ARLINGTON
VIRGINIA

Plans For:

ARLINGTON JUNCTION PARK

1051 SOUTH EADS STREET

PROJECT DESCRIPTION

ARLINGTON JUNCTION PARK IS A 0.9-ACRE NEIGHBORHOOD PARK, CREATING A CONTEMPLATIVE URBAN OASIS IN THE HIGHLY URBANIZED CRYSTAL CITY/PENTAGON CITY CORRIDOR IN ARLINGTON COUNTY. THE PARK FEATURES A MEANDERING PROMENADE WEAVING THROUGH A SERIES OF LOW, SWEEPING BERMS WITH NATIVE PLANTINGS, WHICH CREATES A VISUAL AND NOISE BUFFER BETWEEN THE PARK AND ADJACENT STREET TRAFFIC. POLLINATOR MEADOWS AND A RAIN GARDEN BRING VISUAL, TACTILE AND TEMPORAL EXPERIENCES OF NATURE INTO THE URBAN ENVIRONMENT.

Table of Contents:

DEPARTMENT OF PARKS AND RECREATION

Park Development Division

2100 Clarendon Boulevard, Suite 414,
Arlington, VA 22201
Phone: 703.228.3332 Fax: 703.228.3328
www.arlingtonva.us

GENERAL NOTES

1. THE CONTRACTOR SHALL FULLY ACQUAINT HIMSELF WITH THE CONDITIONS OF THE SITE. THE CONTRACTOR SHALL THOROUGHLY EXAMINE AND BE FAMILIAR WITH THE DRAWINGS AND SPECIFICATIONS. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES, OMISSIONS, AMBIGUITIES, OR CONFLICTS IN OR AMONG THE CONTRACT DOCUMENTS OR BE IN DOUBT AS TO THEIR MEANING, HE SHALL BRING THESE ITEMS TO THE ATTENTION OF THE PROJECT OFFICER FOR DIRECTION BEFORE PROCEEDING WITH WORK.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND BE RESPONSIBLE FOR ADHERENCE TO ALL ORDINANCES, REGULATIONS, LAWS AND CODES HAVING JURISDICTION OVER THE PROPERTY.
3. THE CONTRACTOR SHALL SUBMIT A REQUIRED "RESPONSIBLE LAND DISTURBER" CERTIFICATION LETTER AS PART OF OBTAINING A BUILDING (OR DISTURBANCE) PERMIT.
4. THE CONTRACTOR IS RESPONSIBLE FOR LICENSING AS REQUIRED BY APPLICABLE REGULATORY AGENCIES.
5. THE CONTRACTOR IS RESPONSIBLE FOR ALL SALES, USE AND CAPITAL GAINS TAXES.
6. UTILITY LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE LOCATIONS DETERMINED FROM VISIBLE EVIDENCE AND AVAILABLE RECORDS. ADDITIONAL UNDERGROUND UTILITY LINES MAY BE PRESENT THAT ARE NOT SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND PRESERVE EXISTING UTILITIES.
7. CONTRACTOR SHALL NOT SUBSTITUTE PRODUCTS OR MATERIALS WITHOUT PRIOR APPROVAL BY THE PROJECT OFFICER.
8. THE CONTRACTOR SHALL IDENTIFY ALL STAGING AREAS AND LIMITS OF WORK FOR APPROVAL BY THE PROJECT OFFICER PRIOR TO THE START OF WORK. AREAS OUTSIDE LIMITS OF WORK SHALL NOT BE USED FOR STORAGE OR MOVEMENT OF MATERIALS, MACHINERY OR DEBRIS.
9. THE CONTRACTOR SHALL OBTAIN THE PROJECT OFFICER'S APPROVAL FOR TIMES OF DAY DURING WHICH CONSTRUCTION OPERATIONS MAY OCCUR. ALL CONSTRUCTION OPERATIONS SHALL OCCUR WITHIN TIMES SPECIFIED BY LOCAL ORDINANCES.
10. CONSTRUCTION ACTIVITIES FOR THIS PROJECT OCCUR ENTIRELY ON PARK PROPERTY, THEREFORE, A MAINTENANCE OF TRAFFIC (MOT) PLAN IS NOT EXPECTED TO BE REQUIRED. HOWEVER, IF THE ARLINGTON DEPARTMENT OF ENVIRONMENTAL SERVICES (DES) DETERMINES THAT AN MOT PLAN IS REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE PLAN TO DES FOR THEIR REVIEW AND APPROVAL.
11. THE CONTRACTOR SHALL BE ON SITE AT TIME OF ALL MATERIALS DELIVERIES.
12. THE CONTRACTOR SHALL KEEP THE SITE CLEAN AND FREE OF TRASH AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE A TRASH RECEPTACLE TO BE USED ON SITE DURING CONSTRUCTION AND SHALL REMOVE TRASH FROM THE SITE ON A DAILY BASIS.
13. THE CONTRACTOR SHALL KEEP VEHICULAR ACCESS AREAS CLEAN DURING CONSTRUCTION. VEHICULAR AND OTHER PAVED AREAS SHALL BE WASHED FREE OF MUD ON A WEEKLY BASIS DURING CONSTRUCTION.
14. THE CONTRACTOR SHALL SECURE THE CONSTRUCTION AREA WITH FENCING AT END OF WORKDAY AND WHEN CONTRACTOR IS NOT ON SITE.
15. THE CONTRACTOR SHALL DISTRIBUTE ALL PROJECT MATERIALS AND EQUIPMENT AND DISTRIBUTE ANY STOCKPILES IN SUCH A MANNER AS TO PROTECT EXISTING CONDITIONS, SUCH AS UTILITIES, PAVING, VEGETATION, ETC. THE CONTRACTOR SHALL NOT STOCKPILE SOIL OR CONSTRUCTION MATERIALS, OR DRIVE VEHICLES WITHIN THE CRITICAL ROOT ZONE OF EXISTING TREES TO REMAIN. THE CONTRACTOR SHALL OBTAIN THE PROJECT OFFICER'S APPROVAL FOR ALL CONSTRUCTION ACCESS AREAS, STAGING AND STOCKPILE AREAS PRIOR TO CONSTRUCTION.
16. THE CONTRACTOR SHALL NOT BLOCK STREETS, PARKING AREAS, HOUSE OR DRIVEWAY ENTRANCES DURING CONSTRUCTION WITHOUT THE PROJECT OFFICER'S PERMISSION AND APPROVAL OF ANY RIGHT-OF-WAY PERMITS IF REQUIRED.
17. THE CONTRACTOR SHALL STAKE THE ALIGNMENT OF ALL PAVEMENT, WALLS, CURBING, SAFETY SURFACING AND SITE FEATURES IN THE FIELD FOR APPROVAL BY THE PROJECT OFFICER PRIOR TO CONSTRUCTION.
18. THE CONTRACTOR SHALL PROMPTLY REPAIR ALL DAMAGE TO EXISTING PAVEMENT, DRIVEWAYS, AND ADJACENT FACILITIES CAUSED BY CONSTRUCTION OPERATIONS. COST OF REPAIRS SHALL BE AT CONTRACTOR'S EXPENSE.
19. CONTRACTOR SHALL REMOVE ALL EXCESS SOIL, TEMPORARY FENCING, EROSION CONTROL MEASURES, STABILIZATION MATERIALS, AND OTHER DEBRIS AND SHALL DISPOSE LEGALLY UPON COMPLETION OF THE PROJECT. CONTRACTOR SHALL THOROUGHLY WASH AND CLEAN ALL PAVED AREAS, WALLS, SITE FURNISHINGS AND FEATURES, ETC. UPON COMPLETION OF THE PROJECT.
20. REFER TO INDIVIDUAL DRAWINGS FOR ADDITIONAL NOTES.

LANDSCAPE ARCHITECT/CIVIL ENGINEER

LSG LANDSCAPE ARCHITECTURE

8260 GREENSBORO DRIVE
SUITE 325
TYSONS, VIRGINIA 22102
703-821-2045

CLARK AZAR & ASSOCIATES

20440 CENTURY BOULEVARD
SUITE 220
GERMANTOWN, MD 20874
(240) 912-3491

ARLINGTON COUNTY
DEPARTMENT OF ENVIRONMENTAL SERVICES
WATER-SEWER CONSTRUCTION REQUIREMENTS (REVISED MARCH 2005)

1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES CONSTRUCTION STANDARDS & SPECIFICATIONS (LATEST EDITION) AND SHALL BE APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL SERVICES. UPON PHYSICAL INSPECTION, THE COUNTY RESERVES THE RIGHT TO REJECT THE USE OF ANY MATERIAL FOUND TO BE DEFECTIVE OR NOT CONFORMING TO THE STANDARDS AND SPECIFICATIONS.
2. BEFORE START OF CONSTRUCTION, THE CONTRACTOR SHALL FURNISH THE FOLLOWING INFORMATION AND/OR EVIDENCE OF COMPLIANCE WITH ALL APPLICABLE REGULATIONS AND LAWS, TO THE ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES:

A. THE NAME AND ADDRESS OF THE CONTRACTOR HIRED TO WORK ON THE PROJECT. THE CONTRACTOR SHALL BE REGISTERED IN THE COMMONWEALTH OF VIRGINIA. SATISFACTORY EVIDENCE SHALL BE FURNISHED OF THE CONTRACTOR'S PRIOR EXPERIENCE AS PRIME CONTRACTOR IN THE CONSTRUCTION OF WATER MAINS AND/OR SANITARY SEWER INSTALLATIONS. FURTHER, THE CONTRACTOR SHALL FURNISH A LETTER WITH A LIST OF MATERIALS AND SUPPLIERS FOR PROPOSED PROJECT.

B. A RIGHT OF WAY PERMIT IS REQUIRED TO WORK IN ARLINGTON COUNTY STREETS. IN INSTANCES OF EXCAVATIONS IN STATE RIGHT OF WAY, THE DATE AND NUMBER OF ALL PERMITS REQUIRED BY THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) SHALL BE FURNISHED.

C. IF ANY OTHER EASEMENT IS NEEDED, TWO (2) COPIES OF THE DESCRIPTION OF SUCH EASEMENT, AS ACTUALLY RECORDED, SHALL BE FURNISHED, INCLUDING THE PLACE, DATE AND REFERENCE OF SUCH RECORDATION.

D. WRITTEN NOTICE OF TENTATIVE STARTING DATE OF CONSTRUCTION, WHICH SHALL BE A MINIMUM OF ONE (1) WEEK FOLLOWING THE DATE OF NOTICE. IN ADDITION, THE CONTRACTOR SHALL FURNISH THE NAMES AND TELEPHONE NUMBERS OF TWO (2) RESPONSIBLE PERSONS WHO CAN BE CONTACTED IN CASE OF EMERGENCY.

ACTUAL CONSTRUCTION SHALL NOT BEGIN UNTIL THE ABOVE ITEMS HAVE BEEN COMPLETED AND THE ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES APPROVED THE STARTING DATE AND ARRANGEMENTS HAVE BEEN MADE FOR THE REQUIRED INSPECTION SERVICE.

3. ALL CONSTRUCTION SHALL BE ACCOMPLISHED FROM APPROVED PLANS, SPECIFICATIONS AND CUT SHEETS SUBMITTED BY A REGISTERED ENGINEER AND APPROVED BY THE COUNTY. TO AVOID CONSTRUCTION DELAYS ALL NECESSARY TEST HOLE INFORMATION SHALL BE OBTAINED PRIOR TO MOBILIZATION AND CONSTRUCTION PLANS SHALL BE REVISED ACCORDINGLY.
4. NO EXISTING WATER MAINS, FIRE HYDRANTS, OR SANITARY SEWERS MAY BE TAKEN OUT OF SERVICE OR MADE INACCESSIBLE BY THE CONTRACTOR WITHOUT THE PRIOR APPROVAL FROM THE DEPARTMENT OF ENVIRONMENTAL SERVICES.
5. UPON COMPLETION OF CONSTRUCTION, ALL FINAL TESTS, AS REQUIRED, SHALL BE PERFORMED IN THE PRESENCE OF THE COUNTY'S REPRESENTATIVE. WATER AND SEWER SERVICE CONNECTIONS SHALL NOT BE MADE UNTIL THE WATER AND/OR SEWER MAINS AND APPURTENANCES HAVE BEEN APPROVED AND ACCEPTED BY ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES.
6. EXISTING WATER SERVICES MAY BE ALLOWED FOR CONSTRUCTION PURPOSES ONLY FOR WHICH CONTRACTOR SHALL REQUEST TO THE ARLINGTON COUNTY'S UTILITY SERVICES BY CALLING 703-228-3636. PRIOR TO THE FINAL ACCEPTANCE OF THE PROJECT, THE DEVELOPER SHALL REQUEST TO THE UTILITY SERVICES IN WRITING FOR THE DISCONTINUATION OF ALL EXISTING WATER SERVICES. ALSO, THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING METER BOXES RELATED TO THE SERVICES BEING DISCONTINUED.
7. THE CONTRACTOR SHALL MAINTAIN BACKFILL FOR UTILITY EXCAVATIONS UNTIL ARLINGTON COUNTY HAS FINALLY ACCEPTED THE PROPOSED WATER AND/OR SEWER MAIN. ALSO, ALL SURFACES OVER THE UTILITY EXCAVATIONS SHALL EITHER BE RESTORED TO THE ORIGINAL CONDITION OR FINISHED AS PER THE PROPOSED DESIGN BEFORE THE ACCEPTANCE OF THE PROJECT. PAVEMENT PATCHING FOR UTILITY CUTS IN THE PUBLIC STREETS SHALL BE PERFORMED IN ACCORDANCE WITH ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES CONSTRUCTION STANDARDS AND SPECIFICATIONS OR AS PER VDOT ROAD AND BRIDGE STANDARDS AND SPECIFICATIONS DEPENDING UPON THE STREET JURISDICTION. PRIOR TO FINAL PAVING, THE CONTRACTOR SHALL ADJUST ALL EXISTING VALVE BOXES AND SANITARY SEWER MANHOLE FRAME AND COVERS AS PER COUNTY STANDARDS. REMOVE ALL ABANDONED SANITARY MANHOLES AND VALVE BOXES OVER THE ABANDONED WATER MAINS, AND COMPLETE ALL NECESSARY WATER MAIN "CUT AND CAPS".
8. UPON COMPLETION, APPROVAL, AND ACCEPTANCE OF WATER AND/OR SEWER MAINS AND APPURTENANCES, THE DEVELOPER'S REGISTERED ENGINEER SHALL SUBMIT TO ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES, A SET OF MYLAR TRACINGS INDICATING THE AS-BUILT CONDITIONS AND A SIGNED STATEMENT CONFIRMING THAT THE WORK, AS INDICATED, IS ACCEPTABLE TO THE ENGINEER. SUCH SUBMITTALS SHALL BE MADE BEFORE REQUESTING REDUCTION AND/OR RELEASE OF THE SURETY BOND.

ARLINGTON COUNTY
DEPARTMENT OF ENVIRONMENTAL SERVICES

NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT ARLINGTON COUNTY DES STANDARDS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL REMOVE AND REPLACE, TO THE CURRENT ARLINGTON COUNTY DES STANDARDS AND SPECIFICATIONS, ANY EXISTING ENTRANCES, CURB AND GUTTER OR SIDEWALK ALONG THE FRONTAGE OF THIS SITE IN POOR CONDITION, OR DAMAGED DURING CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND CLOSING, TO ARLINGTON COUNTY STANDARDS, ANY EXISTING ENTRANCES NOT BEING USED IN CONJUNCTION WITH THIS DEVELOPMENT.
4. THE CONTRACTOR SHALL OBTAIN ARLINGTON COUNTY PERMITS FOR ALL OF THIS SITE.
5. THERE MAY BE UNDERGROUND CONDUIT, CABLES AND TRAFFIC DETECTION DEVICES IN THIS AREA, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ANY TRAFFIC CONTROLS THAT ARE DISTURBED DURING CONSTRUCTION. NOTIFY THE TRANSPORTATION ENGINEERING & OPERATIONS BUREAU AT (703) 228-3575, 24 HOURS PRIOR TO STARTING WORK.
6. THE CONTRACTOR SHALL NOT DISTURB OR REMOVE ANY TRAFFIC CONTROL SIGNS, PARKING METERS OR ANY OTHER TRAFFIC CONTROL DEVICE WITHOUT PRIOR PERMISSION FROM THE TRANSPORTATION ENGINEERING & OPERATIONS BUREAU. CONTACT TRANSPORTATION ENGINEERING AT (703) 228-3575.
7. THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE TRANSPORTATION ENGINEERING & OPERATIONS BUREAU, PRIOR TO PLACING ANY OBSTRUCTION WITHIN THE PUBLIC RIGHT OF WAY, OR ON SIDEWALKS ALONG THE FRONTAGE OF THIS DEVELOPMENT.
8. THE CONTRACTOR SHALL OBTAIN PERMITS FROM THE INSPECTION SERVICES DIVISION PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION OF ON-SITE FACILITIES. FOR INFORMATION AND PERMIT REQUIREMENTS TELEPHONE (703) 228-3800.

UTILITY MARKING REQUIREMENTS:

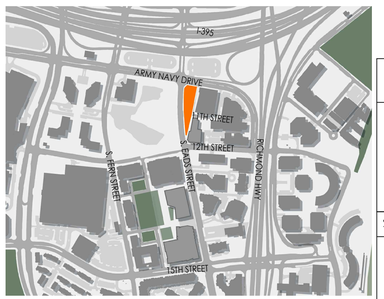
9. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 811, 72 HOURS PRIOR TO THE START OF ANY EXCAVATION OR CONSTRUCTION, FOR THE MARKING OF UNDERGROUND UTILITIES IN THE RIGHT-OF-WAY.
10. UTILITY LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE LOCATIONS DETERMINED FROM VISIBLE EVIDENCE AND AVAILABLE RECORDS. ADDITIONAL UNDERGROUND UTILITY LINES MAY BE PRESENT THAT ARE NOT SHOWN. THE CONTRACTOR SHALL LOCATE AND PRESERVE ALL EXISTING UTILITIES.

HORIZONTAL DATUM:

THE SITE SHOWN HEREON IS REFERENCED TO THE VIRGINIA COORDINATE SYSTEM OF 1983 AS COMPUTED FROM A FIELD RUN BOUNDARY AND HORIZONTAL CONTROL SURVEY.

VERTICAL DATUM:

THE SITE SHOWN HEREON IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 AS COMPUTED FROM A FIELD RUN VERTICAL CONTROL SURVEY.



VICINITY MAP - 1"=500'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET L001	

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Parks Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

ARLINGTON JUNCTION PARK
FINAL PLAN
08/17/2023
1051 SOUTH EADS STREET

Approvals Date

Park Development Division Chief

Design Manager

COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L001

ARLINGTON COUNTY GENERAL NOTES:

GENERAL CONSTRUCTION NOTES:

1.) ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

2.) ALL CONSTRUCTION WORK FOR THIS PROJECT SHALL CONFORM TO THE ARLINGTON COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES, CONSTRUCTION STANDARDS AND SPECIFICATIONS, AND WHERE APPLICABLE THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) ROAD AND BRIDGE SPECIFICATIONS, AND ROAD AND BRIDGE STANDARDS. THE LATEST EDITIONS OF EACH RELEVANT MANUAL SHALL BE USED.

3.) ALL CONSTRUCTION AND WORK ACTIVITIES SHALL COMPLY WITH THE VIRGINIA WORK AREA PROTECTION MANUAL AND ALL OTHER RELEVANT WORK SAFETY REQUIREMENTS, LATEST EDITIONS.

4.) THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 811 FOR MARKING THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES (i.e. WATER, SEWER, GAS, TELEPHONE, ELECTRIC AND CABLE TV) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION OR CONSTRUCTION. THE CONTRACTOR IS REQUIRED TO IDENTIFY AND PROTECT ALL OTHER UTILITY LINES FOUND IN THE WORK SITE AREA BELONGING TO OTHER OWNERS THAT ARE NOT MEMBERS OF "MISS UTILITY". PRIVATE WATER AND/OR SEWER LATERALS WILL NOT BE MARKED BY MISS UTILITY OR THE COUNT. THE CONTRACTOR WILL BE EXPECTED TO LOCATE AND PROTECT THESE SERVICES DURING CONSTRUCTION.

5.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT THE WORK AND SHALL RETAIN A PROFESSIONAL LAND SURVEYOR LICENSED IN THE COMMONWEALTH OF VIRGINIA TO PROVIDE ALL NECESSARY CONSTRUCTION LAYOUTS AND ESTABLISH ALL CONTROL LINES, GRADES, AND ELEVATION DURING CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A COPY OF ALL CUT SHEETS FOR REVIEW, PER THE SPECIFICATIONS. THE COST OF ALL NECESSARY SURVEYING SERVICES SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND, UNLESS OTHERWISE SPECIFIED, THE COST SHALL BE INCORPORATED INTO THE COST FOR RELEVANT ITEMS.

6.) THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS ARE FROM THE BEST AVAILABLE RECORDS AND SHALL BE CONSIDERED TO BE APPROXIMATE. WHEN CONSTRUCTION ACTIVITY REACHES IN PROXIMITY TO EXISTING UTILITIES. THE TRENCH(ES) SHALL BE OPENED A SUFFICIENT DISTANCE AHEAD OF THE WORK OR TEST PITS SHALL BE MADE TO VERIFY THE EXACT LOCATION AND INVERTS OF THE UTILITY TO ALLOW FOR POSSIBLE CHANGES IN THE LINE OR GRADE. THESE TEST PITS SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE COUNTY AND ARE INCIDENTAL TO THE PROPOSED WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING UTILITIES AND THE RELATED STRUCTURES. ALL EXISTING UTILITY SYSTEMS SHALL BE PROTECTED TO PREVENT DAMAGE DURING THE CONTRACTOR'S OPERATIONS. ANY SYSTEM DAMAGED SHALL BE PROMPTLY REPAIRED AT NO COST TO THE OWNER.

THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLAN

7.) EXISTING MANHOLE FRAMES, COVERS, AND VALVE BOXES, AND ANY OTHER APPURTENANCES SHALL BE ADJUSTED TO THE FINAL GRADE OR REPLACED, AS NECESSARY. UNLESS OTHERWISE SPECIFIED, THE COST FOR THIS SHALL BE CONSIDERED INCIDENTAL TO THE WORK, AND SHALL BE INCORPORATED INTO THE COSTS FOR RELEVANT ITEMS.

8.) THE CONTRACTOR SHALL PROVIDE ADA COMPLIANT ACCESS THROUGH OR AROUND THE SITE AT ALL TIMES AND SHALL ENSURE THE SAFETY OF ALL THOSE PASSING THROUGH OR ADJACENT TO THE SITE.

STORMWATER AND ENVIRONMENTAL PROTECTION:

9.) THE CONTRACTOR SHALL PROTECT EXISTING DRAINAGE FACILITIES (TO INCLUDE CURB AND GUTTER) AND WATERWAYS FROM ADVERSE IMPACTS PER SECTION 1500 OF THE ARLINGTON COUNTY STANDARDS AND SPECIFICATIONS.

10.) ANY WORK WITHIN A RESOURCE PROTECTION AREA (RPA) SHALL COMPLY WITH THE REQUIREMENTS OF CHAPTER 61 OF THE COUNTY CODE (THE CHESAPEAKE BAY PRESERVATION ORDINANCE).

TREE PROTECTION:

11.) THE CONTRACTOR SHALL CONFINE ALL ACTIVITIES AT THE SITE ASSOCIATED WITH CONSTRUCTION ACTIVITIES, TO INCLUDE STORAGE OF EQUIPMENT AND OR MATERIALS. ACCESS TO THE WORK, FORMWORK, ECT. TO WITHIN THE DESIGNATED LIMITS OF DISTURBANCE (LOD).

12.) NO TREES SHALL BE REMOVED OR OTHERWISE AFFECTED UNLESS CLEARLY MARKED ON THE APPROVED PLAN.

13.) TREES SHALL BE PROTECTED PER THE REQUIREMENTS OF SECTION 02100 - CLEARING AND GRUBBING.

TRAFFIC CONTROL:

14.) CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 3 WORKING DAYS PRIOR TO DISTURBING ANY EXISTING, OR INSTALLING ANY NEW, TRAFFIC SIGNS, SIGNALS, OR OTHER TRAFFIC CONTROL DEVICES.

15.) THE CONTRACTOR SHALL PREMARK THE LAYOUT OF ANY PERMANENT TRAFFIC CONTROL STRIPING, INDICATING THE PROPOSED LOCATION AND TYPE OF MARKING TO BE INSTALLED. THE PREMARKING MAY CONS1ST OF TYPED TAPE, CHALK, OR LUMBER CRAYONS. THE CONTRACTOR SHALL ALLOW 3 WORKING DAYS FORT THE INSPECTION AND APPROVAL OF THE PREMARKINGS PRIOR TO PLACING THE PERMANENT MARKINGS.

16.) THE CONTRACTOR SHALL SUBMIT ANY REQUESTS FOR TEMPORARY "NO PARKING" RESTRICTIONS TO THE ENGINEER AT LEAST 3 WORKING DAYS PRIOR TO THE DESIRED ONSET OF RESTRICTIONS.

17.) THE CONTRACTOR SHALL PRESERVE ALL BUS STOPS, INCLUDING MAINTAINING ADEQUATE ACCESS THROUGH AND ADJACENT TO THE CONSTRUCTION FOR BUSES AND THEIR PASSENGERS. THE CONTRACTOR SHALL NOT CLOSE, RELOCATE, OR OTHERWISE MODIFY A BUS STOP WITHOUT PRIOR REQUEST OF THE ENGINEER. TYPICALLY ANY RELOCATION OR CLOSURE OF A BUS STOP WILL REQUIRE AT LEAST FOUR WEEKS ADVANCE NOTICE FOR COORDINATION WITH THE COUNTY'S BUS STOP COORDINATOR.

18.) WHEN CONDITIONS WARRANT DUE TO TRAFFIC VOLUMES. PATTERNS. OR SPECIAL EVENTS. THE COUNTY MAY SUSPEND OR OTHERWISE DIRECT THE CONTRACTOR'S ACTIVITIES TO PROTECT THE PUBLIC AND OR THE COUNTY'S TRANSPORTATION NETWORK.

19.) PROTECT WORK HOURS SHALL BE AS FOLLOWS:
IN ARLINGTON RIGHT-OF-WAY - 9:00AM TO 4:00PM (MON.-FRI.)
IN VDOT'S RIGHT-OF-WAY - 9:00AM TO 3:00PM (MON.-THURS.) AND 9:00AM TO 2:00PM (FRI.)

20.) COORDINATE WITH ARLINGTON COUNTY TRANSIT BUREAU. 703-228-3049, AT LEAST FOUR WEEKS PRIOR TO COMMENCEMENT OF WORK FOR APPROVAL, IF TRANSIT IS AFFECTED.

21.) ALL EXISTING FIRE HYDRANTS AND FIRE DEPARTMENT CONNECTIONS SHALL BE MAINTAINED UNOBSTRUCTED AND ACCESS BLEAT ALL TIMES IN ACCORDANCE WITH SECTIONS 508.5.4 AND 508.5.5 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.

22.) ACCESS TO BUILDINGS FOR FIREFIGHTING SHALL BE MAINTAINED AT ALL TIMES. EXISTING FIRE APPARATUS ACCESS ROADS (FIRE LANES) SHALL BE KEPT CLEAR OF OBSTRUCTIONS IN ACCORDANCE WITH SECTION 503.4 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE. ACCESS TO CONSTRUCTION SITES SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH SECTION 1410 OF THE ARLINGTON COUNTY FIRE PREVENTION CODE.

23.) IN THE EVENT THAT EXISTING F RE DEPARTMENT CONNECTIONS OR FIRE APPARATUS ACCESS ROADS (FIRE LANES) MUST BE OBSTRUCTED TO FACILITATE CONSTRUCTION ACTIVITIES, CONTACT THE ARLINGTON COUNTY FIRE DEPARTMENT OF FIRE PREVENTION OFFICE AT 703-228-4644 TO COORDINATE REVIEW AND APPROVAL OF TEMPORARY FIRE DEPARTMENT CONNECTIONS AND/OR FIRE APPARATUS ACCESS ROADS PRIOR TO CREATING THE OBSTRUCTION.

WATER DISTRIBUTION, STORM, AND, SANITARY SEWER SYSTEMS:

24.) UNLESS OTHERWISE DIRECTED, CONTRACTORS ARE EXPRESSLY PROHIBITED FROM OPERATING ANY WATER VALVES OR APPURTENANCES. CONTRACTORS SHALL SUBMIT ALL REQUESTS FOR VALVE OPERATIONS TO THE ENGINEER AT LEAST 3 WORKING DAYS IN ADVANCE OF THE REQUIRED OPERATION.

25.) IN THE EVENT OF A WATER OR SEWER EMERGENCY, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COUNTY'S WATER CONTROL CENTER AT 703-228-5555 AND THE ENGINEER.

26.) STORM OR SANITARY SEWERS AND APPURTENANCES TO BE ABANDONED SHALL BE EXCAVATED AND REMOVED, OR ABANDONED AS DETAILED IN THE COUNTY'S STANDARDS AND SPECIFICATIONS.

27.) WATERMAIN JOINTS ARE ASSUMED TO HAVE 1.5' OF DEFLECTION AT EACH JOINT. PRODUCT SELECTION SHALL ACCOMMODATE THIS DEFLECTION.

WORK WITHIN A VDOT RIGHT-OF-WAY:

28.) WHEN REQUIRED FOR THE WORK, AN APPROVED VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) PERMIT WILL BE PROVIDED BY THE COUNTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO AND IMPLEMENTING ALL PERMIT REQUIREMENTS.

29.) THE CONTRACTOR SHALL HAVE AT LEAST ONE EMPLOYEE ON-SITE CERTIFIED BY VDOT IN BASIC WORK ZONE TRAFFIC CONTROL AND WILL BE RESPONSIBLE FOR THE PLACEMENT. MAINTENANCE AND REMOVAL OF WORK ZONE TRAFFIC CONTROL DEVICES WITHIN THE PROTECTED LIMITS IN COMPLIANCE WITH THE PERMIT REQUIREMENTS AND CONDITIONS, THE APPROVED PLANS, SPECIFICATIONS, THE VIRGINIA WORK AREA PROTECTION MANUAL AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

30.) THE CONTRACTOR SHALL HAVE AT LEAST ONE EMPLOYEE ON-SITE WHO HAS COMPLETED VDOT EROSION AND SEDIMENT CONTROL CONTRACTOR CERTIFICATION TRAINING AND WILL BE RESPONSIBLE FOR ENSURING COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL EROSION AND SEDIMENT CONTROL REGULATIONS DURING ALL LAND DISTURBANCE ACTIVITIES.

ADJACENT AND CONCURRENT PROJECTS:

31.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION OF THE CONSTRUCTION OF THE PARK WITH ALL ADJACENT ACTIVE PROJECTS WITHIN THE VICINITY OF THE PROJECT.

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

GENERAL NOTES
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C1.000

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS
AND RECREATION

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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

GENERAL NOTES

Approval	Date
Design Supervisor	

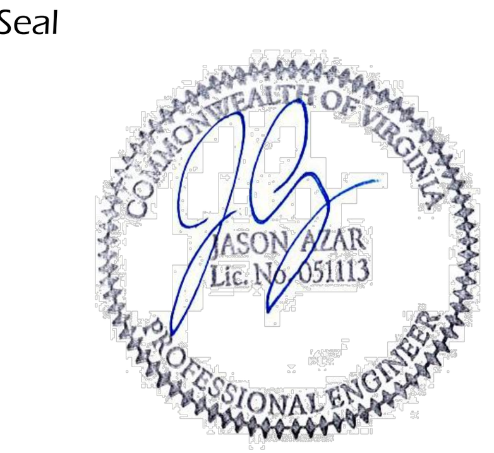
Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: ME
Drawn: ME
Checked: JA

Filename:
Plotted:

Scale: AS SHOWN
Date: July 21, 2023

Seal



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PROPOSED LINETYPES

- LOW — LOW — LIMITS OF WORK
- 2 — PROPOSED INDEX CONTOUR MAJOR
- 25 — PROPOSED INT. CONTOUR MINOR
- PROPOSED PROPERTY LINE
- PROPOSED PROPERTY SETBACK
- PROPOSED RIGHT-OF-WAY BOUNDARY
- PROPOSED ROAD CENTERLINE
- PROPOSED BUILDING OUTLINE
- PROPOSED BUILDING OVERHANG
- X — X — PROPOSED FENCE
- PROPOSED GUARDRAIL
- PROPOSED CURB & GUTTER
- PROPOSED CURB
- PROPOSED PARKING LINE
- PROPOSED RETAINING WALL
- PROPOSED EASEMENT
- PROPOSED SIGN DISTANCE EASEMENT
- PROPOSED STORM EASEMENT
- PROPOSED WATERLINE EASEMENT
- PROPOSED SANITARY EASEMENT
- PROPOSED COMM. EASEMENT
- PROPOSED GASLINE EASEMENT
- PROPOSED POWERLINE EASEMENT
- PROPOSED UTILITY EASEMENT
- PROPOSED TREE LINE
- PROPOSED STORM DITCH TOP
- PROPOSED STORM DITCH BOTTOM
- PROPOSED STORM DITCH CENTER
- PROPOSED STORM HGL
- PROPOSED STORM PIPE
- PROPOSED WATERLINE
- PROPOSED SANITARY SEWER
- OHE — OHE — PROPOSED OVERHEAD ELECTRIC
- E — E — E — PROPOSED UNDERGROUND ELECTRIC
- FO — FO — PROPOSED UNDERGROUND COMM. LINE
- OHU — PROPOSED OVERHEAD COMM. LINE

SURFACES

- PROPOSED SIDEWALK
- PROPOSED CONCRETE (ROADWAY)
- PROPOSED ASPHALT
- PROPOSED MILL AND OVERLAY
- PROPOSED STAMPED CONCRETE
- PROPOSED PERMEABLE PAVERS
- PROPOSED POURED-IN-PLACE SURFACING
- PROPOSED BIORETENTION

PROPOSED UTILITIES

- ACCESSIBLE CURB RAMP
- ACCESSIBLE PARKING SPACE
- CURB RAMP LABEL
- BOLLARD
- CENTERLINE
- MONUMENT
- TEST HOLE
- ×48.35 — PROPOSED SPOT ELEVATION
- 11 — PROPOSED PARKING COUNT
- 5 — PROPOSED STORM STRUCTURE NUMBER
- 12" Concrete Pipe — PROPOSED STORM LABEL
- PROPOSED STORM MANHOLE
- PROPOSED STORM INLET STRUCTURE
- PROPOSED END SECTION
- FIRE DEPARTMENT CONNECTION
- FIRE HYDRANT
- FLOW DIRECTION ARROW
- WATER METER
- WATER VALVE
- WELL
- LIGHT (MISC.)
- STREET LIGHT
- PROPOSED LIGHT POLE
- 8 — PROPOSED SANITARY SEWER STRUCTURE NUMBER
- 8" PVC SDR-26 — PROPOSED SANITARY SEWER LABEL
- PROPOSED SANITARY SEWER MANHOLE

EROSION & SEDIMENT CONTROL

- CE — TEMPORARY CONSTRUCTION ENTRANCE, SPEC. 3.02
- SC — TEMP VEHICLE STREAM CROSSING, SPEC. 3.24
- CE — UTILITY STREAM CROSSING, SPEC. 3.25
- IP — INLET PROTECTION, SPEC. 3.07
- OP — CULVERT OUTLET PROTECTION, SPEC. 3.18
- CIP — CULVERT INLET PROTECTION, SPEC. 3.08
- X — X — SF — SILT FENCE, SPEC. 3.05-2
- XX — XX — SSF — SUPER SILT FENCE, SPEC. 3.05-2
- TP — TREE PROTECTION FENCING, SPEC. 3.38
- RP — RP — RP — ROOT PRUNING, SPEC. 3.38
- OF — ORANGE SAFETY FENCE, SPEC. 3.01-A
- DD — DIVERSION DIKE, SPEC. 3.09
- RWD — RIGHT-OF-WAY DIVERSION DIKE, SPEC. 3.11
- ST — SEDIMENT TRAP, SPEC. 2-11
- CD — ROCK CHECK DAM, SPEC. 3.20
- POST DEVELOPMENT DRAINAGE DIVIDES
- PRE DEVELOPMENT DRAINAGE DIVIDES
- CRITICAL SLOPE

ABBREVIATIONS

A/C	AIR CONDITIONER
APPROX	APPROXIMATE
BC	BOTTOM OF CURB
BLDG	BUILDING
BR	BOTTOM OF RAMP
C&G	CURB & GUTTER
CI	CAST IRON PIPE
CLR	CLEARANCE
C/O	CLEANOUT
COMM	COMMUNICATION
CONC	CONCRETE
CONSTR	CONSTRUCTION
Cu	COPPER
CMP	CORRUGATED METAL PIPE
CPP	CORRUGATED PLASTIC PIPE
DEP	DEPRESSED CURB
DIP	DUCTILE IRON PIPE
ESMT	EASEMENT
EP	EDGE OF PAVEMENT
EL	ELEVATION
EV	ELECTRIC VEHICLE
EX	EXISTING
FC	FACE OF CURB
FF	FINISH FLOOR ELEVATION
FH	FIRE HYDRANT
FL	FLOWLINE
FM	FORCE MAIN
GRD	GRADE
HDCO	HEAVY DUTY CLEANOUT
HW	HEADWATER
HP	HIGH POINT
H/EV	HYBRID/ELECTRIC VEHICLE
IPF	IRON PIPE FOUND
IRF	IRON ROD FOUND
INV	INVERT
LOD	LIMIT OF DISTURBANCE
LOW	LIMIT OF WORK
LP	LOW POINT
MH	MANHOLE
MAX	MAXIMUM
MIN	MINIMUM
O/W	OBSERVATION WELL
PVMT	PAVEMENT
PPF	PINCH PIPE FOUND
PROP	PROPOSED
RCP	REINFORCED CONCRETE PIPE
RW	RETAINING WALL
ROW	RIGHT-OF-WAY
SAN SEW	SANITARY SEWER
SAN SEW ESMT	SANITARY SEWER EASEMENT
SHLDR	SHOULDER
SW	SIDEWALK
SNS	STREET NAME SIGN
SS	STOP SIGN
TEMP	TEMPORARY
TBRL	TO BE RELOCATED
TBR	TO BE REMOVED
TC	TOP OF CURB
TR	TOP OF RAMP
TW/BW	TOP/BOTTOM OF WALL
TOP/BOT	TOP/BOTTOM OF FEATURE
UD	UNDERDRAIN
METR	WATER METER
W/L ESMT	WATERLINE EASEMENT
WSEL	WATER SURFACE ELEVATION
WM	WATERMAIN
YR	YEAR

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

LEGEND AND ABBREVIATIONS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C1.010

ARLINGTON
VIRGINIA

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AND RECREATION

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ITB #23-DPR-ITBPW-450

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Project Name and Location

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FINAL PLAN

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ARLINGTON, VIRGINIA

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COMMONWEALTH OF VIRGINIA
JASON JAAR
Lic. No. 051113
PROFESSIONAL ENGINEER

Sheet
C1.010

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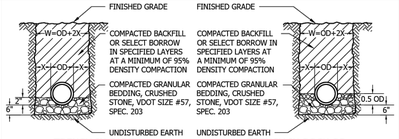


TABLE 3

PIPE SIZE	X
12" & LESS	**
12" - 30"	12"
33" - 42"	15"
48" & LARGER	18"

** TRENCH WIDTH (W) SHALL BE 3'-0" MAX.

WIDTH OF TRENCH (W) = OD+2X WHERE X IS DISTANCE FROM OUTSIDE OF PIPE TO EDGE OF TRENCH

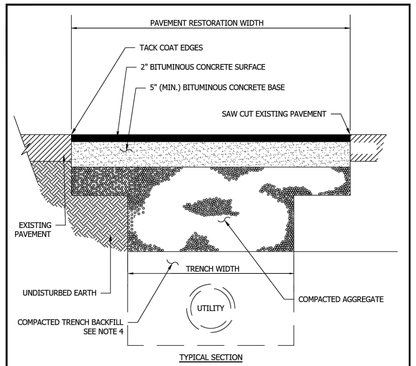
NOTES:
1. CONCRETE FOR CRADLES AND ENCASEMENTS TO HAVE f'c = 3,000 PSI AT 28 DAYS.
2. POUR CONCRETE AGAINST UNDISTURBED EARTH.
3. FOR CONTINUOUS CONDUIT IN TRENCH CONDITIONS THE WIDTH OF TRENCH (W) SHALL BE OD+2X (MAX.).
4. THE WIDTH OF TRENCH FOR ALL OTHER PIPE DIAMETERS SHALL BE ACCORDING TO TABLE 3.
5. FOR PAVEMENT RESTORATION SEE M-6.0.

PIPE AND BEDDING DETAILS FOR TRENCH CONDITIONS

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

ISSUED 9/14/2020

DRAWING NO. **M-3.0**



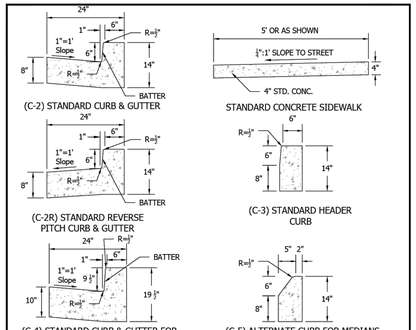
NOTES:
1. WHEN THE DISTANCE FROM THE EDGE OF EXISTING PAVEMENT TO THE EDGE OF THE PAVEMENT RESTORATION PAYMENT WIDTH IS 3' OR LESS THEN THE ADDITIONAL PAVEMENT SHALL BE REMOVED AND REPLACED BACK TO THE EDGE.
2. THICKNESS OF BASE MAY BE REDUCED TO 3" WHEN PATCH IS BEING MADE IN PAVEMENTS OF SURFACE TREATED GRAVEL, AND DIRECTED BY THE PROJECT OFFICER.
3. WHEN WIDENING OR PATCHING A STREET WITH ASPHALT, A NEAT, CLEAN JOINT OF AT LEAST ONE (1) INCH IN DEPTH BETWEEN OLD AND NEW PAVEMENT SHALL BE PROVIDED FOR TOPPING SO AS TO ELIMINATE THE NEED FOR FEATHERING OF THE OVERLAY.
4. FOR TRENCH AND BEDDING DETAILS, SEE DRAWING No. M-3.0.

STANDARD PAVEMENT RESTORATION FOR UTILITY CUTS

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

ISSUED 9/14/2020

DRAWING NO. **M-6.0**



NOTES:
1. SECTION C-3 IS TO BE USED ONLY WITH RIGID TYPE PAVEMENT UNLESS OTHERWISE DIRECTED IN WRITING OR WHEN SHOWN ON APPROVED PLANS.
2. EXPANSION JOINTS IN HEADER CURB AND STANDARD CURB AND GUTTER SHALL BE 40' APART OR AT EXPANSION JOINTS IN CONCRETE PAVEMENT.
3. EXPANSION JOINTS MAY BE OMITTED IF 1/8" JOINTS ARE PLACED EVERY 10' OF LESS
4. EXPANSION JOINTS IN THE SIDEWALK SHALL BE 40' APART. IF ADJACENT TO CONCRETE CURB, EXPANSION JOINTS SHALL MATCH JOINT OF CURB. AN EXPANSION JOINT SHALL BE PLACED BETWEEN CURB AND SIDEWALK.
5. SEE DRAWING R-2.2 FOR DETAIL OF SIDEWALK STRESS COLUMN TO BE PLACED UNDER SIDEWALK WHEN PLACED ADJACENT TO BACK OF CURB.
6. SEE ARLINGTON COUNTY SPECIFICATION SECTIONS 02611 AND 03100 FOR MATERIAL SPECS.
7. PROVIDE 6" MINIMUM AGGREGATE BASE HAVING CBR-30 UNDER CURB AND GUTTER.
8. PROVIDE 3" MINIMUM AGGREGATE BASE HAVING CBR-30 UNDER SIDEWALK
9. WHENEVER CURB ABUTTS RIGID PAVEMENT, PROVIDE LONGITUDINAL JOINT PER VDOT PR-2.
10. SECTION C-5 TO BE USED WHEN BICYCLE LANE RUNS ALONG A MEDIAN.

CONCRETE CURB & GUTTER AND SIDEWALK

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

ISSUED 9/14/2020

DRAWING NO. **R-2.0**

ARLINGTON COUNTY, VIRGINIA
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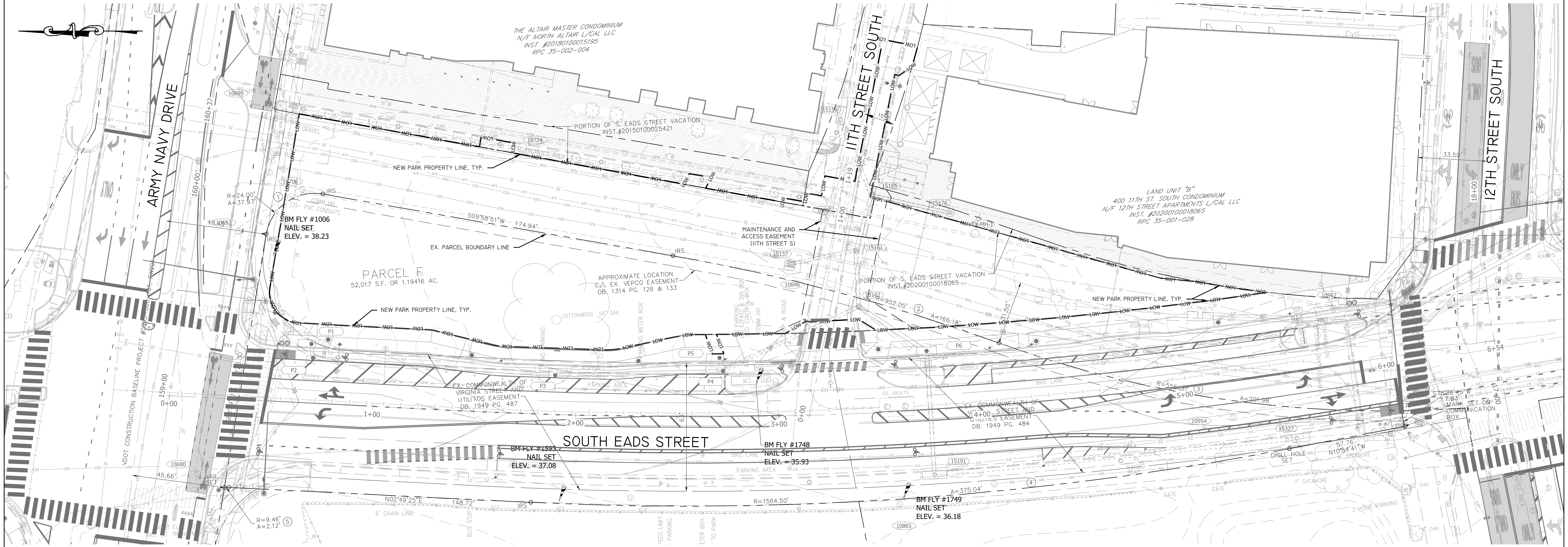

EXISTING CONDITIONS

SCALE: 1" = 25'

BENCHMARK TABLE				
BM #	Northing	Easting	Elevation	TYPE
1006	7001190.3660	11894604.6587	38.23	NAIL SET
1593	7001049.8315	11894483.8268	37.08	NAIL SET
1748	7000952.8368	11894541.5597	35.93	NAIL SET
1749	7000880.2594	11894485.3244	36.18	NAIL SET

GENERAL SURVEY NOTES:

1. THIS TOPOGRAPHIC AND BOUNDARY SURVEY WAS COMPLETED BY JEFF WARNER LAND SURVEYING, INC. AS FIELD-RUN GROUND SURVEY; THE IMAGE AND/OR ORIGINAL DATA WAS OBTAINED FROM 10/2021 TO 11/2021; AND THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.
2. HORIZONTAL DATUM: VIRGINIA COORDINATE SYSTEM 1983.
3. VERTICAL DATUM: NORTH AMERICA VERTICAL DATUM 1988.
4. CONTOUR INTERVAL: 1'

STORM STRUCTURE TABLE

Structure #	Data
15137	VDOT DI-2A TOP = 34.46 INV. OUT = 31.56 (15" RCP) TO 15161
15158	CB-2 TOP = 34.99 INV. OUT = 31.05 (18" RCP) TO 15165
15161	EX MH TOP = 35.34 INV. IN = 29.82 (15" RCP) FROM 15137 INV. IN = 29.94 (18" RCP) FROM 15165 INV. OUT = 22.45 (18" RCP) TO 15162
15162	EX MH TOP = 35.87 INV. IN = 30.87 (15" RCP) FROM P4 INV. IN = 22.15 (18" RCP) FROM 15161 INV. OUT = 22.15 (18" CL. IV RCP) TO P6
15165	EX MH TOP = 35.43 INV. IN = 31.38 (18" RCP) FROM 15158 INV. IN = 31.41 (8" PVC) FROM 15189 INV. IN = 32.59 (15" RCP) FROM 15176 INV. OUT = 31.02 (18" RCP) TO 15161
15176	EX MH TOP = 36.90 INV. OUT = 33.18 (15" RCP) TO 15165
15189	EX MH TOP = 36.12 INV. OUT = 32.04 (8" PVC) TO 15165
15191	VDOT DI-2 L-12' TOP = 35.59 INV. IN = 21.93 (18" RCP) FROM 15 INV. OUT = 21.77 (18" RCP) TO 15327
15327	VDOT DI-2 L-15' TOP = 36.22 INV. IN = 20.72 (18" RCP) FROM 15191
15374	CB-2 TOP = 32.44
*P1	STD ARL PCB-2 L-8' TOP = 38.11 INV. OUT = 34.49 (15" CL. III RCP) TO P2
*P2	STD ARL MH-1 TOP = 37.73 INV. IN = 34.42 (15" CL. III RCP) FROM P1 INV. OUT = 34.32 (15" CL. III RCP) TO P3
*P3	STD ARL MH-1 TOP = 36.17 INV. IN = 33.13 (15" CL. III RCP) FROM P2 INV. OUT = 33.03 (15" CL. III RCP) TO P4
*P4	STD ARL MH-1 TOP = 35.74 INV. IN = 32.21 (15" CL. III RCP) FROM P3 INV. IN = 32.21 (15" CL. III RCP) FROM P5 INV. OUT = 32.11 (15" RCP) TO 15162
*P5	STD ARL PCB-2 L-8' TOP = 36.09 INV. OUT = 32.24 (15" CL. III RCP) TO P4
*P6	STD ARL PCB-2 L-10' TOP = 35.42 INV. IN = 22.05 (18" CL. IV RCP) FROM 15162 INV. OUT = 22.05 (18" CL. IV RCP) TO 15

NOTE: STRUCTURES INDICATED WITH "*" ARE TO BE CONSTRUCTED AS PART OF SOUTH EADS CC13 ROADWAY IMPROVEMENTS PROJECT

SANITARY SEWER STRUCTURE TABLE

Structure #	Data
10680	TOP = 38.77 (UNABLE TO ACCESS)
10692	TOP = 38.39 C/L INV. = 31.81 (36") FROM 10680 C/L INV. = 31.81 (36") FROM 10706
10699	TOP = 38.20 (UNABLE TO ACCESS)
10706	TOP = 37.97 C/L INV. = 31.66 (36") FROM 10692 C/L INV. = 31.66 (36") FROM 10846
10774	TOP = 39.55 (UNABLE TO ACCESS)
10846	STRUCTURE DOES NOT EXIST PER DES RECORDS. LOCATION SHOWN FOR INFORMATION ONLY.
10856	TOP = 35.33 C/L INV. = 25.18 (8") FROM 10774 C/L INV. = 26.37 (8") FROM C/L INV. = 25.16 (8") FROM EX-MH-1
10865	TOP = 36.87 (UNABLE TO ACCESS)
10954	TOP = 35.96 (UNABLE TO ACCESS)
10962	TOP = 37.21 C/L INV. = 21.98 (8") FROM EX-MH-1 C/L INV. = 21.72 (8") FROM
10999	TOP = 36.35 (UNABLE TO ACCESS)
EX-MH-1	TOP = UNKNOWN (UNABLE TO ACCESS)

GRAPHIC SCALE
1" = 25'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

EXISTING CONDITIONS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C3.000

ARLINGTON VIRGINIA

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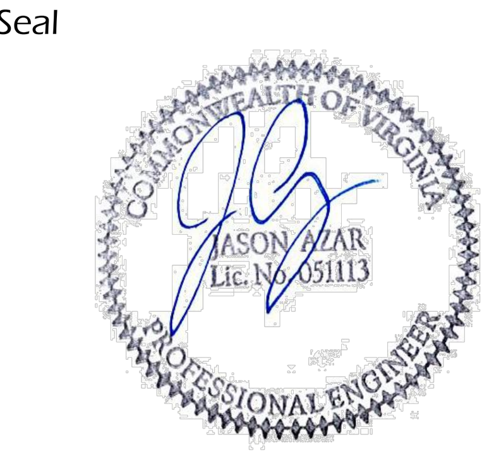

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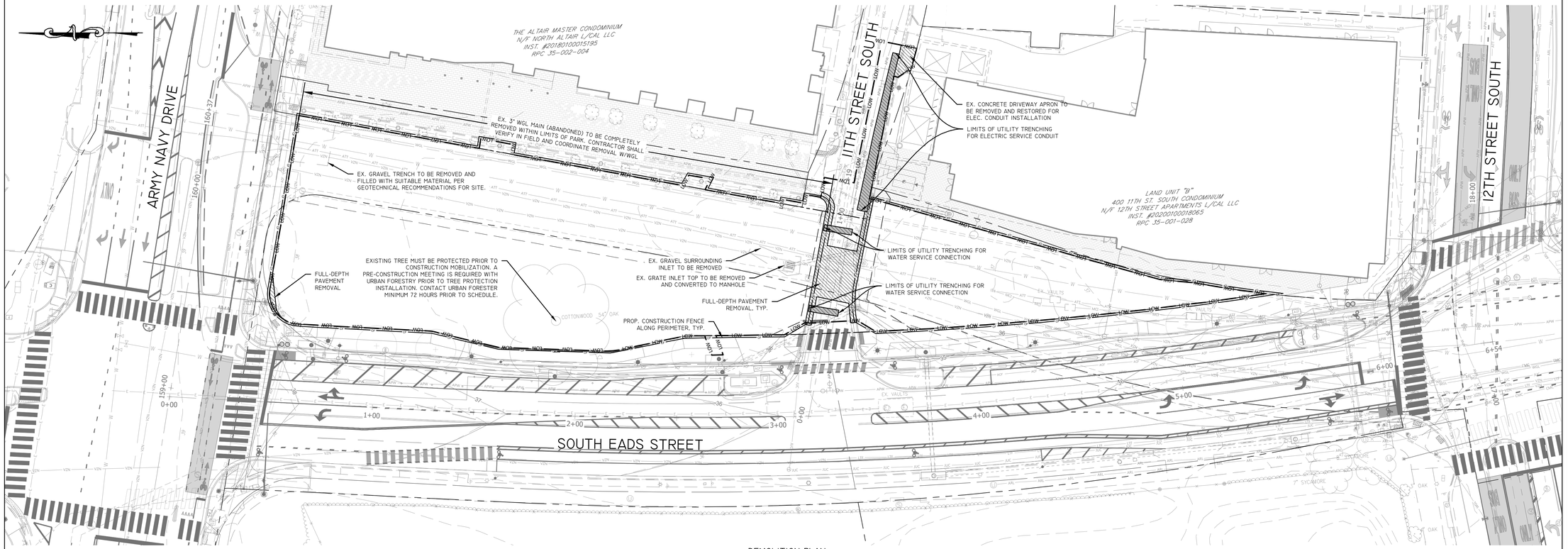

DEMOLITION PLAN
SCALE: 1" = 25'

DEMOLITION LEGEND

- FULL-DEPTH PAVEMENT REMOVAL
- FULL-DEPTH PAVEMENT REMOVAL (UTILITY TRENCHING)
- LOW — LIMITS OF WORK
- CF — CONSTRUCTION FENCE

GENERAL NOTES:

1. AREAS OF DEMOLITION ARE APPROXIMATE PER FIELD CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EXISTING SITE CONDITIONS AND CLEARING THE SITE OF ALL ITEMS TO BE REMOVED WITHIN THE LIMITS OF WORK FOR THE CONSTRUCTION OF PROPOSED IMPROVEMENTS.
2. ALL PAVEMENT REMOVAL INDICATED SHALL BE FULL DEPTH (CURB AND GUTTER, ASPHALT PAVEMENT, CONCRETE PAVEMENT INCLUDING SUBBASE MATERIAL) PER ARL. CO. STANDARDS AND SPECIFICATIONS.
3. EXISTING ASPHALT PAVEMENT TO BE REMOVED SHALL BE SAW-CUT AT LIMITS SHOWN AND SHALL BE STRAIGHT - NO JAGGED EDGES.
4. EXISTING CONCRETE PAVEMENT SHALL BE REMOVED TO THE NEAREST JOINT.
5. EXISTING ITEMS NOT INDICATED FOR REMOVAL ARE TO BE PROTECTED AND PRESERVED UNLESS OTHERWISE NOTED. EXISTING ITEMS DAMAGED DURING CONSTRUCTION OUTSIDE SCOPE OF PROJECT SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE (INCLUDING BUT NOT LIMITED TO PAVEMENT, UTILITIES, SIGNS, LIGHTING, ETC.).
6. ALL EXISTING STRIPING REMOVED AS A RESULT OF PROPOSED WORK SHALL BE REPLACED IN-KIND UNLESS OTHERWISE NOTED.
7. ALL PROPOSED UTILITY TRENCHING AND PAVEMENT RESTORATION WITHIN ROADWAY LIMITS SHALL BE IN ACCORDANCE WITH ARL. CO. STD. M-6.0.
8. ALL TREE PROTECTION MEASURES MUST BE IN PLACE PRIOR TO CONSTRUCTION MOBILIZATION. A PRE-CONSTRUCTION MEETING IS REQUIRED WITH URBAN FORESTRY PRIOR TO TREE PROTECTION INSTALLATION. CONTACT URBAN FORESTER MINIMUM 72 HOURS PRIOR TO SCHEDULE. REFER TO TREE PROTECTION PLANS AND DETAILS FOR MORE INFORMATION.
9. PRIOR TO START OF DEMOLITION PHASE, CONSTRUCTION FENCING MUST BE INSTALLED AS SHOWN AND REMAIN IN PLACE FOR DURATION OF PROJECT.

25' 12.5' 0 25' 50
GRAPHIC SCALE
1" = 25'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

DEMOLITION PLAN
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
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JASON J. ZIAR
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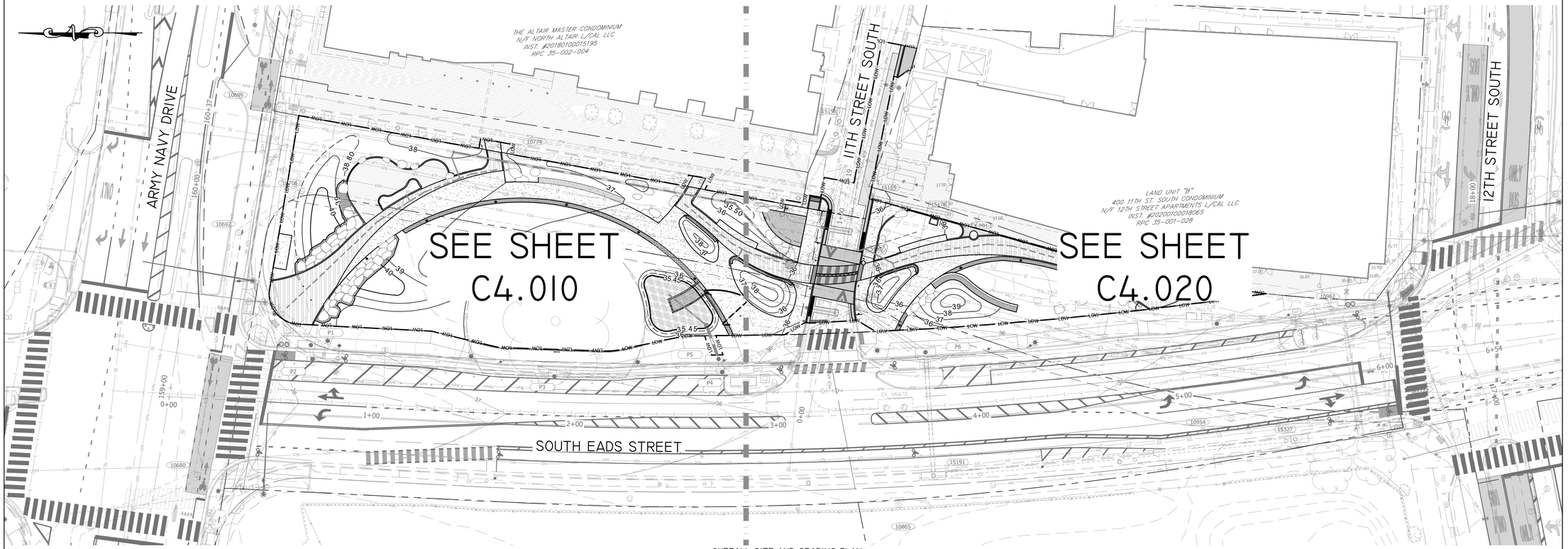

OVERALL SITE AND GRADING PLAN
SCALE: 1" = 25'

GENERAL NOTES:
1. ALL TRANSITIONS BETWEEN PROPOSED PAVEMENT TYPES SHALL BE FLUSH, UNLESS OTHERWISE NOTED.
2. ALL PROPOSED PAVEMENT (INCLUDING MILL AND OVERLAY) SHALL BE FLUSH WITH EXISTING PAVEMENT.
3. REFER TO LANDSCAPE PLAN SHEETS L101-L102, L312 FOR ALL CURB TYPES, LOCATIONS, AND DETAILS WITHIN PROPOSED PARK.
4. LIMITS OF WORK SHOWN REFLECT EXTENTS OF ARLINGTON JUNCTION PARK PROJECT CONSTRUCTION. ADJACENT CC13 (S EADS ROADWAY IMPROVEMENTS PROJECT), LCOR DEVELOPMENT, AND CP01 (ARMY NAVY DRIVE IMPROVEMENTS PROJECT) ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING PARK CONSTRUCTION WITH ALL ONGOING CONCURRENT PROJECTS IN THE AREA.
5. SPOT ELEVATIONS INDICATED AS "TC" (TOP OF CURB) REFER TO FLUSH CURB CONDITION ADJACENT TO PAVEMENT SURFACES - REFER TO LANDSCAPE DETAILS FOR CONDITIONS OUTSIDE OF PAVEMENT AREAS.

ADA GRADING NOTES:
1. ALL PROPOSED WALKING SURFACES SHALL BE CONSTRUCTED TO COMPLY WITH LATEST ADA STANDARDS AND FEDERAL GUIDELINES.
2. MEASUREMENT OF SLOPES FOR ALL ADA-COMPLIANT SURFACES SHALL BE PERFORMED WITH A 2' DIGITAL LEVEL.
3. ALL WALKWAYS SHALL BE CONSTRUCTED WITH A 4.5% MAX. LONGITUDINAL SLOPE AND 1.5% TRANSVERSE SLOPE (UNLESS OTHERWISE INDICATED).
4. LANDINGS WITH A MAX. CROSS SLOPE OF 1.5% IN ALL DIRECTIONS SHALL BE PROVIDED AT ALL CHANGES IN WALKWAY DIRECTION OR AT VARIOUS COMPLIANT FEATURES AND AREAS (REFER TO GRADES AND SLOPES SHOWN ON PLAN).
5. ALL CURB RAMPS SHALL NOT EXCEED 8.3% SLOPE.

25' 12.5' 0 25' 50'
GRAPHIC SCALE
1" = 25'

ARLINGTON COUNTY, VIRGINIA
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OVERALL SITE AND GRADING PLAN
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C4.000

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION
Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location
ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title
OVERALL SITE AND GRADING PLAN

Approval Date

Design Supervisor

Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: ME
Drawn: ME
Checked: JA

Filename:
Plotted:

Scale: AS SHOWN
Date: July 21, 2023

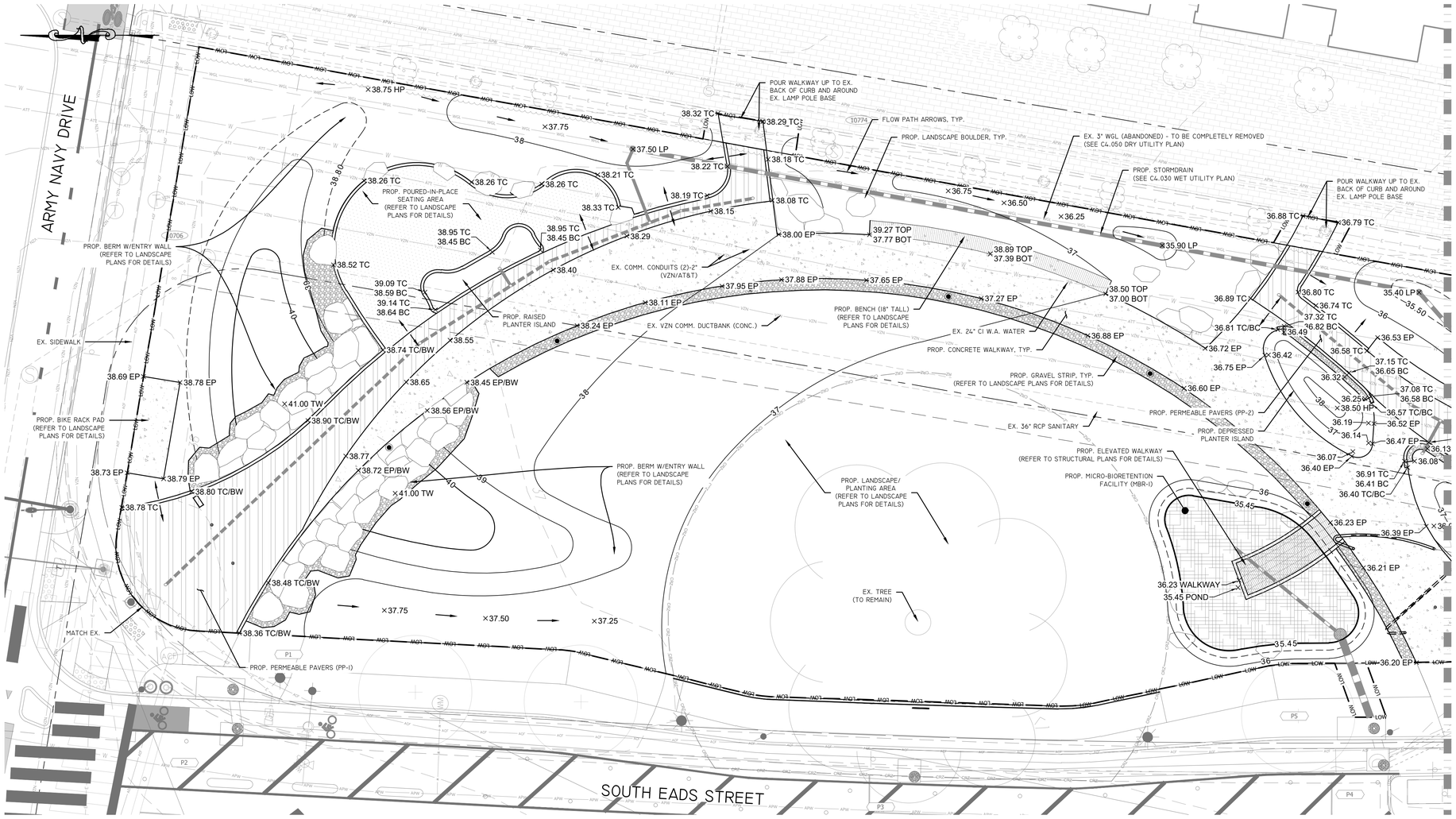
Seal

COMMONWEALTH OF VIRGINIA
JASON AZAR
Lic. No. 051113
PROFESSIONAL ENGINEER

Sheet
C4.000

Path: J:\145.005 - S. Eads St DPR\CAD\DWG\

Filename: C4.000 - SITE AND GRADING PLAN.dwg



SITE AND GRADING PLAN
SCALE: 1" = 10'

MATCH LINE - SEE SHEET C4.020 SITE AND GRADING PLAN

10' 5' 0 10' 20'
GRAPHIC SCALE
1" = 10'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

SITE AND GRADING PLAN
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C4.010

ARLINGTON
VIRGINIA

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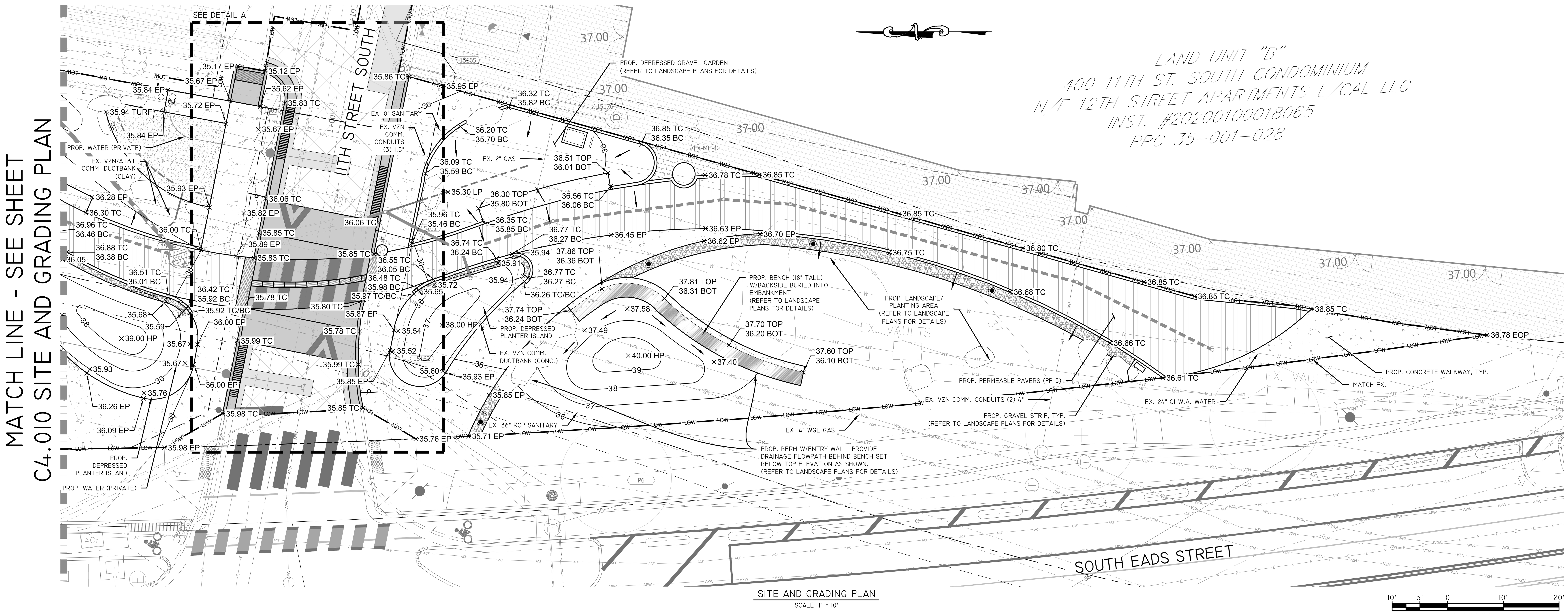

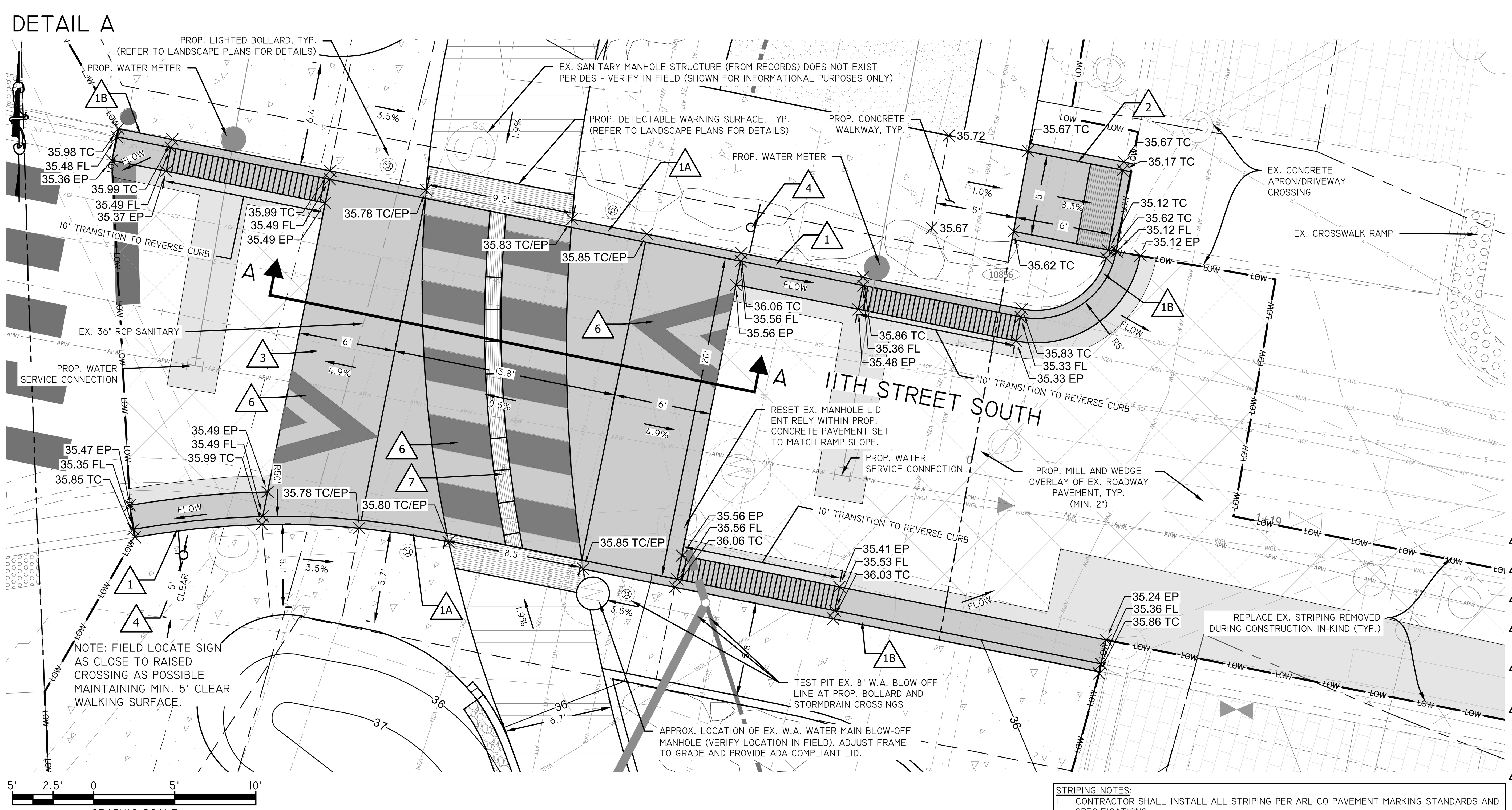

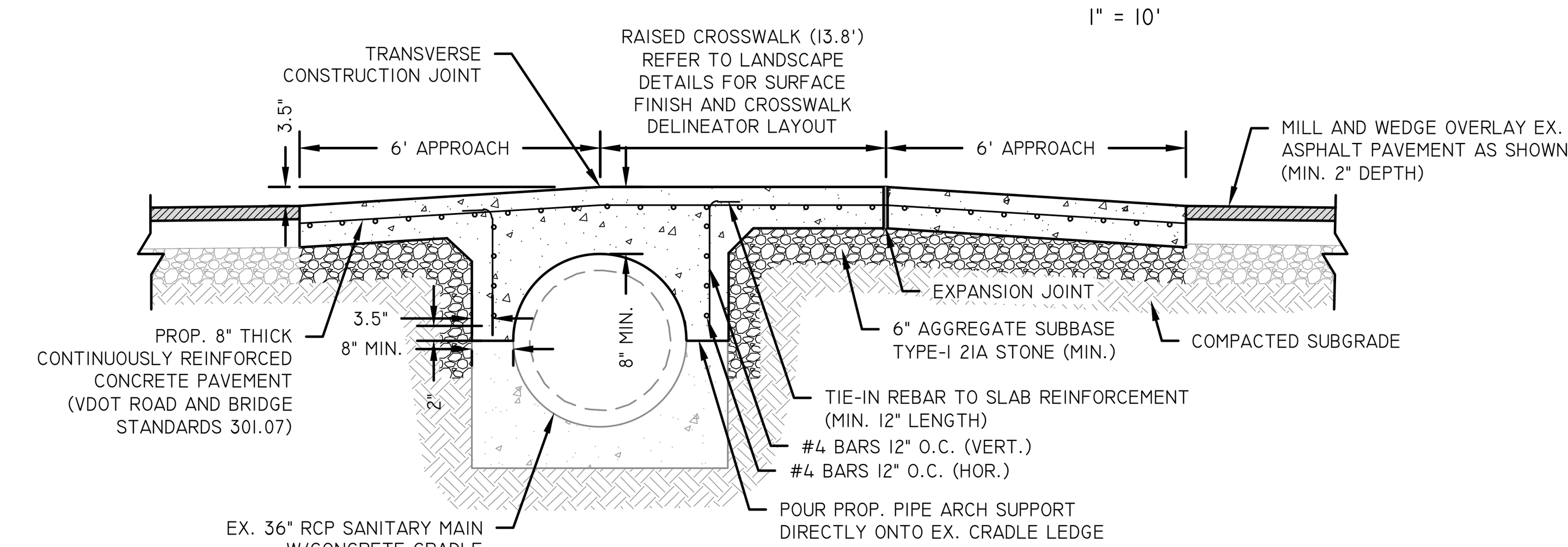

GENERAL NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EX. SANITARY MAIN PIPE CONDITION, DEPTH, AND LOCATION PRIOR TO CONSTRUCTION AND NOTIFY THE COUNTY REPRESENTATIVE OF ANY DEFICIENCIES AND DISCREPANCIES IMMEDIATELY.
2. ALL WORK SHALL BE PERFORMED PER LATEST ARLINGTON COUNTY AND VDOT STANDARDS AND SPECIFICATIONS FOR MATERIALS AND CONSTRUCTION.
3. CONTRACTOR SHALL REFER TO LANDSCAPE PLANS AND DETAILS FOR CROSSWALK MATERIALS, DETAILS, AND DESIGN.
4. PROPOSED SECTION A-A IS ILLUSTRATIVELY OF THE TYPICAL CONDITION AT THE RAISED CROSSWALK RAMP, BUT VARIES BASED ON LOCATION ALONG EX. SANITARY MAIN.
5. LONGITUDINAL JOINT WITH DOWELS SHALL BE PROVIDED ALONG RAISED CROSSWALK EDGE WHERE ABUTTING PROPOSED CURB PER VDOT PR-2.

1 SECTION A-A
SCALE: NTS

STRIPING NOTES:

1. CONTRACTOR SHALL INSTALL ALL STRIPING PER ARL CO PAVEMENT MARKING STANDARDS AND SPECIFICATIONS.
2. ALL STRIPING SHALL BE REFLECTIVE THERMOPLASTIC.
3. ALL STRIPING ON RAISED CONCRETE CROSSWALK SPEED TABLE SHALL HAVE BLACK CONTRAST MARKING TAPE UNDERLAY APPLIED (OUTLINE CONTRAST).

CONSTRUCTION NOTES

- 1 PROP CURB AND GUTTER (C-2) ARL STD (R-2.0)
- 1A PROP HEADER CURB (C-3) ARL STD (R-2.0)
- 1B PROP REVERSE PITCH CURB & GUTTER (C2-R) ARL STD (R-2.0)
- 2 PROP MODIFIED RAMP (CG-12A) VDOT ROAD & BRIDGE STANDARDS (204.02)
- 3 PROP MODIFIED 3.5" RAISED MID-BLOCK CROSSWALK ARL STD (VSC-4.0) W/STAMPED CONCRETE PATTERN (SEE MODIFIED DETAILED SECTION THIS SHEET)
- 4 PROP MID-BLOCK UNCONTROLLED CROSSWALK SIGN (W11-2 - 36"X36", W16-7P - 24"X12") PER ARL CO PAVEMENT MARKING SPECIFICATIONS DETAIL (MK-4). SIGN POST (TYPE A) SHALL BE INSTALLED PER ARL CO STANDARDS AND SPECIFICATIONS.
- 5 PROP FULL-DEPTH ASPHALT REPLACEMENT ARL STD (M-6.0)
- 6 PROP RAISED CROSSWALK SPEED TABLE PAVEMENT MARKING PER ARL CO PAVEMENT MARKING SPECIFICATIONS DETAILS (M-1A/MK-4A)
- 7 PROP 1'-WIDE GAP IN CROSSWALK STRIPING FOR WAYFINDING STRIP (REFER TO LANDSCAPE DETAILS)

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

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1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C4.020

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FINAL PLAN

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ARLINGTON, VIRGINIA

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COMMONWEALTH OF VIRGINIA
JASON AZAR
Lic. No. 051113
PROFESSIONAL ENGINEER

Sheet
C4.020

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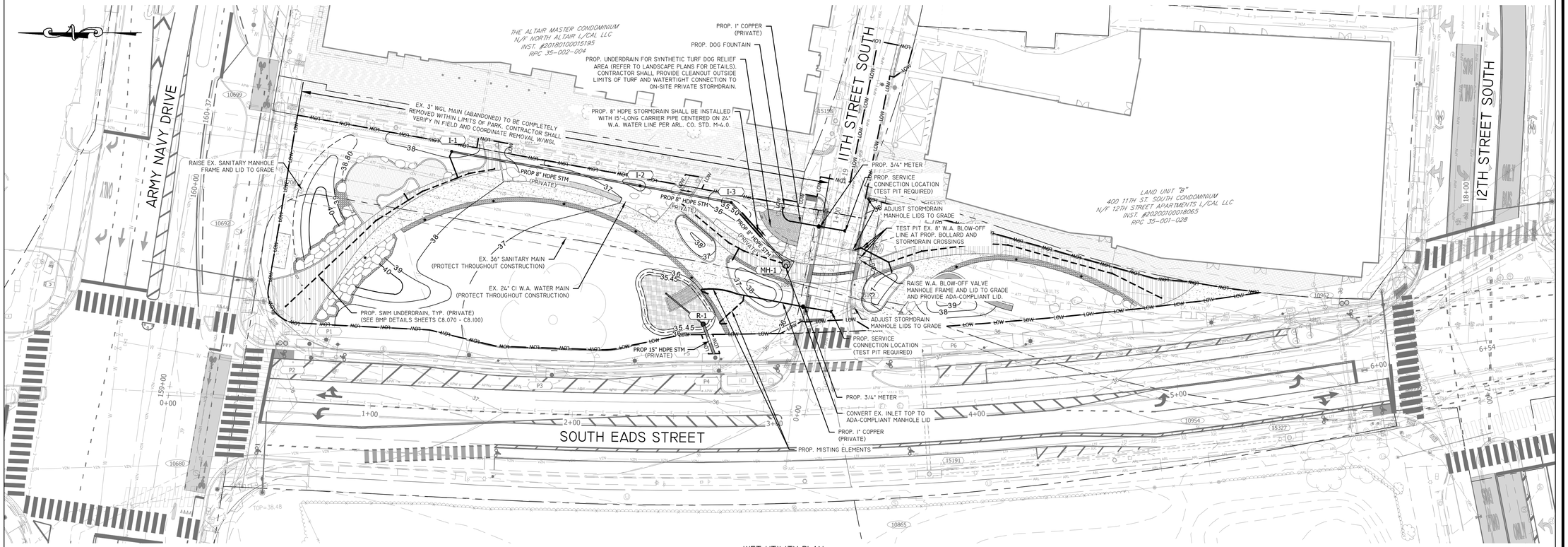

WET UTILITY PLAN
SCALE: 1" = 25'

Local Review Program – Project Report - *Revised June 20, 2018*

Project Name:		Arlington Junction Park			
Building Type:		N/A			
Office		N/A	sq. ft.		
Retail		N/A	sq. ft.		
Residential		N/A	number of units		
Hotel		N/A	number of units		
Other (type):	Park	N/A	sq. ft.		
Water Main					
New pipe information (excluding Fireline length)					
Length of water main by size			Size:	Length:	
			Size:	Length:	
			Size:	Length:	
New Fire Hydrants			Number:		
Blow-offs			Number:		
Abandoned pipe and appurtenance information					
Length of water main by size			Size:	Length:	
			Size:	Length:	
			Size:	Length:	
Fire Hydrants			Number:		
Blow-offs			Number:		
Water Meters and Connections					
Residential (sfd)			Number:	Size:	
Multi-family			Number:	Size:	
Commercial			Number:	Size:	
Institutional			Number: 2	Size:	3/4"
Industrial			Number:	Size:	
Irrigation			Number:	Size:	
Fireline	(Connections)		Number:	Size:	
Other (type):			Number:	Size:	
Sanitary Sewer Main					
New pipe information					
Length of sanitary sewer by size			Size:	Length:	
Number of MHs			Number:		
Abandoned pipe information					
Length of sanitary sewer by size			Size:	Length:	
Number of MHs			Number:		
Interceptor Information					
Type:	Grease		Sand/oil:		
			Both:		
Location:	Inside:		Outside:		
Size:	Size:				
New Bldg:	Yes		No		
Retrofit:	Yes		No		

GENERAL UTILITY NOTES:

1. LOCATION OF ALL UTILITIES SHOWN ARE APPROXIMATE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY AND DETERMINE THE EXACT LOCATION AND DEPTH OF ALL UTILITIES WITHIN THE LIMIT OF WORK PRIOR TO COMMENCING WORK. REPORT ANY DISCREPANCY TO THE PROJECT OFFICER. THE CONTRACTOR SHALL CONTACT MISS UTILITY AT 811 A MINIMUM OF 72 HOURS PRIOR TO ANY EXCAVATION TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES.
2. ALL NEW UTILITY AND SITE DRAINAGE SYSTEMS SHALL BE TESTED IN THE PRESENCE OF THE PROJECT OFFICER PRIOR TO THE INSTALLATION OF BACKFILL MATERIAL.
3. FIELD VERIFY AND COORDINATE ALL PROPOSED LOCATIONS FOR EQUIPMENT, PIPE RUNS, AND SLOPES WITH EXISTING CONDITIONS PIOR TO BEGINNING NEW WORK AS SHOWN. CONTRACTOR TO SLOPE PIPES APPROPRIATELY TO ENSURE POSITIVE DRAINAGE.
4. THERE SHALL BE NO IMPACT ON EXISTING SEWER OR WATER LINES.

