



1 NORTH ELEVATION
SCALE: 1"=20'-0"

STRAND RESIDENCES

5127-5131 Nannie Helen Burroughs Ave., NE
Washington, DC
Square: 5196 Lot No: 0019, 0037, 0805, 0814



PGN Architects, PLLC
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NORTH ELEVATION-RENDERED

A-21

5/08/2017

ZONING COMMISSION
District of Columbia
CASE NO.17-10
EXHIBIT NO.4A4



1 SOUTH ELEVATION
SCALE: 1"=20'-0"

STRAND RESIDENCES

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SOUTH ELEVATION-RENDERED

A-22

5/08/2017



1 EAST ELEVATION
SCALE: 1"=20'-0"

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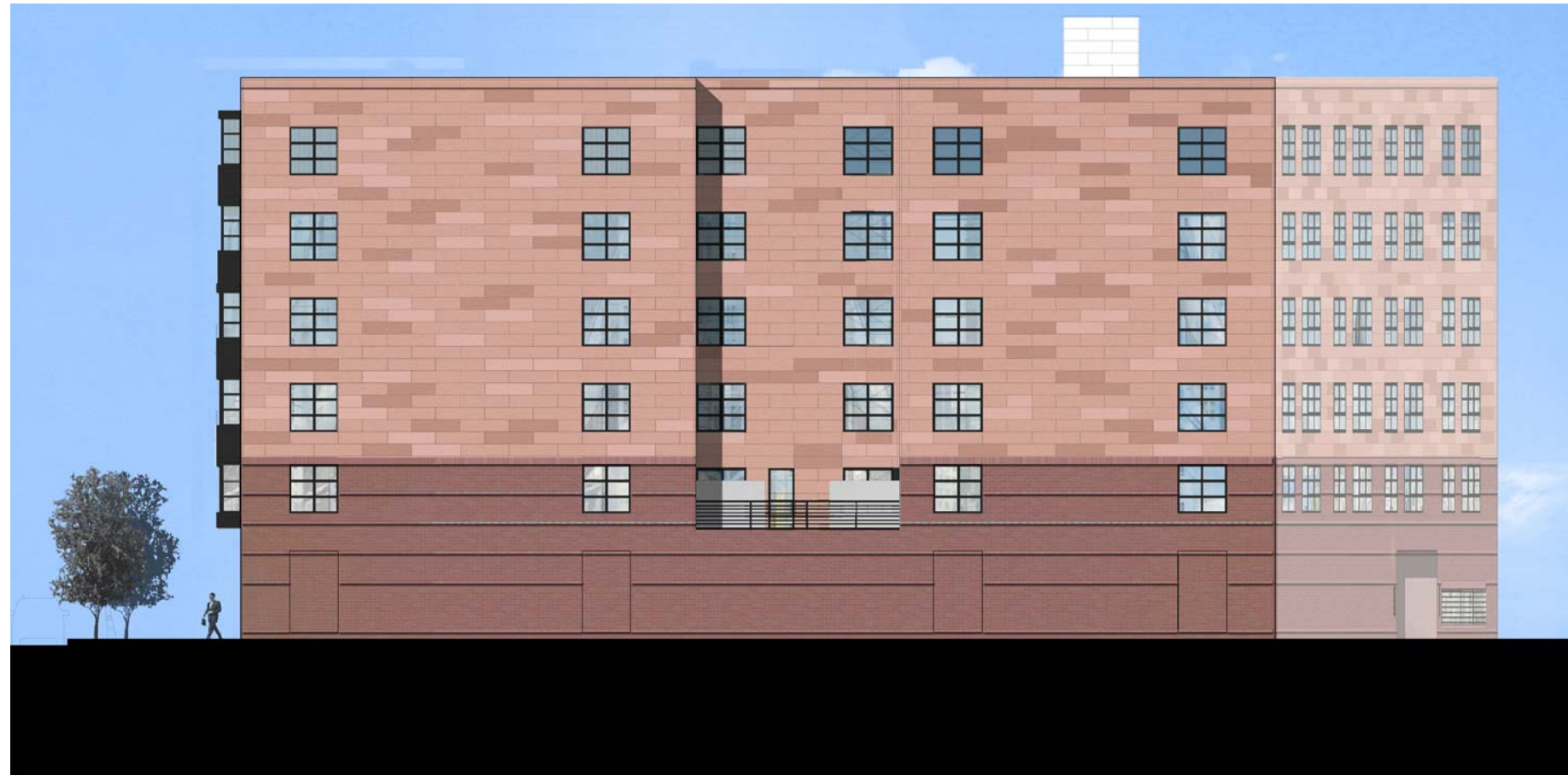


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EAST ELEVATION-RENDERED

A-23

5/08/2017



1 WEST ELEVATION
SCALE: 1"=20'-0"

STRAND RESIDENCES

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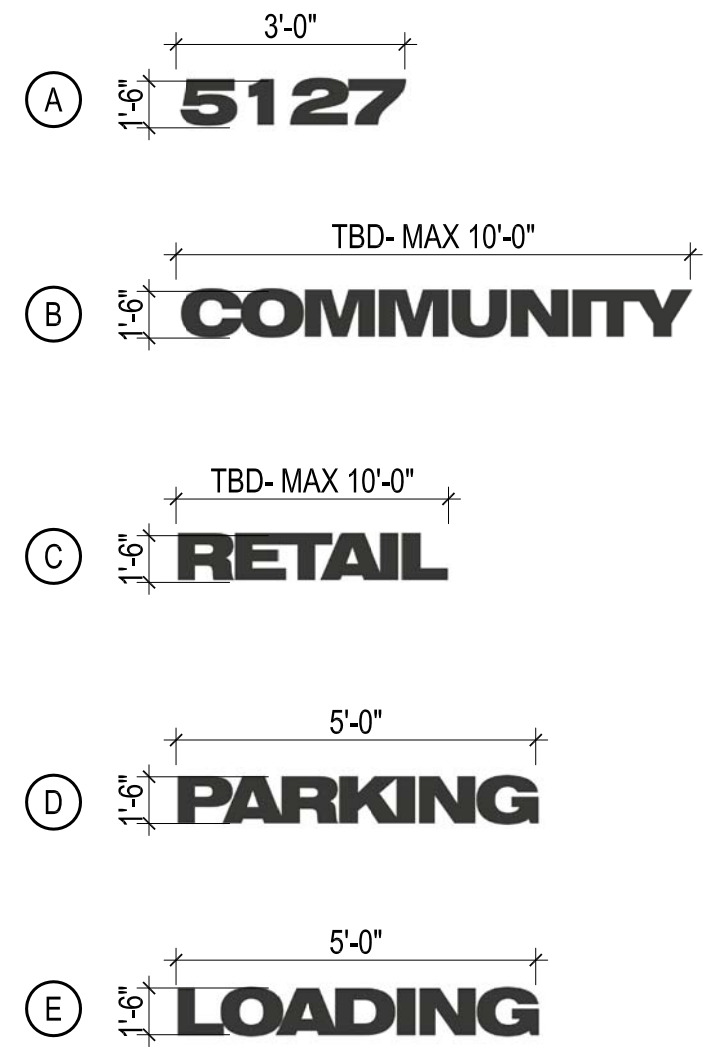


