



Docket Item #4
Development Special Use Permit # 2014-0002
John Adams Elementary School Parking Lot Expansion
5651 Rayburn Avenue

CONSENT AGENDA ITEM

If no one asks to speak about this case prior to the hearing, it will be approved without discussion as part of the Consent Agenda.

Application	General Data	
Project Name: John Adams Elementary Parking Lot Expansion	PC Hearing:	September 4, 2014
	CC Hearing:	September 13, 2014
	If approved, DSUP Expiration:	September 13, 2017
	Plan Acreage:	7.95 AC
Location: 5651 Rayburn Avenue	Zone:	R-12
	Proposed Use:	Public Elementary School
	Dwelling Units:	N/A
	Gross Floor Area:	N/A
Applicant: Alexandria City Public Schools	Small Area Plan:	Alexandria West
	Historic District:	N/A
	Green Building:	N/A

Purpose of Application

The applicant requests approval of a Development Special Use Permit with Site Plan with modifications to construct 28 new parking spaces within the school's existing parking lot.

Special Use Permits and Modifications Requested:

1. Development Special Use Permit with Site Plan to construct 28 new parking spaces
2. Special Use Permit to expand an existing parking lot with parking spaces in excess of zoning ordinance requirement for a school
3. Modification to allow parking and drive aisle areas to exceed 50 percent of the required west and south side yards

Staff Recommendation: APPROVAL WITH CONDITIONS

Staff Reviewers:

Patricia Escher, AICP, Principal Planner; patricia.escher@alexandriava.gov
Ryan Price, Urban Planner; ryan.price@alexandriava.gov

PLANNING COMMISSION ACTION, JUNE 3, 2014: The Planning Commission noted the deferral of the request.

Reason: The applicant requested the deferral.



DSUP #2014-0002
5651 Rayburn Avenue



I. SUMMARY

A. *Recommendation & Summary of Issues*

Staff recommends **approval** of the development special use permit application and all other requests and modifications to allow Alexandria City Public Schools to add 28 additional parking spaces to the existing parking lot at John Adams Elementary School. Staff believes the project will help alleviate some of the parking shortage and congestion issues associated with the site.

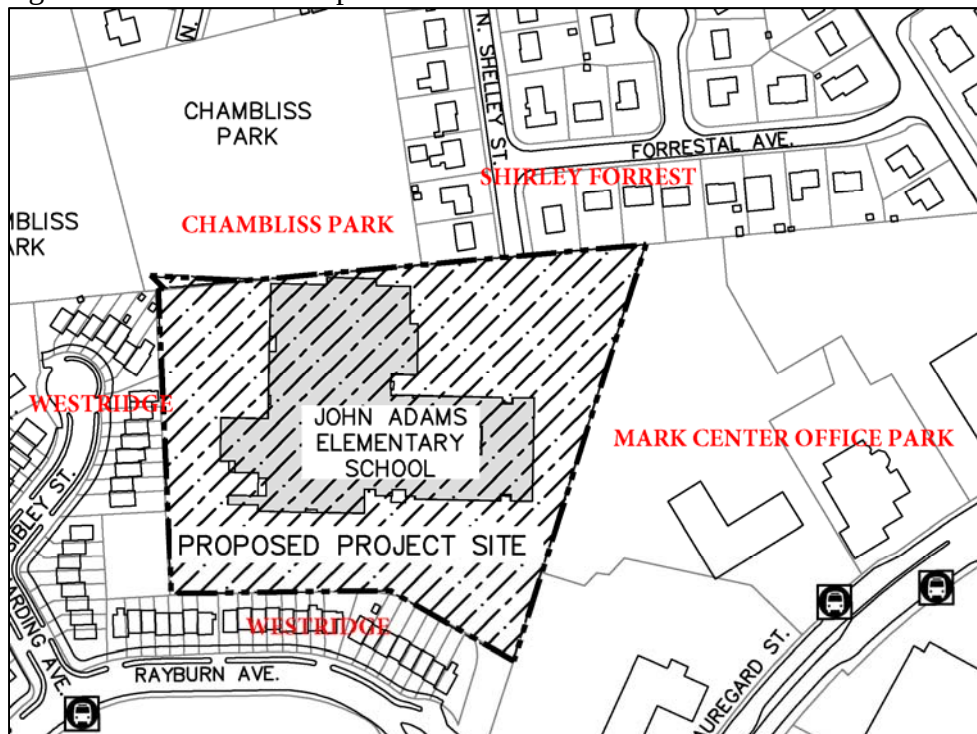
II. BACKGROUND

A. *Site Context*

Location

The project site is located on Rayburn Avenue, near the intersection with North Beauregard Street. The property is considered a “flag” lot, in that it is bound by other properties on all sides with the exception of an entrance driveway which connects the site to Rayburn Avenue. Flag lots do not have street frontage other than the width of the driveway. The school borders the Westridge townhome community to the south and west, and The Mark Center Office Park to the east. The northern edge of the property is bound by Chambliss Park and single family homes (Shirley Forest).

Figure 1: Site Context Map



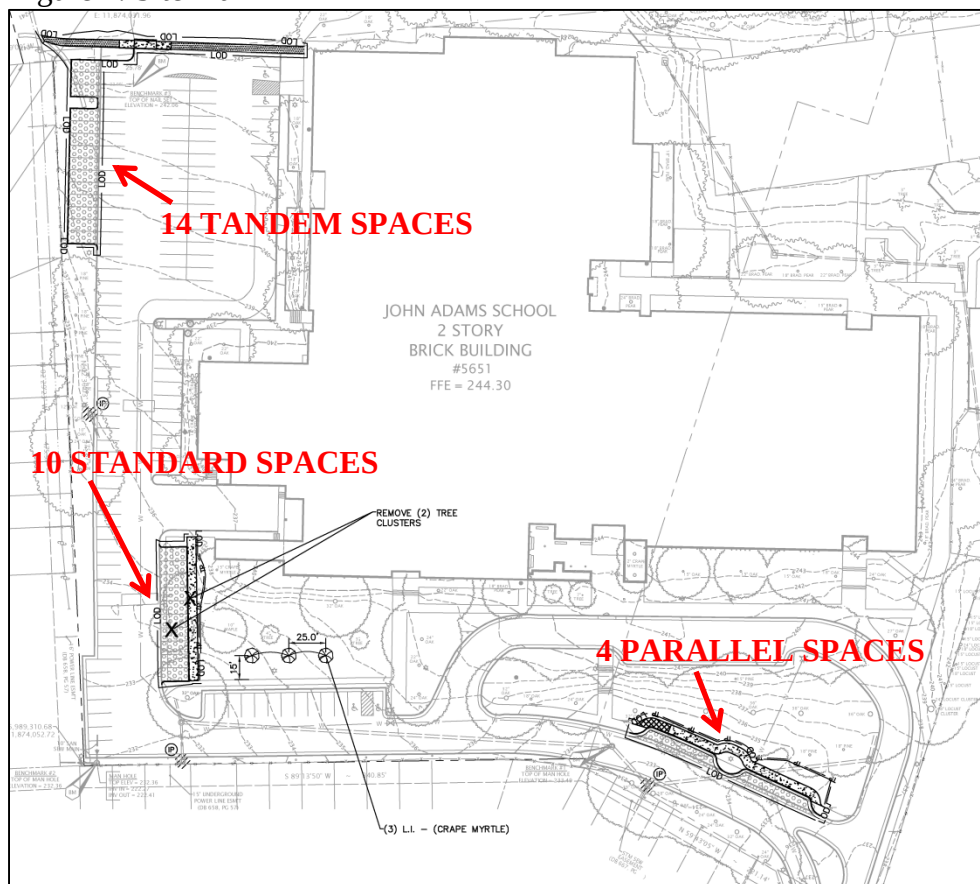
Enrollment at the School

Constructed in 1975, John Adams Elementary School serves residents in the northwest corner of the City. There are currently 874 students enrolled at the school in grades K-5, making it the largest elementary school in Alexandria. In addition to the K-5 enrollment, there are 107 students enrolled in the pre-kindergarten program at the school, also the largest in the City. John Adams Elementary is also home to the Headstart program, which brings in an additional 92 students to the facility during the school day.

B. Detailed Project Description

The applicant, Alexandria City Public Schools (ACPS), is proposing to construct 28 new parking spaces within the existing parking area. The new parking will include 14 tandem spaces, 10 standard spaces, and 4 parallel spaces. All of the new parking will be constructed using pervious materials. In terms of pedestrian related changes, two sidewalks will be relocated to lie adjacent to the new parking spaces, and the trail connecting the site to Chambliss Park will be realigned to connect with the existing path along the northern edge of the property next to the baseball diamond. These parking improvements are part of a series of recommendations that came out of an 2012 Transportation Study that was conducted for ACPS. The study in its entirety is provided in Attachment 2.

Figure 2: Site Plan



III. ZONING

Property Address:	5651 Rayburn Avenue		
Total Site Area:	7.95 AC		
Zone:	R-12		
Current Use:	Public Elementary School		
Proposed Use:	Public Elementary School		
	Permitted/Required	Existing	Proposed
FAR	N/A	N/A	N/A
Buffer	N/A	N/A	N/A
Setbacks	N/A	N/A	N/A
Front	N/A	N/A	N/A
Side	N/A	N/A	N/A
Rear	N/A	N/A	N/A
Parking	39	118	146

IV. STAFF ANALYSIS

A. Parking

Parking Capacity Issues

Daytime parking at the school is well over capacity. There are currently 118 parking spaces on the school grounds to accommodate 130 full-time staff. This does not include additional staff for other programs that use the building during the school day such as Head Start (16 teachers), Child Find development disability screening (9 teachers), and hearing screenings (1 audiologist). Additionally, the Head Start program requires parents to walk their children into the building which is putting additional demand on parking capacity. ACPS implemented a later start time for the Head Start program (changed from 8am to 8:30am) in an effort to stagger incoming traffic to the site. While this alleviates some of the congestion, it does not address parking issues. By the time the program starts at 8:30am, there are no visitor parking spots available due to overflow employee parking; leaving parents no option but to park in the drive aisles. This creates vehicle circulation issues within the site, and poses safety risks by impacting emergency vehicle access.

The school system hired Kimley-Horn and Associates, Inc. to conduct a Transportation Study in 2012. Among the findings from that study, based on field-observations the designated parking areas are over capacity from 8:00am through 2:30pm. The field observers noted that during those hours, between 16 and 30 vehicles were parked in unmarked spaces. A by-product of this capacity problem has been the use of Chambliss Park for vehicle parking. The transportation study notes between 15 and 28 vehicles were parked on the grass areas of Chambliss Park during the school day. This vehicle usage of the park has damaged the lawn areas as shown below.

The Duke Realty property, which sits directly adjacent to John Adams Elementary School, has underutilized surface parking spaces that would be accessible to the school property. The Transportation Study identified these underutilized spaces as a potential near-term solution. However, ACPS efforts to negotiate a shared-parking arrangement with Duke Realty have proven unsuccessful.

In terms of transportation management efforts, ACPS employees are currently eligible for up to \$30 per month in transit benefits to put toward their commuting costs; however the exact breakdown of program participants by school is not available. A condition of this DSUP approval is the creation of a Transportation Demand Management (TDM) fund which will help reduce the number of single-occupancy vehicle trips to the school. The fund will cover things like additional transit benefits for employees, marketing and educational materials illustrating transit alternatives and safe pedestrian routes to school, and classroom competitions to incentivize public transit usage, biking, and walking. A detailed description of the TMP scope is provided in attachment 1.

Figure 3: School overflow parking in Chambliss Park



On-Street Parking

Other elementary schools in the City also have parking capacity issues, however the situation at John Adams Elementary is more pronounced due to the lack of on-street parking options.

As noted earlier in the report, the school sits on a “flag” lot, so the only street frontage that exists is the driveway connecting the school to Rayburn Avenue which is approximately 36 feet; too narrow for on-street parking. By way of comparison, Polk Elementary School has approximately 1,200 feet of on-street parking in front of the school along Polk Avenue. There are a few streets north of the John Adams site which could possibly be used for employee parking (N. Shelley St., Forrestal Ave, and N. Chambliss St.), however they are very limited, and are not a feasible solution because they are on the rear side of the building. Table 1 provides a comparison of the parking situation at other city schools, and the overflow options available:

Table 1: Elementary School Parking Comparison

Elementary School	Employees	Existing Parking	Legal Overflow Options
John Adams	130 (Staff) 16 (Headstart)	118	None. Employees park on Chambliss Park grass
William Ramsay	95 (Staff) 0 (Headstart)	85	Unrestricted on-street parking along sections of adjacent Sanger Avenue (approximately 833 feet)
James K Polk	83 (Staff) 0 (Headstart)	33	Unrestricted on-street parking along sections of adjacent Polk Avenue (approximately 1,200 feet)

B. Special Use Permit Request

The City’s zoning ordinance requires 1 parking space for every 25 classroom seats in elementary schools ([Section 8-200-A-11](#)). Based on this requirement, John Adams Elementary School is permitted to provide a maximum of 39 parking spaces. As noted in the previous section, the number of staff employed at the school far exceeds this parking requirement. Additionally, the existing parking spaces on the school grounds already exceed this requirement by 79 spaces. The applicant is requesting a Special Use Permit to expand parking over the required 39 spaces in the R-12 zone as permitted by the zoning ordinance ([Section 3-203-E](#)).

C. Open Space

The property lies within the R-12 residential zone which has setbacks requirements, but no open space percentage requirement. The site plan for this property was approved prior to the adoption of the 1992 Zoning Ordinance, thus the school is considered to be a legal non-complying structure, and is not required to meet yard setback requirements for the existing building footprint. For information purposes, approximately 45.9 percent of the site is currently used as open space. With the proposed parking spaces and sidewalks, the open space on the site will decline slightly to 44.6 percent. In terms of screening, the properties directly adjacent to the 14 new tandem parking spaces are already screened by existing trees which will mitigate any visual impacts of the new spaces. The remainder of the proposed parking spaces lie further into the John Adams Elementary property, and do not warrant additional screening.

D. Storm Water Management

John Adams Elementary School is located in the Holmes Run watershed. With the development, the change in land use results in higher storm water runoff from the site under post development conditions than predevelopment. As storm water drainage design for a new development or redevelopment is an integral component of storm water management for the site and vicinity areas, the impacts of generation of higher runoff under post development conditions shall be mitigated by providing on site storm water detention in permeable pavement sub base so as to provide flood protection by not releasing the storm water from the site at a higher rate than the predevelopment conditions in accordance with the requirements of the Alexandria Zoning Ordinance (AZO) Article XIII and the latest storm water regulations of the Virginia Department of Environmental Quality (VDEQ). Additionally, the storm water from the site shall be discharged to an adequate storm water outfall per the requirements of Article XI of AZO and Minimum Standard MS-19 of the Commonwealth of Virginia. The site shall also provide on-site Best Management Practices (BMP) and/or Low Impact Development (LID) techniques to treat storm water for phosphorous removal and water quality improvements per the requirements of the AZO Article XIII and Storm Water Regulations of VDEQ.

V. COMMUNITY

The applicant held two public meetings in the summer of 2012 as part of the Transportation Study. The scope of this proposed parking expansion was presented at those meetings along with other potential solutions that could be implemented in future phases, such as construction of a small parking structure and reprogramming on-site recreation areas for parking use. Summaries of community input from those meetings are provided in Section 3 of the Transportation Study (Attachment 2). The applicant also held a community meeting at the school on August 11, 2014 and reached out to the Seminary West Civic Association.

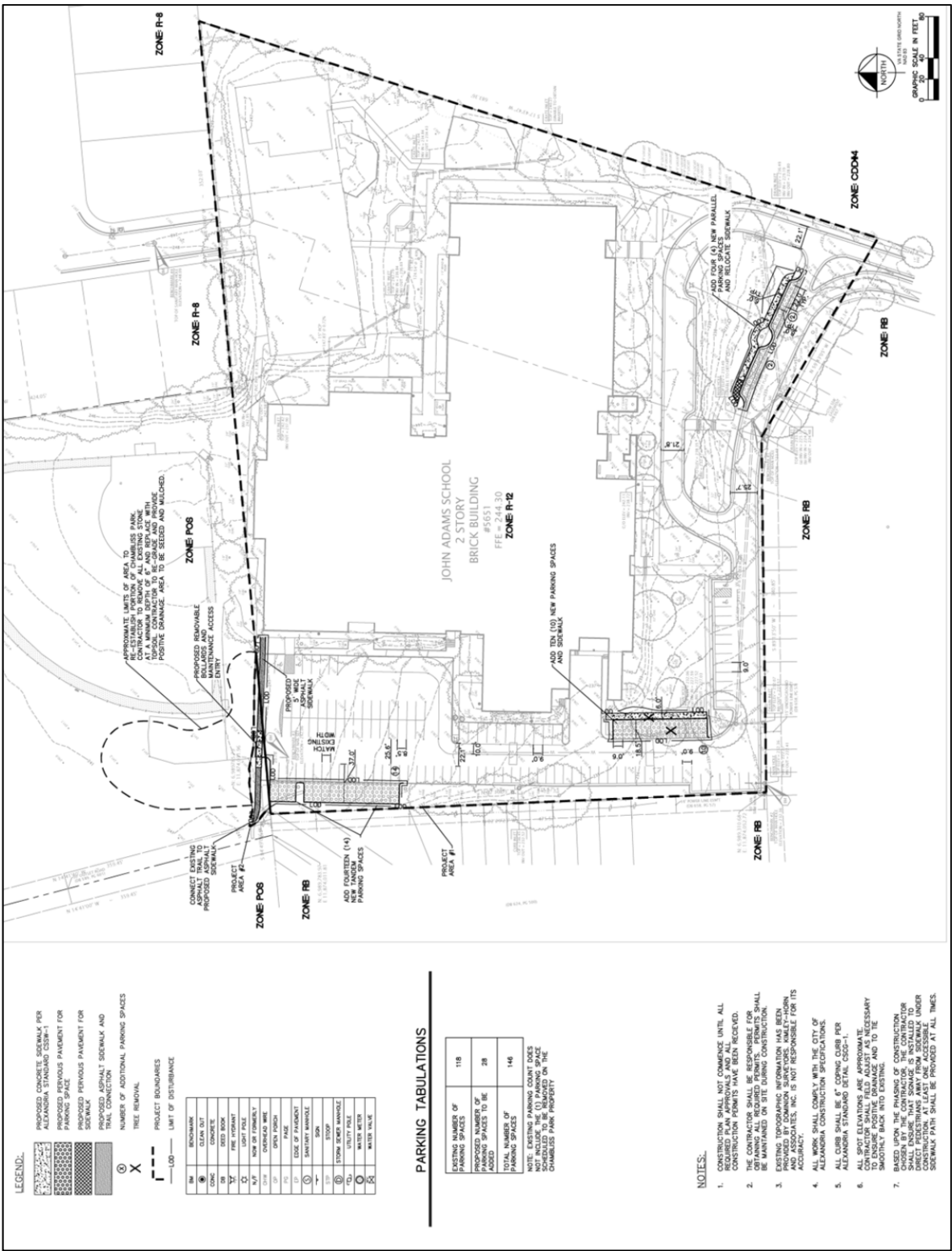
VI. CONCLUSION

Staff recommends **approval** of the Development Special Use Permit with modifications subject to compliance with City codes, ordinances and staff recommendations below.

Staff: Karl Moritz, Deputy Director, Planning and Zoning
Robert Kerns, AICP, Chief, Development Division
Patricia Escher, AICP, Principal Planner
Ryan Price, Urban Planner

VII. GRAPHICS

Site Plan



VIII. STAFF RECOMMENDATIONS

1. The Final Site shall be in substantial conformance with the preliminary plan dated April 4, 2014 and comply with the following conditions of approval.

A. PEDESTRIAN/STREETSCAPE:

2. Provide the following pedestrian improvements to the satisfaction of the Directors of P&Z, RP&CA and T&ES:
 - a. Construct all concrete sidewalks to City standards. The minimum unobstructed width of newly constructed sidewalks shall be 6 feet in commercial, mixed-use or other high-density areas and 5 feet in single-family or other lower density areas.

B. OPEN SPACE/LANDSCAPING:

3. As part of the re-establishment of Chambliss Park, re-vegetate areas impacted by prior overflow parking.
4. Prior to release of Final Site Plan, the Applicant shall update the RP&CA-ACPS Joint Maintenance MOU to reflect the new site configuration. Development of the Project Plan shall guide execution of work.* (RP&CA)
5. The Maintenance MOU shall include scheduling and provision of all labor and materials for the following anticipated items:
 - a. Daily, weekly and seasonal facilities maintenance.
 - b. Specific information relating to winter operations and priorities of work.
 - c. Daily, weekly and seasonal grounds maintenance including litter/debris/solid waste and recycling removal and general policing of grounds. (RP&CA)
6. Any site work including construction staging impacting the field and or outside the limits of disturbance shall be restored to satisfaction of the Director of Recreation, Parks & Cultural Activities. (RP&CA)

C. TREE PROTECTION AND PRESERVATION:

7. A fine shall be paid by the applicant in an amount not to exceed \$10,000 for each tree that is destroyed and/or the City may request that replacement trees of similar caliper and species be provided for damaged trees if the approved tree protection methods have not been followed. The replacement trees shall be installed and if applicable the fine shall be paid prior to the issuance of the last certificate of occupancy permit. *** (P&Z)(RP&CA)
8. The area of the limits of disturbance and clearing for the site shall be limited to the areas as generally depicted on the preliminary site plan dated April 14, 2014 and reduced if possible to retain existing trees and grades. (P&Z)(RP&CA)

9. The applicant shall work with the City for recycling and/or reuse of the existing materials as part of the demolition process, including leftover, unused, and/or discarded materials. (T&ES)(P&Z)
10. Install a temporary informational sign on the site prior to the approval of the final site plan for the project. The sign shall be displayed until construction is complete or replaced with a contractor or real estate sign incorporating the required information; the sign shall notify the public of the nature of the upcoming project and shall provide a phone number for public questions regarding the project.* (P&Z)(T&ES)

D. PARKING:

11. The design and allocation of parking shall be subject to the following to the satisfaction of the directors of P&Z, T&ES, and Code Administration:
 - a. All parked vehicles shall be prohibited from encroaching on the proposed streets, pedestrian walkways, or emergency vehicle easements, and all purchasers shall be notified of this prohibition.

E. TRANSPORTATION DEMAND MANAGEMENT:

12. Transportation Demand Management goals and strategies must be established and implemented in order to encourage employees, parents and volunteers to take public transportation or share a ride to reduce the need for parking spaces. The details of the Plan are included in the TDM Attachment 1 to the general staff conditions. Below are the basic conditions from which other details originate. (T&ES)
13. A TDM Coordinator shall be designated for the school. The name, location, email and telephone number of the coordinator will be provided to the City at the time, as well as any changes occurring subsequently. This person will be responsible for implementing and managing all aspects of the TDM plan and the parking management program for the project. ** (T&ES)
14. The TDM goal is 30% usage of non-single occupancy vehicular modes by employees. The peak hour goal for all trips is a 0.5% reduction year-to-year. A TDM fund of \$14,200 shall be created in two annual installments of \$7,100 each, to be held and utilized by the applicant. The first payment is due in the account before December 31, 2014 and the second by December 31, 2015. The fund shall be used exclusively for the approved transportation activities detailed in the attachment.*** (T&ES)
15. The TDM Coordinator will submit annual reports, fund reports, transportation counts and modes of transportation surveys to the Transportation Planning Division as detailed in the Attachment. (T&ES)

F. SITE PLAN:

16. Per Section 11-418 of the Zoning Ordinance, the development special use permit shall expire and become null and void, unless substantial construction of the project is commenced within 36 months after initial approval and such construction is thereafter pursued with due diligence. The applicant shall provide a written status report to staff 18 months after initial approval to update the City Council on the project status. (P&Z)
17. Provide a lighting plan with the final site plan to verify that lighting meets City standards. The plan shall be to the satisfaction of the Directors of T&ES, P&Z, and/or RP&CA in consultation with the Chief of Police and shall include the following:
 - a. Clearly show location of all existing street lights and site lights with a photometric plan to include all existing light fixtures, shading back less relevant information.
 - b. If existing lighting does not meet minimum standards within the City right-of-way adjacent to the site, additional lighting must be provided so that the lighting meets City standards or to the satisfaction of the Director of T&ES.

In the event that the lighting does not meet the minimum standards, provide the following:

- c. Clearly show location of all existing and proposed street lights and site lights, shading back less relevant information.
- d. A lighting schedule that identifies each type and number of all fixtures, mounting height, and strength of fixture in Lumens or Watts
- e. Manufacturer's specifications and details for all proposed fixtures including site, landscape, pedestrian, sign(s) and security lighting.
- f. A photometric plan with lighting calculations that include all existing and proposed light fixtures, including any existing street lights located on the opposite side(s) of all adjacent streets. Photometric calculations must extend from proposed building face(s) to property line and from property line to the opposite side(s) of all adjacent streets and/or 20 feet beyond the property line on all adjacent properties and rights-of-way. Show existing and proposed street lights and site lights.
- g. Photometric site lighting plan shall be coordinated with architectural/building mounted lights, site lighting, street trees and street lights to minimize light spill into adjacent residential areas.
- h. Provide location of conduit routing between site lighting fixtures so as to avoid conflicts with street trees.
- i. Detail information indicating proposed light pole and footing in relationship to adjacent grade or pavement. All light pole foundations shall be concealed from view.
- j. The lighting for the areas not covered by the City of Alexandria' standards shall be designed to the satisfaction of Directors of T&ES and P&Z.

- k. Provide numeric summary for various areas (i.e., roadway, walkway/ sidewalk, alley, and parking lot, etc.) in the proposed development.
- l. Full cut-off lighting shall be used at the development site to prevent light spill onto adjacent properties. (P&Z)(T&ES)(RP&CA)(Police)(BAR)

G. CONSTRUCTION MANAGEMENT:

- 18. Submit a construction phasing plan to the satisfaction of the Director of T&ES, for review, approval and partial release of Erosion and Sediment Control for the final site plan. In addition, building and construction permits required for site preconstruction shall be permitted prior to release of the final site plan to the satisfaction of the Director of T&ES. * (T&ES)
- 19. Submit a construction management plan for review and approval by the Directors of P&Z, T&ES and Code Administration prior to final site plan release. The plan shall:
 - a. Include a plan for temporary pedestrian and vehicular circulation;
 - b. Include analysis as to whether temporary street lighting is needed on the site and how it is to be installed.
 - c. Include the overall schedule for construction and the hauling route;
 - d. Copies of the plan shall be posted in the construction trailer and given to each subcontractor before they commence work;
 - e. If the plan is found to be violated during the course of construction, citations will be issued for each infraction and a correction notice will be forwarded to the applicant. If the violation is not corrected within five (5) calendar days, a "stop work order" will be issued, with construction halted until the violation has been corrected. * (P&Z)(T&ES)(Code)
- 20. Provide off-street parking for all construction workers without charge to the construction workers. Construction workers shall not be permitted to park on-street. For the construction workers who use Metro, DASH, or another form of mass transit to the site, the applicant shall subsidize a minimum of 50% of the fees for mass transit. Compliance with this condition shall be a component of the construction management plan, which shall be submitted to the Department of P&Z and T&ES prior to final site plan release. This plan shall:
 - a. Establish the location of the parking to be provided at various stages of construction, how many spaces will be provided, how many construction workers will be assigned to the work site, and mechanisms which will be used to encourage the use of mass transit.
 - b. Provide for the location on the construction site at which information will be posted regarding Metro schedules and routes, bus schedules and routes.
 - c. If the plan is found to be violated during the course of construction, a correction notice will be issued to the developer. If the violation is not corrected within five (5) days, a "stop work order" will be issued, with construction halted until the violation has been corrected. * (P&Z)(T&ES)

21. The sidewalks shall remain open during construction or pedestrian access shall be maintained to the satisfaction of the Director of T&ES throughout the construction of the project. (T&ES)
22. No major construction staging shall be allowed within adjoining City Park property. The applicant shall meet with T&ES to discuss construction staging activities prior to release of any permits for ground disturbing activities. ** (T&ES)
23. A "Certified Land Disturber" (CLD) shall be named in a letter to the Division Chief of Construction Management & Inspection prior to any land disturbing activities. If the CLD changes during the project, that change must be noted in a letter to the Division Chief. A note to this effect shall be placed on the Phase I Erosion and Sediment Control sheets on the site plan. (T&ES)
24. Prior to commencing clearing and grading of the site, the applicant shall hold a meeting with notice to all adjoining property owners and civic associations to review the location of construction worker parking, plan for temporary pedestrian and vehicular circulation, and hours and overall schedule for construction. The Departments of P&Z and T&ES shall be notified of the date of the meeting before the permit is issued. (P&Z)(T&ES)
25. Identify a person who will serve as a liaison to the community throughout the duration of construction. The name and telephone number, including an emergency contact number, of this individual shall be provided in writing to residents, property managers and business owners whose property abuts the site and shall be placed on the project sign, to the satisfaction of the Directors of P&Z, and/or and T&ES. (P&Z)(T&ES)
26. Implement a waste and refuse control program during the construction phase of this development. This program shall control wastes such as discarded building materials, concrete truck washout, chemicals, litter or trash, trash generated by construction workers or mobile food vendor businesses serving them, and all sanitary waste at the construction site and prevent offsite migration that may cause adverse impacts to neighboring properties or to the environment to the satisfaction of Directors of T&ES and Code Administration. All wastes shall be properly disposed offsite in accordance with all applicable federal, state and local laws. (T&ES)
27. Temporary construction on-site trailer shall be permitted and be subject to the approval of the Director of P&Z. The trailer shall be removed upon completion of work. ***
28. Submit an as-built development site plan survey per the City's final as-built requirements upon project completion. *** (P&Z) (T&ES)

29. Contractors shall not cause or permit vehicles to idle for more than 10 minutes when parked. (T&ES)

H. STORMWATER:

30. In accordance with the Preliminary Plan, the Final Site Plan shall comply with all the storm water management regulatory requirements by the Commonwealth of Virginia and the City of Alexandria as applicable on or after July 1, 2014. (T&ES)

I. STREETS / TRAFFIC:

31. If the City's existing public infrastructure is damaged during construction, or patch work required for utility installation then the applicant shall be responsible for construction/ installation or repair of the same as per the City of Alexandria standards and specifications and to the satisfaction of Director, Transportation and Environmental Services. (T&ES)
32. A pre-construction walk/survey of the site shall occur with Transportation and Environmental Services Construction Management & Inspection staff to document existing conditions prior to any land disturbing activities. (T&ES)

J. UTILITIES:

33. Locate all private utilities without a franchise agreement outside of the public right-of-way and public utility easements. (T&ES)

K. WATERSHED, WETLANDS, & RPA's:

34. The project site lies within Four Mile Run Watershed thus stormwater quantity controls shall be designed to demonstrate that post development stormwater runoff does not exceed the existing runoff quantities for the 2-year, 10-year, and 100-year storm events. (T&ES)
35. The storm water collection system is located within the Four Mile Run watershed. All on-site storm water curb inlets and public curb inlets within 50 feet of the property line shall be duly marked using standard City markers, or to the satisfaction of the Director of T&ES. (T&ES)

L. BMP FACILITIES:

36. The City of Alexandria's storm water management regulations regarding water quality are two-fold: first, phosphorus removal requirement and second, water quality volume default. Compliance with the phosphorus requirement does not relieve the applicant from the water quality default requirement. The water quality volume determined by the site's proposed impervious area shall be treated in a Best Management Practice (BMP) facility. (T&ES)

37. Provide BMP narrative and complete pre and post development drainage maps that include areas outside that contribute surface runoff from beyond project boundaries to include adequate topographic information, locations of existing and proposed storm drainage systems affected by the development, all proposed BMPs and a completed Worksheet A or B and Worksheet C, as applicable. (T&ES)
38. The storm water Best Management Practices (BMPs) required for this project shall be constructed and installed under the direct supervision of the design professional or his designated representative. Prior to release of the performance bond, the design professional shall submit a written certification to the Director of T&ES that the BMPs are:
 - a. Constructed and installed as designed and in accordance with the approved Final Site Plan.
 - b. Clean and free of debris, soil, and litter by either having been installed or brought into service after the site was stabilized. *****(T&ES)
39. Submit two originals of the storm water quality BMP Maintenance Agreement with the City to be reviewed as part of the Final #2 Plan. The agreement must be executed and recorded with the Land Records Division of Alexandria Circuit Court prior to approval of the final site plan.* (T&ES)
40. The Applicant/Owner shall be responsible for installing and maintaining storm water Best Management Practices (BMPs). The Applicant/Owner shall execute a maintenance service contract with a qualified private contractor for a minimum of three years and develop an Owner's Operation and Maintenance Manual for all Best Management Practices (BMPs) on the project. The manual shall include at a minimum: an explanation of the functions and operations of the BMP(s); drawings and diagrams of the BMP(s) and any supporting utilities; catalog cuts on maintenance requirements including mechanical or electrical equipment; manufacturer contact names and phone numbers; a copy of the executed maintenance service contract; and a copy of the maintenance agreement with the City. A copy of the contract shall also be placed in the BMP Operation and Maintenance Manual. Prior to project completion, a copy of the maintenance contract shall be submitted to the City. *****(T&ES)
41. Submit a copy of the Operation and Maintenance Manual to the Office of Environmental Quality on digital media prior to project completion. *****(T&ES)
42. Prior to project completion, the Applicant is required to submit a certification by a qualified professional to the satisfaction of the Director of T&ES that any existing storm water management facilities adjacent to the project and associated conveyance systems were not adversely affected by construction operations. If maintenance of the facility or systems were required in order to make this certification, provide a description of the maintenance measures performed. *****(T&ES)

M. CONTAMINATED LAND:

43. Indicate whether or not there is any known soil and groundwater contamination present as required with all preliminary submissions. Should any unanticipated contamination, underground storage tanks, drums or containers be encountered at the site, the Applicant must immediately notify the City of Alexandria Department of Transportation and Environmental Services, Office of Environmental Quality. (T&ES)

N. ARCHAEOLOGY:

44. Call Alexandria Archaeology immediately (703-746-4399) if any buried structural remains (wall foundations, wells, privies, cisterns, etc.) or concentrations of artifacts are discovered during development. Work must cease in the area of the discovery until a City archaeologist comes to the site and records the finds. The language noted above shall be included on all final site plan sheets involving any ground disturbing activities. (Archaeology)
45. The applicant shall not allow any metal detection and/or artifact collection to be conducted on the property, unless authorized by Alexandria Archaeology. Failure to comply shall result in project delays. The language noted above shall be included on all final site plan sheets involving any ground disturbing activities. (Archaeology)

CITY DEPARTMENT CODE COMMENTS

Legend: C - Code Requirement R - Recommendation S - Suggestion F – Finding

Planning and Zoning

- C - 1 As-built documents for all landscape and irrigation installations are required to be submitted with the Site as-built and request for project close-out. Refer to City of Alexandria Landscape Guidelines, Section III A & B. ***** (P&Z) (T&ES)

Transportation and Environmental Services

- F - 1. Sheet C-700 - With the final site plan submission, consider revising the tandem parking sign to reflect that these spaces are “reserved”, “permit only”, or other similar language that indicates these spaces are not open to the general public. (T&ES- Transportation)
- F - 2. Since the record drawings, maps, and other documents of the City of Alexandria, State, and Federal agencies show the true north pointing upwards, therefore, the Site Plan shall show the true north arrow pointing upward as is customary; however, for the sake of putting the plan together and/or ease of understanding, the project north arrow pointing upward, preferably east, or west may be shown provided it is consistently shown in the same direction on all the sheets with no exception at all. The north arrow shall show the source of meridian. The project north arrow pointing downward will not be acceptable even if, it is shown consistently on all the sheets. (T&ES)
- F - 3. The Final Site Plan must be prepared per the requirements of Memorandum to Industry 02-09 dated December 3, 2009, Design Guidelines for Site Plan Preparation, which is available at the City’s following web address:
- <http://alexandriava.gov/uploadedFiles/tes/info/Memo%20to%20Industry%20No.%2002-09%20December%203,%202009.pdf>
- F - 4. The plan shall show sanitary and storm sewer, and water line in plan and profile in the first final submission and cross reference the sheets on which the plan and profile is shown, if plan and profile is not shown on the same sheet. Clearly label the sanitary and storm sewer, or water line plans and profiles. Provide existing and proposed grade elevations along with the rim and invert elevations of all the existing and proposed sanitary and storm sewer at manholes, and water line piping at gate wells on the respective profiles. Use distinctive stationing for various sanitary and storm sewers (if applicable or required by the plan), and water line in plan and use the corresponding stationing in respective profiles. (T&ES)
- F - 5. The Plan shall include a dimension plan with all proposed features fully dimensioned and the property line clearly shown. (T&ES)
- F - 6. Include all symbols, abbreviations, and line types in the legend. (T&ES)

- F - 7. Asphalt patches larger than 20% of the total asphalt surface, measured along the length of the road adjacent to the property frontage and extending to the centerline of the street, will require full curb to curb restoration (T&ES)
- F - 8. All storm sewers shall be constructed to the City of Alexandria standards and specifications. Minimum diameter for storm sewers shall be 18" in the public Right of Way (ROW) and the minimum size storm sewer catch basin lead is 15". The acceptable pipe materials will be Reinforced Concrete Pipe (RCP) ASTM C-76 Class IV. Alternatively, AWWA C-151 (ANSI A21.51) Class 52 may be used if approved by the Director of T&ES. For roof drainage system, Polyvinyl Chloride (PVC) ASTM D-3034-77 SDR 26 and ASTM 1785-76 Schedule 40 pipes will be acceptable. The acceptable minimum and maximum velocities will be 2.0 fps and 15 fps, respectively. The storm sewers immediately upstream of the first manhole in the public Right of Way shall be owned and maintained privately (i.e., all storm drains not shown within an easement or in a public Right of Way shall be owned and maintained privately). (T&ES)
- F - 9. Lateral Separation of Sewers and Water Mains: A horizontal separation of 10' (edge to edge) shall be provided between a storm or sanitary sewer and a water line; however, if this horizontal separation cannot be achieved then the sewer and water main shall be installed in separate trenches and the bottom of the water main shall be at least 18" above of the top of the sewer. If both the horizontal and vertical separations cannot be achieved then the sewer pipe material shall be Ductile Iron Pipe (DIP) AWWA C-151 (ANSI A21.51) Class 52 and pressure tested in place without leakage prior to installation.(T&ES)
- F - 10. Crossing Water Main Over and Under a Sanitary or Storm Sewer: When a water main over crosses or under crosses a sanitary / storm sewer then the vertical separation between the bottom of one (i.e., sanitary / storm sewer or water main) to the top of the other (water main or sanitary / storm sewer) shall be at least 18" for sanitary sewer and 12" for storm sewer; however, if this cannot be achieved then both the water main and the sanitary / storm sewer shall be constructed of Ductile Iron Pipe (DIP) AWWA C-151 (ANSI A21.51) Class 52 with joints that are equivalent to water main standards for a distance of 10 feet on each side of the point of crossing. A section of water main pipe shall be centered at the point of crossing and the pipes shall be pressure tested in place without leakage prior to installation. Sewers crossing over the water main shall have adequate structural support (concrete pier support and/or concrete encasement) to prevent damage to the water main. Sanitary sewers under creeks and storm sewer pipe crossings with less than 6" clearance shall be encased in concrete. (T&ES)
- F - 11. No water main pipe shall pass through or come in contact with any part of sanitary / storm sewer manhole. Manholes shall be placed at least 10 feet horizontally from the water main whenever possible. When local conditions prohibit this horizontal separation, the manhole shall be of watertight construction and tested in place. (T&ES)

