BLOCK "A2" PRELIMINARY PLAN

OAKVILLE

ALEXANDRIA, VIRGINIA

PREPARED BY:

christopher consultants

engineering · surveying · land planning

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NARRATIVE DESCRIPTION OF DEVELOPMENT

THIS SITE IS BORDERED TO THE NORTH BY BLOCK A1; TO THE SOUTH BY FANNON STREET; TO THE EAST BY RICHMOND HIGHWAY; AND TO THE WEST BY OAKVILLE STREET, AS RELOCATED, THE SITE IS CURRENTLY ZONED COORDINATED DEVELOPMENT DISTRICT (CDD #24).

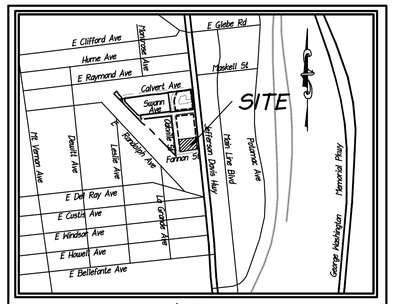
THE EXISTING SITE CONSISTS OF INDUSTRIAL/COMMERCIAL WAREHOUSE BUILDINGS.

THIS PROJECT PROPOSES A MEDICAL CARE FACILITY WITH BELOW GRADE PARKING AND ACCESSORY VALET PARKING.

VEHICULAR ACCESS TO THE BUILDING WILL BE FROM FANNON STREET. THE GARAGE ENTRANCE AND AMBULANCE ENTRANCE WILL BE LOCATED ON OAKVILLE STREET.

REQUESTED SPECIAL USE PERMITS/ZONING MODIFICATIONS/WAIVERS

1. DEVELOPMENT SPECIAL USE PERMIT WITH PRELIMINARY SITE PLAN FOR A MEDICAL CARE FACILITY WITH ACCESSORY VALET PARKING
2. TRANSPORTATION MANAGEMENT PLAN SPECIAL USE PERMIT
3. PARKING REDUCTION SPECIAL USE PERMIT
4. ENCROACHMENT FOR THE BUILDING CANOPY
5. SPECIAL USE PERMIT FOR AN ILLUMINATED ROOFTOP SIGN
6. MODIFICATION FOR HEIGHT TO SETBACK RATIO ON FANNON AND OAKVILLE STREETS (6-403)
7. MODIFICATION OF THE TREE CANOPY COVERAGE REQUIREMENT (7-2200)
8. WATER QUALITY VOLUME DEFAULT (WQVd) WAIVER (SEE SHEET C500)



VICINITY MAP

SCALE 1"= 1000'

DATE	REVISION

COMMONWEALTH OF VIRGINIA
JOHN L. HELMS
Lic. No.52485
12/14/2020
PROFESSIONAL ENGINEER

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INOVA HEALTH CARE SERVICES
C/O INOVA REALTY
8095 INNOVATION PARK DR.
BLDG 7D
FAIRFAX, VA 22031
(703) 698-2313

TRAFFIC ENGINEER
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11400 COMMERCE PARK DRIVE
RESTON, VA 20191
(703) 674-1300

CIVIL ENGINEER
christopher consultants, ltd.
9900 MAIN STREET
FOURTH FLOOR
FAIRFAX, VIRGINIA 22031
(703) 273-6820

ATTORNEY
WALSH, COLUCCI, LUBELEY & WALSH
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SUITE 1300
ARLINGTON, VA 22201
(703) 528-4700

OWNER
BRE/DP ALEXANDRIA, LLC
PO BOX 460169
HOUSTON, TX 77056
(267) 895-1722

LANDSCAPE ARCHITECT
LANDDESIGN
200 SOUTH PEYTON STREET
ALEXANDRIA, VA 22314
(703) 549-7784

ARCHITECT
BALLINGER
833 CHESTNUT STREET
SUITE 1400
PHILADELPHIA, PA 19107
(215) 446-0900

ARCHITECT
ENNEAD
1 WORLD TRADE CENTER
FOURTH FLOOR
NEW YORK, NY 10007
(212) 807-7171

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

DIRECTOR _____ DATE _____

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____

DIRECTOR _____ DATE _____

CHAIRMAN, PLANNING COMMISSION _____ DATE _____

DATE RECORDED _____

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

C100

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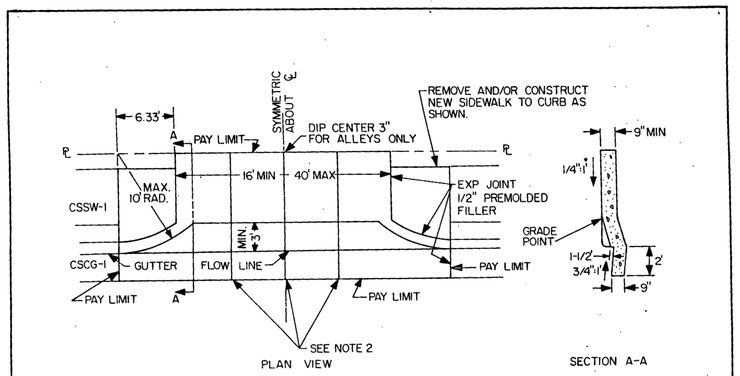

NOTES:
1. ENTRANCE IS POURED MONOLITHIC WITH RADIAL CURB AND FINISHED INTO SMOOTH TRANSITION.
2. PROVIDE KEYED JOINT AT ℄ AND INTERMEDIATE CONTRACTION JOINTS AT 1/4 OF ENTRANCE WIDTH, IF ENTRANCE EXCEEDS 24.
3. NEW CURB AND SIDEWALK GRADE IS TO CONTINUE THROUGH GRADE POINT AT 1/4"/'.
4. PAY QUANTITIES SQ.YD. COMPLETE.

REVISIONS:

TRANSPORTATION & ENVIRONMENTAL SERVICES DEPARTMENT
ALEXANDRIA VIRGINIA

ENTRANCE
INDUSTRIAL

CSET-1 | PAGE 30

Open Space Tabulations for CDD

Oakville Triangle
10/20/2020

Block	Total Area	Ground Level OS	Rooftop Amenity Space	Total OS	% Ground Level OS Provided	% Ground Level OS Required	% Rooftop Amenity Space Provided	% Rooftop Amenity Space Required	Total % Provided	Total % Required	Status
A1 - Resi/Retail	85,432	0	19,000	19,000	0.0%		22.2%		22.2%		Prelim DSUP
B - Mixed Use	62,590	0	14,500	14,500	0.0%		23.2%		23.2%		Prelim DSUP
C - Mixed Use [2]	117,010	51,000	15,800	66,800	43.6%		13.5%		57.1%		Concept 1 TBD
D1 - Open Space	3,033	2,800	0	2,800	92.3%	N/A	0.0%	N/A	92.3%	N/A	Concept 2 TBD
E - Open Space	5,573	3,500	0	3,500	62.8%		0.0%		62.8%		Concept 2 TBD
Mixed Use Totals	273,638	57,300	49,300	106,600	20.9%	20.0%	18.0%	15.0%	39.0%	35.0%	N/A
A2 - Healthplex	39,956	0	1,590	1,590	0.0%	0.0%	4.0%	0.0%	4.0%	0.0%	Prelim DSUP
D - Townhouses [3]	141,865	21,280	15,000	36,280	15.0%	15.0%	10.6%	0.0%	25.6%	15.0%	Concept 1 TBD
New Road A Outlot [4]	12,153	390	0	390	3.2%	N/A	0.0%	N/A	3.2%	N/A	Prelim DSUP
400 Calvert	24,384	2,628	0	2,628	10.8%	N/A	0.0%	N/A	10.8%	N/A	N/A
Total	491,996	81,598	65,890	147,488	16.6%	N/A	13.4%	N/A	30.0%	N/A	

1. Building layout and open space area and amounts shown on this exhibit is conceptual and subject to change at time of Preliminary Site Plan.

2. Block C open space includes public accessible open space area C1 (31,200 sf) and area C2 (8,000 sf)

3. Per Oakville Triangle & Route 1 Corridor Vision Plan and Urban Design Standards and Guidelines, Townhouse developments are to provide 15% ground level open space and are encouraged, but not required, to provide rooftop amenity space. This exhibit assumes 25% of the rooftops of the expected number of townhouses on Block D provide outdoor amenity space. Actual townhome layout, number of units and amount of rooftop amenity space is subject to change at time of Preliminary Site Plan.

4 - New Road A proposed to be located on outlet with no open space requirement.

5 - At-grade utilities may be provided within Block E and/or southern Block C open space. Location and screening to be determined at the time Preliminary Site Plan.

NOTE: SEE PARKING REQUIREMENT CHART ON THIS SHEET FOR DETAILED BREAKDOWN. THE GARAGE FOR THE ENTIRE BLOCK WILL BE BUILT WITH THE PRELIMINARY BLOCK A1 APPLICATION WHICH WILL INCLUDE PARKING FOR THE MEDICAL CARE FACILITY BUILT WITH THIS APPLICATION.

ST804 - Oakville Block A
10.15.2020

PARKING REQUIREMENTS BLOCK A (A1 & A2)

BLOCK A	GFA	STUDIOS	1 BR	2 BR	TOTAL UNITS	TOTAL # BEDROOMS	TOTAL MAX. PARKING REQ'D*	TOTAL MIN. PARKING REQ'D AFTER CREDIT**	PROVIDED	RATIO PROVIDED
MARKET RATE UNITS	NA	27	156	100	283	383	383	326	328	.85 space /bedroom
ADU	NA	39	0	2	41	NA	31	25	25	.60 space /unit
RETAIL	30,000						90	90	90	3 SPACES PER 1,000 SF
MEDICAL CARE FACILTY	93,012						481	481	290	3 spaces /1,000***
TOTAL					324		985	922	733	

RES. MARKET REQ'D =1 SPACE PER BEDROOM* RATIO CREDIT 1- (1 X (.10 +.05) = 0.85**
RES. ADU REQ'D =.75 SPACE PER UNIT * RATIO CREDIT 0.75 - (.10 + .05) = 0.60**
RETAIL REQ'D = 3 SPACES PER 1,000 SF
MEDICAL CARE FACILITY REQ'D = 5 SPACES PER 1,000 SF
(A) 10% credit for being within BRT walkshed + (B) 5% credit for being within ¼ mile of 4 or more bus routes .** Credit used for residential only.
Request modification for parking reduction***

PARKING PROVIDED	STANDARD	COMPACT	HC	TOTAL	GSF	SF/Space	COMPACT RATIO
G2/MEZZ.	62	12	0	74	33,248	449	16%
G1/1ST	41	11	4	56	28,989	518	20%
P1	204	68	16	288	117,329	407	24%
P2	241	74	0	315	117,329	372	23%
TOTAL	553	160	20	733	296,895	405	22%

ZONING TABULATIONS

SITE ADDRESSES & TAX MAP NUMBERS: 025.03-02-20 (2412 RICHMOND HIGHWAY), 025.03-02-19 (2514 RICHMOND HIGHWAY), 025.03-02-18 (2500 OAKVILLE ST)

EXISTING ZONE: COORDINATED DEVELOPMENT DISTRICT (CDD #24)

PROPOSED ZONE: COORDINATED DEVELOPMENT DISTRICT (CDD #24)

SMALL AREA PLAN DISTRICT: POTOMAC WEST

EXISTING SITE AREA:
025.03-02-20 - 38,379 S.F. OR 0.881 AC. (±80% IMPERVIOUS)
025.03-02-19 - 24,084 S.F. OR 0.553 AC. (±75% IMPERVIOUS)
025.03-02-18 - 84,967 S.F. OR 1.95 AC. (±95% IMPERVIOUS)
EXISTING OAKVILLE STREET RIGHT-OF-WAY

NOTE: BLOCK A CONSISTS OF PORTIONS OF THESE THREE PARCELS AND THE RIGHT-OF-WAY OF THE EXISTING OAKVILLE STREET.

PROPOSED SITE AREA: BLOCK A 125,389 S.F. OR 2.88 AC.
BLOCK A1 = 85,405 S.F OR 1.96 AC.
BLOCK A2 = 39,984 S.F. OR 0.92 AC.

EXISTING USE:
025.03-02-20 - VACANT LAND-INDUSTRIAL
025.03-02-19 - AUTO DEALERSHIP
025.03-02-18 - OFFICE/COMM WHSE

PROPOSED USE: MEDICAL CARE FACILITY WITH BELOW GRADE PARKING

OPEN SPACE REQUIRED: 0 S.F.

OPEN SPACE PROVIDED: 1,590 S.F. (ROOFTOP)

AVERAGE FINISHED GRADE: 43.12'

SETBACK REQUIRED: N/A

SETBACK PROVIDED: 0' (WEST), 0' (SOUTH), 0' (EAST)

FRONTAGE REQUIRED: N/A

FRONTAGE PROVIDED: 153' (WEST), 243' (SOUTH), 153' (EAST)

MAXIMUM BUILDING HEIGHT: 75'

PROPOSED BUILDING HEIGHT: 66.42'

GFA ALLOWED: MEDICAL CARE FACILITY - 115,000 SF

GFA PROPOSED: MEDICAL CARE FACILITY - 93,012 SF

NOTE: BELOW GRADE GARAGE IS 235,000 SF AND IS NOT INCLUDED IN THE GFA CALCULATION.

NOTE: GROSS FLOOR AREA (GFA) IS DEFINED AS THE SUM OF ALL GROSS HORIZONTAL AREAS UNDER A ROOF OR ROOFS. THESE AREAS ARE MEASURED FROM THE EXTERIOR FACES OF WALLS OR FROM THE CENTERLINE OF PARTY WALLS. ELEVATORS AND STAIR BULKHEADS, MULTI-STORY ATRIUMS AND SIMILAR VOLUMETRIC CONSTRUCTION , NOT INVOLVING FLOOR AREA SPACE ARE EXCLUDED. BELOW GRADE PARKING IS EXCLUDED FOR BLOCKS A, B, C AND D IN OAKVILLE. [DEFINITION FROM PAGE 22 OF OAKVILLE TRIANGLE & ROUTE 1 CORRIDOR VISION PLAN AND URBAN DESIGN STANDARDS & GUIDELINES]

PARKING REQUIRED: SEE CHART ON THIS SHEET

PARKING PROVIDED: 290*
*PROVIDED ON LEVEL G1 AND G2 IN BLOCK A2 AND A PORTION OF BLOCK A1. SEE PRELIMINARY PLAN FOR BLOCK A1.

APPROXIMATE TOTAL AREA DISTURBED: 1.14 AC OR 49,844 SF

EXISTING AVG. DAILY TRIPS: ENTIRE OAKVILLE DEVELOPMENT = 2,100 VPD

PROPOSED AVG. DAILY TRIPS: ENTIRE OAKVILLE DEVELOPMENT: 5,713 VPD
(SEE TRAFFIC STUDY FOR MORE INFO)

BLOCK A2 AM PEAK HR: 236 TRIPS
BLOCK A2 PM PEAK HR: 271 TRIPS

NOTES:

1. TO THE BEST OF OUR KNOWLEDGE THERE ARE AREAS ONSITE CONTAINING CONTAMINATED SOILS OR CONTAMINATED GROUNDWATER.
2. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO KNOWN UNDERGROUND STORAGE TANKS CURRENTLY LOCATED AT THE PROPERTY OR AREAS LOCATED WITHIN 1,000 FEET OF A SANITARY LANDFILL.
3. 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.
4. THIS PROJECT IS NOT LOCATED WITHIN A COMBINED SEWER AREA.
5. THIS SITE IS LOCATED IN THE POTOMAC RIVER WATERSHED.
6. TREE INVENTORY SHOWN ON THIS SHEET IS FOR THE ENTIRE OAKVILLE SITE. SEE SHEET C201 FOR CORRESPONDING NUMBERS AND LOCATIONS TO ONSITE TREES.
7. THIS PLAN IS NOT PART OF A FEDERAL UNDERTAKING.
8. CONTRACTOR SHALL ENSURE ALL DISCHARGES ARE IN ACCORDANCE WITH CITY OF ALEXANDRIA CODE TITLE 5, CHAPTER 6, ARTICLE B.
9. DEWATERING AND OTHER CONSTRUCTION RELATED DISCHARGE LIMITS TO THE SEWER SYSTEM ARE REGULATED BY ALEXRENEW PRETREATMENT. CONTRACTOR IS TO REQUIRED TO CONTACT ALEXRENEW'S PRETREATMENT COORDINATOR AT 703-549-3381 X2020.
10. 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.
11. 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.

ENVIRONMENTAL SITE ASSESSMENT

1. THERE ARE NO TIDAL WETLANDS, TIDAL SHORES, TRIBUTARY STREAMS, FLOODPLAINS, CONNECTED TIDAL WETLANDS, ISOLATED WETLANDS, HIGHLY ERODIBLE/PERMEABLE SOILS OR BUFFER AREAS ASSOCIATED WITH SHORES, STREAMS, OR WETLANDS LOCATED ON THIS SITE. FURTHER, THERE ARE NO WETLAND PERMITS REQUIRED FOR THIS DEVELOPMENT PROJECT. ADDITIONALLY THERE ARE NO KNOWN UNDERGROUND STORAGE TANKS OR AREAS OF GROUNDWATER CONTAMINATION ON THE SITE TO THE BEST OF OUR KNOWLEDGE.
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 CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE ALEXANDRIA NOISE CONTROL CODE TITLE 11, CHAPTER 5, WHICH PERMITS CONSTRUCTION ACTIVITIES TO OCCUR BETWEEN THE FOLLOWING HOURS:
   - MONDAY THROUGH FRIDAY FROM 7 AM TO 6 PM AND
   - SATURDAYS FROM 9 AM TO 6 PM.
   - NO CONSTRUCTION ACTIVITIES ARE PERMITTED ON SUNDAYS.

   PILE DRIVING IS FURTHER RESTRICTED TO THE FOLLOWING HOURS:

   - MONDAY THROUGH FRIDAY FROM 9 AM TO 6 PM AND
   - SATURDAYS FROM 10 AM TO 4 PM

EXISTING TREE INVENTORY - ONSITE

TREE #	SPECIES	SIZE (in)
141	PECAN	10
142	WILLOW OAK	16
143	WILLOW OAK	20
144	HONEY LOCUST	8
145	RED MAPLE	12
146	RED MAPLE	10
147	HONEY LOCUST	10
148	ELM	14
149	SILVER MAPLE	20
150	KWANZAN CHERRY	10
151	KWANZAN CHERRY	10
152	KWANZAN CHERRY	14
153	KWANZAN CHERRY	12
154	HONEY LOCUST	10
155	HONEY LOCUST	10
156	HONEY LOCUST	8
157	HONEY LOCUST	14
158	HONEY LOCUST	12
159	HONEY LOCUST	12
160	KWANZAN CHERRY	12
161	HONEY LOCUST	10
162	HONEY LOCUST	10
163	HONEY LOCUST	10
164	KWANZAN CHERRY	10
165	KWANZAN CHERRY	4
166	WILLOW OAK	10
167	HONEY LOCUST	8
168	KWANZAN CHERRY	8
169	HONEY LOCUST	8
170	KWANZAN CHERRY	8
171	HONEY LOCUST	8
172	HONEY LOCUST	4
173	HONEY LOCUST	8
174	HONEY LOCUST	10
175	KWANZAN CHERRY	10
176	KWANZAN CHERRY	8
177	KWANZAN CHERRY	8
178	KWANZAN CHERRY	10
179	PURPLE PLUM	10
180	GINKGO	8
181	DOGWOOD	5
182	DOGWOOD	3
183	DOGWOOD	5
184	DOGWOOD	5
185	DOGWOOD	5
186	GINKGO	5
187	PURPLE PLUM	10
188	HONEY LOCUST	8
189	HONEY LOCUST	12
190	KWANZAN CHERRY	5
191	WILLOW OAK	5
192	KWANZAN CHERRY	12
193	HONEY LOCUST	10
194	HONEY LOCUST	10
195	HONEY LOCUST	5
196	HONEY LOCUST	8
197	HONEY LOCUST	5
198	HONEY LOCUST	4
199	HONEY LOCUST	5
200	GINKGO	4
201	WILLOW OAK	5 (x2)
202	WILLOW OAK	11
203	WILLOW OAK	10
204	WILLOW OAK	8

NOTE:

SEE SHEET C201 FOR TREE LOCATIONS.

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

_____ DIRECTOR _____ DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____

_____ DIRECTOR _____ DATE

_____ CHAIRMAN, PLANNING COMMISSION _____ DATE

DATE RECORDED _____

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

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COMMONWEALTH OF VIRGINIA
JOHN L. HELMS
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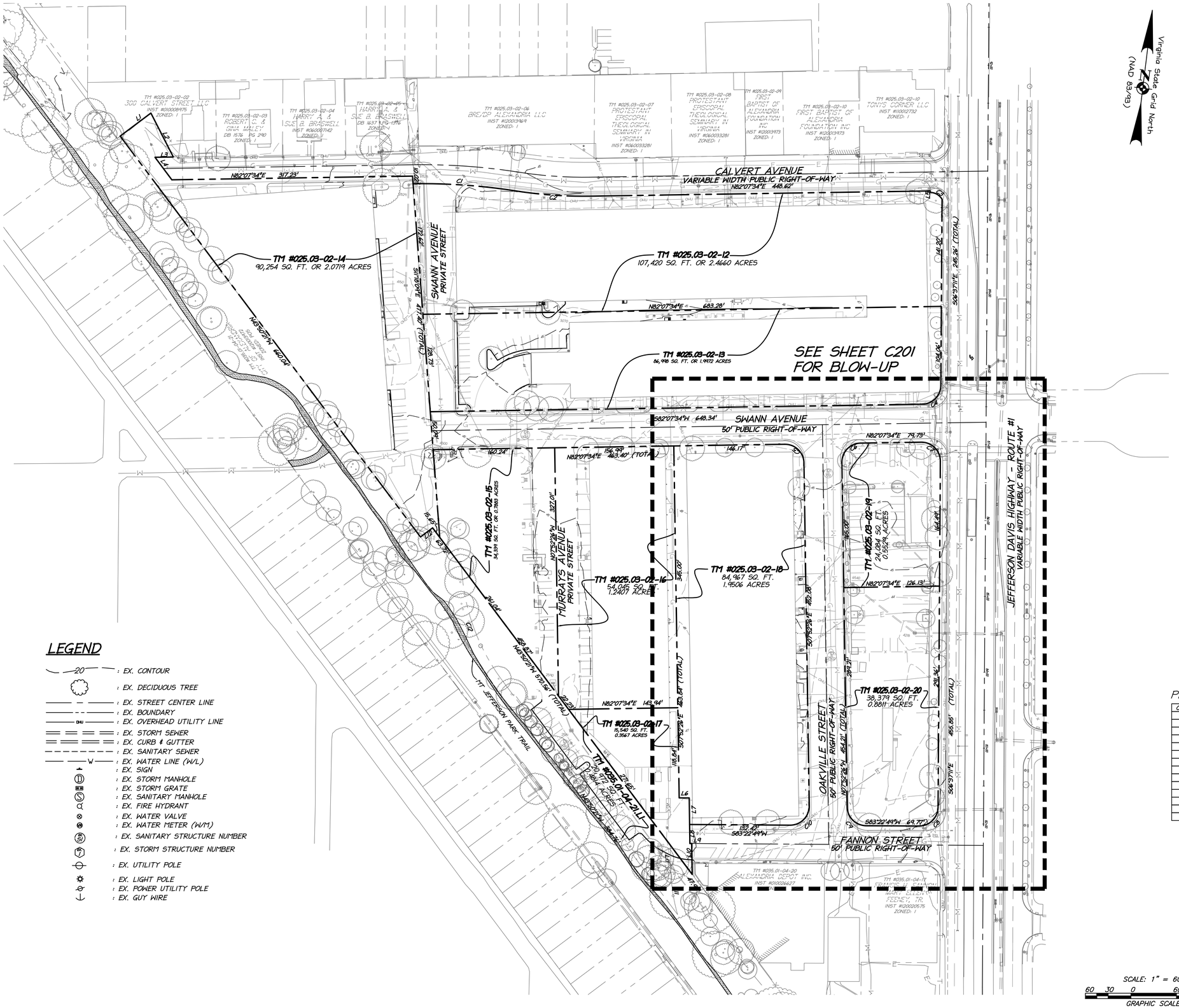
10/22/2020
PROFESSIONAL ENGINEER

NOTES AND TABULATIONS

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No. C101

110236



LEGEND

- : EX. CONTOUR
- : EX. DECIDUOUS TREE
- : EX. STREET CENTER LINE
- : EX. BOUNDARY
- : EX. OVERHEAD UTILITY LINE
- : EX. STORM SEWER
- : EX. CURB & GUTTER
- : EX. SANITARY SEWER
- : EX. WATER LINE (W/L)
- : EX. SIGN
- : EX. STORM MANHOLE
- : EX. STORM GRATE
- : EX. SANITARY MANHOLE
- : EX. FIRE HYDRANT
- : EX. WATER VALVE
- : EX. WATER METER (W/M)
- : EX. SANITARY STRUCTURE NUMBER
- : EX. STORM STRUCTURE NUMBER
- : EX. UTILITY POLE
- : EX. LIGHT POLE
- : EX. POWER UTILITY POLE
- : EX. GUY WIRE

SCALE: 1" = 60'

60 30 0 60 120

GRAPHIC SCALE

PROPERTY LINE TABLE

LINE	BEARING	DISTANCE
L1	N46°09'39"E	50.62'
L2	S34°01'59"E	65.00'
L3	S82°07'34"W	24.16'
L4	S43°50'21"E	37.06'
L5	S07°52'26"E	2.01'
L6	N83°22'49"E	13.24'
L7	S07°52'26"E	34.99'
L8	S07°52'26"E	25.01'
L9	N83°22'49"E	2.36'
L10	S07°52'26"E	40.68'
L11	S07°47'12"E	28.65'
L12	S46°09'39"W	19.99'

PROPERTY CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA	TANGENT	BEARING	CHORD
C1	800.00'	136.51'	9°46'35"	68.42'	N87°02'09"E	136.34'
C2	567.14'	96.98'	9°47'50"	48.61'	N87°01'30"E	96.86'
C3	18.00'	19.10'	60°47'51"	10.56'	S67°33'05"E	18.22'
C4	25.00'	38.70'	88°41'18"	24.43'	S37°42'15"W	34.95'
C5	25.00'	39.28'	90°00'54"	25.01'	S52°52'26"E	35.36'
C6	25.00'	39.27'	90°00'00"	25.00'	N37°07'34"E	35.36'
C7	25.00'	39.82'	91°15'15"	25.55'	S52°14'49"E	35.74'
C8	25.00'	39.27'	90°00'00"	25.00'	S38°22'49"W	35.36'
C9	25.00'	38.72'	88°44'45"	24.46'	N52°14'49"W	34.97'
C10	25.00'	39.76'	91°06'50"	25.49'	S37°49'05"W	35.70'
C11	242.81'	63.53'	14°59'29"	31.95'	S15°16'56"E	63.35'
C12	271.56'	162.43'	34°16'12"	83.72'	N26°42'15"W	160.02'
C13	850.00'	146.04'	9°46'35"	72.70'	N87°02'09"E	144.86'
C14	517.14'	88.43'	9°47'50"	44.32'	N87°01'30"E	88.32'

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DEPARTMENT OF PLANNING & ZONING

_____ _____
DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____

_____ _____
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_____ _____
CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED _____

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

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COMMONWEALTH OF VIRGINIA
JOHN L. HELMS
Lic. No.52485
10/22/2020
PROFESSIONAL ENGINEER

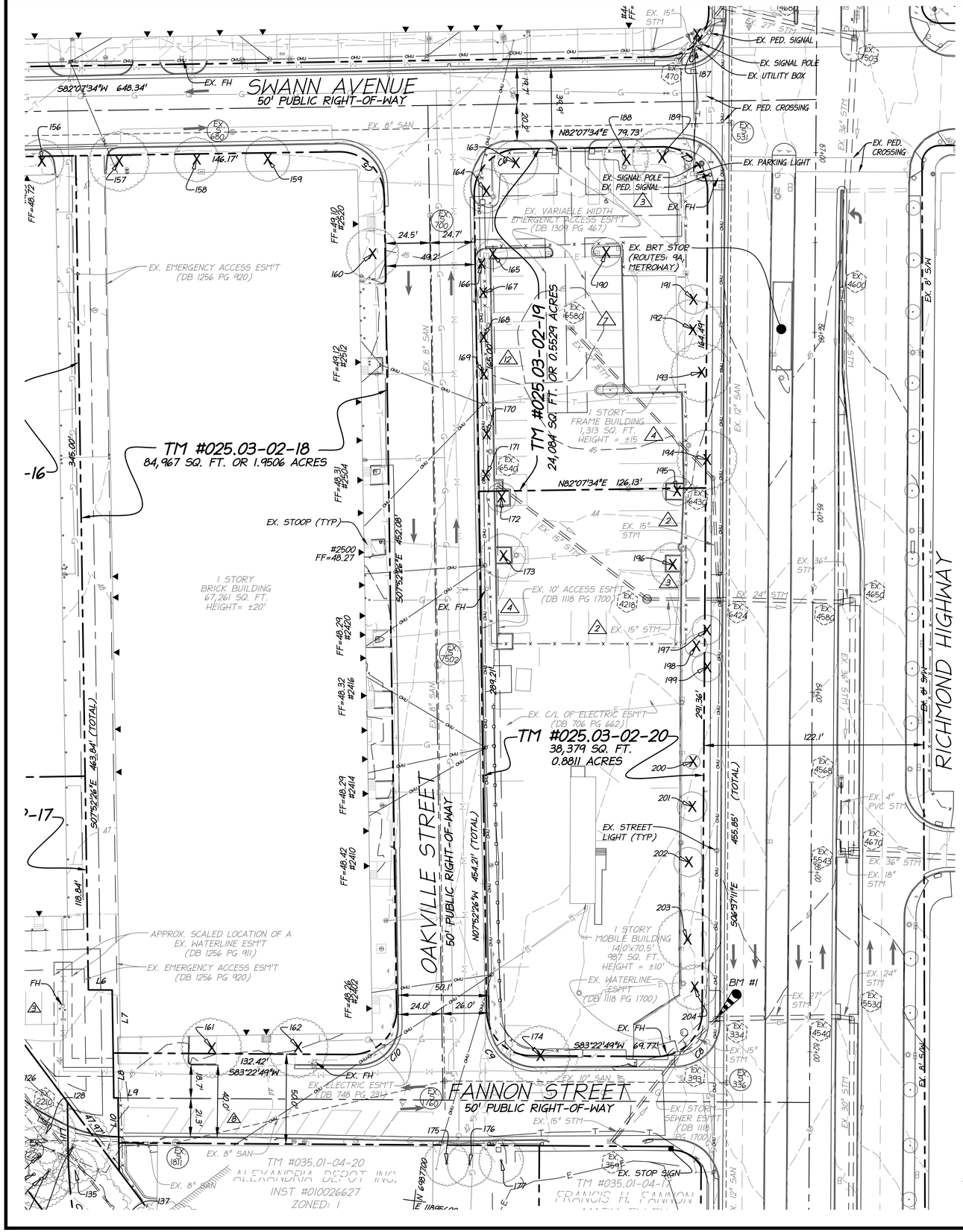
OVERALL EXISTING CONDITIONS PLAN

OAKVILLE BLOCK A2
PRELIMINARY PLAN

THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No. C200

110236



PROPERTY LINE TABLE

LINE	BEARING	DISTANCE
L1	N46°09'34"E	50.62'
L2	S34°01'59"E	65.00'
L3	S82°07'34"W	24.16'
L4	S43°50'21"E	37.06'
L5	S07°52'26"E	2.01'
L6	N83°22'49"E	13.24'
L7	S07°52'26"E	34.99'
L8	S07°52'26"E	25.01'
L9	N83°22'49"E	2.36'
L10	S07°52'26"E	40.68'
L11	S07°47'12"E	28.65'
L12	S46°09'34"W	19.99'

PROPERTY CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA	TANGENT	BEARING	CHORD
C1	800.00'	136.51'	9°46'35"	68.42'	N87°02'09"E	136.34'
C2	567.14'	96.98'	9°47'50"	48.61'	N87°01'30"E	96.86'
C3	18.00'	19.10'	60°47'51"	10.56'	S67°33'05"E	18.22'
C4	25.00'	38.70'	88°41'19"	24.43'	S37°42'15"W	34.95'
C5	25.00'	39.28'	90°00'54"	25.01'	S62°52'26"E	35.36'
C6	25.00'	39.27'	90°00'00"	25.00'	N37°07'34"E	35.36'
C7	25.00'	39.82'	91°15'15"	25.55'	S52°14'49"E	35.74'
C8	25.00'	39.27'	90°00'00"	25.00'	S38°22'49"W	35.36'
C9	25.00'	38.72'	88°44'45"	24.46'	N52°14'49"W	34.97'
C10	25.00'	39.76'	91°06'50"	25.49'	S37°49'05"W	35.70'
C11	242.81'	63.53'	14°59'29"	31.95'	S15°16'56"E	63.35'
C12	271.56'	162.43'	34°16'12"	83.72'	N26°45'15"W	160.02'
C13	850.00'	145.04'	9°46'35"	72.70'	N87°02'09"E	144.86'
C14	517.14'	88.43'	9°47'50"	44.32'	N87°01'30"E	88.32'

NOTE:
1. SEE SHEET C101 FOR EXISTING TREE DATA.
2. SEE SHEET C200 FOR LEGEND.

SANITARY SEWER STRUCTURE DATA

SAN MH 336
TOP=38.48
IN=30.10 10" CONC. FR 531
IN=30.78 10" LINED FR 1760
OUT=30.07 10" LINED TO 7505

SAN MH 531
TOP=45.57
IN=35.02 10" RCP FR 5322
IN=35.52 10" CLAY FR 680
OUT=34.92 10" CONC. TO 336

SAN MH 680
TOP=46.71
IN=36.91 4" CLAY FR 1440
OUT=38.88 10" CLAY TO 531

SAN MH 700
TOP=45.40
OUT=39.72 8" PVC TO 7502

SAN MH 1440
TOP=45.68
INVERT N/A - CLAY

SAN MH 1760
TOP=42.63
IN=37.23 LAT FR S
IN=37.13 8" RCP FR 7502
IN=37.13 8" RCP FR 1811
OUT=37.03 10" LINED TO 336

SAN MH 1811
TOP=44.81
IN=38.12 10" RCP FR 2220
OUT=38.10 10" RCP TO 1760

SAN MH 2220
TOP=51.05
IN=41.65 8" PVC FR 2580
OUT=41.55 8" PVC TO 1811

SAN MH 2580
TOP=45.18
IN=42.53 8" PVC FR N
OUT=42.51 8" PVC TO 2220

SAN MH 5322
TOP=46.27
IN=38.07 10" PVC FR N
IN=38.47 10" RCP FR 5990
OUT=37.97 10" RCP TO 531

SAN MH 5990
TOP=45.55

SAN MH 6785
TOP=44.87
IN=33.97 FR E
IN=33.97 FR W
IN=33.97 FR S
OUT=33.77 TO N

SAN MH 7502
TOP=43.65
IN=38.90 LAT FR E
IN=38.53 8" PVC FR 700
OUT=38.50 8" RCP TO 1760

SAN MH 7505
TOP=37.00
IN=27.55 10" PVC FR W
IN=27.30 10" LINED FR 336
OUT=27.25 10" LINED TO 756

SAN MH 7506
TOP=37.86
IN=32.16 FR W
IN=25.56 10" LINED FR 7505
OUT=25.46 10" LINED TO 756

SAN MH 7509
TOP=38.79
IN=24.94 10" PVC FR 7510

IN=24.94 10" PVC FR 7506
OUT=24.74 10" CONC TO 7518

SAN MH 7510
TOP=39.12
IN=28.22 FR W
IN=28.32 FR S
OUT=28.12 TO 7506

SAN MH 7511
TOP=38.76
IN=21.66 12" PVC FR 7514
OUT=21.56 12" PVC TO 7512

SAN MH 7512
TOP=39.76
IN=20.65 12" PVC FR 7511
OUT=20.57 12" PVC TO 7515

SAN MH 7514
TOP=37.40
IN=22.90 10" CONC FR 7518
OUT=22.80 12" PVC TO 7511

SAN MH 7515
TOP=40.26
IN=20.40 12" PVC FR 7512
OUT=20.30 12" PVC TO 7516

SAN MH 7518

STORM STRUCTURE DATA

STM CB 334
TOP=39.36
IN=34.36 15" RCP FR 393
OUT=32.67 27" RCP TO 4540

STM MH 359
TOP=40.01
FULL OF DEBRIS
NOT ACCESSIBLE

STM CB 393
TOP=39.56
IN=36.51 15" RCP FR 359
OUT=35.76 15" RCP TO 334

STM MH 425
TOP=46.04
COVERED
NOT ACCESSIBLE

STM CB 470
TOP=45.73
OUT=41.78 15" RCP TO 550

STM CB 550
TOP=45.95
IN=39.51 15" RCP FR 470
IN=38.50 24 RCP FR 425
OUT=38.46 27" RCP TO 7503

STM DI 2210
TOP=47.19
BOTTOM= 40.14
FULL OF DEBRIS

STM GI 2581
TOP=43.47
BOTTOM= 41.07
FULL OF DEBRIS

STM CB 2828
TOP=43.47
IN=39.81 15" RCP FR 2829
IN=39.89 15" RCP FR 2890
OUT=39.82 24" RCP TO 6220

STM MH 2829
TOP=43.69
IN=39.79 15" RCP FR 4150
OUT=39.72 15" RCP TO 2828

STM GI 2890
TOP=43.22
IN=40.07 12" PVC FR 2920
OUT=39.92 24" RCP TO 2828

STM CB 2920
TOP=44.00
IN=41.50 12" PVC FR 3070
OUT=41.45 12" PVC TO 2890

STM GI 2590
TOP=44.07
OUT=41.97 10" PVC TO 2581

STM GI 3070
TOP=43.60
OUT=42.35 12" PVC TO 2920

STM GI 4150
TOP=42.70
IN=40.55 12" RCP FR 4300
OUT=40.50 12" RCP TO 2829

STM GI 4215
TOP=42.18
IN=39.69 15" RCP FR 6540
OUT=39.51 15" RCP TO 6424

HEADWALL 4300
INV IN = 42.23 12" PVC TO 4.

STM CB 4540
TOP=39.14
IN=32.14 15" RCP FR 334
OUT=32.04 15" RCP TO 5530

STM MH 4568
TOP=41.33
FILTERRA TREEWELL
NOT ACCESSIBLE

STM CB 4580
TOP=43.04
IN=35.84 36" RCP FR 4600
IN=34.94 15" RCP FR 6424
OUT=34.84 42" RCP TO 4650

STM GI 4600
TOP=44.99
UNDER CONSTRUCTION
INACCESSIBLE

STM CB 4650
TOP=43.30
IN=34.90 42" RCP FR 4580
OUT=34.80 42" RCP TO 4670

STM CB 4670
TOP=40.90
IN=34.30 36" RCP FR 4650
IN=35.90 18" RCP FR 5543
OUT=34.20 36" RCP TO 7504

STM MH 4680
TOP=46.04
OUT=43.34 15" RCP TO 4870

STM MH 4810
TOP=46.82
FILTERRA TREEWELL
NOT ACCESSIBLE

STM MH 4820
TOP=46.65
IN=42.75 4" PVC FR 4810
OUT=42.60 15" RCP TO 4840

STM MH 4840
TOP=46.27
IN=42.17 15" RCP FR 4820
IN=42.37 4" PVC FR 4850
OUT=42.15 15" RCP TO 4900

STM CB 4850
TOP=46.30
FILTERRA TREEWELL
NOT ACCESSIBLE

STM CB 4870
TOP=46.33
IN=42.68 15" RCP FR 4680
OUT=42.63 15" RCP TO 4920

STM CB 4891
TOP=46.71
OUT=42.61 15" RCP TO 4900

STM CB 4900
TOP=46.53
IN=42.08 15" RCP FR 4891
IN=42.08 15" RCP FR 4840
OUT=42.02 15" RCP TO 4910

STM CB 4910
TOP=46.67
IN=41.62 15" RCP FR 4900
OUT=41.52 15" RCP TO 4920

STM CB 4920
TOP=46.39
IN=40.39 15" RCP FR 4910
IN=38.43 15" RCP FR 4870
OUT=40.33 18" RCP TO 7503

STM CB 5090
TOP=46.23
OUT=41.75 18" RCP TO 5320

STM MH 5320
TOP=46.18
IN=40.83 18" RCP FR 5350
IN=40.83 18" RCP FR 5330
IN=40.83 18" RCP FR 5090
OUT=40.78 18" RCP TO 425

STM CB 5330
TOP=46.35
OUT=41.75 18" RCP TO 5320

STM MH 5330
TOP=46.67
COVERED
INACCESSIBLE

STM CB 5502
TOP=36.84
FILTERRA TREEWELL
NOT ACCESSIBLE

STM CB 5510
TOP=37.35
IN=30.65 30" RCP FR 5530
IN=32.45 18" RCP FR 5640
OUT=30.55 30" RCP TO 5502

STM CB 5530
TOP=39.28
IN=32.01 24" RCP FR 4540
OUT=31.90 30" RCP TO 5510

STM CB 5543
TOP=40.73
IN=36.73 4" PVC FR 4568
OUT=36.08 18" RCP TO 4670

STM CB 5640
TOP=37.15
IN=33.15 4" PVC FR 5650
OUT=32.75 15" RCP TO 5510

STM CB 5650
TOP=37.51
FILTERRA TREEWELL
NOT ACCESSIBLE

STM GI 6220
TOP=42.23
IN=39.31 24" RCP FR 2828
IN=39.73 15" RCP FR 6240
OUT=39.23 24" RCP TO N

STM GI 6240
TOP=43.91
OUT=39.91 12" PVC TO 6220

STM GI 6424
TOP=43.10
IN=38.89 15" RCP FR 6430
IN=38.96 15" RCP FR 4218
OUT=38.56 24" RCP TO 4580

STM MH 6430
TOP=44.43
IN=39.18 15" RCP FR 6580
OUT=39.16 15" RCP TO 6424

STM MH 6540
TOP=44.69
COVERED
NOT ACCESSIBLE

STM MH 6580
TOP=43.97
COVERED
NOT ACCESSIBLE

STM CB 6763
TOP=46.69
OUT=43.54 TO N

STM CB 6842
TOP=46.68
OUT=43.73 TO S

STM DI 6974
TOP=44.76
OUT=41.76 18" CMP TO 7353

STM DI 7353
TOP=44.97
IN=40.94 18" CMP FR 6974
IN=42.27 15" CMP FR W
OUT=40.89 18" CMP TO 7400

STM DI 7400
TOP=45.94
IN=39.54 18" CMP FR 7353
OUT=39.44 18" CMP TO 7501

HEADWALL 7483
FULL OF DEBRIS
PIPE NOT VISIBLE

STM DI 7501
TOP=45.77
IN=38.32 18" CMP FR 7400
OUT=38.27 18" CMP TO S

STM MH 7503
TOP=45.83
IN=39.78 18" RCP FR 4920
IN=37.93 27" RCP FR 550
OUT=37.88 36" RCP TO 4600

STM MH 7504
TOP=40.79
IN=32.79 36" RCP FR 4670
OUT=29.69 36" RCP TO E

STM CB 7507
TOP=35.96
IN=29.06 30" RCP FR 5502
OUT=28.96 30" RCP TO S

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DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
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DIRECTOR _____ DATE _____
CHAIRMAN, PLANNING COMMISSION _____ DATE _____
DATE RECORDED _____
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COMMONWEALTH OF VIRGINIA
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10/22/2020
PROFESSIONAL ENGINEER

EXISTING CONDITIONS PLAN

OAKVILLE BLOCK A2
PRELIMINARY PLAN

THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No. C201

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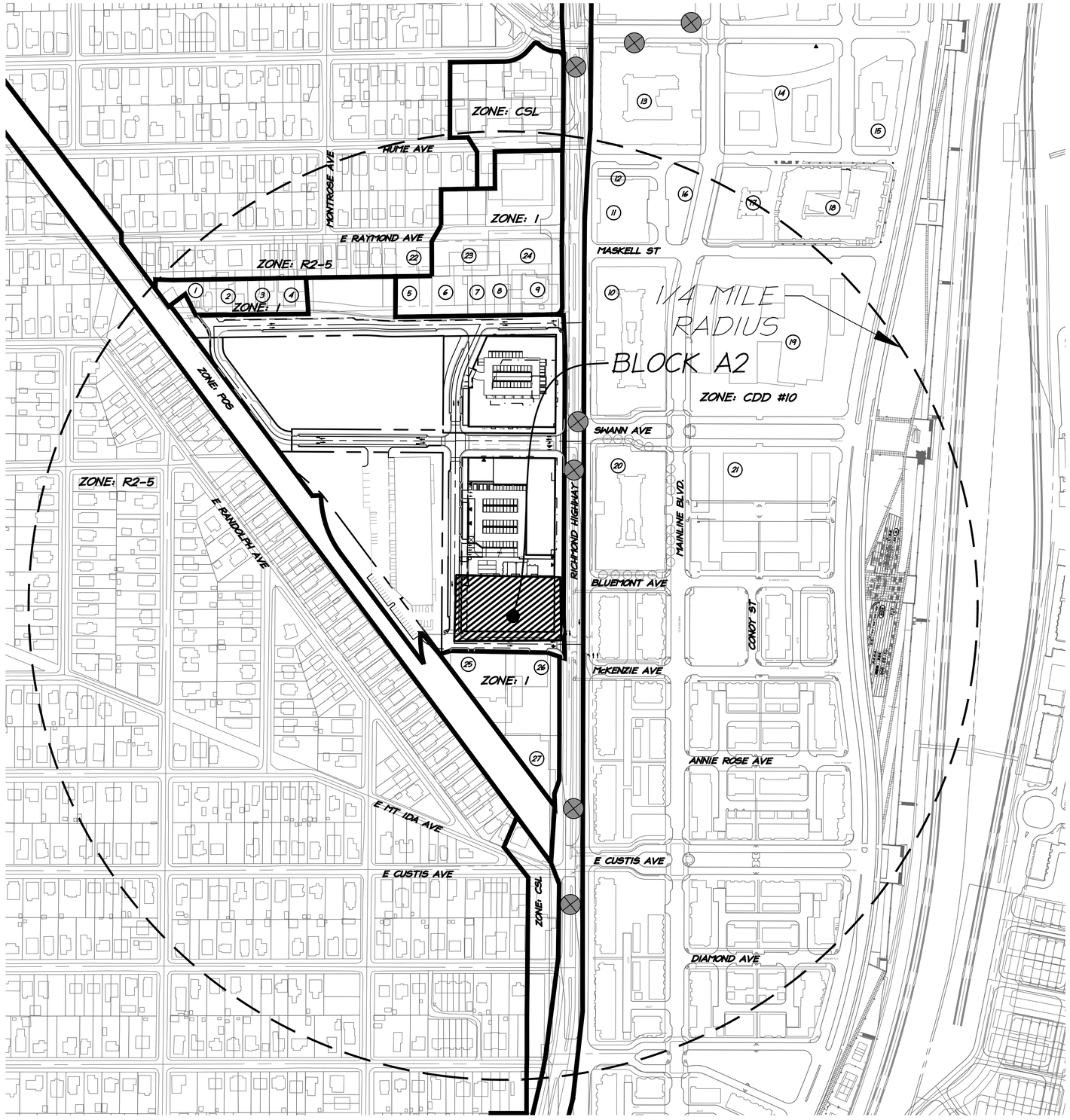

Virginia State Grid North (NAD 83/93)

LEGEND

- SITE
- (17) OWNER INFORMATION NUMBER
- BUS STOP (BRT)
- PROPERTY LINE
- STREET CENTER LINE
- ZONING LINE
- CONTEXTUAL BOUNDARY

OWNERSHIP INFORMATION

1. 300 CALVERT STREET LLC
   300 CALVERT AVE E
   USE: GENERAL COMMERCIAL
   ZONE: I
2. MALEY ROBERT C III OR GINA
   304 CALVERT AVE
   USE: GENERAL COMMERCIAL
   ZONE: I
3. BRASWELL HARRY A OR SUE B
   308 CALVERT AVE
   USE: OFFICE/COMMERCIAL WAREHOUSE
   ZONE: I
4. BRASWELL HARRY A OR SUE B
   312 CALVERT AVE
   USE: OFFICE/COMMERCIAL WAREHOUSE
   ZONE: I
5. 410-420 CALVERT AVENUE LLC
   410 CALVERT AVE
   USE: OFFICE COMMERCIAL WAREHOUSE
   ZONE: I
6. 410-420 CALVERT AVENUE LLC
   420 CALVERT AVE
   USE: OFFICE COMMERCIAL WAREHOUSE
   ZONE: I
7. FIRST BAPTIST OF ALEXANDRIA FOUNDATION INC
   434 CALVERT AVE
   USE: VACANT LANE-INDUSTRIAL
   ZONE: I
8. FIRST BAPTIST OF ALEXANDRIA FOUNDATION INC
   446 CALVERT AVE
   USE: OFFICE/COMMERCIAL WAREHOUSE
   ZONE: I
9. TONYS CORNER LLC
   2700 JEFFERSON DAVIS HY
   USE: VACANT LAND COMMERCIAL
   ZONE: I
10. POTOMAC YARD DEVELOPMENT LLC
    2600 MAIN LINE BV
    USE: VACANT LAND COMMERCIAL
    ZONE: CDD #10
11. STATION AT POTOMAC YARD CONDOMINIUM
    2801 JEFFERSON DAVIS HY
    USE: CONDO MASTER CARDS
    ZONE: CDD #10
12. LBG PARCEL H LLC
    601 SEATON AV
    USE: VACANT LAND COMMERCIAL
    ZONE: CDD #10
13. NOTCH 8 RESIDENTIAL LLC
    2900 MAIN LINE BV
    USE: MED RISE ELEV (4-6S)
    ZONE: CDD#10
14. LBG PARCEL E LLC
    2901 MAIN LINE BV
    USE: VACANT LAND COMMERCIAL
    ZONE: CDD #10
15. LBG PARCEL B LLC
    2900 POTOMAC AV
    USE: VACANT LAND COMMERCIAL
    ZONE: CDD #10
16. POTOMAC YARD HOMEOWNERS ASSOCIATION INC
    2802 MAIN LINE BV
    USE: VACANT LAND COMMERCIAL
    ZONE: CDD #10
17. GATEWAY RESIDENCES AT EXCHANGE LLC
    701 SEATON AV
    USE: MED RISE ELEV (4-6S)
    ZONE: CDD #10
18. GATEWAY RESIDENCES AT EXCHANGE LLC
    731 SEATON AV
    USE: MED RISE ELEV (4-6S)
    ZONE: CDD #10
19. POTOMAC YARD DEVELOPMENT LLC
    2601 MAIN LINE BV
    USE: VACANT LAND COMMERCIAL
    ZONE: CDD #10
20. POTOMAC YARD APARTMENTS LLC
    2500 MAIN LINE BV
    USE: MED RISE ELEV (4-6S)
    ZONE: CDD #10
21. POTOMAC YARD DEVELOPMENT LLC
    MAIN LINE BV
    USE: VACANT LAND-RESID
    ZONE: CDD #10
22. POTOMAC FLATS CONDOMINIUM
    409 E RAYMOND AV
    USE: CONDO MASTER CARDS
    ZONE: R 2-5
23. SKINKER THOMAS C AND MARJORIE B TR
    415 E RAYMOND AV
    USE: OFFICE/COMMERCIAL WAREHOUS
    ZONE: I
24. TONYS CORNER LLC
    2706 JEFFERSON DAVIS HY
    USE: SUB-PARCEL
    ZONE: I
25. ALEXANDRIA DEPOT INC
    405 FANNON ST
    USE: OFFICE/COMMERCIAL WAREHOUSE
    ZONE: I
26. FANNON FRANCIS H III FEENEY MARY
    2320 JEFFERSON DAVIS HY
    USE: REPAIR SERVICES
    ZONE: I

NOTE:
1. TRANSIT STOPS FOR THE BRT ARE LOCATED IN THE MIDDLE OF ROUTE 1.

