PRELIMINARY DEVELOPMENT SPECIAL USE PERMIT

EDGEWOOD TOWNS

(6336 STEVENSON AVENUE)
CITY OF ALEXANDRIA, VIRGINIA

AREA TABULATIONS

TOTAL SITE AREA (COMPUTED) = 0.3868 AC 16,850 SF
TOTAL AREA OF TAX PARCEL (RECORDED) = 0.3874 AC 16,877 SF
TOTAL EXISTING IMPERVIOUS AREA = 0.0692 AC 3,016 SF
TOTAL PROPOSED IMPERVIOUS AREA = 0.2240 AC 9,758 SF
TOTAL DISTURBED AREA = 0.5451 AC 23,745 SF
TOTAL STORMWATER DISTURBED AREA = 0.4626 AC 20,150 SF

ENVIRONMENTAL SITE ASSESSMENT

1. THERE ARE NO TIDAL WETLANDS, TIDAL SHORES, TRIBUTARY STREAMS, FLOODPLAINS, CONNECTED TIDAL WETLANDS, HIGHLY ERODIBLE/PERMEABLE SOILS OR BUFFER AREAS ASSOCIATED WITH SHORES, STREAMS, OR WETLANDS LOCATED ON THE SITE. FURTHER, THERE ARE NO WETLAND PERMITS REQUIRED FOR THIS DEVELOPMENT PROJECT. ADDITIONALLY, THERE ARE NO KNOWN UNDERGROUND STORAGE TANKS ON THE SITE. THERE ARE NO KNOWN CONTAMINATED AREAS, CONTAMINATED SOILS OR ENVIRONMENTAL ISSUES ASSOCIATED WITH THIS SITE.
2. THE CITY OF ALEXANDRIA DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, OFFICE OF ENVIRONMENTAL QUALITY MUST BE NOTIFIED IF UNUSUAL OR UNANTICIPATED CONTAMINATION OR UNDERGROUND STORAGE TANKS, DRUMS AND CONTAINERS ARE ENCOUNTERED AT THE SITE. IF THERE IS ANY DOUBT ABOUT PUBLIC SAFETY OR A RELEASE TO THE ENVIRONMENT, THE ALEXANDRIA FIRE DEPARTMENT MUST BE CONTACTED IMMEDIATELY BY CALLING 911. THE TANK OR CONTAINER'S REMOVAL, ITS CONTENTS, ANY SOIL CONTAMINATION AND RELEASES TO THE ENVIRONMENT WILL BE HANDLED IN ACCORDANCE WITH FEDERAL, STATE, AND CITY REGULATIONS.
3. 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.
4. THERE ARE NO KNOWN CONTAMINATED AREAS, CONTAMINATED SOILS OR ENVIRONMENTAL ISSUES ASSOCIATED WITH THIS SITE.
5. ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE ALEXANDRIA NOISE CONTROL CODE TITLE 11, CHAPTER 5, WHICH PERMITS CONSTRUCTION ACTIVITIES TO OCCUR BETWEEN THE FOLLOWING HOURS:
   MONDAY THROUGH FRIDAY FROM 7am TO 6pm AND SATURDAYS FROM 9am TO 6pm; NO CONSTRUCTION ACTIVITIES ARE PERMITTED ON SUNDAYS AND HOLIDAYS.

   PILE DRIVING IS FURTHER RESTRICTED TO THE FOLLOWING HOURS:
   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, VIRGINIA MARINE RESOURCES MUST BE IN PLACE FOR ALL PROJECT CONSTRUCTION AND MITIGATION WORK PRIOR TO RELEASE OF THE FINAL SITE PLAN.

THIS PROJECT PROPOSES CONSTRUCTION ACTIVITIES WHICH DISTURB AN AREA LESS THAN 1 ACRE; THEREFORE, A VPDES PERMIT IS NOT 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 ARCHAEOLOGIST 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.

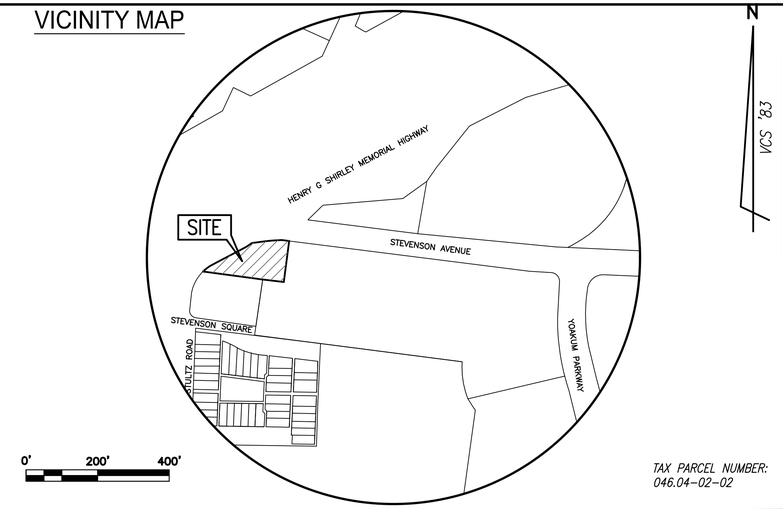
GENERAL NOTES

1. DRAWINGS PREPARED BY A LICENSED ARCHITECT OR PROFESSIONAL ENGINEER SHALL ACCOMPANY THE PERMIT APPLICATION. THE PLANS SHALL 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 OF EGRESS, PASSIVE AND ACTIVE FIRE PROTECTION, HEATING AND VENTILATING SYSTEMS, HANDICAPPED ACCESSIBILITY AND PLUMBING FACILITIES.
2. NEW CONSTRUCTION MUST COMPLY WITH THE CURRENT EDITION OF THE UNIFORM STATEWIDE BUILDING CODE (USBC).
3. 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.
4. A CERTIFICATE OF OCCUPANCY SHALL BE OBTAINED PRIOR TO ANY OCCUPANCY OF THE BUILDING OR PORTION THEREOF.
5. 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.
6. 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).
7. 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 A PERIOD OF TIME EXCEEDING 10 SECONDS, THE VENTILATION RETURN AIR MUST BE EXHAUSTED. AN EXHAUST SYSTEM MUST BE PROVIDED TO CONNECT DIRECTLY TO THE MOTOR VEHICLE EXHAUST (USBC 2801.1).
8. ELECTRICAL WIRING METHODS AND OTHER ELECTRICAL REQUIREMENTS MUST COMPLY WITH NFPA 70, 2008.
9. IF APPLICABLE, THE PUBLIC PARKING GARAGE FLOOR MUST COMPLY WITH USBC 406.2.6 AND DRAIN THROUGH OIL SEPARATORS OR TRAPS TO 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 THE BACKLICK RUN WATERSHED.
11. THIS SITE DOES NOT CONTAIN AREAS PREVIOUSLY MAPPED AS MARINE CLAYS.
12. THIS SITE IS NOT LOCATED WITHIN 1,000 FEET OF A FORMER LANDFILL OR OTHER DUMP SITE.
13. THIS PROJECT IS NOT A FEDERAL UNDERTAKING AND DOES NOT INVOLVE FEDERAL FUNDS, REVIEWS, OR PERMITS.

SURVEYOR'S CERTIFICATION

THIS BOUNDARY AND TOPOGRAPHIC SURVEY ON THE LAND OF 6336 STEVENSON, LLC WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF WIM DE SUTTER FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION ON JUNE 26, 2021 AND THAT THIS PLAT MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

VICINITY MAP



TAX PARCEL NUMBER: 046.04-02-02

PROJECT DESCRIPTION NARRATIVE

THE APPLICANT REQUESTS A DEVELOPMENT SPECIAL USE PERMIT AND SITE PLAN TO REZONE THE EXISTING PARCEL FROM RB/TOWNHOUSE ZONE TO RC/HIGH DENSITY APARTMENT ZONE AND TO PERMIT THE DEVELOPMENT OF THE EXISTING SITE WITH A SINGLE-FAMILY DWELLING INTO SEVEN PROPOSED TOWNHOUSES WITH ASSOCIATED SITE IMPROVEMENTS, ALONG WITH SUBDIVIDING THE EXISTING LOT INTO SEVEN PROPOSED LOTS. PROPOSED SITE ACCESS IS FROM STEVENSON AVENUE TO THE NORTHWEST OF THE SITE.

REQUESTED APPLICATIONS AND MODIFICATIONS:

- AMENDMENT OF THE ZONING OF THE SUBJECT PARCEL FROM RB/TOWNHOUSE ZONE TO RC/HIGH DENSITY APARTMENT ZONE, PURSUANT TO SECTION 11-800.
- DEVELOPMENT SPECIAL USE PERMIT WITH SITE PLAN, PURSUANT TO SECTION 11-400.
- SUBDIVISION, PURSUANT TO SECTION 11-1700.
- MODIFICATION TO SETBACKS, PURSUANT TO SECTION 11-416:
- LOT 501:
  - SIDE YARD SETBACK (1:3 TO 45'H MAX/MIN 8' REQUIRED, 4.5' PROVIDED)
  - REAR YARD SETBACK (1:1 TO 45'H MAX/MIN 8' REQUIRED, 0.0' PROVIDED)
- LOT 503:
  - REAR YARD SETBACK (1:1 TO 45'H MAX/MIN 8' REQUIRED, 26.8' PROVIDED)
- LOT 505:
  - REAR YARD SETBACK (1:1 TO 45'H MAX/MIN 8' REQUIRED, 26.8' PROVIDED)
- LOT 507:
  - SIDE YARD SETBACK (1:3 TO 45'H MAX/MIN 8' REQUIRED, 6.8' PROVIDED)
  - REAR YARD SETBACK (1:1 TO 45'H MAX/MIN 8' REQUIRED, 26.8' PROVIDED)
- LOT 502:
  - REAR YARD SETBACK (1:1 TO 45'H MAX/MIN 8' REQUIRED, 26.8' PROVIDED)
- LOT 504:
  - REAR YARD SETBACK (1:1 TO 45'H MAX/MIN 8' REQUIRED, 26.8' PROVIDED)
- LOT 506:
  - REAR YARD SETBACK (1:1 TO 45'H MAX/MIN 8' REQUIRED, 26.8' PROVIDED)
- REQUEST FOR PLANNING COMMISSION TO ACCEPT DRIVEWAY COVERAGE IN REAR YARDS, PURSUANT TO SECTION 7-1600(F).
- REDUCTION IN PARKING SPACE SIZES WITHIN THE GARAGES, PURSUANT TO SECTION 11-512(B).

OWNER/DEVELOPER

OWNER:
6336 STEVENSON, LLC
3918 PROPERITY AVE, #100
FAIRFAX, VA 22031
INSTR #: 190005909
CONTACT: MATT GRAY
EMAIL: MGRAY@MSG.PROPERTIES

ARBORIST:
TNT ENVIRONMENTAL
13966 PARKEAST CIRCLE, SUITE 101
CHANTILLY, VIRGINIA 20151
(703) 466-5123
CONTACT: SOPHIE SWARTZENDRUBER

ARCHITECT:
PINNACLE DESIGN & CONSULTING, INC.
11150 FAIRFAX BLVD.
SUITE 402
FAIRFAX, VA 22030
(703) 218-3400
CONTACT: TOM ROWLAND

DEVELOPER:
OLD CREEK HOMES, LLC
225 NORTH WEST STREET
ALEXANDRIA, VA 22314
(571) 405-7671
CONTACT: MATT GRAY
EMAIL: MGRAY@OLDCREEKHOMES.COM

LANDSCAPE ARCHITECT:
STUDIO 39
LANDSCAPE ARCHITECTURE, PC
6416 GROVEDALE DRIVE,
SUITE 100-A
ALEXANDRIA, VIRGINIA 22310
(703) 719-6500
CONTACT: AMANDA CLERKIN

ATTORNEY:
LAND CARROLL & BLAIR PC
524 KING STREET
ALEXANDRIA, VA 22314
(703) 836-1000
CONTACT: DUNCAN BLAIR

PLAN PREPARED BY:
R.C. FIELDS & ASSOCIATES, INC.
700 S. WASHINGTON STREET
SUITE 220
ALEXANDRIA, VA 22314
(703) 549-6422
CONTACT: TAYLOR DOYLE

BUILDING CODE ANALYSIS:

USE:	R5
USE GROUP:	TOWNHOUSES
TYPE OF CONSTRUCTION:	V-B
NUMBER OF STORIES:	4 STORIES
FLOOR AREA (1ST FLOOR):	568 SF (LOT 501) 559 SF EACH (LOT 502-507)
FLOOR AREA (2ND FLOOR):	533 SF (LOT 501) 528 SF EACH (LOT 502-507)
FLOOR AREA (3RD FLOOR):	457 SF (LOT 501) 452 SF EACH (LOT 502-507)
FLOOR AREA (4TH FLOOR):	273 SF (LOT 501) 255 SF EACH (LOT 502-507)
BUILDING HEIGHT:	45.0'
FIRE SUPPRESSION/DETECTION:	FULLY SPRINKLERED 13D (NO FDC REQUIRED)

COMPLETE STREETS INFORMATION:

	NEW	UPGRADED
CROSSWALKS (NUMBER)	N/A	N/A
STANDARD	N/A	N/A
HIGH VISIBILITY	N/A	N/A
CURB RAMPS	N/A	N/A
SIDEWALKS (LF)	N/A	270.0'
BICYCLE PARKING (NUMBER SPACES)	2	N/A
PUBLIC/VISITOR	2	N/A
PRIVATE/GARAGE	N/A	N/A
BICYCLE PATHS (LF)	N/A	N/A
PEDESTRIAN SIGNALS	N/A	N/A

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BUILDING SECTION & STAIR 4.00

ZONING TABULATIONS

*1. EXISTING ZONE OF SITE: RB/TOWNHOUSE ZONE PROPOSED ZONE OF SITE: RC/HIGH DENSITY APARTMENT ZONE

2. USE: EXISTING: SINGLE-FAMILY DWELLING PROPOSED: RESIDENTIAL TOWNHOUSES

3. LOT AREA: REQUIRED: 1,600 SQ FT PROVIDED: LOT 501: 3,805 SQ FT LOT 502: 1,993 SQ FT
LOT 503: 1,983 SQ FT LOT 504: 1,984 SQ FT
LOT 505: 1,993 SQ FT LOT 506: 2,069 SQ FT
LOT 507: 3,023 SQ FT

4. OPEN SPACE: REQUIRED: 800 SQ FT
PROVIDED: LOT 501: 800 SF (21.0%) (GROUND LEVEL) LOT 502: 800 SF (40.1%) (GROUND LEVEL)
800 SF (21.0%) (TOTAL) 800 SF (40.1%) (TOTAL)
LOT 503: 800 SF (40.3%) (GROUND LEVEL) LOT 504: 800 SF (40.3%) (GROUND LEVEL)
800 SF (40.3%) (TOTAL) 800 SF (40.3%) (TOTAL)
LOT 505: 800 SF (40.1%) (GROUND LEVEL) LOT 506: 900 SF (43.5%) (GROUND LEVEL)
800 SF (40.1%) (TOTAL) 900 SF (43.5%) (TOTAL)
LOT 507: 1,150 SF (38.0%) (GROUND LEVEL)
1,150 SF (38.0%) (TOTAL)

ALL OPEN SPACE IS PRIVATE.
NO PRIVATE OPEN SPACE W/
PUBLIC ACCESS EASEMENT OR
PUBLIC OPEN SPACE IS PROPOSED
WITH THIS DEVELOPMENT.

5. NUMBER OF DWELLING UNITS: ALLOWED: 21 PROPOSED: 7

6. UNITS PER ACRE: ALLOWED: 54.45 PROPOSED: 18.10

7. FLOOR AREA: ALLOWABLE: 21,062 SQ FT EXISTING: GROSS 2,440 SF NET 2,440 SF PARKING 0 SF

PROPOSED:

*NOTE: PARKING FLOOR AREA IS INCLUDED IN THE GROSS AND NET FLOOR AREA PROVIDED ON THIS SHEET

LOT NUMBER	GROSS FLOOR AREA/UNIT (SF)	NET FLOOR AREA/UNIT (SF)	PARKING FLOOR AREA/UNIT (SF)*	FLOOR AREA RATIO	ALLOWABLE FAR
501	2,500	1,837	333	0.48	1.25
502	2,500	1,800	328	0.90	1.25
503	2,500	1,800	328	0.91	1.25
504	2,500	1,800	328	0.91	1.25
505	2,500	1,800	328	0.90	1.25
506	2,500	1,800	328	0.87	1.25
507	2,500	1,800	328	0.60	1.25
TOTAL	17,500	12,637	328	0.75	1.25

8. FLOOR AREA RATIO: PERMITTED: 1.25 EXISTING: 0.15 PROPOSED: 0.75
EX BELOW GRADE: 0.0 (0 SF) EX AT GRADE: 0.15 (2,440 SF) EX ABOVE GRADE: 0.0 (0 SF)
PROP BELOW GRADE: 0.0 (0 SF) PROP AT GRADE: 0.23 (3,922 SF) PROP ABOVE GRADE: 0.52 (8,715 SF)

9. AVERAGE FINISHED GRADE: LOT 501: 253.88 LOT 502: 253.75
LOT 503: 253.58 LOT 504: 253.30
LOT 505: 253.05 LOT 506: 252.80
LOT 507: 252.34

10. BUILDING HEIGHT: PERMITTED: 150.0 FEET EXISTING: 20.0 FEET
PROPOSED: LOT 501: 45.00 FEET LOT 502: 45.00 FEET
LOT 503: 45.00 FEET LOT 504: 45.00 FEET
LOT 505: 45.00 FEET LOT 506: 45.00 FEET
LOT 507: 45.00 FEET

* 11. SETBACKS: END LOT REQUIRED (LOTS 501 & 507):
FRONT: N/A
SIDE: 15.0', 1:3 SETBACK RATIO WITH MINIMUM 8'
REAR: 45.0'(LOT 501) 31.0'(LOT 507), 1:1 SETBACK RATIO WITH MINIMUM 8'

PROVIDED:

LOT	FRONT	SIDE (NORTH)	SIDE (SOUTH)	REAR
501	7.9'	4.5'*	26.8'	0.0'*
LOT	FRONT	SIDE (EAST)	SIDE (WEST)	REAR
507	53.0'	6.8'*	N/A	26.8'*

INTERIOR LOT REQUIRED (LOT 502-506):
FRONT: N/A
SIDE: N/A
REAR: 31.0', 1:1 SETBACK RATIO WITH MINIMUM 8'

PROVIDED:

LOT	FRONT	SIDE (EAST)	SIDE (WEST)	REAR
502	15.6'	0'	0'	26.8'*
503	27.2'	0'	0'	26.8'*
504	39.3'	0'	0'	26.8'*
505	45.3'	0'	0'	26.8'*
506	49.5'	0'	0'	26.8'*

12. FRONTAGE: REQUIRED: 18' (INTERIOR LOT) 26' (END LOT) PROVIDED: LOT 501: 88.94' (END LOT) LOT 502: 53.00' (INTERIOR LOT)
LOT 503: 33.28' (INTERIOR LOT) LOT 504: 22.27' (INTERIOR LOT)
LOT 505: 18.02' (INTERIOR LOT) LOT 506: 18.00' (INTERIOR LOT)
LOT 507: 26.16' (END LOT)

13. LOT WIDTH: REQUIRED: 18' (INTERIOR LOT) 26' (END LOT) PROVIDED: LOT 501: 51.00' (END LOT) LOT 502: 19.00' (INTERIOR LOT)
LOT 503: 19.00' (INTERIOR LOT) LOT 504: 19.00' (INTERIOR LOT)
LOT 505: 19.00' (INTERIOR LOT) LOT 506: 19.00' (INTERIOR LOT)
LOT 507: 26.40' (END LOT)

14. PARKING:
REQUIRED:
NUMBER OF TOWNHOUSES: 7
PARKING RATIO: 2 SPACES/TOWNHOUSE DWELLING

2 SPACES X # OF TOWNHOUSES = 2 X 7: 14 SPACES

TOTAL RESIDENTIAL PARKING REQUIRED: 14 SPACES

EXISTING:
STANDARD PARKING SPACES: 1 SPACES

PROVIDED (AT GRADE):
*PRIVATE COMPACT GARAGE PARKING SPACES: 14 SPACES
PUBLIC STANDARD PARKING SPACES: 0 SPACES
PUBLIC COMPACT PARKING SPACES: 0 SPACES
PUBLIC HANDICAP PARKING SPACES: 0 SPACES
TOTAL PARKING SPACES: 14 SPACES

15. LOADING SPACES: REQUIRED: N/A PROPOSED: N/A

16. TRIP GENERATION: (PER ITE STANDARDS) EXISTING: 15 VPD PROPOSED: 90 VPD
EX AM PEAK: 6 VPD PR AM PEAK: 8 VPD
EX PM PEAK: 2 VPD PR PM PEAK: 6 VPD

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

RC FIELDS & ASSOCIATES, INC.
ENGINEERING • LAND SURVEYING • PLANNING
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Alexandria, Virginia 22314
www.rcfassoc.com
(703) 549-6422
PROJ. MANAGER: TAYLOR DOYLE
EMAIL: TDOYLE@RCFASSOC.COM

