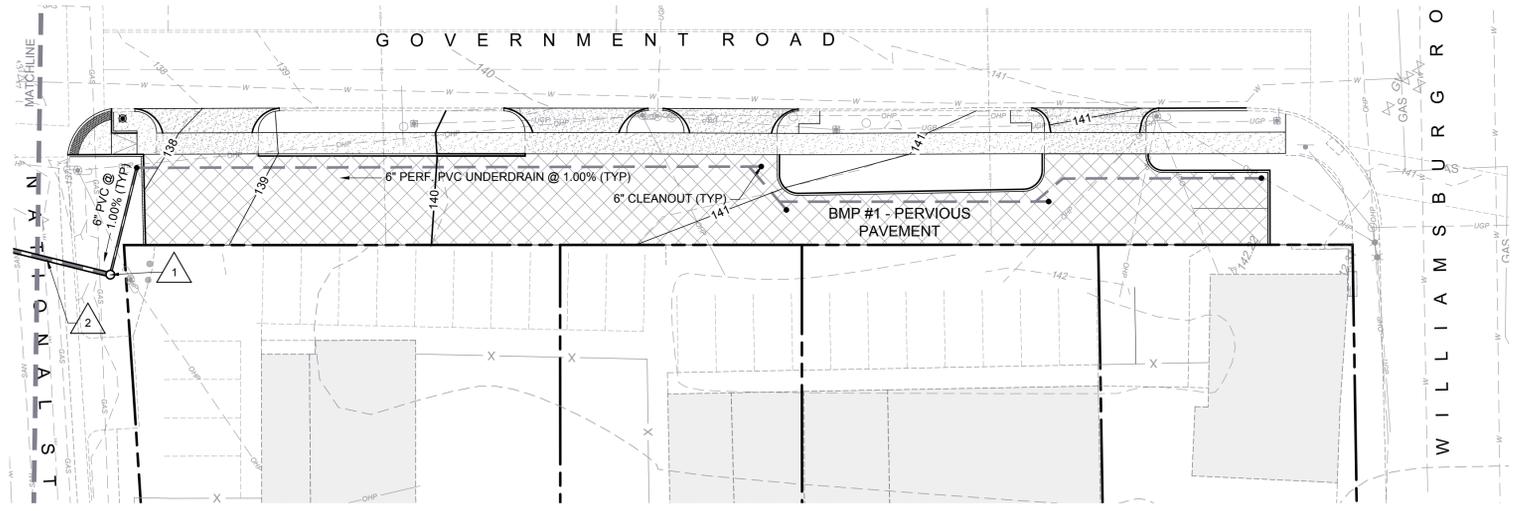
GOVERNMENT ROAD, RICHMOND, VA

REVISIONS:

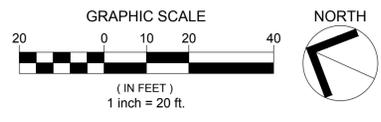
No.	Description	Date

GRADING AND DRAINAGE PLAN

Designed By: CAH
 Drawn By: DSN
 Checked By: CAH
 QA/QC By: ELG
 Date: OCTOBER 12, 2022
 Project Number: M21012
 Sheet Number:



5000 BLOCK

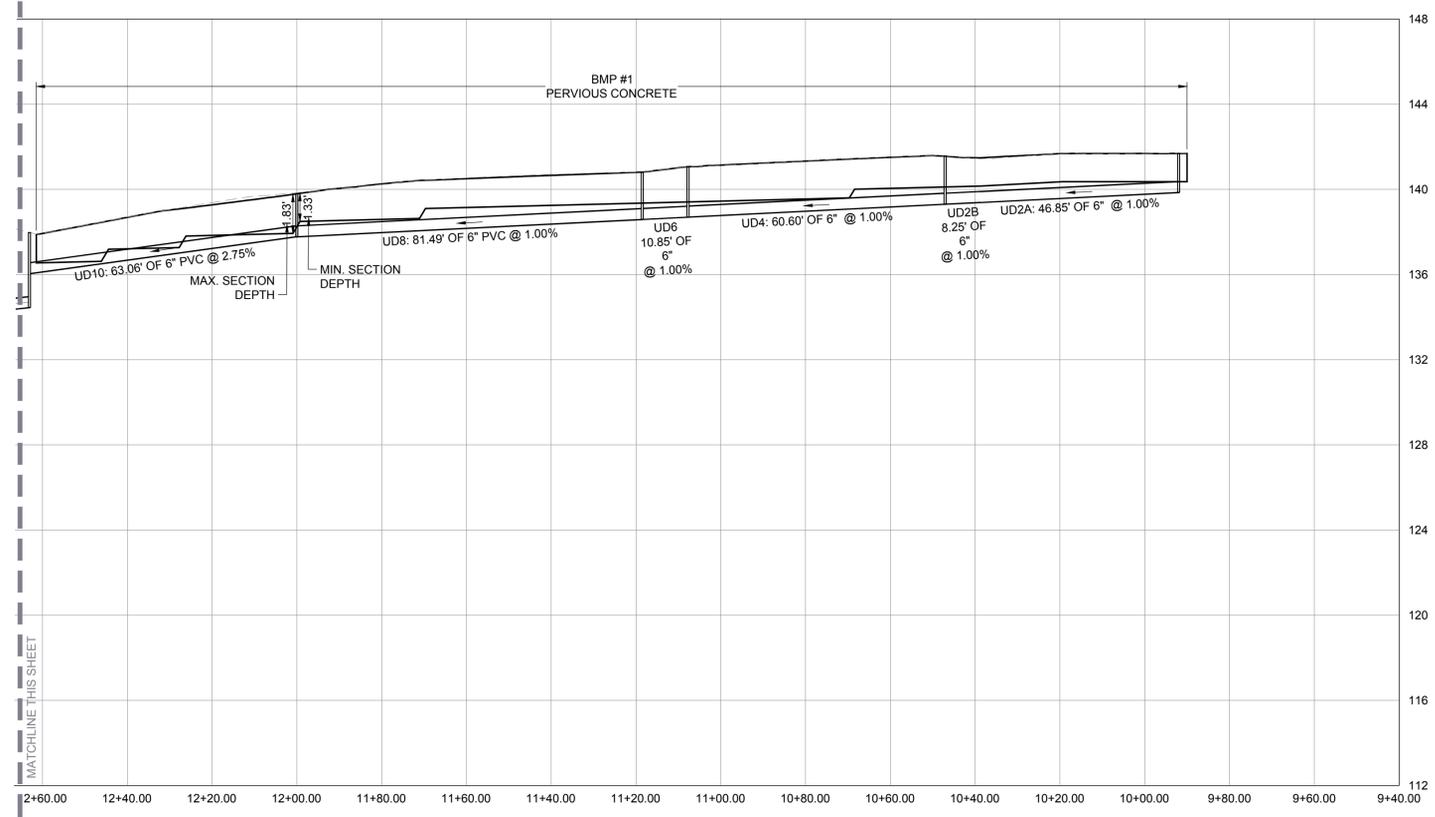


C5.00

© 2022 VHB GROUP, INC. ALL RIGHTS RESERVED. THIS DOCUMENT IS THE PROPERTY OF VHB GROUP, INC. AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE EXPRESS WRITTEN PERMISSION AND CONSENT OF VHB GROUP, INC.



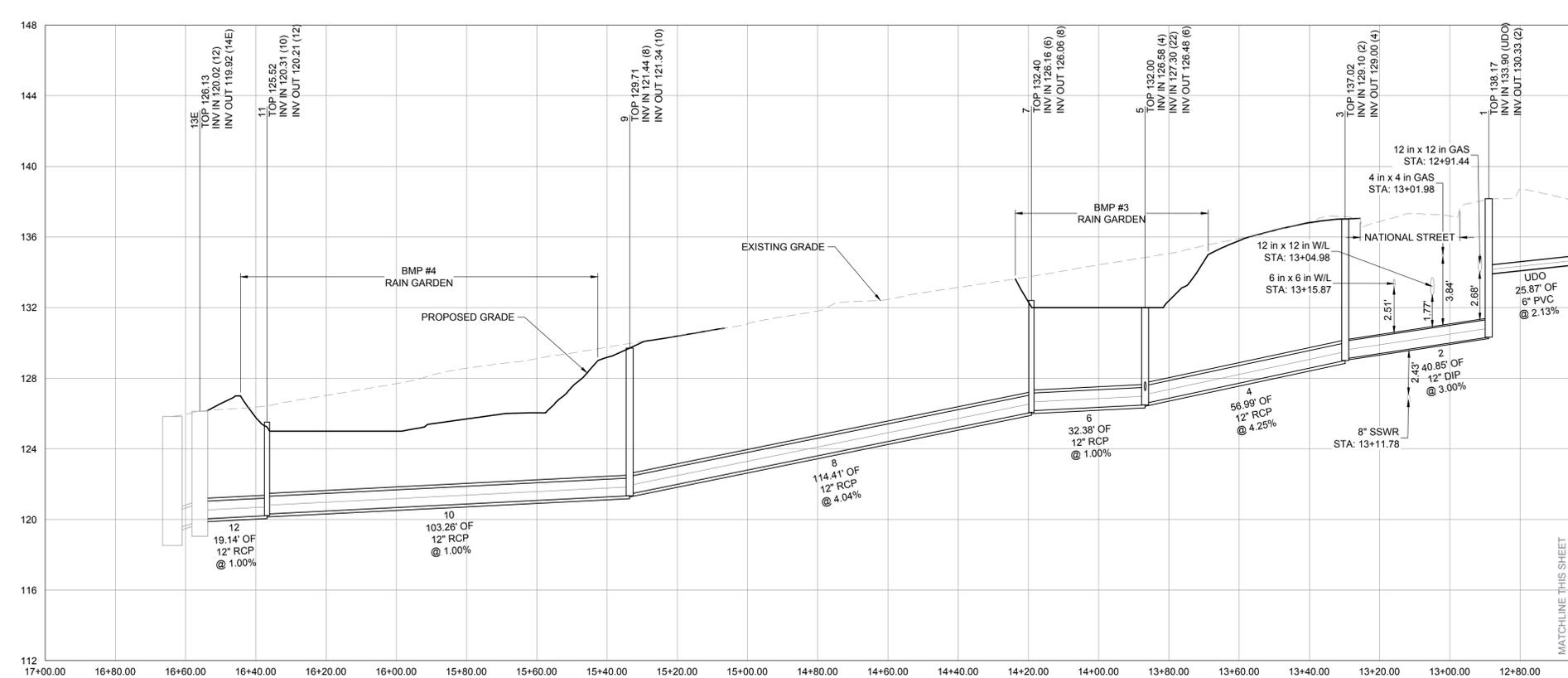
115 South 15th Street
Suite 200
Richmond, VA 23219
804.343.7100



