# PRELIMINARY DEVELOPMENT SPECIAL USE PERMIT

# BASILICA SCHOOL OF SAINT MARY

**400 GREEN STREET** 

CITY OF ALEXANDRIA, VIRGINIA

# **AREA TABULATIONS**

TOTAL SITE AREA = \_\_\_\_\_\_ 3.8859 \_\_\_\_\_ AC \_\_\_\_\_ 169,271 \_\_\_\_ SF TOTAL AREA OF TAX PARCEL = 3.8859 AC 169,271 SF TOTAL EXISTING IMPERVIOUS AREA = 2.7341 AC 119,098 SF TOTAL PROPOSED IMPERVIOUS AREA = \_\_\_\_\_2.6536\_\_\_\_\_\_ AC \_\_\_\_115,591\_\_\_\_\_ SF TOTAL DISTURBED AREA = \_\_\_\_\_2.3141 \_\_\_\_AC \_\_\_\_100,803 \_\_\_\_ SF

### ENVIRONMENTAL SITE ASSESSMENT

- THERE ARE NO TIDAL WETLANDS, TIDAL SHORES, TRIBUTARY STREAMS, CONNECTED TIDAL WETLANDS, HIGHLY ERODIBLE/PERMEABLE SOILS OR BUFFER AREAS ASSOCIATED WITH SHORES, STREAMS, OR WETLANDS LOCATED ON THE SITE; HOWEVER, ACCORDING TO FEMA MAPS, A SMALL PORTION OF THE SITE IS WITHIN THE 100-YEAR FLOODPLAIN OF THE POTOMAC RIVER. DUE TO THE SMALL SIZE OF THE FLOODPLAIN ONSITE, THERE ARE NO WETLAND PERMITS REQUIRED FOR THIS DEVELOPMENT PROJECT. ADDITIONALLY, THERE ARE NO KNOWN UNDERGROUND STORAGE
- 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
- ALL WELLS TO BE DEMOLISHED ON THIS PROJECT, INCLUDING MONITORING WELLS, MUST BE CLOSED IN ACCORDANCE WITH VIRGINIA STATE WATER CONTROL BOARD (VSWCB) REQUIREMENTS. CONTACT ENVIRONMENTAL HEALTH SPECIALIST AND COORDINATE WITH THE ALEXANDRIA HEALTH DEPARTMENT AT 703-746-4996.
- THERE ARE NO KNOWN CONTAMINATED AREAS, CONTAMINATED SOILS OR ENVIRONMENTAL ISSUES ASSOCIATED WITH THIS SITE.
- ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE ALEXANDRIA NOISE CONTROL CODE TITLE 11, CHAPTER 5, WHICH PERMITS CONSTRUCTION ACTIVITIES TO MONDAY THROUGH FRIDAY FROM 7am TO 6pm AND SATURDAYS FROM 9am TO 6pm; NO CONSTRUCTION ACTIVITIES ARE PERMITTED ON SUNDAYS AND HOLIDAYS.
- MONDAY THROUGH FRIDAY FROM 9am TO 6pm AND SATURDAYS FROM 10am TO 4pm; NO PILE DRIVING ACTIVITIES ARE PERMITTED ON SUNDAYS AND HOLIDAYS.

RIGHT OF WAY EXCAVATION IS FURTHER RESTRICTED TO THE FOLLOWING HOURS:

MONDAY THROUGH SATURDAY 7am TO 5pm; NO RIGHT OF WAY EXCAVATION IS PERMITTED ON SUNDAYS.

### ENVIRONMENTAL PERMITS NOTES

ALL REQUIRED PERMITS FROM VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY, ENVIRONMENTAL PROTECTION AGENCY. ARMY CORPS OF ENGINEERS. /IRGINIA MARINE RESOURCES MUST BE IN PLACE FOR ALL PROJECT CONSTRUCTION AND MITIGATION WORK PRIOR TO RELEASE OF THE FINAL SITE

THIS PROJECT PROPOSES CONSTRUCTION ACTIVITIES WHICH DISTURB AN AREA MORE THAN 1 ACRE, THEREFORE A VPDES PERMIT IS REQUIRED.

### ARCHAEOLOGY NOTES

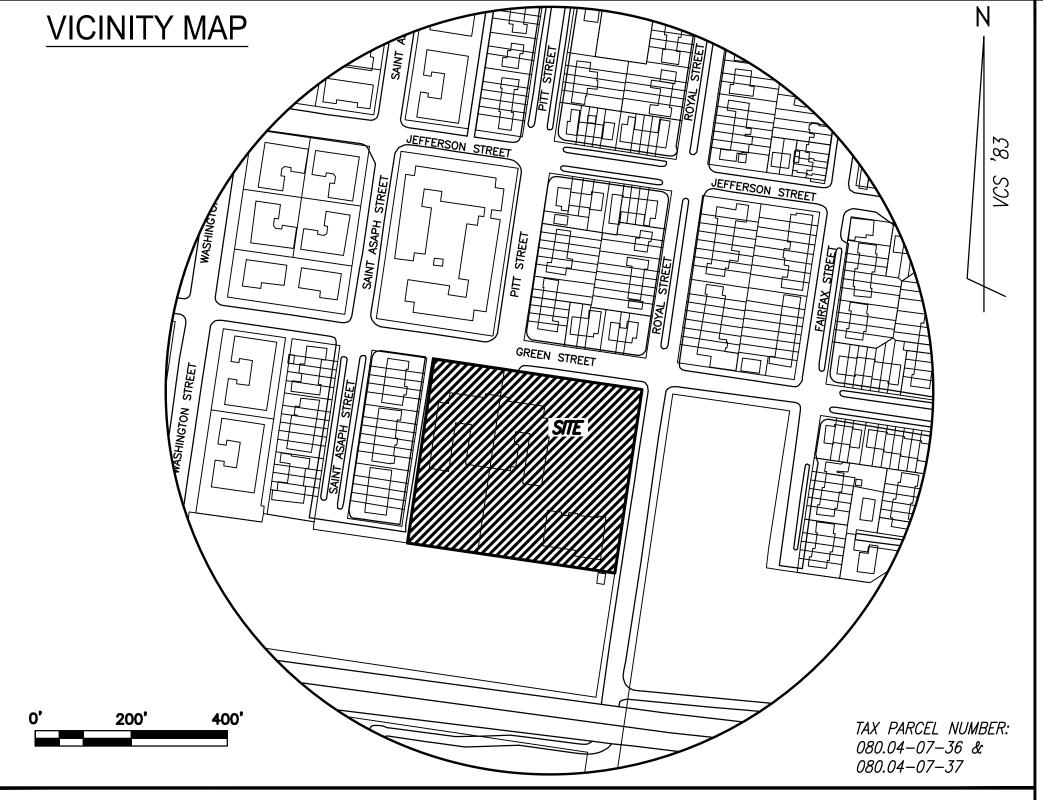
THE APPLICANT/DEVELOPER SHALL CALL ALEXANDRIA ARCHAEOLOGY IMMEDIATELY (703-746-4399) IF ANY BURIED STRUCTURAL REMAINS (WALL FOUNDATIONS. WELLS PRIVIES, CISTERNS, ETC.) OR CONCENTRATIONS OF ARTIFACTS ARE DISCOVERED DURING DEVELOPMENT. WORK MUST CEASE IN THE AREA OF THE DISCOVERY UNTIL A CITY ARCHAFOLOGIST COMES TO THE SITE AND RECORDS THE FINDS.

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.

ALL REQUIRED ARCHAEOLOGICAL PRESERVATION MEASURES SHALL BE COMPLETED IN COMPLIANCE WITH SECTION 11-411 OF THE ZONING ORDINANCE.

### **GENERAL NOTES**

- DRAWINGS PREPARED BY A LICENSED ARCHITECT OR PROFESSIONAL ENGINEER SHALL ACCOMPANY THE PERMIT APPLICATION. THE PLANS SHAL SHOW PROPOSED CONDITIONS AND PROVIDE DATA BY THE DESIGN PROFESSIONAL WHICH DETAILS HOW THE PROPOSED USE WILL COMPLY WITH THE CURRENT EDITION OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE FOR THE NEW USE IN THE AREA OF STRUCTURAL STRENGTH, MEANS | RIIII DING CODE ANALYSIS. OF EGRESS. PASSIVE AND ACTIVE FIRE PROTECTION. HEATING AND VENTILATING SYSTEMS. HANDICAPPED ACCESSIBILITY AND PLUMBING FACILITIES.
- NEW CONSTRUCTION MUST COMPLY WITH THE CURRENT EDITION OF THE UNIFORM STATEWIDE BUILDING CODE (USBC).
- BEFORE A BUILDING PERMIT CAN BE ISSUED ON ANY PROPOSED FUTURE ALTERATIONS, A CERTIFICATION IS REQUIRED FROM THE OWNER OR OWNER'S AGENT THAT THE BUILDING HAS BEEN INSPECTED BY A LICENSED ASBESTOS INSPECTOR FOR THE PRESENCE OF ASBESTOS.
- . A CERTIFICATE OF OCCUPANCY SHALL BE OBTAINED PRIOR TO ANY OCCUPANCY OF THE BUILDING OR PORTION THEREOF.
- REQUIRED EXITS. PARKING, AND ACCESSIBILITY WITHIN THE BUILDING FOR PERSONS WITH DISABILITIES MUST COMPLY WITH USBC CHAPTER 11. HANDICAPPED ACCESSIBLE BATHROOMS SHALL ALSO BE PROVIDED.
- TOILET FACILITIES FOR PERSONS WITH DISABILITIES: LARGER. DETAILED. DIMENSIONED DRAWINGS ARE REQUIRED TO CLARIFY SPACE LAYOUT AND MOUNTING HEIGHTS OF AFFECTED ACCESSORIES. INFORMATION ON DOOR HARDWARE FOR THE TOILET STALL IS REQUIRED (USBC 1109.2.2).
- IF APPLICABLE, ENCLOSED PARKING GARAGES MUST BE VENTILATED IN ACCORDANCE WITH USBC 406.4.2. THE REQUIRED MECHANICAL VENTILATION RATE FOR AIR IS 0.75 CFM PER SQUARE FOOT OF THE FLOOR AREA (USBC 2801.1). IN AREAS WHERE MOTOR VEHICLES OPERATE FOR PERIOD OF TIME EXCEEDING 10 SECONDS, THE VENTILATION RETURN AIR MUST BE EXHAUSTED. AN EXHAUST SYSTEM MUST BE PROVIDED T CONNECT DIRECTLY TO THE MOTOR VEHICLE EXHAUST (USBC 2801.1).
- 3. ELECTRICAL WIRING METHODS AND OTHER ELECTRICAL REQUIREMENTS MUST COMPLY WITH NFPA 70, 2008.
- IF APPLICABLE, THE PUBLIC PARKING GARAGE FLOOR MUST COMPLY WITH USBC 406.2.6 AND DRAIN THROUGH OIL SEPARATORS OR TRAPS AVOID ACCUMULATION OF EXPLOSIVE VAPORS IN BUILDING DRAINS OR SEWERS AS PROVIDED FOR IN THE PLUMBING CODE (USBC 2901). THIS PARKING GARAGE IS CLASSIFIED AS AN S-2, GROUP 2, PUBLIC GARAGE.
- 10. THIS PROJECT IS LOCATED IN A COMBINED SEWER AREA.
- 1. THIS SITE DOES NOT CONTAIN AREAS PREVIOUSLY MAPPED AS MARINE CLAYS.



### PROJECT DESCRIPTION NARRATIVE

THE APPLICANT REQUESTS A DEVELOPMENT SPECIAL USE PERMIT WITH A SITE PLAN (DSUP) TO PERMIT AN ADDITION CONNECTING THE TWO EXISTING BUILDINGS. RELOCATION OF SITE ENTRANCES, AND ASSOCIATED SITE IMPROVEMENTS. THESE IMPROVEMENTS INCLUDE UPGRADED PARKING AREA, STUDENT PICK-UP AND DROP-OFF FACILITIES, AND PLAY AREA. IN EXISTING CONDITIONS THE SITE CONTAINS AN ELEMENTARY SCHOOL BUILDING, MIDDLE SCHOOL BUILDING, PARKING LOT, AND PLAY AREA. THIS SITE IS LOCATED WITHIN AND IS SUBJECT TO THE REQUIREMENTS OF OLD TOWN SMALL AREA PLAN AND OLD AND HISTORIC ALEXANDRIA

### REQUESTED APPLICATIONS AND MODIFICATIONS:

- DEVELOPMENT SPECIAL USE PERMIT FOR A PRIVATE SCHOOL • SUP FOR PARKING IN EXCESS OF REQUIREMENT
- MODIFICATION TO MINIMUM LANDSCAPE ISLAND REQUIREMENT
- MODIFICATION OF THE REQUIRED STREET TREE PLACEMENT

### PREVIOUSLY APPROVED SUP/DSUP

- SUP94-030 SUP95-0138

BOILDING CODE ANALISIS.						
USE:	SCHOOL					
USE GROUP:	E					
TYPE OF CONSTRUCTION:	II-B					
NUMBER OF STORIES:	3 STORY (MAIN BUILDING)					
1 [	4 STORY (STEPHENS HALL)					
FLOOR AREA (GROSS):	111,109 SF					
FLOOR AREA (NET):	101,863 SF					
BUILDING FOOT PRINT AREA:	40,827 SF (INCLUDES EXISTING BUILDING)					
BUILDING HEIGHT:	48.6' (TOWER), 35.0' (FLAT ROOF)					
FIRE SUPPRESSION/DETECTION:	FULLY SPRINKLERED (STEPHENS HALL					
	& BUILDING ADDITION)					

# **COMPLETE STREETS INFORMATION:**

	CRUSSWALKS (NUMBEK)	IN/A	ر ا
	STANDARD	N/A	2
	HIGH VISIBILITY	N/A	1
	CURB RAMPS	N/A	2
	SIDEWALKS (LF)	25	N/A
	BICYCLE PARKING (NUMBER SPACES)	N/A	N/A
	PUBLIC/VISITOR	N/A	N/A
	PRIVATE/GARAGE	N/A	N/A
	BICYCLE PATHS (LF)	N/A	N/A
	PEDESTRIAN SIGNALS	N/A	N/A
_		•	

### OWNER/DEVELOPER

BISHOP OF THE CATHOLIC DIOCESE OF ARLINGTON 310 DUKE STREET ALEXANDRIA, VA 22314 D.B. 104 P.G. 91 & D.B. 189 P.G.38 CONTACT: BOB NASHED

CONTACT: BOB NASHED

EMAIL: ROBERT.NASHED@ARLINGTONDIOCESE.ORG DEVELOPER: BASILICA SCHOOL OF SAINT MARY 400 GREEN STREET ALEXANDRIA, VA 22314 (703) 549-1646

EMAIL: ROBERT.NASHED@ARLINGTONDIOCESE.ORG

CONTACT: MICHAEL PATRICK PLAN PREPARED BY: R.C. FIELDS & ASSOCIATES, INC. 700 S. WASHINGTON STREET, SUITE 220 101 N. UNION ST. SUITE 320 ALEXANDRIA, VA 22314

WASHINGTON, DC 20007

(202) 337-7255

(703) 549 - 6422

CONTACT: VINCE MCHALE

BARNES VANZE ARCHITECTS, INC.

WALSH, COLUCCI, LUBELEY & WALSH, PC. GOROVE SLADE 2200 CLARENDON BLVD, SUITE 1300 1000 POTOMAC STREET NW SUITE L-2 ARLINGTON, VA 22201 (703) 528-4700 X5413 CONTACT: M. CATHARINE PUSKAR

> LANDSCAPE ARCHITECT: PARKER RODRIGUEZ, INC. ALEXANDRIA, VA 22314 (703) 548-5010 X112 CONTACT: TRINI RODRIGUEZ

ATTORNEY:

11140 CONNECTICUT AVE. NW #60 WASHINGTON, DC 20036 (202) 540-1926 CONTACT: ROB SCHIESEL

> ARBORIST: TNT ENVIRONMENTAL 13966 PARKEAST CIRCLE, SUITE 10 CHANTILLY, VIRGINIA 20151 (703) 466-5123 CONTACT: SOPHIE SWARTZENDRUBER

### **ZONING TABULATIONS**

- 1. TAX MAP: <u>#080.04-07-36 & #080.04-07-37</u>
- 2. ZONE OF SITE: <u>RM/TOWNHOUSE ZONE</u>
- 3. USE: EXISTING: PRIVATE SCHOOL PROPOSED: PRIVATE SCHOOL
- 4. LOT AREA: REQUIRED: <u>N/A</u> PROVIDED: <u>169,271 SQ</u>FT
- 5. OPEN SPACE: REQUIRED: N/A PROVIDED: 63,300 SF (37.4%) GROUND LEVEL: 63,300 SF ROOFTOP: 0 SF PUBLIC: 0 SF PRIVATE: 63,300 SF
  - PRIVATE OPEN SPACE W/ PUBLIC ACCESS EASEMENT: 0 SF
- 6. NUMBER OF DWELLING UNITS: ALLOWED: N/A PROPOSED: N/A

7. UNITS PER ACRE: ALLOWED: 30 PROPOSED: N/A

					GROSS	NET	PARKING
3.	FLOOR AREA:	ALLOWED:	<u>253,907 SF</u>	EXISTING:	90,571 SF	82,565 SF	0 SF
				PROPOSED:	111,109 SF	101,863 SF	0 SF

- 9. FLOOR AREA RATIO: PERMITTED: <u>1.5</u> EXISTING: <u>0.5</u> PROPOSED: <u>0.7</u> EXISTING BELOW GRADE: 0.1 EXISTING AT GRADE: 0.2 EXISTING ABOVE GRADE: 0.2 PROPOSED BELOW GRADE: 0.1 PROPOSED AT GRADE: 0.3 PROPOSED ABOVE GRADE: 0.3
- 10. AVERAGE FINISHED GRADE: 22.1'
- 11. BUILDING HEIGHT: PERMITTED: 35 FT PROPOSED: 35.0 FT
- EXISTING: PARAPET 36.1 FT TOWER: 48.6 FT; PARAPET: 38.0 FT 12. SETBACKS:
  - REQUIRED: FRONT: 6.2'(EAST), 10.0'(NORTH) SIDE: 25'

REAR: 1:1 SETBACK RATIO WITH MINIMUM 16'

PROVIDED: FRONT: 21.2'(EAST), 63.9'(NORTH) SIDE: <u>29.7'(</u>WEST)

SIDE: <u>30.7'</u> (SOUTH)

REAR: N/A 13. FRONTAGE: REQUIRED: N/A PROPOSED: <u>821.51'</u>

**★**14. PARKING: 1 SPACE FOR EACH 25 CLASSROOM SEATS

765 CLASSROOM SEATS/ 25 = 31 SPACES

STANDARD PARKING SPACES:

**COMPACT PARKING SPACES:** 35 SPACES ACCESSIBLE PARKING SPACES: 2 SPACES 67 SPACES (INCLUDING TANDEM) TOTAL PARKING SPACES: PROVIDED (AT GRADE): STANDARD PARKING SPACES: 20 SPACES COMPACT PARKING SPACES: 50 SPACES ACCESSIBLE PARKING SPACES: 4 SPACES

30 SPACES

TOTAL PARKING SPACES: 74 SPACES 15. LOADING SPACES: REQUIRED: N/A PROPOSED: N/A

15. CANOPY COVERAGE: REQUIRED: <u>42,318 SF (25%)</u> PROPOSED: <u>44,591 SF (26.3%)</u> (SEE CROWN COVER TABULATIONS ON OVERALL LANDSCAPE PLAN L1.00)

16. TRIP GENERATION: PER TRANSPORTATION IMPACT STUDY

PROPOSED: 1,659 VPD (TIS) EXISTING: 1,561 VPD (TIS) EX AM PEAK: 633 VPH PR AM PEAK: 673 VPH EX PM DISMISSAL PEAK: 305 VPH PR PM DISMISSAL PEAK: 324 VPH EX PM PEAK: 141 VPH PR PM PEAK: 150 VPH

\* SEE REQUESTED APPLICATIONS AND MODIFICATIONS FOR DETAILED INFORMATION (THIS SHEET)

## SHEET INDEX

HARDSCAPE DETAILS

HARDSCAPE DETAILS

HARDSCAPE DETAILS

PLANTING DETAILS



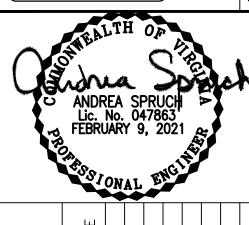
LIBRARY MEDIA CENTER INTERSTITIAL FLOOR PLAN	_LMC	A3.2
LIBRARY MEDIA CENTER MAIN FLOOR PLAN	LMC	A3.3
LIBRARY MEDIA CENTER ROOF PLAN		
PROPOSED OVERALL ROOF PLAN	LMC	A3.4b
EXTERIOR ELEVATIONS		A4.1
	LMC	A4.2
EXTERIOR ELEVATIONS	LMC	A4.3
UILDING SECTIONS	LMC	A4.7
BUILDING SECTIONS	LMC	A4.9
BUILDING SECTIONS	LMC	A4.10
BIRD'S EYE AXON		A5. <sup>^</sup>
TOWER & BRIDGE FACADE PERSPECTIVE		A5.1
PERSPECTIVE VIEW FROM SOUTHWEST		
PERSPECTIVE VIEW FROM WEST		A5.1
PERSPECTIVE VIEW FROM GREEN AND SOUTH ROYAL STRE	ET _	A5.1

PROPOSED SITE ELEVATION @ S ROYAL STREET

PROPOSED SITE ELEVATION @ GREEN STREET

MEDIA CENTER GROUND FLOOR PLAN

AREA CALCULATIONS

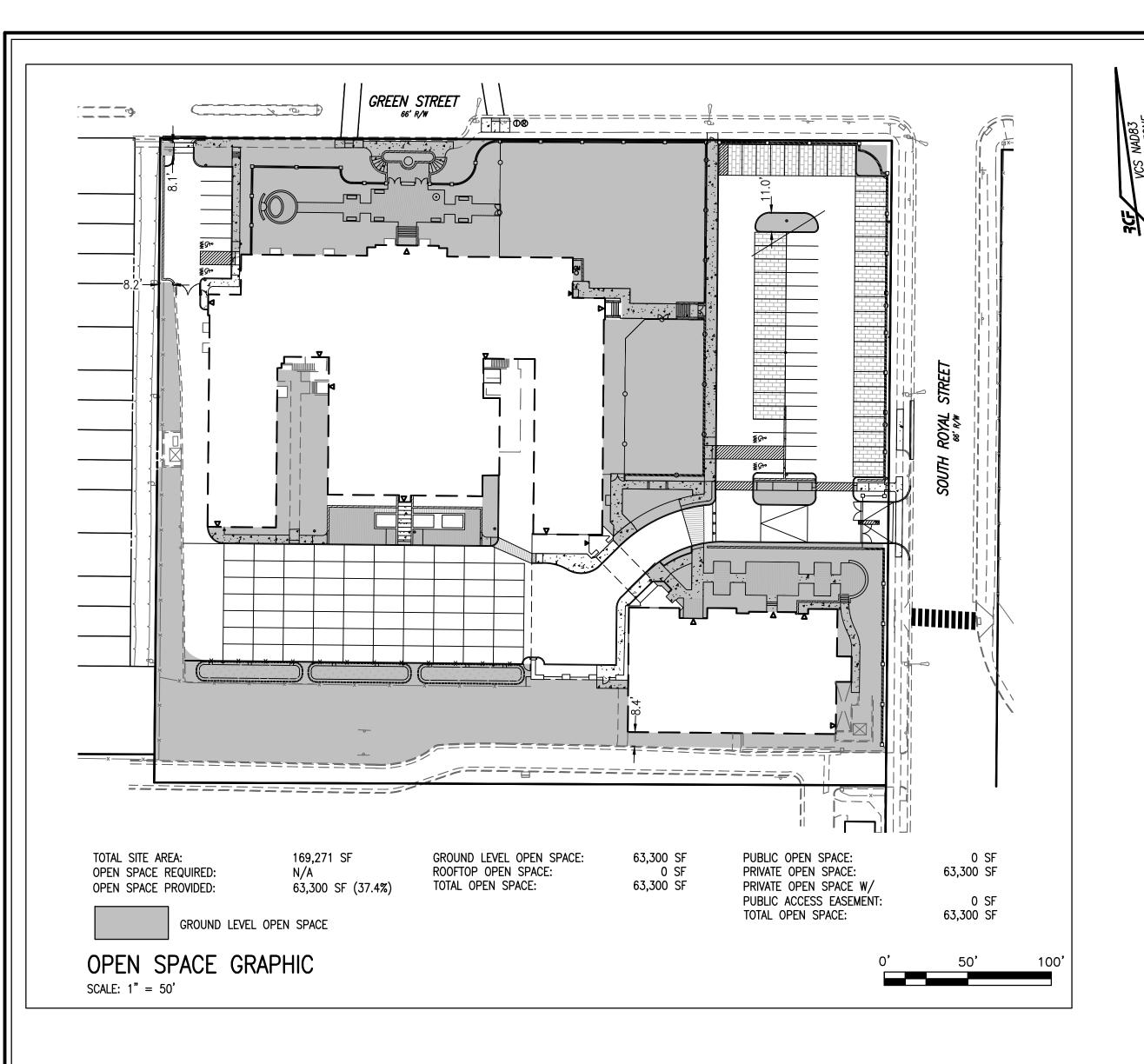


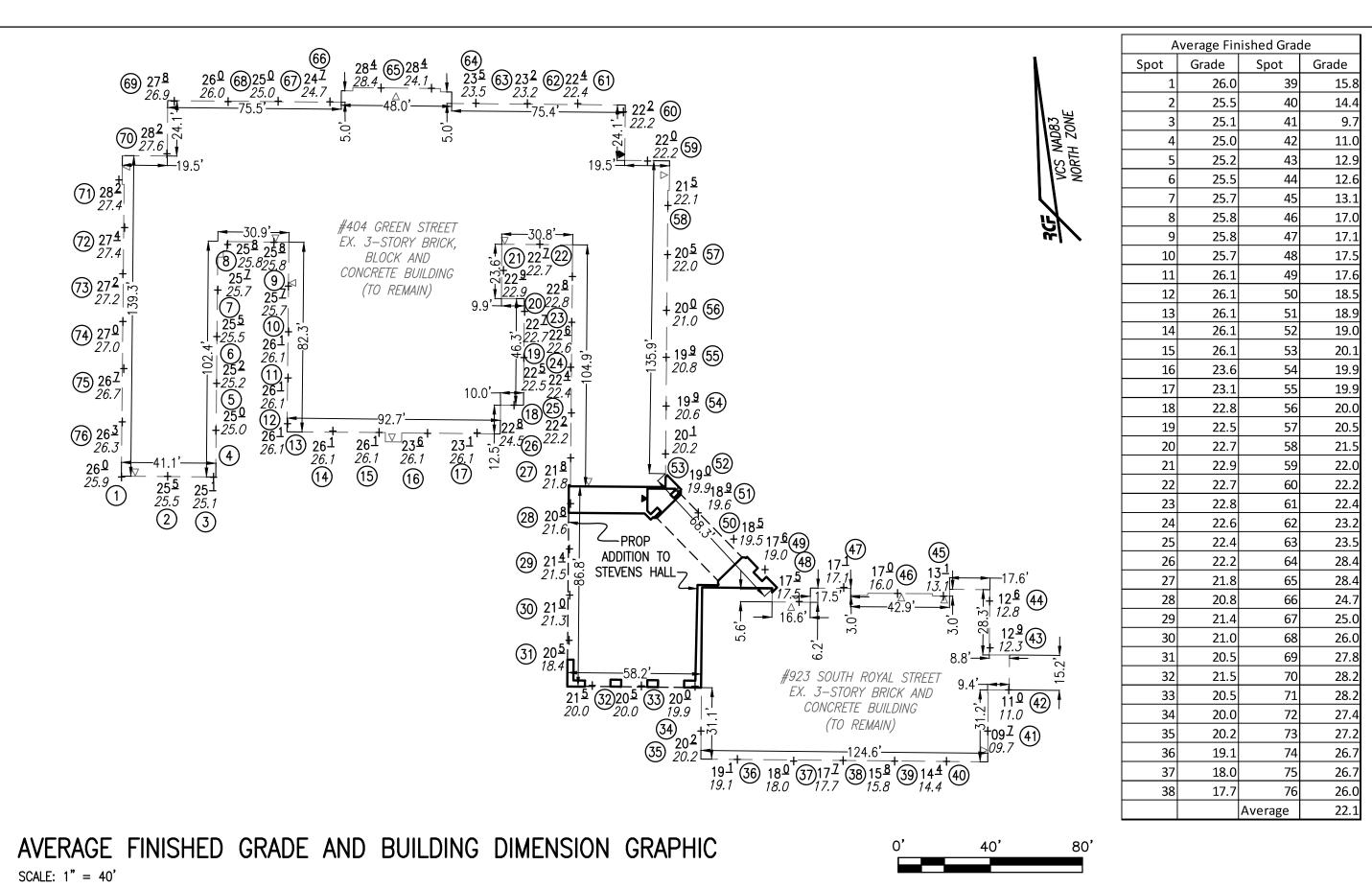
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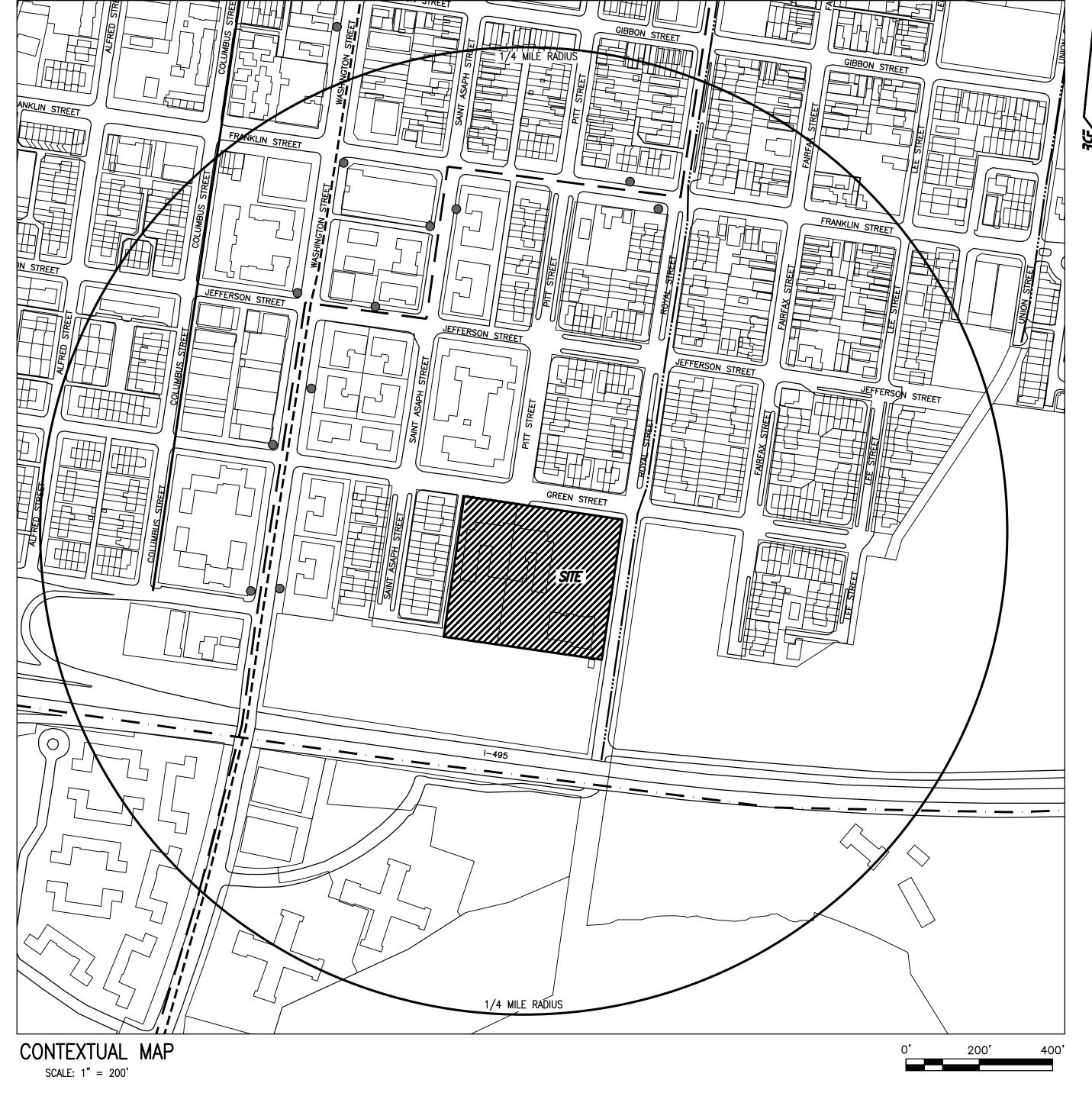
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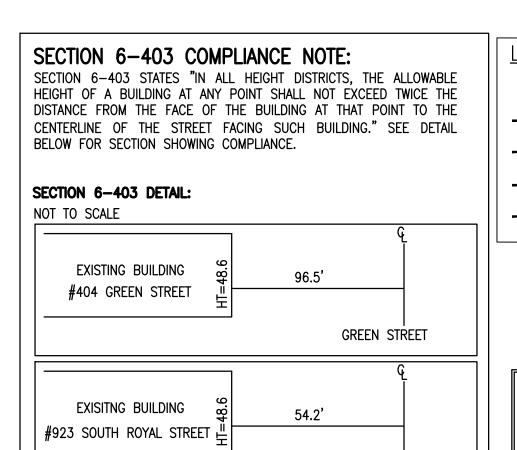
A0.1 LIBRAR

LMC A3.1









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EXISTING UTILITIES SHOWN ON THIS PLAN TAKEN FROM AVAILABLE RECORDS AND/OR FROM FIELD OBSERVATIONS. FOR EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES, NOTIFY "MISS UTILITY" AT 1-800-552-7001, 72 HOURS BEFORE THE START OF ANY EXCAVATION OR CONSTRUCTION.

LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. INTERFERENCE OR DISRUPTION OF SAME WILL NOT BE THE RESPONSIBILITY OF THIS OFFICE.

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ALEXANDRIA.

LEGEND:

BUS STOP

DASH ROUTES AT3

METRO BUS ROUTES 10ABE, 11Y

METRO BUS ROUTE NH2

ENHANCED BICYCLE CORRIDOR

DESIGN: ARO CHECKED: ACS SCALE: AS NOTED DATE: JAN 2021

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

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

CHAIRMAN CHAIRMAN DATE

CHAIRMAN CHAI

DEED BOOK NO.

SHEET 2 OF 23
FILE: 20-77

OPMENT

DEVEL

PRELIMINARY

100H

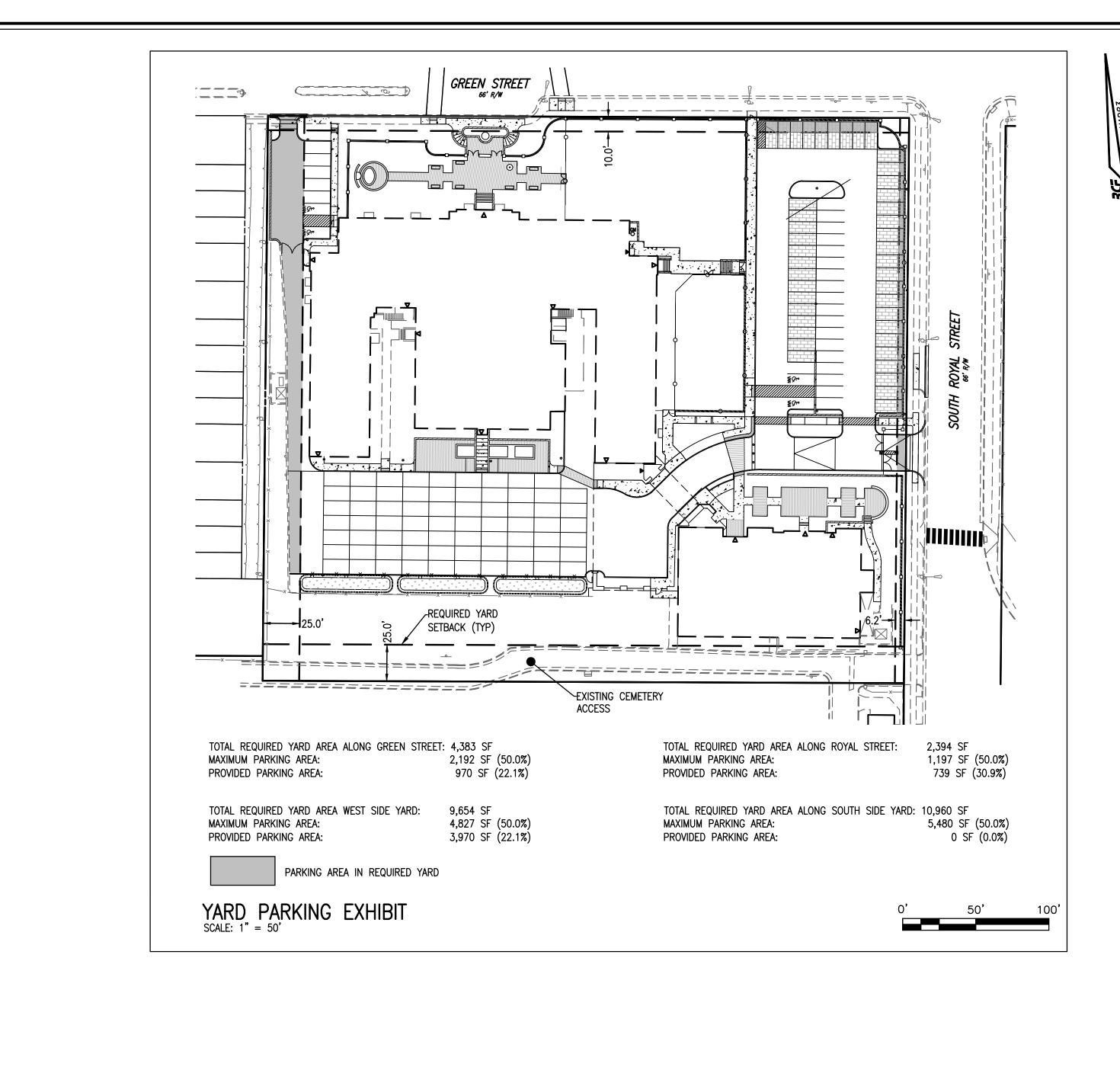
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DATE REVISION

2020\2077\DWG\DELIV\02\_CONTEXTUAL PLAN.dwg



PERMIT MARY USE DEVELOPMENT SCHOOL PRELIMINARY BASILICA  $\widetilde{\mathbf{m}}$ 

DATE REVISION

DESIGN: ARO CHECKED: ACS SCALE: 1"=50' DATE: **JAN 2021** 

APPROVED

DEPARTMENT OF PLANNING & ZONING

SITE PLAN NO. \_\_\_

INSTRUMENT NO.

