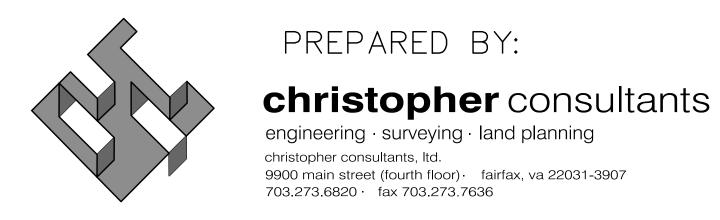
PRELIMINARY DEVELOPMENT SPECIAL USE PERMIT STAGE II 2425 EISENHOWER AVENUE BLOCK 6C RETAIL PAD SITE

ALEXANDRIA, VIRGINIA

NARRATIVE DESCRIPTION OF DEVELOPMENT

THE APPLICANT PROPOSES THE DEVELOPMENT OF A ONE STORY RETAIL BUILDING.

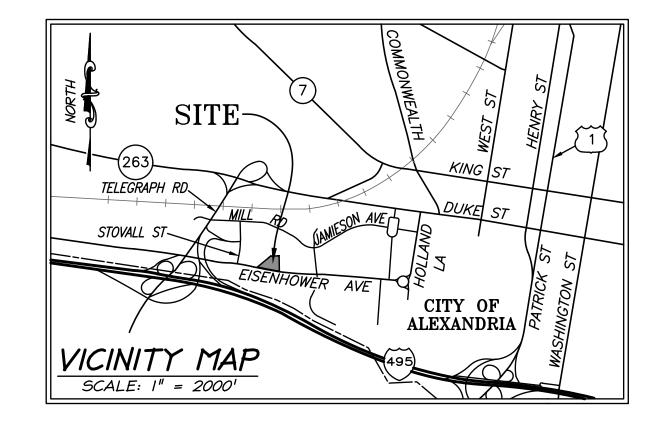


SPECIAL USE PERMITS/ZONING MODIFICTIONS/WAIVERS

- I. STAGE 2 DEVELOPMENT SPECIAL USE PERMIT WITH PRELIMINARY SITE PLAN 2. DSUP #2000-0028
- 3. TMP SUP #98-0043

COMPLETE STREETS

	New	Upgraded
Crosswalks (number)		•
Standard	0	0
High Visibility	0	0
Curb Ramps	1	0
		_
Sidewalks (LF)	0	300
Bicycle Parking (num	ber of spaces)	
Public/Visitor	0	N/A
Private/Garage	0	N/A
Bicycle Paths (LF)	0	N/A
Pedestrian Signals	0	0



OWNER/APPLICANT 2425 EISENHOWER ACQUISITIONS, LLC

2034 EISENHOWER AVENUE, SUITE 290 ALEXANDRIA, VA 22331 (703) 960-4700

WALSH, COLUCCI, LUBELEY, # WALSH

> 2200 CLARENDON BLVD. 13TH FLOOR ARLINGTON, VA 22021 (703) 528-4700

CIVIL ENGINEER CHRISTOPHER CONSULTANTS, LTD.

9900 MAIN STREET FOURTH FLOOR FAIRFAX, VIRGINIA 22031 (703) 273-6820

ARCHITECT CALLISONRTKL INC. 210 L ST. NW

SUITE 200 WASHINGTON, DC 20037 (202) 833-4400

SHEET INDEX

COVER SHEET NOTES AND TABULATIONS EXISTING CONDITIONS PLAN CONTEXTUAL PLAN PERLIMINARY SITE PLAN PRELIMINARY SITE GRADING PLAN PRELIMINARY DIMENSION PLAN AVERAGE FINISHED GRADE TURNING MOVEMENTS FIRE SERVICE PLAN OPEN SPACE PLAN EXISTING TREE EXHIBIT PRELIMINARY BMP COMPUTATIONS PRELIMINARY BMP COMPUTATIONS BMP MAP PRELIMINARY SWM AND OUTFALL ANALYSIS PRELIMINARY SWM COMPUTATIONS C705 PRELIMINARY SWM COMPUTATIONS

ARCHITECTURA

ARCHITECTURAL

AP-001 ZONING EXHIBITS- RETAIL- PAD BUILDING FLOOR PLAN

AP-002 ZONING EXHIBITS- RETAIL- PAD BUILDING ROOF PLAN

AP-101 ZONING EXHIBITS- RETAIL- PAD BUILDING ELEVATIONS

AP-102 ZONING EXHIBITS- RETAIL- PAD BUILDING ELEVATIONS

AP-103 ZONING EXHIBITS- RETAIL- PAD BUILDING SECTIONS

<u>LANDSCAPE</u> LIOO LANDSCAPE PLAN

DATE REVISION

09-04-2018 PRELIMINARY DSUP

10-05-2018 COMPLETENESS VERIFICATION

ELI GOLDMAN
Lic. No.55868
10/05/2018

DIRECTOR	DA	TE
DEPARTMENT OF TRANS SITE PLAN NO		WIRONMENTAL SERVICES
DIRECTOR	DA	TE

C100

GENERAL NOTES

- I. THE BOUNDARY INFORMATION FOR THE SUBJECT SITE IS BASED ON A CURRENT FIELD SURVEY PREPARED BY THIS FIRM ON OCTOBER 31ST, 2017.
- 2. EXISTING SITE INFORMATION FOR THE SUBJECT SITE IS BASED ON A CURRENT FIELD SURVEY PREPARED BY THIS FIRM ON OCTOBER 2017 AND APPROVED PLANS.
- 3. THE SUBJECT SITE IS LOCATED ON CITY OF ALEXANDRIA ASSESSMENT MAP 072.04-03-31, ZONED CDD #2.
- 4. THE PROPERTY SHOWN HEREON IS LOCATED ON F.E.M.A. MAP COMMUNITY PANEL NUMBER 515519 0037 E, REVISED JUNE 16, 2011, ZONE X, AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.
- 5. OWNER: 2425 EISENHOWER ACQUISIIONS, LLC
 - INSTRUMENT NO. 160003222
- 6. IN ACCORDANCE WITH THE CITY OF ALEXANDRIA'S MARINE CLAY AREAS MAP DATED NOVEMBER 1976, THERE ARE NO AREAS OF MARINE CLAY LOCATED IN THE VICINITY OF THIS SITE.
- 7. IN ACCORDANCE WITH THE RESOURCE PROTECTION AREAS MAP ADOPTED JUNE 12, 2004 BY THE CITY COUCIL OF ALEXANDRIA, THERE ARE NO RESOURCE PROTECTION AREAS LOCATED ON THIS PROPERTY.
- 8. THIS PROJECT IS NOT LOCATED IN A COMBINED SEWER AREA.
- 9. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO KNOWN UNDERGROUND STORAGE TANKS CURRENTLY LOCATED AT THE PROPERTY. SHOULD ANY UNANTICIPATED UNDERGROUND STORAGE TANKS OR DRUMS BE ENCOUNTERED AT THE SITE, THE APPLICANT SHALL IMMEDIATELY NOTIFY THE CITY OF ALEXANDRIA FIRE DEPARTMENT AND DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, OFFICE OF ENVIRONMENTAL QUALITY. THE SITE IS LOCATED PROXIMATE TO A KNOWN HISTORIC OLD LANDFILL.
- 10. TO THE BEST OF OUR KNOWLEDGE THERE ARE AREAS ON-SITE CONTAINING CONTAMINATED SOILS OR CONTAMINATED GROUNDWATER.
- II. THERE IS NO OBSERVABLE EVIDENCE OF CEMETERIES OR BURIAL GROUNDS.
- 12. THE APPLICANT WILL COMPLY WITH GREEN BUILDING POLICY.
- 13. CONTRACTOR TO MAINTAIN BUS STOP AND SHELTER LOCATED ON EISENHOWER WEST BOUND SOUTH OF PROPOSED RETAIL PAD THROUGHOUT THE DURATION OF CONSTRUCTION.

SOIL DATA

THE NATURAL SOILS OF THE SITE CONSIST GENERALLY OF HALOCENE AND PLEISTOCENE AGE ALLUVIUM AND RIVER TERRACE DEPOSITS CONSISTING OF CLAY, SILT, SAND, AND GRAVEL, UNDERLAIN BY SAND AND CLAY DEPOSITS OF THE POTOMAC GROUP.

ARCHAEOLOGY NOTES

- I. 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 ARCHAEOLOGIST COMES TO THE SITE AND RECORDS THE FINDS.
- 2. THE APPLICANT/DEVELOPER SHALL NOT ALLOW ANY METAL DETECTION TO BE CONDUCTED ON THE PROPERTY, UNLESS AUTHORIZED BY ALEXANDRIA ARCHAEOLOGY.

SANITARY SEWER OUTFALL NARRATIVE

THIS PROJECT PROPOSES TO CONNECT TO THE EXISTING 24" RCP SEWER THAT RUNS SOUTH ALONG SWAMP FOX ROAD. PER MEMO TO INDUSTRY 06-14, AN ADEQUATE ANALYSIS IS NOT REQUIRED BECAUSE THE TOTAL FLOW IS LESS THAN 10,000 GPD. SEE CALCULATIONS ON THIS SHEET. THIS PROJECT IS NOT LOCATED IN A COMBINED SEWER AREA.

STORM WATER MANAGEMENT NARRATIVE

TO COMPLY WITH THE STORM WATER REQUIREMENTS IN ACCORDANCE WITH ARTICLE XIII OF THE ZONING ORDINANCE, SECTION 13-109.F.2], VOLUME CONTROL IS REQUIRED. THIS PROJECT WILL PROVIDE ON-SITE DETENTION OF SITE RUNOFF THROUGH THE USE OF A VAULT OR A BELOW GRADE HDPE ARCHED PIPE SYSTEM.

ENVIRONMENTAL SITE ASSESSMENT

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

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

ALL WELLS INCLUDING MONITORING WELLS MUST BE CLOSED IN ACCORDANCE WITH STATE WELL REGULATION. CONTACT JOE FINDER AND COORDINATE WITH THE ALEXANDRIA HEALTH DEPARTMENT AT 703-838-4400 EX. 255.

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

MONDAY THROUGH FRIDAY FROM 7:00 AM - 6:00 PM SATURDAYS FROM 9:00 AM TO 6:00 PM NO CONSTRUCTION ACTIVITIES ARE PERMITTED ON SUNDAYS.

ZONING TABULATIONS

SITE LOCATION/ADDRESS: 2425 EISENHOWER AVENUE

EXISTING ZONE: COORDINATED DEVELOPMENT DISTRICT #2 (CDD) COORDINATED DEVELOPMENT DISTRICT #2 (CDD) PROPOSED ZONE:

SMALL AREA PLAN DISTRICT: EISENHOWER EAST PLAN EXISTING SITE AREA: 15,849 S.F. OR 0.36 AC.

PROPOSED SITE AREA: 15,849 S.F. OR 0.36384 AC.

EXISTING USE: VACANT LAND RETAIL PROPOSED USE:

ALLOWABLE GROSS FLOOR AREA: 7,882 SF GROSS FLOOR AREA PROPOSED: 7,752 SF

LOT AREA REQUIRED:

15,849 S.F. OR 0.36 AC. LOT AREA PROVIDED:

BUILDING SETBACK REQUIRED: BUILDING SETBACK PROVIDED: NORTH: 44.5' EAST: 9.4'

SOUTH: 2.7' WEST: 20.4'

WEST: 89'

N/A LOT FRONTAGE REQUIRED: NORTH: 95' LOT FRONTAGE PROVIDED: EAST: 79' SOUTH: 121'

N/A (PER APPROVED CDD #2) OPEN SPACE REQUIRED: 2,765 SF (SEE SHEET C600) OPEN SPACE PROVIDED:

10 TO 15 STORIES MAXIMUM BUILDING HEIGHT:

29.54' , I STORY PROPOSED BUILDING HEIGHT:

AVERAGE FINISHED GRADE:

YARDS:

2 SPACES PER 1,000 GSF = 2 X (7752/1,000) = 16 (FROM APPROVED CDD #2) PARKING REQUIRED:

6 STANDARD SPACES* PARKING PROVIDED:

*NOTE: SURFACE PARKING ALLOCATED FOR BLOCK

6C PER APPROVED DSUP2000-0028

I SPACE PER 20,000 GSF LOADING REQUIRED:

I SPACE LOADING PROVIDED:

APPROXIMATE AREA OF

DISTURBANCE

DURING CONSTRUCTION: 16,000 S.F. OR 0.37 AC.

O VEHICLES EXISTING TRIP GENERATION: 260 ADT PROPOSED TRIP GENERATION:

CONCEPTUAL SANITARY DESIGN FLOWS

7,752 SF OF RETAIL/COMMERCIAL

CITY OF ALEXANDRIA RECOMMENDED AVERAGE DESIGN FLOWS:

200 GPD/1000 SF X 7,752 SF = 1,550 GPD

TOTAL FLOW = 1,550 GPD

Q = (1,550 GPD / 7.48 GAL/CF) * (DAY/86,400 SEC) = 0.002 C.F.S.

PEAK FACTOR FOR LATERALS = 4.0 DESIGN FLOW = 0.002 X 4.0 = 0.009 C.F.S. OR 6,232 GPD

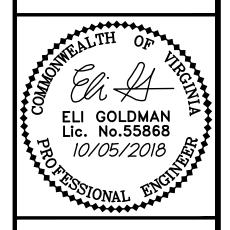
200 GPD/1000 SF (FOR RETAIL/COMMERCIAL)

NOTE: SINCE THE TOTAL WASTEWATER FLOW IS LESS THAN 10,000 GPD, AN OUTFALL ANALYSIS IS NOT WARRANTED PER MEMO TO INDUSTRY 06-14.

DATE	REVISION
10-5-18	VERIFICATION OF COMPLETENESS
_	

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



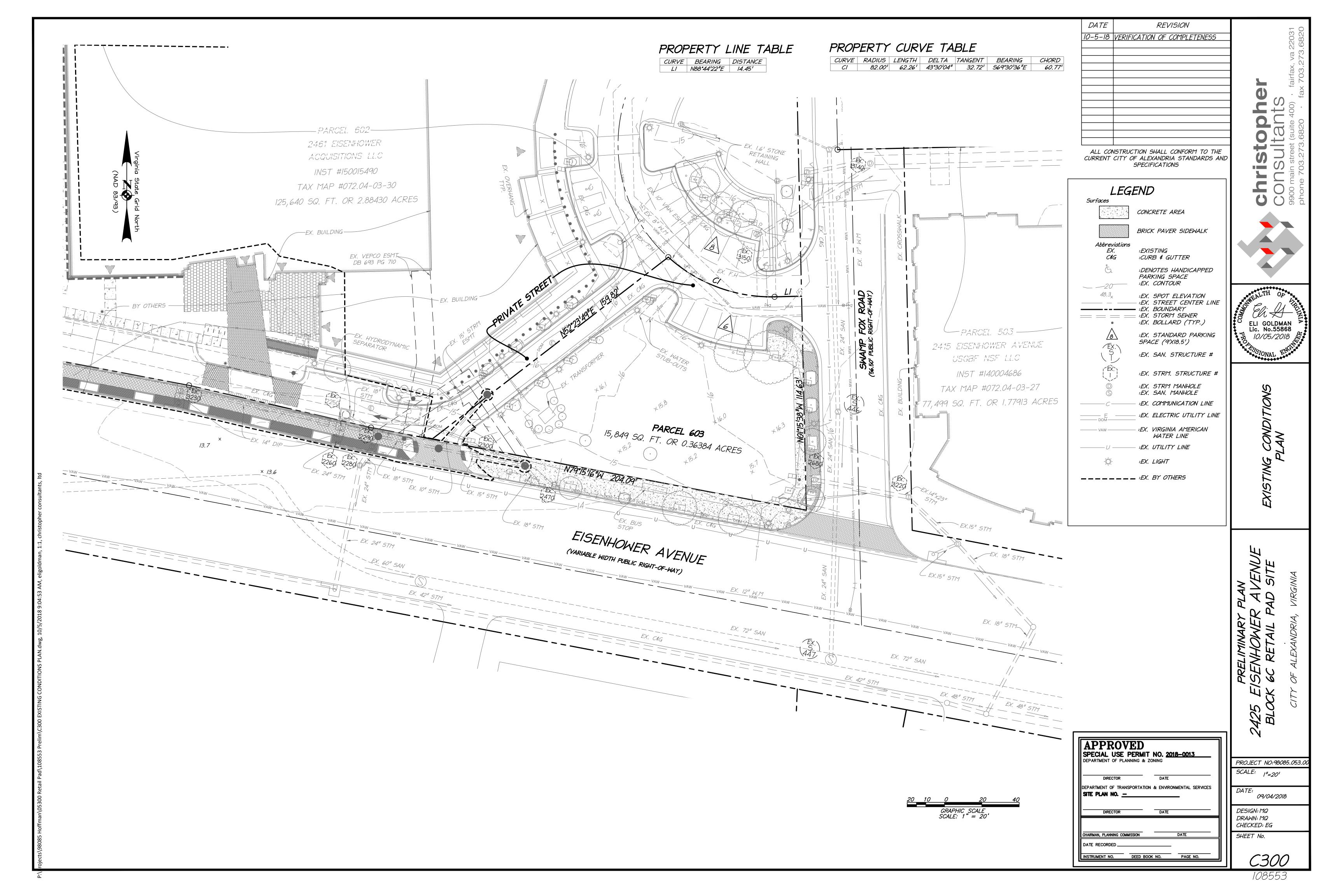


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APPROV SPECIAL USE DEPARTMENT OF PLA	PERMIT NO. 201	18-0013
DIRECTOR DEPARTMENT OF TRAI SITE PLAN NO	DATE NSPORTATION & ENVIRON	NMENTAL SERVICES
		_
DIRECTOR	DATE	<u> </u>
	DATE	DATE

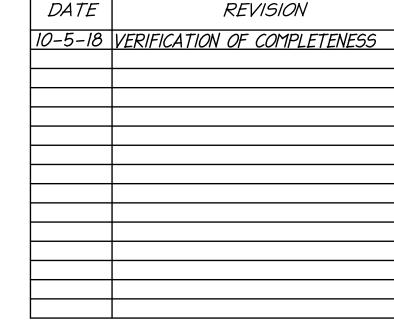
PROJECT NO:98085.053.0 SCALE: N/A DESIGN: MQ DRAWN: MQ CHECKED: EG SHEET No.