- F - 12. Crossing Existing or Proposed Utilities: Underground telephone, cable T.V., gas, and electrical duct banks shall be crossed maintaining a minimum of 12" of separation or clearance with water main, sanitary, or storm sewers. If this separation cannot be achieved then the sewer pipe material shall be Ductile Iron Pipe (DIP) AWWA C-151 (ANSI A21.51) Class 52 for a distance of 10 feet on each side of the point of crossing and pressure tested in place without leakage prior to installation. Sanitary / storm sewers and water main crossing over the utilities shall have adequate structural support (pier support and/or concrete encasement) to prevent damage to the utilities. (T&ES)
- F - 13. Show the drainage divide areas on the grading plan or on a sheet showing reasonable information on topography along with the structures where each sub-area drains. (T&ES)
- F - 14. Provide proposed elevations (contours and spot shots) in sufficient details on grading plan to clearly show the drainage patterns. (T&ES)
- F - 15. All the existing and proposed public and private utilities and easements shall be shown on the plan and a descriptive narration of various utilities shall be provided. (T&ES)
- C - 1 Per the requirements of the City of Alexandria Zoning Ordinance Article XI, the applicant shall complete a drainage study and adequate outfall analysis for the total drainage area to the receiving sewer that serves the site. If the existing storm system is determined to be inadequate then the applicant shall design and build on-site or off-site improvements to discharge to an adequate outfall; even if the post development storm water flow from the site is reduced from the pre-development flow. The Plan shall demonstrate to the satisfaction of the Director of T&ES that a non-erosive stormwater outfall is present. (T&ES)
- C - 2 Per the requirements of the City of Alexandria Zoning Ordinance (AZO) Article XIII, the applicant shall comply with the peak flow requirements and prepare a Stormwater Management Plan so that from the site, the post-development peak runoff rate from a two-year storm and a ten-year storm, considered individually, shall not exceed their respective predevelopment rates. If combined uncontrolled and controlled stormwater outfall is proposed, the peak flow requirements of the Zoning Ordinance shall be met. If the project site lies within the Braddock-West watershed then the applicant shall provide an additional 10% storage of the pre-development flows in this watershed to meet detention requirements. (T&ES)
- C - 3 Per the requirements of Article 13-113 (d) of the AZO, all stormwater designs that require analysis of pressure hydraulic systems, including but not limited to the design of flow control structures and storm water flow conveyance systems shall be signed and sealed by a professional engineer, registered in the Commonwealth of Virginia. The design of storm sewer shall include the adequate outfall, inlet, and hydraulic grade line (HGL) analyses that shall be completed to the satisfaction of the Director of T&ES. Provide appropriate reference and/or source used to complete these analyses. (T&ES)

- C - 4 Location of customer utility services and installation of transmission, distribution and main lines in the public rights of way by any public service company shall be governed by franchise agreement with the City in accordance with Title 5, Chapter 3, Section 5-3-2 and Section 5-3-3, respectively. The transformers, switch gears, and boxes shall be located outside of the public right of way. (T&ES)
- C - 5 (a) Per the requirements of Section 5-3-2, Article A, Chapter 3 of the City of Alexandria Code, all new customer utility services, extensions of existing customer utility services and existing overhead customer utility services supplied by any existing overhead facilities which are relocated underground shall, after October 15, 1971 be installed below the surface of the ground except otherwise exempted by the City Code and to the satisfaction of the Director, Department of Transportation and Environmental Services. (b) Per the requirements of Section 5-3-3, Article A, Chapter 3 of the City of Alexandria Code, all new installation or relocation of poles, towers, wires, lines, cables, conduits, pipes, mains, and appurtenances used or intended to be used to transmit or distribute any service such as electric current, telephone, telegraph, cable television, traffic control, fire alarm, police communication, gas, water, steam or petroleum, whether or not on the streets, alleys, or other public places of the City shall, after October 15, 1971, be installed below the surface of the ground or below the surface in the case of bridges and elevated highways except otherwise exempted by the City Code and to the satisfaction of Director, Department of Transportation and Environmental Services. (T&ES)
- C - 6 Per the requirements of Title 4, Chapter 2, Article B, Section 4-2-21, Appendix A, Section A 106(6), Figure A 106.1 Minimum Standards for Emergency Vehicle Access: provide a total turning radius of 25 feet to the satisfaction of Directors of T&ES and Office of Building and Fire Code Administration and show turning movements of standard vehicles in the parking lot as per the latest AASHTO vehicular guidelines. (T&ES)
- C - 7 The applicant shall provide required storage space for both trash and recycling materials containers as outlined in the City's "Solid Waste and Recyclable Materials Storage Space Guidelines", or to the satisfaction of the Director of Transportation & Environmental Services. The plan shall show the turning movements of the collection. The City's storage space guidelines and required Recycling Implementation Plan forms are available at: www.alexandriava.gov/solidwaste or contact the City's Solid Waste Division at 703-746-4410, or via email at commercialrecycling@alexandriava.gov, for information about completing this form. (T&ES)
- C - 8 The applicants shall submit a Recycling Implementation Plan (RIP) form to the Solid Waste Division, as outlined in Article H of Title 5 (Ordinance Number 4438), which requires all commercial properties to recycle. Instructions for how to obtain a RIP form can be found at: www.alexandriava.gov/solidwaste or by calling the Solid Waste Division at 703.746.4410 or by e-mailing CommercialRecycling@alexandriava.gov. (T&ES)

- C - 9 All private streets and alleys shall comply with the City's Minimum Standards for Private Streets and Alleys. (T&ES)
- C - 10 All easements and/or dedications must be recorded prior to release of the site plan.* (T&ES)
- C - 11 Plans and profiles of utilities and roads in public easements and/or public Right of Way must be approved prior to release of the plan.* (T&ES)
- C - 12 Provide a phased erosion and sediment control plan consistent with grading and construction plan. (T&ES)
- C - 13 Per the Memorandum to Industry, dated July 20, 2005, the applicant is advised regarding a requirement that applicants provide as-built sewer data as part of the final as-built process. Upon consultation with engineering firms, it has been determined that initial site survey work and plans will need to be prepared using Virginia State Plane (North Zone) coordinates based on NAD 83 and NAVD 88. Control points/Benchmarks which were used to establish these coordinates should be referenced on the plans. To insure that this requirement is achieved, the applicant is requested to prepare plans in this format including initial site survey work if necessary. (T&ES)
- C - 14 The thickness of sub-base, base, and wearing course shall be designed using "California Method" as set forth on page 3-76 of the second edition of a book entitled, "Data Book for Civil Engineers, Volume One, Design" written by Elwyn E. Seelye. Values of California Bearing Ratios used in the design shall be determined by field and/or laboratory tests. An alternate pavement section for Emergency Vehicle Easements (EVE) to support H-20 loading designed using California Bearing Ratio (CBR) determined through geotechnical investigation and using Virginia Department of Transportation (VDOT) method (Vaswani Method) and standard material specifications designed to the satisfaction of the Director of Transportation and Environmental Services (T&ES) will be acceptable. (T&ES)
- C - 15 All pedestrian, traffic, and way finding signage shall be provided in accordance with the Manual of Uniform Traffic Control Devices (MUTCD), latest edition to the satisfaction of the Director of T&ES. (T&ES)
- C - 16 All driveway entrances, curbing, etc. in the public ROW or abutting public ROW shall meet City design standards. (T&ES)
- C - 17 All sanitary laterals and/or sewers not shown in the easements shall be owned and maintained privately. (T&ES)
- C - 18 The applicant shall comply with the City of Alexandria's Noise Control Code, Title 11, Chapter 5, which sets the maximum permissible noise level as measured at the property line. (T&ES)

- C - 19 The applicant shall comply with the Article XIII of the City of Alexandria Zoning Ordinance, which includes requirements for stormwater pollutant load reduction, treatment of the water quality volume default and stormwater quantity management. (T&ES)
- C - 20 The applicant shall comply with the City of Alexandria, Erosion and Sediment Control Code, Section 5, Chapter 4. (T&ES)
- C - 21 All required permits from Virginia Department of Environmental Quality, Environmental Protection Agency, Army Corps of Engineers, Virginia Marine Resources shall be in place for all project construction and mitigation work prior to release of the final site plan. This includes the state requirement for a VSMP permit for land disturbing activities greater than 2500 SF. * (T&ES)

Code Administration (Building Code):

- F - 1. The review by Code Administration is a preliminary review only. Once the applicant has filed for a building permit, code requirements will be based upon the building permit plans. If there are any questions, the applicant may contact the Code Administration Office, Plan Review Supervisor at 703-746-4200.

Archaeology

- F – 1. Civil War-era maps indicate that a farmstead once stood less than 100 ft. to the west from the current school property. Therefore, given the proximity, the subject property could contain significant archaeological evidence of mid-nineteenth-century Alexandria history. However, the proposed undertaking is limited in scope and therefore it is unlikely that this particular project will adversely impact the existing resources. As a precaution, the two archaeological conditions have been placed on the project.
- C – 1. All required archaeological preservation measures shall be completed in compliance with Section 11-411 of the Zoning Ordinance.

Asterisks denote the following:

- * Condition must be fulfilled prior to release of the final site plan
- ** Condition must be fulfilled prior to release of the building permit
- *** Condition must be fulfilled prior to release of the certificate of occupancy
- **** Condition must be fulfilled prior to release of the bond

IX. ATTACHMENTS

Attachment 1:

Transportation Demand Management Plan

John Adams Elementary School
DSUP#2014-00002

A Transportation Demand Management Plan is required to implement strategies to persuade employees to take public transportation or share a ride to lessen the need for parking spaces and reduce peak hour trips. The details of the Plan are included below. The TDM strategies address the following users of the site:

- Staff and Students at John Adams Elementary School
- Visitors at school or community events at John Adams Elementary School
- Other employees, visitors, or contractors

The Transportation Demand Management Plan for John Adams Elementary School consists of five parts:

1. Goal and Evaluation of the TDM Plan
2. Organization, Funding and Reporting
3. Transportation Demand Management Plan
4. Evaluation of the Effectiveness of the TDM Plan
5. Modifications

Goal and Evaluation of the TDM Plan

- a. The achievement of a successful TDM Plan will be based on the activities conducted and financed by the TDM fund and the annual survey that are requirements of this development special use permit. The fund report and annual report should demonstrate that enough activities are being conducted to persuade employees to switch to transit or carpool as opposed to driving alone. The survey should progressively show that the strategies financed through the TDM fund are decreasing the number of peak hour single occupant vehicles to the site.

Organization, Funding and Reporting

- a. Alexandria City Public Schools (ACPS) shall designate a Transportation Demand Management Coordinator (the TDM Coordinator) to manage and implement the TDM strategies on behalf of the school. The Transportation Planning Division may assist the TDM Coordinator.
- b. An Annual Work Plan will be developed by the TDM Coordinator and approved by the Transportation Planning Division. This work plan will be due on June 1st of every year for the following school year.
- c. The TDM Plan will be funded by the applicant. Funds will be used exclusively for the following activities:
 - Annual survey and resulting zip code maps
 - Promotional materials

- Supplement to transit benefit provided by the City of Alexandria
 - Quarterly mailers to school families
 - Incentives and prizes
 - Walk/bike to work subsidy program
 - Any other TDM activities as may be proposed by the TDM Coordinator and approved by the Director of T&ES as meeting goals similar to those targeted by the required TDM measures.
- d. Any unencumbered funds remaining in the TDM account at the end of each reporting year may be reprogrammed for TDM activities during the ensuing year or may be paid to the City for use in transit or ridesharing programs and activities.
- e. The TDM Coordinator shall provide semi-annual fund reports to the Transportation Planning Division. These reports will provide a summary of the expenses and account balance and should be accompanied by supporting documentation. The first report will be due six months following the project's completion, with the following due on January 15 and June 1 of every year.
- f. The TDM Coordinator shall distribute an annual survey to all staff members. The survey will be supplied by the Transportation Planning Division. Survey results will be due on April 15 of every year. A 35% response rate is required as approved by the Transportation Planning Division.
- g. The TDM Coordinator shall arrange to conduct annual peak hour vehicular counts to determine the number of vehicles accessing the campus. The Coordinator will work with Transportation Planning to determine the count dates, times and methodology.

Transportation Demand Management Plan

The TDM program will consist of the provision of services and incentives designed to discourage the use of single occupant automobiles for transportation to and from the site.

School families and students

- Annually, prior to school starting, the TDM Coordinator will prepare and mail a letter to John Adams Elementary School families that urge them to carpool to school, take DASH, MetroBus, or walk/bike. The letter will introduce the TDM Coordinator and provide information on forming carpools.
- Incentives will be given at least once a month to students who traveled that day to school by an eligible mode (carpool, school bus, or walk/bike). No one will receive advanced notice of the day selected, thereby encouraging students and their families to engage in alternative transportation as often as possible. Examples of incentives to be offered: store gift certificates, electronic gadgets, movie tickets, or pizza lunch for their class.
- Send a quarterly mailer to students, parents, and staff that includes information on preferred travel routes to campus, information on daily student drop-off/pick-up practices, a reminder of the school's alternative transportation goals, information on bus/metro routes, walking and biking safety tips, and TDM Coordinator's contact information.

- Include a transportation section to student handbook describing applicable goals, policies, services, and incentives. Include a Multi-modal Access Guide which provides maps, directions and preferred circulation for each mode.
- Participate in Walk to School Day events
- Set up “Walking School Buses” and/or “Biking Trains” which are groups of students accompanied by adults that walk or bike a pre-planned route to school.
- The TDM Coordinator will identify safe walking routes to the school and provide these maps to parents at the beginning of the school year.
- The school will participate in walk/bike to school promotional activities.
- Provide school bus stops to all John Adams Elementary students.
- Provide rides home for students who participate in afterschool activities on school buses.

School employees

- Promotional materials related to the TDM program and alternative transportation subsidy will be provided quarterly, beginning at the start of each school year.
- The TDM Coordinator will provide staff with maps and addresses of staff members who may be willing to carpool.
- Register staff carpoolers and assign priority parking for registered carpoolers.
- Promote ride matching and the “Guaranteed Ride Home” program
- Informational bulletin board in a staff area including: sign-up sheet for those interested in carpools, TDM Coordinator contact information, availability of preferred parking and bike racks, local bus/metro information, and other promotional materials.
- Registration and enrollment in walk/bike to work subsidy program for staff.
- Provide bike racks, the number of which will be in accordance with the City of Alexandria requirements. Showers should also be provided on-site. Provide training on safe use of bicycles.

Currently, ACPS employees are eligible for up to \$30 per month in transit benefits to put toward their commuting costs. The program is funded and administered by the City of Alexandria. The benefit has two options: Smart Benefits for WMATA (MetroBus and MetroRail), DASH, VRE or vanpooling, or a monthly DASH pass.

At the time of this TMP SUP, the City of Alexandria provides a transit benefit to all ACPS employees for \$30 per month. This benefit is expected to continue; however, if it is no longer available to all ACPS employees, this TMP requires that a transit benefit be offered to employees of John Adams for an amount of at least 50% of the transit benefit provided to City of Alexandria employees.

- IncentivesTMP funds may be used to supplement the benefits outlined above that are administered by the City of Alexandria.
- Subsidize staff that chooses to walk, bike or take transit to work by establishing a parking cash-out policy that offers employees a cash allowance in lieu of a parking space.

Evaluation of the Effectiveness of the TDM Plan

- a. The annual survey will be used to continually determine whether the school is meeting these targets. Other methods may be used if approved by the Director of T&ES.
- b. The City of Alexandria, in conjunction with the TDM Coordinator, will identify performance standards and objectives to measure the cost effectiveness and develop methodologies to monitor the performance of each element of the TDM Plan. The performance of the development in meeting these objectives will be evaluated in the annual report prepared by the TDM Coordinator, and will be used in developing the work plan.
- c. This TDM Plan has been designed to be flexible and responsive to the inputs of these annual evaluations in prescribing TDM strategies and tactics to be implemented in the Annual Work Program. By linking evaluation to work planning, the standards of performance will also change throughout the development cycle as the “right” solutions are adjusted in response and anticipation of changes in transportation conditions.

Modifications

- a. The Director of T&ES may approve modifications to agreed TDM activities and funds, provided that any changes are consistent with the goals of this plan.



JOHN ADAMS ELEMENTARY TRANSPORTATION STUDY

Traffic Circulation and Parking Issues



Kimley-Horn
and Associates, Inc.



ALEXANDRIA CITY
PUBLIC SCHOOLS



FINAL REPORT

John Adams Elementary School

Traffic Circulation and Parking Study

Prepared for:



November 2012



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Executive Summary

Alexandria City Public Schools (ACPS) has retained Kimley-Horn and Associates, Inc. to perform a study to address the existing circulation and parking issues with the John Adams Elementary School by collecting data, assessing existing conditions, coordinating with stakeholders, and developing recommendations. The goal of the project is to identify near-term solutions (low cost, that don't require regulatory approval) that can quickly be implemented as well as mid- to long-term solutions that ACPS can implement in the future as funding is identified and programmed. This report summarizes the existing conditions, stakeholder input process, identification of potential solutions, and recommendations.

Several meetings were held to engage the public and stakeholders in the study process. The project team had regular communication with representatives of the City Transportation and Environmental Services (T&ES), Department of Recreation, Parks, and Cultural Activities (RPCA), ACPS Administration, and ACPS Pupil Transportation. In addition to meeting and coordination with ACPS and City staff, two public meetings were held on June 28, 2012 and July 31, 2012. The public and stakeholder process provided valuable feedback on potential issues and assisted in narrowing the potential solutions into recommendations.

Based on the study results, the following recommendations are provided:

Short-Term Recommendations

Implement the following short-term solutions to have an immediate impact on the traffic circulation and parking issues at John Adams:

1. Implement a Left-Turn Restriction for the Exiting Movement at School Driveway - During peak traffic demand periods before and after school, no left-turns out of the school driveway would be allowed. The implementation of this recommendation is in progress.
2. Develop a Transportation Management Program (TMP) – Designate a faculty/staff member or committee to coordinate with a potential school district-wide TMP coordinator to develop, implement, and maintain a TMP. Immediate activities recommended to begin this process are:
 - a. Establishing a parking permit program to better control parking within the campus.
 - b. Conduct surveys of parents and faculty/staff to identify their obstacles to using school buses, car pools, or public transit. The implementation of this recommendation is in progress.

- c. Utilize available City transportation demand management resources from Local Motion program. The implementation of this recommendation is in progress.
3. Share Parking with Duke Realty Property - All possible options to utilize the adjacent Duke Realty parking spaces either associated with ACPS Central Office or additional leased spaces should be explored. This existing underutilized parking lot is the only option to increase parking spaces for at least the next two school years.

Mid-Term and Long-Term Recommendations

In the mid-term, ACPS can add more parking within the John Adams site. Three small areas were identified as feasible locations and they could create at least 27 parking spaces with minimal impact and disruption due to construction. While these combined options do not create the targeted 40 spaces by ACPS, they would provide some relief. The additional parking spaces combined with using nearby on-street parking spaces and implementing a TMP could provide a balance between the parking demand and parking supply.

Other recommended improvements require redevelopment of the Duke Realty property (as part of the recommendations contained in the Beauregard Small Area Plan) and are therefore considered long-term. The long-term recommendations are:

1. Add a second site vehicle driveway to the future collector street to help disperse and organize school traffic more efficiently.
2. Reorient the site to provide for more efficient organization of uses. Relocating the playground to the back of the school allows for connectivity with the public open space to the north and creates opportunities for a larger shared use. Construction of parking on the current playground/court area would combine all transportation uses on the south and east side of the school and make efficient use of the recommended second driveway.

ACPS should monitor and participate in the Duke Realty property future planning and site plan approval process as the Beauregard Small Area Plan is implemented.

1. Introduction

Alexandria City Public Schools (ACPS) has retained Kimley-Horn and Associates, Inc. to perform a study to address the existing circulation and parking issues with the John Adams Elementary School by collecting data, assessing existing conditions, coordinating with stakeholders, and developing recommendations. The goal of the project is to identify near-term solutions (low cost) that can quickly be implemented as well as mid- to long-term solutions that ACPS can implement in the future as funding is identified and programmed. The following sections of this report summarize the existing conditions, stakeholder input process, identification of potential solutions, and recommendations.

2. Existing Conditions

The John Adams School currently contains an elementary school, pre-Kindergarten, a City Head Start program, and a Child Find developmental disability screening center. The school site is located at 5651 Rayburn Avenue, along the north side of Rayburn Avenue and west of N. Beauregard Street in the City of Alexandria. The site is surrounded by residential land uses to the west, south, and northeast, City park property to the north (including the baseball/softball field and grass/gravel area currently being used for parking), and commercial uses to the east (owned by Duke Realty). There is an open space near the southwest corner of the John Adams site between the townhomes and the parking lot. This open space is not owned by ACPS and may contain utility easements. There is also a shopping center along the south side of Rayburn Avenue. One of the shopping center's driveways is opposite of the John Adams school driveway along Rayburn Avenue.

Figure 1 shows the overall layout for the John Adams Elementary School campus. Vehicle access is provided at a single driveway (one lane in and one lane out) along Rayburn Avenue. Currently, twelve (12) school buses access the school. The bus loading area occurs in a loop near the building front. The parent drop-off/pick-up area is located in the parking lot near the back of the building. Pedestrian access to the site is along the Rayburn Avenue driveway, a pedestrian gate at the north property boundary opposite N. Shelley Street, and a gravel path that connects to N. Chambliss Street to the northwest. A City crossing guard is present at the Rayburn Avenue driveway during the school arrival and dismissal times to assist children who walk across Rayburn Avenue.

In the 2012 school year, the elementary school supported the following:

- 697 students (Kindergarten – 5th grade)
- 140 students (pre-Kindergarten without Head Start)
- 84 faculty
- 46 support staff (full time equivalents)

A City Head Start program currently operates within the building near the front entrance and bus loop. In the 2012 school year, the Head Start program supported 92 students and 15 staff personnel.

School hours are 8:00 AM – 2:35 PM with a midday dismissal at 11:10-11:30 AM. Head Start hours are 8:30 AM - 2:35 PM. It should be noted that the Head Start opening time was recently changed from 8:00 AM to 8:30 AM to separate the drop-off activities from the John Adams school bus and parent drop-off activities. Head Start parents are required to park and escort their child into the building to sign them in. Because there are no available parking spaces after 8 AM, parents of the Head Start students are forced to park along the drive aisle adjacent to the bus loop.

After school and related activities at the John Adams site currently include the following:

- Campagna Center (6 AM – 6 PM)
- Adult Sports (Mon, Tue, & Fri nights)
- After School Program (2 PM – 6 PM)
- Youth Volleyball/Basketball (Weeknights 6 PM, Weekends all day)
- Summer Program (6/25 – 8/31, 8:30 AM – 6 PM)

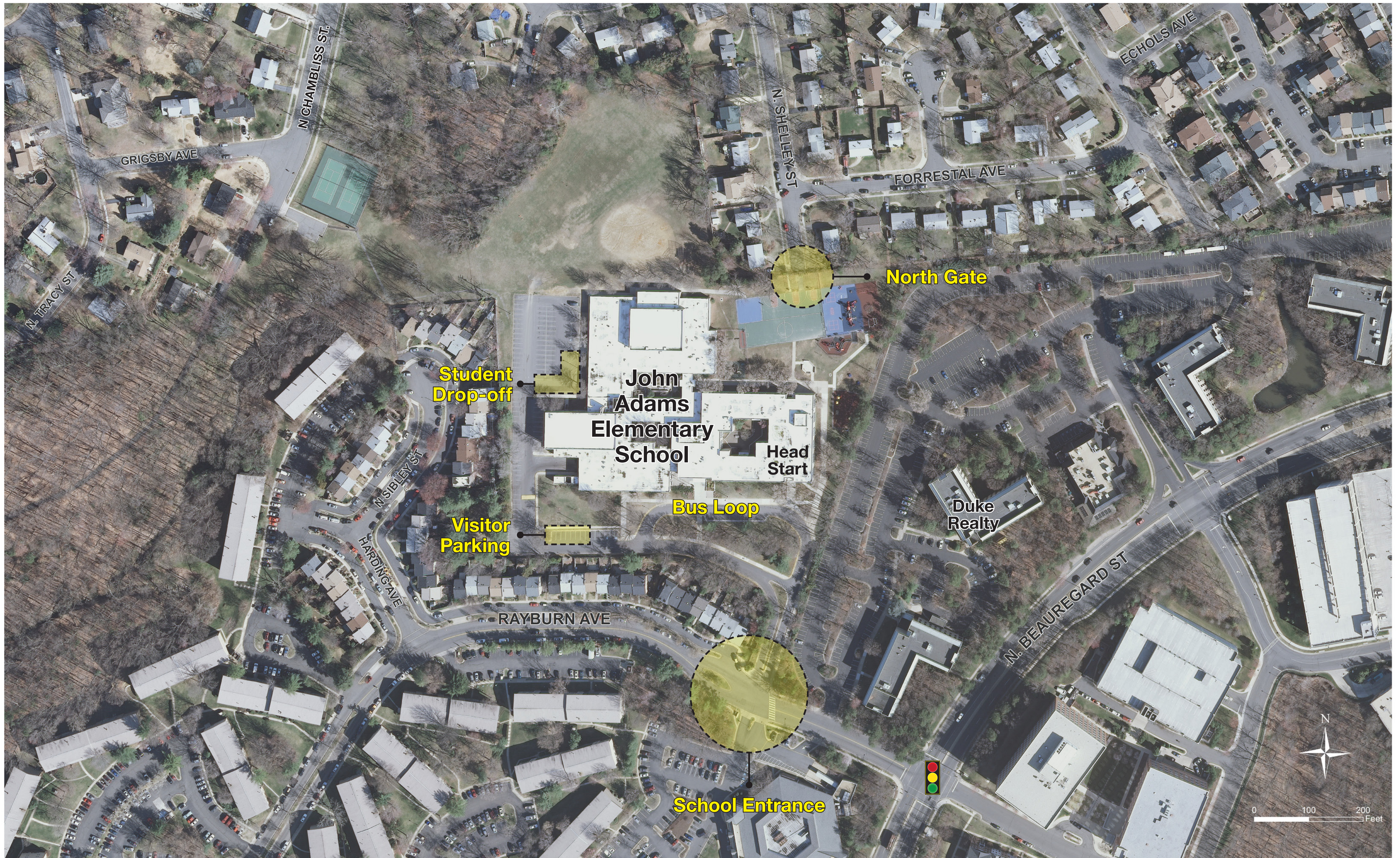


Figure 1—John Adams Elementary School—Campus Layout

2.1. Data Collection and Analyses

Kimley-Horn performed field observations and collected data to establish the baseline existing traffic and parking conditions and to identify transportation issues at the site. The following sections summarize the field observations, traffic counts, and parking counts.

2.1.1. Field Observations

Field observations of a complete school day were performed by two Kimley-Horn staff on Thursday June 7, 2012 from 7:00 AM to 4:00 PM. These observations primarily focused on issues that contribute to the congestion during peak student pick-up and drop-off times. They also involved observing traffic patterns throughout the day, including Head Start drop off and pickup times, and mid-day pickup times.

2.1.2. Traffic Counts and Analyses

Turning movement counts were collected at key intersections adjacent to the John Adams site during peak school traffic hours (7:30-8:30 AM, 2:30-3:30 PM). A summary of the peak hour counts at these four intersections is included in the **Appendix**:

1. Beauregard Street at Rayburn Avenue
2. Beauregard Street at Reading Avenue
3. Seminary Road at Echols Avenue
4. Rayburn Avenue at John Adams driveway

Intersection capacity analyses were performed at these four intersections based on methodologies contained in the Highway Capacity Manual, 2000 Edition as well as traffic signal timings provided by the City Transportation and Environmental Services staff. The *Highway Capacity Manual* defines six levels of service, LOS A through F, with A being the best and F the worst. **Table 1** shows the levels of service and the ranges of delay per vehicle for signalized and unsignalized intersections.

Table 1 - Levels of Service and Ranges of Delay		
LOS	Delay per Vehicle (seconds per vehicle)	
	Signalized	Unsignalized
A	≤ 10	≤ 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

The results of the overall intersection capacity analyses are summarized in **Table 2** for the four intersections based on the existing traffic volumes.

Table 2 - Intersection Delay and Level of Service				
Intersection	AM Peak Hour (7:30 – 8:30 AM)		PM Peak Hour (2:30 – 3:30 PM)	
	Delay (sec)	LOS	Delay (sec)	LOS
Beauregard Street and Rayburn Avenue (signalized)	29.9	C	27.1	C
Beauregard Street and Reading Avenue (signalized)	15.1	B	8.6	A
Seminary Drive and Echols Drive (signalized)	11.4	B	13.9	B
Rayburn Avenue and School Driveway (unsignalized)	70.8*	F	24.2*	C

* Intersection is a 2-way stop-controlled intersection. Results are for the SB driveway approach only.

The results of the analyses show that the signalized intersections operate at acceptable levels of service. The problems at the school driveway approach to Rayburn Avenue are reflected in the results for the AM peak, but not in the PM peak. This is likely due to the fact that Synchro does not take into account the queue blockage of the driveway as a result of the queue spillback

from the Beauregard Street signal and the congestion within the site doesn't allow traffic to easily exit the driveway. The queue blockage and congestion were seen during the field observations and are described in more detail in the Site Circulation/Traffic Conflict Issues section.

The spillback and the associated delays on the eastbound approach of Rayburn Avenue at Beauregard Street are better reflected in the individual delay and queuing results for that approach shown in **Table 3**. Synchro estimates the average delays on this approach to be 3 ½ minutes in the AM peak and over 2 ½ minutes in the PM peak. The school driveway is approximately 275 feet away from the stop line at the Beauregard Street signal. The queuing results confirm that queues from the Beauregard Street signal routinely extend to the driveway intersection and beyond.

Table 3 - Delay/Level of Service and Queuing Results				
<i>Eastbound Rayburn Avenue at Beauregard Street</i>				
	Delay/LOS		Queue Length (ft)	
	Delay (sec)	LOS	Average	95% Percentile
AM Peak	210.9	F	337	466
PM Peak	158.9	F	260	245

2.1.3. Parking Counts

Parking counts were performed every 30 minutes throughout the day as part of the field observations to document the number of occupied parking spaces and the amount of overflow parking that routinely occurs in areas of the campus not designated for that use. Based on the parking counts, there are approximately 128 designated parking spots. Within the total number of spaces available, 6 are marked for visitors, 5 for administrative staff, 4 are handicap parking, and the remaining spaces for faculty/staff. Kimley-Horn divided the parking into 5 sections for data collection and analysis. These sections are illustrated in **Figure 2**.

Figure 2 - Parking locations counted at John Adams Elementary School

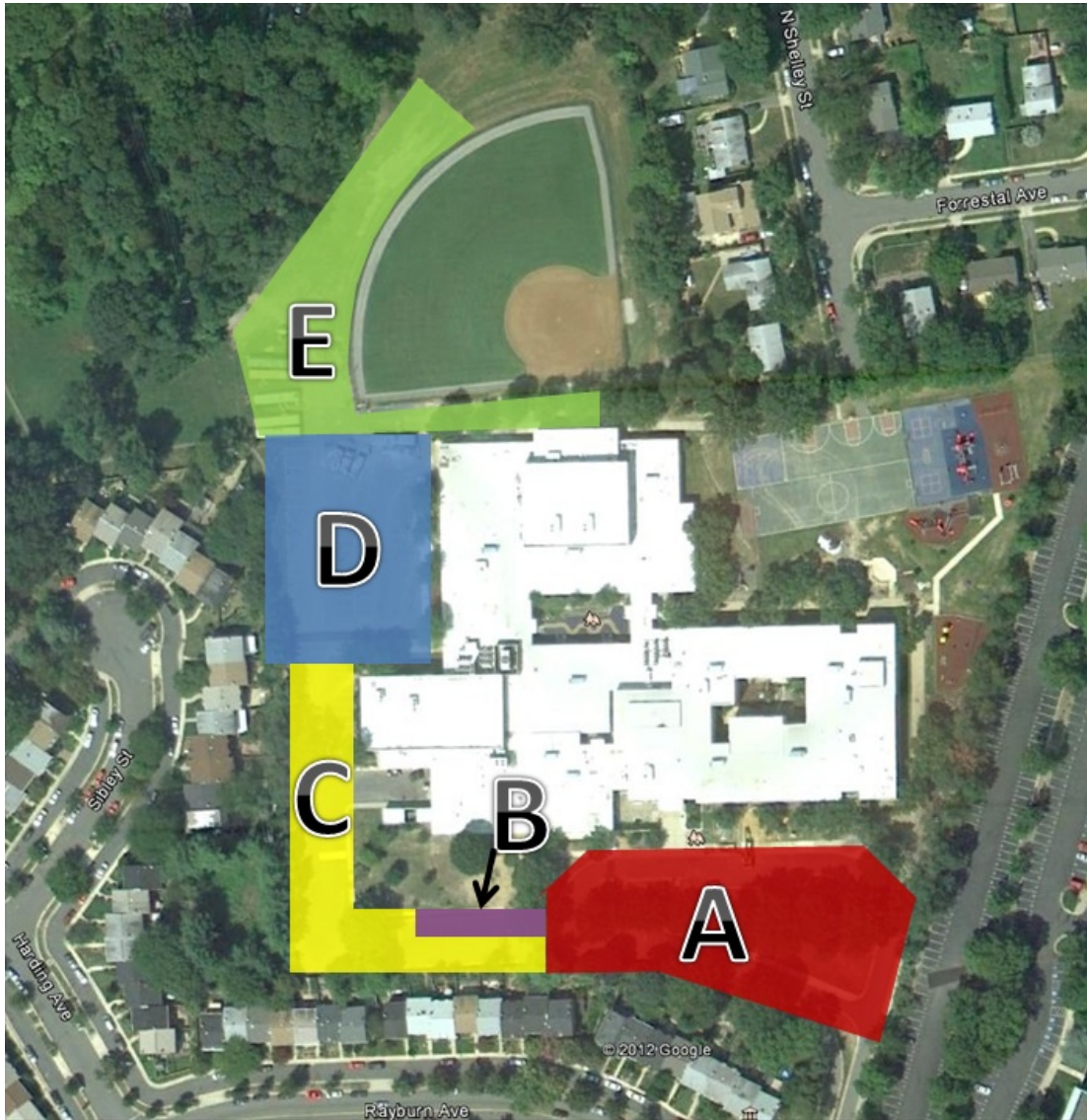


Table 4 - Occupied parking spaces throughout the school day.

Count Date: Thursday, June 7, 2012

Lot (See Figure 2 for Locations)	Total Parking Spaces	Number of Parked Vehicles																		
		7:00 AM	7:30 AM	8:00 AM	8:30 AM	9:00 AM	9:30 AM	10:00 AM	10:30 AM	11:00 AM	11:30 AM	12:00 PM	12:30 PM	1:00 PM	1:30 PM	2:00 PM	2:30 PM	3:00 PM	3:30 PM	4:00 PM
Location A 5 Administrative Only Spots & Bus Loop	5	3	5	5	13	5	5	5	5	5	5	5	4	5	5	7	7	11	4	5
Location B 6 Visitor Spaces/2 Handicap Spaces	6	0	5	6	6	6	6	6	6	5	6	5	6	6	6	6	6	3	4	2
	2	0	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	0
Location C 50 Faculty Spots	50	15	39	52	53	52	52	49	51	52	54	53	52	53	53	52	50	44	27	21
Location D 63 Faculty Spaces/2 Handicap Spaces	63	2	41	62	63	62	60	61	63	62	63	63	62	61	61	63	60	43	23	24
	2	0	0	1	2	2	2	2	2	2	2	2	2	2	2	2	2	1	0	0
Location E Additional Parking North of Lot D on Gravel/Dirt		0	0	20	20	18	17	16	16	15	15	15	15	14	14	20	28	16	8	8
Total	128	20	91	148	159	147	144	141	145	143	147	145	143	143	143	152	155	119	67	60
Total Site Parking Utilization	-	16%	71%	116%	124%	115%	113%	110%	113%	112%	115%	113%	112%	112%	112%	119%	121%	93%	52%	47%
Vehicles Observed in Unmarked Spaces	-	0	0	22	31	20	19	16	17	17	19	18	17	17	17	24	30	22	8	8

* Note: Some counts are higher than available parking spaces since vehicles were parked in unmarked locations.

**Handicap Parking counts are Italicized

2.1.4. Parking Utilization Summary

Table 4 shows the need for more parking at John Adams. During regular school hours of operation there was a maximum of 28 cars parked on the open space area around the ball field north of the school, Location E on **Figure 2**. The worst time of day for parking is at 8:00 AM and 2:30 PM right at the school start and dismissal times. At that time there were 31 cars standing (temporarily parked in unmarked locations such as driveways) during the morning and 30 cars in the afternoon. This does not include the additional 6 cars parked in the Visitors Parking spaces that appear to be faculty/staff vehicles since the same vehicles were observed throughout the day. These counts were conducted on a Thursday, however anecdotal evidence suggests that the parking demand on some days of the week are even higher. These results confirm that additional parking spaces for faculty members are necessary in order to welcome guest and provide designated visitor parking spots.

2.2. Site Circulation/Traffic Conflict Issues

Based on the on-site observations performed and data collection, there are several issues related to traffic flow that all collectively contribute to the congestion during peak traffic times of the day:

Drop off/pickup activity happening throughout the drive aisle.

Due to the inefficiency of the designated drop off/pickup area, students are getting in and out of vehicles while in the drive aisle instead of waiting until the end of the line.



Parents making a U-turn in the aisle and blocking traffic in both directions.

After dropping off or picking up students, parents are bypassing the relatively long wait in line through the designated drop off/pickup area in the back of the school and making a U-turn in the drive aisle. Depending on the size of the vehicle, this maneuver can take several tries to complete the turnaround.



Conflicts between exiting buses and vehicular traffic.

Buses exiting the bus loop conflict with two-way traffic when exiting the bus loop and turning left on the driveway. School staff directs traffic on the driveway at this conflict point to stop traffic and allow the buses to exit.



Vehicle queues on Rayburn Avenue waiting at the Beauregard Street traffic signal block traffic from exiting the school driveway.

The green signal phase for Rayburn Avenue only lasts for about 20 seconds every two minutes. For the remaining time, school traffic turns left from the school driveway onto Rayburn and quickly fills up the space between Beauregard and the driveway. Once that space is full, no school traffic can move until the next 2 minute cycle of the traffic signal. This problem is worse when all the buses leave simultaneously.



A limited drop off/pickup area.

In an effort to maximize parking spaces, the drop off/pickup area is only large enough for 3 to 4 vehicles.



2.3. Parking Issues

Based on the on-site observations performed and data collection, there are several issues related to parking at the John Adams Elementary School site:

Not enough parking spaces for all-day staff parking.

The current number of parking spaces cannot even accommodate school staff. Vehicles park in areas not designated as parking, including the unpaved area on the north end of the parking lot and around the ball field. Two or three vehicles also park along the fence in the southwest corner of the campus, which slows vehicles making the turn. Most of the visitor parking spaces appear to be occupied by staff and other longer term parkers.



Not enough visitor/short-term parking spaces for parents and visitors.

Because all long-term and visitor parking spaces are occupied continuously throughout the day, there are no available spaces for visitors, Head Start, and short-term parent parking. Parents whose children go to the Head Start are required to walk their children into the building and other parents also walk their child into the building. These visitors typically park along the drive aisle near the bus loop in front of the building. This parking causes conflicts with other vehicles trying to get by, especially larger vehicles such as buses and delivery trucks. This can also create safety issues due to the impact on emergency vehicle access.



3. Public and Stakeholder Meetings

After the completion of the data collection and evaluation of the existing conditions, several meetings were held to engage the public and stakeholders in the study process. The project team had regular communication with representatives of the City Transportation and Environmental Services (T&ES), Department of Recreation, Parks, and Cultural Activities (RPCA), ACPS Facilities staff and school administrators, and ACPS Pupil Transportation. In addition to meeting and coordination with ACPS and City staff, two public meetings were held.

The first public meeting was held on June 28, 2012. The purpose of this meeting was to summarize the data collection and field observations and to obtain input from the public about the key issues and concerns. Also, as part of the meeting, the public was invited to suggest solutions or ideas. The presentation, copy of the sign in sheet, and a complete meeting summary is contained in the Appendix.

Some of the comments and concerns that were expressed at the meeting included:

- The parking counts used for this study were collected on a Thursday. Parking demand on other days of the week may be even higher.
- Future enrollment projections and the impact of the Beauregard Small Area Plan redevelopment should be taken into consideration.
- The homeowners in the neighborhood to the north of the school would not support using the north gate for vehicle access for drop-off activities. They indicated that streets are too narrow for bus traffic or increased auto traffic. However, some additional faculty parking on residential streets may be acceptable.
- Access and parking options within the adjacent Duke Realty site should be explored.
- Consider a shuttle bus from the Kenmore Avenue shopping center to reduce on-site drop-off traffic
- Various ideas for reconfiguring circulation within the site were discussed, including swapping the bus and drop-off/pick-up locations, creating a second drop off loop, and widening the exit driveway.

