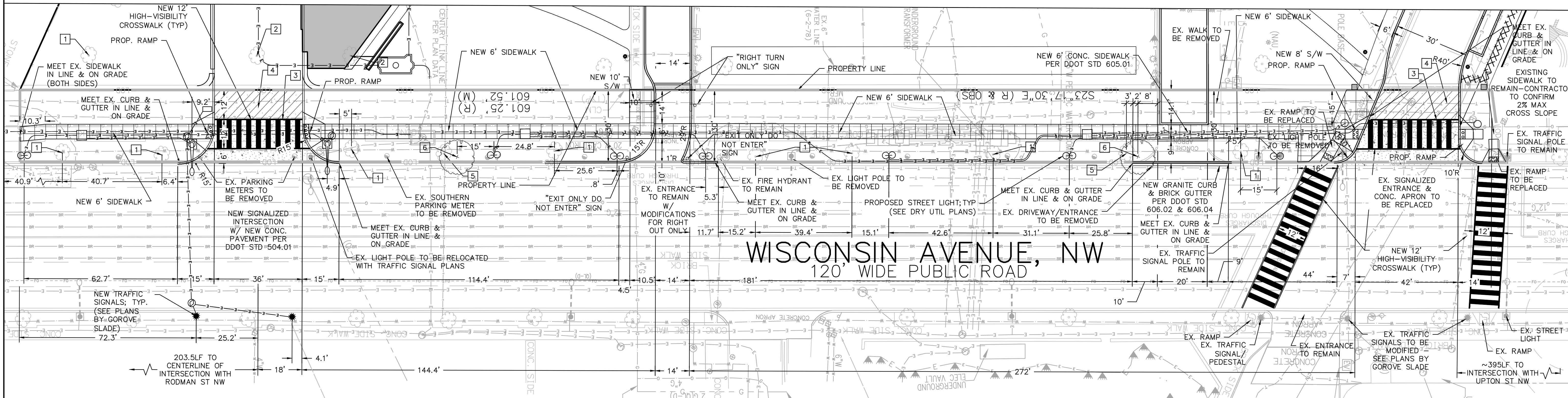
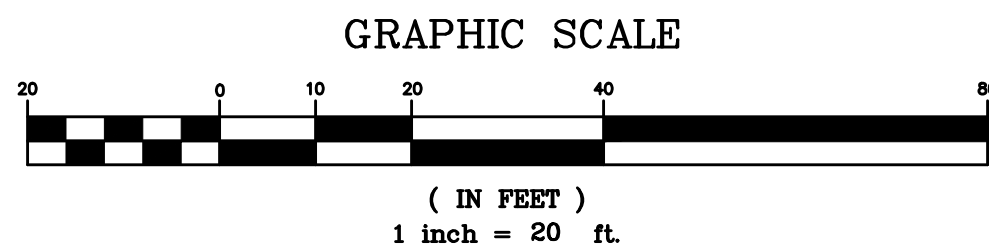


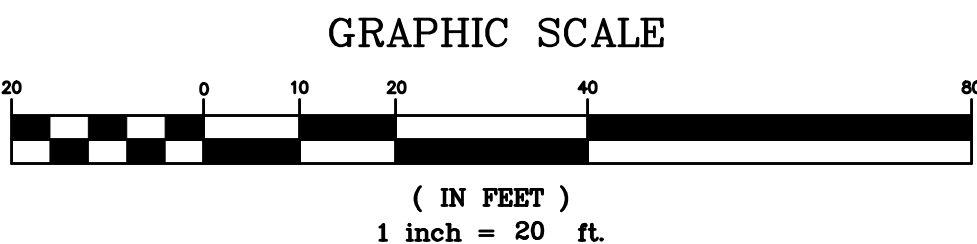
VICINITY MAP
SCALE 1" = 2000'



"FOR LOCATION OF UTILITIES
CALL 8-1-1 or 1-800-257-7777 OR LOG
ON TO or 48 HOURS IN ADVANCE OF
ANY WORK IN THIS VICINITY"

KEYNOTES:

- EXISTING TREES TO REMAIN
- ON-SITE TREE REMOVAL/RELOCATION/PRESERVATION PERMIT FOR ON-SITE HERITAGE TREES TO BE APPLIED FOR SEPARATELY WITH FULL SITE DEVELOPMENT PLAN
- LIMITS OF CONCRETE ENTRANCE
- NEW ASPHALT PAVEMENT
- EXISTING TREE TO BE REMOVED
- NEW TREE (SEE LA PLANS)



NOTE:
REFER TO CIV1340 FOR ALL PUBLIC SPACE SEDIMENT
& EROSION CONTROL MEASURES, INCLUDING REQUIRED
TREE PROTECTION FOR TREES NOTED TO REMAIN

LEGEND

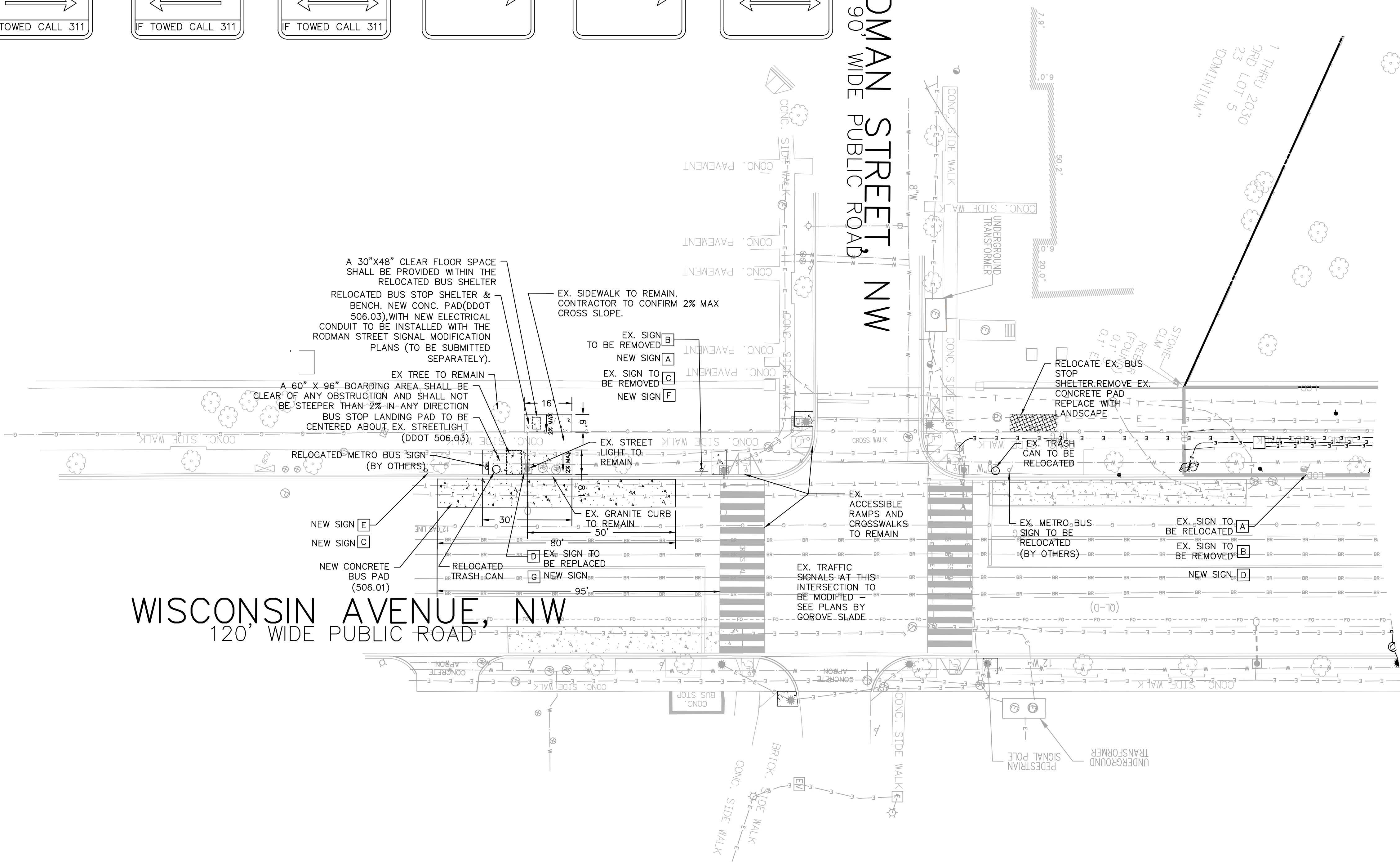
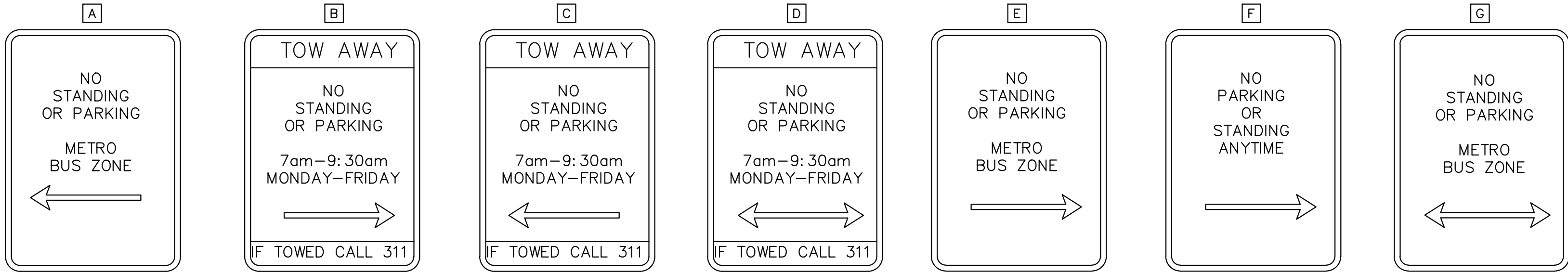
	CABLE TELEVISION CONDUIT		SANITARY MANHOLE		CONC. CONCRETE
	ELECTRICAL CONDUIT		STORM DRAIN MANHOLE		C&G CURB AND GUTTER
	EDGE OF PAVEMENT		ELECTRICAL JUNCTION BOX		BLDG. BUILDING
	FENCE LINE		ELECTRICAL MANHOLE		STY. STORY
	NATURAL GAS CONDUIT		FIRE DEPARTMENT CONNECTION		TRV ELECTRICAL TRANSFORMER
	OVERHEAD WIRES		FIRE HYDRANT		ESMT. ASPHALT
	TELEPHONE/COMMUNICATIONS CONDUIT		GAS MANHOLE		RCP REINFORCED CONCRETE PIPE
	PROPERTY LINES		GUY POLE		CMP CORRUGATED METAL PIPE
	PUBLIC UTILITIES EASEMENTS		LIGHT POLE		BRL BUILDING RESTRICTION LINE
	SANITARY SEWER CONDUIT		PHONE PEDESTAL		R/W RIGHT-OF-WAY
	STORM DRAIN CONDUIT		PHONE MANHOLE		
	WATER CONDUIT		UTILITY POLE		

*NOTE:
THE INFORMATION, DESIGN AND
CONTENT OF THE DRAWINGS OR
DOCUMENTS ATTACHED HERETO ARE
PROPRIETARY TO VIKI CAPITOL, LLC
AND CONSTITUTE ITS PROPRIETARY
INTELLECTUAL PROPERTY. THE
ATTACHED DRAWINGS AND/OR
DOCUMENTS MUST NOT BE FORWARDED,
SHARED, COPIED, DIGITALLY CONVERTED,
MODIFIED, OR USED FOR ANY PURPOSE,
IN ANY FORMAT, WITHOUT PRIOR
WRITTEN AUTHORIZATION FROM VIKI
CAPITOL, LLC. VIOLATIONS MAY RESULT
IN PROSECUTION. ONLY APPROVED,
SEALED AND SIGNED PLANS OR
DRAWINGS MAY BE UTILIZED FOR
CONSTRUCTION PURPOSES.

VIKA CAPITOL REVISIONS	
#	DATE DESCRIPTION
1	10/10/2019 DOEE RESUBMISSION
2	10/10/2019 DOEE RESUBMISSION
3	10/10/2019 DOEE RESUBMISSION
4	10/10/2019 DOEE RESUBMISSION
5	10/10/2019 DOEE RESUBMISSION
6	10/10/2019 DOEE RESUBMISSION
7	10/10/2019 DOEE RESUBMISSION
8	10/10/2019 DOEE RESUBMISSION
9	10/10/2019 DOEE RESUBMISSION
10	10/10/2019 DOEE RESUBMISSION
11	10/10/2019 DOEE RESUBMISSION
12	10/10/2019 DOEE RESUBMISSION
13	10/10/2019 DOEE RESUBMISSION
14	10/10/2019 DOEE RESUBMISSION
15	10/10/2019 DOEE RESUBMISSION
16	10/10/2019 DOEE RESUBMISSION
17	10/10/2019 DOEE RESUBMISSION
18	10/10/2019 DOEE RESUBMISSION
19	10/10/2019 DOEE RESUBMISSION
20	10/10/2019 DOEE RESUBMISSION
21	10/10/2019 DOEE RESUBMISSION
22	10/10/2019 DOEE RESUBMISSION
23	10/10/2019 DOEE RESUBMISSION
24	10/10/2019 DOEE RESUBMISSION
25	10/10/2019 DOEE RESUBMISSION
26	10/10/2019 DOEE RESUBMISSION
27	10/10/2019 DOEE RESUBMISSION
28	10/10/2019 DOEE RESUBMISSION
29	10/10/2019 DOEE RESUBMISSION
30	10/10/2019 DOEE RESUBMISSION
31	10/10/2019 DOEE RESUBMISSION
32	10/10/2019 DOEE RESUBMISSION
33	10/10/2019 DOEE RESUBMISSION
34	10/10/2019 DOEE RESUBMISSION
35	10/10/2019 DOEE RESUBMISSION
36	10/10/2019 DOEE RESUBMISSION
37	10/10/2019 DOEE RESUBMISSION
38	10/10/2019 DOEE RESUBMISSION
39	10/10/2019 DOEE RESUBMISSION
40	10/10/2019 DOEE RESUBMISSION
41	10/10/2019 DOEE RESUBMISSION
42	10/10/2019 DOEE RESUBMISSION
43	10/10/2019 DOEE RESUBMISSION
44	10/10/2019 DOEE RESUBMISSION
45	10/10/2019 DOEE RESUBMISSION
46	10/10/2019 DOEE RESUBMISSION
47	10/10/2019 DOEE RESUBMISSION
48	10/10/2019 DOEE RESUBMISSION
49	10/10/2019 DOEE RESUBMISSION
50	10/10/2019 DOEE RESUBMISSION
51	10/10/2019 DOEE RESUBMISSION
52	10/10/2019 DOEE RESUBMISSION
53	10/10/2019 DOEE RESUBMISSION
54	10/10/2019 DOEE RESUBMISSION
55	10/10/2019 DOEE RESUBMISSION
56	10/10/2019 DOEE RESUBMISSION
57	10/10/2019 DOEE RESUBMISSION
58	10/10/2019 DOEE RESUBMISSION
59	10/10/2019 DOEE RESUBMISSION
60	10/10/2019 DOEE RESUBMISSION
61	10/10/2019 DOEE RESUBMISSION
62	10/10/2019 DOEE RESUBMISSION
63	10/10/2019 DOEE RESUBMISSION
64	10/10/2019 DOEE RESUBMISSION
65	10/10/2019 DOEE RESUBMISSION
66	10/10/2019 DOEE RESUBMISSION
67	10/10/2019 DOEE RESUBMISSION
68	10/10/2019 DOEE RESUBMISSION
69	10/10/2019 DOEE RESUBMISSION
70	10/10/2019 DOEE RESUBMISSION
71	10/10/2019 DOEE RESUBMISSION
72	10/10/2019 DOEE RESUBMISSION
73	10/10/2019 DOEE RESUBMISSION
74	10/10/2019 DOEE RESUBMISSION
75	10/10/2019 DOEE RESUBMISSION
76	10/10/2019 DOEE RESUBMISSION
77	10/10/2019 DOEE RESUBMISSION
78	10/10/2019 DOEE RESUBMISSION
79	10/10/2019 DOEE RESUBMISSION
80	10/10/2019 DOEE RESUBMISSION
81	10/10/2019 DOEE RESUBMISSION
82	10/10/2019 DOEE RESUBMISSION
83	10/10/2019 DOEE RESUBMISSION
84	10/10/2019 DOEE RESUBMISSION
85	10/10/2019 DOEE RESUBMISSION
86	10/10/2019 DOEE RESUBMISSION
87	10/10/2019 DOEE RESUBMISSION
88	10/10/2019 DOEE RESUBMISSION
89	10/10/2019 DOEE RESUBMISSION
90	10/10/2019 DOEE RESUBMISSION
91	10/10/2019 DOEE RESUBMISSION
92	10/10/2019 DOEE RESUBMISSION
93	10/10/2019 DOEE RESUBMISSION
94	10/10/2019 DOEE RESUBMISSION
95	10/10/2019 DOEE RESUBMISSION
96	10/10/2019 DOEE RESUBMISSION
97	10/10/2019 DOEE RESUBMISSION
98	10/10/2019 DOEE RESUBMISSION
99	10/10/2019 DOEE RESUBMISSION
100	10/10/2019 DOEE RESUBMISSION
101	10/10/2019 DOEE RESUBMISSION
102	10/10/2019 DOEE RESUBMISSION
103	10/10/2019 DOEE RESUBMISSION
104	10/10/2019 DOEE RESUBMISSION
105	10/10/2019 DOEE RESUBMISSION
106	10/10/2019 DOEE RESUBMISSION
107	10/10/2019 DOEE RESUBMISSION
108	10/10/2019 DOEE RESUBMISSION
109	10/10/2019 DOEE RESUBMISSION
110	10/10/2019 DOEE RESUBMISSION
111	10/10/2019 DOEE RESUBMISSION
112	10/10/2019 DOEE RESUBMISSION
113	10/10/2019 DOEE RESUBMISSION
114	10/10/2019 DOEE RESUBMISSION
115	10/10/2019 DOEE RESUBMISSION
116	10/10/2019 DOEE RESUBMISSION
117	10/10/2019 DOEE RESUBMISSION
118	10/10/2019 DOEE RESUBMISSION
119	10/10/2019 DOEE RESUBMISSION
120	10/10/2019 DOEE RESUBMISSION
121	10/10/2019 DOEE RESUBMISSION
122	10/10/2019 DOEE RESUBMISSION
123	10/10/2019 DOEE RESUBMISSION
124	10/10/2019 DOEE RESUBMISSION
125	10/10/2019 DOEE RESUBMISSION
126	10/10/2019 DOEE RESUBMISSION
127	10/10/2019 DOEE RESUBMISSION
128	10/10/2019 DOEE RESUBMISSION
129	10/10/2019 DOEE RESUBMISSION
130	10/10/2019 DOEE RESUBMISSION
131	10/10/2019 DOEE RESUBMISSION
132	10/10/2019 DOEE RESUBMISSION
133	10/10/2019 DOEE RESUBMISSION
134	10/10/2019 DOEE RESUBMISSION
135	10/10/2019 DOEE RESUBMISSION
136	10/10/2019 DOEE RESUBMISSION
137	10/10/2019 DOEE RESUBMISSION
138	10/10/2019 DOEE RESUBMISSION
139	10/10/2019 DOEE RESUBMISSION
140	10/10/2019 DOEE RESUBMISSION
141	10/10/2019 DOEE RESUBMISSION
142	10/10/2019 DOEE RESUBMISSION
143	10/10/2019 DOEE RESUBMISSION
144	10/10/2019 DOEE RESUBMISSION
145	10/10/2019 DOEE RESUBMISSION
146	10/10/2019 DOEE RESUBMISSION
147	10/10/2019 DOEE RESUBMISSION
148	10/10/2019 DOEE RESUBMISSION
149	10/10/2019 DOEE RESUBMISSION
150	10/10/2019 DOEE RESUBMISSION
151	10/10/2019 DOEE RESUBMISSION
152	10/10/2019 DOEE RESUBMISSION
153	10/10/2019 DOEE RESUBMISSION
154	10/10/2019 DOEE RESUBMISSION
155	10/10/2019 DOEE RESUBMISSION
156	10/10/2019 DOEE RESUBMISSION
157	10/10/2019 DOEE RESUBMISSION
158	10/10/2019 DOEE RESUBMISSION
159	10/10/2019 DOEE RESUBMISSION
160	10/10/2019 DOEE RESUBMISSION
161	10/10/2019 DOEE RESUBMISSION
162	10/10/2019 DOEE RESUBMISSION
163	10/10/2019 DOEE RESUBMISSION
164	10/10/2019 DOEE RESUBMISSION
165	10/10/2019 DOEE RESUBMISSION
166	10/10/2019 DOEE RESUBMISSION
167	10/10/2019 DOEE RESUBMISSION
168	10/10/2019 DOEE RESUBMISSION
169	10/10/2019 DOEE RESUBMISSION
170	10/10/2019 DOEE RESUBMISSION
171	10/10/2019 DOEE RESUBMISSION
172	10/10/2019 DOEE RESUBMISSION
173	10/10/2019 DOEE RESUBMISSION
174	10/10/2019 DOEE RESUBMISSION
175	10/10/2019 DOEE RESUBMISSION
176	10/10/2019 DOEE RESUBMISSION
177	10/10/2019 DOEE RESUBMISSION
178	10/10/2019 DOEE RESUBMISSION
179	10/10/2019 DOEE RESUBMISSION
180	10/10/2019 DOEE RESUBMISSION
181	10/10/2019 DOEE RESUBMISSION
182	10/10/2019 DOEE RESUBMISSION
183	10/10/2019 DOEE RESUBMISSION
184	10/10/2019 DOEE RESUBMISSION
185	10/10/2019 DOEE RESUBMISSION
186	10/10/2019 DOEE RESUBMISSION
187	10/10/2019 DOEE RESUBMISSION
188	10/10/2019 DOEE RESUBMISSION
189	10/10/2019 DOEE RESUBMISSION
190	10/10/2019 DOEE RESUBMISSION
191	10/10/2019 DOEE RESUBMISSION
192	10/10/2019 DOEE RESUBMISSION
193	10/10/2019 DOEE RESUBMISSION
194	10/10/2019 DOEE RESUBMISSION
195	10/10/2019 DOEE RESUBMISSION
196	10/10/2019 DOEE RESUBMISSION
197	10/10/2019 DOEE RESUBMISSION
198	10/10/2019 DOEE RESUBMISSION
199	10/10/2019 DOEE RESUBMISSION
200	10/10/2019 DOEE RESUBMISSION

DATE:	OCT. 31, 2018
DES:	MDB
DWN:	GMH
SCALE:	1"=20'
PROJECT/FILE NO.	VC0392
SHEET NO.	CIV1230

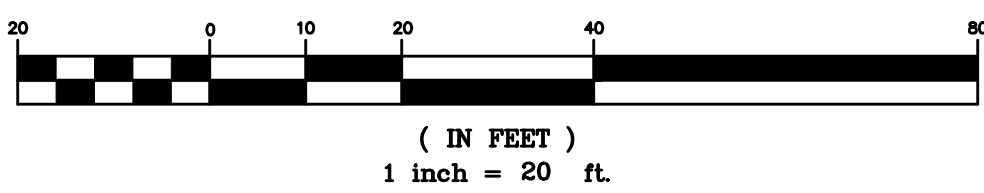
SIGN LEGEND



WISCONSIN AVENUE, NW
120' WIDE PUBLIC ROAD

RODMAN STREET NW
90' WIDE PUBLIC ROAD

GRAPHIC SCALE

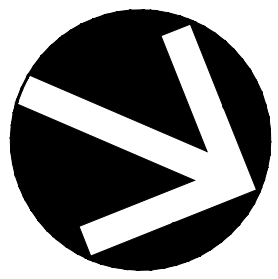


LEGEND

	CABLE TELEVISION CONDUIT ELECTRICAL CONDUIT EDGE OF PAVEMENT FENCE LINE NATURAL GAS CONDUIT OVERHEAD WIRES TELEPHONE/COMMUNICATIONS CONDUIT PROPERTY LINES PUBLIC UTILITIES EASEMENTS SANITARY SEWER CONDUIT STORM DRAIN CONDUIT WATER CONDUIT		SANITARY CLEANOUT STORM DRAIN MANHOLE ELECTRICAL JUNCTION BOX ELECTRICAL MANHOLE FIRE DEPARTMENT CONNECTION FIRE HYDRANT GAS MANHOLE GUY POLE GAS VALVE LIGHT POLE PHONE PEDESTAL PHONE MANHOLE UTILITY POLE		SANITARY MANHOLE TRAFFIC CONTROL BOX TRAFFIC SIGNAL POLE TREE CABLE TELEVISION PEDESTAL UNKNOWN UTILITY MANHOLE WATER METER WATER MANHOLE WATER VALVE BOLLARD SIGN POST WOOD POST INLETS CURB INLET		CONC. CONCRETE C&G CURB AND GUTTER BLDG. BUILDING STY. STORY TRV ELECTRICAL TRANSFORMER ASPH. ASPHALT ESMT. EASEMENT RCP REINFORCED CONCRETE PIPE CMP CORRUGATED METAL PIPE BRL BUILDING RESTRICTION LINE R/W RIGHT-OF-WAY
--	---	--	--	--	--	--	---



"FOR LOCATION OF UTILITIES
CALL 8-1-1 or 1-800-257-7777 OR LOG
ON TO or 48 HOURS IN ADVANCE OF
ANY WORK IN THIS VICINITY"



