

SPRING HILL STATION DEMONSTRATION PROJECT BUILDING D2A FINAL DEVELOPMENT PLAN FDP 2010-PR-014-D

PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

JUNE 5, 2012
JULY 31, 2012
NOVEMBER 28, 2012
JANUARY 11, 2013
JANUARY 16, 2013
JANUARY 28, 2013



ILLUSTRATIVE PERSPECTIVE

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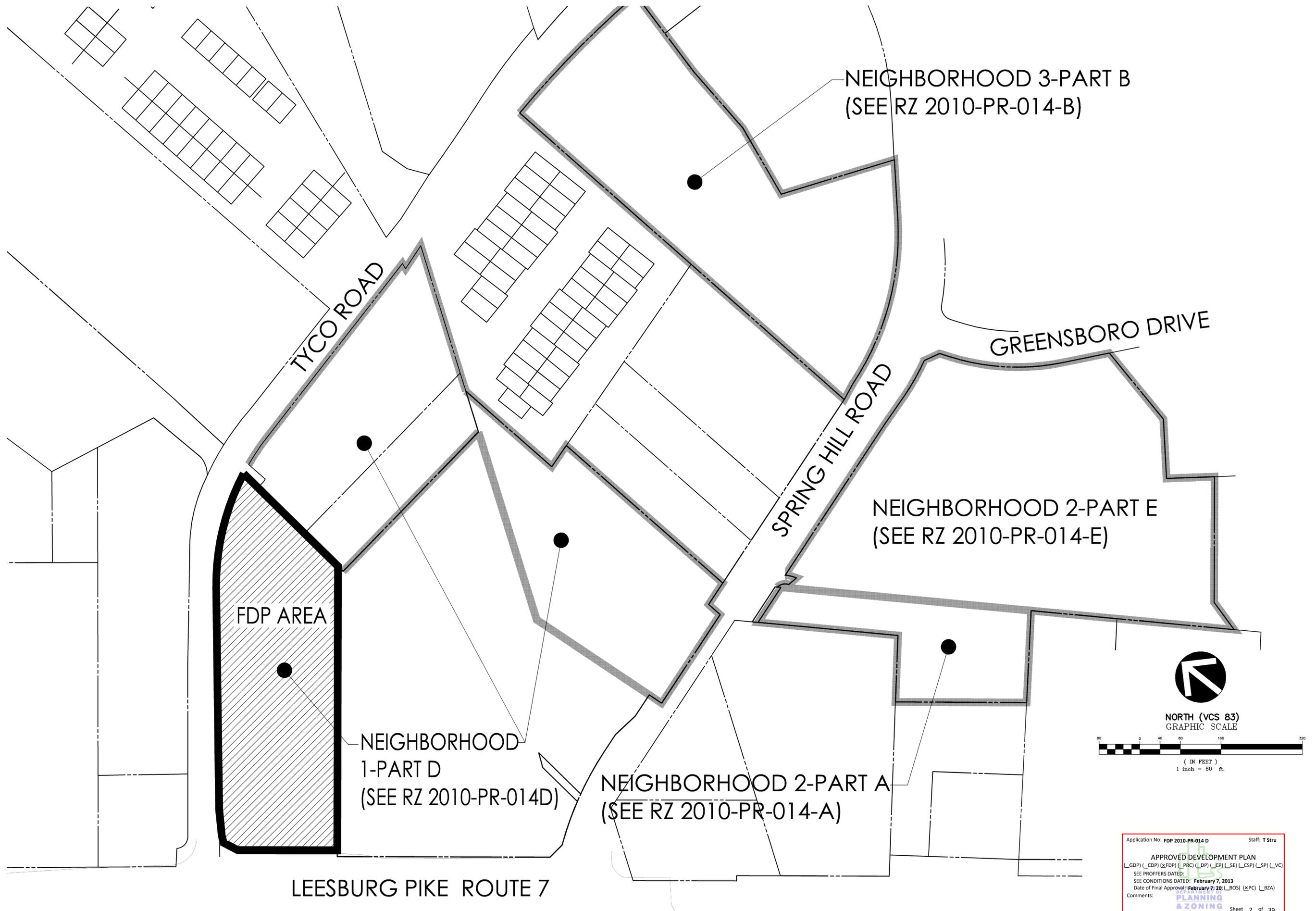
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Application No: FDP 2010-PR-014 D Staff: T Stru
APPROVED DEVELOPMENT PLAN
(_GDP) (_CDP) (xFDP) (_PRC) (_DP) (_CP) (_SE) (_CSP) (_SP) (_VC)
SEE PROFFERS DATED:
SEE CONDITIONS DATED: February 7, 2013
Date of Final Approval: February 7, 20 (_BOS) (xPC) (_BZA)
Comments:
PLANNING & ZONING
Sheet 1 of 39



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REZONING KEY MAP

NUMBER	ISSUE	DATE
5	FDP SUBMISSION 01-28-13	
5	FDP SUBMISSION 01-16-13	
4	FDP SUBMISSION 1-11-13	
3	FDP SUBMISSION 11-17-12	
3	FDP SUBMISSION 10-21-12	
1	FDP SUBMISSION 06-05-12	

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PROJECT

PLANNING

TITLE

DRAWING NUMBER

Application No: FDP 2010-PR-014 D Staff: T Stru

APPROVED DEVELOPMENT PLAN
(L_GDP) (L_CDP) (x_FDP) (L_PRC) (L_DPI) (L_CPI) (L_SE) (L_CSP) (L_SP) (L_VC)
SEE PROFFERS DATED:
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PLANNING & ZONING

Sheet 2 of 39

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FILE P:\Planning\Projects\018\018-FDP-D2A-KEY MAP.dwg USER:Riley DATE: Jan, 25 2013 TIME: 09:51 am

FDP GENERAL NOTES:

- THE SUBJECT PROPERTY SHOWN HEREON IS IDENTIFIED ON TAX MAP 29-3 AS PARCEL 54A AND IS PROPOSED FOR APPROVAL CONCURRENT WITH REZONING.
- THE HORIZONTAL DATUM SHOWN HEREON IS TIED TO THE VIRGINIA COORDINATE SYSTEM 1983 (NORTH ZONE) AND IS BASED ON A FIELD RUN SURVEY USING ACCEPTED GPS SURVEYING METHODS AND PRACTICES AND PERFORMED BY VIKA, INC.
- SEE SHEET C-4 FOR OWNERSHIP INFORMATION.
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON AN AERIAL TOPOGRAPHIC SURVEY AND THE CONTOUR INTERVAL IS TWO (2) FEET. THIS INFORMATION HAS BEEN FIELD VERIFIED BY VIKA, INC.
- THE BOUNDARY INFORMATION WAS PREPARED FROM A FIELD SURVEY BY VIKA.
- PUBLIC WATER AND SANITARY SEWER ARE AVAILABLE AND WILL BE EXTENDED AS NEEDED TO SERVE THE DEVELOPMENT.
- STORM WATER MANAGEMENT FACILITIES WILL BE CONSTRUCTED ON THE SITE IN A PRIVATELY OWNED AND MAINTAINED BELOW GROUND SYSTEM. THE SYSTEM WILL EITHER BE IN A CONCRETE BOX CULVERT OR IN VAULTS WITHIN A PARKING STRUCTURE AS GENERALLY SHOWN ON THESE PLANS. THE SYSTEM SHALL BE MAINTAINED ACCORDING TO THE APPLICABLE ORDINANCES AND PRACTICES OF FAIRFAX COUNTY UNLESS WAIVED OR MODIFIED BY THE DIRECTOR OF DPW&ES. ADEQUATE STORM DRAINAGE QUALITY SYSTEMS WILL BE IN A COMBINATION OF UNDERGROUND STORM FILTERS AND SHALL BE IN ACCORDANCE WITH THE PUBLIC FACILITIES MANUAL DESIGN CRITERIA. STORM WATER COMPUTATIONS WILL BE BASED ON REDEVELOPMENT REQUIREMENTS AS APPROVED BY DPW&ES AT THE TIME OF SITE PLAN SUBMISSION AND ASSOCIATED STORMWATER MANAGEMENT PROFFERS.
- TO THE BEST OF OUR KNOWLEDGE, NO GRAVE SITES OR STRUCTURES MARKING BURIAL SITES ARE PRESENT ON THE SUBJECT PROPERTY.
- TO THE BEST OF OUR KNOWLEDGE, NO HAZARDOUS OR TOXIC SUBSTANCES ARE KNOWN TO EXIST ON THE SUBJECT PROPERTY. AND FURTHER, TO THE BEST OF OUR KNOWLEDGE, THE USES PRESENTED HEREON WILL NOT GENERATE, UTILIZE, STORE, TREAT AND/OR DISPOSE OF ANY HAZARDOUS OR TOXIC SUBSTANCES AS SET FORTH IN TITLE 40, CODE OF FEDERAL REGULATIONS PARTS 116.4, 302.4 AND 305; ANY HAZARDOUS WASTE AS SET FORTH IN COMMONWEALTH OF VIRGINIA/DEPARTMENT OF WASTE MANAGEMENT VA 672-10- VIRGINIA HAZARDOUS WASTE MANAGEMENT REGULATIONS; AND/OR ANY PETROLEUM PRODUCTS AS DEFINED IN TITLE 40, CODE OF FEDERAL REGULATIONS, PART 280.
- THE SITE IS CURRENTLY IMPROVED WITH AN INDUSTRIAL BUILDING.
- NO PORTION OF THE SUBJECT PROPERTY IS LOCATED WITHIN A COUNTY DESIGNATED R.P.A. ZONE. THERE IS NO FLOOD PLAIN MAPPED ON THE SUBJECT PROPERTY.
- THERE ARE NO SCENIC ASSETS OR NATURAL FEATURES ON THE SITE WORTHY OF DELINEATION.
- THE LIMITS OF CLEARING AND GRADING SHOWN HEREON MAY BE ADJUSTED AT FINAL SITE PLAN.
- THE DEVELOPMENT CONFORMS TO THE PROVISIONS OF ALL APPLICABLE STANDARDS WITH THE EXCEPTION OF THOSE WAIVERS AND MODIFICATIONS NOTED ON THE CDP.
- THE SUBJECT PROPERTIES LIE IN FLOOD ZONE "X", AREAS DETERMINED TO BE OUTSIDE 500 YEAR FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY PANEL 515525-0100-D, DATED MARCH 5, 1990.

- LANDSCAPING AND TREE COVER REQUIREMENTS WILL BE PROVIDED IN ACCORDANCE WITH REQUIREMENTS OF ARTICLE 13 OF THE ZONING ORDINANCE, UNLESS MODIFIED OR WAIVED. LANDSCAPING MAY BE MODIFIED AT FINAL ENGINEERING AND DESIGN, BUT THE QUANTITIES, LEVEL OF QUALITY AND GENERAL CHARACTER SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THAT SHOWN HEREON AND AS SET FORTH IN THE PROFFERED CONDITIONS. A DETAILED LANDSCAPE PLAN WILL BE SUBMITTED IN CONJUNCTION WITH THE SITE PLAN(S). THE PROPOSED LANDSCAPING WITHIN THE PUBLIC STREET RIGHT OF WAY IS CONTINGENT UPON VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) APPROVAL.
- FOOTPRINTS REPRESENTED HEREON ARE APPROXIMATE AND MAY BE MODIFIED. THE SIZE AND SHAPE OF THE BUILDINGS ARE PRELIMINARY AND MAY VARY AT FINAL ENGINEERING, PROVIDED EACH SHALL REMAIN IN SUBSTANTIAL CONFORMANCE WITH THE CDP AND FDP. THE LOCATION OF SIDEWALKS, TRAILS AND UTILITIES ARE GRAPHICALLY SHOWN AND ARE PRELIMINARY IN NATURE. MODIFICATIONS MAY OCCUR WITH FINAL ENGINEERING AND DESIGN. SUBJECT TO DPW&ES, VDOT AND/OR FCDOT APPROVAL. BUILDING HEIGHTS REPRESENTED IN THE TABULATION AND/OR GRAPHICALLY ON THE SHEETS ARE TO BE CONSIDERED MAXIMUM HEIGHTS.
- RECREATIONAL AMENITIES PROVIDED FOR THE PROPOSED DEVELOPMENT INCLUDE, BUT ARE NOT LIMITED TO: PARKS; PLAZAS; LANDSCAPED DECKS; SWIMMING POOLS; COURTYARD GARDENS; OUTDOOR ENTERTAINMENT; WATER FEATURES; OUTSIDE EATING AREAS; AND PEDESTRIAN/BICYCLE CIRCULATION SYSTEM, INCLUDING SPECIALTY PAVING AND PEDESTRIAN CROSSWALKS; AND LANDSCAPING THROUGHOUT THE SITE, INCLUDING PERENNIAL BEDS, LAWN, AND SEATING AREAS. ADDITIONAL SITE FEATURES AND SIMILAR FEATURES SUCH AS PLAZA DEVELOPMENT, GAZEBOS, FENCING, BALCONIES, RETAINING WALLS, CORNICES, TRELLISES, ENTRANCE SIGNS, LIGHTS, WALLS, AND/OR ROOF-TOP PLANTING AREAS NOT REPRESENTED HEREON MAY BE PROVIDED.
- THE PROPOSED DEVELOPMENT ON THE SUBJECT PROPERTY WILL NOT POSE ANY ADVERSE EFFECT ON ADJACENT OR NEIGHBORING PROPERTIES.
- THE PROJECT WILL MEET THE PARKING REQUIREMENTS AS SET FORTH IN ARTICLE 6-509 OF THE ZONING ORDINANCE, AS DETERMINED BY THE ZONING ADMINISTRATOR AND SHALL BE PROVIDED IN A COMBINATION OF ABOVE GRADE PARKING STRUCTURES, BELOW GRADE PARKING STRUCTURES, AND ON-STREET SPACES TO THE EXTENT AUTHORIZED. THE NUMBER OF PARKING SPACES PROVIDED HEREON MAY BE ADJUSTED AT SITE PLAN BASED ON THE FINAL DEVELOPMENT PROGRAM IN ACCORDANCE WITH PROFFERS. THE APPLICANT RESERVES THE RIGHT TO PROVIDE COMMERCIAL PAID PARKING IN SURFACE PARKING LOTS ON AN INTERIM BASIS.
- SIGNAGE WILL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 12 OF THE ZONING ORDINANCE OR PURSUANT TO AN APPROVED COMPREHENSIVE SIGN PLAN, AS MAY BE APPROVED BY THE PLANNING COMMISSION.
- TRANSITIONAL SCREENING WITHIN THE TYSONS URBAN CENTER IS NOT REQUIRED AS SET FORTH IN Z.O. SEC. 6-510-4-C.
- PARKING LOT LANDSCAPING AND TREE COVER REQUIREMENTS WILL BE PROVIDED IN ACCORDANCE WITH ZONING ORDINANCE ARTICLE 13 UNLESS WAIVED BY THE DIRECTOR OF DPW&ES.
- APPLICANT RESERVES THE RIGHT TO DETERMINE FINAL NUMBER OF UNITS WITHIN THE RANGE SHOWN, THE GFA OF THE BUILDING, AND THE FINAL MIX OF USES WITH A FINAL SITE PLAN. BUILDING FOOTPRINT(S) AND ASSOCIATED PARKING MAY BE MODIFIED ACCORDINGLY.
- MINOR MODIFICATIONS MAY BE MADE TO THE SITE PLAN PER SECTION 18-204 OF THE ZONING ORDINANCE.
- THE SUBJECT PROPERTY MAY BE SUBJECT TO SUBDIVISION FOR THE PURPOSE OF SALE, JOINT VENTURE OR PHASING, AND THE PROPOSED SUBDIVISION SHOWN ON CDP MAY BE MODIFIED ADMINISTRATIVELY BY THE DIRECTOR OF DPW&ES WITHOUT REQUIRING MODIFICATION OF THE CDP OR PRELIMINARY PLAN. THE PROJECT MAY BE PHASED AND SUBDIVIDED BETWEEN DIFFERENT OWNERSHIP GROUPS.
- THE APPLICANT RESERVES THE RIGHT TO PROVIDE ADDITIONAL INTERIOR LOADING SPACES IN EXCESS OF THAT SHOWN HEREON.
- APPLICANT RESERVES THE RIGHT TO LOCATE A TEMPORARY SALES TRAILER(S) ON THE SUBJECT PROPERTY DURING THE CONSTRUCTION AND SALES PERIOD IN ACCORDANCE WITH SECTION 8-808 OF FAIRFAX COUNTY ORDINANCE.
- THE SUBJECT PROPERTY MAY BE DEVELOPED WITH USES PERMITTED IN THE PTC ZONING DISTRICTS AS SET FORTH IN THE PROFFERS. SPECIAL EXCEPTION AND SPECIAL PERMIT USES ALLOWED IN PTC DISTRICT SHALL BE PERMITTED AS APPROVED.
- IT IS CURRENTLY ANTICIPATED THAT PHASED CONSTRUCTION OF THE PROPOSED DEVELOPMENT WILL COMMENCE AS SOON AS ALL NECESSARY COUNTY APPROVALS AND PERMITS ARE OBTAINED. THE EXACT SCHEDULE IS NOT KNOWN AT THIS TIME. BUILD-OUT WILL PROCEED IN ACCORDANCE WITH MARKET CONDITIONS SUBJECT TO LIMITATIONS CONTAINED IN THE PROFFERS. WITHIN EACH PHASE OF BUILD-OUT, INFRASTRUCTURE, AMENITIES AND DWELLING UNITS MAY PROCEED BEFORE COMPLETION OF ACTIVITY WITHIN OTHER PHASES, SO LONG AS CONSTRUCTION IS IN ACCORDANCE WITH THE PROFFERS.
- THE SUBJECT PROPERTY IS WITHIN A TOD DISTRICT. SEE SHEET C-5 FOR DELINEATION'S FROM THE METRO STATION ENTRANCE.
- THERE ARE NO EXISTING MAJOR UTILITY EASEMENTS ON THE SITE WHICH WERE CREATED AFTER THE EFFECTIVE DATE OF THE ZONING ORDINANCE PER SECTION 2-308.
- EXISTING ENTRANCES TO EXISTING LAND USES SHALL BE PERMITTED TO REMAIN UNTIL SUCH TIME AS THOSE PROPERTIES REDEVELOP.

OVERALL PART A,B,D, & E DEVELOPMENT TABULATION:

Overall Development Tabulations - Parts A, B, D & E

Part	Building	Use	GDP GFA	FDP GFA	Site Plan GFA
A	F1	Residential	430,000	430,000	416,834
		Retail/Service	6,000	-	0
		Total	436,000	430,000	416,834
B	G1 Option 1	Residential	430,000		
		Retail/Service	4,100		
		Total	434,100		
	G1 Option 2	Residential	430,000		
		Retail/Service	7,500		
		Total	437,500		
	G2 Option 1	Residential	430,000		
		Retail/Service	5,700		
		Total	435,700		
	G2 Option 2	Residential	430,000		
		Retail/Service	9,100		
		Total	439,100		
	G3 Option 1	Residential	430,000		
		Retail/Service	5,800		
		Total	435,800		
G3 Option 2	Residential	378,500			
	Retail/Service	0			
	Total	378,500			
G4 Option 1	Residential	430,000			
	Retail/Service	2,500			
	Public Use/ Fire Station	25,000			
Total	457,500 [1]				
G4 Option 2	Residential	338,000			
	Retail/Service	1,500			
	Total	339,500			
G5 Option 2 Only	Public Use/ Fire Station	25,000			
	Total	25,000 [1]			
	D	D1	Office	200,000 - 435,000	
Retail/Service			15,000	39,148 [2]	
Total			215,000 - 450,000		
D2-A		Residential	412,000	412,000	
		Retail/Service	10,000	6,000 - 10,000	
		Total	422,000	422,000	
D2-B		Residential	400,000		
		Retail/Service	13,000		
		Total	413,000		
D3 Option 1		Office	200,000 - 435,000		
		Retail/Service	15,000		
		Total	215,000 - 450,000		
D3 Option 2		Residential	430,000		
		Retail/Service	15,000		
		Total	445,000		
D4	Residential	430,000			
	Retail/Service	6,000			
	Total	436,000			
D5 Option 1	Hotel	189,000			
	Retail/Service	11,000			
	Total	200,000			
D5 Option 2	Residential	189,000			
	Retail/Service	11,000			
	Total	200,000			
D6	Office	200,000 - 402,000			
	Retail/Service	13,000			
	Total	213,000 - 415,000			
E	E1	Existing Office	215,585		N/A
		Total	215,585		
		Existing Office	215,585		N/A
	E2	Existing Office	215,585		
		Total	215,585		
		Existing Office	215,585		N/A
	E3	Office	200,000 - 420,000		
		Retail/Service	7,000		
		Total	207,000 - 427,000		
	E4 Option 1	Hotel	135,000		
Total		135,000			
Residential		200,000			
E4 Option 2	Total	200,000			
	Retail/Service	16,000			
	Total	16,000			
E5 Option 1	Retail/Service	25,000			
	Total	25,000			
	Residential	25,000			
E5 Option 2	Total	25,000			
	Retail/Service	25,000			
	Total	25,000			
Option 1 Totals	Office	1,241,170 - 2,123,170			
	Hotel	324,000			
	Residential	3,392,000			
	Retail/Service	130,100			
	Public/ Fire Station	25,000 [1]			
TOTAL	5,087,270 - 5,969,270				
Option 2 Totals	Office	1,041,170 - 1,688,170			
	Hotel	0			
	Residential	4,090,500			
	Retail/Service	114,100			
	Public/ Fire Station	25,000 [1]			
TOTAL	5,247,770 - 5,894,770				

DEVELOPMENT TABULATION

Building	Maximum Building Height/ Podium Height [1]	Floors [2]	Use [3]	GFA by Use	Building GFA [4]	Total Dwelling Units	WDUs [5]	Parking Permitted/Provided < 1/8 Mile to Metro [6]		Loading Spaces [7]
								Min.	Max.	
D1 Site			Existing Retail/Service	39,148	39,148			0	205	0
D2A	360/80	34	Residential Retail/Service	412,000 6,000 - 10,000	422,000	150 - 436	30 - 87	150 - 436 0	213 - 587 6 - 30	3

- [1] Maximum building height is measured from average grade and includes the podium, architectural features, mechanical penthouse and any social rooms/usable area on the roof penthouse level.
- [2] The number of floors shown is conceptual and may be adjusted provided the maximum building height is not exceeded.
- [3] Retail/Service uses in Building D2A as indicated in this tabulation may include a variety of non-residential uses as specified in the Proffers and FDP Development Conditions. Existing Retail/Service uses in the existing building on the D1 site may include a variety of existing uses as specified in the Proffers and/or a variety of other non-residential uses. (See Proffers.)
- [4] GFA includes cellar space as specified in the Zoning Ordinance.
- [5] Twenty (20) percent of all dwelling units will be Workforce Dwelling Units (WDUs). The actual number of WDUs will be determined at final site plan based on the total number of dwelling units provided.
- [6] The minimum required and maximum permitted parking spaces for each use were calculated in accordance with Sect. 6-509 of the Zoning Ordinance, which is restated below for the primary uses proposed on the CDP/FDP. It is understood that some commercial uses have different parking rates than the retail/service category shown below. Residential parking was based on an average mix of 85% 0-1 bedroom units and 15% 2-bedroom units. At the time of site plan, parking will be provided based on the specific uses, GFA, number of units and mix of dwelling types and the minimum and maximum rates set forth in Section 6-509 of the Zoning Ordinance.

Primary Use	Parking Permitted/Provided < 1/8 Mile to Metro	
	Min	Max
Retail/Service	0	6/1000 GFA, excluding the first 5,000 GFA
Multi-family Residential	0-1 BR	1.3/Unit
	2 BR	1.6/Unit

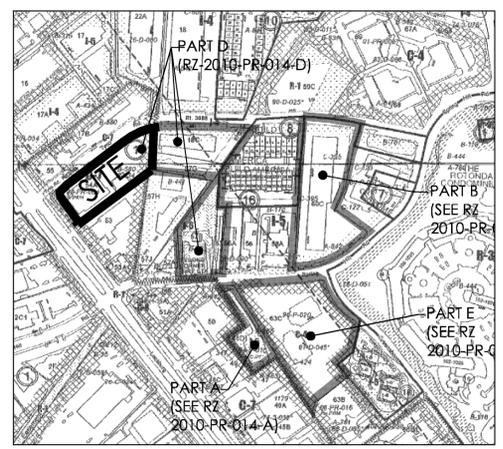
[7] Additional loading spaces may be provided as identified at the time of final site plan. However, such additional loading spaces shall not substantially increase the width of the loading entrance on the streetscape as shown on an approved FDP.

FDP - SITE TABULATIONS

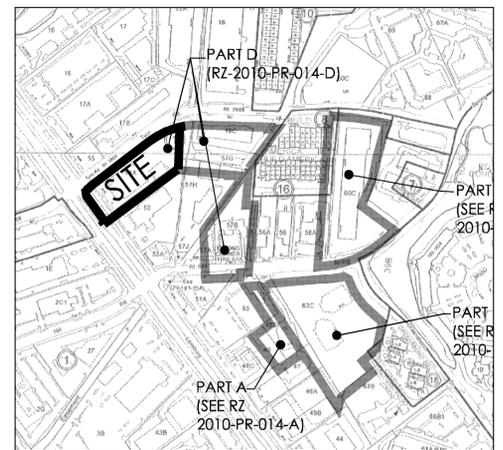
FDP Area 3.51848 AC or 153,265 SF
 Area of Density Credit 0.07516 AC or 3,274 SF
 Total Area for Density Purposes 3.59364 AC or 156,539 SF

Proposed GFA 422,000 [1]
 FAR 2.70

[1] The proposed GFA and resultant FAR represents one building; additional buildings will be provided with future FDPs or FDPAs in keeping with the approved CDP



SCALE 1" = 500' VICINITY MAP



SCALE 1" = 500' SOILS MAP

Application No: **FDP 2010-PR-014 D** Staff: T Stru

APPROVED DEVELOPMENT PLAN
 (L_GDP) (L_CDP) (X_FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)
 SEE PROFFERS DATED:
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 Comments:

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[1] Part B includes 25,000 GFA of Public Use/Fire Station. This 25,000 is not included in the GFA totals as floor area associated with a public facility does not count toward FAR.
 [2] Represents the continued interim use of the existing building, not redevelopment contemplated on the CDP.

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6 FDP SUBMISSION 01-16-13
 5 FDP SUBMISSION 01-16-13
 4 FDP RESUBMISSION 11-14-13
 3 FDP SUBMISSION 01-29-14
 2 FDP SUBMISSION 02-27-14
 1 FDP SUBMISSION 06-05-14

NUMBER ISSUE DATE

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 Spring Hill Station
 Tysons Corner, VA 22102

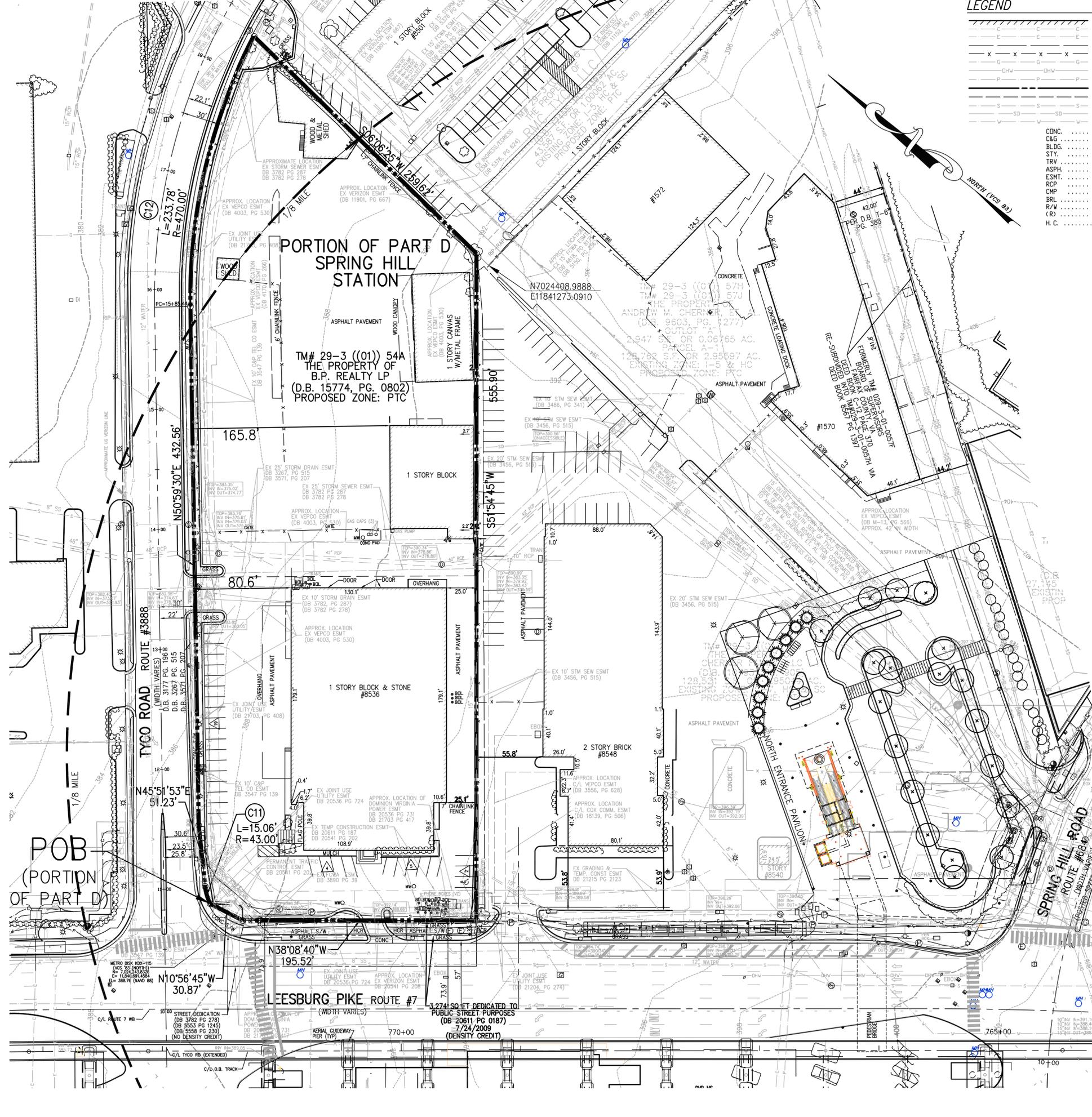
PROFESSOR

PLAN NORTH

FILE:PA_Planning Projects\7018\469\FDP-D2A\7018-FDP-D2A-NOTES.dwg USER:Riley DATE:Jan. 27 2013 TIME: 01:21 pm

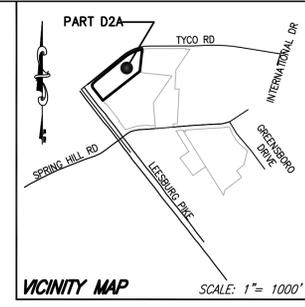
DRAWING NUMBER

C-3



LEGEND

--- C --- C --- C ---	BUILDING LINE	○	SANITARY CLEANOUT	○	SIGN POST
--- E --- E --- E ---	CABLE TELEVISION CONDUIT	○	STORM DRAIN MANHOLE	○	WOOD POST
--- G --- G --- G ---	ELECTRICAL CONDUIT	○	ELECTRICAL JUNCTION BOX	○	INLETS
--- X --- X --- X ---	EDGE OF PAVEMENT	○	ELECTRICAL MANHOLE	○	TREE
--- F --- F --- F ---	FENCE LINE	○	FIRE DEPARTMENT CONNECTION	○	FIRE HYDRANT
--- DHW --- DHW --- DHW ---	NATURAL GAS CONDUIT	○	CABLE TELEVISION PEDESTAL	○	GAS MANHOLE
--- P --- P --- P ---	OVERHEAD WIRES	○	UNKNOWN UTILITY MANHOLE	○	GUY POLE
--- T --- T --- T ---	TELEPHONE CONDUIT	○	TRAFFIC CONTROL BOX	○	GAS VALVE
---	PROPERTY LINES	○	TRAFFIC SIGNAL POLE	○	
---	PUBLIC UTILITIES EASEMENTS	○	LIGHT POLE	○	
---	SANITARY SEWER CONDUIT	○	PHONE PEDESTAL	○	
---	STORM DRAIN CONDUIT	○	PHONE MANHOLE	○	
---	WATER CONDUIT	○	UTILITY POLE	○	
CONC.	CONCRETE	○	SANITARY MANHOLE	○	
C&G	CURB AND GUTTER	○	WATER METER	○	
BLDG.	BUILDING	○	WATER MANHOLE	○	
STY.	STORY	○	WATER VALVE	○	
TRV.	ELECTRICAL TRANSFORMER	○	BOLLARD	○	
ASPH.	ASPHALT	○			
ESMT.	EASEMENT	○			
RCP	REINFORCED CONCRETE PIPE	○			
CMP	CORRUGATED METAL PIPE	○			
BRL	BUILDING RESTRICTION LINE	○			
R/W	RIGHT-OF-WAY	○			
(R)	RECORD INFORMATION	○			
H. C.	HANDICAP RAMP	○			



CURVE	LENGTH	RADIUS	DELTA	TANGENT	CH BEARING	CHORD
C12	319.04'	470.00'	38°53'35"	165.94'	N70°25'40"E	312.95'
C11	15.06'	43.00'	20°04'06"	7.61'	N35°50'49"E	14.98'

NOTES: PORTION OF PART D

1. THE SUBJECT PROPERTY SHOWN HEREON IS IDENTIFIED AS TAX MAP NUMBER 029-3-01-0054A AND IS ZONED PTC.
2. THE HORIZONTAL DATUM SHOWN HEREON IS TIED TO THE VIRGINIA COORDINATE SYSTEM 1983 (NORTH ZONE) AND IS BASED ON A FIELD RUN SURVEY USING ACCEPTED GPS SURVEYING METHODS AND PRACTICES AND PERFORMED BY VIKI, INC.
3. TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON AN AERIAL SURVEY PROVIDED TO VIKI, INC. BY AERO-METRIC AND BASED ON CONTROL PHOTOGRAPHS DATED MARCH 2002 AT 1"=100'. THE VERTICAL DATUM IS REFERENCED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29), CONTOUR INTERVAL IS 2'-0".
4. THE PROPERTY SHOWN HEREON IS CURRENTLY IN THE NAME OF BP REALTY LP AS RECORDED IN DEED BOOK 15774 AT PAGE 802 AMONG THE LAND RECORDS OF FAIRFAX COUNTY, VIRGINIA.
5. THE SUBJECT PROPERTY LIES IN FLOOD ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON FLOOD INSURANCE RATE MAP NO. 51059C0165E, COMMUNITY PANEL 515525 0165-E, DATED SEPTEMBER 17, 2010.
6. THE SUBJECT PROPERTY DOES NOT LIE WITHIN A RESOURCE PROTECTION AREA (RPA) PER FAIRFAX COUNTY CHESAPEAKE BAY PRESERVATION AREA MAP 29-3 DATED 08/01/2005.

DISTANCE FROM METRO TABULATION:

AREA OUTSIDE 1/8 MILE OF METRO STATION ENTRANCE	14,419 SQ FT OR 0.33101 ACRES
AREA WITHIN OF 1/8 MILE OF METRO STATION ENTRANCE	142,120 SQ FT OR 3.26263 ACRES
TOTAL AREA	156,539 SQ FT OR 3.59364 ACRES

AREA TABULATION:

ZONE PTC	
TM# 029-3-01-0054A	153,265 SQ FT OR 3.51848 ACRES
TOTAL ZONE PTC	153,265 SQ FT OR 3.51848 ACRES

DENSITY TABULATION:

TM# 029-3-01-0054-A	153,265 SQ FT OR 3.51848 ACRES
STREET DEDICATION	3,274 SQ FT OR 0.07516 ACRES
TOTAL AREA OF DENSITY	156,539 SQ FT OR 3.59364 ACRES

LEGAL DESCRIPTION: (PORTION OF PART D)

TAX MAP 029-3-01-0054A,
BEING ALL OF THE PROPERTY OF B. P. REALTY, LP RECORDED IN DEED BOOK 15774 AT PAGE 802 AMONG THE LAND RECORDS OF FAIRFAX COUNTY, VIRGINIA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING FOR THE SAME AT A POINT MARKING A POINT OF INTERSECTION OF NORTHEASTERLY RIGHT OF WAY LINE OF LEESBURG PIKE - ROUTE #7 AND THE SOUTHEASTERLY RIGHT OF WAY LINE OF TYCO ROAD - ROUTE 3888 (WIDTH VARIES); THENCE LEAVING SAID POINT OF INTERSECTION AND RUNNING WITH SAID COMMON LINE BETWEEN SAID TYCO ROAD AND THE AFORESAID PROPERTY OF B.P. REALTY, LP (D.B. 15774, PG. 802) THE FOLLOWING FOUR (4) COURSES AND DISTANCES
1. 15.06 FEET ALONG THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 43.00 FEET AND A CHORD BEARING AND DISTANCE OF NORTH 35°50'49" EAST, 14.98 FEET TO A POINT; THENCE
2. NORTH 45°51'53" EAST, 51.23 FEET TO A POINT; THENCE
3. NORTH 50°59'30" EAST, 432.56 FEET TO A POINT; THENCE
4. 233.78 FEET ALONG THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 470.00 FEET AND A CHORD BEARING AND DISTANCE OF NORTH 65°14'27" EAST, 231.38 FEET TO A POINT MARKING THE COMMON CORNER OF THE AFORESAID PROPERTY OF B. P. REALTY, LP (DB 15774 PG 802) AND THE PROPERTY OF RMC TYCO LLC AS RECORDED IN DEED BOOK 12455 AT PAGE 388 AMONG THE AFORESAID LAND RECORDS; THENCE LEAVING THE AFORESAID SOUTHEASTERLY RIGHT OF WAY LINE OF TYCO ROAD - ROUTE 3888 (WIDTH VARIES) AND RUNNING WITH SAID PROPERTY OF RMC TYCO LLC (DB 12455 PG 386) AND CONTINUING WITH THE PROPERTY OF RMC TYCO LLC AS RECORDED IN DEED BOOK 12455 AT PAGE 393
5. SOUTH 06°06'25" WEST 259.62 FEET TO A POINT MARKING THE COMMON EASTERLY CORNER OF THE AFORESAID PROPERTY OF B. P. REALTY, LP (DB 15774 PG 802) AND THE PROPERTY OF CERNER FAMILY, LLC AS RECORDED IN DEED BOOK 10793 AT PAGE 905 AMONG THE AFORESAID LAND RECORDS; THENCE LEAVING THE AFORESAID PROPERTY OF RMC TYCO LLC (DB 12455 PG 393) AND RUNNING WITH THE COMMON LINE OF THE SAID PROPERTY OF B. P. REALTY, LP (DB 15774 PG 802) AND SAID PROPERTY OF CERNER FAMILY, LLC (DB 10793 PG 905)
6. SOUTH 51°54'45" WEST 555.90 FEET TO A POINT LYING ON THE AFORESAID NORTHEASTERLY RIGHT OF WAY LINE OF LEESBURG PIKE - ROUTE #7; THENCE LEAVING THE AFORESAID COMMON LINE OF THE PROPERTY OF B. P. REALTY, LP (DB 15774 PG 802) AND THE PROPERTY OF CERNER FAMILY, LLC (DB 10793 PG 905) AND RUNNING WITH SAID NORTHEASTERLY RIGHT OF WAY LINE OF LEESBURG PIKE - ROUTE #7 THE FOLLOWING TWO (2) COURSES AND DISTANCES
7. NORTH 38°08'40" WEST, 195.52 FEET TO A POINT; THENCE
8. NORTH 10°56'45" WEST, 30.87 FEET TO THE POINT OF BEGINNING CONTAINING 153,265 SQUARE FEET OR 3.51848 ACRES OF LAND.
AN ADDITIONAL 3,274 SQ. FT. OR 0.07516 ACRES HAS BEEN RESERVED FOR DENSITY CREDIT ASSOCIATED WITH AREAS OF STREET DEDICATION RECORDED IN DEED BOOK 20611 AT PAGE 187 AMONG THE AFORESAID LAND RECORDS. FOR A TOTAL AREA FOR DENSITY PURPOSES OF 156,539 SQUARE FEET OR 3.59364 ACRES.



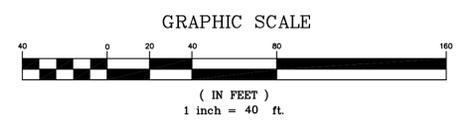
Application No: **FDP 2010-PR-014 D** Staff: **T. Stru**

APPROVED DEVELOPMENT PLAN
(L_GDP) (L_CDP) (L_FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)

SEE PROFESSOR DATED:
SEE CONDITIONS DATED: **February 7, 2013**
Date of Final Approval: **February 7, 2013** (L_BOS) (L_PC) (L_BZA)

Comments:

PLANNING & ZONING
Sheet 4 of 39



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wester@artlshandwalsh.com

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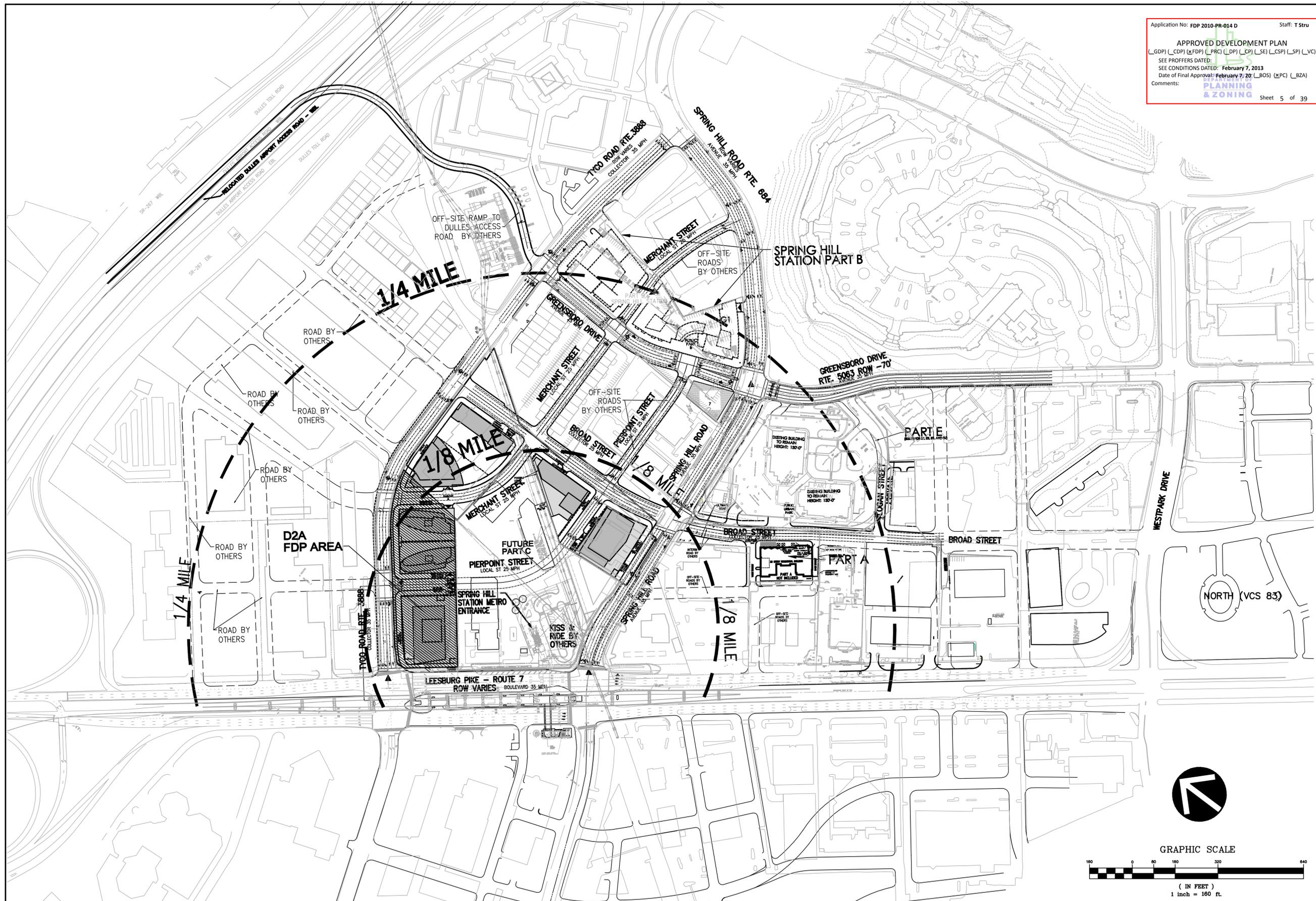
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rah@work@greystar.com

SITE D2A
Spring Hill Station
Tysons Corner, VA 22102

EXISTING CONDITIONS

C-4

Application No: FDP 2010-PR-014 D Staff: T Stru
APPROVED DEVELOPMENT PLAN
(L_GDP) (L_CDP) (L_FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)
SEE PROFFERS DATED: February 7, 2013
Date of Final Approval: February 7, 2013 (L_BOS) (L_PFC) (L_BZA)
Comments: PLANNING & ZONING
Sheet 5 of 39



DISTANCE FROM METRO TABULATION:

AREA WITHIN OF 1/8 MILE OF METRO STATION ENTRANCE	142,120 SQ FT OR 3.26263 ACRES
AREA OUTSIDE 1/8 MILE OF METRO STATION ENTRANCE	14,419 SQ FT OR 0.33101 ACRES
TOTAL AREA	156,539 SQ FT OR 3.59364 ACRES

NOTE:
ALL OF PART D IS WITHIN 1/4 MILE OF METRO

CDP CONTEXT PLAN

NUMBER	ISSUE	DATE
001	CDP SUBMISSION	07-11-11
002	CDP SUBMISSION	07-11-11
003	CDP SUBMISSION	07-11-11
004	CDP SUBMISSION	07-11-11
005	CDP SUBMISSION	07-11-11
006	CDP SUBMISSION	07-11-11
007	CDP SUBMISSION	07-11-11
008	CDP SUBMISSION	07-11-11
009	CDP SUBMISSION	07-11-11
010	CDP SUBMISSION	07-11-11

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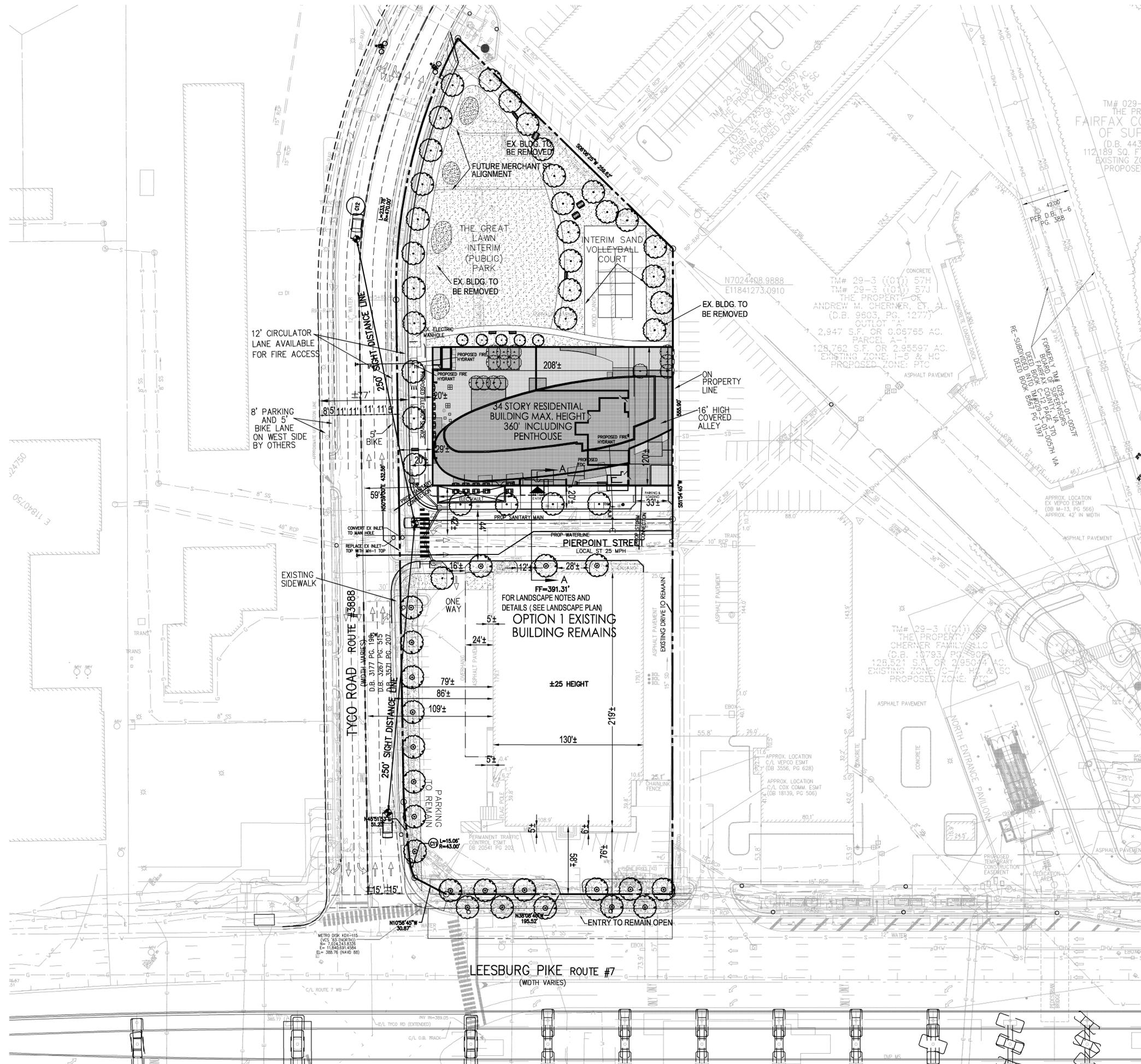
SITE D2A
Spring Hill Station
Tysons Corner, VA 22102

PRODUCED BY
PLAN NORTH

TITLE

DRAWING NUMBER

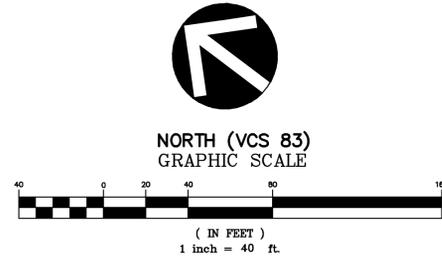
C-5A



Application No: FDP 2010-PR-014 D Staff: T Stru

APPROVED DEVELOPMENT PLAN
 (L_GDP) (L_CDP) (& FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)
 SEE PROFFERS DATED:
 SEE CONDITIONS DATED: February 7, 2013
 Date of Final Approval: February 7, 2013 (L_BOS) (L_PC) (L_BZA)
 Comments:

DEPARTMENT OF PLANNING & ZONING
 Sheet 6 of 39



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CIVIL ENGINEER

TRAFFIC CONSULTANT

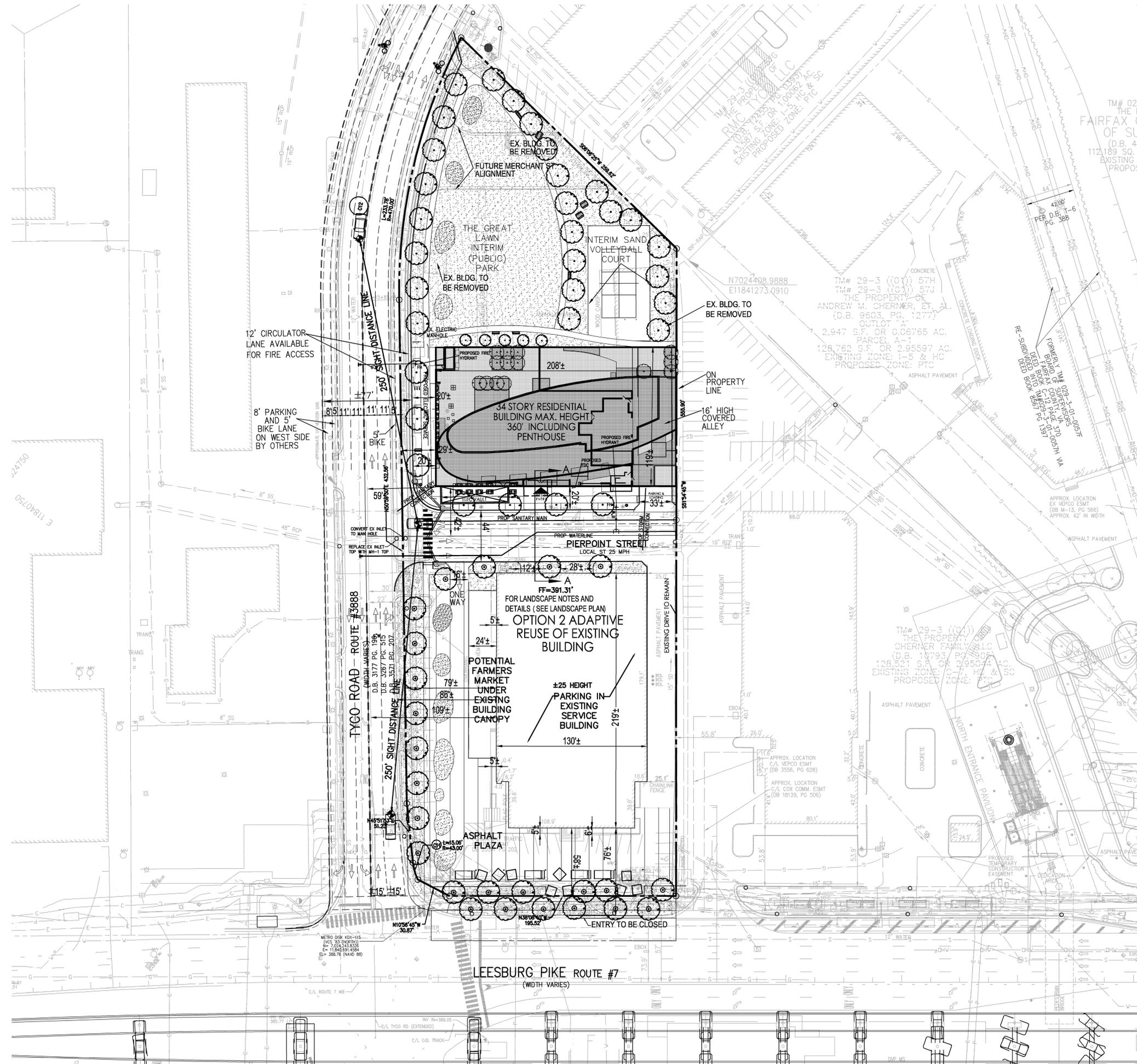
LANDSCAPING ATTORNEY

FINAL DEVELOPMENT PLAN OPTION 1 (OVERALL)

NO.	REVISION	DATE
6	FDP RESUBMISSION 01/28/13	
5	FDP RESUBMISSION 01/15/13	
4	FDP RESUBMISSION 01/14/13	
3	FDP RESUBMISSION 11/29/12	
2	FDP RESUBMISSION 07/31/12	
1	FDP SUBMISSION 06/25/12	

SITE D2A
 Spring Hill Station
 Tysons Corner, VA 22102

C-6A



TM# 029-
THE PR
FAIRFAX CO
OF SUP
(D.B. 443)
112,189 SQ. FT
EXISTING ZC
PROPOSED

N7024408.9888
E11841273.0910
TM# 29-3 ((01)) 57H
TM# 29-3 ((03)) 57J
THE PROPERTY OF
ANDREW M. CHERNER, ET AL
(D.B. 9803, PG. 1277)
OUTLOT "A"
2,947 S.F. OR 0.06765 AC.
PARCEL A-1
128,762 S.F. OR 2.95597 AC.
EXISTING ZONE: 1-5 & HC
PROPOSED ZONE: PTC

RE-SURFACED DEED BOOK
FORMERLY THE SUTHERLY
BROADWAY AND SUTHERLY
BOULEVARD PROJECT
DEED BOOK 1002 PG. 1391
DEED BOOK 1002 PG. 1391
DEED BOOK 1002 PG. 1391
DEED BOOK 1002 PG. 1391

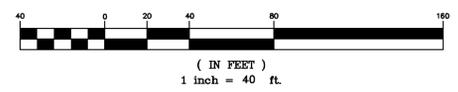
Application No: **FDP 2010-PR-014 D** Staff: **T Stru**

APPROVED DEVELOPMENT PLAN
 (L_GDP) (L_CDP) (L_FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)
 SEE PROFFERS DATED:
 SEE CONDITIONS DATED: **February 7, 2013**
 Date of Final Approval: **February 7, 2013** (L_BOS) (L_CSP) (L_BZA)
 Comments:

PLANNING & ZONING Sheet 7 of 39



NORTH (VCS 83)
GRAPHIC SCALE



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CIVIL ENGINEER

TRAFFIC CONSULTANT

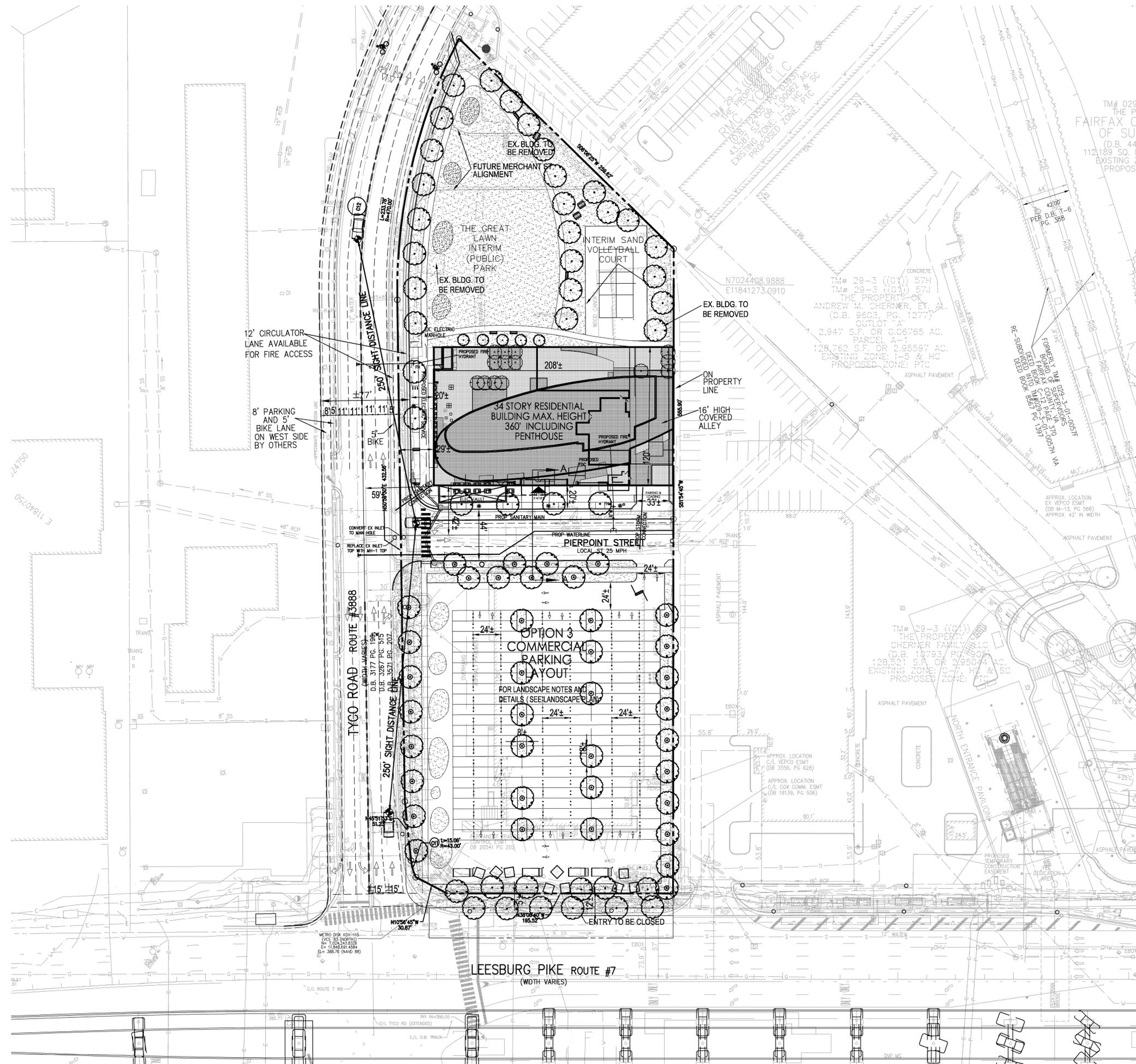
LANDOWNING ATTORNEY

FINAL DEVELOPMENT PLAN OPTION 2 (OVERALL)

NO.	REVISION	DATE
1	FDP SUBMISSION 06-05-12	
2	FDP SUBMISSION 11-23-12	
3	FDP SUBMISSION 07-24-12	
4	FDP SUBMISSION 01-17-13	
5	FDP SUBMISSION 01-18-13	
6	FDP SUBMISSION 01-18-13	
7	FDP SUBMISSION 01-18-13	

SITE D2A
Spring Hill Station
Tysons Corner, VA 22102

C-6B



TM# 029-
THE PR
FAIRFAX CC
OF SUP
(D.B. 443
112,189 SQ. FT
EXISTING ZC
PROPOSEL

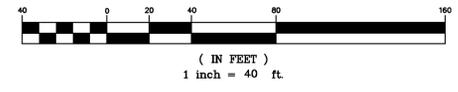
N7024408.9888
E11841273.0910
TM# 29-3 (101) 57H
TM# 29-3 (104) 57J
THE PROPERTY OF
ANDREW M. CHERNER, ET AL
(D.B. 9603, PG. 1277)
OUTLOT 'A'
2,947 S.F. OR 0.06765 AC.
PARCEL A-1
128,762 S.F. OR 2.95597 AC.
EXISTING ZONE: 1-5 & HC
PROPOSED ZONE: PTC

Application No: **FDP 2010-PR-014 D** Staff: T Stru

APPROVED DEVELOPMENT PLAN
 (L_GDP) (L_CDP) (L_FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)
 SEE PROFFERS DATED:
 SEE CONDITIONS DATED: **February 7, 2013**
 Date of Final Approval: **February 7, 2013** (L_BOS) (L_PC) (L_BZA)
 Comments:
PLANNING & ZONING Sheet 8 of 39



**NORTH (VCS 83)
GRAPHIC SCALE**



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**FINAL DEVELOPMENT
PLAN OPTION 3
(OVERALL)**

NUMBER	ISSUE	DATE
1	FDP SUBMISSION 01-28-10	
2	FDP SUBMISSION 01-28-10	
3	FDP SUBMISSION 01-28-10	
4	FDP SUBMISSION 01-28-10	
5	FDP SUBMISSION 01-28-10	
6	FDP SUBMISSION 01-28-10	

OWNER

SITE D2A
Spring Hill Station
Tysons Corner, VA 22102

PLANNING & ZONING

C-6C



EXISTING VEGETATION TABLE FDP - D2A

EVM INDEX	COVER TYPE	SUCCESSIONAL STAGE	AREA	COVER CONDITION	PRIMARY SPECIES	COMMENTS
"C"	DEVELOPED/ MAINTAINED	N/A	153,265 SF (3.51848 AC)	N/A	SEE COVER TYPE TABLE	DEVELOPED AS WAREHOUSE & LIGHT INDUSTRY. ALL AREAS ARE DEVELOPED AS PAVED HARDSCAPE.
TOTAL AREA	-	-	755,920 SF (17.3535AC)	-	-	-

FDP - D2A VEGETATION COVER TYPES

- "C" PRIMARY SPECIES**
- Acer - Maple
 - Cornus - Dogwood
 - Ginkgo biloba - Ginkgo
 - Juniperus - Juniper
 - Magnolia acuminata - Cucumber Magnolia
 - Quercus palustris - Pin Oak
 - Prunus serotina - Black Cherry
 - Robinia pseudacacia - Black Locust
 - Tilia - Linden

FDP AREA

Table 12.3 - Tree Preservation Target Calculations and Statement

Line Item	Description	Value	Reference
A	Pre-development area of existing tree canopy (from existing vegetation map)(SF) =	3,164	see § 12-0508.2
B	Percentage of gross site area covered by existing tree canopy =	2%	
C	Percentage of 10-year tree canopy required for site =	10%	see Table 12.4
D	Percentage of the 10-year tree canopy requirement that should be met through tree preservation =	2%	
E	Proposed percentage of canopy requirement that will be met through tree preservation =	0%	
F	Has the Tree Preservation Target minimum been met?	No	Provide Yes or No
G	If No for line A 6, then a request to deviate from the Tree Preservation Target shall be provided on the plan that states one or more of the justifications listed in § 12-0507.3 along with a narrative that provides a site-specific explanation of why the Tree Preservation Target cannot be met. Provide sheet number where deviation request is located.	C-8	Provide sheet number, see § 12-0508.3
H	If step A 7 requires a narrative, it shall be prepared in accordance with § 12-0508.4	YES	see § 12-0508.4
I	Place this information prior to the 10-year Canopy Calculations as per instructions in Table 12.10.		

\\192.168.10.41\eng\DATA\7000-9000\70180\COPY of 10-yr Tree Canopy Reqmts Part-D2A.xls\NH No 1



January 10, 2013
 Mr. Michael Knapp, Director UFMD
 Forest Conservation Branch, DPWES
 Department of Public Works and Environmental Services
 Land Development Services, Urban Forest Management Division
 12055 Government Center Parkway, Suite 518
 Fairfax, Virginia 22035-5503

**RE: Tree Preservation Target Deviation Request
 Spring Hill Station
 Part D2A
 FDP/RZ 2010-PR-014
 VIKA # V7018C**

Dear Mr. Knapp:
 This letter is to request a deviation to the Tree Preservation Target (TPT) requirements for the above referenced site. In the Fairfax County Comprehensive Plan, adopted on June 22, 2010, the referenced site is located within the Tysons Corner Urban Center. The referenced FDP plan submittal is associated with Spring Hill Station - Part D. This deviation is requested in whole and is based under the following two allowable deviation conditions as outlined in the Fairfax County Public Facilities Manual (PFM). They are as follows:

- 12-0508.3A(1) - where meeting the Tree Preservation Target would preclude the development of uses or densities otherwise allowed by the Zoning Ordinance.
- 12-0508.3A(3) - where construction activities could be reasonably expected to impact existing trees or forested areas used to meet the Tree Preservation Target to the extent these would not likely survive in a healthy and structurally sound manner of a minimum of 10-years in accordance with the post-development standards for trees and forested areas provided in PFM 12-0403 and 12-0404.

Portions of the existing vegetation on the referenced site had been planted with previous development of the property while portions of the existing vegetation on these sites are remnant wooded areas that were not cleared during the development process. Spring Hill Station, Part D2A will be razed of all existing features and fully redeveloped. This redevelopment will include major redesign of the utility infrastructure, the street grids, both on and off-site, as well as a variety of urban components such as building types and uses, active and passive recreation and metro transportation improvements.

The basis for this deviation is warranted as a result of the site engineering necessary within this portion of the Tysons Corner Urban Center redesign. The TPT vegetation requirements cannot be fulfilled with the redevelopment of Spring Hill Station, Part D2A. Therefore, it is requested here that UFMD deem the tree preservation requirements will be hereby satisfied with the planting of the 10-year tree canopy requirements. In accordance with the Tysons Corner Urban Center recommendations, the proposed preliminary landscape 10-year tree canopy calculations will provide canopy coverage of 44,850 SF. Therefore, the new landscape specified with this redevelopment will meet the 10-year tree canopy requirements. Please refer to the project landscape plans, tabulations and computations in this submittal.

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Mr. Michael Knapp, Director UFMD
 Forest Conservation Branch, DPWES
**RE: Spring Hill Station
 Target Deviation Request
 Part D2A
 RZ 2010-PR-014
 VIKA # V7018C**
 January 10, 2013
 Page 2 of 2

Thank you for your time and attention and should you have any questions or need additional information, please do not hesitate to contact our office.

Sincerely,
VIKA, Inc.

Nelson P. Kirchner, RLA,
 Landscape Architect/ISA Certified Arborist
 Associate

NPK/nek
 cc: Dan Avrit, RLA, - Parker Rodriguez
 Barb Coulston - Parker Rodriguez
 Robert R. Cochran, Associate Principal - VIKA, Inc
 Todd Nelson, Urban Forester II, Fairfax County UFMD

FDP PART-D2A EVM NARRATIVE

APPROXIMATELY 96% OF THE FDP AREA HAS BEEN DEVELOPED WITH RETAIL AND LIGHT INDUSTRIAL/WAREHOUSE SERVICE ESTABLISHMENTS.

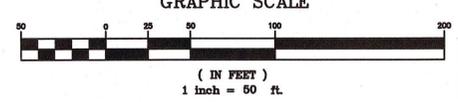
AREA-C: AREA-C HAS BEEN DEVELOPED WITH RETAIL/WHEREHOUSE/LIGHT INDUSTRIAL USES. THERE IS VIRTUALLY NO LANDSCAPING OR TREE PRESERVATION WITH THIS DEVELOPMENT. THERE ARE REMNANT AND VOLUNTEER VEGETATION THAT EXIST BETWEEN PARKING COMPOUNDS AND TRAVEL LANE AREAS. ALONG THE ROUTE 7 RIGHT-OF-WAY TWO GINKGOS HAD BEEN PLANTED. THE HEALTH AND CONDITION OF THE EXISTING VEGETATION WITHIN AREA-C SHOWS STRESS, POOR FORM AND SYMMETRY AND LOW MAINTENANCE. THERE IS A HIGH PROPORTION OF ESTABLISHED INVASIVE PLANT MATERIAL WITHIN AREA-C. THE VEGETATION WITHIN AREA-C SHOULD NOT BE CONSIDERED AS HIGH VALUE OR AS A PRIORITY FOR TREE PRESERVATION.

THE FDP AREA IS ZONED PTC AND IS SPECIFIED FOR COMPLETE REDEVELOPMENT WHERE ALL THE EXISTING BUILDINGS, PARKING COMPOUND AREAS AND VEGETATION WILL BE REMOVED. THIS SITE WILL NOT MEET THE TREE PRESERVATION TARGET REQUIREMENTS. AS PART OF THIS APPLICATION SUBMITTAL AND IN ACCORDANCE WITH PFM 12-0507.4 A TREE PRESERVATION TARGET DEVIATION REQUEST IS INCLUDED FOR FAIRFAX COUNTY UFMD REVIEW AND APPROVAL. SEE THIS SHEET.

X:\DATA\7000-9000\70180\COPY of 10-yr Tree Canopy Reqmts Part-D2A.xls\NH No 1

PLAN PREPARED BY: NELSON P. KIRCHNER, RLA
 ISA CERTIFIED ARBORIST NO. MA-4720AM

SIGNATURE DATE 1/25/13



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EXISTING VEGETATION MAP

NUMBER	ISSUE	DATE
6	FDP REVISED	01/28/13
5	FDP REVISED	01/16/13
4	FDP REVISED	11/21/12
3	FDP REVISED	11/21/12
2	FDP REVISED	11/21/12
1	FDP SUBMISSION	01/24/13

Application No: **FDP 2010-PR-014 D** Staff: T Stru

APPROVED DEVELOPMENT PLAN
 (L_GDP) (L_CDP) (&FDP) (L_PRC) (L_DPI) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)

SEE PROFFERS DATED: **February 7, 2013**
 SEE CONDITIONS DATED: **February 7, 2013**
 Date of Final Approval: **February 7, 2013** (L_BOS) (L_PC) (L_BZA)
 Comments:

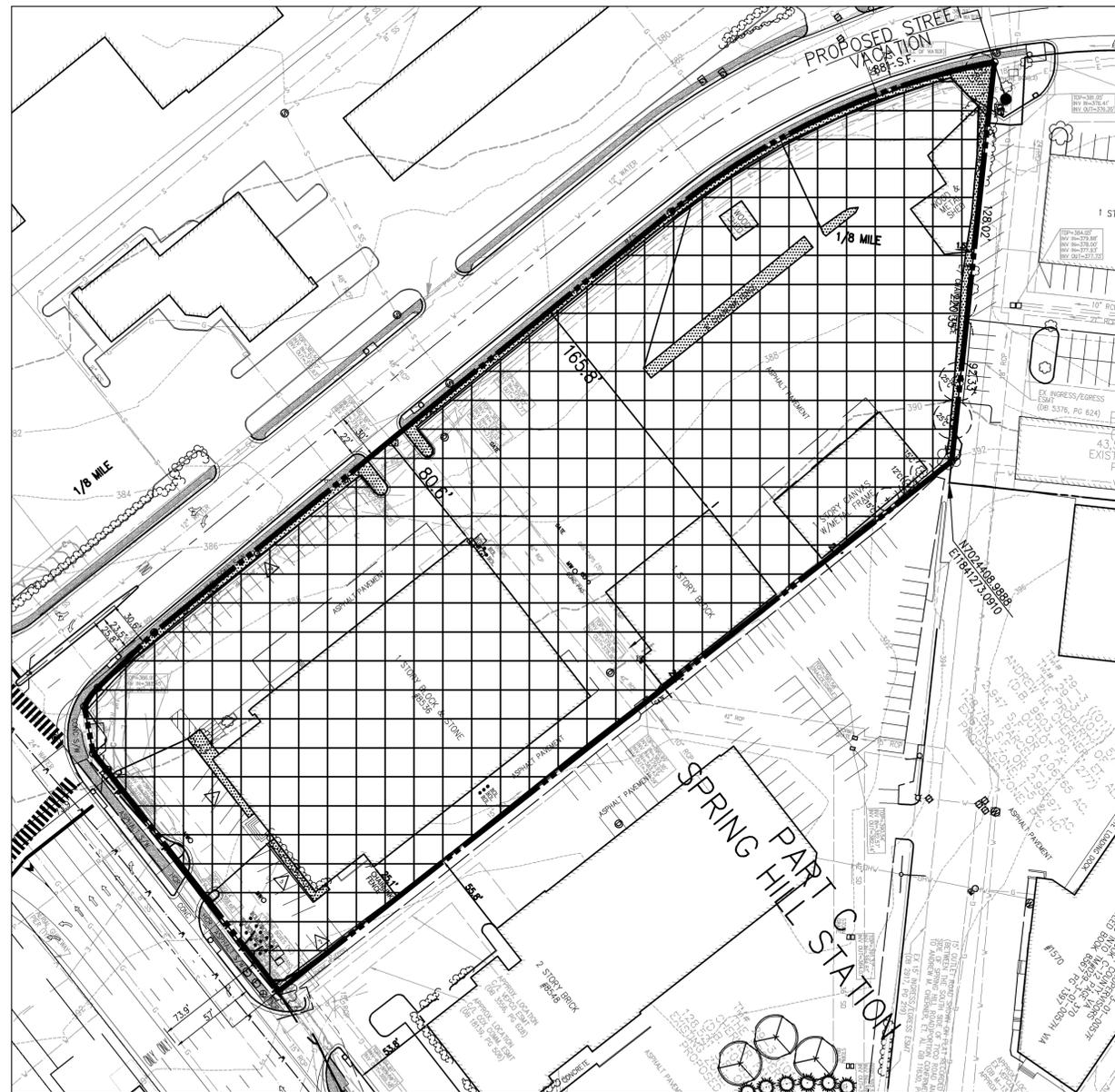
Sheet 10 of 39

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SITE D2A
 Spring Hill Station
 Tysons Corner, VA 22102

C-8



CURRENT EXISTING CONDITION EXHIBIT

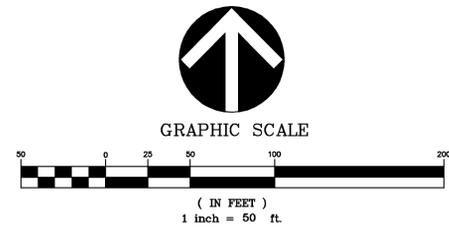
LEGEND

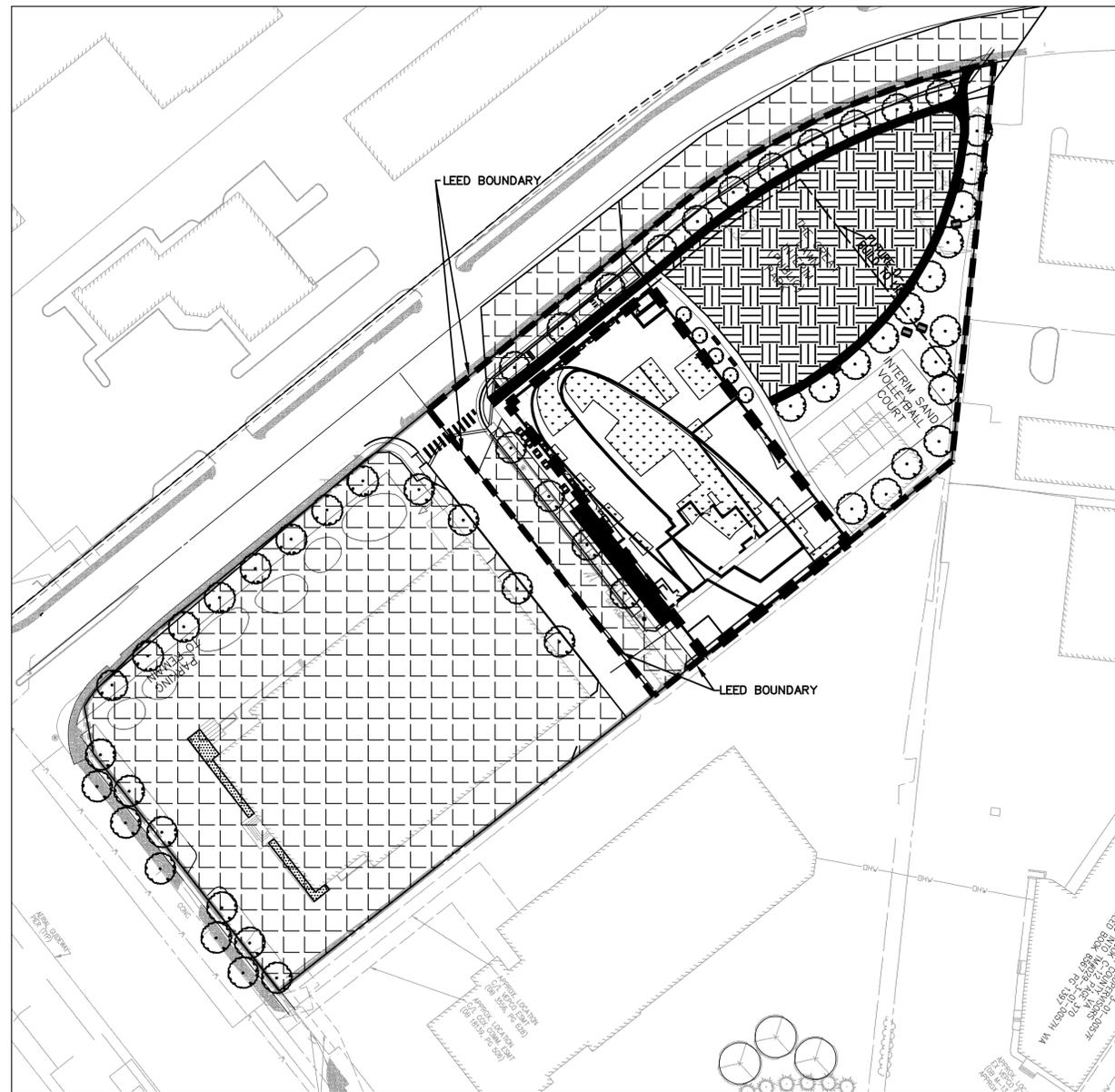
-  IMPERVIOUS AREA = 147,390 SF (3.38 AC) = 96%
-  PERVIOUS AREA = 5,875 SF (0.13 AC) = 4%

EXISTING CONDITIONS (PRE-DETENTION)

- IMPERVIOUS AREA = 0 SF (0 AC) = 0%
- *PERVIOUS AREA = 153,265 SF (3.51 AC) = 100%

*THE SITE CURRENTLY HAS DETENTION MEASURES AND WILL BE CONSIDERED 100% PERVIOUS (PRE-EXISTING CONDITIONS) FOR OUR EXISTING CONDITIONS PFM CALCULATIONS.





LEGEND

-  DRAINAGE AREA TO TREE BOX FILTERS
-  AREA OF PERMEABLE PAVERS
-  AREA OF GREEN ROOF/STORMWATER PLANTERS
-  SOIL AMENDMENTS
-  DRAINAGE AREAS TO GREEN ROOF/STORMWATER PLANTERS

PROPOSED CONDITIONS AREA TABULATION:

BUILDING = 52,606 SF (1.21 AC) (GREEN ROOF CREDITED LATER WITH VOLUME REDUCTION)
 ROADS/SIDEWALK = 68,619 SF (1.57 AC)
 PARKS/TREE PITS = 31,973 SF (0.73 AC)

PERVIOUS = 0.73 AC (21%)
 IMPERVIOUS = 2.78 AC (79%)

LEED BOUNDARY:

BUILDING = 24,964 SF (0.57 AC) (GREEN ROOF CREDITED LATER WITH VOLUME REDUCTION)
 ROADS/SIDEWALK = 27,577 SF (0.63 AC)
 PARKS/TREE PITS = 28,879 SF (0.66 AC)

PERVIOUS = 0.66 AC (35%)
 IMPERVIOUS = 1.2 AC (65%)

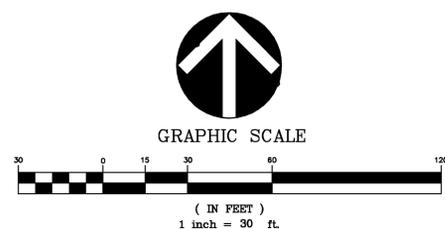
Application No: **FDP 2010-PR-014 D** Staff: T Stru

APPROVED DEVELOPMENT PLAN
 (L_GDP) (L_CDP) (L_FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)

SEE PROFFERS DATED: **February 7, 2013**
 SEE CONDITIONS DATED: **February 7, 2013**
 Date of Final Approval: **February 7, 2013** (L_BOS) (L_PC) (L_BZA)

Comments:

PLANNING & ZONING Sheet 12 of 39



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LANDOWNERS ATTORNEY

NUMBER	ISSUE	DATE
5	FDP SUBMISSION	01-28-13
4	FDP SUBMISSION	01-16-13
3	FDP SUBMISSION	01-11-13
2	FDP SUBMISSION	11-28-12
1	FDP SUBMISSION	07-31-12

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PROJECT
SITE D2A
 Spring Hill Station
 Tysons Corner, VA 22102

PLAN NUMBER


TITLE
**STORMWATER
 MANAGEMENT
 PLAN**

DRAWING NUMBER
C-10

**FOR PRELIMINARY/REFERENCE
 PURPOSES ONLY
 NOT FOR CONSTRUCTION OR
 REGULATORY REVIEW**

TYSONS CORNER COMPREHENSIVE PLAN STORMWATER CONFORMANCE CHECKLIST NARRATIVE

THE PURPOSE OF THIS NARRATIVE IS TO DETAIL THE PROCESS BY WHICH THE SUBJECT SITE MEETS, EXCEEDS, OR PROVIDES TO THE MAXIMUM EXTENT PRACTICABLE THE RUNOFF REDUCTION REQUIREMENTS OF THE TYSONS CORNER COMPREHENSIVE PLAN.

COMPREHENSIVE PLAN STORMWATER MANAGEMENT GOALS:

- THIS STORMWATER MANAGEMENT NARRATIVE EXPLAINS HOW THIS PLAN PROPOSES TO MEET THE STORMWATER REQUIREMENTS OF THE TYSONS CORNER COMPREHENSIVE PLAN.
- THIS NARRATIVE DESCRIBES THE VARIOUS STRATEGIES BY WHICH THE VARIOUS GOALS ARE TO BE MET (E.G. VEGETATIVE ROOF AND URBAN BIO-RETENTION (TREE PITS) AS WELL AS THOSE STRATEGIES WE EVALUATED BUT WERE UNABLE TO IMPLEMENT DUE TO SITE CONSTRAINTS.

COMPREHENSIVE PLAN STORMWATER MANAGEMENT GOALS	RESPONSE
STORMWATER MANAGEMENT AND WATER QUALITY CONTROLS FOR REDEVELOPMENT SHOULD BE DESIGNED TO RETURN WATER INTO THE GROUND WHERE SOILS ARE SUITABLE OR REUSE IT, WHERE ALLOWED, TO THE EXTENT PRACTICABLE. REDUCTION OF STORMWATER RUNOFF VOLUME IS THE SINGLE MOST IMPORTANT STORMWATER DESIGN OBJECTIVE FOR TYSONS.	INFILTRATION SHALL NOT BE USED ON THE PROPOSED BUILDING D2A DUE TO ITS IMPRACTICALITY. AREAS ON SITE AVAILABLE FOR INFILTRATION ARE VERY LIMITED DUE TO THE LARGE PROPOSED UNDERGROUND GARAGE. THE APPLICATION AREA TOTALS 3.51 ACRES, 0.89 ACRES (OR 25%) OF WHICH IS THE PROPOSED BUILDING D2A. THE GARAGE IS 0.57 ACRES AND THE PUBLIC ROADWAYS ARE 0.15 ACRES, OR 81% OF THE D2A SITE. THE REST OF THE SITE IS AN INTERIM CONDITION, PART OF WHICH WILL BE A GRASSY PARK AND PART OF WHICH WILL BE A PARKING LOT THAT IS CONTROLLED BY URBAN BIORETENTION (TREE PITS). THESE AREAS WILL BE IMPROVED FROM EXISTING CONDITIONS IN THE INTERIM CONDITION.
AT A MINIMUM, THE FIRST INCH OF RAINFALL SHOULD BE RETAINED ON-SITE THROUGH INFILTRATION, EVAPOTRANSPIRATION AND/OR REUSE, IF, ON A GIVEN SITE, THE RETENTION ON-SITE OF THE FIRST INCH OF RAINFALL IS DEMONSTRATED NOT TO BE FULLY ACHIEVABLE, ALL AVAILABLE MEASURES SHOULD BE IMPLEMENTED TO THE EXTENT POSSIBLE IN ORDER TO SUPPORT THIS GOAL AND ACHIEVE PARTIAL RETENTION OF THE FIRST INCH OF RAINFALL.	<p>THE TARGET GOAL OF THE RUNOFF REDUCTION METHOD IS TO CAPTURE AND CONTROL THE FIRST INCH OF RAINFALL. TO THIS EXTENT FOUR MAIN STORMWATER MANAGEMENT STRATEGIES HAVE BEEN UTILIZED: VEGETATIVE ROOFS, PERMEABLE PAVEMENT, URBAN BIO-RETENTION (TREE PITS) AND STORMWATER PLANTERS.</p> <ul style="list-style-type: none"> • THE EXTENSIVE VEGETATIVE ROOFS HAVE BEEN DESIGNED PER DCR SPEC #5 AND ARE USED TO TREAT VEGETATIVE ROOF AREAS. • THE INTENSIVE ROOF AREAS INCLUDE ELEMENTS FROM DCR SPECIFICATIONS BUT HAVE BEEN MODIFIED PER DETAILS SHOWN ON THE FDP TO TREAT BOTH VEGETATED AS WELL AS NON-VEGETATED ROOF AREAS. • THE URBAN BIO-RETENTION TREE PITS AND STORMWATER PLANTERS HAVE BEEN DESIGNED PER DCR SPEC #9 APPENDIX 9A WITH MODIFICATION OF CERTAIN ELEMENTS PER THE DETAIL WITHIN THIS CDP. THE TREE PITS ARE UTILIZED TO ULTIMATELY TREAT THE ROADWAY RUNOFF AS WELL AS THE SURROUNDING STREETScape. • THE STORMWATER PLANTERS (DETAILED ON THE FDP) ARE USED TO TREAT IMPERVIOUS BUILDING ROOF AREAS WHERE GREEN ROOF IS IMPRACTICABLE. (TIER 3) • THE PERMEABLE PAVEMENT (LEVEL ONE) HAS BEEN DESIGNED PER DCR SPEC #7 AND WILL ONLY CAPTURE ITS FOOTPRINT AREA. <p>SIZING COMPUTATIONS HAVE BEEN PROVIDED THAT VERIFY THE REQUIRED STORAGE HAS BEEN MET FOR EACH ALTERNATIVE (SEE RAINFALL DESIGN VALUE SIZING NARRATIVE ON THIS SHEET). EACH OF THESE PRACTICES IS ADEQUATELY SIZED FOR THE PROPOSED DRAINAGE AREAS TO THEM.</p> <p>THESE PRACTICES COMBINED YIELD AN ENTIRE ONSITE RETAINED RAINFALL DEPTH OF 0.90 INCHES (0.95" WITH OFF SITE TREATMENT; 1.25" WHEN CONSIDERING THE LEED SPECIFIED RAINFALL EVENT). ALL AREAS OF THE DEVELOPED SITE THAT HAVE THE POTENTIAL FOR A GREEN ROOF HAVE BEEN UTILIZED FOR SUCH PURPOSES. FOR TREATMENT OF THE PROPOSED ROADWAY THE STREETScapeS HAVE BIO-RETENTION TREE PITS PROVIDED FOR TREATMENT AND RETENTION. A TOTAL CONTROLLED AREA OF 2.60 ACRES OR 74% OF THE SITE HAS BEEN CAPTURED AND DEMONSTRATES "TO THE MAXIMUM EXTENT PRACTICABLE" WE HAVE MET THE TYSONS CORNER COMPREHENSIVE PLAN GOAL TO RETAIN/REUSE THE FIRST INCH OF RAINFALL.</p>
REDEVELOPMENT PROJECTS IN TYSONS SHOULD INCORPORATE INNOVATIVE STORMWATER MANAGEMENT MEASURES IN A MANNER THAT WILL, FIRST AND FOREMOST, OPTIMIZE REDUCTION OF STORMWATER RUNOFF VOLUME AND CONTROL OF PEAK FLOWS FOR THE REMAINING STORMWATER THAT CANNOT BE COMPLETELY CAPTURED ON-SITE.	THE RUNOFF REDUCTION PRACTICES SHALL BE USED IN CONFORMANCE WITH THE APPLICABLE DCR SPECIFICATION (IF ONE EXISTS) THAT GOVERNS THEM. THE EXTENSIVE VEGETATIVE ROOF, URBAN BIO-RETENTION TREE PITS, PERMEABLE PAVEMENT, AND STORMWATER PLANTERS HAVE BEEN DESIGNED IN ACCORDANCE WITH THEIR RESPECTIVE SPECIFICATION.
"AT A MINIMUM, STORMWATER MANAGEMENT MEASURES THAT ARE SUFFICIENT TO ATTAIN BOTH THE STORMWATER DESIGN-QUANTITY CONTROL AND STORMWATER DESIGN-QUALITY CONTROL CREDITS OF THE LEED-NC OR LEED-CS RATING SYSTEM (OR THE EQUIVALENT OF THESE CREDITS) SHOULD BE PROVIDED, IF, ON A GIVEN SITE, THE ATTAINMENT OF THE STORMWATER DESIGN LEED CREDITS (OR EQUIVALENT) IS DEMONSTRATED NOT TO BE FULLY ACHIEVABLE, ALL AVAILABLE MEASURES SHOULD BE IMPLEMENTED TO THE EXTENT POSSIBLE IN SUPPORT OF THIS GOAL."	LEED STORMWATER CREDITS 6.1 AND 6.2 SHALL BE OBTAINED THROUGH THE USE OF THE VEGETATIVE ROOF, PERMEABLE PAVEMENT, AND THE URBAN BIO-RETENTION (TREE PITS AND STORMWATER PLANTERS). EACH PRACTICE PROVIDES BOTH QUANTITY AND QUALITY CONTROL. THE COMPUTATIONS PROVIDED ON SHEETS C-12 ARE BASED ON THE LEED AREA (ENCOMPASSING D2A AND PARK). THE COMPUTATIONS ON SHEET C-13 SHOW THE TOTAL SITE AREA BROKEN DOWN BY BLOCK (NEW BUILDING, INTERIM PARK, AND INTERIM BLOCK 1).
"EQUIVALENT APPROACHES MAY INCORPORATE COORDINATED STORMWATER MANAGEMENT ON MULTIPLE DEVELOPMENT SITES AND/OR OFF-SITE CONTROLS. ADDITIONAL STORMWATER MANAGEMENT EFFORTS SHOULD BE ENCOURAGED."	THIS SUBJECT APPLICATION PROPOSES BIO-RETENTION TREE PITS WITHIN THE PROPOSED STREETScape OF THE APPLICATION AREA. THESE BIO-RETENTION TREE PITS CAPTURE AND TREAT THE FIRST INCH OF RAINFALL FROM THE PROPOSED STREETS AND EXISTING OFFSITE STREETS AND ROW (SEE OFFSITE FACILITIES SECTION IN THE NARRATIVE). THERE ARE NO SHARED STORMWATER MANAGEMENT ALTERNATIVES WITH THIS APPLICATION.
"LID TECHNIQUES OF STORMWATER MANAGEMENT SHOULD ALSO BE INCORPORATED INTO NEW AND REDESIGNED STREETS WHERE ALLOWED AND PRACTICABLE."	LOW IMPACT DEVELOPMENT (LID) TECHNIQUES ARE PROVIDED FOR IN THE STREET DESIGN VIA THE URBAN BIO-RETENTION (TREE PIT). THESE TREE PITS PROVIDE BOTH QUANTITY AND QUALITY CONTROL AS OUTLINED BY DCR SPEC #9 AND MODIFIED TO MEET TYSONS URBAN DESIGN GUIDELINES.

"RESTORATION AND/OR STABILIZATION OF DEGRADED STREAMS ON DEVELOPMENT SITES SHOULD BE PURSUED WHERE FEASIBLE; RESTORATION AND STABILIZATION TECHNIQUES THAT INCORPORATE ECOLOGICALLY AND AESTHETICALLY BENEFICIAL, VEGETATED APPROACHES ARE PREFERRED. OFF-SITE EFFORTS TO RESTORE AND/OR STABILIZE STREAMS IN TYSONS CORNER SHOULD ALSO BE ENCOURAGED. THE ABOVE GUIDELINES ARE INTENDED TO IMPROVE STORMWATER MANAGEMENT CONTROLS SUFFICIENTLY TO ALLOW FOR IMPROVEMENTS TO THE HABITAT AND RECREATIONAL VALUES OF STREAMS IN TYSONS CORNER THROUGH NATURAL RESTORATIVE PROCESSES AND/OR THROUGH RESTORATION PROJECTS."

THIS SUBJECT APPLICATION DOES NOT PROPOSE ANY STREAM RESTORATION AS IT HAS NO OPEN CHANNELS OR STREAMS WITHIN ITS BOUNDARY. IT IS BELIEVED THAT ANY STREAM RESTORATION SHOULD BE COMPREHENSIVE IN MANNER AND NOT PROVIDED IN PIECE MEAL FORM TO BETTER PROVIDE AESTHETIC AND RECREATIONAL VALUE TO TYSONS CORNER.

COMPREHENSIVE PLAN IMPLEMENTATION

THE TYSON'S CORNER COMPREHENSIVE STORMWATER MANAGEMENT PLAN SHALL BE IMPLEMENTED VIA THE USE OF URBAN BIO-RETENTION (TREE PITS AND STORMWATER PLANTERS), PERMEABLE PAVEMENT, AND VEGETATIVE ROOFS. THE ROADWAY ROW AND STREETScape SHALL BE CONTROLLED, WHERE POSSIBLE, BY TREE PITS THAT ARE STRATEGICALLY PLACED TO MAXIMIZE RUNOFF INTERCEPTION. THE BUILDING ROOF AREAS FOR D2A SHALL BE CONTROLLED BY A VEGETATIVE ROOF THAT HAS BEEN DESIGNED TO TREAT BOTH VEGETATIVE AND NON-VEGETATIVE AREAS. ROOF AREAS IMPRACTICABLE FOR GREEN ROOF HAVE BEEN DISCONNECTED WHERE POSSIBLE TO STORMWATER PLANTERS. BELOW IS A BREAKDOWN OF THE IMPLEMENTATION ITEMS ON THE STORMWATER CONFORMANCE CHECK LIST:

- THE COMPUTATIONS PROVIDED ON SHEET C-13 CALCULATE THE REQUIRED TREATMENT VOLUME OF 1" OF RAINFALL OVER THE ENTIRE SITE CDP AREA.
- THE STORMWATER MANAGEMENT DESIGN FOR THIS SITE SHALL INCLUDE PRACTICES THAT ARE DOCUMENTED IN THE DCR RUNOFF REDUCTION MANUAL. THIS SUBJECT APPLICATION PROPOSES MODIFICATIONS OF THE DCR STORMWATER PLANTER FOR IMPLEMENTATION WITH HIGH RISE CONSTRUCTION.
- ACCESS TO THE STORMWATER BMP FACILITIES SHALL BE PROVIDED FOR BY ROOF TOP ACCESS FOR THE VEGETATIVE ROOFS AND STREET ACCESS FOR THE TREE PITS AND PERMEABLE PAVEMENT. ACCESS TO THE STORMWATER PLANTERS SHALL BE PROVIDED VIA ROOFTOP (PODIUM) ACCESS.
- THE TREE PITS, VEGETATIVE ROOFS, PERMEABLE PAVEMENT AND STORMWATER PLANTERS SHALL BE PRIVATELY MAINTAINED.
- THE DESIGN SHALL CREATE A SAFE ENVIRONMENT FOR THE PUBLIC. THE EXTENSIVE VEGETATIVE ROOF AREAS SHALL NOT HAVE PUBLIC ACCESS WHEREAS THE TREE PITS SHALL BE PROVIDED WITH A GRATE OR FENCE TO PREVENT PEDESTRIAN CONFLICTS. INTENSIVE GREEN ROOFS AND STORMWATER PLANTERS WILL BE DESIGNED AS PART OF ROOFTOP AND AT GRADE AMENITIES AND WILL NOT CREATE A SAFETY CONCERN.
- CERTAIN PFM REQUIREMENTS SHALL NEED TO BE WAIVED IN ORDER TO MEET THE OVERALL CONCEPT OF THE PTC COMPREHENSIVE PLAN. A DETAILED LIST OF WAIVERS IS AS FOLLOWS:
 1. A WAIVER OF PFM SECTION 6-1304.2F TO REDUCE THE MINIMUM HORIZONTAL SETBACKS FROM BUILDING FOUNDATIONS IN ORDER TO FACILITATE INSTALLATION OF THE PERMEABLE PAVEMENT SYSTEM SET FORTH IN THE TYSON'S CORNER DESIGN GUIDELINES.
 2. ALL REQUESTED DEVIATIONS OF PFM SECTION 6-1307.2E TO SET THE MINIMUM HORIZONTAL SETBACKS FROM BUILDING FOUNDATIONS BE REDUCED TO FOUR (4) FEET IN ORDER TO FACILITATE INSTALLATION OF BIO-RETENTION SYSTEMS IN AN URBAN ENVIRONMENT SET FORTH IN THE TYSON'S CORNER DESIGN GUIDELINES.

DESIGN OF BEST MANAGEMENT PRACTICES

- **INFILTRATION BMP'S**

THERE ARE NO INFILTRATION BMP'S PROPOSED WITH THIS APPLICATION. THIS IS DUE TO THE FACT THAT INFILTRATION IS NOT FEASIBLE ON 81% OF THE PROPOSED BUILDING D2A AREA DUE TO UNDERGROUND GARAGES AND ROADWAYS. INFILTRATION IS IMPRACTICABLE BECAUSE OF LIMITED CONTIGIOUS AREAS ON THE REMAINING 19% OF THE SITE AREA FOR PRACTICES DUE TO PROPOSED UTILITIES, VAULTS, AND STREETScapeS. ALL RUNOFF REDUCTION SHALL BE CONTROLLED BY URBAN BIO-RETENTION, PERMEABLE PAVEMENT (LEVEL 1), AND VEGETATIVE ROOF SYSTEMS. THE EXISTING AREAS ON THE REST OF THE SITE (2.62 AC) HAVE BEEN IMPROVED BY THE ADDITION OF PERVIOUS AREAS AND URBAN BIORETENTION (TREE BOX FILTERS).

• **RAINWATER HARVESTING**
RAINWATER HARVESTING HAS NOT BEEN PROVIDED WITH THIS SITE. BUILDING D2A IS RESIDENTIAL AND WILL HAVE A MINIMAL COOLING TOWER DEMAND.

- **RUNOFF REDUCTION PRACTICES**

THE PROPOSED RUNOFF REDUCTION PRACTICES SHALL INCLUDE VEGETATIVE ROOFS, PERMEABLE PAVEMENT (LEVEL 1) AND URBAN BIO-RETENTION (TREE PITS AND STORMWATER PLANTERS). BELOW IS A BREAKDOWN OF THE RUNOFF REDUCTION PRACTICES ITEMS ON THE STORMWATER CONFORMANCE CHECK LIST:

- RUNOFF REDUCTION BMP'S IN THE FORM OF URBAN BIO-RETENTION (TREE PITS AND STORMWATER PLANTERS) SHALL BE PROVIDED WITH UNDER-DRAINS AND A SUBSURFACE STONE LAYER AS DETAILED IN DCR SPEC#9
- THE BIO-RETENTION TREE PITS AND STORMWATER PLANTERS SHALL CONFORM TO DCR SPEC#9 WITH MODIFICATIONS REQUIRED BY THE URBAN NATURE OF THE SITE. THE EXTENSIVE VEGETATIVE ROOF SYSTEM SHALL CONFORM TO DCR SPEC #5. THE PERMEABLE PAVEMENT SHALL CONFORM TO DCR SPEC #7.

AS MENTIONED EARLIER DUE TO SITE CONSTRAINTS THE ENTIRE 1.0" OF RAINFALL COULD NOT BE CAPTURED/CONTROLLED FOR THE SITE AS A WHOLE. THE PROPOSED PLANS CAN ACCOUNT FOR 0.90" AS CAN BE SEEN ON THE TYSONS STORMWATER CONFORMANCE SPREADSHEET (SEE SHEET C-13).

- **TIER 2 INNOVATIVE BMP'S (ACCEPTED IN OTHER JURISDICTIONS)**

THERE ARE NO TIER 2 NEW OR INNOVATIVE BMP'S BEING PROPOSED WITH THIS SUBJECT APPLICATION, AS MENTIONED PREVIOUSLY SITE CONSTRAINTS LIMIT THE APPLICABILITY OF VARIOUS BMP PRACTICES.

- **TIER 3 INNOVATIVE BMP'S (NON-APPROVED)**

THE INTENSIVE GREEN ROOF SYSTEM PROVIDED WITH THESE PLANS SHALL BE A TIER 3 DESIGN SINCE THEY ARE DESIGNED TO TREAT BOTH VEGETATIVE AND NON-VEGETATIVE AREAS. AS SUCH THE SOIL HAS BEEN INCREASED TO ACCOUNT FOR THIS ADDITIONAL AREA RUNOFF. AS CAN BE SEEN ON SHEETS C-13, 0.05 INCHES OF THE FIRST 1.0 INCH RAINFALL DEPTH SHALL BE CONTROLLED BY THIS TIER 3 APPROACH FROM 0.17 AC (0.07 OF WHICH IS TIER 1). ADDITIONALLY, STORMWATER PLANTERS ARE PROPOSED WITH THIS APPLICATION WHICH SHALL BE A TIER 3 DESIGN. THESE PLANTERS ARE A DCR DESIGN (SPEC #9 URBAN BIORETENTION) MODIFIED TO DISCONNECT TOWER ROOF WATER TO A PODIUM OR AT GRADE. AS CAN BE SEEN ON SHEET C-13, 0.07 INCHES OF THE FIRST 1.0 INCH RAINFALL DEPTH SHALL BE CONTROLLED BY THIS TIER 3 APPROACH. IF AT SITE PLAN TIME THIS DESIGN CONCEPT IS NOT FEASIBLE IT IS REQUESTED THAT OFFSITE TREATMENT BE ALLOWED IN THE FORM OF TREE PIT TREATING RUNOFF FROM THE EXISTING PUBLIC TYCO ROAD. THIS AREA SHALL ADD AN ADDITIONAL 0.08 INCH OF RAINFALL DEPTH CONTROLLED THEREBY PARTIALLY MITIGATING THE RAINFALL DEPTH LOST PROVIDED THE TIER 3 INTENSIVE GREEN ROOF IS NOT FEASIBLE AT SITE PLAN. SEE SHEET C-13 AND C-14 FOR COMPUTATIONS AND DETAILS.

- **OFFSITE OR SHARED FACILITIES**

CURRENTLY THE SUBJECT APPLICATION DOES NOT PROPOSE THE USE OF OFFSITE OR SHARED SWM FACILITIES. HOWEVER, THE TREE PITS CAN ACCOMMODATE ADDITIONAL STREET RUNOFF FROM TYCO ROAD APPROXIMATELY 0.28 AC. AS CAN BE SEEN ON SHEET C-13 THIS WILL YIELD AN ADDITIONAL 0.08 INCH OF THE 1.00 INCH RAINFALL DEPTH CONTROLLED.

- **CONFORMANCE WITH COMPREHENSIVE PLAN STORMWATER GOALS**

IT IS THE BELIEF OF THE UNDERSIGNED ENGINEER THAT THIS SITE PLAN ADEQUATELY HANDLES, TO THE MAXIMUM EXTENT POSSIBLE, THE RUNOFF REDUCTION REQUIREMENTS OF THE TYSONS CORNER COMPREHENSIVE PLAN. BELOW IS SUMMARY OF THE RUNOFF REDUCTION PRACTICES UTILIZED IN THE STORMWATER MANAGEMENT PLAN AND THEIR CONFORMANCE TO THE OVERALL GOAL OF THE COMPREHENSIVE STORMWATER MANAGEMENT PLAN FOR THIS SUBJECT APPLICATION.

- AS MENTIONED PREVIOUSLY THE PROPOSED DESIGN SHALL NOT CONTROL/CAPTURE THE FIRST ENTIRE 1.0" OF RAINFALL. THIS SUBJECT APPLICATION PROPOSES TO CONTROL CAPTURE, TO THE MAXIMUM EXTENT PRACTICABLE, THE FIRST 0.90" OF RAINFALL.
 - THIS PROPOSED DESIGN SHALL OPTIMIZE, TO THE MAXIMUM EXTENT FEASIBLE, RUNOFF REDUCTION VIA THE EMPLOYMENT OF VEGETATIVE ROOFS, PERMEABLE PAVEMENT, AND URBAN BIO-RETENTION (TREE PITS AND STORMWATER PLANTERS).
 - AS MENTIONED PREVIOUSLY SITE CONSTRAINTS HAVE LIMITED THE USE OF MANY BMP'S PRACTICES (SUCH AS INFILTRATION)
 - THE PROPOSED DESIGN DOES HELP CONTROL PEAK FLOW BY REDUCING THE RUNOFF VOLUME AND AS SUCH THE PEAK DISCHARGED IS REDUCED.
 - STREET RUNOFF HAS BEEN ADDRESSED VIA THE USE OF URBAN BIO-RETENTION (TREE PITS) THAT ARE DESIGNED IN ACCORDANCE WITH DCR SPEC #9.
 - STREAM STABILIZATION AND RESTORATION HAS NOT BEEN PROPOSED WITH THIS SUBJECT APPLICATION DUE TO THE NEED OF A COMPREHENSIVE STREAM RESTORATION PROGRAM.
 - THIS SUBJECT APPLICATION SHALL CONFORM TO THE PFM'S SWM REQUIREMENTS FOR ADEQUATE OUTFALL, DETENTION, WATER QUALITY, AND OVERLAND RELIEF. SEE SHEETS C-9 THRU C-15 FOR DETAILS.
- **SUPPLEMENTAL INFORMATION/JUSTIFICATION REQUEST**

WHILE IT IS NOT PRACTICABLE TO RETAIN ALL OF THE SUBJECT SITE, INCLUDING AREAS OF THE SITE PERIPHERY, DUE TO VARIOUS CONSTRAINTS INCLUDING SITE GRADING, OTHER COMPREHENSIVE PLAN REQUIREMENTS, AND VDOT REQUIREMENTS, COMPLIANCE WITH THE COMPREHENSIVE PLAN GOAL FOR CAPTURING/RETAINING THE FULL 1-INCH RAIN EVENT CAN BE MET ON SITE DURING RAINFALL EVENTS GREATER THAN 1.4-INCHES THAT FALLS ON THE BUILDING ROOFS AND STREETScape IF THE RUNOFF REDUCTION MEASURES AND COMPUTATIONS SHOWN HEREIN ARE APPROVED BY THE COUNTY. IF THE RUNOFF REDUCTION MEASURES AND/OR COMPUTATIONS SHOWN HEREIN ARE NOT APPROVED BY DPWES, THE APPLICANT WILL WORK WITH THE COUNTY TO RETAIN THE FIRST 1-INCH OF RAINFALL TO THE EXTENT PRACTICABLE IN ACCORDANCE WITH THE COMPREHENSIVE PLAN GOAL.

IN FURTHERANCE OF THE APPLICANT'S COMMITMENTS HEREIN AND WHILE IT INTENDS TO MEET THE 1-INCH RETENTION GOAL USING THE TECHNIQUES SHOWN, IT RESERVES THE RIGHT TO UTILIZE ANY COMBINATION OF LID (EXISTING AND FUTURE) MEASURES TO MEET THIS GOAL SUBJECT TO THE REVIEW AND APPROVAL OF DPWES AT TIME OF SITE PLAN.

RECOGNIZING THAT RUNOFF REDUCTION TECHNOLOGIES ARE RELATIVELY NEW AND STILL EVOLVING, THE APPLICANT'S FINAL DESIGN DEVELOPMENT AND/OR DPWES COMMENTS ON THE SITE PLAN MAY RESULT IN CHANGES TO THE LID MEASURES SHOWN ON THE CDP AND/OR FDP, INCLUDING, BUT NOT LIMITED TO, ELIMINATION OR ADDITION OF MEASURES SO LONG AS THESE CHANGES DO NOT AFFECT THE GRID OF STREETS, THE GENERAL LOCATION OF THE POINTS OF ACCESS TO EACH BLOCK, THE GENERAL LOCATION OF THE BUILDINGS, THE BUILD-TO LINES, THE MINIMUM AMOUNT AND GENERAL LOCATION OF PUBLICLY-ACCESS URBAN PARK LAND AS MAY BE APPLICABLE FOR EACH BLOCK AND THE GENERAL QUALITY AND CHARACTER OF THE STREETScape ALONG THE PUBLIC AND PRIVATE STREETS WITHIN AND ABUTTING THE SUBJECT PROPERTY AND AS OTHERWISE SPECIFIED IN THE PROFFERS.

BMP NARRATIVE:

THE SUBJECT SITE DRAINS ENTIRELY INTO THE REGIONAL STORMWATER POND D-67 THAT MEETS ALL REQUIREMENTS OF BMP FOR THE ENTIRE DRAINAGE SHED.

HOWEVER, THE SUBJECT SITE ALSO MEETS THE BMP REQUIREMENTS FOR A REDEVELOPED SITE. PER PFM SECTION 6-0401.2B, THE SITE WILL NEED TO HAVE A 10% DECREASE IN IMPERVIOUS AREAS.

EXISTING=96% IMPERVIOUS
PROPOSED=81% IMPERVIOUS

THE SUBJECT SITE HAS A 15% DECREASE IN IMPERVIOUS AREA. THE BMP REQUIREMENT IS MET.

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Application No: Fdp 2010-PR-014 D Staff: T Stru

APPROVED DEVELOPMENT PLAN

(L_GDP) (L_CDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)

SEE PROFFERS DATED: [DATE]

SEE CONDITIONS DATED: February 7, 2013

Date of Final Approval: February 7, 20 (L_BOS) (L_PC) (L_BZA)

Comments: [TEXT]

PLANNING & ZONING

Sheet 13 of 39

STORMWATER MANAGEMENT NARRATIVE

C.11

CREATED NAME

FOR PRELIMINARY/REFERENCE PURPOSES ONLY
NOT FOR CONSTRUCTION OR REGULATORY REVIEW

PART I: LEED COMPUTATIONS

THESE LEED COMPUTATIONS ARE BASED UPON A LEED BOUNDARY OF 1.87 ACRES. THIS BOUNDARY DOES NOT INCLUDE THE BUILDING THAT IS TO REMAIN IN THE EXISTING CONDITION. PLEASE NOTE THAT AT FINAL DESIGN THIS BOUNDARY MAY CHANGE BASED UPON LEED REQUIREMENTS.

D2AEX.txt
GRAPHICAL PEAK DISCHARGE METHOD Version 2.00

Project : GEORGEAS D2A State: VA User: KB Date: _____
County : FAIRFAX Checked: _____ Date: _____
Subtitle: EXISTING CONDITIONS

Data: Drainage Area : 1.87 Acres
Runoff Curve Number : 97
Time of Concentration : 0.10 Hours
Rainfall Type : II
Pond and Swamp Area : NONE

Storm Number	1	2	3	4	5	6	7
Frequency (yrs)	1	2	5	10	25	50	100
24-Hr Rainfall (in)	2.7	3.2	4.5	5.2	6	7	7.3
Ia/P Ratio	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Used	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Runoff (in)	2.36	2.86	4.15	4.85	5.64	6.64	6.94
Unit Peak Discharge (cfs/acre/in)	1.578	1.578	1.578	1.578	1.578	1.578	1.578
Pond and Swamp Factor (0.0% Ponds Used)	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Peak Discharge (cfs)	7	8	12	14	17	20	20

TOTAL RUNOFF VOLUME (EXISTING CONDITIONS):

2 YR: 1.87 AC x (2.86 IN / 12 IN/FT) x 43,560 SQ FT/AC = 19,414 CF

GRAPHICAL PEAK DISCHARGE METHOD Version 2.00

Project : GEORGEAS D2A State: VA User: KB Date: _____
County : FAIRFAX Checked: _____ Date: _____
Subtitle: PROPOSED CONDITIONS

Data: Drainage Area : 1.87 Acres
Runoff Curve Number : 93
Time of Concentration : 0.10 Hours
Rainfall Type : II
Pond and Swamp Area : NONE

Storm Number	1	2	3	4	5	6	7
Frequency (yrs)	1	2	5	10	25	50	100
24-Hr Rainfall (in)	2.7	3.2	4.5	5.2	6	7	7.3
Ia/P Ratio	0.06	0.05	0.03	0.03	0.03	0.02	0.02
Used	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Runoff (in)	1.97	2.45	3.71	4.39	5.18	6.17	6.47
Unit Peak Discharge (cfs/acre/in)	1.578	1.578	1.578	1.578	1.578	1.578	1.578
Pond and Swamp Factor (0.0% Ponds Used)	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Peak Discharge (cfs)	6	7	11	13	15	18	19

TOTAL RUNOFF VOLUME (PROPOSED CONDITIONS):

2 YR: 1.87 AC x (2.45 IN / 12 IN/FT) x 43,560 SQ FT/AC = 16,631 CF

TOTAL RUNOFF VOLUME (ALLOWABLE RELEASE):

PER LEED, POST-DEVELOPMENT VOLUME FOR THE 2 YEAR STORM

MUST NOT EXCEED 75% OF THE EXISTING CONDITIONS VOLUME.

THEREFORE, ANY ADDITIONAL VOLUME WILL BE MET THROUGH A REUSE VAULT.

2 YR: 16,631 CF - (0.75)* 19,414 CF = 2,071 CF

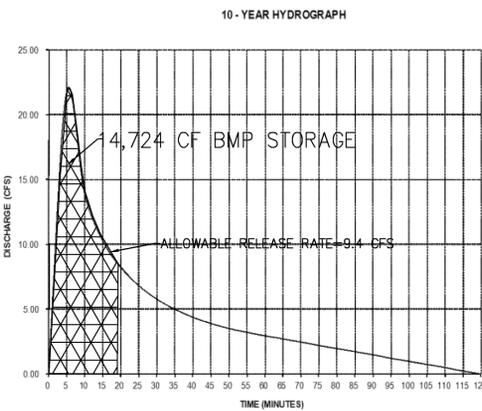
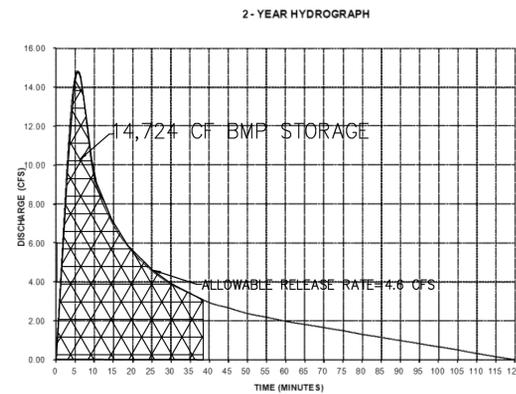
REDUCTION TAKEN FOR BMP STORAGE:

- GREEN ROOF STORAGE = 4,350 CF
- STORMWATER PLANTERS = 1,350
- TREE PIT STORAGE = 8,808
- PERMEABLE PAVEMENT = 216

TOTAL BMP STORAGE = 14,724

2,071 - 14,724 = LESS THAN 0, THEREFORE LEED IS MET

PART III: PFM COMPLIANCE



PARCEL D2	Amount of Site Area (Ac) Per Hydrologic Soil Group*				*Per Soils Map approximately 100% type C
	Type A	Type B	Type C	Type D	
Total Site Area (Ac)	3.51	0.00	3.51	0	Note: 1-yr Storm intensity (I) taken as 60% of 2-yr storm I

Base Line Flow Rates					Per County Adequate Outfall Presentation formula for the conversion from CN to rational method C-Factor (C) is: C = 1 - [(S x (1.2 - (S / (P + 0.85))) / P] where: P = 24-hr rainfall depth for design storm S = (1000 / CN) - 10
Land Use = Existing Conditions (0% Imp)					
Curve Number (CN) For Soil Type Per Land Use					
Type A	Type B	Type C	Type D		
-	-	74	-		
Weighted CN for site: 74					
Design Storm 24-hr Rainfall Depth (in)					
2-yr	10-yr	1-yr			
3.2	5.2	2.7			
S for CN to C Calcs: 3.51					
Equivalent C					
2-yr	10-yr	1-yr			
0.32	0.49	0.27			
Proposed Flow Rates					
Land Use = Proposed Conditions (81% Imp)					
Curve Number (CN) For Soil Type Per Land Use					
Type A	Type B	Type C	Type D		
-	-	92	-		
Weighted CN for site: 93					
Design Storm 24-hr Rainfall Depth (in)					
2-yr	10-yr	1-yr			
3.2	5.2	2.7			
S for CN to C Calcs: 0.75					
Equivalent C					
2-yr	10-yr	1-yr			
0.76	0.85	0.73			

ALLOWABLE RELEASE RATE

PER FAIRFAX COUNTY, THE PEAK RELEASE RATE FOR THE POST-DEVELOPED 2-YR AND 10-YR DESIGN STORMS WILL BE REDUCED TO A LEVEL EQUAL TO OR LESS THAN 75% THE EXISTING CONDITION PEAK RELEASE RATE*:

SITE AREA = 3.51 ACRES
I2 = 5.45 in/hr, I10 = 7.27 in/hr
c2 = 0.32, c10 = 0.49 (EXISTING)

Q2 = 0.32 X 5.45 X 3.51 = 6.12 X (0.75) = 4.6 CFS
Q10 = 0.49 X 7.27 X 3.51 = 12.5 X (0.75) = 9.4 CFS

*EXISTING CONDITIONS ALLOWABLE RELEASE RATE FOUND BY TAKING THE SITE AS GOOD CONDITION OPEN SPACE (CN=74) RATHER THAN AS WHAT EXISTS CURRENTLY.

BMP STORAGE ALLOWS FOR A SMALLER RELEASE RATE THAN WHAT IS REQUIRED. THEREFORE, PFM REQUIREMENT IS MET.

BMP SIZING COMPS

GREEN ROOF NUMBER	INTENSIVE/EXTENSIVE	DA TO GREEN ROOF (Ac.)	Rv	Tv REQ'D (CFT)	SURFACE AREA PROV'D (SFT)	SOIL DEPTH (in)	MEDIA POROSITY	Tv PROV'D (CFT)	Runoff Reduction at 100% Eff. (cft)	
D2A	EXTENSIVE		0.15	0.95	517	6500	4	0.30	650	517
D2A	INTENSIVE		0.17	0.95	586	7500	12	0.30	2250	586
Total			0.32		1103.52	14000			2900	1104

Note: Sizing based on DCR Spec#5

Tv(REQ'D) = 1.1 * Rv * DA / 12

Tv(PROV'D) = (Surface Area * Soil Depth * Porosity) / 12

Runoff Reduction is assumed to be 100% of Tv Req'd or Tv Prov'd (whichever is less)

Permeable Paver Number	LEVEL 1/LEVEL 2	DA TO Pavers (Ac.)	Rv	Tv REQ'D (CFT)	SURFACE AREA PROV'D (SFT)	d _c (ft)	A _c (ac)	A _p (ac)	P	i (ft/day)	t _s (day)	V _r (unitless)	d _p (ft)	d _{p-max} (ft)	Tv PROV'D (CFT)	
D2A	Level 1		0.10	0.95	345	4515	0	0.00	0.10	0.083	1.04	0.083	0.4	0.10	2.6	453
Total			0.10		345	4515									453	

Note: Sizing based on DCR Spec #7

Tv(REQ'D) = 1.1 * Rv * DA / 12

Tv(PROV'D) = Surface Area * d_p

Tyson's Corner Bioretention (Tree Pit) Sizing chart

BIORETEN AREA (Ac.)	DA TO TREE PIT (Ac.)	SURFACE AREA REQ'D (SFT)	Rv	Tv REQ'D (CFT)	SURFACE AREA PROV'D (SFT)	PONDING DEPTH (INCH)	SOIL DEPTH (FT)	GRAVEL DEPTH (FT)	PONDING V _r	SOIL V _r	GRAVEL V _r	Tv PROV'D (CFT)
1	0.10	172	0.95	345	1067	6	4	1	1	0.25	0.4	2027
2	0.18	310	0.95	621	1067	6	4	1	1	0.25	0.4	2027
3	0.13	224	0.95	448	2629	6	4	1	1	0.25	0.4	4995
4	0.69	1190	0.95	2379	1408	6	4	1	1	0.25	0.4	2675
5	0.51	879	0.95	1759	1056	6	4	1	1	0.25	0.4	2006

Tyson's Corner Bioretention Sizing chart

BIORETENTION AREA (Ac.)	DA TO PLANTER (Ac.)	SURFACE AREA REQ'D (SFT)	Rv	Tv REQ'D (CFT)	SURFACE AREA PROV'D (SFT)	PONDING DEPTH (INCH)	SOIL DEPTH (FT)	GRAVEL DEPTH (FT)	PONDING V _r	SOIL V _r	GRAVEL V _r	Tv PROV'D (CFT)
STORMWATER PLANTER		0.25	0.95	862	1000	6	3	1	1	0.25	0.4	1650
TOTALS =		0.25		1078	862	1000						1650

Note: Sizing based on DCR Spec #9

SA(REQ'D) = Tv / 2

Tv(REQ'D) = 1.1 * Rv * A / 12

Tv(PROV'D) = SA * SUM OF STORAGE

Application No: FDP 2010-PR-014 D Staff: T Stru

APPROVED DEVELOPMENT PLAN
(L_GDP) (L_CDP) (L_FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)

SEE PROFFERS DATED: February 7, 2013
Date of Final Approval: February 7, 2013 (L_BOS) (L_P) (L_BZA)
Comments:

Sheet 14 of 39

PART II: FIRST INCH OF RAINFALL
OVERALL SITE

Tyson's Corner Comprehensive Plan Stormwater Conformance Spreadsheet - Beta Version 4-18-2012

Site Name: **Georgelas - D2**
Description: **D.A. 'A' - New Building D2A, D.A. 'B' - Park, D.A. 'C' - Parking lot**

Post-Development Land Cover

Land Cover Type	HSG A Soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Forest / Preserved Open Space - Undisturbed, protected forest and open			0.05		0.05
Managed Turf (acres)					0.84
Impervious Cover (acres)			0.84		0.84
Total					0.89

Drainage Area B

Land Cover Type	HSG A Soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Forest / Preserved Open Space - Undisturbed, protected forest and open			0.85		0.85
Managed Turf (acres)					0.12
Impervious Cover (acres)			0.12		0.12
Total					0.97

Drainage Area C

Land Cover Type	HSG A Soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Forest / Preserved Open Space - Undisturbed, protected forest and open			0.21		0.21
Managed Turf (acres)					1.44
Impervious Cover (acres)			1.44		1.44
Total					1.65

Drainage Area D

Land Cover Type	HSG A Soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Forest / Preserved Open Space - Undisturbed, protected forest and open					0.00
Managed Turf (acres)					0.00
Impervious Cover (acres)					0.00
Total					0.00

Drainage Area E

Land Cover Type	HSG A Soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Forest / Preserved Open Space - Undisturbed, protected forest and open					0.00
Managed Turf (acres)					0.00
Impervious Cover (acres)					0.00
Total					0.00

Rv Coefficients

Land Cover Type *	HSG A Soils	HSG B Soils	HSG C Soils	HSG D Soils
Forest / Preserved Open Space - Undisturbed, protected forest and open space or reforested land	0.02	0.03	0.04	0.05
Managed Turf	0.15	0.20	0.22	0.25
Impervious Cover	0.95	0.95	0.95	0.95

* See the instructions tab for a definition of each land cover type.

Land Cover Summary

Forest / Preserved Open Space (ac)	0.00
Weighted Rv (forest)	0.00
% Forest	0%
Managed Turf (acres)	1.11
Weighted Rv (turf)	0.22
% Managed Turf	32%
Impervious Cover (acres)	2.40
Rv (impervious)	0.95
% Impervious	68%
Total Site Area (acres)	3.51
Site Rv	0.72

Rainfall / Runoff Summary

Target Rainfall to Retain Onsite (inches)	1.0
1-inch Rainfall Volume for entire site (cf)	12,741
Volume Not Converted to Runoff (cf)	3,578
1-inch Runoff Volume for entire site (cf)	9,163
Target Runoff Reduction Volume (cf)	9,163
Runoff Reduction Volume Achieved (cf)	7,831
Total Runoff Volume Retained (cf)	11,410
Total Area of Site Captured in a BMP (acres)	3.02

Conformance with Comprehensive Plan Goal

Total Site Area Captured by a BMP (%)	86%
Rainfall Depth Retained Onsite (inch)	0.90

Tyson's Corner Comprehensive Plan Stormwater Conformance Spreadsheet - Beta Version 4-18-2012

Site Name: **Georgelas - D2**

Drainage Area A Post-Development Land Cover	HSG A Soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Forest / Preserved Open Space	0.00	0.00	0.00	0.00	0.00
Managed Turf	0.00	0.00	0.05	0.00	0.05
Impervious Cover	0.00	0.00	0.84	0.00	0.84
D.A. Total (acres)					0.89

Rv (turf) 0.22
Rv (impervious) 0.95
1" Rainfall 3231
Runoff from 1" Rainfall (cf) = 2,937

Apply Runoff Reduction Practices	Description of Area	Roof Area Contributing to RWHS (ac)	Design Rainfall for RWHS (in)	Max Volume Captured by Practice (cf)	RWHS Credit	Input % RRR from Model	% Credit	Volume Received from Upstream Practices (cf)	Total Volume Received by Practice (cf)	Avg Daily Drawdown (gallons)	Available Cistern Volume (gallons)	Runoff Reduction Vol (cf)	Remaining Volume (cf)	Downstream Practice
Rooftop Rainwater Harvesting		0.00	1.00	0		40%		0	0			0	0	
Apply Runoff Reduction Practices	Description of Area	Impervious Cover in Contributing D.A. (ac)	Managed Turf in Contributing D.A. (ac)	Max Volume Received by Practice (ft³)	Description of Credit	% Credit	Volume Received from Upstream Practices (ft³)	Total Volume Received by Practice (ft³)	Surface Area of Practice (ft²)	Storage Vol Provided by Practice (ft³)	Runoff Reduction Vol (ft³)	Remaining Volume (ft³)	Downstream Practice	
Vegetated Roof	Roof drainage area to intensive (7500 sq. ft. depth) and extensive (6500 sq. ft. depth), 45% voids	0.32	N/A	1,104	Subtract 100% of provided storage vol.	100%	N/A	1,104	N/A	2,900	1,104	0		
Permeable Pavement - DCR Level 1 Design Spec	1724 sq of permeable pavement	0.04	N/A	138	Reduce vol. through permeable pavement by 0.045 cft/sq of permeable pavement.	N/A	N/A	138	1,724	N/A	78	60		
Bioretention - DCR Level 2 Design Spec (enhanced)	2133 sq of tree pits, assuming 4' depth. Max ponding depth 6" and soil porosity 0.3. Typical drainage area 0.07 ac/tree pit - 0.20 ac onsite, 0.08 ac offsite.	0.20		690	Subtract 100% of provided storage vol.	100%	0	690	N/A	3,626	690	0		
Disconnection to Stormwater Planter, Extended Tree Pit, or Curb Extension (Urban Bioretention)	0.25 ac of roof disconnection to 1000 sq stormwater planters (3' depth, 45% voids)	0.25	N/A	862	Subtract 100% of provided storage vol.	100%	0	862	N/A	1,350	862	0		
Totals:		0.81	0.00											

Total Drainage Area Treated (acres): **0.81** Runoff Reduction Volume Achieved for Drainage Area A (cubic feet): **2,733**

Tyson's Corner Comprehensive Plan Stormwater Conformance Spreadsheet - Beta Version 4-18-2012

Site Name: **Georgelas - D2**

Drainage Area B Post-Development Land Cover	HSG A Soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Forest / Preserved Open Space	0.00	0.00	0.00	0.00	0.00
Managed Turf	0.00	0.00	0.85	0.00	0.85
Impervious Cover	0.00	0.00	0.12	0.00	0.12
D.A. Total (acres)					0.97

Rv (turf) 0.22
Rv (impervious) 0.95
1" Rainfall 3521
Runoff from 1" Rainfall (cf) = 1,093

Apply Runoff Reduction Practices	Description of Area	Roof Area Contributing to RWHS (ac)	Design Rainfall for RWHS (in)	Max Volume Captured by Practice (cf)	RWHS Credit	Input % RRR from Model	% Credit	Volume Received from Upstream Practices (cf)	Total Volume Received by Practice (cf)	Avg Daily Drawdown (gallons)	Available Cistern Volume (gallons)	Runoff Reduction Vol (cf)	Remaining Volume (cf)	Downstream Practice
Rooftop Rainwater Harvesting		1.00	0		SELECT RWHS DESIGN METHOD			0	0			0	0	
Apply Runoff Reduction Practices	Description of Area	Impervious Cover in Contributing D.A. (ac)	Managed Turf in Contributing D.A. (ac)	Max Volume Received by Practice (ft³)	Description of Credit	% Credit	Volume Received from Upstream Practices (ft³)	Total Volume Received by Practice (ft³)	Surface Area of Practice (ft²)	Storage Vol Provided by Practice (ft³)	Runoff Reduction Vol (ft³)	Remaining Volume (ft³)	Downstream Practice	
Permeable Pavement - DCR Level 1 Design Spec	2791 sq of permeable pavement	0.06	N/A	207	Reduce vol. through permeable pavement by 0.045 cft/sq of permeable pavement.	N/A	N/A	207	2,791	N/A	126	61		
Bioretention - DCR Level 2 Design Spec (enhanced)	2629 sq of tree pits, assuming 4' depth. Max ponding depth 6" and soil porosity 0.3. Typical drainage area 0.07 ac/tree pit - 0.13 ac onsite, 0.20 ac offsite.	0.13		448	Subtract 100% of provided storage vol.	100%	0	448	N/A	4,469	448	0		
Sheetflow to Vegetated Filter Strip in A/B Soils or Amended C/D Soils	Amended soils in park	0.42		335	Reduce volume by 0.06 cu. ft per sq. ft. of conservation area.	N/A	0	335	16504	N/A	335	0	N/A	
Totals:		0.19	0.42											

Total Drainage Area Treated (acres): **0.61** Runoff Reduction Volume Achieved for Drainage Area A (cubic feet): **909**

Tyson's Corner Comprehensive Plan Stormwater Conformance Spreadsheet - Beta Version 4-18-2012

Site Name: **Georgelas - D2**

Drainage Area C Post-Development Land Cover	HSG A Soils	HSG B Soils	HSG C Soils	HSG D Soils	Totals
Forest / Preserved Open Space	0.00	0.00	0.00	0.00	0.00
Managed Turf	0.00	0.00	0.21	0.00	0.21
Impervious Cover	0.00	0.00	1.44	0.00	1.44
D.A. Total (acres)					1.65

Rv (turf) 0.22
Rv (impervious) 0.95
1" Rainfall 5990
Runoff from 1" Rainfall (cf) = 5,134

Apply Runoff Reduction Practices	Description of Area	Roof Area Contributing to RWHS (ac)	Design Rainfall for RWHS (in)	Max Volume Captured by Practice (cf)	RWHS Credit	Input % RRR from Model	% Credit	Volume Received from Upstream Practices (cf)	Total Volume Received by Practice (cf)	Avg Daily Drawdown (gallons)	Available Cistern Volume (gallons)	Runoff Reduction Vol (cf)	Remaining Volume (cf)	Downstream Practice
Rooftop Rainwater Harvesting		1.00	0		SELECT RWHS DESIGN METHOD			0	0			0	0	
Apply Runoff Reduction Practices	Description of Area	Impervious Cover in Contributing D.A. (ac)	Managed Turf in Contributing D.A. (ac)	Max Volume Received by Practice (ft³)	Description of Credit	% Credit	Volume Received from Upstream Practices (ft³)	Total Volume Received by Practice (ft³)	Surface Area of Practice (ft²)	Storage Vol Provided by Practice (ft³)	Runoff Reduction Vol (ft³)	Remaining Volume (ft³)	Downstream Practice	
Bioretention - DCR Level 2 Design Spec (enhanced)	2464 sq of tree pits, assuming 4' depth. Max ponding depth 6" and soil porosity 0.3. Typical drainage area 0.07 ac/tree pit	1.60		5,518	Subtract 100% of provided storage vol.	100%	0	5,518	N/A	4,189	4,189	1,329		
Totals:		1.60	0.00											

Total Drainage Area Treated (acres): **1.60** Runoff Reduction Volume Achieved for Drainage Area A (cubic feet): **4,189**

TOTAL RUNOFF REDUCTION REQUIRED	12,741 CFT	SEE OVERALL COMPUTATION SHEET 1 (SHOWN HERE)
TOTAL RUNOFF REDUCTION PROVIDED	11,410 CFT	
RAINFALL DEPTH RETAINED ONSITE	0.90 IN	
SITE AREA	3.51 AC	

OFFSITE ALTERNATIVES TO MITIGATE SHORTAGE

RUNOFF REDUCTION PRACTICE	CONTRIBUTING DA	DA RV	1" VOL REQUIRED (CF)	VOL AVAILABLE (CF)	POTENTIAL RUNOFF RETAINED (INCHES)	VOLUME RETAINED	EQUIVALENT DEPTH RETAINED
BIORETENTION (TREES)	0.28	0.95	966	12284	1.00	966	0.08
TOTAL =							0.08

ADDITIONAL STORAGE PROVIDED IN PROPOSED RUNOFF REDUCTION PRACTICES

RUNOFF REDUCTION PRACTICE	CONTRIBUTING DA	DA RV	1" VOL REQUIRED (CF)	VOL PROVIDED (CF)	RUNOFF RETAINED (INCH)	EXCESS VOLUME	EQUIVALENT DEPTH RETAINED
GREEN ROOF	0.32	0.95	1104	2900	2.63	1796	0.14
PERMEABLE PAVEMENT	0.10	0.95	345	203	0.59	0	0.00
BIORETENTION (TREES)	0.33	0.95	6656	12284	3.20	2504	0.20
DISCONNECTION TO SWM PLANTER	0.25	0.95	862	1350	1.57	488	0.04
*SHALL NOT EXCEED 3.2" WHEN CONSIDERING THE LEED SPECIFIED RAINFALL EVENT					TOTAL EXCESS VOL	4788	0.38

OVERALL APPLICATION BREAKDOWN BY PRACTICE

LOW IMPACT DEVELOPMENT PRACTICE	INCHES CONTRIBUTED TO OVERALL	TIER
GREEN ROOF - EXTENSIVE	0.04 IN	TIER 1
PERMEABLE PAVEMENT	0.02 IN	
BIORETENTION (TREES)	0.42 IN	
RAINFALL NOT CONVERTED TO RUNOFF	0.28 IN	TIER 3
GREEN ROOF - INTENSIVE	0.05 IN	TIER 3
DISCONNECTION TO SWM PLANTER	0.07 IN	
TOTAL	0.87 IN	

OVERALL APPLICATION BREAKDOWN BY BLOCK

DRAINAGE AREA	BLOCK	INCHES RETAINED
A	BLDG D2A	0.94
B	PARK	0.95
C	PARKING LOT	0.84

D.A. 'A':
PROPOSED BUILDING D2A

D.A. 'B':
INTERIM PARK

D.A. 'C':
INTERIM BLOCK 1

Application No: **FDP 2010-PR-014 D** Staff: **T Stru**

APPROVED DEVELOPMENT PLAN
(L_GDP) (L_CDP) (L_FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)

SEE PROFFERS DATED: **February 7, 2013**
DATE OF FINAL APPROVAL: **February 7, 2013** (L_BOS) (L_PPC) (L_BZA)

Comments: _____

Sheet 15 of 39

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DEPARTMENT OF PLANNING & ZONING

Application No: **FDP 2010-PR-014 D** Staff: **T Stru**

APPROVED DEVELOPMENT PLAN
(L_GDP) (L_CDP) (L_FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)

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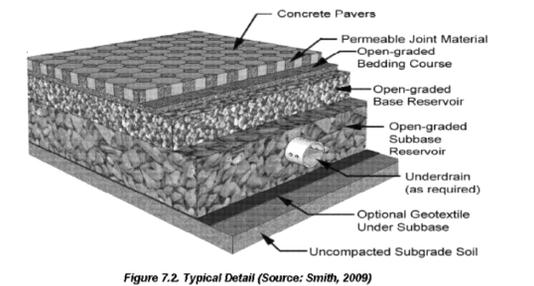
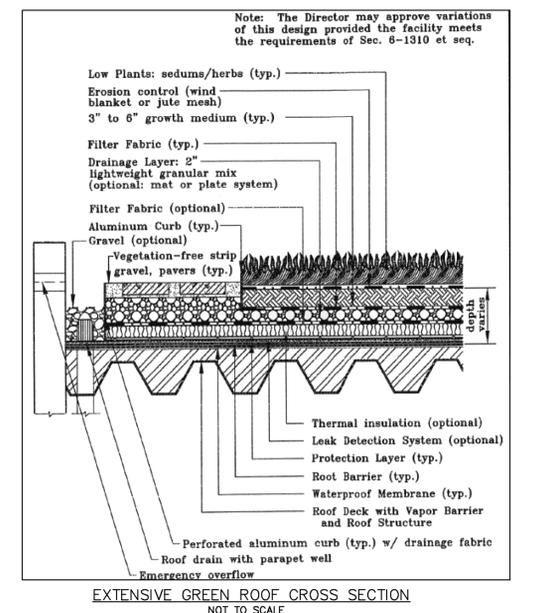
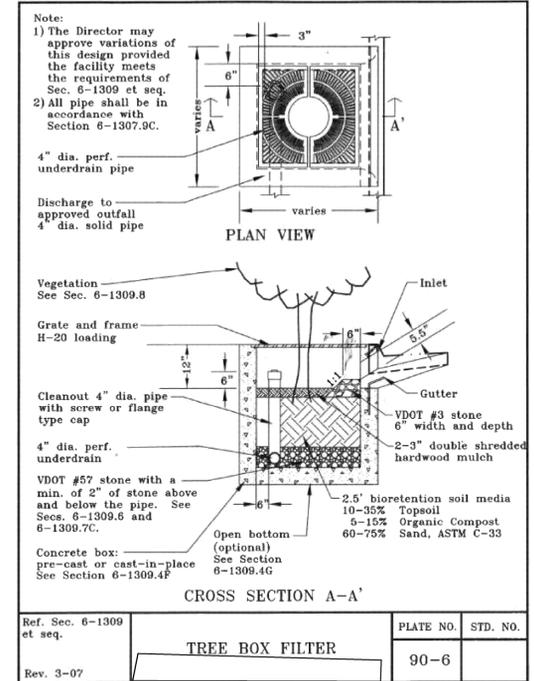
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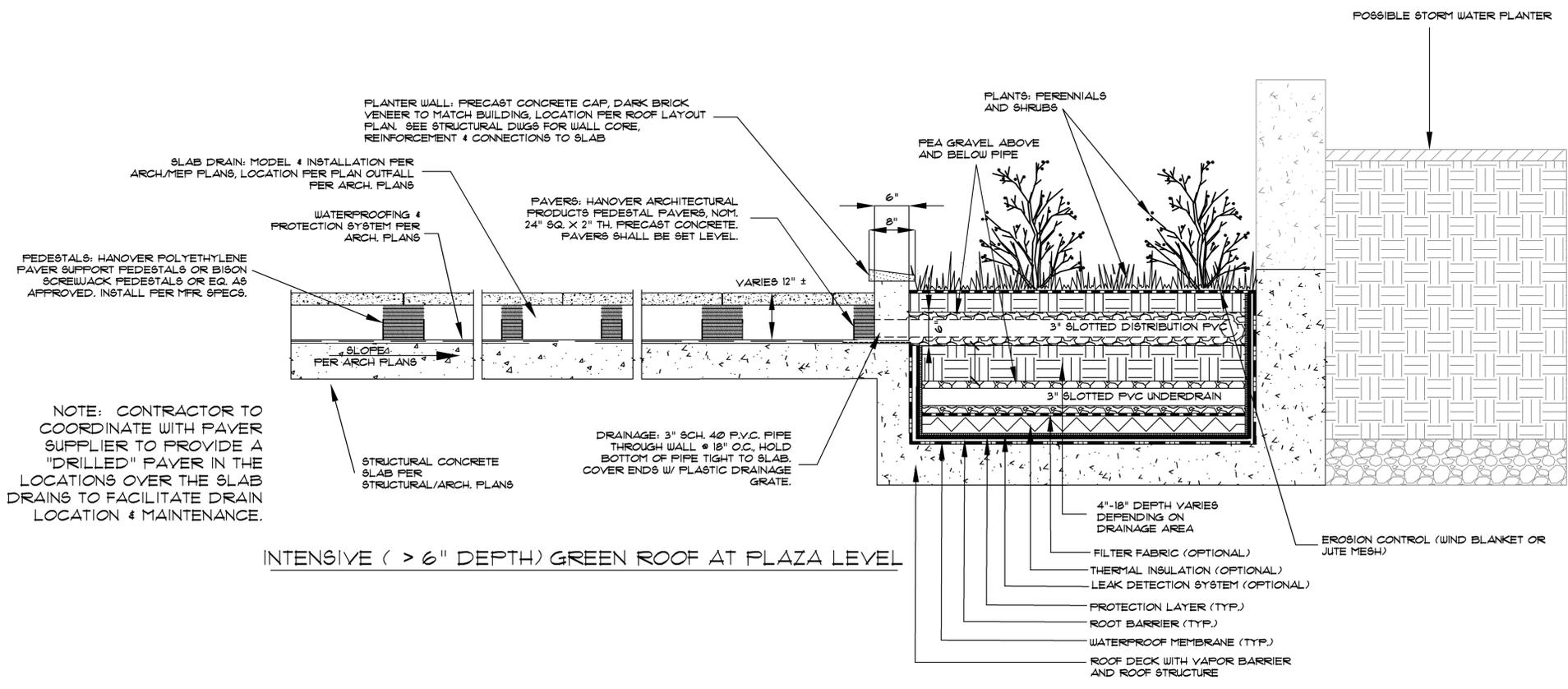
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NOT FOR CONSTRUCTION OR REGULATORY REVIEW

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



PERVIOUS PAVEMENT DETAIL



Application No: FDP 2010-PR-014 D Staff: T Stru

APPROVED DEVELOPMENT PLAN
(L_GDP) (L_CDP) (L_FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)

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Comments:

DEPARTMENT OF PLANNING & ZONING

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NUMBER	ISSUE	DATE
5	FDP SUBMISSION	01-28-13
4	FDP SUBMISSION	01-16-13
3	FDP SUBMISSION	01-11-13
2	FDP SUBMISSION	11-28-12
1	FDP SUBMISSION	07-21-12

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Tysons Corner, VA 22102

PROJECT

PLAN NORTH

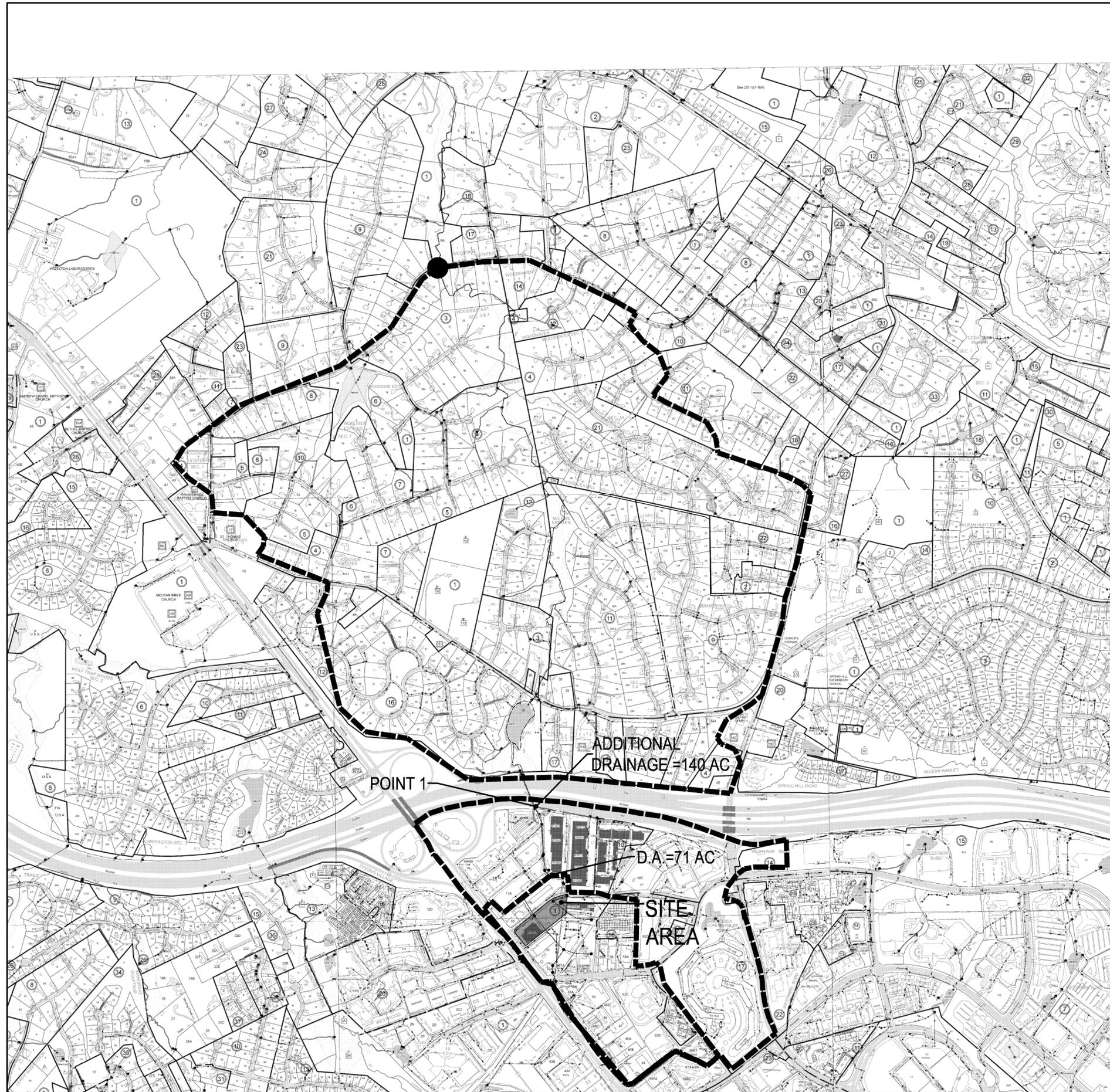
STORMWATER MANAGEMENT DETAILS

TITLE

C.14

DRAWING NUMBER

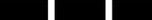
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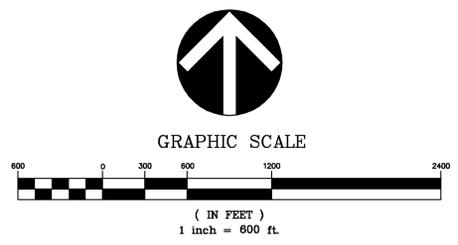


OUTFALL DESCRIPTIONS
 THIS WATERSHED MAP INCLUDES THE FDP SITE AREA PLUS CONTRIBUTING SUBSHEDES AS SHOWN ON THIS PLAN. THE ADEQUACY OF OUTFALL FOR THE FDP AREA IS BASED UPON THE PREMISE THAT AN ADEQUATE OUTFALL IS IN PLACE. THE OUTFALL FOR N1 IS A PART CLOSED CONDUIT SYSTEM FLOWING NORTH WHERE IT CONVERGES WITH NEIGHBORHOOD 2. THE COMBINED OUTFALL RE-ENTERS A CLOSED CONDUIT SYSTEM FLOWING NORTH TO A BOX CULVERT CONVEYING RUNOFF FROM APPROXIMATELY 211 ACRES UNDER THE DULLES ACCESS ROAD. THE OUTFALL BECOMES FLOOD PLAIN AT THE DULLES ACCESS ROAD BOX CULVERT OUTFALL ON THE NORTH SIDE OF THE ROAD. THIS FLOW IS CONVEYED TO EXISTING REGIONAL POND D-67 (PULTE MCLEAN 100). THE POND OUTFALLS INTO ROCKY RUN, CONTINUING NORTH TO A POINT THAT HAS A DRAINAGE AREA OF 713 ACRES. THE STUDY AREA INDICATED ON THIS SHEET IS APPROXIMATELY 924 ACRES, WHICH IS WELL OVER THE REQUIRED ONE SQUARE MILE (640 ACRES). PLEASE NOTE THAT AT SITE PLAN, IT IS ANTICIPATED THAT THE EXTENT OF THE ADEQUATE OUTFALL REVIEW SHALL BE TO POINT 1 WHICH REPRESENTS A CONFLUENCE OF 90% OR MORE PER PFM 6-0203.2A.

LEGEND:

 DENOTES FDP AREA

 DRAINAGE LINE



Application No: FDP 2010-PR-014 D Staff: T Stru
 APPROVED DEVELOPMENT PLAN
 (L_GDP) (L_CDP) (L_FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)
 SEE PROFFERS DATED:
 SEE CONDITIONS DATED: February 7, 2013
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 Comments:
 PLANNING & ZONING Sheet 17 of 39

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CONTROR
PLANNING & ZONING

CONTROR
ADEQUATE OUTFALL PLAN
C.15

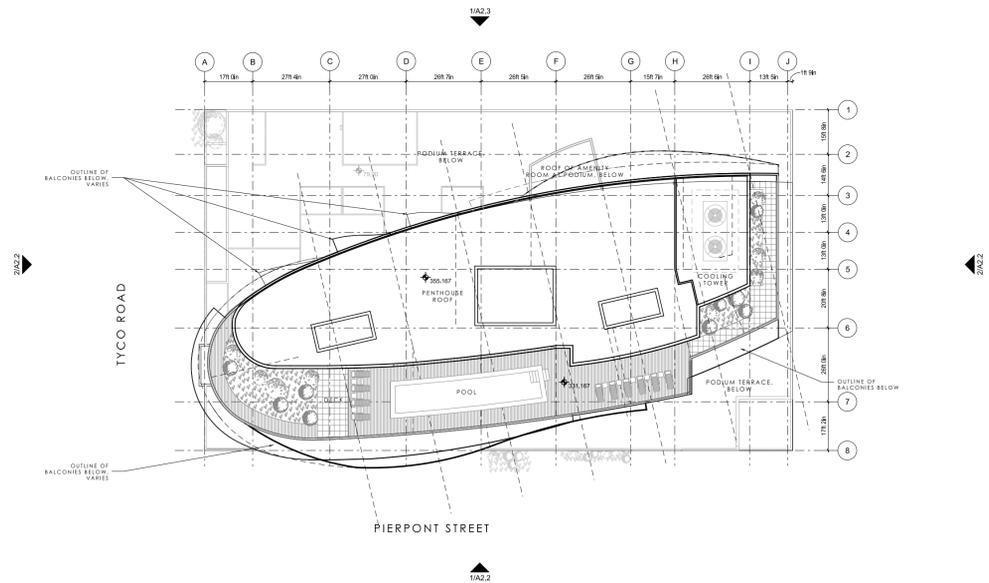
CONTROR
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 NOT FOR CONSTRUCTION OR REGULATORY REVIEW

To facilitate Fire Department review of rezoning requests, applicants should submit a Fire Access Sheet that depicts the below listed following features. For those applications that involve only CDPs, specific details may not be known at application review, and the provisions listed below should be addressed in the proffers and reflected on the subsequent FDPs.

- 1) All roads proposed by the project, as well as adjoining roads; the classifications of the roads (i.e. arterial, collector, etc.) should be noted.
- 2) Location and dimensions of all fire access lanes and turnarounds; vehicle access to the rear of buildings, including interior courtyards for stick-build, donut-shaped buildings, needs to be shown.
- 3) Arrow diagrams indicating where emergency vehicles can access buildings.
- 4) Dimensions of the distance between the portions of the roadway that are accessible to fire trucks and the facades of the buildings. The target distance is between 15 and 30 feet separation.
- 5) Improvements planned for the area between the portions of the roadway that are accessible to fire trucks and the facades of the buildings, including parking lanes, garage podiums, landscaped areas, steep slopes, sidewalks, plazas, yards, outdoor seating areas, steps, planters, sculptures, etc.
- 6) Clear identifications of building footprints, cantilevered extensions, penthouses, balconies, patios, etc.
- 7) Heights of the proposed buildings; for buildings with multiple heights due to step backs, the height and number of stories of each building segment should be clearly noted.
- 8) Location of overhead utility lines.
- 9) Identification of construction type for each building; for multiple buildings located on a single garage podium, the construction type for each building must be identified—the garage podium can be identified as a block, with each building identified separately. Each portion of structure with a different construction type is considered a separate building. Structures that are separated by a fire wall are also considered separate buildings.
- 10) Type of building skin material (combustible/non-combustible), type of sprinklers (Type 13; if 13R please explain), and roof type (Class A preferred).
- 11) Location of proposed building entrances, both pedestrian and vehicular; access doors and elevators, including medevac elevators, should be shown on the FDP. Also, any interior routes available for emergency vehicle use, such as suitably sized driveways through parking garages and courtyards, should be delineated.
- 12) Loading areas and whether they are accessible to emergency vehicles.
- 13) Access to active courtyards (especially with pools, tennis courts, etc.) needs to be shown—how will the medical staff get there, with their equipment, quickly?
- 14) All Fire Access plans must contain their coordinating CDP reference number. This is required for the Fire Marshal's review.

NOTES:

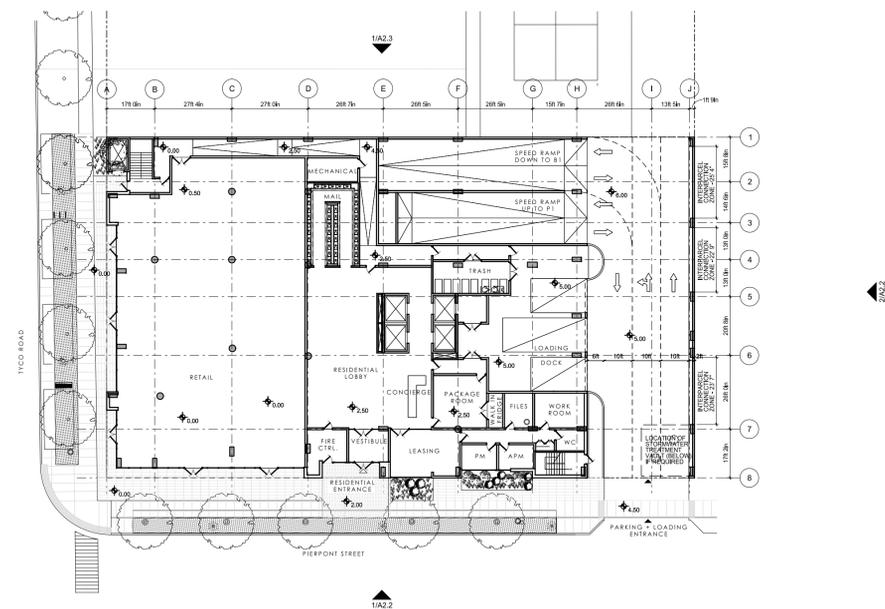
1. MAXIMUM BUILDING HEIGHTS INCLUDE PENTHOUSE AND ARCHITECTURAL FEATURES.
2. REFER TO LANDSCAPE DRAWINGS FOR THE EXTENT OF DESIGN FOR THE ROOF AREA AND STREETSCAPES.
3. REFER TO CIVIL DRAWINGS FOR THE SWM DESIGN, STREET DESIGN AND SECTIONS.
4. THE CONFIGURATION OF INTERIOR SPACES AS SHOWN ARE CONCEPTUAL AND SUBJECT TO FINAL ARCHITECTURAL AND ENGINEERING DESIGN.
5. ELEVATIONS ARE ILLUSTRATIVE AND ALL BUILDING MATERIALS ARE SUBJECT TO CHANGE PROVIDED THAT THE GENERAL QUALITY AND CHARACTERISTICS ARE MAINTAINED.



ROOF PLAN

3

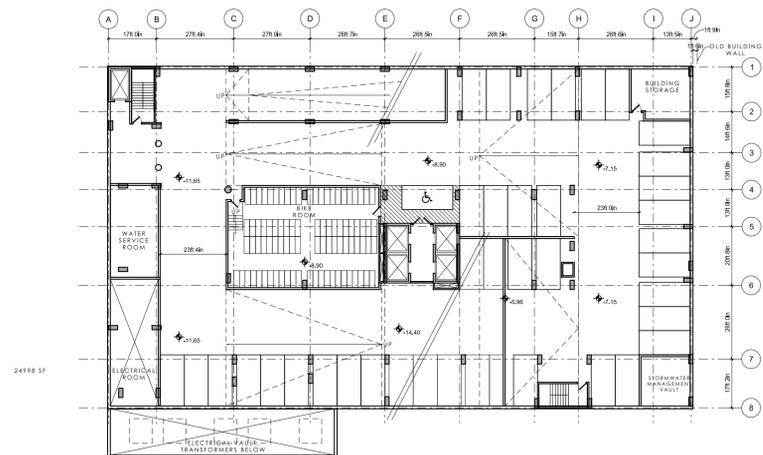
1" = 30'-0"



GROUND FLOOR

2

1" = 30'-0"



LEVEL B1
BELOW GRADE PARKING

1

1" = 30'-0"

Application No: **FDP 2010-PR-014 D** Staff: **T Stru**
APPROVED DEVELOPMENT PLAN
 (L_GDP) (L_CDP) (X_FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)
 SEE PROFFERS DATED:
 SEE CONDITIONS DATED: **February 7, 2013**
 Date of Final Approval: **February 7, 2013** (X_BOS) (X_PC) (L_BZA)
 Comments:
 DEPARTMENT OF PLANNING & ZONING
 Sheet 19 of 39

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LANDSCAPE ARCHITECT

NUMBER	ISSUE	DATE
2	FDP RESUBMISSION	01-28-13
1	FDP SUBMISSION	07-31-12

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 Tysons Corner, VA 22102

PROJECT

PLAN NORTH

0 5' 10' 15' 20' 25' 30' 35' 40' 45' 50' 55' 60'

1/8" = 1'-0" SCALE

BUILDING PLANS (1 - 3)
 TITLE

A2.0
 DRAWING NUMBER

NOTES:

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Application No: **FDP 2010-PR-014 D** Staff: **T Stru**

APPROVED DEVELOPMENT PLAN
 (L_GDP) (L_COP) (L_FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)

SEE PROFFERS DATED: **February 7, 2013**
 SEE CONDITIONS DATED: **February 7, 2013**
 Date of Final Approval: **February 7, 2013** (L_BOS) (L_PC) (L_BZA)

Comments: **PLANNING & ZONING** Sheet 21 of 39

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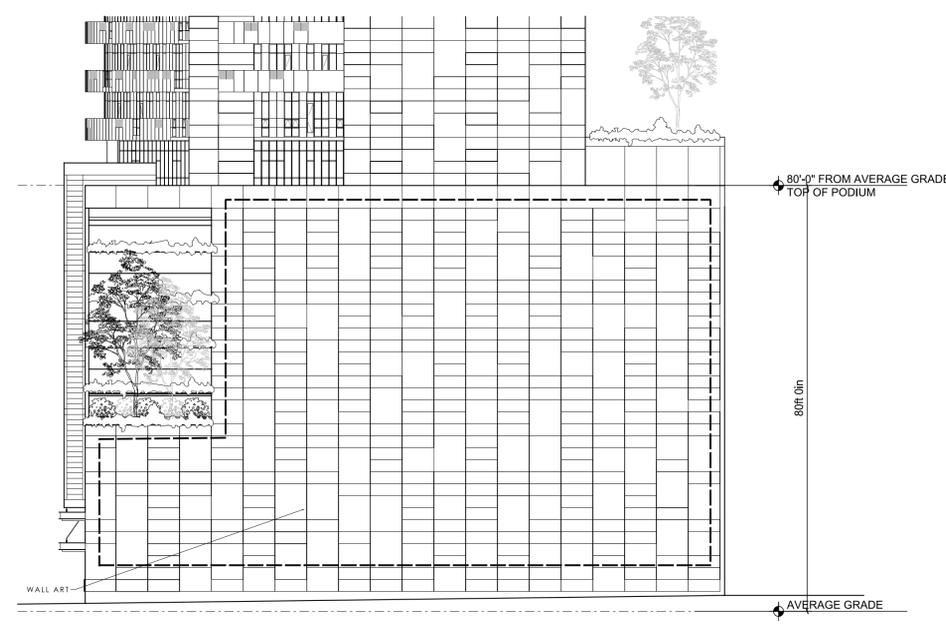
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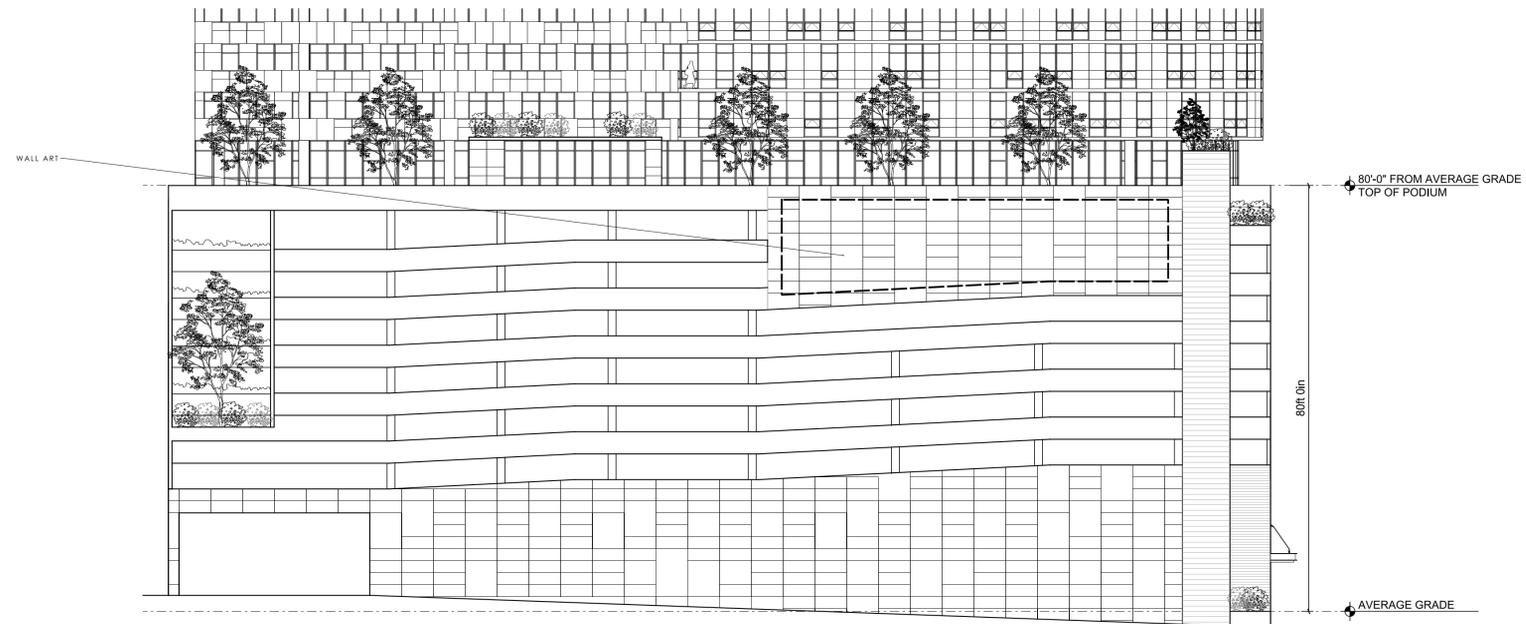
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EAST ELEVATION - BASE

1/16" = 1'-0"

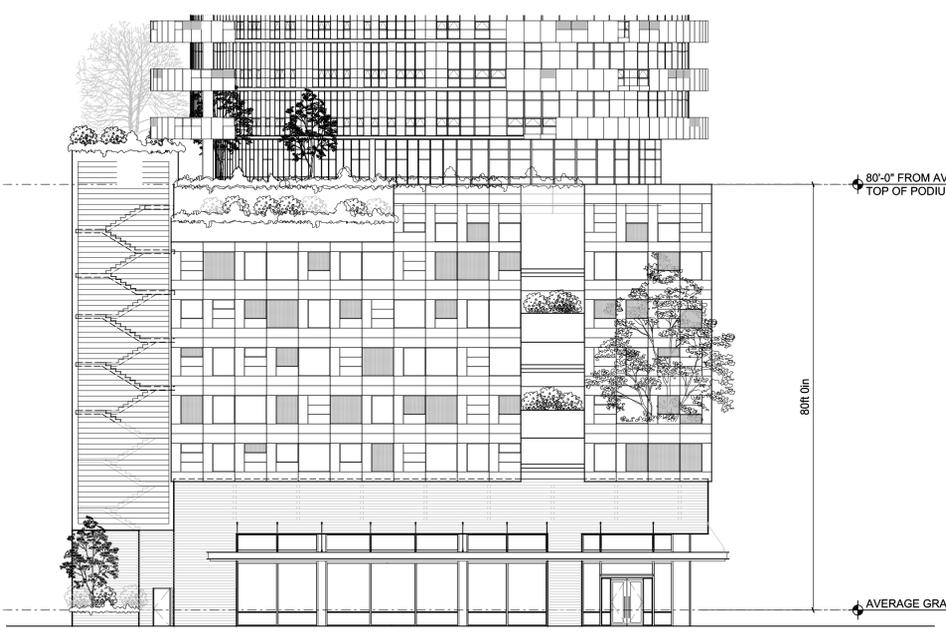
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NORTH ELEVATION - BASE

1/16" = 1'-0"

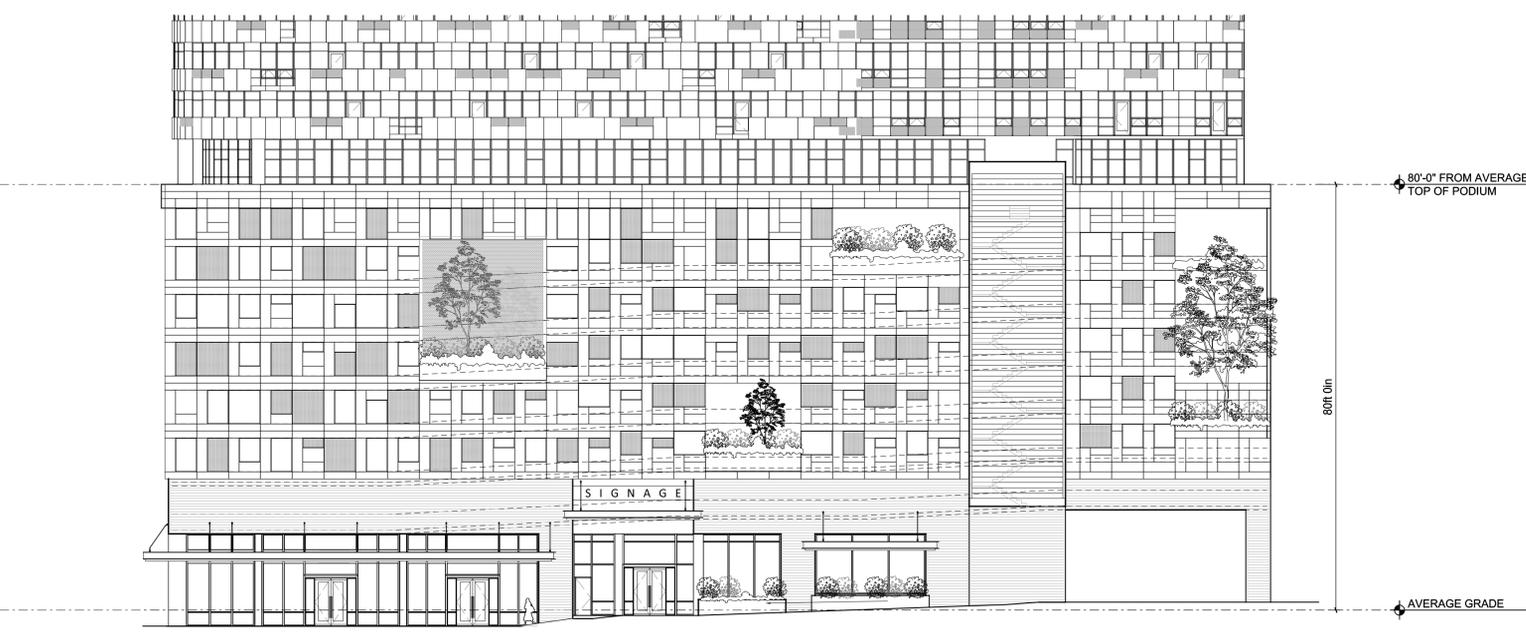
3



WEST ELEVATION - BASE

1/16" = 1'-0"

2



SOUTH ELEVATION - BASE

1/16" = 1'-0"

1

2	FDP RESUBMISSION	01-28-13
1	FDP SUBMISSION	07-31-12
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SITE D2A Spring Hill Station Tysons Corner, VA 22102		
PROJECT		
PLAN NORTH		
0 5 10 15 Feet 1/8" = 1'-0" SCALE		
ENLARGED ELEVATIONS		
TITLE		
A2.2		
DRAWING NUMBER		

NOTES:

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WEST ELEVATION

2

1" = 20'-0"



SOUTH ELEVATION

1

1" = 20'-0"

Application No: **FDP 2010-PR-014 D** Staff: **T Stru**

APPROVED DEVELOPMENT PLAN
 (L_GDP) (L_CDP) (&FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)

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Sheet 22 of 39

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PROJECT

PLAN NORTH

ILLUSTRATIVE ELEVATIONS

A2.3

DRAWING NUMBER

NOTES:

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 Sheet 23 of 39

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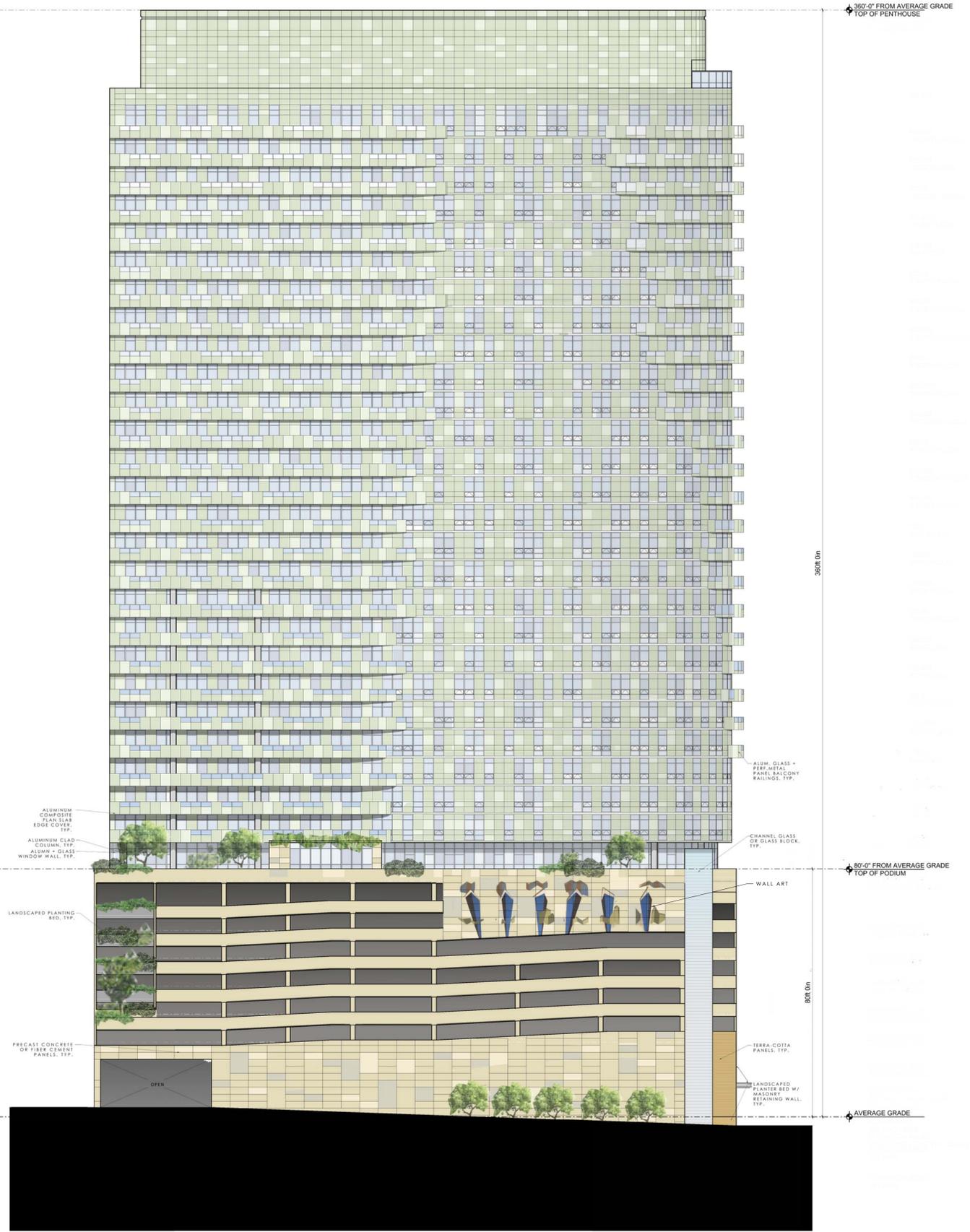
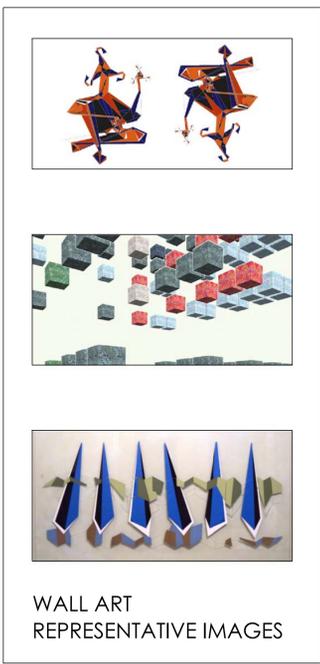
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LANDING ATTORNEY



EAST ELEVATION

2

1" = 20'-0"

NORTH ELEVATION

1

1" = 20'-0"

NUMBER	ISSUE	DATE
2	FDP RESUBMISSION	01-28-13
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PROJECT

PLAN NORTH

ILLUSTRATIVE ELEVATIONS

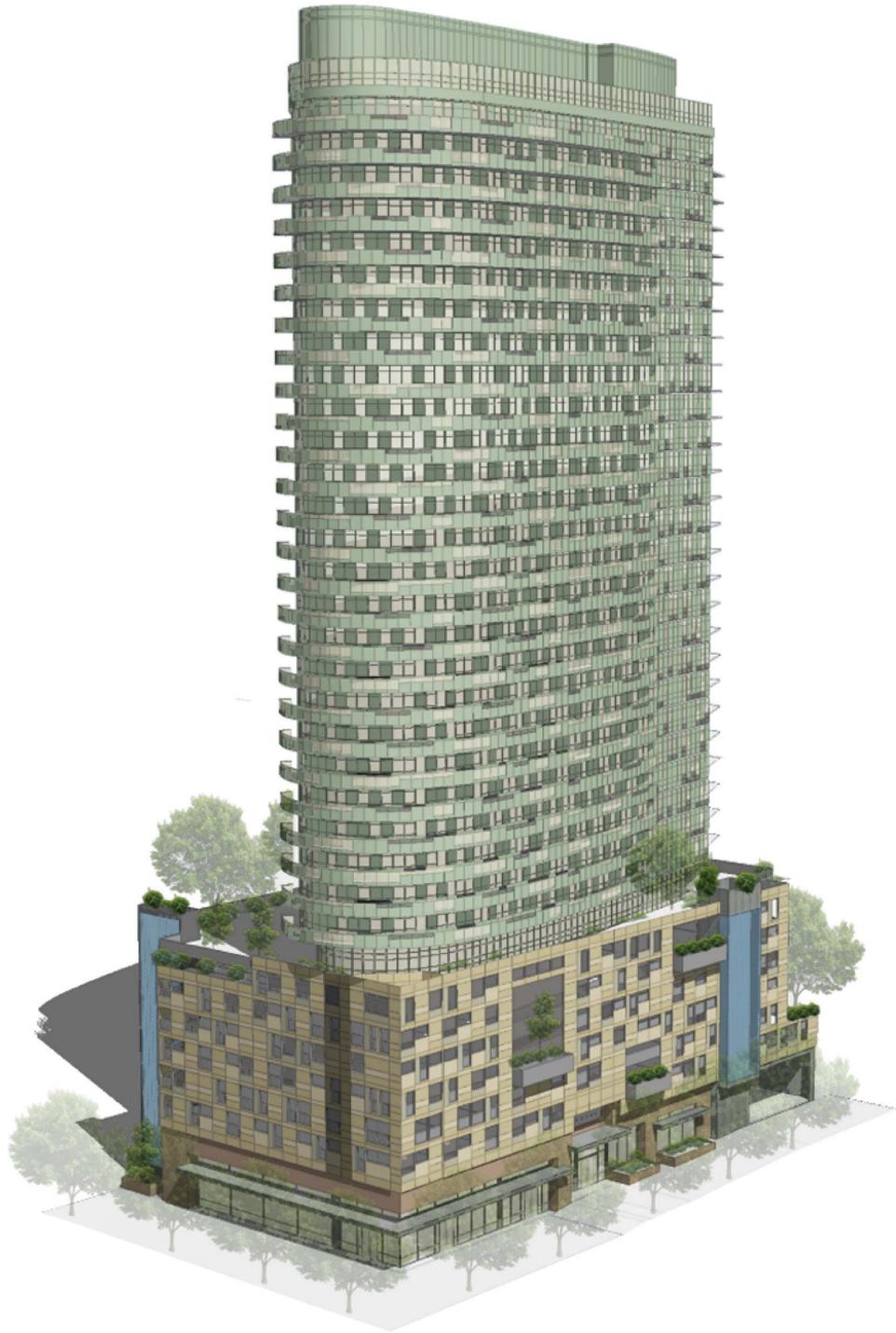
A2.4

DRAWING NUMBER

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 Comments:
 DEPARTMENT OF PLANNING & ZONING
 Sheet 24 of 39



SOUTHWEST CORNER, OVERALL VIEW

2



ALTERNATIVE SCHEME: 18 RESIDENTIAL FLOORS

4



FULL SIZE SCHEME: 27 RESIDENTIAL FLOORS

3



SOUTHWEST CORNER, ENLARGED VIEW AT BASE

1

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 PROJECT

PLAN NORTH

ILLUSTRATIVE PERSPECTIVES
 TITLE

A2.5
 DRAWING NUMBER



MARCH 21 - 09:00 AM



JUNE 21 - 09:00 AM



DECEMBER 21 - 09:00 AM



MARCH 21 - 12:00 PM



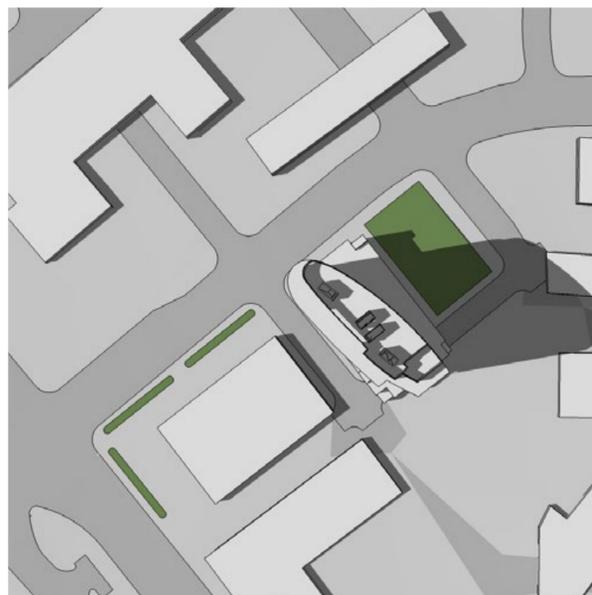
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DECEMBER 21 - 12:00 PM



MARCH 21 - 03:00 PM



JUNE 21 - 03:00 PM



DECEMBER 21 - 03:00 PM

Application No: **FDP 2010-PR-014 D** Staff: **T Stru**

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PLANNING & ZONING Sheet 25 of 39

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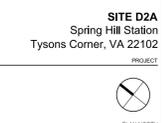
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SOLAR STUDIES
 TITLE

A2.6
 DRAWING NUMBER

Spring Hill Station - Total Park Space Provided		
Neighborhood 1		
Public Urban Parks	54,850 sq. ft.	
Public Sky Parks	42,500 sq. ft.	
Total	2.23 Acres	
Neighborhood 2		
Public Urban Parks	19,300 sq. ft.	
Total	0.44 Acres	
Neighborhood 3		
Public Urban Parks	21,300 sq. ft.	
Total	0.49 Acres	
Total Public Parks	3.17 Acres	
Off-Site		
Public Urban Park	Total	2.81 Acres
Total Public Park		5.98 Acres
In Addition, Spring Hill Station is providing Private Sky Parks.		
Neighborhood 1	0.25 Acres	
Neighborhood 2	0.43 Acres	
Neighborhood 3	1.11 Acres	
Total Private Sky Parks	2.47 Acres*	
*Additional Private Park space may be provided with future FDP sets		
Note: Sky Parks denote parks above street level, built on structures. All other parks are at-grade.		



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NUMBER	ISSUE	DATE
1	PDP SUBMISSION	07-31-12
2	PDP SUBMISSION	11-26-12
3	PDP SUBMISSION	06-14-13
4	PDP SUBMISSION	01-16-13
5	PDP SUBMISSION	07-28-13

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GREYSTAR

GREYSTAR

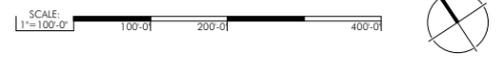
GREYSTAR

Application No: **FDP 2010-PR-014 D** Staff: **T Stru**

APPROVED DEVELOPMENT PLAN
 (_GDP) (_CDP) (x_FDP) (_PRC) (_DP) (_CP) (_SE) (_CSP) (_SP) (_VC)
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 SEE CONDITIONS DATED: **February 7, 2013**
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PLANNING & ZONING

Sheet 26 of 39





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2	FDP SUBMISSION	01-28-12
3	FDP SUBMISSION	01-11-13
4	FDP SUBMISSION	01-18-13
5	FDP SUBMISSION	01-28-13

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NEIGHBORHOOD 1
 SIGHT DISTANCE
 AND UTILITIES

L-1.02A
REVISION NUMBER

Application No: **FDP 2010-PR-014 D** Staff: **T Stru**

APPROVED DEVELOPMENT PLAN
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Comments:

DEPARTMENT OF PLANNING & ZONING

Sheet 27 of 39



LANDSCAPE COMPUTATIONS N1		
13-201: INTERIOR PARKING LOT LANDSCAPE CALCULATIONS		
No Surface Parking Lots		
Interior Parking Lot Landscaping Not Required		
13-202: PERIPHERAL PARKING LOT LANDSCAPE CALCULATIONS		
No Surface Parking Lots		
Peripheral Parking Lot Landscaping Not Required		
13-301: TRANSITIONAL SCREENING AND BARRIERS		
Property Zoning District: PTC/HC		
Adjacent Zoning Districts: I-5, C-7, PDC, PTC/HC		
Transitional Screening and Barriers are Not Required		
13-401: TREE COVER CALCULATIONS		
Table 12.12 10-year Tree Canopy Calculation Worksheet		
Step		Totals
A. Tree Preservation Target and Statement		
A1	See Table 12.3 on Sheet C-8	
B. Tree Canopy Requirement		
B1	Gross Site Area	429,545
B2	Land Dedicated to park, road frontage	0
B3	Optional Dedications (SWM)	0
B4	Adjusted Gross Site Area	429,545
B5	Site Zoning PTC	
B6	Percentage of 10-year Tree Canopy Cover Required	10%
B7	Area of 10-year tree canopy cover	42,955
B8	Modification of 10-year tree canopy cover requested	Yes
B9	Plan sheet where modification is requested	C-3
C. Tree Preservation		
C1	Tree Preservation Target	0
C2	Total Canopy area meeting standards of 12-0200	0
C3	C2 X 1.25	0
C4	Total canopy area provided by unique or valuable forest or woodland communities	0
C5	C4 X 1.25	0
C6	Total of canopy are provided by "Heritage," "Memorial," "Specimen," or "Street" Trees	0
C7	C6 X 1.5	0
C8	Canopy area of trees within Resource Protection Areas and 100-year floodplains	0
C9	C8 X 1.0	0
C10	Total of C3, C5, C7 and C9	0
D. Tree Planting		
D1	Area of Canopy met through tree planting (B7-C10)	44,400
D2	Area of canopy Planted for air quality benefits	0
D3	X 1.5	0
D4	Area of canopy planted for energy conservation benefits	0
D5	X 1.5	0
D6	Area of canopy planted for water quality benefits	0
D7	X 1.5	0
D8	Area of canopy planted for wildlife benefits	0
D9	X 1.5	0
D10	Area of canopy provided by native trees	0
D11	X 1.5	0
D12	Area of canopy provided by improved cultivars and varieties	0
D13	X 1.25	0
D14	Area of canopy provided by seedlings	0
D15	X 1.0	0
D16	Percent of D14 represented by D 15	0
D17	Total of canopy area provided through tree planting	0
D18	Is an off site planting relief requested?	No
D19	Tree bank or Trust Fund?	No
D20	Canopy area requested to be provided through off site banking or trust fund	0
D21	Amount to be deposited into the Tree Preservation and Planting Fund	0
E. Total of 10-year Tree Canopy Provided		
E1	Total of Canopy Provided through tree preservation (C10)	0
E2	Total of canopy area provided through tree planting (D17)	44,400
E3	Total of canopy area provided through off site mechanism (D19)	0
E4	Total of 10-year Tree Canopy Provided	44,400
* Note: Tree Cover Credit calculations for A1 are part of overall Neighborhoods 1, 2 & 3 Canopy Coverage calculations for the Tysons Spring Hill Station Project. Any Excess Tree Cover provided on a parcel shall go towards Tree Cover Credit on other Parcel		

LANDSCAPE COMPUTATIONS N2		
13-201: INTERIOR PARKING LOT LANDSCAPE CALCULATIONS		
No Surface Parking Lots		
Interior Parking Lot Landscaping Not Required		
13-202: PERIPHERAL PARKING LOT LANDSCAPE CALCULATIONS		
No Surface Parking Lots		
Peripheral Parking Lot Landscaping Not Required		
13-301: TRANSITIONAL SCREENING AND BARRIERS		
Property Zoning District: PTC/HC		
Adjacent Zoning Districts: I-5, C-7, PDC, PTC/HC		
Transitional Screening and Barriers are Not Required		
13-401: TREE COVER CALCULATIONS		
Table 12.12 10-year Tree Canopy Calculation Worksheet		
Step		Totals
A. Tree Preservation Target and Statement		
A1	See Table 12.3 on Sheet C-8	
B. Tree Canopy Requirement		
B1	Gross Site Area	322,035
B2	Land Dedicated to park, road frontage	0
B3	Optional Dedications (SWM)	0
B4	Adjusted Gross Site Area	322,035
B5	Site Zoning PTC	
B6	Percentage of 10-year Tree Canopy Cover Required	10%
B7	Area of 10-year tree canopy cover	32,204
B8	Modification of 10-year tree canopy cover requested	Yes
B9	Plan sheet where modification is requested	C-3
C. Tree Preservation		
C1	Tree Preservation Target	3,198
C2	Total Canopy area meeting standards of 12-0200	3,309
C3	C2 X 1.25	4,136
C4	Total canopy area provided by unique or valuable forest or woodland communities	0
C5	C4 X 1.25	0
C6	Total of canopy are provided by "Heritage," "Memorial," "Specimen," or "Street" Trees	0
C7	C6 X 1.5	0
C8	Canopy area of trees within Resource Protection Areas and 100-year floodplains	0
C9	C8 X 1.0	0
C10	Total of C3, C5, C7 and C9	4,136
D. Tree Planting		
D1	Area of Canopy met through tree planting (B7-C10)	29,100
D2	Area of canopy Planted for air quality benefits	0
D3	X 1.5	0
D4	Area of canopy planted for energy conservation benefits	0
D5	X 1.5	0
D6	Area of canopy planted for water quality benefits	0
D7	X 1.5	0
D8	Area of canopy planted for wildlife benefits	0
D9	X 1.5	0
D10	Area of canopy provided by native trees	0
D11	X 1.5	0
D12	Area of canopy provided by improved cultivars and varieties	0
D13	X 1.25	0
D14	Area of canopy provided by seedlings	0
D15	X 1.0	0
D16	Percent of D14 represented by D 15	0
D17	Total of canopy area provided through tree planting	0
D18	Is an off site planting relief requested?	No
D19	Tree bank or Trust Fund?	No
D20	Canopy area requested to be provided through off site banking or trust fund	0
D21	Amount to be deposited into the Tree Preservation and Planting Fund	0
E. Total of 10-year Tree Canopy Provided		
E1	Total of Canopy Provided through tree preservation (C10)	4,136
E2	Total of canopy area provided through tree planting (D17)	29,100
E3	Total of canopy area provided through off site mechanism (D19)	0
E4	Total of 10-year Tree Canopy Provided	33,236
* Note: Tree Cover Credit calculations for A1 are part of overall Neighborhoods 1, 2 & 3 Canopy Coverage calculations for the Tysons Spring Hill Station Project. Any Excess Tree Cover provided on a parcel shall go towards Tree Cover Credit on other Parcel		

LANDSCAPE COMPUTATIONS N3		
13-201: INTERIOR PARKING LOT LANDSCAPE CALCULATIONS		
No Surface Parking Lots		
Interior Parking Lot Landscaping Not Required		
13-202: PERIPHERAL PARKING LOT LANDSCAPE CALCULATIONS		
No Surface Parking Lots		
Peripheral Parking Lot Landscaping Not Required		
13-301: TRANSITIONAL SCREENING AND BARRIERS		
Property Zoning District: PTC/HC		
Adjacent Zoning Districts: I-5, C-7, PDC, PTC/HC		
Transitional Screening and Barriers are Not Required		
13-401: TREE COVER CALCULATIONS		
Table 12.12 10-year Tree Canopy Calculation Worksheet		
Step		Totals
A. Tree Preservation Target and Statement		
A1	See Table 12.3 on Sheet C-8	
B. Tree Canopy Requirement		
B1	Gross Site Area	239,853
B2	Land Dedicated to park, road frontage	0
B3	Optional Dedications (SWM)	0
B4	Adjusted Gross Site Area	239,853
B5	Site Zoning PTC	
B6	Percentage of 10-year Tree Canopy Cover Required	10%
B7	Area of 10-year tree canopy cover	23,985
B8	Modification of 10-year tree canopy cover requested	Yes
B9	Plan sheet where modification is requested	C-3
C. Tree Preservation		
C1	Tree Preservation Target	0
C2	Total Canopy area meeting standards of 12-0200	0
C3	C2 X 1.25	0
C4	Total canopy area provided by unique or valuable forest or woodland communities	0
C5	C4 X 1.25	0
C6	Total of canopy are provided by "Heritage," "Memorial," "Specimen," or "Street" Trees	0
C7	C6 X 1.5	0
C8	Canopy area of trees within Resource Protection Areas and 100-year floodplains	0
C9	C8 X 1.0	0
C10	Total of C3, C5, C7 and C9	0
D. Tree Planting		
D1	Area of Canopy met through tree planting (B7-C10)	24,650
D2	Area of canopy Planted for air quality benefits	0
D3	X 1.5	0
D4	Area of canopy planted for energy conservation benefits	0
D5	X 1.5	0
D6	Area of canopy planted for water quality benefits	0
D7	X 1.5	0
D8	Area of canopy planted for wildlife benefits	0
D9	X 1.5	0
D10	Area of canopy provided by native trees	0
D11	X 1.5	0
D12	Area of canopy provided by improved cultivars and varieties	0
D13	X 1.25	0
D14	Area of canopy provided by seedlings	0
D15	X 1.0	0
D16	Percent of D14 represented by D 15	0
D17	Total of canopy area provided through tree planting	0
D18	Is an off site planting relief requested?	No
D19	Tree bank or Trust Fund?	No
D20	Canopy area requested to be provided through off site banking or trust fund	0
D21	Amount to be deposited into the Tree Preservation and Planting Fund	0
E. Total of 10-year Tree Canopy Provided		
E1	Total of Canopy Provided through tree preservation (C10)	0
E2	Total of canopy area provided through tree planting (D17)	24,650
E3	Total of canopy area provided through off site mechanism (D19)	0
E4	Total of 10-year Tree Canopy Provided	24,650
* Note: Tree Cover Credit calculations for A1 are part of overall Neighborhoods 1, 2 & 3 Canopy Coverage calculations for the Tysons Spring Hill Station Project. Any Excess Tree Cover provided on a parcel shall go towards Tree Cover Credit on other Parcel		

Application No: **FDP 2010-PR-014 D** Staff: **T Stru**

APPROVED DEVELOPMENT PLAN
 (L_GDP) (L_CDP) (L_FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)
 SEE PROFFERS DATED:
 SEE CONDITIONS DATED: **February 7, 2013**
 Date of Final Approval: **February 7, 2013** (L_BOS) (L_PC) (L_BZA)
 Comments:

PLANNING & ZONING

Sheet 29 of 39

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LANDSCAPE ARCHITECT

1	FDP SUBMISSION	01-31-12
2	FDP SUBMISSION	01-28-12
3	FDP SUBMISSION	01-11-12
4	FDP SUBMISSION	01-18-12
5	FDP SUBMISSION	01-28-12

NUMBER **ISSUE** **DATE**

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PROJECT

LANDSCAPE COMPUTATIONS

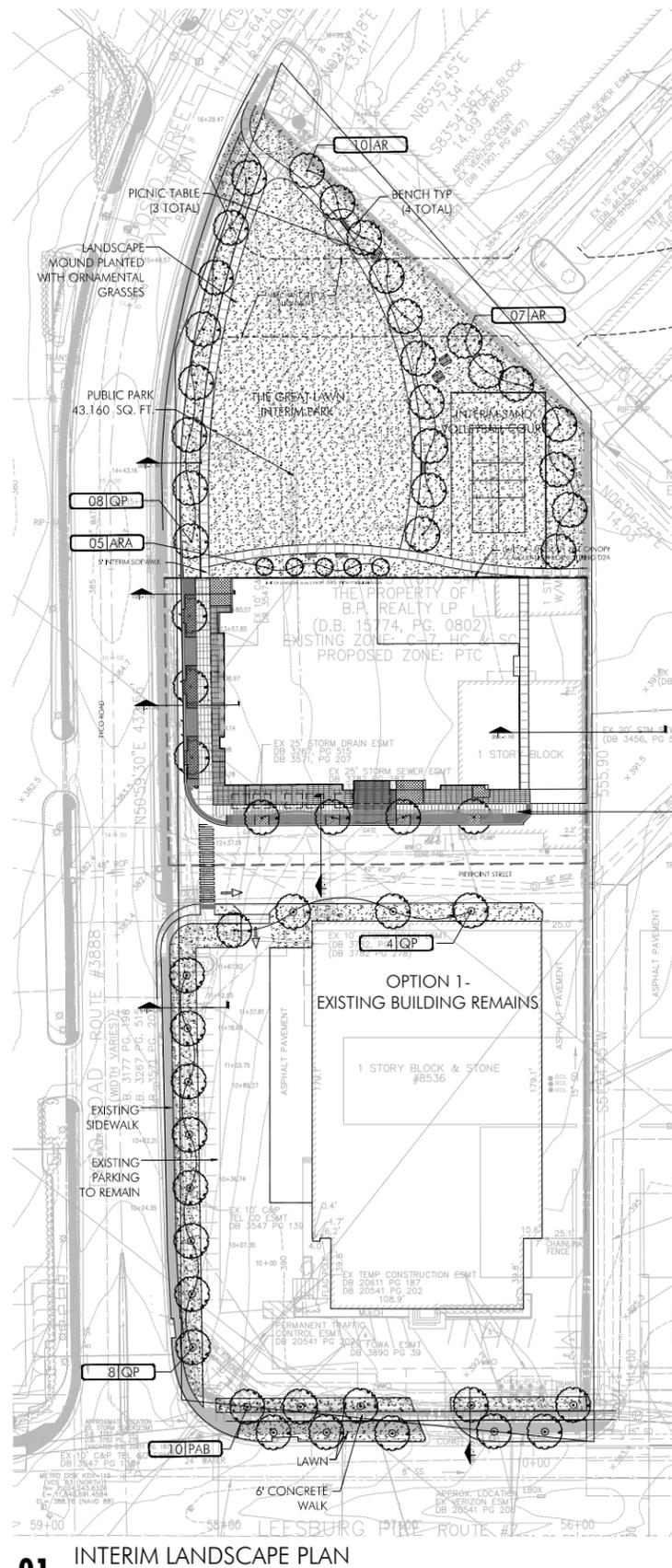
L-1.03

Application No: **FDP 2010-PR-014 D** Staff: **T Stru**

APPROVED DEVELOPMENT PLAN
 (L_GDP) (L_CDP) (L_FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)

SEE PROFFERS DATED:
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 Date of Final Approval: **February 7, 2013** (L_BOS) (L_PC) (L_BZA)

Comments:



01 INTERIM LANDSCAPE PLAN
 SCALE: 1" = 40'-0"

INTERIM PLANT SCHEDULE								
KEY	BOTANICAL NAME	COMMON NAME	Qty.	STOCK SIZE	STOCK TYPE	10-YE TREE CANOPY SQ. FT.	TREE CANOPY SUB-TOTAL SQ. FT.	REMARKS
Category IV Canopy Trees								
AR	Acer rubrum	Red Maple	17	3" cal.	58.5	250	4250	Single, straight trunk. Limbed up to 6'; asymmetrical
ARA	Acer rubrum 'Columnare'	Columnar Red Maple	5	3" cal.	58.5	75	375	Single, straight trunk. Limbed up to 6'; asymmetrical
PA	Platanus acerifolia	London Plane Tree	10	3" cal.	58.5	250	2500	Single, straight trunk. Limbed up to 6'; asymmetrical
QP	Quercus phellos	Willow-Oak	20	3" cal.	58.5	250	5000	Single, straight trunk. Limbed up to 6'; asymmetrical
UP	Ulmus parvifolia	European Elm	4	3" cal.	58.5	250	1000	Single, straight trunk. Limbed up to 6'; asymmetrical
TOTAL 10-YEAR TREE CANOPY PROVIDED BY PLANTING							13,125	

02 PLANT SCHEDULE FOR FDP AREA OUTSIDE OF D2A SITE

LANDSCAPE NOTES:

1. THE PROPOSED LANDSCAPE WILL BE USED TO MEET THE MINIMUM TREE COVER REQUIREMENTS. LOCATIONS, SPECIES AND QUANTITIES MAY BE ADJUSTED WITH FINAL DESIGN.
2. THE LANDSCAPE TREATMENT, DESIGN FEATURES, AND DETAILS MAY CHANGE WITH FINAL DESIGN PROVIDED THAT THE USE OF THE SPACE AND THE CHARACTER AND QUALITY OF THE FEATURES AND PLANTINGS REMAIN IN SUBSTANTIAL CONFORMANCE WITH THAT SHOWN.
3. UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE. FINAL LOCATIONS TO BE DETERMINED AT SITE PLAN.

SEE SHEETS L1.05, L1.06, L1.07 & L1.08 FOR LANDSCAPE PLANS OF D2A BUILDING

INTERIM LANDSCAPE COMPUTATIONS D1+D2A

13-201: INTERIOR PARKING LOT LANDSCAPE CALCULATIONS		
No Surface Parking Lots		
Interior Parking Lot Landscaping Not Required		
13-202: PERIPHERAL PARKING LOT LANDSCAPE CALCULATIONS		
No Surface Parking Lots		
Peripheral Parking Lot Landscaping Not Required		
13-301: TRANSITIONAL SCREENING AND BARRIERS		
Property Zoning District: PTC/HC		
Adjacent Zoning Districts: H5, C-7, PDC, PTHC		
Transitional Screening and Barriers are Not Required		
13-401: TREE COVER CALCULATIONS		
Table 12.12 10-year Tree Canopy Calculation Worksheet		
Step 1	Totals	
A. Tree Preservation Target and Statement		
A1	See Table 12.3 on Sheet C8	
B. Tree Canopy Requirement		
B1	Gross Site Area	153,296
B2	Land Dedicated to park, open space	0
B3	Optional Deductions (SVM)	0
B4	Adjusted Gross Site Area	153,296
B5	Site Zoning PTC	
B6	Percentage of 10-year Tree Canopy Cover Required	10%
B7	Area of 10-year tree canopy cover	15,329
B8	Modification of 10-year tree canopy cover requested	Yes
B9	Plan sheet where modification is requested	C-3
C. Tree Preservation		
C1	Tree Preservation Target	0
C2	Total Canopy area meeting standards of 12-0000	0
C3	C2 X 1.25	0
C4	Total canopy area provided by unique or valuable forest or woodland communities	0
C5	C4 X 1.25	0
C6	Total of canopy area provided by "Heritage," "Memorial," "Specimen," or "Street" Trees	0
C7	C6 X 1.5	0
C8	Canopy area of trees within Resource Protection Areas and 100-year floodplains	0
C9	C8 X 1.0	0
C10	Total of C3, C5, C7 and C9	0
D. Tree Planting		
D1	Area of Canopy met through tree planting (B7-C10)	13,125
D2	Area of canopy planted for air quality benefits	0
D3	X 1.5	0
D4	Area of canopy planted for energy conservation benefits	0
D5	X 1.5	0
D6	Area of canopy planted for water quality benefits	0
D7	X 1.5	0
D8	Area of canopy planted for wildlife benefits	0
D9	X 1.5	0
D10	Area of canopy provided by native trees	0
D11	X 1.5	0
D12	Area of canopy provided by improved cultivars and varieties	0
D13	X 1.25	0
D14	Area of canopy provided by seedlings	0
D15	X 1.0	0
D16	Percent of D14 represented by D15	0
D17	Total of canopy area provided through tree planting	13,125
D18	Is an off-site planting rate requested?	No
D19	Tree bank or Trust Fund?	No
D20	Canopy area requested to be provided through off-site banking or trust fund	0
D21	Amount to be deposited into the Tree Preservation and Planting Fund	0
E. Total of 10-year Tree Canopy Provided		
E1	Total of Canopy Provided through tree preservation (C10)	0
E2	Total of canopy area provided through tree planting (D17)	13,125
E3	Total of canopy area provided through off-site mechanism (D19)	0
E4	Total of 10-year Tree Canopy Provided	13,125

SCALE: 1" = 40'-0" 40'-0" 80'-0" 160'-0"

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LANDSCAPE ARCHITECT

NUMBER	ISSUE	DATE
1	FDP SUBMISSION	07-31-12
2	FDP SUBMISSION	11-28-12
3	FDP SUBMISSION	01-14-13
4	FDP SUBMISSION	01-18-13
5	FDP SUBMISSION	02-28-13

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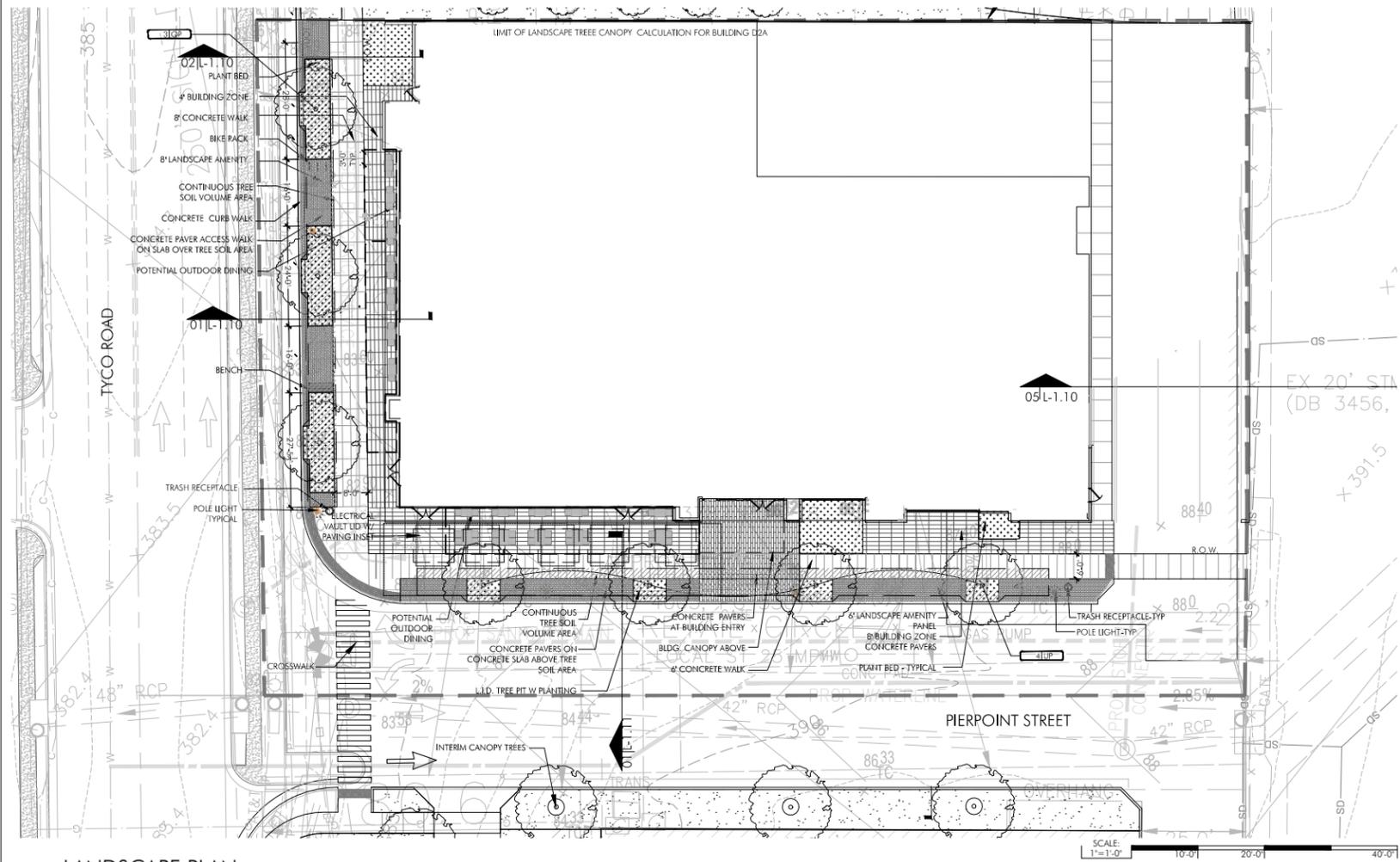
GREYSTAR

SITE D2A
 Spring Hill Station
 Tysons Corner, VA 22102

LANDSCAPE PLAN
 FDP AREA - OPTION 1

L-1.04
 DRAWING NUMBER

NOTE: SEE L-1.09 FOR PLANT SCHEDULE



01 LANDSCAPE PLAN

SCALE: 1/16" = 1'-0"

LANDSCAPE NOTES:

1. THE PROPOSED LANDSCAPE WILL BE USED TO MEET THE MINIMUM TREE COVER REQUIREMENTS. LOCATIONS, SPECIES AND QUANTITIES MAY BE ADJUSTED WITH FINAL DESIGN.
2. THE LANDSCAPE TREATMENT, DESIGN FEATURES, AND DETAILS MAY CHANGE WITH FINAL DESIGN PROVIDED THAT THE USE OF THE SPACE AND THE CHARACTER AND QUALITY OF THE FEATURES AND PLANTINGS REMAIN IN SUBSTANTIAL CONFORMANCE WITH THAT SHOWN.
3. UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE. FINAL LOCATIONS TO BE DETERMINED AT SITE PLAN.



NITTERHOUSE PG-6 NITTERHOUSE PG-23 NITTERHOUSE PG-32 NITTERHOUSE PG-45 B NITTERHOUSE PG-53 B



CONCRETE BOARDWALK PAVER ARCHITECTURAL CONCRETE PAVER

Application No: **FDP 2010-PR-014 D** Staff: **T Stru**

APPROVED DEVELOPMENT PLAN
 (_GDP) (_CDP) (x_FDP) (_PRC) (_DP) (_CP) (_SE) (_CSP) (_SP) (_VC)

SEE PROFFERS DATED:
 SEE CONDITIONS DATED: **February 7, 2013**
 Date of Final Approval: **February 7, 2013** (_BOS) (x_PC) (_BZA)

Comments:

DEPARTMENT OF PLANNING & ZONING

Sheet **31** of **39**



FORMS + SURFACES TRIO BENCH



LANDSCAPE FORMS BOLA BICYCLE RACK



LANDSCAPE FORMS POE TRASH / RECYCLING RECEPTACLE



SE'UX - SPANNER ARM SERIES LED LIGHT FIXTURE

02 STREET FURNITURE

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LANDSCAPE ARCHITECT

NUMBER	ISSUE	DATE
1	FDP SUBMISSION	07-21-12
2	FDP SUBMISSION	11-28-12
3	FDP SUBMISSION	02-12-13
4	FDP SUBMISSION	04-16-13
5	FDP SUBMISSION	05-28-13

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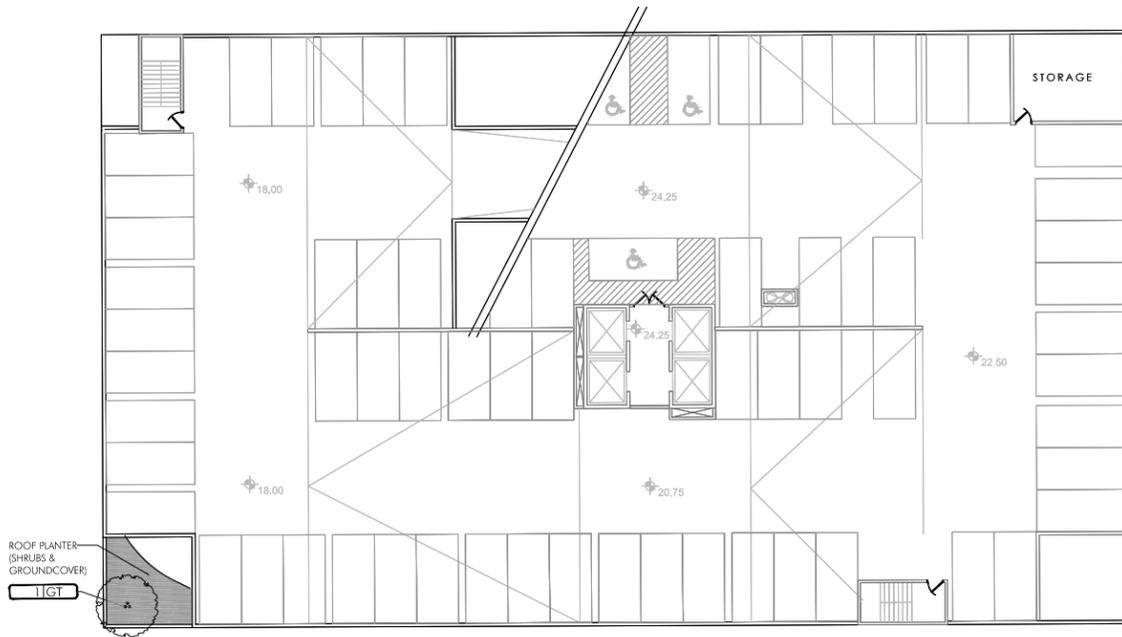
GREYSTAR

SITE D2A
Spring Hill Station
Tysons Corner, VA 22102

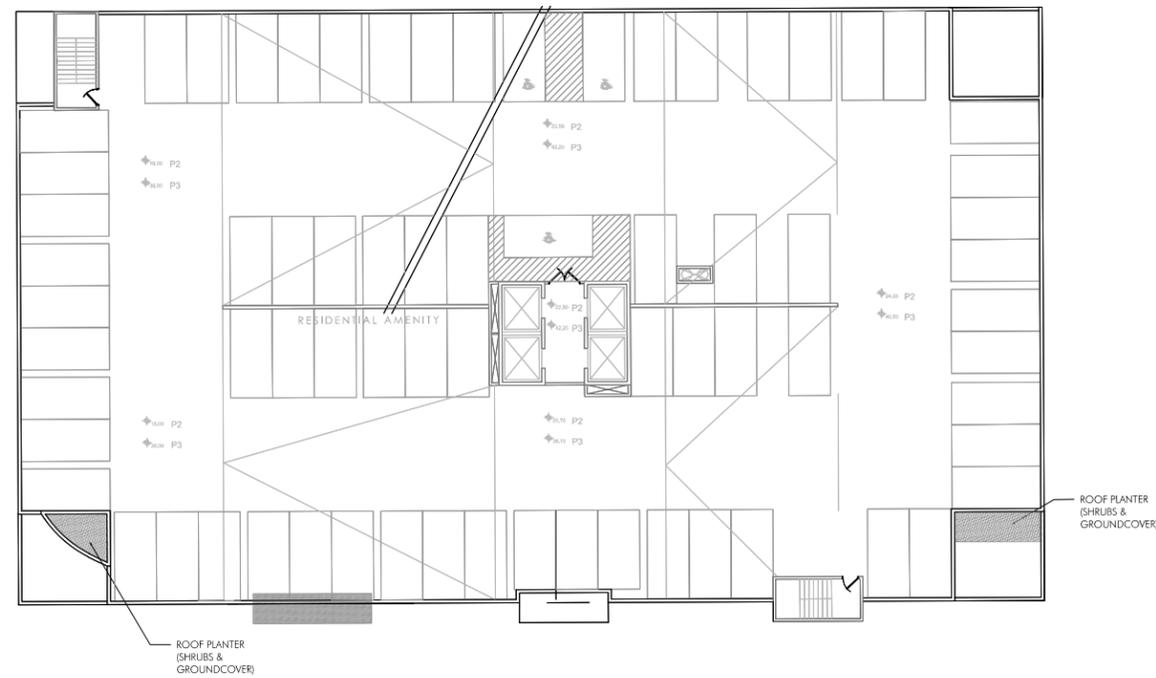
PROJECT

LANDSCAPE PLAN
GROUND LEVEL
BUILDING D2A

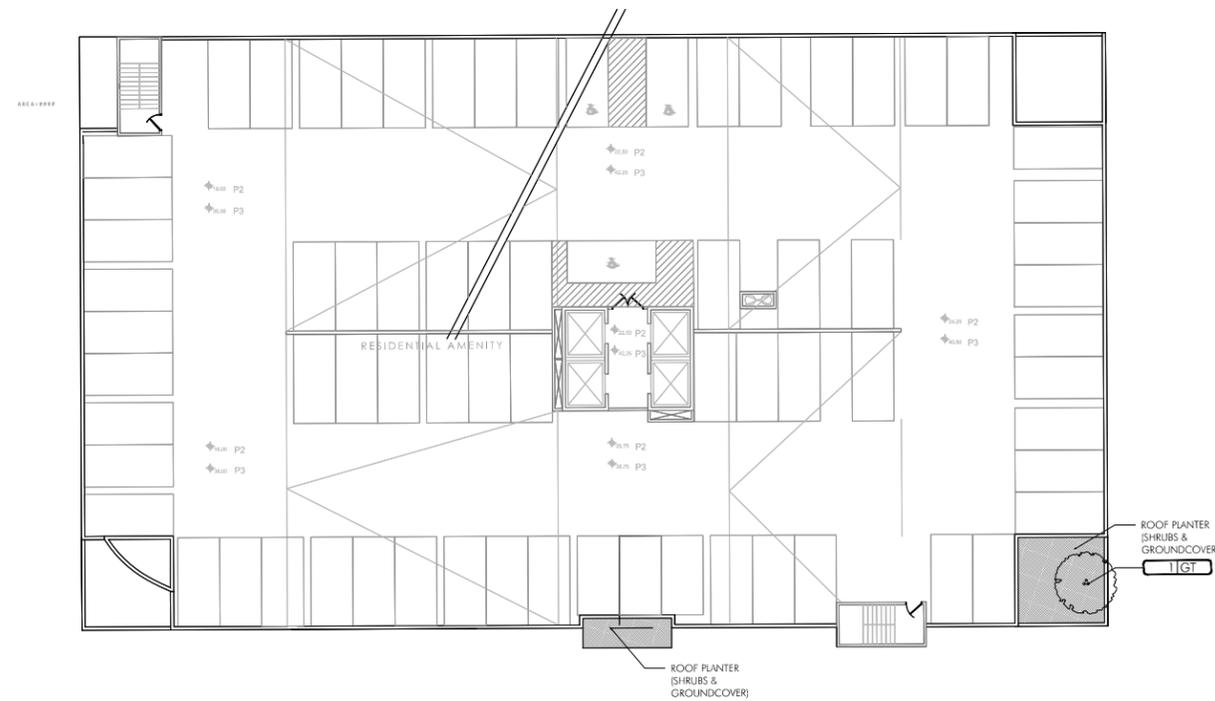
L-1.05



01 LANDSCAPE PLAN - GARAGE L2
SCALE: 1/16"=1'-0"



03 LANDSCAPE PLAN - GARAGE L5-6
SCALE: 1/16"=1'-0"



02 LANDSCAPE PLAN - GARAGE L3-4
SCALE: 1/16"=1'-0"

Application No: **FDP 2010-PR-014 D** Staff: **T Stru**

APPROVED DEVELOPMENT PLAN
 (_GDP) (_CDP) (~~x~~FDP) (_PRC) (_DP) (_CP) (_SE) (_CSP) (_SP) (_VC)

SEE PROFFERS DATED:
 SEE CONDITIONS DATED: **February 7, 2013**
 Date of Final Approval: **February 7, 2013** (_BOS) (~~x~~PC) (_BZA)

Comments:

PLANNING & ZONING Sheet 32 of 39

LANDSCAPE NOTES:

1. THE PROPOSED LANDSCAPE WILL BE USED TO MEET THE MINIMUM TREE COVER REQUIREMENTS. LOCATIONS, SPECIES AND QUANTITIES MAY BE ADJUSTED WITH FINAL DESIGN.
2. THE LANDSCAPE TREATMENT, DESIGN FEATURES, AND DETAILS MAY CHANGE WITH FINAL DESIGN PROVIDED THAT THE USE OF THE SPACE AND THE CHARACTER AND QUALITY OF THE FEATURES AND PLANTINGS REMAIN IN SUBSTANTIAL CONFORMANCE WITH THAT SHOWN.
3. SEE L-1.09 FOR PLANT SCHEDULE

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1	FDP SUBMISSION	07-31-12
2	FDP SUBMISSION	11-28-12
3	FDP SUBMISSION	05-15-13
4	FDP SUBMISSION	01-16-13
5	FDP SUBMISSION	09-26-12

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LANDSCAPE PLAN
 GARAGE LEVELS

L-1.06



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LANDSCAPE ARCHITECT

NUMBER	ISSUE	DATE
1	POP SUBMISSION	07-15-12
2	POP SUBMISSION	11-28-12
3	POP SUBMISSION	04-11-13
4	POP SUBMISSION	05-16-13
5	POP SUBMISSION	07-25-13

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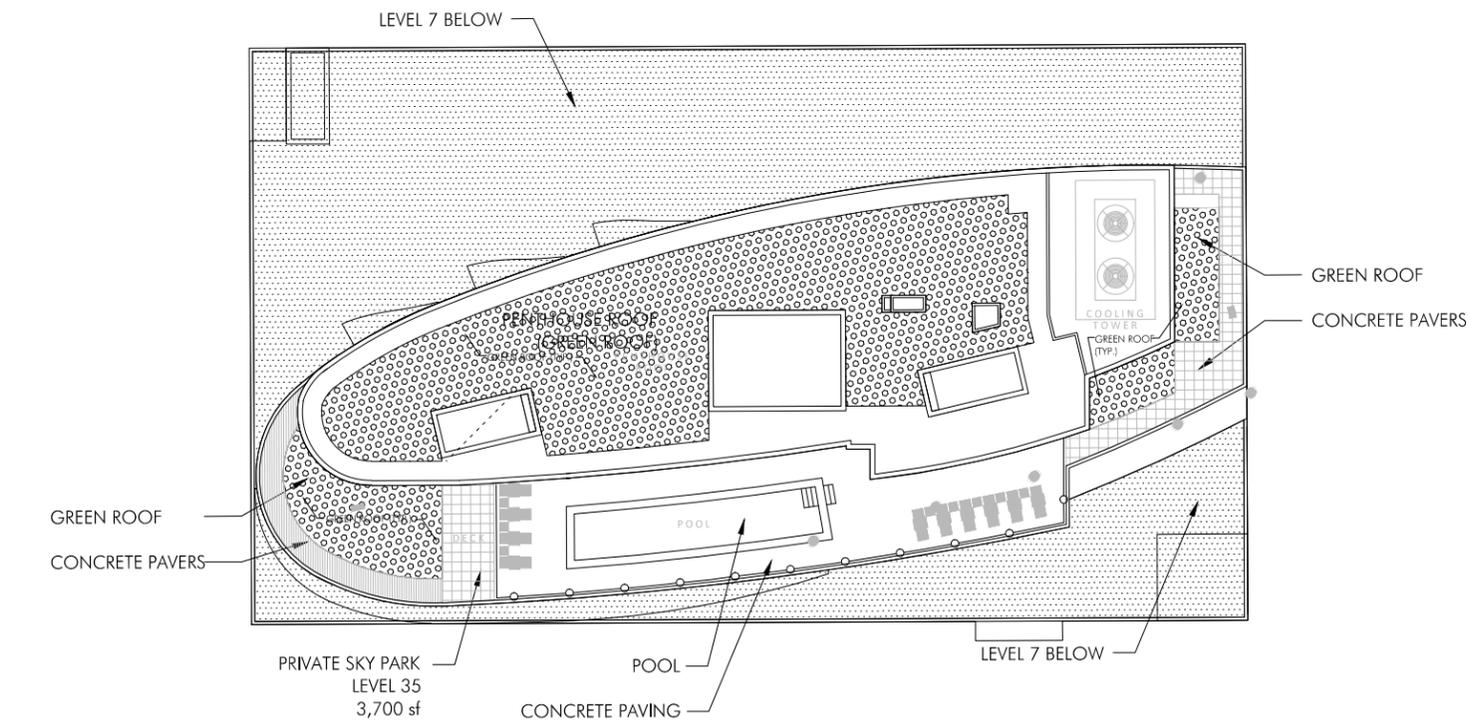
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SITE D2A
Spring Hill Station
 Tysons Corner, VA 22102

PROJECT

LANDSCAPE PLAN
ROOF DECK AMENITY
& ROOF

L-1.08



01 LANDSCAPE PLAN - ROOF DECK
 SCALE: 1/16"=1'-0"

Application No: **FDP 2010-PR-014 D** Staff: **T Stru**

APPROVED DEVELOPMENT PLAN
 (GDP) (CDP) (X FDP) (PRC) (DP) (CP) (SE) (CSP) (SP) (VC)

SEE PROFFERS DATED:
 SEE CONDITIONS DATED: **February 7, 2013**
 Date of Final Approval: **February 7, 2013** (BOS) (X PC) (BZA)

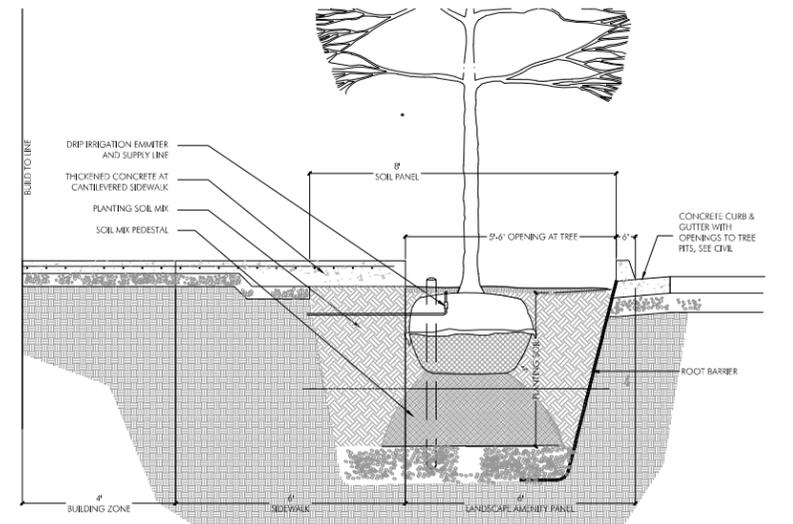
Comments:

DEPARTMENT OF PLANNING & ZONING

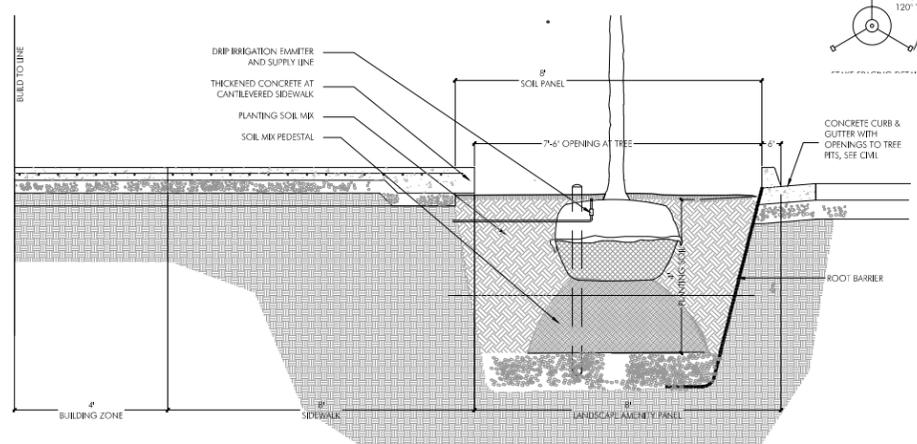
Sheet 34 of 39

LANDSCAPE NOTES:

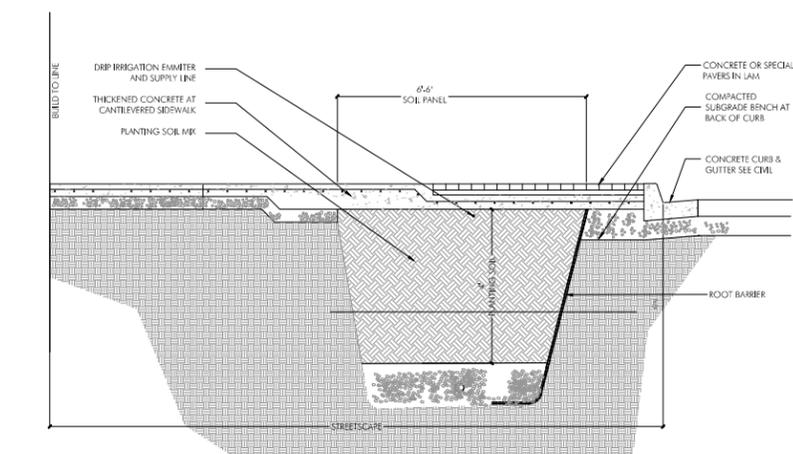
1. THE PROPOSED LANDSCAPE WILL BE USED TO MEET THE MINIMUM TREE COVER REQUIREMENTS. LOCATIONS, SPECIES AND QUANTITIES MAY BE ADJUSTED WITH FINAL DESIGN.
2. THE LANDSCAPE TREATMENT, DESIGN FEATURES, AND DETAILS MAY CHANGE WITH FINAL DESIGN PROVIDED THAT THE USE OF THE SPACE AND THE CHARACTER AND QUALITY OF THE FEATURES AND PLANTINGS REMAIN IN SUBSTANTIAL CONFORMANCE WITH THAT SHOWN.



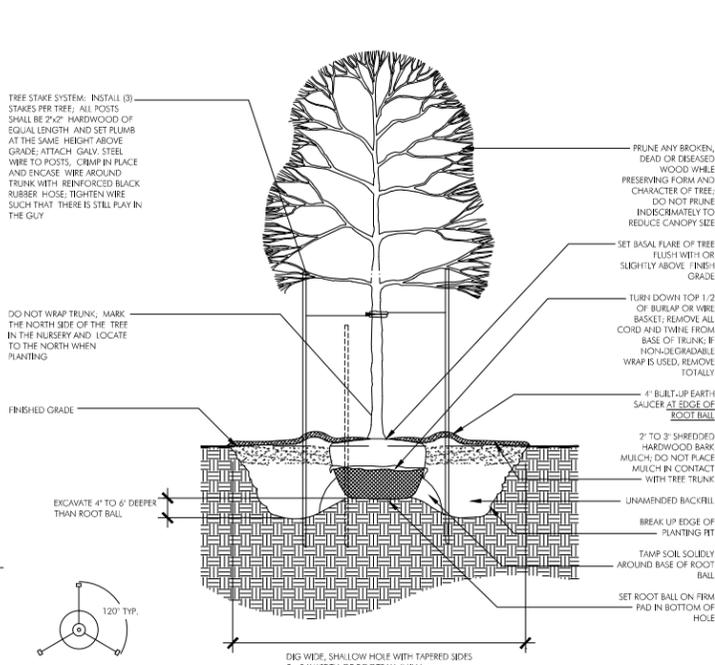
01 TREE PLANTING DETAIL - LID TREE BOX FILTER-6' AMENITY PANEL
SCALE: 1/2"=1'-0"



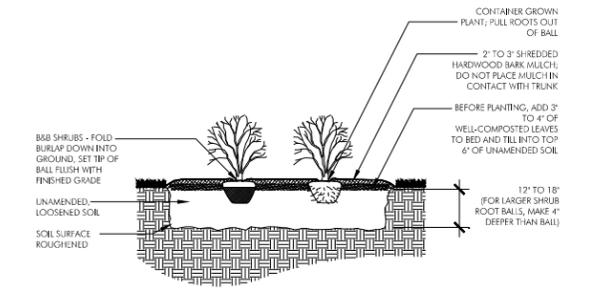
02 TREE PLANTING DETAIL - L.I.D. TREE BOX - 8' AMENITY PANEL
SCALE: 1/2"=1'-0"



03 TREE PLANTING DETAIL - TREE SOIL BRIDGE
SCALE: 1/2"=1'-0"



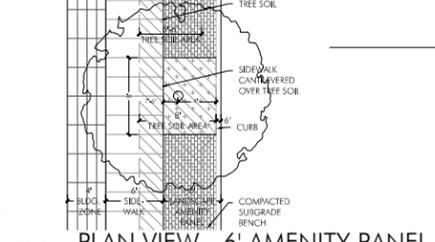
06 TREE PLANTING DETAIL
SCALE: 1/2"=1'-0"



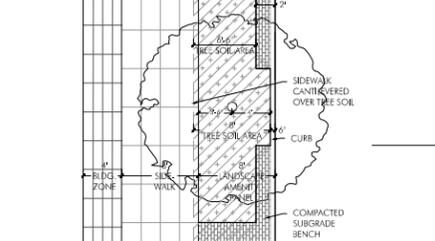
07 SHRUB PLANTING DETAIL
SCALE: 1/2"=1'-0"

Category	Tree Name	Quantity	Size	Price	Canopy Area (sq. ft.)	Sub-Total Price
Category IV Canopy Trees	Ulmus americana	4	2' cal.	\$68	250	1000
Category III Canopy Trees	Quercus prinus	2	2' cal.	\$68	250	750
Category II Canopy Trees	Schinus molle	4	2-1/2' cal.	\$68	150	600
Category I Canopy Trees	Quercus bicolor	2	2-1/2' cal.	\$68	150	600
	Amelanchier canadensis Autumn Brilliance	1	8-10 in.	\$68	100	100
	Cornus florida	1	8-10 in.	\$68	100	100
	Magnoia virginiana	2	8-10 in.	\$68	100	300
TOTAL 10-YEAR TREE CANOPY PROVIDED BY PLANTING					3350	

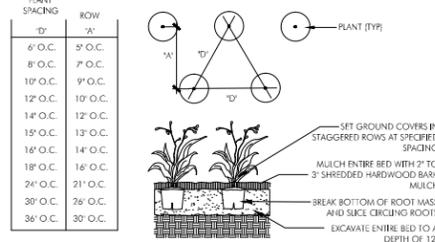
11 PLANT SCHEDULE FOR D2A BUILDING FDP - ALL LEVELS



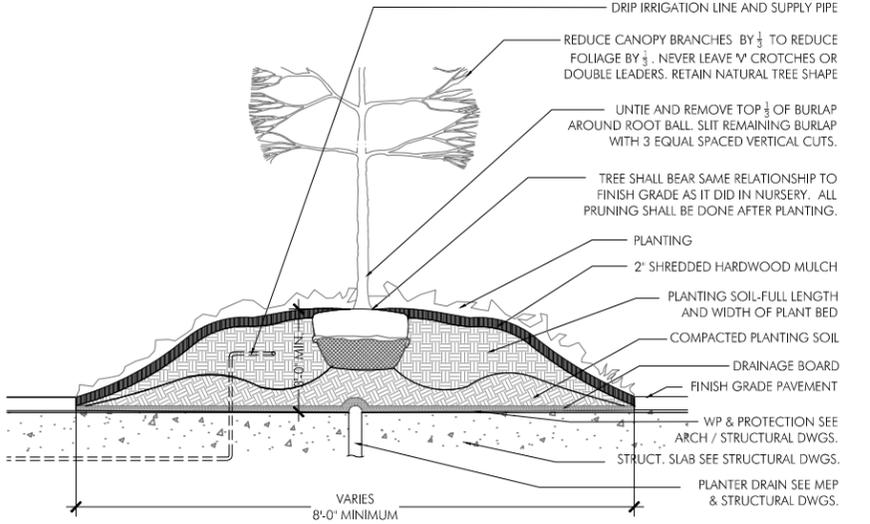
10 PLAN VIEW - 6' AMENITY PANEL
SCALE: 1/8"=1'-0"



09 PLAN VIEW - 8' AMENITY PANEL
SCALE: 1/8"=1'-0"



08 GROUNDCOVER PLANTING DETAIL
SCALE: 1/2"=1'-0"



05 TREE PLANTING ON STRUCTURE DETAIL
SCALE: 1/2"=1'-0"

LANDSCAPE COMPUTATION S D2A

13-201: INTERIOR PARKING LOT LANDSCAPE CALCULATIONS

No Surface Parking Lots

Interior Parking Lot Landscaping Not Required

13-202: PERIPHERAL PARKING LOT LANDSCAPE CALCULATIONS

No Surface Parking Lots

Peripheral Parking Lot Landscaping Not Required

13-301: TRANSITIONAL SCREENING AND BARRIERS

Property Zoning District: PTC/HC

Adjacent Zoning Districts: I-5, C-7, PDC, PTC/HC

Transitional Screening and Barriers are Not Required

13-401: TREE COVER CALCULATIONS

Table 12.12, 10-year Tree Canopy Calculation Worksheet

A. Tree Preservation Target and Statement

A1. See Table 12.3 on Sheet C-8

Item	Description	Value
B1	Tree Canopy Requirement	38,441
B2	Gross Site Area	38,441
B3	Land Dedicated to park, road, bridge	0
B4	Optional Dedications (SWM)	0
B5	Adjusted Gross Site Area	38,441
B6	Site Zoning	PTC
B7	Percentage of 10-year Tree Canopy Cover Required	10%
B8	Area of 10-year tree canopy cover	3,844
B9	Modification of 10-year tree canopy cover requested	Yes
B9	Plan sheet where modification is requested	C-3

Item	Description	Value
C1	Tree Preservation	0
C2	Tree Preservation Target	0
C3	Total Canopy area meeting standards of 12-0200	0
C4	Total canopy area provided by unique or valuable forest or woodland communities	0
C5	Total canopy area provided by "Heritage", "Memorial", "Specimen", or "Street" Trees	0
C6	Canopy area of trees within Resource Protection Areas and 100-year floodplains	0
C7	Canopy area of trees within Resource Protection Areas and 100-year floodplains	0
C8	Canopy area of trees within Resource Protection Areas and 100-year floodplains	0
C9	Total of C3, C5, C7 and C8	0

Item	Description	Value
D1	Area of Canopy met through tree planting (B7-C10)	3,850
D2	Area of canopy planted for air quality benefits	0
D3	Area of canopy planted for energy conservation benefits	0
D4	Area of canopy planted for water quality benefits	0
D5	Area of canopy planted for wildlife benefits	0
D6	Area of canopy provided by native trees	0
D7	Area of canopy provided by improved cultivars and varieties	0
D8	Area of canopy provided by seedlings	0
D9	Area of canopy provided by improved cultivars and varieties	0
D10	Area of canopy provided by seedlings	0
D11	Area of canopy provided by improved cultivars and varieties	0
D12	Area of canopy provided by seedlings	0
D13	Area of canopy provided by improved cultivars and varieties	0
D14	Area of canopy provided by seedlings	0
D15	Area of canopy provided by improved cultivars and varieties	0
D16	Area of canopy provided by seedlings	0
D17	Total of canopy area provided through tree planting	3,850
D18	Is an offsite planting site requested?	No
D19	Tree bank or Trust Fund?	No
D20	Canopy area requested to be provided through offsite banking or trust fund	0
D21	Amount to be deposited into the Tree Preservation and Planting Fund	0

Item	Description	Value
E1	Total of 10-year Tree Canopy Provided	3,850
E2	Total of canopy area provided through tree preservation (C10)	0
E3	Total of canopy area provided through tree planting (D17)	3,850
E4	Total of canopy area provided through tree preservation (C10) and tree planting (D17)	3,850

* Note: Tree Cover Credit calculations for A1 are part of overall neighborhoods 1, 2 & 3 Canopy Coverage calculations for the Tysons Spring Hill Station Project. Any Excess Tree Cover provided on a parcel shall go towards Tree Cover Credit on other Parcels.

LANDSCAPE NOTES:

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Application No: **FDP 2010-PR-014 D** Staff: **T Stru**

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(L_GDP) (L_CDP) (L_FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)

SEE PROFFERS DATED: **February 7, 2013**
Date of Final Approval: **February 7, 2013** (L_BOS) (L_PC) (L_BZA)

Comments:

DEPARTMENT OF PLANNING & ZONING

Sheet 35 of 39

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LANDSCAPE ARCHITECT

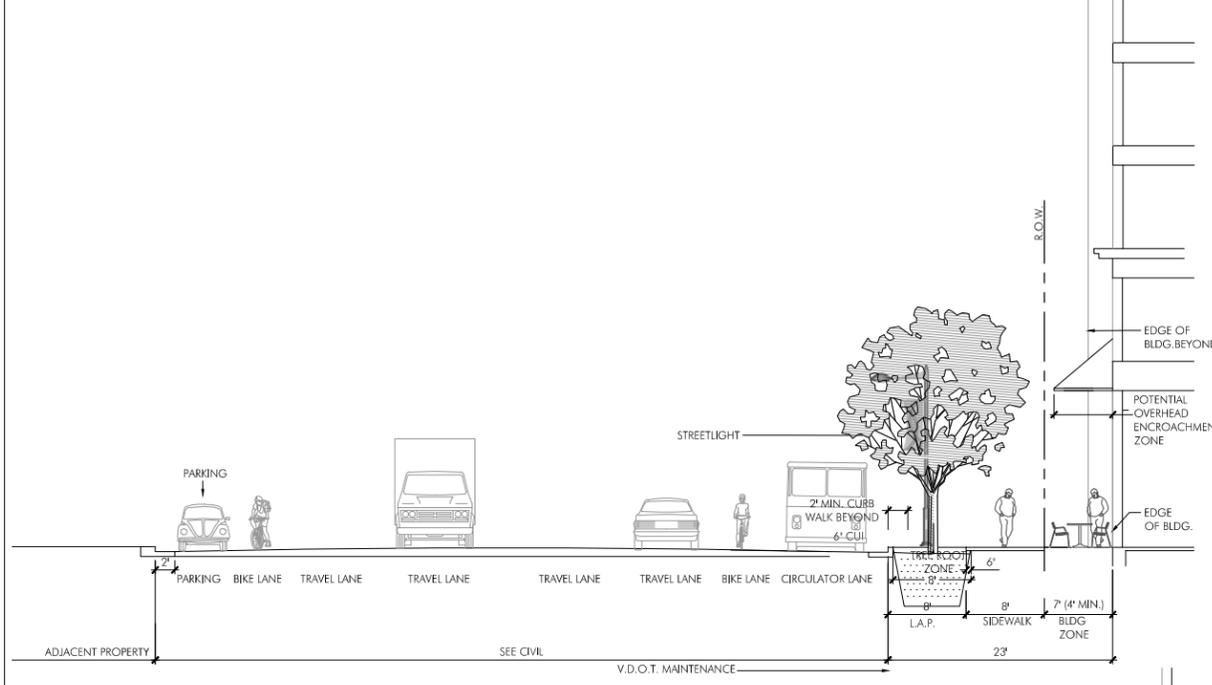
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GREYSTAR

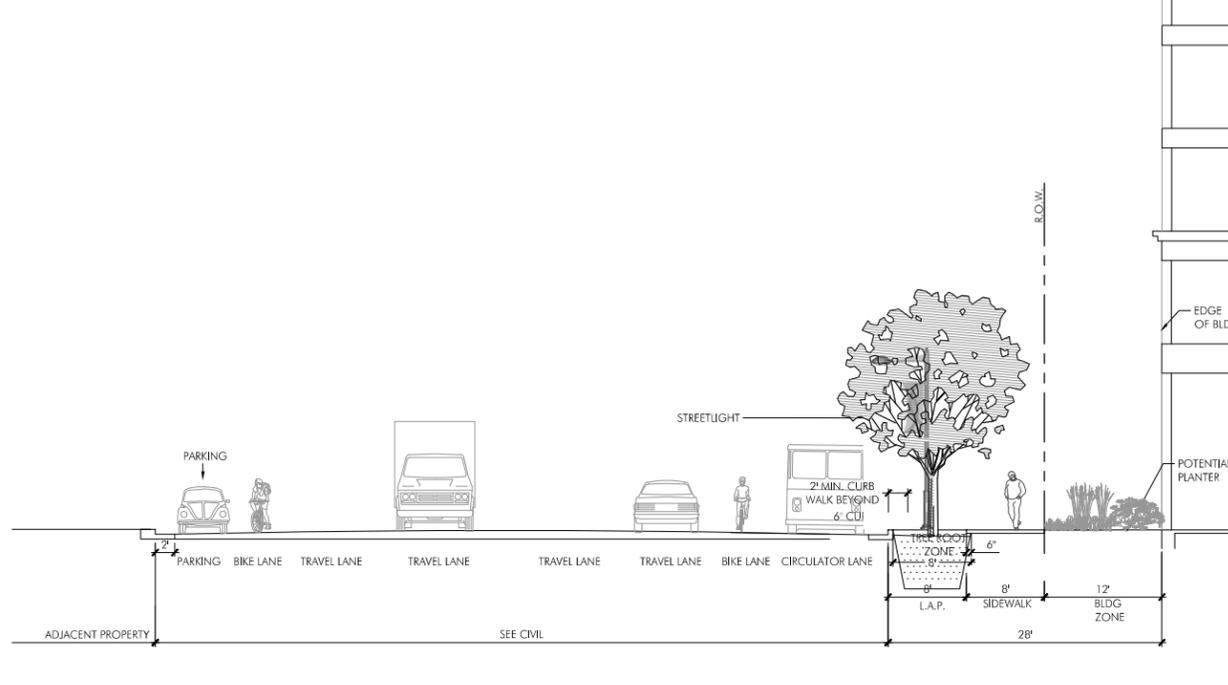
SITE D2A
Spring Hill Station
Tysons Corner, VA 22102

PLANTING DETAILS AND PLANT SCHEDULE

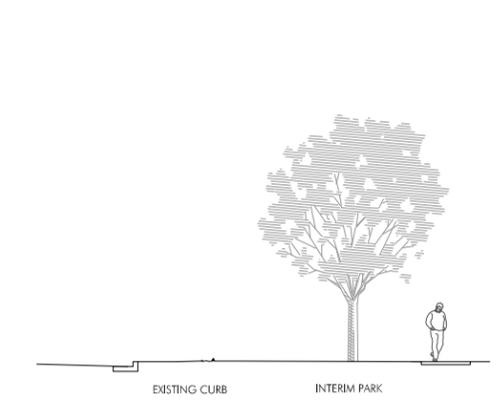
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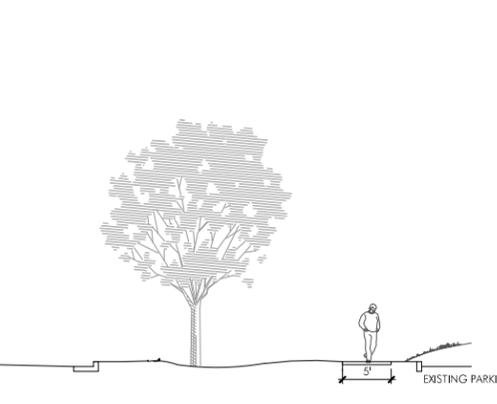
01 TYCO ROAD
SCALE: 1/8"=1'-0"



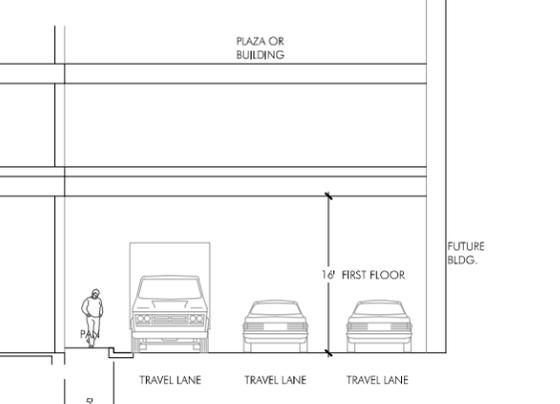
02 TYCO ROAD
SCALE: 1/8"=1'-0"



03 TYCO ROAD - INTERIM SIDEWALK
SCALE: 1/8"=1'-0"



04 TYCO ROAD - INTERIM SIDEWALK
SCALE: 1/8"=1'-0"



05 SERVICE ALLEY
SCALE: 1/8"=1'-0"

Application No: **FDP 2010-PR-014 D** Staff: **T Stru**

APPROVED DEVELOPMENT PLAN
 (_GDP) (_CDP) (x_FDP) (_PRC) (_DP) (_CP) (_SE) (_CSP) (_SP) (_VC)
 SEE PROFFERS DATED:
 SEE CONDITIONS DATED: **February 7, 2013**
 Date of Final Approval: **February 7, 2013** (_BOS) (x_PC) (_BZA)
 Comments:

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1	FDP SUBMISSION	07-31-12
2	FDP SUBMISSION	11-26-12
3	FDP SUBMISSION	01-15-13
4	FDP SUBMISSION	01-16-13
5	FDP SUBMISSION	01-28-13

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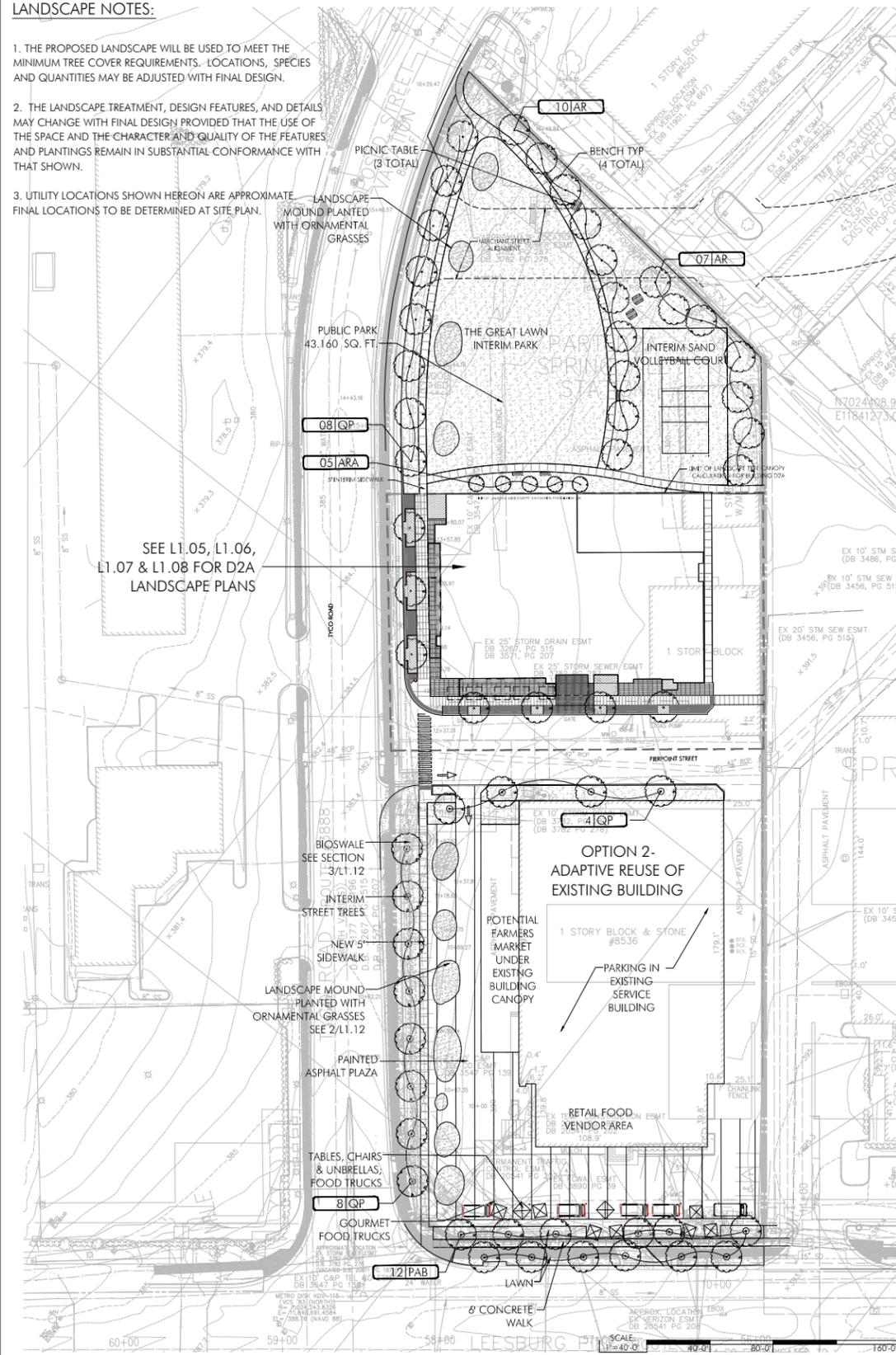
PLANNING

STREET SECTIONS

L-1.10

LANDSCAPE NOTES:

1. THE PROPOSED LANDSCAPE WILL BE USED TO MEET THE MINIMUM TREE COVER REQUIREMENTS. LOCATIONS, SPECIES AND QUANTITIES MAY BE ADJUSTED WITH FINAL DESIGN.
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3. UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE. FINAL LOCATIONS TO BE DETERMINED AT SITE PLAN.



SEE L1.05, L1.06, L1.07 & L1.08 FOR D2A LANDSCAPE PLANS



INTERIM PLANT SCHEDULE - OPTION 1*

KEY	BOTANICAL NAME	COMMON NAME	Qty.	STOCK SIZE	STOCK TYPE	10-YR TREE CANOPY SQ. FT.	TREE CANOPY SUB-TOTAL SQ. FT.	REMARKS
Category IV Canopy Trees								
AR	Acer rubrum	Red Maple	17	3" cal.	868	250	4250	Single, straight trunk. Limited up to 6'; symmetrical
ARA	Acer rubrum 'Columnar'	Columnar Red Maple	5	3" cal.	868	75	375	Single, straight trunk. Limited up to 6'; symmetrical
PAB	Pistacia aserifolia	London Plane	12	3" cal.	868	250	3000	Single, straight trunk. Limited up to 6'; symmetrical
QP	Quercus phellos	Willow-Oak	20	3" cal.	868	250	5000	Single, straight trunk. Limited up to 6'; symmetrical
TOTAL 10-YEAR TREE CANOPY PROVIDED BY PLANTING							12,625	

NOTE: Species in the plant schedule are indicative of the trees which will be selected for the final planting schedule. Species may vary depending on final design and availability.
* See L1.09 for trees of Building D2A

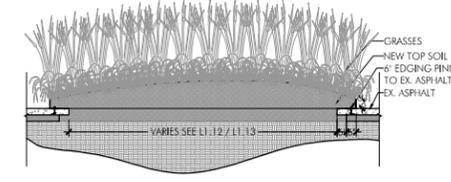
Application No: **FDP 2010-PR-014 D** Staff: **T Stru**

APPROVED DEVELOPMENT PLAN
(L_GDP) (L_CDP) (x_FDP) (L_PRC) (L_DP) (L_CP) (L_SE) (L_CSP) (L_SP) (L_VC)

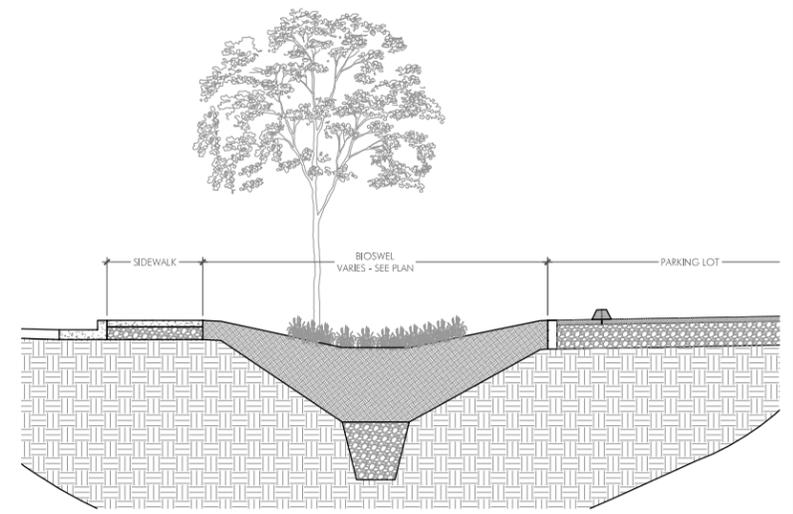
SEE PROFFERS DATED:
SEE CONDITIONS DATED: **February 7, 2013**
Date of Final Approval: **February 7, 2013** (x_BOS) (x_PC) (L_BZA)

Comments:

PLANNING & ZONING Sheet 38 of 39



02 LANDSCAPE MOUND - TYPICAL
SCALE: 1/4" = 1'-0"



03 BIOSWALE
SCALE: 1/4" = 1'-0"

01 LANDSCAPE PLAN
SCALE: 1" = 40'-0"

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LANDSCAPE ARCHITECT

NUMBER	ISSUE	DATE
1	FOR SUBMISSION	01-31-12
2	FOR SUBMISSION	01-28-12
3	FOR SUBMISSION	01-11-12
4	FOR SUBMISSION	01-16-12
5	FOR SUBMISSION	01-28-12

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GRIDSTAR

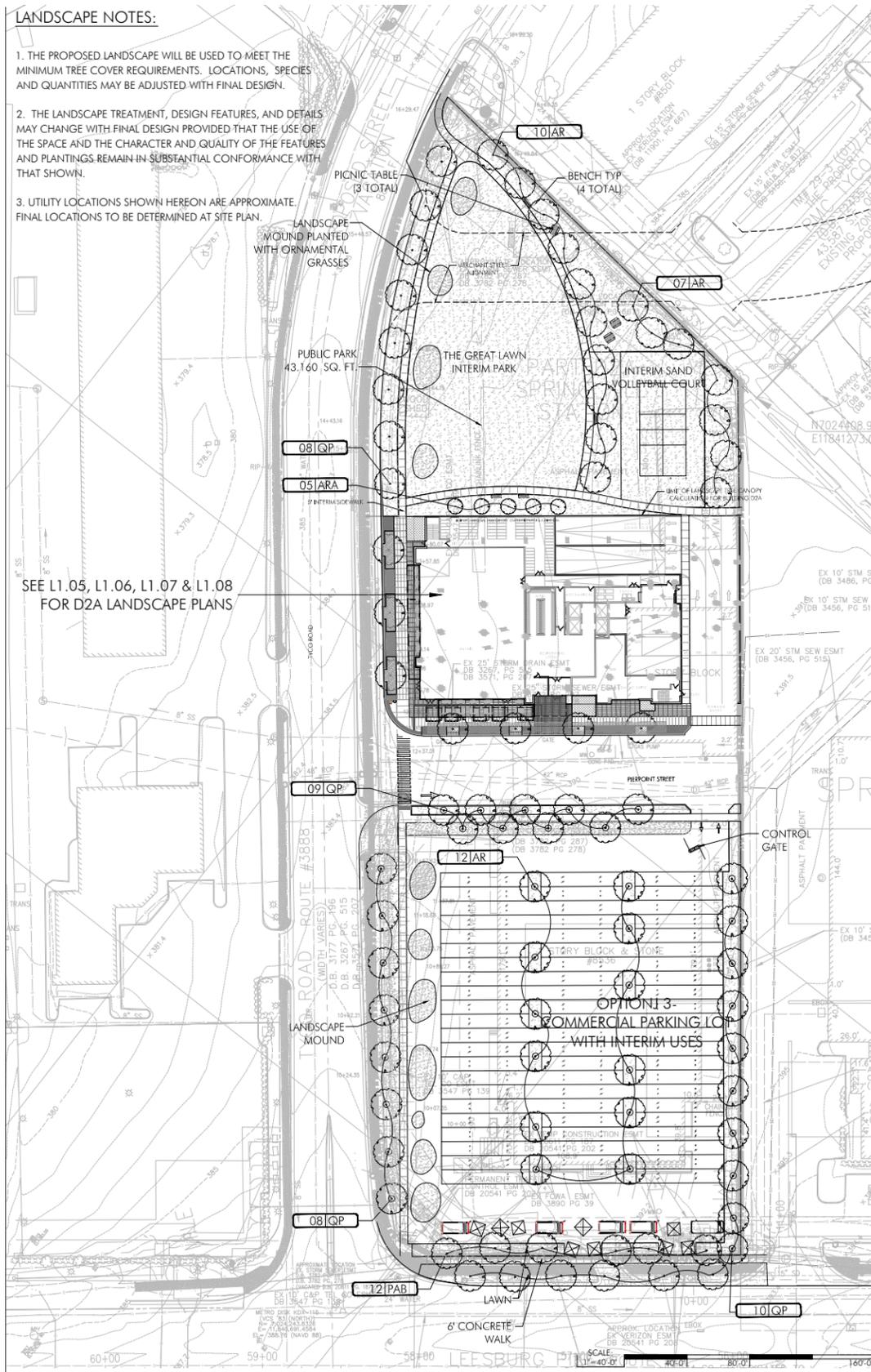
SITE D2A
Spring Hill Station
Tysons Corner, VA 22102

LANDSCAPE PLAN
FDP AREA - OPTION 2

L-1.12

LANDSCAPE NOTES:

1. THE PROPOSED LANDSCAPE WILL BE USED TO MEET THE MINIMUM TREE COVER REQUIREMENTS. LOCATIONS, SPECIES AND QUANTITIES MAY BE ADJUSTED WITH FINAL DESIGN.
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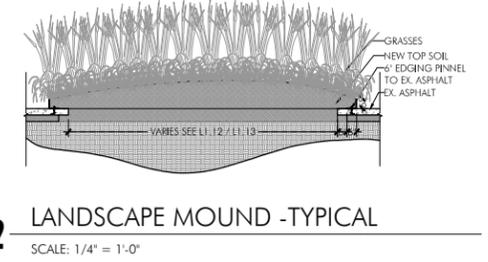
01 LANDSCAPE PLAN
SCALE: 1" = 40'-0"



INTERIM PLANT SCHEDULE - OPTION 2*

KEY	BOTANICAL NAME	COMMON NAME	Qty.	STOCK SIZE	STOCK TYPE	10-YR TREE CANOPY SQ. FT.	TREE CANOPY SUB-TOTAL SQ. FT.	REMARKS
Category IV Canopy Trees								
AR	Acer rubrum	Red Maple	29	3" cal.	8.88	250	7250	Single, straight trunk. Limbed up to 6'; symmetrical
ARA	Acer rubrum 'Columnare'	Columnar Red Maple	5	3" cal.	8.88	75	375	Single, straight trunk. Limbed up to 6'; symmetrical
PAB	Platanus acerifolia	London Planetree	12	3" cal.	8.88	250	3000	Single, straight trunk. Limbed up to 6'; symmetrical
QP	Quercus phellos	Willow Oak	30	3" cal.	8.88	250	7500	Single, straight trunk. Limbed up to 6'; symmetrical
TOTAL 10-YEAR TREE CANOPY PROVIDED BY PLANTING							18,125	

NOTE: Species in the plant schedule are indicative of the trees which will be selected for the final planting schedule. Species may vary depending on final design and availability.
* See L1.09 for trees at Building D2A



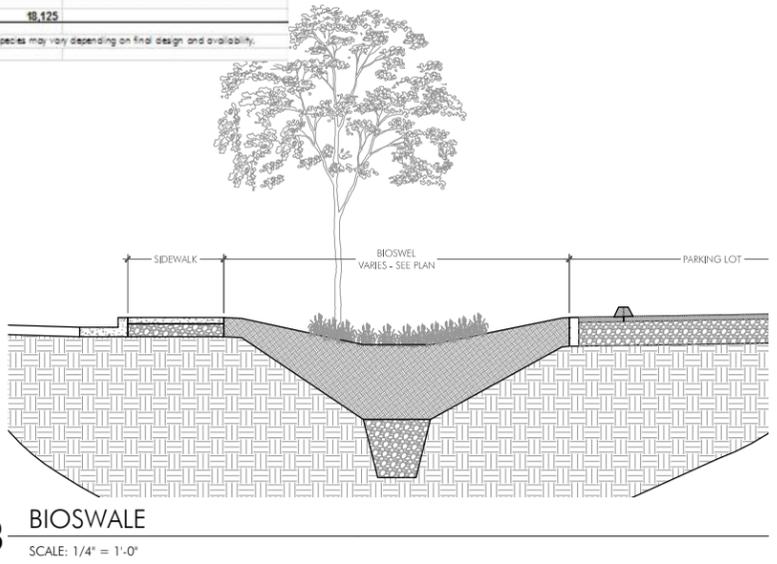
Application No: **FDP 2010-PR-014 D** Staff: **T Stru**

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(_GDP) (_CDP) (xFDP) (_PRC) (_DP) (_CP) (_SE) (_CSP) (_SP) (_VC)

SEE PROFFERS DATED:
SEE CONDITIONS DATED: **February 7, 2013**
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Comments:

PLANNING & ZONING Sheet 39 of 39



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LANDSCAPE ARCHITECT

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5	FDP SUBMISSION	01-28-13

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Tysons Corner, VA 22102

LANDSCAPE PLAN
FDP AREA - OPTION 3

L-1.13