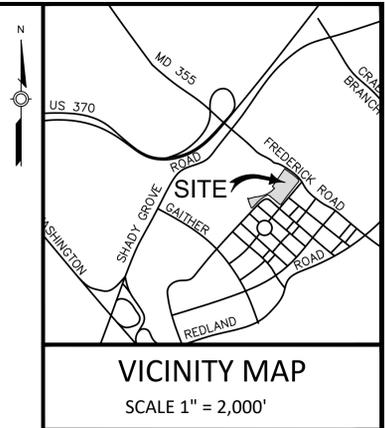


# KING FARM FARMSTEAD

## WATER AND SEWER IMPROVEMENTS

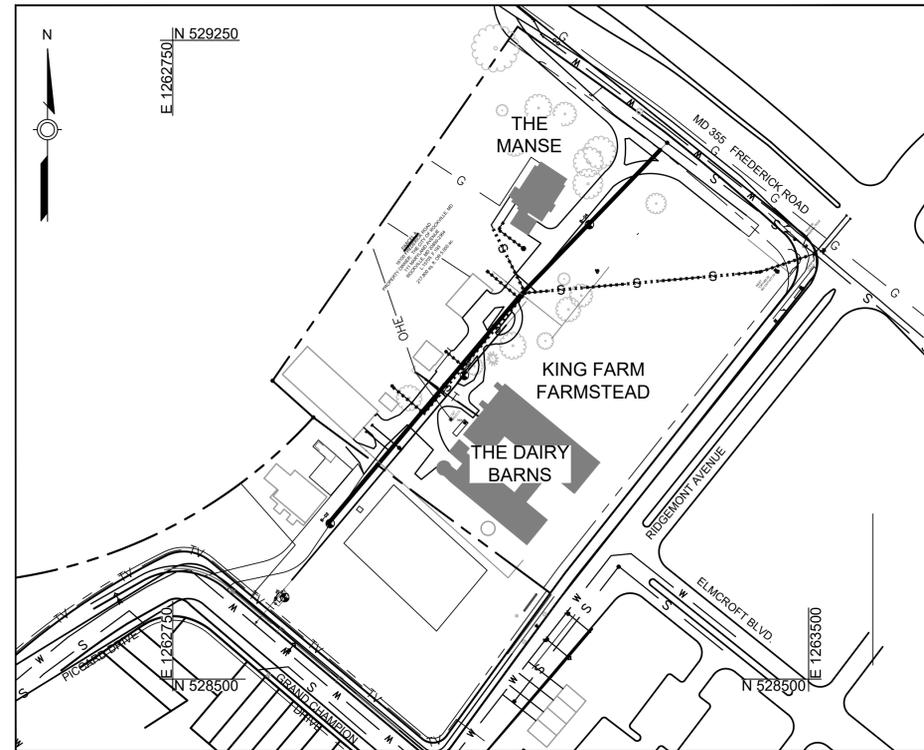
PWK2022-00059; SCP2022-00021  
CITY OF ROCKVILLE, MARYLAND

### SEDIMENT CONTROL PLAN



**GENERAL NOTES**

- THE APPLICANT IS THE ENTITY FOR WHICH THE CITY OF ROCKVILLE DEPARTMENT OF PUBLIC WORKS (DPW) HAS ISSUED A PERMIT. FOR DPW PROJECTS WHERE A PERMIT IS NOT APPLICABLE, THE ENTITY FOR WHICH THE CITY CONTRACT IS ISSUED SHALL BE CONSIDERED THE APPLICANT IN THESE NOTES. THE APPLICANT IS RESPONSIBLE FOR ALL CONTRACTORS, AGENTS, SUBCONTRACTORS, OR OTHER ENTITIES COMPLETING WORK UNDER THIS PERMIT AND/OR APPROVED PLAN.
- THE APPLICANT MUST ARRANGE A PRE-CONSTRUCTION MEETING PRIOR TO COMMENCING ANY WORK. PROVIDE AT LEAST 48 HOURS OF NOTICE TO THE FOLLOWING: CITY PROJECT INSPECTOR LISTED IN THE PERMIT, CITY FORESTRY INSPECTOR AT 240-314-8713, IF REQUIRED BY EITHER A DPW AND/OR FORESTRY PERMIT, OR DPW SEDIMENT CONTROL INSPECTOR AT 240-314-8879, IF REQUIRED BY PERMIT.
- THE APPLICANT MUST CONTACT MISS UTILITY AT 1-800-257-7777 OR #811 OR MISSUTILITY.NET SO THAT UTILITIES ARE MARKED PRIOR TO HOLDING ANY PRE-CONSTRUCTION MEETING.
- INFORMATION CONCERNING EXISTING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF EXISTING UTILITIES BY DIGGING TEST PITS AT THE UTILITY CROSSINGS WELL IN ADVANCE OF TRENCHING. IF CLEARANCE IS LESS THAN SHOWN ON THIS PLAN, CONTACT THE PROFESSIONAL ENGINEER WHO STAMPED THE DESIGN PLANS BEFORE PROCEEDING WITH CONSTRUCTION
- MAINTAIN A MINIMUM ONE-FOOT VERTICAL CLEARANCE BETWEEN ALL CITY UTILITIES CROSSING ANY OTHER UTILITY. UNLESS OTHERWISE NOTED, MAINTAIN A FIVE-FOOT HORIZONTAL CLEARANCE WITH BETWEEN A CITY UTILITY WITH ANY OTHER UTILITY OR STRUCTURE. THE ONLY EXCEPTION IS THAT THERE SHALL BE A TEN-FOOT HORIZONTAL CLEARANCE BETWEEN CITY WATER AND SEWER MAINS.
- AT THE END OF EACH DAY, ALL TRENCHES SHALL BE BACKFILLED, ALL EQUIPMENT SECURED, AND THE AREA LEFT IN A SAFE CONDITION. STEEL PLATES ARE ALLOWED TO REMAIN NO LONGER THAN SEVEN DAYS. PLATES ARE TO BE NOTCHED (RECESSED) AND PINNED TO THE ROADWAY. PLATES MUST BE LARGE ENOUGH TO ALLOW A MINIMUM OF ONE-FOOT BEARING ON ALL FOUR SIDES OF THE PAVEMENT SURROUNDING THE EXCAVATION. THE STEEL PLATE REQUIREMENTS ONLY APPLY TO PUBLIC STREETS.
- THE PUBLIC ROAD UTILITY PATCH SHALL BE IN ACCORDANCE WITH CITY STANDARD DETAIL #60, OR AS SHOWN ON THE PLANS. ALL TRENCHES IN PUBLIC STREETS SHALL BE FILLED WITH COMPACTED GRADED AGGREGATE BASE (GAB) FROM BELOW THE PAVEMENT TO THE TOP OF THE PIPE EMBEDMENT ZONE OR TO A DEPTH OF FIVE-FEET, WHICHEVER IS LESS.
- DPW NORMAL WORKING HOURS ARE MONDAY THROUGH FRIDAY, EXCEPT HOLIDAYS, FROM 7 A.M. TO 5 P.M. THE CITY OBSERVES THE FOLLOWING HOLIDAYS: NEW YEAR'S DAY, MARTIN LUTHER KING'S BIRTHDAY, PRESIDENT'S DAY, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, VETERANS' DAY, THANKSGIVING DAY, THANKSGIVING FRIDAY, AND CHRISTMAS DAY, AND ALL DAYS OF GENERAL AND CONGRESSIONAL ELECTIONS THROUGHOUT THE STATE.  
THE CONTRACTOR WILL NOT BE PERMITTED TO CLOSE LANES OR DO ANY WORK THAT REQUIRES THE SERVICES OF THE CITY FORCES, OUTSIDE OF THE NORMAL WORKING HOURS, UNLESS LISTED IN THE PERMIT OR AUTHORIZED BY DPW IN WRITING. HOWEVER, THE CONTRACTOR, WITH VERBAL PERMISSION OF DPW MAY BE PERMITTED TO WORK OUTSIDE OF THE NORMAL WORK HOURS FOR CLEAN-UP ACTIVITIES OR OTHER SUCH ITEMS THAT DO NOT ADVERSELY IMPACT TRAFFIC, RESIDENTS OR CITY SERVICES.
- TRAFFIC MUST BE MAINTAINED ON ALL ROADWAYS WITHIN THE CONSTRUCTION AREA AS DIRECTED BY DPW. NO LANE CLOSURE SHALL BE PERMITTED BETWEEN 7:00-9:00 A.M. OR 3:30-6:00 P.M. MONDAY THROUGH FRIDAY. AN EXCEPTION IS THAT LANE CLOSURES ARE PERMITTED ON SECONDARY RESIDENTIAL STREETS AT ANY TIME DURING NORMAL WORKING HOURS. DEPLOYMENT AND DESIGN OF ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). IF REQUIRED, TRAFFIC CONTROL PLANS SHALL BE REVIEWED AND APPROVED BY THE CHIEF OF THE TRAFFIC AND TRANSPORTATION DIVISION. DPW MAY SUSPEND LANE CLOSURE OR OTHER TRAFFIC CONTROLS AT ANY TIME DURING, OR IN ADVANCE OF, INCLEMENT WEATHER EVENTS.
- SHEETING AND SHORING IS THE TOTAL RESPONSIBILITY OF THE APPLICANT. A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MARYLAND SHALL SEAL THESE DRAWINGS. PROVIDE THREE COPIES TO DPW FOR INFORMATIONAL PROPOSES ONLY.
- IN ADDITION TO ALL CITY PERMITS, THE APPLICANT IS RESPONSIBLE TO ENSURE THAT ALL NECESSARY FEDERAL, STATE AND/OR MONTGOMERY COUNTY APPROVALS AND/OR PERMITS HAVE BEEN OBTAINED IN ASSOCIATION WITH THIS APPROVED PLAN.



**PROJECT AREA MAP**  
SCALE: 1" = 100'

**SITE: KING FARM FARMSTEAD**  
LIBER 15705 FOLIO 193/ LIBER 35480 FOLIO 487  
(16100 FREDERICK ROAD/ 1101 GRAND CHAMPION DRIVE)

**OWNER / DEVELOPER**

CITY OF ROCKVILLE, MARYLAND  
DEPARTMENT OF RECREATION AND PARKS  
111 MARYLAND AVENUE  
ROCKVILLE, MD 20850-2364

CONTACT: MAURICIO DAZA  
(240) 314-8608  
mdazd@rockvillemd.gov

**ENGINEER**

KCI TECHNOLOGIES, INC.  
936 RIDGEBROOK ROAD  
SPARKS, MD 21152

(410) 316-7800

CONTACT: JORDAN RANG, P.E.  
936 RIDGEBROOK RD.  
SPARKS, MD 21152

(410) 316-7936  
jordan.rang@kci.com

**Owner/Developer Certification**

I/We hereby certify that any clearing, grading, construction or development, or all of these, will be done pursuant to this plan and that Responsible Personnel involved in the construction project will have a certification of training at a Department of the Environment approved training program for the control of sediment and erosion before beginning the project and that the applicable sediment control conditions and requirements of the City of Rockville and the State of Maryland and its agencies are hereby made part of this plan.