A second public meeting was held on July 31, 2012 as a follow-up to the first meeting. The objective was to present the potential traffic circulation and parking solutions and obtain feedback. The presentation, copy of the sign in sheet, and a complete meeting summary is contained in the Appendix.

Some of the additional comments and concerns that were expressed at the meeting included:

- Explore possibility of shifting schedule of Pre-K to reduce peak trips on site.

- There was general support for the Kimley-Horn recommendation to restrict left-turns out of the school driveway, but some concern about the potential for pedestrian conflicts along Rayburn and Reading Avenues. There was also concern about the increased traffic on Reading making it difficult to exit the shopping center at the south driveway. The restriction of the left turn movement out of the school driveway is described in detail in the Potential Solutions section of this report.
- Providing vehicle access to the north gate was not supported due to pedestrian conflict and neighborhood circulation concerns.
- There was general support for implementing a parking permit program for faculty and staff to better control the available parking spaces. Some concerns were expressed about the ability to enforce parking restrictions and the increased burden on school staff.
- Continued support for utilizing the Duke Realty parking spaces for faculty.
- More parking in the front of the school is needed, but the property with open space near the southwest corner of John Adams is undesirable due to its proximity to the townhomes.
- General support for maximizing parking near the visitor parking, even if some trees were removed.
- General support for tandem parking spaces wherever possible.

4. Potential Solutions

Potential traffic circulation and parking solutions were developed based on the evaluation of existing conditions and input received from the public and stakeholders. In general, the solutions were separated into two categories: 1) traffic circulation and 2) parking. Within those categories, the solutions range from low-cost, near-term implementation to higher cost, long-term implementation. These solutions could be combined and/or implemented over time based on available funding, resources, and design/approval/construction time.

Overall, this study assumes that the school population is at its capacity and the Head Start program will operate through the foreseeable future. Should these conditions change, then the solutions would need to be reconsidered. Discussions with ACPS indicate that future population changes that may occur as a result of the Beauregard Small Area Plan will likely reduce the student population, not increase it.

4.1. Traffic Circulation

There are two primary strategies to improve traffic circulation conditions during peak periods of school demand: 1) *transportation demand management* – reduce the number of vehicles that are on-site, and 2) *improve circulation efficiency* – reduce or eliminate the bottlenecks that cause delays for vehicles during peak pick-up and drop-off times.

Table 5 shows all traffic circulation solutions considered and a summary of the anticipated benefits, issues, implementation timeframe, and cost.

Table 5 - Solutions Identified for Improving Traffic Circulation

Potential Solution	Benefits	Potential Issues	Implementation Timeframe	Cost (Preliminary/Planning Level)*
Short-Term Improvements				
Develop a transportation management program (TMP) to establish goals and strategies to reduce the number of parent drop-off/pick-up trips	Reduces and manages school vehicle trip demand	Changing parent travel patterns and tendencies may be challenging	Near-Term and Ongoing – as soon as a TMP can be developed	Relatively low cost, requires ACPS staff resources to develop and implement the TMP. Cost may also include incentives (such as vouchers) and materials.
Establish a “shuttle” route between ACPS Central Office and John Adams. This shuttle could be one TMP strategy to help reduce parent vehicle or faculty/staff trip demand.	Reduces parent trip demand within school driveways and parking areas without physical site modifications	Coordination schedules with ACPS bus schedules, communicating with parents, and supervision at ACPS Central Office	Near-Term – as soon as shuttle bus logistics are developed.	Yearly operational and maintenance costs associated with the shuttle bus (assuming a City bus from the existing fleet can be utilized for this service) and additional ACPS staff time for the Central Office site for supervision.
Reroute exiting left turn by parents onto Rayburn Avenue to instead turn right and use Reading Avenue to reach Beauregard Street.	Reduce congestion and stacking along Rayburn Avenue at Beauregard Street traffic signal	School driveway is only one lane (doesn’t allow bypassing) and changing parent travel patterns may be challenging. Would likely require an officer directing traffic. Requires approval by the Traffic and Parking Board.	Near-Term – the implementation of this recommendation is in progress.	Staff cost for initial monitoring
Long-Term Improvements				
Provide a second vehicle access to the school. Access requires new internal roadway around school: - Along existing sidewalk alignment on east side of school - Behind school along north side	Improves circulation, reduces congestion, and disperses traffic.	Connection to N. Shelley Street will create pedestrian/vehicle conflicts. Will require removal and relocation of the outdoor play areas and new equipment, and will introduce school traffic into a residential neighborhood. May also require minor signal timing modifications at Seminary Road/Echols Avenue.	Long-Term – implementation will require close coordination with surrounding neighborhood, development of design plans, and approval through City of Alexandria processes.	Dependent on which driveway alternative selected
Plan for connection to future collector street as contained in the Beauregard Street Small Area Plan	Incorporating into a Small Area Plan will provide support and justification to assist in the negotiation for adding future access once redevelopment occurs	Redevelopment timing is market driven and ACPS does not control the timeline	Long-Term – implementation will depend on coordination with future redevelopment activity (no known pending applications).	Unknown, dependent upon redevelopment activities and timings
Improvements Evaluated but Dropped from Consideration				
Stagger school opening and closing times to “spread out” parent drop-off/pick-up activities	Should significantly reduce congestion within school driveways and parking areas without physical site modifications.	Operational challenges with programming, staff schedules, and bus schedules. <i>Discussions with ACPS staff indicate that this was not feasible.</i>	Near-Term – as quickly as ACPS can implement the changes.	ACPS staff resources to modify programming and staffing. Possible increased operational and transportation cost due to longer school days.
Adjust traffic signal timings at the Beauregard Street/Rayburn Avenue intersection	Will help reduce stacking along Rayburn Avenue	Adjusting the timings will affect the signal progression along Beauregard Street. However, these timings could be implemented within a limited time period to minimize the impact. <i>This was not pursued because ACPS decided to implement the exiting left turn restriction. This solution could be revisited later if needed.</i>	Near-Term – prior to 2012 fall school opening (in coordination with City TE&S). As noted, this was not pursued.	Minimal, City staff time to implement signal timings

*Since Kimley-Horn and Associates, Inc., has no control over the cost of labor, materials, equipment, or services furnished by others, or over methods of determining price, or over competitive bidding or market conditions, any and all opinions as to the cost herein, including but not limited to opinions as to the costs of construction materials, shall be made on the basis of experience and best available data. Kimley-Horn and Associates, Inc. cannot and does not guarantee that proposals, bids, or actual costs will not vary from the opinions on costs shown herein.

Further discussion about transportation demand management and long term traffic circulation improvements are provided below.

4.1.1. Transportation Demand Management (Short-term)

In general, transportation demand management (TDM) refers to strategies to make better use of the existing transportation facilities when adding capacity is not feasible. This includes encouraging the use of higher capacity transit vehicles or carpooling instead of encouraging single occupant vehicle use, shifting peak period trips to off peak times where capacity is available, and reducing parking on-site to encourage the reduction of the number of auto trips. All of these strategies are used on a regular basis throughout the region and in Alexandria. TDM is also consistent with the City's multimodal transportation policies and the City's Transportation Master Plan.

Some potential TDM strategies for John Adams are:

- Developing a Transportation Management Program (TMP) at John Adams.
- Designating a John Adams individual to work with a potential school district-wide TMP coordinator to develop, implement, and maintain a TMP for John Adams.
- Increasing transit usage to reduce traffic demand at John Adams. This comes in two forms: increased bus ridership for students and increased public transit usage by faculty and staff.
- Shifting peak period trips earlier or later to reduce the peak period traffic demand. The adjustment of the Head Start program start time from 8:00 to 8:30 AM is an example of this strategy.
- Implementing parking restrictions through a parking pass program.
- Implementing an off-site shuttle bus for student drop-off.
- Organizing and encouraging walking school buses to reduce parent drop-off trips.
- Continue utilizing resources available through the City's Local Motion program. More information can be found at their website, <http://alexandriava.gov/localmotion/>.



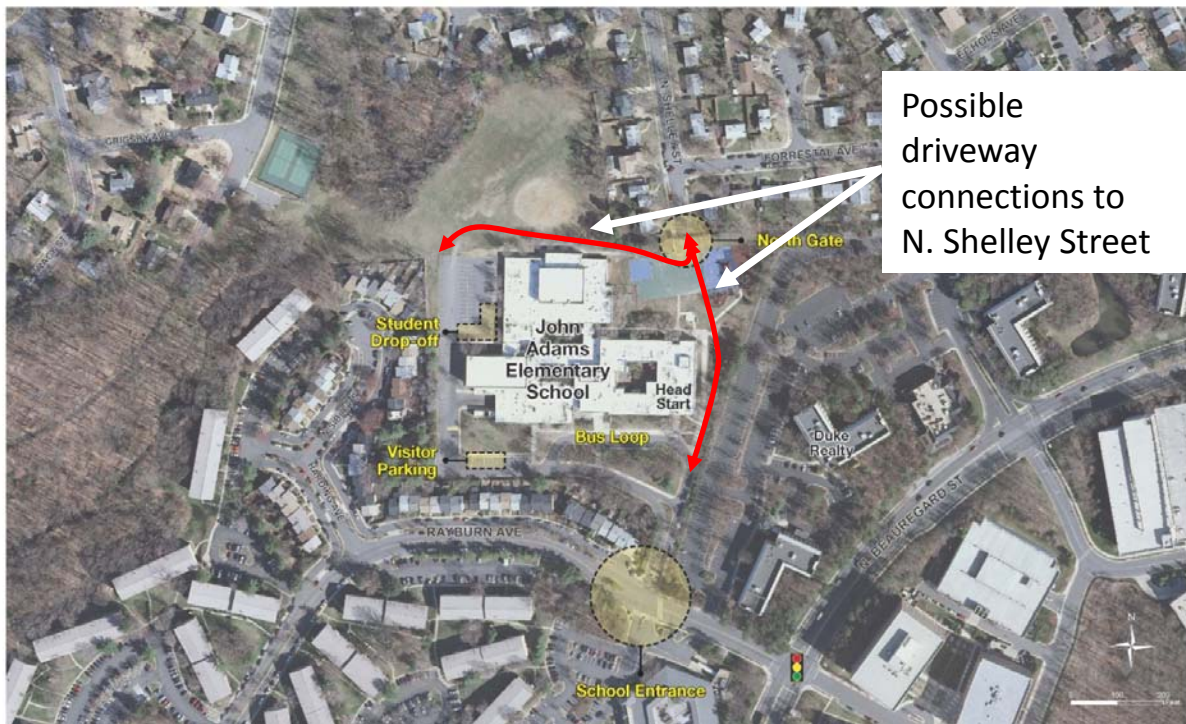
4.1.2. Traffic Circulation Improvements (Long-term)

In general the traffic circulation issues at John Adams are created by the single access point and limited space to circulate traffic within the internal driveways. Bus and automobile traffic utilize the same driveway and have to mix before exiting the site. Due to the existing built

environment adjacent to the site, there are two locations where a second driveway could potentially occur, 1) N. Shelley Street and 2) Duke Realty property.

N. Shelley Street Connection

One location where there appears to be easy access to a public street is along the north property line at N. Shelley Street. However, providing access to this location requires construction of a new driveway either across the north property line or along the east property line.



- North Driveway Option: a preliminary review of a driveway alignment across the north property line shows that the driveway will have to go onto the City RPCA property and will require the removal of trees and bleachers. These constraints may preclude the installation of sidewalks.
- East Driveway Option: a preliminary review of a driveway alignment across the east property line shows that the driveway will impact the existing playground areas

Both alternatives impact the existing courts and playgrounds and introduce vehicle pedestrian conflicts where none exist today. Either alternative could provide access for buses only to minimize the pedestrian and vehicle conflicts in this area. If buses were only permitted, the N.

Shelley Street access could have restricted access except for the limited time that buses would need to use it.

It should be noted that N. Shelley Street is within a residential community with narrow streets with on-street parking. Providing school vehicle access would create challenges for vehicle maneuverability, especially buses, to exit the neighborhood. Vehicles would likely have to travel on Forrestal Avenue, N. Stevens Street, and Echols Avenue to turn onto Seminary Road at a traffic signal.

Duke Realty Property Connection

The City Council recently approved the Beauregard Small Area Plan which includes a future collector street parallel to and west of Beauregard Street in the vicinity of the school. This future street could provide the opportunity to provide a second vehicle access for John Adams. The construction of the new street would likely only occur as part of the Duke Realty Property redevelopment. Such a redevelopment would be subject to the City's approval process; therefore it is recommended that ACPS play an active role in any future redevelopment planning processes.



4.2. Parking

ACPS has targeted to add 40 new parking spaces to the John Adams site. The need for this additional parking is validated by the parking counts that show a maximum number of parked vehicles of 159 on a site that contains only 128 parking spaces. While the overall deficiency shown by this count is 31 spaces, that does not include the 6 vehicles parked all day in the visitor spots and additional parking demand that can occur on certain days of the week.

Two strategies were utilized to identify parking solutions: 1) *manage parking demand* – reduce the number of new spaces needed, and 2) *add more parking capacity* - identify locations to add/build more parking spaces.

4.2.1. Short-Term Solutions

Adding parking capacity has budget implications and generally takes time since it typically requires time to prepare design plans, obtain City approval and permits, and construct the spaces. However, there are short-term solutions identified to improve parking without building new spaces.

- *Transportation Demand Management* – Implement a parking permit system as part of a John Adams TMP to more effectively manage the available parking spaces.
 - Enforce parking restrictions on non-marked spaces and issue parking passes to faculty and staff.
 - Encourage carpooling by reserving the most desirable parking spaces for “Carpool Only” vehicles
 - Rotate on-site parking spaces monthly/quarterly, all other parking would be required to find parking offsite or carpool as part of a parking permit program
 - on-street parking in the neighborhood to the north
 - tennis court parking lot to the west
- *Share Parking with Duke Realty* – Kimley-Horn understands that ACPS recently attempted to enter into an agreement with Duke Realty to relocate the student drop-off onto the Duke Realty property but was not successful due to liability concerns. As a result, the dialogue has ceased. However, discussions with ACPS staff indicate that faculty parking on the Duke Realty property was not considered previously. Therefore it is recommended that ACPS continue to explore options for utilizing the Duke Realty parking lot to the east of the school for faculty/staff parking, especially since ACPS is a tenant in one of the buildings. Some suggestions are:
 - Swap reserved parking spaces at ACPS Central Office (2000 N. Beauregard St.) with spaces in the northwest corner of the Duke Realty lot (adjacent to the playground)
 - Faculty/staff could park at Central Office. A gate in the existing fence could be added. Another option is to provide a shuttle service between Central Office and the school
 - Lease additional parking spaces in the Duke Realty lot

4.2.2. Mid-Term and Long-Term Solutions

Mid-Term and Long-Term solutions identified were focused on adding more parking spaces. There is very little available open space within ACPS property. Kimley-Horn explored the possibility of adding parking spaces in several locations on-site and on adjacent property. **Figure 3** illustrates the areas evaluated for potential expansion locations.

Table 6 shows all parking solutions considered and a summary of the anticipated benefits, issues, implementation timeframe, and cost.



FIGURE 3: JOHN ADAMS ELEMENTARY SCHOOL - POSSIBLE LOCATIONS FOR ADDITIONAL PARKING

Table 6 - Solutions Identified for Improving Parking

Potential Solution	Benefits	Potential Issues	Implementation Timeframe	Cost (Preliminary/Planning Level)*
Short-Term Improvements				
Develop a transportation management program (TMP) to establish goals and strategies to reduce the parking demand for faculty and staff. Strategies could include carpooling and/or transit subsidies	Reduces and manages parking demand	Previous attempt to subsidize transit fares was not successful. Faculty/staff tend to arrive early which makes carpool match-ups challenging.	Near-Term and Ongoing – as soon as a TMP can be developed	Relatively low cost, requires ACPS staff resources to develop and implement the TMP
Establish faculty/staff permit parking and provide enforcement to manage parking spaces. This effort could be part of the TMP to manage on-site parking demand	Manages parking demand and provides enforcement	School would need to develop permit system through lottery or some other mechanism.	Near-Term - prior to 2012 fall school opening	Relatively low cost, requires ACPS staff resources to permit process and to implement enforcement
Encourage and communicate on-street parking availability on surrounding streets such as N. Chambliss Street and N. Shelley Street	Parking is immediately available, does not require construction or operational changes. Could be part of TMP and/or permit parking implementation.	Less convenient than the on-site parking spaces and previous attempts (without TMP or other established programs) were unsuccessful.	Near-Term - prior to 2012 fall school opening	None
Share parking with Duke Realty site adjacent to school	Adjacent to school property and shares underutilized parking spaces	Requires an agreement between ACPS and Duke Realty and provision of pedestrian access or shuttle to school property. Previous attempts to negotiate an agreement have been unsuccessful.	Near-Term or Mid-Term – Requires agreement with property owner.	Unknown, will be based on a negotiated agreement.
Mid-Term Improvements				
Add parking spaces in open space near visitor parking (Location C)	Adds parking capacity (approximately 10 spaces)	Minimal loss of open space. Layout shown preserved large mature trees and an existing memorial tree and plaque. Public input indicates a desire to use more of space on-site for parking.	Mid-Term - could be implemented within 1-2 years. Requires City to approve design plans	\$25,000 (construction only)
Add parallel parking spaces near Head Start area (Location D)	Adds parking capacity (approximately 4 spaces) that can be used for Head Start use and visitors.	Minimal loss of open space, requires sidewalk modifications, and circulation issues (no nearby turnaround location). More spaces could be provided by using angle parking or extending further to the west, but would require the removal of several mature trees.	Mid-Term - could be implemented within 1-2 years. Requires City to approve design plans	\$25,000 (construction only)
Add tandem parking spaces in the northwest corner of the existing parking lot (Location F)	Adds parking capacity (approximately 13 spaces)	Requires coordination among faculty/staff for tandem parking spaces. As shown, some spaces would be on City RPCA land and would require coordination and approval. Fewer spaces could be provided to stay within school property.	Mid-Term - could be implemented within 1-2 years. Requires City to approve design plans	\$25,000 (construction only)
Install mechanical lift parking within existing parking spaces near parent drop-off/pick-up area.	Lift structure can be installed within existing parking spaces. Does not remove open space from school property, only requires minimal construction to install power service and pavement support.	Vehicles on the lift have to remain until vehicle below leaves. Requires additional coordination and management of parking spaces. Installing lifts will require City regulatory approval. Neighbors also expressed concerns over aesthetics during the public meeting.	Mid-Term – could be implemented within 1-3 years. Requires City to approve design plans and ordering/installing equipment	Approximately \$6,500 per lift unit plus yearly maintenance

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Table 6 - Solutions Identified for Improving Parking (Continued)				
Potential Solution	Benefits	Potential Issues	Implementation Timeframe	Cost (Preliminary/Planning Level)*
Long-Term Improvements				
Replace playground/court area with surface parking lot (Location E)	- Adds parking capacity (up to 113 spaces). - The public open space to the north could potentially be used for some or all of the playground area, leaving additional parking spaces behind the school. This ultimate reconfiguration of the school site connects the playground and open space uses and puts all transportation uses on the south and east sides of the property. - It also would allow for a new entrance/exit to the school from the potential new street along the east side of the property that is proposed in the Beauregard Small Area Plan.	Removes recently installed playground and main outdoor play area for the school. No current vehicle access, requires the construction of an access driveway around school. If the existing playground were relocated to the current northwest parking lot, it would eliminate the existing 63 spaces for a net gain of 50 spaces.	Long-Term - could be implemented within 2-5 years. Requires achieving consensus with neighborhood and approval by City of design plans	\$450,000-\$600,000 (construction only), does not include cost for playground replacement/relocation
Build a parking structure on existing parking lot near parent drop-off/pick-up area	Adds parking capacity on school property and removes parking on RPCA property	Maintaining traffic circulation for parent drop-off/pick-up activities. Limited area for structure will be inefficient and expensive.	Long-Term - could be implemented within 2-5 years. Requires City to approve design plans	\$1,500,000 (construction only)
Improvements Evaluated but Dropped from Consideration				
Pave parking spaces near baseball/softball field (Location A)	Adds parking capacity (could add approximately 40 spaces) adjacent to school property, this area is currently used for parking so it's familiar to faculty/staff. Parking could be shared between the school and the baseball/softball field use	City RPCA owns property and desires to remove parking. Due to the Public Open Space designation, it is not feasible to pave this area so it was eliminated from consideration.	Mid-Term - could be implemented within 1-3 years. Requires an agreement with RPCA and City approving design plans	\$200,000 (construction only)
Add parking to land adjacent to townhomes (Location B)	Adds parking capacity (net increase of approximately 19 additional spaces) adjacent to school property.	ACPS does not own property and there are large, mature trees that would have to be removed. Also, the adjacent residents may object to the loss of property buffer. Due to the location, 12 existing spaces would be lost. Adds more internal circulation conflict points.	Mid-Term - could be implemented within 1-3 years. Requires agreement with property owner and City approving design plans	\$150,000 (construction only)

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5. Recommendations

Based on the results of the data collection, analyses, stakeholder input, and discussions with ACPS, the following recommendations are provided for the John Adams Elementary School site:

5.1. Short-Term Recommendations

Implement the following short-term solutions to have an immediate impact on the traffic circulation and parking issues at John Adams:

4. Implement the Left-Turn Restriction at School Driveway Exiting Movement - during peak traffic demand periods before and after school, restrict left-turns out of the school driveway onto Rayburn Avenue. The implementation of this recommendation is in progress.
5. Develop a Transportation Management Program (TMP) – Designate a faculty/staff member or committee to coordinate with a potential school district-wide TMP coordinator to develop, implement, and maintain a TMP. Immediate activities recommended to begin this process are:
 - a. Establish a parking permit program to better control parking within the campus.
 - b. Conduct surveys of parents and faculty/staff to identify their obstacles to using school buses or public transit. The implementation of this recommendation is in progress.
 - c. Utilize available City transportation demand management resources from Local Motion program. The implementation of this recommendation is in progress.
6. Share Parking with Duke Realty Property - All possible options to utilize the Duke Realty parking spaces either associated with ACPS Central Office or additional leased spaces should be explored. This existing underutilized parking lot is the only option to increase parking spaces for at least the next two school years.

5.2. Mid-Term and Long-Term Recommendations

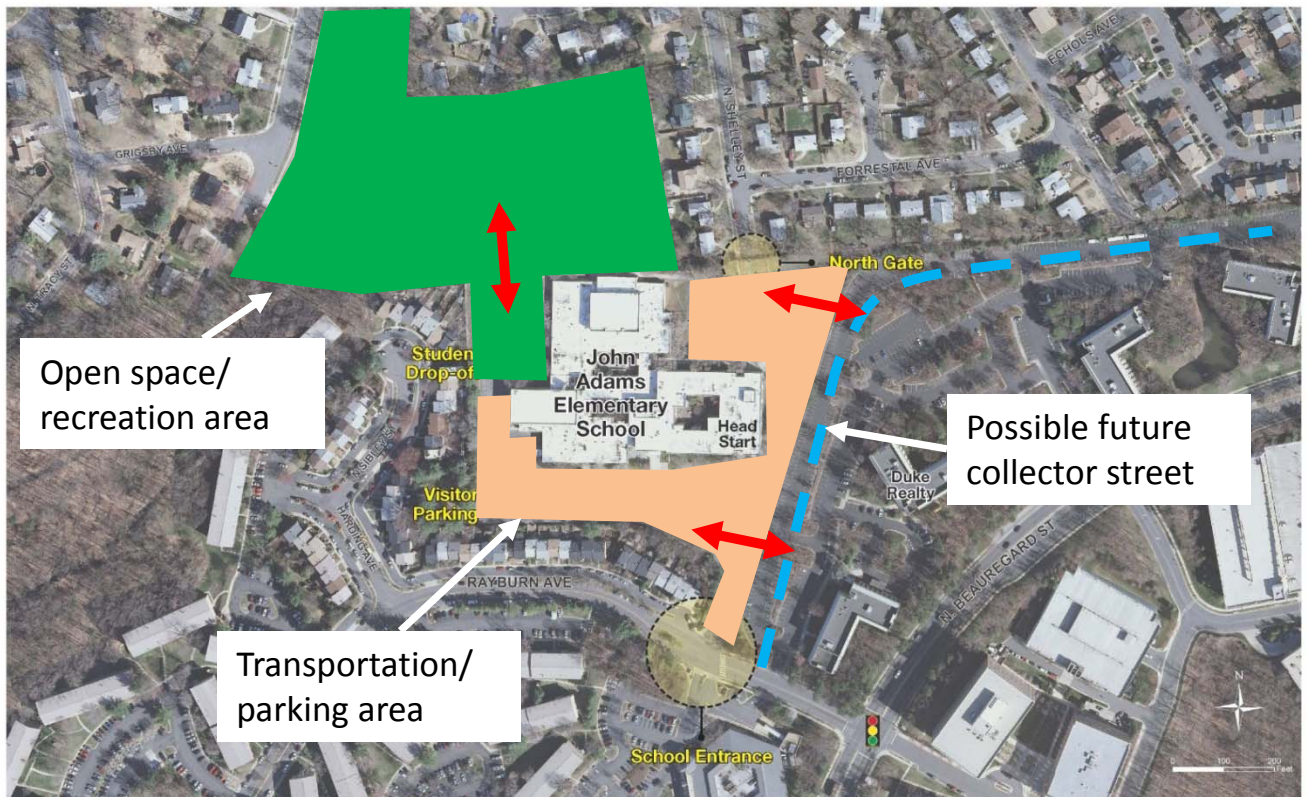
In the mid-term, ACPS can add more parking within the John Adams site. Parking locations C, D, and F (shown on Figure 3) appear to be the most feasible locations and they could create at least 27 parking spaces with minimal impact and disruption due to construction. More spaces may be possible if additional green space and trees were eliminated in areas C and D. The exact layout would be determined during the detailed design process. While these combined options do not create the required 40 spaces, they would provide some relief. The additional parking spaces combined with using nearby on-street parking spaces and implementing a TMP

could provide a balance between the parking demand and supply if the TMP is enforced and updated on a regular basis.

Other recommended improvements require redevelopment of the Duke Realty property and are therefore considered long-term. The long-term recommendations are:

1. Add a second site vehicle driveway to the future collector street (recommended in the Beauregard Small Area Plan) to help disperse and organize school traffic more efficiently.
2. Reorient the site to provide for more efficient organization of uses. Relocating the playground to the back of the school allows for connectivity with the public open space (compatible use) to the north and creates opportunities for a larger shared use. Construction of parking on the current playground/court area would combine all transportation uses on the south and east side of the school and make efficient use of the recommended second driveway.

ACPS should monitor and participate in the future planning and site plan approval process of the Duke Realty property as the Beauregard Small Area Plan is implemented.



APPENDIX

To: Eric Wagner, Chair of the Planning Commission
CC: William Holley, Andrea Feniak, Tom Mulcahy, Kevin Vanhise, Patricia Escher, Ryan Price
From: Laurel Hammig
Date: 6/3/2014
Re: John Adams Parking

ACPS would like to make an official request to pull the John Adams Parking project from the June 3, 2014 Planning Commission docket and defer until September 2014. This will allow ACPS time to conduct additional community outreach related to the project.

From: Robin Bectel <rmbectel@gmail.com>

Sent: Monday, June 2, 2014 10:49 AM

To: PlanComm

Subject: John Adams parking

Hello -

For the Planning Commission's 6/13/14 agenda, I wanted to submit the following comments. Please send these to the Planning Commission and confirm receipt so I know these arrived.

Thanks Robin Bectel

Dear Planning Commission -

I understand you are discussing the parking situation at John Adams in June and wanted to add my comments. I am a parent of John Adams students and a resident of Seminary West/Dowden Terrace. I see from the plans that you are planning an asphalt sidewalk along the baseball field side of the parking lot. I worked with ACPS Facilities Dept and the City to get that sorry little asphalt sidewalk put in a few years ago. It has helped in that it connects the sad little walkway through Chambliss Park to the school's sidewalk. After several years of trudging up that hill in all sorts of weather with my two young children, not having to hop through snow, rain, puddles and mud to trek the last 100 feet to school has been a big help. At the time, the city put in the temporary asphalt sidewalk because no decision had been made on parking in the area behind the baseball field. While it has been nice, it apparently confuses drivers, who routinely park on it blocking our way. That forces us to walk around the vehicles either into the traffic lanes or back into the mud or snow. Neither is a great option. It would be highly preferable if this were a recognizable concrete sidewalk to avoid people parking on it and avoid the snow plow blocking it with snow in the winter. If that is not possible, it needs to be marked with signs that it is a no parking zone. That is a harder option because drives may think you mean the area behind the sidewalk next to the field.

Secondly, the parking lot needs a sidewalk that takes parkers to the front of the school, which is the only entrance for visitors. Without this, we are forced to walk from the parking lot in the traffic lanes, to reach the front of the school. This is crazy enough without pedestrians. The only other option is to walk 3/4 of the way around the school through the playground, which is really a long walk especially on rainy days.

Third - it would help visitors tremendously if the parking spaces in the front of the school closest to the visitors entrance were left for visitors and not staff. There are dozens of parent volunteers and visitors in the building every day and we can not use another entrance as the staff can do. This results in very long walks from the parking area, sometimes with heavy loads. Some of these could be timed for shorter visits. Right now, anyone just wanting to drop something off must either walk all the way from the back or double park on the fire lane, which is always the choice made.

Fourth - Regarding the parking behind the baseball field. I know the city counts this as green space, but in my opinion that is completely disingenuous. Its not at all usable

since it is not accessible by a road. Most people in the city or even the surrounding area dont even know its there and they would be forced to park in the school parking lot to use it, something that is not technically allowed for that purpose.

Given its shape and size and proximity to the ballfield and school, its not good for playing, picnicking, walking or any other activity. Right now its useful for walking the dog and that's about it. Given that we have two huge areas right beside this designated for dogs, this little stretch is completely unneeded and unworthy to be counted as "green space."

The city is cheating by counting this sliver as green space. Perhaps the city should include a real green space area in the Beauregard Plan. This could have a field that anyone could access (not just organized, paying ball players) or a park for children instead of dogs on this side of 395. The only one now is at the Ramsey rec center, which is in use a lot of the time between the school and the Rec center.

Finally, paving this sliver of grass behind the ballfield would really be the simplest and least expensive ways to solve the John Adams parking problem. Its unusable for anything else and it involves very little cost to pave it.

Please confirm your receipt of these comments.

Thank you

Robin Bectel

From: Christine Coker <christine@cpa-coker.com>

Sent: Tuesday, June 3, 2014 10:49 AM

To: PlanComm

Subject:

As a JA parent and former PTA officer, we have struggled with the inadequate parking for many years. I have 3 suggestions to add to your plan for improving the parking there:

1. Go ahead and pave a portion of the Chambliss park behind the baseball fence – people WILL continue to park there for overflow when events like back to school night occur. Extra parking here could be used by teachers and staff as well, when VISITING the school this is the ONLY place available – even with your planned extra spaces. The baseball folks could use this parking as well.
2. Add (10) MORE tandem spaces in front of the existing visitor parking – which is always full. Please see the attached.
3. In conjunction with these additional spaces, add a paved with stone area in front of the parking for a couple of picnic tables, a seating area for teachers & students & parents to enjoy – under the big trees (please don't remove any trees!)

Thanks much.

Christine Coker

3156 N Rosser Street, Alexandria, VA 22311

home: (703) 820-2956 cell: (703) 489-9273

John Adams Elementary Parking Expansion

Add (10) new tandem spaces in front

of existing "Visitor Parking" area Site Plan

+ Paved courtyard w/ picnic tables

Site Context



$$\begin{array}{r}
 11' 8'' \text{ existing on site} \\
 + 28' \\
 \hline
 146' \\
 + 10' \\
 \hline
 156' = \text{FT}
 \end{array}$$

PRELIMINARY SITE PLAN SUBMISSION
ALEXANDRIA CITY PUBLIC SCHOOLS
JOHN ADAMS ELEMENTARY SCHOOL - PARKING LOT IMPROVEMENTS
5651 RAYBURN AVE. - APRIL 04, 2014

SITE TABULATIONS

- SITE LOCATION — AREA #1: ALEXANDRIA CITY TAX MAPS 019.01—01—48
- ADDRESS: 5651 RAYBURN AVE. ALEXANDRIA, VA 22311
- SITE LOCATION — AREA #2: ALEXANDRIA CITY TAX MAPS 010.03—07—18
- ADDRESS: 2500 N. SCOTT. ST. ALEXANDRIA, VA 22311
- ZONING OF SURROUNDING PROPERTIES:
NORTHWEST: POS (PUBLIC OPEN SPACE)
NORTHEAST: R-8 (SINGLE FAMILY ZONE)
EAST: CDD#4 (COORDINATED DEVELOPMENT DISTRICT)
WEST/SOUTH: R-B (SINGLE FAMILY ZONE)
- SITE USE AREA#1: JOHN ADAMS ELEMENTARY SCHOOL (ZONING: R-12)
- SITE USE AREA#2: CHAMBLISS PARK (ZONING: POS)
- EXISTING POPULATION (2012/2013 SCHOOL YEAR):
(874 STUDENTS; 84 STAFF)
- DESIGN POPULATION: 958 (874 STUDENTS; 84 STAFF)
- REQUIRED YARDS: PROVIDED YARDS (MINIMUM):
SIDE YARD 25' (1:1) 46.6'
REAR YARD 25' (1:1) 7.06'
FRONT YARD 35' 120.45'
- SITE IS SERVED BY PUBLIC WATER AND SEWER.
- SITE IS NOT IN ANY RPA OR FLOOD PLAIN.
- SITE SURVEY WAS COMPLETED BY DOMINION SURVEYORS ON:
OCTOBER 18, 2013, MAY 09, 2011, MAY 25, 2011, MARCH 29, 2010
- REQUIRED LOT FRONTAGE: 60' — PROVIDED 73'
- AVERAGE FINISHED GRADE OF SCHOOL: 242'
- AVERAGE BUILDING HEIGHT — TWO STORY EXISTING SCHOOL
- GROSS BUILDING AREA: 3.25 ACRES (141,364 SF)
- COMBINED AREAS #1, #2: 7.99 ACRES (347,574 SF)
- APPROXIMATE DISTURBED AREA: 0.275 ACRES (11,975 SF)

AREA #1
EXISTING:
ZONING: R-12
USE: PUBLIC ELEMENTARY SCHOOL
TOTAL LOT AREA = 7.95 AC (346,141 SF)
IMPERVIOUS AREA = 5.56 AC (242,235 SF)
PERVIOUS AREA = 2.39 AC (103,912 SF)
OPEN SPACE = 3.65 (158,993 SF)
PROPOSED:
ZONING: R-12
USE: PUBLIC ELEMENTARY SCHOOL
TOTAL LOT AREA = 7.95 AC (346,141 SF)
IMPERVIOUS AREA = 5.64 AC (245,560 SF)
PERVIOUS AREA = 2.31 AC (100,587 SF)
OPEN SPACE = 3.54 AC (154,523 SF)

AREA #2
EXISTING:
ZONING: POS
USE: CHAMBLISS PARK
PROJECT AREA = .037 AC (1,618 SF)
IMPERVIOUS AREA = .005 AC (210 SF)
PERVIOUS AREA = .032 AC (1408 SF)
OPEN SPACE = .034 AC (1461 SF)
PROPOSED:
ZONING: POS
USE: CHAMBLISS PARK
PROJECT AREA = .037 AC (1,618 SF)
IMPERVIOUS AREA = .015 AC (637 SF)
PERVIOUS AREA = .023 AC (981 SF)
OPEN SPACE = .036 AC (1551 SF)

TRIP GENERATION

ITE LAND USE CODE = 520
TRIP RATE = 1.29
EXISTING = 1127
PROPOSED: NO ADDITIONAL TRIPS
NET INCREASE = NO ADDITIONAL TRIPS

PARKING TABULATION

PARKING REQUIRED: 1 SPACE PER 25 CLASS ROOM SEATS REQUIRED

DESIGN POPULATION: 958 (874 STUDENTS; 84 STAFF)

PARKING PROVIDED: 118 SPACES ON-SITE, AT GRADE

EXISTING PARKING CALCULATIONS (PARKING REQUIRED BASED ON CITY ZONING

ORDINANCE SECTION 8-200(A)(11))

USE	PARKING REQUIRED	PARKING EXISTING	PARKING PROPOSED	TOTAL
SCHOOL	39 SPACES	118 SPACES	28 SPACES	146 SPACES
LOADING	7 SPACES	2 SPACES	2 SPACES	2 SPACES

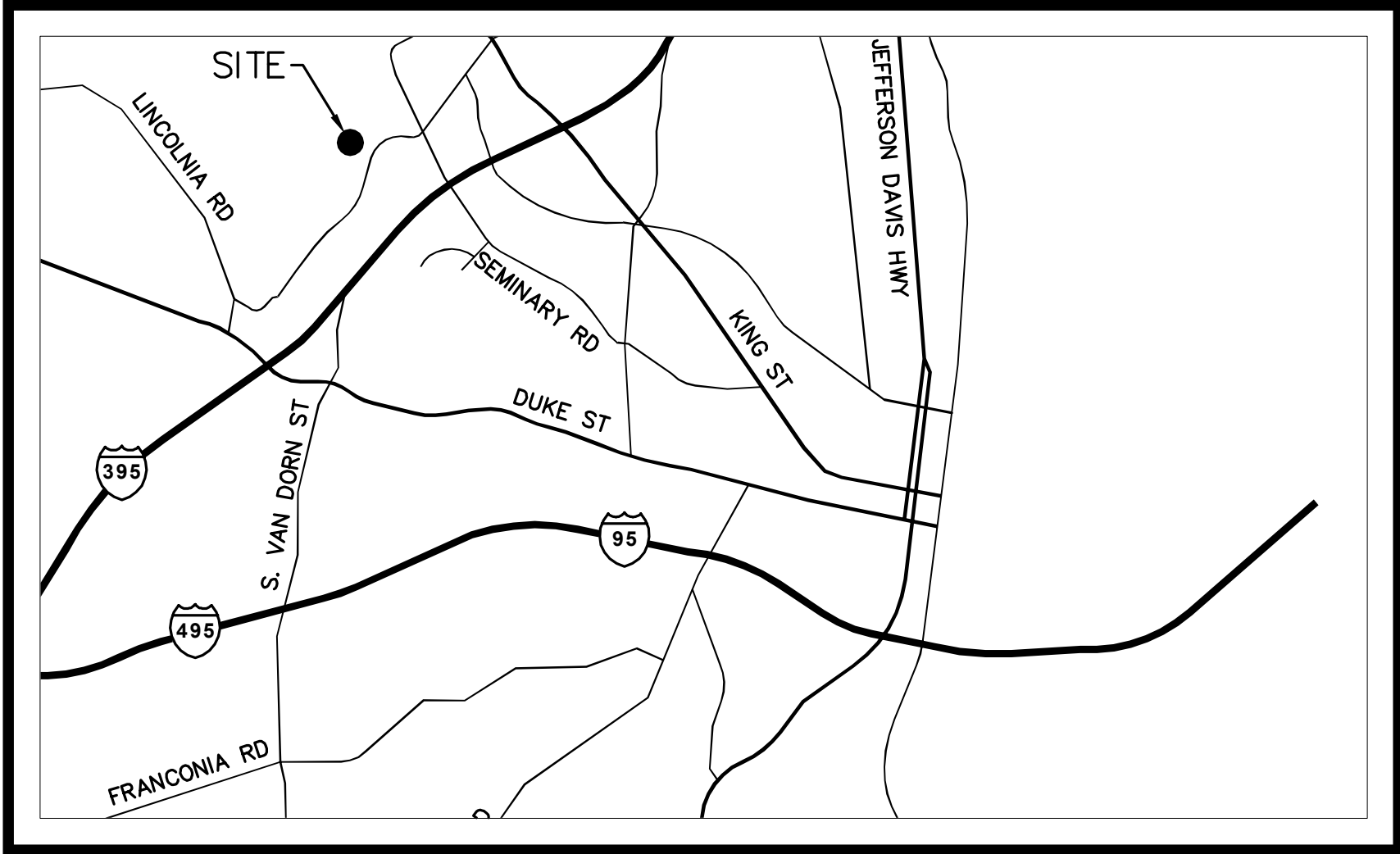
NOTE: EXISTING PARKING COUNT (118 SPACES) DOES NOT INCLUDE THE PARKING (1 SPACE) LOCATED ON THE CHAMBLISS PARK PROPERTY

NOTES

—TABULATIONS FOR THE SITE REFLECT THE FULL PARCEL OF JOHN ADAMS ELEMENTARY SCHOOL (TAX MAP 019.01—01—48) AND A PARTIAL PARCEL OF CHAMBLISS PARK (TAX MAP 010.03—07—18). THE LIMITS OF WORK FOR THE PROJECT ARE SHOWN ON SHEET C-100 — EXISTING CONDITIONS PLAN.

