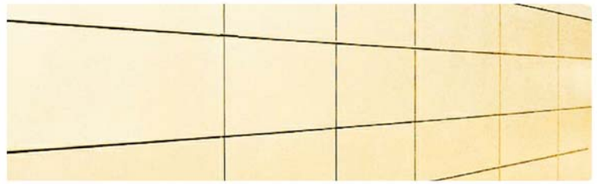
2 EAST FACADE- PARTIAL PERSPECTIVE

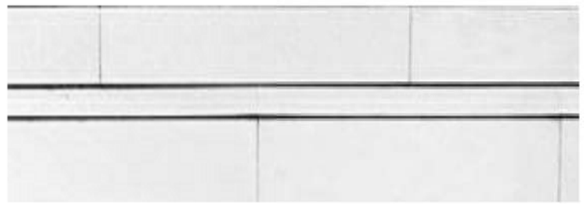
1 PARTIAL EAST ELEVATION
1/8" = 1'-0"

1 BEIGE FIBER CEMENT PANEL

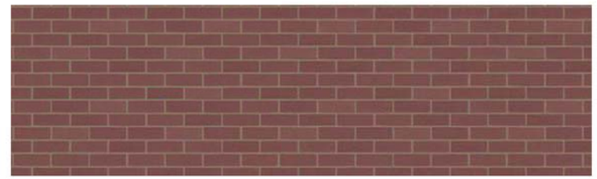


2 BEIGE ALUMINUM PANEL

3 DARK GRAY ALUMINUM PANEL



4 LIGHT GRAY ALUMINUM PANEL



5 RED SMOOTH FACE MODULAR BRICK

THE STRAND RESIDENCES

MATERIAL DETAILING-EAST ELEVATION | A-27

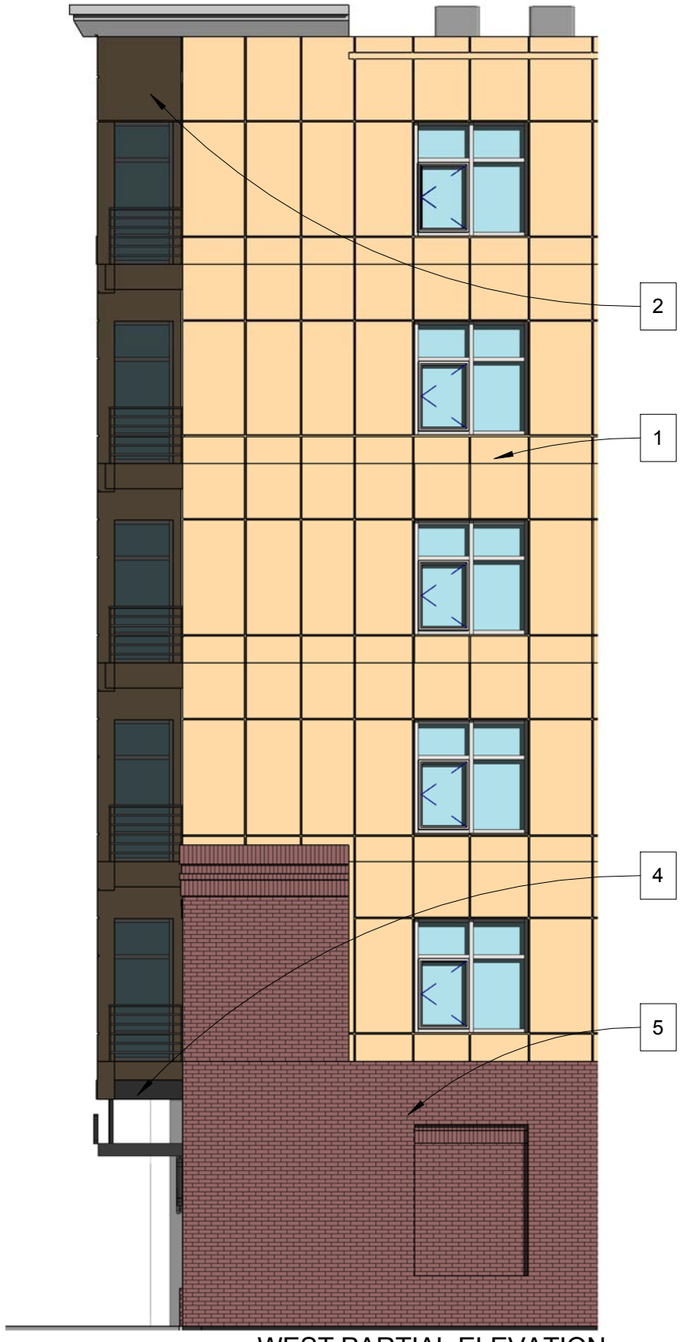
07/31/2017

5127-5131 NANNIE HELEN BURROUGHS AVE., NE,
WASHINGTON DC

Square: 5196 Lot No: 0019, 0031, 0805 Zone: Proposed MU-5A/PUD

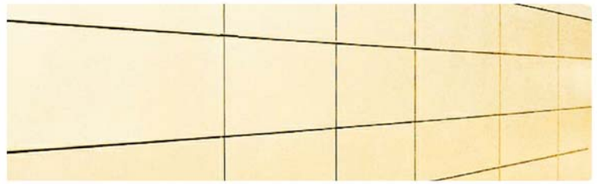
PGN ARCHITECTS, PLLC
210 7th Street SE - Suite 201
Washington, DC 20003
202.822.5995 (P); 202.822.0908 (F)

2 WEST FACADE-PARTIAL PERSPECTIVE



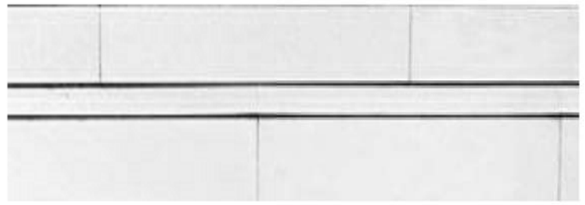
1 WEST PARTIAL ELEVATION
1/8" = 1'-0"

1 BEIGE FIBER CEMENT PANEL

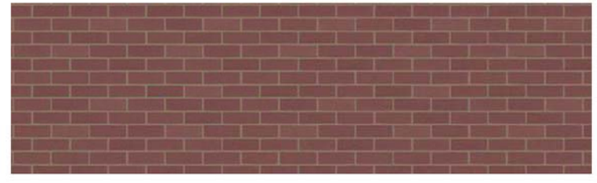


2 BEIGE ALUMINUM PANEL

3 DARK GRAY ALUMINUM PANEL



4 LIGHT GRAY ALUMINUM PANEL



5 RED SMOOTH FACE MODULAR BRICK

THE STRAND RESIDENCES

MATERIAL DETAILING- WEST ELEVATION | A-28

07/31/2017

5127-5131 NANNIE HELEN BURROUGHS AVE., NE,
WASHINGTON DC

Square: 5196 Lot No: 0019, 0031, 0805 Zone: Proposed MU-5A/PUD

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THE STRAND RESIDENCES

PERSPECTIVE | A-29

07/31/2017

5127-5131 NANNIE HELEN BURROUGHS AVE., NE,
WASHINGTON DC

Square: 5196 Lot No: 0019, 0031, 0805 Zone: Proposed MU-5A/PUD

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THE STRAND RESIDENCES

PERSPECTIVE | A-30

07/31/2017

5127-5131 NANNIE HELEN BURROUGHS AVE., NE,
WASHINGTON DC

Square: 5196 Lot No: 0019, 0031, 0805 Zone: Proposed MU-5A/PUD

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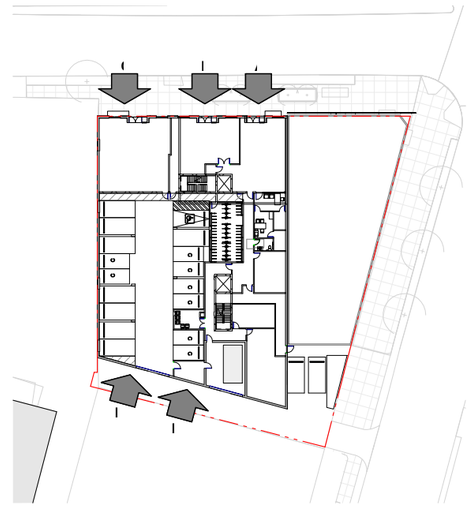
A 3'-0" x 1'-6" 5127

B TBD- MAX 10'-0" x 1'-6" COMMUNITY

C TBD- MAX 10'-0" x 1'-6" RETAIL

D 5'-0" x 1'-6" PARKING

E 5'-0" x 1'-6" LOADING



1 SIGNAGE KEYPLAN
1" = 80'-0"

THE STRAND RESIDENCES

SIGNAGE | A-31

07/31/2017

5127-5131 NANNIE HELEN BURROUGHS AVE., NE,
WASHINGTON DC

Square: 5196 Lot No: 0019, 0031, 0805 Zone: Proposed MU-5A/PUD

PGN ARCHITECTS
PGN ARCHITECTS, PLLC
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202.822.5995 (P); 202.822.0908 (F)

STRAND THEATER

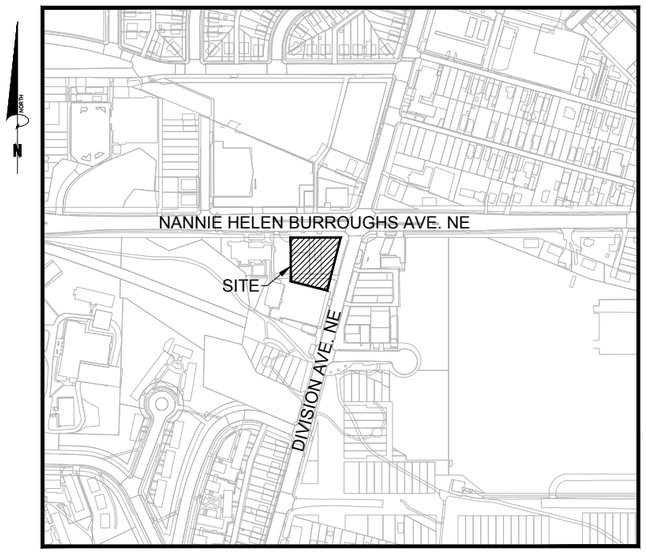
SQUARE 5196; LOTS 37, 805, 19, AND 814

5127 - 5131 NANNIE HELEN BURROUGHS AVENUE NE

WASHINGTON, DC

ABBREVIATIONS:

APPROX	APPROXIMATE
ASPH	ASPHALT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BC	BACK OF CURB
BF	BASEMENT FLOOR
BLDG	BUILDING
BM	BENCHMARK
BOV	BLOW OFF VALVE
BRL	BUILDING RESTRICTION LINE
BW	BOTTOM OF WALL
C&G	CURB AND GUTTER
CB	CATCH BASIN
CC	CONCRETE CURB
CIP	CAST IRON PIPE
℄	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CONC	CONCRETE
DIP	DUCTILE IRON PIPE
DI	DROP INLET
DOM	DOMESTIC
EBL	EAST BOUND LANE
EG	EDGE OF GUTTER
EL	ELEVATION
ELEC	ELECTRIC
ELEV	ELEVATION
ENT	ENTRANCE
EP	EDGE OF PAVEMENT
EQUIP	EQUIPMENT
ESMT	EASEMENT
EW	END WALL
EX	EXISTING
FC	FACE OF CURB
FD	FLOOR DRAIN
FF	FIRST FLOOR
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
G	GAS
GR	GUARD RAIL OR GRATE INLET
HC	HANDICAP
HP	HIGH POINT
HR	HAND RAIL
INV	INVERT
IP	IRON PIPE
IPS	IRON PIPE SET
LP	LOW POINT
MH	MANHOLE
O/H	OVERHEAD
PCC	PORTLAND CEMENT CONCRETE
PROP	PROPOSED
PVMT	PAVEMENT
SAN	SANITARY
SEW	SEWER
STD	STANDARD
S/W	SIDEWALK
TC	TOP OF CURB
TEL	TELEPHONE
TP	TEST PIT OR TREE PROTECTION
TW	TOP OF WALL OR TAILWATER
UP	UTILITY POLE
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UGT	UNDERGROUND TELEPHONE
UGC	UNDERGROUND CABLE
UD	UNDERDRAIN
WL	WATER LINE
WM	WATER METER



VICINITY MAP

SCALE: 1" = 500'

LEGEND

EXISTING		PROPOSED
350	INDEX CONTOUR	350
352	INTERMEDIATE CONTOUR	352
EX. E.P.	EDGE OF PAVEMENT	NEW E.P.
EX. C & G	CURB AND GUTTER	
	TRANSITION	
	PROPOSED HEADER CURB	
	PROPERTY LINE	
	LOT LINE	
	RIGHT-OF-WAY	
	EASEMENT	
EX 8" WATER	WATER LINE	8" DIP WATER
EX. W/V	WATER VALVE	
	WATER REDUCER	
	WATER METER	
EX 8" SAN	SANITARY SEWER	
EX 15" RCP	STORM SEWER	15" STORM
CATV	CABLE TV	CATV
E	ELECTRIC SERVICE-UNDERGROUND	E
OHE	ELECTRIC SERVICE-OVERHEAD	OHE
OHT	OVERHEAD TELEPHONE	OHT
T	TELEPHONE SERVICE	T
G	GAS LINE	G
× 25.32	SPOT ELEVATION	+00.00
	UTILITY POLE	
	GUY POLE	
	TRANSFORMER	T
	SIGN	
EX 2305	SANITARY SEWER IDENTIFIER	
EX 1901	STORM DRAIN IDENTIFIER	
	FIRE HYDRANT	
	STREET LIGHT	
	TEST PIT LOCATION RECOMMENDED/REQUIRED	TP
	HANDICAP RAMP	
15" OAK	TREE	
	CONCRETE SIDEWALK	

UTILITY CONTACTS:

SEWER/WATER:	DC WATER – (202) 787-4299 5000 OVERLOOK AVE. SW 5TH FLOOR WASHINGTON, DC 20032
ELECTRICITY:	PEPCO – FRED JOHNSON (202) 872-2833 701 9TH STREET NW, ROOM 6005 WASHINGTON, DC 20068
GAS:	WASHINGTON GAS CO. – VANN JONES (703) 750-5983 6801 INDUSTRIAL ROAD SPRINGFIELD, VA 22151
COMMUNICATIONS:	VERIZON COMMUNICATIONS – DIVINA YANCEY (301) 282-7736 FDC-1 13101 COLUMBIA PIKE CONDUIT GROUP – LOWER LEVEL SILVER SPRING, MD 20904

ENGINEER

BOWMAN CONSULTING GROUP DC PC
888 17TH STREET NW
SUITE 510
WASHINGTON, DC 20006
(202) 750-2474
ATTN: RYAN J BRANNAN, P.E.