SPECIAL USE PERMIT NO. 2019-0004

DEED BOOK NO. DATE

YARD PARKING EXHIBIT

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STRIPE (TYP.

INV = 17.91

□ □ EX. CLEAN□

OUT (TYP.)1-

ROOF

₹ 2 ADA PARKING

ELEV.=34.31

ELEV.=49.51

ROYAL STREET

EX. 3-STORY

BRICK AND

CONCRETE

EX. 15' VEPCO

EASEMENT

(D.B. 1579 PG. 1557)

EX. TRANS.

EX. TRENCH DRAIN

EX. 6"-

PVC

×21.8

18 COMPACT I

п ×22.4/

**TEXT LEGEND:** 

UTILITY POLE

LIGHT POLE

= DEGREES ' = MINUTES (OR FEET) " = SECONDS (OR INCHES) % = PERCENT

BUILDING ENTRANCES

APPROX = APPROXIMATE

EVE = EMERGENCY VEHICLE EASEMENT EX = EXISTINGFDC = FIRE DEPT. CONNECTION FF = FINISH FLOOR

 $\blacksquare$ 

д

PVC = POLYVINYL CHLORIDE R = RADIUSFH = FIRE HYDRANT RCP = REINFORCED CONCRETE PIPE RELOC = RELOCATEDRET = RETAININGRESID = RESIDENTIAL REQ = REQUIRED

PP = POWER POLE

PROP = PROPOSED

GM = GAS METERROW = RIGHT-OF-WAYG/S = GAS SERVICES = SOUTHGV = GAS VALVESAN = SANITARYHC = HEADER CURB SEW = SEWERSF = SQUARE FEETHDPE = HIGH DENSITY POLYETHYLENE SQ FT = SQUARE FEETSTM = STORMSTR = STRUCTURE

> **APPROVED** SPECIAL USE PERMIT NO. \_\_\_\_2019-0004 DEPARTMENT OF PLANNING & ZONING SITE PLAN NO. \_\_\_\_

> > DEED BOOK NO.

EX. WV

STRIPE

(TYP.)

EX. 15" STM.

SEW.

EX. CONC

DUMPSTER

AREA

DATE: JAN 2021 EXISTING CONDITIONS

SHEET 4 OF 2.

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DESIGN: ARO

CHECKED: ACS

SCALE: 1" = 30'

REVISION

HPS = HIGH PRESSURE SODIUM BM = BENCHMARKIPF = IRON PIPE FOUND BSMT = BASEMENT SW = SIDEWALKINV = INVERTBOL = BOLLARDTBR = TO BE REMOVED INSTR = INSTRUMENT BW = BOTTOM OF WALL□ N <u>81°</u>42'49" W ~ 438.34 □ □□□ TBS = TO BE SAVEDINTX = INTERSECTION CATV = CABLE UTILITY TM = TAX MAPIRF = IRON ROD FOUND CL = CLASSEX. TRENCHII TMH = TELEPHONE MANHOLE EX. L = LUMENSC/L = CENTERLINEDRAIN TC = TOP OF CURBHEADSTONE LAT = LATERALCLR = CLEARANCEPORTION OF CHURCH STREET INV. IN=11.7 TW = TOP OF WALLPORTION OF CHURCH STREET (TYP.) LED = LIGHT EMITTING DIODE CLF = CHAIN LINK FENCEINV. OUT=8.13 TRAF SIG = TRAFFIC SIGNAL (ABANDONED PER CITY LL = LANDSCAPE LIGHT (ABANDONED PER CITY #1001 S ROYAL ST, CMP = CORRUGATED METAL PIPE TYP = TYPICALLOC = LOCATIONORDINANCE 359) ORDINANCE 741) CI = CURB INLETST. MARYS CATHOLIC CEMETERY UGE = UNDERGROUND ELECTRIC LP = LIGHT POLE CO = CLEAN OUTUP = UTILITY POLE MAX = MAXIMUMCONC = CONCRETE310 DUKE ST. VCS = VIRGINIA COORDINATE SYSTEM ME = MATCH EXISTING C&G = CURB & GUTTER VPD = VEHICLES PER DAY ALEXANDRIA, VA. 22314 MH = MANHOLECVR = COVERTM #083.02-01-01 W = WESTMIN = MINIMUMDB = DEED BOOK" ZONE: RM W/L = WATER LINEMON = MONUMENTDHF = DRILL HOLE FOUND USE: PRIVATE CEMETERIES WM = WATER METERMPH = MILES PER HOURDIP = DUCTILE IRON PIPE MW = MONITORING WELL W/S = WATER SERVICEDOM = DOMESTICN = NORTHWSE = WATER SURFACE ELEVATION DU = DWELLING UNIT EX.LP OHW = OVERHEAD WIRE WV = WATER VALVEE = EASTPED = PEDESTRIANWW = WINDOW WELL EBOX = ELECTRICAL BOXTHIS DRAWING IS A SERVICE DOCUMENT OF R.C. FIELDS & ASSOCIATES, INC. AND MAY NOT BE USED OR XING = CROSSINGPN = PANELESMT = EASEMENT**TOPOGRAPHY NOTE:** REPRODUCED WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER AND/OR LAND SURVEYOR. PG = PAGEEXISTING CONDITIONS SURVEY NOTES: EP = EDGE OF PAVEMENTTHIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND UTILITY INFORMATION. AS SHOWN ON THIS PLAN, IS TAKEN FROM THE RECORDS AND/OR FIELD SURVEY EXISTING UTILITIES SHOWN ON THIS PLAN TAKEN FROM AVAILABLE RECORDS AND/OR FROM FIELD OBSERVATIONS RESPONSIBLE CHARGE OF WIM DE SUTTER, LS FROM AN ACTUAL FOR EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES. NOTIFY "MISS UTILITY" AT 1-800-552-7001. COMPLETED AND CANNOT BE GUARANTEED. FOR EXACT LOCATIONS OF EXISTING UNDERGROUND GROUND SURVEY MADE UNDER MY SUPERVISION; THE IMAGERY AND/OR HOURS BEFORE THE START OF ANY EXCAVATION OR CONSTRUCTION. UTILITIES, NOTIFY "MISS UTILITY" AT 1-800-552-7001, 72 HOURS BEFORE THE START OF ANY ORIGINAL DATA WAS OBTAINED ON DECEMBER 19, 2018; AND THIS EXCAVATION OR CONSTRUCTION. PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS CHAIRMAN, PLANNING COMMISSION location and depth of all existing underground utilities to be verified by contractor prior LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR CONSTRUCTION. INTERFERENCE OR DISRUPTION OF SAME WILL NOT BE THE RESPONSIBILITY OF THIS OFFICE. MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED. DATE RECORDED PRIOR TO CONSTRUCTION, CONTRACTOR/ENGINEER SHOULD DIG TEST PITS BY HAND AT ALL UTILITY CROSSINGS TO VERIFY EXACT LOCATION. ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF INSTRUMENT NO. © 2021 R.C. FIELDS & ASSOCIATES, INC.

×/| PARKING SRACES ×2.3.3

5 I STANDAR

PARKING' SPACE

SIGN (TYP.)

×24.9

EX. HEADSTONE i

19 🔻

EX. U.P. —

(TYP.)

×24.5

×24.4

EX. ĈHAIN LINK FENCE

EX. PLAYGROUND

# = NUMBER $\mathbf{0} = \mathsf{AT}$ lbs = POUNDS A = ARCAC = ACRE

BC = BOTTOM OF CURBBF = BASEMENT FLOORBLDG = BUILDING

ADA = AMERICANS W/ DISABILITIES ACT BFE = BASE FLOOD ELEVATION

HDCP = HANDICAPHP = HIGH POINT

 $\nabla$ 

C

 $\phi$ 

FT = FEET

GI = GRATE INLET

G/L = GAS LINE

### ADJOINING LOT INFORMATION

904 S. SAINT ASAPH ST. 900 S. SAINT ASAPH ST. 902 S. SAINT ASAPH ST. 906 S. SAINT ASAPH ST. N/F GAYLE R. & TERENCE W. N/F CAROL R. OR DENNIS M. N/F NANCY E. OR RANDALL A. N/F HILLARY H. LEWIS ANDERSON, TR. KENNEDY *MADDOX* 906 S. SAINT ASAPH ST. 904 S. SAINT ASAPH ST. 900 S. SAINT ASAPH ST. 902 S. SAINT ASAPH ST. ALEXANDRIA, VA. 22314 ALEXANDRIA, VA. 22314 ALEXANDRIA, VA. 22314 ALEXANDRIA, VA. 22314 TM #080.04-07-23 *TM #080.04-07-22* TM #080.04-07-20 TM #080.04-07-21 ZONE: RM ZONE: RM ZONE: RM ZONE: RM USE: TOWNHOUSE USE: TOWNHOUSE USE: TOWNHOUSE USE: TOWNHOUSE DB. 1705 PG. 681 INSTRUMENT #170010738 DB. 1570 PG. 327 DB. 1510 PG. 657 COLONIAL PROPERTIES LOT 29 COLONIAL PROPERTIES LOT 30 COLONIAL PROPERTIES LOT 32 COLONIAL PROPERTIES LOT 31 912 S. SAINT ASAPH ST. 910 S. SAINT ASAPH ST. 914 S. SAINT ASAPH ST. 908 S. SAINT ASAPH ST. N/F HELENE ELIZABETH BELL N/F JONATHAN H. OR KERRI H. N/F JUDITH A. OR MICHAEL F. N/F MARY L. SCRIVA ATTN. HELENE E. LAFONTAINE KERR LAVANGA, TRS. 908 S. SAINT ASAPH ST. 8224 CHANCERY COURT 914 S. SAINT ASAPH ST. ALEXANDRIA, VA. 22314 912 S. SAINT ASAPH ST. ALEXANDRIA. VA. 22308 ALEXANDRIA, VA. 22314 TM #080.04-07-24 ALEXANDRIA, VA. 22314 TM #080.04-07-25 TM #080.04-07-27 ZONE: RM *TM #080.04-07-26* ZONE: RM ZONE: RM USE: SEMI-DETACHED HOUSE ZONE: RM CW15001004 USE: SEMI-DETACHED HOUSE USE: TOWNHOUSE USE: TOWNHOUSE COLONIAL PROPERTIES LOT 28 INSTRUMENT #150016398 INSTRUMENT #060009301 INSTRUMENT #170001380 COLONIAL PROPËRTIES LOT 26 COLONIAL PROPERTIES LOT 27 COLONIAL PROPERTIES LOT 25 916 S. SAINT ASAPH ST. 918 S. SAINT ASAPH ST. 920 S. SAINT ASAPH ST. 922 S. SAINT ASAPH ST. N/F PATRICIA A. TIERNEY & HELGA N/F JAMES P. OR HEATHER P. N/F BRENDA K. OR DAVID W. N/F CHRISTINE BROWN M. TILLINGHAST **BECK** 922 S. SAINT ASAPH ST. 918 S. SAINT ASAPH ST. 916 S. SAINT ASAPH ST. 920 S. SAINT ASAPH ST. ALEXANDRIA, VA. 22314 ALEXANDRIA, VA. 22314 ALEXANDRIA, VA. 22314 ALEXANDRIA, VA. 22314 TM #080.04-07-31 *TM #080.04-07-29* TM #080.04-07-28 TM #080.04-07-30 ZONE: RM ZONE: RM ZONE: RM ZONE: RM USE: TOWNHOUSE USE: TOWNHOUSE USE: TOWNHOUSE USE: SEMI-DETACHED HOUSE INSTRUMENT #130006470 INSTRUMENT #050039883 INSTRUMENT #040001131 INSTRUMENT #050002990 COLONIAL PROPERTIES LOT 21 COLONIAL PROPERTIES LOT 23 COLONIAL PROPERTIES LOT 24 COLONIAL PROPERTIES LOT 22 924 S. SAINT ASAPH ST. 930 S. SAINT ASAPH ST. 926 S. SAINT ASAPH ST. 928 S. SAINT ASAPH ST. N/F RYAN R. MERTINS & INDIA A. N/F JOHN OR ELISE LATAWIEC N/F CHRISTINE B. & N/F LAUREN KRAMER MOORHOUSE MICHAEL N. SCHLACTER 926 S. SAINT ASAPH ST. 928 S. SAINT ASAPH ST. 924 S. SAINT ASAPH ST. ALEXANDRIA, VA. 22314 930 S. SAINT ASAPH ST. ALEXANDRIA, VA. 22314 ALEXANDRIA, VA. 22314 TM #080.04-07-33 ALEXANDRIA, VA. 22314 TM #080.04-07-34 *TM #080.04-07-32* ZONE: RM *TM #080.04-07-35* ZONE: RM ZONE: RM USE: TOWNHOUSE ZONE: RM USE: TOWNHOUSE USE: TOWNHOUSE INSTRUMENT #170008668 USE: SEMI-DETACHED HOUSE INSTRUMENT #120000303 INSTRUMENT #170005396 COLONIAL PROPERTIES LOT 19 INSTRUMENT #130002938 COLONIAL PROPERTIES LOT 18 COLONIAL PROPERTIES LOT 20 COLONIAL PROPERTIES LOT 517 VACATED R/W & ALLEY 413 GREEN ST. 832 S. PITT ST. 409 GREEN ST. N/F BRADFORD E. & SOFIA V. N/F JOHN L. MCPHERSON SCHWARTZ *N/F SETH EHRLICH* N/F EDWARD SEMONIAN 832 S. PITT ST. 413 GREEN ST. 409 GREEN ST. 411 GREEN ST. ALEXANDRIA, VA. 22314 ALEXANDRIA, VA. 22314 ALEXANDRIA, VA. 22314 ALEXANDRIA, VA. 22314 TM #080.04-04-17 TM #080.04-04-18 TM #080.04-04-20 TM #080.04-04-19 ZONE: RM ZONE: RM ZONE: RM ZONE: RM USE: SEMI-DETACHED HOUSE USE: SEMI-DETACHED HOUSE USE: SEMI-DETACHED HOUSE USE: TOWNHOUSE INSTRUMENT #130025969 INSTRUMENT #150006243 INSTRUMENT #160020386 INSTRUMENT #180003266 YATES GARDEN LOT 825 SEC. 1 YATES GARDEN LOT 824 SEC. 1 YATES GARDEN LOT 822 SEC. 1 YATES GARDEN LOT 823 SEC. 1 BLK. 2 BLK. 2 BLK. 2 BLK. 2 405 GREEN ST. 827 S. ROYAL ST. 403 GREEN ST. 333 GREEN ST. N/F MICHAEL OR MEGHAN N/F CHARLES T. NELSON & N/F JEFFREY A. BLOUNT N/F AMY L. OR PAUL OSULLIVAN LOUISA F. MILLER COURTNEY 6300 GOLF COURSE SQ. 405 GREEN ST. 827 S. ROYAL ST. 333 GREEN ST. ALEXANDRIA, VA. 22037 ALEXANDRIA. VA. 22314 ALEXANDRIA, VA. 22314 ALEXANDRIA, VA. 22314 *TM #080.04-04-22* TM #080.04-04-21 TM #080.04-04-23 *TM #080.04-05-16* ZONE: RM ZONE: RM ZONE: RM ZONE: RM USE: TOWNHOUSE USE: SEMI-DETACHED HOUSE USE: SEMI-DETACHED HOUSE USE: TOWNHOUSE DB. 1473 PG. 1676

INSTRUMENT #150008615

YATES GARDEN LOT 19 SEC. 1

BLK. 2

INSTRUMENT #060033516

YATES GARDEN LOT 16 BLK. 5

# UTILITY OWNERSHIP NOTE:

DB. 1161 PG. 625

YATES GARDEN LOT 21 SEC. 1

BLK. 2

 GAS: ALL GAS LINES SHOWN ON THIS PLAN ARE OWNED AND MAINTAINED BY WASHINGTON GAS COMPANY. CONTACT: KEN McCONKEY 703-750-4756; ADDRESS: WASHINGTON GAS, 6801 INDUSTRIAL ROAD, SPRINGFIELD, VA 22151.

YATES GARDEN LOT 20 SEC. 1

BLK. 2

- ELECTRIC: ALL ELECTRIC UTILITIES SHOWN ON THIS PLAN ARE OWNED AND MAINTAINED BY DOMINION VIRGINIA POWER. ANY RELOCATION OF EXISTING POLES AND LINES WILL BE COORDINATED WITH DOMINION VIRGINIA POWER. CONTACT: 1-866-366-4357; ADDRESS: DOMINION POWER, P.O. BOX 26666, RICHMOND, VA 23261.
- WATER: ALL EXISTING WATER LINES AND FIRE HYDRANTS SHOWN ON THIS PLAN ARE OWNED AND MAINTAINED BY VIRGINIA AMERICAN WATER COMPANY (V.A.W.C.). EXISTING/PROPOSED WATER SERVICES FROM METERS TO THE PROPOSED BUILDINGS ARE OWNED AND MAINTAINED BY THE PROPERTY OWNER. CONTACT: NETWORK SUPERVISOR FOR THE SOUTHEAST REGION HAO (STEVEN) CHEN 703-706-3889; ADDRESS: VIRGINIA AMERICAN WATER COMPANY, 2223 DUKE STREET, ALEXANDRIA, VA 22314.
- SANITARY SEWER: ALL EXISTING SANITARY SEWER MAINS SHOWN ON THIS PLAN ARE OWNED AND MAINTAINED BY THE CITY OF ALEXANDRIA. EXISTING/ PROPOSED SANITARY LATERAL(S) WILL BE OWNED AND MAINTAINED BY THE PROPERTY OWNER. CONTACT: PUBLIC WORKS SERVICES, 2900 BUSINESS CENTER DRIVE, ALEXANDRIA, VA. TELEPHONE: 703-746-4357.
- STORM SEWER: ALL EXISTING AND PROPOSED STORM SEWER LOCATED IN THE PUBLIC RIGHT-OF-WAY SHOWN ON THIS PLAN IS OWNED AND MAINTAINED BY THE CITY OF ALEXANDRIA. ANY PROPOSED ON-SITE STORM SEWER WILL BE MAINTAINED BY THE PROPERTY OWNER. CONTACT: PUBLIC WORKS SERVICES, 2900 BUSINESS CENTER DRIVE, ALEXANDRIA, VA. TELEPHONE: 703-746-4357.
- TELEPHONE: ALL TELEPHONE LINES ARE OWNED BY VERIZON. CONTACT: SECTION MANAGER MIKE TYSINGER 804-772-6625; ADDRESS: VERIZON. VIRGINIA, INC., 3011 HUNGARY SPRING ROAD, 2ND FLOOR, RICHMOND, VA 23228.

### EXISTING SANITARY SEWER INFORMATION

EX. SAN M.H.

TOP = 10.15

INV. IN=2.28

INV. OUT=2.24

EX. SAN M.H.

INV. IN (WEST)=7.07

INV. IN (NORTH)=7.70

INV. OUT=7.00

TOP = 15.16

(A)EX. SAN M.H. TOP = 9.51INV. IN (NORTH)=1.09 INV. IN (EAST)=1.74 INV. OUT=0.84

EX. SAN M.H.

TOP = 9.69

INV. IN (NORTH)=2.71

INV. IN (EAST)=2.88

INV. OUT=2.61

EX. SAN M.H. TOP=9.88 INV. IN=1.97INV. OUT=1.91

> BENCHMARK #2 EX. SAN M.H. TOP=10.14 INV. IN (NORTH)=1.34 INV. IN (WEST)=2.42 INV. OUT=1.33

EX. SAN. M.H. TOP=8.71 INV. IN (WEST)=1.16 INV. IN (NORTH) = -0.06INV. OUT=0.21

(1) 6" TREE (2) 10" TREE 12" TREE (4) 8" TREE 6" TREE 6" TREE 10" TREE (7) 10" TREE (9) 12" TREE (10) 27" TREE (11) 24" TREE (12) 24" TREE (13) 21" TREE (14) 10" TREE (15) 18" TREE/TWIN (16) 15" TREE (17) 15" TREE

EXISTING TREE TABLE

(32) 8" TREE/TRIPLE (33) 12" TREE (34) 12" TREE (35) 24" MAGNOLIA (37) 6" CREPE MYRTLE (38) 15" TREE (39) 18" TREE (40) 12" TREE (41) 12" TREE (42) 12" TREE (43) 6" TREE/TWIN (18) 15" TREE/DEAD (44) 27" MAGNOLIA (19) 15" TREE (45) 21" HOLLY (20) 12" TREE (47) 8" TREE (21) 15" TREE (48) 6" TREE (22) 10" TREE (49) 6" TREE (23) 8" TREE (50) 4" TREE (24) 12" TREE (51) 4" TREE (52) 10" TREE (53) 12" TREE

(30) 15" TREE

(31) 18" TREE

(25) 10" TREE/TWIN (26) 8" TREE/QUAD (27) 8" TREE/TRIPLE (28) 15" TREE/TWIN (29) 10" TREE/TRIPLE

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DESIGN: ARO CHECKED: ACS SCALE: N/A DATE: JAN 2021

EXISTING CONDITIONS INFORMATION

TOP=9.20 TOP=12.10 TOP = 10.48TOP = 9.45BOTTOM = 11.0NO ACCESS NO ACCESS NO ACCESS INV. OUT=11.35

### EXISTING STORM SEWER INFORMATION $\sqrt{2}$ 7

(1)	$\langle 2 \rangle$	$\langle 3 \rangle$	$\langle 4 \rangle$
EX. STM. GRATE INLET TOP=9.00 INV. IN(WEST)=4.70 INV. IN (SOUTH)=6.72 INV. IN (NORTH)=6.32 INV. OUT=4.50	EX. STM. M.H. TOP=11.97 INV. IN=5.22 INV. OUT=4.82	EX. STM. M.H. TOP=11.53 INV. IN (WEST)=7.93 INV. IN (NORTH)=7.28 INV. OUT=6.63	EX. COMBINED STM. SAN. $M.H.$ $TOP=9.07$ $INV. IN(NORTH)=-0.17$ $INV. OUT=-0.27$
$\langle 5 \rangle$	$\langle 6 \rangle$	(7)	8
EX. STM. M.H. TOP=8.84	EX. STM. M.H.  TOP=12.55  INV. IN (NORTH)=8.05  INV. IN (WEST)=7.90  INV. OUT=7.80	BENCHMARK #1 EX. STM. M.H. TOP=18.78 INV. IN=15.00 INV. OUT=12.25	EX. STM. GRATE INLET  TOP=10.81  INV. OUT=8.74
9) EX. STM. GRATE INLET TOP=11.20 INV. OUT=7.60	\( \lambda 10 \rangle \) \( EX. \ STM \ M.H. \) \( TOP=10.07 \) \( INV. \ IN \ (NORTH)=6.79 \) \( INV. \ IN \ (WEST)=6.03 \) \( INV. \ IN \ (SOUTH)=7.37 \) \( INV. \ OUT=4.82 \)	\(\left(11\right)\) EX. STM. M.H. \(TOP=9.09\) INV. IN=7.24 INV. OUT=6.69	(12)  EX. COMBINED STM. SAN. M.H.  TOP=21.08  INV. IN (WEST)=14.88  INV. IN (SOUTH)=13.00  INV. OUT=13.00
⟨ <u>1.3</u> ⟩	$\langle 14 \rangle$	<i>⟨</i> 1 <i>5⟩</i>	$\langle 16 \rangle$
EX. STM. H.H.  TOP=21.18  INV. IN=17.20  INV. OUT=16.58	EX. STM. H.H.EX. STM TOP=21.70 INV. IN=19.39 INV. OUT=17.90	M. GRATE INLET TOP=. INV. IN=6.35 INV. OUT=0.45	9.05 EX. STM. GRATE INLET TOP=9.09 INV. OUT=6.94
<i>⟨</i> 17⟩	(18)	$\langle \overline{19} \rangle$	<i>⟨20⟩</i>
EX. STM. CATCH BASIN  TOP=9.14  INV. IN (NORTH)=7.14  INV. IN (SOUTH)=6.74  INV. OUT=5.99	EX. STM. H.H. EX  TOP=11.98  INV. IN=8.00  INV. OUT=7.93	C. STM. GRATE INLET TOP=13.45 INV. OUT=11.85	EX. YARD INLET  TOP=11.45  BOTTOM=10.37  INV. OUT=10.73
(21)	(22)	\(\begin{aligned} 23 \right\)	(24)
EX. STM. CATCH BASIN	EX. STM. CATCH BASIN	EX. STM. CATCH E	BASIN EX. YARD INLET TOP=12 10

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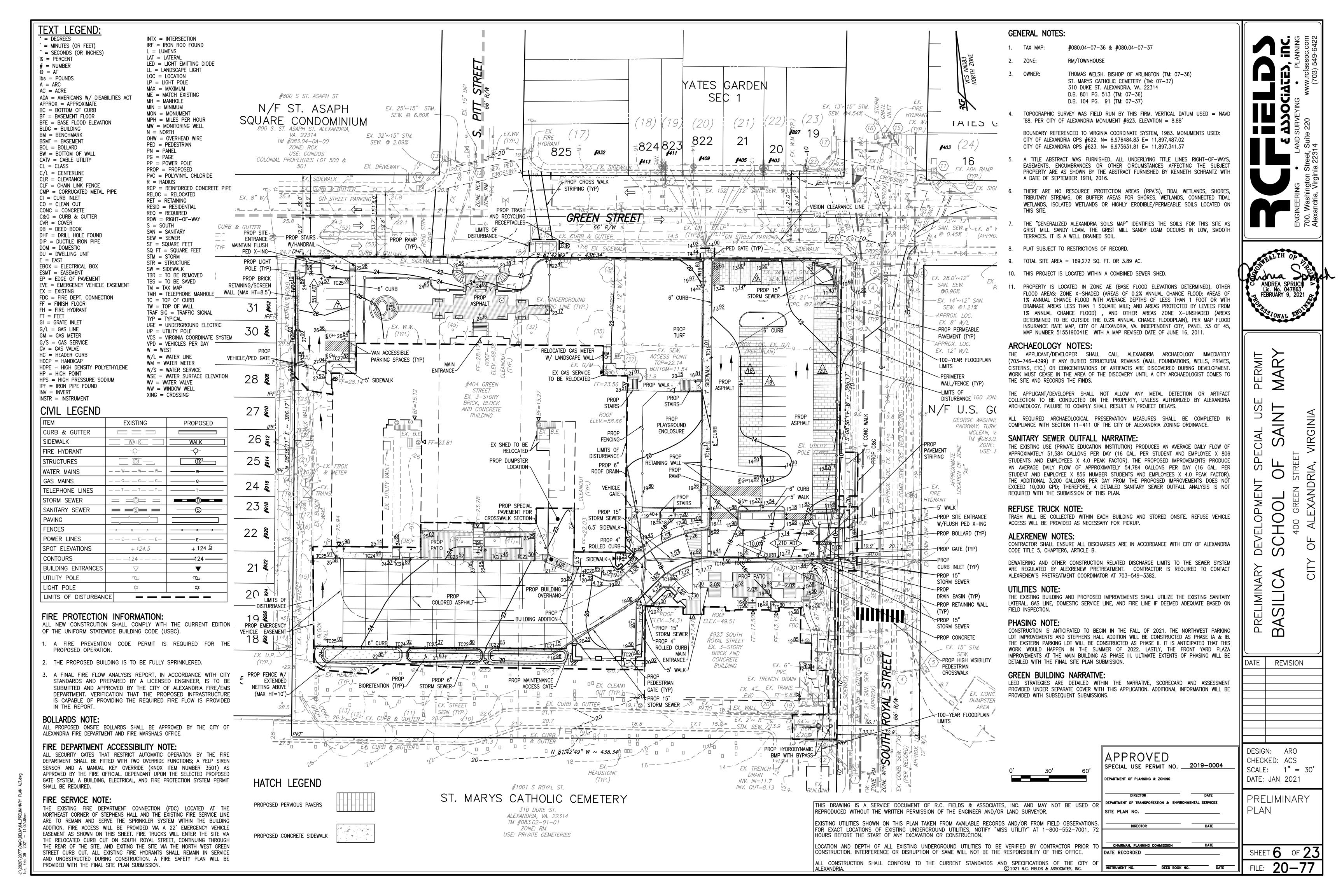
CHAIRMAN, PLANNING COMMISSION DATE RECORDED DEED BOOK NO. INSTRUMENT NO.

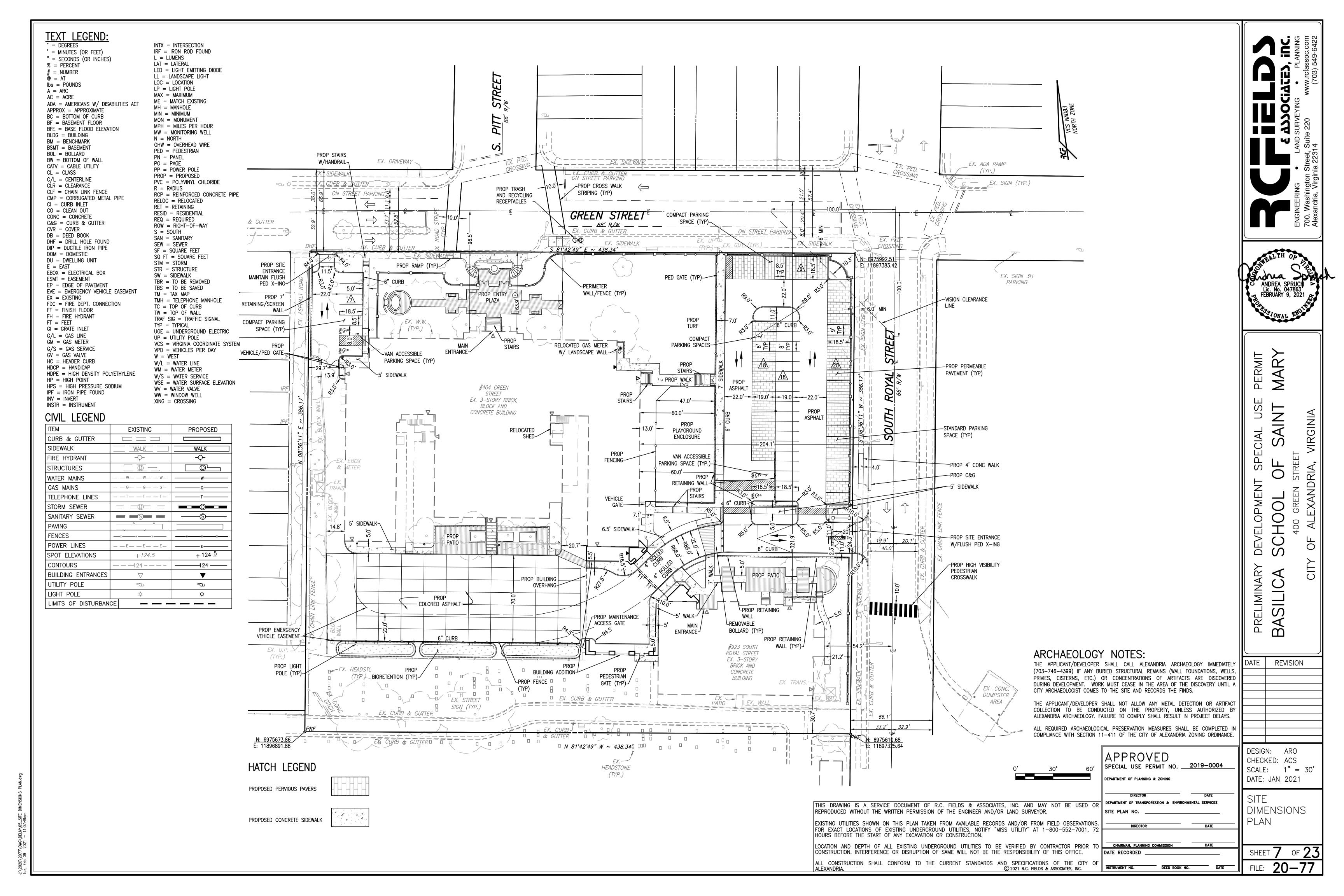
HOURS BEFORE THE START OF ANY EXCAVATION OR CONSTRUCTION.

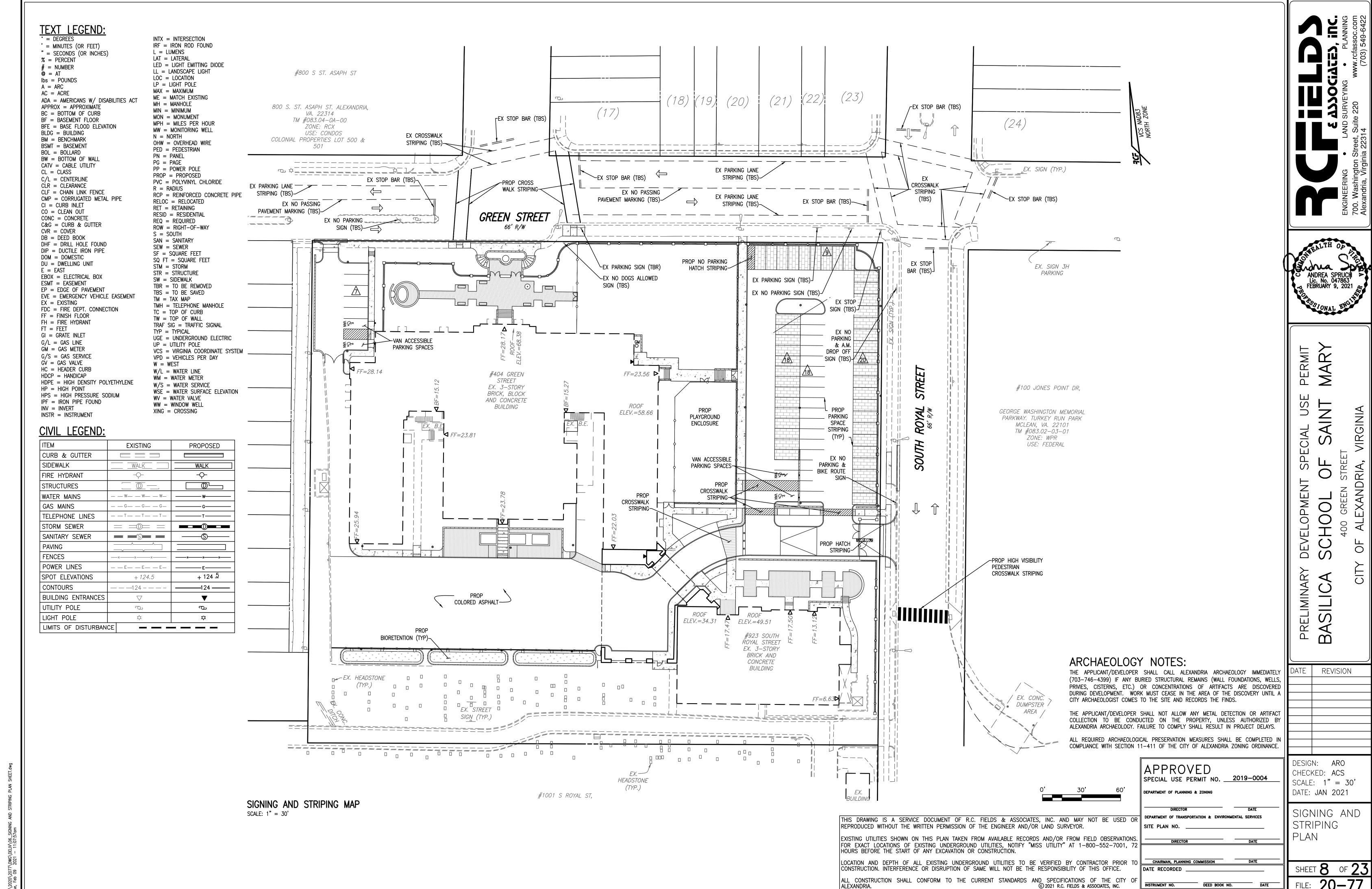
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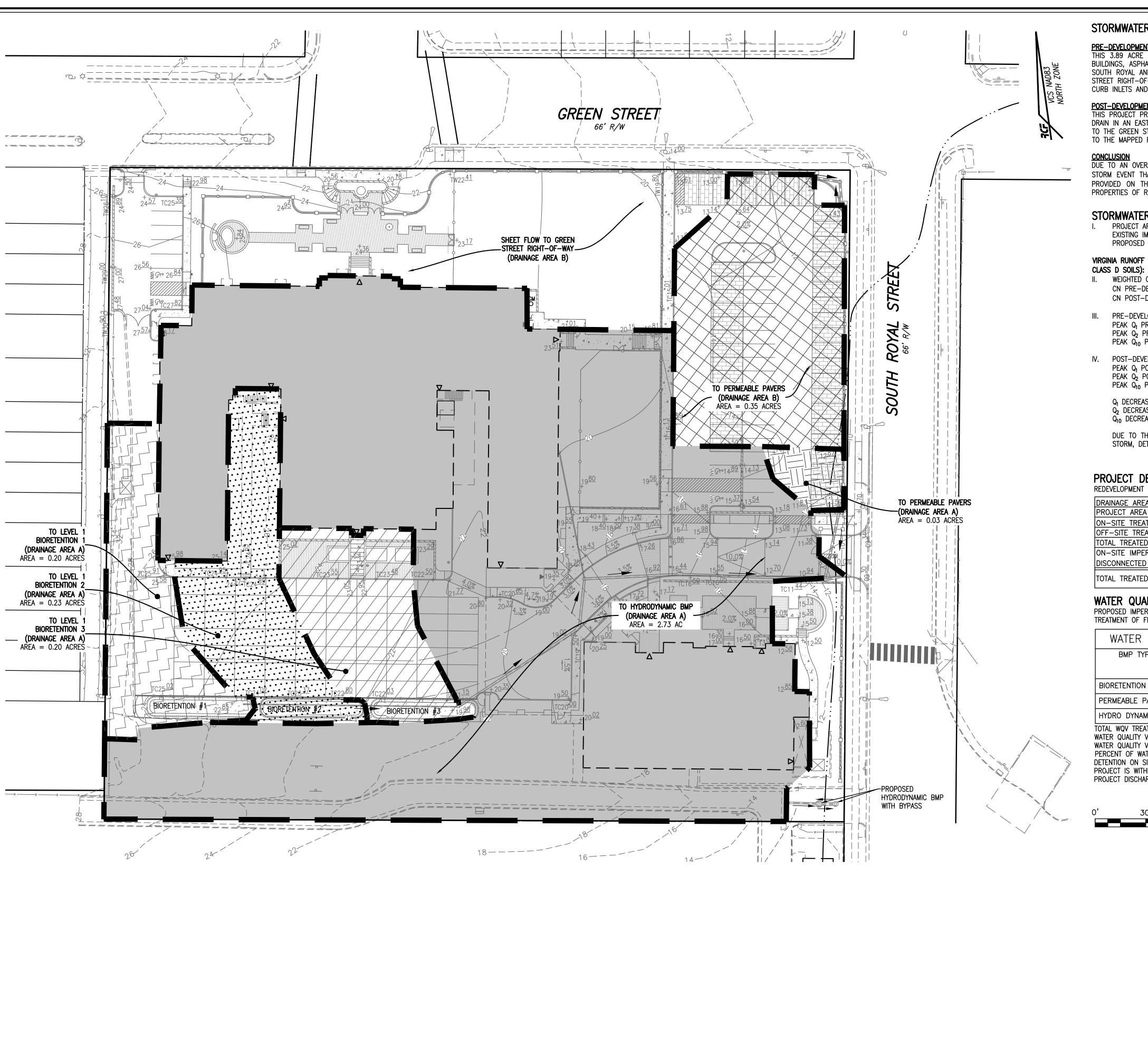
SITE PLAN NO.