WASHINGTON AQUEDUCT (W.A.) NOTES:

1. LOCATION OF EXISTING WASHINGTON AQUEDUCT (W.A.) 24" WATER MAIN IS PER AVAILABLE RECORDS AND LIMITED UTILITY LOCATING WITHIN PARK PROPERTY. CONTRACTOR SHALL VERIFY LOCATION IN FIELD PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL BE REQUIRED TO NOTIFY W.A. A MINIMUM 72 HOURS IN ADVANCE TO SCHEDULE A PRE-CONSTRUCTION MEETING ON-SITE WITH THEIR PERSONNEL TO REVIEW THE PROPOSED WORK AND THE EXISTING WATER MAIN. THE CONTRACTOR MUST OPERATE WITH EXTREME CAUTION OVER EXISTING 24" WATER MAIN AND UTILIZE LOW-IMPACT MACHINERY WHEN WORKING WITHIN VICINITY OF MAIN.
3. SHOULD ANY ISSUES ARISE WITH THE MAIN DURING CONSTRUCTION, THE CONTRACTOR MUST CONTACT W.A. IMMEDIATELY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS TO THE MAIN DUE TO ANY DAMAGE THAT ARISES AS A RESULT OF PROPOSED CONSTRUCTION.

ARLINGTON COUNTY W.S.S. NOTES:

1. LOCATION OF EXISTING 36" SANITARY SEWER MAIN IS PER AVAILABLE RECORDS AND LIMITED UTILITY LOCATING WITHIN PARK PROPERTY. CONTRACTOR SHALL VERIFY LOCATION IN FIELD PRIOR TO CONSTRUCTION. LIMITED TEST PIT DATA INDICATES EXTREMELY SHALLOW BURIAL DEPTH ALONG A PORTION OF ALIGNMENT THROUGH PARK.
2. THE CONTRACTOR SHALL BE REQUIRED TO NOTIFY W.S.S. A MINIMUM 72 HOURS IN ADVANCE TO SCHEDULE A PRE-CONSTRUCTION MEETING ON-SITE WITH THEIR PERSONNEL TO REVIEW THE PROPOSED WORK AND THE EXISTING SANITARY SEWER MAIN. THE CONTRACTOR MUST OPERATE WITH EXTREME CAUTION OVER EXISTING 36" SANITARY SEWER MAIN AND UTILIZE LOW-IMPACT MACHINERY WHEN WORKING WITHIN VICINITY OF MAIN.
3. SHOULD ANY ISSUES ARISE WITH THE MAIN DURING CONSTRUCTION, THE CONTRACTOR MUST CONTACT W.S.S. IMMEDIATELY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS TO THE MAIN DUE TO ANY DAMAGE THAT ARISES AS A RESULT OF PROPOSED CONSTRUCTION.

LEGEND

	PROPERTY LINES	TC	TRAFFIC CONTROL BOX
	RIGHT OF WAY		TRAFFIC SIGNAL POLE
ARL	FIBER–ARLINGTON CO		LIGHT POLE
ARL	ST. LIGHT–ARLINGTON CO	EJB	ELECTRICAL JUNCTION BOX
ATT	AT&T	E	ELECTRICAL MANHOLE
MCI	MCI		UTILITY POLE
WXN	WXN FIBER		GUY POLE
VZN	VERIZON	G	GAS VALVE
JUC	JONES UTILITY	G	GAS MANHOLE
LTF	FIBER LITE	F	ARL. CO. FIBER HAND HOLE
CMC	COMCAST	P	PHONE MANHOLE
E	DOMINION ELEC ST. LIGHT	CATV	CABLE TELEVISION PEDESTAL
DOM	DOMINION ELEC	UNK	UNKNOWN UTILITY MANHOLE
WGL	WASHINGTON GAS		TREE
APW	WATER–ARL CO PUBLIC WORKS	BOL	BOLLARD
W	WATER–WASHINGTON AQUEDUCT		SIGN POST
APW	SEWER–ARL CO PUBLIC WORKS		WOOD POST
	SEWER	CO	SANITARY CLEANOUT
	STORM DRAIN CONDUIT	S	SANITARY MANHOLE
	FENCE LINE	FDC	FIRE DEPARTMENT CONNECTION
	EDGE OF PAVEMENT		FIRE HYDRANT
	PROP. STORM SEWER	W	WATER METER
	PROP. WATER LINE	W	WATER MANHOLE
		W	WATER VALVE
		I	INLETS
			CURB INLET
		SD	STORM DRAIN MANHOLE

25' 12.5' 0 25' 50'
GRAPHIC SCALE
1" = 25'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

WET UTILITY PLAN
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C4.030

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION
Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

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Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

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WET UTILITY PLAN

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COMMONWEALTH OF VIRGINIA
JASON GIZAR
Lic. No. 051113
PROFESSIONAL ENGINEER

Sheet

C4.030

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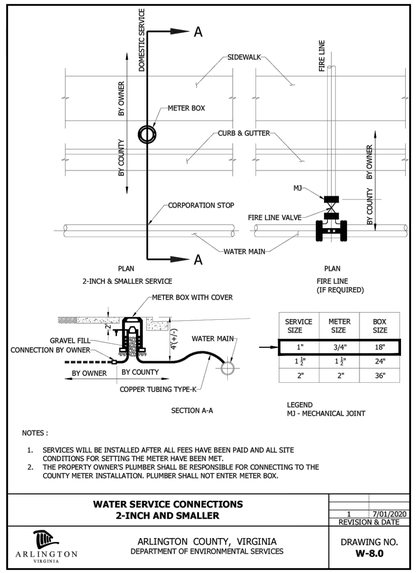


SERVICE SIZE	METER SIZE	BOX SIZE
1"	3/4"	18"
1 1/2"	1 1/2"	24"
2"	2"	36"

NOTES :

1. SERVICES WILL BE INSTALLED AFTER ALL FEES HAVE BEEN PAID AND ALL SITE CONDITIONS FOR SETTING THE METER HAVE BEEN MET.
2. THE PROPERTY OWNER'S PLUMBER SHALL BE RESPONSIBLE FOR CONNECTING TO THE COUNTY METER INSTALLATION. PLUMBER SHALL NOT ENTER METER BOX.

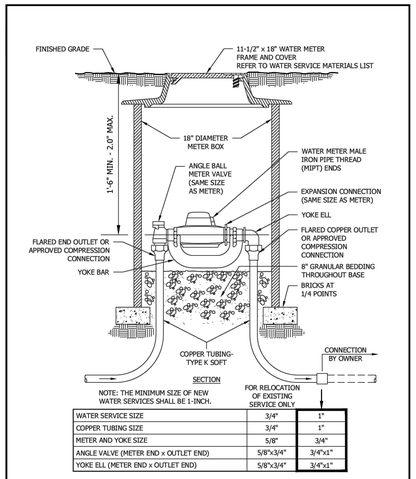
WATER SERVICE CONNECTIONS
2-INCH AND SMALLER

1 7/01/2020
REVISION & DATE

ARLINGTON VIRGINIA

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

DRAWING NO.
W-8.0



WATER SERVICE SIZE	3/4"	1"
COPPER TUBING SIZE	3/4"	1"
METER AND YOKE SIZE	5/8"	3/4"
ANGLE VALVE (METER END x OUTLET END)	5/8"x3/4"	3/4"x1"
YOKE ELL (METER END x OUTLET END)	5/8"x3/4"	3/4"x1"

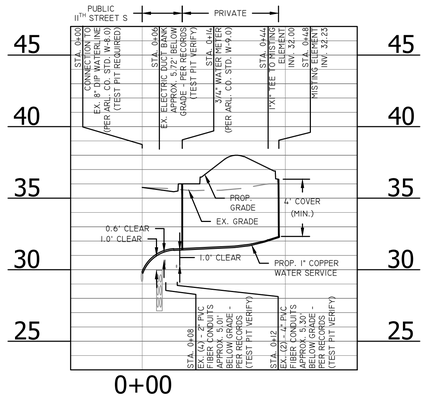
WATER METER INSTALLATION
¾-INCH AND 1-INCH SERVICE

ISSUED 9/14/2020

ARLINGTON VIRGINIA

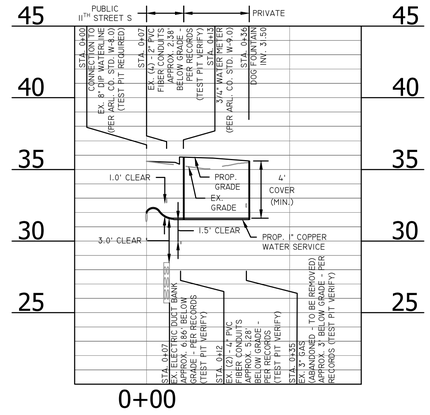
ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

DRAWING NO.
W-9.0



1" SERVICE CONNECTION TO MISTING ELEMENT

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 25'



1" SERVICE CONNECTION TO DOG FOUNTAIN

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 25'

5' 2.5' 0 5' 10'
VERTICAL GRAPHIC SCALE
1" = 5'

25' 12.5' 0 25' 50'
HORIZONTAL GRAPHIC SCALE
1" = 25'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

WET UTILITY PROFILES
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET C4.040	

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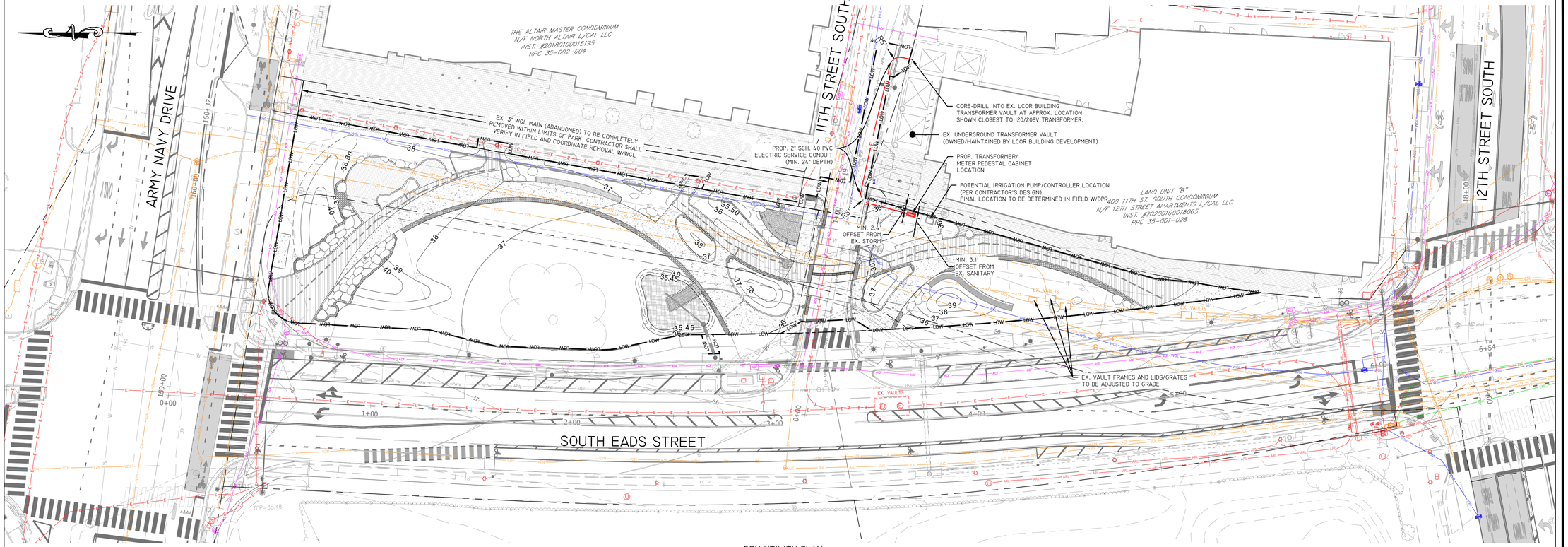


DRY UTILITY PLAN
SCALE: 1" = 25'

LCOR INCORPORATED
7255 WOODMONT AVE | SUITE 225 | BETHESDA, MD 20814
(301) 897-0002 | FAX (301) 897-3713 | WWW.LCOR.COM

November 8, 2022

12th Street Apartments L/Cal LLC
c/o LCOR Inc
7255 Woodmont Ave, Suite 225
Bethesda, MD 20814

Re: DEV Vault Access Authorization for Adjacent Park Work
Property: 480 11th Street S (RPC 35-001-028)

I hereby notify Dominion Energy Virginia that:

I am the owner's authorized representative and authorize Arlington County Government to obtain access to the underground transformer vault located at 480 11th St S. The County and/or its representative (Contractor) is allowed to core drill into the vault and install an electrical service line to the transformer / new meter pedestal, including all related appurtenances, as necessary. The County and/or its representative will perform any repairs to waterproofing of the vault and/or Sage building required resulting from this new vault connection.

The County will coordinate access with LCOR and Dominion Energy prior to installation. Dominion personnel will be present in the vault during the installation by the Contractor.

Sincerely,

Britton Carr — Digitally signed by Britton Carr, Date: 2022.11.08 11:43:21-05'00'

Britton Carr
Sr. Project Manager
12th Street Apartments L/Cal LLC
M – 240-517-2531
E – bcarr@lcor.com

Dominion Commitment/Conceptual Design Acceptance Memo

Instructions:
1. Developer: Affix this memo to each dry utility plan sheet in order to obtain the Dominion supervisor's signature.
2. DEV: Please sign this letter *ONLY* if the Developer has affixed this memo to each Dry Utility Plan sheet.

11/16/22

Mrs. Nicole Blankenship
907 W Glebe Road
Alexandria, VA 22305

Re: Arlington Junction Park#10545036
0 S Eads Street, Arlington, VA

Arlington County Department of Parks and Recreation (DPR) has developed a conceptual dry utility plan (attached) for the referenced project in conjunction with the site civil engineering plan. This dry utility plan dated **11/16/22** considers the installation of a new underground utility system to accommodate the removal of the existing overhead utility wires and, utility poles that are adjacent to the site and/or permanent service to the buildings.

Dominion Energy Virginia (DEV) has completed a conceptual review and accepts the preliminary design of **Arlington Junction Park #10545036** for the installation of conduit and manholes. DEV acknowledges that based on the current existing and projected load information provided, the current and existing capacity on DEV's systems, DEV's current design standards, and other information provided at the time of the DEV conceptual review, **DPR** dry utility plan meets the DEV requirements and commits to utilizing the underground infrastructures for installation of the DEV cable and other necessary facilities to underground the existing overhead utilities and/or provide permanent service to the buildings, if the underground infrastructure and installation meets DEV's requirements. DEV will endeavor to complete their final engineering design plan in a manner that will not result in additional trenching, conduit or any underground type work beyond what is shown on this county accepted dry utility conceptual plan. Should there be a change in any of the following; DEV reserves the right to adjust its design accordingly to assure the operational integrity of its system:

- Conceptual plans submitted
- Existing and planned loads on DEV's system
- DEV's standards of design
- Any other unforeseen changes

Any changes DEV must make to the conceptual dry utility plan will need to be coordinated with the Developer. The Developer will be responsible for submitting to the County a revision to the approved site civil plan. The County approval must be obtained before any Right-of-Way permits may be issued.

Should you have any questions regarding this plan, feel free to contact **Aaron Wohler** at **(703) 228-7928**.

Sincerely,
Aaron Wohler, Project Manager
Arlington County
Department of Parks and Recreation
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
awohler@arlingtonva.us

Dominion Energy Virginia agrees with terms as stated in this letter and accepts this conceptual dry utility plan with the understanding that the plans are subject to change. DEV reserves the right to adjust the plan as needed to meet the operational integrity of its electric distribution system.

Signature: Greg King — Digitally signed by Greg King, Date: 2023.01.06 16:37:34 -05'00' — Date: _____

DEV Project Number: _____

GENERAL DRY UTILITY NOTES:
1. REFER TO ELECTRICAL DRAWINGS FOR METER/ENCLOSURE DETAILS.
2. CONTRACTOR SHALL NOT ENTER OR WORK WITHIN TRANSFORMER VAULT WITHOUT DOMINION PERSONNEL PRESENT.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH LCOR DEVELOPMENT REPRESENTATIVE FOR ACCESS TO TRANSFORMER VAULT FOR PROPOSED WORK.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING BELL ENDS, CABLE SUPPORT RACKS, AND PARGING VAULT WALL AS NECESSARY.
5. 2" SCH. 40 PVC CONDUIT SHALL BE MIN. 24" BELOW GRADE; MIN. 5" HORIZONTAL/1" VERTICAL SEPARATION FROM ALL COUNTY-OWNED WET UTILITIES UNLESS OTHERWISE NOTED AND APPROVED BY COUNTY AS SHOWN.

SITE LIGHTING NOTES:
1. REFER TO LANDSCAPE PLANS FOR SITE LIGHTING PLAN AND FIXTURES. REFER TO ELECTRICAL SITE PLAN FOR ON-SITE LIGHTING WIRING AND DIAGRAMS.
2. ALL PROPOSED PARK LIGHTING FOR INTERIOR OF PARK TO BE MAINTAINED AND PAID FOR BY ARLINGTON COUNTY DEPARTMENT OF PARKS AND RECREATION (DPR).

LEGEND

PROPERTY LINES	TRAFFIC CONTROL BOX
RIGHT OF WAY	TRAFFIC SIGNAL POLE
ACF FIBER–ARLINGTON CO	LIGHT POLE
ARL ST. LIGHT–ARLINGTON CO	ELECTRICAL JUNCTION BOX
ATT AT&T	ELECTRICAL MANHOLE
MCI MCI	UTILITY POLE
WXN WXN FIBER	GUY POLE
VZN VERIZON	GAS VALVE
JUC JONES UTILITY	GAS MANHOLE
LTF FIBER LITE	ARL. CO. FIBER HAND HOLE
CMC COMCAST	PHONE MANHOLE
E DOMINION ELEC ST. LIGHT	CABLE TELEVISION PEDESTAL
DOM DOMINION ELEC	UNKNOWN UTILITY MANHOLE
E PROP. DOMINION ELEC SERVICE	TREE
WGL WASHINGTON GAS	BOLLARD
APW WATER–ARL CO PUBLIC WORKS	SIGN POST
W WATER–WASHINGTON AQUEDUCT	WOOD POST
APW SEWER–ARL CO PUBLIC WORKS	SANITARY CLEANOUT
SEWER	SANITARY MANHOLE
STORM DRAIN CONDUIT	FIRE DEPARTMENT CONNECTION
FENCE LINE	FIRE HYDRANT
EDGE OF PAVEMENT	WATER METER
	WATER MANHOLE
	WATER VALVE
	INLETS
	CURB INLET
	STORM DRAIN MANHOLE

25' 12.5' 0 25' 50'
GRAPHIC SCALE
1" = 25'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

DRY UTILITY PLAN
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C4.050

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION
Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location
ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title
DRY UTILITY PLAN

Approval Date

Design Supervisor

Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: ME
Drawn: ME
Checked: JA

Filename:
Plotted:

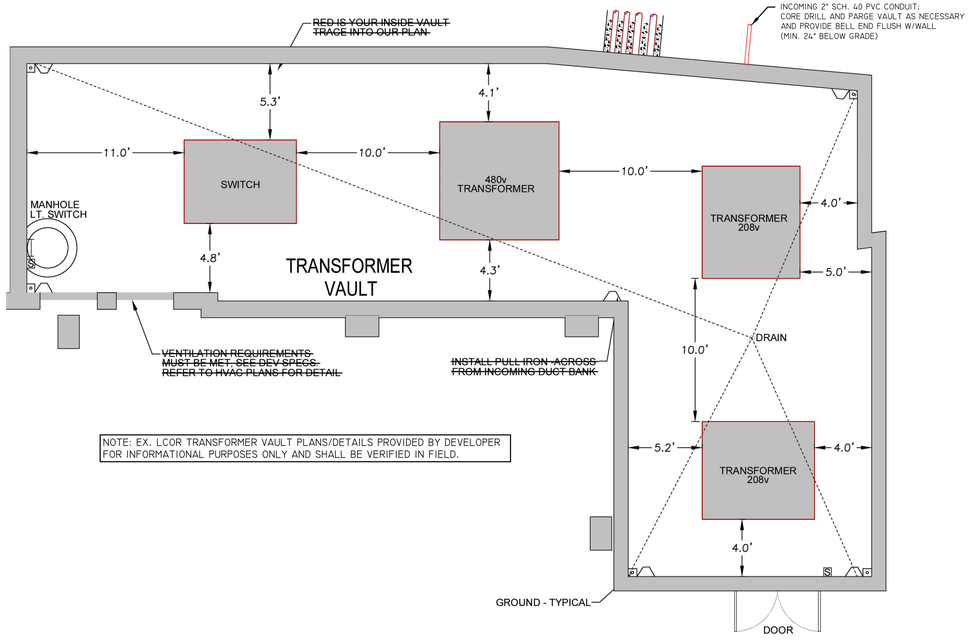
Scale: AS SHOWN
Date: July 21, 2023

Seal
COMMONWEALTH OF VIRGINIA — JASON AZAR — Lic. No. 051113 — PROFESSIONAL ENGINEER

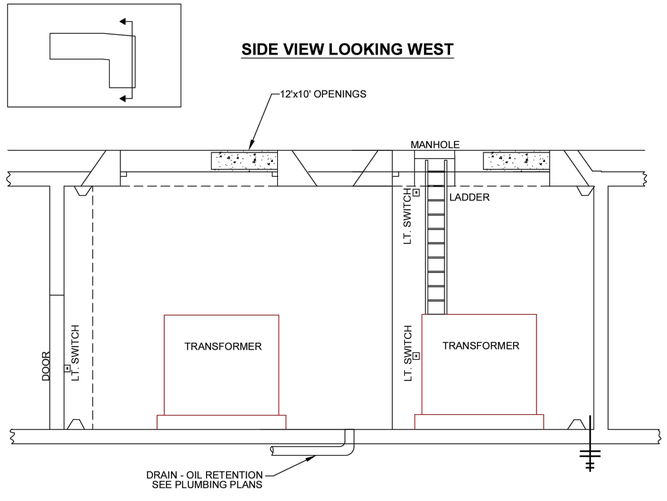
Sheet
C4.050

Path: J:\145.005 - S. Eads St DPR\CAD\DWG\ Filename: C4.050 - DRY UTILITY PLAN.dwg

TOP VIEW SHOWING TRANSFORMER LOCATIONS



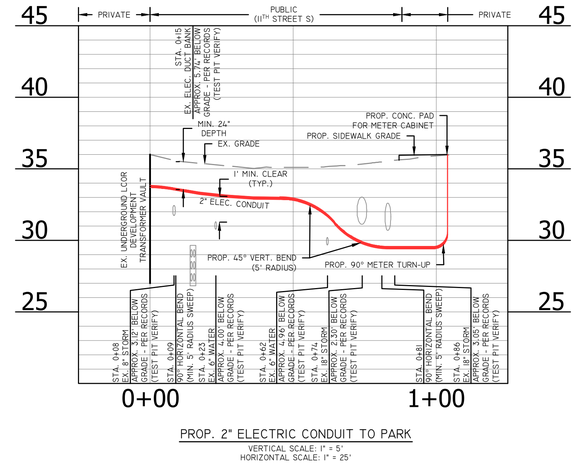
SIDE VIEW LOOKING WEST



EX. TRANSFORMER VAULT DETAILS
SCALE: N.T.S.

GENERAL DRY UTILITY NOTES:

1. REFER TO ELECTRICAL DRAWINGS FOR METER/ENCLOSURE DETAILS.
2. CONTRACTOR SHALL NOT ENTER OR WORK WITHIN TRANSFORMER VAULT WITHOUT DOMINION PERSONNEL PRESENT.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH LCOR DEVELOPMENT REPRESENTATIVE FOR ACCESS TO TRANSFORMER VAULT FOR PROPOSED WORK.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING BELL ENDS, CABLE SUPPORT RACKS, AND PARGING VAULT WALL AS NECESSARY
5. 2" SCH. 40 PVC CONDUIT SHALL BE MIN. 24" BELOW GRADE; MIN. 5' HORIZONTAL/1' VERTICAL SEPARATION FROM ALL COUNTY-OWNED WET UTILITIES UNLESS OTHERWISE NOTED AND APPROVED BY COUNTY AS SHOWN.



PROP. 2" ELECTRIC CONDUIT TO PARK
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 25'

Dominion Commitment/Conceptual Design Acceptance Memo

Instructions:
1. Developer: Affix this memo to each dry utility plan sheet in order to obtain the Dominion supervisor's signature.
2. DEV: Please sign this letter *ONLY* if the Developer has affixed this memo to each Dry Utility Plan sheet.

11/16/22

Mrs. Nicole Blankenship
907 W Glebe Road
Alexandria, VA 22305

Re: Arlington Junction Park #10545036
0 S Eads Street, Arlington, VA

Arlington County Department of Parks and Recreation (DPR) has developed a conceptual dry utility plan (attached) for the referenced project in conjunction with the site civil engineering plan. This dry utility plan dated **11/16/22** considers the installation of a new underground utility system to accommodate the removal of the existing overhead utility wires and, utility poles that are adjacent to the site and/or permanent service to the buildings.

Dominion Energy Virginia (DEV) has completed a conceptual review and accepts the preliminary design of **Arlington Junction Park #10545036** for the installation of conduit and manholes. DEV acknowledges that based on the current existing and projected load information provided, the current and existing capacity on DEV's systems, DEV's current design standards, and other information provided at the time of the DEV conceptual review, **DPR** dry utility plan meets the DEV requirements and commits to utilizing the underground infrastructures for installation of the DEV cable and other necessary facilities to underground the existing overhead utilities and/or provide permanent service to the buildings, if the underground infrastructure and installation meets DEV's requirements. DEV will endeavor to complete their final engineering design plan in a manner that will not result in additional trenching, conduit or any underground type work beyond what is shown on this county accepted dry utility conceptual plan. Should there be a change in any of the following; DEV reserves the right to adjust its design accordingly to assure the operational integrity of its system:

- Conceptual plans submitted
- Existing and planned loads on DEV's system
- DEV's standards of design
- Any other unforeseen changes

Any changes DEV must make to the conceptual dry utility plan will need to be coordinated with the Developer. The Developer will be responsible for submitting to the County a revision to the approved site civil plan. The County approval must be obtained before any Right-of-Way permits may be issued.

Should you have any questions regarding this plan, feel free to contact **Aaron Wohler** at **(703) 228-7928**.

Sincerely,
Aaron Wohler, Project Manager
Arlington County
Department of Parks and Recreation
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
awohler@arlingtonva.us

Dominion Energy Virginia agrees with terms as stated in this letter and accepts this conceptual dry utility plan with the understanding that the plans are subject to change. DEV reserves the right to adjust the plan as needed to meet the operational integrity of its electric distribution system.

Signature: Greg King Title: Digitally signed by Greg King
Designated Authorized Supervisor
Date: 2023.01.06 16:38:30 -05'00'
DEV Project Number:

5' 2.5' 0 5' 10'
VERTICAL GRAPHIC SCALE
1" = 5'

25' 12.5' 0 25' 50'
HORIZONTAL GRAPHIC SCALE
1" = 25'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

DRY UTILITY PROFILE
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET C4.060	

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

DRY UTILITY PROFILE

Approval Date

Design Supervisor

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BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: ME
Drawn: ME
Checked: JA

Filename:
Plotted:

Scale: AS SHOWN
Date: July 21, 2023

Seal

COMMONWEALTH OF VIRGINIA
JASON WAR
Lic. No. 051113
PROFESSIONAL ENGINEER

Sheet
C4.060

Path: J:\145.005 - S. Eads St DPR\CAD\DWG\ Filename: C4.060 - DRY UTILITY PROFILE.dwg

Construction Inspection Checklist: Bioretention

ARLINGTON VIRGINIA

Address/ Location: _____ Building Permit #: _____

LDA Permit #: _____ SWM#: _____

Contractor: _____ Telephone: _____

Certifying Professional*: _____ Telephone: _____

Date Started: _____ Final Inspection Date: _____

Certifying professional must be a licensed Professional Engineer (PE), Landscape Architect (LA), or Land Surveyor (LS).

The following checklist provides a basic outline of the anticipated items for the construction inspection of bioretention facilities. This checklist does not necessarily distinguish between all the design variations and differences in construction between the family of practices. Inspectors should review the plans carefully, and adjust these items and the timing of inspection verification as needed to ensure the intent of the design is met. The standard for design of this practice is based on Virginia Stormwater BMP Clearinghouse and Arlington County Stormwater Guidance Manual.

All items should be checked when completed. **Items labeled "Certification of…" must be crossed off, dated and initialed by certifying inspector.**

PRE-CONSTRUCTION MEETING		DATE
☐	Identify the tentative schedule for construction and verify the requirements and schedule for interim inspections.	
☐	All pervious areas of the contributing drainage areas have been adequately stabilized with a thick layer of vegetation or erosion control measures are still in place and stormwater has been diverted around the area.	
☐	Area of bioretention practice has not been impacted during construction.	
☐	Conduct a pre-construction meeting with the contractor designated to install the bioretention, the person completing this checklist, and the County DES Stormwater Specialist inspector (schedule via stormwaterreview@arlingtonva.us).	

EXCAVATION		DATE
☐	Area of bioretention excavation is marked and the size and location conforms to plan.	
☐	If the excavation area has been used as a sediment trap: verify that the bottom elevation of the proposed stone reservoir is lower than the bottom elevation of the existing trap.	
☐	For Level 2 bioretention, ensure the bottom of the excavation is scarified prior to placement of stone.	
☐	Subgrade surface is free of rocks and roots, and large voids. Any voids should be refilled with the base aggregate to create a level surface for the placement of aggregates and underdrain (if required).	
☐	No groundwater seepage or standing water is present. Any standing water is dewatered to an acceptable dewatering device.	
☐	Excavation of the bioretention practice has achieved proper grades and the required geometry and elevations without compacting the bottom of the excavation. ***Constructed dimensions:*** _____	
☐	Sides of excavation covered with geotextile; no tears, holes, or excessive wrinkles are present.	

☐	**Certification of Excavation Inspection:** Inspector certifies the successful completion of the excavation steps listed above. Photos required include: o Excavated area prior to installation of stone, including measurements (L x W x D); o Non-woven geotextile fabric installed on sides of excavated subgrade only. Material delivery ticket include: o Geotextile installed on sides	

FILTER LAYER, UNDERDRAIN, AND STONE RESERVOIR PLACEMENT		DATE
☐	All aggregates conform to specifications as certified by quarry.	
☐	Underdrain size and perforations meet the specifications (if applicable).	
☐	If the underdrain is directly tied into the public storm sewer system, the connection has been witnessed by DES inspector.	
☐	For Level 2 installations: placement of filter layer and initial lift of stone reservoir layer aggregates with underdrain or infiltration sump, spread (not dumped) to avoid aggregate segregation	
☐	Placement of underdrain, observation wells, and underdrain fittings are in accordance with the approved plans.	
☐	Elevations of underdrain and outlet structure are in accordance with approved plans, or as adjusted to meet field conditions and denoted in Comments section.	
☐	Placement of remaining lift of stone reservoir layer as needed to achieve the required reservoir depth.	
☐	**Certification of Filter Layer and Underdrain Placement Inspection:** Inspector certifies the successful completion of the filter layer and underdrain placement steps listed above. Photos and material delivery tickets for these items are attached. Photos required include: o Perforated underdrain pipe (if applicable) with a solid vertical overflow pipe; o Depth of #57 stone; o Depth of choker stone (pea gravel or #8); o Underdrain connection to public storm sewer system (if applicable). Material delivery tickets required include: o 57 stone; o Choker stone (pea gravel or #8).	

BIORETENTION SOIL MEDIA PLACEMENT		DATE
☐	Soil media is certified by supplier or contractor as meeting the project specifications and comes from an approved soil media vendor.	
☐	Soil media is placed in 12-inch lifts to the design top elevation of the bioretention area, and lifts have been lightly watered Elevation has been verified after settlement (2 to 4 days after initial placement).	
☐	Side slopes of ponding area are feathered back at the required slope (no steeper than 3H:1V).	
☐	**Certification of Soil Media Placement Inspection:** Inspector certifies the successful completion of the soil media steps listed above and any necessary photos are attached. Photo required of a measurement of the soil media installed. Material delivery ticket required from an approved soil media vendor.	

PRETREATMENT AND PLANT INSTALLATION		DATE
☐	Riser, overflow weir, or other outflow structure is set to the proper elevation, receive the proper compaction and are functional.	
☐	Placement of energy dissipaters and pretreatment practices (forebays, gravel diaphragms, etc.) are installed in accordance with the approved plans.	
☐	Appropriate number and spacing of plants are installed in accordance with the approved plans. Microbioretentions use the appropriate number of plants from VA DEQ Table 9.4, bioretentions follow the approved landscape plan.	
☐	Ponding depth verification after plant and mulch placement.	
☐	**Certification of Pretreatment and Plant Installation:** Inspector certifies the successful completion of any pretreatment measures, plants and mulch as listed above. Photos/Elevations required for this step include: o Overall photos of showing mulch and plants installed; o Location of inflow and appropriate energy dissipation; o *Microbioretention with sheetflow as the inflow: string line measurement showing the swale.* o *Bioretention with sheetflow as the inflow: survey of the swale.* o Any pretreatment measures required per the approved plans; o Distance from the top of the mulch to the top of the overflow (either pipe or berm). o *Microbioretention: string line measurement showing the surface of the microbioretention is level and has the appropriate ponding depth over the entire surface.* o *Bioretention: as-built survey that captures the top of mulch and top of overflow to achieve the proper ponding depth.* Material delivery tickets required for this step include: o Approved plants listing number and species; o Shredded hardwood mulch.	

BIORETENTION TESTING		DATE
☐	A bioretention that uses infiltration to drain (i.e., it has no underdrain) must be tested for infiltration rate upon completion and must function as designed.	

COMMENTS (CLARIFICATION, DEVIATIONS, ETC.)	DATE

All items checked above have been inspected by me (or by an individual under my responsible charge) and have been completed to my satisfaction and meet the approved plans (or deviations are noted here).

Signature: _____ Date: _____

Certifying Professional's License Number (or Seal): _____

- See attached sealed final location survey with the installed stormwater management facilities appropriately labeled and certification letter

WATER QUALITY NARRATIVE

THE TOTAL SITE AREA FOR ANALYSIS OF STORMWATER MANAGEMENT AND BEST MANAGEMENT (BMP) PRACTICES IS 0.683 ACRES. THE PROPOSED PARK LAYOUT INCREASES THE IMPERVIOUS AREA IN THE PARK TO 0.219 ACRES AND REDUCES THE MANAGED TURF AREAS TO 0.464 ACRES. THIS RESULTS IN A REQUIRED PHOSPHORUS REDUCTION OF AROUND 0.374 POUNDS PER YEAR. THE MANY UNDERGROUND UTILITIES RUNNING THROUGH THE PARK LIMIT THE OPTIONS AND LOCATIONS FOR BMP'S TO MEET THE PHOSPHORUS REDUCTION REQUIREMENT. IT IS PROPOSED TO BE ACHIEVED USING PERMEABLE PAVEMENT IN THE PARK, AND ONE (1) MICRO-BIORETENTION BASIN (LEVEL II) ON THE NORTHERN END OF THE PARK. APPROXIMATELY 3,384 SF OF PERMEABLE PAVEMENT (LEVEL I & LEVEL II) IS PROPOSED WHICH WILL REMOVE 0.147 LBS OF PHOSPHORUS. THE MICRO-BIORETENTION BASIN (LEVEL II) WILL TREAT APPROXIMATELY 0.299 ACRES OF THE NORTHERN PORTION OF THE PARK, REMOVING 0.234 LBS OF PHOSPHORUS. THE SURFACE AREA REQUIRED FOR A FACILITY WITH 3 INCHES OF PONDING, 2 FEET OF MEDIA DEPTH, AND ONE FOOT OF GRAVEL WILL BE AROUND 670.00 SQUARE FEET.

STORMWATER MANAGEMENT NARRATIVE

THE NEW PARK AT S. EADS STREET WILL CONSIST OF THE DEVELOPMENT OF A PARCEL OF LAND INTO AN URBAN PARK. THE PARCEL IS CURRENTLY LOCATED IN A FAIRLY URBAN AREA AND IS BORDERED BY ARMY NAVY DRIVE TO THE NORTH, SOUTH EADS STREET TO THE WEST, 12TH STREET TO THE SOUTH, EXISTING RESIDENTIAL AND COMMERCIAL DEVELOPMENT TO THE EAST, AND IS BISECTED BY 11TH STREET SOUTH. THE PARK CURRENTLY CONSISTS OF SIDEWALKS ADJACENT TO THE EXISTING ROADS BORDERING THE PROPERTY, GRASSY OPEN SPACE, AND A LARGE COTTONWOOD TREE THAT IS INTENDED TO BE PRESERVED. THERE ARE MANY UNDERGROUND UTILITIES RUNNING THROUGH THE PARK. THE PROPOSED DEVELOPMENT FOR THE PARK INCORPORATES A PROMENADE, VEGETATED BERMS, OUTDOOR FITNESS AREA, LAWNS, BENCHES, A BOARDWALK AND NATURAL SPACES. THE PROJECT PROPOSES TO DISTURB APPROXIMATELY 0.683 ACRES. THERE WILL BE AN OVERALL INCREASE IN IMPERVIOUS AREA WITH THE PROPOSED IMPROVEMENTS. ONE (1) MICRO-BIORETENTION BASIN (LEVEL II) AND PERVIOUS PAVEMENT (LEVEL I & LEVEL II) ARE PROPOSED TO MANAGE STORMWATER RUNOFF FOR QUALITY AND QUANTITY.

CHANNEL AND FLOOD PROTECTION

CHANNEL AND FLOOD PROTECTION REQUIREMENTS FOR THE PROJECT HAVE BEEN MET VIA THE PROPOSED BMP FACILITIES ON-SITE AND UTILIZING THE REDUCED CURVE NUMBER FOR THE ENERGY BALANCE EQUATION AND QUANTITY ANALYSIS. SEE SHEETS C5.030 AND C5.040 FOR QUANTITY ANALYSIS CALCULATIONS FOR THE PROPOSED DEVELOPMENT.

Construction Inspection Checklist: Permeable Pavement

ARLINGTON VIRGINIA

Address/ Location: _____ Building Permit #: _____

LDA Permit #: _____ SWM#: _____

Contractor: _____ Telephone: _____

Installer / Contractor's Certification (Required)

☐ **Permeable Interlocking Pavers:** Name of ICPI Certified Installer or PICP Specialist: _____ ☐ **Pervious Concrete:** NRMCA Installer or Craftsman Certification Number: _____

Certifying Professional*: _____ Telephone: _____

Date Started: _____ Final Inspection Date: _____

Certifying professional must be a licensed Professional Engineer (PE), Landscape Architect (LA), or Land Surveyor (LS).

The following checklist provides a basic outline of the anticipated items for the construction inspection of permeable pavement. This checklist does not necessarily differentiate between the types of pavement materials and the different construction requirements. Inspectors should review the plans carefully, and adjust these items and the timing of inspection verification as needed to ensure the intent of the design is met. The standard for design of this practice is based on Virginia Stormwater BMP Clearinghouse and Arlington County Stormwater Guidance Manual.

All items should be crossed off when completed. **Items labeled "Certification of…" must be crossed off, dated and initialed by the certifying inspector.**

PRE-CONSTRUCTION MEETING		DATE
☐	Walk through site with builder/contractor/subcontractor to review the SWPPP (erosion and sediment control plan, the stormwater management plan, and the Pollution Prevention plan)	
☐	Determine when permeable pavement is built in project construction sequence; before or after building construction and determine measures for protection and surface cleaning.	
☐	Identify the tentative schedule for construction, verify the certification of the installer (ICPI for permeable interlocking pavers or NRMCA for pervious concrete) and requirements and schedule for interim inspections.	
☐	Storage locations for aggregate material have been identified (hard surface or on geotextile).	
☐	Conduct a pre-construction meeting with the contractor designated to install the permeable pavement, the person completing this checklist, and the County DES Stormwater Specialist inspector (schedule via stormwaterreview@arlingtonva.us).	

SEDIMENT MANAGEMENT		DATE
☐	Access routes for delivery and construction vehicles identified.	
☐	Vehicle tire/track washing station location/maintenance (if specified in the erosion and sediment control plan/SWPPP).	
☐	Contributing drainage areas are stabilized and are not eroding.	

EXCAVATION		DATE
☐	Excavated area marked with paint and/or stakes.	
☐	Excavation size and location conforms to plan.	

☐	Runoff is diverted around the excavation area to a stabilized conveyance.	
☐	If excavation is used as a sediment trap: verify that the bottom elevation of the proposed stone reservoir is lower than the bottom elevation of the existing trap.	
☐	Subgrade surface is free of rocks and roots, and large voids. Any voids should be refilled with the base aggregate to create a level surface for the placement of aggregates and underdrain (if required).	
☐	For Level 2 permeable pavement, ensure the bottom of the excavation is scarified prior to placement of stone.	
☐	No groundwater seepage or standing water is present. Any standing water is dewatered to an acceptable dewatering device.	
☐	The excavation has achieved the proper elevations and grade (0% slope) as noted on the approved plans.	
☐	**Certification of Excavation Inspection:** Inspector certifies the successful completion of the excavation steps listed above. ***For Level 2, field infiltration test results at excavation bottom:*** _____ Photos required include excavated subgrade prior to covering with fabric and stone, and include measurement from subgrade to reference point (i.e., top of edge restraint, top of apron, top of garage entrance, top of flow barriers and flow barrier excavation cuts, etc.).	

FILTER LAYER, UNDERDRAIN, STONE RESERVOIR, AND BEDDING LAYER PLACEMENT		DATE
☐	All aggregates, including, as required, the filter layer (choker stone & sand or geotextile), the reservoir layer, and bedding layer conform to specifications as certified by quarry.	
☐	Underdrain size and perforations meet the specifications (if applicable).	
☐	Placement of filter layer and initial layer of reservoir layer aggregates (approximately 2 inches) spread (not dumped) to avoid aggregate segregation.	
☐	Placement of underdrain, observation wells, and underdrain fittings in accordance with the approved plans.	
☐	Concrete curbs or plastic/metal edge restraints are installed.	
☐	Sides of excavation covered with geotextile, prior to placing stone reservoir aggregate; no tears or holes, or excessive wrinkles are present.	
☐	Flow barriers are properly installed (if applicable).	
☐	Stone reservoir layer and bedding layer is properly installed.	
☐	**Certification of Filter Layer, Underdrain, Stone Reservoir and Bedding Layer Inspection:** Inspector certifies the successful completion of the filter layer, underdrain, stone reservoir and bedding layer placement steps listed above. Photos and material delivery tickets for these items are attached. Photos required include: o Non-woven geotextile fabric installed on bottom and sides of excavated subgrade; o Perforated observation well prior to installation of stone; o Perforated underdrain (if applicable) and connection to storm sewer or dry well; o Depth of #2 or #3 stone installed (if applicable); o Edge restraints; o Depth of #57 stone installed; o Depth of #8 stone installed. Photos required of flow barrier (if applicable): o 12" height of berm; o 12" height of cut for flow barrier; o Impermeable liner;	

	o Distance between flow barriers. Material delivery tickets required include: o Choker stone & sand or geotextile installed at subbase; o Geotextile installed along sides; o Impermeable liner on gravel flow berms (if applicable); o #2 or #3 stone (if applicable), #57 stone, #8 stone.	

PERMEABLE PAVERS OR PERVIOUS CONCRETE INSTALLATION		DATE
☐	Permeable paver surface is installed.	
☐	If pavers are used, the joints are full of #8 or #9 stone.	
☐	**Certification of Pavement Installation:** Contractor and/or manufacturer certifies that permeable pavement has been placed in accordance with manufacturers specifications (ICPI Tech Spec #18 for interlocking concrete pavers or ACI#522.1-13 for pervious concrete). Photos required include: o Overall of completed installation; o Observation well with proper cap installed. For Level 2, completed facility observed infiltration rate: _____ Material delivery tickets required for the pavers or concrete installed.	
☐	The permeable pavement is protected until the remainder of the site is stabilized.	

COMMENTS (CLARIFICATION, DEVIATIONS, ETC.)	DATE

All items checked above have been inspected by me (or by an individual under my responsible charge) and have been completed to my satisfaction and meet the approved plans (or deviations are noted here).

Signature: _____ Date: _____

Certifying Professional's License Number (or Seal): _____

- See attached sealed final location survey with the installed stormwater management facilities appropriately labeled and certification letter

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

STORMWATER MANAGEMENT NOTES
ARLINGTON JUNCTION PARK-CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET C5.000	

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

STORMWATER MANAGEMENT NOTES

Approval Date

Design Supervisor

Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: ME
Drawn: ME
Checked: JA

Filename:
Plotted:

Scale: AS SHOWN
Date: July 21, 2023

Seal

COMMONWEALTH OF VIRGINIA JASON SEAR Lic. NO. 051113 PROFESSIONAL ENGINEER

Sheet

C5.000

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Site Information - Revised 9/19/2017

Project SWM #	CEP Permit #	Disturbed Area (acres)	% Pre-Impervious	% Post-Impervious	Pre-Development TP load (lb/yr)	Post-Development TP load (lb/yr)	TP load reduction achieved (lb/yr)	Pre-Development TN load (lb/yr)	Post-Development TN load (lb/yr)	TN load reduction achieved (lb/yr)	Total Site Area (acres)	Pre-Forest Area (acres)	Pre-Turf Area (acres)	Pre-Impervious Area (acres)	Post-Forest Area (acres)	Post-Turf Area (acres)	Post-Impervious Area (acres)	Pre-Runoff Volume	Post-Runoff Volume	Runoff Volume Reducation Achieved	Site Latitude (Decimal Degrees)	Site Longitude (Decimal Degrees)	Anticipated Start Date
22-0224	CEPL22-00064	0.7060	5.7	35.0	0.47	0.80	0.40	3.34	5.70	2.93	0.7060	0.0000	0.6660	0.0400	0.0000	0.4590	0.2470	742.3350	1268.3220	554.3736	38.864415	-77.054166	Fall 2023

Stormwater Management Facility Information- Revised 3/19/2019

Facility Type**	Description	Location	LDA Permit #	Project SWM #	Building Permit #	Facility ID	BMP downstream of another BMP (in Series)?	Upstream (Primary) BMP	Chesapeake Bay Segment	Watershed	HUC6	Soils	Runoff Treated (in)	Volume Treated (ft^3)	Treated Area (acres)	Forest Area (acres)	Turf Area (acres)	Impervious Area (acres)	RPC	Phosphorus Efficiency (%)	Nitrogen Efficiency (%)	Sediment Efficiency (%)	TP load removed (lbs)	TN load removed (lbs)
BIORETENTION #2	Micro-Bioretention #1	NE Corner of 11th and S. Eads	CEPL22-00064	22-0224		22-0224A	No		POTTF_VA	Roaches Run	PL24	C/D	1.25	413.6	0.2990	0.0000	0.2430	0.0560	35003437	90.00	90.00	79.00	0.23	1.71
PERMEABLE PAVEMENT #2	Permeable Pavers #1	NW Walkway	CEPL22-00064	22-0224		22-0224B	No		POTTF_VA	Roaches Run	PL24	C/D	1.10	124.1	0.0360	0.0000	0.0000	0.0360	35003437	81.00	81.00	79.00	0.06	0.45
PERMEABLE PAVEMENT #1	Permeable Pavers #2	NE Walkway	CEPL22-00064	22-0224		22-0224C	No		POTTF_VA	Roaches Run	PL24	C/D	1.00	55.0	0.0160	0.0000	0.0000	0.0160	35003437	59.00	59.00	75.00	0.02	0.14
PERMEABLE PAVEMENT #1	Permeable Pavers #3	SE Walkway	CEPL22-00064	22-0224		22-0224D	No		POTTF_VA	Roaches Run	PL24	C/D	1.00	234.5	0.0680	0.0000	0.0000	0.0680	35003437	59.00	59.00	75.00	0.09	0.62

July 2014 (Revised April 2015). Sizing spreadsheet for micro-bioretention for compliance with Arlington County Stormwater Managment Ordinance
Enter data into highlighted cells. WQV needs to > 100% for credit.

Facility name/type	Design Level	Impervious Area to Facility	Pervious Area to Facility	Total Drainage Area	Total Drainage Area	Rainfall Depth (P)	Rv	Target storage (WQv)	Ponding depth	Filter depth	Gravel depth	Filter : Gravel Depth Ratio	Gravel Sump below underdrain *Required for Level 2 Designs that include an underdrain (No storage credit provided)*	Top Surface Area	Bottom Surface Area (5:1 slopes)	Ponding Volume (1.00 void)	Soil Storage Volume (0.25 void)	Gravel Storage Volume (0.4 void)	Available Storage	% Water Quality Volume Captured
		(SF)	(SF)	(SF)	(acre)	(in)		(CF)	(in)	(in)	in	Level 1: ≥ 1.5:1 Level 2: ≥ 2:1	(in)	(SF)	(SF)	(CF)	(CF)	(CF)	(CF)	Must be ≥ 100% (Max. 200%)
Micro-Bioretention #1	Level 2	2439	10585	13024	0.2990	1.25	0.36	483.93	3	24	12	2.00	6	800.00	670.00	183.75	335.00	268.00	**786.75**	**162.6%**

DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet - Version 3.0

○ 2011 BMP Standards and Specifications ◉ 2013 Draft BMP Standards and Specifications

Project Name: New Park at South Eads Street
Date: 4/7/2022
Linear Development Project? No

CLEAR ALL (Ctrl+Shift+R)

data input cells / constant values / calculation cells / final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area *(acres)* → 0.7060

Maximum reduction required:	*10%*
The site's net increase in impervious cover (acres) is:	*0.2070*
Post-Development TP Load Reduction for Site (lb/yr):	*0.3985*

Check:
BMP Design Specifications List: 2013 Draft Stds & Specs
Linear project? No
Land cover areas entered correctly? ✓
Total disturbed area entered? ✓

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed forest/open space	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres) -- disturbed, graded for yards or other turf to be	0.0000	0.0000	0.0000	0.6660	0.6660
Impervious Cover (acres)	0.0000	0.0000	0.0000	0.0400	0.0400
					0.7060

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres) -- disturbed, graded for yards or other turf to be	0.0000	0.0000	0.0000	0.4590	0.4590
Impervious Cover (acres)	0.0000	0.0000	0.0000	0.2470	0.2470
Area Check	OK.	OK.	OK.	OK.	0.7060

Constants

Annual Rainfall (inches)	43
Target Rainfall Event (inches)	1.00
Total Phosphorus (TP) EMC (mg/L)	0.26
Total Nitrogen (TN) EMC (mg/L)	1.86
Target TP Load (lb/acre/yr)	0.41
Pj (unitless correction factor)	0.90

Runoff Coefficients (Rv)

	A Soils	B Soils	C Soils	D Soils
Forest/Open Space	0.02	0.03	0.04	0.05
Managed Turf	0.15	0.20	0.22	0.25
Impervious Cover	0.95	0.95	0.95	0.95

LAND COVER SUMMARY – PRE-REDEVELOPMENT

Land Cover Summary-Pre Pre-ReDevelopment	Listed	Adjusted[1]
Forest/Open Space Cover (acres)	0.0000	0.0000
Weighted Rv(forest)	0.0000	0.0000
% Forest	0%	0%
Managed Turf Cover (acres)	0.6660	0.4590
Weighted Rv(turf)	0.2500	0.2500
% Managed Turf	94%	92%
Impervious Cover (acres)	0.0400	0.0400
Rv(impervious)	0.9500	0.9500
% Impervious	6%	8%
Total Site Area (acres)	**0.7060**	**0.4990**
Site Rv	**0.2897**	**0.3061**
Treatment Volume and Nutrient Load		
Pre-ReDevelopment Treatment Volume (acre-ft)	0.0170	0.0127
Pre-ReDevelopment Treatment Volume (cubic feet)	742.3350	554.4825
Pre-ReDevelopment TP Load (lb/yr)	**0.4664**	**0.3484**
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	0.6600	0.7000
Baseline TP Load (lb/yr) (0.41 lbs/acre/yr applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		0.2046

LAND COVER SUMMARY – POST DEVELOPMENT

Land Cover Summary-Post (Final) Post ReDev. & New Impervious	
Forest/Open Space Cover (acres)	0.0000
Weighted Rv(forest)	0.0000
% Forest	0%
Managed Turf Cover (acres)	0.4590
Weighted Rv (turf)	0.2500
% Managed Turf	65%
Impervious Cover (acres)	0.2470
Rv(impervious)	0.9500
% Impervious	35%
Final Site Area (acres)	**0.7060**
Final Post Dev Site Rv	**0.4949**
Final Post-Development Treatment Volume (acre-ft)	0.0291
Final Post-Development Treatment Volume (cubic feet)	1,268.3220
Final Post-Development TP Load (lb/yr)	**0.7969**
Final Post-Development TP Load per acre (lb/acre/yr)	1.1300

Land Cover Summary-Post Post-ReDevelopment	
Forest/Open Space Cover (acres)	0.0000
Weighted Rv(forest)	0.0000
% Forest	0%
Managed Turf Cover (acres)	0.4590
Weighted Rv (turf)	0.2500
% Managed Turf	92%
ReDev. Impervious Cover (acres)	0.0400
Rv(impervious)	0.9500
% Impervious	8%
Total ReDev. Site Area (acres)	**0.4990**
ReDev Site Rv	**0.3061**
Post-ReDevelopment Treatment Volume (acre-ft)	0.0127
Post-ReDevelopment Treatment Volume (cubic feet)	554.4825
Post-ReDevelopment Load (TP) (lb/yr)*	0.3484
Post-ReDevelopment TP Load per acre (lb/acre/yr)	0.7000
Max. Reduction Required (Below Pre-ReDevelopment Load)	10%
TP Load Reduction Required for Redeveloped Area (lb/yr)	**0.0348**

Land Cover Summary-Post Post-Development New Impervious	
New Impervious Cover (acres)	0.2070
Rv(impervious)	0.9500
Post-Development Treatment Volume (acre-ft)	0.0164
Post-Development Treatment Volume (cubic feet)	713.8395
Post-Development TP Load (lb/yr)	0.4485
TP Load Reduction Required for New Impervious Area (lb/yr)	**0.3636**

[1] Adjusted Land Cover Summary:
Pre ReDevelopment land cover minus pervious land cover (forest/open space or managed turf) acreage proposed for new impervious cover.

Adjusted total acreage is consistent with Post-ReDevelopment acreage (minus acreage of new impervious cover).

Column I shows load reduction requirement for new impervious cover (based on new development load limit, 0.41 lbs/acre/year).

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	0.3985

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	3.3366
Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	5.7008

Drainage Area A

CLEAR BMP AREAS

Drainage Area A Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres)	0.0000	0.0000	0.0000	0.2430	0.2430	0.2500
Impervious Cover (acres)	0.0000	0.0000	0.0000	0.0560	0.0560	0.9500
				Total	0.2990	

Total Phosphorus Available for Removal in D.A. A (lb/yr) 0.2599
Post Development Treatment Volume in D.A. A (ft^3) 413.6385

Stormwater Best Management Practices (RR = Runoff Reduction)

--Select from dropdown lists-

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft^3)	Runoff Reduction (ft^3)	Remaining Runoff Volume (ft^3)	Total BMP Treatment Volume (ft^3)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
6. Bioretention (RR)													
6.b. Bioretention #2 or Micro-Bioretention #2 (Spec #9)	80	0.2430	0.0560	0.0000	330.9108	82.7277	413.6385	50	0.0000	0.2596	0.2336	0.0260	

Drainage Area B

CLEAR BMP AREAS

Drainage Area A Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Impervious Cover (acres)	0.0000	0.0000	0.0000	0.0360	0.0360	0.9500
				Total	0.0360	

Total Phosphorus Available for Removal in D.A. B (lb/yr) 0.0780
Post Development Treatment Volume in D.A. B (ft^3) 124.1460

Stormwater Best Management Practices (RR = Runoff Reduction)

--Select from dropdown lists-

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft^3)	Runoff Reduction (ft^3)	Remaining Runoff Volume (ft^3)	Total BMP Treatment Volume (ft^3)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
3. Permeable Pavement (RR)													
3.b. Permeable Pavement #2 (Spec #7)	75		0.0360		93.1095	31.0365	124.1460	25		0.0779	0.0633	0.0146	

Drainage Area C

CLEAR BMP AREAS

Drainage Area A Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Impervious Cover (acres)	0.0000	0.0000	0.0000	0.0160	0.0160	0.9500
				Total	0.0160	

Total Phosphorus Available for Removal in D.A. C (lb/yr) 0.0347
Post Development Treatment Volume in D.A. C (ft^3) 55.1760

Stormwater Best Management Practices (RR = Runoff Reduction)

--Select from dropdown lists-

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft^3)	Runoff Reduction (ft^3)	Remaining Runoff Volume (ft^3)	Total BMP Treatment Volume (ft^3)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
3. Permeable Pavement (RR)													
3.a. Permeable Pavement #1 (Spec #7)	45		0.0160	0.0000	24.8292	30.3468	55.1760	25	0.0000	0.0346	0.0203	0.0143	

Drainage Area D

CLEAR BMP AREAS

Drainage Area A Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv
Forest/Open Space (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Impervious Cover (acres)	0.0000	0.0000	0.0000	0.0680	0.0680	0.9500
				Total	0.0680	

Total Phosphorus Available for Removal in D.A. D (lb/yr) 0.1473
Post Development Treatment Volume in D.A. D (ft^3) 234.4980

Stormwater Best Management Practices (RR = Runoff Reduction)

--Select from dropdown lists-

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft^3)	Runoff Reduction (ft^3)	Remaining Runoff Volume (ft^3)	Total BMP Treatment Volume (ft^3)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (lb)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
3. Permeable Pavement (RR)													
3.a. Permeable Pavement #1 (Spec #7)	45		0.0680	0.0000	105.5241	128.9739	234.4980	25	0.0000	0.1472	0.0865	0.0607	

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

STORMWATER MANAGEMENT CALCULATIONS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C5.010

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location
ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title
STORMWATER MANAGEMENT CALCULATIONS

Approval	Date
Design Supervisor	

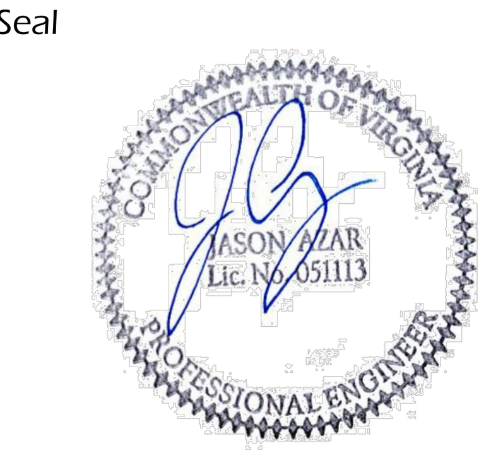
Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: ME
Drawn: ME
Checked: JA

Filename:
Plotted:

Scale: AS SHOWN
Date: July 21, 2023

Seal



Sheet
C5.010

Runoff Volume and Curve Number Calculations

Enter design storm rainfall depths (in):

1-year storm	2-year storm	10-year storm
2.58	3.11	4.78

Use NOAA Atlas 14 (http://hdsc.nws.noaa.gov/hdsc/pfds/)

***Notes (see below):**

[1] The curve numbers and runoff volumes computed in this spreadsheet for each drainage area are limited in their applicability for determining and demonstrating compliance with water quantity requirements. See VRRM User's Guide and Documentation for additional information.

[2] Runoff Volume (RV) for pre- and post-development drainage areas must be in volumetric units (e.g., acre-feet or cubic feet) when using the Energy Balance Equation. Runoff measured in watershed-inches and shown in the spreadsheet as RV(watershed-inch) can only be used in the Energy Balance Equation when the pre- and post-development drainage areas are equal. Otherwise RV(watershed-inch) must be multiplied by the drainage area.

[3] Adjusted CNs are based on runoff reduction volumes as calculated in D.A. tabs. An alternative CN adjustment calculation for Vegetated Roofs is included in BMP specification No. 5.

Drainage Area Curve Numbers and Runoff Depths*

Curve numbers (CN, CNadj) and runoff depths ($RV_{Developed}$) are computed with and without reduction practices.

Drainage Area A

		A Soils	B Soils	C Soils	D Soils
Forest/Open Space -- undisturbed, protected forest/open space or reforested land	Area (acres)	0.0000	0.0000	0.0000	0.0000
	CN	30	55	70	77
Managed Turf -- disturbed, graded for yards or other turf to be mowed/managed	Area (acres)	0.0000	0.0000	0.0000	0.2430
	CN	39	61	74	80
Impervious Cover	Area (acres)	0.0000	0.0000	0.0000	0.0560
	CN	98	98	98	98

Total Area (acres): 0.2990
Runoff Reduction Volume (ft^3): 330.9108

$CN_{(D.A.\ A)}$ = 83

	1-year storm	2-year storm	10-year storm
$RV_{Developed}$ *(watershed-inch)* with no Runoff Reduction*	1.1166	1.5356	2.9758
$RV_{Developed}$ *(watershed-inch)* with Runoff Reduction*	0.8117	1.2307	2.6709
Adjusted CN*	77	78	80

**See Notes above*

Drainage Area B

		A Soils	B Soils	C Soils	D Soils
Forest/Open Space -- undisturbed, protected forest/open space or reforested land	Area (acres)	0.0000	0.0000	0.0000	0.0000
	CN	30	55	70	77
Managed Turf -- disturbed, graded for yards or other turf to be mowed/managed	Area (acres)	0.0000	0.0000	0.0000	0.0000
	CN	39	61	74	80
Impervious Cover	Area (acres)	0.0000	0.0000	0.0000	0.0360
	CN	98	98	98	98

Total Area (acres): 0.0360
Runoff Reduction Volume (ft^3): 93.1095

$CN_{(D.A.\ B)}$ = 98

	1-year storm	2-year storm	10-year storm
$RV_{Developed}$ *(watershed-inch)* with no Runoff Reduction*	2.3503	2.8778	4.5435
$RV_{Developed}$ *(watershed-inch)* with Runoff Reduction*	1.6378	2.1653	3.8310
Adjusted CN*	90	91	91

**See Notes above*

Drainage Area C

		A Soils	B Soils	C Soils	D Soils
Forest/Open Space -- undisturbed, protected forest/open space or reforested land	Area (acres)	0.0000	0.0000	0.0000	0.0000
	CN	30	55	70	77
Managed Turf -- disturbed, graded for yards or other turf to be mowed/managed	Area (acres)	0.0000	0.0000	0.0000	0.0000
	CN	39	61	74	80
Impervious Cover	Area (acres)	0.0000	0.0000	0.0000	0.0160
	CN	98	98	98	98

Total Area (acres): 0.0160
Runoff Reduction Volume (ft^3): 24.8292

$CN_{(D.A.\ C)}$ = 98

	1-year storm	2-year storm	10-year storm
$RV_{Developed}$ *(watershed-inch)* with no Runoff Reduction*	2.3503	2.8778	4.5435
$RV_{Developed}$ *(watershed-inch)* with Runoff Reduction*	1.9228	2.4503	4.1160
Adjusted CN*	94	94	94

**See Notes above*

Drainage Area D

		A Soils	B Soils	C Soils	D Soils
Forest/Open Space -- undisturbed, protected forest/open space or reforested land	Area (acres)	0.0000	0.0000	0.0000	0.0000
	CN	30	55	70	77
Managed Turf -- disturbed, graded for yards or other turf to be mowed/managed	Area (acres)	0.0000	0.0000	0.0000	0.0000
	CN	39	61	74	80
Impervious Cover	Area (acres)	0.0000	0.0000	0.0000	0.0680
	CN	98	98	98	98

Total Area (acres): 0.0680
Runoff Reduction Volume (ft^3): 105.5241

$CN_{(D.A.\ D)}$ = 98

	1-year storm	2-year storm	10-year storm
$RV_{Developed}$ *(watershed-inch)* with no Runoff Reduction*	2.3503	2.8778	4.5435
$RV_{Developed}$ *(watershed-inch)* with Runoff Reduction*	1.9228	2.4503	4.1160
Adjusted CN*	94	94	94

**See Notes above*

Site Results (Water Quality Compliance)

Area Checks	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
FOREST/OPEN SPACE (ac)	0.0000	0.0000	0.0000	0.0000	0.0000	OK.
IMPERVIOUS COVER (ac)	0.0560	0.0360	0.0160	0.0680	0.0000	OK.
IMPERVIOUS COVER TREATED (ac)	0.0560	0.0360	0.0160	0.0680	0.0000	OK.
MANAGED TURF AREA (ac)	0.2430	0.0000	0.0000	0.0000	0.0000	OK.
MANAGED TURF AREA TREATED (ac)	0.2430	0.0000	0.0000	0.0000	0.0000	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft^3): 1,268.3220

Runoff Reduction Volume and TP By Drainage Area

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	TOTAL
RUNOFF REDUCTION VOLUME ACHIEVED (ft^3)	330.9108	93.1095	24.8292	105.5241	0.0000	554.3736
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	0.2599	0.0780	0.0347	0.1473	0.0000	0.5199
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.2336	0.0633	0.0203	0.0865	0.0000	0.4037
TP LOAD REMAINING (lb/yr)	0.0263	0.0147	0.0143	0.0609	0.0000	0.1161
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	1.7085	0.4529	0.1455	0.6185	0.0000	2.9255

Total Phosphorus

FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	0.7969
TP LOAD REDUCTION REQUIRED (lb/yr)	0.3985
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.4037
TP LOAD REMAINING (lb/yr):	0.3931
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	0.0000 **

** TARGET TP REDUCTION EXCEEDED BY 0.0053 LB/YEAR **

Total Nitrogen (For Information Purposes)

POST-DEVELOPMENT LOAD (lb/yr)	5.7008
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	2.9255
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	2.7753

DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet - Version 3.0

BMP Design Specifications List: **2013 Draft Stds & Specs**

Update Summary Sheet | Print Preview | Print

Site Summary

Project Title: New Park at South Eads Street
Date: 44658

Total Rainfall (in):	43
Total Disturbed Acreage:	0.7060

Site Land Cover Summary

Pre-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres)	0.0000	0.0000	0.0000	0.6660	0.6660	94.3343
Impervious Cover (acres)	0.0000	0.0000	0.0000	0.0400	0.0400	5.6657
					0.7060	100.0000

Post-ReDevelopment Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals	% of Total
Forest/Open (acres)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Managed Turf (acres)	0.0000	0.0000	0.0000	0.4590	0.4590	65.0142
Impervious Cover (acres)	0.0000	0.0000	0.0000	0.2470	0.2470	34.9858
					0.7060	100.0000

Site Tv and Land Cover Nutrient Loads

	Final Post-Development (Post-ReDevelopment & New Impervious)	Post-ReDevelopment	Post-Development (New Impervious)	Adjusted Pre-ReDevelopment
Site Rv	0.4949	0.3061	0.9500	0.3061
Treatment Volume (ft^3)	1,268.3220	554.4825	713.8395	554.4825
TP Load (lb/yr)	0.7969	0.3484	0.4485	0.3484

Pre-ReDevelopment TP Load per acre (lb/acre/yr)	Final Post-Development TP Load per acre (lb/acre/yr)	Post-ReDevelopment TP Load per acre (lb/acre/yr)
0.7000	1.1300	0.7000

Total TP Load Reduction Required (lb/yr)	0.3985	0.0348	0.3636

	Final Post-Development Load (Post-ReDevelopment & New Impervious)	Pre-ReDevelopment
TN Load (lb/yr)	5.7008	3.3366

Site Compliance Summary

Maximum % Reduction Required Below Pre-ReDevelopment Load	10%

Total Runoff Volume Reduction (ft^3)	554.3736
Total TP Load Reduction Achieved (lb/yr)	0.4037
Total TN Load Reduction Achieved (lb/yr)	2.9255
Remaining Post Development TP Load (lb/yr)	0.3931
Remaining TP Load Reduction (lb/yr) Required	0.0000

** TARGET TP REDUCTION EXCEEDED BY 0.0053 LB/YEAR **

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

STORMWATER MANAGEMENT CALCULATIONS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C5.020

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION
Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

STORMWATER MANAGEMENT CALCULATIONS

Approval Date

Design Supervisor

Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: ME
Drawn: ME
Checked: JA

Filename:
Plotted:

Scale: AS SHOWN
Date: July 21, 2023

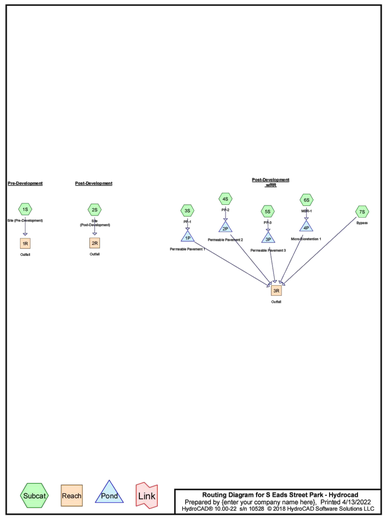
Seal

COMMONWEALTH OF VIRGINIA
JASON AZAR
Lic. No. 051113
PROFESSIONAL ENGINEER

Sheet

C5.020

ROUTING DIAGRAM



AREAS SUMMARY

Time span=0.00-28.00 hrs, dt=0.05 hrs, 561 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Site (Pre-Development) Runoff Area=0.683 ac 3.51% Impervious Runoff Depth=1.00"
Flow Length=257' Tc=11.9 min CN=81 Runoff=0.96 cfs 0.057 af

Subcatchment2S: Site (Post-Development) Runoff Area=0.683 ac 32.06% Impervious Runoff Depth=1.31"
Flow Length=160' Tc=10.3 min CN=86 Runoff=1.34 cfs 0.075 af

Subcatchment3S: PP-1 Runoff Area=0.030 ac 100.00% Impervious Runoff Depth=2.35"
Tc=6.0 min CN=98 Runoff=0.11 cfs 0.006 af

Subcatchment4S: PP-2 Runoff Area=0.015 ac 100.00% Impervious Runoff Depth=2.35"
Tc=6.0 min CN=98 Runoff=0.05 cfs 0.003 af

Subcatchment5S: PP-3 Runoff Area=0.035 ac 100.00% Impervious Runoff Depth=2.35"
Tc=6.0 min CN=98 Runoff=0.12 cfs 0.007 af

Subcatchment6S: MBR-1 Runoff Area=0.299 ac 18.73% Impervious Runoff Depth=1.12"
Flow Length=160' Tc=10.3 min CN=83 Runoff=0.50 cfs 0.028 af

Subcatchment7S: Bypass Runoff Area=0.304 ac 27.30% Impervious Runoff Depth=1.24"
Tc=6.0 min CN=85 Runoff=0.65 cfs 0.031 af

Reach 1R: Outfall Inflow=0.96 cfs 0.057 af
Outflow=0.96 cfs 0.057 af

Reach 2R: Outfall Inflow=1.34 cfs 0.075 af
Outflow=1.34 cfs 0.075 af

Reach 3R: Outfall Inflow=0.66 cfs 0.048 af
Outflow=0.66 cfs 0.048 af

Pond 1P: Permeable Pavement 1 Peak Elev=35.22' Storage=256 cf Inflow=0.11 cfs 0.006 af
Outflow=0.00 cfs 0.000 af

Pond 2P: Permeable Pavement 2 Peak Elev=34.91' Storage=128 cf Inflow=0.05 cfs 0.003 af
Outflow=0.00 cfs 0.000 af

Pond 3P: Permeable Pavement 3 Peak Elev=34.66' Storage=299 cf Inflow=0.12 cfs 0.007 af
Outflow=0.00 cfs 0.000 af

Pond 4P: Micro-Bioretention1 Peak Elev=34.01' Storage=761 cf Inflow=0.50 cfs 0.028 af
Outflow=0.01 cfs 0.017 af

Total Runoff Area = 2.049 ac Runoff Volume = 0.206 af Average Runoff Depth = 1.21"
77.45% Pervious = 1.587 ac 22.55% Impervious = 0.462 ac

Time span=0.00-28.00 hrs, dt=0.05 hrs, 561 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Site (Pre-Development) Runoff Area=0.683 ac 3.51% Impervious Runoff Depth=2.79"
Flow Length=257' Tc=11.9 min CN=81 Runoff=2.70 cfs 0.159 af

Subcatchment2S: Site (Post-Development) Runoff Area=0.683 ac 32.06% Impervious Runoff Depth=3.26"
Flow Length=160' Tc=10.3 min CN=86 Runoff=3.26 cfs 0.186 af

Subcatchment3S: PP-1 Runoff Area=0.030 ac 100.00% Impervious Runoff Depth=4.54"
Tc=6.0 min CN=98 Runoff=0.20 cfs 0.011 af

Subcatchment4S: PP-2 Runoff Area=0.015 ac 100.00% Impervious Runoff Depth=4.54"
Tc=6.0 min CN=98 Runoff=0.10 cfs 0.006 af

Subcatchment5S: PP-3 Runoff Area=0.035 ac 100.00% Impervious Runoff Depth=4.54"
Tc=6.0 min CN=98 Runoff=0.23 cfs 0.013 af

Subcatchment6S: MBR-1 Runoff Area=0.299 ac 18.73% Impervious Runoff Depth=2.98"
Flow Length=160' Tc=10.3 min CN=83 Runoff=1.32 cfs 0.074 af

Subcatchment7S: Bypass Runoff Area=0.304 ac 27.30% Impervious Runoff Depth=3.17"
Tc=6.0 min CN=85 Runoff=1.61 cfs 0.080 af

Reach 1R: Outfall Inflow=2.70 cfs 0.159 af
Outflow=2.70 cfs 0.159 af

Reach 2R: Outfall Inflow=3.26 cfs 0.186 af
Outflow=3.26 cfs 0.186 af

Reach 3R: Outfall Inflow=1.63 cfs 0.111 af
Outflow=1.63 cfs 0.111 af

Pond 1P: Permeable Pavement 1 Peak Elev=35.68' Storage=495 cf Inflow=0.20 cfs 0.011 af
Outflow=0.00 cfs 0.000 af

Pond 2P: Permeable Pavement 2 Peak Elev=35.15' Storage=192 cf Inflow=0.10 cfs 0.006 af
Outflow=0.00 cfs 0.002 af

Pond 3P: Permeable Pavement 3 Peak Elev=35.14' Storage=569 cf Inflow=0.23 cfs 0.013 af
Outflow=0.00 cfs 0.000 af

Pond 4P: Micro-Bioretention1 Peak Elev=35.58' Storage=2,372 cf Inflow=1.32 cfs 0.074 af
Outflow=0.02 cfs 0.028 af

Total Runoff Area = 2.049 ac Runoff Volume = 0.529 af Average Runoff Depth = 3.10"
77.45% Pervious = 1.587 ac 22.55% Impervious = 0.462 ac

1-YR PRE-DEVELOPMENT

Summary for Subcatchment 1S: Site (Pre-Development)

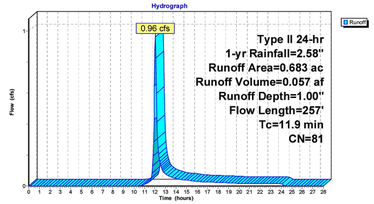
Runoff = 0.96 cfs @ 12.04 hrs, Volume= 0.057 af, Depth= 1.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.58"

	Area (ac)	CN	Description
*	0.659	80	Managed Turf
*	0.024	98	Impervious Cover
	0.683	81	Weighted Average
	0.659		96.49% Pervious Area
	0.024		3.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.5	100	0.0176	0.16		**Sheet Flow, Sheet Flow** Grass: Short n= 0.150 P2= 3.07"
1.4	157	0.0135	1.87		**Shallow Concentrated Flow, Shallow Concentrated Flow** Unpaved Kv= 16.1 fps
11.9	257	Total			

Subcatchment 1S: Site (Pre-Development)



10-YR PRE-DEVELOPMENT

Summary for Subcatchment 1S: Site (Pre-Development)

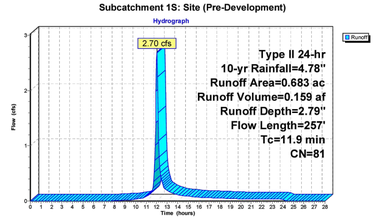
Runoff = 2.70 cfs @ 12.04 hrs, Volume= 0.159 af, Depth= 2.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.78"

	Area (ac)	CN	Description
*	0.659	80	Managed Turf
*	0.024	98	Impervious Cover
	0.683	81	Weighted Average
	0.659		96.49% Pervious Area
	0.024		3.51% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.5	100	0.0176	0.16		**Sheet Flow, Sheet Flow** Grass: Short n= 0.150 P2= 3.07"
1.4	157	0.0135	1.87		**Shallow Concentrated Flow, Shallow Concentrated Flow** Unpaved Kv= 16.1 fps
11.9	257	Total			

Subcatchment 1S: Site (Pre-Development)



1-YR POST-DEVELOPMENT

Summary for Subcatchment 2S: Site (Post-Development)

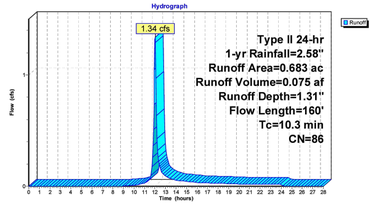
Runoff = 1.34 cfs @ 12.02 hrs, Volume= 0.075 af, Depth= 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.58"

	Area (ac)	CN	Description
*	0.464	80	Managed Turf
*	0.219	98	Impervious Cover
	0.683	86	Weighted Average
	0.464		67.94% Pervious Area
	0.219		32.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	100	0.0210	0.17		**Sheet Flow, Sheet Flow** Grass: Short n= 0.150 P2= 3.07"
0.5	60	0.0158	2.02		**Shallow Concentrated Flow, Shallow Concentrated Flow** Unpaved Kv= 16.1 fps
10.3	160	Total			

Subcatchment 2S: Site (Post-Development)



10-YR POST-DEVELOPMENT

Summary for Subcatchment 2S: Site (Post-Development)

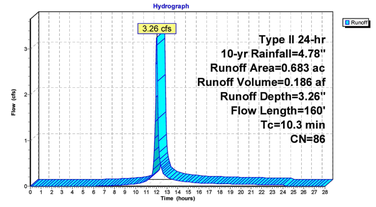
Runoff = 3.26 cfs @ 12.01 hrs, Volume= 0.186 af, Depth= 3.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-28.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=4.78"

	Area (ac)	CN	Description
*	0.464	80	Managed Turf
*	0.219	98	Impervious Cover
	0.683	86	Weighted Average
	0.464		67.94% Pervious Area
	0.219		32.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	100	0.0210	0.17		**Sheet Flow, Sheet Flow** Grass: Short n= 0.150 P2= 3.07"
0.5	60	0.0158	2.02		**Shallow Concentrated Flow, Shallow Concentrated Flow** Unpaved Kv= 16.1 fps
10.3	160	Total			

Subcatchment 2S: Site (Post-Development)



SWM Water Quantity Energy Balance Worksheet

SITE AREA (acre) 0.683

	1-year		10-year	
	PRE	POST (adjusted)	PRE	POST (adjusted)
P	2.69	2.69	4.84	4.84
CN	81	86	81	86
S=1000/CN-10	2.35	1.63	2.35	1.63
0.2S	0.47	0.33	0.47	0.33
$RV=(P-0.2S)^2/(P-0.2S)+S$	1.08	1.40	2.84	3.32

POST (adjusted) from RRM 'Channel and Flood Protection' tab; PRE CN can be computed using same computations on this tab

QPost Development <= I.F.* (Qpre-development* RVpre-development)/RVDeveloped)

I.F 0.9

CHANNEL PROTECTION		
Qpre-development	0.96	From TR55
QPost Development	1.34	From TR55
RVPost Development (with runoff reduction)	1.40	From RRM
Qallowable	0.67	
Qallowable/QPost Development	0.50	
Vs/Vr	0.28	Fig 11.7 of DEQ Manual
Vs	0.39	
Storage required (cf)	972	

FLOOD CONTROL		
Qpre-development	2.70	From TR55
QPost Development	3.26	From TR55
RVPost Development (with runoff reduction)	3.32	From RRM
Qallowable	2.31	
Qallowable/QPost Development	0.71	
Vs/Vr	0.21	Fig 11.7 of DEQ Manual
Vs	0.70	
Storage required (cf)	1727	

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

PRE-DEVELOPMENT SWM CALCULATIONS
ARLINGTON JUNCTION PARK-CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C5.030

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

PRE-DEVELOPMENT SWM CALCULATIONS

Approval Date

Design Supervisor

Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: ME
Drawn: ME
Checked: JA

Filename:
Plotted:

Scale: AS SHOWN
Date: July 21, 2023

Seal

Sheet

C5.030

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1-YR POST-DEVELOPMENT W/RR

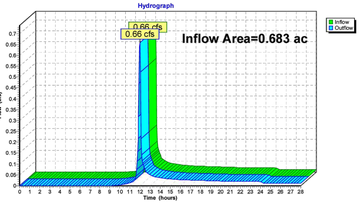
Summary for Reach 3R: Outfall

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.683 ac, 32.06% Impervious, Inflow Depth > 0.85" for 1-yr event
Inflow = 0.66 cfs @ 11.97 hrs, Volume= 0.048 af
Outflow = 0.66 cfs @ 11.97 hrs, Volume= 0.048 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-28.00 hrs, dt= 0.05 hrs

Reach 3R: Outfall



Summary for Pond 1P: Permeable Pavement 1

Inflow Area = 0.030 ac,100.00% Impervious, Inflow Depth = 2.35" for 1-yr event
Inflow = 0.11 cfs @ 11.96 hrs, Volume= 0.006 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.05 hrs
Peak Elev= 35.22' @ 24.40 hrs Surf.Area= 1,301 sf Storage= 256 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	34.73'	260 cf	**Sand (Prismatic)**Listed below (Recalc) 651 cf Overall x 40.0% Voids
#2	35.23'	520 cf	**Stone (Sump) (Prismatic)**Listed below (Recalc) 1,301 cf Overall x 40.0% Voids
#3	36.23'	781 cf	**Stone (Prismatic)**Listed below (Recalc) 1,952 cf Overall x 40.0% Voids
		1,561 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
34.73	1,301	0	0
35.23	1,301	651	651

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
35.23	1,301	0	0
36.23	1,301	1,301	1,301

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
36.23	1,301	0	0
37.73	1,301	1,952	1,952

Device	Routing	Invert	Outlet Devices
#1	Primary	37.02'	**6.0" Round Underdrain** L= 108.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 37.02' / 36.48' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf
#2	Device 1	36.48'	**0.4" Vert. Perforations** X 3 rows with 6.0" cc spacing C= 0.600

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=34.73' (Free Discharge)
1=Underdrain (Controls 0.00 cfs)
2=Perforations (Controls 0.00 cfs)

STAGE STORAGE (PP-1, PP-2, PP-3, MBR-1)

Summary for Pond 2P: Permeable Pavement 2

Inflow Area = 0.015 ac,100.00% Impervious, Inflow Depth = 2.35" for 1-yr event
Inflow = 0.05 cfs @ 11.96 hrs, Volume= 0.003 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.05 hrs
Peak Elev= 34.91' @ 24.40 hrs Surf.Area= 655 sf Storage= 128 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	34.42'	393 cf	**Stone (Prismatic)**Listed below (Recalc) 983 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
34.42	655	0	0
35.92	655	983	983

Device	Routing	Invert	Outlet Devices
#1	Primary	34.97'	**6.0" Round Underdrain** L= 59.1' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 34.97' / 34.67' S= 0.0051 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf
#2	Device 1	34.67'	**0.4" Vert. Orifice/Grate** X 3 rows with 6.0" cc spacing C= 0.600

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=34.42' (Free Discharge)
1=Underdrain (Controls 0.00 cfs)
2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond 3P: Permeable Pavement 3