CIVIL DRAWING LIST - PUD:

STRAND RESIDENCES

5127-5131 Nannie Helen Burroughs Ave., NE
Washington, DC
Square: 5196 Lot No: 805, 19 Zone: C-1

PGN Architects, PLLC
210 7th Street SE - Suite 201
Washington, DC 20003
(P) 202-822-5995 (F) 202-822-0908

COVER SHEET | CIV0001

7/21/2017

DEMOLITION NOTES:

1. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES FOR SHUTOFF, CAPPING AND CONTINUATION OF UTILITY SERVICES AS REQUIRED.
2. CONTRACTOR SHALL REMOVE AND TRANSPORT ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM ALL DEMOLITION OPERATIONS TO A LEGAL DISPOSAL OFF SITE.
3. REMOVAL OF ASPHALT AND CONCRETE PAVEMENT SHALL INCLUDE THE REMOVAL OF ALL SURFACE, BASE AND SUBBASE MATERIALS.
4. EXISTING CONDITIONS SHOWN HEREON WERE TAKEN FROM GIS AND AVAILABLE UTILITY COMPANY RECORDS.
5. ALL UNDERGROUND UTILITY LOCATIONS, INCLUDING WATER, STORM DRAINAGE, SANITARY SEWER, ELECTRICAL, TELEPHONE AND GAS WERE TAKEN FROM AVAILABLE RECORDS AND FIELD VERIFIED WHERE POSSIBLE. THE LOCATION OF ALL UTILITIES SHOWN ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY AND DETERMINE THE EXACT LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO COMMENCING WORK. REPORT ANY DISCREPANCY TO THE ENGINEER. MARKING LOCATIONS OF EXISTING UTILITIES, CONTACT "MISS UTILITY" AT 1-800-257-7777, 48-HOURS PRIOR TO ANY EXCAVATION.
6. THE CONTRACTOR MUST HAND-DIG TEST PITS AT ALL UTILITY CROSSINGS TO DETERMINE THE EXACT LOCATION AND DEPTH OF ALL UTILITIES AS WELL IN DEMOLITION WORK AND PRIOR TO ORDERING PIPE MATERIALS AND STRUCTURE. UTILITIES FOUND DURING DEMOLITION OR CONSTRUCTION ACTIVITIES SHALL BE THE RESPONSIBILITY OF ANY CONTRACTOR ENGAGED IN EXCAVATION AT THIS SITE. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY UTILITY FINDINGS WHICH DEVIATE FROM THE CONDITIONS SHOWN.
7. ALL SEDIMENT AND EROSION CONTROL METHODS SHALL BE INSTALLED BEFORE THE START OF ANY EXCAVATION AND/OR DEMOLITION AS PER DISTRICT OF COLUMBIA EROSION AND CONTROL HANDBOOK. IF ANY ONSITE INSPECTION REVEALS FURTHER EROSION CONTROL MEASURES ARE NECESSARY, THE SAME SHALL BE PROVIDED. REFER TO SHEETS CIV0130, CIV0510, AND CIV0520 FOR SEDIMENTATION AND EROSION CONTROL PLANS, NOTES, AND DETAILS.
8. SEE SEDIMENTATION AND EROSION CONTROL PLAN FOR ALL EXISTING TREES TO REMAIN AND BE PROTECTED.
9. NOTE PROXIMITY OF ADJACENT STRUCTURES AND UTILITY LINES AND MAINTAIN CONTINUED SERVICE DURING CONSTRUCTION. COORDINATE WITH RESPECTIVE UTILITY COMPANIES AND ENGINEER SHOULD RELOCATION OF SERVICE BE REQUIRED.
10. EXISTING UTILITIES (STRUCTURES AND LINES) NOT REQUIRED FOR FUTURE SERVICE TO BE REMOVED TO FACILITATE CONSTRUCTION. UTILITIES TO BE CAPPED AS PER UTILITY PURVEYOR'S STANDARDS AND SPECIFICATIONS. COORDINATE REQUIREMENTS WITH UTILITY PURVEYOR'S.
11. REMOVAL OF ALL WALLS/RETAINING WALLS AND FENCES SHALL INCLUDE THE REMOVAL OF THEIR FOUNDATION UNLESS OTHERWISE INDICATED ON THESE DRAWINGS.
12. ALL EXISTING DC STREETLIGHT POLES THAT ARE BEING PERMANENTLY REMOVED MUST BE RETURNED IN GOOD CONDITION TO THE DISTRICT OF COLUMBIA WAREHOUSE AT 1735 15TH STREET NE OFF WEST VIRGINIA AVENUE CONTACT NUMBER 202-576-5258.
13. EXISTING WATER AND SEWER SERVICES NOT REQUIRED FOR FUTURE USE TO BE REMOVED TO EXTENT NECESSARY TO FACILITATE NEW CONSTRUCTION. REMAINDER OF SERVICE TO BE CAPPED AT MAIN AND EXISTING VALVES AND TEES TO BE REMOVED PER DC/WATER STANDARDS SPECIFICATIONS.COORDINATE REQUIREMENTS WITH DC WATER UTILITY INSPECTOR AT 202-787-4299. PAVEMENT TO BE REMOVED PER DISTRICT OF COLUMBIA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.
14. CONTRACTOR TO BE RESPONSIBLE FOR LAYOUT, EXTENT AND DESIGN OF SHEETING, SHORING AND SUPPORT OF EXISTING UTILITIES AND ADJACENT STRUCTURES, SHORING, BRACING AND UNDERPINNING SHALL BE DESIGNED BY A STRUCTURAL ENGINEER, LICENSED IN THE DISTRICT OF COLUMBIA, HIRED BY THE CONTRACTOR AS NECESSARY TO ENSURE SUPPORT OF SURROUNDING STRUCTURES AND UTILITIES.
15. CONTRACTOR TO RELOCATE PARKING METERS IF REQUIRED AND AS DIRECTED BY D.C. BUREAU OF PARKING. COORDINATE REQUIREMENT WITH LARRY BROWN OF PARKING SERVICES AT 202-671-2291.
16. NOTIFY DC WATER AT (202) 787-4024 48 HOURS PRIOR TO START OF CONSTRUCTION.
17. UNLESS OTHERWISE SHOWN ON THESE DRAWINGS, EXISTING PAVEMENT ON NANNIE HELEN BURROUGHS AVENUE NE AND DIVISION AVENUE NE TO REMAIN. PROVIDE PRE-CONSTRUCTION VIDEO OF EXISTING PAVEMENT ON NANNIE HELEN BURROUGHS AVENUE NE AND DIVISION AVENUE NE. EXISTING PAVEMENT THAT IS DISTURBED OR DAMAGED DURING CONSTRUCTION, SHALL BE REPLACED PER DISTRICT OF COLUMBIA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS AT NO ADDITIONAL COST.
18. PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES VERIFY INVERT ELEVATION OF EXISTING UTILITIES. NOTIFY ENGINEER OF ANY DISCREPANCIES WITH INFORMATION SHOWN PRIOR TO ORDERING ANY STRUCTURES.
19. CONTACT 'MISS UTILITY' AT 1 800 257-7777 48 HOURS PRIOR TO CONSTRUCTION.
20. CONTACT DISTRICT OF COLUMBIA DEPARTMENT OF TRANSPORTATION-PUBLIC SPACE MAINTENANCE ADMINISTRATION 48 HOURS PRIOR TO START OF CONSTRUCTION AT (202) 645-6030 OR (202) 645-6031.
21. ALL PROPOSED UTILITY WORK TO BE PERFORMED UNDER THE INSPECTION OF DC WATER.
22. USE MANHOLE ENTRY SEALS WHERE REQUIRED.
23. CONTRACTOR TO PROVIDE A PRE AND POST TV VIDEO SEWER ON EXISTING SEWER AROUND THE SITE PER DC WATER STANDARDS AND SPECIFICATIONS.

SITE NOTES:

1. WHERE NEW WORK MEETS EXISTING, NOTE FIELD LOCATION AND ELEVATIONS OF EXISTING FEATURES BEFORE BEGINNING CONSTRUCTION AND REPORT ANY DISCREPANCY TO THE ARCHITECT OR ENGINEER.
2. VERIFY LOCATION OF EXISTING UTILITIES BEFORE PROCEEDING WITH WORK. NOTIFY OWNER'S REPRESENTATIVE, DC WATER (202-787-4024) AND "MISS UTILITY" (1-800-257-7777) 48 HOURS BEFORE PROCEEDING WITH ANY EXCAVATIONS. HAND DIG TEST PITS AT ALL UTILITY CROSSINGS AND DETERMINE EXACT CLEARANCE OF ALL PROPOSED INSTALLATIONS WELL IN ADVANCE OF CONSTRUCTION. NOTIFY ENGINEER OF ANY CONFLICTS WITH PLAN ELEVATIONS.
3. WORK AND MATERIALS IN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE APPLICABLE DISTRICT OF COLUMBIA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS. ON-SITE WORK AND MATERIALS CODE.
4. ELEVATIONS SHOWN HEREON ARE BASED ON D.C. DATUM.
5. DIMENSIONS ARE TO FACE OF WALL AND CURB, EDGE OF WALK AND PAVEMENT, CENTERLINE OF COLUMN, PIPE AND UTILITY STRUCTURE. UNLESS OTHERWISE NOTED.
6. FRAMES AND COVERS OF EXISTING STRUCTURES TO BE ADJUSTED TO MATCH NEW FINISHED GRADES.
7. OMISSIONS AND/OR ADDITIONS OF UTILITIES FOUND DURING CONSTRUCTION SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OR ENGINEER IMMEDIATELY OF ANY INFORMATION CONCERNING FOUND UTILITY, NOT SHOWN ON PLANS.
8. EXISTING SURFACE CONDITIONS DISTURBED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED TO MATCH EXISTING CONDITIONS. CONTRACTOR TO COORDINATE EXTENT WITH ARCHITECT OR ENGINEER.
9. TEST PITS ARE REQUIRED AT ALL LOCATIONS) WHERE PROPOSED UTILITIES CROSS EXISTING UTILITIES. INVESTIGATIONS) TO IDENTIFY HORIZONTAL LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES. THE ENGINEER IS TO BE NOTIFIED OF THIS INFORMATION.
10. IF A 1' MINIMUM VERTICAL CLEARANCE CAN NOT BE MAINTAINED AT UTILITY CROSSING, THE CONTRACTOR IS TO NOTIFY THE ENGINEER BEFORE PROCEEDING WITH WORK.
11. TRANSITION CURB, GUTTER, PAVING AND SIDEWALK TO MEET EXISTING IN LINE AND ON GRADE OR AS DIRECTED BY ENGINEER.
12. ALL DEBRIS AND EXCESS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN APPROVED OFF-SITE LOCATION.
13. ALL ON-SITE WATER LINES TO HAVE A MINIMUM COVER OF 4'-0". WATER FITTINGS SHALL BE PROPERLY TIED AND ANCHORED, PER DC WATER STANDARDS AND SPECIFICATIONS.
14. WHERE PORTIONS OF EXISTING BITUMINOUS OR CONCRETE PAVING ARE TO BE REMOVED,THE EXISTING PAVEMENT SHALL BE SAW-CUT.
15. REMOVE FRAMES AND COVERS OF SEWER MANHOLE/INLETS AND/OR WATER MAIN VALVE CASTINGS TO BE ABANDONED AND FILL TO GRADE.
16. ALL CURB SPOT SHOTS ARE TOP OF CURB, UNLESS OTHERWISE NOTED.
17. NOTIFY WASHINGTON GAS AT 202-750-4205, 48 HOURS PRIOR TO ANY EXCAVATION IN THE VICINITY OF ANY TRANSMISSION MAIN. FOR FURTHER INFORMATION OR PROBLEMS, CONTACT MR. CHUCK WHITEY AT WASHINGTON GAS AT 703-750-4205.
18. PROVIDE A MINIMUM OF 5 FEET HORIZONTAL AND 1 FOOT VERTICAL CLEARANCE BETWEEN 12" DIAMETER AND SMALLER DISTRIBUTION EXISTING GAS FACILITIES AND PROPOSED FACILITIES.
19. PROVIDE A MINIMUM OF 5 FEET HORIZONTAL AND 2 FEET VERTICAL CLEARANCE BETWEEN 16" DIAMETER OR GREATER TRANSMISSION GAS FACILITIES AND PROPOSED FACILITIES.
20. ALL PROPOSED WORK TO BE CONSTRUCTED IN ACCORDANCE WITH LATEST STANDARDS AND SPECIFICATIONS OF THE DISTRICT OF COLUMBIA DEPARTMENT OF TRANSPORTATION AND WATER AND SEWER AUTHORITY.
21. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING SIDEWALK, CURB AND GUTTER TO REMAIN OR TO REPLACE SIDEWALK, CURB AND GUTTER DAMAGED DURING CONSTRUCTION.
22. EXISTING FULL DEPTH PAVEMENT SECTION, CURB AND GUTTER TO BE REMOVED AND REPLACED TO EXTENT NECESSARY TO FACILITATE CONSTRUCTION OF NEW UTILITIES. MATERIALS TO COMPLY WITH DISTRICT OF COLUMBIA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.

DC WATER STANDARD CONSTRUCTION NOTES:

1. CONTACT: NOTIFY THE FOLLOWING DC WATER DEPARTMENTS PRIOR TO THE COMMENCEMENT OF UTILITY CONSTRUCTION:
   a) CONSTRUCTION INSPECTION SECTION AT 202-787-4024 AT LEAST TWO WEEKS PRIOR TO THE COMMENCEMENT OF UTILITY CONSTRUCTION TO SCHEDULE PRE-CONSTRUCTION MEETING.
   b) WATER SERVICES AT 202-612-3400 AT LEAST ONE WEEK PRIOR TO THE COMMENCEMENT OF UTILITY CONSTRUCTION.
   c) SEWER SERVICES AT 202-264-3862 OR 3873 AT LEAST ONE WEEK PRIOR TO THE COMMENCEMENT OF UTILITY CONSTRUCTION.
2. STANDARDS: ALL CONSTRUCTION, MATERIALS, AND APPURTENANCES SHALL COMPLY WITH THE LATEST EDITIONS OF THE DC WATER PROJECT DESIGN MANUAL, STANDARD DETAILS & DESIGN GUIDELINES, AND SPECIFICATIONS.
3. LEAD SERVICE REPLACEMENT: IF THIS PROJECT INCLUDES THE REPLACEMENT OF A WATER MAIN THAT HAS EXISTING LEAD WATER SERVICE LATERALS, THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE DC WATER CONSTRUCTION INSPECTION SECTION AT 202-787-4024 AT LEAST 90 DAYS PRIOR TO CONSTRUCTION TO ALLOW ADEQUATE TIME TO INITIATE STANDARD LEAD SERVICE REPLACEMENT PROTOCOL. LATERAL REPLACEMENT INCLUDES THE FULL LENGTH OF PIPE IN PUBLIC SPACE.
4. OWNER RESPONSIBILITY: THE OWNER IS RESPONSIBLE FOR ALL WORK AND COSTS ASSOCIATED WITH EXCAVATION, INSTALLATION, AND RESTORATION OF PUBLIC SPACE TO PERFORM A WATER/SEWER CONNECTION/ABANDONMENT. ONCE THE CONTRACTOR HAS OBTAINED A PUBLIC SPACE PERMIT HE/SHE MUST THEN CONTACT DC WATER PRIOR TO PERFORMING THE EXCAVATION TO INSTALL/INSPECT THE UTILITY WORK. THE OWNER SHALL BE HELD RESPONSIBLE FOR ALL DAMAGES TO EXISTING STRUCTURES AND UTILITIES CAUSED BY CONSTRUCTION ACTIVITY.
5. DC WATER RESPONSIBILITY: DC WATER IS RESPONSIBLE FOR INSTALLATION OF SMALL WATER SERVICE TAPS (2" DIAMETER AND LESS) TO THE PUBLIC MAIN, SMALL WATER SERVICE TAP REMOVALS FROM THE PUBLIC MAIN, FURNISHING & INSTALLING THE METER IN PUBLIC SPACE, AND INSPECTION OF WORK PERFORMED ON THE PUBLIC SYSTEMS.
6. MISS UTILITY: CONTACT MISS UTILITY AT 800-257-7777 48 HOURS BEFORE ANY DIGGING.
7. PLAN SET: A SET OF SIGNED & SEALED AND DC WATER STAMPED PLANS SHALL BE KEPT AT ALL TIMES AT THE JOB SITE ON WHICH ALL CHANGES OR VARIATIONS IN THE WORK, INCLUDING ALL EXISTING UTILITIES, ARE TO BE RECORDED AND/OR CORRECTED DAILY.
8. ABANDONMENTS: THE OWNER MUST PHYSICALLY DISCONNECT EXISTING WATER, SEWER, AND STORM LATERALS THAT ARE ARE TO BE ABANDONED AT THEIR CONNECTION TO THE PUBLIC MAIN.
9. UNMETERED WATER: THERE SHALL BE NO UNMETERED CONNECTIONS TO THE CITY'S WATER SYSTEM, INCLUDING CONNECTIONS BYPASSING METERS FOR TESTING ON-SITE PLUMBING OR FOR OBTAINING CONSTRUCTION WATER.
10. PRESSURE TESTING AGAINST VALVES: PRESSURE TESTING AGAINST VALVES WILL NOT BE ALLOWED.
11. WATER METER INSTALLATION: TO SCHEDULE THE INSTALLATION OF A DOMESTIC WATER-METER CONTACT PERMIT OPERATIONS AT 202-646-8600. DC WATER WILL FURNISH AND INSTALL THE METER AFTER THE CONNECTION TO THE MAIN HAS BEEN MADE AND THE METER PIT/VAULT HAS BEEN INSTALLED.
12. CROSS CONTAMINATION CONTROL: ASSE 1048 CERTIFIED BACKFLOW PREVENTION ARE REQUIRED ON ALL FIRE SERVICES AND ARE TO BE LOCATED INSIDE THE BUILDING (UNLESS AN EXTERNAL LOCATION IS NECESSARY OR REQUIRED BY DC WATER) WHERE IT IS SUPPLIED, OWNED, OPERATED, AND MAINTAINED BY THE OWNER. DC WATER DOES NOT FURNISH NOR INSTALL FIRE DOUBLE CHECK DETECTOR FIRE PROTECTION BACKFLOW PREVENTION ASSEMBLIES.
13. UTILITY SERVICE DISRUPTIONS: PHASE ALL UTILITY WORK TO MAINTAIN UTILITY SERVICES TO THE SURROUNDING AREA DURING ALL PHASES OF CONSTRUCTION. LIMIT REQUIRED UTILITY SHUT-DOWNS IN NUMBER AND DURATION. COORDINATE THESE SHUT DOWNS WITH DC WATER CONSTRUCTION INSPECTION STAFF.
14. WATER VALVE OPERATION: THE CONTRACTOR IS REQUIRED TO COORDINATE WITH DC WATER FOR ALL NECESSARY WATER MAIN SHUT DOWNS WITH ADEQUATE ADVANCED NOTICE. ONLY DC WATER EMPLOYEES MAY SHUT DOWN A PUBLIC WATER MAIN. A CERTIFIED PLUMBER IS ONLY AUTHORIZED TO TURN OFF VALVES INSIDE METER PITS.
15. WATER GATE VALVE LOCATION: LOCATE GATE VALVES FOR DOMESTIC AND FIRE SERVICES AS CLOSE TO THE PUBLIC WATER MAIN TEE AS POSSIBLE. HOWEVER, IF NECESSARY ADJUSTMENTS ARE REQUIRED DUE TO CONFLICTS, COORDINATE WITH A DC WATER INSPECTOR.
16. MATERIAL: THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING SHOP CUTS TO THE APPROPRIATE DC WATER OFFICE FOR APPROVAL OR OBTAINING A DC WATER APPROVAL STAMP FOR ALL WORK IN PUBLIC SPACE IN ADVANCE OF INSTALLATION. ONLY APPROVED MATERIALS MAY BE USED.
17. TEMPORARY CONDITIONS MINIMUM COVER: A NOMINAL FOUR FEET OF COVER IS REQUIRED FOR ALL WATER MAINS AT FINAL GRADE. COVER OF LESS THAN FOUR FEET REQUIRES DC WATER APPROVAL.
18. AS-BUILT: DEVELOPERS, CONTRACTORS AND/OR PLUMBERS MUST SUBMIT FINAL CONSTRUCTION AS-BUILT INFORMATION TO THE APPROPRIATE DC WATER INSPECTOR(S) FOR REVIEW AND APPROVAL, UPON COMPLETION OF INSTALLATION OF NEW SERVICES OR ABANDONMENT OF EXISTING SERVICES. WHEN THE FINAL AS-BUILT IS APPROVED THE DEPOSIT WILL BE RETURNED TO THE APPLICANT. SEE DC WATER AS-BUILT REQUIREMENTS FOR ADDITIONAL INFORMATION.
19. CONFLICTS: THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF PROPOSED UTILITIES. A MINIMUM OF ONE FOOT VERTICAL AND FIVE FEET HORIZONTAL CLEARANCE FROM OTHER UTILITIES SHALL BE MAINTAINED FROM ANY UTILITIES AND PUBLIC WATER AND SEWER MAINS.
20. FIRE HYDRANT USE: THE USE OF A FIRE HYDRANT AS A WATER SOURCE IS PROHIBITED UNLESS A PERMIT HAS BEEN OBTAINED FROM DC WATER FOR USE OF A SPECIFIC HYDRANT(S). DAILY OR EXTENDED USE PERMITS CAN BE OBTAINED FROM DC WATER PERMIT OPERATIONS DEPARTMENT 202-646-8600.
21. FIRE HYDRANT STATUS: THE CONTRACTOR SHALL NOTIFY FEMS AT 202-277-1889, PRIOR TO TAKING ANY FIRE HYDRANT OUT OF SERVICE OR RENDERING ANY HYDRANT INACCESSIBLE FOR ANY REASON. FEMS IS ALSO TO BE PROVIDED WITH THE LOCATION OF ANY NEW INSTALLATION OF PRIVATE FIRE HYDRANTS.
22. DC WATER SAFETY OFFICE: THE DC WATER SAFETY OFFICE CAN BE CONTACTED AT 202-787-4350.
23. SEWER BACKWATER PREVENTION: THE PLUMBING SYSTEM MUST BE IN COMPLIANCE WITH SECTION 715 OF THE 2006 INTERNATIONAL PLUMBING CODE WHICH STATES A BACKWATER VALVE IS REQUIRED FOR ALL PLUMBING FIXTURES BELOW THE ELEVATION OF THE MANHOLE COVER OF THE NEXT UPSTREAM MANHOLE IN THE PUBLIC SEWER.