**APPROVED** 









STORMWATER MANAGEMENT NARRATIVE:

PRE-DEVELOPMENT CONDITIONS:
THIS 3.89 ACRE PROJECT AREA IS LOCATED IN THE COMBINED SEWER SYSTEM WATERSHED. IN EXISTING CONDITIONS, THE SITE CONSISTS OF TWO EXISTING BUILDINGS, ASPHALT PARKING LOT, AND VEGETATED AREAS. RUNOFF FROM THE ENTIRE PARCEL DRAINS IN A NORTHERLY AND EASTERLY DIRECTION TO THE SOUTH ROYAL AND GREEN STREET RIGHT-OF-WAYS. AS A PORTION OF THE RUNOFF IS DIRECTED IN AN EASTERLY DIRECTION, ENTERING THE SOUTH ROYAL STREET RIGHT-OF-WAY, THE RUNOFF ENTERS THE MAPPED FLOODPLAIN OF THE POTOMAC RIVER. THE REMAINDER OF THE RUNOFF IS COLLECTED VIA EXISTING CURB INLETS AND THEN CONVEYED IN A SOUTHERLY DIRECTION UNTIL IT ENTERS A MAPPED FLOODPLAIN OF THE POTOMAC RIVER.

**POST-DEVELOPMENT CONDITIONS:** 

THIS PROJECT PROPOSES THE CONSTRUCTION OF BUILDING ADDITIONS AND ASSOCIATED SITE IMPROVEMENTS. RUNOFF FOR THE ENTIRE SITE WILL CONTINUE TO DRAIN IN AN EASTERLY DIRECTION, TO THE SOUTH ROYAL STREET RIGHT-OF-WAY AND THE FLOODPLAIN OF THE POTOMAC RIVER, AND A NORTHERLY DIRECTION. TO THE GREEN STREET RIGHT-OF-WAY WHERE THE RUNOFF IS CONVEYED IN A SOUTHERLY DIRECTION, AS IN EXISTING CONDITIONS. ALL RUNOFF IS CONVEYED TO THE MAPPED FLOODPLAIN OR THROUGH THE EXISTING COMBINED SEWER SYSTEM UNTIL IT ENTERS A MAPPED FLOODPLAIN.

DUE TO AN OVERALL DECREASE OF SITE IMPERVIOUS AREA, THE SITE RELEASES A POST-DEVELOPMENT PEAK RATE FOR THE 1, 2, AND 10-YEAR, 24-HOUR STORM EVENT THAT IS LESS THAN THE PRE-DEVELOPMENT PEAK FLOW RATE FOR THE 1, 2, AND 10-YEAR, 24-HOUR STORM EVENT (SEE COMPUTATIONS PROVIDED ON THIS SHEET). THEREFORE, THE SMALL PORTION OF RUNOFF THAT EXITS THE SITE WILL HAVE NO ADVERSE IMPACT ON DOWN GRADIENT

### STORMWATER RUNOFF COMPUTATIONS

I. PROJECT AREA = 169,271 SQ.FT. OR 3.89 ACRES EXISTING IMPERVIOUS AREA = 119,098 SQ.FT. OR 2.73 ACRES PROPOSED IMPERVIOUS AREA = 115,591 SQ.FT. OR 2.65 ACRES

### VIRGINIA RUNOFF REDUCTION METHOD (PER TR-20, TYPE II, 24-HOUR STORM, USING

II. WEIGHTED CURVE NUMBER (CN) CALCULATIONS:

CN PRE-DEVELOPMENT =  $(2.73 \times 98 + 1.16 \times 80) \div 3.89 = 93$ CN POST-DEVELOPMENT =  $(2.65 \times 98 + 1.24 \times 80) \div 3.89 = 92$ 

III. PRE-DEVELOPMENT PEAK DISCHARGES: (Tc = 5 MINS.) PEAK Q<sub>1</sub> PRE-DEVELOPMENT = 8.83 CFS

PEAK Q PRE-DEVELOPMENT = 10.82 CFS PEAK  $Q_{10}$  PRE-DEVELOPMENT = 18.72 CFS

IV. POST-DEVELOPMENT PEAK DISCHARGES (Tc = 5 MINS.)

PEAK Q<sub>1</sub> POST-DEVELOPMENT = 8.53 CFS PEAK  $Q_2$  POST-DEVELOPMENT = 10.53 CFS PEAK  $Q_{10}^-$  POST-DEVELOPMENT = 18.48 CFS

 $Q_1$  DECREASE = 0.30 CFS  $Q_2$  DECREASE = 0.29 CFS  $Q_{10}$  DECREASE = 0.24 CFS

DUE TO THE DECREASE IN THE PEAK DISCHARGE FOR THE 1, 2, AND 10-YEAR STORM, DETENTION IS NOT REQUIRED.

### PROJECT DESCRIPTION:

DRAINAGE AREA	IMPERVIOUS	PERVIOUS	TOTAL
PROJECT AREA	2.65	1.24	3.89
ON-SITE TREATED	2.45	0.63	3.08
OFF-SITE TREATED	0.00	0.00	0.00
TOTAL TREATED	2.45	0.63	3.08
ON-SITE IMPERVIOUS AREAS	N/A		
DISCONNECTED BY A VEGETATIVE BUFFER	ATIVE BUFFER		
TOTAL TREATED OR DISCONNECTED			3.08

### WATER QUALITY VOLUME DEFAULT:

TREATMENT OF FIRST HALF INCH OF RUNOFF: 1,815 X 2.65 = 4,810 CU. FT. WQV REQUIRED

WATER	TREATMENT	ON-SITE

WATER TREATMENT OF SITE									
BMP TYPE	AREA TREATED BY BMP (ACRES)	IMPERVIOUS AREA TREATED BY BMP (ACRES)	BMP EFFICIENCY (%)						
BIORETENTION	0.60	0.55	25%						
PERMEABLE PAVERS	0.38	0.38	25%						
HYDRO DYNAMIC BMP	2.73	2.10	20%						

TOTAL WQV TREATED: NO

WATER QUALITY VOLUME REQUIRED = 4,810 CU. FT.

WATER QUALITY VOLUME TREATED = 1,815 X 2.51 = 4,556 CU. FT.

PERCENT OF WATER QUALITY VOLUME TREATED = 94.4% DETENTION ON SITE: NO

PROJECT IS WITHIN WHICH WATERSHED? COMBINED SEWER SHED - ROYAL STREET PROJECT DISCHARGES TO WHICH BODY OF WATER? POTOMAC RIVER

### HATCH LEGEND

DRAINAGE AREAS

PERMEABLE PAVERS

AREA TO HYDRODYNAMIC BMP (DRAINAGE AREA A)

AREA TO PERMEABLE PAVERS (DRAINAGE AREA A)

AREA TO BIORETENTION 1 (DRAINAGE AREA A)

AREA TO BIORETENTION 2 (DRAINAGE AREA A)

AREA TO BIORETENTION 3 (DRAINAGE AREA A)

AREA TO PERMEABLE PAVERS (DRAINAGE AREA B)

APPROVED

DEPARTMENT OF PLANNING & ZONING

SITE PLAN NO.

SPECIAL USE PERMIT NO. \_\_\_\_\_2019-0004

DATE | REVISION

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DESIGN: ARO CHECKED: ACS SCALE: 1" = 30'DATE: **JAN 2021** 

STORMWATER MANAGEMENT

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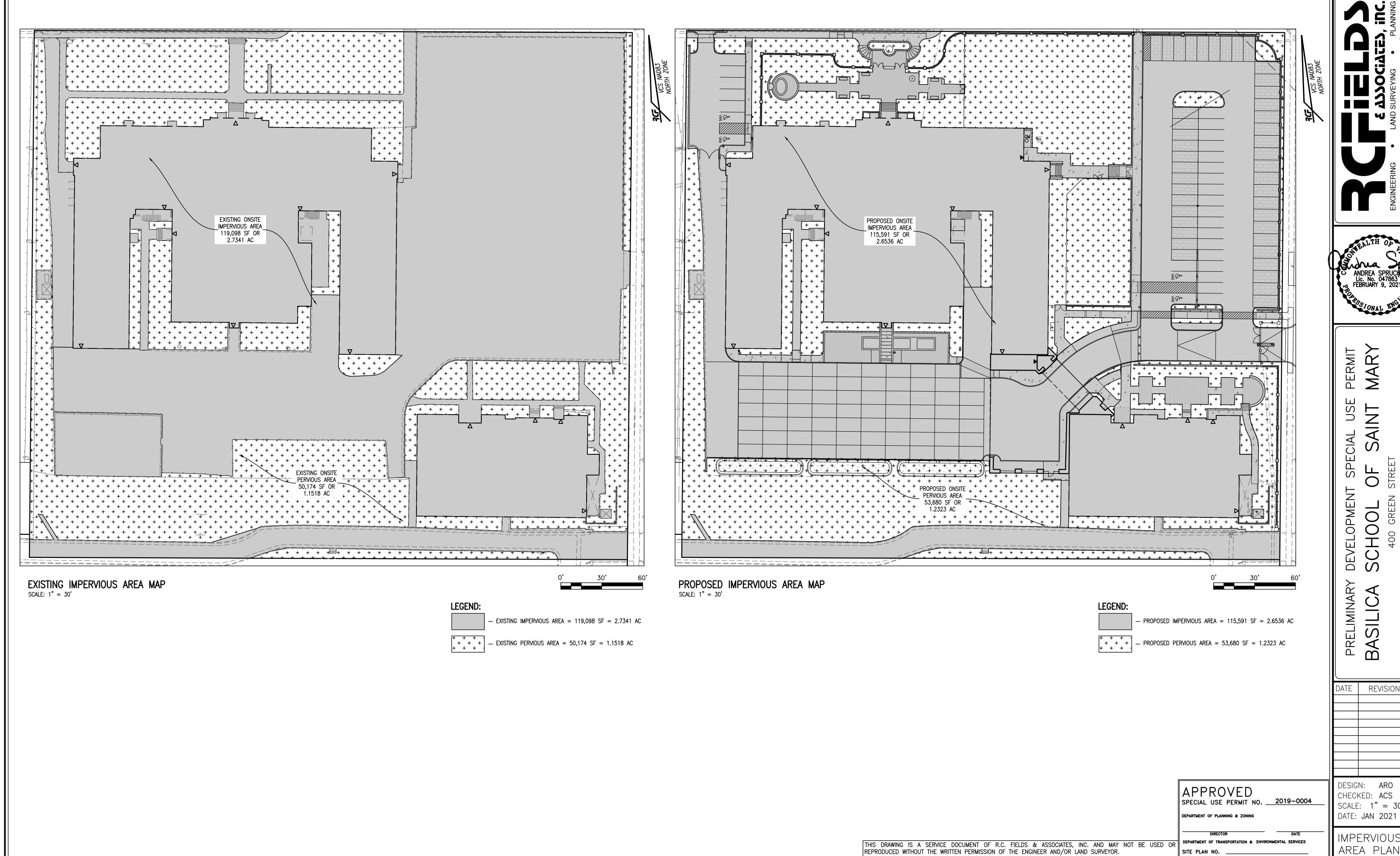
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LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO

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DATE | REVISION

DESIGN: ARO CHECKED: ACS SCALE: 1" = 30'

**IMPERVIOUS** AREA PLAN

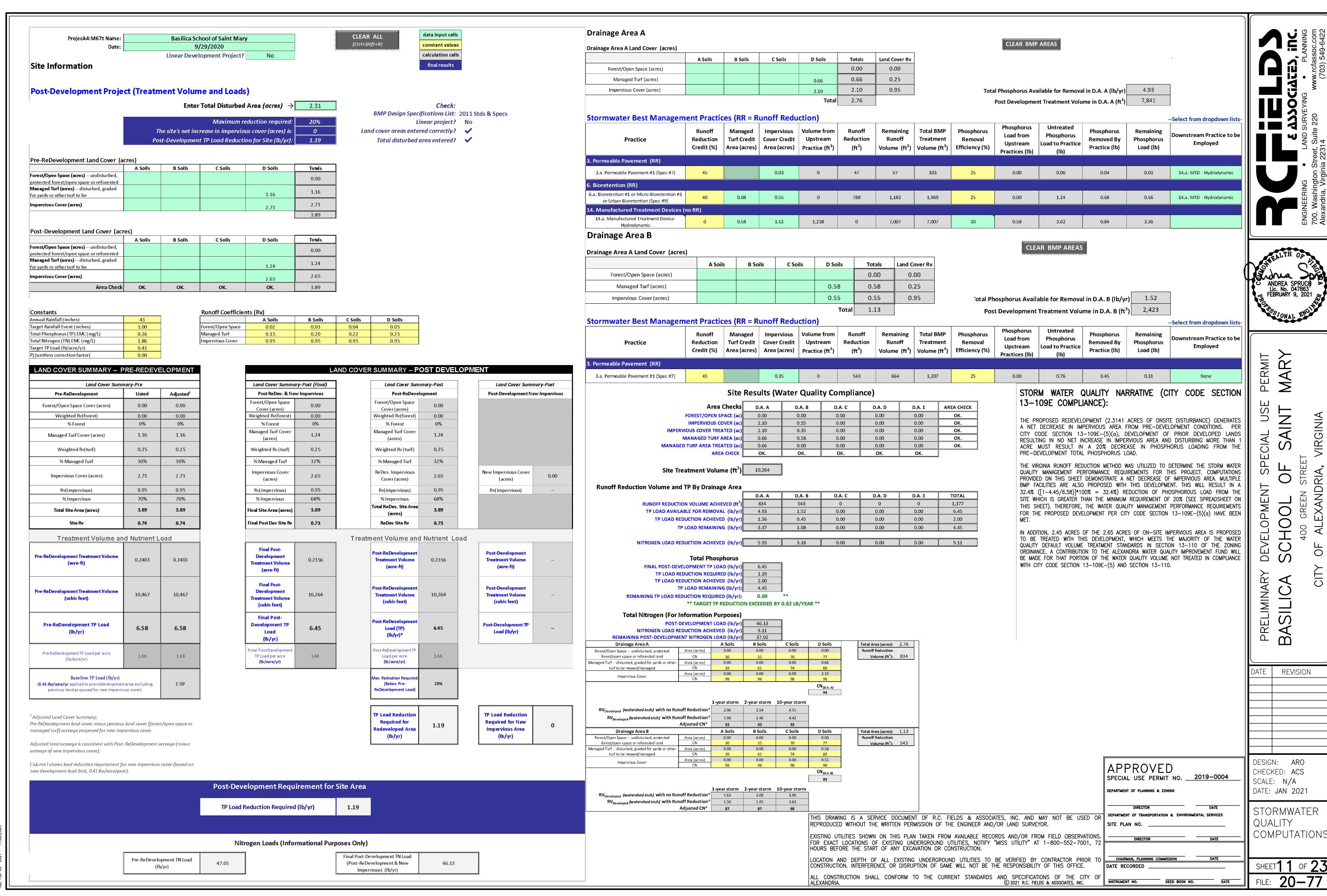
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DEED BOOK NO.



J:\2020\2077\DWG\DELIV\07\_STORMWATER QUALITY COMPUTATIONS.dwg

### WATER QUALITY VOLUME CALCULATIONS:

PROPOSED BIORETENTION #1: TOTAL AREA TO BMP = 8.655 SQ.FT

IMPERVIOUS AREA TO BMP = 8,183 SQ.FT. (" $R_V$ " = 0.95) IMPERVIOUS AREA TO BMP = 7,287 SQ.FT. (" $R_V$ " = 0.95) IMPERVIOUS AREA TO BMP = 8,218 SQ.FT. (" $R_V$ " = 0.95) PERVIOUS AREA TO BMP = 472 SQ.FT. ("Ry" = 0.25) PERVIOUS AREA TO BMP = 2,713 SQ.FT. ("Ry" = 0.25) PERVIOUS AREA TO BMP = 472 SQ.FT. ("Ry" = 0.25)

WATER QUALITY VOLUME REQUIRED:  $\Gamma_{V} = (RV)(A)/12$ 

= AREA TO FACILITY (8.655 SF) R<sub>V</sub> = COMPOSITE RUNOFF COEFFICIENT  $R_V = [(0.25*472)+(0.95*8,183)] = 0.91$ 

 $T_V = (0.91)(8,655)/12 = 656.3 \text{ FT}^3$ 

### WATER QUALITY VOLUME PROVIDED: $V = SA[D_p + (D_{fm})(N_{fm}) + (D_q)(N_q)]$ WHERE:

V = VOLUMESA = SURFACE AREA (472 SQ. FT.) = PONDING DEPTH (6")

 $D_{fm}$  = DEPTH OF FILTER MEDIA (24")  $N_{fm}$  = VOID RATIO OF FILTER MEDIA (0.25) = DEPTH OF GRAVEL BED (12") = VOID RATIO OF GRAVEL BED (0.40)

 $V = 472[0.5'+(2.0')(0.25)+(1.0')(0.40)] = 660.8 \text{ FT}^3$ 

BMP FACILITY

PERMEABLE PAVERS

BIORETENTION

REQUIRED: 656 CU.FT. PROVIDED: 638 CU.FT.

AREA TREATED IMP

(ACRES) 0.3781

0.6278

PROVIDED: 661 CU.FT.

WATER QUALITY VOLUME REQUIRED:  $T_{V} = (RV)(A)/12$ 

TOTAL AREA TO BMP = 10,000 SQ.FT.

PROPOSED BIORETENTION #2:

A = AREA TO FACILITY (10.000 SF)R<sub>v</sub> = COMPOSITE RUNOFF COEFFICIENT  $R_V = [(0.25*2,713)+(0.95*7,287)] = 0.76$ 

 $T_V = (0.76)(10,000)/12 = 633.3 \text{ FT}^3$ 

### WATER QUALITY VOLUME PROVIDED: $V = SA[D_P + (D_{FM})(N_{FM}) + (D_G)(N_G)]$

WHERE: V = VOLUMESA = SURFACE AREA (456 SQ. FT.)  $D_P = PONDING DEPTH (6")$ 

 $D_{FM} = DEPTH OF FILTER MEDIA (24")$  $N_{FM}$  = VOID RATIO OF FILTER MEDIA (0.25)  $D_G$  = DEPTH OF GRAVEL BED (12")  $N_G$  = VOID RATIO OF GRAVEL BED (0.40)

 $V = 456[0.5'+(2.0')(0.25)+(1.0')(0.40)] = 638.4 \text{ FT}^3$ 

0.95

10077.6

6406.1

797.8

0.079

1.57

0.083

0.5

0.083

1.0

0.4

0.47

0.63

0.50

REQUIRED: 633 CU.FT.

PROPOSED BIORETENTION #3: TOTAL AREA TO BMP = 8,690 SQ.FT.

### WATER QUALITY VOLUME REQUIRED:

 $T_V = (RV)(A)/12$ 

A = AREA TO FACILITY (8.690 SF)R<sub>v</sub> = COMPOSITE RUNOFF COEFFICIENT  $R_V = [(0.25*472)+(0.95*8,218)] = 0.91$ 

 $T_V = (0.91)(8,690)/12 = 659.0 \text{ FT}^3$ 

### WATER QUALITY VOLUME PROVIDED: $V = SA[D_P + (D_{FM})(N_{FM}) + (D_G)(N_G)]$

WHERE: V = VOLUME

SA = SURFACE AREA (472 SQ. FT.)  $D_P = PONDING DEPTH (6")$  $D_{FM}$  = DEPTH OF FILTER MEDIA (24")

> $N_{FM}$  = VOID RATIO OF FILTER MEDIA (0.25)  $D_G$  = DEPTH OF GRAVEL BED (12")

 $N_G$  = VOID RATIO OF GRAVEL BED (0.40)

 $V = 472[0.5'+(2.0')(0.25)+(1.0')(0.40)] = 660.8 \text{ FT}^3$ REQUIRED: 659 CU.FT.

38.8262209 -77.0811314

PROVIDED: <b>638 CU.FT.</b> PROVIDED: <b>661 CU.FT.</b>								
PERVIOUS AREA	PERVIOUS AREA	TP REMOVAL	PHOSPHORUS	GEOGRAPHIC	COORDINATES			
EATED (ACRES)	ED (ACRES) TREATED (ACRES)		REMOVED (LBS)	LATITUDE	LONGITUDE			
0.3781	0	25%	0.49	38.7952625	-77.0458185			
0.5459	0.0819	25%	0.68	SEE I	BELOW			

	HYDRODYNAMIC BMP 2.7		7579 2.0954		0.6625		20%		0				
	BIORETENTION	SQ.FT. OF		ELEVATIONS		LATITUDE		LONGITURE		_ ]			
	DIORETENTION	SURFACE ARE	AREA	Α	В	С	D		LATITUDE	LONGITUDE		_	
	1	472	.0	23.52	23.35	22.85	19.68		38.7946689	_	77.047160	8	
	2	456	.0	22.30	22.13	21.63	18.46		38.7946343	-	77.046932	2	
	3	472	.0	20.65	20.48	19.98	16.81		38.7946056	_	77.046702	:3	

### TYPICAL PERVIOUS PAVER DETAIL - 6" OBSERVATION WELL WITH BRASS CAP 2" OF AASHTO #8 STONE BEDDING LAYER — & BASEPLATE (PERFORATED PVC PIPE) $(\frac{3}{16}$ " TO $\frac{3}{8}$ " IN SIZE). NO FINES OR WASHED - CONCRETE EDGE RESTRAINT (OR APPROVED EQUAL) PERMEABLE PAVERS OR -APPROVED EQUAL JNCOMPACTED NON-WOVEN -OBSERVATION WELL TO EXTEND GEOTEXTILE SUBGRADE TO BOTTOM OF STONE STORAGE AASHTO #57 STONE $(\frac{1}{2}$ " TO $1\frac{1}{2}$ " IN SIZE), NO FINES

A<sub>c</sub> (SF)

A<sub>p</sub> (SF)

T<sub>v</sub> (FT3)

i (FT/DAY)

t<sub>f</sub> (DAY)

t<sub>d</sub> (DAY)

d<sub>p</sub> (FT)

d<sub>n</sub> Provided (FT)

 $d_c$  (FT)

### WATER QUALITY VOLUME CALCULATIONS:

**WATER QUALITY VOLUME REQUIRED:**  $_{V} = (R_{V})(A)/12$ 

> v = TREATMENT VOLUME (FT<sup>3</sup>) $R_V = COMPOSITE RUNOFF COEFFICIENT$ A = AREA TO FACILITY (SF)

**DEPTH OF RESERVOIR LAYER:**  $d_p = \frac{(d_c * R) + P - (i/2 * t_f)}{2}$ 

 $d_n = DEPTH OF RESERVOIR LAYER (FT)$ 

 $d_c = DEPTH OF RUNOFF FROM THE CONTRIBUTING DRAINAGE AREA FOR THE TREATMENT VOLUME <math>(Tv/A_c)$ 

P = RAINFALL DEPTH (0.083 FT)

i = INFILTRATION RATE (ASSUME 0.5 FT/DAY)  $t_f$  = TIME TO FILL THE RESERVOIR LAYER (0.083 DAY)

 $t_1$  = TIME TO DRAIN THE RESERVOIR LAYER (1 DAY)

### Technical Abstract First Defense® - High Capacity

### NJCAT Verified 80% TSS Removal for 50 to 150 um Particle Size Range

Hydro International has a state-of-the-art hydraulics and test facility that is used both to develop products and to evaluate performance. Through controlled testing using industry standard test protocols, Hydro's treatment products are evaluated under varying hydraulic and sediment load conditions. With a known drainage area or water quality flow rate, these test results are used to benchmark treatment objectives and to select the correct model size.

A common stormwater treatment goal for manufactured treatment devices is to reduce the Total Suspended Solids (TSS) concentration by at least 80%. To comply with this goal, a silica-based test sand with known particle size gradation (PSD) and density is injected into the treatment system at different flow rates. With known TSS concentrations and particle sizes before and after treatment. efficiency curves are plotted and used to predict TSS reductions for a range of particle sizes.

### OK110 Silica Test Sand

NTS

U.S. Silica OK110 is a common test sand that has been used by the industry but is no longer available. However, its PSD can be modelled from a blend of silica sands having a wide range of particle sizes. This abstract summarizes test results based on a particle size range similar to OK110 for the First Defense® High Capacity (FDHC). All test protocols and results have been independently verified by the New Jersey Corporation for Advanced Technology (NJCAT). The full report can be viewed at: FDHC PSD Removal Verification Report 9-16.pdf

### First Defense High Capacity (FDHC)

The FDHC (Figure 1) has patented flow modifying internal components that create a gentle swirling flow path within the Vortex Chamber. The rotating flow creates low energy vortex forces that supplement gravitational settling forces to enhance separation of pollutants.

The internal components are fit into precast manholes to collect runoff as part of typical drainage network system. During rain events, flow enters either from a surface inlet grate or inlet pipe. As flow enters the manhole, components divert flow and pollutants into a Vortex Chamber beneath a separation module, that includes both Inlet\Outlet Chutes and Bypass Weirs. The internal Bypass Weirs divert peak flows over the separation module and away from the Vortex Chamber where pollutants are collecting. This prevents high velocities from re-suspending captured pollutants during infrequent but large storm events.

Capable of providing high pollutant removals for a wide range of flow rates and pipe sizes, the FDHC can be installed ether online or offline depending on pipes and peak flows. Its efficiency and simplicity make it economical to install and maintain.

Pipe Bypass Weirs -Inlet Chute Vortex Chamber —

Figure 1 - First Defense High Capacity

Sediment Storage ----

### Laboratory Testing Arrangement

The laboratory setup (Figure 2) consisted of a recirculating closed loop system with an 8-inch (200 mm) submersible Flygt pump that conveyed water from a 23,000 gal (87,064 L) reservoir through a PVC pipe network to the 4-ft (1.2m) FDHC. The flow rate of the pump was controlled by a GE Fuji Electric AF-300 P11 Adjustable Frequency Drive and measured by an EMCO Flow Systems 4411e Electromagnetic Flow Transmitter. Test sand was injected into the incoming flow stream using a volumetric screw feeder situated 10ft prior to entering the test unit.

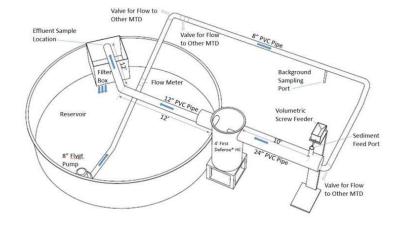


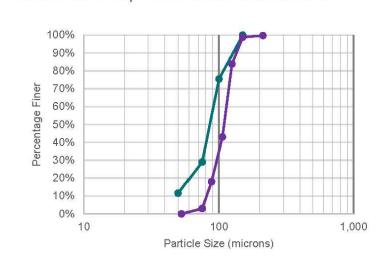
Figure 2 - Set-up of the Portland, Maine hydraulic testing facility

The feed sediment injected into the inlet during removal efficiency testing was a blend of commercially available silica sands ranging from 2 µm to 1,000 µm. The PSD of the test sediment was analyzed by an independent laboratory in accordance with ASTM D 422-63.

Stormwater Solutions

### First Defense® - High Capacity

To evaluate the performance consistent with OK110 test sand, results were analyzed from the particle sizes range of 50 µm to 150  $\mu$ m (D<sub>50</sub>=108 $\mu$ m). A comparison between the 50 – 150  $\mu$ m range and OK110 gradation is shown in Figure 3. The 50 – 150 µm test sand gradation is overall finer than OK110 between 50 µm and 100 μm. For example, the test sand had 15% finer than 75 μm compared to the OK110 PSD that had only 3% less than 75 microns. Given that finer particles are more difficult to remove, performance results for 50 to 150 µm PSD is considered conservative.



Test Sand — OK110 Figure 3 - Particle Size Distribution Comparison

Removal Efficiency Testing Removal efficiency testing with the feed sediment was conducted in accordance with Section 5 of the NJDEP Laboratory Protocol for Manufactured Treatment Devices. Five flow rates ranging from 0.38 cfs to 1.88 cfs were tested to assess the performance trend.

The test sediment was fed into the flow stream at a rate that was equivalent to 200 mg/L. The average influent TSS concentration was calculated using the total sediment mass and volume of water added during dosing. The influent concentration for each particle size band was calculated using the percentage of particles in each particle size band and known average inlet concentration. Three time-spaced effluent grab samples were composited and analyzed using laser diffraction (ISO 13320) to evaluate the effluent particle sizes.

Table 1 – 50 – 150 µm Particle Size Range Test Results

Flow	Inlet Mass	Outlet Mass	Removal
cfs (L/s)	grams	grams	%
0.38 (10.8)	1,554.6	107.1	93.1
0.75 (21.2)	1,761.0	150.8	91.4
1.13 (32.0)	1,872.8	127.2	93.2
1.5 (42.5)	2,203.2	226.7	89.7
1.88 (53.2)	2,366.6	303.8	87.2

For design purposes the selected model's Treatment Flow Rate must be equal or greater to the site's required Water Quality Flow Rate. The peak flow rate and maximum pipe size must be considered to determine whether an online or offline configuration is appropriate. Full removal curves are available on request.

The average effluent sediment concentration of the three compo-

particle size band was then calculated using the average effluent

cle size band.

for the available models.

composite concentration and percentage of particles in each parti-

Percent removed at each of the five tested flow rates is shown in

Table 1. Inlet concentrations of the OK110 particle size range var-

ied from 79-84 mg/L compared to 4-8.5 mg/L at the outlet. As ex-

pected, the highest concentration measured at the outlet was at the

highest tested flow rate of 1.88 cfs (53.2 L/s). In general, the 4-ft

FDHC removed greater than 85% of the OK110 particle size range

for all tested flow rates. Table 2 provides "Treatment Flow Rates"

Nodel: FD-3HC FD-4HC FD-5HC FD-6HC FD-8HC

3 ft 4 ft 5 ft 6 ft

L/s: 30.02 53.2 83.3 119.8 212.9

(900 mm) (1.2 m) (1.5 m) (1.8 m) (2.4m)

1.06 1.88 2.94 4.23 7.52

Table 2 – FDHC Treatment Flow Rate for > 85% OK110

sited samples was also measured for each flow rate in accordance with ASTM D3977-97. The effluent concentration for each

Refer First Defense product information brochure or visit www.hydro-int.com/us for more information

Hydro International, 94 Hutchins Drive, Portland, ME 04102 Tel: 207.756.6200 Fax: 207.756.6212 Email: stormwaterinquiry@hydro-int.com Web: www.hydro-int.com Stormwater Solutions © Hydro International FDHC\_TA\_110um\_G2001

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CONTRACTOR TO CONFIRM RIM, PIPE INVERTS, PIPE DIA.

ND PIPE ORIENTATION PRIOR

FIRST DEFENSE HIGH CAPACITY

GENERAL ARRANGEMEN

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ABRICATION.

4-ft DIAMETER

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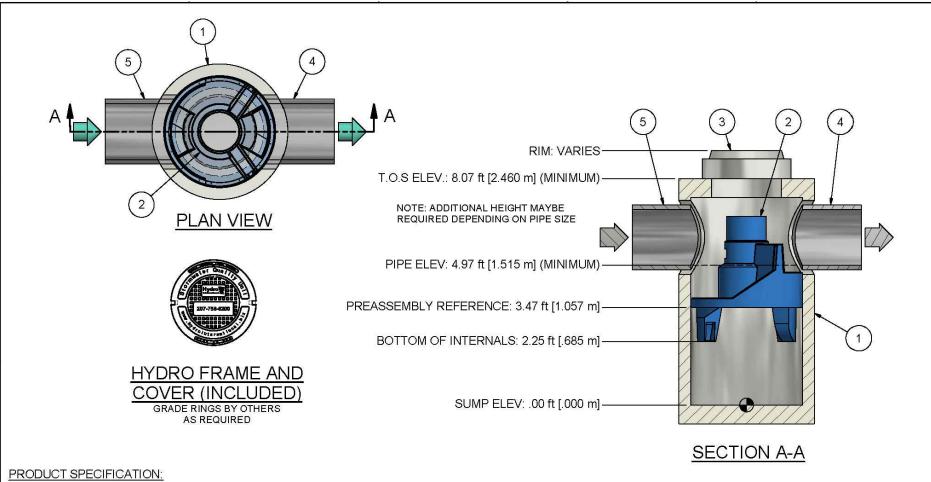
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Peak Hydraulic Flow: 18.0 cfs (510 l/s) ?. Min Sediment Storage Capacity: 0.7 cu. yd. (0.5 cu. m.) 3. Oil Storage Capacity: 191 gal. (723 liters)

Maximum Inlet/Outlet Pipe Diameters: 24 in. (600 mm) 5. The Treatment System Shall Use An Induced Vortex To Separate Pollutants From Stormwater Runoff. 6. For More Product Information Including Regulatory Acceptances, Please Visit https://hydro-int.com/en/products/first-defense

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HOURS BEFORE THE START OF ANY EXCAVATION OR CONSTRUCTION.

. General Arrangement drawings only. Contact Hydro International for site specific drawings. . The diameter of the inlet and outlet pipes may be no more than 24". . Multiple inlet pipes possible (refer to project plan). . Inlet/outlet pipe angle can vary to align with drainage network (refer to project plan.s) . Peak flow rate and minimum height limited by available cover and pipe diameter.

Larger sediment storage capacity may be provided with a deeper sump depth.

Hydro & International TEM QTY SIZE (in) SIZE (mm) DESCRIPTION 012in = ±0.04in 024in = ±0.06in 048in = ±0.08in 1 1 48 1200 I.D. PRECAST MANHOLE INTERNAL COMPONENTS (PRE-INSTALLED) 3 1 30 750 FRAME AND COVER (ROUND) 4 1 24 (MAX) 600 (MAX) OUTLET PIPE (BY OTHERS) 5 1 24 (MAX) 600 (MAX) INLET PIPE (BY OTHERS)

HYDRO INTERNATIONAL O NOT SCALE DRAWING
FEEL FABRICATION TOLERANCES

APPROVED SPECIAL USE PERMIT NO. \_\_\_\_2019-0004 DEPARTMENT OF PLANNING & ZONING

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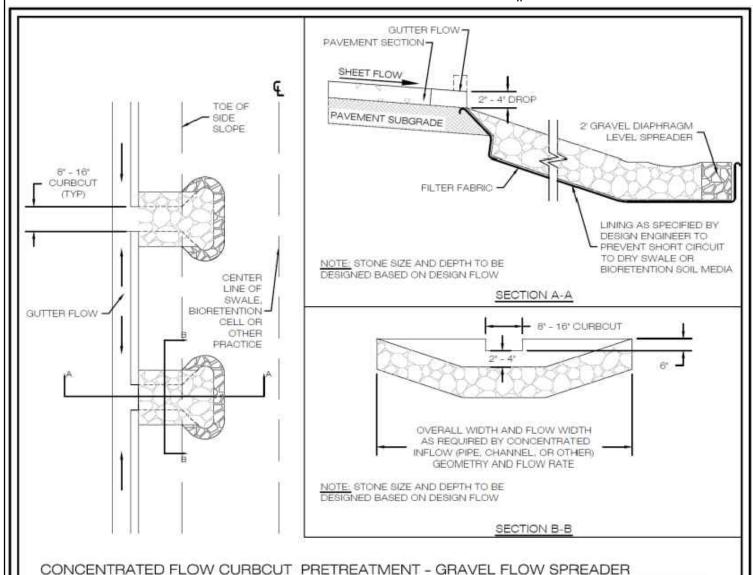
CHECKED: ACS SCALE: **as noted** DATE: **JAN 2021** BMP DETAILS

 $d_{p-max} = (i/2)(t_d)$ WHERE:

R = RATIO OF CONTRIBUTING DRAINAGE AREA (A<sub>r</sub>) TO PERMEABLE PAVEMENT SURFACE AREA (A<sub>r</sub>) [A<sub>r</sub>/A<sub>r</sub>]

 $V_r = VOID RATIO OF THE RESERVOIR LAYER (0.4)$ 





SCALE: 1" = 300'

### STORMWATER OUTFALL NARRATIVE (CITY CODE SECTION 13-109F):

### PRE-DEVELOPMENT CONDITIONS:

THE 3.89 ACRE SITE IS LOCATED IN THE POTOMAC RIVER WATERSHED. IN EXISTING CONDITIONS, THE SITE CONSISTS OF AN EXISTING ELEMENTARY AND MIDDLE SCHOOL WITH A PLAYGROUND, PARKING LOT, AND ASSOCIATED SITE IMPROVEMENTS. THIS PROJECT HAS TWO OUTFALL

OUTFALL #1: A PORTION OF THE PROJECT SITE DRAINS VIA NON-CONCENTRATED SHEET FLOW BEFORE FLOWING OFF SITE TO THE GREEN STREET RIGHT-OF-WAY. THE STORMWATER RUNOFF IS THEN COLLECTED BY AN EXISTING CURB INLET (EX.1) AT THE CORNER OF GREEN STREET AND SOUTH ROYAL STREET AND PIPED IN A GENERALLY SOUTHERLY DIRECTION VIA CITY OF ALEXANDRIA MAINTAINED 5'X7' COMBINED SEWER BEFORE IT OUTFALLS TO THE POTOMAC RIVER.

