PRELIMINARY PLAN SUBMISSION

DSUP# 2011-00015

SAFEWAY®

SAFEWAY STORE #3250
3526 KING STREET
ALEXANDRIA, VIRGINIA 22302

REGULATORY AGENCIES

CITY OF ALEXANDRIA DEPARTMENT OF PLANNING AND ZONING
ALEXANDRIA CITY HALL
301 KING STREET, ROOM 2100
ALEXANDRIA, VA 22314
TELEPHONE: (703) 796-4666

CITY OF ALEXANDRIA
TRANSPORTATION & ENVIRONMENTAL SERVICES
ENGINEERING & DESIGN
ALEXANDRIA CITY HALL
301 KING STREET
ALEXANDRIA, VA 22314
TELEPHONE: (703) 746-4045

VIRGINIA AMERICAN WATER COMPANY
2223 DUKE STREET
ALEXANDRIA, VA 22314
TELEPHONE: (703) 549-7080

NOI PERMIT
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
629 E. MAIN STREET
P.O. BOX 10009
RICHMOND, VA 23240
TELEPHONE: (804) 698-4000

UTILITY COMPANIES

VIRGINIA AMERICAN WATER COMPANY
2223 DUKE STREET
ALEXANDRIA, VA 22314
TELEPHONE: (703) 549-7080

VERIZON
TELEPHONE: 1-(800)-837-4966

DOMINION VIRGINIA POWER
907 WEST GLEBE ROAD
ALEXANDRIA, VA 22305
TELEPHONE: 1-(888)-569-5700

WASHINGTON GAS
6801 INDUSTRIAL ROAD
SPRINGFIELD, VA 22151
ATTN: RAY BAKER
TELEPHONE: (703) 750-4486

CITY OF ALEXANDRIA
TRANSPORTATION & ENVIRONMENTAL SERVICE
ENGINEERING & DESIGN
ALEXANDRIA CITY HALL
301 KING STREET
ALEXANDRIA, VA 22314
TELEPHONE: (703) 746-4045

PROJECT DIRECTORY

OWNER
SAFEWAY INC.
1371 OAKLAKE BLVD. #200
WALNUT, CA 94593

DEVELOPER
SAFEWAY INC.
EASTERN DIVISION
4551 FORBES BLVD.
LANHAM, MD 20706
TELEPHONE: (301) 370-8041
ATTN: LARRY EVANS

CIVIL ENGINEER
CPH ENGINEERS, INC.
4200 FORBES BLVD., SUITE 205
LANHAM, MD 20706
TELEPHONE: (301) 918-2662
ATTN: JENNIFER LANGOSKI, P.E., LEED-AP, BD+C

ARCHITECT
FREEMAN & MORGAN ARCHITECTS
7229 FOREST AVE. #209
HENRICO, VIRGINIA 23226
TELEPHONE: (804) 282-9700
ATTN.: DAVID SMITH, RA

CUNNINGHAM | QUILL ARCHITECTS
1054 31ST STREET NW SUITE 315
WASHINGTON, DC 20007
TELEPHONE: (202) 337-0090
ATTN.: LEE QUILL, FAIA, CNU

SURVEYOR
BOHLER ENGINEERING
22630 DAVIS DRIVE, SUITE 200
STERLING, VIRGINIA 20164
TELEPHONE: (703) 904-9400
ATTN.: ROBERT C. HARR, JR.

GEOTECHNICAL ENGINEER
TERRACON
5240 GREEN'S DAIRY ROAD
RALEIGH, NC 27615
TELEPHONE: (919) 873-2211
ATTN: RAYMOND L. "LEVI" DENTON, II, P.E.