STRAND RESIDENCES

5127-5131 Nannie Helen Burroughs Ave., NE
Washington, DC
Square: 5196 Lot No: 805, 19 Zone: C-1

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GENERAL NOTES | CIV0002

7/21/2017

NANNIE HELEN BURROUGHS AVE. NE

DIVISION AVE. NE

LOT 37

LOT 805

SQUARE 5196

LOT 801

LOT 814

LOT 19

EX. BUILDING

EX. BUILDING "STRAND THEATER" 2 STORY

ASPHALT PAVEMENT

CONC. ALLEY

GRAVEL

GRASS STRIP

CONC. PAVERS

CONC. BUS PAD

DECORATIVE PAVERS

METAL COVER (TYP)

TRASH CAN

BUS STOP

BIORETENTION

CONC. D/W ENTRANCE

TRAFFIC SIGNAL

TRAFFIC SIGNAL & STREET LIGHT

CROSSWALK

HISTORIC SIGN

UTILITY POLE

INV.IN=49.22 (REC)
INV.IN=48.23 (REC)
INV.OUT=48.23 (REC)

INV.IN=51.15 (REC)
INV.OUT=50.85 (REC)

INV.IN=51.79 (REC)
INV.OUT=50.28 (REC)

INV.45.77 (REC)

INV.49.85 (REC)

12" WATER
16" WATER
8" WATER

12" SAN
10" SAN

21" STORM
18" STORM
15" STORM
12" STORM

OHE

GRAPHIC SCALE
1" = 40'

0 20 40

N

STRAND RESIDENCES

5127-5131 Nannie Helen Burroughs Ave., NE
Washington, DC
Square: 5196 Lot No: 805, 19 Zone: C-1

EXISTING CONDITIONS PLAN | CIV0110

7/21/2017

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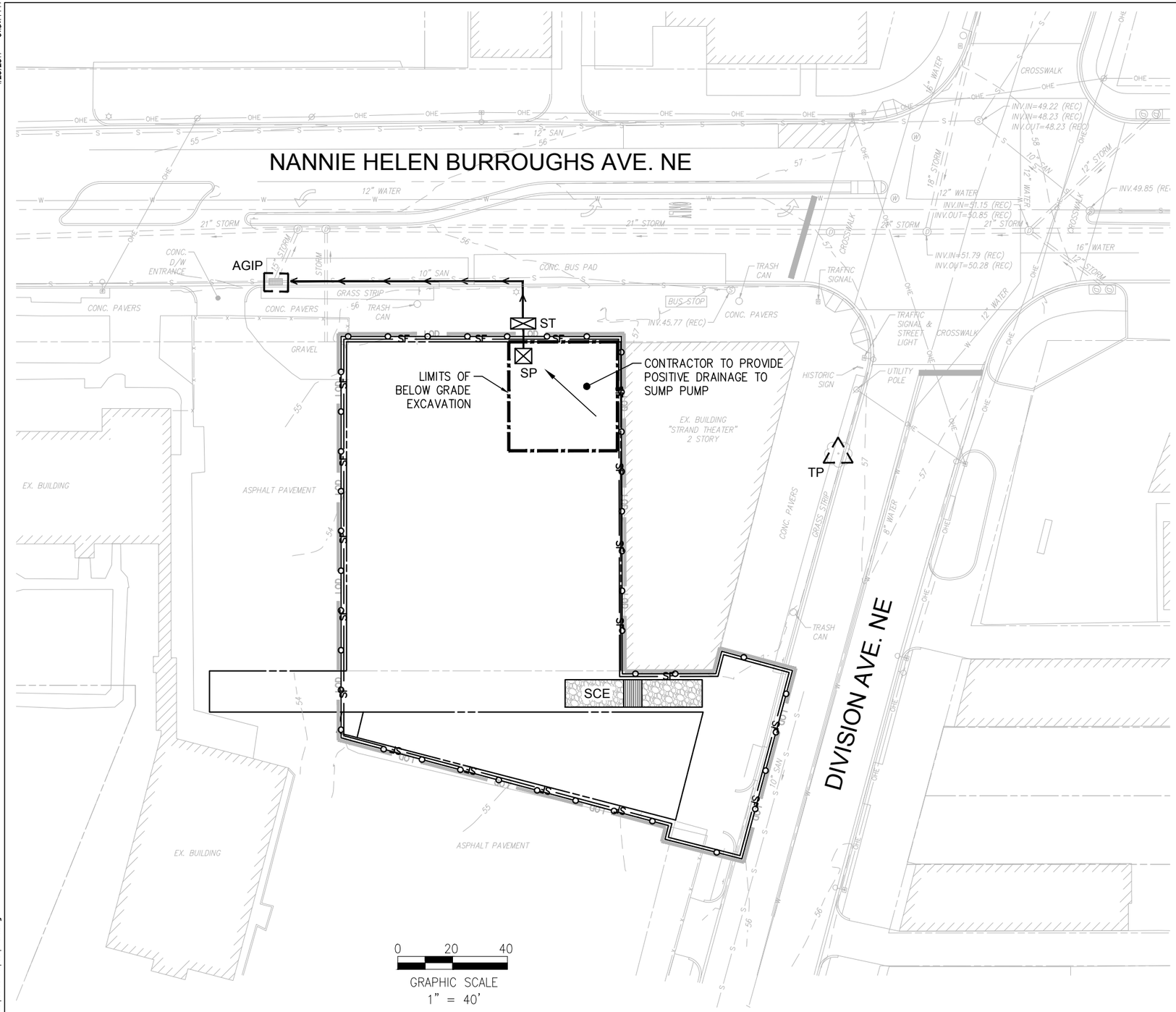

LEGEND

- STABILIZED CONSTRUCTION ENTRANCE — SCE / WASH RACK
- INLET PROTECTION — CIP / AGIP
- SILT FENCE — SF
- SAFETY FENCE (5' CHAIN LINK FENCE)
- TREE PROTECTION (ORANGE FENCE) — TP
- LIMITS OF DISTURBANCE — LOD
- SUMP PUMP — SP
- SEDIMENT TANK — ST
- LIMITS OF BELOW GRADE EXCAVATION

DUST CONTROL NOTES:

1. THE CONTRACTOR SHALL CONDUCT OPERATIONS AND MAINTAIN THE PROJECT SITE AS TO MINIMIZE THE CREATION AND DISPERSION OF DUST. DUST CONTROL SHALL BE USED THROUGHOUT THE WORK AT THE SITE.
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 WILL 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, 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 AT 20 PSI (137.8 K PA) MINIMUM. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
6. FOR WATER APPLICATION TO SOIL SURFACES DURING DEMOLITION AND/OR EXCAVATION, 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 SITE BOUNDARIES.

SEDIMENT AND EROSION CONTROL NOTE:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF SHEETING AND SHORING AND SUPPORT OF EXISTING UTILITIES AND ADJACENT STRUCTURES. SHORING, BRACING, AND UNDERPINNING DESIGNED BY THE CONTRACTOR'S STRUCTURAL ENGINEER LICENSED IN THE DISTRICT OF COLUMBIA SHALL BE PROVIDED AS NECESSARY TO ENSURE THEIR SUPPORT.
2. PROVIDE SILT FENCE AT THE PERIMETER OF DISTURBED AREA OR EXCAVATION TO REMAIN IN PLACE UNTIL SITE IS STABILIZED OR OTHERWISE APPROVED BY THE INSPECTOR.
3. PROVIDE CONSTRUCTION FENCE AT THE PERIMETER OF DISTURBED AREA OR EXCAVATION TO REMAIN IN PLACE UNTIL SITE IS STABILIZED OR OTHERWISE APPROVED BY THE INSPECTOR.
4. CONTRACTOR TO MAINTAIN ON-SITE STAMPED AND SIGNED, SEDIMENT AND EROSION CONTROL DRAWINGS APPROVED BY THE DEPARTMENT OF THE ENVIRONMENT, WATERSHED PROTECTION DIVISION.
5. THE APPLICATION MUST NOTIFY THE DEPARTMENT OF THE ENVIRONMENT BY PHONE (202-535-2250) AT LEAST 24 HOURS PRIOR TO START OF GRADING ACTIVITY AND WITHIN TWO (2) WEEKS AFTER COMPLETION OF PROJECT TO REQUEST INSPECTION. IF THERE IS NEED TO MAKE CHANGES OR MODIFICATIONS IN THE APPROVED DESIGN, DEPARTMENT OF THE ENVIRONMENT MUST BE NOTIFIED IMMEDIATELY.

CONSTRUCTION AND STABILIZATION SEQUENCE:

1. CONTACT DC WATERSHED PROTECTION DIVISION AT 202-535-1364 TO SCHEDULE THE PRE-CONSTRUCTION MEETING PRIOR TO MOBILIZATION.
2. REMOVE RETAINING WALL TO THE SOUTH OF THE SITE USING TEMPORARY MEASURES TO STABILIZE LIMITED SITE WORK.
3. SEDIMENT TRAPS OR BASINS AND OTHER EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED NO LATER THAN THE FIRST PHASE OF LAND GRADING.
4. SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AND APPROVED BY THE INSPECTOR PRIOR TO COMMENCING ANY OTHER LAND DISTURBING ACTIVITIES.
5. 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.
6. IMMEDIATELY AFTER DEBRIS BASINS, DIVERSIONS, WATERWAYS, AND RELATED STRUCTURES ARE BUILT, SEED AND MULCH, OR INSTALL SOD AND STABILIZATION BLANKET.
7. NO LATER THAN THE FIRST DAY OF CONSTRUCTION INSTALL SITE ACCESS MEASURES TO MINIMIZE OFF-SITE VEHICLE TRACKING OF SEDIMENTS. EACH CONSTRUCTION ENTRANCE MUST BE STABILIZED AND INCLUDE EACH ADDITIONAL MEASURE REQUIRED TO KEEP SEDIMENT FROM BEING CARRIED ONTO PUBLIC STREETS BY CONSTRUCTION VEHICLES AND WASHED INTO A STORM DRAIN OR WATERWAYS.
8. REMOVE OFF-SITE ACCUMULATIONS OF SEDIMENT DAILY DURING CONSTRUCTION AND IMMEDIATELY AT THE REQUEST OF A DOEE INSPECTOR.
9. PERFORM ROUTINE MAINTENANCE TO PREVENT ANY NEW DESTABILIZED AREAS.
10. DISCONNECT UTILITIES AND RAZE BUILDING TO SURFACE.
11. AT THE COMPLETION OF THIS PHASE OF CONSTRUCTION, FOLLOWING SITE STABILIZATION AND UPON INSPECTOR'S APPROVAL, TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES CAN BE REMOVED.

SEDIMENT AND EROSION CONTROL NARRATIVE:

INSTALL SEDIMENT AND EROSION CONTROL MEASURES INCLUDING SILT FENCE, INLET PROTECTION, TREE PROTECTION, AND STABILIZED CONSTRUCTION ENTRANCE AT SITE. FOLLOWING DISCONNECTION OF UTILITIES, BUILDING TO BE RAZED TO THE SURFACE USING DISTRICT APPROVED DEMOLITION METHODS. REMOVE OTHER SITE FEATURES AND ROUGH GRADE SITE. CONTACT DC DOEE, WATERSHED PROTECTION DIVISION AT 202-535-2250 TO SCHEDULE PRE-CONSTRUCTION MEETING. SHOULD MEASURES SHOWN ON THE PLAN NOT BE NEEDED UPON SITE STABILIZATION, CONTRACTOR TO REMOVE WITH PERMISSION OF DOEE INSPECTOR.

TREE AND ROOT PROTECTION NOTES:

ALL STREET TREES WITHIN OR DIRECTLY ADJACENT TO THE LIMITS OF WORK MUST BE PROTECTED WITH 6 FT. TALL CHAIN LINK FENCE TO THE EXTENT OF THE TREE BOX (MINIMUM 4' X 9') OR THE DRIP LINE IN A PLANTING STRIP. THE DRIP LINE IS DEFINED AS THE GROUND AREA UNDER THE CANOPY OF A TREE. 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. IF THERE ARE ANY TREE CONFLICTS ON THIS JOB, SITE PERMIT HOLDER MUST SUSPEND ALL WORK THAT CONTRIBUTES TO THE CONFLICT AND IMMEDIATELY CONTACT WARD ARBORIST OR CALL THE DDOT URBAN FORESTRY ADMINISTRATION AT 202-671-5133 TO RECEIVE CLEARANCE TO CONTINUE THE CONFLICTING WORK.

CONSTRUCTION DATES:

. THE PROPOSED WORK DUE TO COMMENCE IN THE FALL OF 2017 AND IS ANTICIPATED TO TAKE APPROXIMATELY 18 MONTHS.
. EXACT BEGINNING AND END OF CONSTRUCTION IS TO BE ESTABLISHED BY THE OWNER.