—MARINE CLAYS ARE KNOWN BY THE APPLICANT AS SHOWN IN THE MARINE CLAY AREAS MAP PROVIDED BY THE CITY OF ALEXANDRIA. THESE AREAS ARE CLASSIFIED AS UNDER 10% SLOPE —NO EXISTING SITE CONTAMINATION KNOWN BY THE APPLICANT

VICINITY MAP



SCALE: NTS

PROJECT DESCRIPTION NARRATIVE

ALEXANDRIA CITY PUBLIC SCHOOLS IS SEEKING APPROVAL OF A DEVELOPMENT SITE PLAN IN ORDER TO CONSTRUCT 28 NEW PARKING SPACES WITHIN THE EXISTING PARKING LOT AND DRIVE AISLES AT JOHN ADAMS ELEMENTARY SCHOOL FOR A TOTAL OF 146 SPACES. A PORTION (1 SPACE) OF THE EXISTING NORTHWESTERN PARKING LOT EXTENDS INTO CHAMBLISS PARK. THIS AREA IS BEING REMOVED. THE ADDITIONAL PARKING SPACES WOULD BE LOCATED IN THREE LOCATIONS ON SITE; 14 TANDEM SPACES TO THE NORTHWEST, 10 SPACES TO THE SOUTHWEST, AND 4 SPACES AT THE SOUTHEAST BUS LOOP / ENTRANCE. THE SCHOOL IS CURRENTLY ZONED AS R-12 WHILE CHAMBLISS PARK IS ZONED POS.

ENVIRONMENTAL SITE ASSESSMENT:

THERE ARE NO TIDAL WETLANDS, TIDAL SHORES, TRIBUTARY STREAMS, FLOODPLAINS, CONNECTED TIDAL WETLANDS, ISOLATED WETLANDS, HIGHLY ERODIBLE/PERMEABLE SOILS OR BUFFER AREAS ASSOCIATED WITH SHORES, STREAMS OR WETLANDS LOCATED ON THIS SITE. FURTHER, THERE ARE NO WETLAND PERMITS REQUIRED FOR THIS DEVELOPMENT PROJECT. ADDITIONALLY, THERE ARE NO KNOWN UNDERGROUND STORAGE TANKS OR AREAS OF SOIL OR GROUNDWATER CONTAMINATION OF THE SITE.

THE CITY OF ALEXANDRIA, DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, DIVISION OF ENVIRONMENTAL QUALITY MUST BE NOTIFIED IF UNUSUAL OR UNANTICIPATED CONTAMINATION OR UNDERGROUND STORAGE TANKS, DRUMS AND CONTAINERS ARE ENCOUNTERED AT THE SITE. IF THERE IS ANY DOUBT ABOUT PUBLIC SAFETY OR A RELEASE TO THE ENVIRONMENT, THE ALEXANDRIA FIRE DEPARTMENT MUST BE CONTACTED IMMEDIATELY BY CALLING 911. THE TANK OR CONTAINER'S REMOVAL, ITS CONTENTS, ANY SOIL CONTAMINATION, AND RELEASES TO THE ENVIRONMENT WILL BE HANDLED IN ACCORDANCE WITH FEDERAL, STATE AND CITY REGULATIONS.

ALL WELLS TO BE DEMOLISHED IN THIS PROJECT, INCLUDING MONITORING WELLS MUST BE CLOSED IN ACCORDANCE WITH STATE WELL REGULATION. CONTACT JOE FIANDER AND COORDINATE WITH THE ALEXANDRIA HEALTH DEPARTMENT AT 703-838-4400 EXT 255.

ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE ALEXANDRIA NOISE CONTROL CODE TITLE 11, CHAPTER 5, WHICH PERMITS CONSTRUCTION ACTIVITIES TO OCCUR BETWEEN THE FOLLOWING HOURS:

- MONDAY THROUGH FRIDAY FROM 7 AM TO 6 PM AND
- SATURDAYS FROM 9 AM TO 6 PM.
- NO CONSTRUCTION ACTIVITIES ARE PERMITTED ON SUNDAYS.

STORMWATER NARRATIVE

THIS PROJECT IS DESIGNED TO COMPLY WITH THE PROPOSED REGULATIONS FROM THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) EXPECTED TO BE ADOPTED BY JULY 1, 2014. AS OF THIS PLAN DATE, THE CITY OF ALEXANDRIA HAS NOT PUBLISHED ANY ADDENDUMS TO THESE STATE REGULATIONS. THE FINAL VERSION OF THESE PLANS MAY NEED TO BE REVISED TO COMPLY WITH THE CURRENT CITY OF ALEXANDRIA STORMWATER REGULATIONS AFTER THE JULY 1, 2014 ADOPTION.

COMPLIANCE WITH ARTICLE XIII OF THE CITY OF ALEXANDRIA ZONING ORDINANCE IS ASSUMED BY MEETING THE NEW STATEWIDE REGULATIONS.

CITY OF ALEXANDRIA STANDARD WATER QUALITY WORKSHEETS A OR B AND C ARE NOT PROVIDED. THE VIRGINIA RUNOFF REDUCTION SPREADSHEET CALCULATIONS PROVIDED BY DEQ SHOW THE COMPLIANCE WITH THE NEW PHOSPHORUS REDUCTION REQUIREMENTS.

CITY STANDARD WATER QUALITY BLOCKS SHOWN ON THIS PAGE ARE FOR INFORMATION ONLY. ALL WATER QUALITY CALCULATIONS SHOULD BE TAKEN FROM THE RUNOFF REDUCTION CALCULATIONS ON SHEETS C-400 — C-430

ENVIRONMENTALLY SENSITIVE DESIGN STRATEGY

THE PROPOSED PARKING SPACES WILL BE PLACED ADJACENT TO EXISTING PARKING AREAS TO MINIMIZE THE AMOUNT OF EARTHWORK THAT WILL BE REQUIRED. ALL NEW PARKING SPACES WILL EMPLOY PERMEABLE PAVEMENT.

APPLICATIONS REQUESTED

- DEVELOPMENT SPECIAL USE PERMIT
- STORMWATER MANAGEMENT BMP MASTER PLAN
- MODIFICATION TO ZONING ORDINANCE FROM:
 - SUPPLEMENTAL YARD
 - SETBACK
 - FRONTAGE REQUIREMENTS
 - LANDSCAPE REQUIREMENTS FOR PARKING ISLANDS

SHEET INDEX

Sheet Number	Sheet Title
C-000	COVER SHEET
C-010	GENERAL NOTES
C-011	GENERAL NOTES
C-030	CONTEXTUAL PLAN
C-040	ADJACENT PROPERTIES PLAN
C-100	EXISTING CONDITIONS PLAN
C-110	DEMOLITION PLAN
C-200	SITE PLAN
C-210	OPEN SPACE PLAN
C-220	GIS DIMENSIONAL PLAN
C-300	GRADING PLAN
C-310	EROSION AND SEDIMENT CONTROL PLAN - PHASE 1
C-320	EROSION AND SEDIMENT CONTROL PLAN - PHASE 2
C-330	EROSION AND SEDIMENT CONTROL PLAN - GENERAL NOTES
C-400	BMP TREATMENT MAP - PARKING LOT IMPROVEMENTS
C-410	BMP CALCULATIONS - PARKING LOT IMPROVEMENTS
C-420	RUNOFF REDUCTION CALCULATIONS - PARKING LOT
C-430	PERMEABLE PAVEMENT CALCULATIONS - PARKING LOT
C-500	BMP TREATMENT MASTER PLAN - OVERALL CAMPUS
C-510	BMP MASTER PLAN CALCULATIONS - OVERALL CAMPUS
C-600	LANDSCAPE PLAN
C-700	CONSTRUCTION & LANDSCAPE DETAILS

OWNER / DEVELOPER / ENGINEER OF RECORD / ARCHITECT

- RECORDED OWNER: CITY OF ALEXANDRIA
301 KING STREET
ALEXANDRIA, VA 22314
- DEVELOPER: ALEXANDRIA CITY PUBLIC SCHOOLS
2000 N. BEAUREGARD STREET
ALEXANDRIA, VA 22311
703-461-4168
- ENGINEER OF RECORD: KIMLEY-HORN AND ASSOCIATES, INC.
11400 COMMERCE PARK DR., SUITE 400
RESTON, VA 20191

TAX MAP INFO

TAX MAP REFERENCE: 019.01-01-48 - JOHN ADAMS ELEMENTARY SCHOOL
TAX MAP REFERENCE: 010.03-07-18 - CHAMBLISS PARK

DESIGN ENGINEER AND LANDSCAPE ARCHITECT

FIRM NAME: KIMLEY-HORN AND ASSOCIATES, INC.

ADDRESS: 11400 COMMERCE PARK DRIVE, SUITE 400

RESTON, VIRGINIA 20191

PHONE NO: 703-674-1300

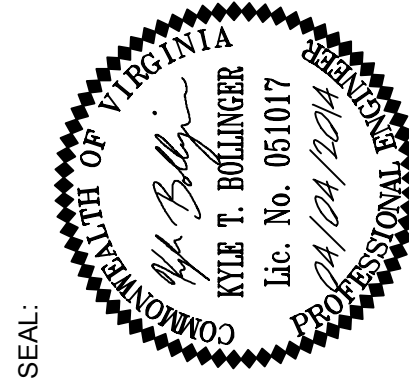
FAX NO: 703-674-1350

PROJ. MANAGER: KEVIN VAN HISE

EMAIL: KEVIN.VANHISE@KIMLEY-HORN.COM

SCALE: N.T.S. (AT 24x36) DATE: 04/04/2014 DRAWN BY: ATR

Kimley-Horn
and Associates, Inc.



OWNER
CITY OF ALEXANDRIA
301 KING STREET
ALEXANDRIA, VA 22314
DEVELOPER
ALEXANDRIA CITY
PUBLIC SCHOOLS
CONTACT
ANDREA FENIAK, AIA
(703) 461-4168

REVISION / APPROVED BY

NO	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

JOHN ADAMS SCHOOL
PARKING LOT
IMPROVEMENTS
PRELIMINARY SITE PLAN
CITY OF ALEXANDRIA, VIRGINIA
COVER SHEET
SHEET NAME:

APPROVED

SPECIAL USE PERMIT NO. _____
DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. _____

DIRECTOR _____ DATE _____

CHAIRMAN, PLANNING COMMISSION _____ DATE _____
DATE RECORDED _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____

SHEET NO: C-000

K:\NVA_LTBK\110266001 John Adams\CAD\PlanSheets\C-010 GENERAL NOTES.dwg, Layout:C-010 GENERAL NOTES Apr 03, 2014 kye@bellingham.com
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JOHN ADAMS SCHOOL PARKING LOT IMPROVEMENTS PRELIMINARY SITE P	GENERAL NOTES
	SHEET NAME: _____
APPROVED SPECIAL USE PERMIT NO. _____ DEPARTMENT OF PLANNING & ZONING _____ DIRECTOR _____ DATE _____ DEPARTMENT OF PLANNING & ENVIRONMENTAL SERVICES SITE PLAN NO. _____ _____ DIRECTOR _____ DATE _____ _____ DATE _____	
CHAIRMAN, PLANNING COMMISSION _____ DATE RECORDED _____ _____ DATE _____ _____	
INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____	
SHEET NO: C-010	

THE EXISTING UNDERGROUND UTILITIES SHOWN HEREIN ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH MAY OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. IF DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE THE CONTINUANCE OF SERVICE.

THE CONTRACTOR SHALL DIG TEST PITS FOLLOWING NOTIFICATION AND MARKING OF ALL EXISTING UTILITIES TO VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES TEST HOLES TO BE PERFORMED AT LEAST 30 DAYS PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES ARE TO BE REPORTED IMMEDIATELY TO THE OWNER AND ENGINEER. REDESIGN AND APPROVAL BY REVIEWING AGENCY SHALL BE OBTAINED IF REQUIRED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER AND THE ENGINEER OF ANY CHANGES OR CONDITIONS ATTACHED TO PERMITS OBTAINED FROM ANY AUTHORITY ISSUING PERMITS.

THE CONTRACTOR SHALL VISIT THE SITE AND SHALL VERIFY EXISTING CONDITIONS PRIOR TO STARTING CONSTRUCTION.

THE CONTRACTOR SHALL CLEAR THE SITE OF ALL TREES, BUILDINGS, FOUNDATIONS, ETC., WITHIN THE LIMITS OF CONSTRUCTION UNLESS OTHERWISE SPECIFIED, AND SHALL BE RESPONSIBLE FOR ENSURING THAT EXISTING UTILITIES ARE DISCONNECTED.

ALL AREAS, ON OR OFF-SITE, WHICH ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON, SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. THE MINIMUM ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS, SEED MIXTURE TO BE AS RECOMMENDED BY THE CITY AGENT. ALL SLOPES 3:1 AND GREATER SHALL BE SODDED AND PEGGED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY OF ALEXANDRIA.

ALL ABOVE GROUND UTILITIES SERVING THE SITE SHALL BE RELOCATED AS REQUIRED BY THE OWNING UTILITY COMPANIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL ARRANGEMENTS AND COORDINATING ALL WORK REQUIRED FOR THE NECESSARY RELOCATIONS.

PRIOR TO BEGINNING OF CONSTRUCTION, CONTRACTOR SHALL VERIFY FROM THE ARCHITECTURAL DRAWINGS ALL DIMENSIONS, DETAILS, AND TREATMENTS FOR THE PROPOSED BUILDINGS, WALKWAYS, AND OTHER PROPOSED CONSTRUCTION WHERE INDICATED ON THE PLANS.

THE CONTRACTOR SHALL VERIFY INVERT SIZE AND LOCATION OF BUILDING UTILITY CONNECTIONS PRIOR TO PLACEMENT OF UNDERGROUND UTILITIES.

EXISTING BUILDING, FENCES, AND OTHER EXISTING PHYSICAL FEATURES ARE TO BE REMOVED AS REQUIRED BY THE CONTRACTOR.

EXISTING CONSTRUCTION SHALL BE REMOVED TO NEAREST JOINT. NEW CONSTRUCTION SHALL BE PROVIDED AS SHOWN AND ANY DAMAGED AREA SHALL BE REPAIRED TO MATCH CONDITIONS EXISTING PRIOR TO CONSTRUCTION OR TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES.

ALL PRIVATE BUILDING CONNECTIONS ARE TO BE INSTALLED IN ACCORDANCE WITH THE CURRENT PLUMBING CODE.

TOPS OF EXISTING STRUCTURES WHICH REMAIN IN USE ARE TO BE ADJUSTED IN ACCORDANCE WITH THE GRADING PLAN. ALL PROPOSED STRUCTURE TOP ELEVATIONS ARE TO BE VERIFIED BY THE CONTRACTOR WITH THE SITE GRADING PLANS. IN CASE OF CONFLICT, THE GRADING PLAN SHALL SUPERSEDE PROFILE ELEVATIONS. MINOR ADJUSTMENT TO MEET FINISHED GRADE ELEVATION, IF REQUIRED, SHALL BE MADE IN THE FIELD WITH THE APPROVAL OF SITE INSPECTOR OF THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES.

THE CONSTRUCTION, FIELD PRACTICES AND METHODS SHALL CONFORM TO THE REQUIREMENTS SET FORTH BY THE CITY OF ALEXANDRIA AND ITS CURRENT ZONING ORDINANCE AND CONSTRUCTION STANDARDS MANUAL. FAILURE TO COMPLY WITH THE CODE, APPLICABLE MANUALS, AND PROVISIONS OF THE CONSTRUCTION AND ESCROW AGREEMENTS OR THE PERMITS SHALL BE DEEMED A VIOLATION.

THE APPROVAL OF THESE PLANS SHALL IN NO WAY RELIEVE THE OWNER/DEVELOPER OR HIS AGENT OF ANY LEGAL RESPONSIBILITIES WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA OR ANY ORDINANCE ENACTED BY THE CITY OF ALEXANDRIA.

CONSTRUCTION STAKEOUT SHALL BE UNDER THE DIRECT SUPERVISION OF A LICENSED LAND SURVEYOR IN THE COMMONWEALTH OF VIRGINIA.

THE CONTRACTOR IS REFERRED TO STRUCTURAL, GEOTECHNICAL, MECHANICAL, AND ARCHITECTURAL PLANS FOR FOUNDATION TREATMENT INCLUDING, BUT NOT LIMITED TO, SHEETING AND SHORING FOR BUILDING EXCAVATION, WATERPROOFING FOR FILL AGAINST BUILDINGS, LOCATION OF MECHANICAL EQUIPMENT, AND CONNECTIONS THE FACES OF BUILDINGS.

SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF THE EXISTING ROAD TO THE PROPOSED ENTRANCE AND/OR CURB & GUTTER TO PRECLUDE THE FORMING OF FALSE GUTTER AND/OR PONDING OF WATER ON THE ROADWAY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING A SMOOTH TRANSITION TO EXISTING CURB AND SIDEWALKS, IF APPLICABLE.

THE CALIFORNIA BEARING RATIO (CBR) VALUES ON IN-SITU MATERIALS SHALL BE DETERMINED BY FIELD AND/OR LABORATORY TESTS FOR ACTUAL DETERMINATION OF REQUIRED THICKNESS OF SURFACE, BASE, SUB-BASE, AND SUB GRADE MATERIALS. THE PAVEMENT SECTION SHALL BE DESIGNED BY A GEOTECHNICAL/LICENSED PROFESSIONAL ENGINEER TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES FOR ALL PAVEMENTS INCLUDING EMERGENCY VEHICLE EASEMENT(EVE) TO SUPPORT H-20 LOADING. IN THE CASE OF PAVEMENT PATCHES, PAVEMENT SECTION MUST MEET OR EXCEED EXISTING SECTION.

EMERGENCY VEHICLE EASEMENTS (EVE) AND AMERICAN WITH DISABILITY (ADA) ACCESSIBLE PARKING SPACES MUST BE DELINEATED WITH PAVEMENT MARKINGS PER THE CITY OF ALEXANDRIA STANDARD SIGNAGE AND AMERICAN WITH DISABILITIES (ADA) REQUIREMENTS.

ALL STRIPING SHALL MEET THE REQUIREMENTS OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS (LATEST EDITION) AND SHALL BE THERMOPLASTIC UNLESS OTHERWISE SPECIFIED.

ALL EARTHWORK OPERATIONS ARE TO BE PERFORMED UNDER THE FULL TIME, ON-SITE SUPERVISION OF A REGISTERED GEOTECHNICAL ENGINEER WITH GEOTECHNICAL TESTING IN ACCORDANCE WITH CONSTRUCTION SPECIFICATIONS AND SOILS REPORT REQUIREMENTS.

THE CONTRACTORS SHALL NOT CAUSE OR PERMIT VEHICLES TO IDLE FOR MORE THAN 10 MINUTES WHEN PARKED.

DAMAGE TO ANY EXISTING ENTRANCES, CURB AND GUTTER, PAVEMENT OR OTHER EXISTING STRUCTURES NOT PROPOSED TO BE DISTURBED WITH THIS DEVELOPMENT, WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE REPAIRED TO THE SATISFACTION OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION AND ANY ADJOINING OWNERS THAT MAY BE AFFECTED.

ALL CONSTRUCTION ACTIVITIES SHALL CONFORM WITH LATEST EDITION OF OSHA REGULATIONS AND GUIDELINES.

IN THE EVENT THE PROPOSED DRAINAGE SYSTEM ADVERSELY IMPACTS AND/OR CREATES A NUISANCE ON THE PUBLIC OR PRIVATE PROPERTIES THEN THE APPLICANT SHALL BE RESPONSIBLE TO PROVIDE ADDITIONAL IMPROVEMENTS TO THE FIELD DRAINAGE SYSTEM AND/OR SUMP PUMP DISCHARGE TO THE SATISFACTION OF THE DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES (&ES).

ALL GEOTECHNICAL AND CONCRETE TESTING AND INSPECTIONS SHALL BE PROVIDED BY A CITY APPROVED, THIRD PARTY CONSULTANT. FEES FOR ALL THIRD PARTY CONSULTANT TESTING AND INSPECTIONS SHALL BE PAID BY THE CONTRACTOR AND INCLUDED IN THE CONTRACTOR'S BASE BID.

ALL COORDINATION WITH APPLICABLE PUBLIC UTILITIES INCLUDING BUT NOT LIMITED TO TIMING OF SERVICE DROPS, RECONNECTIONS, LOAD LETTERS, PRESSURE TESTS AND PERMITS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL SUCH WORK SHALL BE SCHEDULED AND PERFORMED IN A MANNER TIMELY TO COMPLETION OF THE PROJECT.

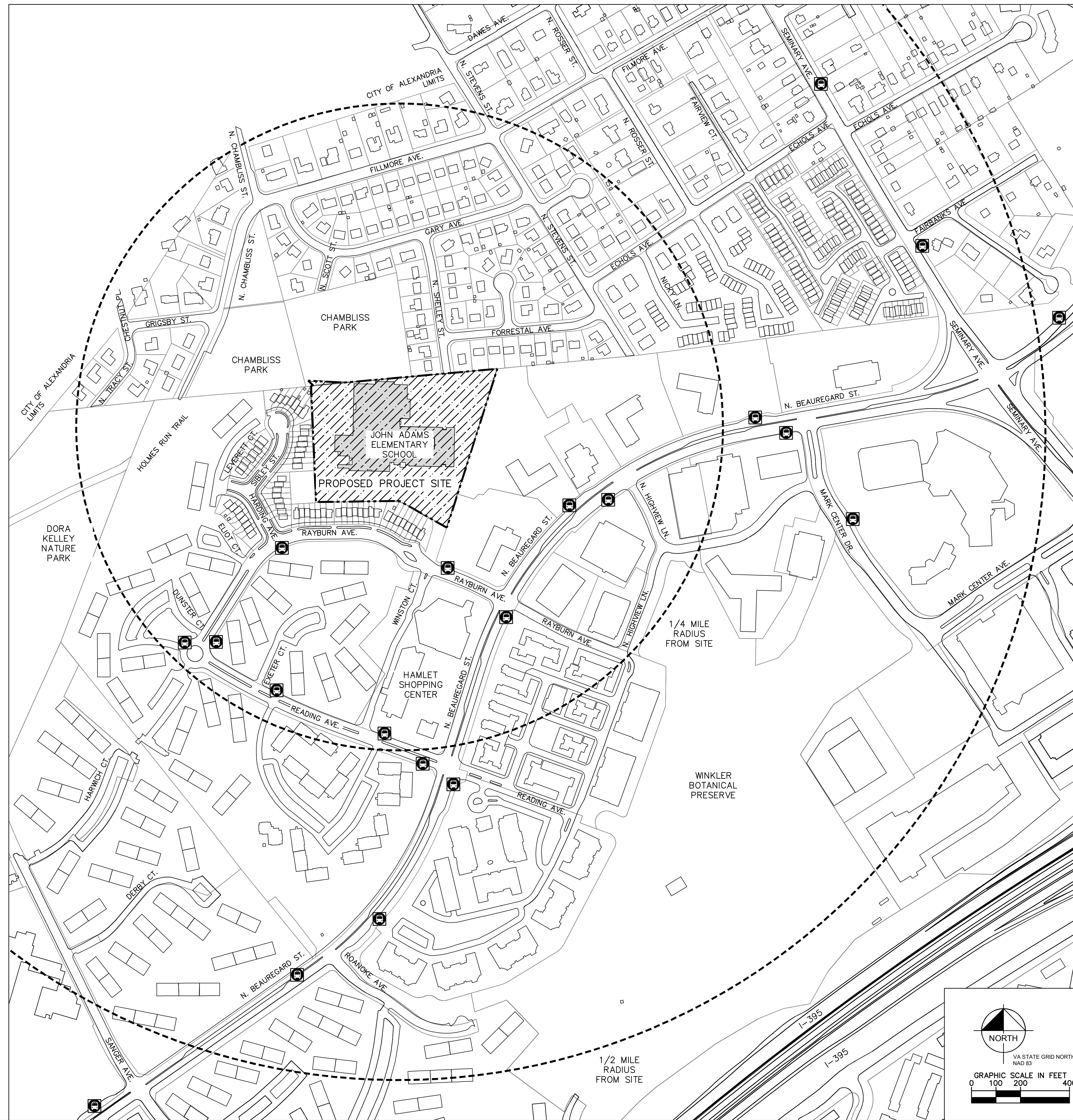
THE PROPOSED PROJECT SITE LOCATION LIES WITHIN THE CITY OF ALEXANDRIA, VA. NO STREET FRONTAGE EXISTS. CHAMBLISS PARK CREATES THE JOHN ADAMS SCHOOL PROPERTY'S NORTH BOUNDARY, WHILE RESIDENTIAL AREAS CREATE THE EAST, WEST, AND SOUTH BOUNDARIES.

ALEXANDRIA'S DASH AND WMATA BUS SYSTEMS OPERATE MULTIPLE ROUTES WITHIN 1/4 MILE OF THE SITE:

<u>STREET</u>	<u>BUS LINES</u>
RAYBURN AVE. (DASH)	AT1, AT2
BEAUREGARD ST. (WMATA)	7A, 7F, 7W, 7X

<u>STREET</u>	<u>BUS LINES</u>
BEAUREGARD ST. (WMATA)	7A, 7F, 7W, 7X
BEAUREGARD ST. (DASH)	AT1, AT2
MARK CENTER DR. (WMATA)	7A, 7F, 7M, 7W, 7X, 8W
SEMINARY AVE. (WMATA)	16L, 28F, 28G

	BUS STOP
	REFERENCE RADIUS
	PROPOSED PROJECT SITE



DESIGN ENGINEER AND LANDSCAPE ARCHITECT	
FIRM NAME: KIMLEY-HORN AND ASSOCIATES, INC.	
ADDRESS: 11400 COMMERCE PARK DRIVE, SUITE 400	
<u>RESTON, VIRGINIA 20191</u>	
PHONE NO. 703-674-1300	FAX NO. 703-674-1350
PROJ. MANAGER: KEVIN VAN HISE	
EMAIL: KEVIN.VANHISE@KIMLEY-HORN.COM	
SCALE: 1" = 200' (AT 24x36)	DATE: 04/04/2014
	DRAWN BY: ATR

SEAL:

COMMONWEALTH OF VIRGINIA
Kyle T. Bollinger
KYLE T. BOLLINGER
 Lic. No. 051017
05/04/2014
PROFESSIONAL ENGINEER

OWNER
 CITY OF ALEXANDRIA
 301 KING STREET
 ALEXANDRIA, VA 22314

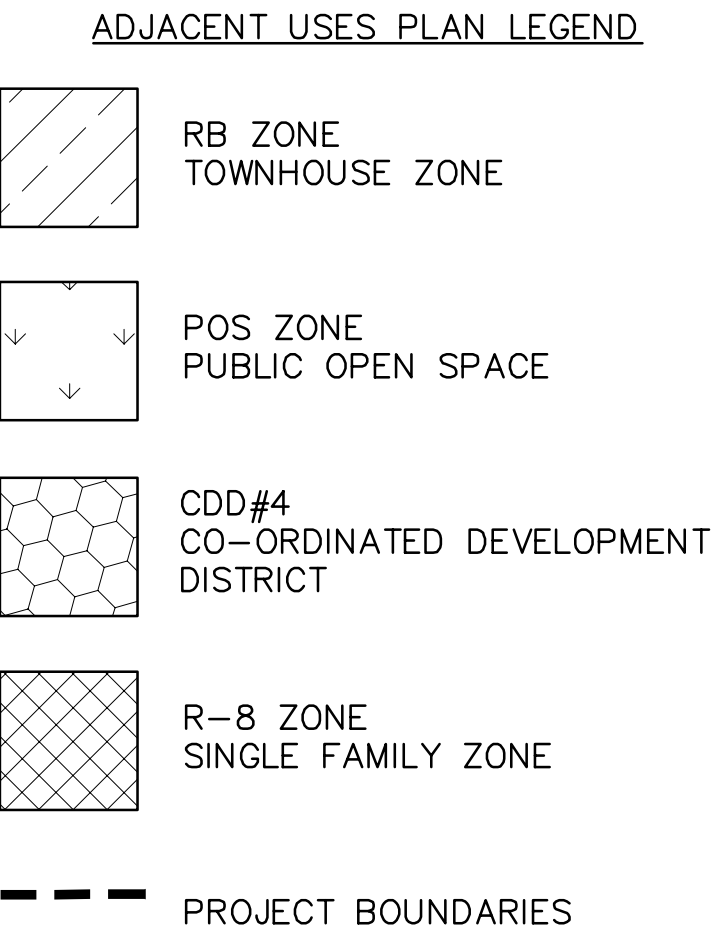
DEVELOPER
 ALEXANDRIA CITY
 PUBLIC SCHOOLS

CONTACT
 ANDREA FENIAK, AIA
 (703) 461-4118

[illegible]

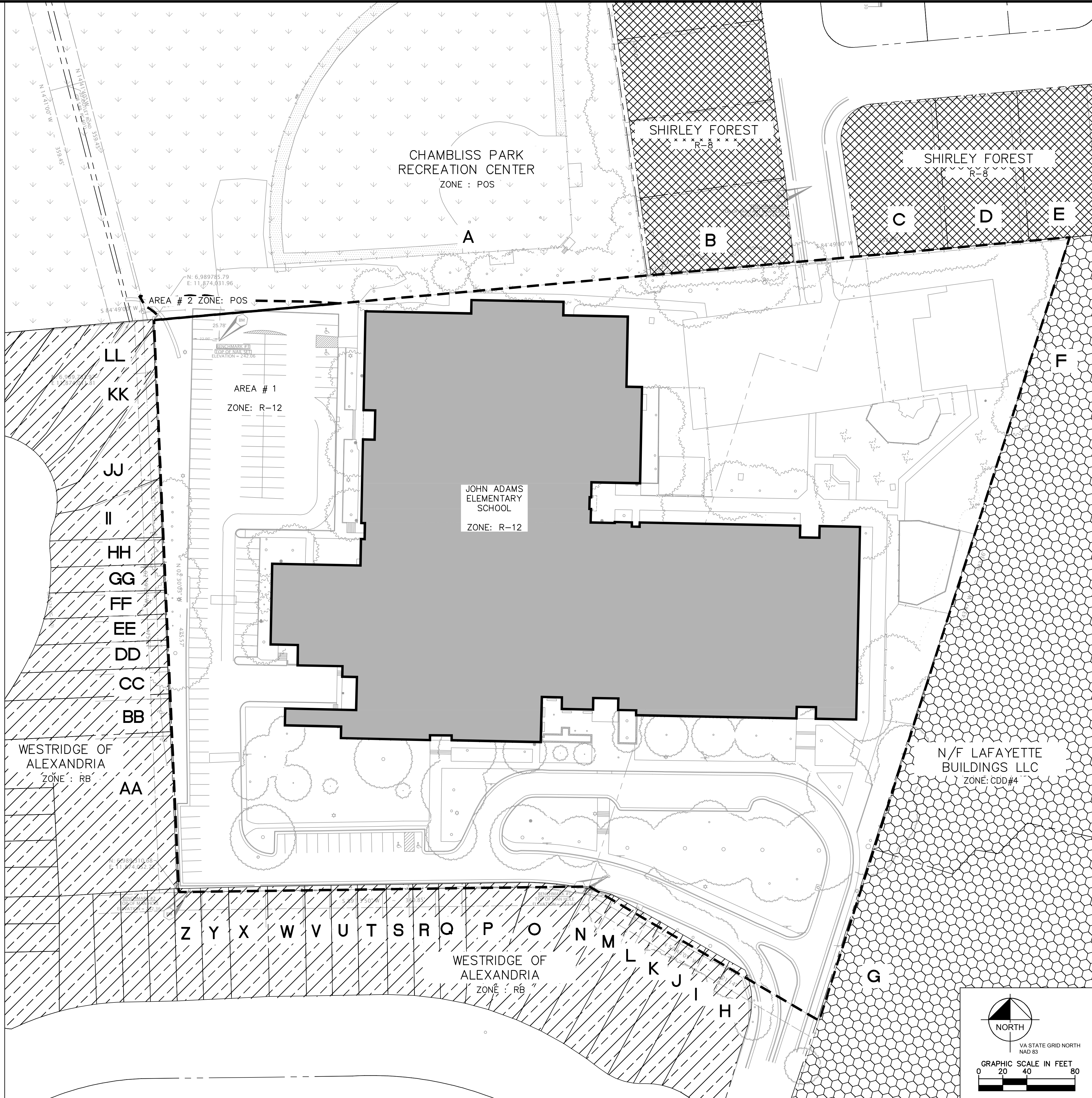
JOHN ADAMS SCHOOL
PARKING LOT
IMPROVEMENTS
PRELIMINARY SITE PLAN
CITY OF ALEXANDRIA, VIRGINIA
E: CONTEXTUAL PLAN

APPROVED _____		
SPECIAL USE PERMIT NO. _____		
DEPARTMENT OF PLANNING & ZONING _____		
DIRECTOR _____		DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES _____		
SITE PLAN NO. _____		
DIRECTOR _____		DATE _____
CHAIRMAN, PLANNING COMMISSION _____		
DATE RECORDED _____		DATE _____
INSTRUMENT NO. _____		DEED BOOK NO. _____ PAGE NO. _____
SHEET NO: C-030		



ADJACENT PROPERTIES

- | | | | |
|----|---|----|---|
| | 2500 N SCOTT STREET
CITY OF ALEXANDRIA
LOT 2500 N SCOTT | EE | 2313 N SIBLEY ST
PORTER PATRICK J
LOT 35 SEC 2 WESTRIDGE OF ALEXANDRIA |
| B | 2460 N SHELLEY STREET
RUSSELL ROBERT W
LOT 11 BLK 3 SEC 2 SHIRLEY FOREST | FF | 2315 N SIBLEY ST
RUELL DAVID E TR OR BULL NANCY H TR
LOT 36 SEC 2 WESTRIDGE OF ALEXANDRIA |
| C | 2450 N SHELLEY STREET
JONES, SAMUEL P OR SUSAN M
LOT 10 BLK 5 SEC 2 SHIRLEY FOREST | GG | 2319 N SIBLEY ST
KLOCKER KENNETH D
LOT 37 SEC 2 WESTRIDGE OF ALEXANDRIA |
| D | 5542 FORRESTAL AVENUE
PAYOS, MANUELA
LOT 9 BLK 5 SEC 2 SHIRLEY FOREST | HH | 2319 N SIBLEY ST
BONFIGLIO NATHAN J OR SURDI V
LOT 38 SEC 2 WESTRIDGE OF ALEXANDRIA |
| E | 5536 FORRESTAL AVENUE
LEWIS, WILLIAM MITCHELL II
LOT 8 BLK 5 SEC 2 SHIRLEY FOREST | II | 2321 N SIBLEY ST
GEBRESLASSIE GUENET
LOT 39 SEC 2 WESTRIDGE OF ALEXANDRIA |
| F | 1600 N BAUREGARD STREET
LAFAYETTE BUILDINGS LLC
PARCEL B - MARK CENTER II | JJ | 2323 N SIBLEY ST
VINCENT REGINALD OR YOLANDE J
LOT 40 SEC 2 WESTRIDGE OF ALEXANDRIA |
| G | 1500 N BAUREGARD STREET
LAFAYETTE BUILDINGS LLC
PARCEL A - MARK CENTER I | KK | 2325 N SIBLEY ST
AL TOM M
LOT 41 SEC 2 WESTRIDGE OF ALEXANDRIA |
| H | 5653 RAYBURN AVENUE
KANE LOLA D OR THOMAS R
LOT 1 SEC 1 WESTRIDGE OF ALEXANDRIA | LL | 2329 N SIBLEY ST
ALAGA OSCAR F
LOT 42 SEC 2 WESTRIDGE OF ALEXANDRIA |
| I | 5655 RAYBURN AVE
TOMPKINS JANCE E TR
LOT 2 SEC 1 WESTRIDGE OF ALEXANDRIA | | |
| J | 5657 RAYBURN AVE
RAUM N THOMAS OR NORA
LOT 3 SEC 1 WESTRIDGE OF ALEXANDRIA | | |
| K | 5659 RAYBURN AVE
OGBUOKIRI ROSELINE U, UMO ARCHIBONG A
LOT 4 SEC 1 WESTRIDGE OF ALEXANDRIA | | |
| L | 5661 RAYBURN AVE
SHIFTMAN FRED OR JOELLEN M
LOT 5 SEC 1 WESTRIDGE OF ALEXANDRIA | | |
| M | 5663 RAYBURN AVE
SEARS GWENIVERE ELAINE TR
LOT 6 SEC 1 WESTRIDGE OF ALEXANDRIA | | |
| N | 5665 RAYBURN AVE
JOURDAN SHARON A TR
LOT 7 SEC 1 WESTRIDGE OF ALEXANDRIA | | |
| O | 5667 RAYBURN AVE
WALTERMAN JAMES
LOT 8 SEC 1 WESTRIDGE OF ALEXANDRIA | | |
| P | 5669 RAYBURN AVE
DIGREGORIO ELIZABETH LOUISE
LOT 9 SEC 1 WESTRIDGE OF ALEXANDRIA | | |
| Q | 5671 RAYBURN AVE
WODGETT JOHN T
LOT 10 SEC 1 WESTRIDGE OF ALEXANDRIA | | |
| R | 5673 RAYBURN AVE
DOSE DANIEL C AND MARY T TRS
LOT 11 SEC 1 WESTRIDGE OF ALEXANDRIA | | |
| S | 5675 RAYBURN AVE
COLLINS FELICIA D
LOT 12 SEC 1 WESTRIDGE OF ALEXANDRIA | | |
| T | 5677 RAYBURN AVE
KING DANIEL M
LOT 13 SEC 1 WESTRIDGE OF ALEXANDRIA | | |
| U | 5679 RAYBURN AVE
HOFFMAN RICHARD R AND GAIL A
LOT 14 SEC 1 WESTRIDGE OF ALEXANDRIA | | |
| V | 5681 RAYBURN AVE
LAMBERT ASHLEIGH E OR BRIAN C
LOT 15 SEC 1 WESTRIDGE OF ALEXANDRIA | | |
| W | 5683 RAYBURN AVE
SILINS INTS M OR ELIZABETH L
LOT 16 SEC 1 WESTRIDGE OF ALEXANDRIA | | |
| X | 5685 RAYBURN AVE
BAKRI ISWEN I AND MELTUA AND ZULFAN
LOT 17 SEC 1 WESTRIDGE OF ALEXANDRIA | | |
| Y | 5687 RAYBURN AVE
ELVAHOUH ROSENBERG ASMAA OR ROSENBERG MICHAEL R
LOT 18 SEC 2 WESTRIDGE OF ALEXANDRIA | | |
| Z | 5689 RAYBURN AVE
KOERNER PHYLLIS B
LOT 19 SEC 2 WESTRIDGE OF ALEXANDRIA | | |
| AA | 2399 N SIBLEY ST
FIRST INVESTMENT CORP VIRGINIA PWIR TAX DEPT 18 JI
PAR 4 SEC 2 WESTRIDGE OF ALEXANDRIA | | |
| BB | 2307 N SIBLEY ST
SAVER MARCIA V
LOT 32 SEC 2 WESTRIDGE OF ALEXANDRIA | | |
| CC | 2309 N SIBLEY ST
DREW ALYSSA G
LOT 33 SEC 2 WESTRIDGE OF ALEXANDRIA | | |
| DD | 2311 N SIBLEY ST
BRINANE ARBEE SAMUEL OR ESTEFANOS AMLESET AND TSEGAYE EYOB
LOT 34 SEC 2 WESTRIDGE OF ALEXANDRIA - AFFORDABLE HOUSING | | |

[illegible]

K:\NVA\LALP\11026000\John Adams\CAD\PlanSheets\C-100 EXISTING CONDITIONS PLAN.dwg, Layout:C-100 EXISTING CONDITIONS PLAN Apr 03, 2014 kylebolinger
THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, IS AN INSTRUMENT OF SERVICE, AND IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE
OF AND UNLAWFUL RELIANCE ON THE DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

LEGEND:

- EXISTING CONCRETE SIDEWALKS
EXISTING ASPHALT AREAS
EXISTING PLAY SURFACES
PROJECT BOUNDARIES

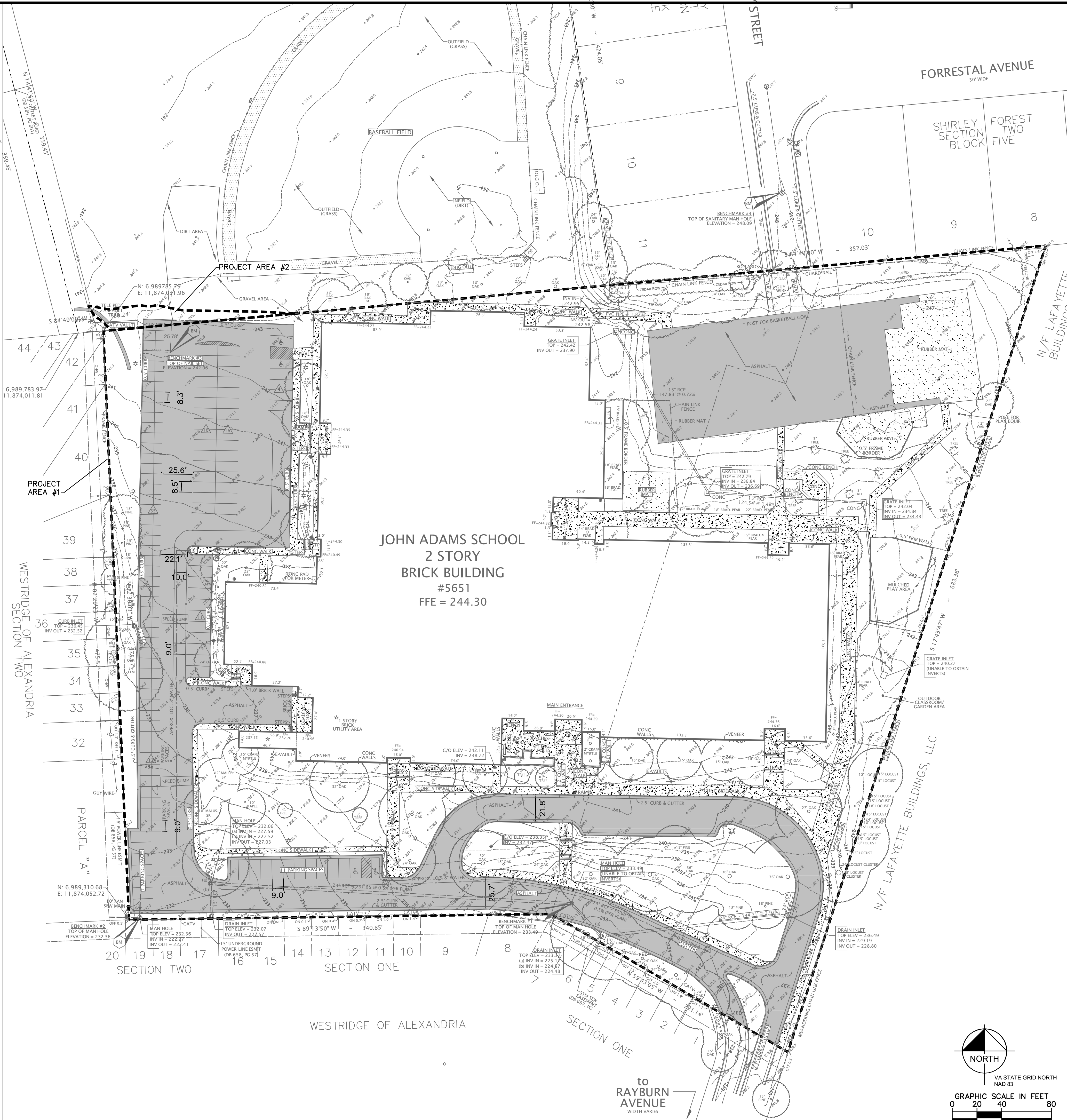
BM	BENCHMARK
CO	CLEAN OUT
CONC	CONCRETE
DB	DEED BOOK
FD	FIRE HYDRANT
LP	LIGHT POLE
N/F	NOW OR FORMERLY
OW	OVERHEAD WIRE
OP	OPEN PORCH
PG	PAGE
EP	EDGE OF PAVEMENT
SM	SANITARY MANHOLE
SG	SIGN
STP	STOOP
SD	STORM SEWER MANHOLE
UP	UTILITY POLE
WM	WATER METER
WV	WATER VALVE

NOTES:

1. TOTAL PROJECT AREA #1 & #2: 347,759 S.F.
AREA #1 —JOHN ADAMS ELEMENTARY: 346,141 S.F.
AREA #2 —CHAMBLISS PARK: 1,618 S.F.
2. TOTAL IMPERVIOUS AREA: 233,807 S.F.
AREA #1 233,598 S.F.
PLAY SURFACES: 8,921 S.F.
ASPHALT SURFACES: 84,647 S.F.
CONCRETE SIDEWALKS: 34,243 S.F.
BUILDING FOOTPRINT: 105,787 S.F.
AREA #2 209 S.F.
ASPHALT PARKING: 153 S.F.
ASPHALT SIDEWALK: 56 S.F.
3. PERVIOUS AREA: 113,952
AREA #1: 112,543 S.F.
AREA #2: 1,409 S.F.