Inflow Area = 0.035 ac,100.00% Impervious, Inflow Depth = 2.35" for 1-yr event
Inflow = 0.12 cfs @ 11.96 hrs, Volume= 0.007 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.05 hrs
Peak Elev= 34.66' @ 24.40 hrs Surf.Area= 1,427 sf Storage= 299 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	34.14'	856 cf	**Stone (Prismatic)**Listed below (Recalc) 2,141 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
34.14	1,427	0	0
35.64	1,427	2,141	2,141

Device	Routing	Invert	Outlet Devices
#1	Primary	35.11'	**6.0" Round Underdrain** L= 144.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 35.11' / 34.39' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf
#2	Device 1	34.39'	**0.4" Vert. Perforations** X 3 rows with 6.0" cc spacing C= 0.600

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=34.14' (Free Discharge)
1=Underdrain (Controls 0.00 cfs)
2=Perforations (Controls 0.00 cfs)

Summary for Pond 4P: Micro-Bioretention 1

[44] Hint: Outlet device #4 is below defined storage

Inflow Area = 0.299 ac, 18.73% Impervious, Inflow Depth = 1.12" for 1-yr event
Inflow = 0.50 cfs @ 12.02 hrs, Volume= 0.028 af
Outflow = 0.01 cfs @ 16.09 hrs, Volume= 0.017 af, Atten= 97%, Lag= 244.2 min
Primary = 0.01 cfs @ 16.09 hrs, Volume= 0.017 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.05 hrs
Peak Elev= 34.01' @ 16.09 hrs Surf.Area= 2,095 sf Storage= 761 cf

Plug-Flow detention time= 460.6 min calculated for 0.017 af (61% of inflow)
Center-of-Mass det. time= 341.7 min (1,186.0 - 844.3)

Volume	Invert	Avail.Storage	Storage Description
#1	32.45'	268 cf	**Stone (Prismatic)**Listed below (Recalc) 670 cf Overall x 40.0% Voids
#2	33.45'	335 cf	**Media (Prismatic)**Listed below (Recalc) 1,340 cf Overall x 25.0% Voids
#3	33.45'	2,419 cf	**Ponding (Prismatic)**Listed below (Recalc)
		3,022 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
32.45	670	0	0
33.45	670	670	670

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
33.45	670	0	0
35.45	670	1,340	1,340

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
33.45	670	0	0
36.20	1,089	2,419	2,419

Device	Routing	Invert	Outlet Devices
#1	Primary	32.32'	**15.0" Round Outfall** L= 17.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 32.32' / 32.23' S= 0.0053 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf
#2	Device 1	32.45'	**6.0" Round 6" Underdrain** L= 26.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 32.45' / 32.32' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf
#3	Device 1	35.70'	**24.0" Horiz. Overflow Weir** C= 0.600 Limited to weir flow at low heads
#4	Device 2	32.32'	**0.4" Vert. Perforations** X 3 rows with 6.0" cc spacing C= 0.600

10-YR POST-DEVELOPMENT W/RR

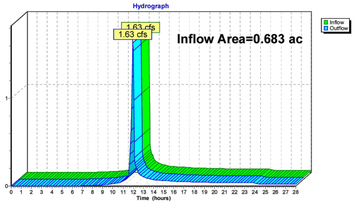
Summary for Reach 3R: Outfall

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.683 ac, 32.06% Impervious, Inflow Depth > 1.94" for 10-yr event
Inflow = 1.63 cfs @ 11.97 hrs, Volume= 0.111 af
Outflow = 1.63 cfs @ 11.97 hrs, Volume= 0.111 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-28.00 hrs, dt= 0.05 hrs

Reach 3R: Outfall



Summary for Pond 1P: Permeable Pavement 1

Inflow Area = 0.030 ac,100.00% Impervious, Inflow Depth = 4.54" for 10-yr event
Inflow = 0.20 cfs @ 11.96 hrs, Volume= 0.011 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.05 hrs
Peak Elev= 35.68' @ 24.40 hrs Surf.Area= 2,602 sf Storage= 495 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	34.73'	260 cf	**Sand (Prismatic)**Listed below (Recalc) 651 cf Overall x 40.0% Voids
#2	35.23'	520 cf	**Stone (Sump) (Prismatic)**Listed below (Recalc) 1,301 cf Overall x 40.0% Voids
#3	36.23'	781 cf	**Stone (Prismatic)**Listed below (Recalc) 1,952 cf Overall x 40.0% Voids
		1,561 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
34.73	1,301	0	0
35.23	1,301	651	651

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
35.23	1,301	0	0
36.23	1,301	1,301	1,301

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
36.23	1,301	0	0
37.73	1,301	1,952	1,952

Device	Routing	Invert	Outlet Devices
#1	Primary	37.02'	**6.0" Round Underdrain** L= 108.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 37.02' / 36.48' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf
#2	Device 1	36.48'	**0.4" Vert. Perforations** X 3 rows with 6.0" cc spacing C= 0.600

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=34.73' (Free Discharge)
1=Underdrain (Controls 0.00 cfs)
2=Perforations (Controls 0.00 cfs)

STAGE STORAGE (PP-1, PP-2, PP-3, MBR-1)

Summary for Pond 2P: Permeable Pavement 2

Inflow Area = 0.015 ac,100.00% Impervious, Inflow Depth = 4.54" for 10-yr event
Inflow = 0.10 cfs @ 11.96 hrs, Volume= 0.006 af
Outflow = 0.00 cfs @ 15.82 hrs, Volume= 0.002 af, Atten= 98%, Lag= 231.4 min
Primary = 0.00 cfs @ 15.82 hrs, Volume= 0.002 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.05 hrs
Peak Elev= 35.15' @ 15.82 hrs Surf.Area= 655 sf Storage= 192 cf

Plug-Flow detention time= 593.9 min calculated for 0.002 af (36% of inflow)
Center-of-Mass det. time= 427.4 min (1,172.1 - 744.7)

Volume	Invert	Avail.Storage	Storage Description
#1	34.42'	393 cf	**Stone (Prismatic)**Listed below (Recalc) 983 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
34.42	655	0	0
35.92	655	983	983

Device	Routing	Invert	Outlet Devices
#1	Primary	34.97'	**6.0" Round Underdrain** L= 59.1' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 34.97' / 34.67' S= 0.0051 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf
#2	Device 1	34.67'	**0.4" Vert. Orifice/Grate** X 3 rows with 6.0" cc spacing C= 0.600

Primary OutFlow Max=0.00 cfs @ 15.82 hrs HW=35.15' (Free Discharge)
1=Underdrain (Passes 0.00 cfs of 0.07 cfs potential flow)
2=Orifice/Grate (Orifice Controls 0.00 cfs @ 2.06 fps)

Summary for Pond 3P: Permeable Pavement 3

Inflow Area = 0.035 ac,100.00% Impervious, Inflow Depth = 4.54" for 10-yr event
Inflow = 0.23 cfs @ 11.96 hrs, Volume= 0.013 af
Outflow = 0.00 cfs @ 24.07 hrs, Volume= 0.000 af, Atten= 99%, Lag= 726.4 min
Primary = 0.00 cfs @ 24.07 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.05 hrs
Peak Elev= 35.14' @ 24.07 hrs Surf.Area= 1,427 sf Storage= 569 cf

Plug-Flow detention time= 1,258.0 min calculated for 0.000 af (3% of inflow)
Center-of-Mass det. time= 723.8 min (1,468.4 - 744.7)

Volume	Invert	Avail.Storage	Storage Description
#1	34.14'	856 cf	**Stone (Prismatic)**Listed below (Recalc) 2,141 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
34.14	1,427	0	0
35.64	1,427	2,141	2,141

Device	Routing	Invert	Outlet Devices
#1	Primary	35.11'	**6.0" Round Underdrain** L= 144.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 35.11' / 34.39' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf
#2	Device 1	34.39'	**0.4" Vert. Perforations** X 3 rows with 6.0" cc spacing C= 0.600

Primary OutFlow Max=0.00 cfs @ 24.07 hrs HW=35.14' (Free Discharge)
1=Underdrain (Passes 0.00 cfs of 0.00 cfs potential flow)
2=Perforations (Orifice Controls 0.00 cfs @ 0.80 fps)

Summary for Pond 4P: Micro-Bioretention 1

[44] Hint: Outlet device #4 is below defined storage

Inflow Area = 0.299 ac, 18.73% Impervious, Inflow Depth = 2.98" for 10-yr event
Inflow = 1.32 cfs @ 12.02 hrs, Volume= 0.074 af
Outflow = 0.02 cfs @ 18.89 hrs, Volume= 0.028 af, Atten= 98%, Lag= 412.6 min
Primary = 0.02 cfs @ 18.89 hrs, Volume= 0.028 af

Routing by Stor-Ind method, Time Span= 0.00-28.00 hrs, dt= 0.05 hrs
Peak Elev= 35.58' @ 18.89 hrs Surf.Area= 2,334 sf Storage= 2,372 cf

Plug-Flow detention time= 484.2 min calculated for 0.028 af (38% of inflow)
Center-of-Mass det. time= 361.7 min (1,177.9 - 816.2)

Volume	Invert	Avail.Storage	Storage Description
#1	32.45'	268 cf	**Stone (Prismatic)**Listed below (Recalc) 670 cf Overall x 40.0% Voids
#2	33.45'	335 cf	**Media (Prismatic)**Listed below (Recalc) 1,340 cf Overall x 25.0% Voids
#3	33.45'	2,419 cf	**Ponding (Prismatic)**Listed below (Recalc)
		3,022 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
32.45	670	0	0
33.45	670	670	670

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
33.45	670	0	0
35.45	670	1,340	1,340

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
33.45	670	0	0
36.20	1,089	2,419	2,419

Device	Routing	Invert	Outlet Devices
#1	Primary	32.32'	**15.0" Round Outfall** L= 17.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 32.32' / 32.23' S= 0.0053 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.23 sf
#2	Device 1	32.45'	**6.0" Round 6" Underdrain** L= 26.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 32.45' / 32.32' S= 0.0050 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf
#3	Device 1	35.70'	**24.0" Horiz. Overflow Weir** C= 0.600 Limited to weir flow at low heads
#4	Device 2	32.32'	**0.4" Vert. Perforations** X 3 rows with 6.0" cc spacing C= 0.600

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

POST-DEVELOPMENT SWM CALCULATIONS
ARLINGTON JUNCTION PARK-CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET C5.040	

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

POST-DEVELOPMENT SWM CALCULATIONS

Approval Date

Design Supervisor

Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: ME
Drawn: ME
Checked: JA

Filename:
Plotted:

Scale: AS SHOWN
Date: July 21, 2023

Seal

Sheet

C5.040

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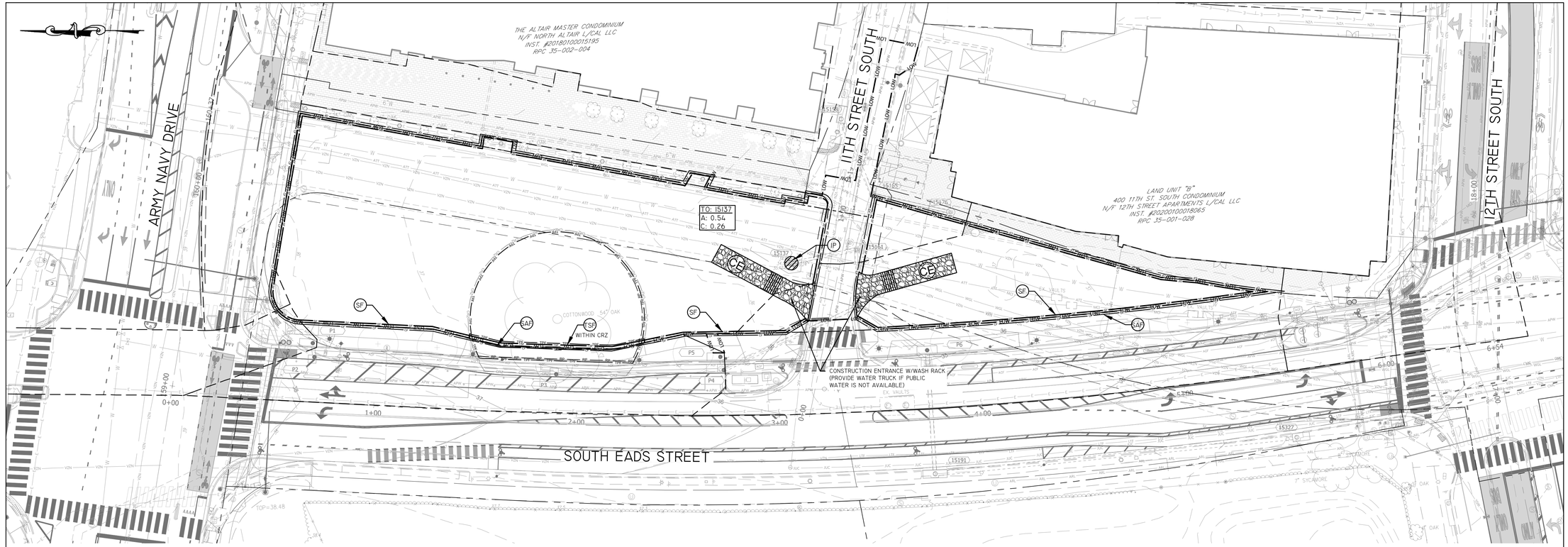

EROSION & SEDIMENT CONTROL PHASE I
SCALE: 1" = 25'

LEGEND:

	CE	TEMPORARY CONSTRUCTION ENTRANCE, SPEC. 3.02
SF	SF	SILT FENCE, SPEC. 3.05-2
CF	SAF	SAFETY FENCE, SPEC. 3.01
LOW		LIMITS OF WORK
TSF	TSF	TRENCHLESS SILT FENCE
	IP	INLET PROTECTION, SPEC 3.07-1
	IP	CURB INLET PROTECTION, SPEC. 3.07-7

25' 12.5' 0 25' 50'
GRAPHIC SCALE
1" = 25'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

EROSION & SEDIMENT CONTROL PLAN PHASE 1
ARLINGTON JUNCTION PARK-CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C8.000

ARLINGTON
VIRGINIA

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AND RECREATION

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Arlington, VA 22201
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Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

EROSION & SEDIMENT CONTROL PLAN PHASE 1

Approval Date

Design Supervisor

Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: ME
Drawn: ME
Checked: JA

Filename:
Plotted:

Scale: AS SHOWN
Date: July 21, 2023

Seal

COMMONWEALTH OF VIRGINIA
JASON J. AZAR
Lic. No. 051113
PROFESSIONAL ENGINEER

Sheet

C8.000

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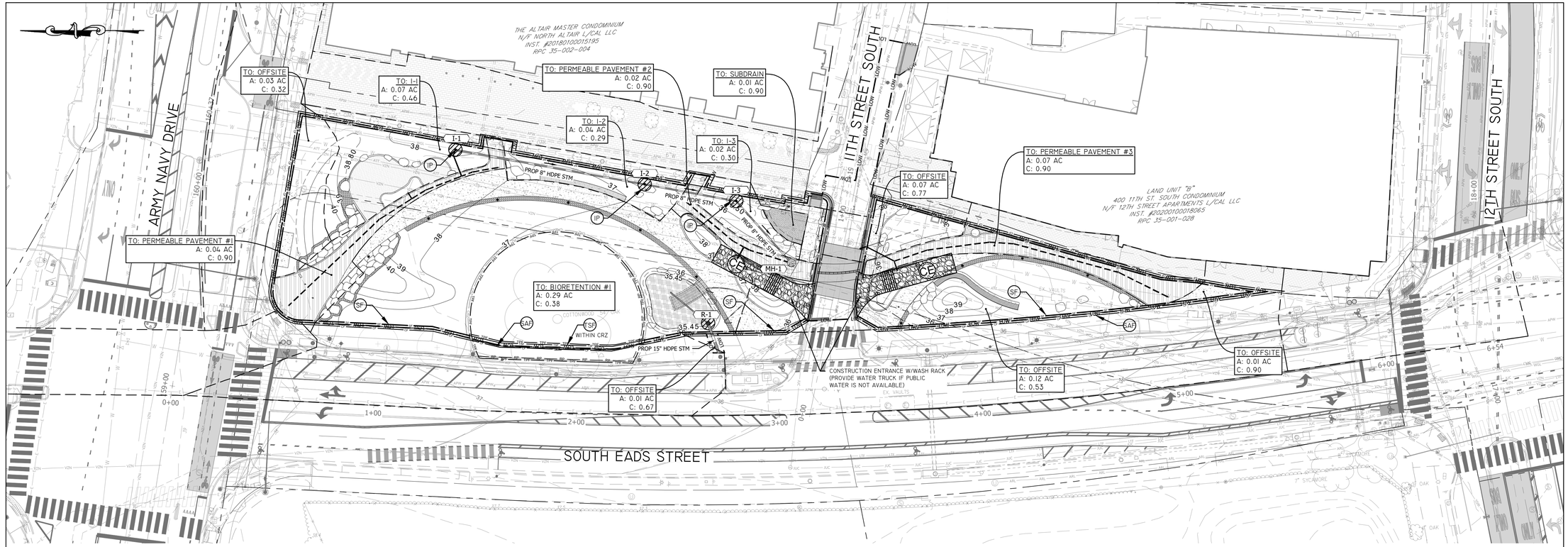

EROSION & SEDIMENT CONTROL PHASE 2
SCALE: 1" = 25'

LEGEND:

	CE	TEMPORARY CONSTRUCTION ENTRANCE, SPEC. 3.02
SF	SF	SILT FENCE, SPEC. 3.05-2
CF	SAF	SAFETY FENCE, SPEC. 3.01
LOW		LIMITS OF WORK
TSF	TSF	TRENCHLESS SILT FENCE
	IP	INLET PROTECTION, SPEC 3.07-1
	IP	CURB INLET PROTECTION, SPEC. 3.07-7

25' 12.5' 0 25' 50'
GRAPHIC SCALE
1" = 25'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

EROSION & SEDIMENT CONTROL PLAN PHASE 2
ARLINGTON JUNCTION PARK-CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C8.010

ARLINGTON
VIRGINIA

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AND RECREATION

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Arlington, VA 22201
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Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

EROSION & SEDIMENT CONTROL PLAN PHASE 2

Approval Date

Design Supervisor

Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: ME
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Plotted:

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Date: July 21, 2023

Seal

COMMONWEALTH OF VIRGINIA
JASON J. AZAR
Lic. No. 051113
PROFESSIONAL ENGINEER

Sheet

C8.010

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EROSION AND SEDIMENT CONTROL PLAN NARRATIVE

PROJECT DESCRIPTION:
THIS PROJECT IS LOCATED IN ARLINGTON COUNTY, VIRGINIA. THE SITE IS LOCATED AT THE INTERSECTION OF SOUTH EADS STREET AND ARMY NAVY DRIVE IN ARLINGTON, VA 22202. THIS PROJECT PROPOSES TO REDEVELOP AN EXISTING EMPTY LOT INTO A NEW PARK. NEW WALKWAYS, BENCHES, LANDSCAPED AREAS, AND REQUIRED STORMWATER MANAGEMENT FACILITIES WILL BE CONSTRUCTED. THE TOTAL AREA OF THE PARK IS PROPOSED BE APPROXIMATELY 0.71 ACRES.

EXISTING SITE CONDITIONS:
THE EXISTING PROJECT AREA CONSISTS OF AN EMPTY LOT WITH GRASS COVERAGE THROUGHOUT.

DATE OF CONSTRUCTION:
CONSTRUCTION IS ANTICIPATED TO START AT TIME OF PLAN APPROVAL.

ADJACENT PROPERTIES:
BOUNDED BY ARMY NAVY DRIVE TO THE NORTH SOUTH EADS STREET TO THE WEST, 12TH STREET S TO THE SOUTH, AND AN APARTMENT BUILDING TO THE EAST.

OFF-SITE AREAS:
THE PROJECT WILL NOT REQUIRE ANY OFF-SITE LAND DISTURBING ACTIVITIES.

CRITICAL AREAS:
THE PROJECT DOES NOT IMPACT ANY CRITICAL AREAS.

SOILS:
SEE THIS SHEET FOR SOILS MAP AND INFORMATION

STRUCTURAL PRACTICES:

1. 3.02 CONSTRUCTION ENTRANCE – A TEMPORARY ENTRANCE IN ACCORDANCE WITH THE STATE STANDARDS WITH A LENGTH OF AT LEAST 75 LINEAR FEET WILL BE PROVIDED AT THE LOCATION SHOWN ON THE PLANS WHICH IS AT THE APPROXIMATE POINT OF THE PAVED ACCESS AND A WOVEN FILTER FABRIC UNDERLINER IS REQUIRED. THE ENTRANCE SHALL BE MAINTAINED IN GOOD REPAIR AND SHALL PROVIDE REMOVAL OF DEBRIS FROM VEHICLES PRIOR TO LEAVING THE CONSTRUCTION SITE. WATER FOR THE WASH RACK TO BE PROVIDED BY A WATER TANK TRUCK IF PUBLIC WATER IS NOT AVAILABLE.
2. 3.01 SAFETY FENCE – WILL BE INSTALLED AS A PROTECTIVE BARRIER TO PREVENT PUBLIC ACCESS TO THE CONSTRUCTION SITE AND E&S CONTROL MEASURES.
3. 3.05 SILT FENCE BARRIER – SILT FENCE SEDIMENT BARRIERS WITHOUT WIRE SUPPORT SHALL BE INSTALLED AS SHOWN ON THE APPROVED PLAN TO FILTER SEDIMENT LADEN RUNOFF FROM THE CONSTRUCTION AREA.
4. 3.38 TREE PRESERVATION AND PROTECTION – WILL BE CONSTRUCTED AT TREE SAVE AREAS TO ENSURE THE SURVIVAL OF DESIRABLE TREES WHERE THEY WILL BE EFFECTIVE FOR EROSION AND SEDIMENT CONTROL, WATERSHED PROTECTION, LANDSCAPE BEAUTIFICATION, DUST AND POLLUTION CONTROL, NOISE REDUCTION, SHADE AND OTHER ENVIRONMENTAL BENEFITS WHILE THE LAND IS BEING CONVERTED FROM FOREST TO URBAN TYPE USES.

SEDIMENT CONTROL PROGRAM:
PHASE 1A EROSION CONTROL

THE INITIAL CONTROL MEASURES SHALL BE AS FOLLOWS:
1. CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS INDICATED IN THE PLAN INSIDE THE CONSTRUCTION FENCE. MUD AND DEBRIS SHALL BE WASHED FROM ALL VEHICLES AND EQUIPMENT BEFORE LEAVING THE SITE AND BE CAPTURED BY SETTLING AREA.
2. SUPER SILT FENCE AND SILT FENCE SHALL BE INSTALLED WHERE INDICATED IN THE PLAN. HE SILT FENCE SHALL BE TEMPORARILY REMOVED FOR CONSTRUCTION ACTIVITIES, BUT SHALL BE INSTALLED AT THE END OF EACH WORK DAY.
3. AREAS INSIDE THE CONSTRUCTION FENCE WITH PRIVACY SCREENING WILL BE USED AS STAGING/LAYDOWN AREAS AS MAY BE NEEDED FOR CONSTRUCTION.
4. AFTER ESTABLISHMENT OF ALL INITIAL CONTROL MEASURES, THE CONTRACTOR SHALL PROCEED WITH DEMOLITION AND INSTALLATION OF IMPROVEMENTS.UNDER PHASE 1B OF THE EROSION CONTROL PROGRAM.

PHASE 1B
1. INSTALL SEDIMENT TRAP PER CONSTRUCTION PLAN.
2. AFTER COMPLETING THE PHASE 1A ACTIVITIES, THE CONTRACTOR SHALL BEGIN DEMOLITION OF THE EXISTING BUILDING.
3. ALL DEMOLITION OF THE EXISTING BUILDING AND PAVEMENT AREAS WILL BE PERFORMED UNDER THIS PHASE.

PHASE 2
1. THIS PHASE WILL INCLUDE THE GRADING, UTILITY INSTALLATION, BMP FACILITY CONSTRUCTION AND ALL OTHER PARK IMPROVEMENTS. THE REMAINING SITE AREA WILL BE STABILIZED WITH GRASS.
2. ANY EXISTING EROSION CONTROL ITEMS WILL BE REMOVED UPON APPROVAL OF THE INSPECTOR AND ANY RESULTING DISTURBED AREAS WILL BE STABILIZED WITH GRASS.

GENERAL EROSION AND SEDIMENT CONTROL NOTES:

ES-1 UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS 4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS.

ES-2 THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE RE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

ES-3 ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.

ES-4 A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

ES-5 PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.

ES-6 THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.

ES-7 ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

ES-8 THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURE PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY

GENERAL LAND CONSERVATION NOTES:

1. NO AREA WILL REMAIN DENUDED FOR MORE THAN 7 CALENDAR DAYS UNLESS OTHERWISE AUTHORIZED BY THE DIRECTOR OR HIS AGENT.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING. FIRST AREAS TO BE CLEARED ARE TO BE THOSE REQUIRED FOR THE PERIMETER CONTROLS.
3. ALL STORM SEWER LINES NOT IN STREETS ARE TO BE MULCHED AND SEEDED WITHIN 5 DAYS AFTER BACKFILL. NO MORE THAN 500 FEET ARE TO BE OPEN AT ANY ONE TIME.
4. DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY INLET PROTECTION DEVICES, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
5. ANY DISTURBED AREA NOT COVERED BY NOTE #1 ABOVE AND NOT PAVED, SODDED OR BUILT UPON BY NOVEMBER 1ST, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED WITH HAY OR STRAW MULCH AT THE RATE OF 2 TONS PER ACRE AND OVER-SEEDED NO LATER THAN MAY 15TH.
6. AT THE COMPLETION OF CONSTRUCTION PROJECT AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED. ARLINGTON COUNTY INSPECTOR TO APPROVE REMOVAL OF ALL TEMPORARY SILTATION MEASURES

MAINTENANCE PROGRAM:
THE SITE SUPERINTENDENT OR HIS OR HER REPRESENTATIVE SHALL MAKE A VISUAL INSPECTION OF ALL MECHANICAL CONTROLS AND NEWLY STABILIZED AREAS (I.E. SEEDED AND MULCHED AND/OR SODDED AREAS) ON A DAILY BASIS, ESPECIALLY AFTER A HEAVY RAINFALL EVENT TO INSURE THAT ALL CONTROLS ARE MAINTAINED AND PROPERLY FUNCTIONING. ANY DAMAGED CONTROLS SHALL BE REPAIRED PRIOR TO THE END OF THE WORKDAY INCLUDING RE-SEEDING AND MULCHING OR RE-SODDING, IF NECESSARY.

STORMWATER MANAGEMENT:
THIS PROJECT DISTURBS APPROXIMATELY 9.3015 ACRES. THE PROJECT SITE IS WITHIN A FLOODPLAIN. IT CONNECTS TO THE EXISTING ON-SITE STORM SEWER SYSTEM WHICH DISCHARGES INTO FOUR MILE RUN.

MS4 NOTE:
ONLY THE FOLLOWING NON-STORMWATER DISCHARGES ARE AUTHORIZED BY ARLINGTON COUNTY'S MS4 PERMIT, UNLESS THE STATE WATER CONTROL BOARD, THE VIRGINIA SOIL AND WATER CONSERVATION BOARD (BOARD), OR ARLINGTON COUNTY DETERMINES THE DISCHARGE TO BE A SIGNIFICANT SOURCE OF POLLUTANTS TO SURFACE WATERS:

WATER LINE FLUSHING; LANDSCAPE IRRIGATION; DIVERTED STREAM FLOWS; RISING GROUND WATERS; UNCONTAMINATED GROUND WATER INFILTRATION (AS DEFINED AT 40 CFR 35.2005(20)); UNCONTAMINATED PUMPED GROUND WATER; DISCHARGES FROM POTABLE WATER SOURCES; FOUNDATION DRAINS; AIR CONDITIONING CONDENSATION; IRRIGATION WATER; SPRINGS; WATER FROM CRAWL SPACE PUMPS; FOOTING DRAINS; LAWN WATERING; INDIVIDUAL RESIDENTIAL CAR WASHING; FLOWS FROM RIPARIAN HABITATS AND WETLANDS; DECHLORINATED SWIMMING POOL DISCHARGES; DISCHARGES OR FLOWS FROM FIRE FIGHTING; AND, OTHER ACTIVITIES GENERATING DISCHARGES IDENTIFIED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY AS NOT REQUIRING VPDES AUTHORIZATION. APPROPRIATE CONTROLS MUST BE IMPLEMENTED TO PREVENT ANY NON-STORMWATER DISCHARGES NOT INCLUDED ON THE ABOVE LIST (E.G., CONCRETE WASH WATER, PAINT WASH WATER, VEHICLE WASH WATER, DETERGENT WASH WATER, ETC.) FROM BEING DISCHARGED INTO ARLINGTON COUNTY'S MS4 SYSTEM, WHICH INCLUDES THE CURB AND GUTTER SYSTEM, AS WELL AS CATCH BASINS AND OTHER STORM DRAIN INLETS, OR STREAM NETWORK. PER CHAPTER 26 OF THE ARLINGTON COUNTY CODE, IT SHALL BE UNLAWFUL FOR ANY PERSON TO DISCHARGE DIRECTLY OR INDIRECTLY INTO THE STORM SEWER SYSTEM OR STATE WATERS, ANY SUBSTANCE LIKELY, IN THE OPINION OF THE COUNTY MANAGER, TO HAVE AN ADVERSE EFFECT ON THE STORM SEWER SYSTEM OR STATE WATERS.

POLLUTION PREVENTION NOTES:

1. ONLY THE FOLLOWING NON-STORMWATER DISCHARGES ARE AUTHORIZED BY ARLINGTON COUNTY'S MS4 PERMIT, UNLESS THE STATE WATER CONTROL BOARD, THE VIRGINIA SOIL AND WATER CONSERVATION BOARD (BOARD), OR ARLINGTON COUNTY DETERMINES THE DISCHARGE TO BE A SIGNIFICANT SOURCE OF POLLUTANTS TO SURFACE WATERS: WATER LINE FLUSHING; LANDSCAPE IRRIGATION; DIVERTED STREAM FLOWS; RISING GROUND WATERS; UNCONTAMINATED GROUND WATER INFILTRATION (AS DEFINED AT 40 CFR 35.2005(20)); UNCONTAMINATED PUMPED GROUND WATER; DISCHARGES FROM POTABLE WATER SOURCES; FOUNDATION DRAINS; AIR CONDITIONING CONDENSATION; IRRIGATION WATER; SPRINGS; WATER FROM CRAWL SPACE PUMPS; FOOTING DRAINS; LAWN WATERING; INDIVIDUAL RESIDENTIAL CAR WASHING; FLOWS FROM RIPARIAN HABITATS AND WETLANDS; DECHLORINATED SWIMMING POOL DISCHARGES; DISCHARGES OR FLOWS FROM FIRE FIGHTING; AND, OTHER ACTIVITIES GENERATING DISCHARGES IDENTIFIED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY AS NOT REQUIRING VPDES AUTHORIZATION.
2. APPROPRIATE CONTROLS MUST BE IMPLEMENTED TO PREVENT ANY NON-STORMWATER DISCHARGES NOT INCLUDED ON THE ABOVE LIST (E.G., CONCRETE WASH WATER, PAINT WASH WATER, VEHICLE WASH WATER, DETERGENT WASH WATER, ETC.) FROM BEING DISCHARGED INTO ARLINGTON COUNTY'S MS4 SYSTEM, WHICH INCLUDES THE CURB AND GUTTER SYSTEM, AS WELL AS CATCH BASINS AND OTHER STORM DRAIN INLETS, OR STREAM NETWORK.
3. PER CHAPTER 26 OF THE ARLINGTON COUNTY CODE, IT SHALL BE UNLAWFUL FOR ANY PERSON TO DISCHARGE DIRECTLY OR INDIRECTLY INTO THE STORM SEWER SYSTEM OR STATE WATERS, ANY SUBSTANCE LIKELY, IN THE OPINION OF THE COUNTY MANAGER, TO HAVE AN ADVERSE EFFECT ON THE STORM SEWER SYSTEM OR STATE WATERS.

TABLE 3.31-B
(Revised June 2003)
TEMPORARY SEEDING SPECIFICATIONS
QUICK REFERENCE FOR ALL REGIONS

SEED

APPLICATION DATES	SPECIES	APPLICATION RATES
Sept. 1 - Feb. 15	50/50 Mix of Annual Ryegrass (Iolium multi-florum) & Cereal (Winter) Rye (Secale cereale)	50 -100 (lbs/acre)
Feb. 16 - Apr. 30	Annual Ryegrass (Iolium multi-florum)	60 - 100 (lbs/acre)
May 1 - Aug. 31	German Millet	50 (lbs/acre)

FERTILIZER & LIME

- Apply 10-10-10 **fertilizer** at a rate of 450 lbs. / acre (or 10 lbs. / 1,000 sq. ft.)
- Apply **Pulverized Agricultural Limestone** at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.)

NOTE:
1 - A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
2 - Incorporate the lime and fertilizer into the top 4 – 6 inches of the soil by disking or by other means.
3 - When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin # 4, 2003 Nutrient Management for Development Sites at http://www.dcr.state.va.us/sw/e&s.htm#pubs

TABLE 3.32-D
(Revised June 2003)
PERMANENT SEEDING SPECIFICATIONS FOR PIEDMONT AREA

SEED[1]

LAND USE	SPECIES	APPLICATION PER ACRE
Minimum Care Lawn (Commercial or Residential)	Tall Fescue[1] Perennial Ryegrass Kentucky Bluegrass[1]	95-100% 0-5% 0-5% TOTAL: 175-200 lbs.
High-Maintenance Lawn	Tall Fescue[1]	TOTAL: 200-250 lbs.
General Slope (3:1 or less)	Tall Fescue[1] Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop[2]	128 lbs. 2 lbs. 20 lbs. TOTAL: 150 lbs.
Low-Maintenance Slope (Steeper than 3:1)	Tall Fescue[1] Red Top Grass or Creeping Red Fescue Seasonal Nurse Crop[2] Crownvetch[3]	108 lbs. 2 lbs. 20 lbs. 20 lbs. TOTAL: 150 lbs.

1 - When selecting varieties of turfgrass, use the Virginia Crop Improvement Association (VCIA) recommended turfgrass variety list. Quality seed will bear a label indicating that they are approved by VCIA. A current turfgrass variety list is available at the local County Extension office or through VCIA at 804-746-4884 or at http://sudan.cses.vt.edu/html/Turf/turf/publications/publications2.html
2 - Use seasonal nurse crop in accordance with seeding dates as stated below:
February 16th - April ..... Annual Rye
May 1st - August 15th ..... Foxtail Millet
August 16th - October ..... Annual Rye
November - February 15th ..... Winter Rye
3 - Substitute Sericea lespedeza for Crownvetch east of Farmville, VA (May through September use hulled seed, all other periods, use unhulled Sericea). If Flatpea is used, increase rate to 30 lbs./acre. If Weeping Lovegrass is used, include in any slope or low maintenance mixture during warmer seeding periods, increase to 30 -40

FERTILIZER & LIME

- Apply 10-20-10 **fertilizer** at a rate of **500** lbs. / acre (or 12 lbs. / 1,000 sq. ft.)
- Apply **Pulverized Agricultural Limestone** at a rate of 2 tons/acre (or 90 lbs. / 1,000 sq. ft.)

NOTE:
- A soil test is necessary to determine the actual amount of lime required to adjust the soil pH of site.
- Incorporate the lime and fertilizer into the top 4 – 6 inches of the soil by disking or by other means.
- When applying Slowly Available Nitrogen, use rates available in Erosion & Sediment Control Technical Bulletin # 4, 2003 Nutrient Management for Development Sites at http://www.dcr.state.va.us/sw/e&s.htm#pubs

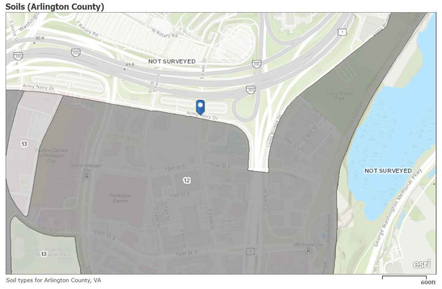
12 Urban land-Udorthents complex, 2 to 15 percent slopes
This mapping unit consists of areas where more than 85 percent of the surface is Urban land, covered by buildings, asphalt, concrete, or other impervious materials. The other 15 percent consists of areas of deep to very deep, nearly level to moderately sloping, well and moderately well drained soils. The Urban land and Udorthents are so intermingled it was not practical to map them separately. This complex occurs throughout the survey area but is largely located in the Rosslyn-Ballston and Crystal City areas. This unit is about 85 percent Urban land, 10 percent Udorthents, and 5 percent other soils.

The Udorthents consist of material that has been graded, cut, filled, or otherwise disturbed during urbanization. The disturbed material is loamy and generally reflects the soils in the adjacent area.

Included in this mapping unit are small areas of soils that have not been disturbed. Also included are moderately steep and steep slopes.

It is not pratical to examine nor attempt to identify the soil or soil-like material of this unit.

Soils (Arlington County)



_____
date

Qianqian Li, P.E.
ESC Program Administrator
Department of Environmental Sevices
2100 Clarendon Boulevard, Suite 813
Arlington, Virginia 22201

Re: Erosion and Sediment Control Permit Application for:

_____
street address

_____
lot, block, section subdivision

_____
permit number

Dear Mrs. Li:

I hereby certify that I accept the responsibilities of Responsible Land Disturber for the above referenced project. I understand that these responsibilities include:

1. Reviewing the erosion and sedimentation (E&S) plan for the project.
2. Walking the site prior to construction to identify critical areas.
3. Conducting a pre-construction briefing with earth moving and site contractors to present the E&S plan and highlight the presence of critical areas, the limits of clearing and the required E&S controls and tree protection measures to be installed. Call 703-228-0760 to schedule pre-construction meeting.
4. Regularily inspecting the site during construction to ensure that all E&S controls are functioning and are adequate to address erosion and sedimentation. Inspect the site 48 hours after a runoff-generating storm, and provide a copy of the inspection findings to the county.
5. Reporting to the owner the presence inadequate or non functioning E&S controls when they are observed.
6. Ensuring that temporary soil stabilization is applied within 7 days to areas denuded that will remain undisturbed for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.
7. Calling (703) 228-0760 at least 80 hours before demolishing any structure.

I may be reached at _____ with questions about this plan or my execution of the duties of
telephone number
Responsible Land Disturber.

Sincerely,

_____
signed

_____
name printed

_____
professional registration (type and number)

Pre-Storm Erosion and Sediment Control Checklist

Per Erosion and Sediment Control General Note 6, the Contractor is responsible for the installation and maintenance of any additional erosion and sediment control (ESC) measures necessary to prevent erosion and sedimentation as determined by the County. Controls and measures shall be modified as needed to ensure only clean water is discharged from the site.

The following actions shall be taken prior to storm events with predicted heavy and/or large volume rainfall to prevent sediment discharges from a construction site. A typical summer thunderstorm is an example of a storm event with predicted heavy and/or large volume rainfall.

Perimeter controls
- Silt fence shall be checked for undermining, holes, or deterioration of the fabric. Fencing shall be replaced immediately if the fabric is damaged or worn. Silt fence must be trenched into the ground per state specifications (Std & Spec 3.09).
- Wooden stakes or steel posts shall be properly secured upright into the ground. Damaged posts or stakes must be replaced.
- Sediment that has accumulated against the silt fence should be removed. Accumulated sediment must be removed when the level reaches one-half the height of the fencing.
- Hay bales or a stone berm should be placed across the construction entrance to prevent sediment from leaving the construction site.

Exposed slopes, soil, and stockpiles
- Exposed slopes not at the final stabilization phase shall be covered with 2" layer of straw, plastic sheeting, or erosion control matting. Cover material shall be properly secured/anchored.
- Controls shall be installed to prevent concentrated flow down an exposed slope. Berms or diversion dikes shall be installed at the top of cut / exposed slopes to direct storm flow around the disturbed area.
- Exposed slopes at the final stabilization phase shall be stabilized using slope stabilization practices such as soil stabilization blankets or matting as specified in the Virginia Erosion and Sediment Control Handbook (VESCH) Std & Spec 3.36. Blankets or mats must be properly secured and anchored to the slope using staples, pins, or stakes.
- Recently seeded areas shall be protected by straw, matting, or soil stabilization blankets to prevent seeding from being washed away.
- Stockpiled soil and other loose materials that can be washed away shall be covered with a tarp, plastic sheeting, or other stabilization matting. The cover must be properly secured / anchored down to prevent it from being blown off and exposing materials to rain. Controls such as hay bales or booms should be placed along the perimeter of the stock pile (downhill side).

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

EROSION & SEDIMENT CONTROL NOTES
ARLINGTON JUNCTION PARK-CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET C8.020	

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

EROSION & SEDIMENT CONTROL NOTES

Approval	Date
Design Supervisor	

Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: ME
Drawn: ME
Checked: JA

Filename:
Plotted:

Scale: AS SHOWN
Date: July 21, 2023

Seal

COMMONWEALTH OF VIRGINIA
JASON AZAR
Lic. No. 051113
PROFESSIONAL ENGINEER

Sheet

C8.020

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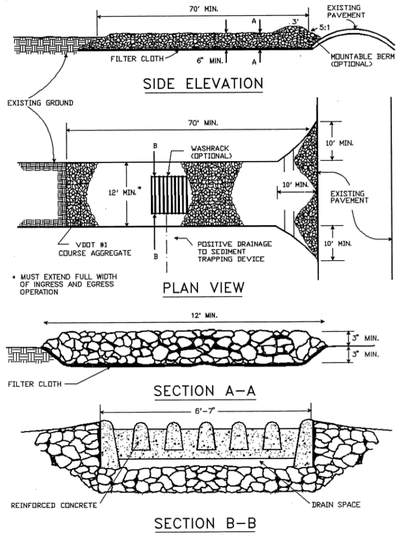
1992 3.02

STONE CONSTRUCTION ENTRANCE



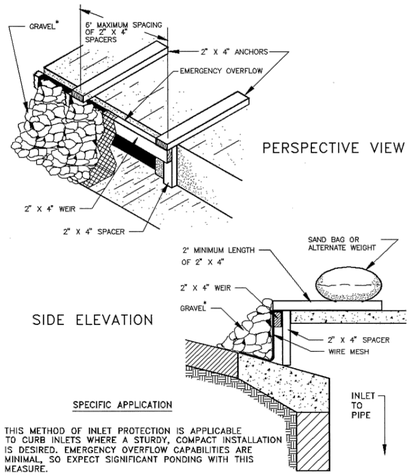
Source: Adapted from 1983 Maryland Standards for Soil Erosion and Sediment Control, and Va. DSWC

Plate 3.02-1

CE CONSTRUCTION ENTRANCE
N.T.S.

1992 3.07

CURB INLET PROTECTION WITH 2-INCH X 4-INCH WOODEN WEIR



SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE TO CURB INLETS WHERE A STURDY, COMPACT INSTALLATION IS DESIRED. EMERGENCY OVERFLOW CAPABILITIES ARE MINIMAL, SO EXPECT SIGNIFICANT PONDING WITH THIS MEASURE.

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

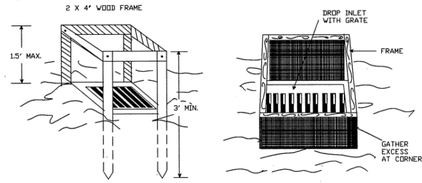
Source: 1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control, and USDA-SCS

Plate 3.07-7

IP CURB INLET PROTECTION
N.T.S.

1992 3.07

SILT FENCE DROP INLET PROTECTION



SPECIFIC APPLICATION

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

Source: N.C. Erosion and Sediment Control Planning and Design Manual, 1988

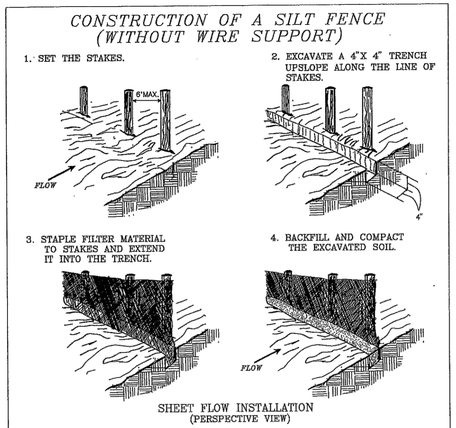
Plate 3.07-1

IP INLET PROTECTION
N.T.S.

1992 3.05

CONSTRUCTION OF A SILT FENCE (WITHOUT WIRE SUPPORT)

1. SET THE STAKES.
2. EXCAVATE A 4"X 4" TRENCH UPSLOPE ALONG THE LINE OF STAKES.
3. STAPLE FILTER MATERIAL TO STAKES AND EXTEND IT INTO THE TRENCH.
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



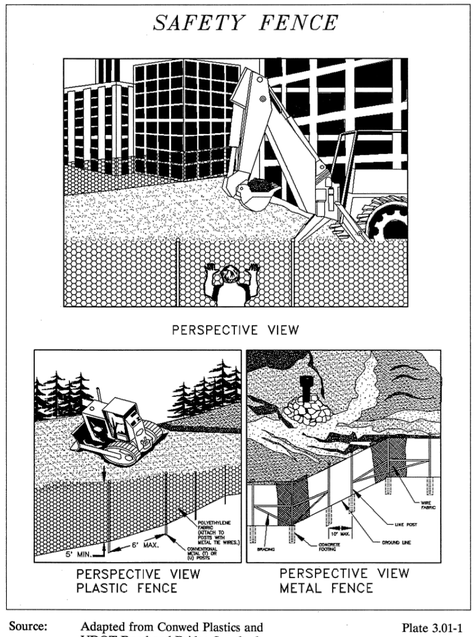
Source: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood and Wyant

Plate 3.05-2

SF SILT FENCE
N.T.S.

1992 3.01

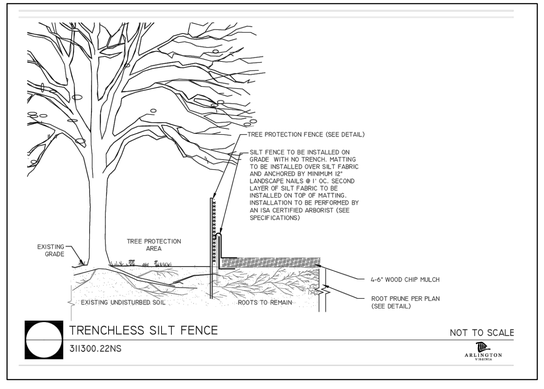
SAFETY FENCE



Source: Adapted from Conwed Plastics and VDOT Road and Bridge Standards

Plate 3.01-1

SAF SAFETY FENCE
N.T.S.



TSF TRENCHLESS SILT FENCE
N.T.S.

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

EROSION & SEDIMENT CONTROL DETAILS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET C8.030	

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

EROSION & SEDIMENT CONTROL DETAILS

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Design Supervisor

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Seal

COMMONWEALTH OF VIRGINIA
JASON SPEAR
Lic. No. 051113
PROFESSIONAL ENGINEER

Sheet

C8.030

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1.0 SWPPP Documents Located Onsite & Available for Review

SWPPP Document Type	Located Onsite & Available for Review?	
Registration Statement	☐ Yes	☐ NA
Notice of Coverage Letter	☐ Yes	☐ NA
Construction General Permit	☐ Yes	☐ NA
Pollution Prevention Plan	☐ Yes	☐ NA
Erosion & Sediment Control Plan (or agreement in lieu of)	☐ Yes	☐ NA
Stormwater Management Plan	☐ Yes	☐ NA

2.0 Authorized Non-Stormwater Discharges

Type of Authorized Non-Stormwater Discharge	Likely Present at Your Project Site?	
External buildings wash down	☐ Yes	☒ No
Uncontaminated foundation or footing drains	☐ Yes	☒ No
Uncontaminated excavation dewatering	☐ Yes	☐ No
Landscape irrigation	☒ Yes	☐ No
Others	☐ Yes	☐ No

3.0 Pollution Prevention Awareness

Employees will be given a "walk through" of the site identifying areas of possible pollution and will be shown Erosion and Sediment Controls and Pollution Prevention Practices (identified in Sections 4.0 and 5.0 of this SWPPP) that are applicable to their assigned job duties. A refresher meeting and "walk through" will be conducted on an as needed basis.

4.0 Erosion & Sediment Controls

Select all that apply	Erosion & Sediment Control	Estimated Installation Date	Estimated Removal Date	Responsible Party
☒	Construction Entrance (Std. & Spec. 3.02)			Construction Activity Operator (See Cover Page of this SWPPP)
☒	Silt Fence (Std. & Spec. 3.05)			
☐	Culvert Inlet Protection (Std. & Spec. 3.08)			
☐	Outlet Protection (Std. & Spec. 3.18)		NA	
☒	Temporary Seeding (Std. & Spec. 3.31)	As required by 3.31	NA	
☒	Permanent Seeding (Std. & Spec. 3.32)		NA	
☒	Sodding (Std. & Spec. 3.33)		NA	
☐	Mulching (Std. & Spec. 3.35)		NA	
☒	Safety Fence (Std. & Spec 3.01)			
☒	Storm Drain Inlet Protection (Std. & Spec 3.08)			
☐	Dewatering (Std. & Spec 3.26)			
☐	Turbidity Curtain (Std. & Spec 3.27)			
☒	Tree Protection (Arlington County Std. & Spec.)			
☐	Others			

STORMWATER POLLUTION PREVENTION PLAN
ARLINGTON JUNCTION PARK

5.0 Potential Sources of Pollution & Pollution Prevention Practices

Pollutant-Generating Activity	Likely Present at your Project Site?	Pollutants: Sediment	Nutrients	Heavy Metals	pH (acids and bases)	Pesticides & Herbicides	Oil & Grease	Bacteria & Viruses	Trash, Debris, Solids	Other Toxic Chemicals	Pollution Prevention Practice	Responsible Party
Clearing, grading, excavating, and un-stabilized areas	☒ Yes ☐ No	X							X		(1)	Construction Activity Operator (See Cover Page of this SWPPP)
Paving operations	☒ Yes ☐ No	X					X		X		(2)	
Concrete washout and cement waste	☒ Yes ☐ No			X	X				X		(3)	
Structure construction, stucco, painting, and cleaning	☒ Yes ☐ No			X	X				X	X	(4)	
Dewatering operations	☒ Yes ☐ No	X	X						X		(5)	
Material delivery and storage	☒ Yes ☐ No	X	X	X	X		X		X	X	(6)	
Material use during building process	☒ Yes ☐ No		X	X	X		X		X	X	(7)	
Solid waste disposal	☒ Yes ☐ No								X	X	(8)	
Sanitary waste	☒ Yes ☐ No		X		X			X			(9)	
Landscaping operations	☒ Yes ☐ No	X	X			X			X	X	(10)	
Others [describe]	☐ Yes ☐ No	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	[X]	(11)	

6.0 Stormwater Management Controls

Select all that apply	Stormwater Management Control	Estimated Installation Date	Responsible Party
☐	Post-development Stormwater Management Controls provided by a Larger Common Plan of Development or Sale	NA	Common Plan Construction Activity Operator
☐	Rooftop Disconnection		Construction Activity Operator (See Cover Page of this SWPPP)
☐	Sheet flow to Vegetated Filter (1 or 2)		
☐	Grass Channel		
☐	Rainwater Harvesting		
☒	Permeable Pavement (1 or 2)		
☐	Infiltration (1 or 2)		Construction Activity Operator (See Cover Page of this SWPPP)
☒	Bioretention (1 or 2)		
☐	Others		
☐	Exempted	NA	NA

Pollution Prevention Practices:

(1) **Clearing, grading, excavating and un-stabilized areas** – Utilize erosion and sediment controls to prevent sediment laden or turbid runoff from leaving the construction site. Dispose of clearing debris at acceptable disposal sites. Apply permanent or temporary stabilization, sodding and/or mulching to denuded areas in accordance with the erosion and sediment control specifications and the general VPDES permit for discharges of stormwater from construction activities.

(2) **Paving operations** – Cover storm drain inlets during paving operations and utilize pollution prevention materials such as drip pans and absorbent/oil dry for all paving machines to limit leaks and spills of paving materials and fluids.

(3) **Concrete washout and cement waste** – Direct concrete wash water into a leak-proof container or leak-proof settling basin that is designed so that no overflows can occur due to inadequate sizing or precipitation. Hardened concrete wastes shall be removed and disposed of in a manner consistent with the handling of other construction wastes.

(4) **Structure construction, stucco, painting and cleaning** – Enclose, cover or berm building material storage areas if susceptible to contaminated stormwater runoff. Conduct painting operations consistent with local air quality and OSHA regulations. Mix paint indoors, in a containment area or in a flat unpaved area. Prevent the discharge of soaps, solvents, detergents and wash water from construction materials, including the clean-up of stucco paint, form release oils and curing compounds.

(5) **Dewatering operations** – Construction site dewatering from building footings or other sources may not be discharged without treatment. Sediment laden or turbid water shall be filtered, settled or similarly treated prior to discharge.

(6) **Material delivery and storage** – Designate areas of the construction site for material delivery and storage. Place near construction entrances, away from waterways, and avoid transport near drainage paths or waterways.

(7) **Material use during building process** – Use materials only where and when needed to complete the construction activity. Follow manufacturer's instructions regarding uses, protective equipment, ventilation, flammability and mixing of chemicals.

(8) **Solid waste disposal** – Designate a waste collection area on the construction site that does not receive a substantial amount of runoff from upland areas and does not drain directly to a waterway. Ensure that containers have lids so they can be covered before periods of rain, and keep containers in a covered area whenever possible. Schedule waste collection to prevent the containers from overfilling.

(9) **Sanitary waste** – Prevent the discharge of sanitary waste by providing convenient and well-maintained portable sanitary facilities. Locate sanitary facilities in a convenient location away from waterways.

(10) **Landscaping operations** – Maintain as much existing vegetation as practicable. Apply permanent or temporary stabilization, sodding and/or mulching to denuded areas in accordance with the erosion and sediment control specifications and the general VPDES permit for discharges of stormwater from construction activities. Apply nutrients in accordance with manufacturer's recommendations and not during rainfall events.

(11) **Others** –

7.0 Spill Prevention & Response

Most spills can be cleaned up following manufacturer specifications. Absorbent/oil dry, sealable containers, plastic bags, and shovels/brooms are suggested minimum spill response items that should be available at this location.

1st Priority: Protect all people
2nd Priority: Protect equipment and property
3rd Priority: Protect the environment

1. Check for hazards (flammable material, noxious fumes, cause of spill) – if flammable liquid, turn off engines and nearby electrical equipment. If serious hazards are present leave the area and call 911. LARGE SPILLS ARE LIKELY TO PRESENT A HAZARD.
2. Make Sure the spill area is safe to enter and that it does not pose an immediate threat to health or safety of any person.
3. Stop the spill source.
4. Call co-workers and supervisor for assistance and to make them aware of the spill and potential dangers.
5. If possible, stop spill from entering drains (use absorbent or other material as necessary).
6. Stop spill from spreading (use absorbent or other material)
7. If spilled material has entered a storm sewer; contact locality's storm water department.
8. Clean up spilled material according to manufacturer specifications, for liquid spills use absorbent materials and do not flush area with water.
9. Properly dispose of cleaning materials and used absorbent material according to manufacturer specifications.

Emergency Contacts:

Normal Working Hours

DEQ Northern Regional Office	703-583-3800

Nights, Holidays & Weekends

VA Dept. of Emergency Management 24 Hour Reporting Service	804-674-2400

Local Contacts

Arlington County Fire & Police	703-558-2222
DES Water, Sewer, Streets 24-Hour Emergency	703-228-6555
Washington Gas Emergency	703-750-1400

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

EROSION & SEDIMENT CONTROL SWPPP
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C8.040

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

EROSION & SEDIMENT CONTROL SWPPP

Approval Date

Design Supervisor

Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: ME
Drawn: ME
Checked: JA

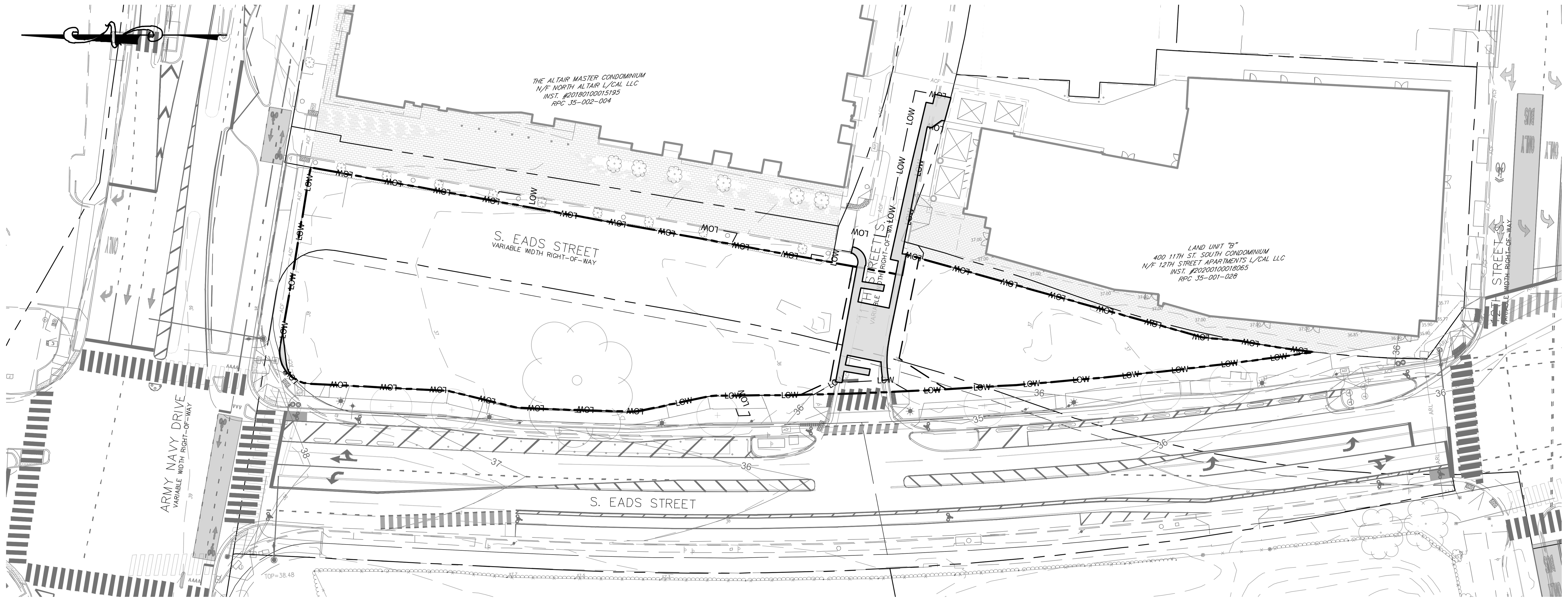
Filename:
Plotted:

Scale: AS SHOWN
Date: July 21, 2023

Seal

Sheet

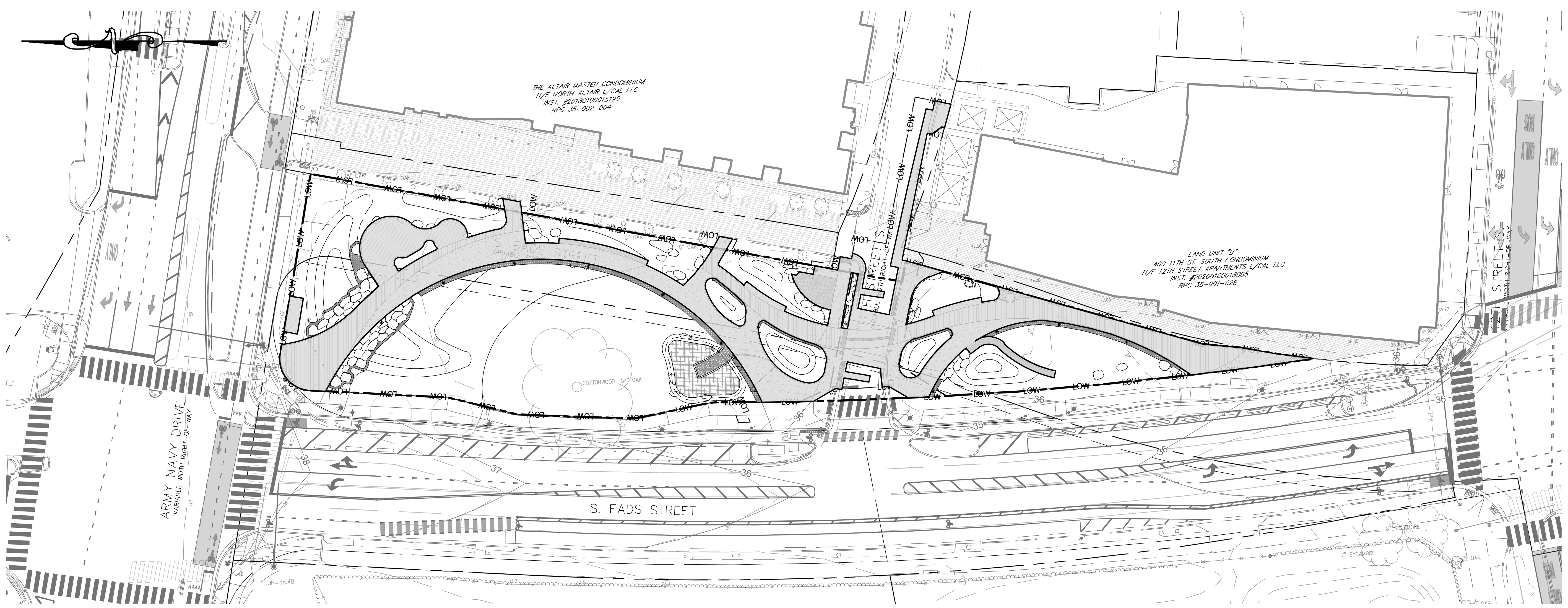
C8.040



PRE-DEVELOPMENT
SCALE: 1" = 40'

PRE-DEVELOPMENT LAND COVER	
TYPE	AREA (AC)
PERVIOUS	0.666
IMPERVIOUS	0.040

PRE-DEVELOPMENT IMPERVIOUS AREA



POST-DEVELOPMENT
SCALE: 1" = 40'

POST-DEVELOPMENT LAND COVER	
TYPE	AREA (AC)
PERVIOUS	0.459
IMPERVIOUS	0.247

POST-DEVELOPMENT IMPERVIOUS AREA

40' 20' 0 40' 80'
GRAPHIC SCALE
1" = 40'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

BMP LAND COVER MAP
ARLINGTON JUNCTION PARK-CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C8.050

ARLINGTON VIRGINIA

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Seal
COMMONWEALTH OF VIRGINIA
JASON AZAR
Lic. No. 051113
PROFESSIONAL ENGINEER

Sheet
C8.050

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BIORETENTION SPECIFICATIONS

SEQUENCE OF CONSTRUCTION

1. CONSTRUCTION OF THE BIORETENTION AREA MAY ONLY BEGIN AFTER THE ENTIRE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED WITH VEGETATION. IT MAY BE NECESSARY TO BLOCK CERTAIN CURB OR OTHER INLETS WHILE THE BIORETENTION AREA IS BEING CONSTRUCTED. THE PROPOSED SITE SHOULD BE CHECKED FOR EXISTING UTILITIES PRIOR TO ANY EXCAVATION.
2. THE DESIGNER AND THE INSTALLER SHOULD HAVE A PRECONSTRUCTION MEETING, CHECKING THE BOUNDARIES OF THE CONTRIBUTING DRAINAGE AREA AND THE ACTUAL INLET ELEVATIONS TO ENSURE THEY CONFORM TO ORIGINAL DESIGN. SINCE OTHER CONTRACTORS MAY BE RESPONSIBLE FOR CONSTRUCTING PORTIONS OF THE SITE, IT IS QUITE COMMON TO FIND SUBTLE DIFFERENCES IN SITE GRADING, DRAINAGE AND PAVING ELEVATIONS THAT CAN PRODUCE HYDRAULICALLY IMPORTANT DIFFERENCES FOR THE PROPOSED BIORETENTION AREA. THE DESIGNER SHOULD CLEARLY COMMUNICATE, IN WRITING, ANY PROJECT CHANGES DETERMINED DURING THE PRECONSTRUCTION MEETING TO THE INSTALLER AND THE PLAN REVIEW/INSPECTION AUTHORITY.
3. TEMPORARY E&S CONTROLS ARE NEEDED DURING CONSTRUCTION OF THE BIORETENTION AREA TO DIVERT STORMWATER AWAY FROM THE BIORETENTION AREA UNTIL IT IS COMPLETED. SPECIAL PROTECTION MEASURES SUCH AS EROSION CONTROL FABRICS MAY BE NEEDED TO PROTECT VULNERABLE SIDE SLOPES FROM EROSION DURING THE CONSTRUCTION PROCESS.
4. ANY PRE-TREATMENT CELLS SHOULD BE EXCAVATED FIRST AND THEN SEALED TO TRAP SEDIMENTS.
5. EXCAVATORS OR BACKHOES SHOULD WORK FROM THE SIDES TO EXCAVATE THE BIORETENTION AREA TO ITS APPROPRIATE DESIGN DEPTH AND DIMENSIONS. EXCAVATING EQUIPMENT SHOULD HAVE SCOOPS WITH ADEQUATE REACH SO THEY DO NOT HAVE TO SIT INSIDE THE FOOTPRINT OF THE BIORETENTION AREA. CONTRACTORS SHOULD USE A CELL CONSTRUCTION APPROACH IN LARGER BIORETENTION BASINS, WHEREBY THE BASIN IS SPLIT INTO 500 TO 1,000 SQ. FT. TEMPORARY CELLS WITH A 10-15 FOOT EARTH BRIDGE IN BETWEEN, SO THAT CELLS CAN BE EXCAVATED FROM THE SIDE.
6. IT MAY BE NECESSARY TO RIP THE BOTTOM SOILS TO A DEPTH OF 6 TO 12 INCHES TO PROMOTE GREATER INFILTRATION.
7. PLACE GEOTEXTILE FABRIC ON THE SIDES OF THE BIORETENTION AREA WITH A 6-INCH OVERLAP ON THE SIDES. IF A STONE STORAGE LAYER WILL BE USED, PLACE THE APPROPRIATE DEPTH OF #57 STONE ON THE BOTTOM, INSTALL THE PERFORATED UNDERDRAIN PIPE, PACK #57 STONE TO 3 INCHES ABOVE THE UNDERDRAIN PIPE, AND ADD APPROXIMATELY 3 INCHES OF CHOKER STONE/PEA GRAVEL AS A FILTER BETWEEN THE UNDERDRAIN AND THE SOIL MEDIA LAYER. IF NO STONE STORAGE LAYER IS USED, START WITH 6 INCHES OF #57 STONE ON THE BOTTOM, AND PROCEED WITH THE LAYERING AS DESCRIBED ABOVE.
8. OBTAIN SOIL THE MEDIA FROM A QUALIFIED VENDOR, AND STORE IT ON AN ADJACENT IMPERVIOUS AREA OR PLASTIC SHEETING. AFTER VERIFYING THAT THE MEDIA MEETS THE SPECIFICATIONS, APPLY THE MEDIA IN 12-INCH LIFTS UNTIL THE DESIRED TOP ELEVATION OF THE BIORETENTION AREA IS ACHIEVED. WAIT A FEW DAYS TO CHECK FOR SETTLEMENT, AND ADD ADDITIONAL MEDIA, AS NEEDED, TO ACHIEVE THE DESIGN ELEVATION.UNDERDRAIN AND THE SOIL MEDIA LAYER. IF NO STONE STORAGE LAYER IS USED, START WITH 6 INCHES OF #57
9. PREPARE PLANTING HOLES FOR ANY TREES AND SHRUBS, INSTALL THE VEGETATION, AND WATER ACCORDINGLY. INSTALL ANY TEMPORARY IRRIGATION.
10. PLACE THE SURFACE COVER IN BOTH CELLS (MULCH, RIVER STONE OR TURF), DEPENDING ON THE DESIGN. IF COIR OR JUTE MATTING WILL BE USED IN LIEU OF MULCH, THE MATTING WILL NEED TO BE INSTALLED PRIOR TO PLANTING (STEP 9), AND HOLES OR SLITS WILL HAVE TO BE CUT IN THE MATTING TO INSTALL THE PLANTS.
11. INSTALL THE PLANT MATERIALS AS SHOWN IN THE LANDSCAPING PLAN, AND WATER THEM DURING WEEKS OF NO RAIN FOR THE FIRST TWO MONTHS.

NOTE: CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING BIORETENTION FACILITY THROUGHOUT ENTIRE CONSTRUCTION PHASE UNTIL PROJECT COMPLETION.

PERMEABLE PAVEMENT SPECIFICATIONS

SEQUENCE OF CONSTRUCTION

1. CONSTRUCTION OF THE PERMEABLE PAVEMENT SHALL ONLY BEGIN AFTER THE ENTIRE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED. THE PROPOSED SITE SHOULD BE CHECKED FOR EXISTING UTILITIES PRIOR TO ANY EXCAVATION. DO NOT INSTALL THE SYSTEM IN RAIN OR SNOW, AND DO NOT INSTALL FROZEN AGGREGATE MATERIALS.
2. AS NOTED ABOVE, TEMPORARY EROSION AND SEDIMENT (E&S) CONTROLS ARE NEEDED DURING INSTALLATION TO DIVERT STORMWATER AWAY FROM THE PERMEABLE PAVEMENT AREA UNTIL IT IS COMPLETED. SPECIAL PROTECTION MEASURES SUCH AS EROSION CONTROL FABRICS MAY BE NEEDED TO PROTECT VULNERABLE SIDE SLOPES FROM EROSION DURING THE EXCAVATION PROCESS. THE PROPOSED PERMEABLE PAVEMENT AREA MUST BE KEPT FREE FROM SEDIMENT DURING THE ENTIRE CONSTRUCTION PROCESS. CONSTRUCTION MATERIALS THAT ARE CONTAMINATED BY SEDIMENTS MUST BE REMOVED AND REPLACED WITH CLEAN MATERIALS.
3. WHERE POSSIBLE, EXCAVATORS OR BACKHOES SHOULD WORK FROM THE SIDES TO EXCAVATE THE RESERVOIR LAYER TO ITS APPROPRIATE DESIGN DEPTH AND DIMENSIONS. FOR MICRO-SCALE AND SMALL-SCALE PAVEMENT APPLICATIONS, EXCAVATING EQUIPMENT SHOULD HAVE ARMS WITH ADEQUATE EXTENSION SO THEY DO NOT HAVE TO WORK INSIDE THE FOOTPRINT OF THE PERMEABLE PAVEMENT AREA (TO AVOID COMPACTION). CONTRACTORS CAN USE A CELL CONSTRUCTION APPROACH, WHEREBY THE PROPOSED PERMEABLE PAVEMENT AREA IS SPLIT INTO 500 TO 1000 SQ. FT. TEMPORARY CELLS WITH A 10 TO 15 FOOT EARTH BRIDGE IN BETWEEN, SO THAT CELLS CAN BE EXCAVATED FROM THE SIDE. EXCAVATED MATERIAL SHOULD BE PLACED AWAY FROM THE OPEN EXCAVATION SO AS TO NOT JEOPARDIZE THE STABILITY OF THE SIDE WALLS.
4. THE NATIVE SOILS ALONG THE BOTTOM AND SIDES OF THE PERMEABLE PAVEMENT SYSTEM SHOULD BE SCARIFIED OR TILLED TO A DEPTH OF 3 TO 4 INCHES PRIOR TO THE PLACEMENT OF THE FILTER LAYER OR FILTER FABRIC. IN LARGE SCALE PAVING APPLICATIONS WITH WEAK SOILS, THE SOIL SUBGRADE MAY NEED TO BE COMPACTED TO 95% OF THE STANDARD PROCTOR DENSITY TO ACHIEVE THE DESIRED LOAD-BEARING CAPACITY. (NOTE: THIS EFFECTIVELY ELIMINATES THE INFILTRATION FUNCTION OF THE INSTALLATION, AND IT MUST BE ADDRESSED DURING HYDROLOGIC DESIGN.)
5. THE FILTER LAYER SHOULD BE INSTALLED ON THE BOTTOM OF THE RESERVOIR LAYER AND, WHERE APPROPRIATE, FILTER FABRIC CAN BE PLACED ON THE SIDES.
6. PROVIDE A MINIMUM OF 2 INCHES OF AGGREGATE ABOVE AND BELOW THE UNDERDRAINS. THE UNDERDRAINS SHOULD SLOPE DOWN TOWARDS THE OUTLET AT A GRADE OF 0.5% OR STEEPER. THE UP-GRADIENT END OF UNDERDRAINS IN THE RESERVOIR LAYER SHOULD BE CAPPED. WHERE AN UNDERDRAIN PIPE IS CONNECTED TO A STRUCTURE, THERE SHOULD BE NO PERFORATIONS WITHIN 1 FOOT OF THE STRUCTURE. ENSURE THAT THERE ARE NO PERFORATIONS IN CLEAN-OUTS AND OBSERVATION WELLS WITHIN 1 FOOT OF THE SURFACE.
7. SPREAD 6-INCH LIFTS OF THE APPROPRIATE CLEAN, WASHED STONE AGGREGATE. PLACE AT LEAST 4 INCHES OF ADDITIONAL AGGREGATE ABOVE THE UNDERDRAIN, AND THEN COMPACT IT USING A VIBRATORY ROLLER IN STATIC MODE UNTIL THERE IS NO VISIBLE MOVEMENT OF THE AGGREGATE. DO NOT CRUSH THE AGGREGATE WITH THE ROLLER.
8. INSTALL OVER-DRAIN IF REQUIRED AND CONNECT INTO OUTLET CONVEYANCE SYSTEM.
9. INSTALL THE DESIRED DEPTH OF THE BEDDING LAYER, DEPENDING ON THE TYPE OF PAVEMENT, AS FOLLOWS:

- PERVIOUS CONCRETE: NO BEDDING LAYER IS USED.
- POROUS ASPHALT: THE BEDDING LAYER FOR POROUS ASPHALT PAVEMENT CONSISTS OF 1 TO 2 INCHES OF CLEAN, WASHED ASTM D 448 NO.57 STONE. THE FILTER COURSE MUST BE LEVELED AND PRESSED (CHOKED) INTO THE RESERVOIR BASE WITH AT LEAST FOUR (4) PASSES OF A 10-TON STEEL DRUM STATIC ROLLER.
- INTERLOCKING PAVERS: THE BEDDING LAYER FOR OPEN-JOINTED PAVEMENT BLOCKS SHOULD CONSIST OF 2 INCHES OF WASHED ASTM D 448 NO.8 STONE.

10. INSTALL PAVING MATERIALS IN ACCORDANCE WITH MANUFACTURER OR INDUSTRY SPECIFICATIONS FOR THE PARTICULAR TYPE OF PAVEMENT.

NOTE: CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PERMEABLE PAVEMENT FACILITIES THROUGHOUT ENTIRE CONSTRUCTION PHASE UNTIL PROJECT COMPLETION.

Material Specifications for Microbioretention. Below is the table of material specifications for microbioretentions.

Microbioretention Material Specifications

Material	Specification	Notes
Filter Media Composition	Filter Media to contain: • 80%-90% sand with >75% being coarse to very coarse • 10%-20% soil fines • 3%-5% organic matter in the form of plant based compost meeting Clearinghouse Design Specification #4, Section 6.5	The volume of filter media based on 110% of the plan volume, to account for settling or compaction.
Filter Media Testing	Plant available P within Low+ (L+) to Medium (M) per DCR 2014 Nutrient Management Criteria (18-40 mg/kg P for the Mehlich III procedure) and CEC >5	The media must be procured from approved filter media vendors.
Mulch Layer	Use aged, shredded hardwood bark mulch	Lay a 2 to 3 inch layer on the surface of the filter bed.
Geotextile/Liner	Use a non-woven geotextile fabric with a flow rate of > 110 gal./min./sq. ft. (e.g., Geotex 351 or equivalent)	Apply only to the vertical sides and 2' on each side of the underdrain. Do not install at the bottom or between layers.
Choking Layer	3 inch layer of pea gravel or VDOT #8 stone which is laid over the underdrain stone.	
Stone Jacket for Underdrain and/or Storage Layer	1 inch stone should be double-washed and clean and free of all fines (e.g., VDOT #57 stone).	Minimum 6 inches or 12 inches if an underdrain is specified
Underdrains, Cleanouts, and Observation Wells	SCH. 40 PVC or equivalent, with 3/8-inch perforations at 6 inches on center, maximum of 3 rows of perforations; position each underdrain on a 1% or 2% slope located nor more than 20 feet from the next pipe OR none if soil infiltration requirements met (Level II design).	All bioretentions are to have an observation well, cleanout or overflow pipe. Lay the perforated pipe under the length of the bioretention cell, and install non-perforated pipe as needed to connect with the storm drain system. Install T's and Y's as needed, depending on the underdrain configuration. Extend cleanout pipes to the surface with vented caps at the Ts and Ys.
Plant Materials	1 quart-sized perennial installed per 1-2 sf and 1 3-gallon shrub installed per 7.5 sf over entire ponding area from DEQ Specification 9: Table 9.5	For Level 1 designs – choose either herbaceous and/or shrubs For Level 2 designs – choose any 2 of herbaceous, shrubs, or trees

Berm. Fill for the berm and overflow weir shall consist of clean material free of organic matter, rubbish, frozen soil, snow, ice, particles with sizes larger than 3 inches, or other deleterious material. Fill shall be placed in 6-inch lifts and hand tamped. The berm shall be stabilized the same day it is installed, using either sod or matting. Matting must be plastic free/no plastic netting.

Material Specifications for Permeable Pavements. Below is the table of material specifications for permeable pavements.

Material Specifications for Underneath the Permeable Pavements

Material	Specification	Notes
Bedding Layer	PC: None PICP: 2 in. depth of No. 8 stone above 4 inches of No. 57	ASTM D448 size No. 8 stone (e.g. 3/8 to 3/16 inch in size). ASTM D448 size No. 57 stone (e.g. 1 1/2 to 1/2 inch in size) should be washed, clean and free of all fines.
Reservoir Layer	PC: No. 57 stone PICP: No. 2 or 3 stone	PC: ASTM D448 size No. 57 stone (e.g. 1 1/2 to 1/2 inch in size) PICP: No. 2 Stone (e.g. 3 inch to 3/4 inch in size) or No. 3 Stone. Depth is based on the pavement structural and hydraulic requirements. Should be washed, clean and free of all fines.
Underdrain	Use 4 to 6 inch diameter perforated schedule 40 PVC pipe, with 3/8-inch perforations at 6 inches on center; each underdrain installed at a minimum 0.5% slope located 20 feet or less from the next pipe ~~(or equivalent corrugated HDPE may be used for non-vehicular applications)~~. Perforated pipe installed for the full length of the permeable pavement cell, and non-perforated pipe, as needed, is used to connect with the storm drain system. T's and Y's installed as needed, depending on the underdrain configuration. Extend cleanout pipes to the surface with caps.	
Filter Layer	The underlying native soils should be separated from the stone reservoir by a 6 to 8 inch layer of coarse sand (e.g. ASTM C 33, gradation) or use an appropriate filter fabric for the particular application based on AASHTO M288-06. At a minimum the fabric shall have a Flow Rate greater than 125 gpm/sq. ft. (ASTM D4491), and an Apparent Opening Size (AOS) equivalent to a US # 70 or # 80 sieve (ASTM D4751). The geotextile AOS selection is based on the percent passing the No. 200 sieve in "A" Soil subgrade, using FHWA or AASHTO selection criteria.	
Observation Well	Use a perforated 4 to 6 inch vertical schedule 40 PVC pipe (AASHTO M 252) with a cap, installed flush with the surface. Applications in vehicular areas shall have a metal cap. All applications shall have an observation well installed.	

*PC: Permeable Concrete, PICP: Permeable Interlocking Concrete Pavers with an open surface of 5-15%.

Maintenance Activities for Bioretention. The following is the list of maintenance activities for bioretention. The table is to be included on plans proposing bioretention.

Bioretention Maintenance Schedule

Maintenance	Frequency
• Spot weeding, erosion repair, trash removal, and mulch raking	Twice during growing season
• Add reinforcement planting to maintain the desired vegetation density • Remove invasive plants using recommended control methods • Stabilize the contributing drainage area to prevent erosion	As needed
• Spring inspection and cleanup • Supplement mulch to maintain a 2-3 inch layer • Prune trees and shrubs	Annually
• Remove sediment in pre-treatment cells and inflow points	Once every 2 to 3 years
• Replace the mulch layer	Every 3 years
• Inspected and certified by a professional licensed in the State of Virginia	Once every 5 years

Maintenance Activities for Permeable Pavement. The following is the list of maintenance activities for permeable pavement. The table is to be included on plans proposing permeable pavement.

Permeable Pavement Maintenance Schedule

Maintenance	Schedule
• Check observation wells 3 days after a storm event in excess of 1/2 inch in depth. Standing water observed in the well after three days is a clear indication of clogging. • Inspect the surface of the permeable pavement for evidence of sediment deposition, organic debris, staining or ponding that may indicate surface clogging. If any signs of clogging are noted, schedule a vacuum sweeper (no brooms or water spray) to remove deposited material. • Inspect the structural integrity of the pavement surface, looking for signs of surface deterioration, such as slumping, cracking, spalling or broken pavers. Replace or repair affected areas, as necessary. • Check inlets, pretreatment cells and any flow diversion structures for sediment buildup and structural damage. Note if any sediment needs to be removed. • Inspect the condition of the observation well and make sure it is still capped. • Generally, inspect any contributing drainage area for any controllable sources of sediment or erosion.	Annually
• Inspected and certified by a professional licensed in the State of Virginia	Once every 5 years

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

BMP NOTES

ARLINGTON JUNCTION PARK-CIVIL ENGINEERING PLAN

1051 SOUTH EADS STREET

ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C8.060

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

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FINAL PLAN

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ARLINGTON, VIRGINIA

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CEP#4	07/21/2023

Designed: ME
Drawn: ME
Checked: JA

Filename:
Plotted:

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Seal

COMMONWEALTH OF VIRGINIA
JASON GEAR
Lic. No. 051113
PROFESSIONAL ENGINEER

Sheet

C8.060

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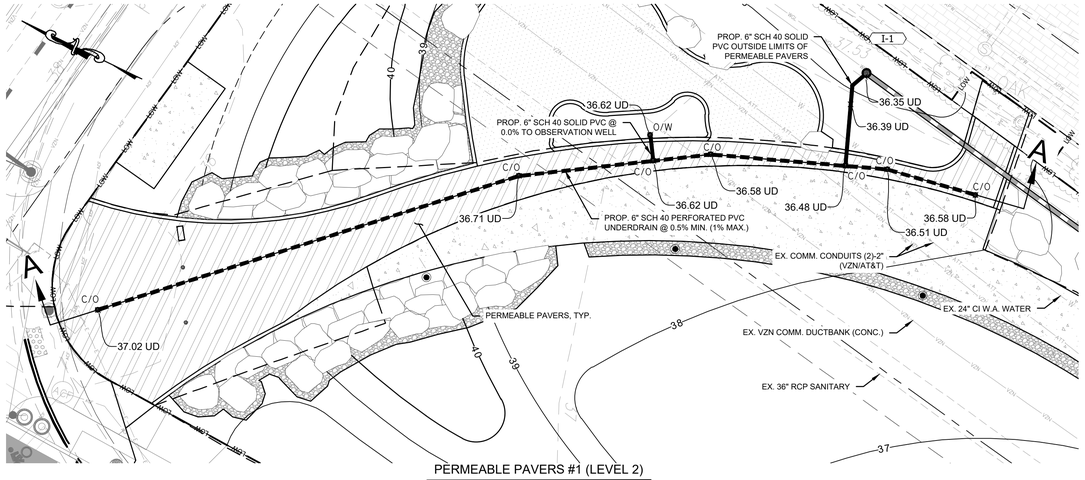
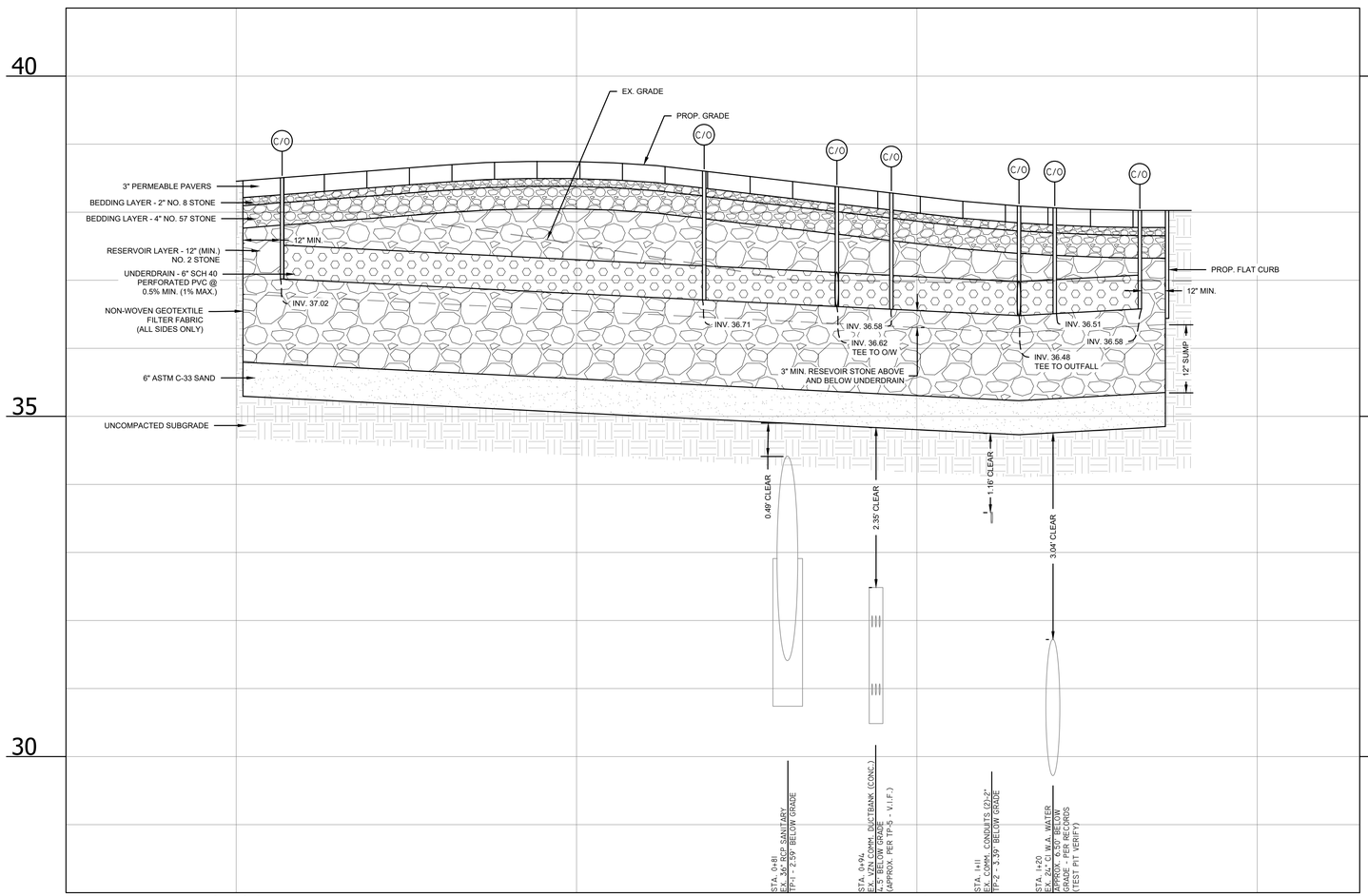


PERMEABLE PAVERS #1 (LEVEL 2)

SCALE: 1" = 10'

GENERAL NOTES:

1. ALL CLEANOUTS WITHIN PERMEABLE PAVERS SHALL BE BRASS CAPS W/COUNTERSUNK PLUGS (ADA COMPLIANT).
2. ALL OBSERVATION WELLS SHALL BE FITTED WITH PVC CAPS WITH RAISED PLUGS LOCATED OUTSIDE LIMITS OF PAVEMENT AS SHOWN (ELEVATE 6" ABOVE GRADE).
3. ALL UNDERDRAINS SHALL BE CONSTRUCTED WITH A MIN. 0.5% SLOPE (1% MAX.) AND SHALL BE VERIFIED IN FIELD WITH INSPECTOR TO ENSURE POSITIVE SLOPE IS MAINTAINED ACROSS ENTIRE LENGTH OF UNDERDRAIN INSTALLED.