TOTAL AREAS - SOE:

SITE AREA: 17,061 SF OR 0.39 AC
AREA TO BE DISTURBED: ±22,000 SF OR ±0.51 AC

EXCAVATION CUT/FILL:

THE TOTAL VOLUME OF EXCAVATION = 1,580 SF (AREA) x 11 FT (DEPTH ASSUMED) / 27 = 644 CY ±

N

STRAND RESIDENCES

5127-5131 Nannie Helen Burroughs Ave., NE
Washington, DC
Square: 5196 Lot No: 805, 19 Zone: C-1

EROSION AND SEDIMENT CONTROL PLAN | CIV0130

7/21/2017

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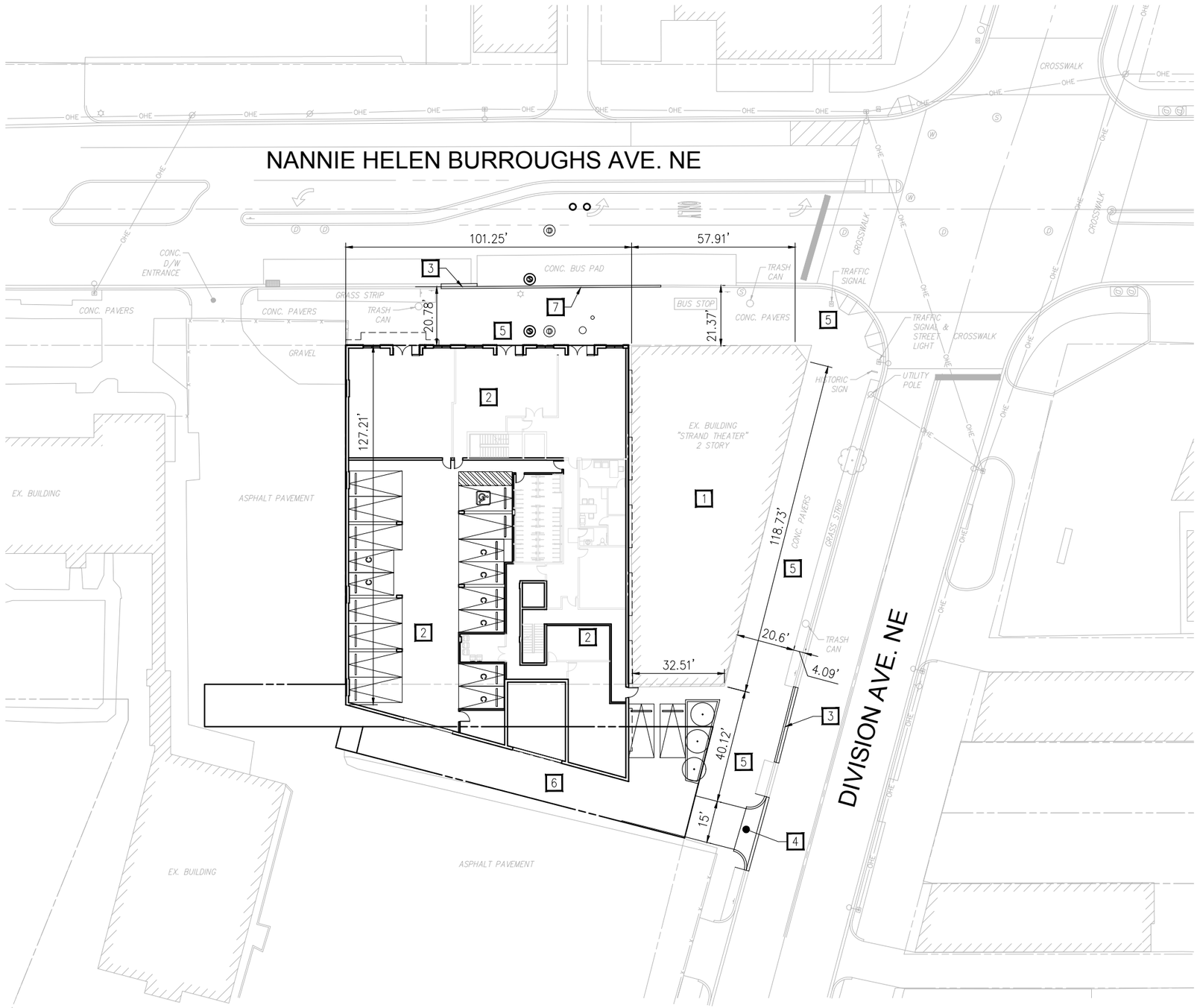

SITE NARRATIVE

THE PROJECT IS LOCATED AT 5124-5131 NANNIE HELEN BURROUGHS AVENUE NE, SQUARE 5196, LOTS 19, 37, 805, AND 814 IN THE MU-3 DISTRICT. PROPOSED DEVELOPMENT INCLUDES THE CONSTRUCTION OF A NEW 6 STORY MIXED-USE BUILDING WITH GROUND FLOOR RETAIL, RESIDENTIAL ABOVE ADJACENT TO THE HISTORIC STRAND THEATER. CONSTRUCTION WILL ALSO INCLUDE THE INSTALLATION OF NEW SITE UTILITIES FOR SEWER, STORM DRAIN, FIRE PROTECTION AND DOMESTIC WATER SERVICES. THE PROJECT WILL MEET THE DESIGN STANDARDS FOR STORMWATER MANAGEMENT, AS REQUIRED BY THE DISTRICT OF COLUMBIA.

NOTE: OWNER TO GET PERMISSION AS NECESSARY TO PERFORM WORK ON ADJACENT PROPERTY SITES.

SITE KEYNOTES

1. EXISTING STRAND THEATER TO REMAIN.
2. NEW 6 STORY BUILDING WITH PARKING ON GROUND FLOOR. SEE ARCHITECTURAL PLANS FOR DETAILS.
3. NEW CONCRETE CURB AND GUTTER
4. NEW CONCRETE DRIVEWAY ENTRANCE.
5. EXISTING SIDEWALK AND STREETSCAPE TO BE PRESERVED.
6. NEW CONCRETE RAMP DOWN TO LOADING DOCK.
7. NEW CONCRETE CURB.

0 20 40
GRAPHIC SCALE
1" = 40'

N

STRAND RESIDENCES

SITE PLAN | CIV0140

7/21/2017

5127-5131 Nannie Helen Burroughs Ave., NE
Washington, DC
Square: 5196 Lot No: 805, 19 Zone: C-1

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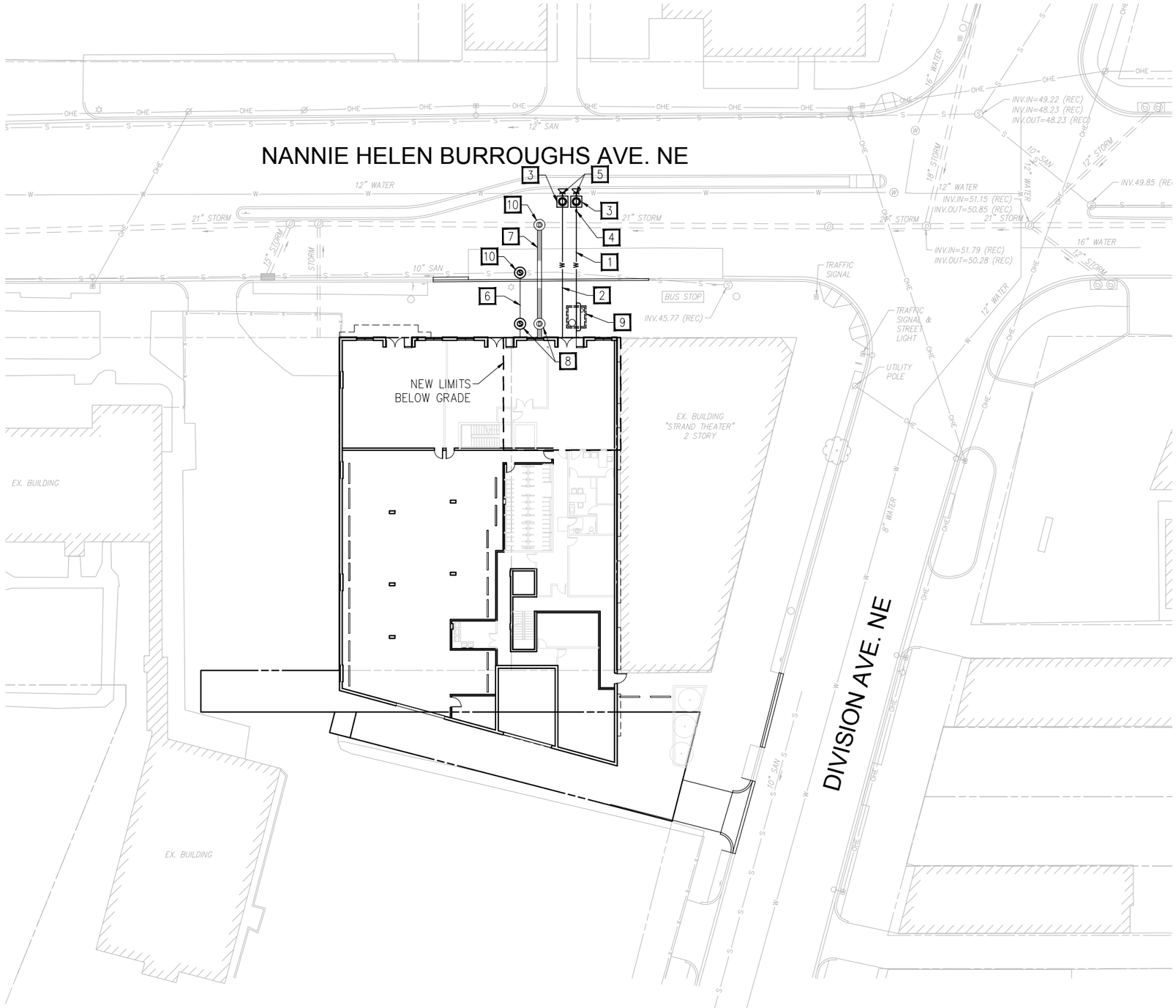

UTILITY NARRATIVE

THE REDEVELOPMENT OF THE STRAND THEATER WILL INCLUDE NEW UTILITIES SERVICING THE SITE. NEW DOMESTIC AND FIRE PROTECTION SERVICES WILL BE PROVIDED BY A CONNECTION FROM THE EXISTING 8" WATER MAIN IN DIVISION AVENUE NE. NEW SANITARY CONNECTION WILL TIE INTO THE EXISTING 10" SANITARY SEWER MAIN WITHIN NANNIE HELEN BURROUGHS NE. STORMWATER SERVICE WILL BE PROVIDED FROM A CONNECTION TO AN EXISTING 21" STORM SEWER MAIN IN NANNIE HELEN BURROUGHS NE.

UTILITY KEYNOTES

1. NEW 3" DIP DOMESTIC SERVICE.
2. NEW 6" DIP FIRE SERVICE.
3. NEW 6" WATER VALVE.
4. NEW 6" x 3" REDUCER.
5. NEW 12" x 6" TEE WITH THRUST BLOCK.
6. NEW 8" PVC SDR-35 SANITARY LATERAL.
7. NEW 18" RCP CL IV STORM LATERAL.
8. NEW MANHOLE.
9. NEW 3" DOMESTIC WATER METER.
10. NEW DOGHOUSE MANHOLE.

WATER AND SEWER DEMAND

WATER
(170 GPD PER UNIT X 85 UNITS) + (0.288 GPD PER SF X 1,389 SF)
= 14,850 GPD

SEWER
14,850 GPD = 0.02 CFS

DEMANDS ARE BASED ON AVERAGE WASTEWATER FLOW FACTOR PER WSSC PIPELINE DESIGN MANUAL OF 2008. ALL RETAIL IS ASSUMED TO BE CARRY OUT RESTAURANT. FINAL UNIT COUNTS WILL BE DETERMINED DURING THE FINAL ENGINEERING PHASE.

0 20 40
GRAPHIC SCALE
1" = 40'

N

STRAND RESIDENCES

5127-5131 Nannie Helen Burroughs Ave., NE
Washington, DC
Square: 5196 Lot No: 805, 19 Zone: C-1

UTILITY PLAN | CIV0150

7/21/2017

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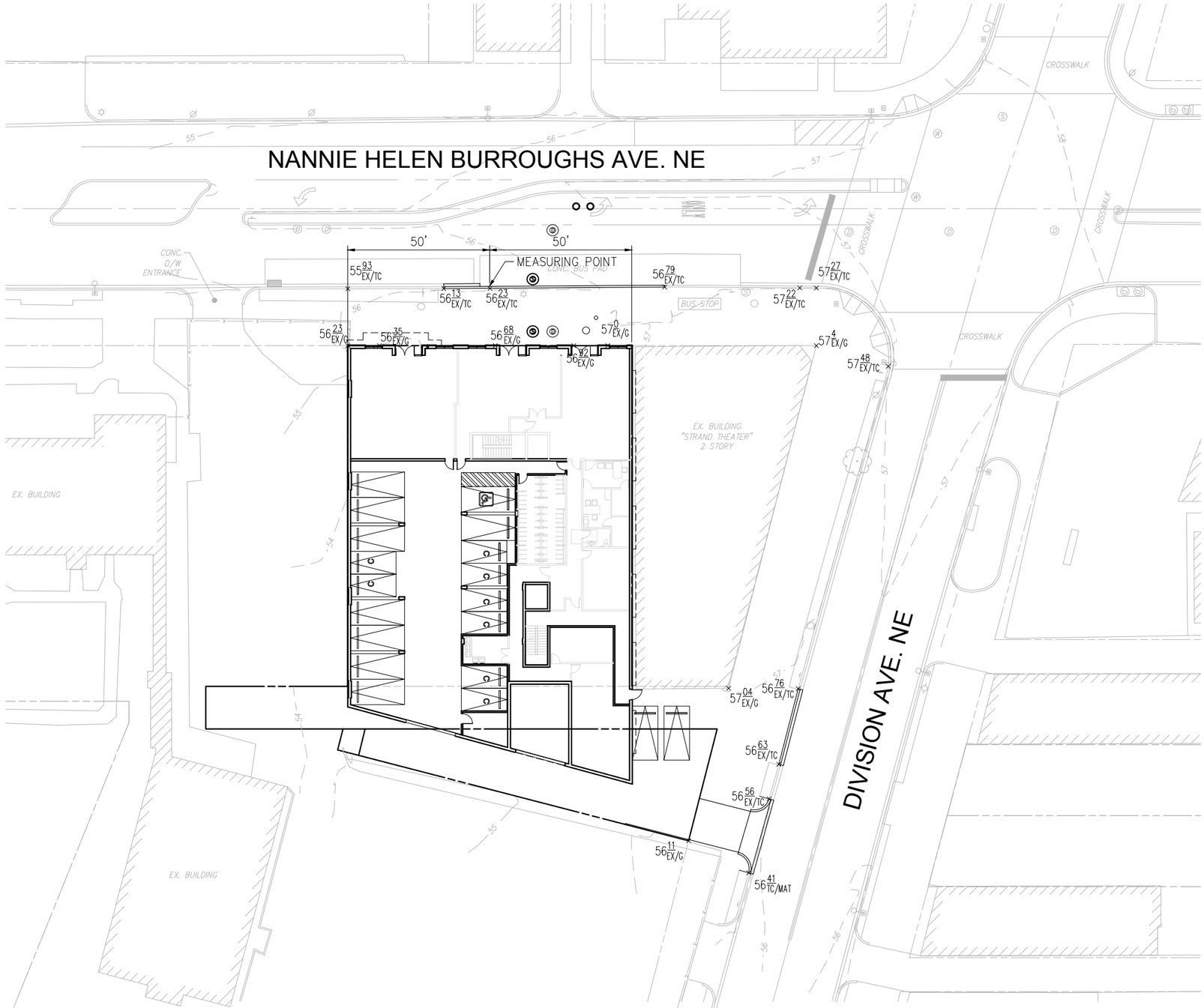

SPOT SHOT LEGEND

XX XX/FF ×	FINISHED FLOOR SPOT
XX XX/G ×	GROUND SPOT
XX XX/TC ×	TOP OF CURB SPOT
XX XX/BC ×	BOTTOM OF CURB SPOT
XX XX/TW ×	TOP OF WALL SPOT
XX XX/BW ×	BOTTOM OF WALL SPOT
XX XX/TS ×	TOP OF STEPS SPOT
XX XX/BS ×	BOTTOM OF STEPS SPOT
XX XX/MAT ×	MATCH EXISTING SPOT

0 20 40
GRAPHIC SCALE
1" = 40'

N

STRAND RESIDENCES

5127-5131 Nannie Helen Burroughs Ave., NE
Washington, DC
Square: 5196 Lot No: 805, 19 Zone: C-1

GRADING PLAN | CIV0160

7/21/2017

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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).

2. ESC MEASURES SHALL BE IN PLACE BEFORE AND DURING LAND DISTURBANCE.

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.

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.

5. ESC MEASURES SHALL BE IN PLACE TO STABILIZE AND 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.

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.

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.

8. PROTECT BEST MANAGEMENT PRACTICES FROM SEDIMENTATION AND OTHER DAMAGE DURING CONSTRUCTION FOR PROPER POST CONSTRUCTION OPERATION.

9. REQUEST A DOEE INSPECTOR'S APPROVAL AFTER THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROL, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.

10. REQUEST A DOEE INSPECTOR'S APPROVAL AFTER FINAL STABILIZATION OF THE SITE AND BEFORE THE REMOVAL OR EROSION AND SEDIMENT CONTROLS.

11. FINAL STABILIZATION MEANS THAT ALL LAND-DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND EITHER OF THE FOLLOWING CRITERIA HAVE BEEN MET: (1) A UNIFORM (FOR EXAMPLE, EVENLY DISTRIBUTED, WITHOUT LARGE BARE AREAS) PERENNIAL VEGETATIVE COVER WITH A DENSITY OF SEVENTY PERCENT (70%) OF THE NATIVE BACKGROUND VEGETATIVE COVER FOR THE AREA HAVE 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).

12. 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.

13. 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 LESS THAN 18 X 24 INCHES 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 ADDRESS, DOEE'S TELEPHONE NUMBER (202-535-2977), DOEE'S EMAIL ADDRESS (IEB.SCHEDULING@DC.GOV), AND THE 311 MOBILE APP HEADING ("CONSTRUCTION-EROSION RUNOFF").

IF A SITE DISTURBS 5,000 SQUARE FEET OF LAND OR GREATER, THE ESC PLAN MUST CONTAIN THE FOLLOWING STATEMENT:

14. 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 TRAINIGN PROGRAM.