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COMMONWEALTH OF VIRGINIA
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10/22/2020
PROFESSIONAL ENGINEER

CONTEXTUAL PLAN

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No.
C202

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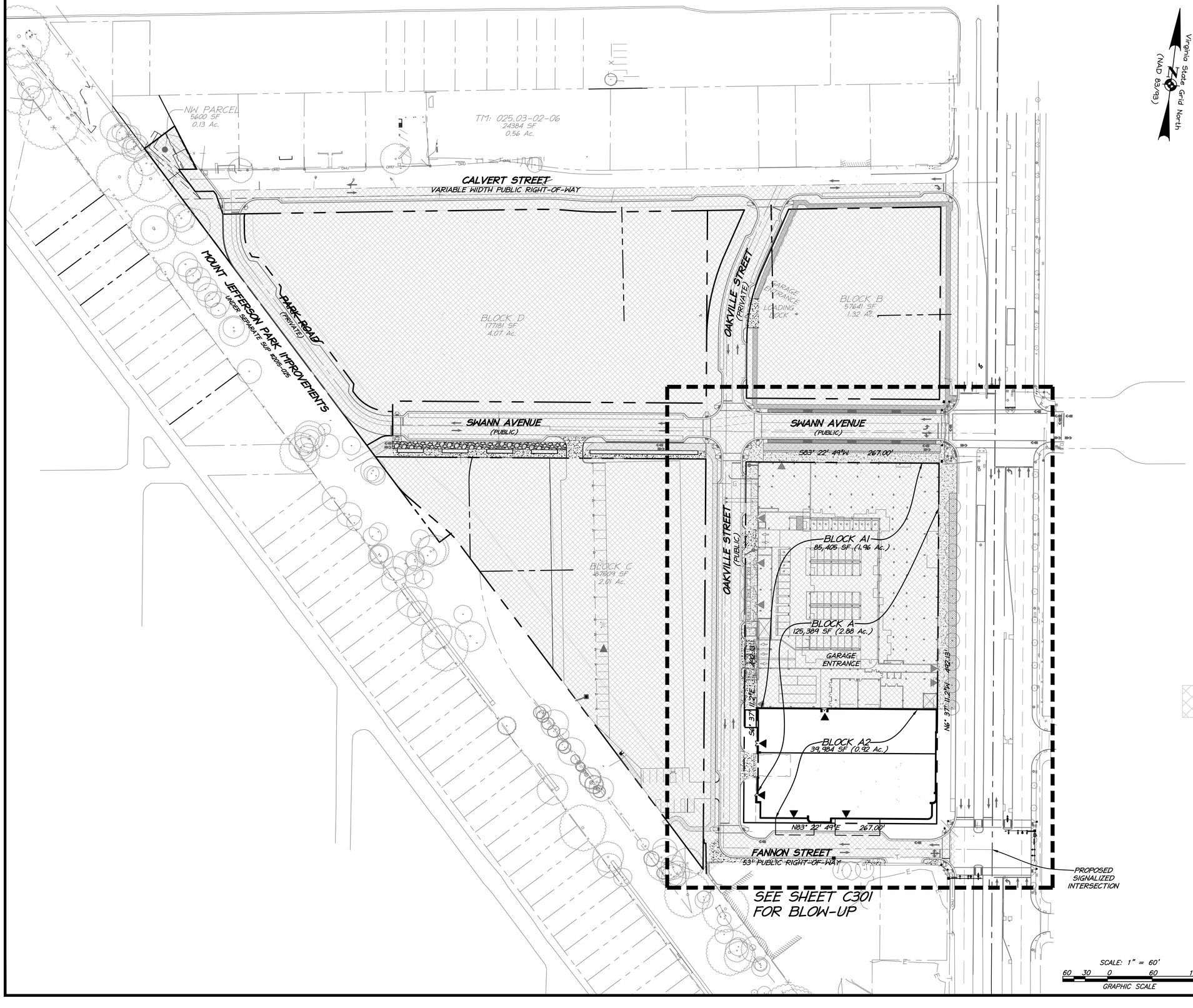

NOTES:
1. WITH THE A1 APPLICATION, A TWO LEVEL BELOW GRADE GARAGE IS PROPOSED BENEATH BOTH BUILDINGS A1 AND A2.
2. THE LOADING AND GARAGE ENTRANCE IS SHARED WITH BUILDING A1.
3. SEE PROPOSED OAKVILLE INFRASTRUCTURE FSP.

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COMMONWEALTH OF VIRGINIA
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10/22/2020
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OVERALL PRELIMINARY SITE PLAN

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
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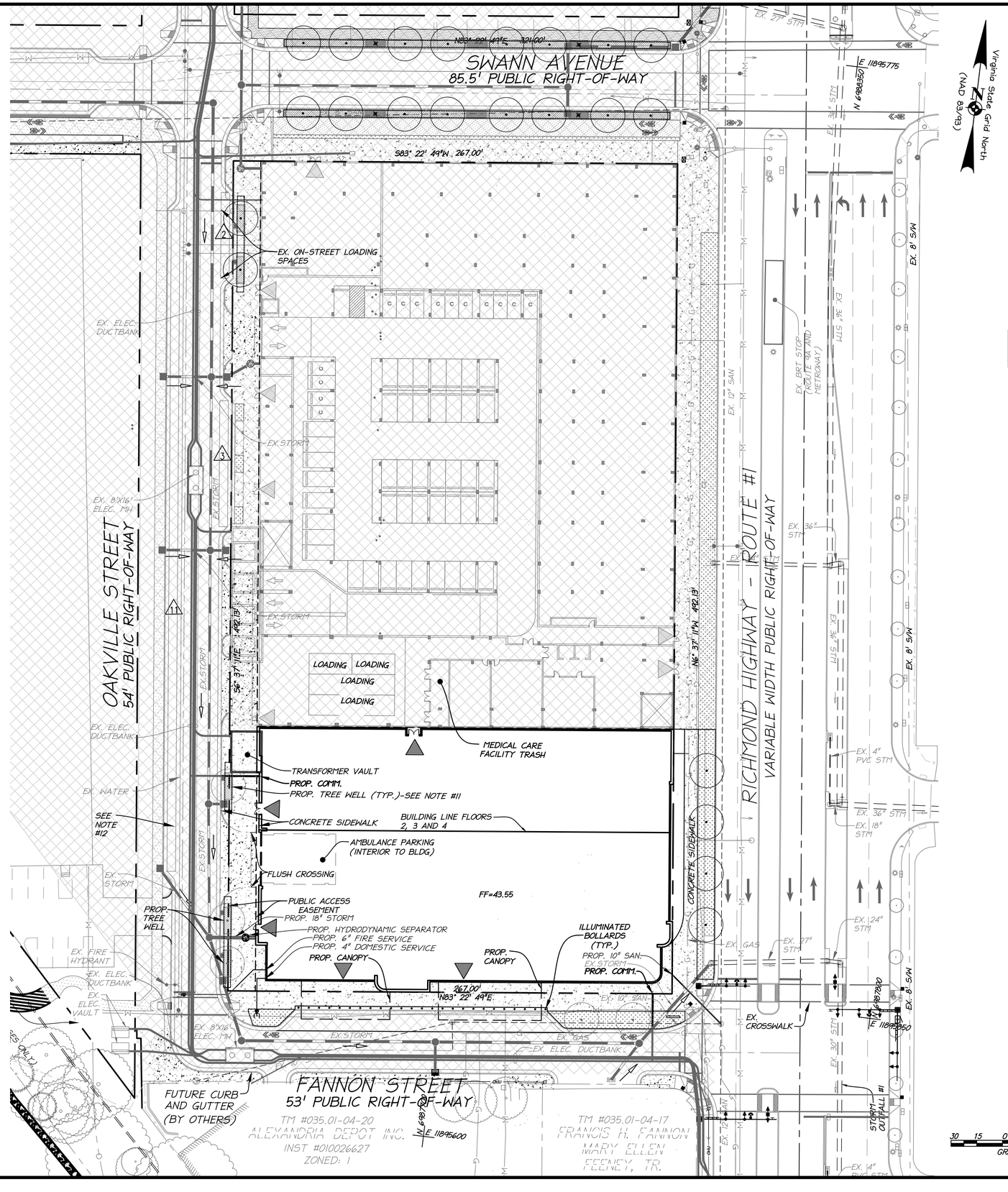
C300

110236



30 15 0 30 60
GRAPHIC SCALE
1" = 30'

LEGEND

△	DENOTES NUMBER OF STANDARD PARKING SPACES
═	CURB AND GUTTER
─	HEADER CURB
— —	CENTERLINE OF STREET
— - —	PROPERTY BOUNDARY
━	PROPOSED BUILDING OUTLINE
▲	PROPOSED BUILDING ENTRANCE
▨	AREA OF OAKVILLE THAT IS NOT INCLUDED WITH THIS APPLICATION

NOTES:

1. ALL INFRASTRUCTURE WORK (ROADS, UTILITIES, AND NEW TRAFFIC SIGNAL IMPROVEMENTS AT THE INTERSECTION OF FANNON STREET AND ROUTE 1) SHOWN AROUND BLOCK A2 IS PROPOSED WITH THE OAKVILLE INFRASTRUCTURE FINAL SITE PLAN.
2. ALL DIMENSIONS NEAR THE BUILDING/PROPERTY LINE ARE ASSUMED TO BE TO THE PROPERTY LINE UNLESS OTHERWISE NOTED BY A 'BLDG' LABEL.
3. PARKING GARAGE BELOW INOVA HEALTHPLEX IS PROPOSED WITH BLOCK A1.
4. THE APPROXIMATE TOTAL DISTURBED AREA FOR THIS SITE IS 1.16 AC.
5. ALL VEHICULAR ENTRANCES ALONG OAKVILLE STREET ARE FLUSH, REFER TO DETAIL ON SHEET C101.
6. THE TRAFFIC VOLUME AT THE SHARED GARAGE ENTRANCE ON BLOCK A1 IS 1,077 VPD.
7. PROPOSED CANOPIES ARE 15FT IN HEIGHT.
8. TREES SHOWN ALONG OAKVILLE STREET ARE PROPOSED WITH THE OAKVILLE INFRASTRUCTURE FINAL SITE PLAN.
9. SIDEWALKS ALONG OAKVILLE STREET WILL BE PRIVATELY MAINTAINED.
10. PROPOSED HYDRODYNAMIC SEPARATOR LOCATION SUBJECT TO CHANGE WITH FINAL SITE PLAN.
11. PROPOSED TREE WELLS WILL BE PRIVATELY MAINTAINED.
12. SIGNAGE WILL BE PROVIDED PROVIDED AT FINAL SITE PLAN TO HAVE AN 80' AREA DEDICATED FOR FIRE TRUCK PARKING. THIS AREA IS TEMPORARY AND WILL BE RELOCATED SOUTH TO ITS PERMANENT CONDITION ONCE BLOCK C IS REDEVELOPED.

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PRELIMINARY SITE PLAN

OAKVILLE BLOCK A2
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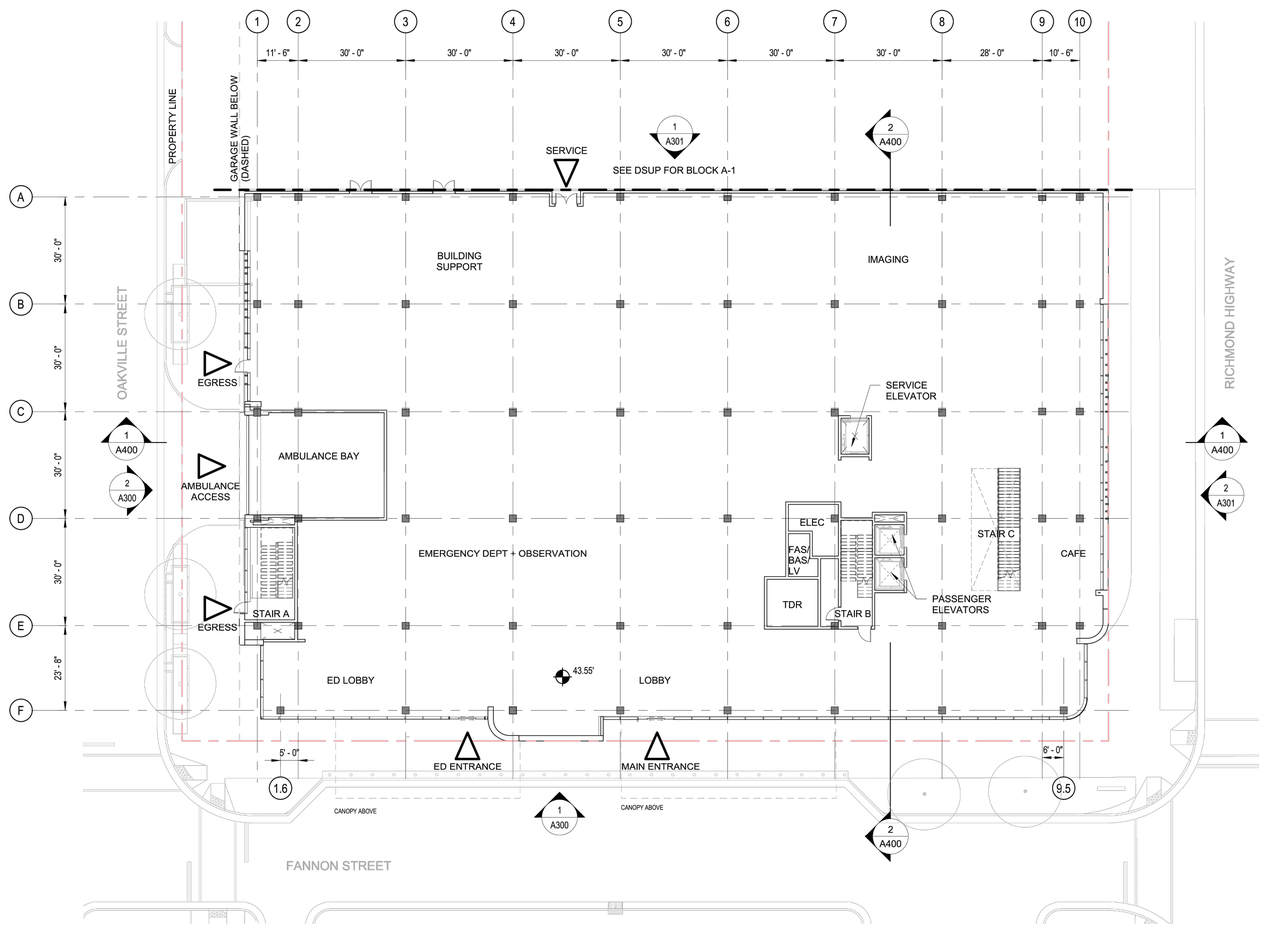
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No.
C301

110236



1" = 20'-0" 1 FLOOR PLAN
GROUND FLOOR

Virginia State Grid North (NAD 83/93)

20 10 0 20 40
GRAPHIC SCALE
1" = 20'

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

christopher consultants
9900 main street (suite 400) · fairfax, va 22031
phone 703.273.6820 · fax 703.273.6820

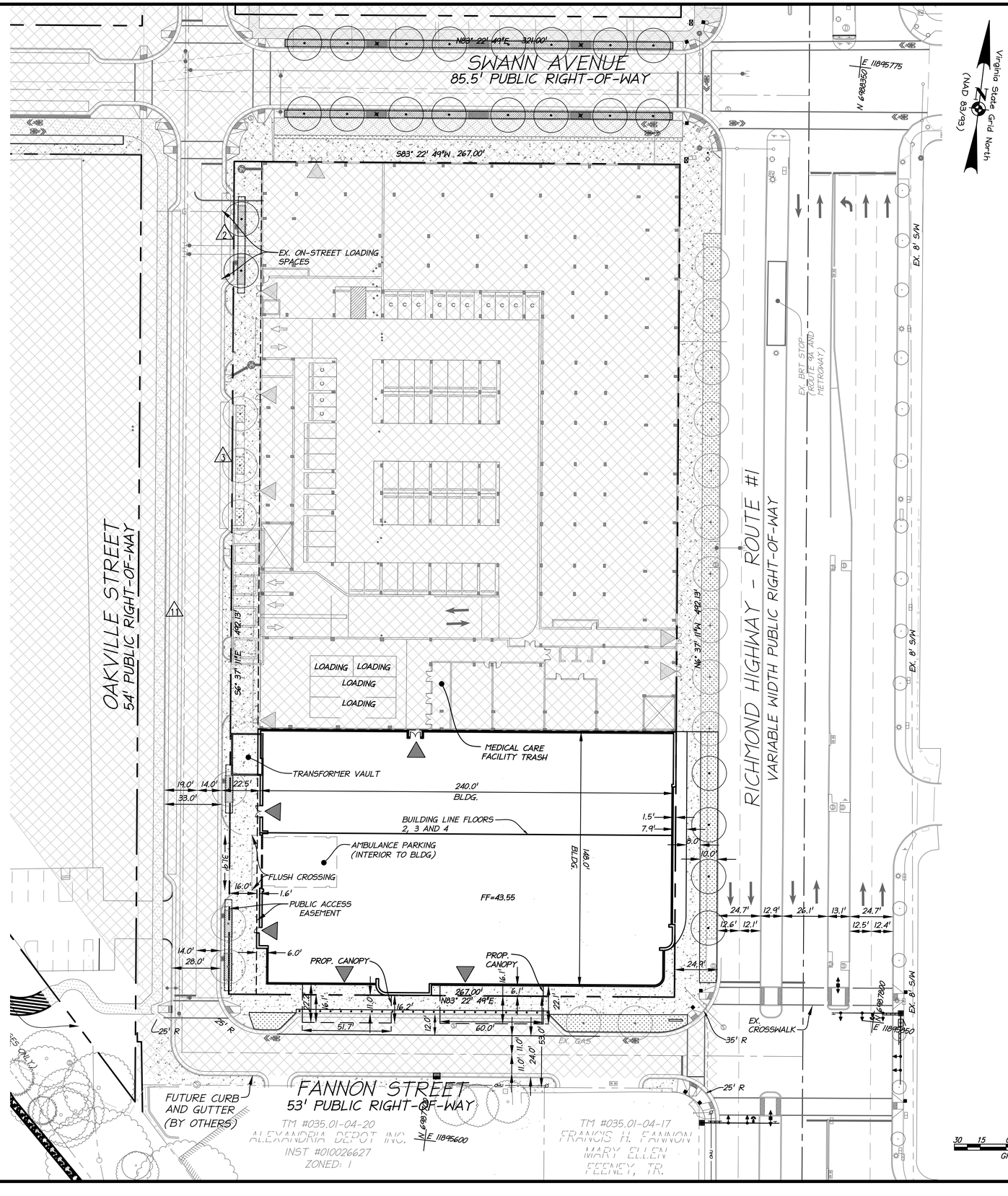
COMMONWEALTH OF VIRGINIA
JOHN L. HELMS
Lic. No.52485
10/22/2020
PROFESSIONAL ENGINEER

GROUND FLOOR USES

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No.
C301A

110236



LEGEND

- # — DENOTES NUMBER OF STANDARD PARKING SPACES
- CURB AND GUTTER
- HEADER CURB
- CENTERLINE OF STREET
- PROPERTY BOUNDARY
- PROPOSED BUILDING OUTLINE
- PROPOSED BUILDING ENTRANCE

NOTES:

1. ALL INFRASTRUCTURE WORK (ROADS AND UTILITIES) SHOWN AROUND BLOCK A2 IS PROPOSED WITH THE OAKVILLE INFRASTRUCTURE FINAL SITE PLAN.
2. ALL DIMENSIONS NEAR THE BUILDING/PROPERTY LINE ARE ASSUMED TO BE TO THE PROPERTY LINE UNLESS OTHERWISE NOTED BY A 'BLDG' LABEL.
3. PARKING GARAGE BELOW INOVA HEALTHPLEX IS PROPOSED WITH BLOCK A1.
4. THE APPROXIMATE TOTAL DISTURBED AREA FOR THIS SITE IS 1.16 AC.

APPROVED
SPECIAL USE PERMIT NO. _____
DEPARTMENT OF PLANNING & ZONING
DIRECTOR — DATE
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____
DIRECTOR — DATE
CHAIRMAN, PLANNING COMMISSION — DATE
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10/22/2020
PROFESSIONAL ENGINEER

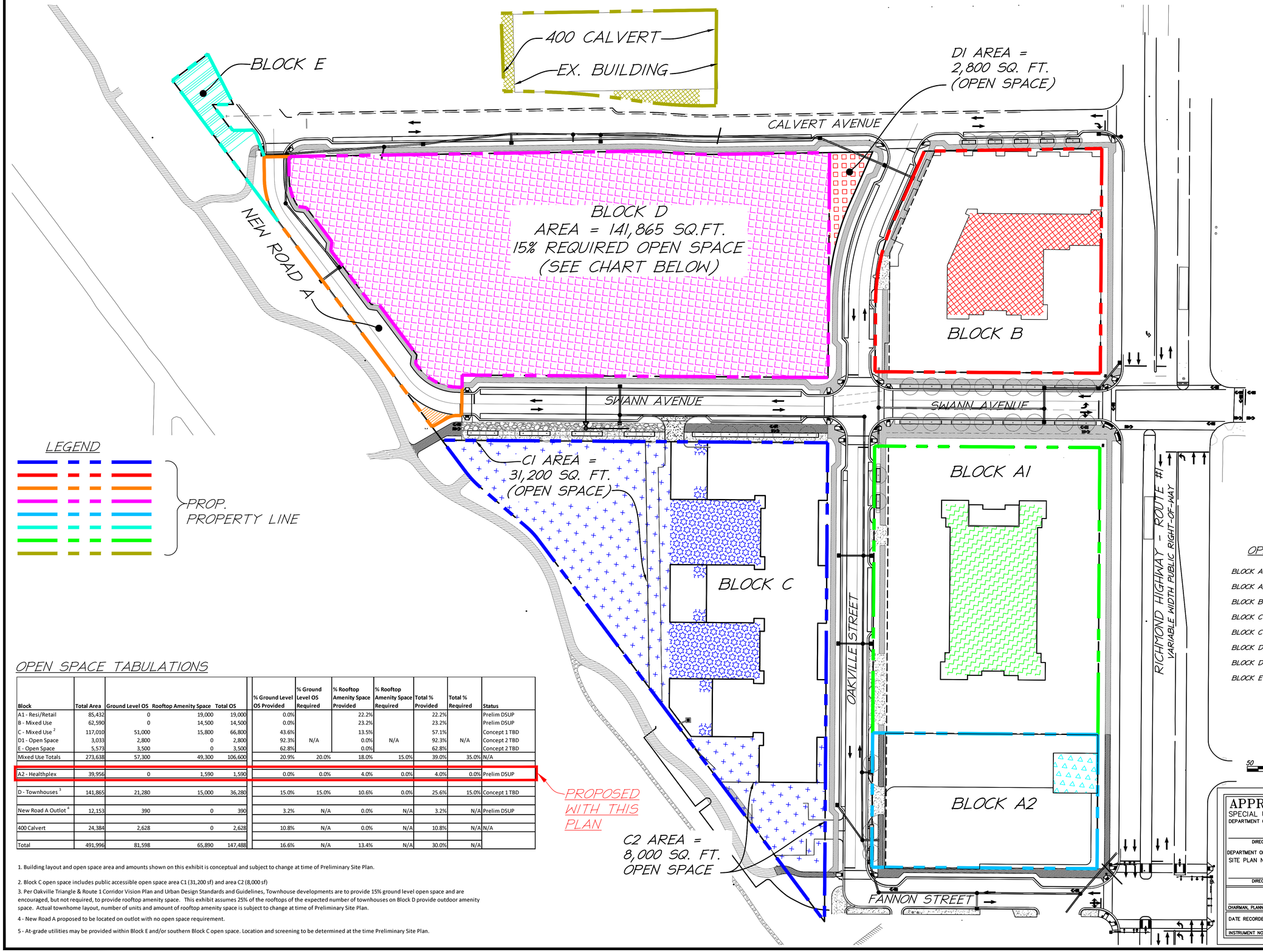
DIMENSION PLAN

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No. C302

110236

FOR INFORMATIONAL PURPOSES ONLY



OPEN SPACE TABULATIONS

Block	Total Area	Ground Level OS	Rooftop Amenity Space	Total OS	% Ground Level OS Provided	% Ground Level OS Required	% Rooftop Amenity Space Provided	% Rooftop Amenity Space Required	Total % Provided	Total % Required	Status
A1 - Resi/Retail	85,432	0	19,000	19,000	0.0%		22.2%		22.2%		Prelim DSUP
B - Mixed Use	62,590	0	14,500	14,500	0.0%		23.2%		23.2%		Prelim DSUP
C - Mixed Use [2]	117,010	51,000	15,800	66,800	43.6%		13.5%		57.1%		Concept 1 TBD
D1 - Open Space	3,033	2,800	0	2,800	92.3%	N/A	0.0%	N/A	92.3%	N/A	Concept 2 TBD
E - Open Space	5,573	3,500	0	3,500	62.8%		0.0%		62.8%		Concept 2 TBD
Mixed Use Totals	273,638	57,300	49,300	106,600	20.9%	20.0%	18.0%	15.0%	39.0%	35.0%	N/A
A2 - Healthplex	39,956	0	1,590	1,590	0.0%	0.0%	4.0%	0.0%	4.0%	0.0%	Prelim DSUP
D - Townhouses [3]	141,865	21,280	15,000	36,280	15.0%	15.0%	10.6%	0.0%	25.6%	15.0%	Concept 1 TBD
New Road A Outlot [4]	12,153	390	0	390	3.2%	N/A	0.0%	N/A	3.2%	N/A	Prelim DSUP
400 Calvert	24,384	2,628	0	2,628	10.8%	N/A	0.0%	N/A	10.8%	N/A	N/A
Total	491,996	81,598	65,890	147,488	16.6%	N/A	13.4%	N/A	30.0%	N/A	

PROPOSED WITH THIS PLAN

1. Building layout and open space area and amounts shown on this exhibit is conceptual and subject to change at time of Preliminary Site Plan.

2. Block C open space includes public accessible open space area C1 (31,200 sf) and area C2 (8,000 sf)

3. Per Oakville Triangle & Route 1 Corridor Vision Plan and Urban Design Standards and Guidelines, Townhouse developments are to provide 15% ground level open space and are encouraged, but not required, to provide rooftop amenity space. This exhibit assumes 25% of the rooftops of the expected number of townhouses on Block D provide outdoor amenity space. Actual townhome layout, number of units and amount of rooftop amenity space is subject to change at time of Preliminary Site Plan.

4 - New Road A proposed to be located on outlet with no open space requirement.

5 - At-grade utilities may be provided within Block E and/or southern Block C open space. Location and screening to be determined at the time Preliminary Site Plan.

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

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COMMONWEALTH OF VIRGINIA
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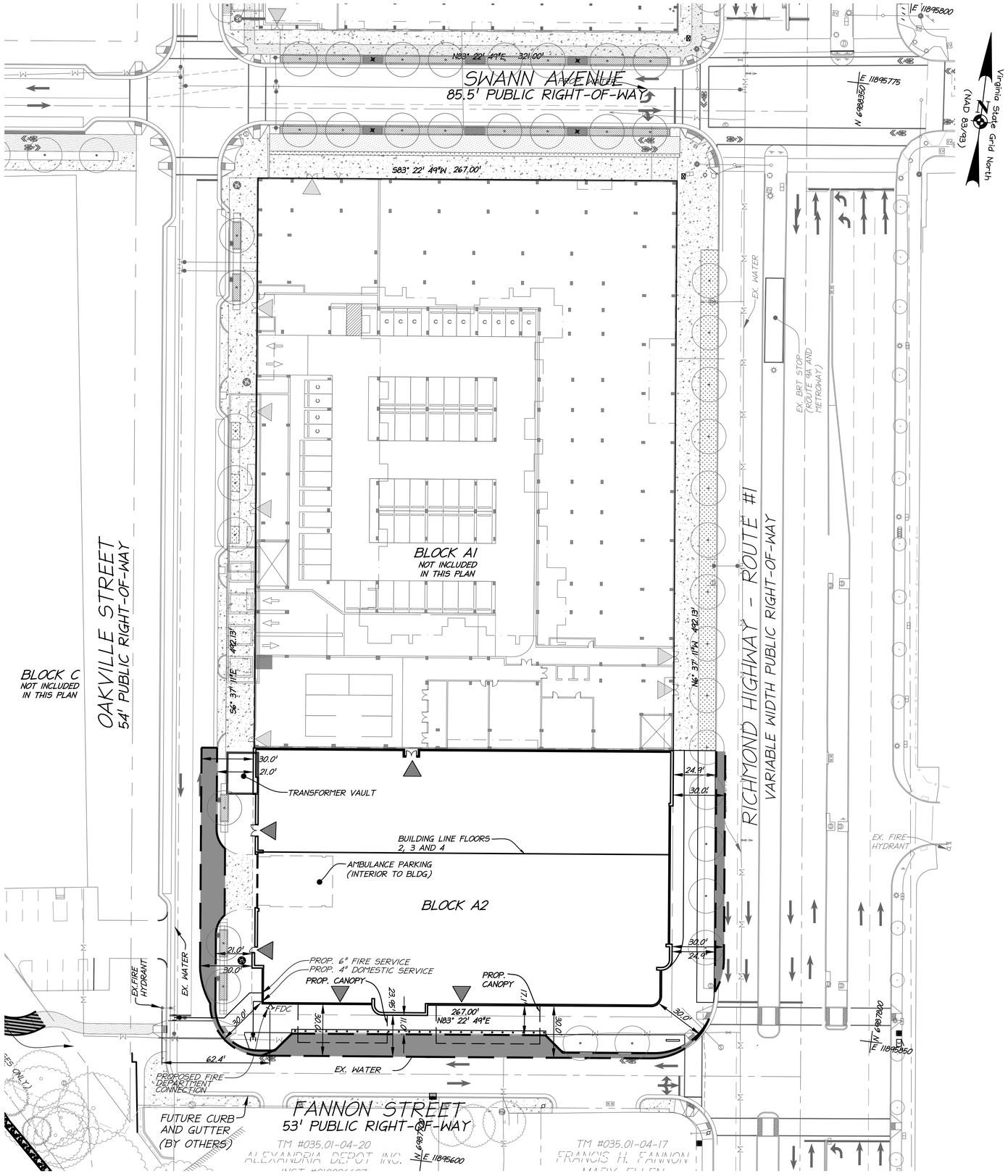
10/22/2020
PROFESSIONAL ENGINEER

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

OPEN SPACE PLAN

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No. C303

110236



LEGEND

- : PROPOSED R.O.W.
- : PROPOSED WATER
- : BUILDING ENTRANCE
- FH : PROPOSED FIRE HYDRANT
- FDC : PROPOSED FIRE DEPARTMENT CONNECTION
- : EX. FIRE HYDRANT
- : FIRE TRUCK ACCESS ENVELOPE

BUILDING CODE ANALYSIS BUILDING A-2	
USE:	MIXED USE (STORAGE, BUSINESS)
USE GROUP:	B, S-2
TYPE OF CONSTRUCTION:	IA
NUMBER OF STORIES:	5 STORIES ABOVE GROUND (INCLUDES PENTHOUSE)
BUILDING HEIGHT:	66.0 FT
FIRE SUPRESSION/DETECTION:	FULLY SPRINKLERED, NFPA13

GRAPHIC SCALE
30 15 0 30 60
1" = 30'

APPROVED
SPECIAL USE PERMIT NO. _____
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COMMONWEALTH OF VIRGINIA
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10/22/2020
PROFESSIONAL ENGINEER

FIRE SAFETY PLAN

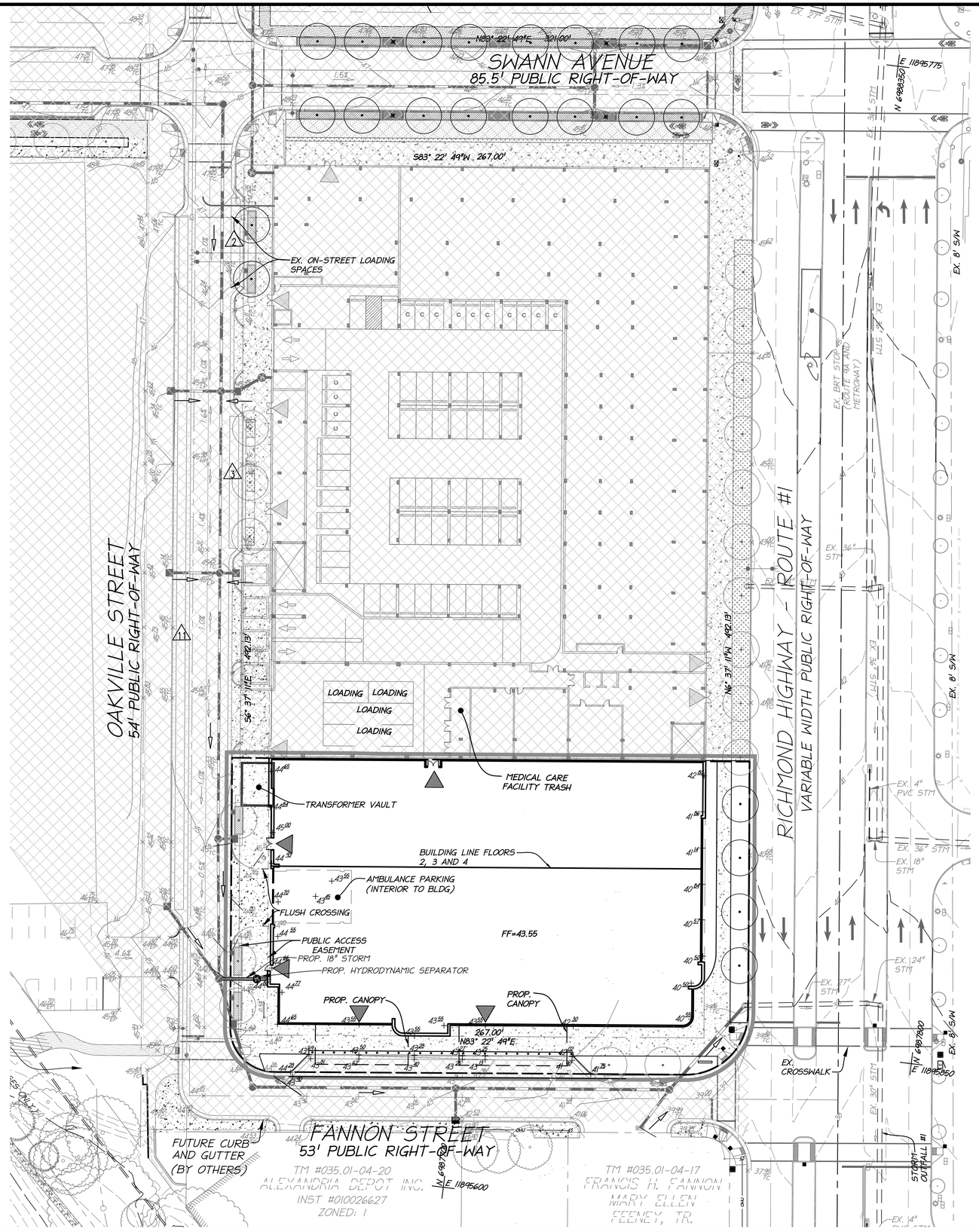
OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No.
C304

110236

*** starts at northeast corner and goes clockwise**

AFG Point	Elevation
1	42.80
2	41.86
3	41.14
4	40.84
5	40.57
6	40.50
7	40.50
8	40.55
9	40.61
10	42.95
11	43.55
12	43.55
13	43.55
14	43.55
15	44.65
16	44.77
17	44.80
18	44.66
19	44.55
20	44.70
21	43.45
22	43.55
23	44.93
24	45.00
25	44.84
26	44.65
AFG =	**43.12**



LEGEND

- △# — DENOTES NUMBER OF STANDARD PARKING SPACES
- CURB AND GUTTER
- HEADER CURB
- CENTERLINE OF STREET
- PROPERTY BOUNDARY
- PROPOSED BUILDING OUTLINE
- LIMITS OF DISTURBANCE
- PROPOSED BUILDING ENTRANCE
- AREA OF OAKVILLE THAT IS NOT INCLUDED WITH THIS APPLICATION

NOTES:

1. ALL INFRASTRUCTURE WORK (ROADS AND UTILITIES) SHOWN AROUND BLOCK A2 IS PROPOSED WITH THE OAKVILLE INFRASTRUCTURE FINAL SITE PLAN.
2. ALL DIMENSIONS NEAR THE BUILDING/PROPERTY LINE ARE ASSUMED TO BE TO THE PROPERTY LINE UNLESS OTHERWISE NOTED BY A 'BLDG' LABEL.
3. PARKING GARAGE BELOW INOVA HEALTHPLEX IS PROPOSED WITH BLOCK A1.
4. AVERAGE FINISHED GRADE = 43.12'

30 15 0 30 60
GRAPHIC SCALE
1" = 30'

APPROVED
SPECIAL USE PERMIT NO. _____
DEPARTMENT OF PLANNING & ZONING
_____ _____
DIRECTOR DATE
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____
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COMMONWEALTH OF VIRGINIA
JOHN L. HELMS
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10/22/2020
PROFESSIONAL ENGINEER

PRELIMINARY GRADING PLAN

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No. C400

110236

BMP MASTER PLAN TRACKING CHART

SITE (SEE SHEET C501 FOR SITE BMP MAP AND SHEET C502 FOR OVERALL POST BMP MAP)

BMP VRRM Drainage Area Breakdown / Tracking Chart

Drainage Area 'A' (Block A1)

BMP Device	Total Area Treated	Impervious Area Treated	Pervious Area Treated	TP Removed	TP Removed (nonproprietary)	Notes
2.i. To Stormwater Planter, Urban Bioretention (Spec #9, Appendix A)	0.23	0.23	0.00	0.27	0.27	
14.a. Manufactured Treatment Device-Hydrodynamic	1.60	1.60	0.00	0.74	0	0.23 Acres to (2.i. To Stormwater Planter) in series to (14.a. Manufactured Treatment Device-Hydrodynamic)
Total Treated	**1.83**	**1.83**	**0.00**	**1.01**	**0.27**	
Untreated	0.00	0.00	0.00			
Total	**1.83**	**1.83**	**0.00**			

Drainage Area 'B' (Block A2)

BMP Device	Total Area Treated	Impervious Area Treated	Pervious Area Treated	TP Removed	TP Removed (nonproprietary)	Notes
1.b. Vegetated Roof #2 (Spec #5)	0.20	0.20	0.00	0.26	0.26	
14.a. Manufactured Treatment Device-Hydrodynamic	0.62	0.62	0.00	0.30	0.00	0.2 Acres to (1.b. Vegetated Roof #2 (Sp) in series to (14.a. Manufactured Treatment Device-Hydrodynamic)
Total Treated	**0.82**	**0.82**	**0.00**	**0.56**	**0.26**	
Untreated	0.00					
Total	**0.82**	**0.82**	**0.00**			

Drainage Area 'C' (Block B)

BMP Device	Total Area Treated	Impervious Area Treated	Pervious Area Treated	TP Removed	TP Removed (nonproprietary)	Notes
2.i. To Stormwater Planter, Urban Bioretention (Spec #9, Appendix A)	0.15	0.15	0	0.18	0.18	
14.a. Manufactured Treatment Device-Hydrodynamic	1.19	1.19	0.00	0.54	0.00	
Total Treated	**1.34**	**1.34**	**0.00**	**0.72**	**0.18**	
Untreated	0.00					
Total	1.19	1.34	0.00			

Drainage Area 'D' (Block C)

BMP Device	Total Area Treated	Impervious Area Treated	Pervious Area Treated	TP Removed	TP Removed (nonproprietary)	Notes
14.a. Manufactured Treatment Device-Hydrodynamic	1.09	1.09	0.00	0.47	0.00	
Total Treated	**1.09**	**1.09**	**0.00**	**0.47**	**0.00**	
Untreated	0.00					
Total	**1.09**	**1.09**	**0.00**			
Sub-total Treated (Blocks A, B and C)	**5.08**	**5.08**	**0.00**			
Sub-total Un-Treated (Blocks A, B and C)	**0.00**	**0.00**	**0.00**			

Drainage Area 'E' (ROW and Park Road Outlot)

BMP Device	Total Area Treated	Impervious Area Treated	Pervious Area Treated	TP Removed	TP Removed (nonproprietary)	Notes
BMP Tree Filters - ROW	1.13	1.07	0.06	1.29	1.29	
3.a. Permeable Pavement #1 (Spec #7)	0.08	0.08	0.00	**0.10**	**0.10**	
Total Treated	**1.21**	**1.15**	**0.06**	**1.39**	**1.39**	
Untreated	0.00	0.00	0.00			
Total	1.21	1.15	0.06			
			Grand Total Phosphorus Removed	**4.16**	**2.11**	
			Total Phosphorus Requirement	3.06	1.99	

BMP OVERALL APPROACH:

THIS PLAN IS PART OF A BMP MASTER PLAN THAT INCLUDES BLOCK A1, BLOCK B, BLOCK C AND THE INFRASTRUCTURE PLAN, SEE 'CONCEPTUAL BMP NARRATIVE' BELOW FOR MORE INFORMATION.

CONCEPTUAL BMP/SWM TABULATIONS
BMP AREA = 1.14 AC.

EXISTING IMPERVIOUS AREA = 0.99 AC.
EXISTING PERVIOUS AREA = 0.15 AC.

PROPOSED IMPERVIOUS AREA = 1.08 AC.
PROPOSED PERVIOUS AREA = 0.06 AC.

WQVD REQUIREMENT = 0.92 AC.
WQVD PROVIDED = 0.92 AC.

TOTAL PHOSPHORUS REMOVED = 0.59 LBS/YEAR

BMP PRACTICES PROVIDED = GREEN ROOF AND HYDRODYNAMIC SEPARATOR.

BMP NARRATIVE:

THE SITE IS DESIGNED TO UTILIZED GREEN ROOF AND HYDRODYNAMIC SEPARATORS TO MEET THE BMP REQUIREMENTS OUTLINED BELOW.

STATE REQUIREMENT:
THIS SITE IS PART OF A BMP MASTER PLAN FOR A PORTION OF THE OAKVILLE TRIANGLE WHICH WILL INCLUDE BLOCK A1, BLOCK B, BLOCK C AND INFRASTRUCTURE (RON, PARK ROAD OUTLOT AND PRIVATE SIDEWALKS THAT HAVE PUBLIC ACCESS EASEMENTS). THIS SITE WILL TREAT APPROXIMATELY 1.14 ACRES AND REMOVE 0.59 LBS OF PHOSPHORUS A YEAR. THIS AMOUNT IS SUBJECT TO CHANGE AS THE PLAN DEVELOPS.

MEMO TO INDUSTRY 01-18 REQUIREMENT:
THIS REQUIREMENT WILL BE MET AS A WHOLE FOR THE BMP MASTER PLAN (SEE BMP VRRM DRAINAGE AREA BREAKDOWN THIS SHEET). THIS PORTION OF THE MASTER PLAN WILL INCLUDE NON-PROPRIETARY PHOSPHORUS REMOVAL CREDIT FOR THE PORTION OF THE GREEN ROOF.

CITY WQVD REQUIREMENT (13-109-E-1):
THIS PORTION OF THE BMP MASTER PLAN IS RESPONSIBLE FOR THE AREA WITHIN THE LIMITS OF BLOCK A2, EXCLUDING THE ACCESS EASEMENT ALONG THE WEST SIDE. THAT AREA IS ACCOUNTED FOR IN THE INFRASTRUCTURE. THIS SITE TREATS 96% OF THE WQVD THROUGH WITH THE TREATMENT OF THE HYDRODYNAMIC SEPARATORS AND THE GREEN ROOF. SEE WAIVER ON THIS SHEET.

NOTE:
BMP FACILITIES AND LAYOUT SHOWN ON THIS PLAN ARE PRELIMINARY AND ARE SUBJECT TO CHANGE.

WQVD CALCULATIONS

REQUIRED = (1816 CU FT/ACRE) X (0.92 ACRES) = 1,671 CU FT

PROVIDED (ON-SITE) = (1816 CU FT/ACRE) X (0.92 ACRES) = 1,671 CU FT
PROVIDED (OFF-SITE) = (1816 CU FT/ACRE) X (0.00 ACRES) = 0 CU FT

TOTAL CAPTURED WQVD = 1,671 CU FT
NOT CAPTURED WQVD = 1,671 - 1,671= 0.0 CU FT

IMPERVIOUS AREA COVERAGE

TOTAL IMPERVIOUS AREA = 0.88 ACRES

TOTAL IMPERVIOUS TREATED (ON-SITE) = 0.88 ACRES
TOTAL IMPERVIOUS TREATED (OFF-SITE) = 0.00 ACRES

TOTAL IMPERVIOUS AREA TREATED = 0.88 AC
UNTREATED IMPERVIOUS AREA = 0.92 - 0.88 = 0.4 AC

PROJECT SITE RUNOFF COMPUTATIONS:

PRE AND POST RUNOFF IS THE SAME, SEE SHEET C505 FOR CALCULATION.

Project Description
Development (Redevelopment)

Drainage Area	Impervious	Pervious	Total
Site Area	1.08	0.06	1.14
On-Site Treated	0.88	0.00	0.88
Off-Site Treated	0	0	0
Total Treated	0.88	0.00	0.88

Miscellaneous Information
Total WQV treated yes (no)
Detention on Site yes (no)
Project is within which watershed? FOUR MILE RUN / POTOMAC RIVER
Project Discharges to which body of water? FOUR MILE RUN / POTOMAC RIVER

BMP PHASING NARRATIVE

THIS DEVELOPMENT IS BEING CONSTRUCTED IN TWO PHASES:
- PHASE 1 - THE FOLLOWING AREAS WILL BE DESIGNED AND CONSTRUCTED CONCURRENTLY AS PHASE 1: INFRASTRUCTURE, BLOCK A1, BLOCK A2, BLOCK B, NEW ROAD A OUTLOT, BLOCK C OPEN SPACE, BLOCK E.
- PHASE 2 - THE REMAINING PORTION OF THE SITE WILL BE DESIGNED AND CONSTRUCTED AS PHASE 2: BLOCK C RESIDENTIAL BUILDING AND THE OPEN SPACE SOUTH OF THE BUILDING.

NOTE: BLOCK D (TOWNHOUSES) WILL BE DESIGNED BY OTHERS AS A STANDALONE DSUP INDEPENDENT OF ANYTHING BEING COMPLETED IN PHASE 1 OR 2 LISTED ABOVE.

STATE WATER QUALITY COMPLIANCE (VRRM SPREADSHEET): THIS MASTER PLAN WILL SHOW COMPLIANCE FOR BOTH PHASE 1 AND PHASE 2. EACH INDIVIDUAL DSUP FOR EACH PLAN WILL PROVIDE A VRRM SPREADSHEET FOR INFORMATIONAL PURPOSES ONLY.

MEMO TO INDUSTRY 01-18 COMPLIANCE: THIS MASTER PLAN WILL SHOW COMPLIANCE FOR BOTH PHASE 1 AND PHASE 2. THE PHASE 1 MUST PROVIDE THE MINIMUM REQUIRED FOR THAT PHASE TO BE COMPLIANT. AS CURRENTLY DESIGNED, THE REQUIREMENT FOR THE ENTIRE DEVELOPMENT (PHASE 1 AND PHASE 2) IS MET AT THE CONCLUSION OF PHASE 1.

WATER QUALITY VOLUME DEFAULT (WQVD): THIS REQUIREMENT IS ANALYZED BASED ON THE THE MASTER PLAN. ALL IMPERIOUS AREA ON PRIVATE PROPERTY MUST BE TREATED. ANY UNTREATED IMPERVIOUS AREA CAN BE OFF-SET BY IMPERVIOUS AREA TREATED IN THE RIGHT-OF-WAY. A FEE IN LIEU OF CAN BE PAID FOR ANY REMAINING UNTREATED IMPERVIOUS AREA.

MEMO-TO-INDUSTRY 04-14: THE MAXIMUM AMOUNT OF GREEN SIDEWALK INFRASTRUCTURE HAS BEEN PROVIDED BY THE BMP TREE WELLS AND PERMEABLE PAVEMENT SHOWN ON THE MASTER PLAN.

Phosphorus Load Reduction Requirements

DA	Area (ac.)	Pre - Imp	Pre - Perv	Post - Imp (2)	Post - Perv	TP Reduction Required	TP Reduction Required with nonproprietary BMPs (1)
BMP Limits	12.23	11.18	1.05	9.99	2.24	3.06	1.99

Notes:
(1) Per City's memo-to-industry 01-18, 65% of the total phosphorus removal required by the VRRM must be achieved through
(2) City's WQIF requirement that 100% of the site's impervious area be treated or pay a fee in lieu of ($2/sf) for any untreated

BLOCK A2 - 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)	1.08	0.00	0.00	0.00	0.00	OK.
IMPERVIOUS COVER TREATED (ac)	0.82	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA (ac)	0.06	0.00	0.00	0.00	0.00	OK.
MANAGED TURF AREA TREATED (ac)	0.00	0.00	0.00	0.00	0.00	OK.
AREA CHECK	OK.	OK.	OK.	OK.	OK.	

Site Treatment Volume (ft^3): 3,779

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)	600	0	0	0	0	600
TP LOAD AVAILABLE FOR REMOVAL (lb/yr)	2.37	0.00	0.00	0.00	0.00	2.37
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.66	0.00	0.00	0.00	0.00	0.66
TP LOAD REMAINING (lb/yr)	1.72	0.00	0.00	0.00	0.00	1.72
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	2.69	0.00	0.00	0.00	0.00	2.69

Total Phosphorus

FINAL POST-DEVELOPMENT TP LOAD (lb/yr)	2.37
TP LOAD REDUCTION REQUIRED (lb/yr)	0.59
TP LOAD REDUCTION ACHIEVED (lb/yr)	0.66
TP LOAD REMAINING (lb/yr)	1.72
REMAINING TP LOAD REDUCTION REQUIRED (lb/yr):	0.00 **

** TARGET TP REDUCTION EXCEEDED BY 0.06 LB/YEAR **

Total Nitrogen (For Information Purposes)

POST-DEVELOPMENT LOAD (lb/yr)	16.98
NITROGEN LOAD REDUCTION ACHIEVED (lb/yr)	2.69
REMAINING POST-DEVELOPMENT NITROGEN LOAD (lb/yr)	14.29

christopher consultants

October 19, 2020

Mr. Jesse Maines, MPA, CPESC
Watershed Management Planner
City of Alexandria
Department of Transportation & Environmental Services
2900 B Business Center Drive
Alexandria, VA 22313

RE: Oakville Triangle Block A2
Alexandria Water Quality Improvement Fund Contribution Letter
DSUP #2020-10031, SUP TMP #2020-0079, ENC #2020-0006
christopher Project #14007.0010.00

Dear Mr. Maines:

We are submitting this letter to request that we provide a Monetary Contribution to the Alexandria Water Quality Improvement Fund (WQIF) in accordance with Section 113-110 © of the Amendments to the City of Alexandria Article XIII Environmental Management Ordinance for the above referenced project.

The project is located along the west side of Route 1, where it intersects with Fannon Street. The project proposes a medical care facility for Inova. Parking will be provided by an underground garage.

The site area is approximately 0.92 acres and the proposed project disturbed area will be approximately 1.14 acres due to the necessary work within the public right-of-way.

The site runoff will flow to an existing closed conduit system. The runoff is then conveyed through the system to the Potomac River. The runoff from the building's impervious roof area and green roof flows through a hydrodynamic separator prior to entering the closed conduit system. Overall, the site drainage patterns have been maintained.

The proposed site's impervious area will be 0.92 acres, of which 0.883 acres of the associated Water Quality Volume (WQV) for this redevelopment project will be treated by the proposed green roof and hydrodynamic separator.

The portion (0.037 acres) of untreated impervious area consists of sidewalk where the building has been stepped back from the property line. This area drains to the Fannon Street right-of-way and into the public closed conduit storm system.

We request approval of this letter and permission to contribute to the WQIF for the portion of the impervious area that is not able to be treated.

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Should you have any questions or need additional information, please do not hesitate to contact this office.