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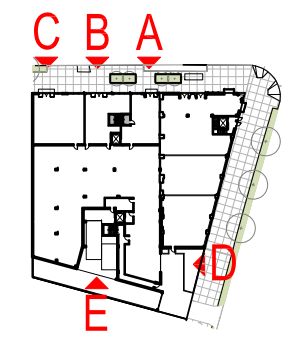
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A-24

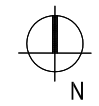
5/08/2017



1 PERSPECTIVE
SCALE: N.T.S.



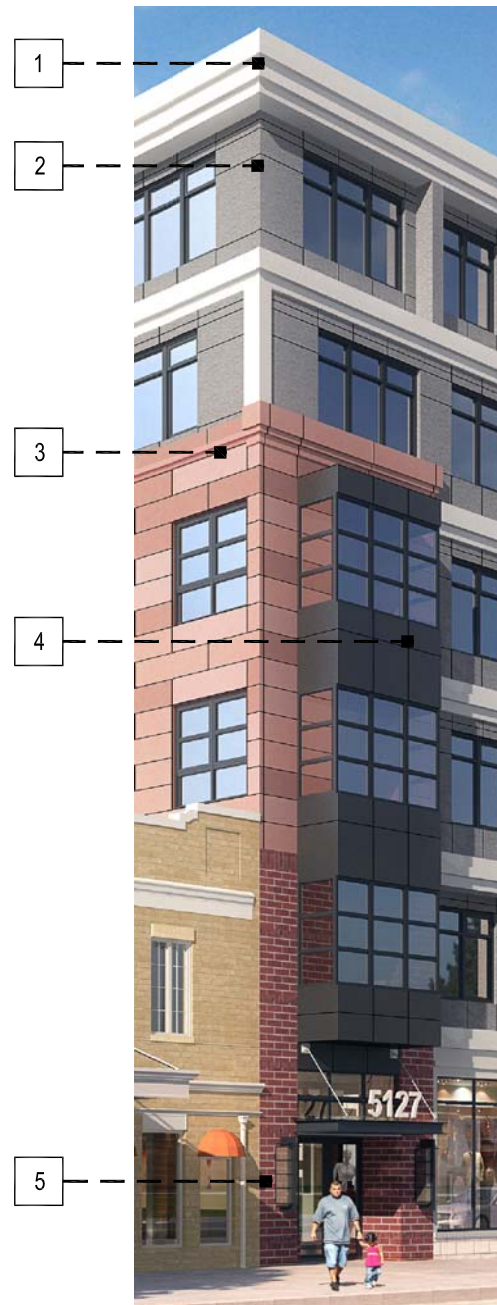
2 KEY PLAN
SCALE: N.T.S.



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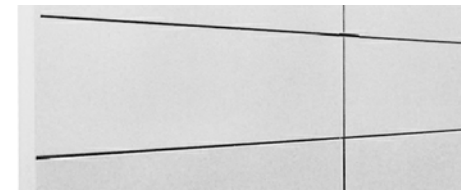
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1 PARTIAL PERSPECTIVE
SCALE: NTS



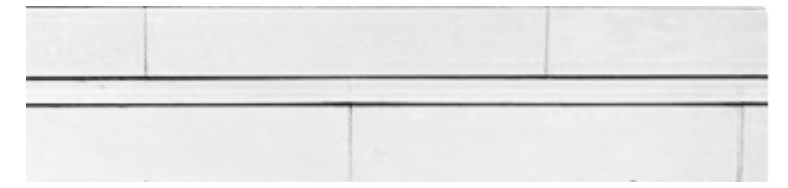
2 PARTIAL ELEVATION
SCALE: NTS



6 NICHHA PANEL



7 MASONRY



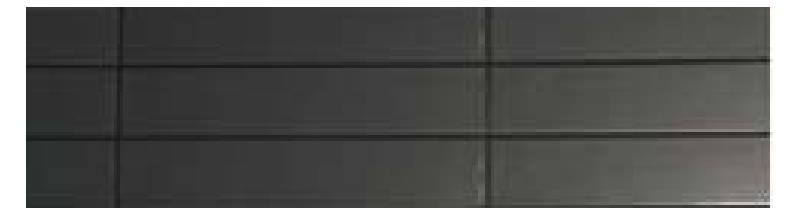
1 LIGHT GRAY METAL PANEL



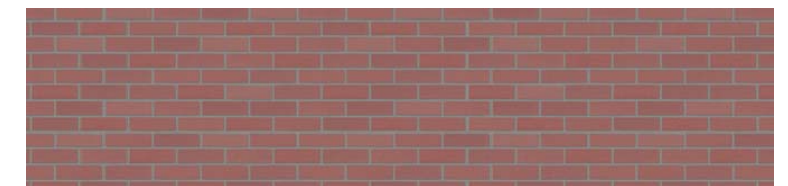
2 DARK GRAY METAL PANEL



3 NICHHA PANEL



4 BLACK METAL PANEL



5 MODULAR BRICK

3 MATERIAL TYPES
SCALE: NTS

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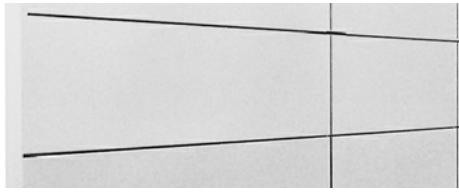


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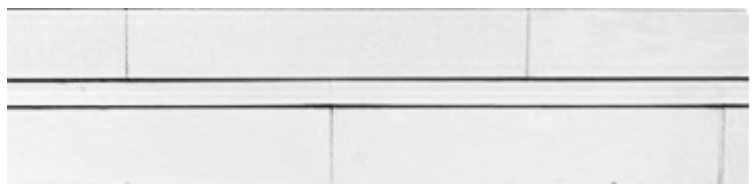
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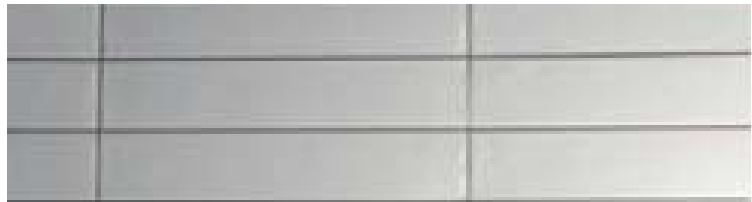
1 PARTIAL ELEVATION
SCALE: NTS