OUTFALL #2: THE REMAINDER OF THE PROJECT SITE RUNOFF FLOWS AS NON-CONCENTRATED SHEET FLOW BEFORE BEING COLLECTED BY AN EXISTING PRIVATE STORM PIPE SYSTEM ON THE SUBJECT PROPERTY. RUNOFF CONTINUES WITHIN THE PRIVATE STORM PIPE SYSTEM UNTIL IT ENTERS THE CITY OF ALEXANDRIA MAINTAINED COMBINED SEWER SYSTEM IN THE SOUTH ROYAL STREET RIGHT-OF-WAY (EX.3) BEFORE BEING DISCHARGED INTO THE POTOMAC RIVER.

### POST-DEVELOPMENT CONDITIONS:

THE REDEVELOPMENT OF THE PROJECT SITE PROPOSES A BUILDING ADDITION, RENOVATION OF THE EXISTING PARKING LOT, AND PLAYGROUND AND ASSOCIATED SITE IMPROVEMENTS. OVERALL IMPERVIOUS AREA DECREASES WITH THE PROPOSED CONSTRUCTION. THE STORMWATER RUNOFF FROM THE SITE WILL BE TREATED BY THE PROPOSED BIORETENTION FACILITY, PERVIOUS PAVEMENT, AND HYDRODYNAMIC BMP. THE PROJECT SITE HAS TWO OUTFALL POINTS IN PROPOSED CONDITIONS.

OUTFALL #1: IN POST-DEVELOPMENT CONDITIONS, A PORTION OF THE SITE WILL BE COLLECTED AND TREATED ONSITE BY PROPOSED PERMEABLE PAVEMENT. THE RUNOFF THEN OUTFALLS VIA PIPE FLOW TO THE EXISTING COMBINED SEWER SYSTEM LOCATED AT CORNER OF GREEN STREET AND SOUTH ROYAL STREET (EX.1, POINT OF OUTFALL #1). THE STORMWATER THEN FLOWS IN A GENERALLY SOUTHERLY DIRECTION VIA CITY OF ALEXANDRIA MAINTAINED COMBINED SEWER SYSTEM BEFORE A BLIND CONNECTION INTO A 5'X7' COMBINED SEWER (EX.2). AT THIS POINT, PER SECTION 13-109(F)(2)(c)(iii) AND IN ACCORDANCE WITH SECTION 6-300 OF THE CITY CODE, THE FLOW REACHES THE LIMITS OF ANALYSIS AS THE STORMWATER CONVEYANCE SYSTEM ENTERS A MAPPED FLOODPLAIN.

OUTFALL #2: A MAJORITY OF THE REMAINING RUNOFF FROM THE PROJECT SITE IS COLLECTED BY THE PROPOSED ONSITE STORM PIPE SYSTEM. THE RUNOFF WILL BE TREATED BY PROPOSED BIORETENTIONS, PERMEABLE PAVEMENT, AND A HYDRODYNAMIC BMP. THE FLOW THEN ENTERS THE CITY OF ALEXANDRIA COMBINED SEWER SYSTEM IN THE SOUTH ROYAL STREET RIGHT-OF-WAY (EX.3, POINT OF OUTFALL #2). AT POINT EX.3, PER SECTION 13-109(F)(2)(c)(iii) AND IN ACCORDANCE WITH SECTION 6-300 OF THE CITY CODE, THE FLOW REACHES THE LIMITS OF ANALYSIS FOR OUTFALL #2 AS THE STORMWATER CONVEYANCE SYSTEM ENTERS A MAPPED FLOODPLAIN.

THE REMAINDER OF THE RUNOFF FROM THE SITE LEAVES THE SITE VIA NON-CONCENTRATED SHEET FLOW. DUE THE NON-CONCENTRATED SHEET FLOW AND THE FACT THERE IS NO RUNOFF VOLUME INCREASE IN THE FORM OF SHEET FLOW RESULTING FROM PERVIOUS AREAS, DISCONNECTED IMPERVIOUS AREAS OR FROM PHYSICAL SPREADING OF CONCENTRATED FLOW ASSOCIATED WITH THE REDEVELOPMENT OF THIS SITE, THE SMALL PORTION OF THE RUNOFF THAT EXITS THE SITE IN THE FORM OF SHEET FLOW WILL HAVE NO ADVERSE IMPACTS ON DOWN-GRADIENT PROPERTIES OR RESOURCES.

DUE TO THE FREQUENCY OF BLIND CONNECTIONS INTO THE 5'X7' COMBINE SEWER, DETERMINING THE SLOPE OF THE SEWER BASED ON INVERTS IS NOT FEASIBLE. WITH THE LACK OF INFORMATION, PIPE CAPACITY COMPUTATIONS HAVE NOT BE PROVIDED. HOWEVER, THE PEAK FLOW RATE FOR THE 1, 2, AND 10-YEAR, 24-HOUR STORMS ARE BEING REDUCED WITH THE PROPOSED DEVELOPMENT THROUGH DECREASE OF IMPERVIOUS AREA AND RUNOFF REDUCTION PROVIDED BY THE PROPOSED BIORETENTION FACILITIES AND PERMEABLE PAVEMENT. ASSUMING THE WORST CASE SCENARIO THAT THE EXISTING STORMWATER CONVEYANCE SYSTEM IS CURRENTLY EXPERIENCING LOCALIZED FLOODING, THE SITE IS IN COMPLIANCE WITH SECTIONS 13-109(F)(1)(a)(i) AND 13-109F(2)(b)(ii) AND NO OFFSITE IMPROVEMENTS WILL BE REQUIRED.

### COMBINED SEWER SYSTEM NOTE:

THIS SITE DISCHARGES TO SEPARATE STORM AND SANITARY PIPE SYSTEMS THAT COMBINE DOWNSTREAM. PER MEMO TO INDUSTRY 07-14, THE APPLICANT WILL PROVIDE A CONTRIBUTION FOR STORM WATER AND SANITARY RUNOFF GENERATED ONSITE IN LIEU OF OFFSITE SEPARATION AS THERE IS NO OPPORTUNITY FOR SEPARATION WITHIN THE VICINITY OF THIS SITE AND THE EXISTING SOIL CONDITIONS ARE NOT CONDUCIVE FOR STORM WATER INFILTRATION.

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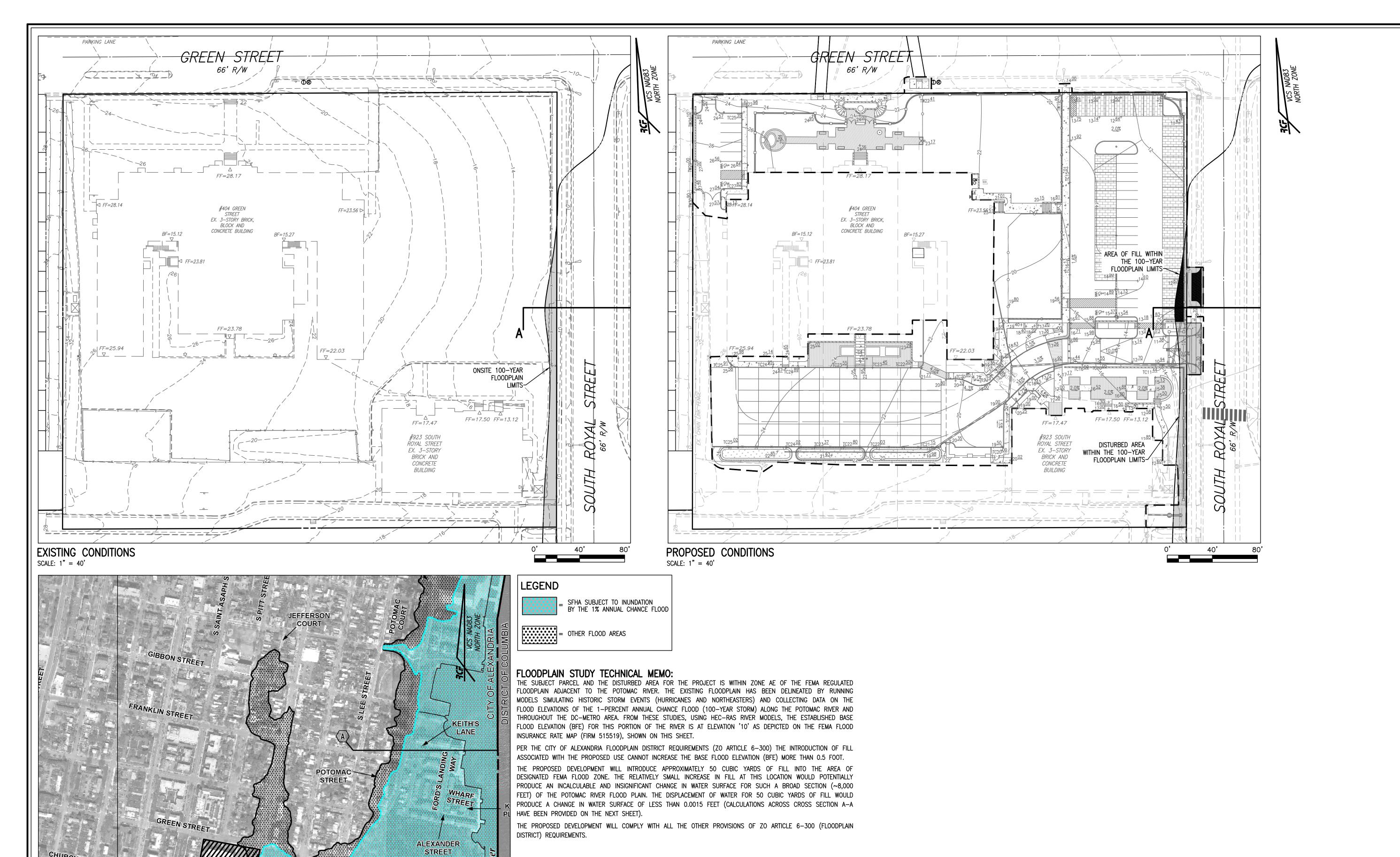
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STORM SEWER OUTFALL ANALYSIS

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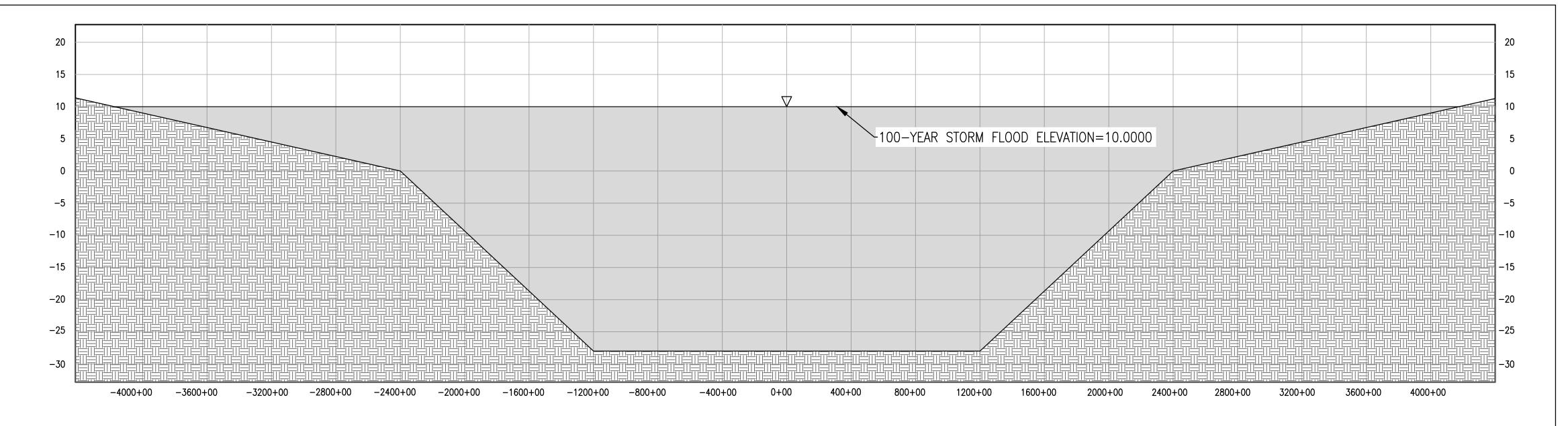
FLOODPLAIN ANALYSIS AND ASSESSMENT (SHEET 1 OF 2)

SHEET 14 OF 23

FEMA FLOODPLAIN MAP

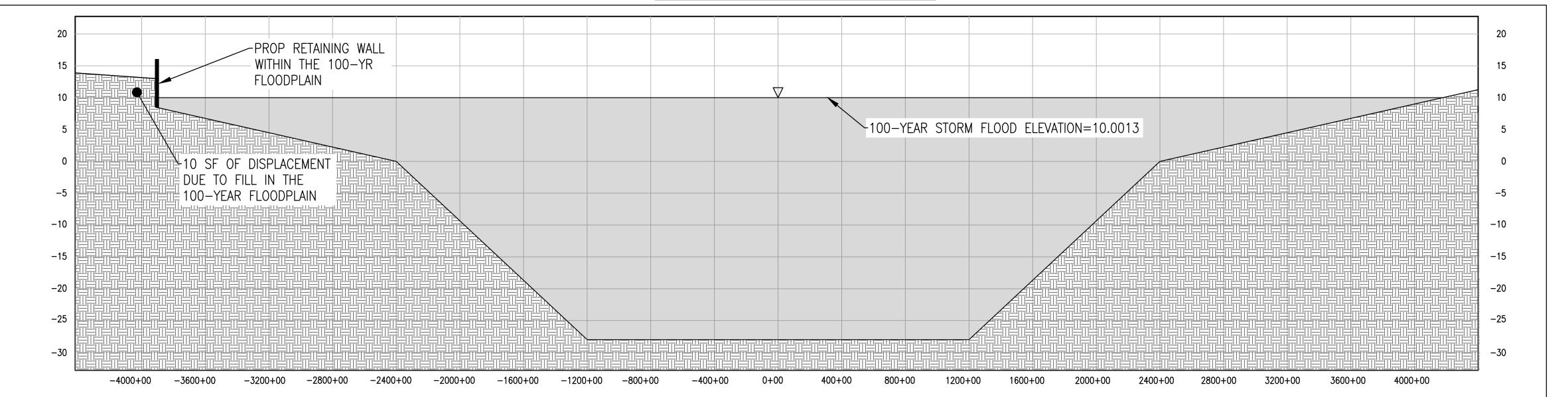
SCALE: 1" = 350'

### PRE DEVELOPMENT SECTION "A-A"



HORIZONTAL: 1" = 400'

### POST DEVELOPMENT SECTION "A-A"



### DISPLACEMENT IN THE FLOODPLAIN **CALCULATION:**

WIDTH OF THE FLOODPLAIN OF THE POTOMAC RIVER (PER FEMA MAPS): 8,000 FT

AREA OF DISPLACEMENT WITHIN THE FLOODPLAIN AT CROSS SECTION A-A: 10 SF

ELEVATION RISE OF THE FLOODPLAIN=(AREA OF DISPLACEMENT WITHIN FLOODPLAIN)/(WIDTH OF FLOODPLAIN)

ELEVATION RISE=(10 SF)/(8,000 FT)=0.0013 FT

### MINOR CHANGE IN FLOODPLAIN STUDY:

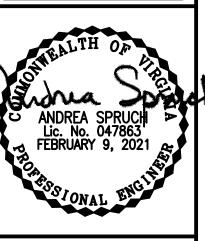
DUE TO THE PROPOSED FILL WITHIN THE 100-YEAR FLOODPLAIN, THE WATER SURFACE ELEVATION WILL RISE HIGHER DIRECTLY PROPORTIONATE TO THE AMOUNT OF AREA DISPLACED WITHIN THE FLOODPLAIN IN THE DISTURBED AREA. CROSS SECTION A-A HAS BEEN ANALYZED DUE TO THE AMOUNT OF ENCROACHMENT IN THE FLOODPLAIN AND THE FILL PROPOSED WITHIN IT. APPROXIMATELY 10 SF WITHIN THE CROSS SECTION OF THE ENTIRE FLOODPLAIN OF THE POTOMAC RIVER IS TO BE FILLED, RAISING THE ELEVATION OF THE FLOODPLAIN APPROXIMATELY 0.0013 FT. THE DISPLACEMENT WITHIN THE FLOODPLAIN IS LESS THAN 0.5 FEET; THEREFORE, PER ALEXANDRIA CODE SECTION 6-307(A), THE DISTURBANCE WITHIN THE FLOODPLAIN IS ACCEPTABLE

400' HORIZONTAL: 1" = 400

APPROVED

SPECIAL USE PERMIT NO. \_\_\_\_\_2019-0004

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MARY PERMIT OPMENT

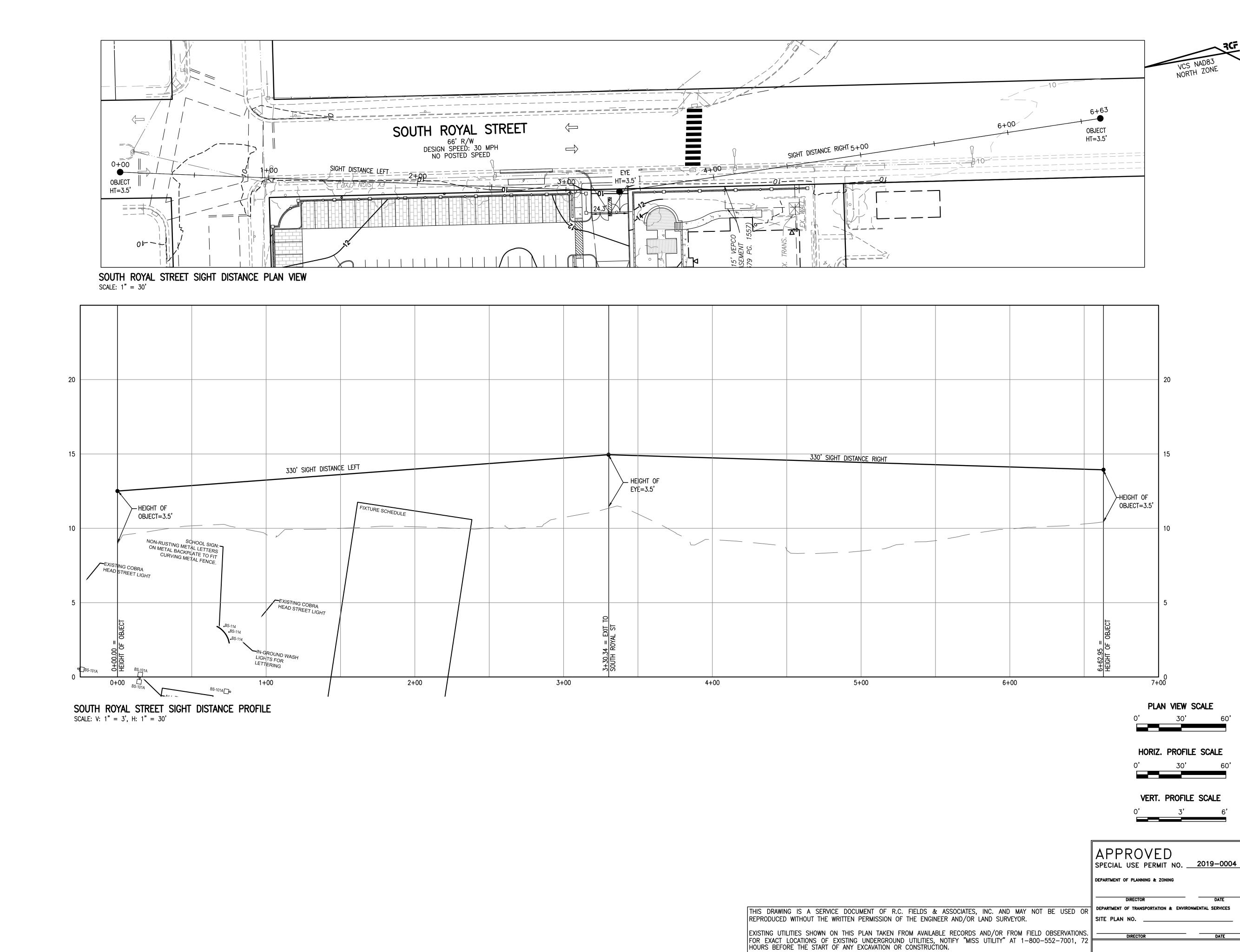
H000 PRELIMINARY BASILICA SILIC,

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DATE REVISION

DESIGN: ARO CHECKED: ACS SCALE: AS NOTED DATE: JAN 2021

FLOODPLAIN ANALYSIS AND ASSESSMENT (SHEET 2 OF 2)



PERMIT

SCHOOL PRELIMINARY BASILICA

DEVELOPMENT

DATE REVISION

DESIGN: ARO CHECKED: ACS SCALE: AS NOTED DATE: JAN 2021

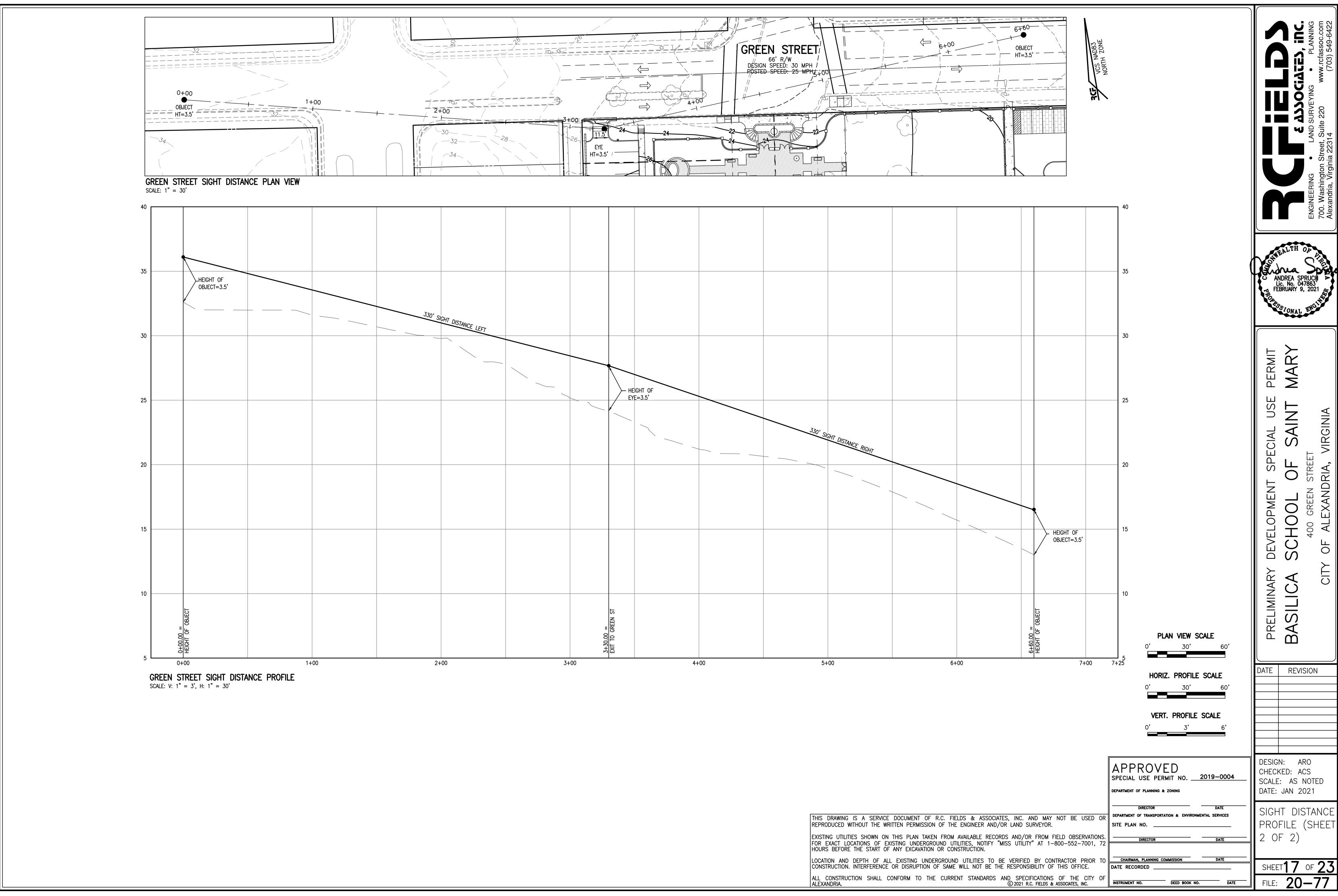
SIGHT DISTANCE OF 2)

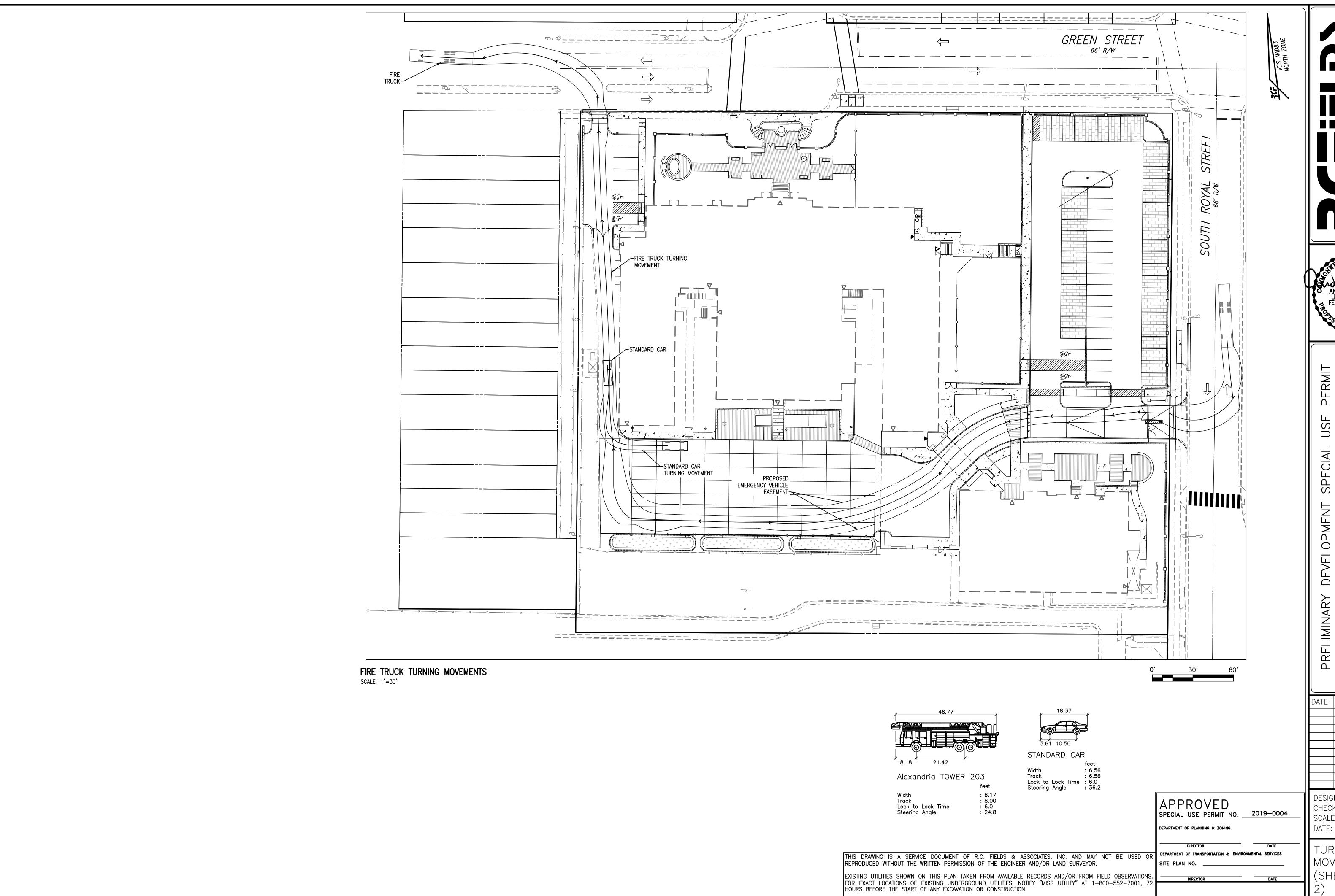
INSTRUMENT NO.

DEED BOOK NO. DATE

LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. INTERFERENCE OR DISRUPTION OF SAME WILL NOT BE THE RESPONSIBILITY OF THIS OFFICE.

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ELIMINARY DEVELOPMENT SPECIAL USE FINITICA SCHOOL OF SAINT NAME STREET

DATE REVISION

BA

PATE REVISION

DESIGN: ARO
CHECKED: ACS
SCALE: 1" = 30'
DATE: JAN 2021

TURNING MOVEMENTS (SHEET 1 OF

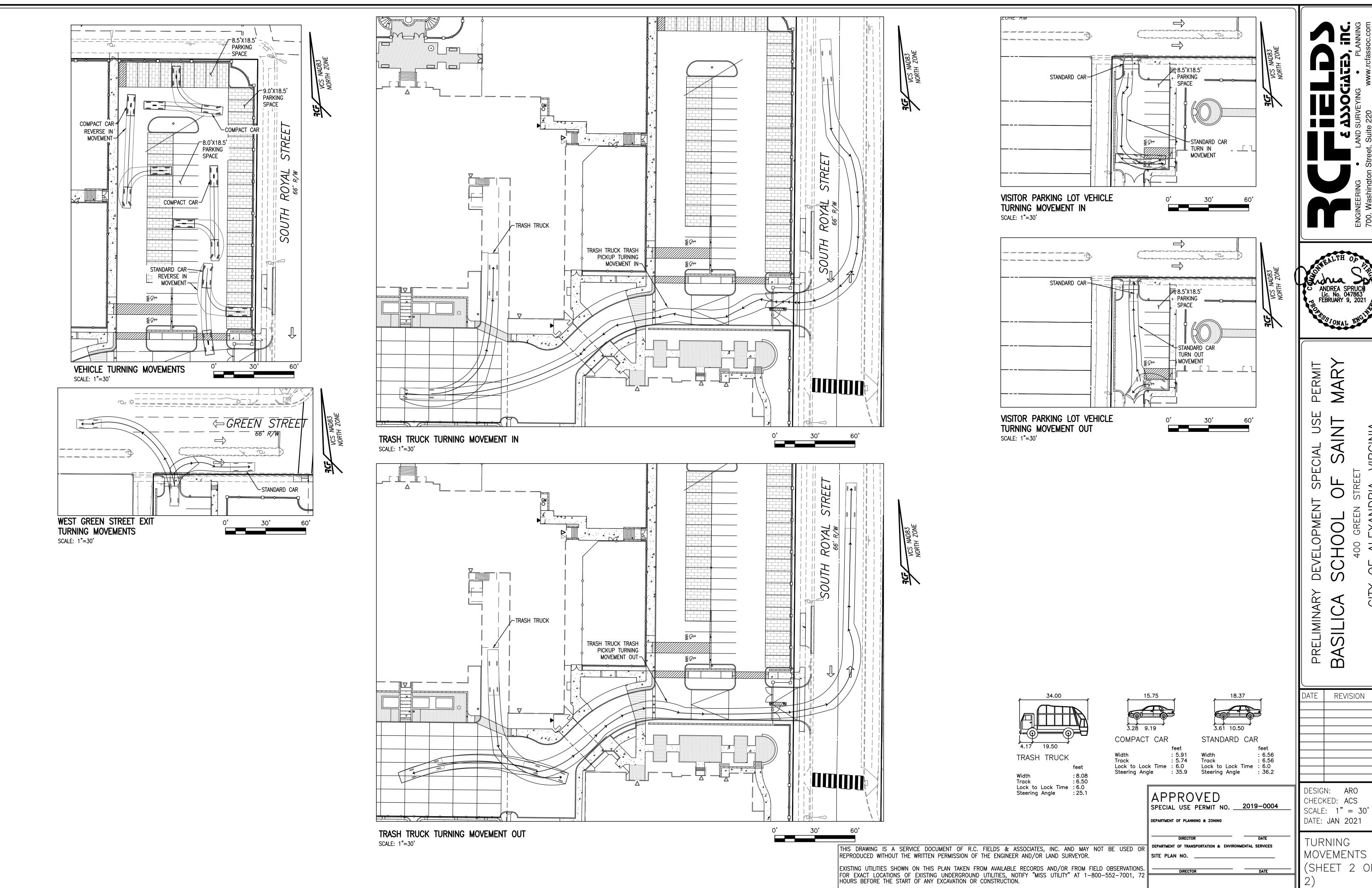
SHEET 18 OF 23

INSTRUMENT NO.

DEED BOOK NO. DATE

LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. INTERFERENCE OR DISRUPTION OF SAME WILL NOT BE THE RESPONSIBILITY OF THIS OFFICE.

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ALEXANDRIA.



TURNING MOVEMENTS (SHEET 2 OF

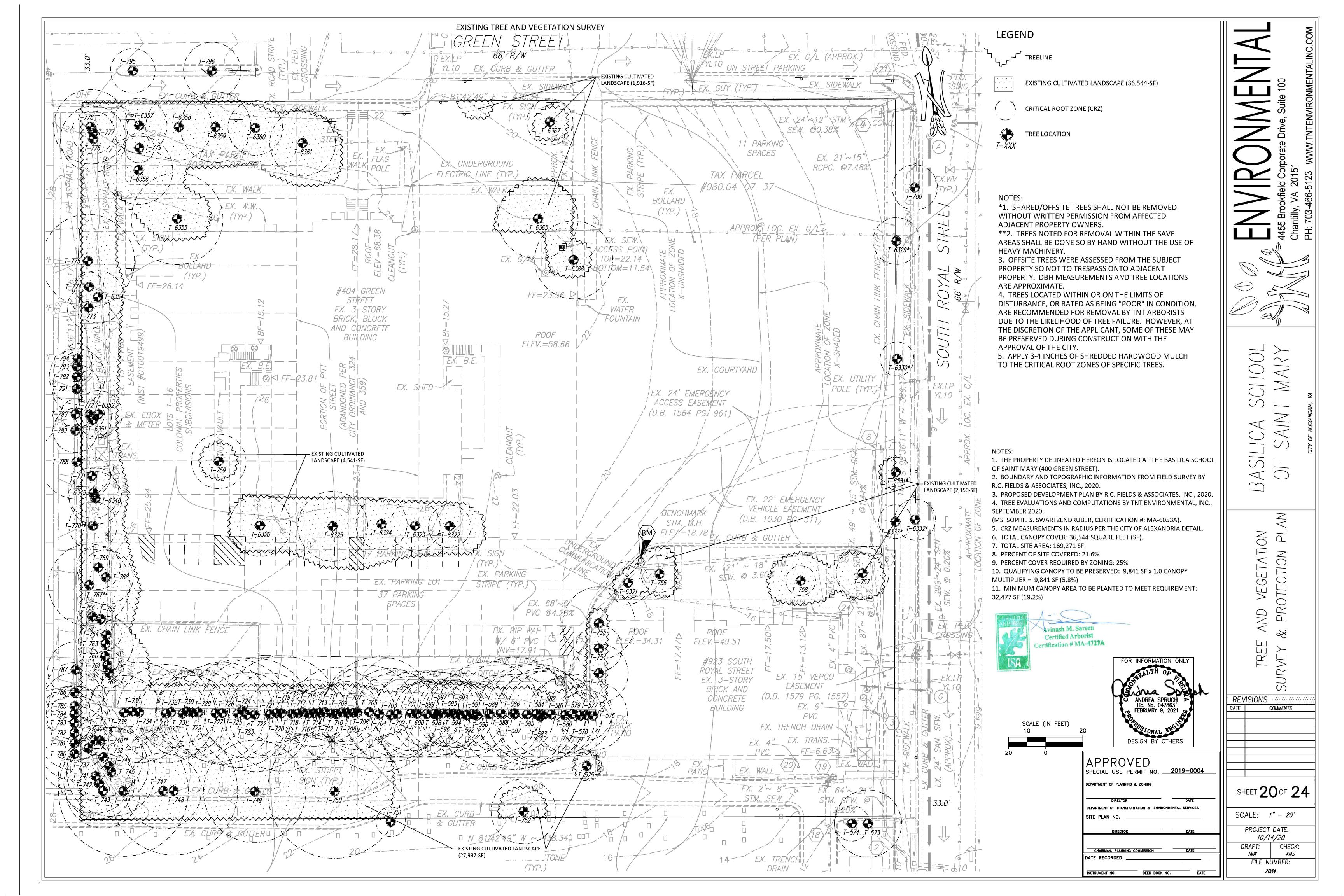
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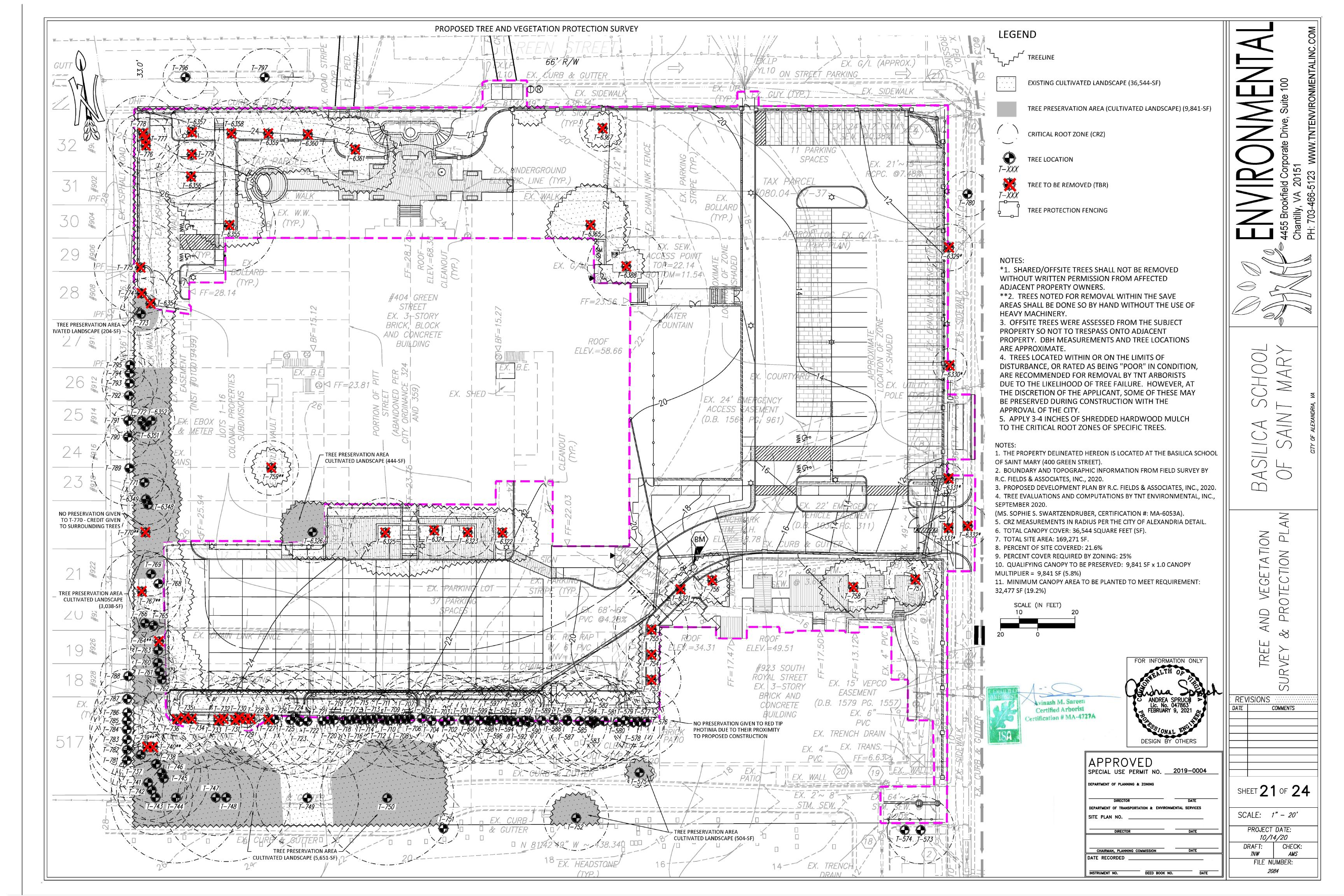
INSTRUMENT NO.