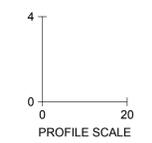
Structure Table			
STRUCTURE #	TOP	STRUCTURE HEIGHT	DESCRIPTION
1	138.17	7.84'	24" MANHOLE
3	137.02	8.02'	24" MANHOLE
5	132.00	5.52'	24" MANHOLE
7	132.40	6.34'	18" DOME INLET
9	129.71	8.37'	24" MANHOLE
11	125.52	5.30'	18" DOME INLET
21	134.88	3.13'	6" CLEANOUT
CO	137.97	3.52'	6" CLEANOUT

Pipe Table							
PIPE NAME	DIA	FROM - TO	UPSTREAM INVERT	DOWNSTREAM INVERT	SLOPE	LENGTH	DESCRIPTION
2	12"	1 - 3	130.33	129.10	3.00%	40.85 LF	DIP
4	12"	3 - 5	129.00	126.58	4.25%	56.99 LF	RCP
6	12"	5 - 7	126.48	126.16	1.00%	32.38 LF	RCP
8	12"	7 - 9	126.06	121.44	4.04%	114.41 LF	RCP
10	12"	9 - 11	121.34	120.31	1.00%	103.26 LF	RCP
12	12"	11 - 13E	120.21	120.02	1.00%	19.14 LF	RCP
22	6"	21 - 5	131.74	127.30	26.02%	17.08 LF	PVC
UDO	6"	CO - 1	134.45	133.90	2.13%	25.87 LF	PVC

PERVIOUS CONCRETE PROFILE



STORM DRAIN PROFILE



FULTON HILL - GREEN STREET

GOVERNMENT ROAD, RICHMOND, VA

REVISIONS:

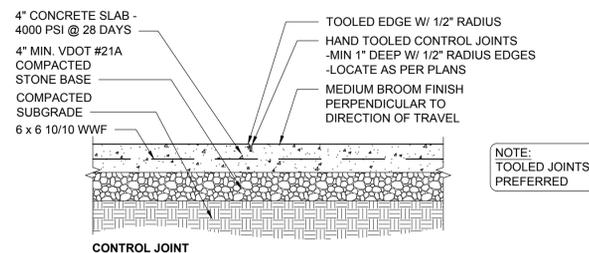
No.	Description	Date

DRAINAGE PROFILE & SCHEDULE

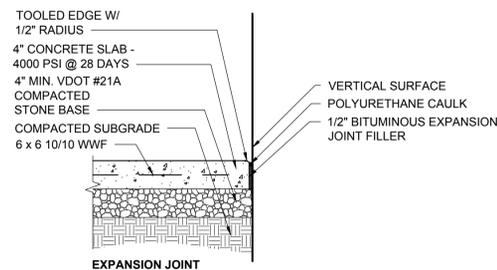
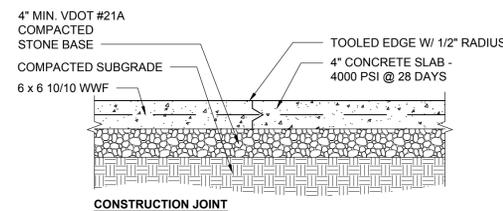
Designed By: CAH
 Drawn By: DSN
 Checked By: CAH
 QA/QC By: ELG
 Date: OCTOBER 12, 2022
 Project Number: M21012
 Sheet Number:

C5.10

© 2022 VHB GROUP, INC. ALL RIGHTS RESERVED. THIS DOCUMENT IS THE PROPERTY OF VHB GROUP, INC. AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION AND CONSENT OF VHB GROUP, INC.



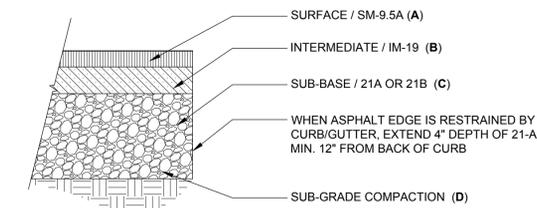
NOTE:
TOOLED JOINTS
PREFERRED



SECTION
CONCRETE SIDEWALK

SCALE: NTS

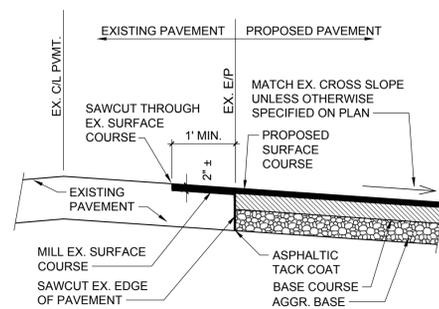
1



ASPHALT PAVING

COURSE/VDOT SPECIFICATIONS	HEAVY DUTY	LIGHT DUTY
SURFACE/SM-9.5A (A)	1.5"	2.0"
INTERMEDIATE/IM-19 (B)	2.5"	-
SUB-BASE/21A OR 21B (C)	8.0"	8.0"
SUB-GRADE COMPACTION (D)	*98%	*95%

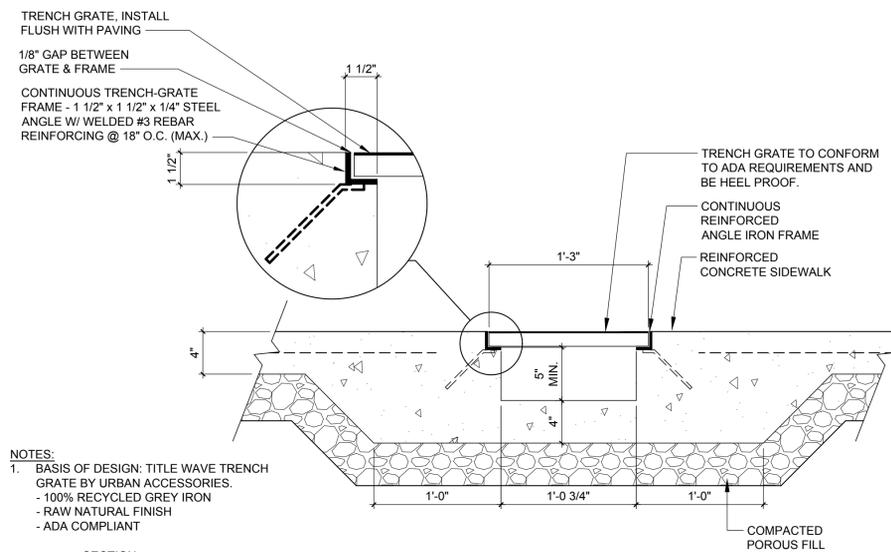
*MAXIMUM DRY DENSITY (ASTM D698, METHOD D)



SECTION
EXISTING TO PROPOSED ASPHALT JOINT

SCALE: NTS

3



- NOTES:
- BASIS OF DESIGN: TITLE WAVE TRENCH GRATE BY URBAN ACCESSORIES.
 - 100% RECYCLED GREY IRON
 - RAW NATURAL FINISH
 - ADA COMPLIANT

SECTION
GRATED FLUME IN SIDEWALK

SCALE: NTS

4

FULTON HILL - GREEN STREET

GOVERNMENT ROAD, RICHMOND, VA

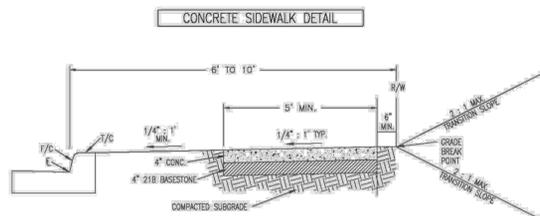
REVISIONS:

No.	Description	Date

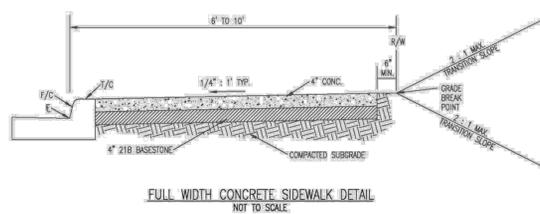
SITE DETAILS

REFER TO VDOT STANDARD DETAILS FOR:
- CG-9D STANDARD GUTTER ENTRANCE
- CG-12 TYPE B DETECTABLE WARNING SURFACE

Designed By:	CAH
Drawn By:	DSN
Checked By:	CAH
QA/QC By:	ELG
Date:	OCTOBER 12, 2022
Project Number:	M21012
Sheet Number:	



MINIMUM 5' WIDTH CONCRETE SIDEWALK DETAIL
NOT TO SCALE



FULL WIDTH CONCRETE SIDEWALK DETAIL
NOT TO SCALE

NOTES - ALL CONCRETE SIDEWALKS

- NO REINFORCEMENT WIRE OR STEEL UNLESS BY SPECIAL DESIGN AND APPROVAL.
- ALL ENTRAINED CONCRETE TYPE A-3 PER VDOT SPECIFICATIONS.
- ACCESSIBLE PATH SHALL CONFORM WITH ADA (MAX. CROSS SLOPE IS 1/4" x 1").
- 5' x 5' SCORING PATTERN TYPICAL.
- 5' x 5' ALTERNATE POUR PLACEMENT METHOD.
- ALTERNATE BASESTONE MAY BE USED WITH ENGINEER'S APPROVAL.