6 NICHIBA PANEL



1 LIGHT GRAY METAL PANEL



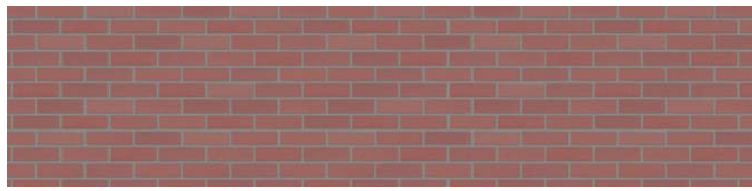
2 DARK GRAY METAL PANEL



3 NICHIBA PANEL



4 BLACK METAL PANEL



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3 MATERIAL TYPES
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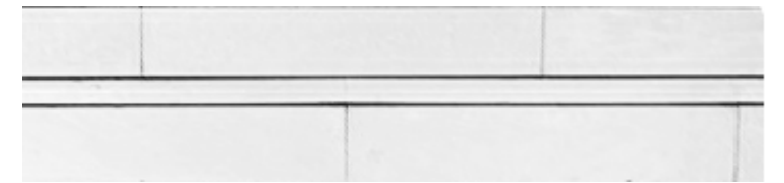

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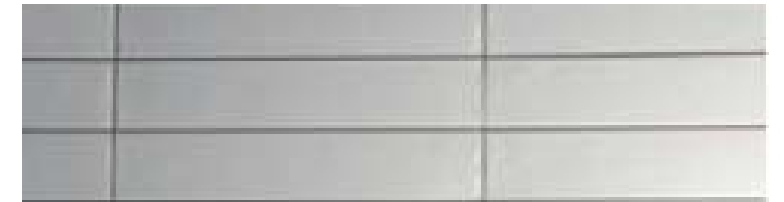
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SCALE: NTS



2 PARTIAL ELEVATION
SCALE: NTS



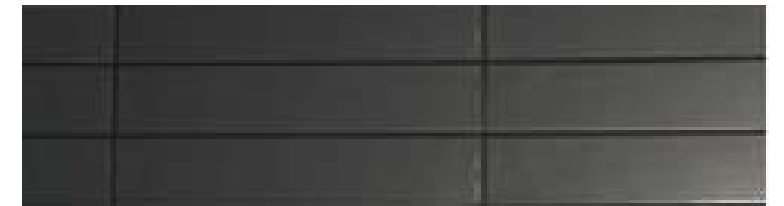
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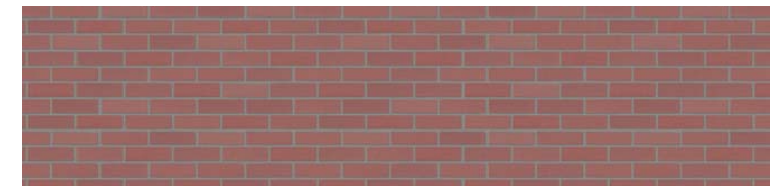
2 DARK GRAY METAL PANEL