09/04/2018



- 100 TELEGRAPH ROAD EXTRA SPACE PROPERTIES 102 LLC USE: SELF STORAGE FACILITY ZONE: OCM (50) TM 072.02-01-02
- 25 DOVE STREET DOVE STREET HOLDINGS LLC USE: COMMERCIAL BUILDING
- 2438 DUKE STREET MII LLC USE: VACANT LAND COMMERCIAL ZONE: OCM (50) TM 072.02-01-04
- 20 DOVE STREET MII LLC USE: AUTOMOTIVE CENTER ZONE: OCM (50) TM 072.02-01-05
- 26 DOVE STREET DAREZZO REAL ESTATE NO I LLC USE: AUTO SALES
- 100 DOVE STREET AITCHESON REAL ESTATE INC USE: DISTRIBUTION WAREHOUSE
- 2412 DUKE STREET AITCHESON REAL ESTATE INC USE: VACANT LAND/COMMERCIAL
- 2387 DUKE STREET 2350 DUKE STREET ASSOCIATES, LC USE: COMMERCIAL WAREHOUSE ZONE: OCM (50) TM 072.02-01-09
- 2350 DUKE STREET 2350 DUKE STREET ASSOCIATES, LC USE: COMMERCIAL WAREHOUSE
- 2328 DUKE STREET ASSOCIATES, LC USE: SURFACE PARKING
- 2326 DUKE STREET J.T. MARTYN JR. AND E.F. CANNON USE: VACANT LAND/COMMERCIAL ZONE: OCM (50) TM 072.02-01-12
- 2324 DUKE STREET J.T. MARTYN JR. AND E.F. CANNON USE: AUTOMOTIVE CENTER ZONE: OCM (50) TM 072.02-01-13
- 2226 DUKE STREET UNITED STATES POSTAL SERVICE USE: U.S. POST OFFICE ZONE: OCM (50) TM 072.02-01-14.C
- CSX TRANSPORTATION, INC USE: CSX TRACKS ZONE: OCM (100) TM 071.01-03-01
- WASHINGTON METRO AREA TRANSIT AUTHORITY (WMATA) USE: WMATA ZONE: OCM (100) TM 072.02-02-XX
- IOB TELEGRAPH ROAD WASHINGTON METRO AREA TRANSIT AUTHORITY (WMATA) USE: WMATA ZONE: UT TM 071.02-02-01
- 2421 MILL ROAD WASHINGTON METRO AREA TRANSIT AUTHORITY (WMATA) USE: WMATA ZONE: OCM (100)/UT TM 071.02-02-13
- 2415 MILL ROAD WASHINGTON METRO AREA TRANSIT AUTHORITY (WMATA) USE: WMATA ZONE: OCM (100)/UT TM 072.02-02-14
- 2403 MILL ROAD WASHINGTON METRO AREA TRANSIT AUTHORITY (WMATA) USE: WMATA ZONE: OCM (100)/UT TM 072.02-02-17
- 2395 MILL ROAD WASHINGTON METRO AREA TRANSIT AUTHORITY (WMATA)
 USE: WMATA ZONE: OCM (100) TM 072.02-02-18

- 2355 MILL ROAD CITY OF ALEXANDRIA USE: CITY GOVERNMENT BUILDINGS ZONE: OCM (100) TM 072.02-02-10
- 2393 MILL ROAD WASHINGTON METRO AREA TRANSIT AUTHORITY (WMATA) USE: WIATA TRACKS ZONE: UT TM 072.02-02-19
- 2375 MILL ROAD CITY OF ALEXANDRIA USE: CITY VACANT LAND ZONE: OCM (100) TM 072.04-02-14
- 2365 MILL ROAD WASHINGTON METRO AREA TRANSIT AUTHORITY (WMATA) USE: WMATA TRACKS ZONE: UT TM 072.04-02-20
- 2345 MILL ROAD MHF ALEXANDRIA V LLC USE: EXTENDED STAY HOTEL ZONE: CDD-2 TM 072.04-02-19
- 2425 MILL ROAD HOFFMAN FAMILY, LLC USE: VACANT LAND COMMERCIAL ZONE: CDD-2 TM 072.02-02-12
- 2460 MILL ROAD S/C EISENHOWER, LLC USE: SURFACE PARKING/COMMERCIAL ZONE: CDD-2 TM 072.04-03-28
- 2410 MILL ROAD S/C EISENHOWER, LLC USE: SURFACE PARKING/COMMERCIAL ZONE: CDD-2 TM 072.04-03-25
- 2380 MILL ROAD TOWN CENTER GARAGE, LLC USE: TOWN CENTER GARAGE ZONE: CDD-2 TM 072.04-03-26
- 2360 MILL ROAD WASHINGTON METRO AREA TRANSIT AUTHORITY (WMATA) USE: WMATA TRACKS ZONE: UT TM 072.04-03-08
- 2299 EISENHOWER AVENUE WASHINGTON METRO AREA TRANSIT AUTHORITY (WMATA) USE: WMATA TRACKS ZONE: UT TM 072.04-03-12
- 2318 MILL ROAD CARLYLE OVERLOOK LLC USE: OFFICE BUILDING/RETAIL ZONE: CDD-2 TM 072.04-0A-00
- 2316 MILL ROAD MILL RACE PROPERTY OWNERS ASSOCIATION USE: VACANT LAND/COMMERCIAL ZONE: CDD-2 TM 072.04-03-22
- 2251 EISENHOWER AVENUE CARLYLE PLACE ASSOCIATES LLC USE: HI-RISE RESIDENTIAL ZONE: CDD-2 TM 072.04-03-21
- 2351 EISENHOWER AVENUE EISENHOWER RESIDENTIAL LP USE: HI-RISE RESIDENTIAL ZONE: CDD-2 TM 072.04-03-23
- 2415 EISENHOWER AVENUE USGBF NSF LLC USE: OFFICE BUILDING ZONE: CDD-2 TM 072.04-03-27
- 206 SWAMP FOX ROAD HOFFMAN FAMILY, LLC USE: AMC HOFFMAN CENTER 22 THEATER & SURFACE PARKING ZONE: CDD-2 TM 072.04-03-19
- 200 STOVALL STREET PERSEUS REALTY, LLC USE: OFFICE BUILDING/SURFACE PARKING ZONE: CDD-2 TM 072.04-03-29
- 2461 EISENHOWER AVENUE 2461 EISENHOWER ACQUISITIONS LLC USE: OFFICE BUILDING/SURFACE PARKING ZONE: CDD-2 TM 072.04-03-30
- 2425 EISENHOWER AVENUE 2425 EISENHOWER ACQUISITIONS LLC USE: VACANT LAND/COMMERCIAL ZONE: CDD-2 TM 072.04-03-31



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WEALTH OF

Eli H

ELI GOLDMAN

Lic. No.55868

10/05/2018

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

- 315 STOVALL STREET HOFFMAN FAMILY LLC USE: VACANT/SURFACE PARKING ZONE: CDD-2 TM 072.04-04-08
- 312 TAYLOR DRIVE HOFFMAN MANAGEMENT INC USE: VACANT LAND/COMMERICAL ZONE: CDD-2 TM 072.03-04-09
- 2460 EISENHOWER AVENUE ALEXANDRIA VA HOTEL PARTNERS LLC USE: HOTEL AND SURFACE PARKING ZONE: CDD-2 TM 072.04-04-07
- 2400 EISENHOWER AVENUE HOFFMAN FAMILY LLC USE: VACANT LAND/SURFACE PARKING ZONE: CDD-2 TM 078.02-01-08
- 2300 EISENHOWER AVENUE WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY (WMATA) USE: WMATA RAIL TRACKS ZONE: UT TM 078.02-01-02
- 2310 EISENHOWER AVENUE HOFFMAN FAMILY LLC USE: VACANT LAND/APARTMENTS ZONE: CDD-2 TM 078.02-01-19
- 2356 EISENHOWER AVENUE HOFFMAN TOWERS BLOCK 12 LLC USE: VACANT LAND/APARTMENTS ZONE: CDD-2 TM 078.02-01-09
- 2300 DOCK LANE HOFFMAN TOWERS BLOCK II LLC USE: VACANT LAND/APARTMENTS ZONE: CDD-2 TM 078.02-01-13
- 2250 EISENHOWER AVENUE HOFFMAN FAMILY LLC USE: VACANT LAND/APARTMENTS ZONE: CDD-2 TM 078.02-01-15
- 750 PORT STREET PARADIGM 2230 MILL LLC USE: HI-RISE RESIDENTIAL ZONE: CDD-2 TM 078.02-01-20
- 2200A MILL ROAD LSREF2 CLOVER PROPERTY 12 LLC USE: VACANT LAND/COMMERCIAL ZONE: OCM (100) TM 078.02-01-18

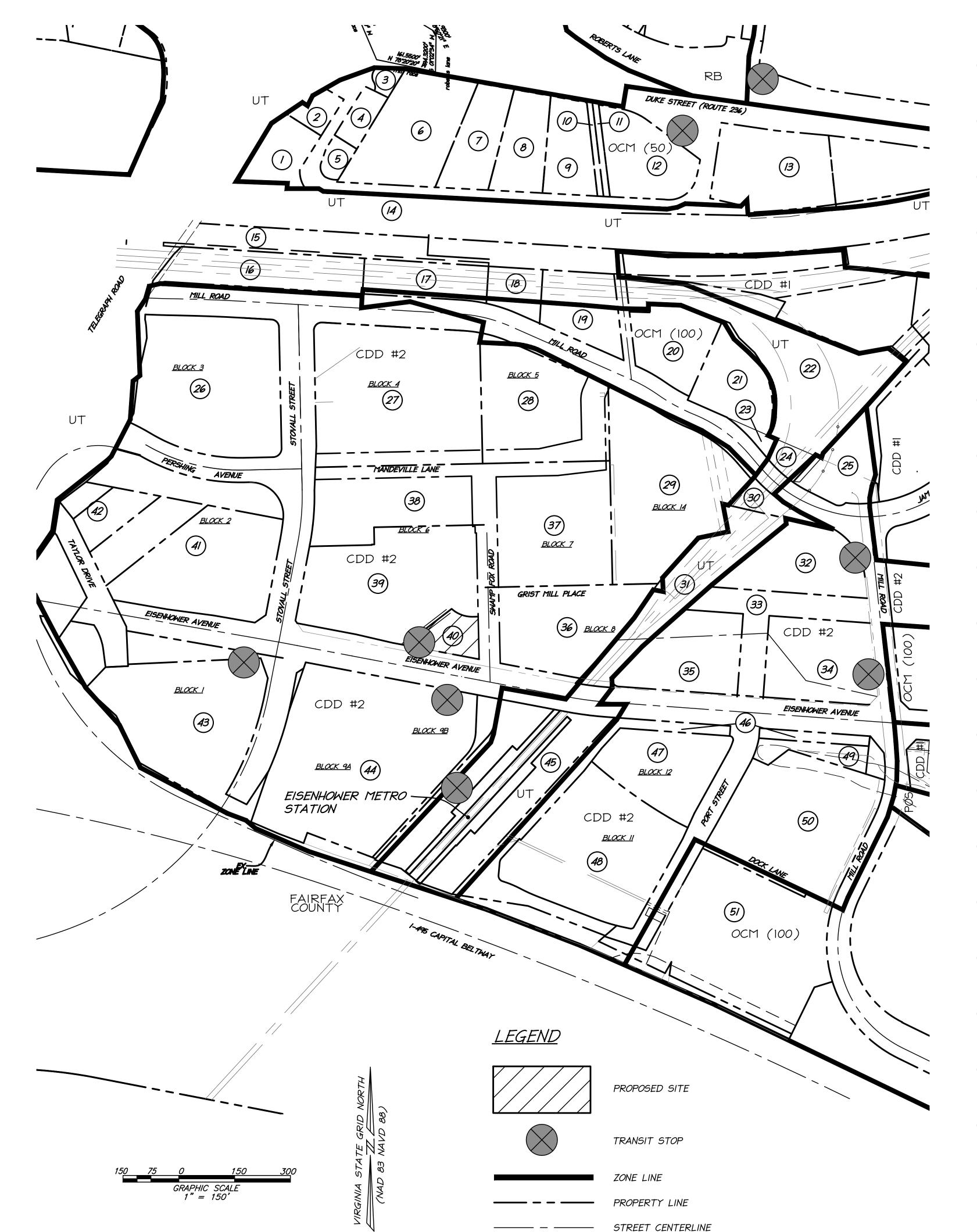
APPROVED SPECIAL USE PERMIT NO. 2018-0013 DEPARTMENT OF PLANNING & ZONING DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES DIRECTOR HAIRMAN, PLANNING COMMISSION INSTRUMENT NO. DEED BOOK NO. PAGE NO.

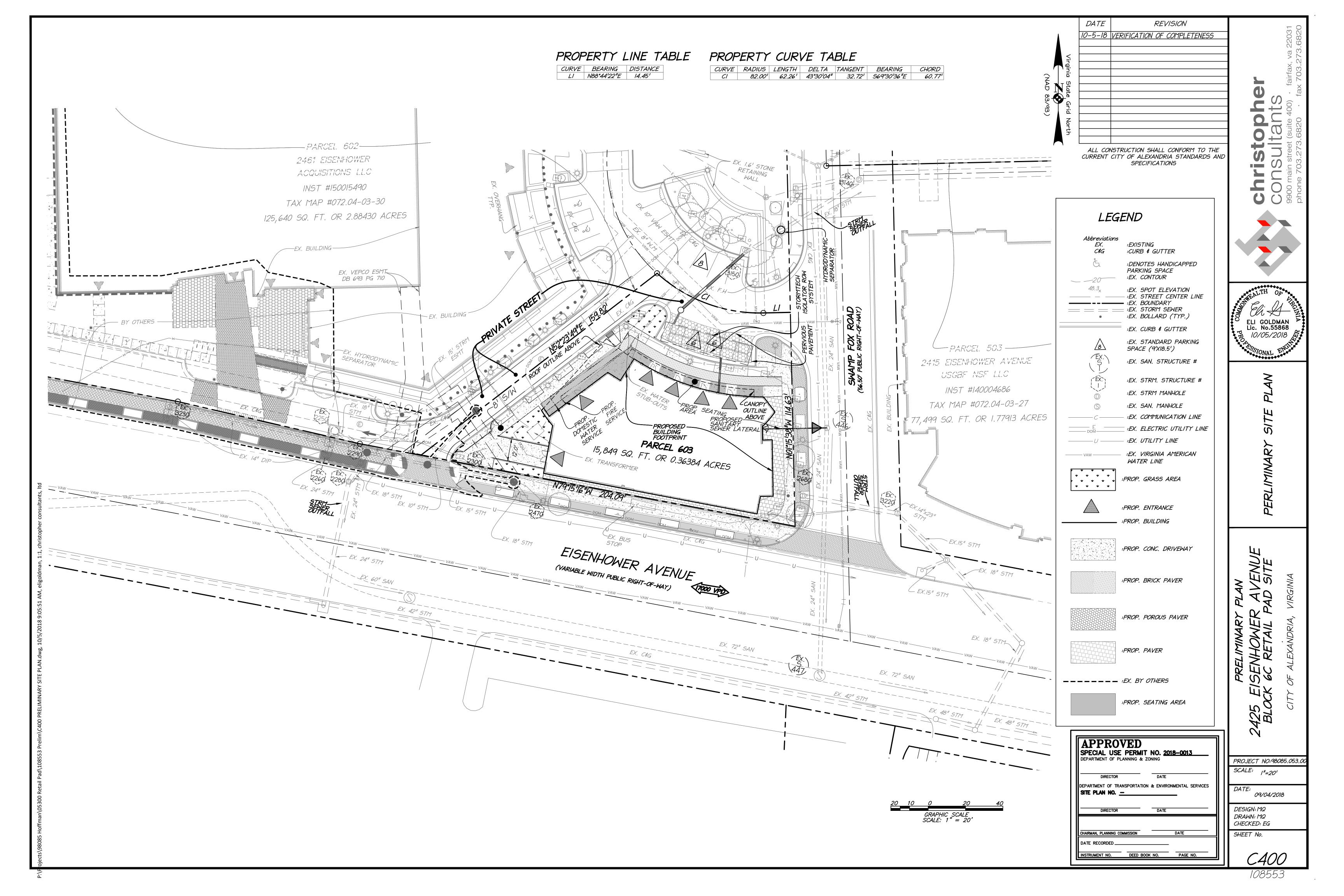
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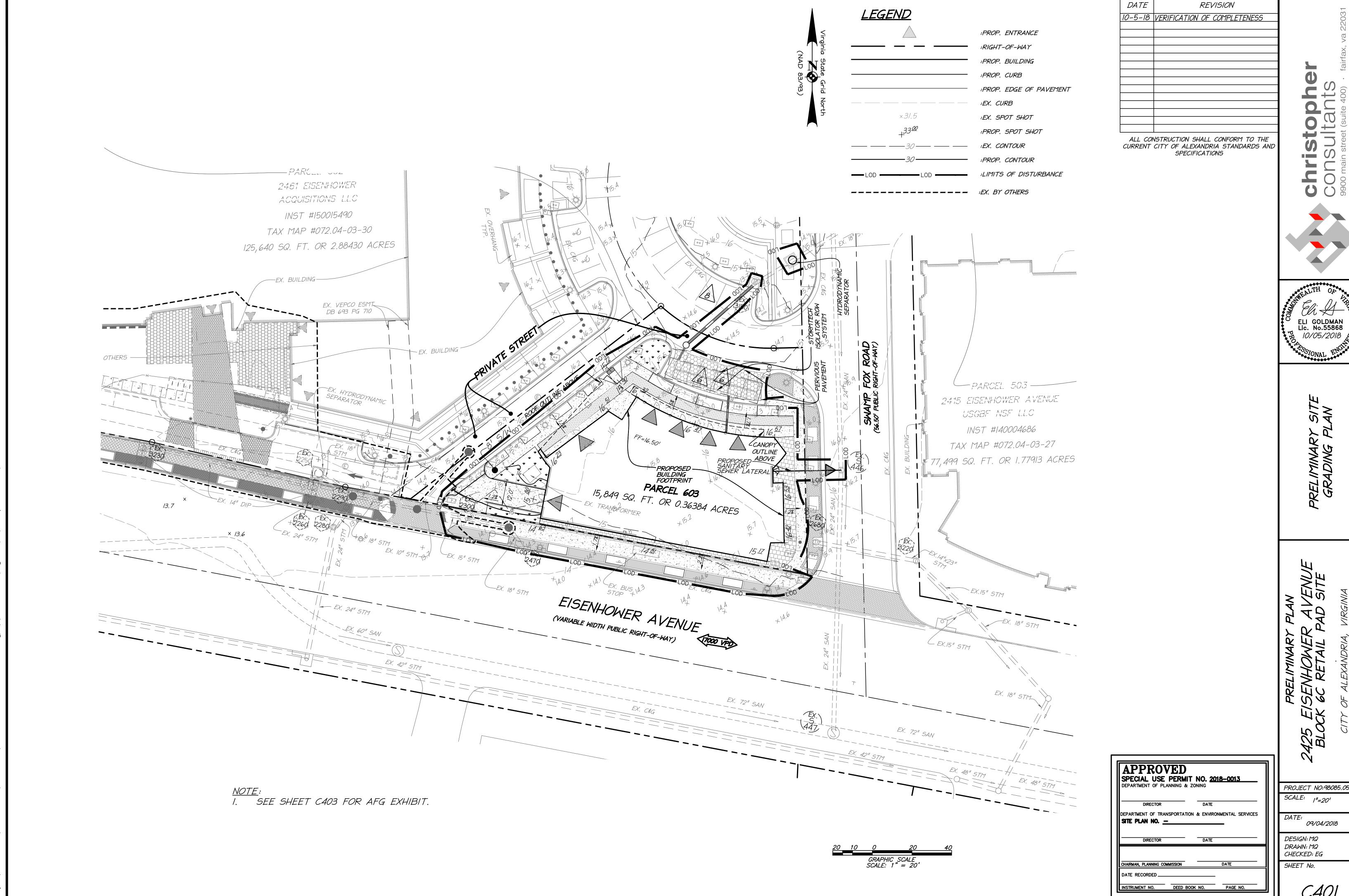
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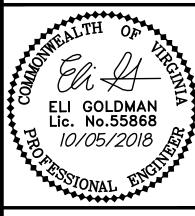
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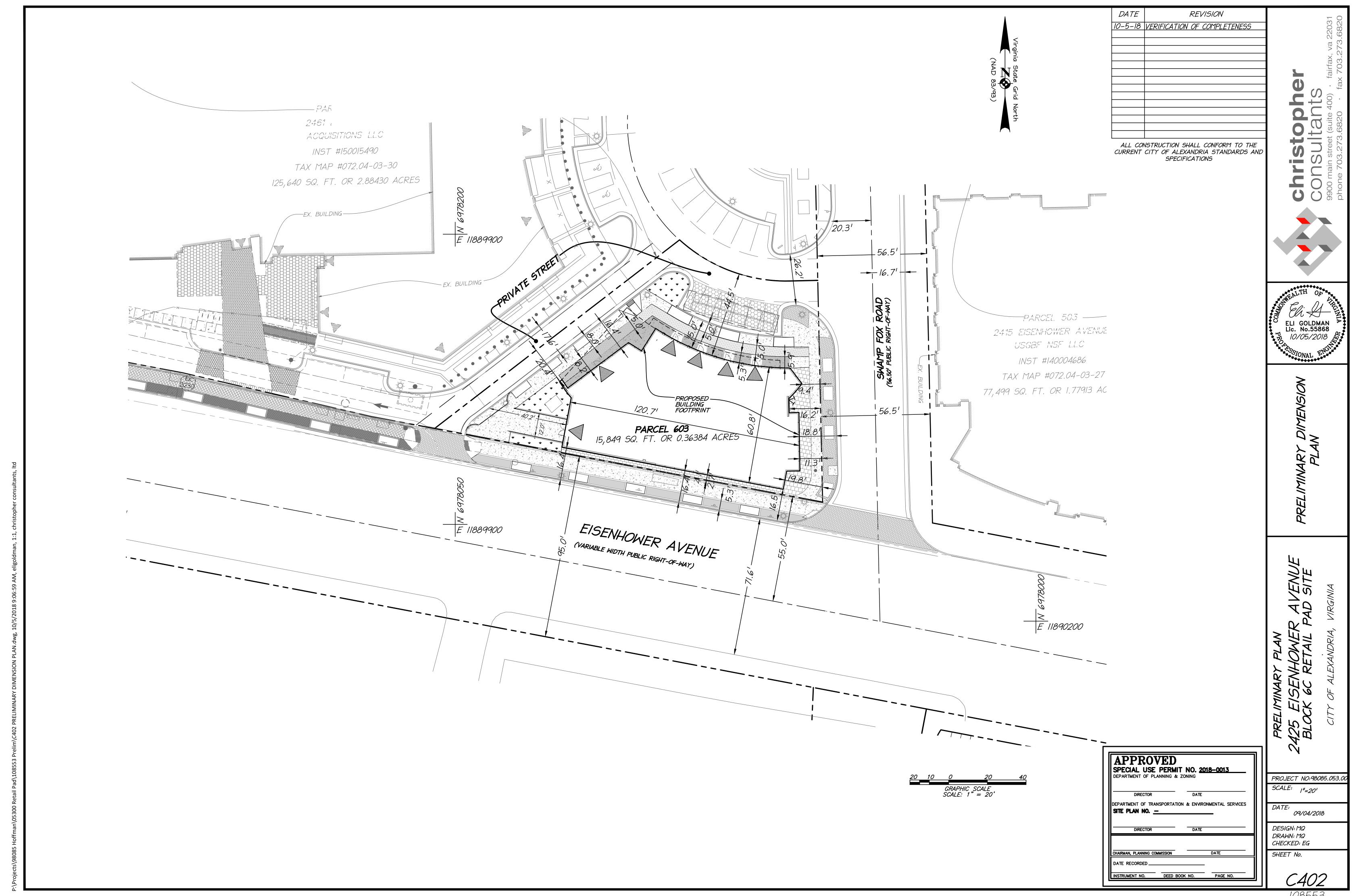