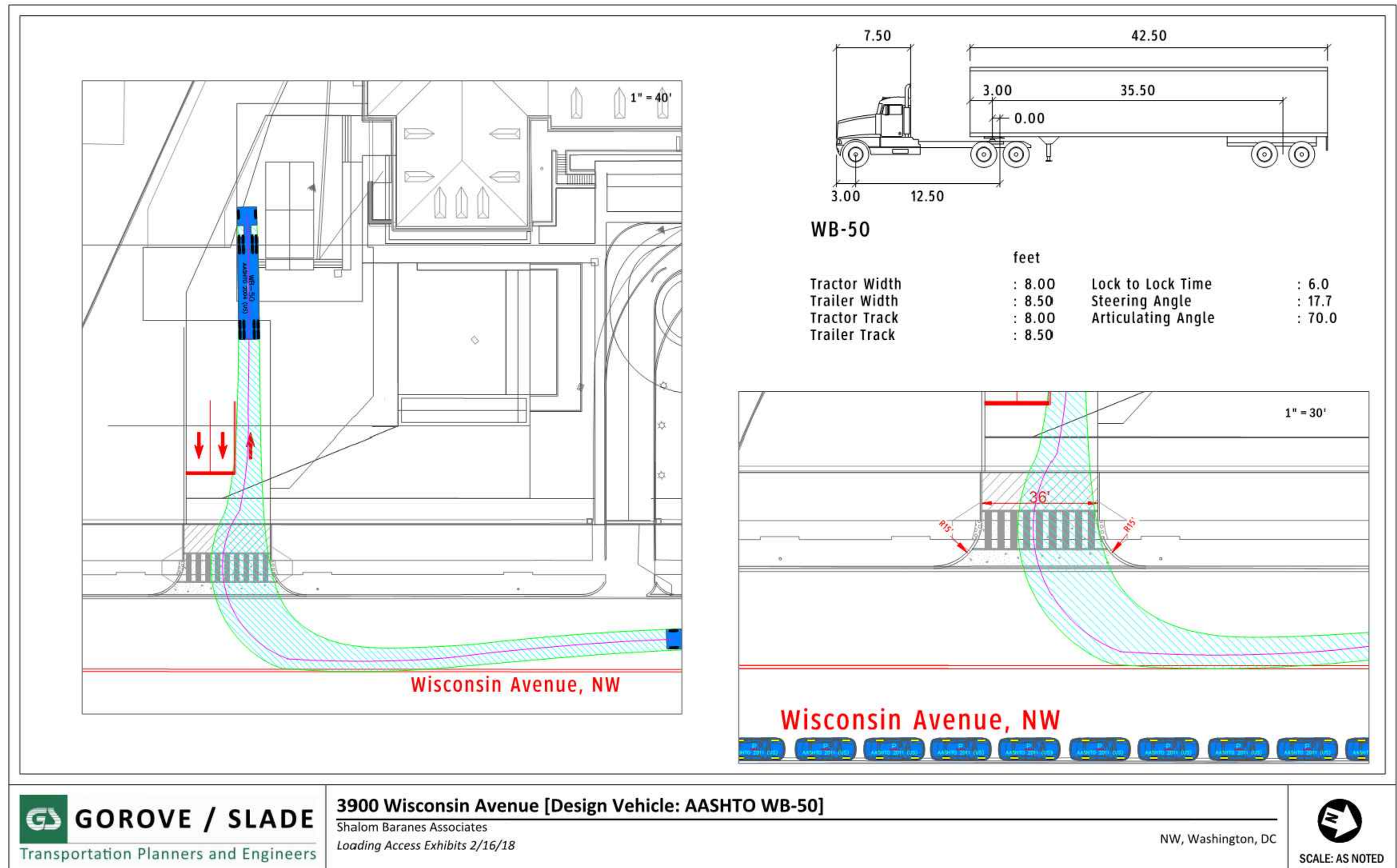
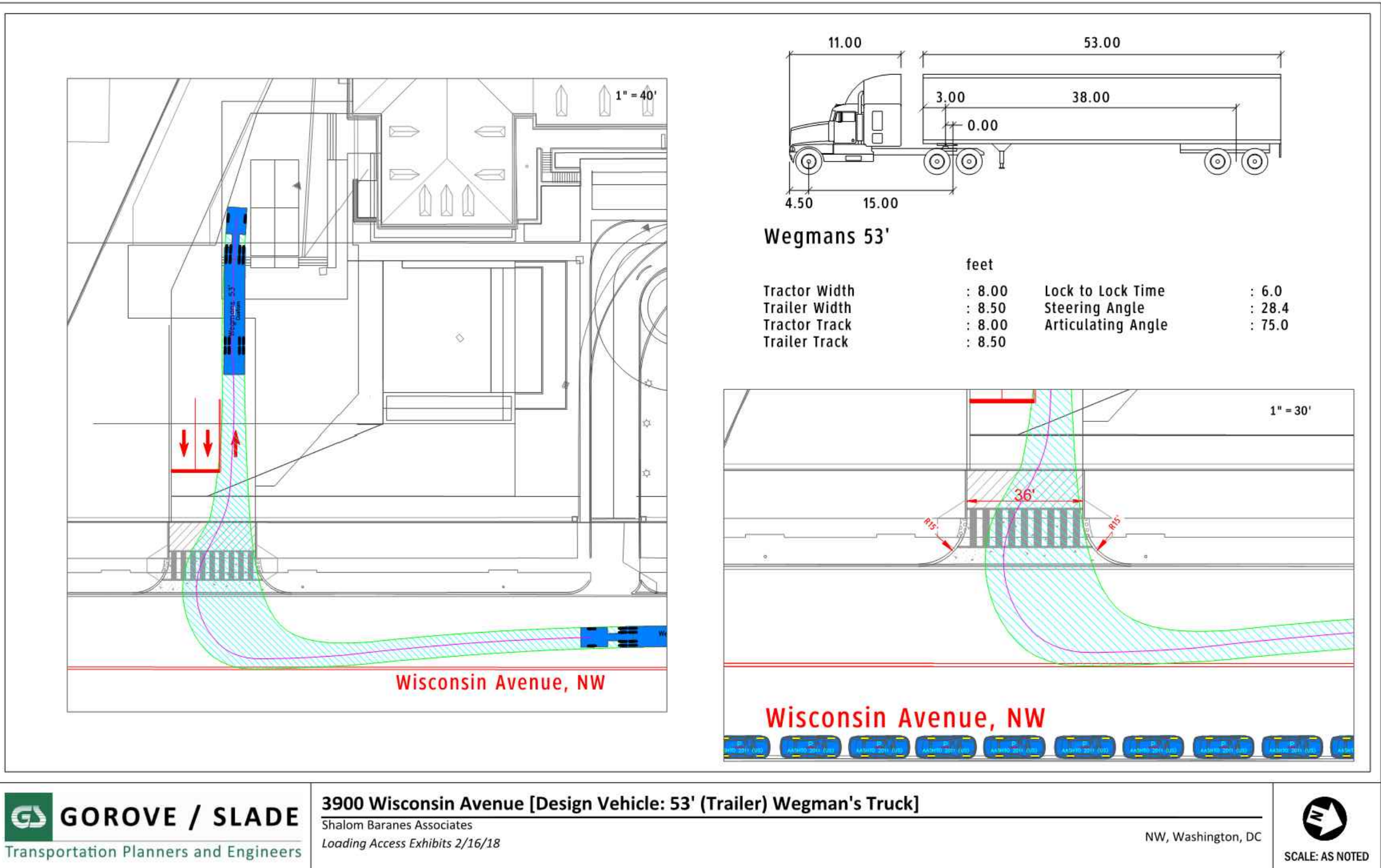
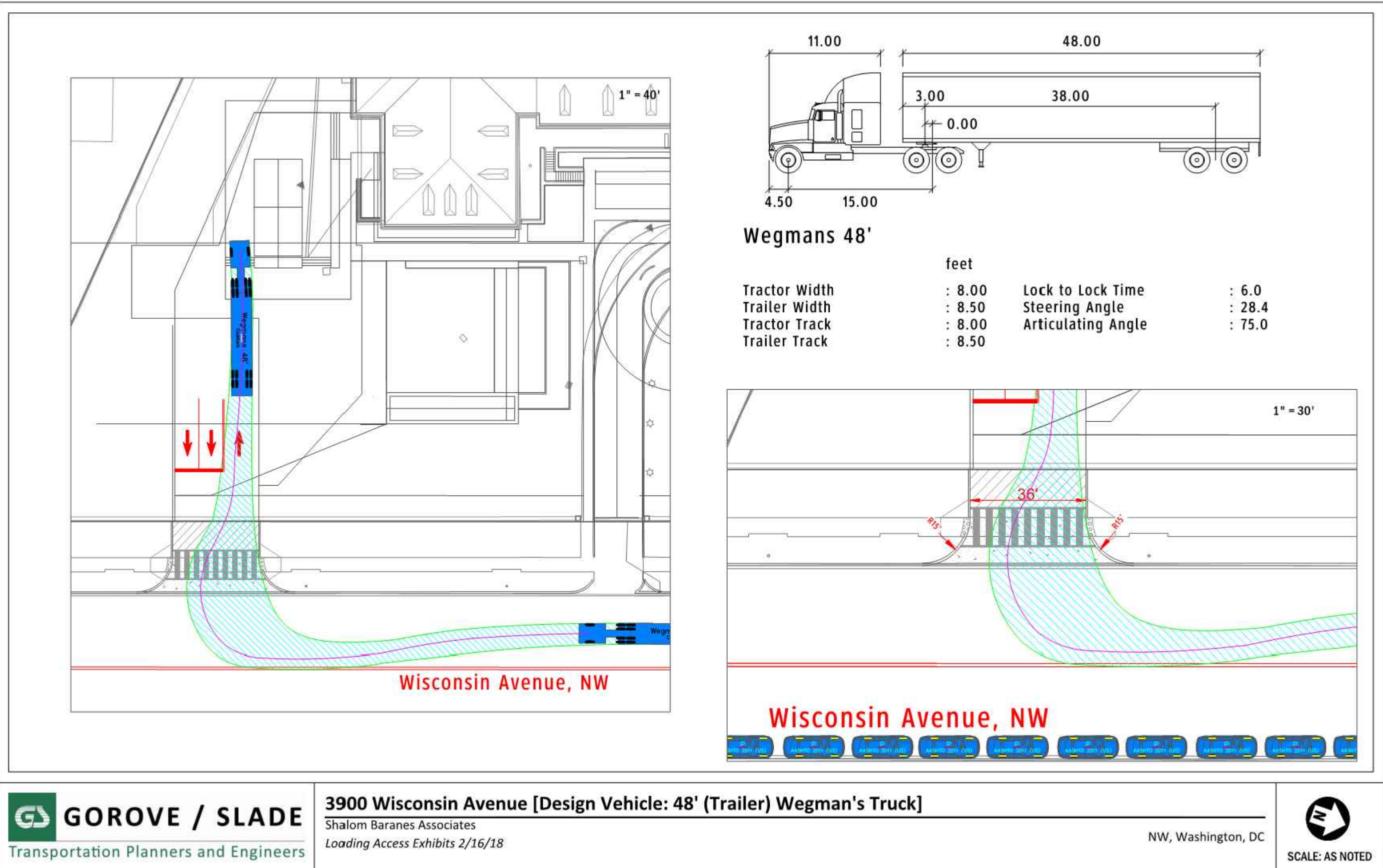
VIKA CAPITOL
ENGINEERS ★ PLANNERS ★ LANDSCAPE ARCHITECTS ★ SURVEYORS ★ GEOMATICS
PROJECT: **MICHAEL D. BENTON, P.E.**
COORDINATOR: **benton@vikacapitol.com**
★ VIK4 CAPITOL, LLC ★ 4810 MASSACHUSETTS AVENUE, NW SUITE 16
★ WASHINGTON, DC 20016 ★ PHONE: 202.244.4140
★ WWW.VIKACAPITOL.COM ★

3900 WISCONSIN AVENUE
FULL SITE DEVELOPMENT
3900 WISCONSIN AVE NW
A&T LOT 801, SQUARE 1823
WASHINGTON, D.C. 20016

**BUS STOP RELOCATION
PLAN**

VIKA CAPITOL REVISIONS	
#	DATE DESCRIPTION
10	10/15/2019 DOEE RESUBMISSION
9	07/26/2019 DOEE RESUBMISSION
8	10/31/18 DC WATER & DOEE SUB
7	10/01/18 DC WATER 2ND SUB.
6	07/20/18 DEMOLITION PLAN
5	06/12/18 DDOT RESUBMISSION
4	20/20/18 DDOT RESUBMISSION
3	02/02/18 DDOT RESUBMISSION
2	12/01/17 DC WATER SUBMISSION
DATE: OCT. 31, 2018	
DES. MDB	DWN. GMH
SCALE: 1"=20'	
PROJECT/FILE NO. VC0392	
SHEET NO. CIV1235	

***NOTE
THE INFORMATION, DESIGN AND
CONTENT OF THE DRAWINGS OR
DOCUMENTS ATTACHED HERETO ARE
PROPRIETARY TO VIKA CAPITOL, LLC
AND CONSTITUTE ITS PROPRIETARY
INTELLECTUAL PROPERTY. THE
ATTACHED DRAWINGS AND/OR
DOCUMENTS MUST NOT BE FORWARDED,
SHARED, COPIED, DIGITALLY CONVERTED,
MODIFIED, OR USED FOR ANY PURPOSE,
IN ANY FORMAT, WITHOUT PRIOR
WRITTEN AUTHORIZATION FROM VIKA
CAPITOL, LLC. VIOLATIONS MAY RESULT
IN PROSECUTION. ONLY APPROVED,
SIGNED AND SEALED PLANS OR
DRAWINGS MAY BE UTILIZED FOR
CONSTRUCTION PURPOSES.



VIKA CAPITOL

ENGINEERS ★ PLANNERS ★ LANDSCAPE ARCHITECTS ★ SURVEYORS ★ GEOMATICS

PROJECT: **MICHAEL D. BENTON, P.E.**
COORDINATOR: **benton@vikacapitol.com**

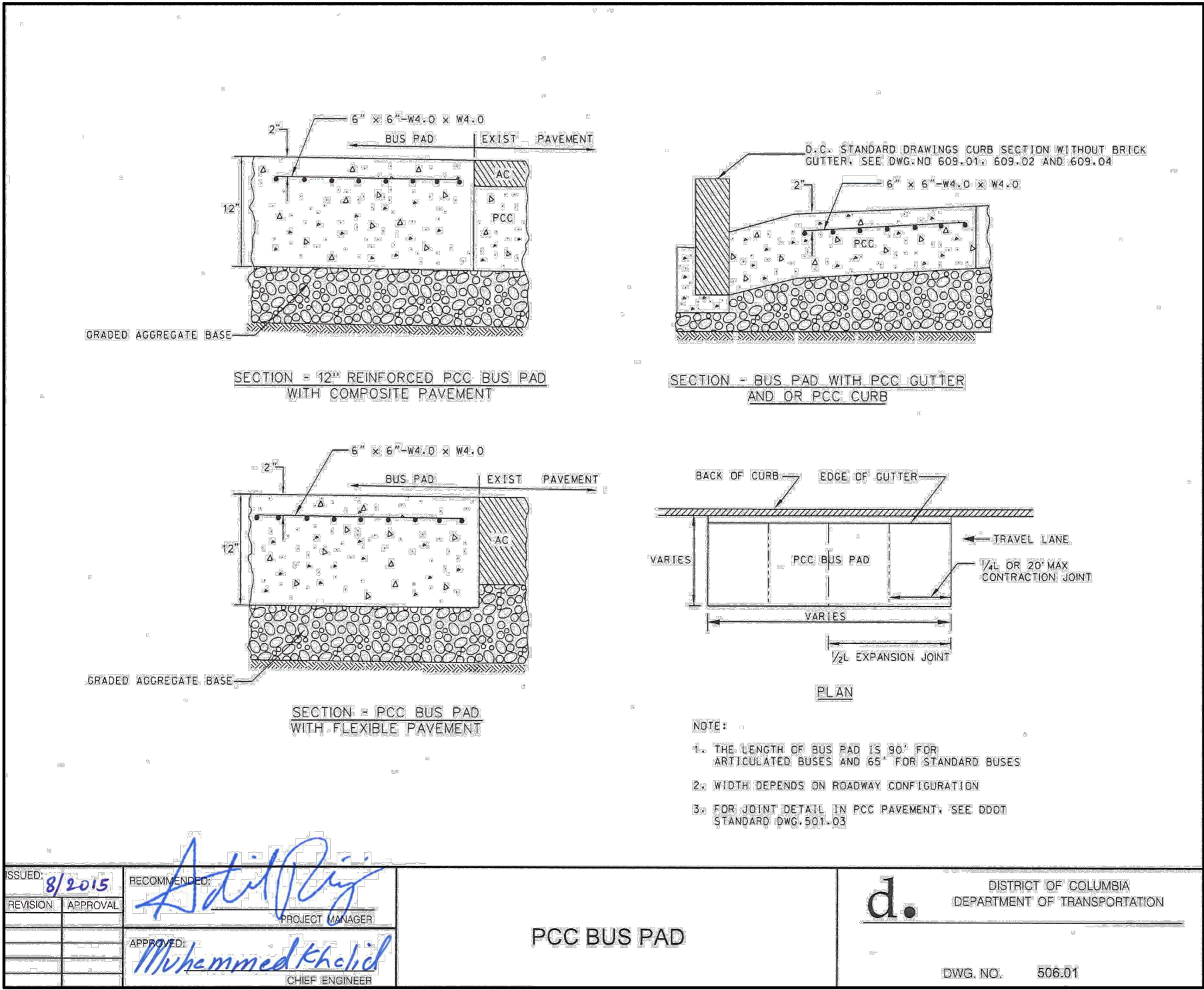
★ VIKA CAPITOL, LLC ★ 4910 MASSACHUSETTS AVENUE, NW SUITE 16
★ WASHINGTON, DC 20016 ★ PHONE: 202.244.4140 ★
★ WWW.VIKACAPITOL.COM ★

3900 WISCONSIN AVENUE
FULL SITE DEVELOPMENT
3900 WISCONSIN AVE NW
A&T LOT 801, SQUARE 1823
WASHINGTON, D.C. 20016

PUBLIC SPACE DETAILS

VIKA CAPITOL REVISIONS	
#	DATE DESCRIPTION
10	10/15/2019 DOEE RESUBMISSION
9	07/26/2019 DOEE RESUBMISSION
8	10/31/18 DC WATER & DOEE SUB
7	10/01/18 DC WATER 2ND SUB.
6	07/20/18 DEMOLITION PLAN
5	06/12/18 DDOT RESUBMISSION
4	20/20/18 DDOT RESUBMISSION
3	02/02/18 DDOT RESUBMISSION
2	12/01/17 DC WATER SUBMISSION
DATE: OCT. 31, 2018	
DES. MDB	DWN. GMH
SCALE: AS SHOWN	
PROJECT/FILE NO. VC0392	
SHEET NO. CIV1241	

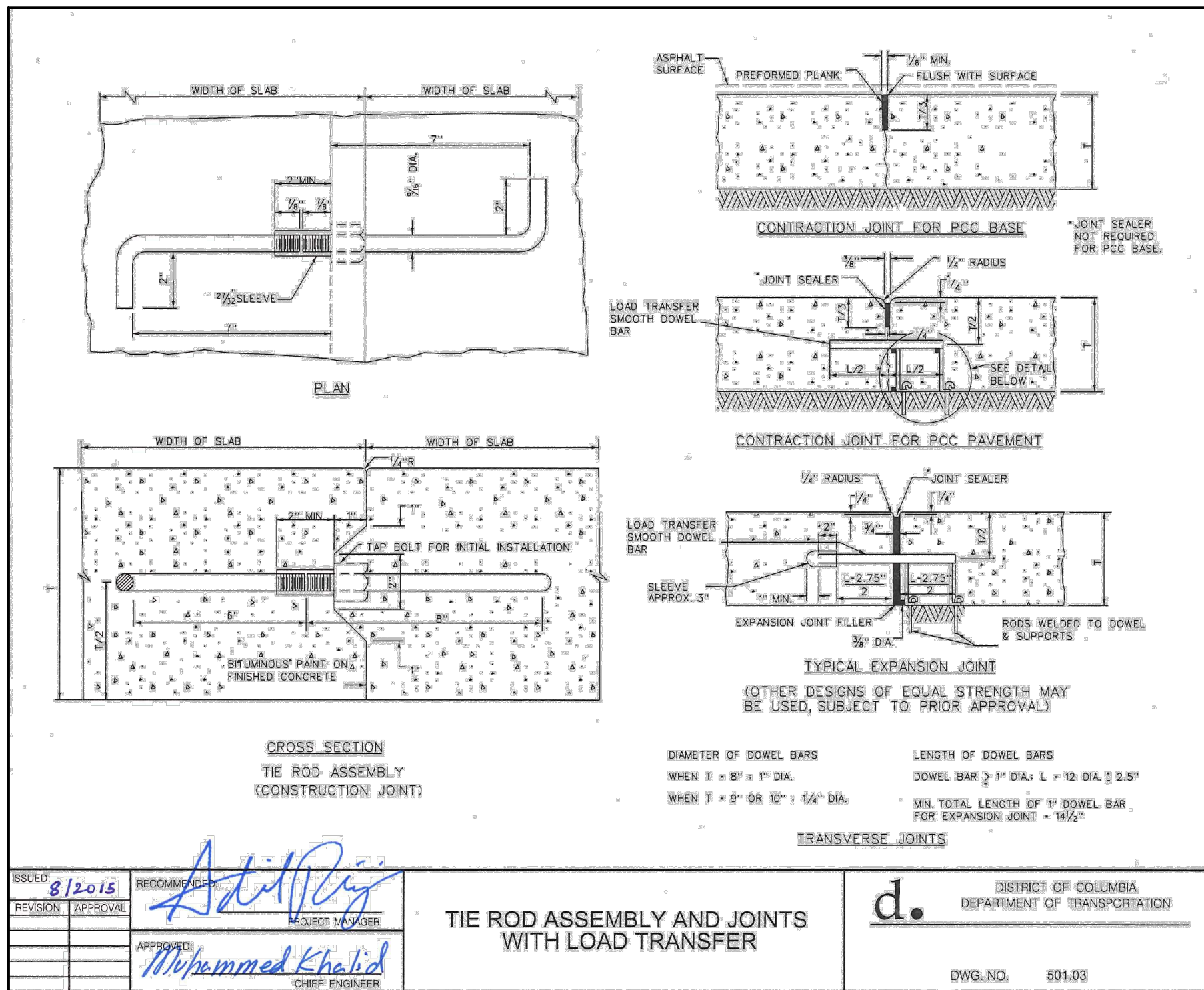
****NOTE**
THE INFORMATION, DESIGN AND CONTENT OF THE DRAWINGS OR DOCUMENTS ATTACHED HERETO ARE PROPRIETARY TO VIKA CAPITOL, LLC AND CONSTITUTE ITS PROPRIETARY INTELLECTUAL PROPERTY. THE ATTACHED DRAWINGS AND/OR DOCUMENTS MUST NOT BE FORWARDED, SHARED, COPIED, DIGITALLY CONVERTED, MODIFIED, OR USED FOR ANY PURPOSE, IN ANY FORMAT, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM VIKA CAPITOL, LLC. VIOLATIONS MAY RESULT IN PROSECUTION. ONLY APPROVED, SIGNED AND SEALED PLANS OR DRAWINGS MAY BE UTILIZED FOR CONSTRUCTION PURPOSES.



1
CIV1242

PCC BUS PAD DETAIL

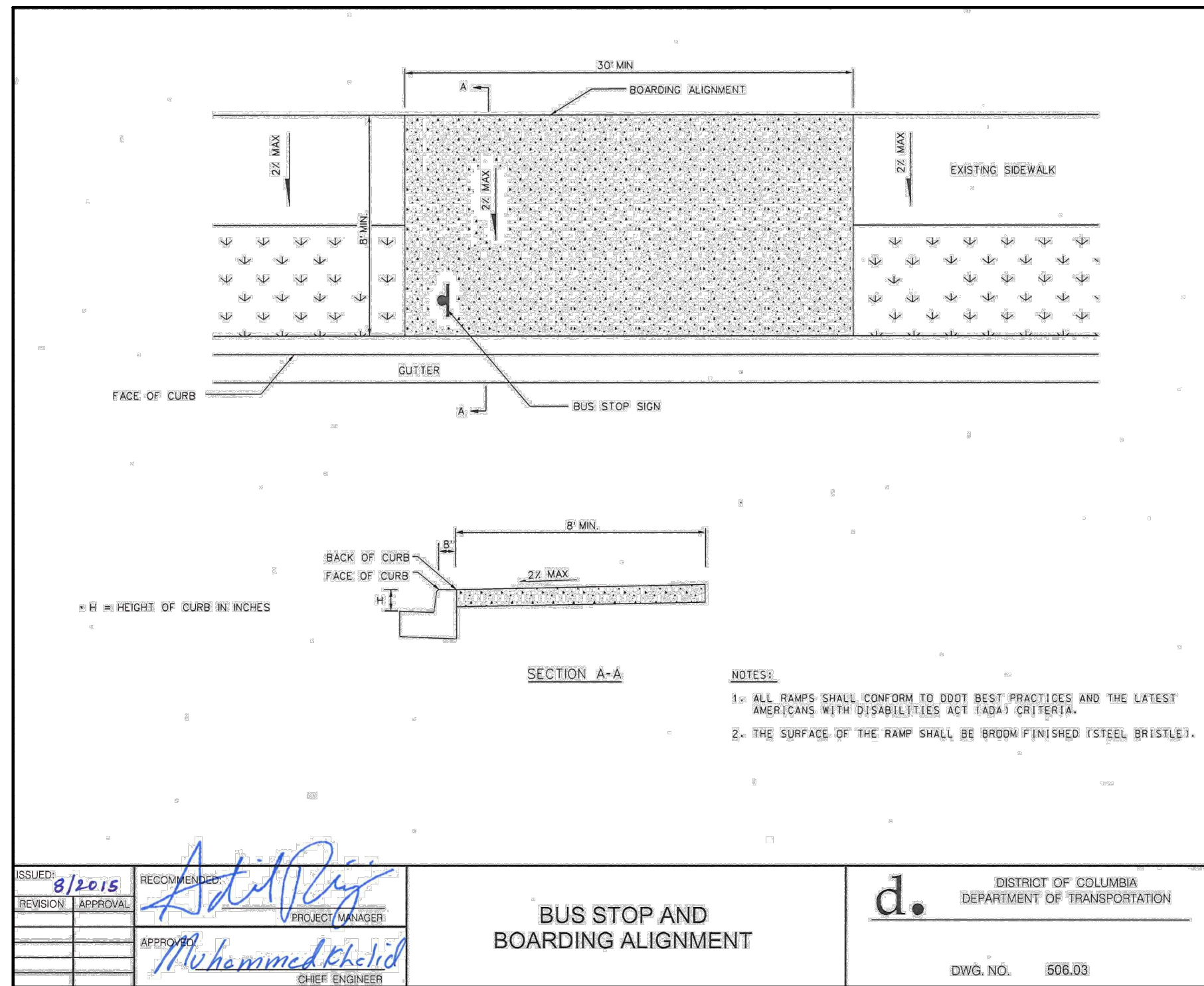
NOT TO SCALE



2
CIV1242

PCC BUS PAD JOINTS DETAIL

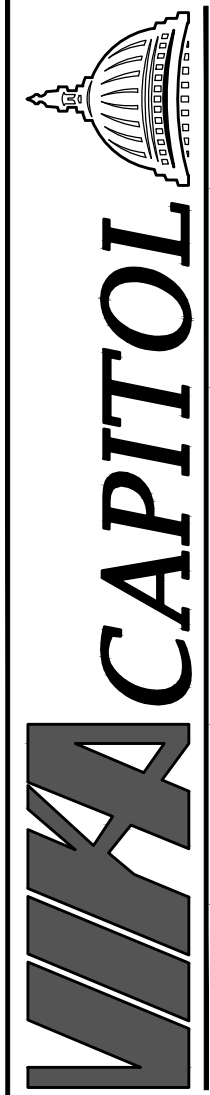
NOT TO SCALE



3
CIV1242

BUS STOP AND BOARDING ALIGNMENT DETAIL

NOT TO SCALE



ENGINEERS ★ PLANNERS ★ LANDSCAPE ARCHITECTS ★ SURVEYORS ★ GEOMATICS
PROJECT: MICHAEL D. BENTON, P.E.
COORDINATOR: benton@vikacapitol.com
★ VIKA CAPITOL, LLC ★ 4810 MASSACHUSETTS AVENUE, NW SUITE 16
★ WASHINGTON, DC 20016 ★ PHONE: 202.244.4140
★ WWW.VIKACAPITOL.COM ★

3900 WISCONSIN AVENUE
FULL SITE DEVELOPMENT
3900 WISCONSIN AVE NW
A&T LOT 801, SQUARE 1823
WASHINGTON, D.C. 20016

PUBLIC SPACE DETAILS

VIKA CAPITOL REVISIONS

#	DATE	DESCRIPTION
10	10/15/2019	DOEE RESUBMISSION
9	07/26/2019	DOEE RESUBMISSION
8	10/31/18	DC WATER & DOEE SUB
7	10/01/18	DC WATER 2ND SUB.
6	07/20/18	DEMOLITION PLAN
5	06/12/18	DDOT RESUBMISSION
4	20/20/18	DDOT RESUBMISSION
3	02/02/18	DDOT RESUBMISSION
2	12/01/17	DC WATER SUBMISSION

**NOTE
THE INFORMATION, DESIGN AND CONTENT OF THE DRAWINGS OR DOCUMENTS ATTACHED HERETO ARE PROPRIETARY TO VIKA CAPITOL, LLC AND CONSTITUTE ITS PROPRIETARY INTELLECTUAL PROPERTY. THE ATTACHED DRAWINGS AND/OR DOCUMENTS MUST NOT BE FORWARDED, SHARED, COPIED, DIGITALLY CONVERTED, MODIFIED, OR USED FOR ANY PURPOSE, IN ANY FORMAT, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM VIKA CAPITOL, LLC. VIOLATIONS MAY RESULT IN PROSECUTION. ONLY APPROVED, SIGNED AND SEALED PLANS OR DRAWINGS MAY BE UTILIZED FOR CONSTRUCTION PURPOSES.

DATE: OCT. 31, 2018
DES. MDB DWN. GMH

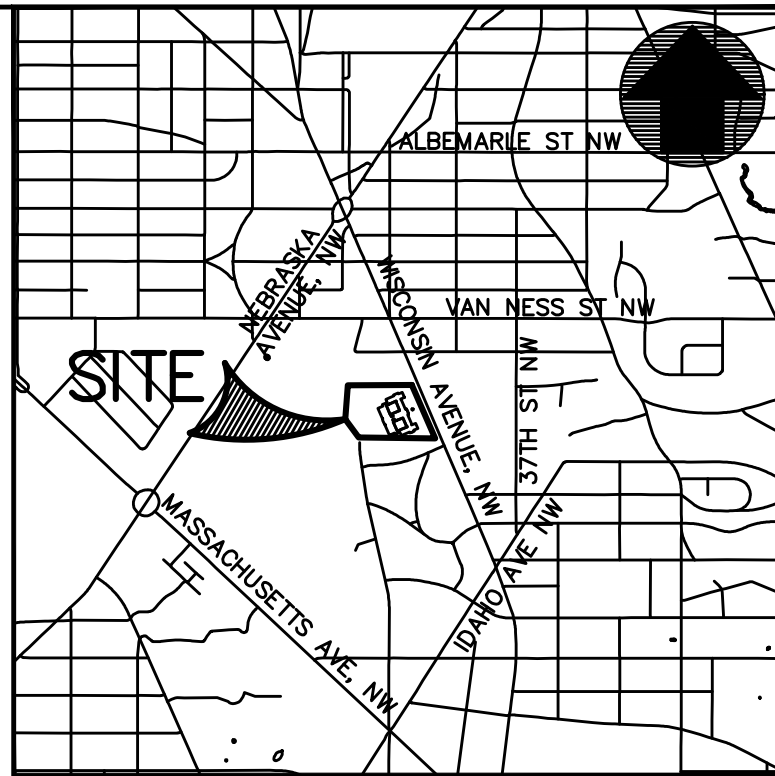
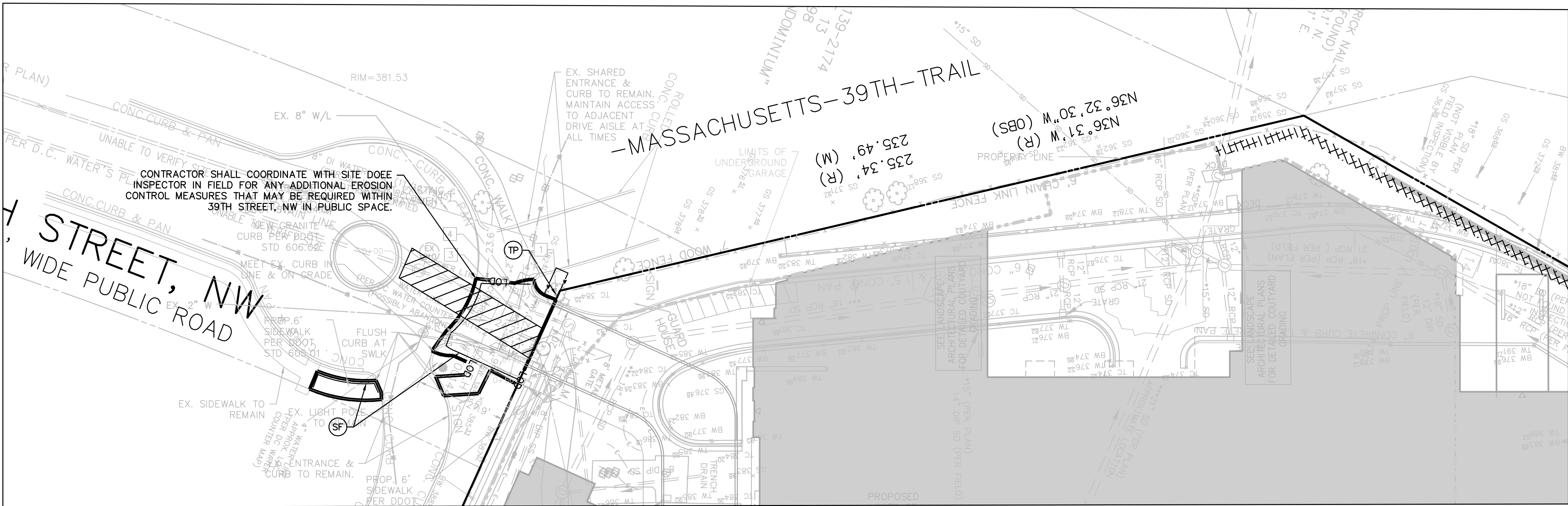
SCALE: AS SHOWN

PROJECT/FILE NO.

VC0392

SHEET NO.