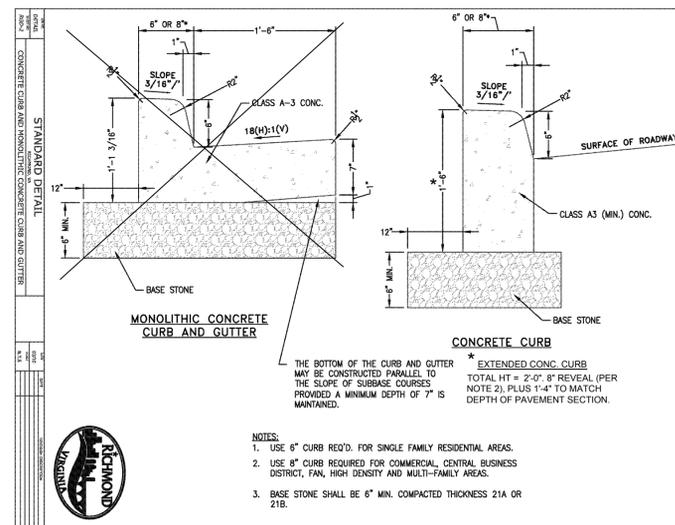


DATE	DESCRIPTION	BY	CHECKED	REVISION

SECTION
CONCRETE SIDEWALK

SCALE: NTS

5



STANDARD DETAIL
CONCRETE CURB AND GUTTER

- NOTES:
- USE 6" CURB REQ'D. FOR SINGLE FAMILY RESIDENTIAL AREAS.
 - USE 8" CURB REQUIRED FOR COMMERCIAL, CENTRAL BUSINESS DISTRICT, FAN, HIGH DENSITY AND MULTI-FAMILY AREAS.
 - BASE STONE SHALL BE 6" MIN. COMPACTED THICKNESS 21A OR 21B.



VDOT STANDARD DETAILS

SCALE:

C7.00



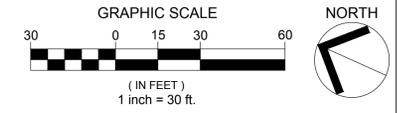
115 South 15th Street
Suite 200
Richmond, VA 23219
804.343.7100



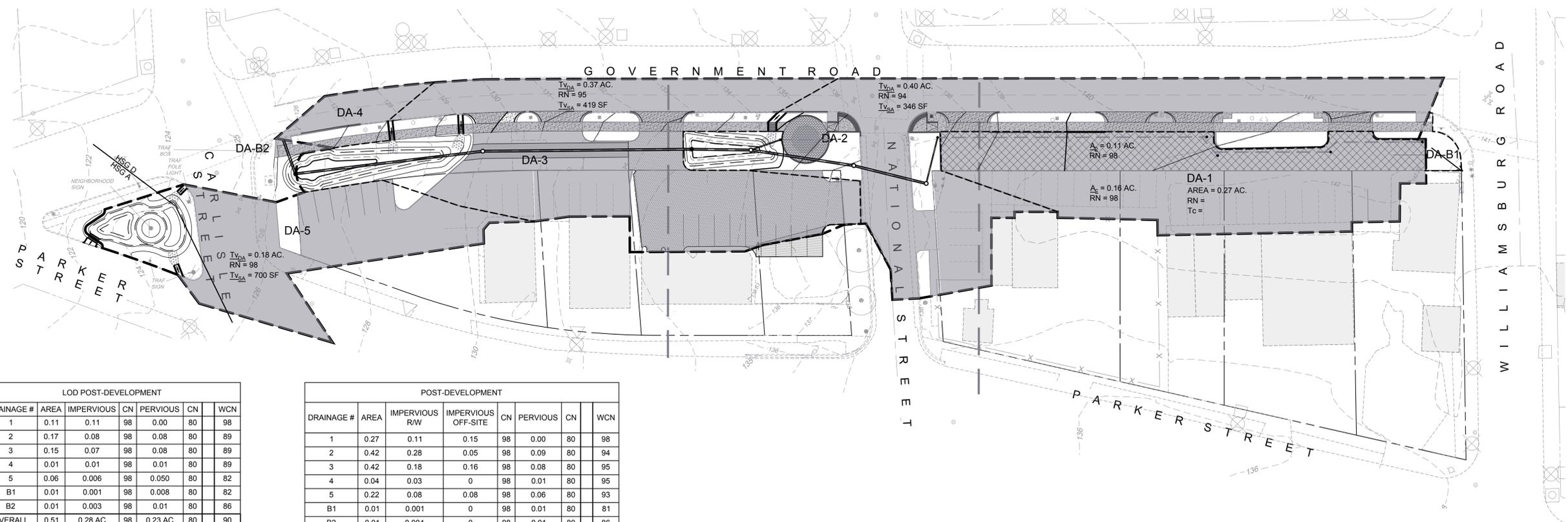
LOD PRE-DEVELOPMENT							
DRAINAGE #	AREA	IMPERVIOUS	%	C N	PERVIOUS	%	WCN
1	0.40	0.38	95	98	0.02	5	80
B1	0.01	0.01	100	98	0.00	0	80
B2	0.10	0.05	53	98	0.05	47	80
OVERALL	0.51 AC	0.45 AC	87	98	0.07 AC	13	80

PRE-DEVELOPMENT							
DRAINAGE #	AREA	IMPERVIOUS R/W	IMPERVIOUS OFF-SITE	%	C N	PERVIOUS	%
1	1.07	0.72	0.33	97	98	0.03	3
B1	0.01	0.01	0	100	98	0.00	0
B2	0.30	0.13	0.12	85	98	0.05	15
OVERALL	1.38 AC	0.86 AC	0.45 AC	95	98	0.07 AC	5

EXISTING CONDITIONS



PROPOSED CONDITIONS



LOD POST-DEVELOPMENT							
DRAINAGE #	AREA	IMPERVIOUS	CN	PERVIOUS	CN	WCN	
1	0.11	0.11	98	0.00	80	98	
2	0.17	0.08	98	0.08	80	89	
3	0.15	0.07	98	0.08	80	89	
4	0.01	0.01	98	0.01	80	89	
5	0.06	0.006	98	0.050	80	82	
B1	0.01	0.001	98	0.008	80	82	
B2	0.01	0.003	98	0.01	80	86	
OVERALL	0.51 AC	0.28 AC	98	0.23 AC	80	90	

POST-DEVELOPMENT							
DRAINAGE #	AREA	IMPERVIOUS R/W	IMPERVIOUS OFF-SITE	CN	PERVIOUS	CN	WCN
1	0.27	0.11	0.15	98	0.00	80	98
2	0.42	0.28	0.05	98	0.09	80	94
3	0.42	0.18	0.16	98	0.08	80	95
4	0.04	0.03	0	98	0.01	80	95
5	0.22	0.08	0.08	98	0.06	80	93
B1	0.01	0.001	0	98	0.01	80	81
B2	0.01	0.004	0	98	0.01	80	86
OVERALL	1.39 AC	0.70 AC	0.44 AC	98	0.25 AC	80	95

FULTON HILL - GREEN STREET

GOVERNMENT ROAD, RICHMOND, VA

REVISIONS:

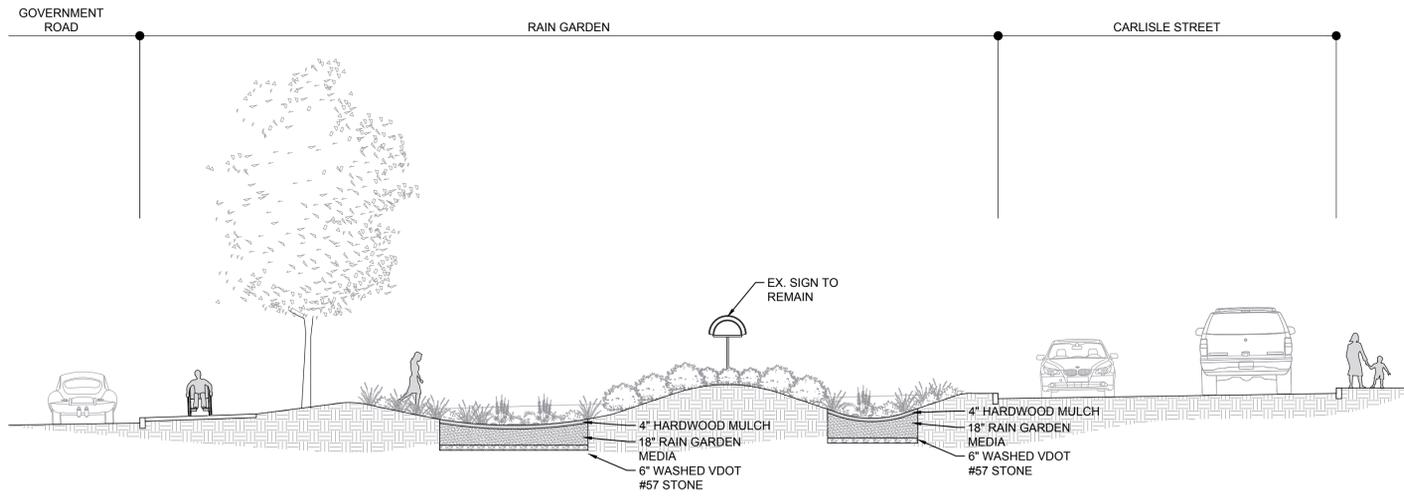
No.	Description	Date

DRAINAGE AREA MAP

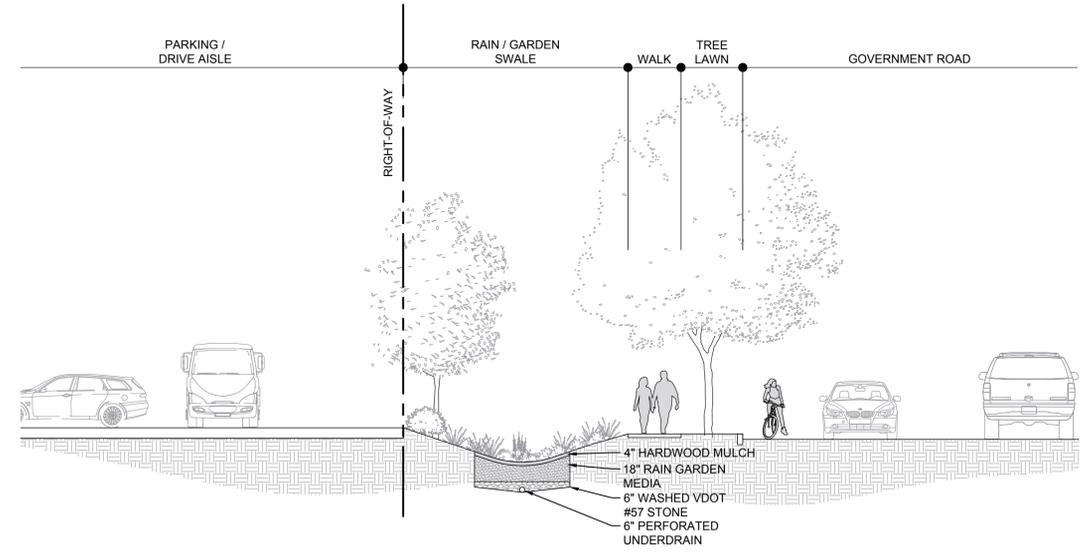
Designed By: CAH
 Drawn By: DSN
 Checked By: CAH
 QA/QC By: ELG
 Date: OCTOBER 12, 2022
 Project Number: M21012
 Sheet Number:

C8.00

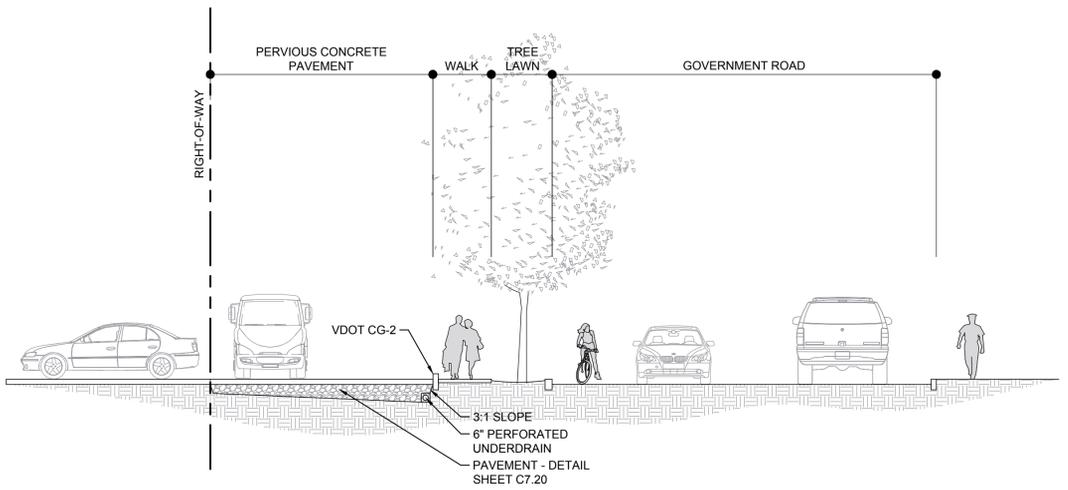
© 2022 VHB ENGINEERS, ARCHITECTS AND PLANNERS. THESE DRAWINGS ARE NOT TO BE REPRODUCED, COPIED, OR OTHERWISE TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE EXPRESS WRITTEN PERMISSION AND CONSENT OF VHB ENGINEERS.



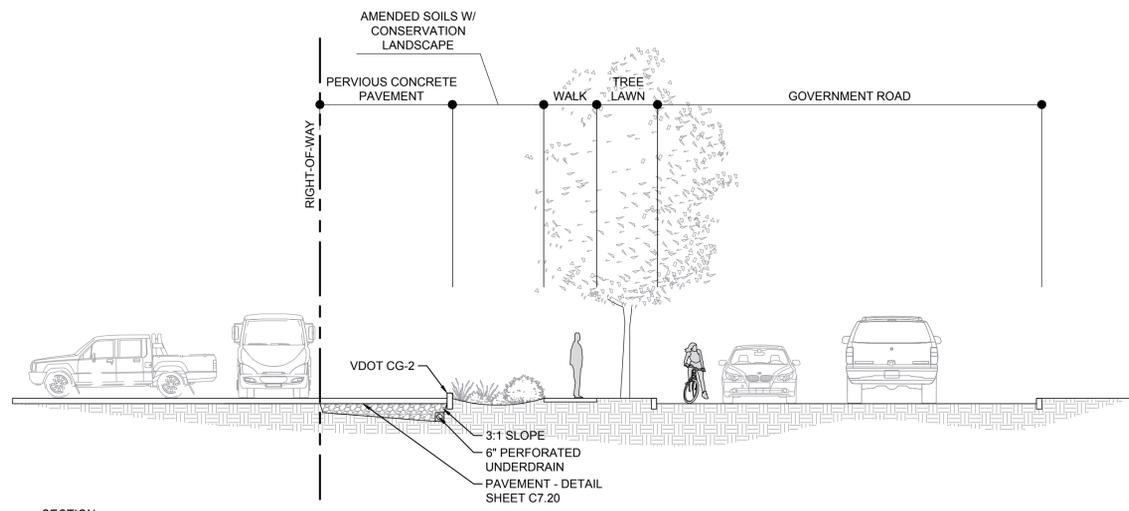
SECTION 1
SCALE: 1/8" = 1'-0"



SECTION 2
SCALE: 1/8" = 1'-0"



SECTION 3
SCALE: 1/8" = 1'-0"



SECTION 4
SCALE: 1/8" = 1'-0"