SCALE: AS NOTED DATE: MARCH 2022 DRAWN: TSM
REV:

COMMONWEALTH OF VIRGINIA
ANDREA SPRUCH
Lic. No. 047863
SEPTEMBER 15, 2022
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	DATE	REV. BY	APPROVED	DATE

REVISION APPROVED BY

PRELIMINARY DEVELOPMENT SPECIAL USE PERMIT
EDGEWOOD TOWNS
(6336 STEVENSON AVENUE)
CITY OF ALEXANDRIA, VIRGINIA

SHEET NAME: COVER SHEET

APPROVED
SPECIAL USE PERMIT NO. 2022-00004
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

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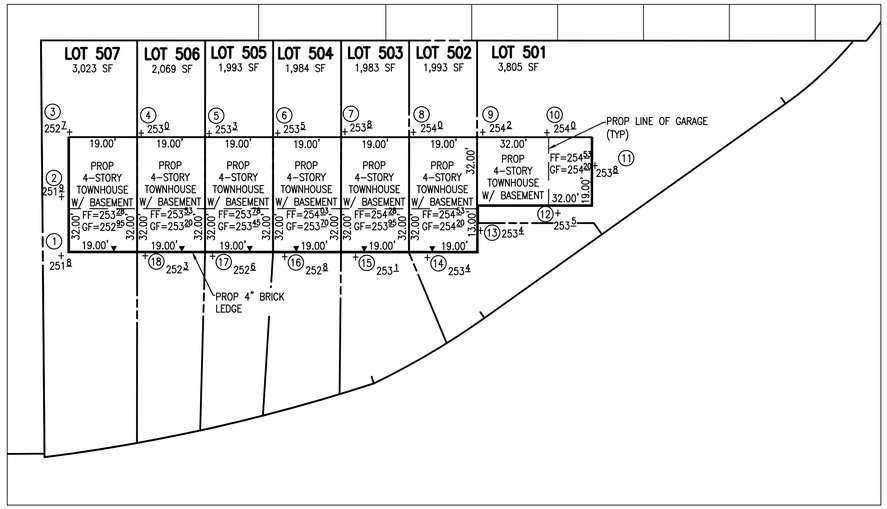


AVERAGE FINISHED GRADE AND BUILDING DETAIL GRAPHIC

SCALE: 1" = 20'

0' 20' 40'

Lot 501 Average Finished Grade	
Spot	Proposed Elevation
9	254.20
10	254.00
11	253.80
12	253.50
AFG:	253.88

Lot 502 Average Finished Grade	
Spot	Proposed Elevation
8	254.00
9	254.20
13	253.40
14	253.40
AFG:	253.75

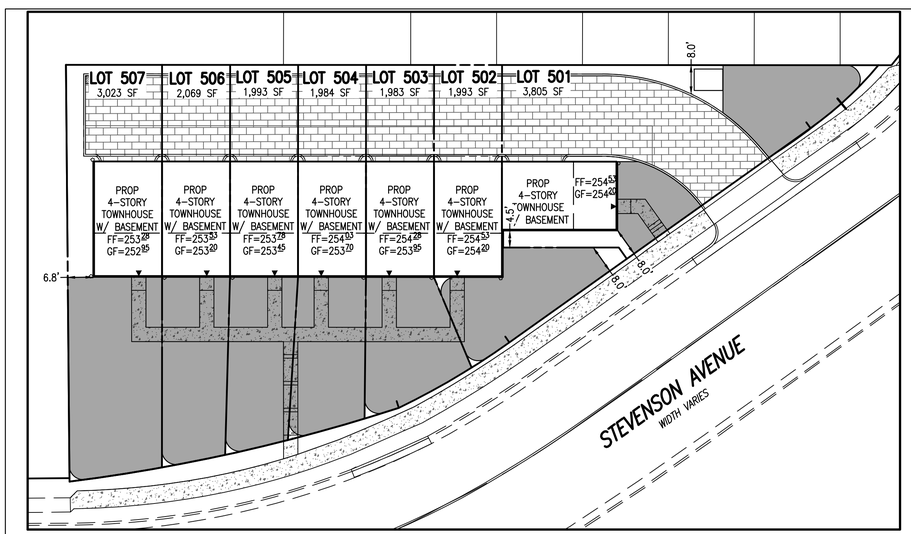
Lot 503 Average Finished Grade	
Spot	Proposed Elevation
7	253.80
8	254.00
14	253.40
15	253.10
AFG:	253.58

Lot 504 Average Finished Grade	
Spot	Proposed Elevation
6	253.50
7	253.80
15	253.10
16	252.80
AFG:	253.30

Lot 505 Average Finished Grade	
Spot	Proposed Elevation
5	253.30
6	253.50
16	252.80
17	252.60
AFG:	253.05

Lot 506 Average Finished Grade	
Spot	Proposed Elevation
4	253.00
5	253.30
17	252.60
18	252.30
AFG:	252.80

Lot 507 Average Finished Grade	
Spot	Proposed Elevation
1	251.80
2	251.90
3	252.70
4	253.00
18	252.30
AFG:	252.34



OPEN SPACE GRAPHIC

SCALE: 1" = 20'

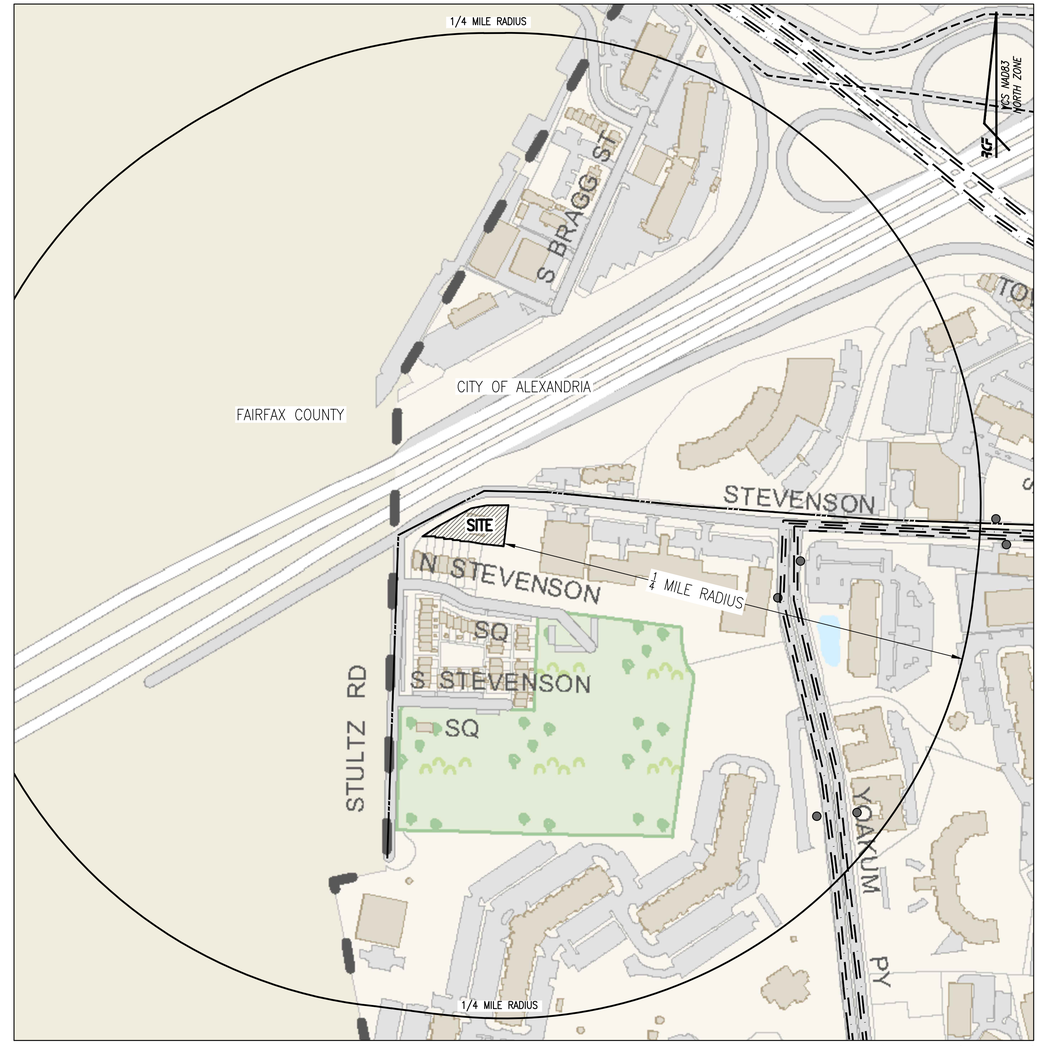
0' 20' 40'

= GROUND LEVEL OPEN SPACE

ALL OPEN SPACE IS PRIVATE.
NO PRIVATE OPEN SPACE W/ PUBLIC ACCESS EASEMENT OR PUBLIC OPEN SPACE IS PROPOSED WITH THIS DEVELOPMENT.

LOT OPEN SPACE REQUIRED: 800 SF

Lot #:	Public Open Space:	Private Open Space:	Private Open Space with Public Access Easement:	Total Open Space:	Groud Level Open Space:
501	0 sf	800 sf	0 sf	800 sf	800 sf
502	0 sf	800 sf	0 sf	800 sf	800 sf
503	0 sf	800 sf	0 sf	800 sf	800 sf
504	0 sf	800 sf	0 sf	800 sf	800 sf
505	0 sf	800 sf	0 sf	800 sf	800 sf
506	0 sf	900 sf	0 sf	900 sf	900 sf
507	0 sf	1,150 sf	0 sf	1,150 sf	1,150 sf



CONTEXTUAL MAP

SCALE: 1" = 200'

0' 200' 400'

LEGEND:

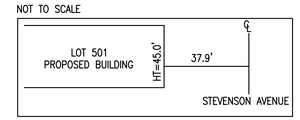
- BUS STOP
- DASH ROUTE 35
- METRO BUS ROUTE 17B
- METRO BUS ROUTE 21C
- BIKE ROUTES

SECTION 6-403 COMPLIANCE NOTE:

SECTION 6-403 STATES "IN ALL HEIGHT DISTRICTS, THE ALLOWABLE HEIGHT OF A BUILDING AT ANY POINT SHALL NOT EXCEED TWICE THE DISTANCE FROM THE FACE OF THE BUILDING AT THAT POINT TO THE CENTERLINE OF THE STREET FACING SUCH BUILDING." SEE DETAIL BELOW FOR SECTION SHOWING COMPLIANCE. DUE TO THE DWELLING ON LOT 501 BEING THE CLOSEST TO THE CENTER LINE AND THE BUILDING HEIGHTS BEING THE SAME, IF THE BUILDING ON LOT 501 IS COMPLIANT, THE REMAINING BUILDINGS ARE COMPLIANT.

SECTION 6-403 DETAIL:

NOT TO SCALE



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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 ALEXANDRIA.

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APPROVED
SPECIAL USE PERMIT NO. 2022-00004

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

R.C. FIELDS & ASSOCIATES, INC.
ENGINEERING • LAND SURVEYING • PLANNING
700 Washington Street, Suite 220
Alexandria, Virginia 22314
www.rcfassoc.com
(703) 549-6422

COMMONWEALTH OF VIRGINIA
ANDREA SPRUCH
Lic. No. 047863
SEPTEMBER 15, 2022
PROFESSIONAL ENGINEER

DEVELOPMENT SPECIAL USE PERMIT
EDGEWOOD TOWNS
6336 STEVENSON AVENUE
CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION

DESIGN: TSM
CHECKED: ACS
SCALE: AS NOTED
DATE: SEPT 2022

CONTEXTUAL PLAN

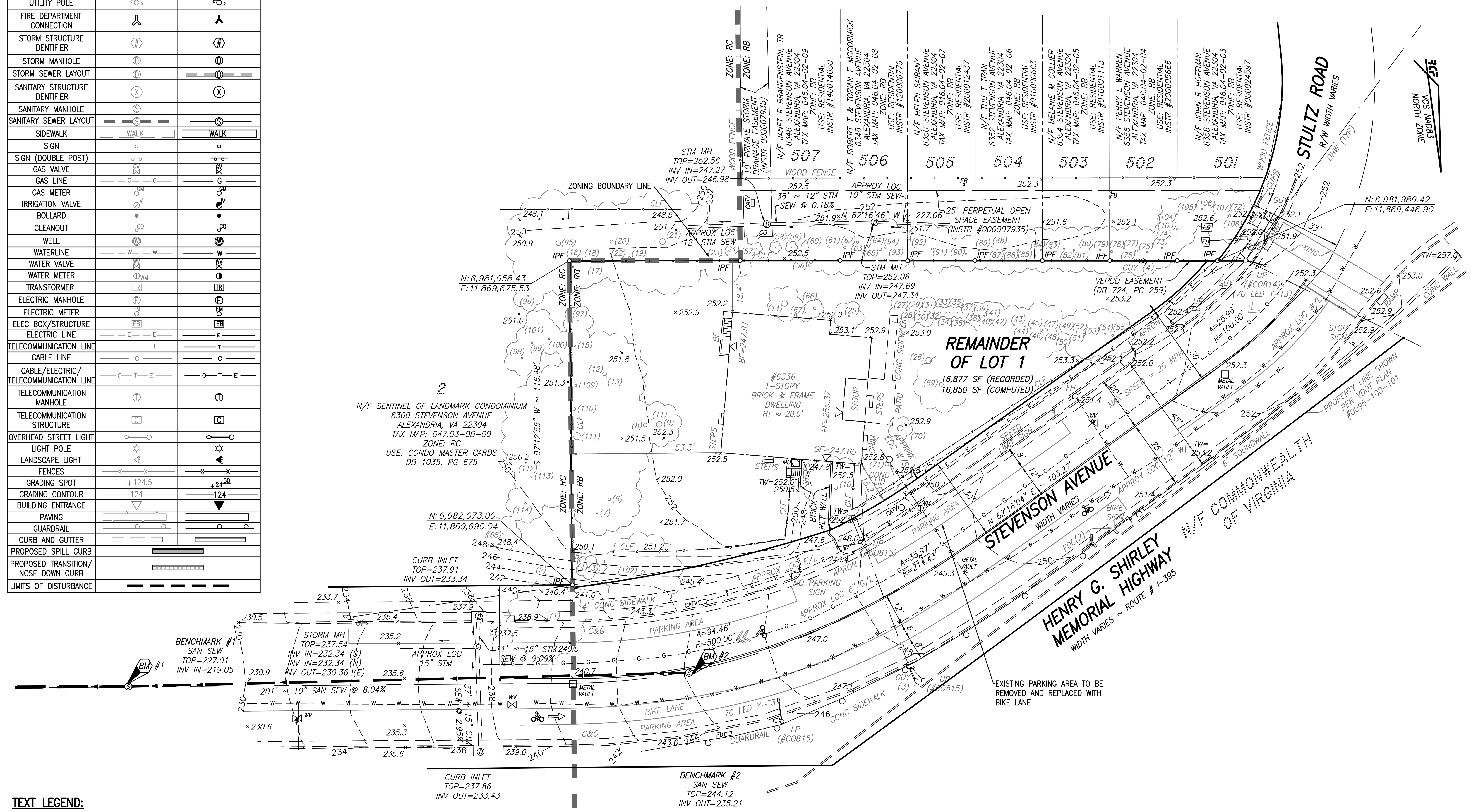
SHEET 02 OF 15

FILE: 21-52

I:\2021\21052\DWG\REL\Preliminary Set\002_CONTEXTUAL PLAN.dwg
Fri, Sep 16 2022 - 11:08:34am

SYMBOLS LEGEND

ITEM	EXISTING	PROPOSED
FIRE HYDRANT		
AIR CONDITIONING UNIT	AC	AC
UTILITY POLE		
FIRE DEPARTMENT CONNECTION		
STORM STRUCTURE IDENTIFIER	#	#
STORM MANHOLE	D	D
STORM SEWER LAYOUT	D	D
SANITARY STRUCTURE IDENTIFIER	X	X
SANITARY MANHOLE	S	
SANITARY SEWER LAYOUT	S	S
SIDEWALK	WALK	WALK
SIGN		
SIGN (DOUBLE POST)		
GAS VALVE	GV	GV
GAS LINE	G G	G
GAS METER	GM	GM
IRRIGATION VALVE	IV	IV
BOLLARD		
CLEANOUT	CO	CO
WELL	W	W
WATERLINE	W W	W
WATER VALVE	WV	WV
WATER METER	WM	
TRANSFORMER	TR	TR
ELECTRIC MANHOLE	E	E
ELECTRIC METER	EM	EM
ELEC BOX/STRUCTURE	EB	EB
ELECTRIC LINE	E E	E
TELECOMMUNICATION LINE	T T	T
CABLE LINE	C	C
CABLE/ELECTRIC/ TELECOMMUNICATION LINE	C T E	C T E
TELECOMMUNICATION MANHOLE	T	T
TELECOMMUNICATION STRUCTURE	C	C
OVERHEAD STREET LIGHT		
LIGHT POLE		
LANDSCAPE LIGHT		
FENCES	x x	x x
GRADING SPOT	+124.5	+24.50
GRADING CONTOUR	124	124
BUILDING ENTRANCE		
PAVING		
GUARDRAIL		
CURB AND GUTTER		
PROPOSED SPILL CURB		
PROPOSED TRANSITION/ NOSE DOWN CURB		
LIMITS OF DISTURBANCE		



GENERAL NOTES:

1. TAX MAP: 046.04-02-02
2. ZONE: RC/HIGH DENSITY APARTMENT ZONE
3. OWNER: 6336 STEVENSON, LLC.
   225 N. WEST STREET
   ALEXANDRIA, VA 22314
   INSTR #210013578

   CLIENT: MATT GRAY
4. TOPOGRAPHIC SURVEY WAS FIELD RUN BY THIS FIRM. VERTICAL DATUM = NAVD '88 PER FIELD GPS DATA REFERENCED TO THE RTK NETWORK LEICA, SMARTNET.
5. TITLE REPORT FURNISHED BY MBH SETTLEMENT GROUP, FILE NO. 22-21-11535 DATED 03/04/2021 AND IS RELIED UPON AS ACCURATE BY THE ENGINEER.
6. PLAT SUBJECT TO RESTRICTIONS OF RECORD.
7. TOTAL SITE AREA = 16,850 S.F. OR 0.3868 AC. (COMPUTED)
   = 16,877 S.F. OR 0.3874 AC. (RECORDED; DB 718 PG 135)
8. THERE ARE NO KNOWN CONTAMINATED AREAS, CONTAMINATED SOILS, OR ENVIRONMENTAL ISSUES ASSOCIATED WITH THE SITE.
9. THE "GENERALIZED ALEXANDRIA SOILS MAP" IDENTIFIES THE SOILS FOR THIS SITE AS URBAN LAND KINGSTOWNE COMPLEX.
10. THIS SITE DOES NOT CONTAIN AREAS PREVIOUSLY MAPPED AS MARINE CLAYS.
11. THIS PROJECT IS WITHIN THE BACKLICK RUN WATERSHED.