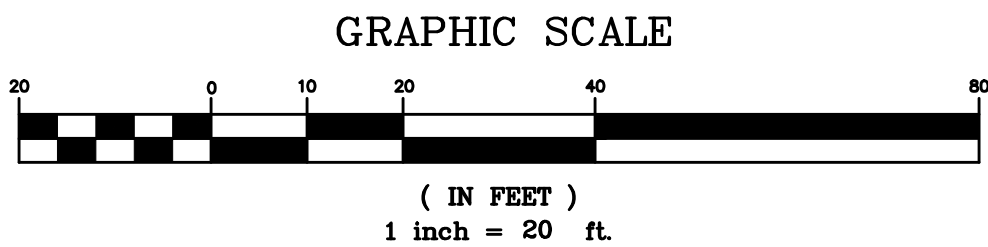
CIV1242



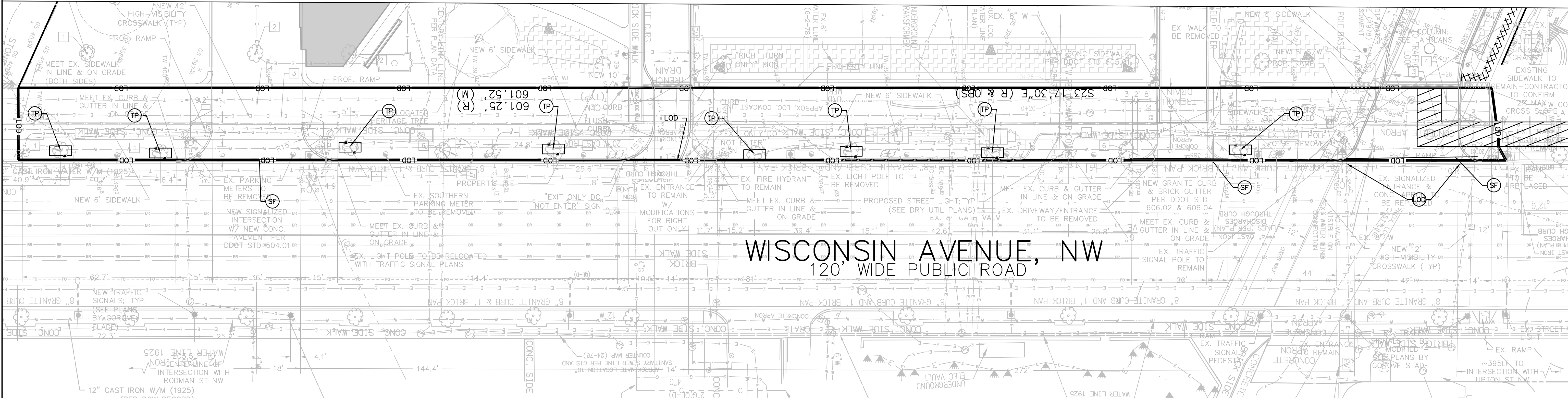
VICINITY MAP
SCALE 1" = 2000'

- TREE PRESERVATION NOTES:**
1. DEVELOPER SHALL RETAIN A CONSULTING CERTIFIED ARBORIST TO IMPLEMENT THE PRESERVATION PLAN TO ENSURE SUFFICIENT OVERSIGHT AND PROTECTION PRE-, DURING, AND POST-CONSTRUCTION AS PER CURRENT LAWS.
 2. DEVELOPER SHALL WORK WITH DDOT WARD 3 ARBORIST TO PLANT NEW STREET TREES FOR ANY EXISTING TREES REMOVED FOR THE PROJECT.

**“FOR LOCATION OF UTILITIES
CALL 8-1-1 or 1-800-257-7777 OR LOG
ON TO or 48 HOURS IN ADVANCE OF
ANY WORK IN THIS VICINITY”**



THIS SHEET IS FOR SEDIMENT
AND EROSION CONTROL ONLY



LEGEND:

- | | | | |
|---------------------|---|----|----------------------------------|
| — LOD — LOD — LOD — | LIMITS OF DISTURBANCE | ✕ | EX TREE SHALL BE REMOVED |
| — SF — SF — SF — | PUBLIC RIGHT-OF-WAY DISTURBANCE SOLEY FOR UTILITY TRENCH WORK | ⊞ | STABILIZED CONSTRUCTION ENTRANCE |
| — SSF — SSF — SSF — | INLET PROTECTION | DD | TEMPORARY DIVERSION DIKE |
| — TP — TP — TP — | SILT FENCE | | PROPOSED DRAINAGE DIVIDES |
| | SUPER SILT FENCE | | |
| | TREE PROTECTION | | |

SITE STABILIZATION NOTE

FOLLOWING INITIAL LAND DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR INTERIM STABILIZATION SHALL BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS FOR THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN THREE (3) HORIZONTAL TO ONE (1) VERTICAL (3:1); AND FOURTEEN (14) DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. THE REQUIREMENTS OF THIS PARAGRAPH DO NOT APPLY TO THOSE AREAS WHICH ARE SHOWN ON THE PLAN AND ARE BEING USED FOR MATERIAL STORAGE OTHER THAN STOCKPILING, OR FOR THOSE AREAS ON WHICH ACTUAL CONSTRUCTION ACTIVITIES ARE BEING PERFORMED. MAINTENANCE SHALL BE PERFORMED AS NECESSARY SO THAT STABILIZED AREAS CONTINUOUSLY MEET THE APPROPRIATE REQUIREMENTS OF THE DISTRICT OF COLUMBIA STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

DEWATERING NOTE:

SINCE THE GEOTECH REPORT DOES NOT ANTICIPATE GROUNDWATER AS BEING AN ISSUE, A FULL DE-WATERING PLAN IS NOT PRESENTLY REQUIRED. HOWEVER, ANY PERCHED WATER THAT MIGHT BE ENCOUNTERED DURING CONSTRUCTION WILL BE COLLECTED VIA PUMPS AND ROUTED TO THE PORTABLE SEDIMENT TANK THAT WILL BE UTILIZED AND INDICATED IN THE E&S PLANS.

SEDIMENT AND EROSION CONTROL NARRATIVE

SEDIMENT CONTROLS (TREE PROTECTION, SILT FENCE, INLET PROTECTION SHALL BE PROVIDED FOR THE CONSTRUCTION OF THE PROPOSED ENTRANCES AND ENTRANCE MODIFICATIONS. SEE DETAIL SHEETS CIV1350-CIV1355.

AS THE TOTAL DISTURBANCE IS GREATER THAN 5000 SF, STORMWATER MANAGEMENT RETENTION WILL BE PROVIDED TO THE MAXIMUM EXTENTS PRACTICABLE BY RETAINING OF EXISTING STREET TREES AND PLANTING OF NEW STREET TREES WITHIN PUBLIC SPACE.

SITE INFORMATION:

AREA OF PROPERTY = 423,529 SQ. FT. (9.72 ACRES)
APPROX. QUANTITY OF DISTURBED AREA (PROW ONLY) = 18,443 SQ. FT.

APPROX. QUANTITY OF CUT = 20 CY
APPROX. QUANTITY OF FILL = 20 CY

SOIL TYPE: Ub - URBAN LAND PER THE USDA-NRCS

OFFSITE WASTE/BORROW LOCATION
TO BE SUBMITTED BY CONTRACTOR FOR APPROVAL

****NOTE**
THE INFORMATION, DESIGN AND CONTENT OF THE DRAWINGS OR DOCUMENTS ATTACHED HERETO ARE PROPRIETARY TO VIK A CAPITOL, LLC AND CONSTITUTE ITS PROPRIETARY INTELLECTUAL PROPERTY. THE ATTACHED DRAWINGS AND/OR DOCUMENTS MUST NOT BE FORWARDED, SHARED, COPIED, DIGITALLY CONVERTED, MODIFIED, OR USED FOR ANY PURPOSE, IN ANY FORMAT, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM VIK A CAPITOL, LLC. VIOLATIONS MAY RESULT IN PROSECUTION. ONLY APPROVED, SIGNED AND SEALED PLANS OR DRAWINGS MAY BE UTILIZED FOR CONSTRUCTION PURPOSES.

VIKA CAPITOL REVISIONS

#	DATE	DESCRIPTION
1	10/10/15/2019	DOEE RESUBMISSION
2	07/26/2019	DOEE RESUBMISSION
3	10/31/18	DC WATER & DOEE SUB
4	10/01/18	DC WATER 2ND SUB.
5	06/12/18	DEMOLITION PLAN
6	07/20/18	DEMOLITION PLAN
7	06/12/18	DDOT RESUBMISSION
8	02/20/18	DDOT RESUBMISSION
9	02/02/18	DDOT RESUBMISSION
10	12/01/17	DC WATER SUBMISSION

DATE:	OCT. 31, 2018
DES.	MDB
DWN.	GMH
SCALE:	1"=20'
PROJECT/FILE NO.	VC0392
SHEET NO.	CIV1340

3900 WISCONSIN AVENUE
FULL SITE DEVELOPMENT
3900 WISCONSIN AVE NW
A&T LOT 801, SQUARE 1823
WASHINGTON, D.C. 20016

SEDIMENT & EROSION
CONTROL PLAN
PUBLIC SPACE

VIKA CAPITOL
ENGINEERS * PLANNERS * LANDSCAPE ARCHITECTS * SURVEYORS * GEOMATICS
PROJECT: MICHAEL D. BENTON, P.E.
COORDINATOR: benton@vikacapitol.com
* VIK A CAPITOL, LLC * 4810 MASSACHUSETTS AVENUE, NW SUITE 16
* WASHINGTON, DC 20016 * PHONE: 202.244.4140
* WWW.VIKACAPITOL.COM *

DISTRICT OF COLUMBIA GENERAL DEMOLITION NOTES:

1. CONTRACTOR IS TO COORDINATE WITH DC WATER & SEWER AUTHORITY, VERIZON, COMCAST, RCN, DCNET, WASHINGTON GAS, BELL ATLANTIC TELEPHONE AND PEPCO TO PROPERLY TERMINATE AND REMOVE EXISTING SERVICE CONNECTIONS TO THE SITE. SERVICES TO ALL EXISTING RESIDENCES AND BUILDINGS WHICH ARE LOCATED ON THIS PROJECT SITE ARE TO BE PROPERLY TERMINATED & REMOVED.
2. CONTRACTOR IS TO WALK THE SITE AND FAMILIARIZE HIM/HERSELF WITH THE SCOPE OF DEMOLITION REQUIRED. ALL DEMOLITION WORK REQUIRED TO CONSTRUCT NEW SITE IMPROVEMENTS SHALL BE PERFORMED BY THE CONTRACTOR AND WILL BE UNCLASSIFIED EXCAVATION.
3. REMOVAL SHALL INCLUDE BUT IS NOT LIMITED TO THE EXCAVATION, HAULING AND DISPOSAL OF CONCRETE PADS, FOUNDATIONS, SLABS, STEPS AND STRUCTURES. ABANDONED UTILITIES, BUILDINGS, PAVEMENT, DECKS, VEGETATION, AND ALL MATERIALS CLEARED AND GRUBBED.
4. THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY AND STRUCTURES AND UTILITIES ON THE PROPERTY NOT TO BE DEMOLISHED.
5. INDIVIDUAL BUILDING SERVICES ARE NOT INDICATED ON THE DEMOLITION PLAN AND SHALL BE LOCATED AND REMOVED BY THE CONTRACTOR TO THE POINT OF UTILITY COMPANY CUT OFF OR PUBLIC AGENCY MAINTENANCE.
6. ELECTRIC, TELEPHONE, SANITARY SEWER, WATER AND STORM DRAINAGE UTILITIES THAT SERVICE OFF-SITE PROPERTIES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS. (MAINTENANCE SHALL INCLUDE TEMPORARY REROUTING WITH THE APPROVAL OF THE AUTHORITY HAVING JURISDICTION AND THE ARCHITECT.) ANY EXISTING SERVICES INTERRUPTED OR DAMAGED BY THE CONTRACTOR AND/OR HIS OPERATIONS SHALL BE REPAIRED AND / OR REPLACED AS NEEDED AT HIS EXPENSE.
7. EXISTING CURB AND GUTTER, LIGHTS, SIDEWALK, AND UTILITIES WITHIN THE PUBLIC RIGHT-OF-WAY NOT TO BE RECONSTRUCTED SHALL BE MAINTAINED, PROTECTED AND UNDISTURBED DURING DEMOLITION.
8. CONTRACTOR SHALL ERECT ALL NECESSARY PROTECTIVE DEVICES AROUND THE LIMITS OF DEMOLITION AND PROVIDE ANY AND ALL PEDESTRIAN AND VEHICULAR TRAFFIC CONTROL MEASURES DURING CONSTRUCTION AS DETERMINED BY THE OWNER AND DC.
9. PROVIDE SMOOTH SAW CUT OF EXISTING PAVEMENTS, CURBS AND GUTTER AND SIDEWALK TO BE DEMOLISHED.

all EXISTING WATER SERVICE CONNECTIONS NOTED TO BE ABANDONED ARE TO BE REMOVED AT THE PUBLIC MAIN PER DC WATER REQUIREMENTS

valve MANHOLES ON WATER MAINS THAT ARE SHOWN TO BE ABANDONED SHALL BE REMOVED

water CONNECTIONS ARE INSTALLED BY CUTTING IN A TEE AND SLEEVE IN THE PUBLIC WATER MAIN WITH A VALVE ON THE BRANCH OF THE TEE. THE ABANDONMENT CONSISTS OF REMOVING THE VALVE AND INSTALLING A PLUG ON THE BRANCH OF THE EXISTING TEE, IF THE TEE IS MECHANICAL JOINT. IF THE EXISTING TEE IS LEAD JOINT AND IS 20" OR SMALLER, THE ENTIRE TEE MUST BE REMOVED FROM THE PUBLIC WATER MAIN AND REPLACED WITH A STRAIGHT RUN OF PIPE. IF THE TEE IS LEAD JOINTS AND IS LARGER THAN 20", THE PIPE OUT OF THE BRANCH OF THE TEE CAN BE CUT AND CAPPED WITH CONCRETE BLOCK AND HARNESS BACK TO THE TEE. THE REMAINING WATER CONNECTION PIPE IS ABANDONED IN PLACE.

water SERVICES ARE INSTALLED BY TAPPING THE PUBLIC WATER MAIN AND INSTALLING A CORPORATION STOP. ABANDONMENT CONSISTS OF REMOVING THE CORPORATION STOP AND INSTALLING A PLUG IN THE TAP. THE REMAINING WATER SERVICE PIPE IS ABANDONED IN PLACE.
13. ALL EXISTING SEWERS TO BE ABANDONED/REMOVED SHALL BE DONE PER DC WATER REQUIREMENTS. NOTE: ABANDONMENT OF STORM/SEWER SERVICES AND CONNECTIONS

all SEWER SERVICE CONNECTIONS NOTED TO BE ABANDONED ARE TO BE ABANDONED AT THE PUBLIC MAIN PER DC WATER REQUIREMENTS

wye BRANCH CONNECTIONS MUST BE REMOVED AND CONNECTED TO PUBLIC SEWER UP STRAIGHT.

if CONNECTION GOES TO A MANHOLE, BULK HEAD THE PIPE IN THE MANHOLE.

abandoned MANHOLES SHALL BE FILLED WITH LEAN MIX CONCRETE, OR APPROVED EQUIVALENT

sewers 36" AND LARGER THAT ARE TO BE ABANDONED SHALL BE FILLED WITH APPROVED SUITABLE MATERIAL.

abandonment OF EXISTING STORM DRAINAGE FACILITIES MUST BE COORDINATED WITH CONSTRUCTION OF REPLACEMENT FACILITIES TO PROVIDE STORMWATER RUNOFF.
14. ALL EXISTING DC WATER UTILITY CONNECTIONS WITHIN PUBLIC SPACE NOTED TO BE ABANDONED SHALL BE DONE PER DC WATER REQUIREMENTS. NOTE: ABANDONMENT OF UTILITIES IN PUBLIC SPACE

contractor SHALL OBTAIN NECESSARY PUBLIC PERMITS PRIOR TO THE START OF WORK.

if EXISTING LOCATION OF UTILITY CONNECTIONS TO THE PUBLIC UTILITY COULD NOT BE DETERMINED WITH THE FIELD SURVEY, THE CONTRACTOR SHALL DETERMINE THE LOCATION OF THIS OUTFALL IN THE FIELD PRIOR TO COMMENCING SERVICE UTILITY ABANDONMENT/REMOVAL. THIS WORK SHALL BE DONE IN COORDINATION WITH DC WATER INSPECTORS.

all UTILITY DISCONNECT TRENCHES SHALL BE APPROXIMATELY 3' IN WIDTH OR AS DICTATED BY FIELD CONDITIONS. UTILITY DISCONNECT TRENCHES IN PAVED AREAS SHALL BE REPAIRED IN ACCORDANCE WITH DC DPW DWG. NO. 207.01
15. ALL EXISTING UTILITIES WHICH ARE TO REMAIN SHALL BE ADJUSTED TO FINAL GRADE AS NECESSARY BY THE CONTRACTOR.
16. CONTRACTOR SHALL OBTAIN COPIES OF ALL ENVIRONMENTAL REPORTS FOR THIS SITE AND FOLLOW THEIR RECOMMENDATIONS.
17. CONTRACTORS CONSTRUCTION METHODS SHALL NOT INTERRUPT OR IMPEDE USAGE OF OR ACCESS TO ADJACENT BUILDINGS.
18. THIS DEMOLITION PLAN IS DESIGNED TO CURRENT SITE CONDITIONS. IF SITE CONDITIONS CHANGE PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR SHALL CHANGE DEMOLITION PLAN ACCORDINGLY.
19. ALL TREES GREATER THAN 14" IN DIAMETER IN THE DISTRICT OF COLUMBIA ARE CONSIDERED "SPECIAL TREES" AND WILL REQUIRE A SEPARATE PERMIT FROM THE DISTRICT'S URBAN FORESTRY ADMINISTRATION PRIOR TO DEMOLITION AND / OR REMOVAL. ADDITIONALLY, ALL TREES GREATER THAN 31" IN DIAMETER (100" OR MORE IN CIRCUMFERENCE) ARE CONSIDERED "HERITAGE TREES" AND WILL REQUIRE A SEPARATE PERMIT FROM THE MAYOR'S OFFICE AND THE DISTRICT'S URBAN FORESTRY ADMINISTRATION. NO TREE REMOVAL OR DEMOLITION ACTIVITY SHALL COMMENCE PRIOR TO THE APPROVAL AND ISSUANCE OF THE APPROPRIATE DISTRICT OF COLUMBIA PERMITS.

ADDITIONAL UTILITY DISCONNECT NOTES:

UTILITY DISCONNECTS FOR WATER & SANITARY SEWER HOUSE CONNECTIONS AND STORM DRAIN CONNECTIONS

1. WATER & SANITARY SEWER HOUSE CONNECTION LATERALS ARE TO BE ABANDONED AT THE PUBLIC MAIN IN ACCORDANCE WITH DC WATER REGULATIONS. AND CAPPED AT THE PROPERTY LINE IN ACCORDANCE WITH THE DISTRICT OF COLUMBIA PLUMBING CODE, UNLESS THESE REQUIREMENTS ARE WAIVED BY DC WATER AND DCRA DUE TO THE ABANDONMENT OF THE MAINS. (SEE DEMOLITION NOTES 12, 13, & 14)
2. ALL ON-SITE STORM DRAIN STRUCTURES AND THEIR ASSOCIATED OUTFALL INTO PUBLIC SPACE ARE TO BE ABANDONED IN ACCORDANCE WITH DC WATER REGULATIONS. (SEE DEMOLITION NOTES 12, 13, & 14)
3. REFER TO TRAFFIC CONTROL PLAN (BY OTHERS) FOR ALL ROAD AND SIDEWALK CLOSING ASSOCIATED WITH THIS PLAN.

EROSION & CONTROL NOTES

DOEE SOIL EROSION AND SEDIMENT CONTROL PLAN GENERAL NOTES	
1.	Following initial land disturbance or re-disturbance, permanent or interim stabilization must be completed within seven (7) calendar days for the surfaces of all perimeter controls, dikes, swales, ditches, perimeter slopes, and slopes greater than three (3) horizontal to one (1) vertical (3:1); and fourteen (14) days for all other disturbed or graded areas on the project site. These requirements do not apply to areas shown on the plan that are used for material storage other than stockpiling, or for those areas on the plan where actual construction activities are being performed. Maintenance shall be performed as necessary so that stabilized areas continuously meet the appropriate requirements of the District of Columbia Standards and Specifications for Soil Erosion and Sediment Control (ESC). [21 DCMR § 542.9 (o)]
2.	ESC measures shall be in place before and during land disturbance. [21 DCMR § 543.6]
3.	Contact DOEE Inspection (202) 535-2977 to schedule a preconstruction meeting at least three (3) business days before the commencement of a land-disturbing activity. [21 DCMR § 503.7 (a)]
4.	A copy of the approved plan set will be maintained at the construction site from the date that construction activities begin to the date of final stabilization and will be available for DOEE inspectors. [21 DCMR § 542.15]
5.	ESC measures shall be in place to stabilize an exposed area as soon as practicable after construction activity has temporarily or permanently ceased but no later than fourteen (14) days following cessation, except that temporary or permanent stabilization shall be in place at the end of each day of underground utility work that is not contained within a larger development site. [21 DCMR § 543.7]
6.	Stockpiled material being actively used during a phase of construction shall be protected against erosion by establishing and maintaining perimeter controls around the stockpile. [21 DCMR § 543.16 (a)]
7.	Stockpiled material not being actively used or added to shall be stabilized with mulch, temporary vegetation, hydro-seed or plastic within fifteen (15) calendar days after its last use or addition. [21 DCMR § 543.16 (b)]
8.	Fill material must be free of contamination levels of any pollutant that is, or may be considered to represent, a possible health hazard to the public or may be detrimental to surface or ground water quality, or which may cause damage to property or the drainage system. All fill material must be free of hazardous materials and comply with all applicable District and federal regulations.
9.	Protect best management practices from sedimentation and other damage during construction for proper post construction operation. [21 DCMR § 543.18]
10.	Request a DOEE inspector's approval after the installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. [21 DCMR § 542.12 (a)]
11.	Request a DOEE inspector's approval after final stabilization of the site and before the removal of erosion and sediment controls. [21 DCMR § 542.12 (b)]
12.	Final stabilization means that all land-disturbing activities at the site have been completed and either of the following two criteria have been met: (1) a uniform (for example, evenly distributed, without large bare areas) perennial vegetative cover with a density of seven percent (7%) of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures; or (2) equivalent permanent stabilization measures have been employed (such as the use of riprap, gabions, or geotextiles). [21 DCMR § 542.12 (b.1, b.2)]
13.	Follow the requirements of the United States Environmental Protection Agency approved Stormwater Pollution Prevention Plan (SWPPP) and maintain a legible copy of this SWPPP on site. [21 DCMR § 543.10 (b)]
14.	Post a sign that notifies the public to contact DOEE in the event of erosion or other pollution. The sign will be placed at each entrance to the site or as directed by the DOEE inspector. Each sign will be no less than 18" x 24" in size and made of materials that will withstand weather for the duration of the project. Lettering will be at least 1 inch in height and easily readable by the public from a distance of twelve feet (12 ft). The sign must direct the public, in substantially the following form: "To Report Erosion, Runoff, or Stormwater Pollution" and will provide the construction site address, DOEE's telephone number (202-535-2977), DOEE's e-mail address (IEB.scheduling@dc.gov), and the 311 mobile app heading ("Construction-Erosion Runoff"). [21 DCMR § 543.22]
If a site disturbs 5,000 square feet of land or greater, the ESC plan must contain the following statement:	
15.	A Responsible Person must be present or available while the site is in a land-disturbing phase. The Responsible Person is charged with being available to (a) inspect the site and its ESC measures at least once biweekly and after a rainfall event to identify and remedy each potential or actual erosion problem, (b) respond to each potential or actual erosion problem identified by construction personnel, and (c) speak on site with DOEE to remedy each potential or actual erosion problem. A Responsible Person shall be (a) licensed in the District of Columbia as a civil or geotechnical engineer, a land surveyor, or architect; or (b) certified through a training program that DOEE approves, including a course on erosion control provided by another jurisdiction or professional association. During construction, the Responsible Person shall keep on site proof of professional licensing or of successful completion of a DOEE-approved training program. [21 DCMR § 547]

MINIMUM STORMWATER POLLUTION PREVENTION PLAN: GOOD HOUSEKEEPING NOTES

FUELS AND OILS. ON-SITE REFUELING WILL BE CONDUCTED IN A DEDICATED LOCATION AWAY FROM ACCESS TO SURFACE WATERS. TANKS FABRICATED WITH DOUBLE WALLS DO NOT REQUIRE AN ADDITIONAL BERMED AREA. INSTALL CONTAINMENT BERMS AND, OR SECONDARY CONTAINMENTS AROUND REFUELING AREAS AND STORAGE TANKS. SPILLS WILL BE CLEANED UP IMMEDIATELY AND CONTAMINATED SOILS DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL & DC REGULATIONS. PETROLEUM PRODUCTS WILL BE STORED IN CLEARLY LABELED TIGHTLY SEALED CONTAINERS. ALL VEHICLES ON SITE WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE ACTIVITIES. ANY ASPHALT SUBSTANCES USED ON SITE WILL BE APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. SPILL KITS WILL BE INCLUDED WITH ALL FUELING SOURCES AND MAINTENANCE ACTIVITIES.

SOLID WASTE. NO SOLID MATERIALS SHALL BE DISCHARGED TO SURFACE WATER. SOLID MATERIALS INCLUDING BUILDING MATERIALS, GARBAGE AND PAINT DEBRIS SHALL BE CLEANED UP DAILY AND DEPOSITED INTO DUMPSTERS, WHICH WILL BE PERIODICALLY REMOVED AND DEPOSITED INTO A LANDFILL.

ABRASIVE BLASTING. WATER BLASTING, SANDBLASTING, AND OTHER FORMS OF ABRASIVE BLASTING ON PAINTED SURFACES BUILT PRIOR TO 1978 MAY ONLY BE PERFORMED IF AN EFFECTIVE CONTAINMENT SYSTEM PREVENTS DISPERSAL OF PAINT DEBRIS.

FERTILIZER. FERTILIZERS WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER, WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER, AND STORED IN A COVERED SHED. PARTIALLY USED BAGS WILL BE TRANSFERRED TO A SEALABLE BIN TO AVOID SPILLS.

PAINT AND OTHER CHEMICALS. ALL PAINT CONTAINERS AND CURING COMPOUNDS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGES TO THE STORM SEWERS, BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. SPRAY GUNS WILL BE CLEANED ON A REMOVABLE TARP. CHEMICALS USED ON SITE ARE KEPT IN SMALL QUANTITIES AND IN CLOSED CONTAINERS UNDERCOVER AND KEPT OUT OF DIRECT CONTACT WITH STORMWATER. AS WITH FUELS AND OILS, ANY INADVERTENT SPILLS WILL BE CLEANED UP IMMEDIATELY AND DISPOSED OF ACCORDING FEDERAL AND DISTRICT OF COLUMBIA REGULATIONS.

CONCRETE. CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH ON SITE, EXCEPT IN A SPECIALLY DESIGNATED CONCRETE DISPOSAL AREA. FORM RELEASE OIL FOR DECORATIVE STONE WORK WILL BE APPLIED OVER A PALLET COVERED WITH AN ABSORBENT MATERIAL TO COLLECT EXCESS FLUID. THE ABSORBENT MATERIAL WILL BE REPLACED AND DISPOSED OF PROPERLY WHEN SATURATED.

WATER TESTING. WHEN TESTING AND, OR CLEANING WATER SUPPLY LINES, THE DISCHARGE FROM THE TESTED PIPE WILL BE COLLECTED AND CONVEYED TO A COMPLETED STORMWATER CONVEYANCE SYSTEM FOR ULTIMATE DISCHARGE INTO A STORMWATER BEST MANAGEMENT PRACTICE (BMP).

SANITARY WASTE. PORTABLE LAVATORIES LOCATED ON SITE WILL BE SERVICES ON A REGULAR BASIS BY A CONTRACTOR. PORTABLE LAVATORIES WILL BE LOCATED IN AN UPLAND AREA AWAY FROM DIRECT CONTACT WITH SURFACE WATERS. ANY SPILLS OCCURRING DURING SERVICING WILL BE CLEANED IMMEDIATELY AND CONTAMINATED SOILS DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL AND DC REGULATIONS.

MECHANICAL DEVICE MAINTENANCE PROGRAM:

ALL CONTROLS ARE TO BE INSPECTED ON A DAILY BASIS BY THE SITE SUPERINTENDENT OR HIS REPRESENTATIVE, ANY DAMAGED CONTROLS ARE TO BE REPAIRED BY THE END OF THE WORKING DAY.

GENERAL SEDIMENT & EROSION CONTROL NOTES:

1. ALL SOIL EROSION AND SEDIMENT CONTROL (SESC) METHODS SHALL BE INSTALLED PER STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR THE DISTRICT OF COLUMBIA. ALL SEC CONTROL MEASURES SHALL REMAIN IN PLACE DURING LAND DISTURBANCE, EXCEPT AS OTHERWISE STATED OR APPROVED BY THE DOEE INSPECTOR. IF AN ON-SITE INSPECTION REVEALS FURTHER EROSION CONTROL MEASURES ARE NECESSARY, THE SAME SHALL BE PROVIDED. SEE DDOE'S SESC GENERAL NOTES FOR FURTHER INFORMATION.
2. PHYSICALLY MARK OFF LIMITS OF LAND DISTURBANCE ON THE SITE WITH TAPE, SIGNS OR OTHER METHODS, SO THE WORKERS CAN SEE AREAS TO BE PROTECTED
3. MAINTENANCE SHALL BE PERFORMED

(A) ROUTINELY TO PREVENT ANY NEW DESTABILIZED AREAS AND TO PREVENT STABILIZED AREAS FROM BECOMING UNSTABILIZED

(B) AS NECESSARY SO THAT STABILIZED AREAS CONTINUOUSLY MEET APPROPRIATE REQUIREMENTS OF DC'S STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
4. CONSTRUCTION SITE ACCESS MEASURES SHALL BE INSTALLED NO LATER THAN THE FIRST DAY OF CONSTRUCTION TO MINIMIZE OFF-SITE VEHICLE TRACKING INCLUDING:

(A) STABILIZED CONSTRUCTION ENTRANCE AT ANY POINT WHERE TRAFFIC LEAVES THE SITE.