STREET SWEEPING

1. STREETS WITHIN ONE MILE (1.6km) SHALL BE INSPECTED DAILY, ANY DROPPED SOIL, DUST AND/OR DEBRIS SHALL BE REMOVED.
2. VACUUM TYPE STREET CLEANER SHALL BE USED TO EFFECTIVELY REMOVE TOTAL DUST AND DIRT ON PAVED SURFACES.
3. ROADS SHALL BE SWEPT ON A WEEKLY BASIS (MINIMUM) DURING ALL ON AND OFF-SITE HAULING OPERATIONS FOR UP TO ONE MILE

2.0 STANDARDS AND SPECIFICATIONS FOR STABLIZED CONSTRUCION ENTRANCE WITH WASH RACK

DEFINITION: A STABILIZED LAYER OF AGGREGATE, THAT IS UNDERLAIN WITH GEOTEXTILE CLASS SE ENHANCED BY THE USE OF A WASH RACK. STABILIZED ENTRANCES ARE LOCATED AT ANY POINT WHERE TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE.

PURPOSE: STABILIZED CONSTRUCTION ENTRANCES REDUCE TRACKING OF SEDIMENT ONTO STREETS OR PUBLIC RIGHTS-OF-WAY AND PROVIDE A STABLE AREA FOR ENTRANCE OR EXIT FROM THE CONSTRUCTION SITE.

CONDITIONS WHERE PRACTICE APPLIES: STABILIZED CONSTRUCTION ENTRANCES WITH WASH RACKS SHOULD BE CONSIDERED WHEREVER SOIL AND/OR TRAFFIC CONDITIONS ON SITE REQUIRE WASHING THE CONSTRUCTION VEHICLE WHEELS PRIOR TO EXISTING THE SITE TO AVOID EXCESSIVE TRACKING OF MUD ONTO A HIGHWAY.

SPECIFICATIONS:

STABILIZED CONSTRUCTION ENTRANCES WITH WASH RACKS SHOULD BE CONSTRUCTED TO THE MINIMUM LENGTH, WIDTH, AND THICKNESS DIMENSIONS SHOWN ON STANDARD CONSTRUCTION DETAIL 2. A METAL WASH RACK IS AN ACCEPTABLE ALTERNATIVE TO THE REINFORCED CONCRETE ONE SHOWN.

APPROACHES TO THE WASH RACK SHOULD BE LINED WITH CRUSHED AGGREGATE (2"-3") ROCK A MINIMUM OF 25' ON BOTH SIDES.

THE WASH RACK SHOULD DISCHARGE TO A SEDIMENT REMOVAL FACILITY, SUCH AS A VEGETATED FILTER STRIP OR INTO A CHANNEL LEADING TO A SEDIMENT REMOVAL DEVICE, SUCH AS A SEDIMENT TRAP OR TANK.

STABILIZED CONSTRUCTION ENTRANCES WITH WASH RACKS SHOULD BE MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK MATERIAL SHOULD BE MAINTAINED ON SITE FOR THIS PURPOSE.

SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE. NOTE: WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE WAYS IS NOT ACCEPTABLE UNLESS A SEDIMENT FILTER BED IS INSTALLED IN THE DITCH OR CATCH BASIN.

DAMAGED WASH RACKS SHOULD BE REPAIRED AS NECESSARY TO MAINTAIN THEIR EFFECTIVENESS.

A STABILIZED CONSTRUCTION ENTRANCE WITHOUT A WASH RACK IS SHOWN ON STANDARD CONSTRUCTION DETAIL 1.

37.0 STANDARDS AND SPECIFICATIONS FOR LAND GRADING

DEFINITION: RESHAPING OF THE EXISTING LAND SURFACE IN ACCORDANCE WITH A PLAN AS DETERMINED BY ENGINEERING SURVEY AND LAYOUT.

PURPOSE: THE PURPOSE OF A LAND GRADING SPECIFICATION IS TO PROVIDE FOR EROSION CONTROL AND VEGETATIVE ESTABLISHMENT ON THOSE AREAS WHERE THE EXISTING LAND SURFACE IS TO BE RESHAPED BY GRADING ACCORDING TO PLAN.

DESIGN CRITERIA: THE GRADING PLAN SHOULD BE BASED UPON THE INCORPORATION OF BUILDING DESIGNS AND STREET LAYOUTS THAT FIT AND UTILIZE EXISTING TOPOGRAPHY AND DESIRABLE NATURAL SURROUNDINGS TO AVOID EXTREME GRADE MODIFICATIONS. INFORMATION SUBMITTED MUST PROVIDE SUFFICIENT TOPOGRAPHIC SURVEYS AND SOIL INVESTIGATIONS TO DETERMINE LIMITATIONS THAT MUST BE IMPOSED UPON THE GRADING OPERATION RELATED TO SLOPE STABILITY, EFFECT ON ADJACENT PROPERTIES AND DRAINAGE PATTERNS, MEASURES FOR DRAINAGE AND WATER REMOVAL, AND VEGETATIVE TREATMENT, ETC.

THE PLAN MUST SHOW EXISTING AND PROPOSED CONTOURS OF THE AREA(S) TO BE GRADED. THE PLAN SHALL ALSO INCLUDE PRACTICES FOR EROSION CONTROL, SLOPE STABILIZATION, SAFE DISPOSAL OF RUNOFF WATER AND DRAINAGE, SUCH AS WATERWAYS, LINED DITCHES, REVERSE SLOPE BENCHES (INCLUDE GRADE AND CROSS-SECTION), GRADE STABILIZATION STRUCTURES, RETAINING WALLS, AND SURFACE AND SUBSURFACE DRAINS. THE PLAN SHALL ALSO INCLUDE PHASING OF THESE PRACTICES. THE FOLLOWING SHALL BE INCORPORATED INTO THE PLAN:

1. PROVISIONS SHALL BE MADE TO SAFELY CONDUCT SURFACE RUNOFF TO STORM DRAINS, PROTECTED OUTLETS OR TO STABILIZE WATER COURSES TO INSURE THAT SURFACE RUNOFF WILL NOT DAMAGE SLOPES OR OTHER GRADED AREAS.

2. CUT AND FILL SLOPES THAT ARE TO BE STABILIZED WITH GRASSES SHALL NOT BE STEEPER THAN 2:1. (WHERE THE SLOPE IS TO BE MOWED THE SLOPE SHOULD BE NO STEEPER THAN 3:1, 4:1 IS PREFERRED BECAUSE OF SAFETY FACTORS RELATED TO MOWING STEEP SLOPES.) SLOPES EXCEEDING 2:1 SHALL REQUIRE SPECIAL DESIGN AND STABILIZATION CONSIDERATIONS THAT SHALL BE ADEQUATELY SHOWN ON THE PLANS.

3. REVERSE BENCHES SHALL BE PROVIDED WHENEVER THE VERTICAL INTERVAL (HEIGHT) OF ANY 2:1 SLOPE EXCEEDS 20 FEET; FOR 3:1 SLOPE IT SHALL BE INCREASED TO 30 FEET AND FOR 4:1 TO 40 FEET. BENCHES SHALL BE LOCATED TO DIVIDE THE SLOPE FACE AS EQUALLY AS POSSIBLE AND SHALL CONVEY THE WATER TO A STABLE OUTLET. SOILS, SEEPS, ROCK OUTCROPS, ETC., SHALL ALSO BE TAKEN INTO CONSIDERATION WHEN DESIGNING BENCHES.

A. BENCHES SHALL BE A MINIMUM OF SIX-FEET WIDE TO PROVIDE FOR EASE OF MAINTENANCE.

B. BENCHES SHALL BE DESIGNED WITH A REVERSE SLOPE OF 6:1 OR FLATTER TO THE TOE OF THE UPPER SLOPE AND WITH A MINIMUM OF ONE FOOT IN DEPTH. BENCH GRADIENT TO THE OUTLET SHALL BE BETWEEN 2 PERCENT AND 3 PERCENT, UNLESS ACCOMPANIED BY APPROPRIATE DESIGN AND COMPUTATIONS.

C. THE FLOW LENGTH WITHIN A BENCH SHALL NOT EXCEED 800' UNLESS ACCOMPANIED BY APPROPRIATE DESIGN AND COMPUTATIONS. FOR FLOW CHANNEL STABILIZATION, SEE TEMPORARY SWALE.

4. SURFACE WATER SHALL BE DIVERTED FROM THE FACE OF ALL CUT AND/OR FILL SLOPES BY THE USE OF EARTH DIKES, DITCHES AND SWALES OR CONVEYED DOWNSLOPE BY THE USE OF A DESIGNED STRUCTURE, EXCEPT WHERE:

A. THE FACE OF THE SLOPE IS OR SHALL BE STABILIZED AND THE FACE OF ALL GRADED SLOPES SHALL BE PROTECTED FROM SURFACE RUNOFF UNTIL THEY ARE STABILIZED.

B. THE FACE OF THE SLOPE SHALL NOT BE SUBJECT TO ANY CONCENTRATE FLOWS OF SURFACE WATER SUCH AS FROM NATURAL DRAINAGEWAYS, GRADED SWALES, DOWNSPOUTS, ETC.

C. THE FACE OF THE SLOPE WILL BE PROTECTED BY SPECIAL EROSION CONTROL MATERIALS, TO INCLUDE, BUT NOT LIMITED TO: APPROVED VEGETATIVE STABILIZATION PRACTICES (SEE SECTION G), RIP-RAP OR OTHER APPROVED STABILIZATIONS METHODS.

5. CUT SLOPES OCCURRING IN RIPABLE ROCK SHALL BE SERRATED AS SHOWN IN DETAIL 70 (WATERSHED PROTECTION DIVISION, DISTRICT OF COLUMBIA DEPARTMENT OF HEALTH, PAGE I-37-5), SERRATED SLOPES ON THE FOLLOWING DIAGRAM. THESE SERRATIONS SHALL BE MADE WITH CONVENTIONAL EQUIPMENT AS THE EXCAVATION IS MADE. EACH STEP OR SERRATION SHALL BE CONSTRUCTED ON THE CONTOUR AND WILL HAVE STEPS CUT AT NOMINAL TWO-FOOT INTERVALS WITH NOMINAL THREE-FOOT HORIZONTAL SHELVES. THESE STEPS WILL VARY DEPENDING ON THE SLOPE RATIO OR THE CUT SLOPE. THE NOMINAL SLOPE LINE IS 1:5:1. THESE STEPS WILL WEATHER AND ACT TO HOLD MOISTURE, LIME, FERTILIZER AND SEED THUS PRODUCING A MUCH QUICKER AND LONGER LIVED VEGETATIVE COVER AND BETTER SLOPE STABILIZATION. OVERLAND FLOW SHALL BE DIVERTED FROM THE TOP OF ALL SERRATED CUT SLOPES AND CARRIED TO A SUITABLE OUTLET.

6. SUBSURFACE DRAINAGE SHALL BE PROVIDED WHERE NECESSARY TO INTERCEPT SEEPAGE THAT WOULD OTHERWISE ADVERSELY AFFECT SLOPE STABILITY OR CREATE EXCESSIVELY WET SITE CONDITIONS.

7. SLOPES SHALL NOT BE CREATED SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTIES WITHOUT ADEQUATELY PROTECTING SUCH PROPERTIES AGAINST SEDIMENTATION, EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED DAMAGES.

8. FILL MATERIAL SHALL BE FREE OF SNOW, ICE, FROZEN MATERIALS, TRASH, BRICK, CLAY LUMPS, HAZARDOUS MATERIAL, BROKEN CONCRETE, TREE ROOTS, SOD, ASHES, CINDERS, GLASS, PLASTER, ORGANIC MATTER, BRUSH, LOGS, STUMPS, BUILDING DEBRIS. AND ANY OTHER FOREIGN MATERIAL. IT SHOULD BE FREE OF STONES OVER 2 INCHES IN DIAMETER WHERE COMPACTED BY HAND OR MECHANICAL TAMPERS OR OVER 8 INCHES IN DIAMETER WHERE COMPACTED BY ROLLERS OR OTHER EQUIPMENT. FROZEN MATERIAL SHALL NOT BE PLACED IN THE FILL NOR SHALL THE FILL MATERIAL BE PLACED ON A FROZEN FOUNDATION.

9. STOCKPILES, BORROW AREAS, AND SPOIL SHALL BE SHOWN ON THE PLANS AND SHALL BE SUBJECT TO THE PROVISIONS OF THIS STANDARD AND SPECIFICATION.

10. ALL DISTURBED AREAS SHALL BE STRUCTURALLY OR VEGETATIVELY IN COMPLIANCE WITH 42.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION.

38.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

DEFINITION: PLACEMENT OF TOPSOIL OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

CONDITIONS WHERE PRACTICE APPLIES

I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:

A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.

B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.

C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.

D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

II. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

I. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF THE TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED IN THE NRCS DISTRICT OF COLUMBIA SOIL SURVEY MANUAL

II. TOPSOIL SPECIFICATIONS – SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:

i. A TOPSOIL SHALL BE A LOAM, SANDY LOAM. CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE WATERSHED PROTECTION DIVISION. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOIL AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2 INCHES IN DIAMETER.

ii. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS. JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OTHER POISONOUS PLANTS OR OTHERS AS SPECIFIED.

iii. WHERE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 LBS/1,000 SF) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

38.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL (CONT'D)

III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:

i. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 42.0 VEGETATIVE STABILIZATION – SECTION I – VEGETATIVE STABILIZATION METHOD AND MATERIALS.

IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:

i. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:

a. pH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A pH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE pH TO 6.5 OR HIGHER.

b. ORGANIC CONTENT OF TOPSOIL SHALL NOT BE LESS THAN 1.5% BY WEIGHT.

c. TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.

d. NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MINIMUM) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE WATERSHED PROTECTION AGENCY, MAY BE USED IN-LIEU OF NATURAL TOPSOIL.

ii. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 42.0 VEGETATIVE STABILIZATION – SECTION I – VEGETATIVE STABILIZATION METHOD AND MATERIALS.

V. TOPSOIL APPLICATION

i. WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.

ii. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4"-8" HIGHER IN ELEVATION.

iii. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4"-8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.

iv. TOPSOIL SHALL BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

VI. ALTERNATIVE FOR PERMANENT SEEDING – INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:

i. COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO THE PRESCRIBE AMENDMENTS AND FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

a. COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS THAT ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY EITHER THE STATE OF MARYLAND OR THE STATE OF VIRGINIA.

b. COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1.0% NITROGEN, 1.5% PHOSPHOROUS, AND 0.2% POTASSIUM, AND HAVE A pH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.

c. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SF.

ii. COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LBS/1,000 SF AND 1/3 THE NORMAL LIME APPLICATION RATE.

REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING, MD-VA, PUB. #1, COOPERATIVE EXTENSIVE SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES, REVISED 1973.

42.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

SECTION 1 – VEGETATIVE STABILIZATION METHODS AND MATERIALS

A. SITE PREPARATION

i. INSTALL EROSION AND SEDIMENT CONTROL STRUCTURES (EITHER TEMPORARY OR PERMANENT) SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, WATERWAYS. OR SEDIMENT CONTROL BASINS.

ii. PERFORM ALL GRADING OPERATIONS AT RIGHT ANGLES TO THE SLOPE. FINAL GRADING AND SHAPING NOT USUALLY NECESSARY FOR TEMPORARY SEEDING.

iii. SCHEDULE REQUIRED SOIL TESTS TO DETERMINE SOIL AMENDMENT COMPOSITION AND APPLICATION RATES FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES.

B. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

i. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIONS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING 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 ALSO BE USED FOR CHEMICAL ANALYSES.

ii. FERTILIZERS SHALL BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION AND APPROVED EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS SHALL ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE STATE FERTILIZER LAWS AND SHALL BEAR THE NAME, TRADE NAME OR TRADEMARK, AND WARRANTEE OF THE PRODUCER.

iii. LIME MATERIALS SHALL BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED) WHICH CONTAINS AT LEAST 50% TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE SHALL BE GROUND TO SUCH FINENESS THAT AT LEAST 50% WILL PASS THROUGH A #100 MESH SIEVE AND 98-100% WILL PASS THROUGH A #20 MESH SIEVE.

iv. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3"-5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

C. SEEDBED PREPARATION

i. TEMPORARY SEEDING

a. SEEDBED PREPARATION SHALL CONSIST OF LOOSENING SOIL TO A DEPTH OF 3" TO 5" BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT SHOULD NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPED AREAS (GREATER THAN 3:1) SHOULD BE TRACKED LEAVING THE SURFACE IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.

b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.

c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3" - 5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

ii. PERMANENT SEEDING

a. MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT:

1. SOIL pH SHALL BE BETWEEN 6.0 AND 7.0
2. SOLUBLE SALTS SHALL BE LESS THAN 500 PARTS PER MILLION (PPM).
3. THE SOIL SHALL 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. AN EXCEPTION IS IF LOVEGRASS OR SERECIA LESPEDEZA IS TO BE PLANTED, THAN A SANDY SOIL (<30% SILT PLUS CLAY) WOULD BE ACCEPTABLE.
4. SOIL SHALL CONTAIN 1.5% MINIMUM ORGANIC MATTER BY WEIGHT.
5. SOIL MUST CONTAIN SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
6. IF THESE CONDITIONS CANNOT BE MET BY SOILS ON-SITE, ADDING TOPSOIL IS REQUIRED IN ACCORDANCE WITH SECTION 38, STANDARD AND SPECIFICATION FOR TOPSOIL.

b. AREAS PREVIOUSLY GRADED IN CONFORMANCE WITH THE DRAWINGS SHALL BE MAINTAINED IN A TRUE AND EVEN GRADE, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3"-5" 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.