SECTION A-A

VERTICAL SCALE: 1" = 1'
HORIZONTAL SCALE: 1" = 10'

1' 0.5' 0 1' 2'
VERTICAL GRAPHIC SCALE
1" = 1'

10' 5' 0 10' 20'
HORIZONTAL GRAPHIC SCALE
1" = 10'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

BMP DETAILS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET C8.070	

ARLINGTON
VIRGINIA

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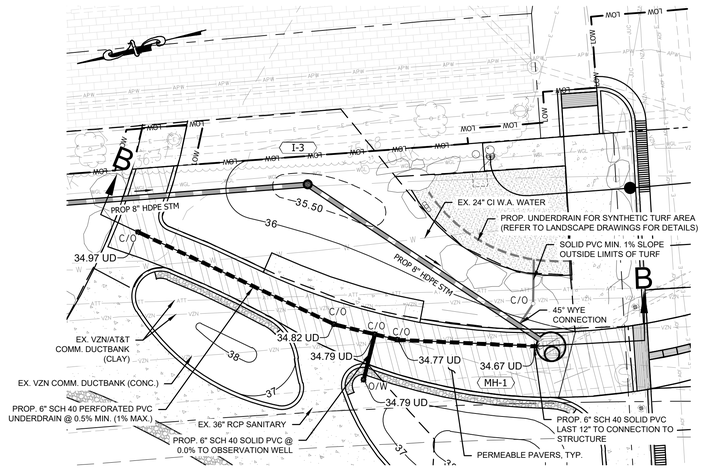
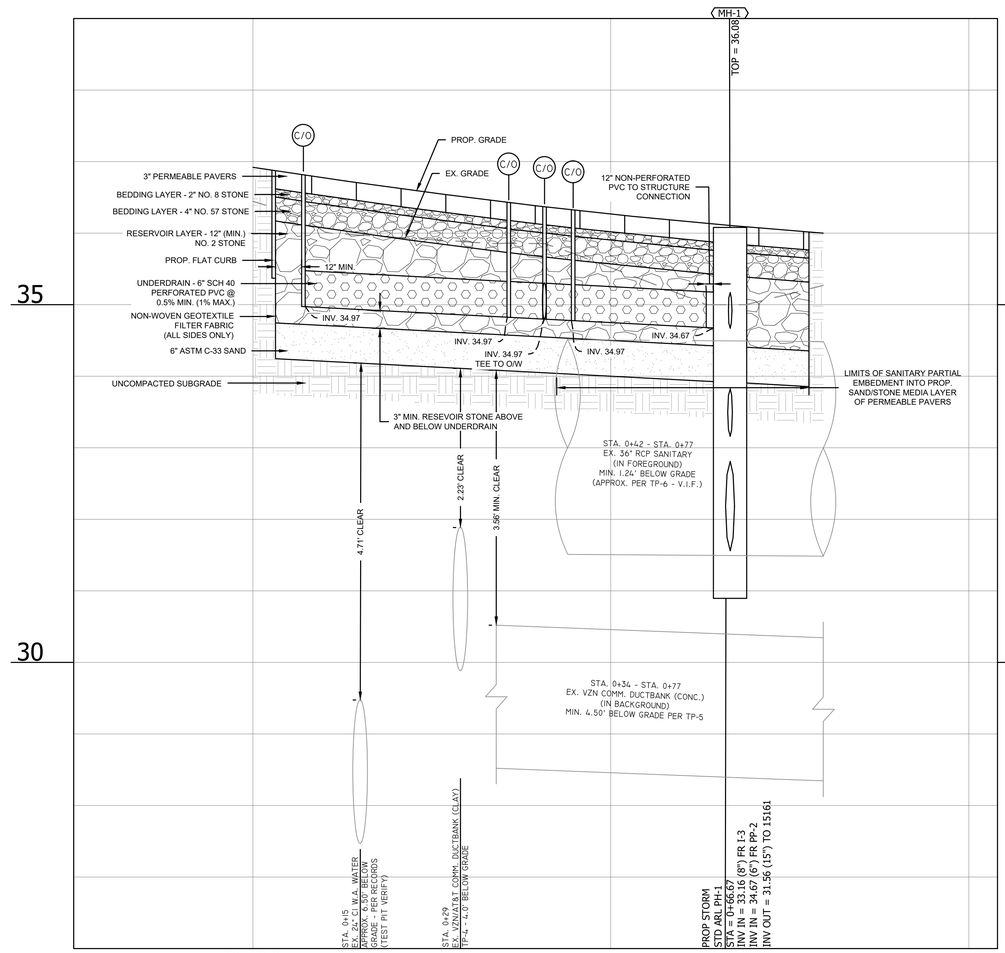


PERMEABLE PAVERS #2 (LEVEL 1)

SCALE: 1" = 10'

GENERAL NOTES:

1. ALL CLEANOUTS WITHIN PERMEABLE PAVERS SHALL BE BRASS CAPS W/COUNTERSUNK PLUGS (ADA COMPLIANT).
2. ALL OBSERVATION WELLS SHALL BE FITTED WITH PVC CAPS WITH RAISED PLUGS LOCATED OUTSIDE LIMITS OF PAVEMENT AS SHOWN (ELEVATE 6" ABOVE GRADE).
3. ALL UNDERDRAINS SHALL BE CONSTRUCTED WITH A MIN. 0.5% SLOPE (1% MAX.) AND SHALL BE VERIFIED IN FIELD WITH INSPECTOR TO ENSURE POSITIVE SLOPE IS MAINTAINED ACROSS ENTIRE LENGTH OF UNDERDRAIN INSTALLED.



SECTION B-B

VERTICAL SCALE: 1" = 1'
HORIZONTAL SCALE: 1" = 10'

VERTICAL GRAPHIC SCALE
1" = 1'

HORIZONTAL GRAPHIC SCALE
1" = 10'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

BMP DETAILS

ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN

1051 SOUTH EADS STREET

ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C8.080

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS
AND RECREATION

Park Development Division
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Arlington, VA 22201
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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON
JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

BMP DETAILS

Approval Date

Design Supervisor

Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: ME
Drawn: ME
Checked: JA

Filename:
Plotted:

Scale: AS SHOWN
Date: July 21, 2023

Seal

COMMONWEALTH OF VIRGINIA
JASON AZAR
Lic. No. 051113
PROFESSIONAL ENGINEER

Sheet

C8.080

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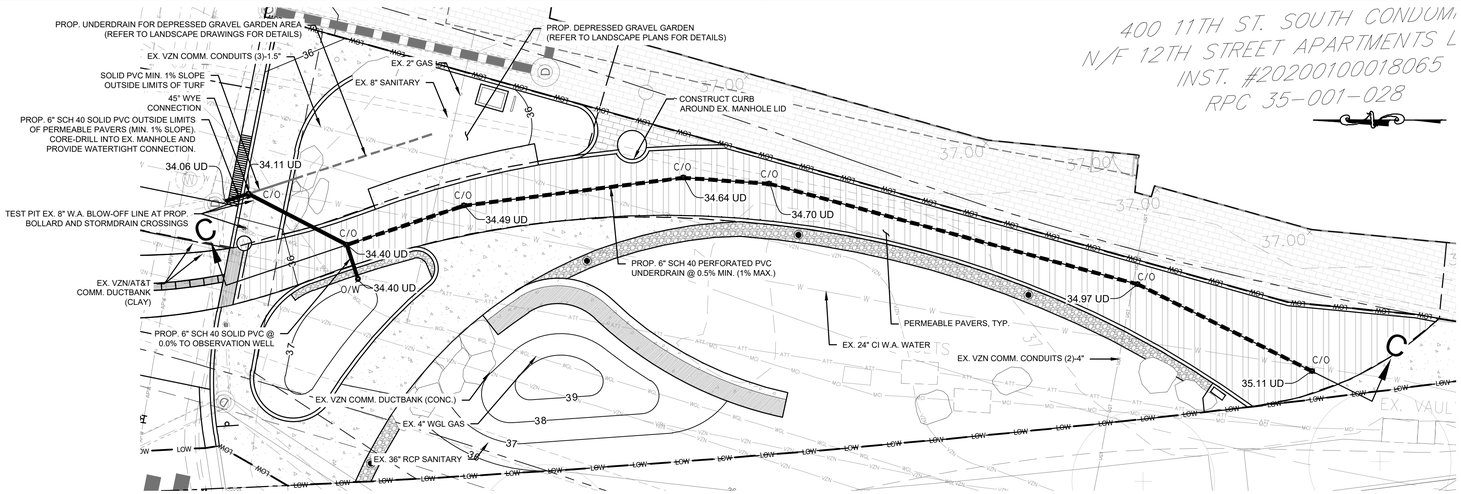
Filename: C8.070 - BMP DETAILS.dwg

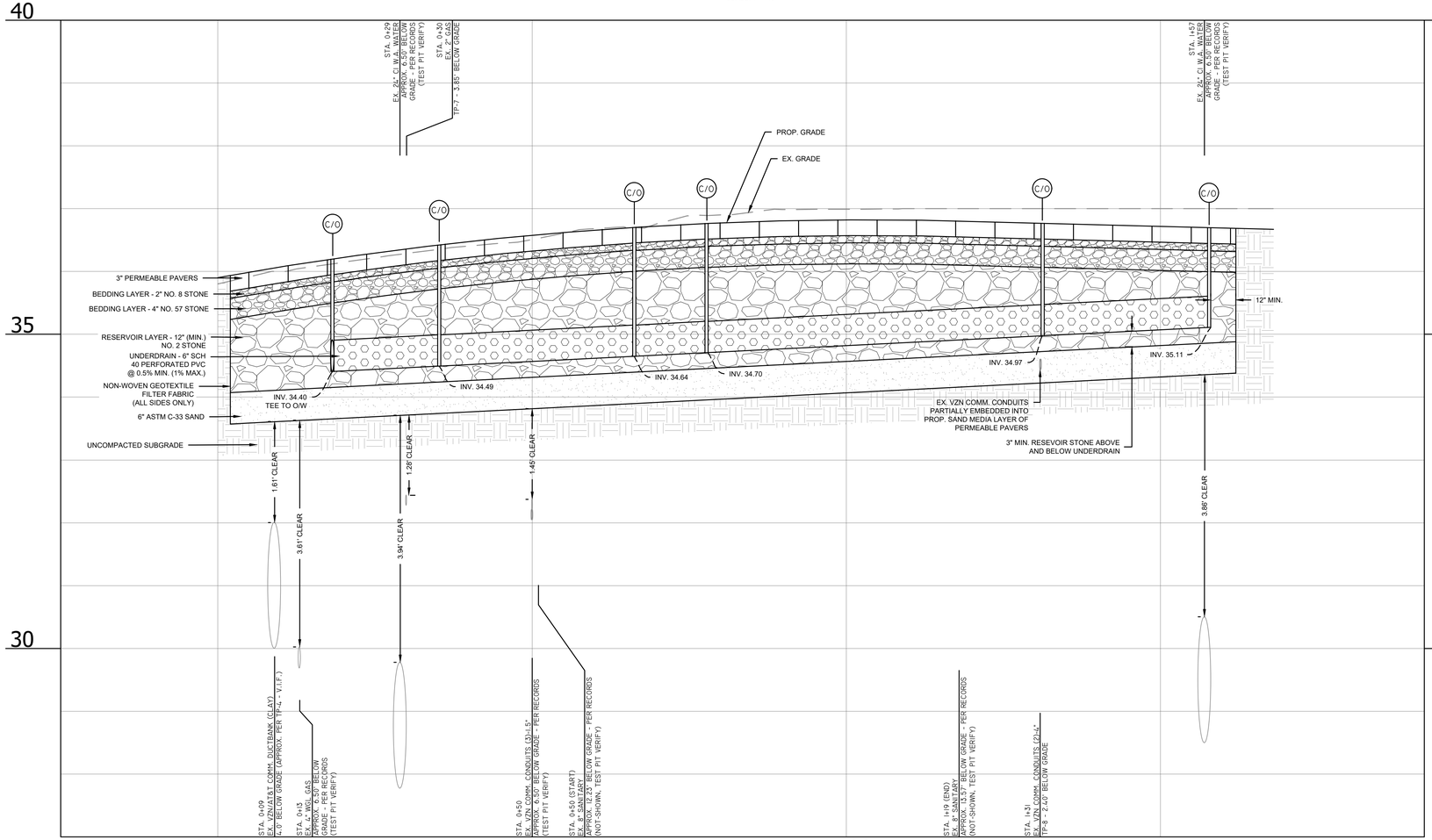


PERMEABLE PAVERS #3 (LEVEL 1)

SCALE: 1" = 10'

GENERAL NOTES:

1. ALL CLEANOUTS WITHIN PERMEABLE PAVERS SHALL BE BRASS CAPS W/COUNTERSUNK PLUGS (ADA COMPLIANT).
2. ALL OBSERVATION WELLS SHALL BE FITTED WITH PVC CAPS WITH RAISED PLUGS LOCATED OUTSIDE LIMITS OF PAVEMENT AS SHOWN (ELEVATE 6" ABOVE GRADE).
3. ALL UNDERDRAINS SHALL BE CONSTRUCTED WITH A MIN. 0.5% SLOPE (1% MAX.) AND SHALL BE VERIFIED IN FIELD WITH INSPECTOR TO ENSURE POSITIVE SLOPE IS MAINTAINED ACROSS ENTIRE LENGTH OF UNDERDRAIN INSTALLED.



SECTION C-C

VERTICAL SCALE: 1" = 1'
HORIZONTAL SCALE: 1" = 10'

ARLINGTON
VIRGINIA

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Seal

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JASON AZAR
Lic. No. 051113
PROFESSIONAL ENGINEER

Sheet

C8.090

1' 0.5' 0 1' 2'
VERTICAL GRAPHIC SCALE
1" = 1'

10' 5' 0 10' 20'
HORIZONTAL GRAPHIC SCALE
1" = 10'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

BMP DETAILS

ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN

1051 SOUTH EADS STREET

ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET C8.090	

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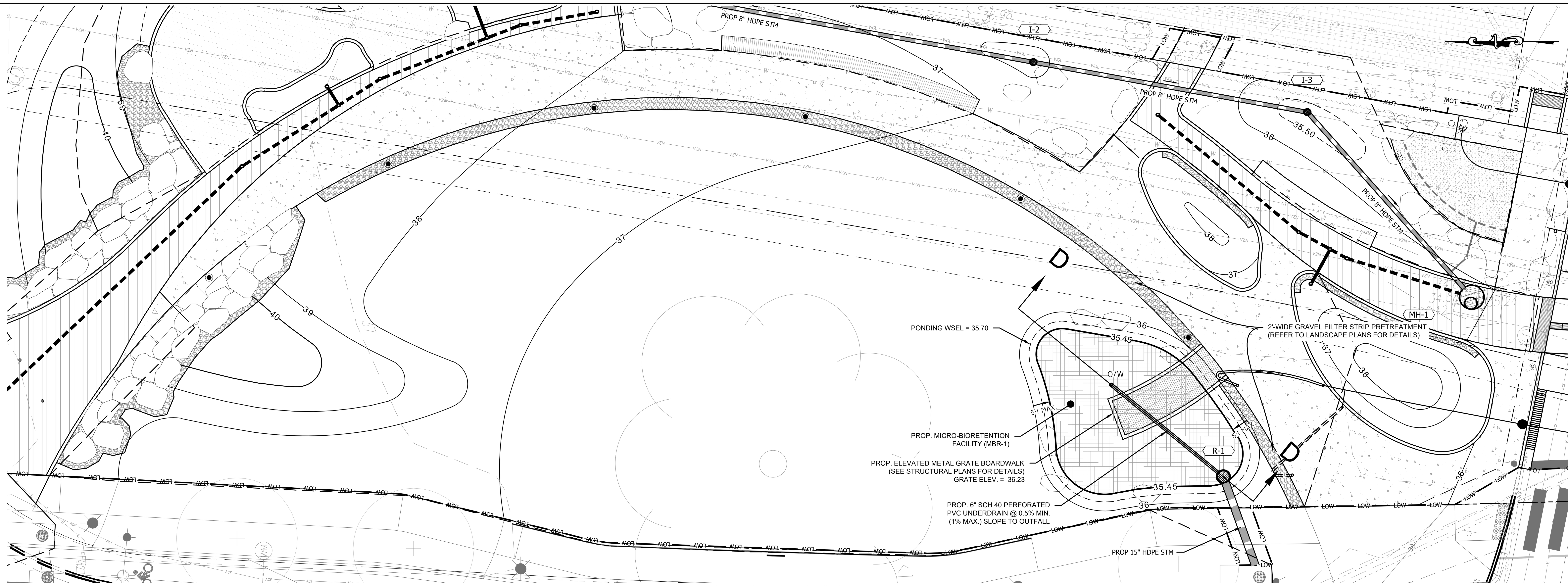
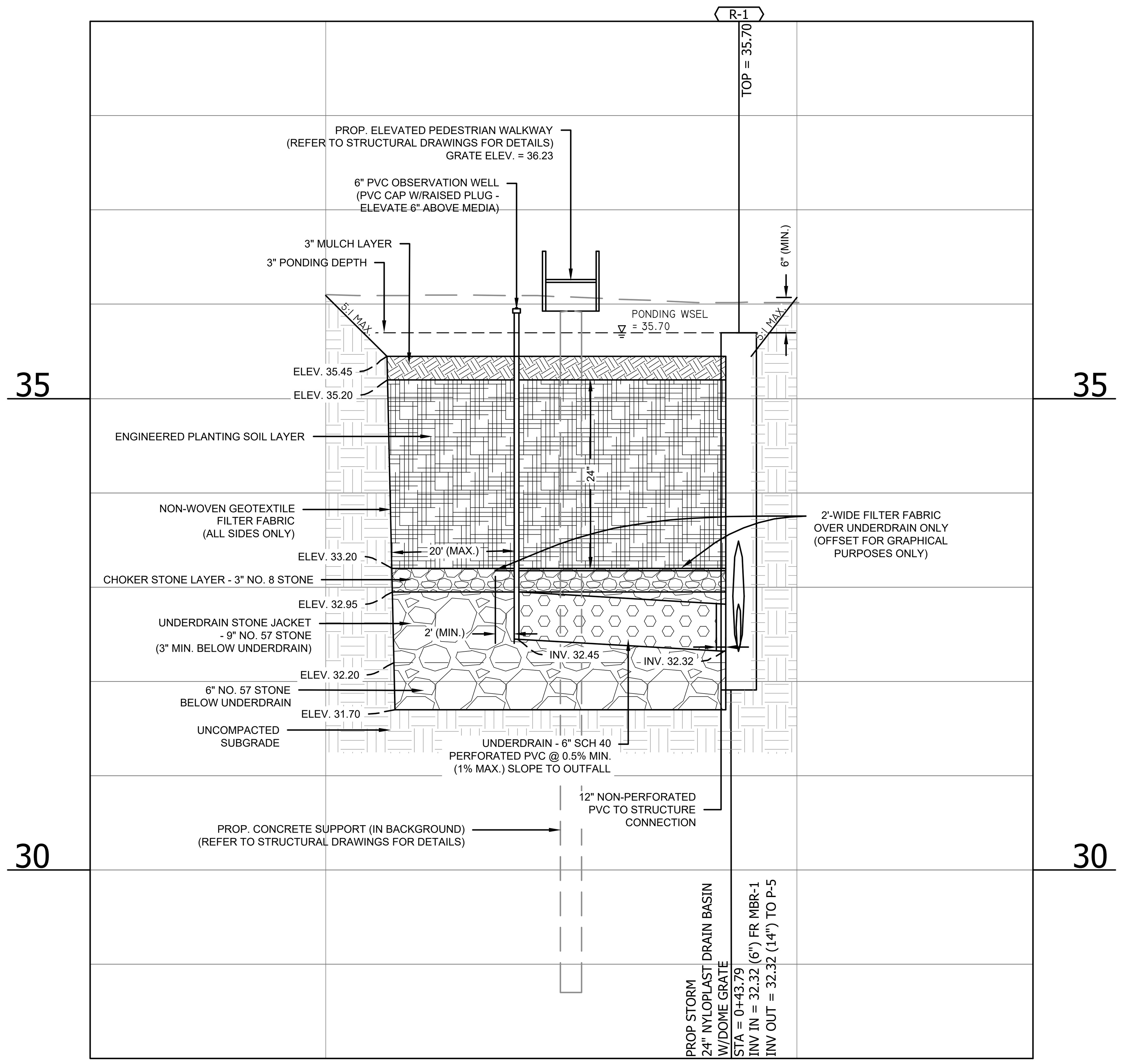


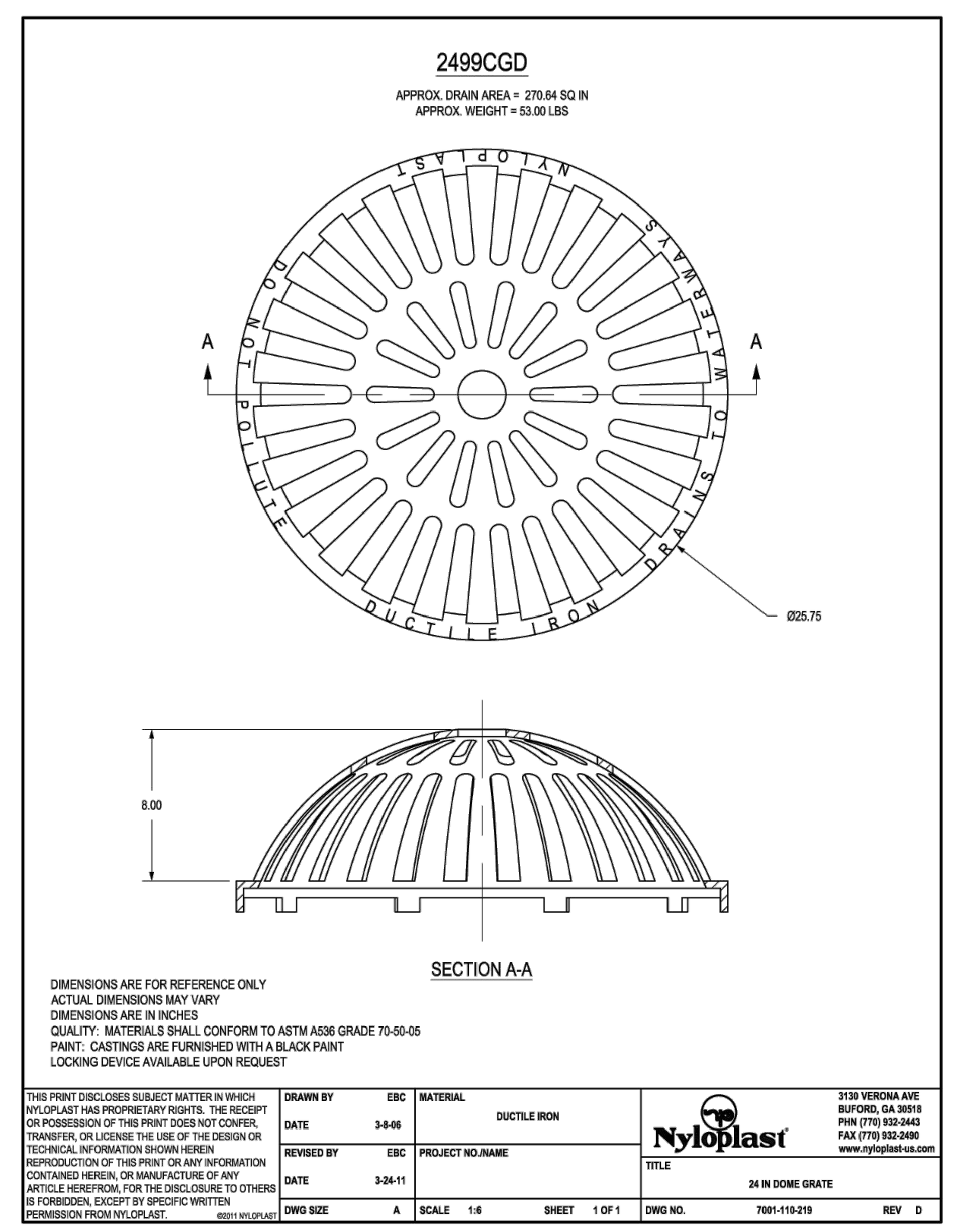
MICRO-BIORETENTION #1 (LEVEL 2)

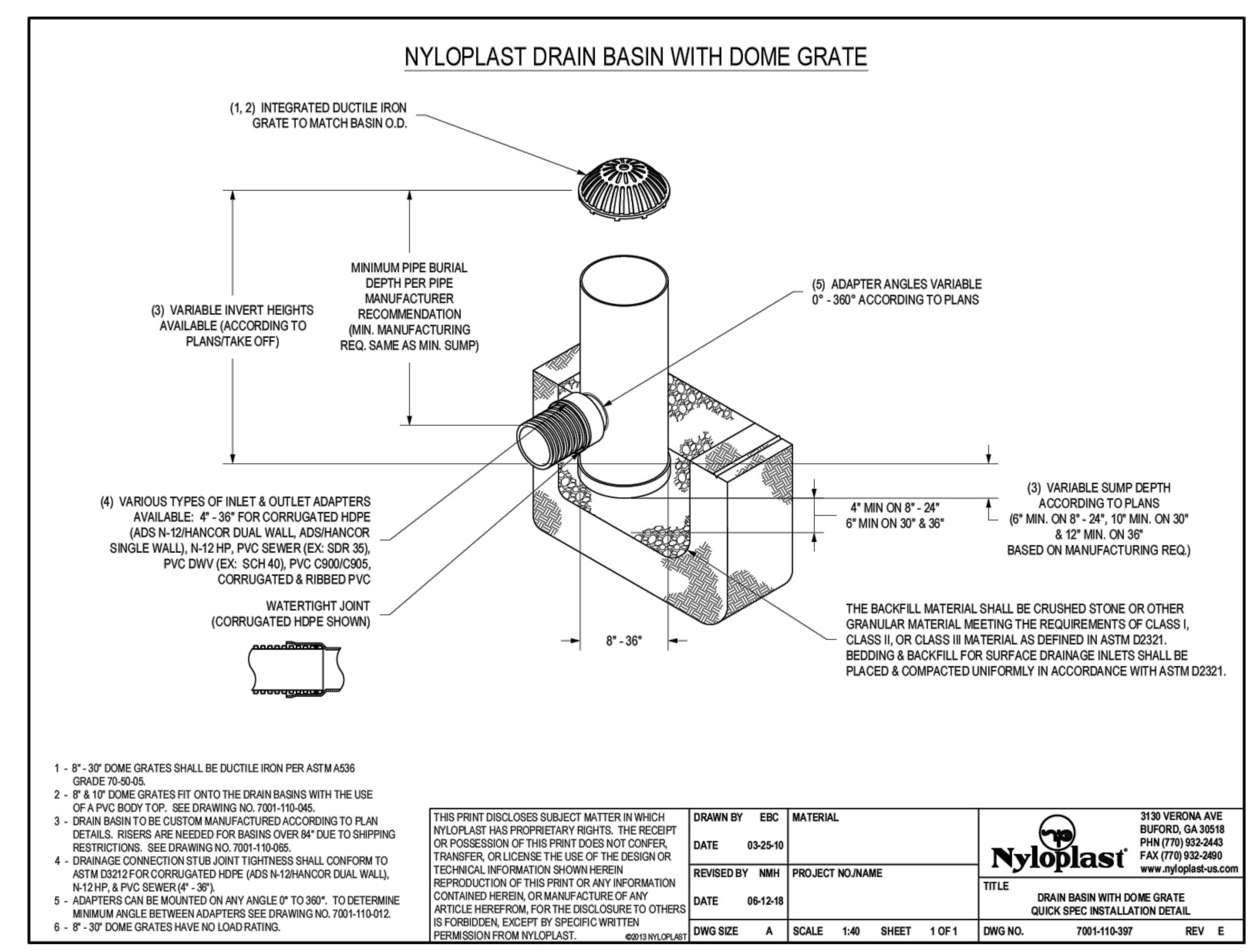
SCALE: 1" = 10'



SECTION D-D

VERTICAL SCALE: 1" = 2'
HORIZONTAL SCALE: 1" = 20'





ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

BMP DETAILS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C8.100

1' 0.5' 0 1' 2'
VERTICAL GRAPHIC SCALE
1" = 1'

10' 5' 0 10' 20'
HORIZONTAL GRAPHIC SCALE
1" = 10'

ARLINGTON VIRGINIA

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Seal

COMMONWEALTH OF VIRGINIA
JASON AZAR
Lic. No. 051113
PROFESSIONAL ENGINEER

Sheet
C8.100

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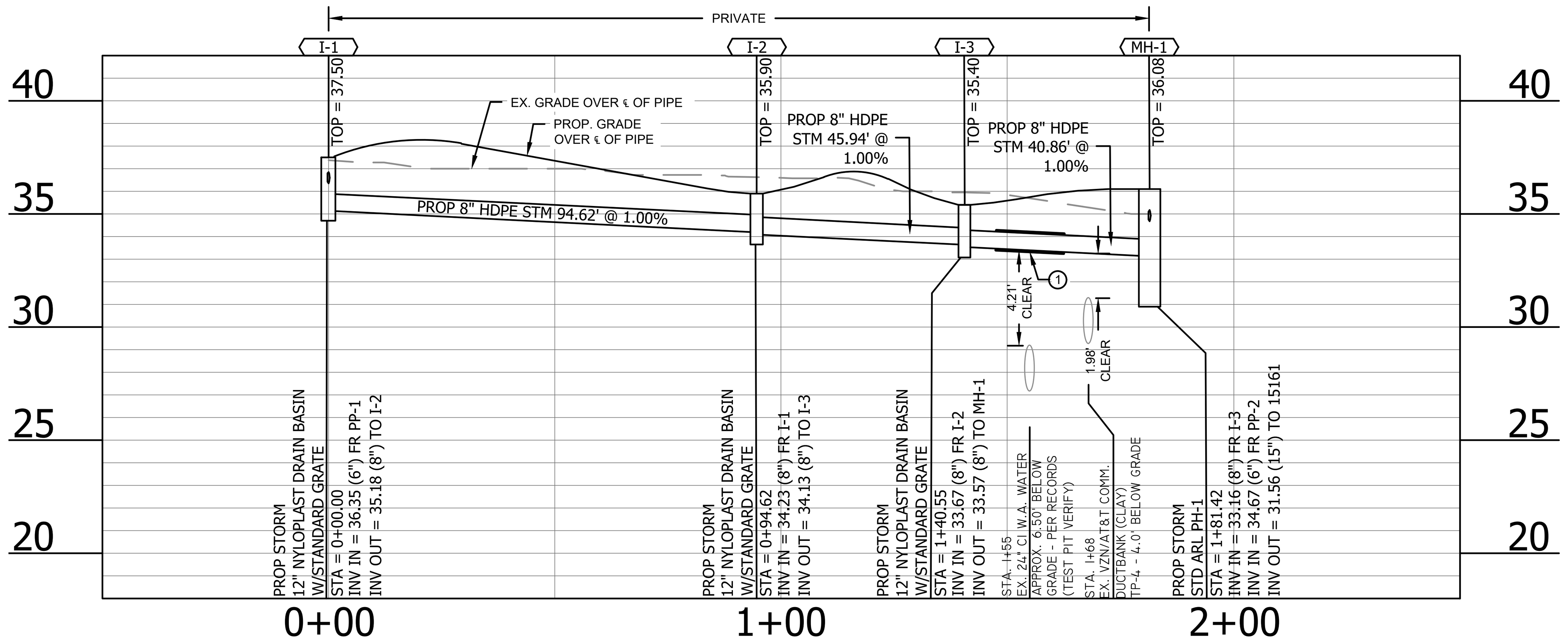
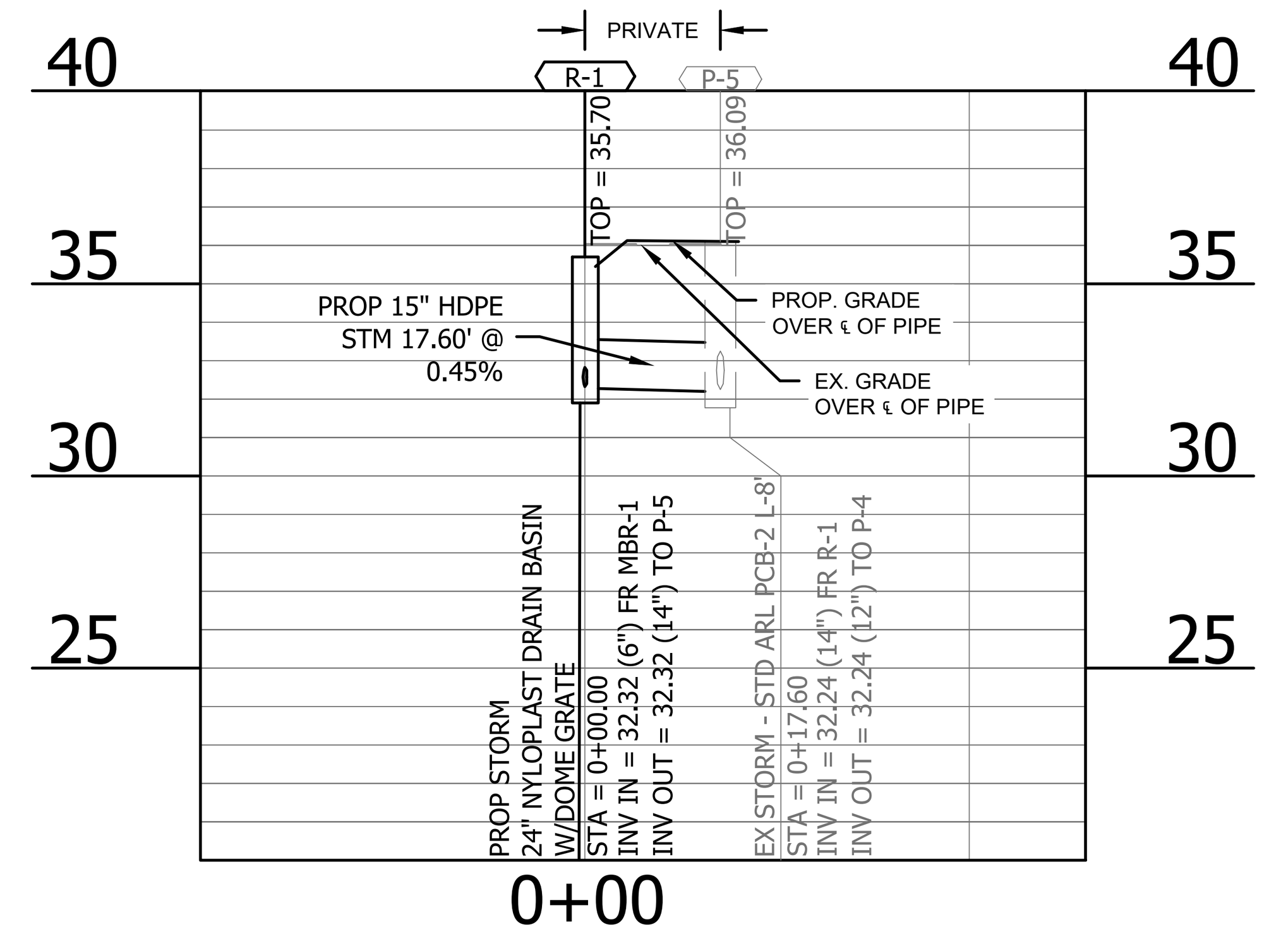


I-1 TO MH-1
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 25'



R-1 TO P-5
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 25'

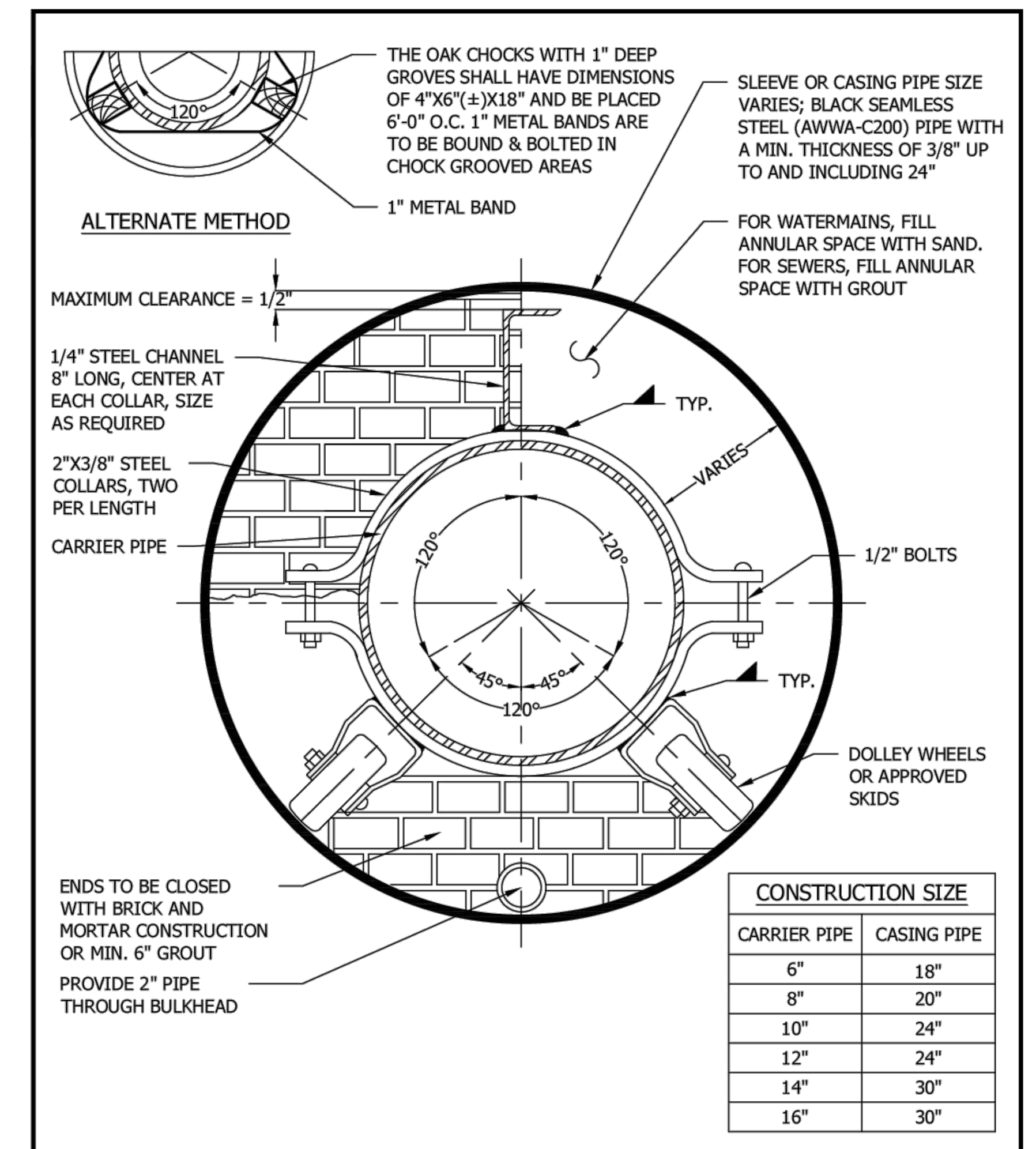
STORMDRAIN NOTES:
1. PROP. 8" HDPE STORMDRAIN SHALL BE INSTALLED WITH 15'-LONG CARRIER PIPE CENTERED ON 24" W.A. WATER LINE PER ARL. CO. STD. M-4.0.

Storm Tabulation

Structure #	Data
I-1	TOP = 37.50 INV. IN = 36.35 (6") FROM PP-1 INV. OUT = 35.18 (8") TO I-2
I-2	TOP = 35.90 INV. IN = 34.23 (8") FROM I-1 INV. OUT = 34.13 (8") TO I-3
I-3	TOP = 35.40 INV. IN = 33.67 (8") FROM I-2 INV. OUT = 33.57 (8") TO MH-1

Storm Tabulation

Structure #	Data
MH-1	TOP = 36.08 INV. IN = 33.16 (8") FROM I-3 INV. IN = 34.67 (6") FROM PP-2 INV. OUT = 31.56 (15" Reinforced Concrete Pipe) TO 15161
P-5	TOP = 36.09 INV. IN = 32.24 (14") FROM R-1 INV. OUT = 32.24 (12" Reinforced Concrete Pipe) TO P-4
R-1	TOP = 35.70 INV. IN = 32.32 (6") FROM MBR-1 INV. OUT = 32.32 (14") TO P-5



CONSTRUCTION SIZE

CARRIER PIPE	CASING PIPE
6"	18"
8"	20"
10"	24"
12"	24"
14"	30"
16"	30"

NOTES:
ALTERNATIVE METHODS OF SUPPORTING CARRIER PIPES MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JACKING AND BORING DETAILS

ISSUED 9/14/2020

ARLINGTON VIRGINIA
ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES
DRAWING NO. M-4.0

5' 2.5' 0 5' 10'
VERTICALGRAPHIC SCALE
1" = 5'
25' 12.5' 0 25' 50'
HORIZONTAL GRAPHIC SCALE
1" = 25'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

STORM PROFILES
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C8.110

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION
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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location
ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET
ARLINGTON, VIRGINIA

Sheet Title
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Approval | Date
Design Supervisor

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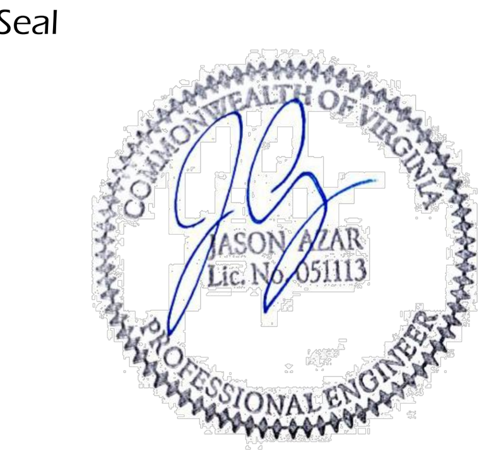
Seal


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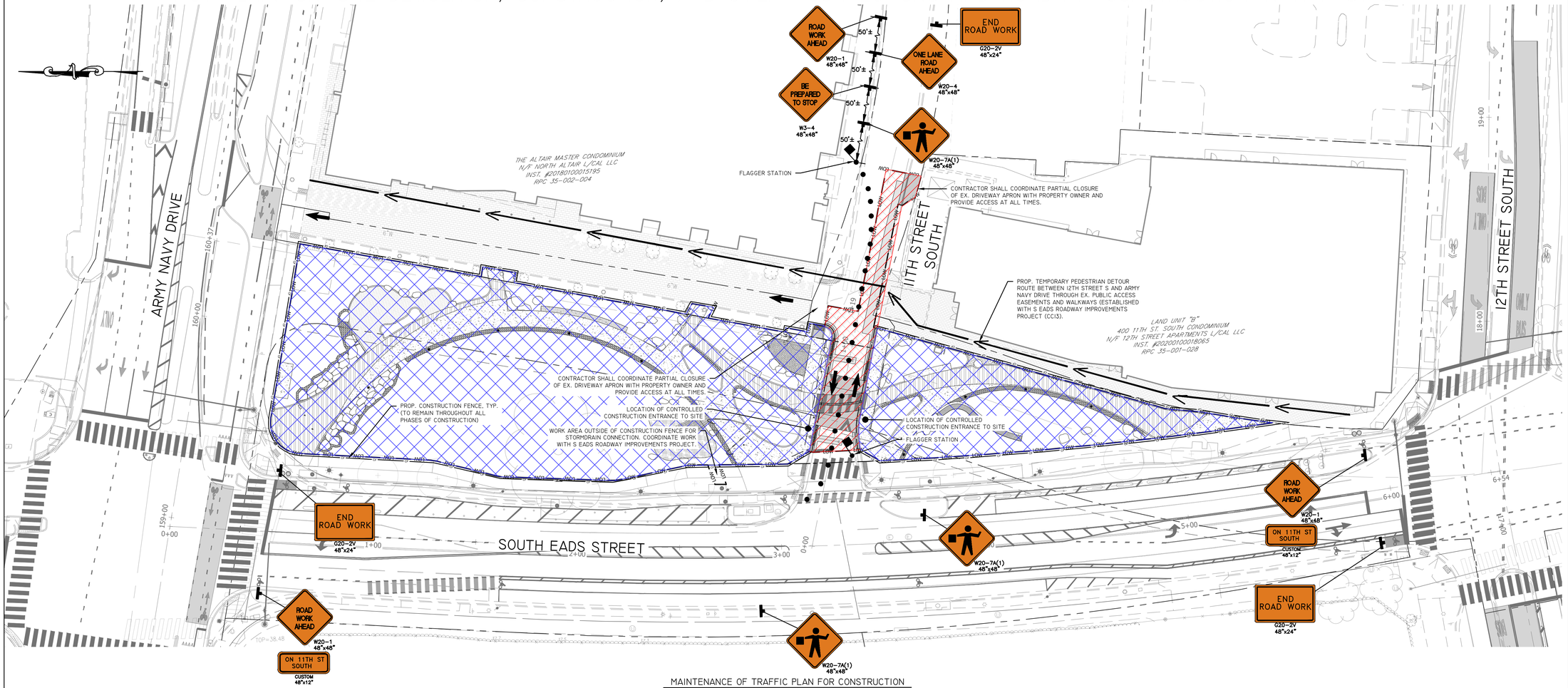
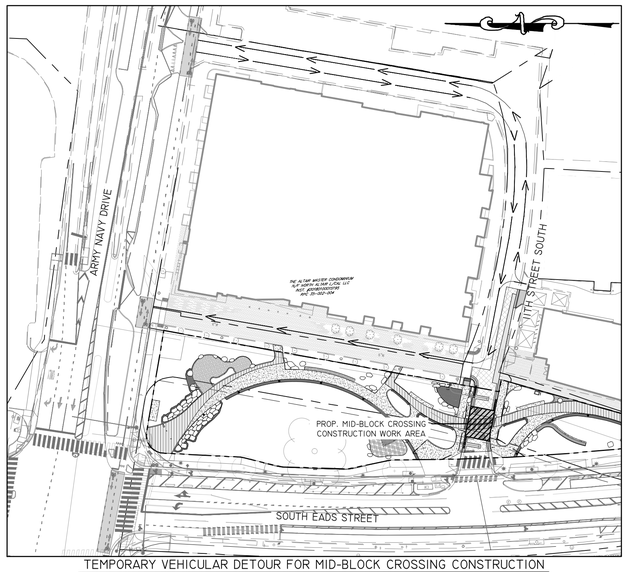
MOT PLAN: ON-SITE DEMOLITION, CONSTRUCTION, AND UTILITY CONNECTIONS AND ROADWAY CONSTRUCTION IN 11TH ST S



MAINTENANCE OF TRAFFIC PLAN FOR CONSTRUCTION

SCALE: 1" = 25'



TEMPORARY VEHICULAR DETOUR FOR MID-BLOCK CROSSING CONSTRUCTION

SCALE: 1" = 60'

MAINTENANCE OF TRAFFIC PLAN INTRODUCTION

MAINTENANCE OF TRAFFIC IS FOR ON-SITE PARK DEMOLITION, CONSTRUCTION, AND THE PLACEMENT OF UTILITIES AND CONSTRUCTION OF ROADWAY IMPROVEMENTS WITHIN 11TH ST S.

11TH ST S (DURATION: APPROX. 2 WEEKS)

DURING CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PHASE, ONE LANE WILL BE TEMPORARILY CLOSED WITH THE USE OF SIGNS AND FLAGGERS. TWO-WAY VEHICULAR TRAFFIC SHALL BE RESTORED AT THE END OF EACH WORK DAY. CONSTRUCTION OF CONCRETE RAISED MID-BLOCK CROSSING WILL NECESSITATE TEMPORARY 11TH STREET LANE CLOSURE AND VEHICULAR DETOUR ROUTE AS INDICATED ON PLAN.

CONSTRUCTION ACTIVITY WITHIN THE PUBLIC RIGHT-OF-WAY MAY OCCUR BETWEEN 9:00 A.M. AND 3:30 P.M., MONDAY THROUGH FRIDAY OR BETWEEN 10:00 A.M AND 6:00 P.M ON WEEKENDS AND HOLIDAYS. CONSTRUCTION ACTIVITY WITHIN THE PUBLIC RIGHT-OF-WAY SHALL NOT OCCUR BETWEEN 6:00 A.M AND 9:00 A.M OR BETWEEN 3:30 P.M AND 6:30 P.M MONDAY THROUGH FRIDAY. THE FOREGOING CONSTRUCTION HOURS MAY BE MODIFIED BY THE COUNTY MANAGER IF HE/SHE FINDS THAT, 1) FOR RIGHT-OF-WAY IMPROVEMENTS REQUIRED BY THE SITE PLAN, CONSTRUCTION ACTIVITY MUST BE CONSTRUCTED OUTSIDE THE HOURS STATED ABOVE IN ORDER TO AVOID DISRUPTION OF TRAFFIC OR OTHER TRANSPORTATION SYSTEMS; OR 2) THE CONSTRUCTION ACTIVITY REQUIRES CERTAIN UTILITY WORK AND/OR STREET CLOSURE OUTSIDE THE HOURS ABOVE. "HOLIDAYS" ARE DEFINED AS NEW YEAR'S DAY, MARTIN LUTHER KING DAY, PRESIDENTS DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, COLUMBUS DAY, VETERANS DAY, THANKSGIVING AND CHRISTMAS.

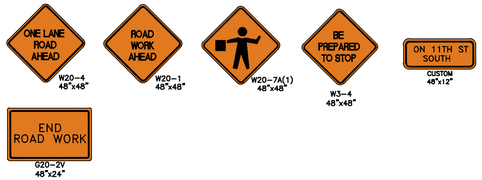
ADJACENT AND CONCURRENT PROJECTS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION OF THE CONSTRUCTION OF THE PARK WITH ALL ADJACENT ACTIVE PROJECTS WITHIN THE VICINITY OF THE PROJECT.

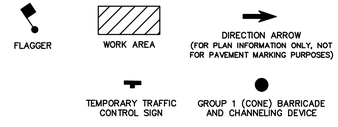
PEDESTRIAN DETOUR ROUTE AROUND PROJECT SITE

THE CONTRACTOR SHALL COORDINATE CONTINUED USE OF PEDESTRIAN DETOUR ROUTE FROM 12TH STREET S TO ARMY NAVY DRIVE (AS SHOWN ON PLAN) ESTABLISHED WITH S EADS STREET ROADWAY IMPROVEMENTS PROJECT (CC13) THROUGHOUT ALL PHASES OF CONSTRUCTION.

SIGN LEGEND



MOT LEGEND



25' 12.5' 0 25' 50'

GRAPHIC SCALE

1" = 25'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

MAINTENANCE OF TRAFFIC PLAN FOR CONSTRUCTION
ARLINGTON JUNCTION PARK-CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET C9.000	

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

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FINAL PLAN

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COMMONWEALTH OF VIRGINIA
JASON AZAR
Lic. No. 051113
PROFESSIONAL ENGINEER

Sheet

C9.000

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Filename: C9.000 - MAINTENANCE OF TRAFFIC PLAN FOR CONSTRUCTION.dwg

Typical Traffic Control
Crosswalk Closure and Pedestrian Detour Operation
(Figure TTC-36.2)

NOTES

Standard:

1. **When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.**
2. **Curb parking shall be prohibited for at least 50 feet in advance of the midblock crosswalk.**

Guidance:

3. *Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.*
4. *Pedestrian traffic signal displays controlling closed crosswalks should be covered or deactivated.*
5. *Temporary markings should be considered for operations exceeding three days in duration.*

Option:

6. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS (W5-1) signs, may be used to control vehicular traffic.
7. For nighttime closures, Type A Flashing warning lights may be used on barricades supporting signs and closing sidewalks.

Standard:

8. **In order to maintain the systematic use of the fluorescent yellow-green background for school warning signs in a jurisdiction, the fluorescent yellow-green background for school warning signs shall be used in TTC zones.[2]**
9. **All sidewalk closures shall be closed with Type 3 Barricades. The SIDEWALK CLOSED (R9-9) sign and the SIDEWALK CROSS HERE (R9-11) sign shall be installed above the Type 3 Barricade. The KEEP RIGHT sign can cover the top rail of the Type 3 Barricade.[2]**

Support:

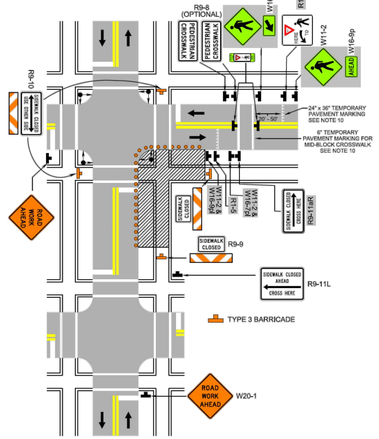
10. Refer to Sections 3B-16 through 3B-18 of the 2009 MUTCD and the Virginia Supplement to the MUTCD[1] for crosswalk[1] lines, yield lines and other related TTC devices that may be used to control vehicular traffic at midblock crosswalks.

Standard:[2]

11. **The YIELD HERE TO PEDESTRIANS (R1-5) sign shall be placed at the Yield Line.**
12. **Fluorescent yellow-green PEDESTRIAN TRAFFIC (W11-2) symbol sign, AHEAD (W16-9p) plaque and ARROW (W16-7p) plaque shall be used to identify the work zone crosswalk.**

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Crosswalk Closure and Pedestrian Detour Operation
(Figure TTC-36.2)



1: Revision 1 – 4/1/2015
2: Revision 2 – 7/1/2018

Typical Traffic Control
Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.2)

NOTES

Guidance:

1. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.*
2. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the flagger station and transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. Generally speaking, motorists should have a clear line of sight from the graphic flagger symbol sign to the flagger.*
3. *To maintain efficient traffic flow in a flagging operation on a two-lane roadway, the maximum time motorists should be stopped at a flagger station is 8 minutes for high volume roadways (average daily traffic of 500 or more vehicles per day) to a maximum of 12 minutes for low volume roadways (less than 500 vehicles per day). For additional information see Section 6E.07.[2]*

Standard:

4. **Portable Temporary Rumble Strips (PTRS) shall be used as noted in Section 6F.99.**
5. **Flagging stations shall be located far enough in advance of the work space to permit approaching traffic to reduce speed and/or stop before passing the work space and allow sufficient distance for departing traffic in the left lane to return to the right lane before reaching opposing traffic (see Table 6H-3 on Page 6H-5).**
6. **All flaggers shall be state certified and have their certification card in their possession when performing flagging duties (see Section 6E.01, Qualifications for Flaggers).**
7. **Cone spacing shall be based on the posted speed and the values in Table 6H-4 on Page 6H-6.[1]**
8. **A shadow vehicle with at least one high intensity amber rotating, flashing, or[1] oscillating light shall be parked 80'-120' in advance of the first work crew.**

Option:

8. A SLOW (W21-V10) sign[2] may be required in this area to give advance warning of the operation ahead by slowing approaching traffic prior to reaching the flagger station or queued traffic.

Guidance:

9. *If the queue of traffic reaches the BE PREPARED TO STOP (W3-4) sign then the signs, and if used the* PTRS[2] *should be readjusted at greater distances.*
10. *When a highway-rail crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the highway-rail grade crossing, the temporary traffic control zone should be extended so that the transition area precedes the highway-rail crossing (see Figure TTC-56 for additional information on highway-rail crossings).*

Standard:

11. **At night, flagger stations shall be illuminated, except in emergencies (see Section 6E.08).**

Option:

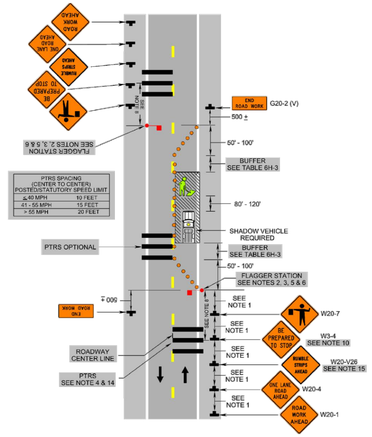
12. Cones may be eliminated when using a pilot vehicle operation or when the total roadway width is 20 feet or less.
13. For low-volume situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger, positioned to be visible to road users approaching from both directions, may be used (see Chapter 6E).

Standard:[1]

14. **When used[2], three portable temporary rumble (PTRS) strips shall be installed across the entire travel lane adjacent to the BE PREPARED TO STOP (W3-4) sign. The portable temporary rumble strips shall be monitored and adjusted as necessary during the work shift to ensure proper plcmeut on the roadway. When the PTRS are installed, the RUMBLE STRIPS AHEAD (W20-V26) sign shall also be utilized.**

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Lane Closure on a Two-Lane Roadway Using Flaggers
(Figure TTC-23.2)



1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019
3: Revision 2.1 – 11/1/2020

Typical Traffic Control
End of Day Signing for Paving Operations on a Two-Lane Roadway
(Figure TTC-59.1)

NOTES

Standard:

1. **Open travel lane(s) shall not be exposed to more than 2 to 3 mile sections of milled or uneven surface.**
2. **The maximum pavement edge drop-off shall be 2 inches or less.**
3. **NO CENTER LINE (W8-12) sign shall be installed whenever the centerline has been obliterated or until permanent pavement markings have been installed. The sign shall be installed in both directions when the centerline is not present. In addition, NO CENTER LINE signs shall be installed every mile if the unmarked area is less than 3 miles, or every 2 miles if the unmarked area is longer than 4 miles.**
4. **A DO NOT PASS (R4-1) sign shall be used when the centerline has been obliterated or until pavement markings have been installed. The DO NOT PASS sign shall be installed after the NO CENTER LINE sign and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand[1]. Thereafter the DO NOT PASS sign shall be installed every mile if the unmarked area is less than 3 miles or every 2 miles if the unmarked area is longer than 4 miles.**
5. **In the vicinity of a turning lane a BUMP (W8-1) sign shall be installed.**
6. **The UNEVEN LANES (W8-11) sign and BUMP sign shall be adjusted daily with the work operation and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand[1]. Additional UNEVEN LANES signs shall be installed every mile.**
7. **Signs shall be post-mounted at locations after 72 consecutive hours of non-work activities.**

Guidance:[1]

8. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.*

Option:[1]

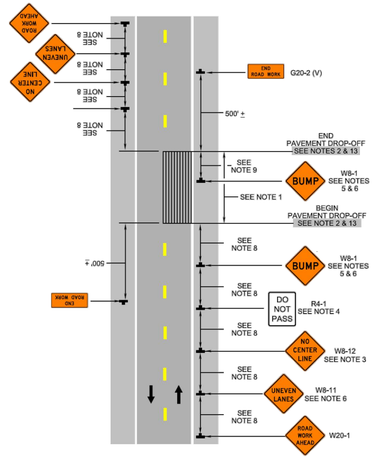
9. Only traffic control signing for pavement resurfacing is shown. Other devices may be used for the control of traffic through the work area.
10. The LOW SHOULDER (W8-9) sign may be used to warn of a shoulder condition where there is an elevation difference of less than 2 inches between the shoulder and the travel lane.

Standard:

11. **The LOW SHOULDER sign shall be repeated at 1 mile intervals where there is an elevation difference of less than 2 inches between the shoulder and the travel lane extends over a distance in excess of 1 mile.**
12. **If pavement marking cannot be installed in accordance with Section 704.03 of the Road and Bridge Specifications, then yellow temporary pavement markers spaced at 10 foot centers for two-way traffic shall be placed along the centerline for lane division. No edge markers will be required.**
13. **A temporary pavement wedge shall be constructed of surface mix asphalt a minimum of three (3) feet in length for every inch of depth of pavement milling on the approach and departure end of the milled travel lane(s). Refer to Standard ACOT-1 of the Road and Bridge Standards for details.**

1: Revision 1 – 4/1/2015

End of Day Signing for Paving Operations on a Two-Lane Roadway
(Figure TTC-59.1)



1: Revision 1 – 4/1/2015

Figure 6E-4, Flagger Requirements (Sheet 1 of 2)

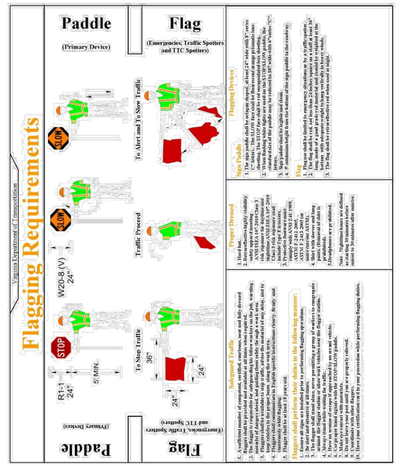
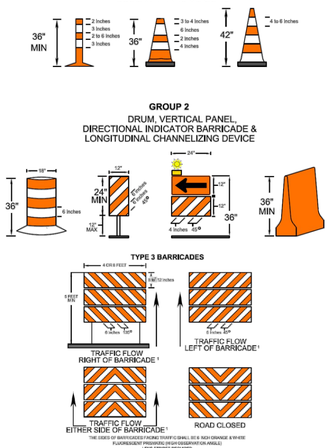


Figure 6F-8, Channelizing Devices[1]



1: Revision 1 – 4/1/2015

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

MAINTENANCE OF TRAFFIC PLAN DETAILS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET C9.010	

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

MAINTENANCE OF TRAFFIC PLAN DETAILS

Approval Date

Design Supervisor

Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: ME
Drawn: ME
Checked: JA

Filename:
Plotted:

Scale: AS SHOWN
Date: July 21, 2023

Seal

COMMONWEALTH OF VIRGINIA
JASON AZAR
Lic. No. 051113
PROFESSIONAL ENGINEER

Sheet

C9.010

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1.0 PROJECT OVERVIEW

1.1. PROJECT INFORMATION AND SITE CONDITIONS

The project site is located along South Eads Street in Arlington, Virginia. The site is bounded by Army Navy Drive to the north, apartment buildings to the east, 12th Street South, to the south, and South Eads Street to the west. Based on topographic plans provided by Clark | Azar & Associates (herein referred as "Client"), the site is generally flat with elevations ranging from EL. 35 feet to EL. 38 feet.

The project consists of the design and construction of a new park with architectural features. The planned features and structures are listed below:

- A new mico-bioretention facility with an invert elevation of EL 31.7 ft.
- Permeable pavers and concrete pavement will be constructed throughout the park. The invert elevation for the permeable pavers will be at approximately 1.75 to 3.5 feet below proposed grades. We understand that the pavement will be primarily used by pedestrians and will only be utilized by maintenance vehicles about twice a month and bucket trucks less than twice a month.
- New boulder retaining walls with maximum exposed heights ranging from 1.0 to 2.25 feet will be constructed near the northern end of the park and near the entrance to the southern portion of the park. The boulders retaining wall will consist of 2 to 3 stacked boulders.
- A new 6-foot wide boardwalk will be constructed along South Eads Street and through the micro-bioretention facility in the northern portion of the site. The boardwalk will be supported by helical piers or sonotubes. The boardwalk will support pedestrian loads only. Based on the information provided by the structural engineer, the maximum anticipated load on each helical pier or sonotube will be 5.3 kips.
- New architectural pylon lights that are planned throughout the site. The lights will be 15 feet tall and are planned to be surface mounted to a thickened slab.
- New misting elements and traffic bollards.
- New streetlights along South Eads Street.

The description of the proposed project given above is based on the information provided to us by you and information gathered during our site reconnaissance. If any of the assumptions or project information is incorrect, DMY should be informed so that we may revise our geotechnical recommendations, if necessary.

1.2. SCOPE OF SERVICES

The purposes of this study were to obtain the subsurface soil and groundwater information for the existing buildings. Our scope of services included the following:

- Drilling nineteen (19) SPT borings and one (1) hand auger boring within the South Eads Park project limits. Two (2) borings were performed in the vicinity of the proposed boardwalk along

South Eads Street. Two (2) borings were performed in the vicinity of the proposed micro-bioretention facility. Five (5) borings were performed in the vicinity of the proposed boulder walls. The remainder of the borings were performed in the vicinity of various architectural features throughout the site.
- Drilling four (4) auger probes for infiltration testing purpose.
- Performing four (4) in-situ infiltration tests in accordance with Virginia Department of Environmental Quality (DEQ) and Arlington County Stormwater Manual requirements.
- Performing laboratory tests on select soil samples.
- Evaluating field and laboratory data.
- Performing engineering calculations and analyses.
- Preparing this geotechnical engineering report.

2.0 FIELD EXPLORATION AND LABORATORY TESTING

2.1. FIELD EXPLORATION

The field exploration consisted of:

- Drilling nineteen (19) Standard Penetration Test (SPT) borings (B-1 through B-14, and B-16 through B-20) to depths ranging from 5 to 25 feet below current site grades.
- Drilling one (1) hand auger boring (B-15) to a depth of 4.5 feet. The hand auger boring was performed at a location which was inaccessible to our drill rig.
- Drilling four (4) auger probes (INF-1 through INF-4) to depths of 5.0 feet for infiltration testing. The infiltration test was conducted in general accordance with the requirements of the Arlington County Stormwater Manual and the Virginia DEQ Stormwater Design Specification No. 8, Infiltration Practices.

The boring locations were selected by the Client and located in the field by DMY personnel using visual reference to existing site features. As-drilled boring elevations were estimated to the nearest half foot based on the topographic plan provided to us by the client. Some borings were offset from the original locations due to reasons such as access, utility conflict, etc. The approximate locations of the as-drilled borings are shown on the Boring Location Plan included in Appendix A.

The SPT borings were drilled by a truck-mounted CME-45 or CME-55 drill rig using the hollow stem auger method. Groundwater levels were measured at each SPT boring location at the time of drilling and upon completion of drilling. The groundwater level was also measured 72 hours after completion of drilling in Borings B-1, B-5, B-10, and B-13. DMY performed a hand auger boring with Dynamic Cone Penetrometer (DCP) test at Boring B-15. This boring location was not accessible to our SPT drill rig; therefore, a hand auger with DCP testing was performed. The field exploration procedures are included in Appendix B.

Following field operations, the soil samples were transported to our laboratory for further analysis and testing. The samples will be stored in our laboratory for a period of 2 weeks from the submittal date of this report. After this period, the samples will be discarded unless we are instructed otherwise.

2.2. LABORATORY TESTING

Representative soil samples were selected and tested in the laboratory to verify field classifications and to determine pertinent engineering properties. The laboratory testing procedures and results are included in Appendix C of this report. The laboratory testing program included the following:

- 8 Natural moisture Content (ASTM D 2216)
- 8 Grain size analysis (ASTM D 6913)
- 8 Atterberg Limits (ASTM D 4318)
- 8 USDA Textural Analysis (ASTM D 7928)
- 1 California Bearing Ratio (VTM-8)
- 1 Standard Proctor (VTM-1)

3.0 SITE GEOLOGY AND SUBSURFACE CONDITIONS

3.1. SITE GEOLOGY AND SOIL SURVEY

According to the Geologic Map of Virginia (1993) published by the Virginia Department of Mines, Minerals, and Energy (DMME), the site is located in the Shirley Formation. The Shirley Formation consists of light to dark gray, bluish gray, and brown sand, gravel, silt, clay and peat. The soil was deposited in riverine terraces, baymouth barriers, and bay-floor plains. The fluvial-estuarine facies comprise a lower pebble to boulder sand overlain by fine to coarse sand interbedded with peat and clayey silt rich in organic material, including tree stumps, leaves, and seeds of cypress, oak, and hickory which grades up to medium-to-thick-bedded clayey and sandy silt and silty clay.

The Arlington County Soil Survey (2019) shows the site within the Urban Land – Udorthents mapping unit. The Urban Land mapping unit consists of material that has been disturbed during urbanization. Urban Land is highly heterogenous.

3.2. SUBSURFACE CONDITIONS

The subsurface conditions encountered at the locations explored are shown in the boring logs in Appendix B. The records represent our interpretation of the subsurface conditions in accordance with generally accepted geotechnical engineering practice. The lines designating the interfaces between various strata on the boring logs are approximate, as the actual transitions between soil strata are often gradual. In the absence of foreign substances, it is difficult to distinguish between natural soils and clean soil fills. Although individual test borings are representative of the subsurface conditions at the precise boring locations on the dates shown, they are not necessarily indicative of the subsurface conditions at other locations or at other times.

Surficial Materials
Approximately 2 to 4 inches of topsoil was encountered within Borings B-01 through B-10 and B-16 through B-20. Topsoil encountered is typically a dark colored soil material containing roots, fibrous matter,

and/or other organic components, and is generally unsuitable for engineering purposes. No laboratory testing was performed for landscaping use purpose ; therefore, the term topsoil is not intended to indicate suitability for landscaping and/or other purposes.

Borings B-11 through B-15 were performed within the construction site in the southern portion of the project. No topsoil was encountered within Borings B-11 through B-15. Approximately 2.4 to 3.6 inches of concrete was encountered at ground surface within Borings B-12 and B-14.

Stratum F: Existing Fill
The existing fill materials were encountered beneath the surficial materials in all borings extending to approximate depths ranging from 2 to 14.2 feet below the existing grades. The existing fill materials identified or classified as LEAN CLAY (GL), CLAYEY GRAVEL (GC), SILTY GRAVEL (GM), SILT (ML), CLAYEY SAND (SC), and SILTY SAND (SM). SPT N-values ranging from 2 blows per foot (bpf) to 20 blows over 0 inches and DCP blow values ranging from 8 to more than 30 blows per 1.75-inch increment were recorded in the fill materials, indicating a firm to very hard consistency for fine-grained soils and a very loose to medium dense relative density for coarse-grained soils in this stratum. No compaction records were available for the existing fill materials and, consequently, the fill encountered is considered uncontrolled.

Stratum C: Coastal Plain Deposits
Coastal Plain Deposits are defined as coast deposits of clay, silt, sand, and/or gravel ranging in age from Quaternary to Cretaceous. Coastal Plain soils were encountered underlying the existing fill in all borings except Borings B-7, B-8, B-11, and B-15. The soils in this strata are loose, unconsolidated soil or sediment which has been eroded and reshaped by water in some form. The soils of this stratum were identified or classified as SILTY SAND (SM), CLAYEY SAND (SC), LEAN CLAY (CL), SILTY GRAVEL (GM), POORLY-GRADED GRAVEL (GP), SILT (ML), and POORLY-GRADED SAND (SP). The SPT N-values recorded in these soils ranged from 3 bpf to 50 blows over 5 inches of split spoon penetration, indicating a firm to very stiff consistency for fine-grained soils and a very loose to very dense relative density for coarse-grained soils in this stratum.

Groundwater
Groundwater was encountered at the depths of 7.7 feet and 13 feet during the drilling in Borings B-01 and B-13, respectively. Groundwater was not encountered within the other borings during drilling or upon completion of drilling. The borings except Borings B-01, B-05, B-10, and B-13 were backfilled immediately upon completion of drilling for public safety reasons. Temporary PVC standpipes were installed within Borings B-01, B-05, B-10, and B-13 prior to backfill.

Groundwater readings were taken at Borings B-01, B-05, B-10, and B-13 at 72 hours after completion of drilling. Groundwater was not encountered 72 hours after completion of drilling within these borings. It should be noted that due to backfilling of the borings upon completion, groundwater may not have had time to enter the borings or reach its hydrostatic level. Groundwater may still be present at the locations and/or depths not indicated from the borings since stabilized groundwater readings were not obtained due to public safety concerns. Groundwater levels fluctuate with seasonal and climatic variations and may be different at other times and locations than those stated in this report.

3.3. INFILTRATION TESTING

Four (4) infiltration tests were performed at infiltration test locations INF-1 through INF-4 to determine the general infiltration capabilities of the soils at the site. Constant head borehole infiltration test was conducted in the infiltration test borings using the Aardvark automated permeameter device in accordance with Virginia DEQ and the Arlington County Stormwater Manual requirements. The Aardvark Permeameter estimates soil hydraulic conductivity using the amount of supplied water measured at equal time intervals. This is equivalent to the amount of water that was infiltrated by soil. Soil-water infiltration rate is the amount of percolated water over time which is equivalent to the reservoir flow rate. The measurement ends when the reservoir flow rate does not change over several consecutive readings and a steady state flow is observed. Due to the sensitivity of the equipment, some minor fluctuations require that the steady state be manually interpreted. Soil hydraulic conductivity (K_{sat}) is then calculated using the steady flow rate using the Earth Manual method and is also corrected for temperature.

Table 3-1 below summarizes the saturated hydraulic conductivity (K_{sat}), infiltration test depth, and USDA soil classification at each infiltration test location and its adjacent SPT boring. The infiltration test results are included in Appendix D.

The saturated hydraulic conductivity (K_{sat}), testing depths, and USDA soil classification. The Virginia DEQ requires that requires that the Seasonal High Water Table be at least 2 feet below the invert elevation. Groundwater was encountered within boring B-01 at a depth of 7.7 feet and within Boring B-13 at 13.0 ft.

The Virginia DEQ Stormwater Design Specification No. 8 states that infiltration practices should not be situated above fills soils. Fill soils were encountered throughout the site at depths ranging from 2.0 to 14.2 feet below existing grades. Refer to the boring logs in Appendix B of this report for depths and elevations of existing fill as encountered within the borings.

Table 3-1: Summary of Infiltration Test Results

Infiltration Test Location	Infiltration Test Depth (ft)	K_{sat} (in/hr)	Adjacent SPT Boring	USDA Soil Classification at Infiltration Test Depth
INF-01	5.0	0.19	B-01	Sandy Loam
INF-02	5.0	1.34	B-05	Loamy Sand
INF-03	5.0	0.55	B-10	Loamy Sand
INF-04	5.0	0.26	B-13	Sandy Loam

4.0 GEOTECHNICAL RECOMMENDATIONS

4.1. FOUNDATION DESIGN

Based on information provided by the structural engineer, the maximum anticipated load for the helical piers and sonotubes supporting the boardwalk structures will be 5.3 kips. Loading for the streetlights were not provided, however, we have assumed loading to be less than 1 kip. The size of the boulders for

the boulder walls was not provided; however, DMY has assumed that the boulders will be the "large" designation (L 5.5 ft, W 2-3 ft, H 1-2 ft) as shown on page L312 of the plans titled *New Park at S. Eads St and Army Navy Drive, 60% Construction Documents*, *Construction Details* sheet L312.

4.1.1 BOARDWALK

Helical Piers:
Helical piers consist of a steel shaft with a single helix that is screwed into the ground until competent bearing material is achieved. Additional steel pier sections (no helix) are added as the anchors are advanced into the ground surface. Helical piers are normally designed by a design-build contractor and the proposed plan is reviewed by the Geotechnical Engineer of Record. The capacity of the helical piers is determined through torque readings observed during installation. The torque required to achieve the required bearing pressure is determined prior to the installation so that the required depth can be evaluated during the installation. The final pier design is typically performed by a design-build contractor; however, a preliminary vertical capacity of up to 30 kips is typically feasible. It is our experience that these types of piers do not function well under eccentric loading and the designer will need to consider any lateral loading in the design. One critical advantage of the helical piers is the relatively small equipment criteria. Helical piers may be installed using hand operated equipment or skid steer. Depending on the final design and any lateral or uplift loading, the piers may also incorporate a concrete or grouting to increase the lateral and uplift capacities of the piers.

Very loose to loose materials were encountered during our field investigation at various depths. The piers should not bear on the soft or loose materials, or any debris. The piers should bear on the firm soils (such as medium dense Coastal Plain Deposits). In addition to the above requirements, helical piers should be installed a minimum of five (5) helix diameters below ground surface, where the helix diameter is that of the largest helix.

Helical piers should be installed in a smooth, continuous manner at a rate ranging from 5 to 20 revolutions per minute. Sufficient down pressure should be applied to advance the helical piers to the required depths. Extensions may be required to advance the helical piers to the required depths. The installation torque should be monitored throughout the installation process and should at no time exceed the torque rating of the helical pier shafts.

Written installation records should be maintained for each helical pier, and should include, but are not limited to, project name and/or location, date and time of installation, location and reference number of helical piers, descriptions of lead section and extensions installed, overall depth of installation as referenced from bottom of grade beam or footing, torque readings for the last three feet of installation if practical, and any other applicable information relating to the installation.

Sonotube Foundations:
The sonotube foundations should be considered shallow foundations if the embedment depth to diameter ratio is less than five (5) and should be considered deep foundations if the embedment depth to diameter ratio is greater than five (5). For design of sonotube as shallow foundations bearing on medium dense natural soils, we recommend that an allowable soil bearing pressure of 2,000 pounds per square foot (psf) be utilized to size the sonotube foundations.

The lateral capacity of a foundation is derived from the passive earth pressure at the foundation side and friction at the foundation base. For footings supported on natural soils consisting of SILTY SAND or CLAYEY SAND, the following parameters may be used to estimate the lateral capacities of sonotube foundations at this site:

• Soil Unit Weight	115 pcf
• Coefficient of Sliding Friction	0.34
• Passive Earth Pressure Coefficient (K_p)	2.37

A minimum safety factor of 1.5 is recommended in evaluating the lateral capacity of the shallow foundations. The uplift capacity of a shallow foundation is derived from its self-weight and the weight of the soil column directly above the footprint of the foundation. A minimum safety factor of 1.67 is recommended in evaluating the uplift capacity.

4.1.2 BOULDER RETAINING WALLS

Boulder retaining walls, also known as rockeries, are planned at various locations in the portion of the site north of 11th Street South and near the northern entrance to the park in the portion south of 11th Street South. Boulder retaining walls have relatively low tolerance for settlement due to the rocks not being structurally tied together. Unsuitable existing fill materials were throughout the site. In the portion of the site north of 11th Street South, existing fill was encountered at depths ranging from 2 to 6 feet. In the portion of the site south of 11th Street South, existing fill soils were encountered at deeper depths, extending to depths between 6 and 14.2 feet.

In the portion of the site north of 11th Street South, boulder retaining walls on firm natural soils or new controlled fills placed and compacted in accordance with Section 5.2 of this report may be designed for an allowable bearing capacity of 2,000 psf. The existing fill soils are not suitable for support of the boulder retaining walls. Where existing fill is encountered at the foundation subgrade, the footings should be lowered to undisturbed, natural residual soils. Alternatively, the existing fill materials may be undercut and replaced with compacted engineered fill.

In the portion of the site south of 11th Street South, the existing fill extended to depths which may make removal of the existing fill infeasible. DMY recommends that the boulder retaining wall on the southern portion of the site be supported by helical piles with pile cap. The helical piles should extend to natural soil.

4.1.3 STREETLIGHTS

For design of streetlight foundations on firm natural soils, we recommend that an allowable soil bearing pressure of 1,500 pounds per square foot (psf) be utilized to size the streetlight foundations. The lateral capacity of a foundation is derived from the passive earth pressure at the foundation side and friction at the foundation base. For footings supported on natural soils consisting of SILTY SAND or CLAYEY SAND, the following parameters may be used to estimate the lateral capacities of streetlight foundations at this site:

• Soil Unit Weight	115 pcf
• Coefficient of Sliding Friction	0.34
• Passive Earth Pressure Coefficient (K_p)	2.37

A minimum safety factor of 1.5 is recommended in evaluating the lateral capacity of the shallow foundations. The uplift capacity of a foundation is derived from its self-weight and the weight of the soil column directly above the footprint of the foundation. A minimum safety factor of 1.67 is recommended in evaluating the uplift capacity.

4.1.4 EXISTING FILL

Existing fill soils were encountered throughout the project site at depths ranging from 2.0 to 14.2 feet. The existing fill soils are not suitable for foundation support. Where encountered above the bottom of footing for shallow foundations or the bottom of the boulder retaining walls, the existing fill should be removed and replaced with properly placed and compacted controlled fill in conformance with Section 5.2 Controlled Fills. Alternatively, the foundation may be lowered to the undisturbed, natural soil. Helical pier foundations should extend beneath the existing fill soils and should terminate in medium dense Coastal Plain Deposits.

Unsuitable existing fill extended to the following depths in the vicinity of the proposed structures:

- 4.0 to 6.0 feet within the borings in the vicinity of the proposed boardwalk;
- 4.0 to 6.0 feet within the borings in the vicinity of South Eads Street where streetlights are planned;
- 2.0 to 6.0 feet north of 11th Street South in the vicinity of the proposed boulder retaining walls;
- 2.0 to 6.0 feet north of 11th Street South in the vicinity of the proposed boulder retaining walls;
- 6.0 to 14.2 feet south of 11th Street South in the vicinity of the proposed boulder retaining walls.

4.1.5 GENERAL FOUNDATION RECOMMENDATIONS

During construction, the bearing capacity at the final footing excavation should be documented in the field by an authorized representative of the Geotechnical Engineer of Record to check that the in situ bearing capacity at the bottom of each footing excavation is adequate for the design loads. Where existing fill is encountered at the foundation subgrade, the footings should be lowered to undisturbed, natural Coastal Plain soils. Alternatively, the existing fill materials may be undercut and replaced with compacted engineered fill.

In order to prevent disproportionately small footing sizes, we recommend that sonotubes, streetlights, and shallow foundations have a minimum lateral dimension of 24 inches. The minimum dimensions recommended above help reduce the possibility of foundation bearing failure and excessive settlement due to local shear or "punching" action. All footings should be placed at a minimum depth of 30 inches below finished grade to provide adequate frost cover protection acceptable for this region. New footings should be a minimum distance of 10 feet from any existing footings. The base of footing should not be within the 1 ½ to 1 (Horizontal to Vertical) projected influence zone above any utility line.
During construction, the bearing capacity at the final footing excavation should be documented in the field by an authorized representative of the Geotechnical Engineer of Record to check that the in situ

bearing capacity at the bottom of the foundation (including the bottom of the boulder retaining wall excavation) is adequate for the design loads.

Settlement of a structure is a function of the compressibility of the natural soils, the design bearing pressure, structural loads, and the footing embedment depths. For the anticipated loads and bearing conditions, total settlement of less than one inch and differential settlement of less than ½ inches over a 30-foot span are expected.