Very truly yours,

John Helms, P.E.
Senior Project Manager, Associate

JH/mb

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

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COMMONWEALTH OF VIRGINIA
JOHN L. HELMS
Lic. No.52485
10/22/2020
PROFESSIONAL ENGINEER

PRELIMINARY BMP COMPUTATIONS

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No.
C500

110236

Project Name: Oakville Block A2 Prelim DSUP
Date: 10/16/2020
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)* → 1.14

Maximum reduction required:	*20%*
The site's net increase in impervious cover (acres) is:	*0.09*
Post-Development TP Load Reduction for Site (lb/yr):	*0.59*

Check:
BMP Design Specifications List: 2013 Draft 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				0.15	0.15
Impervious Cover (acres)				0.99	0.99
					1.14

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				0.06	0.06
Impervious Cover (acres)				1.08	1.08
Area Check	OK.	OK.	OK.	OK.	1.14

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)	0.15	0.06
Weighted Rv(turf)	0.25	0.25
% Managed Turf	13%	6%
Impervious Cover (acres)	0.99	0.99
Rv(impervious)	0.95	0.95
% Impervious	87%	94%
Total Site Area (acres)	**1.14**	**1.05**
Site Rv	**0.86**	**0.91**

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)	0.06
Weighted Rv (turf)	0.25
% Managed Turf	5%
Impervious Cover (acres)	1.08
Rv(impervious)	0.95
% Impervious	95%
Final Site Area (acres)	**1.14**
Final Post Dev Site Rv	**0.91**

Land Cover Summary-Post	
Post-ReDevelopment	
Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.06
Weighted Rv (turf)	0.25
% Managed Turf	6%
ReDev. Impervious Cover (acres)	0.99
Rv(impervious)	0.95
% Impervious	94%
Total ReDev. Site Area (acres)	**1.05**
ReDev Site Rv	**0.91**

Land Cover Summary-Post	
Post-Development New Impervious	
New Impervious Cover (acres)	0.09
Rv(impervious)	0.95

Treatment Volume and Nutrient Load

Pre-ReDevelopment Treatment Volume (acre-ft)	0.0815	0.0796	
Pre-ReDevelopment Treatment Volume (cubic feet)	3,550	3,468	
Pre-ReDevelopment TP Load (lb/yr)	**2.23**	**2.18**	
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	1.96	2.08	
Baseline TP Load (lb/yr) (**0.41 lbs/acre/yr** applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		*0.43*	

Treatment Volume and Nutrient Load

Final Post-Development Treatment Volume (acre-ft)	0.0868		
Final Post-Development Treatment Volume (cubic feet)	3,779		
Final Post-Development TP Load (lb/yr)	**2.37**		
Final Post-Development TP Load per acre (lb/acre/yr)	2.08		

Treatment Volume and Nutrient Load

Post-ReDevelopment Treatment Volume (acre-ft)	0.0796		**Post-Development Treatment Volume (acre-ft)**	0.0071
Post-ReDevelopment Treatment Volume (cubic feet)	3,468		**Post-Development Treatment Volume (cubic feet)**	310
Post-ReDevelopment Load (TP) (lb/yr)*	**2.18**		**Post-Development TP Load (lb/yr)**	**0.20**
Post-ReDevelopment TP Load per acre (lb/acre/yr)	2.08		
Max. Reduction Required (Below Pre-ReDevelopment Load)	**20%**		
TP Load Reduction Required for Redeveloped Area (lb/yr)	**0.44**		**TP Load Reduction Required for New Impervious Area (lb/yr)**	**0.16**

[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)	**0.59**

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	15.96
Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	16.98

Drainage Area A

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)				0.06	0.06	0.25
Impervious Cover (acres)				1.08	1.08	0.95
				Total	1.14	

CLEAR BMP AREAS

Total Phosphorus Available for Removal in D.A. A (lb/yr): 2.37
Post Development Treatment Volume in D.A. A (ft³): 3,779

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 (ft³)	Runoff Reduction (ft³)	Remaining Runoff Volume (ft³)	Total BMP Treatment Volume (ft³)	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
1. Vegetated Roof (RR)													
1.b. Vegetated Roof #2 (Spec #5)	60		0.29		600	400	1,000	0		0.63	0.38	0.25	14.a. MTD - Hydrodynamic

TOTAL IMPERVIOUS COVER TREATED (ac): 0.29 AREA CHECK: OK.
TOTAL MANAGED TURF AREA TREATED (ac): 0.00 AREA CHECK: OK.
TOTAL RUNOFF REDUCTION IN D.A. A (ft³): 600

TOTAL PHOSPHORUS AVAILABLE FOR REMOVAL IN D.A. A (lb/yr): 2.37
TOTAL PHOSPHORUS REMOVED WITH RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr): 0.38
TOTAL PHOSPHORUS REMAINING AFTER APPLYING RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr): 2.00

SEE WATER QUALITY COMPLIANCE TAB FOR SITE COMPLIANCE CALCULATIONS

14. Manufactured Treatment Devices (no RR)													
14.a. Manufactured Treatment Device-Hydrodynamic	0	0.00	0.53	400	0	2,228	2,228	20	0.25	1.15	0.28	1.12	

TOTAL IMPERVIOUS COVER TREATED (ac): 0.82 AREA CHECK: OK.
TOTAL MANAGED TURF AREA TREATED (ac): 0.00 AREA CHECK: OK.

TOTAL PHOSPHORUS REMOVAL REQUIRED ON SITE (lb/yr): 0.59

TOTAL PHOSPHORUS AVAILABLE FOR REMOVAL IN D.A. A (lb/yr): 2.37
TOTAL PHOSPHORUS REMOVED WITHOUT RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr): 0.28
TOTAL PHOSPHORUS REMOVED WITH RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr): 0.38
TOTAL PHOSPHORUS LOAD REDUCTION ACHIEVED IN D.A. A (lb/yr): 0.66
TOTAL PHOSPHORUS REMAINING AFTER APPLYING BMP LOAD REDUCTIONS IN D.A. A (lb/yr): 1.72

SEE WATER QUALITY COMPLIANCE TAB FOR SITE COMPLIANCE CALCULATIONS

NITROGEN REMOVED WITH RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr): 2.69
NITROGEN REMOVED WITHOUT RUNOFF REDUCTION PRACTICES IN D.A. A (lb/yr): 0.00
TOTAL NITROGEN REMOVED IN D.A. A (lb/yr): 2.69

Runoff Volume and Curve Number Calculations

Enter design storm rainfall depths (in):

1-year storm	2-year storm	10-year storm
2.70	3.20	5.20

Use NOAA Atlas 14 (http://hdsc.nws.noaa.gov/hdsc/pfds/)

***Notes (see below):**

[1] The curve numbers and runoff volumes computed in this spreadsheet for each drainage area are limited in their applicability for determining and demonstrating compliance with water quantity requirements. See VRRM User's Guide and Documentation for additional information.

[2] Runoff Volume (RV) for pre- and post-development drainage areas must be in volumetric units (e.g., acre-feet or cubic feet) when using the Energy Balance Equation. Runoff measured in watershed-inches and shown in the spreadsheet as RV(watershed-inch) can only be used in the Energy Balance Equation when the pre- and post-development drainage areas are equal. Otherwise RV(watershed-inch) must be multiplied by the drainage area.

[3] Adjusted CNs are based on runoff reduction volumes as calculated in D.A. tabs. An alternative CN adjustment calculation for Vegetated Roofs is included in BMP specification No. 5.

Drainage Area Curve Numbers and Runoff Depths*

Curve numbers (CN, CNadj) and runoff depths ($RV_{Developed}$) are computed with and without reduction practices.

Drainage Area A		A Soils	B Soils	C Soils	D Soils
Forest/Open Space -- undisturbed, protected forest/open space or reforested land	Area (acres)	0.00	0.00	0.00	0.00
	CN	30	55	70	77
Managed Turf -- disturbed, graded for yards or other turf to be mowed/managed	Area (acres)	0.00	0.00	0.00	0.06
	CN	39	61	74	80
Impervious Cover	Area (acres)	0.00	0.00	0.00	1.08
	CN	98	98	98	98
					$CN_{(D.A. A)}$ 97

	1-year storm	2-year storm	10-year storm
$RV_{Developed}$ *(watershed-inch)* **with no Runoff Reduction***	2.36	2.86	4.85
$RV_{Developed}$ *(watershed-inch)* **with Runoff Reduction***	2.22	2.71	4.70
Adjusted CN*	**95**	**96**	**96**

**See Notes above*

Total Area (acres):	1.14
Runoff Reduction Volume (ft³):	600

MINIMUM 65% PHOSPHOROUS REMOVAL REQUIREMENT

PHOSPHOROUS LOAD REDUCTION REQUIRED = 0.59 LB/YR

*MINIMUM PHOSPHOROUS REMOVAL REQUIREMENT = 0.59 LB/YR * 0.65 = 0.38 LB/YR*

PHOSPHOROUS REMOVAL ACHIEVED (VEGETATED ROOF - LEVEL 2) = 0.38 LB/YR

APPROVED
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CHAIRMAN, PLANNING COMMISSION DATE
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INSTRUMENT NO. DEED BOOK NO. PAGE NO.

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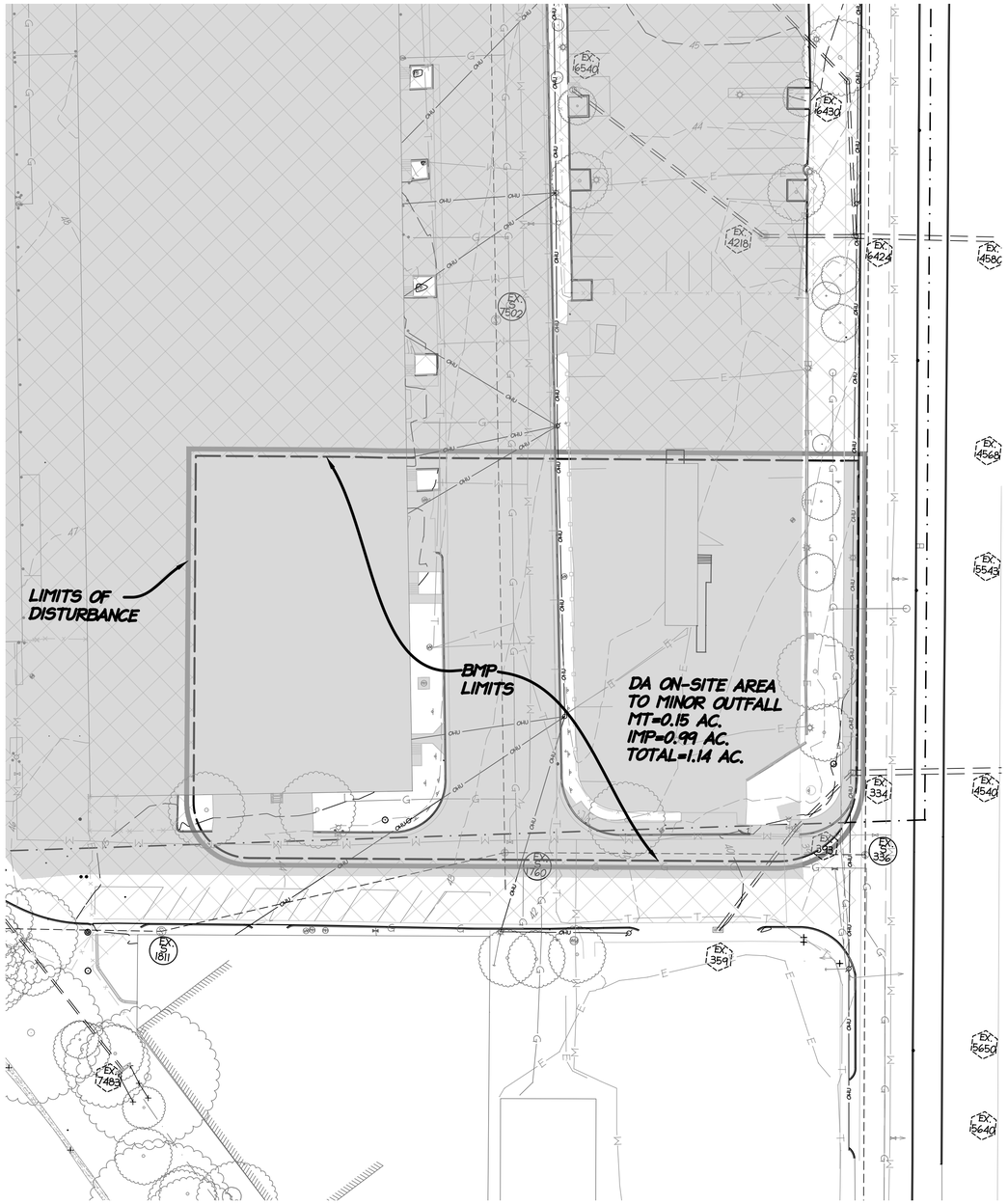
COMMONWEALTH OF VIRGINIA
JOHN L. HELMS
Lic. No.52485
10/22/2020
PROFESSIONAL ENGINEER

PRELIMINARY BMP COMPUTATIONS

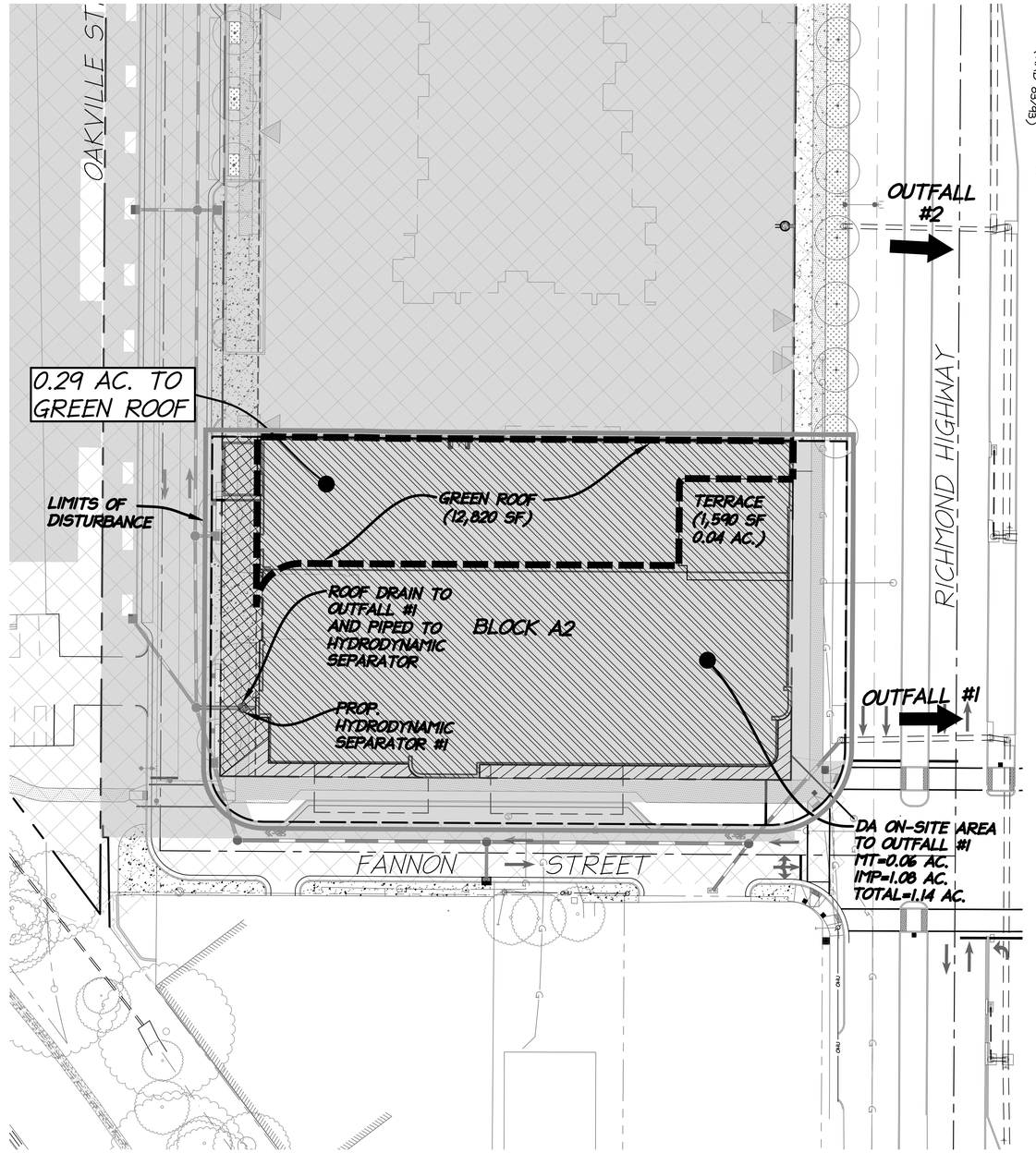
OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No.
C500A

110236



PRE-DEVELOPMENT



POST-DEVELOPMENT

Virginia State Grid North (NAD 83/93)

LEGEND:

- BMP LIMITS A= 1.14 AC.
- IMPERVIOUS GROUND COVER (A=0.99 AC.)
- PERVIOUS GROUND COVER (A=0.15 AC.)

LEGEND:

- BMP LIMITS A=1.14 AC.
- IMPERVIOUS GROUND COVER
- AREA TO HYDRODYNAMIC SEPARATOR (A=0.82 AC.)
- AREA TO TREE PITS (A=0.06 AC.)
- UNTREATED AREA (A=0.037 AC.)

BMP COORDINATES
- GREEN ROOF (N:6,987,905 - E:11,895,580)
- HYDRODYNAMIC SEPARATOR (N:6,987,802 - E:11,895,483)
- TREE PITS (N:6,987,799 - E:11,895,472)

30 15 0 30 60
GRAPHIC SCALE
1" = 30'

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COMMONWEALTH OF VIRGINIA
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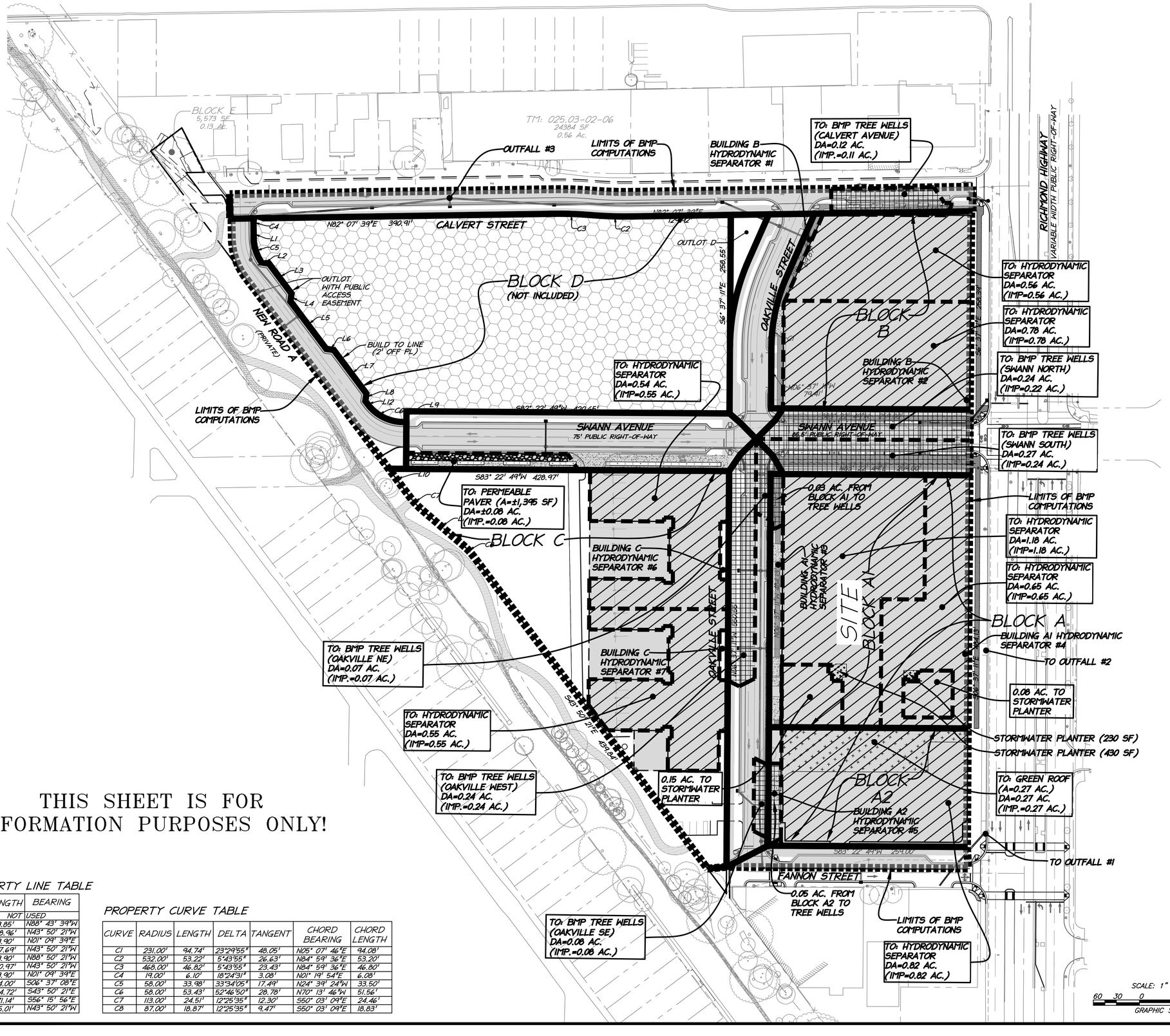
BMP MAP

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No. C501

110236



LEGEND

SYMBOL	TITLE
	: PROPERTY LIMITS
	: BMP LIMITS = 10.54 Ac. (BLOCKS A1, A2, B, C, D, & ROW)
	: VRRM DRAINAGE AREA DIVIDE
	: VRRM SUB-DRAINAGE AREA DIVIDE (TREE WELLS / PERMEABLE PAVER / HYDRODYNAMIC SEPARATOR)
	: GREEN ROOF (LEVEL 2) A=±0.27 AC. (BUILDING A2)
	: STORMWATER PLANTER DA=0.23 AC. (BUILDINGS A1)
	: HYDRODYNAMIC SEPARATOR BLOCKS RUNOFF TREATED = 5.08 Ac (5.08 Ac. IMP.)
	: BMP TREE WELLS RUNOFF TREATED = 1.02 Ac (0.96 Ac. IMP.)
	: BMP PERMEABLE PAVER ROW RUNOFF TREATED = 0.08 Ac (0.08 Ac. IMP.)
	: BLOCK D (3.26 AC) NOT INCLUDED IN BMP LIMITS AREA
	: IMPERVIOUS AREA (8.93 AC)

NON TREATED:
BLOCK = 1.84 AC. (IMP.=0.53, PERVIOUS=1.31)
ROW = 2.52 AC. (IMP.=2.28, PERVIOUS=0.24)
TOTAL = 4.36 AC. (IMP.=2.81, PERVIOUS=1.55)

THIS SHEET IS FOR INFORMATION PURPOSES ONLY!

PROPERTY LINE TABLE

LINE	LENGTH	BEARING
L1	NOT	USED
L2	9.85'	N88° 43' 39"W
L3	48.96'	N43° 50' 21"W
L4	9.90'	N01° 09' 39"E
L5	77.69'	N43° 50' 21"W
L6	9.90'	N88° 50' 21"W
L7	70.97'	N43° 50' 21"W
L8	9.90'	N01° 09' 39"E
L9	14.00'	S06° 37' 08"E
L10	44.72'	S43° 50' 21"E
L11	71.14'	S56° 15' 56"E
L12	5.01'	N43° 50' 21"W

PROPERTY CURVE TABLE

CURVE	RADIUS	LENGTH	DELTA	TANGENT	CHORD BEARING	CHORD LENGTH
C1	231.00'	94.74'	23°29'55"	48.05'	N05° 07' 46"E	94.08'
C2	532.00'	53.22'	5°43'55"	26.63'	N84° 59' 36"E	53.20'
C3	468.00'	46.82'	5°43'55"	23.43'	N84° 59' 36"E	46.80'
C4	19.00'	6.10'	18°24'31"	3.08'	N01° 19' 54"E	6.08'
C5	58.00'	33.98'	33°34'05"	17.49'	N24° 39' 24"W	33.50'
C6	58.00'	53.43'	52°46'50"	28.78'	N70° 13' 46"W	51.56'
C7	113.00'	24.51'	12°25'95"	12.30'	S50° 03' 09"E	24.46'
C8	87.00'	18.87'	12°25'95"	9.47'	S50° 03' 09"E	18.83'

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COMMONWEALTH OF VIRGINIA
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OVERALL POST-BMP MAP

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
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DESIGN: JLH
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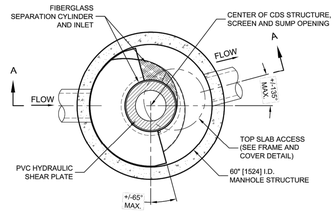
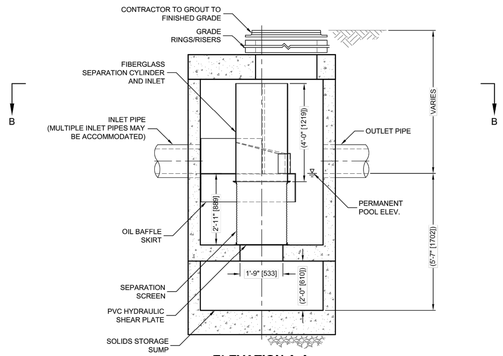
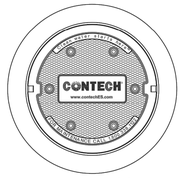
SHEET No. C502

110236







PLAN VIEW B-B
N.T.S.

ELEVATION A-A
N.T.S.

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 5,788,848; 6,641,720; 6,511,595; 6,581,783; RELATED FOREIGN PATENTS, OR OTHER PATENTS PENDING.

C:\USERS\SCHLACHTERH\DESKTOP\CDS DETAILS 180 MICRON SIZING\ACAD\CDS2025-5-C-DTL.DWG 5/19/2014 5:20 PM

CDS2025-5-C DESIGN NOTES

THE STANDARD CDS2025-5-C CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION
GRATED INLET ONLY (NO INLET PIPE)
GRATED INLET WITH INLET PIPE OR PIPES
CURB INLET ONLY (NO INLET PIPE)
CURB INLET WITH INLET PIPE OR PIPES
SEPARATE OIL BAFFLE (SINGLE INLET PIPE REQUIRED FOR THIS CONFIGURATION)
SEDIMENT WEIR FOR NJDEP / NJCAT CONFORMING UNITS

FRAME AND COVER
(DIAMETER VARIES)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID			
WATER QUALITY FLOW RATE (CFS OR L/s)			*
PEAK FLOW RATE (CFS OR L/s)			*
RETURN PERIOD OF PEAK FLOW (YRS)			*
SCREEN APERTURE (2400 OR 4700)			*
PIPE DATA:	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	*	*	*
INLET PIPE 2	*	*	*
OUTLET PIPE	*	*	*
RIM ELEVATION			*
ANTI-FLOTATION BALLAST		WIDTH	HEIGHT
		*	*
NOTES/SPECIAL REQUIREMENTS:			

* PER ENGINEER OF RECORD

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
3. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.contechES.com
4. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
5. STRUCTURE SHALL MEET AASHTO HS20 AND CASTINGS SHALL MEET HS20 (AASHTO M 306) LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
6. PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
C. CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH
ENGINEERED SOLUTIONS LLC
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800-338-1122 513-645-7000 513-645-7993 FAX

CDS2025-5-C
INLINE CDS
STANDARD DETAIL

VA DEQ STORMWATER DESIGN SPECIFICATION NO. 5 **VEGETATED ROOF**

Figure 5.3. Typical Section – Intensive Vegetated Roof
(Source: Northern VA Regional Commission)

Version 2.3, March 1, 2011 Page 5 of 17

TYPICAL INTENSIVE GREEN ROOF
NOT TO SCALE

CITY STANDARD
BMP/SWM MARKER

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

NOTES:
1. FOR VRRM SPREADSHEET, SEE SHEET C500.
2. FOR BMP VRRM DRAINAGE AREA BREAKDOWN, SEE SHEET C501.
3. FOR PRE-BMP MAP, SEE SHEET C501.

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____________ DIRECTOR ____________ DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. ____________

____________ DIRECTOR ____________ DATE

____________ CHAIRMAN, PLANNING COMMISSION ____________ DATE

DATE RECORDED ____________
INSTRUMENT NO. ____________ DEED BOOK NO. ____________ PAGE NO. ____________

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phone 703.273.6820 · fax 703.273.6820

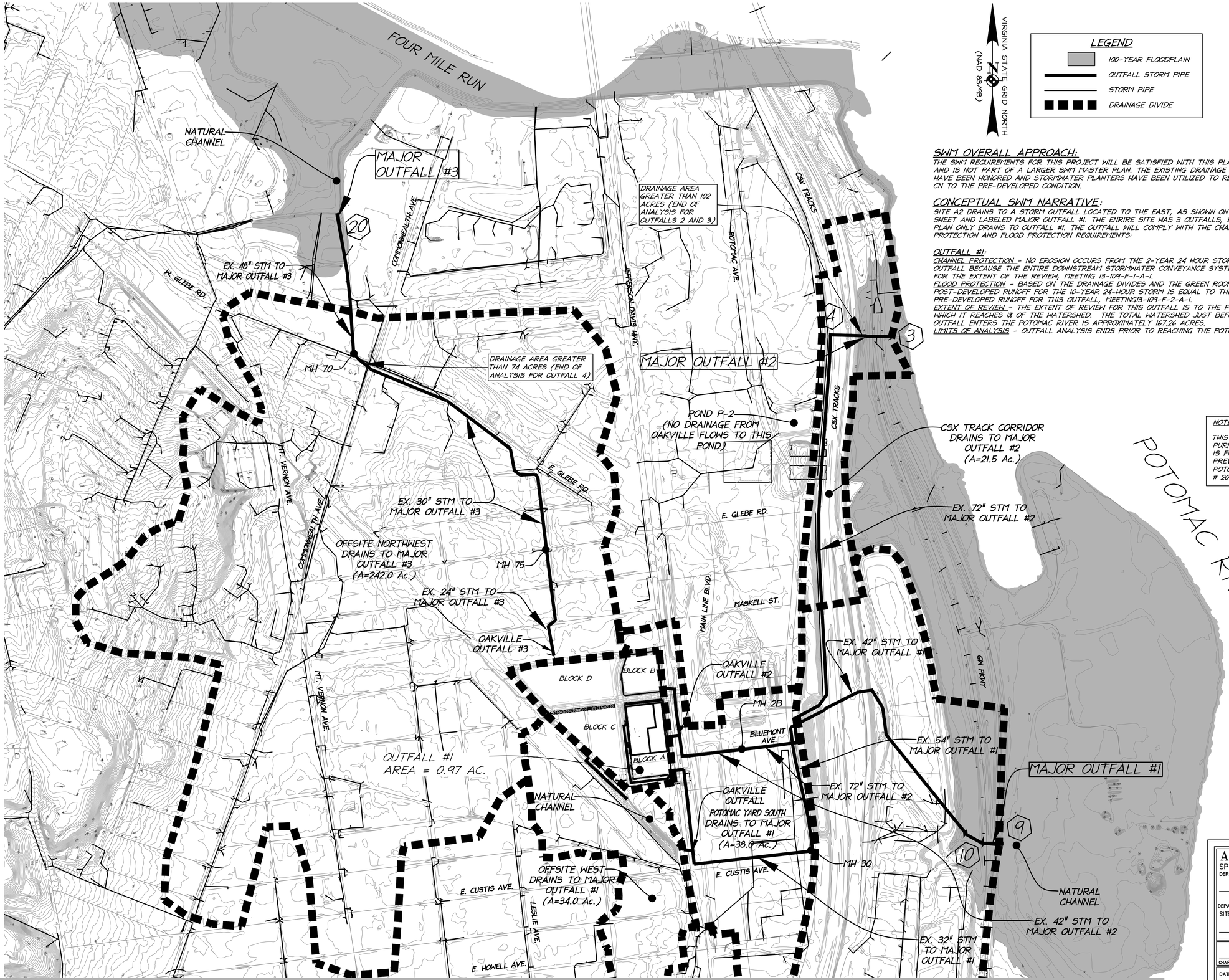
JOHN L. HELMS
Lic. No.52485
10/22/2020

BMP AND SWM DETAILS

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No. C503

110236



SWM OVERALL APPROACH:

THE SWM REQUIREMENTS FOR THIS PROJECT WILL BE SATISFIED WITH THIS PLAN ONLY AND IS NOT PART OF A LARGER SWM MASTER PLAN. THE EXISTING DRAINAGE AREAS HAVE BEEN HONORED AND STORMWATER PLANTERS HAVE BEEN UTILIZED TO REDUCE THE CN TO THE PRE-DEVELOPED CONDITION.

CONCEPTUAL SWM NARRATIVE:

SITE A2 DRAINS TO A STORM OUTFALL LOCATED TO THE EAST, AS SHOWN ON THIS SHEET AND LABELED MAJOR OUTFALL #1. THE ENRIRE SITE HAS 3 OUTFALLS, BUT THIS PLAN ONLY DRAINS TO OUTFALL #1. THE OUTFALL WILL COMPLY WITH THE CHANNEL PROTECTION AND FLOOD PROTECTION REQUIREMENTS:

OUTFALL #1:

CHANNEL PROTECTION - NO EROSION OCCURS FROM THE 2-YEAR 24 HOUR STORM FOR THIS OUTFALL BECAUSE THE ENTIRE DOWNSTREAM STORMWATER CONVEYANCE SYSTEM IS PIPED FOR THE EXTENT OF THE REVIEW, MEETING 13-109-F-1-A-1.

FLOOD PROTECTION - BASED ON THE DRAINAGE DIVIDES AND THE GREEN ROOF, THE POST-DEVELOPED RUNOFF FOR THE 10-YEAR 24-HOUR STORM IS EQUAL TO THE PRE-DEVELOPED RUNOFF FOR THIS OUTFALL, MEETING13-109-F-2-A-1.

EXTENT OF REVIEW - THE EXTENT OF REVIEW FOR THIS OUTFALL IS TO THE POINT IN WHICH IT REACHES 1% OF THE WATERSHED. THE TOTAL WATERSHED JUST BEFORE THE OUTFALL ENTERS THE POTOMAC RIVER IS APPROXIMATELY 167.26 ACRES.

LIMITS OF ANALYSIS - OUTFALL ANALYSIS ENDS PRIOR TO REACHING THE POTOMAC RIVER.

NOTE:

THIS PLAN IS FOR INFORMATIONAL PURPOSES ONLY. ALL INFORMATION SHOWS IS FROM THE CITY OF ALEXANDRIA GIS OR PREVIOUSLY APPROVED PLANS FROM POTOMAC YARD (DSUP # 2007-0022, DSUP # 2005-0038 AND DSUP # 2005-0039).

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SITE PLAN NO. _____

DIRECTOR _____ DATE _____

CHAIRMAN, PLANNING COMMISSION _____ DATE _____

DATE RECORDED _____

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

MATCHLINE - SEE SHEET C505

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COMMONWEALTH OF VIRGINIA
JOHN L. HELMS
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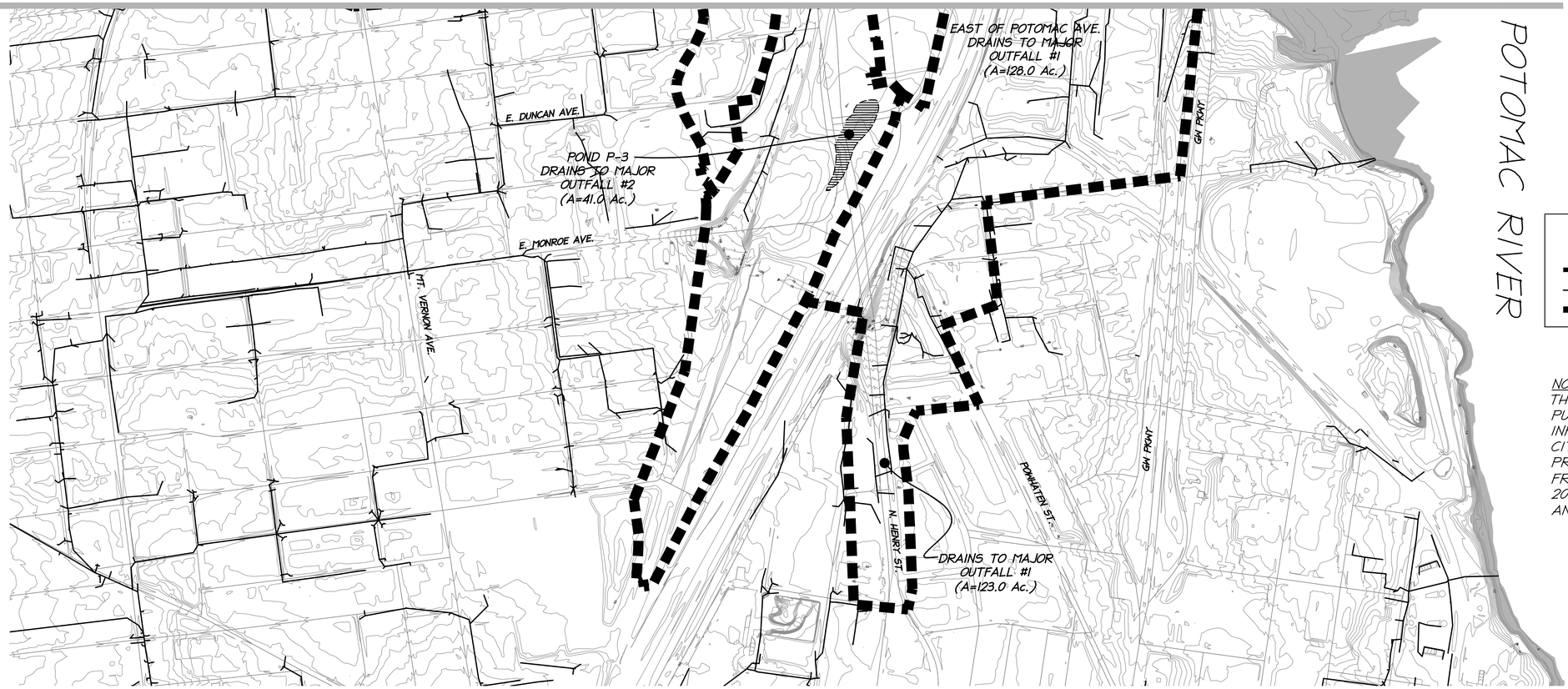
10/22/2020
PROFESSIONAL ENGINEER

OVERALL OUTFALL MAP

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No. C504

110236



NOTE:
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BLOCK A2 - Drainage Area Curve Numbers and Runoff Depths*

Curve numbers (CN, CNadj) and runoff depths ($RV_{Developed}$) are computed with and without reduction practices.

Drainage Area A		A Soils	B Soils	C Soils	D Soils
Forest/Open Space -- undisturbed, protected forest/open space or reforested land	Area (acres)	0.00	0.00	0.00	0.00
	CN	30	55	70	77
Managed Turf -- disturbed, graded for yards or other turf to be mowed/managed	Area (acres)	0.00	0.00	0.00	0.06
	CN	39	61	74	80
Impervious Cover	Area (acres)	0.00	0.00	0.00	1.08
	CN	98	98	98	98

Total Area (acres):	1.14
Runoff Reduction Volume (ft^3):	600

$CN_{(D.A. A)}$
97

	1-year storm	2-year storm	10-year storm
$RV_{Developed}$ *(watershed-inch)* with no Runoff Reduction*	2.36	2.86	4.85
$RV_{Developed}$ *(watershed-inch)* with Runoff Reduction*	2.22	2.71	4.70
Adjusted CN*	95	96	96

POST ADJUSTED CN

*See Notes above

	Pre-Development		Post - Development			
	Area	CN	Area	CN (1-yr)	CN (2-yr)	CN (10-yr)
OUTFALL #1	1.14	97	1.14	95	96	96

	Pre-Development						Post - Development					
	1 - Year		2 - Year		10 - Year		1 - Year			2 - Year		10 - Year
	Q (cfs)	Rv (cf)	Q (cfs)	Rv (cf)	Q (cfs)	Rv (cf)	Q (cfs)	Rv (cf)	Rv (for IF)	Q (cfs)	Rv (cf)	Q (cfs)	Rv (cf)
OUTFALL #1	4.42	10,077	5.28	12,191	8.72	20,682	4.32	9,633	N/A	5.19	11,732	8.65	20,191

NOTE: SEE SHEET C501 FOR DRAINAGE DIVIDES OF SITE.

300 150 0 300 600
GRAPHIC SCALE
1" = 300'

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OVERALL OUTFALL MAP

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

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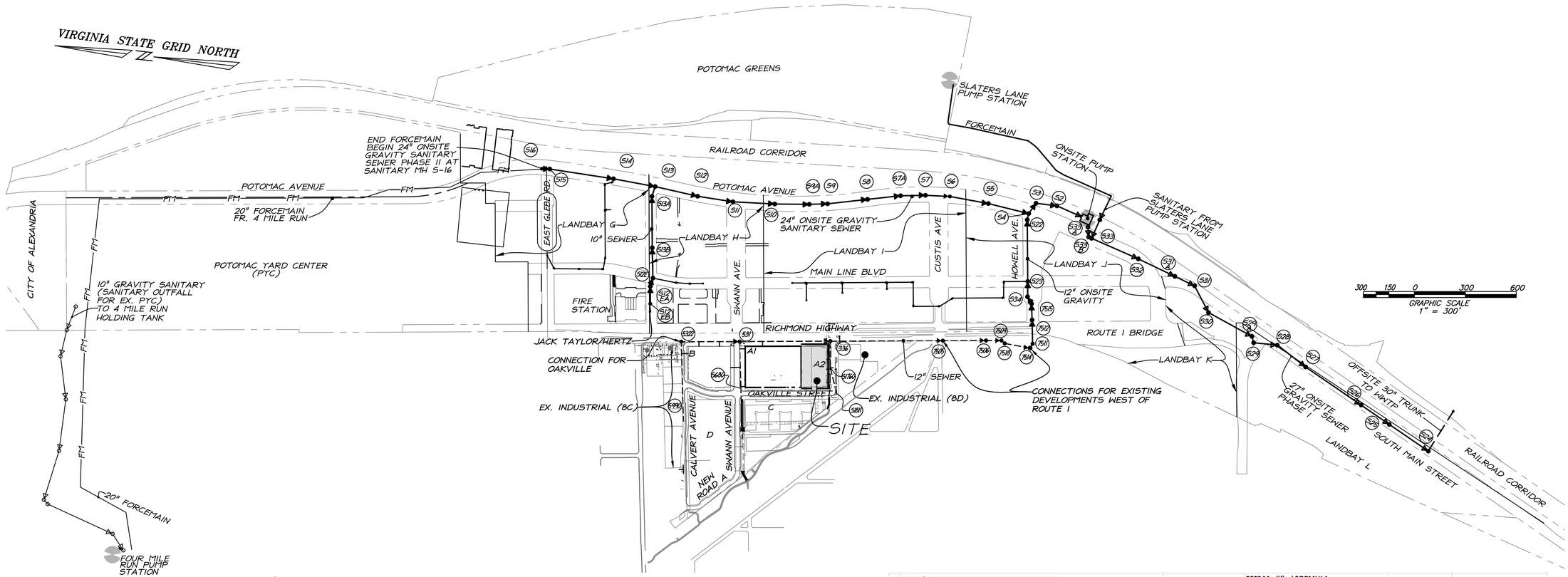

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OAKVILLE TRIANGLE

SANITARY FLOW CALCULATIONS - DRAFT MODIFIED FORMULA

BLOCKS	BUILDING GFA	OFFICE SANITARY FLOW	OFFICE S.F. (GROSS)	RESIDENTIAL MULTI-FAMILY	MULTI-FAMILY HOUSING UNITS	RESIDENTIAL TOWNHOUSE	TOWNHOUSE UNITS**	RETAIL SANITARY FLOW	RETAIL S.F. (GROSS)	TOTAL PROPOSED SANITARY FLOW (GPD)	
A1	450,000	200 GPD/1,000 S.F.	0	300 GPD/UNIT	324	350 GPD/UNIT	0	200 GPD/1,000 S.F.	30,000	103,200	0.38
A2	93,012	200 GPD/1,000 S.F.	93,012	300 GPD/UNIT	0	350 GPD/UNIT	0	200 GPD/1,000 S.F.	0	18,602	0.07
B	335,000	200 GPD/1,000 S.F.	0	300 GPD/UNIT	251	350 GPD/UNIT	0	200 GPD/1,000 S.F.	15,000	78,300	0.29
C	220,000	200 GPD/1,000 S.F.	0	300 GPD/UNIT	220	350 GPD/UNIT	0	200 GPD/1,000 S.F.	0	66,000	0.24
D	250,000	200 GPD/1,000 S.F.	0	300 GPD/UNIT	0	350 GPD/UNIT	73	200 GPD/1,000 S.F.	0	25,550	0.09
	1,128,012		93,012		575		73		45,000	225,652	PHASE I ADF
	220,000		0		220		0		0	66,000	PHASE II ADF
	1,348,012		93,012		795		73		45,000	291,652	TOTAL ADF

PEAK FLOW CALCULATIONS BASED ON CITY'S MEMO TO INDUSTRY 06-14	
PEAKING FACTOR	2.5
PHASE I PEAK FLOW RATE (MGD)	0.56
PHASE II PEAK FLOW RATE (MGD)	0.17
TOTAL PEAK FLOW RATE (MGD)	0.73

LOW FLOW FIXTURES CALCULATIONS	
LFF FACTOR	35%
PHASE I PEAK FLOW REDUCTION (MGD)	0.08
PHASE II PEAK FLOW REDUCTION (MGD)	0.02
TOTAL PEAK FLOW REDUCTION (MGD)	0.10

ULTIMATE BUILD-OUT FLOWS (W/ 2.5 PEAKING FACTOR)	
PHASE I PEAK FLOW RATE (MGD)	0.49
PHASE II PEAK FLOW RATE (MGD)	0.14
TOTAL PEAK FLOW RATE (MGD)	0.63

PEAKING FACTOR	4.0
PHASE I PEAK FLOW RATE (MGD)	0.90
PHASE II PEAK FLOW RATE (MGD)	0.26
TOTAL PEAK FLOW RATE (MGD)	1.17

ULTIMATE BUILD-OUT FLOWS (W/ 4.0 PEAKING FACTOR)	
PHASE I PEAK FLOW RATE (MGD)	0.82
PHASE II PEAK FLOW RATE (MGD)	0.24
TOTAL PEAK FLOW RATE (MGD)	1.06

PHASE I

PHASE II

SANITARY SEWER STRUCTURE DATA

SAN MH 7505
TOP=37.00
IN=27.55 8" PVC FR W
IN=27.30 12" PVC FR 336
OUT=27.25 12" PVC TO 7506

SAN MH 7506
TOP=37.86
IN=32.16 FR W
IN=25.56 12" PVC FR 7505
OUT=25.46 12" PVC TO 7509

SAN MH 7509
TOP=38.79
IN=24.94 FR 7510
IN=24.94 12" PVC FR 7506
OUT=24.74 12" PVC TO 7518

SAN MH 7510
TOP=39.12
IN=28.22 FR W
IN=28.32 FR S
OUT=28.12 TO 7506

SAN MH 7511
TOP=38.76
IN=21.66 12" PVC FR 7514
OUT=21.56 12" PVC TO 7512

SAN MH 7512
TOP=39.76
IN=20.65 12" PVC FR 7515
OUT=20.57 12" PVC TO 7511

SAN MH 7514
TOP=37.40
IN=22.90 12" PVC FR 7518
OUT=22.80 12" PVC TO 7511

SAN MH 7515
TOP=40.26
IN=20.40 12" PVC FR 7512
OUT=20.30 12" PVC TO 7516

SAN MH 7518
TOP=38.48
IN=24.18 12" PVC FR 7509
OUT=24.08 12" PVC TO 7514

SAN MH 9309 (534)
TOP=41.02
IN=20.07 12" PVC FR 7515
OUT=19.91 12" PVC TO 9310

SAN MH 9310 (523)
TOP=43.17
IN=19.25 12" PVC FR 9309
IN=19.24 10" PVC FR 524
OUT=19.20 12" PVC TO 10385

SAN MH 10383 (52)
TOP=46.29
IN=13.29 12" PVC FR 10384
OUT=13.19 12" PVC TO S

SAN MH 10384 (53)
TOP=45.33
IN=13.83 12" PVC FR S4
OUT=13.73 12" PVC TO 10383

SAN MH 10385 (522)
TOP=44.59
IN=17.32 12" PVC FR 9310
OUT=17.30 12" PVC TO S4

NOTES:

1. CALCULATIONS SHOWN ARE PRELIMINARY AND WILL BE FURTHER REFINED AS THE DESIGN PROGRESSES.
2. SOME INVERTS SHOWN ARE BASED ON DESIGN PLANS AND WILL NEED TO BE FIELD VERIFIED PRIOR TO FINALIZING COMPUTATIONS.
3. REFER TO SHEET C201 AND THIS SHEET FOR SANITARY SEWER AS-BUILT DATA. ADDITIONAL AS-BUILT INFORMATION WAS TAKEN FROM THE POTOMAC YARD-OFFSITE SANITARY TRUNK SEWER (30") AND THE POTOMAC YARD ONSITE SANITARY SEWER COLLECTION SYSTEM PHASE I (27").

christopher consultants

2020 Modified FORMULA

SANITARY SEWER FLOW COMPUTATIONS WITH EXISTING PIPE SIZE

PHASE I & II - DRAFT

Project Number: 88024.172.02
Prepared by: Mustafa Mahmoodzada, P.E., CFM
Revised by: Eli Goldman, P.E.
Checked by: Kevin Washington
Date Prepared: 4/16/2020, rev 10/20/2020

	WITH STANDARD WASTEWATER FLOW RATES				ULTIMATE BUILD-OUT FLOWS	
	FLOWS FROM	TO MANHOLE NUMBER	AVERAGE DAILY FLOW RATE (MGD)	PEAK FLOW RATE (MGD)	35% ADF REDUCTION	ULTIMATE BUILD-OUT FLOWS (MGD)
1	FOUR MILE RUN PUMP STATION	S16	N/A	4.000	N/A	4.000
2	POTOMAC AVENUE REDEVELOPMENT - PHASE I & II PEAKED AT 2.5 -LLF ELIGIBLE	S16	2.192	5.480	0.767	4.713
3	LANDBAY G - PEAKED AT 2.5	S14	0.454	1.135	N/A	1.135
4	FIRE STATION - PEAKED AT 2.5	S12E/S13	0.019	0.060	N/A	0.060
5	LANDBAY H - PEAKED AT 2.5	S13	0.370	0.940	N/A	0.940
6	JACK TAYLOR/HERTZ (CDD #7) - PEAKED AT 2.5 - LLF ELIGIBLE	S16	0.200	0.500	0.070	0.430
7	LANDBAY I - PEAKED AT 2.5	S8	0.100	0.240	N/A	0.240
8	LANDBAY J - PEAKED AT 2.5	S23/S4	0.100	0.240	N/A	0.240
9	ROUTE 1 N OAKVILLE - PEAKED AT 2.5 - LLF ELIGIBLE	S16	0.210	0.525	0.074	0.452
10	OAKVILLE TRIANGLE (CDD #24) - PEAKED AT 2.5 - LLF ELIGIBLE	5322/S4	0.292	0.730	0.100	0.630
11	RIVER ROAD PUMPING STATION - PEAKED AT 3	7505/S4	0.170	0.520	N/A	0.520
12	SLATER LANE - PEAKED AT 3	S33	0.250	0.750	N/A	0.750
13	LANDBAY C - PEAKED AT 2.5	S33	0.003	0.010	N/A	0.010
14	LANDBAY L - PEAKED AT 2.5	S27	0.120	0.310	N/A	0.310
15	BRADDOCK METRO NEIGHBORHOOD PLAN - PEAKED AT 3 - LFF ELIGIBLE	SHAFT 20	0.840	2.520	0.294	2.226
16	BRADDOCK FIELDS - PEAKED AT 3 - LFF ELIGIBLE	SHAFT 20	0.014	0.042	0.005	0.037
17	EXISTING DEVELOPMENT - PEAKED AT 3 - LFF ELIGIBLE	SHAFT 17	0.178	0.534	N/A	0.534
18	SEPERATION COMPLETED BY DECEMBER 2019 - PEAKED AT 3	SHAFT 17	0.183	0.549	N/A	0.549
19	REMAINING SEPERATION - PEAKED AT 3	SHAFT 13	0.368	1.104	N/A	1.104
	TOTAL			**20.19**		**18.88**

SANITARY OUTFALL NARRATIVE:

PER MEMO TO INDUSTRY 06-14, THIS OUTFALL ANALYSIS SHALL ANALYZE THE SEWER SYSTEM UNTIL THE SEWER TIES TO A 24" OR LARGER PIPE. THE OAKVILLE SITE WILL TIE INTO THE EXISTING 12" SEWER MAIN RUNNING NORTH TO SOUTH ALONG ROUTE 1. FROM THE INTERSECTION OF ROUTE 1 AND EAST HOWELL AVENUE, THE SEWER GOES EAST UNTIL IT CONNECTS TO THE 24" SEWER IN POTOMAC AVENUE.

BASED ON THIS ANALYSIS, IT IS DETERMINED THAT THE SEWER IN EAST HOWELL AVENUE WILL NEED TO BE UPSIZED FROM A 12" PVC TO A 18" PVC. THIS UPGRADE WILL BE DESIGNED AND CONSTRUCTED WITH THE INFRASTRUCTURE PLAN FOR THIS DEVELOPMENT. FOR INFORMATIONAL PURPOSES ONLY, THE ANALYSIS IS CONTINUED FOR THE 24" PIPE IN POTOMAC AVENUE TO THE 27" ON-SITE SANITARY SEWER AND TO THE 30" POTOMAC YARD OFF-SITE TRUNK SEWER. REFER TO SHEET C603 AND C604 FOR THIS ANALYSIS.

BASED ON THIS ANALYSIS COMPLETED, IT IS OUR ENGINEERING OPINION THAT THIS SEWER HAS AN ADEQUATE OUTFALL.