3 NICHHA PANEL



4 BLACK METAL PANEL



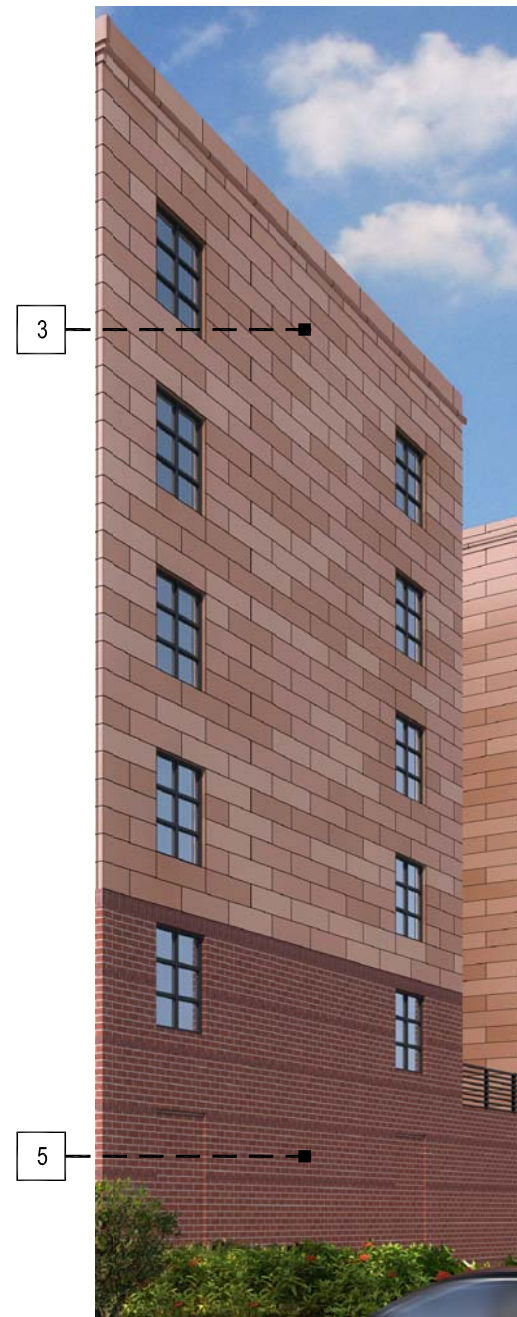
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3 MATERIAL TYPES
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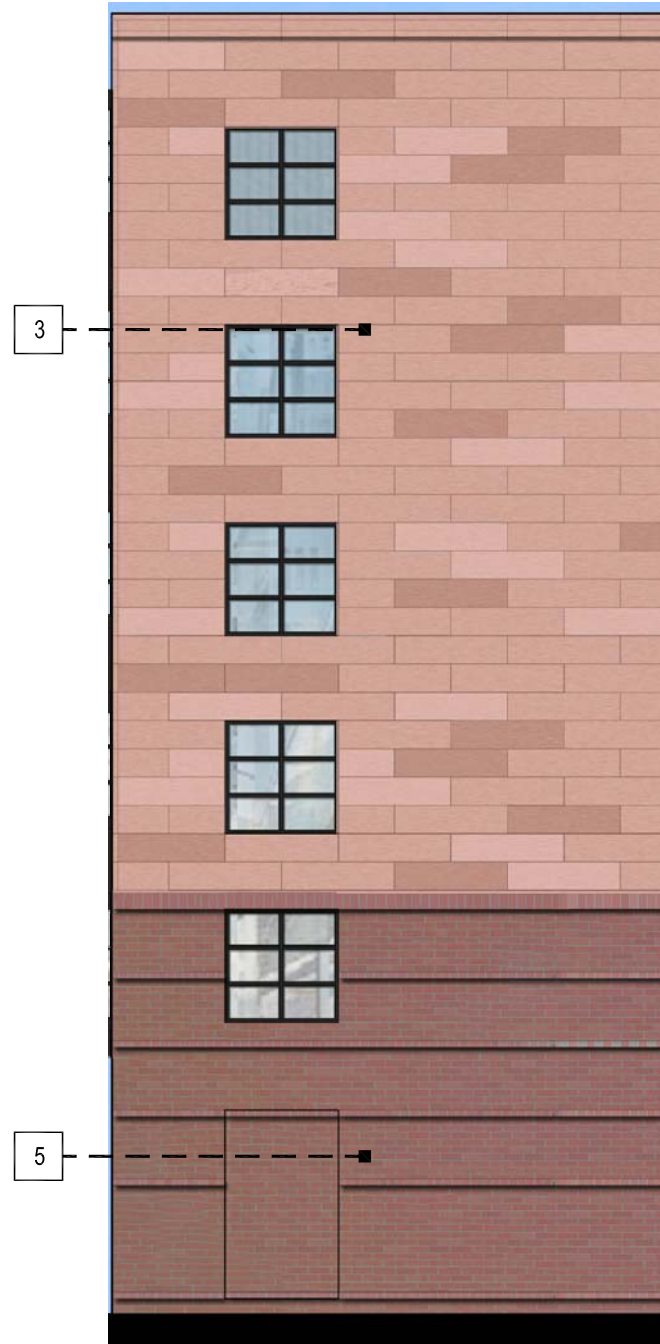
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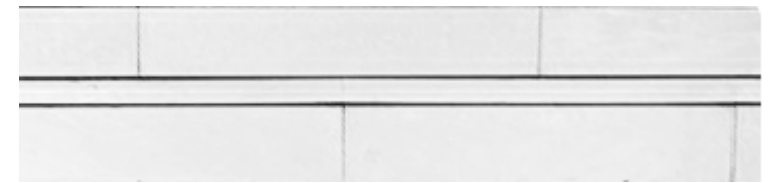
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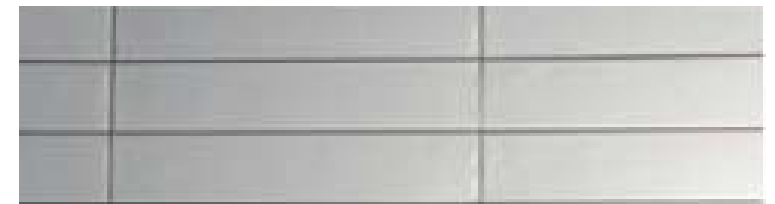
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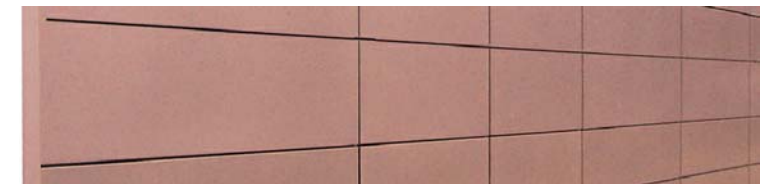
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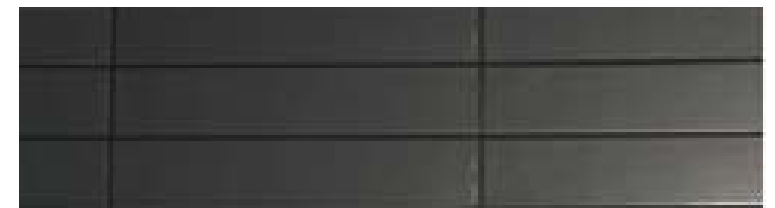
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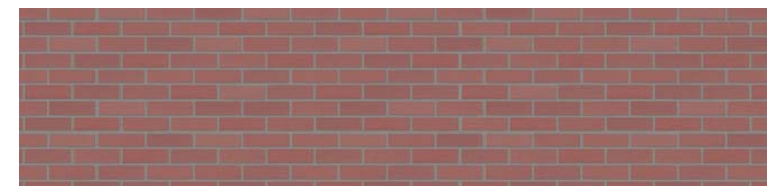
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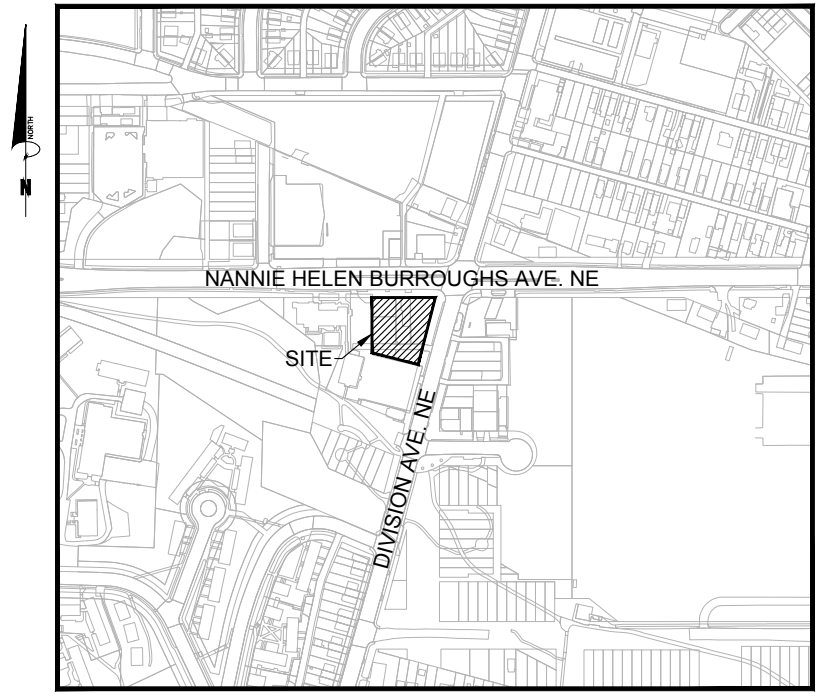
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STRAND THEATER

SQUARE 5196; LOTS 37, 805, 19, AND 814 5127 - 5131 NANNIE HELEN BURROUGHS AVENUE NE WASHINGTON, DC

ABBREVIATIONS:

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



VICINITY MAP
SCALE: 1" = 500'