4.2. PAVEMENT DESIGN

No traffic data was available at the time of this report. We have assumed a design AADT of 400 or less. The lab testing results show CBR of 10.6 and we used a California Bearing Ratio (CBR) value of 7 (2/3 of the tested CBR value) for the design of the pavement within the park. This design CBR value assumes that the pavement subgrade will consist of onsite soils and will be prepared in accordance with the Site and Subgrade Preparation and Compacted Fills sections of this report.

For concrete pavements, assuming only light vehicle traffic (automobiles) and periodic bucket trucks are permitted to travel, DMY recommends the minimum pavement section presented in Table 4-1 below. The pavement design was performed in accordance with the *Guidelines for 1993 AASHTO Pavement Design*, which was published by VDOT and revised in July 2011. DMY understands that the actual concrete thickness will be 8 inches as shown on the plans titled *New Park at S. Eads St and Army Navy Drive, Construction Details, L312*. Our concrete pavement recommendations assume that the concrete will be non-doweled and jointed plain concrete.

Table 4-1: Light Duty Concrete Pavement Section

Minimum Slab Thickness (in)	Minimum Aggregate Thickness (in)	Maximum Transverse Joint Spacing (ft)	Minimum 28-day Concrete Flexural Strength (psi)	Minimum CBR
5	6	8	650	7

Permeable paver construction should be in conformance with the Arlington County Construction Standards and Specifications Manual, Section 02780 (2020).

It should be noted that the light-duty pavement is designed for supporting light vehicular traffic (automobiles) and periodic bucket trucks only. Any appreciable amount of truck traffic, either during construction or during service life, will likely cause excessive distress in the pavement. This could eventually result in the premature failure of the pavement structure.

4.3. HIGHLY PLASTIC SOILS

Highly plastic soils were not encountered in the borings. However, highly plastic soils are common in this geology and can exhibit significant shrinkage and/or swelling due to changes in moisture content and should not be used as structural fill if encountered during construction.

If highly plastic soils are encountered at or below the foundation bearing level or bottom of helical pier cap, the highly plastic soil should be undercut a depth of 4 feet below the proposed finished grade at footing or pile cap locations. The foundation may either step down to meet this requirement, or the highly plastic soils can be undercut and replaced with properly compacted engineered fill to the original bearing elevation. Undercutting backfilling with gravel or free draining material is not recommended as this would create a reservoir condition which could saturate the plastic soils.

If highly plastic soils are encountered within 2 feet below the pavement elevation, they should be undercut to a depth of two feet, or the thickness of the high plasticity soils, whichever is less. The undercut area should then be backfilled using engineered fill placed in accordance with the recommendations contained within Section 5.2 *Controlled Fills* of this report.

4.4. BOULDER RETAINING WALL

4.4.1. DESIGN PARAMETERS

The boulder retaining walls should be designed to withstand lateral earth pressures and surcharge loads. The boulder retaining walls will be supporting new fill. We recommend that the following parameters be used for the retaining wall design:

- Friction Angle for Soil Backfill 28°
- Unit Weight of Soil Backfill 120 pcf
- Coefficient of Sliding Friction 0.35*
- Equivalent Active Fluid Pressure 45 pcf
- Equivalent Passive Fluid Pressure 330 pcf*
- Equivalent At-rest Fluid Pressure 60 pcf
- * In the design calculations, the resisting forces computed using the above recommended passive earth pressure coefficient, equivalent passive fluid pressure, and coefficient of sliding friction should be reduced using a safety factor of 1.5.

The above recommended soil parameters assume that the wall backfill consist of properly compacted onsite SILTY SAND (SM) or more granular soils. The recommended equivalent fluid pressures assume that constantly functioning drainage systems are installed between the walls and the soil backfill to prevent any accidental buildup of hydrostatic pressures. The wall design should also account for any surcharge loads.

Active earth pressure conditions apply to relatively flexible earth retention structures, such as freestanding walls, where some movement and rotation may occur to mobilize soil shear strength. This will likely be the case for the proposed site retaining walls.
All wall backfill should consist of SILTY SAND (SM) or more granular material and should be placed in accordance with the Compacted Fills section of this report. Heavy earthwork equipment should maintain

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

GEOTECHNICAL REQUIREMENTS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET C9.020	

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
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Arlington, VA 22201
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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

GEOTECHNICAL REQUIREMENTS

Approval Date

Design Supervisor

Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: ME
Drawn: ME
Checked: JA

Filename:
Plotted:

Scale: AS SHOWN
Date: July 21, 2023

Seal

Sheet

C9.020

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South Eads Park
DMY Project No. 01.05718.01
May 2, 2022

a minimum horizontal distance away from the walls of one foot per foot of vertical wall height. Lighter compaction equipment should be used close to the walls.

4.4.2. DRAINAGE

Proper drainage measures should be provided to minimize any hydrostatic pressure build-up (from ground water and/or seeping rain water) behind the walls. Adequate drainage can be accomplished if a blanket of select granular backfill, such as VDOT No. 57 aggregate, is used behind the walls. To prevent migration of fines into the select granular backfill, a layer of filter fabric should be installed around the select granular backfill where it comes in contact with the general wall backfills. The filter fabric should have an apparent open size (AOS) of no greater than 0.21 mm (#70 sieve). Geocomposite drainage panel may be used in lieu of the select granular backfill adjacent to the walls. Examples of the geocomposite drainage materials include Enkadrain®, MiraDRAIN®, and Geotec drains. The select granular backfill or geocomposite drainage panel should be extended from the bottom to approximately two feet below the final grade behind the walls. The remaining two feet should consist of a clayey material to reduce the amount of surface water infiltration into the drainage system. The ground surface adjacent to the below grade walls should be kept properly graded to prevent ponding of water adjacent to the walls.

We recommend that a perforated collector pipe be installed at the base of the walls to gravity drain any water from the drainage blanket behind the wall to daylight. The collector pipe should be surrounded by a minimum of six inches of drainage gravel wrapped in filter fabric. Alternatively, weep holes may be provided for the retaining walls every eight feet with outlet at a height of six inches above the ground surface in front of the wall.

5.0 CONSTRUCTION RECOMMENDATIONS

5.1. SITE PREPARATION

The construction should be conducted in accordance with Arlington County Construction Standards and Specifications Manual. Site preparation should consist of removing existing underground utilities, topsoil, and any other soft or unsuitable material from the proposed construction. The resulting excavations should be brought back to proposed elevations using structural fill placed as detailed herein. Utilities such as pipes (no longer in use) should be removed entirely or abandoned by filling the pipe with grout to prevent future migration of soils into the pipe.

Following the site preparation and any required excavation, the newly exposed subgrade should be evaluated by an authorized representative of the Geotechnical Engineer of Record. During this evaluation, we recommend that all subgrade areas, with the exception of the permeable paver subgrade, be proof-rolled using a fully loaded tandem axle dump truck (20-ton minimum) or similar rubber-tired vehicle. The proofrolling should be performed in such a pattern that the entire subgrade areas are loaded with at least one pass. Areas that are not accessible to proofrolling may be evaluated using other suitable methods such as a steel probe rod.

Construction of the permeable pavers should follow the Arlington County Construction Standards and Specifications manual. The permeable paver subgrade should not be proofrolled due to the potential of

South Eads Park
DMY Project No. 01.05718.01
May 2, 2022

proofrolling to densify the subgrade soils and impede infiltration. Therefore, the authorized representative of the Geotechnical Engineer of Record should perform at least one (1) DCP for every 100 square feet of permeable paver subgrade area to evaluate the subgrade strength. The Geotechnical Engineer of Record should be contacted if DCP values of less than 5 blows per 1.75-inch increment are measured. In accordance with the Arlington County Construction Standards and Specifications manual, the final 6 inches of final subgrade elevation for permeable pavers should be graded with low pressure equipment.

In locations where structures or rigid pavement are located any soft, loose, or unsuitable soils should be removed and replaced with suitable materials. Soil bridging lifts should not be used to span over soft subgrade soils within the footprint of structures. The Geotechnical Engineer of Record should be informed of any soft or unstable subgrade soils within the permeable paver area so that the area may be evaluated.

5.2. CONTROLLED FILLS

All fill material supporting buildings, pavements, slabs, or other structures should consist of engineered fill. Based on the subsurface conditions observed in our exploration, the onsite granular soils (i.e., GC, GM, SC, SM) and the existing granular fill soils (i.e., GM, GP, SM, SP, and SC) can be re-used as engineered fill. All controlled fills should have a Liquid Limit less than 40 and a Plasticity Index less than 15. Before field operations begin, a representative sample of each proposed engineered fill should be collected and tested to determine its Atterberg Limits, gradation, maximum dry density, optimum moisture content, and natural moisture content. The test results will be used to evaluate the suitability of each proposed controlled fill for quality control purposes during fill placement. All fill placed within the retained zone of the boulder retaining walls should consist of SM or more granular material.

Controlled fill materials should be placed in lifts not exceeding eight inches in loose thickness and moisture conditioned to within two percentage points of the optimum moisture content. The engineered fill should be compacted to a minimum of 95% of the maximum dry density obtained in accordance with VTM-1 or ASTM Specification D-698, Standard Proctor Method. With the exception of the permeable pavers, the top one foot of soil supporting pavements, sidewalks, or gutters should be compacted to a minimum of 100% of the maximum dry density in accordance with VTM-1 or ASTM Specification ASTM D-698, Standard Proctor Method.

Compaction of the permeable paver subgrade may impede infiltration. The compaction recommendations for permeable paver subgrades of Section 02780 of the Arlington County Construction Standards and Specifications manual should be followed.

All fill operations should be observed on a full-time basis by an authorized representative of the Geotechnical Engineer of Record to determine that compaction requirements are being met. All fill shall be periodically tested to confirm that compaction is being achieved. A sufficient number of tests shall be taken in each lift before the next lift is placed, on the order of at least three tests per lift. The elevation and location of the tests should be clearly identified and recorded at the time of fill placement.

5.3. EXCAVATION

South Eads Park
DMY Project No. 01.05718.01
May 2, 2022

All excavations should be sloped or stepped back in accordance with Occupational Safety and Health Administration (OSHA) regulations for excavations. Exposure to the environment may weaken the soils at the footing bearing level if the excavations remain open for too long a time. Therefore, concrete should be placed the same day that excavations are made. If the bearing soils are softened by surface water intrusion or exposure, the softened soils must be removed from the foundation excavation bottom immediately prior to placement of concrete. If the excavation must remain open overnight, or if rainfall becomes imminent while the bearing soils are exposed, we recommend that a 3-inch thick "mud mat" of "lean" concrete be placed on the bearing soils before the placement of reinforcing steel.

The Geotechnical Engineer of Record should document the type and competency of the soils exposed with those documented in the nearby SPT borings. Any significant difference should be brought to the attention of the owner along with recommendations by the Geotechnical Engineer of Record.

5.4. CONSTRUCTION WATER CONTROL

It is not anticipated that the permanent groundwater table at the site will be encountered above the design subgrade levels for the proposed structures. However, excavations performed at this site may encounter perched groundwater conditions in some isolated areas or surface water flowing from the higher elevations of the site. We anticipate that some localized areas within the excavations may not be completely dry and may require the use of trenches and sump pits to facilitate the placement of foundations. Although a totally dry subgrade should not be anticipated, the surface of the subgrade should be sufficiently dewatered to provide an adequate surface on which to construct the footings and grade slabs.

The surface of the site should be properly graded to keep drainage of the surface water away from the proposed construction areas. The actual extent of the dewatering system will need to be determined at the time the excavation is performed.

5.5. MONITORING

We recommend that the owner commission the performance of a pre-construction survey on the adjacent structures. It has been our experience that such pre-construction surveys can usually help prevent frivolous claims as a result of pre-existing damages that were not apparent to nearby property owners until they began to observe their building following the construction of adjoining properties. We recommend that the owners or property managers be invited to accompany the engineering crews on the survey of the building, and to receive a copy of the survey. If there is any damage to the nearby buildings, this survey can be beneficial in helping develop an equitable resolution.

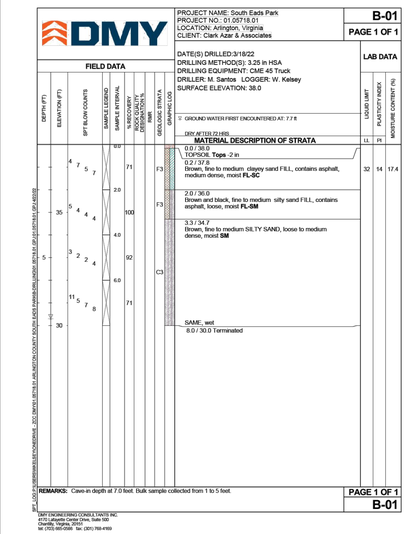
6.0 LIMITATIONS

The recommendations provided are based in part on project information provided to us and are only applied to the specific project and site discussed in this report. If the project information section in this report contains incorrect information or if additional information is available, DMY should be contacted to review our recommendations. We can then modify our recommendations for the proposed project.

South Eads Park
DMY Project No. 01.05718.01
May 2, 2022

Regardless of the thoroughness of a subsurface investigation, there is always a possibility that subsurface conditions may vary from those documented during a subsurface exploration at specific locations. In addition, the construction process itself may alter subsurface conditions. Therefore, experienced geotechnical personnel should be engaged to observe and document the construction procedures used and the conditions encountered. Unanticipated conditions and inadequate procedures should be reported to the design team along with timely recommendations. We recommend that DMY be retained to provide this service based upon our familiarity with the project, the subsurface conditions, and the intent of the recommendations.

We have prepared this report for use by the design professionals for design purposes in accordance with generally accepted geotechnical engineering practices. No other warranty, expressed or implied, is made as to the professional advice included in this report.



NOTES:
1. PERMEABLE PAVEMENT #1 IS IN THE PROXIMITY OF BORING B-01, PERMEABLE PAVEMENT #2 IS IN THE PROXIMITY OF BORING B-08, PERMEABLE PAVEMENT #3 IS IN THE PROXIMITY OF BORING B-13, MICRO-BIORETENTION #1 IS IN THE PROXIMITY OF BORING B-10.
2. SEASONAL HIGH WATER TABLE (SHWT) WAS OBSERVED AT ELEVATIONS OF 7.7' (B-01) AND 13.0' (B-13) BELOW EXISTING GRADE. DEPTH TO BOTTOM OF PROPOSED STORMWATER MANAGEMENT FACILITIES EXCEEDS 2' MIN. REQUIREMENT.

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

GEOTECHNICAL REQUIREMENTS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET C9.030 |

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

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Approval Date

Design Supervisor

Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: ME
Drawn: ME
Checked: JA

Filename:
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Date: July 21, 2023

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COMMONWEALTH OF VIRGINIA
JASON AZAR
Lic. No. 051113
PROFESSIONAL ENGINEER

Sheet

C9.030

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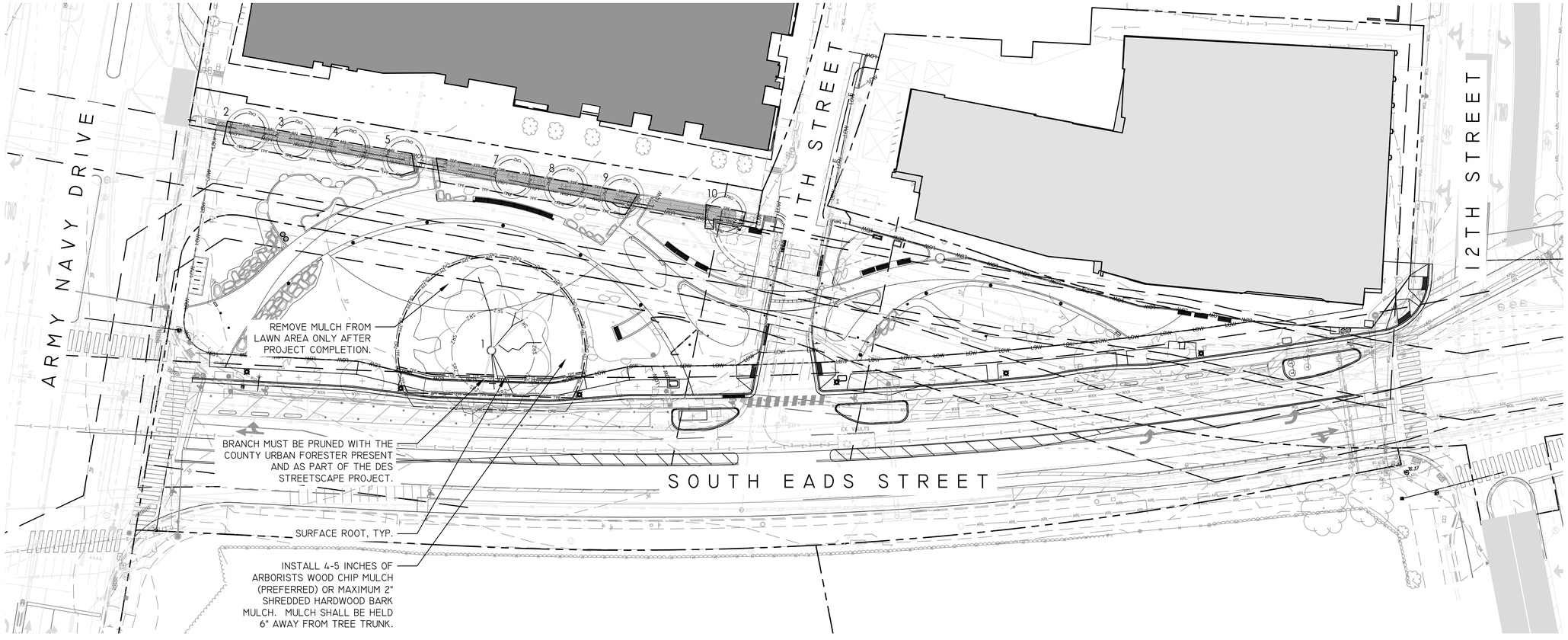
TREE PROTECTION LEGEND

- LOW — LOW — LIMIT OF WORK
- CRZ — CRITICAL ROOT ZONE
- TPF — TREE PROTECTION FENCING
- RP — RP — ROOT PRUNING

NOTE:
1. WITHIN LOW TREE PROTECTION FENCING REPRESENTS AREAS WHERE WORK MUST BE CONDICTED UNDER SUPERVISION OF CONTRACTOR'S ARBORIST.
2. NO TRENCHING TO OCCUR WITHIN TREE PROTECTION AREA INCLUDING TRENCHING FOR IRRIGATION AND SITE LIGHTING.
3. ALL PRUNING TO BE PERSONALLY DIRECTED BY COUNTY URBAN FORESTER.



NOTE:
TREE PROTECTION FENCE TO STAY UP FOR THE DURATION OF THE PROJECT. URBAN FORESTER TO GIVE APPROVAL FOR REMOVAL, AND TO BE NOTIFIED 72 HOURS IN ADVANCE OF ANY PROPOSED OF WORK WITHIN THE FENCE OR CRZ. DO NOT GRADE, SPREAD SOIL, OR DO SOIL PREPARATION WITHIN THE CRZ. DO NOT OPERATE EQUIPMENT AT ANY TIME WITHIN THE TREE CRZ WITHOUT PREAPPROVAL FROM THE URBAN FORESTER, IN WHICH CASE, UF MAY REQUIRE SOIL PROTECTION. SEE PLANTING SPECIFICATIONS. ACCESS TO THE AREA TO CONSTRUCT THE BOARDWALK IS ALLOWED WITH HAND EQUIPMENT ONLY AT THE DIRECTION OF THE INSPECTOR.

0 12.5 25' 75' 30'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

TREE PROTECTION PLAN
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET TP101

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

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TREE PROTECTION PLAN

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REVISED BUILDING PERMIT	04/20/2023
CEP #4	7/20/2023

Designed:
Drawn: JC, SM
Checked: SM, CF

Filename:
Plotted:

Scale: AS SHOWN
Date: 04/20/2023

Seal

COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet TP101

TREE INVENTORY TABLE

ARLINGTON JUNCTION PARK - TREE INVENTORY											TREE PRESERVATION SPECIFICATIONS																							
ID	Botanic Name	Common Name	DBH (in.)	Critical Root Zone (in ft. radius per Arl. County 311300.3)	D-100 Condition Rating	Condition Rating	Species Rating	Species Impact Toler. (ANSI A300) P=Poor M=Moderate G=Good	Remarks	% CRZ Impact	Removal	Removal by Arborist	Grind Stump	Cut Vines @ Ground	Work in CRZ Oversight by Arborist	Root Prune - Supersonic Air Spade (RP^{SAS})	Root Prune - Mechanical (RP^{M})	Existing Root Deflection	Tree Protection Fence (TPF) 6CL-6 Ft. Chainlink	Trenchless Silt Fence in CRZ	Mulching in CRZ (MC)	Supplemental Watering (SW) c=during construction a#=aftercare for # years	Root Aeration Matting (RAM) LD=Light Duty HD=Heavy Duty	Growth Regulator (TGR)	Prune - To Manage Health (P^{MH})	Prune - To Provide Clearance (P^{PC})	Soil Management (SM)	Post-Construction Health Assessment (# of Years)					
SAMPLE	*Quercus phellos*	Willow Oak	12.7	12.7	90	Excellent	90	M-G																										
1	*Populus deltoides*	Eastern Cottonwood	43.4	65.1	77	Good	60	M-G	Ext. surface roots to dripline, all sides exc. north. V. lg. roots w/ hvy. damage. Dripline somewhat asymmetrical further out to south and east. Some lg. wounds from old breaks. Sounded w/ mallet, no decay detected. Little dead wood, has been maintained, two +/- 4" branches tbr. Clearance above ground: SE +/-5" dia. at 7' ht. SE +/-9" dia. at 5' ht. WNW +/-20" dia. at 6.5' ht. Shows good vigor, sprouting on pruned open areas on 20° WNW branch. V. gd. foliage density overall. Foliar shot hole damage, prob. insect caused. Canopy structure: main trunk to 18' ht., then main ldr. narrows to +/-25" and leans north. Lg. branch +/-21" to east slightly subordinate to main. Roots: 68. Trunk: 85. Canopy: 75. Foliage/Vigor: 80.	±11%																								
2	*Quercus phellos*	Willow Oak	5.0	8.0	70	Good	50	M	Condition, size, and species by Rice & Associates 2018, Q phellos is not County property	0%																							
3	*Quercus phellos*	Willow Oak	5.0	8.0	70	Good	50	M	Condition, size, and species by Rice & Associates 2018, Q phellos is not County property	0%																							
4	*Quercus phellos*	Willow Oak	5.0	8.0	70	Good	50	M	Condition, size, and species by Rice & Associates 2018, Q phellos is not County property	0%																							
5	*Quercus phellos*	Willow Oak	5.0	8.0	70	Good	50	M	Condition, size, and species by Rice & Associates 2018, Q phellos is not County property	10%																							
6	*NOT USED*																																	
7	*Quercus phellos*	Willow Oak	5.0	8.0	70	Good	50	M	Condition, size, and species by Rice & Associates 2018, Q phellos is not County property	0%																							
8	*Quercus phellos*	Willow Oak	5.0	8.0	70	Good	50	M	Condition, size, and species by Rice & Associates 2018, Q phellos is not County property	0%																							
9	*Quercus phellos*	Willow Oak	5.0	8.0	70	Good	50	M	Condition, size, and species by Rice & Associates 2018, Q phellos is not County property	28%																							
10	*Quercus phellos*	Willow Oak	5.0	8.0	70	Good	50	M	Condition, size, and species by Rice & Associates 2018, Q phellos is not County property	20%																							

REMARKS LEGEND
a. Low vigor
b. Dieback in canopy
c. Canopy unbalanced
d. Surface roots
e. Watersprouts
f. Measured below trunk branching
g. Low live-crown ratio (LCR)
h. Trunk leaning
i. Vines on trunk
j. Codominant leaders
k. Girdling roots
l.Discoloration on trunk
m. Voids in the base / large branches
n. Wood decay fruiting found
p. Multistem
q. Excellent specimen

NOTES

1. CTLA Guide for Plant Appraisal (latest edition) methodology used to determine condition assessment. All observations taken at ground level.
2. Information about trees on adjacent private property, if indicated, was estimated from the subject parcel or public right-of-way.
3. A Tree Risk Assessment was not conducted unless specifically noted otherwise.
4. Information shown is based solely on conditions at the times of inventory, Month, date 2021
5. Inventory performed by Dave Norden except for portions indicated otherwise.

CTLA PLANT CONDITION CATEGORIES	
Excellent	81-100%
Good	61-80%
Fair	41-60%
Poor	21-40%
Very Poor	6-20%
Dead	0-5%

NOTES:

1. SURVEY COMPLETED BY RICE ASSOCIATES UNDER RESPONSIBLE CHARGE OF DARRYL E. FORSYTHE BETWEEN THE DATES OF OCTOBER 15, 2018 AND DECEMBER 5, 2018.
2. SURVEYOR PROVIDED LOCATION OF ALL TREES ON PROPERTY AND ADJACENT TO PROPERTY.
3. AN INVENTORY OF TREES AFFECTED BY CONSTRUCTION WAS PERFORMED BY DAVE NORDEN, ISA CERTIFIED ARBORIST MA-5513A, ON NOVEMBER 12, 2019.
4. CTLA GUIDE FOR PLANT APPRAISAL (LATEST EDITION) METHODOLOGY USED TO DETERMINE CONDITION ASSESSMENT. ALL OBSERVATIONS TAKEN AT GROUND LEVEL.
5. A RISK ASSESSMENT WAS NOT CONDUCTED UNLESS SPECIFICALLY NOTED OTHERWISE.
6. INFORMATION ABOUT TREES ON ADJACENT PRIVATE PROPERTY WAS ESTIMATED FROM SUBJECT PARCEL OR PUBLIC RIGHT-OF-WAY.
7. INFORMATION SHOWN IS BASED SOLELY ON CONDITIONS AT THE TIME OF INVENTORY, AND ARE SUBJECT TO CHANGE AT ANY TIME.
8. INSPECTION BY COUNTY URBAN FORESTER IS REQUIRED BEFORE ANY LAND DISTURBANCE ACTIVITY.

TREE REPLACEMENT TABLE

SOUTH EADS STREET

TREE INVENTORY AND REPLACEMENT SCHEDULE

Tree #	To Be Removed	DBH	Condition	Species	Common name	Species Rating	Replacement Score	Replacement Value	Required Replacements
01		60	75	*Populus deltoides*	Eastern Cottonwood	60	27	6	0
02		5	70	*Quercus phellos*	Willow Oak	50	1.75	1	0
03		5	70	*Quercus phellos*	Willow Oak	50	1.75	1	0
04		5	70	*Quercus phellos*	Willow Oak	50	1.75	1	0
05		5	70	*Quercus phellos*	Willow Oak	50	1.75	1	0
06		NOT USED							
07		5	70	*Quercus phellos*	Willow Oak	50	1.75	1	0
08		5	70	*Quercus phellos*	Willow Oak	50	1.75	1	0
09		5	70	*Quercus phellos*	Willow Oak	50	1.75	1	0
10		5	70	*Quercus phellos*	Willow Oak	50	1.75	1	0
								Total:	0

NOTE:

1. NO TREES PROPOSED FOR REMOVAL FOR THIS PROJECT

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

TREE INVENTORY TABLES
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET TP102

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

TREE INVENTORY TABLES

Approval Date

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Revisions	Date
CEP#1	7/15/2021
CEP#2	12/21/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP #4	7/20/2023

Designed:
Drawn: JC, SM
Checked: SM, CF

Filename:
Plotted:

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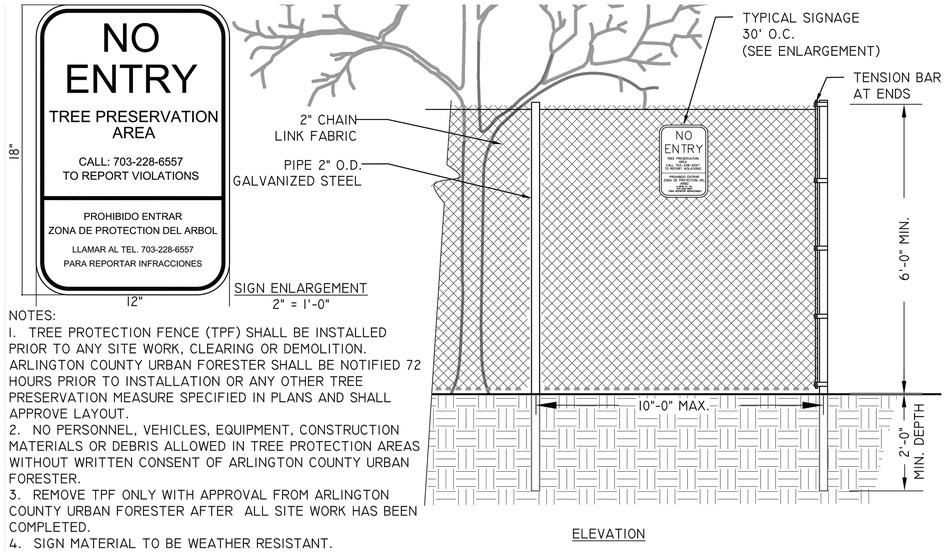
Date: 04/20/2023

Seal

COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

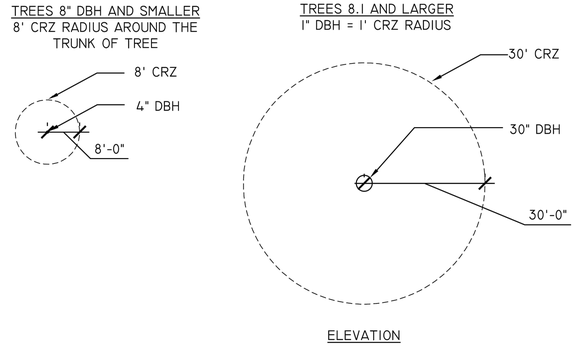
Sheet TP102



NOTES:

1. TREE PROTECTION FENCE (TPF) SHALL BE INSTALLED PRIOR TO ANY SITE WORK, CLEARING OR DEMOLITION. ARLINGTON COUNTY URBAN FORESTER SHALL BE NOTIFIED 72 HOURS PRIOR TO INSTALLATION OR ANY OTHER TREE PRESERVATION MEASURE SPECIFIED IN PLANS AND SHALL APPROVE LAYOUT.
2. NO PERSONNEL, VEHICLES, EQUIPMENT, CONSTRUCTION MATERIALS OR DEBRIS ALLOWED IN TREE PROTECTION AREAS WITHOUT WRITTEN CONSENT OF ARLINGTON COUNTY URBAN FORESTER.
3. REMOVE TPF ONLY WITH APPROVAL FROM ARLINGTON COUNTY URBAN FORESTER AFTER ALL SITE WORK HAS BEEN COMPLETED.
4. SIGN MATERIAL TO BE WEATHER RESISTANT.

1 6' CHAIN LINK TREE PROTECTION FENCE



NOTES:

1. GRAPHICALLY, THE CRITICAL ROOT ZONE (CRZ) IS REPRESENTED AS A CIRCULAR REGION MEASURED OUTWARD FROM A TREE TRUNK REPRESENTING THE AREA OF ROOTS THAT MUST BE MAINTAINED OR PROTECTED FOR THE TREE'S SURVIVAL.

2. THE CRZ OF A TREE IS THE ZONE IN WHICH THE MAJORITY OF THE ROOTS LAY. 95% OF THE ROOTS OF MOST TREES WILL BE FOUND IN THE UPPER 12-18" OF THE SOIL. MOST OF THE ROOTS THAT SUPPLY THE NUTRIENTS AND WATER TO THE TREE ARE FOUND JUST BELOW THE SOIL SURFACE. THE TOTAL AMOUNT OF A TREE'S ROOTS ARE GENERALLY PROPORTIONAL TO THE VOLUME OF THE TREE'S CANOPY. THEREFORE, IF THE ROOTS ONLY PENETRATE A THIN LAYER OF SOIL, THEN THE ROOTS MUST SPREAD FAR FROM THE TREE, BEYOND THE EXTENSION OF THE CANOPY.

3. PLOT ACCURATE TRUNK LOCATIONS OF ALL TREES GREATER THAN 3" DIAMETER AT BREAST HEIGHT (DBH) AND/OR TREE STANDS WITHIN DEVELOPMENT AREAS ON ALL PLANS FOR THE PROJECT AND DELINEATE THEIR ESTIMATED CRITICAL ROOT ZONE.

4. PLOT ACCURATE TRUNK LOCATIONS OF OFFSITE TREES WHICH WILL HAVE THEIR CRZ AFFECTED BY DEVELOPMENT AND DELINEATE THEIR ESTIMATED CRITICAL ROOT ZONE.

2 TREE PROTECTION DETAIL FOR DETERMINING CRITICAL ROOT ZONE

NTS

NOTES

1. ROOT PRUNING SHALL BE DONE WITH A TRENCHER OR VIBRATORY PLOW TO A DEPTH OF 12". ROOTS OVER 1.5" IN DIAMETER SHALL HAVE A CLEAN CUT MADE BY A CLEAN SAW ON THE SURFACE OF THE ROOT, WHICH IS STILL ATTACHED TO THE TREE. DO NOT BREAK OR CHOP. DO NOT PAINT THE CUT ROOT END. IF EXCAVATION IS FOR INSTALLATION OF UNDERGROUND UTILITIES, LEAVE THE ROOT INTACT AND THREAD THE LINES UNDERNEATH.

2. ROOT PRUNING SHALL TAKE PLACE PRIOR TO ANY CLEARING AND GRADING. EXACT LOCATION OF TREE PROTECTION AREAS SHALL BE STAKED OR FLAGGED PRIOR TO TRENCHING AND SHALL BE APPROVED BY ARLINGTON COUNTY URBAN FORESTER.

3. ROOT PRUNING SHALL BE CONDUCTED WITH THE SUPERVISION OF AN ISA CERTIFIED ARBORIST.

4. BACKFILL THE ROOT-PRUNING TRENCH WITH APPROVED LOOSE TOPSOIL MIX AND TOP WITH 3-4" BARK MULCH AND MARK LOCATION FOR FUTURE REFERENCE. SILT FENCE MAY BE INSTALLED IN TRENCH PRIOR TO BACKFILLING AS LONG AS THE TRENCH IS NOT OPEN FOR LONGER THAN 48 HOURS WITHOUT WATERING.

5. ROOT PRUNING WORK SHALL NOT BE DONE WHEN MORE THAN THE TOP 1 INCH OF SOIL IS FROZEN. ROOT PRUNING SHALL NOT BE UNDERTAKEN WHEN THE SOIL IS WET AND CONDITIONS ARE MUDDY.

6. THE ARLINGTON COUNTY URBAN FORESTER SHALL BE NOTIFIED 72 HOURS PRIOR TO TRENCHING AND WHEN ALL ROOT PRUNING AND TREE PROTECTION FENCE INSTALLATION IS COMPLETE.

3 ROOT PRUNING

NTS

NOTES:

1. CONTACT URBAN FORESTER FOR PRECONSTUCTION MEETING, 72 HOURS PRIOR TO CONSTRUCTION STARTING.

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

TREE PROTECTION DETAILS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET TP103

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION
Park Development Division
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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

TREE PROTECTION DETAILS

Approval Date

Design Supervisor

Revisions	Date
CEP#1	7/15/2021
CEP#2	12/21/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP #4	7/20/2023

Designed:
Drawn: JC, SM
Checked: SM, CF

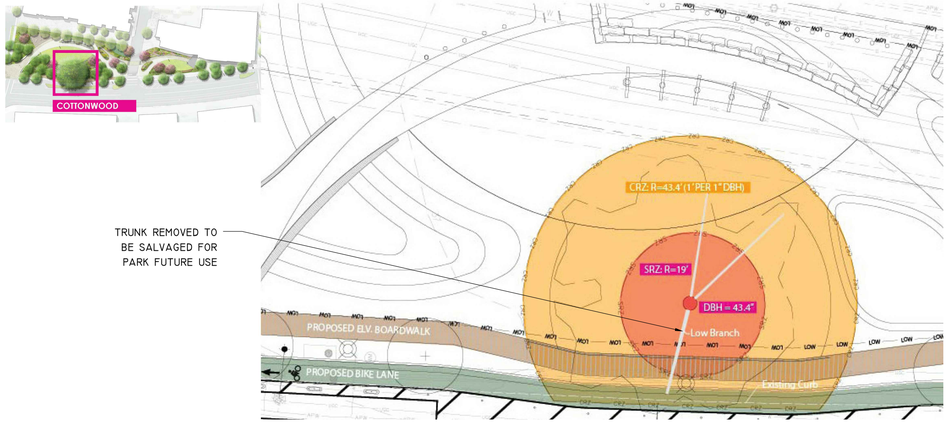
Filename:
Plotted:

Scale: AS SHOWN
Date: 04/20/2023

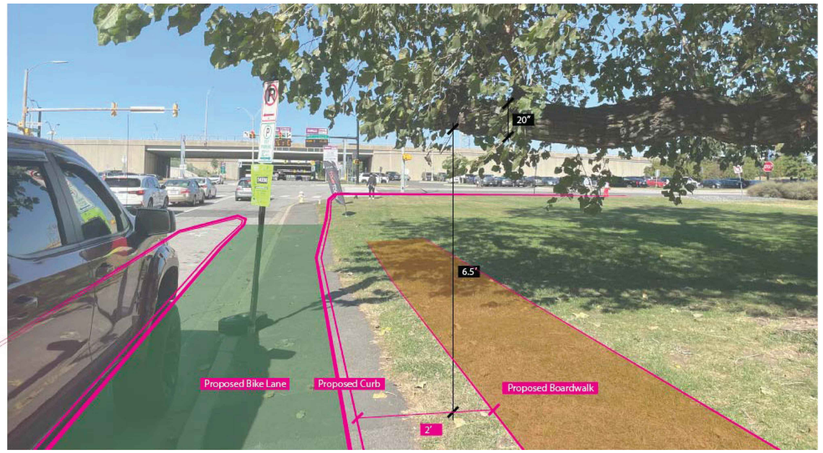
Seal

COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet TP103



TREE BRANCH LOCATION

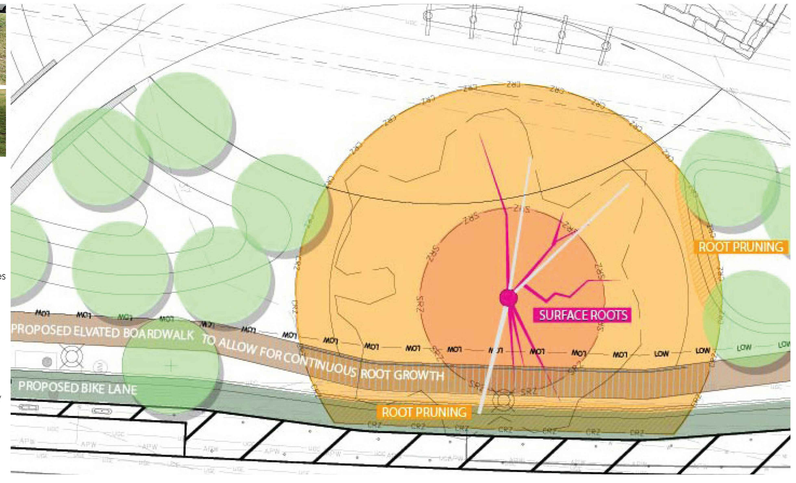


TREE BRANCH LOCATION WITH PROPOSED BOARDWALK

EXISTING CONDITIONS
- Existing estimated CRZ: 9,975 sq ft.
- Assumes 1.5' radius per 1" DBH per Arlington requirement.
- CRZ is shown clipped 2 feet beyond existing road curb.

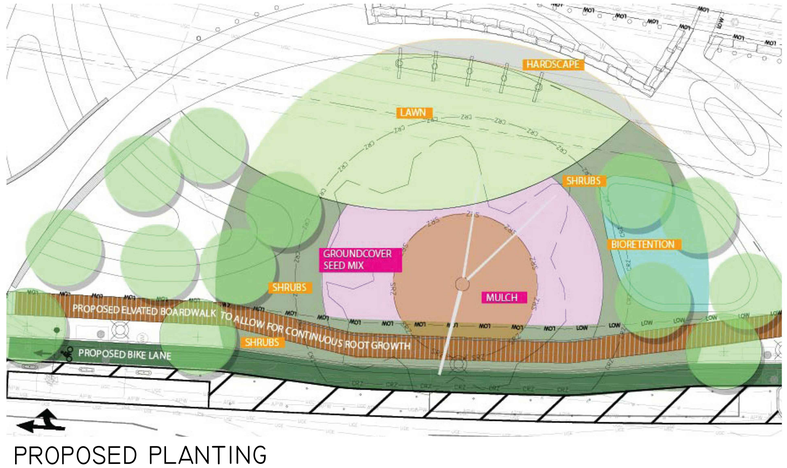
PROPOSED PARK DESIGN
Proposed root pruning and other measures = 7,600 sq ft remaining
- 24% CRZ loss.

- Assumes elevated boardwalk along Eads
- Preserves structural root zone
- Mitigation to be specified, including protection fencing (to be maintained except when work is done by or supervised by their arborist), temporary mulching, supplemental watering, growth regulator application (to be confirmed by urban forester during design phase), and 2 years post-construction monitoring and maintenance



PROPOSED MITIGATION

PROPOSED SECTION



PROPOSED PLANTING

NOTE:
1. THIS SHEET IS FOR REFERENCE ONLY AND DOES NOT RELATE TO CONTRACTOR'S WORK.
2. BRANCH TO BE PRUNED BY COUNTY CONTRACTOR USING PROJECT FUNDS. PLACE WITHIN TPF UNTIL RELOCATION IS DIRECTED BY PROJECT LANDSCAPE ARCHITECT.
3. ALL PRUNING TO BE PERSONALLY DIRECTED BY COUNTY URBAN FORESTER.

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

COTTONWOOD TREE PROTECTION STUDIES
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET TP104

ARLINGTON
VIRGINIA

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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location
ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET
ARLINGTON, VIRGINIA

Sheet Title
COTTONWOOD TREE PROTECTION STUDIES

Approval Date
Design Supervisor

Revisions	Date
CEP#1	7/15/2021
CEP#2	12/21/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP #4	7/20/2023

Designed:
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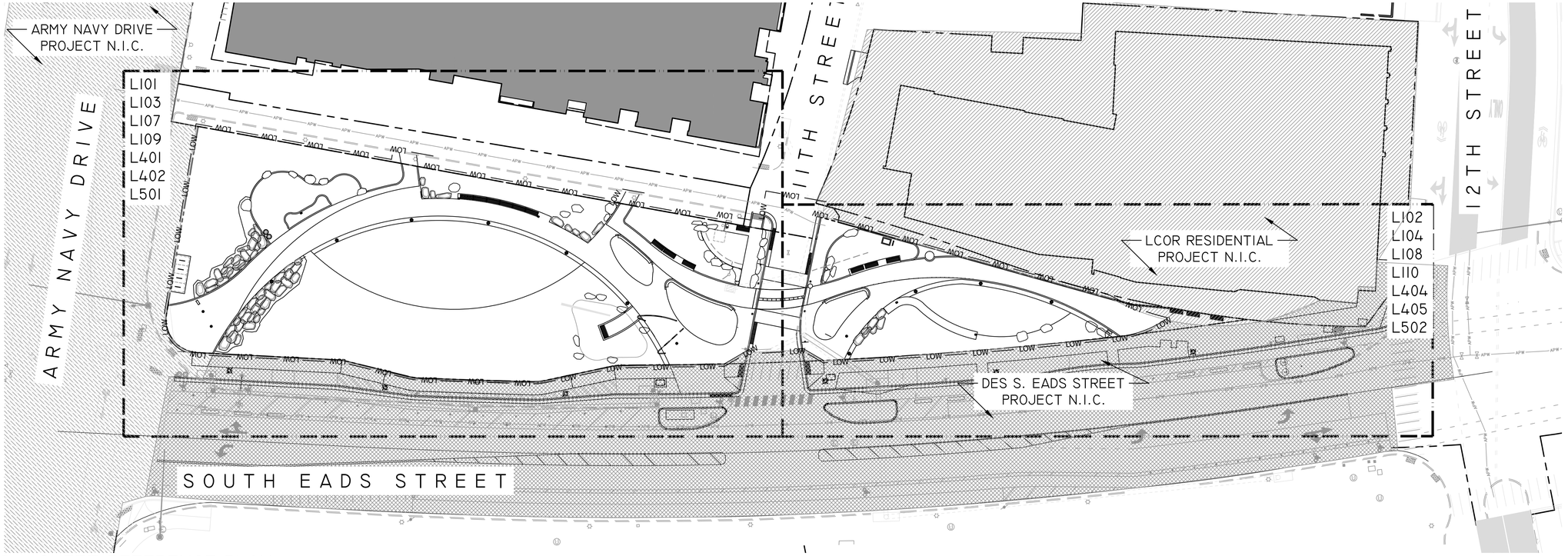
Date: 04/20/2023

Seal
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet TP104



1 SHEET REFERENCE PLAN

1" = 25' - 0"

2 PROJECT CONTEXT PLAN

1" = 25' - 0"

0 12.5 25' 50' 75'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

OVERALL REFERENCE PLAN
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L100

ARLINGTON
VIRGINIA

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AND RECREATION

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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON
JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

OVERALL
REFERENCE
PLANS

Approval Date

Design Supervisor

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COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L100

A

B

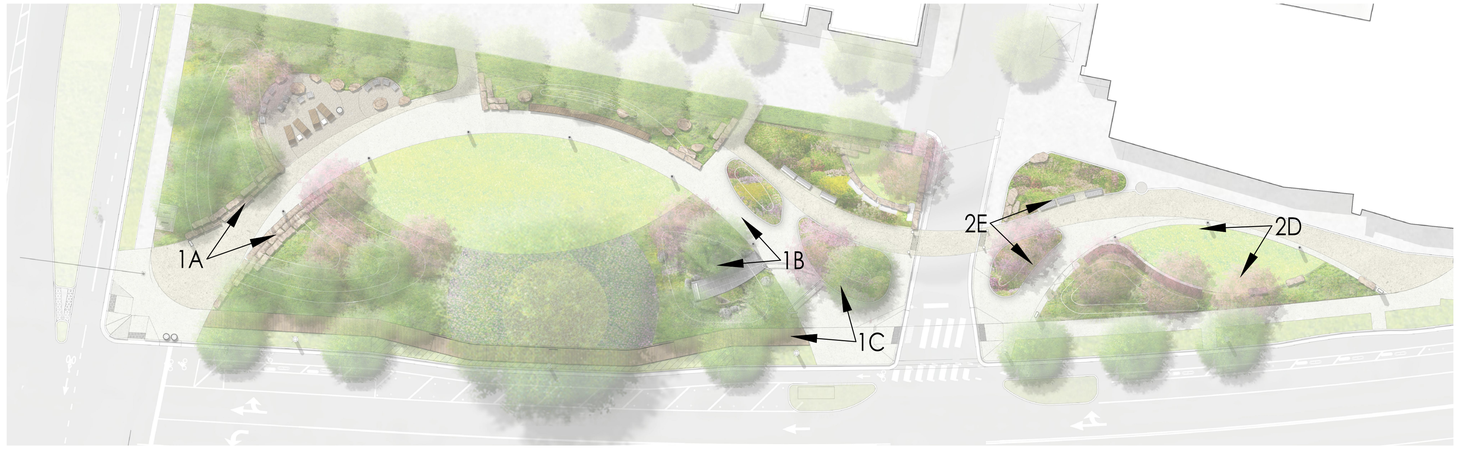
C

1 NORTH PARCEL VIEWS

D

E

2 SOUTH PARCEL VIEWS



ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

PROJECT RENDERINGS

ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN

1051 SOUTH EADS STREET

ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET L100A	

ARLINGTON
VIRGINIA

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AND RECREATION

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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON
JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

PROJECT
RENDERINGS

Approval Date

Design Supervisor

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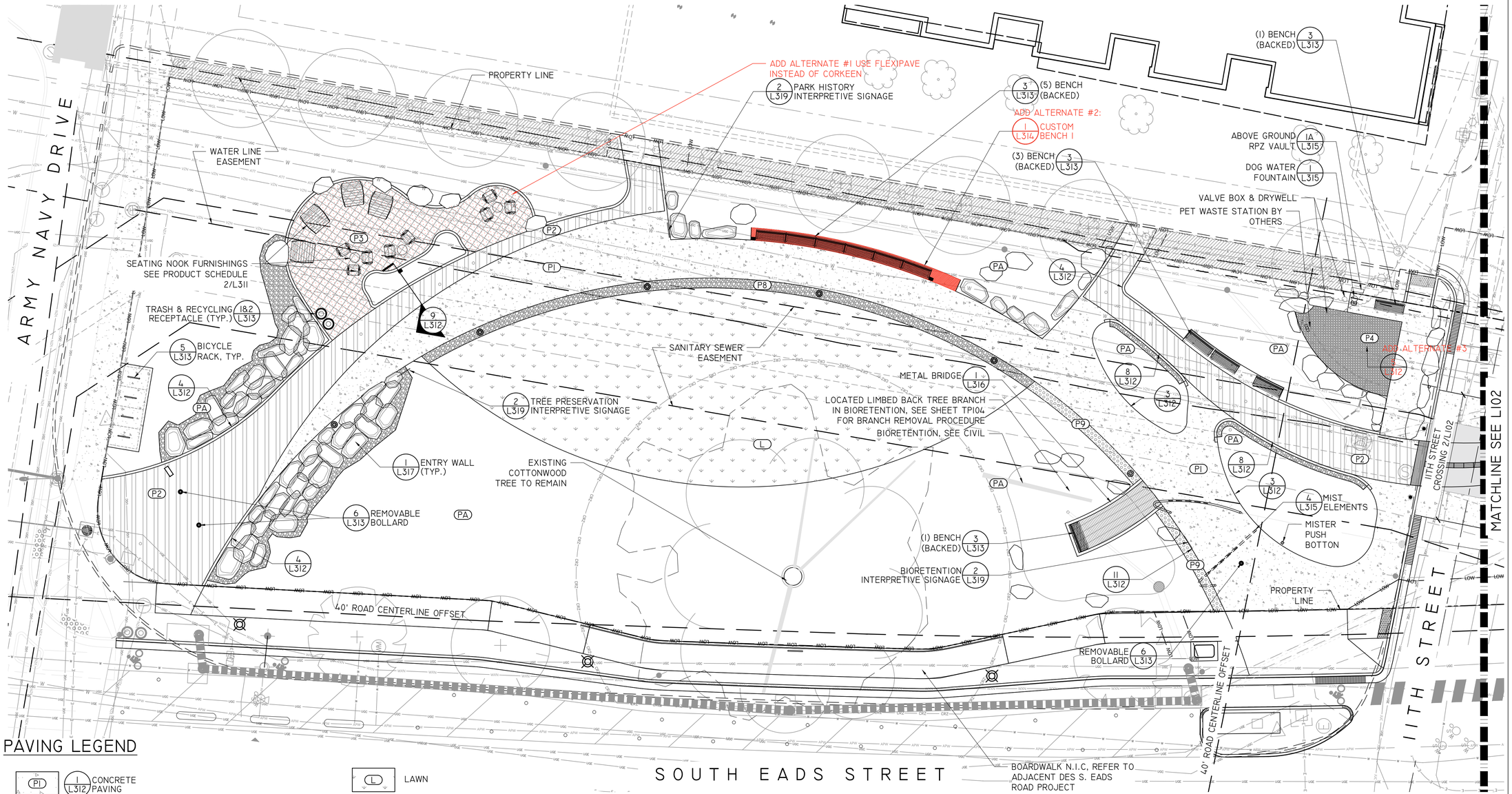
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L100A



PAVING LEGEND

- P1 — 1/L312 CONCRETE PAVING
- P2 — 4/L312 POROUS UNIT PAVING
- P3 — 3/L311 CORKEEN PAVING
- P4 — 3/L311A UNSTABILIZED AGGREGATE PAVING
- P5 — CONCRETE CROSSWALK. REFER TO CIVIL FOR PAVING CROSS SECTION AND STRIPING
- P6 — 10/L312 GRAVEL GARDEN
- P7 — 7/L312 LONGITUDINAL DIRECTIONAL PAVERS
- P8 — 1/L312 RIVER JACK COBBLE STRIP REFER TO DETAIL
- P9 — 11/L312 GRAVEL FILTER STRIP
- L — LAWN
- PA — PLANTED AREA

- 5/L317 LANDSCAPE BOULDER TYPE 2
- 3/L317 BOULDER TYPE 1 SIM.
- 3/L312 FLUSH CONCRETE TURN DOWN EDGE CONDITION
- 4/L312 FLUSH CURB ADJACENT TO POROUS PAVING
- 8/L312 RAISED CURB ADJACENT TO POROUS PAVING
- 9/L312 PLANTER CURB

LIGHTING/ELECTRICAL LEGEND

- EXISTING POLE LIGHT
- STREET LIGHTS, REFER TO STREETSCAPE PLANS
- PYLON AREA LIGHT-REFER TO STRUCTURAL FOR MOUNTING CONDITION
- BOLLARD LIGHT-REFER TO STRUCTURAL FOR MOUNTING CONDITION
- INTEGRAL STRUCTURE LEDS
- PARK POLE LIGHT-REFER TO STRUCTURAL FOR MOUNTING CONDITION
- POWER PEDESTAL

ALTERNATES LEGEND

- 6/L312 ADD ALTERNATE #1: FLEXI-PAVE POROUS PAVING
- 1-4/L314 ADD ALTERNATE #2: CUSTOM BENCHES POROUS PAVING
- 5/L312 ADD ALTERNATE #3 SYNTHETIC TURF

0 5' 10' 20' 30'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

MATERIALS PLAN
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L101

ARLINGTON
VIRGINIA

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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

MATERIALS PLAN

Approval Date

Design Supervisor

Revisions	Date
CEP#1	7/15/2021
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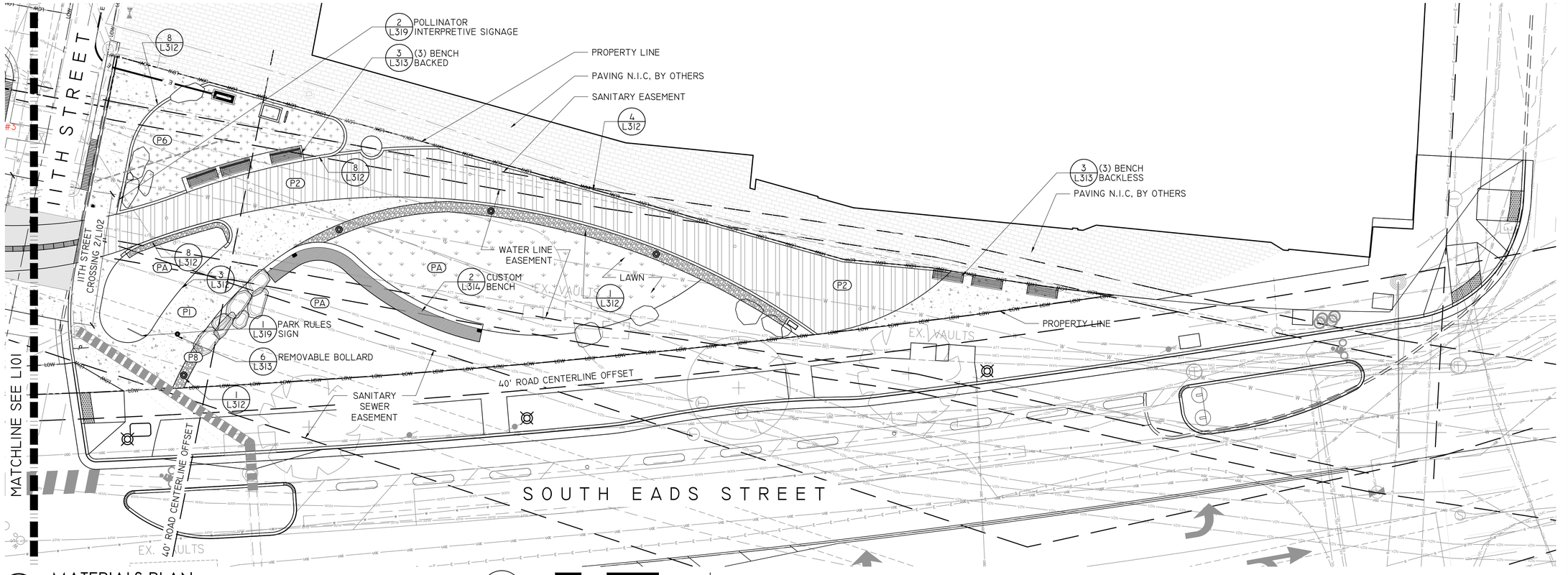
Seal

COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L101



1 MATERIALS PLAN

1"=10'-0"

0 5' 10' 20' 30'

PAVING LEGEND

P1	1 L312	CONCRETE PAVING
P2	4 L312	POROUS UNIT PAVING
P3	3 L311	CORKEEN PAVING
P4	3 L311A	UNSTABILIZED AGGREGATE PAVING
P5		CONCRETE CROSSWALK. REFER TO CIVIL FOR PAVING CROSS SECTION AND STRIPING
P6	10 L312	GRAVEL GARDEN
P7	7 L312	LONGITUDINAL DIRECTIONAL PAVERS
P8	1 L312	RIVER JACK COBBLE STRIP REFER TO DETAIL
P9	11 L312	GRAVEL FILTER STRIP
L		LAWN
PA		PLANTED AREA

5 L317		LANDSCAPE BOULDER TYPE 2
3 L317		BOULDER TYPE 1 SIM.
3 L312		FLUSH CONCRETE TURN DOWN EDGE CONDITION
4 L312		FLUSH CURB ADJACENT TO POROUS PAVING
8 L312		RAISED CURB ADJACENT TO POROUS PAVING
9 L312		PLANTER CURB

LIGHTING/ELECTRICAL LEGEND

- EXISTING POLE LIGHT
- STREET LIGHTS, REFER TO STREETSCAPE PLANS
- PYLON AREA LIGHT-REFER TO STRUCTURAL FOR MOUNTING CONDITION
- BOLLARD LIGHT-REFER TO STRUCTURAL FOR MOUNTING CONDITION
- INTEGRAL STRUCTURE LEDS
- PARK POLE LIGHT-REFER TO STRUCTURAL FOR MOUNTING CONDITION
- POWER PEDESTAL

2 11TH STREET CROSSING

1"=4'-0"

0 2' 4' 8' 12'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

MATERIALS PLAN
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L102

ARLINGTON VIRGINIA
DEPARTMENT OF PARKS AND RECREATION
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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location
ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET
ARLINGTON, VIRGINIA

Sheet Title
MATERIALS PLAN

Approval Date
Design Supervisor

Revisions	Date
CEP#1	7/15/2021
CEP#2	12/21/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP #4	7/20/2023

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Drawn: JC, SM
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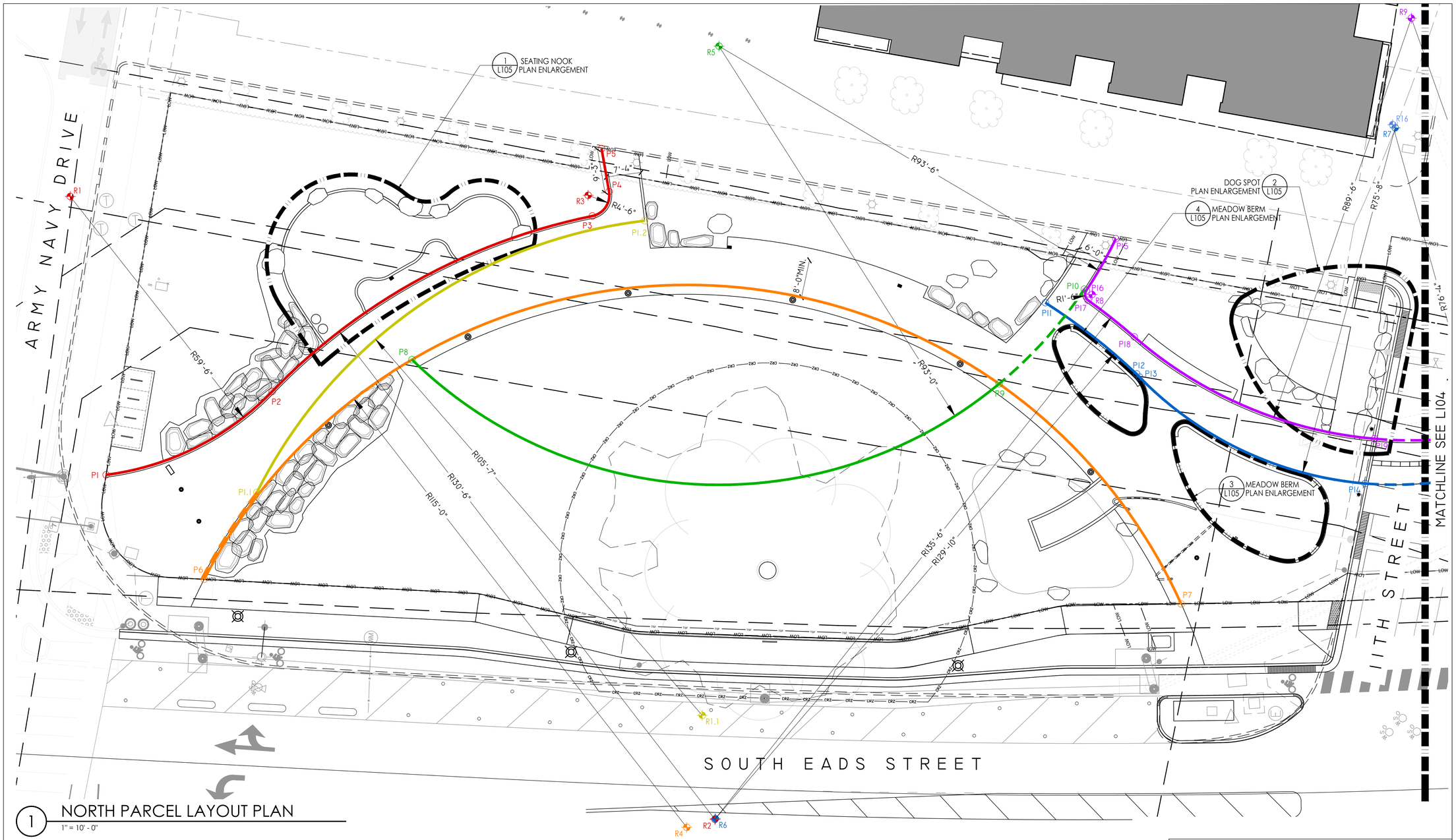
Seal
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L102



1 NORTH PARCEL LAYOUT PLAN

1" = 10' - 0"

ARC 1

RADIUS POINT	NORTHINGS	EASTINGS	DESC.
P1	7001191.33	11894593.11	ARC BEGINNING
R1	7001198.94	11894652.12	RADIUS CTR.
P2	7001156.15	11894610.77	POINT OF TANGENCY
R2	7001062.30	11894520.09	RADIUS CTR.
P3	7001088.28	11894647.98	POINT OF TANGENCY
R3	7001089.17	11894652.39	RADIUS CTR.
P4	7001084.74	11894653.16	POINT OF TANGENCY
P5	7001086.32	11894662.26	ARC ENDING

ARC 1.1

RADIUS POINT	NORTHINGS	EASTINGS	DESC.
P1.1	7001159.37	11894589.39	ARC BEGINNING
R1.1	7001064.99	11894542.14	RADIUS CTR.
P1.2	7001077.20	11894646.98	ARC ENDING

ARC 2

RADIUS POINT	NORTHINGS	EASTINGS	DESC.
P6	7001170.55	11894570.98	ARC BEGINNING
R4	7001068.28	11894518.38	RADIUS CTR.
P7	7000963.49	11894565.75	ARC ENDING

ARC 3

RADIUS POINT	NORTHINGS	EASTINGS	DESC.
P8	7001126.50	11894617.55	ARC BEGINNING
R5	7001061.44	11894684.00	RADIUS CTR.
P9	7001002.07	11894612.41	ARC ENDING
P10	7000984.03	11894632.45	ARC EXTENDING

ARC 4

RADIUS POINT	NORTHINGS	EASTINGS	DESC.
P11	7000992.26	11894629.61	ARC BEGINNING
R6	7001062.20	11894520.22	RADIUS CTR.
P12	7000972.95	11894614.52	POINT OF TANGENCY
P13	7000972.31	11894613.83	POINT OF TANGENCY
R7	7000918.15	11894666.69	RADIUS CTR.
P14	7000924.50	11894591.28	ARC ENDING

ARC 5

RADIUS POINT	NORTHINGS	EASTINGS	DESC.
P15	7000977.34	11894643.15	ARC BEGINNING
R5	7001061.44	11894684.00	RADIUS CTR.
P16	7000983.61	11894632.18	POINT OF TANGENCY
R8	7000982.37	11894631.35	RADIUS CTR.
P17	7000983.24	11894630.13	POINT OF TANGENCY
R2	7001062.30	11894520.09	RADIUS CTR.
P18	7000973.42	11894622.36	POINT OF TANGENCY
R9	7000914.71	11894689.92	RADIUS CTR.
P19	7000922.52	11894600.76	ARC ENDING

2 RADIUS CENTER POINTS

ARC LEGEND
- ARC 1
- ARC 1.1
- ARC 2
- ARC 3
- ARC 4
- ARC 5

NOTE:
1. GPS COORDINATES ARE IN INTERNATIONAL FEET.
2. "E" POINTS REFERENCE ENLARGEMENTS, SEE SHEETS L105 AND L106

0 5' 10' 20' 30'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

LAYOUT PLAN
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L103

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION
Park Development Division
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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location
ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET
ARLINGTON, VIRGINIA

Sheet Title
LAYOUT PLAN

Approval Date
Design Supervisor

Revisions	Date
CEP#1	7/15/2021
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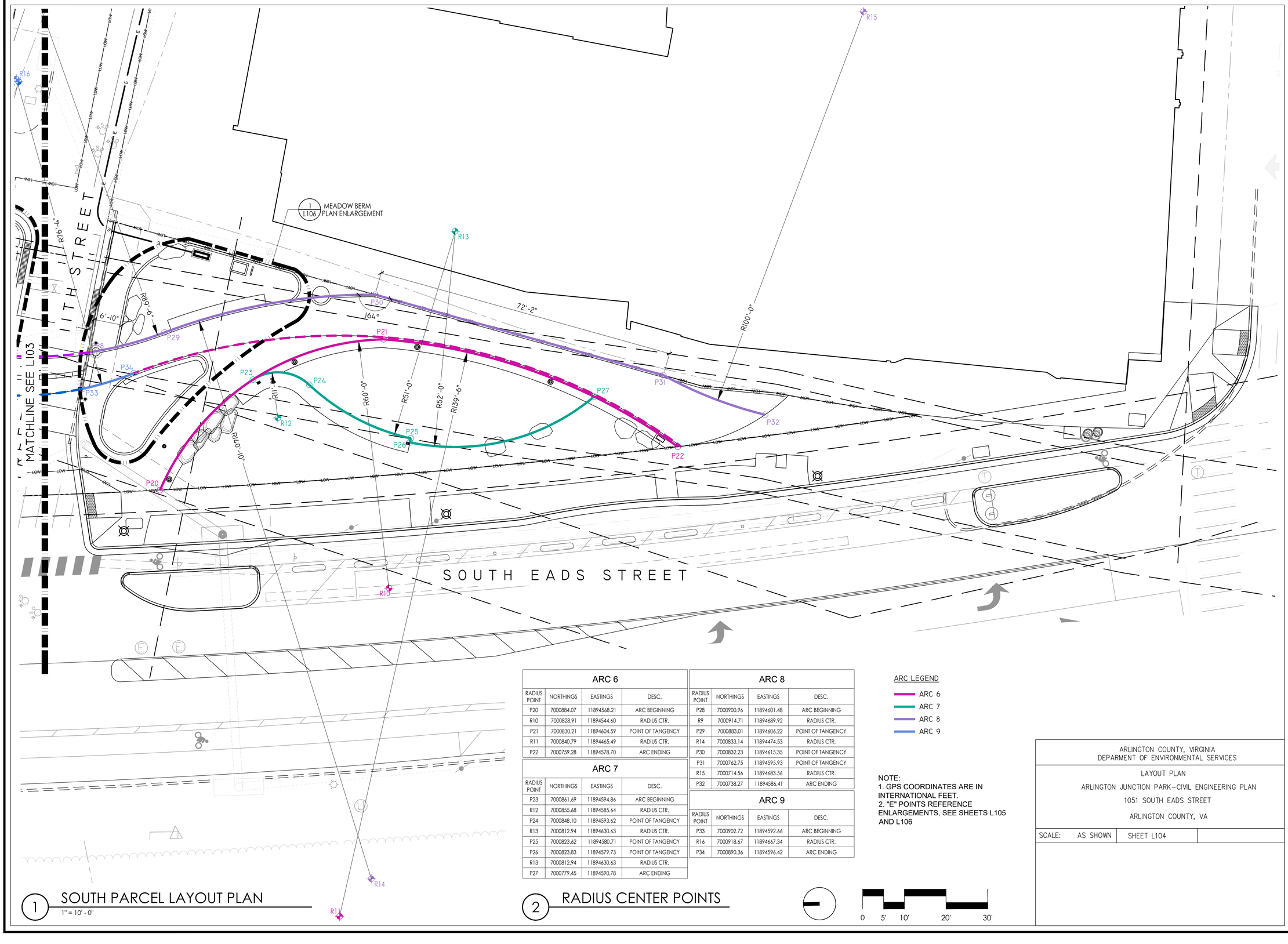
Seal
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L103



1 SOUTH PARCEL LAYOUT PLAN
1" = 10' - 0"

ARC 6			
RADIUS POINT	NORTHINGS	EASTINGS	DESC.
P20	7000884.07	11894568.21	ARC BEGINNING
R10	7000828.91	11894544.60	RADIUS CTR.
P21	7000830.21	11894604.59	POINT OF TANGENCY
R11	7000840.79	11894465.49	RADIUS CTR.
P22	7000759.28	11894578.70	ARC ENDING

ARC 7			
RADIUS POINT	NORTHINGS	EASTINGS	DESC.
P23	7000861.69	11894594.86	ARC BEGINNING
R12	7000855.68	11894585.64	RADIUS CTR.
P24	7000848.10	11894593.62	POINT OF TANGENCY
R13	7000812.94	11894630.63	RADIUS CTR.
P25	7000823.62	11894580.71	POINT OF TANGENCY
P26	7000823.83	11894579.73	POINT OF TANGENCY
R13	7000812.94	11894630.63	RADIUS CTR.
P27	7000779.45	11894590.78	ARC ENDING

ARC 8			
RADIUS POINT	NORTHINGS	EASTINGS	DESC.
P28	7000900.96	11894601.48	ARC BEGINNING
R9	7000914.71	11894689.92	RADIUS CTR.
P29	7000883.01	11894606.22	POINT OF TANGENCY
R14	7000833.14	11894474.53	RADIUS CTR.
P30	7000832.23	11894615.35	POINT OF TANGENCY
P31	7000762.75	11894595.93	POINT OF TANGENCY
R15	7000714.56	11894683.56	RADIUS CTR.
P32	7000738.27	11894586.41	ARC ENDING

ARC 9			
RADIUS POINT	NORTHINGS	EASTINGS	DESC.
P33	7000902.72	11894592.66	ARC BEGINNING
R16	7000918.67	11894667.34	RADIUS CTR.
P34	7000890.36	11894596.42	ARC ENDING

ARC LEGEND
- ARC 6
- ARC 7
- ARC 8
- ARC 9

NOTE:
1. GPS COORDINATES ARE IN INTERNATIONAL FEET.
2. "E" POINTS REFERENCE ENLARGEMENTS, SEE SHEETS L105 AND L106

2 RADIUS CENTER POINTS

0 5' 10' 20' 30'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

LAYOUT PLAN
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L104

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION
Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location
ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET
ARLINGTON, VIRGINIA

Sheet Title
LAYOUT PLAN

Approval Date
Design Supervisor

Revisions	Date
CEP#1	7/15/2021
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CEP #4	7/20/2023

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Checked: SM, CF

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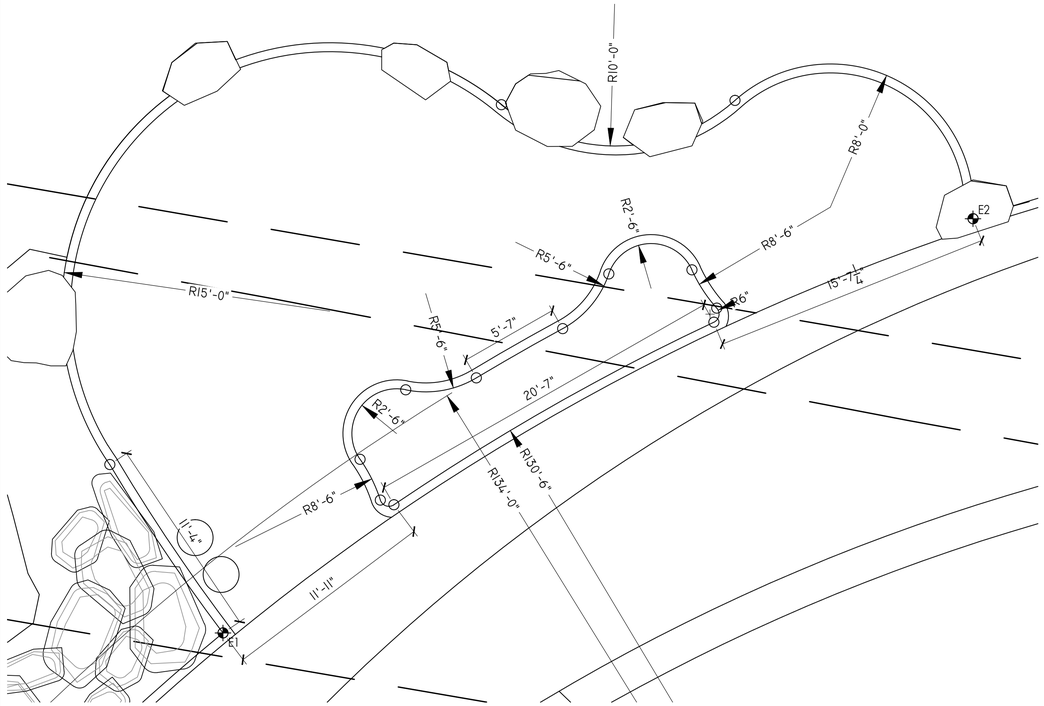
Date: 04/20/2023

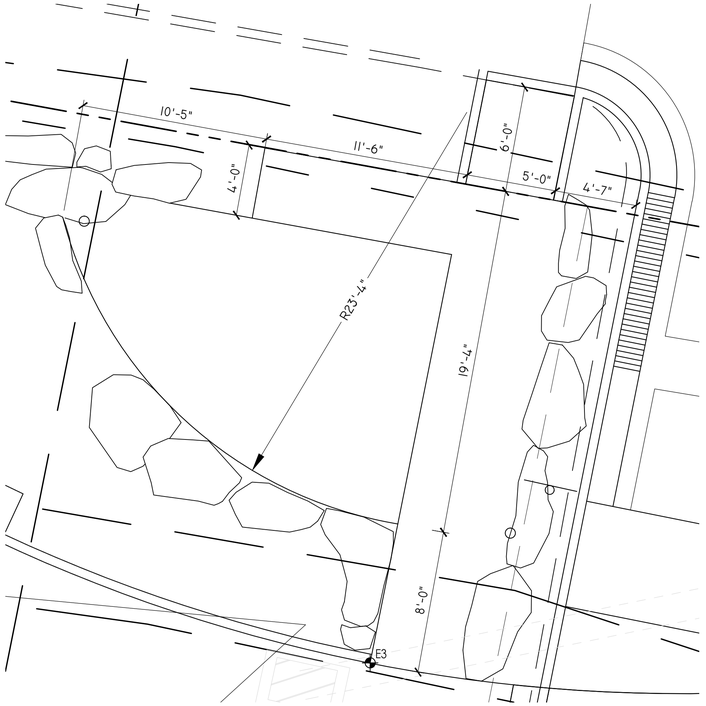
Seal
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L104



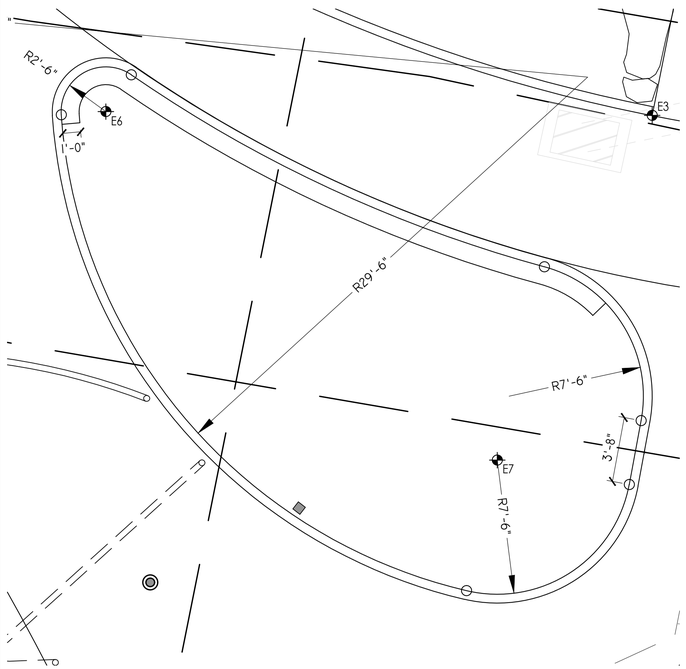
1 SEATING NOOK LAYOUT PLAN ENLARGEMENT

1" = 4' - 0"



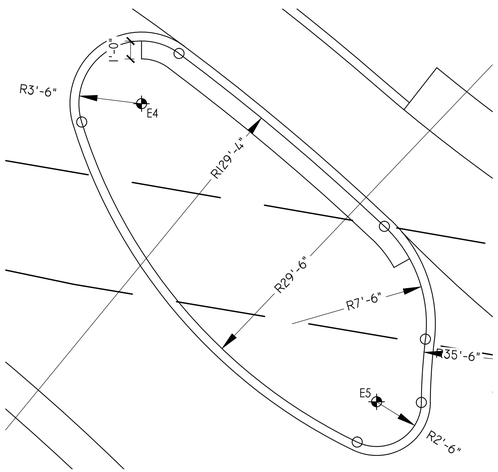
2 DOG SPOT LAYOUT PLAN ENLARGEMENT

1" = 4' - 0"



3 MEADOW BERM LAYOUT PLAN ENLARGEMENT

1" = 4' - 0"



4 MEADOW BERM LAYOUT PLAN ENLARGEMENT

1" = 4' - 0"

ENLARGEMENT KEY POINTS		
RADIUS POINT	NORTHINGS	EASTINGS
E1	7001145.29	11894620.80
E2	7001103.37	11894643.96
E3	7000932.12	11894601.63
E4	7000986.87	11894621.01
E5	7000973.73	11894604.34
E6	7000962.67	11894601.85
E7	7000940.79	11894582.36
E8	7000894.28	11894602.78
E9	7000851.73	11894614.12
E10	7000875.44	11894598.04
E11	7000892.70	11894582.67

5 RADIUS CENTER POINTS

0 2' 4' 8' 12'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

LAYOUT PLAN ENLARGEMENT
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L105

ARLINGTON
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1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

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ENLARGEMENTS

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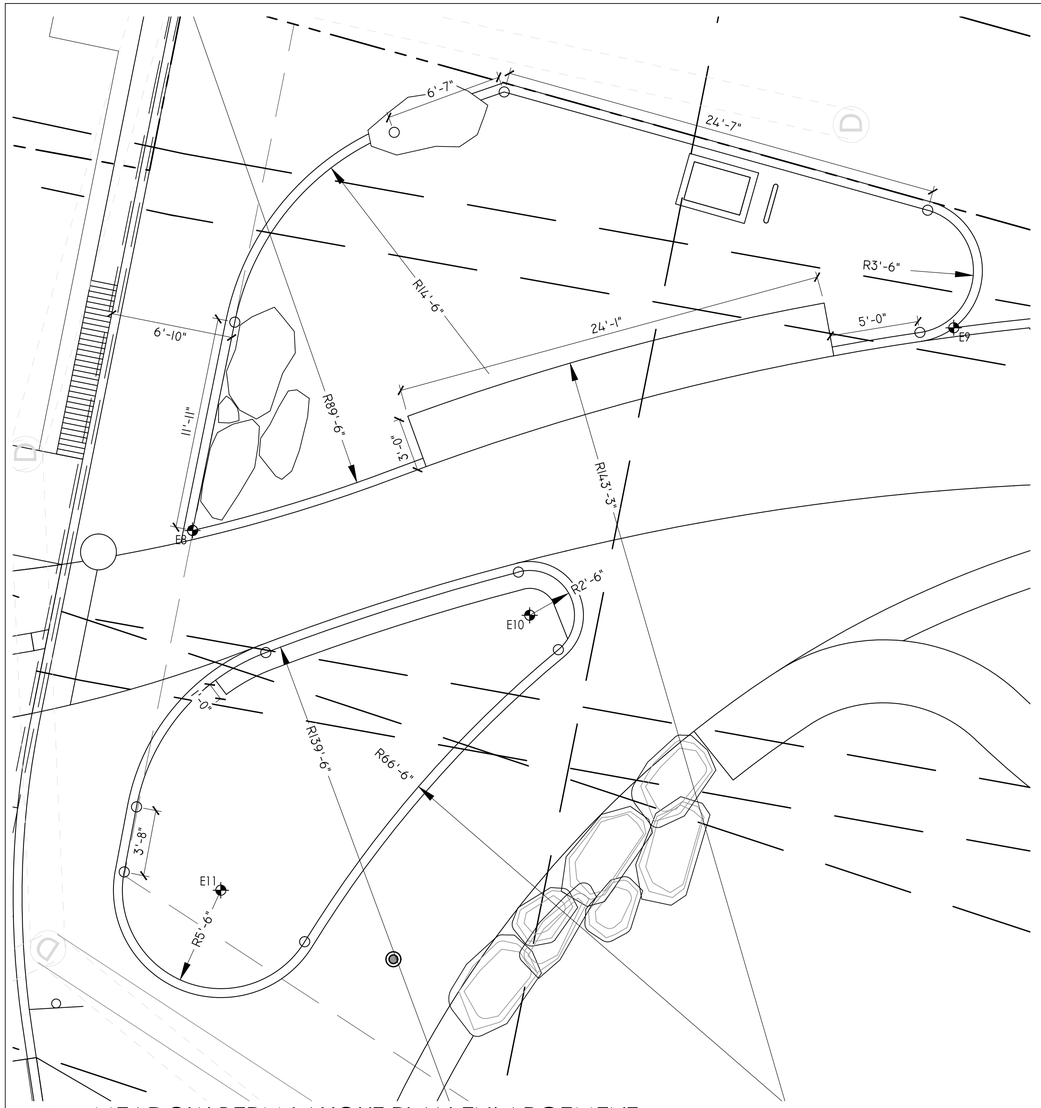
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L105



1 MEADOW BERM LAYOUT PLAN ENLARGEMENT

1" = 4' - 0"

ENLARGEMENT KEY POINTS		
RADIUS POINT	NORTHINGS	EASTINGS
E1	7001145.29	11894620.80
E2	7001103.37	11894643.96
E3	7000930.39	11894601.80
E4	7000986.87	11894621.01
E5	7000973.73	11894604.34
E6	7000962.67	11894601.85
E7	7000940.79	11894582.36
E8	7000894.28	11894602.78
E9	7000851.73	11894614.12
E10	7000875.44	11894598.04
E11	7000892.70	11894582.67

2 RADIUS CENTER POINTS

0 2' 4' 8' 12'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

LAYOUT PLAN ENLARGEMENT
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
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SCALE: AS SHOWN | SHEET L106