EXISTING TREE TABLE:

(1)	15"	TREE		(58)	2"	TREE	
(2)	4"	TREE	DEAD	(59)	2"	TREE	
(3)	4"	TREE		(60)	2"	TREE	
(4)	4"	TREE		(61)	10"	TREE	
(5)	4"	TREE	DEAD	(62)	10"	TREE	
(6)	12"	TREE	TWIN	(63)	10"	TREE	
(7)	4"	TREE		(64)	10"	TREE	
(8)	16"	TREE	CLUSTER	(65)	12"	TREE	
(9)	24"	TREE	CLUSTER	(66)	12"	TREE	CLUSTER
(10)	12"	TREE	CLUSTER	(67)	3"	TREE	CLUSTER
(11)	3"	TREE		(68)	6"	TREE	
(12)	16"	TREE	CLUSTER	(69)	16"	TREE	TWIN
(13)	3"	TREE		(70)	24"	TREE	CLUSTER
(14)	24"	TREE	CLUSTER	(71)	16"	TREE	SIAMESE
(15)	7"	TREE		(72)	10"	TREE	
(16)	6"	TREE		(73)	7"	TREE	
(17)	3"	TREE		(74)	6"	TREE	
(18)	3"	TREE		(75)	6"	TREE	
(19)	10"	TREE		(76)	9"	TREE	
(20)	14"	TREE		(77)	7"	TREE	
(21)	24"	TREE	SIMESE	(78)	9"	TREE	
(22)	2"	TREE		(79)	6"	TREE	
(23)	2"	TREE		(80)	8"	TREE	
(24)	7"	TREE		(81)	8"	TREE	
(25)	5"	TREE		(82)	8"	TREE	
(26)	25"	TREE	DEAD	(83)	4"	TREE	
(27)	6"	TREE		(84)	6"	TREE	
(28)	4"	TREE		(85)	4"	TREE	
(29)	2"	TREE		(86)	8"	TREE	
(30)	5"	TREE		(87)	9"	TREE	
(31)	2"	TREE		(88)	6"	TREE	
(32)	2"	TREE		(89)	7"	TREE	
(33)	2"	TREE		(90)	6"	TREE	
(34)	2"	TREE		(91)	9"	TREE	
(35)	2"	TREE		(92)	2"	TREE	
(36)	2"	TREE		(93)	2"	TREE	
(37)	2"	TREE		(94)	6"	TREE	
(38)	2"	TREE		(95)	20"	TREE	
(39)	4"	TREE		(96)	5"	TREE	
(40)	4"	TREE		(97)	6"	TREE	
(41)	5"	TREE		(98)	6"	TREE	
(42)	6"	TREE		(99)	6"	TREE	
(43)	7"	TREE		(100)	5"	TREE	
(44)	5"	TREE		(101)	3"	TREE	
(45)	5"	TREE		(102)	15"	TREE	TWIN
(46)	10"	TREE		(103)	7"	TREE	
(47)	4"	TREE		(104)	6"	TREE	
(48)	4"	TREE		(105)	6"	TREE	
(49)	4"	TREE		(106)	6"	TREE	
(50)	3"	TREE		(107)	6"	TREE	
(51)	4"	TREE		(108)	7"	TREE	
(52)	4"	TREE		(109)	8"	TREE	
(53)	9"	TREE		(110)	12"	TREE	TWIN
(54)	9"	TREE		(111)	30"	TREE	
(55)	8"	TREE		(112)	5"	TREE	
(56)	15"	TREE	DEAD	(113)	6"	TREE	
(57)	2"	TREE		(114)	7"	TREE	

0' 20' 40'
SCALE: 1" = 20'

TEXT LEGEND:

°= DEGREES
'= MINUTES (OR FEET)
"= SECONDS (OR INCHES)
%= PERCENT
#= NUMBER
@= AT
lbs.= POUNDS
A= ARC
AC.= ACRE
ADA = AMERICANS W/ DISABILITIES ACT
APPROX=APPROXIMATE
BC=BOTTOM OF CURB
BF= BASEMENT FLOOR
BLDG.= BUILDING
BM= BENCHMARK
BOL.= BOLLARD
CATV= CABLE UTILITY
CL= CLASS
CLEAR= CLEARANCE
CLF= CHAIN LINK FENCE
CMP = CORRUGATED METAL PIPE
C.I.= CURB INLET
C.O.= CLEAN OUT
CONC.= CONCRETE
C&G= CURB & GUTTER
DB= DEED BOOK
DIP= DUCTILE IRON PIPE
DOM= DOMESTIC
DSP= DEVELOPMENT SITE PLAN
DSUP= DEVELOPMENT SPECIAL USE PERMIT
DU= DWELLING UNIT
E= EAST
EBOX= ELECTRICAL BOX
ESMT.= EASEMENT
EP= EDGE OF PAVEMENT
EVE= EMERGENCY VEHICLE EASEMENT
EX=EXISTING
FDC= FIRE DEPT. CONNECTION
FF= FINISH FLOOR
FH= FIRE HYDRANT
FT.= FEET
GL = GROUND LIGHT
G/V= GAS VALVE
G/M= GAS METER
G.I.= GRATE INLET
H.C.= HEADER CURB
HDCP.= HANDICAP
HDPE= HIGH DENSITY POLYETHYLENE
HPS= HIGH PRESSURE SODIUM
IPF= IRON PIPE FOUND
INV.= INVERT
INSTR.= INSTRUMENT
L= LUMENS
LOC.= LOCATION
LP= LIGHT POLE
MAX.= MAXIMUM
MH= MANHOLE
MIN.= MINIMUM
MPH= MILES PER HOUR
MW= MONITORING WELL
N= NORTH
OHW= OVERHEAD WIRE
PN = PANEL
PG= PAGE
PP= POWER POLE
PROP= PROPOSED
PVC= POLYVINYL CHLORIDE
R= RADIUS
RCP= RE-ENFORCED CONCRETE PIPE
RELOC. = RELOCATED
RET.= RETAINING
RESID.= RESIDENTIAL
R/W= RIGHT-OF-WAY
S= SOUTH
SAN.= SANITARY SEWER
S.F.= SQUARE FEET
SQ.FT.= SQUARE FEET
STM.= STORM SEWER
STR.= STRUCTURE
SUB= SUBDIVISION PLAN
TBR = TO BE REMOVED
TBS = TO BE SAVED
T.M.= TAX MAP
TMH= TELEPHONE MANHOLE
TC= TOP OF CURB
TW = TOP OF WALL
TRAF.SIG.= TRAFFIC SIGNAL
TYP= TYPICAL
UGE= UNDERGROUND ELECTRIC
UP= UTILITY POLE
VCS= VIRGINIA COORDINATE SYSTEM
VPD= VEHICLES PER DAY
W= WATT
W= WEST
W.S.E.= WATER SURFACE ELEVATION
WV= WATER VALVE
WM= WATER METER
W.W.= WINDOW WELL

UTILITY OWNERSHIP NOTE:

- 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.
- 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 WATER SERVICES FROM METERS TO THE EXISTING BUILDINGS ARE OWNED AND MAINTAINED BY THE PROPERTY OWNER. 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. ALL PROPOSED SANITARY LATERALS SHOWN ON THIS PLAN ARE TO BE PRIVATELY MAINTAINED. 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/HOA. 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 CONDITIONS SURVEY NOTES:

1. UTILITY INFORMATION, AS SHOWN ON THIS PLAN, IS TAKEN FROM THE RECORDS AND/OR FIELD SURVEY COMPLETED AND CANNOT BE GUARANTEED. 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.
2. LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR/ENGINEER SHOULD DIG TEST PITS BY HAND AT ALL UTILITY CROSSINGS TO VERIFY EXACT LOCATION.

TOPOGRAPHY NOTE:

THIS TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF GARY M FAULHABER, LS FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED ON JUNE 26, 2021; AND THIS PLAT, MAP OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

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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

RC FIELDS & ASSOCIATES, INC.
ENGINEERING • LAND SURVEYING • PLANNING
700 Washington Street, Suite 220
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COMMONWEALTH OF VIRGINIA
ANDREA SPRUCH
Lic. No. 047863
SEPTEMBER 15, 2022
PROFESSIONAL ENGINEER

DEVELOPMENT SPECIAL USE PERMIT
EDGEWOOD TOWNS
6336 STEVENSON AVENUE
CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION

DESIGN: TSM
CHECKED: ACS
SCALE: 1" = 20'
DATE: SEPT 2022

EXISTING CONDITIONS

SHEET 03 OF 15
FILE: 21-52

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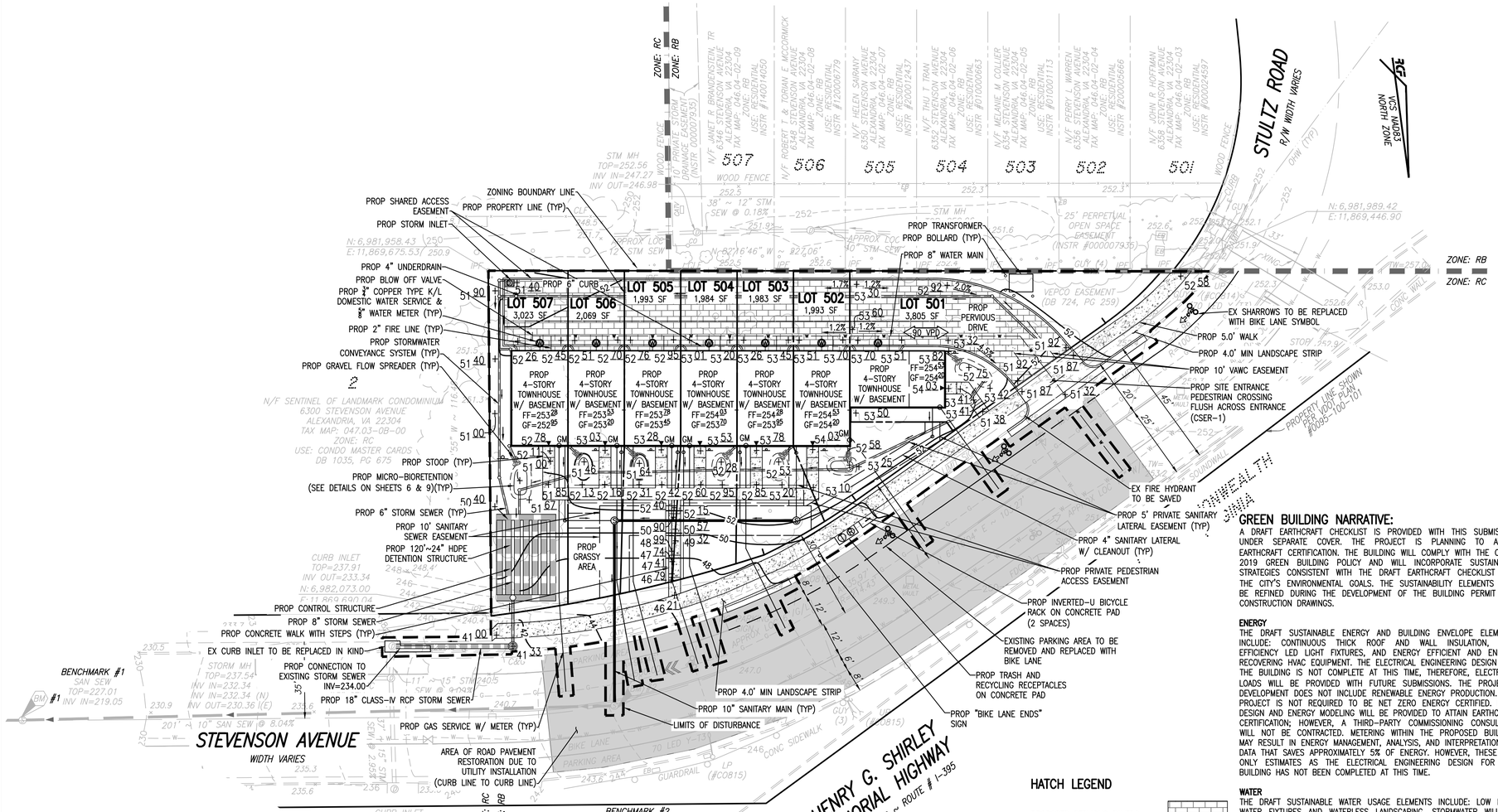
Fri, Sep 16 2022 - 11:08:42am



GENERAL PLAN INFORMATION NOTE:

SEE PROJECT GENERAL NOTES ON SHEET 3.

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 ARCHAEOLOGIST COMES TO THE SITE AND RECORDS THE FINDS.

THE APPLICANT/DEVELOPER SHALL NOT ALLOW ANY METAL DETECTION 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 CITY OF ALEXANDRIA ZONING ORDINANCE.

SANITARY SEWER OUTFALL NARRATIVE:

THE EXISTING USE (SINGLE FAMILY HOME/TOWNHOUSE) PRODUCES AN AVERAGE DAILY FLOW OF APPROXIMATELY 1,400 GALLONS PER DAY (350 GPD/UNIT X 1 UNIT X 4.0 PEAK FLOW FACTOR). THE PROPOSED IMPROVEMENTS PRODUCE AN AVERAGE DAILY FLOW OF APPROXIMATELY 9,800 GALLONS PER DAY (350 GPD/UNIT X 7 UNITS X 4.0 PEAK FLOW FACTOR). THE ADDITIONAL FLOW FROM THE PROPOSED IMPROVEMENTS DOES NOT EXCEED 10,000 GPD. THEREFORE, A DETAILED SANITARY SEWER OUTFALL ANALYSIS IS NOT REQUIRED WITH THIS PLAN. THE PROPOSED SANITARY SEWER CAPACITY COMPUTATIONS HAVE BEEN PROVIDED ON SHEET 12.

FIRE SERVICE NOTE:

FIRE TRUCK ACCESS WILL BE PROVIDED VIA THE SITE FRONTAGE ALONG THE STEVENSON AVENUE RIGHT-OF-WAY. EXISTING FIRE HYDRANTS SHALL REMAIN IN-SERVICE AND UNOBSTRUCTED DURING CONSTRUCTION.

ALEXRENEW NOTES:

1. CONTRACTOR SHALL ENSURE ALL DISCHARGES ARE IN ACCORDANCE WITH CITY OF ALEXANDRIA CODE TITLE 5, CHAPTER 6, ARTICLE B.
2. DEWATERING AND OTHER CONSTRUCTION RELATED DISCHARGE LIMITS TO THE SEWER SYSTEM ARE REGULATED BY ALEXRENEW PRETREATMENT. CONTRACTOR IS REQUIRED TO CONTACT ALEXRENEW'S PRETREATMENT COORDINATOR AT 703-721-3500 X2020.

REFUSE TRUCK NOTE:

TRASH CANS WILL BE STORED ON PRIVATE PROPERTY (WITHIN THE PROPOSED GARAGES) AND ROLLED TO THE STEVENSON AVENUE RIGHT-OF-WAY FOR TRASH PICK UP ON A WEEKLY BASIS.

UTILITIES NOTE:

THE PROPOSED BUILDINGS WILL UTILIZE A NEW SANITARY LATERAL, NEW GAS LINE, A NEW FIRE LINE, AND A NEW DOMESTIC SERVICE LINE. THE NEW SANITARY LATERALS ARE TO CONNECT TO THE PROPOSED SANITARY MAIN IN THE FRONT OF THE SITE. THE PROPOSED SANITARY MAIN IS TO CONNECT TO THE EXISTING SANTARY SEWER WITHIN THE STEVENSON AVENUE RIGHT-OF-WAY. GAS LINES SHALL CONNECT TO THE EXISTING MAINS LOCATED IN THE STEVENSON AVENUE RIGHT-OF-WAY. THE FIRE LINE AND DOMESTIC WATER SERVICE LINES ARE TO CONNECT TO THE PROPOSED WATER MAIN LOCATED IN THE DRIVE AISLE, WHICH CONNECTS TO THE EXISTING WATER MAIN WITHIN THE STEVENSON AVENUE RIGHT-OF-WAY.

STORMWATER MITIGATION NOTE:

IN THE EVENT THE PROPOSED ROOF DRAINAGE AND/ OR SUMP PUMP DISCHARGE, AND FOUNDATION DRAIN SYSTEMS AND/OR GRADING ADVERSELY IMPACTS AND/OR CREATES A NUISANCE ON PUBLIC RIGHT OF WAY OR PRIVATE PROPERTIES THEN THE APPLICANT SHALL BE RESPONSIBLE TO PROVIDE ADDITIONAL IMPROVEMENTS TO THE ROOF DRAINAGE AND/OR GRADING TO THE SATISFACTION OF DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES.

UTILITY UNDERGROUNDING NOTE:

ALL PROPOSED DRY UTILITIES SERVING THE SUBJECT PARCEL SHALL BE PLACED UNDERGROUND.

BUILDING WATERPROOFING NOTE:

PROPER WATERPROOFING FOR THE FACE OF THE PROPOSED DWELLINGS FACING THE BIORETENTION FACILITES IS TO BE PROVIDED AT FINAL SITE PLAN.

PRETREATMENT NOTE:

GUTTER GUARDS ARE TO BE INSTALLED ON DOWNSPOUTS DIRECTED TO THE BIORETENTIONS TO SATISFY THE PRETREATMENT REQUIREMENT.

HVAC NOTE:

HVAC UNITS ARE TO BE LOCATED ON THE UPPER ROOF AND ARE TO BE SCREENED BY A SMALL WALL, SEE THE ARCHITECTURAL SHEETS FOR MORE INFORMATION.

PARKING ACCESS NOTE:

PER SECTION 7-1600(F)(a)(ii) OF THE ZONING ORDINANCE, SINCE PERMEABLE PAVEMENT AND LANDSCAPING IS PROVIDED ALONG THE PROPOSED DRIVE AISLE, THE PARKING COVERAGE IN THE REAR IS ACCEPTABLE WITH PLANNING COMMISSION APPROVAL, SEE THE REQUESTED APPLICATIONS AND MODIFICATIONS ON THE COVER SHEET.

STREET LIGHT NOTE:

ALL EXISTING STREET LIGHTS ARE TO BE CONVERTED TO LED ALONG THE FRONTAGE OF THE SITE, SEE THE LIGHTING PLAN PROVIDED ON SHEET L3.01 FOR MORE INFORMATION.

YARD PARKING REQUIREMENTS

REQUIRED YARD AREA	YARD AREA (SQ. FT.)	PARKING AREA (SQ. FT.)	ALLOWABLE RATIO	PARKING RATIO PROPOSED
REAR YARD	5,735	4,309	50%	75%

*NO PROPOSED PARKING IN ANY OTHER REQUIRED YARDS

STREET PAVEMENT RESTORATION NOTE:

THE ROAD SHALL BE REPAVED (MILLED AND OVERLAYED) FROM CURB AND GUTTER LINE TO CURB AND GUTTER LINE DUE TO THE AMOUNT OF PROPOSED UTILITY CUTS IN THE IN THE ROADWAY. BACKFILL MATERIAL SHALL BE COMPACTED TO NO LESS THAN 95% COMPACTION.

GREEN BUILDING NARRATIVE:

A DRAFT EARTHCRAFT CHECKLIST IS PROVIDED WITH THIS SUBMISSION UNDER SEPARATE COVER. THE PROJECT IS PLANNING TO ATTAIN EARTHCRAFT CERTIFICATION. THE BUILDING WILL COMPLY WITH THE CITY'S 2019 GREEN BUILDING POLICY AND WILL INCORPORATE SUSTAINABLE STRATEGIES CONSISTENT WITH THE DRAFT EARTHCRAFT CHECKLIST AND THE CITY'S ENVIRONMENTAL GOALS. THE SUSTAINABILITY ELEMENTS WILL BE REFINED DURING THE DEVELOPMENT OF THE BUILDING PERMIT AND CONSTRUCTION DRAWINGS.

ENERGY

THE DRAFT SUSTAINABLE ENERGY AND BUILDING ENVELOPE ELEMENTS INCLUDE: CONTINUOUS THICK ROOF AND WALL INSULATION, HIGH EFFICIENCY LED LIGHT FIXTURES, AND ENERGY EFFICIENT AND ENERGY RECOVERING HVAC EQUIPMENT. THE ELECTRICAL ENGINEERING DESIGN FOR THE BUILDING IS NOT COMPLETE AT THIS TIME, THEREFORE, ELECTRICAL LOADS WILL BE PROVIDED WITH FUTURE SUBMISSIONS. THE PROJECT'S DEVELOPMENT DOES NOT INCLUDE RENEWABLE ENERGY PRODUCTION. THE PROJECT IS NOT REQUIRED TO BE NET ZERO ENERGY CERTIFIED. HVAC DESIGN AND ENERGY MODELING WILL BE PROVIDED TO ATTAIN EARTHCRAFT CERTIFICATION; HOWEVER, A THIRD-PARTY COMMISSIONING CONSULTANT WILL NOT BE CONTRACTED. METERING WITHIN THE PROPOSED BUILDING MAY RESULT IN ENERGY MANAGEMENT, ANALYSIS, AND INTERPRETATION OF DATA THAT SAVES APPROXIMATELY 5% OF ENERGY. HOWEVER, THESE ARE ONLY ESTIMATES AS THE ELECTRICAL ENGINEERING DESIGN FOR THE BUILDING HAS NOT BEEN COMPLETED AT THIS TIME.

WATER

THE DRAFT SUSTAINABLE WATER USAGE ELEMENTS INCLUDE: LOW FLOW WATER FIXTURES AND WATERLESS LANDSCAPING. STORMWATER WILL BE MANAGED UTILIZING THE ON-SITE BMPs. THERE WILL BE NO PLANT IRRIGATION SYSTEM, THEREFORE, THE EXTERIOR WATER USAGE WILL BE ZERO. THE INTERIOR WATER REDUCTION ESTIMATES WILL BE PROVIDED WITH A FUTURE SUBMISSION AS THE PLUMBING ENGINEERING DESIGN FOR THE BUILDING HAS NOT BEEN COMPLETED YET.

INDOOR ENVIRONMENTAL QUALITY

THE DRAFT SUSTAINABLE INDOOR ENVIRONMENTAL QUALITY ELEMENTS INCLUDE: INDOOR AIR QUALITY PLAN DURING CONSTRUCTION, LOW VOC MATERIALS, ADHESIVES, AND PAINTS, AND HVAC FILTRATION AND FRESH OUTSIDE AIR. ENERGY REDUCTION STRATEGIES WILL BE AT THE FOREFRONT OF THE BUILDING'S MECHANICAL AND ELECTRICAL ENGINEERING DESIGN AND WILL BE PROVIDED WITH FUTURE SUBMISSIONS.