(B) STABILIZE ACCESS ROADS, HAUL ROADS, TEMPORARY CONSTRUCTION PARKING AREAS AND OTHER ON-SITE VEHICLE TRANSPORTATION ROUTES WITH STONE
5. ALLEY AND/OR STREET SHALL BE SWEEPED CLEAN AT ALL TIMES DURING EXCAVATION AND CONSTRUCTION.
6. ALL CATCH BASINS AND AREA DRAINS SHALL BE PROTECTED DURING EXCAVATION AND CONSTRUCTION. IF ANY CATCH BASIN OR DRAIN BECOMES CLOGGED AS A RESULT OF EXCAVATION OR CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS CLEANING.
7. GENERAL PRINCIPLES TO SELECTION AND PLACEMENT OF SEDIMENT CONTROL MEASURES:

(A) UTILIZE DIVERSION DIKE/SWALES TO DIVERT CLEAN RUNOFF FROM OFFSITE OR UNDISTURBED AREAS TO AVOID DISTURBED AREAS AND OUTFLET IN STABLE AREAS.

(B) REMOVE SEDIMENT FROM WATER EXPOSED TO DISTURBED AREAS BEFORE WATER LEAVES THE SITE.

A. CONCENTRATED FLOW MUST BE DIVERTED TO TRAPPING DEVICE SO SUSPENDED SEDIMENT CAN BE DEPOSITED.

B. SURFACE RUNOFF DRAINING IN SHEET FLOW MUST BE FILTERED BEFORE WATER LEAVES THE SITE.
8. SEDIMENT TRAPS/BASINS AND OTHER EROSION & SEDIMENT CONTROLS SHALL BE INSTALLED AS SOON AS NEW SITE-RELATED RUNOFF IS DETECTED, BUT NO LATER THAN FIRST PHASE OF LAND GRADING;
9. DEBRIS BASINS, DIVERSIONS, WATERWAYS, AND RELATED STRUCTURES SHALL BE SEEDED AND MULCHED, OR HAVE SOD OR A STABILIZATION BLANKET INSTALLED IMMEDIATELY AFTER THEY ARE BUILT.
10. VEGETATIVE STABILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH THE DCRA STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. REFER TO APPROPRIATE SPECIFICATIONS FOR TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, SODDING AND GROUND COVERS.
11. ALL CUT/FILL SLOPES SHALL BE STABILIZED IMMEDIATELY WHEN VERTICAL HEIGHT OF THE MULTIPLE LIFTS REACHES 15' OR WHEN GRADING OPERATIONS CEASE AS PRESCRIBED IN THE PLANS.
12. CRITICAL AREA STABILIZATION SHALL BE APPLIED TO CUT AND FILL SLOPES STEEPER THAN 3:1 OR TO EVERY CUT AND FILL SLOPE CONSTRUCTED OUT-OF-PLANTING SEASON UNTIL PERMANENT PROTECTION CAN BE PROVIDED.
13. RESEED ALL DISTURBED AREAS NOT COVERED BY PAVEMENTS, WALLS, BUILDINGS, AND PERMANENT STRUCTURES UPON COMPLETION OF ALL SITE WORK AS PER SEEDING SPECIFICATIONS.
14. SEDIMENT ACCUMULATED IN STRUCTURAL SEC MEASURES MUST BE REMOVED AND DISPOSED OF IN A MANNER THAT MINIMIZES EROSION AND SEDIMENTATION
15. OFF-SITE ACCUMULATIONS OF SEDIMENT SHALL BE REMOVED DAILY DURING CONSTRUCTION AND IMMEDIATELY AT THE REQUEST OF A DOEE INSPECTOR
16. OFF-SITE SPOIL, WASTE, OR BORROW AREAS IN DC OR ON FEDERAL PROPERTY MUST HAVE PRIOR APPROVAL BY DCRA. ALL WASTE & BORROW AREAS OFF-SITE MUST BE PROTECTED BY SEDIMENT CONTROL MEASURES AND STABILIZED IN ACCORDANCE WITH THE ORDINANCES AND REGULATIONS OF THE JURISDICTION WHERE THE SPOIL, WASTE, OR BORROW AREA IS LOCATED/STABILIZED.
17. STOCKPILES:

(A) STOCKPILES SHOULD BE LOCATED AWAY FROM DRAINAGE PATHS

(B) SHOULD BE ACCESSED FROM THE UP-GRADIENT SIDE SO THAT PERIMETER CONTROLS CAN REMAIN IN PLACE ON THE DOWN-GRADIENT SIDE.

(C) SEE DDOE'S SESC GENERAL NOTES 6 & 7 FOR ADDITIONAL REQUIREMENTS
18. SEDIMENT CONTROL FOR UTILITY CONSTRUCTION FOR AREAS OUTSIDE OF DESIGNED CONTROLS OR AS DIRECTED BY ENGINEER OR DCRA INSPECTOR:

(A) CALL "MISS UTILITY" AT 1-800-257-7777 48 HOURS PRIOR TO THE START OF WORK.

(B) NO MORE THAN FIVE HUNDRED LINEAR FEET (500') OF TRENCH SHALL BE OPEN AT ANY ONE TIME

(C) EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.

(D) TRENCHES FOR UTILITY INSTALLATION SHALL BE BACKFILLED, COMPACTED AND STABILIZED AT THE END OF EACH WORKING DAY. NO MORE TRENCHES SHALL BE OPENED THAN CAN BE COMPLETED THE SAME DAY, UNLESS;

(E) TEMPORARY SILT FENCE SHALL BE PLACED IMMEDIATELY DOWNSTREAM OF ANY DISTURBED AREA INTENDED TO REMAIN DISTURBED FOR MORE THAN ONE DAY.

(F) INSTALL INTERIM OR PERMANENT STABILIZATION IMMEDIATELY AFTER A UTILITY TRENCH IS REFILLED.

(G) USE MULCH AND MATTING ON EXCAVATED MATERIAL TO MINIMIZE THEIR EROSION WHEN NATURAL OR ARTIFICIAL GRASS FILTER STRIPS ARE INSTALLED TO RECEIVE STORMWATER RUNOFF FROM THE EXCAVATED MATERIALS.

(H) WATER PUMPED FROM EXCAVATIONS SHALL BE FILTERED PRIOR TO DISCHARGING TO THE STORM SEWER SYSTEM
19. SEC MEASURE FOR SITE DEMOLITION AND BUILDING RAZE

(A) AS SOON AS PRACTICABLE GUTTERS AND DOWNSPOUTS SHALL BE INSTALLED TO CONTROL EROSION.

(B) MEASURES SHALL BE TAKEN TO ACHIEVE NON-ERODING VELOCITY FOR STORMWATER EXITING FROM A ROOF/DOWNSPOUT OR TO TEMPORARILY PIPE THAT STORMWATER DIRECTLY TO STORM DRAIN

(C) THE SITE WORK SHALL MAXIMIZE THE PRESERVATION OF NATURAL VEGETATION AND LIMIT THE REMOVAL OF VEGETATION TO WHAT IS NECESSARY FOR CONSTRUCTION OR LANDSCAPING ACTIVITIES

(D) AFTER RAZE OR DEMOS, THERE IS THE NEED FOR GROUND COVER TO PREVENT EROSION AND SEDIMENT RUNOFF FROM OCCURRING, SUCH AS SEED, SOD, PAVE, BRICKBAT OR MULCH, ETC.
20. SEC MEASURES FOR ROADWAY PROJECTS

(A) ROUGH GRADED RIGHTS-OF-WAY AWAITING INSTALLATION OF UTILITIES OR PAVEMENT SHALL BE PROTECTED BY THE INSTALLATION OF INTERCEPTOR DIKES ACROSS RIGHTS-OF-WAY SO LOCATED AS TO LIMIT ROADWAY GRADE TO A LENGTH BETWEEN DIKES OF NOT MORE THAN FIVE HUNDRED FEET (500 FT); OR

(B) PERMANENT STABILIZATION OF STREETS AND PARKING AREAS SHALL BE WITH BASE COURSE CRUSHED STONE OR OTHER DOEE-APPROVED MEASURES

DOEE INSPECTION SCHEDULING/NOTES

GENERAL INSPECTION NOTES:

- A) REQUIRED INSPECTIONS: SEE DOEE'S SESC GENERAL NOTES 3, 4, 9 & 10
- B) CONTRACTOR SHALL CONTACT DOEE'S INSPECTIONS (202) 535-2977 TO SCHEDULE A MEETING.
- C) THE DEPARTMENT MAY REQUIRE ADDITIONAL INSPECTION(S) AT PARTICULAR STAGES OF CONSTRUCTION AS SPECIFIED IN APPROVED DOEE PLAN, OR AS REQUIRED DURING THE PRECONSTRUCTION MEETING). TO SCHEDULE SUCH INSPECTIONS, CONTRACTOR SHALL CONTACT DOEE AT LEAST THREE (3) BUSINESS DAYS BEFORE ANTICIPATED INSPECTION;

INSPECTIONS REQUIRED PERTAINING TO CONSTRUCTION OF STORMWATER MANAGEMENT (SWM) OR BEST MANAGEMENT PRACTICE (BMP) FACILITY:

- A) FOR THE INSTALLATION OF ALL PROPOSED BMP FACILITIES (GREEN ROOF, BIORETENTION, AND TREE PLANTING/ PRESERVATION) REFERENCE THE FOLLOWING CHECKLISTS FROM DDOE'S 2013 STORMWATER MANAGEMENT GUIDEBOOK (SWMG) APPENDIX K: CONSTRUCTION INSPECTION CHECKLIST
- B) CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION INSPECTION BEFORE BEGINNING CONSTRUCTION OF A SWM OR BMP FACILITY; CONTRACTOR SHALL CONTACT DOEE AT LEAST THREE (3) BUSINESS DAYS BEFORE THE START OF THE CONSTRUCTION;
- C) CONTRACTOR SHALL SCHEDULE A FINAL CONSTRUCTION INSPECTION FOR THE COMPLETION OF A SWM OR BMP FACILITY. CONTRACTOR SHALL REQUEST A FINAL CONSTRUCTION INSPECTION, AND GIVE THE DEPARTMENT ONE (1) WEEK NOTICE

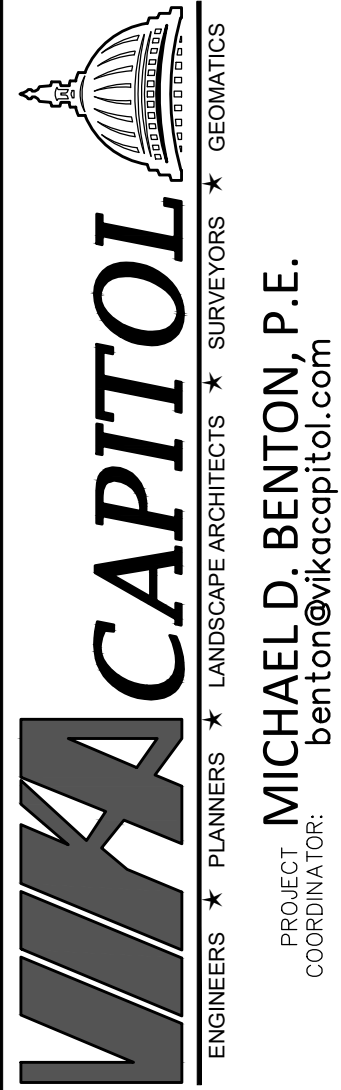
NO PERSON MAY PROCEED WITH WORK PAST A STAGE OF CONSTRUCTION THAT THE DEPARTMENT HAS IDENTIFIED AS REQUIRING AN INSPECTION UNLESS:

- A) THE DEPARTMENT'S INSPECTOR HAS ISSUED AN "APPROVED" OR "PASSED" REPORT;
- B) THE DEPARTMENT HAS APPROVED A PLAN MODIFICATION THAT ELIMINATES THE INSPECTION REQUIREMENT; OR
- C) THE DEPARTMENT OTHERWISE ELIMINATES/MODIFIES INSPECTION REQUIREMENT IN WRITING

FINAL DOEE APPROVAL IS REQUIRED PRIOR TO SIGN OFF ON THE CERTIFICATE OF OCCUPANCY.

NO PERMITTED STORM WATER BMP IS COMPLETE UNTIL:

1. A FINAL INSPECTION HAS BEEN CONDUCTED, AND
2. AN AS-BUILT PLAN IS SUBMITTED TO DOEE WITHIN 21 DAYS OF FINAL INSPECTION FOR REVIEW AND APPROVAL.



3900 WISCONSIN AVENUE
FULL SITE DEVELOPMENT
3900 WISCONSIN AVE NW
A&T LOT 801, SQUARE 1823
WASHINGTON, D.C. 20016

SEDIMENT
AND EROSION CONTROL
NOTES AND DETAILS

VIKA CAPITOL
REVISIONS

#	DATE	DESCRIPTION
1	10/10/15/2019	DOEE RESUBMISSION
2	9/07/26/2019	DOEE RESUBMISSION
3	8/10/31/18	DC WATER & DOEE SUB

7	10/01/18	DC WATER 2ND SUB.
6	07/20/18	DEMOLITION PLAN
5	06/12/18	DDOT RESUBMISSION
4	20/20/18	DDOT RESUBMISSION
3	02/02/18	DDOT RESUBMISSION
2	12/01/17	DC WATER SUBMISSION

DATE: OCT. 31, 2018	
DES. MDB	DWN. GMH

SCALE: AS SHOWN

PROJECT/FILE NO.
VC0392

SHEET NO.
CIV1350

*NOTE:
THE INFORMATION, DESIGN AND CONTENT OF THE DRAWINGS OR DOCUMENTS ATTACHED HERETO ARE PROPRIETARY TO VIKA CAPITOL, LLC AND CONSTITUTE ITS PROPRIETARY INTELLECTUAL PROPERTY. THE ATTACHED DRAWINGS AND/OR DOCUMENTS MUST NOT BE FORWARDED, SHARED, COPIED, DIGITALLY CONVERTED, MODIFIED, OR USED FOR ANY PURPOSE, IN ANY FORMAT, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM VIKA CAPITOL, LLC. VIOLATIONS MAY RESULT IN PROSECUTION. ONLY APPROVED, SIGNED AND SEALED PLANS OR DRAWINGS MAY BE UTILIZED FOR CONSTRUCTION PURPOSES.

DC'S 2013 GREEN CONSTRUCTION CODE (GCC) REQUIREMENTS

SOIL AND WATER QUALITY SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 405.1.4.

SOIL REUSE AND RESTORATION.

SOILS THAT ARE BEING PLACED OR REPLACED ON SITE SHALL BE PREPARED, AMENDED AND PLACED IN A MANNER THAT ESTABLISHES OR RESTORES THE ABILITY OF THE SOIL TO SUPPORT THE VEGETATION THAT HAS BEEN PROTECTED AND THAT WILL BE PLANTED.

405.1.4.1 PREPARATION.

BEFORE PLACING STOCKPILED OR IMPORTED TOPSOILS, COMPLIANCE WITH ALL OF THE FOLLOWING SHALL OCCUR:

- 1. AREAS SHALL BE CLEARED OF DEBRIS INCLUDING, BUT NOT LIMITED TO, BUILDING MATERIALS, PLASTER, PAINTS, ROAD BASE TYPE MATERIALS, PETROLEUM BASED CHEMICALS, AND OTHER HARMFUL MATERIALS;
- 2. AREAS OF CONSTRUCTION-COMPACTED SUBSOIL SHALL BE SCARIFIED; AND
- 3. THE FIRST LIFT OF REPLACED SOIL SHALL BE MIXED INTO SCARIFICATION ZONE TO IMPROVE THE TRANSITION BETWEEN THE SUBSOIL AND OVERLYING SOIL HORIZONS.

EXCEPTIONS: SCARIFICATION IS PROHIBITED IN ALL OF THE FOLLOWING LOCATIONS:

- WHERE SCARIFICATION WOULD DAMAGE EXISTING TREE ROOTS.
- ON INACCESSIBLE SLOPES.
- ON OR ADJACENT TO TRENCHING AND DRAINAGE INSTALLATIONS.
- ON AREAS INTENDED BY THE DESIGN TO BE COMPACTED SUCH AS ABUTMENTS, FOOTINGS, INSLOPES.
- BROWNFIELDS.
- OTHER LOCATIONS WHERE SCARIFICATION WOULD DAMAGE EXISTING STRUCTURES, UTILITIES & VEGETATION BEING PRESERVED

405.1.4.2 RESTORATION.

SOILS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED IN AREAS THAT WILL NOT BE COVERED BY BUILDINGS, STRUCTURES OR HARDSCAPES. SOIL RESTORATION SHALL COMPLY WITH THE FOLLOWING:

- 1. ORGANIC MATTER, TO PROVIDE APPROPRIATE ORGANIC MATTER FOR PLANT GROWTH AND FOR WATER STORAGE AND INFILTRATION, SOILS SHALL BE AMENDED WITH A MATURE, STABLE COMPOST MATERIAL SO THAT NOT LESS THAN THE TOP 6 INCHES OF SOIL CONTAINS NOT LESS THAN 3% ORGANIC MATTER. SPHAGNUM PEAT OR ORGANIC AMENDMENTS THAT CONTAIN SPHAGNUM PEAT SHALL NOT BE USED. SOIL ORGANIC MATTER SHALL BE DETERMINED IN ACCORDANCE WITH ASTM D 2974. ORGANIC MATERIALS SELECTED FOR ONSITE AMENDMENT OR FOR BLENDING OF IMPORTED SOILS SHALL BE RENEWABLE WITHIN A 50-YEAR CYCLE.
- EXCEPTION: WHERE THE REFERENCE SOIL FOR A BUILDING SITE HAS AN ORGANIC LEVEL DEPTH OTHER THAN 6 INCHES, SOILS SHALL BE AMENDED TO ORGANIC MATTER LEVELS AND ORGANIC MATTER DEPTH THAT ARE COMPARABLE TO THE SITE'S REFERENCE SOIL.
- 2. ADDITIONALLY SOIL RESTORATION SHALL COMPLY WITH NOT LESS THAN THREE OF THE FOLLOWING CRITERIA:
 - COMPACTION, BULK DENSITIES WITHIN ROOT ZONE SHALL NOT EXCEED DENSITIES SPECIFIED IN TABLE 405.1.4 AND SHALL BE MEASURED USING A SOIL CONE PENETROMETER IN ACCORDANCE WITH ASAE S313.3. THE ROOT ZONE SHALL BE NOT LESS THAN 6 INCHES, NOR LESS THAN THE SITE'S REFERENCE SOIL, WHICHEVER IS THE GREATER DEPTH. DATA DERIVED FROM A SOIL CONE PENETROMETER SHALL BE REPORTED IN ACCORDANCE WITH ASAE EP542
 - INFILTRATION RATES, INFILTRATION RATE OR SATURATED HYDRAULIC CONDUCTIVITY OF THE RESTORED SOILS SHALL BE COMPARABLE TO THE SITE'S REFERENCE SOIL. INFILTRATION RATES SHALL BE DETERMINED IN ACCORDANCE WITH ASTM D 3385 OR ASTM D 5093. FOR SLOPED AREAS WHERE THE METHODS PROVIDED IN THE REFERENCED STANDARDS CANNOT BE USED SUCCESSFULLY, ALTERNATE METHODS APPROVED BY THE CODE OFFICIAL SHALL BE PERMITTED PROVIDED THAT THE SAME METHOD IS USED TO TEST BOTH REFERENCE SOIL AND ONSITE SOIL.
 - SOIL BIOLOGICAL FUNCTION, WHERE REMEDIATED SOILS ARE USED, THE BIOLOGICAL FUNCTION OF THE SOIL'S MINERALIZABLE NITROGEN SHALL BE PERMITTED AS A PROXY ASSESSMENT OF BIOLOGICAL ACTIVITY.
 - SOIL CHEMICAL CHARACTERISTICS, SOIL CHEMICAL CHARACTERISTICS APPROPRIATE FOR PLANT GROWTH SHALL BE RESTORED. THE PH, CATION EXCHANGE CAPACITY AND NUTRIENT PROFILES OF THE ORIGINAL UNDISTURBED SOIL OR THE SITE'S REFERENCE SOIL SHALL BE MATCHED IN RESTORED SOILS. SALINITY SUITABLE FOR REGIONALLY APPROPRIATE VEGETATION SHALL BE ESTABLISHED. SOIL AMENDMENTS AND FERTILIZERS SHALL BE SELECTED FROM THOSE WHICH MINIMIZE NUTRIENT LOADING TO WATERWAYS OR GROUNDWATER.

TABLE 405.1.4 MAXIMUM CONE PENETROMETER READINGS			
SURFACE RESISTANCE (PSI)		SUBSURFACE RESISTANCE (PSI)	
ALL TEXTURES SAND	SAND (INCL. LOAMY SAND, SANDY LOAM, SANDY CLAY LOAM, & SANDY CLAY)	SILT (INCLUDES LOAM, SILT LOAM, SILTY CLAY LOAM, & SILTY CLAY)	CLAY (INCLUDES CLAY LOAM)
110	260	260	225

CONSTRUCTION PHASE MOISTURE CONTROL

GCC 503.1.2 - CONSTRUCTION PHASE MOISTURE CONTROL. POROUS OR FIBROUS MATERIALS AND OTHER MATERIALS SUBJECT TO MOISTURE DAMAGE SHALL BE PROTECTED FROM MOISTURE DURING THE CONSTRUCTION PHASE. MATERIAL DAMAGED BY MOISTURE OR THAT ARE VISIBLY COLONIZED BY FUNGI EITHER PRIOR TO DELIVERY OR DURING THE CONSTRUCTION PHASE SHALL BE CLEANED AND DRIED OR, WHERE DAMAGE CANNOT BE CORRECTED BY SUCH MEANS, SHALL BE REMOVED AND REPLACED.

WASTE MANAGEMENT

SITE SHALL COMPLY WITH THE FOLLOWING GREEN CONSTRUCTION CODE REQUIREMENTS:

406.1 - BUILDING SITE WASTE MANAGEMENT REQUIREMENTS.

NOT LESS THAN 75% OF THE LAND-CLEARING DEBRIS FROM A BUILDING SITE SHALL BE DIVERTED FROM LANDFILLS. LAND-CLEARING DEBRIS INCLUDES ROCK, TREES, STUMPS & ASSOCIATED VEGETATION. ADDITIONALLY, BUILDING SITE DEVELOPMENT SHALL INCLUDE THE EFFECTIVE DESTRUCTION & DISPOSAL OF INVASIVE PLANT SPECIES

503.1 - CONSTRUCTION MATERIAL AND WASTE MANAGEMENT REQUIREMENTS.

NOT LESS THAN 50% OF NONHAZARDOUS CONSTRUCTION WASTE SHALL BE DIVERTED FROM DISPOSAL BY RECYCLING OR SALVAGE OF CONSTRUCTION MATERIALS AND WASTE. FOR THE PURPOSES OF THIS SECTION, CONSTRUCTION MATERIALS AND WASTE SHALL INCLUDE BUT ARE NOT LIMITED TO (1) ALL MATERIALS DELIVERED TO THE SITE AND INTENDED FOR INSTALLATION PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY, INCLUDING RELATED PACKAGING; AND (2) CONSTRUCTION MATERIALS AND WASTE REMOVED DURING DEMOLITION OR RAZING

RECORDS & SUBMITTALS

THE OWNER, CONTRACTOR OR APPROVED AGENCY SHALL MAINTAIN RECEIPTS AND OTHER DOCUMENTATION RELATED TO WASTE DIVERSION THROUGHOUT THE COURSE OF CONSTRUCTION AS EVIDENCE OF DIVERSION (EG, HAULING RECEIPTS).

NOTE: PERCENTAGE OF MATERIALS TO BE DIVERTED SHALL BE SPECIFIED AND CALCULATED BY WEIGHT OR VOLUME, BUT NOT BOTH.

GREEN BUILDING SUBMITTAL TEMPLATES ARE AVAILABLE ONLINE:
HTTP://DCRA.DC.GOV/PAGE/GREEN-BUILDING-SUBMITTAL-FORM

VERIFICATION.

THE OWNER, CONTRACTOR OR AN APPROVED AGENCY MUST PROVIDE VERIFICATION OF THE PROJECT'S COMPLIANCE WITH THE ABOVE REQUIREMENTS (GCC 406.1 & 503.1)

- 1. WHEN REQUESTED BY THE CODE OFFICIAL
- 2. PRIOR TO ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY FOR OCCUPIABLE SPACE IN A STORY ABOVE GRADE PLANE, (OR PRIOR TO FINAL INSPECTION, IF A NEW CERT. OF OCCUPANCY IS NOT REQUIRED)

SEDIMENT & EROSION CONTROL
SEQUENCE OF CONSTRUCTION

GENERAL CONSTRUCTION NOTES

- FOR THE INSTALLATION OF ALL PROPOSED BMP FACILITIES (GREEN ROOF, BIORETENTION, AND TREE PLANTING/ PRESERVATION) REFERENCE THE FOLLOWING CHECKLISTS FROM DDOE'S 2013 STORMWATER MANAGEMENT GUIDEBOOK (SWMG):
 - APPENDIX K: CONSTRUCTION INSPECTION CHECKLISTS
 - APPENDIX L: MAINTENANCE INSPECTION CHECKLISTS
- SEE SPECIFIC BMP INSTALLATION NOTES FOR ADDITIONAL CONSTRUCTION SEQUENCING & REQUIREMENTS
- SEE DDOE'S INSPECTION & SCHEDULING NOTES FOR ADDITIONAL INFO/REQUIREMENTS

PRE-DISTURBANCE

- 1. NOTIFY THE DC SEDIMENT AND EROSION CONTROL INSPECTOR 3 BUSINESS DAYS PRIOR TO ANY LAND DISTURBING ACTIVITIES. PLEASE CALL (202) 535-2977 FOR APPOINTMENT.
- 2. MEETING WITH THE OWNER'S REPRESENTATIVE SHALL BE HELD PRIOR TO START OF ANY CONSTRUCTION.

SITE ACCESS - BEFORE ANY SITE GRADING ACTIVITIES BEGIN

- 1. FLAG OFF AREAS TO BE PROTECTED, SUCH AS BUFFER ZONES, DRAINAGE FEATURES, VEGETATED FILTER STRIPS, MATURE TREES, ETC.
- 2. INSTALL SEDIMENT CONTROLS DOWN GRADIENT OF ACCESS POINT (ON PAVED STREETS THIS MAY CONSIST OF INLET PROTECTION).
- 3. ESTABLISH VEHICLE TRACKING CONTROL AT SITE ENTRANCES TO PAVED STREETS. FENCE AS NEEDED.
- 4. NO LATER THAN THE FIRST DAY OF CONSTRUCTION, INSTALL CONSTRUCTION ENTRANCES/SITE ACCESS MEASURES TO MINIMIZE OFF-SITE VEHICLE TRACKING OF SEDIMENTS. EACH CONSTRUCTION ENTRANCE MUST BE STABILIZED AND INCLUDE EACH ADDITIONAL MEASURES REQUIRED TO KEEP SEDIMENT FROM BEING CARRIED ONTO PUBLIC STREETS BY CONSTRUCTION VEHICLES AND WASHED INTO A STORM DRAIN OR WATERWAYS.
- 5. INSTALL BOUNDARY PERIMETER CONTROLS (CONSTRUCTION FENCING, TREE PROTECTION, FLAGGING, ETC) TO CLEARLY DEFINE THE BOUNDARIES OF THE PROJECT AND LIMIT ACCESS TO AREAS OF THE SITE THAT ARE NOT TO BE DISTURBED.
- 6. PERFORM STREET SWEEPING AS NEEDED.

SITE GRADING - SITE CLEARING & GRUBBING

- 1. INSTALL RUNOFF PERIMETER CONTROLS - AS NEEDED ON DOWN-GRADIENT PERIMETER OF SITE (SILT FENCE, INLET PROTECTION, PERIMETER DIKE/SWALE).
- 2. ALL PERIMETER CONTROLS SHALL BE INSTALLED PER THE SEC PHASE 1 PLAN PRIOR TO COMMENCING LAND DISTURBANCE.
- 3. LIMIT CONSTRUCTION ACTIVITIES TO AREAS PLANNED FOR DISTURBANCE AND PROTECT UNDISTURBED AREAS WITHIN THE SITE.
- 4. IF APPLICABLE, PRESERVE VEGETATIVE BUFFER AT SITE PERIMETER.
- 5. ESTABLISH CONSTRUCTION ROUTES; DESIGNATE AREAS FOR PARKING
- 6. CREATE STABILIZED STAGING AREA.
- 7. LOCATE PORTABLE TOILETS ON FLAT SURFACES AWAY FROM DRAINAGE PATHS. STAKE IN AREAS SUSCEPTIBLE TO HIGH WINDS.
- 8. ESTABLISH WASTE DISPOSAL AREAS.
- 9. INSTALL SEDIMENT BASINS / TRAPS. SEDIMENT TRAPS OR BASINS AND OTHER EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED NO LATER THAN THE FIRST PHASE OF LAND GRADING.
- 10. SEDIMENT TRAPS OR BASINS AND OTHER EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED AS SOON AS NEW SITE-RELATED RUNOFF IS DETECTED AND EMPLOYED AT ALL TIMES TO PROTECT INLETS OR STORM SEWERS BELOW SILT-PRODUCING AREAS.
- 11. IMMEDIATELY AFTER DEBRIS BASINS, DIVERSIONS, WATERWAYS, AND RELATED STRUCTURES ARE BUILT, THEY MUST BE SEEDED AND MULCHED OR HAVE A SOD AND STABILIZATION BLANKET INSTALLED.
- 12. CONSTRUCT ONSITE DIKE/SWALE TO DIRECT ONSITE WATER TO CONTROLLED OUTFALLS DURING GRUBBING AND CLEARING.
- 13. BEGIN CLEARING AND DEMOLITION OF THE SITE AND EXISTING BUILDINGS.
- 14. BEGIN OVERALL SITE GRADING AND TOPSOIL STRIPPING
- 15. SEPARATE AND STOCKPILE TOPSOIL, LEAVE ROUGHENED AND/OR COVER.
- 16. PROTECT STOCKPILES WITH PERIMETER CONTROL BMPS (SILT FENCES). USE APPROPRIATE EROSION CONTROLS FOR STOCKPILES DURING INACTIVITY; SEE GENERAL SEC NOTES FOR TREATMENT OF STOCKPILES
- 17. LEAVE DISTURBED AREA OF SITE IN A ROUGHENED CONDITION TO LIMIT EROSION. STABILIZE DISTURBED AREAS WHERE CONSTRUCTION WILL CEASE FOR MORE THAN 14 DAYS.
- 18. WATER DISTURBED AREA TO MINIMIZE DUST BUT NOT TO A POINT THAT WATERING CREATES RUNOFF.
- 19. PERMANENTLY STABILIZE ALL AREAS THAT WILL NOT BE REGRADED FOR AT LEAST 1-YEAR.
- 20. REMOVE OFF-SITE ACCUMULATIONS OF SEDIMENT DAILY DURING CONSTRUCTION AND IMMEDIATELY AT THE REQUEST OF A DDOE INSPECTOR.
- 21. ONCE FINAL GRADE IS MET, PERMANENTLY STABILIZE ALL DISTURBED AREAS.
- 22. PERFORM ROUTINE MAINTENANCE TO PREVENT ANY NEW DESTABILIZED AREAS.
- 23. CONTRACTOR TO MOVE TOWARD SEC PHASE 2 PLAN.