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C401

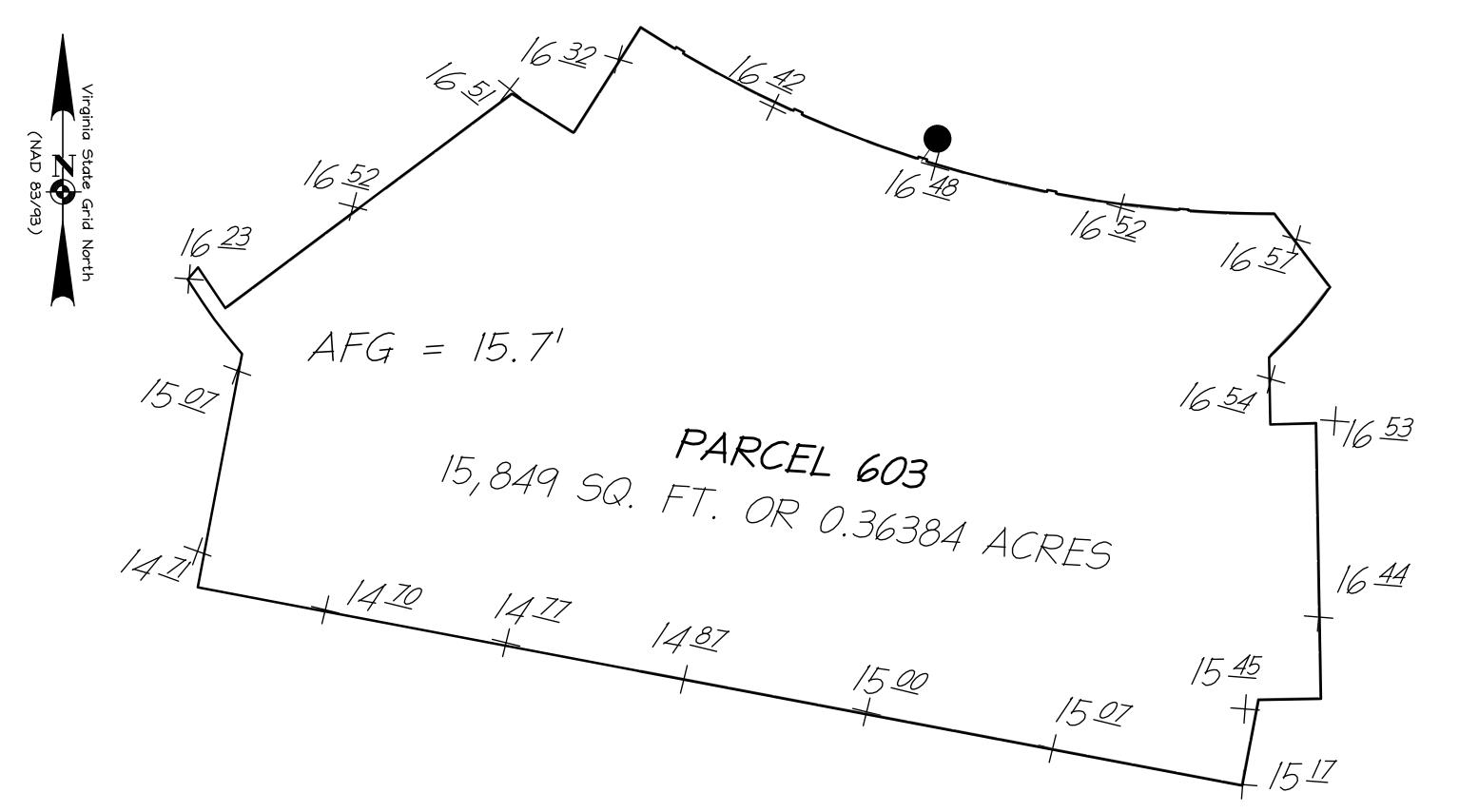


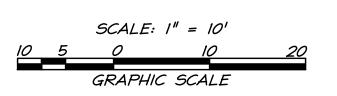
DATE	REVISION
10-5-18	VERIFICATION OF COMPLETENESS
ALL COI	NSTRUCTION SHALL CONFORM TO THE

CURRENT CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS

*STARTS AT SOUTHEAST CORNER AND GOES COUNTERCLOCKWISE

Point	Grade
1*	15.17
2	15.07
3	15
4	14.87
5	14.77
6	14.7
7	14.71
8	15.07
9	16.23
10	15.52
11	16.51
12	16.32
13	16.42
14	16.48
15	16.52
16	16.57
17	15.54
18	16.53
19	16.44
20	15.45
AFG	15.7



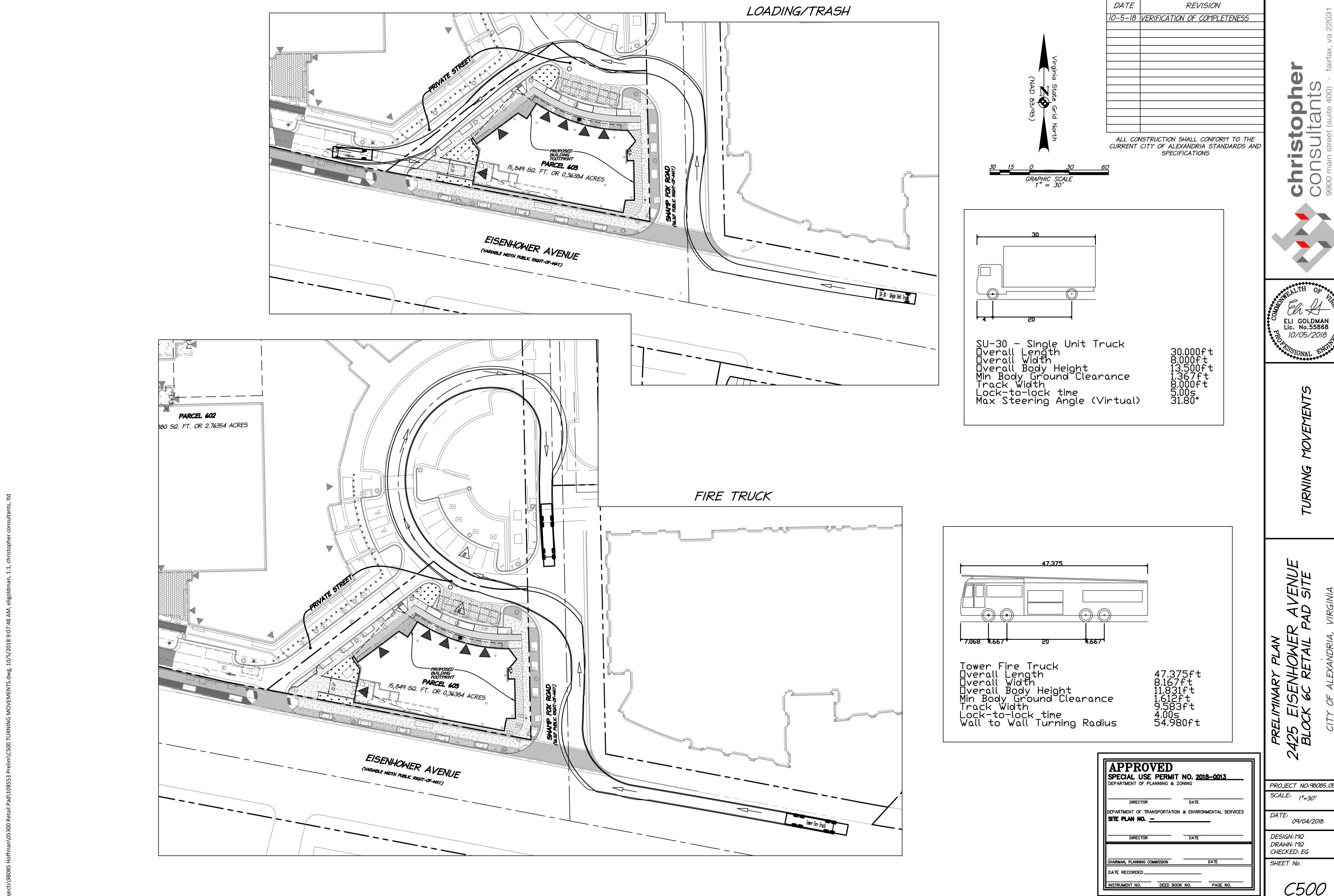


DIRECTOR	DATE
DEPARTMENT OF TRANSPORTATION	ON & ENVIRONMENTAL SERVICE
site plan no. <u>—</u>	
DIRECTOR	DATE
CHAIRMAN, PLANNING COMMISSION	DATE
CHAIRMAN, PLANNING COMMISSION DATE RECORDED	DATE

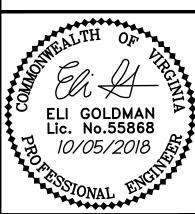
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C403

PROJECT NO:98085.053.00



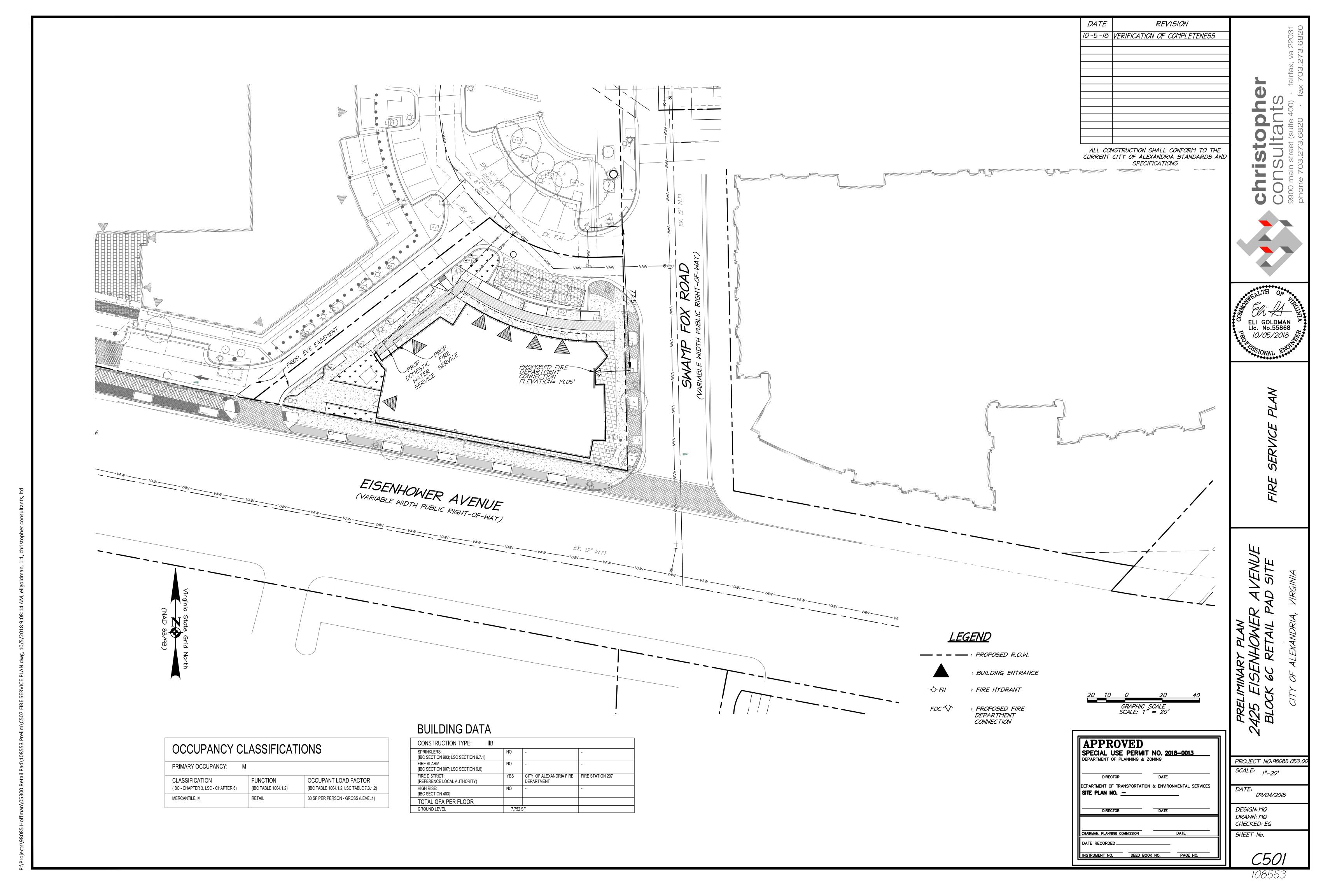




PROJECT NO:98085.053.0

C500

108553



DATE	REVISION
10-5-18	VERIFICATION OF COMPLETENESS
ALL COL	NETRICTION CILVII CONFORM TO THE

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



	PROJECT	NO:98085.053
ı	SCALE:	1// 00/

ALL: 1"=20'

DATE: 09/04/2018

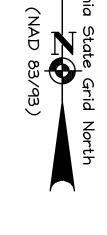
DESIGN: MQ DRAWN: MQ CHECKED: EG SHEET No.

C600

PARCEL 603
15,849 SQ. FT. OR 0.36384 ACRES EISENHOWER AVENUE (VARIABLE WIDTH PUBLIC RIGHT-OF-WAY)

:OPEN SPACE = ±2,765 SF (0.06 Ac.)

NOTE: THERE IS NO OPEN SPACE REQUIREMENT FOR THIS SITE PER CDD #2



GRAPHIC SCALE SCALE: 1" = 20'

VEGETATION PROTECTION

AND PRESERVATION DETAIL SECTION

Landscape Guidelines - City of Alexandria, Virginia - 2007

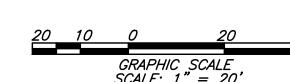
& DISTURBANCE

PLAN VIEW: VEGETATION

REVISION 10-5-18 VERIFICATION OF COMPLETENESS

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





<u>LEGEND</u>



:EXISTING OFF-SITE TREE

:EXISTING OFF-SITE TREE (TO BE REMOVED)

:EXISTING ON-SITE TREE (TO BE REMOVED)

--- XX --- :TREE PROTECTION FENCE

	1,4,
APPROVED SPECIAL USE PERMIT NO. 2018-0013	
DEPARTMENT OF PLANNING & ZONING	PROJECT NO
DIRECTOR DATE	SCALE: /"=
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES SITE PLAN NO	DATE: 09/0.
DIRECTOR DATE	DESIGN: MQ
	DRAWN: MQ CHECKED: EC
CHAIRMAN, PLANNING COMMISSION DATE	SHEET No.
DATE RECORDED	

INSTRUMENT NO. DEED BOOK NO. PAGE NO.