EXISTING	LEGEND	PROPOSED
	INDEX CONTOUR	
	INTERMEDIATE CONTOUR	
	EDGE OF PAVEMENT	
	CURB AND GUTTER TRANSITION	
	PROPOSED HEADER CURB	
	PROPERTY LINE	
	LOT LINE	
	RIGHT-OF-WAY EASEMENT	
	WATER LINE	
	WATER VALVE	
	WATER REDUCER	
	WATER METER	
	SANITARY SEWER	
	STORM SEWER	
	CABLE TV	
	ELECTRIC SERVICE-UNDERGROUND	
	ELECTRIC SERVICE-OVERHEAD	
	OVERHEAD TELEPHONE	
	TELEPHONE SERVICE	
	GAS LINE	
	SPOT ELEVATION	
	UTILITY POLE	
	GUY POLE	
	TRANSFORMER	
	SIGN	
	SANITARY SEWER IDENTIFIER	
	STORM DRAIN IDENTIFIER	
	FIRE HYDRANT	
	STREET LIGHT	
	TEST PIT LOCATION RECOMMENDED/REQUIRED	
	HANDICAP RAMP	
	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:

CIV0001	COVER SHEET
CIV0002	GENERAL NOTES
CIV0110	EXISTING CONDITIONS PLAN
CIV0130	EROSION AND SEDIMENT CONTROL PLAN
CIV0140	SITE PLAN
CIV0150	UTILITY PLAN
CIV0160	GRADING PLAN
CIV0510	EROSION AND SEDIMENT CONTROL NOTES
CIV0520	EROSION AND SEDIMENT CONTROL DETAILS
CIV0710	STORMWATER MANAGEMENT PLAN

STRAND RESIDENCES

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

COVER SHEET | CIV0001

5/8/2017

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 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.

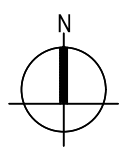
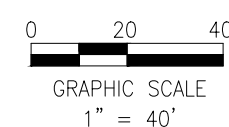
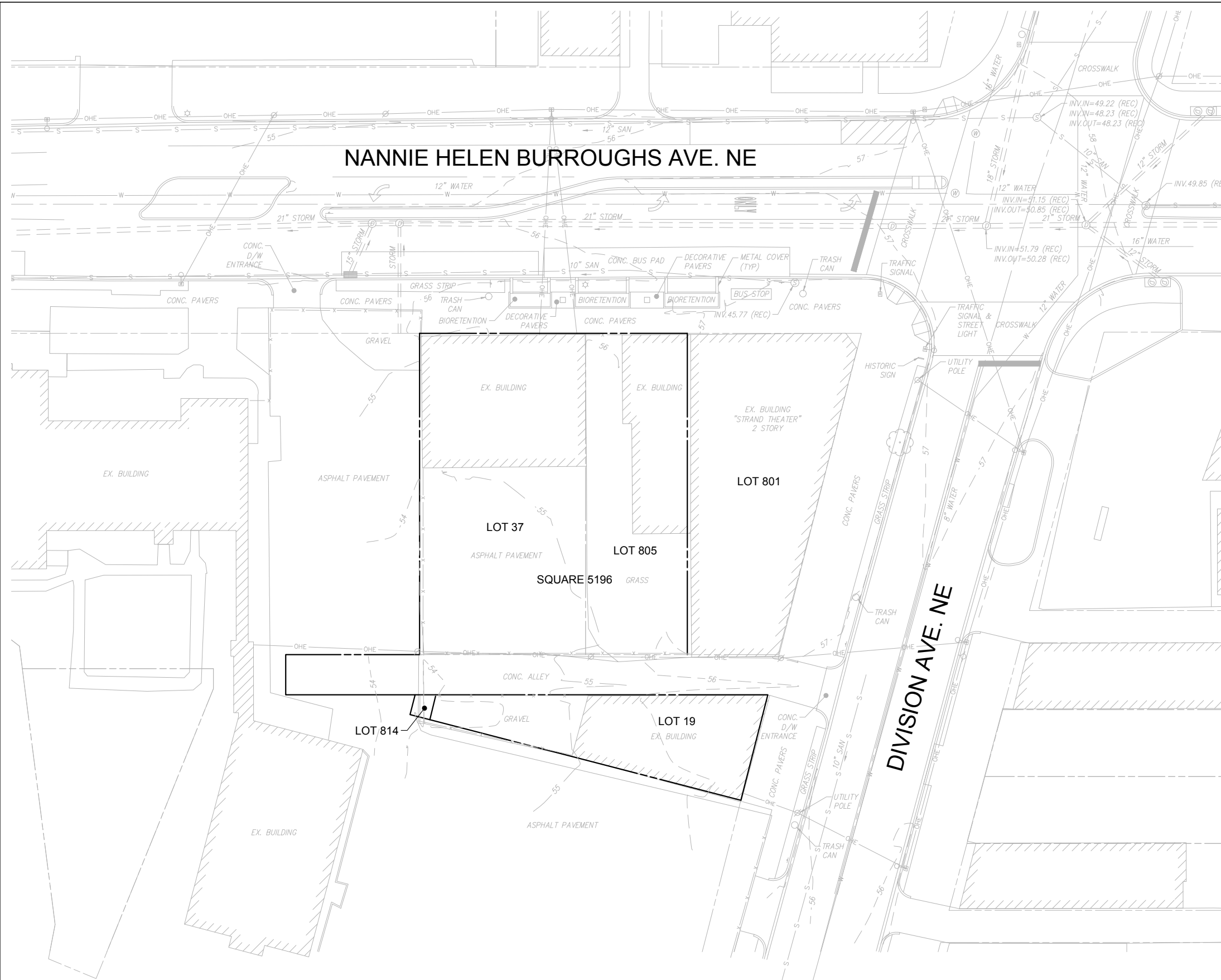
STRAND RESIDENCES