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

c. MIX SOIL AMENDMENTS INTO THE TOP 3"-5" OF TOPSOIL BY DISKING OR OTHER SUITABLE MEANS. LAWN AREAS SHOULD BE RAKED 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 A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE. STEEP SLOPES (STEEPER THAN 3:1) SHOULD BE TRACKED BY A DOZER LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. THE TOP 1"-3" OF SOIL SHOULD BE LOOSE AND FRIABLE. SEEDBED LOOSENING MAY NOT BE NECESSARY ON NEWLY DISTURBED AREAS.

42.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION (CONT'D)

D. SEED SPECIFICATIONS

i. ALL SEED MUST MEET THE REQUIREMENTS OF THE DISTRICT OF COLUMBIA DPW STANDARD AND SPECIFICATIONS FOR HIGHWAYS AND STRUCTURES AND SPECIFICATION 42.0 VEGETATIVE STABILIZATION. ALL SEED SHALL BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED SHALL HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON THIS JOB.

NOTE: SEED TAGS SHALL BE MADE AVAILABLE TO THE INSPECTOR TO VERIFY TYPE AND RATE OF SEED USED.

ii. INOCULANT – THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES SHALL BE A PURE CULTURE OF NITROGEN-FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS SHALL NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANT AS DIRECTED ON PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75-80°F CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.

E. METHODS OF SEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER), BROADCAST OR DROP SEEDER, OR A CULTIPACKER SEEDER.

i. HYDROSEEDING:

a. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES AMOUNTS WILL NOT EXCEED THE FOLLOWING: NITROGEN; MAXIMUM OF 100 LBS PER ACRE TOTAL OF SOLUBLE NITROGEN; P2O5 (PHOSPHOROUS): 200 LBS/AC; K2O (POTASSIUM): 200 LBS/AC.

b. LIME – USE ONLY GROUND AGRICULTURAL LIMESTONE, (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.

c. SEED AND FERTILIZER SHALL BE MIXED ON-SITE AND SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.

ii. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.

a. SEED SPREAD DRY SHALL BE INCORPORATED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON THE TEMPORARY OR PERMANENT SEEDING SUMMARIES OR TABLES 42 OR 43. THE SEEDED AREA SHALL THEN BE ROLLED WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.

b. WHERE PRACTICAL, SEED SHOULD BE APPLIED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

iii. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.

a. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IS SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.

b. WHERE PRACTICAL, SEED SHOULD BE APPLIED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

F. MULCH SPECIFICATIONS (IN ORDER OF PREFERENCE)

i. STRAW SHALL CONSIST OF THOROUGHLY THRESHED WHEAT, RYE, OR OAT STRAW, REASONABLY BRIGHT IN COLOR, AND SHALL NOT BE MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY AND SHALL BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED BY THE NRCS SEED LAW.

NOTE: ONLY STERILE STRAW MULCH SHOULD BE USED IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.

ii. WOOD CELLULOSE FIBER MULCH (WCFM)

a. WCFM SHALL CONSIST OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.

b. WCFM SHALL BE DYED GREEN OR CONTAIN A GREEN DYE 1N THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.

c. WCFM, INCLUDING DYE, SHALL CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.

d. WCFM MATERIALS SHALL BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL SHALL FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND SHALL COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.

e. WCFM MATERIAL SHALL CONTAIN NO ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.

f. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH TO APPROXIMATELY 10 MM., DIAMETER APPROXIMATELY 1 MM., pH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6% MAXIMUM AND WATER HOLDING CAPACITY OF 90% MINIMUM.

G. MULCHING SEEDED AREAS – MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.

i. IF GRADING IS COMPLETED OUTSIDE OF THE SEEDING SEASON, MULCH ALONE SHALL BE APPLIED AS PRESCRIBED IN THIS SECTION AND MAINTAINED UNTIL THE SEEDING SEASON RETURNS AND SEEDING CAN BE PERFORMED IN ACCORDANCE WITH THESE SPECIFICATIONS.

ii. WHEN STRAW MULCH IS USED, IT SHALL BE SPREAD OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS/ACRE. MULCH SHALL BE APPLIED TO A UNIFORM LOOSE DEPTH OF BETWEEN 1" AND 2". MULCH APPLIED SHALL ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. IF A MULCH ANCHORING TOOL IS TO BE USED, THE RATE SHOULD BE INCREASED TO 2.5 TONS/ACRE.

iii. WOOD CELLULOSE FIBER USED AS A MULCH SHALL BE APPLIED AT A NET DRY WEIGHT OF 1,500 LBS. PER ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER, AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 LBS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

H. SECURING STRAW MULCH (MULCH ANCHORING): MULCH ANCHORING SHALL BE PERFORMED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING ON THE SIZE OF AREA AND EROSION HAZARD:

i. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD BE USED ON THE CONTOUR IF POSSIBLE.

ii. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. THE FIBER BINDER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 LBS/ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 LBS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

iii. APPLICATION OF LIQUID BINDERS SHOULD BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. THE REMAINDER OF AREA SHOULD APPEAR UNIFORM AFTER BINDER APPLICATION. SYNTHETIC BINDERS – SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH.

iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4' TO 15' FEET WIDE AND 300 TO 3,000 FEET LONG.

SECTION II – TEMPORARY SEEDING

VEGETATION – ANNUAL GRASS OR GRAIN USED TO PROVIDE COVER ON DISTURBED AREAS FOR UP TO 12 MONTHS. FOR LONGER DURATION OF VEGETATIVE COVER, PERMANENT SEEDING IS REQUIRED.

SEED MIXTURE (HARDINESS ZONE 7A) FROM TABLE 43					FERTILIZER RATE (10-10-10)	LIME RATE
NO.	SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS		
	RYE PLUS FOXTAIL MILLET	150	2/1-4/30 5/1-8/30 8/15-11/30	1	600 lb/ac (14 lb/1000 sf)	2 tons/ac (92 lb/1000sf)
	WEEPING LOVEGRASS	4	5/1-8/14	1/4		

SECTION III – PERMANENT SEEDING

SEEDING GRASS AND LEGUMES TO ESTABLISH GROUND COVER FOR A MINIMUM PERIOD OF ONE YEAR ON DISTURBED AREAS GENERALLY RECEIVING LOW MAINTENANCE.

A. SEED MIXTURES – PERMANENT SEEDING SUMMARY

SEED MIXTURE (HARDINESS ZONE 7A) FROM TABLE 42					FERTILIZER RATE (10-20-20)			LIME RATE
NO.	SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS	N	P205	K20	
	TALL FESCUE (85%)	125	3/1-5/15 8/15-11/15	1/4" MIN. 2" MIN.	90 lb/ac (2.0 lb/ 1000 sf)	175 lb/ac (4 lb/ 1000 sf)	175 lb/ac (4 lb/ 1000 sf)	2 tons/ac (92 lb/ 1000 sf)
	PERENNIAL RYEGRASS (10%)	15						
	KENTUCKY BLUEGRASS (5%)	10						

42.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION (CONT'D)

SECTION IV – SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).

A. GENERAL SPECIFICATIONS

i. CLASS OF TURFGRASS SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED OR APPROVED. SOD LABELS SHALL BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.

ii. SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4", PLUS OR MINUS 1/4", AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS SHALL EXCLUDE TOP GROWTH AND THATCH. INDIVIDUAL PIECES OF SOD SHALL BE CUT TO THE SUPPLIERS WIDTH AND LENGTH. MAXIMUM ALLOWABLE DEVIATION FROM STANDARD WIDTHS AND LENGTHS SHALL BE 5%. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE

iii. STANDARD SIZE SECTIONS OF SOD SHALL 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.

iv. SOD SHALL NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL

v. SOD SHALL BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD SHALL BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.

SECTION V – TURFGRASS ESTABLISHMENT

AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE. AREAS TO RECEIVE SEED SHALL BE TILLED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVELED AND RAKED TO PREPARE A PROPER SEEDBED. STONES AND DEBRIS OVER 1 1/2 INCHES IN DIAMETER SHALL BE REMOVED. THE RESULTING SEEDBED SHALL BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.

NOTE: CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY.

A TURFGRASS MIXTURES

i. KENTUCKY BLUEGRASS – FULL SUN MIXTURE – FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 LBS/1,000 SF. A MINIMUM OF THREE BLUEGRASS CULTIVARS SHOULD BE CHOSEN RANGING FROM A MINIMUM OF 10% TO A MAXIMUM OF 35% OF THE MIXTURE BY WEIGHT.

ii. 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. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 LBS. MIXTURE/1,000 SF. A MINIMUM OF 3 KENTUCKY BLUEGRASS CULTIVARS MUST BE CHOSEN, WITH EACH CULTIVAR RANGING FROM 10% TO 35% OF THE MIXTURE BY WEIGHT.

iii. 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. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 95-100%, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0-5%. SEEDING RATE: 5 TO 8 LB/1,000 SF. ONE OR MORE CULTIVARS MAY BE BLENDED.

iv. KENTUCKY BLUEGRASS/FINE FESCUE – SHADE MIXTURE – FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGEMENT TURF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30-40% AND CERTIFIED FINE FESCUE 60-70%. SEEDING RATE: 1 1/2 – 3 LBS/1,000 SF. 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: TURFGRASS VARIETIES SHOULD BE SELECTED FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MIMEO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND".

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 AN OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

SPECIFICATIONS

TEMPORARY METHODS:

A. MULCHES – SEE STANDARDS FOR CRITICAL AREA STABLIZED 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 EXAMPLE 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 EROSIVE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.

C. STONE – COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

REFERENCES:

1. AGRICULTURAL HANDBOOK 346. WIND EROSION FORCES IN THE UNITED STATES AND THEIR USE IN PREDICTING SOIL LOSS.

2. AGRICULTURAL INFORMATION BULLETIN 354. HOW TO CONTROL WIND EROSION, USDA-ARS.

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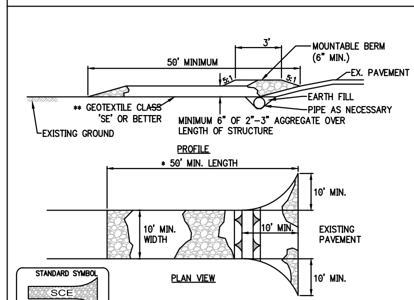
DETAIL 1 - STABILIZED CONSTRUCTION ENTRANCE



CONSTRUCTION SPECIFICATION

1. LENGTH – MINIMUM OF 50' (*30' FOR SINGLE RESIDENCE LOT).
2. WIDTH – 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
3. GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. ** THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE FAMILY RESIDENCES TO USE GEOTEXTILE.
4. STONE – CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
5. SURFACE WATER – ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 6" STONE OVER THE PIPE. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO CONVEYED. A 6" MINIMUM WILL BE REQUIRED. THE MOUNTABLE BERM IS REQUIRED ON ALL SCEs NOT LOCATED AT A HIGH SPOT.
6. LOCATION – A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

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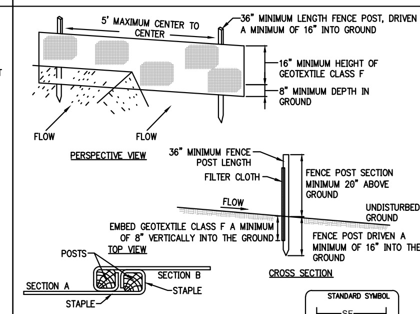
DETAIL 4 - SILT FENCE



CONSTRUCTION SPECIFICATIONS

1. FENCE POSTS SHALL BE A MINIMUM OF 36" LONG DRIVEN 16' MINIMUM INTO THE GROUND. WOOD POSTS SHALL BE 1 1/2" x 1 1/2" SQUARE (MIN.) CUT, OR 1 3/4" DIAMETER (MIN.) ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS WILL BE STANDARD T OR U SECTION WEIGHTING NOT LESS THAN 1.00 POUND PER LINEAR FOOT.

2. GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F.

TENSILE STRENGTH	50 LBS/IN (MIN.)	TEST: ASTM D-4595
TENSILE MODULUS	20 LBS/IN (MIN.)	TEST: ASTM D-4595
FLOW RATE	0.3 GAL/FT2/MINUTE (MAX.)	TEST: ASTM D-5141
FILTERING EFFICIENCY	75% (MIN.)	TEST: ASTM D-5141

3. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT SEDIMENT BYPASS.

4. SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHED 30% OF THE FABRIC HEIGHT.

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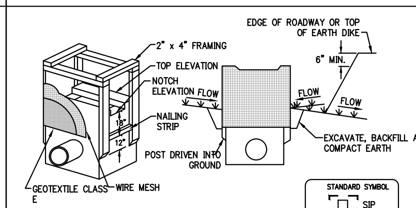
DETAIL 6A - STANDARD INLET PROTECTION



MAX. DRAINAGE AREA = 1/4 ACRE

CONSTRUCTION SPECIFICATIONS

1. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18" BELOW THE NOTCH ELEVATION.

2. DRIVE THE 2' x 4' CONSTRUCTION GRADE LUMBER POSTS 1' INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2' x 4' FRAME USING THE OVERLAP JOINT SHOWN ON DETAIL 6A. THE TOP OF THE FRAME (WEIR) MUST BE 6" BELOW ADJACENT ROADWAYS WHERE FLOODING AND SAFETY ISSUES MAY ARISE.

3. STRETCH THE 1/2" x 1/2" WIRE MESH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. THE ENDS MUST MEET AND OVERLAP AT A POST.

4. STRETCH THE GEOTEXTILE CLASS E TIGHTLY OVER THE WIRE MESH WITH THE GEOTEXTILE EXTENDING FROM THE TOP OF THE FRAME TO 18" BELOW THE INLET NOTCH ELEVATION. FASTEN THE GEOTEXTILE FIRMLY TO THE FRAME. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED THAN FASTENEND DOWN.

5. BACKFILL AROUND THE INLET IN COMPACTING 6" LAYERS UNTIL THE LAYER OF EARTH IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.

6. IF THE INLET IS NOT IN A SUMP, CONSTRUCT A COMPACTED EARTH DIKE ACROSS THE DITCH LINE DIRECTLY BELOW IT. THE TOP OF THE EARTH DIKE SHOULD BE AT LEAST 6" HIGHER THAN THE TOP OF THE FRAME.

7. THE STRUCTURE MUST BE INSPECTED PERIODICALLY AND AFTER EACH RAIN AND THE GEOTEXTILE REPLACED WHEN IT BECOMES CLOGGED.

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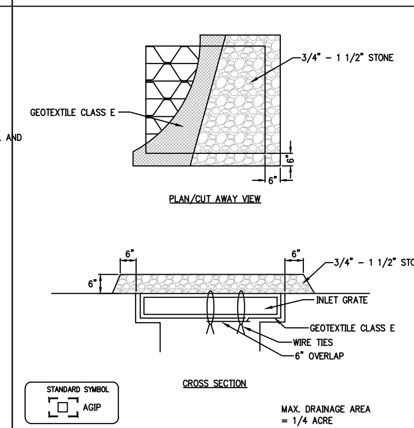
DETAIL 6B - AT GRADE INLET PROTECTION



CONSTRUCTION SPECIFICATIONS

1. LIFT GRATE AND WRAP WITH GEOTEXTILE CLASS E TO COMPLETELY COVER ALL OPENINGS, THEN SET GRATE BACK IN PLACE.

2. PLACE 3/4" TO 1 1/2" STONE. 4"-6" THICK ON THE GRATE TO SECURE THE FABRIC AND PROVIDE ADDITIONAL FILTRATION.

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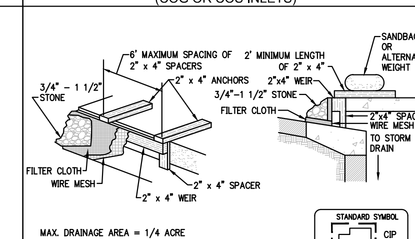
DETAIL 6C - CURB INLET PROTECTION (COG OR COS INLETS)



MAX. DRAINAGE AREA = 1/4 ACRE

CONSTRUCTION SPECIFICATIONS

1. ATTACH A CONTINOUS PIECE OF WIRE MESH (30" MINIMUM WIDTH BY THROAT LENGTH PLUS 4') TO THE 2" x 4" WEIR (MEASURING THROAT LENGTH PLUS 2') AS SHOWN ON THE STANDARD DRAWING.

2. PLACE A CONTINUOUS PIECE OF GEOTEXTILE CLASS E THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH IT TO THE 2" x 4" WEIR.

3. SECURELY NAIL THE 2" x 4" WEIR TO A 9" LONG VERTICAL SPACER TO BE LOCATE BETWEEN THE WEIR AND THE INLET FACE (MAX. 4' APART).

4. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL (MINIMUM 2' LENGTHS OF 2" x 4" TO THE TOP OF THE WEIR AT SPACER LOCATIONS). THESE 2" x 4" ANCHORS SHALL EXTEND ACROSS THE INLET TOP AND BE HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHT.