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COMMONWEALTH OF VIRGINIA
JOHN L. HELMS
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10/22/2020
PROFESSIONAL ENGINEER

SANITARY SEWER OUTFALL ANALYSIS

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
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DRAWN: MZ
CHECKED: KMW
SHEET No.
C600

110236

SANITARY SEWER PIPE COMPUTATIONS
(ULTIMATE CONDITION)

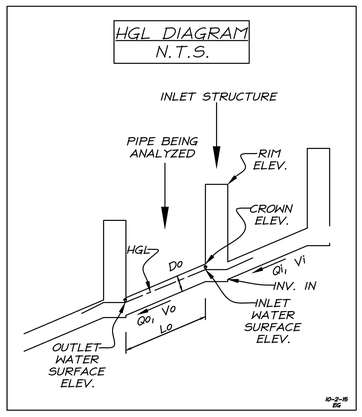
	On-site Gravity Sewers														
	FROM	TO	UPPER INV	LOWER INV	L (FT)	SLOPE (%)	DIA (IN)	MATERIAL	N	CAPACITY (cfs)	CAPACITY (MGD)	DESIGN FLOW (cfs)	DESIGN FLOW (MGD)	V (ft/s)	Assumptions / Comments	Flow Increase (MGD)
as-built/GIS	5990	S322	40.99	37.92	465	0.66	8	PVC	0.010	1.29	0.83	0.26	0.168	4.18	Ex. North of Calvert (0.05), 1/2 Block D (0.045) and 1/4 Block B (0.0725)	0.168
	S1440	S680	41.90	38.98	292	1.00	10	CLAY	0.013	2.38	1.54	0.44	0.285		Block C (0.24) and 1/2 Block D (0.045)	0.285
as-built	S680	S531	38.88	35.52	277.4	1.21	10	CLAY	0.013	2.38	1.54	0.95	0.611	3.79	2/3 Block A1 (0.253) and 1/4 Block B (0.0725)	0.326
as-built	S1811	S1760	38.1	37.13	153.2	0.63	10	RCP	0.015	1.49	0.96	0.19	0.12	2.34	Existing South of Fannon (0.03)	0.12
as-built	S1760	S336	37.03	30.78	156.7	3.99	10	LINED	0.010	5.63	3.64	0.19	0.12	6.14		
	Oakville Off-Site Sewer - S31 to S4 (Route 1 --> E. Howell --> Potomac Ave)															
	FROM	TO	UPPER INV	LOWER INV	L (FT)	SLOPE (%)	DIA (IN)	MATERIAL	N	CAPACITY (cfs)	CAPACITY (MGD)	DESIGN FLOW (cfs)	DESIGN FLOW (MGD)	V (ft/s)	Assumptions / Comments	Flow Increase (MGD)
as-built	5322	531	38.07	35.02	343.2	0.89	10	DIP	0.011	2.42	1.56	0.48	0.313	3.82	1/2 Block B (0.145) + Flow from 5990	0.145
as-built	531	336	34.79	30.03	533.70	0.89	10	DIP	0.011	2.42	1.56	1.63	1.051	4.48	1/3 Block A1 (0.127) + Flow from S680	0.127
as-built	336	7505	29.98	27.20	658.20	0.42	12	DIP	0.011	2.73	1.76	1.92	1.241	3.52	Block A2 (0.07) + Flow from S1760	0.07
as-built	7505	7506	27.10	25.31	254.00	0.70	14	DIP	0.011	5.23	3.38	2.72	1.761	4.73	Development west of RT 1	0.52
as-built	7506	7509	25.26	24.99	95.20	0.28	8	DIP	0.011	0.82	0.53	2.72	1.761	2.22		
as-built	7509	7518	24.69	24.28	26.00	1.58	12	CONC.	0.015	3.88	2.51	2.72	1.761	5.15		
as-built	7518	7514	24.00	22.90	151.00	0.73	12	CONC.	0.015	2.84	1.84	2.72	1.761	3.75		
as-built	7514	7511	22.80	21.66	29.50	3.86	12	PVC	0.010	9.10	5.88	2.72	1.761	10.46		
as-built	7511	7512	21.56	20.65	138.20	0.66	12	PVC	0.010	3.76	2.43	2.72	1.761	5.39		
as-built	7512	7515	20.57	20.40	97.60	0.17	12	PVC	0.010	2.05	1.32	2.72	1.761	2.46		
as-built	7515	S34	20.30	20.07	47.00	0.49	12	PVC	0.010	3.24	2.09	2.72	1.761	4.13		
as-built	S34	S23	19.91	19.25	92.00	0.72	12	PVC	0.010	3.92	2.53	2.72	1.761	4.99		
as-built	S23	S22	19.20	17.32	360.90	0.52	12	PVC	0.010	3.34	2.16	2.91	1.881	4.26	85 Townhouse units from LB I and J	0.12
as-built	S22	S4	17.30	17.11	38.00	0.50	12	PVC	0.010	3.27	2.11	2.91	1.881	4.17		
	Note: All calcualted capacities are at full flow capacity, when the pipe is approximately 93% full.															

xxx / yyy
xxx = Upper Inv
yyy = Lower Inv

Notes:
1. All capacities shown on the chart are full flow capacities, approximately 93% of the maximum capacity.
2. All information is from as-built plans, design information or GIS data and noted appropriately.
3. A 'n' value of 0.010 was used for all smooth pipes per the ESI checklist.

SANITARY SEWER HGL COMPUTATIONS
(ULTIMATE CONDITION)

										JUNCTION LOSS																
Inlet Str.	Outlet Water Surf Elev (ft)	Do (in)	Qo (cfs)	Lo (ft)	Sfo (%)	Hf (ft)	Vo (fps)	Ho (ft)	Qi (cfs)	Vi (fps)	QiVi	Vi^2 2g	Hi (ft)	Angle (deg)	Ha (ft)	Ht (ft)	1.3Ht (ft)	0.5Ht (ft)	Final H (ft)	Inlet Water Surf Elev (ft)	Crown Elev (ft)	Surcharge Depth (ft)	Rim Elev (ft)	Invert In (ft)		surface inflow >20% Y or N	K
Oakville Off-Site Sewer (Route 1 -> Howell -> Potomac)																										
S22	17.91	12	2.91	38.00	0.39	0.15	4.2	0.07	2.91	4.3	12.40	0.28	0.10	14	0.03	0.19	0.00	0.10	0.25	18.16	18.30	0.14	44.59	17.32	17.30	N	0.09
S23	18.16	12	2.91	360.90	0.39	1.42	4.3	0.07	2.72	5.0	13.60	0.39	0.14	0	0.00	0.21	0.00	0.10	1.53	19.68	20.20	0.52	43.17	19.25	19.20	N	0.00
S34	20.05	12	2.72	92.00	0.35	0.32	5.0	0.10	2.72	4.1	11.25	0.26	0.09	30	0.07	0.26	0.00	0.13	0.45	20.50	20.91	0.41	41.02	20.07	19.91	N	0.28
7515	20.87	12	2.72	47.00	0.35	0.16	4.1	0.07	2.72	2.5	6.70	0.09	0.03	30	0.03	0.13	0.00	0.06	0.23	21.10	21.33	0.23	40.26	20.40	20.33	N	0.28
7512	21.20	12	2.72	97.60	0.35	0.34	2.5	0.02	2.72	5.4	14.69	0.45	0.16	0	0.00	0.18	0.00	0.09	0.43	21.63	21.67	0.04	39.76	20.65	20.67	N	0.00
7511	21.63	12	2.72	138.20	0.35	0.48	5.4	0.11	2.72	10.5	28.50	1.70	0.59	33	0.53	1.23	0.00	0.62	1.10	22.72	22.56	-0.16	38.76	21.66	21.56	N	0.31
7514	22.72	12	2.72	29.50	0.35	0.10	10.5	0.42	2.72	3.8	10.22	0.22	0.08	66	0.13	0.63	0.00	0.31	0.42	23.14	23.80	0.66	37.40	22.90	22.80	N	0.59
7518	23.70	12	2.72	151.36	0.35	0.52	3.8	0.05	2.72	5.2	14.03	0.41	0.14	33	0.13	0.33	0.00	0.16	0.69	24.39	24.98	0.59	38.48	24.28	23.98	N	0.31
7509	24.81	8	2.72	26.00	3.01	0.78	5.2	0.10	2.72	2.2	6.05	0.08	0.03	0	0.00	0.13	0.00	0.06	0.85	25.66	25.69	0.03	38.79	24.99	24.69	N	0.00
7506	25.92	14	2.72	95.20	0.15	0.14	2.2	0.02	2.72	4.7	12.89	0.35	0.12	0	0.00	0.14	0.00	0.07	0.22	26.14	26.26	0.12	37.86	25.31	25.26	N	0.00
7505	26.14	12	2.72	254.00	0.35	0.88	4.7	0.09	1.92	3.5	6.76	0.19	0.07	0	0.00	0.15	0.00	0.08	0.96	27.09	28.10	1.01	37.00	27.20	27.10	N	0.00
336	27.87	10	1.92	658.20	0.45	2.99	3.5	0.05	1.63	4.5	7.29	0.31	0.11	0	0.00	0.16	0.00	0.08	3.07	30.94	30.98	0.04	38.48	30.03	29.98	N	0.00
531	30.94	10	1.63	533.70	0.33	1.74	4.5	0.08	0.48	3.8	1.85	0.23	0.08	0	0.00	0.16	0.00	0.08	1.82	32.75	35.79	3.04	45.57	35.02	34.79	N	0.00
5322	35.69	10	0.48	343.20	0.03	0.10	3.8	0.06							0.00	0.06	0.00	0.03	0.13	35.81	39.07	3.26	46.27		38.07	N	0.00
Oakville On-Site Sewer																											
5990	38.45	8	0.26	465.00	0.03	0.13	4.8	0.09	0.00	0.0	0.00	0.00	0.00	0	0.00	0.09	0.00	0.04	0.17	38.62	41.72	3.10	45.55		40.99	N	0.00
S680	36.05	8	0.96	277.40	0.37	1.04	4.8	0.09						0	0.00	0.09	0.00	0.04	1.08	37.13	39.55	2.42	46.71	38.91	38.88	N	0.00
S1760	31.45	10	0.19	156.70	0.00	0.01	6.2	0.15	0.45	3.3	1.48	0.17	0.06	20	0.03	0.24	0.00	0.12	0.13	31.58	37.86	6.28	42.63	37.13	37.03	N	0.16
S1811	37.66	8	0.19	153.20	0.01	0.02	3.3	0.04						0	0.00	0.04	0.00	0.02	0.04	37.71	38.77	1.06	44.81		38.10	N	0.00



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

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COMMONWEALTH OF VIRGINIA
JOHN L. HELMS
Lic. No.52485
10/22/2020
PROFESSIONAL ENGINEER

SANITARY SEWER ANALYSIS FLOW - (ULTIMATE - NO UPGRADES)

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No. C601

1110236

SANITARY SEWER PIPE COMPUTATIONS
(ULTIMATE CONDITION WITH UPGRADES)

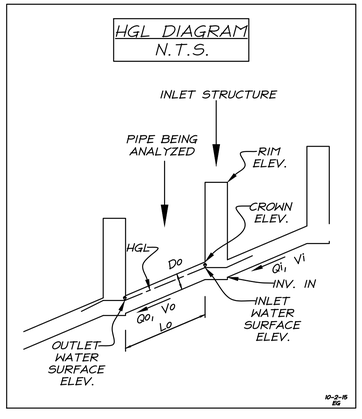
	On-site Gravity Sewers															
	FROM	TO	UPPER INV	LOWER INV	L (FT)	SLOPE (%)	DIA (IN)	MATERIAL	N	CAPACITY (cfs)	CAPACITY (MGD)	DESIGN FLOW (cfs)	DESIGN FLOW (MGD)	V (ft/s)	Assumptions / Comments	Flow Increase (MGD)
as-built/GIS	5990	5322	40.99	37.92	465	0.66	8	PVC	0.010	1.29	0.83	0.26	0.168	4.18	Ex. North of Calvert (0.05), 1/2 Block D (0.045) and 1/4 Block B (0.0725)	0.168
	S1440	S680	41.90	38.98	292	1.00	10	CLAY	0.013	2.38	1.54	0.44	0.285		Block C (0.24) and 1/2 Block D (0.045)	0.285
as-built	S680	S531	38.88	35.52	277.4	1.21	10	CLAY	0.013	2.38	1.54	0.95	0.611	3.79	2/3 Block A1 (0.253) and 1/4 Block B (0.0725)	0.326
as-built	S1811	S1760	38.1	37.13	153.2	0.63	10	RCP	0.015	1.49	0.96	0.19	0.12	2.34	Existing South of Fannon (0.03)	0.12
as-built	S1760	S336	37.03	30.78	156.7	3.99	10	LINED	0.010	5.63	3.64	0.19	0.12	6.14		
	Oakville Off-Site Sewer - S31 to S4 (Route 1 --> E. Howell --> Potomac Ave)															
	FROM	TO	UPPER INV	LOWER INV	L (FT)	SLOPE (%)	DIA (IN)	MATERIAL	N	CAPACITY (cfs)	CAPACITY (MGD)	DESIGN FLOW (cfs)	DESIGN FLOW (MGD)	V (ft/s)	Assumptions / Comments	Flow Increase (MGD)
as-built	5322	531	38.07	35.02	343.2	0.89	10	DIP	0.011	2.42	1.56	0.48	0.313	3.82	1/2 Block B (0.145) + Flow from 5990	0.145
as-built	531	336	34.79	30.03	533.70	0.89	10	DIP	0.011	2.42	1.56	1.63	1.051	4.48	1/3 Block A1 (0.127) + Flow from S680	0.127
as-built	336	7505	29.98	27.20	658.20	0.42	12	DIP	0.011	2.73	1.76	1.92	1.241	3.52	Block A2 (0.07) + Flow from S1760	0.07
as-built	7505	7506	27.10	25.31	254.00	0.70	14	DIP	0.011	5.23	3.38	2.72	1.761	4.73	Development west of RT 1	0.52
as-built	7506	7509	25.26	24.79	95.20	0.49	12	PVC	0.010	3.49	2.26	2.72	1.761	4.6		
as-built	7509	7518	24.69	24.28	26.00	1.58	12	CONC.	0.015	3.88	2.51	2.72	1.761	5.15		
as-built	7518	7514	24.00	22.90	151.00	0.73	12	RCP	0.015	2.84	1.84	2.72	1.761	3.75		
as-built	7514	7511	22.80	21.66	29.50	3.86	12	PVC	0.010	9.10	5.88	2.72	1.761	10.46		
as-built	7511	7512	21.56	20.65	138.20	0.66	16	PVC	0.010	3.76	2.43	2.72	1.761	5.39		
as-built	7512	7515	20.57	20.40	97.60	0.17	16	PVC	0.010	4.40	2.84	2.72	1.761	3.14		
as-built	7515	S34	20.30	20.07	47.00	0.49	12	PVC	0.010	3.24	2.09	2.72	1.761	4.13		
as-built	S34	S23	19.91	19.25	92.00	0.72	12	PVC	0.010	3.92	2.53	2.72	1.761	4.99		
as-built	S23	S22	19.20	17.32	360.90	0.52	12	PVC	0.010	3.34	2.16	2.91	1.881	4.26	85 Townhouse units from LB I and J	0.12
as-built	S22	S4	17.30	17.11	38.00	0.50	12	PVC	0.010	3.27	2.11	2.91	1.881	4.17		
	Note: All calcualted capacities are at full flow capacity, when the pipe is approximately 93% full.															

xxx / yyy
xxx = Upper Inv
yyy = Lower Inv

Notes:
1. All capacities shown on the chart are full flow capacities, approximately 93% of the maximum capacity.
2. All information is from as-built plans, design information or GIS data and noted appropriately.
3. A 'n' value of 0.010 was used for all smooth pipes per the ESI checklist.

SANITARY SEWER HGL COMPUTATIONS
(ULTIMATE CONDITION WITH UPGRADES)

								JUNCTION LOSS																				
Inlet Str.	Outlet Water Surf Elev (ft)	Do (in)	Qo (cfs)	Lo (ft)	Sfo (%)	Hf (ft)	Vo (fps)	Ho (ft)	Qi (cfs)	Vi (fps)	QiVi	Vi^2 2g	Hi (ft)	Angle (deg)	Ha (ft)	Ht (ft)	1.3Ht (ft)	0.5Ht (ft)	Final H (ft)	Inlet Water Surf Elev (ft)	Crown Elev (ft)	Surcharge Depth (ft)	Rim Elev (ft)		Invert In (ft)		surface inflow >20% Y or N	K
Oakville Off-Site Sewer (Route 1 -> Howell -> Potomac)																											
S22	17.91	12	2.91	38.00	0.39	0.15	4.2	0.07	2.91	4.3	12.40	0.28	0.10	14	0.03	0.19	0.00	0.10	0.25	18.16	18.30	0.14	44.59		17.32	17.30	N	0.09
S23	18.16	12	2.91	360.90	0.39	1.42	4.3	0.07	2.72	5.0	13.60	0.39	0.14	0	0.00	0.21	0.00	0.10	1.53	19.68	20.20	0.52	43.17		19.25	19.20	N	0.00
S34	20.05	12	2.72	92.00	0.35	0.32	5.0	0.10	2.72	4.1	11.25	0.26	0.09	30	0.07	0.26	0.00	0.13	0.45	20.50	20.91	0.41	41.02		20.07	19.91	N	0.28
7515	20.87	12	2.72	47.00	0.35	0.16	4.1	0.07	2.72	3.1	8.56	0.15	0.05	30	0.04	0.16	0.00	0.08	0.24	21.11	21.33	0.22	40.26		20.40	20.33	N	0.28
7512	21.20	12	2.72	97.60	0.35	0.34	3.1	0.04	2.72	5.4	14.69	0.45	0.16	0	0.00	0.20	0.00	0.10	0.44	21.64	21.67	0.03	39.76		20.65	20.67	N	0.00
7511	21.64	12	2.72	138.20	0.35	0.48	5.4	0.11	2.72	10.5	28.50	1.70	0.59	33	0.53	1.23	0.00	0.62	1.10	22.73	22.56	-0.17	38.76		21.66	21.56	N	0.31
7514	22.73	12	2.72	29.50	0.35	0.10	10.5	0.42	2.72	3.8	10.22	0.22	0.08	66	0.13	0.63	0.00	0.31	0.42	23.15	23.80	0.65	37.40		22.90	22.80	N	0.59
7518	23.70	12	2.72	151.36	0.35	0.52	3.8	0.05	2.72	5.2	14.03	0.41	0.14	33	0.13	0.33	0.00	0.16	0.69	24.39	24.98	0.59	38.48		24.28	23.98	N	0.31
7509	24.81	8	2.72	26.00	3.01	0.78	5.2	0.10	2.72	4.6	12.53	0.33	0.12	0	0.00	0.22	0.00	0.11	0.89	25.70	25.69	-0.01	38.79		24.79	24.69	N	0.00
7506	25.72	14	2.72	95.20	0.15	0.14	4.6	0.08	2.72	4.7	12.89	0.35	0.12	0	0.00	0.20	0.00	0.10	0.25	25.97	26.26	0.29	37.86		25.31	25.26	N	0.00
7505	26.11	12	2.72	254.00	0.35	0.88	4.7	0.09	1.92	3.5	6.76	0.19	0.07	0	0.00	0.15	0.00	0.08	0.96	27.07	28.10	1.03	37.00		27.20	27.10	N	0.00
336	27.87	10	1.92	658.20	0.45	2.99	3.5	0.05	1.63	4.5	7.29	0.31	0.11	0	0.00	0.16	0.00	0.08	3.07	30.94	30.98	0.04	38.48		30.03	29.98	N	0.00
531	30.94	10	1.63	533.70	0.33	1.74	4.5	0.08	0.48	3.8	1.85	0.23	0.08	0	0.00	0.16	0.00	0.08	1.82	32.75	35.79	3.04	45.57		35.02	34.79	N	0.00
5322	35.69	10	0.48	343.20	0.03	0.10	3.8	0.06							0.00	0.06	0.00	0.03	0.13	35.81	39.07	3.26	46.27			38.07	N	0.00
Oakville On-Site Sewer																												
5990	38.45	8	0.26	465.00	0.03	0.13	4.8	0.09	0.00	0.0	0.00	0.00	0.00	0	0.00	0.09	0.00	0.04	0.17	38.62	41.72	3.10	45.55			40.99	N	0.00
S680	36.05	8	0.96	277.40	0.37	1.04	4.8	0.09						0	0.00	0.09	0.00	0.04	1.08	37.13	39.55	2.42	46.71		38.91	38.88	N	0.00
S1760	31.45	10	0.19	156.70	0.00	0.01	6.2	0.15	0.45	3.3	1.48	0.17	0.06	20	0.03	0.24	0.00	0.12	0.13	31.58	37.86	6.28	42.63		37.13	37.03	N	0.16
S1811	37.66	8	0.19	153.20	0.01	0.02	3.3	0.04						0	0.00	0.04	0.00	0.02	0.04	37.71	38.77	1.06	44.81			38.10	N	0.00



SANITARY SEWER UPGRADE NARRATIVE:
BASED ON THIS SANITARY SEWER ANALYSIS THE FOLLOWING UPGRADES WILL BE NEEDED FOR THE SANITARY SEWER SYSTEM TO ADEQUATELY HANDLE THE FLOWS AT FULL BUILD OUT.

12" GRAVITY SEWER
- UPSIZE 12" SEWER TO 18" FROM MANHOLE S4 TO MANHOLE S22 (38 LF)
- UPSIZE 12" SEWER TO 18" FROM MANHOLE S22 TO MANHOLE S23 (360.9 LF)
- UPSIZE 12" SEWER TO 18" FROM MANHOLE S23 TO MANHOLE S34 (92 LF)
- UPSIZE 12" SEWER TO 18" FROM MANHOLE S34 TO MANHOLE 7515 (47 LF)
- UPSIZE 12" SEWER TO 18" FROM MANHOLE 7515 TO MANHOLE 7512 (99.6 LF)

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DEPARTMENT OF PLANNING & ZONING
DIRECTOR DATE
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CHAIRMAN, PLANNING COMMISSION DATE
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INSTRUMENT NO. DEED BOOK NO. PAGE NO.

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COMMONWEALTH OF VIRGINIA
JOHN L. HELMS
Lic. No.52485
10/22/2020
PROFESSIONAL ENGINEER

SANITARY SEWER ANALYSIS (ULTIMATE FLOW - WITH UPGRADES)

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No. C602

110236

2020 MODIFIED ULTIMATE BUILD-OUT FLOWS
(PHASE I & PHASE II)

	24" Gravity Sewer - S16 to S33 (Potomac Ave)														Use Total Sanitary Sewer Flow Computations (Trunk Line)	
	FROM	TO	UPPER INV	LOWER INV	L (FT)	SLOPE (%)	DIA (IN)	MATERIAL	N	CAPACITY (cfs)	CAPACITY (MGD)	DESIGN FLOW (cfs)	DESIGN FLOW (MGD)	V_{FULL} (ft/s)	Assumptions	Inc
design	S16	S15	27.74	27.15	14.30	4.13	24	PVC	0.011	54.31	35.10	6.18	3.99	17.29	4 mile run, North Potomac Yard Phase I & II, JACK TAYLOR, AND ROUTE 1 N OAKVILLE Note: 5.6 MGD of flow from the new pumping station diverted to the downstream of the existing Potomac Yard Pumping Station via the 20-inch force main extension was removed from the design flow.	9.594
design	S15	S14	27.05	23.83	397.20	0.81	24	PVC	0.011	24.07	15.56	6.18	3.99	7.66		
design	S14	S13	23.58	22.75	251.80	0.33	24	PVC	0.011	15.35	9.92	7.94	5.13	4.89	Landbay G	1.135
design	S13	S12	22.65	21.81	254.20	0.33	24	PVC	0.011	15.37	9.93	9.48	6.13	4.89	Fire Station, Landbay H	1.000
design	S12	S11	21.71	21.02	210.10	0.33	24	PVC	0.011	15.32	9.90	9.48	6.13	4.88		
design	S11	S10	20.92	20.10	246.40	0.33	24	PVC	0.011	15.42	9.97	9.48	6.13	4.91		
design	S10	S9A	20.00	19.33	203.40	0.33	24	PVC	0.011	15.35	9.92	9.48	6.13	4.88		
design	S9A	S9	19.23	18.88	107.80	0.32	24	PVC	0.011	15.24	9.85	9.48	6.13	4.85		
design	S9	S8	18.78	17.99	237.00	0.33	24	PVC	0.011	15.44	9.98	9.48	6.13	4.91		
design	S8	S7A	17.89	17.25	195.00	0.33	24	PVC	0.011	15.32	9.90	9.85	6.37	4.88	Landbay I	0.240
design	S7A	S7	17.15	16.67	146.90	0.33	24	PVC	0.011	15.28	9.88	9.85	6.37	4.86		
design	S7	S6	16.57	16.09	144.00	0.33	24	PVC	0.011	15.44	9.98	9.85	6.37	4.91		
design	S6	S5	15.99	15.23	230.30	0.33	24	PVC	0.011	15.36	9.93	9.85	6.37	4.89		
design	S5	S4	15.13	14.32	244.40	0.33	24	PVC	0.011	15.39	9.95	9.85	6.37	4.90		
design/ as-built	S4	S3	14.22	13.83	74.40	0.52	24	PVC	0.011	19.36	12.51	12.01	7.76	6.16	Landbay J, Oakville Triangle, and River RD	1.390
as-built	S3	S2	13.73	13.29	124.20	0.35	24	PVC	0.011	15.91	10.29	12.01	7.76	5.07		
as-built/design slope	S2	S33A (PUMP)	13.19	12.70	151.90	0.32	24	PVC	0.011	15.19	9.81	12.01	7.76	4.83	On-site pump station, Calculated normal depth = 1.80', Max Flow = 17.89 cfs	
	S33A	S33B	--	--	--	--	24	PVC	0.011	-	-	12.01	7.76		Force Main	
	S33B	S33	--	--	--	--	24	PVC	0.011	-	-	12.01	7.76		Force Main	
	27" Gravity Sewer - S33 to S24 (Potomac Ave)															
	FROM	TO	UPPER INV	LOWER INV	L (FT)	SLOPE (%)	DIA (IN)	MATERIAL	N	CAPACITY (cfs)	CAPACITY (MGD)	DESIGN FLOW (cfs)	DESIGN FLOW (MGD)	V (ft/s)	Assumptions	Inc
as-built	S33	S32	27.23	26.37	300.50	0.29	36	PVC	0.011	42.17	27.26	13.18	8.52	5.97	Slater's lane pump station and Landbay C	0.760
as-built	S32	S31A	26.28	25.56	237.50	0.30	36	PVC	0.011	43.40	28.05	13.18	8.52	6.14		
as-built	S31A	S31	25.45	25.02	133.00	0.32	36	PVC	0.011	44.82	28.97	13.18	8.52	6.34		
as-built	S31	S30	24.89	24.41	173.00	0.28	36	PVC	0.011	41.52	26.84	13.18	8.52	5.87		
as-built	S30	S29A	24.30	23.34	295.00	0.33	36	PVC	0.011	44.97	29.06	13.18	8.52	6.36		
as-built	S29A	S29	23.29	22.60	39.50	1.75	36	PVC	0.011	104.19	67.34	13.18	8.52	14.74		
as-built	S29	S28	22.57	22.08	140.00	0.35	36	PVC	0.011	46.64	30.14	13.18	8.52	6.60		
as-built	S28	S27	21.93	21.14	209.50	0.38	36	PVC	0.011	48.41	31.29	13.18	8.52	6.85		
as-built	S27	S26	21.09	20.10	402.00	0.25	36	PVC	0.011	39.12	25.28	13.66	8.83	5.53	Landbay L	0.310
as-built	S26	S25	19.90	19.33	197.50	0.29	36	PVC	0.011	42.35	27.37	13.66	8.83	5.99		
as-built	S25	S24	19.21	18.28	276.00	0.34	36	PVC	0.011	45.76	29.58	13.66	8.83	6.47		
	30" Gravity Sewer - Shaft 24 to Shaft 0 (Off-Site)															
	FROM	TO	UPPER INV	LOWER INV	L (FT)	SLOPE (%)	DIA (IN)	MATERIAL	N	CAPACITY (cfs)	CAPACITY (MGD)	DESIGN FLOW (cfs)	DESIGN FLOW (MGD)	V (ft/s)	Contributing Flows	
as-built	24	23	18.26	17.7	281.2	0.20	36	CCFP	0.011	35.18	22.74	13.66	8.83	4.98		
as-built	23	22	17.51	16.97	221.8	0.24	36	CCFP	0.011	38.90	25.14	13.66	8.83	5.50		
as-built	22	21	16.83	15.94	253.2	0.35	36	CCFP	0.011	46.74	30.21	13.66	8.83	6.61		
as-built	21	20	15.85	14.84	376.3	0.27	36	CCFP	0.011	40.84	26.40	13.66	8.83	5.78		
as-built	20	19	14.67	13.73	394.3	0.24	36	CCFP	0.011	38.49	24.88	17.16	11.09	5.45	Braddock Metro Neighborhood Plan and Braddock Fields	2.263
as-built	19	18	13.46	12.47	427	0.23	36	CCFP	0.011	37.96	24.53	17.16	11.09	5.37		
as-built	18	17	12.12	11.01	424.4	0.26	36	CCFP	0.011	40.32	26.06	17.16	11.09	5.70		
as-built	17	16	10.75	10.06	410.9	0.17	36	CCFP	0.011	32.30	20.88	18.84	12.18	4.57	Existing Developments and Seperation Completed by December 2019	1.083
as-built	16	15	9.71	8.97	416.8	0.18	36	CCFP	0.011	33.22	21.47	18.84	12.18	4.70		
as-built	15	14	8.66	7.49	430.1	0.27	36	CCFP	0.011	41.12	26.57	18.84	12.18	5.82		
as-built	14	13	7.43	6.62	340.8	0.24	36	CCFP	0.011	38.43	24.84	18.84	12.18	5.44		
as-built	13	12	6.52	5.6	315.4	0.29	36	CCFP	0.011	42.58	27.52	20.55	13.28	6.02	Remaining Seperation	1.104
as-built	12	11	5.55	4.49	326.4	0.32	36	CCFP	0.011	44.92	29.04	20.55	13.28	6.36		
as-built	11	10	4.39	3.21	434.6	0.27	36	CCFP	0.011	41.08	26.55	20.55	13.28	5.81		
as-built	10	9	2.98	1.77	431.20	0.28	36	CCFP	0.011	41.76	26.99	20.55	13.28	5.91		
as-built	9	8	1.72	0.53	351.30	0.34	36	CCFP	0.011	45.88	29.65	20.55	13.28	6.49		
as-built	8	7	0.46	0.05	400.90	0.10	36	CCFP	0.011	25.21	16.29	20.55	13.28	3.57		
as-built	7	5	0.01	-2.17	587.20	0.37	36	CCFP	0.011	48.03	31.04	20.55	13.28	6.80		
as-built	5	4	-2.24	-3.78	561.10	0.27	36	CCFP	0.011	41.30	26.69	20.55	13.28	5.84		
as-built	4	3	-3.83	-4.64	399.00	0.20	36	CCFP	0.011	35.52	22.96	20.55	13.28	5.02		
as-built	3	2	-4.74	-5.89	408.70	0.28	36	CCFP	0.011	41.82	27.03	20.55	13.28	5.92		
as-built	2	1	-6.38	-7.14	326.60	0.23	36	CCFP	0.011	38.03	24.58	20.55	13.28	5.38		
as-built/design slope	1	0	-7.28	-7.50	80.30	0.27	36	CCFP	0.011	41.26	26.67	20.55	13.28	5.84		

Note: All calcualted capacities are at full flow capacity, when the pipe is approximately 93% full.

NAD 83	xxx / yyy
USGS	xxx = Upper Inv
	yyy = Lower Inv

Notes:

ll elevation for the 30" and 27" sewer are from the USGS datum
or all other sewers are from the NAD 83 datum (0.83' below the USGS datum)
on the chart are full flow capacities, approximately 93% of the maximum capacity.
s from as-built plans, design information or GIS data and noted appropriately.
value of 0.010 was used for all smooth pipes per the ESI checklist.

THIS SHEET IS FOR INFORMATION PURPOSES ONLY!

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

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COMMONWEALTH OF VIRGINIA
JOHN L. HELMS
Lic. No.52485
10/22/2020
PROFESSIONAL ENGINEER

OFF-SITE SANITARY SEWER ANALYSIS

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No. C603

2020 MODIFIED ULTIMATE BUILD-OUT FLOWS
(HYDRAULIC GRADE LINE (HGL) COMPUTATIONS)

Inlet Str.	Outlet Water Surf Elev (ft)	Do (in)	Qo (cfs)	Lo (ft)	Sfo (%)	Hf (ft)	JUNCTION LOSS Vo (fps)	Ho (ft)	Qi (cfs)	Vi (fps)	QiVi	Vi^2 2g	Hi (ft)	Angle (deg)	Ha (ft)	Ht (ft)	1.3 Ht (ft)	0.5 Ht (ft)	Final H (ft)	Inlet Water Surf Elev (ft)	Rim Elev (ft)	Outlet Pipe Crown Elevation (ft)	Inlet Pipe Crown Elevation (ft)	Delta b/w Outlet WSE & Outlet Pipe Crown (see note 6)	Delta b/w Inlet WSE & Inlet Pipe Crown (see note 7)	Invert In (ft)		surface inflow >20% Y or N	K
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)				
30" Offsite Sewer																													
1	-2.00	36	20.55	80.30	0.06	0.05	6.4	0.16	20.55	5.9	121.22	0.54	0.19	90	0.38	0.73	0.00	0.36	0.41	-1.59	23.42	-3.95	-3.81	-1.95	-2.22	-7.14	-7.28	N	0.70
2	-1.59	36	20.55	326.60	0.06	0.18	5.9	0.14	20.55	6.6	134.58	0.67	0.23	0	0.00	0.37	0.00	0.18	0.37	-1.22	37.09	-3.05	-2.56	-1.46	-1.33	-5.89	-6.38	N	0.00
3	-1.22	36	20.55	408.70	0.06	0.23	6.6	0.17	20.55	5.5	113.00	0.47	0.16	0	0.00	0.33	0.00	0.17	0.39	-0.83	32.03	-1.41	-1.31	-0.18	-0.48	-4.64	-4.74	N	0.00
4	-0.83	36	20.55	399.00	0.06	0.22	5.5	0.12	20.55	6.4	131.50	0.64	0.22	0	0.00	0.34	0.00	0.17	0.39	-0.44	27.55	-0.50	-0.45	0.33	-0.01	-3.78	-3.83	N	0.00
5	-0.44	36	20.55	561.10	0.06	0.32	6.4	0.16	20.55	7.5	153.07	0.86	0.30	0	0.00	0.46	0.00	0.23	0.55	0.11	27.46	1.09	1.16	1.53	1.05	-2.17	-2.24	N	0.00
7	0.23	36	20.55	587.20	0.06	0.33	7.5	0.22	20.55	3.9	80.13	0.24	0.08	0	0.00	0.30	0.00	0.15	0.48	0.71	32.23	3.34	3.38	3.11	2.67	0.05	0.01	N	0.00
8	2.45	36	20.55	400.90	0.06	0.23	3.9	0.06	20.55	7.1	145.47	0.78	0.27	5	0.05	0.38	0.00	0.19	0.41	2.86	28.83	3.79	3.86	1.34	1.00	0.53	0.46	N	0.06
9	2.93	36	20.55	351.30	0.06	0.20	7.1	0.19	20.55	6.5	133.55	0.66	0.23	5	0.04	0.46	0.00	0.23	0.43	3.36	31.61	5.05	5.10	2.12	1.74	1.77	1.72	N	0.06
10	4.17	36	20.55	431.20	0.06	0.24	6.5	0.16	20.55	6.4	131.50	0.64	0.22	5	0.04	0.42	0.00	0.21	0.45	4.62	29.73	6.31	6.54	2.14	1.92	3.21	2.98	N	0.06
11	5.61	36	20.55	434.60	0.06	0.24	6.4	0.16	20.55	6.9	141.77	0.74	0.26	5	0.04	0.46	0.00	0.23	0.48	6.09	29.95	7.72	7.82	2.11	1.74	4.49	4.39	N	0.06
12	6.89	36	20.55	326.40	0.06	0.18	6.9	0.18	20.55	6.6	135.61	0.68	0.24	70	0.41	0.83	0.00	0.42	0.60	7.49	33.02	8.88	8.93	1.99	1.44	5.60	5.55	N	0.61
13	8.00	36	20.55	315.40	0.06	0.18	6.6	0.17	18.84	6.1	114.35	0.57	0.20	70	0.35	0.72	0.00	0.36	0.54	8.54	40.87	9.85	9.95	1.85	1.42	6.62	6.52	N	0.61
14	9.02	36	18.84	340.80	0.05	0.16	6.1	0.14	18.84	6.4	120.56	0.64	0.22	0	0.00	0.37	0.00	0.18	0.34	9.36	43.98	10.76	10.82	1.74	1.46	7.49	7.43	N	0.00
15	9.89	36	18.84	430.10	0.05	0.20	6.4	0.16	18.84	5.3	98.90	0.43	0.15	0	0.00	0.31	0.00	0.15	0.36	10.25	45.62	11.99	12.30	2.10	2.06	8.97	8.66	N	0.00
16	11.37	36	18.84	416.80	0.05	0.20	5.3	0.11	18.84	5.1	96.07	0.40	0.14	0	0.00	0.25	0.00	0.12	0.32	11.69	44.15	13.04	13.39	1.67	1.70	10.06	9.71	N	0.00
17	12.46	36	18.84	410.90	0.05	0.19	5.1	0.10	17.16	6.2	106.24	0.59	0.21	0	0.00	0.31	0.00	0.15	0.35	12.81	42.81	14.08	14.34	1.62	1.53	11.01	10.75	N	0.00
18	13.41	36	17.16	424.40	0.04	0.17	6.2	0.15	17.16	5.8	99.54	0.52	0.18	0	0.00	0.33	0.00	0.17	0.33	13.74	44.41	15.45	15.80	2.04	2.06	12.47	12.12	N	0.00
19	14.87	36	17.16	427.00	0.04	0.17	5.8	0.13	17.16	5.9	101.26	0.54	0.19	0	0.00	0.32	0.00	0.16	0.33	15.20	43.96	16.79	17.06	1.92	1.87	13.73	13.46	N	0.00
20	16.13	36	17.16	394.30	0.04	0.15	5.9	0.14	13.66	6.1	83.33	0.58	0.20	0	0.00	0.34	0.00	0.17	0.32	16.45	45.92	18.00	18.17	1.87	1.72	14.84	14.67	N	0.00
21	17.24	36	13.66	376.30	0.02	0.09	6.1	0.14	13.66	6.8	92.35	0.71	0.25	25	0.21	0.61	0.00	0.30	0.40	17.64	47.03	19.18	19.27	1.94	1.64	15.94	15.85	N	0.30
22	18.34	36	13.66	253.20	0.02	0.06	6.8	0.18	13.66	5.8	79.23	0.52	0.18	70	0.32	0.68	0.00	0.34	0.40	18.74	45.23	20.16	20.30	1.82	1.56	16.97	16.83	N	0.61
23	19.37	36	13.66	221.80	0.02	0.06	5.8	0.13	13.66	5.4	73.77	0.45	0.16	15	0.09	0.38	0.00	0.19	0.24	19.61	42.51	20.84	21.03	1.47	1.42	17.70	17.51	N	0.19
24	20.10	36	13.66	281.20	0.02	0.07	5.4	0.11	0.00	0.0	0.00	0.00	0.00	90	0.00	0.11	0.00	0.06	0.13	20.23	41.38	21.59	21.07	1.49	0.85		18.26	N	0.70
27" Onsite Sewer																													
S25	20.23	36	13.66	276.00	0.02	0.07	6.6	0.17	13.66	6.2	84.29	0.59	0.21	0	0.00	0.38	0.00	0.19	0.26	20.48	39.96	22.00	22.12	1.78	1.64	19.33	19.21	N	0.00
S26	21.73	36	13.66	197.50	0.02	0.05	6.2	0.15	13.66	5.8	78.82	0.52	0.18	0	0.00	0.33	0.00	0.16	0.21	21.94	39.68	22.69	22.89	0.96	0.95	20.10	19.90	N	0.00
S27	22.50	36	13.66	402.00	0.02	0.10	5.8	0.13	13.18	6.9	90.56	0.73	0.26	0	0.00	0.39	0.00	0.19	0.29	22.79	39.51	23.88	23.93	1.38	1.14	21.14	21.09	N	0.00
S28	23.54	36	13.18	209.50	0.02	0.05	6.9	0.18	13.18	6.7	87.66	0.69	0.24	35	0.27	0.69	0.00	0.35	0.39	23.93	38.76	24.72	24.87	1.18	0.94	22.08	21.93	N	0.39
S29	24.48	36	13.18	140.00	0.02	0.03	6.7	0.17	13.18	12.3	161.60	2.33	0.82	70	1.42	2.41	0.00	1.21	1.24	25.72	39.35	25.36	25.39	0.88	-0.33	22.60	22.57	N	0.61
S29A	25.72	36	13.18	39.50	0.02	0.01	12.3	0.58	13.18	6.5	85.55	0.65	0.23	45	0.30	1.12	0.00	0.56	0.57	26.29	38.02	26.08	26.13	0.36	-0.15	23.34	23.29	N	0.47
S30	26.29	36	13.18	295.00	0.02	0.07	6.5	0.16	13.18	6.1	79.75	0.57	0.20	35	0.22	0.58	0.00	0.29	0.36	26.65	36.74	27.09	27.20	0.81	0.56	24.41	24.30	N	0.39
S31	26.81	36	13.18	173.00	0.02	0.04	6.1	0.14	13.18	6.4	84.36	0.64	0.22	40	0.27	0.64	0.00	0.32	0.36	27.17	37.70	27.68	27.81	0.87	0.64	25.02	24.89	N	0.43
S31A	27.42	36	13.18	133.00	0.02	0.03	6.4	0.16	13.18	6.2	81.72	0.60	0.21	0	0.00	0.37	0.00	0.18	0.21	27.63	37.05	28.24	28.35	0.82	0.72	25.56	25.45	N	0.00
S32	27.96	36	13.18	237.50	0.02	0.05	6.2	0.15	13.18	6.1	80.41	0.58	0.20	0	0.00	0.35	0.00	0.18	0.23	28.19	37.62	29.07	29.16	1.11	0.97	26.37	26.28	N	0.00
S33	28.77	36	13.18	300.50	0.02	0.07	6.1	0.14	0.00	0.0	0.00	0.00	0.00	90	0.00	0.14	0.00	0.07	0.14	28.91	33.90	30.02	30.31	1.25	1.40		27.23	N	0.70
24" Onsite Sewer (Scenario 2)																													
S2	14.30	24	12.01	151.90	0.17	0.25	6.0	0.14	12.01	6.3	75.63	0.62	0.22	15	0.12	0.47	0.00	0.24	0.49	14.79	46.29	15.98	15.61	1.68	0.82	13.29	13.19	N	0.19
S3	14.89	24	12.01	151.90	0.17	0.25	6.3	0.15	12.01	7.5	90.52	0.88	0.31	60	0.49	0.96	0.00	0.48	0.73	15.62	45.33	16.05	16.15	1.16	0.53	13.83	13.73	N	0.56
S4	15.62	24	12.01	124.20	0.17	0.21	7.5	0.22	12.01	6.1	73.35	0.58	0.20	70	0.35	0.78	0.00	0.39	0.60	16.22	44.75	16.54	16.64	0.92	0.42	14.32	14.22	N	0.61
S5	16.22	24	12.01	74.40	0.17	0.12	6.1	0.14	9.85	6.1	60.21	0.58	0.20	0	0.00	0.35	0.00	0.17	0.30	16.52	41.95	17.45	17.55	1.23	1.03	15.23	15.13	N	0.00
S6	16.83	24	9.85	244.40	0.11	0.27	6.1	0.14	9.85	6.1	60.21	0.58	0.20	5	0.03	0.38	0.00	0.19	0.47	17.30	43.11	18.31	18.41	1.48	1.11	16.09	15.99	N	0.06
S7	17.69	24	9.85	230.30	0.11	0.26	6.1	0.14	9.85	6.1	60.21	0.58	0.20	5	0.03	0.38	0.00	0.19	0.45	18.14	42.95	18.89	18.99	1.20	0.85	16.67	16.57	N	0.06
S7A	18.27	24	9.85	144.00	0.11	0.16	6.1	0.14	9.85	6.1	60.21	0.58	0.20	5	0.03	0.38	0.00	0.19	0.35	18.62	41.49	19.47	19.57	1.20	0.95	17.25	17.15	N	0.06
S8	18.85	24	9.85	146.90	0.11	0.16	6.1	0.14	9.85	6.1	60.21	0.58	0.20	0	0.00	0.35	0.00	0.17	0.34	19.19	39.54	20.21	20.31	1.36	1.12	17.99	17.89	N	0.00
S9	19.59	24	9.85	195.00	0.11	0.22	6.1	0.14	9.48	6.0	57.19	0.56	0.20	5	0.03	0.38	0.00	0.19	0.41	20.00	35.35	21.10	21.20	1.51	1.20	18.88	18.78	N	0.06
S9A	20.48	24	9.48	237.00	0.10	0.25	6.0	0.14	9.48	6.1	57.94	0.58	0.20	0	0.00	0.34	0.00	0.17	0.42	20.90	36.56	21.55	21.65	1.07	0.75	19.33	19.23	N	0.00
S10	20.93	24	9.48	107.80	0.10	0.11	6.1	0.14	9.48	6.1	57.94	0.58	0.20	5	0.03	0.38	0.00	0.19	0.30	21.23	35.97	22.32	22.42	1.39	1.19	20.10	20.00	N	0.06
S11	21.70	24	9.48	203.40	0.10	0.21	6.1	0.14	9.48	6.1	57.94	0.58	0.20	5	0.03	0.38	0.00	0.19	0.40	22.10	37.48	23.24	23.34	1.54	1.24	21.02	20.92	N	0.06
S12	22.62	24	9.48	246.40	0.10	0.26	6.1	0.14	9.48	6.1	57.94	0.58	0.20	5	0.03	0.38	0.00	0.19	0.45	23.07	36.49	24.03	24.13	1.41	1.06	21.81	21.71	N	0.06
S13	23.41	24	9.48	210.10	0.10	0.22	6.1	0.14	9.48	6.1	57.66	0.57	0.20	0	0.00	0.35	0.00	0.17	0.39	23.80	34.78	24.97	25.07	1.56	1.27	22.75	22.65	N	0.00
S14	24.35	24	9.48	254.20	0.10	0.26	6.1	0.14	7.94	8.7	69.12	1.18	0.41	0	0.00	0.56	0.00	0.28	0.54	24.89	33.90	25.90	25.89	1.55	1.00	23.83	23.58	N	0.00
S15	25.43	24	7.94	251.80	0.07	0.18	8.7	0.29	6.18	14.7	90.85	3.36	1.17	0	0.00	1.47	0.00	0.73	0.92	26.35	35.99	29.11	29.21	3.68	2.86	27.15	27.05	N	0.00
S16	28.75	24	6.18	397.20	0.04	0.18	14.7	0.84	0.00	0.0	0.00	0.00	0.00	0	0.00	0.84	0.00	0.42	0.59	29.34	35.99	29.80		1.05			27.74	N	0.00

Notes:
1. All elevation for the 30" and 27" sewer are from the USGS datum
2. All elevation for all other sewers are from the NAD 83 datum (0.83' below the USGS datum)
3. All capacities shown on the chart are full flow capacities, approximately 93% of the maximum capacity.
4. All information is from as-built plans, design information or GIS data and noted appropriately.
5. Velocity values assumed to be at maximum when the pipe is at full capacity.
6. Column (24) = Column (22) - Column (2). A negative value donates that the water surface elevation is higher than the crown of the pipe.
7. Column (25) = Column (23) - Column (20). A negative value donates that the water surface elevation is higher than the crown of the pipe.

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_____ DIRECTOR _____ DATE
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____
_____ DIRECTOR _____ DATE
_____ CHAIRMAN, PLANNING COMMISSION _____ DATE
DATE RECORDED _____
_____ INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO.

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COMMONWEALTH OF VIRGINIA
JOHN L. HELMS
Lic. No.52485
10/22/2020
PROFESSIONAL ENGINEER

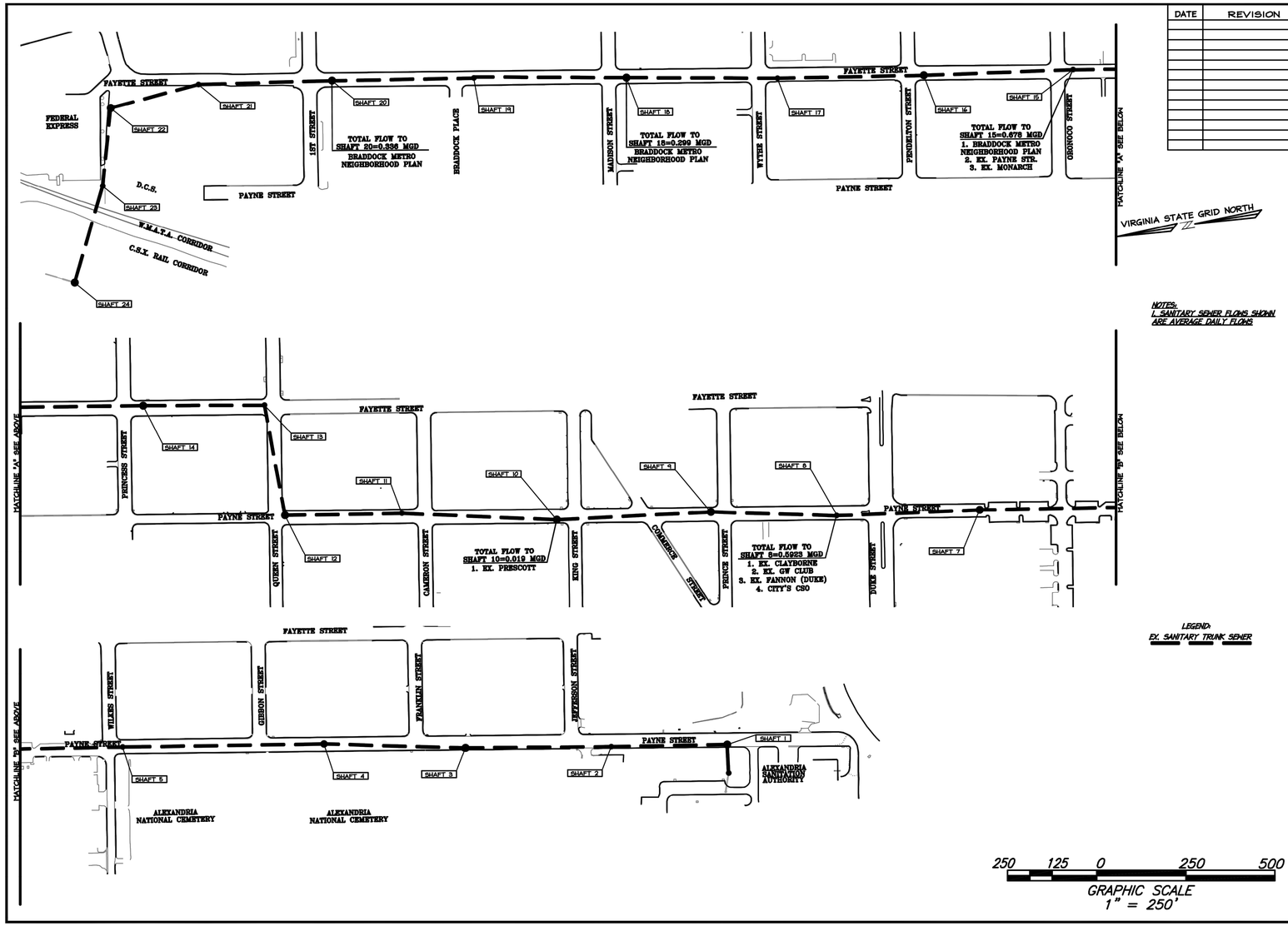
OFF-SITE SANITARY SEWER ANALYSIS

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No. C604

110236

TRUNK SEWER TO WASTEWATER TREATMENT PLANT
(SHAFT 24 - SHAFT 1)



DATE	REVISION

christopher consultants
engineering · surveying · land planning
9900 main street (fourth floor) · fairfax, va. 22031-3907
703.273.6820 · fax 703.273.7636

EXISTING 30" OFFSITE SANITARY TRUNK SEWER EXHIBIT 4

POTOMAC VILLAGE
SANITARY ALTERNATIVES
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO: 882496.00
SCALE: 1" = 250'
DATE: OCT. 30, 2009
DESIGN: MAC
DRAWN: MAC
CHECKED:
SHEET No. 1 OF 1

A-832

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COMMONWEALTH OF VIRGINIA
JOHN L. HELMS
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10/22/2020
PROFESSIONAL ENGINEER

EXISTING 30-INCH SANITARY TRUNK SEWER EXHIBIT

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No. C605

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

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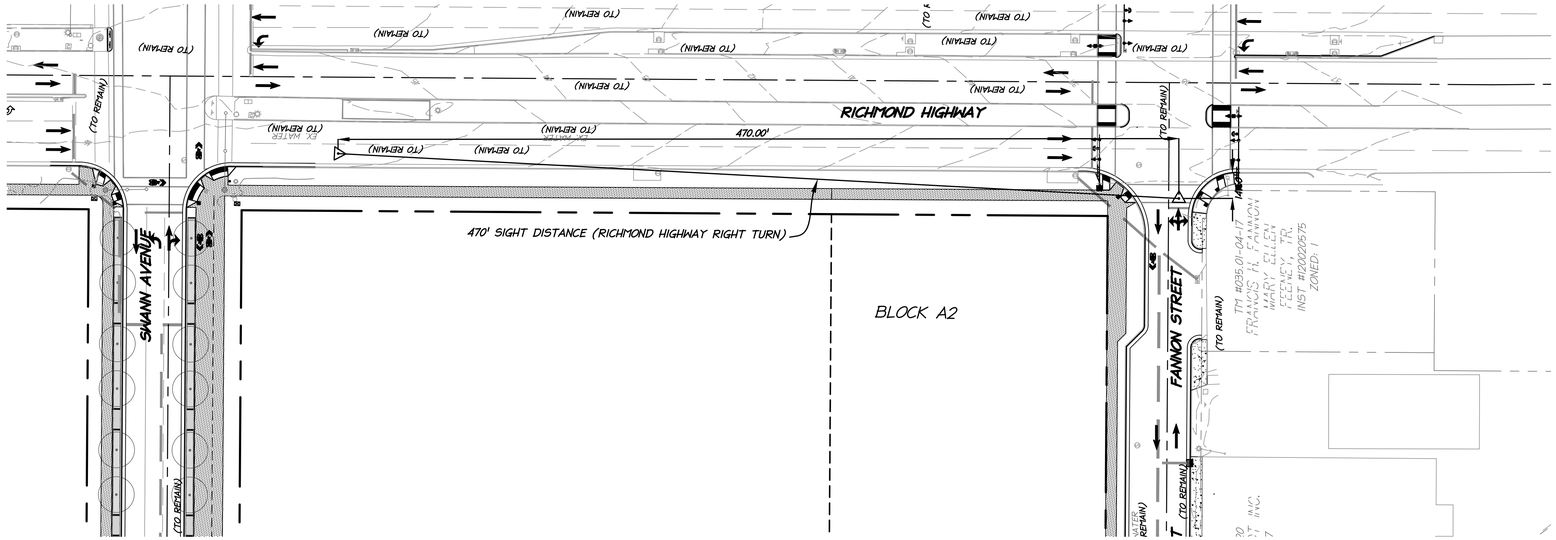
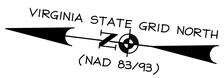
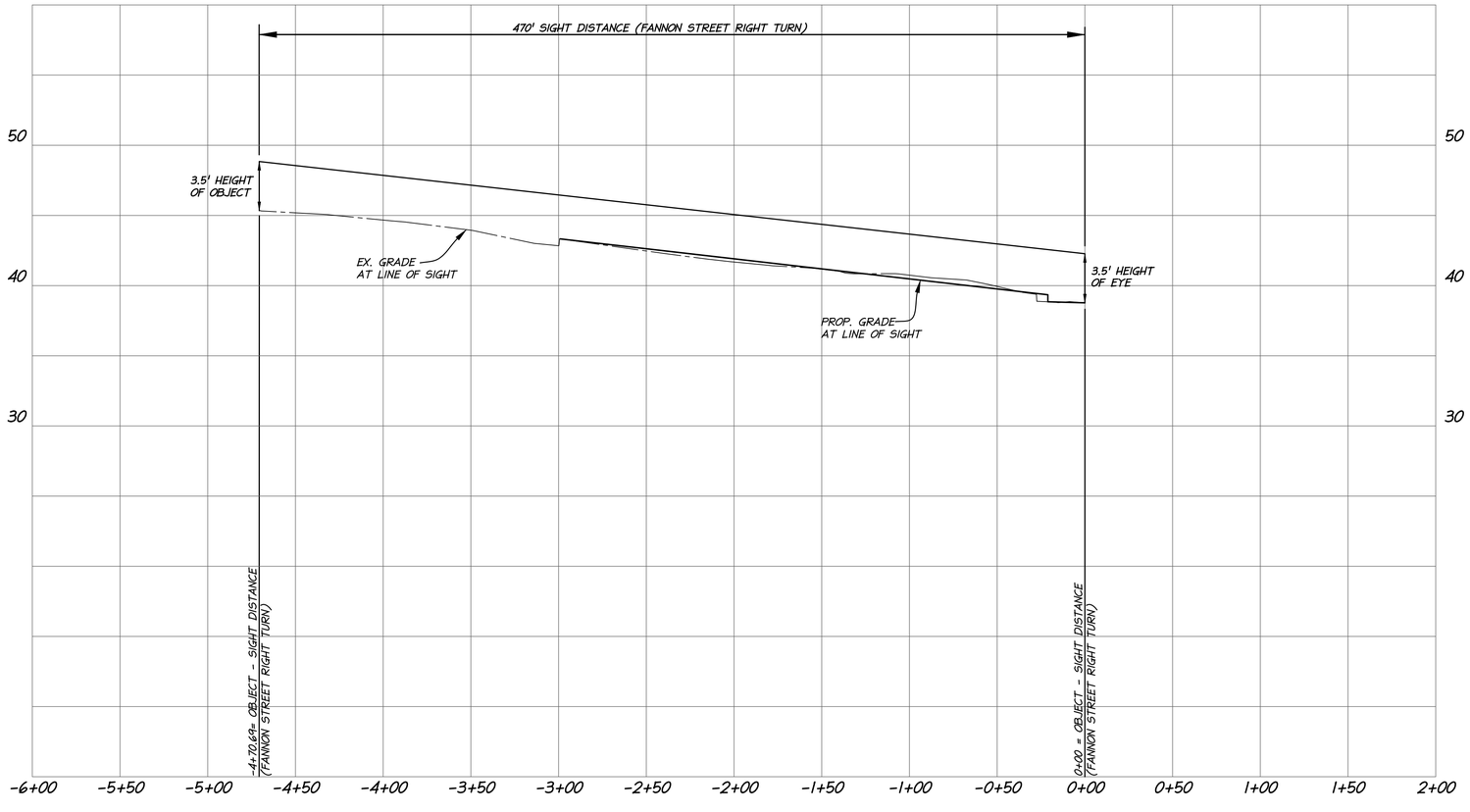
110236

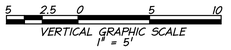


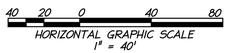


RICHMOND HIGHWAY DISTANCE - RIGHT TURN ONLY

POSTED SPEED: 35 MPH







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DIRECTOR DATE

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CHAIRMAN, PLANNING COMMISSION DATE

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INSTRUMENT NO. DEED BOOK NO. PAGE NO.