LANDSCAPE ARCHITECT
CAMPION LANDSCAPE ARCHITECTURE
25 SOUTH STREET
ANNAPOLIS, MD 21401
TELEPHONE: (410) 878-7117
ATTN: KEVIN CAMPION

TRANSPORTATION ENGINEER
GOROVE/SLADE ASSOCIATES, INC.
1140 CONNECTICUT AVENUE NW, SUITE 600
WASHINGTON, DC 20036
TELEPHONE: (202) 296-8625
ATTN: DANIEL B. VANPELT, P.E., PTOE

LAND USE ATTORNEY
LAND, CLARK, CARROLL, MENDELSON & BLAIR, P.C.
524 KING STREET
ALEXANDRIA, VA 22314
TELEPHONE: (703) 595-2037
ATTN: DUNCAN W. BLAIR

FIRE FLOW CONSULTANT
EVERARD MID ATLANTIC INC.
5712 GENERAL WASHINGTON DRIVE, UNIT E
ALEXANDRIA, VA 22312
TELEPHONE: (703) 750-9731
ATTN: WILLIAM H. EVERARD, P.E.

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PROJECT NARRATIVE

SAFEWAY, INC., A DELAWARE CORPORATION, IS REQUESTING APPROVALS OF A DEVELOPMENT SPECIAL USE PERMIT WITH SITE PLAN, A SPECIAL USE PERMIT AND A PARKING REDUCTION TO CONSTRUCT A NEW 61,323 SF LIFESTYLE SAFEWAY AND A 3,136 SF RETAIL BUILDING ON ITS PROPERTY AT 3526 KING STREET IN THE FAIRLINGTON / BRADLEE AREA OF THE CITY. THE REDEVELOPMENT OF THE PROPERTY WILL INCLUDE THE DEMOLITION OF THE EXISTING RETAIL BUILDING AND SITE IMPROVEMENTS AND THE CONSTRUCTION OF TWO NEW RETAIL STRUCTURES, PARKING FACILITIES AND ASSOCIATED INFRASTRUCTURE. IT IS ANTICIPATED THAT SAFEWAY, INC. WILL REQUEST THAT THE ZONING CLASSIFICATION OF THE PROPERTY BE CHANGED FROM THE CG (COMMERCIAL GENERAL) ZONE TO THE OC (OFFICE COMMERCIAL) ZONE WITH A PROFFERED DEVELOPMENT PLAN.

GREEN AND SUSTAINABLE MEASURES

THE PROPOSED DEVELOPMENT WILL INCORPORATE A NUMBER OF GREEN/SUSTAINABLE MEASURES TO COMPLY WITH THE CITY'S GREEN BUILDING POLICY. BASED ON A PRELIMINARY REVIEW OF THE BUILDING AND SITE, WE EXPECT THE SITE TO BE LEED SILVER CERTIFIED AS REQUIRED BY THE CITY. WE PLAN ON IMPLEMENTING THE FOLLOWING SUSTAINABLE FEATURES:

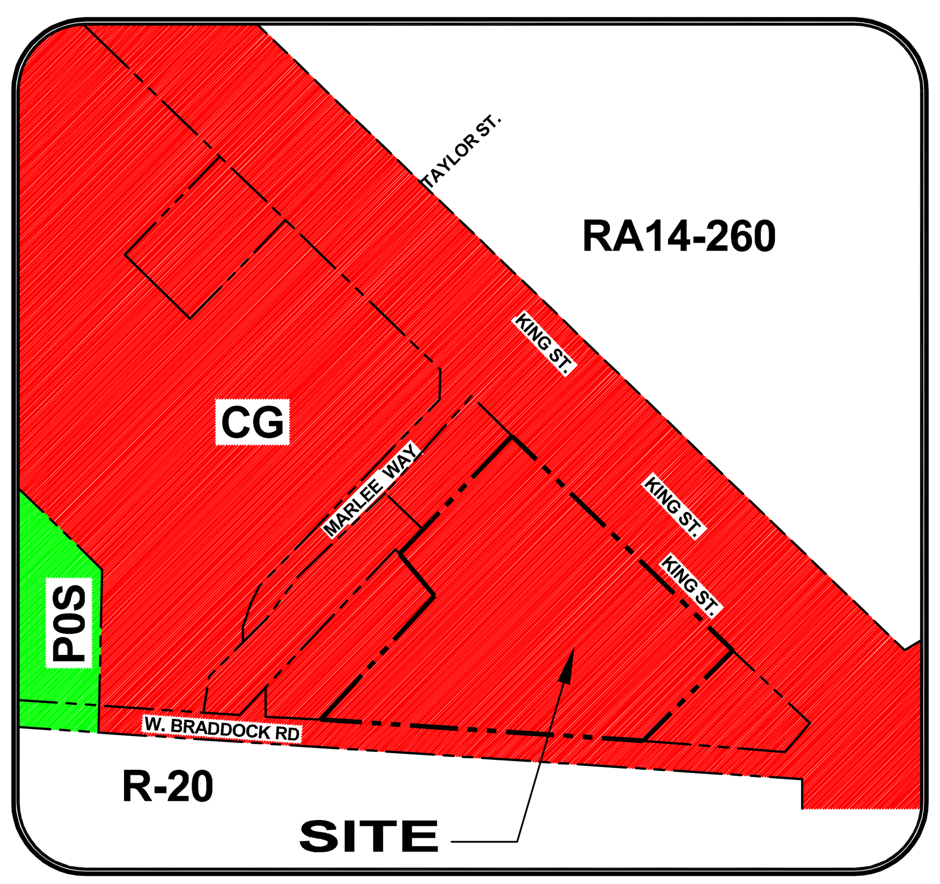
- APPROPRIATE AMOUNT OF PARKING TO NOT EXCEED CODE.
- PROXIMITY TO PUBLIC TRANSPORTATION.
- STORMWATER TREATMENT AND ATTENUATION.
- PROXIMITY TO RESTAURANTS AND RETAIL
- ROOF MATERIALS WITH A HIGH SOLAR REFLECTANCE INDEX.
- WATER EFFICIENT LANDSCAPING.
- WATER EFFICIENT FIXTURES.
- HIGH EFFICIENCY HEATING AND COOLING.
- USE OF RECYCLED AND SALVAGED MATERIALS.
- USE OF LOW EMITTING MATERIALS.
- CONTROLLED LIGHTING AND THERMAL SYSTEMS.

BUILDING CODE ANALYSIS

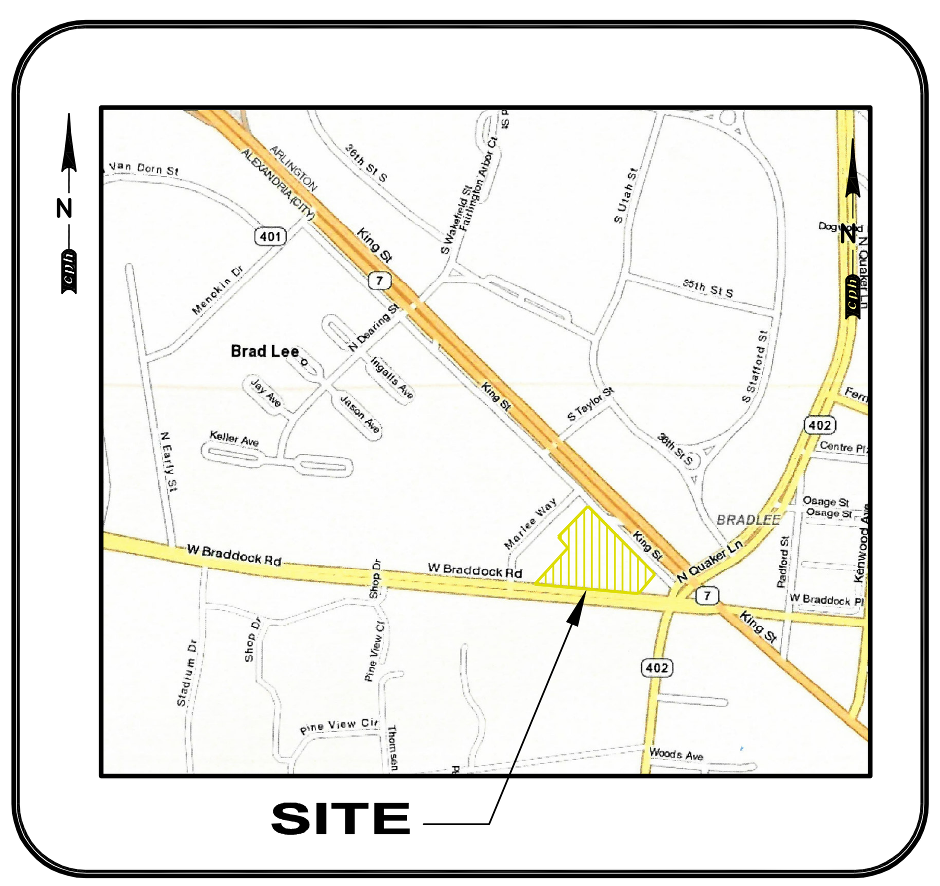
USE GROUP: M, S2
CONSTRUCTION CLASSIFICATION: TYPE II-A
TWO-STORY, FULLY SPRINKLERED