Signature \_\_\_\_\_

Printed name and title Director of Recreation and Parks

Date August 29, 2022

**GRAPHIC SCALE**



PROFESSIONAL CERTIFICATION:  
I hereby certify that these documents were prepared or approved by me, and that I am duly licensed Professional Engineer under the laws of the State of Maryland,  
License No. 45808  
Expiration Date: 6/3/2024

Jordan E. Rang  
NAME



| SHEET INDEX |             |                                    |
|-------------|-------------|------------------------------------|
| SHEET NO.   | DRAWING NO. | SHEET NAME                         |
| 1           | G-001       | TITLE SHEET                        |
| 2           | ES-001      | EROSION & SEDIMENT CONTROL PLAN    |
| 3           | ES-002      | EROSION & SEDIMENT CONTROL NOTES   |
| 4           | ES-003      | EROSION & SEDIMENT CONTROL DETAILS |
| 5           | ES-004      | FORESTRY & LANDSCAPING NOTES       |
| 6           | ES-005      | FORESTRY NOTES & TABLES            |

**GENERAL NOTES (CONTINUED)**

- SHOP DRAWINGS MUST BE PREPARED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MARYLAND PRIOR TO FABRICATION. THE PROFESSIONAL ENGINEER WHO SEALED THE DESIGN PLANS (BUT NOT THE SHOP DRAWINGS) MUST APPROVE THE SHOP DRAWINGS FOR CONFORMANCE TO THE APPROVED DESIGN. PROVIDE THREE COPIES OF APPROVED SHOP DRAWINGS TO DPW PRIOR TO CONSTRUCTION. STANDARD PRE-CAST STRUCTURES PREVIOUSLY APPROVED BY THE MARYLAND STATE HIGHWAY ADMINISTRATION, MONTGOMERY COUNTY AND WASHINGTON SUBURBAN SANITATION COMMISSION DO NOT REQUIRE A SHOP DRAWING SUBMISSION. USE ACTUAL FIELD SOILS DATA FOR DESIGN OF PIPES AND STRUCTURES. ALL PIPES AND STRUCTURES IN PAVED AREAS SHALL BE DESIGNED FOR HS-20 VEHICLE LOADING.
- UPON COMPLETION OF CONSTRUCTION, THE APPLICANT SHALL PROVIDE THREE SETS OF RED LINED AS-BUILT PRINTS (24"X 36") FOR REVIEW AND APPROVAL BY DPW. THE DRAWINGS MUST CONTAIN THE ORIGINAL APPROVAL SIGNATURES AND PROFESSIONAL ENGINEER'S SEAL AND SIGNATURE (A SCANNED IMAGE OF THE ORIGINAL MYLAR IS ACCEPTABLE). THE AS-BUILT SHALL BE SEALED BY A PROFESSIONAL ENGINEER OR PROFESSIONAL SURVEYOR, AS APPROPRIATE AND MUST BE LICENSED BY THE STATE OF MARYLAND. THE SEAL SHALL NOTE THAT IT IS ONLY FOR THE AS-BUILT AND SHALL INCLUDE AN AS-BUILT CERTIFICATION ACCEPTABLE TO DPW. UPON RECEIPT OF WRITTEN APPROVAL, THE APPLICANT SHALL PROVIDE APPROVED AS-BUILT MYLAR DRAWINGS ALONG WITH THE ORIGINAL MYLARS (WITH ALL ORIGINAL SIGNATURES) TO DPW PRIOR TO THE RELEASE OF THE PERMIT.
- THE APPLICANT MUST COMPLY WITH THE MONTGOMERY COUNTY NOISE CONTROL ORDINANCE. PLEASE REFER TO THE MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION AT 240-777-7770, ASKDEP@MONTGOMERYCOUNTYMD.GOV, OR WWW.MONTGOMERYCOUNTYMD.GOV/DEP.
- ALL APPLICABLE CITY OF ROCKVILLE DETAILS ARE SHOWN. OTHERWISE, THE CONTRACTOR SHALL REFER TO WSSC STANDARD CONDITIONS, SPECIFICATIONS AND DETAILS.

**Design and Quantities Certification**

I hereby certify that this plan has been prepared in accordance with the latest Maryland Standards and Specifications for Soil Erosion and Sediment Control and the Ordinance of the Rockville City Code. The estimated total amount of excavation and fill has been computed to be 0 cubic yards of excavation and 0 cubic yards of fill and the total area to be disturbed as shown on these plans has been determined to be 30,500 square feet of which 29,550 square feet is on-site and 950 square feet is in the adjacent right-of-way.

Signature: Jordan Rang

Printed name and title: Jordan Rang, Project Engineer

Date: 8/29/2022

Maryland Registration number: 45808

Title and License Number: Professional Engineer, Professional Land Surveyor, Registered Landscape Architect or Licensed Architect.

BEFORE BEGINNING CONSTRUCTION CONTACT "MISS UTILITY" WWW.MISSUTILITY.NET OR 1-800-257-7777 OR 811 AT LEAST 48 HOURS PRIOR TO EXCAVATION



|  |   |  |   |  |                                    |  |   |                   |                                      |              |
|--|---|--|---|--|------------------------------------|--|---|-------------------|--------------------------------------|--------------|
|  | <b>DEPARTMENT OF PUBLIC WORKS</b><br>CITY OF<br><b>ROCKVILLE</b><br>111 MARYLAND AVE. ROCKVILLE, MARYLAND | DESIGNED _____<br>DRAFTED _____<br>CHECKED _____ | <b>DESIGN PLAN APPROVAL</b><br>PWK# <u>PWK2022-00059</u> SCP# <u>SCP2022-00021</u><br>SMP# <u>N/A</u> REVIEWED BY _____ | <b>AS BUILT PLAN APPROVAL</b><br>_____<br>CHIEF, CONSTRUCTION MANAGEMENT APPROVAL DATE _____ | <b>G-001</b><br><b>TITLE SHEET</b> | KING FARM FARMSTEAD<br>PARCELS A & CX<br>Election District No. 4 City of Rockville, Maryland | DATE SUBMITTED:<br><u>08/29/2022</u>              | SCALE<br>AS SHOWN | SHEET<br>NO. <u>1</u><br>OF <u>6</u> | FILE # _____ |
|  | DIRECTOR OF PUBLIC WORKS APPROVAL DATE _____  |  | APPROVAL DATE _____   |  | APPROVAL DATE _____                |  | APPROVAL OF REVISIONS AFTER INITIAL PLAN APPROVAL |                   |                                      |              |



STANDARD WORDING FOR INITIAL STEPS OF SEQUENCE OF CONSTRUCTION FOR PRIVATE DEVELOPMENT PROJECTS April 2022

- GENERAL NOTES: 1) Comply with the City of Rockville's Standard Erosion and Sediment Control Notes 2) City Inspectors reserve the right to request additional measures not included on plans. 3) Changes to the approved plans require written approval from DPW Engineering and may require an approved 'redlined' plan revisions before proceeding.

- PRE-CONSTRUCTION MEETING: The following items must be completed prior to the pre-construction meeting: • Limits of Disturbance (LOD) and tree protection measures to be marked/staked out in the field • Contact Miss Utility @ 1-800-257-7777 or 811 and have utilities marked in the work area.

A pre-construction meeting must be conducted on-site with the following representatives: Minimum notice of 48 hours must be provided prior to meeting.

- City of Rockville Sediment and Erosion Control Inspector: Arthur Simpson @ 240-314-8879 (asimpson@rockvillemd.gov)
• City of Rockville Construction Inspector: (circle one) Ralph McElhinney @ 240-314-8553 (rmcelhinney@rockvillemd.gov) or Rob Queen @ 240-314-8548 (rqueen@rockvillemd.gov)
• City Stormwater Management Inspector: Ethan Chappell @ 240-314-8541 (echappell@rockvillemd.gov)
• City of Rockville Forestry Inspector: (circle one) Paula Perez @ 240-314-8706 (pperez@rockvillemd.gov) or Natasha Shangold @ 240-314-8205 (nshangold@rockvillemd.gov)
• Any of Agency Issuing a Permit
• Permittee, Owner, or Owners Representative
• General Contractor
• Site Engineer

The following items must be discussed, as needed, during the pre-construction meeting:

- Haul routes and maintenance of traffic
• Existing SWM facilities downstream of project
• SWM Construction Inspection and As-built process (see SWM plan)
• Water system shut downs

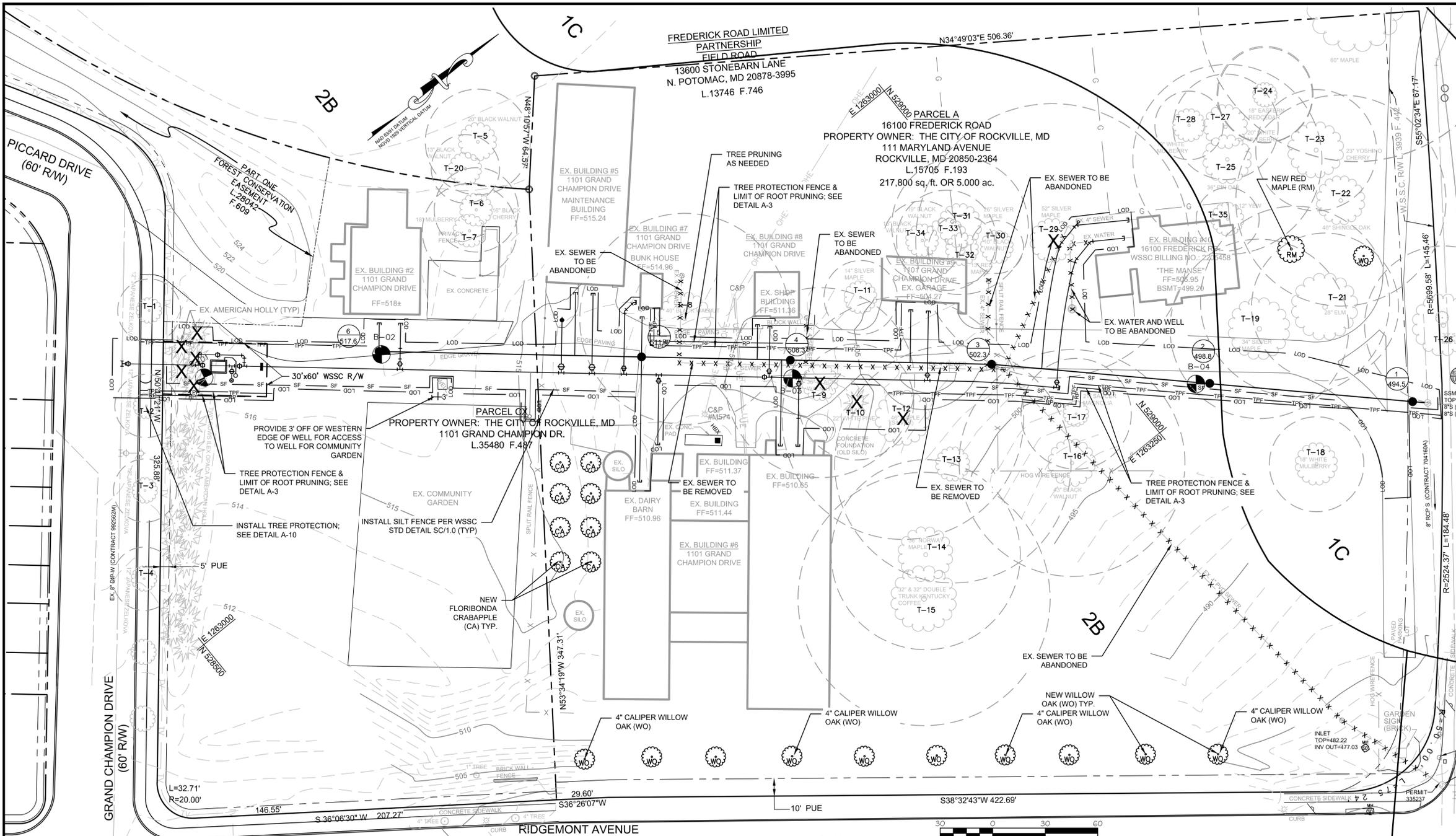
- SITE PREPARATION: 1) With approval from the City of Rockville Sediment Control, Construction, and Forestry Inspectors, install perimeter controls, tree protection measures and stabilized construction entrance. 2) With Step 1 above complete, obtain approval from the City of Rockville Inspectors to begin clearing and grading and site construction.

PROJECT SEQUENCE OF CONSTRUCTION:

- 1. INSTALL SEDIMENT AND EROSION CONTROL DEVICES IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND WITH THE EROSION AND SEDIMENT CONTROL PLANS.
2. INSTALL 8" WATER MAIN ALONG THE PROPERTY'S DRIVEWAY FROM STA. 0+83 TO STA. 5+34 COMPLETE WITH FITTINGS, VALVES, AND FIRE HYDRANTS AS SHOWN ON THE DRAWINGS. RESTRAIN ALL JOINTS AND FITTINGS.
3. INSTALL THE 4" AND 6" WATER MAINS TO EACH BUILDING COMPLETE WITH FITTINGS AND VALVES AS SHOWN ON THE DRAWINGS. RESTRAIN ALL JOINTS AND FITTINGS.
4. INSTALL 8" WATER MAIN (FROM STA. 0+15 TO STA. 0+83), METER VAULT, VALVES, FITTINGS, AND FIRE HOSE CONNECTION AS SHOWN ON THE DRAWING. RESTRAIN ALL JOINTS.
5. INSTALL 8"x8" TAPPING SLEEVE AND VALVE AT THE LOCATION SHOWN ON THE CONTRACT DRAWINGS, USING APPROVED FITTINGS AND CONNECTIONS. INSTALL 8" WATER MAIN FROM STA. 0+00 TO STA. 0+15. RESTRAIN ALL JOINTS. VALVES SHALL BE OPERATED BY WSSC PERSONNEL ONLY.
6. TEST AND DISINFECT NEW WATER PIPING IN ACCORDANCE WITH WSSC STANDARD SPECIFICATIONS FOR CONSTRUCTION. RESTORE THE AREA TO EXISTING CONDITIONS.
7. INSTALL 8" SEWER MAIN FROM MH-6 TO EX. MH U-029.
8. INSTALL 6" AND 4" SEWER MAINS FROM THE 8" MAIN TO EACH BUILDING AS SHOWN ON THE DRAWINGS.
9. PERFORM SANITARY SEWER TESTING IN ACCORDANCE WITH WSSC STANDARD SPECIFICATIONS FOR CONSTRUCTION.
10. CONNECT TO EXISTING SANITARY SEWER.
11. RESTORE THE AREA TO EXISTING CONDITIONS.