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

5/8/2017



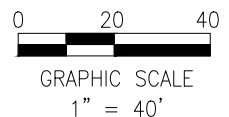
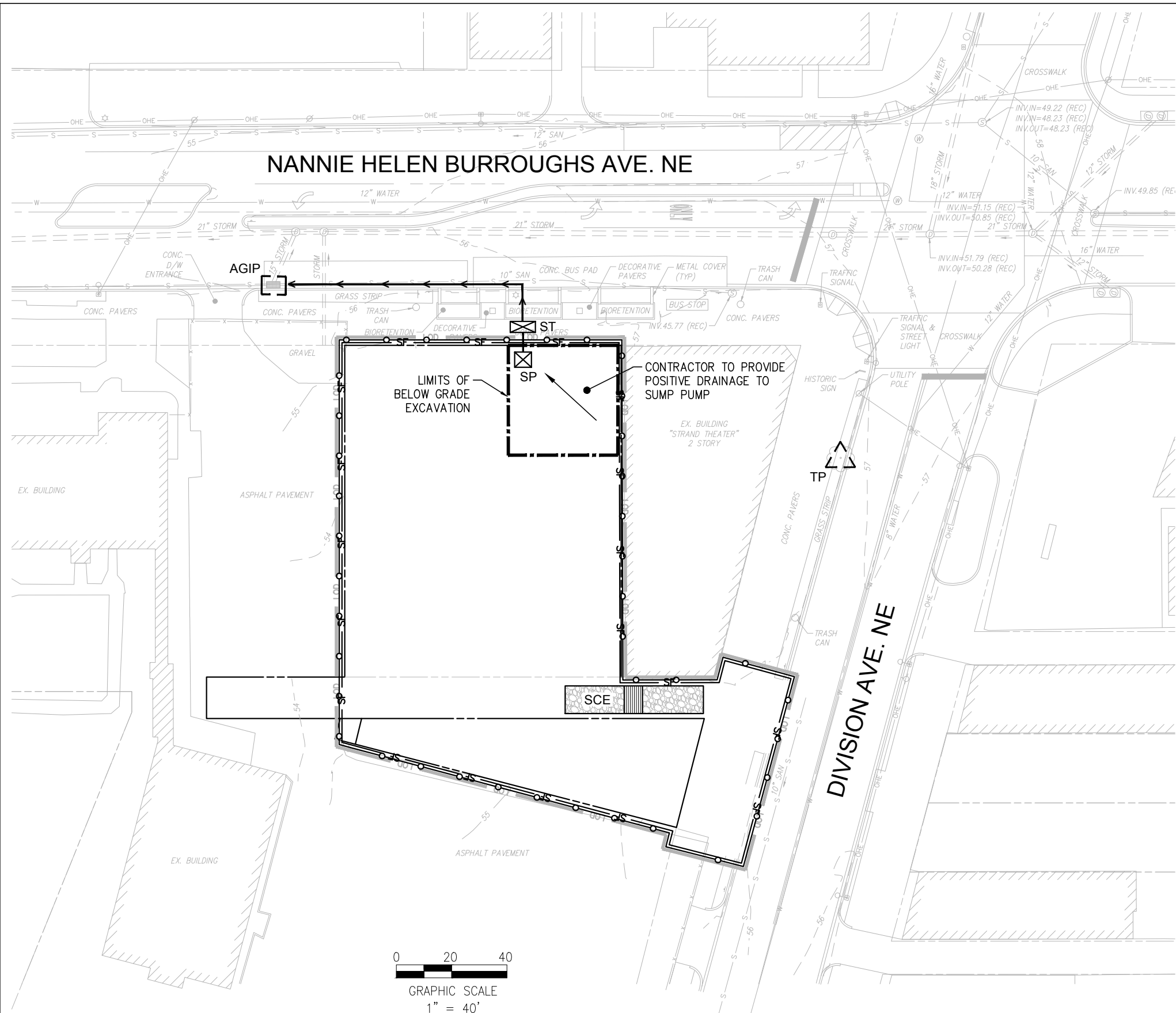
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EXISTING CONDITIONS PLAN CIV0110

5/8/2017

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LEGEND

- STABILIZED CONSTRUCTION ENTRANCE: SCE
- INLET PROTECTION: IP
- SILT FENCE: SF
- SAFETY FENCE (5' CHAIN LINK FENCE): SF
- TREE PROTECTION (ORANGE FENCE): TP
- LIMITS OF DISTURBANCE: LOD
- SUMP PUMP: SP
- SEDIMENT TANK: ST
- LIMITS OF BELOW GRADE EXCAVATION: [Symbol]

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:

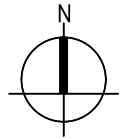
THE PROPOSED WORK DUE TO COMMENCE IN THE FALL OF 2017 AND IS ANTICIPATED TO TAKE APPROXIMATELY 18 MONTHS. EXACT BEGINNING AND END OF CONSTRUCTION IS TO BE ESTABLISHED BY THE OWNER.

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:

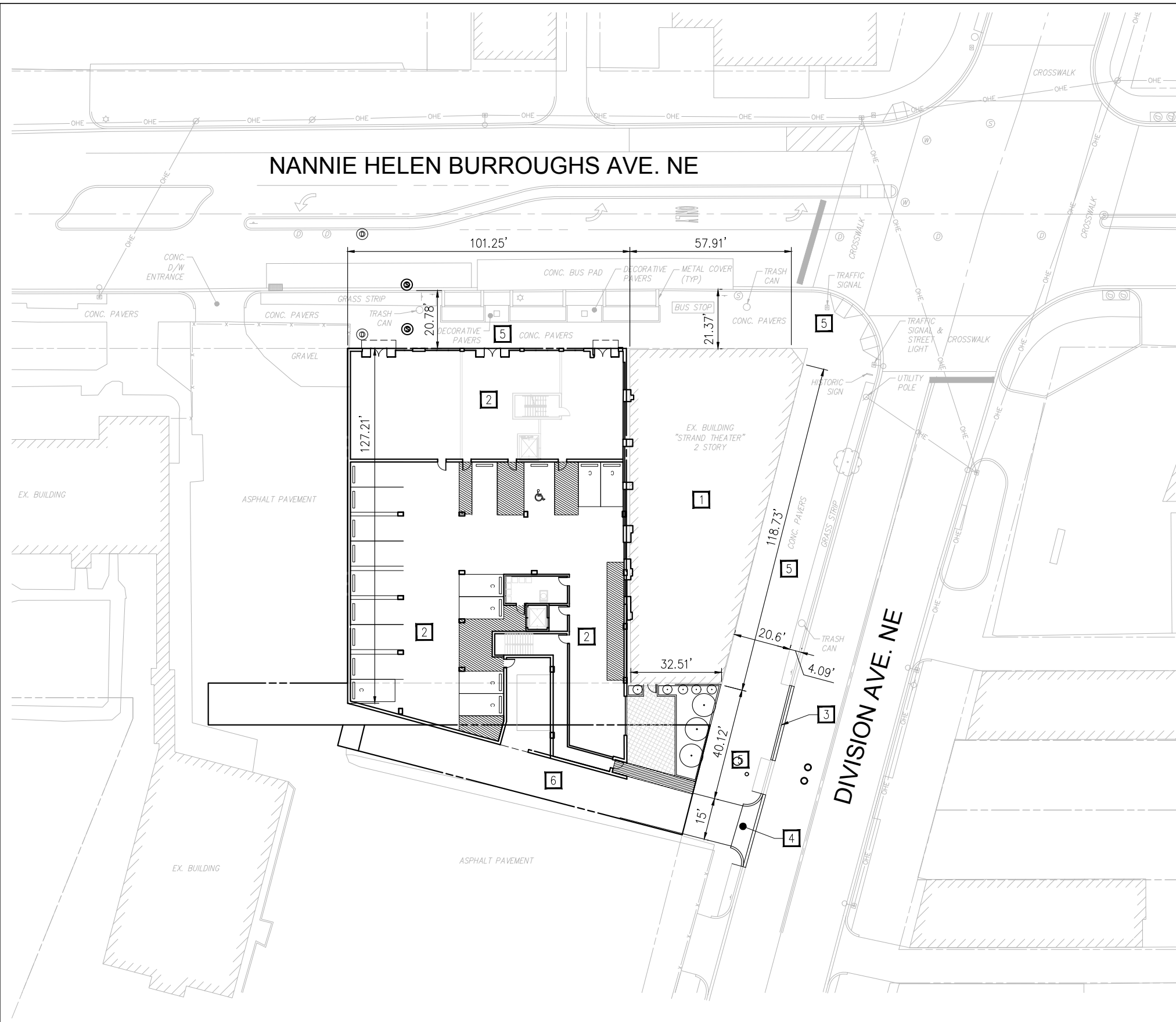
THE TOTAL VOLUME OF EXCAVATION = 1,580 SF (AREA) x 11 FT (DEPTH ASSUMED) / 27 = 644 CY ±