HATCH LEGEND

PROPOSED PERVIOUS PAVERS

PROPOSED CONCRETE SIDEWALK

PAVEMENT RESTORATION AREA

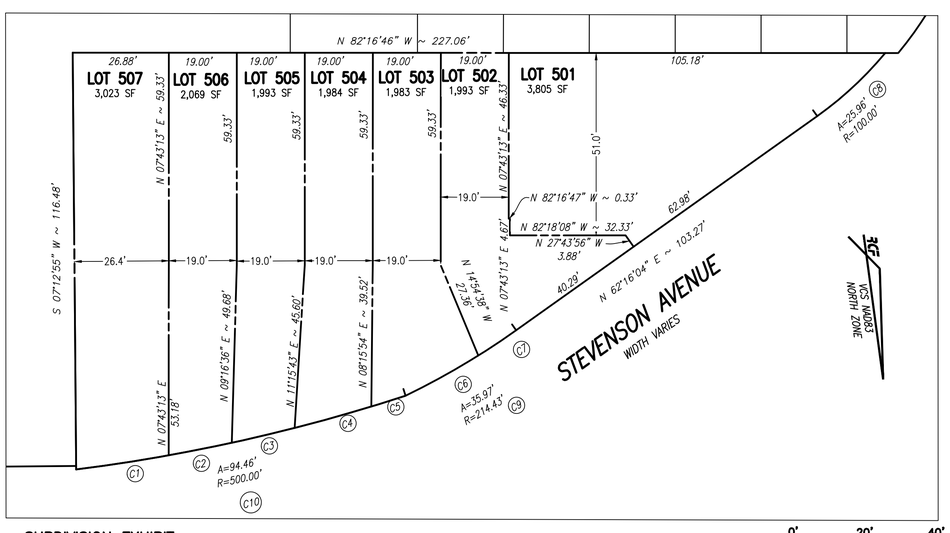
LEGEND

PROPOSED BEARING AND DISTANCE 26.72'

PROPOSED LOT WIDTH |—— 26.72' ——|

CURVE TABLE:

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	TANGENT	CHORD BEARING	CHORD LENGTH
C1	26.16'	500.00'	2°59'52"	13.08'	S 88°59'35" W	26.16'
C2	18.00'	500.00'	2°03'45"	9.00'	S 86°27'47" W	18.00'
C3	18.02'	500.00'	2°03'53"	9.01'	S 84°23'58" W	18.02'
C4	22.27'	500.00'	2°33'05"	11.13'	S 82°05'29" W	22.26'
C5	10.01'	500.00'	1°08'51"	5.01'	S 80°14'31" W	10.01'
C6	23.27'	214.43'	6°13'02"	11.65'	S 68°46'15" W	23.26'
C7	12.70'	214.43'	3°23'40"	6.35'	S 63°57'54" W	12.70'
C8	25.96'	100.00'	14°52'32"	13.05'	S 54°49'46" W	25.89'
C9	35.97'	214.43'	9°36'42"	18.03'	N 67°04'25" E	35.93'
C10	94.46'	500.00'	10°49'26"	47.37'	N 85°04'48" E	94.32'



SUBDIVISION EXHIBIT:
SCALE: 1"=20'

0' 20' 40'
SCALE: 1" = 20'

0' 20' 40'
SCALE: 1" = 20'

SEE SHEET 3 FOR SYMBOL AND TEXT LEGENDS

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DEPARTMENT OF PLANNING & ZONING

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DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO.

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED

INSTRUMENT NO. DEED BOOK NO. DATE

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COMMONWEALTH OF VIRGINIA
ANDREA SPRUCH
Lic. No. 047663
SEPTEMBER 15, 2022
PROFESSIONAL ENGINEER

DEVELOPMENT SPECIAL USE PERMIT
EDGEWOOD TOWNS
6336 STEVENSON AVENUE
CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION

DESIGN: TSM
CHECKED: ACS
SCALE: 1" = 20'
DATE: SEPT 2022

PRELIMINARY PLAN

SHEET 04 OF 15
FILE: 21-52

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Fri, Sep 16 2022 - 11:08:48am

GENERAL PLAN INFORMATION NOTE:

SEE PROJECT GENERAL NOTES ON SHEET 3.

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 ARCHAEOLOGIST COMES TO THE SITE AND RECORDS THE FINDS.

THE APPLICANT/DEVELOPER SHALL NOT ALLOW ANY METAL DETECTION 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 CITY OF ALEXANDRIA ZONING ORDINANCE.

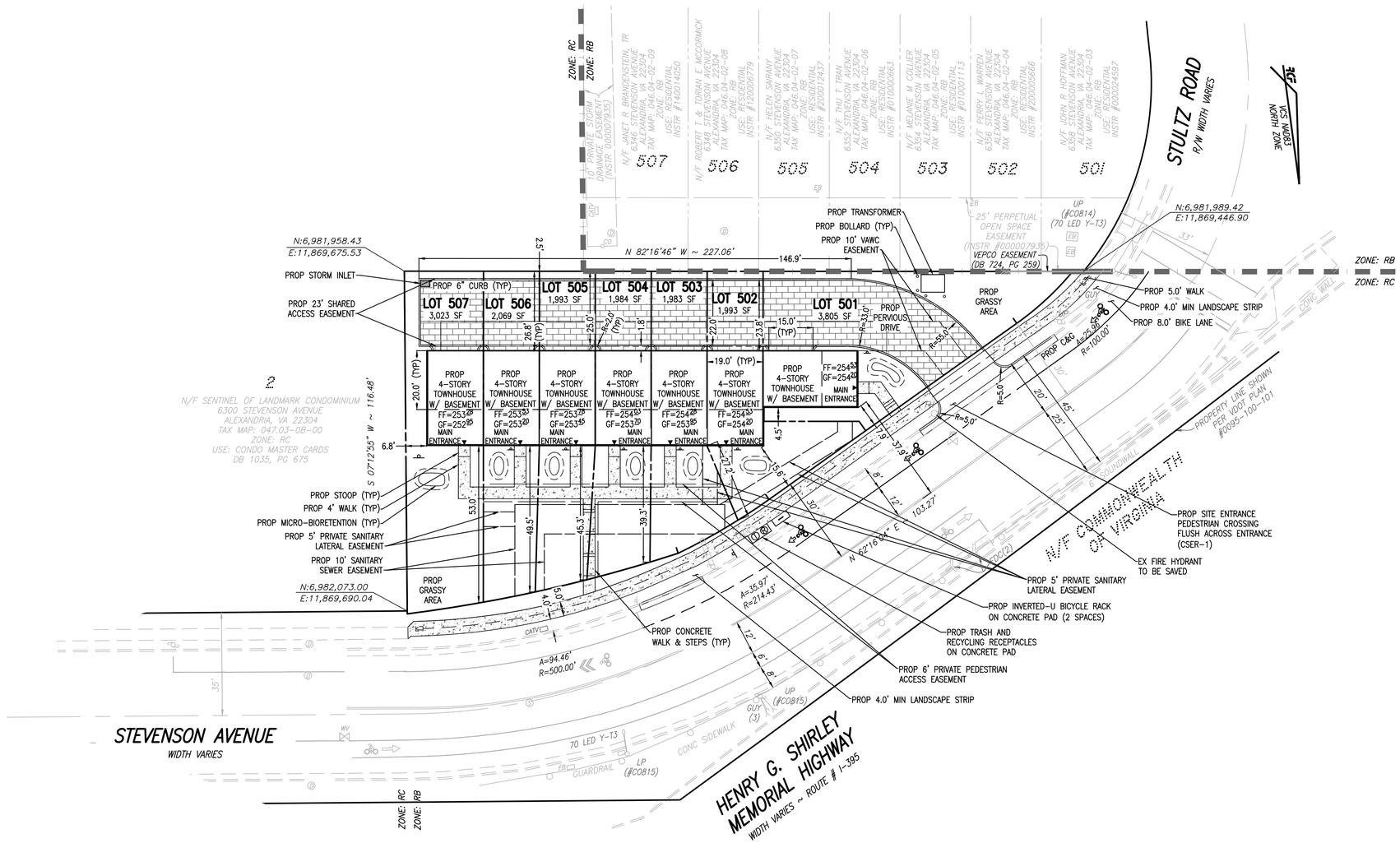
HATCH LEGEND

PROPOSED PERVIOUS PAVERS

PROPOSED CONCRETE SIDEWALK

BUILDING HEIGHT TABLE:

PERMITTED:	150.0 FEET	EXISTING:	20.0 FEET
PROPOSED:	LOT 501: 45.00 FEET		LOT 502: 45.00 FEET
	LOT 503: 45.00 FEET		LOT 504: 45.00 FEET
	LOT 505: 45.00 FEET		LOT 506: 45.00 FEET
	LOT 507: 45.00 FEET		



0' 20' 40'
SCALE: 1" = 20'

SEE SHEET 3 FOR SYMBOL AND TEXT LEGENDS

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DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

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SITE DIMENSIONS PLAN

SHEET 05 OF 15
FILE: 21–52

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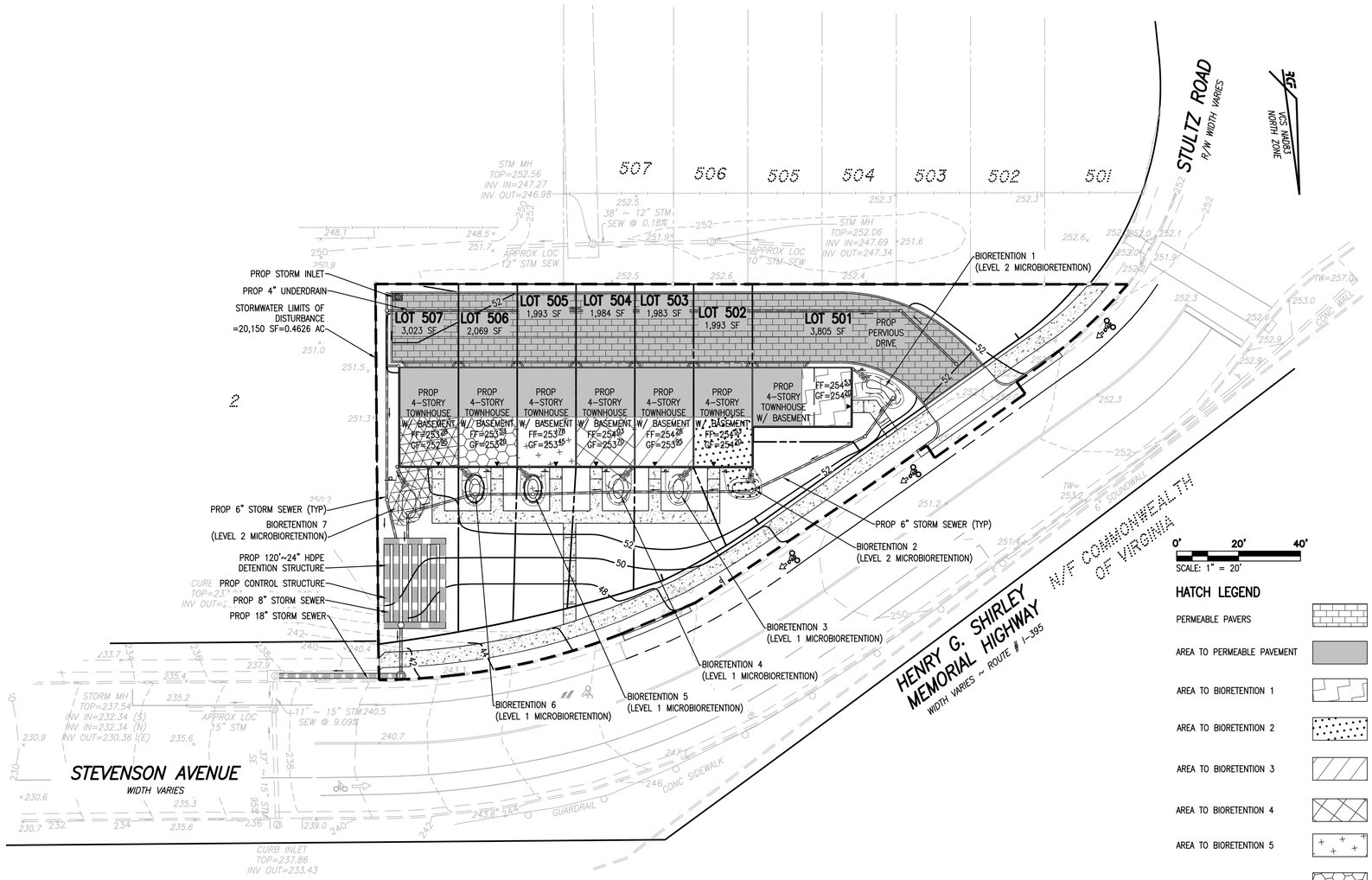
Fri, Sep 16 2022 – 11:08:52am



HATCH LEGEND

- PERMEABLE PAVERS
- AREA TO PERMEABLE PAVEMENT
- AREA TO BIORETENTION 1
- AREA TO BIORETENTION 2
- AREA TO BIORETENTION 3
- AREA TO BIORETENTION 4
- AREA TO BIORETENTION 5
- AREA TO BIORETENTION 6
- AREA TO BIORETENTION 7

STORMWATER MANAGEMENT (CITY CODE SECTION 13-109F COMPLIANCE) NARRATIVE

PRE-DEVELOPMENT CONDITIONS:
THIS 0.39 ACRE PARCEL IS LOCATED IN THE BACKLICK RUN WATERSHED. IN EXISTING CONDITIONS, THE SITE CONSISTS OF AN EXISTING DWELLING, DRIVEWAY, RETAINING WALL AND VEGETATED AREAS. RUNOFF FROM THE ENTIRE PARCEL DRAINS IN A SOUTHEASTERLY DIRECTION TO THE STEVENSON AVENUE RIGHT-OF-WAY WHERE IT IS COLLECTED BY EXISTING CURB INLETS. RUNOFF IS THEN CONVEYED IN A SOUTHEASTERLY DIRECTION WHERE IT EVENTUALLY OUTFALLS TO BACKLICK RUN.

POST-DEVELOPMENT CONDITIONS:
THIS PROJECT PROPOSES THE CONSTRUCTION OF MULTIPLE TOWNHOUSE DWELLINGS AND ASSOCIATED SITE IMPROVEMENTS. RUNOFF FOR THE ENTIRE SITE WILL CONTINUE TO DRAIN TO THE STEVENSON AVENUE RIGHT-OF-WAY AS IN EXISTING CONDITIONS. RUNOFF IS THEN CONVEYED THROUGH THE EXISTING STORM SEWER SYSTEM WHERE IT EVENTUALLY OUTFALLS TO BACKLICK RUN.

CONCLUSION
DUE TO AN OVERALL INCREASE OF SITE IMPERVIOUS AREA, THE SITE RELEASES A POST-DEVELOPMENT PEAK RATE OF RUNOFF FOR THE 2 AND 10-YEAR, 24-HOUR STORM EVENT THAT IS GREATER THAN PRE-DEVELOPMENT CONDITIONS (SEE COMPUTATIONS PROVIDED ON THIS SHEET); THEREFORE, DETENTION IS REQUIRED ONSITE. WITH THE DETENTION STRUCTURE, THE SITE RELEASES A POST-DEVELOPMENT PEAK RATE FOR THE 2 AND 10-YEAR, 24-HOUR STORM EVENTS THAT IS LOWER THAN THE PRE-DEVELOPMENT PEAK FLOW RATE. DUE TO THERE BEING NO INCREASE IN SHEETFLOW LEAVING THE SUBJECT PARCEL, THE DECREASE IN PEAK RUNOFF DURING THE PEAK 2- AND 10-YEAR, 24 HOUR STORM EVENT, AND THE SMALL PORTION OF RUNOFF THAT EXITS THE SITE VIA SHEET FLOW HAVING NO ADVERSE IMPACT ON DOWN GRADIENT PROPERTIES OR RESOURCES, THE STORMWATER MANAGEMENT CRITERIA FOR THE PROPOSED DEVELOPMENT COMPLIES WITH THE CHANNEL PROTECTION AND FLOOD PROTECTION REQUIREMENTS PER CITY CODE SECTION 13-109F.

STORMWATER RUNOFF COMPUTATIONS

I. PROJECT AREA = 20,150 SQ.FT. OR 0.46 ACRES
EXISTING IMPERVIOUS AREA = 4,304 SQ.FT. OR 0.10 ACRES (WITHIN STORMWATER LIMITS OF ANALYSIS)
PROPOSED IMPERVIOUS AREA = 11,275 SQ.FT. OR 0.26 ACRES (WITHIN STORMWATER LIMITS OF ANALYSIS)

VIRGINIA RUNOFF REDUCTION METHOD (PER TR-20, TYPE II, 24-HOUR STORM, USING CLASS D SOILS):

II. WEIGHTED CURVE NUMBER (CN) CALCULATIONS:
CN PRE-DEVELOPMENT = (0.10 X 98 + 0.36 X 80) ÷ 0.46 = 84
CN POST-DEVELOPMENT = (0.26 X 98 + 0.20 X 80) ÷ 0.46 = 90
CN POST-DEVELOPMENT FROM VRRM = 88

III. PRE-DEVELOPMENT PEAK DISCHARGES: (Tc = 5 MINS.)
PEAK Q_2 PRE-DEVELOPMENT = 0.94 CFS
PEAK Q_{10} PRE-DEVELOPMENT = 1.88 CFS

IV. POST-DEVELOPMENT PEAK DISCHARGES (Tc = 5 MINS.)
PEAK Q_2 POST-DEVELOPMENT = 1.18 CFS
PEAK Q_{10} POST-DEVELOPMENT = 2.13 CFS

Q_2 INCREASE = 0.24 CFS
Q_{10} INCREASE = 0.25 CFS

DUE TO THE INCREASE IN THE PEAK DISCHARGE FOR THE 2 AND 10-YEAR STORM, DETENTION IS REQUIRED AND SHALL BE PROVIDED THROUGH THE ONSITE BMPS (PERMEABLE PAVERS, AND BIORETENTION) AND THE PROPOSED DETENTION STRUCTURE.

V. POST-DEVELOPMENT PEAK DISCHARGES W/ DETENTION (Tc = 5 MINS.)
PEAK Q_2 POST-DEVELOPMENT W/ DETENTION = 0.89 CFS
PEAK Q_{10} POST-DEVELOPMENT W/ DETENTION = 1.81 CFS

Q_2 DECREASE = 0.05 CFS
Q_{10} DECREASE = 0.07 CFS

NATURAL CHANNEL 1-YR STORM CALCULATION NOTE:

NO NATURAL STREAMS ARE LOCATED WITHIN THE STORMWATER ANALYSIS AREA. THEREFORE, PER CITY CODE CHAPTER 13, 1-YR STORM CALCULATIONS ARE NOT REQUIRED.

PROJECT DESCRIPTION:

REDEVELOPMENT

DRAINAGE AREA	IMPERVIOUS	PERVIOUS	TOTAL
PROJECT AREA	0.23 AC	0.16 AC	0.39 AC
ON-SITE TREATED	0.20 AC	0.02 AC	0.22 AC
OFF-SITE TREATED	0.00 AC	0.00 AC	0.00 AC
TOTAL TREATED	0.20 AC	0.02 AC	0.22 AC
ON-SITE IMPERVIOUS AREAS DISCONNECTED BY A VEGETATIVE BUFFER	N/A		
TOTAL TREATED OR DISCONNECTED			0.22 AC

WATER QUALITY VOLUME DEFAULT:

PROPOSED IMPERVIOUS: 0.23 AC
TREATMENT OF FIRST HALF INCH OF RUNOFF: 1,815 X 0.23 = 417 CU. FT. WQV REQUIRED

WATER TREATMENT ON-SITE

BMP TYPE	AREA TREATED BY BMP (ACRES)	IMPERVIOUS AREA TREATED BY BMP (ACRES)	BMP EFFICIENCY (%)
BIORETENTION FACILITIES	0.07	0.05	25%
PERMEABLE PAVERS	0.15	0.15	25%

TOTAL WQV TREATED: NO
WATER QUALITY VOLUME REQUIRED = 417 CU. FT.
WATER QUALITY VOLUME TREATED = 1,815 X 0.20 = 363 CU. FT.
PERCENT OF WATER QUALITY VOLUME TREATED = 87.1%
DETENTION ON SITE: YES
PROJECT IS WITHIN WHICH WATERSHED? BACKLICK RUN
PROJECT DISCHARGES TO WHICH BODY OF WATER? CAMERON RUN

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CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION

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STORMWATER MANAGEMENT PLAN

SHEET 06 OF 15
FILE: 21-52

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Fri, Sep 16 2022 - 11:08:57am