UTILITY AND INFRASTRUCTURE INSTALLATION

- 1. INSTALL UTILITIES; CLOSE TRENCH AS SOON AS POSSIBLE (GENERALLY AT END OF DAY)
- 2. USE ROUGH-CUT STREET CONTROL OR INSTALL ROAD BASE FOR STREETS THAT WILL NOT BE PROMPTLY PAVED.
- 3. INSTALL GUTTERS, CURBS, STORM INLETS, SEWER MANHOLES AT FINAL GRADE
- 4. PROVIDE INLET PROTECTION TO ALL INSTALLED STORM DRAIN INLETS AS THEY ARE BROUGHT ON-LINE.
- 5. FLUSH ALL NEW AND EXISTING STORM DRAIN PIPE TO ENSURE THAT THE SYSTEM IS FREE OF SEDIMENT.
- 6. PROTECT AND REPAIR BMPS, AS NECESSARY.

BUILDING CONSTRUCTION & ROAD FINISHING

- 1. IMPLEMENT MATERIALS MANAGEMENT AND GOOD HOUSEKEEPING PRACTICES FOR BUILDING ACTIVITIES.
- 2. USE PERIMETER CONTROLS FOR TEMPORARY STOCKPILES FROM FOUNDATION EXCAVATIONS.
- 3. AS EXCAVATION OF THE BUILDING BEGINS, CONTRACTOR SHALL INSTALL A SUMP PIT TO REMOVE EXCESS WATER UNTIL THE FOUNDATION/BUILDING IS BROUGHT TO GRADE.
- 4. BMPS SHALL BE CONSTRUCTED ONCE BUILDING CONSTRUCTION HAS BEEN COMPLETED.

FINAL GRADING & ROAD FINISHING

- 1. REMOVE TEMPORARY CONCRETE WASHOUT AREA
- 2. REMOVE EXCESS OR WASTE MATERIALS.
- 3. REMOVE STORED MATERIALS.
- 4. FINALIZE PAVEMENT ACTIVITIES

FINAL STABILIZATION & LANDSCAPING

- 1. SEED AND MULCH/TACKIFY; INSTALL BLANKETS ON STEEP SLOPES.
- 2. INSTALL PROPOSED LANDSCAPING
- 3. MONITOR STABILIZED AREAS UNTIL FINAL STABILIZATION IS REACHED
- 4. REMOVE ALL TEMPORARY CONTROL BMPS UPON APPROVAL OF DDOE INSPECTOR AND OWNER'S REPRESENTATIVE. STABILIZE ANY AREAS DISTURBED BY THIS REMOVAL WITH EROSION CONTROLS

FOLLOWING CONSTRUCTION

AT COMPLETION OF LAND DISTURBING ACTIVITY, GIVE NOTICE TO THE DDOE INSPECTOR ONE WEEK NOTICE TO REQUEST A FINAL CONSTRUCTION INSPECTION. SEE DDOE INSPECTION NOTES FOR MORE INFORMATION

CONTAMINATION

REFER TO WATER QUALITY COMMITMENT LETTER ON THIS SHEET AS WELL AS WRAP CASE NUMBER 2017-007 & LUST CASE NUMBER 2008-086 FOR REQUIRED CONSTRUCTION ACTIVITIES REGARDING CONTAMINATED SOILS AND/OR GROUND WATER

SEDIMENT & EROSION CONTROL
SEQUENCE OF CONSTRUCTION (CONT.)

CONTAMINATED SITE COMMITMENT



June 5, 2018

District Department of Energy & Environment
Water Quality Division
1200 First Street NE
Washington, DC 20002

RE: 3900 Wisconsin Avenue NW

If any contaminated groundwater is encountered, or rainwater comes in contact with contaminated soil during the construction phase of the project, the applicant (NASH-Roadside 3900 Wisconsin, LLC, and/or their representatives) has committed to the following:

- (1) Containerize the known or potentially contaminated groundwater or rainwater in a holding tank. Obtain accurate, reproducible, and representative water samples from the tank(s) and have them analyzed in a laboratory for all contaminants of concern using USEPA approved methods.

If the laboratory analytical results of water samples collected from the containerized tank(s) is:
 - (a) Above DC Water's Pretreatment Standards, the applicant must obtain a discharge permit from DC Water before discharging to the sanitary or combined sewer system; or
 - (b) Below DC Water's Pretreatment Standards but exceeds DC Surface Water Quality Standards, the applicant must contact DDOE/WQD for guidance on handling/treatment of the contaminated water, and a discharge permit from USEPA to discharge treated water in the District's Municipal Separate Sewer System (MS4) and surface waters;
Note: Under these conditions, the applicant shall develop and submit a work plan stating how contaminated water will be treated. The work plan must be approved by DDOE/WQD prior to the submission of discharge permit application to USEPA. The work shall be performed in accordance with the approved work plan and comply with discharge permit conditions.
 - (2) Hire an independent environmental consultant to investigate the site to determine if any contaminated soil is identified during construction that can adversely impact US and District waters;
 - (3) Containerize all installation/investigation-derived wastes including but not limited to soils, muds, and sediments from known or potentially contaminated sites; collect an accurate, reproducible, and representative samples for all contaminants of concern, and have samples analyzed in a laboratory using USEPA approved methods for characterization for offsite disposal;
 - (4) Provide a soil, sediment, and water sampling plan, a quality assurance and quality control plan, a sediment and erosion control plan, and a health and safety plan for known or potentially contaminated sites for review and approval prior to the start of work to DDOE/WQD;
 - (5) Take all necessary steps to minimize or prevent any discharge of contaminated water and soil that has a reasonable likelihood of adversely affecting human health or the environment;
 - (6) Provide a work completion report documenting procedures taken and all investigation records including, but not limited to, as-built plans/drawings, deviations from the approved work plans if any, boring logs, fields tests results, and laboratory analysis results with quality assurance quality control, data quality issues, and chain-of-custody to DDOE/WQD within 30 days of work completion; and
- NASH-Roadside 3900 Wisconsin, LLC | 1730 Rhode Island Ave, NW, Suite 512 | Washington, DC 20036
- (7) Complete all work in accordance with all permit conditions, and federal and District laws and regulations.



OWNER:

NASH-ROADSIDE 3900 WISCONSIN, LLC
By: 3900 Wisconsin, LLC
By: 3900 Wisconsin Holding LLC
By: Roadside Management LLC

Name: *[Signature]*

Title: Member

Date: June 5, 2018



NASH Advisory Services, LLC
A North America Science Based Company



OWNER:

NASH-ROADSIDE 3900 WISCONSIN, LLC
By: 3900 Wisconsin, LLC
By: 3900 Wisconsin Holding LLC
By: Roadside Management LLC

Name: *[Signature]*

Title: Member

Date: June 5, 2018

CONSTRUCTION & MAINTENANCE INSPECTION CHECKLISTS FOR EACH APPLICABLE BMP CAN BE FOUND IN DDOE'S 2013 STORMWATER MANAGEMENT GUIDEBOOK - APPENDICES K & L.

EROSION AND SEDIMENT CONTROL FOR DUST CONTROL

44.0 STANDARDS AND SPECIFICATIONS FOR DUST CONTROL

DEFINITION:

CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

PURPOSE:

TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY.

CONDITIONS WHERE PRACTICE APPLIES:

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

SPECIFICATIONS:

TEMPORARY METHODS:

- A. MULCHES: SEE STANDARDS FOR CRITICAL AREA STABILIZATION WITH MULCHES ONLY. CHEMICAL OR WOOD CELLULOSE FIBER BINDERS MAY BE USED INSTEAD OF ASPHALT TO BIND MULCH MATERIAL.
- B. VEGETATIVE COVER: SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
- C. SPRAY-ON ADHESIVES: ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS.

	WATER DILUTION	TYPE OF NOZZLE	APPLY GALLONS/AC
ANIONIC ASPHALT EMULSION	7:1	COARSE SPRAY	1,200
LATEX EMULSION	12.5:1	FINE SPRAY	235
RESIN-IN-WATER EMULSION	4:1	FINE SPRAY	300

- D. TILLAGE: TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12" APART, SPRING TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
- E. IRRIGATION: THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED.
- F. BARRIERS: SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
- G. CALCIUM CHLORIDE: APPLY AT RATE THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

PERMANENT METHODS:

- A. PERMANENT VEGETATION: SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE
- B. TOPSOILING: COVERING WITH LESS EROSION SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.
- C. STONE: COVER SURFACE WITH CRUSHED STONE OR GRAVEL.

CONSTRUCTION SPECIFICATIONS:

- 1. THE CONTRACTOR MUST CONDUCT OPERATIONS AND MAINTAIN THE PROJECT SITE SO AS TO MINIMIZE THE CREATION AND DISPERSION OF DUST.
- 2. THE CONTRACTOR MUST PROVIDE CLEAN WATER, FREE FROM SALT, OIL, AND OTHER DELETERIOUS MATERIAL TO BE USED FOR ON-SITE DUST CONTROL.
- 3. THE CONTRACTOR SHALL SUPPLY WATER-SPRAYING EQUIPMENT CAPABLE OF ACCESSING ALL WORK AREAS.
- 4. THE CONTRACTOR SHALL IMPLEMENT STRICT DUST CONTROL MEASURES DURING ACTIVE CONSTRUCTION PERIODS ON-SITE. THESE CONTROL MEASURES SHALL GENERALLY CONSIST OF WATER APPLICATIONS THAT SHALL BE APPLIED A MINIMUM OF ONCE PER DAY DURING DRY WEATHER OR MORE OFTEN AS REQUIRED TO PREVENT DUST EMISSIONS.
- 5. FOR WATER APPLICATION TO UNDISTURBED SOIL SURFACES, THE CONTRACTOR SHALL:
 - A. APPLY WATER WITH EQUIPMENT CONSISTING OF TANK, SPRAY BAR, AND PUMP WITH DISCHARGE PRESSURE GAUGE.
 - B. ARRANGE SPRAY BAR HEIGHT, NOZZLE SPACING AND SPRAY PATTERN TO PROVIDE COMPLETE COVERAGE OF GROUND WITH WATER.
 - C. DISPERSE WATER THROUGH NOZZLES ON SPRAY BAR AS 20 PSI (137.8 KPA) MINIMUM. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
- 6. FOR WATER APPLICATION TO SOIL SURFACES, THE CONTRACTOR SHALL:
 - A. APPLY WATER WITH EQUIPMENT CONSISTING OF A TANK, PUMP, WITH DISCHARGE GAUGE, HOSES, AND MIST NOZZLES
 - B. LOCATE TANK AND SPRAYING EQUIPMENT SO THAT THE ENTIRE EXCAVATION AREA CAN BE MISTED WITHOUT INTERFERING WITH DEMOLITION AND/OR EXCAVATION EQUIPMENT OR OPERATIONS. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
 - C. APPLY WATER SPRAY IN A MANNER TO PREVENT MOVEMENT OF SPRAY BEYOND THE SITE BOUNDARIES.

**NOTE
THE INFORMATION, DESIGN AND CONTENT OF THE DRAWINGS OR DOCUMENTS ATTACHED HERETO ARE PROPRIETARY TO VIK A CAPITOL, LLC AND CONSTITUTE ITS PROPRIETARY INTELLECTUAL PROPERTY. THE ATTACHED DRAWINGS AND/OR DOCUMENTS MUST NOT BE FORWARDED, SHARED, COPIED, DIGITALLY CONVERTED, MODIFIED, OR USED FOR ANY PURPOSE, IN ANY FORMAT, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM VIK A CAPITOL, LLC. VIOLATIONS MAY RESULT IN PROSECUTION. ONLY APPROVED, SIGNED AND SEALED PLANS OR DRAWINGS MAY BE UTILIZED FOR CONSTRUCTION PURPOSES.

VIKA CAPITOL
REVISIONS

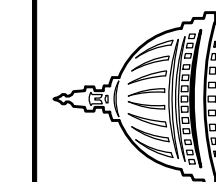
#	DATE	DESCRIPTION
1	10/10/15/2019	DDOE RESUBMISSION
2	9/07/26/2019	DDOE RESUBMISSION
3	8/10/31/18	DC WATER & DDOE SUB
4	7/10/01/18	DC WATER 2ND SUB.
5	6/07/20/18	DEMOLITION PLAN
6	5/06/12/18	DDOT RESUBMISSION
7	4/20/20/18	DDOT RESUBMISSION
8	3/02/02/18	DDOT RESUBMISSION
9	2/12/01/17	DC WATER SUBMISSION

DATE: OCT. 31, 2018
DES. MDB DWN. GMH

SCALE: AS SHOWN

PROJECT/FILE NO.
VC0392

SHEET NO.
CIV1351



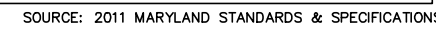
ENGINEERS ★ PLANNERS ★ LANDSCAPE ARCHITECTS ★ SURVEYORS ★ GEOMATICS
PROJECT: MICHAEL D. BENTON, P.E.
COORDINATOR: benton@vikacapitol.com