PROJECT NO:98085.053.00 SCALE: |"=20"

ELI GOLDMAN Lic. No.55868

09/04/2018

DESIGN: MQ DRAWN: MQ CHECKED: EG

THIS SITE IS 0.36 ACRES (EXCLUDING RIGHT-OF-WAYS) AND IS A VACANT GRASSED LOT WITH SOME PAVED PARKING AREAS AND A PRIVATE SERVICE DRIVE. THE SITE IS LOCATED NORTH OF THE EISENHOWER METRO AND IS BORDERED TO THE NORTH BY AN EXISTING PRIVATE STREET AND PARKING; TO THE SOUTH BY EISENHOWER AVENUE; TO THE EAST BY SWAMP FOX ROAD; AND TO THE WEST BY AN EXISTING PRIVATE STREET AND RETAIL AND OFFICE BUILDING

REVIEW OF EXISTING TOPOGRAPHY INDICATES THAT A MAJORITY OF THE GRASSED AREA DRAINS TO THE SOUTH VIA OVERLAND RELIEF TOWARDS EISENHOWER AVENUE. PORTIONS OF THE WEST, NORTH AND EAST DRAIN OFF TOWARDS INLETS IN THEIR RESPECTIVE DIRECTION.

THERE ARE NO RESOURCE PROTECTION AREAS ON THIS PROPERTY.

PROPOSED CONDITION SITE NARRATIVE

THIS PROJECT PROPOSES A DEVELOPMENT OF RETAIL ONE-STORY BUILDING. IMPROVEMENTS TO THE STREETSCAPE FRONTING THE PROPERTY WILL ALSO BE PROVIDED.

WATER QUALITY TREATMENT (BMP) NARRATIVE

TO COMPLY WITH THE CHESAPEAKE BAY ACT (CBA) AND ARTICLE XIII OF THE ZONING ORDINANCE, THE PROJECT WILL PROVIDE WATER QUALITY TREATMENT THROUGH THE USE OF STORMTECH ISOLATOR CHAMBERS UNDER PERVIOUS ASPHALT LOCATED ON THE NORTHERN SIDE OF THE SITE AND AN OFF-SITE PROPOSED HYDRODYNAMIC SEPARATOR DEVICE LOCATED ON SWAMP FOX ROAD.

ON THE NORTH SIDE, PERVIOUS PAVEMENT WILL TREAT APPROXIMATELY 0.05 ONSITE ACRES OF IMPERVIOUS RUNOFF FROM THE BUILDING AND NORTHERN SIDEWALK, STORMTECH ISOLATOR CHAMBERS WILL TREAT APPROXIMATELY 0.17 ONSITE ACRES OF IMPERVIOUS RUNOFF FROM THE BUILDING (AND THE 0.05 ACRE FROM THE PERVIOUS PAVEMENT), AND THE PROPOSED OFF-SITE HYDRODYNAMIC SEPARATOR DEVICE WILL TREAT ALL OF THE ABOVE NOTED AREA AND AN ADDITIONAL 0.06 ACRES OF ON-SITE IMPERVIOUS AREA AND 0.31 ACRES OFF-SITE IMPERVIOUS AREA.

PER CITY CODE SECTION 13-103-LL, THE SITE IS THE ENTIRE PARCEL SINCE GREATER THAN 50% OF THE TAX PARCEL IS BEING DISTURBED. THIS TOTAL SITE AREA IS 0.36 ACRES.

THE WQV TO BE TREATED AS PER THE CITY OF ALEXANDRIA SUPPLEMENT TO THE NORTHERN VIRGINIA BMP HANDBOOK IS 1816 CU FT/ ACRE OF IMPERVIOUS SURFACE. THEREFORE WQV REQUIRED = 0.33 x 1816 = 599 CU FT. SEE WQV CALCULATIONS ON C701.

BMP TREATMENT PROVIDED

FOR THIS PROJECT, 0.28 ACRES OF ON-SITE IMPERVIOUS COVER IS TREATED BY PERVIOUS PAVEMENT, STORMTECH ISOLATOR CHAMBERS, AND OFF-SITE PROPOSED HYDRODYNAMIC SEPARATOR DEVICE. AN ADDITIONAL 0.31 ACRES OF OFF-SITE IMPERVIOUS COVER TREATMENT IS PROVIDED BY THE PROPOSED HYDRODYNAMIC SEPARATOR DEVICE. A TOTAL OF 0.59 ACRES OF IMPERVIOUS AREA IS BEING TREATED AND EXCEEDS THE CITY'S WQVD REQUIREMENT.

STORM WATER MANAGEMENT / BEST MANAGEMENT PRACTICES NARRATIVE

BEST MANAGEMENT PRACTICES (BMP) - STORMWATER QUALITY

TO MEET THE STATE REQUIREMENTS FOR STORMWATER QUALITY, THE VIRGINIA RUNOFF REDUCTION METHOD SPREADSHEET FOR RE-DEVELOPMENT MUST BE FILLED OUT AND MEET ALL POLLUTANT LOAD REDUCTION REQUIREMENTS. THE CITY REQUIREMENT IS MORE STRINGENT IN THIS CASE, THE ENTIRE SITE'S WATER QUALITY VOLUME (WQV) NEEDS TO BE TREATED (13-109-E-1). SINCE THERE IS A NET INCREASE IN IMPERVIOUS AREA FOR THE SITE, THE NET INCREASE WILL HAVE TO MEET THE 'NEW DEVELOPMENT' REQUIREMENT.' THE SITE IS BEING DESIGNED TO CAPTURE AND TREAT AS MUCH WATER AS POSSIBLE WITH PERVIOUS PAVEMENT, STORMTECH ISOLATOR CHAMBERS, AND HYDRODYNAMIC SEPARATOR DEVICE.

STORMWATER QUANTITY (CHANNEL PROTECTION / FLOOD PROTECTION) SEE SHEETS C703-C704 FOR NARRATIVE AND COMPUTATIONS.

I) SEE SHEET C702 FOR LOCATION OF ALL DRAINAGE AREAS

BMP MAINTENANCE AGREEMENT NOTE:

THE APPLICANT SHALL EXECUTE A MAINTENANCE SERVICE CONTRACT WITH A PRIVATE CONTRACTOR FOR A MINIMUM OF THREE YEARS. A COPY OF THE CONTRACT SHALL BE PLACED IN THE BMP OPERATION AND MAINTENANCE MANUAL. PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY, A COPY OF THE CONTRACT SHALL BE SUBMITTED TO THE CITY. THE APPLICANT SHALL PREPARE AN OWNER'S OPERATION AND MAINTENANCE MANUAL FOR ALL THE BEST MANAGEMENT PRACTICES (BMPS) USED ON SITE. THE MANUAL SHALL INCLUDE AT A MINIMUM: AN EXPLANATION OF THE FUNCTIONS AND OPERATIONS OF THE BMP(S); DRAWINGS AND DIAGRAMS OF THE BMP(S) AND ANY SUPPORTING UTILITIES; CATALOG CUTS ON MAINTENANCE REQUIREMENTS; MANUFACTURER CONTACT NAMES AND PHONE NUMBERS; A COPY OF THE EXECUTED MAINTENANCE SERVICE CONTRACT; AND A COPY OF THE MAINTENANCE AGREEMENT WITH THE CITY. PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY, A COPY OF THE OPERATION AND MAINTENANCE MANUAL SHALL BE SUBMITTED TO THE CITY ON A DIGITAL MEDIA.

DESIGN PROFESSIONAL INSPECTION NOTE

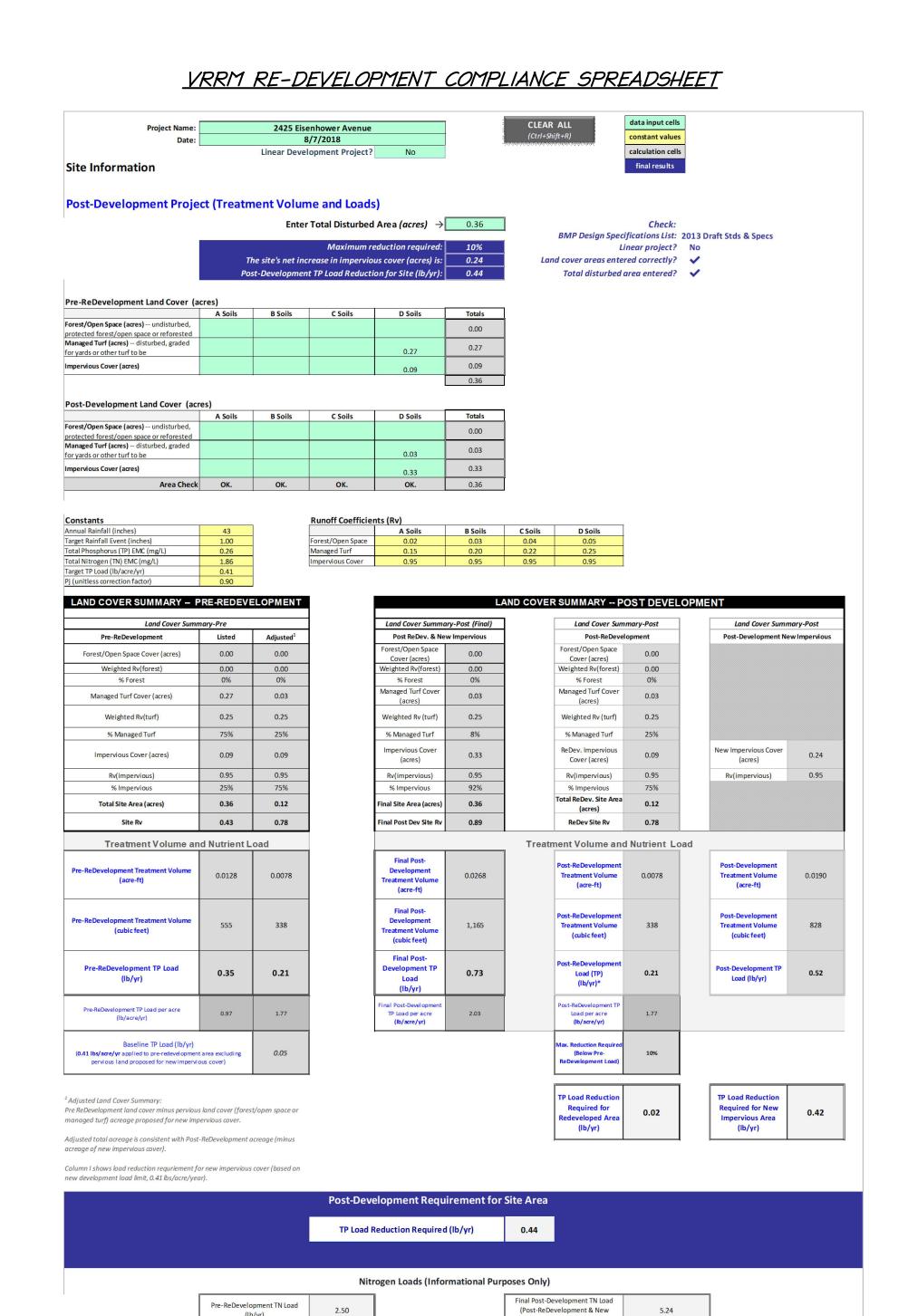
THE STORMWATER BEST MANAGEMENT PRACTICES (BMPS) REQUIRED FOR THIS PROJECT SHALL BE CONSTRUCTED AND INSTALLED UNDER THE DIRECT SUPERVISION OF THE DESIGN PROFESSIONAL OR HIS DESIGNATED REPRESENTATIVE. PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY, THE DESIGN PROFESSIONAL SHALL SUBMIT A WRITTEN CERTIFICATION TO THE DIRECTOR OF TEES THAT THE BMPS ARE:

A. CONSTRUCTED AND INSTALLED AS DESIGNED AND IN ACCORDANCE WITH THE APPROVED

B. CLEAN AND FREE OF DEBRIS, SOIL AND LITTER BY EITHER HAVING BEEN INSTALLED OR BROUGHT INTO SERVICE AFTER SITE WAS STABILIZED.

WAIVER REQUEST TO MEMO TO INDUSTRY 01-18

DUE TO THE EXISTING SITE CONSTRAINTS. A WAIVER TO MEMO TO INDUSTRY 01-18 WILL BE APPLIED FOR. THE ONLY PRACTICAL USE OF NON-PROPRIETARY GREEN INFRASTRUCTURE ON THIS SITE IS PREVIOUS PAVEMENT THAT IS LOCATED IN THE PARKING SPACES ON THE NORTH SIDE OF THE SITE. ALL OTHER BMP PRACTICES ARE NOT FEASIBLE DUE TO SITE LAYOUT, EXISTING GRADE, EXISTING STORM LOCATIONS/INVERTS AND PROPOSED BUILDING TYPE.



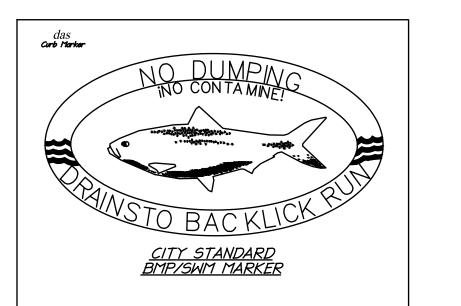
Impervious) (lb/yr)

REVISION 10-5-18 VERIFICATION OF COMPLETENESS

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

> ELI GOLDMAN 10/05/2018

1



NOTE: ADD STORM DRAIN MARKER TO ALL PUBLIC CURB INLETS WITHIN 50 FEET OF THE PROPERTY LINE

<u>Project Description</u> (Redevelopment) Development Drainage Area Impervious Pervious Total 0.33 0.03 0.36 Site Area On-Site Treated 0.28 | 0.01 | 0.29 Off-Site Treated 0.31 0.03 0.34 0.59 | 0.04 | 0.63 Total Treated Any On-Site Disconnected by a Vegetated Buffer (25 ft) 0.00 Total On-Site Treated or

<u>Mater Treatment On-Site</u>

BMP Type	Area Treated	Impervious Area treated	BMP Efficiency (%)	Phosphorus	Geographic
	by BMP (acres)	by BMP (acres)		Removal (lbs)	Coordinates
Pervious Pavement	0.05	0.05	25%	0.06	X: 11,890,043 Y: 6,978,160
StormTech	0.17	0.17	40%	0.17	X: 11,890,043 Y: 6,978,160
HDS	0.41	0.37	20%	0.22	X: 11,890,082 Y: 6,978,220
TDEATMENT	NOTE.				

IREAIMENI NOIE: PERVIOUS PAVEMENT AREA FLOW OF 0.05 ACRE IN SERIES TO THE STORMTECH AND THEN CONTINUES IN SERIES TO THE HDS.

<u>Miscellaneous Information</u> Total WQV treated Detention on Site HOOFFS RUN Project is within which watershed? Project Discharges to which body of water? _CAMERON RUN

APPROVED SPECIAL USE PERMIT NO. 2018-0013 DEPARTMENT OF PLANNING & ZONING	PROJECT NO:98085.
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES SITE PLAN NO	SCALE: N/A DATE: 09/04/2018
DIRECTOR DATE	DESIGN: MQ DRAWN: MQ CHECKED: EG
CHAIRMAN, PLANNING COMMISSION DATE DATE RECORDED	SHEET No.
INSTRUMENT NO. DEED BOOK NO. PAGE NO.	$\parallel \parallel $ ~ 700

CLEAR BMP AREAS

Total Phosphorus Available for Removal in D.A. A (lb/yr) 0.73 Post Development Treatment Volume in D.A. A (ft³) 1,165

Practice	Runoff Reduction Credit (%)	Managed Turf Credit Area (acres)	Impervious Cover Credit Area (acres)	Volume from Upstream Practice (ft ³)	Runoff Reduction (ft ³)	Remaining Runoff Volume (ft ³)	Total BMP Treatment Volume (ft ³)	Phosphorus Removal Efficiency (%)	Phosphorus Load from Upstream Practices (Ib)	Untreated Phosphorus Load to Practice (lb)	Phosphorus Removed By Practice (lb)	Remaining Phosphorus Load (lb)	Downstream Practice to be Employed
3. Permeable Pavement (RR)													
3.a. Permeable Pavement #1 (Spec #7)	45		0.05	0	78	95	172	25	0.00	0.11	0.06	0.04	14.b. MTD - Filtering
4. Manufactured Treatment Devices (no RR)													
14.a. Manufactured Treatment Device- Hydrodynamic	0	0.01	0.06	681	0	897	897	20	0.25	0.14	0.08	0.31	
14.b. Manufactured Treatment Device-	0	0.00	0.17	95	0	681	681	40	0.04	0.37	0.17	0.25	14.a. MTD - Hydrodynamic

VIRGINIA RUNOFF REDUCTION METHOD SPREADSHEET (OFF-SITE FOR HYDRODYNAMIC SEPARATOR DEVICE)

Drainage Area B (OFF-SITE)

Drainage Area A Land Cover (acres)								
	A Soils	B Soils	C Soils	D Soils	Totals	Land Cover Rv		
Forest/Open Space (acres)					0.00	0.00		
Managed Turf (acres)				0.04	0.04	0.25		
Impervious Cover (acres)				0.35	0.35	0.95		
				Total	0.39			

B Soils

C Soils

Totals

0.00

0.03

0.33

Total 0.36

D Soils

0.03

0.33

Land Cover Rv

0.00

0.25

0.95

otal Phosphorus Available for Removal in D.A. B (lb/yr)	0.78
Post Development Treatment Volume in D.A. B (ft ³)	1,243
	•

CLEAR BMP AREAS

Practice	Runoff Reduction Credit (%)		Cover Credit	Volume from Upstream Practice (ft ³)	Reduction	Remaining Runoff Volume (ft ³)	Total BMP Treatment Volume (ft ³)	Removal Efficiency	Phosphorus Load from Upstream Practices (Ib)	Phosphorus Load to	Removed By	Phosphorus	Downstream Practice to be
14. Manufactured Treatment Devices (14. Manufactured Treatment Devices (no RR)												
14.a. Manufactured Treatment Device- Hydrodynamic	0	0.03	0.31	0	0	1,096	1,096	20	0.00	0.69	0.14	0.55	

PHOSPHORUS REMOVED FROM ---OFF-SITE IMPERVIOUS

AREA TREATED = 0.31 Ac. OFF-SITE PRACTICE (0.14 LB)

Site Results (Water Quality Compliance)

Area Checks	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHE
FOREST/OPEN SPACE (ac)	0.00	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER (ac)	0.33	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER TREATED (ac)	0.28	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA (ac)	0.03	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA TREATED (ac)	0.01	0.00	0.00	0.00	0.00	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft³) 1,165

Runoff Reduction Volume and TP By Drainage Area

	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	TOTAL
RUNOFF REDUCTION VOLUME ACHIEVED (ft ³)	78	0	0	0	0	78
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	0.73	0.00	0.00	0.00	0.00	0.73
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.31	0.00	0.00	0.00	0.00	0.31
TP LOAD REMAINING (lb/yr)	0.43	0.00	0.00	0.00	0.00	0.43

WQVD CALCULATIONS

IMPERVIOUS AREA COVERAGE

TOTAL IMPERVIOUS AREA = 0.33 ACRES

 NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)
 1.49
 0.00
 0.00
 0.00
 0.00
 1.49

Total Phosphorus FINAL POST-DEVELOPMENT TP LOAD (lb/yr) 0.73 TP LOAD REDUCTION REQUIRED (lb/yr) 0.44 TP LOAD REDUCTION ACHIEVED (lb/yr) 0.31 TP LOAD REMAINING (lb/yr): 0.43 REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):