* PROJECT AREA # 1 INCLUDES THE ENTIRE JOHN ADAMS ELEMENTARY SCHOOL PROPERTY.

** PROJECT AREA # 2 INCLUDES ONLY A PORTION OF CHAMBLISS PARK. THIS AREA IS LABELED AS THE LIMITS OF DISTURBANCE ON CHAMBLISS PARK.



JOHN ADAMS SCHOOL
PARKING LOT
IMPROVEMENTS
PRELIMINARY SITE PLAN
CITY OF ALEXANDRIA, VIRGINIA
EXISTING CONDITIONS PLAN

APPROVED
SPECIAL USE PERMIT NO. _____
DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____

DIRECTOR _____ DATE _____

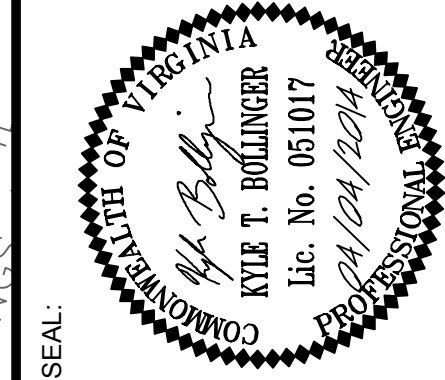
CHAIRMAN, PLANNING COMMISSION _____ DATE _____
DATE RECORDED _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____
SHEET NO: C-100

REVISION / APPROVED BY

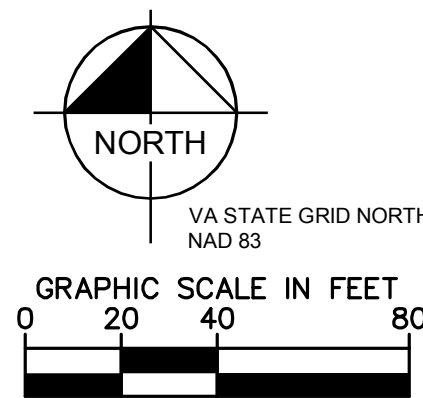
NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

SEAL:



OWNER
CITY OF ALEXANDRIA
301 KING STREET
ALEXANDRIA, VA 22314
DEVELOPER
ALEXANDRIA CITY
PUBLIC SCHOOLS
CONTACT
ANDREA FENAK, AIA
(703) 461-1155

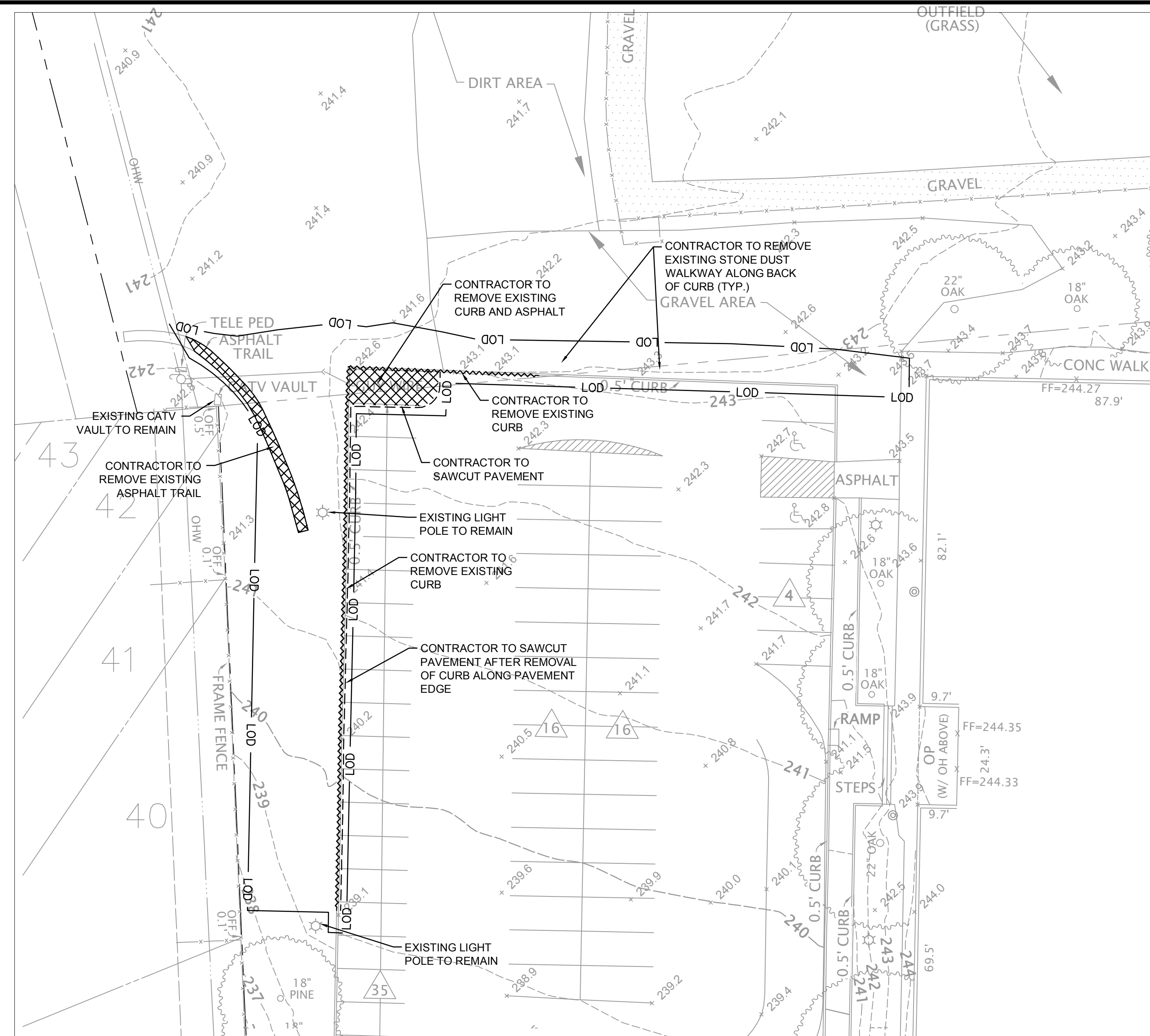
DESIGN ENGINEER AND LANDSCAPE ARCHITECT
FIRM NAME: KIMLEY-HORN AND ASSOCIATES, INC.
ADDRESS: 11400 COMMERCE PARK DRIVE, SUITE 400
RESTON, VIRGINIA 20191
PHONE NO: 703-674-1300 FAX NO: 703-674-1350
PROJ. MANAGER: KEVIN VAN HISE
EMAIL: KEVIN.VANHISE@KIMLEY-HORN.COM
SCALE: 1" = 40' (AT 24x36) DATE: 04/04/2014 DRAWN BY: ATR
Kimley-Horn
and Associates, Inc.



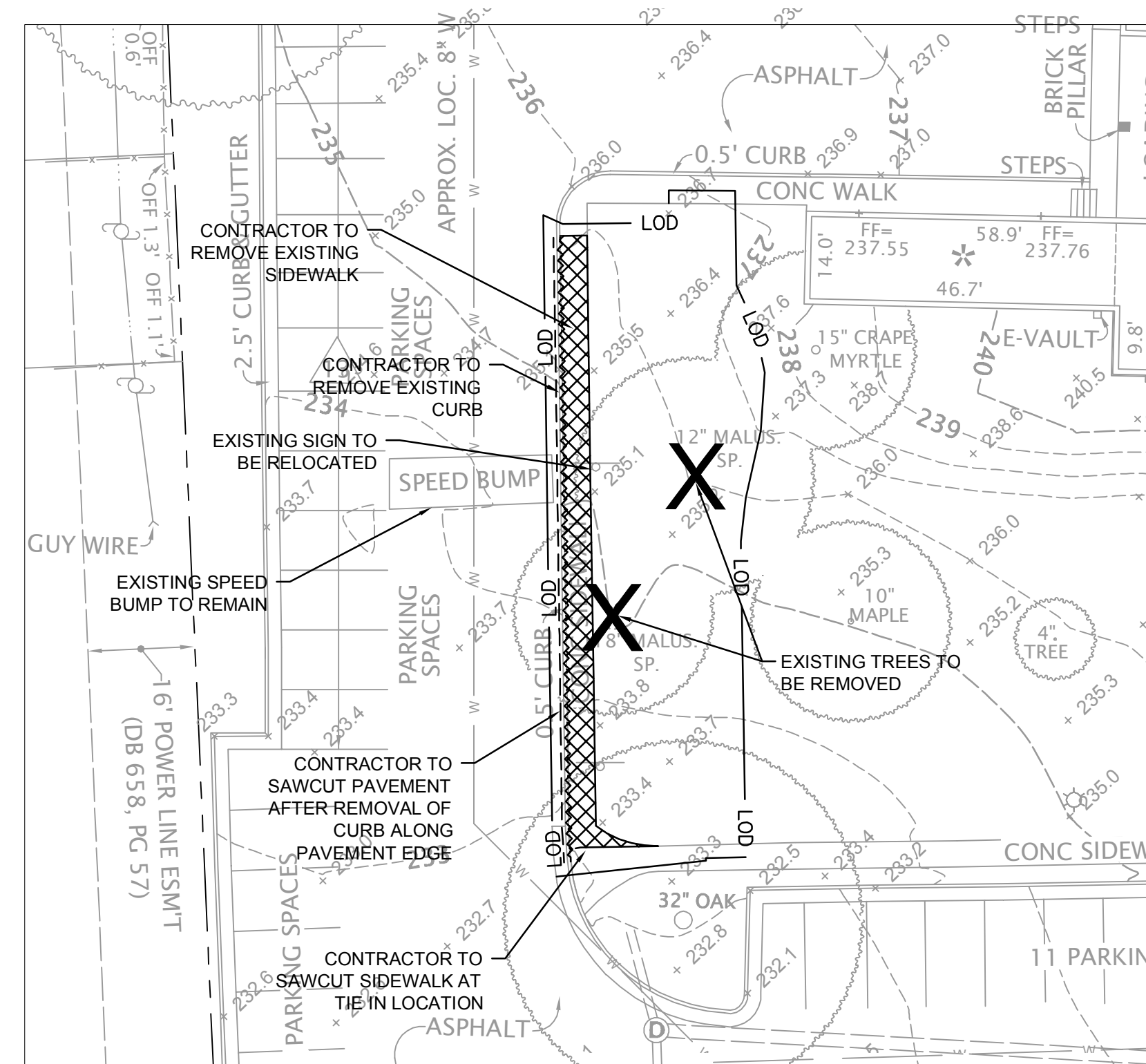
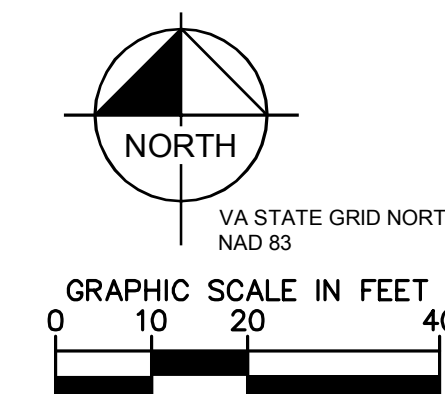
	PAVEMENT DEMOLITION AREA
	TREE REMOVAL
	LIMIT OF PAVEMENT SAWCUT
	CURB AND GUTTER REMOVAL
	LIMIT OF DISTURBANCE

BM	BENCHMARK
	CLEAN OUT
CONC	CONCRETE
DB	DEED BOOK
	FIRE HYDRANT
	LIGHT POLE
N/F	NOW OR FORMERLY
OHW	OVERHEAD WIRE
OP	OPEN PORCH
PG	PAGE
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	SANITARY MANHOLE
	SIGN
STP	STOOP
	STORM SEWER MANHOLE
	UTILITY POLE
	WATER METER
	WATER VALVE

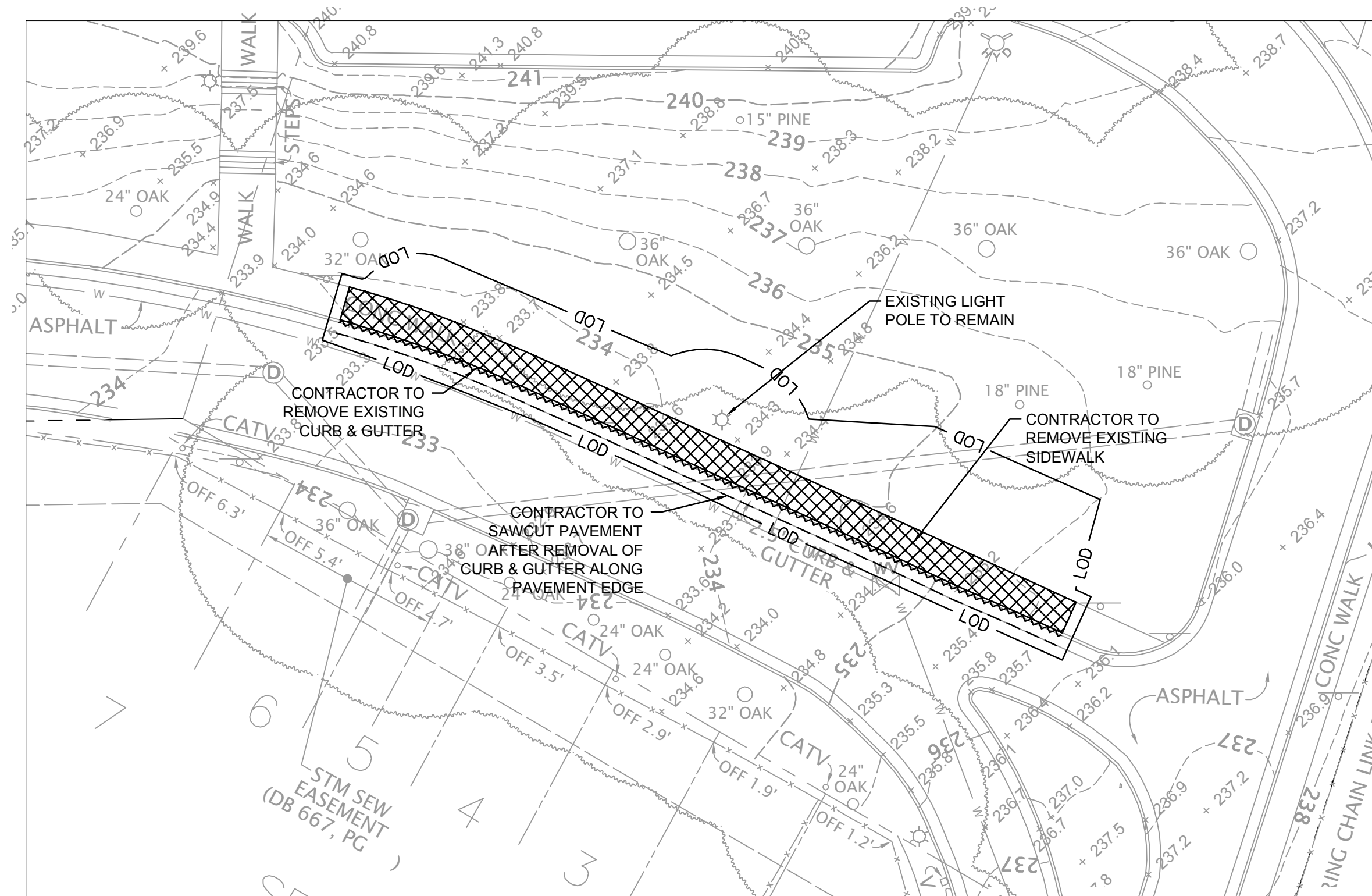
1. CONSTRUCTION SHALL NOT COMMENCE UNTIL ALL REQUIRED PLAN APPROVALS AND ALL CONSTRUCTION PERMITS HAVE BEEN RECEIVED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS. PERMITS SHALL BE MAINTAINED ON SITE DURING CONSTRUCTION.
3. EXISTING TOPOGRAPHIC INFORMATION HAS BEEN PROVIDED BY DOMINION SURVEYORS, KIMLEY-HORN AND ASSOCIATES, INC. IS NOT RESPONSIBLE FOR ITS ACCURACY.
4. ALL WORK SHALL COMPLY WITH THE CITY OF ALEXANDRIA CONSTRUCTION SPECIFICATIONS.



DETAILED DEMOLITION PLAN ENLARGEMENT
SCALE: 1" = 20'



DETAILED DEMOLITION PLAN ENLARGEMENT
SCALE: 1" = 20'



DETAILED DEMOLITION PLAN ENLARGEMENT
SCALE: 1" = 20'

DESIGN ENGINEER AND LANDSCAPE ARCHITECT

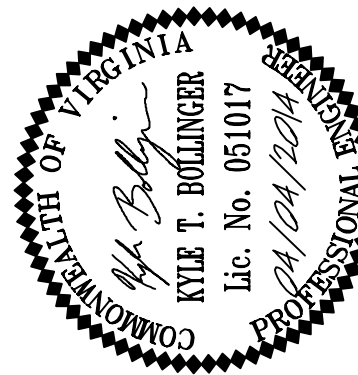
FIRM NAME: KIMLEY-HORN AND ASSOCIATES, INC.

ADDRESS: 11400 COMMERCE PARK DRIVE, SUITE 400
RESTON, VIRGINIA 20191

PHONE NO: 703-674-1300 FAX NO: 703-674-1350

PROJ. MANAGER: KEVIN VAN HISE

EMAIL: KEVIN.VANHISE@KIMLEY-HORN.COM



OWNER
CITY OF ALEXANDRIA
301 KING STREET
ALEXANDRIA, VA 22314

DEVELOPER
ALEXANDRIA CITY
PUBLIC SCHOOLS

CONTACT
ANDREA FENIAK, AIA
(703) 461-4168



**Kimley-Horn
and Associates, Inc.**

[illegible]

JOHN ADAMS SCHOOL
PARKING LOT
IMPROVEMENTS
PRELIMINARY SITE PLAN
CITY OF ALEXANDRIA, VIRGINIA
DEMOLITION PLAN

SHEET NAME:

APPROVED _____	
SPECIAL USE PERMIT NO. _____	
DEPARTMENT OF PLANNING & ZONING _____	
DIRECTOR _____	DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES _____	
SITE PLAN NO. _____	
DIRECTOR _____	DATE _____
CHAIRMAN, PLANNING COMMISSION _____	
DATE RECORDED _____	
INSTRUMENT NO. _____	DEED BOOK NO. _____
PAGE NO. _____	
SHEET NO: _____	

K:\NVA_LALP\11026001 John Adams CAD\PlanSheets\C-200 SITE PLAN.dwg, layout:C-200 SITE PLAN Apr 03, 2014 kylebollinger
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LEGEND:

PROPOSED CONCRETE SIDEWALK PER ALEXANDRIA STANDARD CSSW-1

PROPOSED PERVIOUS PAVEMENT FOR PARKING SPACE

PROPOSED PERVIOUS PAVEMENT FOR SIDEWALK

PROPOSED ASPHALT SIDEWALK AND TRAIL CONNECTION

NUMBER OF ADDITIONAL PARKING SPACES

TREE REMOVAL

PROJECT BOUNDARIES

LIMIT OF DISTURBANCE

BM	BENCHMARK
	CLEAN OUT
	CONCRETE
	DEED BOOK
	FIRE HYDRANT
	LIGHT POLE
	NOW OR FORMERLY
	OVERHEAD WIRE
	OPEN PORCH
	PAGE
	EDGE OF PAVEMENT
	SANITARY MANHOLE
	SIGN
	STOOP
	STORM SEWER MANHOLE
	UTILITY POLE
	WATER METER
	WATER VALVE

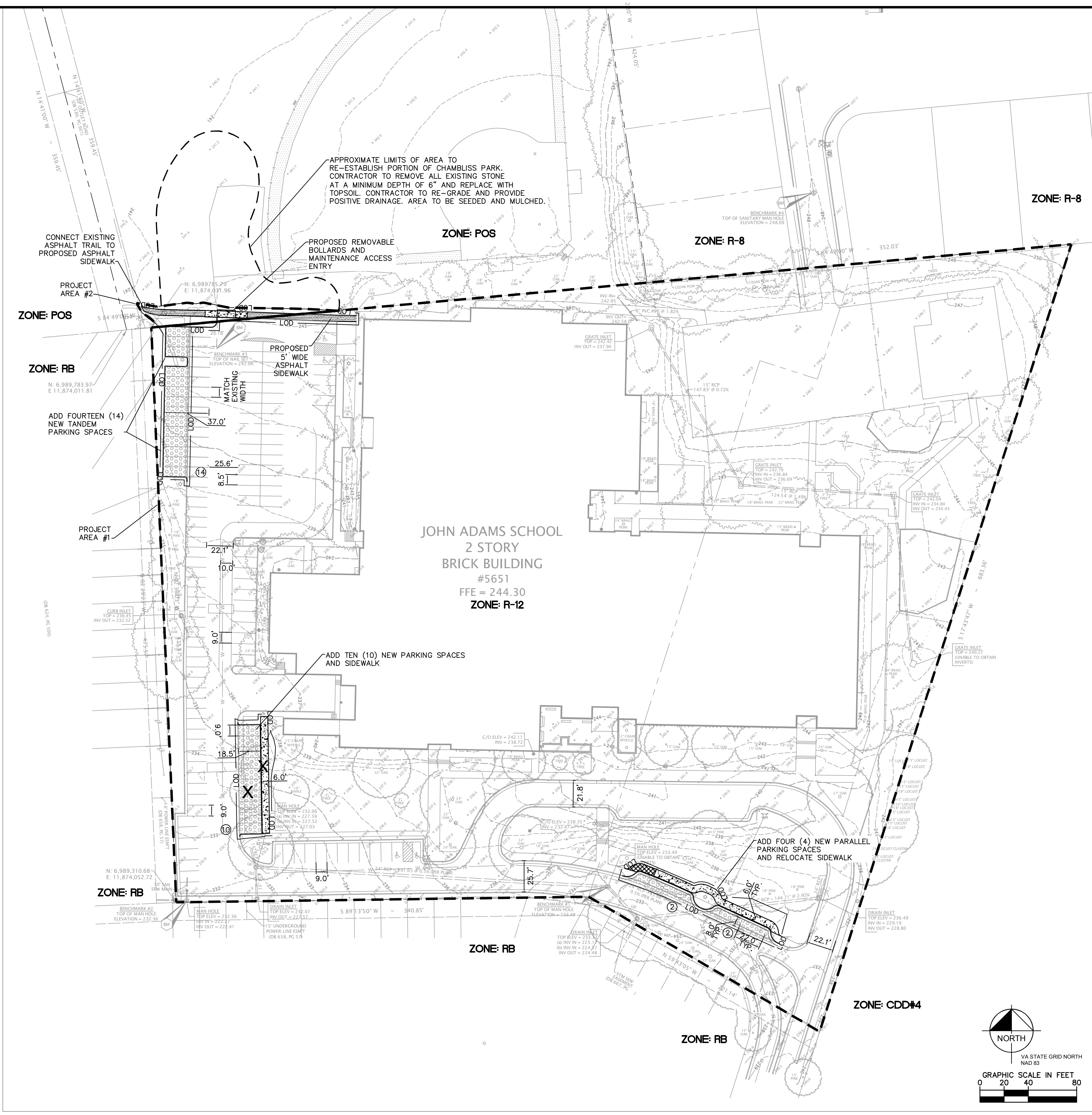
PARKING TABULATIONS

EXISTING NUMBER OF PARKING SPACES	118
PROPOSED NUMBER OF PARKING SPACES TO BE ADDED	28
TOTAL NUMBER OF PARKING SPACES	146

NOTE: EXISTING PARKING COUNT DOES NOT INCLUDE THE (1) PARKING SPACE SCHEDULED TO BE REMOVED ON THE CHAMBLISS PARK PROPERTY

NOTES:

- CONSTRUCTION SHALL NOT COMMENCE UNTIL ALL REQUIRED PLAN APPROVALS AND ALL CONSTRUCTION PERMITS HAVE BEEN RECEIVED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS. PERMITS SHALL BE MAINTAINED ON SITE DURING CONSTRUCTION.
- EXISTING TOPOGRAPHIC INFORMATION HAS BEEN PROVIDED BY DOMINION SURVEYORS. KIMLEY-HORN AND ASSOCIATES, INC. IS NOT RESPONSIBLE FOR ITS ACCURACY.
- ALL WORK SHALL COMPLY WITH THE CITY OF ALEXANDRIA CONSTRUCTION SPECIFICATIONS.
- ALL CURB SHALL BE 6" COPING CURB PER ALEXANDRIA STANDARD DETAIL CSCG-1.
- ALL SPOT ELEVATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD ADJUST AS NECESSARY TO ENSURE POSITIVE DRAINAGE AND TO TIE SMOOTHLY BACK INTO EXISTING.
- BASED UPON THE PHASING OF CONSTRUCTION CHOSEN BY THE CONTRACTOR, THE CONTRACTOR SHALL ENSURE THAT SIGNAGE IS INSTALLED TO DIRECT PEDESTRIANS AWAY FROM SIDEWALK UNDER CONSTRUCTION. AT LEAST ONE ACCESSIBLE SIDEWALK PATH SHALL BE PROVIDED AT ALL TIMES.



DESIGN ENGINEER AND LANDSCAPE ARCHITECT
FIRM NAME: KIMLEY-HORN AND ASSOCIATES, INC.
ADDRESS: 11400 COMMERCE PARK DRIVE, SUITE 400
RESTON, VIRGINIA 20191
PHONE NO: 703-674-1300 FAX NO: 703-674-1350
PROJ. MANAGER: KEVIN VAN HISE
EMAIL: KEVIN.VANHISE@KIMLEY-HORN.COM

SEAL:

OWNER: CITY OF ALEXANDRIA
301 KING STREET
ALEXANDRIA, VA 22314
DEVELOPER: ALEXANDRIA CITY PUBLIC SCHOOLS
CONTACT: ANDREA FENIAK, AIA
(703)-461-4165

REVISION / APPROVED BY

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

JOHN ADAMS SCHOOL
PARKING LOT
IMPROVEMENTS
PRELIMINARY SITE PLAN
CITY OF ALEXANDRIA, VIRGINIA

SHEET NAME: SITE PLAN

APPROVED
SPECIAL USE PERMIT NO. _____
DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____
DIRECTOR _____ DATE _____

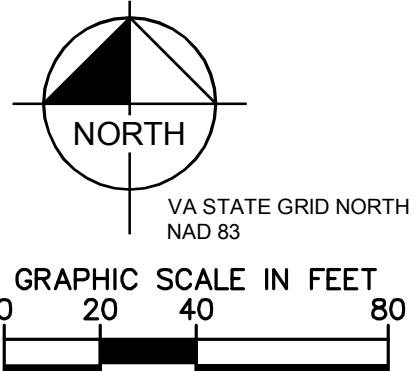
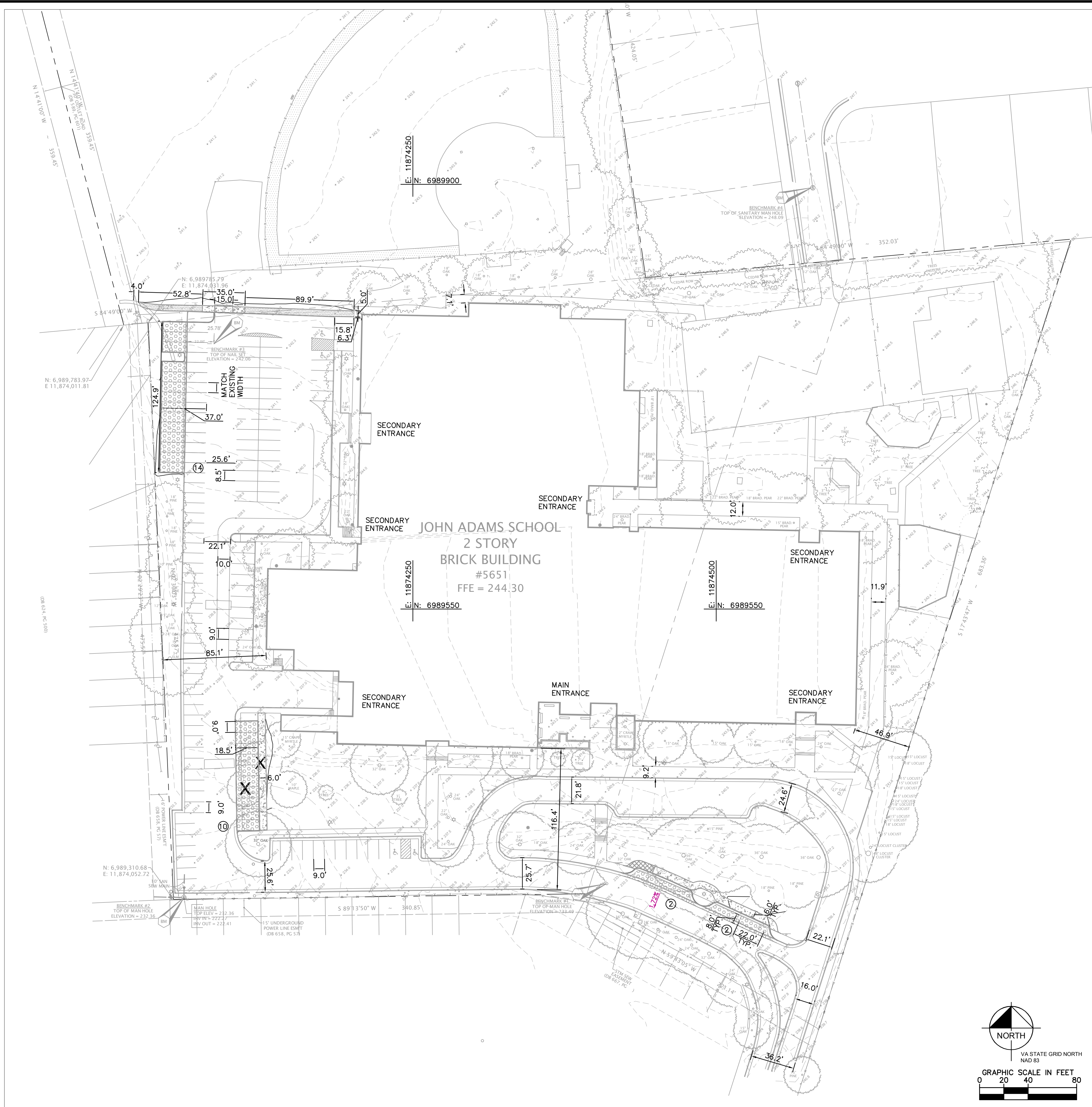
CHAIRMAN, PLANNING COMMISSION _____ DATE _____
DATE RECORDED _____
INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____
SHEET NO: C-200

K:\NVA\LALP\110266001 John Adams School\GIS\220 GIS DIMENSIONAL PLAN.dwg, Layout: C-220 GIS DIMENSIONAL PLAN Apr 03, 2014 Kyle Bollinger
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LEGEND:

- PROPOSED CONCRETE SIDEWALK PER ALEXANDRIA STANDARD CSSW-1
- PROPOSED PERVIOUS PAVEMENT FOR PARKING SPACE
- PROPOSED PERVIOUS PAVEMENT FOR SIDEWALK
- PROPOSED ASPHALT SIDEWALK AND TRAIL CONNECTION
- NUMBER OF ADDITIONAL PARKING SPACES
- TREE REMOVAL

BM	BENCHMARK
●	CLEAN OUT
CONC	CONCRETE
DB	DEED BOOK
⊗	FIRE HYDRANT
⊙	LIGHT POLE
N/F	NOW OR FORMERLY
OHW	OVERHEAD WIRE
OP	OPEN PORCH
PG	PAGE
EP	EDGE OF PAVEMENT
Ⓢ	SANITARY MANHOLE
⊥	SIGN
STP	STOOP
Ⓢ	STORM SEWER MANHOLE
Ⓢ	UTILITY POLE
Ⓢ	WATER METER
Ⓢ	WATER VALVE



JOHN ADAMS SCHOOL
PARKING LOT
IMPROVEMENTS
PRELIMINARY SITE PLAN
CITY OF ALEXANDRIA, VIRGINIA
SHEET NAME: GIS DIMENSIONAL PLAN

APPROVED
SPECIAL USE PERMIT NO. _____
DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____

DIRECTOR _____ DATE _____

CHAIRMAN, PLANNING COMMISSION _____ DATE _____
DATE RECORDED _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____
SHEET NO: C-220

REVISION / APPROVED BY

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

SEAL: 

OWNER
CITY OF ALEXANDRIA
301 KING STREET
ALEXANDRIA, VA 22314

DEVELOPER
ALEXANDRIA CITY
PUBLIC SCHOOLS
CONTACT
ANDREA FENAK, AIA
(703) 461-1185

DESIGN ENGINEER AND LANDSCAPE ARCHITECT

FIRM NAME: KIMLEY-HORN AND ASSOCIATES, INC.
ADDRESS: 11400 COMMERCE PARK DRIVE, SUITE 400
RESTON, VIRGINIA 20191
PHONE NO: 703-674-1300 FAX NO: 703-674-1350
PROJ. MANAGER: KEVIN VAN HISE
EMAIL: KEVIN.VANHISE@KIMLEY-HORN.COM

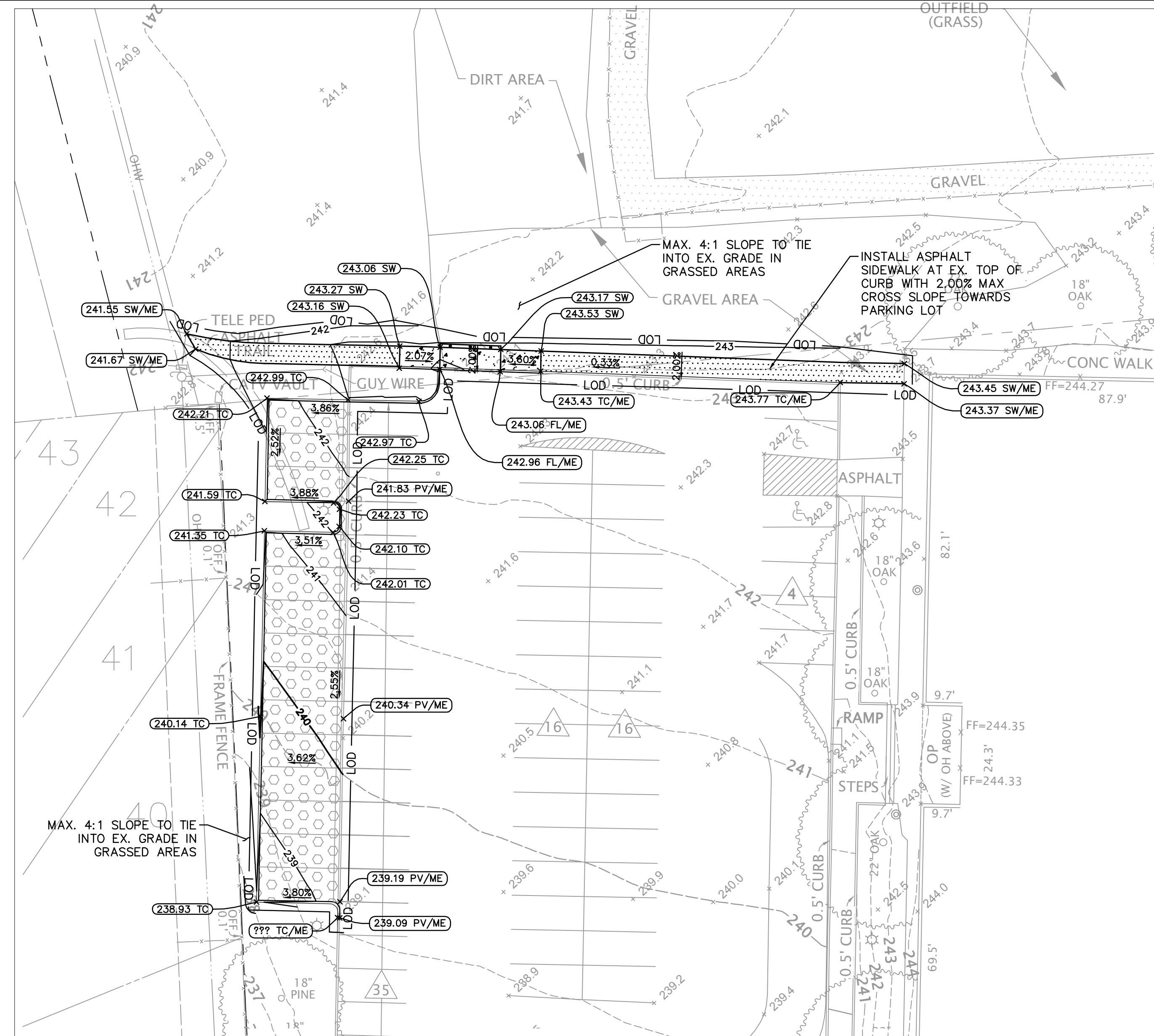
SCALE: 1" = 40' (AT 24x36) DATE: 04/04/2014 DRAWN BY: ATR

 Kimley-Horn and Associates, Inc.