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COMMONWEALTH OF VIRGINIA
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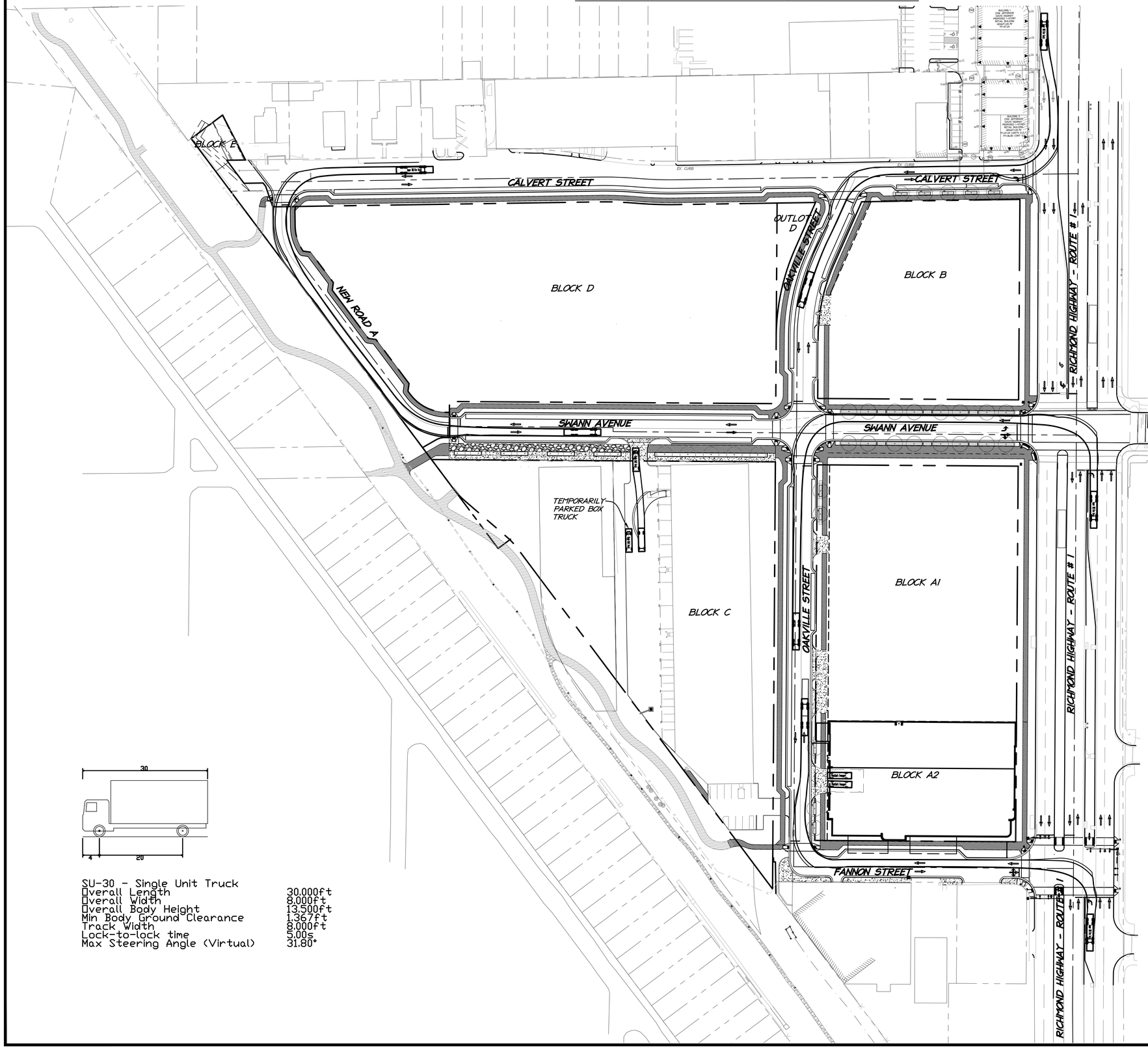
SIGHT DISTANCE

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

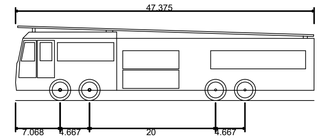
PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No.
C700

110236

FIRE TRUCK TURNS THROUGH OUT THE SITE



SU-30 - Single Unit Truck	
Overall Length	30.000ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.367ft
Track Width	8.000ft
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	31.80°



Tower 203 Fire Truck	
Overall Length	47.375ft
Overall Width	8.167ft
Overall Body Height	11.831ft
Min Body Ground Clearance	1.612ft
Track Width	9.583ft
Lock-to-lock time	4.00s
Wall to Wall Turning Radius	54.980ft

NOTE: TURNING MOVEMENT SHOWN FOR A TOWER 203 FIRE TRUCK IS BEING PROVIDED TO SHOW THE TURN CAN WORK. THERE IS AN ENCROACHMENT INTO OPPOSING LANES, BUT THAT IS COMMON TO SEE FOR LARGE TRUCKS IN AN URBAN ENVIRONMENT.

60 30 0 60 120
GRAPHIC SCALE
1" = 60'

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COMMONWEALTH OF VIRGINIA
JOHN L. HELMS
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10/22/2020
PROFESSIONAL ENGINEER

TURNING MOVEMENT ANALYSIS

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
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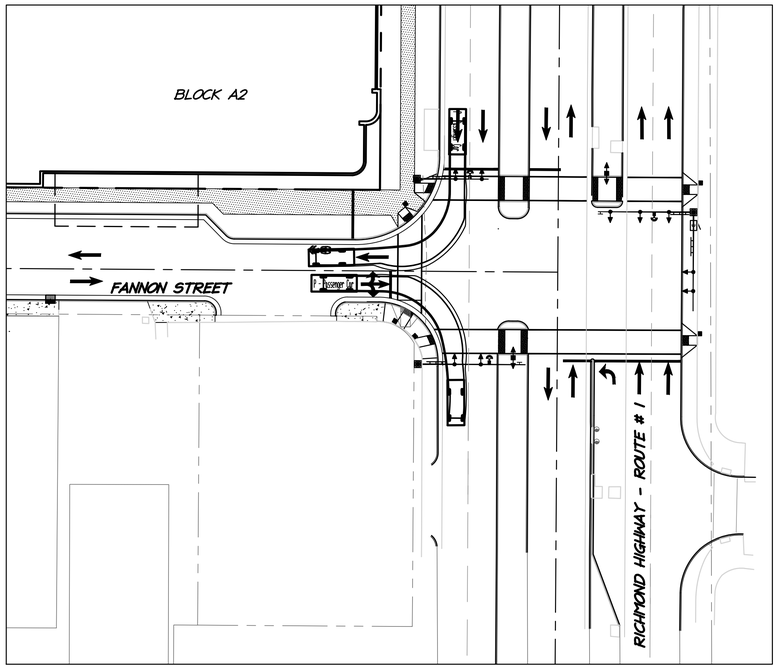
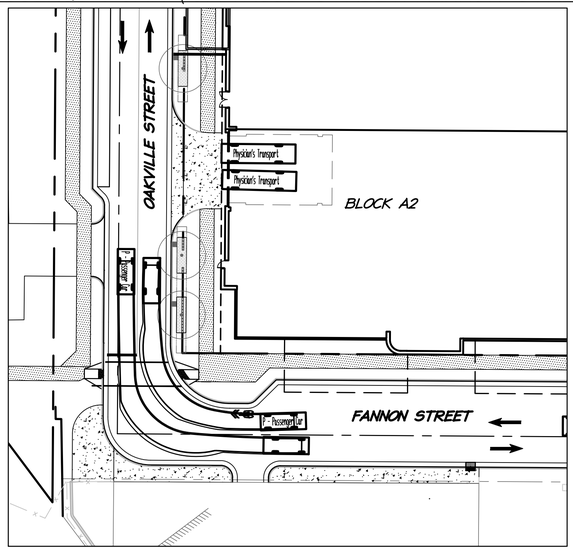
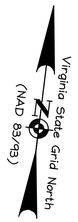
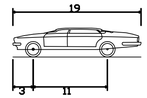
PASSENGER CAR (RICHMOND HIGHWAY/FANNON STREET)



PASSENGER CAR (OAKVILLE STREET/FANNON STREET)



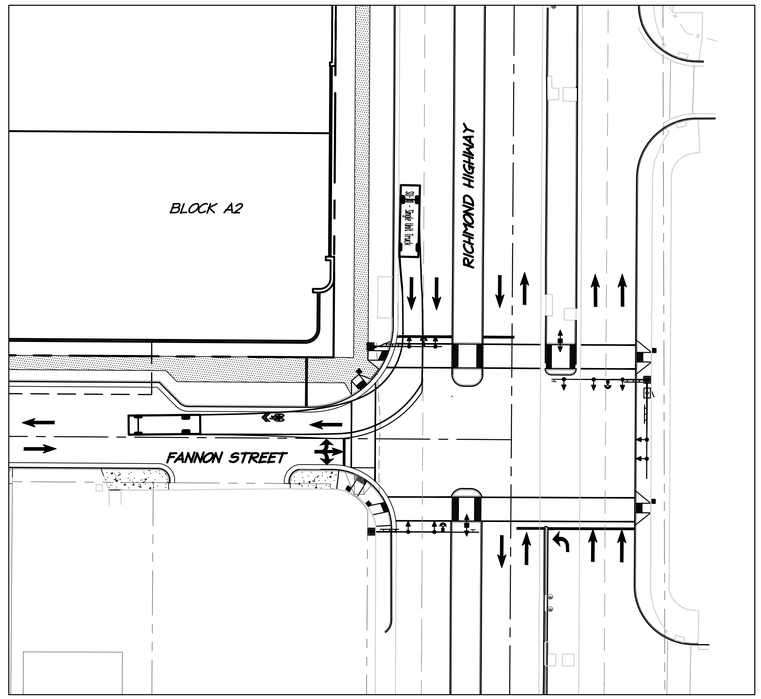


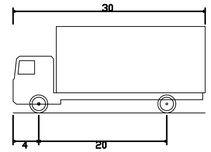


P - Passenger Car

Overall Length	19.000ft
Overall Width	7.000ft
Overall Body Height	4.300ft
Min Body Ground Clearance	1.115ft
Track Width	6.000ft
Lock-to-lock time	4.00s
Max Steering Angle (Virtual)	31.60°

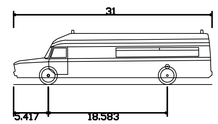
SU-30 LEFT TURN FROM RICHMOND HIGHWAY TO FANNON STREET





SU-30 - Single Unit Truck

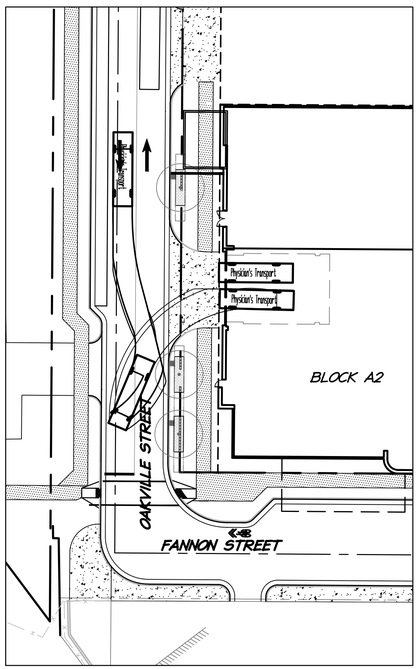
Overall Length	30.000ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.367ft
Track Width	8.000ft
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	31.80°

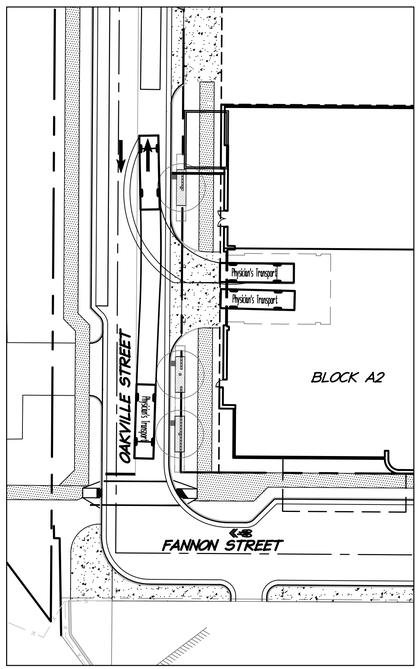


Copy of Physician's Transport

Overall Length	31.000ft
Overall Width	8.000ft
Overall Body Height	8.527ft
Min Body Ground Clearance	1.071ft
Track Width	8.000ft
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	23.250ft

AMBULANCE ENTERING DROP OFF (OAKVILLE STREET/FANNON STREET)





30 15 0 30 100
GRAPHIC SCALE
1" = 30'

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DEPARTMENT OF PLANNING & ZONING
DIRECTOR _____ DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
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CHAIRMAN, PLANNING COMMISSION _____ DATE _____
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COMMONWEALTH OF VIRGINIA
JOHN L. HELMS
Lic. No.52485
10/22/2020
PROFESSIONAL ENGINEER

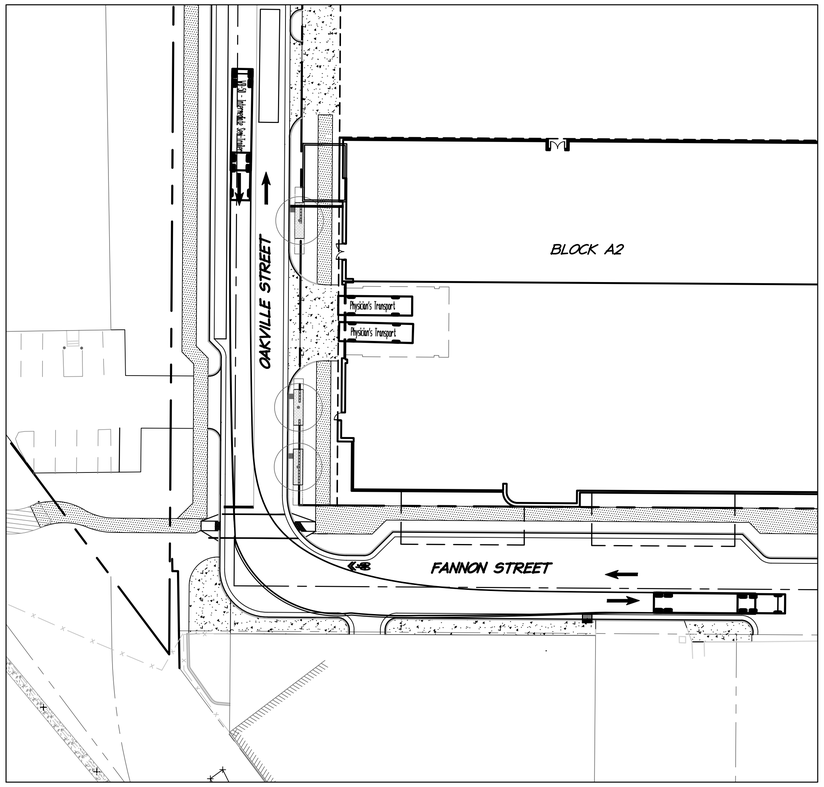
TURNING MOVEMENT ANALYSIS

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

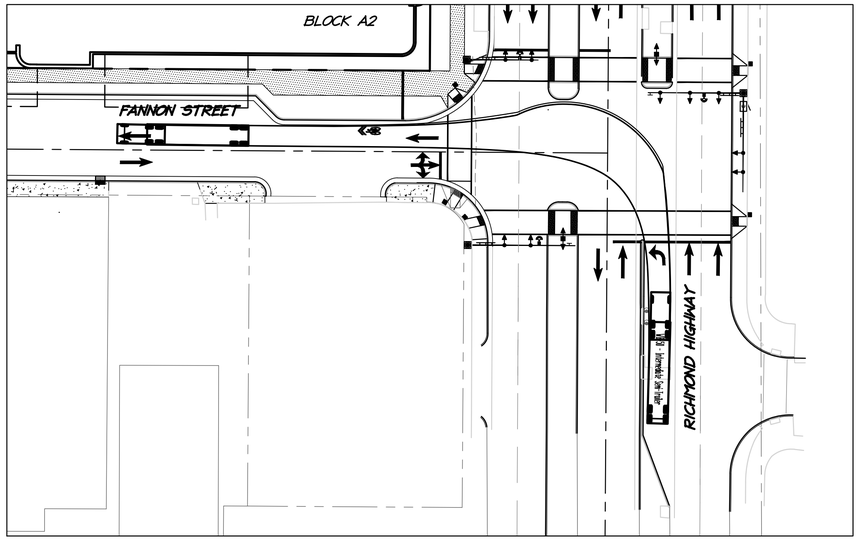
PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No.
C801

1110236

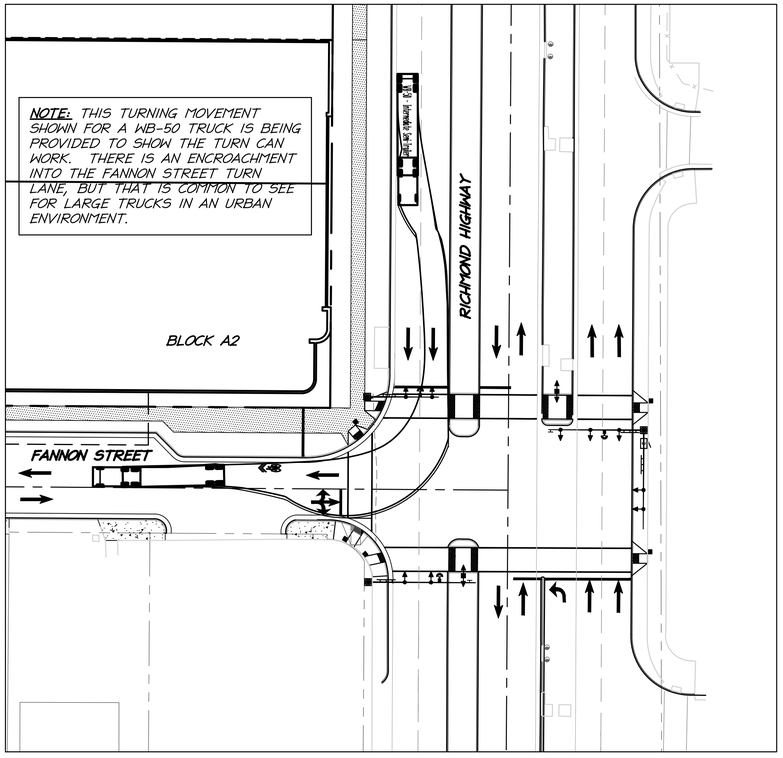
WB-50 LEFT TURN FROM OAKVILLE STREET TO FANNON STREET



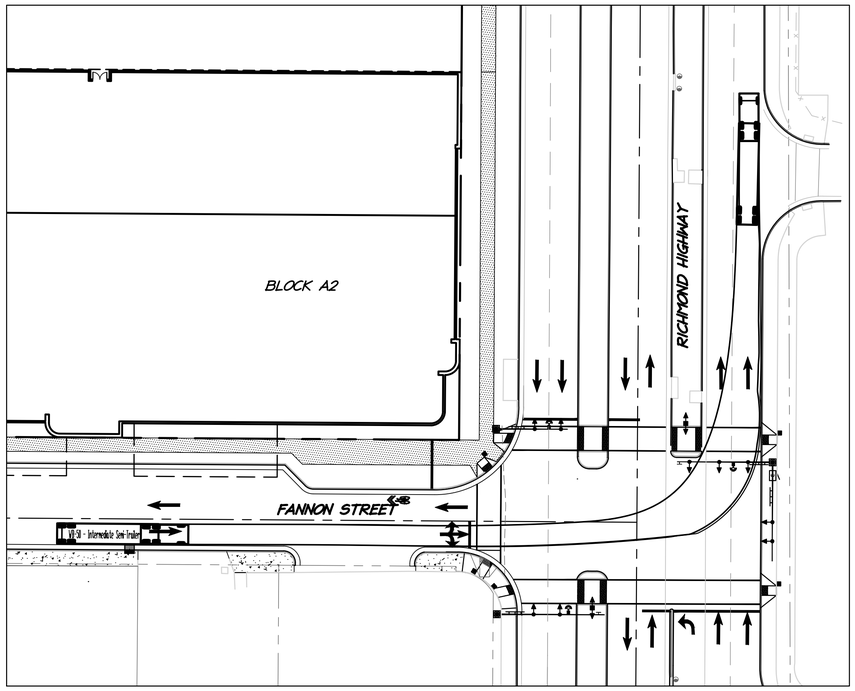
WB-50 LEFT TURN FROM RICHMOND HIGHWAY TO FANNON STREET

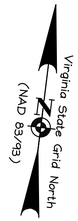


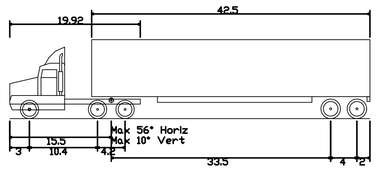
WB-50 RIGHT TURN FROM RICHMOND HIGHWAY TO FANNON STREET



WB-50 LEFT TURN FROM FANNON STREET TO RICHMOND HIGHWAY







WB-50 - Intermediate Semi-Trailer

Overall Length	55.000ft
Overall Width	8.500ft
Overall Body Height	12.052ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	17.90°

30 15 0 30 100

GRAPHIC SCALE
1" = 30'

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COMMONWEALTH OF VIRGINIA
JOHN L. HELMS
Lic. No.52485
10/22/2020
PROFESSIONAL ENGINEER

TURNING MOVEMENT ANALYSIS

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No.
C802

110236

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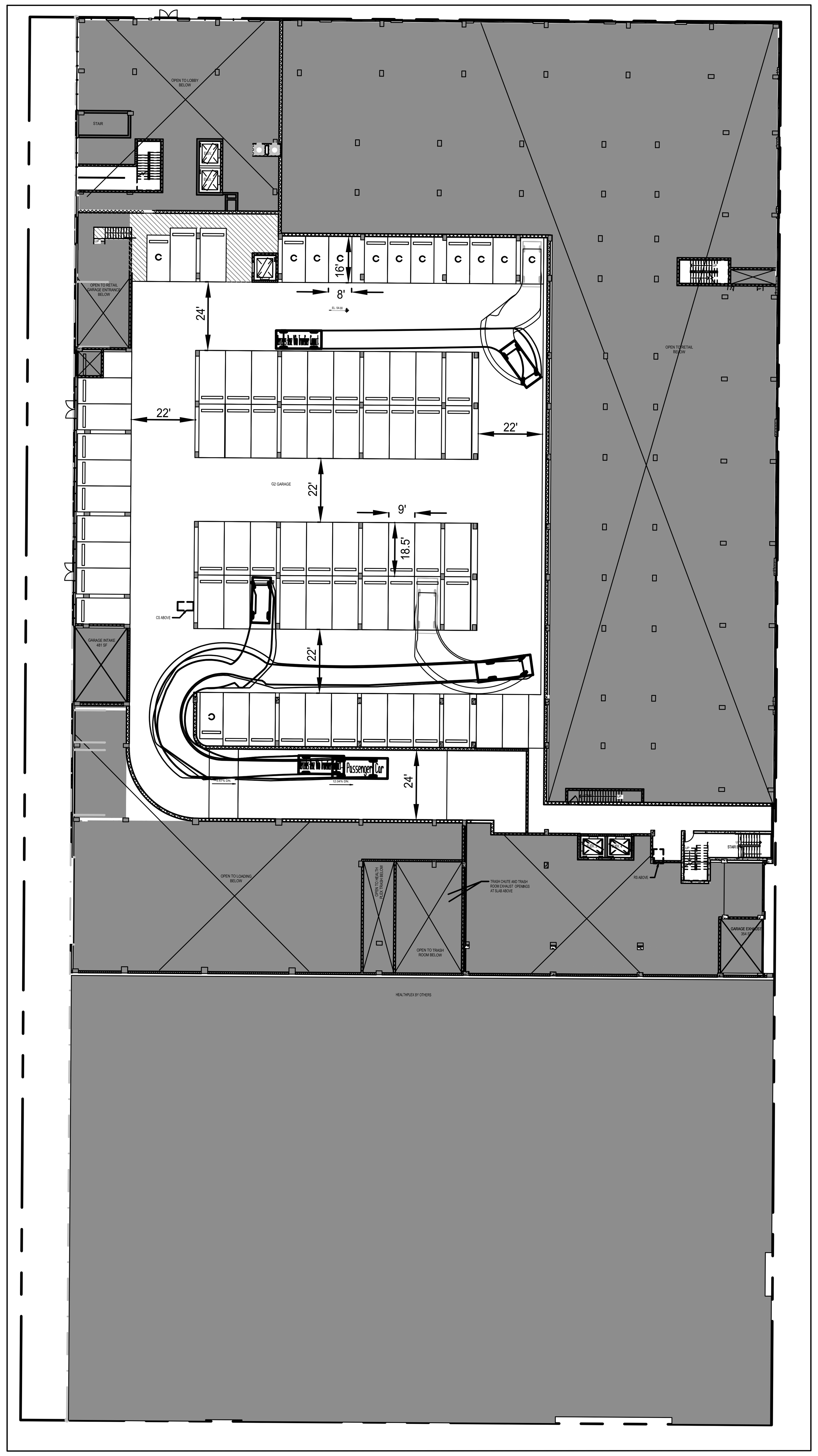
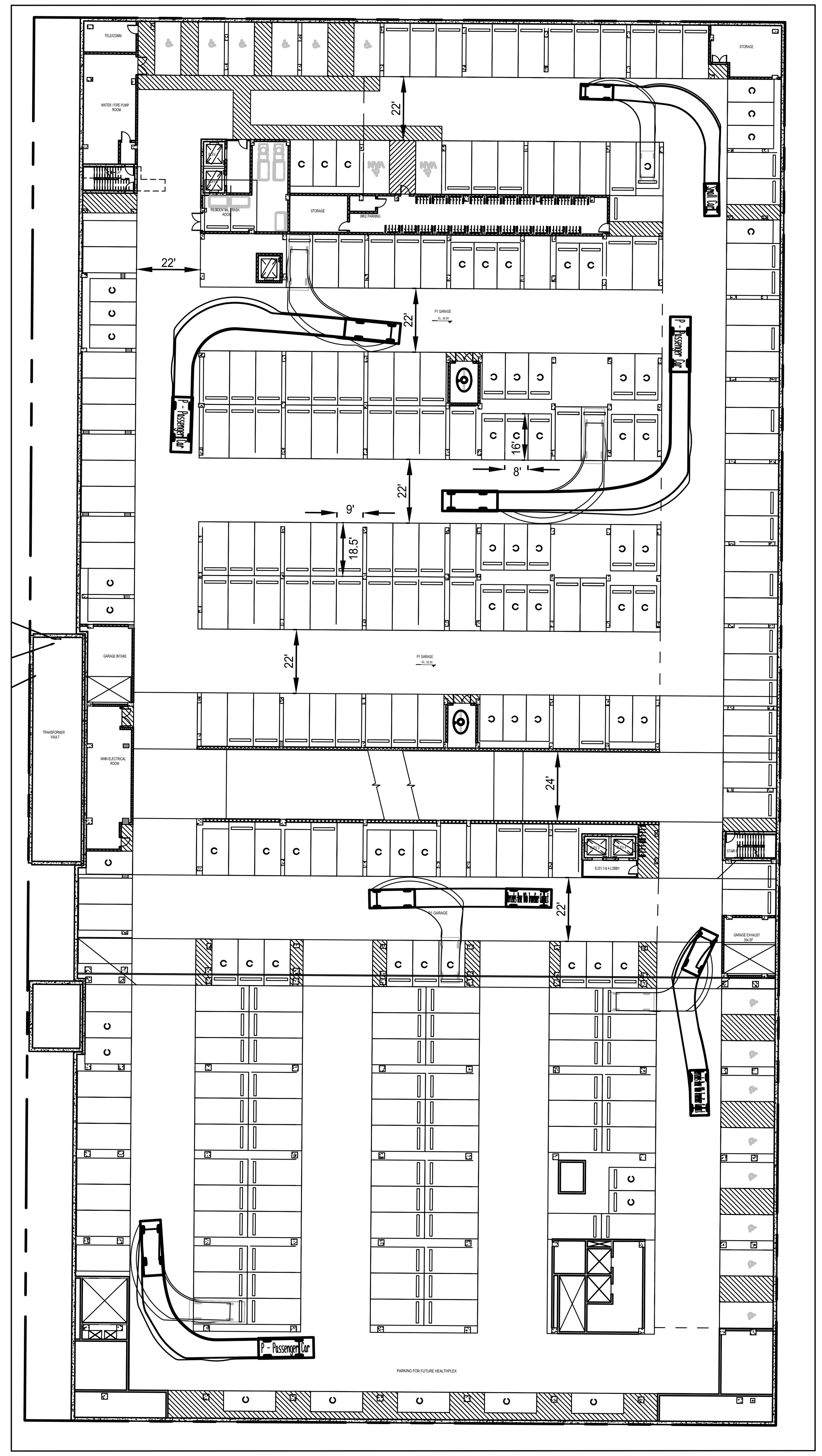
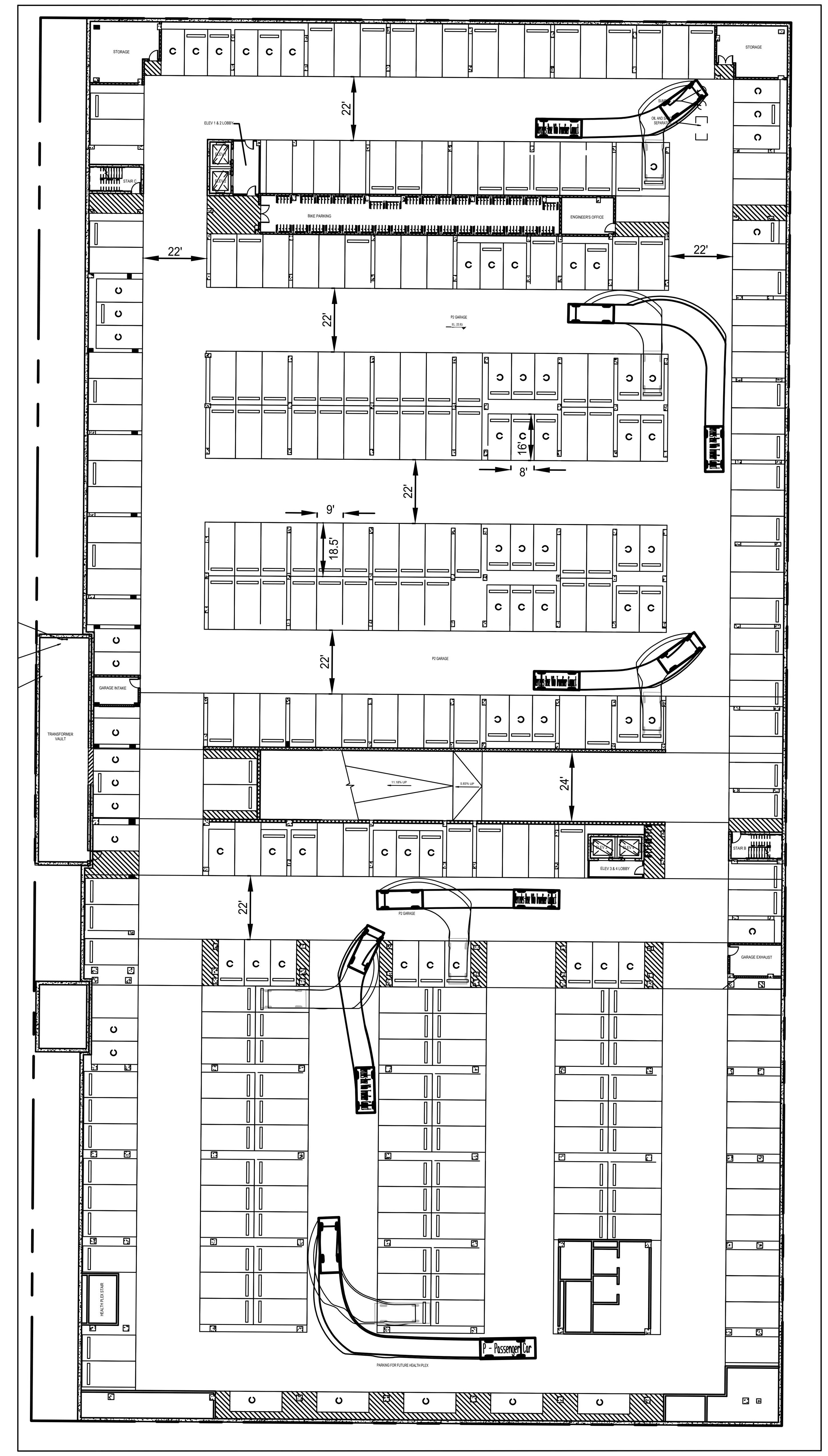
CAR MANEUVER INTO PARKING SPACES (G2 - MEZZANINE LEVEL)



CAR MANEUVER INTO PARKING SPACES (P1 LEVEL)



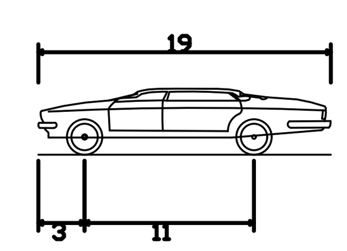
CAR MANEUVER INTO PARKING SPACES (P2 LEVEL)



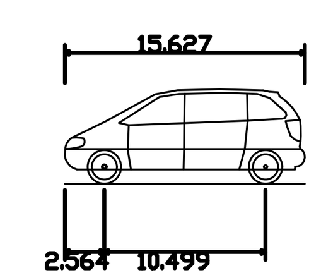
30 15 0 30 60
GRAPHIC SCALE
1" = 30'

NOTES:

1. THIS SHEET WAS SUBMITTED WITH THE BLOCK A1 PRELIMINARY DSUP PLANS ON 9/4/2020.
2. LOCATION OF PROPOSED HYDRODYNAMIC SEPARATOR IS SUBJECT TO CHANGE WITH FINAL SITE PLAN.



P - Passenger Car	
Overall Length	19.000ft
Overall Width	7.000ft
Overall Body Height	4.300ft
Min Body Ground Clearance	1.115ft
Track Width	6.000ft
Lock-to-lock time	4.00s
Max Steering Angle (Virtual)	31.60°



Mercedes-Benz Vito Traveliner Compact	
Overall Length	15.627ft
Overall Width	6.237ft
Overall Body Height	6.153ft
Min Body Ground Clearance	0.927ft
Track Width	6.237ft
Lock-to-lock time	4.00s
Wall to Wall Turning Radius	19.357ft

THIS SHEET IS FOR
INFORMATION PURPOSES ONLY!

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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. PAGE NO.

COMMONWEALTH OF VIRGINIA
ELI GOODMAN
Lic. No. 45868
PROFESSIONAL ENGINEER

TURNING MOVEMENT ANALYSIS

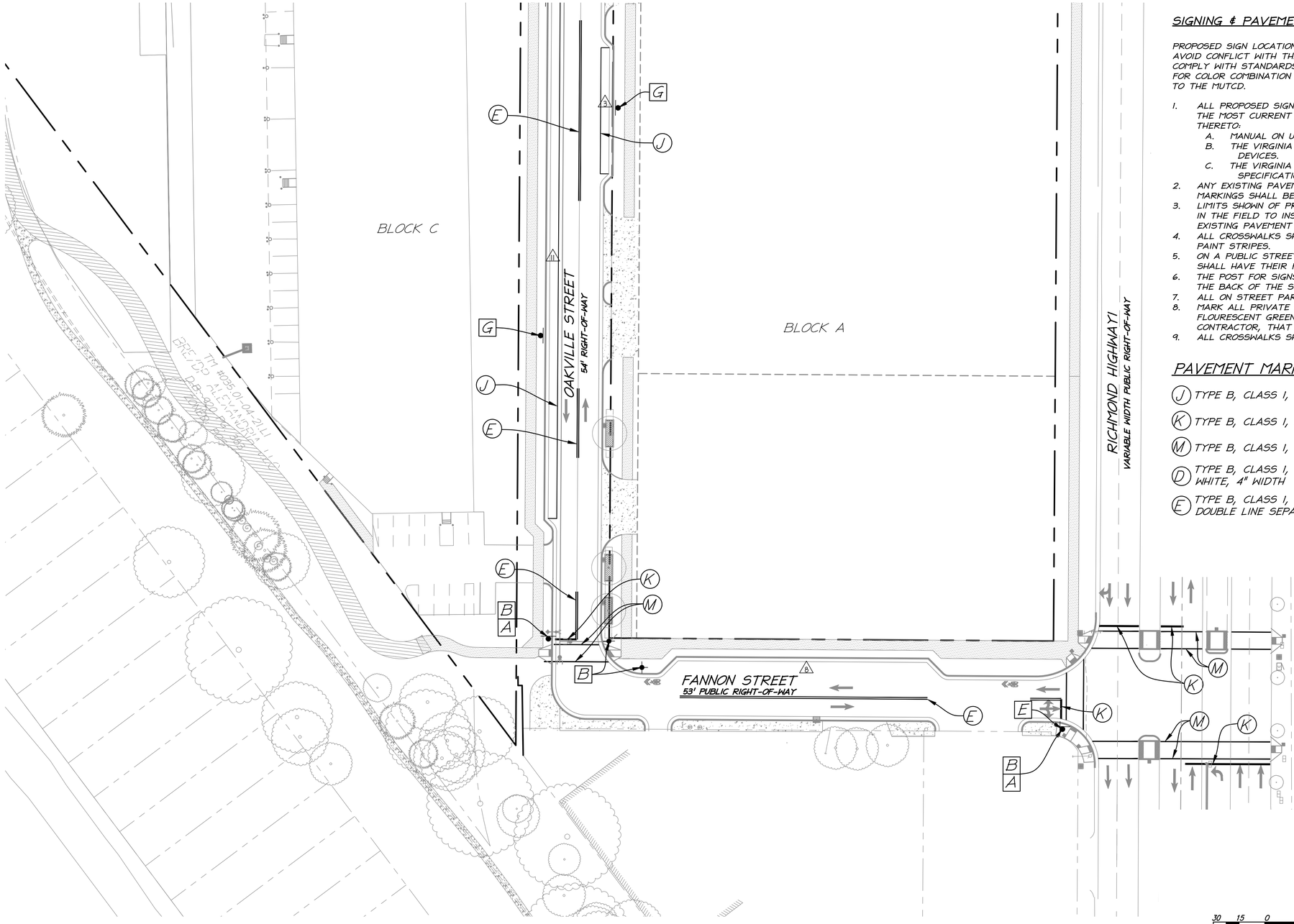
OAKVILLE BLOCK A2
BLOCK A1 PRELIMINARY DSUP
#
CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: 1"=30'
DATE: 09/18/2020
DESIGN: ##
DRAWN: ##
CHECKED: ###
SHEET No. C803

110236

SIGN LEGEND

SIGN	A	B	C	D	E	F	G
SYMBOL	STOP	CENTER ST. NAME ON SIGN; Port St; ST. SUFFIX; XXX; BLOCK #		NO PARKING ANY TIME ←	NO PARKING ANY TIME →	NO PARKING ANY TIME ↔	2 HR PARKING MONDAY THRU FRIDAY 8 AM - 9 PM
SIGN	R1-1 24"x24"	30"(MIN)X9"	W11-15 24"x24"	R7-1L 18"x24"	R7-1R 18"x24"	R7-1D 18"x24"	R7-108 12"x18"



SIGNING & PAVEMENT MARKING NOTES:

PROPOSED SIGN LOCATIONS ARE APPROXIMATE AND SHALL BE MODIFIED IN THE FIELD TO AVOID CONFLICT WITH THE UNDERGROUND UTILITIES OR OTHER OBSTRUCTIONS AND TO COMPLY WITH STANDARDS REFERENCED IN NOTE 1.
FOR COLOR COMBINATION AND/OR LETTERING SIZE, REFER TO THE VIRGINIA SUPPLEMENT TO THE MUTCD.

1. ALL PROPOSED SIGNING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF EACH OF THE FOLLOWING AND ANY REVISION THERETO:
   A. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
   B. THE VIRGINIA SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
   C. THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS.
2. ANY EXISTING PAVEMENT MARKINGS WHICH WILL CONFLICT WITH PROPOSED PAVEMENT MARKINGS SHALL BE ERADICATED.
3. LIMITS SHOWN OF PROPOSED MARKINGS ARE APPROXIMATE AND SHALL BE MODIFIED IN THE FIELD TO INSURE THAT PROPOSED PAVEMENT MARKINGS CONTINUE UNTIL EXISTING PAVEMENT MARKINGS CAN BE MATCHED.
4. ALL CROSSWALKS SHALL BE 10' WIDE MEASURED FROM THE INSIDE EDGE OF THE PAINT STRIPES.
5. ON A PUBLIC STREET ALL NO PARKING SIGNS, EXCEPT THOSE DEMARKING AN EVE, SHALL HAVE THEIR FACE PLACED AT A 45 DEGREE ANGLE TOWARD TRAFFIC.
6. THE POST FOR SIGNS SHALL BE A 2" SQUARE TUBE POST. THE POSTS AS WELL AS THE BACK OF THE SIGNS SHALL HAVE A MATTE BLACK FINISH.
7. ALL ON STREET PARKING SHALL BE 8' X 22' AS SHOWN UNLESS OTHERWISE NOTED.
8. MARK ALL PRIVATE STREET SIGNS THAT INTERSECT A PUBLIC STREET WITH A FLOURESCENT GREEN STRIP TO NOTIFY THE PLOWING CREWS, BOTH CITY AND CONTRACTOR, THAT THEY ARE NOT TO PLOW THOSE STREETS.
9. ALL CROSSWALKS SHALL BE THERMO PLASTIC PEDESTRIAN CROSSWALKS.

PAVEMENT MARKING LEGEND

- (J) TYPE B, CLASS I, WHITE, 4" WIDTH
- (K) TYPE B, CLASS I, WHITE, 12" WIDTH
- (M) TYPE B, CLASS I, WHITE, 6" WIDTH
- (D) TYPE B, CLASS I, SINGLE BROKEN WHITE, 4" WIDTH
- (E) TYPE B, CLASS I, YELLOW, 4" WIDTH DOUBLE LINE SEPARATED BY 4" SPACE

NOTES:

1. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS ARE TO BE REMOVED.
2. SEE SHEET C310 OF THE LATEST INFRASTRUCTURE PLAN (DSUP#2020-00025) FOR FIRE LANE AND FIRE SIGNAGE.
3. THIS PLAN SHOWN IS FROM THE LATEST INFRASTRUCTURE PLAN (DSUP#2020-00025) IS FOR INFORMATION PURPOSES ONLY.
4. ANY MARKINGS DISTURBED WITH CONSTRUCTION WILL BE REPLACED. SPACE AND PARKING CHARTS.

THIS SHEET IS FOR PAVEMENT AND MARKING INFORMATION PURPOSES ONLY!

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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. _____ PAGE NO. _____

christopher consultants
9900 main street (suite 400) · fairfax, va 22031
phone 703.273.6820 · fax 703.273.6820

COMMONWEALTH OF VIRGINIA
JOHN L. HELMS
Lic. No.52485
10/22/2020
PROFESSIONAL ENGINEER

STRIPING AND SIGNAGE PLAN

OAKVILLE BLOCK A2
PRELIMINARY PLAN
THE CITY OF ALEXANDRIA, VIRGINIA

PROJECT NO:14007.010.00
SCALE: N/A
DATE: 09/18/2020
DESIGN: JLH
DRAWN: MZ
CHECKED: KMW
SHEET No.
C900

110236

PROJECT: INOVA OAKVILLE
LOCATION: ALEXANDRIA, VA

EXTERIOR CONCEPT LIGHTING FIXTURE SCHEDULE

TYPE	MOUNTING	DESCRIPTION	COLOR TEMPERATURE
L1	SURFACE	LINEAR LED LUMINAIRE MOUNTED BEHIND LOUVER SCREEN SYSTEM, LUMINAIRES SHIELDED WITH INTERNAL LOUVERS AND FROM BUILDING.	3000K OR 3500K
L2	COVE	FLEXIBLE LINEAR LED CONCEALED WITHIN EXTERIOR ARCHITECTURAL COVE/POCKET.	3000K OR 3500K
L3	RECESSED	RECESSED 2-INCH DIAMETER LED DOWNLIGHT WITHIN ENTRY CANOPIES.	3000K OR 3500K
L4	SURFACE	LINEAR LED LUMINAIRE MOUNTED AT TOP OF AMBULANCE ENTRY AND AIMED DOWN.	3000K OR 3500K
M1	INGRADE	IN-GROUND LOW-OUTPUT/LOW-GLARE 4-INCH DIAMETER UPLIGHTS TO PROVIDE LIGHT ON CANOPY.	3000K OR 3500K
M2	GROUND/ PLANTER	ADJUSTABE LOW-OUTPUT TREE UPLIGHT ACCENTS, INTEGRAL LOUVER/SHIELDING.	3000K OR 3500K
M3	SURFACE	LINEAR LED LIGHTING MOUNTED AND CONCEALED BENEATH BENCHES/SEATING.	3000K OR 3500K
M4	INGRADE	LOW OUTPUT IN-GROUND PATH/MARKER LIGHTS THROUGHOUT GARDEN AREA.	3000K OR 3500K
M5	GROUND	ILLUMINATED BOLLARD, APPROXIMATELY 36-INCHES TO 42-INCHES TALL.	3000K OR 3500K

NOTE THAT EXTERIOR BUILDING LIGHTING IS PRELIMINARY. FINAL BUILDING LIGHTING AND FIXTURE SELECTION TO BE FINALIZED PRIOR TO BUILDING PERMIT.