Total Nitrogen (For Information Purposes) POST-DEVELOPMENT LOAD (lb/yr) 5.24 NITROGEN LOAD REDUCTION ACHIEVED (lb/yr) 1.49
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr) 3.75 -PHOSPHORUS REMOVED ON-SITE = 0.31 LB/YR

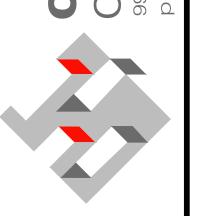
REQUIRED = (1816 CU FT/ACRE) * (0.33 ACRES) = 599 CU FT

TOTAL CAPTURED WQVD = 509 + 563 = 1,072 CU FT

PROVIDED (ON-SITE) = (1816 CU FT/ACRE) * (0.28 ACRES) = 509 CU FT PROVIDED (OFF-SITE) = (1816 CU FT/ACRE) * (0.31 ACRES) = 563 CU FT

REVISION 10-5-18 VERIFICATION OF COMPLETENESS

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



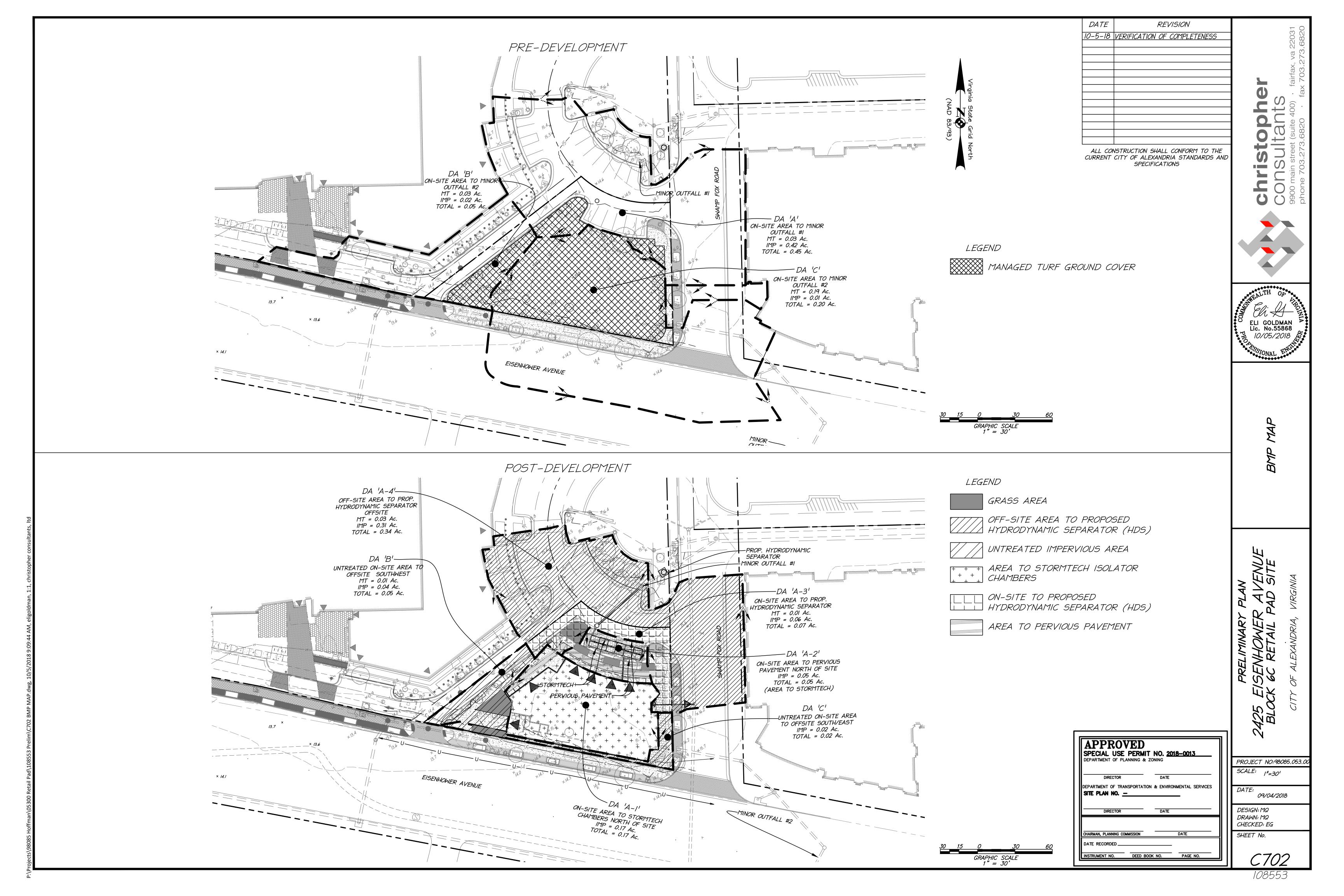
ELI GOLDMAN Lic. No.55868 10/05/2018

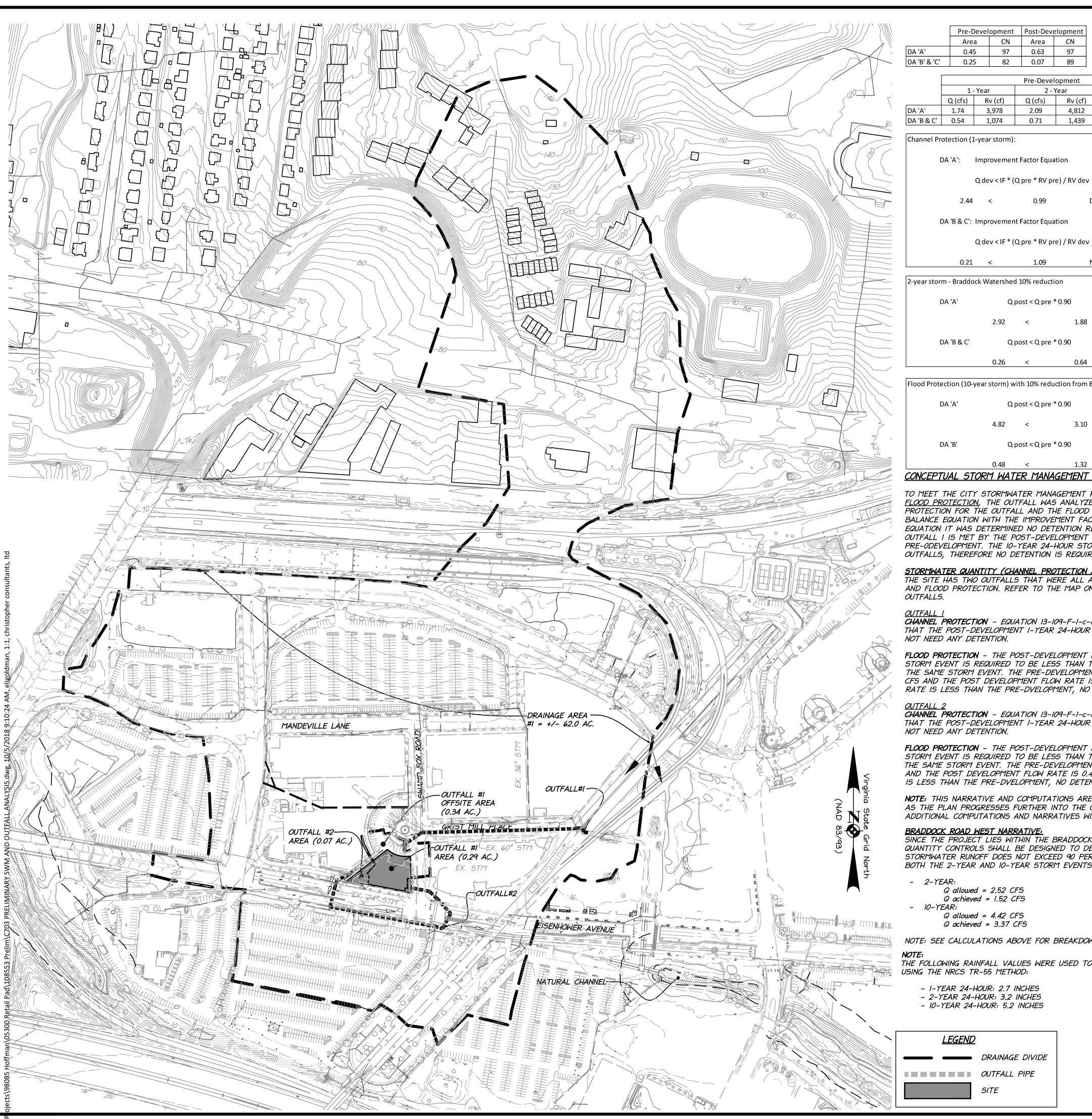
TOTAL IMPERVIOUS TREATED (ON-SITE) = 0.28 ACRES TOTAL IMPERVIOUS TREATED (OFF-SITE) = 0.31 ACRES TOTAL IMPERVIOUS AREA TREATED = 0.28 + 0.31 = 0.59 AC

PROJECT NO:98085.053.06 DESIGN: MQ DRAWN: MQ CHECKED: EG SHEET No.

APPROVED
SPECIAL USE PERMIT NO. 2018-0013
DEPARTMENT OF PLANNING & ZONING DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES INSTRUMENT NO. DEED BOOK NO. PAGE NO.

09/04/2018





	Pre-Devel	opment	Post-Development		
	Area	CN	Area	CN	
A 'A'	0.45	97	0.63	97	
A 'B' & 'C'	0.25	82	0.07	89	

		Pre-Devel	opment		Post - Development						
1 - Year		2 - Y	'ear	10 -	Year	1 - Y	'ear	2 - Y	'ear	10 - 1	Year
Q (cfs)	Rv (cf)	Q (cfs)	Rv (cf)	Q (cfs)	Rv (cf)	Q (cfs)	Rv (cf)	Q (cfs)	Rv (cf)	Q (cfs)	Rv (cf)
1.74	3,978	2.09	4,812	3.44	8,164	2.44	5569	2.92	6737	4.82	11,430
0.54	1,074	0.71	1,439	1.47	3,050	0.21	427	0.26	545	0.48	1,039
	Q (cfs) 1.74	Q (cfs) Rv (cf) 1.74 3,978	1 - Year 2 - Year Q (cfs) Rv (cf) Q (cfs) 1.74 3,978 2.09	1 - Year 2 - Year Q (cfs) Rv (cf) Q (cfs) Rv (cf) 1.74 3,978 2.09 4,812	1 - Year 2 - Year 10 - Q (cfs) Rv (cf) Q (cfs) Rv (cf) Q (cfs) 1.74 3,978 2.09 4,812 3.44	1 - Year 2 - Year 10 - Year Q (cfs) Rv (cf) Q (cfs) Rv (cf) Q (cfs) Rv (cf) 1.74 3,978 2.09 4,812 3.44 8,164	1 - Year 2 - Year 10 - Year 1 - Year Q (cfs) Rv (cf) Q (cfs) Rv (cf) Q (cfs) Rv (cf) Q (cfs) 1.74 3,978 2.09 4,812 3.44 8,164 2.44	1 - Year 2 - Year 10 - Year 1 - Year Q (cfs) Rv (cf) Q (cfs) Rv (cf) Q (cfs) Rv (cf) Q (cfs) Rv (cf) 1.74 3,978 2.09 4,812 3.44 8,164 2.44 5569	1 - Year 2 - Year 10 - Year 1 - Year 2 - Year Q (cfs) Rv (cf) Q (cfs) 2.92 2.92	1 - Year 2 - Year 10 - Year 1 - Year 2 - Year Q (cfs) Rv (cf) Q (cfs) <t< td=""><td>1 - Year 2 - Year 10 - Year 1 - Year 2 - Year 10 - Q (cfs) Rv (cf) Q</td></t<>	1 - Year 2 - Year 10 - Year 1 - Year 2 - Year 10 - Q (cfs) Rv (cf) Q

No Detention Required

No Detention Required

|Channel Protection (1-year storm):

DA 'A': Improvement Factor Equation Q dev < IF * (Q pre * RV pre) / RV dev 0.99

Detention Required

DA 'B & C': Improvement Factor Equation

No Detention Required 1.09

2-year storm - Braddock Watershed 10% reduction									
DA 'A'	Q post < Q pre * 0.90								
	2.92	<	1.88	Detention Required					
DA 'B & C'	Qı								

0.64

Flood Protection (10-year storm) with 10% reduction from Braddock Watershed:

0.26 <

DA 'A'	Q post < Q pre * 0.90					
	4.82 <	3.10	Detention Required			
DA 'B'	Q post < Q pre	e * 0.90				

CONCEPTUAL STORM WATER MANAGEMENT NARRATIVE

0.48 < 1.32

TO MEET THE CITY STORMWATER MANAGEMENT REQUIREMENTS FOR CHANNEL PROTECTION AND <u>FLOOD PROTECTION</u>, THE OUTFALL WAS ANALYZED FOR BOTH REQUIREMENTS. THE CHANNEL PROTECTION FOR THE OUTFALL AND THE FLOOD PROTECTION ARE MET BY USING THE ENERGY BALANCE EQUATION WITH THE IMPROVEMENT FACTOR (13-109-F-1-c-i). BY USING THIS EQUATION IT WAS DETERMINED NO DETENTION REQUIRED FOR OUTFALL 2 (AREA B & C). THE OUTFALL I IS MET BY THE POST-DEVELOPMENT STORM EVENT BEING LOWER THAN THE PRE-ODEVELOPMENT. THE IO-YEAR 24-HOUR STORM EVENT IS REDUCED FOR ALL TWO OUTFALLS, THEREFORE NO DETENTION IS REQUIRED.

<u>STORMWATER QUANTITY (CHANNEL PROTECTION / FLOOD PROTECTION)</u> THE SITE HAS TWO OUTFALLS THAT WERE ALL ANALYZED FOR BOTH CHANNEL PROTECTION AND FLOOD PROTECTION. REFER TO THE MAP ON THIS SHEET FOR LOCATION OF THE

CHANNEL PROTECTION - EQUATION 13-109-F-1-c-i IN THE CITY CODE WAS USED TO DETERMINE THAT THE POST-DEVELOPMENT I-YEAR 24-HOUR STORM MEETS THE REQUIREMENTS AND DOES NOT NEED ANY DETENTION.

FLOOD PROTECTION - THE POST-DEVELOPMENT PEAK FLOW RATE FOR THE 10-YEAR 24-HOUR STORM EVENT IS REQUIRED TO BE LESS THAN THE PREDEVELOPMENT PEAK FLOW RATE OF THE SAME STORM EVENT. THE PRE-DEVELOPMENT FLOW RATE AT THIS OUTFALL WAS 3.44 CFS AND THE POST DEVELOPMENT FLOW RATE IS 2.89 CFS. SINCE THE POST-DEVELOPMENT RATE IS LESS THAN THE PRE-DVELOPMENT, NO DETENTION IS REQUIRED.

CHANNEL PROTECTION - EQUATION 13-109-F-1-c-i IN THE CITY CODE WAS USED TO DETERMINE THAT THE POST-DEVELOPMENT I-YEAR 24-HOUR STORM MEETS THE REQUIREMENTS AND DOES NOT NEED ANY DETENTION.

FLOOD PROTECTION - THE POST-DEVELOPMENT PEAK FLOW RATE FOR THE 10-YEAR 24-HOUR STORM EVENT IS REQUIRED TO BE LESS THAN THE PREDEVELOPMENT PEAK FLOW RATE OF THE SAME STORM EVENT. THE PRE-DEVELOPMENT FLOW RATE AT THIS OUTFALL WAS 1.47 CFS AND THE POST DEVELOPMENT FLOW RATE IS 0.48 CFS. SINCE THE POST-DEVELOPMENT RATE IS LESS THAN THE PRE-DVELOPMENT, NO DETENTION IS REQUIRED.

NOTE: THIS NARRATIVE AND COMPUTATIONS ARE PRELIMINARY AND ARE SUBJECT TO CHANGE. AS THE PLAN PROGRESSES FURTHER INTO THE CITY'S DEVELOPMENT REVIEW PROCESS, ADDITIONAL COMPUTATIONS AND NARRATIVES WILL BE PROVIDED PER CITY STANDARDS.

BRADDOCK ROAD WEST NARRATIVE: SINCE THE PROJECT LIES WITHIN THE BRADDOCK ROAD WEST WATERSHED, THE STORMWATER QUANTITY CONTROLS SHALL BE DESIGNED TO DEMONSTRATE THAT THE POST DEVELOPMENT STORMWATER RUNOFF DOES NOT EXCEED 90 PERCENT OF THE EXISTING RUNOFF QUANTITIES FOR BOTH THE 2-YEAR AND 10-YEAR STORM EVENTS. THIS REQUIREMENT HAS BEEN MET

Q allowed = 2.52 CFS Q achieved = 1.52 CFS Q allowed = 4.42 CFS

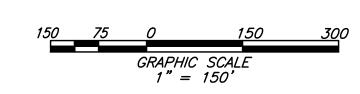
NOTE: SEE CALCULATIONS ABOVE FOR BREAKDOWN BY DRAINAGE AREA.

THE FOLLOWING RAINFALL VALUES WERE USED TO CALCULATE THE ABOVE NOTED PEAK RUNOFFS USING THE NRCS TR-55 METHOD:

- I-YEAR 24-HOUR: 2.7 INCHES - 2-YEAR 24-HOUR: 3.2 INCHES

- IO-YEAR 24-HOUR: 5.2 INCHES

<u>LEGEND</u>	
	DRAINAGE DIVIDE
	OUTFALL PIPE
	SITE



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

REVISION

10-5-18 VERIFICATION OF COMPLETENESS

		StormTech Routing Results - 1 Year Storm										
	Drainage Area	Aroa (Ac.)	O Uncontrolled (cfs)	O Conrolled (cfs)	Reduction Achieved							
		Area (Ac.)	Q - Oncontrolled (cis)	Q - Contolled (cis)	From Post-Developn							
	А	0.63	2.44	0.95	1.49							
	B&C	0.07	0.21	0.21	0.00							

		StormTech Routing Re	sults - 2 Year Storm	
Drainage Area	Area (Ac.)	Q - Uncontrolled (cfs)	Q - Conrolled (cfs)	Reduction Achieved (cfs) From Post-Development
A	0.63	2.92	1.26	1.66
B&C	0.07	0.26	0.26	0.00

		StormTech Routing Res	ults - 10 Year Storm	
Drainage Area	Aros (As)	O Uncontrolled (ofs)	O Cancellad (efs)	Reduction Achieved (cfs)
Drainage Area	Area (Ac.)	Q - Oncontrolled (cis)	Q - Contolled (cis)	Reduction Achieved (cfs) From Post-Development
Α	0.63	4.82	2.89	1.93
B&C	0.07	0.48	0.48	0.00

Drainage Area	Q pre	Q required	Q post
Α	1.74	0.99	0.95
B & C	0.54	1.09	0.21
Total	2.28	N/A	1.16
Stormw	ater Man	agement Summary -	2 year storm

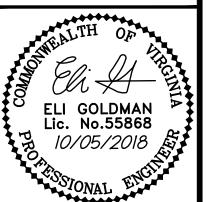
Stormwater Management Summary - 1 year storm

Stormw	ater ivian	agement Summary -	2 year storm
Drainage Area	Q pre	Q required	Q post
Α	2.09	1.88	1.26
B & C	0.71	0.64	0.26
Total	2.80	2.52	1.52

Stormwa	ater Mana	agement Summary - 1	l0 year storm
Drainage Area	Q pre	Q required	Q post
А	3.44	3.10	2.89
B & C	1.47	1.32	0.48
Total	4.91	4.42	3.37

... O





Stormwater Management Summary - 2 year storm						
Drainage Area	Q pre	Q required	Q post			
А	2.09	1.88	1.26			
B & C	0.71	0.64	0.26			
Total	2.80	2.52	1.52			

Stormwa	ater Mana	agement Summary - 1	LO year storm
Drainage Area		Q required	Q post
А	3.44	3.10	2.89
B & C	1.47	1.32	0.48
Total	4.91	4.42	3.37

APPROVED

SITE PLAN NO. _

CHAIRMAN, PLANNING COMMISSION

DEPARTMENT OF PLANNING & ZONING

SPECIAL USE PERMIT NO. 2018-0013

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

INSTRUMENT NO. DEED BOOK NO. PAGE NO.