NOTES:

1. ALL INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY REGULATORY AGENCIES, UTILITY PROVIDERS AND/OR SPECIFICATIONS, AND FINAL CONNECTION OF SERVICES SHALL BE COMPLETED PRIOR TO THE ANNOUNCED POSSESSION DATE.
2. SAFETY NOTICE
THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONDITIONS OF THE WORK SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS ARRANGEMENT IS NOT LIMITED TO WORKING HOURS, BUT SHALL APPLY CONTINUOUSLY. ANY OBSERVATION BY THE ENGINEER OF CONTRACTOR'S PERFORMANCE IN CONSTRUCTION OF THE PLANNED IMPROVEMENTS IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES. FEDERAL, STATE, AND LOCAL AGENCY LAW AND REGULATIONS GOVERN PERFORMANCE OF WORK INCLUDED WITHIN THE PLANS AND SPECIFICATIONS, AND THE CONTRACTOR SHALL COMPLY WITH SUCH REGULATIONS, HOLDING THE OWNER, ENGINEER, AND AGENCY OFFICIALS HARMLESS AGAINST VIOLATION OF APPLICABLE REGULATIONS.
3. GROUNDWATER NOTICE
THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR BID SHALL INCLUDE CONSIDERATION FOR ADDRESSING THIS ISSUE.
4. WARRANTY/DISCLAIMER
THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER THE ENGINEER NOR IT'S ASSOCIATES CAN OR DO WARRANT THESE DESIGNS OR PLANS AS CONSTRUCTED EXCEPT IN THE SPECIFIC CASES WHERE THE ENGINEER IS INVOLVED WITH THE PHYSICAL CONSTRUCTION ON AN ONGOING BASIS AT THE SITE.
5. NOTICE TO BIDDERS
ALL QUESTIONS REGARDING THE PREPARATION OF THE GENERAL CONTRACTOR'S BID SHALL BE DIRECTED TO THE OWNER'S DESIGNATED AGENT: MR. LARRY EVANS, (301) 307-8041. SUBCONTRACTORS MUST DIRECT THEIR QUESTIONS THROUGH THE GENERAL CONTRACTOR.
6. SURVEY
BOUNDARY AND TOPOGRAPHIC INFORMATION HAS BEEN PROVIDED TO OWNER AND CPH ENGINEERS, INC. SURVEY WAS PERFORMED BY BOHLER ENGINEERING IN OCTOBER OF 2010, WITH SUPPLEMENTAL INFORMATION ADDED IN JULY 2011 AND AUGUST 2011
7. GEOTECHNICAL
GEOTECHNICAL INVESTIGATION HAS BEEN PROVIDED TO OWNER AND CPH ENGINEERS, INC. GEOTECHNICAL INVESTIGATION WAS PERFORMED BY TERRACON IN MARCH OF 2011.
8. FLOOD CERTIFICATION
THIS PROPERTY LIES WITHIN ZONE X, AS SHOWN ON F.E.M.A., N.F.I.P., F.I.R.M. COMMUNITY PANEL NO. 515519 0005 D, DATED MAY 15, 1991.
9. THE APPLICANT INTENDS TO MAKE A CONTRIBUTION TO THE CITY'S AFFORADBLE HOUSING TRUST FUND.