APPROVED
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DIRECTOR DATE

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INOVA

INOVA OAKVILLE AT
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LANDDESIGN
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ALEXANDRIA, VA 22314
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KEYPLAN:

SEAL:

COMMONWEALTH OF VIRGINIA
ERIC W. SWANSON
Lic. No. 0401016508
ARCHITECT

CONDITION OF USE

10/22/2020 Completeness Submission
09/18/2020 Completeness Submission
DRAWING ISSUE

PROJECT: 20033.00

SCALE:

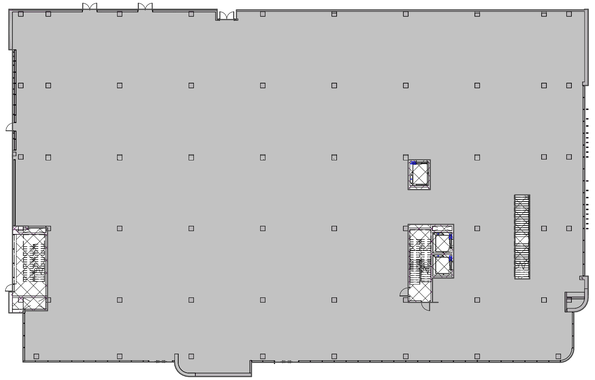
JC

TITLE:

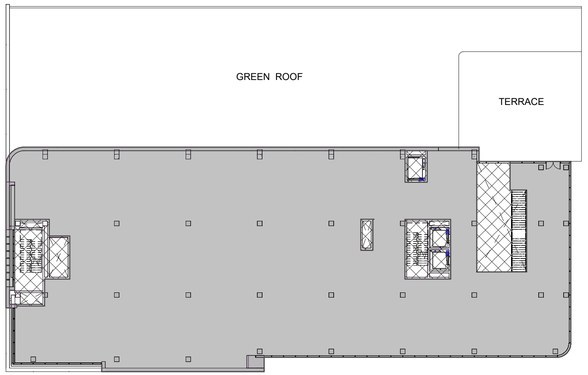
SITE LIGHTING

NUMBER:

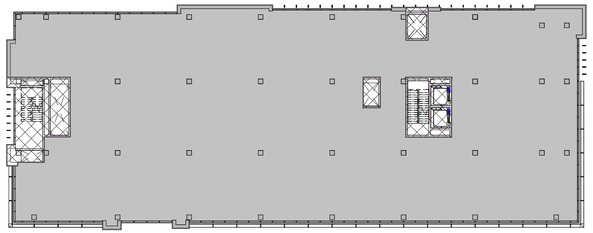
A001



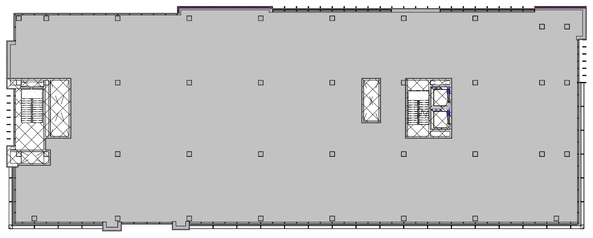
1" = 30'-0" 1 FLOOR PLAN
Ground Floor



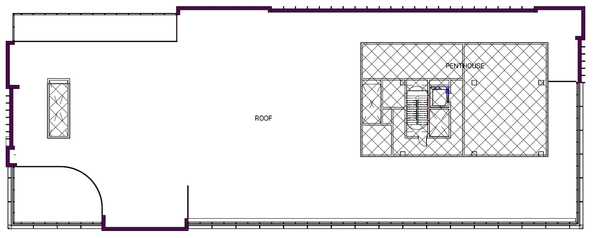
1" = 30'-0" 2 FLOOR PLAN
Second Floor



1" = 30'-0" 3 FLOOR PLAN
Third Floor



1" = 30'-0" 4 FLOOR PLAN
Fourth Floor



1" = 30'-0" 5 FLOOR PLAN
Roof

Area Calculations (GSF)

	Area
Ground Floor	
Base Building	34161 SF
Exclusions	1401 SF
Second Floor	
Base Building	18890 SF
Exclusions	2221 SF
Third Floor	
Base Building	19961 SF
Exclusions	1465 SF
Fourth Floor	
Base Building	20000 SF
Exclusions	1421 SF
Roof	
Exclusions	3955 SF
TOTAL GSF	**93,012 SF**

KEY

BASE BUILDING

EXCLUSIONS

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

_____ _____
DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____

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DIRECTOR DATE

_____ _____
CHAIRMAN, PLANNING COMMISSION DATE

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KEYPLAN:

SEAL:

COMMONWEALTH OF VIRGINIA
ERIC W. SWANSON
Lic. No. 0401016508
ARCHITECT

CONDITION OF USE

10/22/2020 Completeness Submission
09/18/2020 Completeness Submission
DRAWING ISSUE

PROJECT: 20033.00
SCALE: As indicated
NA/AH

TITLE:

AREA PLANS

NUMBER:

A002

BUILDING CODE SUMMARY

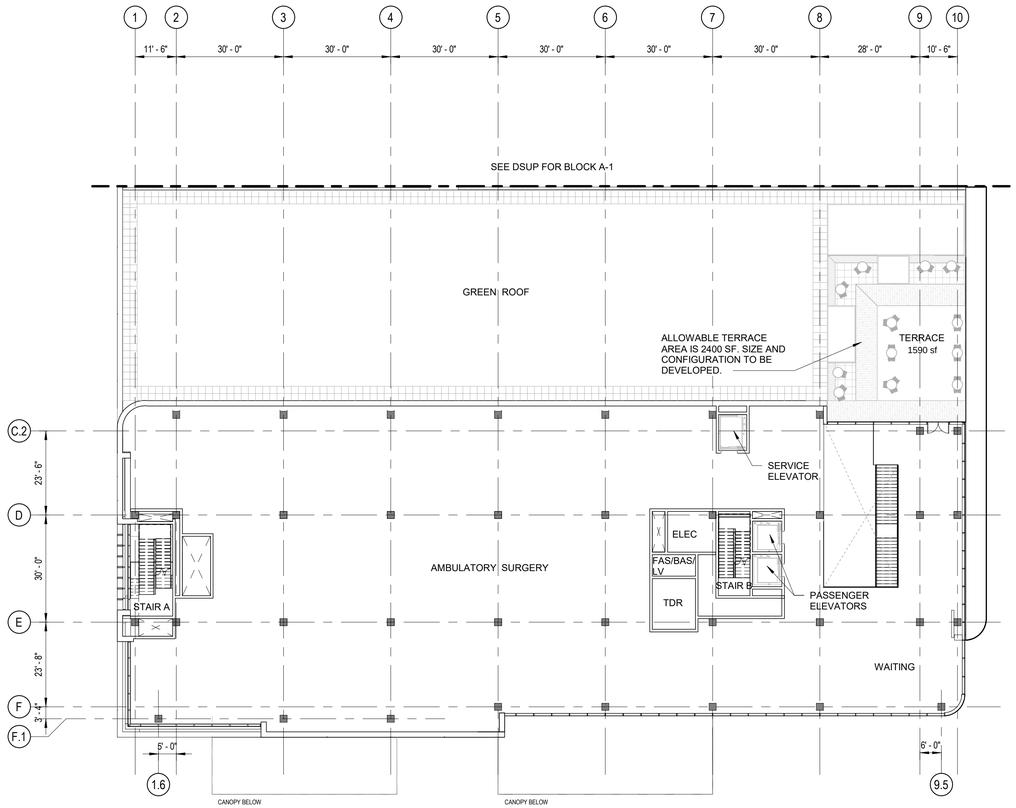
Proposed Building Height: 66'-0"
Building Height Above Averaae Finish Grade: 66.43'
GSF Proposed: 93,012 sf

Building Code Analysis

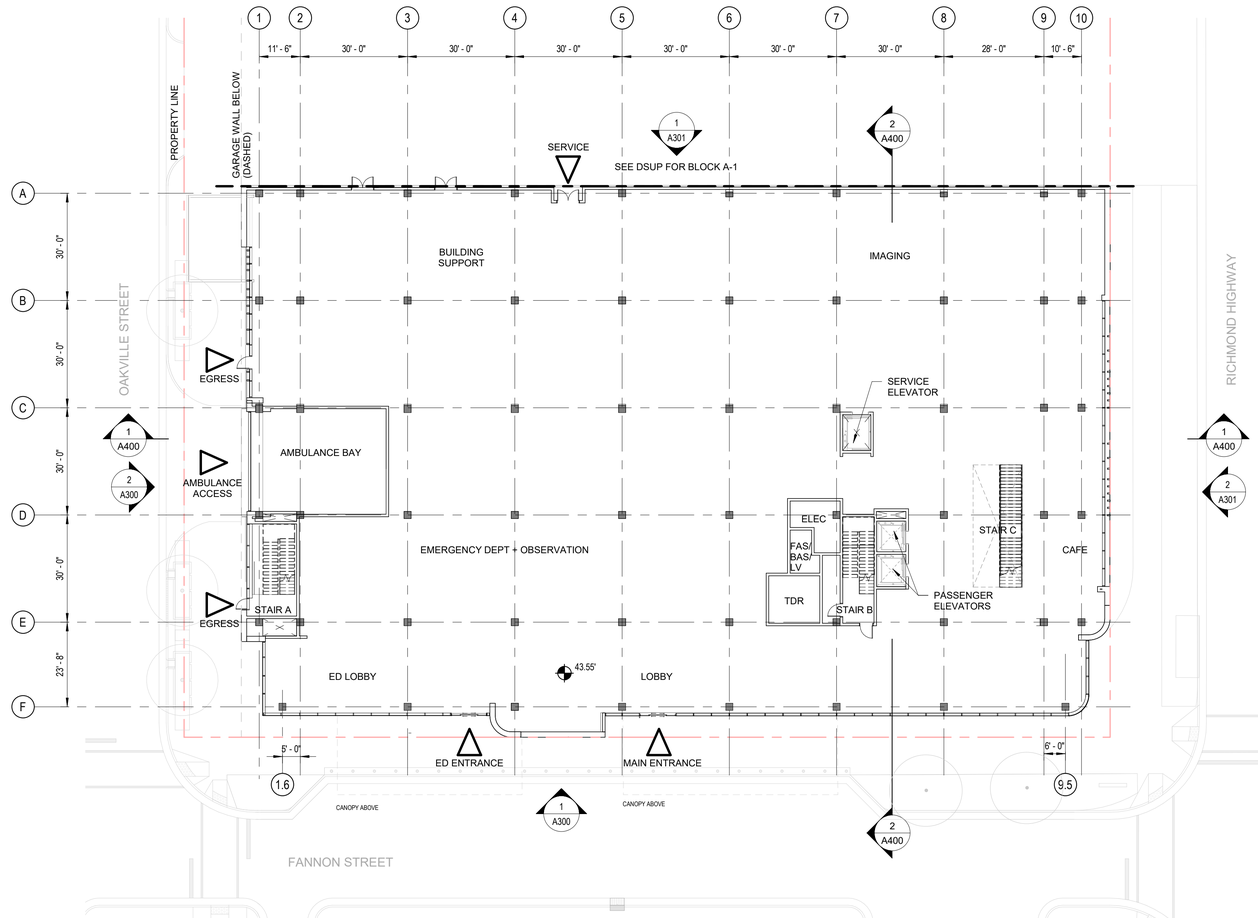
1.	Building Code:	2015 Virginia Construction Code
2.	Use Group:	B, S-2
3.	Number of Stories:	5 Above Ground (includes Penthouse)
4.	Construction Type:	IA
5.	Fully Sprinklered:	Yes

GREEN BUILDING NARRATIVE

Please see additional narrative and LEED scorecard submitted under separate cover.



1" = 20'-0" 2 FLOOR PLAN
SECOND FLOOR



1" = 20'-0" 1 FLOOR PLAN
GROUND FLOOR

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09/18/2020	Completeness Submission
08/06/2020	Concept II Submission

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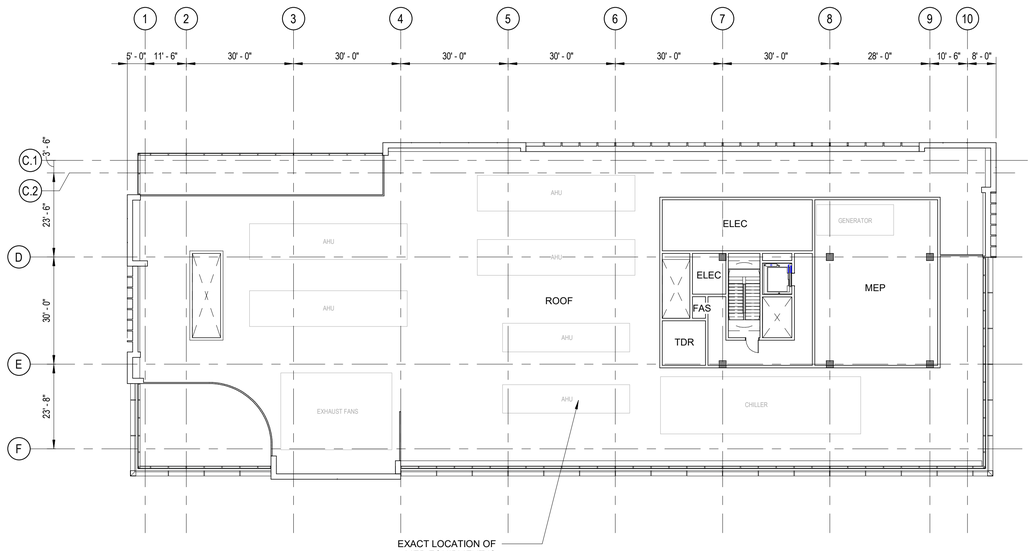
PROJECT: 20033.00
SCALE: As indicated
NA/AH

TITLE:

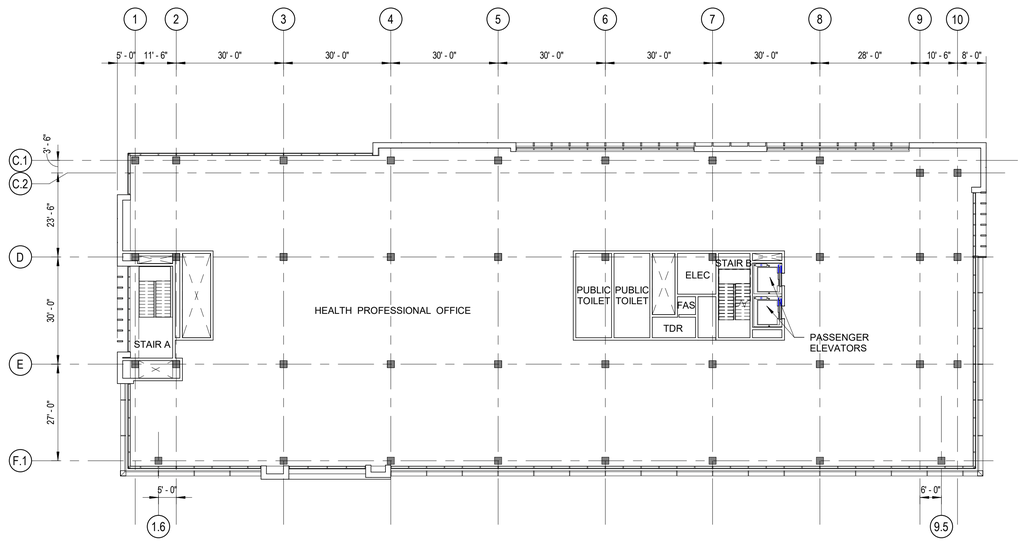
BUILDING PLANS

NUMBER:

A100



1" = 20'-0" 2 FLOOR PLAN
ROOF



1" = 20'-0" 1 FLOOR PLAN
THIRD & FOURTH FLOOR

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

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SITE PLAN NO. _____

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PROJECT: 20033.00

SCALE: 1" = 20'-0"

NA/AH

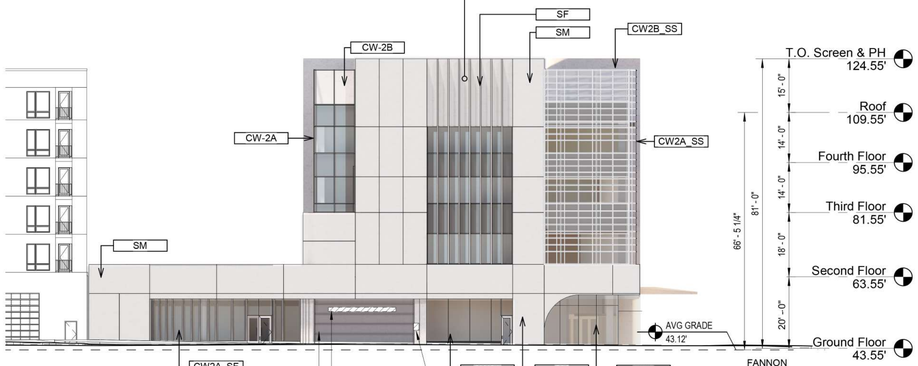
TITLE:

BUILDING PLANS

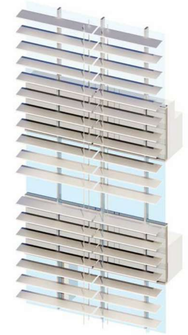
NUMBER:

A101

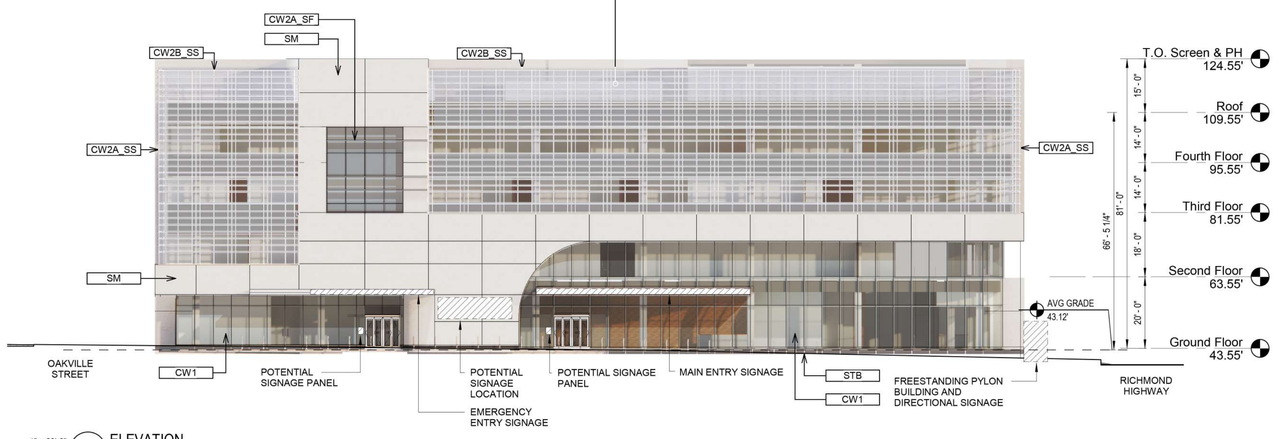
WEST ELEVATION
SOLID MATERIAL, SHADING FINS OVER CURTAIN WALL



1" = 20'-0" 2 ELEVATION
OAKVILLE STREET



SOUTH ELEVATION
SHADING SCREEN OVER CURTAIN WALL



1" = 20'-0" 1 ELEVATION
FANNON STREET

EXTERIOR MATERIALS KEY

PRIMARY FACADE MATERIALS BUILDING ENCLOSURE					**SECONDARY FACADE MATERIALS** RESPONSIVE TO ENVIRONMENT AND PROGRAM	
						
SM - SOLID MATERIAL	**CW1** -STRUCTURALLY GLAZED CURTAIN WALL	**CW2A** - CURTAIN WALL	**CW2B** - CURTAIN WALL WITH SHADOW BOX	**STB** - STONE BASE	**SF** - SHADING FINS	**SS** - SHADING SCREEN
GLASS FIBER REINFORCED CONRETE (GFRC) PANELS WITH AN INTEGRAL GALVANIZED STEEL STUD FRAME. SOFFIT PANELS, SILLS, COPINGS AND RETURNS TO MATCH. JOINTS TO BE CAULKED.	FOUR-SIDED STRUCTURALLY GLAZED INSULATED GLAZING UNITS. ALUMINUM FRAME WITH STEEL REINFORCEMENT.	THERMALLY BROKEN ALUMINUM MULLION AND CAP CURTAIN WALL SYSTEM WITH CONVENTIONALLY CAPTURED INSULATED GLAZING UNITS. VISION GLASS WITH PAINTED ALUMINUM PLATE SHADOW BOXES AT FLOOR SLABS AND SILLS.	SAME AS CW2A. SHADOW BOX CONDITION ABOVE ROOF LINE TO FULLY SCREEN MECHANICAL EQUIPMENT.	NATURAL STONE BASE, COLOR TONE SIMILAR TO GFRC CLADDING ABOVE.	GFRC VERTICAL AND HORIZONTAL FINS WITH INTEGRATED NON-FERROUS CONCEALED REFINFORCING IN FRONT OF CURTAIN WALL AND SOLID MATERIAL PANELS.	SHADING SCREEN IN FRONT OF CURTAIN WALL COMPRISED OF HORIZONTAL ALUMINUM ELEMENTS, CLOSELY SPACED TO PROVIDE SHADING TO INTERIOR SPACES.
PERCENT OF FACADE						
44%	15%	30%	9%	2%	PROVIDED AT CW-2A AS SHOWN ON ELEVATIONS	PROVIDED AT CW-2A AND CW-2B AS SHOWN ON ELEVATIONS

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SITE PLAN NO. _____
_____ _____
DIRECTOR DATE
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CHAIRMAN, PLANNING COMMISSION DATE
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KEYPLAN:

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ARCHITECT

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08/06/2020	Concept II Submission

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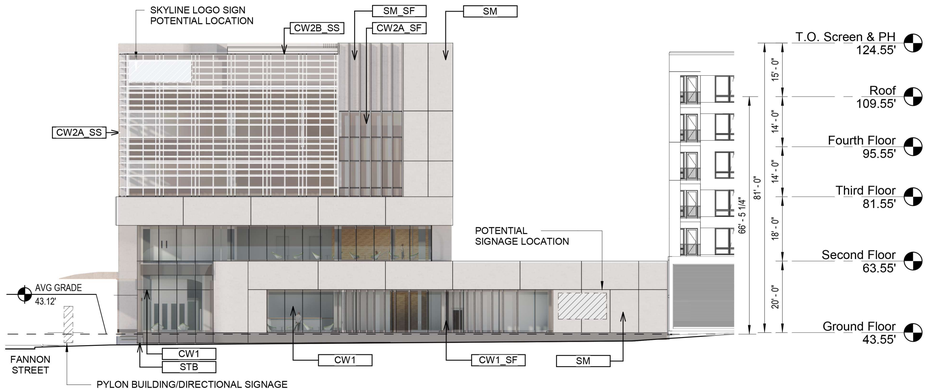
PROJECT: 20033.00
SCALE: As indicated
Author

TITLE:

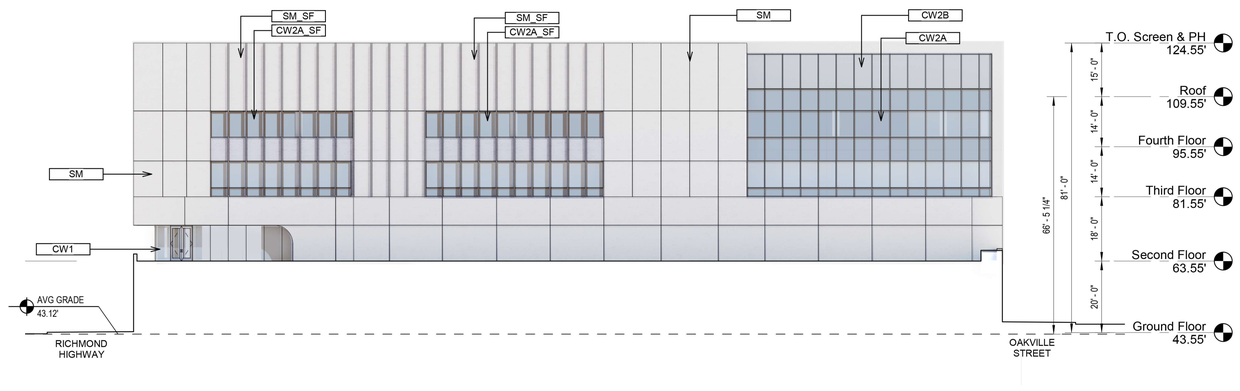
ELEVATIONS

NUMBER:

A300

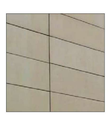
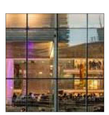
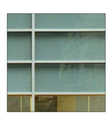


1" = 20'-0" 2 ELEVATION
RICHMOND HIGHWAY



1" = 20'-0" 1 ELEVATION
NORTH

EXTERIOR MATERIALS KEY

PRIMARY FACADE MATERIALS BUILDING ENCLOSURE					SECONDARY FACADE MATERIALS RESPONSIVE TO ENVIRONMENT AND PROGRAM	
						
SM - SOLID MATERIAL	**CW1** -STRUCTURALLY GLAZED CURTAIN WALL	**CW2A** - CURTAIN WALL	**CW2B** - CURTAIN WALL WITH SHADOW BOX	**STB** - STONE BASE	**SF** - SHADING FINS	**SS** - SHADING SCREEN
GLASS FIBER REINFORCED CONRETE (GFRC) PANELS WITH AN INTEGRAL GALVANIZED STEEL STUD FRAME. SOFFIT PANELS, SILLS, COPINGS AND RETURNS TO MATCH. JOINTS TO BE CAULKED.	FOUR-SIDED STRUCTURALLY GLAZED INSULATED GLAZING UNITS. ALUMINUM FRAME WITH STEEL REINFORCEMENT.	THERMALLY BROKEN ALUMINUM MULLION AND CAP CURTAIN WALL SYSTEM WITH CONVENTIONALLY CAPTURED INSULATED GLAZING UNITS. VISION GLASS WITH PAINTED ALUMINUM PLATE SHADOW BOXES AT FLOOR SLABS AND SILLS.	SAME AS CW2A. SHADOW BOX CONDITION ABOVE ROOF LINE TO FULLY SCREEN MECHANICAL EQUIPMENT.	NATURAL STONE BASE, COLOR TONE SIMILAR TO GFRC CLADDING ABOVE.	GFRC VERTICAL AND HORIZONTAL FINS WITH INTEGRATED NON-FERROUS CONCEALED REFINFORCING IN FRONT OF CURTAIN WALL AND SOLID MATERIAL PANELS.	SHADING SCREEN IN FRONT OF CURTAIN WALL COMPRISED OF HORIZONTAL ALUMINUM ELEMENTS, CLOSELY SPACED TO PROVIDE SHADING TO INTERIOR SPACES.
PERCENT OF FACADE						
44%	15%	30%	9%	2%	PROVIDED AT CW-2A AS SHOWN ON ELEVATIONS	PROVIDED AT CW-2A AND CW-2B AS SHOWN ON ELEVATIONS

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_____ DIRECTOR _____ DATE
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____
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_____ CHAIRMAN, PLANNING COMMISSION _____ DATE
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_____ INSTRUMENT NO. _____ DEED BOOK NO. _____ PAGE NO.

INOVA

INOVA OAKVILLE AT POTOMAC YARD
2412 Richmond Highway Alexandria Va

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LANDDESIGN
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ALEXANDRIA, VA 22314
703.549.7784

KEYPLAN:

SEAL:

COMMONWEALTH OF VIRGINIA
ERIC W. SWANSON
Lic. No. 0401016508
ARCHITECT

CONDITION OF USE

10/22/2020	Completeness Submission
09/18/2020	Completeness Submission
08/06/2020	Concept II Submission

DRAWING ISSUE

PROJECT: 20033.00
SCALE: As indicated
Author

TITLE:

ELEVATIONS

NUMBER:

A301

SOUTHEAST VIEW

SOUTHWEST VIEW

NORTHEAST VIEW

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Author
TITLE:

3D VIEWS

NUMBER:

A302

SOUTHEAST AXON

SOUTHWEST AXON

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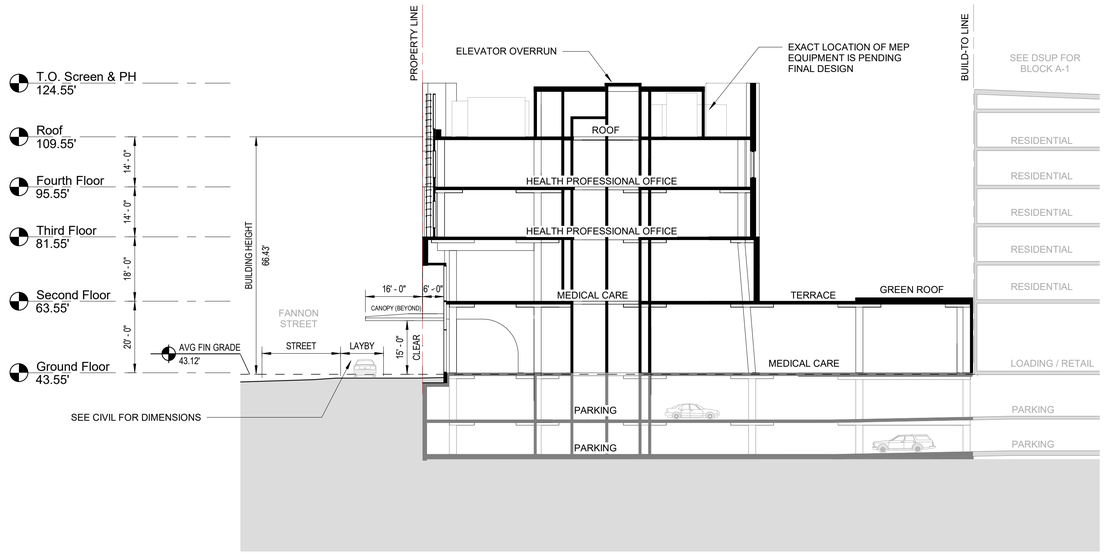
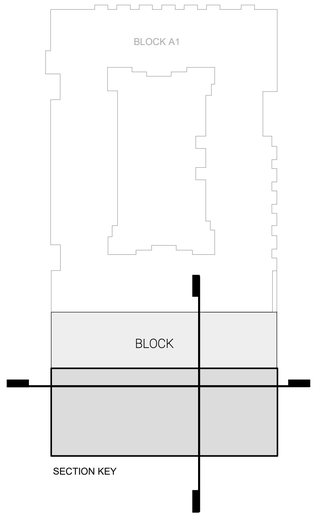
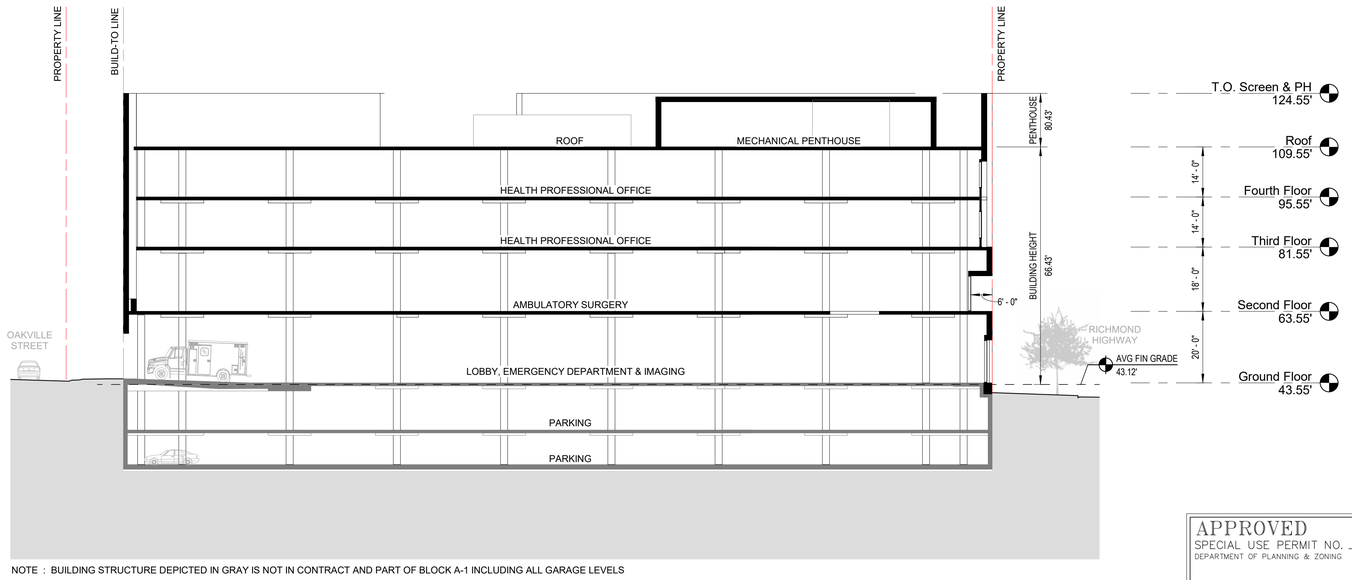
A303



NOTE : BUILDING STRUCTURE DEPICTED IN GRAY IS NOT IN CONTRACT AND PART OF BLOCK A-1 INCLUDING ALL GARAGE LEVELS

1" = 20'-0" 2 BUILDING SECTION
NORTH/SOUTH





NOTE : BUILDING STRUCTURE DEPICTED IN GRAY IS NOT IN CONTRACT AND PART OF BLOCK A-1 INCLUDING ALL GARAGE LEVELS

1" = 20'-0" 1 BUILDING SECTION
EAST/WEST

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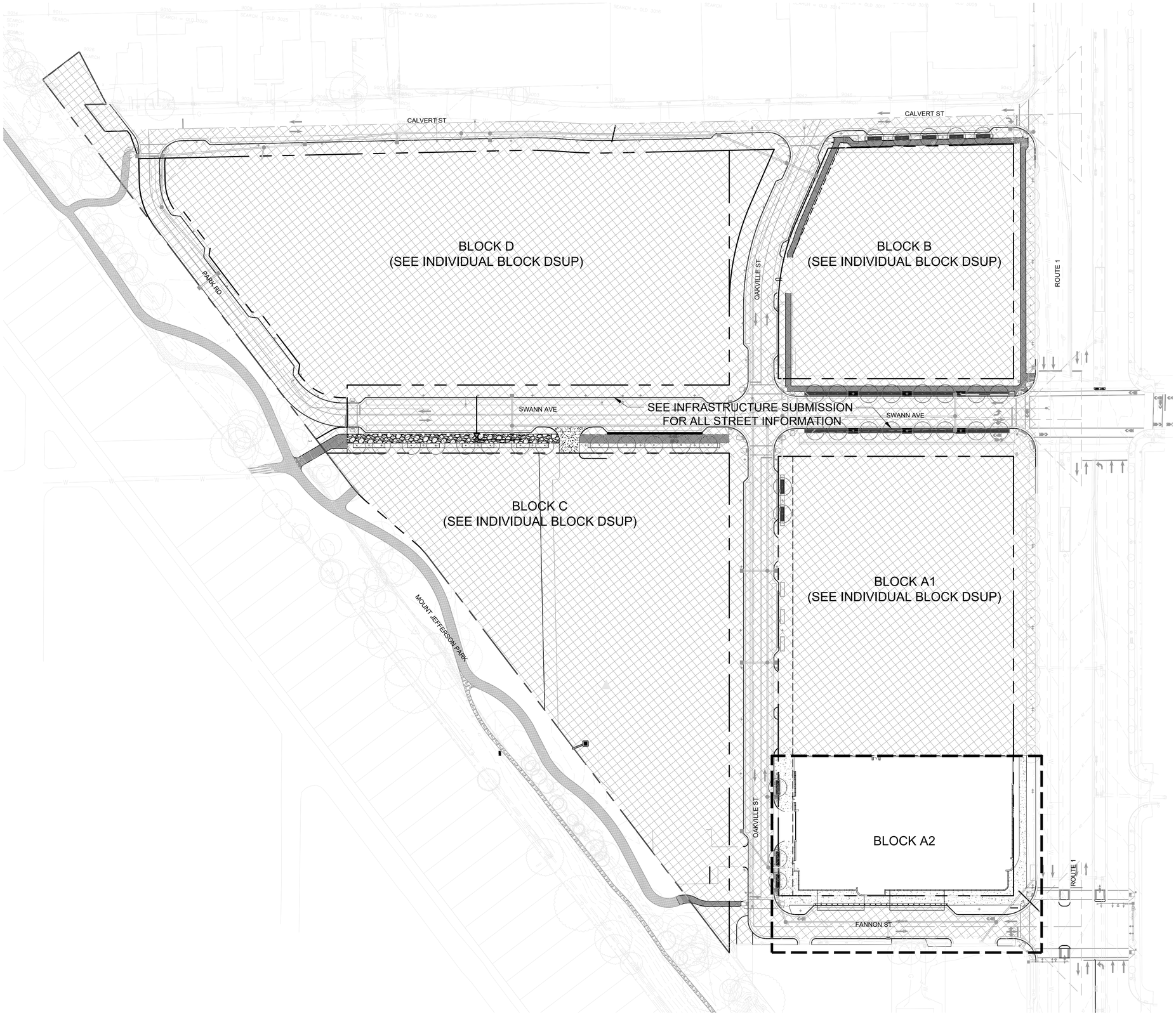
PROJECT: 20033.00
SCALE: As indicated
NA/AH

TITLE:

SECTIONS

NUMBER:

A400



AREA OF OAKVILLE THAT IS NOT INCLUDED WITH THIS APPLICATION

APPROVED

SPECIAL USE PERMIT NO. DSUP2020-10031

DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO.

DIRECTOR DATE

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223 NORTH GRAHAM STREET
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KEY MAP

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COMMONWEALTH OF VIRGINIA
MATTHEW V. CLARK
Lic. No. 952
10-22-2020
LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

PROJECT

OAKVILLE BLOCK A2

INOVA

ALEXANDRIA, VA

–

LANDDESIGN PROJ.#

2020081

REVISION / ISSUANCE

NO.	DESCRIPTION	DATE
	CONCEPT II SUBMISSION	08-06-2020
	COMPLETENESS SUBMISSION	09-18-2020
	COMPLETENESS RESUBMISSION	10-22-2020

DESIGNED BY:
DRAWN BY:
CHECKED BY:

SCALE

NORTH

VERT: N/A
HORZ: 1"=50'

0 25' 50' 100'

SHEET TITLE

REFERENCE PLAN

SHEET NUMBER

L001

PLANTING NOTES:

1. ALL QUANTITIES LISTED IN THE DRAWINGS ARE FOR INFORMATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL QUANTITIES AND TO PROVIDE ALL MATERIALS NECESSARY FOR FULL COVERAGE IN ALL PLANTING AREAS AS SPECIFIED ON THE DRAWINGS. ANY DISCREPANCY SHOULD BE REPORTED TO THE OWNER.
2. ALL PLANTS SHOULD BE IN ACCORDANCE WITH ANSI Z60.1 -2014, AMERICAN STANDARD FOR NURSERY STOCK PUBLICATION, APPROVED APRIL 14, 2014.
3. CALIPER SIZE OF CANOPY TREES ARE TO BE MEASURED PER LOCAL CITY LANDSCAPE ORDINANCE.
4. ALL PLANT MATERIAL SHALL CONFORM TO THE SIZE SPECIFICATIONS (CALIPER, HEIGHT AND SPREAD) GIVEN IN THE PLANT SCHEDULE AND SHALL BE NURSERY GROWN UNLESS SPECIFIED OTHERWISE.
5. ANY PLANT SUBSTITUTION SHALL BE APPROVED BY LANDDESIGN PRIOR TO PURCHASE.
6. SIZES LISTED ARE MIN. AND REFER TO HEIGHT, UNLESS OTHERWISE SPECIFIED.
7. LANDSCAPE CONTRACTOR SHALL STAKE OUT LOCATIONS OF ALL TREES TO BE PLANTED FOR REVIEW BY LANDDESIGN PRIOR TO INSTALLING. LANDDESIGN RESERVES THE RIGHT TO ADJUST TREE LOCATIONS IN THE FIELD AS NECESSARY.
8. SHRUB/GROUNDCOVER BEDS SHALL BE STAKED FOR REVIEW BY LANDDESIGN/OWNER'S REPRESENTATIVE PRIOR TO EXCAVATION AND OR BED PREPARATION.
9. LANDSCAPE CONTRACTOR SHALL INSTALL STEEL EDGING BETWEEN PLANTING BEDS AND LAWNS, OR AS SHOWN IN DETAILS.
10. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UNDERGROUND UTILITIES. PIPES, STRUCTURES, AND LINE RUNS IN THE FIELD PRIOR TO THE INSTALLATION OF ANY PLANT MATERIAL.
11. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADVISE LANDDESIGN OF ANY CONDITION FOUND ON THE SITE WHICH PROHIBITS INSTALLATION AS SHOWN ON THE DRAWINGS.
12. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH OTHER CONTRACTORS ON SITE AS REQUIRED TO ACCOMPLISH ALL PLANTING OPERATIONS.
13. ALL PROPOSED PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY GROWING CONDITION AND MUST BE REPLACED WITH PLANT OF SAME VARIETY AND SIZE IF DAMAGED, DESTROYED, DEAD AND /OR REMOVED.
14. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR FINE GRADING AND REMOVAL OF DEBRIS PRIOR TO PLANTING IN ALL AREAS.
15. FINAL FINISHED GRADING SHALL BE REVIEWED BY LANDDESIGN. CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL TOPSOIL REQUIRED TO CREATE A SMOOTH CONDITION SUITABLE FOR PLANTING.
16. TREES OVERHANGING INTO THE PUBLIC R.O.W. SHALL HAVE A MINIMUM CLEAR TRUNK HEIGHT OF FOURTEEN(14) FEET OVER STREETS, DRIVE AISLES, ALLEYS AND FIRE LANES. TREES OVERHANGING PRIVATE STREETS, WALKS, AND /OR PARKING LOTS SHALL HAVE A MINIMUM CLEAR TRUNK HEIGHT OF SEVEN (7) FEET.
17. LANDSCAPE CONTRACTOR IS REQUIRED TO PERFORM A TREE PIT PERCOLATION TEST FOR EACH TREE PIT PRIOR TO INSTALLATION. IF TREE PIT DOES NOT DRAIN WITHIN A 24-HOUR PERIOD, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE A GRAVEL SUMP, FILTER FABRIC AND STAND PIPE. ALL TREE PIT SUMPS SHALL BE INCLUDED IN IN THE CONTRACTOR'S BASE BID AS A UNIT PRICE AND PROVIDE AS A DEDUCT ALTERNATE PER TREE PIT SUMPS NOT REQUIRED TO BE INSTALLED.
18. LANDSCAPE CONTRACTOR IS RESPONSIBLE TO REVIEW SITE ENVIRONMENTAL CONDITIONS PRIOR TO AND DURING INSTALLATION OF PLANT MATERIAL. ANY DISCREPANCIES OR CONCERNS BETWEEN THE ENVIRONMENTAL SITE CONDITIONS (I.E., SOIL TYPE, WATER, CLIMATE, WIND, SUN EXPOSURE ETC.) AND THE PLANT MATERIAL SPECIFIED WITHIN THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF LANDDESIGN AND/OR OWNER, AND SHALL BE DONE SO IN WRITING. CONTRACTOR SHALL PROVIDE SUGGESTED SOLUTIONS FOR ALTERNATIVE PLANT MATERIAL PROPOSED FOR SUBSTITUTION. LANDDESIGN TO REVIEW CONDITIONS AND INFORMATION SUBMITTED BY CONTRACTOR AND WILL ISSUE DIRECTIVE. SHOULD PLANT MATERIAL DIE BECAUSE OF ENVIRONMENTAL CONDITIONS DESCRIBED ABOVE, THE LANDSCAPE CONTRACTOR ASSUMES ALL WARRANTY AND GUARANTEE OF THE PLANT MATERIAL INSTALLED.
19. ALL NEW PLANTING AREAS SHALL BE BACKFILLED WITH PLANTING SOIL THAT IS A MIXTURE OF 40-50% IMPORTED UNSCREENED TOPSOIL, 40-45% COARSE SAND, AND 10% COMPOST. FINAL TESTED ORGANIC MATTER SHALL BE BETWEEN 2.75 AND 4% (BY DRY WEIGHT). BACKFILL SHALL BE TO A DEPTH OF 18" FOR SHRUB AND GROUNDCOVER ZONES AND 36" FOR TREE PITS.
20. AFTER PLANTING SOIL MIXES ARE INSTALLED IN PLANTING BED AREAS AND JUST PRIOR TO THE INSTALLATION OF SHRUB OR GROUNDCOVER PLANTINGS, SPREAD 3-4 INCHES OF COMPOST OVER THE BEDS AND ROTO TILL INTO THE TOP 8 INCHES OF THE PLANTING SOIL. THIS WILL RAISE GRADES SLIGHTLY ABOVE THE FINISHED GRADES, IN ANTICIPATION GRADES WILL SETTLE WITHIN A FEW MONTHS AFTER INSTALLATION AS COMPOST BREAKS DOWN.
21. IN ALL EXISTING PLANTING AREAS DESIGNATED TO RECEIVE NEW PLANTINGS, SPREAD 3-4 INCHES OF COMPOST OVER THE BEDS AND ROTO TILL INTO THE TOP 8 INCHES OF THE PLANTING SOIL. THIS WILL RAISE THE GRADES SLIGHTLY ABOVE THE FINISHED GRADES, IN ANTICIPATION GRADES WILL SETTLE WITHIN A FEW MONTHS AFTER INSTALLATION AS COMPOST BREAKS DOWN. IN NO CASE WILL THIS BE PERFORMED WHERE IT MAY NEGATIVELY IMPACT THE HEALTH OF ADJACENT, EXISTING PLANT MATERIALS WHICH ARE DESIGNATED TO REMAIN.
22. LANDSCAPE CONTRACTOR TO WARRANTY ALL PLANT MATERIALS FOR A PERIOD OF ONE YEAR. THE CONTRACTOR AGREES TO REPLACE DEFECTIVE WORK AND DEFECTIVE PLANTS, AND THAT THE OWNER'S REPRESENTATIVE SHALL MAKE THE FINAL DETERMINATION IF PLANTS MEET THE REQUIRED SPECIFICATIONS OR THAT PLANTS ARE DEFECTIVE. PLANTS DETERMINED TO BE DEFECTIVE SHALL BE REMOVED IMMEDIATELY UPON NOTIFICATION BY THE OWNER'S REPRESENTATIVE AND REPLACED WITHOUT COST TO THE OWNER, AS SOON AS WEATHER CONDITIONS PERMIT AND WITHIN THE SPECIFIED PLANTING PERIOD. THE REPLACED MATERIALS SHALL ALSO RECEIVE A WARRANTY PERIOD OF ONE YEAR WHICH STARTS AT THE DATE OF INSTALLATION. BULBS, ANNUAL FLOWERS, AND SEASONAL COLOR PLANTS SHALL ONLY BE WARRANTED FOR THE PERIOD OF THE EXPECTED BLOOM OR PRIMARY DISPLAY.

IRRIGATION NOTES:

1. A FULLY AUTOMATED IRRIGATION SYSTEM PROVIDING 100% COVERAGE SHALL BE PROVIDED FOR ALL PLANTING AREAS, UNLESS NOTED OTHERWISE ON IRRIGATED AREAS PLANS. SYSTEM SHALL BE IN OPERATION PRIOR TO INSTALLATION OF ANY PLANT MATERIAL OTHER THAN CANOPY TREES.
2. ALL PLANTING BEDS/ SHRUB AND GROUNDCOVER AREAS TO BE IRRIGATED WITH EITHER 12" SPRAY POP-UPS AND/OR A LANDSCAPE DRIP-LINE SYSTEM, UNLESS NOTED OTHERWISE.
3. ALL PLANTER POTS AND RAISED PLANTERS TO BE IRRIGATED WITH MICRO SPRAY SPRINKLER HEADS.
4. IRRIGATION SYSTEM IS DESIGN/BUILD. CONTRACTOR TO PROVIDE DRAWINGS AND CUT SHEETS OF ALL COMPONENTS.
5. PROVIDE AS-BUILT DRAWINGS OF IRRIGATION AFTER INSTALLATION.

MATERIALS + PAVING NOTES:

1. ALL MATERIALS, CONSTRUCTION METHODS, WORKMANSHIP, EQUIPMENT SERVICES AND TESTING FOR ALL IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE PROJECT DOCUMENTS AND THE GOVERNING AUTHORITIES' REQUIREMENTS. IN THE EVENT OF A CONFLICT BETWEEN THE PROJECT DOCUMENTS AND THE GOVERNING AUTHORITIES' REQUIREMENTS, THE MORE STRINGENT SHALL APPLY.
2. SUBGRADE PREPARATION, PAVEMENT STRENGTH AND THICKNESS SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT.
   - 2.1. PROOF-ROLL SUBGRADE: PRIOR TO PREPARATION OF THE SUBBASE, THE SUBGRADE SHALL BE PROOF-ROLLED WITH HEAVY PNEUMATIC EQUIPMENT. ANY SOFT OR PUMPING AREAS SHALL BE EXCAVATED TO FIRM SUBGRADE AND BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
   - 2.2. PAVEMENT SUBGRADE SHALL BE GRADED TO PREVENT PONDING AND INFILTRATION OF EXCESSIVE MOISTURE ON OR ADJACENT TO THE PAVEMENT SUBGRADE.
3. THE USE OF "LEVEL UP" SAND UNDER PAVEMENT WILL NOT BE ACCEPTED, UNLESS NOTED OTHERWISE..
4. CONCRETE SHALL NOT BE PLACED WHEN THE TEMPERATURE IS BELOW 40 DEGREES FAHRENHEIT AND FALLING, BUT MAY BE PLACED WHEN THE TEMPERATURE IS ABOVE 35 DEGREES FAHRENHEIT AND RISING. THE TEMPERATURE READING SHALL BE TAKEN IN THE SHADE AWAY FROM ARTIFICIAL HEAT.
   - 4.1. DO NOT PLACE CONCRETE WHILE IT IS RAINING OR WHEN RAIN IS IMMINENT.
5. CAST IN PLACE CONCRETE SHALL MEET THE FOLLOWING REQUIREMENTS:
   - 5.1. MINIMUM 3,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS, UNLESS NOTED OTHERWISE.
   - 5.2. AGGREGATES: ASTM C33 MAX 3/4" IN SIZE, UNLESS NOTED OTHERWISE
   - 5.3. SLUMP: 3 TO 5 INCHES
   - 5.4. AIR CONTENT: 4 TO 6 PERCENT BY VOLUME
6. CONCRETE THICKNESS:
   - 6.1. PEDESTRIAN AREA: 4" THICK, UNLESS NOTED OTHERWISE.
   - 6.2. ALL OTHER CONCRETE COMPONENTS INSTALL PER SIZE SPECIFIED IN DRAWINGS
7. CONCRETE REINFORCING:
   - 7.1. 4" THICK PAVING: #3's AT 24" SPACING UNLESS NOTED OTHERWISE IN DRAWINGS
   - 7.2. 6" THICK PAVING: #4s AT 24" SPACING UNLESS NOTED OTHERWISE IN DRAWINGS
   - 7.3. 8" THICK PAVING: #5's AT 24" SPACING UNLESS NOTED OTHERWISE IN DRAWINGS
   - 7.4. ALL PAVEMENT REINFORCING BARS SHALL BE GRADE 60 KSI DEFORMED BILLET STEEL BARS, UNCOATED FINISH. SIZE AND SPACING SHALL BE IN ACCORDANCE WITH THE PAVING PLAN AND DETAILS.
   - 7.5. ALL REINFORCING STEEL AND DOWEL BARS IN PAVEMENT SHALL BE SUPPORTED AND MAINTAINED AT THE CORRECT CLEARANCES BY THE USE OF BAR CHAIRS.
8. CONTROL JOINTS (TROWEL OR SAW CUT)
   - 8.1. TO BE PLACED AS INDICATED ON PLANS AND DETAILS TO A MINIMUM DEPTH OF 1/8 OF CONCRETE THICKNESS.
   - 8.2. SAW CUT JOINTS TO BE EXECUTED WITHIN 12 HOURS OF CONCRETE PLACEMENT.
   - 8.3. SAWN JOINTS ARE TO BE TRUE IN ALIGNMENT AND SHALL CONTINUE THROUGH ADJACENT CURBS. RADIAL JOINTS SHALL BE NO SHORTER THAN 18".
   - 8.4. SAWN JOINTS TO BE CLEANED OF DEBRIS, DIRT, DUST, SCALE, CURING COMPOUND AND CONCRETE, BLOWN DRY AND IMMEDIATELY SEALED. SEALANT MATERIAL SHALL BE SONNEBORN SONOLASTIC SL2 MULTI-COMPONENT, SELF-LEVELING, ELASTOMERIC POLYURETHANE OR EQUIVALENT. SEALANT COLOR SHALL MATCH PAVEMENT.
9. EXPANSION JOINTS
   - 9.1. PLACE AT A MAXIMUM SPACING OF 30' O.C. AND COORDINATE WITH OVERALL PAVING PATTERN AND COLOR.
   - 9.2. PROVIDE DOWELS AS SPECIFIED IN DRAWING DETAILS.
   - 9.3. CONTRACTOR SHALL PREPARE A JOINT LAYOUT AND PROVIDE IT TO THE ENGINEER FOR REVIEW. THE JOINT LAYOUT SHALL BE PROVIDED A MINIMUM OF ONE WEEK PRIOR TO PLACING CONCRETE. PATTERN SHALL BE CAREFULLY DESIGNED BY THE CONTRACTOR TO AVOID IRREGULAR SHAPES. EXPANSION JOINTS SHALL NOT BE LOCATED ALONG VALLEYS IN PAVEMENT.
10. ALL CONSTRUCTION JOINTS SHALL BE SAWN, CONCRETE FINISHES TO BE PER DRAWING DETAILS AND SPECIFICATIONS.
11. CONCRETE SHALL BE BROOM FINISHED AND CURED FOR A MINIMUM OF 72 HOURS UNLESS NOTED OTHERWISE.
12. BREAKOUTS FOR REMOVAL OF EXISTING PAVEMENT AND CURBS SHALL BE MADE BY FULL DEPTH SAW CUT WHEN ADJACENT TO PROPOSED PAVEMENT AND/OR CURBS.
13. PROPOSED PAVEMENT AND/OR CURBS INTENDED TO TIE INTO EXISTING SHALL MATCH SHALL MATCH THE ELEVATION OF EXISTING PAVEMENT AND/OR CURBS.
14. PAVEMENT MARKINGS
   - 14.1. PAVEMENT MARKINGS SHALL BE PROVIDED IN ACCORDANCE WITH THE ALEXANDRIA LANDSCAPE GUIDELINES "UNIFORM TRAFFIC MANUAL FOR PAVEMENT MARKINGS."
   - 14.2. FIRE LANES SHALL BE STRIPED AND/OR SIGNED IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' REGULATIONS.
   - 14.3. ALL ACCESSIBLE PAVEMENT MARKINGS SHALL COMPLY WITH ADAAG STANDARDS AND STATE AND LOCAL CODES.
   - 14.4. PARKING SPACE STRIPES, ACCESSIBLE SPACES, PEDESTRIAN STRIPING, DIRECTIONAL ARROWS AND LETTERING SHALL BE SOLID WHITE, UNLESS A SPECIFIC COLOR IS REQUIRED BY LOCAL CODE. TWO (2) COATS OF VOC COMPLIANT, LOCAL DOT APPROVED, UNDILUTED, SOLVENT BASED OR LATEX TRAFFIC PAINT SHALL BE APPLIED. USE MANUFACTURER'S RECOMMENDED APPLICATION RATE, WITHOUT ADDITION OF A THINNER, WITH A MAXIMUM OF 100 SQUARE FEET PER GALLON OR AS REQUIRED. PROVIDING MINIMUM 15 MILS WET FILM THICKNESS AND 7 MILS DRY FILM THICKNESS PER COAT WITH A MINIMUM OF 30 DAYS BETWEEN APPLICATIONS. PAINT SHALL BE CRISP, STRAIGHT AND APPLIED UNIFORMLY ACROSS THE WIDTH OF THE LINE FOR A MINIMUM TOTAL DRY FILM THICKNESS OF 15 MILS.
15. CONTRACTOR SHALL REFER TO THE SITE CIVIL, MEP AND IRRIGATION PLANS FOR CONDUIT TO BE INSTALLED UNDER PAVEMENT PRIOR TO COMMENCING PAVEMENT SUBGRADE PREPARATION.
16. ALL TESTING SHALL BE PERFORMED BY A QUALIFIED TESTING LABORATORY, EMPLOYED AND PAID DIRECTLY BY THE OWNER. TESTING SHALL BE PERFORMED, AT A MINIMUM, IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT. IN THE EVENT THE RESULTS OF THE INITIAL TESTING DO NOT COMPLY WITH THE PLANS AND THE SPECIFICATIONS, SUBSEQUENT TEST NECESSARY TO DETERMINE THE ACCEPTABILITY OF CONSTRUCTION SHALL BE AT THE CONTRACTOR'S EXPENSE. PAVEMENT FOUND TO BE DEFICIENT IN STRENGTH OR THICKNESS SHALL BE REMOVED AND REPLACED SOLELY AT THE EXPENSE OF THE CONTRACTOR.