RESOURCE DATA TABLE

Table with 2 columns: Resource Description, Value. Includes rows for Acreage of Tract (Gross Area), Acreage of Tract Remaining in Agricultural Use, Acreage of Total Existing Forest, etc.



PLAN SCALE: 1" = 30'

REPLACEMENT TREES:

Table with 5 columns: SYMBOL, SPECIES, COMMON NAME, SIZE, NUMBER. Lists replacement trees like Willow Oak, Quercus Phellos, Malus x 'Floribunda', and Acer Rubrum.

SOILS TABLE

Table with 6 columns: SYMBOL, SOIL, PRIME AGRICULTURE, HIGHLY ERODIBLE, SERPENTINE, HYDRIC GROUP, K FACTOR. Lists soil types like Gaiia silt loam and Gleneig silt loam.

SOURCES: \* USDA NRCS WEB SOIL SURVEY (http://websoilsurvey.nrcs.usda.gov) \*\* PAGE 140 TABLE 5 MONTGOMERY COUNTY, MARYLAND SOIL SURVEY \*\*\* URBAN OR BUILT UP AREAS OF THE PRIME AGRICULTURAL SOILS ARE NOT CONSIDERED PRIME FARMLAND PER THE MONTGOMERY COUNTY MARYLAND SOIL SURVEY PAGE 140 TABLE 5 \*\*\*\* PAGE 67 APPENDIX C ERODIBLE SOILS LIST M-NCPDC MONTGOMERY COUNTY ENVIRONMENTAL GUIDELINES \*\*\*\*\* PAGE 120 MONTGOMERY COUNTY SOIL SURVEY \*\*\*\*\* TABLE 16 PAGE 212 MONTGOMERY COUNTY SOIL SURVEY

CASE NUMBER: FTP2022-00012 APPROVED BY: CITY OF ROCKVILLE PLANNING AND DEVELOPMENT SERVICES 9/16/2022 DATE SIGNED: 9/16/2022 DATE APPROVED: AS DIRECTED

PROFESSIONAL CERTIFICATION: I hereby certify that these documents were prepared or approved by me, and that I am duly licensed Professional Engineer under the laws of the State of Maryland, License No. 45808, Expiration Date: 6/3/2024 Jordan E. Rang



LEGEND:

- PROPERTY LINE
EXISTING WATER
EXISTING SEWER
EXISTING GAS
EXISTING CABLE TV
EXISTING MAJOR CONTOUR
EXISTING MINOR CONTOUR
EXISTING TREE(S)
EXISTING UTILITY POLE
EXISTING LIGHTPOLE
FOREST CONSERVATION EASEMENT
TREE REMOVAL
CRITICAL ROOT ZONE
EXISTING FENCE TO BE ABANDONED
SILT FENCE
LIMIT OF DISTURBANCE
100 LF FROM LOD
SOIL BORING
EXISTING SEWER CLEANOUT
EXISTING SEWER MANHOLE
EXISTING FIRE HYDRANT
TREE PROTECTION FENCE
LIMIT OF ROOT PRUNING
REPLACEMENT TREE(S)

MINIMUM TREE COVER

Table with 4 columns: TRACT AREA SF, ZONING, MTC REQUIRED %, MTC SF REQUIRED. Shows 203,700 SF tract area, MXD/PARK zoning, and exempt MTC requirements.

SIGNIFICANT TREE REMOVALS

Table with 4 columns: TREE NUMBER, TREE SPECIES, SIZE, REPLACEMENTS. Lists trees to be removed like T-9 Black Walnut, T-10 White Pine, T-12 Silver Maple, etc.

BEFORE BEGINNING CONSTRUCTION CONTACT "MISS UTILITY" WWW.MISSUTILITY.NET OR 1-800-257-7777 OR 811 AT LEAST 48 HOURS PRIOR TO EXCAVATION

TAX ID PLAT 160403396371 22411



Approval and submission information including Department of Public Works City of Rockville, Design Plan Approval, AS BUILT PLAN APPROVAL, ES-001 Erosion & Sediment Control Plan, King Farm Farmstead Parcels A & CX, Date Submitted: 08/29/2022, Scale: AS SHOWN, Sheet No. 2 of 6, File #.



GENERAL NOTES
November 2016

- 1. The Applicant is the entity for which the City of Rockville Department of Public Works (DPW) has issued a permit. For DPW projects where a permit is not applicable, the entity for which the City contract is issued shall be considered the Applicant in these notes. The Applicant is responsible for all contractors, agents, subcontractors, or other entities completing work under this permit and/or approved plan.
2. The Applicant must arrange a pre-construction meeting prior to commencing any work. Provide at least 48 hours of notice to the following: City Project Inspector listed in the permit, City Forestry Inspector at 240-314-8713, if required by either a DPW and/or Forestry permit, or DPW Sediment Control Inspector at 240-314-8879, if required by permit.
3. The Applicant must contact Miss Utility at 1-800-257-7777 or #811 or missutility.net so that utilities are marked prior to holding any pre-construction meeting.
4. Information concerning existing underground utilities was obtained from available records. The Contractor must determine the exact location and elevation of existing utilities by digging test pits at the utility crossings well in advance of trenching. If clearance is less than shown on this plan, contact the Professional Engineer who stamped the design plans before proceeding with construction.
5. Maintain a minimum one-foot vertical clearance between all City utilities crossing any other utility. Unless otherwise noted, maintain a five-foot horizontal clearance with between a City utility with any other utility or structure. The only exception is that there shall be a ten-foot horizontal clearance between City water and sewer mains.
6. At the end of each day, all trenches shall be backfilled, all equipment secured, and the area left in a safe condition. Steel plates are allowed to remain no longer than seven days. Plates are to be notched (recessed) and pinned to the roadway. Plates must be large enough to allow a minimum of one-foot bearing on all four sides of the pavement surrounding the excavation. The steel plate requirements only apply to public streets.
7. The public road utility patch shall be in accordance with City Standard Detail #60, or as shown on the plans. All trenches in public streets shall be filled with compacted Graded Aggregate Base (GAB) from below the pavement to the top of the pipe embedment zone or to a depth of five-feet, whichever is less.
8. DPW normal working hours are Monday through Friday, except holidays, from 7 a.m. to 5 p.m. The City observes the following holidays: New Year's Day, Martin Luther King's Birthday, President's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, Thanksgiving Friday, and Christmas Day, and all days of general and congressional elections throughout the State.
The Contractor will not be permitted to close lanes or do any work that requires the services of the City forces, outside of the normal working hours, unless listed in the permit or authorized by DPW in writing. However, the Contractor, with verbal permission of DPW may be permitted to work outside of the normal work hours for clean-up activities or other such items that do not adversely impact traffic, residents or City services.
9. Traffic must be maintained on all roadways within the construction area as directed by DPW. No lane closure shall be permitted between 7:00-9:00 A.M. or 3:30-6:00 P.M. Monday through Friday. An exception is that lane closures are permitted on secondary residential streets at any time during normal working hours. Deployment and design of all traffic control devices shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). If required, traffic control plans shall be reviewed and approved by the Chief of the Traffic and Transportation Division. DPW may suspend lane closure or other traffic controls at any time during, or in advance of, inclement weather events.
10. Sheeting and shoring is the total responsibility of the Applicant. A Professional Engineer licensed in the State of Maryland shall seal these drawings. Provide three copies to DPW for informational purposes only.
11. In addition to all City permits, the Applicant is responsible to ensure that all necessary Federal, State and/or Montgomery County approvals and/or permits have been obtained in association with this approved plan.
12. Shop drawings must be prepared and sealed by a Professional Engineer licensed in the State of Maryland prior to fabrication. The Professional Engineer who sealed the design plans (but not the shop drawings) must approve the shop drawings for conformance to the approved design. Provide three copies of approved shop drawings to DPW prior to construction. Standard pre-cast structures previously approved by the Maryland State Highway Administration, Montgomery County and Washington Suburban Sanitation Commission do not require a shop drawing submission. Use actual field soils data for design of pipes and structures. All pipes and structures in paved areas shall be designed for HS-20 vehicle loading.
13. Upon completion of construction, the Applicant shall provide three sets of red lined As-Built prints (24" x 36") for review and approval by DPW. The drawings must contain the original approval signatures and Professional Engineer's seal and signature (a scanned image of the original mylar is acceptable). The As-Built shall be sealed by a Professional Engineer or Professional Surveyor, as appropriate and must be licensed by the State of Maryland. The seal shall note that it is only for the As-Built and shall include an as-built certification acceptable to DPW. Upon receipt of written approval, the Applicant shall provide approved As-Built mylar drawings along with the original mylars (with all original signatures) to DPW prior to the release of the permit.
14. The Applicant must comply with the Montgomery County Noise Control Ordinance. Please refer to the Montgomery County Department of Environmental Protection at 240-777-7770, askdep@montgomerycountymd.gov, or www.montgomerycountymd.gov/DEP.



GEOTECHNICAL NOTES
November 2016

- 1. The Applicant shall be responsible for all subgrade inspection and soil compaction testing associated with any work within a City right-of-way, private property subject to a public access easement, or private property subject to City easement for public utilities or public improvements; and/or any work associated with a sediment control facility, or stormwater management practice. This work shall be completed by or under the supervision of a Professional Engineer licensed in the State of Maryland. For the purposes of these notes and associated approved plans, this Engineer shall be referred to as the Geotechnical Engineer and shall be an independent firm from the Applicant.
2. Any plans subject to NRCS-MD Pond Code 378 Standards/Specifications, as shown on the plans, shall supersede these notes when these notes are less stringent or in case of conflict. Any reference to the Engineer in the 378 Standard/Specifications shall be the Professional Engineer who stamped and sealed the design plans. Any reference to the Geotechnical Engineer shall be the Geotechnical Engineer as defined above or the Geotechnical Engineer who completed certain aspects of the pond design.
3. All inspections, tests, supporting data, reports, and certifications shall be provided to the City of Rockville Department of Public Works (DPW) and shall be sealed by the Geotechnical Engineer. Daily inspection reports, if requested by the City, can be provided without being immediately sealed by the Geotechnical Engineer. These reports shall be compiled, reviewed, sealed and then submitted to DPW at a later date as agreed upon by the City.
4. The Geotechnical Engineer shall approve all fill materials that are used for the project. The Geotechnical Engineer shall obtain samples of proposed fill materials and perform all required testing to determine that fill materials are in conformance with this plan.
5. The Geotechnical Engineer shall provide a report that certifies the subgrade preparation and fill/backfill placement are in conformance with this plan. The certification applies to all fill, backfill, and subgrade operations subject to this plan as detailed in Note #1, including utility trenches. When constructing new roadway pavement this certification report shall be provided prior to the placement of Graded Aggregate Base (GAB). All other certifications shall be provided as requested by the City.
6. All fill and/or backfill material shall be free from organics, frozen material, rocks/stones greater than one and a half inches in any dimension, waste metal products, unsightly debris, toxic material, or other deleterious materials; shall be a minimum of 105 pounds per cubic foot for the maximum dry density according to AASHTO T-180, Method C, and shall not have a liquid limit greater than 30 nor a plasticity index greater than six according to ASTM D-4318. All other materials shall meet the requirements stated in Category 900 of the latest edition of the Maryland State Highway Administration (MSHA) Standard Specifications for Construction and Materials.
7. Compact the material that is one foot below the top of subgrade to at least 92 percent of the maximum dry density per AASHTO T-180. Compact the top one foot to at least 97 percent of the maximum dry density. When necessary, add water or dry the layer in order to compact to the required density. Generally the material shall be within two percent of the optimum moisture content but may be outside of this range if approved by the Geotechnical Engineer.
8. Fill and backfill materials must completely fill all spaces under and adjacent to the structure or pipe. For Stormwater Management embankments, the Applicant shall scarify each lift with a sheepsfoot roller or claw to a minimum depth of two-inches prior to placing the next lift. The Applicant shall scarify embankments parallel with the centerline of the dam core and perpendicular to the principal spillway. Bedding shall be provided in accordance with details indicated on the construction drawings. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four-feet, measured horizontally, to any part of a structure. Under no circumstances shall the Applicant drive equipment over any part of a corrugated metal pipe unless there is a compacted fill of 24-inches or greater over the structure or pipe.
9. At a minimum, compaction tests shall be completed for every lift of fill or backfill. The testing frequency shall be at least once per 150 linear feet of trench or once per 1,500 square feet of fill. At a minimum, there shall be at least one compaction test per lift and a least two compaction tests per day. The Geotechnical Engineer shall supply DPW with certified compaction test results, including certification of pipe bedding subgrade and fill subgrade.
10. Prior to placing any roadway fill on existing grades (original grade after topsoil has been stripped, fill prepared by others outside of this plan or fill not prepared under the supervision of the Geotechnical Engineer), scarify the minimum top eight-inches of soil material. Compact this layer to the compaction requirements in these Notes. Proof-roll this compacted layer using a fully loaded dump truck (minimum 20 ton payload capacity). The Geotechnical Engineer shall inspect the proof-rolling and determine if the subgrade is acceptable or if there are areas that require remediation. Subgrade areas that fail proof-rolling shall be remediated to the satisfaction of the Geotechnical Engineer by either of the following methods:
A. Scarifying, moisture conditioning, and re-compaction of the subgrade materials.
B. Undercutting soft of unsuitable areas of subgrade and backfilling with compacted select borrow (MSHA Section 916).
C. Undercutting of soft or unsuitable areas of subgrade and placing a layer of geotextile covered by # MSHA 57 coarse aggregate (Table 901A).
DPW may approve an alternate approach for soil remediation/improvement if it is recommended and sealed by the Geotechnical Engineer.
11. Except when specified, do not place layers exceeding eight-inches un-compacted depth. Place the material in horizontal layers across the full width of the embankment. Perform all rolling in a longitudinal direction along the embankment. Begin at the outer edges and progress towards the center. Vary the travel paths of traffic and equipment over the width of the embankment to aid in obtaining uniform compaction.
12. Uniformly grade areas to a smooth surface, free of irregular surface changes. Grade and prepare the subgrade section to the lines, grades, cross sections and/or elevations shown on the plans. At all times, maintain the subgrade surface in such condition as to readily drain.