3900 WISCONSIN AVENUE
FULL SITE DEVELOPMENT
3900 WISCONSIN AVE NW
A&T LOT 801, SQUARE 1823
WASHINGTON, D.C. 20016

SEDIMENT AND
EROSION CONTROL
NOTES AND DETAILS



NOT TO SCALE



SOURCE: 2011 MARYLAND STANDARDS & SPECIFICATIONS

NOT TO SCALE



NOT TO SCALE



DWG. NO 302.1

DWG. NO 302.2

SOURCE: 2011 MARYLAND STANDARDS & SPECIFICATIONS

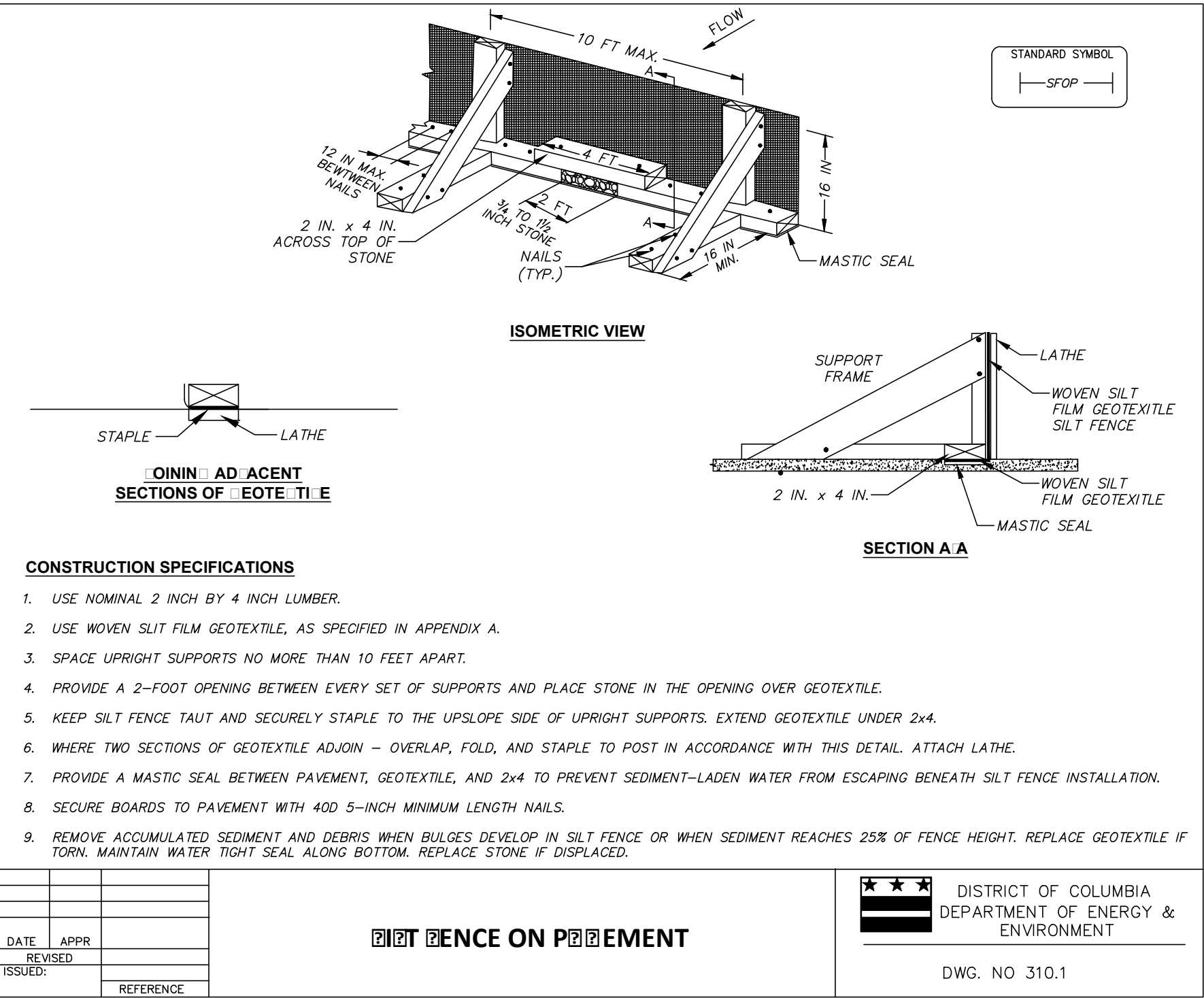
NOT TO SCALE



DWG. NO 307.1

NOT TO SCALE

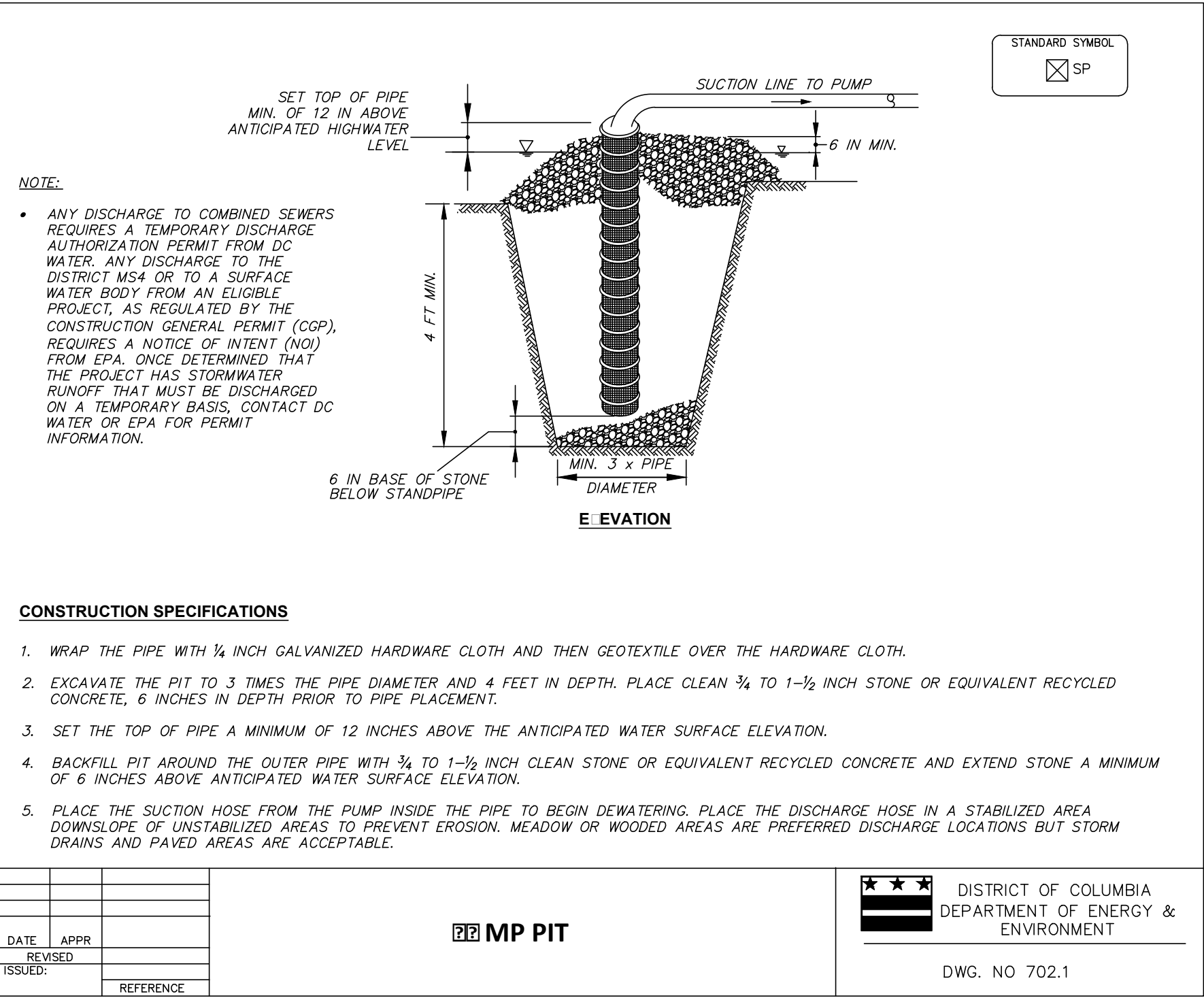




1
CIV1353

SILT FENCE ON PAVEMENT

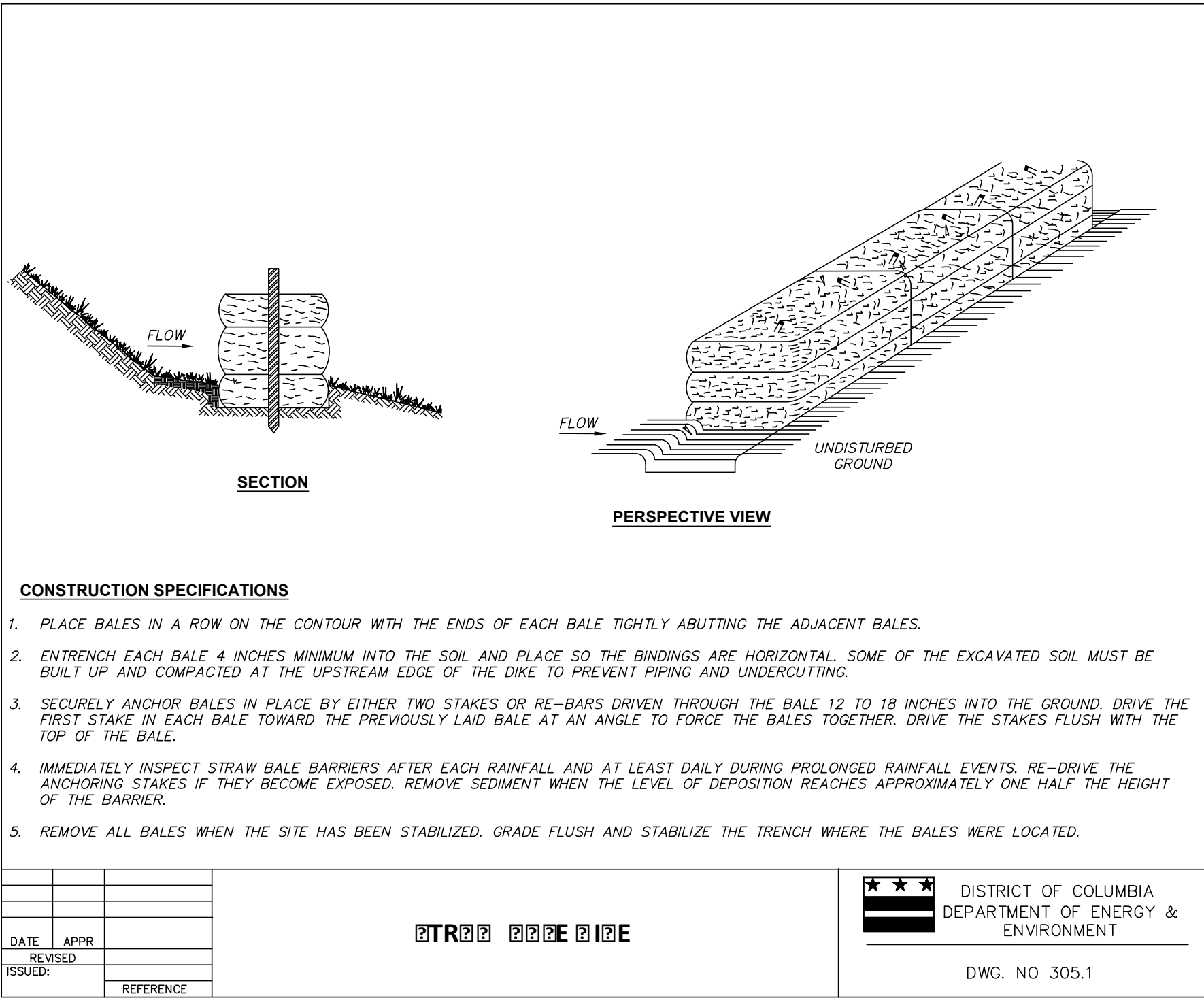
NOT TO SCALE



2
CIV1353

SUMP PIT DETAIL

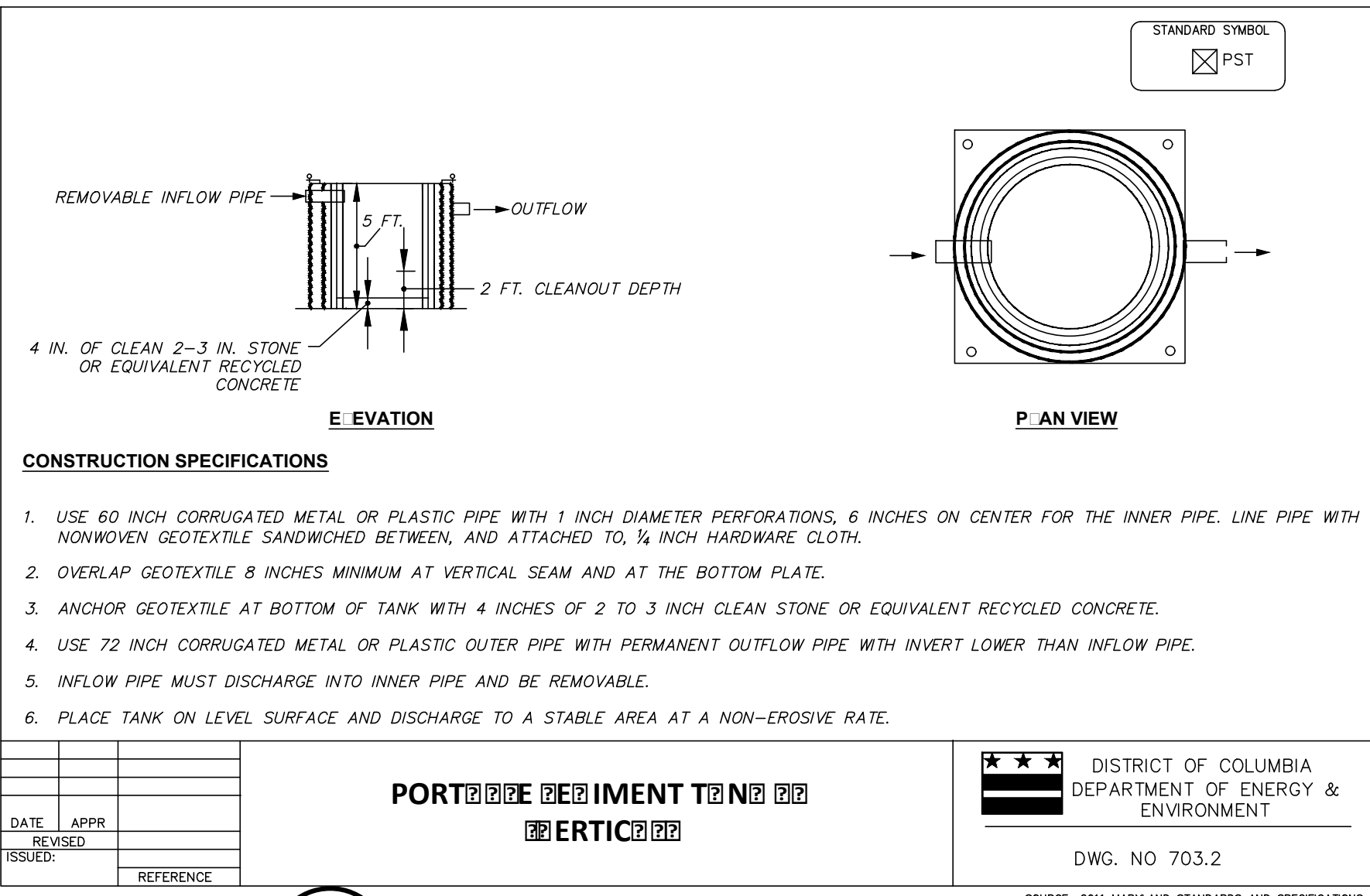
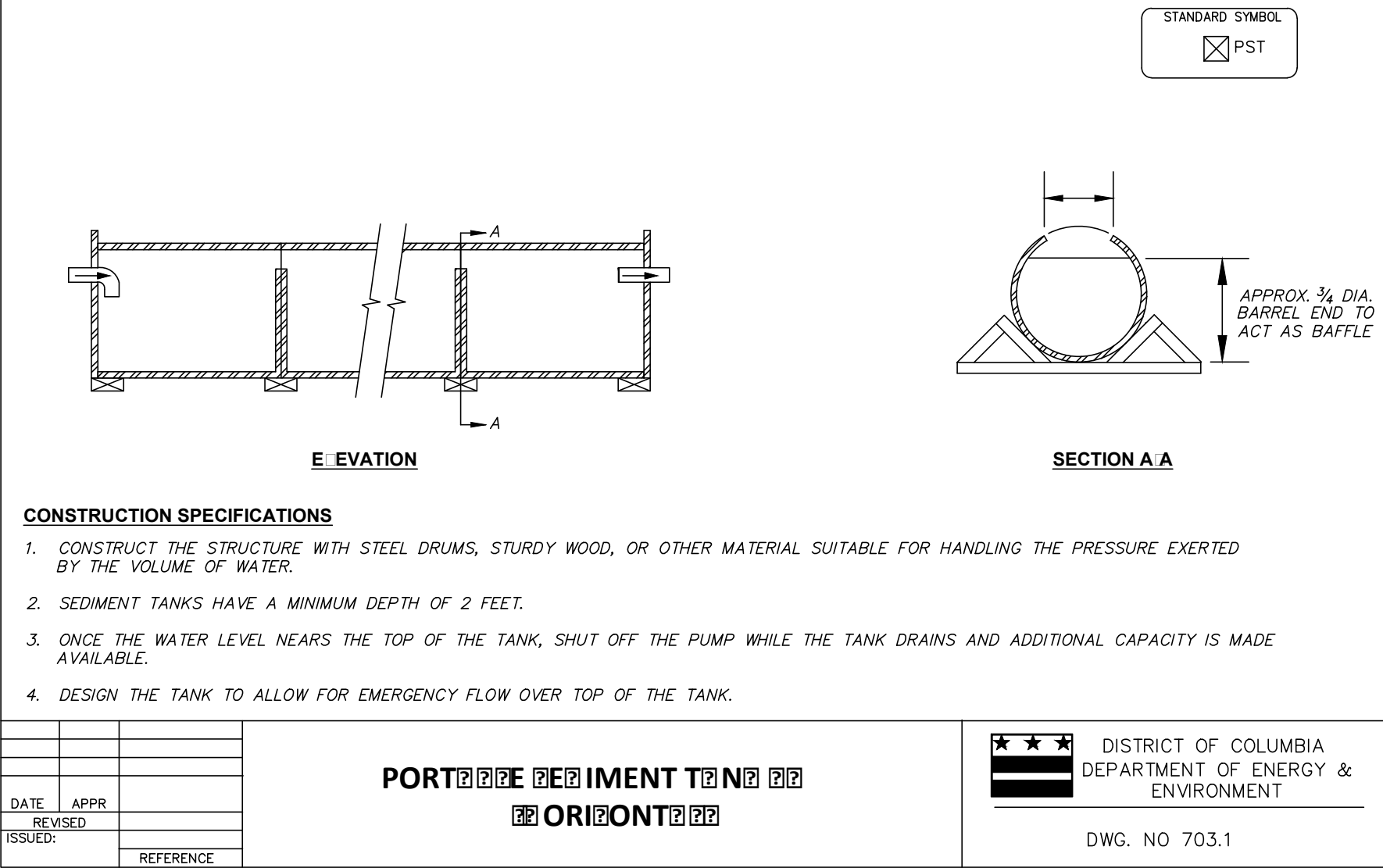
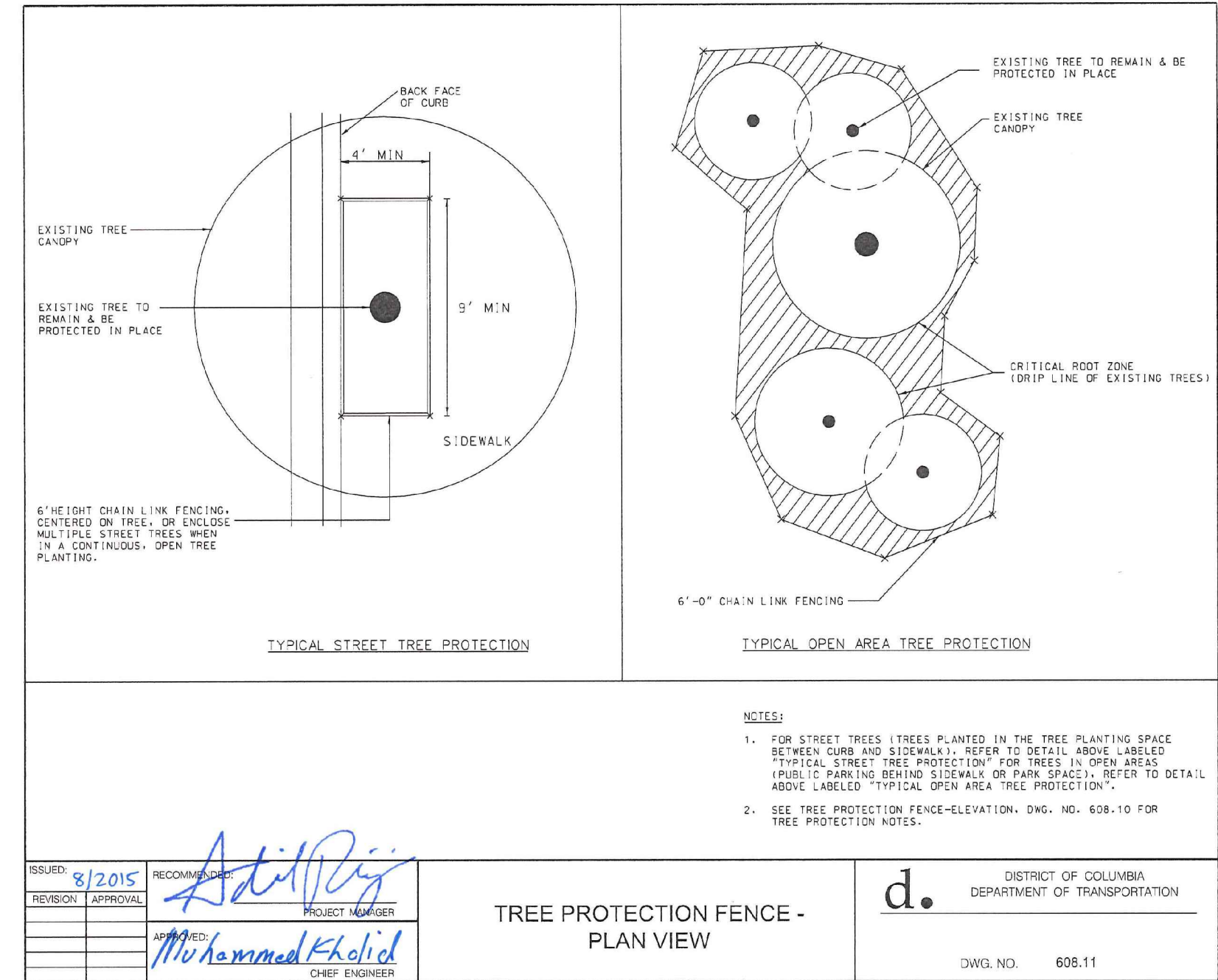
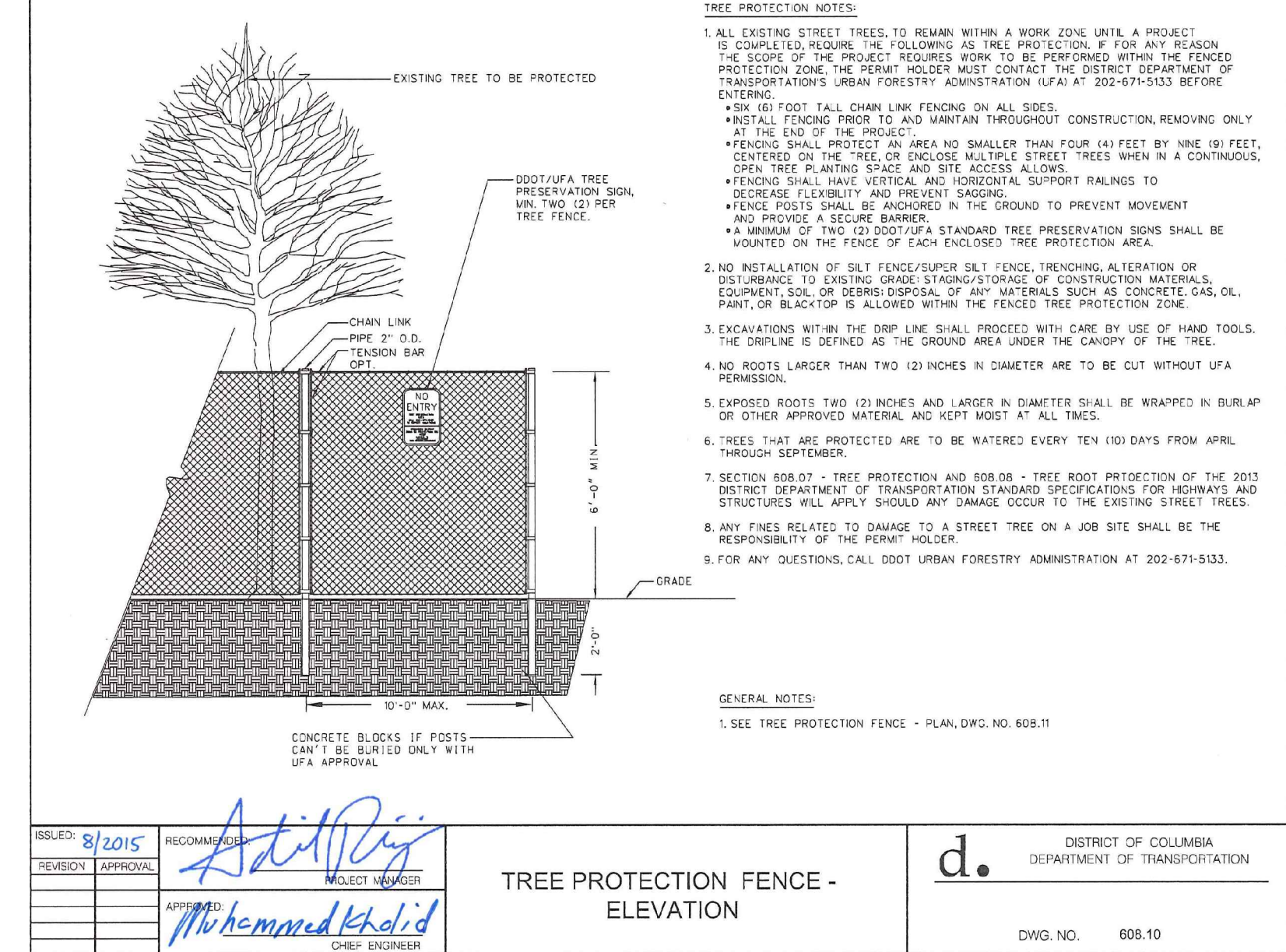
NOT TO SCALE



3
CIV1353

STRAW BALE DIKE

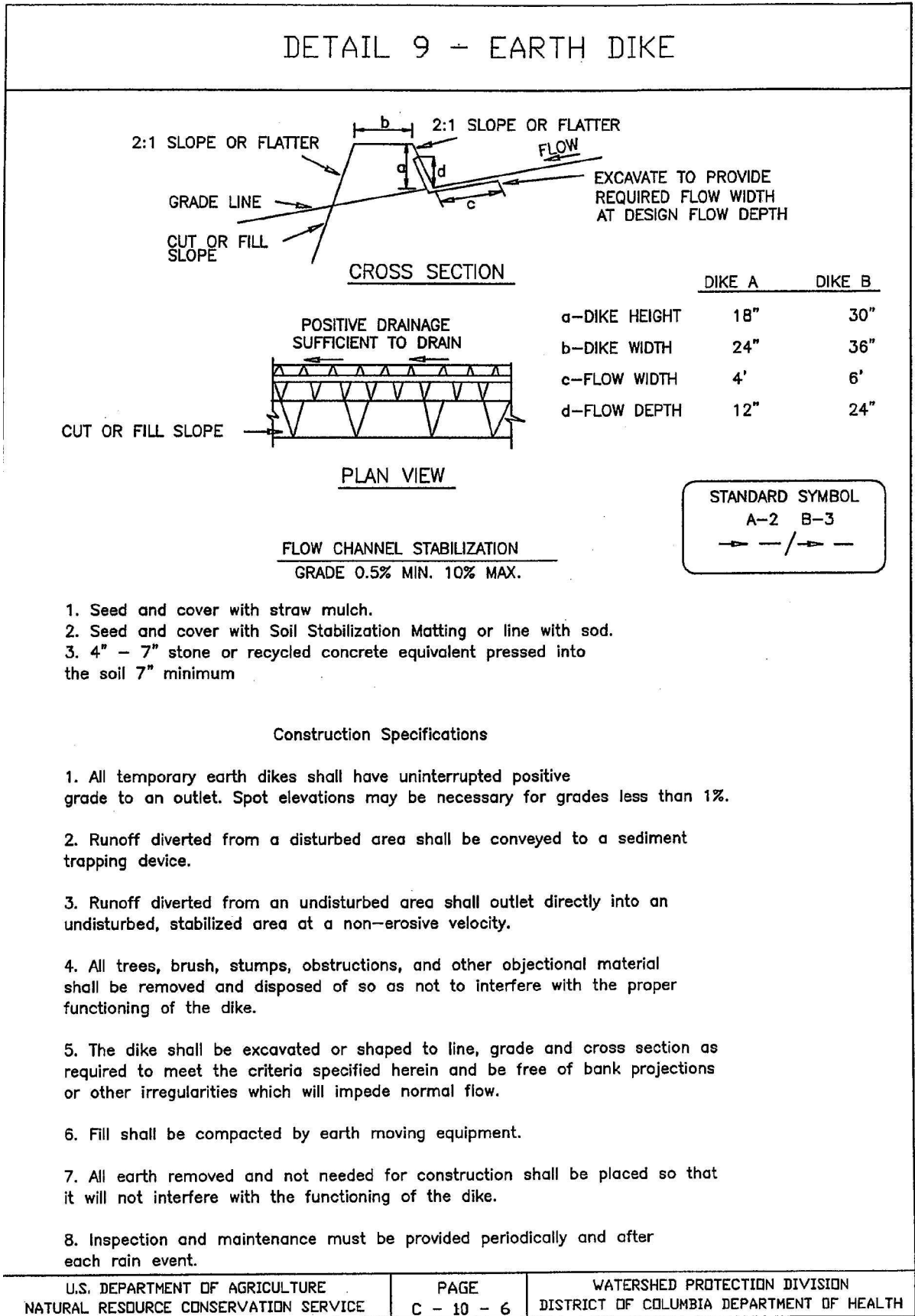
NOT TO SCALE



4
CIV1353

PORTABLE SEDIMENT TANK DETAIL

NOT TO SCALE



5
CIV1353

EARTH DIKE DETAIL

NOT TO SCALE

Vika Capitol

ENGINEERS * PLANNERS * LANDSCAPE ARCHITECTS * SURVEYORS * GEOMATICS

PROJECT: MICHAEL D. BENTON, P.E.
COORDINATOR: benton@vikacapitol.com

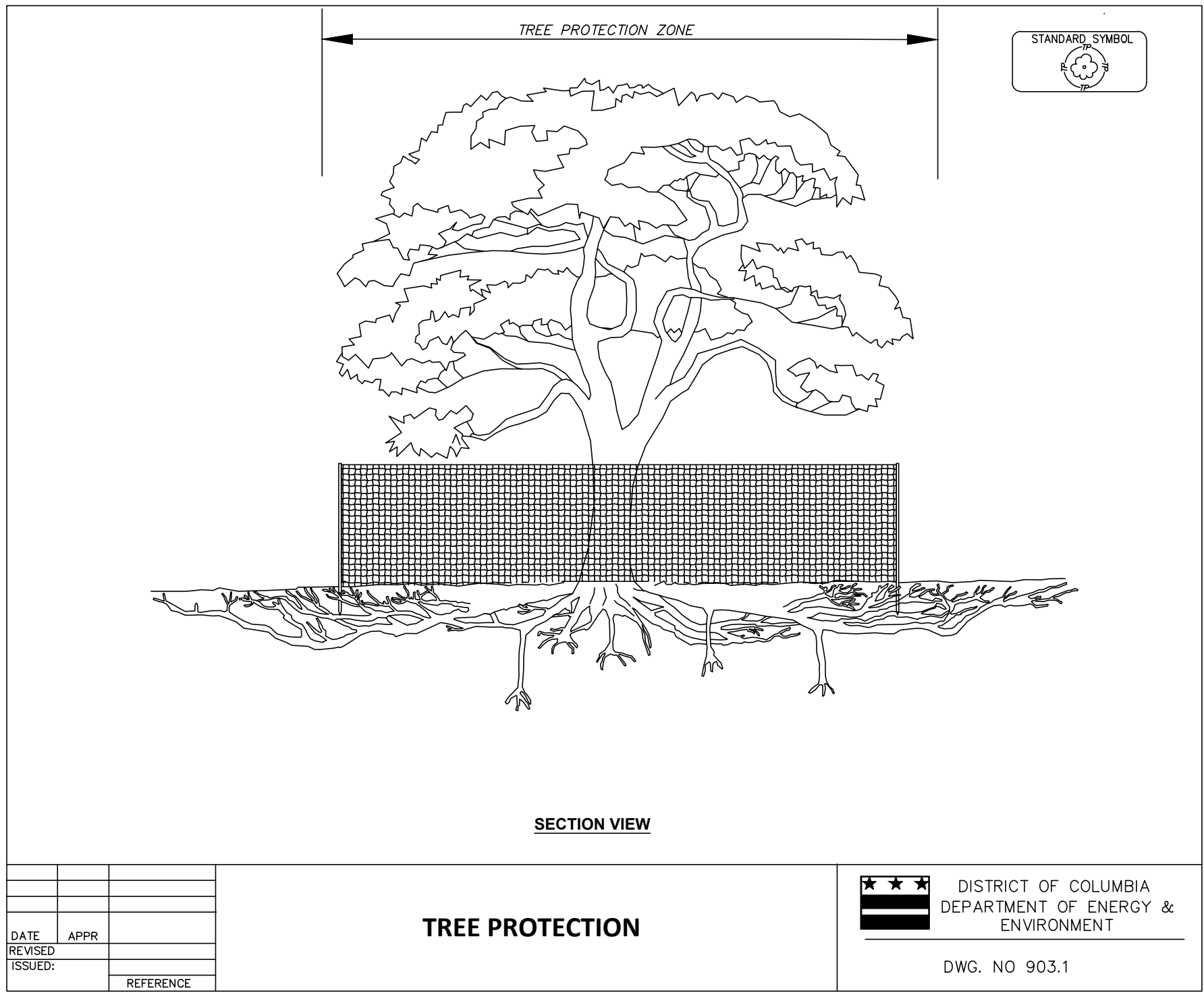
3900 WISCONSIN AVENUE
FULL SITE DEVELOPMENT
3900 WISCONSIN AVE NW
A&T LOT 801, SQUARE 1823
WASHINGTON, D.C. 20016

WWW.VIKACAPITOL.COM

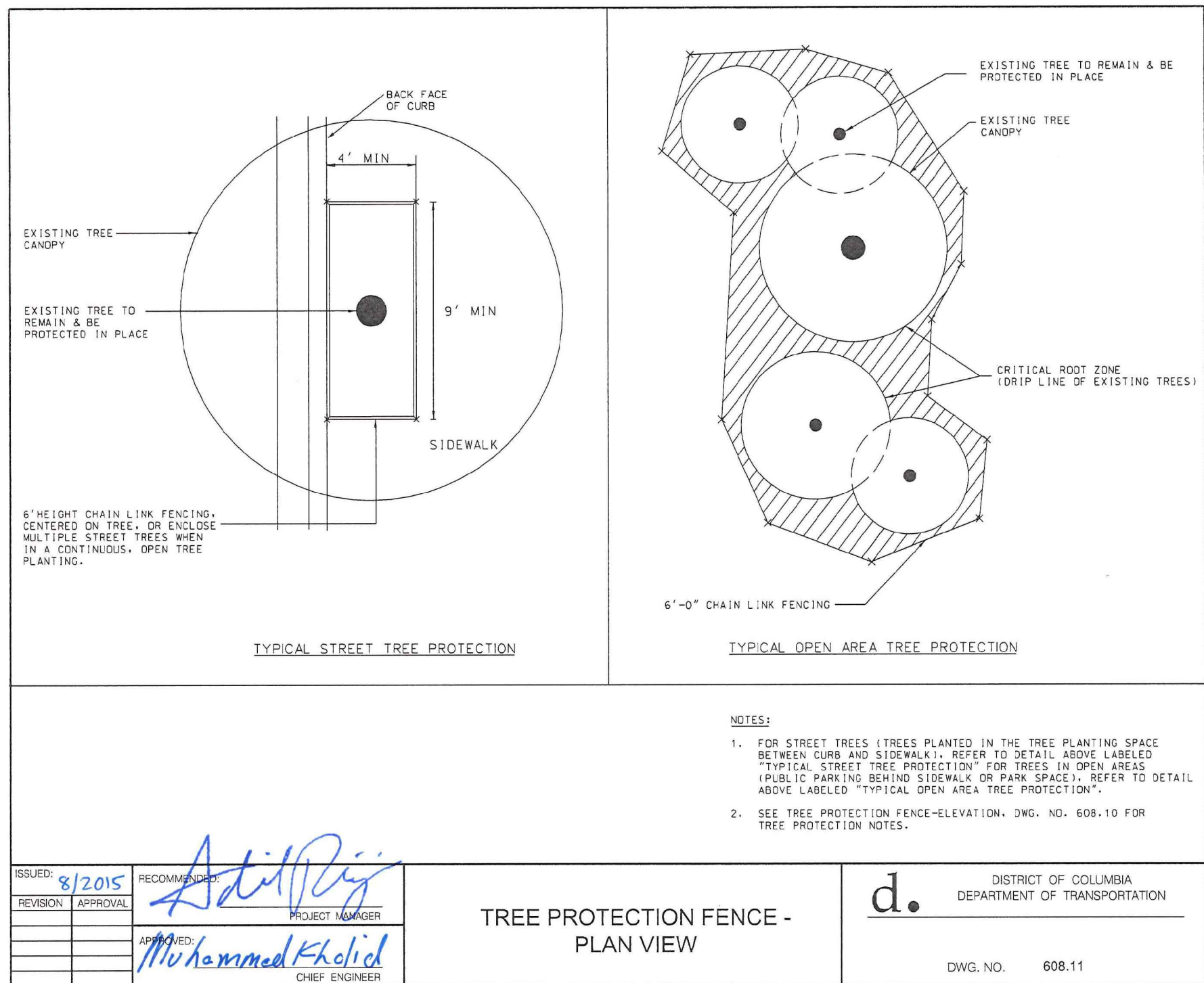
3900 WISCONSIN AVENUE
FULL SITE DEVELOPMENT
3900 WISCONSIN AVE NW
A&T LOT 801, SQUARE 1823
WASHINGTON, D.C. 20016

SEDIMENT AND
EROSION CONTROL
NOTES AND DETAILS

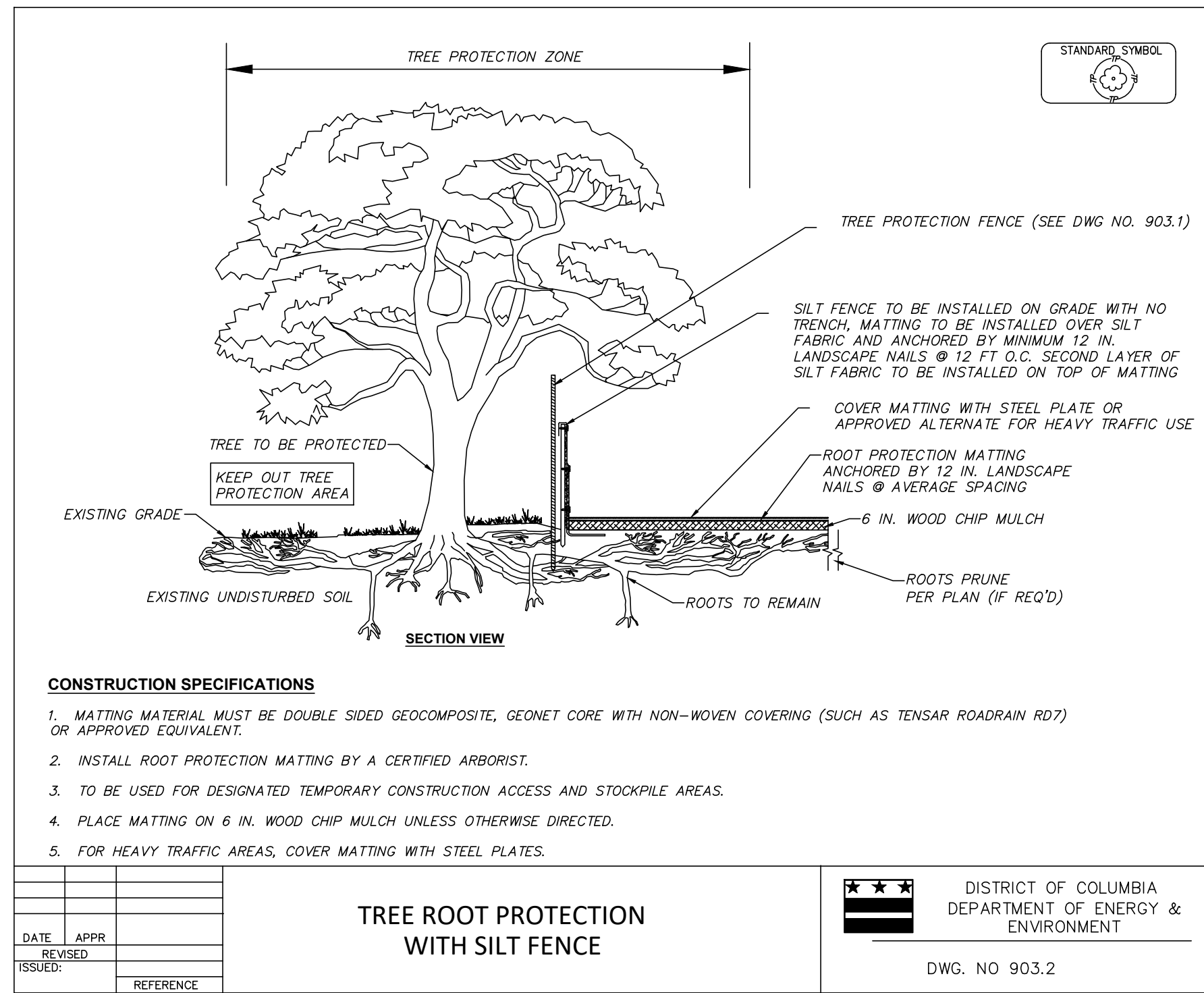
VIKA CAPITOL REVISIONS	
#	DATE DESCRIPTION
1	10/10/15/2019 DOEE RESUBMISSION
2	9/07/26/2019 DOEE RESUBMISSION
3	8/10/31/18 DC WATER & DOEE SUB
4	7/10/01/18 DC WATER 2ND SUB.
5	6/07/20/18 DEMOLITION PLAN
6	5/06/12/18 DDOT RESUBMISSION
7	4/20/20/18 DDOT RESUBMISSION
8	3/02/02/18 DDOT RESUBMISSION
9	2/12/01/17 DC WATER SUBMISSION
DATE: OCT. 31, 2018	
DES. MDB	DWN. GMH
SCALE: AS SHOWN	
PROJECT/FILE NO. VC0392	
SHEET NO. CIV1353	