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LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. INTERFERENCE OR DISRUPTION OF SAME WILL NOT BE THE RESPONSIBILITY OF THIS OFFICE.

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF

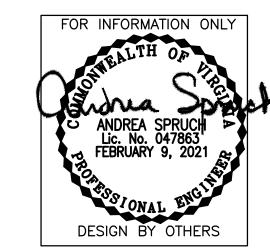




Tree Number	Common Name	Scientific Name	Size (dia. @ 54-in. above grade)	Critical Root Zone (feet)		Invasive	Likelihood of Survival of Construction	Remove?	Offsite or Shared	Notes & Recommendations
573	American Elm	Ulmus americana	18.1	18.1	75%		High	Save	Offsite	Several dead limbs/broken limbs, shallow rooting
574 575	Black Cherry Sugar Maple	Prunus serotina Acer saccharum	9.5 7.0	9.5 8.0	75% 94%		High High	Save Save	Offsite	Large dead limbs/broken limbs, shallow rooting  Mulch shallow roots (see note 5)
576	Red Tip Photinia	Photinia fraseri	18.5	18.5	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
577 578	Red Tip Photinia Red Tip Photinia	Photinia fraseri Photinia fraseri	13.5 12.0	13.5 12.0	78% 78%		Moderate Moderate	Save Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards  Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
579	Red Tip Photinia	Photinia fraseri	21.5	21.5	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
580 581	Red Tip Photinia Red Tip Photinia	Photinia fraseri Photinia fraseri	20.2	20.2 24.0	78% 78%		Moderate Moderate	Save Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards  Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
582	Red Tip Photinia	Photinia fraseri	25.0	25.0	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
583 584	Red Tip Photinia Red Tip Photinia	Photinia fraseri Photinia fraseri	24.5 27.0	24.5 27.0	78% 78%		Moderate Moderate	Save Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards  Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
585	Red Tip Photinia	Photinia fraseri	26.8	26.8	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
586	Red Tip Photinia	Photinia fraseri	30.2	30.2	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
587 588	Red Tip Photinia Red Tip Photinia	Photinia fraseri Photinia fraseri	21.5 20.8	21.5 20.8	78% 78%		Moderate Moderate	Save Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards  Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
589	Red Tip Photinia	Photinia fraseri	28.4	28.4	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
590 591	Red Tip Photinia Red Tip Photinia	Photinia fraseri Photinia fraseri	18.7 17.0	18.7 17.0	78% 78%		Moderate Moderate	Save Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards  Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
592	Red Tip Photinia	Photinia fraseri	22.6	22.6	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards  Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
593	Red Tip Photinia	Photinia fraseri	17.8	17.8	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
594 595	Red Tip Photinia Red Tip Photinia	Photinia fraseri Photinia fraseri	18.0 19.6	18.0 19.6	78% 78%		Moderate Moderate	Save Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards  Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
596	Red Tip Photinia	Photinia fraseri	22.0	22.0	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
597 598	Red Tip Photinia Red Tip Photinia	Photinia fraseri Photinia fraseri	17.5 23.0	17.5 23.0	78% 78%		Moderate Moderate	Save Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards  Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
599	Red Tip Photinia	Photinia fraseri	17.4	17.4	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
600	Red Tip Photinia	Photinia fraseri	23.0	23.0	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
701 702	Red Tip Photinia Red Tip Photinia	Photinia fraseri Photinia fraseri	20.0	20.0 22.8	78% 78%		Moderate Moderate	Save Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards  Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
703	Red Tip Photinia	Photinia fraseri	25.0	25.0	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
704	Red Tip Photinia	Photinia fraseri	31.0	31.0	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
705 706	Red Tip Photinia Red Tip Photinia	Photinia fraseri Photinia fraseri	25.0 20.0	25.0 20.0	78% 78%		Moderate Moderate	Save Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards  Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
707	Red Tip Photinia	Photinia fraseri	10.5	10.5	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
708 709	Red Tip Photinia Red Tip Photinia	Photinia fraseri Photinia fraseri	17.0 15.5	17.0 15.5	78% 78%		Moderate Moderate	Save Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards  Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
710	Red Tip Photinia	Photinia fraseri	25.0	25.0	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
711	Red Tip Photinia	Photinia fraseri	15.0	15.0	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
712 713	Red Tip Photinia Red Tip Photinia	Photinia fraseri Photinia fraseri	13.0 14.0	13.0 14.0	78% 78%		Moderate Moderate	Save Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards  Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
714	Red Tip Photinia	Photinia fraseri	18.0	18.0	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
715 716	Red Tip Photinia Red Tip Photinia	Photinia fraseri Photinia fraseri	12.0 12.0	12.0 12.0	78% 78%		Moderate Moderate	Save Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards  Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
717	Red Tip Photinia	Photinia fraseri	11.8	11.8	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
718	Red Tip Photinia	Photinia fraseri	13.5	13.5	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
719 720	Red Tip Photinia Red Tip Photinia	Photinia fraseri Photinia fraseri	31.0 16.0	31.0 16.0	78% 78%		Moderate Moderate	Save Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards  Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
721	Red Tip Photinia	Photinia fraseri	22.3	22.3	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
722	Red Tip Photinia	Photinia fraseri	30.5	30.5	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
723 724	Red Tip Photinia Hackberry	Photinia fraseri Celtis occidentalis	3.0	23.0 8.0	78% 75%		Moderate Moderate	Save Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards  Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
725	Red Tip Photinia	Photinia fraseri	29.0	29.0	78%		Moderate	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
726 727	Red Tip Photinia Red Tip Photinia	Photinia fraseri Photinia fraseri	27.5 26.4	27.5 26.4	78% 78%		Moderate None, within LOD	Save TBR		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards  Multi-trunk, English ivy on trunk, several dead limbs, improperly pruned
728	Red Tip Photinia	Photinia fraseri	23.0	23.0	78%		None, within LOD	TBR		Multi-trunk, English ivy on trunk, several dead limbs, improperly pruned
729	Red Tip Photinia	Photinia fraseri	20.0 16.4	20.0 16.4	78% 78%		None, within LOD	TBR TBR		Multi-trunk, English ivy on trunk, several dead limbs, improperly pruned
730 731	Red Tip Photinia Red Tip Photinia	Photinia fraseri Photinia fraseri	23.0	23.0	78% 78%		None, within LOD None, within LOD	TBR		Multi-trunk, English ivy on trunk, several dead limbs, improperly pruned  Multi-trunk, English ivy on trunk, several dead limbs, improperly pruned
732	Red Tip Photinia	Photinia fraseri	19.0	19.0	78%		None, within LOD	TBR		Multi-trunk, English ivy on trunk, several dead limbs, improperly pruned
733 734	Red Tip Photinia Red Tip Photinia	Photinia fraseri Photinia fraseri	26.5 27.0	26.5 27.0	78% 78%		None, within LOD None, within LOD	TBR TBR		Multi-trunk, English ivy on trunk, several dead limbs, improperly pruned  Multi-trunk, English ivy on trunk, several dead limbs, improperly pruned
735	Red Tip Photinia	Photinia fraseri	16.5	16.5	78%		None, within LOD	TBR		Multi-trunk, English ivy on trunk, several dead limbs, improperly pruned
736	Red Tip Photinia	Photinia fraseri	20.0	20.0	78%		None, within LOD	TBR		Multi-trunk, English ivy on trunk, several dead limbs, improperly pruned
737 738	Eastern Redbud Red Tip Photinia	Cercis canadensis Photinia fraseri	9.0	9.0 21.2	75% 78%		High High	Save Save		Multi-trunk, lean in growth. Treat/remove vines, prune dead limbs to ANSI A300 standards  Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
739	Rose of Sharon	Hibiscus syriacus	8.0	8.0	50%	Invasive	Invasive	TBR**		Multi-trunk, covered in vines, dead limbs/broken limbs
740 741	White Mulberry Red Tip Photinia	Morus alba Photinia fraseri	8.0 20.0	8.0 20.0	50% 78%	Invasive	Invasive High	TBR** Save		Covered in vines, many dead limbs/broken limbs  Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
742	Red Tip Photinia	Photinia fraseri	19.0	19.0	78%		High	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
743	Red Tip Photinia	Photinia fraseri	20.0	20.0	78%		High	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
744 745	Red Tip Photinia Red Tip Photinia	Photinia fraseri Photinia fraseri	35.0 24.0	35.0 24.0	78% 78%		High High	Save Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards  Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
746	Red Tip Photinia	Photinia fraseri	21.0	21.0	78%		High	Save		Multi-trunk, improperly pruned. Treat/remove English ivy on trunk, prune dead limbs to ANSI A300 standards
747	Black Cherry	Prunus serotina	20.5	20.5	66%		High	Save		Poor form, crooked trunk, rot at base. Treat/remove vines on trunk, prune dead limbs to ANSI A300 standards  Several weeping wounds, poor form, rot at base. Prune dead limbs/broken limbs to ANSI A300 standards,
748	Black Cherry	Prunus serotina	34.5	34.5	66%		High	Save		treat/remove vines on trunk
749	Silver Maple	Acer saccharinum	27.6	27.6	50%		Moderate	Save		Cavity with rot at base, partially topped, high amount of dieback
750 751	Silver Maple Sugar Maple	Acer saccharinum  Acer saccharum	36.0 6.5	36.0 8.0	91% 100%		High High	Save Save	Offsite	Low amount of dieback. Prune water sprouts & dead limbs/broken limbs to ANSI A300 standards
752	Willow Oak	Quercus phellos	17.5	17.5	97%		High	Save	0,110.110	Prune few dead limbs to ANSI A300 standards
753 754	Crepe Myrtle Crepe Myrtle	Lagerstroemia spp.  Lagerstroemia spp.	15.8 12.5	15.8 12.5	97% 97%	Invasive Invasive	None, within LOD None, within LOD	TBR TBR		Multi-trunk, a few dead limbs  Multi-trunk, a few dead limbs
754 755	Crepe Myrtle	Lagerstroemia spp.	19.5	19.5	97%	Invasive	None, within LOD	TBR		Multi-trunk, a few dead firms  Multi-trunk, a few dead limbs
6321	Southern Magnolia	Magnolia grandiflora	11.5	11.5	100%		None, within LOD	TBR		Some woodpecker damage to trunk, included bark
756 757	Flowering Dogwood Crabapple	Cornus florida Malus spp.	10.0 14.2	10.0 14.2	100% 75%		None, within LOD None, within LOD	TBR TBR		Several dead limbs/broken limbs, shallow rooting  Large dead limbs/broken limbs, shallow rooting
758	Southern Magnolia	Magnolia grandiflora	5.0	8.0	50%		None, within LOD	TBR		Small cavity in limbs
6322	Red Maple	Acer rubrum	11.5	11.5	97%		None, within LOD	TBR		Some dieback
6323 6324	Red Maple Red Maple	Acer rubrum Acer rubrum	13.5 13.8	13.5 13.8	100% 84%		None, within LOD None, within LOD	TBR TBR		Small cavity in limb, several dead limbs  High amount of dieback, many dead limbs/broken limbs
6325	Red Maple	Acer rubrum	18.8	18.8	63%		None, within LOD	TBR		Multiple small cavities in limbs, several broken limbs, moderate dieback
6326	Red Maple	Acer rubrum	16.6	16.6	69%		Moderate	Save		Multiple, small cavities in limbs, moderate dieback. Mulch girdled roots (see note 5), prune broken limbs to ANSI
759	Crepe Myrtle	Lagerstroemia spp.	14.7	14.7	69%	Invasive	Invasive	TBR**		A300 standards Small cavity in limb
760	American Elm	Ulmus americana	8.2	8.2	94%		Moderate	Save		Poor form, lean in growth. Treat/remove vines
761 762	Black Cherry Pin Oak	Prunus serotina  Quercus palustris	4.5 6.6	8.0 8.0	75% 75%		Moderate Moderate	Save Save		Poor form, lean in growth. Treat/remove vines  Moderate amount of dieback. Treat/remove vines, prune dead limbs/broken limbs to ANSI A300 standards
763	Sugar Maple	Acer saccharum	14.8	14.8	75%		Moderate	Save		Multi-trunk. Treat/remove vines, prune dead limbs/broken limbs to ANSI A300 standards
764	Chinese Holly	llex cornuta	2.5	8.0	72%	Invasive	Invasive	TBR**		Covered in vines, some broken limbs

Tree Number	Common Name	Scientific Name	Size (dia. @ 54-in. above grade)	Critical Root Zone (feet)		Invasive	Likelihood of Survival of Construction	Remove?	Offsite or Shared	Notes & Recommendations
765	Northern Red Oak	Quercus rubra	5.0	8.0	75%		Moderate	Save		Twisted trunk. Treat/remove vines, prune dead limbs to ANSI A300 standards
766	Northern Red Oak	Quercus rubra	7.0	8.0	66%		Moderate	Save		Treat/remove vines, prune dead limbs to ANSI A300 standards
767	White Mulberry	Morus alba	22.0	22.0	75%	Invasive	Invasive	TBR**		Topped/uprooting, mostly dead
768	Crabapple	Malus spp.	14.7	14.7	25%		Moderate	Save		Treat/remove vines, prune dead limbs to ANSI A300 standards
769	Northern Red Oak	Quercus rubra	11.7	11.7	63%		Moderate	Save		Treat/remove vines, prune dead limbs to ANSI A300 standards
770	White Mulberry	Morus alba	13.0	13.0	78%	Invasive	Invasive	TBR**		Mostly dead, partially topped, covered in vines
6348	American Elm	Ulmus americana	14.2	14.2	25%		High	Save		Treat/remove vines, prune dead limbs to ANSI A300 standards
6349	American Elm	Ulmus americana	13.7	13.7	56%		High	Save		High amount of dieback. Treat/remove vines, prune dead limbs to ANSI A300 standards
771	Black Cherry	Prunus serotina	10.2	10.2	50%		High	Save		Poor form, partially topped. Treat/remove vines, prune dead limbs/broken limbs to ANSI A300 standards
6351	Black Walnut	Juglans nigra	10.3	10.3	63%		High	Save		Treat/remove vines, prune dead limbs to ANSI A300 standards
6352	Black Walnut	Juglans nigra	12.6	12.6	63%		High	Save		Treat/remove vines, prune dead limbs to ANSI A300 standards
772	American Elm	Ulmus americana	6.8	8.0	75%		High	Save		Treat/remove vines, prune dead limbs to ANSI A300 standards
773	Northern Red Oak	Quercus rubra	11.5	11.5	63%		High	Save		Treat/remove dense vines, moderate dieback
6354	American Elm	Ulmus americana	14.1	14.1	75%		None, within LOD	TBR		Vines, pruned for powerlines, dead limbs/broken limbs
774	Northern Red Oak	Quercus rubra	7.0	8.0	63%		None, within LOD	TBR		Covered in dense vines, moderate dieback
775	White Mulberry	Morus alba	25.0	25.0	25%	Invasive	None, within LOD	TBR		Poor form, several large dead limbs/broken limbs, high dieback, covered in dense vines
776	Red Tip Photinia	Photinia fraseri	17.7	17.7	75%		None, within LOD	TBR		Multi-trunk, covered in vines, many broken limbs
777	Red Tip Photinia	Photinia fraseri	11.5	11.5	75%		None, within LOD	TBR		Multi-trunk, covered in vines, many broken limbs
778	Red Tip Photinia	Photinia fraseri	20.0	20.0	75%		None, within LOD	TBR		Multi-trunk, covered in vines, many broken limbs
6356	Kwanzan Cherry	Prunus serrulata	18.5	18.5	63%		None, within LOD	TBR		Girdled/shallow roots, moderate dieback, several dead limbs, weeping wound
6357	Kwanzan Cherry	Prunus serrulata	14.8	14.8	63%		None, within LOD	TBR		Girdled/shallow roots, moderate dieback, several dead limbs, weeping wound
779	Kwanzan Cherry	Prunus serrulata	6.5	8.0	59%		None, within LOD	TBR		Broken co-leader, moderate dieback, several dead limbs/broken limbs, shallow roots
6358	Kwanzan Cherry	Prunus serrulata	17.8	17.8	63%		None, within LOD	TBR		Girdled/shallow roots, moderate dieback, several dead limbs, weeping wound
6359	Kwanzan Cherry	Prunus serrulata	19.0	19.0	63%		None, within LOD	TBR		Girdled/shallow roots, moderate dieback, several dead limbs, weeping wound
6360	Littleleaf Linden	Tilia cordata	14.7	14.7	69%		None, within LOD	TBR		Girdled/shallow roots, some dead limbs/broken limbs
6355	Southern Magnolia	Magnolia grandiflora	24.7	24.7	94%		None, within LOD	TBR		Over pruned
6361	Kwanzan Cherry	Prunus serrulata	17.7	17.7	50%		None, within LOD	TBR		Shallow rooting, many dead limbs, broken limbs
6365	Southern Magnolia	Magnolia grandiflora	21.6	21.6	81%		None, within LOD	TBR		Shallow rooting, some dead limbs, broken limbs
6388	Crepe Myrtle	Lagerstroemia spp.	21.0	21.0	100%	Invasive	None, within LOD	TBR		Multi-trunk
6367	White Ash	Fraxinus americana	12.4	12.4	50%		None, within LOD	TBR		Shallow rooting, improperly pruned, moderate dieback, dead limbs/broken limbs
6368	Bradford Pear	Pyrus calleryana	24.1	24.1	50%	Invasive		TBR		Shallow rooting, cavity in trunk, improperly pruned
6369	Bradford Pear	Pyrus calleryana	18.6	18.6	50%	Invasive	None, within LOD	TBR		Shallow rooting, cavity in trunk, improperly pruned
6367	Crabapple	Malus spp.	9.5	9.5	50%		None, within LOD	TBR	0.00.11	Fungus at base, many dead limbs/broken limbs, girdled/shallow roots
780	Crabapple	Malus spp.	12.2	12.2	50%		Moderate	Save	Offsite	Fungus at base, many dead limbs/broken limbs, girdled/shallow roots
6329	Crabapple	Malus spp.	12.6	12.6	50%		Low	TBR*	Shared	Fungus at base, many dead limbs/broken limbs, girdled/shallow roots
6330	Crabapple	Malus spp.	9.1	9.1	50%		Low	TBR*	Shared	Fungus at base, many dead limbs/broken limbs, girdled/shallow roots
6331	Crabapple	Malus spp.	7.8	8.0	75%		None, within LOD	TBR*	Shared	Girdled/shallow roots, some dead limbs/broken limbs
6332	Crabapple	Malus spp.	11.0	11.0	75%		None, within LOD	TBR*	Offsite	Girdled/shallow roots, some dead limbs/broken limbs, poor form
6333	Crabapple	Malus spp.	9.1	9.1	75%		None, within LOD	TBR*	Shared	Girdled/shallow roots, some dead limbs/broken limbs
781	Cherry Laurel	Prunus laurocerasus	20.0	20.0	91%		High	Save	Offsite	Some dead limbs, vines in canopy
782 783	Cherry Laurel	Prunus laurocerasus	20.0	20.0	91% 91%		High	Save	Offsite Offsite	Some dead limbs, vines in canopy
	Cherry Laurel	Prunus laurocerasus	20.0	20.0	91%		High High	Save	Offsite	Some dead limbs, vines in canopy
784 785	Cherry Laurel	Prunus laurocerasus		1	91%		High	Save	Offsite	Some dead limbs, vines in canopy
785 786	Cherry Laurel	Prunus laurocerasus	15.0 18.0	15.0 18.0	91%		High	Save	Offsite	Some dead limbs, vines in canopy
786	Cherry Laurel	Prunus laurocerasus	16.0	16.0	91%		High	Save	Offsite	Some dead limbs, vines in canopy
787	Cherry Laurel	Prunus laurocerasus		1	63%		High	Save	<del>                                     </del>	Some dead limbs, vines in canopy Covered in vines, soveral dead limbs /broken limbs
788 789	Hackberry American Elm	Celtis occidentalis	15.0 20.0	15.0 20.0	25%		High	Save Save	Offsite Offsite	Covered in vines, several dead limbs/broken limbs  Poor form, dense vines throughout, many large dead limbs/broken limbs
789 790		Ulmus americana	12.0	12.0	100%		High High		Offsite	
790	Arborvitae Arborvitae	Thuja occidentalis Thuja occidentalis	5.0	8.0	100%		T	Save Save	Offsite	Multi-trunk
	Arborvitae			<del>                                     </del>			High			Covered in vines, several dead limbs /broken limbs
792 793	Black Walnut	Juglans nigra	13.0 15.0	13.0 15.0	75% 75%		High	Save	Offsite Offsite	Covered in vines, several dead limbs/broken limbs  Covered in vines, several dead limbs/broken limbs
793 794	Black Walnut	Juglans nigra	6.0	8.0	75% 75%		High High	Save	Offsite	
794	Black Walnut Bradford Pear	Juglans nigra Pyrus calleryana	8.0	8.0	75% 75%	Invasive	High	Save Save	Offsite	Covered in vines, several dead limbs/broken limbs  Covered in dense vines, several dead limbs/broken limbs
795	Japanese Zelkova	Zelkova serrata	12.0	12.0	63%	Invasive	Moderate	Save	Offsite	Shallow rooting, many dead limbs/broken limbs
796	Japanese Zelkova Japanese Zelkova	Zelkova serrata	15.4	15.4	75%	Invasive	High	Save	Offsite	Girdled/very shallow roots, improperly pruned, many dead limbs
	Japanese Zerkova	ZEINOVU SEITULU	13.4	13.4	13/0	ilivasive	I LIRII	Jave	Onsite	Girarea, very stratiow roots, miproperty prunea, many dead imps

- \*1. SHARED/OFFSITE TREES SHALL NOT BE REMOVED WITHOUT WRITTEN PERMISSION FROM AFFECTED ADJACENT PROPERTY OWNERS.
- \*\*2. TREES NOTED FOR REMOVAL WITHIN THE SAVE AREAS SHALL BE DONE SO BY HAND WITHOUT THE USE OF HEAVY MACHINERY.
- 3. OFFSITE TREES WERE ASSESSED FROM THE SUBJECT PROPERTY SO NOT TO TRESPASS ONTO ADJACENT PROPERTY. DBH MEASUREMENTS AND TREE LOCATIONS ARE APPROXIMATE.
- 4. TREES LOCATED WITHIN OR ON THE LIMITS OF DISTURBANCE, OR RATED AS BEING "POOR" IN CONDITION, ARE RECOMMENDED FOR REMOVAL BY TNT ARBORISTS DUE TO THE LIKELIHOOD OF TREE FAILURE. HOWEVER, AT THE DISCRETION OF THE APPLICANT, SOME OF THESE MAY BE PRESERVED DURING CONSTRUCTION WITH THE APPROVAL OF THE CITY.
- 5. APPLY 3-4 INCHES OF SHREDDED HARDWOOD MULCH TO THE CRITICAL ROOT ZONES OF SPECIFIC TREES.



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19-0004
DATE AL SERVICES
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INSTRUMENT NO. DEED BOOK NO. DATE

Certified Arborist

Certification # MA-4727A

JS L

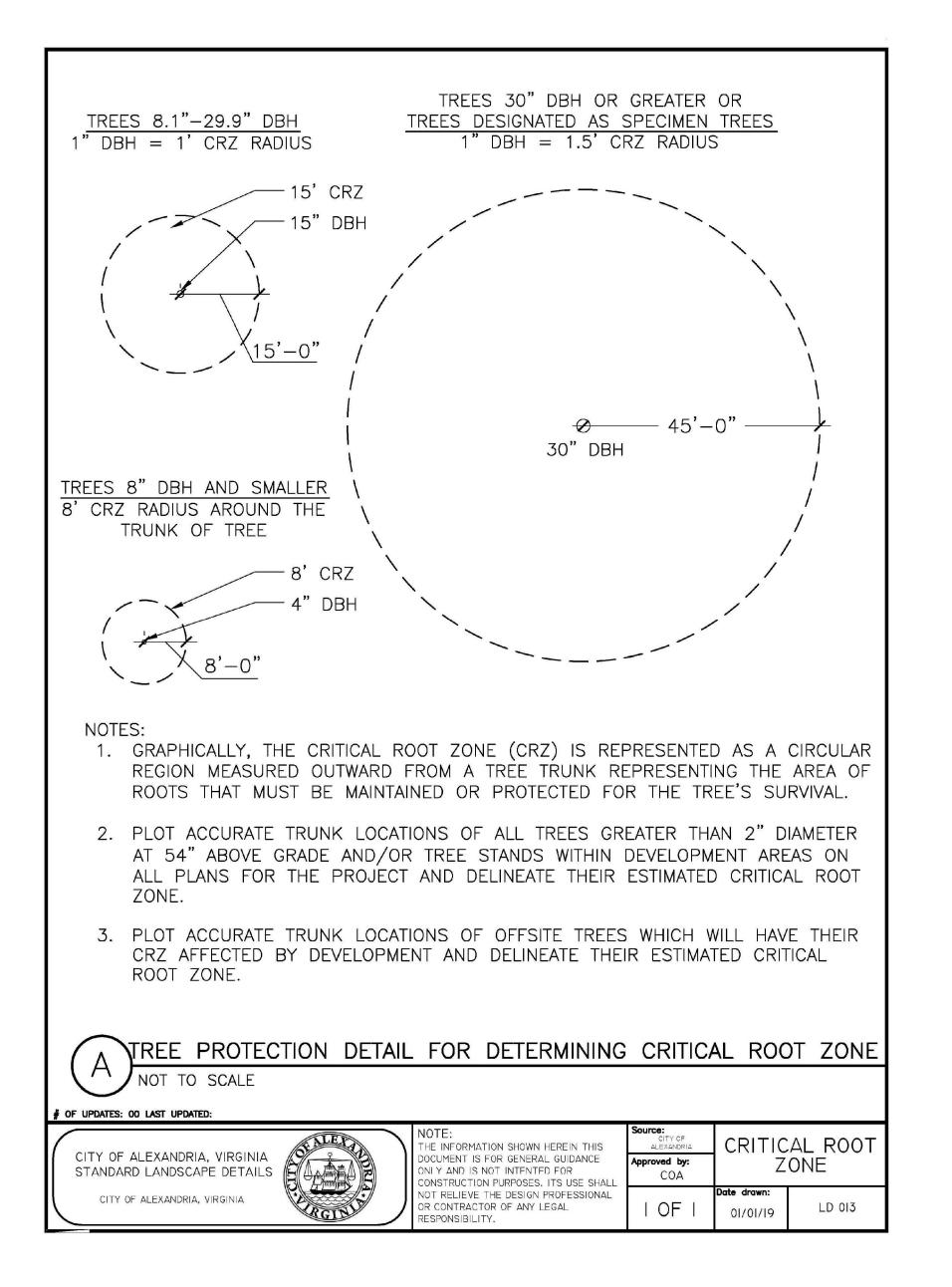
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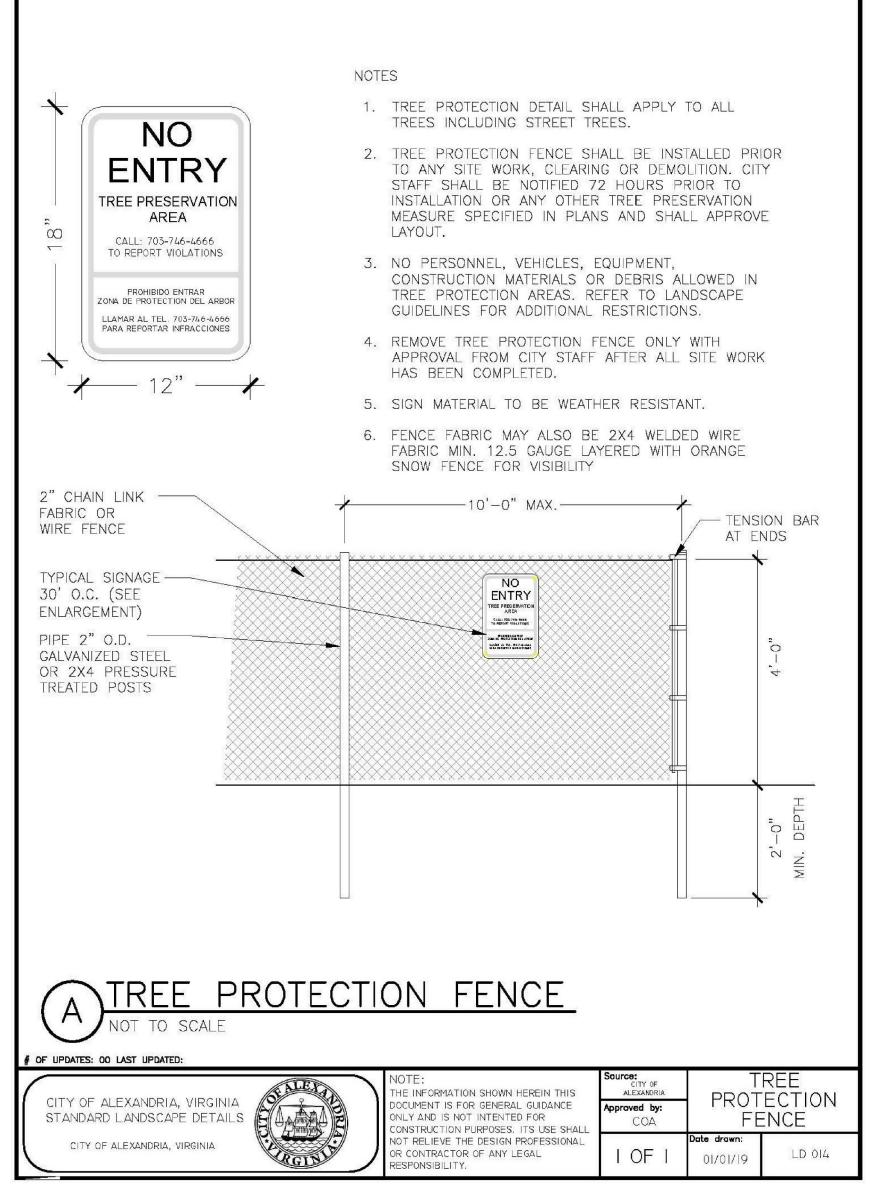
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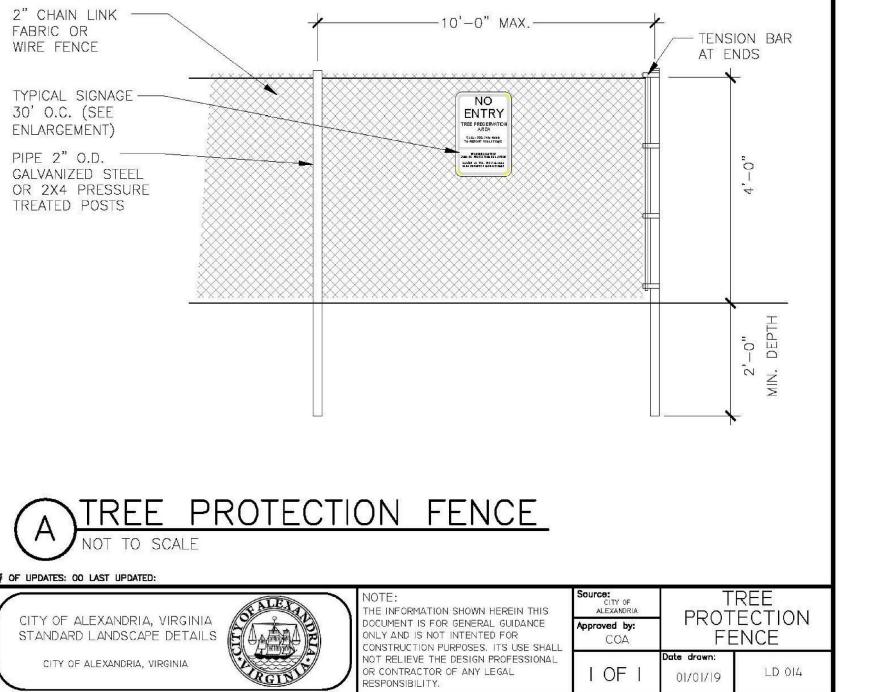
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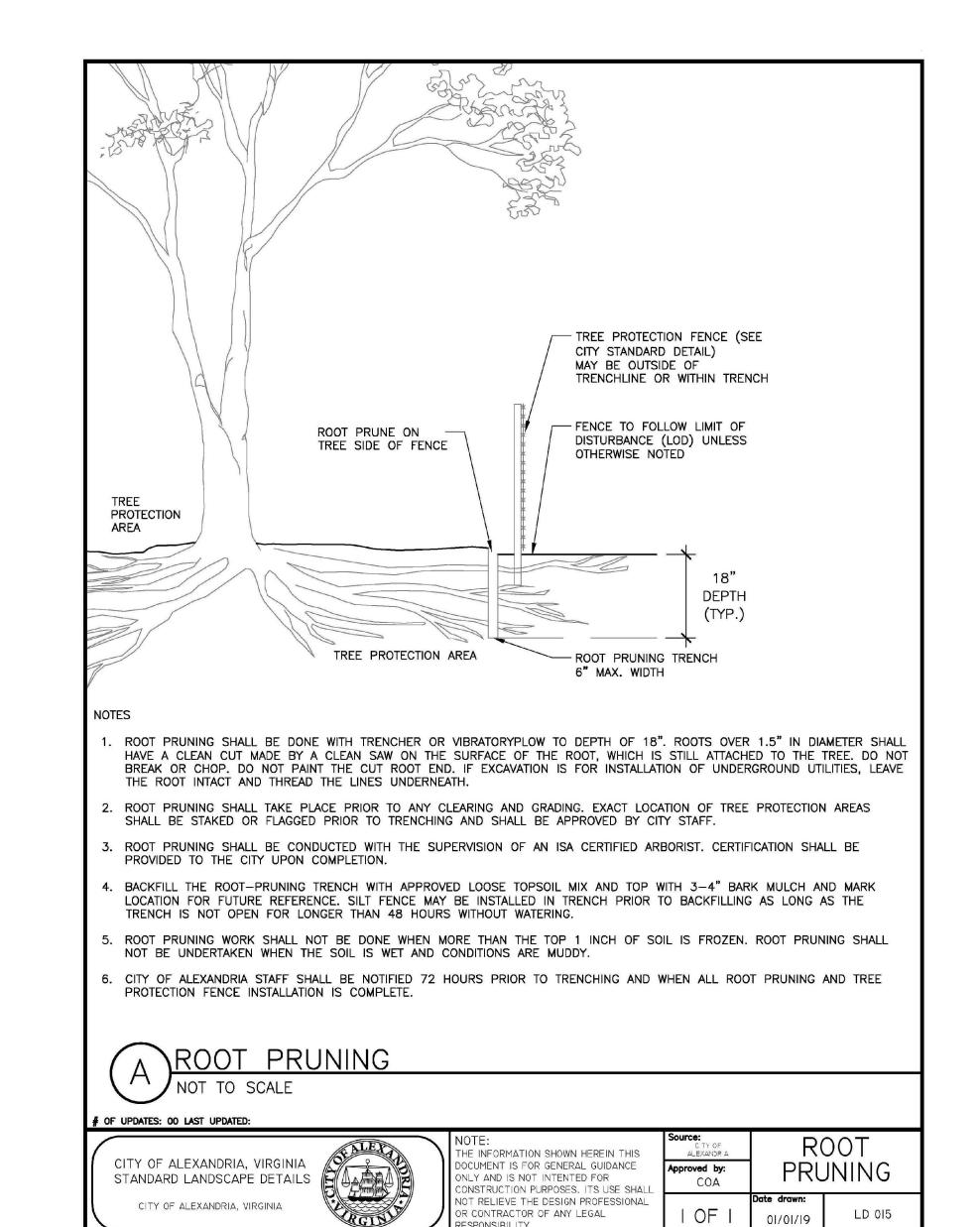
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NLY AND IS NOT INTENTED FOR

OR CONTRACTOR OF ANY LEGAL

Certification # MA-4727A

RESPONSIBILITY.