5. THE ASSEMBLY SHALL BE PLACE SO THAT THE END SPACERS ARE A MINIMUM 1' BEYOND BOTH ENDS OF THE THROAT OPENING.

6. FORM THE 1/2" x 1/2" WIRE MESH AND THE GEOTEXTILE FABRIC TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN 3/4" x 1 1/2" STONE OVER THE WIRE MESH AND GEOTEXTILE IN SUCH A MANNER TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.

7. THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE FILTER CLOTH AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.

8. ASSURE THAT THE STORM FLOW DOES NOT BYPASS THE INLET BY INSTALLING A TEMPORARY EARTH OR ASPHALT DIKE TO DIRECT THE FLOW TO THE INLET.

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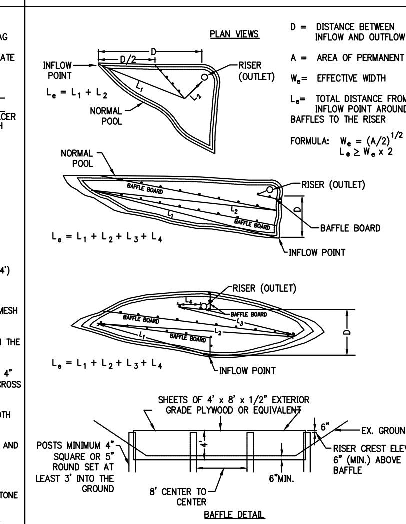
DETAIL 22 - SEDIMENT BASIN/TRAP BAFFLES



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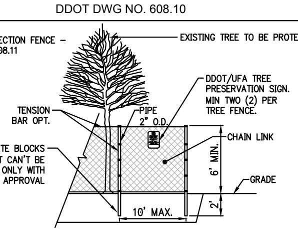
TREE PROTECTION FENCE - ELEVATION

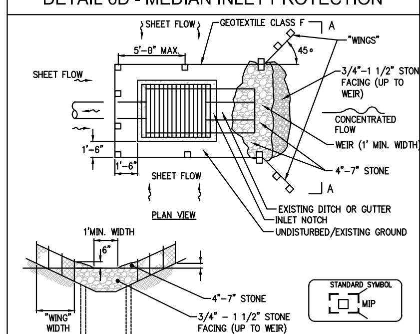
DDOT DWG NO. 608.10

GENERAL NOTES:
1. SEE TREE PROTECTION FENCE – PLAN, DWG. NO. 608.11



1. ALL EXISTING STREET TREES, TO REMAIN WITHIN A WORK ZONE UNTIL A PROJECT IS COMPLETED, REQUIRE THE FOLLOWING AS TREE PROTECTION. IF FOR ANY REASON THE SCOPE OF THE PROJECT REQUIRES WORK TO BE PERFORMED WITHIN THE FENCED PROTECTION ZONE, THE PERMIT HOLDER MUST CONTACT THE DISTRICT OF TRANSPORTATION'S URBAN FORESTRY ADMINISTRATION (UFA) AT 202-671-5133 BEFORE ENTERING.
   - SIX (6) FOOT TALL CHAIN LINK FENCING ON ALL SIDES;
   - INSTALL FENCING PRIOR TO AND MAINTAIN THROUGHOUT CONSTRUCITION, REMOVING ONLY AT THE END OF THE PROJECT;
   - FENCING SHALL PROTECT AN AREA NO SMALLER THAN FOUR (4) FEET BY NINE (9) FEET, CENTERED ON THE TREE, OR ENCLOSE MULTIPLE STREET TREES WHEN IN A CONTINUOUS, OPEN TREE PLANTING SPACE AND SITE ACCESS ALLOWS;
   - FENCING SHALL HAVE A VERTICAL AND HORIZONTAL SUPPORT RAILINGS TO DECREASE FLEXIBILITY AND PREVENT SAGGING;
   - FENCE POSTS SHALL BE ANCHORED IN THE GROUND TO PREVENT MOVEMENT AND PROVIDE A SECURE BARRIER; AND
   - A MINIMUM OF TWO (2) DDOT/UFA STANDARD TREE PRESERVATION SIGNS SHALL BE MOUNTED TO THE FENCE OF EACH ENCLOSED TREE PROTECTION AREA.
2. NO INSTALLATION OF SILT FENCE/SUPER SILT FENCE, TRENCHING, ALTERATION OR DISTURBANCE TO EXISTING GRADE; STAGING/STORAGE OF CONSTRUCTION MATERIALS, EQUIPMENT, SOIL, OR DEBRIS; DISPOSAL OF ANY MATERIALS SUCH AS CONCRETE, GAS, OIL, PAINT, OR BLACKTOP IS ALLOWED WITHIN THE FENCED TREE PROTECTION ZONE.
3. EXCAVATIONS WITHIN THE DRIPLINE SHALL PROCEED WITH CARE BY USE OF HAND TOOLS. THE DRIPLINE IS DEFINED AS THE GROUND AREA UNDER THE CANOPY OF THE TREE.
4. NO ROOTS LARGER THAN TWO (2) INCHES IN DIAMETER ARE TO BE CUT WITHOUT UFA PERMISSION.
5. EXPOSED ROOTS TWO (2) INCHES AND LARGER IN DIAMETER SHALL BE WRAPPED IN BURLAP OR OTHER APPROVED MATERIAL AND KEPT MOIST AT ALL TIMES.
6. TREES THAT ARE TO BE WATERED EVERY TEN (10) DAYS FROM APRIL THROUGH SEPTEMBER.
7. SECTIONS 608.07-TREE PROTECTION AND REPLACEMENT AND 608.08-TREE ROOT PROTECTION OF THE 2013 DISTRICT DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR HIGHWAYS AND STRUCTURES WILL APPLY SHOULD ANY DAMAGE OCCUR TO THE EXISTING STREET TREES.
8. ANY FINES RELATED TO DAMAGE TO A STREET TREE ON A JOB SITE SHALL BE THE RESPONSIBILITY OF THE PERMIT HOLDER.
9. FOR ANY QUESTIONS, CALL DDOT URBAN FORESTRY ADMINISTRATION AT 202-671-5133.

DETAIL 6D - MEDIAN INLET PROTECTION



CONSTRUCTION SPECIFICATIONS

1. FENCE POSTS SHALL BE 36" (MIN.) LONG. DRIVEN 16" INTO THE GROUND AND SPACED 5' (MAX.) APART. WOOD POSTS SHALL BE 1 1/2" x 1 1/2" (MIN.) SQUARE CUT OR 1 3/4" (MIN.) DIAMETER ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS SHALL BE STANDARD T OR U SECTION WEIGHING NOT LESS THAN 1.0 #/LINEAR FOOT.

2. GEOTEXTILE CLASS F SHALL BE FASTENED SECURELY TO EACH POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.

3. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED.

4. MEDIAN INLET PROTECTION SHALL BE INSPECTED AFTER EACH RAIN AND MAINTAINED WHEN BULGES OCCUR IN THE FABRIC OR WHEN THE STONE GETS CLOGGED.

5. STONE USED TO CONSTRUCT THE WEIR SHALL BE 4"-7" WITH A 1' THICK LAYER OF 3/4"-1 1/2" STONE ON THE UPSTREAM FACE.

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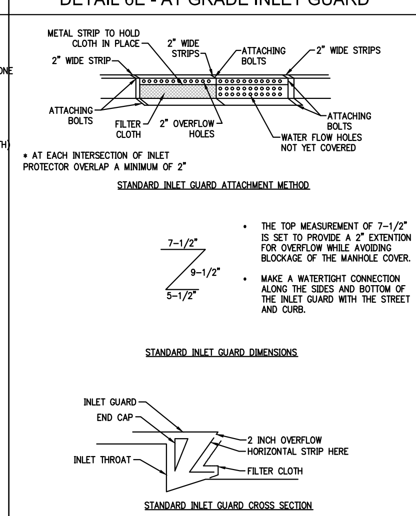
DETAIL 6E - AT GRADE INLET GUARD



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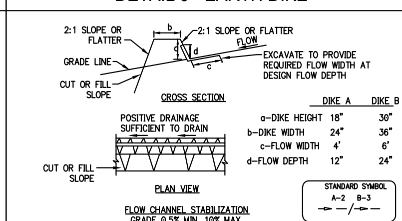
DETAIL 9 - EARTH DIKE



	DIKE A	DIKE B
a-DIKE HEIGHT	18"	30"
b-DIKE WIDTH	24"	36"
c-FLOW WIDTH	4'	6'
d-FLOW DEPTH	12"	24"

1. SEED AND COVER WITH STRAW MULCH.
2. SEED AND COVER WITH SOIL STABILIZATION MATTING OR LINE WITH SOD.
3. 4"-7" STONE OR RECYCLED CONCRETE EQUIVALENT PRESSED INTO THE SOIL 7" MINIMUM.

CONSTRUCTION SPECIFICATIONS

1. ALL TEMPORARY EARTH DIKES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET. SPOT ELEVATIONS MAY BE NECESSARY FOR GRADES LESS THAN 1%.

2. RUNOFF DIVERTED FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.

3. RUNOFF DIVERTED FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED, STABILIZED AREA AT A NON-EROSIVE VELOCITY.

4. ALL TREES, BRUSH, STAMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE DIKE.

5. THE DIKE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.

6. FILL SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.

7. ALL EARTH REMOVED AND NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DIKE.

8. INSPECTION AND MAINTENANCE MUST BE PROVIDED PERIODICALLY AND AFTER EACH RAIN EVENT.

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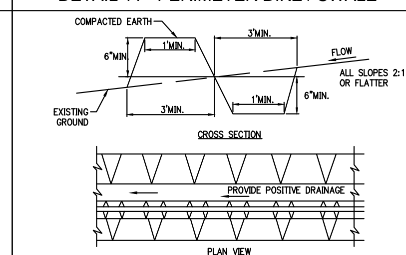
DETAIL 11 - PERIMETER DIKE / SWALE



STABILIZATION
PD/S-1 SEED AND MULCH (DRAINAGE ≤ 1 ACRE)
PD/S-2 SEED AND COVER WITH SOIL STABILIZATION MATTING OR LINE WITH SOD (DRAINAGE BETWEEN 1 AND 2 ACRES)

CONSTRUCTION SPECIFICATIONS

1. ALL PERIMETER DIKE/SWALES SHALL HAVE AN UNINTERRUPTED POSITIVE GRADE TO AN OUTLET. SPOT ELEVATIONS MAY BE NECESSARY FOR GRADES LESS THAN 1%.

2. RUNOFF DIVERTED FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.

3. RUNOFF DIVERTED FROM AN UNDISTURBED AREA SHALL OUTLET INTO AN UNDISTURBED STABILIZED AREA AT A NON-EROSIVE VELOCITY.

4. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS-SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED IN THE STANDARD.

5. FILL SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.

6. STABILIZATION WITH SEED AND MULCH OR AS SPECIFIED OF THE AREA DISTURBED BY THE DIKE AND SWALE SHALL BE COMPLETED WITHIN 7 DAYS UPON REMOVAL.

7. INSPECTION AND REQUIRED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN EVENT.

NOTE: THE MAXIMUM DRAINAGE FOR THIS PRACTICE IS 2 ACRES.

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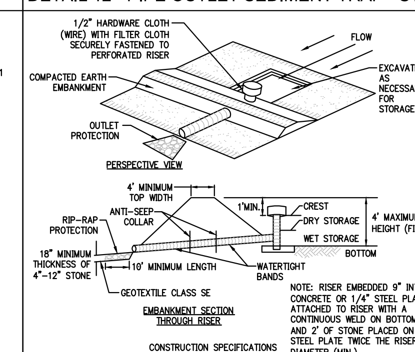
DETAIL 12 - PIPE OUTLET SEDIMENT TRAP - ST I



CONSTRUCTION SPECIFICATIONS

1. THE AREA UNDER THE EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.

2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVERSIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.

3. THE TOTAL VOLUME AS MEASURED FROM THE BOTTOM TO RISER CREST ELEVATION SHALL BE 3600 CUBIC FEET PER ACRE OF DRAINAGE AREA (SEE TABLE 11). THE TOP OF EMBANKMENT MUST BE ≥ 1' ABOVE THE RISER CREST ELEVATION.

4. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF OF THE WET STORAGE DEPTH OF THE TRAP (900 CF/AC). THE SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

5. THE STRUCTURE SHALL BE INSPECTED PERIODICALLY AND AFTER EACH RAIN AND REPAIRS.

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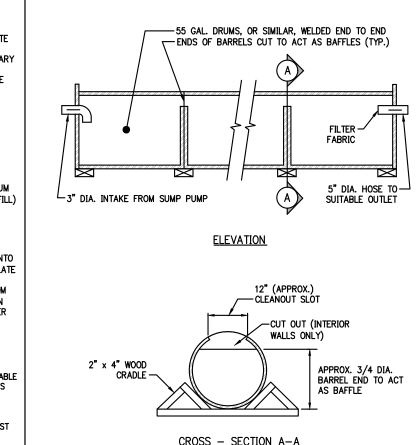
DETAIL 34 - PORTABLE SEDIMENT TANK (HORIZONTAL)



SOURCE: USDA – SCS

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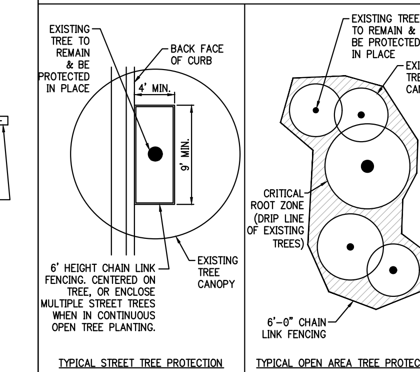
TREE ROOT PROTECTION FENCE - PLAN VIEW

DDOT DWG NO. 608.11



NOTES:

1. FOR STREET TREES (TREES PLANTED IN THE TREE PLANTING SPACE BETWEEN CURB AND SIDEWALK). REFER TO DETAIL ABOVE LABELED "TYPICAL STREET TREE PROTECTION" FOR TREES IN OPEN AREAS (PUBLIC PARKING BEHIND SIDEWALK OR PARK SPACE). REFER TO DETAIL ABOVE LABELED "TYPICAL OPEN AREA TREE PROTECTION".

2. SEE TREE PROTECTION FENCE – ELEVATION DWG. NO. 608.10 FOR TREE PROTECTION NOTES.

PIPE OUTLET SEDIMENT TRAP - ST I

6. CONSTRUCTION OPERATIONS SHALL BE CARRIED CUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE ABATED. ONCE CONSTRUCTED, THE TOP AND OUTSIDE FACE OF THE EMBANKMENT SHALL BE STABILIZED WITH SEED AND MULCH. POINTS OF CONCENTRATED INFLOW SHALL BE PROTECTED IN ACCORDANCE WITH GRADE STABILIZATION STRUCTURE CRITERIA. THE REMAINDER OF THE INTERIOR SLOPES SHOULD BE STABILIZED (ONE TIME) WITH SEED AND MULCH UPON TRAP COMPLETION AND MONITORED AND MAINTAINED EROSION FREE USING THE LIFE OF THE TRAP.

7. THE STRUCTURE SHALL BE REMOVED AND AREA STABLIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

8. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.

9. ALL PIPE CONNECTIONS SHALL BE WATERTIGHT.

10. ABOVE THE WET STORAGE ELEVATION, THE RISER SHALL BE PERFORATED WITH 1/2" WIDE BY 6" LONG SLITS OR 1" DIAMETER HOLES SPACED 6" VERTICALLY AND HORIZONTALLY. NO PERFORATIONS WILL BE ALLOWED WITHIN 6" OF THE HORIZONTAL BARREL.

11. THE RISER SHALL BE WRAPPED WITH 1/2" HARDWARE CLOTH (WIRE) THEN WRAPPED WITH GEOTEXTILE CLASS E. THE FILTER CLOTH SHALL EXTEND 6" ABOVE THE HIGHEST SLIT AND 6" BELOW THE LOWEST SLIT. WHERE ENDS OF FILTER CLOTH COME TOGETHER, ,THEY SHALL BE OVERLAPPED, FOLDED AND FASTENED TO PREVENT BYPASS. FILTER CLOTH SHALL BE REPLACED AS NECESSARY TO PREVENT CLOGGING.

12. STRAPS OR CONNECTING BANDS SHALL BE USED TO HOLD THE FILTER CLOTH AND WIRE FABRIC IN PLACE. THEY SHALL BE PLACED AT THE TOP AND BOTTOM OF THE CLOTH.

13. FILL MATERIAL AROUND THE PIPE SPILLWAY SHALL BE HAND COMPACTED IN 4" LAYERS. A MINIMUM OF 2' OF HAND-COMPACTED BACKFILL SHALL BE PLACED OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT.

14. THE RISER SHALL BE ANCHORED WITH EITHER A CONCRETE BASE OR STEEL PLATE BASE TO PREVENT FLOTATION. CONCRETE BASES SHALL BE AT LEAST TWICE THE RISER DIAMETER, 1/4" MINIMUM THICKNESS AND ATTACHED TO THE BOTTOM OF THE RISER BY A CONTINUOUS WELD TO FORM A WATERTIGHT CONNECTION. THEN PLACE 2' OF STONE, GRAVEL OR TAMPED EARTH ON THE PLATE.