FULTON HILL - GREEN STREET

GOVERNMENT ROAD, RICHMOND, VA

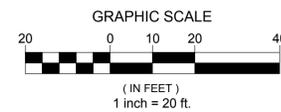
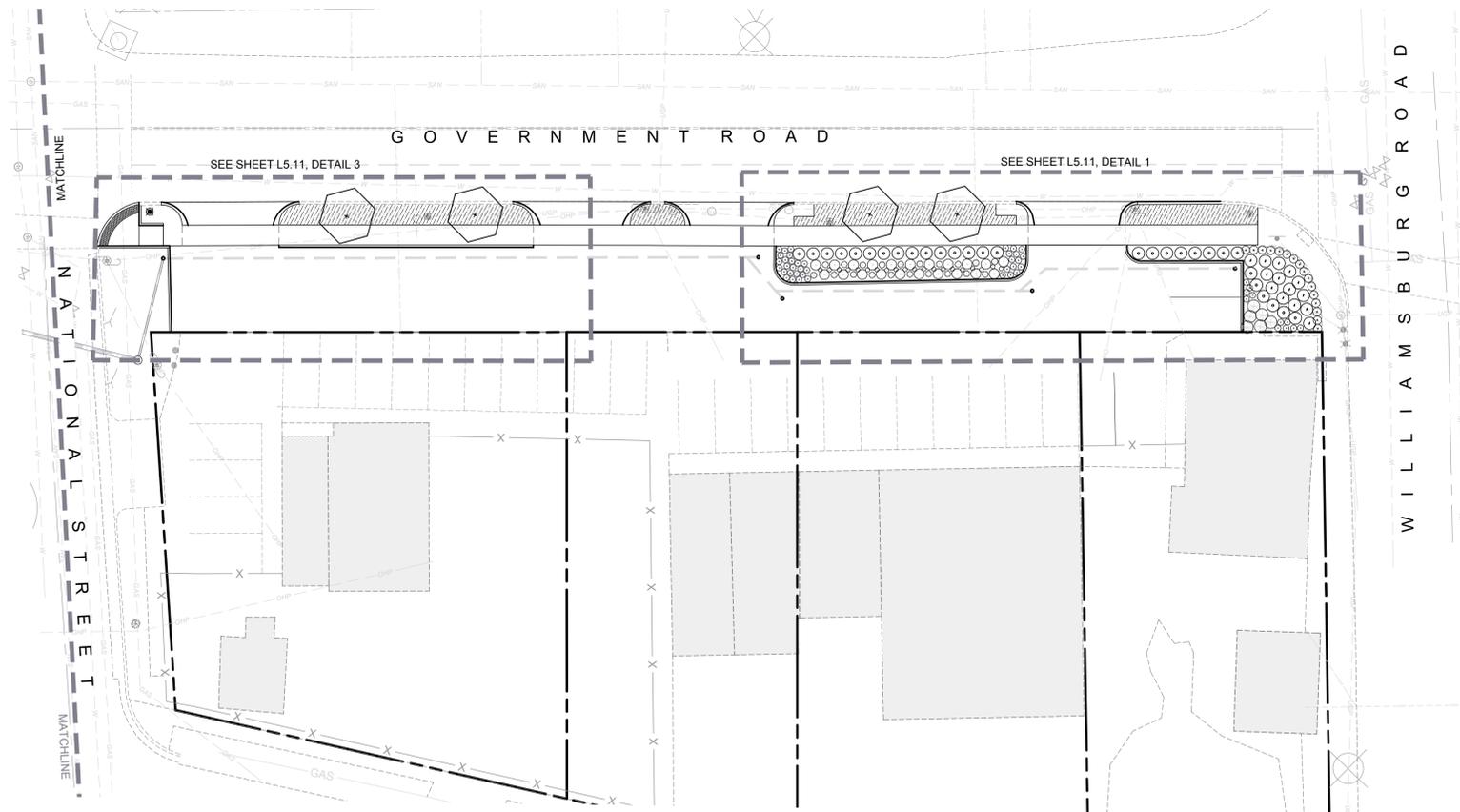
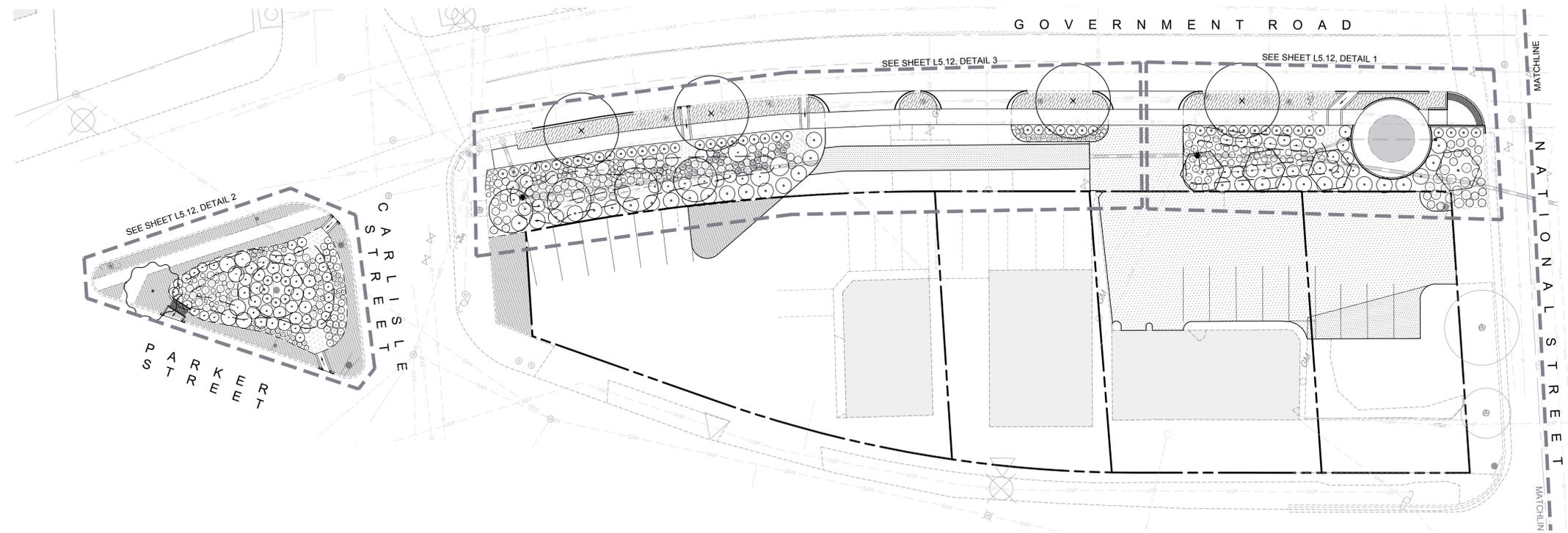
REVISIONS:

No.	Description	Date

ILLUSTRATIVE SECTIONS

Designed By:	CAH
Drawn By:	DSN
Checked By:	CAH
QA/QC By:	ELG
Date:	OCTOBER 12, 2022
Project Number:	M21012
Sheet Number:	

© 2022 HOK DESIGN STUDIO. ALL RIGHTS RESERVED. THIS DOCUMENT IS THE PROPERTY OF HOK DESIGN STUDIO AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE EXPRESS WRITTEN PERMISSION AND CONSENT OF HOK DESIGN STUDIO.



FULTON HILL - GREEN STREET

GOVERNMENT ROAD, RICHMOND, VA

REVISIONS:

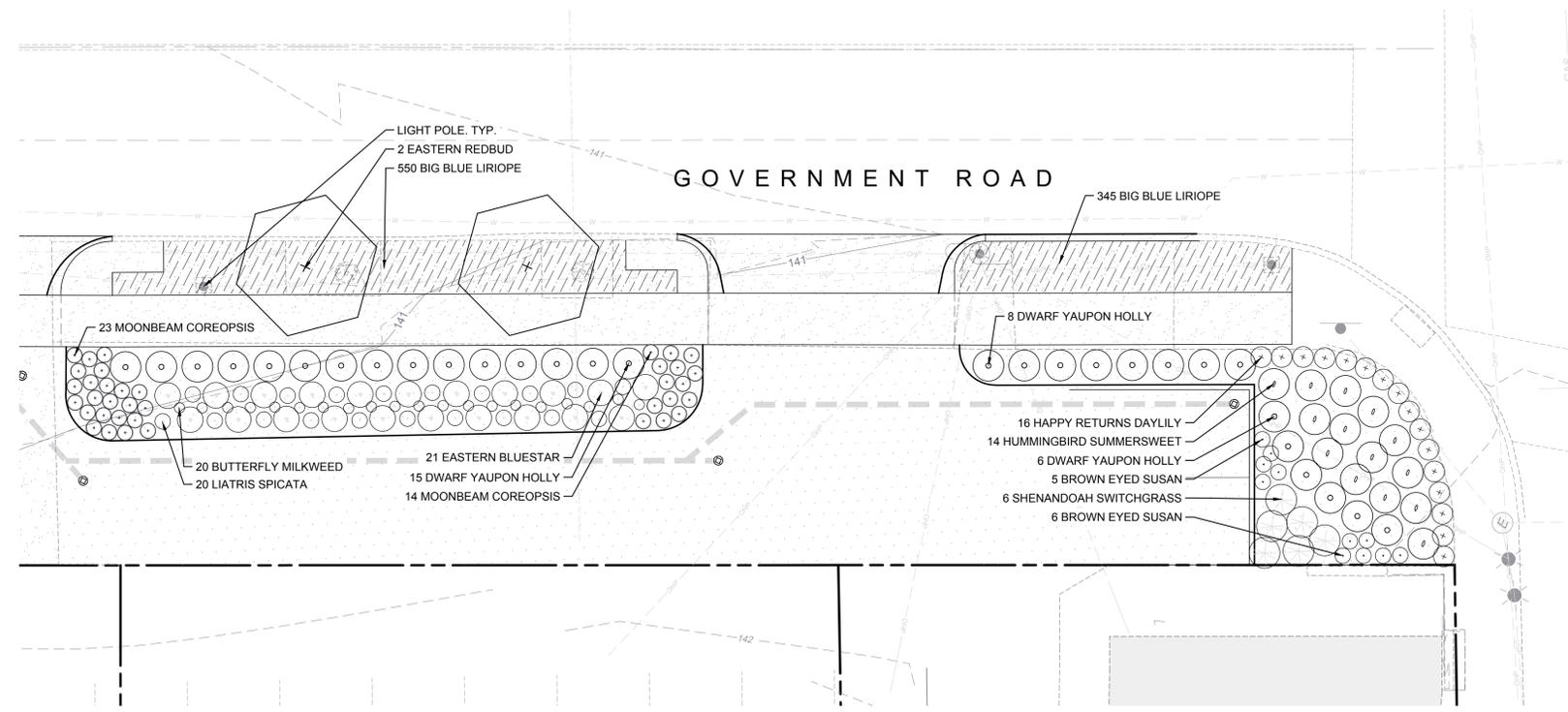
No.	Description	Date

No.	Description	Date

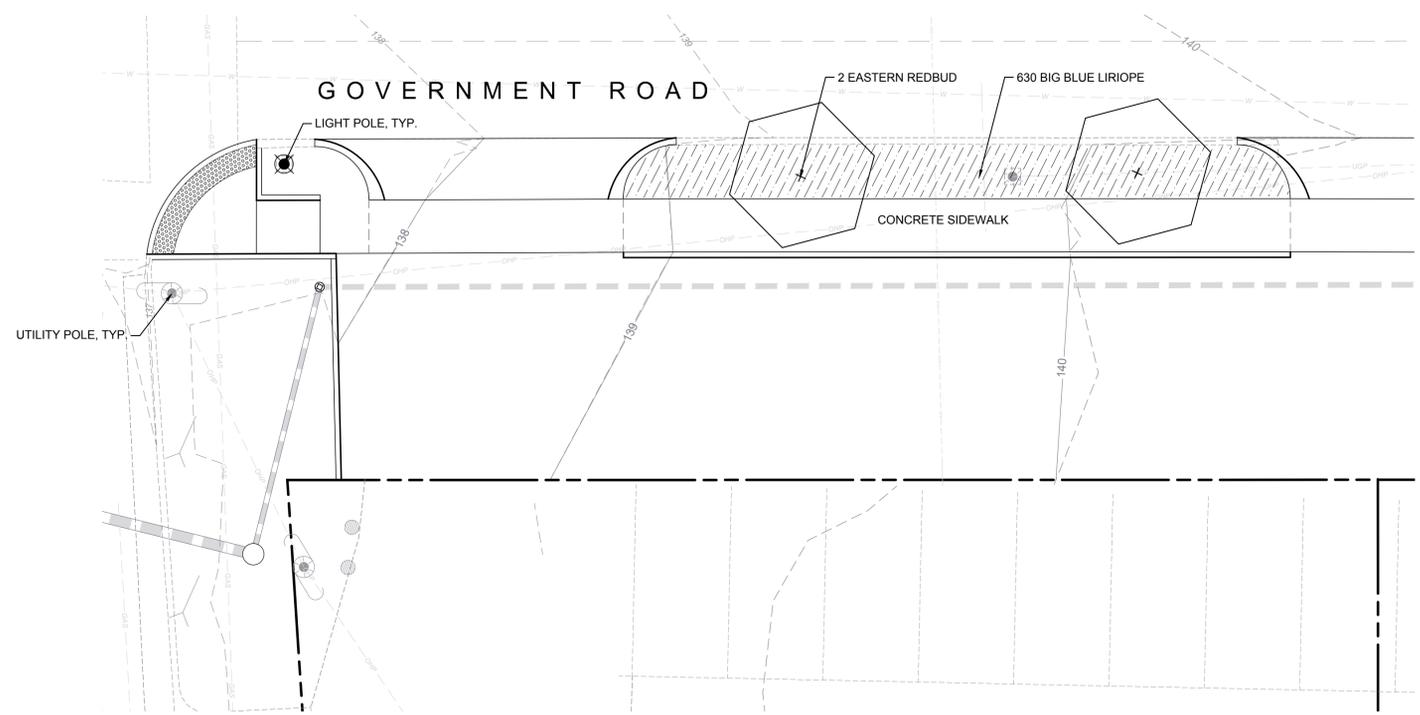
PLANTING PLAN OVERVIEW

Designed By: CAH
 Drawn By: DSN
 Checked By: CAH
 QA/QC By: ELG
 Date: OCTOBER 12, 2022
 Project Number: M21012
 Sheet Number:

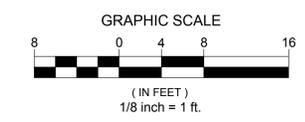
L5.00



1 PLAN
RAIN GARDEN AT INNOVATE FULTON
SCALE: 1/8" = 1'-0"



3 PLAN
TREE LAWN AT RESTAURANT
SCALE: 1/8" = 1'-0"



FULTON HILL - GREEN STREET

GOVERNMENT ROAD, RICHMOND, VA

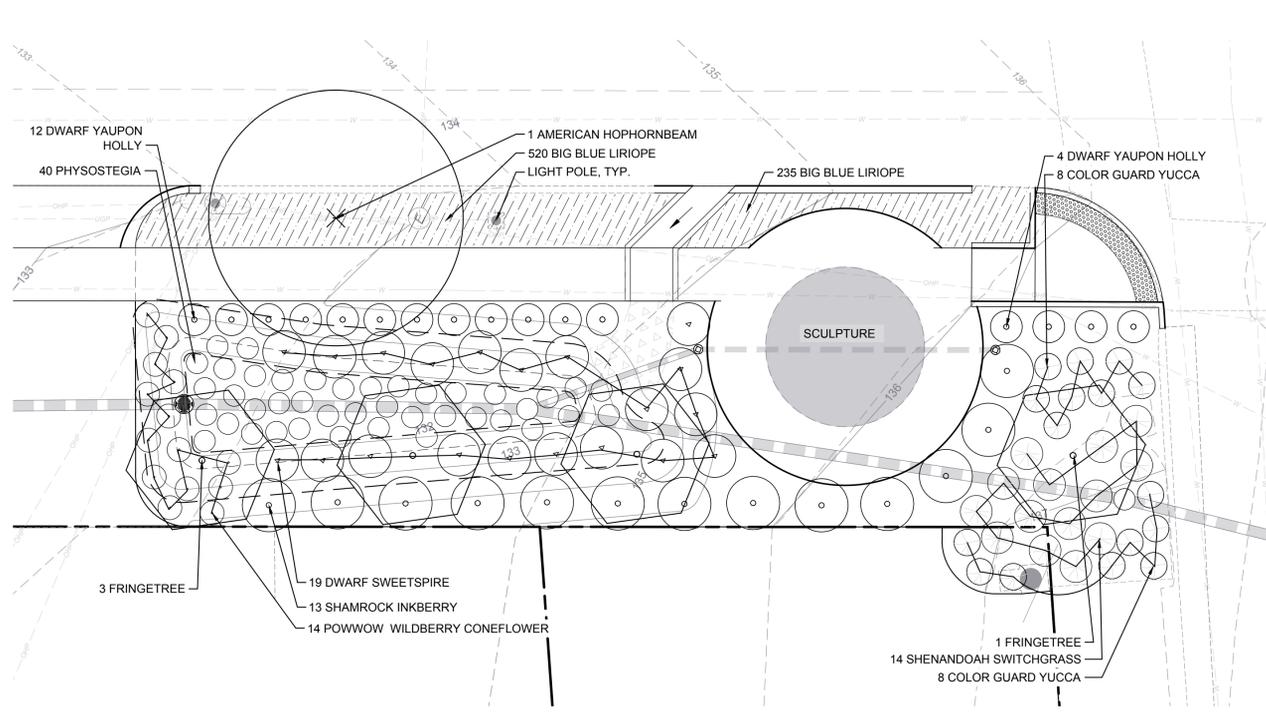
REVISIONS:

No.	Description	Date

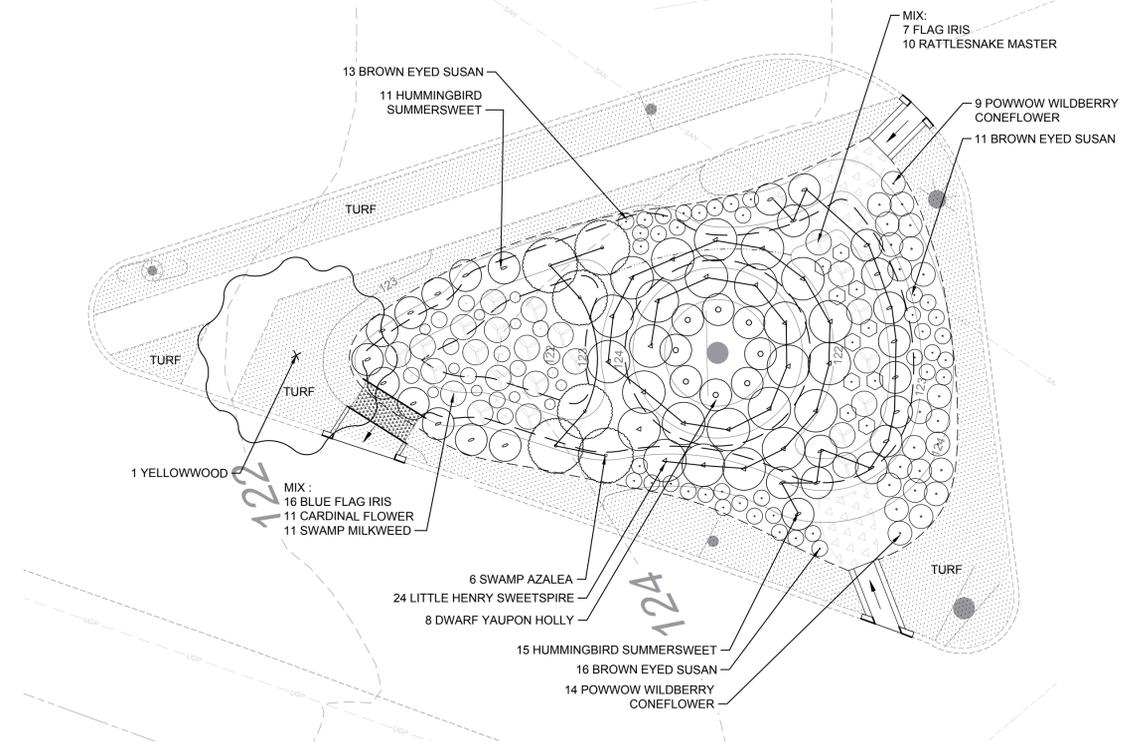
PLANTING ENLARGEMENTS

Designed By:	CAH
Drawn By:	DSN
Checked By:	CAH
QA/QC By:	ELG
Date:	OCTOBER 12, 2022
Project Number:	M21012
Sheet Number:	