ZONING MAP
NTS



VICINITY MAP
NTS

ZONING TABULATIONS

EXISTING SITE DATA	
Total Site Area	2.997 AC / 130,533 SF
Building Area	41,693 ± SF
Use	Retail
Floor Area Ratio (FAR)	0.32
Building Height	23 ± FT
Building Floor Elevation	202.08 ± FT
Impervious Area	2.799 ± AC / 121,908 ± SF / 93.4%
Pervious Area	0.198 ± AC / 8,675 ± SF / 6.6%
Trip Generation	4,263
PROPOSED PROJECT DATA	
Total Site Area	2.997 AC / 130,533 SF
Gross Building Area	126,347 ± SF[1]
Safeway 1st Floor	61,888 ± SF[1]
Safeway 2nd Floor	61,323 ± SF[1]
Retail	3,136 ± SF
Net Building Area	122,809 ± SF[1]
Safeway 1st Floor	60,024 ± SF[1]
Safeway 2nd Floor	59,649 ± SF[1]
Retail	3,136 ± SF
Use	Retail
Building Floor Elevation (Safeway)	216 ± FT (Upper) 201.2 ± FT (Average At-Grade)
Building Floor Elevation (Retail)	198.4 ± FT
Impervious Area	2.593 ± AC / 112,936 ± SF / 86.5%
Pervious Area	0.404 ± AC / 17,597 ± SF / 13.5%
Total Parking Required	330 Parking Spaces
Total Parking Provided	228 Parking Spaces[2]
Size Of Parking Space	See Parking Table Summary
Total Handicap Parking Required	7
Total Handicap Parking Provided	8
Total Loading Required	4
Total Loading Provided	4
Truck Type	WB-67
Disturbed Area	3.56 ± AC
LAND INFORMATION	
Tax Map Reference	032.01-01-04
Parcel Numbers	901 and 3915-03-01-01
Front Setback Required	75 FT from Centerline of King Street 70 FT from Braddock Road Right-of-Way
Front Setback Provided	0.05 FT (King Street) 64.94 FT (Braddock Road)[3]
Side Yard Setback Required	None
Open Space Required	None for Commericial Use
Open Space	
Ground Level	17,932 ± SF / 0.412 AC / 13.7%
Rooftop	0 SF / 0 AC / 0%
Total	17,932 ± SF / 0.412 AC / 13.7%
Landscape Canopy Coverage Required	25%
Landscape Canopy Coverage Provided	27.62%
Trip Generation	6,409
ZONING INFORMATION	
Existing Zoning	CG (Commercial General)
Proposed Zoning	OC (Office Commercial)[4]
Adjacent Zoning	(N) King Street / RA14-26, (W) CG, (E) CG, (S) Braddock Road / R-20
Minimum Lot Area (CG Zone)	None for Commercial Use
Minimum Lot Area (OC Zone)	None for Commercial Use
Minimum Road Frontage (CG Zone)	None for Commercial Use
Minimum Road Frontage (OC Zone)	None for Commercial Use
Maximum FAR (CG Zone)	0.50
Maximum FAR (OC Zone)	1.00
Proposed FAR (Based on Net SF)	0.94
Proposed FAR (Based on Gross SF)	0.97
Maximum Building Height (CG Zone)	50 FT
Maximum Building Height (OC Zone)	50 FT
Proposed Safeway Building Height	46.8 FT
Proposed Retail Building Height	22 FT
PERMITS AND MODIFICATIONS REQUIRED	
1 Special Use Permit for retail use greater than 20,000 square feet	
2 Special Use Permit for parking reduction	
3 Modification of zone transition setback	
4 Rezoning approval	
5 Special Use Permit for Traffic Management Plan	

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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.

cph
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Lanham, MD 20706
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www.cphengineers.com

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JENNIFER LANGOSKI, P.E.
VA. LIC. NO. 0402047801
DATE: Aug 25, 2011

No.	Date	Revision	By
1	07/15/11	REVISION TO PLAN PER CITY OF ALEXANDRIA COMMENTS DATED JULY 1, 2011	J.L.
2	08/26/11	REVISION TO PLAN PER CITY OF ALEXANDRIA COMMENTS DATED AUGUST 5, 2011	
3			
4			
5			
6			
7			