EXISTING IMPERVIOUS AREA MAP

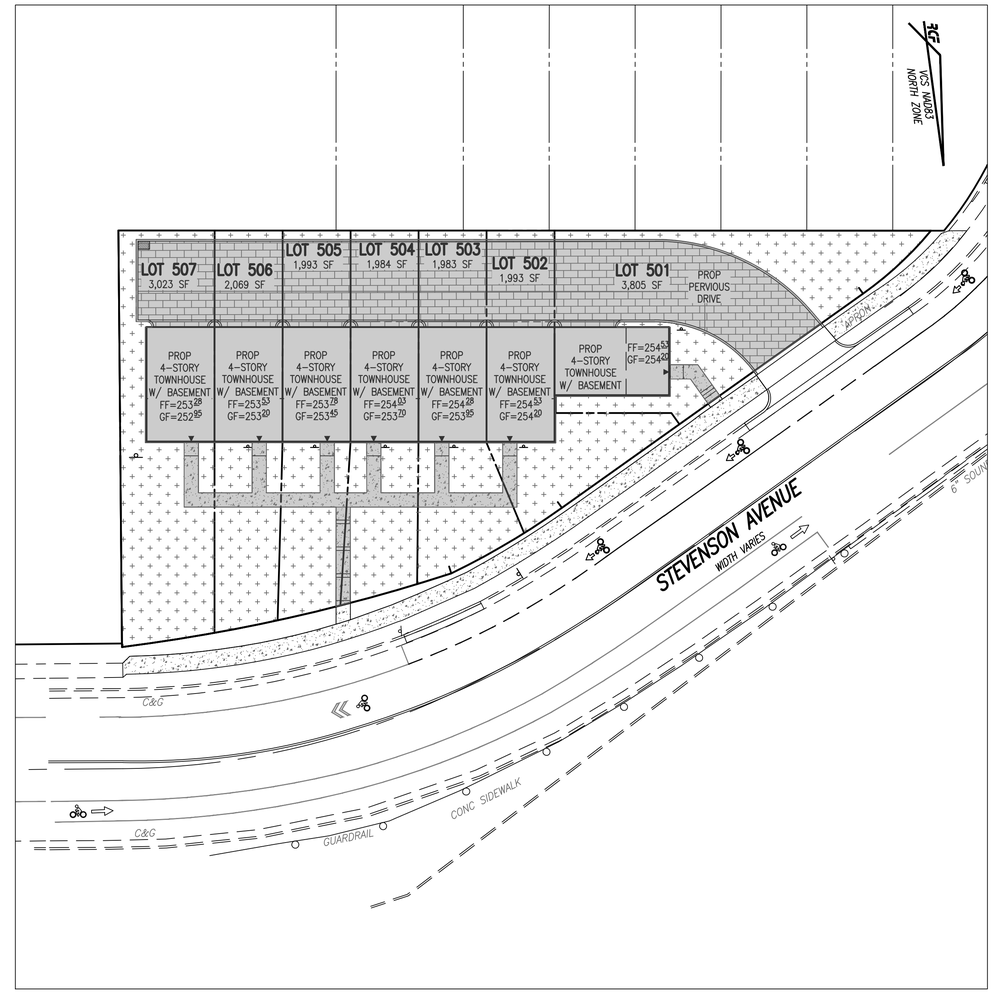
SCALE: 1" =20'

0' 20' 40'
SCALE: 1" = 20'

LEGEND:

— EXISTING ONSITE IMPERVIOUS AREA = 3,016 SF = 0.0692 AC

— EXISTING ONSITE PERVIOUS AREA = 13,834 SF = 0.3176 AC



PROPOSED IMPERVIOUS AREA MAP

SCALE: 1" = 20'

0' 20' 40'
SCALE: 1" = 20'

LEGEND:

— PROPOSED ONSITE IMPERVIOUS AREA = 9,758 SF = 0.2240 AC

— PROPOSED ONSITE PERVIOUS AREA = 7,092 SF = 0.1628 AC

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IMPERVIOUS AREA PLAN

SHEET 07 OF 15
FILE: 21-52

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Fri, Sep 16 2022 - 11:09:03am

DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet - Version 3.0

⊙ 2011 BMP Standards and Specifications ○ 2013 Draft BMP Standards and Specifications

Project Name:	Stevenson Townhouses
Date:	12/1/2021
Linear Development Project?	No

CLEAR ALL (Ctrl+Shift+R)

data input cells | constant values | calculation cells | final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area *(acres)* → 0.46

Maximum reduction required:	*10%*
The site's net increase in impervious cover (acres) is:	*0.16*
Post-Development TP Load Reduction for Site (lb/yr):	*0.31*

Check:
BMP Design Specifications List: 2011 Stds & Specs
Linear project? No
Land cover areas entered correctly? ✓
Total disturbed area entered? ✓

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested					0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be				0.36	0.36
Impervious Cover (acres)				0.10	0.10
					0.46

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested					0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be				0.20	0.20
Impervious Cover (acres)				0.26	0.26
Area Check	OK.	OK.	OK.	OK.	0.46

Constants

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

Runoff Coefficients (Rv)

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

LAND COVER SUMMARY -- PRE-REDEVELOPMENT

Land Cover Summary-Pre

Pre-ReDevelopment	Listed	Adjusted[1]
Forest/Open Space Cover (acres)	0.00	0.00
Weighted Rv(forest)	0.00	0.00
% Forest	0%	0%
Managed Turf Cover (acres)	0.36	0.20
Weighted Rv(turf)	0.25	0.25
% Managed Turf	78%	67%
Impervious Cover (acres)	0.10	0.10
Rv(impervious)	0.95	0.95
% Impervious	22%	33%
Total Site Area (acres)	**0.46**	**0.30**
Site Rv	**0.40**	**0.48**

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	0.0154	0.0121
Pre-ReDevelopment Treatment Volume (cubic feet)	672	526
Pre-ReDevelopment TP Load (lb/yr)	**0.42**	**0.33**
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	0.92	1.10
Baseline TP Load (lb/yr) (**0.41 lbs/acre/yr** applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		*0.12*

LAND COVER SUMMARY -- POST DEVELOPMENT

Land Cover Summary-Post (Final)

Post ReDev. & New Impervious	
Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.20
Weighted Rv (turf)	0.25
% Managed Turf	43%
Impervious Cover (acres)	0.26
Rv(impervious)	0.95
% Impervious	57%
Final Site Area (acres)	**0.46**
Final Post Dev Site Rv	**0.65**

Land Cover Summary-Post

Post-ReDevelopment	
Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.20
Weighted Rv (turf)	0.25
% Managed Turf	67%
ReDev. Impervious Cover (acres)	0.10
Rv(impervious)	0.95
% Impervious	33%
Total ReDev. Site Area (acres)	**0.30**
ReDev Site Rv	**0.48**

Land Cover Summary-Post

Post-Development New Impervious	
New Impervious Cover (acres)	0.16
Rv(impervious)	0.95

Treatment Volume and Nutrient Load

Final Post-Development Treatment Volume (acre-ft)	0.0248
Final Post-Development Treatment Volume (cubic feet)	1,078
Final Post-Development TP Load (lb/yr)	**0.68**
Final Post-Development TP Load per acre (lb/acre/yr)	1.47

Post-ReDevelopment Treatment Volume (acre-ft)	0.0121
Post-ReDevelopment Treatment Volume (cubic feet)	526
Post-ReDevelopment Load (TP) (lb/yr)*	**0.33**
Post-ReDevelopment TP Load per acre (lb/acre/yr)	1.10
Max. Reduction Required (Below Pre-ReDevelopment Load)	**10%**
TP Load Reduction Required for Redeveloped Area (lb/yr)	**0.03**

Post-Development Treatment Volume (acre-ft)	0.0127
Post-Development Treatment Volume (cubic feet)	552
Post-Development TP Load (lb/yr)	**0.35**
TP Load Reduction Required for New Impervious Area (lb/yr)	**0.28**

[1] *Adjusted Land Cover Summary:*
Pre ReDevelopment land cover minus pervious land cover (forest/open space or managed turf) acreage proposed for new impervious cover.

Adjusted total acreage is consistent with Post-ReDevelopment acreage (minus acreage of new impervious cover).

Column I shows load reduction requriement for new impervious cover (based on new development load limit, 0.41 lbs/acre/year).

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	**0.31**

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	3.02	Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	4.85

Drainage Area A

CLEAR BMP AREAS

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)				0.20	0.20	0.25
Impervious Cover (acres)				0.26	0.26	0.95
				Total	0.46	

Total Phosphorus Available for Removal in D.A. A (lb/yr)	0.68
Post Development Treatment Volume in D.A. A (ft^3)	1,078

Stormwater Best Management Practices (RR = Runoff Reduction)

--Select from dropdown lists-

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 (lb)	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		0.15	0	233	285	517	25	0.00	0.32	0.19	0.13	None
6. Bioretention (RR)													
6.a. Bioretention #1 or Micro-Bioretention #1 or Urban Bioretention (Spec #9)	40	0.01	0.03	0	45	68	113	25	0.00	0.07	0.04	0.03	None
6.b. Bioretention #2 or Micro-Bioretention #2 (Spec #9)	80	0.01	0.02	0	62	16	78	50	0.00	0.05	0.04	0.00	None

Site Results (Water Quality Compliance)

Area Checks	D.A. A	D.A. B	D.A. C	D.A. D	D.A. E	AREA CHECK
FOREST/OPEN SPACE (ac)	0.00	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER (ac)	0.26	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER TREATED (ac)	0.20	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA (ac)	0.20	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA TREATED (ac)	0.02	0.00	0.00	0.00	0.00	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft^3) 1,078

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)	340	0	0	0	0	340
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	0.68	0.00	0.00	0.00	0.00	0.68
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.27	0.00	0.00	0.00	0.00	0.27
TP LOAD REMAINING (lb/yr)	0.40	0.00	0.00	0.00	0.00	0.40
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	2.01	0.00	0.00	0.00	0.00	2.01

Total Phosphorus

FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	0.68
TP LOAD REDUCTION REQUIRED (lb/yr)	0.31
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.27
TP LOAD REMAINING (lb/yr):	0.40
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	0.04

Total Nitrogen (For Information Purposes)

POST-DEVELOPMENT LOAD (lb/yr)	4.85
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	2.01
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	2.84

STORMWATER QUALITY NARRATIVE (CITY CODE SECTION 13–109E COMPLIANCE):

THE PROPOSED REDEVELOPMENT (0.46 ACRES) OF ONSITE DISTURBANCE (STORMWATER ANALYSIS LIMITS)) GENERATES A NET INCREASE IN IMPERVIOUS AREA FROM PRE–DEVELOPMENT CONDITIONS. PER CITY CODE SECTION 13–109E–(5)(c), DEVELOPMENT OF PRIOR DEVELOPED LANDS RESULTING IN A NET INCREASE IN IMPERVIOUS AREA AND DISTURBING LESS THAN 1 ACRE, MUST RESULT IN A 10% DECREASE IN PHOSPHORUS LOADING FROM THE PRE–DEVELOPMENT TOTAL PHOSPHORUS LOAD.

THE VIRGINIA RUNOFF REDUCTION METHOD WAS UTILIZED TO DETERMINE THE STORMWATER QUALITY MANAGEMENT PERFORMANCE REQUIREMENTS FOR THIS PROJECT. MULTIPLE LEVEL 1 AND LEVEL 2 BIORETENTION FACILITIES ARE PROPOSED AS BMPS TO PROVIDE WATER QUALITY TREATMENT, ALONG WITH PERMEABLE PAVEMENT. THIS WILL RESULT IN A REDUCTION OF 0.27 LB/YEAR PHOSPHORUS LOAD (8.7%), WHICH IS 87% OF THE REQUIRED TOTAL PHOSPHORUS REDUCTION OF 0.31 LB/YEAR. TO MEET THE REMAINING PHOSPHORUS LOAD REQUIREMENT, THE PURCHASE OF OFFSITE CREDITS, AS ALLOWED PER CITY CODE SECTION 13–109E–(8), IS PROPOSED. THUS, THROUGH THE COMBINATION OF PROPOSED BMPS AND THE PURCHASE OF OFFSITE NUTRIENT CREDITS, THE WATER QUALITY MANAGEMENT PERFORMANCE REQUIREMENTS FOR THE PROPOSED DEVELOPMENT PER CITY CODE SECTION 13–109E–(5)(a) HAVE BEEN MET.

IN ADDITION, APPROXIMATELY 87.1% OF ON–SITE IMPERVIOUS AREA IS PROPOSED TO BE TREATED WITH THIS DEVELOPMENT, WHICH MEETS THE MAJORITY OF THE WATER QUALITY DEFAULT VOLUME TREATMENT STANDARDS IN SECTION 13–110 OF THE ZONING ORDINANCE. A CONTRIBUTION TO THE ALEXANDRIA WATER QUALITY IMPROVEMENT FUND WILL BE MADE FOR THAT PORTION OF THE WATER QUALITY VOLUME NOT TREATED IN COMPLIANCE WITH CITY CODE SECTION 13–109E–(5) AND SECTION 13–110.

NUTRIENT CREDIT AVAILABILITY LETTER:

Eco-Cap

March 4, 2022

Terry Morris
RC Fields

Eco-Cap, LLC - Harris Nutrient Bank - Availability Letter

Project Reference: 6336 Stevenson Avenue, Alexandria, VA 22304

This letter is to confirm the availability of Nutrient Credits sufficient to meet your project requirements at the Harris Nutrient Bank located in the Westmoreland County, Virginia Hydrologic Unit Code 02070011. The Harris Nutrient Bank received approval and release from the Virginia Department of Environmental Quality on June 14th, 2019 with a release of 28.24 lbs. The nutrient reductions resulting from this activity will generate nonpoint source Nutrient "Credits" which are transferable to those entities requiring nutrient reductions in accordance with the Chesapeake Bay Watershed Nutrient Credit Exchange Program (VA Code § 62. 1-44. 19:14) and the Virginia Stormwater Credit Program (VA Code § 62. 1-44. 15:35).

The Harris facility has **2.40** Credits available and will be able to meet your removal requirement of approximately **0.04** Credits.

Feel free to contact me if you require further assistance.

Casey J. Jensen

Casey J. Jensen
President
Eco-Cap, LLC

Manager
Harris Nutrient Bank

THIS DRAWING IS A SERVICE DOCUMENT OF R.C. FIELDS & ASSOCIATES, INC. AND MAY NOT BE USED OR REPRODUCED WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER AND/OR LAND SURVEYOR.

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.

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APPROVED
SPECIAL USE PERMIT NO. 2022–00004
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

RC FIELDS & ASSOCIATES, INC.
ENGINEERING • LAND SURVEYING • PLANNING
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Alexandria, Virginia 22314
www.rcfassoc.com
(703) 549-6422

COMMONWEALTH OF VIRGINIA
ANDREA SPRUCH
Lic. No. 047663
SEPTEMBER 15, 2022
PROFESSIONAL ENGINEER

DEVELOPMENT SPECIAL USE PERMIT
EDGEWOOD TOWNS
6336 STEVENSON AVENUE
CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION

DESIGN: TSM
CHECKED: ACS
SCALE: NO SCALE
DATE: SEPT 2022

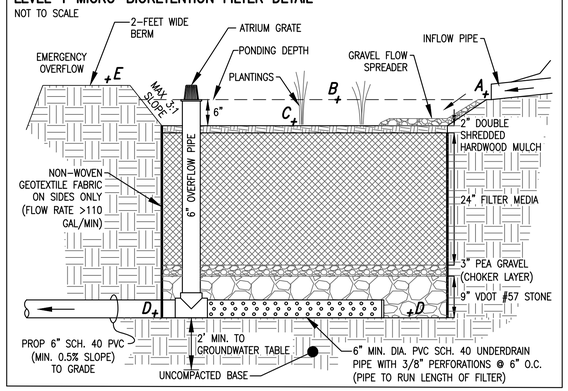
STORMWATER QUALITY COMPUTATIONS

SHEET 08 OF 15
FILE: 21–52

I:\2021\21052\DWG\DELTA\Preliminary Set\05_STORMWATER QUALITY COMPUTATIONS.dwg
Fri, Sep 16 2022 - 11:09:06am

LEVEL 1 MICRO-BIORETENTION FILTER DETAIL

NOT TO SCALE



PRETREATMENT NOTE:

GUTTER GUARDS ARE TO BE INSTALLED ON DOWNSPOUTS DIRECTED TO THE BIORETENTIONS TO SATISFY THE PRETREATMENT REQUIREMENT.

WATER QUALITY VOLUME CALCULATIONS:

PROPOSED BIORETENTION #3:
TOTAL AREA TO BMP = 395 SQ.FT.
IMPERVIOUS AREA TO BMP = 304 SQ.FT. ("R_v" = 0.95)
PERVIOUS AREA TO BMP = 91 SQ.FT. ("R_v" = 0.25)

WATER QUALITY VOLUME REQUIRED:
$T_V = (1.00)(RV)(A)/12$
WHERE:
A = AREA TO FACILITY (395 SF)
R_V = COMPOSITE RUNOFF COEFFICIENT
$R_V = \frac{[(0.25*91)+(0.95*304)]}{395} = 0.79$
$T_V = (1.00)(0.79)(395)/12 = 26.0\ FT^3$

WATER QUALITY VOLUME PROVIDED:
$V = SA[D_p+(D_{fm})(N_{fm})+(D_g)(N_g)]$
WHERE:
V = VOLUME
SA = SURFACE AREA (20 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)

$V = 20[0.5'+(2.0')(0.25)+(1.0')(0.40)] = 28.0\ FT^3$

REQUIRED: 26.0 CU.FT.
PROVIDED: 28.0 CU.FT.

PROPOSED BIORETENTION #4:
TOTAL AREA TO BMP = 395 SQ.FT.
IMPERVIOUS AREA TO BMP = 304 SQ.FT. ("R_v" = 0.95)
PERVIOUS AREA TO BMP = 91 SQ.FT. ("R_v" = 0.25)

WATER QUALITY VOLUME REQUIRED:
$T_V = (1.00)(RV)(A)/12$
WHERE:
A = AREA TO FACILITY (395 SF)
R_V = COMPOSITE RUNOFF COEFFICIENT
$R_V = \frac{[(0.25*91)+(0.95*304)]}{395} = 0.79$
$T_V = (1.00)(0.79)(395)/12 = 26.0\ FT^3$

WATER QUALITY VOLUME PROVIDED:
$V = SA[D_p+(D_{fm})(N_{fm})+(D_g)(N_g)]$
WHERE:
V = VOLUME
SA = SURFACE AREA (20 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)

$V = 20[0.5'+(2.0')(0.25)+(1.0')(0.40)] = 28.0\ FT^3$

REQUIRED: 26.0 CU.FT.
PROVIDED: 28.0 CU.FT.

PROPOSED BIORETENTION #5:
TOTAL AREA TO BMP = 395 SQ.FT.
IMPERVIOUS AREA TO BMP = 304 SQ.FT. ("R_v" = 0.95)
PERVIOUS AREA TO BMP = 91 SQ.FT. ("R_v" = 0.25)

WATER QUALITY VOLUME REQUIRED:
$T_V = (1.00)(RV)(A)/12$
WHERE:
A = AREA TO FACILITY (395 SF)
R_V = COMPOSITE RUNOFF COEFFICIENT
$R_V = \frac{[(0.25*91)+(0.95*304)]}{395} = 0.79$
$T_V = (1.00)(0.79)(395)/12 = 26.0\ FT^3$

WATER QUALITY VOLUME PROVIDED:
$V = SA[D_p+(D_{fm})(N_{fm})+(D_g)(N_g)]$
WHERE:
V = VOLUME
SA = SURFACE AREA (20 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)

$V = 20[0.5'+(2.0')(0.25)+(1.0')(0.40)] = 28.0\ FT^3$

REQUIRED: 26.0 CU.FT.
PROVIDED: 28.0 CU.FT.

PROPOSED BIORETENTION #6:
TOTAL AREA TO BMP = 395 SQ.FT.
IMPERVIOUS AREA TO BMP = 304 SQ.FT. ("R_v" = 0.95)
PERVIOUS AREA TO BMP = 91 SQ.FT. ("R_v" = 0.25)

WATER QUALITY VOLUME REQUIRED:
$T_V = (1.00)(RV)(A)/12$
WHERE:
A = AREA TO FACILITY (395 SF)
R_V = COMPOSITE RUNOFF COEFFICIENT
$R_V = \frac{[(0.25*91)+(0.95*304)]}{395} = 0.79$
$T_V = (1.00)(0.79)(395)/12 = 26.0\ FT^3$

WATER QUALITY VOLUME PROVIDED:
$V = SA[D_p+(D_{fm})(N_{fm})+(D_g)(N_g)]$
WHERE:
V = VOLUME
SA = SURFACE AREA (20 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)

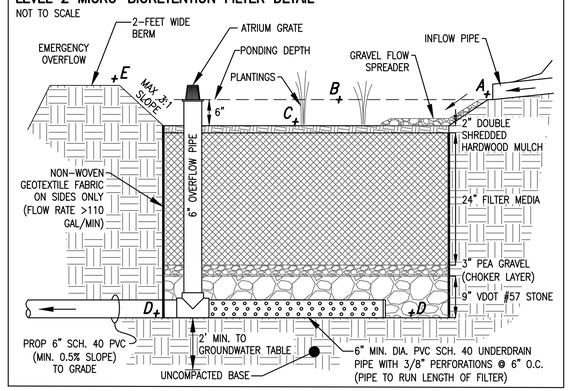
$V = 20[0.5'+(2.0')(0.25)+(1.0')(0.40)] = 28.0\ FT^3$

REQUIRED: 26.0 CU.FT.
PROVIDED: 28.0 CU.FT.

BIORETENTION	SQ.FT. OF SURFACE AREA	ELEVATIONS					LATITUDE	LONGITUDE
		A	B	C	D	E		
3	20.0	53.03	53.03	52.53	49.36	53.20	38.8130942	-77.1430498
4	20.0	52.78	52.78	52.28	49.08	52.95	38.8131028	-77.1428803
5	20.0	54.14	52.14	51.64	48.47	52.31	38.8131012	-77.1427416
6	20.0	51.96	51.96	51.46	48.29	52.13	38.8130856	-77.1425945

LEVEL 2 MICRO-BIORETENTION FILTER DETAIL

NOT TO SCALE



PRETREATMENT NOTE:

GUTTER GUARDS ARE TO BE INSTALLED ON DOWNSPOUTS DIRECTED TO THE BIORETENTIONS TO SATISFY THE PRETREATMENT REQUIREMENT.