CONSTRUCTION PURPOSES. ITS USE SHA

NOT RELIEVE THE DESIGN PROFESSIONAL

COA

**INVASIVE SPECIES CONTROL NARRATIVE:** 1. ANY APPLICATION OF ENVIRONMENTALLY SENSITIVE APPROVED HERBICIDES SHALL BE APPLIED BY A VIRGINIA CERTIFIED APPLICATOR OR REGISTERED TECHNICIAN.

2. ENGLISH IVY: REMOVE FROM TREES AND LANDSCAPE BY CUTTING ALL VINES AT GROUND LEVEL. VINES SHOULD BE CUT AGAIN SEVERAL FEET UP THE TRUNK. PEAL THE CUT SECTIONS OFF BUT CARE SHOULD BE TAKEN NOT TO STRIP THE BARK OFF THE TREE. PULL GROUND COVER BACK A FEW FEET FROM THE BASE OF THE TREE TO SLOW REGROWTH UP THE TREE TRUNK. REMOVE GROUND COVER BY HAND PULLING, CUTTING AND MULCHING OVER TOP, AND/OR APPLYING A GLYPHOSATE HERBICIDE AS A 4-PERCENT SOLUTION (1 PINT PER 3-GALLON MIX) TO LEAVES OR FRESHLY CUT LARGE STEMS, BY THOROUGHLY WETTING THEM. USE A STRING TRIMMER TO REDUCE GROWTH LAYERS AND TO INJURE LEAVES FOR IMPROVED HERBICIDE UPTAKE. RETREATMENT MAY BE NECESSARY FOR COMPLETE ERADICATION. THE REMNANTS SHALL BE BAGGED AND REMOVED FROM THE PROJECT SITE.

3. JAPANESE HONEYSUCKLE: SHALL BE REMOVED BY HAND TO MINIMIZE SITE DISTURBANCE. TO REDUCE DAMAGE TO NON-TARGET PLANTS, HERBICIDES SUCH AS GLYPHOSATE AND TRICLOPYR MAY BE APPLIED TO FOLIAGE BY A VIRGINIA CERTIFIED APPLICATOR DURING GROWING SEASON (APRIL TO OCTOBER). THOROUGHLY COVER ALL LEAVES AND/OR FRESHLY CUT STEMS IN HERBICIDE, REPEAT AS NECESSARY.

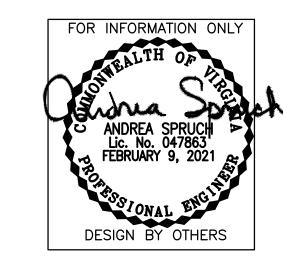
4. BRADFORD PEAR: ANY BRADFORD PEAR OF ANY SIZE ARE TO BE REMOVED FROM TREE PRESERVATION AREAS BY HAND. THE STUMP WILL BE CUT, FLAGGED AND PAINTED WITH AN AN ENVIRONMENTALLY SENSITIVE APPROVED HERBICIDE TO BE APPLIED BY A VIRGINIA CERTIFIED APPLICATOR.

5. ORNAMENTAL BITTERSWEET: VINES SHALL BE REMOVED BY HAND, INCLUDING THE ROOTS, WHERE POSSIBLE TO MINIMIZE DISTURBANCE. FOR VINES TOO LARGE TO PULL, CUT AT GROUND LEVEL OR GRUB. CUT VINE STEMS MAY ALSO BE TREATED WITH A SYSTEMIC HERBICIDE BY A CERTIFIED APPLICATOR. FOR LARGE INFESTATIONS, A FOLIAR APPLICATION OF A SYSTEMIC HERBICIDE SUCH AS GLYPHOSATE OR TRICLOPYR MAY BE APPLIED FROM LATE SUMMER TO FALL BY A CERTIFIED APPLICATOR.

6. WHITE MULBERRY: CONTROL AND MANAGEMENT SHOULD BE ATTEMPTED DURING FLOWERING, BEFORE SEED PRODUCTION. CUTTING THE TREE TO THE GROUND LEVEL IS THE FIRST MEASURE OF CONTROL AND WILL REQUIRE REPEATED CUTTING OF RESPROUTS OR SUPPLEMENTAL APLICATION OF HERBICIDE AS RESPROUT OCCURS. GIRDLING CAN BE EFFECTIVE ON LARGE TREES AND SHOULD BE CONDUCTED BY CUTTING THROUGH THE BARK OF THE TREE, AROUND THE ENTIRE TRUNK OF THE TREE, AT LEAST 6 INCHES ABOVE THE SURFACE. SUBSEQUENT RESPROUTING SHOULD BE TREATED WITH AN HERBICIDE. HAND PULLING CAN BE EFFECTIVE WITH YOUNG SEEDLINGS BUT CARE SHOULD BE GIVEN TO REMOVE THE ENTIRE ROOT SINCE BROKEN FRAGMENTS MAY RESPROUT.

7. ROSE OF SHARON: HAND PULL SEEDLINGS, USE A WEED WRENCH ON LARGE SAPLINGS AND CUT DOWN MATURE BUSHES. BUNDLE BRANCHES AND BAG BRANCHES WITH SEED PODS. DISPOSE OF IN DUMPSTER OR BURN. A VIRGINIA CERTIFIED APPLICATOR MAY APPLY A 3-PERCENT SOLUTION OF GLYPHOSATE HERBICIDE TO FOLIAGE IN THE LATE FALL OR EARLY WINTER. REPEAT AS NECESSARY.

8. INVASIVE SPECIES CONTROL SHALL COMMENCE WITH E&S PHASE I AND BE CONDUCTED UNTIL THE PLANTS NOTED ABOVE ARE NO LONGER IN ABUNDANCE OR UNTIL BOND RELEASE, WHICHEVER IS LATER.



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FILE NUMBER: 2084

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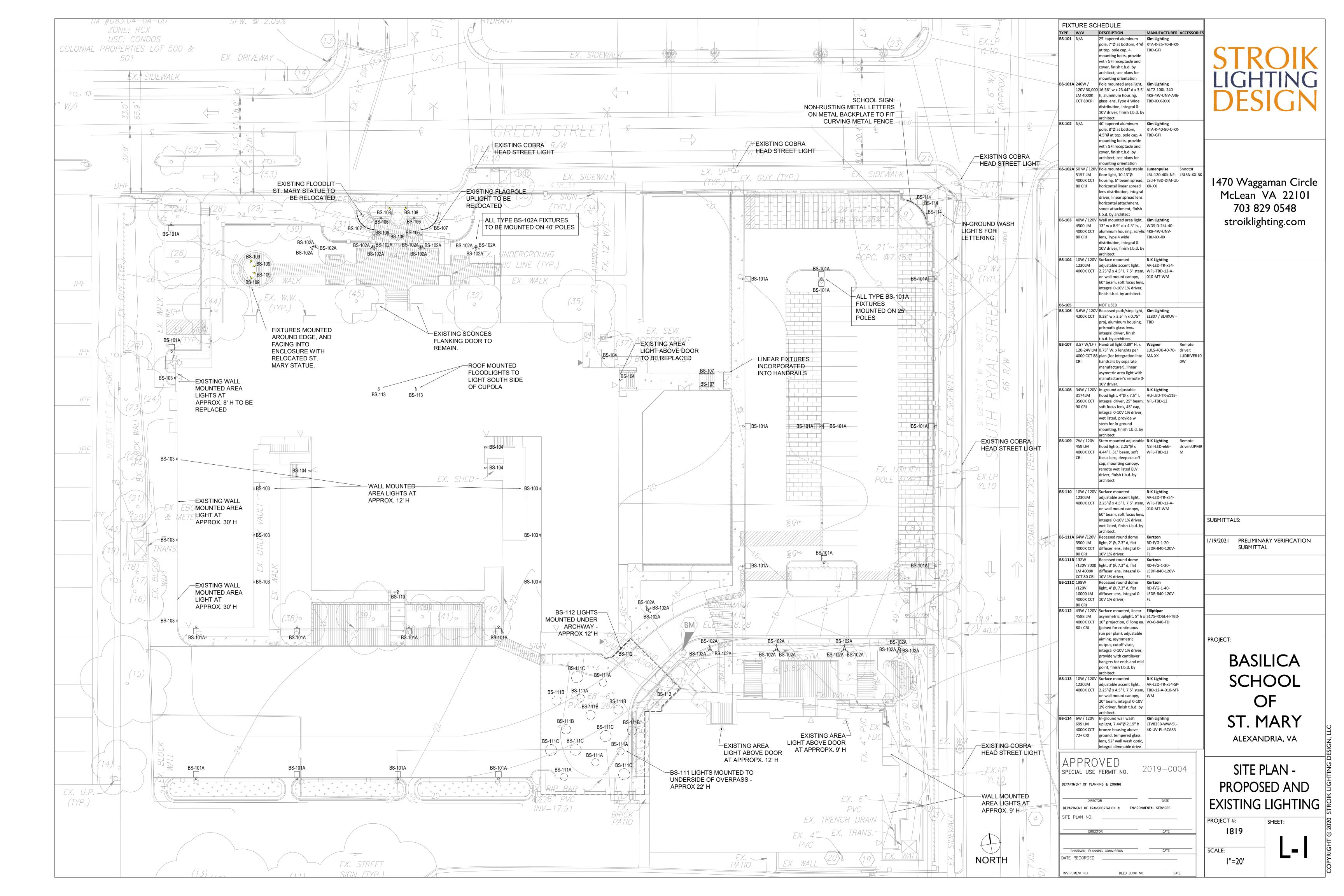
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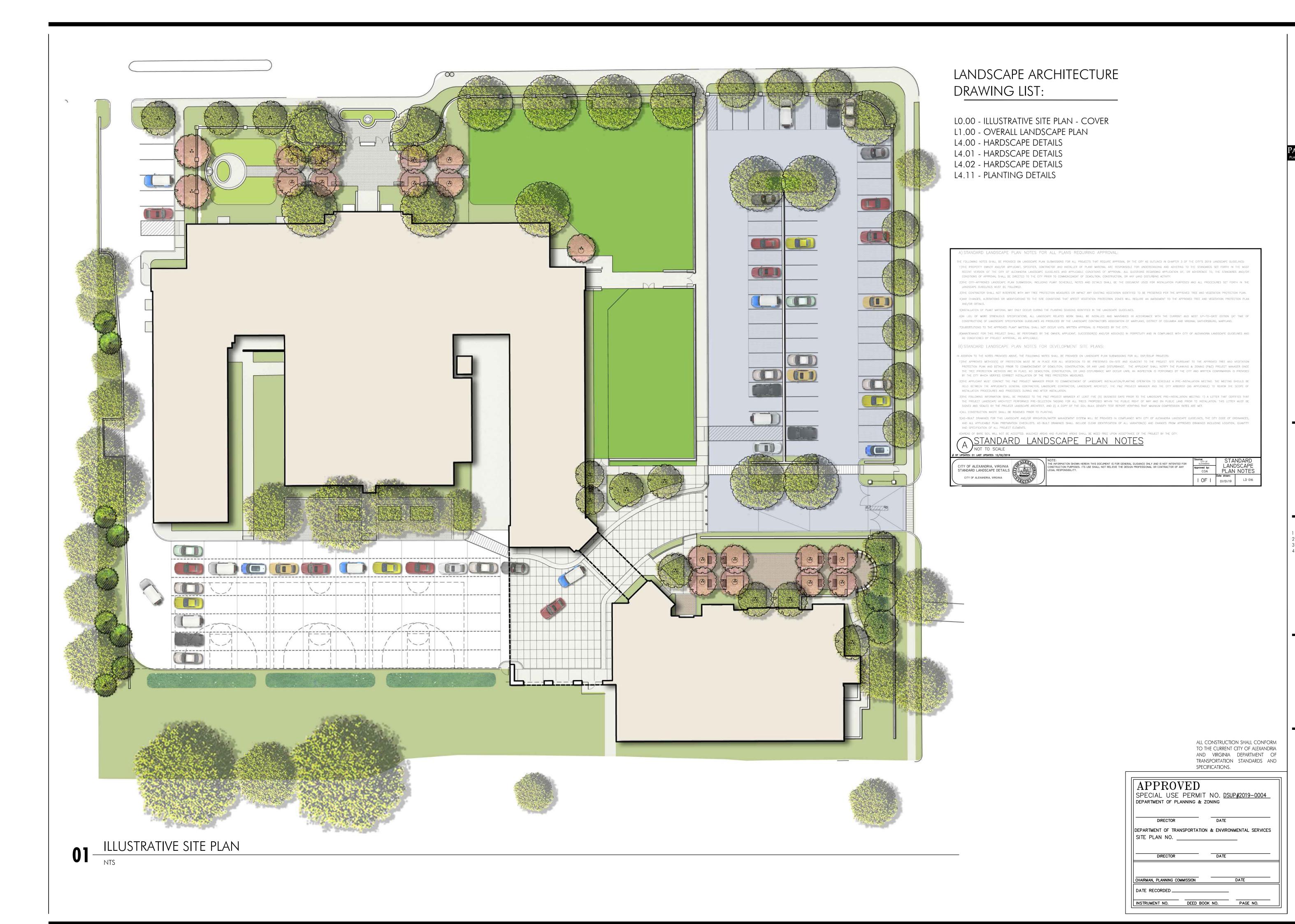
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	APPROVED SPECIAL USE PERMIT NO. 2019-0004			
	DEPARTMENT OF PLANNING & ZONING  DIRECTOR  DATE  DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES		SHEET 23	3 of <b>24</b>
	SITE PLAN NO.		SCALE:	NTS
	DIRECTOR DATE		PROJECT 10/3	DATE: 14/20
	CHAIRMAN, PLANNING COMMISSION DATE  DATE RECORDED	] ]	TNW	CHECK:  AMS
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APPROVED SPECIAL USE PERMIT NO. 2019-0004 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. DATE





# BASILICA SCHOOL OF SAINT MARY

**ALEXANDRIA** 

### Parker Rodriguez, Inc

Alexandria VA 22314 703.548.5010

BISHOP OF THE CATHOLIC DIOCESE OF ARLINGTON

310 DUKE STREET ALEXANDRIA, VA 22314 DEVELOPER

BASILICA SCHOOL OF SAINTMARY 400 GREEN STREET ALEXANDRIA, VA 22314

703.549.1646

BARNES VANZE ARCHITECTS, INC 1000 POTOMAC STREET NW SUITE L-2 WASHINGTON, DC 20007 202.337.7255

CIVIL ENGINEERS R.C. FIELDS & ASSOCIATES, INC 700 S. WASHINGTON ST,STE 220 ALEXANDRIA, VA 22314

703.549.6422

ATTORNEY WALSH, COLUCCI, LUBELEY & WALSH, PC. 2200 CLARENDON BLVD SUITE 1300 ARLINGTON, VA 22201 703.528.4700 x5413

10.16.2020 12.18.2020

01.21.2021

02.09.2021

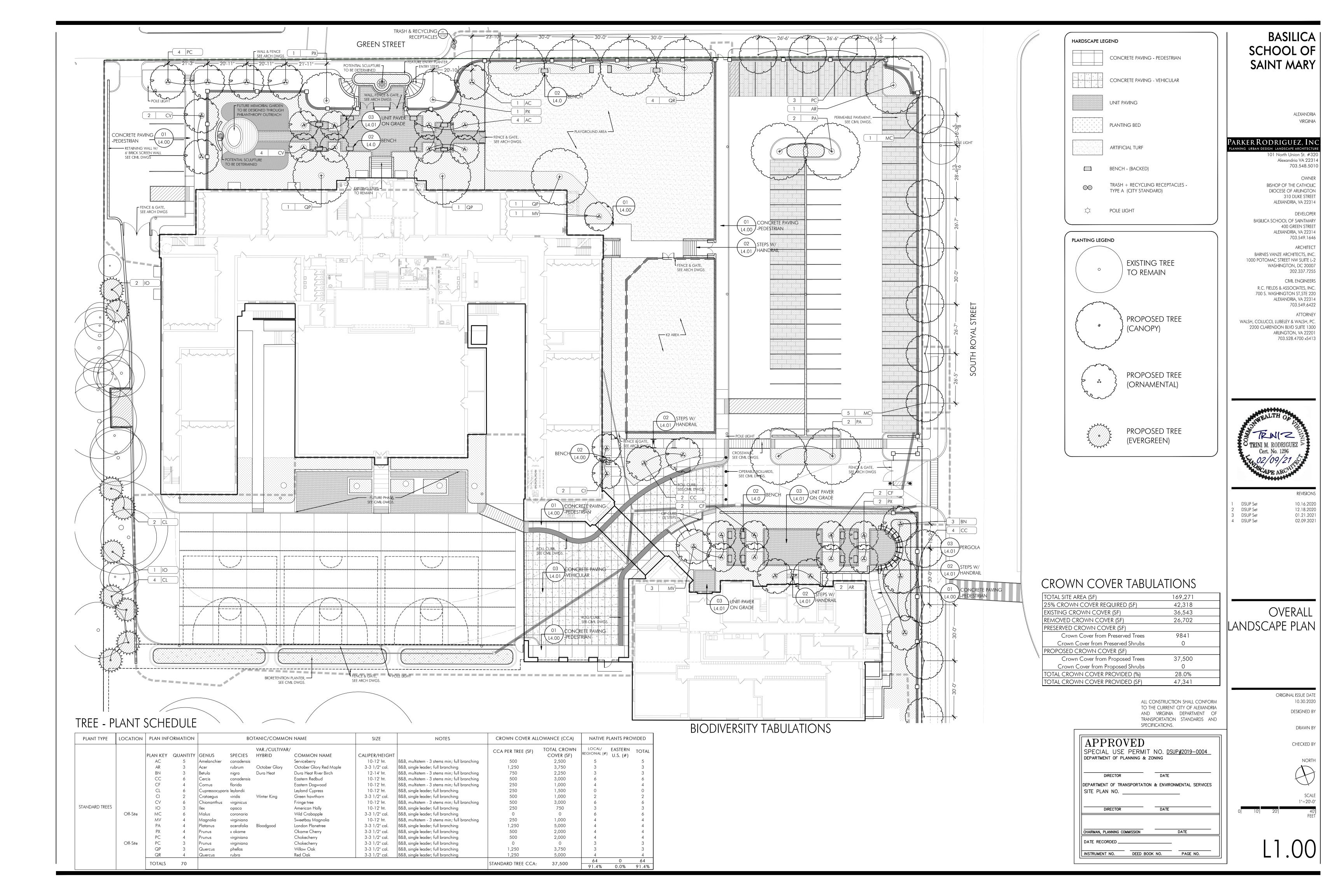
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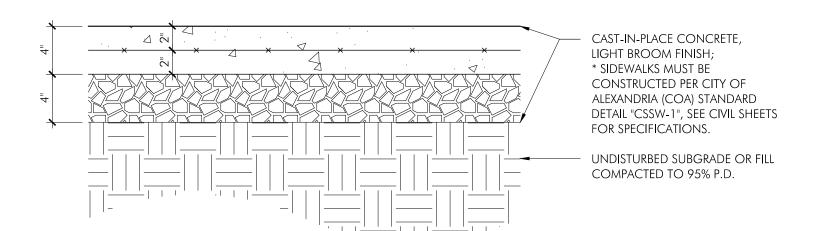
> ILLUSTRATIVE SITE PLAN

> > ORIGINAL ISSUE DATE 10.30.2020 DESIGNED BY

> > > DRAWN BY

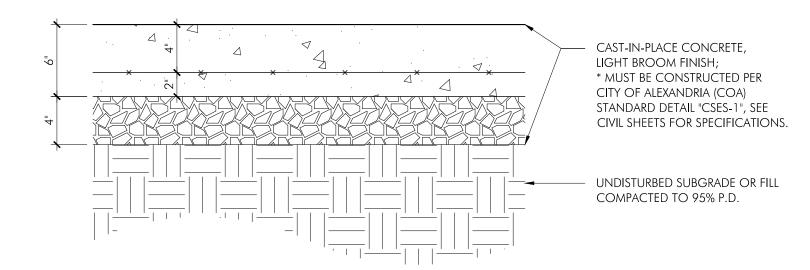
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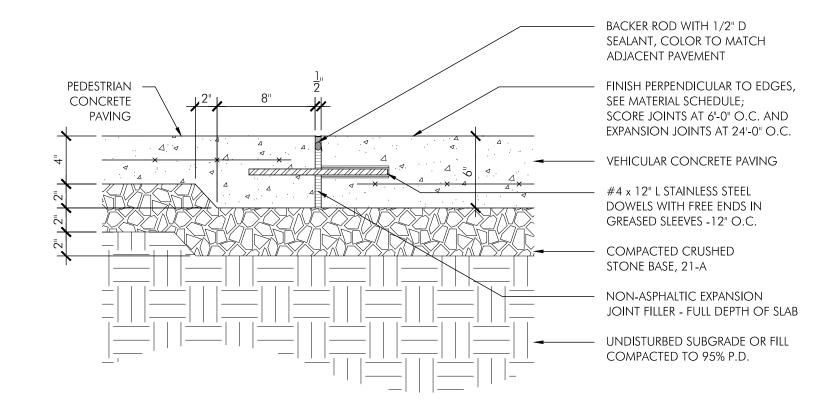
# CONCRETE PAVING ON GRADE - PEDESTRIAN

1 1/2" - 1'-0"



# CONCRETE PAVING ON GRADE - VEHICULAR

1 1/2" - 1'-0"



### CONCRETE PAVING ON GRADE - VEH. TO PED. 1 1/2" - 1'-0"

SAW-CUT CONTROL JOINT 1/4 SLAB THICKNESS -

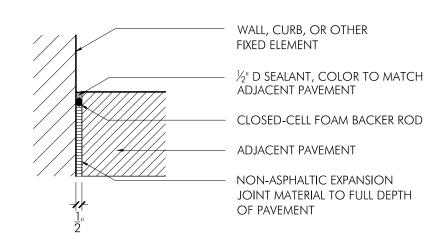
# CONTROL JOINT

1 1/2" - 1'-0"

BACKER ROD WITH \( \frac{1}{2} \)" D SEALANT, COLOR TO MATCH ADJACENT PAVEMENT CAST-IN-PLACE CONCRETE PAVING #4 x 12" L STAINLESS STEEL DOWELS WITH FREE ENDS IN GREASED SLEEVES -12" O.C. COMPACTED CRUSHED STONE BASE, 21-A NON-ASPHALTIC EXPANSION JOINT FILLER - FULL DEPTH OF SLAB

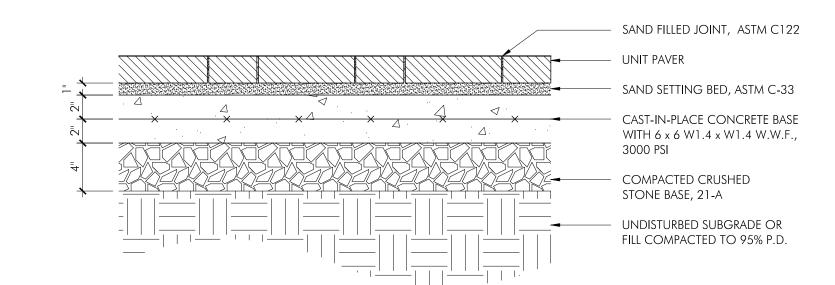
# **EXPANSION JOINT**

1 1/2" - 1'-0"



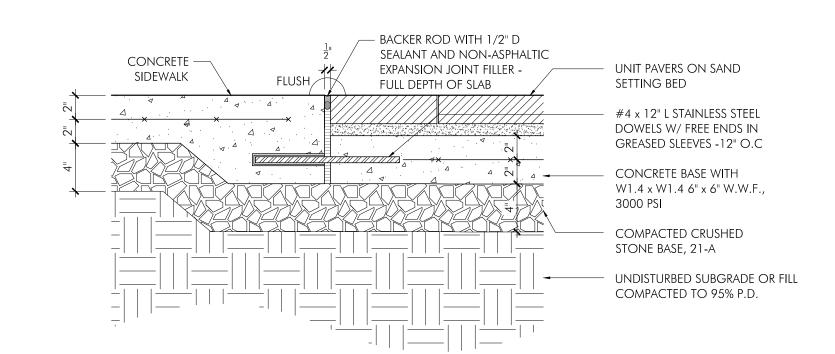
### ISOLATION JOINT

1 1/2" - 1'-0"



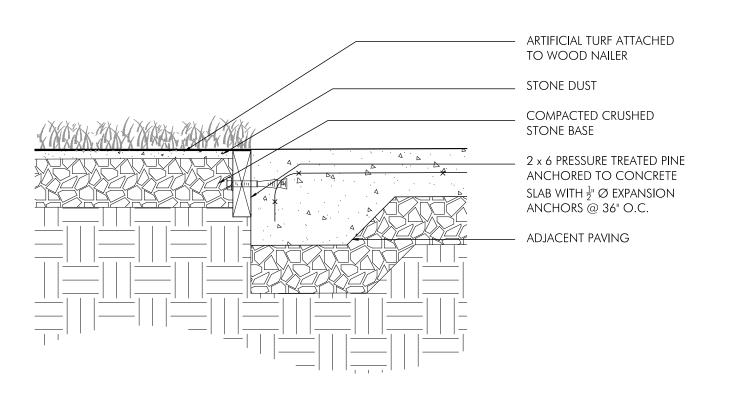
# UNIT PAVING ON GRADE

1 1/2" - 1'-0"



### CONCRETE PAVING TO UNIT PAVING ON GRADE

1 1/2" - 1'-0"



### ARTIFICIAL TURF EDGE TREATMENT

1 1/2" - 1'-0"

BASILICA SCHOOL OF SAINT MARY

> ALEXANDRIA VIRGINIA

### Parker Rodriguez, Inc 1 North Union St. #32

Alexandria VA 22314 703.548.5010

BISHOP OF THE CATHOLIC DIOCESE OF ARLINGTON 310 DUKE STREET ALEXANDRIA, VA 22314

DEVELOPER BASILICA SCHOOL OF SAINTMARY 400 GREEN STREET

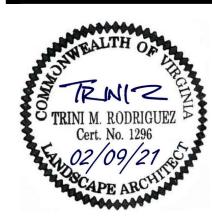
### ALEXANDRIA, VA 22314 703.549.1646

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703.549.6422

ATTORNEY WALSH, COLUCCI, LUBELEY & WALSH, PC 2200 CLARENDON BLVD SUITE 1300 ARLINGTON, VA 22201 703.528.4700 x5413



10.16.2020

12.18.2020

01.21.2021

02.09.2021

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### HARDSCAPE DETAILS

ORIGINAL ISSUE DATE 10.30.2020 DESIGNED BY

> Drawn by CHECKED BY

SCALE AS NOTED

ARTIFICIAL TURF

SYNLAWN

2680 ABUTMENT ROAD SE

DALTON, GA 30721

TOLL FREE: 1-866-SYNLAWN

FAX: (706) 277-1128

- BENDER BOARD

(1/2" - 3/4" BELOW CONCRETE EDGE)

NAIL OR SCREW FROM TOP

CONCRETE CURB

LAST STAGE OF INSTALLATION

GALVANIZED FLAT

**GRASS SPIKES 6" TO** 

REVISION DATE 11/02/2018

CADdetails.com

12" APART ALONG

PERIMETER.

HEAD SYNTHETIC

SECURING THE GRASS TO THE BASE

www.synlawn.com

DRAINAGE PASS THROUGH FOR WATER IN

REGULAR GRID THROUGHOUT BACKING

SYNLAWN®

ENVIROLOC™ BACKING -

COMPACTED AGGREGATE BASE - CLASS II ROAD BASE, 1/4"

MINUS WITH FINES MIXED IN

GEOTEXTILE WEED BARRIER

NATURAL DIRT SUBGRADE -

YARN TYPE: GRASS ZONE™:

YARN FACE WEIGHT:

MAXIMUM DRAIN RATE:

2. DO NOT SCALE DRAWINGS.

PROTECTED BY COPYRIGHT ©2018 CADDETAILS.COM LTD.

REFERENCE NUMBER 1437-444.

ROLL WIDTH:

YARN TYPE: THATCH ZONE™:

YARN COLOR: GRASS THATCH™: BEIGE

PILE HEIGHT: GRASS ZONE™: 1 5/8" PILE HEIGHT: THATCH ZONE™: 1 1/8" +/- 15%

SYSTEM

(OPTIONAL)

(COMPACTED)

YARN COLOR: GRASS ZONE™: FEILD / OLIVE / APPLE

SEAMING GLUE AND SEAMING CLOTH, NOT ADHESIVE TAPE.

NOT TO SCALE

> 45 INCHES PER HOUR PER SQ. YARD

3. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info

LAWN AND LANDSCAPE SYSTEM

SYNAUGUSTINE X47 - INSTALLED OVER AGGREGATE BASE W/ BENDER BOARD

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH SPECIFICATIONS BY FACTORY AUTHORIZED INSTALLERS.

POLYETHYLENE OMEGA

100 OZ

15' WIDTH

NOTE: THE GRASS MUST BE INSTALLED AND SEAMED WITH ADJACENT PIECES

RUNNING IN THE SAME DIRECTION; SEAMS SHOULD BE GLUED WITH SUITABLE

ALL CONSTRUCTION SHALL CONFORM to the current city of Alexandria and virginia department of transportation standards and SPECIFICATIONS.

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

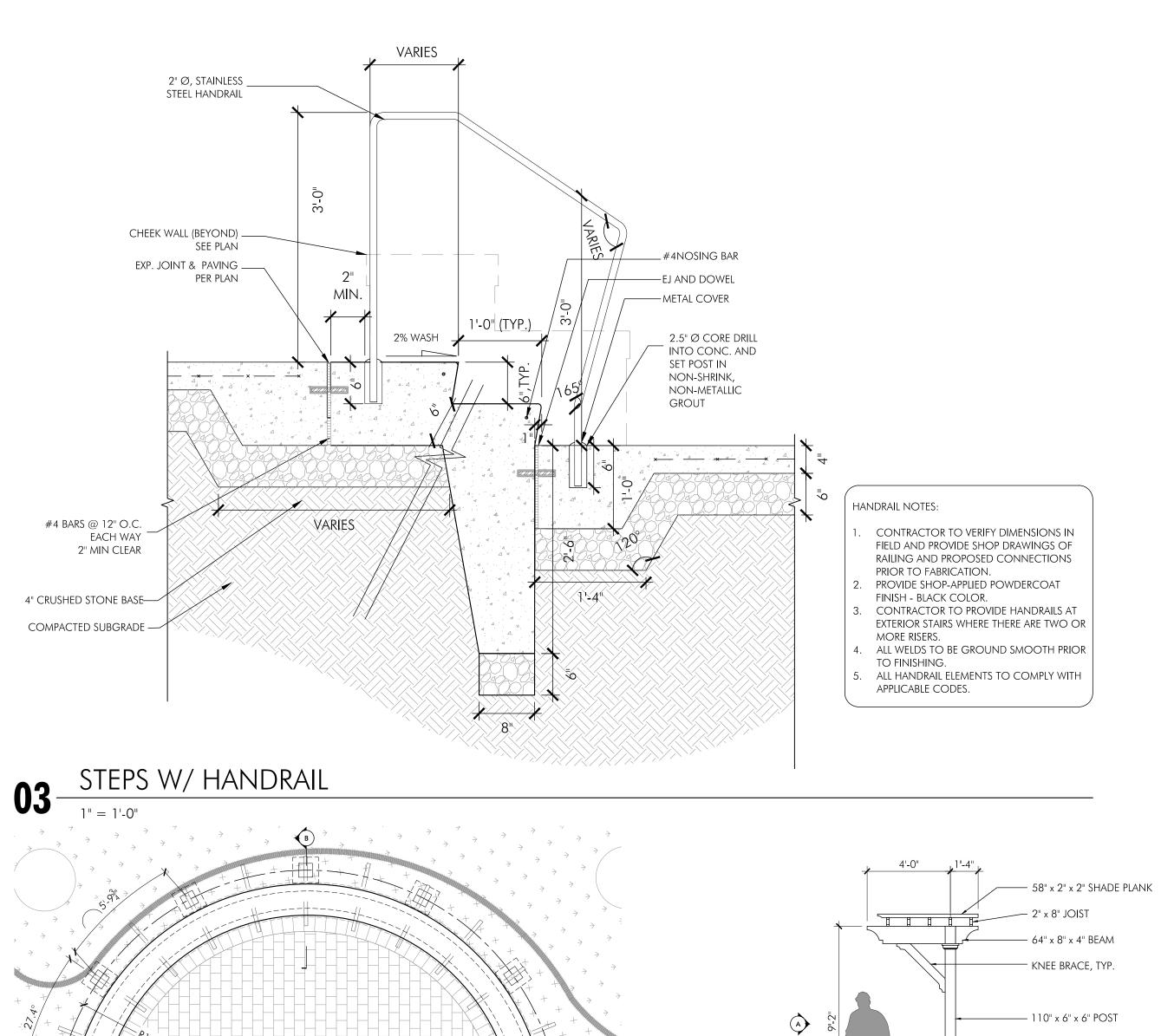


PERFORATION DETAIL

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NON-MARRING\_\_\_

-PERFORATED STEEL PANEL



— 64" x 8" x 4" BEAM

- SEAT WALL (SEE ARCH)

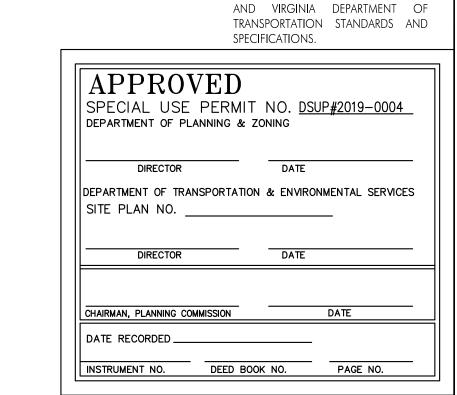
UNIT PAVING ON GRADE

110" x 6" x 6" POST

O2 STEPS

PERGOLA

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT CITY OF ALEXANDRIA



— SEAT WALL (SEE ARCH)

— C.I.P FOOTING

COMPACTED SUBGRADE

B SECTION

- CAST IN PLACE CONCRETE FOOTING

BASILICA SCHOOL OF SAINT MARY

> **ALEXANDRIA** VIRGINIA

703.548.5010

PARKER RODRIGUEZ, INC Alexandria VA 22314

> BISHOP OF THE CATHOLIC DIOCESE OF ARLINGTON 310 DUKE STREET

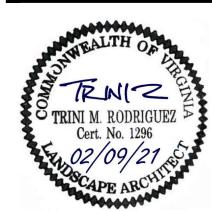
ALEXANDRIA, VA 22314 DEVELOPER BASILICA SCHOOL OF SAINTMARY

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10.16.2020

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HARDSCAPE **DETAILS** 

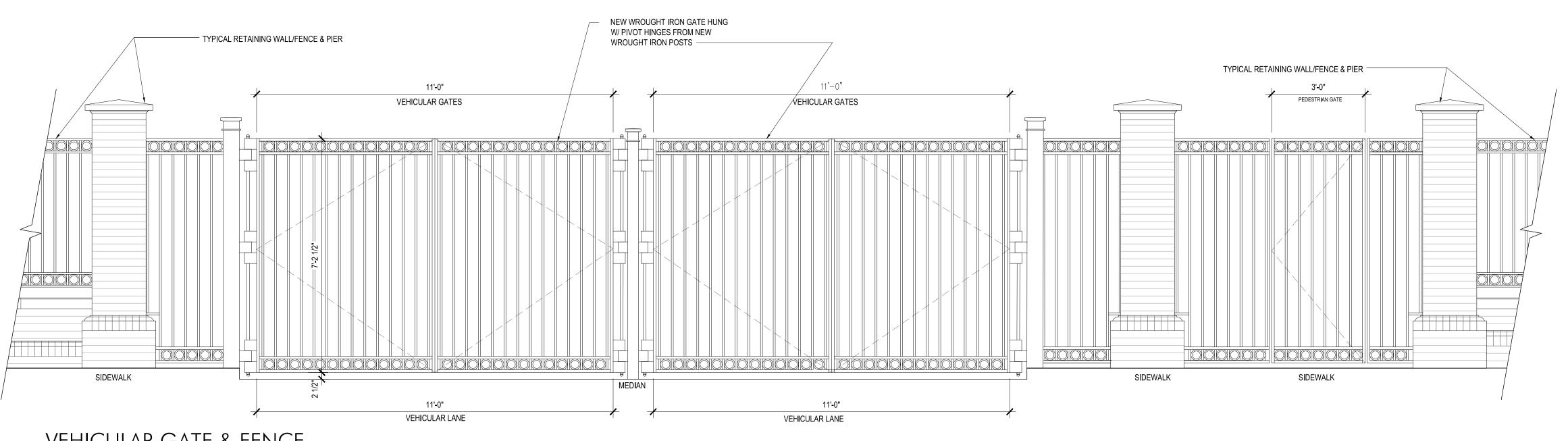
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> > DRAWN BY CHECKED BY

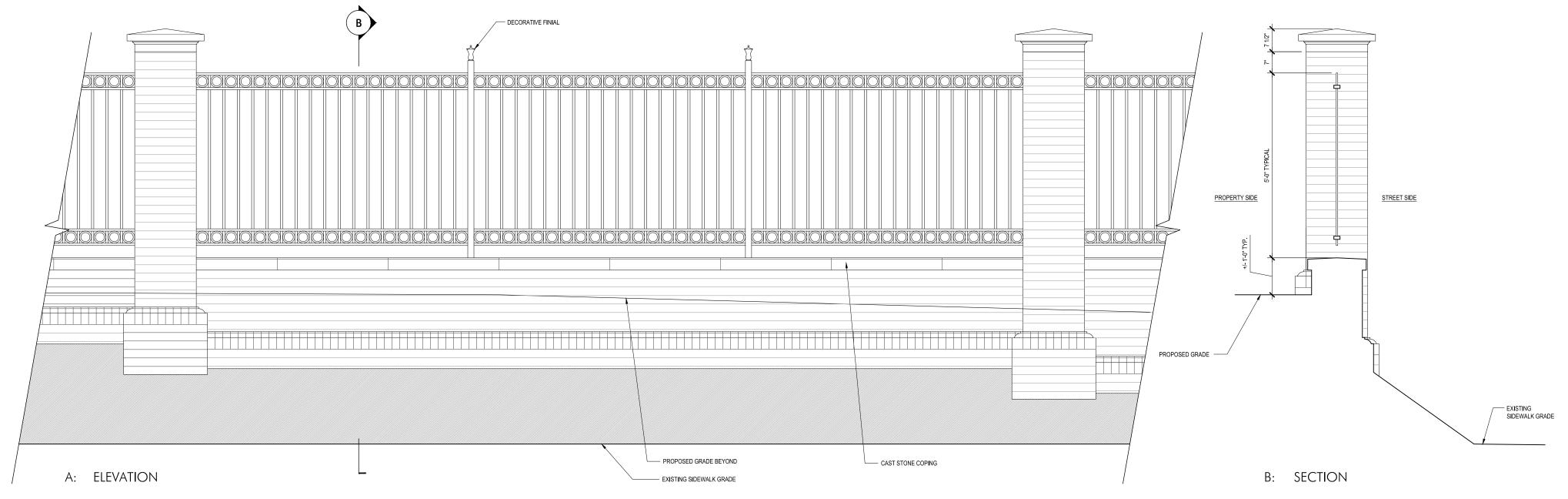
SCALE as noted

BENCH NOT TO SCALE [972] 38 1/4"

Drawing: TN625-03 Dimensions are in inches [mm] Patent Pending



VEHICULAR GATE & FENCE



**02** FENCE & PIER

1/2" = 1'-0"

BASILICA SCHOOL OF SAINT MARY

**ALEXANDRIA** VIRGINIA

Parker Rodriguez, Inc Alexandria VA 22314

703.548.5010 BISHOP OF THE CATHOLIC DIOCESE OF ARLINGTON

310 DUKE STREET ALEXANDRIA, VA 22314

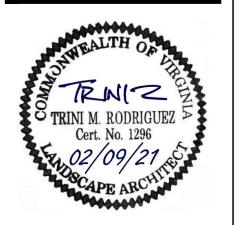
DEVELOPER BASILICA SCHOOL OF SAINTMARY 400 GREEN STREET ALEXANDRIA, VA 22314 703.549.1646

BARNES VANZE ARCHITECTS, INC

1000 POTOMAC STREET NW SUITE L-2 WASHINGTON, DC 20007 202.337.7255

CIVIL ENGINEERS R.C. FIELDS & ASSOCIATES, INC 700 S. WASHINGTON ST,STE 220 ALEXANDRIA, VA 22314 703.549.6422

ATTORNEY WALSH, COLUCCI, LUBELEY & WALSH, PC. 2200 CLARENDON BLVD SUITE 1300 ARLINGTON, VA 22201 703.528.4700 x5413



10.16.2020 12.18.2020

01.21.2021 02.09.2021

DSUP Set 2 DSUP Set 3 DSUP Set 4 DSUP Set

> HARDSCAPE DETAILS

> > ORIGINAL ISSUE DATE 10.30.2020 DESIGNED BY

> > > DRAWN BY CHECKED BY

> > > > SCALE

AS NOTED

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT CITY OF ALEXANDRIA and virginia department of transportation standards and SPECIFICATIONS.