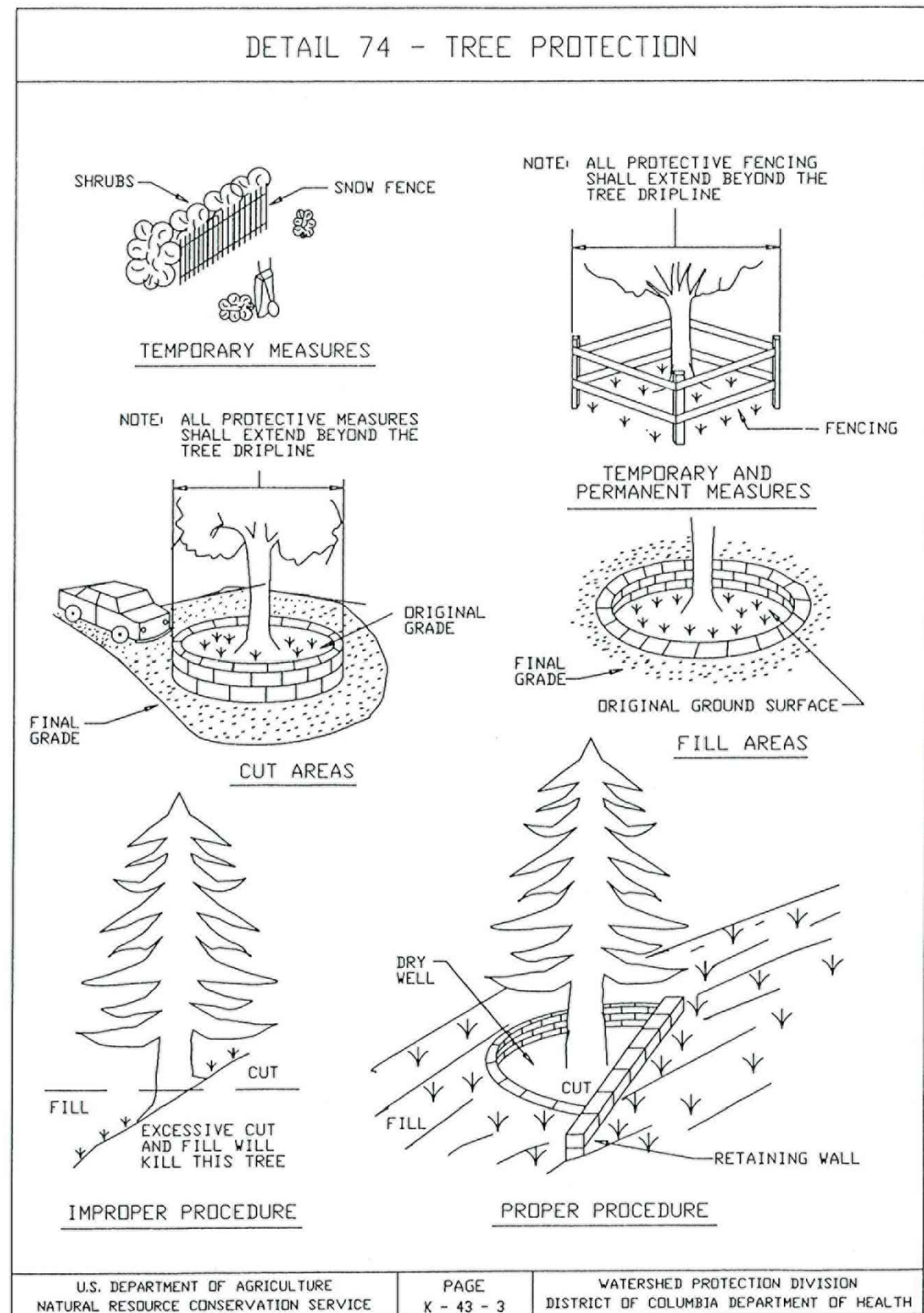
1 STREET TREE PROTECTION 1
NOT TO SCALE



2 STREET TREE PROTECTION 3
NOT TO SCALE



3 STREET TREE PROTECTION 2
NOT TO SCALE



4 GENERAL TREE PROTECTION
NOT TO SCALE

TREE PROTECTION NOTES DURING CONSTRUCTION

- IF CONFLICT WITH EX TREES NOTED FOR PRESERVATION ARISES, PERMIT HOLDER MUST SUSPEND ALL WORK THAT CONTRIBUTES TO CONFLICT AND IMMEDIATELY CONTACT UFA WARD ARBORIST TO RECEIVE CLEARANCE TO CONTINUE THE CONFLICTING WORK.
- STREET TREES NOTED FOR PRESERVATION: ONLY INSTALL TRENCHLESS SILT/SUPER SILT FENCE METHODS WITHIN THE ROOT ZONE OF A STREET TREE; TRENCHLESS METHODS SUCH AS FILTER LOGS OR AN APPROVED EQUIVALENT SHALL BE USED.
(NOTE: THE ROOT ZONE IS MEASURED AT 4.5' ABOVE GRADE FROM THE NEAR SIDE OF THE TRUNK TO THE DISTANCE THAT EQUALS THE TREE DIAMETER X 1.5 FT. OR TO THE DRIP LINE OF TREE WHICHEVER IS GREATER.)
- IF UTILITY TRENCH WORK IS WITHIN 10 FT OF EX TREE (MEASURING FROM NEAR SIDE OF TREE TRUNK TO EDGE OF EXCAVATION), IN LIEU OF STANDARD UTILITY TRENCHING / ROOT PRUNING, THE WORK WITHIN THE TREE'S ROOT ZONE SHALL BE DONE SO VIA PNEUMATIC EXCAVATION ("AIRSPADING"), OR HYDRO EXCAVATION OR HORIZONTAL TUNNELING (OPTIONAL FOR USE ONLY IF UTILITY IS LOCATED 30' BELOW GRADE). CONTRACTOR SHALL CONTACT WARD ARBORIST TO DISCUSS OPTIONS
- ALL PROTECTION MEASURES AND EXCAVATION OPERATIONS SHALL COMPLY WITH THE 2013 DISTRICT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS AND STRUCTURES (GOLD BOOK) - SECTIONS 207.03, 608.07 AND 608.08 AND DDOT STANDARD DRAWINGS 608.10, 608.11, AND 608.12
- NONE OF THE FOLLOWING SHALL OCCUR WITHIN THE TREE PROTECTION ZONE: ALTERATION OR DISTURBANCE TO EXISTING GRADE, STAGING/STORAGE OF CONSTRUCTION MATERIALS, EQUIPMENT, SOIL, OR DEBRIS; DISPOSAL OF ANY LIQUIDS E.G. CONCRETE, GAS, OIL, PAINT; AND BLACKTOP, AND TRENCHING.
- INSTALL ONLY TRENCHLESS SILT/SUPER SILT FENCE METHODS WITHIN THE TREE PROTECTION ZONE; TRENCHLESS METHODS SUCH AS FILTER LOGS, SILT SOXX, STRAW BALES, OR AN APPROVED EQUIVALENT SHALL BE USED.
- NO HEAVY EQUIPMENT SHALL BE USED TO EXCAVATE WITHIN THE TREE PROTECTION ZONE. EXCAVATIONS SHALL PROCEED WITH CARE BY USE OF HAND TOOLS OR EQUIPMENT THAT WILL NOT CAUSE INJURY TO TREE TRUNKS, BRANCHES, AND ROOTS.
- NO ROOTS GREATER THAN TWO (2) INCHES IN DIAMETER SHALL BE CUT WITHOUT AN ARBORISTS PERMISSION. EXPOSED ROOTS 2 INCHES AND LARGER IN DIAMETER SHALL BE WRAPPED IN BURLAP OR OTHER APPROVED MATERIAL AND KEPT MOIST AT ALL TIMES.

REGULATED TREE PROTECTIONS AND PERMITS

- HERITAGE TREES ARE EXISTING TREES WITH A CIRCUMFERENCE OF 100" OR LARGER ARE CONSIDERED 'HERITAGE TREES' AND MAY NOT BE REMOVED.
- SPECIAL TREES ARE EXISTING TREES BETWEEN 44" TO 100" IN CIRCUMFERENCE (0.75" TO 31.8"). SPECIAL TREE REMOVAL PERMIT MUST BE ACQUIRED FROM DDOT-UFA PRIOR TO REMOVAL. UNLESS PREVIOUSLY ACQUIRED, CONTRACTOR MUST APPLY FOR A CONSTRUCTION/EXCAVATION PERMIT FOR ITS REMOVAL @ \$55 PER INCH DIAMETER
- PUBLIC STREET TREES ARE ANY TREE LOCATED BETWEEN THE PUBLIC STREET AND SIDEWALK. ANY PLANTING, PRUNING, REPLACEMENT OR REMOVAL OF A PUBLIC STREET TREE REQUIRES A PERMIT FROM DDOT'S UFA. UNLESS PREVIOUSLY ACQUIRED, CONTRACTOR MUST APPLY FOR A CONSTRUCTION/EXCAVATION PERMIT FOR SUCH IMPACTS, WHICH INCLUDES COMPENSATION AS FOLLOWS:
 - TREE PRUNING: \$75 PER TREE
 - REMOVAL OF HEALTHY STREET TREE: \$200 PER INCH DIAMETER, OR
 - REPLACEMENT OF UNHEALTHY OR HAZARDOUS STREET TREE: PLANTING NEW TREE(S) @ 1:1 RATIO.

TREE PROTECTION & PRESERVATION

GENERAL CRITERIA FOR PROTECTING TREES

- TREES WITHIN 25' OF A BUILDING SITE AND ASSOCIATED GRADING, PARKING & UTILITY EXTENSIONS SHALL BE BOXED IN TO PREVENT MECHANICAL INJURY. BOX SHOULD BE AS CLOSE AS POSSIBLE TO DRIP LINE OF TREE.
- BOARDS WILL NOT BE NAILED TO TREES DURING BUILDING OPERATIONS.
- HEAVY EQUIPMENT OPERATORS WILL BE CAUTIONED TO AVOID DAMAGE TO EXISTING TREE TRUNKS & ROOTS DURING LAND LEVELING OPERATIONS. TUNNEL UNDER ROOT SYSTEM WHEN INSTALLING UTILITY LINES, IF POSSIBLE
- TREE TRUNKS AND EXPOSED ROOTS AND LIMBS DAMAGED DURING EQUIPMENT OPERATIONS WILL BE CARED FOR AS PRESCRIBED BY A FORESTER OR LICENSED TREE EXPERT.
- WOOD CHIPS SPREAD AT 4" DEPTH CAN BE USED IN WOODED AREA TO HELP PREVENT SOIL COMPACTION & DAMAGE TO TREES.
- THE USE OF HEAVY EQUIPMENT ON ROOT SYSTEMS OF DESIRABLE TREES MUST BE AVOIDED TO PREVENT SOIL COMPACTION. ALL CONSTRUCTION SHOULD BE KEPT OUT OF THE DRIP LINE OF PROTECTED TREES. PROTECTIVE FENCING SHALL BE UTILIZED FOR TREES BEING RETAINED AND SHALL BE LOCATED AT THE DRIP LINE.
- BROAD LEAF TREES SHOULD RECEIVE A HEAVY APPLICATION OF COMPLETE FERTILIZER TO AID THEIR RECOVERY FROM POSSIBLE DAMAGE CAUSED BY CONSTRUCTION OPERATIONS. FERTILIZATION SHOULD BE DONE DURING WINTER AND/OR EARLY SPRING FOLLOWING COMPLETION OF CONSTRUCTION; APPLIED AT THE FOLLOWING RATE: 2 TO 4 LBS. OF 10-6-4 FOR EACH INCH OF TRUNK DIAMETER MEASURED AT 4.5' ABOVE GROUND LINE. FERTILIZER SHOULD BE APPLIED IN HOLES 1" IN DIAMETER 18" DEEP. SPACED ABOUT 2' APART AT THE DRIP LINE OF THE TREE.
- DURING THE FIRST TWO SUMMERS FOLLOWING CONSTRUCTION, IT IS DESIRABLE THAT THE TREES RECEIVE ADEQUATE AMOUNTS OF WATER.

TREE COORDINATION NOTES

UFA WARD ARBORIST FOR PROJECT SITE
WARD ARBORIST CONTACT INFO

WARD 3
ARBORIST: EVAN ANDERSON
CONTACT: EVAN.ANDERSON@dc.gov

Vika Capitol
ENGINEERS * PLANNERS * LANDSCAPE ARCHITECTS * SURVEYORS * GEOMATICS
PROJECT: MICHAEL D. BENTON, P.E.
COORDINATOR: benton@vikacapitol.com
* VIK4 CAPITOL, LLC * 4810 MASSACHUSETTS AVENUE, NW SUITE 16 * WASHINGTON, DC 20016 * PHONE: 202.244.4140 * WWW.VIKACAPITOL.COM *

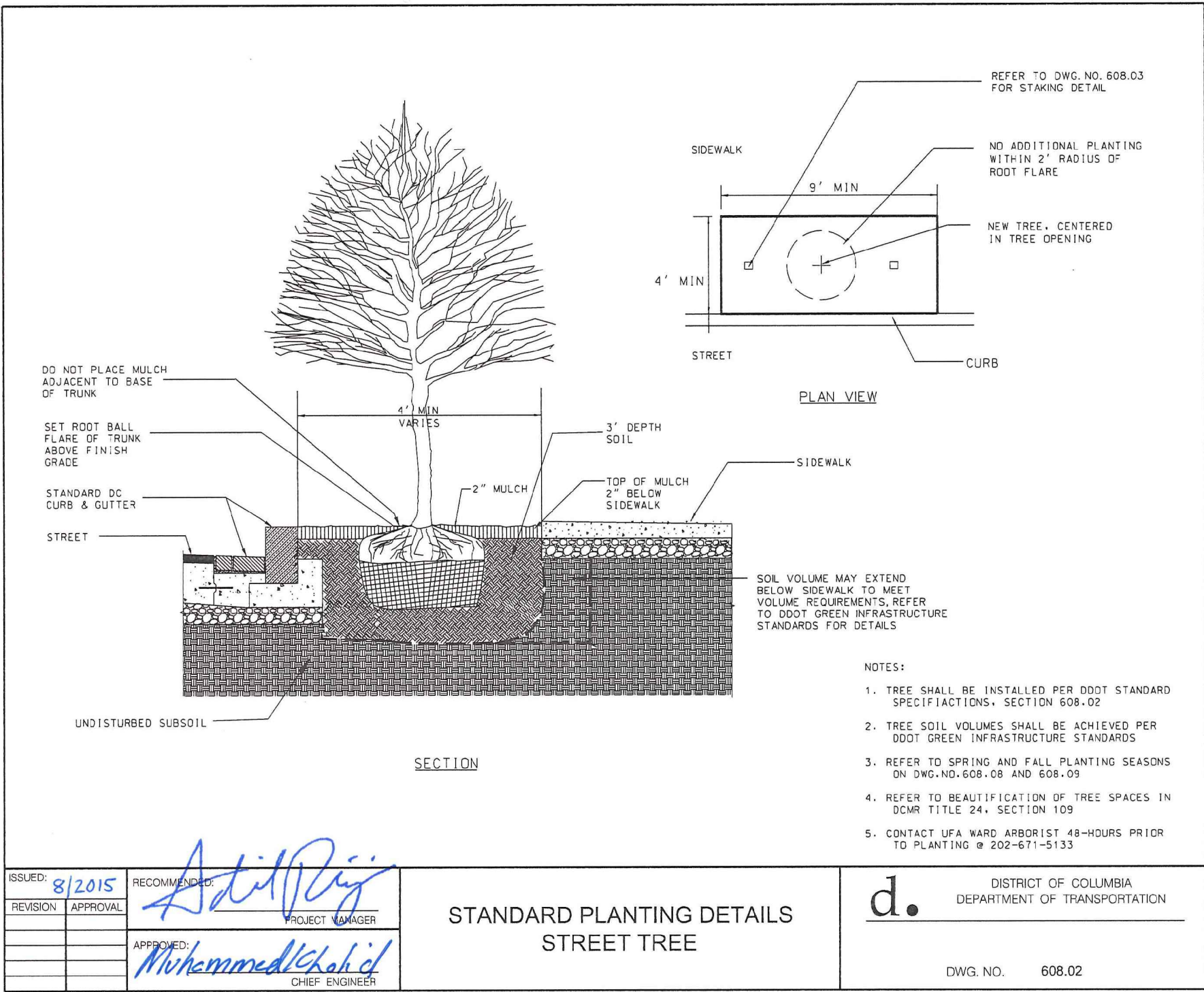
3900 WISCONSIN AVENUE
FULL SITE DEVELOPMENT
3900 WISCONSIN AVE NW
A&T LOT 801, SQUARE 1823
WASHINGTON, D.C. 20016

SEDIMENT AND
EROSION CONTROL
NOTES AND DETAILS

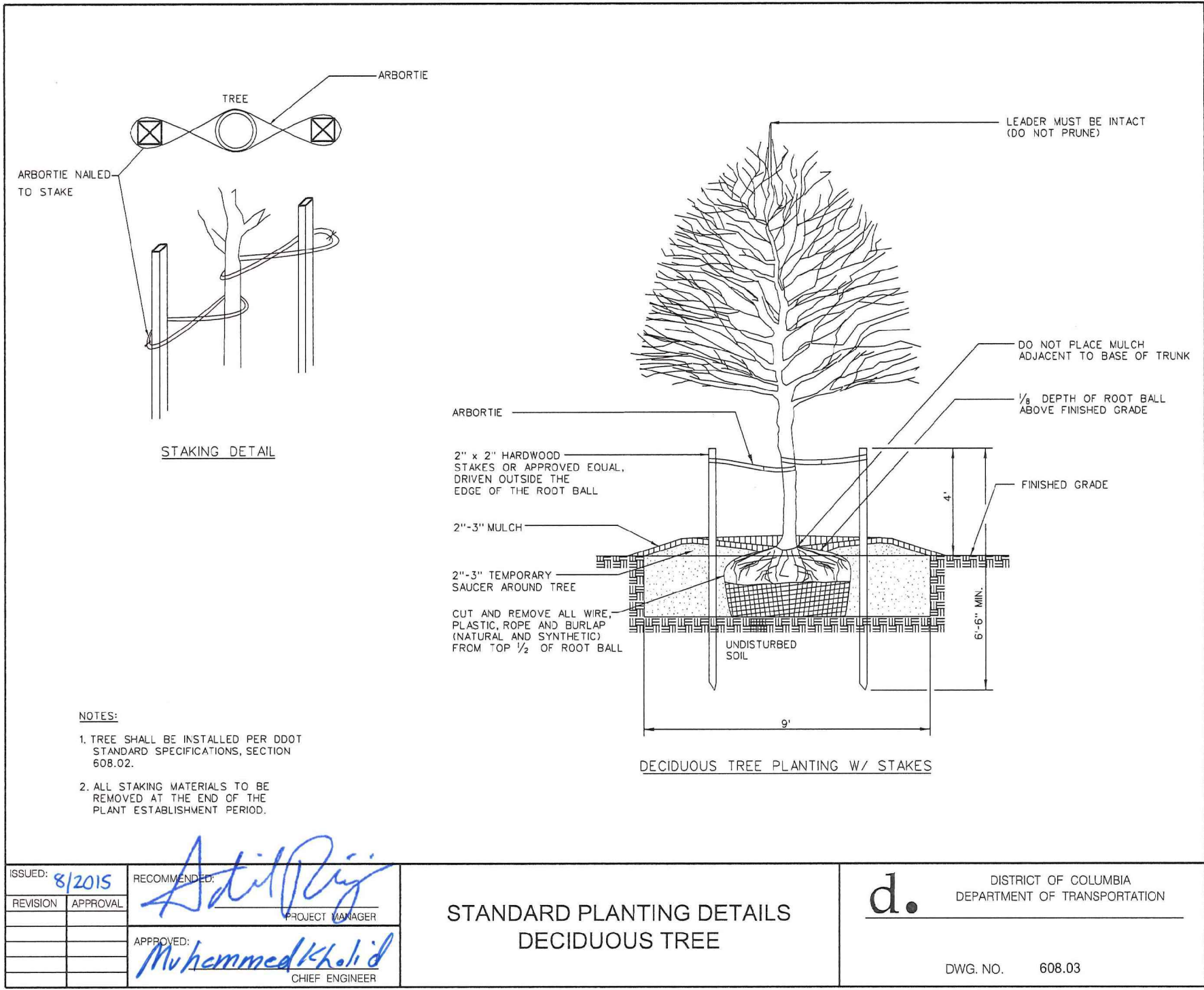
VIKA CAPITOL
REVISIONS

#	DATE	DESCRIPTION
1	10/15/2019	DOEE RESUBMISSION
2	07/26/2019	DOEE RESUBMISSION
3	10/31/18	DC WATER & DOEE SUB
4	10/01/18	DC WATER 2ND SUB.
5	07/20/18	DEMOLITION PLAN
6	06/12/18	DDOT RESUBMISSION
7	20/20/18	DDOT RESUBMISSION
8	02/02/18	DDOT RESUBMISSION
9	12/01/17	DC WATER SUBMISSION

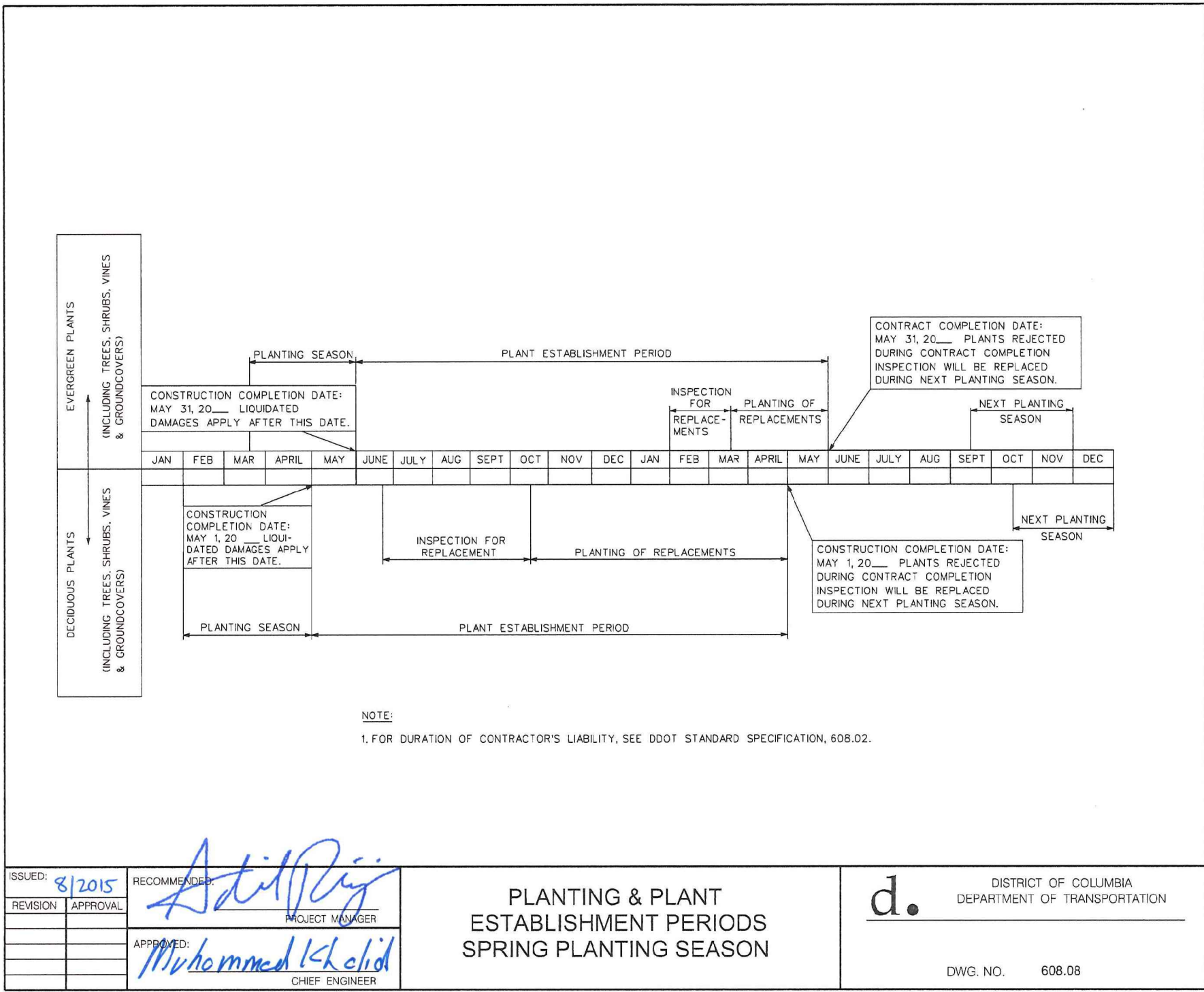
DATE: OCT. 31, 2018	
DES. MDB	DWN. GMH
SCALE: AS SHOWN	
PROJECT/FILE NO. VC0392	
SHEET NO. CIV1354	



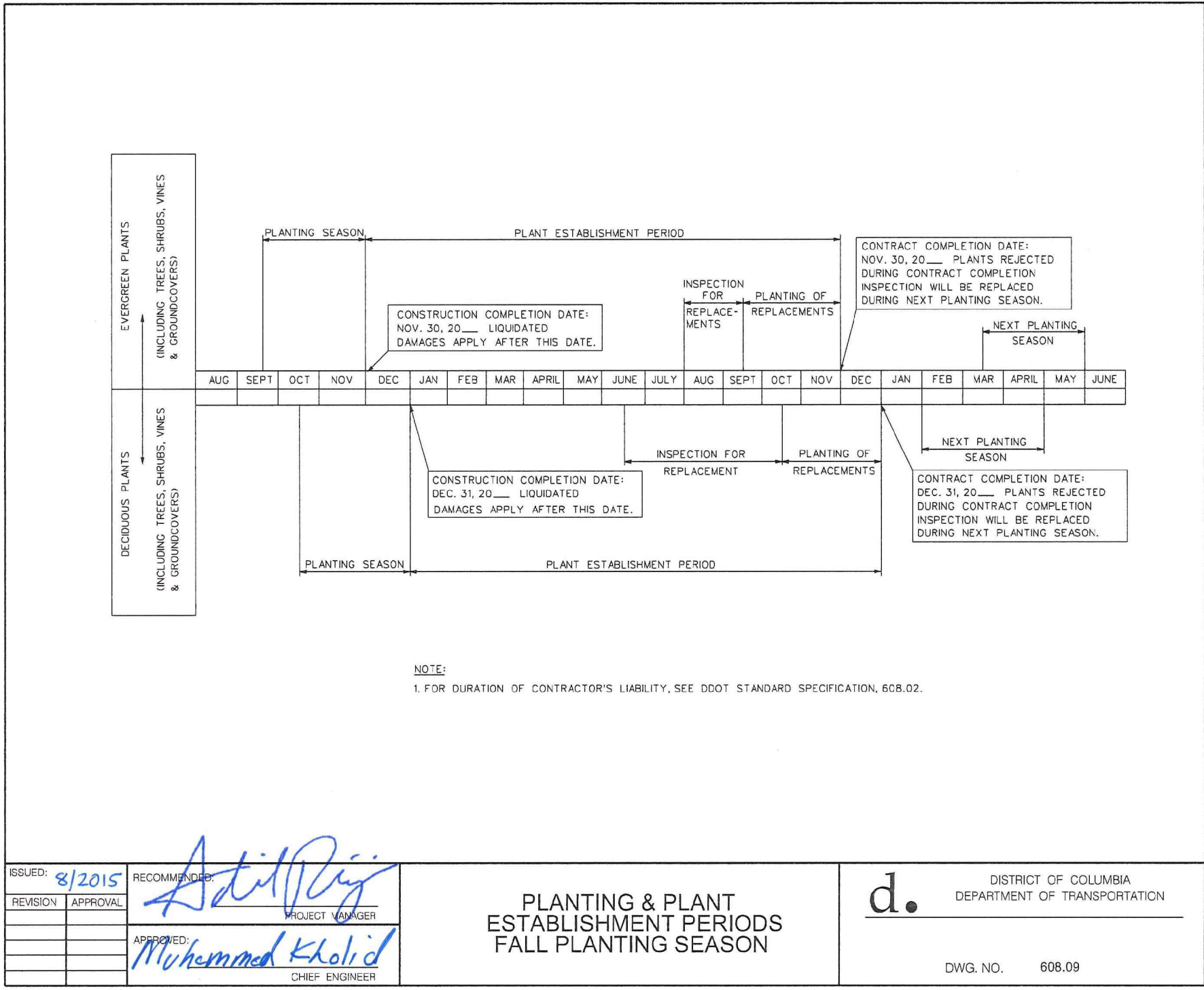
1
CIV1355
STREET TREE PLANTING
NOT TO SCALE



2
CIV1355
DECIDUOUS TREE PLANTING
NOT TO SCALE



3
CIV1355
PLANTING ESTABLISHMENT PERIODS
NOT TO SCALE



4
CIV1355
PLANTING ESTABLISHMENT PERIODS
NOT TO SCALE

VEGETATIVE STABILIZATION

I. DEFINITION

USING VEGETATION AS COVER FOR BARREN SOIL TO PROTECT IT FROM FORCES THAT CAUSE EROSION. THIS SPECIFICATION INCLUDES BOTH TEMPORARY AND PERMANENT STABILIZATION.

II. PURPOSE

USE VEGETATIVE STABILIZATION SPECIFICATIONS TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL. WHEN SOIL IS STABILIZED WITH VEGETATION, THE SOIL IS LESS LIKELY TO ERODE AND MORE LIKELY TO ALLOW INFILTRATION OF RAINFALL, THEREBY REDUCING SEDIMENTS LOADS AND RUNOFF TO DOWNSTREAM AREAS AND IMPROVING WILDLIFE HABITAT AND VISUAL RESOURCES.

III. CONDITIONS WHERE PRACTICE APPLIES

USE THIS PRACTICE ON DENUDED AREAS AS SPECIFIED ON THE ESC AND SWM PLANS. IT MAY BE USED ON HIGHLY ERODIBLE OR CRITICALLY ERODING AREAS. THIS SPECIFICATION IS DIVIDED INTO TEMPORARY SEEDING, TO QUICKLY ESTABLISH VEGETATIVE COVER FOR SHORT DURATION (UP TO ONE YEAR), AND PERMANENT SEEDING, FOR LONG-TERM VEGETATIVE COVER. EXAMPLES OF APPLICABLE AREAS FOR TEMPORARY SEEDING ARE TEMPORARY SOIL STOCKPILES, CLEARED AREAS BEING LEFT IDLE BETWEEN CONSTRUCTION PHASES, AND EARTH DIKES OR OTHER TEMPORARY EROSION CONTROL MEASURES. EXAMPLES OF PERMANENT SEEDING INCLUDE LAWNS, DAMS, CUT AND FILL SLOPES, AND OTHER AREAS AT FINAL GRADE.

VEGETATIVE STABILIZATION MUST BE IN PLACE TO STABILIZE THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3:1 WITHIN 7 DAYS. ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE MUST BE STABILIZED WITHIN 14 DAYS.

IV. DESIGN CRITERIA

DESIGN CRITERIA FOR BOTH TEMPORARY AND PERMANENT VEGETATIVE STABILIZATION INCLUDES SEED SPECIFICATIONS, SEED MIXTURES, AND SOIL AMENDMENTS.

SEED SPECIFICATION

FOR BOTH TEMPORARY AND PERMANENT SOIL STABILIZATION, SEED MUST MEET THE FOLLOWING SPECIFICATIONS:

- ALL SEED MUST BE SUBJECT TO RETESTING BY A RECOGNIZED SEED LABORATORY WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON THE SITE.
NOTE: SEED TAGS MUST BE MADE AVAILABLE TO THE INSPECTOR TO VERIFY TYPE AND RATE OF SEED USED.
- SEED QUALITY MUST BE CONSISTENT WITH THE CRITERIA OUTLINED IN TABLE 2.2
- THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN-FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. DO NOT USE INOCULANTS BEYOND THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANT AS DIRECTED ON THE PACKAGE. USE 4 TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING.
NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL IT IS USED. TEMPERATURES ABOVE 75-80°F CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.

Table 2.2 Quality of Seed

Species	Minimum Seed Purity (%)	Minimum Seed Germination (%)
Cool-Season Grasses		
Barley	98	85
Bentgrass, Creeping	95	85
Bluegrass, Canada	90	80
Bluegrass, Kentucky	97	80
Bluegrass, Rough	96	80
Fescue, Chewings	97	85
Fescue, Creeping Red	97	85
Fescue, Hard	97	85
Fescue, Sheep	97	85
Fescue, Tall	97	85
Oats	98	85
Orchardgrass	90	80
Redtop	92	80
Rye, Cereal	98	85
Ryegrass, Annual or Perennial	97	85
Saltgrass, Alkali	85	80
Wheat	98	85
Wild Rye, Canada	85	70
Warm-Season Grasses		
Bluestem, Big	60	60
Bluestem, Little	55	60
Deertongue	95	75
Indiangrass	60	60
Millet, Foxtail or Pearl	98	80
Panicgrass, Coastal	95	70
Switchgrass	95	75
Legumes/Forbs		
Clover, Alsike	99	85
Clover, Red	99	85
Clover, White	99	90
Flatpea	98	75
Lespedeza, Common	98	80
Pea, Partridge	98	70
Trefoil, Birdsfoot	98	85

TEMPORARY STABILIZATION

USE TEMPORARY SEEDING TO PROVIDE COVER ON DISTURBED AREAS FOR UP TO 12 MONTHS. LONGER DURATION OF VEGETATIVE COVER REQUIRES PERMANENT SEEDING.