Designed by:	J.L.
Drawn by:	R.K.R
Checked by:	J.L.
Approved by:	D.P.M.
Scale:	NTS
Date:	07-15-2011
Job No.:	S21823
File:	S21823-Cover - CofA.dwg

COVER SHEET
SAFEWAY STORE #3250 (R4003)
SAFEWAY
3526 KING STREET
ALEXANDRIA, VIRGINIA 22302

Sheet No.
C-1

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PRINTED BY: rreid

GENERAL PROVISIONS

1. THE CONTRACTOR SHALL OBTAIN FROM THE OWNER COPIES OF ALL AVAILABLE REGULATORY AGENCY PERMITS AND LOCAL AGENCY PERMITS.

2. ALL CONSTRUCTION PROJECTS 1 OR MORE ACRES IN SIZE THAT DISCHARGE TO OFFSITE AREAS ARE REQUIRED TO ABIDE BY THE PROVISIONS OF THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND SUBMITTING NPDES "NOTICE OF INTENT" (N.O.I.) TRANSFER AND "NOTICE OF TERMINATION" (N.O.T.) NOTICES TO THE EPA OR LOCAL STATE AGENCY HAVING JURISDICTION OVER THE NPDES PROGRAM. THE CONTRACTOR SHALL KEEP ONSITE A COPY OF THE SWPPP, NOI, AND LOCAL EROSION CONTROL PERMITS ISSUED, TOGETHER WITH THE INSPECTION REPORTS AND CURRENT PLANS, INCLUDING ANY MODIFICATIONS REQUIRED.

3. UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR SHALL USE THE GEOMETRY PROVIDED ON THE CONSTRUCTION PLANS. BENCHMARK INFORMATION SHALL BE PROVIDED TO THE CONTRACTOR BY THE OWNER OR OWNER'S SURVEYOR. ANY DISCREPANCIES BETWEEN FIELD MEASUREMENTS AND CONSTRUCTION PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

4. BASE SURVEY INFORMATION INCLUDING, BUT NOT LIMITED TO, ELEVATIONS, EASEMENTS, RIGHTS-OF-WAY, AND OTHER TOPOGRAPHIC INFORMATION HAS BEEN PREPARED BY OTHER PROFESSIONALS. CPH ENGINEERS, INC. ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.

5. THIS SET OF PLANS MAY CONTAIN DRAWINGS PREPARED BY OTHER PROFESSIONALS, WHICH CONTAIN THE NAME, ADDRESS, AND LOGO OF THE PROFESSIONAL. CPH ENGINEERS, INC. IS NOT RESPONSIBLE FOR DRAWINGS PREPARED BY OTHER PROFESSIONALS.

6. THIS SET OF PLANS IS BASED ON FIELD INVESTIGATION DATA AND REPORTS PROVIDED BY THE SURVEYOR, GEOTECHNICAL ENGINEER, ENVIRONMENTAL ENGINEER, TRAFFIC ENGINEER, AND OTHERS. CPH ENGINEERS, INC. AND ITS ASSOCIATES ASSUME NO LIABILITY FOR THE ACCURACY OF THE INFORMATION PROVIDED, OR FOR ERRORS OR OMISSIONS RESULTING FROM INACCURACY, ERRORS OR OMISSIONS IN THE INFORMATION PROVIDED.

7. THE CONTRACTOR SHALL SUBMIT FOUR (4) COPIES OF SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING THE MATERIALS REQUIRED FOR CONSTRUCTION. PRIOR TO SUBMISSION, THE CONTRACTOR SHALL THOROUGHLY CHECK SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES FOR COMPLETENESS AND FOR COMPLIANCE WITH THE CONSTRUCTION PLANS AND SHALL VERIFY ALL DIMENSIONS AND FIELD CONDITIONS AND SHALL COORDINATE THE SHOP DRAWINGS WITH THE REQUIREMENTS FOR OTHER RELATED WORK. THE CONTRACTOR'S RESPONSIBILITY FOR ERRORS AND OMISSIONS IN SUBMITTALS IS NOT RELIEVED BY THE ENGINEER'S REVIEW OF SUBMITTALS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING AT THE TIME OF SUBMISSION, OF DEVIATIONS IN SUBMITTALS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