SPECIAL USE PERMIT NO. DSUP#2019-0004
DEPARTMENT OF PLANNING & ZONING

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

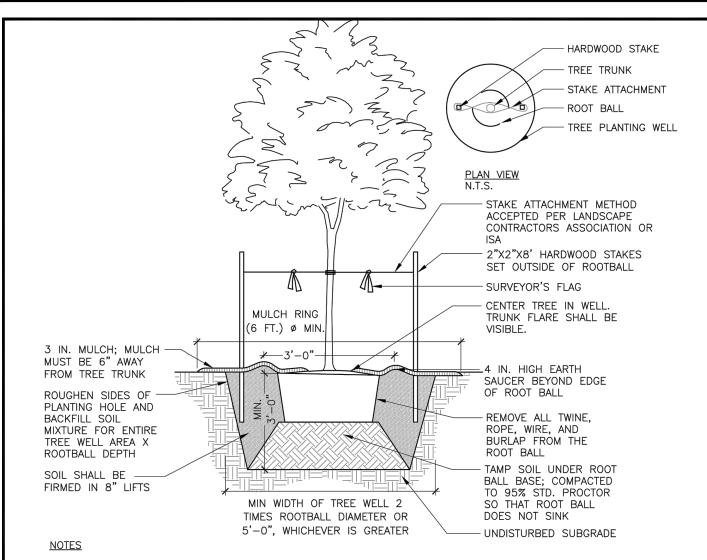
INSTRUMENT NO. DEED BOOK NO. PAGE NO.

APPROVED

SITE PLAN NO.

DATE RECORDED\_

DIRECTOR



- 1. AT PLANTING PRUNE ONLY CROSSING LIMBS, BROKEN OR DEAD BRANCHES, AND ANY BRANCHES THAT POSE A HAZARD TO PEDESTRIANS PER ANSI STANDARDS A300. DO NOT PRUNE INTO OLD WOOD ON EVERGREENS.
- 2. CONTRACTOR SHALL MAXIMIZE EXCAVATED AREA FOR TREE WELL WITHOUT ADVERSELY IMPACTING ADJACENT SITE FEATURES
- 4. UNLESS OTHERWISE DIRECTED BY PROJECT SPECIFICATIONS OR CITY STAFF, SOIL MIXTURE SHALL BE CLEANED OF DEBRIS, AND MEET SOIL COMPOSITION REQUIREMENTS OF CITY OF ALEXANDRIA LANDSCAPE GUIDELINES.
- 5. TREES PLANTED WITHOUT THE TRUNK FLARE VISIBLE WILL BE REJECTED.
- 6. ALL PLANTS MUST BE WATERED AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION, ESTABLISHMENT WATERING SHALL BE PER THE SPECIFICATIONS ON ALL DETAILS.
- 7. STAKES WILL BE INSTALLED USING ARBORICULTURE PRACTICES, TREES SHALL STAND PLUM AFTER STAKING.
- 8. INSTALLATION WILL INCLUDE THE REMOVAL OF ALL STAKING MATERIAL ONE YEAR AFTER INSTALLATION, ANY HOLES LEFT BY REMOVING STAKING SHALL BE FILLED WITH APPROVED TOPSOIL / BACKFILL MIXTURE.
- 9. CONTRACTOR SHALL USE GALVANIZED EYESCREW & TURNBUCKLE INSTEAD OF ARBOR TIE ONLY FOR TREES OF SIGNIFICANT SIZE AS DIRECTED BY CITY STAFF



DEPTH OF ROOT

/BALL VARIES

CITY OF ALEXANDRIA, VIRGINIA STANDARD LANDSCAPE DETAILS CITY OF ALEXANDRIA, VIRGINIA

<u>INSET</u>

TAMP SOIL UNDER ROOT BALL BASE; -

 $\mid$  #57 STONE SLOPED TO DRAIN PIPE-

4" PERFORATED HDPE, SMOOTH WALL -

SYSTEM OR DRAIN WELL; PIPE MAY BE

LOCATED AT SIDES OR MIDDLE OF WELL

DRAIN PIPE CONNECTED TO STORM DRAIN

AT  $\frac{1}{2}$ "-1"/FT; LINE SIDES OF

PER SITE CONDITIONS

# OF UPDATES: 00 LAST UPDATED

CITY OF ALEXANDRIA, VIRGINIA

CITY OF ALEXANDRIA, VIRGINIA

STANDARD LANDSCAPE DETAILS

EXCAVATION WITH FILTER FABRIC

COMPACTED TO 95% STD. PROCTOR SO THAT ROOT BALL DOES NOT SINK

4x2x1" UNFINISHED -

18" O.C. MIN.

½" MORTAR -

JOINT WITH

BACKER ROD AND SEAL

ALUMINUM ANGLE WITH 1" DIAMETER EXPANSION

HEADER COURSE OF -

PAVERS CONTINUOUS

THROUGH TREE WELL

AS REQ. SEE INSET.

ADJACENT CURB-

PER CITY OF

AMENDED SOIL,

COMPACTED 85%

ALEXANDRIA

STANDARDS

HE INFORMATION SHOWN HEREIN THIS CUMENT IS FOR GENERAL GUIDANCE Y AND IS NOT INTENTED FOR ONSTRUCTION PURPOSES ITS USE SHA R CONTRACTOR OF ANY LEGAL SPONSIBILITY.

-WIDTH PER

**PLANS** 

SLOPE TO DRAIN 00000000

1. THIS CROSS-SECTION APPLIES TO BOTH TREE PLANTING STRIPS AND TREE PLANTING WELLS.

TREE PLANTING WELL

SPONSIBILITY.

CUMENT IS FOR GENERAL GUIDANCE

STRUCTION PURPOSES. ITS USE SHAI

IOT RELIEVE THE DESIGN PROFESSIONA

NLY AND IS NOT INTENTED FOR

2. REFER TO LANDSCAPE GUIDELINES FOR GENERAL STREET TREE PLANTING NOTES.

TREE PLANTING COA I OF I LD 001 01/01/19

-STREET TREE

BE VISIBLE.

-CENTER TREE IN WE

- REMOVE ALL TWINE,

— 3 IN. MULCH; MULCH

MUST BE 6" AWAY

FROM TREE TRUNK

-SIDEWALK PER CITY

STANDARDS; METAL

MUST BE PROVIDED

UNIT PAVERS ABUT

PERIMETER OF TREE

WELL. SEE INSET.

- UNDISTURBED SOIL

STREET TREE

LD 005

|PLANTING WELL

WHERE BRICK OR

OF ALEXANDRIA

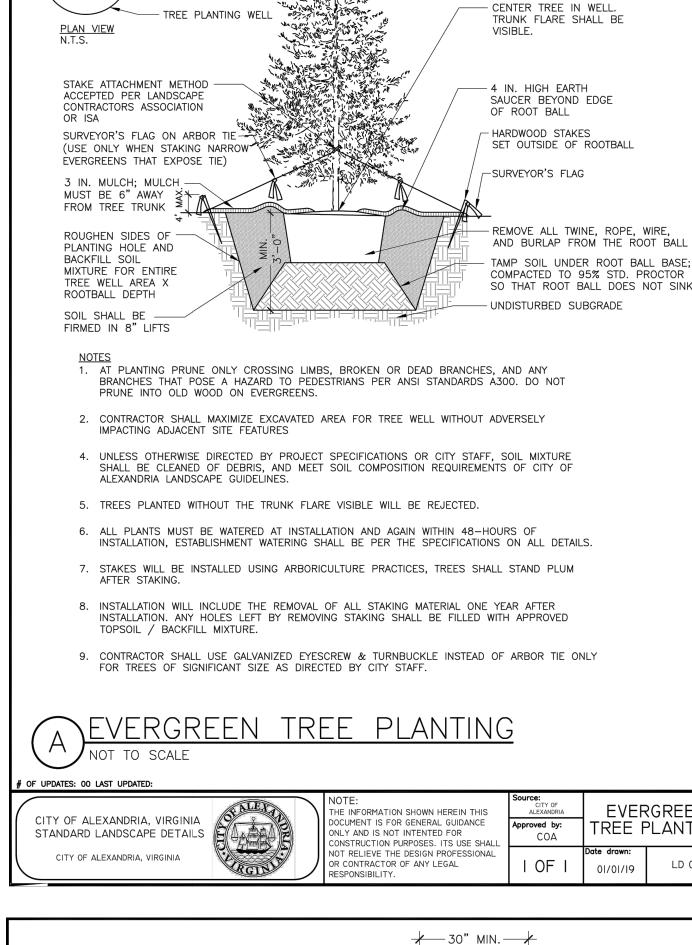
EDGE RESTRAINT

ROPE, WIRE, AND

BURLAP FROM

ROOT BALL

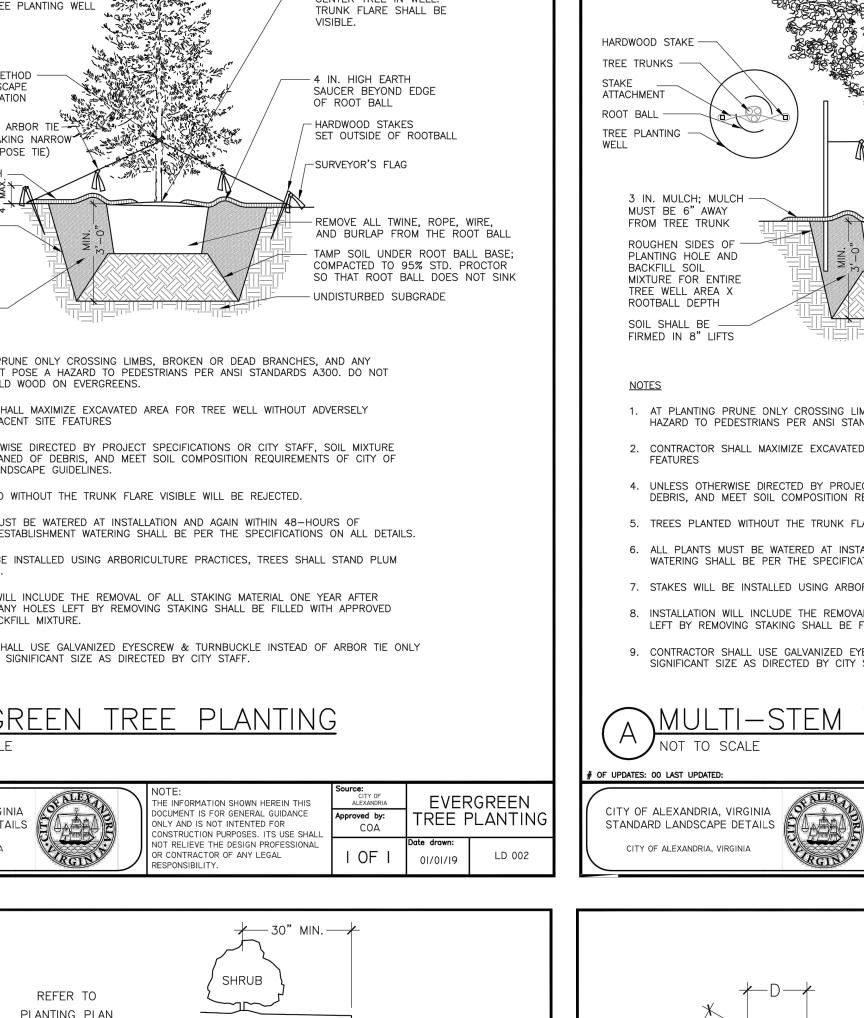
TRUNK FLARE SHALL

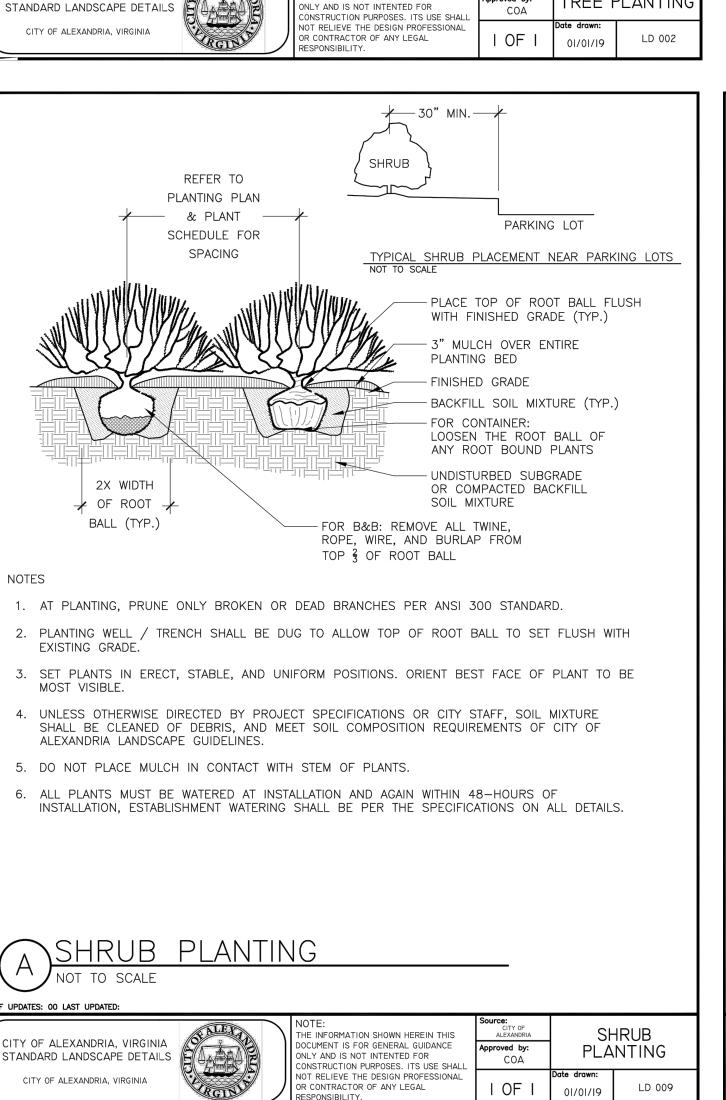


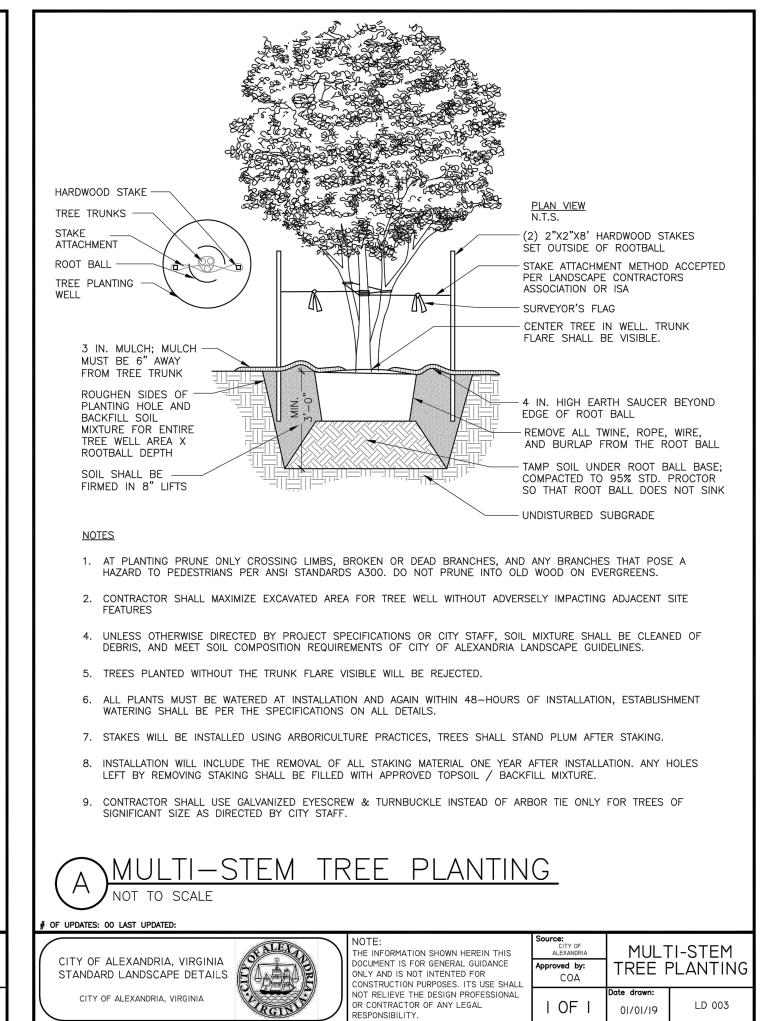
HARDWOOD STAKE

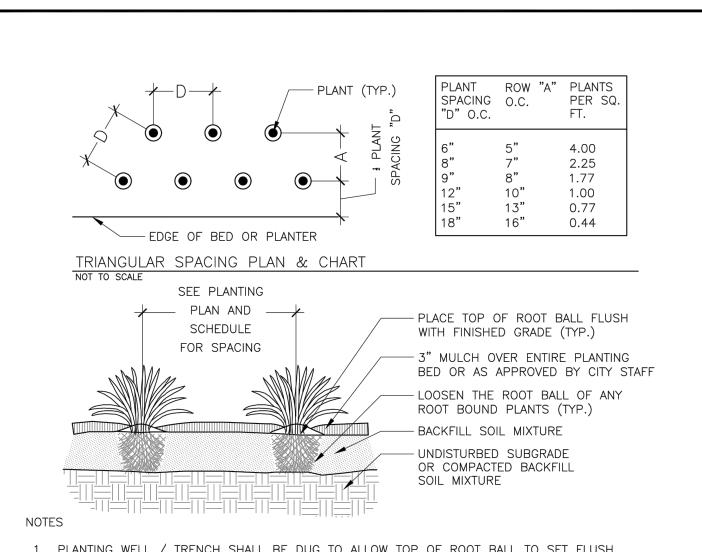
- STAKE ATTACHMENT

- ROOT BALL







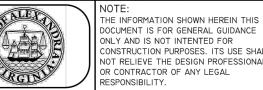


- 1. PLANTING WELL / TRENCH SHALL BE DUG TO ALLOW TOP OF ROOT BALL TO SET FLUSH WITH EXISTING GRADE.
- 2. SET PLANTS IN ERECT, STABLE, AND UNIFORM POSITIONS. ORIENT BEST FACE OF PLANT TO BE MOST VISIBLE.
- 3. GROUND COVERS AND PERENNIALS SHALL BE INSTALLED WITH TRIANGULAR SPACING. REFER
- 4. UNLESS OTHERWISE DIRECTED BY PROJECT SPECIFICATIONS OR CITY STAFF, SOIL MIXTURE SHALL BE CLEANED OF DEBRIS, AND MEET SOIL COMPOSITION REQUIREMENTS OF CITY OF ALEXANDRIA LANDSCAPE GUIDELINES.
- 5. DO NOT PLACE MULCH IN CONTACT WITH STEM OR CROWN OF PLANTS.
- 6. ALL PLANTS MUST BE WATERED AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION, PER THE SPECIFICATIONS.



OF UPDATES: 00 LAST UPDATED

CITY OF ALEXANDRIA, VIRGINIA STANDARD LANDSCAPE DETAILS CITY OF ALEXANDRIA, VIRGINIA



GROUNDCOVER 8 PERENNIAL PLANTING COA I OF I LD 011 01/01/19

# **BASILICA** SCHOOL OF

ALEXANDRIA VIRGINIA

### Parker Rodriguez, Inc INING URBAN DESIGN LANDSCAPE ARCHITECT

North Union St. #32 Alexandria VA 22314 703.548.5010

OWNER BISHOP OF THE CATHOLIC DIOCESE OF ARLINGTON

310 DUKE STREET ALEXANDRIA, VA 2231 DEVELOPER

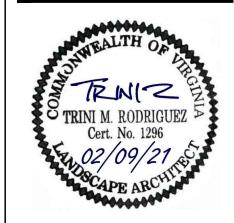
BASILICA SCHOOL OF SAINTMARY 400 GREEN STREE ALEXANDRIA, VA 22314

703.549.1646 BARNES VANZE ARCHITECTS, INC

1000 POTOMAC STREET NW SUITE L-WASHINGTON, DC 20007 202.337.7255

> CIVIL ENGINEERS R.C. FIELDS & ASSOCIATES, INC 700 S. WASHINGTON ST,STE 220 ALEXANDRIA, VA 22314 703.549.6422

ATTORNEY WALSH, COLUCCI, LUBELEY & WALSH, PC 2200 CLARENDON BLVD SUITE 1300 ARLINGTON, VA 2220 703.528.4700 x5413



DSUP Set DSUP Set DSUP Set DSUP Set

ALL CONSTRUCTION SHALL CONFORM

TO THE CURRENT CITY OF ALEXANDRIA

AND VIRGINIA DEPARTMENT OF

transportation standards and

SPECIFICATIONS.

| SPECIAL USE PERMIT NO. <u>DSUP#2019-0004</u>

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

INSTRUMENT NO. DEED BOOK NO. PAGE NO.

DATE

APPROVED

DIRECTOR

CHAIRMAN, PLANNING COMMISSION

SITE PLAN NO.

DATE RECORDED

DEPARTMENT OF PLANNING & ZONING

01.21.2021 02.09.2021

10.16.2020

12.18.2020

PLANTING **DETAILS** 

> ORIGINAL ISSUE DAT 10.30.2020 DESIGNED BY

> > DRAWN BY

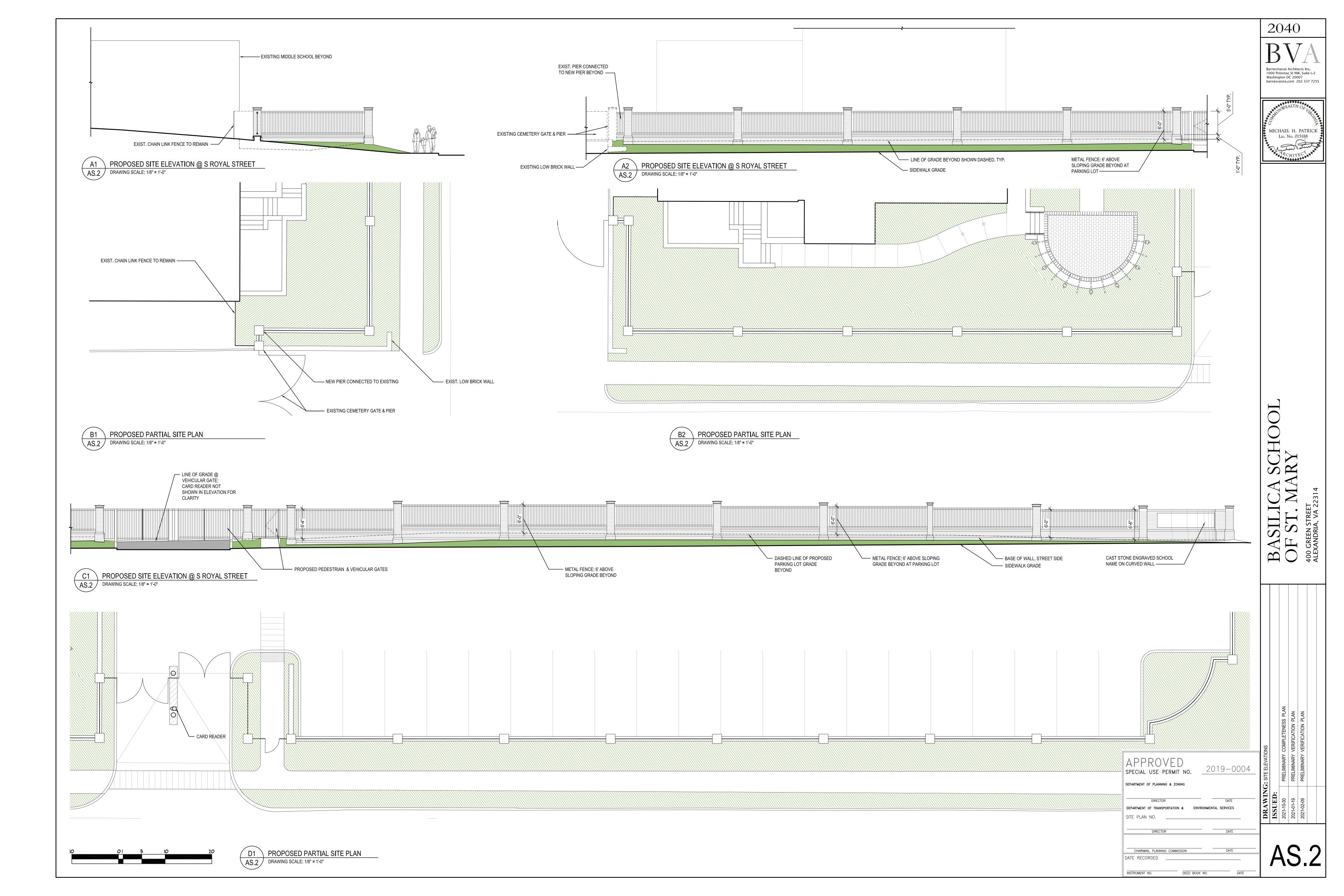
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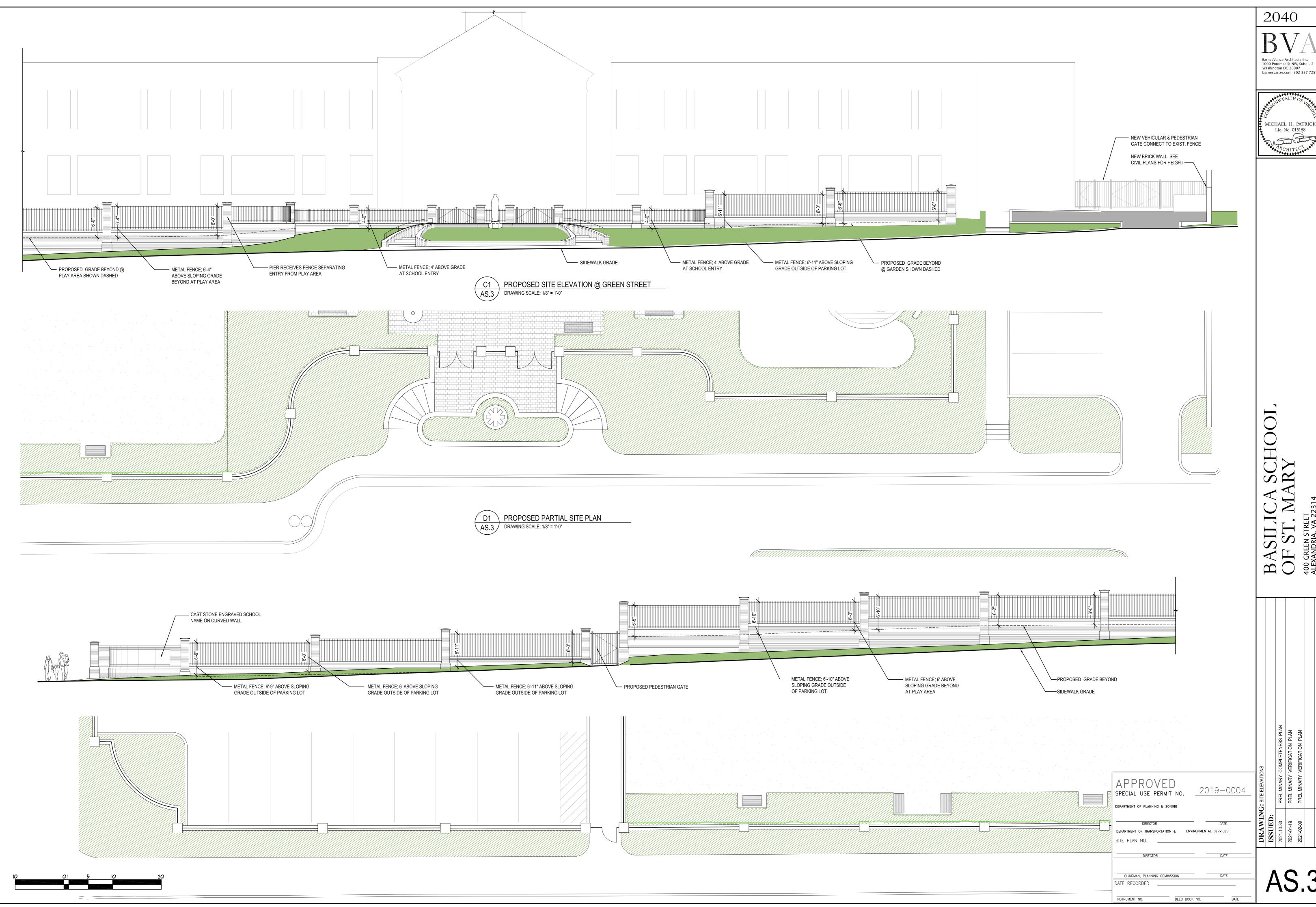
as noted