ACCESSIBILITY NOTES:

1. MAX CROSS SLOPE ON PAVED SURFACES SHALL BE 2% MAXIMUM, UNLESS NOTED OTHERWISE.
2. MAX RUNNING SLOPE ON PAVED SURFACES SHALL BE 5% MAXIMUM, UNLESS NOTED OTHERWISE.
3. ACCESSIBLE PATH OF TRAVEL SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM, AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" AND LESS THAN 80". CONTRACTOR SHALL VERIFY THAT THERE ARE NO BARRIERS IN THE PATH OF TRAVEL.
4. ALL CURB RAMPS SHALL BE BROOM FINISHED PERPENDICULAR TO SLOPE.
5. ALL CURB RAMPS SHALL HAVE A 1:12 MAX SLOPE IN THE DIRECTION OF TRAVEL, 2% MAX CROSS SLOPE.
6. IT IS THE INTENT OF THE CONTRACT DOCUMENTS TO COMPLY WITH ALL APPROPRIATE FAIR HOUSING ACCESSIBILITY GUIDELINES AND GENERAL NOTES FOR PUBLIC AND COMMON USE FACILITIES. REPORT ANY DISCREPANCIES TO LANDDESIGN.

JURISDICTION NOTES:

1. SEE SHEET L202 FOR CITY OF ALEXANDRIA STANDARD LANDSCAPE PLAN NOTES.

GENERAL NOTES:

1. BASE INFORMATION, INCLUDING EXISTING CONDITIONS, TOPOGRAPHY, EXISTING UTILITIES, AND BOUNDARY INFORMATION IS FROM PLANS BY: CHRISTOPHER CONSULTANTS
2. ARCHITECTURAL INFORMATION IS FROM PLANS BY: BALLINGER ARCHITECTS AND ENNEAD ARCHITECTS.
3. WRITTEN DIMENSIONS PREVAIL OVER SCALED DIMENSIONS. NOTIFY LANDDESIGN OF ANY DISCREPANCIES.
4. DIMENSIONS ARE TO FACE OF OBJECT, UNLESS NOTED OTHERWISE.
5. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL UNDERGROUND UTILITIES, PIPES, STRUCTURES, AND LINE RUNS IN THE FIELD PRIOR TO CONSTRUCTION. ANY DAMAGE TO NEW AND EXISTING UTILITIES ARE TO BE REPAIRED IMMEDIATELY AT NO ADDITIONAL EXPENSE TO THE OWNER. LANDDESIGN ASSUMES NO RESPONSIBILITY FOR ANY UTILITIES NOT SHOWN ON PLANS.
6. ALL PROPOSED FINISHED GRADES ARE BASED ON INFORMATION PROVIDED BY THE OWNER'S SURVEY AND OR CIVIL ENGINEER. ANY DISCREPANCIES IN ACTUAL FIELD MEASUREMENTS ARE TO BE REPORTED TO LANDDESIGN IMMEDIATELY.
7. PRIOR TO COMMENCEMENT OF HARDSCAPE CONSTRUCTION, ALL PIERS, FOOTINGS, AND WALLS ARE TO BE SURVEYED, LAID OUT, AND STAKED IN THE FIELD FOR REVIEW BY LANDDESIGN. CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY DEMOLITION, ADJUSTMENTS, OR RECONSTRUCTION OF HARDSCAPE CONSTRUCTION RESULTING FROM UNAUTHORIZED CONSTRUCTION.
8. CONTRACTOR IS RESPONSIBLE TO PROVIDE AND INSTALL ALL ITEMS PER DRAWINGS AND SPECIFICATION. NOTIFY LANDDESIGN OF ANY MAJOR DISCREPANCIES BETWEEN CONTRACTOR'S VERIFIED QUANTITIES, BID BOOK, AND INTENT OF DRAWING.
9. CONTRACTOR IS RESPONSIBLE FOR ALL FINAL QUANTITIES PER DRAWINGS AND SPECIFICATIONS ANY QUANTITIES PROVIDE BY LANDDESIGN ARE PROVIDED FOR CONVENIENCE ONLY AND SHALL NOT BE CONSIDERED ABSOLUTE. LANDDESIGN SHOULD BE NOTIFIED OF ANY GRADING DISCREPANCIES.
10. THE CONTRACTOR SHALL EXAMINE AND BECOME FAMILIAR WITH ALL CONTRACT DOCUMENTS IN THEIR ENTIRETY. SURVEY THE PROJECT AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND SCOPE OF WORK. ALL COSTS SUBMITTED SHALL BE BASED ON THOROUGH KNOWLEDGE OF ALL WORK AND MATERIALS REQUIRED ANY DISCREPANCY AND/ OR UNCERTAINTY AS TO WHAT MATERIAL OR PRODUCT IS TO BE USED, SHALL BE VERIFIED WITH THE OWNER OR LANDDESIGN PRIOR TO BIDDING.
11. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES REQUIRED FOR SAFE EXECUTION AND COMPLETION OF WORK, AND FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
12. IN THE EVENT A DISCREPANCY IS FOUND IN THE CONTRACT DOCUMENTS, THE OWNER & LANDDESIGN SHALL BE NOTIFIED IMMEDIATELY.
13. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND NOTIFY LANDDESIGN OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
14. CONTRACTOR SHALL VERIFY ALL MEASUREMENTS AT THIS SITE AND AND BE RESPONSIBLE FOR ACCURACY AND CORRECTNESS OF SAME.
15. CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER TRADES AND NOTIFY OWNER & LANDDESIGN OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
16. THE CONTRACTOR SHALL EMPLOY, AS REQUIRED BY GOVERNING AUTHORITIES, AN APPROVED TESTING LABORATORY TO MAKE ALL TESTS FROM CONCRETE, SOIL COMPACTION AND WELDING TO INSURE COMPLIANCE WITH PLANS, STANDARDS AND CODES. COST SHALL BE INCLUDED AS INCIDENTAL TO THE CONTRACT.
17. ALL EXISTING WORK OR LANDSCAPING NOT SHOWN TO BE ALTERED OR REMOVED SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. THE CONTRACTOR(S) SHALL BEAR THE TOTAL EXPENSE FOR, AND SHALL REPAIR ANY DAMAGE TO EXISTING CONDITIONS, OR IMPROVEMENTS NOT INDICATED IN THE DRAWINGS OR SPECIFICATIONS TO RECEIVE ALTERATION, ADDITIONS OR REMOVAL.

LAYOUT NOTES:

1. ALL MATERIALS AND CONSTRUCTION WITHIN RIGHT OF WAYS SHALL BE IN ACCORDANCE WITH THE ALEXANDRIA STANDARD SPECIFICATIONS AND CONSTRUCTION STANDARDS, AND STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION PREPARED BY THE .(LATEST REVISION)
2. EXISTING UTILITIES ARE SHOWN SCHEMATICALLY AND ARE FOR THE CONTRACTOR'S GUIDANCE ONLY. THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING IMPROVEMENTS IN THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING IMPROVEMENTS DURING CONSTRUCTION. REPAIRS SHALL BE EQUAL TO OR BETTER THAN CONDITION PRIOR TO CONSTRUCTION.
4. ALL ONSITE PAVING DIMENSIONS ARE TO THE FACE OF CURB, WHERE APPLICABLE, UNLESS NOTED OTHERWISE.
5. ALL CURB RADII AND SIDEWALK RETURNS ARE 2' UNLESS NOTED OTHERWISE.
6. ALL PAVING AND EARTHWORK OPERATIONS SHALL CONFORM TO THE PROJECT GEOTECHNICAL REPORT.
7. BOUNDARY SURVEY: BOUNDARY SURVEY INFORMATION IS BASED ON THE BOUNDARY SURVEY PREPARED BY CIVL ENGINEERS. REFER TO THE BOUNDARY SURVEY AND PLAT TO VERIFY PROPERTY LINES AND EASEMENT LOCATIONS.
8. BUILDING DIMENSIONS: THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS TO VERIFY THE EXACT BUILDING DIMENSIONS.
9. LAY PAVERS IN PATTERN(S) SHOWN ON DRAWINGS. PLACE UNITS HAND TIGHT WITHOUT USING HAMMERS. MAKE HORIZONTAL ADJUSTMENTS TO PLACEMENT OF LAID PAVERS WITH RUBBER HAMMERS AS REQUIRED.
10. PROVIDE JOINTS BETWEEN PAVERS BETWEEN 1/16 IN. AND 3/16 IN. (2 AND 5 MM) WIDE. NO MORE THAN 5% OF THE JOINTS SHALL EXCEED 1/4" WIDE TO ACHIEVE STRAIGHT BOND LINES.
11. JOINT (BOND) LINES SHALL NOT DEVIATE MORE THAN ±1/2 IN. (±15 MM) OVER 50 FT. (15 M) FROM STRING LINES.
12. FILL GAPS AT THE EDGES OF THE PAVED AREA WITH CUT PAVERS OR EDGE UNITS.
13. CUT PAVERS TO BE PLACED ALONG THE EDGE WITH A MASONRY SAW.
14. ADJUST BOND PATTERN AT PAVEMENT EDGES SUCH THAT CUTTING OF EDGE PAVERS IS MINIMIZED.
15. IN NO CASE SHALL A CUT PAVER BE LESS THAN 1/3 FULL PAVER SIZE.
16. PAVER DIMENSIONS ARE NOMINAL. PRIOR TO POURING SLABS, BANDING, OR OTHERWISE SETTING PAVER FIELDS, VERIFY ACTUAL PAVER SIZES AND LAYOUT OF THE PAVER FIELDS. MAKE MINOR ADJUSTMENTS TO EDGE CONSTRAINTS AS REQUIRED TO ACCOMMODATE ACTUAL PAVER SIZES. NOTIFY LANDDESIGN IMMEDIATELY OF DISCREPANCIES AND/OR ADJUSTMENTS.

GRADING NOTES:

1. STAKE PER SPOT ELEVATIONS AND NOTED SLOPES. CONTOURS ARE PROVIDED FOR MASS GRADING/INTENT ONLY.
2. WRITTEN DIMENSIONS AND GRADES PREVAIL OVER SCALED DIMENSIONS. NOTIFY LANDDESIGN OF ANY DISCREPANCIES.
3. ALL SPOT ELEVATIONS SHOWN ON GRADING PLAN ARE TO BOTTOM OF CURB/TOP OF PAVEMENT UNLESS OTHERWISE NOTED. ALL RIM ELEVATIONS ARE TO EDGE OF PAVEMENT.
4. REFER TO GEOTECHNICAL ENGINEER AND GEOTECH REPORT FOR INFORMATION ON SUBSURFACE MATERIALS, TOPSOIL, STRUCTURAL MATERIAL, DEEP FILLS, EXCAVATION, AND FOUNDATIONS.
5. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.
6. IN ORDER TO ASSURE PROPER DRAINAGE, KEEP A MINIMUM OF .5% SLOPE ON THE CURB.
7. ALL PLANTING ISLANDS SHALL BE GRADED TO MOUND TO PROVIDE POSITIVE DRAINAGE.
8. CONTRACTOR TO VERIFY 2% MAX. CROSS-SLOPE ON ALL SIDEWALKS.
9. CONTRACTOR TO VERIFY THAT ALL SIDEWALK SLOPES, HANDICAP RAMPS, AND HANDICAP PARKING SPACES MEET ADA REQUIREMENTS.
10. CONCRETE SIDEWALKS ADJACENT TO TREE SAVE LOCATIONS SHOULD BE POURED ON TOP OF EXISTING GRADE.
11. REFER TO LANDSCAPE PLAN FOR ALL TREE PROTECTION FENCE LOCATIONS AND INSTALLATION PROCEDURES. BEFORE GRADING/CONSTRUCTION BEGINS, CALL FOR INSPECTION OF TREE PROTECTION BARRICADES. NO SOIL DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING, OR OTHER LAND DISTURBING ACTIVITY ALLOWED IN THE TREE PROTECTION ZONE.
12. DIMENSIONS ON BUILDINGS ARE FOR GRADING PURPOSES ONLY AND ARE NOT TO BE USED TO LAYOUT FOOTINGS.
13. GRADING CONTRACTORS SHALL NOTIFY AND COOPERATE WITH ALL UTILITY COMPANIES OR FIRMS HAVING FACILITIES ON OR ADJACENT TO THE SITE BEFORE DISTURBING, ALTERING, REMOVING, RELOCATING, ADJUSTING OR CONNECTING TO SAID FACILITIES. CONTRACTORS SHALL PAY ALL COSTS IN CONNECTION WITH THE ALTERATION OF OR RELOCATION OF THE FACILITIES. CONTRACTORS SHALL RAISE OR LOWER TOPS OF EXISTING MANHOLES AS REQUIRED TO MATCH FINISHED GRADES.
14. GRADING CONTRACTOR SHALL COOPERATE AND WORK WITH ALL OTHER CONTRACTORS PERFORMING WORK ON THIS PROJECT TO INSURE PROPER AND TIMELY COMPLETION OF THIS PROJECT.

APPROVED
SPECIAL USE PERMIT NO. DSUP2020-10031

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

LandDesign.
223 NORTH GRAHAM STREET
CHARLOTTE, NC 28202
704.333.0325
WWW.LANDDESIGN.COM

KEY MAP

SEAL

COMMONWEALTH OF VIRGINIA
MATTHEW V. CLARK
Lic. No. 952
10-22-2020
LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

PROJECT

OAKVILLE BLOCK A2

INOVA

ALEXANDRIA, VA

–

LANDDESIGN PROJ.#
2020081

REVISION / ISSUANCE

NO.	DESCRIPTION	DATE
	CONCEPT II SUBMISSION	08-06-2020
	COMPLETENESS SUBMISSION	09-18-2020
	COMPLETENESS RESUBMISSION	10-22-2020

DESIGNED BY:
DRAWN BY:
CHECKED BY:

SCALE — NORTH

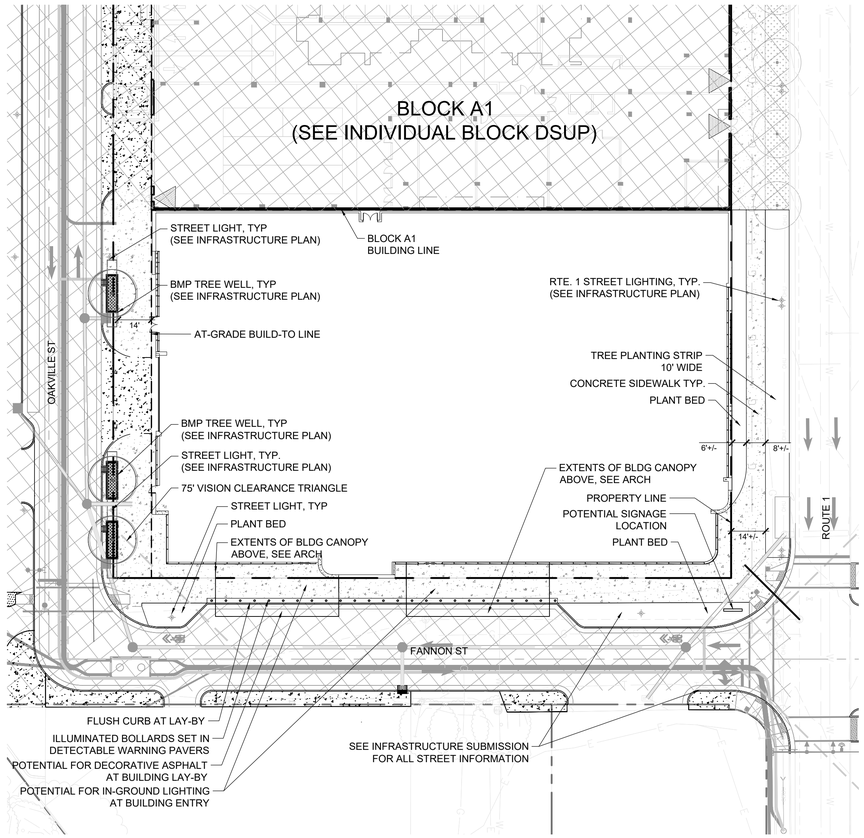
VERT: N/A
HORZ: 1"=50'
0 25' 50' 100'

SHEET TITLE

GENERAL NOTES

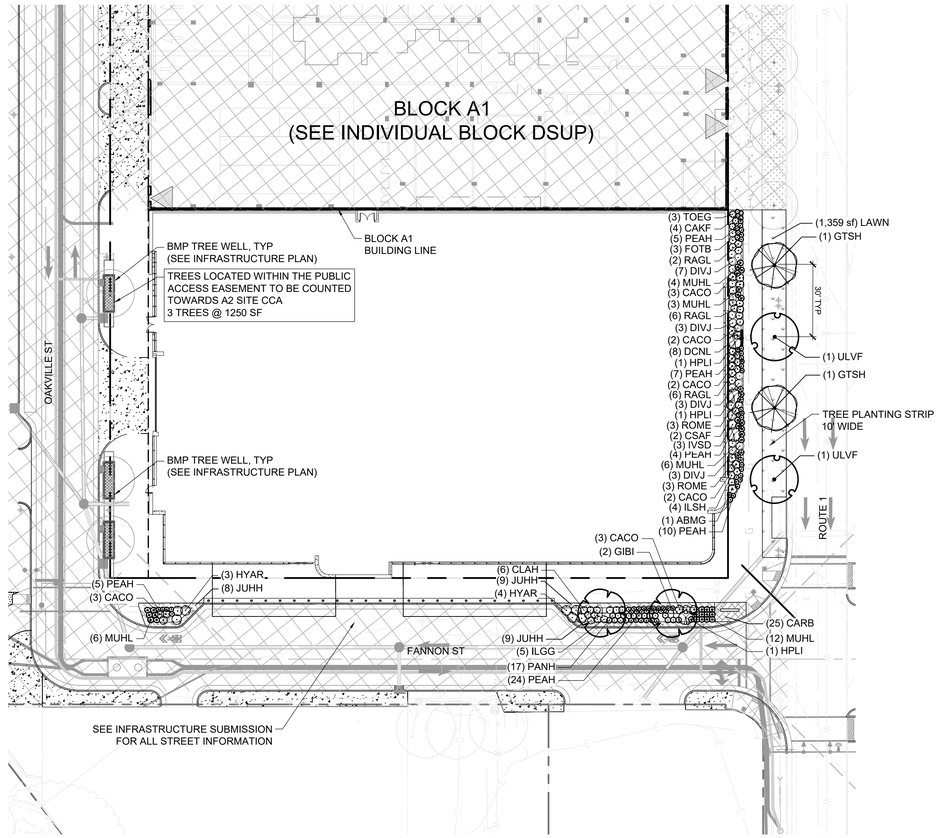
SHEET NUMBER

L002



1 L101 STREETSCAPE - MATERIALS PLAN

PLAN SCALE 1" = 30'



2 L101 STREETSCAPE - LANDSCAPE PLAN

PLAN SCALE 1" = 30'

AREA OF OAKVILLE THAT IS NOT
INCLUDED WITH THIS APPLICATION

NOTES:

1. ALL PLANS AND GRAPHICS AS SHOWN ARE CONCEPTUAL IN NATURE AND ARE SUBJECT TO CHANGE DURING THE DSUP PROCESS.
2. PAVING PATTERNS ARE PRELIMINARY AND ARE INTENDED TO SHOW CHANGES IN MATERIALS. PATTERNS DO NOT DEPICT FINAL PAVING PATTERN OR LAYOUT.
3. SEE INFRASTRUCTURE PLANS (DSUP2020-10029) FOR ALL STREET INFORMATION, BMP TREE WELLS, AND STREET LIGHT LOCATIONS.

APPROVED
SPECIAL USE PERMIT NO. DSUP2020-10031

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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KEY MAP

SEAL

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OAKVILLE BLOCK A2

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	COMPLETENESS RESUBMISSION	10-22-2020

DESIGNED BY:
DRAWN BY:
CHECKED BY:

SCALE NORTH

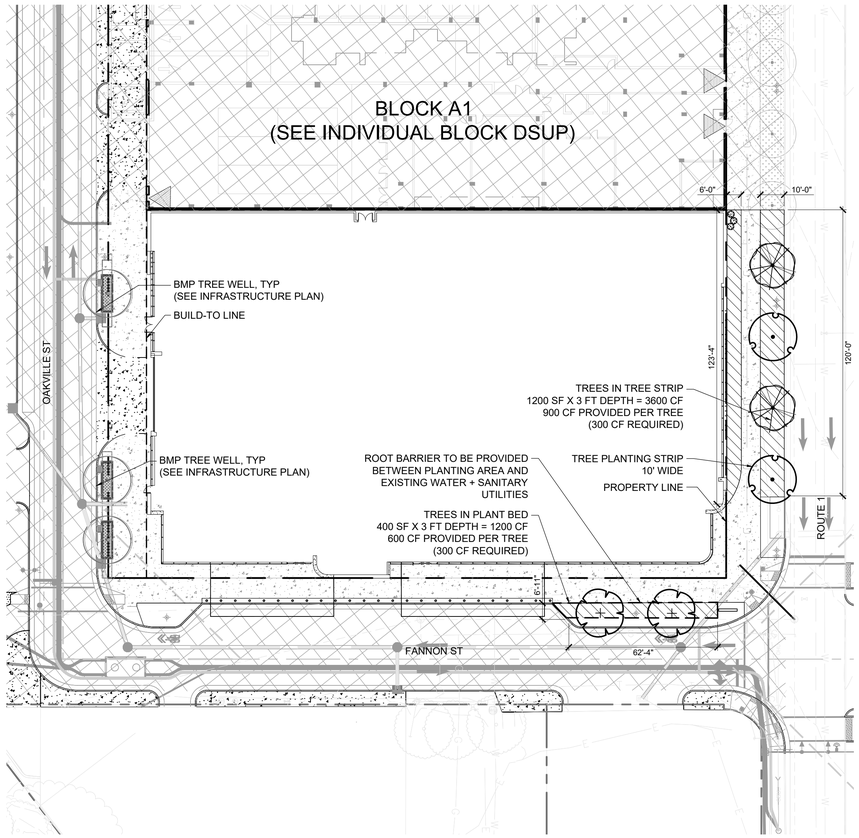
VERT:
HORZ: 1"=30'
0 15' 30' 60'

SHEET TITLE

MATERIALS + PLANTING PLAN

SHEET NUMBER

L101



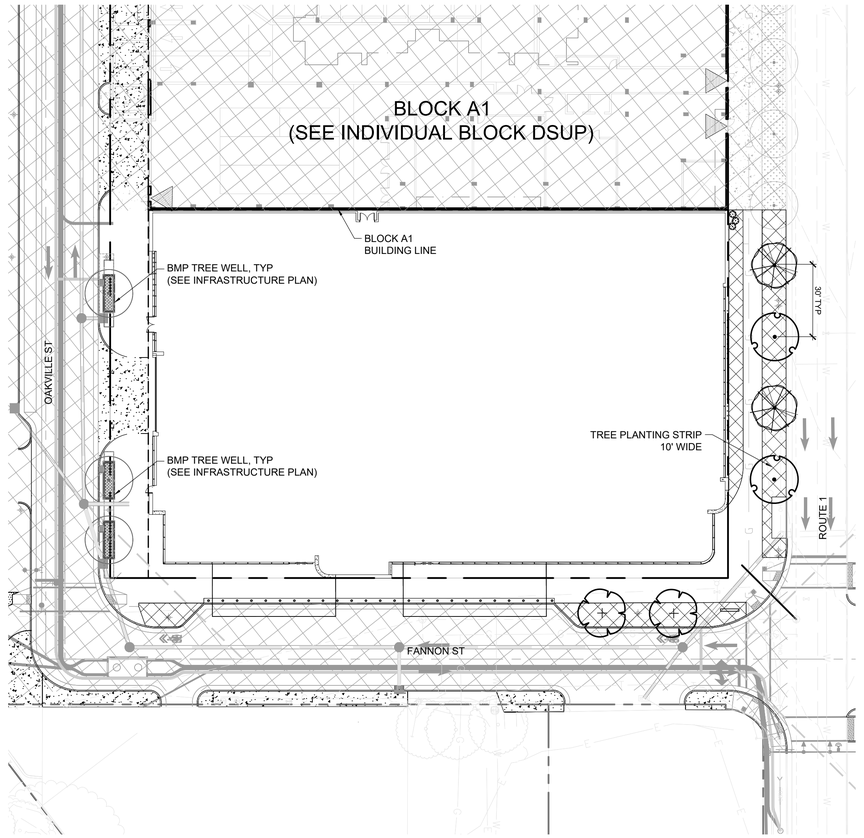
1 L102 STREETSCAPE - SOIL VOLUME PLAN

PLAN

SCALE 1" = 30'

STREETSCAPE SOIL VOLUME

EXTENTS OF UNCOMPACTED SOIL VOLUME IN TREE WELLS



2 L102 STREETSCAPE - LIMITS OF IRRIGATION PLAN

PLAN

SCALE 1" = 30'

LIMITS OF IRRIGATION

LIMITS OF AREA WITH NO PERMANENT IRRIGATION
(TO BE HAND-WATERED)

NOTES:

1. PROPOSED LIMITS OF IRRIGATION ARE SUBJECT TO CHANGE WITH FINAL ENGINEERING AND LEED APPROVALS. HAND IRRIGATED AREAS MAY BE UPGRADED TO A PERMANENT IRRIGATION SYSTEM IN THE FUTURE WITHOUT AMENDMENT TO THIS SITE PLAN. FULL IRRIGATION SYSTEM PLANS TO BE PROVIDED BY OTHERS AT A LATER DATE.
2. SOIL SURVEY TO BE PERFORMED AT A LATER DATE CLOSER TO INSTALLATION OF PLANT MATERIAL. SOIL SAMPLE TEST REPORT WILL DOCUMENT THE EXISTING SOIL PH.

APPROVED
SPECIAL USE PERMIT NO. DSUP2020-10031
DEPARTMENT OF PLANNING & ZONING
DIRECTOR DATE
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO.
DIRECTOR DATE
CHAIRMAN, PLANNING COMMISSION DATE
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KEY MAP

SEAL

COMMONWEALTH OF VIRGINIA
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10-22-2020
LANDSCAPE ARCHITECT

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PROJECT

OAKVILLE BLOCK A2

LANDDESIGN PROJ.#
2020081

REVISION / ISSUANCE

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	COMPLETENESS SUBMISSION	09-18-2020
	COMPLETENESS RESUBMISSION	10-22-2020

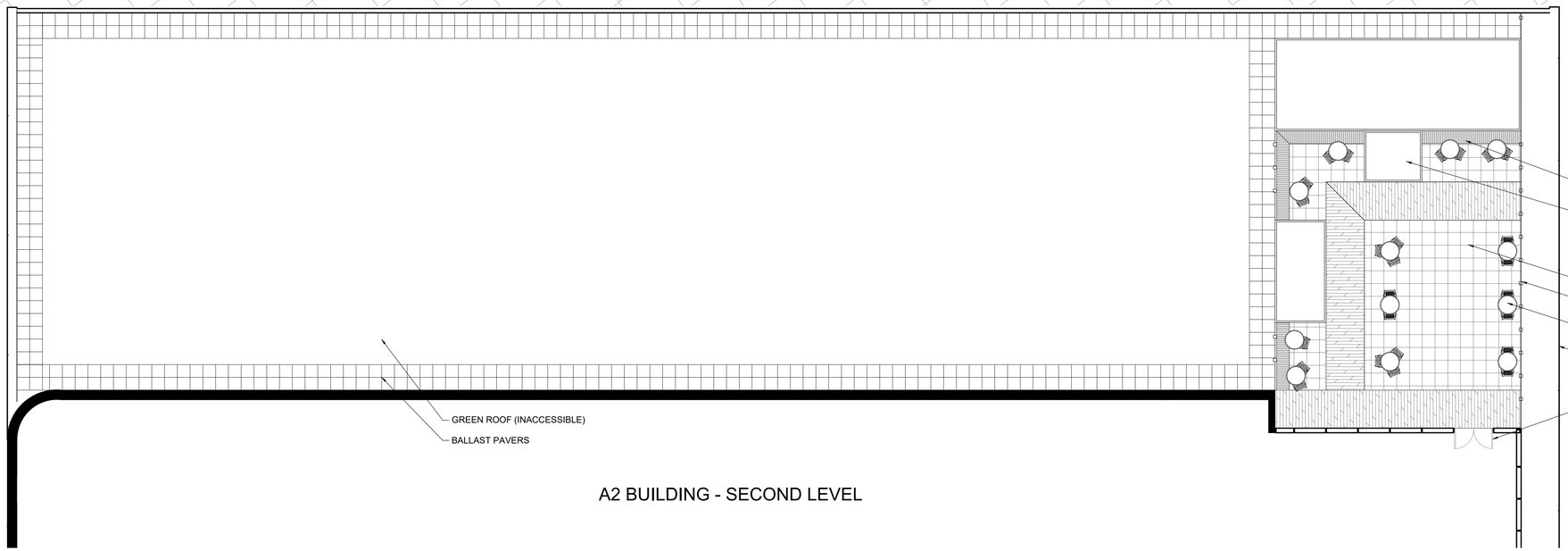
DESIGNED BY:
DRAWN BY:
CHECKED BY:

SCALE NORTH
VERT:
HORZ: 1"=30'
0 15' 30' 60'

SHEET TITLE
SOIL VOLUME + LIMITS OF IRRIGATION PLAN

SHEET NUMBER
L102

BLOCK A1
(SEE INDIVIDUAL BLOCK DSUP)

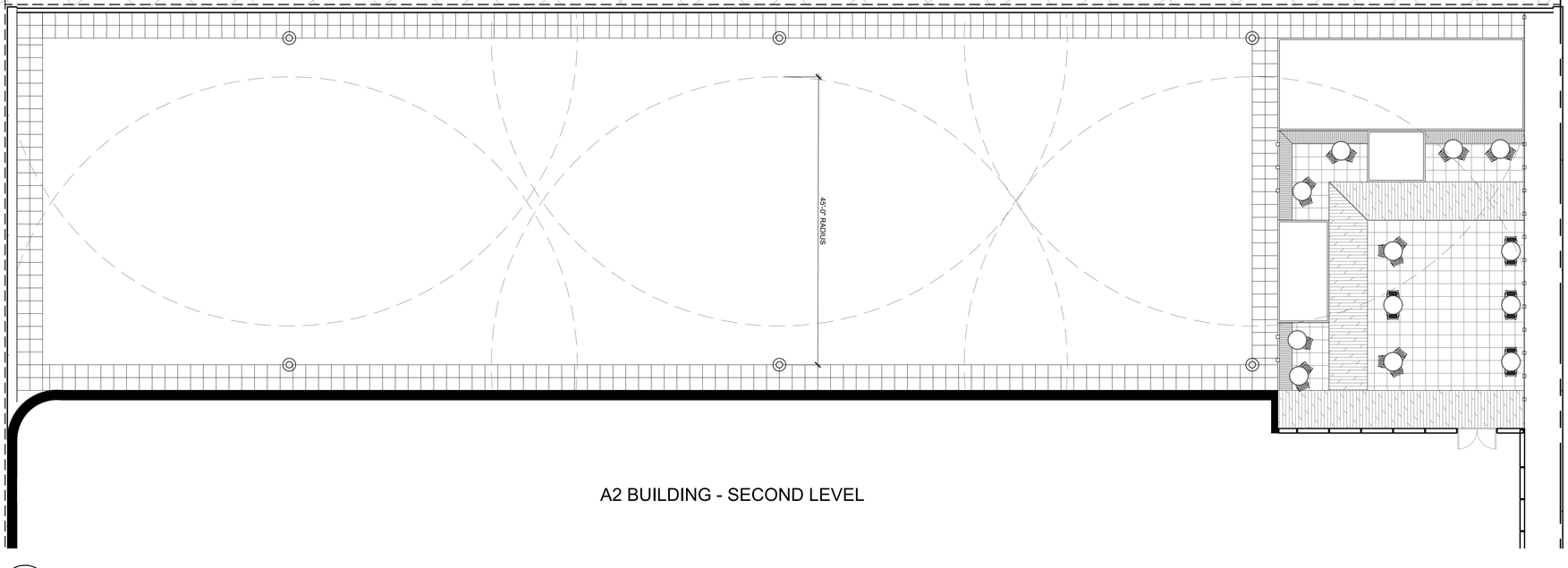


A2 BUILDING - SECOND LEVEL

NOTES:
1. DESIGN OF TERRACE IS PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL SITE PLAN WITH FINAL ENGINEERING.
2. ALLOWABLE TERRACE AREA IS 2400 SF (TERRACE IS 1590 SF AS SHOWN ON PLAN). FINAL SIZE AND CONFIGURATION TO BE DEVELOPED.
3. PAVING PATTERNS ARE PRELIMINARY, AND DO NOT DEPICT FINAL PAVING PATTERN OR LAYOUT.

1 L201 UPPER LEVEL TERRACE - MATERIALS PLAN
PLAN
SCALE 1" = 10'

BLOCK A1
(SEE INDIVIDUAL BLOCK DSUP)



A2 BUILDING - SECOND LEVEL

LEGEND

SYMBOL	DESCRIPTION
◎	HOSE BIB
- - - -	45' RADIUS

NOTES:
1. PROPOSED LIMITS OF IRRIGATION ARE SUBJECT TO CHANGE WITH FINAL ENGINEERING AND LEED APPROVALS. HAND IRRIGATED AREAS MAY BE UPGRADED TO A PERMANENT IRRIGATION SYSTEM IN THE FUTURE WITHOUT AMENDMENT TO THIS SITE PLAN. FULL IRRIGATION SYSTEM PLANS TO BE PROVIDED BY OTHERS AT A LATER DATE.
2. SOIL SURVEY TO BE PERFORMED AT A LATER DATE CLOSER TO INSTALLATION OF PLANT MATERIAL. SOIL SAMPLE TEST REPORT WILL DOCUMENT THE EXISTING SOIL PH.

APPROVED
SPECIAL USE PERMIT NO. DSUP2020-10031
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

2 L201 UPPER LEVEL TERRACE - LIMITS OF IRRIGATION PLAN
PLAN
SCALE 1" = 10'

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KEY MAP

SEAL

COMMONWEALTH OF VIRGINIA
MATTHEW V. CLARK
Lic. No. 952
10-22-2020
LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

PROJECT

OAKVILLE BLOCK A2

LANDDESIGN PROJ.#
2020081

REVISION / ISSUANCE

NO.	DESCRIPTION	DATE
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	COMPLETENESS RESUBMISSION	10-22-2020

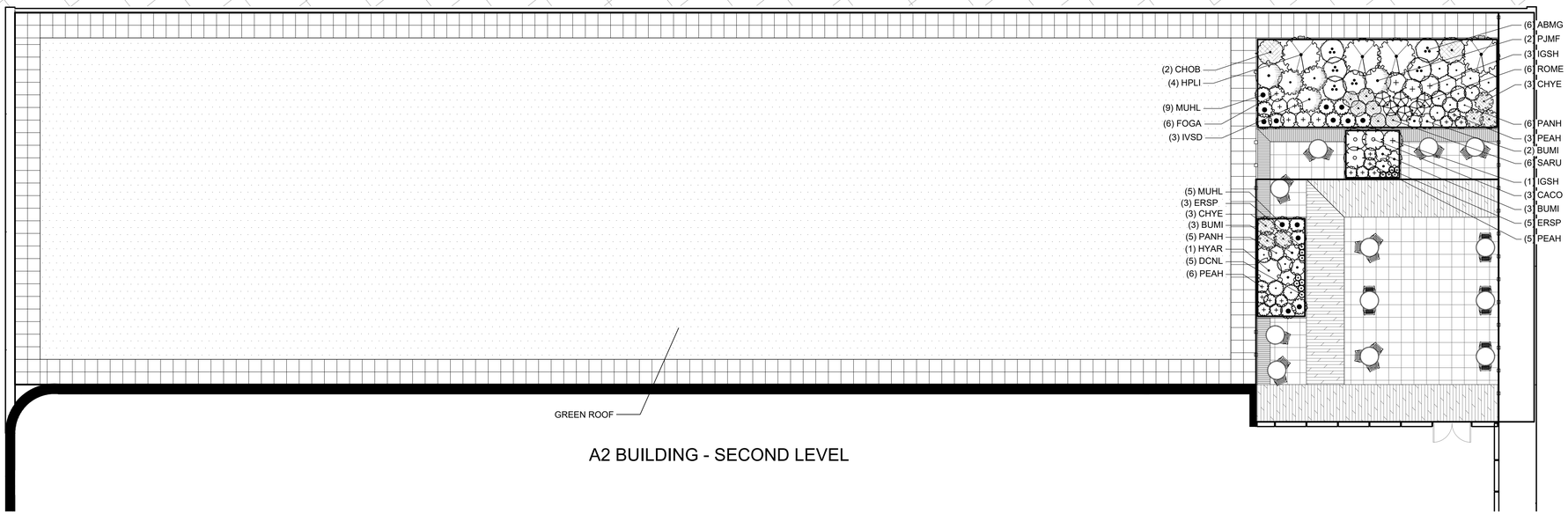
DESIGNED BY:
DRAWN BY:
CHECKED BY:

SCALE NORTH
VERT:
HORZ: 1"=30'
0 15' 30' 60'

SHEET TITLE
TERRACE MATERIALS PLAN

SHEET NUMBER
L201

BLOCK A1
(SEE INDIVIDUAL BLOCK DSUP)



A2 BUILDING - SECOND LEVEL

1 / L202 UPPER LEVEL TERRACE - LANDSCAPE PLAN
PLAN

SCALE 1" = 10'

PLANT KEY

DECIDUOUS SHRUB	CODE	BOTANICAL / COMMON NAME
	CACO	CLETHRA ALNIFOLIA `COMPACTA` / COMPACT SUMMERSWEET
	CSAF	CORNUS SERICEA `ARCTIC FIRE` / ARCTIC FIRE DOGWOOD
	FOGA	FOTHERGILLA GARDENII / DWARF FOTHERGILLA
	HYAR	HYDRANGEA ARBORESCENS `ANNABELLE` / WILD HYDRANGEA
	HPLI	HYDRANGEA PANICULATA `LIMELIGHT` / LIMELIGHT HYDRANGEA
	ROME	ROSA X `MEIDRIFORA` TM / CORAL DRIFT GROUNDCOVER ROSE

EVERGREEN SHRUB	CODE	BOTANICAL / COMMON NAME
	ABMG	ABELIA X GRANDIFLORA `MARDI GRAS` / MARDI GRAS ABELIA
	BUMI	BUXUS MICROPHYLLA / LITTLELEAF BOXWOOD
	CHYE	CEPHALOTAXUS HARRINGTONIA `PLANIA` TM / YEWTOPIA PLUM YEW
	CHOB	CHAMAECYPARIS OBTUSA `GRACILIS` / SLENDER HINOKI CYPRESS
	IGSH	ILEX GLABRA `SHAMROCK` / SHAMROCK INKBERRY HOLLY
	IVSD	ILEX VOMITORIA `STOKES DWARF` / STOKES DWARF YAUPON HOLLY
	PJMF	PIERIS JAPONICA `MOUNTAIN FIRE` / MOUNTAIN FIRE PIERIS
	SARU	SARCOCOCCA HUMILIS / SWEETBOX

ORNAMENTAL GRASSES	CODE	BOTANICAL / COMMON NAME
	ERSP	ERAGROSTIS SPECTABILIS / PURPLE LOVE GRASS
	MUHL	MUHLENBERGIA LINDHEIMERI `LENI` / AUTUMN GLOW MUHLY GRASS
	PANH	PANICUM VIRGATUM `RUBY RIBBONS` / SWITCH GRASS
	PEAH	PENNISETUM ALOPECUROIDES `HAMELN` / HAMELN DWARF FOUNTAIN GRASS

GROUND COVERS	CODE	BOTANICAL / COMMON NAME
	GRRF	GREEN ROOF

A) STANDARD LANDSCAPE PLAN NOTES FOR ALL PLANS REQUIRING APPROVAL:

THE FOLLOWING NOTES SHALL BE PROVIDED ON LANDSCAPE PLAN SUBMISSIONS FOR ALL PROJECTS THAT REQUIRE APPROVAL BY THE CITY AS OUTLINED IN CHAPTER 3 OF THE CITY'S 2019 LANDSCAPE GUIDELINES:

1) THE PROPERTY OWNER AND/OR APPLICANT, SPECIFIER, CONTRACTOR AND INSTALLER OF PLANT MATERIAL ARE RESPONSIBLE FOR UNDERSTANDING AND ADHERING TO THE STANDARDS SET FORTH IN THE MOST RECENT VERSION OF THE CITY OF ALEXANDRIA LANDSCAPE GUIDELINES AND APPLICABLE CONDITIONS OF APPROVAL. ALL QUESTIONS REGARDING APPLICATION OF, OR ADHERENCE TO, THE STANDARDS AND/OR CONDITIONS OF APPROVAL SHALL BE DIRECTED TO THE CITY PRIOR TO COMMENCEMENT OF DEMOLITION, CONSTRUCTION, OR ANY LAND DISTURBING ACTIVITY.

2) THE CITY-APPROVED LANDSCAPE PLAN SUBMISSION, INCLUDING PLANT SCHEDULE, NOTES AND DETAILS SHALL BE THE DOCUMENT USED FOR INSTALLATION PURPOSES AND ALL PROCEDURES SET FORTH IN THE LANDSCAPE GUIDELINES MUST BE FOLLOWED.

3) THE CONTRACTOR SHALL NOT INTERFERE WITH ANY TREE PROTECTION MEASURES OR IMPACT ANY EXISTING VEGETATION IDENTIFIED TO BE PRESERVED PER THE APPROVED TREE AND VEGETATION PROTECTION PLAN.

4) ANY CHANGES, ALTERATIONS OR MODIFICATIONS TO THE SITE CONDITIONS THAT AFFECT VEGETATION PROTECTION ZONES WILL REQUIRE AN AMENDMENT TO THE APPROVED TREE AND VEGETATION PROTECTION PLAN AND/OR DETAILS.

5) INSTALLATION OF PLANT MATERIAL MAY ONLY OCCUR DURING THE PLANTING SEASONS IDENTIFIED IN THE LANDSCAPE GUIDELINES.

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

7) SUBSTITUTIONS TO THE APPROVED PLANT MATERIAL SHALL NOT OCCUR UNTIL WRITTEN APPROVAL IS PROVIDED BY THE CITY.

8) MAINTENANCE FOR THIS PROJECT SHALL BE PERFORMED BY THE OWNER, APPLICANT, SUCCESSOR(S) AND/OR ASSIGN(S) IN PERPETUITY AND IN COMPLIANCE WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES AND AS CONDITIONED BY PROJECT APPROVAL, AS APPLICABLE.

B) STANDARD LANDSCAPE PLAN NOTES FOR DEVELOPMENT SITE PLANS:

IN ADDITION TO THE NOTES PROVIDED ABOVE, THE FOLLOWING NOTES SHALL BE PROVIDED ON LANDSCAPE PLAN SUBMISSIONS FOR ALL DSP/DSUP PROJECTS:

1) THE APPROVED METHOD(S) OF PROTECTION MUST BE IN PLACE FOR ALL VEGETATION TO BE PRESERVED ON-SITE AND ADJACENT TO THE PROJECT SITE PURSUANT TO THE APPROVED TREE AND VEGETATION PROTECTION PLAN AND DETAILS PRIOR TO COMMENCEMENT OF DEMOLITION, CONSTRUCTION, OR ANY LAND DISTURBANCE. THE APPLICANT SHALL NOTIFY THE PLANNING & ZONING (P&Z) PROJECT MANAGER ONCE THE TREE PROTECTION METHODS ARE IN PLACE. NO DEMOLITION, CONSTRUCTION, OR LAND DISTURBANCE MAY OCCUR UNTIL AN INSPECTION IS PERFORMED BY THE CITY AND WRITTEN CONFIRMATION IS PROVIDED BY THE CITY WHICH VERIFIES CORRECT INSTALLATION OF THE TREE PROTECTION MEASURES.

2) THE APPLICANT MUST CONTACT THE P&Z PROJECT MANAGER PRIOR TO COMMENCEMENT OF LANDSCAPE INSTALLATION/PLANTING OPERATION TO SCHEDULE A PRE-INSTALLATION MEETING. THE MEETING SHOULD BE HELD BETWEEN THE APPLICANT'S GENERAL CONTRACTOR, LANDSCAPE CONTRACTOR, LANDSCAPE ARCHITECT, THE P&Z PROJECT MANAGER AND THE CITY ARBORIST (AS APPLICABLE) TO REVIEW THE SCOPE OF INSTALLATION PROCEDURES AND PROCESSES DURING AND AFTER INSTALLATION.

3) THE FOLLOWING INFORMATION SHALL BE PROVIDED TO THE P&Z PROJECT MANAGER AT LEAST FIVE (5) BUSINESS DAYS PRIOR TO THE LANDSCAPE PRE-INSTALLATION MEETING: 1) A LETTER THAT CERTIFIES THAT THE PROJECT LANDSCAPE ARCHITECT PERFORMED PRE-SELECTION TAGGING FOR ALL TREES PROPOSED WITHIN THE PUBLIC RIGHT OF WAY AND ON PUBLIC LAND PRIOR TO INSTALLATION. THIS LETTER MUST BE SIGNED AND SEALED BY THE PROJECT LANDSCAPE ARCHITECT, AND 2) A COPY OF THE SOIL BULK DENSITY TEST REPORT VERIFYING THAT MAXIMUM COMPRESSION RATES ARE MET.

4) ALL CONSTRUCTION WASTE SHALL BE REMOVED PRIOR TO PLANTING.

5) AS-BUILT DRAWINGS FOR THIS LANDSCAPE AND/OR IRRIGATION/WATER MANAGEMENT SYSTEM WILL BE PROVIDED IN COMPLIANCE WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES, THE CITY CODE OF ORDINANCES, AND ALL APPLICABLE PLAN PREPARATION CHECKLISTS. 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.

6) AREAS OF BARE SOIL WILL NOT BE ACCEPTED. MULCHED AREAS AND PLANTING AREAS SHALL BE WEED FREE UPON ACCEPTANCE OF THE PROJECT BY THE CITY.

A STANDARD LANDSCAPE PLAN NOTES
NOT TO SCALE

OF UPDATES: 01 LAST UPDATED: 12/02/2019

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

NOTE:
THE INFORMATION SHOWN HEREIN THIS DOCUMENT IS FOR GENERAL GUIDANCE ONLY AND IS NOT INTENTED FOR CONSTRUCTION PURPOSES. ITS USE SHALL NOT RELIEVE THE DESIGN PROFESSIONAL OR CONTRACTOR OF ANY LEGAL RESPONSIBILITY.

Source: CITY OF ALEXANDRIA
Approved by: COA
1 OF 1
STANDARD LANDSCAPE PLAN NOTES
Date drawn: 01/01/19
LD 016

APPROVED
SPECIAL USE PERMIT NO. DSUP2020-10031

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

LandDesign.
223 NORTH GRAHAM STREET
CHARLOTTE, NC 28202
704.333.0325
WWW.LANDDESIGN.COM

KEY MAP

SEAL

COMMONWEALTH OF VIRGINIA
MATTHEW V. CLARK
Lic. No. 952
10-22-2020
LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

PROJECT

OAKVILLE BLOCK A2

LANDDESIGN PROJ.#
2020081

REVISION / ISSUANCE

NO.	DESCRIPTION	DATE
	CONCEPT II SUBMISSION	08-06-2020
	COMPLETENESS SUBMISSION	09-18-2020
	COMPLETENESS RESUBMISSION	10-22-2020

DESIGNED BY:
DRAWN BY:
CHECKED BY:

SCALE
VERT:
HORZ: 1"=30'
0 15' 30' 60'

NORTH

SHEET TITLE
TERRACE PLANTING PLAN

SHEET NUMBER
L202

PLANT SCHEDULE - TERRACE

DECIDUOUS SHRUB	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	HEIGHT	SPREAD	REMARKS
	CACO	3	CLETHRA ALNIFOLIA `COMPACTA` / COMPACT SUMMERSWEET	#3	18" - 24"		REGIONALLY NATIVE CCA : 10 SF
	CSAF	5	CORNUS SERICEA `ARCTIC FIRE` / ARCTIC FIRE DOGWOOD	CONTAINER	24" - 30"		REGIONALLY NATIVE CCA: 25 SF
	FOGA	7	FOTHERGILLA GARDENII / DWARF FOTHERGILLA	#3	18" - 24"	18" - 24"	EASTERN US NATIVE CCA : 2 SF
	HYAR	1	HYDRANGEA ARBORESCENS `ANNABELLE` / WILD HYDRANGEA	CONTAINER	24" - 30"	---	LOCALLY NATIVE CCA: 10 SF
	HPLI	4	HYDRANGEA PANICULATA `LIMELIGHT` / LIMELIGHT HYDRANGEA	#3	18" - 24"		CCA : 25 SF
	ROME	6	ROSA X `MEIDRIFORA` TM / CORAL DRIFT GROUNDCOVER ROSE	#3		12" - 18"	

EVERGREEN SHRUB	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	HEIGHT	SPREAD	REMARKS
	ABMG	6	ABELIA X GRANDIFLORA `MARDI GRAS` / MARDI GRAS ABELIA	#3		18" - 24"	CCA : 10 SF
	BUMI	8	BUXUS MICROPHYLLA / LITTLELEAF BOXWOOD	#3	18" - 24"		CCA : 2 SF
	CHYE	6	CEPHALOTAXUS HARRINGTONIA `PLANIA` TM / YEWTOPIA PLUM YEW	#3		18" - 24"	CCA : 25 SF
	CHOB	2	CHAMAECYPARIS OBTUSA `GRACILIS` / SLENDER HINOKI CYPRESS	B & B OR CONTAINER	4` - 5`		CCA : 50 SF
	IGSH	4	ILEX GLABRA `SHAMROCK` / SHAMROCK INKBERRY HOLLY	#3	18" - 24"		REGIONALLY NATIVE CCA : 25 SF
	IVSD	3	ILEX VOMITORIA `STOKES DWARF` / STOKES DWARF YAUPON HOLLY	#3		18" - 24"	REGIONALLY NATIVE CCA : 25 SF
	PJMF	2	PIERIS JAPONICA `MOUNTAIN FIRE` / MOUNTAIN FIRE PIERIS	#5	30" - 36"		CCA: 25 SF
	SARU	6	SARCOCOCCA HUMILIS / SWEETBOX	#3		12" - 18"	CCA : 10 SF

ORNAMENTAL GRASSES	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	HEIGHT	SPREAD	REMARKS
	DCNL	5	DESCHAMPSIA CESPITOSA `NORTHERN LIGHTS` / NORTHERN LIGHTS TUFTED HAIR GRASS	1 GAL			NORTH AMERICAN NATIVE
	ERSP	9	ERAGROSTIS SPECTABILIS / PURPLE LOVE GRASS	1 GAL			LOCALLY NATIVE
	MUHL	14	MUHLENBERGIA LINDHEIMERI `LENI` / AUTUMN GLOW MUHLY GRASS	1 GAL			NORTH AMERICAN NATIVE
	PANH	11	PANICUM VIRGATUM `RUBY RIBBONS` / SWITCH GRASS	1 GAL			LOCALLY NATIVE CUT BACK TO 6" IN MARCH
	PEAH	14	PENNISETUM ALOPECUROIDES `HAMELN` / HAMELN DWARF FOUNTAIN GRASS	1 GAL			GROWS 18-30", 2` O.C. ADAPTIVE

GROUND COVERS	CODE	BOTANICAL / COMMON NAME	SIZE	COLOR	BLOOMS	SPACING	REMARKS
	GRRF	GREEN ROOF	--				

CROWN COVER TABULATIONS	
TOTAL SITE AREA (SF) - **BLOCK A2**	39,983
25% CROWN COVER REQUIRED (SF)	9,996
EXISTING CROWN COVER (SF)	0
REMOVED CROWN COVER (SF)	0
PRESERVED CROWN COVER (SF)	
Crown Cover from Preserved Trees	0
Crown Cover from Preserved Shrubs	0
PROPOSED CROWN COVER (SF)	
Crown Cover from Proposed Trees	3,750
Crown Cover from Proposed Shrubs	900
TOTAL CROWN COVER PROVIDED (%)	11.6%
TOTAL CROWN COVER PROVIDED (SF)	4,650

NOTES:

1. BLOCK DOES NOT MEET CANOPY COVERAGE REQUIREMENTS, AND A MODIFICATION IS REQUESTED. SEE COVER SHEET.
2. 3 TREES ALONG OAKVILLE STREET ARE WITHIN THE SITE AREA IN A PUBLIC ACCESS EASEMENT, AND ARE INCLUDED IN THE CANOPY COVER COUNTS. SEE INFRASTRUCTURE PLAN DSUP2020-10039 FOR TREE SPECIES.
3. TREE SPECIES LISTED AS "C.C.A.= N/A" ARE LOCATED WITHIN PUBLIC ROW, AND DO NOT COUNT TOWARD CROWN COVERAGE ALLOWANCE (C.C.A.) REQUIREMENTS.