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YUNHUI FAN
No. 1316
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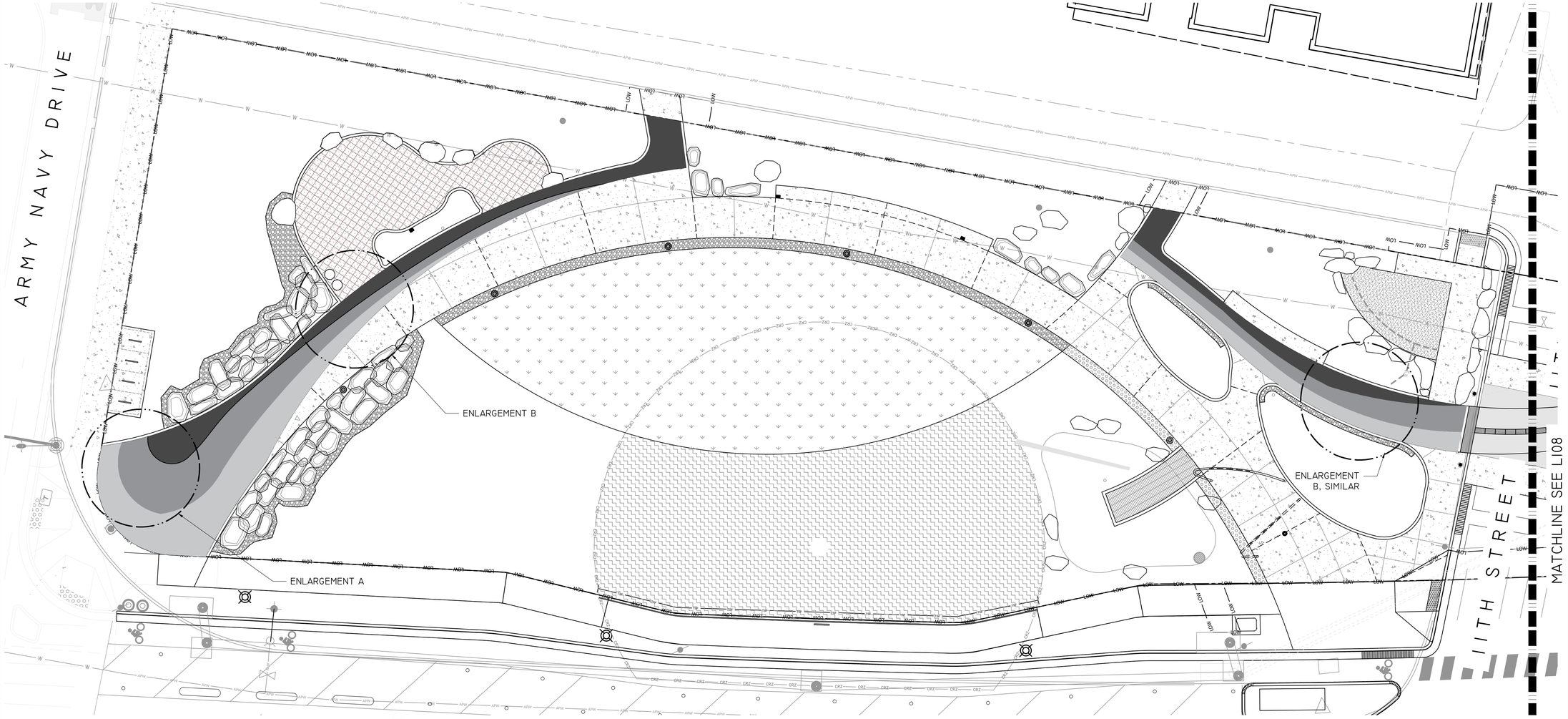
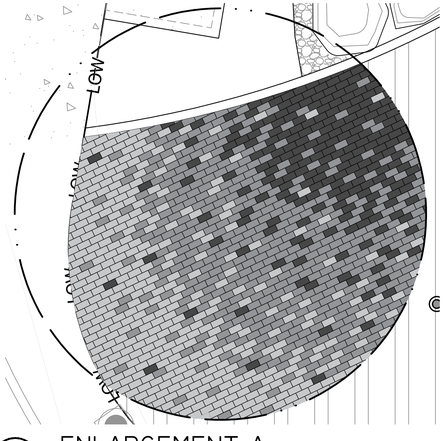
Sheet L106



1 PAVING PLAN

1" = 10' - 0"

0 5' 10' 20' 30'



2 ENLARGEMENT A

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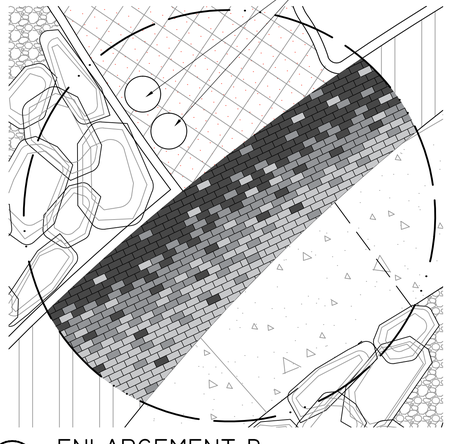
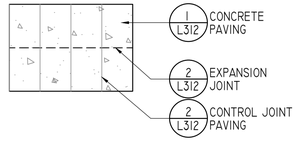


3 ENLARGEMENT B

1" = 4' - 0"

4 PAVING LEGEND



ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

PAVING PLAN
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L107

ARLINGTON
VIRGINIA

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FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

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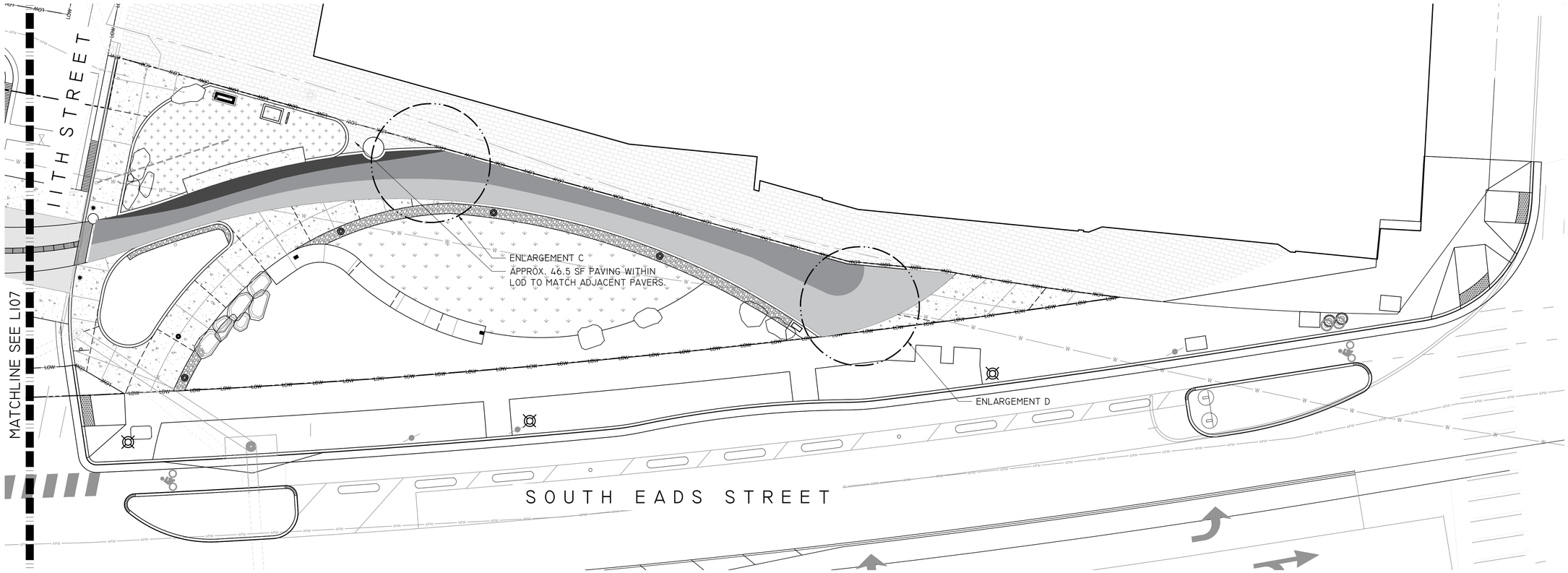
Seal

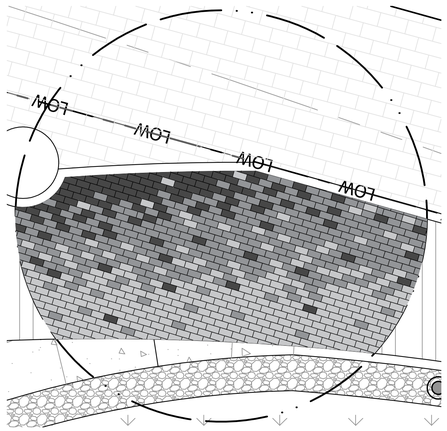
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L107



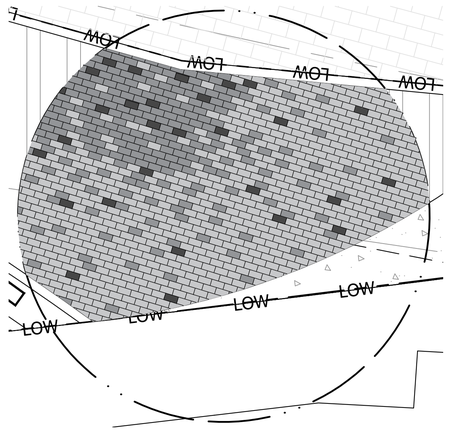
1 PAVING PLAN

1" = 10' - 0"



2 ENLARGEMENT C

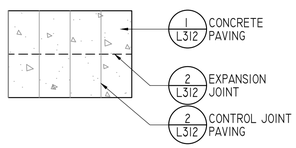
1" = 4' - 0"



3 ENLARGEMENT D

1" = 4' - 0"

PAVING LEGEND



1 L312 POROUS UNIT PAVING RUNNING BOND PATTERN

70% DARK GREY, 20% MEDIUM GREY, 10% LIGHT GREY

15% DARK GREY, 70% MEDIUM GREY, 15% LIGHT GREY

5% DARK GREY, 15% MEDIUM GREY, 80% LIGHT GREY

4 PAVING LEGEND

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

PAVING PLAN
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L108

ARLINGTON
VIRGINIA

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ITB #23-DPR-ITBPW-450

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Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

PAVING PLAN

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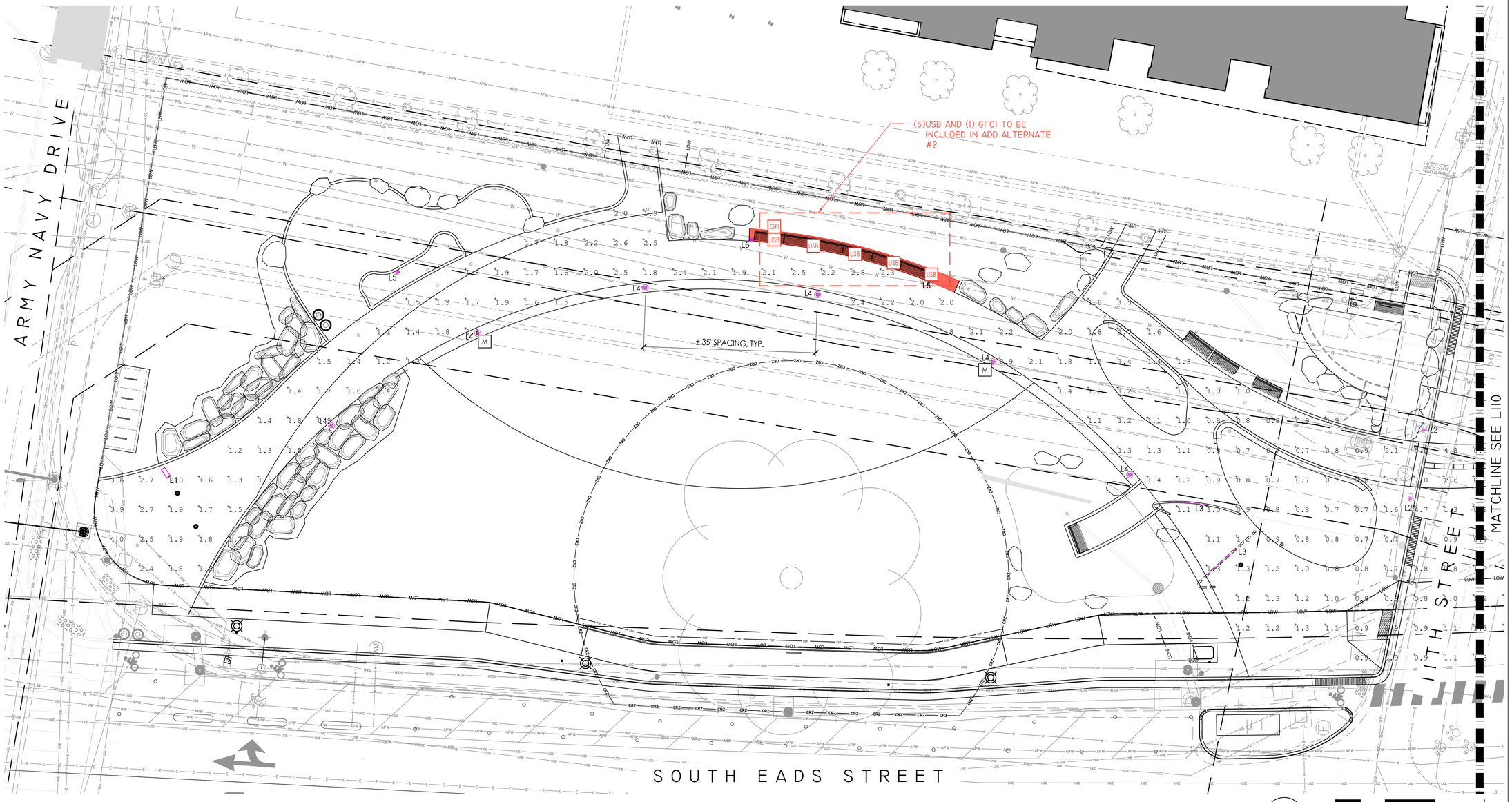
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L108



LIGHTING/ELECTRICAL LEGEND

- EXISTING POLE LIGHT
- STREET LIGHTS, REFER TO STREETSCAPE PLANS
- L1 PYLON AREA LIGHT-REFER TO STRUCTURAL FOR MOUNTING CONDITION
- L2 BOLLARD LIGHT-REFER TO STRUCTURAL FOR MOUNTING CONDITION
- L3 INTEGRAL STRUCTURE LEDS
- L4 PARK POLE LIGHT-REFER TO STRUCTURAL FOR MOUNTING CONDITION
- L5 POWER PEDESTAL
- GFI GFI LOCATION
- USB USB CHARGING OUTLET
- M MAINTENANCE OUTLET

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

LIGHTING PLAN
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L109

ARLINGTON
VIRGINIA

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ARLINGTON, VIRGINIA

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COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L109

LIGHTING/ELECTRICAL LEGEND

- EXISTING POLE LIGHT
- STREET LIGHTS, REFER TO STREETSCAPE PLANS
- L1 PYLON AREA LIGHT-REFER TO STRUCTURAL FOR MOUNTING CONDITION
- L2 BOLLARD LIGHT-REFER TO STRUCTURAL FOR MOUNTING CONDITION
- L3 INTEGRAL STRUCTURE LEDS
- L4 PARK POLE LIGHT-REFER TO STRUCTURAL FOR MOUNTING CONDITION
- L5 POWER PEDESTAL
- GFI GFI LOCATION
- USB USB CHARGING OUTLET
- M MAINTENANCE OUTLET

LIGHTING/ELECTRICAL SCHEDULE

TAG	REFERENCE SHEETS	QTY.	DESCRIPTION	PRODUCT NUMBER	SUMMARY
L1	1/L318	2	WAYFINDING PYLON LIGHT	CUSTOM FIXTURE,15' HEIGHT, 4000K	-
L2	5/L318	4	BOLLARD LIGHT	BEGA 88 060	-
L3	LED ACCENT LIGHTING NOT INCLUDED IN CALCUALTIONS				
L4	7/L318	10	PARK POLE LIGHT	BEGA 84 875	-
L5	REFER TO PRODUCT SCHEDULE				
				AVG. FC FOR PRIMARY CIRCULATION	1.48 FC
				MIN. FC FOR PRIMARY CIRCULATION	0.6 FC

0 5' 10' 20' 30'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

LIGHTING PLAN
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No. 1316
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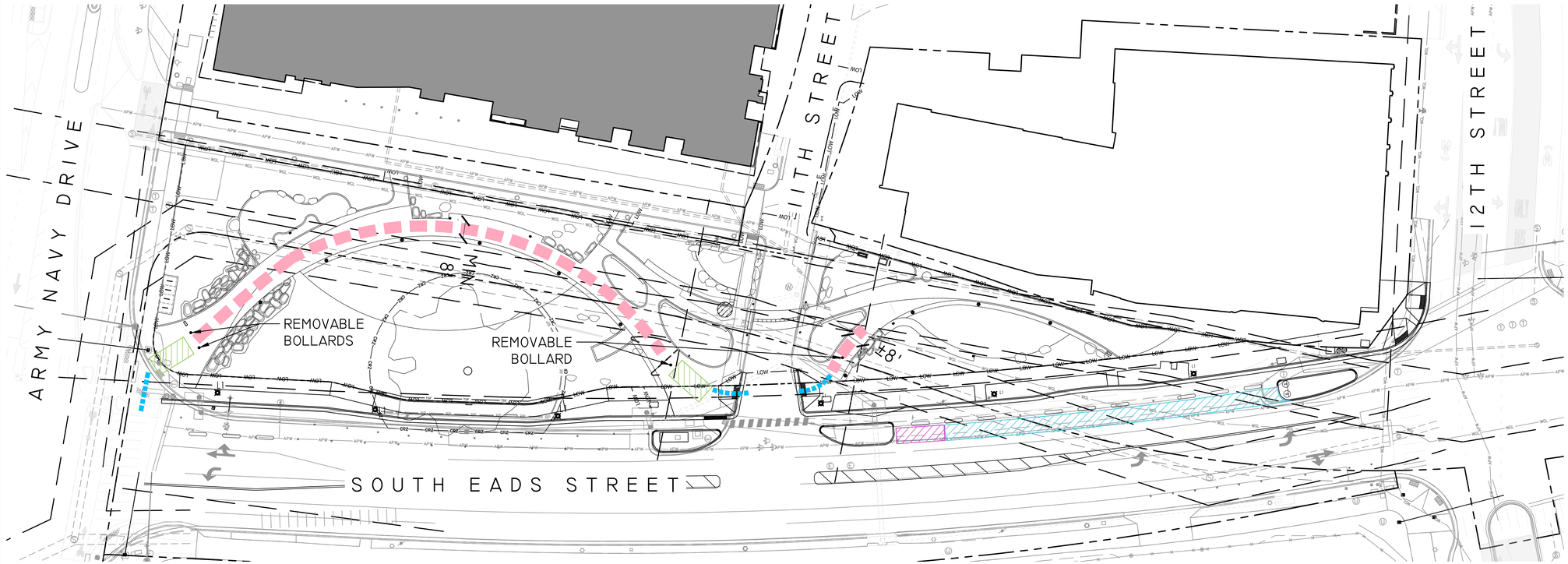
Sheet L110



1 MAINTENANCE ACCESS DIAGRAM

MAINTENANCE ACCESS LEGEND

- 9X18 VEHICULAR ACCESS FOR ROUTINE MAINTENANCE
- CURB RAMPS TO ENTER PARK
- VEHICULAR-GRADE PAVING ROUTE FOR OCCASIONAL USE
- PUBLIC PARKING
- COUNTY PARKING SPOT

0 12.5 25' 75' 30'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

MAINTENANCE ACCESS DIAGRAM
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L111

ARLINGTON
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1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

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MAINTENANCE
ACCESS
DIAGRAM

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COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L111

1 ADA ACCESS DIAGRAM

ADA ACCESS LEGEND

- ACCESSIBLE ROUTE
- ACCESSIBLE SIDEWALK N.I.C, REFER TO DES S. EADS ROAD PROJECT
- ACCESSIBLE AMENITY AREA
- ACCESSIBLE SEATING AREA

GRADING & ADA COMPLIANCE NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL ELEMENTS ARE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN DOCUMENTS AND CONTRACT CONDITIONS INCLUDING THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN (ADA) AND THE VIRGINIA ACCESSIBILITY CODE AND ANY UPDATES. IF THE CONTRACTOR OBSERVES THAT PORTIONS OF THE PROJECT ARE NON-COMPLIANT WITH THE ADA, HE SHALL NOTIFY ARLINGTON COUNTY CONSTRUCTION MANAGER SO THAT A FIELD ADJUSTMENT CAN BE MADE TO ENSURE COMPLIANCE. GRADE TOLERANCES SHALL BE MEASURED WITH A 2 FOOT DIGITAL LEVEL.
2. VERIFY ALL EXISTING AND PROPOSED GRADES PRIOR TO FINAL CONSTRUCTION. CONTRACTOR SHALL STAKE OUT GRADES IN THE FIELD FOR REVIEW BY ARLINGTON COUNTY CONSTRUCTION MANAGER PRIOR TO FINAL CONSTRUCTION.
3. PROPOSED GRADING SHALL MEET EXISTING GRADE UNIFORMLY TO ENSURE A SMOOTH TRANSITION. NOTIFY ARLINGTON COUNTY CONSTRUCTION MANAGER IMMEDIATELY IF THERE ARE ANY EDGE CONDITIONS THAT CREATE AREAS WITHOUT POSITIVE DRAINAGE.
4. ALL LONGITUDINAL SLOPES ALONG THE WALKS SHALL BE NO STEEPER THAN 4.8% WITHOUT RAILING AND 7.8% WITH RAILING. THE CROSS SLOPE SHALL BE MINIMUM 1% AND MAXIMUM 1.8% OR AS NOTED ON THE DRAWINGS. ALL LANDING AND TRANSITION AREAS SHALL BE LESS THAN 1.8% IN ALL DIRECTIONS. THESE LIMITS PROVIDE A 0.2% MARGIN FROM THE A.O.J. ADA REQUIREMENTS TO ALLOW FOR CONSTRUCTION TOLERANCES.
5. ANY HARDSCAPE SURFACE AREAS THAT ARE BUILT WITHOUT COMPLYING WITH THE ABOVE CODE MUST BE CORRECTED BY CONTRACTOR AT NO ADDITIONAL EXPENSE.
6. THE MAXIMUM VERTICAL CHANGE BETWEEN THE FINISH GRADES OF ADJACENT HARDSCAPE SURFACES IS 1/4". THE MAXIMUM HORIZONTAL GAP BETWEEN THE EDGES OF ADJACENT HARDSCAPE SURFACES IS 3/8".

0 12.5 25' 75' 30'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

ADA ACCESS DIAGRAM
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L112

ARLINGTON
VIRGINIA

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ADA ACCESS
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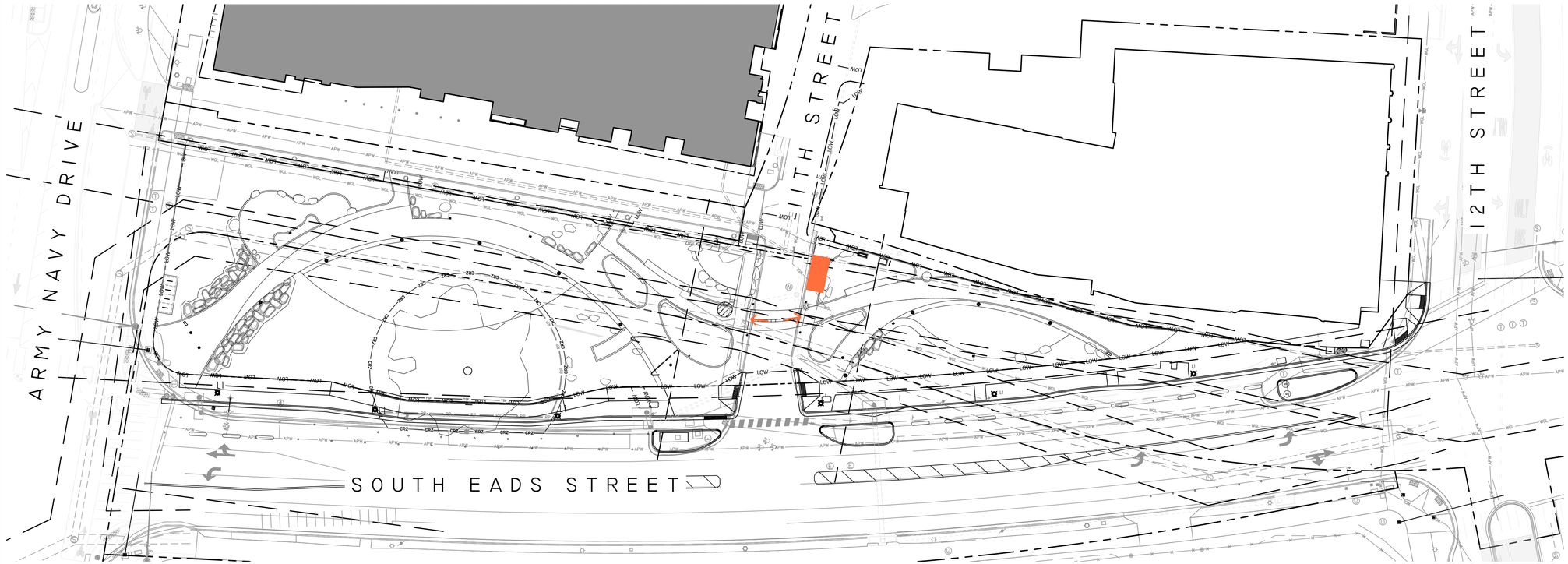
Sheet L112



1 CONSTRUCTION ACCESS DIAGRAM

CONSTRUCTION ACCESS LEGEND

POTENTIAL TRAILER LOCATION

→ POTENTIAL CONSTRUCTION ENTRANCE

0 12.5 25' 75' 30'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

CONSTRUCTION ACCESS DIAGRAM
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L113

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS
AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON
JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

CONSTRUCTION
ACCESS
DIAGRAM

Approval Date

Design Supervisor

Revisions	Date
CEP#1	7/15/2021
CEP#2	12/21/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP #4	7/20/2023

Designed:
Drawn: JC, SM
Checked: SM, CF

Filename:
Plotted:

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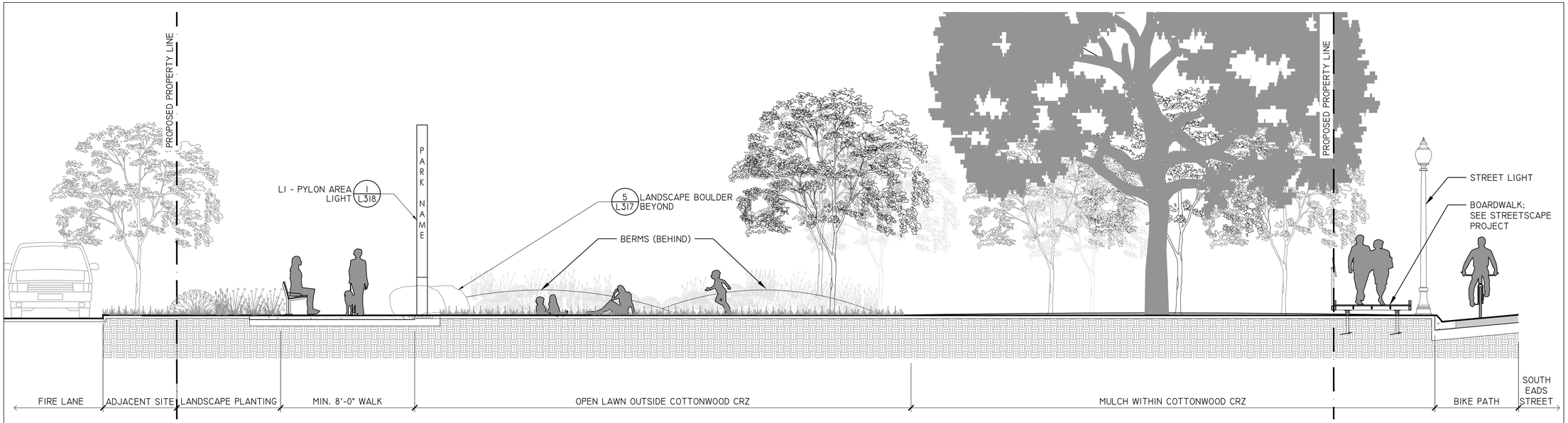
Date: 04/20/2023

Seal

COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

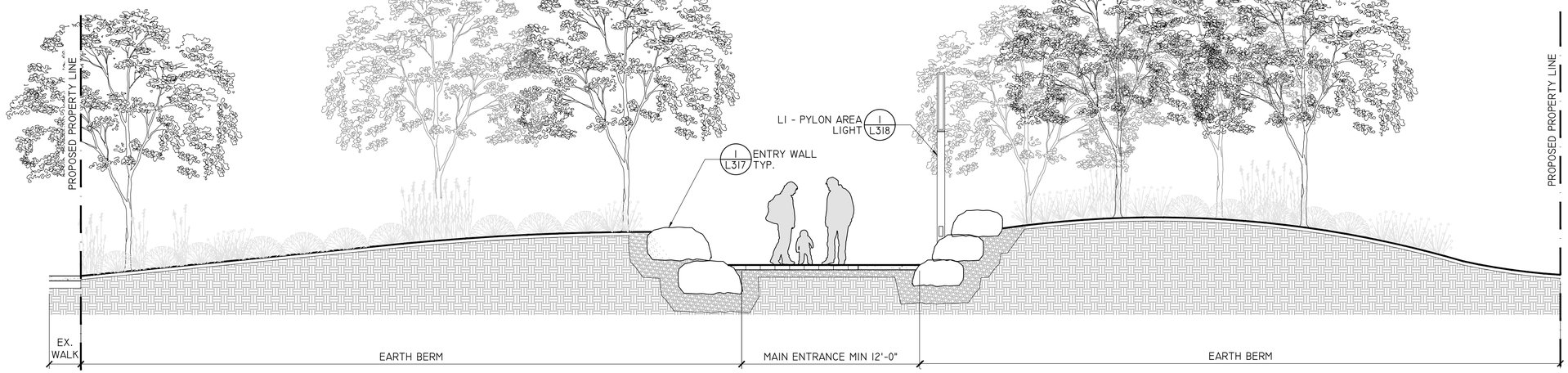
Sheet L113



1 SITE SECTION-NORTH PARCEL

1"=4'-0"

0 1' 2' 4' 6'

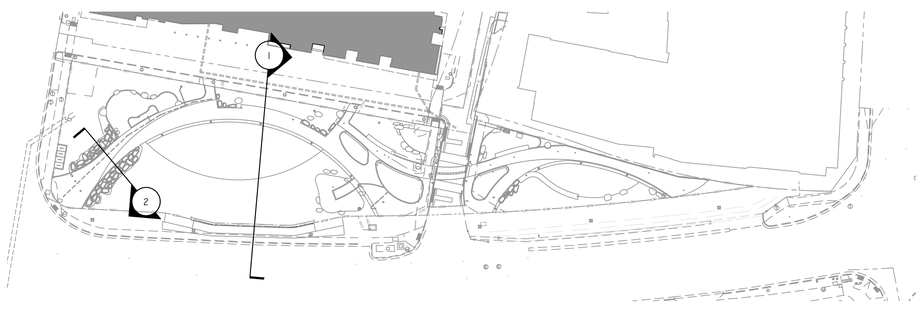


2 SITE SECTION-NORTH PARCEL

1"=4'-0"

0 1' 2' 4' 6'

NOTE: SECTIONS FOR DESIGN INTENT ONLY



3 KEY

1"=50'-0"

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

SECTIONS AND ELEVATIONS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET L301	

ARLINGTON
VIRGINIA

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1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

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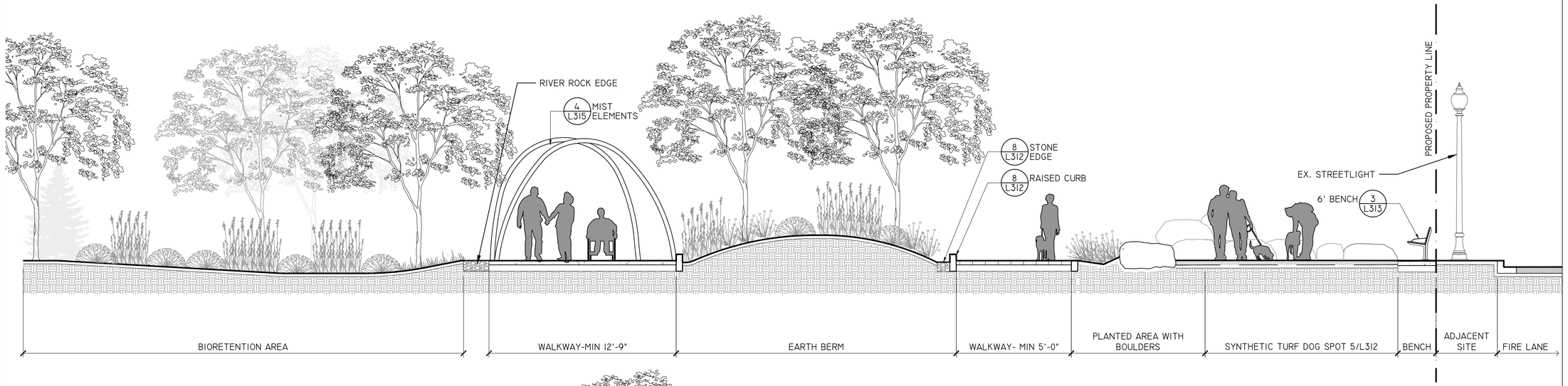
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

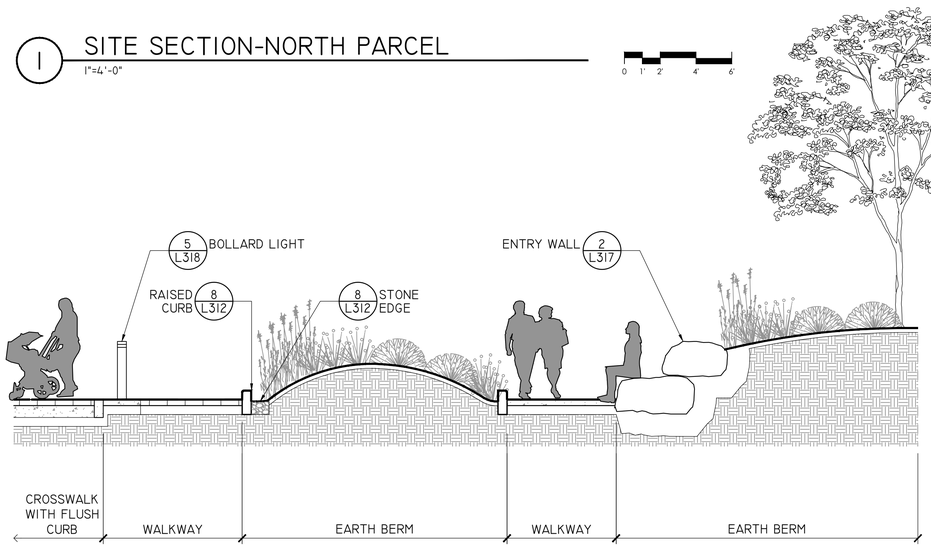
Sheet L301



1 SITE SECTION-NORTH PARCEL

1"=4'-0"

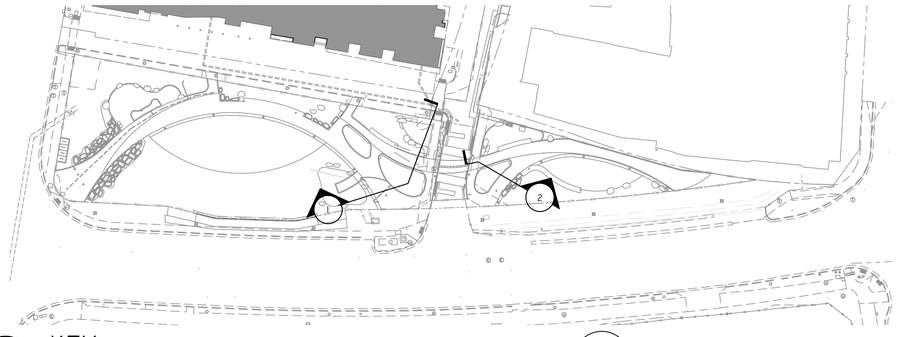
0 1' 2' 4' 6'



2 SITE SECTION-SOUTH PARCEL

1"=4'-0"

0 1' 2' 4' 6'



3 KEY

1"=50'-0"

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

SECTIONS AND ELEVATIONS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET L302	

ARLINGTON
VIRGINIA

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1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

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COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

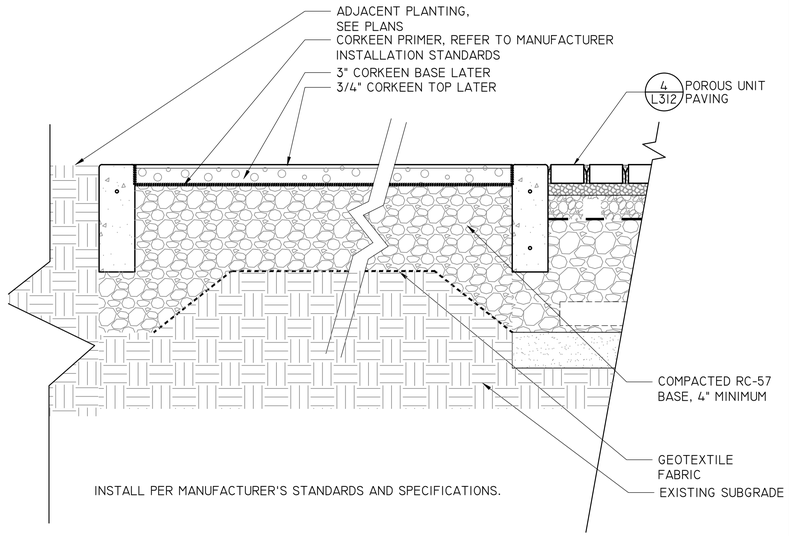
Sheet L302

DESIGNATION	MANUFACTURER	MODEL	FINISH	COLOR	OTHER	QTY
PAVING/HARDSCAPE						
P-2 POROUS UNIT PAVING	HANOVER ARCHITECTURAL PRODUCTS 800-426-4242	PERMEABLE 4.5X9, 3" THICKNESS	HEAVY TUDOR	LIMESTONE GRAY, CHARCOAL, AND GLACIER WHITE		
FLEXIPAVE (ADD ALTERNATE #1)	CAPITAL FLEXIPAVE	FLEXIPAVE	N/A	TBD		
P-3 CORKEEN PAVING (RECOMMENDED BY DPR)	CORKEEN BY AMORIM +351 22 747 5300	CORKEEN BY AMORIM	N/A	N/A		
P-4 SYNTHETIC TURF (ADD ALTERNATE #3)	SYNLAWN 866-796-5296	PET PREMIUM	N/A	N/A	USE APPROVED ANIMAL SAFE INFILL	
P-5 & P-5A STAMPED COLORED CONCRETE	SILKA CORPORATION, 201-933-8800	NEW BRICK RUNNING BOND (P-5A)		INTEGRAL COLOR CONCRETE (P-5 & P-5A): GULL GRAY RELEASE AGENT (P-5A): STORM GRAY		
P-7 LONGITUDINAL DIRECTIONAL PAVERS	ARMOR TILE 800-682-2525	DETECTABLE/TACTILE WARNING SURFACE GUIDANCE TILE		DARK GRAY	SEE PLANS FOR LAYOUT AND LOCATIONS	
BOULDER TYPE 1	IRWIN STONE 301-762-5800	PENNSYLVANIA WEATHERED STEPPING STONE OR WESTERN MARYLAND STEPPING STONES	SPLIT FACE	TANS AND GRAYS	STONES TO HAVE RELATIVELY FLAT TOP AND BOTTOM SUITABLE FOR STACKING. GENERALLY SIZED BETWEEN 15"~20" H, 2'~4' WIDE, 5'~8' LONG. TO BE SELECTED BY THE LANDSCAPE ARCHITECT AT STONE QUARRY.	75
BOULDER TYPE 2		PENNSYLVANIA WEATHERED STONE OR WESTERN MARYLAND STONES	NATURALLY WEATHERED FINISH WITH LICHENS AND MOSSES	TANS AND GRAYS	GENERALLY SIZED BETWEEN 20"~30" H, 2'~3' WIDE, 4'~6' LONG. TO BE PICKED BY THE LANDSCAPE ARCHITECT AT STONE YARD.	45
RIVER JACK STONE		MD RIVERJACK	N/A	TANS AND GRAYS	3"-5" STONE SIZE	
SITE FURNISHING						
BENCH	LANDSCAPE FORMS 800-430-6209	GENERATION 50 BENCH	THERMALLY MODIFIED ASH	POWDERCOATED METAL COLOR TBD TO BE SELECTED BY PROJECT LANDSCAPE ARCHITECT FROM MANUFACTURER'S FULL RANGE	PROVIDE BACKED OPTION WITH LOOPED END ARMS, STANDARD SURFACE MOUNT	20
					PROVIDE BACKLESS, ARMLESS BENCHES, STANDARD SURFACE MOUNT, IN AREA INDICATED ON PLANS	3
TRASH AND RECYCLING RECEPTACLES	VICTOR STANLEY 1-800-368-2573	SD-42 WITH DOME LID, DECALS, AND SIDE DOOR	POWDERCOATED ALUMINUM	TRASH- SILVER RECYCLING - BLUE	PROVIDE SHOP DRAWINGS OF DECALS. INCLUDE MATCHING LINERS.	1 EACH
BICYCLE RACK		BRHS 101 CYCLE SENTRY SERIES	POWDERCOATED ALUMINUM	SILVER		4
DOG WATER FOUNTAIN	MOST DEPENDABLE FOUNTAINS 901-867-0039	300 SMSS	POWDERCOATED ALUMINUM	TO BE SELECTED BY PROJECT LANDSCAPE ARCHITECT FROM MANUFACTURER'S FULL RANGE	PROVIDE HOSE BIB CONNECTION	1
INTERPRETIVE SIGNS	ENGRAPHIX 314-781-7878	HIGH PRESSURE LAMINATE PANEL-SELF SUPPORTING WITH FRAMELESS PEDESTAL	N/A	N/A	PROVIDE SHOP DRAWINGS. SEE PLANS FOR LOCATIONS.	4
PARK RULES SIGN		ALUMINUM PANELS PRINTED PER DETAIL	N/A	N/A	CONTENT TO BE PROVIDED BY DPR, PROVIDE SHOP DRAWINGS.SIGN TO BE DOUBLE SIDED.	1
MIST ELEMENTS	RODNEY CARROLL	CUSTOM PIECE TO BE DESIGNED IN COLLABORATION WITH LANDSCAPE ARCHITECT. BRUSHED STAINLESS STEEL FINISH. ONE PIECE CONSTRUCTION. EACH ARCH TO HAVE MIN. 26 MIST EMITTERS AND LINEAR COLOR CHANGING LED ELEMENTS.				2 ARCHES
LINEAR LED LIGHT FOR PYLON	LED LINEAR 716-283-4400	VENUS TV IP67	N/A	N/A	3000K, RGB FIXTURE. RUNS VERTICALLY DOWN FOUR CORNERS OF THE PYLON	8
REMOVABLE BOLLARD	RELIANCE FOUNDRY CO 877-789-3245	R-8907 STAINLESS STEEL BOLLARD			INCLUDE REMOVABLE EMBEDDED RECIEVER WITH LID 4" SS	4
CUSTOM BENCH 1 (ADD ALTERNATE #2A) AND CUSTOM BENCH 2	VESTRE FURNISHING 617-780-4134	CUSTOM VIA BENCH	KEBONY WOOD, HOT DIP GALVANIZED POWDERCOATED STEEL FRAME	TO BE SELECTED BY PROJECT LANDSCAPE ARCHITECT FROM MANUFACTURER'S FULL RANGE	PROVIDE SHOP DRAWINGS OF BENCHES INCLUDING BENCH TOPS, FRAME, ATTACHMENTS, BENCH BACKS.	ONE CUSTOM BENCHES AND ONE ADD ALTERNATE CUSTOM BENCH
LOUNGE SEAT	VESTRE FURNISHING 617-780-4134	BLOC SUN BENCH	KEBONY WOOD, HOT DIP GALVANIZED POWDERCOATED STEEL FRAME	TO BE SELECTED BY PROJECT LANDSCAPE ARCHITECT FROM MANUFACTURER'S FULL RANGE	ALL FURNISHING SELECTIONS TO BE FINALIZED WITH DPR PM	4
CAFE CHAIRS		APRIL GO CHAIR	HOT DIP GALVANIZED POWDERCOATED STEEL FRAME	TO BE SELECTED BY PROJECT LANDSCAPE ARCHITECT FROM MANUFACTURER'S FULL RANGE		8
CAFE TABLES		MUNCH TABLE	HOT DIP GALVANIZED POWDERCOATED STEEL FRAME	TO BE SELECTED BY PROJECT LANDSCAPE ARCHITECT FROM MANUFACTURER'S FULL RANGE		3

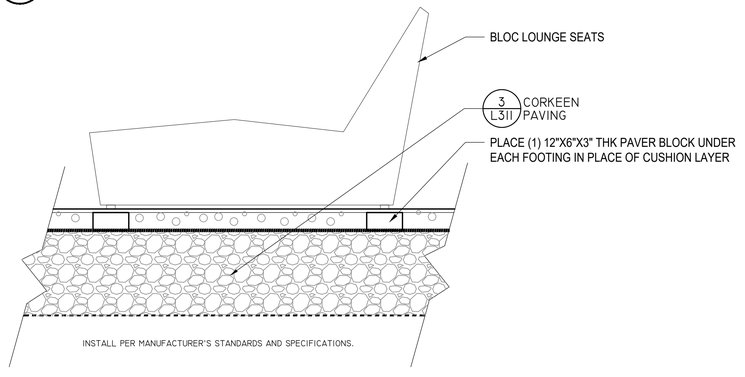
1. PRODUCT SCHEDULE
NTS

1. PROVIDE MOCKUPS, SHOP DRAWINGS, PRODUCT DATA, AND FINISH SAMPLES FOR LANDSCAPE ARCHITECT'S AND COUNTY LANDSCAPE ARCHITECT'S REVIEW AND APPROVAL PRIOR TO FABRICATION/CONSTRUCTION.
2. ALL METAL IS HOT-DIPPED GALVANIZED STEEL UNLESS OTHERWISE INDICATED.
3. ALL METAL-TO-METAL CONNECTIONS ARE FULL-LENGTH WELDS UNLESS OTHERWISE INDICATED.
4. GRIND SMOOTH ALL WELDS, REMOVE ALL BURRS, AND PRIME ALL BARE SPOTS PRIOR TO FINISHING.
5. WELDING AND GRINDING ARE PROHIBITED FOLLOWING SHOP FINISHING.
6. REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
7. NAMED PRODUCTS ARE BASIS-OF-DESIGN. ALTERNATE PRODUCTS DOCUMENTED TO MEET OR EXCEED PERFORMANCE CRITERIA (SUBSTITUTIONS) ARE PERMITTED ONLY UNDER SPECIFIC CONDITIONS. REFER TO SPECIFICATION SECTION 016000-PRODUCT REQUIREMENTS FOR SUBSTITUTION REQUIREMENTS.

2. NOT IN USE



3. CORKEEN PAVING (RECOMMENDED BY DPR)
1"=1'-0"



4. FURNITURE BASE IN CORKEEN (RECOMMENDED BY DPR)
1"=1'-0"

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

GENERAL NOTES & PROJECT SCHEDULE
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L311

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

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Project Name and Location
ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET
ARLINGTON, VIRGINIA

Sheet Title
GENERAL NOTES & PRODUCT SCHEDULE

Approval Date
Design Supervisor

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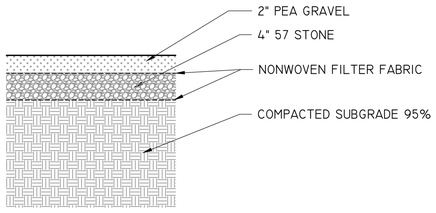
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L311

LIGHTING						
LI - PYLON STRUCTURE		CUSTOM DESIGN	POWDERCOATED ALUMINUM	RAL 2000 YELLOW ORANGE	PROVIDE SHOP DRAWINGS.	2
LI - PYLON FIXTURE	BEGA US 805-684-0533	22 261	POWDERCOATED ALUMINUM	BLACK	REFER TO ELECTRICAL DRAWINGS FOR PRODUCT PART NUMBERS.	2
L2 - BOLLARD		88 060	STAINLESS STEEL	STAINLESS STEEL	PROVIDE SURFACE MOUNT ANCHORAGE ACCESSORIES. REFER TO ELECTRICAL DRAWINGS FOR PRODUCT PART NUMBERS	2
L-3 LED STRIP	QTRAN 203-367-8777	BOXA-SW	N/A	N/A	REFER TO ELECTRICAL DRAWINGS FOR PRODUCT PART NUMBERS	
L-4 PARK LIGHT POLE	BEGA US 805-684-0533	84 875	POWDERCOATED ALUMINUM	STAINLESS STEEL	REFER TO ELECTRICAL DRAWINGS FOR PRODUCT PART NUMBERS	10
L-5 POWER PEDESTAL	LANDSCAPE FORMS 800-430-6209	POWER PEDESTAL	POWDERCOATED ALUMINUM	SILVER	2 GANG 1 DUPLEX GFCI & 1 4-PORT USB OUTLET (IGIU). INSTALL PER MFR. INSTRUCTIONS	5

2 PRODUCT SCHEDULE
NTS



3 UNSTABLIZED AGGREGATE PAVING
3/4" = 1'-0"

1. PROVIDE MOCKUPS, SHOP DRAWINGS, PRODUCT DATA, AND FINISH SAMPLES FOR LANDSCAPE ARCHITECT'S AND COUNTY LANDSCAPE ARCHITECT'S REVIEW AND APPROVAL PRIOR TO FABRICATION/CONSTRUCTION.
2. ALL METAL IS HOT-DIPPED GALVANIZED STEEL UNLESS OTHERWISE INDICATED.
3. ALL METAL-TO-METAL CONNECTIONS ARE FULL-LENGTH WELDS UNLESS OTHERWISE INDICATED.
4. GRIND SMOOTH ALL WELDS, REMOVE ALL BURRS, AND PRIME ALL BARE SPOTS PRIOR TO FINISHING.
5. WELDING AND GRINDING ARE PROHIBITED FOLLOWING SHOP FINISHING.
6. REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
7. NAMED PRODUCTS ARE BASIS-OF-DESIGN. ALTERNATE PRODUCTS DOCUMENTED TO MEET OR EXCEED PERFORMANCE CRITERIA (SUBSTITUTIONS) ARE PERMITTED ONLY UNDER SPECIFIC CONDITIONS. REFER TO SPECIFICATION SECTION 016000-PRODUCT REQUIREMENTS FOR SUBSTITUTION REQUIREMENTS.

1 NOTES

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

GENERAL NOTES & PROJECT SCHEDULE
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
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SCALE: AS SHOWN | SHEET L311A

ARLINGTON
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FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

GENERAL
NOTES &
PRODUCT
SCHEDULE

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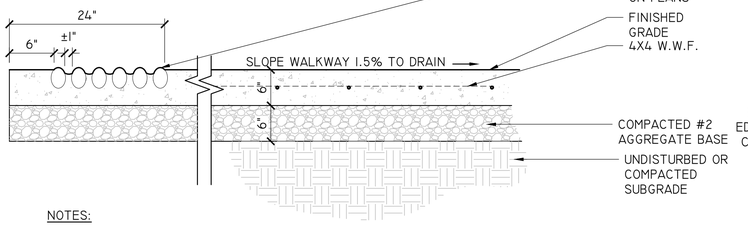
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L311A

GENERAL NOTE: PLANTING TO BE MIN. 4" BELOW ADJACENT HARD EDGES. APPLIES TO ALL AREAS ADJACENT TO CURBS, PAVING, ETC.

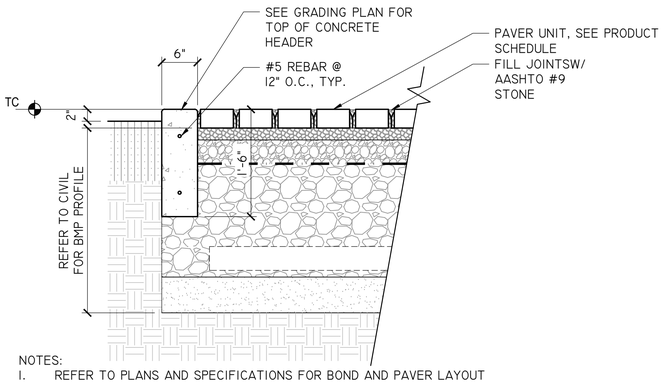


NOTES:

1. PROVIDE EXPANSION AND CONTROL JOINTS AS SHOWN ON THE PLANS, OR EXPANSION JOINTS EVERY 20' O.C. AND CONTROL JOINTS EVERY 5' O.C. IF NOT SHOWN.
2. ALL EXPANSION JOINTS SHALL BE FINISHED WITH SEALANT. COLOR TO MATCH COLOR OF CONCRETE PAVEMENT.
3. FINISH IN ACCORDANCE WITH VDOT 404.07, SIDEWALK FINISH, WITH CLEAR CURING COMPOUND.
4. DISTURBED LAWN AREAS ADJACENT TO CONCRETE PAVEMENT SHALL BE BACKFILLED AND SEEDED AS DESCRIBED IN SPECIFICATIONS .
5. REFER TO CONCRETE DETAILS, THIS SHEET FOR ADDITIONAL CONDITIONS AND REQUIREMENTS, AS NEEDED.

1 CONCRETE PAVEMENT - VEHICULAR (6" THICKNESS)

1"=1'-0"

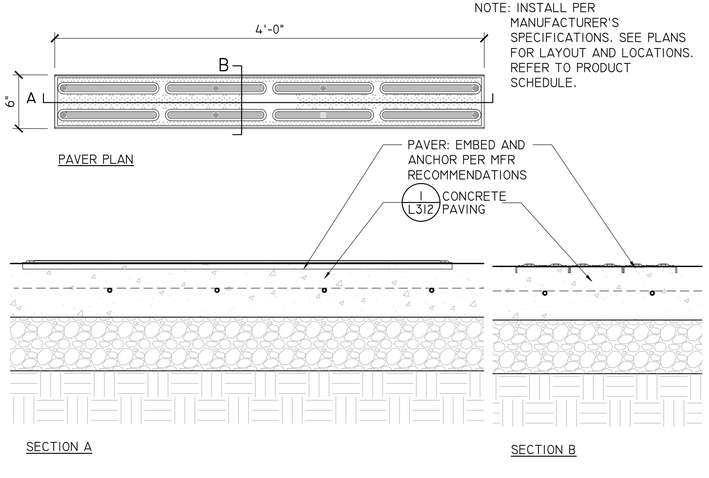


NOTES:

1. REFER TO PLANS AND SPECIFICATIONS FOR BOND AND PAVER LAYOUT POINT OF BEGINNING.
2. AVOID OVER-COMPACTION OF NATURAL SUBGRADE.

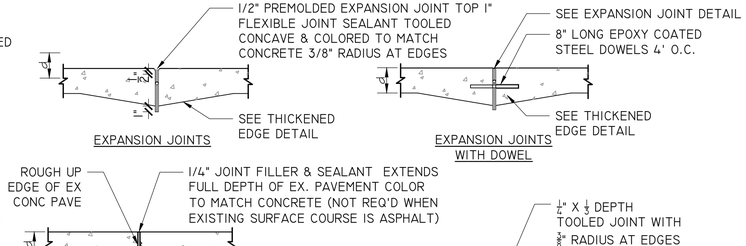
4 POROUS UNIT PAVING & HEADER CURB

1" = 1'-0"



7 LONGITUDINAL DIRECTIONAL PAVERS

1"=1'-0"

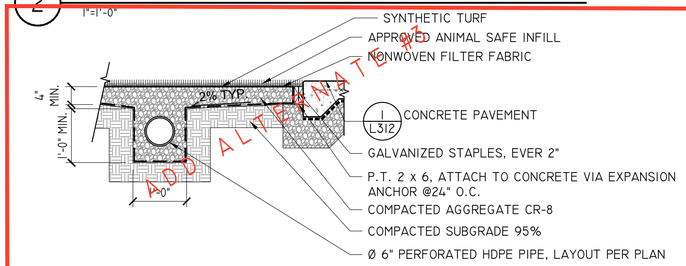


NOTES:

1. TRANSVERSE JOINT SPACE SHALL NOT EXCEED SPACING INDICATED IN PLANS. THE ARE OF THE PAVEMENT PANEL SHALL NOT EXCEED 225 SQUARE FEET.
2. JOINT OFFSETS AT RADIUS POINTS SHOULD BE AT LEAST 1'-6" LONG.
3. JOINT INTERSECTION ANGLES OF LESS THAN 60 DEGREES SHALL NOT BE USED.
4. WHEN A JOINT IS CLOSER THAN 1'-0" TO A CASTING, THEN A MINOR ADJUSTMENT IN THE JOINT LOCATION SHOULD BE MADE BY SKEWING OR SHIFTING THE JOINT ALIGNMENT TO MEET THE CASTING AT 90° OR NORMAL TO THE CASTING.

2 CONCRETE PAVING JOINT DETAILS

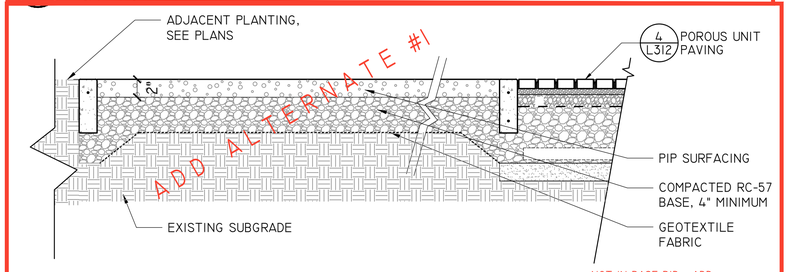
1"=1'-0"



5 SYNTHETIC TURF (NON-ATHLETIC)

3/4" = 1'-0"

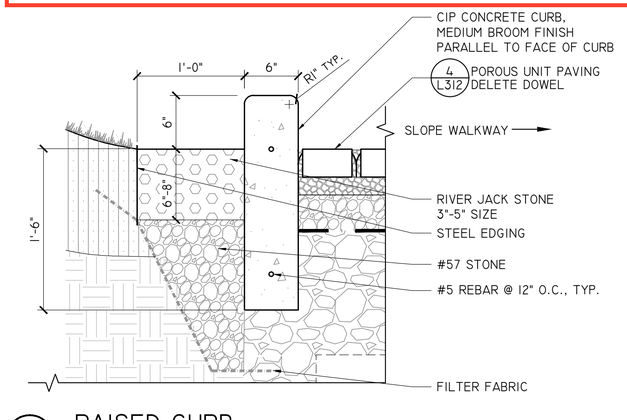
NOT IN BASE BID - ADD ALTERNATE #3



6 FLEXI-PAVE - POROUS FLEXIBLE PAVING

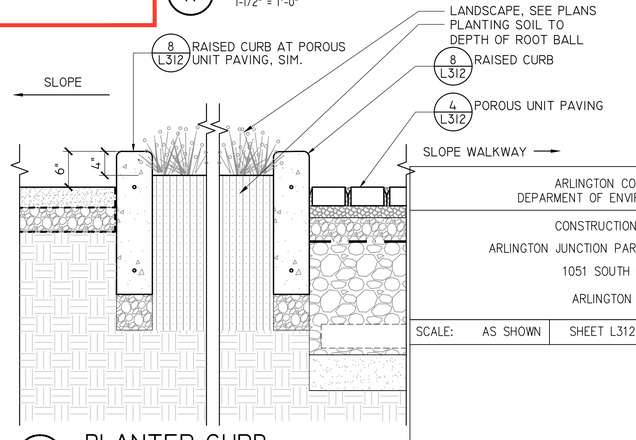
1/2"=1'-0"

NOT IN BASE BID - ADD ALTERNATE #1



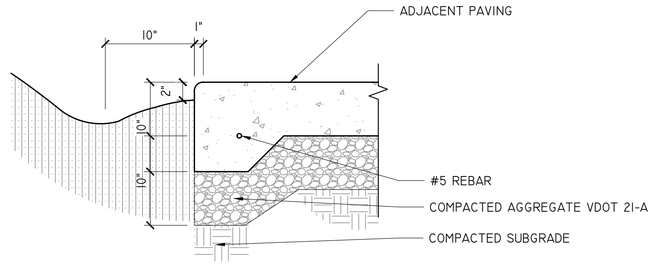
8 RAISED CURB

1-1/2" = 1'-0"



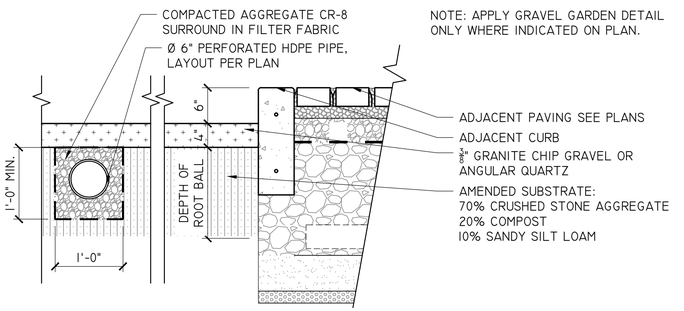
9 PLANTER CURB

1" = 1'-0"



3 CONCRETE EDGE CONDITION

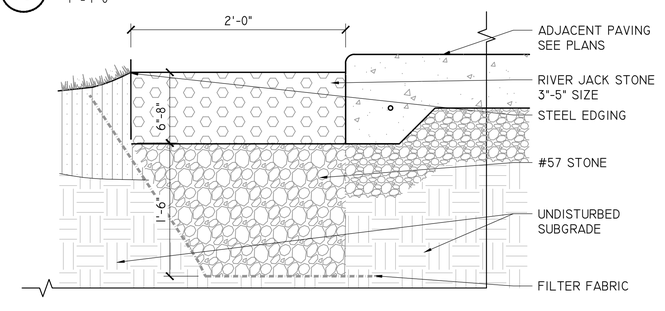
1 1/2" = 1'-0"



NOTE: APPLY GRAVEL GARDEN DETAIL ONLY WHERE INDICATED ON PLAN.

10 GRAVEL GARDEN

1" = 1'-0"



11 GRAVEL FILTER STRIP AT BIORETENTION

1-1/2" = 1'-0"

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

CONSTRUCTION DETAILS – PAVING

ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN

1051 SOUTH EADS STREET

ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET L312	

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

CONSTRUCTION DETAILS - PAVING

Approval Date

Design Supervisor

Revisions	Date
CEP#1	7/15/2021
CEP#2	12/21/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP #4	7/20/2023

Designed:
Drawn: JC, SM
Checked: SM, CF

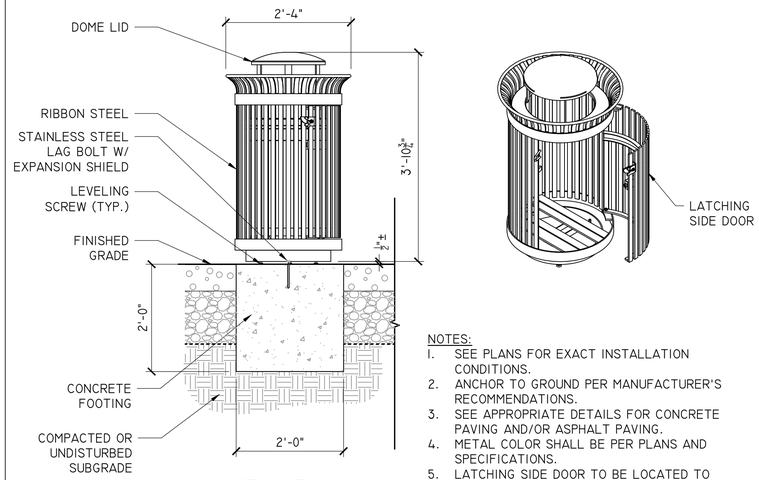
Filename:
Plotted:

Scale: AS SHOWN
Date: 04/20/2023

Seal

COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

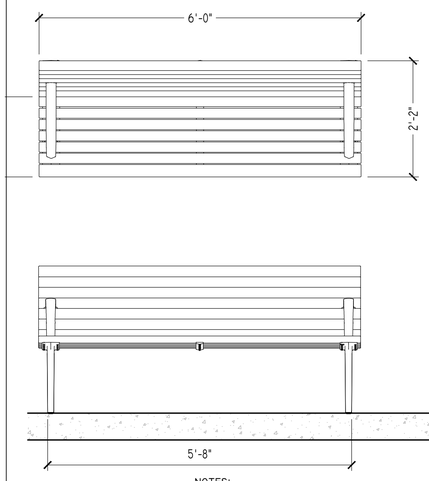
Sheet L312



INSTALLATION IN FLEXIPAVE

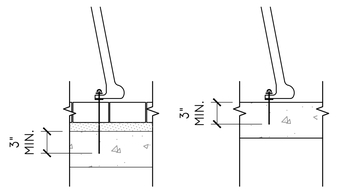
NOTES:
1. SEE PLANS FOR EXACT INSTALLATION CONDITIONS.
2. ANCHOR TO GROUND PER MANUFACTURER'S RECOMMENDATIONS.
3. SEE APPROPRIATE DETAILS FOR CONCRETE PAVING AND/OR ASPHALT PAVING.
4. METAL COLOR SHALL BE PER PLANS AND SPECIFICATIONS.
5. LATCHING SIDE DOOR TO BE LOCATED TO FRONT OF BIN SO THAT THE DOOR OPENS ALL THE WAY.

1 TRASH RECEPTACLE
3/4"=1'



NOTES:
1. REFER TO PRODUCT SCHEDULE.
2. SURFACE MOUNT PER MANUFACTURER'S WRITTEN SPECIFICATIONS.

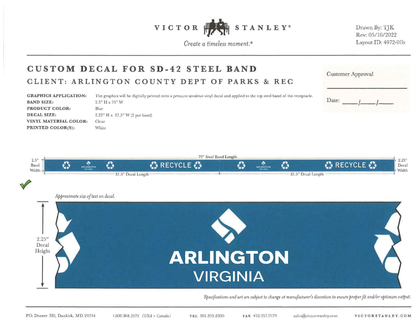
3 BENCH
3/4"=1'



UNIT PAVING CONCRETE PAVING

NOTE:
1. ALL HARDWARE TO BE GALVANIZED OR STAINLESS STEEL. PAINT TO MATCH LEG.
2. PROVIDE (1) ANCHOR & WASHER PER ANCHOR HOLE, AS REQUIRED BY BENCH MFR; DROP-IN ANCHOR OR SLEEVE ANCHOR W/ ACORN NUT.

4 BENCH ANCHOR
1-1/2"=1'-0"


VICTOR STANLEY®
Create a timeless moment.®

Drawn By: TJK
Rev: 05/10/2022
Layout ID: 4972-01b

CUSTOM DECAL FOR SD-42 STEEL BAND
CLIENT: ARLINGTON COUNTY DEPT OF PARKS & REC

Customer Approval:
Date: ____/____/____

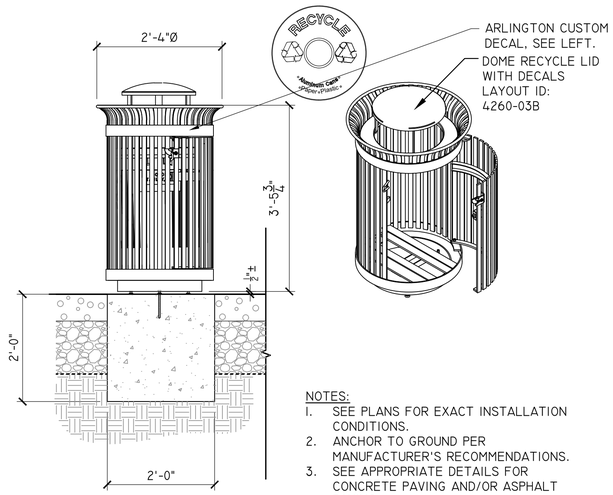
GRAPHICS APPLICATION: Use graphics will be digitally printed onto a pressure sensitive vinyl decal and applied to the top steel band of the receptacle.
BAND SIZE: 1.5" H x 75" W
PRODUCT COLOR: Blue
DECAL SIZE: 2.25" H x 37.5" W (2 per band)
VINYL MATERIAL COLOR: Clear
PRINTED COLOR(S): White

75" Steel Band Length
1.0" Band Width
RECYCLE
31.5" Decal Length
31.5" Decal Length
2.25" Decal Height
Approximate size of text on decal.
ARLINGTON VIRGINIA

Specifications and art are subject to change at manufacturer's discretion to ensure proper fit and/or optimum output.

P.O. Drawer 351, Dunkirk, MD 20754 1.800.368.2070 (USA + Canada) TEL 301.855.0300 FAX 410.257.3579 sales@victorstanley.com VICTORSTANLEY.COM

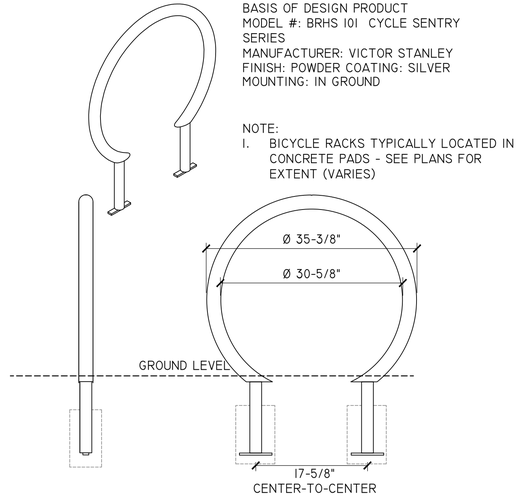
ARLINGTON CUSTOM DECAL



INSTALLATION IN FLEXIPAVE

NOTES:
1. SEE PLANS FOR EXACT INSTALLATION CONDITIONS.
2. ANCHOR TO GROUND PER MANUFACTURER'S RECOMMENDATIONS.
3. SEE APPROPRIATE DETAILS FOR CONCRETE PAVING AND/OR ASPHALT PAVING.
4. COLOR SHALL BE PER SPECIFICATIONS.
5. LATCHING SIDE DOOR TO BE LOCATED TO FRONT OF BIN SO THAT THE DOOR OPENS ALL THE WAY.

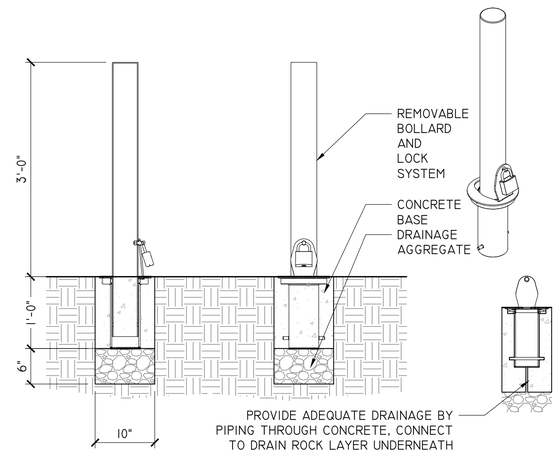
2 RECYCLING RECEPTACLE
3/4"=1'



BASIS OF DESIGN PRODUCT
MODEL #: BRHS 101 CYCLE SENTRY SERIES
MANUFACTURER: VICTOR STANLEY
FINISH: POWDER COATING: SILVER
MOUNTING: IN GROUND

NOTE:
1. BICYCLE RACKS TYPICALLY LOCATED IN CONCRETE PADS - SEE PLANS FOR EXTENT (VARIES)

5 BICYCLE RACK
1"=1'-0"



6 REMOVABLE BOLLARD
1"=1'-0"

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

CONSTRUCTION DETAILS – SITE FURNISHING
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET L313	

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION
Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location
ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET
ARLINGTON, VIRGINIA

Sheet Title
CONSTRUCTION DETAILS - SITE FURNISHING

Approval Date
Design Supervisor

Revisions	Date
CEP#1	7/15/2021
CEP#2	12/21/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP #4	7/20/2023

Designed:
Drawn: JC, SM
Checked: SM, CF

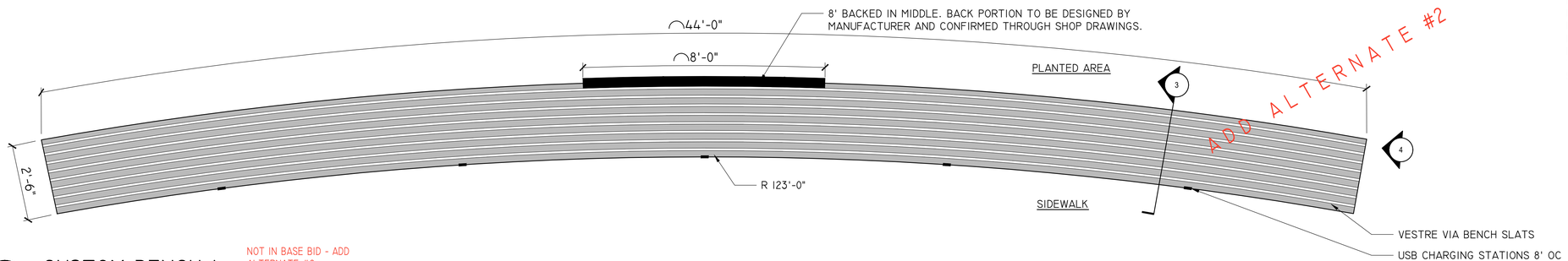
Filename:
Plotted:

Scale: AS SHOWN
Date: 04/20/2023

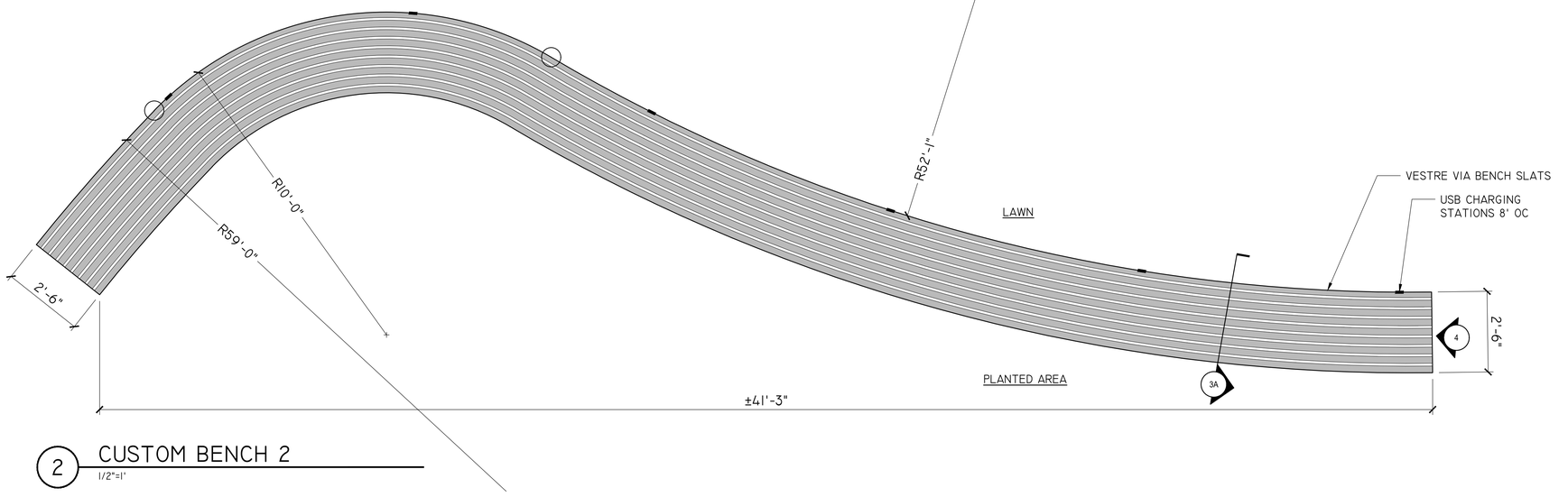
Seal
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L313

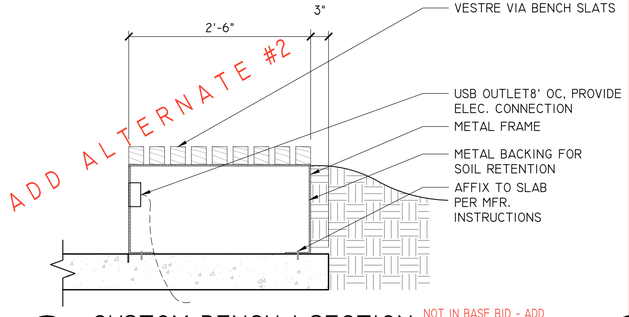
NOTE:
1. CUSTOM BENCH DETAILS ARE FOR ILLUSTRATIVE PURPOSES AND DESIGN INTENT ONLY. FINAL DETAILS FOR BENCH INCLUDING SLATS, FRAME, BENCH BACK, CONNECTIONS TO BE APPROVED THROUGH SHOP DRAWINGS.



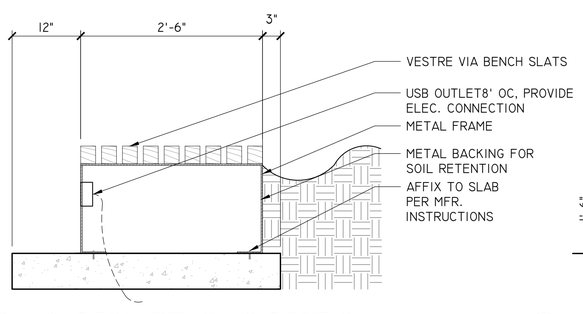
1 CUSTOM BENCH 1 — NOT IN BASE BID - ADD ALTERNATE #2
1/2"=1'



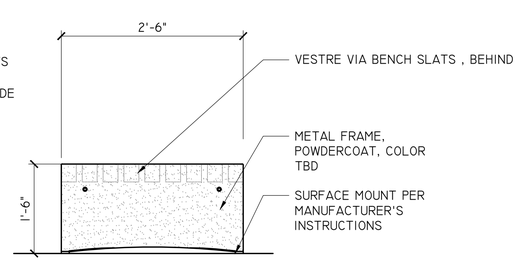
2 CUSTOM BENCH 2
1/2"=1'



3 CUSTOM BENCH 1 SECTION — NOT IN BASE BID - ADD ALTERNATE #2
1/2"=1'



3A CUSTOM BENCH 2 SECTION
1/2"=1'



4 CUSTOM BENCH ELEVATION
1/2"=1'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

CONSTRUCTION DETAILS – CUSTOM BENCHES
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET L314	

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION
Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location
ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET
ARLINGTON, VIRGINIA

Sheet Title
CONSTRUCTION DETAILS - CUSTOM BENCHES ADD ALTERNATES 2A&2B

Approval Date
Design Supervisor

Revisions	Date
CEP#1	7/15/2021
CEP#2	12/21/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP #4	7/20/2023

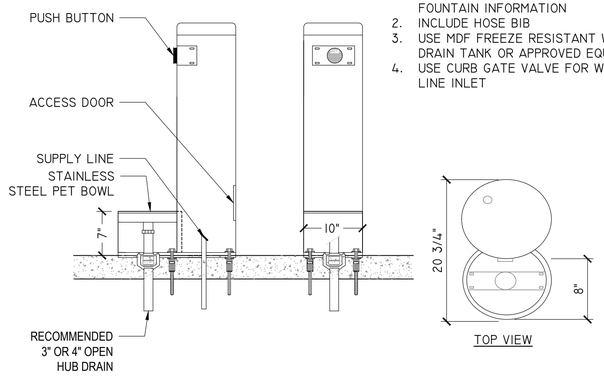
Designed:
Drawn: JC, SM
Checked: SM, CF

Filename:
Plotted:

Scale: AS SHOWN
Date: 04/20/2023

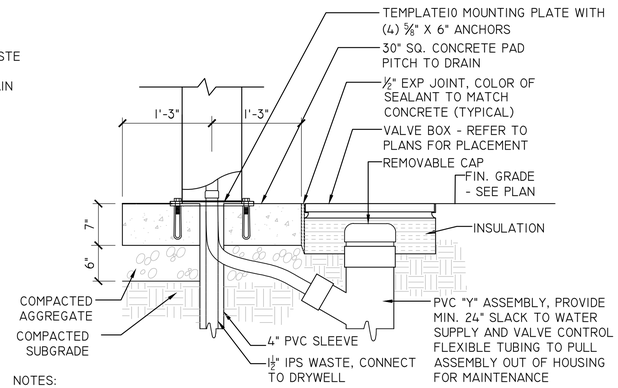
Seal
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L314



NOTES:
1. REFER TO PRODUCT SCHEDULE FOR FOUNTAIN INFORMATION
2. INCLUDE HOSE BIB
3. USE MDF FREEZE RESISTANT WITH WASTE DRAIN TANK OR APPROVED EQUAL
4. USE CURB GATE VALVE FOR WATER MAIN LINE INLET

1 DOG WATER FOUNTAIN
1"=1'-0"

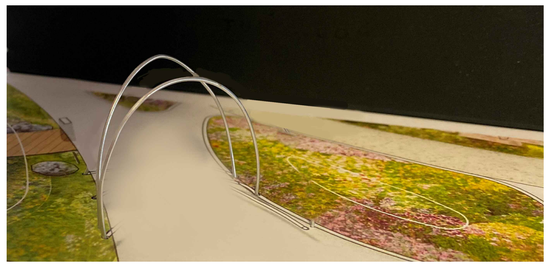


NOTES:
1. FOUNTAIN SHALL CONNECT TO DRY WELL SUBMIT PLANS FOR APPROVAL
2. VALVE BOX SHALL BE APPROVED ON SHOP DRAWINGS, REFER TO MANUFACTURER FOR SPECIFICATIONS

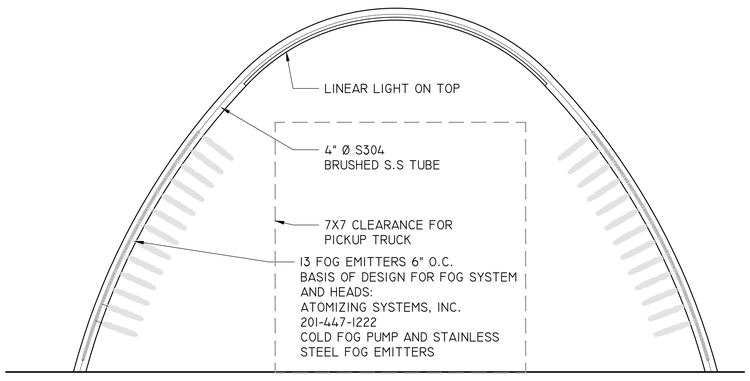
2 PET FOUNTAIN BASE
1"=1'-0"

NOTE:
1. DESIGN TO BE FINALIZED THROUGH COLLABORATION OF LANDSCAPE ARCHITECT, FABRICATOR, AND DPR
2. PROVIDE SHOP DRAWINGS

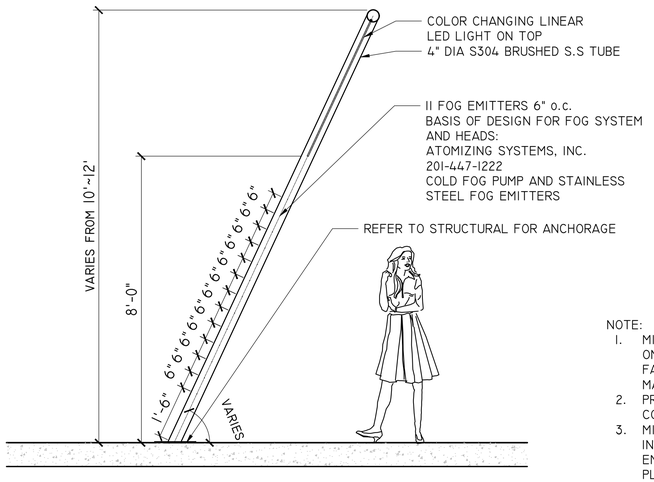
4 MISTER CONCEPT DESIGN
NTS



5 MISTER CONCEPT
NTS

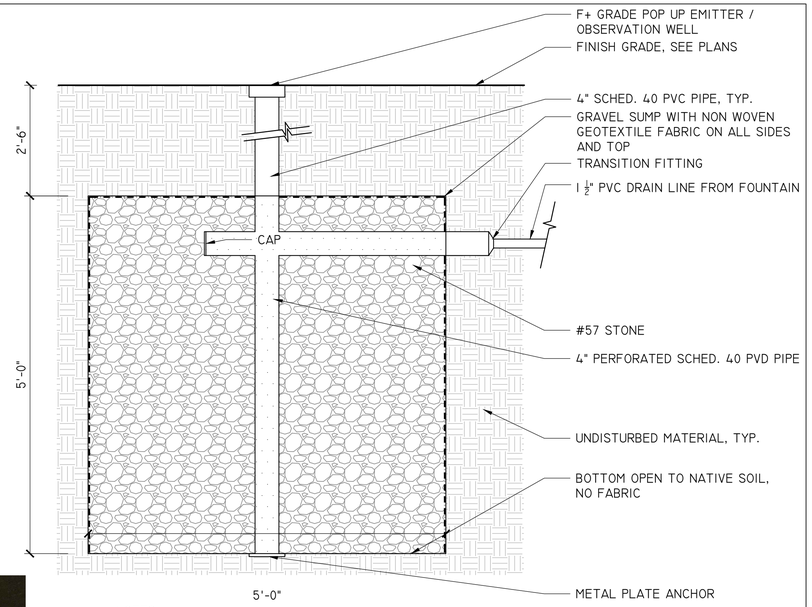


6 MISTER ELEVATION
1/2"=1'-0"



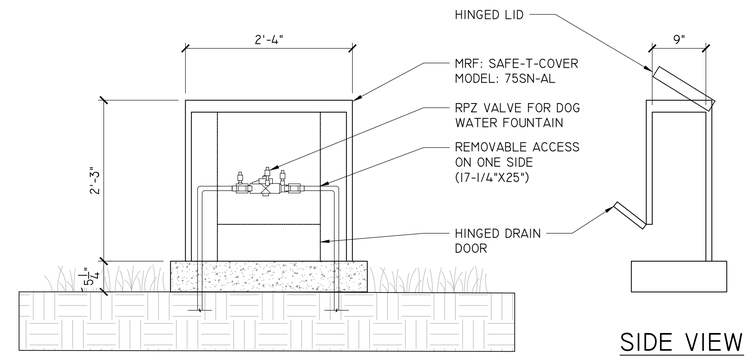
7 MISTER SECTION
1/2"=1'-0"

NOTE:
1. MISTERS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. FINAL DESIGN TO BE DETERMINED BY FABRICATOR AND APPROVED BY DPR PROJECT MANAGER AND LANDSCAPE ARCHITECT.
2. PROVIDE SHOP DRAWINGS FOR MISTER DESIGN, CONSTRUCTION, AND CONNECTIONS.
3. MISTER FABRICATOR SCOPE OF WORK SHOULD INCLUDE ALL ELEMENTS: TUBE ARCH, FOG EMITTERS, PUMP SYSTEM, LED LIGHTS, MOUNTING PLATE, AND PUSH-BUTTON ACTIVATION SYSTEM, AS WELL AS SHOP DRAWINGS FOR ALL ELEMENTS. WATER CONNECTION TO BE PROVIDED BY OTHERS.
4. CONTRACTOR TO COORDINATE WITH FABRICATOR AFTER AWARD OF CONTRACT TO PROCURE PROPOSAL AND SHOP DRAWINGS.