- 13. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice. Vehicular and equipment traffic shall be distributed across the prepared surface in such a manner as to prevent disturbance. Repair any damage to the prepared subgrade to the satisfaction of the Geotechnical Engineer. The Geotechnical Engineer must approve the storage or stockpiling of heavy loads on a roadway subgrade.
14. Unsuitable existing fill, soft or loose natural soils, organic material, and rubble shall be stripped to approved grades as determined by the Geotechnical Engineer.
15. Protect all structures and utilities from any damage in the handling, processing or compacting of embankment or backfill material. Exercise caution near arches, retaining walls, culverts and utility trenches to prevent undue strain or movement. The Geotechnical Engineer may require the use of specially selected material adjacent to structures to protect against damage. Do not use rock greater than one and a half inches in any dimension adjacent to structures.
16. When placing and compacting embankment on hillsides or against existing embankments, continuously bench the slopes where the slope is steeper than 4:1 when measured at right angles to the roadway or embankment centerline. Perform the benching operation as the embankment is constructed in layers. Maintain a bench width of at least five-feet. Begin each horizontal cut at the intersection of the original ground and the vertical sides of the previous cut. If the material cut from the benches meets fill requirements, compact this material along with the new embankment material.
17. When placing fill over existing pavement, thoroughly break up, scarify, or remove the pavement as specified or as directed by the Geotechnical Engineer.
18. Prior to the placement of asphalt pavement, proof-roll the compacted graded aggregate base (GAB) layer using a fully loaded dump truck (minimum 20 ton payload capacity). The Geotechnical Engineer shall inspect the proof-rolling and determine if the GAB is acceptable or if there are areas that require remediation. GAB areas that fail proof-rolling shall be remediated to the satisfaction of the Geotechnical Engineer by either of the following methods:
A. Scarifying, moisture conditioning, and re-compaction of the GAB materials.
B. Undercutting soft of unsuitable areas of GAB and replacing with compacted GAB.
DPW may approve an alternate approach for GAB remediation/improvement if it is recommended and sealed by the Geotechnical Engineer. The Geotechnical Engineer shall provide a sealed approval of the GAB prior to placement of asphalt. DPW may accept an oral or email approval while the final approval and reports are being compiled and completed.

STANDARDS AND SPECIFICATIONS FOR TOPSOIL

Definition
Purpose
Conditions Where Practice Applies
This practice is limited to areas having 2:1 or flatter slopes.
For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications
Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications.
Topsoil Specifications - Soil to be used as topsoil must meet the following:
1. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by DPS. Regardless, topsoil shall not be a mixture of contrasting textured subsoils, and shall contain less than 5 % by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
The subsoil shall be tilled to a minimum depth of 6 inches before placement of topsoil.
Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 lbs per 1000 sq ft) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil.

Topsoil shall be tested and amended as per soil test recommendations.
Topsoil Application.
1. When topsoiling, maintain needed erosion and sediment control practices.
2. Topsoil shall be uniformly distributed in a 4-8 inch layer and lightly compacted to a minimum thickness of 4 inches. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
3. Topsoil shall not be placed while the topsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.



EROSION AND SEDIMENT CONTROL NOTES
November 2016

- 1. The Applicant must obtain inspection and approval by the City of Rockville Department of Public Works (DPW) at the following points:
a. At the required preconstruction meetings.
b. Following installation of sediment control measures and prior to any other land disturbing activity.
c. During the installation of a sediment basin or stormwater management structure at the required inspection points (see Inspection Checklist on plan). Notification prior to commencing construction is mandatory.
d. Prior to removal or modification of any sediment control devices.
e. Prior to final acceptance.
2. All erosion control measures are to be constructed and maintained in accordance with applicable published standards and specifications and the most current "Maryland Standards and Specifications for Soil Erosion and Sediment Control."
3. The Applicant shall construct all erosion and sediment control measures per the approved plan and construction sequence, shall have them inspected and approved by DPW prior to beginning any other land disturbances, shall ensure that all runoff from disturbed areas is directed to the sediment control devices and shall not remove any erosion or sediment control measures without prior permission from DPW.
4. Any request for changes to the approved sediment control plan or sequence of construction must be submitted to the DPW Sediment Control Inspector and approved before implementing changes. Major changes will require a plan revision.
5. The Applicant shall protect all points of construction ingress and egress to prevent the deposition of materials onto traversed public thoroughfare(s). All materials deposited onto public thoroughfare(s) shall be removed immediately.
6. The Applicant shall inspect daily and maintain continuously in effective operating condition all erosion and sediment control measures until such time as they are removed with prior permission from the DPW Sediment Control Inspector.
7. All sediment basins, trap embankments, swales, perimeter dikes and permanent slopes steeper or equal to 3:1 shall be stabilized with sod, seed and anchored straw mulch or other approved stabilization measures, within seven calendar days of establishment. All areas disturbed outside of the perimeter sediment control system must be minimized and stabilized immediately. Maintenance must be performed as necessary to ensure continued stabilization. Restabilization or overseeding will be required, if necessary.
8. The Applicant shall apply sod, seed and anchored straw mulch, or other approved stabilization measures to all disturbed areas within seven (7) calendar days after stripping and grading activities have ceased on that area. Maintenance shall be performed as necessary to ensure continued stabilization. Other active construction areas that are not being actively graded (i.e. routes for construction vehicles within a site) may be required to be stabilized at the direction of the inspector. Stockpiles, which have not been used for seven (7) calendar days, shall be stabilized through the application of sod, seed, and anchored straw mulch, or other approved stabilization methods.
9. Prior to removal of sediment control measures, the Applicant shall stabilize all contributory disturbed areas using sod or an approved permanent seed mixture with required soil amendments and an approved anchored mulch. Wood fiber mulch may only be used in seeding season to promote sheet flow drainage. Areas brought to finished grade during the seeding season shall be permanently stabilized within seven (7) calendar days of establishment. When property is brought to finished grade during the months of November through February, and permanent stabilization is found to be impractical, approved temporary seed and straw anchored mulch shall be applied to disturbed areas. The final permanent stabilization of such property shall be completed prior to the following April 15.
10. The site work, materials, approved Sediment Control and Stormwater Management Plans, and any required test reports shall be available, at the site for inspection by duly authorized officials of the City of Rockville.
11. Surface drainage flows over unstabilized cut and fill slopes shall be controlled by either preventing drainage flows from traversing the slopes or by installing mechanical devices to lower the water downslope without causing erosion. Dikes shall be installed and maintained at the top of cut or fill slopes until the slope and drainage area to it are fully stabilized, at which time they must be removed and final grading done to promote sheet flow drainage. Mechanical devices must be provided at points of concentrated flow where erosion is likely to occur.
12. Permanent swales or other points of concentrated water flow shall be stabilized with sod or seed with approved erosion control matting or by other approved stabilization measures.
13. Temporary sediment control devices shall be removed, with permission of DPW, within 30 calendar days following establishment of permanent stabilization in all contributory drainage areas. If establishment is not full and uniform as determined by the DPW Sediment Control Inspector, overseeding will be required. Stormwater management structures used temporarily for sediment control shall be converted to the permanent configuration within this time period as well.
14. No permanent cut or fill slope with a gradient steeper than 3:1 will be permitted in lawn maintenance areas. A slope gradient of up to 2:1 will be permitted in areas that are not to be maintained provided that those areas are indicated on the erosion and sediment control plan with a low-maintenance ground cover specified for permanent stabilization. Slope gradient steeper than 2:1 will not be permitted with vegetative stabilization.
15. The Applicant shall install a splash block at the bottom of each downspout unless the downspout is connected by a drain line to an acceptable outlet.
16. All water pumped from an excavation during construction shall be pumped either to sediment tanks and/or sediment traps. No water will be pumped to the storm drain system or swale. De-watering

- shall be performed in accordance with the most current Maryland Standards and Specifications for Soil Erosion and Sediment Control.
17. For finished grading, the Applicant shall provide adequate gradients so as to: (1) prevent water from standing on the surface of lawns more than 24 hours after the end of a rainfall, except in designated drainage courses and swale flow areas which may drain as long as 48 hours after the end of a rainfall, and (2) provide positive drainage away from all building foundations or openings.
18. Sediment traps or basins are not permitted within 20-feet of a building, which exists or is under construction. No building may be constructed within 20-feet of a sediment trap or basin.
19. All inlets in non-sump areas shall have asphalt berms installed at the time of base paving to direct runoff to inlets.
20. The DPW Sediment Control Inspector has the option of requiring additional sediment control measures, if deemed necessary.
21. All trap elevations are relative to the outlet elevation, which must be on existing undisturbed ground.
22. Vegetative stabilization shall be performed in accordance with the most current Maryland Standards and Specifications for Soil Erosion and Sediment Control.
23. Temporary sediment trap(s) shall be cleaned out and restored to the original dimensions when sediment has accumulated to a point one-half the depth between the outlet crest and the bottom of the trap.
24. Sediment removed from traps shall be placed and stabilized in approved areas in such a manner that it does not foul existing or proposed storm drainage systems or areas already stabilized. Sediment shall not be placed within a flood plain or wetland.
25. All sediment basins and traps must be surrounded with a welded wire safety fence. The fence must be at least 42-inches high, have posts spaced no farther apart than eight-feet, have mesh openings no greater than two-inches in width and four-inches in height with a minimum of 14 gauge wire. Safety fence must be maintained in good condition at all times.
26. Off-site spoil or borrow areas must have approved sediment control plans.
27. Protect all trees to be preserved during construction in accordance with the approved Forest Conservation Plan.
28. The Applicant is responsible for all actions of contractor and subcontractors, including repairing damage to sediment control devices and existing infrastructure.
29. The Applicant shall comply with all provisions of the NPDES Construction Discharge Permit. A copy of the permit and all required reports shall be available on site at all times.