WATER QUALITY VOLUME CALCULATIONS:

PROPOSED BIORETENTION #1:
TOTAL AREA TO BMP = 442 SQ.FT.
IMPERVIOUS AREA TO BMP = 304 SQ.FT. ("R_v" = 0.95)
PERVIOUS AREA TO BMP = 138 SQ.FT. ("R_v" = 0.25)

WATER QUALITY VOLUME REQUIRED:
$T_V = (1.25)(RV)(A)/12$
WHERE:
A = AREA TO FACILITY (442 SF)
R_V = COMPOSITE RUNOFF COEFFICIENT
$R_V = \frac{[(0.25*138)+(0.95*304)]}{442} = 0.73$
$T_V = (1.25)(0.73)(442)/12 = 33.7\ FT^3$

WATER QUALITY VOLUME PROVIDED:
$V = SA[D_p+(D_{fm})(N_{fm})+(D_g)(N_g)]$
WHERE:
V = VOLUME
SA = SURFACE AREA (25 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)

$V = 25[0.5'+(2.0')(0.25)+(1.0')(0.40)] = 35.0\ FT^3$

REQUIRED: 33.7 CU.FT.
PROVIDED: 35.0 CU.FT.

PROPOSED BIORETENTION #2:
TOTAL AREA TO BMP = 414 SQ.FT.
IMPERVIOUS AREA TO BMP = 304 SQ.FT. ("R_v" = 0.95)
PERVIOUS AREA TO BMP = 110 SQ.FT. ("R_v" = 0.25)

WATER QUALITY VOLUME REQUIRED:
$T_V = (1.25)(RV)(A)/12$
WHERE:
A = AREA TO FACILITY (414 SF)
R_V = COMPOSITE RUNOFF COEFFICIENT
$R_V = \frac{[(0.25*114)+(0.95*304)]}{414} = 0.77$
$T_V = (1.25)(0.77)(414)/12 = 33.2\ FT^3$

WATER QUALITY VOLUME PROVIDED:
$V = SA[D_p+(D_{fm})(N_{fm})+(D_g)(N_g)]$
WHERE:
V = VOLUME
SA = SURFACE AREA (25 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)

$V = 25[0.5'+(2.0')(0.25)+(1.0')(0.40)] = 35.0\ FT^3$

REQUIRED: 33.2 CU.FT.
PROVIDED: 35.0 CU.FT.

PROPOSED BIORETENTION #7:
TOTAL AREA TO BMP = 504 SQ.FT.
IMPERVIOUS AREA TO BMP = 304 SQ.FT. ("R_v" = 0.95)
PERVIOUS AREA TO BMP = 200 SQ.FT. ("R_v" = 0.25)

WATER QUALITY VOLUME REQUIRED:
$T_V = (1.25)(RV)(A)/12$
WHERE:
A = AREA TO FACILITY (504 SF)
R_V = COMPOSITE RUNOFF COEFFICIENT
$R_V = \frac{[(0.25*200)+(0.95*304)]}{504} = 0.67$
$T_V = (1.25)(0.67)(504)/12 = 35.2\ FT^3$

WATER QUALITY VOLUME PROVIDED:
$V = SA[D_p+(D_{fm})(N_{fm})+(D_g)(N_g)]$
WHERE:
V = VOLUME
SA = SURFACE AREA (35 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)

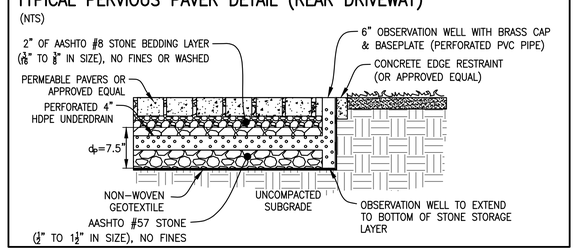
$V = 35[0.5'+(2.0')(0.25)+(1.0')(0.40)] = 49.0\ FT^3$

REQUIRED: 35.2 CU.FT.
PROVIDED: 49.0 CU.FT.

BIORETENTION	SQ.FT. OF SURFACE AREA	ELEVATIONS					LATITUDE	LONGITUDE
		A	B	C	D	E		
1	25.0	53.25	53.25	52.75	49.58	53.42	38.8130984	-77.1432323
2	25.0	53.08	53.08	52.58	49.41	53.25	38.8130735	-77.1424923
7	35.0	51.50	51.50	51.00	47.83	51.67	38.8130735	-77.1424923

TYPICAL PERVIOUS PAVER DETAIL (REAR DRIVEWAY)

(NTS)



AREA TO PAVERS CALCULATION (REAR DRIVEWAY):

MAXIMUM RATIO OF TOTAL AREA TO PAVERS TO AREA OF PAVERS: 2.5
A(C) = AREA TO PAVERS
A(P) = AREA OF PAVERS
A(C) = 6,350 SF
A(P) = 2,847 SF

A(C)/A(P) = 2.2

ACCORDING TO VA DEQ STORMWATER DESIGN SPECIFICATION #7, SECTION 5, SINCE THE AREA BEING DIRECTED TO THE PROPOSED PERVIOUS PAVERS LESS THAN 2.5 TIMES THE SQUARE FOOTAGE OF PAVERS, THE PAVERS ARE ADEQUATE FOR TREATMENT.

WATER QUALITY VOLUME CALCULATIONS:

WATER QUALITY VOLUME REQUIRED:
$T_V = (R_V)(A)/12$
WHERE:
T_V = TREATMENT VOLUME (FT^3)
R_V = COMPOSITE RUNOFF COEFFICIENT
A = AREA TO FACILITY (SF)

DEPTH OF RESERVOIR LAYER:

$d_p = \frac{\{(d_c*R)+P-(i/2*t_f)\}}{V_r}$

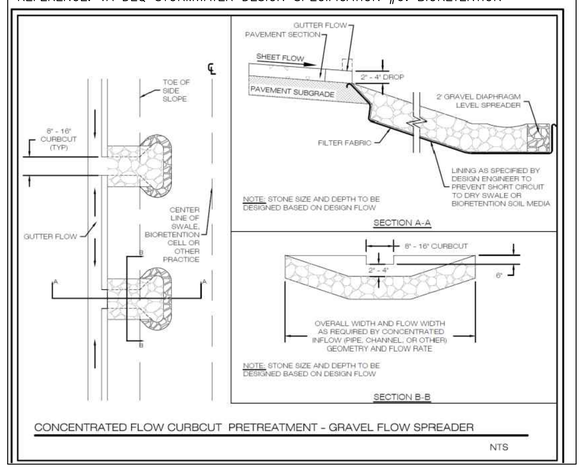
$d_{p-max} = \frac{(i/2)(t_d)}{V_r}$

R_v	0.95
A_C (SF)	6350.0
A_P (SF)	2847.0
T_V (FT3)	502.7
d_c (FT)	0.079
R	2.23
P (FT)	0.083
i (FT/DAY)	0.5
t_f (DAY)	0.083
t_d (DAY)	1.0
V_r	0.4
d_p (FT)	**0.60**
d_{p-max} (FT)	**0.63**
d_p Provided (FT)	**0.63**

WHERE:
d_p = DEPTH OF RESERVOIR LAYER (FT)
d_c = DEPTH OF RUNOFF FROM THE CONTRIBUTING DRAINAGE AREA FOR THE TREATMENT VOLUME (T_V/A_C)
R = RATIO OF CONTRIBUTING DRAINAGE AREA (A_C) TO PERMEABLE PAVEMENT SURFACE AREA (A_P) [A_C/A_P]
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_d = TIME TO DRAIN THE RESERVOIR LAYER (1 DAY)
V_r = VOID RATIO OF THE RESERVOIR LAYER (0.4)

GRAVEL FLOW SPREADER DETAIL:

REFERENCE: VA DEQ STORMWATER DESIGN SPECIFICATION #9: BIORETENTION



CONCENTRATED FLOW CURBCUT PRETREATMENT - GRAVEL FLOW SPREADER

NTS

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DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

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COMMONWEALTH OF VIRGINIA
ANDREA SPRUCH
Lic. No. 047863
SEPTEMBER 15, 2022
PROFESSIONAL ENGINEER

DEVELOPMENT SPECIAL USE PERMIT
EDGEWOOD TOWNS
6336 STEVENSON AVENUE
CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION

DESIGN: TSM
CHECKED: ACS
SCALE: NO SCALE
DATE: SEPT 2022

BMP DETAILS

SHEET 09 OF 15
FILE: 21-52

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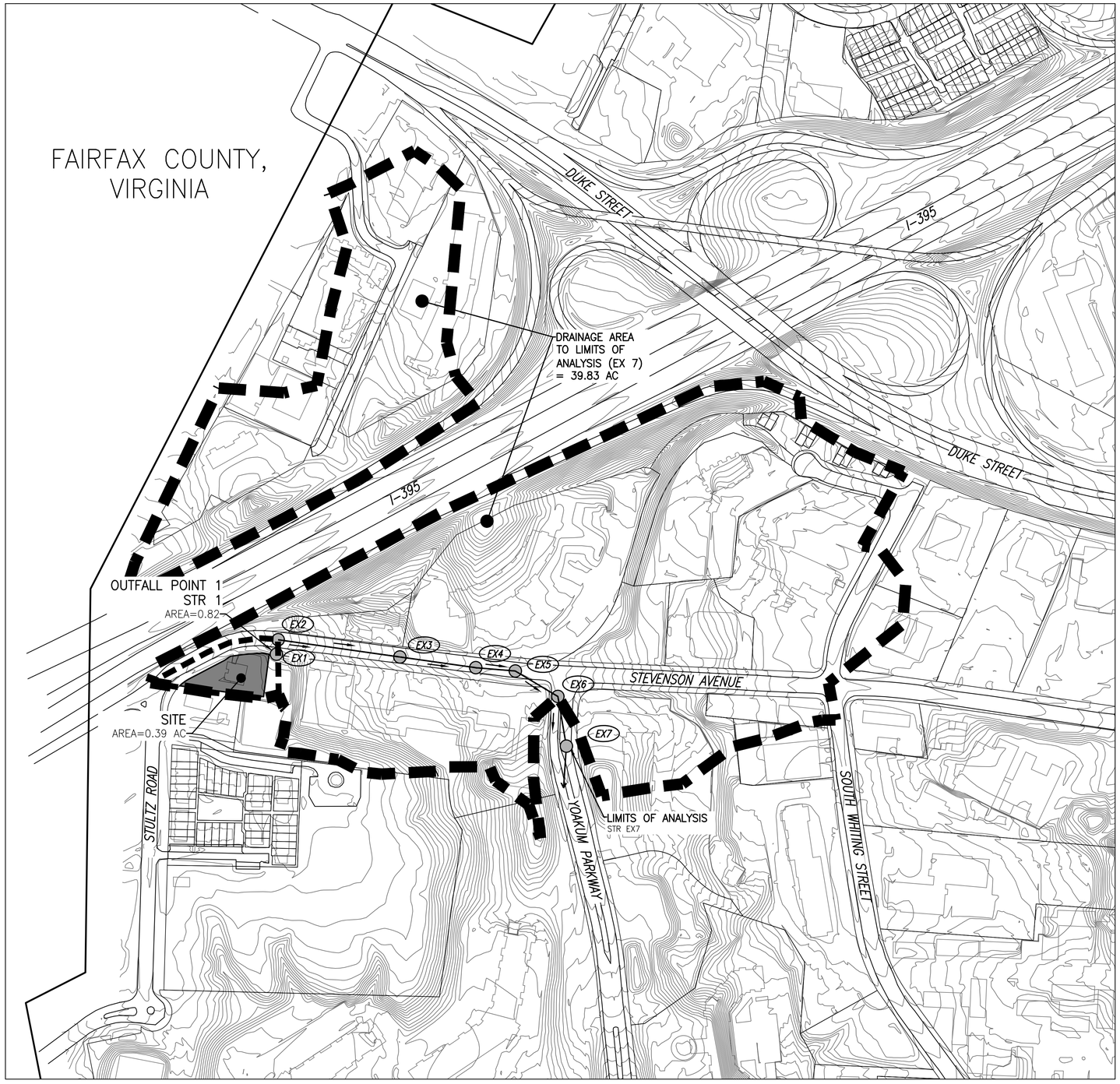
Fri, Sep 16 2022 - 11:09:11am



OUTFALL MAP
SCALE: 1" = 150'

0' 150' 300'

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

PRE–DEVELOPMENT CONDITIONS:
THE 0.39 ACRE SITE IS LOCATED IN THE BACKLICK RUN WATERSHED. IN EXISTING CONDITIONS, THE SITE CONSISTS OF AN EXISTING DWELLING, DRIVEWAY, MULTIPLE RETAINING WALLS, AND VEGETATED AREAS. THIS PROJECT HAS ONE OUTFALL POINT.

OUTFALL #1: A MAJORITY OF THE PROJECT SITE DRAINS VIA NON–CONCENTRATED SHEET FLOW TOWARDS THE STEVENSON AVENUE RIGHT–OF–WAY (OUTFALL #1) BEFORE FLOWING OFF SITE IN A NORTHERLY DIRECTION. THE STORMWATER RUNOFF IS THEN COLLECTED BY THE EXISTING CURB AND GUTTER, DIRECTING RUNOFF TO THE EXISTING CURB INLET WITHIN THE STEVENSON AVENUE RIGHT–OF–WAY AND PIPED IN A GENERALLY EASTERLY DIRECTION VIA THE CITY OF ALEXANDRIA MAINTAINED STORM SEWER SYSTEM BEFORE IT OUTFALLS TO BACKLICK RUN.

THE REMAINDER OF THE PROJECT SITE IS DIRECTED TO THE ADJACENT PROPERTY TO THE EAST. AFTER ENTERING THE NEIGHBORING PROPERTY, THE RUNOFF IS DIRECTED IN A NORTHERLY DIRECTION, TOWARDS THE STEVENSON AVENUE RIGHT–OF–WAY. RUNOFF IS QUICKLY COLLECTED BY THE EXISTING CURB AND GUTTER WITHIN THE RIGHT–OF–WAY, EVENTUALLY BEING COLLECTED BY THE CITY OF ALEXANDRIA MAINTAINED STORM SEWER SYSTEM, JOINING THE OTHER FLOW REGIME, AND OUTFALLING TO BACKLICK RUN.

POST–DEVELOPMENT CONDITIONS:
THE REDEVELOPMENT OF THE PROJECT SITE PROPOSES CONSTRUCTION OF SEVEN TOWNHOUSE DWELLINGS WITH A COMMON DRIVE AISLE, AND ASSOCIATED IMPROVEMENTS. OVERALL IMPERVIOUS AREA WILL INCREASE WITH THE PROPOSED CONSTRUCTION; HOWEVER, A PROPOSED DETENTION STRUCTURE AND ONSITE BMPS ARE TO BE USED TO OFFSET THE INCREASE IN RUNOFF AND REMAINING RUNOFF WILL BE DIRECTED TO THE CITY OF ALEXANDRIA STORM SEWER SYSTEM. EXISTING OVERALL DRAINAGE DIVIDES ARE MAINTAINED FROM PRE–DEVELOPMENT CONDITIONS. THE PROJECT SITE HAS ONE PROPOSED CONDITION OUTFALL POINT.

OUTFALL #1: IN POST–DEVELOPMENT CONDITIONS, THE MAJORITY OF ONSITE STORMWATER RUNOFF IS COLLECTED WITHIN AN ONSITE PRIVATE STORM PIPE SYSTEM. THE RUNOFF THEN OUTFALLS VIA PIPE FLOW TO THE EXISTING STORM SEWER SYSTEM LOCATED WITHIN THE STEVENSON AVENUE RIGHT–OF–WAY, WHERE IT CONVERGES WITH THE REMAINDER OF THE RUNOFF THAT EXITS THE SITE VIA SHEET FLOW TO THE SAME CURB INLET (OUTFALL #1). THE STORMWATER THEN FLOWS IN AN EASTERLY DIRECTION VIA THE CITY OF ALEXANDRIA MAINTAINED STORM SEWER SYSTEM BEFORE IT ENTERS EXISTING MANHOLE (EX 6) WITHIN THE INTERSECTION OF STEVENSON AVE AND YOAKUM PKWY. AT THIS POINT, THE FLOW REACHES THE LIMITS OF ANALYSIS WHERE THE SUBJECT SITE CONTRIBUTING DRAINAGE AREA (0.39 AC) IS LESS THAN 1% OF THE TOTAL WATERSHED AREA (39.83 AC) (PER SECTION 13–109F–2(d)(i) OF THE ZONING ORDINANCE).

COMPUTATIONS SHOWN ON THIS SHEET DEMONSTRATE THAT THE EXISTING MANMADE STORMWATER CONVEYANCE SYSTEM IS MINORLY SURCHARGED IN EXISTING CONDITIONS WITHIN THE PIPE THAT FLOWS FROM STRUCTURE EX4–EX5 & EX5–EX6. HOWEVER, THE PEAK FLOW RATE FOR THE 2 AND 10–YEAR, 24–HOUR STORMS WILL BE REDUCED WITH THE PROPOSED DEVELOPMENT THROUGH THE INSTALLATION OF THE PROPOSED DETENTION SYSTEM AND ONSITE BMPS. THE WATER QUANTITY REQUIREMENTS FOR THIS SITE IS THEREFORE IN COMPLIANCE WITH SECTIONS 13–109F(1)(a)(i) AND 13–109F(2)(b)(ii). SINCE THE SITE DRAINAGE OUTFALLS TO AN EXISTING UNDERSIZED MANMADE STORM SEWER SYSTEM, NO OFFSITE IMPROVEMENTS TO THE SYSTEM ARE REQUIRED DUE TO THE REDUCTION IN THE POST–DEVELOPMENT RUNOFF RATE FOR THE 2– YEAR AND 10–YEAR, 24–HOUR STORM. THE PROJECT'S POST–DEVELOPMENT RUNOFF WILL NOT EXACERBATE ANY EXISTING DOWNSTREAM CAPACITY CONDITIONS.

10-YR, 24-HR STORM SEWER COMPUTATIONS

STRUCTURE FROM	STRUCTURE TO	INC. DRAINAGE AREA (AC)	ACCUM. DRAINAGE AREA (AC)	CURVE NUMBER	RAINFALL DEPTH (IN)	T_C (MINUTES)	INCREMENTAL "Q" (CFS)	ACCUMULATED "Q" (CFS)	PIPE DIAMETER (IN)	SLOPE (%)	"n"	MAXIMUM "Q" (CFS)	MAXIMUM VELOCITY (FPS)	LENGTH OF RUN (FT)	UPPER INVERT	LOWER INVERT	FALL (FT)
EX1	EX2	0.82	0.82	92	5.20	5	3.90	**3.90**	15	9.26%	0.015	17.78	13.92	10.80	233.34	232.34	1.00
EX2	EX3	0.33	1.15	92	5.20	5	1.57	**5.47**	18	8.74%	0.015	28.09	15.27	288.93	230.36	205.11	25.25
EX3	EX4	2.44	3.59	92	5.20	5	11.59	**17.06**	18	4.64%	0.015	20.46	11.12	218.04	205.11	195.00	10.11
EX4	EX5	1.23	4.82	92	5.20	5	5.84	**22.90**	18	4.29%	0.015	19.68	10.70	103.70	195.00	190.55	4.45
EX5	EX6	1.67	6.49	92	5.20	5	7.93	**30.83**	24	1.73%	0.015	26.94	8.24	147.08	190.55	188.00	2.55
EX6	EX7	33.34	39.83	92	5.20	15	140.99	**171.82**	96	2.94%	0.013	1632.88	31.21	151.21	188.00	183.55	4.45

LEGEND:
- STORM STRUCTURE
- DRAINAGE AREA TO LIMITS OF ANALYSIS

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COMMONWEALTH OF VIRGINIA
ANDREA SPRUCH
Lic. No. 047663
SEPTEMBER 15, 2022
PROFESSIONAL ENGINEER

DEVELOPMENT SPECIAL USE PERMIT
EDGEWOOD TOWNS
6336 STEVENSON AVENUE
CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION

DESIGN: TSM
CHECKED: ACS
SCALE: 1" = 150'
DATE: SEPT 2022

STORM OUTFALL ANALYSIS

SHEET 10 OF 15
FILE: 21–52

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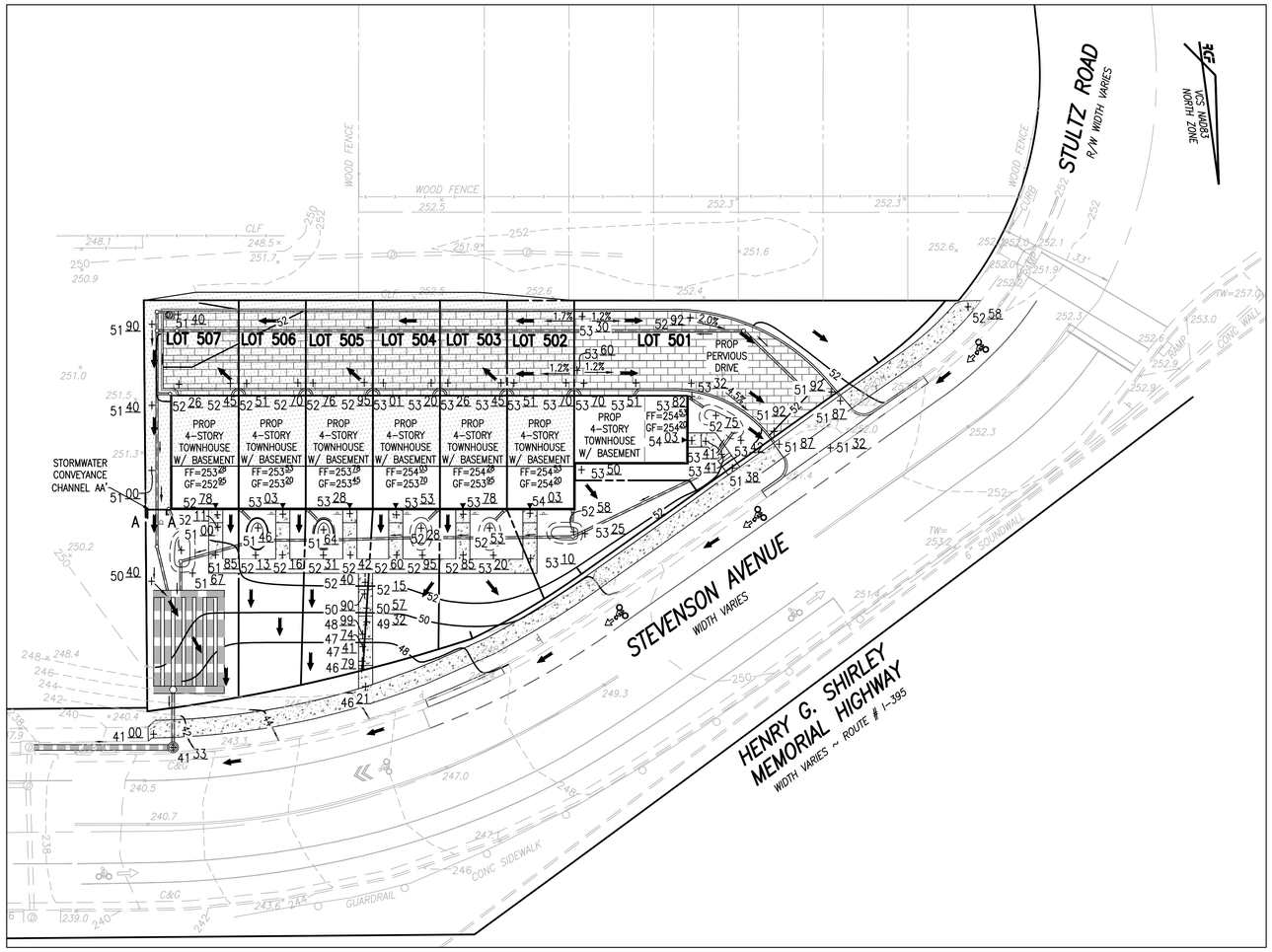
Fri, Sep 16 2022 - 11:09:19am



OVERLAND RELIEF PATH

SCALE: 1" = 20'

0' 20' 40'

HATCH LEGEND

PROPOSED PERVIOUS PAVERS

PROPOSED CONCRETE

DRAINAGE AREA TO CONVEYANCE CHANNEL A–A'

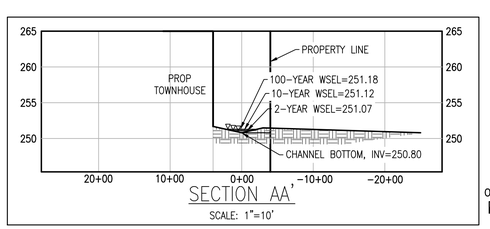
LEGEND

OVERLAND RELIEF PATH

PROPOSED DOWNSPOUT

ONSITE STORMWATER CONVEYANCE CHANNEL COMPUTATIONS (SECTION AA')
(2, 10, & 100–YEAR, 24–HOUR STORM)

CROSS SECTION	DRAINAGE AREA (ACRES)	CURVE NUMBER (CN)	"n"	CHANNEL MATERIAL	CHANNEL SLOPE	BOTTOM WIDTH	LEFT SLOPE	RIGHT SLOPE	CHANNEL DEPTH	RAINFALL DEPTH (2-YR, 24-HR STORM)	Q (2-YR, 24-HR STORM)	2-YEAR CHANNEL DEPTH	2-YEAR VELOCITY	RAINFALL DEPTH (10-YR, 24-HR STORM)	Q (10-YR, 24-HR STORM)	10-YEAR CHANNEL DEPTH	10-YEAR VELOCITY	RAINFALL DEPTH (100-YR, 24-HR STORM)	Q (100-YR, 24-HR STORM)	100-YEAR CHANNEL DEPTH	100-YEAR VELOCITY	MAXIMUM CHANNEL CAPACITY
					FT/FT	FT	FT/FT	FT/FT	FT	IN	CFS	FT	FPS	IN	CFS	FT	FPS	IN	CFS	FT	FPS	CFS
AA'	0.13	96	0.030	GRASS LINED, CLEAN	0.025	N/A	SEE X-SECTION		0.75	3.20	**0.39**	0.27	1.84	5.20	**0.65**	0.32	2.08	8.20	**0.97**	0.38	2.33	9.39



SECTION AA'

SCALE: 1"=10'

0' 5' 10' 20'

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CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION

DESIGN: TSM
CHECKED: ACS
SCALE: AS NOTED
DATE: SEPT 2022

OVERLAND RELIEF PATH

SHEET 11 OF 15

FILE: 21–52

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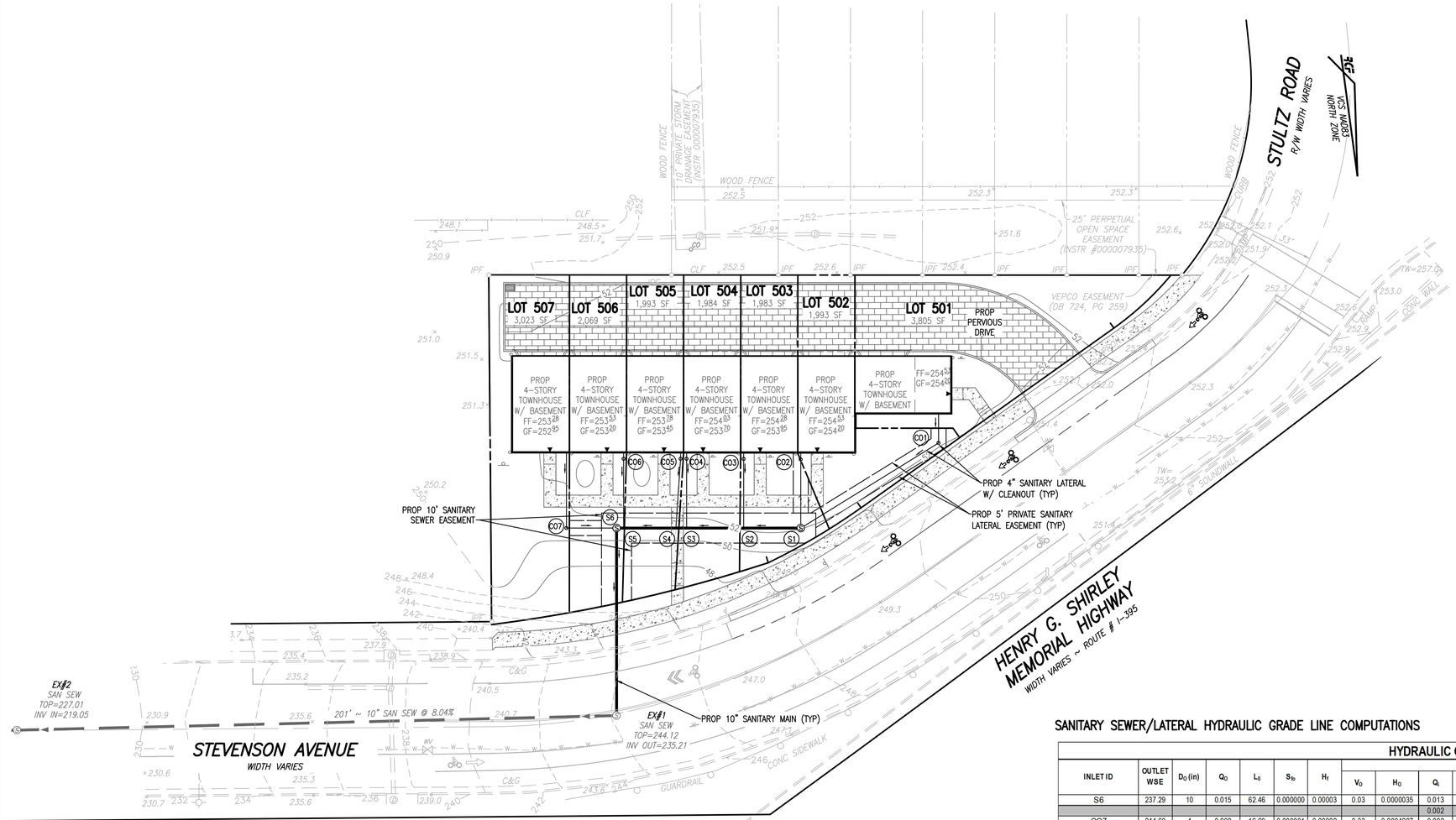

SANITARY SEWER OUTFALL NARRATIVE:

THE EXISTING USE (SINGLE FAMILY HOME/TOWNHOUSE) PRODUCES AN AVERAGE DAILY FLOW OF APPROXIMATELY 1,400 GALLONS PER DAY (350 GPD/UNIT X 1 UNIT X 4.0 PEAK FLOW FACTOR). THE PROPOSED IMPROVEMENTS PRODUCE AN AVERAGE DAILY FLOW OF APPROXIMATELY 9,800 GALLONS PER DAY (350 GPD/UNIT X 7 UNITS X 4.0 PEAK FLOW FACTOR). THE ADDITIONAL FLOW FROM THE PROPOSED IMPROVEMENTS DOES NOT EXCEED 10,000 GPD. THEREFORE, A DETAILED SANITARY SEWER OUTFALL ANALYSIS IS NOT REQUIRED WITH THIS PLAN. CAPACITY CALCULATIONS HAVE BEEN PROVIDED FOR THE PROPOSED STORM SEWER PROVIDED ONSITE.

HATCH LEGEND

PROPOSED PERVIOUS PAVERS

PROPOSED CONCRETE

SANITARY SEWER/LATERAL HYDRAULIC GRADE LINE COMPUTATIONS

HYDRAULIC GRADE LINE COMPUTATIONS

INLET ID	OUTLET WSE	D_O (in)	Q_O	L_o	S_{fo}	H_f	V_O	H_O	Q_i	V_i	Q_i*V_i	JUNCTION LOSS $Vi^2/2g$	H_i	ANGLE	H_Δ	H_t	1.3 H_t	0.5 H_t	FINAL H (FT)	INLET WSE	RIM ELEV	FREE BOARD
S6	237.29	10	0.015	62.46	0.000000	0.00003	0.03	0.0000035	0.013	1.720	0.02270	0.05	0.02	90	0.032	0.0482383	--	0.0241191	0.024150	237.31	251.00	13.69
									0.002	5.020	0.01104											
CO7	244.60	4	0.002	16.69	0.000001	0.00002	0.33	0.0004227	0.002	5.020	0.01104	0.39	0.14	90	0.274	0.4112988	--	0.2056494	0.205672	244.80	251.00	6.20
LOT 507 BUILDING	245.12	4	0.002	25.31	0.000001	0.00003	0.33	0.0004227								0.0004227	--	0.0002114	0.000245	245.12	252.19	7.07
S5	245.00	10	0.013	2.35	0.000000	0.00000	0.03	0.0000035	0.011	1.810	0.01991	0.05	0.02	0	0.000	0.0178084	--	0.0089042	0.008905	245.01	250.90	5.89
									0.002	5.020	0.01104											
CO6	244.67	4	0.002	23.04	0.000001	0.00003	0.33	0.0004227	0.002	5.020	0.01104	0.39	0.14	0	0.000	0.1373814	--	0.0686907	0.068722	244.74	252.44	7.70
LOT 506 BUILDING	245.39	4	0.002	2.50	0.000001	0.00000	0.33	0.0004227								0.0004227	--	0.0002114	0.000215	245.39	252.44	7.05
S4	245.07	10	0.011	17.43	0.000000	0.00000	0.03	0.0000035	0.009	1.890	0.01663	0.06	0.02	0	0.000	0.0194171	--	0.0097085	0.009713	245.08	250.90	5.82
									0.002	5.020	0.01104											
CO5	245.21	4	0.002	23.01	0.000001	0.00003	0.33	0.0004227	0.002	5.020	0.01104	0.39	0.137	0	0.000	0.1373814	--	0.0686907	0.068721	245.28	252.69	7.41
LOT 505 BUILDING	245.93	4	0.002	2.50	0.000001	0.00000	0.33	0.0004227								0.0004227	--	0.0002114	0.000215	245.93	252.69	6.76
S3	245.61	10	0.009	3.54	0.000000	0.00000	0.03	0.0000035	0.002	5.020	0.01104	0.39	0.14	90	0.274	0.4108796	--	0.2054398	0.205440	245.82	250.90	5.08
									0.007	1.660	0.01096											
CO4	245.32	4	0.002	23.04	0.000001	0.00003	0.33	0.0004227	0.002	5.020	0.01104	0.39	0.000	0	0.000	0.0004227	--	0.0002114	0.000242	245.32	252.94	7.62
LOT 504 BUILIDNG	246.04	4	0.002	2.50	0.000001	0.00000	0.33	0.0004227								0.0004227	--	0.0002114	0.000215	246.04	252.94	6.90
S2	245.72	10	0.007	19.00	0.000000	0.00000	0.02	0.0000016	0.002	5.020	0.01104	0.39	0.14	90	0.274	0.4108776	--	0.2054388	0.205441	245.93	250.90	4.97
									0.004	1.330	0.00585											
CO3	245.92	4	0.002	23.04	0.000001	0.00003	0.33	0.0004227	0.002	5.020	0.01104	0.39	0.000	0	0.000	0.0004227	--	0.0002114	0.000242	245.92	253.19	7.27
LOT 503 BUILDING	246.64	4	0.002	2.50	0.000001	0.00000	0.33	0.0004227								0.0004227	--	0.0002114	0.000215	246.64	253.19	6.55
S1	246.32	10	0.004	19.00	0.000000	0.00000	0.02	0.0000016	0.002	5.020	0.01104	0.39	0.14	90	0.274	0.4108776	--	0.2054388	0.205440	246.52	252.00	5.48
									0.002	5.020	0.01104											
CO2	246.51	4	0.002	23.04	0.000001	0.00003	0.33	0.0004227	0.002	5.020	0.01104	0.39	0.000	0	0.000	0.0004227	--	0.0002114	0.000242	246.51	253.44	6.93
LOT 502 BUILDING	247.23	4	0.002	2.50	0.000001	0.00000	0.33	0.0004227								0.0004227	--	0.0002114	0.000215	247.23	253.44	6.21
CO1	246.51	4	0.002	53.93	0.000001	0.00007	0.33	0.0004227	0.002	5.020	0.01104	0.39	0.14	0	0.000	0.1373814	--	0.0686907	0.068763	246.58	252.20	5.62
LOT 501 BUILDING	248.19	4	0.002	9.90	0.000001	0.00001	0.33	0.0004227								0.0004227	--	0.0002114	0.000225	248.19	253.50	5.31

SANITARY SEWER/LATERAL COMPUTATIONS

SANITARY OUTFALL COMPUTATIONS

STRUCTURE FROM	STRUCTURE TO	INCREMENTAL "Q" (CFS)	ACCUMULATED "Q" (CFS)	PIPE DIAMETER (IN)	SLOPE (%)	MATERIAL	"n"	MAXIMUM "Q" (CFS)	MAXIMUM VELOCITY (FPS)	LENGTH OF RUN (FT)	UPPER INVERT	LOWER INVERT	FALL (FT)	NORMAL VELOCITY (FPS)	NORMAL DEPTH (FT)
LOT 501 BUILDING	CO1	0.0022	**0.0022**	4	3.12%	PVC	0.010	0.46	5.02	9.90	248.23	247.93	0.31	5.02	0.33
CO1	S1	0.0000	**0.0022**	4	3.12%	PVC	0.010	0.46	5.02	53.93	247.93	246.24	1.68	5.02	0.33
LOT 502 BUILDING	CO2	0.0022	**0.0022**	4	3.12%	PVC	0.010	0.46	5.02	2.50	247.04	246.96	0.08	5.02	0.33
CO2	S1	0.0000	**0.0022**	4	3.12%	PVC	0.010	0.46	5.02	23.04	246.96	246.24	0.72	5.02	0.33
LOT 503 BUILDING	CO3	0.0022	**0.0022**	4	3.12%	PVC	0.010	0.46	5.02	2.50	246.45	246.37	0.08	5.02	0.33
CO3	S2	0.0000	**0.0022**	4	3.12%	PVC	0.010	0.46	5.02	23.04	246.37	245.65	0.72	5.02	0.33
LOT 504 BUIILDNG	CO4	0.0022	**0.0022**	4	3.12%	PVC	0.010	0.46	5.02	2.50	245.85	245.78	0.08	5.02	0.33
CO4	S3	0.0000	**0.0022**	4	3.12%	PVC	0.010	0.46	5.02	23.04	245.78	245.06	0.72	5.02	0.33
LOT 505 BUILDING	CO5	0.0022	**0.0022**	4	3.12%	PVC	0.010	0.46	5.02	2.50	245.74	245.67	0.08	5.02	0.33
CO5	S4	0.0000	**0.0022**	4	3.12%	PVC	0.010	0.46	5.02	23.01	245.67	244.95	0.72	5.02	0.33
LOT 506 BUILDING	CO6	0.0022	**0.0022**	4	3.12%	PVC	0.010	0.46	5.02	2.50	245.20	245.12	0.08	5.02	0.33
CO6	S5	0.0000	**0.0022**	4	3.12%	PVC	0.010	0.46	5.02	23.04	245.12	244.40	0.72	5.02	0.33
LOT 507 BUILDING	CO7	0.0022	**0.0022**	4	3.12%	PVC	0.010	0.46	5.02	25.31	245.64	244.85	0.79	5.02	0.33
CO7	S6	0.0000	**0.0022**	4	3.12%	PVC	0.010	0.46	5.02	16.69	244.85	244.33	0.52	5.02	0.33
S1	S6	0.0132	**0.0132**	10	3.12%	PVC	0.010	5.25	9.25	61.31	246.24	244.33	1.91	1.93	0.03
S6	EX1	0.0022	**0.0154**	10	3.12%	PVC	0.010	5.25	9.25	62.46	238.57	236.62	1.95	2.00	0.03

0' 20' 40'

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APPROVED
SPECIAL USE PERMIT NO. 2022-00004

DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO.