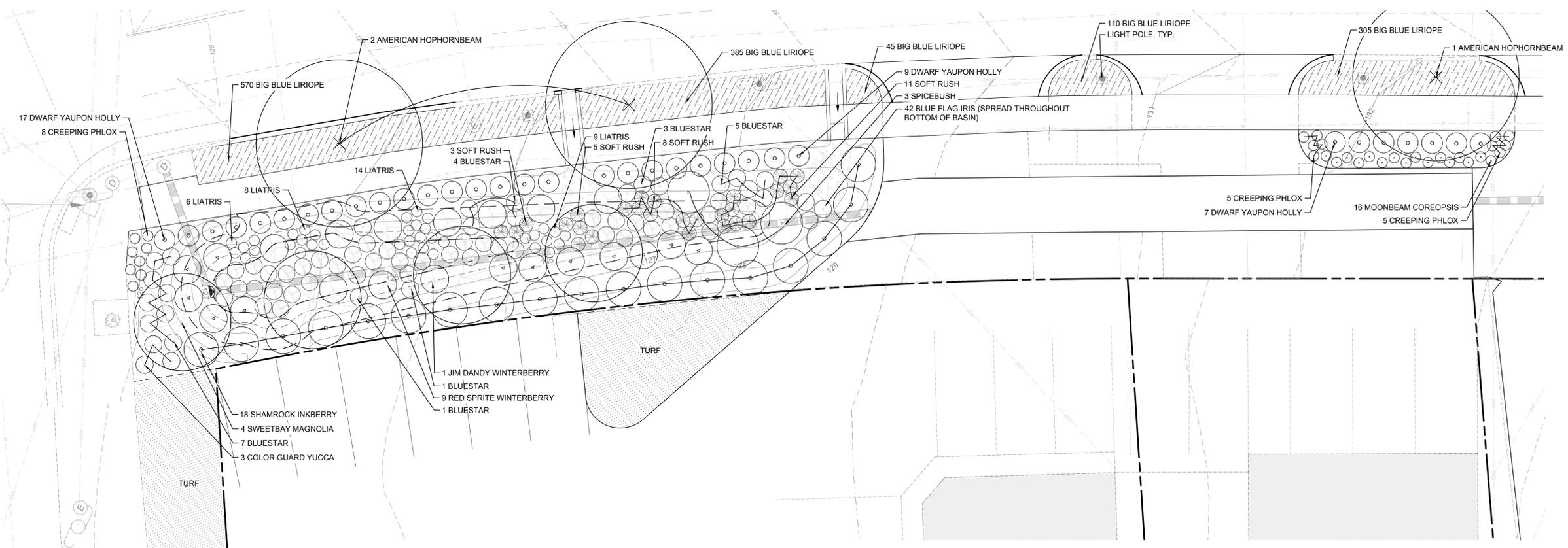
© 2022 VHB GROUP, INC. ALL RIGHTS RESERVED. THIS DOCUMENT IS THE PROPERTY OF VHB GROUP, INC. AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE EXPRESS WRITTEN PERMISSION AND CONSENT OF VHB GROUP, INC.



1 PLAN
RAIN GARDEN AT INNOVATE FULTON
SCALE: 1/8" = 1'-0"



2 PLAN
RAIN GARDEN AT TRAFFIC TRIANGLE
SCALE: 1/8" = 1'-0"



3 PLAN
TREE LAWN AT RESTAURANT
SCALE: 1/8" = 1'-0"

FULTON HILL - GREEN STREET

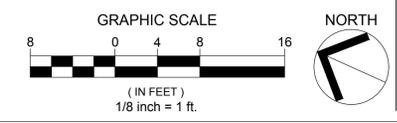
GOVERNMENT ROAD, RICHMOND, VA

REVISIONS:

No.	Description	Date

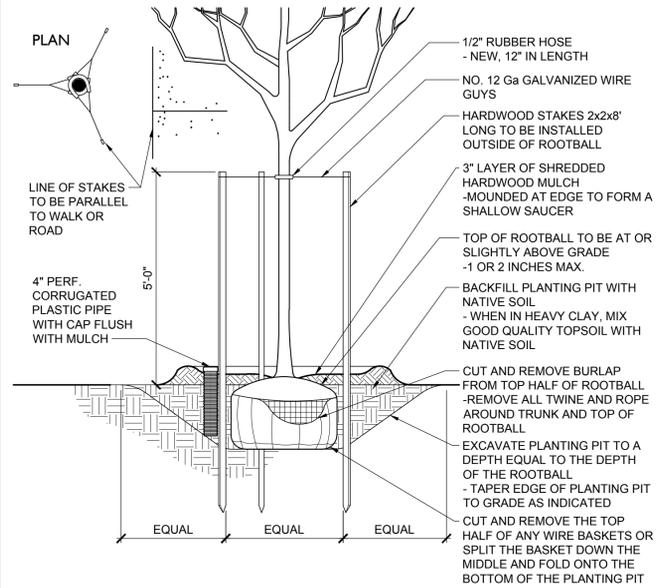
PLANTING ENLARGMENTS

Designed By:	CAH
Drawn By:	DSN
Checked By:	CAH
QA/QC By:	ELG
Date:	OCTOBER 12, 2022
Project Number:	M21012
Sheet Number:	L5.12



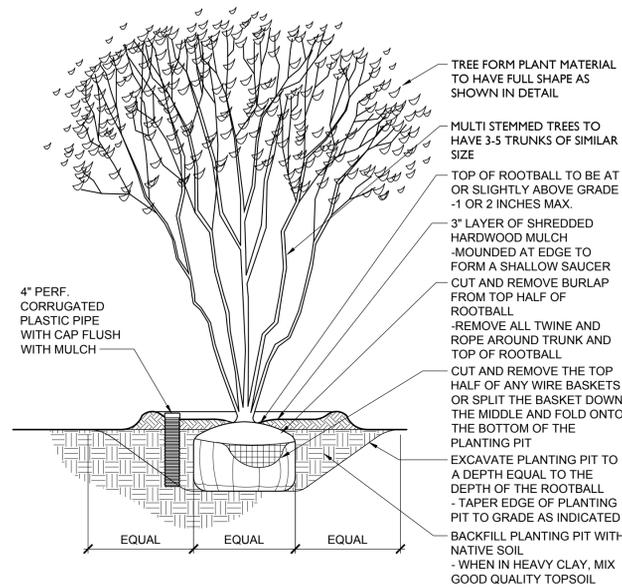
© 2022 VHB GROUP, INC. ALL RIGHTS RESERVED. THIS DOCUMENT IS THE PROPERTY OF VHB GROUP, INC. AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE EXPRESS WRITTEN PERMISSION AND CONSENT OF VHB GROUP, INC.