DEPARTMENT OF PUBLIC WORKS
CITY OF ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL
PWK# PWK2022-00059\_SCP# SCP2022-00021
SMP# N/A REVIEWED BY

AS BUILT PLAN APPROVAL
ES-002
EROSION & SEDIMENT CONTROL NOTES

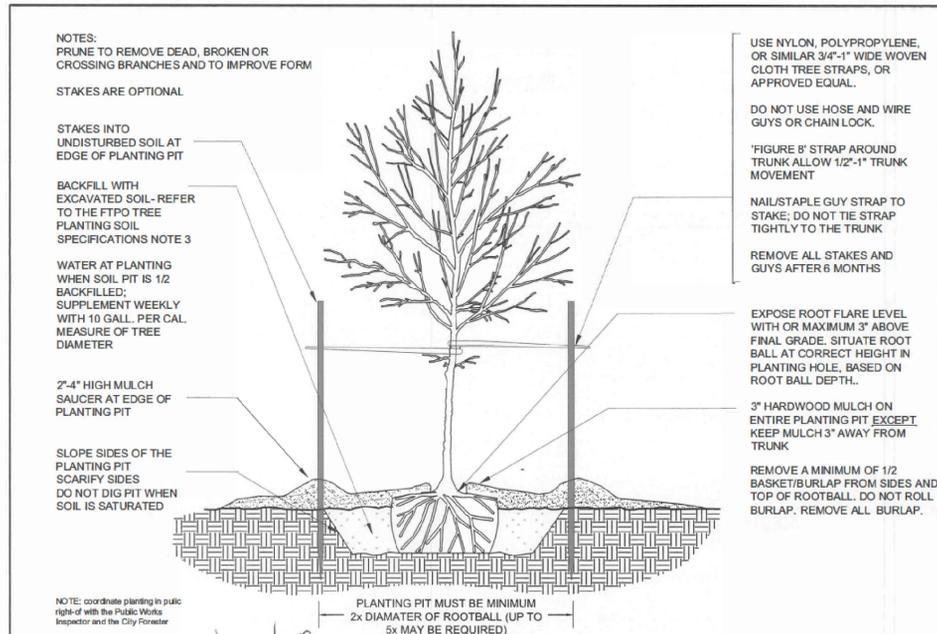
KING FARM FARMSTEAD PARCELS A & CX
Election District No. 4 City of Rockville, Maryland

Table with columns: NO., DESCRIPTION OF REVISION, P.E. INITIAL, DATE, DPW, DATE. Includes sub-table for APPROVAL OF REVISIONS AFTER INITIAL PLAN APPROVAL with columns: DATE SUBMITTED, SCALE, SHEET NO., FILE #.



PROFESSIONAL CERTIFICATION: I hereby certify that these documents were prepared or approved by me, and that I am duly licensed Professional Engineer under the laws of the State of Maryland, License No. 45808, Expiration Date: 6/3/2024. Jordan E. Rang



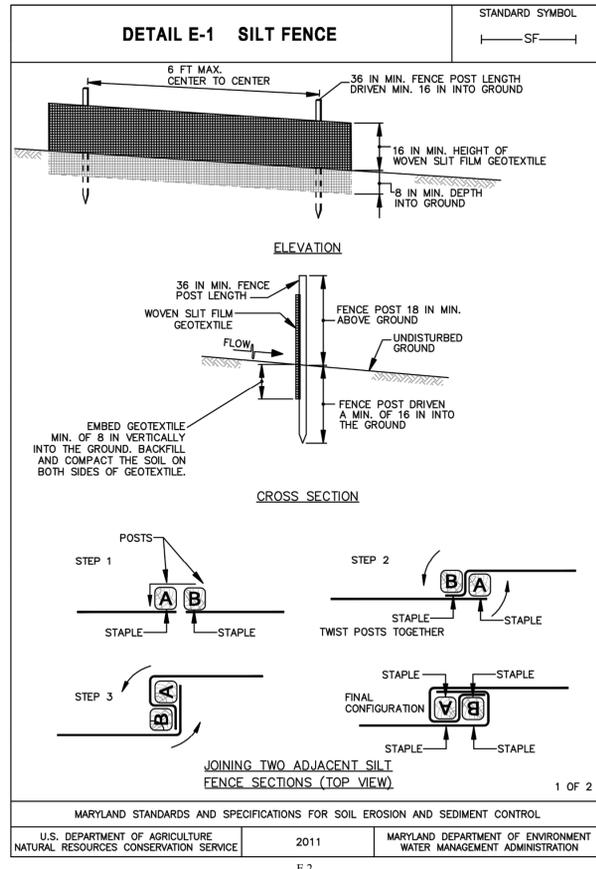


APPROVED BY: *W. J. Wall* CITY FORESTER  
DATE: 3/30/17

**SHADE TREE PLANTING DETAIL**

DETAIL A-1

June 2018



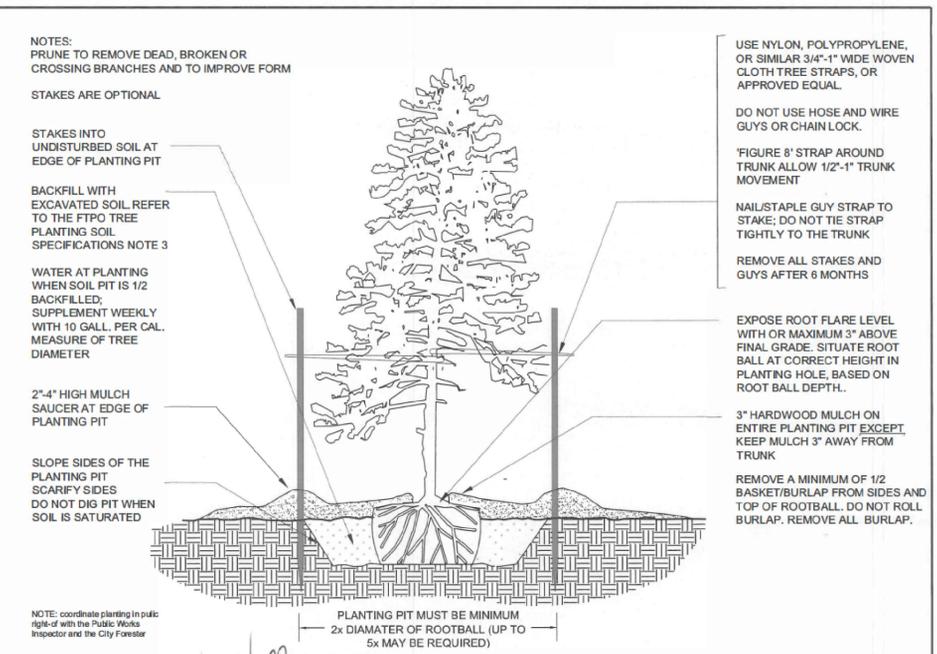
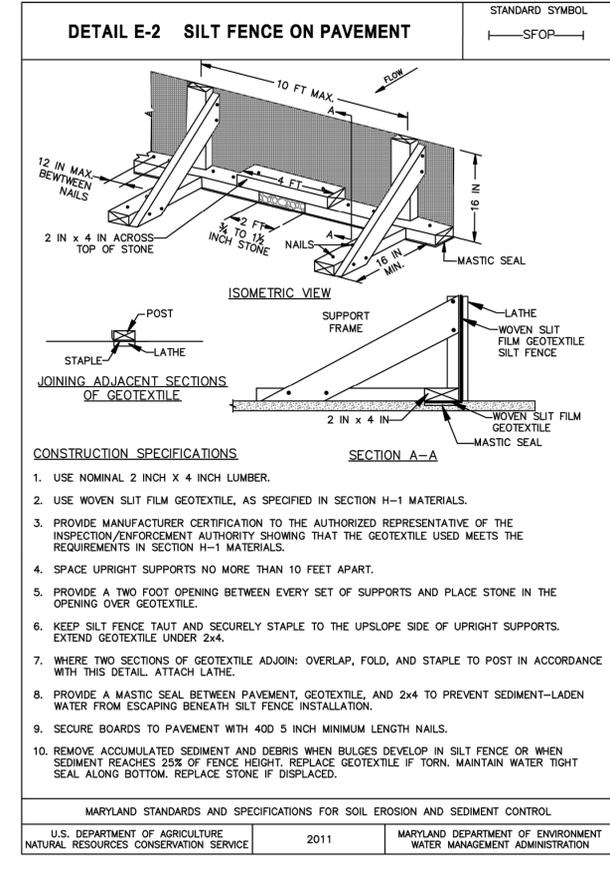
**DETAIL E-1 SILT FENCE**

STANDARD SYMBOL: SF

**CONSTRUCTION SPECIFICATIONS**

- USE WOOD POSTS 1 1/2 x 1 1/2 x 1/8 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
- USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
- USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
- PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
- WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
- EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

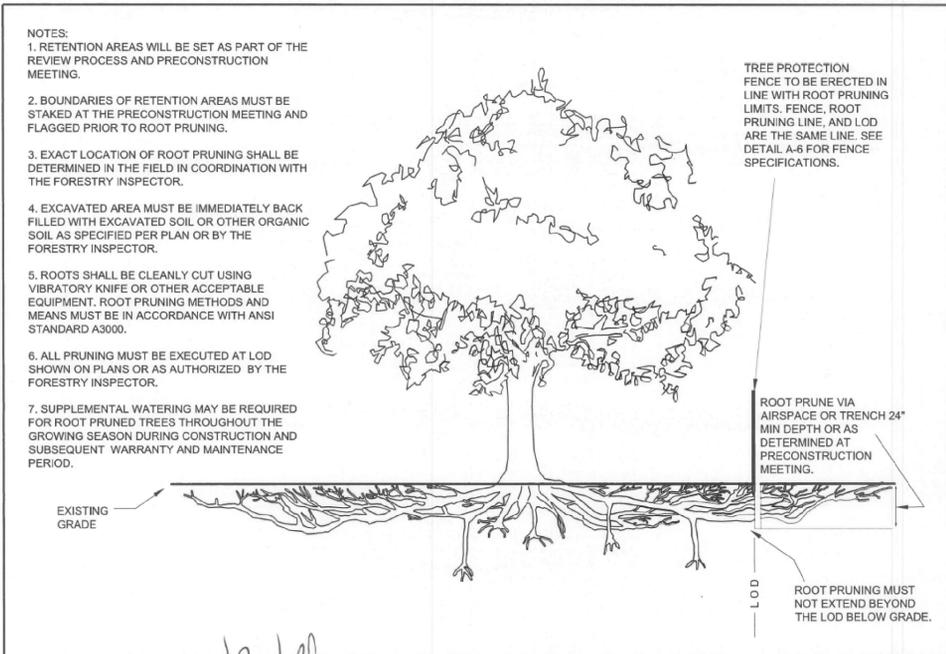


APPROVED BY: *W. J. Wall* CITY FORESTER  
DATE: 3/30/17

**EVERGREEN TREE PLANTING DETAIL**

DETAIL A-2

June 2018

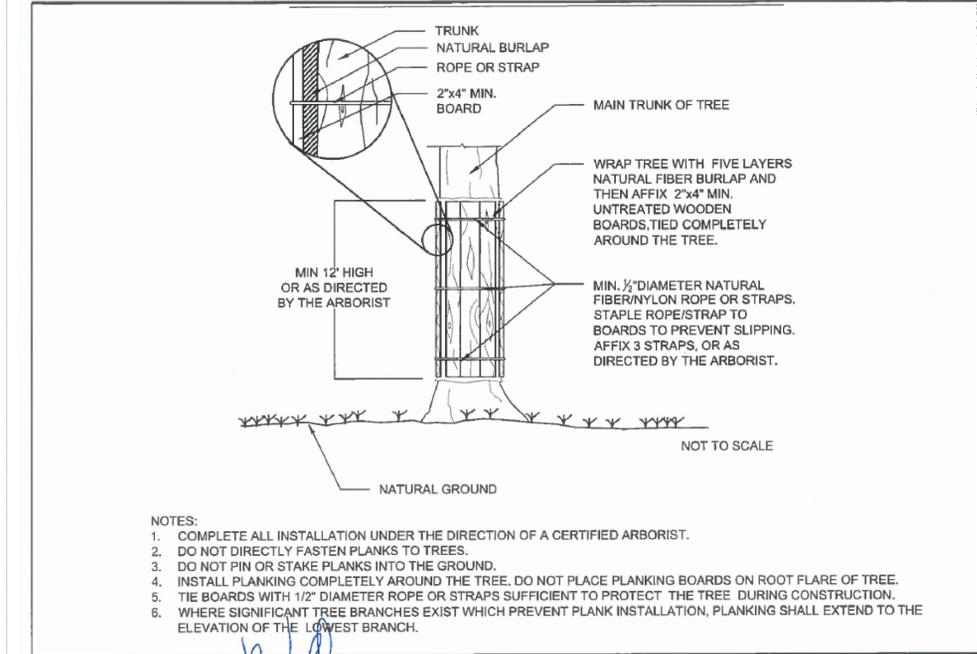


APPROVED BY: *W. J. Wall* CITY FORESTER  
DATE: 3/30/17

**ROOT PRUNING DETAIL**

DETAIL A-3

June 2018



APPROVED BY: *W. J. Wall* CITY FORESTER  
DATE: 4/1/18

**TRUNK PROTECTION DETAIL**

DETAIL A-10

June 2018

BEFORE BEGINNING CONSTRUCTION CONTACT "MISS UTILITY" AT WWW.MISSUTILITY.NET OR 1-800-257-7777 OR 811 AT LEAST 48 HOURS PRIOR TO EXCAVATION

**KCI TECHNOLOGIES**  
ENGINEERS PLANNERS SURVEYORS CONSTRUCTION MANAGERS  
936 Rosemont Road  
Shelton, MD 21152  
Phone: (410) 316-7800  
Fax: (410) 316-7817  
www.kci.com