BIODIVERSITY TABULATIONS

TREES (URBAN AND STANDARD)

TOTAL NUMBER OF TREES PROPOSED:

GENUS	QTY.	PERCENT OF TOTAL PROPOSED	MAXIMUM PERCENT ALLOWED	SPECIES	QTY.	PERCENT OF TOTAL PROPOSED	MAXIMUM PERCENT ALLOWED
TOTAL	**0**						

SHRUBS

TOTAL NUMBER OF SHRUBS PROPOSED:

GENUS	QTY.	PERCENT OF TOTAL PROPOSED	MAXIMUM PERCENT ALLOWED	SPECIES	QTY.	PERCENT OF TOTAL PROPOSED	MAXIMUM PERCENT ALLOWED
Clethra	7	8%	33%	alnifolia 'hummingbird'	7	8%	10%
Ilex	7	8%	33%	glabra	7	8%	10%
Clethra	9	10%	33%	alnifolia 'compacta'	9	10%	10%
Cornus	5	5%	33%	sericea	5	5%	10%
Fothergilla	7	8%	33%	gardenii	7	8%	10%
Hydrangea	8	9%	33%	arborescens	8	9%	10%
Hydrangea	5	5%	33%	paniculata 'limelight'	4	4%	10%
Rosa x	6	7%	33%	meidrifora	6	7%	10%
Abelia x	6	7%	33%	grandiflora	6	7%	10%
Buxus	8	9%	33%	microphylla	8	9%	10%
Cephalotaxus	6	7%	33%	harringtonia	6	7%	10%
Chamaecyparis	2	2%	33%	obtusa	2	2%	10%
Ilex	4	4%	33%	glabra 'shamrock'	4	4%	10%
Ilex	3	3%	33%	vomitoria	3	3%	10%
Pieris	2	2%	33%	japonica	2	2%	10%
Sarcococca	6	7%	33%	humilis	6	7%	10%
TOTAL	**91**						

NATIVE PLANT TABULATIONS

PLANT TYPE	QUANTITY	NATIVE TYPE	MARCH 2, 2019 – JANUARY 1, 2020 REQUIRED %	MARCH 2, 2019 – JANUARY 1, 2020 PROVIDED QTY.	MARCH 2, 2019 – JANUARY 1, 2020 PROVIDED %	JANUARY 2, 2020 – JANUARY 1, 2024 REQUIRED %	JANUARY 2, 2020 – JANUARY 1, 2024 PROVIDED QTY.	JANUARY 2, 2020 – JANUARY 1, 2024 PROVIDED %	BEGINNING JANUARY 2, 2024 REQUIRED %	BEGINNING JANUARY 2, 2024 PROVIDED QTY.	BEGINNING JANUARY 2, 2024 PROVIDED %
Urban Trees	0	Regional/Local	10%			15%	0	0%	20%		
		Total Natives	25%			25%	0	0%	50%		
Standard Trees	0	Regional/Local	15%			25%	0	0%	40%		
		Total Natives	40%			60%	0	0%	80%		
Evergreen Shrubs	44	Regional/Local	5%			8%	14	32%	10%		
		Total Natives	20%			30%	14	32%	40%		
Deciduous Shrubs	47	Regional/Local	10%			15%	36	77%	20%		
		Total Natives	40%			60%	36	77%	80%		
Groundcovers	51	Regional/Local	5%			10%	26	51%	10%		
		Total Natives	10%			20%	26	51%	20%		
Perennials, Ferns, Ornamental Grasses	121	Regional/Local	10%			15%	76	63%	25% (perennials) 30% (ferns & grasses)		
		Total Natives	25%			40%	76	63%	60% (perennials) 80% (ferns & grasses)		
Vines		Total Natives	80%			100%	0	0%	100%		

TOTALS

TOTAL PLANTS SPECIFIED	TOTAL SUM OF REGIONAL/LOCAL NATIVE PLANTS	TOTAL SUM OF NATIVE PLANTS
263	152	152
	57.8%	57.8%

NOTES:

1) Percentages apply to the total quantity of each plant type specifed on Completeness/Preliminary Plans and Final #1 Grading Plans submitted during the listed time frames.
2) Total Natives is the sum of Eastern U.S. Native, Regionally Native, and Locally Native vegetation specifed on the plans for each plant type.
3) Non-native vegetation for the purposes of providing edible fruits, seeds, or nuts may be planted and shall not be calculated in the above-stated requirements for native species regardless of plant type.

NOTES:

1. FINAL PLANT SPECIES SELECTIONS TO BE DETERMINED WITH FINAL SITE PLAN.
2. TREE SPECIES LISTED AS "C.C.A.= N/A" ARE LOCATED WITHIN PUBLIC ROW, AND DO NOT COUNT TOWARD CROWN COVERAGE ALLOWANCE (C.C.A.) REQUIREMENTS.

SHEET IS FOR PLANTINGS WITHIN THE PROPERTY LINE ONLY.
SEE SHEET L203A FOR TRACKING OF PLANTINGS WITHIN THE PUBLIC RIGHT-OF-WAY, PUBLIC ACCESS EASEMENTS, AND PUBLICLY ACCESSIBLE OPEN SPACE.

APPROVED
SPECIAL USE PERMIT NO. DSUP2020-10031

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

LandDesign.
223 NORTH GRAHAM STREET
CHARLOTTE, NC 28202
704.333.0325
WWW.LANDDESIGN.COM

KEY MAP

SEAL

COMMONWEALTH OF VIRGINIA
MATTHEW V. CLARK
Lic. No. 952
10-22-2020
LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

PROJECT

OAKVILLE BLOCK A2

LANDDESIGN PROJ.#
2020081

REVISION / ISSUANCE

NO.	DESCRIPTION	DATE
	CONCEPT II SUBMISSION	08-06-2020
	COMPLETENESS SUBMISSION	09-18-2020
	COMPLETENESS RESUBMISSION	10-22-2020

DESIGNED BY:
DRAWN BY:
CHECKED BY:

SCALE NORTH

VERT:
HORZ: 1"=30'

0 15' 30' 60'

SHEET TITLE

PLANTING SCHEDULE + TABULATIONS

SHEET NUMBER

L203

INFRASTRUCTURE - DSUP2020-10029

DECIDUOUS TREES	QTY	BOTANICAL / COMMON NAME
ACER	3	ACER RUBRUM / RED MAPLE
AMEG	3	AMELANCHIER X GRANDIFLORA `AUTUMN BRILLIANCE` / `AUTUMN BRILLIANCE` SERVICEBERRY
CALA	1	CARYA LACINIOSA / SHELLBARK HICKORY
CERC	2	CERCIS CANADENSIS / EASTERN REDBUD
CFCP	3	CORNUS FLORIDA `CHEROKEE PRINCESS` / CHEROKEE PRINCESS DOGWOOD
FAGR	1	FAGUS GRANDIFOLIA / AMERICAN BEECH
JUNI	2	JUGLANS NIGRA / BLACK WALNUT

EVERGREEN TREES	QTY	BOTANICAL / COMMON NAME
ILEO	2	ILEX OPACA / AMERICAN HOLLY
INRS	2	ILEX X `NELLIE R STEVENS` / NELLIE STEVENS HOLLY
MAGG	1	MAGNOLIA GRANDIFLORA / SOUTHERN MAGNOLIA
TOEG	11	THUJA OCCIDENTALIS `EMERALD GREEN` / EMERALD GREEN ARBORVITAE

STREET TREES	QTY	BOTANICAL / COMMON NAME
ACAF	5	ACER RUBRUM `AUTUMN FLAME` / AUTUMN FLAME RED MAPLE
GIBI	8	GINKGO BILOBA `AUTUMN GOLD` / AUTUMN GOLD GINKGO
LIST	8	LIQUIDAMBAR STYRACIFLUA `ROTUNDILOBA` / AMERICAN SWEETGUM
PLAB	4	PLATANUS X ACERIFOLIA `BLOODGOOD` / BLOODGOOD LONDON PLANE TREE
QUCO	6	QUERCUS COCCINEA / SCARLET OAK
QURU	6	QUERCUS RUBRA / RED OAK
QUSH	5	QUERCUS SHUMARDII / SHUMARDII OAK

EVERGREEN SHRUB	QTY	BOTANICAL / COMMON NAME
ABGR	32	ABELIA X GRANDIFLORA / GLOSSY ABELIA
CHYE	32	CEPHALOTAXUS HARRINGTONIA `PLANIA` TM / YEWTOPIA PLUM YEW
CHOB	3	CHAMAECYPARIS OBTUSA `GRACILIS` / SLENDER HINOKI CYPRESS
ILGG	136	ILEX GLABRA `NIGRA` / NIGRA INKBERRY HOLLY
IGSH	20	ILEX GLABRA `SHAMROCK` / SHAMROCK INKBERRY HOLLY

ORNAMENTAL GRASSES	QTY	BOTANICAL / COMMON NAME
DCNL	160	DESCHAMPSIA CESPITOSA `NORTHERN LIGHTS` / NORTHERN LIGHTS TUFTED HAIR GRASS
ERSP	64	ERAGROSTIS SPECTABILIS / PURPLE LOVE GRASS
MUCA	56	MUHLENBERGIA CAPILLARIS `REGAL MIST` / PINK MUHLYGRASS
MUHL	72	MUHLENBERGIA LINDHEIMERI `LENI` / AUTUMN GLOW MUHLY GRASS
PANH	72	PANICUM VIRGATUM `RUBY RIBBONS` / SWITCH GRASS
PEAH	107	PENNISETUM ALOPECUROIDES `HAMELN` / HAMELN DWARF FOUNTAIN GRASS

DECIDUOUS SHRUB	QTY	BOTANICAL / COMMON NAME
CSKE	80	CORNUS SERICEA `KELSEYI` / KELSEY`S DWARF RED-OSIER DOGWOOD
ITVI	48	ITEA VIRGINICA `LITTLE HENRY` / VIRGINIA SWEETSPIRE

GROUND COVERS	QTY	BOTANICAL / COMMON NAME
CARB	12	CAREX BUCHANANII `RED ROOSTER` / RED ROOSTER SEDGE
CARP	348	CAREX PENSYLVANICA / PENNSYLVANIA SEDGE
CARS	64	CAREX STRICTA / TUSSOCK SEDGE
JUEF	44	JUNCUS EFFUSUS / SOFT RUSH

BLOCK A1 - DSUP2020-10028

STREET TREES	QTY	BOTANICAL / COMMON NAME
GTSH	3	GLEDITSIA TRIACANTHOS INERMIS `SHADEMASTER` TM / SHADEMASTER LOCUST
GYMD	2	GYMNOCLADUS DIOICA `EXPREESO` / EXPRESSO KENTUCKY COFFEE TREE
QUEP	2	QUERCUS PHELLOS / WILLOW OAK
ULVF	3	ULMUS AMERICANA `VALLEY FORGE` / AMERICAN ELM

SOD/SEED	QTY	BOTANICAL / COMMON NAME
LAWN	2,827 SF	LAWN / LAWN

BLOCK B - DSUP2020-10030

STREET TREES	QTY	BOTANICAL / COMMON NAME
ACAF	2	ACER RUBRUM `AUTUMN FLAME` / AUTUMN FLAME RED MAPLE
GTSH	1	GLEDITSIA TRIACANTHOS INERMIS `SHADEMASTER` TM / SHADEMASTER LOCUST
LIST	2	LIQUIDAMBAR STYRACIFLUA `ROTUNDILOBA` / AMERICAN SWEETGUM
QUEP	4	QUERCUS PHELLOS / WILLOW OAK
QUSH	3	QUERCUS SHUMARDII / SHUMARDII OAK
ULVF	3	ULMUS AMERICANA `VALLEY FORGE` / AMERICAN ELM

DECIDUOUS SHRUB	QTY	BOTANICAL / COMMON NAME
CSFA	7	CORNUS SERICEA `FARROW` TM / ARCTIC FIRE RED TWIG DOGWOOD
CSKE	8	CORNUS SERICEA `KELSEYI` / KELSEY`S DWARF RED-OSIER DOGWOOD

EVERGREEN SHRUB	QTY	BOTANICAL / COMMON NAME
DIVJ	4	DISTYLIUM X `VINTAGE JADE` / VINTAGE JADE DISTYLIUM
SARU	17	SARCOCOCCA HUMILIS / SWEETBOX

ORNAMENTAL GRASSES	QTY	BOTANICAL / COMMON NAME
ERSP	14	ERAGROSTIS SPECTABILIS / PURPLE LOVE GRASS
PANH	8	PANICUM VIRGATUM `RUBY RIBBONS` / SWITCH GRASS
PEAH	13	PENNISETUM ALOPECUROIDES `HAMELN` / HAMELN DWARF FOUNTAIN GRASS

GROUND COVERS	QTY	BOTANICAL / COMMON NAME
OPJN	52	OPHIOPOGON JAPONICUS `NANA` / DWARF MONDO GRASS

SOD/SEED	QTY	BOTANICAL / COMMON NAME
LAWN	2,463 SF	LAWN / LAWN

BLOCK A2

STREET TREES	QTY	BOTANICAL / COMMON NAME
GIBI	2	GINKGO BILOBA `AUTUMN GOLD` / AUTUMN GOLD GINKGO
GTSH	2	GLEDITSIA TRIACANTHOS INERMIS `SHADEMASTER` TM / SHADEMASTER LOCUST
ULVF2	2	ULMUS AMERICANA `VALLEY FORGE` / AMERICAN ELM

DECIDUOUS SHRUB	QTY	BOTANICAL / COMMON NAME
CACO	9	CLETHRA ALNIFOLIA `COMPACTA` / COMPACT SUMMERSWEET
CLAH	6	CLETHRA ALNIFOLIA `HUMMINGBIRD` / SUMMERSWEET
FOTB	3	FOTHERGILLA GARDENII `BLUE MIST` / BLUE MIST FOTHERGILLA
HYAR	7	HYDRANGEA ARBORESCENS `ANNABELLE` / WILD HYDRANGEA
HPLI	1	HYDRANGEA PANICULATA `LIMELIGHT` / LIMELIGHT HYDRANGEA
RAGL	2	RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC

EVERGREEN SHRUB	QTY	BOTANICAL / COMMON NAME
DIVJ	5	DISTYLIUM X `VINTAGE JADE` / VINTAGE JADE DISTYLIUM
ILGG	5	ILEX GLABRA `NIGRA` / NIGRA INKBERRY HOLLY
ILSH	3	ILEX GLABRA `SHAMROCK` / INKBERRY

ORNAMENTAL GRASSES	QTY	BOTANICAL / COMMON NAME
CAKF	4	CALAMAGROSTIS X ACUTIFLORA `KARL FOERSTER` / FEATHER REED GRASS
MUHL	22	MUHLENBERGIA LINDHEIMERI `LENI` / AUTUMN GLOW MUHLY GRASS
PANH	17	PANICUM VIRGATUM `RUBY RIBBONS` / SWITCH GRASS
PEAH	34	PENNISETUM ALOPECUROIDES `HAMELN` / HAMELN DWARF FOUNTAIN GRASS

GROUND COVERS	QTY	BOTANICAL / COMMON NAME
CARB	25	CAREX BUCHANANII `RED ROOSTER` / RED ROOSTER SEDGE
JUHH	26	JUNIPERUS HORIZONTALIS `HUGHES` / HUGHES JUNIPER

SOD/SEED	QTY	BOTANICAL / COMMON NAME
LAWN	1,359 SF	LAWN / LAWN

BIODIVERSITY TABULATIONS - OAKVILLE RIGHT OF WAY PLANTING

TREES (URBAN AND STANDARD)
TOTAL NUMBER OF TREES PROPOSED

GENUS	QTY.	PERCENT OF TOTAL PROPOSED	MAXIMUM PERCENT ALLOWED	SPECIES	QTY.	PERCENT OF TOTAL PROPOSED	MAXIMUM PERCENT ALLOWED
Acer	3	3%	33%	rubrum	3	3%	10%
Amelanchier	3	3%	33%	grandiflora	3	3%	10%
Carya	1	1%	33%	laciniosa	1	1%	10%
Cercis	2	2%	33%	canadensis	2	2%	10%
Cornus	3	3%	33%	florida	3	3%	10%
Fagus	1	1%	33%	grandifolia	1	1%	10%
Juglans	2	2%	33%	nigra	2	2%	10%
Ilex	2	2%	33%	opaca	2	2%	10%
Ilex	2	2%	33%	X 'Nellie R Stevens'	2	2%	10%
Magnolia	1	1%	33%	grandifolia	1	1%	10%
Thuja	11	11%	33%	occidentalis	11	11%	10%
Acer	7	7%	33%	rubrum 'Autumn Flame'	7	7%	10%
Ginko	10	10%	33%	bilboa 'Autumn Gold"	10	10%	10%
Liguidambar	10	10%	33%	styraciflua	10	10%	10%
Platanus	4	4%	33%	acerifolia	4	4%	10%
Quercus	6	6%	33%	coccinea	6	6%	10%
Quercus	6	6%	33%	rubra	6	6%	10%
Quercus	8	8%	33%	shumardii	8	8%	10%
Gleditsia	6	6%	33%	tricanthos	6	6%	10%
Gymnocladus	2	2%	33%	dioica	2	2%	10%
Quercus	6	6%	33%	phellos	6	6%	10%
Ulmus	8	8%	33%	americana	8	8%	10%

TOTAL **104**

SHRUBS
TOTAL NUMBER OF SHRUBS PROPOSED:

GENUS	QTY.	PERCENT OF TOTAL PROPOSED	MAXIMUM PERCENT ALLOWED	SPECIES	QTY.	PERCENT OF TOTAL PROPOSED	MAXIMUM PERCENT ALLOWED
Abelia	32	7%	33%	grandifolia	32	7%	10%
Cephalotaxus	32	7%	33%	harringtonia	32	7%	10%
Chamaecyparis	3	1%	33%	obtusa	3	1%	10%
Ilex	141	33%	33%	glabra 'Nigra'	141	33%	10%
Ilex	23	5%	33%	glabra 'Shamrock'	23	5%	10%
Cornus	88	21%	33%	sericea 'Kelseyi"	88	21%	10%
Cornus	7	2%	33%	sericea 'Farrow"	7	2%	10%
Itea	48	11%	33%	cespitosa	48	11%	10%
Dystylium	9	2%	33%	x ' vintage jade'	9	2%	10%
Sarcococca	17	4%	33%	humilis	17	4%	10%
Clethra	9	2%	33%	alnifolia ' compacta'	9	2%	10%
Clethra	6	1%	33%	alnifolia 'hummingbird'	6	1%	10%
Fothergilla	3	1%	33%	gardenii	3	1%	10%
Hydrangea	7	2%	33%	arborescens	7	2%	10%
Hydrangea	1	0%	33%	paniculata 'limelight'	1	0%	10%
Rhus	2	0%	33%	aromatica	2	0%	10%

TOTAL **428**

URBAN TREE TABULATIONS

PLAN KEY	QUANTITY	PLAN LOCATION	PROJECTED 20 YR. CANOPY* (PER TREE)	IMPERVIOUS AREA UNDER CANOPY (PER TREE)	IMPERVIOUS AREA GREATER THAN 50% OF PROJECTED 20 YR. CANOPY? (Y/N)
ACAF	7	STREET TREE	1,250 SF	625 SF	Y
GIBI	10	STREET TREE	1,250 SF	625 SF	Y
LIST	10	STREET TREE	1,250 SF	625 SF	Y
PLAB	4	STREET TREE	1,250 SF	625 SF	Y
QUCO	6	STREET TREE	1,250 SF	625 SF	Y
QURU	6	STREET TREE	1,250 SF	625 SF	Y
QUSH	8	STREET TREE	1,250 SF	625 SF	Y
GTSH	6	STREET TREE	1,250 SF	625 SF	Y
GYMD	2	STREET TREE	1,250 SF	625 SF	Y
QUEP	4	STREET TREE	1,250 SF	625 SF	Y
ULVF	6	STREET TREE	1,250 SF	625 SF	Y
ULVF2	2	STREET TREE	1,250 SF	625 SF	Y
TOTAL URBAN TREES					
71					

NATIVE PLANT TABULATIONS

PLANT TYPE	QUANTITY	NATIVE TYPE	MARCH 2, 2019 – JANUARY 1, 2020 REQUIRED %	MARCH 2, 2019 – JANUARY 1, 2020 PROVIDED QTY.	MARCH 2, 2019 – JANUARY 1, 2020 PROVIDED %	JANUARY 2, 2020 – JANUARY 1, 2024 REQUIRED %	JANUARY 2, 2020 – JANUARY 1, 2024 PROVIDED QTY.	JANUARY 2, 2020 – JANUARY 1, 2024 PROVIDED %	BEGINNING JANUARY 2, 2024 REQUIRED %	BEGINNING JANUARY 2, 2024 PROVIDED QTY.	BEGINNING JANUARY 2, 2024 PROVIDED %
Urban Trees	71	Regional/Local	10%			15%	63	89%	20%		
		Total Natives	25%			25%	71	100%	50%		
Standard Trees	31	Regional/Local	15%			25%	30	97%	40%		
		Total Natives	40%			60%	31	100%	80%		
Evergreen Shrubs	257	Regional/Local	5%			8%	222	86%	10%		
		Total Natives	20%			30%	222	86%	40%		
Deciduous Shrubs	171	Regional/Local	10%			15%	171	100%	20%		
		Total Natives	40%			60%	171	100%	80%		
Groundcovers	643	Regional/Local	5%			10%	574	89%	10%		
		Total Natives	10%			20%	574	89%	20%		
Perennials, Ferns, Ornamental Grasses	571	Regional/Local	10%			15%	491	86%	25% (perennials) 30% (ferns & grasses)		
		Total Natives	25%			40%	571	100%	60% (perennials) 80% (ferns & grasses)		
Vines		Total Natives	80%			100%			100%		

TOTALS

TOTAL PLANTS SPECIFIED	TOTAL SUM OF REGIONAL/LOCAL NATIVE PLANTS	TOTAL SUM OF NATIVE PLANTS
1744	1551	1640
	88.9%	94.0%

NOTES:
1) Percentages apply to the total quantity of each plant type specifed on Completeness/Preliminary Plans and Final #1 Grading Plans submitted during the listed time frames.
2) Total Natives is the sum of Eastern U.S. Native, Regionally Native, and Locally Native vegetation specifed on the plans for each plant type.
3) Non-native vegetation for the purposes of providing edible fruits, seeds, or nuts may be planted and shall not be calculated in the above-stated requirements for native species regardless of plant type.

SHEET FOR INFORMATION AND TRACKING ONLY!

SHEET SHOWS TRACKING INFORMATION FOR BIODIVERSITY AND NATIVE REQUIRMENTS FOR PLANTINGS WITHIN IN THE RIGHT-OF-WAY, PUBLIC ACCESS EASEMENTS, AND PUBLICLY ACCESSIBLE OPEN SPACE. OAKVILLE SITE TO CUMULATIVELY MEET BIODIVERSITY STANDARDS FOR PLANTINGS IN THIS AREA, BUT MAY NOT MEET IT AT EVERY STAGE OF DEVELOPMENT.

BLOCKS WILL INDIVIDUALLY MEET BIODIVERSITY STANDARDS FOR PLANTING AREAS WITHIN THEIR RESPECTIVE PROPERTY LINES, TABULATIONS TO BE PROVIDED SEPERATELY.

THIS TRACKING SHEET TO BE UPDATED AS DSUPS FOR NEW BLOCKS ARE SUBMITTED.

APPROVED
SPECIAL USE PERMIT NO. DSUP 2020-10031

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

LandDesign.
200 S. PEYTON STREET
ALEXANDRIA, VA 22314
703.549.7784
WWW.LANDDESIGN.COM

KEY MAP

SEAL

NOT FOR CONSTRUCTION

COMMONWEALTH OF VIRGINIA
Matthew V. Clark
MATTHEW V. CLARK
Lic. No. 952
10-20-2020
LANDSCAPE ARCHITECT

PROJECT

OAKVILLE BLOCK A2

LANDDESIGN PROJ.#
2020081

REVISION / ISSUANCE

NO.	DESCRIPTION	DATE
	CONCEPT II SUBMISSION	06-22-2020
	PDSUP SUBMISSION #1	09-04-2020
	PDSUP SUBMISSION #2	10-20-2020

DESIGNED BY:
DRAWN BY:
CHECKED BY:

SCALE — NORTH

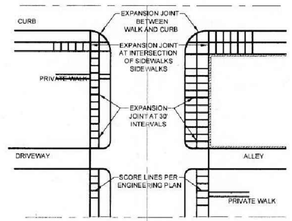
VERT:
HORZ: N/A

SHEET TITLE

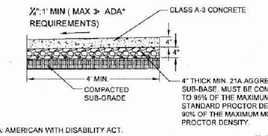
SITEWIDE BIODIVERSITY TRACKING

SHEET NUMBER

L203A

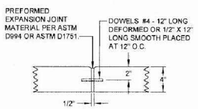


EXPANSION JOINT PLACEMENT



(N.T.S.)

SIDEWALK SECTION



EXPANSION JOINT

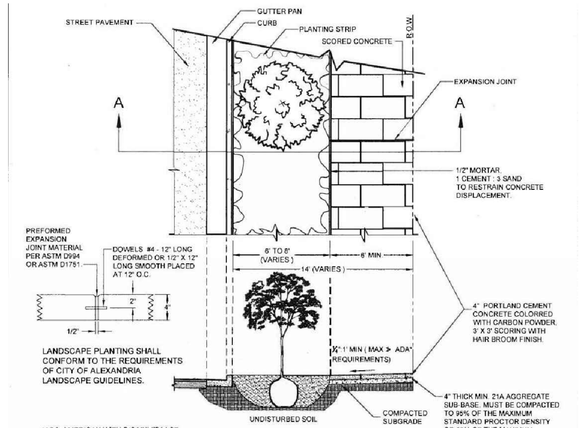
NOTES:

1. SCORING OF CONCRETE SLAB SHALL BE SAW CUT NOT MORE THAN 3/16" IN WIDTH AND NOT MORE THAN ¼" DEEP.
2. THE EXPANSION JOINTS SHALL BE ½" WIDE AND SHALL BE THE FULL THICKNESS OF THE CONCRETE SLAB, AND SHALL BE OF PRE-FORMED EXPANSION JOINT MATERIAL CONFORMING TO THE REQUIREMENTS OF ASTM D994 ASPHALT OR ASTM D1751 FIBRE. EXPANSION MATERIAL SHALL BE SECURED IN A MANNER THAT WILL PREVENT MOVEMENT OR DISPLACEMENT OF CONCRETE DURING PLACEMENT.
3. THE EXPANSION JOINTS SHALL BE PLACED PERPENDICULAR TO CONCRETE CURB AT A DISTANCE OF 30' OR COINCIDING WITH THE SCORING.
4. DOWELS SHALL BE PLACED AT THE END OF A SIDEWALK PLACEMENT, AT INTERRUPTIONS FOR A DRIVEWAY, OR IF SIDEWALK SLABS ARE POURED AT DIFFERENT TIMES.
5. SAWING OF JOINTS SHALL BE CONDUCTED AS SOON AS THE CONDITION OF THE CONCRETE PERMITS AND BEFORE ANY RANDOM CRACKING APPEARS.
6. ALL STRUCTURAL ITEMS TO CONFORM TO THE LATEST EDITION OF UNIFORM STATEWIDE BUILDING CODE (USBC) REQUIREMENTS.
7. PRIOR TO CONSTRUCTION, ALL STRUCTURAL CROSS SECTIONS SHALL BE REVIEWED BY A QUALIFIED STRUCTURAL AND/OR GEOTECHNICAL ENGINEER, AND MODIFIED AS NECESSARY BASED ON THE SITE SPECIFIC GEOTECHNICAL REPORT.

STANDARD CONCRETE SIDEWALK

DATE

1 L501 SECTION NTS



SECTION A-A

(N.T.S.)

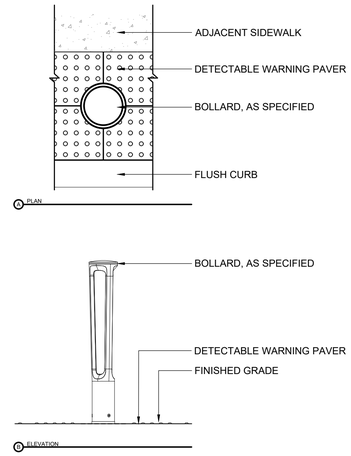
NOTES:

1. SCORING OF CONCRETE SLAB SHALL BE SAW CUT NOT MORE THAN 3/16" IN WIDTH AND NOT MORE THAN ¼" DEEP.
2. THE EXPANSION JOINTS SHALL BE ½" WIDE AND SHALL BE THE FULL THICKNESS OF THE CONCRETE SLAB, AND SHALL BE OF PRE-FORMED EXPANSION JOINT MATERIAL CONFORMING TO THE REQUIREMENTS OF ASTM D994 ASPHALT OR ASTM D1751 FIBRE. EXPANSION MATERIAL SHALL BE SECURED IN A MANNER THAT WILL PREVENT MOVEMENT OR DISPLACEMENT OF CONCRETE DURING PLACEMENT.
3. THE EXPANSION JOINTS SHALL BE PLACED PERPENDICULAR TO CONCRETE CURB AT A DISTANCE OF 30' OR COINCIDING WITH THE SCORING.
4. DOWELS SHALL BE PLACED AT THE END OF A SIDEWALK PLACEMENT, AT INTERRUPTIONS FOR A DRIVEWAY, OR IF SIDEWALK SLABS ARE POURED AT DIFFERENT TIMES.
5. SAWING OF JOINTS SHALL BE CONDUCTED AS SOON AS THE CONDITION OF THE CONCRETE PERMITS AND BEFORE ANY RANDOM CRACKING APPEARS.
6. ALL STRUCTURAL ITEMS TO CONFORM TO THE LATEST EDITION OF UNIFORM STATEWIDE BUILDING CODE (USBC) REQUIREMENTS.
7. PRIOR TO CONSTRUCTION, ALL STRUCTURAL CROSS SECTIONS SHALL BE REVIEWED BY A QUALIFIED STRUCTURAL AND/OR GEOTECHNICAL ENGINEER, AND MODIFIED AS NECESSARY BASED ON THE SITE SPECIFIC GEOTECHNICAL REPORT.

CONCRETE SIDEWALK SCORING

DATE

2 L501 SECTION NTS

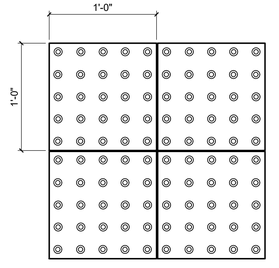


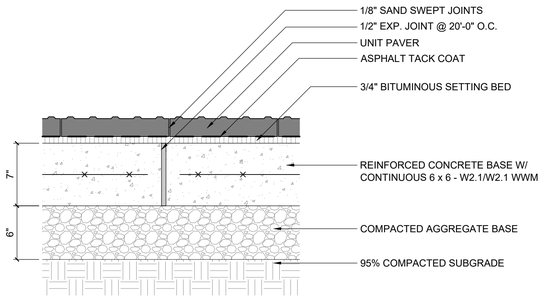
NOTES:

1. SEE PLAN FOR QUANTITY AND LOCATIONS.
2. DESIGN OF THE BOLLARD TO BE FINALIZED IN THE DSUP PROCESS.
3. BOLLARD TO BE ILLUMINATED.
4. ALL STRUCTURAL CROSS SECTIONS, INCLUDING FOOTINGS, SHALL BE REVIEWED BY A QUALIFIED STRUCTURAL ENGINEER AND MODIFIED AS NECESSARY
5. OR OWNER AND CITY APPROVED EQUAL.

3 L501 BOLLARD (TYP)

SECTION NTS



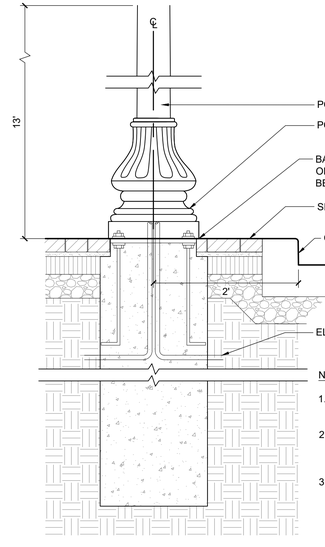


4 L501 DETECTABLE WARNING PAVER (TYP)

SECTION NTS

CAT. NO. R54BANN1ATRD150SQ OR EQUAL
HADCO CAT. NO. R54 (POLYACRYL GLOBE)
B (ROUND FITTER W/ PETAL SCALLOPS POD)
A (VICTORIAN POLYACRYL ROOF)
N (NO CAGE)
N (NO FINIAL)
1 (HEX HEAD FASTENERS)
A (BLACK FINISH)
T (FULL TOP REFLECTOR) OR G (FULL TOP W/ HOUSE SIDE SHIELD)
R (TWIST-LOCK PHOTCELL SOCKET) AND SHORTENING CAP
D (MEDIUM SOCKET)
100S (100 WATT HPS LAMP)
Q (MULTI-VOLT BALLAST)
LUMINAIRE MANUFACTURER:
HADCO LIGHTING, LITTLESTOWN, PA
GLOBE: TYPE V WIDE CLEAR "POLYACRYL" WITH VICTORIAN STYLE ROOF
GLOBE: ROUND FITTER WITH METAL SCALLOPS. 360 CAST ALUMINUM ALLOY
REFLECTOR: FULL TOP SPECULAR ANODIZED COATED HYDROFORM ALUMINUM
GLOBE: HPS, MEDIUM BASE, WITH PHOTOCELL OR APPROVED EQUAL.

LIGHT POST MANUFACTURER:
W.J. WHATLEY
6980 E. 54TH PLACE
COMMERCE CITY, CO 80022
Ph. 877-959-7678
POST MODEL: XF45-D3M
ABOVE GRADE HEIGHT: 14'
INSTALLATION METHOD: ANCHOR BASE
POST COLOR: BLACK



NOTES:

1. SHOWN FOR INFORMATIONAL PURPOSES ONLY, SEE INFRASTRUCTURE PLANS FOR SITE LIGHTING
2. LIGHT SPECIFICATIONS AND LOCATIONS TO BE REVIEWED AND FINALIZED BY A QUALIFIED LIGHTING ENGINEER
3. INSTALL PER MANUFACTURER'S SPECIFICATIONS.ALL STRUCTURAL CROSS SECTIONS, INCLUDING FOOTINGS, SHALL BE REVIEWED BY A QUALIFIED STRUCTURAL ENGINEER AND MODIFIED AS NECESSARY BASED ON THE SITE SPECIFIC GEOTECHNICAL REPORT.
4. STREET LIGHTS ALONG ROUTE 1 TO BE A DOUBLE-ACORN FIXTURE, WITH STANDARD BLACK FINISH.

5 L501 STREET LIGHT

SECTION 1" = 1'-0"

APPROVED

SPECIAL USE PERMIT NO. DSUP2020-10031

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

LandDesign.
223 NORTH GRAHAM STREET
CHARLOTTE, NC 28202
704.333.0325
WWW.LANDDESIGN.COM

KEY MAP

SEAL

COMMONWEALTH OF VIRGINIA
MATTHEW V. CLARK
Lic. No. 952
10-22-2020
LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

PROJECT

OAKVILLE BLOCK A2

INOVA

ALEXANDRIA, VA

–

LANDDESIGN PROJ.#

2020081

REVISION / ISSUANCE

NO.	DESCRIPTION	DATE
	CONCEPT II SUBMISSION	08-06-2020
	COMPLETENESS SUBMISSION	09-18-2020
	COMPLETENESS RESUBMISSION	10-22-2020

DESIGNED BY: MC/GC
DRAWN BY: WT/LB
CHECKED BY: LB/TW

SCALE NORTH

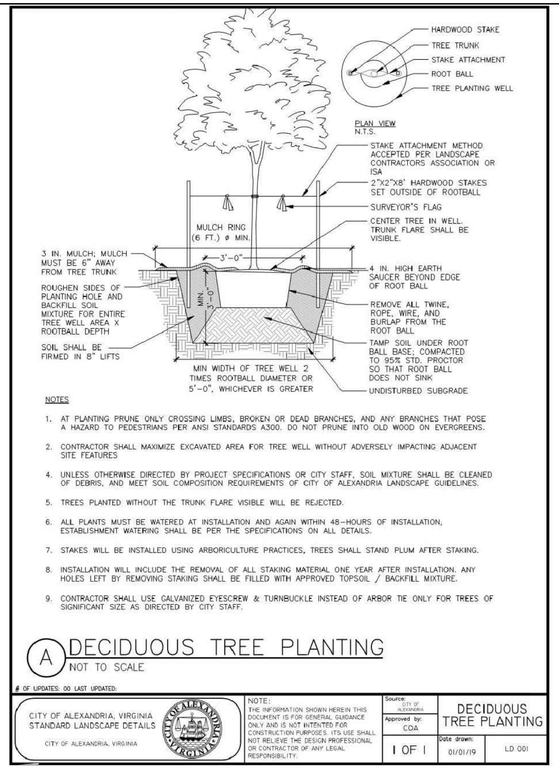
VERT: N/A
HORZ: N/A

SHEET TITLE

DETAILS - HARDSCAPE

SHEET NUMBER

L501



NOTES

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

A DECIDUOUS TREE PLANTING
NOT TO SCALE

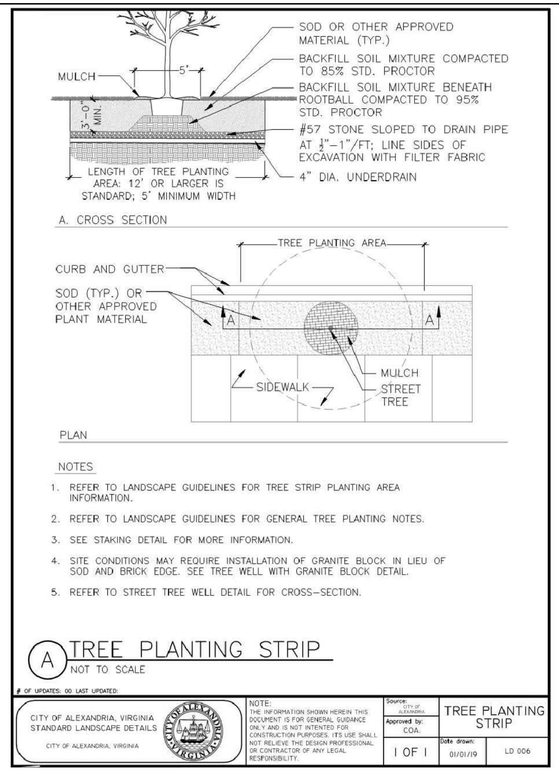
OF UPDATES: 00 LAST UPDATED:

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

NOTE: THE INFORMATION SHOWN HEREIN THIS DOCUMENT IS FOR GENERAL GUIDANCE ONLY AND IS NOT INTENTED FOR CONSTRUCTION PURPOSES. ITS USE SHALL NOT RELIEVE THE DESIGN PROFESSIONAL OR CONTRACTOR OF ANY LEGAL RESPONSIBILITY.

Source: CITY OF ALEXANDRIA | Approved by: COA | DECIDUOUS TREE PLANTING | I OF I | Date drawn: 01/01/19 | LD 001

1 / L601 SECTION — NTS



NOTES

1. REFER TO LANDSCAPE GUIDELINES FOR TREE STRIP PLANTING AREA INFORMATION.
2. REFER TO LANDSCAPE GUIDELINES FOR GENERAL TREE PLANTING NOTES.
3. SEE STAKING DETAIL FOR MORE INFORMATION.
4. SITE CONDITIONS MAY REQUIRE INSTALLATION OF GRANITE BLOCK IN LIEU OF SOD AND BRICK EDGE. SEE TREE WELL WITH GRANITE BLOCK DETAIL.
5. REFER TO STREET TREE WELL DETAIL FOR CROSS-SECTION.

A TREE PLANTING STRIP
NOT TO SCALE

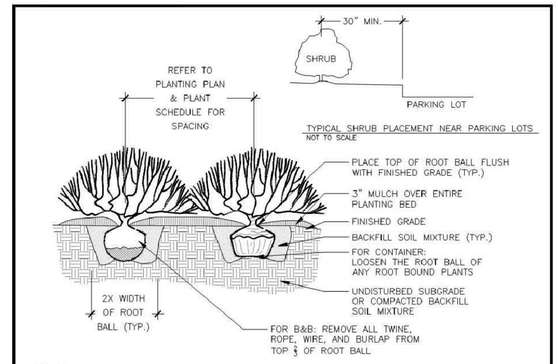
OF UPDATES: 00 LAST UPDATED:

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

NOTE: THE INFORMATION SHOWN HEREIN THIS DOCUMENT IS FOR GENERAL GUIDANCE ONLY AND IS NOT INTENTED FOR CONSTRUCTION PURPOSES. ITS USE SHALL NOT RELIEVE THE DESIGN PROFESSIONAL OR CONTRACTOR OF ANY LEGAL RESPONSIBILITY.

Source: CITY OF ALEXANDRIA | Approved by: COA | TREE PLANTING STRIP | I OF I | Date drawn: 01/01/19 | LD 006

2 / L601 SECTION — NTS



NOTES

1. AT PLANTING, PRUNE ONLY BROKEN OR DEAD BRANCHES PER ANSI 300 STANDARD.
2. PLANTING WELL / TRENCH SHALL BE DUG TO ALLOW TOP OF ROOT BALL TO SET FLUSH WITH EXISTING GRADE.
3. SET PLANTS IN ERECT, STABLE, AND UNIFORM POSITIONS. ORIENT BEST FACE OF PLANT TO BE MOST VISIBLE.
4. UNLESS OTHERWISE DIRECTED BY PROJECT SPECIFICATIONS OR CITY STAFF, SOIL MIXTURE SHALL BE CLEANED OF DEBRIS, AND MEET SOIL COMPOSITION REQUIREMENTS OF CITY OF ALEXANDRIA LANDSCAPE GUIDELINES.
5. DO NOT PLACE MULCH IN CONTACT WITH STEM OF PLANTS.
6. ALL PLANTS MUST BE WATERED AT INSTALLATION AND AGAIN WITHIN 48-HOURS OF INSTALLATION, ESTABLISHMENT WATERING SHALL BE PER THE SPECIFICATIONS ON ALL DETAILS.

A SHRUB PLANTING
NOT TO SCALE

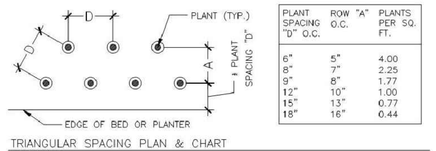
OF UPDATES: 00 LAST UPDATED:

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

NOTE: THE INFORMATION SHOWN HEREIN THIS DOCUMENT IS FOR GENERAL GUIDANCE ONLY AND IS NOT INTENTED FOR CONSTRUCTION PURPOSES. ITS USE SHALL NOT RELIEVE THE DESIGN PROFESSIONAL OR CONTRACTOR OF ANY LEGAL RESPONSIBILITY.

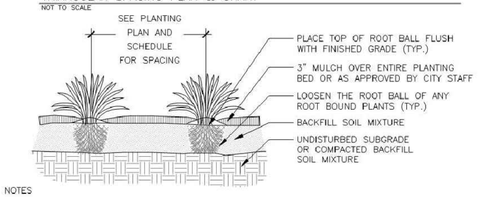
Source: CITY OF ALEXANDRIA | Approved by: COA | SHRUB PLANTING | I OF I | Date drawn: 01/01/19 | LD 009

3 / L601 SECTION — NTS



PLANT SPACING "D" O.C.	ROW "A" O.C.	PLANTS PER SQ. FT.
6"	5"	4.00
8"	7"	2.25
9"	8"	1.77
12"	10"	1.00
15"	13"	0.77
18"	16"	0.44

TRIANGULAR SPACING PLAN & CHART
NOT TO SCALE



NOTES

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

A GROUNDCOVER & PERENNIAL PLANTING
NOT TO SCALE

OF UPDATES: 00 LAST UPDATED:

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

NOTE: THE INFORMATION SHOWN HEREIN THIS DOCUMENT IS FOR GENERAL GUIDANCE ONLY AND IS NOT INTENTED FOR CONSTRUCTION PURPOSES. ITS USE SHALL NOT RELIEVE THE DESIGN PROFESSIONAL OR CONTRACTOR OF ANY LEGAL RESPONSIBILITY.

Source: CITY OF ALEXANDRIA | Approved by: COA | GROUNDCOVER & PERENNIAL PLANTING | I OF I | Date drawn: 01/01/19 | LD 011

4 / L601 SECTION — NTS

A) STANDARD LANDSCAPE PLAN NOTES FOR ALL PLANS REQUIRING APPROVAL:

THE FOLLOWING NOTES SHALL BE PROVIDED ON LANDSCAPE PLAN SUBMISSIONS FOR ALL PROJECTS THAT REQUIRE APPROVAL BY THE CITY AS OUTLINED IN CHAPTER 3 OF THE CITY'S 2019 LANDSCAPE GUIDELINES:

1) THE PROPERTY OWNER AND/OR APPLICANT, SPECIFIER, CONTRACTOR AND INSTALLER OF PLANT MATERIAL ARE RESPONSIBLE FOR UNDERSTANDING AND ADHERING TO THE STANDARDS SET FORTH IN THE MOST RECENT VERSION OF THE CITY OF ALEXANDRIA LANDSCAPE GUIDELINES AND APPLICABLE CONDITIONS OF APPROVAL. ALL QUESTIONS REGARDING APPLICATION OF, OR ADHERENCE TO, THE STANDARDS AND/OR CONDITIONS OF APPROVAL SHALL BE DIRECTED TO THE CITY PRIOR TO COMMENCEMENT OF DEMOLITION, CONSTRUCTION, OR ANY LAND DISTURBING ACTIVITY.

2) THE CITY-APPROVED LANDSCAPE PLAN SUBMISSION, INCLUDING PLANT SCHEDULE, NOTES AND DETAILS SHALL BE THE DOCUMENT USED FOR INSTALLATION PURPOSES AND ALL PROCEDURES SET FORTH IN THE LANDSCAPE GUIDELINES MUST BE FOLLOWED.

3) THE CONTRACTOR SHALL NOT INTERFERE WITH ANY TREE PROTECTION MEASURES OR IMPACT ANY EXISTING VEGETATION IDENTIFIED TO BE PRESERVED PER THE APPROVED TREE AND VEGETATION PROTECTION PLAN.

4) ANY CHANGES, ALTERATIONS OR MODIFICATIONS TO THE SITE CONDITIONS THAT AFFECT VEGETATION PROTECTION ZONES WILL REQUIRE AN AMENDMENT TO THE APPROVED TREE AND VEGETATION PROTECTION PLAN AND/OR DETAILS.

5) INSTALLATION OF PLANT MATERIAL MAY ONLY OCCUR DURING THE PLANTING SEASONS IDENTIFIED IN THE LANDSCAPE GUIDELINES.

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

7) SUBSTITUTIONS TO THE APPROVED PLANT MATERIAL SHALL NOT OCCUR UNTIL WRITTEN APPROVAL IS PROVIDED BY THE CITY.

8) MAINTENANCE FOR THIS PROJECT SHALL BE PERFORMED BY THE OWNER, APPLICANT, SUCCESSOR(S) AND/OR ASSIGN(S) IN PERPETUITY AND IN COMPLIANCE WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES AND AS CONDITIONED BY PROJECT APPROVAL, AS APPLICABLE.

B) STANDARD LANDSCAPE PLAN NOTES FOR DEVELOPMENT SITE PLANS:

IN ADDITION TO THE NOTES PROVIDED ABOVE, THE FOLLOWING NOTES SHALL BE PROVIDED ON LANDSCAPE PLAN SUBMISSIONS FOR ALL DSP/DSUP PROJECTS:

1) THE APPROVED METHOD(S) OF PROTECTION MUST BE IN PLACE FOR ALL VEGETATION TO BE PRESERVED ON-SITE AND ADJACENT TO THE PROJECT SITE PURSUANT TO THE APPROVED TREE AND VEGETATION PROTECTION PLAN AND DETAILS PRIOR TO COMMENCEMENT OF DEMOLITION, CONSTRUCTION, OR ANY LAND DISTURBANCE. THE APPLICANT SHALL NOTIFY THE PLANNING & ZONING (P&Z) PROJECT MANAGER ONCE THE TREE PROTECTION METHODS ARE IN PLACE. NO DEMOLITION, CONSTRUCTION, OR LAND DISTURBANCE MAY OCCUR UNTIL AN INSPECTION IS PERFORMED BY THE CITY AND WRITTEN CONFIRMATION IS PROVIDED BY THE CITY WHICH VERIFIES CORRECT INSTALLATION OF THE TREE PROTECTION MEASURES.

2) THE APPLICANT MUST CONTACT THE P&Z PROJECT MANAGER PRIOR TO COMMENCEMENT OF LANDSCAPE INSTALLATION/PLANTING OPERATION TO SCHEDULE A PRE-INSTALLATION MEETING. THE MEETING SHOULD BE HELD BETWEEN THE APPLICANT'S GENERAL CONTRACTOR, LANDSCAPE CONTRACTOR, LANDSCAPE ARCHITECT, THE P&Z PROJECT MANAGER AND THE CITY ARBORIST (AS APPLICABLE) TO REVIEW THE SCOPE OF INSTALLATION PROCEDURES AND PROCESSES DURING AND AFTER INSTALLATION.

3) THE FOLLOWING INFORMATION SHALL BE PROVIDED TO THE P&Z PROJECT MANAGER AT LEAST FIVE (5) BUSINESS DAYS PRIOR TO THE LANDSCAPE PRE-INSTALLATION MEETING: 1) A LETTER THAT CERTIFIES THAT THE PROJECT LANDSCAPE ARCHITECT PERFORMED PRE-SELECTION TAGGING FOR ALL TREES PROPOSED WITHIN THE PUBLIC RIGHT OF WAY AND ON PUBLIC LAND PRIOR TO INSTALLATION. THIS LETTER MUST BE SIGNED AND SEALED BY THE PROJECT LANDSCAPE ARCHITECT, AND 2) A COPY OF THE SOIL BULK DENSITY TEST REPORT VERIFYING THAT MAXIMUM COMPRESSION RATES ARE MET.

4) ALL CONSTRUCTION WASTE SHALL BE REMOVED PRIOR TO PLANTING.

5) AS-BUILT DRAWINGS FOR THIS LANDSCAPE AND/OR IRRIGATION/WATER MANAGEMENT SYSTEM WILL BE PROVIDED IN COMPLIANCE WITH CITY OF ALEXANDRIA LANDSCAPE GUIDELINES, THE CITY CODE OF ORDINANCES, AND ALL APPLICABLE PLAN PREPARATION CHECKLISTS. 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.

6) AREAS OF BARE SOIL WILL NOT BE ACCEPTED. MULCHED AREAS AND PLANTING AREAS SHALL BE WEED FREE UPON ACCEPTANCE OF THE PROJECT BY THE CITY.

A STANDARD LANDSCAPE PLAN NOTES
NOT TO SCALE

OF UPDATES: 01 LAST UPDATED: 12/02/2019

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APPROVED
SPECIAL USE PERMIT NO. DSUP2020-10031

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

LandDesign.
223 NORTH GRAHAM STREET
CHARLOTTE, NC 28202
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WWW.LANDDESIGN.COM

KEY MAP

SEAL

COMMONWEALTH OF VIRGINIA
MATTHEW V. CLARK
Lic. No. 952
10-22-2020
LANDSCAPE ARCHITECT

NOT FOR CONSTRUCTION

PROJECT

OAKVILLE BLOCK A2

INOVA

ALEXANDRIA, VA

–

LANDDESIGN PROJ.# 2020081

REVISION / ISSUANCE

NO.	DESCRIPTION	DATE
	CONCEPT II SUBMISSION	08-06-2020
	COMPLETENESS SUBMISSION	09-18-2020
	COMPLETENESS RESUBMISSION	10-22-2020

DESIGNED BY: MC/GC
DRAWN BY: WT/LB
CHECKED BY: LB/TW

SCALE — NORTH

VERT: N/A
HORZ: N/A

SHEET TITLE

DETAILS - PLANTING

SHEET NUMBER

L601