15. ANTI SEEP COLLARS SHALL BE CONSTRUCTED IN ACCORDANCE WITH PLANS (REF. TABLE 18 AND DETAILS 17 AND 18).

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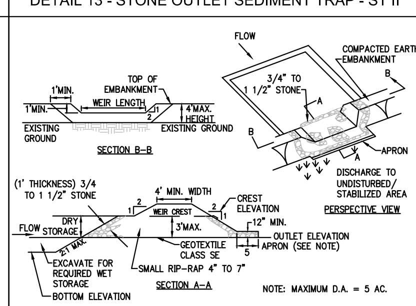
DETAIL 13 - STONE OUTLET SEDIMENT TRAP - ST II



CONSTRUCTION SPECIFICATIONS

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.

2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS AND OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.

3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.

4. THE STONE USED IN THE OUTLET SHALL BE SMALL RIP-RAP 4" TO 7" IN SIZE WITH A 1" THICK LAYER OF 3/4" TO 1 1/2" WASHED AGGREGATE PLACED ON THE UPSTREAM FACE OF THE OUTLET. STONE FACING SHALL BE AS NECESSARY TO PREVENT CLOGGING. GEOTEXTILE CLASS SE MAY BE SUBSTITUTED FOR THE STONE FACING BY PLACING IT ON THE INSIDE FACE OF THE STONE OUTLET.

5. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF OF THE WET STORAGE DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

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STONE OUTLET SEDIMENT TRAP - ST II

6. THE STRUCTURE SHALL BE INSPECTED PERIODICALLY AND AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.

7. CONSTRUCTION OF TRAPS SHALL BE CARRIED OUT IN SUCH A MANNER THAT SEDIMENT POLLUTION IS ABATED. ONCE CONSTRUCTED, THE TOP AND OUTSIDE FACE OF THE EMBANKMENT SHALL BE STABILIZED WITH SEED AND MULCH. POINTS OF CONCENTRATION INFLOW SHALL BE PROTECTED IN ACCORDANCE WITH GRADE STABILIZATION STRUCTURE CRITERIA. THE REMAINDER OF THE INTERIOR SLOPES SHOULD BE STABILIZED (ONE TIME) WITH SEED AND MULCH UPON TRAP COMPLETION AND MONITORED AND MAINTAINED EROSION FREE DURING THE LIFE OF THE TOP.

8. THE STRUCTURE SHALL BE DEWATERED BY APPROVED METHODS. REMOVED AND THE AREA STABLIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

9. REFER TO SECTION G FOR SPECIFICATIONS CONCERNING TRAP DEWATERING.

10. MINIMUM TRAP DEPTH SHALL BE MEASURED FROM THE WEIR ELEVATION.

11. THE ELEVATION OF THE TOP OF ANY DIKE DIRECTING WATER INTO THE TRAP MUST EQUAL OR EXCEED THE ELEVATION OF THE TRAP EMBANKMENT.

12. GEOTEXTILE CLASS SE SHALL BE PLACED OVER THE BOTTOM AND SIDES OF THE OUTLET CHANNEL PRIOR TO THE PLACEMENT OF STONE. SECTIONS OF FILTER CLOTH MUST OVERLAP AT LEAST 1' WITH THE SECTION NEAREST THE ENTRANCE PLACED ON TOP. THE FILTER CLOTH SHALL BE EMBEDDED AT LEAST 6" INTO EXISTING GROUND AT THE ENTRANCE OF THE OUTLET CHANNEL.

13. OUTLET – AN OUTLET SHALL BE PROVIDED, INCLUDING A MEANS OF CONVEYING THE DISCHARGE IN AN EROSION FREE MANNER TO AN EXISTING STABLE CHANNEL.

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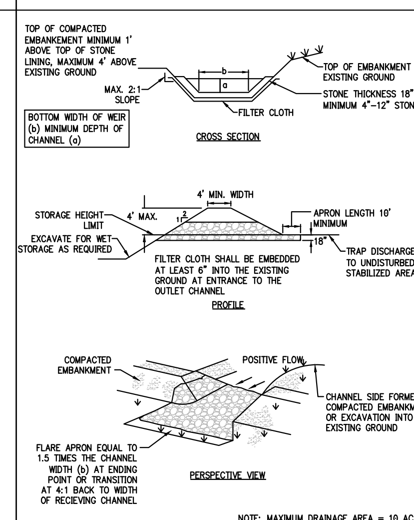
DETAIL 14 - RIP-RAP OUTLET SEDIMENT TRAP - ST III



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RIP-RAP OUTLET SEDIMENT TRAP - ST III

1. THE AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.

2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED. MAXIMUM HEIGHT OF EMBANKMENT SHALL BE 4', MEASURED AT CENTERLINE OF EMBANKMENT.

3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.

4. ELEVATION OF THE TOP OF ANY DIKE DIRECTING WATER INTO TRAP MUST EQUAL OR EXCEED THE HEIGHT OF TRAP EMBANKMENT.

5. STORAGE AREA PROVIDED SHALL BE FIGURED BY COMPUTING THE VOLUME MEASURED FROM TOP OF EXCAVATION. (FOR STORAGE REQUIREMENTS SEE TABLE 12).

6. FILTER CLOTH SHALL BE PLACED OVER THE BOTTOM AND SIDES OF THE OUTLET CHANNEL PRIOR TO PLACEMENT OF STONE. SECTION OF FABRIC MUST OVERLAP AT LEAST 1' WITH SECTION NEAREST THE ENTRANCE PLACED ON TOP. FABRIC SHALL BE EMBEDDED AT LEAST 6" INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.

7. STONE USED IN THE OUTLET CHANNEL SHALL BE 4" – 12" PLACED 18" THICK.

8. OUTLET – AN OUTLET SHALL BE PROVIDED, WHICH INCLUDES A MEANS OF CONVEYING THE DISCHARGE IN AN EROSION FREE MANNER TO AN EXISTING STABLE CHANNEL. PROTECTION AGAINST SCOUR AT THE DISCHARGE END SHALL BE PROVIDED AS NECESSARY.

9. OUTLET CHANNEL MUST HAVE POSITIVE DRAINAGE FROM THE TRAP.

10. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/4 OF THE WET STORAGE DEPTH OF THE TRAP (1350 cf/ac). REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

11. THE STRUCTURE SHALL BE INSPECTED PERIODICALLY AND AFTER EACH RAIN AND REPAIRED AS NEEDED.

12. CONSTRUCTION OF TRAPS SHALL BE CARRIED OUT IN SUCH A MANNER THAT SEDIMENT POLLUTION IS ABATED. ONCE CONSTRUCTED, THE TOP AND OUTSIDE FACE OF THE EMBANKMENT SHALL BE STABILIZED WITH SEED MULCH. POINTS OF CONCENTRATED INFLOW SHALL BE PROTECTED IN ACCORDANCE WITH GRADE STABILIZATION STRUCTURE CRITERIA. THE REMAINDER OF THE INTERIOR SLOPES SHOULD BE STABILIZED (ONE TIME) WITH SEED AND MULCH UPON TRAP COMPLETION AND MONITORED AND MAINTAINED EROSION FREE DURING THE LIFE OF THE TRAP.

13. THE STRUCTURE SHALL BE DEWATERED BY APPROVED METHODS, REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

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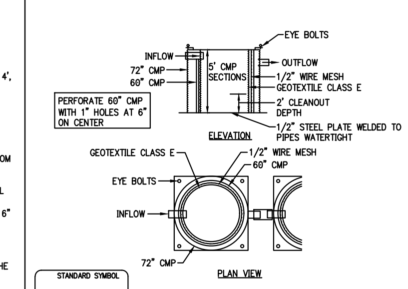
DETAIL 35 - PORTABLE SEDIMENT TANK (VERTICAL)



CONSTRUCTION SPECIFICATIONS

1. THE FOLLOWING FORMULA SHOULD BE USED IN DETERMINING THE STORAGE VOLUME OF THE SEDIMENT TANK: 1 CUBIC FOOT OF STORAGE FOR EACH GALLON PER MINUTE OF PUMP DISCHARGE CAPACITY.

2. AN EXAMPLE OF A TYPICAL SEDIMENT TANK IS SHOWN ABOVE. OTHER CONTAINER DESIGNS CAN BE USED IF THE STORAGE VOLUME IS ADEQUATE AND APPROVAL IS OBTAINED FROM THE LOCAL APPROVING AGENCY.

3. TANKS MAY BE CONNECTED IN SERIES.

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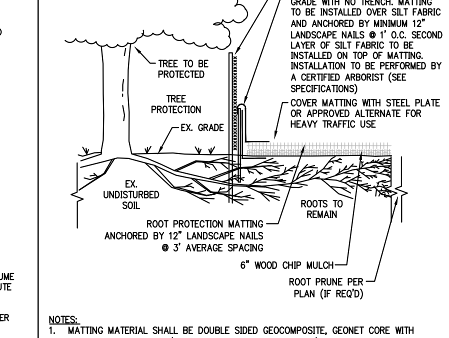
TREE ROOT PROTECTION W/ SILT FENCE

DDOT DWG NO. 608.12



NOTES:
1. MATTING MATERIAL SHALL BE DOUBLE SIDED GEOCOMPOSITE, GEONET CORE WITH NON-WOVEN COVERING (SUCH AS TENSAR ROADRAIN RD7) OR APPROVED EQUIVALENT.
2. ROOT PROTECTION MATTING SHALL BE INSTALLED BY A CERTIFIED ARBORIST.
3. TO BE USED FOR DESIGNATED TEMPORARY CONSTRUCTION ACCESS AND STOCKPILE AREAS.
4. MATTING SHALL BE PLACED ON 6" WOOD CHIP MULCH UNLESS OTHERWISE DIRECTED.
5. FOR HEAVY TRAFFIC AREAS, MATTING SHALL BE COVERED WITH STEEL PLATES.

STRAND RESIDENCES

EROSION AND SEDIMENT CONTROL DETAILS

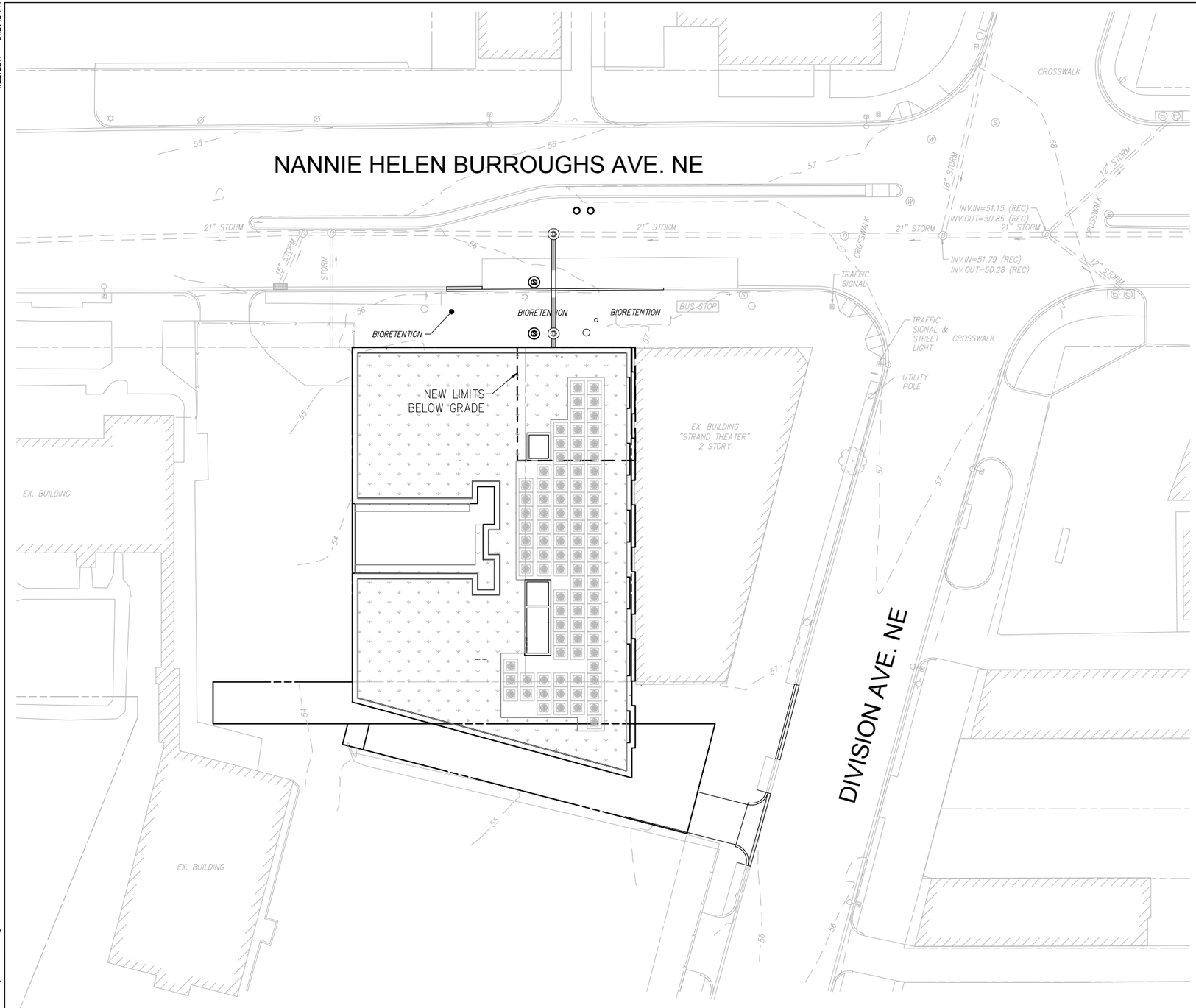
CIV0520

7/21/2017

5127-5131 Nannie Helen Burroughs Ave., NE
Washington, DC
Square: 5196 Lot No: 805, 19 Zone: C-1

PGN Architects, PLLC
210 7th Street SE - Suite 201
Washington, DC 20003
(P) 202-822-5995 (F) 202-822-0908

v:\11897 - strand theater\11897-01-001 (eng) - 5124-5131 nannie helen (mixed)\engineering\engineering plans\pud\11897-pud-detsht.dwg



STORMWATER MANAGEMENT NARRATIVE:

ACCORDING TO THE 2013 SWM GUIDEBOOK FOR THE DISTRICT OF COLUMBIA, THIS PROJECT SITE DEVELOPMENT IS CATEGORIZED AS A "MAJOR LAND DISTURBANCE" FOR THE ENTIRETY OF THE BUILDING FOOTPRINT, THUS REQUIRING A STORMWATER RETENTION VOLUME (SWRv) BASED ON THE 1.2" STORM EVENT. IN ADDITION TO THE RETAINED VOLUME, THE SWM FACILITIES MUST PROVIDE 15-YR STORM CONTROL FOR PEAK DISCHARGE TO THE PRE-PROJECT RATE.

SITE AREA DISTURBED = 17,061 sf
REQUIRED SWRv = 1,621 cf

THE SWRv REQUIREMENT IS ACHIEVED BY THE DESIGN AND IMPLEMENTATION OF GREEN ROOF. THE RUNOFF FROM THE EXISTING BUILDING IS ROUTED DIRECTLY TO GREEN ROOF AREAS FOR TREATMENT. ADDITIONALLY, THE DETENTION REQUIREMENT WILL BE MET THROUGH A COMBINATION OF GREEN ROOF AND DETENTION VAULT. THE STORAGE CAPACITY OF THESE FACILITIES ARE SIZED TO ATTENUATE THE 2-YR STORM PEAK DISCHARGE BACK TO PRE-DEVELOPMENT CONDITION AND THE 15-YR STORM PEAK DISCHARGE BACK TO PRE-PROJECT CONDITIONS.

DESIGN CRITERIA IS BASED OFF THE DISTRICT'S 2013 SWM GUIDEBOOK FOR GREEN ROOF.

STORMWATER MANAGEMENT EXEMPTIONS:

CHAPTER 21 DCMR ∴ 517
THE FOLLOWING DEVELOPMENT ACTIVITIES SHALL BE EXEMPT FROM THE PROVISIONS OF THE STORM WATER MANAGEMENT REQUIREMENTS:

- CUTTING A TRENCH FOR UTILITY WORK AND RELATED REPLACEMENT OF SIDEWALKS AND RAMPS
- REPAVING OR REMILLING THAT DOES NOT EXPOSE THE UNDERLYING SOIL.

GREEN ROOF PROVIDED:

ASSUMED 6" GREEN ROOF AT 0.50 POROSITY

±6,500 sf OF 6" GREEN ROOF IS REQUIRED TO MEET RETENTION REQUIREMENTS.

PLAN CURRENTLY SHOWS 8,455 SQUARE FEET OF GREEN ROOF.

CONCEPTUAL STORMWATER MANAGEMENT PROVIDED FOR PUD REVIEW ONLY. DURING THE FINAL ENGINEERING PHASE, STORMWATER MANAGEMENT DESIGN WILL BE ADVANCED AND MAY USE OTHER METHOD WHICH WILL PROVIDE THE REQUIRED RETENTION TO BE IN ACCORDANCE WTIH THE 2013 SWM GUIDEBOOK FOR THE DISTRICT OF COLUMBIA.

N

STRAND RESIDENCES

STORMWATER MANAGEMENT PLAN | CIV0710

7/21/2017

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