NOTES:
1. MINIMUM SIZE IS 5'L X 5'W X 5'H
2. ANCHOR PLATE MUST BE A 6" SQUARE METAL PLATE
3. FACILITIES SHALL BE SET BACK A MIN. 10' FROM PROPERTY LINE FOR A DOWN-GRADIENT PROPERTY AND MIN. 5' FOR AN UP-GRADIENT PROPERTY,

3 PET FOUNTAIN DRYWELL
1"=1'-0"



1A ABOVE GROUND RPZ VAULT
1"=1'-0"

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

CONSTRUCTION DETAILS – MISTERS AND FOUNTAIN
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET L315	

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

CONSTRUCTION DETAILS - MISTERS AND FOUNTAIN

Approval Date

Design Supervisor

Revisions	Date
CEP#1	7/15/2021
CEP#2	12/21/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP #4	7/20/2023

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Drawn: JC, SM
Checked: SM, CF

Filename:
Plotted:

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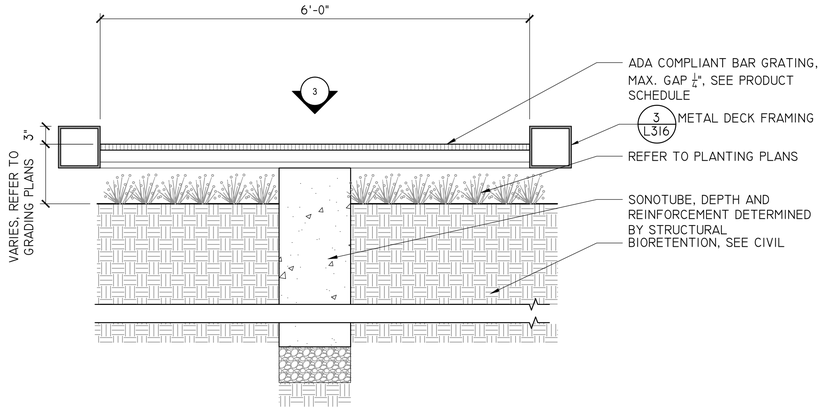
Date: 04/20/2023

Seal

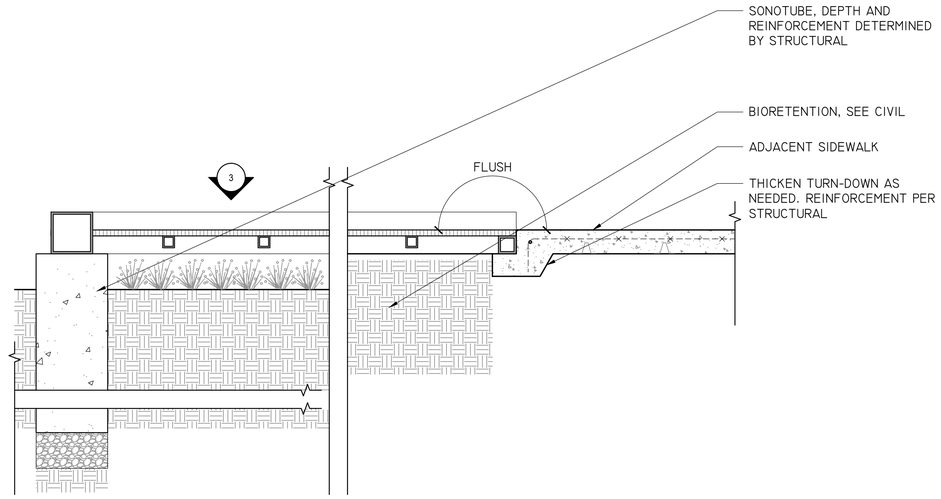
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet P315



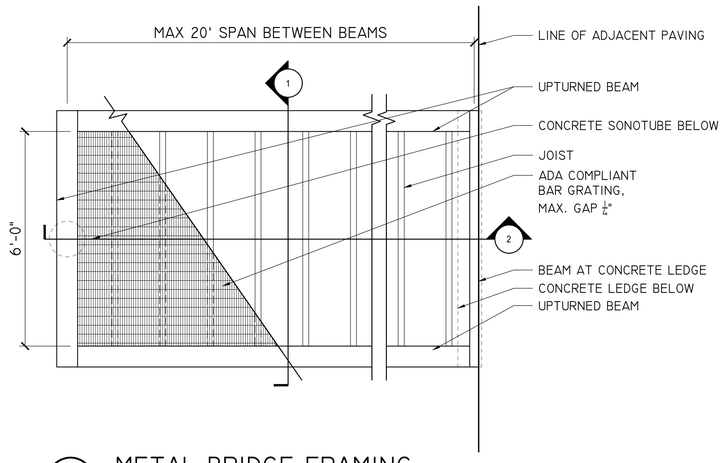
1 METAL BRIDGE SECTION

1" = 1'-0"



2 METAL BRIDGE SECTION

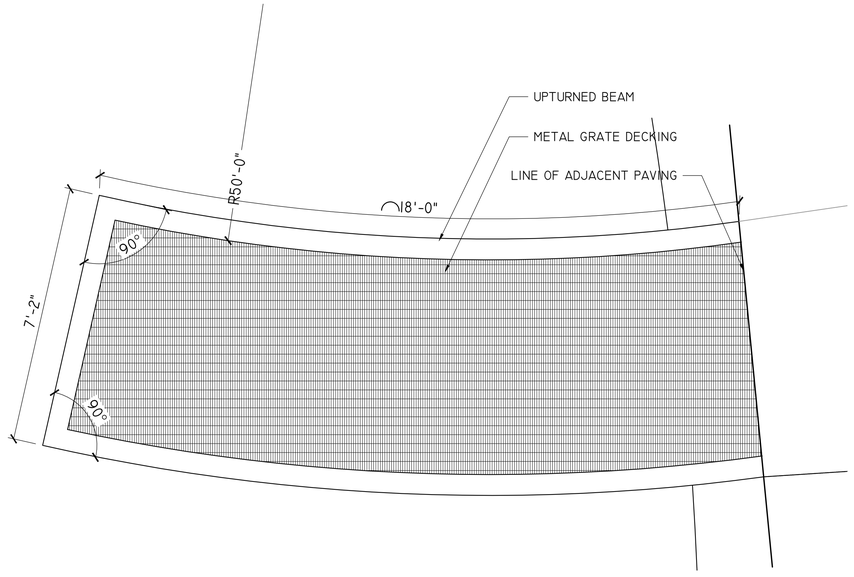
1" = 1'-0"



3 METAL BRIDGE FRAMING

1/2" = 1'-0"

NOTE: PROVIDE SHOP DRAWINGS



4 METAL BRIDGE PLAN

1/2" = 1'-0"

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

CONSTRUCTION DETAILS –METAL BRIDGE
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET L316	

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION
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2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

CONSTRUCTION DETAILS - METAL BRIDGE

Approval Date

Design Supervisor

Revisions	Date
CEP#1	7/15/2021
CEP#2	12/21/2023
BUILDING PERMIT	02/15/2023
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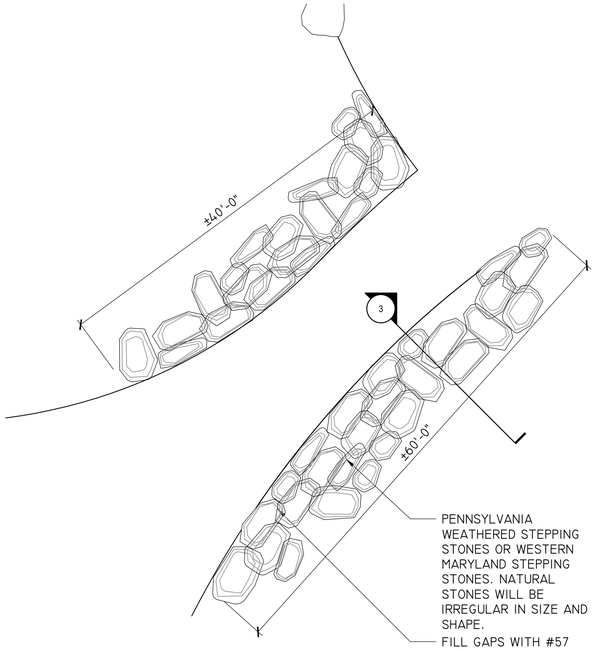
Seal

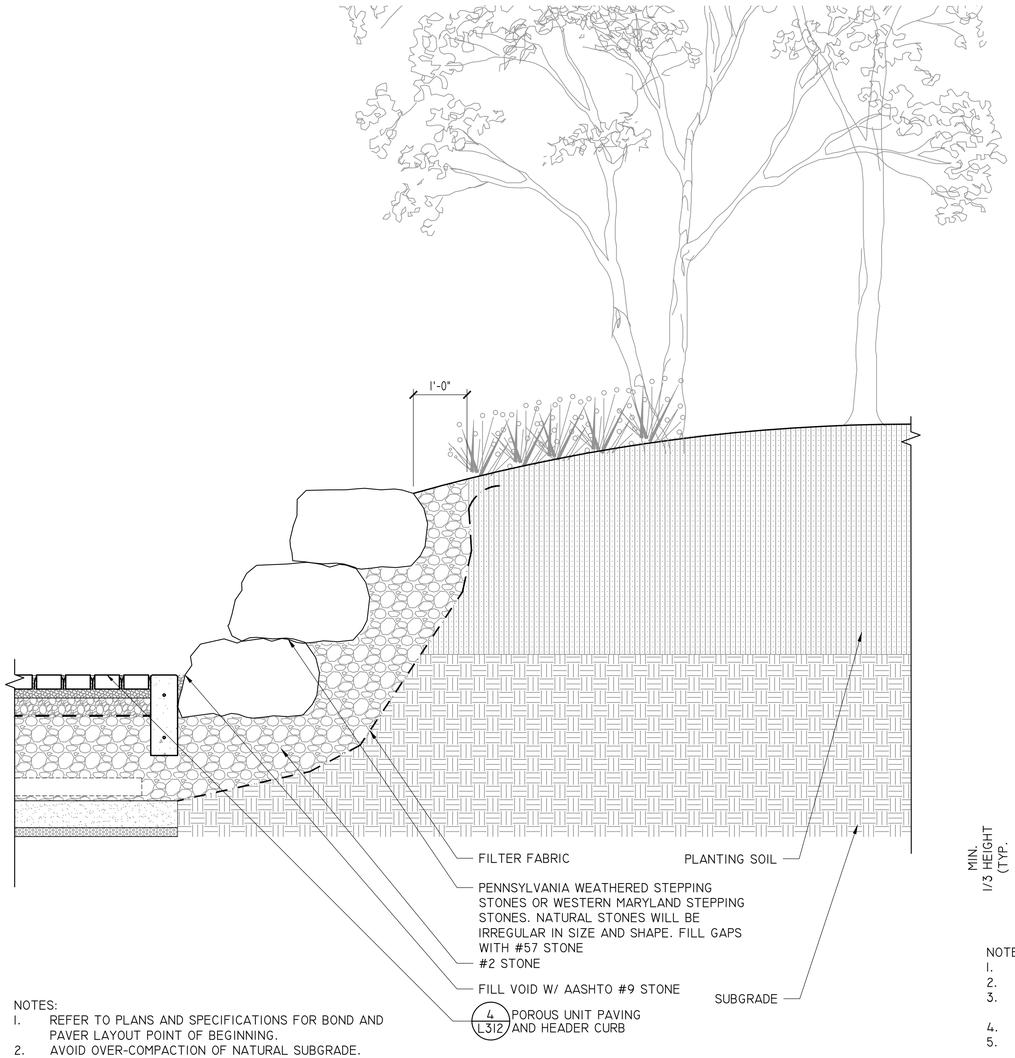
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L316



1 ENTRY WALL NORTH PARCEL

1/8" = 1'-0"

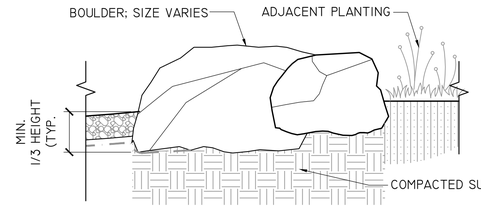


NOTES:
1. REFER TO PLANS AND SPECIFICATIONS FOR BOND AND PAVER LAYOUT POINT OF BEGINNING.
2. AVOID OVER-COMPACTION OF NATURAL SUBGRADE.

3 ENTRY WALL (BOULDER TYPE 1)

3/4"=1'-0"

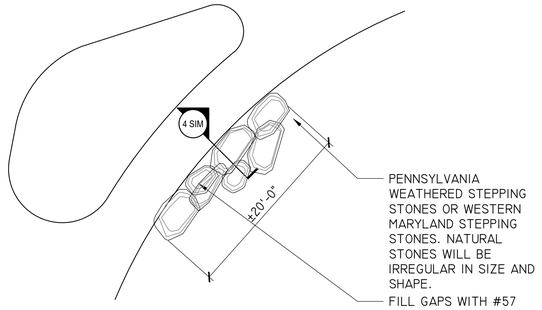
NOTE:
1. WALL DETAILS ARE FOR ILLUSTRATIVE PURPOSES ONLY.



NOTES:
1. BASIS OF DESIGN PRODUCT: PENNSYLVANIA MOUNTAIN BOULDERS.
2. BOULDER SIZE RANGES: REFER TO PRODUCT SCHEDULE.
3. ORIENT AND PLACE BOULDERS AS DIRECTED IN THE FIELD BY THE ARCHITECT.
4. SET WITH TOP SURFACE OF EACH BOULDER +/- LEVEL.
5. ADJACENT CONDITIONS VARY.

5 LANDSCAPE BOULDER TYPE 2

1"=1'-0"



2 ENTRY WALL SOUTH PARCEL

1/8" = 1'-0"

4 ENTRY WALL ILLUSTRATIVE VIEW

NTS

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

CONSTRUCTION DETAILS – BOULDER WALLS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L317

ARLINGTON VIRGINIA
DEPARTMENT OF PARKS AND RECREATION
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Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

CONSTRUCTION DETAILS - BOULDER WALLS

Approval Date

Design Supervisor

Revisions	Date
CEP#1	7/15/2021
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BUILDING PERMIT	02/15/2023
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CEP #4	7/20/2023

Designed:
Drawn: JC, SM
Checked: SM, CF

Filename:
Plotted:

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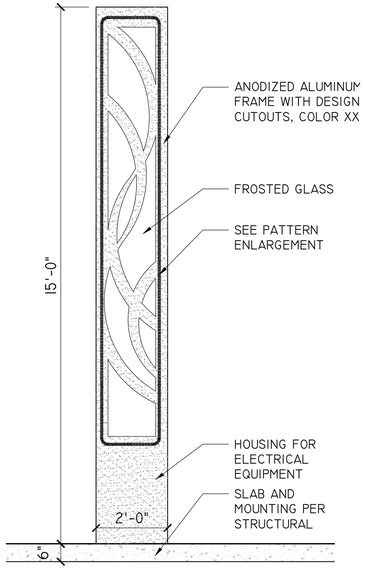
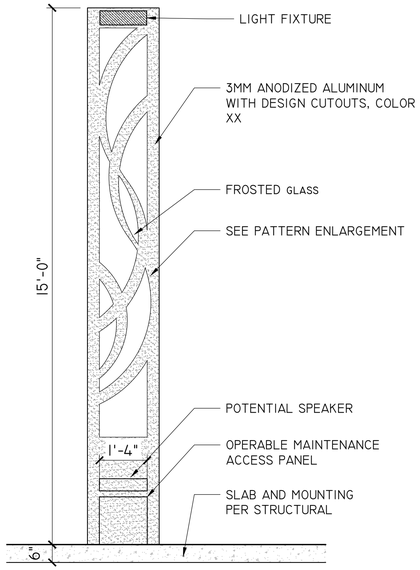
Seal

COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

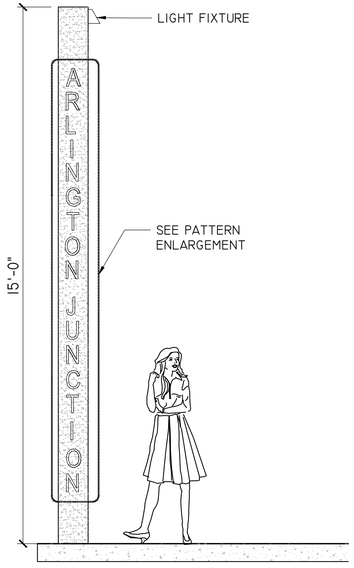
Sheet L317



FRONT, FACING THE PARK



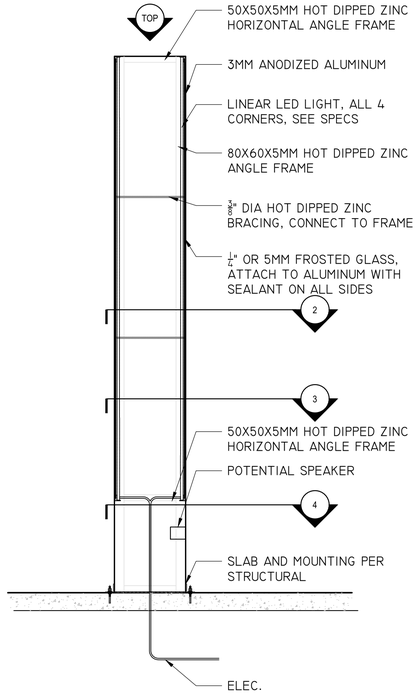
BACK, FACING THE WALK



SIDE, FACING PARK ENTRY

1 LI- PYLON AREA LIGHT ELEVATIONS

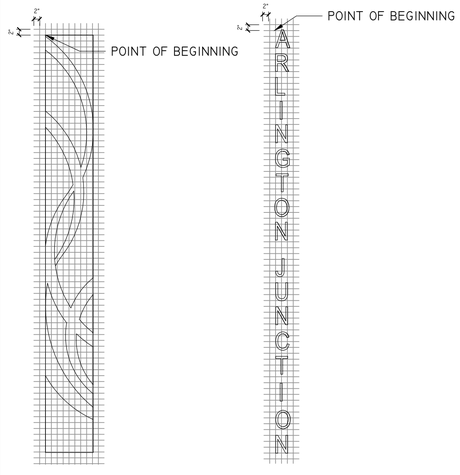
1/2"=1'-0"



2 LIGHT VERTICAL SECTIONS

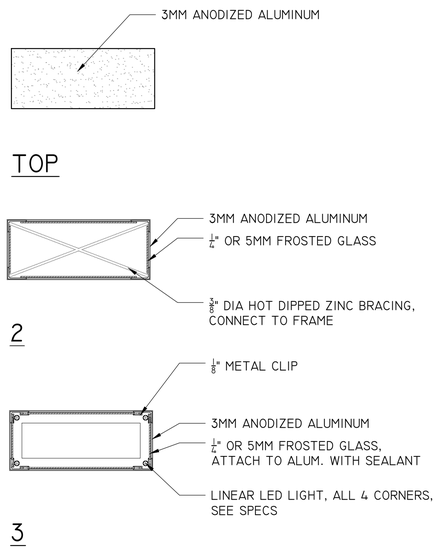
1/2"=1'-0"

NOTE: STEEL FRAMING SHOWN FOR PYLON LIGHT IS CONCEPTUAL ONLY. FABRICATOR / SUPPLIER SHALL DESIGN THE PYLON TO SUPPORT THE LOADING REQUIREMENTS INDICATED ON THE STRUCTURAL DRAWINGS, AND TO MATCH THE GEOMETRY AND SUPPORT THE FINISHES ON THE LANDSCAPE DRAWINGS. FABRICATOR / SUPPLIER SHALL SUBMIT THE PROPOSED ASSEMBLY ALONG WITH CALCULATIONS STAMPED AND SIGNED BY THE VIRGINIA LICENSED PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN OF THE PYLON SUPPORTS.



3 PATTERN ENLARGEMENT

1/2"=1'-0"



4 LI- PYLON AREA LIGHT HORIZONTAL SECTIONS

1"=1'-0"

ARLINGTON COUNTY, VIRGINIA
DEPARTMENT OF ENVIRONMENTAL SERVICES

CONSTRUCTION DETAILS – LIGHTING
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET L318	

ARLINGTON VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

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ITB #23-DPR-ITBPW-450

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ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

CONSTRUCTION DETAILS - LIGHTING

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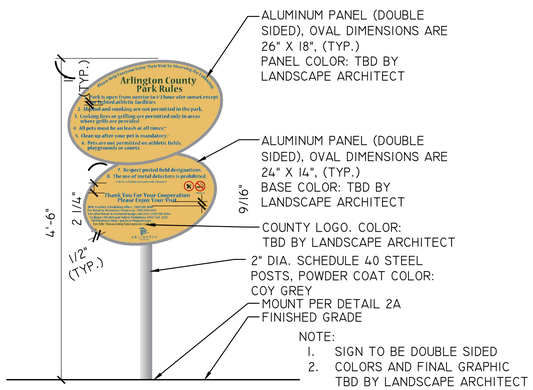
Seal

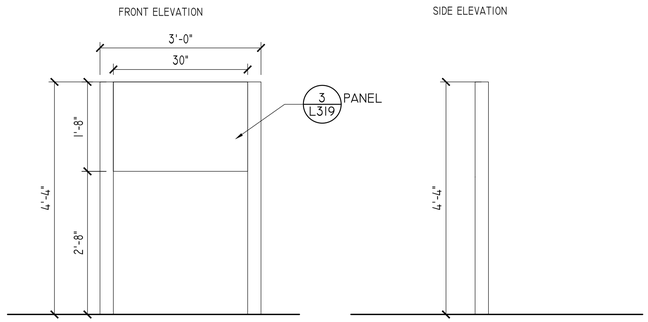
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L318

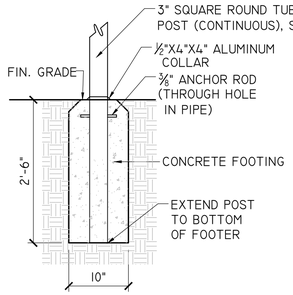


NOTE:
1. SIGN TO BE DOUBLE SIDED
2. COLORS AND FINAL GRAPHIC TBD BY LANDSCAPE ARCHITECT
3. PROVIDE SHOP DRAWINGS

1 PARK RULES SIGN
1"=1'-0"

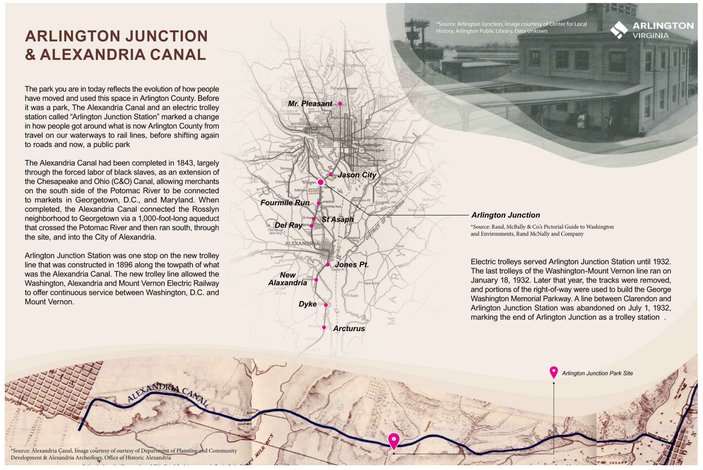


2 INTERPRETIVE SIGN
3/4"=1'-0"



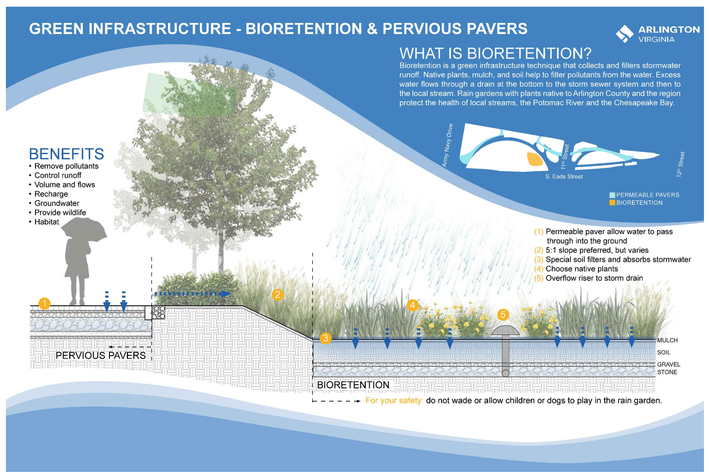
NOTES:
1. COLORS SHALL BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO ANY FABRICATION.
2. SEE LAYOUT PLAN FOR LOCATIONS.
3. SIGNS SHALL BE FABRICATED BY BY ENGRAPHIX ARCHITECTURAL SIGNAGE OR APPROVED EQUAL. SEE SPECIFICATIONS.

2A SIGN FOOTING
1" = 1'-0"



PARK HISTORY

POLLINATOR GARDEN



GREEN INFRASTRUCTURE

TREE PRESERVATION

3 INTERPRETIVE PANEL
NTS

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FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

CONSTRUCTION DETAILS - SIGNAGE

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COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

CONSTRUCTION DETAILS – SIGNAGE
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET L319	

Sheet L319

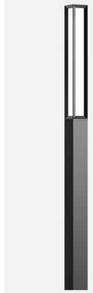
1 BENCH
NTS

2 CUSTOM BENCH
NTS

3 CUSTOM PYLON
NTS

4 PYLON FIXTURE
NTS

5 BOLLARD
NTS



6 PARK LIGHT POLE
NTS

7 SEATING NOOK - TABLES& CHAIRS
NTS

8 SEATING NOOK - LOUNGE
NTS

9 POWER PEDESTAL
NTS

NOTE: THIS SHEET IS FOR ILLUSTRATIVE PURPOSES ONLY. REFER TO PRODUCT SCHEDULE FOR MANUFACTURERS, MODEL NUMBERS, SIZES, COLORS ETC.

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

CONSTRUCTION DETAILS–SITE FURNISHING
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET L320	

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ITB #23-DPR-ITBPW-450

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Project Name and Location

ARLINGTON
JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

CONSTRUCTION
DETAILS - SITE
FURNISHING

Approval Date

Design Supervisor

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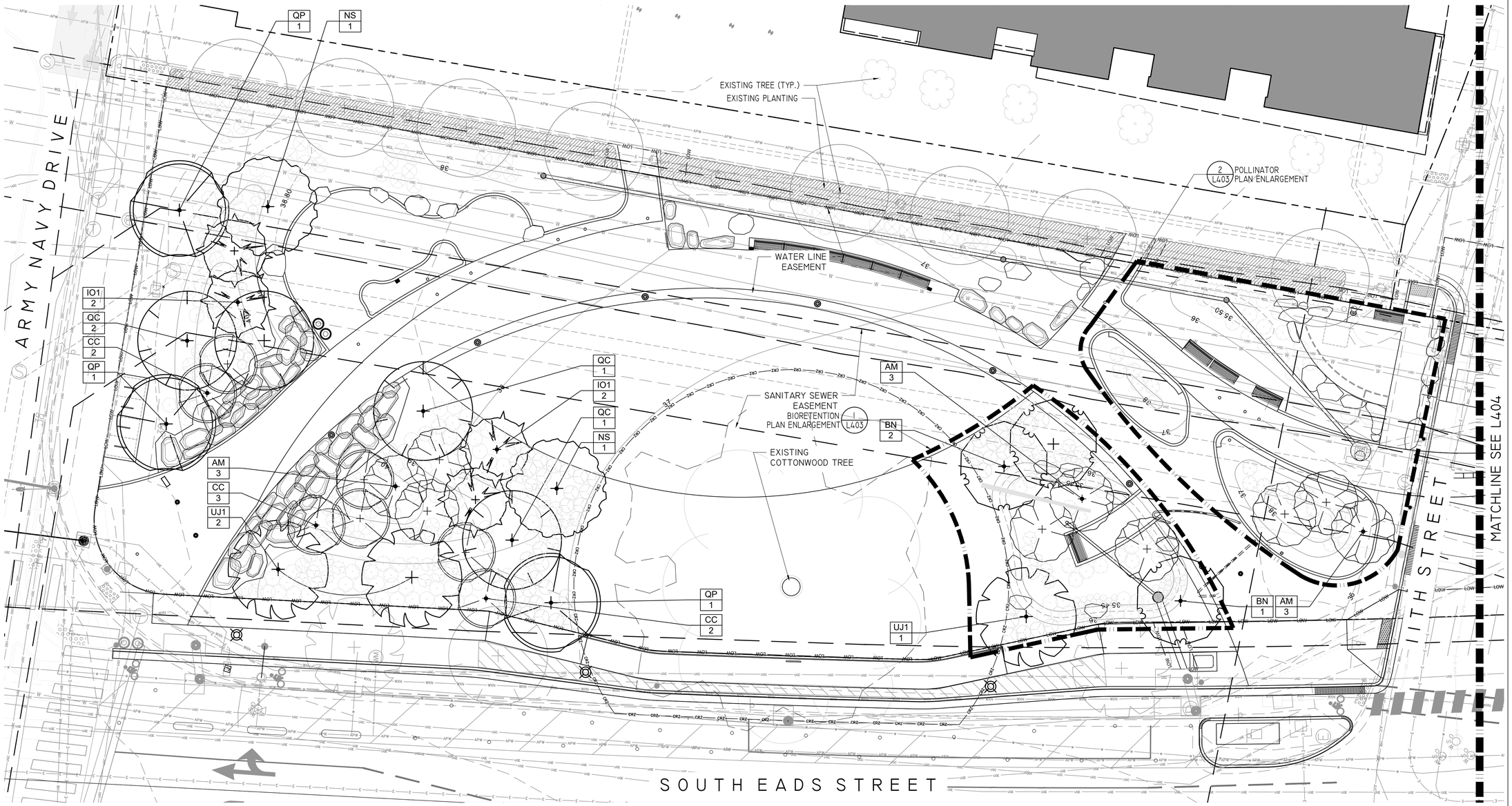
Seal

COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L320



1 NORTH PARCEL OVERSTORY PLANTING PLAN

1" = 10' - 0"

NOTE:

1. STREET TREE PLANTING ALONG SOUTH EADS STREET IS PART OF SOUTH EADS ROADWAY IMPROVEMENTS BETWEEN ARMY NAVY DR. AND 12TH ST S PROJECT
2. DISTURBED SOILS TO HAVE SOIL REBUILDING PER 02910 PLANT PREPARATION - SOIL PREPARATION. REFER TO SHEET L413.
3. SOIL PROFILE REBUILDING AREAS CAN BE MODIFIED OUTSIDE OF THE TREE PRESERVATION ZONE TO SUPPORT THE URBAN FORESTER TREE PRESERVATION RECOMMENDATIONS.

0 5' 10' 20' 30'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

PLANTING PLAN – NORTH PARCEL OVERSTORY
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L401

ARLINGTON
VIRGINIA

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ITB #23-DPR-ITBPW-450

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ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

PLANTING PLAN - NORTH PARCEL OVERSTORY

Approval Date

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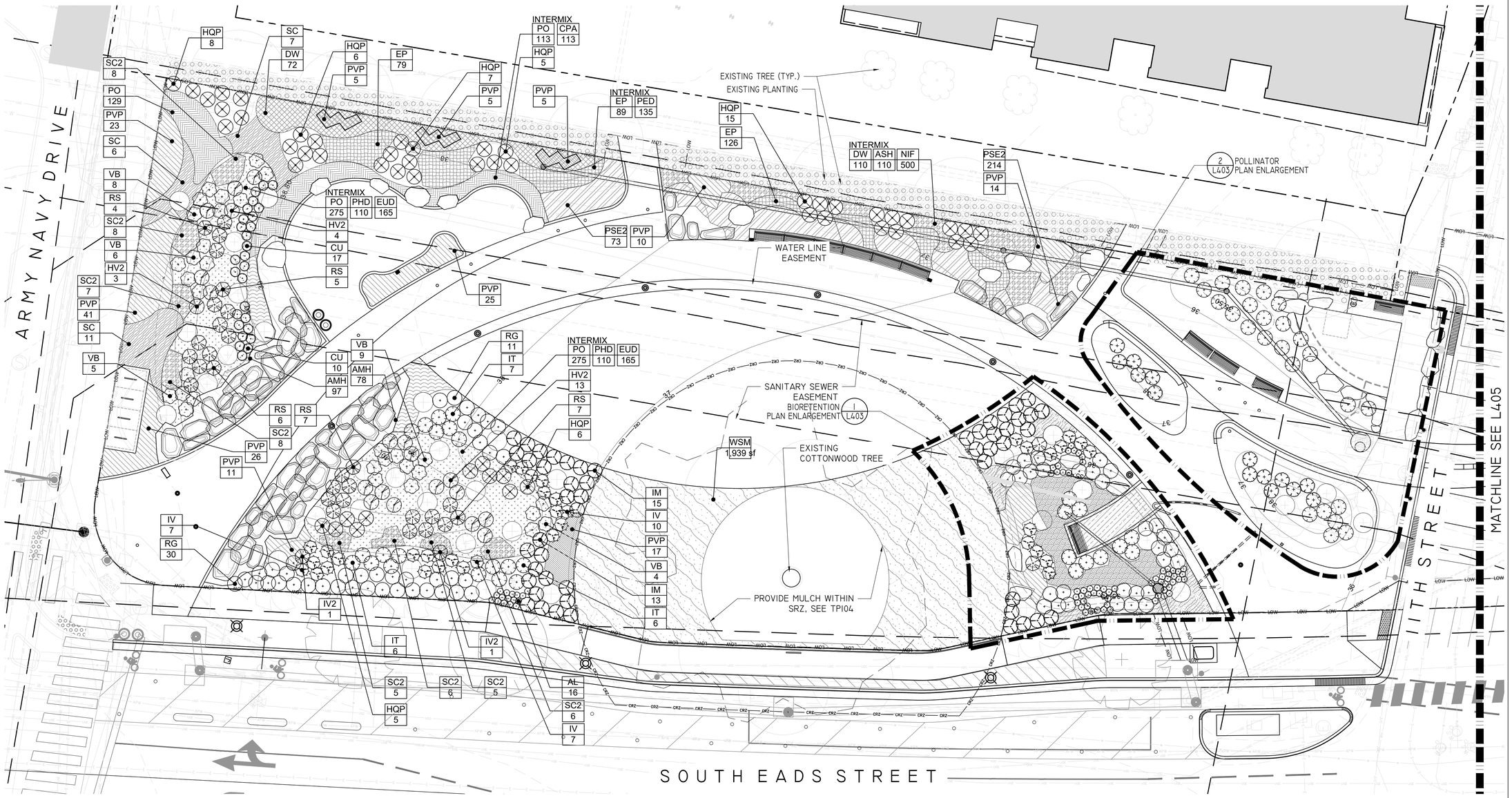
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L401



1 NORTH PARCEL UNDERSTORY PLANTING PLAN

1" = 10' - 0"

NOTE:
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0 5' 10' 20' 30'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

PLANTING PLAN – NORTH PARCEL UNDERSTORY
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L402

ARLINGTON
VIRGINIA

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ITB #23-DPR-ITBPW-450

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Project Name and Location
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FINAL PLAN

1051 SOUTH EADS STREET
ARLINGTON, VIRGINIA

Sheet Title
PLANTING PLAN - NORTH PARCEL UNDERSTORY

Approval Date
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Seal
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L402

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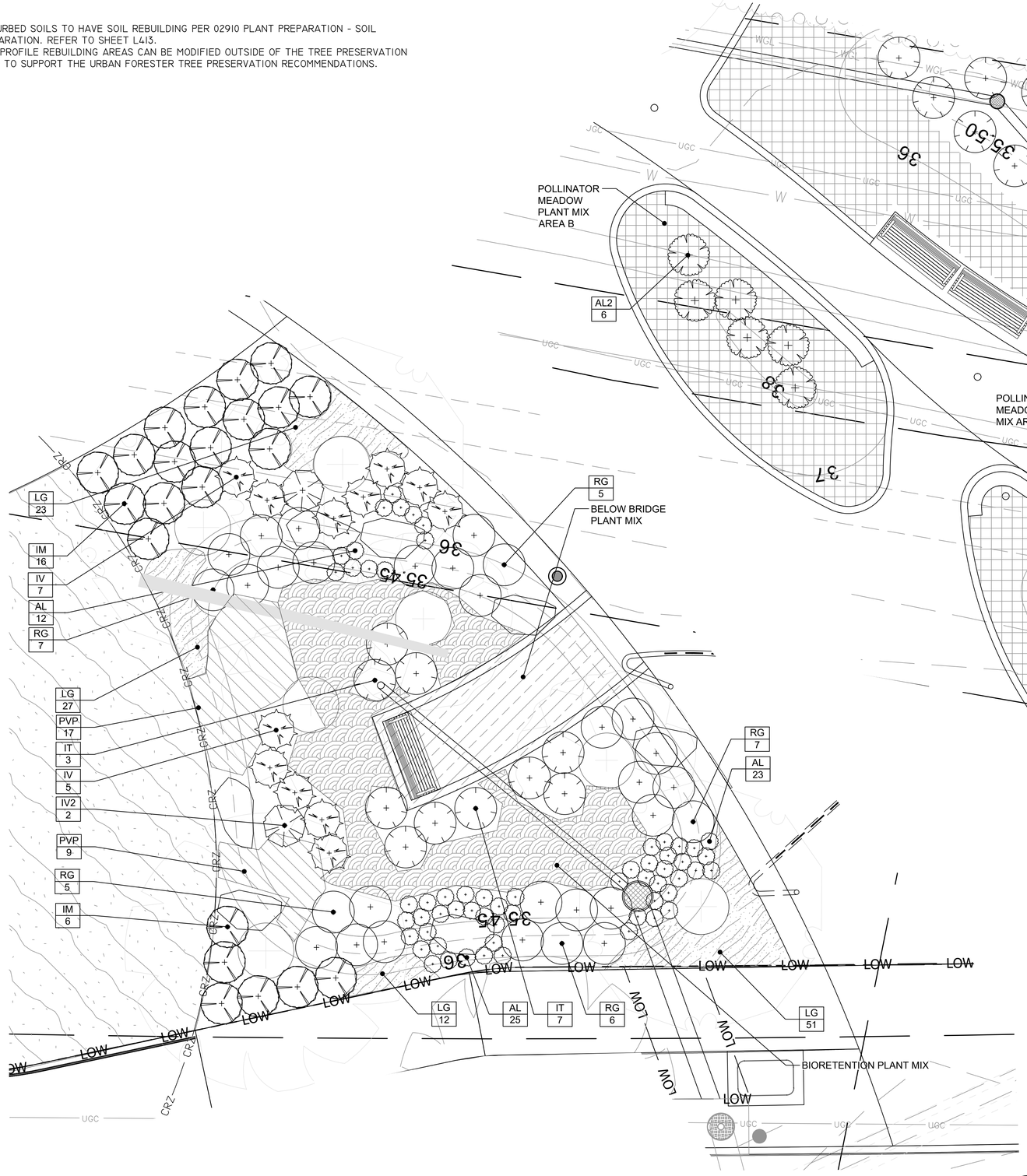

1 NORTH PARCEL BIORETENTION PLAN
1" = 4' - 0"

2 NORTH PARCEL POLLINATOR PLAN
1" = 4' - 0"

0 2' 4' 8' 12'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

PLANTING PLAN – NORTH PARCEL ENLARGEMENTS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L403

ARLINGTON
VIRGINIA

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1051 SOUTH EADS STREET
ARLINGTON, VIRGINIA

Sheet Title
PLANTING PLAN - NORTH PARCEL ENLARGEMENTS

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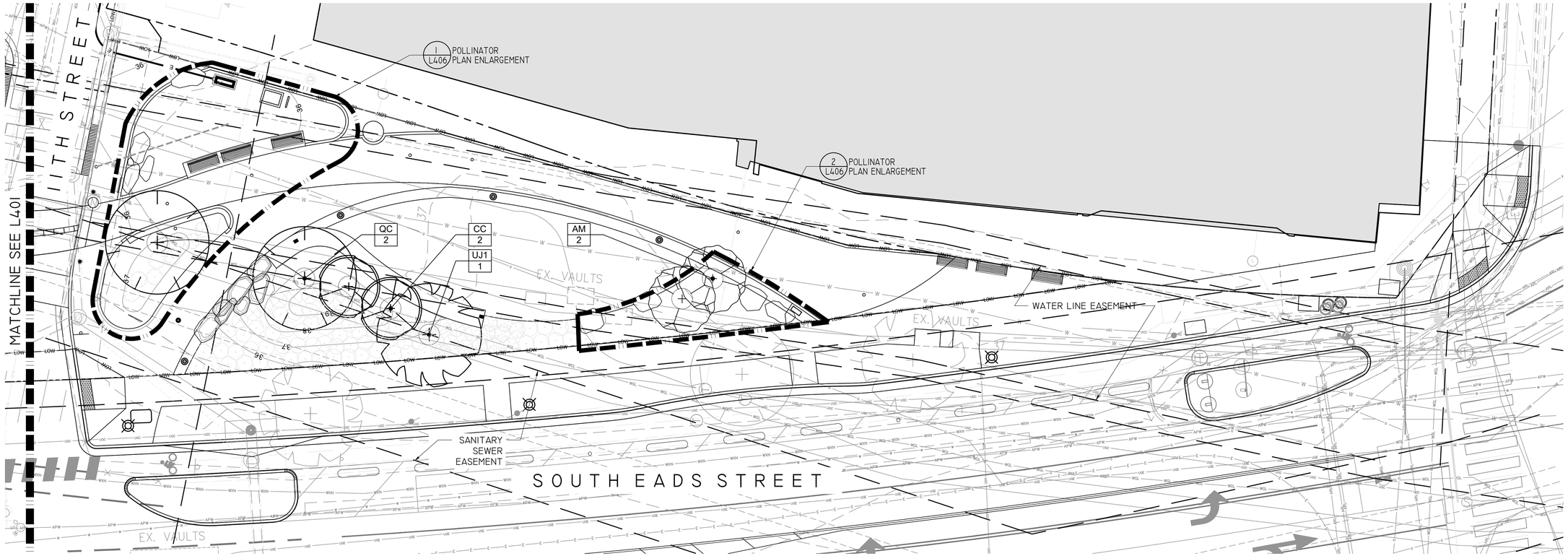
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L403



1 SOUTH PARCEL OVERSTORY PLANTING PLAN

1" = 10' - 0"

NOTE:

1. STREET TREE PLANTING ALONG SOUTH EADS STREET IS PART OF SOUTH EADS ROADWAY IMPROVEMENTS BETWEEN ARMY NAVY DR. AND 12TH ST S PROJECT
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0 5' 10' 20' 30'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

PLANTING PLAN – SOUTH PARCEL OVERSTORY
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L404

ARLINGTON
VIRGINIA

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PLANTING PLAN - SOUTH PARCEL OVERSTORY

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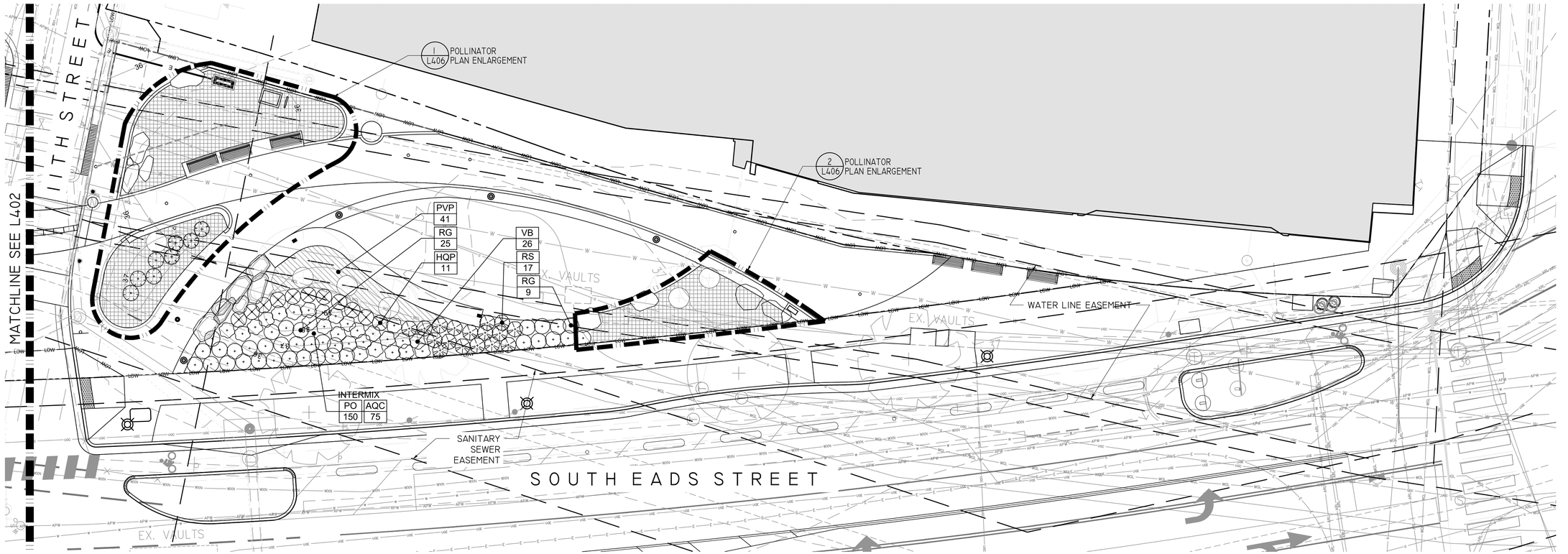
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L404



1 SOUTH PARCEL UNDERSTORY PLANTING PLAN

1" = 10' - 0"

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0 5' 10' 20' 30'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

PLANTING PLAN – SOUTH PARCEL UNDERSTORY
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
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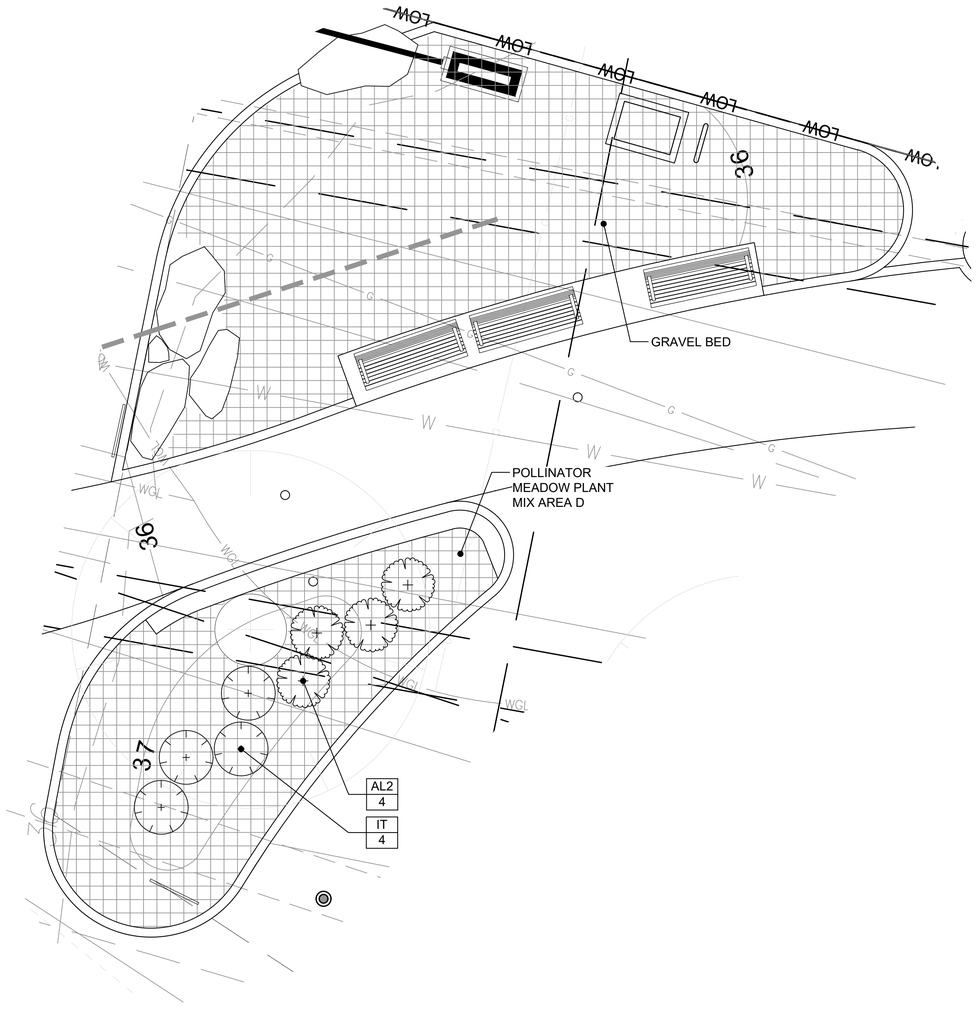
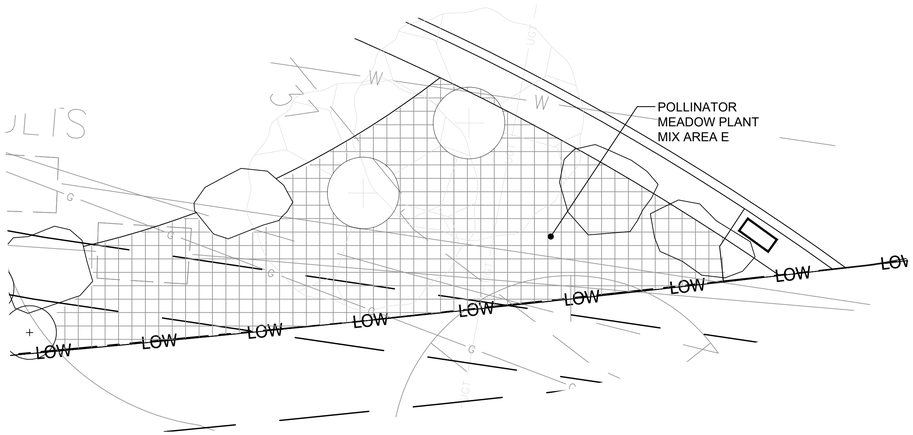


1 SOUTH PARCEL POLLINATOR PLAN

1" = 4' - 0"



2 SOUTH PARCEL POLLINATOR PLAN

1" = 4' - 0"

NOTE:

1. DISTURBED SOILS TO HAVE SOIL REBUILDING PER 02910 PLANT PREPARATION - SOIL PREPARATION. REFER TO SHEET L413.
2. SOIL PROFILE REBUILDING AREAS CAN BE MODIFIED OUTSIDE OF THE TREE PRESERVATION ZONE TO SUPPORT THE URBAN FORESTER TREE PRESERVATION RECOMMENDATIONS.

0 2' 4' 8' 12'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

PLANTING PLAN – SOUTH PARCEL ENLARGEMENTS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET L406	

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS
AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON
JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

PLANTING
PLAN - SOUTH
PARCEL
ENLARGEMENTS

Approval Date

Design Supervisor

Revisions	Date
CEP#1	7/15/2021
CEP#2	12/21/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP #4	7/20/2023

Designed:
Drawn: JC, SM
Checked: SM, CF

Filename:
Plotted:

Scale: AS SHOWN
Date: 04/20/2023

Seal

COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L406

NOTES
1. AT PLANTING PRUNE ONLY CROSSING LIMBS, BROKEN OR DEAD BRANCHES, AND ANY BRANCHES THAT POSE A HAZARD TO PEDESTRIANS PER ANSI STANDARD A300. DO NOT PRUNE INTO OLD WOOD ON EVERGREENS.

2. CONTRACTOR SHALL MAXIMIZE EXCAVATED AREA FOR TREE PIT WITHOUT ADVERSELY IMPACTING ADJACENT SITE FEATURES.

3. UNLESS OTHERWISE DIRECTED BY ARLINGTON COUNTY URBAN FORESTER, BACKFILL SOIL MIXTURE WILL BE 3/4 EXISTING SOIL CLEANED OF DEBRIS (GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC MATERIAL (COMPOSTED BARK, LEAF MOLD, OR OTHER PLANT DEBRIS PROCESSED TO A POINT OF DECAY AND APPROVED BY THE URBAN FORESTER; PEAT MOSS SHALL NOT BE USED).

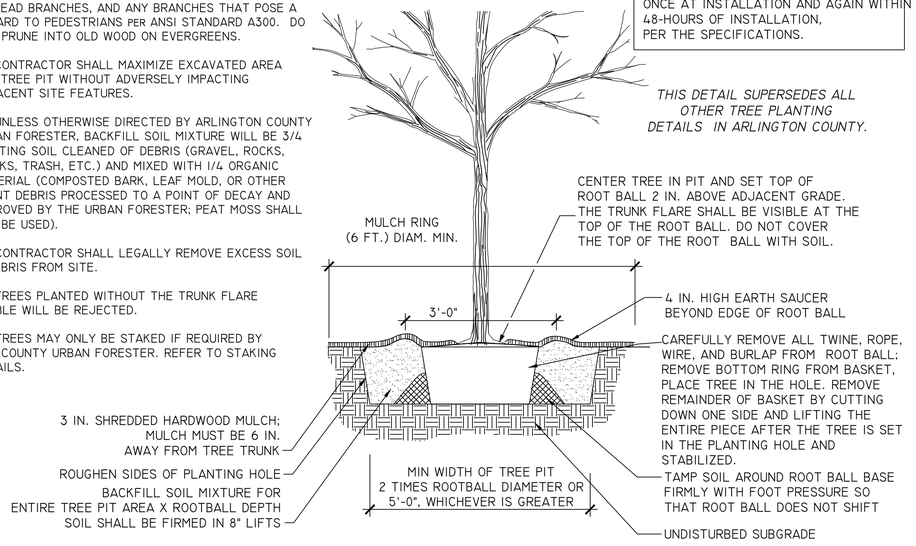
4. CONTRACTOR SHALL LEGALLY REMOVE EXCESS SOIL & DEBRIS FROM SITE.

5. TREES PLANTED WITHOUT THE TRUNK FLARE VISIBLE WILL BE REJECTED.

6. TREES MAY ONLY BE STAKED IF REQUIRED BY THE COUNTY URBAN FORESTER. REFER TO STAKING DETAILS.

ALL PLANTS MUST BE WATERED TWICE: ONCE AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION, PER THE SPECIFICATIONS.

THIS DETAIL SUPERSEDES ALL OTHER TREE PLANTING DETAILS IN ARLINGTON COUNTY.



1 TREE PLANTING DETAIL
NTS

NOTES
1. AT PLANTING PRUNE ONLY BROKEN OR DEAD BRANCHES PER ANSI 300 STANDARD.

2. PLANTING PIT/TRENCH SHALL BE DUG DEEP ENOUGH TO ALLOW AT LEAST 1/8TH OF ROOT BALL TO SET ABOVE EXISTING GRADE.

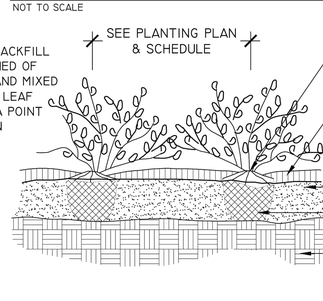
3. SET PLANTS IN ERECT, STABLE, AND UNIFORM POSITIONS. ORIENT BEST FACE OF PLANT TO BE THE MOST VISIBLE.

4. GROUND COVERS AND PERENNIALS SHALL BE INSTALLED WITH TRIANGULAR SPACING. REFER TO CHART.

5. CONTRACTOR SHALL REMOVE EXCESS SOIL & DEBRIS FROM SITE.

6. DO NOT PLACE MULCH IN CONTACT WITH STEM OF PLANTS.

ALL PLANTS MUST BE WATERED TWICE: ONCE AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION, PER THE SPECIFICATIONS.



PLANT SPACING "D" O.C.	ROW "A" O.C.	PLANTS PER S.F.
6"	5"	4.00
8"	7"	2.25
9"	8"	1.77
12"	10"	1.00
15"	13"	0.77
18"	16"	0.44

TRIANGULAR SPACING PLAN & CHART
NOT TO SCALE

THIS DETAIL SUPERSEDES ALL OTHER GROUND COVER PLANTING DETAILS IN ARLINGTON COUNTY.

3 GROUND COVERS & PERENNIAL PLANTING DETAIL
NTS

NOTES
1. AT PLANTING PRUNE ONLY BROKEN OR DEAD BRANCHES PER ANSI 300 STANDARD.

2. PLANTING PIT/TRENCH SHALL BE DUG DEEP ENOUGH TO ALLOW AT LEAST 1/8TH OF ROOT BALL TO SET ABOVE EXISTING GRADE.

3. SET PLANTS IN ERECT, STABLE, AND UNIFORM POSITIONS IN THE CENTER OF THE PLANTING PIT. ORIENT BEST FACE OF PLANT TO BE THE MOST VISIBLE.

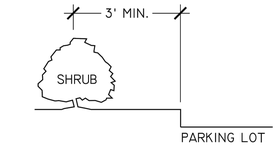
4. UNLESS OTHERWISE DIRECTED BY COUNTY URBAN FORESTER, BACKFILL SOIL MIXTURE WILL BE 3/4 EXISTING SOIL CLEANED OF DEBRIS (GRAVEL, ROCKS, STICKS, TRASH, ETC.) AND MIXED WITH 1/4 ORGANIC MATERIAL(COMPOSTED BARK, LEAF MOLD, OR OTHER PLANT DEBRIS PROCESSED TO A POINT OF DECAY AND APPROVED BY THE COUNTY URBAN FORESTER. PEAT MOSS MAY NOT BE USED).

5. CONTRACTOR SHALL REMOVE EXCESS SOIL & DEBRIS FROM SITE.

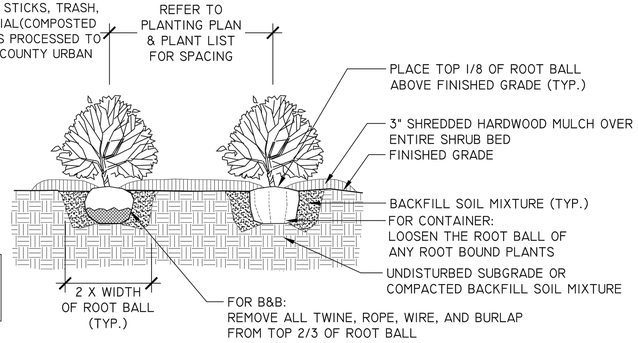
6. DO NOT PLACE MULCH IN CONTACT WITH STEM OF SHRUBS

THIS DETAIL SUPERSEDES ALL OTHER SHRUB PLANTING DETAILS IN ARLINGTON COUNTY.

ALL PLANTS MUST BE WATERED TWICE: ONCE AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION, PER THE SPECIFICATIONS.



TYPICAL SHRUB PLACEMENT NEAR PARKING LOTS
NOT TO SCALE



2 SHRUB PLANTING DETAIL
NTS

NOTE:
1. STREET TREE PLANTING ALONG SOUTH EADS STREET IS PART OF SOUTH EADS ROADWAY IMPROVEMENTS BETWEEN ARMY NAVY DR. AND 12TH ST S PROJECT
2. DISTURBED SOILS TO HAVE SOIL REBUILDING PER 02910 PLANT PREPARATION - SOIL PREPARATION. REFER TO SHEET L413.
3. SOIL PROFILE REBUILDING AREAS CAN BE MODIFIED OUTSIDE OF THE TREE PRESERVATION ZONE TO SUPPORT THE URBAN FORESTER TREE PRESERVATION RECOMMENDATIONS.

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

PLANTING DETAILS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L411

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Project Name and Location
ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET
ARLINGTON, VIRGINIA

Sheet Title
PLANTING DETAILS

Approval Date
Design Supervisor

Revisions	Date
CEP#1	7/15/2021
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Seal
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L411

PLANT SCHEDULE

CANOPY TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
BN	3	BETULA NIGRA `DURA HEAT`	DURA HEAT RIVER BIRCH	8-10` HT.	B&B	AS SHOWN	MULTI-STEM, 3 STEMS MIN.
NS	2	NYSSA SYLVATICA "WILDFIRE`	SOUR GUM	2" CAL	B&B	AS SHOWN	BALANCED, STRONG CENTRAL LEADER
QC	6	QUERCUS COCCINEA	SCARLET OAK	2" CAL	B&B	AS SHOWN	MATCHED SPECIMENS, FULL BALANCED CANOPY
QP	3	QUERCUS PHELLOS `QPSTJ`	WILLOW OAK ASCENDOR	2" CAL	B & B	AS SHOWN	MATCHED SPECIMENS, FULL BALANCED CANOPY. PROVIDE FROM SELECT TREES
UJ1	4	ULMUS AMERICANA `JEFFERSON`	JEFFERSON AMERICAN ELM	2" CAL	B&B	AS SHOWN	MATCHED SPECIMENS, FULL BALANCED CANOPY. PROVIDE FROM SELECT TREES

EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
IO1	4	ILEX OPACA	AMERICAN HOLLY	8-10` HT.	B&B	AS SHOWN	FULL TO GROUND

ORNAMENTAL TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
AM	11	AMELANCHIER LAEVIS `SNOWCLOUD`	SNOWCLOUD ALLEGHENY SERVICEBERRY	6-8` HT	B&B	AS SHOWN	3-5 STEMS, MATCHING SPECIMEN
CC	9	CERCIS CANADENSIS	EASTERN REDBUD	6-8` HT	B&B	AS SHOWN	SINGLE STEM, FULL AND WELL BALANCED

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
AL2	18	AMORPHA CANESCENS	LEADPLANT	1 GAL	CONT.	AS SHOWN	HEAVY, FULL TO GROUND
AL	76	ARONIA MELANOCARPA 'LOW SCAPE MOUND'	LOW SCAPE MOUND BLACK CHOKEBERRY	1 GAL	CONT.	15" O.C.	HEAVY, FULL TO GROUND
CU	27	CLETHRA ALNIFOLIA `HUMMINGBIRD`	SUMMERSWEET	24"HT.	CONT.	24" OC	HEAVY, FULL TO GROUND
HV2	20	HAMAMELIS VIRGINIANA	COMMON WITCH HAZEL	30" - 36" HT.	CONT.	36" O.C.	HEAVY, FULL TO GROUND
HQP	63	HYDRANGEA QUERCIFOLIA `PEE WEE`	OAKLEAF HYDRANGEA	30-36"HT	CONT.	36" OC	HEAVY, FULL TO GROUND
IM	50	ILEX OPACA 'MARYLAND DWARF'	MARYLAND DWARF AMERICAN HOLLY	1 GAL	CONT.	36" OC	HEAVY, FULL TO GROUND
IV2	4	ILEX VERTICILLATA `JIM DANDY`	JIM DANDY WINTERBERRY	30" - 36" HT.	CONT.	36" OC	HEAVY, FULL TO GROUND
IV	38	ILEX VERTICILLATA `RED SPRITE`	RED SPRITE WINTERBERRY	30" - 36" HT.	CONT.	36" OC	HEAVY, FULL TO GROUND
IT	58	ITEA VIRGINICA `LITTLE HENRY` TM	VIRGINIA SUMMERSWEET	24"HT.	CONT.	36" OC	HEAVY, FULL TO GROUND
RS	46	RHODODENDRON ARBORESCENS	SWEET AZALEA	30" - 36" HT.	CONT.	36" O.C.	HEAVY, FULL TO GROUND
RG	105	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	12" - 18" HT.	CONT.	36" OC	HEAVY, FULL TO GROUND
VB	58	VIBURNUM X BURKWOODII 'CONOY'	CONOY VIBURNUM	30" - 36" HT.	CONT.	36" OC	HEAVY, FULL TO GROUND

GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
CPA	113	CAREX PENSYLVANICA	PENNSYLVANIA SEDGE	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD
LG	113	LYSIMACHIA LANCEOLATA 'BURGUNDY MIST'	BURGUNDY MIST LANCELEAF LOOSESTRIFE	1 GAL	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD
PO	942	PACKERA OBOVATA	GOLDEN GROUNDSEL	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD
SC2	53	SOLIDAGO CAESIA	WREATH GOLDENROD	1 QT	CONT.	24 OC	FULL AND HEAVY, LOCATE IN FIELD
SC	24	SYMPHORICARPOS X CHENAULTII 'HANCOCK'	HANCOCK CHENAULT CORALBERRY	1 GAL.	CONT.	42" OC.	FULL AND HEAVY, LOCATE IN FIELD

BULBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
NIF	500	NARCISSUS `ICE FOLLIES`	LARGE CUPPED DAFFODIL	TOP SIZE	BULB	12" OC	TOP SIZE

ORNAMENTAL GRASSES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
PVP	246	PANICUM VIRGATUM 'PURPLE TEARS'	PURPLE TEARS PANICUM	1 GAL.	CONT.	24" O.C.	FULL AND HEAVY, LOCATE IN FIELD
DW	182	DESCHAMPSIA FLEXUOSA	WAVY HAIR GRASS	1 GAL.	CONT.	24" O.C.	FULL AND HEAVY, LOCATE IN FIELD

PERENNIALS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
AMH	175	AMSONIA 'BLUE ICE'	ARKANSAS BLUESTAR	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD
ASH	110	AMSONIA HUBRICHTII	ARKANSAS BLUESTAR	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD
ASE	18	ASCLEPIAS EXALTATA	POKE MILKWEED	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD
ASI	9	ASCLEPIAS INCARNATA	SWAMP MILKWEED	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD
AQC	75	AQUILEGIA CANADENSIS	RED COLUMBINE	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD
EP	294	ECHINACEA PALLIDA	PALE PURPLE CONEFLOWER	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD
EUD	330	EURYBIA DIVARICATA	WHITE WOOD ASTER	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD
PHD	220	PHLOX DIVARICATA	WILD BLUE PHLOX	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD
PSE2	287	PHLOX SUBULATA `EMERALD PINK`	EMERALD PINK CREEPING PHLOX	1 QT	CONT.	15" O.C.	FULL AND HEAVY, LOCATE IN FIELD
PED	135	PENSTEMON DIGITALIS	MISSISSIPPI PENSTEMON	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD

POLLINATOR MEADOW PLANT MIX - AREA A	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
	9	SORGHASTRUM NUTANS 'INDIAN STEEL'	INDIAN GRASS	1 GAL	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	15	LIATRIS ASPERA	ROUGH BLAZING STAR	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	20	ECHINACEA PALLIDA	PALE PURPLE CONEFLOWER	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	18	AMSONIA HUBRICTII	HUBRICHT'S BLUESTAR	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	26	SYMPHYOTRICHUM OBLONGIFOLIUM 'RAYDON'S FAVORITE'	AROMATIC ASTER	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	15	SOLIDAGO ODORA	SWEET GOLDENROD	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	63	CAREX TEXENSIS	TEXAS SEDGE	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	80	DESCHAMPSIA FLEXUOSA	WAVY HAIR GRASS	1 GAL	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	12	ASCLEPIAS TUBEROSA	BUTTERFLY WEED	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	20	AQUILEGIA CANADENSIS	RED COLUMBINE	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	70	NARCISSUS 'ICE FOLLIES'	LARGE-CUPPED DAFFODIL	TOP SIZE	BULB	12" OC	FULL AND HEAVY, LOCATE IN FIELD

POLLINATOR MEADOW PLANT MIX - AREA B	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
	25	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	12	MONARDA BRADBURIANA	EASTERN BEEBALM	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	14	SYMPHYOTRICHUM OBLONGIFOLIUM 'OCTOBER SKIES'	AROMATIC ASTER	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	20	SOLIDAGO ODORA	SWEET GOLDENROD	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	40	BOUTELOUA CURTIPENDULA	SIDEOATS GRAMA	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	59	PACKERA OBOVATA	ROUNDLEAF RAGWORT	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	20	AQUILEGIA CANADENSIS	RED COLUMBINE	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	50	NARCISSUS 'ICE FOLLIES'	LARGE-CUPPED DAFFODIL	TOP SIZE	BULB	12" OC	FULL AND HEAVY, LOCATE IN FIELD

POLLINATOR MEADOW PLANT MIX - AREA C	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
	24	SOLIDAGO ODORA	SWEET GOLDENROD	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	42	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	19	MONARDA BRADBURIANA	EASTERN BEEBALM	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	41	SYMPHYOTRICHUM OBLONGIFOLIUM 'OCTOBER SKIES'	AROMATIC ASTER	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	20	PYCNANTHEMUM MUTICUM	BLUNT MOUNTAINMINT	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	60	BOUTELOUA CURTIPENDULA	SIDEOATS GRAMA	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	45	CAREX TEXENSIS	TEXAS SEDGE	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	75	PACKERA OBOVATA	ROUNDLEAF RAGWORT	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	43	AQUILEGIA CANADENSIS	RED COLUMBINE	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	70	NARCISSUS 'ICE FOLLIES'	LARGE-CUPPED DAFFODIL	TOP SIZE	BULB	12" OC	FULL AND HEAVY, LOCATE IN FIELD

POLLINATOR MEADOW PLANT MIX - AREA D	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
	9	SOLIDAGO ODORA	SWEET GOLDENROD	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	35	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	15	MONARDA BRADBURIANA	EASTERN BEEBALM	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	23	SYMPHYOTRICHUM OBLONGIFOLIUM 'OCTOBER SKIES'	AROMATIC ASTER	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	15	PYCNANTHEMUM MUTICUM	BLUNT MOUNTAINMINT	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	40	BOUTELOUA CURTIPENDULA	SIDEOATS GRAMA	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	60	PACKERA OBOVATA	ROUNDLEAF RAGWORT	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	23	AQUILEGIA CANADENSIS	RED COLUMBINE	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	50	NARCISSUS 'ICE FOLLIES'	LARGE-CUPPED DAFFODIL	TOP SIZE	BULB	12" OC	FULL AND HEAVY, LOCATE IN FIELD

POLLINATOR MEADOW PLANT MIX - AREA E	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
	12	SORGHASTRUM NUTANS 'INDIAN STEEL'	INDIAN GRASS	1 GAL	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	12	LIATRIS ASPERA	ROUGH BLAZING STAR	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	26	ECHINACEA PALLIDA	PALE PURPLE CONEFLOWER	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	20	AMSONIA HUBRICTII	HUBRICHT'S BLUESTAR	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	24	SYMPHYOTRICHUM OBLONGIFOLIUM 'RAYDON'S FAVORITE'	AROMATIC ASTER	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	15	SOLIDAGO ODORA	SWEET GOLDENROD	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	40	CAREX TEXENSIS	TEXAS SEDGE	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	60	DESCHAMPSIA FLEXUOSA	WAVY HAIR GRASS	1 GAL	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	10	ASCLEPIAS TUBEROSA	BUTTERFLY WEED	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	18	AQUILEGIA CANADENSIS	RED COLUMBINE	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	50	NARCISSUS 'ICE FOLLIES'	LARGE-CUPPED DAFFODIL	TOP SIZE	BULB	12" OC	FULL AND HEAVY, LOCATE IN FIELD

GRAVEL BED	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
	15	SORGHASTRUM NUTANS 'INDIAN STEEL'	INDIAN GRASS	1 GAL	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	10	LIATRIS ASPERA	ROUGH BLAZING STAR	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	19	ECHINACEA PALLIDA	PALE PURPLE CONEFLOWER	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	25	AMSONIA HUBRICTII	HUBRICHT'S BLUESTAR	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	25	SYMPHYOTRICHUM OBLONGIFOLIUM 'RAYDON'S FAVORITE'	AROMATIC ASTER	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	12	SOLIDAGO ODORA	SWEET GOLDENROD	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	64	CAREX TEXENSIS	TEXAS SEDGE	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	50	DESCHAMPSIA FLEXUOSA	WAVY HAIR GRASS	1 GAL	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	10	ASCLEPIAS TUBEROSA	BUTTERFLY WEED	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	16	AQUILEGIA CANADENSIS	RED COLUMBINE	1 QT	CONT.	LOCATE IN FIELD	FULL AND HEAVY, LOCATE IN FIELD
	40	NARCISSUS 'ICE FOLLIES'	LARGE-CUPPED DAFFODIL	TOP SIZE	BULB	12" OC	FULL AND HEAVY, LOCATE IN FIELD

BELOW BRIDGE PLANT MIX	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
	134	CAREX PENSYLVANICA	PENNSYLVANIA SEDGE	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD
	134	JUNCUS TENUIS	POVERTY RUSH	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD

BIORETENTION PLANT MIX	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
	12	ASCLEPIAS VERTICILLATA	WHORLED MILKWEED	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD
	140	CAREX DIVULSA	EUROPEAN GREY SEDGE	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD
	20	EUPATORIUM MACULATUM `GATEWAY`	GATEWAY JOE-PYE WEED	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD
	104	JUNCUS TENUIS	POVERTY RUSH	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD
	450	PACKERA OBOVATA	GOLDEN GROUNDSEL	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD
	20	SYMPHYOTRICHUM OBLONGIFOLIUM 'RAYDON'S FAVORITE	RAYDON'S FAVORITE FALL ASTER	1 QT	CONT.	12" OC	FULL AND HEAVY, LOCATE IN FIELD

SEED	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	SPACING	REMARKS
WSM	1,939SF	WOODLAND SEED MIX	WOODLAND SEED MIX	-	SEED	-	CUSTOM 'COTTONWOOD SEED MIX' BY ERNST SEED QUOTE # Q280451

1 PLANTING SCHEDULE
NTS

NOTES:
1. REFER TO SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING: SOIL ANALYSES AND AMENDMENT RECOMMENDATIONS; SOURCE LIST AND PHOTOGRAPHS FOR INITIAL SELECTION; PHOTOGRAPHS FOR VERIFICATION.
2. REFER TO SPECIFICATIONS FOR TREE TAGGING REQUIREMENTS.
3. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
4. MEET REQUIREMENTS OF ANSI Z60.I, LATEST ADDITION, FOR ALL PLANT MATERIAL.
5. QUANTITIES GIVEN ARE FOR INFORMATION ONLY. CONTRACTOR IS RESPONSIBLE FOR MEETING THE DESIGN INTENT, AS INDICATED ON PLANTING PLANS.
6. ALL PLANTS ARE TO BE HEALTHY, FULL, BALANCED, AND EXCEPTIONALLY HEAVY.
7. PROVIDE TURF PER SPECIFICATIONS IN ALL DISTURBED AREAS NOT OTHERWISE PLANTED OR PAVED.
8. ALL QUART SIZED PLANTS TO BE LOCATED IN FIELD.

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

PLANTING DETAILS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L412

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location
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FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

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Seal
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L412

NOTE:
1. SOIL PROFILE REBUILDING AREAS INDICATED IN GREEN.
2. REFER TO 02910-PLANT PREPARATION-SOIL PREPARATION FOR SOIL PROFILE REBUILDING

1 SOIL PROFILE REBUILDING LOCATIONS
1"=400'-0"

Soil Profile Rebuilding

Specification for Restoration of Graded and Compacted Soils that will be Vegetated

CSI Div 2

CSICode-02910-Plant Preparation-Soil Preparation

CONTENTS

1. PURPOSE AND DESCRIPTION

1.1 Purpose
Soil Profile Rebuilding is an appropriate soil restoration technique for sites where topsoil has been completely or partially removed and subsoil layers have been compacted (graded and/or trafficked by equipment). It may also be used with some modifications if topsoil is present. This is not an appropriate technique in sites with surface compaction only (6 inches or less), although this situation is rare on construction sites. This technique is not appropriate within the root zones of trees that are to be protected. Soil Profile Rebuilding can improve physical and biological characteristics of soil to allow for revegetation. Soil chemical problems, soil contamination from heavy metals, pathogens, or excessive debris or gravel shall be addressed separately.

1.2 Description of Procedure
The procedure includes a subsoiling procedure, addition of organic matter in the form of compost, replacement or addition of topsoil, and subsequent planting with woody plants. The soil preparation portion of Soil Profile Rebuilding puts the components in place for restoration to characteristics similar to undisturbed soils, however, the complete restoration process requires root activity and occurs over many years. This technique may be appropriate for restoration of disturbed soils as defined by SITES™.

1.3 Expected Outcomes
Soil Profile Rebuilding may improve vegetation establishment, increase tree growth rates, increase soil permeability, enhance formation of aggregates in the subsoil, and enhance long-term soil carbon storage.

2. PROCEDURE

2.1 Location
Profile Rebuilding shall occur on all soil areas that are to be vegetated that have been disturbed by trafficking or grading during construction or prior to construction. Soil areas that are not to be treated should be protected by permanent fencing during the construction period and all access to these areas prohibited. A soil map delineating protected areas and areas to be treated shall be approved by the owner, arborist, or landscape architect before grading or construction begins.

2.2 Sequencing
Profile Rebuilding shall occur after site disturbance is complete, including all vehicle and equipment trafficking, but before replacement of topsoil. Once profile rebuilding is complete, all traffic and equipment or materials storage on treated areas is prohibited with the exception of foot traffic for the purposes of planting or mulching.

If topsoil is already present and is 4 inches or greater in depth, use the "modifications for pre-existing topsoil."

2.3 Remove foreign materials
Remove all foreign materials resulting from construction operations, including oil drippings, stone, gravel, and other construction materials from the existing soil surface.

2.4 Application of Compost
Spread mature, stable compost (see Section 3. Definitions for definition of compost) to a 4 inch depth over compacted subsoil.

2.5 Subsoiling
Subsoiling may be performed when soil is neither wet nor dry. If a shovel cannot be forced into the soil, it is too dry. If the surface is sticky or muddy, it is too wet. Use a backhoe rearbucket or similar equipment with a tined bucket to break up the compacted soil and incorporate the compost. Work backwards away from excavated soils so that treated soil is not trafficked by the equipment. Insert the bucket through the compost layer and into the subsoil to a depth of 24 inches and raise a bucket of soil at least 24 inches above the soil surface. Tip the bucket and allow soil to fall. Repeat this procedure until no clumps of compacted soil larger than 12 inches in diameter remain. The tines of the bucket can be used to break apart larger clumps if necessary. 50% of the soil shall be in clumps 6 inches or smaller. No clumps shall be greater than 18" in diameter. The subsoiling is not intended to homogenize the compost and soil, but rather loosen the soil to a 24-inch depth and create veins of compost down to that depth as well. To ensure that subsoiling reached the appropriate depth, a push tube soil sampler shall be used to verify compost is present at 24 inch depth.

2.6 Replacement of topsoil

2.6.1 Standard procedure
Stockpiled topsoil, or additional topsoil if none is available from the site, shall be returned to the site to a 4 inch minimum depth (see *Section 3.3 Definitions* for definition of topsoil). If soil was severely disturbed (see definitions), a 6-8 inch minimum shall be replaced.

2.6.2 Modification if significant topsoil is already present before Profile Rebuilding is initiated
Case 1:
At least four inches of topsoil is present on the site after construction activities are completed AND soil **is not** severely disturbed (see *Section 3.3 Definitions* for description of severely disturbed).

Case 2:
Less than 4 inches of topsoil is present on site after construction activities were completed but before Profile Rebuilding is initiated, OR soil is severely disturbed (see *Section 3.3 Definitions* for description of severely disturbed).

For Case 1: A minimum of 3 inches additional topsoil shall be placed over the subsoiled layer before tilling.

For Case 2: Follow *Section 2.6.1 Standard procedure*, as if no topsoil had been present.

2.7 Tilling
Rototill topsoil to a depth of 6-8 inches when soil is neither dry nor very moist. Rototilling depth should cross the interface with the subsoiled layer by a minimum of 1 inch and can be verified with a random sampling with a push tube soil sampler.

2.8 Planting
Plant the site with woody plants, trees or shrubs, at a density that insure a minimum of 50% of the site will be occupied with roots within 10 years. Planting of at least one large stature tree (e.g., one that will mature at approximately 60-70 feet in height) or 20 medium stature shrubs per 5,000 sq. ft. shall be considered to achieve this.

3. DEFINITIONS

3.1 Topsoil
Soil can be considered topsoil if it originates from an A horizon of a natural soil or is a mineral soil with 3% or greater organic matter content and a NRCS textural class similar to pre-development A horizon soils for the site or as specified by the owner, arborist, or landscape architect. Blended soils shall not be used unless specified by the owner, arborist, or landscape architect. In addition topsoil shall:

1. Be friable and well drained

2. have a pH between 5.2 and 7.5 (a narrower range may be specified for particular plant material)
3. have an organic matter content not less than 3%
4. have low salinity as indicated by an electrical conductivity of less than 4.0 mmhos/cm
5. be free of debris, stones, gravel, trash, large sticks, heavy metals, and other deleterious contaminants, (if screening is used to remove debris, screen size must be ¾ inch or larger).
6. have a nutrient profile such that it is able to support plant growth
7. be free of noxious weed seeds

3.2 Compost
Compost feedstock shall be leaves, yardwaste, or foodwaste. Biosolid-based composts shall not be used. A compost sample with analysis shall be submitted for approval to the client before application.

Stability refers to the rate of biological breakdown, measured by carbon dioxide release. Maturity refers to completeness of the aerobic composting process and suitability (lack of plant toxicity) as a plant growth media, often measured by ammonia release and by plant growth tests. Compost manufacturers that subscribe to the US Composting Council's testing program may document stability as compost testing 7 or below in accordance with TMECC 05.08-B, "Carbon Dioxide Evolution Rate". Maturity (suitability for plant growth) may be documented as compost testing greater than 80% in accordance with TMECC 05.05-A, "Germination and Vigor". Compost is considered mature and stable if it tests at 6.0 or higher on the Solvita Compost Maturity Index Rating, which is a combination of Carbon Dioxide and Ammonia Maturity Tests (test information and equipment available at www.solvita.com).

Compost shall also:

1. Free of weed seeds
2. Free of heavy metals or other deleterious contaminants
3. Have an EC of less than 4.0 mmhos/cm

3.3 Severely Disturbed Soil
Soil shall be considered *severely disturbed* if grade was lowered more than 14 inches OR soil was compacted in lifts regardless of the final grade.

4. SUBMITTALS

4.1 Soil Map
A soil map indicating soil areas to be protected and those to be restored via Soil Profile Rebuilding shall be submitted by the contractor for approval by the owner, arborist, or landscape architect before construction begins.

4.2 Compost
A compost sample with analysis certifying it is stable, mature, from acceptable feedstocks and free of contaminants and weed seeds shall be submitted for approval to the landscape architect or owner before compost is applied to the soil.

4.3 Topsoil
A topsoil sample with analysis from a certified testing laboratory and verification of source shall be submitted for approval to the landscape architect or owner before application. Separate documentation is required for each 100 cubic yards of topsoil unless otherwise approved by the landscape architect or owner.

REFERENCES & PERMISSIONS
Use of this specification has been documented to increase tree canopy and soil carbon stores compared with typical practices. See www.urbanforestry.frec.vt.edu/SRES for more information.