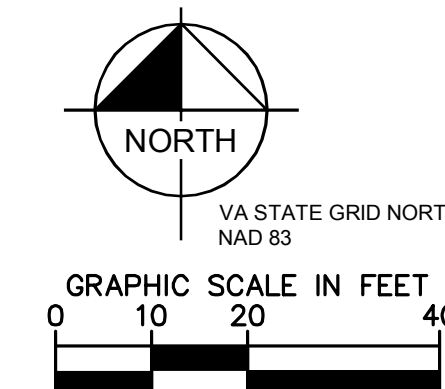
	PROPOSED CONCRETE SIDEWALK PER ALEXANDRIA STANDARD CSSW-1
	PROPOSED PERVIOUS PAVEMENT FOR PARKING SPACE
	PROPOSED PERVIOUS PAVEMENT FOR SIDEWALK
	NUMBER OF ADDITIONAL PARKING SPACES
	TREE REMOVAL
	PROJECT BOUNDARIES
	LIMIT OF DISTURBANCE
	TREE PROTECTION

GRADING KEYNOTE	
EG:	EXISTING GRADE
TC:	TOP OF CURB
FL:	FLOW LINE
ME:	MATCH EXISTING GRADE
PV:	PAVEMENT
SW:	SIDEWALK

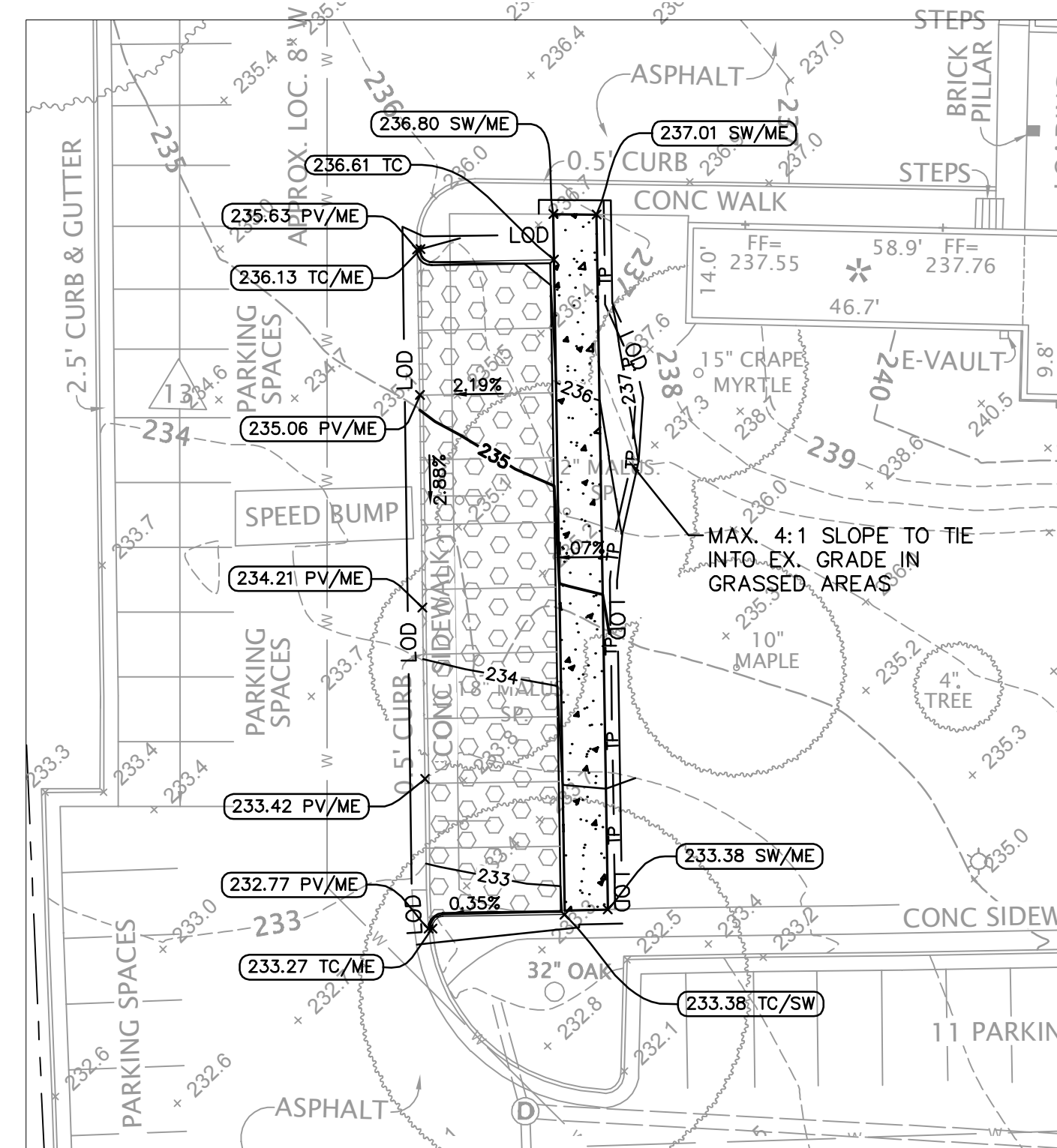
BM	BENCHMARK
	CLEAN OUT
CONC	CONCRETE
DB	DEED BOOK
	FIRE HYDRANT
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N/F	NOW OR FORMERLY
OHW	OVERHEAD WIRE
OP	OPEN PORCH
PG	PAGE
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	SANITARY MANHOLE
	SIGN
STP	STOOP
	STORM SEWER MANHOLE
UO ₃	UTILITY POLE
	WATER METER
	WATER VALVE



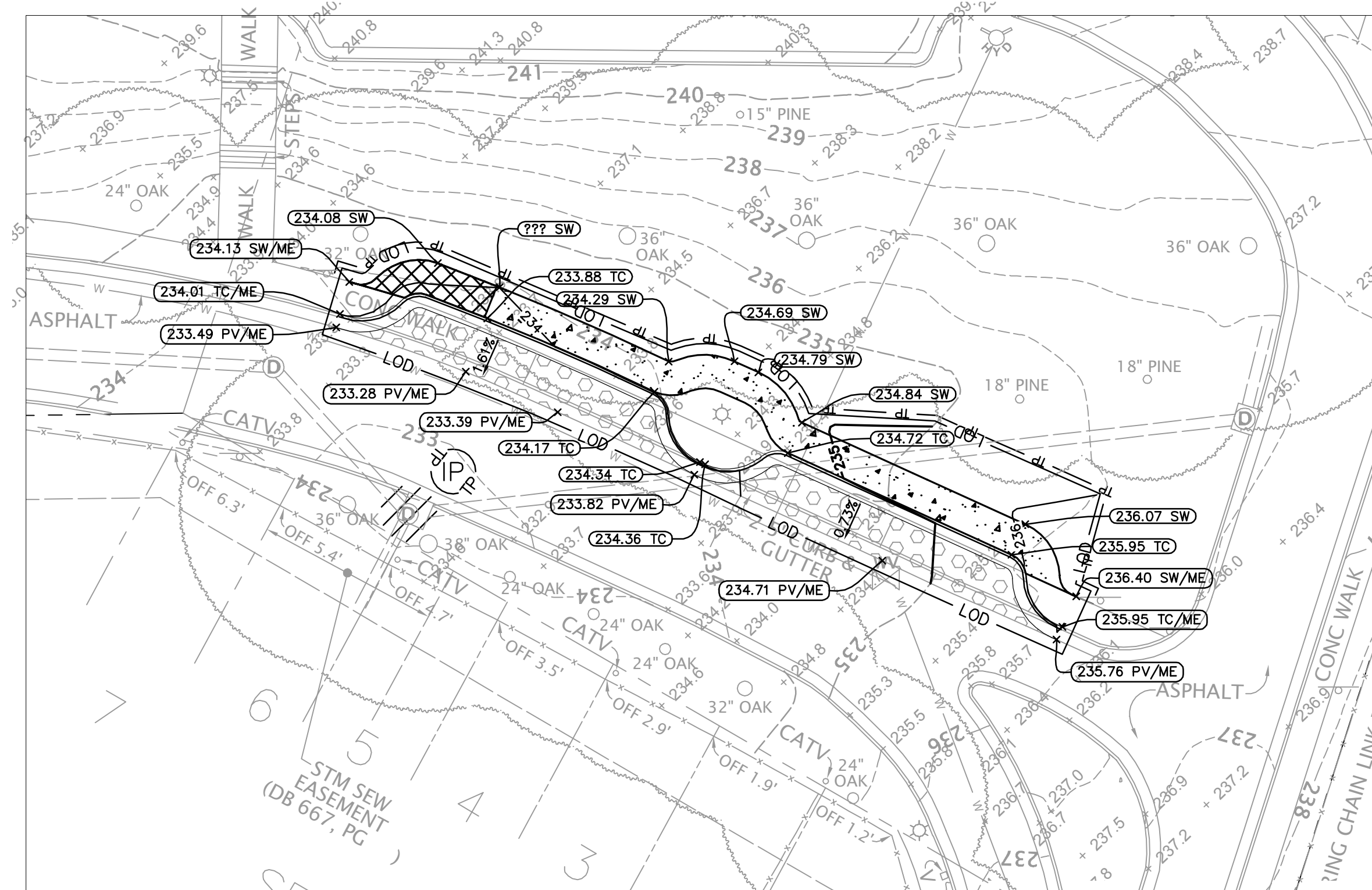
DETAIL GRADING ENLARGEMENT
SCALE: 1" = 20'



1. CONSTRUCTION SHALL NOT COMMENCE UNTIL ALL REQUIRED PLAN APPROVALS AND ALL CONSTRUCTION PERMITS HAVE BEEN RECEIVED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS. PERMITS SHALL BE MAINTAINED ON SITE DURING CONSTRUCTION.
3. EXISTING TOPOGRAPHIC INFORMATION HAS BEEN PROVIDED BY DOMINION SURVEYORS, KIMLEY+HORN AND ASSOCIATES, INC. IS NOT RESPONSIBLE FOR ITS ACCURACY.
4. ALL WORK SHALL COMPLY WITH THE CITY OF ALEXANDRIA CONSTRUCTION SPECIFICATIONS.
5. ALL CURB SHALL BE 6" COPING CURB PER ALEXANDRIA STANDARD DETAIL CSCG-1.
6. ALL SPOT ELEVATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD ADJUST AS NECESSARY TO ENSURE POSITIVE DRAINAGE AND TO TIE SMOOTHLY BACK INTO EXISTING.

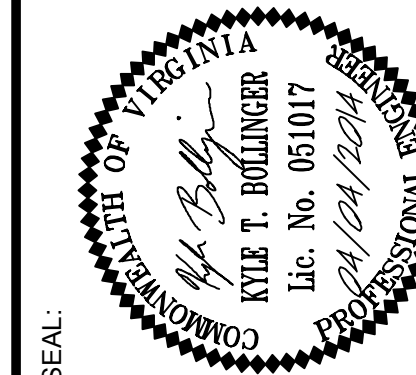


DETAIL GRADING ENLARGEMENT
SCALE: 1" = 20'



DETAIL GRADING ENLARGEMENT
SCALE: 1" = 20'

DESIGN ENGINEER AND LANDSCAPE ARCHITECT	
FIRM NAME: KIMLEY-HORN AND ASSOCIATES, INC.	
ADDRESS: 11400 COMMERCE PARK DRIVE, SUITE 400	
RESTON, VIRGINIA 20191	
PHONE NO. 703-674-1300	FAX NO. 703-674-1350
PROJ. MANAGER: KEVIN VAN HISE	
EMAIL: KEVIN.VANHISE@KIMLEY-HORN.COM	
SCALE: 1" = 20' (AT 24x36)	
DATE: 04/04/2014	DRAWN BY: KITB
 Kimley-Horn and Associates, Inc.	



OWNER
CITY OF ALEXANDRIA
301 KING STREET
ALEXANDRIA, VA 22314

DEVELOPER
ALEXANDRIA CITY
PUBLIC SCHOOLS

CONTACT
ANDREA FENIAK, AIA
(703) 461-4168

[illegible]

JOHN ADAMS SCHOOL
PARKING LOT
IMPROVEMENTS
PRELIMINARY SITE PLAN
CITY OF ALEXANDRIA, VIRGINIA
GRADING PLAN

SHEET NAME:

APPROVED _____	
SPECIAL USE PERMIT NO. _____	
DEPARTMENT OF PLANNING & ZONING _____	
DIRECTOR _____	DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES _____	
SITE PLAN NO. _____	
DIRECTOR _____	DATE _____
CHAIRMAN, PLANNING COMMISSION _____	
DATE RECORDED _____	
INSTRUMENT NO. _____	DEED BOOK NO. _____
PAGE NO. _____	
SHEET NO: _____	

K:\NVA\LALP\110266001 John Adams CAD\PlanSheets\C-310 EROSION AND SEDIMENT CONTROL PLAN - PHASE 1.dwg, Layout:C-310 EROSION AND SEDIMENT CONTROL PLAN - PHASE 1 Apr 03, 2014 kylebollinger
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EROSION CONTROL LEGEND:

- PERMANENT SEEDING
- TP

TREE PROTECTION
- LOD

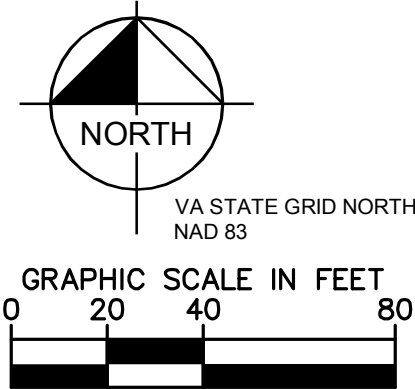
LIMIT OF DISTURBANCE
- INLET PROTECTION

NOTES:

1. CONSTRUCTION SHALL NOT COMMENCE UNTIL ALL REQUIRED PLAN APPROVALS AND ALL CONSTRUCTION PERMITS HAVE BEEN RECEIVED.
2. CONTRACTOR SHALL MAINTAIN ACCESS TO CHAMBLISS PARK AT ALL TIMES DURING CONSTRUCTION.
3. CONTRACTOR SHALL MAINTAIN FULL ACCESS TO EXISTING DRIVE AISLES AND PARKING LOTS AT ALL TIMES DURING CONSTRUCTION.
4. CONTRACTOR SHALL RESTORE/REPAIR DAMAGED AREAS OUTSIDE OF LIMITS OF DISTURBANCE TO EXISTING CONDITIONS AFTER CONSTRUCTION IS COMPLETED.
5. SEE SHE

SEQUENCE OF CONSTRUCTION – PHASE 1:

1. SCHEDULE A PRE-CONSTRUCTION CONFERENCE ONE (1) WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY.
2. CONTRACTOR IS TO OBTAIN ALL APPLICABLE PERMITS PRIOR TO COMMENCEMENT OF LAND DISTURBING ACTIVITIES. COPIES OF OBTAINED PERMITS ARE TO BE FILED WITH THE CITY OF ALEXANDRIA.
3. SECURE THE SITE WITH TEMPORARY SECURITY FENCING
4. INSTALL PERIMETER EROSION AND SEDIMENT CONTROLS AS SHOWN ON THIS PLAN.
5. ALL VEGETATION PRESERVATION AND PROTECTION METHODS SHALL BE APPROVED/VERIFIED IN THE FIELD BY THE CITY ARBORIST PRIOR TO COMMENCEMENT OF LAND DISTURBING ACTIVITY.
6. INSTALL INLET PROTECTION AT EXISTING STORM DRAIN INLETS AS NECESSARY AND AS SHOWN ON THIS PLAN.
7. INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL PRACTICES AS NECESSARY AND AS DIRECTED BY THE EROSION AND SEDIMENT CONTROL INSPECTOR.
8. ANY DISTURBED AREAS WHICH WILL REMAIN DORMANT FOR 7 DAYS SHALL BE TEMPORARILY SEEDDED.
9. WITH INSPECTOR'S APPROVAL, CONTINUE TO PHASE 2.



JOHN ADAMS SCHOOL

PARKING LOT

IMPROVEMENTS

PRELIMINARY SITE PLAN

CITY OF ALEXANDRIA, VIRGINIA

SHEET NAME: EROSION AND SEDIMENT CONTROL PLAN - PHASE 1

APPROVED
SPECIAL USE PERMIT NO. _____
DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____

DIRECTOR _____ DATE _____

CHAIRMAN, PLANNING COMMISSION _____ DATE _____
DATE RECORDED _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____

SHEET NO: C-310

DESIGN ENGINEER AND LANDSCAPE ARCHITECT
FIRM NAME: KIMLEY-HORN AND ASSOCIATES, INC.
ADDRESS: 11400 COMMERCE PARK DRIVE, SUITE 400
RESTON, VIRGINIA 20191
PHONE NO: 703-674-1300 FAX NO: 703-674-1350
PROJ. MANAGER: KEVIN VAN HISE
EMAIL: KEVIN.VANHISE@KIMLEY-HORN.COM

SEAL:
OWNER: CITY OF ALEXANDRIA
301 KING STREET
ALEXANDRIA, VA 22314
DEVELOPER: ALEXANDRIA CITY PUBLIC SCHOOLS
CONTACT: ANDREA FENIAK, AIA
(703) 461-4168

SCALE: 1" = 40' (AT 24x36) DATE: 04/04/2014 DRAWN BY: KTB

Kimley-Horn and Associates, Inc.

REVISION / APPROVED BY				
NO.	DESCRIPTION	DATE	REV. BY	APPROVED

K:\NVA\LALP\110266001 John Adams CAD\PlanSheets\C-310 EROSION AND SEDIMENT CONTROL PLAN -- PHASE 1.dwg, Layout:C-320 EROSION AND SEDIMENT CONTROL PLAN -- PHASE 2 Apr 03, 2014 kylebollinger
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EROSION CONTROL LEGEND:

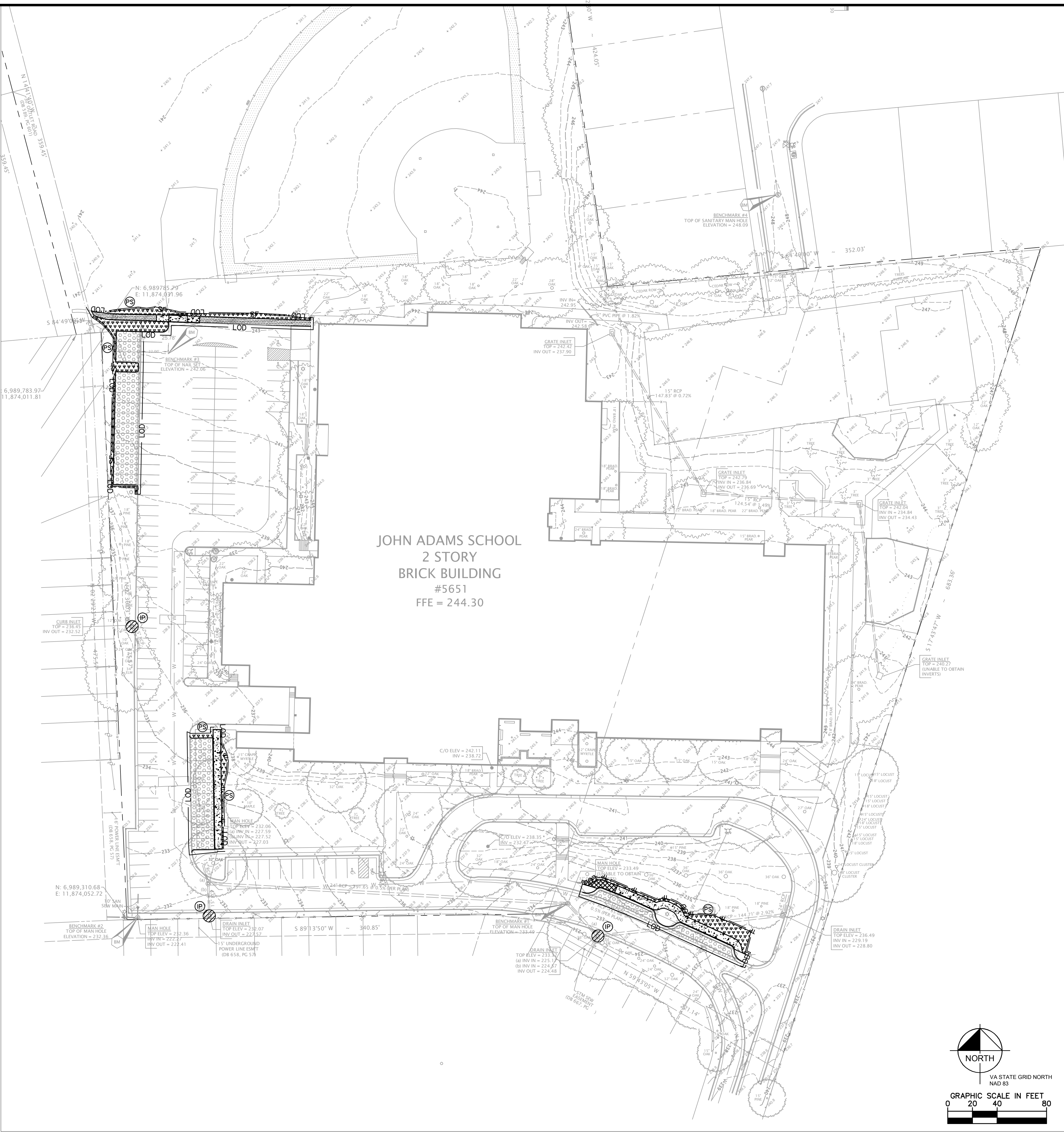
- PERMANENT SEEDING
- TP TREE PROTECTION
- L/D LIMIT OF DISTURBANCE
- INLET PROTECTION

NOTES:

1. CONTRACTOR SHALL MAINTAIN ACCESS TO CHAMBLISS PARK AT ALL TIMES DURING CONSTRUCTION.
2. CONTRACTOR SHALL MAINTAIN FULL ACCESS TO EXISTING DRIVE AISLES AND PARKING LOTS AT ALL TIMES DURING CONSTRUCTION.
3. CONTRACTOR SHALL RESTORE/REPAIR DAMAGED AREAS OUTSIDE OF LIMITS OF DISTURBANCE TO EXISTING CONDITIONS AFTER CONSTRUCTION IS COMPLETED.
4. CONTRACTOR SHALL REMOVE ALL EXCESS DIRT INCLUDING TOPSOIL FROM SITE AND DISPOSE OF IT AN AN APPROPRIATE DISPOSAL FACILITY. CONTRACTOR SHALL TEST EXCAVATION MATERIAL TO DETERMINE THE METHOD OF DISPOSAL.

SEQUENCE OF CONSTRUCTION – PHASE 2:

1. INSPECT AND MAINTAIN/REPLACE PHASE 1 SEDIMENT CONTROLS AS NECESSARY.
2. COMPLETE DEMOLITION ACCORDING TO THESE PLANS.
3. INSTALL PROPOSED PERMEABLE PAVEMENT, CURBS, AND SIDEWALKS AS SHOWN ON THESE PLANS.
4. AS CONTRIBUTORY DRAINAGE AREAS ARE STABILIZED AND WITH THE PERMISSION OF THE EROSION AND SEDIMENT CONTROL INSPECTOR, REMOVE INDIVIDUAL EROSION AND SEDIMENT CONTROL MEASURES.
5. REMOVE TEMPORARY SECURITY FENCE.
6. UPON COMPLETION OF DEMOLITION, CONSTRUCTION AND LAND DISTURBING ACTIVITIES PROVIDE PERMANENT STABILIZATION ACCORDING TO APPROVED METHODS AND REMOVE ALL REMAINING EROSION AND SEDIMENT CONTROL MEASURES WITH APPROVAL OF THE INSPECTOR.



DESIGN ENGINEER AND LANDSCAPE ARCHITECT

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ADDRESS: 11400 COMMERCE PARK DRIVE, SUITE 400
RESTON, VIRGINIA 20191

PHONE NO: 703-674-1300 FAX NO: 703-674-1350

PROJ. MANAGER: KEVIN VAN HISE

EMAIL: KEVIN.VANHISE@KIMLEY-HORN.COM

SEAL:

COMMONWEALTH OF VIRGINIA

KYLE T. BOLLINGER

Lic. No. 051017

PROFESSIONAL

OWNER

CITY OF ALEXANDRIA

301 KING STREET

ALEXANDRIA, VA 22314

DEVELOPER

ALEXANDRIA CITY

PUBLIC SCHOOLS

CONTACT

ANDREA FENIAK, AIA

(703) 461-4168

SCALE: 1" = 40' (AT 24x36)

DATE: 04/04/2014

DRAWN BY: KTB

Kimley-Horn

and Associates, Inc.

REVISION / APPROVED BY				
NO.	DESCRIPTION	DATE	REV. BY	APPROVED

JOHN ADAMS SCHOOL

PARKING LOT

IMPROVEMENTS

PRELIMINARY SITE PLAN

CITY OF ALEXANDRIA, VIRGINIA

EROSION AND SEDIMENT

CONTROL PLAN - PHASE 2

SHEET NAME:

EROSION AND SEDIMENT

CONTROL PLAN - PHASE 2

APPROVED

SPECIAL USE PERMIT NO. _____

DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. _____

DIRECTOR _____ DATE _____

CHAIRMAN, PLANNING COMMISSION _____ DATE _____

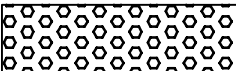
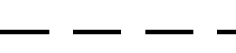
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SHEET NO: C-320

K:\NVA_LALP\110266001 John Adams CAD\PlanSheets\C-400 BMP TREATMENT MAP -- PARKING LOT IMPROVEMENTS.dwg, Layout: C-400 BMP TREATMENT MAP -- PARKING LOT IMPROVEMENTS, REUSE
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LEGEND:

-  PROPOSED CONCRETE SIDEWALK PER ALEXANDRIA STANDARD CSSW-1
-  PROPOSED PERVIOUS PAVEMENT FOR PARKING SPACE
-  PROPOSED PERVIOUS PAVEMENT FOR SIDEWALK
-  NUMBER OF ADDITIONAL PARKING SPACES
-  TREE REMOVAL
-  PROJECT DRAINAGE AREA

Existing Conditions (SF)			
Drainage Area	Pervious Area (SF)	Impervious Area (SF)	Total Area (SF)
DA-1	3200	1600	4800
DA-2	2125	750	2875
DA-3	1425	1575	3000
Project Area	6750	3925	10675

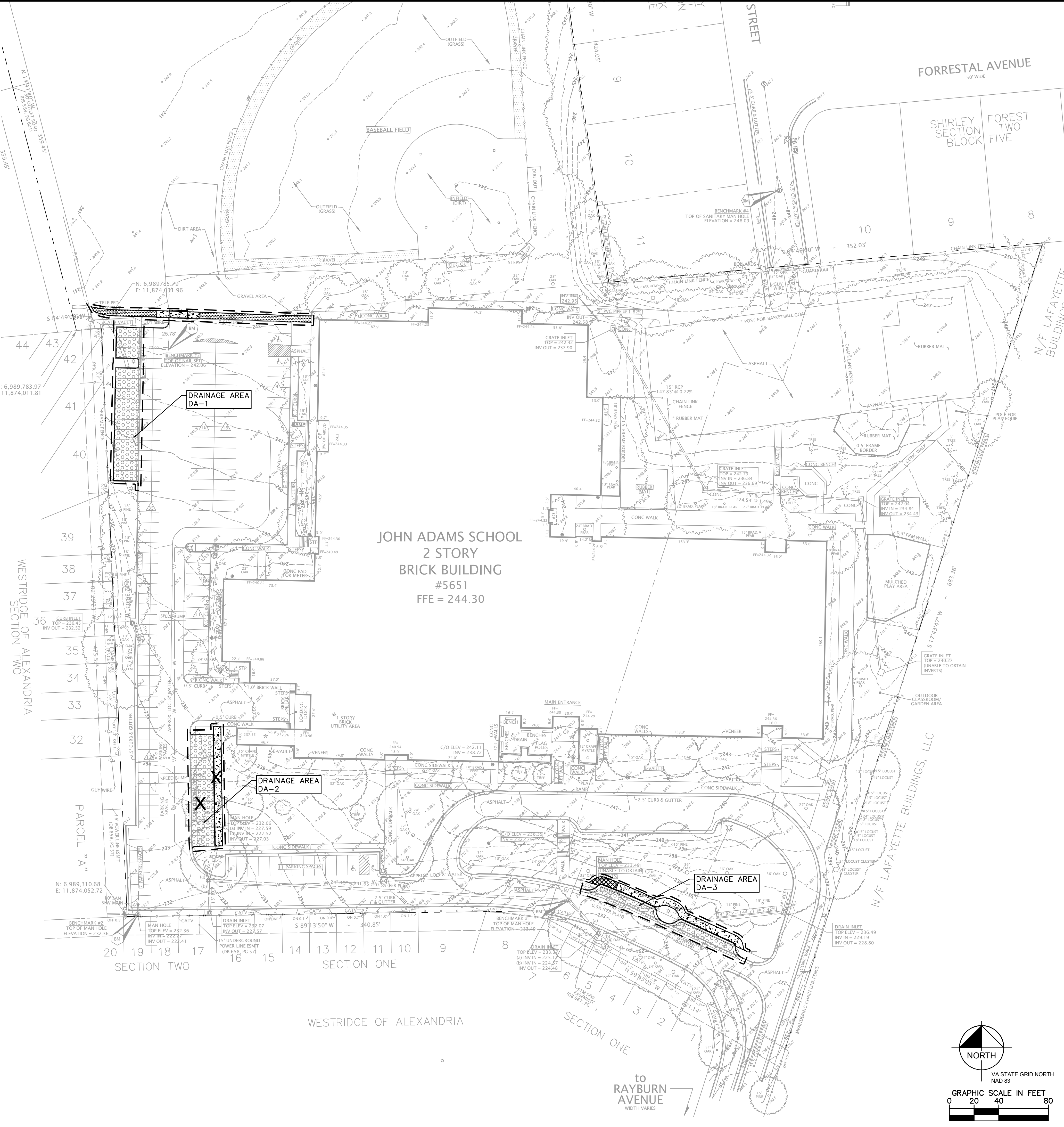
Existing Conditions (ac)			
Drainage Area	Pervious Area (ac)	Impervious Area (ac)	Total Area (ac)
DA-1	0.073	0.037	0.110
DA-2	0.049	0.017	0.066
DA-3	0.033	0.036	0.069
Project Area	0.155	0.090	0.245

Proposed Conditions (SF)					
Drainage Area	Pervious Area (SF)	Impervious Area (SF)	Total Area (SF)	Permeable Pavers Area (SF)	Design Infiltration Rate (in/hr)
DA-1	800	4000	4800	2365	1.0
DA-2	275	2600	2875	1675	4.5
DA-3	500	2500	3000	850	1.2
Project Area	1575	9100	10675	4890	

Proposed Conditions (ac)					
Drainage Area	Pervious Area (ac)	Impervious Area (ac)	Total Area (ac)	Permeable Pavers Area (SF)	Design Infiltration Rate (in/hr)
DA-1	0.018	0.092	0.110	0.054	1.0
DA-2	0.006	0.060	0.066	0.038	4.5
DA-3	0.011	0.057	0.069	0.020	1.2
Project Area	0.036	0.209	0.245	0.112	

NOTES:

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- ALL WORK SHALL COMPLY WITH THE CITY OF ALEXANDRIA CONSTRUCTION SPECIFICATIONS.



DESIGN ENGINEER AND LANDSCAPE ARCHITECT
FIRM NAME: KIMLEY-HORN AND ASSOCIATES, INC.
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EMAIL: KEVIN.VANHISE@KIMLEY-HORN.COM

SCALE: 1" = 40' (AT 24x36) DATE: 04/04/2014 DRAWN BY: KTB

**Kimley-Horn and Associates, Inc.**



SEAL: **KYLE T. BOLLINGER**
PROFESSIONAL ENGINEER
STATE OF VIRGINIA
LICENSE NO. 051017
EXPIRATION DATE 04/01/2024

OWNER
CITY OF ALEXANDRIA
301 KING STREET
ALEXANDRIA, VA 22314

DEVELOPER
ALEXANDRIA CITY
PUBLIC SCHOOLS
CONTACT
ANDREA FENAK, AIA
(703) 461-1458

REVISION / APPROVED BY

NO.	DESCRIPTION	REV. BY	DATE	APPROVED	DATE

**JOHN ADAMS SCHOOL
PARKING LOT
IMPROVEMENTS**
PRELIMINARY SITE PLAN
CITY OF ALEXANDRIA, VIRGINIA

SHEET NAME: **BMP TREATMENT MAP -
PARKING LOT IMPROVEMENTS**

APPROVED
SPECIAL USE PERMIT NO. _____
DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____
DIRECTOR _____ DATE _____

CHAIRMAN, PLANNING COMMISSION _____ DATE _____
DATE RECORDED _____
INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____
SHEET NO: **C-400**

K:\NVA\LALP\110260001 John Adams CAD\PlanSheets\C-430 PERMEABLE PAVEMENT CALCULATIONS -- PARKING LOT.dwg, Layout: C-410 BMP CALCULATIONS -- PARKING LOT IMPROVEMENTS -- Apr 03, 2014 kylebollinger
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PARKING LOT IMPROVEMENTS DRAINAGE AREA SUMMARY

Virginia Runoff Reduction Method Worksheet -- Revised -- 03/25/2011 - Redevelopment
Site Data

Project Name: John Adams Elementary - Parking Addition
Date: 02/21/2014

	data input cells
	calculation cells
	constant values

Post-Development Project & Land Cover Information

Constants

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

Pre-Development Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed	0.00	0.00	0.17	0.00	0.17
Impervious Cover (acres)	0.00	0.00	0.09	0.00	0.09
Total					0.26

Post-Development Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed	0.00	0.00	0.05	0.00	0.05
Impervious Cover (acres)	0.00	0.00	0.21	0.00	0.21
Total					0.26

Rv Coefficients

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

Land Cover Summary

Pre-Development

Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.17
Weighted Rv(turf)	0.22
% Managed Turf	65%
Impervious Cover (acres)	0.09
Rv(impervious)	0.95
% Impervious	35%
Total Site Area (acres)	0.26
Site Rv	0.48

Pre-Development Treatment Volume (acre-ft)	0.0102
Pre-Development Treatment Volume (cubic feet)	443
Pre-Development Load (TP) (lb/yr)	0.28

Land Cover Summary

Post-Development

Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.05
Weighted Rv(turf)	0.22
% Managed Turf	18%
Impervious Cover (acres)	0.21
Rv(impervious)	0.95
% Impervious	82%
Total Site Area (acres)	0.26
Site Rv	0.82

Post-Development Treatment Volume (acre-ft)	0.0174
Post-Development Treatment Volume (cubic feet)	758
Post-Development Load (TP) (lb/yr)	0.48

Maximum % Reduction Required Below Pre-Development Load	10%
---	-----

Total Load (TP) Reduction Required (lb/yr)	0.23
--	------

Pre-Development Load (TN) (lb/yr)	1.99
-----------------------------------	------

Post-Development Load (TN) (lb/yr)	3.40
------------------------------------	------

PLANNED BMP MEASURES - PARKING LOT IMPROVEMENTS

Drainage Area A Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed	0.00	0.00	0.04	0.00	0.04
Impervious Cover (acres)	0.00	0.00	0.21	0.00	0.21
Total					0.25

Apply Runoff Reduction Practices to Reduce Treatment Volume & Post-Development Load in Drainage Area A

Credit	Unit	Description of Credit	Credit	Credit Area (acres)	Volume from Upstream RR Practice (cf)	Runoff Reduction (cf)	Remaining Runoff Volume (cf)	Phosphorus Efficiency (%)	Phosphorus Load from Upstream RR Practices (lbs)	Untreated Phosphorus Load to Practice (lbs.)	Phosphorus Removed By Practice (lbs.)	Remaining Phosphorus Load (lbs.)	Downstream Treatment to be Employed
3. Permeable Pavement													
3.a. Permeable Pavement #1 (Spec #7)	acres of permeable pavement + acres of "external" (upgradient) impervious pavement	45% runoff volume reduction	0.45	0.25	0	380	465	25	0.00	0.53	0.31	0.22	
3.b. Permeable Pavement #2 (Spec #7)	acres of permeable pavement	75% runoff volume reduction	0.75	0.00	0	0	0	25	0.00	0.00	0.00	0.00	

TOTAL PHOSPHOROUS REMOVAL REQUIRED ON SITE (lb/yr)	0.23
--	------

TOTAL RUNOFF REDUCTION IN D.A. A (cf)	380
PHOSPHORUS REMOVAL FROM RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr)	0.31

SEE WATER QUALITY COMPLIANCE TAB FOR SITE COMPLIANCE CALCULATIONS

PARKING LOT COMPLIANCE RESULTS

Site Results

Phosphorous

TOTAL PHOSPHOROUS LOAD REDUCTION REQUIRED (LB/YEAR)	0.23
---	------

RUNOFF REDUCTION (cf)	380
PHOSPHOROUS LOAD REDUCTION ACHIEVED (LB/YR)	0.31

ADJUSTED POST-DEVELOPMENT PHOSPHOROUS LOAD (TP) (lb/yr)	0.16
---	------

REMAINING PHOSPHOROUS LOAD REDUCTION (LB/YR) NEEDED	CONGRATULATIONS!! YOU EXCEEDED THE TARGET REDUCTION BY 0.1 LB/YEAR!!
---	--

Nitrogen (for information purposes)

RUNOFF REDUCTION (cf)	380
NITROGEN LOAD REDUCTION ACHIEVED (LB/YR)	2.23

ADJUSTED POST-DEVELOPMENT NITROGEN LOAD (TP) (lb/yr)	1.18
--	------

STORMWATER NARRATIVE

THIS PROJECT IS DESIGNED TO COMPLY WITH THE CURRENT REGULATIONS FROM THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ). AS OF THIS PLAN DATE, THE CITY OF ALEXANDRIA HAS NOT PUBLISHED ANY ADDENDUMS TO THESE STATE REGULATIONS. BY COMPLYING WITH THE REGULATIONS, THIS PROJECT WILL COMPLY WITH ALL WATER QUALITY AND QUANTITY REGULATIONS. THE FINAL VERSION OF THESE PLANS MAY NEED TO BE REVISED TO COMPLY WITH THE CURRENT CITY OF ALEXANDRIA STORMWATER REGULATIONS AFTER THE JULY 1, 2014 ADOPTION.