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED

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Alexandria, Virginia 22314
www.rcfassoc.com
(703) 549-6422

COMMONWEALTH OF VIRGINIA
ANDREA SPRUCH
Lic. No. 047663
SEPTEMBER 15, 2022
PROFESSIONAL ENGINEER

DEVELOPMENT SPECIAL USE PERMIT
EDGEWOOD TOWNS
6336 STEVENSON AVENUE
CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION

DESIGN: TSM
CHECKED: ACS
SCALE: 1" = 20'
DATE: SEPT 2022

SANITARY CAPACITY CALCULATIONS

SHEET 12 OF 15

FILE: 21-52

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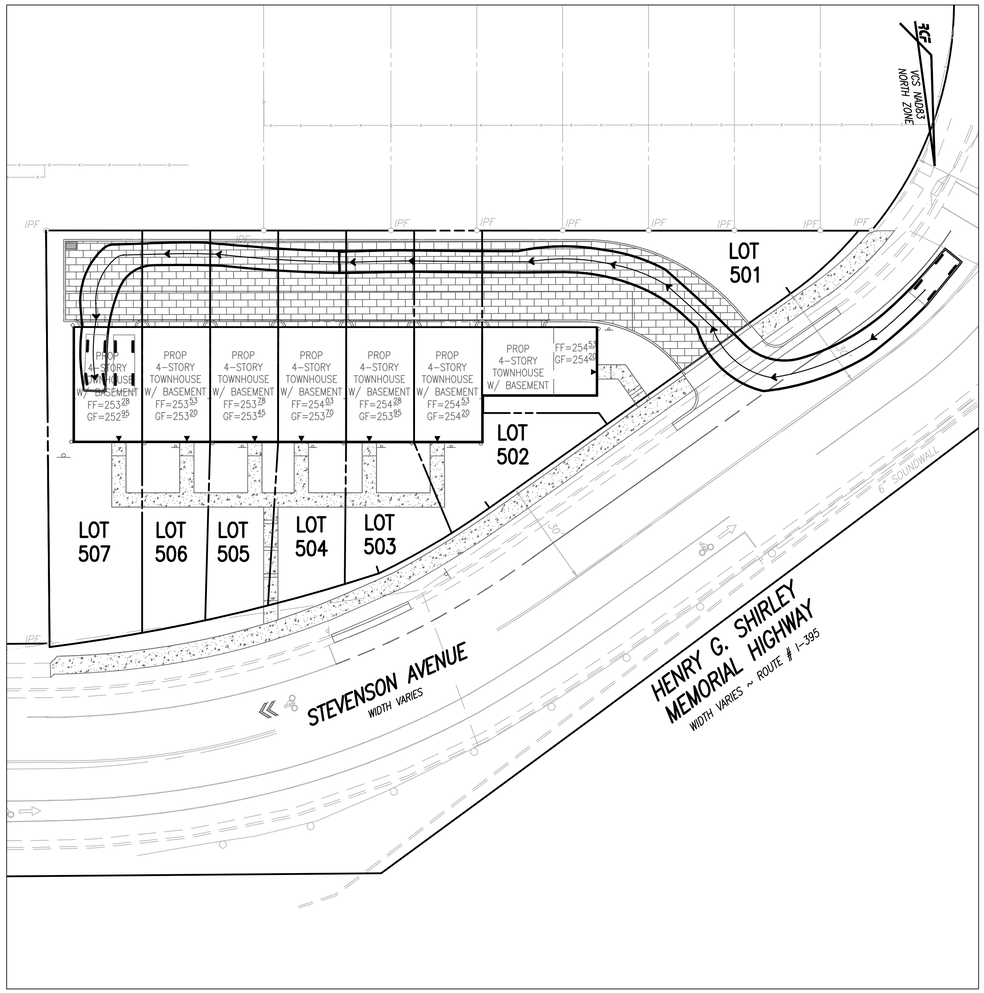
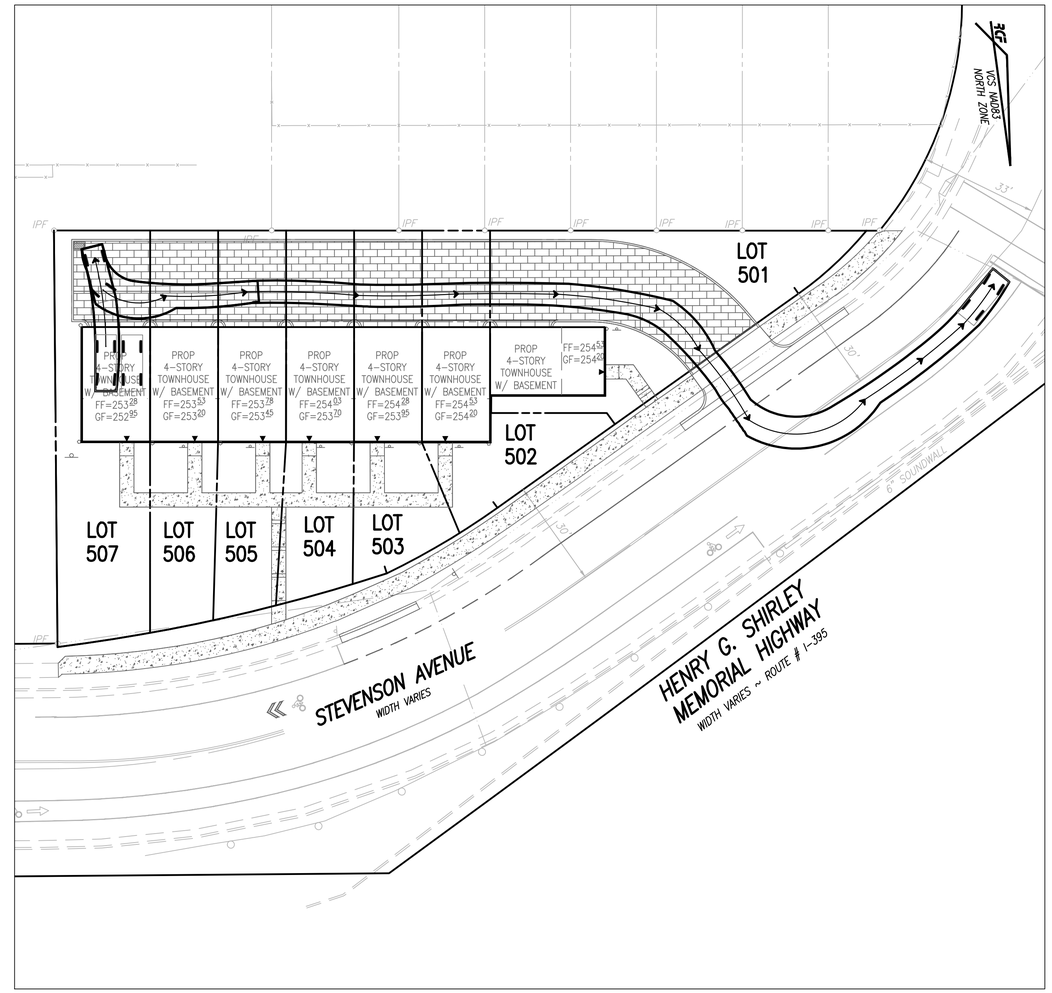


TURNING MOVEMENTS IN

SCALE: 1" = 20'

0' 20' 40'
SCALE: 1" = 20'



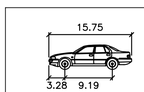
TURNING MOVEMENTS OUT

SCALE: 1" = 20'

0' 20' 40'
SCALE: 1" = 20'

REFUSE TRUCK NOTE:

TRASH CANS WILL BE STORED ON PRIVATE PROPERTY AND ROLLED TO THE TRASH ENCLOSURE ALONG THE STEVENSON AVENUE RIGHT-OF-WAY FOR TRASH PICK UP ON A WEEKLY BASIS; THEREFORE, NO REFUSE TRUCK TURNING MOVEMENTS ARE REQUIRED.



COMPACT CAR

	feet
Width	: 5.91
Track	: 5.74
Lock to Lock Time	: 6.0
Steering Angle	: 35.9

COMPACT CAR DETAIL

(NTS)

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TURNING MOVEMENTS

SHEET 13 OF 15
FILE: 21-52

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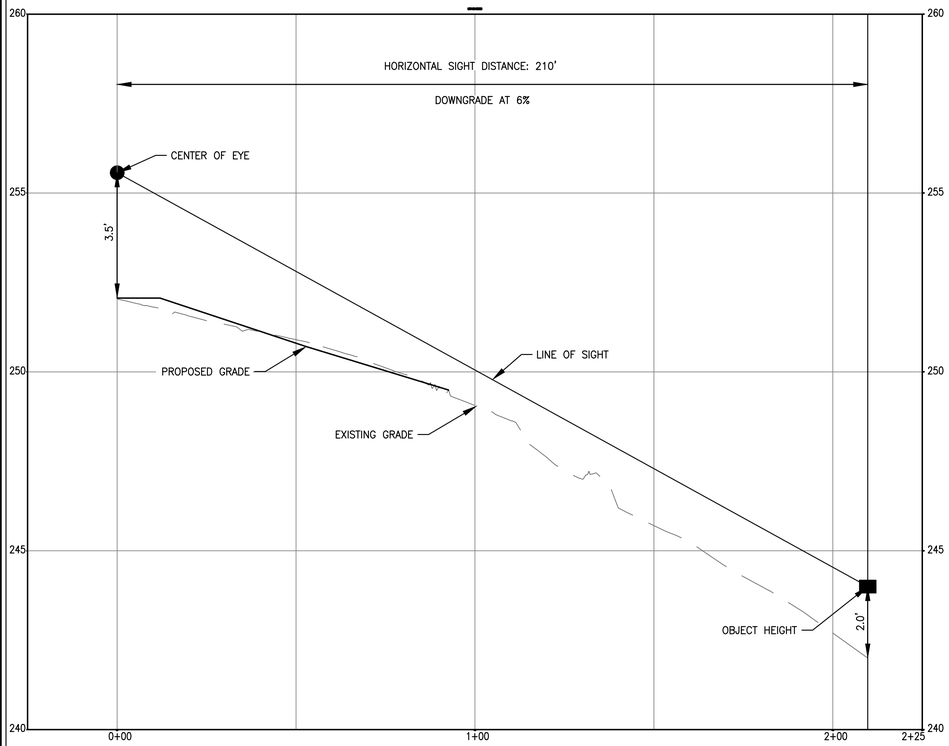
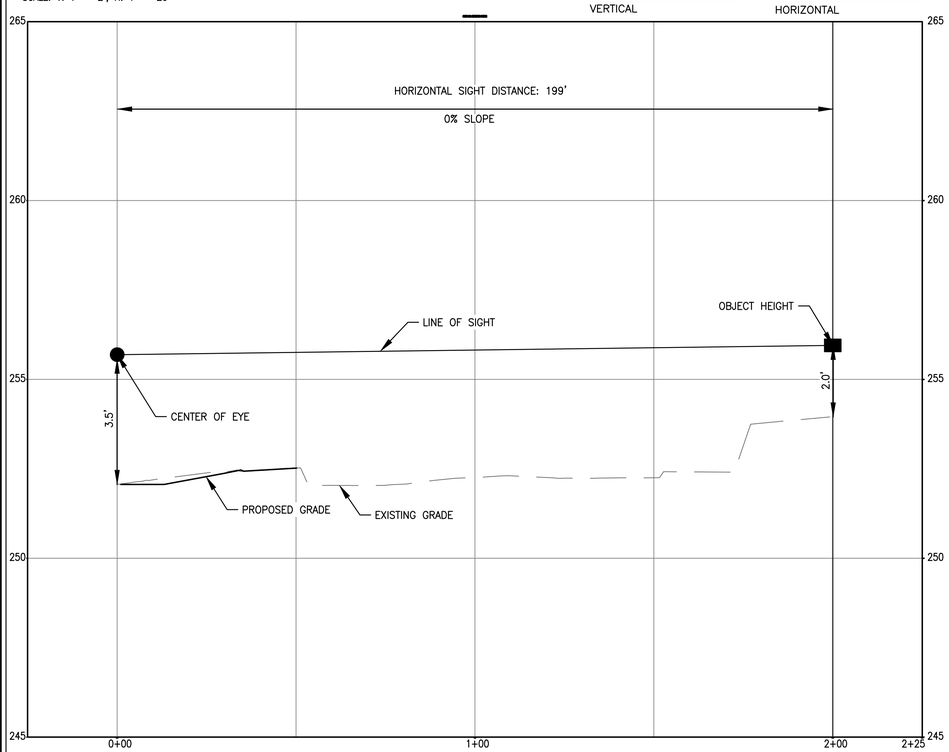


RIGHT SIGHT DISTANCE PROFILE
SCALE: V: 1" = 2', H: 1" = 20'

0' 2' 4' VERTICAL
0' 20' 40' HORIZONTAL



LEFT SIGHT DISTANCE PROFILE
SCALE: V: 1" = 2', H: 1" = 20'

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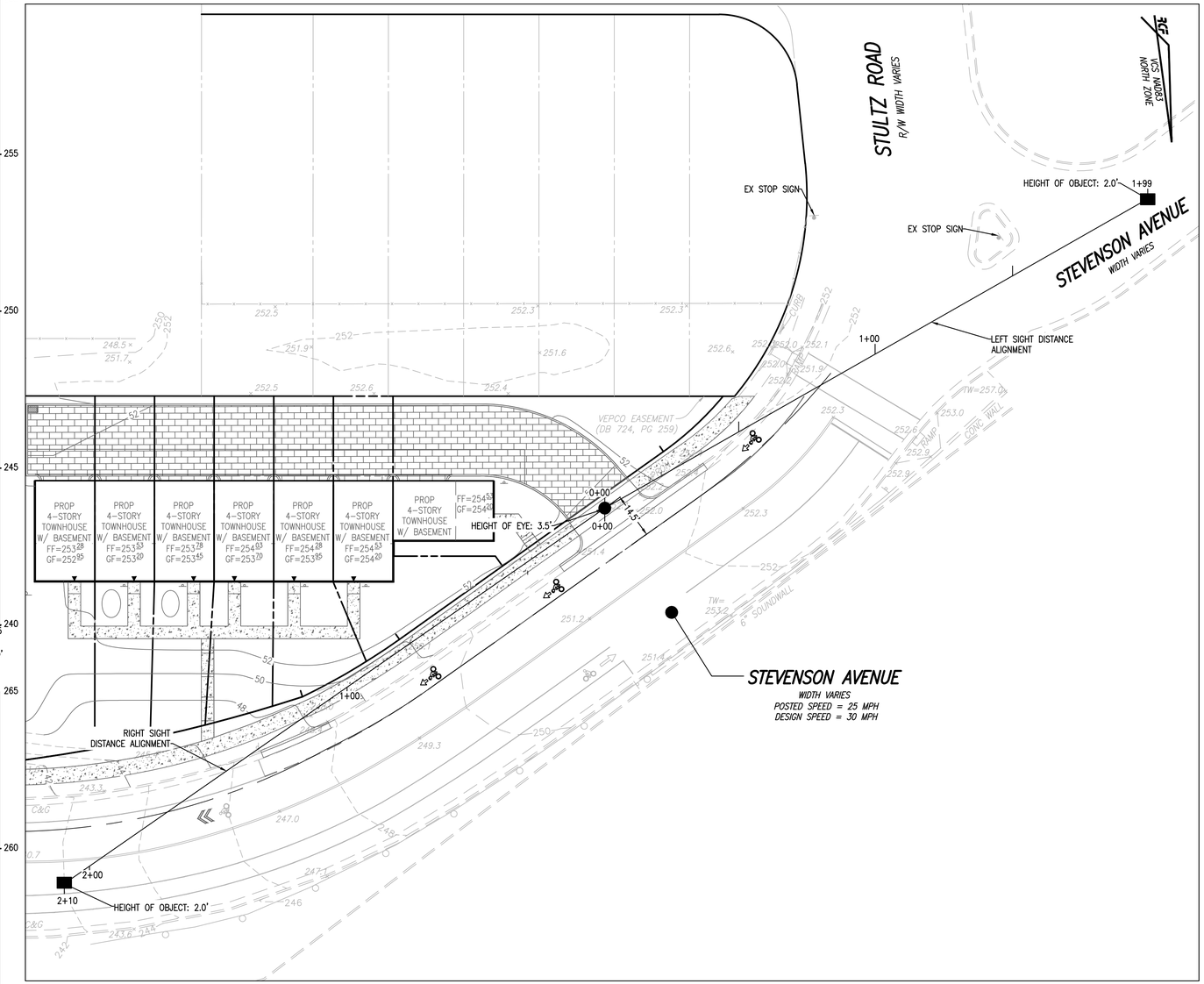

SIGHT DISTANCE PLAN VIEW
SCALE: 1" = 20'

0' 20' 40'

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DATE: SEPT 2022

SIGHT DISTANCE PLAN AND PROFILES

SHEET 14 OF 15

FILE: 21-52

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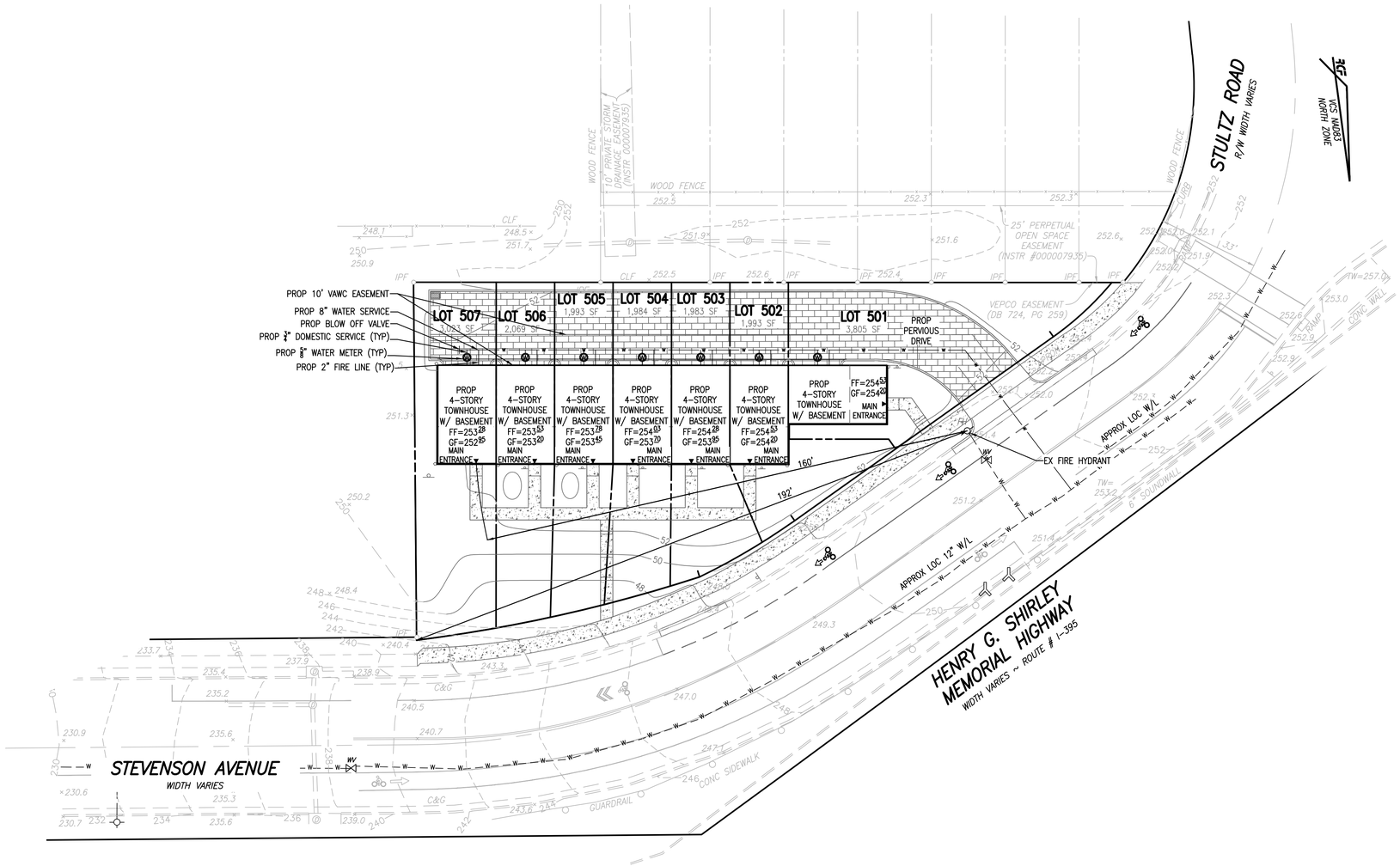

HATCH LEGEND

PROPOSED PERVIOUS PAVERS

PROPOSED CONCRETE

FIRE PROTECTION INFORMATION:

ALL NEW CONSTRUCTION SHALL COMPLY WITH THE CURRENT EDITION OF THE UNIFORM STATEWIDE BUILDING CODE (USBC).

1. A FIRE PREVENTION CODE PERMIT IS REQUIRED FOR THE PROPOSED OPERATION.
2. THE PROPOSED TOWNHOUSES ARE TO BE FULLY SPRINKLERED.
3. A FINAL FIRE FLOW ANALYSIS REPORT, IN ACCORDANCE WITH CITY STANDARDS AND PREPARED BY A LICENSED ENGINEER, IS TO BE SUBMITTED TO THE CITY OF ALEXANDRIA FIRE/EMS DEPARTMENT. VERIFICATION THAT THE PROPOSED INFRASTRUCTURE IS CAPABLE OF PROVIDING THE REQUIRED FIRE FLOW IS TO BE PROVIDED IN THE REPORT.

FIRE HYDRANT NOTE:

THE NEAREST FIRE HYDRANT IS SHOWN ON THIS SHEET, ALONG STEVENSON AVENUE. PER FIRE CODE SECTION 18.5.3, THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO THE CLOSEST POINT ON A BUILDING FOR A BUILDING THAT IS NOT A DETACHED ONE OR TWO FAMILY DWELLING IS 400'; THEREFORE, SINCE THE DISTANCE PROVIDED ON THIS DEVELOPMENT IS 160', NO FIRE HYDRANT INSTALLATION IS NEEDED. ADDITIONALLY, PER SECTION 4-2-21-C101.1.20 OF THE CITY CODE, THE MAXIMUM DISTANCE MEASURED FROM THE HYDRANT TO THE MOST REMOTE PART OF VEHICULAR ACCESS TO THE SITE IS 300 FEET. AS SHOWN, THE EXISTING HYDRANT IS APPROXIMATELY 192' FROM THE MOST REMOTE PART OF VEHICULAR ACCESS ALONG THE RIGHT-OF-WAY.

0' 20' 40'

BUILDING CODE ANALYSIS:

USE:	R5
USE GROUP:	TOWNHOUSES
TYPE OF CONSTRUCTION:	V-B
NUMBER OF STORIES:	4 STORIES
FLOOR AREA (1ST FLOOR):	568 SF (LOT 501) 559 SF EACH (LOT 502-507)
FLOOR AREA (2ND FLOOR):	533 SF (LOT 501) 528 SF EACH (LOT 502-507)
FLOOR AREA (3RD FLOOR):	457 SF (LOT 501) 452 SF EACH (LOT 502-507)
FLOOR AREA (4TH FLOOR):	273 SF (LOT 501) 255 SF EACH (LOT 502-507)
BUILDING HEIGHT:	45.0'
FIRE SUPPRESSION/DETECTION:	FULLY SPRINKLERED 13D (NO FDC REQUIRED)

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FIRE SAFETY PLAN

SHEET 15 OF 15

FILE: 21-52

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