INCLUDE IN THE PLAN THE FOLLOWING TEMPORARY SEEDING SUMMARY (TABLE 2.3) THAT IDENTIFIES TEMPORARY SEEDING MATERIALS RATES, SPECIES, AND FERTILIZER/LIME RATES. USE TABLE 2.4 TO COMPLETE THE SUMMARY TABLE. IF TABLE 2.3 IS NOT PUT ON THE PLANS AND COMPLETED, THEN TABLE 2.4 MUST BE PUT ON THE PLANS.

SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING, BUT THE PLAN SHOULD IDENTIFY RECOMMENDED FERTILIZER AND/OR LIME APPLICATION RATES. IF SOIL TESTING IS COMPLETED, REPORT THE TESTING AGENCY'S RESULTS ON THE PLANS. IF SOIL TEST HAS BEEN PERFORMED, DELETE THE RATES SHOWN IN TABLE 2.3 AND WRITE IN THE RATES RECOMMENDED BY THE TESTING AGENCY.

Table 2.3 Temporary Seeding Summary

Temporary Seeding Summary					
Seed Mixture			Fertilizer Rate (10-10-10)	Lime Rate	
Species	Seeding Rate (indicate units)	Seeding Dates			
ANNUAL RYEGRASS	40 LBS/AC	FEB 15 - APR 30 AUG 15 - NOV 30	0.5 INCHES	436 lb/ac	2 tons/ac
OAT	72 LBS/AC	FEB 15 - APR 30 AUG 15 - NOV 30	1 INCH	(10 lb/ft ²)	(90 lb/ft ²)
WHEAT	120 LBS/AC	FEB 15 - APR 30 AUG 15 - NOV 30	1 INCH		

Seed mixtures appropriate to the District of Columbia for temporary seeding are included in Table 2.4, along with appropriate seeding rates, depths, and planting dates.

****NOTE**
THE INFORMATION, DESIGN AND CONTENT OF THE DRAWINGS OR DOCUMENTS ATTACHED HERETO ARE PROPRIETARY TO VIKKA CAPITOL, LLC AND CONSTITUTE ITS PROPRIETARY INTELLECTUAL PROPERTY. THE ATTACHED DRAWINGS AND/OR DOCUMENTS MUST NOT BE FORWARDED, SHARED, COPIED, DIGITALLY CONVERTED, MODIFIED, OR USED FOR ANY PURPOSE, IN ANY FORMAT, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM VIKKA CAPITOL, LLC. VIOLATIONS MAY RESULT IN PROSECUTION. ONLY APPROVED, SIGNED AND SEALED PLANS OR DRAWINGS MAY BE UTILIZED FOR CONSTRUCTION PURPOSES.

VIKA CAPITOL
ENGINEERS ★ PLANNERS ★ LANDSCAPE ARCHITECTS ★ SURVEYORS ★ GEOMATICS
PROJECT: **MICHAEL D. BENTON, P.E.**
COORDINATOR: **benton@vikacapitol.com**
★ VIKKA CAPITOL, LLC ★ 4810 MASSACHUSETTS AVENUE, NW SUITE 16 ★
★ WASHINGTON, DC 20016 ★ PHONE: 202-244-4140 ★
★ WWW.VIKKACAPITOL.COM ★

3900 WISCONSIN AVENUE
FULL SITE DEVELOPMENT
3900 WISCONSIN AVE NW
A&T LOT 801, SQUARE 1823
WASHINGTON, D.C. 20016

SEDIMENT AND EROSION CONTROL NOTES AND DETAILS

VIKA CAPITOL REVISIONS	
#	DATE DESCRIPTION
1	10/10/2019 DOEE RESUBMISSION
2	9/07/2019 DOEE RESUBMISSION
3	8/10/31/18 DC WATER & DOEE SUB
4	7/10/01/18 DC WATER 2ND SUB.
5	6/07/20/18 DEMOLITION PLAN
6	5/06/12/18 DDOT RESUBMISSION
7	4/20/20/18 DDOT RESUBMISSION
8	3/02/02/18 DDOT RESUBMISSION
9	2/12/01/17 DC WATER SUBMISSION
DATE: OCT. 31, 2018	
DES. MDB	DWN. GMH
SCALE: AS SHOWN	
PROJECT/FILE NO. VC0392	
SHEET NO. CIV1355	

VEGETATIVE STABILIZATION (cont'd)

SEED MIXTURES APPROPRIATE TO THE DISTRICT OF COLUMBIA FOR TEMPORARY SEEDING ARE INCLUDED IN TABLE 2.4, ALONG WITH APPROPRIATE SEEDING RATES, DEPTHS, AND PLANTING DATES.

Table 2.4 Temporary Seeding for Site Stabilization

Plant Species	Seeding Rate¹		Seeding Depth (inches)²	Recommended Seeding Dates Plant Hardiness Zone 7a and 7b³
	lb/ac	lb/1,000 ft²		
Cool-Season Grasses				
Annual Ryegrass	40	1.0	0.5	Feb. 15 to Apr. 30; Aug. 15 to Nov. 30
Barley	96	2.2	1.0	Feb. 15 to Apr. 30; Aug. 15 to Nov. 30
Oats	72	1.7	1.0	Feb. 15 to Apr. 30; Aug. 15 to Nov. 30
Wheat	120	2.8	1.0	Feb. 15 to Apr. 30; Aug. 15 to Nov. 30
Cereal Rye	112	2.8	1.0	Feb. 15 to Apr. 30; Aug. 15 to Dec. 15
Warm-Season Grasses				
Foxtail Millet	30	0.7	0.5	May 1 to Aug. 14
Pearl Millet	20	0.5	0.5	May 1 to Aug. 14

Notes:
¹Seeding rates for the warm-season grasses are in pounds of pure live seed (PLS). Actual planting rates must be adjusted to reflect percent seed germination and purity, as tested. Adjustments are usually not needed for the cool-season grasses.
²Seeding rates listed above are for temporary seedings, when planted alone. When planted as a nurse crop with permanent seed mixes, use 1/3 of the seeding rate listed above for barley, oats, and wheat. For smaller-seeded grasses (annual ryegrass, pearl millet, foxtail millet), do not exceed more than 5% (by weight) of the overall permanent seeding mix. Generally, do not use cereal rye as a nurse crop unless planting will occur in very late fall beyond the seeding dates for other temporary seedings. Cereal rye has allelopathic properties that inhibit the germination and growth of other plants. If it must be used as a nurse crop, seed at 1/3 of the rate listed above. Oats are the recommended nurse crop for warm-season grasses.
³For sandy soils, plant seeds at twice the depth listed above.

²The planting dates listed are averages and may require adjustment to reflect local conditions.

PERMANENT STABILIZATION

FOR PERMANENT SEEDINGS, THE PLAN MUST INCLUDE THE PERMANENT SEEDING SUMMARY BELOW IN TABLE 2.5. THE SUMMARY TABLE WAS COMPILED USING TABLES 2.6 AND 2.7 IN THE DOEE DESIGN MANUAL.

Table 2.5 Permanent Seeding Summary

Permanent Seeding Summary									
No.	Species	Seed Mixture		Fertilizer Rate (10-20-20)			Lime Rate	Seeding Dates	Seeding Depths
		Application Rate (lb/ac)		N	P ₂ O ₅	K ₂ O			
	KENTUCKY BLUEGRASS	87 LBS/AC	FEB 15-APR 30 AUG 15-NOV 30	0.5 INCHES	45 lb/ac	90 lb/ac	90lb/ac	2 tons/ac	
	TALL FESCUE	130 LBS/AC	FEB 15-APR 30 AUG 15-NOV 30	0.5 INCHES	(1.0 lb/1,000 ft²)	(2 lb/1,000 ft²)	(2 lb/1,000 ft²)	(90 lb/1,000 ft²)	
	PERENNIAL RYE GRASS	87 LBS/AC	FEB 15-APR 30 AUG 15-NOV 30	0.5 INCHES	(1.0 lb/1,000 ft²)	(2 lb/1,000 ft²)	(2 lb/1,000 ft²)	(90 lb/1,000 ft²)	

TURFGRASS MIXTURES
SELECT A SEED MIXTURE FROM TABLE 2.6, USING TABLE 2.7(CONDITIONS BY MIX) AS A GUIDELINE. SOME GUIDANCE FOR COMMON MIXES IS AS FOLLOWS:
1. KENTUCKY BLUEGRASS (FULL SUN MIXTURES) – FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. THE RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVAR SEEDING RATE IS 1.5 TO 2 LBS PER 1000 SQUARE FT. CHOOSE A MINIMUM OF 3 BLUEGRASS CULTIVARS RANGING FROM A MINIMUM OF 10% TO A MAXIMUM OF 35% OF THE MIXTURE BY WEIGHT.
2. KENTUCKY BLUEGRASS/PERENNIAL RYE(FULL SUN MIXTURE) – FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. THE CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE IS 2 LBS MIXTURE PER 1000 SQUARE FEET. A MINIMUM OF 3 KENTUCKY BLUEGRASS CULTIVARS MUST BE CHOSEN, WITH EACH CULTIVAR RANGING FROM 10% TO 35% OF THE MIXTURE BY WEIGHT.
3. TALL FESCUE/KENTUCKY BLUEGRASS (FULL SUN MIXTURE) – FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. THE RECOMMENDED MIXTURE INCLUDE 95% TO 100% CERTIFIED TALL FESCUE CULTIVARS AND 0% TO 5% CERTIFIED KENTUCKY BLUEGRASS CULTIVARS. THE SEEDING RATE IS 5 TO 8 LBS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
4. KENTUCKY BLUEGRASS/FINE FESCUE(SHADE MIXTURE) – FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS OR FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. THE MIXTURE INCLUDES 30% TO 40% CERTIFIED KENTUCKY BLUEGRASS CULTIVARS AND 60% TO 70% OF CERTIFIED FINE FESCUE. THE SEEDING RATE IS 1½ TO 3LBS PER 1000 SQUARE FEET. A MINIMUM OF 3 KENTUCKY BLUEGRASS CULTIVARS MUST BE CHOSEN, WITH EACH CULTIVAR RANGING FROM A MINIMUM OF 10% TO A MAXIMUM OF 35% OF THE MIXTURE BY WEIGHT.

NOTE: SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT MARYLAND – VIRGINIA TURFGRASS VARIETY RECOMMENDATION WORK GROUP LIST (HTTP://WWW.PUBS.EXT.VT.EDU/).

Table 2.6 Recommended Permanent Seeding Mixtures by Site Conditions or Purpose

Site Conditions or Purpose of the Planting	Recommended Mix (See Table 2.7)												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Steep Slopes, Roadsides	R	R	R	A	R	A				A	A	R	R
Soil and Gravel Pits, Sanitary Landfills	R	R	R	A	R	A					A	R	R
Soil Damaged Areas	A												R
Mixte Spoil, Degraded Material, and Spoil Banks	A		R	A	R	A							R
Utility Rights-of-Way	R	R	R	R	R	R	A			R	R		
Dikes and Dams	A	A	R	R	R	R	A			R	R		
Bermes and Low Embankments (not on Ponds)	R	R	R	R	R	R	A			R	R		
Flood and Channel Banks, Streambanks	R	R	R	R	A	A				A	A		
Grassed Waterways, Diversion, Terraces, Spillways	A				R	A				R	A		
Bottoms of Drainage Channels, Swales, Detention Basins				A						A	R		
Field Borders, Filter Strips, Concrete Buffer Strips	R	R	A	A	R	A	R	R	R	R	R		
Waterway Treatment Strips and Areas													
Heavy Use Areas (Grass Loosening Paddocks for Livestock)							R						
Athletic Fields, Residential and Commercial Lawns							R	R	R				
Recreation Area							R	R	R				

R = Recommended mix for the site condition or purpose.
A = Alternative mix, depending on site conditions.
Table 2.7 Selected List of Permanent Turfgrass Seeding Mixtures

Mix	Recommended Cultivar	Seeding Rate ¹ lb/ac 1,000 ft ²	Soil Drainage Class ²	Max. Height (ft.) ³	Maint. Level ³	Remarks
Warm-Season/Cool-Season Grass Mixes						
1. SELECT ONE WARM-SEASON GRASS: Switch Grass (<i>Festuca ovina</i>) or OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Blackwell, Corbridge, Cura in the Rock, or Halo Atlantic	10 10	0.23 0.23			All species are native to the area. Plant this mix with a regular grass drill. Cooling pastures to best adapted to Zones 7a and 7b. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
2. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Navigator II	15	0.34	5-8	4-7	C-D
3. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	4	0.09			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
4. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
5. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	4	0.09			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
6. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
7. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	4	0.09			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
8. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
9. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
10. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
11. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
12. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
13. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
14. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
15. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
16. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
17. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
18. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
19. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
20. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
21. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
22. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
23. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
24. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
25. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
26. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
27. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
28. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
29. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
30. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
31. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
32. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
33. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
34. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
35. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
36. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
37. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
38. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
39. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
40. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
41. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
42. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
43. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) AND ONE Cooling Red Fescue (<i>Festuca rubra</i> var. <i>rubra</i>) PLUS ONE OF THE FOLLOWING LEGUMES: Perennial Pea (<i>Caragana pinnatifida</i>) OR Shank Clover (<i>Lupinus albus</i>) OR Wild Hedges (<i>Asperula cynosuroides</i>)	Common	2	0.05			Swishgrass, coastal pastures, the "Thames" pastures are becoming abundant. Cooling red fescue is a cool-season grass that will provide erosion protection within the warm-season grass (outbreaks or coastal pastures) is becoming abundant.
44. SELECT TWO WARM-SEASON GRASSES: Crested Wheat Grass (<i>Panicum capense</i> var. <i>capense</i>) OR 						

SOD GRASS

- CLASS OF TURFGRASS SOD MUST COMPLY WITH THE GRASS VARIETIES LISTED IN TABLE 2.7. MAKE SOD LABELS AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
- MACHINE CUT SOD AT A UNIFORM SOIL THICKNESS OF ¾ in. , AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. INDIVIDUAL PIECES OF SOD MUST BE CUT TO SUPPLIER'S WIDTH AND LENGTH. MAXIMUM ALLOWABLE DEVIATION FROM STANDARD WIDTHS AND LENGTHS IS 5% BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
- STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10% OF THE SECTION.
- DO NOT HARVEST OR TRANSPORT SOD WHEN MOISTURE CONTENT(EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
- HARVEST, DELIVER, AND INSTALL SOD WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPORTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.

PLANTING DATES

THE RECOMMENDED PLANTING DATES FOR PERMANENT COVER CAN BE FOUND IN TABLE 2.8

Table 2.8 Recommended Planting Dates for Permanent Cover

Type of Plant Material	Planting Dates
Seeds - Cool-Season Grasses (includes mixes with forbs and/or legumes)	Feb 15 to Apr 30 Aug 15 to Oct 31 Nov 1 to Nov 30²
Seeds - Warm-Season/Cool-Season Grass Mixes (includes mixes with forbs and/or legumes)	Feb 15 to Apr 30³ May 1 to May 31³
Sod - Cool-Season	Feb 15 to Apr 30 May 1 to Sep 30³ Oct 1 to Dec 15³,⁴

- Notes:
- When seeding toward the end of the listed planting dates, or when conditions are expected to be less than optimal, select an appropriate nurse crop from Table 2.4 Temporary Seeding for Site Stabilization and plant together with the permanent seeding mix.
 - When planted during the growing season, most of these materials must be purchased and kept in a dormant condition until planting.
 - Recommend adding a nurse crop, as noted above, if planting during this period.
 - Warm-season grasses need a soil temperature of at least 50 degrees F in order to germinate. If soil temperatures are colder than 50 degrees, or moisture is not adequate, the seeds will remain dormant until conditions are favorable. In general, planting during the latter portion of this period allows more time for weed emergence and weed control prior to planting. When selecting a planting date, consider the need for weed control vs. the likelihood of having sufficient moisture for later plantings, especially on droughty sites.
 - Additional planting dates during which supplemental watering may be needed to ensure plant establishment.
 - Frequent freezing and thawing of wet soils may result in frost-heaving of materials planted in late fall, if plants have not sufficiently rooted in place. Sod usually needs 4 to 6 weeks to become sufficiently rooted.

MINIMUM SOIL CRITERIA

MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT INCLUDE THE FOLLOWING:

- SOIL PH MUST BE BETWEEN 6.0 AND 7.0
- SOLUBLE SALTS MUST BE LESS THAN 500 PARTS PER MILLION (ppm).
- THE SOIL MUST CONTAIN LESS THAN 40% CLAY BUT ENOUGH FINE GRAINED MATERIAL(>30% SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AS AN EXCEPTION, IT IS ACCEPTABLE TO PLANT LOVEGRASS OR SERECIA LESPEDEZA IN SANDY SOIL (<30% SILT PLUS CLAY).
- SOIL MUST CONTAIN 1.5% MINIMUM ORGANIC MATTER BY WEIGHT.
- SOIL MUST CONTAIN SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
- IF THESE CONDITIONS CANNOT BE MET BY SOILS ON SITE, TOPSOIL MUST BE ADDED AS REQUIRED IN SECTION 2.6 TOPSOILING.

SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS).

- SOIL TEST MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES WITH DISTURBED AREAS OVER 5 ACRES. SOIL ANALYSIS MAY BE PERFORMED BY THE UNIVERSITY OF THE DISTRICT OF COLUMBIA OR A CERTIFIED COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY BE USED FOR CHEMICAL ANALYSES.
- FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING, AND SUITABLE FOR ACCURATE APPLICATION BY APPROVED EQUIPMENT. FERTILIZER MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM DOEE. DELIVER ALL FERTILIZERS TO THE SITE FULLY LABELED PER APPLICABLE LAWS AND BEAR THE NAME, TRADE NAME OR TRADEMARK, AND WARRANTY OF THE PRODUCER.
- LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED) CONTAINING AT LEAST 50% TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 505 WILL PASS THROUGH A #100 MESH SIEVE AND 98% TO 100% WILL PASS THOUGH A #20 MESH SIEVE.

V. CONSTRUCTION SPECIFICATIONS

SITE PREPARATION

- INSTALL EROSION AND SEDIMENT CONTROL STRUCTURES (EITHER TEMPORARY OR PERMANENT) SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, WATERWAYS, OR SEDIMENTS CONTROL BASINS.
 - PERFORM ALL GRADING OPERATIONS AT RIGHT ANGLES TO THE SLOPE. FINAL GRADING AND SHAPING IS NOT USUALLY NECESSARY FOR TEMPORARY SEEDING.
 - SCHEDULE REQUIRED SOIL TESTS TO DETERMINE SOIL AMENDMENT COMPOSITION AND APPLICATION RATES FOR SITES HAVING DISTURBED AREA OVER 5 ACRES.
 - DISTRIBUTE LIME AND FERTILIZER EVENLY AND INCORPORATE THEM INTO TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
 - WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS PER ACRE (200 TO 400 LBS PER 1000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.
- SEEDBED PREPARATION
- TEMPORARY SEEDING
 - SEEDBED PREPARATION MUST CONSIST OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MONSIST ON CONSTRUCTION EQUIPMENT. TRACK SLOPED AREAS (GREATER THAN 3:1) LEAVING THE SURFACE IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
 - APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
 - INCORPORATE LIME AND FERTILIZER INTO TOP 3 TO 5 INCHES OF SOIL DISKING OR OTHER SUITABLE MEANS.
 - PERMANENT SEEDING – MAINTAIN AREAS PREVIOUSLY GRADED IN CONFORMANCE WITH THE DRAWINGS IN A TRUE AND EVEN GRADE, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES TO PERMIT BONDING OF THE TOPSOIL TO THE SURFACE AREA AND TO CREATE HORIZONTAL EROSION CHECK SLOTS TO PREVENT TOPSOIL FROM SLIDING DOWN A SLOPE.

APPLY SOIL AMENDMENTS AS PER SOIL TEST AS INCLUDED ON THE PLANS.

MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF TOPSOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION, LOOSEN SURFACE SOIL BY DRAGGING WITH HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE. TRACK STEEP SLOPED (STEEPER THAN 3:1) BY A DOZER LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. THE TOP 1 TO 3 INCHES OF SOIL SHOULD BE LOOSE AND FRIABLE. SEEDBED LOOSENING MAY NOT BE NECESSARY ON NEWLY DISTRIBUTED AREAS.

- METHODS OF SEEDING – APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED, FERTILIZER AND MULCH), BROADCAST OR DROP SEEDER, OR A CULTIPACKER SEEDER.
- HYDROSEEDING
- IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES WILL NOT EXCEED THE FOLLOWING: NITROGEN, MAXIMUM OF 100 LBS PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS), 200 LBS PER ACRE; K20 (POTASSIUM), 200 LBS PER ACRE.
- LIME – USE ONLY GROUND AGRICULTURE LIMESTONE, (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS PER ACRE ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
- SEED AND FERTILIZER MUST BE MIXED ON SITE AND SEEDING MUST BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.
- FIBER MULCH MAY BE INCORPORATED INTO THE HYDROSEEDING MIXTURE. CONSULT SECTION 2.7 MULCHING FOR STANDARDS AND SPECIFICATIONS FOR MULCH MATERIALS.
- DRY SEEDING – THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
- INCORPORATE SEED SPREAD DRY INTO THE SUBSOIL AT THE RATES PRESCRIBED ON THE TEMPORARY OR PERMANENT SEEDING SUMMARIES OR TABLE 2.4 AND 2.7. THE SEEDED AREA MUST THEN BE ROLLED WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
- WHERE PRACTICAL, APPLY SEED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER.
- APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
- DRILL OR CULTIPACKER SEEDING – MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
- CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST ½ INCHES OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.
- WHERE PRACTICAL, APPLY SEED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

- SOD INSTALLATION – DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, THE SUBSOIL MUST BE LIGHTLY IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD.
- THE FIRST ROW OF SOD MUST BE LAID IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO TIGHTLY WEDGED AGAINST EACH OTHER. LATERAL JOINTS MUST BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD D IS NOT STRETCHED OR OVERLAPPED AND ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS, WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
- WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG, OR OTHERWISE SECURE SOD TO PREVENT SUFFRAGE ON SLOPED AND TO ENSURE SOLID CONTACT BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.
- IMMEDIATELY WATER SOD FOLLOWING ROLLING OR TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATION OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN 8 HOURS.

- INCREMENTAL STABILIZATION – CUT SLOPES
- DRESS, PREPARE, SEED, AND MULCH ALL CUT SLOPES AS THE WORK PROGRESSES. EXCAVATE AND STABILIZE SLOPES IN EQUAL INCREMENTS NOT TO EXCEED 15 FT.
- THE CONSTRUCTION SEQUENCE IS AS FOLLOWS (REFER TO FIGURE 2.1):
 - EXCAVATE AND STABILIZE ALL TEMPORARY SWALES, SIDE DITCHES, OR BERMS THAT WILL BE USED TO CONVEY RUNOFF FROM THE EXCAVATION.
 - PERFORM PHASE 1 EXCAVATION, DRESS, AND STABILIZE.
 - PERFORM PHASE 2 EXCAVATION, DRESS, AND STABILIZE. OVERSEED PREVIOUSLY SEEDD AREAS IF NECESSARY.
 - PERFORM FINAL EXCAVATION, DRESS, AND STABILIZE. OVERSEED PREVIOUSLY SEEDD AREAS IF NECESSARY.
- NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OF COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

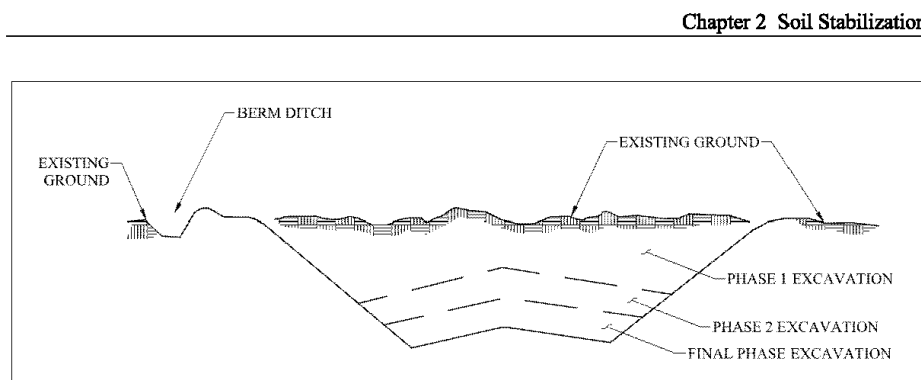


Figure 2.1 Incremental stabilization - cut.

- INCREMENTAL STABILIZATION OF EMBANKMENTS – FILL SLOPES
- CONSTRUCT EMBANKMENTS IN LIFTS AS PRESCRIBED ON THE PLANS.
- IMMEDIATELY STABILIZE SLOPES WHEN THE VERTICAL HEIGHT OF THE MULTIPLE LIFTS REACHES 15 FT, OR WHEN THE GRADING OPERATION CEASES AS PRESCRIBED IN THE PLANS.
- AT THE END OF EACH DAY, CONSTRUCT TEMPORARY BERMS AND PIPE SLOPE DRAINS ALONG THE TOP EDGE OF THE EMBANKMENT TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER TO A SEDIMENT TRAPPING DEVICE.
- THE CONSTRUCTION SEQUENCE IS AS FOLLOWS (REFER TO FIGURE 2.2):
 - EXCAVATE AND STABILIZE ALL TEMPORARY SWALES, SIDE DITCHES, OR BERMS THAT WILL BE USED TO DIVERT RUNOFF AROUND THE FILL. CONSTRUCT SLOPE SILT FENCE ON LOW SIDE OF FILL AS SHOWN IN FIGURE 2.2, UNLESS OTHER METHODS SHOWN ON THE PLANS ADDRESS THIS AREA.
 - PLACE PHASE 1 EMBANKMENT, DRESS AND STABILIZE.
 - PLACE PHASE 2 EMBANKMENT, DRESS AND STABILIZE.
- PLACE FINAL PHASE EMBANKMENT, DRESS AND STABILIZE. OVERSEED PREVIOUSLY SEEDD AREAS AS NECESSARY.
- NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

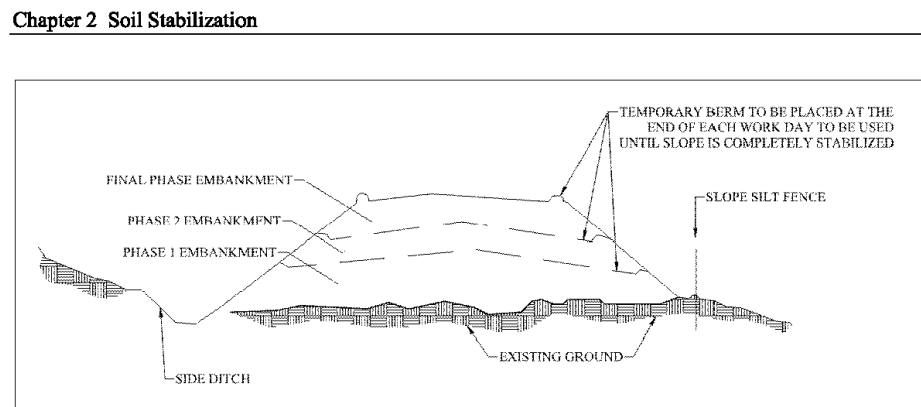


Figure 2.2 Incremental stabilization - fill.

VI. MAINTENANCE

GRASS MAINTENANCE

- INSPECT ALL SEEDD AREAS FOR FAILURE AND MAKE NECESSARY REPAIRS, REPLACEMENTS, AND RESEEDINGS WITHIN THE PLANNING SEASON.
- ONCE THE VEGETATION IS ESTABLISHED, THE SITE MUST HAVE 95% GROUND COVER TO BE CONSIDERED ADEQUATELY STABILIZED.
- IF THE STAND PROVIDES BETWEEN 40% GROUND COVERAGE, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER, SEEDBED PREPARATION AND SEEDING RECOMMENDATION.
- IF THE STAND PROVIDES BETWEEN 40% AND 94% GROUND COVERAGE, OVERSEEDING AND FERTILIZING USING HALF OF THE RATES ORIGINALLY APPLIED MAY BE NECESSARY.
- MAINTENANCE FERTILIZER RATES FOR PERMANENT SEEDINGS ARE SHOWN IN TABLE 2.9.

Table 2.9 Maintenance Fertilization for Permanent Seeding

Seeding Mixture	Type	Seeding Rate lb/acre	Time	Mowing	
Tall fescue makes up 70% or more of cover.	10-10-10	500	11.5	Yearly or as needed.	
	30-10-10	400	9.2	Fall	
Birdfoot trefoil.	0-20-0	400	9.2	Spring, the year following establishment, and every 4 to 5 years, after.	
Fairly uniform stand of tall fescue or birdfoot trefoil.	5-10-10	500	11.5	Fall, the year following establishment, and every 4 to 5 years, after.	
Wooping yarrowgrass Plant distribution.	5-10-10	500	11.5	Spring, the year following establishment, and every 3 to 4 years, after.	
Red & chewings fescue, Kentucky bluegrass, tall fescue mixtures.	25-0	58	September, 30 days later.	Mow no closer than 2 inches for red fescue and Kentucky bluegrass, 3 inches for fescue mixtures.	
Red & chewings fescue, Kentucky bluegrass, tall fescue mixtures.	25-0	58	September, 30 days later.	Mow no closer than 2 inches for red fescue and Kentucky bluegrass, 3 inches for fescue mixtures.	
	20-10-10	100	2.3	December, May 20, June 30, if needed.	
	20-10-10	100	2.3	September, 30 days later.	
	20-10-10	100	2.3	December, May 20, June 30, if needed.	