8. THE CONTRACTOR SHALL PROTECT BENCHMARKS, PROPERTY CORNERS, AND OTHER SURVEY MONUMENTS FROM DAMAGE OR DISPLACEMENT. IF MARKER NEEDS TO BE REMOVED, IT SHALL BE REFERENCED BY A LICENSED LAND SURVEYOR AND REPLACED, AS NECESSARY, BY SAME.

9. THE CONTRACTOR IS RESPONSIBLE FOR ALL QUALITY CONTROL TESTING. AT A MINIMUM, TESTING SHALL INCLUDE A) PIPING AND STRUCTURAL EXCAVATION, BEDDING AND BACKFILL MATERIALS AND DENSITY TESTS; B) DETERMINATION OF COMBATIVE EFFORT NEEDED FOR COMPLIANCE WITH THE DENSITY REQUIREMENTS; C) PORTLAND CEMENT CONCRETE AND ASPHALT PAVING QUALITY CONTROL TESTING, INCLUDING DESIGN MIX REVIEW, MATERIALS, FIELD SLUMP AND AIR CONTENT, AND FIELD AND LAB CURED STRENGTH SAMPLES AND TESTING.

10. IN ADDITION TO QUALITY CONTROL TESTING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REQUIRED TESTING OR APPROVALS FOR ANY WORK (OR ANY PART THEREOF) IF LAWS OR REGULATIONS OF ANY PUBLIC BODY HAVING JURISDICTION SPECIFICALLY REQUIRE TESTING, INSPECTIONS OR APPROVAL. THE CONTRACTOR SHALL PAY ALL COSTS IN CONNECTION THEREWITH AND SHALL FURNISH TO THE OWNER AND ENGINEER THE REQUIRED CERTIFICATES OF INSPECTION, TESTING OR APPROVAL.

11. ANY DESIGN OR TESTING LABORATORY UTILIZED BY THE CONTRACTOR SHALL BE AN INDEPENDENT LABORATORY ACCEPTABLE TO THE OWNER AND THE ENGINEER, APPROVED IN WRITING, AND COMPLYING WITH THE LATEST EDITION OF THE "RECOMMENDED REQUIREMENTS FOR INDEPENDENT LABORATORY QUALIFICATION", PUBLISHED BY THE AMERICAN COUNCIL OF INDEPENDENT LABORATORIES.

12. TESTING RESULTS SHALL BE PROVIDED TO THE OWNER/OPERATOR AND THE ENGINEER. ALL TEST RESULTS SHALL BE PROVIDED (PASSING AND FAILING) ON A REGULAR AND IMMEDIATE BASIS.

13. THE ENTIRE PROJECT SITE SHALL BE THOROUGHLY CLEANED AT THE COMPLETION OF THE WORK. THE CONTRACTOR SHALL CLEAN ALL INSTALLED PIPELINES, STRUCTURES, SIDEWALKS, PAVED AREAS, ACCUMULATED SILT IN PONDS, PLUS ALL ADJACENT AREAS AFFECTED BY CONSTRUCTION, AS DIRECTED BY THE OWNER OR JURISDICTIONAL AGENCY. EQUIPMENT USED TO CLEAN THESE SURFACES SHALL BE SUBJECT TO APPROVAL BY THE OWNER.

SITE PREPARATION

1. UNLESS OTHERWISE DIRECTED BY THE OWNER OR ENGINEER, THE CONTRACTOR IS EXPECTED TO CONTAIN ALL CONSTRUCTION ACTIVITIES WITHIN THE PROPERTY, RIGHT-OF-WAY, AND EASEMENTS AS INDICATED ON THE DRAWINGS. AT NO TIME SHALL THE CONTRACTOR DISTURB SURROUNDING PROPERTIES OR TRAVEL ON SURROUNDING PROPERTIES WITHOUT WRITTEN CONSENT FROM THE PROPERTY OWNER. ANY REPAIR OR RECONSTRUCTION OF DAMAGED AREAS REQUIRED IN SURROUNDING PROPERTIES SHALL BE PERFORMED BY THE CONTRACTOR ON AN IMMEDIATE BASIS. ALL COSTS FOR REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION SHALL BE PROVIDED.