PROJECT NO:98085.053.00 SCALE: |"=150"

DATE: 09/04/2018

DESIGN: MQ DRAWN: MQ CHECKED: EG SHEET No.

Hydrograph Report Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Tuesday, 09 / 4 / 2018 Hyd. No. 6 Pre - Outfall 2 (B&C) = SCS Runoff = 0.535 cfsHydrograph type Peak discharge = 1 yrs Time to peak = 718 min Storm frequency = 1 min = 1,074 cuft Time interval Hyd. volume = 82* = 0.250 ac Drainage area Curve number = 0.0 % = 0 ftBasin Slope Hydraulic length $= 5.00 \, \text{min}$ Tc method

= User Time of conc. (Tc) = 2.70 inDistribution = Type II Total precip. Storm duration = 24 hrs Shape factor = 484

* Composite (Area/CN) = $[(0.220 \times 80) + (0.030 \times 98)] / 0.250$

* Composite (Area/CN) = $[(0.220 \times 80) + (0.030 \times 98)] / 0.250$

* Composite (Area/CN) = $[(0.220 \times 80) + (0.030 \times 98)] / 0.250$

* Composite (Area/CN) = $[(0.060 \times 80) + (0.010 \times 98)] / 0.070$

19

PRE-DEVELOPMENT HYDROGRAPHS (2-YR)

* Composite (Area/CN) = $[(0.030 \times 80) + (0.420 \times 98)] / 0.450$

12 **Hydrograph Report** Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Tuesday, 09 / 4 / 2018 Hyd. No. 1 Pre - Outfall 1 (A) = SCS Runoff = 2.085 cfsPeak discharge Hydrograph type = 2 yrs Time to peak = 717 min Storm frequency = 1 min = 4,812 cuft Time interval Hyd. volume = 97* = 0.450 acCurve number Drainage area Basin Slope = 0.0 % Hydraulic length = 0 ft= 5.00 min Tc method = User Time of conc. (Tc) = 3.20 in= Type II Distribution Total precip. = 24 hrs Shape factor = 484 Storm duration

Hydrograph Report Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Tuesday, 09 / 4 / 2018 Hyd. No. 6 Pre - Outfall 2 (B&C) = SCS Runoff = 0.535 cfsHydrograph type Peak discharge = 1 yrs Time to peak = 718 min Storm frequency = 1 min = 1,074 cuft Time interval Hyd. volume = 0.250 ac = 82* Drainage area Curve number Basin Slope = 0.0 % Hydraulic length = 0 ft= 5.00 min Tc method = User Time of conc. (Tc) = 2.70 in= Type II Distribution Total precip. Storm duration = 24 hrs Shape factor = 484

PRE-DEVELOPMENT HYDROGRAPHS (10-YR)

POST-DEVELOPMENT HYDROGRAPHS (I-YR)

* Composite (Area/CN) = $[(0.030 \times 80) + (0.420 \times 98)] / 0.450$

Hydrograph Report Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Tuesday, 09 / 4 / 2018 Hyd. No. 1 Pre - Outfall 1 (A) = SCS Runoff = 3.440 cfsHydrograph type = 717 min Storm frequency = 10 yrs Time to peak Hyd. volume = 8.164 cuft Time interval = 1 min = 0.450 ac Drainage area Curve number = 0.0 % = 0 ftBasin Slope Hydraulic length $= 5.00 \, \text{min}$ Tc method = User Time of conc. (Tc) = 5.20 in Total precip. Distribution = Type II = 24 hrs Shape factor = 484 Storm duration * Composite (Area/CN) = $[(0.030 \times 80) + (0.420 \times 98)] / 0.450$

Hydrograph Report Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Tuesday, 09 / 4 / 2018 Hyd. No. 6 Pre - Outfall 2 (B&C) = SCS Runoff = 1.474 cfs Hydrograph type Peak discharge = 10 yrs = 717 min Storm frequency Time to peak Hyd. volume Time interval = 1 min = 0.250 ac = 82* Drainage area Curve number = 0.0 % = 0 ftHydraulic length Basin Slope = 5.00 min Tc method = User Time of conc. (Tc) = 5.20 inDistribution = Type II Total precip. = 24 hrs Shape factor = 484 Storm duration

1 SCS Runoff 1.744 2.085 3.440 Pre - Outfall 1 (A) 2 SCS Runoff 2.441 2.920 4.817 Post - Outfall 1 (A) 3 SCS Runoff Post - Outfall 1 (A) 3 SCS Runoff Post - Outfall 2 (B&C) 4 SCS Runoff 0.208 0.262 0.482 Post - Outfall 2 (B&C) 5 Combine 3, 4 1.077 1.399 3.209 Offsite & stormtech 6 SCS Runoff 0.535 0.714 1.474 Pre - Outfall 2 (B&C)	(origin) 1-yr 2-yr 3-yr 5-yr 10-yr 25-yr 50-yr 100-yr 1 SCS Runoff 1.744 2.085 3.440 Pre - Outfall 1 (A) 2 SCS Runoff 2.441 2.920 4.817 Post - Outfall 1 (A) 3 Reservoir 2 0.953 1.260 2.890 post devleopment 4 SCS Runoff 0.208 0.262 0.482 Post - Outfall 2 (B&C) 5 Combine 3, 4 1.077 1.399 3.209 Offsite & stormtech	(origin) 1-yr 2-yr 3-yr 5-yr 10-yr 25-yr 50-yr 100-yr 1 SCS Runoff 1.744 2.085 3.440 Pre - Outfall 1 (A) 2 SCS Runoff 2.441 2.920 4.817 Post - Outfall 1 (A) 3 Reservoir 2 0.953 1.260 2.890 post devleopment 4 SCS Runoff 0.208 0.262 0.482 Post - Outfall 2 (B&C) 5 Combine 3, 4 1.077 1.399 3.209 Offsite & stormtech	(origin) 1-yr 2-yr 3-yr 5-yr 10-yr 25-yr 50-yr 100-yr 1 SCS Runoff 1.744 2.085 3.440 Pre - Outfall 1 (A) 2 SCS Runoff 2.441 2.920 4.817 Post - Outfall 1 (A) 3 Reservoir 2 0.953 1.260 2.890 post devleopment 4 SCS Runoff 0.208 0.262 0.482 Post - Outfall 2 (B&C) 5 Combine 3, 4 1.077 1.399 3.209 Offsite & stormtech	Hyd.	Hydrograph	Inflow				Peak Ou	tflow (cfs))			Hydrograph
2 SCS Runoff 2.441 2.920 4.817 Post - Outfall 1 (A) 3 Reservoir 2 0.953 1.260 2.890 post devleopment 4 SCS Runoff 0.208 0.262 0.482 Post - Outfall 2 (B&C) 5 Combine 3, 4 1.077 1.399 3.209 Offsite & stormtech	2 SCS Runoff 2.441 2.920 4.817 Post - Outfall 1 (A) 3 Reservoir 2 0.953 1.260 2.890 post devleopment 4 SCS Runoff 0.208 0.262 0.482 Post - Outfall 2 (B&C) 5 Combine 3, 4 1.077 1.399 3.209 Offsite & stormtech	2 SCS Runoff 2.441 2.920 4.817 Post - Outfall 1 (A) 3 Reservoir 2 0.953 1.260 2.890 post devleopment 4 SCS Runoff 0.208 0.262 0.482 Post - Outfall 2 (B&C) 5 Combine 3, 4 1.077 1.399 3.209 Offsite & stormtech	2 SCS Runoff	NO.	type (origin)	hyd(s)	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	- Description
3 Reservoir 2 0.953 1.260 2.890 post devleopment 4 SCS Runoff 0.208 0.262 0.482 Post - Outfall 2 (B&C) 5 Combine 3, 4 1.077 1.399 3.209 Offsite & stormtech	3 Reservoir 2 0.953 1.260 2.890 post devleopment 4 SCS Runoff 0.208 0.262 0.482 Post - Outfall 2 (B&C) 5 Combine 3, 4 1.077 1.399 3.209 Offsite & stormtech	3 Reservoir 2 0.953 1.260 2.890 post devleopment 4 SCS Runoff 0.208 0.262 0.482 Post - Outfall 2 (B&C) 5 Combine 3, 4 1.077 1.399 3.209 Offsite & stormtech	3 Reservoir 2 0.953 1.260	1	SCS Runoff		1.744	2.085			3.440				Pre - Outfall 1 (A)
4 SCS Runoff 0.208 0.262 0.482 Post - Outfall 2 (B&C) 5 Combine 3, 4 1.077 1.399 3.209 Offsite & stormtech	4 SCS Runoff 0.208 0.262 0.482 Post - Outfall 2 (B&C) 5 Combine 3, 4 1.077 1.399 3.209 Offsite & stormtech	4 SCS Runoff 0.208 0.262 0.482 Post - Outfall 2 (B&C) 5 Combine 3, 4 1.077 1.399 3.209 Offsite & stormtech	4 SCS Runoff —— 0.208 0.262 —— —— 0.482 —— —— Post - Outfall 2 (B&C) 5 Combine 3, 4 1.077 1.399 —— 3.209 —— —— Offsite & stormtech 6 SCS Runoff —— 0.535 0.714 —— 1.474 —— Pre - Outfall 2 (B&C)	2	SCS Runoff		2.441	2.920			4.817				Post - Outfall 1 (A)
5 Combine 3, 4 1.077 1.399 3.209 Offsite & stormtech	5 Combine 3, 4 1.077 1.399 3.209 Offsite & stormtech	5 Combine 3, 4 1.077 1.399 3.209 Offsite & stormtech	5 Combine 3,4 1.077 1.399 3.209 Cffsite & stormtech 6 SCS Runoff 0.535 0.714 1.474 0.535 0.714 1.474 0.535 0.714 1.474 0.535 0.714	3	Reservoir	2	0.953	1.260			2.890				post devleopment
			6 SCS Runoff —— 0.535 0.714 —— 1.474 —— Pre - Outfall 2 (B&C)	4	SCS Runoff		0.208	0.262			0.482				Post - Outfall 2 (B&C)
6 SCS Runoff 0.535 0.714 1.474 Pre - Outfall 2 (B&C)	6 SCS Runoff 0.535 0.714 1.474 Pre - Outfall 2 (B&C)	6 SCS Runoff —— 0.535 0.714 —— 1.474 —— Pre - Outfall 2 (B&C)		5	Combine	3, 4	1.077	1.399			3.209				Offsite & stormtech
				6	SCS Runoff		0.535	0.714			1.474				Pre - Outfall 2 (B&C)

Tuesday, 09 / 4 / 2018

DATE **REVISION** 10-5-18 VERIFICATION OF COMPLETENESS

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

> ELI GOLDMAN Lic. No.55868 10/05/2018

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PREL CO

POST-DEVELOPMENT HYDROGRAPHS (I-YR) - STORMTECH ROUTING

Hydrograph Report Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Tuesday, 09 / 4 / 2018 Hyd. No. 2 Post - Outfall 1 (A) = SCS Runoff Peak discharge = 2.441 cfs Hydrograph type = 717 min Storm frequency = 1 yrs Time to peak = 5,569 cuft = 1 min Time interval Hyd. volume = 0.630 acCurve number = 97* Drainage area = 0 ftBasin Slope = 0.0 % Hydraulic length = 5.00 min Tc method = User Time of conc. (Tc) = 2.70 inDistribution = Type II Total precip. = 24 hrs Shape factor = 484 Storm duration * Composite (Area/CN) = $[(0.040 \times 80) + (0.590 \times 98)] / 0.630$

Hydrograph Report Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Tuesday, 09 / 4 / 2018 Hyd. No. 4 Post - Outfall 2 (B&C) = SCS Runoff Peak discharge = 0.208 cfsHydrograph type = 1 yrs = 717 min Time to peak Storm frequency = 427 cuft = 1 min Time interval Hyd. volume = 0.070 ac = 89* Curve number Drainage area = 0.0 % = 0 ftBasin Slope Hydraulic length = User Time of conc. (Tc) = 5.00 min Tc method = 2.70 inDistribution = Type II Total precip. = 24 hrs Shape factor = 484 Storm duration

Hydrograph I	Report		6
Hydraflow Hydrographs Extensi	ion for Autodesk® Civil 3D® 2019 by Autodesk, Inc	:. v2020	Tuesday, 09 / 4 / 2018
Hyd. No. 3			
post devleopment			
Hydrograph type	= Reservoir	Peak discharge	= 0.953 cfs
Storm frequency	= 1 yrs	Time to peak	= 724 min
Time interval	= 1 min	Hyd. volume	= 5,566 cuft
Inflow hyd. No.	= 2 - Post - Outfall 1 (A)	Max. Elevation	= 12.37 ft
Reservoir name	= Stormtech	Max. Storage	= 1,480 cuft

Proj. file: SWm Pre-Post 108553 - 2 outfalls.gpw

APPROVED SPECIAL USE PERMIT NO. 2018-0013 DEPARTMENT OF PLANNING & ZONING	,
DEPARTMENT OF PLANNING & ZUNING	PROJECT NO:98085.053
DIRECTOR DATE	SCALE: N.A.
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES SITE PLAN NO	DATE: 09/04/2018
DIRECTOR DATE	DESIGN: MQ
	DRAWN: MQ CHECKED: EG
CHAIRMAN, PLANNING COMMISSION DATE	SHEET No.
DATE RECORDED	
INSTRUMENT NO. DEED BOOK NO. PAGE NO.	II C701

Shape factor

= 484

Hydraflow Hydrographs Extensi	on for Autodesk® Civil 3D® 2019 by Autod	esk, Inc. v2020	Tuesday, 09 / 4 / 2018
Hyd. No. 4			
Post - Outfall 2 (B&C)		
Hydrograph type	= SCS Runoff	Peak discharge	= 0.262 cfs
Storm frequency	= 2 yrs	Time to peak	= 717 min
Time interval	= 1 min	Hyd. volume	= 545 cuft
Drainage area	= 0.070 ac	Curve number	= 89*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

Hydrograph F	•		
Hydraflow Hydrographs Extension	on for Autodesk® Civil 3D® 2019 by Autodesk, Inc	:. v2020	Tuesday, 09 / 4 / 2018
Hyd. No. 3			
post devleopment			
Hydrograph type	= Reservoir	Peak discharge	= 1.260 cfs
Storm frequency	= 2 yrs	Time to peak	= 723 min
Time interval	= 1 min	Hyd. volume	= 6,734 cuft
Inflow hyd. No.	= 2 - Post - Outfall 1 (A)	Max. Elevation	= 12.80 ft
Reservoir name	= Stormtech	Max. Storage	= 1,782 cuft

DATE	<i>REVISION</i>
10-5-18	VERIFICATION OF COMPLETENESS
	NSTRUCTION SHALL CONFORM TO THE

CURRENT CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS

POST-DEVELOPMENT HYDROGRAPHS (10-YR)

* Composite (Area/CN) = [(0.040 x 80) + (0.590 x 98)] / 0.630

* Composite (Area/CN) = [(0.040 x 80) + (0.590 x 98)] / 0.630

= 24 hrs

Storm duration

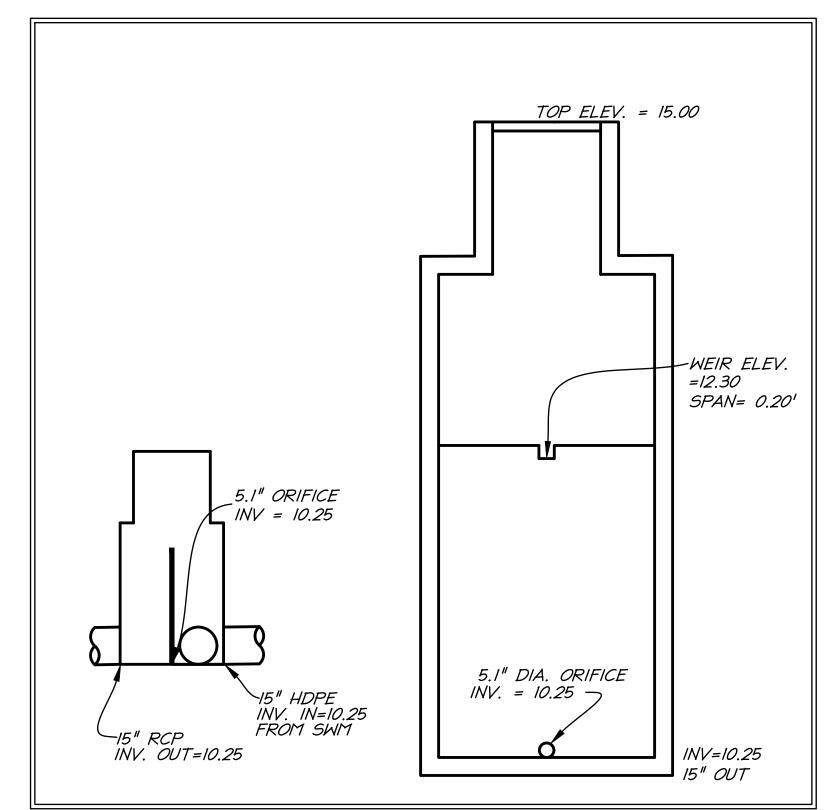
Hydraflow Hydrographs Extensi	on for Autodesk® Civil 3D® 2019 by Autod	esk, Inc. v2020	Tuesday, 09 / 4 / 20
Hyd. No. 2			
Post - Outfall 1 (A)			
Hydrograph type	= SCS Runoff	Peak discharge	= 4.817 cfs
Storm frequency	= 10 yrs	Time to peak	= 717 min
Time interval	= 1 min	Hyd. volume	= 11,430 cuft
Drainage area	= 0.630 ac	Curve number	= 97*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.20 in	Distribution ` ´	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

Hydraflow Hydrographs Extensi	on for Autodesk® Civil 3D® 2019 by Autod	esk, Inc. v2020	Tuesday, 09 / 4 / 2018
Hyd. No. 4			
Post - Outfall 2 (B&C)		
Hydrograph type	= SCS Runoff	Peak discharge	= 0.482 cfs
Storm frequency	= 10 yrs	Time to peak	= 717 min
Time interval	= 1 min	Hyd. volume	= 1,039 cuft
Drainage area	= 0.070 ac	Curve number	= 89*
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 5.20 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484

Hydraflow Hydrographs Extensi	on for Autodesk® Civil 3D® 2019 by Autodesk, Inc	:. v2020	Tuesday, 09 / 4 / 2018
Hyd. No. 3			
post devleopment			
Hydrograph type	= Reservoir	Peak discharge	= 2.890 cfs
Storm frequency	= 10 yrs	Time to peak	= 722 min
Time interval	= 1 min	Hyd. volume	= 11,427 cuft
Inflow hyd. No.	= 2 - Post - Outfall 1 (A)	Max. Elevation	= 14.14 ft
Reservoir name	= Stormtech	Max. Storage	= 2,719 cuft

POST-DEVELOPMENT HYDROGRAPHS (10-YR) - STORMTECH ROUTING

Pond Report Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2020 Tuesday, 09 / 4 / 2018 Pond No. 1 - Stormtech Pond Data Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 10.25 ft 11.25 12.25 13.25 14.25 700 1,400 2,100 2,800 1.00 2.00 3.00 Weir Structures Culvert / Orifice Structures No. Barrels Invert El. (ft) Length (ft) Slope (%) N-Value Orifice Coeff. = 0.60 0.60 0.60 Exfil.(in/hr) = 0.000 (by Contour) Multi-Stage = n/a TW Elev. (ft) = 0.00 Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s). Stage / Discharge Stage (ft) 3.00 - 12.25 2.00 -- 11.25 Discharge (cfs) —— Total Q



NOTE: THIS DETAIL IS FOR DIMENSIONAL PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR STRUCTURAL DESIGN.