PLANTING DETAILS



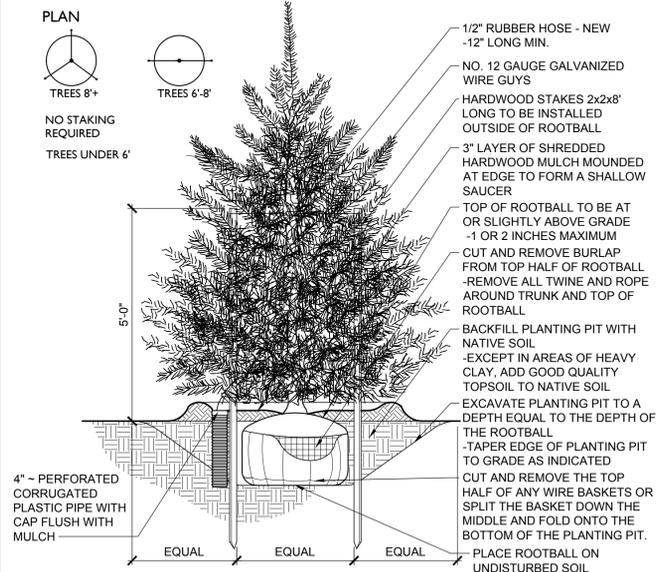
A DECIDUOUS TREE STAKING DETAIL

NOT TO SCALE



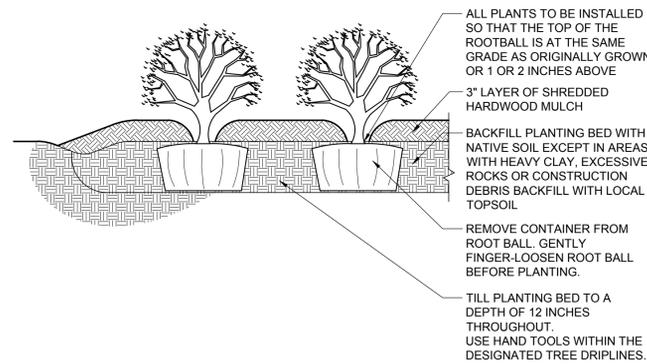
B MULTI-STEM TREE PLANTING DETAIL

NOT TO SCALE



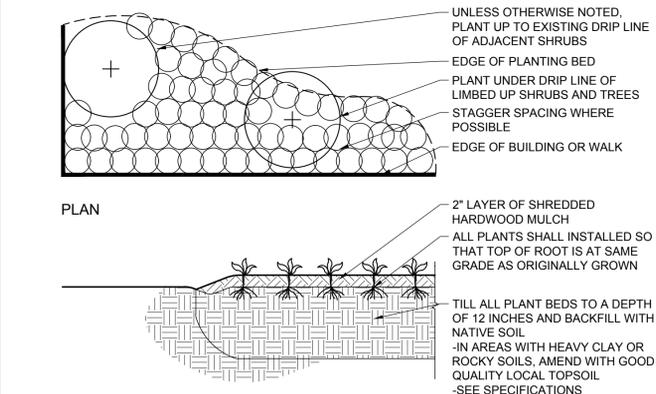
C EVERGREEN TREE STAKING DETAIL

NOT TO SCALE



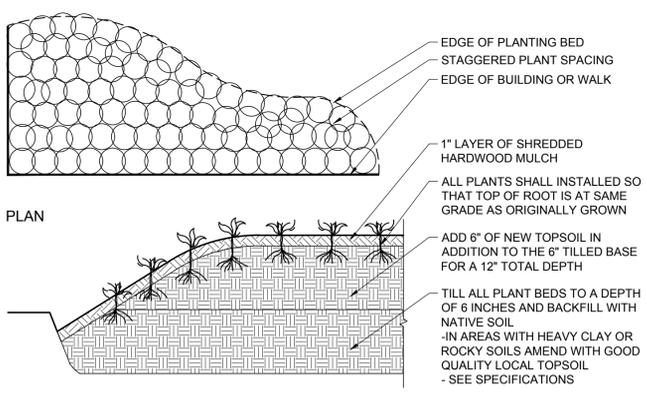
D SHRUB PLANTING DETAIL

NOT TO SCALE



E GROUNDCOVER PLANTING BED DETAIL

NOT TO SCALE



F FLOWER BED PLANTING DETAIL

NOT TO SCALE

PLANT MATERIAL SCHEDULE

QUANTITY	BOTANICAL NAME	COMMON NAME	SPACING	CALIPER	HEIGHT	ROOT TYPE	DETAIL	REMARKS
TREES								
4	CERCIS CANADENSIS	EASTERN REDBUD	AS SHOWN	8-10"		B&B	A	SPECIMEN QUALITY, MATCHED
4	CHIONANTHUS VIRGINICUS	FRINGETREE	AS SHOWN	6-8"		B&B	B	MATCHED
1	CLADRASTIS KENTUCKEA	YELLOWWOOD	AS SHOWN	2.5"		B&B	A	SPECIMEN QUALITY
4	MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	AS SHOWN	8-10"		B&B	B	MATCHED
4	OSTRYA VIRGINIANA	AMERICAN HOPHORNBEAM	AS SHOWN	2.5"		B&B	A	SPECIMEN QUALITY, MATCHED
SHRUBS								
40	CLETHRA ALNIFOLIA 'HUMMINGBIRD'	HUMMINGBIRD SUMMERSWEET	AS SHOWN		18" MIN.	CONT.	D	
31	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	AS SHOWN		24" MIN.	CONT.	D	
1	ILEX VERTICILLATA 'JIM DANDY'	JIM DANDY WINTERBERRY (MALE)	AS SHOWN		24" MIN.	CONT.	D	
9	ILEX VERTICILLATA 'RED SPRITE'	RED SPRITE WINTERBERRY	AS SHOWN		24" MIN.	CONT.	D	
86	ILEX VOMITORIA 'BORDEAUX'	DWARF YAUPON HOLLY	AS SHOWN		18" MIN.	CONT.	D	
57	ITEA VIRGINICA 'LITTLE HENRY'	LITTLE HENRY SWEETSPIRE	AS SHOWN		24" MIN.	CONT.	D	
3	LINDERA BENZOIN	NORTHERN SPICEBUSH	AS SHOWN		24" MIN.	CONT.	D	
6	RHODODENDRON VISCOSUM	SWAMP AZALEA	AS SHOWN		21" MIN.	CONT.	D	
19	YUCCA FILAMENTOSA 'COLOR GUARD'	COLOR GUARD YUCCA	AS SHOWN		18" MIN.	CONT.	D	
PERENNIALS, GROUNDCOVER, AND ORNAMENTAL GRASSES								
47	AMSONIA TABERNAEMONTANA	EASTERN BLUESTAR	AS SHOWN			1 GAL.	E	
11	ASCLEPIAS INCARNATA	SWAMP MILKWEED	AS SHOWN			1 GAL.	E	
20	ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED	AS SHOWN			1 GAL.	E	
53	COREOPSIS 'MOONBEAM'	MOONBEAM COREOPSIS	AS SHOWN			1 GAL.	E	
37	ECHINACEA PURPUREA 'POWWOW WILDBERRY'	POWWOW WILDBERRY	AS SHOWN			1 GAL.	E	
10	ERYNGIUM YUCCIFOLIUM	RATTLESNAKE MASTER	AS SHOWN			1 GAL.	E	
16	HEMEROCALLIS 'HAPPY RETURNS'	HAPPY RETURNS DAYLILY	AS SHOWN			1 GAL.	E	
65	IRIS VERSICOLOR	BLUE FLAG IRIS	AS SHOWN			1 GAL.	E	
27	JUNCUS EFFUSUS	SOFT RUSH	AS SHOWN			1 GAL.	E	
57	LIATRIS SPICATA	DENSE BLAZING STAR	AS SHOWN			1 GAL.	E	
11	LOBELIA CARDINALIS	CARDINAL FLOWER	AS SHOWN			1 GAL.	E	
3695	LIRIOPE MUSCARI 'BIG BLUE'	BIG BLUE LIRIOPE	9" O.C.			4" POT	E	
20	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCHGRASS	AS SHOWN			3 GAL.	E	
18	PHLOX SUBULATA	CREeping PHLOX	AS SHOWN			1 GAL.	E	
40	PHYSOSTEGIA VIRGINIANA	FALL OBEDIENT PLANT	AS SHOWN			1 GAL.	E	
51	RUDBECKIA TRILOBA	BROWN EYED SUSAN	AS SHOWN			1 GAL.	E	

PLANTING NOTES:

- CONTRACTOR SHALL VERIFY PLANT MATERIAL QUANTITIES SHOWN ON PLAN WITH TOTALS IN PLANTING SCHEDULE. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO FINAL BIDDING. UNIT PRICES SHALL BE SUBMITTED AS PART OF FINAL BID.
- ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE FULL YEAR TO BE IN A HEALTHY GROWING CONDITION. PLANT MATERIALS WHICH DO NOT FULFILL THIS GUARANTEE SHALL BE REPLACED AT NO COST TO THE OWNER. REPLACEMENT SHALL BE GUARANTEED THROUGHOUT THE ORIGINAL GUARANTEE PERIOD. PLANTS THAT DIE SHALL BE REPLACED IMMEDIATELY.
- CONTRACTOR IS RESPONSIBLE FOR WATERING ALL PLANT MATERIAL DURING INSTALLATION AND UNTIL FINAL INSPECTION AND ACCEPTANCE BY OWNER. AN IRRIGATION SYSTEM IS NOT PROPOSED WITH THIS PROJECT.
- CONTRACTOR RESPONSIBLE FOR CONTACTING MISS UTILITY PRIOR TO BEGINNING OF CONSTRUCTION FOR LOCATION OF ALL UTILITY LINES. TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS. NOTIFY LANDSCAPE ARCHITECT IF ANY CONFLICTS OCCUR.
- THE LANDSCAPE ARCHITECT IS THE OWNERS REPRESENTATIVE AND SHALL BE THE APPROVING AUTHORITY FOR INFORMATION PROVIDED IN THESE PLANS AND SPECIFICATIONS.
- ALL PLANT MATERIALS, TOPSOIL, MULCH, FERTILIZERS, SOIL AMENITIES, PLANTING SUPPLIES AND METHODS SHALL BE SUBJECT TO LANDSCAPE ARCHITECTS APPROVAL. REJECTED MATERIALS SHALL BE REMOVED FROM THE SITE WITHOUT DELAY.
- ALL PLANT MATERIALS AND PLANTING METHODS SHALL CONFORM TO A.A.N. STANDARDS.
- CONTRACTOR SHALL LAYOUT AND MARK LOCATION FOR ALL PLANT MATERIAL, PLANTING, AND IMPROVEMENTS SHOWN AND REQUEST IN FIELD APPROVAL FROM LANDSCAPE ARCHITECT.
- BEDS TO CONTAIN SHRUBS OR GROUND COVER SHALL BE TILLED TO A DEPTH OF 6" AND THE SOIL CONDITIONED BY ADDING CLEAN, WELL ROTTED MANURE. IF EXISTING SOIL IS CONSIDERED TO BE UNUSABLE BY OWNER, BEDS SHALL BE TREATED TO ELIMINATE WEEDS AND WEED SEEDS.
- ALL PLANTING BED AREAS SHALL BE COVERED WITH A 3" MINIMUM LAYER OF MEDIUM TEXTURE SHREDDED HARDWOOD MULCH UNLESS OTHERWISE NOTED.
- ALL SUBSTITUTIONS OF PLANT MATERIAL SHALL BE REQUESTED IN WRITING TO THE LANDSCAPE ARCHITECT AND APPROVED IN WRITING BY THE OWNER.
- ALL PLANTING OPERATIONS SHALL BE UNDER THE SUPERVISION OF AN EXPERIENCED PLANTSMAN.
- LANDSCAPE ARCHITECT RESERVES THE RIGHT TO SELECT PLANT MATERIALS IN THE NURSERY.
- FOR TREES BALLED IN WIRE BASKETS, CUT AND REMOVE TOP AND SIDES OF BASKET AFTER INSTALLATION.
- LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANTS AND MATERIALS THAT ARE IN AN UNHEALTHY OR UNSIGHTLY CONDITION, AS WELL AS PLANTS AND MATERIALS THAT DO NOT CONFORM TO A.A.N. STANDARDS. SEE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1-(CURRENT EDITION).
- SOIL SHALL BE FREE OF ALL WEEDS.
- PLANT SIZES, QUANTITIES, AND SPECIES WILL BE CHECKED BY COUNTY INSPECTION FOR COMPLIANCE WITH PLANT SCHEDULE AS APPROVED BY THE COUNTY. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR DELAY IN ISSUANCE OF CERTIFICATE OF OCCUPANCY BY THE COUNTY RESULTING FROM UNAUTHORIZED SUBSTITUTIONS OR DOWNSIZING.
- UPON COMPLETION OF LANDSCAPE INSTALLATION, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR WHO WILL VERIFY COMPLETENESS, INCLUDING THE REPLACEMENT OF ALL DEAD PLANT MATERIAL, AND SCHEDULE A FINAL INSPECTION FOR ACCEPTANCE BY OWNER.
- THE ONE YEAR GUARANTEE PERIOD SHALL BEGIN UPON THE OWNER'S APPROVAL AND ACCEPTANCE OF THE PLANTING INSTALLATION. THE OWNER SHALL ASSUME RESPONSIBILITY FOR MAINTENANCE INCLUDING WATERING, WEEDING, PEST CONTROL, AND FERTILIZATION.
- CONTRACTOR SHALL REMOVE STAKING FROM TREES AT THE END OF THE ONE YEAR WARRANTY PERIOD.



115 South 15th Street
Suite 200
Richmond, VA 23219
804.343.7100

FULTON HILL - GREEN STREET

GOVERNMENT ROAD, RICHMOND, VA

REVISIONS:

No.	Description	Date

PLANTING NOTES, DETAILS, AND SCHEDULE

Designed By: CAH
 Drawn By: DSN
 Checked By: CAH
 QA/QC By: ELG
 Date: OCTOBER 12, 2022
 Project Number: M21012
 Sheet Number:

L5.20