COMPLIANCE WITH ARTICLE XIII OF THE CITY OF ALEXANDRIA ZONING ORDINANCE IS ASSUMED BY MEETING THE NEW STATEWIDE REGULATIONS.

CITY OF ALEXANDRIA STANDARD WATER QUALITY WORKSHEETS A OR B AND C ARE NOT PROVIDED, INSTEAD ARE SHOWN THROUGH THE VIRGINIA RUNOFF REDUCTION SPREADSHEET CALCULATIONS PROVIDED BY DEQ.

CITY STANDARD WATER QUALITY BLOCKS SHOWN ON THIS PAGE ARE FOR INFORMATION ONLY. ALL WATER QUALITY CALCULATIONS SHOULD BE TAKEN FROM THE RUNOFF REDUCTION CALCULATIONS ON SHEETS C-400 - C-430

JOHN ADAMS SCHOOL
PARKING LOT
IMPROVEMENTS
PRELIMINARY SITE PLAN
CITY OF ALEXANDRIA, VIRGINIA
SHEET NAME: BMP CALCULATIONS - PARKING LOT IMPROVEMENTS

APPROVED

SPECIAL USE PERMIT NO. _____
DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____

DIRECTOR _____ DATE _____

CHAIRMAN, PLANNING COMMISSION _____ DATE _____
DATE RECORDED _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____

SHEET NO: C-410



REVISION / APPROVED BY

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

K:\NVA\LALP\110266001 John Adams CAD\PlanSheets\C-420 PERMEABLE PAVEMENT CALCULATIONS - PARKING LOT.dwg, Layout: C-420 RUNOFF REDUCTION CALCULATIONS - PARKING LOT Apr 04, 2014 kyle.bollinger
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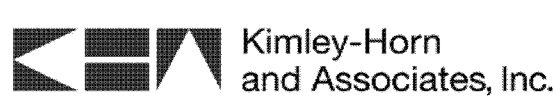


Project: John Adams Elementary - Parking Lot Improvements
Project #: 110266001
Date: 4/4/2014
Locality: Loudoun
HSG: Type C Soils

LAND USE TYPE
IMPERVIOUS 0.90
MANAGED TURF 0.30
FOREST/ OPEN SPACE 0.05

CN
98
74
70

DRAINAGE AREA SUMMARY								
DRAINAGE AREA	TOTAL AREA (AC.)	IMPERVIOUS AREA (AC.)	MANAGED TURF AREA (AC.)	FOREST/ OPEN SPACE AREA (AC.)	C	CN	TIME OF CONC. Tc (min)	TREATMENT VOLUME Tv (cu ft)
PRE	0.255	0.090	0.165	0.000	0.51	82.5	-	n/a
BMP 1	0.110	0.092	0.018	0.000	0.80	94.0	-	320
BMP 2	0.068	0.060	0.008	0.000	0.83	95.1	-	204
BMP 3	0.077	0.057	0.020	0.000	0.75	91.8	-	209
Untreated Areas	0.000	0.000	0.000	0.000	0.00	0.0	-	n/a
PRE TOTAL	0.255	0.090	0.165	0.000	0.51	82.5	5.0	-
POST TOTAL	0.255	0.209	0.046	0.000	0.79	93.6	5.0	-



Project: John Adams Elementary - Parking Lot Improvements
Project #: 110266001
Date: 4/4/2014
Locality: Loudoun

Rainfall Zone: Alexandria (City)
SCS Distribution: Type II

SCS 24-hr Rainfall Depths			Rainfall Intensity
Storm Event	P (in)		i (in/hr)
1 -year	2.57		4.60
2 -year	3.11		5.30
10 -year	4.78		7.00
50 -year	7.04		8.70
100 -year	8.24		9.10

BMP Summary: DA-1, DA-2, and DA-3

Runoff Curve Number (CN)
Runoff Coefficient (c)
Drainage Area
0.26 acres

Routed to BMP #1 (DA-1)

Runoff Curve Number (CN)
Runoff Coefficient (c)
Drainage Area
Runoff Reduction Credit
0.11 acres

Routed to BMP #2 (DA-2)

Runoff Curve Number (CN)
Runoff Coefficient (c)
Drainage Area
Runoff Reduction Credit
0.07 acres

Routed to BMP #3 (DA-3)

Runoff Curve Number (CN)
Runoff Coefficient (c)
Drainage Area
Runoff Reduction Credit
0.08 acres

Storm Event	Rainfall Depth P (in)	Runoff Depth Q (in)	Runoff Volume V (cu ft)	Unadjusted Peak Flow q (cfs)	Runoff Reduction R (cu ft)
1 -year	2.57	5.72	1,766	0.93	330
2 -year	3.11	7.27	2,246	1.07	330
10 -year	4.78	12.16	3,757	1.41	330
50 -year	7.04	18.86	5,827	1.76	330
100 -year	8.24	22.43	6,931	1.84	330

Storm Event	Rainfall Depth P (in)	Runoff Depth Q (in)	Runoff Volume V (cu ft)	Unadjusted Peak Flow q (cfs)	Runoff Reduction R (cu ft)
1 -year	2.57	1.94	775	0.41	144
2 -year	3.11	2.46	983	0.47	144
10 -year	4.78	4.09	1,636	0.62	144
50 -year	7.04	6.33	2,531	0.77	144
100 -year	8.24	7.52	3,008	0.80	144

Storm Event	Rainfall Depth P (in)	Runoff Depth Q (in)	Runoff Volume V (cu ft)	Unadjusted Peak Flow q (cfs)	Runoff Reduction R (cu ft)
1 -year	2.57	2.04	503	0.26	92
2 -year	3.11	2.57	633	0.30	92
10 -year	4.78	4.21	1,039	0.39	92
50 -year	7.04	6.46	1,592	0.49	92
100 -year	8.24	7.65	1,887	0.51	92

Storm Event	Rainfall Depth P (in)	Runoff Depth Q (in)	Runoff Volume V (cu ft)	Unadjusted Peak Flow q (cfs)	Runoff Reduction R (cu ft)
1 -year	2.57	1.74	489	0.27	94
2 -year	3.11	2.25	631	0.31	94
10 -year	4.78	3.86	1,081	0.40	94
50 -year	7.04	6.07	1,703	0.50	94
100 -year	8.24	7.26	2,036	0.52	94



Project: John Adams Elementary - Parking Lot Improvements
Project #: 110266001
Date: 4/4/2014
Locality: Alexandria (City)

Rainfall Zone: Alexandria (City)
SCS Distribution: Type II

Flood Protection Compliance

10-year Storm
Q post < Q pre
1.29 < 0.91
FAIL **DETENTION REQ'D

Channel Protection Compliance

Energy Balance Equation, 1-year Storm
Improvement Factor 0.9
Q post < I.F. x Q pre x RV_pre/RV_post
0.83 < 0.38
FAIL **DETENTION REQ'D

Pre-Development - Summary

Runoff Curve Number (CN)
Runoff Coefficient (c)
Drainage Area
0.255 acres

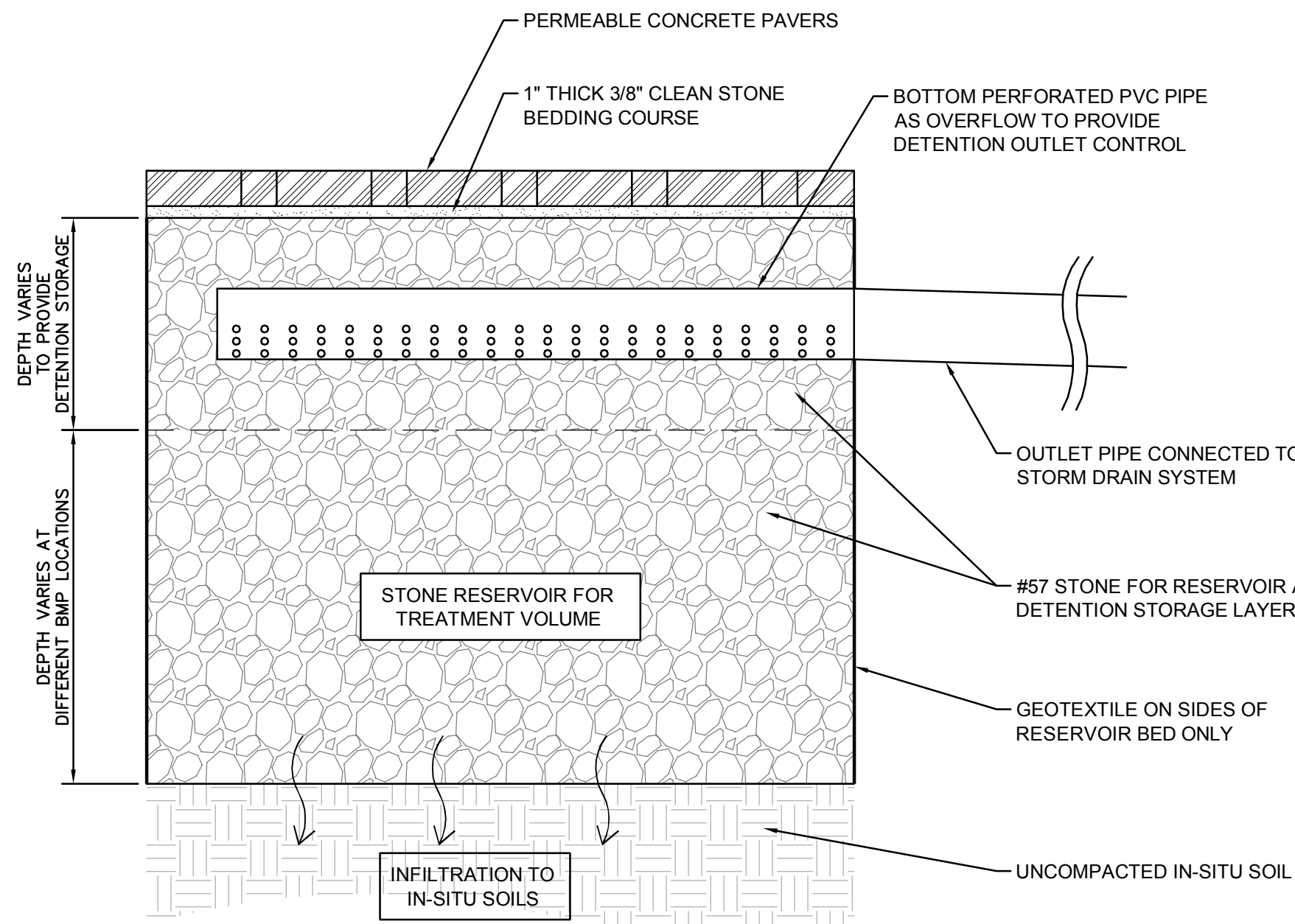
SCS 24-hr Rainfall Depths			Rainfall Intensity
Storm Event	P (in)		i (in/hr)
1 -year	2.57		4.60
2 -year	3.11		5.30
10 -year	4.78		7.00
50 -year	7.04		8.70
100 -year	8.24		9.10

Pre-Development					
Storm Event	Rainfall Depth P (in)	Runoff Depth Q (in)	Runoff Volume V (cu ft)	Peak Flow q (cfs)	
1 -year	2.57	1.08	999	0.60	
2 -year	3.11	1.50	1,389	0.69	
10 -year	4.78	2.93	2,713	0.91	
50 -year	7.04	5.01	4,641	1.14	
100 -year	8.24	6.14	5,696	1.19	

Post-Development										
Storm Event		Unadjusted Results			Adjusted for Runoff Reduction Credit					
		Rainfall Depth P (in)	Runoff Depth Q (in)	Runoff Volume V (cu ft)	Unadjusted Peak Flow q (cfs)	Adjusted Volume A (cu ft)	Adjusted Runoff Depth (in)	Adjusted Curve Number	Adjusted Coefficient	Adjusted Peak Flow q (cfs)
1 -year	2.57	1.90	1,764	0.93	1,434	1.55	89.3	0.71	0.83	
2 -year	3.11	2.42	2,244	1.07	1,914	2.06	89.7	0.72	0.97	
10 -year	4.78	4.05	3,755	1.41	3,425	3.69	90.2	0.72	1.29	
50 -year	7.04	6.28	5,827	1.76	5,497	5.93	90.5	0.73	1.62	
100 -year	8.24	7.48	6,931	1.84	6,601	7.12	90.6	0.73	1.70	

NOTES:

- REQUIRED DETENTION FOR CHANNEL PROTECTION AND FLOOD PROTECTION WILL BE PROVIDED IN THE PERMEABLE PAVEMENT SUBBASE. A TYPICAL DETAIL SHOWING DETENTION STORAGE IS SHOWN ON THIS PAGE.
- DETENTION LAYER TO BE PROVIDED WITH FINAL DESIGN TO MEET VIRGINIA STORMWATER REGULATIONS EFFECTIVE JULY 1, 2014.
- AN ADEQUATE STORM SEWER OUTFALL IS ASSUMED TO BE PROVIDED BY THE EXISTING ONSITE STORM NETWORK. THE PROPOSED IMPROVEMENTS WILL COMPLY WITH THE NEW STORMWATER REGULATIONS FOR CHANNEL PROTECTION AND FLOOD PROTECTION BY PROVIDING THE NECESSARY DETENTION FOR THE PARKING IMPROVEMENTS. THE STORMWATER DETENTION MEASURES WILL BE SIZED TO REDUCE THE POST DEVELOPMENT PEAK FLOWS TO MEET THE ENERGY BALANCE EQUATION OF THE NEW STORMWATER REGULATIONS.



NOTES:

- CONTRACTOR TO INSTALL BOTTOM OF STONE RESERVOIR AT FLAT GRADE TO ALLOW INFILTRATION THROUGHOUT ENTIRE PERMEABLE PAVEMENT AREA.

1 PERMEABLE PAVEMENT TYP. SECTION
N.T.S.

Project Description

Development or Redevelopment

Drainage Area	Impervious	Pervious	Total
Site Area	5.637 ac	2.309 ac	7.946 ac
On-Site Treated	0.209 ac	0.036 ac	0.245 ac
Off-Site Treated	0.0 ac	0.0 ac	0.0 ac
Total Treated	0.209 ac	0.036 ac	0.245 ac
Any On-Site Disconnected by a Vegetated Buffer (25 ft)	0.0 ac		
Total On-Site Treated or Disconnected			0.245 ac

Water Treatment on site

BMP Type	Area treated by BMP (acres)	Impervious area treated by BMP (acres)	BMP efficiency (%)
Permeable Pvmt	0.245 ac	0.209 ac	45%

Miscellaneous

Total WQV treated: yes (no)
Detention on site: yes (no)
Project is within which watershed? HOLMES RUN
Project discharges to which body of water? HOLMES RUN

DESIGN ENGINEER AND LANDSCAPE ARCHITECT

FIRM NAME: KIMLEY-HORN AND ASSOCIATES, INC.
ADDRESS: 11400 COMMERCE PARK DRIVE, SUITE 400
RESTON, VIRGINIA 20191
PHONE NO: 703-674-1300 FAX NO: 703-674-1350
PROJ. MANAGER: KEVIN VAN HISE
EMAIL: KEVIN.VANHISE@KIMLEY-HORN.COM

SCALE: N.T.S. (AT 24x36) DATE: 04/04/2014 DRAWN BY: KTB

Kimley-Horn and Associates, Inc.

SEAL: COMMONWEALTH OF VIRGINIA
KYLE T. BOLLINGER
Lic. No. 051017
PROFESSIONAL

OWNER
CITY OF ALEXANDRIA
301 KING STREET
ALEXANDRIA, VA 22314
DEVELOPER
ALEXANDRIA CITY
PUBLIC SCHOOLS
CONTACT
ANDREA FENIAK, AIA
(703) 461-4168

REVISION / APPROVED BY			
NO.	DESCRIPTION	DATE	REV. BY

JOHN ADAMS SCHOOL
PARKING LOT
IMPROVEMENTS
PRELIMINARY SITE PLAN
CITY OF ALEXANDRIA, VIRGINIA
SHEET NAME: RUNOFF REDUCTION CALCULATIONS - PARKING LOT

APPROVED
SPECIAL USE PERMIT NO. _____
DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____

DIRECTOR _____ DATE _____

CHAIRMAN, PLANNING COMMISSION _____ DATE _____
DATE RECORDED _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____

SHEET NO: C-420

K:\NVA\LALP\110266001 John Adams CAD\PlanSheets\C-430 PERMEABLE PAVEMENT CALCULATIONS - PARKING LOT.dwg, Layout: C-430 PERMEABLE PAVEMENT CALCULATIONS - PARKING LOT, Apr 03, 2014 kyle.bollinger
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DRAINAGE AREA DA—A

Project: John Adams Elementary Parking Additon Date: 4/3/2014 Initials: KTB
Drainage Area: DA-A

Contributing Drainage Area Information:

Contributing Impervious				
Drainage Area (A _i)=	4000	ft ²	Incl. Permeable	
Contributing Pervious			Pavement Area	Input Value
Area =	800	ft ²		
Permeable Pavement				Calculated Value
Area (A _p)=	2365	ft ²		

Runoff Coefficient (Rv) = 0.800 0.05 + 0.009*(I)
Level Design = Level 1
Treatment Volume
Required (TV) = 266.67 ft³

Determine Depth of Stone Reservoir Layer

d_c = 0.163 ft.
R = 0.691
P = 1 inch
i = 2.00 ft./day 1.0 in/hr
t_f = 0.083 day
V_r = 0.4
d_p = 2.57 ft.

Determine Max Depth of Reservoir Layer

i = 2 ft./day
V_r = 0.4
t_d = 1.25 day(s) (Typ. 1-2 days)
d_{p-max} = 3.13 ft.

Underdrain Required? No

Outflow through Underdrain Pipe

k = 100 ft./day
m = 0.005 ft./ft.
Number of
U.D. pipes 1
q_u = N/A ft./day

Determine Depth of Reservoir Layer with Underdrain

d_c = 0.163 ft.
R = 0.691
P = 1 inch
i = 2 ft./day
t_f = 0.083 day
V_r = 0.4
q_u = N/A ft./day
d_p = N/A ft.

Determine Maximum Allowable Reservoir Depth

i = 2 ft./day
V_r = 0.4
t_d = 1 day (Typ. 1-2 days)
q_u = N/A ft./day
d_{p-max} = N/A ft.

DRAINAGE AREA DA—B

Project: John Adams Elementary Parking Additon Date: 4/3/2014 Initials: KTB
Drainage Area: DA-B

Contributing Drainage Area Information:

Contributing Impervious				
Drainage Area (A _i)=	2600	ft ²	Incl. Permeable	
Contributing Pervious			Pavement Area	Input Value
Area =	360	ft ²		
Permeable Pavement				Calculated Value
Area (A _p)=	1675	ft ²		

Runoff Coefficient (Rv) = 0.841 0.05 + 0.009*(I)
Level Design = Level 1
Treatment Volume
Required (TV) = 182.12 ft³

Determine Depth of Stone Reservoir Layer

d_c = 0.197 ft.
R = 0.552
P = 1 inch
i = 9.00 ft./day 4.5 in/hr
t_f = 0.083 day
V_r = 0.4
d_p = 1.84 ft.

Determine Max Depth of Reservoir Layer

i = 9 ft./day
V_r = 0.4
t_d = 1 day(s) (Typ. 1-2 days)
d_{p-max} = 11.25 ft.

Underdrain Required? No

Outflow through Underdrain Pipe

k = 100 ft./day
m = 0.005 ft./ft.
Number of
U.D. pipes 1
q_u = N/A ft./day

Determine Depth of Reservoir Layer with Underdrain

d_c = 0.197 ft.
R = 0.552
P = 1 inch
i = 9 ft./day
t_f = 0.083 day
V_r = 0.4
q_u = N/A ft./day
d_p = N/A ft.

Determine Maximum Allowable Reservoir Depth

i = 9 ft./day
V_r = 0.4
t_d = 1 day (Typ. 1-2 days)
q_u = N/A ft./day
d_{p-max} = N/A ft.

DRAINAGE AREA DA—C

Project: John Adams Elementary Parking Additon Date: 4/3/2014 Initials: KTB
Drainage Area: DA-C

Contributing Drainage Area Information:

Contributing Impervious				
Drainage Area (A _i)=	2500	ft ²	Incl. Permeable	
Contributing Pervious			Pavement Area	Input Value
Area =	865	ft ²		
Permeable Pavement				Calculated Value
Area (A _p)=	850	ft ²		

Runoff Coefficient (Rv) = 0.719 0.05 + 0.009*(I)
Level Design = Level 1
Treatment Volume
Required (TV) = 149.72 ft³

Determine Depth of Stone Reservoir Layer

d_c = 0.091 ft.
R = 1.941
P = 1 inch
i = 2.40 ft./day 1.2 in/hr
t_f = 0.083 day
V_r = 0.4
d_p = 2.69 ft.

Determine Max Depth of Reservoir Layer

i = 2.4 ft./day
V_r = 0.4
t_d = 1 day(s) (Typ. 1-2 days)
d_{p-max} = 3.00 ft.

Underdrain Required? No

Outflow through Underdrain Pipe

k = 100 ft./day
m = 0.005 ft./ft.
Number of
U.D. pipes 1
q_u = N/A ft./day

Determine Depth of Reservoir Layer with Underdrain

d_c = 0.091 ft.
R = 1.941
P = 1 inch
i = 2.4 ft./day
t_f = 0.083 day
V_r = 0.4
q_u = N/A ft./day
d_p = N/A ft.

Determine Maximum Allowable Reservoir Depth

i = 2.4 ft./day
V_r = 0.4
t_d = 1 day (Typ. 1-2 days)
q_u = N/A ft./day
d_{p-max} = N/A ft.

DESIGN ENGINEER AND LANDSCAPE ARCHITECT FIRM NAME: KIMLEY-HORN AND ASSOCIATES, INC. ADDRESS: 11400 COMMERCE PARK DRIVE, SUITE 400 RESTON, VIRGINIA 20191 PHONE NO: 703-674-1300 FAX NO: 703-674-1350 PROJ. MANAGER: KEVIN VAN HISE EMAIL: KEVIN.VANHISE@KIMLEY-HORN.COM		SCALE: N.T.S. (AT 24x36) DATE: 04/04/2014 DRAWN BY: KTB			
		OWNER CITY OF ALEXANDRIA 307 KING STREET ALEXANDRIA, VA 22314 DEVELOPER ALEXANDRIA CITY PUBLIC SCHOOLS CONTACT ANDREA FENIAK, AIA (703) 461-4168			
REVISION / APPROVED BY					
NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE
JOHN ADAMS SCHOOL PARKING LOT IMPROVEMENTS PRELIMINARY SITE PLAN CITY OF ALEXANDRIA, VIRGINIA SHEET NAME: PERMEABLE PAVEMENT CALCULATIONS - PARKING LOT		APPROVED SPECIAL USE PERMIT NO. _____ DEPARTMENT OF PLANNING & ZONING DIRECTOR _____ DATE _____ DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES SITE PLAN NO. _____ DIRECTOR _____ DATE _____ CHAIRMAN, PLANNING COMMISSION _____ DATE _____ DATE RECORDED _____ INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____ SHEET NO: C-430			

K:\NVA_LALP\11026001 John Adams CAD\PlanSheets\C-510 BMP CALCULATIONS -- OVERALL CAMPUS.dwg, Layout C-500 BMP TREATMENT MAP -- OVERALL CAMPUS
Apr 03, 2014 kyle.bollinger
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Existing Conditions Summary (SF)			
Drainage Area	Pervious Area (SF)	Impervious Area (SF)	Total Area (SF)
Western BMP Drainage Area	18747	120155	138902
Eastern BMP Drainage Area	76870	122080	198950
Uncaptured BMP Drainage Area	8295	0	8295
Project Area	103912	242235	346147

Existing Conditions Summary (ac)			
Drainage Area	Pervious Area (ac)	Impervious Area (ac)	Total Area (ac)
Western BMP Drainage Area	0.430	2.758	3.189
Eastern BMP Drainage Area	1.765	2.803	4.567
Uncaptured BMP Drainage Area	0.190	0.000	0.190
Project Area	2.385	5.561	7.946

Proposed Conditions Summary (SF)				
Drainage Area	Pervious Area (SF)	Impervious Area (SF)	Total Area (SF)	Increase In Impervious Area (SF)
Western BMP Drainage Area	14497	124405	138902	4250
Eastern BMP Drainage Area	77795	121155	198950	-925
Uncaptured BMP Drainage Area	8295	0	8295	0
Project Area	100587	245560	346147	3325

Proposed Conditions Summary (ac)				
Drainage Area	Pervious Area (ac)	Impervious Area (ac)	Total Area (ac)	Increase In Impervious Area (SF)
Western BMP Drainage Area	0.333	2.856	3.189	0.098
Eastern BMP Drainage Area	1.786	2.781	4.567	-0.021
Uncaptured BMP Drainage Area	0.190	0.000	0.190	0.000
Project Area	2.309	5.637	7.946	0.076

Western Campus Drainage Area BMP Sumamry (SF)			
Drainage Area	Pervious Area (ac)	Impervious Area (ac)	Total Area (ac)
Area Treated by Permeable Pavement	5325	2350	7675
Area Treated by Sand Filter	9172	61363	70535
Total Area Treated by BMP	14497	63713	78210
Remaining Area Untreated by BMP	0	60692	60692

Western Campus Drainage Area BMP Sumamry (ac)			
Drainage Area	Pervious Area (ac)	Impervious Area (ac)	Total Area (ac)
Area Treated by Permeable Pavement	0.122	0.054	0.176
Area Treated by Sand Filter	0.211	1.409	1.619
Total Area Treated by BMP	0.333	1.463	1.795
Remaining Area Untreated by BMP	0.000	1.393	1.393

Eastern Campus Drainage Area BMP Sumamry (SF)			
Drainage Area	Pervious Area (ac)	Impervious Area (ac)	Total Area (ac)
Area Treated by Permeable Pavement	1425	1575	3000
Area Treated by Sand Filter	60853	47615	108468
Total Area Treated by BMP	62278	49190	111468
Remaining Area Untreated by BMP	15517	71965	87482

Eastern Campus Drainage Area BMP Sumamry (ac)			
Drainage Area	Pervious Area (ac)	Impervious Area (ac)	Total Area (ac)
Area Treated by Permeable Pavement	0.033	0.036	0.069
Area Treated by Sand Filter	1.397	1.093	2.490
Total Area Treated by BMP	1.430	1.129	2.559
Remaining Area Untreated by BMP	0.356	1.652	2.008

Project Description

Development or **Redevelopment**

Drainage Area	Impervious	Pervious	Total
Site Area	5.637 ac	2.309 ac	7.946 ac
On-Site Treated	2.09 ac	0.21 ac	2.30 ac
Off-Site Treated	0.0 ac	0.0 ac	0.0 ac
Total Treated	2.09 ac	0.21 ac	2.09 ac
Any On-Site Disconnected by a Vegetated Buffer (25 ft)	0.0 ac		
Total On-Site Treated or Disconnected			2.09 ac

Water Treatment on site

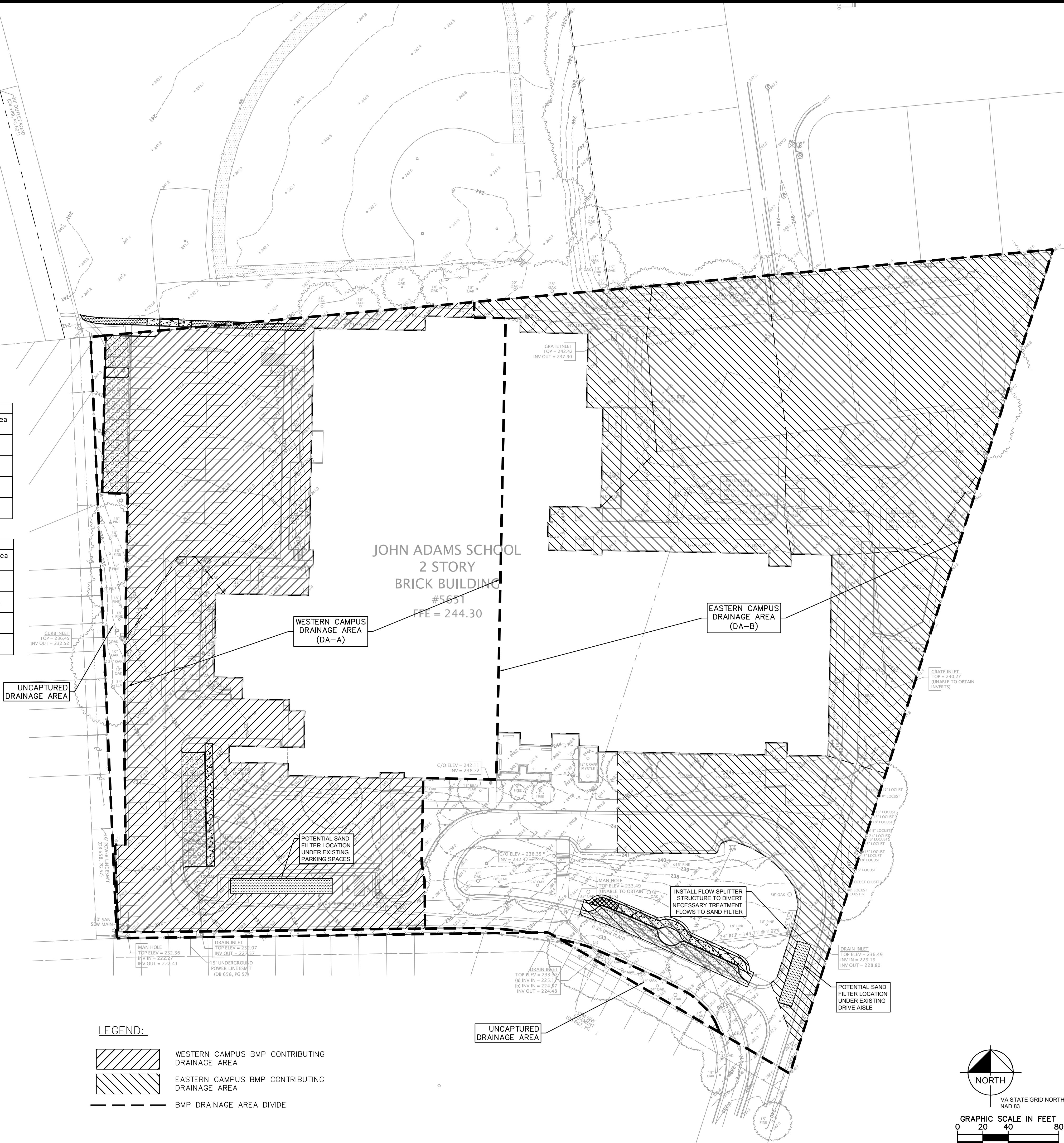
BMP Type	Area treated by BMP (acres)	Impervious area treated by BMP (acres)	BMP efficiency (%)
Permeable Pvm	0.245 ac	0.209 ac	45%
Sand Filter	1.845 ac	0.00 ac	60%

Miscellaneous

Total WQV treated: **yes** **no**
Detention on site: **yes** **no**

Project is within which watershed? HOLMES RUN

Project discharges to which body of water? HOLMES RUN



DESIGN ENGINEER AND LANDSCAPE ARCHITECT
FIRM NAME: KIMLEY-HORN AND ASSOCIATES, INC.
ADDRESS: 11400 COMMERCE PARK DRIVE, SUITE 400
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PHONE NO: 703-674-1300 FAX NO: 703-674-1350
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SCALE: 1" = 40' (AT 24x36) DATE: 04/04/2014 DRAWN BY: KTB

Kimley-Horn and Associates, Inc.

SEAL:
OWNER: CITY OF ALEXANDRIA
301 KING STREET
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DEVELOPER: ALEXANDRIA CITY PUBLIC SCHOOLS
CONTACT: ANDREA FENIAK, AIA
(703) 461-4168

REVISION / APPROVED BY		NO.		DESCRIPTION		DATE		REV. BY		APPROVED		DATE	

**JOHN ADAMS SCHOOL
PARKING LOT
IMPROVEMENTS
PRELIMINARY SITE PLAN**
CITY OF ALEXANDRIA, VIRGINIA
SHEET NAME: **BMP TREATMENT MASTER PLAN - OVERALL CAMPUS**

APPROVED
SPECIAL USE PERMIT NO. _____
DEPARTMENT OF PLANNING & ZONING
DIRECTOR _____ DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____
DIRECTOR _____ DATE _____
CHAIRMAN, PLANNING COMMISSION _____ DATE _____
DATE RECORDED _____
INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____
SHEET NO: **C-500**

K:\NVA\LALP\11026001 John Adams (CAD) PlanSheets\C-510 BMP CALCULATIONS -- OVERALL CAMPUS.dwg, Layout:C-510 BMP MASTER PLAN CALCULATIONS -- OVERALL CAMPUS Apr 03, 2014 kyle.bollinger
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CAMPUS PROJECT DRAINAGE AREA SUMMARY

Virginia Runoff Reduction Method Worksheet -- Revised -- 03/25/2011 - Redevelopment Site Data

Project Name: John Adams Elementary - Overall Campus Development
Date: 02/21/2014

data input cells
calculation cells
constant values

Post-Development Project & Land Cover Information

Constants

Annual Rainfall (inches)	43
Target Rainfall Event (inches)	1.00
Phosphorus EMC (mg/L)	0.26
Target Phosphorus Target Load (lb/acre/yr)	0.41
Pj	0.90

Nitrogen EMC (mg/L)

1.86

Pre-Development Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed	0.00	0.00	2.39	0.00	2.39
Impervious Cover (acres)	0.00	0.00	5.56	0.00	5.56
Total					7.95

Post-Development Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed	0.00	0.00	2.31	0.00	2.31
Impervious Cover (acres)	0.00	0.00	5.64	0.00	5.64
Total					7.95

Rv Coefficients

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

Land Cover Summary

Pre-Development

Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	2.39
Weighted Rv(turf)	0.22
% Managed Turf	30%
Impervious Cover (acres)	5.56
Rv(imperious)	0.95
% Impervious	70%
Total Site Area (acres)	7.95
Site Rv	0.73

Pre-Development Treatment Volume (acre-ft)	0.4840
Pre-Development Treatment Volume (cubic feet)	21,082
Pre-Development Load (TP) (lb/yr)	13.25

Land Cover Summary

Post-Development

Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	2.31
Weighted Rv(turf)	0.22
% Managed Turf	29%
Impervious Cover (acres)	5.64
Rv(imperious)	0.95
% Impervious	71%
Total Site Area (acres)	7.95
Site Rv	0.74

Post-Development Treatment Volume (acre-ft)	0.4886
Post-Development Treatment Volume (cubic feet)	21,284
Post-Development Load (TP) (lb/yr)	13.37

Maximum % Reduction Required Below Pre-Development Load

20%

Total Load (TP) Reduction Required (lb/yr)	2.78
Post-Development Load (TN) (lb/yr)	95.67

CAMPUS COMPLIANCE RESULTS

Site Results

Phosphorous

TOTAL PHOSPHOROUS LOAD REDUCTION REQUIRED (LB/YEAR) 2.78

RUNOFF REDUCTION (cf) 380

PHOSPHOROUS LOAD REDUCTION ACHIEVED (LB/YR) 2.85

ADJUSTED POST-DEVELOPMENT PHOSPHOROUS LOAD (TP) (lb/yr) 10.52

REMAINING PHOSPHOROUS LOAD REDUCTION (LB/YR) NEEDED CONGRATULATIONS!! YOU EXCEEDED THE TARGET REDUCTION BY 0.1 LB/YEAR!!

Nitrogen (for information purposes)

RUNOFF REDUCTION (cf) 380

NITROGEN LOAD REDUCTION ACHIEVED (LB/YR) 8.29

ADJUSTED POST-DEVELOPMENT NITROGEN LOAD (TP) (lb/yr) 87.38

NOTES:

- OVERALL CAMPUS BMP MASTERPLAN IS FOR PHOSPHORUS REMOVAL PURPOSES ONLY
- ADDITIONAL DESIGN AND ANALYSIS WILL BE NECESSARY TO PROVIDE COMPLIANCE WITH CHANNEL AND FLOOD PROTECTION REQUIREMENTS

Drainage Area A Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed	0.00	0.00	0.33	0.00	0.33
Impervious Cover (acres)	0.00	0.00	2.86	0.00	2.86
Total					3.19

Apply Runoff Reduction Practices to Reduce Treatment Volume & Post-Development Load in Drainage Area A - WESTERN CAMPUS DRAINAGE AREA

Credit	Unit	Description of Credit	Credit	Credit Area (acres)	Volume from Upstream RR Practice (cf)	Runoff Reduction (cf)	Remaining Runoff Volume (cf)	Phosphorus Efficiency (%)	Phosphorus Load from Upstream RR Practices (lbs)	Untreated Phosphorus Load to Practice (lbs.)	Phosphorus Removed By Practice (lbs.)	Remaining Phosphorus Load (lbs.)	Downstream Treatment to be Employed
3. Permeable Pavement													
3.a. Permeable Pavement #1 (Spec #7)	acres of permeable pavement + acres of "external" (upgradient) impervious pavement	45% runoff volume reduction	0.45	0.18	0	273	334	25	0.00	0.38	0.22	0.16	
3.b. Permeable Pavement #2 (Spec #7)	acres of permeable pavement	75% runoff volume reduction	0.75	0.00	0	0	0	25	0.00	0.00	0.00	0.00	
TOTAL PHOSPHOROUS REMOVAL REQUIRED ON SITE (lb/yr)						2.78							
TOTAL RUNOFF REDUCTION IN D.A. A (cf)						273							
PHOSPHORUS REMOVAL FROM RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr)						0.22							

Apply Practices that Remove Pollutants but Do Not Reduce Runoff Volume

Practice	Unit	Area (excluding areas treated by upstream practices)	Phosphorus Efficiency (%)	Runoff from Upstream RR Practices (cf)	Phosphorus Load from Upstream RR Practices (lbs)	Untreated Phosphorus Load to Practice (lbs.)	Phosphorus Removed By Practice (lbs.)	Remaining Phosphorus Load (lbs.)	Downstream Treatment to be Employed
11. Filtering Practices									
11.a. Filtering Practice #1 (Spec #12)	impervious acres draining to filter	1.41	60	0.00	0.00	3.05	1.83	1.22	
	turf acres draining to filter	0.21	60	0.00	0.00	0.11	0.06	0.04	
11.b. Filtering Practice #2 (Spec #12)	impervious acres draining to filter	0.00	65	0.00	0.00	0.00	0.00	0.00	
	turf acres draining to filter	0.00	65	0.00	0.00	0.00	0.00	0.00	
PHOSPHORUS REMOVAL BY PRACTICES THAT DO NOT REDUCE RUNOFF VOLUME IN D.A. A							1.89		
TOTAL PHOSPHORUS REMOVAL IN D.A. A (lb/yr)							2.12		
NITROGEN REMOVAL BY PRACTICES THAT DO NOT REDUCE RUNOFF VOLUME IN D.A. A							4.51		
TOTAL NITROGEN REMOVAL IN D.A. A (lb/yr)							6.12		

Drainage Area B Land Cover (acres)

	A soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land	0.00	0.00	0.00	0.00	0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed	0.00	0.00	1.79	0.00	1.79
Impervious Cover (acres)	0.00	0.00	2.78	0.00	2.78
Total					4.57

Apply Runoff Reduction Practices to Reduce Treatment Volume & Post-Development Load in Drainage Area B - EASTERN CAMPUS DRAINAGE AREA

Credit	Unit	Description of Credit	Credit	Credit Area (acres)	Volume from Upstream RR Practice (cf)	Runoff Reduction (cf)	Remaining Runoff Volume (cf)	Phosphorus Efficiency (%)	Phosphorus Load from Upstream RR Practices (lbs)	Untreated Phosphorus Load to Practice (lbs.)	Phosphorus Removed By Practice (lbs.)	Remaining Phosphorus Load (lbs.)	Downstream Treatment to be Employed
3. Permeable Pavement													
3.a. Permeable Pavement #1 (Spec #7)	acres of permeable pavement + acres of "external" (upgradient) impervious pavement	45% runoff volume reduction	0.45	0.07	0	107	131	25	0.00	0.15	0.09	0.06	
3.b. Permeable Pavement #2 (Spec #7)	acres of permeable pavement	75% runoff volume reduction	0.75	0.00	0	0	0	25	0.00	0.00	0.00	0.00	
TOTAL PHOSPHOROUS REMOVAL REQUIRED ON SITE (lb/yr)						2.78							
TOTAL RUNOFF REDUCTION IN D.A. B (cf)						107							
PHOSPHORUS REMOVAL FROM RUNOFF REDUCTION PRACTICES IN D.A. B (lb/yr)						0.09							

Apply Practices that Remove Pollutants but Do Not Reduce Runoff Volume

Practice	Unit	Area (excluding areas treated by upstream practices)	Phosphorus Efficiency (%)	Runoff from Upstream RR Practices (cf)	Phosphorus Load from Upstream RR Practices (lbs)	Untreated Phosphorus Load to Practice (lbs.)	Phosphorus Removed By Practice (lbs.)	Remaining Phosphorus Load (lbs.)	Downstream Treatment to be Employed
11. Filtering Practices									
11.a. Filtering Practice #1 (Spec #12)	impervious acres draining to filter	0.50	60	0.00	0.00	1.08	0.65	0.43	
	turf acres draining to filter	0.00	60	0.00	0.00	0.00	0.00	0.00	
11.b. Filtering Practice #2 (Spec #12)	impervious acres draining to filter	0.00	65	0.00	0.00	0.00	0.00	0.00	
	turf acres draining to filter	0.00	65	0.00	0.00	0.00	0.00	0.00	
PHOSPHORUS REMOVAL BY PRACTICES THAT DO NOT REDUCE RUNOFF VOLUME IN D.A. B							0.65		
TOTAL PHOSPHORUS REMOVAL IN D.A. B (lb/yr)							0.74		
NITROGEN REMOVAL BY PRACTICES THAT DO NOT REDUCE RUNOFF VOLUME IN D.A. B							1.55		
TOTAL NITROGEN REMOVAL IN D.A. B (lb/yr)							2.17		

Nitrogen Efficiency (%)	Nitrogen Load from Upstream RR Practices (lbs)	Untreated Nitrogen Load to Practice (lbs.)	Nitrogen Removed By Practice (lbs.)	Remaining Nitrogen Load (lbs.)
11. Filtering Practices				
20	0.00	7.74	1.55	6.19
20	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00

NOTES:

- A FLOW SPLITTER WILL NEED TO BE INSTALLED TO DIRECT AN EQUIVALENT OF 0.50 ACRES OF IMPERVIOUS TO THE PROPOSED SAND FILTER. DESIGN OF THE FLOW SPLITTER WILL BE PROVIDED WITH FINAL SITE PLAN 1.
- THE POTENTIAL LOCATION OF THE SAND FILTER FOR DA-B IS LOCATED UNDER THE DRIVE AISLE AND COULD POTENTIALLY BE EXPANDED IN THE FUTURE IF ADDITIONAL TREATMENT VOLUMES ARE REQUIRED BY DEVELOPMENT.