OUTLET CONTROL STRUCTURE DETAIL NOT TO SCALE

DIRECTOR		TE	-
		VIRONMENTAL SERVICES	s
SITE PLAN NO. :			
DIRECTOR	DA	TE.	-
DIRECTOR	DA	TE.	-

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APPROVED SPECIAL USE PERMIT NO. 2018-0013	
DEPARTMENT OF PLANNING & ZONING	PROJECT NO:98085.053.00
DIRECTOR DATE	SCALE: N.A.
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES SITE PLAN NO. —	DATE: 09/04/2018
DIRECTOR DATE	DESIGN: MQ DRAWN: MQ CHECKED: EG
CHAIRMAN, PLANNING COMMISSION DATE	SHEET No.
DATE RECORDED INSTRUMENT NO. DEED BOOK NO. PAGE NO.	C705
	1 6/05

ELI GOLDMAN Lic. No.55868 10/05/2018

I. ALL PROTECTION AND PRESERVATION MEASURES FOR EXISTING VEGETATION, INCLUDING MAINTENANCE SHALL BE APPROVED BY THE CITY ARBORIST IN-FIELD PRIOR TO COMMENCEMENT OF ANY SITE DISTURBING ACTIVITY.

2. SPECIFICATION FOR ALL PLANTINGS & MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT AND MOST UP-TO-DATE EDITION OF ANSI-Z60.1, THE AMERICAN STANDARD FOR NURSERY STOCK AS PRODUCED BY THE AMERICAN ASSOCIATION OF NURSERYMEN; WASHINGTON, DC.

3. THE APPLICANT HAS MADE SUITABLE ARRANGEMENTS FOR PRE-SELECTION TAGGING, PRE-CONTRACT GROWING, OR IS UNDERTAKING SPECIALIZED PLANTING STOCK DEVELOPMENT WITH A NURSERY OR GROWER THAT IS CONVENIENTLY LOCATED TO THE PROJECT SITE, OTHER PROCEDURES THAT WILL ENSURE AVAILABILITY OF SPECIFIED MATERIALS. IN THE EVENT THAT SHORTAGES AND/OR INABILITY TO OBTAIN SPECIFIED PLANTINGS OCCURS, REMEDIAL EFFORTS INCLUDING SPECIES CHANGES, ADDITIONAL PLANTINGS AND MODIFICATION TO THE LANDSCAPE PLAN SHALL BE UNDERTAKEN BY THE APPLICANT. ALL REMEDIAL EFFORTS SHALL, WITH PRIOR APPROVAL BY THE CITY, BE PERFORMED TO THE SATISFACTION OF THE DIRECTORS OF PLANNING & ZONING, RECREATION, PARKS & CULTURAL ACTIVITIES AND TRANSPORTATION & ENVIRONMENTAL SERVICES.

4. IN LIEU OF MORE STRENUOUS SPECIFICATIONS, ALL LANDSCAPE RELATED WORK SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE IWTH THE CURRENT AND MOST UP-TO-DATE EDITION (AT TIME OF CONSTRUCTION) OF LANDSCAPE SPECIFICATION GUIDELINES AS PRODUCED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF MARYLAND, DISTRICT OF COLUMBIA AND VIRGINIA; GAITHERSBURG, MARYLAND.

5. PRIOR TO COMMENCEMENT OF LANDSCAPE INSTALLATION/PLANTING OPERATIONS, A PRE-INSTALLATION/CONSTRUCTION MEETING WILL BE SCHEDULED WITH THE CITY'S ARBORIST AND LANDSCAPE ARCHITECTS TO REVIEW THE SCOPE OF INSTALLATION PROCEDURES AND PROCESSES.

6. MAINTENANCE FOR THIS PROJECT SHALL BE PERFORMED IN PERPETUITY, IN COMPLIANCE WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES AND/OR AS CONDITIONED BY PROJECT APPROVAL

a. TREE CANOPY TO BE MAINTAINED AT LEAST 6-FEET ABOVE GRADE LEVEL AS THEY MATURE TO ALLOW FOR NATURAL SURVEILLANCE. b. SHRUBS SHALL BE MAINTAINED NO HIGHER THAN 3-FEET FOR SAFETY

7. A CERTIFICATION LETTER FOR TREE WELLS, TREE TRENCHES AND PLANTINGS ABOVE STRUCTURE SHALL BE PROVIDED BY THE PROJECT'S LANDSCAPE ARCHITECT. THE LETTER SHALL CERTIFY THAT ALL BELOW GRADE CONSTRUCTION IS IN COMPLIANCE WITH APPROVED DRAWINGS AND SPECIFICATIONS. THE LETTER SHALL BE SUBMITTED TO THE CITY ARBORIST AND APPROVED PRIOR TO APPROVAL OF THE LAST AND FINAL CERTIFICATE OF OCCUPANCY FOR THE PROJECT. THE LETTER SHALL BE SUBMITTED BY THE OWNER/APPLICANT/SUCCESSOR AND SEALED AND DATED AS APPROVED BY THE PROJECT'S LANDSCAPE ARCHITECT.

8. AS-BUILT DRAWINGS FOR THIS LANDSCAPE AND/OR IRRIGATION/WATER MANAGEMENT SYSTEM WILL BE PROVIDED IN COMPLIANCE WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES. AS-BUILT DRAWINGS SHALL INCLUDE CLEAR IDENTIFICATION OF ALL VARIATION(S) AND CHANGES FROM APPROVED DRAWINGS INCLUDING LOCATION, QUANTITY AND SPECIFICATION OF ALL PROJECT ELEMENTS.

I. PRUNE TO REMOVE DAMAGED, DISEASED OR BROKEN BRANCHES.

3. DO NOT CUT LEADER. TREE MUST RETAIN NATURAL CROWN SHAPE.

5. ALL STAKING TO BE INSTALLED PARALLEL TO STREET, COMPLYING

6. MULCH AND SOIL SHALL BE HELD AWAY FROM TREE TRUNK AT TOP OF

7. TREE TRENCHES SHALL HOLD A MINIMUM OF 300 CUBIC FEET OF SOIL

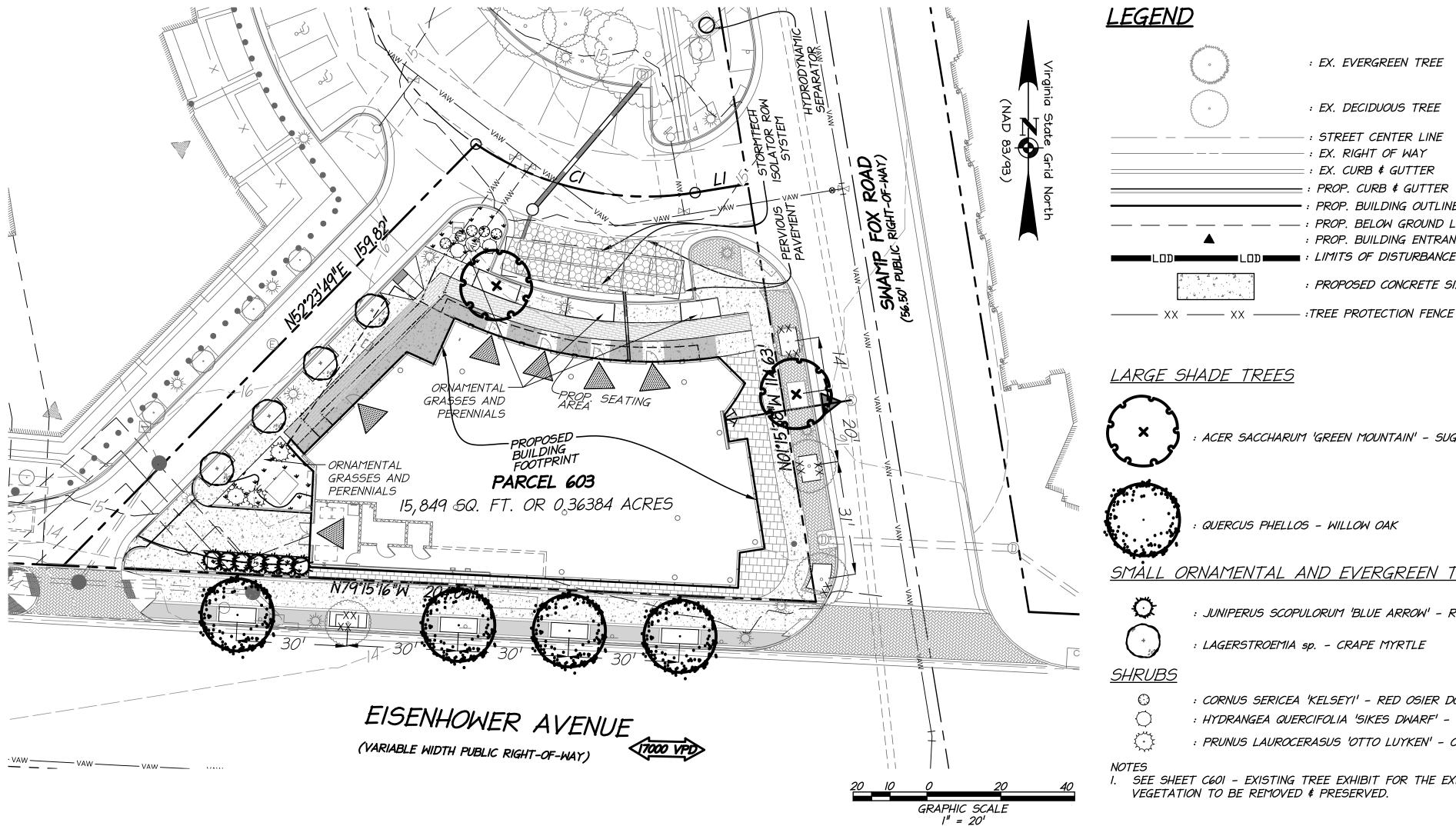
2. DO NOT REMOVE MORE THAN 1/5 OF BRANCH SYSTEM.

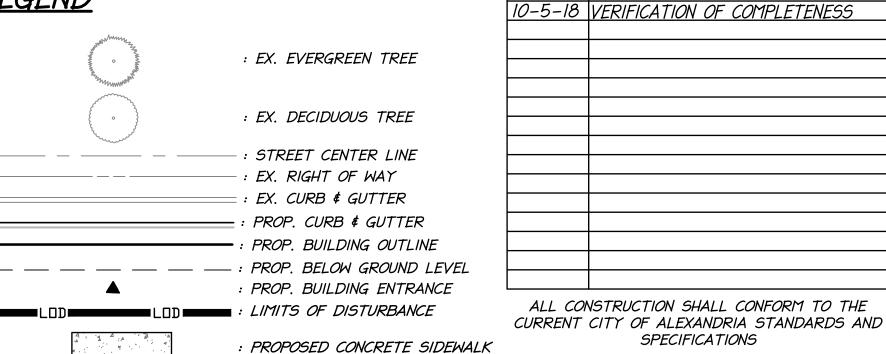
4. REMOVE ALL STAKES WITHIN THE REQUIRED PERIOD.

PER TREE.

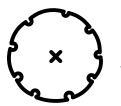
NOT TO SCALE

WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES.

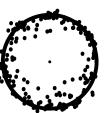




LARGE SHADE TREES



ACER SACCHARUM 'GREEN MOUNTAIN' - SUGAR MAPLE



QUERCUS PHELLOS - WILLOW OAK







: CORNUS SERICEA 'KELSEYI' - RED OSIER DOGWOOD

: HYDRANGEA QUERCIFOLIA 'SIKES DWARF' - OAKLEAF HYDRANGEA : PRUNUS LAUROCERASUS 'OTTO LUYKEN' - CHERRY LAUREL

I. SEE SHEET C601 - EXISTING TREE EXHIBIT FOR THE EXISTING

DI ANTING CCHEDIII E

PLA	NII	NG SCHEDULE										
				MATUI	RE SIZE	S	TOCK SIZ	E		CANOPY	TOTAL	
KEY	QTY	BOTANICAL NAME	COMMON NAME			STOCK	STOCK	STOCK	STOCK	COVER	COVER	COMMENTS
				HEIGHT	SPREAD	CALIPE R	HEIGHT	SPREAD	TYPE	(SF)	(SF)	
ARGE S	HADE 1	REES										
ARB	1	ACER SACCHARUM 'GREEN MOUNTAIN'	SUGAR MAPLE	35-50'	25-40'	3 1/2 - 4"	12-14'	N/A	B & B	1,250	OFFSITE	PROP. WITHIN R.O.W. (1,250 SF)
ARB	1	ACER SACCHARUM 'GREEN MOUNTAIN'	SUGAR MAPLE	35-50'	25-40'	3 1/2 - 4"	12-14'	N/A	B&B	1,250	1,250	
QH	4	QUERCUS PHELLOS	WILLOW OAK	40-75'	25-50'	3 1/2 - 4"	12-14'	N/A	B&B	1,250	OFFSITE	PROP. WITHIN R.O.W. (5,000 SF)
SMALL C	RNAME	ENTAL AND EVERGREEN TREES										
JSB	7	JUNIPERUS SCOPULORUM 'BLUE ARROW'	ROCKY MOUNTAIN JUNIPER	12-15'	2-3'	N/A	8'	N/A	B&B	250	1,750	
LI	4	LAGERSTROMIA sp.	CRAPE MYRTLE	15-20'	10-15'	2 - 2 1/2"	8'	N/A	B & B	250	1,000	SELECT CULTIVAR TO MATCH EXISTING
SHRUBS												
CSK	5	CORNUS SERICEA 'KELSEYI'	RED OSIER DOGWOOD	2-2.5'	2-2.5'	N/A	2-3'	24" - 30"	CONTAINER	2	10	
HQS	3	HYDRANGEA QUERCIFOLIA 'SIKES DWARF'	OAKLEAF HYDRANGEA	2-4'	2-4'	N/A	2-3'	24" - 30"	CONTAINER	2	6	
PLO	3	PRUNUS LAUROCERASUS 'OTTO LUYKEN'	CHERRY LAUREL	3-4'	6-8'	N/A	2-3'	24" - 30"	CONTAINER	N/A	N/A	NO CREDIT TAKEN FOR SCREENING SHRUBS
						•			TOTAL CO	VER (SE):	4.016	

TREE COVER CALCULATIONS

		QUANTITY	SF
SITE AREA		N/A	15,849
CANOPY COVERAGE REQUIRED	25%	N/A	3,962
CANOPY COVERAGE PROVIDED - ONSITE			
EXISTING CANOPY TO BE PRESERVED		N/A	0
LARGE SHADE TREE	(1,250 SF)	1	1,250
MEDIUM SHADE TREE	(750 SF)	0	0
MEDIUM ORNAMENTAL & EVERGREEN TREE	(500 SF)	0	0
SMALL ORNAMENTAL & EVERGREEN TREE	(250 SF)	11	2,750
SHRUBS	(2 SF)	8	16
TOTAL CANOPY COVERAGE PROVIDE	D 25%	N/A	4,016
CANOPY COVERAGE PROVIDED - OFFSITE			
EXISTING CANOPY TO BE PRESERVED		N/A	0
LARGE SHADE TREE	(1,250 SF)	6	7,500
TOTAL CANOPY COVERAGE PROVIDED	- OFFSITE	N/A	7.500

1. NO CREDIT IS TAKEN FOR CANOPY COVERAGE PROVIDED OFFSITE.

8. GROUNDCOVER WILL NOT BE INSTALLED ON TOP OF ROOT BALL OR WITHIN PLANTING SAUCER. - ROOTBALL CENTERED IN TREE PIT - REMOVE EXCESS SOIL FROM TOP OF ROOTBALL TO EXPOSE ROOT FLAIR - REMOVE TOP ¾ OF WIRE BASKET, REMOVE OR FOLD DOWN BURLAP TO REMAINING BASKET, CUT/REMOVE ALL ATTACHED STRING AND ROPE. BACKFILL WITH SOIL TAKEN OUT OF PLANTING HOLE OR 50% CLEAN EXISTING SOIL, 25% TOP SOIL AND 25% CITY APPROVED ORGANIC MATERIAL EXPANDABLE TREE GRATE (TYP.) OR GROUNDCOVER PLANTINGS PAVERS (TYP.) SPLAY SIDES OF PLANTING PIT. PIT DEPTH EQUAL TO HEIGHT OF ROOTBALL. MIN 6' TREE PIT DIMENSION VARIES · UNDISTURBED SOIL STREET TREE PLANTING

NOTES: I. FOR CONTAINER SHRUBS, COMPLETELY REMOVE ALL NON-BIODEGRADABLE CONTAINERS AND SCARIFY ROOTBALL BY USING A SHARP BLADE AND MAKING 4 TO 5 ONE INCH CUTS THE LENGTH OF THE ROOTBALL. 2. FOR B\$B SHRUBS, CUT AND REMOVE BURLAP FROM TOP I/ 3 OF ROOT BALL -BACKFILL MIX (SEE SPECS) — SPADE EDGING, TYP. GRADE SET I / 8" OF ROOT BALL -ABOVE FINISH GRADE UNLESS OTHERWISE REQUIRED BY SOIL CONDITIONS. SCARIFY SUBSOIL TO 6" MIN DEPTH SHRUB BED PLANTING

NOT TO SCALE

ON CENTER SPACING PER PLANS

SET PLANTS SO TOP OF ROOT SYSTEM IS EVEN WITH SOIL GRADE AND ROOTS ARE SURROUNDED BY SOIL BELOW THE MULCH (ALLOW FOR SOIL SETTING)

BACKFILL WITH SOIL AS SPECIFIED AT 'TREE PIT' DETAIL ON SHEET C16.2 ROOTBALL SLITS

BEFORE PLANTING, BIODEGRADABLE POTS SHALL BE SLIT IN THREE PLACES AND NON-BIODEGRADABLE SHALL BE REMOVED. (SCARIFY THE BOTTOM OF THE ROOTBALL).