DEPARTMENT OF PUBLIC WORKS  
CITY OF  
**ROCKVILLE**  
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGNED \_\_\_\_\_  
DRAFTED \_\_\_\_\_  
CHECKED \_\_\_\_\_

DESIGN PLAN APPROVAL

PWK# PWK2022-00059\_SCP# SCP2022-00021  
SMP# N/A REVIEWED BY \_\_\_\_\_

DIRECTOR OF PUBLIC WORKS APPROVAL DATE \_\_\_\_\_

AS BUILT PLAN APPROVAL

CHIEF, CONSTRUCTION MANAGEMENT APPROVAL DATE \_\_\_\_\_

ES-003  
**EROSION & SEDIMENT CONTROL DETAILS**

PROFESSIONAL CERTIFICATION:  
I hereby certify that these documents were prepared or approved by me, and that I am duly licensed Professional Engineer under the laws of the State of Maryland, License No. 45808  
Expiration Date: 6/3/2024  
**Jordan E. Rang**  
NAME

STATE OF MARYLAND  
JORDAN E. RANG  
No. 45808  
PROFESSIONAL ENGINEER  
8/29/2022

| NO. | DESCRIPTION OF REVISION | P.E. INITIAL | DATE | DPW | DATE |
|-----|-------------------------|--------------|------|-----|------|
|     |                         |              |      |     |      |
|     |                         |              |      |     |      |
|     |                         |              |      |     |      |
|     |                         |              |      |     |      |

APPROVAL OF REVISIONS AFTER INITIAL PLAN APPROVAL

DATE SUBMITTED: 08/29/2022

SCALE AS SHOWN

SHEET NO. 4 OF 6

FILE # \_\_\_\_\_



# Forest and Tree Preservation Ordinance Notes

NOVEMBER 2019

## SEQUENCE OF EVENTS

The permittee is responsible for strict adherence to the sequence and details as outlined. During each stage of the project, forestry staff may provide additional direction based on site conditions, unforeseen circumstances, or approved revisions.

## PRE-CONSTRUCTION

- Permittee shall obtain a Forestry Permit (FTP) for the project and secure copies of the approved Forest Conservation Plan (FCP) for distribution to contractors. The Permittee is responsible for obtaining a Maryland Roadside Tree Permit if applicable. Contact Miss Utility at 1-800 257-7777.
- The Permittee must coordinate and schedule an onsite preconstruction meeting with the following attendees: Permittee, Construction Superintendent, Maryland LTE/ISA Certified Arborist (if required by Forestry Department), the City Forestry Inspector, City Project Inspector, and City Sediment Control Inspector. The limits of disturbance must be staked and flagged prior to the preconstruction meeting. No land disturbance shall occur prior to this meeting. This includes, but is not limited to, the installation of tree protection fencing, sediment control measures, clearing, grading and tree stress reduction measures. The limits of disturbance will be reviewed, and tree protection and tree care measures will be discussed.
- No land disturbance shall begin before stress-reduction measures as indicated on the approved FCP, or otherwise directed by the Forestry Inspector have been implemented and approved by Forestry Inspector. Measures not specified on the plan may be required as determined by the Forestry Inspector in consultation with the Permittee's MD LTE/ISA Certified Arborist. Appropriate stress-reduction measures may include, but are not limited to:
  - Root pruning
  - Crown reduction or pruning
  - Watering
  - Fertilizing
  - Surface mulching
  - Vertical mulching
  - Root aeration matting
- A professional with the dual credentials of Maryland Department of Natural Resources Licensed Tree Expert (LTE) and International Society of Arboriculture Certified Arborist (ISA CA) must perform all stress reduction measures. Documentation of these qualifications may be required. The measures must be done in accordance with *ANSI Standards for Tree Care Operations (A300)* and other industry best management practices. Implementation of the stress reduction measures must be observed by the Forestry Inspector or written documentation, including photographs must be sent via mail or email to the City Forestry Inspector.
- Temporary tree protection devices, including signage, shall be installed per the approved Forest Conservation Plan, or as otherwise directed by the Forestry Inspector, and prior to any land disturbance. Tree protection fencing locations must be staked and flagged prior to the pre-construction meeting. The Forestry Inspector, in coordination with the City Sediment Control Inspector, may make field adjustments to increase the survivability of trees and forest shown as saved on the approved plan. The Permittee must contact the Forestry Inspector to schedule a follow up construction inspection after installing all tree protection measures and performing all stress reduction measures. Upon a satisfactory inspection by the Forestry Inspector and Sediment Control Inspector, a Notice to Proceed will be issued and clearing and grading can commence. Temporary tree protection devices may include:
  - Chain link fence (four feet high)
  - Super slit fence with wire strung between the support poles (minimum 4 feet high) with high visibility flagging.
  - 14 gauge 2 inch x 4 inch welded wire fencing supported by steel T-bar posts (minimum 4 feet high) with high visibility flagging.
- The Permittee and contractor shall maintain the temporary tree protection devices for the duration of the project and the location must not be altered without prior approval of the Forestry Inspector. No equipment, trucks, materials, debris, or any other items may be stored within the tree protection fence areas during the entire construction project. No access beyond the fenced area will be permitted. Tree Protection fencing shall not be removed without prior approval of the Forestry Inspector.
- Long term tree protection devices/techniques, as shown on the FCP or as directed by the Forestry Inspector may include but are not limited to:
  - Root aeration systems
  - Retaining walls
  - Raised sidewalks
  - Tunneling of utilities
  - Pier and panel walls
  - Porous pavers

## DURING CONSTRUCTION

- Periodic inspections at the discretion of the Forestry Inspector will occur during the construction project. Corrections and repairs to all tree protection devices and other protective measures, as determined by the Forestry Inspector, must be made within the timeframe established by the Forestry Inspector.
- The Permittee must immediately notify the Forestry Inspector of any damage to trees, forests, understorey, ground cover, and any other undisturbed areas shown on the plan. Remedial actions to the restore these areas will be determined by the Forestry Inspector and the corrective actions must be made within the timeframe established by the Forestry Inspector.
- Failure to comply with the approved FCP or any directive of the City Forester's office is a violation of the Forest and Tree Preservation Ordinance (FTPO). Pursuant to Section 10.5-34 of the FTPO, a fine in the amount of \$1,000 may be imposed for each violation. Each day a violation continues is a separate violation. In addition, a stop work order may be issued until the violation has been abated and the fine has been paid or an appeal has been filed pursuant to Section 10.5-35 of the FTPO. Additional punitive measures as stated under Section 10.5-34 of the FTPO may be imposed.

## POST CONSTRUCTION

- After construction is completed, the Permittee must request a final inspection in writing with the Forestry Inspector. At the final inspection, the Forestry Inspector may require additional corrective measures, which may include, but is not limited to:
  - Removal and replacement of dead and dying trees
  - Pruning of damaged, dead or declining limbs
  - Surface mulching
  - Soil aeration
  - Fertilization
  - Watering
  - Wound repair
  - Clean up of retention areas including trash removal
- After the final inspection and completion of all corrective measures the Forestry Inspector will request all temporary tree and forest protection devices be removed from the site. Removal of tree protection devices that also operate for erosion and sediment control must be coordinated with both the City Sediment Control Inspector and the Forest Conservation Inspector. No additional grading, sodding, or burial may take place after the tree protection fencing is removed.

## INSTALLATION OF PLANT MATERIAL

- The Permittee is responsible for obtaining the approved Forest Conservation Plan/Landscape Plan and providing a copy to the Landscape Contractor. The Permittee shall ensure that the Landscape Contractor can secure the plants shown the FCP/Landscape Plan. Plant substitutions are not allowed. It is strongly recommended that plant material be secured from supplier by the project start date.

2. A pre-planting meeting is required before installation of landscaping, afforestation, or reforestation. The applicant must schedule an on-site pre-planting meeting with the City Forestry Inspector. Attendees must include the Permittee, landscape contractor, and Forestry Inspector. Trees and shrubs shall conform to the current edition of the American Standard for Nursery Stock (ANSI Z60.1).

- Comply with appropriate City Soil Specification:
  - Soil Specification FOR TREE PLANTING WHERE EXISTING PAVEMENT OR OTHER IMPERVIOUS SURFACES WERE PREVIOUSLY LOCATED OR WHERE EXISTING GREENSPACE HAS BEEN SEVERELY DEGRADED<sup>1</sup>
    - Site preparation
      - Demolish existing impervious surface and remove all existing asphalt, concrete, stone and construction materials to expose subsoil free of debris.
      - Excavate soil that final planting bed will provide quality soil to a depth of forty-eight (48) inches, and to a radius of 10' minimum or to new hard edge of planting bed, whichever is less.
      - Loosen exposed subsoil below 48" by ripping 18" into the sub grade elevation.
      - Test to ensure that planting bed drains at a rate of at least 1 inch/per hour.
      - Install imported soil to fill excavated planting bed. Imported soil shall have a texture of LOAM, per the USDA soil classification system and a chemical composition compatible with healthy tree growth. When installing the soil, it should be installed in lifts or layers of < 12 inches (30 cm), tamping or watering (not both) between lifts to minimize potential settling.
    - Immediately prior to installation of plant material, the soil must be tested and must have a pH range between 5.5 and 7 and a nutrient content which corresponds to an adequate rating, per current industry standards.
    - The Forestry Inspector may require additional soil specifications, based on site conditions.
  - Soil Specification FOR PLANTING WHERE EXISTING GREEN SPACE HAS NOT BEEN PROTECTED FROM CONSTRUCTION IMPACTS BUT IS NOT SEVERELY DEGRADED.
    - Site Preparation:
      - Remove all construction debris and top four to six inches of existing soil.
      - Test remaining existing soil to verify a pH range between 5.5 and 7, and has a nutrient content which corresponds to an adequate rating, per current industry standards.
      - Apply four (4) inches of mature compost evenly over the entire planting surface. (4" = 12 Cubic Yard/1,000 s.f.). Provide compost supplier information and specifications to the City Forestry Inspector for approval prior to install.
      - Till the compost into the existing soil to a minimum depth of thirty-six (36) inches using the city's soil profile rebuilding specification.
      - If soil does not meet nutrient standards, mitigate soil chemistry to meet the chemical parameters.
    - The Forestry Inspector may require additional soil specifications, based on site conditions.

- Soil Specification FOR PLANTING WITHIN EXISTING GREEN SPACE AREAS WHICH HAVE BEEN PROTECTED FROM CONSTRUCTION IMPACTS (One of two options, as determined by Forestry Inspector) Refer to approved City of Rockville Detail A-7
  - Test existing soil to verify it has a pH range between 5.5 and 7, and a nutrient content which corresponds to an adequate rating, per current industry standards. If soil does not meet nutrient standards, one of two options will be performed to amend the soil:
    - Option 1 - Till Method- Depth of tilling for planting must be at least twenty-four (24) inches:
      - Apply four (4) inches of mature compost evenly over the entire planting surface (4" = 12 cubic yards/1,000 s.f.). Provide compost supplier information and specifications to the City Forestry Inspector for approval prior to install.
      - Till the compost into the existing soil to a minimum depth of twenty-four (24") inches.
    - Option 2 - Aeration and Vertical Mulching
      - Using a 2- 3" Auger, drill a series of holes in the soil to a depth of twenty-four (24) inches.
      - Begin at the edge of the hole dug for the root ball and continue drilling at one-foot intervals (maximum), in concentric rings around the tree out to ten (10) feet from the tree.
      - Each hole must be refilled with mature compost.
  - The Forestry Inspector may require additional soil specifications, based on site conditions.

- Soil Specification FOR PLANTING WITHIN EXISTING GREEN SPACE AREAS WHICH HAVE BEEN PROTECTED FROM CONSTRUCTION IMPACTS (One of two options, as determined by Forestry Inspector) Refer to approved City of Rockville Detail A-7
  - Test existing soil to verify it has a pH range between 5.5 and 7, and a nutrient content which corresponds to an adequate rating, per current industry standards. If soil does not meet nutrient standards, one of two options will be performed to amend the soil:
    - Option 1 - Till Method- Depth of tilling for planting must be at least twenty-four (24) inches:
      - Apply four (4) inches of mature compost evenly over the entire planting surface (4" = 12 cubic yards/1,000 s.f.). Provide compost supplier information and specifications to the City Forestry Inspector for approval prior to install.
      - Till the compost into the existing soil to a minimum depth of twenty-four (24") inches.
    - Option 2 - Aeration and Vertical Mulching
      - Using a 2- 3" Auger, drill a series of holes in the soil to a depth of twenty-four (24) inches.
      - Begin at the edge of the hole dug for the root ball and continue drilling at one-foot intervals (maximum), in concentric rings around the tree out to ten (10) feet from the tree.
      - Each hole must be refilled with mature compost.
  - The Forestry Inspector may require additional soil specifications, based on site conditions.

- Soil testing of the existing soil may be conducted with PRIOR approval from the City's Forestry Inspector to determine the number and location of the samples. The above requirements may be reduced if soil testing shows the following:
  - Soil pH is between 5.5 and 7
  - The top 24" of existing soil contains a minimum of 4-6% organic matter by weight
  - The soil is free of contaminants
  - The soil texture is sandy loam or loam
  - The soil has an infiltration rate not less than 1" per hour
  - The soil does not contain debris or stones greater than one inch
  - The soluble salt content is less than 3 ds/m
  - Consult the University of Maryland Extension website: <http://extension.umd.edu/> for a listing of commercial soil testing facilities.
- Soil preparation is required for street trees planted within the city's rights-of-way and private street trees, if they are part of the approved plan.

4. The depths and grades shown on plan drawings are final grades after settlement and shrinkage of the organic material. The contractor shall install the soil mix at a higher level to anticipate this reduction of volume. All grades are assumed to be "as measured" to be prior to the addition of any surface compost till layer or mulch or sod.

- All details of the planting plans regarding plant quality and proper planting will be discussed including but not limited to:
  - Plant quality.
  - Proper form for species.
  - Proper ratio of caliper size/height to container size/root ball size.
  - Proper pruning cuts if applicable in accordance with current ANSI A300 pruning standards (generally there should be no recent pruning).
  - No co-dominant stems or multiple trunks (unless approved by FCP or by The Forestry Inspector).
  - Sound graft union.
  - Free of girdling roots, or the ability to remove girdling roots without damaging the tree.
  - Trees shall be healthy, vigorous, insect/disease free, and without cankers/cracks or trunk damage.

- Proper Installation
  - Root flare no higher than 3 inches from existing grade.
  - Exposed root flare (not graft); removing more than several inches of soil to expose the root flare may result in the rejection of the plant material.
  - Wire baskets/twine/burlap removed from at least the top half of root ball, or as directed by Forestry Inspector.
  - All burlap or twine removed completely.
  - No hose and wire; staking and strapping per City planting detail.
  - Planting Hole a minimum of twice the width of the root ball; could be greater. Planting detail assumes soil has been prepared per the city's specifications (Planting, #3).
  - Mulched properly, per City planting detail.
  - Wildlife protection installed, if required; type approved by the Forestry Inspector.

7. Trees not complying with the above requirements may be rejected at the discretion of the City Forestry Inspector.

8. Tree planting will generally not be permitted between the dates of June 1 and September 1, or when the ground is frozen.

- DEFINITIONS
  - Topsoil
    - Soil can be considered topsoil if it originates from an A horizon of a natural soil or is a mineral soil with 4-6% organic matter content, and a NRCs textural class similar to pre-development conditions A horizon soils for the site, or as specified by the City Forestry Division. The city Forestry Division will specify a LOAM texture in the absence of native conditions listed above. Blended soils shall not be used unless specified by the City Forestry Division. In addition, topsoil shall:
      - Be friable and well drained
      - Have a pH between 5.5-7.
      - Have an organic matter content between 4-6%.
      - Have low salinity as indicated by a soluble salt content which is less than 3 ds/m
      - Be free of debris, stone, gravel, trash, large sticks, heavy metals, and other deleterious contaminants, (if screening is used to remove debris, screen size must be ¼ inch or larger).
      - Have a nutrient profile such that it has an adequate rating, per current industry standards.
      - Be free of noxious weed seeds
  - Compost
    - Compost shall be composed of leaves, yard waste, or food waste. Biosolid-based composts shall not be used. A compost sample with analysis shall be submitted for approval to the City Forestry Division 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](http://www.solvita.com)).
- Compost shall also be:
  - Free of weed seeds.
  - Free of heavy metals or other deleterious contaminants.
  - Have a soluble salt content which is less than 3 ds/m.
- Severely Degraded Soil
  - Soil shall be considered severely degraded if grade was lowered or raised more than 14 inches OR soil was compacted in lifts regardless of the final grade OR was used as a staging area for construction materials, equipment or processes.

## POST INSTALLATION

- The Permittee shall notify the City Forestry Inspector IN WRITING when the planting is complete and request a post planting inspection. The inspection must include the Permittee, landscape contractor and Forestry Inspector. The maintenance and warranty period will not begin until the City Forestry Inspector has accepted ALL plantings.
- Trees will be inspected for plant quality and proper planting in accordance with City specifications and nursery standards. Once the maintenance period has begun, the applicant is responsible for maintaining plant health in accordance with the signed Warranty and Maintenance Agreement.
- Routine inspections will be conducted throughout the warranty period and the applicant will be notified in writing when corrective measures are required. Failure to complete the corrective measures by the given date may result in fines being issued, permits revoked, extension of warranty period or other punitive measures.
- Such maintenance shall include when appropriate, but not necessarily be limited to:
  - Weekly watering equal to 10 gallons per caliper measure of tree diameter. (ex: 2.5" caliper tree =25 gallons/week.) Documented drenching natural rainfall may substitute for weekly watering.
  - Control of competing vegetation throughout the maintenance period as necessary.
  - Fertilizing, as required by soil analysis.
  - Pruning, mulching, tightening of strapping, resetting of plants to proper grades or upright position.
  - Furnishing and applying pesticides or other items necessary to thwart damage from insects and disease.
  - Providing protection measures such as fencing and interpretive signs as necessary, to prevent destruction or degradation of the planting site.
  - Replacement of dead and dying trees. Survival standards contained in the State Forest Conservation Manual shall be followed for the protection and satisfactory establishment of forest where applicable.
  - Eradicate, suppress and control non-native and invasive plant species during the maintenance period to the satisfaction of the City Forestry Inspector.
  - Installing and maintaining devices to protect against wildlife damage.
  - Removal of staking and strapping after six months, or as directed by the Forestry Inspector.

## NON-NATIVE INVASIVE PLANT CONTROL:

- The City of Rockville maintains a list of non-native and invasive plants for certain available on the City's website. The State of Maryland maintains a noxious weed list. The Permittee shall submit a Non-Native and Invasive Management Plan to the City Forestry Inspector for review and approval prior to the pre-planting meeting. Details to be included in the management plan are:
  - Narrative and/or plan stating the location, type and amount of non-native and invasive plants present on the site.
  - Proposed treatment measures and methods of control by plant type.
  - Timing and frequency of treatments by plant type.
  - Plan for seeding and/or re-planting following management/eradication treatment.
  - Proposed signage type and locations for installing herbicide application notification signs.
  - Copies of contractor certifications/pesticide licenses.
- Contractor is responsible for complying with MDE, EPA and other government agency regulations as well as obtaining proper permits from these agencies as applicable. The Forestry inspector must be notified 48 hours in advance prior to commencing any and all treatments.
- The Forestry Inspector will perform periodic inspections of the non-native and invasive treatments throughout the warranty and maintenance period. The applicant may be required to submit proof of treatment.



# Planting Notes for Landscape Plans

NOVEMBER 2019

## INSTALLATION OF PLANT MATERIAL

- The Permittee is responsible for obtaining the approved Forest Conservation Plan/Landscape Plan and providing a copy to the Landscape Contractor. The Permittee shall ensure that the Landscape Contractor can secure the plants shown the FCP/Landscape Plan. Plant substitutions are not allowed. It is strongly recommended that plant material be secured from supplier by the project start date.
- A pre-planting meeting is required before installation of landscaping, afforestation, or reforestation. The applicant must schedule an on-site pre-planting meeting with the City Forestry Inspector. Attendees must include the Permittee, landscape contractor, and Forestry Inspector. Trees and shrubs shall conform to the current edition of the American Standard for Nursery Stock (ANSI Z60.1).

- Comply with appropriate City Soil Specification:
  - Soil Specification FOR TREE PLANTING WHERE EXISTING PAVEMENT OR OTHER IMPERVIOUS SURFACES WERE PREVIOUSLY LOCATED OR WHERE EXISTING GREENSPACE HAS BEEN SEVERELY DEGRADED<sup>1</sup>
    - Site preparation
      - Demolish existing impervious surface and remove all existing asphalt, concrete, stone and construction materials to expose subsoil free of debris.
      - Excavate so that final planting bed will provide quality soil to a depth of forty-eight (48) inches, and to a radius of 10' minimum or to new hard edge of planting bed, whichever is less.
      - Loosen exposed subsoil below 48" by ripping 18" into the sub grade elevation.
      - Test to ensure that planting bed drains at a rate of at least 1 inch/per hour.
      - Install imported soil to fill excavated planting bed. Imported soil shall have a texture of LOAM, per the USDA soil classification system and a chemical composition compatible with healthy tree growth. When installing the soil, it should be installed in lifts or layers of < 12 inches (30 cm), tamping or watering (not both) between lifts to minimize potential settling.
    - Immediately prior to installation of plant material, the soil must be tested and must have a pH range between 5.5 and 7 and a nutrient content which corresponds to an adequate rating, per current industry standards. Amend soil, if necessary, to achieve the current industry standard.
    - The Forestry Inspector may require additional soil specifications, based on site conditions.
  - Soil Specification FOR PLANTING WHERE EXISTING GREEN SPACE HAS NOT BEEN PROTECTED FROM CONSTRUCTION IMPACTS BUT IS NOT SEVERELY DEGRADED.
    - Site Preparation:
      - Remove all construction debris and top four to six inches of existing soil.
      - Test remaining existing soil to verify a pH range between 5.5 and 7, and has a nutrient content which corresponds to an adequate rating, per current industry standards.
      - Apply four (4) inches of mature compost evenly over the entire planting surface. (4" = 12 Cubic Yard/1,000 s.f.). Provide compost supplier information and specifications to the City Forestry Inspector for approval prior to install.
      - Till the compost into the existing soil to a minimum depth of thirty-six (36) inches using the city's soil profile rebuilding specification.
      - If soil does not meet nutrient standards, mitigate soil chemistry to meet the chemical parameters.

- Soil testing of the existing soil may be conducted with PRIOR approval from the City's Forestry Inspector to determine the number and location of the samples. The above requirements may be reduced if soil testing shows the following:
  - Soil pH is between 5.5 and 7
  - The top 24" of existing soil contains a minimum of 4-6% organic matter by weight
  - The soil is free of contaminants
  - The soil texture is sandy loam or loam
  - The soil has an infiltration rate not less than 1" per hour
  - The soil does not contain debris or stones greater than one inch
  - The soluble salt content is less than 3 ds/m
  - Consult the University of Maryland Extension website: <http://extension.umd.edu/> for a listing of commercial soil testing facilities.
- Soil preparation is required for street trees planted within the city's rights-of-way and private street trees, if they are part of the approved plan.

**PROFESSIONAL CERTIFICATION:**  
I hereby certify that these documents were prepared or approved by me, and that I am duly licensed Professional Engineer under the laws of the State of Maryland, License No. 45808, Expiration Date: 6/3/2024  
Jordan E. Rang  
NAME



| NO. | DESCRIPTION OF REVISION | P.E. INITIAL | DATE | DPW | DATE |
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CASE NUMBER: FTP2022-00012  
APPROVED BY:  
CITY OF ROCKVILLE  
PLANNING AND  
DEVELOPMENT SERVICES  
9/16/2022  
DATE SIGNED  
9/16/2022  
DATE APPROVED  
AS DIRECTED

BEFORE BEGINNING CONSTRUCTION CONTACT "MISS UTILITY" AT WWW.MISSUTILITY.NET OR 1-800-257-7777 OR 811 AT LEAST 48 HOURS PRIOR TO EXCAVATION



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|  | DEPARTMENT OF PUBLIC WORKS<br>CITY OF<br><b>ROCKVILLE</b><br>111 MARYLAND AVE. ROCKVILLE, MARYLAND | DESIGNED _____ | DESIGN PLAN APPROVAL                                | AS BUILT PLAN APPROVAL         | ES-004                          | KING FARM FARMSTEAD<br>PARCELS A & CX<br>Election District No. 4 City of Rockville, Maryland | DATE SUBMITTED:<br>08/29/2022 | SCALE<br>AS SHOWN | SHEET<br>NO. <u>5</u> | FILE # |
|  |  | DRAFTED _____  | PWK# <u>PWK2022-00059</u> SCP# <u>SCP2022-00021</u> | CHIEF, CONSTRUCTION MANAGEMENT | FORESTRY & LANDSCAPING<br>NOTES |  | APPROVAL DATE                 | APPROVAL DATE     | OF <u>6</u>           |        |
|  |  | CHECKED _____  | SMP# <u>N/A</u> REVIEWED BY _____                   |                                |                                 |  |                               |                   |                       |        |

FOREST CONSERVATION WORKSHEET  
King Farm Farmstead - Water/ Sewer Connection (Linear Project)

**NET TRACT AREA:**

|   |      |
|---|------|
| A. Total tract area ... LOD + 100'  | 4.68 |
| B. Additions to tract area (Off-Site Work, etc.; construction required by this plan)... | 0.00 |
| C. Land dedication acres (parks, county facility, etc.) ...                             | 0.00 |
| D. Land dedication for roads or utilities (construction not required by this plan) ...  | 0.00 |
| E. Area to remain in commercial agricultural production/use ...                         | 0.00 |
| F. Other deductions (specify) .....   | 0.00 |
| G. Net Tract Area .....   | 4.68 |

**LAND USE CATEGORY:**  
MXD/Park

|                                |     |       |      |
|--------------------------------|-----|-------|------|
| G. Afforestation Threshold ... | 15% | x G = | 0.70 |
| H. Conservation Threshold ...  | 15% | x G = | 0.70 |

**EXISTING FOREST COVER:**

|   |      |
|---|------|
| I. Existing forest cover .....                        | 0.18 |
| J. Area of forest above afforestation threshold ..... | 0.00 |
| K. Area of forest above conservation threshold .....  | 0.00 |

**BREAK EVEN POINT:**

|  |      |
|--|------|
| L. Forest retention above threshold with no mitigation ..... | 0.00 |
| M. Clearing permitted without mitigation .....               | 0.00 |

**PROPOSED FOREST CLEARING:**

|  |      |
|--|------|
| N. Total area of forest to be cleared .....  | 0.00 |
| O. Total area of forest to be retained ..... | 0.18 |

**PLANTING REQUIREMENTS:**

|   |      |
|---|------|
| P. Reforestation for clearing above conservation threshold .....    | 0.00 |
| Q. Reforestation for clearing below conservation threshold .....    | 0.00 |
| R. Credit for retention above conservation threshold .....          | 0.00 |
| S. Total reforestation required .....                               | 0.00 |
| T. Total afforestation required .....                               | 0.52 |
| U. Credit for landscaping (may not exceed 20% of "S") .....         | 0.00 |
| V. Total reforestation and afforestation required (see note), ..... | 0.52 |

worksheet date 9/13/2021

**NOTE:** Per City of Rockville Forest Conservation Manual Sec 8.c- Linear projects are exempt from Minimum Tree Cover and Afforestation. Total reforestation/afforestation/MTC is 0 acres) - Only significant tree replacement will apply.

**GENERAL NOTES:**

- The subject property (Limits of Disturbance -LOD + 100' on each side) is 4.68 acres
- The subject property is zoned PD-King Farm zone; however the subject property is on park property and therefore should be in the Park Zone
- The subject property is located within the Rockcreek Watershed. There is no mapped stream or FEMA 100-year flood plan. Verified on FEMA Flood Map Service map 24031C0331D, 9/29/2006.
- There are no perennial, intermittent streams, or streams on the property. There are two functioning water source wells. One serving the Manse and the other serving the garden plots.
- Per U.S. Fish and Wildlife Services National Wetlands Inventory - Surface Waters and Wetlands Online Mapper resource, there are no mapped wetlands on the subject property. The site was accessed on September 8, 2021. Visual observations made on September 8, 2021 did not find evidence of wetland plants or seeps. The only hydric soil (6A Baile silt loam) is located outside the perimeter of the LOD + 100' distance.
- DNR Wildlife and Heritage Division were contacted by the adjacent property owners and based on the General Notes # 7 from the Approved NRI/FSD - FTP 2021-00021 ( adjacent property) there are no Rare, Threatened or Endangered Species noted.
- Field work was completed by Paula Perez, City Forester and Steve Mader, Superintendent of Parks and Facilities on September 8, 2021.
- The subject property is within the King Farmstead Historic District, 16100 Frederick Road as indicated on the City of Rockville GIS data base.
- There is a small portion of an existing forest conservation easement located within the subject property. The location is on the north side of Grand Champion Drive at the entrance to the subject property. The portion of the existing easement is approximately 0.2 acres and comprised of Silver Maple, Red Bud, White Oak, Pin Oak, Mulberry, Black Cherry and numerous NNIs including Tree of Heaven and Bush Honeysuckle.
- There are no steep slopes within the subject property.
- The primary soils types found within the subject property include 2B Glenleg silt loam, 3-8 percent slope and Gaila silt loam, 8-15 percent slope. Soil data is from the USDA Natural Resources Conservation Service - Web Soil Survey.
- Tree shown are survey located or are shown in their approximate locations. CTLA data sheets were completed, and the basis of the ratings include in the Significant Tree Summary Sheet.

**SIGNIFICANT TREE TABLE**

| Tree # | Scientific Name        | Common Name         | Size          | Condition | Comment          | SQFT CRZ |
|--------|------------------------|---------------------|---------------|-----------|------------------|----------|
| T-1    | Zelkova serrata        | Japanese Zelkova    | 12"           | 93        | Street tree      | 1,017    |
| T-2    | Zelkova serrata        | Japanese Zelkova    | 12"           | 93        | Street tree      | 1,017    |
| T-3    | Zelkova serrata        | Japanese Zelkova    | 12"           | 93        | Street tree      | 1,017    |
| T-4    | Zelkova serrata        | Japanese Zelkova    | 12"           | 93        | Street tree      | 1,017    |
| T-5    | Juglans nigra          | Black Walnut        | 20"           | 81        | Lots of invasive | 2,827    |
| T-6    | Prunus serotina        | Black Cherry        | 16"           | 75        | Lots of invasive | 1,809    |
| T-7    | Morus alba             | White Mulberry      | 18"           | 75        | Lots of invasive | 2,290    |
| T-8    | Juglans nigra          | Black Walnut        | 40"           | 93        |                  | 11,309   |
| T-9    | Juglans nigra          | Black Walnut        | 36"           | 87        |                  | 9,160    |
| T-10   | Pinus strobus          | White Pine          | 22"           | 68        | Remove           | 3,421    |
| T-11   | Acer saccharinum       | Silver Maple        | 14"           | 90        |                  | 1,385    |
| T-12   | Acer saccharinum       | Silver Maple        | 46"           | 56        | Remove           | 14,957   |
| T-13   | Prunus x yedoensis     | Yoshino Cherry      | 45"           | 69        |                  | 14,313   |
| T-14   | Acer platanoides       | Norway Maple        | 36"           | 76        | Non-native       | 9,160    |
| T-15   | Gymnocladus dioicus    | Kentucky coffeetree | 32"/32" (48") | 75        | Double stem      | 16,286   |
| T-16   | Juglans nigra          | Black Walnut        | 43"           | 91        |                  | 13,069   |
| T-17   | Magnolia x soulangiana | Saucer Magnolia     | 21"           | 78        |                  | 3,117    |
| T-18   | Morus alba             | White Mulberry      | 18"           | 78        |                  | 2,290    |
| T-19   | Acer saccharinum       | Silver Maple        | 34"           | 84        |                  | 8,171    |
| T-20   | Juglans nigra          | Black Walnut        | 13"           | 90        |                  | 1,194    |
| T-21   | Ulmus spp.             | Elm                 | 28"           | 69        |                  | 5,341    |
| T-22   | Quercus imbricaria     | Shingle Oak         | 40"           | 69        |                  | 11,309   |
| T-23   | Prunus x yedoensis     | Yoshino Cherry      | 23"           | 63        |                  | 3,739    |
| T-24   | Juniperus virginiana   | Eastern Redcedar    | 18"           | 91        |                  | 2,270    |
| T-25   | Quercus palustris      | Pin Oak             | 36"           | 69        |                  | 9,160    |
| T-26   | Acer saccharinum       | Silver Maple        | 30"           | 69        |                  | 6,361    |
| T-27   | Morus alba             | White Mulberry      | 20"           | 63        |                  | 2,827    |
| T-28   | Morus alba             | White Mulberry      | 13"           | 63        |                  | 1,194    |
| T-29   | Acer saccharinum       | Silver Maple        | 52"           | 69        |                  | 19,113   |
| T-30   | Juglans nigra          | Black Walnut        | 10"           | 94        |                  | 706      |
| T-31   | Acer saccharinum       | Silver Maple        | 26"           | 75        |                  | 4,778    |
| T-32   | Acer rubrum            | Red Maple           | 13"           | 59        |                  | 1,194    |
| T-33   | Juglans nigra          | Black Walnut        | 19"           | 78        |                  | 2,551    |
| T-34   | Juglans nigra          | Black Walnut        | 15"           | 78        |                  | 1,590    |
| T-35   | Taxus spp              | Yew                 | 12"           | 90        |                  | 1,017    |

**Justification for removal of tree T-9, 39" diameter Black Walnut**  
Tree T-9 is located within the Limits of Disturbance (LOD) of the sewer and water line construction project. Owners considered options such as relocation of the lines, reduction of the LOD and sheeting and shoring during construction. Those 3 options were not feasible because the disturbance to the critical roots zone still exceeded 30% with each option. Therefore the recommendation is to remove and replace the Black Walnut.

**Arboricultural Care of Tree T-8, 48" diameter Black Walnut**

- Remove all deadwood over 1" diameter
- Saw cut the asphalt at the LOD and remove asphalt and sub base by hand within the remaining CRZ.
- Air spade to expose roots within CRZ prior to root pruning. Root prune at the LOD line one foot back from trench.
- Apply 2-3 " over entire CRZ outside of the LOD
- Apply cambistat per the manufactures recommendations
- Establish a watering protocol for the first 6 months after construction to include weekly watering when there is less than 1" of rainfall per week

**SITE DESCRIPTION**

The subject property is located at 16100 Frederick Road, Rockville Maryland and is bounded by Grand Champion Drive, Ridgemont Avenue and Frederick Road (Route 355). The closest community is the King Farm Development and proposed King Pontiac Development to the west.

Existing land use is a public park, known as the King Farm Farmstead including two dairy barns, horse barn, Manse, community gardens, hay-drying shed/picnic shelter and several other ancillary buildings and structures.

The site topography gently slopes from Grand Champion Drive to Frederick Road (Route 355). Elevations range from 518' to 485'.

The primary soils types found within the subject property include 2B Glenleg silt loam, 3-8 percent slope and Gaila silt loam, 8-15 percent slope. Soil data is from the USDA Natural Resources Conservation Service - Web Soil Survey.

All significant trees over 12" d.b.h have been identified and included in Significant Tree Summary Sheet.

CASE NUMBER: FTP2022-00012  
APPROVED BY  
CITY OF ROCKVILLE  
PLANNING AND  
DEVELOPMENT SERVICES  
9/16/2022  
DATE SIGNED  
9/16/2022  
DATE APPROVED  
AS DIRECTED

PROFESSIONAL CERTIFICATION:  
I hereby certify that these documents were prepared or approved by me, and that I am duly licensed Professional Engineer under the laws of the State of Maryland,  
License No. 45808  
Expiration Date: 6/3/2024  
Jordan E. Rang  
NAME



| NO. | DESCRIPTION OF REVISION | P.E. INITIAL | DATE | DPW | DATE |
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| <p>DEPARTMENT OF PUBLIC WORKS<br/>CITY OF<br/><b>ROCKVILLE</b><br/>111 MARYLAND AVE. ROCKVILLE, MARYLAND</p> | <p>DESIGNED _____<br/>DRAFTED _____<br/>CHECKED _____</p> | <p>DESIGN PLAN APPROVAL</p> <p>PWK# PWK2022-00059 SCP# SCP2022-00021<br/>SMP# N/A REVIEWED BY _____</p> | <p>AS BUILT PLAN APPROVAL</p> <p>CHIEF, CONSTRUCTION MANAGEMENT APPROVAL DATE _____</p> | <p>ES-005<br/>FORESTRY NOTES &amp; TABLES</p> | <p>KING FARM FARMSTEAD<br/>PARCELS A &amp; CX<br/>Election District No. 4 City of Rockville, Maryland</p> | <p>DATE SUBMITTED:<br/>08/29/2022</p> | <p>SCALE<br/>AS SHOWN</p> | <p>SHEET<br/>NO. 6<br/>OF 6</p> | <p>FILE #</p>        |
|  |   | <p>DIRECTOR OF PUBLIC WORKS APPROVAL DATE _____</p>   | <p>APPROVAL OF REVISIONS AFTER INITIAL PLAN APPROVAL</p>                                | <p>APPROVAL DATE</p>                          | <p>APPROVAL DATE</p>  | <p>APPROVAL DATE</p>                  | <p>APPROVAL DATE</p>      | <p>APPROVAL DATE</p>            | <p>APPROVAL DATE</p> |