DESIGN ENGINEER AND LANDSCAPE ARCHITECT	FIRM NAME: KIMLEY-HORN AND ASSOCIATES, INC.	ADDRESS: 11400 COMMERCE PARK DRIVE, SUITE 400 RESTON, VIRGINIA 20191	PHONE NO: 703-674-1300 FAX NO: 703-674-1350	PROJ. MANAGER: KEVIN VAN HISE EMAIL: KEVIN.VANHISE@KIMLEY-HORN.COM	SCALE: N.T.S. (AT 24x36)	DATE: 04/04/2014	DRAWN BY: KTB
					Kimley-Horn and Associates, Inc.		

SEAL: COMMONWEALTH OF VIRGINIA KYLE T. BOLLINGER Lic. No. 051017 PROFESSIONAL	OWNER: CITY OF ALEXANDRIA 301 KING STREET ALEXANDRIA, VA 22314 DEVELOPER: ALEXANDRIA CITY PUBLIC SCHOOLS CONTACT: ANDREA FENIAK, AIA (703) 461-4165
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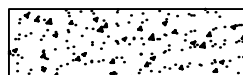
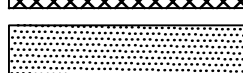
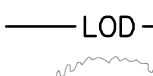
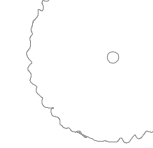
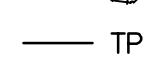
REVISION / APPROVED BY		DATE	APPROVED	DATE	APPROVED	DATE	APPROVED	DATE	APPROVED
NO.	DESCRIPTION	REV. BY							

JOHN ADAMS SCHOOL PARKING LOT IMPROVEMENTS PRELIMINARY SITE PLAN CITY OF ALEXANDRIA, VIRGINIA SHEET NAME: BMP MASTER PLAN CALCULATIONS - OVERALL CAMPUS
--

APPROVED SPECIAL USE PERMIT NO. _____ DEPARTMENT OF PLANNING & ZONING	DIRECTOR _____ DATE _____ DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES SITE PLAN NO. _____ DIRECTOR _____ DATE _____
CHAIRMAN, PLANNING COMMISSION _____ DATE _____ DATE RECORDED _____	INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____
SHEET NO: C-510	

K:\NVA\LA\LA\110266001 John Adams (CAD) PlanSheets\C-600 LANDSCAPE PLAN.dwg, Layout:C-600 LANDSCAPE PLAN Apr 03, 2014 kylebollinger
THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, IS AN INSTRUMENT OF SERVICE, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE
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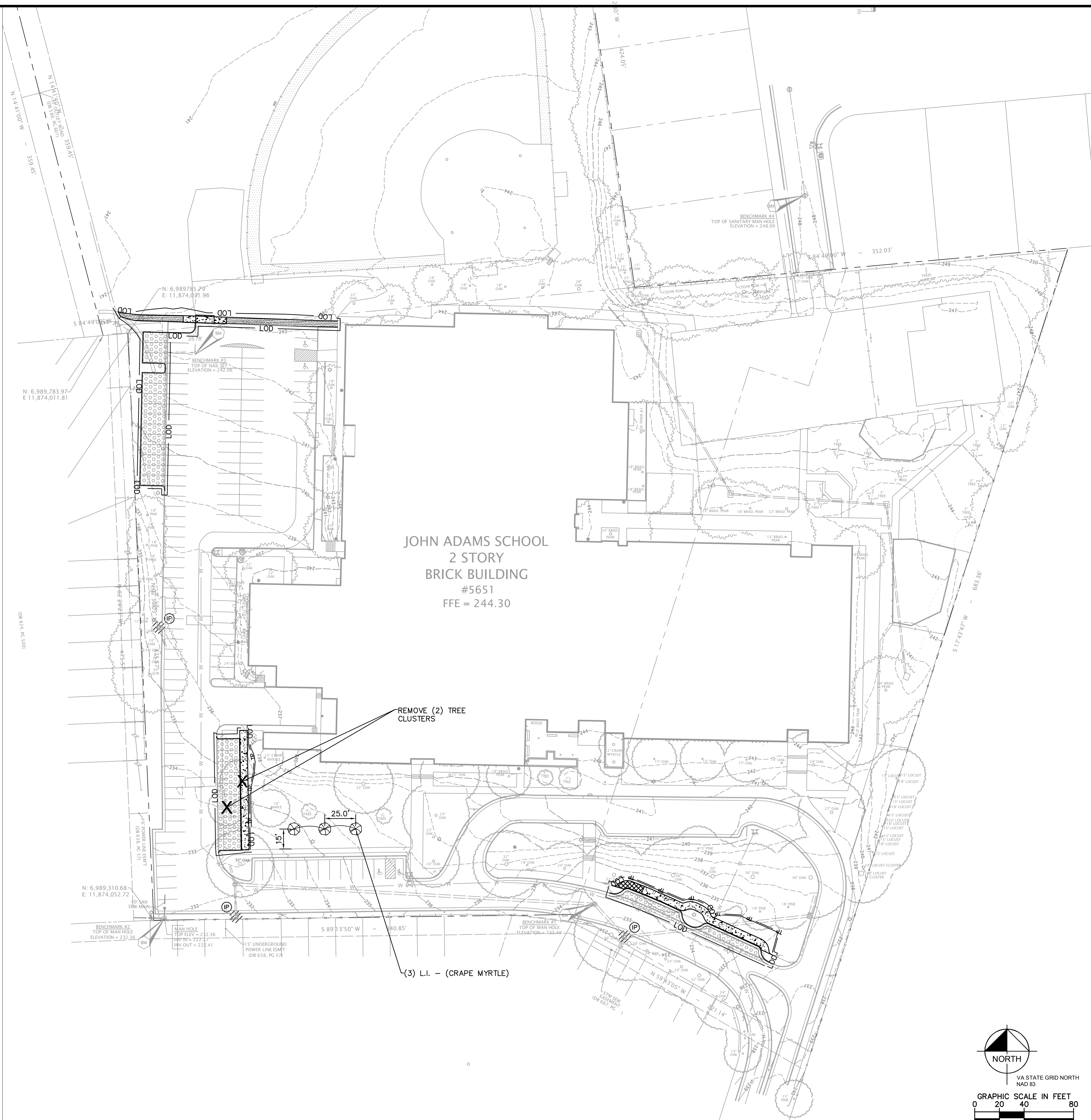
LEGEND:

-  PROPOSED CONCRETE SIDEWALK PER ALEXANDRIA STANDARD CSSW-1
-  PROPOSED PERVIOUS PAVEMENT FOR PARKING SPACE
-  PROPOSED PERVIOUS PAVEMENT FOR SIDEWALK
-  PROPOSED ASPHALT SIDEWALK AND TRAIL CONNECTION
-  NUMBER OF ADDITIONAL PARKING SPACES
-  TREE REMOVAL
-  PROJECT BOUNDARIES
-  LIMIT OF DISTURBANCE
-  EXISTING TREE
-  PROPOSED TREE
-  TREE PROTECTION

BM	BENCHMARK
	CLEAN OUT
	CONCRETE
	DEED BOOK
	FIRE HYDRANT
	LIGHT POLE
	N/F NOW OR FORMERLY
	OH/W OVERHEAD WIRE
	OP OPEN PORCH
	PG PAGE
	EP EDGE OF PAVEMENT
	S SANITARY MANHOLE
	SIGN
	STP STOOP
	D STORM SEWER MANHOLE
	U UTILITY POLE
	W WATER METER
	WV WATER VALVE

LANDSCAPE NOTES

- ALL PROTECTION AND PRESERVATION MEASURES FOR EXISTING VEGETATION, INCLUDING MAINTENANCE SHALL BE APPROVED BY THE CITY ARBORIST IN-FIELD PRIOR TO COMMENCEMENT OF ANY SITE DISTURBING ACTIVITY.
- SPECIFICATION FOR ALL PLANTINGS SHALL BE IN ACCORDANCE WITH THE CURRENT AND MOST UP TO DATE EDITION OF ANSI-Z60.1, THE AMERICAN STANDARD FOR NURSERY STOCK AS PRODUCED BY THE AMERICAN ASSOCIATION OF NURSERYMEN; WASHINGTON, DC.
- THE APPLICANT HAS MADE SUITABLE ARRANGEMENTS FOR PRE-SELECTION TAGGING, PRE-CONTRACT GROWING, OR IS UNDERTAKING SPECIALIZED PLANTING STOCK DEVELOPMENT WITH A NURSERY OR GROWER THAT IS CONVENIENTLY LOCATED TO THE PROJECT SITE. OTHER PROCEDURES THAT WILL ENSURE AVAILABILITY OF SPECIFIED MATERIALS. IN THE EVENT THAT SHORTAGES AND/OR INABILITY TO OBTAIN SPECIFIED PLANTINGS OCCURS, REMEDIAL EFFORTS INCLUDING SPECIES CHANGES, ADDITIONAL PLANTINGS AND MODIFICATION TO THE LANDSCAPE PLAN SHALL BE UNDERTAKEN BY THE APPLICANT. ALL REMEDIAL EFFORTS SHALL, WITH PRIOR APPROVAL BY THE CITY, BE PERFORMED TO THE SATISFACTION OF THE DIRECTORS OF PLANNING AND ZONING, RECREATION, PARKS AND CULTURAL ACTIVITIES AND TRANSPORTATION AND ENVIRONMENTAL SERVICES.
- IN LIEU OF MORE STRENUOUS SPECIFICATIONS, ALL LANDSCAPE RELATED WORK SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE CURRENT AND MOST UP-TO-DATE EDITION (AT ANY TIME OF CONSTRUCTION) OF LANDSCAPE SPECIFICATION GUIDELINES AS PRODUCED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF MARYLAND, DISTRICT OF COLUMBIA, AND VIRGINIA; GAITHERSBURG MARYLAND.
- PRIOR TO COMMENCEMENT OF LANDSCAPE INSTALLATION/PLANTING OPERATION, A PRE-INSTALLATION/CONSTRUCTION MEETING WITH BE SCHEDULED WITH THE CITY'S ARBORIST AND LANDSCAPE ARCHITECTS TO REVIEW THE SCOPE OF INSTALLATION PROCEDURES AND PROCESSES.
- MAINTENANCE FOR THIS PROJECT SHALL BE PERFORMED IN PERPETUITY, IN COMPLIANCE WITH THE CITY OF ALEXANDRIA LANDSCAPE GUIDELINES AND/OR AS CONDITIONED BY PROJECT APPROVAL.
- A CERTIFICATION LETTER FOR TREE WELLS, TREE TRENCHES AND PLANTING ABOVE STRUCTURE SHALL BE PROVIDED BY THE PROJECT'S LANDSCAPE ARCHITECT. THE LETTER SHALL CERTIFY THAT ALL BELOW GRADE CONSTRUCTION IS IN COMPLIANCE WITH APPROVED DRAWINGS AND SPECIFICATIONS. THE LETTER SHALL BE SUBMITTED TO THE CITY ARBORIST AND APPROVED PRIOR TO APPROVAL OF THE LAST AND FINAL CERTIFICATE OF OCCUPANCY FOR THE PROJECT. THE LETTER SHALL BE SUBMITTED BY THE OWNER/APPLICANT/SUCCESSOR AND SEALED AND DATED AS APPROVED BY THE PROJECT'S LANDSCAPE ARCHITECT.
- AS-BUILT DRAWINGS FOR THIS LANDSCAPE AND/OR IRRIGATION/WATER MANAGEMENT SYSTEM WILL BE PROVIDED IN COMPLIANCE WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES. AS-BUILT DRAWINGS SHALL INCLUDE CLEAR IDENTIFICATION OF ALL VARIATION(S) AND CHANGES FROM APPROVED DRAWINGS INCLUDING LOCATION, QUANTITY, AND SPECIFICATION OF ALL PROJECT ELEMENTS.



DESIGN ENGINEER AND LANDSCAPE ARCHITECT
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ADDRESS: 11400 COMMERCE PARK DRIVE, SUITE 400
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PHONE NO: 703-674-1300 FAX NO: 703-674-1350
PROJ. MANAGER: KEVIN VAN HISE
EMAIL: KEVIN.VANHISE@KIMLEY-HORN.COM

SEAL: COMMONWEALTH OF VIRGINIA
Kevin A. Van Hise
Lic. No. 001395
4-4-2014
LANDSCAPE ARCHITECT

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301 KING STREET
ALEXANDRIA, VA 22314
DEVELOPER
ALEXANDRIA CITY
PUBLIC SCHOOLS
CONTACT
ANDREA FENIAK, AIA
(703)-461-1168

SCALE: 1" = 40' (AT 24x36) DATE: 04/04/2014 DRAWN BY: ATR

 Kimley-Horn and Associates, Inc.

REVISION / APPROVED BY

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

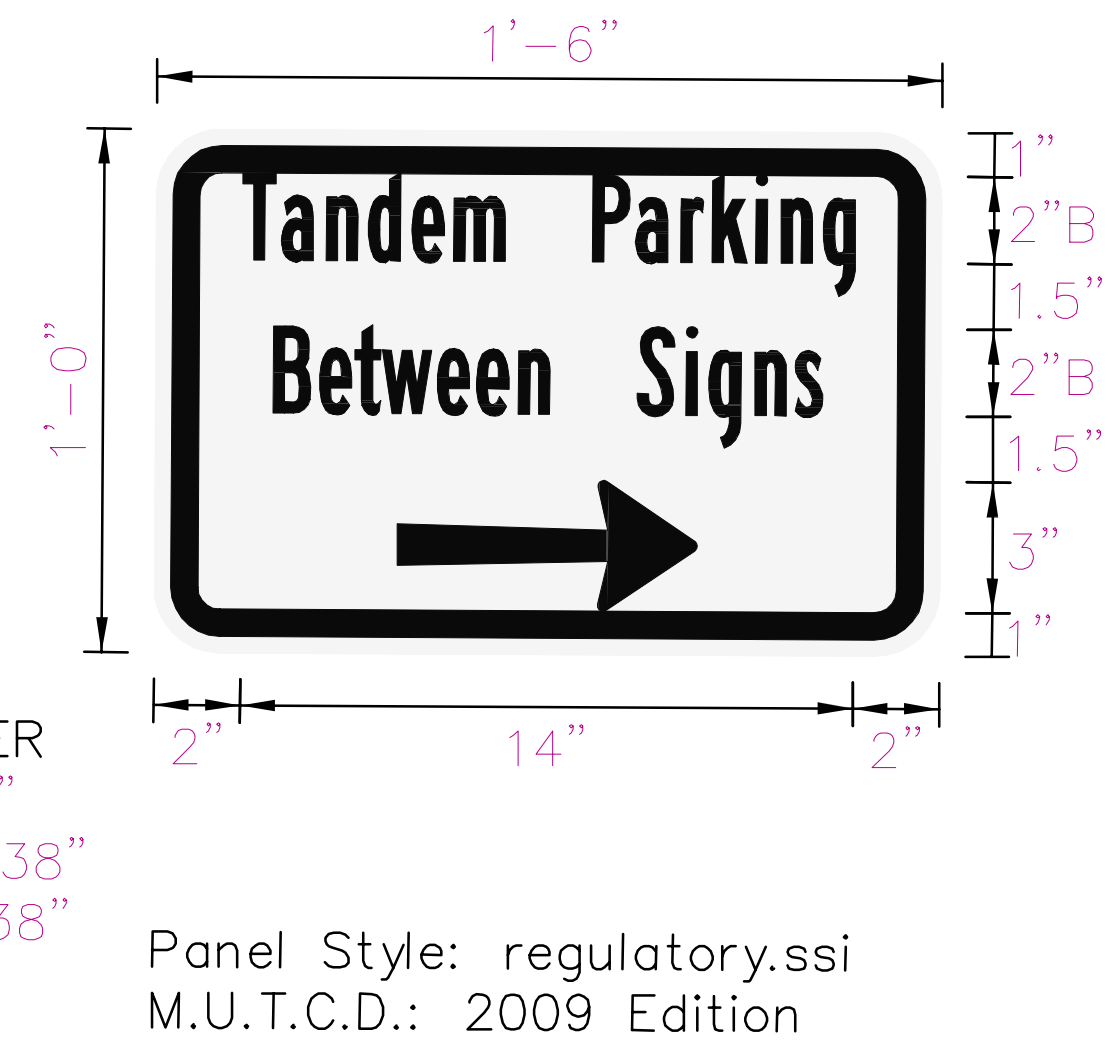
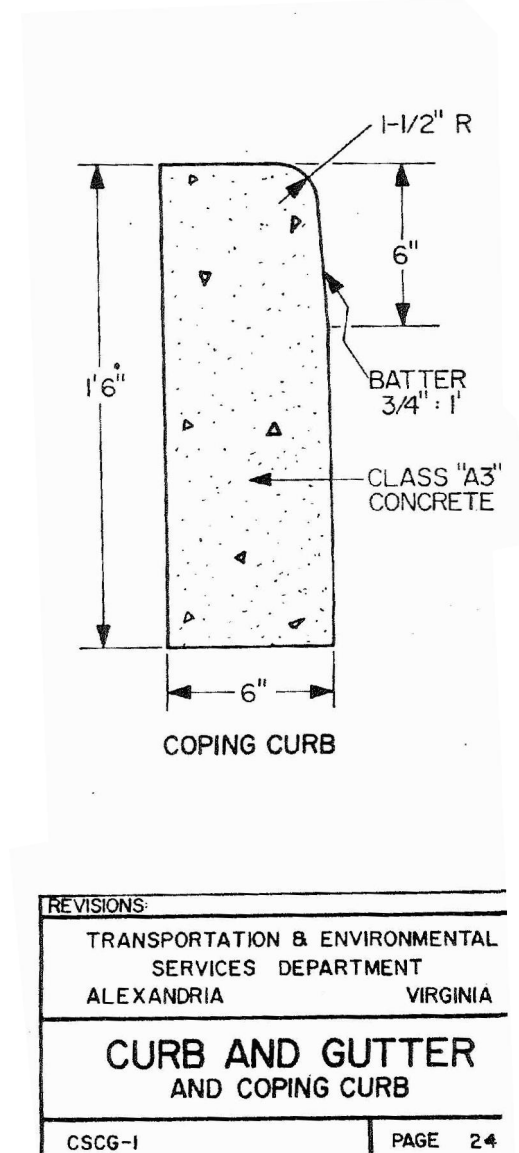
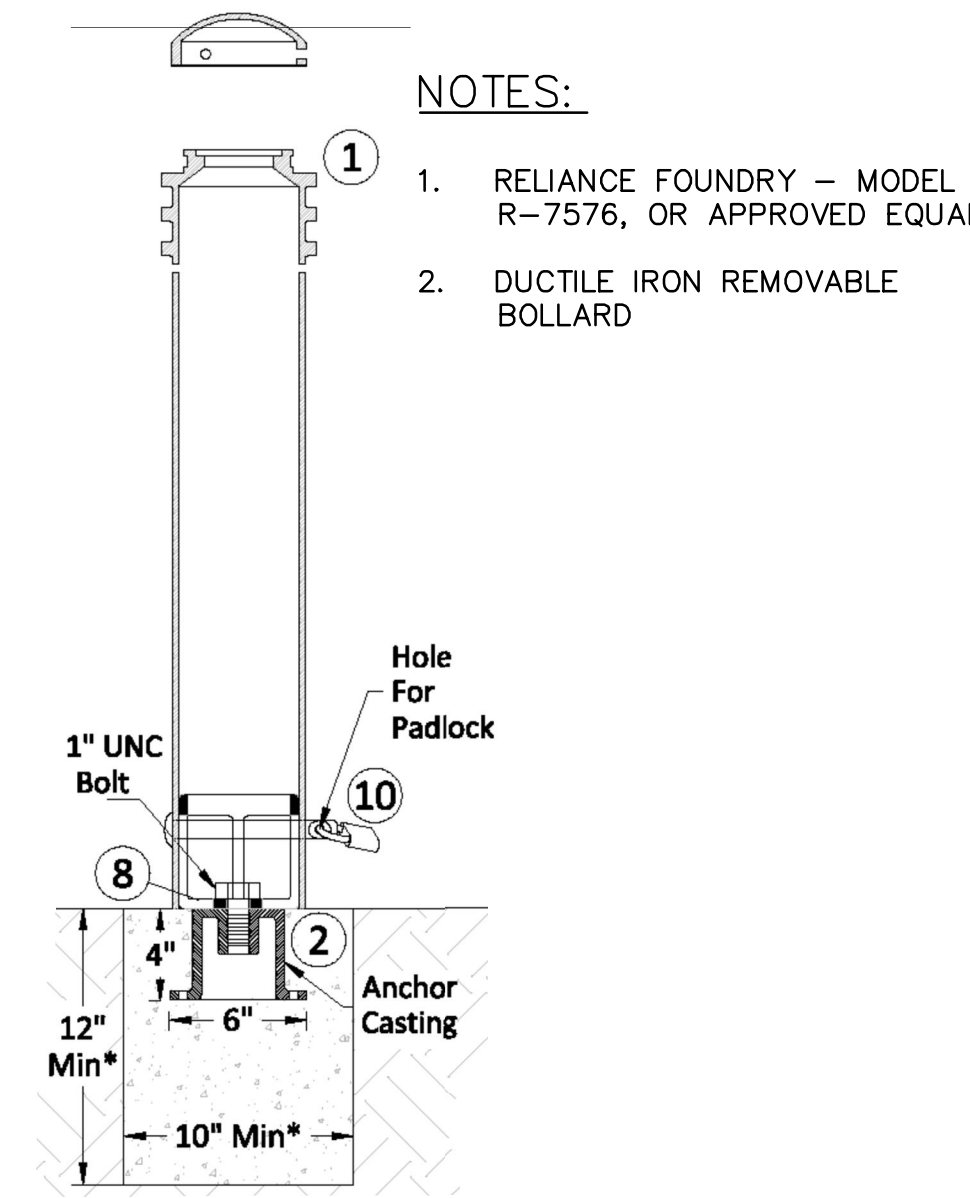
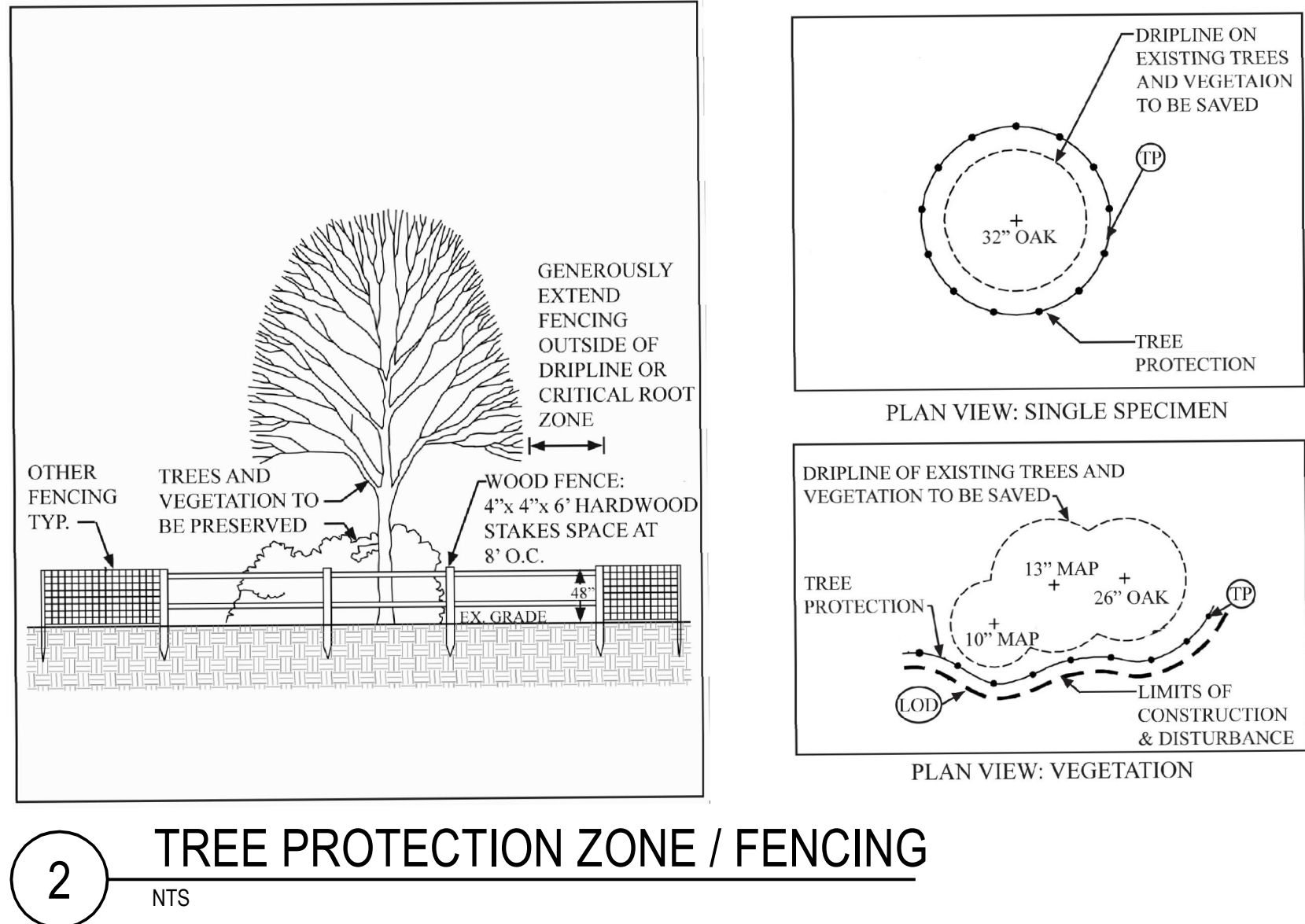
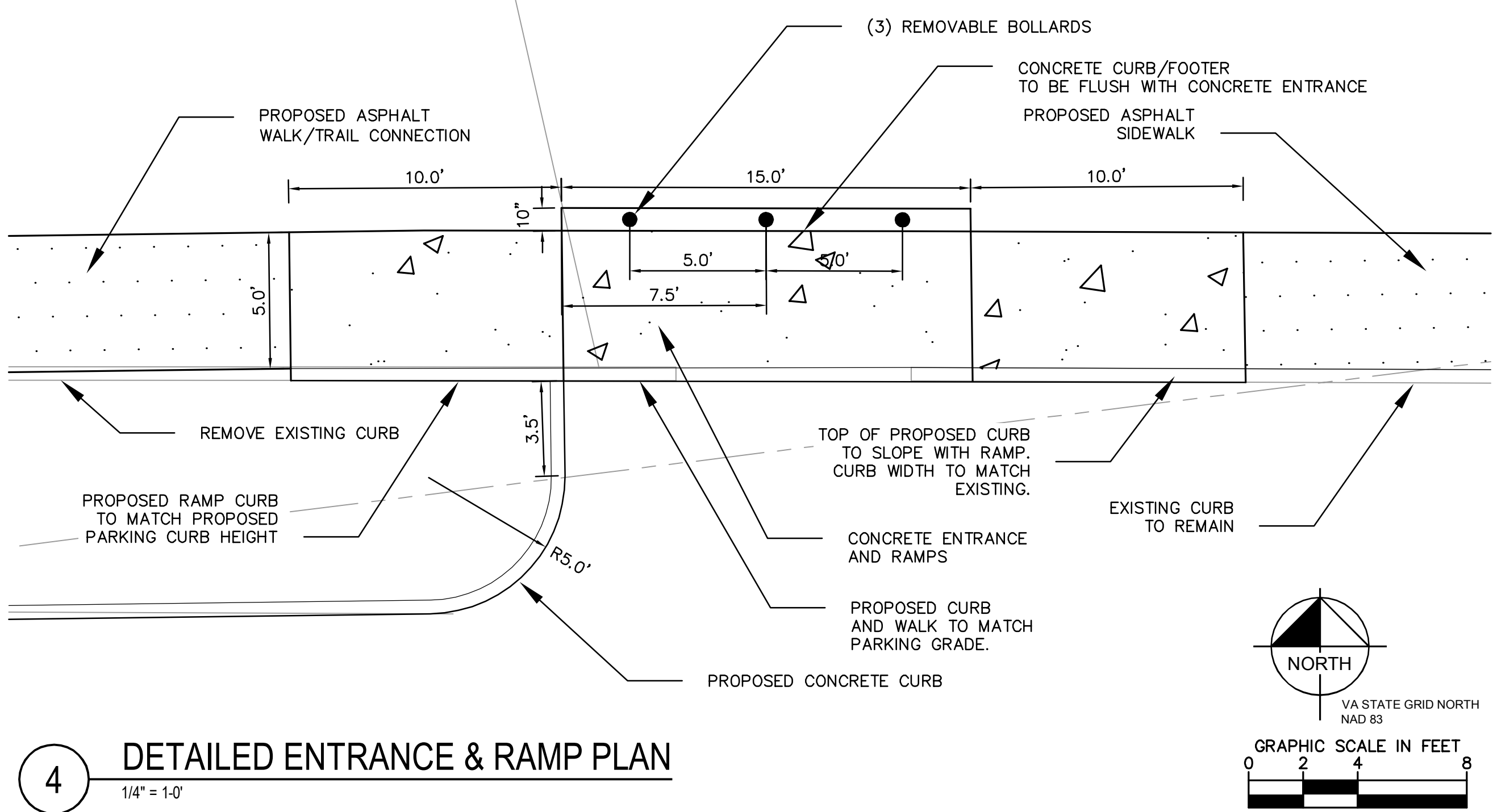
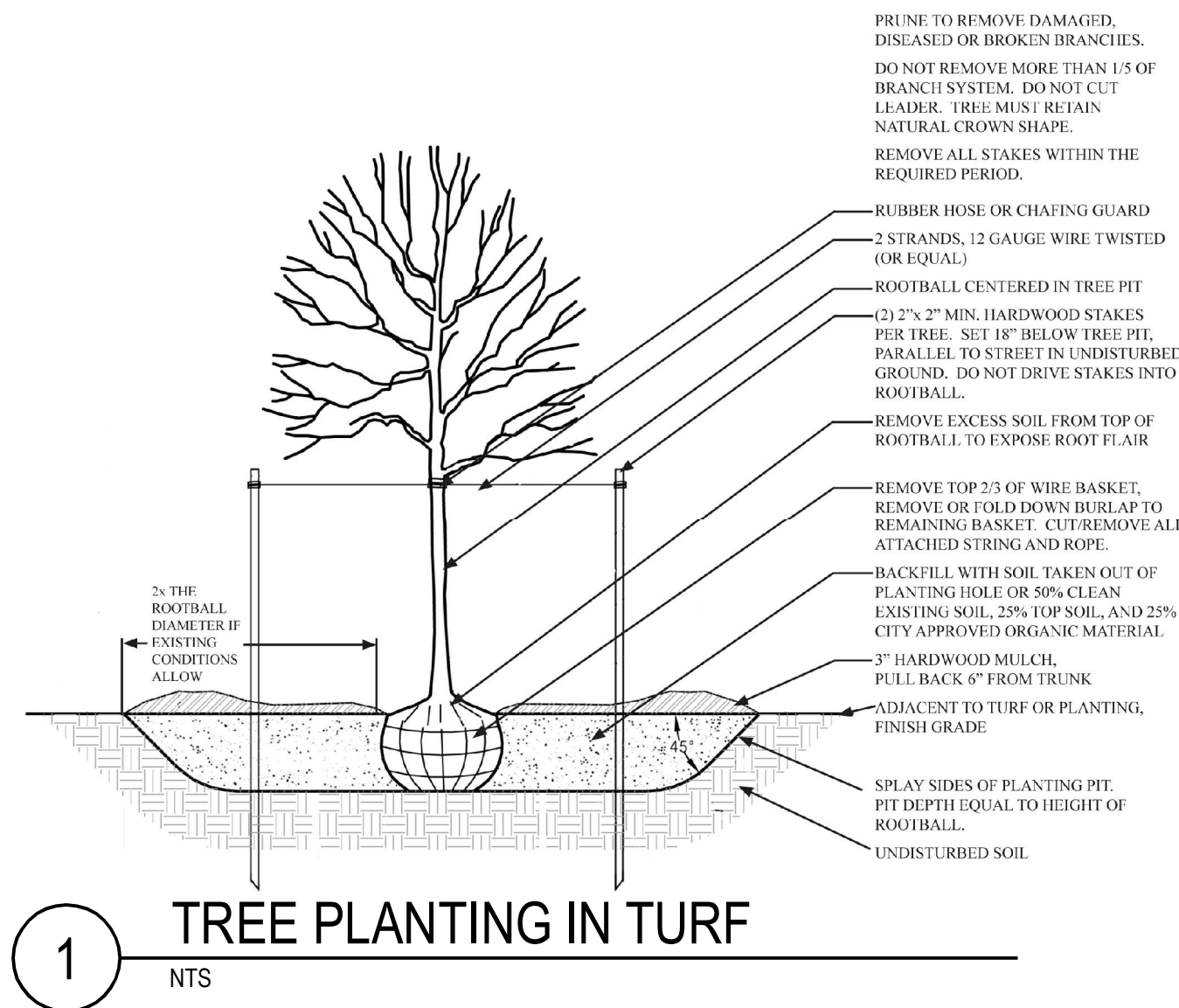
JOHN ADAMS SCHOOL
PARKING LOT
IMPROVEMENTS
PRELIMINARY SITE PLAN
CITY OF ALEXANDRIA, VIRGINIA

SHEET NAME:
LANDSCAPE PLAN

APPROVED
SPECIAL USE PERMIT NO. _____
DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____
DIRECTOR _____ DATE _____

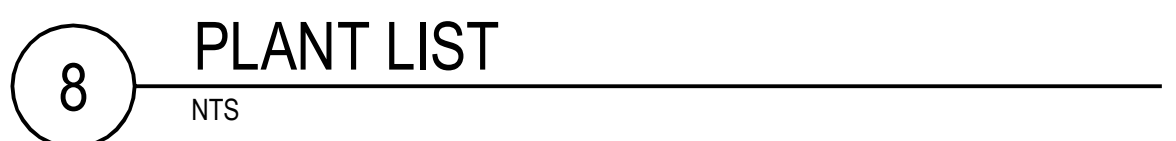
CHAIRMAN, PLANNING COMMISSION _____ DATE _____
DATE RECORDED _____
INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____
SHEET NO: C-600



TREE CROWN COVERAGE REQUIREMENT CALCULATIONS		
Existing Site Area (s.f.)		346,141
Crown Coverage Required (s.f.)	25%	86,535
25% Minimum as per City of Alexandria Zoning Code 11-410 CC (2). Crown Coverages calculated in accordance with City of Alexandria's Landscape Guideline Manual.		
EXISTING CROWN COVERAGE PROVIDED		
Existing Crown Coverage Pre-construction (not including street trees) (s.f.)		92,369

CROWN COVERAGE PROVIDED		
Existing Crown Coverage to Retain (not including street trees) (s.f.)		90,836
Existing Crown Coverage to Be Removed (s.f.)		1,533
Proposed Crown Coverage to Add (not including street trees) (s.f.)		750
Total Tree Canopy Provided Post-construction (not including street trees) (s.f.)	26.50%	91,586
*****Site exceeds City of Alexandria Crown Coverage Requirements*****		

PLANT SCHEDULE									
Key	Qty.	Botanical Name	Common Name	Size (Min.)	Height at Planting	Mature Height	Stock Type	Comments	Canopy Coverage (s.f.) **R.O.W. Street Trees NOT included in Canopy Coverage Calculations**
LI	3	Lagestroemia indica 'Natchez'	Crape Myrtle	2-3" Cal.	8'-10' Ht.	20' Ht.	B & B	Multi-stem, Min. 3 heavy stems	250 750



DESIGN ENGINEER AND LANDSCAPE ARCHITECT
FIRM NAME: KIMLEY-HORN AND ASSOCIATES, INC.
ADDRESS: 11400 COMMERCE PARK DRIVE, SUITE 400
RESTON, VIRGINIA 20191
PHONE NO: 703-674-1300 FAX NO: 703-674-1350
PROJ. MANAGER: KEVIN VAN HISE
EMAIL: KEVIN.VANHISE@KIMLEY-HORN.COM

SEAL: COMMONWEALTH OF VIRGINIA
Kevin A. Van Hise
Lic. No. 001395
4-4-2014
LANDSCAPE ARCHITECT

OWNER: CITY OF ALEXANDRIA
301 KING STREET
ALEXANDRIA, VA 22314
DEVELOPER: ALEXANDRIA CITY
PUBLIC SCHOOLS
CONTACT: ANDREA FENIAK, AIA
(703) 461-4168

SCALE: N.T.S. (AT 24x36) DATE: 04/04/2014 DRAWN BY: ATR

Kimley-Horn and Associates, Inc.

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NO.	DESCRIPTION	DATE	REV. BY	APPROVED

JOHN ADAMS SCHOOL
PARKING LOT
IMPROVEMENTS
PRELIMINARY SITE PLAN
CITY OF ALEXANDRIA, VIRGINIA

SHEET NAME:
CONSTRUCTION & LANDSCAPE DETAILS

APPROVED
SPECIAL USE PERMIT NO. _____
DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____
DIRECTOR _____ DATE _____

CHAIRMAN, PLANNING COMMISSION _____ DATE _____
DATE RECORDED _____
INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO. _____
SHEET NO: C-700

K:\NVA_LALP\110266001 John Adams School\110266001 C-700 CONSTRUCTION DETAILS.dwg, Layout: C-700 CONSTRUCTION DETAILS Apr 03, 2014 kylebellinger
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