PERENNIAL/ORNAMENTAL GRASS PLANTING NOT TO SCALE

THIS SHEET IS FOR LANDSCAPE PURPOSES ONLY!



REVISION

Jevie B Connate

LAURIE B. DONNACHIE

Lic. No. 0406001880

2018-09-04

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ELI GOLDMAN Lic. No.55868 10/05/2018

PROJECT NO:98085.053.0 SCALE: |"=20"

DATE: 08/16/18

DESIGN: LBD DRAWN: LBD CHECKED: LBD

SHEET No.

I. ALL PROTECTION AND PRESERVATION MEASURES FOR EXISTING VEGETATION, INCLUDING MAINTENANCE SHALL BE APPROVED BY THE CITY ARBORIST IN-FIELD PRIOR TO COMMENCEMENT OF ANY SITE DISTURBING ACTIVITY.

2. SPECIFICATION FOR ALL PLANTINGS & MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT AND MOST UP-TO-DATE EDITION OF ANSI-Z60.1, THE AMERICAN STANDARD FOR NURSERY STOCK AS PRODUCED BY THE AMERICAN ASSOCIATION OF NURSERYMEN; WASHINGTON, DC.

3. THE APPLICANT HAS MADE SUITABLE ARRANGEMENTS FOR PRE-SELECTION TAGGING, PRE-CONTRACT GROWING, OR IS UNDERTAKING SPECIALIZED PLANTING STOCK DEVELOPMENT WITH A NURSERY OR GROWER THAT IS CONVENIENTLY LOCATED TO THE PROJECT SITE, OTHER PROCEDURES THAT WILL ENSURE AVAILABILITY OF SPECIFIED MATERIALS. IN THE EVENT THAT SHORTAGES AND/OR INABILITY TO OBTAIN SPECIFIED PLANTINGS OCCURS, REMEDIAL EFFORTS INCLUDING SPECIES CHANGES, ADDITIONAL PLANTINGS AND MODIFICATION TO THE LANDSCAPE PLAN SHALL BE UNDERTAKEN BY THE APPLICANT. ALL REMEDIAL EFFORTS SHALL, WITH PRIOR APPROVAL BY THE CITY, BE PERFORMED TO THE SATISFACTION OF THE DIRECTORS OF PLANNING & ZONING, RECREATION, PARKS & CULTURAL ACTIVITIES AND TRANSPORTATION & ENVIRONMENTAL SERVICES.

4. IN LIEU OF MORE STRENUOUS SPECIFICATIONS, ALL LANDSCAPE RELATED WORK SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE IMTH THE CURRENT AND MOST UP-TO-DATE EDITION (AT TIME OF CONSTRUCTION) OF LANDSCAPE SPECIFICATION GUIDELINES AS PRODUCED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF MARYLAND, DISTRICT OF COLUMBIA AND VIRGINIA; GAITHERSBURG, MARYLAND.

5. PRIOR TO COMMENCEMENT OF LANDSCAPE INSTALLATION/PLANTING OPERATIONS, A PRE-INSTALLATION/CONSTRUCTION MEETING WILL BE SCHEDULED WITH THE CITY'S ARBORIST AND LANDSCAPE ARCHITECTS TO REVIEW THE SCOPE OF INSTALLATION PROCEDURES AND PROCESSES.

6. MAINTENANCE FOR THIS PROJECT SHALL BE PERFORMED IN PERPETUITY, IN COMPLIANCE WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES AND/OR AS CONDITIONED BY PROJECT APPROVAL

a. TREE CANOPY TO BE MAINTAINED AT LEAST 6-FEET ABOVE GRADE LEVEL AS THEY MATURE TO ALLOW FOR NATURAL SURVEILLANCE. b. SHRUBS SHALL BE MAINTAINED NO HIGHER THAN 3-FEET FOR SAFETY

7. A CERTIFICATION LETTER FOR TREE WELLS, TREE TRENCHES AND PLANTINGS ABOVE STRUCTURE SHALL BE PROVIDED BY THE PROJECT'S LANDSCAPE ARCHITECT. THE LETTER SHALL CERTIFY THAT ALL BELOW GRADE CONSTRUCTION IS IN COMPLIANCE WITH APPROVED DRAWINGS AND SPECIFICATIONS. THE LETTER SHALL BE SUBMITTED TO THE CITY ARBORIST AND APPROVED PRIOR TO APPROVAL OF THE LAST AND FINAL CERTIFICATE OF OCCUPANCY FOR THE PROJECT. THE LETTER SHALL BE SUBMITTED BY THE OWNER/APPLICANT/SUCCESSOR AND SEALED AND DATED AS APPROVED BY THE PROJECT'S LANDSCAPE ARCHITECT.

8. AS-BUILT DRAWINGS FOR THIS LANDSCAPE AND/OR IRRIGATION/WATER MANAGEMENT SYSTEM WILL BE PROVIDED IN COMPLIANCE WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES. AS-BUILT DRAWINGS SHALL INCLUDE CLEAR IDENTIFICATION OF ALL VARIATION(S) AND CHANGES FROM APPROVED DRAWINGS INCLUDING LOCATION, QUANTITY AND SPECIFICATION OF ALL PROJECT ELEMENTS.

I. PRUNE TO REMOVE DAMAGED, DISEASED OR BROKEN BRANCHES.

3. DO NOT CUT LEADER. TREE MUST RETAIN NATURAL CROWN SHAPE.

5. ALL STAKING TO BE INSTALLED PARALLEL TO STREET, COMPLYING

7. TREE TRENCHES SHALL HOLD A MINIMUM OF 300 CUBIC FEET OF SOIL

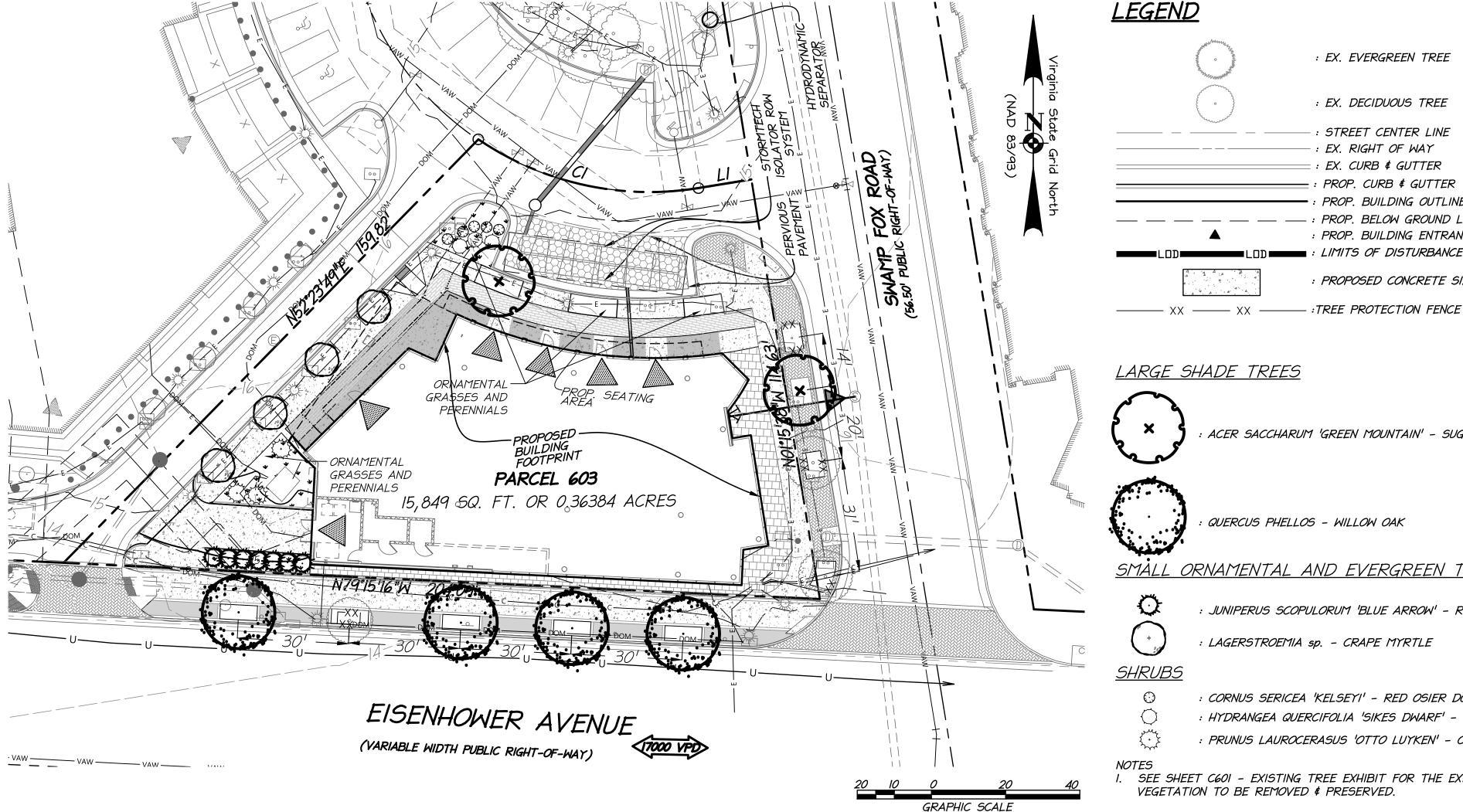
6. MULCH AND SOIL SHALL BE HELD AWAY FROM TREE TRUNK AT TOP OF

2. DO NOT REMOVE MORE THAN 1/2 OF BRANCH SYSTEM.

4. REMOVE ALL STAKES WITHIN THE REQUIRED PERIOD.

NOT TO SCALE

WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES.

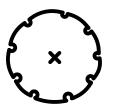


LEGEND 10-5-18 VERIFICATION OF COMPLETENESS : EX. EVERGREEN TREE : EX. DECIDUOUS TREE - : STREET CENTER LINE : EX. RIGHT OF WAY : EX. CURB & GUTTER = : PROP. CURB & GUTTER - : PROP. BUILDING OUTLINE ---- : PROP. BELOW GROUND LEVEL : PROP. BUILDING ENTRANCE D : LIMITS OF DISTURBANCE : PROPOSED CONCRETE SIDEWALK

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

REVISION

LARGE SHADE TREES



ACER SACCHARUM 'GREEN MOUNTAIN' - SUGAR MAPLE



QUERCUS PHELLOS - WILLOW OAK

SMÅLL ORNAMENTAL AND EVERGREEN TREES

: JUNIPERUS SCOPULORUM 'BLUE ARROW' - ROCKY MOUNTAIN JUNIPER

: LAGERSTROEMIA sp. - CRAPE MYRTLE

SHRUBS

: CORNUS SERICEA 'KELSEYI' - RED OSIER DOGWOOD

: HYDRANGEA QUERCIFOLIA 'SIKES DWARF' - OAKLEAF HYDRANGEA

: PRUNUS LAUROCERASUS 'OTTO LUYKEN' - CHERRY LAUREL

I. SEE SHEET C601 - EXISTING TREE EXHIBIT FOR THE EXISTING VEGETATION TO BE REMOVED & PRESERVED.

PLANTING SCHEDULE

PLA		NG SCHEDULE										
				MATU	RE SIZE	S	TOCK SIZ	生		CANOPY	TOTAL	
KEY	QTY	BOTANICAL NAME	COMMON NAME			STOCK	STOCK	STOCK	STOCK	COVER	COVER	COMMENTS
				HEIGHT	SPREAD	CALIPE R	HEIGHT	SPREAD	TYPE	(SF)	(SF)	
LARGE SI	HADE TR	EES										
ARB	1	ACER SACCHARUM 'GREEN MOUNTAIN'	SUGAR MAPLE	35-50'	25-40'	3 1/2 - 4"	12-14'	N/A	B&B	1,250	OFFSITE	PROP. WITHIN R.O.W. (1,250 SF)
QH	4	QUERCUS PHELLOS	WILLOW OAK	40-75'	25-50'	3 1/2 - 4"	12-14'	N/A	B&B	1,250	OFFSITE	PROP. WITHIN R.O.W. (5,000 SF)
SMALL O	RNAMEN	ITAL AND EVERGREEN TREES										
JSB	7	JUNIPERUS SCOPULORUM 'BLUE ARROW'	ROCKY MOUNTAIN JUNIPER	12-15'	2-3'	N/A	8'	N/A	B&B	250	1,750	
LI	4	LAGERSTROMIA sp.	CRAPE MYRTLE	15-20'	10-15'	2 - 2 1/2"	8'	N/A	B&B	250	1,000	SELECT CULTIVAR TO MATCH EXISTING
SHRUBS				·								
CSK	5	CORNUS SERICEA 'KELSEYI'	RED OSIER DOGWOOD	2-2.5'	2-2.5'	N/A	2-3'	24" - 30"	CONTAINER	2	10	
HQS	3	HYDRANGEA QUERCIFOLIA 'SIKES DWARF'	OAKLEAF HYDRANGEA	2-4'	2-4'	N/A	2-3'	24" - 30"	CONTAINER	2	6	
PLO	3	PRUNUS LAUROCERASUS 'OTTO LUYKEN'	CHERRY LAUREL	3-4'	6-8'	N/A	2-3'	24" - 30"	CONTAINER	N/A	N/A	NO CREDIT TAKEN FOR SCREENING SHRUBS
									TOTAL COV	VFR (SF)	2.766	

TREE COVER CALCULATIONS

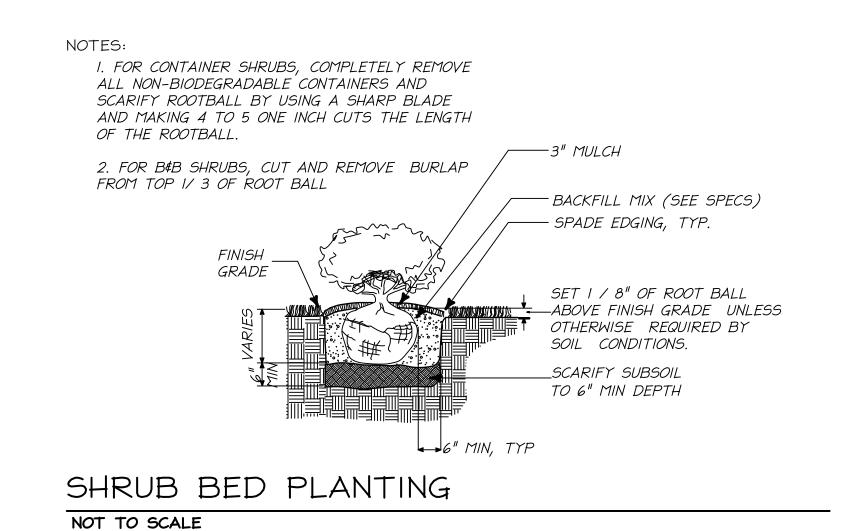
ZONING: CDD			
		QUANTITY	SF
SITE AREA		N/A	15,849
CANOPY COVERAGE REQUIRED	25%	N/A	3,962
CANOPY COVERAGE PROVIDED - ONSITE			
EXISTING CANOPY TO BE PRESERVED		N/A	0
LARGE SHADE TREE	(1,250 SF)	0	0
MEDIUM SHADE TREE	(750 SF)	0	0
MEDIUM ORNAMENTAL & EVERGREEN TREE	(500 SF)	0	0
SMALL ORNAMENTAL & EVERGREEN TREE	(250 SF)	11	2,750
SHRUBS	(2 SF)	8	16
TOTAL CANOPY COVERAGE PROVIDE	D 17%	N/A	2,766
CANOPY COVERAGE PROVIDED - OFFSITE			
EXISTING CANOPY TO BE PRESERVED		N/A	389
		1	

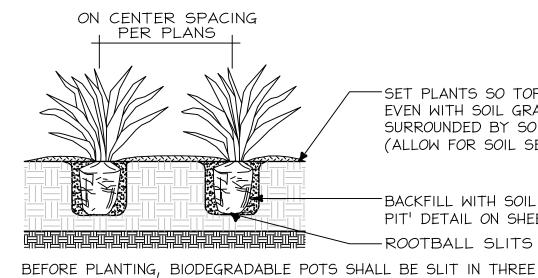
1. AN IN-LIEU FEE TO THE CITY OF ALEXANDRIA LIVING LANDSCAPE FUND SHALL BE PAID BY THE OWNER/DEVELOPER FOR MISSING ONSITE CROWN COVERAGE (1 LARGE SHADE TREE @ 1,250 SF)

TOTAL CANOPY COVERAGE PROVIDED - OFFSITE N/A 6,639

2. NO CREDIT IS TAKEN FOR CANOPY COVERAGE PROVIDED OFFSITE.

8. GROUNDCOVER WILL NOT BE INSTALLED ON TOP OF ROOT BALL OR WITHIN PLANTING SAUCER. - ROOTBALL CENTERED IN TREE PIT - REMOVE EXCESS SOIL FROM TOP OF ROOTBALL TO EXPOSE ROOT FLAIR - REMOVE TOP ¾ OF WIRE BASKET, REMOVE OR FOLD DOWN BURLAP TO REMAINING BASKET, CUT/REMOVE ALL ATTACHED STRING AND ROPE. BACKFILL WITH SOIL TAKEN OUT OF PLANTING HOLE OR 50% CLEAN EXISTING SOIL, 25% TOP SOIL AND 25% CITY APPROVED ORGANIC MATERIAL EXPANDABLE TREE GRATE (TYP.) SPLAY SIDES OF PLANTING PIT. PIT DEPTH EQUAL TO HEIGHT OF ROOTBALL. MIN 6' TREE PIT DIMENSION VARIES · UNDISTURBED SOIL STREET TREE PLANTING





I" = 20'

SET PLANTS SO TOP OF ROOT SYSTEM IS EVEN WITH SOIL GRADE AND ROOTS ARE SURROUNDED BY SOIL BELOW THE MULCH (ALLOW FOR SOIL SETTING)

BACKFILL WITH SOIL AS SPECIFIED AT 'TREE PIT' DETAIL ON SHEET C16.2

BEFORE PLANTING, BIODEGRADABLE POTS SHALL BE SLIT IN THREE PLACES AND NON-BIODEGRADABLE SHALL BE REMOVED. (SCARIFY THE BOTTOM OF THE ROOTBALL).

PERENNIAL/ORNAMENTAL GRASS PLANTING NOT TO SCALE

THIS SHEET IS FOR LANDSCAPE PURPOSES ONLY!

APPROVED SPECIAL USE PERM DEPARTMENT OF PLANNING &	IT NO. <u>2018–0013</u>
DIRECTOR	DATE
DIRECTOR	DATE
CHAIRMAN, PLANNING COMMISSION	DATE

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ELI GOLDMAN Lic. No.55868 10/05/2018

PROJECT NO:98085.053.0 SCALE: |"=20"

08/16/18

DESIGN: LBD DRAWN: LBD CHECKED: LBD SHEET No.