STRAND RESIDENCES

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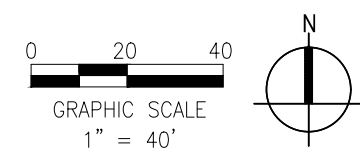
SITE NARRATIVE

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.



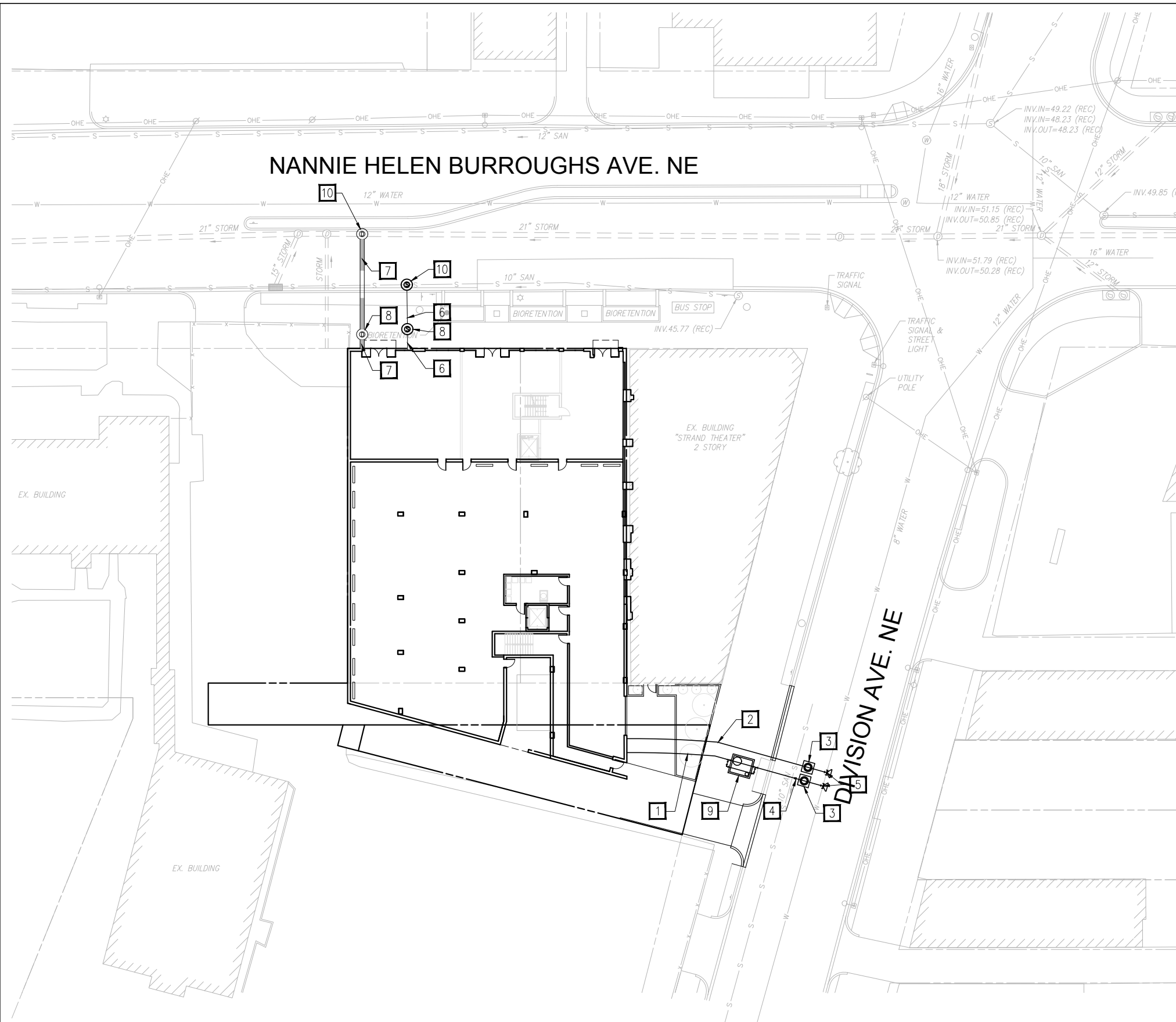
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SITE PLAN CIV0140

5/8/2017



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 4" REDUCER.
- 5 NEW 8" 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

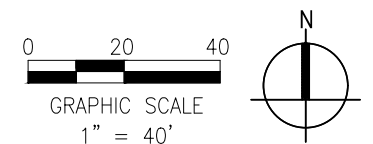
WATER

(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.