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

SOIL PROFILE REBUILDING DETAILS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L413

ARLINGTON VIRGINIA
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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location
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FINAL PLAN

1051 SOUTH EADS STREET
ARLINGTON, VIRGINIA

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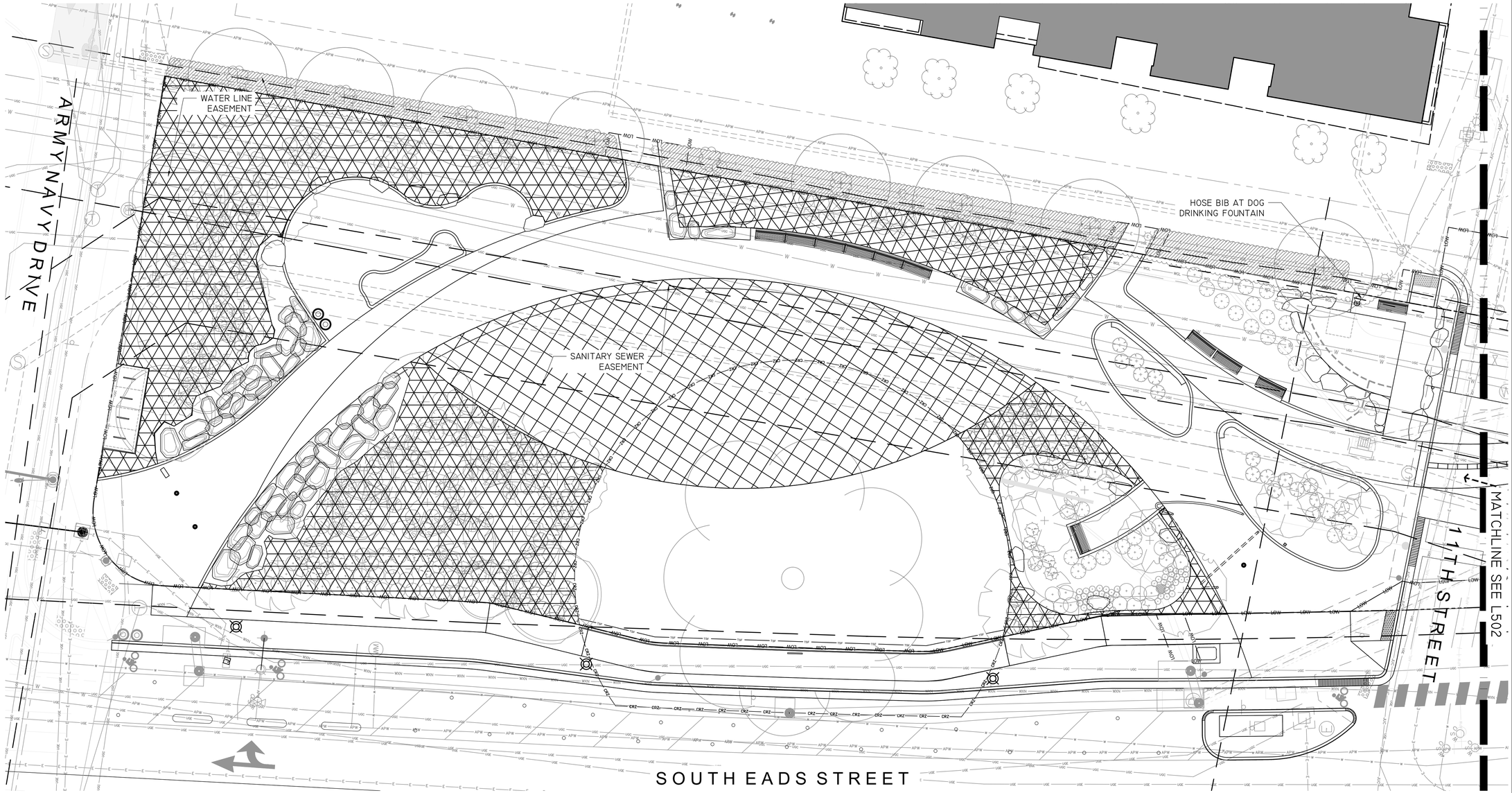
Seal
COMMONWEALTH OF VIRGINIA
YUNHUI FAN
No. 1316
CERTIFIED LANDSCAPE ARCHITECT

Sheet L413



IRRIGATION LEGEND

- C — CONTROLLER
- P — POINT OF CONNECTION
- HB — HOSE BIB
- POPUP SPRAY OR ROTOR IRRIGATION
- DRIP IRRIGATION

NOTES:

1. DRAWINGS PROVIDED ARE INTENDED AS A DIAGRAM INDICATING THE PLANTING AREAS TO BE IRRIGATED.
2. COMPLY WITH CURRENT CODE REQUIREMENTS.
3. POINT OF CONNECTION SHOWN IS SCHEMATIC ONLY. TO BE COORDINATED WITH ARLINGTON WATER SEWER STREETS (WSS).
4. PROVIDE HOSE BIB LOCATIONS AS NOTED.
5. STRUCTURE LOCATIONS SHOWN ARE SCHEMATIC ONLY. IRRIGATION INSTALLER TO PROVIDE DETAILED LOCATIONS OF CONTROL PANEL, SUBMETER, AND BACKFLOW PREVENTER.
6. REFER TO PLANTING PLANS FOR COMPLETE PLANTING INFORMATION.
7. REFER TO SPECIFICATIONS FOR MINIMAL SUBMITTAL REQUIREMENTS.
8. ZONE ALL DIVERGENT PLANT TYPES, SOIL TYPES, AND ENVIRONMENTAL CONDITIONS SEPARATELY.
9. IRRIGATION COVERAGE IS TO BE COMPREHENSIVE. NOTIFY ARCHITECT IF DISCREPANCIES BETWEEN FIELD CONDITIONS AND PLANS EXIST THAT WOULD RESULT IN LANDSCAPE WITHOUT IRRIGATION.
10. ALL PRUNING TO BE PERSONALLY DIRECTED BY COUNTY URBAN FORESTER.

0 5' 10' 20' 30'

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

IRRIGATION CONCEPT PLAN
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET L501

ARLINGTON
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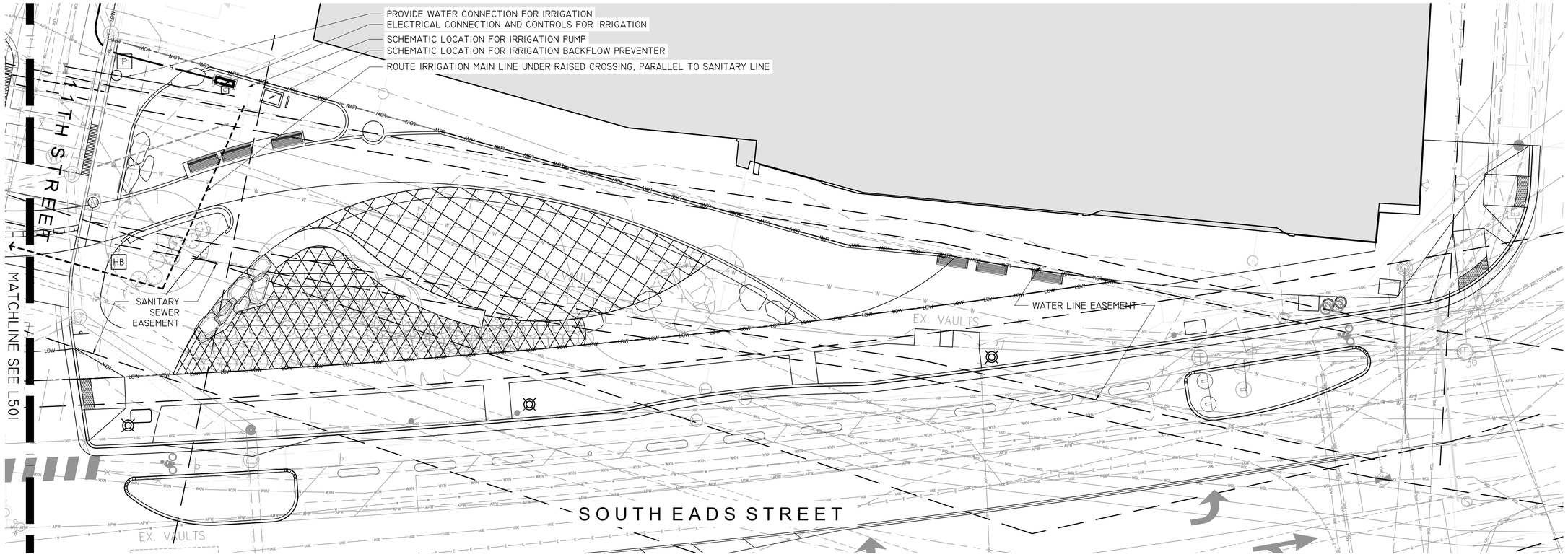

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0 5' 10' 20' 30'

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1051 SOUTH EADS STREET
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SCALE: AS SHOWN | SHEET L502

ARLINGTON
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Sheet L502

PANELBOARD A

120/208V, 1 PHASE, 3 WIRE — 200 AMP MAIN CIRCUIT BREAKER
MANUFACTURER: EATON PRL 1A OR EQUIVALENT — 22,000 AIC
OPTIONS: SERVICE ENTRANCE RATED, SURGE PROTECTIVE DEVICE (SPD) — SURFACE MOUNTED

#	DESCRIPTION	WIRE	EGC	COND	TRIP AMPS	P	TYPE	CONNECTED LOADS IN VA		TYPE	P	TRIP AMPS	WIRE	EGC	COND	DESCRIPTION	#
1	LIGHTS RELAY CONTACT r1	2#6	1#6	2"	20	1		500	A		1					BUSS SPACE	2
3	USB CHARGERS	2#6	1#6	2"	20	1		150	B		1					BUSS SPACE	4
5	LIGHTS RELAY CONTACT r2	2#6	1#6	2"	20	1		350	A		1					BUSS SPACE	6
7	USB CHARGERS	2#6	1#6	2"	20	1		180	B		1					BUSS SPACE	8
9	GFCI RECEPTACLE	2#12	1#12	3/4"	20	1		180	A		1					BUSS SPACE	10
11	SPARE				20	1			B		1					BUSS SPACE	12
13	SPARE				20	1			A		1					BUSS SPACE	14
15	SPARE				20	1			B		2	##				SPD	16
17	SPARE				20	1			A								18

1.0	KVA PHASE A	8.6	AMPS PHASE A
0.3	KVA PHASE B	2.8	AMPS PHASE B
1.4	KVA TOTAL	6.5	AMPS TOTAL CONNECTED LOAD

TYPE KEY
A - ARC FAULT CIRCUIT INTERRUPTER
G - GROUND FAULT CIRCUIT INTERRUPTER
ST - SHUNT TRIP
HT - HANDLE TIE
H - HACR RATED
S - SWITCH DUTY RATED
HL - HANDLE LOCKOFF
MC - METAL-CLAD CABLE

SCHNEIDER RELAY CONTACTOR

RELAY	CIRCUIT	CONTROL	ON	OFF
r1	1L8-1	PHOTOCELL		
r2	1L8-3	PHOTOCELL		

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	CATALOG #	VOLTAGE	LUMENS	DIMMING	LAMPS	WATTS
L1	WALL MOUNTED OUTDOOR RATED LED LUMINAIRE. DIRECT LIGHT MARKING LIGHT FIXTURE, 3000K	BEGA	22261	120-277	362	0-10V SET MAX FIXED	LED	5.8
L2	LED BOLLARD WITH 360 DEGREE LIGHT DISTRIBUTION. #4 BRUSHED 316 GRADE STAINLESS STEEL. 3000K	BEGA	88060 K3	120-277	766	0-10V SET MAX FIXED	LED	11
L3	FULLY ENCAPSULATED FLEXIBLE LINEAR LED FIXTURE, WET RATED, 3000K, 1.5W/FT. COORDINATE MOUNTING, END CAPS, AND ELECTRICAL CONNECTION. COORDINATE LENGHTS WITH 40 LED DRIVER	Q-TRAN	BOXA-SW WET 3000K END/TL	LED DRIVER	99 PER FOOT	LED DRIVER	LED	1.5 W/FT
L3 LED DRIVER	40W CONSTANT VOLTAGE + CONSTANT CURRENT LED DRIVER. IP67 RATED FOR OUTDOOR INSTALLATIONS	MW MEAN WELL	HLG-40H	120-277	-	YES	-	40 MAX
L-4	LED BUILDING ELEMENT UNSHIELDED POLE LIGHT.	BEGA	84 875	120-277	5189	0-10V SET MAX FIXED	LED	46.8

ELECTRICAL SYMBOLS

DOMINION VIRGINIA POWER 200-AMP METER SOCKET, 120/208V, 1PH, 3W, 200-AMPS

L1 / A-1 / r1 — L1 INDICATES LED LIGHT FIXTURE TYPE. SEE LIGHT FIXTURE SCHEDULE FOR MORE INFORMATION. r1 INDICATES RELAY / CONTACT NUMBER. A-1 INDICATES PANELBOARD CIRCUIT NUMBER.

CONDUIT AND WIRE. ARROW INDICATES HOMERUN TO PANEL. TICK MARKS INDICATE NUMBER OF PHASE, SWITCHED PHASE, SWITCH RUNNERS, AND NEUTRAL (GROUNDED) WIRES. SEE PANEL BOARD SCHEDULES FOR NUMBER OF CIRCUITS AND WIRE SIZES.

EXISTING UNDERGROUND CONDUIT SHOWN FOR REFERENCE ONLY. PREVIOUS ENGINEERING DRAWINGS INDICATED UNDERGROUND CONDUIT AT THESE LOCATIONS. COORDINATE LOCATIONS WITH DEMOLITION OF SITE LIGHTING. EXISTING CONDUIT MAY BE REUSED.

3 #6
1 #6 N
1 #6 EGC
2" C

UNDERGROUND PVC SCHEDULE 40 CONDUIT.
3 #6 - INDICATES QUANTITY AND SIZE OF PHASE CONDUCTORS
1 #6 N - INDICATES QUANTITY AND SIZE OF NEUTRAL CONDUCTORS
1 #6 EGC - INDICATES QUANTITY AND SIZE OF EQUIPMENT GROUNDING CONDUCTORS
2" C - INDICATES SIZE OF CONDUIT

A — 120/208V, 1 PHASE, 3 WIRE PANELBOARD. PROVIDE FLUSH OR SURFACE MOUNT AS INDICATED ON PLANS.

HH — HAND HOLE - SMALL JUNCTION BOXES 12 INCH X 12 INCH QUAZITE PC1212HA00 (LID) AND PC1212BA12

B1-3 | 44" — DUPLEX GROUND FAULT CIRCUIT INTERRUPTER (GFCI) CONVENIENCE RECEPTACLE. 125V, 20-AMP, GROUNDING TYPE. NEMA 5-20R. MOUNTED 18" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE. B1-3 INDICATES PANEL CIRCUITING.

SINGLE-GANG USB CHARGER WITH FOUR USB TYPE A OR TWO USB TYPE A AND TWO USB TYPE C CHARGERS. TYPICAL 5 AMPS AT 5VDC, 30W.
PROVIDE CAST OR BELL-TYPE SINGLE GANG OUTLET BOX WITH IN-USE COVER PLATE.

ABBREVIATIONS

ECB - ENCLOSED CIRCUIT BREAKER
EGC - EQUIPMENT GROUNDING CONDUCTOR
EPO - EMERGENCY POWER OFF
EM - EMERGENCY
EX - EXISTING TO REMAIN
GFI/GFCI - GROUND FAULT INTERRUPTER / GROUND FAULT CIRCUIT INTERRUPTER
LV - LOW VOLTAGE
REX - RELOCATE EXISTING/RELOCATED EXISTING
TR - TAMPER RESISTANT
X - EXISTING TO BE REMOVED
WP - WEATHERPROOF

ARLINGTON COUNTY, VIRGINIA
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ELECTRICAL SYMBOLS AND SCHEDULES
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Sheet Title

ELECTRICAL SYMBOLS AND SCHEDULES

Approval — Date

Design Supervisor

Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

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Sheet

E.001

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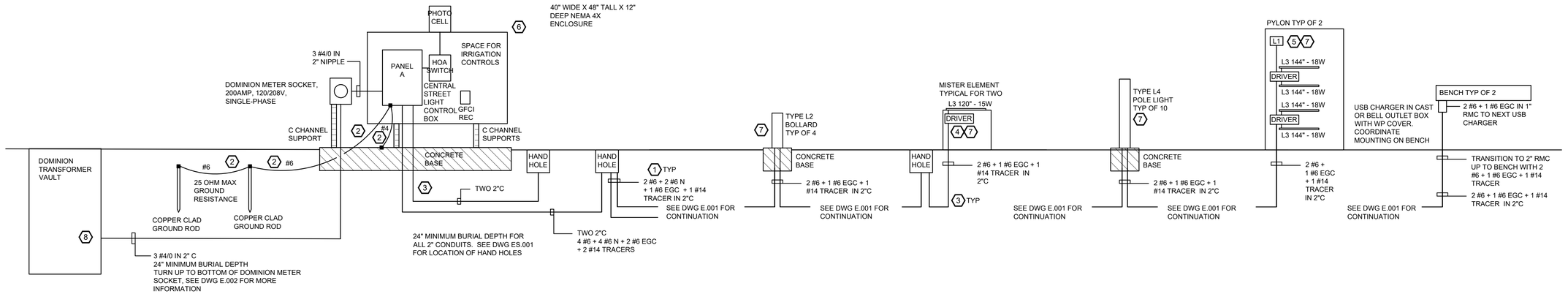
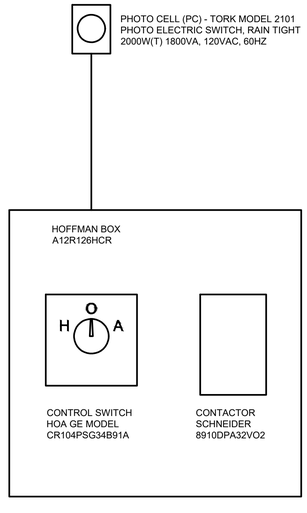


POWER RISER DIAGRAM - 208Y/120V THREE-PHASE DOMINION SERVICE

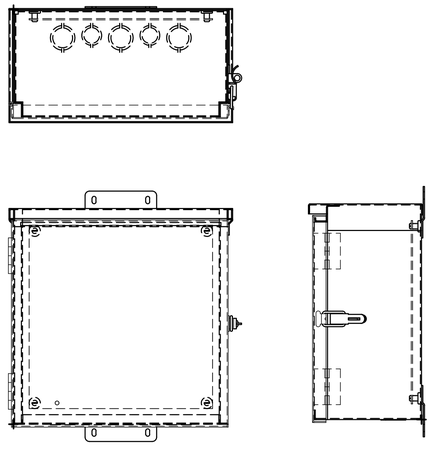
NO SCALE

POWER RISER DIAGRAM NOTES

1. ALL WIRE IS COPPER WITH XHHW-2 INSULATION.
2. ALL GROUNDING / BONDING WIRE IS BARE COPPER. PROVIDE 1" RIGID METAL CONDUIT WHERE EXPOSED ABOVE GROUND. PROVIDE BONDING BUSHINGS.
3. ALL CONDUIT TURN UNDERGROUND TURN UPS TRANSITION FROM HORIZONTAL SCHEDULE 40 PVC CONDUIT TO ABOVE GROUND VERTICAL RIGID METAL CONDUIT (RMC)
4. COORDINATE INSTALLATION LOCATION FOR LED DRIVER - MEAN WELL MW HLG-40H OR EQUIVALENT. CONCEAL WITH ACCESS WITHIN ARCHITECTURAL MISTER ELEMENT FEATURE. PROVIDE ONE DRIVER FOR EACH RUN OF TYPE L3 LED ROPE CHAIN. TWO TOTAL.
5. MOUNT TO CAST OUTLET BOX WITH TWO 2" BOTTOM CONDUIT INLETS FOR TYPE L1 FIXTURE. COORDINATE INSTALLATION LOCATION FOR LED DRIVER INSIDE PYLON. CONCEAL WITH ACCESS. PROVIDE ONE DRIVER FOR EACH 12 FOOT RUN OF TYPE L3 FIXTURE.
6. STAINLESS STEEL NEMA 4X ENCLOSURE. TWO GASKETED DOORS WITH HANDLES AND HANDLE LOCK. COORDINATE ALL CONDUIT PENETRATIONS.
7. WIRING TO TRANSITION TO 12/2 UF-B CABLE ABOVE GROUND FOR FINAL CONNECTION TO LIGHT FIXTURE. SEE DETAIL ON DWG E.003 FOR MORE INFORMATION.
8. COORDINATE ALL DOMINION VIRGINIA POWER REQUIREMENTS FOR INSTALLING AND TERMINATING SERVICE CONDUCTORS TO UTILITY TRANSFORMER. PROVIDE CABLE LUGS PER DOMINION VIRGINIA POWER REQUIREMENTS. PROVIDE THE FIFTH LUG. SEE VAULT DETAIL ON DWG E.003.



CENTRAL STREET LIGHT CONTROL BOX



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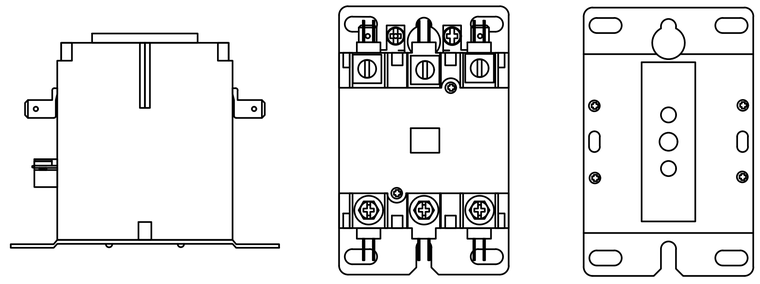

CONTACTOR SCHNEIDER 8910DPA32VO2

ARLINGTON COUNTY, VIRGINIA DEPARMENT OF ENVIRONMENTAL SERVICES		
RISER DIAGRAM ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN 1051 SOUTH EADS STREET ARLINGTON COUNTY, VA		
SCALE: AS SHOWN	SHEET E.002	

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Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

RISER DIAGRAM

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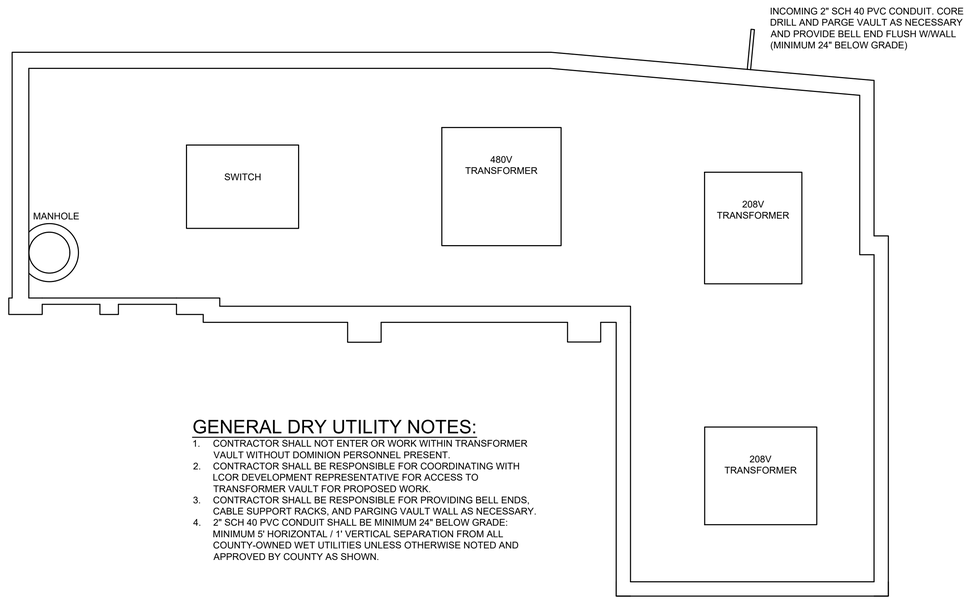
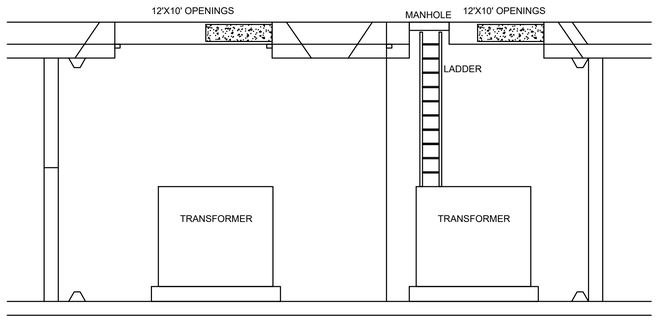
TOP VIEW TRANSFORMER LOCATIONS

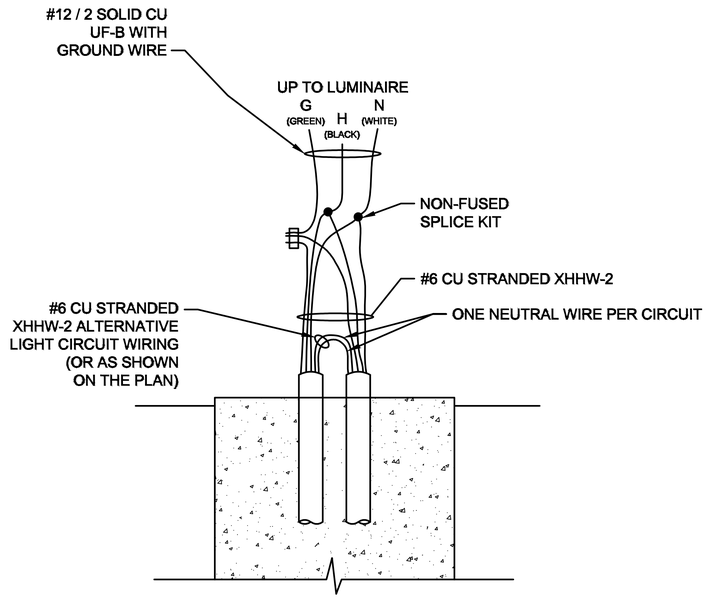


GENERAL DRY UTILITY NOTES:

1. CONTRACTOR SHALL NOT ENTER OR WORK WITHIN TRANSFORMER VAULT WITHOUT DOMINION PERSONNEL PRESENT.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH LCOR DEVELOPMENT REPRESENTATIVE FOR ACCESS TO TRANSFORMER VAULT FOR PROPOSED WORK.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING BELL ENDS, CABLE SUPPORT RACKS, AND PARGING VAULT WALL AS NECESSARY.
4. 2" SCH 40 PVC CONDUIT SHALL BE MINIMUM 24" BELOW GRADE: MINIMUM 5' HORIZONTAL / 1' VERTICAL SEPARATION FROM ALL COUNTY-OWNED WET UTILITIES UNLESS OTHERWISE NOTED AND APPROVED BY COUNTY AS SHOWN.

SIDE VIEW LOOKING WEST





NOTES:

1. **CONTRACTOR SHALL INSTALL 4' SLACK OF ALTERNATE CIRCUIT CONDUCTOR IN THE BASE OF THE POLES WHERE THERE IS NO JUNCTION BOX PRESENT BETWEEN ALTERNATE POLES.**

LIGHT FIXTURE WIRING DETAIL

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

DETAILS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
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SCALE: AS SHOWN	SHEET E.003	

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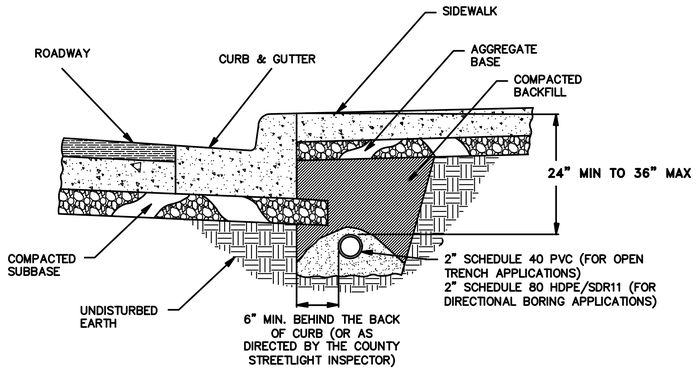
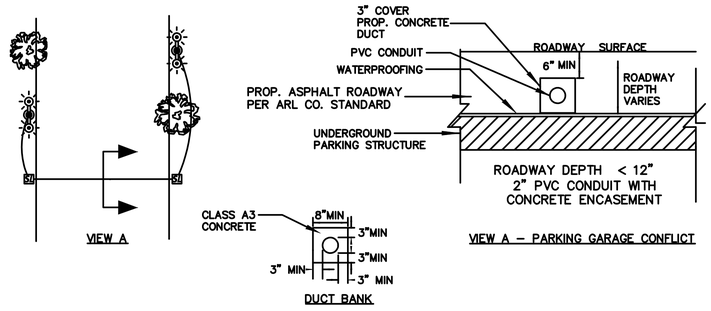


TYPICAL CONDUIT INSTALLATION



SHALLOW DEPTH DUCT BANK INSTALLATION

NOTES:

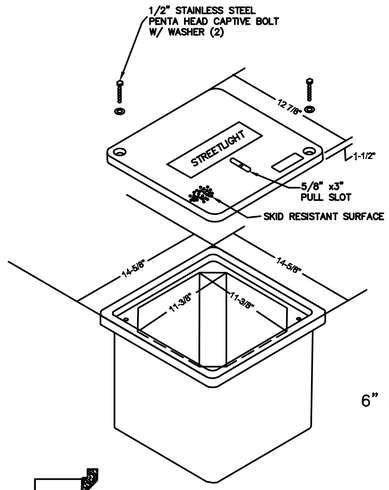
1. TYPICAL CONDUIT INSTALLATION SHALL BE INSTALLED A MINIMUM OF 24" & NO MORE THAN 36" BELOW FINISH GRADE.

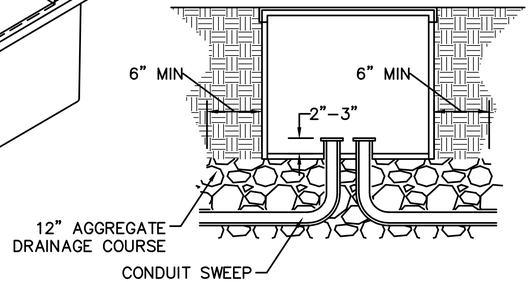
LIGHTING CONDUIT INSTALLATION

BOXES (STACKABLE)
COVERS

	DESCRIPTION	DIMENSION A	DESIGN/TEST LOAD #	ANSI TIER*
JUNCTION BOX	OPEN BOTTOM	12-7/8"	22,500/33,750	22
COVER	HEAVY DUTY W/2 BOLTS	N/A	22,500/33,750	22

DIMENSIONS & WEIGHTS IN PARENTHESES ARE METRIC EQUIVALENT.
* LOADINGS COMPLY WITH ANSCI/SCTE 77
* GASKETED COVERS AND BOLT GROMMETS MUST BE USED WITH A GASKETED BOX. GASKETS REDUCE THE INFLOW OF FLUIDS BUT DO NOT MAKE THE ENCLOSURE WATER TIGHT.





NOTES:

1. ALL CONDUIT SHALL HAVE 2" SEPARATION AND WITH GROUNDING END BUSHING INSTALLED.
2. JUNCTION BOX SHALL HAVE MIN. 4" CLEARANCE NEAR THE CURB.
3. JUNCTION BOX SHALL INCLUDE A GROUND ROD INSTALLED PER NEC.

SMALL JUNCTION BOX

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

DETAILS
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET E.004

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FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

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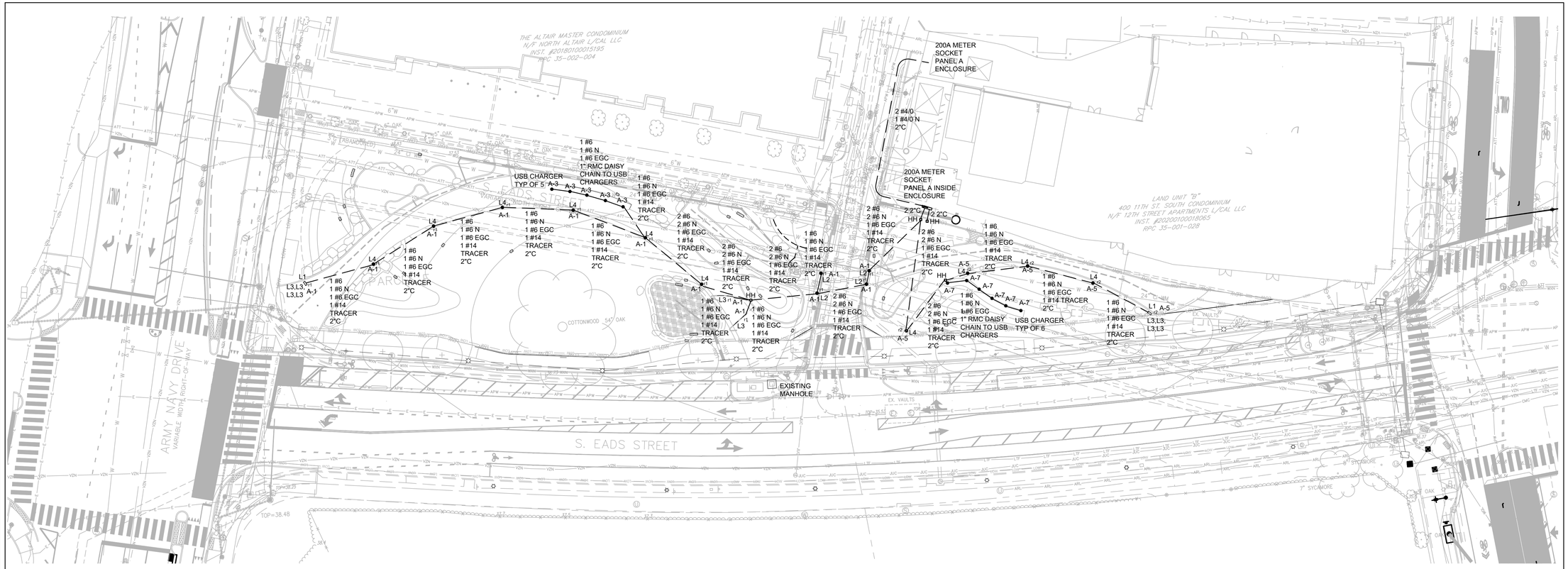

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

ELECTRICAL SITE PLAN
ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET ES.001	

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ES.001

STRUCTURAL GENERAL NOTES

THESE NOTES APPLY TO CONTRACTORS, SUBCONTRACTORS, MANUFACTURERS, SUPPLIERS, FABRICATORS, ERECTORS, ETC. ENGAGED IN THE EXECUTION OF WORK INDICATED ON THESE DRAWINGS.

A. CODES AND STANDARDS

THE FOLLOWING CODES AND STANDARDS, INCLUDING ALL SPECIFICATIONS REFERENCED WITHIN, SHALL APPLY TO THE DESIGN, CONSTRUCTION, AND QUALITY CONTROL OF ALL WORK PERFORMED ON THE PROJECT. USE THE LATEST EDITION UNLESS NOTED OTHERWISE.

1. BUILDING CODES:
   a. "INTERNATIONAL BUILDING CODE", IBC 2018.
   b. "VIRGINIA UNIFORM STATEWIDE BUILDING CODE", 2018 EDITION.
   c. "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES", ASCE 7-16.
2. AMERICAN CONCRETE INSTITUTE (ACI)
   a. "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", ACI 318-14.
   b. "ACI MANUAL OF CONCRETE PRACTICE - PARTS 1 THROUGH 5".
3. CONCRETE REINFORCING STEEL INSTITUTE (CRSI)
   a. "MANUAL OF STANDARD PRACTICE".
4. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
   a. "STEEL CONSTRUCTION MANUAL", FIFTEENTH EDITION, 2017.
   b. "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", AISC 360-16.
   c. "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", AISC 303-16.
5. RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC)
   a. "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS".
6. AMERICAN WELDING SOCIETY (AWS)
   a. "STRUCTURAL WELDING CODE - STEEL", ANSI/AWS D1.1:2015.

B. DESIGN DATA

1. SUPERIMPOSED DEAD LOADS (IN ADDITION TO STRUCTURE SELF-WEIGHT)

AREA	PSF
a. BOARDWALK	10

2. LIVE LOADS

AREA	PSF
a. BOARDWALK	100

3. SNOW LOAD:
   a. GROUND SNOW LOAD (P_g): 25
   b. SNOW EXPOSURE FACTOR (C_e): 1.0
   c. SNOW LOAD IMPORTANCE FACTOR (I_s): 1.0
   d. ROOF THERMAL FACTOR (C_t): 1.0
   e. FLAT-ROOF SNOW LOAD: P_f = 0.7 $C_e C_t I_s P_g$ (BUT NOT LESS THAN 20xIs) = 20 PLUS UNBALANCED, DRIFTING AND SLIDING SNOW WHERE APPLICABLE
   f. SLOPED ROOF FACTOR (C_s): 1.0
   g. SLOPED ROOF SNOW LOAD: $P_s = C_s P_f$ = 20 PSF
4. WIND LOADS
   a. RISK CATEGORY: II
   b. WIND EXPOSURE CATEGORY: B
   c. WIND SPEED:
      1) ULTIMATE WIND SPEED, 3-SECOND GUST (V_{ult}): ___115 mph____
      2) NOMINAL WIND SPEED, 3-SECOND GUST (V_{asd}): ____89 mph____
   d. MAIN WIND-FORCE RESISTING SYSTEM:
      1) WING LOADS FOR SOLID FREE STANDING WALLS AND SOLID SIGNS.
         a) FORCE COEFFICIENT FACTOR Cf = 1.68
         b) RESULTING PRESSURE ON AREA OF SIGN = 24 PSF

C. FOUNDATIONS / GEOTECHNICAL REPORT

1. FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS INCLUDED IN THE GEOTECHNICAL REPORT PREPARED BY DMY ENGINEERING CONSULTANTS, INC. DATED 04/22/22, REPORT NO. 01.05718.01. REFER TO THAT REPORT FOR ADDITIONAL REQUIREMENTS.
2. FOUNDATIONS PLACED ON UNDISTURBED SOIL AT ELEVATIONS INDICATED HAVE BEEN DESIGNED FOR A NET ALLOWABLE BEARING PRESSURE OF 1500 PSF.
3. STRUCTURAL STEEL HELICAL-PILES — 3 TON MINIMUM CAPACITY

D. MATERIALS

THE FOLLOWING ASTM STANDARDS AND DESIGN STRESSES SHALL BE USED FOR THE APPROPRIATE MATERIALS USED IN THE CONSTRUCTION OF THIS PROJECT.

1. CEMENT: ASTM C150, TYPE I, II, OR III
2. BLENDED HYDRAULIC CEMENT: ASTM C595, TYPE IS (LIMIT SLAG TO 35% MAX. CONTENT BY WEIGHT)
3. AGGREGATES: ASTM C33 (NORMAL WEIGHT); ¾" NOMINAL MAXIMUM AGGREGATE SIZE.
4. ADMIXTURES: AIR ENTRAINING ADMIXTURES — ASTM C260; CHEMICAL ADMIXTURES — ASTM C494
5. CONCRETE: AIR ENTRAIN CONCRETE AS INDICATED BELOW, AND CONCRETE EXPOSED TO EARTH AND WEATHER, 6% ± 1½% BY VOLUME UNLESS OTHERWISE NOTED. *HARD TROWEL FINISH NOT RECOMMENDED FOR AIR-ENTRAINED SLABS. *EXTERIOR* MEMBERS ARE THOSE FULLY OR PARTIALLY OUTSIDE OF THE CONDITIONED BUILDING ENVELOPE AND FULLY OR PARTIALLY ABOVE THE FROST DEPTH.

APPLICATION	f'c @ 28 DAYS (PSI)	ACI WT (PCF)	EXP. CLASS	W/C RATIO (MAX)	AIR-ENTRAIN
a. FOOTINGS	3000	145	F0	0.55	Y

6. REINFORCEMENT:
   a. DEFORMED REINFORCING BARS — ASTM A615, GRADE 60
   b. HOT-DIP GALVANIZING — ASTM A767
7. STEEL:
   a. HOLLOW STRUCTURAL SECTIONS (HSS) — ASTM A500, GRADE C: F_y = 50 KSI
   b. OTHER STRUCTURAL SHAPES AND PLATES — ASTM A36, F_y = 36 KSI
   c. HIGH-STRENGTH BOLTS — ASTM F3125, GRADE A325 / F1852
   d. WELDING ELECTRODES — AWS A5.1 OR A5.5, E70XX (STRUCTURAL STEEL)
   e. HOT-DIPPED GALVANIZING — ASTM A123 / ASTM A153 / ASTM F2329

E. CONSTRUCTION

1. GENERAL:
   a. THESE DRAWINGS REPRESENT THE COMPLETED PROJECT WHICH HAS BEEN DESIGNED FOR THE LOADS INDICATED IN THE DESIGN DATA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE PROPER ERECTION PROCEDURES, ALLOWABLE CONSTRUCTION LOADS AND PROVIDE PROPER DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, BRACING, SHEETING AND SHORING, ETC.
   b. **IMPLEMENTING JOB SITE SAFETY AND CONSTRUCTION PROCEDURES ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.**
   c. THE STRUCTURAL DRAWINGS ARE INTENDED TO INDICATE THE MAIN STRUCTURAL FEATURES FOR THE PROJECT. ANY NON-STRUCTURAL DETAILS SHOWN ARE SCHEMATIC IN NATURE AND MAY NOT REFLECT THE COMPLETE CONSTRUCTION. THE PROJECT CIVIL DRAWINGS MUST BE USED IN CONJUNCTION WITH THE PROJECT STRUCTURAL DRAWINGS DURING ALL PHASES OF CONSTRUCTION. ANY DISCREPANCIES BETWEEN THE PROJECT STRUCTURAL DRAWINGS AND THE SPECIFICATIONS AND DRAWINGS OF THE OTHER DISCIPLINES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO COMMENCING THE WORK.
   d. REFER TO CIVIL DRAWINGS FOR DIMENSIONS NOT SHOWN.
   e. DO NOT SCALE THE STRUCTURAL DRAWINGS.
   f. IN CASE OF CONFLICT BETWEEN THE GENERAL NOTES, AND DRAWINGS, THE MOST RIGID REQUIREMENTS GOVERN.
   g. STORE AND HANDLE STRUCTURAL CONSTRUCTION MATERIALS TO PREVENT ANY ADVERSE EFFECTS ON THE PHYSICAL PROPERTIES OF THE MATERIAL.
   h. PAY ALL COSTS, INCLUDING INVESTIGATION AND/OR REDESIGN, DUE TO CONTRACTOR MISLOCATION OF STRUCTURAL ELEMENTS OR OTHER LACK OF CONFORMANCE WITH THE CONTRACT DOCUMENTS TO BRING WORK IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
2. SHOP DRAWINGS AND SUBMITTALS:
   a. REPRODUCTION OF ANY PORTION OF THE STRUCTURAL CONTRACT DRAWINGS FOR RESUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED WITHOUT REVIEW AND RETURNED.
   b. SUBMIT SHOP DRAWINGS AT LEAST 15 BUSINESS DAYS BEFORE DATE REVIEWED SUBMITTALS WILL BE NEEDED. SHOP DRAWINGS SHALL BEAR THE CONTRACTOR'S STAMP OF APPROVAL WHICH SHALL CONSTITUTE CERTIFICATION THAT THE CONTRACTOR HAS VERIFIED ALL FIELD MEASUREMENTS, CONSTRUCTION CRITERIA, MATERIALS AND SIMILAR DATA AND HAS CHECKED EACH DRAWING FOR COMPLETENESS, COORDINATION AND COMPLIANCE WITH THE CONTRACT DOCUMENTS.
      1) THE DETAILS, MATERIALS AND PRODUCTS SPECIFIED OR REFERENCED IN THESE DRAWINGS CONSTITUTE THE ENGINEERED DESIGN FOR THIS PROJECT. PROPOSED SUBSTITUTION OF ALTERNATE DETAILS, MATERIALS OR PRODUCTS (i.e., CONTRACTOR REDESIGN) WILL ONLY BE CONSIDERED IF REQUESTED IN WRITING TO THE SER AT LEAST 14 DAYS IN ADVANCE OF ANY SUBMITTAL THAT IS AFFECTED BY THE PROPOSED SUBSTITUTION. **SUBSTITUTIONS WHICH APPEAR ON ANY SHOP DRAWING SUBMITTAL WHICH HAVE NOT BEEN PREVIOUSLY ACCEPTED BY THE SER WILL BE DISAPPROVED AND RETURNED FOR CORRECTION.** THE WRITTEN REQUEST MUST INCLUDE THE FOLLOWING:
         a) SPECIFICALLY IDENTIFY THE PROPOSED SUBSTITUTION AND CLEARLY INDICATE IF IT WILL INCLUDE STRUCTURAL ENGINEERING ANALYSIS TO SUBSTANTIATE ITS ADEQUACY. SUBSTITUTIONS WHICH REQUIRE ADDITIONAL ANALYSIS ON THE PART OF THE SER WILL BE SUBJECT TO A FEE FOR SUCH SERVICES.
         b) PROVIDE PRELIMINARY APPROVAL OF SUBSTITUTION BY OWNER, GC, AND ARCHITECT.
         c) PROVIDE CERTIFICATION THAT EFFECTS ON OTHER TRADES HAVE BEEN CONSIDERED AND RESOLVED.
         d) PROVIDE COST REDUCTION TO BE CREDITED TO OWNER.
   c. SUBMIT CALCULATIONS AND DRAWINGS CONCURRENTLY FOR EACH OF THE FOLLOWING ASSEMBLIES. DESIGN EACH ASSEMBLY UNDER THE DIRECT SUPERVISION OF AN ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION. ALL PORTIONS OF SUBMITTALS SHALL BEAR THIS ENGINEER'S SEAL AND SIGNATURE. UNSEALED SUBMITTALS WILL BE RETURNED AND REJECTED WITHOUT REVIEW. REVIEW SHALL BE FOR GENERAL CONFORMANCE WITH THE PROJECT PARAMETERS AS INDICATED ON THE DRAWINGS AND IN THE GENERAL NOTES, AND FOR IMPACTS ON THE SUPPORTING STRUCTURAL SYSTEM. DESIGN FOR ALL GRAVITY AND LATERAL LOADS AND OTHER EFFECTS (INCLUDING CREEP, SHRINKAGE, THERMAL, ETC.) REQUIRED BY APPLICABLE CODES AND STANDARDS AS WELL AS THOSE INDICATED ON THE DRAWINGS.
      1) FORMWORK, SHORES, AND RESHORES
         a) INDICATE PLAN OF STRIPPING AND RESHORING PROCEDURES AND OPERATIONS ON SHOP DRAWINGS.
         b) DESIGN FORMWORK, SHORING, AND RESHORING SYSTEMS TO ACCOUNT FOR ADDITIONAL LOADS RESULTING FROM POST-TENSIONING STRESSING SEQUENCES INDICATED.
         c) REMOVAL OF FORMS IS NOT PERMITTED UNTIL CONCRETE HAS ACHIEVED A MINIMUM 3,000 PSI COMPRESSIVE STRENGTH, ENABLING THE MEMBERS TO CARRY THEIR DEAD LOAD AND ANTICIPATED CONSTRUCTION LOADS.
         d) REMOVAL OF FORMS IS NOT PERMITTED UNTIL SUFFICIENT PRESTRESSING HAS BEEN APPLIED TO ENABLE THE MEMBERS TO CARRY THEIR DEAD LOAD AND ANTICIPATED CONSTRUCTION LOADS.
      2) HELICAL PILES
         a) REFER TO PROJECT DRAWINGS AND GEOTECHNICAL REPORT FOR CRITERIA AND REQUIREMENTS.
         b) SPECIALTY ENGINEERING CALCULATIONS SHALL BE JUSTIFY REQUIRED FOUNDATION CAPACITY FOR STRENGTH AND SERVICEABILITY (SETTLEMENT).
         c) ALONG WITH DESIGN SUBMITTAL, INCLUDE PROPOSED PROCEDURES AND ACCEPTANCE CRITERIA, PREPARED BY THE SPECIALY ENGINEER, FOR COMPRESSION AND TENSION MODULUS TESTING.
      3) PYLON SLON ANND MISTING ASSEMBLY
         a) SHALL BE DESIGNED BY MANUFACTURER OR VENDOR'S ENGINEER FOR LATERAL WIND FORCES INDICATED IN THE DESIGN DATA.
   d. SUBMITTALS AND CERTIFICATIONS, IN ADDITION TO STANDARD INDUSTRY PRACTICE
      1) CAST-IN-PLACE CONCRETE
         a) CONCRETE MIX DESIGNS, INCLUDING DOCUMENTATION USED TO DETERMINE STANDARD DEVIATION IN ACCORDANCE WITH ACI 301. IF CEMENTITIOUS SUBSTITUTES OR ADMIXTURES ARE TO BE USED, PROVIDE DOCUMENTATION IN THE MIX DESIGN THAT INDICATES CONFORMANCE TO THE MAXIMUM PERCENTAGE OF SUBSTITUTE.
         b) CERTIFICATIONS OF REINFORCING STEEL COMPLIANCE WITH REFERENCED STANDARDS.
      2) STRUCTURAL STEEL
         a) CERTIFIED COPIES OF MILL TEST REPORTS FOR RECORD PURPOSES ONLY
         b) ALL WELD PROCEDURE SPECIFICATIONS THAT ARE QUALIFIED BY TEST (IN ACCORDANCE WITH AWS D1.1), ACCOMPANIED BY PROCEDURE QUALIFICATION RECORDS AND ELECTRODE DATA SHEETS.
3. INSPECTION AND TESTING:
   a. SPECIAL INSPECTIONS, IN ACCORDANCE WITH IBC CHAPTER 17, ARE REQUIRED. THE OWNER WILL ENGAGE A SPECIAL INSPECTIONS ENGINEER OF RECORD (SIER) TO PERFORM THE SERVICES INDICATED.
      1) REQUIRED INSPECTIONS ARE SHOWN ON DRAWING _____.
      2) CONTRACTOR SHALL REGULARLY PROVIDE SIER WITH A CURRENT CONSTRUCTION SCHEDULE SO THAT THE REQUIRED INSPECTIONS CAN BE PROVIDED IN A TIMELY MANNER.
   b. THE OWNER WILL ENGAGE AN APPROVED, QUALIFIED, TESTING AGENCY TO PROVIDE TESTING AND INSPECTION SERVICES, IN ADDITION TO THE SPECIAL INSPECTION REQUIREMENTS, AS INDICATED BELOW. SUBMIT REPORTS TO THE SER AND CODE OFFICIAL (AS APPLICABLE).
   c. SOILS TESTING
      1) TEST ALL DIFFERING FOUNDATION SUBGRADE SOIL STRATA OBSERVED IN A MINIMUM OF ONE LOCATION FOR EACH FOR MINIMUM REQUIRED BEARING CAPACITY (INDICATED EARLIER IN THESE NOTES). SUBSEQUENT VERIFICATION OF BEARING CAPACITY AT OTHER LOCATIONS MAY BE BY VISUAL COMPARISON WITH TESTED LOCATIONS.
      2) TESTING AGENCY WILL TEST COMPACTION OF STRUCTURAL FILL PER ASTM D1556, ASTM D2167, ASTM D2922, AND ASTM D2937, AS APPLICABLE. TEST A MINIMUM OF THREE LOCATIONS RANDOMLY LOCATED ACROSS THE BUILDING PAD. TEST ADDITIONAL AREAS IF POOR CONDITIONS ARE OBSERVED.
      3) NOTIFY CONTRACTOR AND A/E OF AREAS FAILING TO MEET DESIGN REQUIREMENTS AND WHICH REQUIRE RECOMPACTIONS AND REINSPECTION.
   d. CAST-IN-PLACE CONCRETE:
      1) THE AGENCY SHALL INSPECT THE FORMWORK, AND REINFORCING STEEL PLACEMENT FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS AND SHOP DRAWINGS. THE AGENCY SHALL MONITOR ALL STRUCTURAL CONCRETE PLACEMENTS FOR CONFORMANCE WITH APPLICABLE ACI REQUIREMENTS.
      2) SAMPLE FRESH CONCRETE IN ACCORDANCE WITH ASTM C172. MOLD TEST CYLINDERS IN ACCORDANCE WITH ASTM C31.
         a) UNLESS OTHERWISE NOTED AND/OR APPROVED IN WRITING BY THE SER, SAMPLING FOR TESTING AND INSPECTION OF CONCRETE SHALL BE AT THE POINT OF PLACEMENT.
      3) THE FOLLOWING NUMBER OF 6"x12"** TEST CYLINDERS SHALL BE CAST FOR EACH DAY'S POUR OR EACH 50 CUBIC YARDS, WHICHEVER RESULTS IN MORE TEST CYLINDERS:

FOR FOOTINGS AND OTHER STRUCTURAL CONCRETE
2 @ 7 DAYS, LAB CURED
2 @ 28 DAYS, LAB CURED

      4) THE AGENCY SHALL OBTAIN AND TEST FIELD-CORED SAMPLES OF IN-PLACE CONCRETE AT THE CONTRACTOR'S EXPENSE WHEN TEST RESULTS INDICATED SPECIFIED CONCRETE STRENGTHS HAVE NOT BEEN ATTAINED. CORING LOCATIONS AND QUANTITIES SHALL BE DIRECTED BY THE SER.
      5) INSPECTION BY AN APPROVED TESTING AGENCY IS REQUIRED FOR ALL POST-TENSIONED WORK.
   e. STRUCTURAL STEEL:
      1) THE AGENCY SHALL REVIEW PREQUALIFIED WELD PROCEDURE SPECIFICATIONS IN ACCORDANCE WITH AWS D1.1, SECTION 6.3.1.
      2) THE AGENCY SHALL VISUALLY INSPECT ALL FILLET WELDS, SHEAR STUDS, AND BOLTED CONNECTIONS.
      3) THE AGENCY SHALL PERFORM WELDING INSPECTION AND TESTING PROCEDURES IN ACCORDANCE WITH THE AWS CODE.
      4) TEST 10% OF ALL FIELD FILLET WELDS IN PRIMARY CONNECTIONS AND MULTI-PASS WELDS BY THE MAGNETIC PARTICLE METHOD ASTM E709.
      5) TEST ANY WELD FOR WHICH VISUAL EXAMINATION INDICATES AN UNUSUAL CONDITION AND/OR POOR QUALITY.

F. FOUNDATIONS AND STRUCTURAL EARTHWORK

1. GENERAL:
   a. REFER TO PROJECT SPECIFICATION AND GEOTECHNICAL REPORT REQUIREMENTS FOR EXCAVATION AND PREPARATION OF THE FOUNDATION AND SLAB-ON-GRADE SUBGRADES, INCLUDING COMPACTION PROCEDURES. **REQUIREMENTS CONTAINED IN THE GEOTECHNICAL REPORT ARE PART OF THIS WORK.**
   b. VERIFY ALL EXISTING FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE FOUNDATION SYSTEM AS SHOWN PRIOR TO STARTING WORK. COMPACTED STRUCTURAL FILL SHALL BE PROVIDED WHERE NATURAL SOILS ARE FOUND TO BE INSUFFICIENT TO SUPPORT THE NEW FOUNDATIONS.
   c. WHERE REQUIRED, SCARIFY AND RECOMPACT TOP 12" OF EXISTING SUBGRADE UNDER FOOTING TO 95% OF MAXIMUM DRY UNIT WEIGHT PER ASTM D698 (STANDARD PROCTOR).
   d. WHERE REQUIRED WHERE REQUIRED, COMPACT ALL NEW STRUCTURAL FILL TO 95% OF MAXIMUM DRY UNIT WEIGHT PER ASTM D698 AT 2% OF OPTIMUM MOISTURE CONTENT. PLACE FILL IN 8" LIFTS IF USING HEAVY EQUIPMENT FOR COMPACTION. FOR LIGHT, HAND-OPERATED EQUIPMENT, PLACE FILL IN 4" LIFTS. STRUCTURAL FILL IS ONLY REQUIRED AT BEARING OF NEW FOOTINGS.
   e. WHERE REQUIRED, STRUCTURAL FILL AND BACKFILL SHALL CONSIST OF SOIL MEETING CLASSIFICATIONS GW, GP, GM, SW, AND SP ACCORDING TO ASTM D2487. SOILS SHALL BE WITHIN 2% OF OPTIMUM MOISTURE CONTENT AT TIME OF COMPACTION. IF SUITABLE QUANITIES OF ONSITE SOILS MEETING THESE CLASSIFICATIONS ARE NOTE AVAILABLE, PROVIDE OFF-SITE BORROW MATERIAL.
   f. LOCATE AND PROTECT ALL EXISTING UTILITIES, WHETHER INDICATED OR NOT, WHICH MAY BE AFFECTED BY THE CONSTRUCTION PROCESS.
   g. INSTALL, MAINTAIN, MONITOR AND REMOVE EARTH RETENTION SYSTEMS IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS PREPARED UNDER THE DIRECT SUPERVISION OF THE SPECIALTY ENGINEER FOR EARTH RETENTION SYSTEM DESIGN. COORDINATE ELEMENTS OF EARTH RETENTION SYSTEM SO AS TO NOT INTERFERE WITH PERMANENT BUILDING ELEMENTS.
   h. PROTECT EXISTING AND NEW STRUCTURES FROM DAMAGE BY CONSTRUCTION EQUIPMENT. REPAIR DAMAGE OF EXISTING AND NEW CONSTRUCTION CAUSED BY CONSTRUCTION TECHNIQUES OR MOVEMENT OF EARTH RETENTION SYSTEM.
   i. REFER TO PLUMBING DRAWINGS FOR PERIMETER DRAIN AND UNDERFLOOR DRAINAGE SYSTEM.
   j. DO NOT PLACE UTILITY LINES THROUGH OR BELOW FOUNDATIONS WITHOUT THE APPROVAL OF THE SER.
   k. BEAR ALL FOUNDATIONS ON UNDISTURBED SOIL OR COMPACTED STRUCTURAL FILL. DETERMINATION OF FINAL BEARING ELEVATIONS AND FIELD VERIFICATION OF ALLOWABLE BEARING PRESSURE SHALL BE MADE BY A LICENSED GEOTECHNICAL ENGINEER PRIOR TO PLACING FOUNDATIONS. NOTIFY THE SER WHEN ADDITIONAL EXCAVATION IS REQUIRED TO REACH SUITABLE BEARING MATERIAL.
   l. BEAR FOUNDATIONS A MINIMUM OF 2'-6" BELOW GRADE UNLESS OTHERWISE INDICATED. IN CASE OF CONFLICT, NOTIFY THE ARCHITECT AND SER IN ADVANCE OF ANY CONSTRUCTION TO ALLOW FOR ADJUSTMENT.
   m. THE SLOPE BETWEEN THE LOWER EDGES OF ADJACENT FOOTINGS NOT TO EXCEED 1.5H:1.0V, UNLESS INDICATED OTHERWISE IN THE GEOTECHNICAL REPORT. PROTECT SUBGRADES, SLOPES AND FOOTINGS FROM DAMAGE CAUSED BY LATERAL MOVEMENT, UNDERMINING, SETTLEMENT AND OTHER HAZARDS CREATED BY EXCAVATION.
   n. DO NOT USE EARTH CUTS AS FORMS FOR VERTICAL SURFACES UNLESS APPROVED IN ADVANCE BY THE SER.
   o. PLACE CONCRETE FOR FOUNDATIONS OR MUD SLABS ON THE SAME DAY SUBGRADE APPROVAL IS GIVEN BY THE GEOTECHNICAL ENGINEER.
   p. PROTECT CONCRETE FOUNDATIONS FROM FREEZING DURING PLACING AND FOR A PERIOD OF NOT LESS THAN 5 DAYS THEREAFTER.
   q. PROVIDE CONTINUOUS WATERSTOP AT ALL HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS IN BASEMENT WALLS AND ALL PIT WALLS.

G. CAST-IN-PLACE CONCRETE

1. GENERAL:
   a. COMPLY WITH REQUIREMENTS OF "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE" (ACI 301), EXCEPT AS MODIFIED BY THESE NOTES. KEEP COPY OF "ACI FIELD REFERENCE MANUAL, MNL-15" IN FIELD OFFICE.
   b. PROVIDE MINIMUM CLEAR COVER FOR REINFORCING AS FOLLOWS, UNLESS OTHERWISE NOTED IN THE DRAWINGS:
      1) NON-POST-TENSIONED CONCRETE:
         a) CONCRETE CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND: 3"
   c. SPLICE REINFORCEMENT AS DETAILED OR AUTHORIZED BY THE SER. MAKE BARS CONTINUOUS AROUND CORNERS. SPLICES SHALL BE MADE BY CONTACT TENSION LAP SPLICES, UNLESS OTHERWISE NOTED.
   d. WELDING OF REINFORCING IS NOT PERMITTED.
   e. FIELD BENDING OF REINFORCING PARTIALLY EMBEDDED IN CONCRETE IS NOT PERMITTED UNLESS OTHERWISE SHOWN OR APPROVED BY THE SER.
   f. FURNISH ALL ACCESSORIES, CHAIRS, SPACE BARS, SUPPORTS, ETC. NECESSARY TO SECURE REINFORCING.
   g. PROVIDE PLASTIC TIPPED BOLSTERS AND CHAIRS AT ALL LOCATIONS WHERE THE CONCRETE SURFACE IN CONTACT WITH THE BOLSTERS OR CHAIRS IS EXPOSED.
   h. ERECT AND REMOVE FORMWORK, SHORES AND RESHORES IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS PREPARED, SIGNED AND SEALED BY THE ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION.
   i. ANY STOP IN CONCRETE WORK MUST BE MADE WITH VERTICAL BULKHEADS AND KEYS, UNLESS OTHERWISE SHOWN.
   j. HORIZONTAL JOINTS ARE NOT PERMITTED IN FOUNDATIONS, PILE CAPS, SLABS, BEAMS, GIRDERS AND JOISTS.
   k. CORE DRILLING, CHIPPING, OR TRENCHING OF ANY CONCRETE ELEMENT IS NOT PERMITTED UNLESS AUTHORIZED IN WRITING BY THE SER.

H. STRUCTURAL STEEL

1. PREPARE WRITTEN WELD PROCEDURE SPECIFICATIONS (WPS), IN ACCORDANCE WITH AWS D1.1, FOR ALL WELDING PROCEDURES TO BE USED ON PROJECT. A COPY OF ALL WPS SHALL BE MAINTAINED ON SITE AT ALL TIMES.
2. OBTAIN CURRENT EVIDENCE OF WELDERS PASSING THE APPROPRIATE AWS QUALIFICATION TESTS. SUCH EVIDENCE MAY BE REQUESTED AT ANY TIME DURING THE PROJECT.
3. PROVIDE ACCESS FOR INSPECTION OF ALL SHOP AND FIELD CONNECTIONS FOR PROPER MATERIALS AND WORKMANSHIP.
4. **ALTERNATE CONNECTION DESIGNS SHALL ONLY BE ALLOWED WITH PRIOR APPROVAL OF THE SER.** IF SUCH APPROVAL IS GRANTED, DESIGN ALL CONNECTIONS, SPLICES, AND ERECTION PIECES NOT IN ACCORDANCE WITH CONTRACT DRAWINGS (FABRICATOR REDESIGN) UNDER THE DIRECT SUPERVISION OF THE ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION. SUBMIT CALCULATIONS AND SHOP DRAWINGS BEARING THE ENGINEER'S SEAL AND SIGNATURE.
5. USE HIGH STRENGTH BOLTS AND NUTS WITH CLEAR MARKINGS AS REQUIRED BY AISC SPECIFICATIONS. CONNECTIONS MADE WITH UNMARKED BOLTS AND NUTS WILL BE REJECTED.
6. TIGHTEN ALL HIGH-STRENGTH BOLTS TO THE "SNUG TIGHT" CONDITION (DEFINED AS ALL PLIES OF THE CONNECTED MATERIAL HAVE BEEN BROUGHT INTO TIGHT CONTACT).
7. WELDS INDICATED AS FIELD WELDS MAY BE MADE IN THE FIELD OR SHOP AT THE CONTRACTOR'S DISCRETION. WELDS INDICATED AS SHOP WELDS SHALL BE MADE IN THE SHOP UNLESS SPECIFICALLY APPROVED OTHERWISE BY THE STRUCTURAL ENGINEER.
8. HOT-DIP GALVANIZE ALL STRUCTURAL STEEL FRAMING IN EXTERIOR LOCATIONS.
9. NOTIFY THE SER OF ANY FABRICATION OR ERECTION ERRORS OR DEVIATIONS AND RECEIVE WRITTEN APPROVAL BEFORE ANY FIELD CORRECTIONS ARE MADE.
10. REPLACE OR REINFORCE ANY STRUCTURAL STEEL DAMAGED DURING CONSTRUCTION AS ACCEPTABLE TO THE SER.
11. FIELD CUTTING WITH GAS TORCH IS NOT PERMITTED.

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

ARLINGTON JUNCTION PARK–CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN | SHEET S–100P

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION
Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
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ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

GENERAL NOTES

Approval — Date

Design Supervisor

Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: HA
Drawn: HA
Checked: DBS

Filename:
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Scale: AS SHOWN
Date: July 21, 2023

Seal

COMMONWEALTH OF VIRGINIA
DAVID B. SMITH
Lic. No. 049140
7/21/23
PROFESSIONAL ENGINEER

Sheet
S-100P

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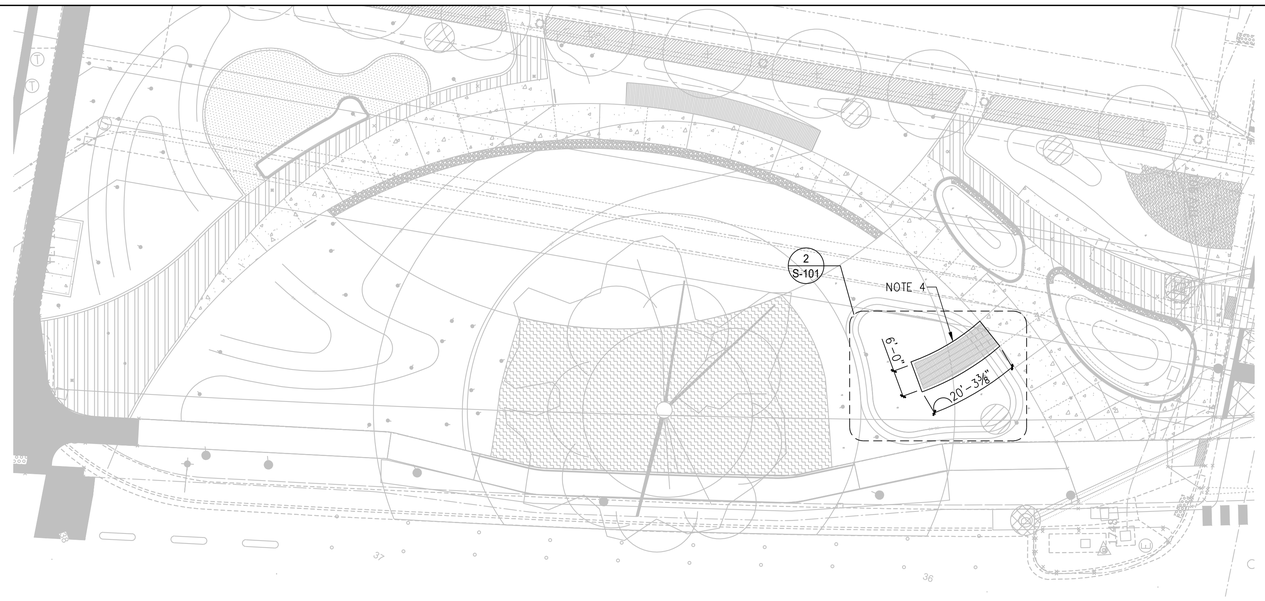
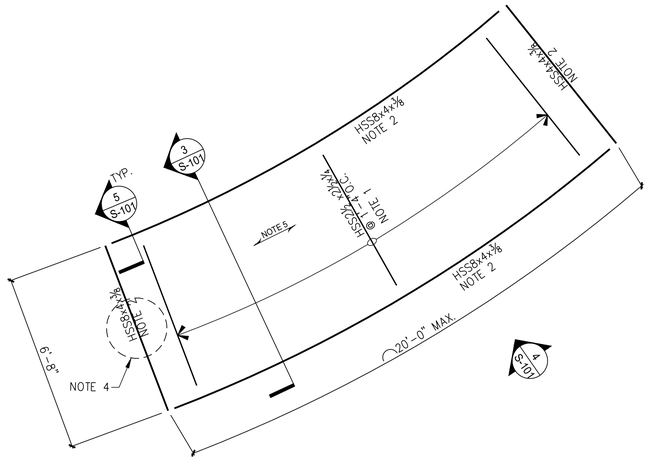


1 BOARDWALK KEY PLAN

1/16"=1'-0"

PLAN NOTES

1) SEE S-100 FOR GENERAL NOTES
2) CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, ETC. AFFECTING THE NEW WORK SHOWN.
3) BACKGROUND SITE PLAN INFORMATION SHOWN HALF TONE IS SHOWN FOR REFERENCE ONLY. SEE CIVIL DRAWINGS FOR SITE PLAN INFORMATION INCLUDING PROPERTY LINES, LIMITS OF DISTURBANCE, GRADING INFO, ETC.
4) NEW BOARDWALK. SEE 2/S-101 FOR TYPICAL FRAMING AND AND 3/S-101 AND 4/S-101 FOR TYPICAL DETAILS.
5) ALL STRUCTURAL STEEL BE HOT-DIPPED GALVANIZED.
6) SEE S-100 FOR GENERAL NOTES.
7) SEE S-102 FOR ANCHORAGE DETAILS OF LANDSCAPE DESIGN ELEMENTS.

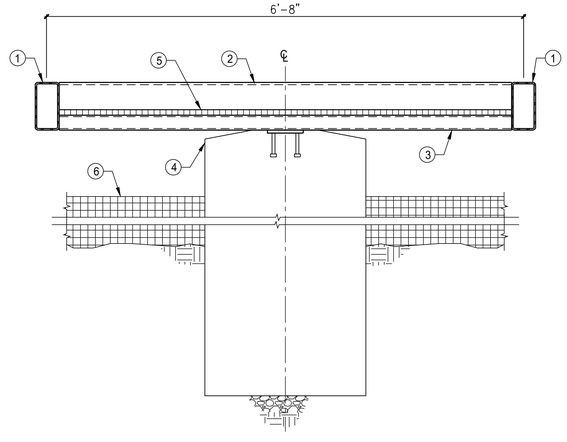


1) HSS2½x2½x¼ JOISTS @ 2'-0" MAX. O.C. – TYP.
2) HSS8x4x⅜ UPTURNED BEAM – TYP.
3) HSS4x4x⅜ BEAM BEARING ON ADJACENT CONCRETE SIDEWALK. SEE 4/S-101 FOR BOARDWALK TO ADJACENT SIDEWALK CONNECTIONS.
4) FOUNDATION SUPPORT – SEE 4/S-101.
5) TYPE 11W4 – 1"x3/16" ADA COMPLIENT METAL BAR GRATING.
6) SEE 5/S-101 FOR TYPICAL CONNECTION OPTIONS.
7) ALL STRUCTURAL STEEL TO BE GALVANIZED.

2 BORADWALK SECTION FRAMING PLAN

3/8"=1'-0"

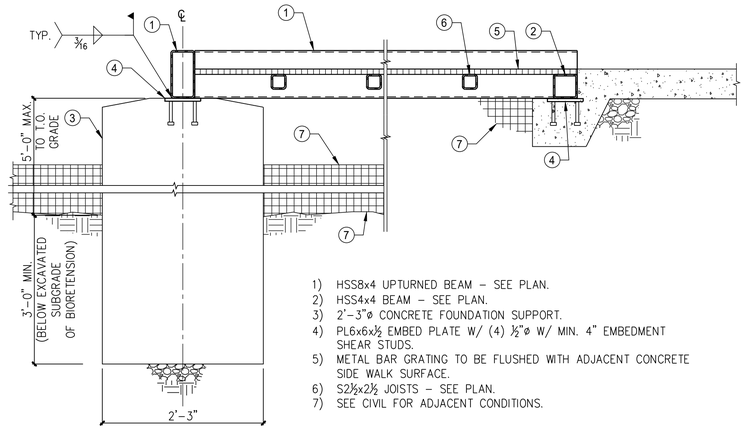
FILL NON-SUITABLE FOR SUPPORT OF FOUNDATIONS HAS BEEN IDENTIFIED TO VARYING DEPTHS ACROSS THE SITE. ALL FOUNDATIONS SHALL BEAR ON SUITABLE SOILS OR, WHERE REQUIRED, COMPACTED STRUCTURAL FILL. DETERMINATION OF FINAL BEARING ELEVATIONS AND FIELD VERIFICATION OF ALLOWABLE BEARING PRESSURE SHALL BE MADE BY A LICENSED GEOTECHNICAL ENGINEER PRIOR TO PLACING FOUNDATIONS. NOTIFY THE SER WHEN ADDITIONAL EXCAVATION IS REQUIRED TO REACH SUITABLE BEARING MATERIAL. WHERE REPLACED WITH COMPACTED STRUCTURAL FILL, COMPACTION SHALL MEET THE REQUIREMENTS OF SECTION F ON S-100



1) HSS8x4 UPTURNED BEAM – SEE PLAN.
2) HSS8x4 UPTURNED BEAM BEYOND – SEE PLAN.
3) HSS2½x2½ JOIST – SEE PLAN.
4) CONCRETE FOUNDATION SUPPORT BEYOND.
5) METAL BAR GRATING – SEE PLAN.
6) BIORETENSION SECTION – SEE CIVIL.

3 TYPICAL BOARDWALK FRAMING SUPPORT

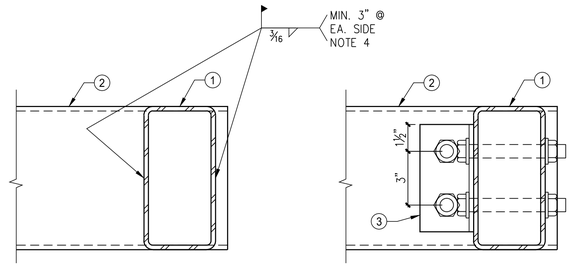
N.T.S.



1) HSS8x4 UPTURNED BEAM – SEE PLAN.
2) HSS4x4 BEAM – SEE PLAN.
3) 2'-3"ø CONCRETE FOUNDATION SUPPORT.
4) PL6x6x½ EMBED PLATE W/ (4) ½"ø W/ MIN. 4" EMBEDMENT SHEAR STUDS.
5) METAL BAR GRATING TO BE FLUSHED WITH ADJACENT CONCRETE SIDE WALK SURFACE.
6) S2½x2½ JOISTS – SEE PLAN.
7) SEE CIVIL FOR ADJACENT CONDITIONS.

4 BOARDWALK FRAMING SUPPORT ADJACENT OT SIDEWALK

N.T.S.



A WELDED CONNECTION

B THRU-BOLT CONNECTION

1) HSS BEAM.
2) HSS GIRDER.
3) L3x3x¼ x0'-6" W/ (2) ¾"ø THROUGH-BOLT AT EA SIDE.
4) REPAIR GALVANIZING AT WELDS.
5) CONTRACTOR MAY SELECT EITHER OPTION FOR EACH CONNECTION.

5 TYPICAL HSS BEAM TO HSS GIRDER CONNECTION

N.T.S.

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BOARDWALK FRAMING AND DETAILS

Approval Date

Design Supervisor

Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
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Seal

COMMONWEALTH OF VIRGINIA
DAVID B. SMITH
Lic. No. 049140
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PROFESSIONAL ENGINEER

Sheet

S-101P

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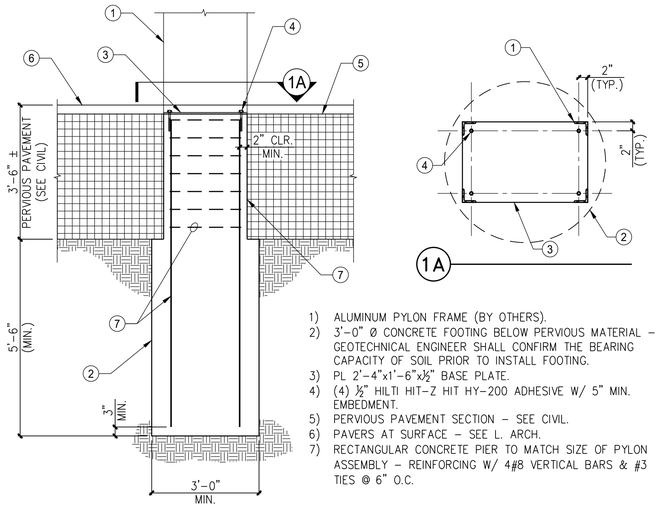
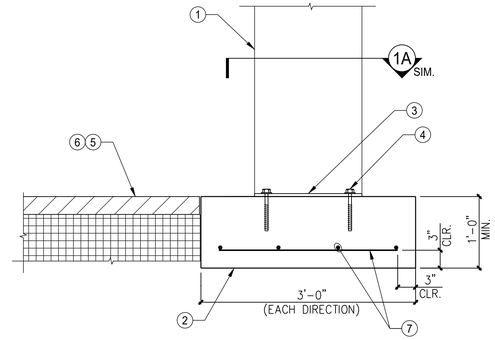


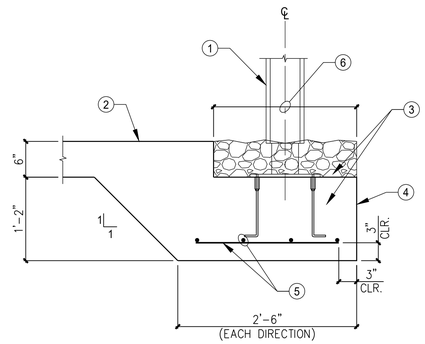
1) ALUMINUM PYLON FRAME (BY OTHERS).
2) 3'-0" Ø CONCRETE FOOTING BELOW PERVIOUS MATERIAL – GEOTECHNICAL ENGINEER SHALL CONFIRM THE BEARING CAPACITY OF SOIL PRIOR TO INSTALL FOOTING.
3) PL 2'-4"x1'-6"x½" BASE PLATE.
4) (4) ½" HILTI HIT-Z HIT HY-200 ADHESIVE W/ 5" MIN. EMBEDMENT.
5) PERVIOUS PAVEMENT SECTION – SEE CIVIL.
6) PAVERS AT SURFACE – SEE L. ARCH.
7) RECTANGULAR CONCRETE PIER TO MATCH SIZE OF PYLON ASSEMBLY – REINFORCING W/ 4#8 VERTICAL BARS & #3 TIES @ 6" O.C.

1 LI – PYLON LIGHT POLE FOOTING
1/2" = 1'-0"



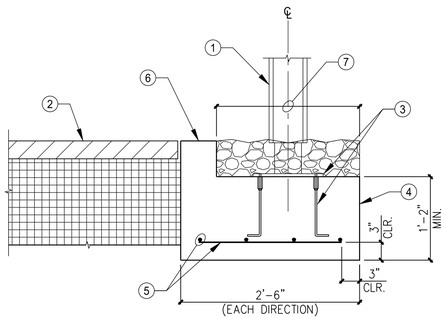
1) ALUMINUM PYLON FRAME (BY OTHERS).
2) 3'-0" x 3'-0" CONCRETE "FOOTING" – GEOTECHNICAL ENGINEER SHALL CONFIRM THE BEARING CAPACITY OF SOIL PRIOR TO INSTALL FOOTING. POUR FOOTING MONOLITHIC WITH ADJACENT CONCRETE PAVEMENT.
3) PL 2'-4"x1'-6"x½" BASE PLATE.
4) (4) ½" HILTI HIT-Z HIT HY-200 ADHESIVE W/ 5" MIN. EMBEDMENT.
5) PAVERS OVER PERVIOUS PAVEMENT SECTION – SEE CIVIL.
6) 4#4 EA. WAY BOT.

1A LI – PYLON LIGHT POLE FOOTING BASE ABOVE UTILITIES
1" = 1'-0"



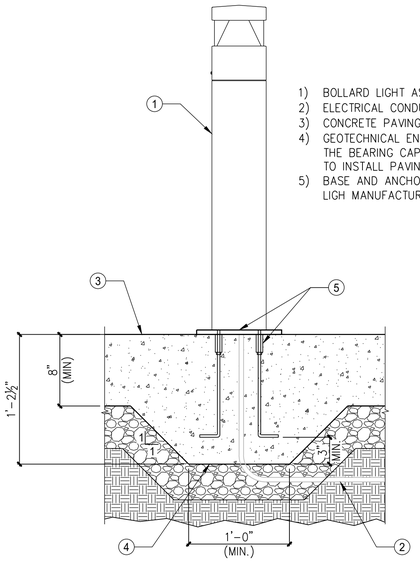
1) LIGHT POLE (BY OTHERS).
2) CONCRETE PAVEMENT (BY OTHERS).
3) BASE AND ACNHORAGE ASSEMBLY BY LIGHT MANUFACTURER.
4) 2'-6" x 2'-6" CONCRETE "FOOTING" BELOW LIGHT POLE – GEOTECHNICAL ENGINEER SHALL CONFIRM THE BEARING CAPACITY OF SOIL PRIOR TO INSTALL FOOTING. POUR FOOTING MONOLITHIC WITH ADJACENT CONCRETE PAVEMENT.
5) 4#4 EA. WAY BOTTOM.
6) 2'-0" WIDE LANDSCAPE STONE – SEE L. ARCH.

2 PARK LIGHT POLE FOOTING
1" = 1'-0"



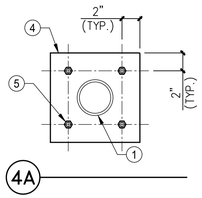
1) LIGHT POLE (BY OTHERS).
2) PAVERS OVER PERVIOUS PAVEMENT SECTION – SEE CIVIL.
3) BASE AND ACNHORAGE ASSEMBLY BY LIGHT MANUFACTURER.
4) 2'-6" x 2'-6" CONCRETE "FOOTING" BELOW LIGHT POLE – GEOTECHNICAL ENGINEER SHALL CONFIRM THE BEARING CAPACITY OF SOIL PRIOR TO INSTALL FOOTING. POUR FOOTING MONOLITHIC WITH ADJACENT CONCRETE PAVEMENT..
5) 4#4 EA. WAY BOTTOM.
6) CONCRETE CURB PER L. ARCH.
7) 2'-0" WIDE LANDSCAPE STONE – SEE L. ARCH.

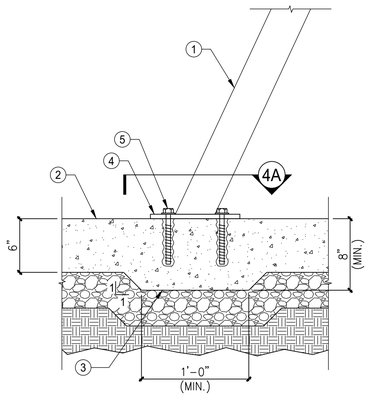
2A PARK LIGHT POLE FOOTING
1" = 1'-0"



1) BOLLARD LIGHT ASSEMBLY (BY OTHERS).
2) ELECTRICAL CONDUIT (BY OTHERS).
3) CONCRETE PAVING (BY OTHERS).
4) GEOTECHNICAL ENGINEER SHALL CONFIRM THE BEARING CAPACITY OF SOIL PRIOR TO INSTALL PAVING.
5) BASE AND ANCHORAGE ASSEMBLY BY LIGH MANUFACTURER.

3 BOLLARD LIGHT ANCHORAGE
1 1/2" = 1'-0"





1) 4" Ø MISTER PIPE (BY OTHERS).
2) CONCRETE PAVING (BY OTHERS).
3) GEOTECHNICAL ENGINEER SHALL CONFIRM THE BEARING CAPACITY OF SOIL PRIOR TO INSTALL PAVING.
4) PL 10x10x½" BASE PLATE.
5) (4) ½" HILTI HIT-Z HIT HY-200 ADHESIVE W/ 5" MIN. EMBEDMENT.

4 MISTER ANCHORAGE DETAIL
1 1/2" = 1'-0"

FILL NON-SUITABLE FOR SUPPORT OF FOUNDATIONS HAS BEEN IDENTIFIED TO VARYING DEPTHS ACROSS THE SITE. ALL FOUNDATIONS SHALL BEAR ON SUITABLE SOILS OR, WHERE REQUIRED, COMPACTED STRUCTURAL FILL. DETERMINATION OF FINAL BEARING ELEVATIONS AND FIELD VERIFICATION OF ALLOWABLE BEARING PRESSURE SHALL BE MADE BY A LICENSED GEOTECHNICAL ENGINEER PRIOR TO PLACING FOUNDATIONS. NOTIFY THE SER WHEN ADDITIONAL EXCAVATION IS REQUIRED TO REACH SUITABLE BEARING MATERIAL. WHERE REPLACED WITH COMPACTED STRUCTURAL FILL, COMPACTION SHALL MEET THE REQUIREMENTS OF SECTION F ON S-100

ARLINGTON COUNTY, VIRGINIA
DEPARMENT OF ENVIRONMENTAL SERVICES

ARLINGTON JUNCTION PARK-CIVIL ENGINEERING PLAN
1051 SOUTH EADS STREET
ARLINGTON COUNTY, VA

SCALE: AS SHOWN	SHEET S-102P	

ARLINGTON
VIRGINIA

DEPARTMENT OF PARKS AND RECREATION

Park Development Division
2100 Clarendon Boulevard, Suite 414
Arlington, VA 22201
Phone: 703.228.3332
Fax: 703.228.3328

ITB #23-DPR-ITBPW-450

#SWM 22-0224

Project Name and Location

ARLINGTON JUNCTION PARK

FINAL PLAN

1051 SOUTH EADS STREET

ARLINGTON, VIRGINIA

Sheet Title

ANCHORAGE DETAILS

Approval Date

Design Supervisor

Revisions	Date
CEP#2	12/21/2022
CEP#3	06/02/2023
BUILDING PERMIT	02/15/2023
REVISED BUILDING PERMIT	04/20/2023
CEP#4	07/21/2023

Designed: HA
Drawn: HA
Checked: DBS

Filename:
Plotted:

Scale: AS SHOWN
Date: July 21, 2023

Seal

COMMONWEALTH OF VIRGINIA
DAVID B. SMITH
Lic. No. 049140
7/21/23
PROFESSIONAL ENGINEER

Sheet
S-102P

Path: Filename: