



**ADDENDUM OF SOLICITATION
INVITATION FOR BIDS (IFB #024-002)**

ADDENDUM No. 1

Issued: April 30, 2024

IFB No. #024-002

Title: PRTC Landscape Services

Contact: Cynthia Porter Johnson

Email: cporter-johnson@omniride.com

Phone: 703-580-6147

This addendum is hereby incorporated into the solicitation documents of the above referenced IFB. The following items are clarifications, corrections, additions, deletions and/or revisions to the IFB, which shall take precedence over the original documents. Bidders must acknowledge receipt of this amendment by returning the signed original with the Bid package prior to the hour and date specified in the solicitation.

DESCRIPTION OF ADDENDUM

The above numbered solicitation is amended as follows:

1. **PRE-BID ATTENDEE LIST, PRESENTATION AND ANSWERS TO SUBMITTED QUESTIONS –**
Providing pre-bid meeting attendee list, pre-bid presentation, and a matrix of answers to all submitted questions and attached herewith, **PRTC Landscape Services Questions.**

2. **I.1 INTRODUCTION – PURPOSE OF REQUEST**
Adding the physical address for the commuter parking lot.

DELETE: Page 1

REPLACE WITH: Page 1 **(Revised)** attached herewith

3. I.4 SCOPE OF WORK

Adding the physical address for the commuter parking lot.

DELETE: Page 2

REPLACE WITH: Page 2 (Revised) attached herewith

4. I.6 TYPE OF CONTRACT

Adding the physical address for the commuter parking lot.

DELETE: Page 2

REPLACE WITH: Page 2 (Revised) attached herewith

5. SECTION III SCOPE OF WORK

Revising the scope of work for leaf removal occurrences located at all locations: (PRTC Transit Center, Commuter Lot, PRTC Western Maintenance Facility and Quantico Terrace Apartments).

DELETE: Page 12

REPLACE WITH: Page 12 (Revised) attached herewith

6. ATTACHMENT A SITE MAP DRAWINGS/CHARTS/ LANDSCAPE PLANS

Providing original digital photos of landscape plans and Specifications, Presentation Photos and the PRTC Irrigation System Control Panel and Rain Bird Outside Sprinkler Manual.

ADD: (Original digital photos of landscape plans and Specifications, Presentation Photos and the PRTC Irrigation System Control Panel and Rain Bird Outside Sprinkler Manual).

7. ATTACHMENT E INSURANCE CHECKLIST

Deleting Line Item 4, Professional Errors and Omissions.

DELETE: Page 38

REPLACE WITH: Page 38 (Revised) attached herewith

Except as specifically amended herein, all other terms and conditions of this solicitation remain unchanged and in full force and effect.

Bidders must acknowledge receipt of this amendment by returning signed original with the Bid package prior to the hour and date specified in the solicitation. Failure to acknowledge receipt of this Addendum may be grounds to declare your Bid unresponsive.

Company _____

Address _____

City _____ State _____ Zip Code _____

Name of Person Authorized to Sign _____
Print

Signature _____ Date _____

Pre-Bid Sign-In Sheet

Solicitation No: IFB No. 024-002

PRTC Landscape Services

Date: April 16, 2024 - Time: 11:00 AM

Location: PRTC Transit Center - Virtual: Zoom Meeting ID: 827 5647 3044



	Name	Company	Phone	Email	In-Person or via Zoom
1.	TYLER COULTER	COMMERCIAL SCAPES	703.898.3082	tcoulter@commercialscares.com	In Person
2.	FRANK BONILLA	HAULING UNLIMITED	703.644.2789	customer@haulingunlimited.com	In Person
3.	VIRGILIO CAVIETO	HAULING UNLIMITED	703.644.2789	customer@haulingunlimited.com	In Person
4.	BRANDON	HAULING UNLIMITED	703.644.2789	customer@haulingunlimited.com	In Person
5.	ARISTIDES AYALA	AYALA LANDSCAPING	571.212.6979	ayalalandscapeingservices@gmail.com	In Person
6.	JOHN ALDEN	WEWERKA LANDSCAPE	703.330.3400	john@wewerkalandscape.com	In Person
7.	DORIS LOOKABILL	PRTC	703.580.6153	dlookabill@omniride.com	In Person
8.	LAWANA GLYMPH	PRTC	703.580.6158	lglymph@omniride.com	In Person
9.	CYNTHIA JOHNSON	PRTC	703.580.6147	cporter-johnson@omniride.com	In Person
10.	VINCENT WALKER	PRTC	703.580.6150	vwalker@omniride.com	In Person

	Name	Company	Phone	Email	In-Person or via Zoom
11.	BRENDEN LOWE	DAVEY TREE	202.517.5732	Brenden.lowe@davey.com	Zoom
12.	ASHLEY MOOSE	BRIGHTVIEW	804.283.0532	Ashley.moose@brightview.com	Zoom
13.	SINDY BENAVIDES	HAULING UNLIMITED	703.300.5683	sindy@haulingunlimited.com	Zoom
14.	MARY KIRBY	DAVEY TREE	571.349.6941	mary.kirby@davey.com	Zoom
15.	MIKE BREWSTER	(DULLES) DAVEY TREE	703.899.3156	mike.brewster@davey.com	Zoom
16.					
17.					
18.					
19.					
20.					



OMNIRIDE

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IFB No. 024-002

PRTC Landscape Services

Pre-Bid Meeting

April 16, 2024

AGENDA



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- **Introductions**
- **About PRTC/OmniRide**
- **Background/Purpose of Project**
- **Discussion of Scope of Work and Drawings**
- **IFB Requirements and Forms**
- **Timeline**
- **Questions & Answers**

INTRODUCTIONS



PRTC/OmniRide Staff Members

- Cynthia Porter-Johnson, Mgr. of Grants and Procurement
- LaWana Glymph, Contract Specialist
- Rick Brown, Western Facility Manager
- Vince Walker, Transit Center Facility Manager
- Doris Lookabill, Director of Facilities

ABOUT PRTC/OMNIRIDE



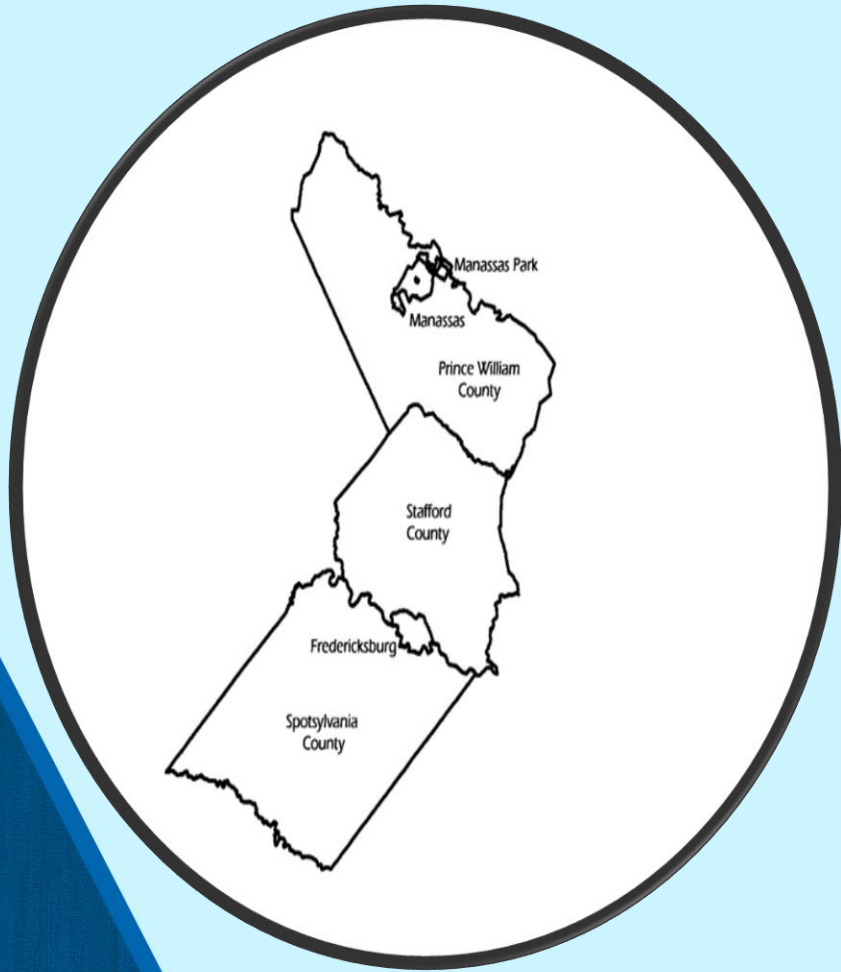
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PRTC/OmniRide:

- Multi-jurisdictional public transit agency
- Locations in Woodbridge & Manassas VA

Family of mobility services to meet community travel needs:

- Commuter, Metro Express, Local and Para-transit bus services
- Rideshare and TDM programs
- Employer Services program

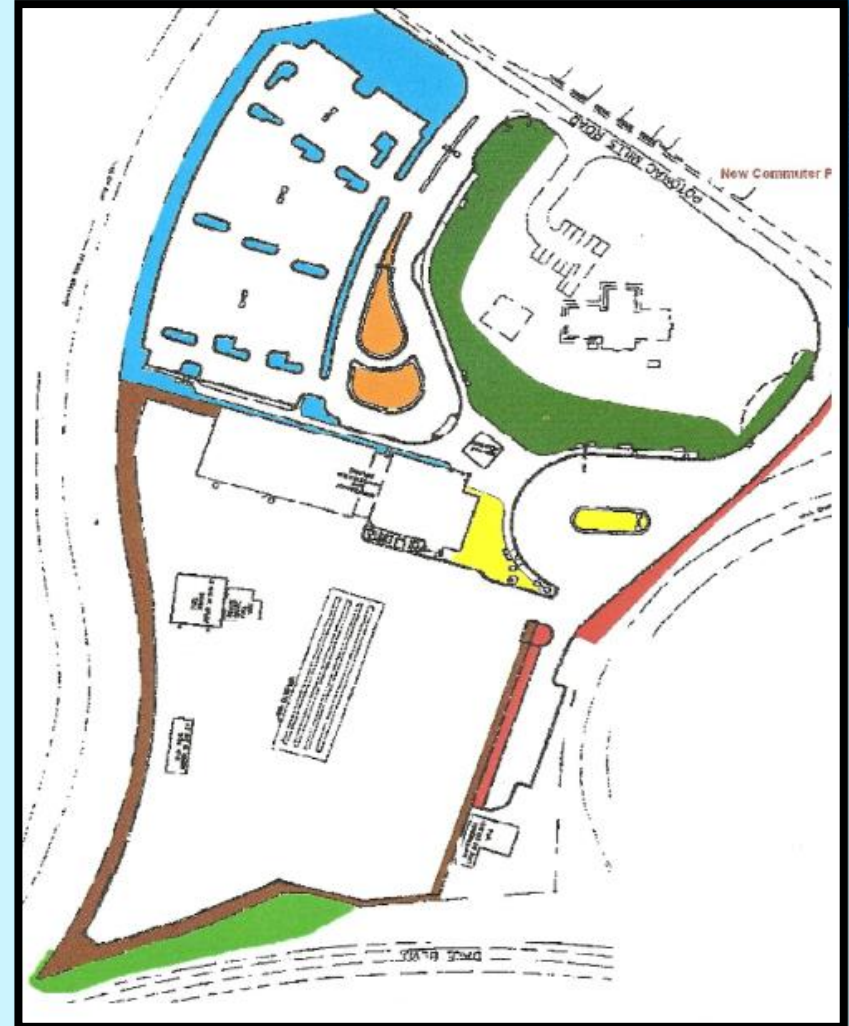
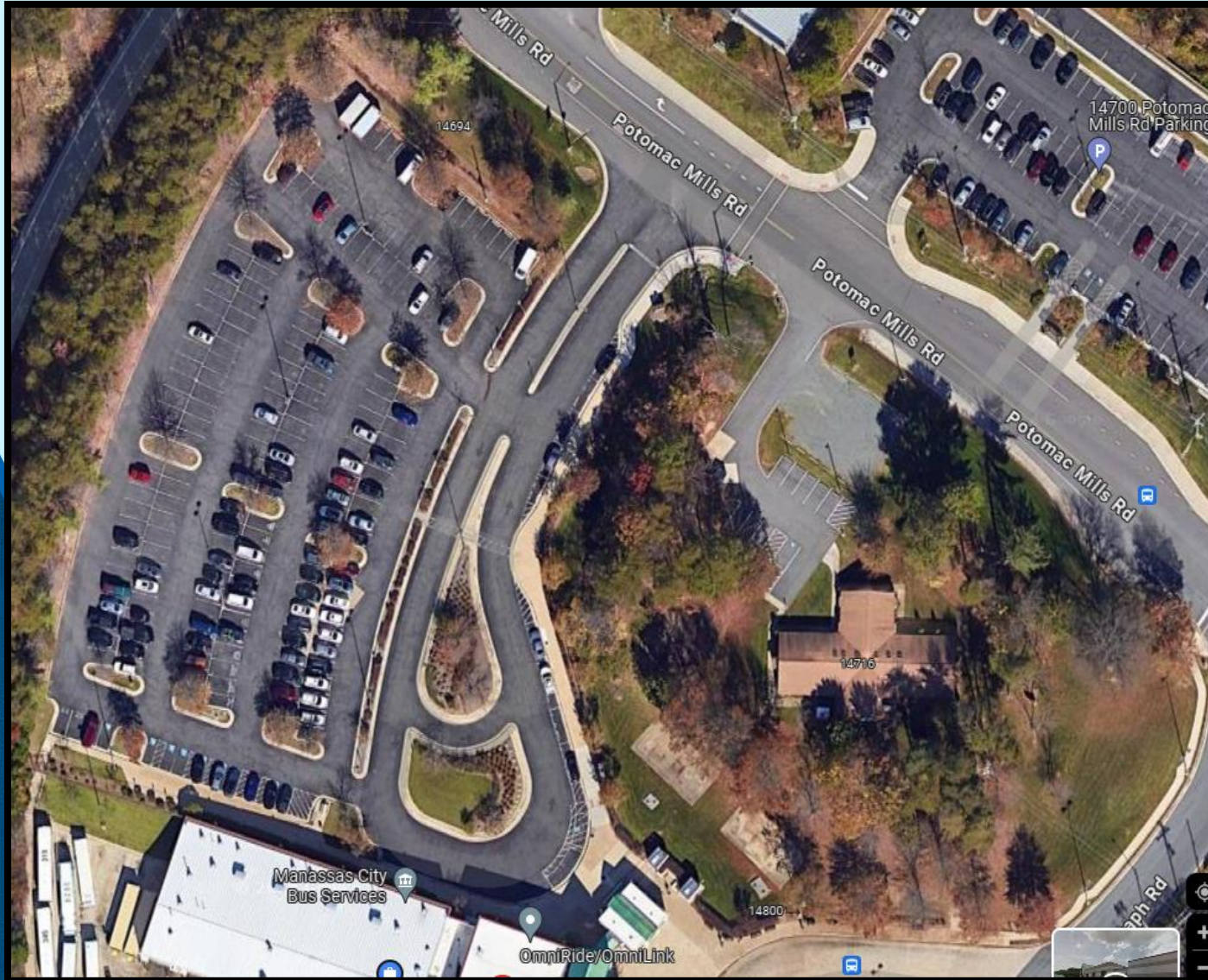


BACKGROUND/PURPOSE

PRTC Transit Center



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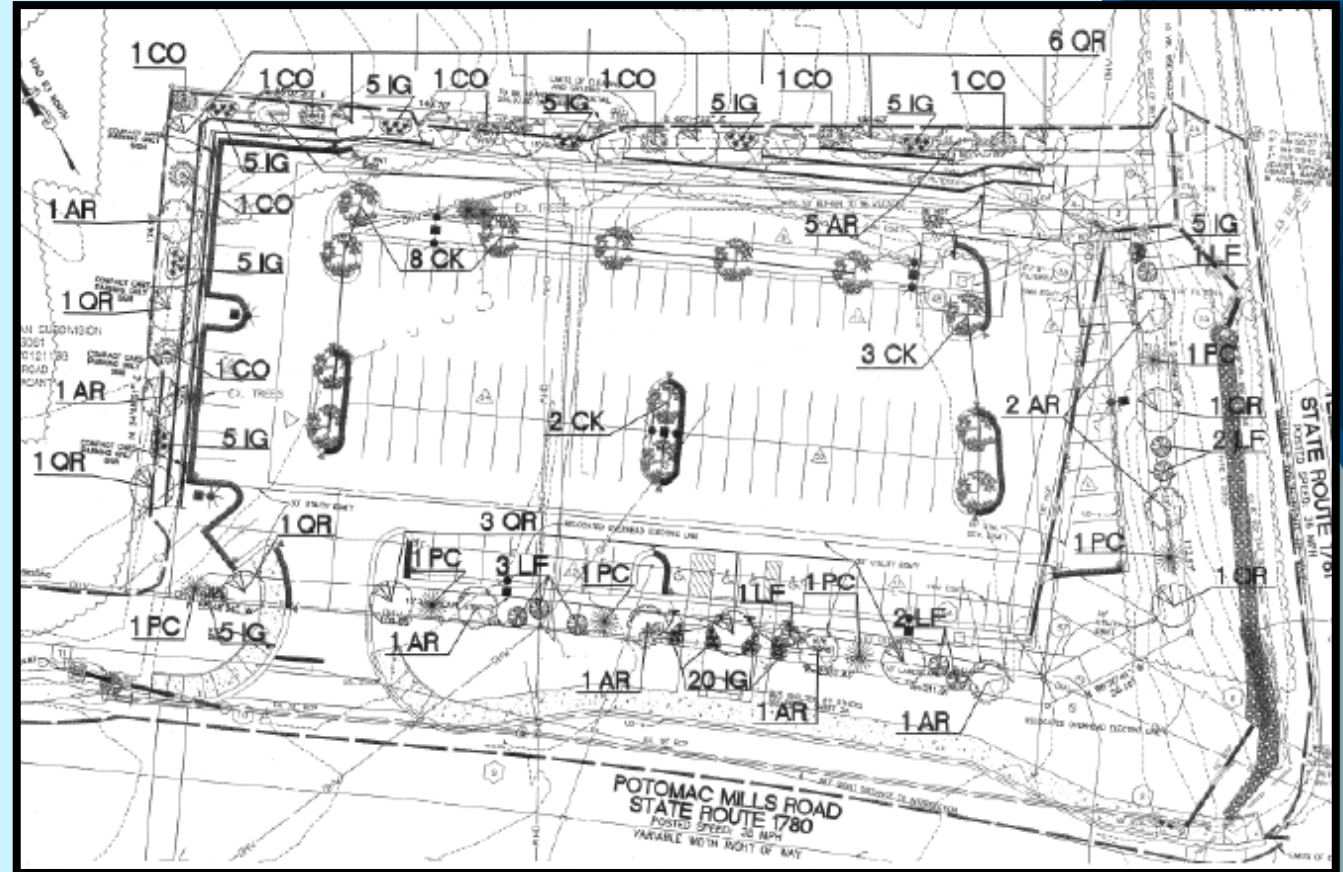


BACKGROUND/PURPOSE

PRTC Transit Center Commuter Lot



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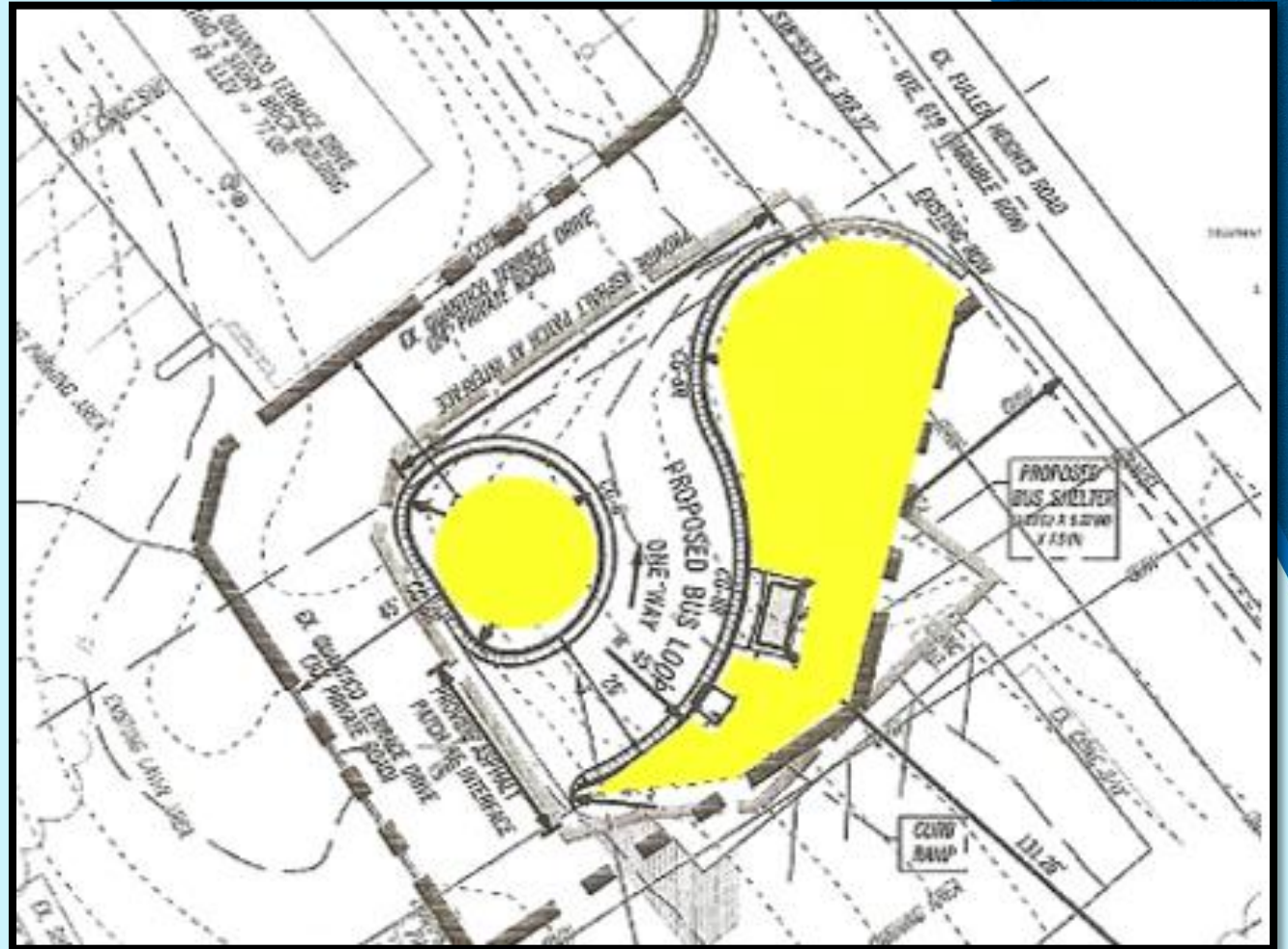


BACKGROUND/PURPOSE

Quantico Terrace Apartments Bus Stop/Shelter



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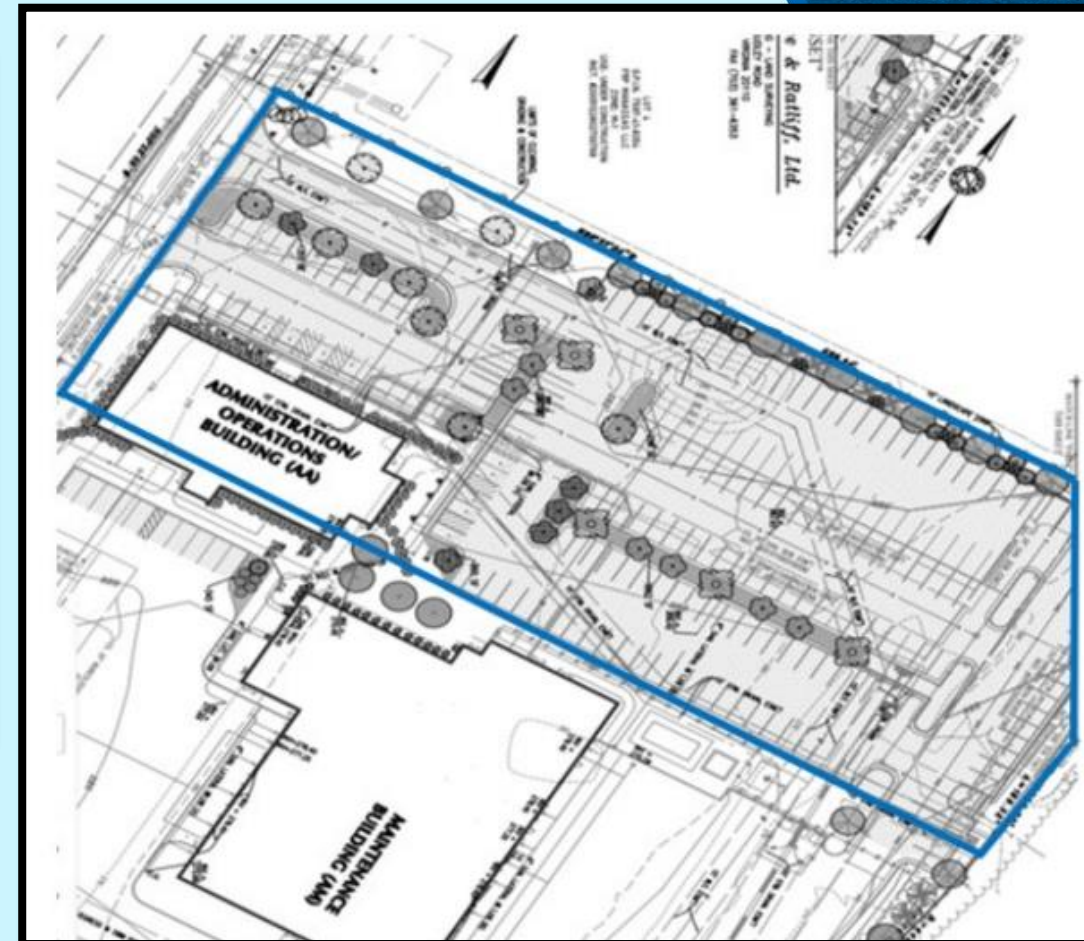


BACKGROUND/PURPOSE

Western Maintenance Facility
7850 Doane Drive, Manassas



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IFB REQUIREMENTS AND FORMS

Failure to provide all the required certifications and documents listed and described in the Invitation for Bids (IFB) may cause the bid to be rejected and be considered non-responsive.

- Price Schedule(s) – Attachment B
- Reference Form – Attachment C
- IFB Submission Form – Attachment D
- Insurance Checklist – Attachment E
- Addendum(s)



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TIMELINE



- April 16** In-Person/Virtual Pre-bid Meeting 11:00 AM
- April 23** Final Questions Due 12:00 Noon **(No Exceptions)**
- April 30** PRTC Response to Questions
- May 14** **BIDS DUE (BID OPENING at 12:00 NOON)**
- June 06** Recommend Contract Award to PRTC Commission



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Questions?

Cynthia Porter-Johnson

Manager of Grants & Procurement

cporter-johnson@omniride.com

703-580-6147

IFB No. 024-002 Landscape Services
PRTC Response to Prospective Bidders' Questions and Requests for Clarifications
April 30, 2024

Question/Clarification	Date Submitted/ Prospective Bidder	Response
1. How many leaf removals will be required?	April 15, 2024/BrightView	As provided in Section III, 4.b.v.2.b. on Page 10 of the IFB, in autumn, leaf removal shall occur at each visit as needed to prevent smothering of turf and ground covers and excessive clumping when mulch mowing. These specifications for leaf removal shall apply to all locations: the PRTC Transit Center, Western Maintenance Facility, and the Quantico Terrace Apartments bus shelter area.
2. What is the irrigation zone count for each site?	April 15, 2024/BrightView	There is one control panel for the irrigation system, which controls three (3) zones in total onsite at the PRTC Transit Center location and the commuter lot located at 14700 Potomac Mills Road, Woodbridge, VA and 14711 Potomac Mills Road, Woodbridge, VA respectively. There is no irrigation system at the PRTC Western Maintenance Facility located at 7850 Doane Drive, Manassas or the Quantico Terrace Apartments bus shelter area located at 19050 Fuller Heights Road, Triangle, VA 22172.
3. Can bid submissions be submitted on eVA?	April 15, 2024/BrightView	Yes, bid submissions can be submitted via the eVA website: https://eva.virginia.gov/index.html .
4. What is the address for the commuter lot?	April 15, 2024/BrightView	The address for the commuter lot is 14711 Potomac Mills Road, Woodbridge VA 22192.

IFB No. 024-002 Landscape Services

PRTC Response to Prospective Bidders' Questions and Requests for Clarifications

April 30, 2024

5. When will the Contract be initiated or begin?	April 16, 2024/Hauling Unlimited	The Contract will be effective starting July 1, 2024.
6. Are the liability coverage amounts for line item 4 (Professional Errors and Omissions) and line item 13 (Umbrella Liability) required for this project?	April 16, 2024/Hauling Unlimited	Professional Errors and Omissions (Item 4) is not required for this project and has been removed from Attachment E – Insurance Checklist. Per PRTC’s insurance agent, the Umbrella Liability (Item 13) is standard and will not be changed.

I. INTRODUCTION

I.1 Purpose of the Request

The purpose and intent of this Invitation for Bids (IFB) is to solicit bids from firms in order to enter into a Contract with a qualified and experienced Contractor to maintain grass and landscaped areas at PRTC Transit Center and employee parking lot located at 14700 Potomac Mills Road, Woodbridge, VA 22192; the commuter parking lot located at 14711 Potomac Mills Road, Woodbridge, VA 22192; the PRTC Western Maintenance Facility located at 7850 Doane Drive, Manassas, VA 20109 and also the areas surrounding PRTC's bus shelter located on the grounds of the Quantico Terrace Apartments at 19050 Fuller Heights Road, Triangle, VA 22172. at PRTC's facilities, its associated employee and commuter parking lots located at 14700 Potomac Mills Road, Woodbridge, VA 22192 and 7850 Doane Drive, Manassas, VA 20109, also includes maintaining the area surrounding PRTC's bus shelter located on the grounds of the Quantico Terrace Apartments located at 19050 Fuller Heights Road, Triangle, VA 22172.

Failure to provide all the required certifications and documents listed and described in this Invitation for Bids (IFB) may cause the bid to be rejected and be considered non-responsive.

I.2 Background Information

Located in the Greater Prince William County, area about 25 miles southwest of Washington, D.C., the Potomac and Rappahannock Transportation Commission (PRTC) is a multimodal, multijurisdictional agency providing local and commuter bus services and Transportation Demand Management (TDM) services in Prince William County and the Cities of Manassas and Manassas Park. PRTC's services are operated under the OmniRide brand name and PRTC is a partner in several regional services. PRTC prides itself on providing high quality, progressive and innovative transportation services for residents of its member jurisdictions.

I.3 PRTC Contract Management:

Contract Administrator: Matters relating to prices, terms and conditions, period of performance, quantities to be supplied, delivery schedule and financial adjustments shall be handled through the Contract Administrator, Cynthia Porter-Johnson, PRTC's Manager of Grants and Procurement.

Project Manager: **Doris Lookabill** will serve as the Project Manager (PM) for this Contract. The PM is responsible for the technical administration of the Contract and technical liaison with the Contractor. The PM is responsible for the day-to-day clarifications and guidance of the Contractor's personnel as may be required under the Contract.

Contracting Officer:

PRTC’s Executive Director is the only individual who can legally commit or obligate PRTC for the expenditure of federal/public funds. Only the Contracting Officer shall have the authority to revise the terms and conditions of the Contract, and any such revisions shall be authorized in writing.

Contract or Agreement:

The contractual agreement between PRTC and the successful Contractor to perform work described in this solicitation and successful Contractor’s bid. **Note: The Contractual instrument for this project will be PRTC’s standard form Contract provided as Attachment F, modified as required to conform to this project. PRTC will not use the Offeror’s form contract.**

I.4 Scope of Work

PRTC is seeking a Contractor to maintain grass and landscaped areas at PRTC Transit Center and employee parking lot located at 14700 Potomac Mills Road, Woodbridge, VA 22192; the commuter parking lot located at 14711 Potomac Mills Road, Woodbridge, VA 22192; the PRTC Western Maintenance Facility located at 7850 Doane Drive, Manassas, VA 20109 and also the areas surrounding PRTC’s bus shelter located on the grounds of the Quantico Terrace Apartments at 19050 Fuller Heights Road, Triangle, VA 22172.

~~PRTC’s facilities, its associated employee and commuter parking lots located at 14700 Potomac Mills Road, Woodbridge, VA 22192 and 7850 Doane Drive, Manassas, VA 20109, also includes maintaining the area surrounding PRTC’s bus shelter located on the grounds of the Quantico Terrace Apartments located at 19050 Fuller Heights Road, Triangle, VA 22172.~~ The full Scope of Services for the procurement is described in **Section III – Scope of Work** in this document. The successful Bidder shall provide the means to fulfill the types of requirements listed herein.

I.5 Period of Contract

The term of this Contract shall be for one (1) base year from the date of award, with four (4), one (1) year option periods.

I.6 Type of Contract

PRTC expects to award a firm-fixed price contract for maintaining grass and landscaped areas at PRTC’s facilities, its associated employee and commuter parking lots located at PRTC Transit Center and employee parking lot located at 14700 Potomac Mills Road, Woodbridge, VA 22192; the commuter parking lot located at 14711 Potomac Mills Road, Woodbridge, VA 22192; the PRTC Western Maintenance Facility located at 7850 Doane Drive, Manassas, VA 20109 and also the areas surrounding PRTC’s bus shelter located on the grounds of the Quantico Terrace Apartments at 19050 Fuller Heights Road, Triangle, VA 22172,

~~14700 Potomac Mills Road, Woodbridge, VA 22192 and 7850 Doane Drive, Manassas, VA 20109, also includes maintaining the area surrounding PRTC's bus shelter located on the grounds of the Quantico Terrace Apartments located at 19050 Fuller Heights Road, Triangle, VA 22172~~ based on costs provided for the services and materials specified in the Scope of Work to the lowest responsive and responsible bidder.

1. The site surrounding the PRTC bus shelter located on the grounds of the Quantico Terrace Apartments, 19050 Fuller Heights Road, Triangle, Virginia 22172, shall be maintained for the areas designated in Figure 3, and as described below:

a. Weekly mowing, trimming, edging, turf trash ~~and leaf~~ removal, and blowing of hard surfaces in and around shelter area shall occur during the turf mowing schedule in Section 4.b.ii.

~~b.—Leaf removal for all locations: PRTC Transit Center, Commuter Lot, PRTC Western Maintenance Facility and Quantico Terrace Apartments) shall follow the Specification in Section III, 4.b.v.2.b. on Page 10 of this IFB. Mulching and weeding of existing landscape island, as needed.~~

5. Contractor's Employees

- a. Personnel employed by the Contractor shall be capable employees qualified in this type of work.
- b. A fully qualified workforce shall be maintained throughout the period of this contract. All personnel shall receive close and continuing first-line supervision.
- c. The Contractor's supervisors shall be fully and adequately trained and have experience in lawn and landscaping supervision sufficient in scope to meet the approval of the Contract Manager.
- d. The Contractor shall always employ the quantity and quality of supervision necessary for both effective and efficient management of lawn and landscaping operations.
- e. Contractor shall be liable for any damages caused directly or indirectly by its employees and/or sub-contractors.

Attachment A

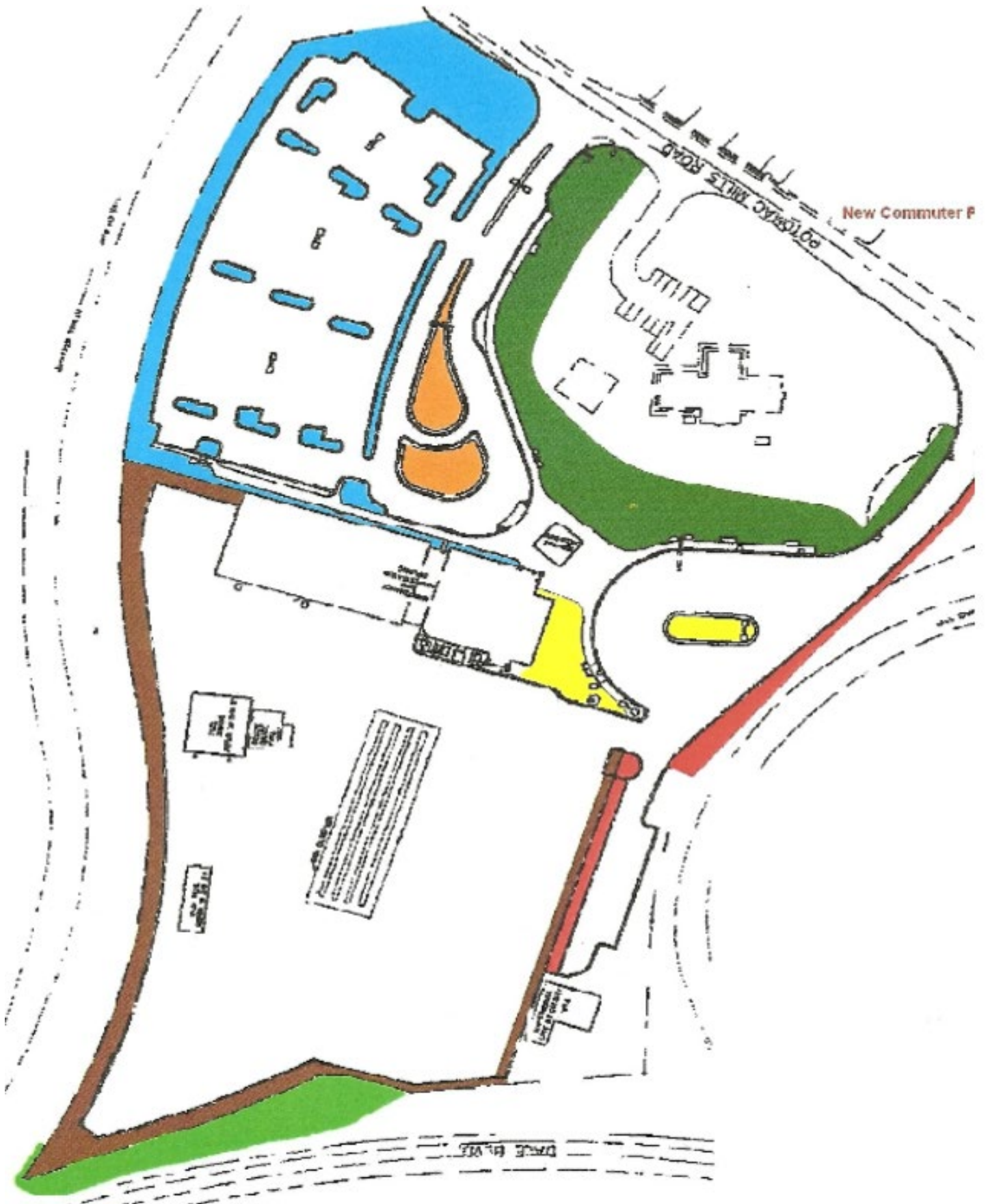
Site Map Drawings/Charts/Landscape Plans

Original Digital Photos of Landscape Plans and Specifications, Presentation Photos and the PRTC Irrigation System Control Panel and Rain Bird Outside Sprinkler Manual

1. PRTC Transit Center Landscape Plan
2. PRTC Commuter Lot Landscape Plan
3. Western Facility Landscaping Specifications
4. Quantico Terrace Apartments Property Drawing
5. PRTC Landscape Presentation Images
6. PRTC Irrigation System Control Panel
7. Rain Bird Outside Sprinkler Manual

PRTC Transit Center Landscape Plan

PRTC Transit Center Landscape Plan

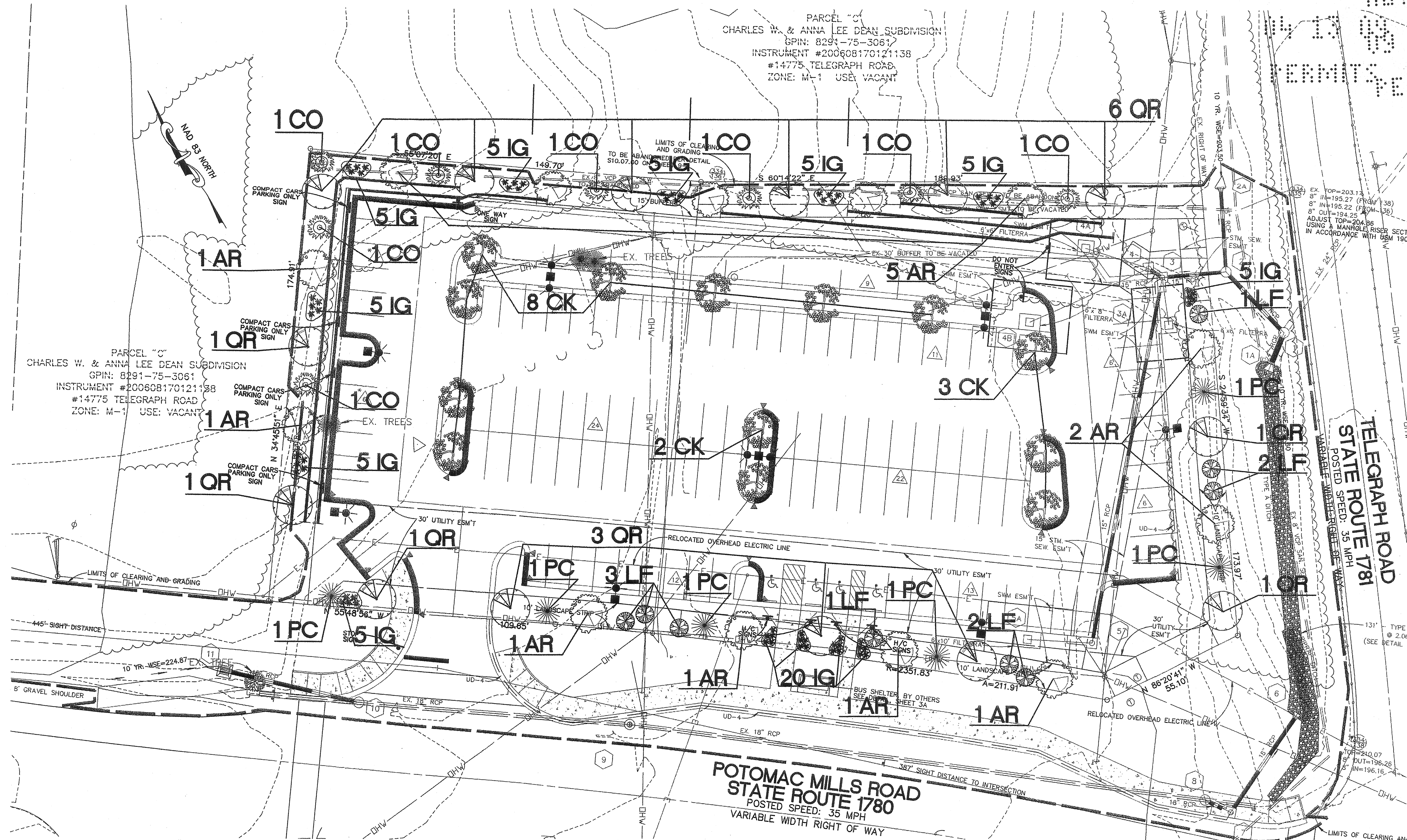


PLANT/TREE CHART

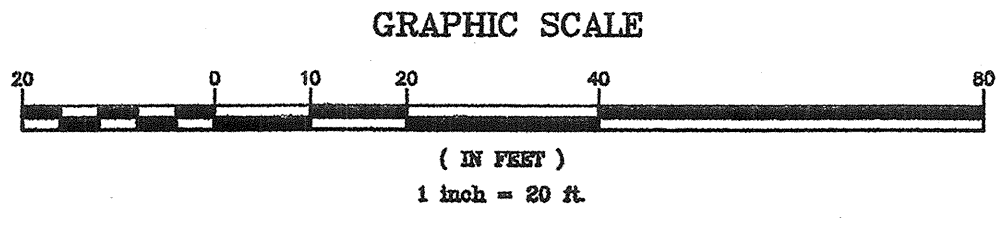
PRTC Transit Center – 14700 Potomac Mills Road, Woodbridge, VA 22192

Color Area	Plants, Trees, Etc.
Blue	Rose Glow Barberry, Abelia, Viburnum, Crepe Myrtle, Red Chokeberry, Arrowwood Viburnum, Green Spire Linden, Red Maple, Pin Oak, White Pine, Dogwood, Kwanzan Cherry, Redbud, Red Oak, American Holly
Orange	Liriope Spicata, Rose, Juniper, Blue Pacific Juniper, Little Princess Spirea, Kwanzan Cherry
Green	Rose Glow Barberry, Blue Pacific Juniper, Helliery Holly, Pansy, Begonia, Crepe Myrtle, Downy Serviceberry, White Pine, Pin Oak, Green Spire Linden, Red Maple, Dogwood, Redbud, Black Pine, Red Sunset Maple
Yellow	Cotoneaster, Abelia, Liriope Spicata, Kwanzan Cherry, Black Pine
Red	Crepe Myrtle, Forsythia, Red Maple, Black Pine, Pin Oak, Little-Leaf Linden
Light Green	White Pine
Brown (Interior Bus Yard Area – Note: this service is optional)	Forsythia, Crepe Myrtle, Red Chokeberry, Arrowwood Viburnum, Pine, Maple, Downy Serviceberry, Red Oak, American Holly, Dogwood, Sweet Bay Magnolia, Little-Leaf Linden

PRTC Commuter Lot Landscape Plan



LANDSCAPE PLAN



**SCHEDULE D
TREE COVER CALCULATIONS**

Tree cover required:	
1) Gross site area:	68,053 SF
2) Percent of tree cover required:	10%
3) Total area of tree cover required:	6,805 SF
Tree cover provided:	
4) Tree cover from landscaping:	10,775 SF
5) Tree cover from preservation:	0 SF
6) Total tree cover provided:	10,775 SF

**SCHEDULE B
NONRESIDENTIAL LANDSCAPED STRIP ALONG POTOMAC MILLS RD. & TELEGRAPH RD.**

1) Linear feet (meters) of street frontage, not including driveway entrances: 540-30 = 510 FT.	
2) Total number of plant units required: (50 P.U./100 FT.)(510 FT.) =	255 P.U.
3) Number of plants provided:	
12 shade trees x 10 P.U. =	120 P.U.
5 ornamental trees x 5 P.U. =	25 P.U.
30 evergreen trees x 5 P.U. =	150 P.U.
30 shrubs x 2 P.U. =	60 P.U.
4) Total number of plant units provided	255 P.U.

**SCHEDULE C
PARKING LOT INTERIOR PLANTINGS**

1) Area of parking:	42,925 SF
2) Interior landscaped area required (% and sq. ft./sq. meters):	5% (2,146 SF)
Interior landscaped area provided (% and sq. ft./sq. meters):	5.8% (2,489 SF)
3) Number of large/medium trees required:	11
Number of large/medium trees provided:	13

- SCHEDULE A
BUFFER AREA PLANTING**
- Minimum required buffer area (A, B, OR C): A
 - Minimum width of landscaped yard: 15'
 - Linear feet of buffer strip along property line: 500'
 - Percentage of buffer area occupied by existing woodland: 0%
 - Fence or wall or berm employed in buffer area: Yes No
 - Total number of plant units required: (50 P.U./100)(500) = 250 P.U.
 - Number of large deciduous tree provided: 15 x 10 p.u. = 150 p.u.
 Number of evergreen trees: _____ x 5 p.u. = _____ p.u.
 Number of deciduous understory trees (medium, small or compact): 8 x 5 p.u. = 40 p.u.
 Number of shrubs: 35 x 2 p.u. = 70 p.u.
 - Total number of plant units provided in buffer strip: 260

**SCHEDULE H
TYPICAL PLANT LIST**

SYMBOL	BOTANICAL NAME/ COMMON NAME	QUANTITY	CALIPER	HEIGHT	TREE COVER CREDIT SQ. FT.	TOTAL TREE COVER CREDIT SQ. FT.
QR	QUERCUS RUBA/ RED OAK (LARGE DECIDUOUS)	14	2"		200	2,800
AR	ACER RUBRUM/ RED MAPLE (LARGE DECIDUOUS)	13	2"		200	2,600
CK	GLEDETIA TRIACANTHOS INERMIS/ THORNLESS HONEYLOCUST (LARGE DECIDUOUS)	13	2"		200	2,600
CO	CELTIS OCCIDENTALIS/ HACKBERRY (MEDIUM DECIDUOUS)	8	2"		150	1,200
PC	PISTACIA CHINENSIS CHINESE PISTACHE (MEDIUM DECIDUOUS)	6	2"		150	900
LF	LAGERSTROMIA FAURIEI JAPANESE GRAPE MYRTLE (SMALL DECIDUOUS)	9	1"	6'-8'	75	675
IG	ILEX GLABRA/ INKBERRY (DECIDUOUS SHRUB)	65		18"-24"	N/A	N/A
TOTAL TREES = 63		TOTAL TREE COVER CREDIT = 10,775 SQ. FT.				

ENGINEERING GROUPE PROJECT STATUS

DATE	AUGUST 8, 2008
SCALE	1"=20'
DESIGNER	MW/CO
DRAFTSMAN	MT
FILE NO.	SP-212
SHEET	18 OF 21

01-09-08 REVISED PER COUNTY COMMENTS
 12-10-08 REVISED PER COUNTY COMMENTS

The Engineering Group, Inc.
 Engineers | Surveyors | Planners
 13580 Group Drive, Suite 200, Woodbridge, Virginia 22192
 Phone: (703) 670-0985 Fax: (703) 670-7769 www.enggroup.com

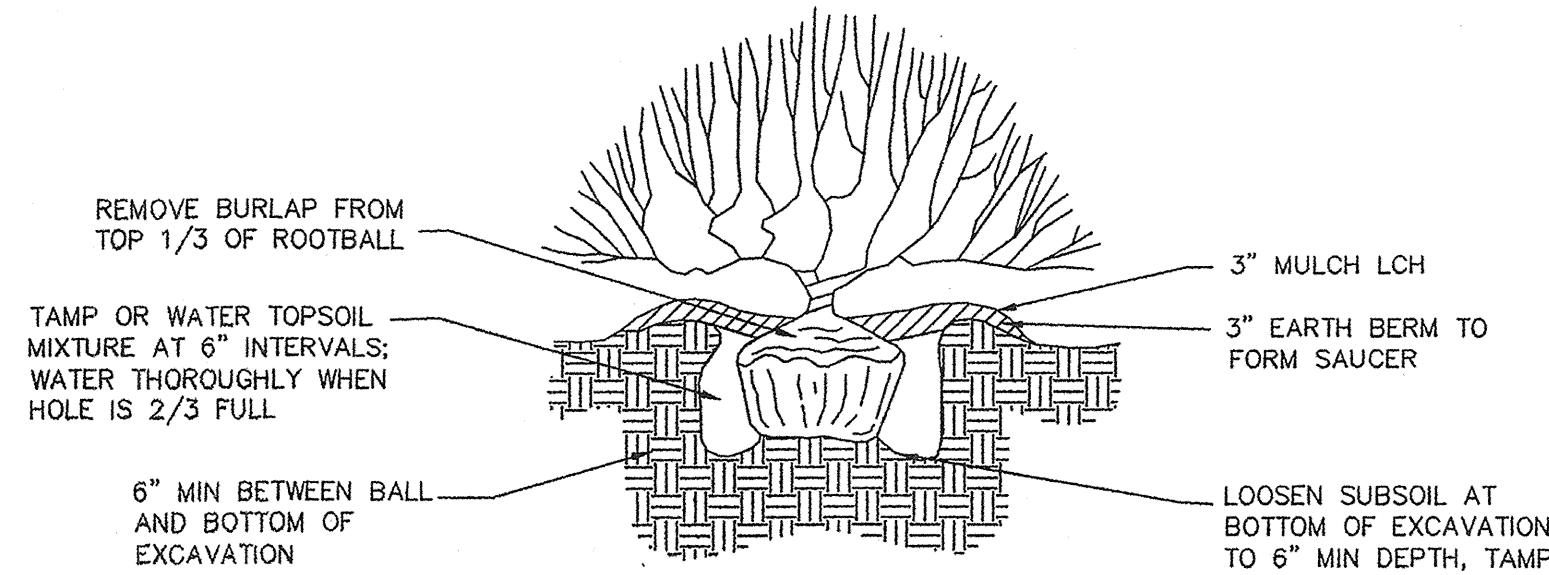
LANDSCAPE PLAN
 PRTC PARK AND RIDE LOT

NEABSCO MAGISTERIAL DISTRICT
FOR REVIEW ONLY

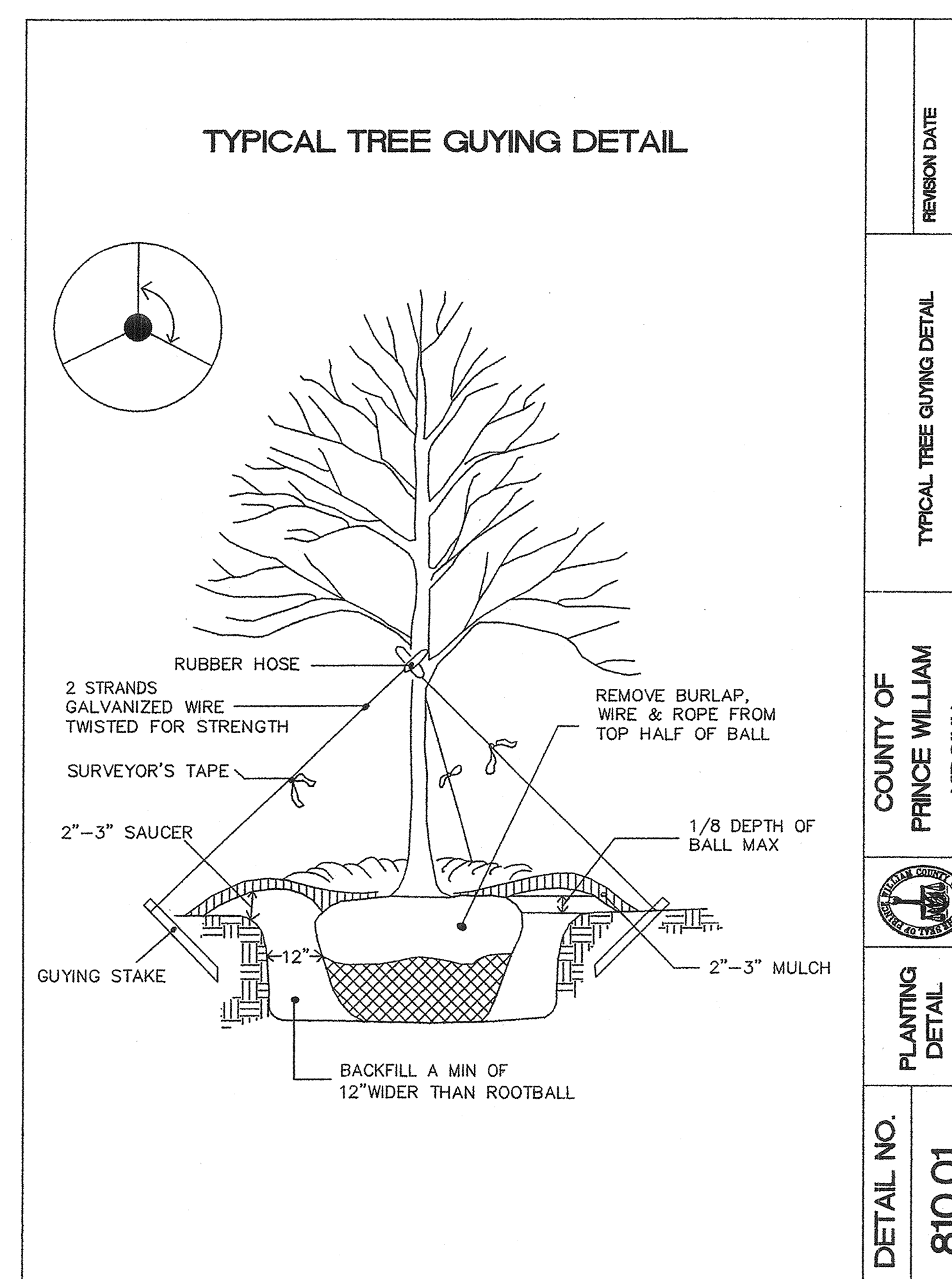
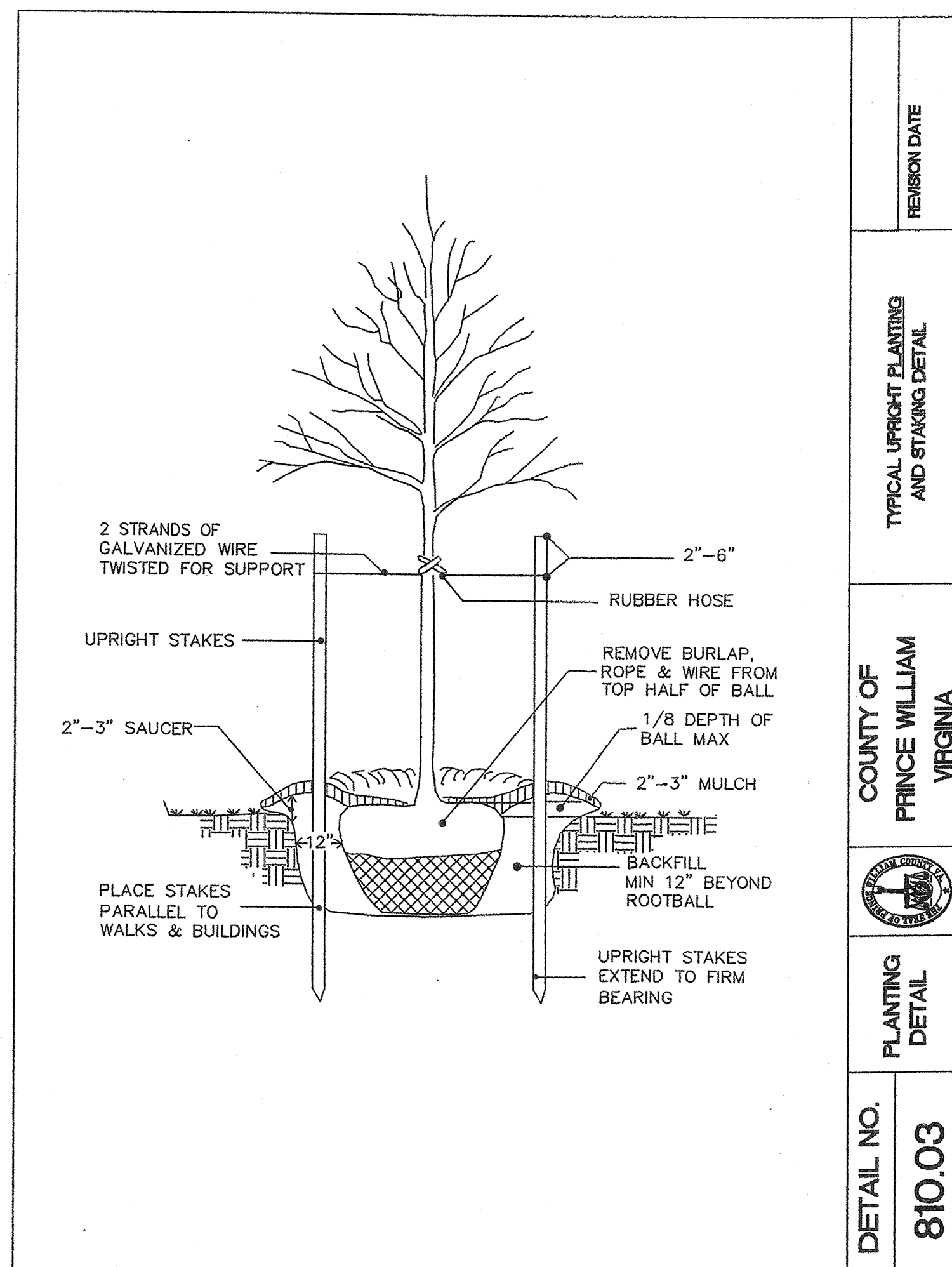
COUNTY REVISIONS

NO. DATE

COMMONWEALTH OF VIRGINIA
 MICHAEL S. WEBB
 Lic. No. 12656
 1-12-09
 PROFESSIONAL ENGINEER



DETAIL NO.	PLANTING DETAIL	COUNTY OF PRINCE WILLIAM VIRGINIA	DECIDUOUS SHRUB	REVISION DATE
810.05				



LANDSCAPING REQUIREMENTS

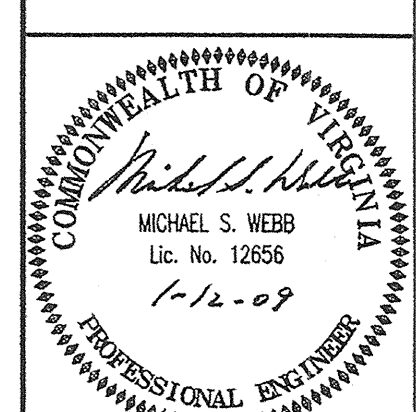
- The contractor shall furnish and install all plants as shown on the planting plan, in accordance with the quantities, sizes, and specifications listed in the plant materials schedule.
- Total number of plants shall be as drawn on the landscape plan. If this differs from the plant key the contractor is to notify the owner or owner's representative.
- All plants shall be nursery grown.
- Plant dimensions shall be in accordance with American Standards for Nursery stock, latest edition. Balled and Burlapped shall be dug with firm natural balls of earth and shall be pruned, stored and dug in accordance with current ASNS. Plants shall be in proper Nursery condition.
- No B & B plants shall be planted if ball is cracked or either broken during the process of planting.
- All plants shall be hardy under climate conditions in the locality of the project.
- All plants shall have a normal habit of growth and shall be sound, healthy, vigorous, and free from disease and insect infestation. Any tree with a weak, thin trunk, not capable of supporting itself when in the open, will not be acceptable. The minimum acceptable size of all plants measured before pruning with the branches in normal position shall conform to dimensions as shown on Planting schedule. Larger plants of equal quality may be accepted at no additional cost to the Owner.
- Substitution of plant material shall not be permitted unless authorized by owner or owner's representative and approved by County Agent.
- The contractor shall lay out, with identifiable stakes, the location of all trees, underground utilities, and outline of planting beds as indicated on the drawing. In the event that rock or underground construction work, obstruction or utility lines are encountered during these operations or in excavation of any plant pits under this contract, alternate locations may be selected by the L.A. with no additional cost to the owner.
- Planting soil shall be an amended soil mix.
- Mulch shall be applied immediately after planting operations. Mulch shall be free of debris, weeds, spores or other foreign material, and must be well rotted and of such character as not to be easily removed by wind.
- Prior to installation, the contractor shall notify the owner and/or Landscape Architects of all soil or drainage conditions in which are detrimental to the growth of plants. He shall state the conditions and submit a proposal for correcting the conditions, including any changes in the cost, for review and acceptance by the owner.
- Container grown Plants- All plants designated container grown in the plant schedule shall be healthy vigorous, well rooted, and established in the container in which they are sold. They shall have tops in which are of good quality and are in healthy condition. An established container grown plant shall be defined as a plant transplanted into a container and grown in that container sufficiently long for the new fibrous roots to have developed so that container mass will retain its shape and hold together when removed from the container. No root bound grown container plants, as determined by the Landscape Architect, will be permitted. No container grown plant shall be planted if the root mass is broken either before or during the process of planting.
- Preparation of Plants- All plants' pits shall be circular in outline: all excavations shall have vertical sides. The depths and widths for excavation of plants pits shall be depths and widths as specified on planting details or as approved by the Landscape Architect. Loosen sub grade 6" below bottom of the pit. Soil separation- sub grade soils shall be separated from the upper "topsoil" portions and removed immediately wherever encountered during planting operations. Excess soils shall be removed and legally disposed.
- Setting plants- In general, set plants at same relation to finished grade as the bore to the ground from which they were dug. Prepare plants' pits as specified and as shown on the drawings, prior to inserting plants. Use topsoil mixture to backfill plant pits. When planting pits have been backfilled approximately 2/3 full, water thoroughly before installing the remainder of the soil to the top of the pit. Set trees plumb and brace rigidly in position until the planting soil has been tamped solidly around the ball and the roots.
- Guying and staking- shall be required for all trees or tree-like shrubs in accordance with detailed drawings. Guying and staking shall be done within 24 hours after planting.
- Maintenance of new plantings shall consist of pruning, watering, cultivating, weeding, mulching, tightening, resetting plants to proper grades or upright position, restoration of the planting saucer, and furnishing and applying such sprays as are necessary to keep the planting free from insects and disease. Maintenance shall be provided until time of provisional acceptance.
- Planting areas and plantings shall be protected at all times against trespassing and damaging of any kind for the duration of the maintenance period. If any plants become damaged or injured, they shall be treated or replaced by the Contractor as directed by the Landscape Architect at no additional cost to the Owner. No work shall be done within, adjacent to, or over any plant or planting area without proper safeguards and protection to materials.
- All plant material shall be guaranteed by the Contractor for a period of one year from the date of Provisional Acceptance, to be in good, healthy, and flourishing condition.
- The Contractor shall provide the owner specific maintenance recommendations in writing for watering, fertilizing, and maintaining the plant material.
- No plantings shall impede the sight distance for ingress & egress to the site. No signage, trees, or plant material with expected mature growth heights of 2.5' feet, shall be planted within the boundary lines.

LANDSCAPING MAINTENANCE NOTE :

THE OWNER OF FEE TITLE TO ANY PROPERTY ON WHICH PLANT MATERIAL HAS BEEN ESTABLISHED IN ACCORDANCE WITH AN APPROVED LANDSCAPING/PLANTING PLAN SHALL BE RESPONSIBLE FOR THE MAINTENANCE, REPAIR AND REPLACEMENT OF THE APPROVED PLANT MATERIALS, AS REQUIRED BY THE PRINCE WILLIAM COUNTY ZONING ORDINANCE. REQUIRED LANDSCAPE MATERIALS, ONCE INSTALLED, SHALL BE MAINTAINED AND NURTURED, INCLUDING PRUNING, IN ACCORDANCE WITH THE STANDARDS OF THE NATIONAL ARBORISTS ASSOCIATION.

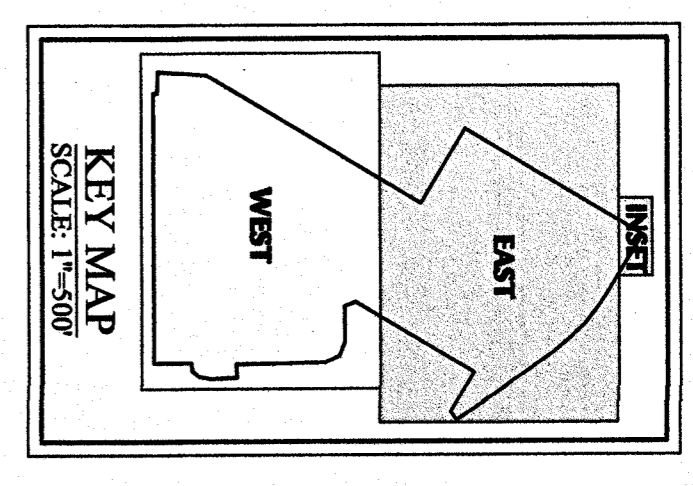
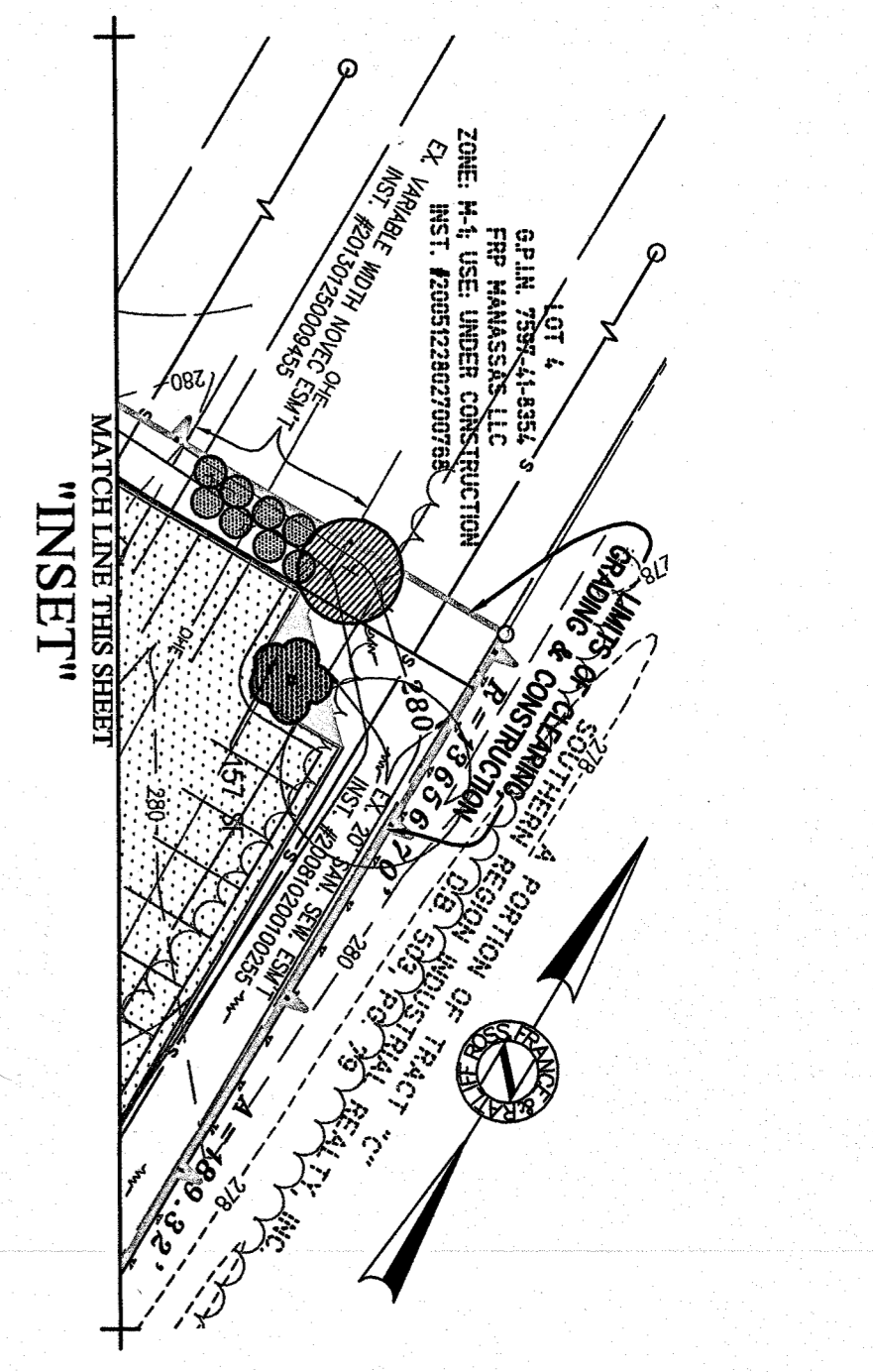
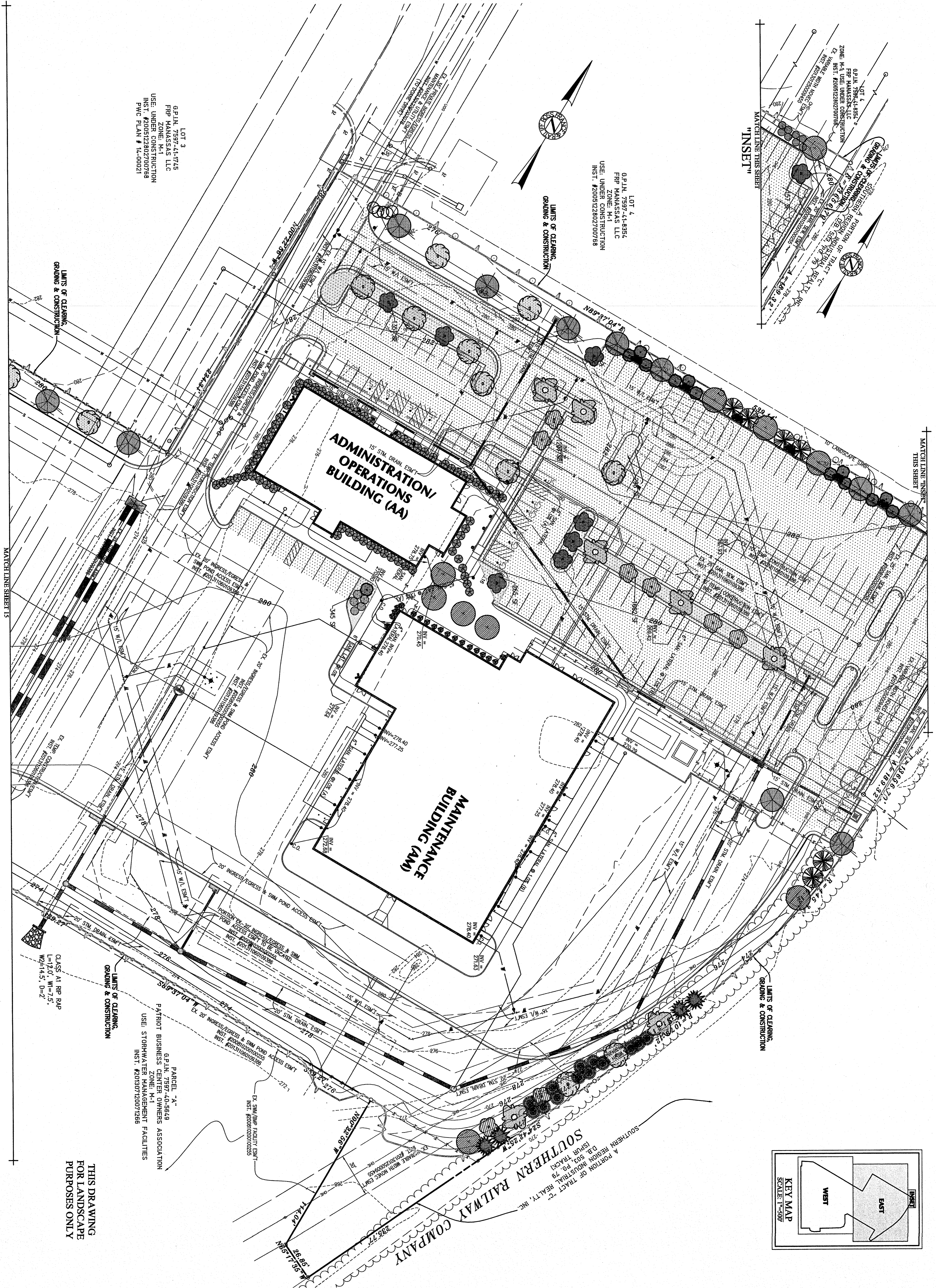
NO.	DATE	COUNTY REVISIONS

LANDSCAPE NOTES AND DETAILS
PRTC PARK & RIDE LOT
 NEARSCO MAGISTERIAL DISTRICT
FOR REVIEW ONLY



ENGINEERING GROUPE PROJECT STATUS	DATE: AUGUST 8, 2008
SCALE: N/A	DESIGNER: CO
DRAFTSMAN: CO	FILE NO. SP-212
12-10-08 REVISED PER COUNTY COMMENTS	SHEET 17 OF 21
DATE	ACTION

Western Facility Landscaping Specifications



THIS DRAWING FOR LANDSCAPE PURPOSES ONLY

PARCEL 74
G.P.H. 527-40-56-9
PATRIOT BUSINESS CENTER OWNERS ASSOCIATION
USE: STORAGE/MAINTENANCE FACILITIES
INST. #201307120071266

LOT 3
G.P.H. 7597-41-17-15
F.P.P. MANASSAS, LLC
ZONE: M-1
USE: UNDER CONSTRUCTION
INST. #2005122802700768
P.W.C. PLAN # 14-00021

LOT 4
G.P.H. 7597-41-8-5-4
F.P.P. MANASSAS, LLC
ZONE: M-1
USE: UNDER CONSTRUCTION
INST. #2005122802700768

Ross, France & Ratliff, Ltd.
CIVIL ENGINEERING - LAND SURVEYING
8802 SUDLEY ROAD
MANASSAS, VIRGINIA 20110
(703) 361-4188 FAX (703) 361-6353

LANDSCAPE PLAN

PRTC MAINTENANCE AND OPERATIONS FACILITY

GAINESVILLE MAGISTERIAL DISTRICT
PRINCE WILLIAM COUNTY, VIRGINIA

CONTOUR INTERVAL = 2'

SCALE: 1" = 30'

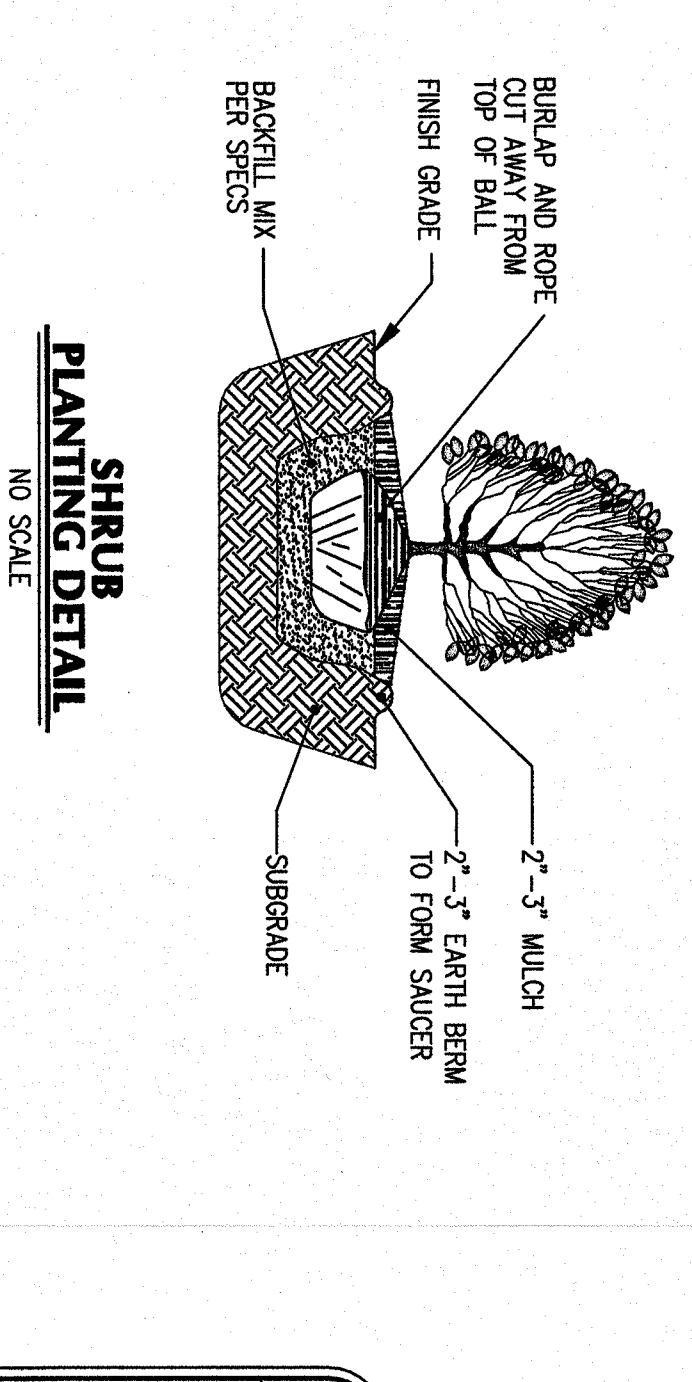
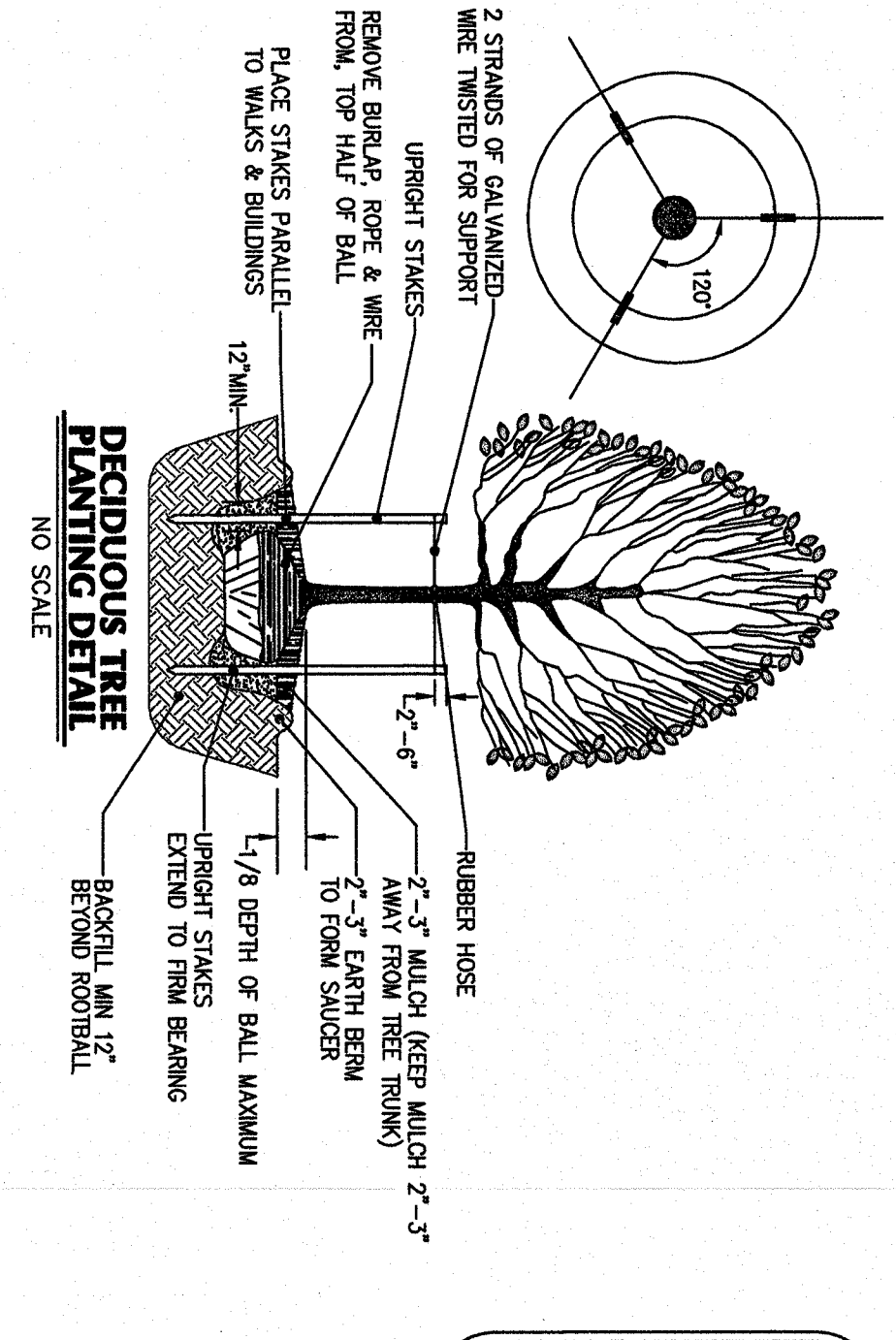
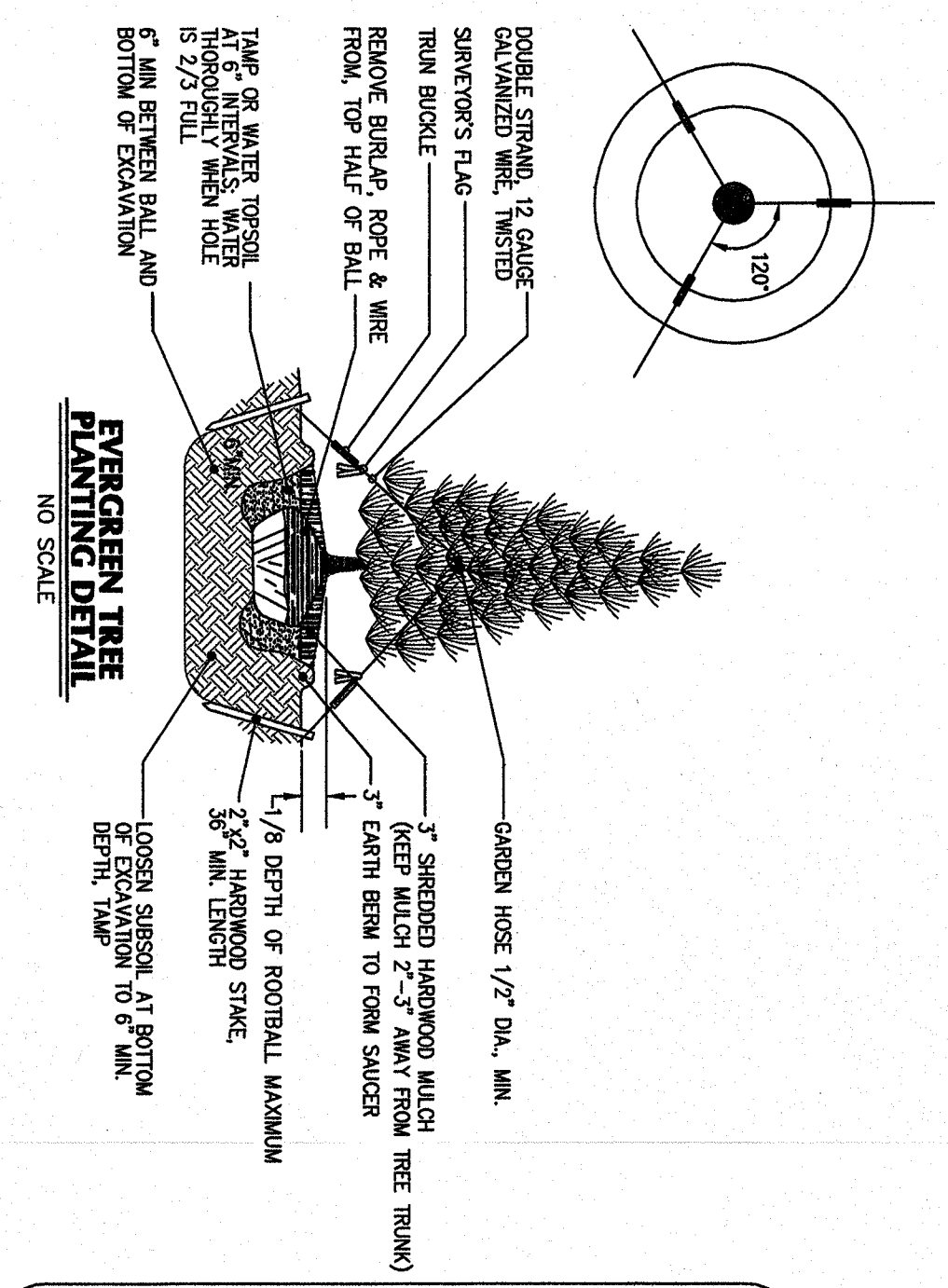
AUGUST 15, 2014

DATE	BY	REVISION

CHK: LU
DES: TAD
DWN: -

SCALE: 1" = 30'

COMMONWEALTH OF VIRGINIA
THOMAS A. DOUGHER
Lic. No. 18577
REGISTERED PROFESSIONAL LAND SURVEYOR
SHEET 16 OF 28
FILE NO. SF # 1807



SCHEDULE A
BUFFER AREA PLANTING

- 1) MINIMUM REQUIRED BUFFER AREA: HCOB REQUIRED ALONG PARKWAY AND/OR RIGHT-OF-WAY: 50
- 2) MINIMUM WIDTH OF LANDSCAPED YARD: 50
- 3) LINEAR FEET OF BUFFER STRIP REQUIRED ALONG PROPERTY LINE
- 4) PERCENTAGE OF REQUIRED BUFFER AREA OCCUPIED BY EXISTING WOODLAND: 0
- 5) FENCE OR WALL OR BERM EMPLOYED IN BUFFER AREA: YES NO
- 6) TOTAL NUMBER OF PLANT UNITS REQUIRED IN BUFFER STRIP: 2355
- 7) NUMBER OF LG. DECIDUOUS TREES PROVIDED: 86 X 10 P.U. = 860 P.U.
NUMBER OF LG. EVERGREEN TREES: 45 X 10 P.U. = 450 P.U.
NUMBER OF EVERGREEN UNDERSTORY TREES: 184 X 5 P.U. = 920 P.U.
NUMBER OF ORNAMENTAL TREES: 175 X 2 P.U. = 350 P.U.
NUMBER OF SHRUBS: 175 X 1 P.U. = 175 P.U.
NUMBER OF ORNAMENTAL GRASSES: 175 X 1 P.U. = 175 P.U.
TOTAL NUMBER OF PLANT UNITS PROVIDED IN BUFFER STRIP: 2355

SCHEDULE C
PARKING LOT INTERIOR PLANTING

- 1) AREA OF PARKING: 79,010 S.F.
- 2) INTERIOR LANDSCAPED AREA REQUIRED: (5% AND 3950.5 SQ. FT.)
- 3) INTERIOR LANDSCAPED AREA PROVIDED: (6.7% AND 5297.1 SQ. FT.)
- 4) NUMBER OF SHADE TREES REQUIRED: 20
- 5) NUMBER OF SHADE TREES PROVIDED: 24

SCHEDULE D
TREE COVER CALCULATIONS

TREE COVER PROVIDED	15,118 ACRES
1) GROSS SITE AREA:	10%
2) PERCENT OF TREE COVER REQUIRED:	1,518 ACRES
3) TOTAL AREA OF TREE COVER REQUIRED:	= 66124 SF
TREE COVER PROVIDED	61,425 SF
4) TREE COVER FROM LANDSCAPING:	27,548 SF
5) TREE COVER FROM PRESERVATION:	22,957 X 1.2 = 27,548 SF
6) TREE COVER FROM HCOB: Included in 1,5	
7) TOTAL TREE COVER PROVIDED:	89,973 SF (1.35%)

SCHEDULE E
PARKING LOT PERIMETER AREA

- 1) LINEAR FEET OF PARKING LOT PERIMETER ADJACENT TO PROPERTY LINE: 320
- 2) 80/100X320=256 PLANT UNITS REQUIRED
- 3) NUMBER OF PLANTS PROVIDED ADJACENT TO PROPERTY LINE:
NUMBER OF LARGE TREES PROVIDED: 4 X 10 P.U. = 40 P.U.
NUMBER OF EVERGREEN UNDERSTORY TREES: 12 X 5 P.U. = 60 P.U.
NUMBER OF DECIDUOUS UNDERSTORY TREES: 38 X 1 P.U. = 38 P.U.
NUMBER OF ORNAMENTAL GRASSES: 175 X 0.25 P.U. = 44 P.U.
TOTAL NUMBER OF PLANT UNITS PROVIDED: 256

SCHEDULE H - LANDSCAPE LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	TREE TYPE	QUANTITY	CANOPY	TOTAL CANOPY
RD	QUERCUS RUBRA	RED OAK	2'-1/2"-3" (CAL)	888	24	225 SF	5400 SF
RM	ACER SACCHARUM	SUGAR MAPLE	2'-1/2"-3" (CAL)	888	14	225 SF	3150 SF
RO	QUERCUS PAULSTERS	PIN OAK	2'-1/2"-3" (CAL)	888	51	225 SF	11475 SF
RI	ACER RUBRUM	RED MAPLE	2'-1/2"-3" (CAL)	888	42	225 SF	9450 SF
RG	LINDUMBAR STRACAPUA	SWEET GUM	2'-1/2"-3" (CAL)	888	8	150 SF	1200 SF
WO	QUERCUS PHELLOS	WILLOW OAK	2'-1/2"-3" (CAL)	888	9	225 SF	2025 SF
EVERGREEN TREES							
AP	AUSTRIAN PINE	AUSTRIAN PINE	6'-6-1/2" (H)	888	10	150 SF	1500 SF
AL	VIRGINIA JUNIPERUS	RED CEDAR	6'-6-1/2" (H)	888	28	75 SF	2100 SF
VP	VIRGINIA PINE	VIRGINIA PINE	6'-6-1/2" (H)	888	49	125 SF	6125 SF
ORNAMENTAL TREES							
CB	GEORGIA CAMDENSS	REDBUD	1'-1/2"-2"	888	36	75 SF	2700 SF
BM	MANQUILA-TEILATA	STAR MANQUILA	1'-1/2"-2"	888	17	50 SF	850 SF
YC	PRUNUS X YEDONENS	YOSHINO CHERRY	2'-2-1/2"	888	39	150 SF	5850 SF
DS	CORNUS FLORIDA	APPLAUGHAN SPRING	1'-1/2"-2"	888	60	75 SF	4500 SF
DW	AMERICAN-CHER ARBORV	DOCKET SERVICEBERRY	1'-1/2"-2"	888	68	75 SF	5100 SF
SHRUBS							
F	BUNUS MICROPHYLLA	GREEN BEAUTY BOWWOOD	24"-30" CONT.	888	5		
IL	LEL GREVATA	JAPANESE HOLLY	24"-30" CONT.	888	135		
D	SPREA FRANKIOLA	BROADLEAFED SPREA	24"-30" CONT.	888	159		
						CANOPY TOTAL	61,425 SF

Ross, France & Ratliff, Ltd.
CIVIL ENGINEERING - LAND SURVEYING
8802 SUDLEY ROAD
MANASSAS, VIRGINIA 20110
(703) 361-4188 FAX (703) 361-6353

LANDSCAPE PLAN

PRTC MAINTENANCE AND OPERATIONS FACILITY
GAINESVILLE MAGISTERIAL DISTRICT
PRINCE WILLIAM COUNTY, VIRGINIA
CONTOUR INTERVAL = 2'
SCALE: 1" = 30'
AUGUST 15, 2014

DATE	BY	REVISION

CHK: LU
DES: TAD
DWN:

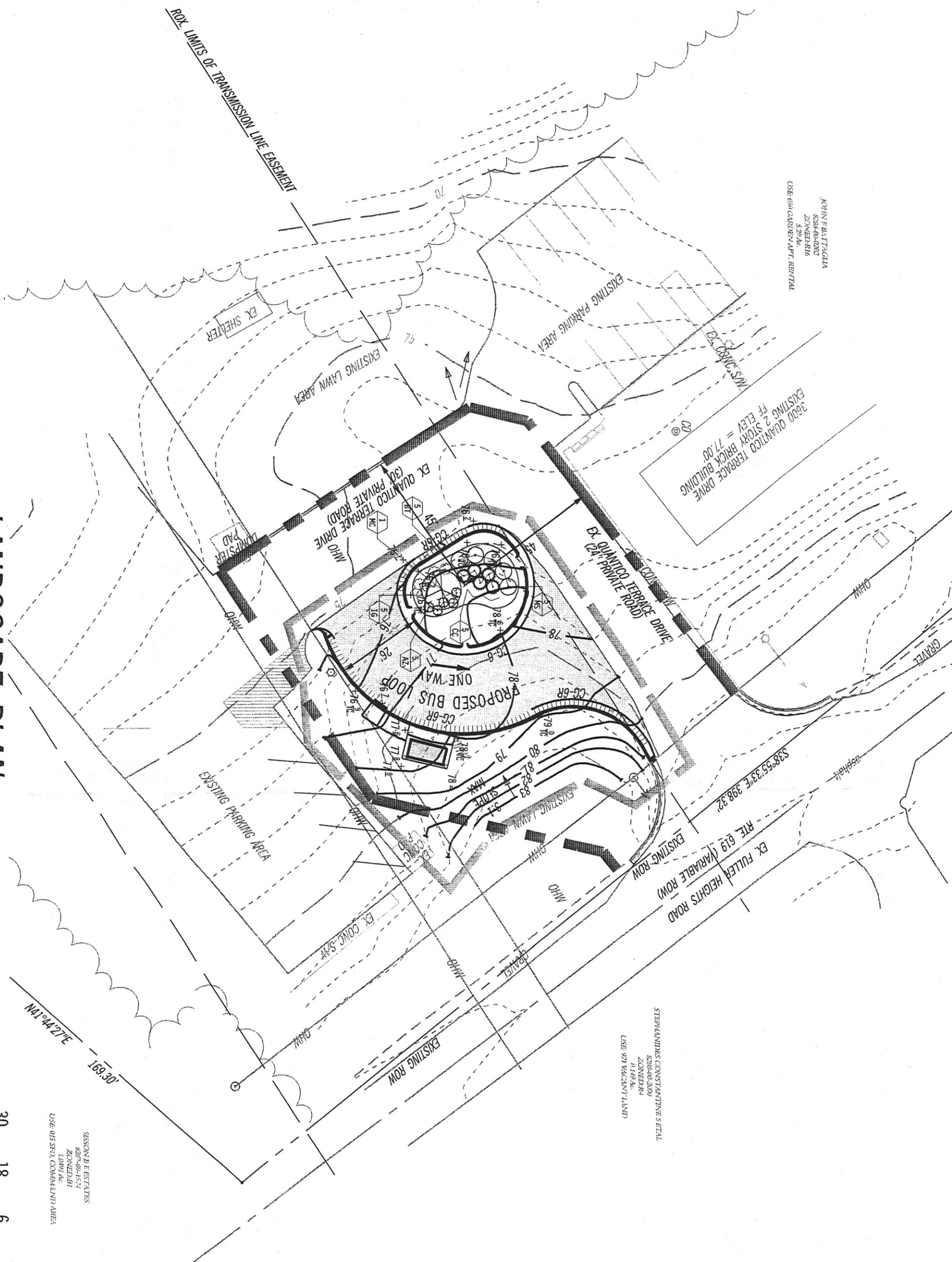
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SCALE: 1" = 30'

COMMUNITY OF VIRGINIA
THOMAS A. DOUGHER
LE. No. 1897
7-20-15
REGISTERED PROFESSIONAL ENGINEER

SHEET 17 OF 28
FILE NO. SF # 1807

Quantico Terrace Apartments Property Drawing

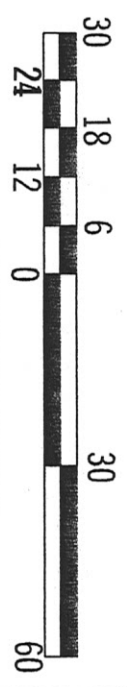
LANDSCAPE PLAN



JOHN P. BATTAGLIA
 SS8-00-0002
 ZONED: R16
 5.29 AC.
 USE: 050 GARDEN APT. RENTAL

STEPHANIDES CONSTANTINIS ET AL
 SS8-00-0004
 ZONED: R4
 0.19 AC.
 USE: 971 VACANT LAND

SISSON B. ESTATES
 SS8-00-1574
 ZONED: D1
 1.089 AC.
 USE: 015 SFPA, COMMONLAND AREA



GRAPHIC SCALE

No.	REVISION	DATE	BY



GENERAL CIVIL
 TRANSPORTATION
 ENVIRONMENTAL
 GEOGRAPHIC SCIENCES

GREENHORNE & O'MARA

3635 (PHON

SHEET 2 OF 4

1260 QTBL PP-12
 PROJ. No. FILE No.

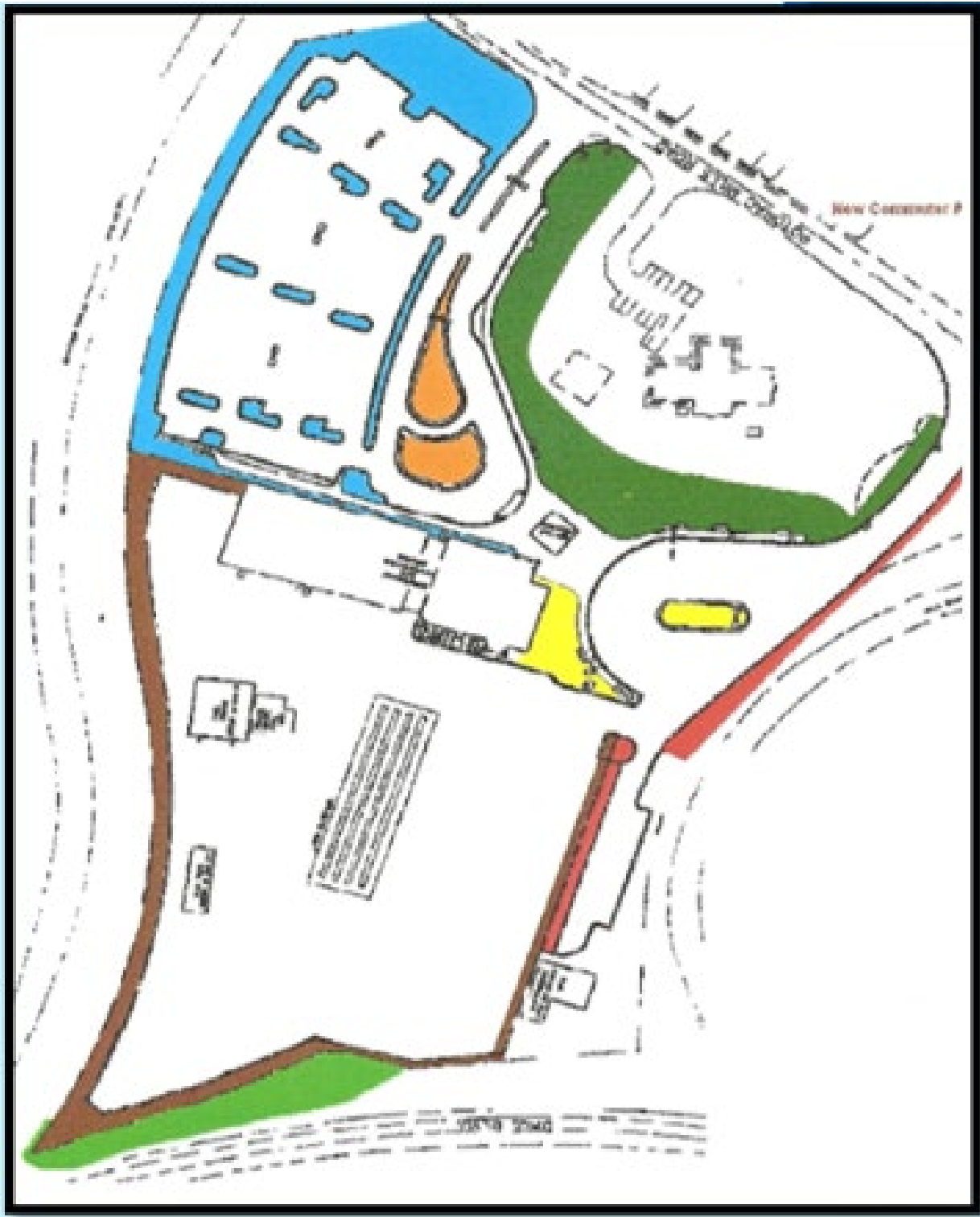
SCALE 1" = 30'
 DATE 5/19/0

LB LB CP R
 DESIGN DRAWN CHE

PRTC Landscape Presentation Images

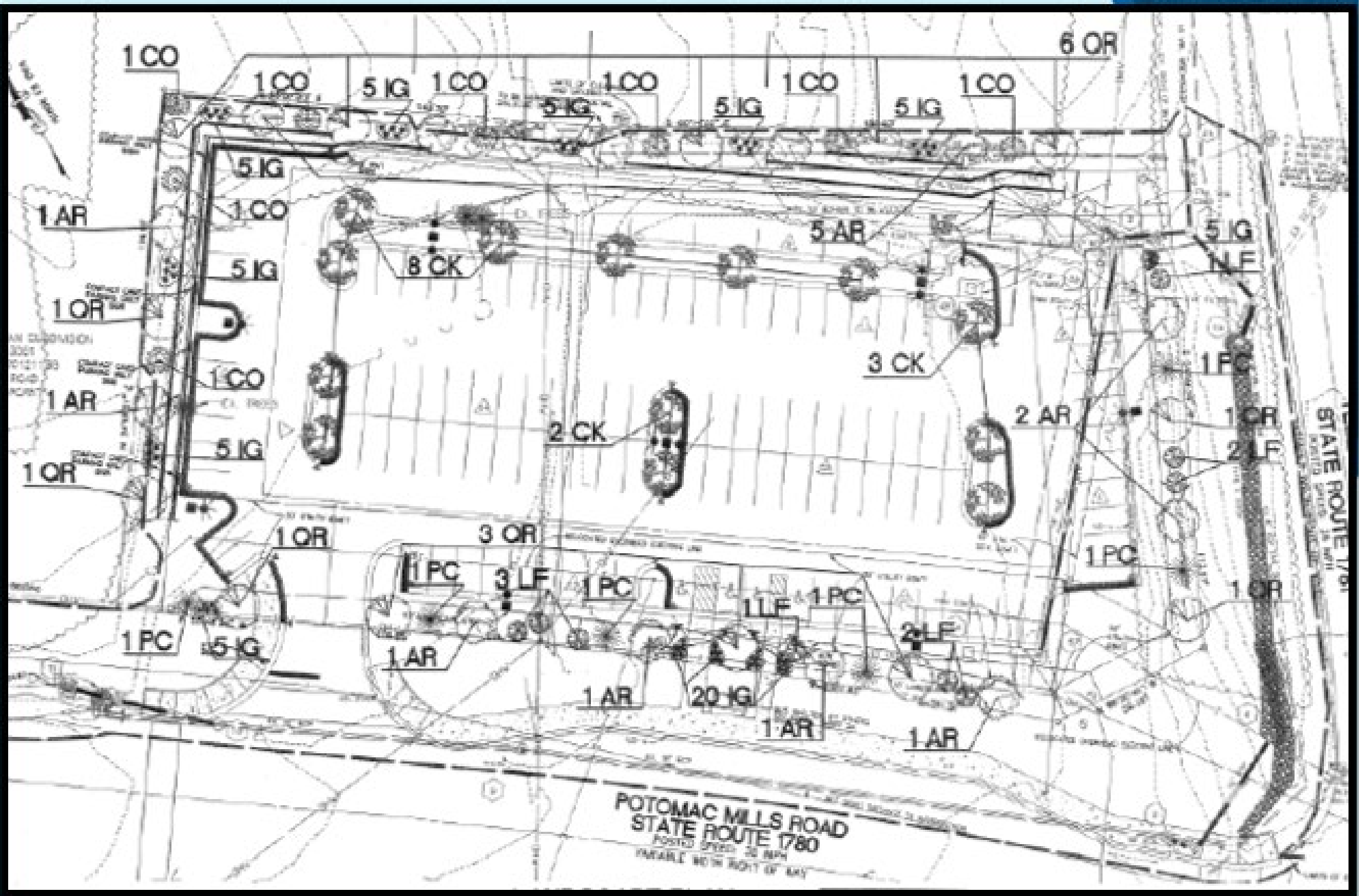
PRTC Transit Center – 14700 Potomac Mills Road



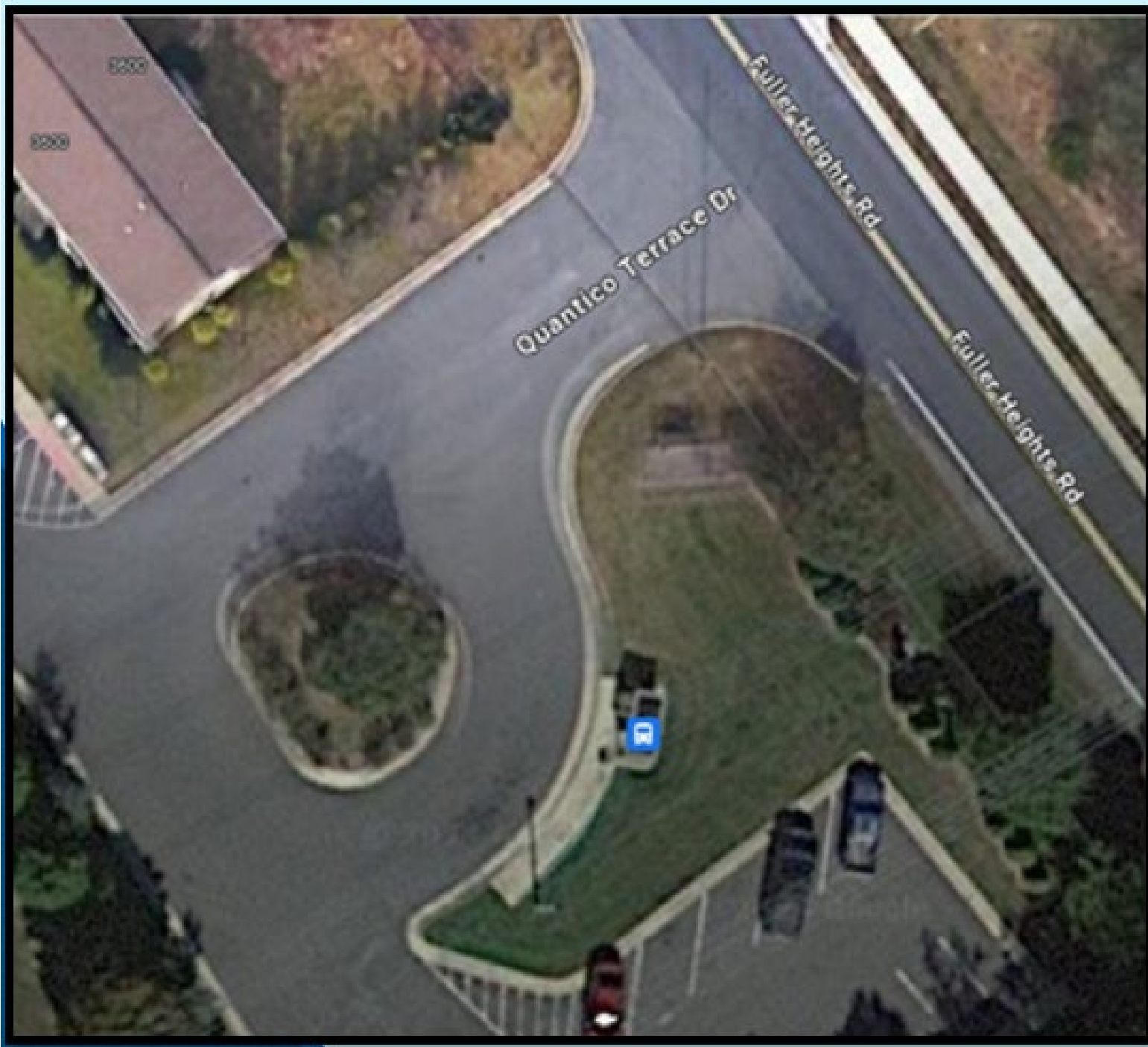


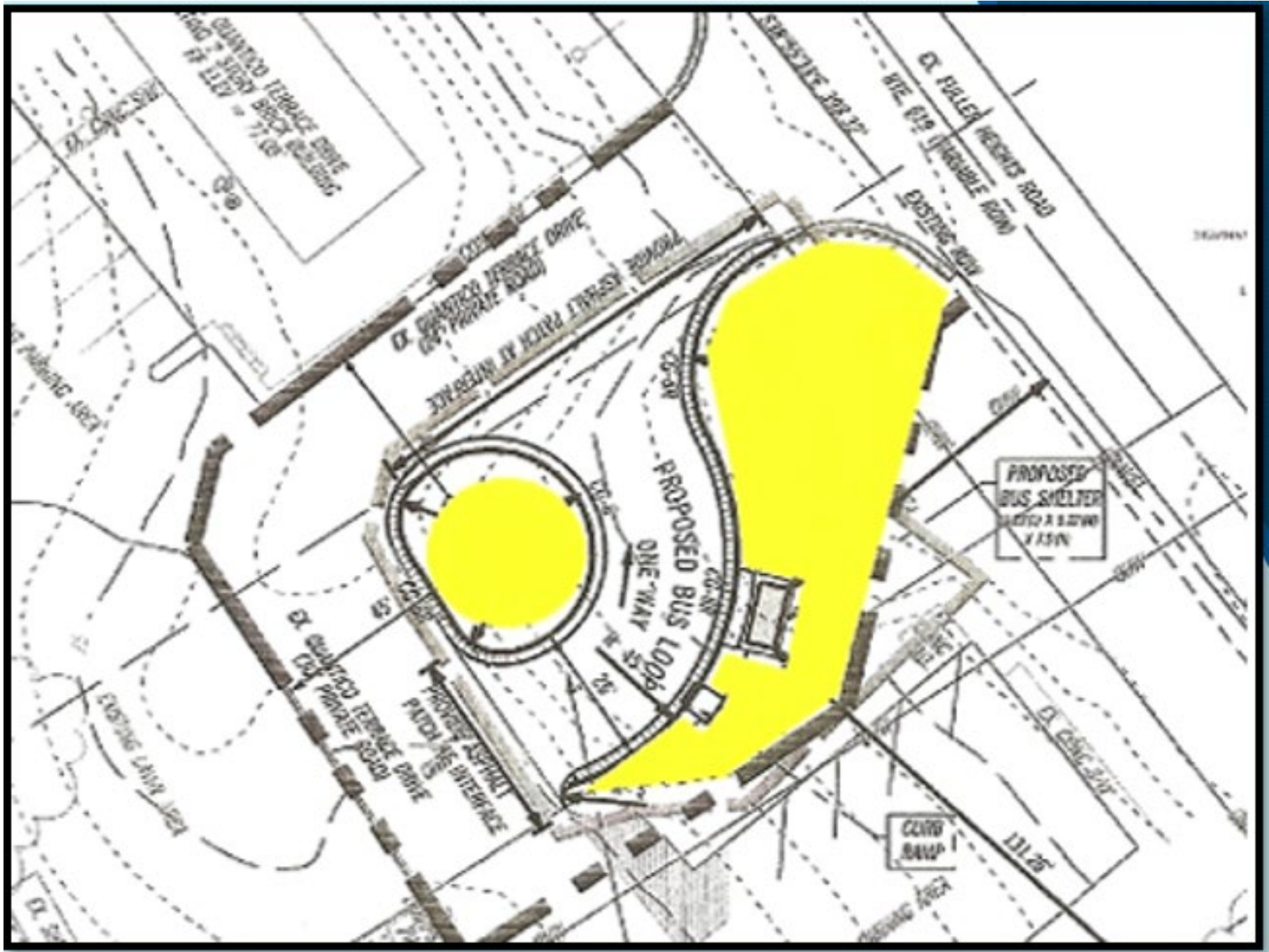
PRTC Commuter Lot – 14711 Potomac Mills Road





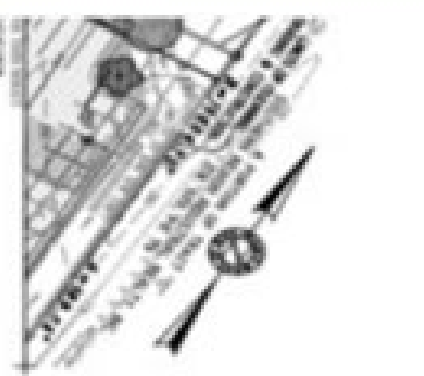
Quantico Terrace Apartments PRTC Bus Shelter Area – 19050 Fuller Heights Road, Triangle





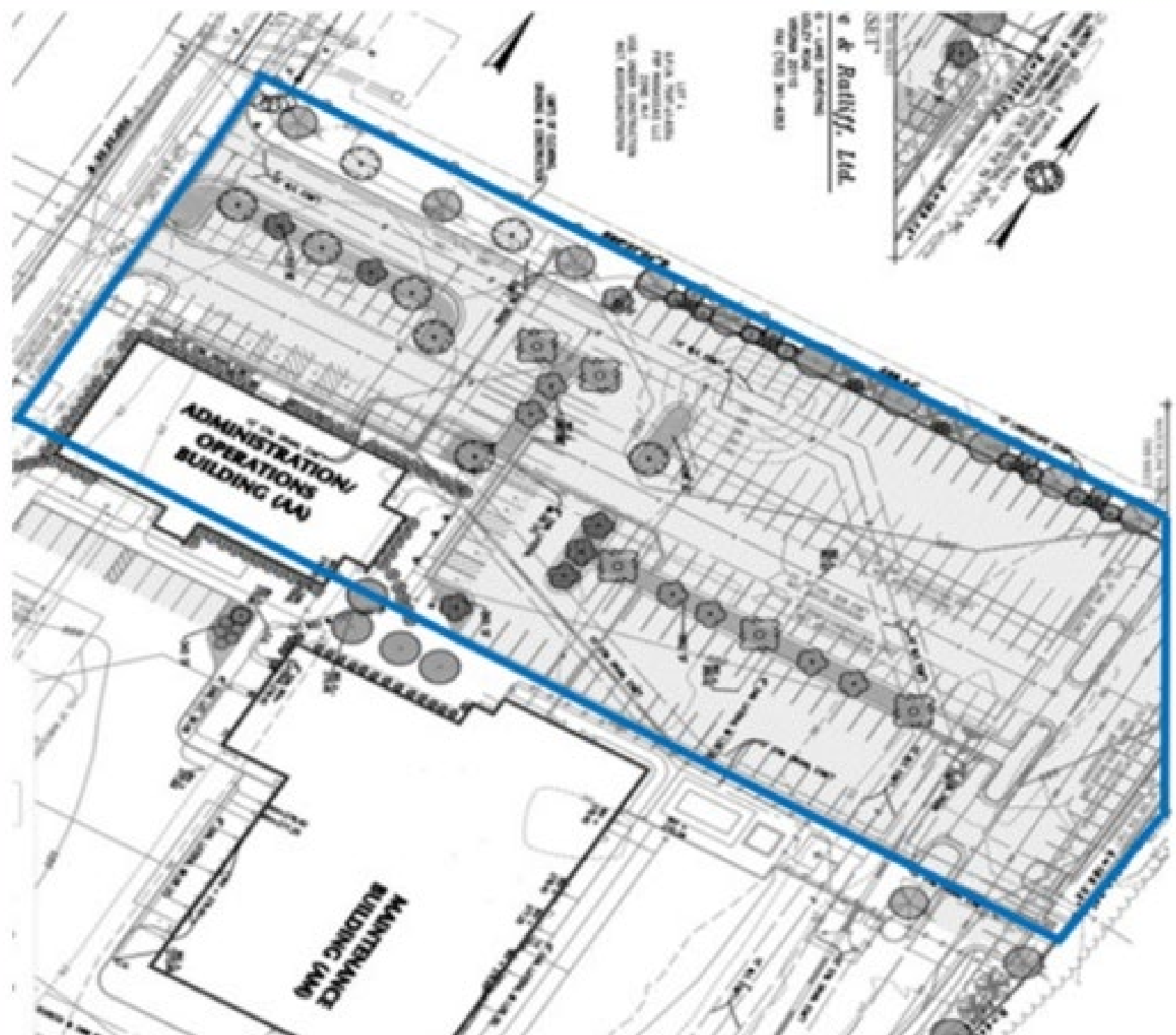
PRTC Western Facility (Manassas) – 7850 Doane Drive





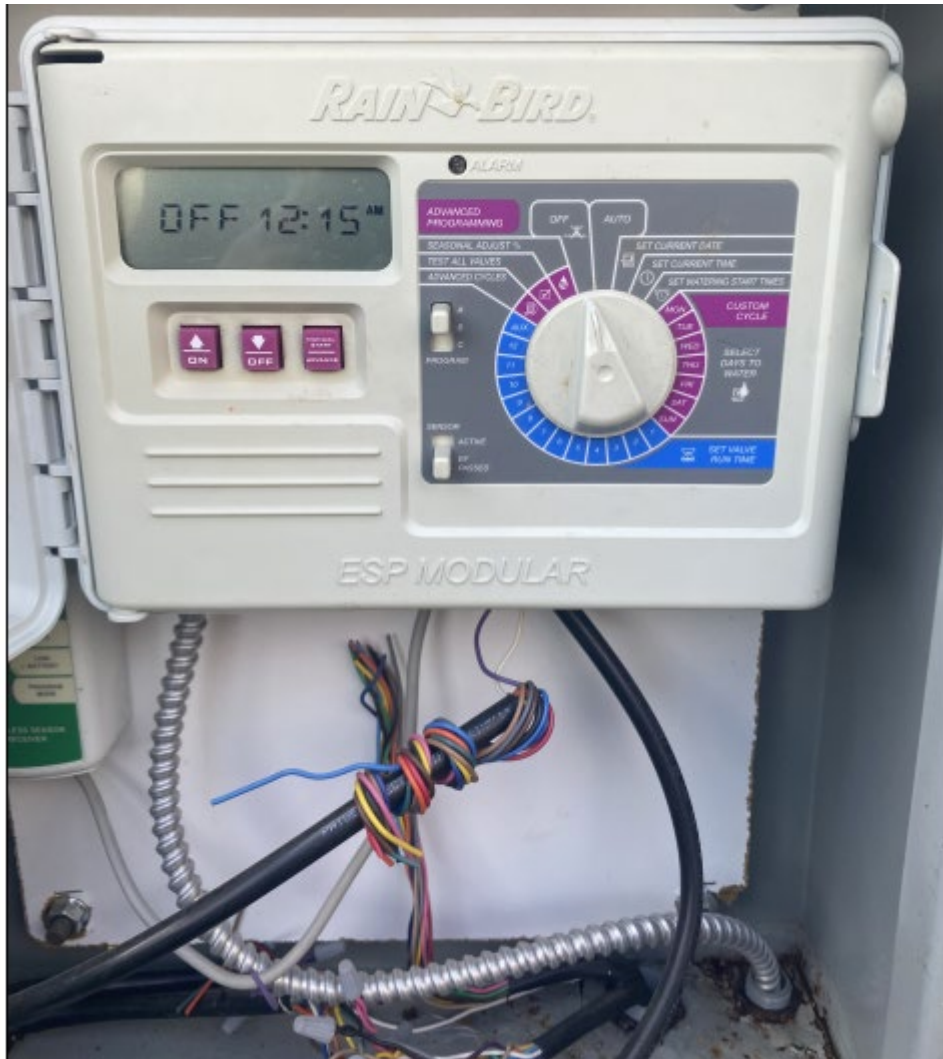
S&P Railways, Ltd.
S - LINE STATIONS
LONDON 2015
020 7000 30000

DATE: 10/10/15
FOR: S&P RAILWAYS LTD
REF: S&P/15/001
ALL DIMENSIONS IN METERS



PRTC Irrigation System Control Panel

PRTC Irrigation System Control Panel Images



RAIN BIRD.

Programming Overview/Descripción de Programación/ Description de la programmation



Use dial to select programming functions.
Utilice el dial para seleccionar funciones de programación.
A l'aide du cadran, sélectionner une fonction.

Change the current value in the LCD display.
Cambia el valor actual en la pantalla LCD.
Changer la valeur à l'écran LCD.

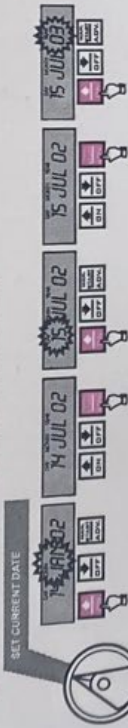
Moves cursor to next value in the display.
Cambia el cursor al valor siguiente en la pantalla.
A l'écran, déplacer le curseur à la valeur suivante.

Selects watering program A, B, or C.
Selecciona el programa A, B o C.
Sélectionner le programme d'arrosage A, B ou C.

PROGRAM

1 Set Current Date (Example July 15, 2003.)

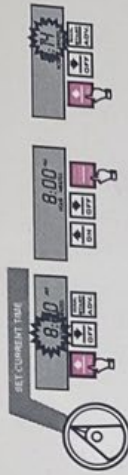
Configurar la Fecha (Ejemplo: 15 Julio del 2003.)
Réglage de la date (Exemple: 15 juillet 2003.)



Note: If the ALARM is lit, clear the error indicated on the LCD. Consult owner's manual.
Nota: Si ALARM se enciende, limpiar el error indicado en la pantalla. Consultar el manual del usuario.
Note: Si ALARM est allumé, effacer l'erreur sur l'écran LCD. Consulter le manuel du propriétaire.

2 Set current Time (Example : 8:14 am.)

Configurar la Hora (Ejemplo: 8:14 am.)
Réglage de l'heure (Exemple: 8:14).



3

Set Custom Day Cycle.

Configurar riego por días de la semana.
Réglage du cycle d'arrosage journalier.

Note: For ODD/EVEN/CYCLIC watering cycle, consult the owner's manual. To set permanent day(s) off, move dial to selected day and press OFF. To restore press ON.

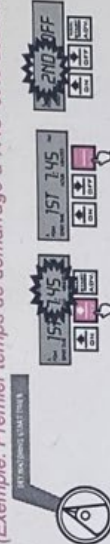
Note: Para el ciclo de riego IMPAR/PAR/CICLO, consultar el manual del usuario. Para apagar permanentemente el/los día(s), mueva la perilla al día seleccionado y presione OFF. Para restaurar el día, presione ON.

Note: Pour les réglages PAIRS/IMPAIRS/CYCLIQUE consulter le manuel du propriétaire. Pour retirer une (des) journée(s) d'arrosage, sélectionner le jour avec le cadran, appuyer OFF. Pour restaurer le jour, appuyer ON.

4

Set Watering Start Times.

(Example: 1st start time at 7:45 a.m. & 2nd start time is OFF)
Configurar las Horas de Inicio.
(Ejemplo: Primera hora de inicio a las 7:45 a.m. y la segunda esta apagada)
Réglage des heures de démarrages.
(Exemple: Premier temps de démarrage a 7:45 et le deuxième temps à OFF)



5 Set Watering Time for each station.

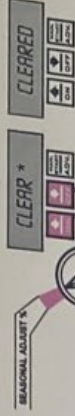
(Example: station 1 set for 11 minutes and station 7 set for 20 minutes.)
Configurar Tiempo de Riego para cada estación.
(Ejemplo: Estación 1 ajustada a 11 minutos y la estación 7 a 20 minutos.)
Réglage de la durée d'arrosage de chaque station.
(Exemple: Station # 1 à 11 minutes et la station # 7 à 20 minutes.)



Normal Operation/Operación Normal/Operation Normale

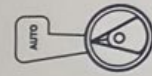
Clear all program information.

Borrar la información de los programas.
Effacer toutes les informations de programmes.



Set controller to automatic operation.

Colocar el controlador en modo AUTO.
Sélectionner le Mode AUTO.



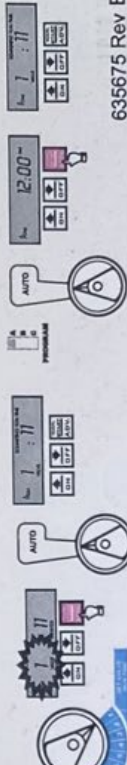
Hold both for 5 seconds
Presione ambos por 5 segundos
Appuyer simultanément pendant 5 secondes.

QUICK REFERENCE STICKER

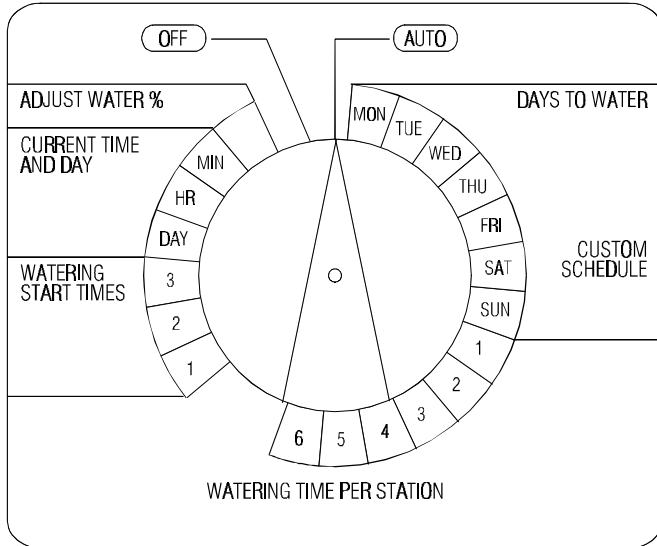
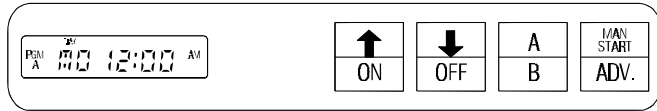
Lose your owner's manual? Want additional programming tips?
Please visit us at www.rainbird.com or Call technical assistance at 1-800-247-3782

Manual Operation/Operación Manual/Operations manuelles

Run valve(s) Manually.
Ejecutar un Programa Manualmente.
Départ manuel d'une programmation.



Rain Bird Outside Sprinkler Manual



Installation, Programming, & Operation

ESP-4
ESP-6
ESP-8



INTRODUCTION

Congratulations on purchasing a Rain Bird ESP solid state controller. This manual describes how to install, operate, and maintain your controller. Please read these instructions carefully. For your convenience, we have included a Quick Reference Guide below, so you can quickly find instructions for common tasks.

Quick Reference Guide

If you want to:

- Change the time of day..... page 4
- Turn the controller off and on
(for example, because of rain)..... page 8
- Adjust watering times for all stations
(for example, during a hot or cool period)... page 9
- Start the sprinkler system manually..... page 9
- Run the test program..... page 10
- Install a new battery..... page 14
- Troubleshoot a controller problem..... page 14

Special Upgrade Offer

Save an extra 15% off new sprinkler timers and irrigation controllers at the Rain Bird Online Store.*

Still struggling with your old sprinkler timer? Having a hard time complying with local watering restrictions? Upgrading to a new Rain Bird sprinkler timer is easier than you might think.

New timers are easier to program than ever before, with powerful features to help save you time and water while keeping your yard healthy and vibrant.

There are lots of models to meet your needs, including indoor and outdoor versions, flexible modular timers and even smart controllers that automatically adjust themselves based on the weather.

Shop Now at store.rainbird.com and enjoy exclusive upgrade savings!



Enter discount code:

UPGRADE15

at checkout to save an extra 15% off*

** Additional discount not valid on clearance items, bundles or store specials. Discount applies to controller products only. Cannot be combined with other store discount codes. Valid at the Rain Bird Online Store only. Subject to change without notice.*

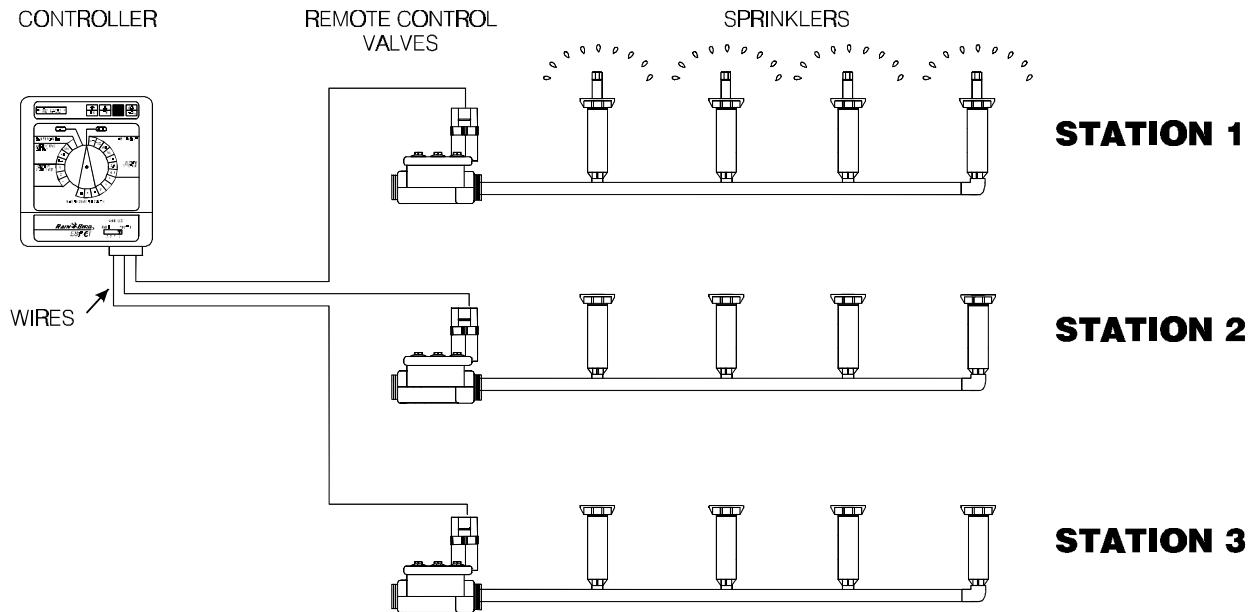
RAIN  BIRD®

Controller Stations

The controller has several *stations* as shown in the illustration below. Each station is connected to a remote control sprinkler valve. The valve opens when it receives a signal from the controller, and the sprinklers connected to the valve turn on. When these sprinklers have run for their allotted time, the controller shuts off the valve and opens the next valve in sequence.

For example, the illustration shows that station 1 is currently watering. When station 1 is finished, the controller will shut it off and start station 2. In the same way, station 3 will begin watering when station 2 is finished.

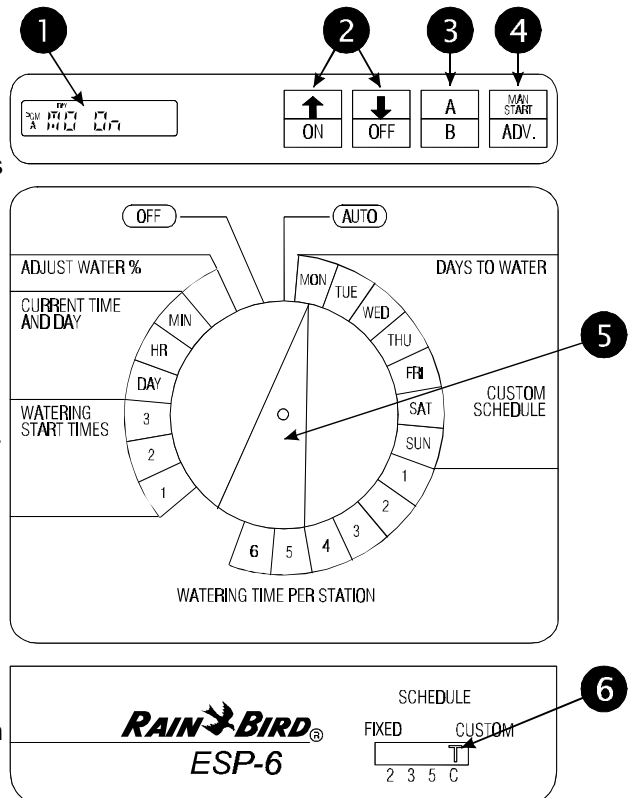
Sample Station Layout



Controls and Switches

The illustration shows the programming controls on the face of the ESP. These controls include:

- ❶ **LCD Display** — during normal operation, displays the time of day; during programming, shows the results of your commands; during watering, shows the station that is running and the minutes remaining in its run time.
- ❷ **Arrow ON-OFF Buttons** — used to set times and days, and to make program changes.
- ❸ **A / B Program Button** — used to select watering program A or B. (On some ESP models, this button is labeled PGM.)
- ❹ **Manual Start / Advance Button** — used to start the irrigation program manually or to manually advance watering from one station to the next.
- ❺ **Programming Dial** — used to turn controller off and on, and for programming.
- ❻ **Schedule Slide Switch** — used to select one of the fixed-interval watering schedules or a custom watering schedule.



PROGRAMMING THE CONTROLLER

Your ESP controller is an electronic clock that controls when your sprinkler system turns on, and how long the sprinklers run.

Programming is the process of telling the controller exactly when and how long you want to water. The controller opens and closes the remote control valves according to the program you set.

Each program contains:

- *Watering days* — the specific days of the week on which watering takes place (for example, Monday, Wednesday, Friday), or the watering interval (for example, every third day).
- *Start time* — the time of day that the program begins; this is the time that the first station in the program begins watering; all other stations then follow in sequence.
- *Run time* — the number of minutes that each station runs.

Programming Checklist

To program the ESP- controller for the first time, we recommend that you complete the following steps in order:

Fill out Program Schedule Sheet.....	page 3
Select watering schedule.....	page 4
Set the current time.....	page 4
Set the current day.....	page 5
Select the program (A or B).....	page 6
Set station watering days. (custom schedule only).....	page 6
Set station run times.....	page 7
Set watering start times.....	page 7
Set controller to automatic operation.....	page 8

Fill Out Program Schedule Sheet

Before you begin programming, fill out the ESP Controller Program Sheet and attach it to the label on the inside of the controller door. A sample Program Sheet is shown in this illustration.

- ❶ Enter a brief description of each station on the controller.
- ❷ In the Program A column, mark the watering schedule. Either circle one of the fixed intervals, or fill in the watering days in the "Custom" row.
- ❸ Enter the starting time(s) for Program A. You may have up to three separate start times for each program.
- ❹ Enter the run time for each station assigned to Program A. Enter "0" for stations that are not used in Program A.
- ❺ Repeat steps 2 - 4 for Program B. If you are using a fixed schedule, Program B will have the same watering days as Program A.

The illustration shows the Rain Bird ESP Controller Program Sheet. It includes a header with the Rain Bird logo and 'ESP Controller Program Sheet'. Below the header is a 'CUSTOM' row for selecting watering days (M, T, W, T, F, S, S) and a 'FIXED' row for selecting fixed intervals (1, 2, 3, 5). There are three 'START' rows for Program A and Program B. Below this is a table with columns for 'NO.', 'DESCRIPTION', 'RUN TIME', and 'RUN TIME'. The table contains 16 rows of station information. Numbered callouts 1 through 5 point to various parts of the sheet: 1 points to the 'DESCRIPTION' column, 2 points to the 'CUSTOM' row, 3 points to the 'START' rows, 4 points to the 'RUN TIME' columns, and 5 points to the 'FIXED' row.

RAIN BIRD		A	B
ESP Controller Program Sheet			
Peel off liner to expose adhesive back and affix to label on inside of controller door.			
NO.	DESCRIPTION	RUN TIME	RUN TIME
1	Front lawn rotors	25 min	0
2	Side lawn spray heads	8 min	0
3	Front flower bed	15 min	0
4	Back lawn rotors	0	20 min
5	Patio flower beds	0	5 min
6	Rose garden	0	7 min
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			

Select Watering Schedule

The ESP has two types of watering schedules, either fixed or custom. The fixed schedule sets watering to occur every second, third, or fifth day. The custom schedule lets you select specific days of the week on which watering is to occur.

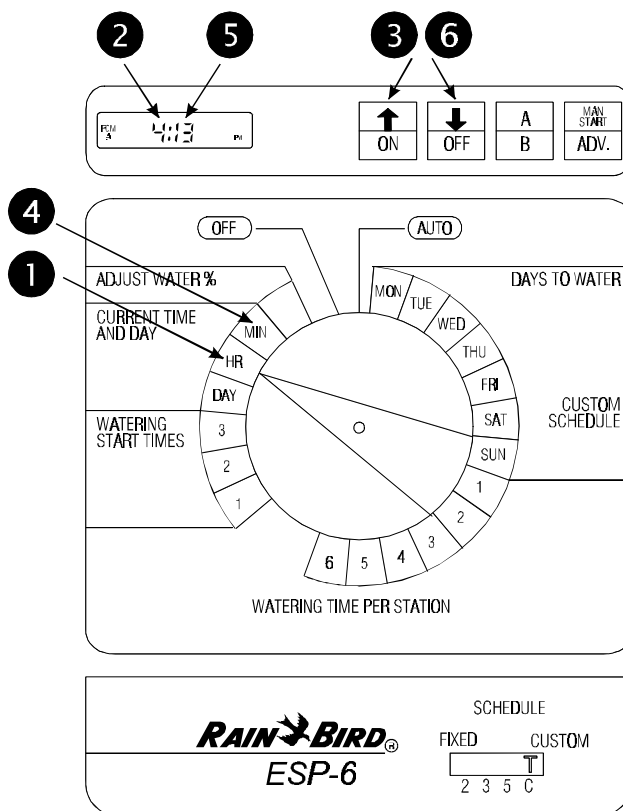
The type of schedule you select applies to both programs, A and B. For example, you cannot set Program A to a fixed schedule and Program B to a custom schedule.

- ❶ To use a fixed schedule, move the Schedule Slide Switch to one of the FIXED positions:
 - 2 = every other day
 - 3 = every third day
 - 5 = every fifth day
- ❷ To use the custom schedule, move the Schedule Slide Switch to the "C" position.



Set Current Time

- ❶ Turn the dial to "HR."
- ❷ The display shows the hour that is currently set, either AM or PM.
- ❸ Press \uparrow or \downarrow to set the current hour.
- ❹ Turn the dial to "MIN."
- ❺ The display shows the minute currently set.
- ❻ Press \uparrow or \downarrow to set the current minute.

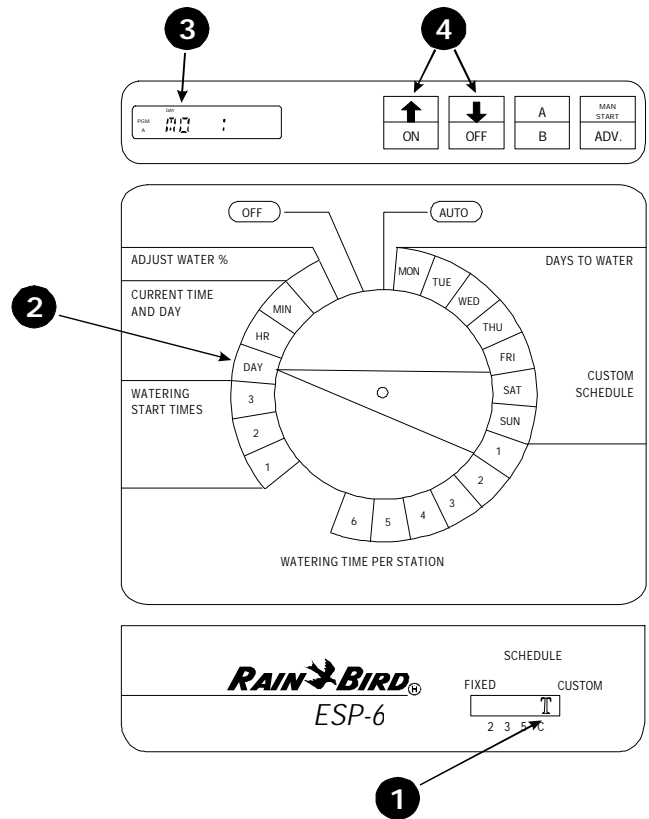


Set Current Day

Setting the current day varies somewhat depending on whether you are using a custom schedule or a fixed schedule.

Custom Schedule

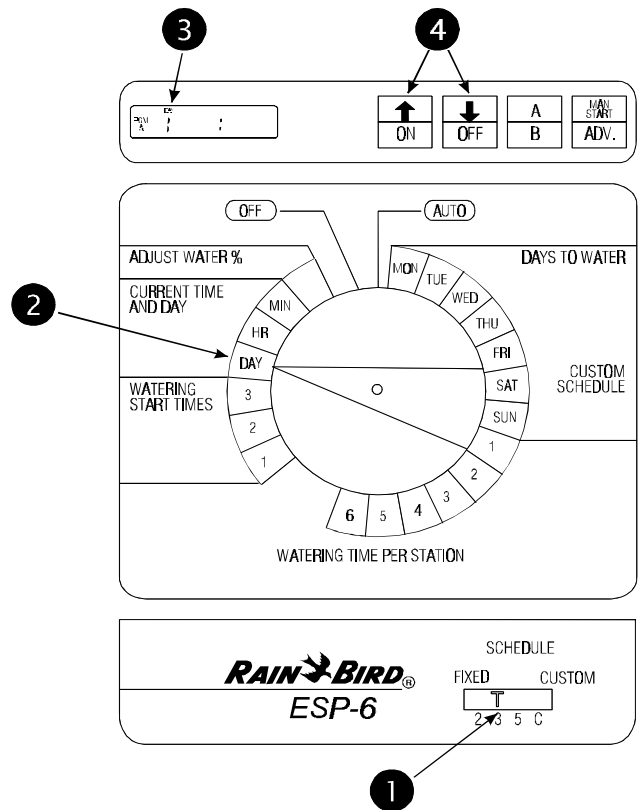
- 1 Make sure the Schedule Slide switch is set to "C."
- 2 Turn the dial to "DAY."
- 3 The display shows the day of the week that is currently set (for example, "MO" for Monday).
- 4 Press \uparrow or \downarrow to change the display to the current day of the week.



Fixed Schedule

- 1 Make sure the Schedule Slide switch is set to a fixed-day schedule: 2, 3, or 5.
- 2 Turn the dial to "DAY."
- 3 The display shows "1" for the first day of the watering cycle. Day 1 is always the watering day.
- 4 Press \uparrow or \downarrow to change the current day from 1. If you want tomorrow to be the watering day, change the current day to the last day in your fixed schedule.

For example, if you're using a two-day schedule and you want to start watering tomorrow, set the current day to "2." If you're using a three-day schedule and you want to start tomorrow, set the current day to "3."



Select Program

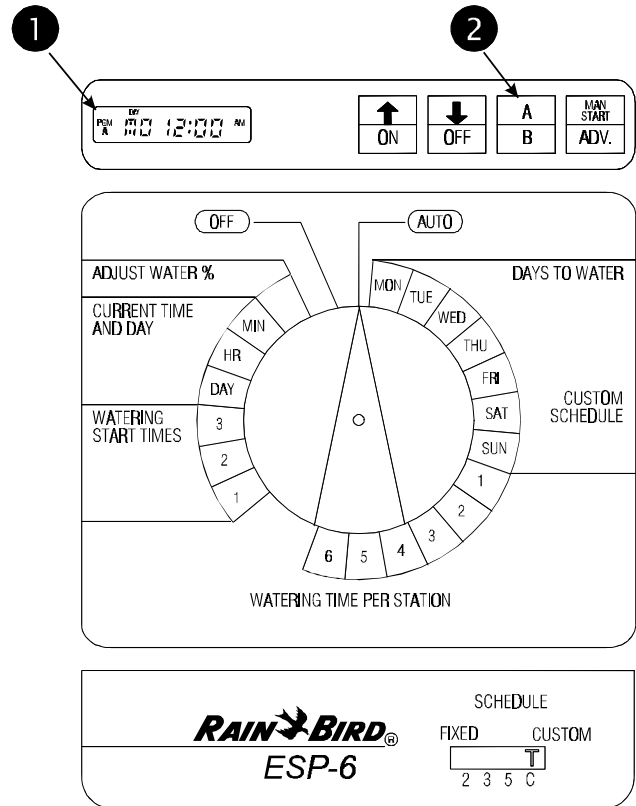
The ESP controller has two programs, A and B. Each program operates independently.

If you are using the custom watering schedule, each program can have different watering days. For example, Program A might run on Monday, Wednesday, and Friday; Program B on Tuesday, Thursday, and Saturday.

If you are using a fixed watering schedule, both programs will have the same "ON" days. For example, if you are using the three-day fixed schedule, Program A and Program B will both run every third day.

You can assign any station to Program A, Program B, or both.

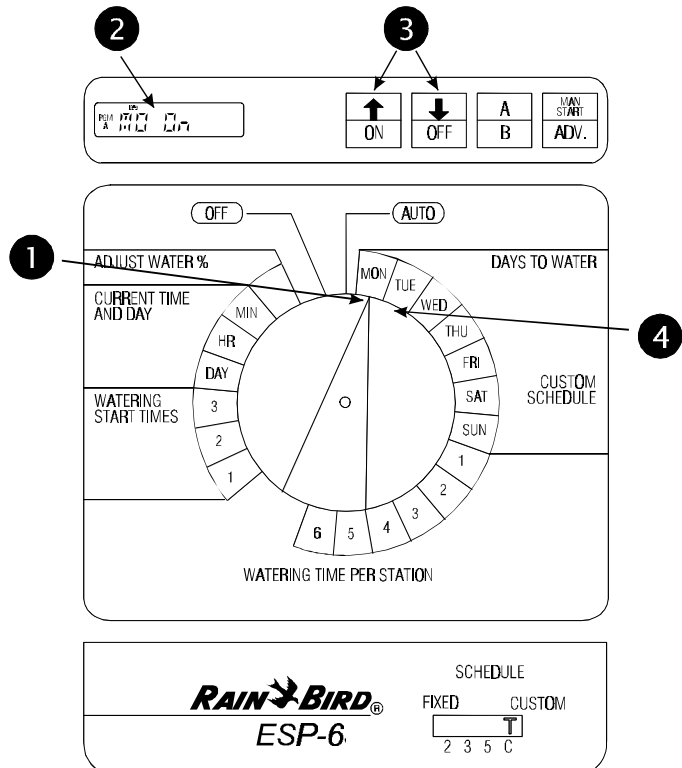
- 1 The program that is currently selected appears in the far left corner of the display. The display will show either "PGM A" or "PGM B."
- 2 To select the program, press the A / B (or PGM) button until the program you want appears in the display. Pressing the A / B button switches back and forth between the two programs.



Set Station Watering Days

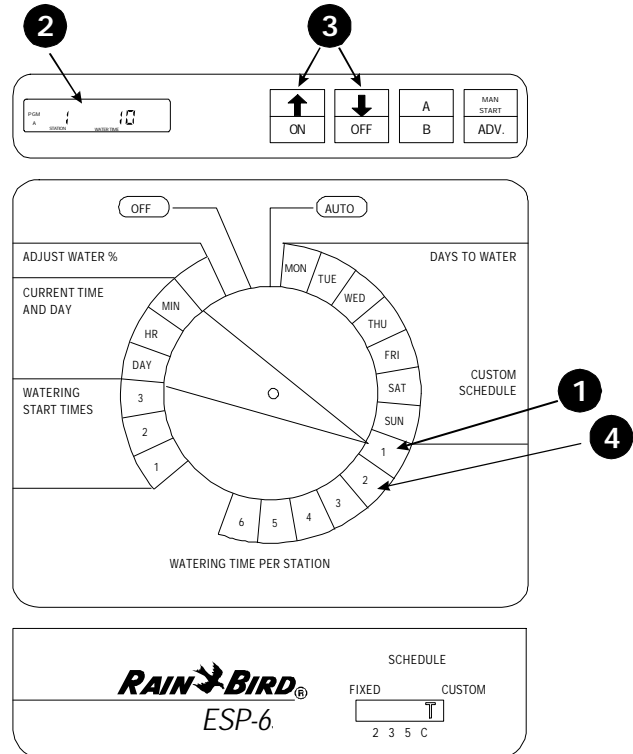
NOTE: You must set station watering days **only** if you are using the CUSTOM Schedule. If you are using one of the FIXED schedules, skip to the steps in **Set Station Run Times**

- 1 Turn the dial to "MON."
- 2 The display shows the day of the week (for example, "MO" for Monday) and either "ON" or "OFF." ON means the selected day is a watering day. OFF means watering doesn't take place on the selected day.
- 3 Press the ON or OFF button to set the selected day of the week on or off.
- 4 Turn the dial to the next day of the week. Repeat steps 2 and 3 until you have set each day of the week either on or off.



Set Station Run Times

- ❶ Turn the dial to Station 1.
- ❷ The display shows the selected station and its run time. If you are programming the controller for the first time, or after a long power outage, the built-in run time of 10 minutes will appear.
- ❸ Press \uparrow or \downarrow to change the display to the run time you want (up to 99 minutes). Set any unused stations to 0 minutes.
- ❹ Turn the dial to the next station in sequence. Repeat steps 2 through 4 until you have set the run time for each station.

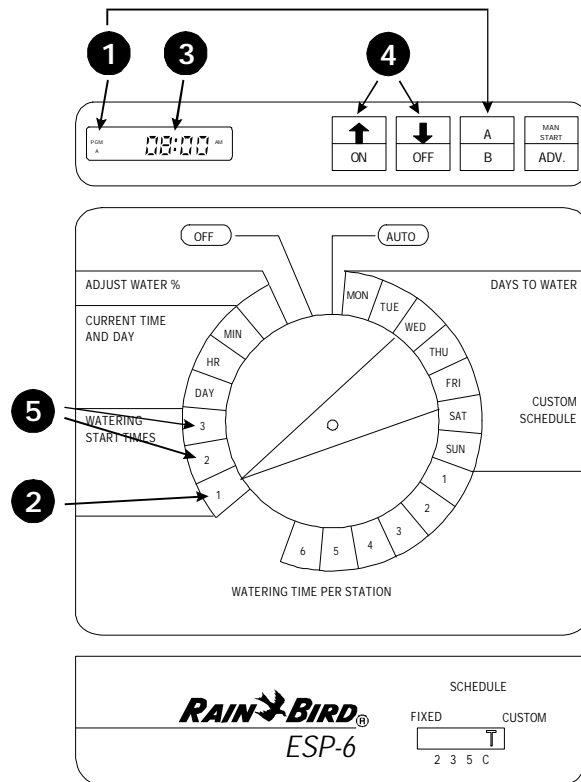


Set Watering Start Times

Each program on the ESP can have up to three watering start times, which tell the controller when to begin the watering program. The start time applies to all watering days for that program.

If you want to water more than once a day, you can set the second and third watering start times. For example, if you are growing new lawn seed, you might want to water several times a day. To do so, you could set a program to run at 6:00 A.M., 11:00 A.M., and 4:00 P.M.

- ❶ Make sure the program you want appears in the display. Either "PGM A" or "PGM B" will appear. To switch to the other program, press the A / B (or PGM) button.
- ❷ Turn the dial to 1 in the "Watering Start Times" section.
- ❸ The display shows the start time currently set for this program.



Set Watering Start Times (Continued)

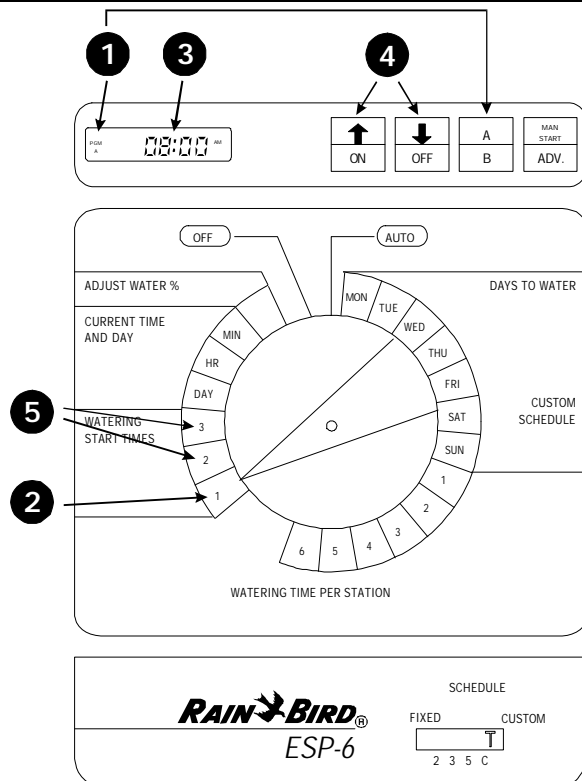
- 4 Press \uparrow or \downarrow to change the start time. The time setting moves forward or backward in 15-minute increments.

To eliminate a start time, press \uparrow or \downarrow until the blank setting between 11:45 PM and 12:15 AM appears.

- 5 If you want to set additional start times for this program, move the dial to 2 or 3 in the "Watering Start Times" section. Then repeat steps 3 and 4.

If you are following the programming checklist on page 6, you have now completed all programming steps for Program A. At this point, you may:

- Enter Program B by following the steps that begin on page 3, or
- Set the controller to automatic operation, as described on page 8.



OPERATING THE CONTROLLER

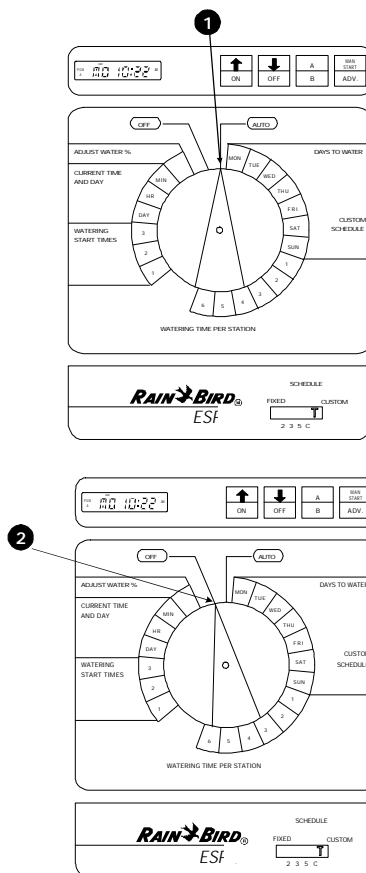
Turn Controller On and Off

- 1 To set the controller to automatic operation, turn the dial to AUTO. The display will show the current day and time until the next scheduled automatic start. When a program is running, the display will show the station currently turned on and the minutes remaining on its run time. When the entire program is complete, the display will change back to the current day and time.

If you forget to turn the dial to AUTO, the controller will eventually set itself to automatic operation. The only setting that prevents automatic operation is OFF (see step 2).

- 2 To turn the controller off and prevent all watering, set the dial to OFF. The display will show the current day and time. In addition, the right-hand minute digit will blink to show that the controller has been turned off.

The OFF setting can be used during rainy weather, seasonal shutdown, or system maintenance.



Adjust Water Budget Percent

The Water Budget feature on the ESP lets you increase or decrease the run times of all stations by a selected percentage. You may adjust the run times as low as 10 percent and as high as 200 percent. Adjustments must be made in increments of 10 percentage points.

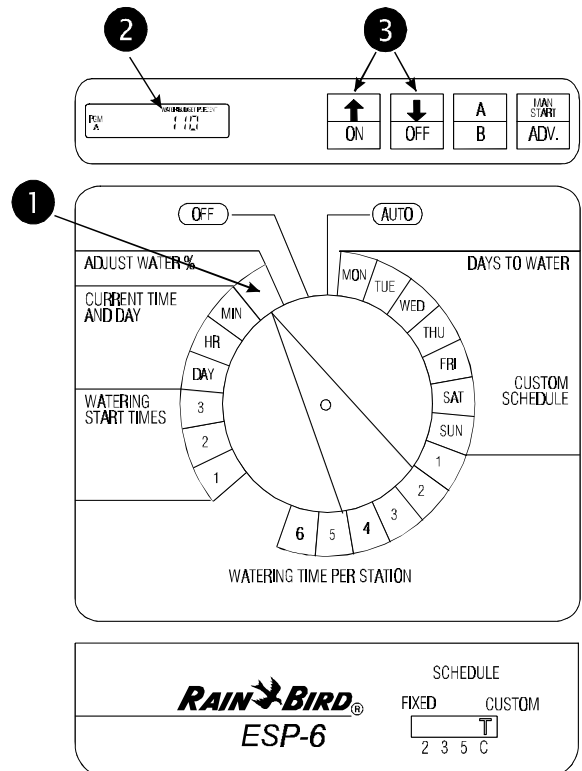
The percentages are calculated on the normal programmed run times for each station. For example, if a station is programmed to run for 10 minutes, and you set the water budget percent to 80%, the station will run for 8 minutes (80% of 10 minutes). If you set the water budget to 120%, that same station will run for 12 minutes (120% of 10 minutes).

The water budget feature can be useful for cutting back watering during cool winter months, or for increasing watering during periods of unusual heat. Keep in mind that the percentage you set applies to **all** stations on **both** programs.

- ❶ Turn the dial to ADJUST WATER %.
- ❷ The display shows the current water budget setting (between 10% and 200%). A setting of 100% means that all stations will run according to their normal programmed run times.
- ❸ Press \uparrow or \downarrow to increase or decrease the percentage in 10-point increments.

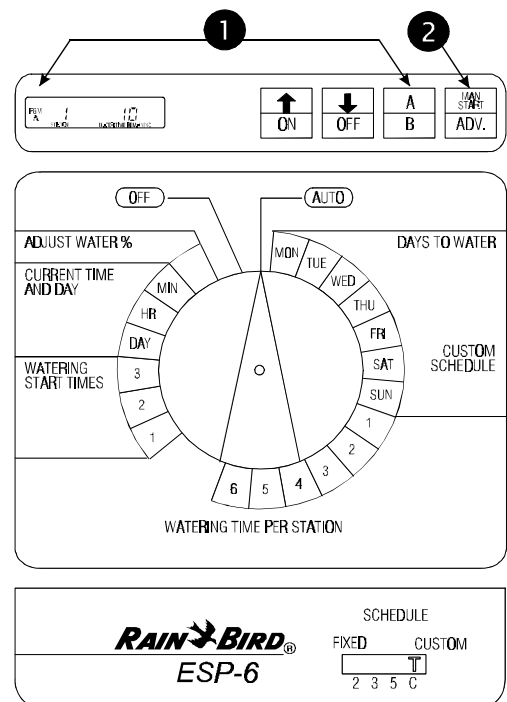
When water budgeting is set above or below 100 percent, the words *WATER BUDGET PERCENT* will appear in the top of the display.

To turn off water budgeting, repeat steps 1 to 3, and set the percentage to 100%.



Use Manual Start / Advance

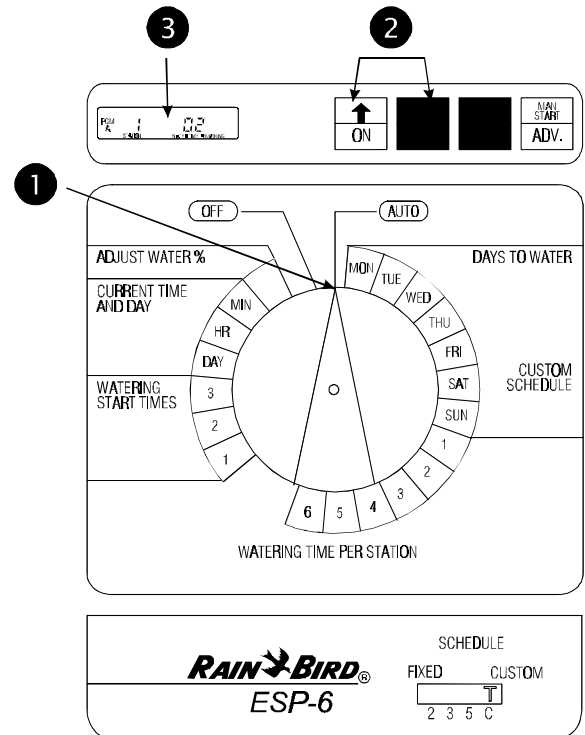
- ❶ Select the program you want to start. Press the A / B (or PGM) button to switch back and forth between the two programs.
- ❷ Press the MAN START / ADV. button to begin the program with the first assigned station. To advance through the stations in the program, press MAN START / ADV. repeatedly until the station you want is displayed.



Run Test Program

The ESP controller has a built-in test program that will run each station in sequence for two minutes. You can use this program to check out the operation of all the sprinklers in the system.

- ❶ Turn the dial to AUTO.
- ❷ Press both arrow buttons at the same time and hold them down.
- ❸ The display shows the first station number and two minutes of watering time remaining. The controller will run each station for two minutes and then return to AUTO mode to await the next scheduled start time. Any station that has been set to a 0 run time will be skipped during the test program.

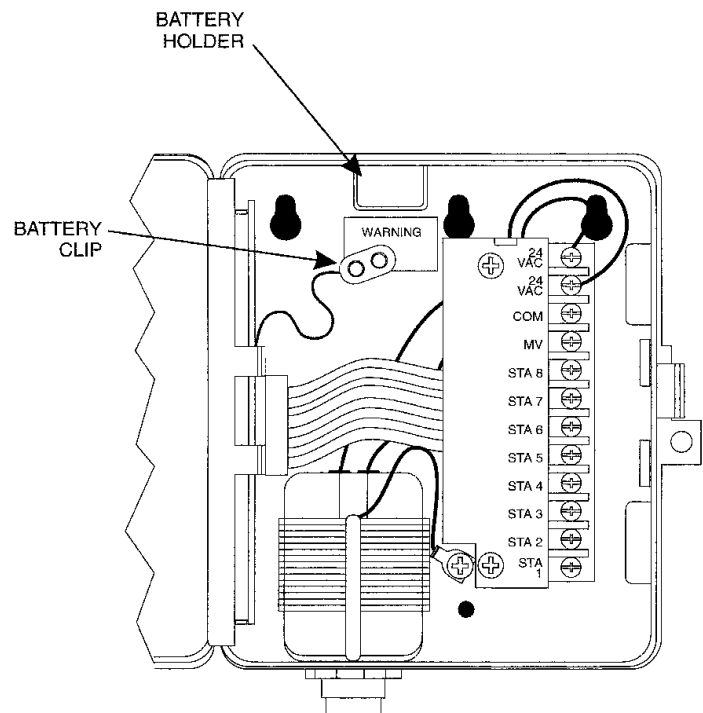


REPLACING THE BATTERY

The ESP controller features a rechargeable battery backup, which will preserve the controller's program in the event of a power failure. A fully charged battery will maintain the controller's program and keep current time for up to three days. However, the battery cannot operate the system. To replace the battery:

- ❶ Open the controller door and swing the face panel out on its hinges from right to left.
- ❷ Remove the old battery from the battery holder and disconnect it from the battery clip. Connect a new 9-Volt rechargeable, NiCad battery to the battery clip. Then insert the battery into the battery holder.

CAUTION: DO NOT use 9-Volt alkaline batteries. They may burst or leak when subjected to the continuous charging circuit of the ESP. Use NiCad batteries only.



INSTALLING THE CONTROLLER

Select Location

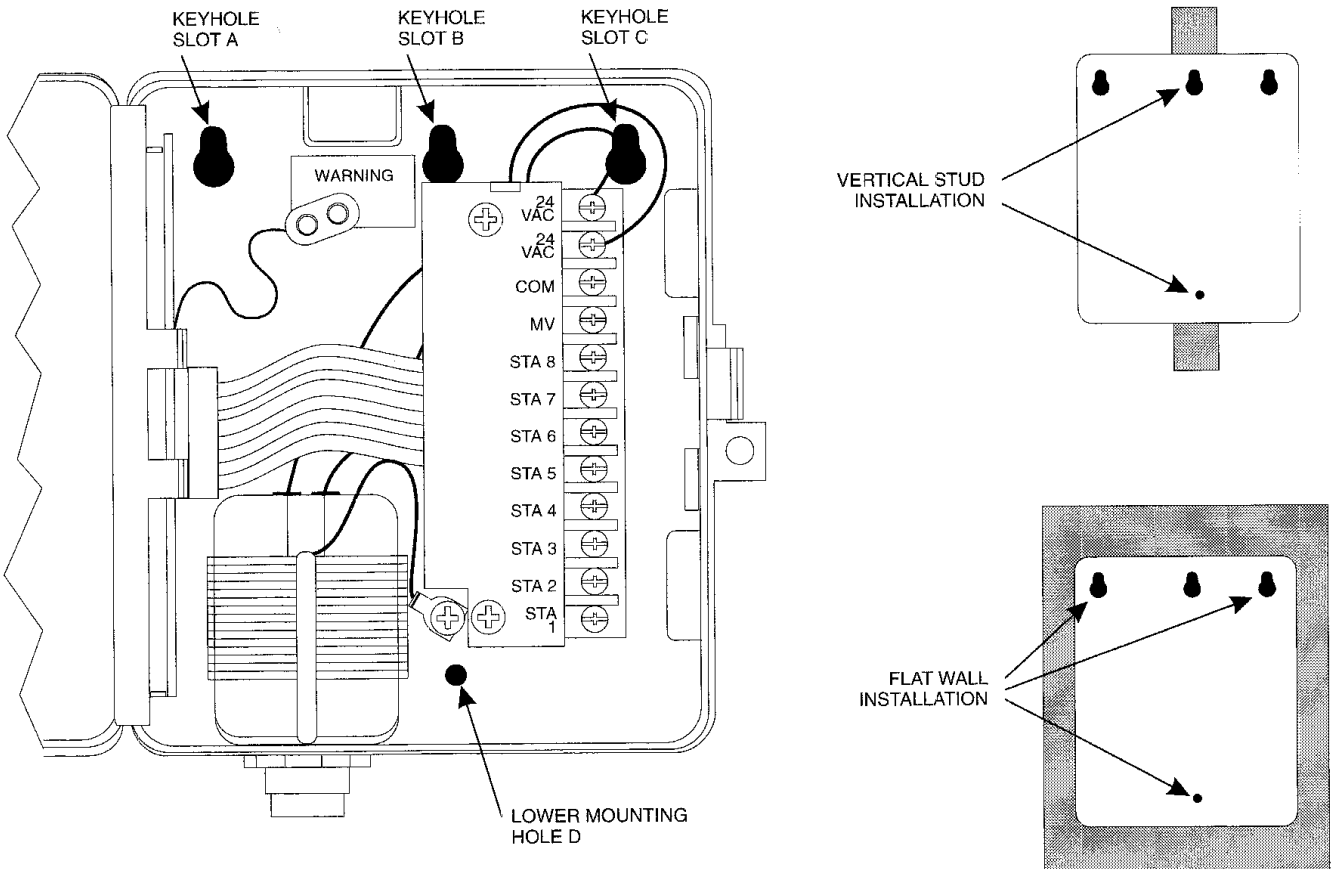
The plastic, weatherproof cabinet of the ESP controller is suitable for mounting outdoors or indoors. For best results, mount the controller at eye level in a sheltered location.

Allow approximately 7 1/2" of clearance to the left side of the controller so the controller door can swing fully open. In addition, mount the controller so that 117-Volt AC power is readily accessible.

The ESP controller has three "keyhole" slots on the back of the cabinet. Use these slots to mount the controller to a flat wall or vertical stud. Always use lower mounting hold "D" to secure the bottom of the controller.

Mount Controller

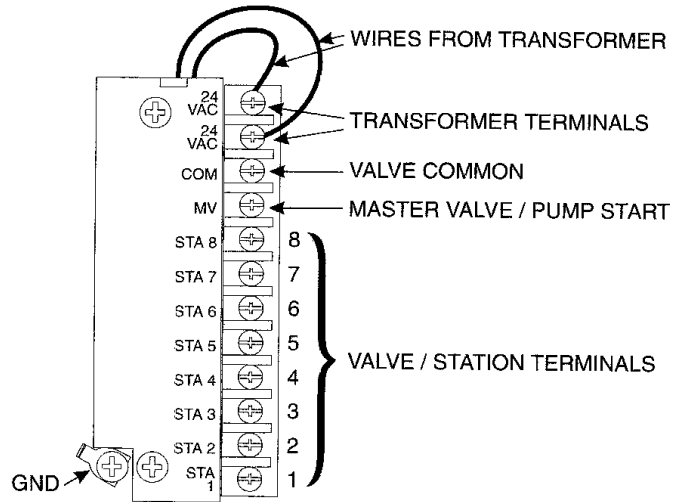
- 1 Open the controller door and swing the face panel out on its hinges from right to left.
- 2 Place the open controller on the mounting surface and mark through the *upper* slots of the keyholes. (Use keyholes A and C for wall mounting. Use keyhole B for mounting on a stud.) Then mark the location of hole D.
- 3 Remove the cabinet. Drive appropriate fasteners into the wall or stud at the upper keyhole marks (A, B, C). Leave slightly more than 1/4" between the head of the fastener and the wall surface. Do **not** drive a fastener into location D at this time.
- 4 Hang the controller on the upper keyhole slots. Make sure the shafts of the fasteners are in the upper, narrow portion of the slots. Then drive a fastener through lower mounting hole D. The controller should now be secure.



Connect Field Wiring

The ESP's terminal strip, shown in this illustration, provides fast screw connections for field wires.

- ❶ Wires connected to the terminal strip should be stripped to expose 1/2" of conductor at the end.
- ❷ To connect field wires, loosen the screw terminal. Insert the stripped wire around the base of the screw. Then tighten the screw terminal to grip the wire.
- ❸ Tug gently on each wire to make sure it's securely connected.



Station Valve Wiring

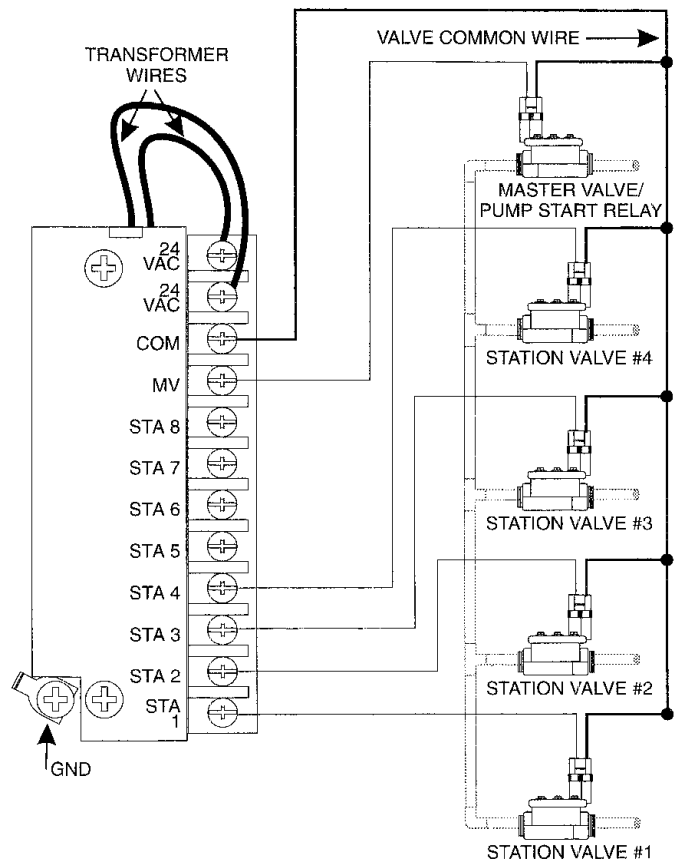
Connect each valve by its own separate power wire to one of the numbered terminals on the ESP terminal strip, as shown in the illustration.

Connect a common wire to one of the leads on each valve. Connect the other end of the common wire to the COM terminal on the ESP terminal strip. Wire used to connect the valves must be code-approved for underground installation. Bring all wires up through the right-hand hole in the bottom of the cabinet.

Master Valve / Pump Start Relay Wiring

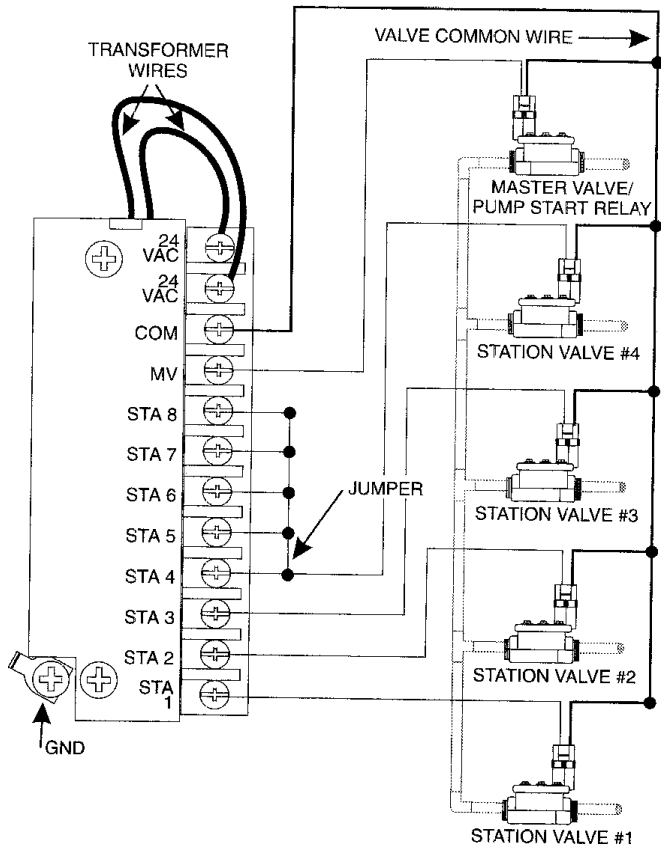
NOTE: Complete this section only if your system requires a master valve (an automatic valve installed on the mainline pipe upstream from the station valves) or a 24-Volt pump start relay.

Connect the master valve / pump start relay wiring to the MV terminal and COM terminal as shown in the illustration.



Jumper Settings for Unused Stations

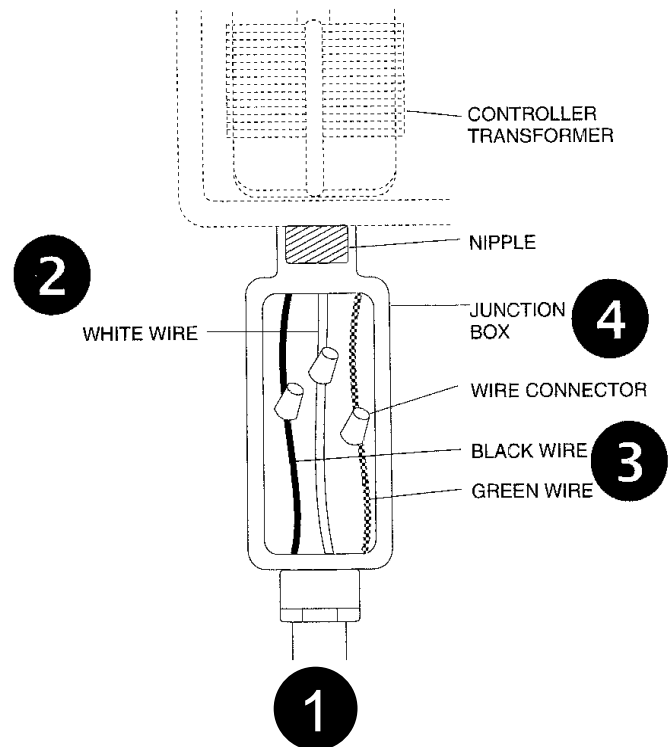
CAUTION: To prevent **pump** damage when using a pump start relay, use a jumper to connect unused stations to a station that is being used. If program information is lost during a prolonged power outage, the ESP will automatically run a "default" program when power is restored. This program runs all stations for 10 minutes. If unused stations are not jumpered, the pump will operate with no flow (dead-head) during this 10-minute period. Dead-heading may cause the pump to overheat or burn out.



Connect Transformer

The ESP controller has a nipple-mounted transformer that provides a 1/2" nipple below the cabinet. Use this nipple to connect the ESP to an electrical function box or other code-approved enclosure for wire connections.

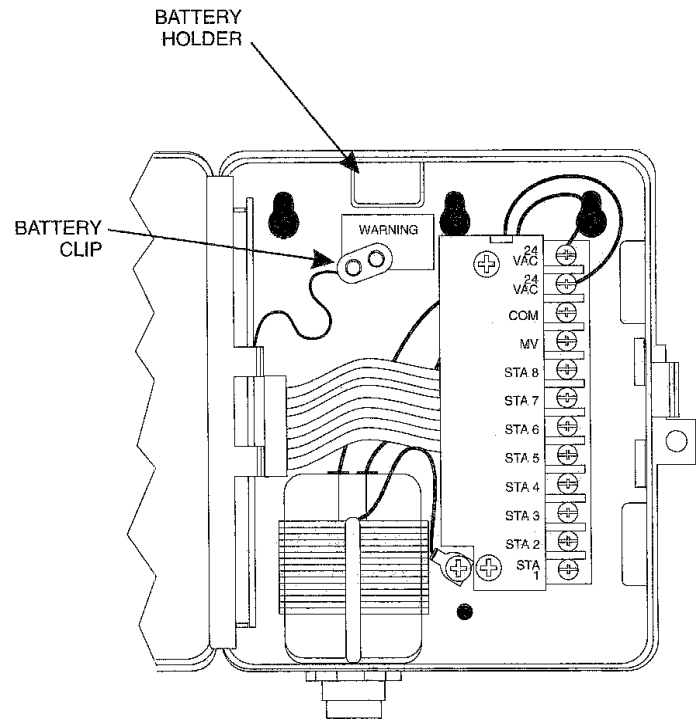
- ❶ Make sure the 117-Volt AC power is off.
- ❷ Connect the white wire from the controller nipple to the white wire coming out of the electrical conduit from the power source. Make sure all connections are made with code-approved insulated connectors.
- ❸ In the same way, make the black-to-black and green-to-green wire connections.
- ❹ Close up the weatherproof junction box after all connections are complete.



Install Battery

Connect a rechargeable 9-Volt NiCad battery to the battery clip and insert the battery into the battery holder. See page 10 for complete instructions.

CAUTION: DO NOT use alkaline batteries in the ESP.



TROUBLESHOOTING

SYMPTOM	CAUSE	CORRECTION
Display shows "PR OFF "	1. Fuse has blown	Replace the fuse with one of the same amperage rating. Use the MAN START / ADV button to run a watering program Press MAN START / ADV to cycle through each station; if the fuse blows again on a particular station, that station's solenoid or field wires may have a short circuit that needs repair.
	2. Power is off to the controller	Determine why power to the controller has been interrupted, and re-establish power.
Display is blank	3. If the controller is still receiving power, an electrical surge exceeding the controller's built-in surge protection may have damaged the controller's microprocessor.	Shut off power to the controller, open the lower face panel, and disconnect the battery. Let the controller "rest" for about 5 minutes. Reinstall the battery and turn power back on. If numbers and letters return to the display, the power surge did not do permanent damage: reprogram the controller. If the display remains blank, the ESP may be permanently damaged. Call 1-800-RAIN-BIRD for a service referral.
	4. Power is off to the ESP and the backup battery has run down.	Re-establish power to the controller, and then reprogram it. The recharging circuit will charge the battery in about 12 to 14 hours.
Display shows numbers and letters, but is not moving or advancing	Same as Cause #3	See correction for Cause #3

This controller generates radio frequency energy and may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient the receiving antenna.
2. Move the controller away from the receiver.
3. Plug the controller into a different outlet so that the controller and receiver are on different branch circuits.

If necessary, the user should consult the dealer or experienced radio / television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

“How to Identify and Resolve Radio-TV Interference Problems.”

This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.



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ATTACHMENT E INSURANCE REQUIRED CHECKLIST

X = Required Coverage, Indicate compliance in blank with Yes/No

				COVERAGE REQUIRED		LIMITS (FIGURES DENOTE MINIMUM)
Yes	No*	Required				
___	___	X	1.	Workers' Compensation and Employers' Liability;	1.	Statutory Limits of the Commonwealth of Virginia:
___	___			Admitted in Virginia		Yes
___	___	X		Employer's Liability		\$500,000
___	___			All Sates Endorsement		
___	___			USL&H Endorsement		
___	___			Voluntary Compensation		
___	___	X	2.	General Liability	2.	\$1,000,000 Combined
___	___			Products		Single Limit Bodily
___	___	X		Complete Operations		Injury and Property
___	___	X		Contractual Liability		Damage Each Occurrence
___	___	X		Personal Injury		
___	___	X		Independent Contractors		
___	___			XCU Prop. Damage Excl.		
___	___	X	3.	Automobile Liability	3.	\$1,000,000 Combined
___	___	X		Owned, Hired & Rented		Single Limit Bodily
___	___			Motor Carrier Act End.		Injury and Property
						Damage Each Occurrence
___	___	X	4.	Professional Errors and Omissions	4.	\$1,000,000 Per Claim & Aggregate Limit
___	___		5.	Garage Liability	5	
___	___		6.	Garage keepers' Legal Liability	6	
___	___		7.	Fire Legal Liability		
___	___		8.	Other Insurance:		
___	___	X	9.	PRTC named as additional insured on General Liability (This coverage is primary to all other coverage's PRTC may possess)	9	
___	___	X	10.	30-day cancellation notice required	10	
___	___	X	11.	Best's Guide Rating - A:VI or Better, or Equivalent	11	
___	___	X	12.	The Certificate must state IFB # 024-002 and IFB Title	12	
___	___	X	13.	Umbrella Liability	13	\$2,000,000 Limit per Occurrence