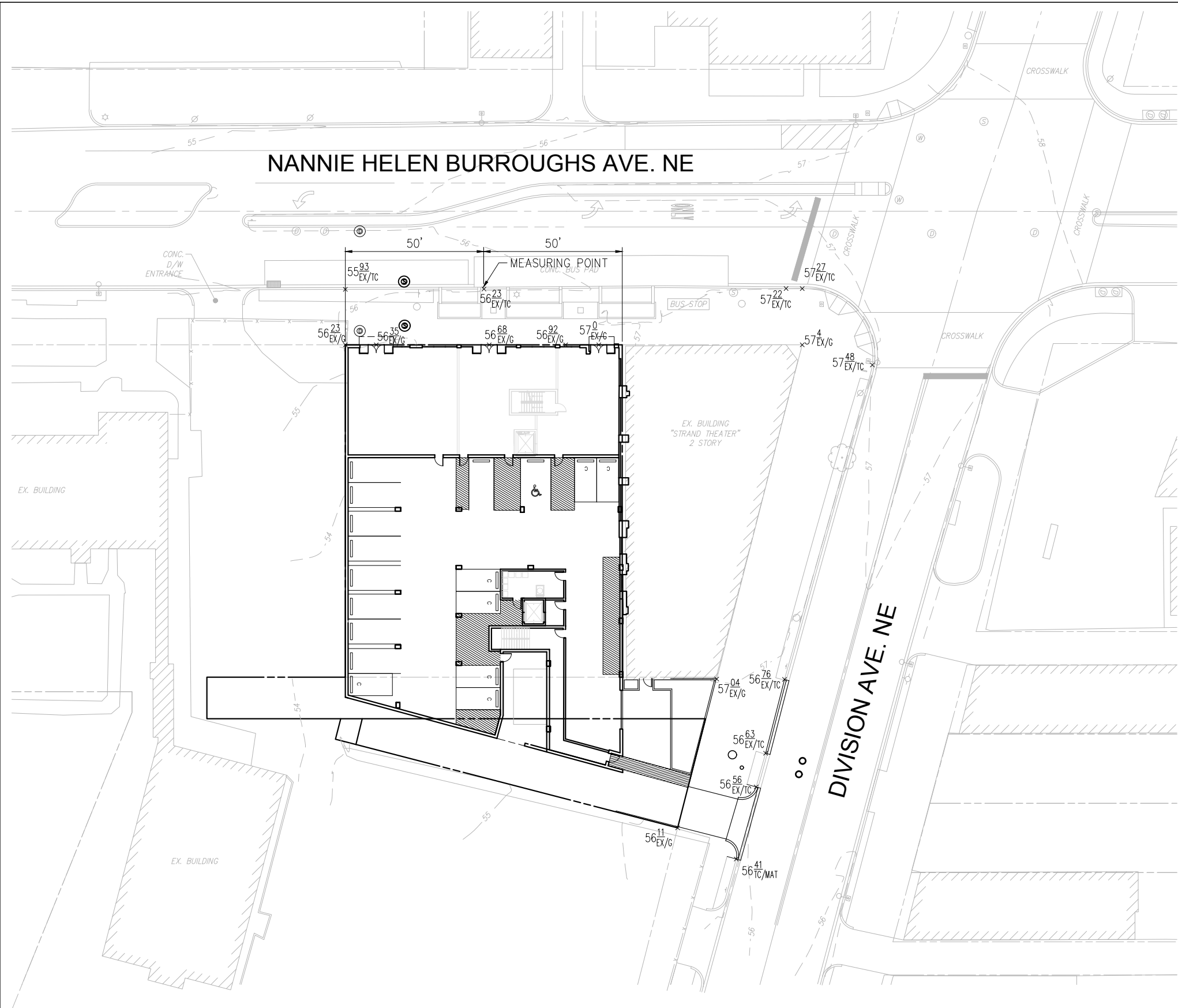
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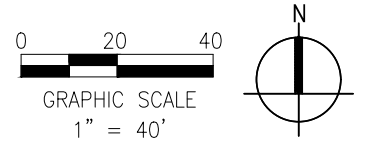
UTILITY PLAN CIV0150

5/8/2017



SPOT SHOT LEGEND

- XX^{XX}_{FF}x FINISHED FLOOR SPOT
- XX^{XX}_Gx GROUND SPOT
- XX^{XX}_{TC}x TOP OF CURB SPOT
- XX^{XX}_{BC}x BOTTOM OF CURB SPOT
- XX^{XX}_{TW}x TOP OF WALL SPOT
- XX^{XX}_{BW}x BOTTOM OF WALL SPOT
- XX^{XX}_{TS}x TOP OF STEPS SPOT
- XX^{XX}_{BS}x BOTTOM OF STEPS SPOT
- XX^{XX}_{/MAT}x MATCH EXISTING SPOT



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GRADING PLAN CIV0160

5/8/2017

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... 2. ESC MEASURES SHALL BE IN PLACE BEFORE AND DURING LAND DISTURBANCE. 3. CONTACT DOE 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 DOE INSPECTORS. 5. ESC MEASURES SHALL BE IN PLACE TO STABILIZE AND EXPOSED AREA AS SOON AS PRACTICABLE AFTER CONSTRUCTION AND/OR PERMANENTLY CEASED BUT NO LATER THAN FOURTEEN (14) DAYS FOLLOWING CESSION, 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 DOE 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 DOE INSPECTOR'S APPROVAL AFTER FINAL STABILIZATION OF THE SITE AND BEFORE THE REMOVAL OF 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 DOE 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, DOE'S TELEPHONE NUMBER (202-535-2977), DOE'S EMAIL ADDRESS (E.SCHMIDT@NCGOCC.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 WEEKLY 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 DOE 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 DOE 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 DOE APPROVED TRAINING 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 SWEEP ON A WEEKLY BASIS (MINIMUM) DURING ALL ON AND OFF-SITE HAULING OPERATIONS FOR UP TO ONE MILE.

2.0 STANDARDS AND SPECIFICATIONS FOR STABILIZED CONSTRUCTION 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 EXITING 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 SOLE 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 INTENSITY (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 1-37-5). SERRATED SLOPES ON THE FOLLOWING DIAGON. 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 THROUGH 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 THIS 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, SLIDING, SETTLEMENT, SUBSIDENCE OR OTHER RELATED DAMAGES. 8. FILL MATERIAL SHALL BE FREE OF SNOW, ICE, FROZEN MATERIALS, TRASH, BROCK, CLAY LUMPS, HAZARDOUS MATERIAL, BROKEN CONCRETE, TREE ROOTS, SOIL, ASHES, ONDERS, 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 TAMBERS 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:

- 1. 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 ONDERS, 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, FLOAN 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 1 - VEGETATIVE STABILIZATION METHOD AND MATERIALS.

IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:

- 1. 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 OF 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-LEU OF NATURAL TOPSOIL.

II. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 42.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHOD AND MATERIALS.

V. TOPSOIL APPLICATION

- 1. 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, ALBERT 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:

- 1. COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS UNDER 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

- 1. 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 RATIOS 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 ANALYSIS. II. FERTILIZERS SHALL BE UNIFORM IN COMPOSITION, FINE 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

- 1. 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 RIPPERMOUNTED 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 SERCEA 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. d. 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 (RUNNER 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 FRAGILE. 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; P205 (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 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. C. MULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING. D. 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 WEEED 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 IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMITY 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 WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED 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 MANAGED 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.

V. 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. MULCHED 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. SEEDING 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 DRAW 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 AROUND UNIFORM AFTER BINDER APPLICATION. SYNTHETIC BINDERS - SUCH AS ACRYLIC DLR (ACRO-TACK), DCA-70, PETROSEAL, TERRA TACK II, TERRA TACK AIR 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 OTHER 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 GRAM SEED TO PROVIDE COVER OVER DISTURBED AREAS FOR UP TO 12 MONTHS. FOR LONGER DURATION OF VEGETATIVE COVER, PERMANENT SEEDING IS REQUIRED.

Table with 4 columns: SEED MIXTURE (HARDINESS ZONE 7A) FROM TABLE 43, NLT SPECIES, APPLICATION RATE (lb/oc), SEEDING DATES, SEEDING DEPTHS, FERTILIZER RATE (10-10-1