SCALE

ALEXANDRIA CITY STANDARD PLANTING DETAILS ON GRADE

COA

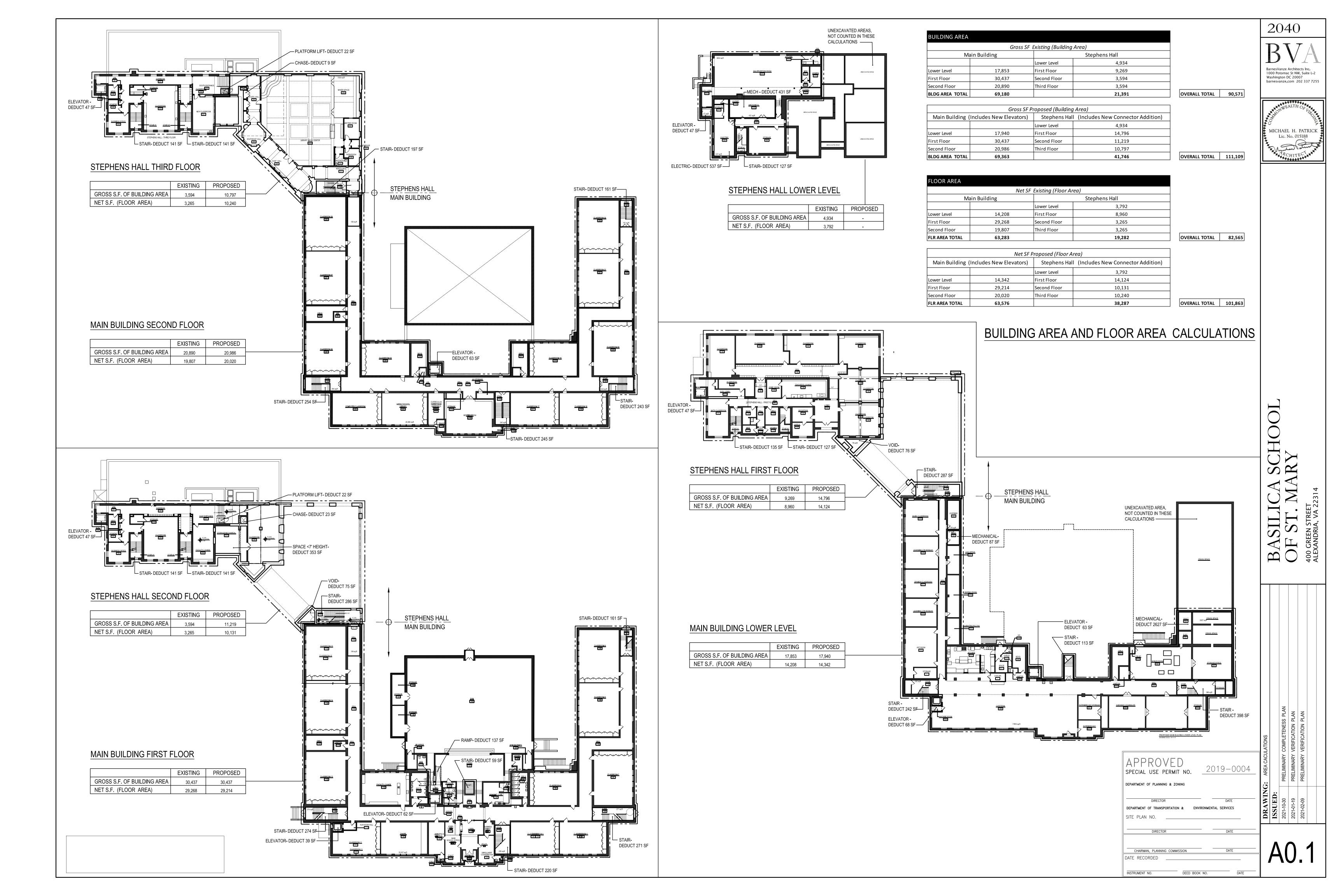


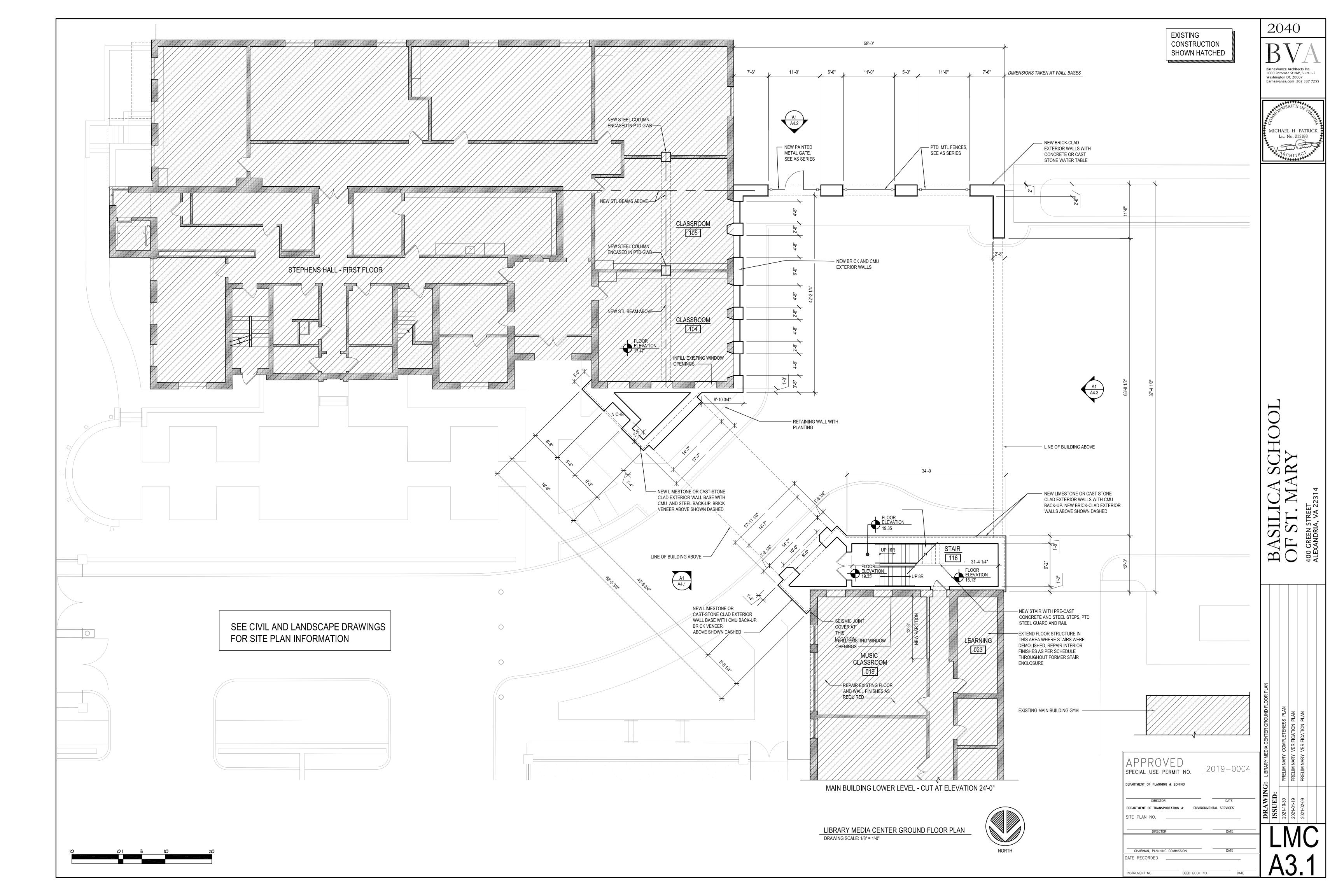


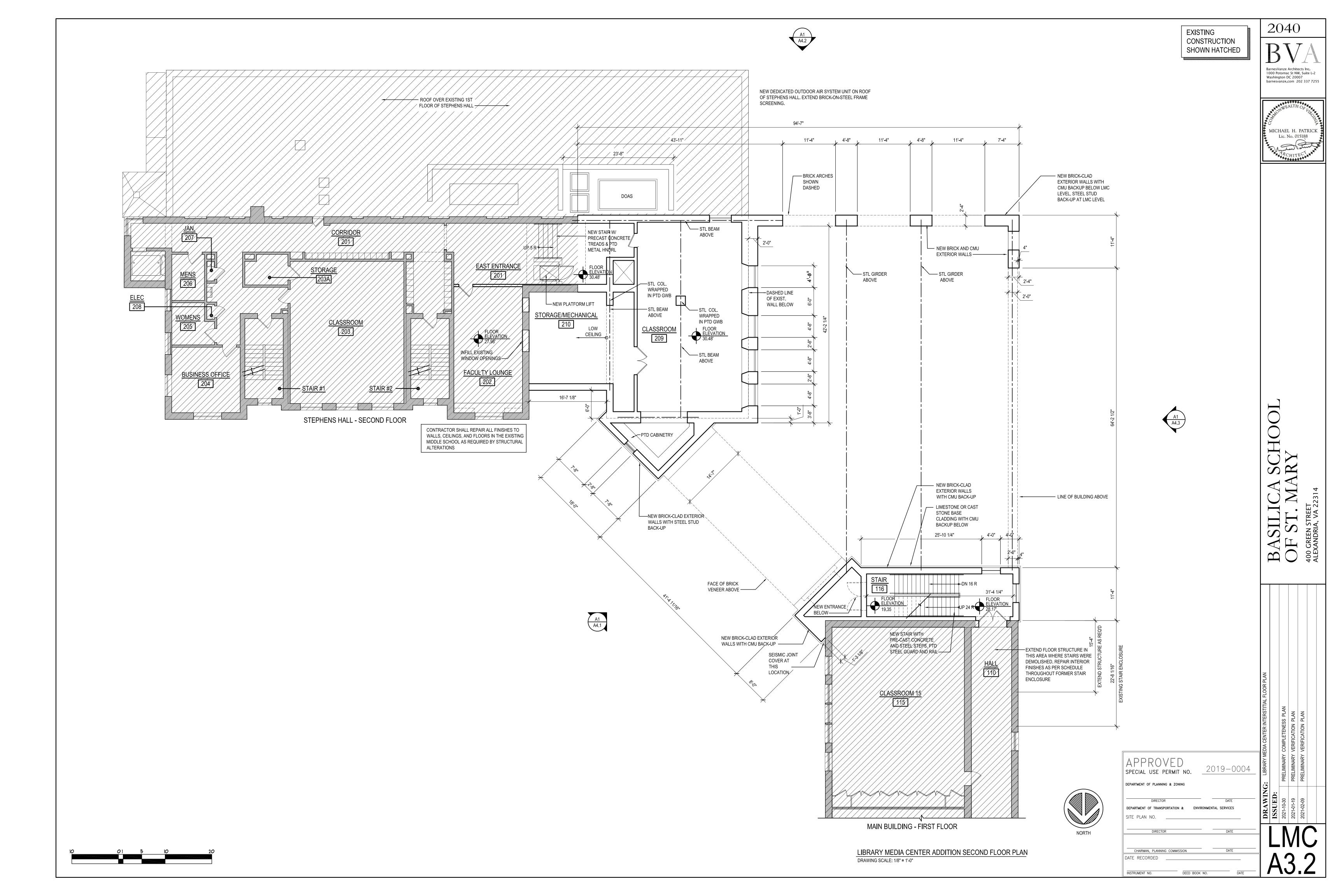
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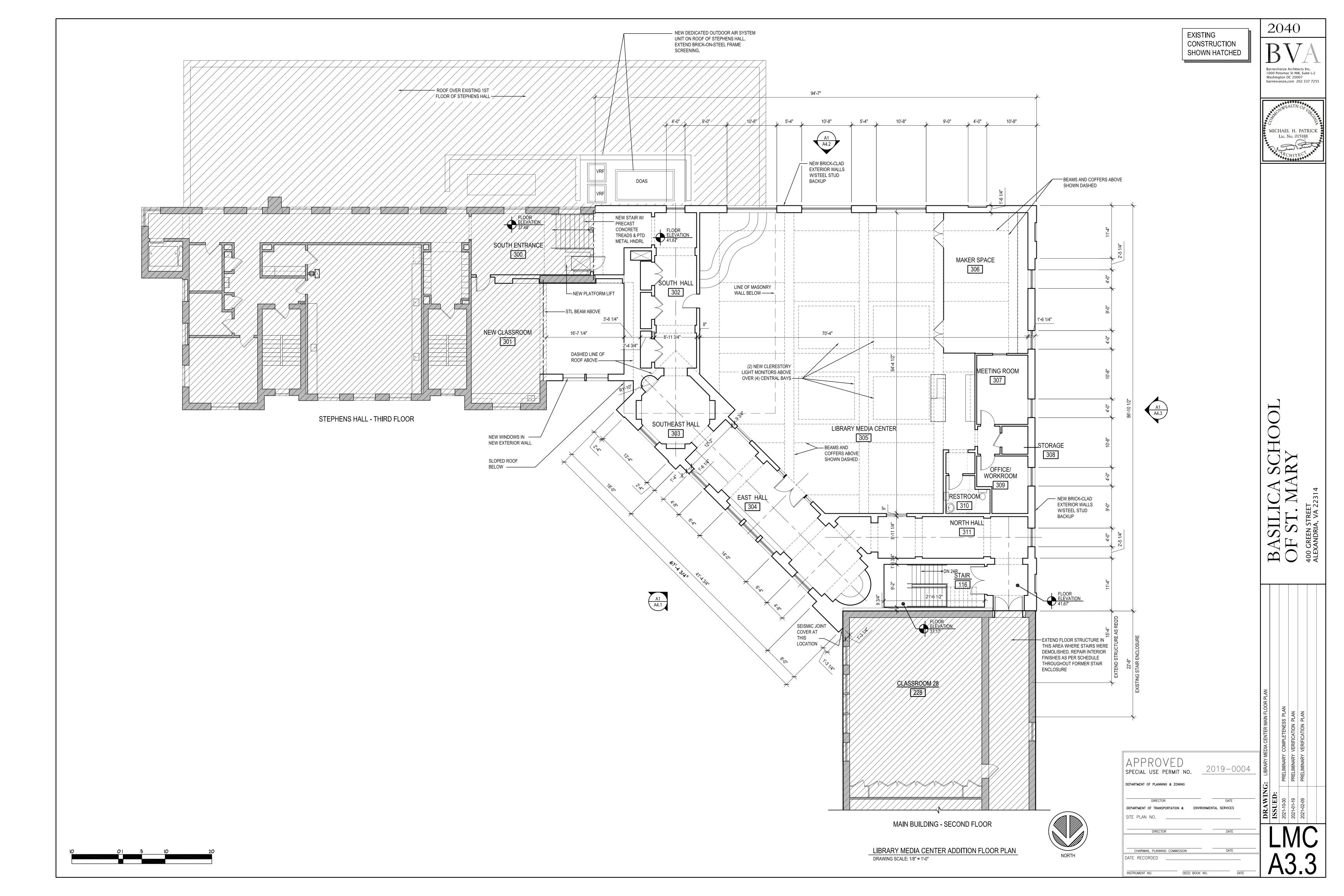


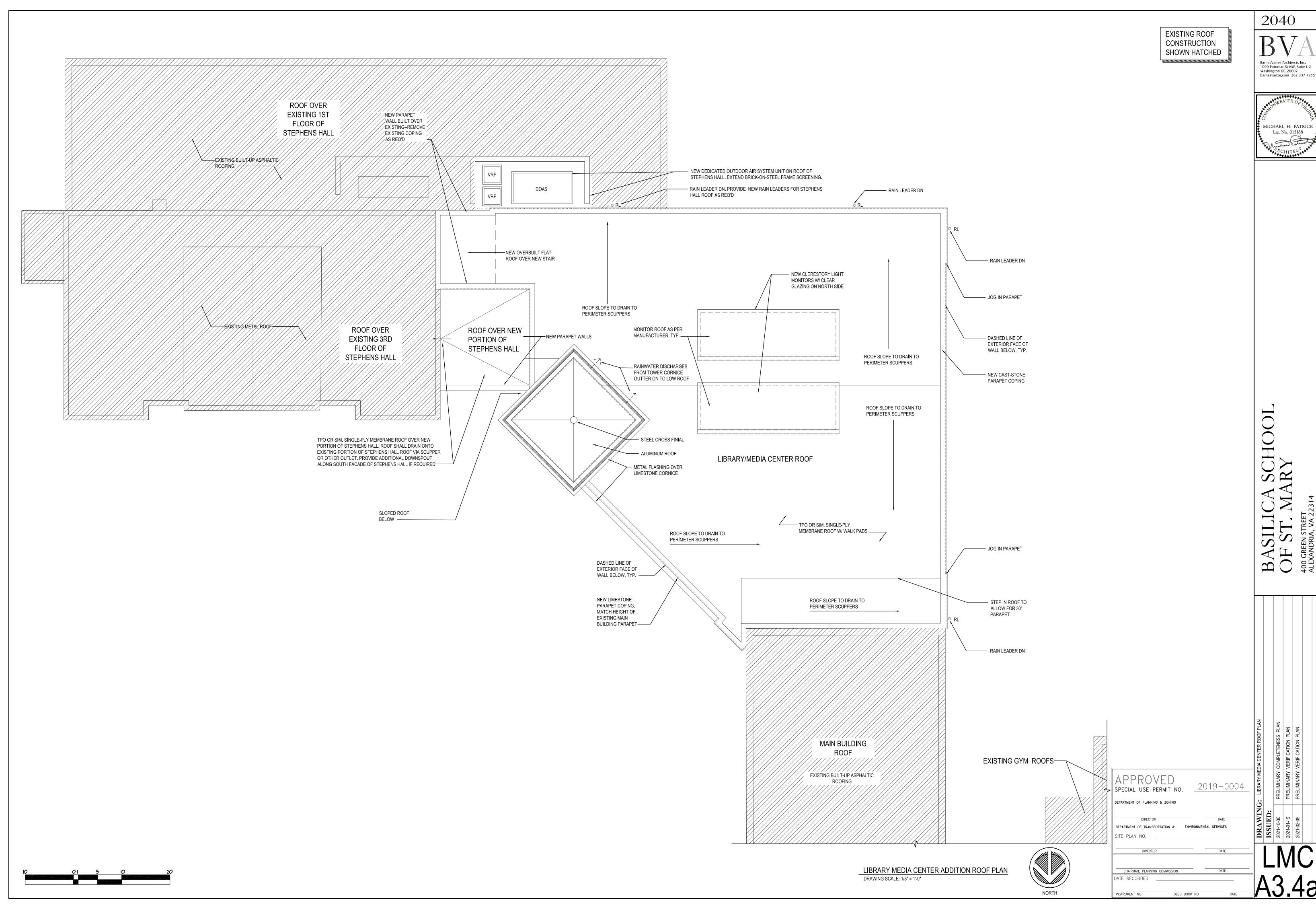








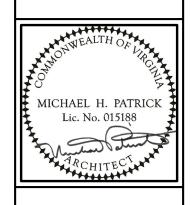






EXISTING ROOF CONSTRUCTION SHOWN HATCHED





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DEPARTMENT OF PLANNING & ZONING

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES SITE PLAN NO.

PROPOSED OVERALL ROOF PLAN
DRAWING SCALE: 1/8" = 1'-0"

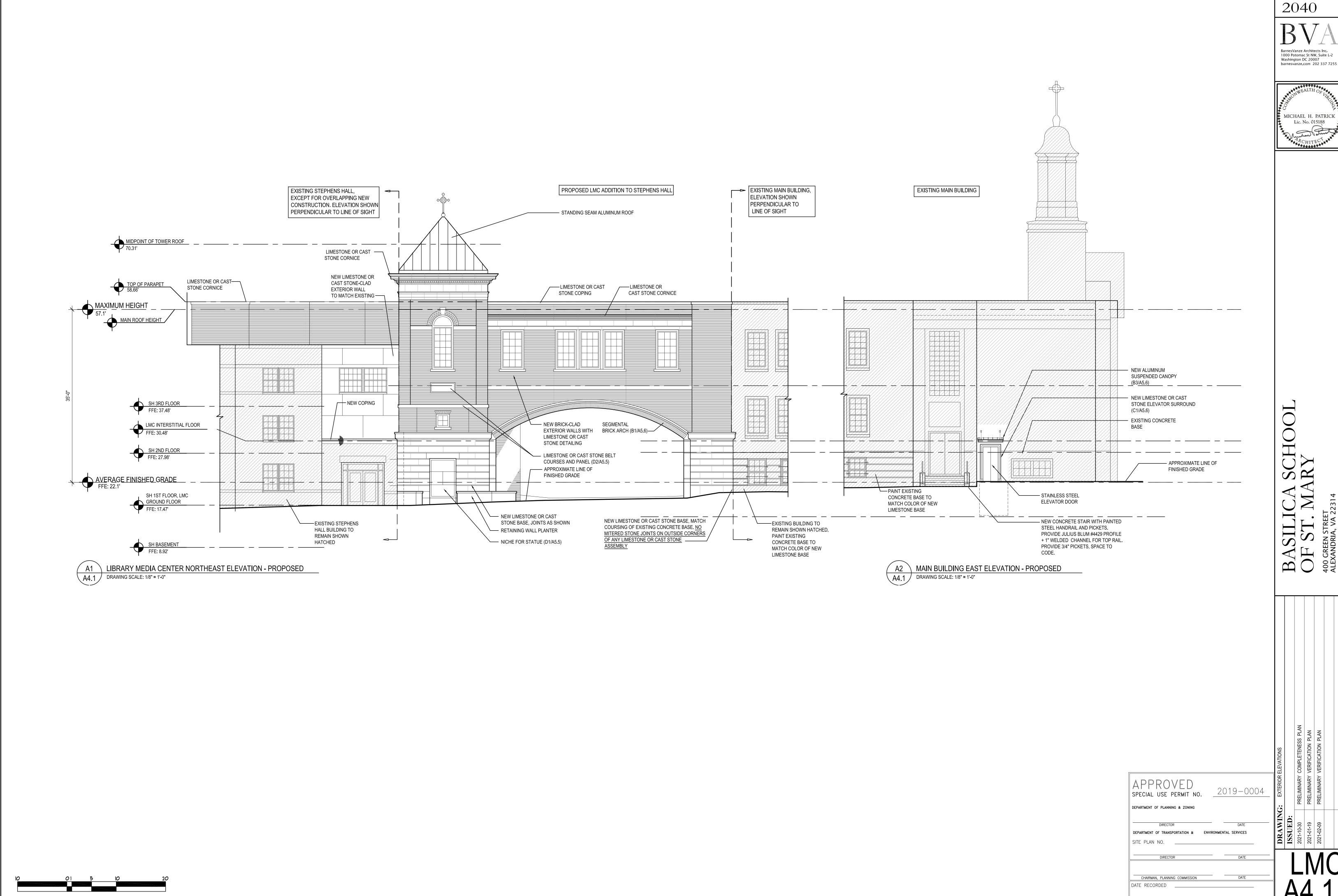
EXISTING STEPHENS HALL ROOF

ROOF OVER NEW PORTION OF STEPHENS HALL

EXISTING MAIN BUILDING GYM

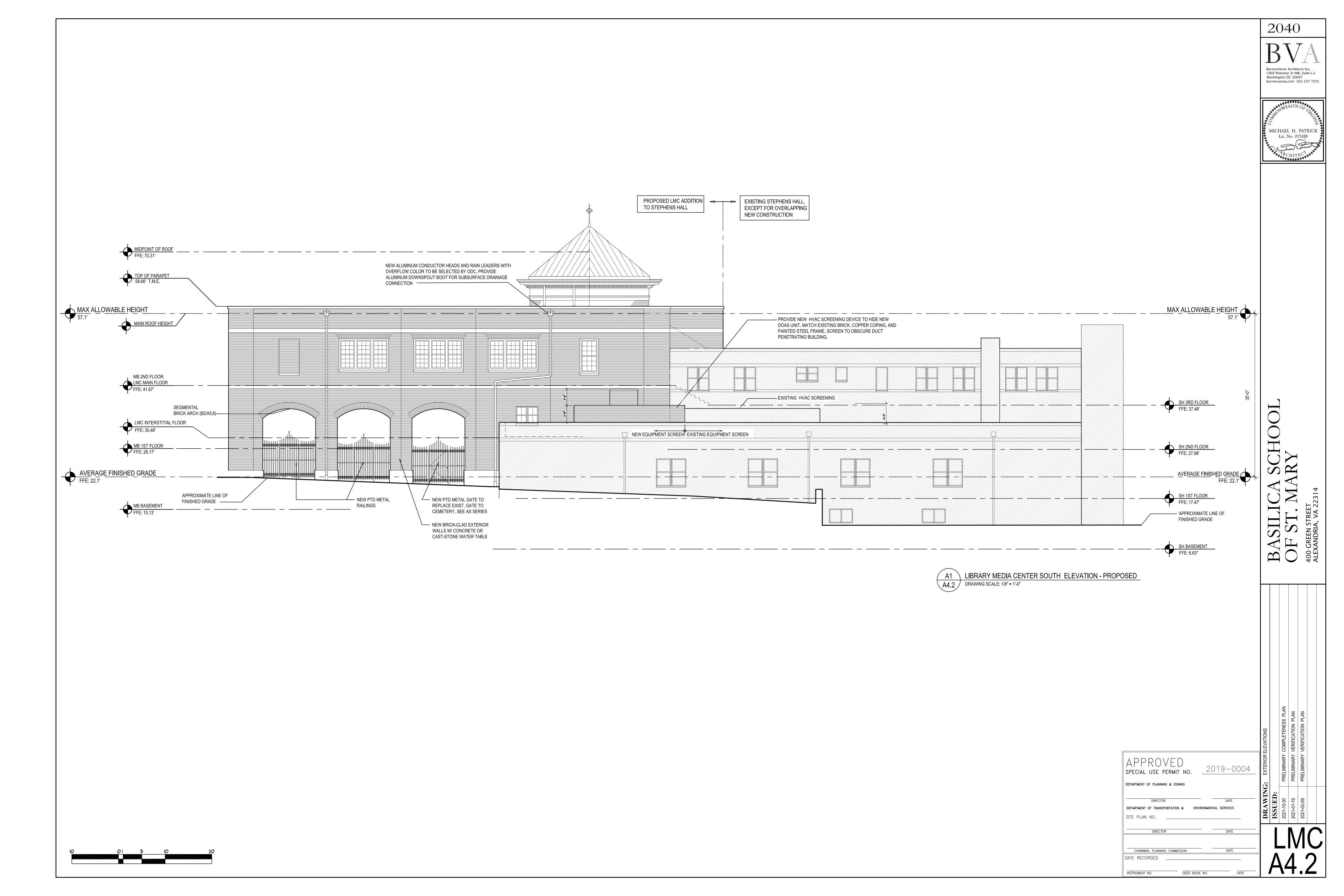
EXISTING MAIN BUILDING ROOF

**ROOF OVER NEW** ADDITION



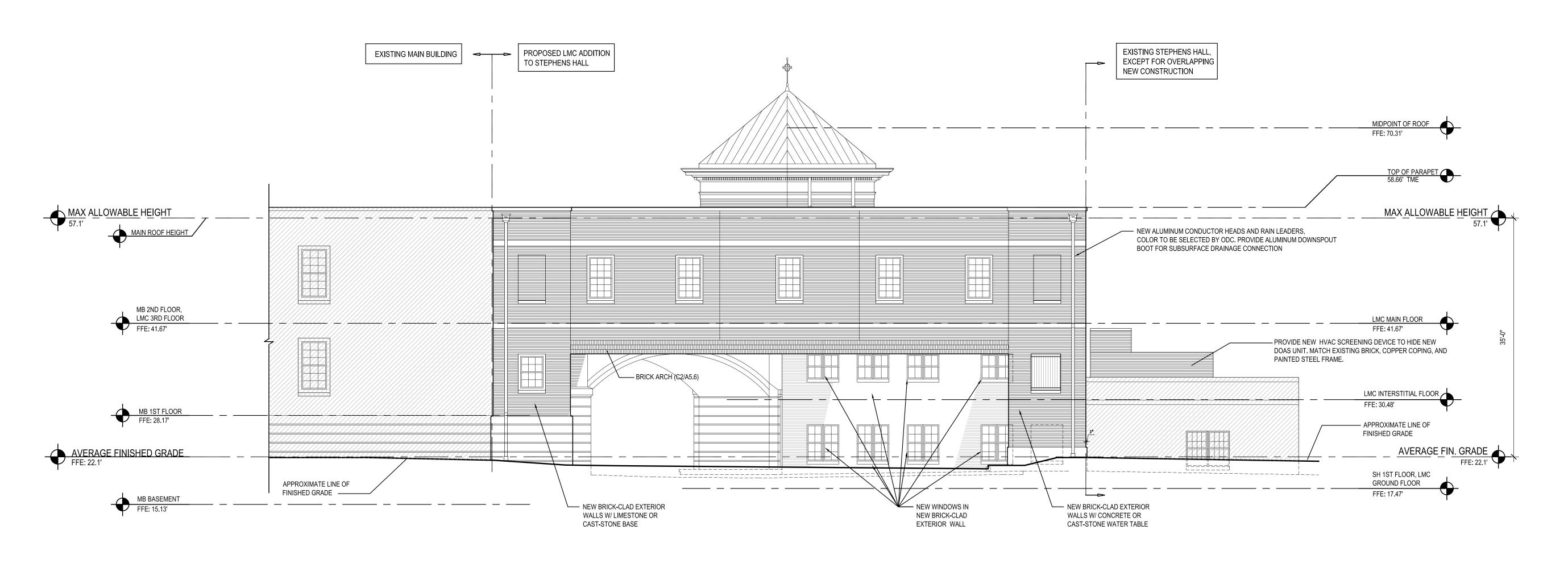


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BASILICA OF ST. MA 400 GREN STRET ALEXANDRIA, VA 22314



A1 LIBRARY MEDIA CENTER SOUTH ELEVATION - PROPOSED

DRAWING SCALE: 1/8" = 1'-0"

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DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

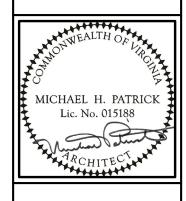
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CHAIRMAN, PLANNING COMMISSION DATE

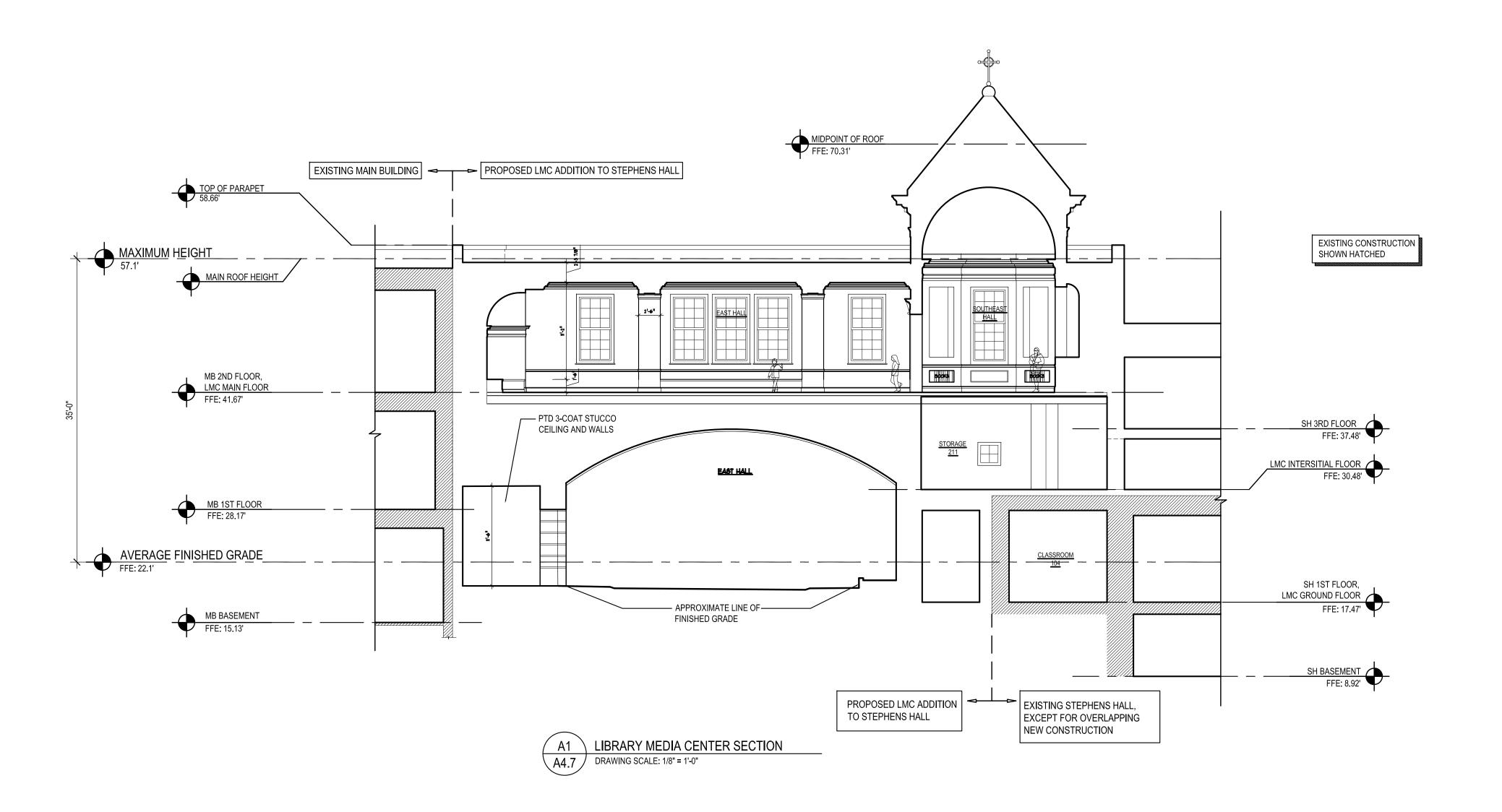
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BASILICA OF ST. MA



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2019-0004

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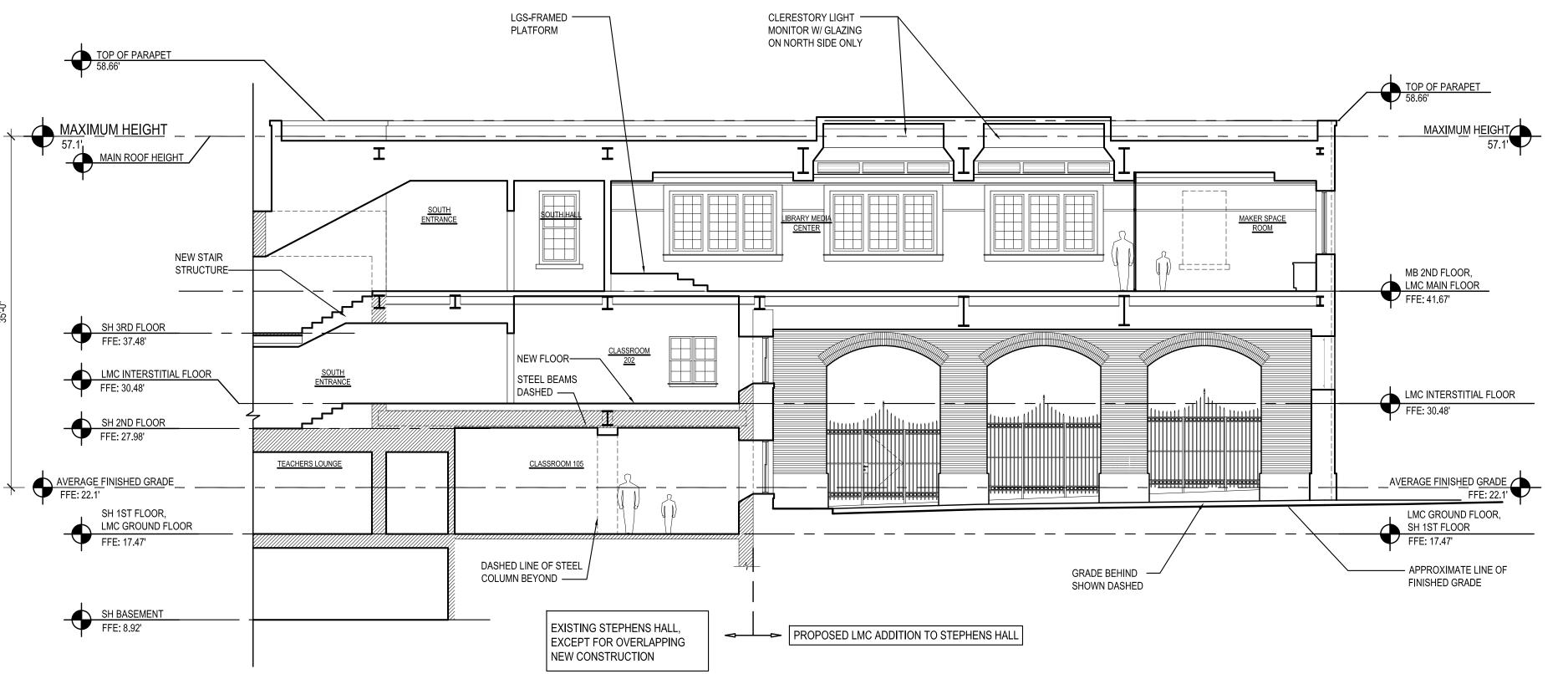
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A2 LIBRARY MEDIA CENTER SECTION

A4.9 DRAWING SCALE: 1/8" = 1'-0"

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CHAIRMAN, PLANNING COMMISSION DATE DATE RECORDED

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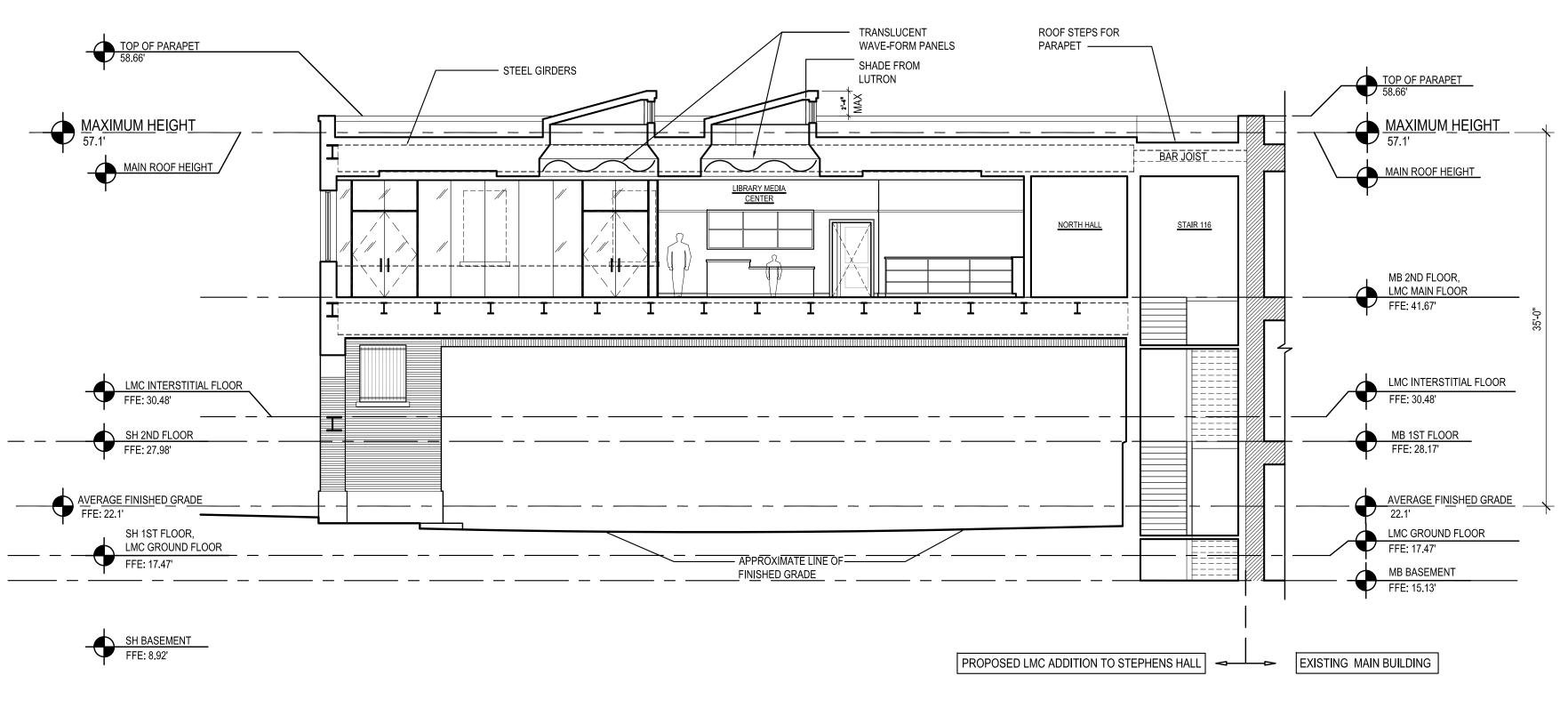
BASILLICA OF ST. MA 400 GREEN STREET ALEXANDRIA, VA 22314

2040 BarnesVanze Architects Inc. 1000 Potomac St NW, Suite L-2 Washington DC 20007 barnesvanze.com 202 337 7255



BASILICA OF ST. MA

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A2 LIBRARY MEDIA CENTER SECTION

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2019-0004

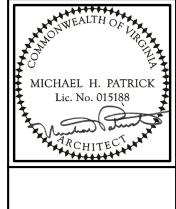
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CHAIRMAN, PLANNING COMMISSION DATE DATE RECORDED DEED BOOK NO. DATE









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DEPARTMENT OF PLANNING & ZONING

IM-1 BIRD'S EYE AXON
A5.10 DRAWING SCALE: NTS

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2019-0004

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DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

INSTRUMENT NO. DEED BOOK NO. DATE

IM-1 TOWER & BRIDGE FACADE PERSPECTIVE A5.11 DRAWING SCALE: NTS



MICHAEL H. PATRICK
Lic. No. 015188

RCHITECT

2040

BASILICA SCHOOL OF ST. MARY

OF ST. MARY

400 GREEN STREET
ALEXANDRIA, VA 22314

AN T

G: PERSPECTIVE VIEW FROM WEST

PRELIMINARY COMPLETENESS PLAN

PRELIMINARY VERIFICATION PLAN

PRELIMINARY VERIFICATION PLAN

DRAWING: PERSPECTIV
ISSUED:
2021-10-30 PRELIMINARY
2021-01-19 PRELIMINARY

DATE

DEED BOOK NO. DATE

2019-0004

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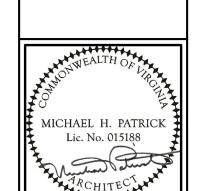
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INSTRUMENT NO.

IM-1 PERSPECTIVE VIEW FROM WEST
A5.13 DRAWING SCALE: NTS



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1000 Potomac St NW, Suite L-2
Washington DC 20007
barnesvanze.com 202 337 7255



BASILICA SCHOOL
OF ST. MARY
A00 GREEN STREET
ALEXANDRIA, VA 22314

ST

PERSPECTIVE VIEW FROM SOUTHWEST
PRELIMINARY COMPLETENESS PLAN
PRELIMINARY VERIFICATION PLAN
PRELIMINARY VERIFICATION PLAN

DRAWING: PERSPECTIVE
ISSUED:
2021-10-30 PRELIMINARY

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DEED BOOK NO. DATE

A5.12

IM-1 PERSPECTIVE VIEW FROM SOUTHWEST
A5.12 DRAWING SCALE: NTS





2019-0004

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