2. THE CONTRACTOR SHALL STAKE OUT THE CONSTRUCTION, ESTABLISH LINES AND LEVELS, TEMPORARY BENCH MARKS, BATTER BOARDS, CENTERLINES, BASELINES, AND REFERENCE POINTS FOR THE WORK, AND VERIFY ALL DIMENSIONS RELATING TO INTERCONNECTION WITH EXISTING FEATURES. REPORT ANY INCONSISTENCIES IN THE PROPOSED GRADES, LINES AND LEVELS, DIMENSIONS AND LOCATIONS TO THE ENGINEER BEFORE COMMENCING WORK.

3. PROTECT ALL TREES AND SHRUBS LOCATED OUTSIDE THE RIGHT-OF-WAY, EASEMENTS, AND OWNER SECURED PROPERTY, PARTICULARLY THOSE TREES AND SHRUBS LOCATED ADJACENT TO WORK AREAS.

4. TREES TO REMAIN IN THE CONSTRUCTION AREA SHALL BE BOXED, FENCED OR OTHERWISE PROTECTED IN ACCORDANCE WITH DETAILS ON THE DRAWINGS. DO NOT PERMIT HEAVY EQUIPMENT OR STOCKPILES WITHIN BRANCH SPREAD.

5. CLEAR AND GRUB ALL AREAS TO BE OCCUPIED BY THE PROPOSED IMPROVEMENTS, AND AREAS FOR FILL AND SITE GRADING. REMOVE TREES OUTSIDE OF THESE AREAS ONLY AS INDICATED ON THE DRAWINGS OR AS APPROVED IN WRITING BY THE ENGINEER.

6. EXERCISE EXTREME CARE DURING THE CLEARING AND GRUBBING OPERATIONS. DO NOT DAMAGE EXISTING STRUCTURES, PIPES OR UTILITIES. GRUBBING SHALL CONSIST OF REMOVING AND DISPOSING OF STUMPS, ROOTS LARGER THAN 2 INCHES IN DIAMETER, AND MATTED ROOTS. REMOVE TO A DEPTH OF NOT LESS THAN 18 FEET BELOW THE ORIGINAL SURFACE LEVEL OF THE GROUND.

7. ALL COMBUSTIBLE DEBRIS AND REFUSE FROM SITE PREPARATION OPERATIONS SHALL BE REMOVED TO LEGAL OFFSITE DISPOSAL AREAS.

PRECAST STRUCTURES AND APPURTENANCES

1. ALL MANHOLES SHALL BE PRECAST CONSTRUCTION. THE MINIMUM SIZE DIAMETER OF MANHOLES SHALL BE 48 INCHES FOR SEWER LINES 21" INCHES IN DIAMETER OR LESS. INTEGRALLY CAST STEPS WITHIN PRECAST STRUCTURES ARE NOT ALLOWED.

2. BASES SHALL BE ONE-PIECE PRECAST BASE SECTIONS CONSISTING OF INTEGRALLY CAST SLAB, BOTTOM RING SECTION AND CONCRETE FLOW CHANNELS. BASE SECTIONS SHALL HAVE INTEGRAL INVERTS WITH GASKETS TO MATCH THE PIPE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ALL INVERT ANGLES. PROVIDE OUTLET STUBS WITH JOINTS TO MATCH THE PIPE.

3. RISERS SHALL BE PRECAST REINFORCED CONCRETE PER ASTM C478, MANUFACTURED USING SULFATE RESISTANT CEMENT (ASTM C150, TYPE II). RISERS SHALL BE 48 INCHES IN DIAMETER UNLESS OTHERWISE INDICATED AND SHALL HAVE A MINIMUM WALL THICKNESS OF 5 INCHES.

4. GASKETS FOR SEATING PRECAST SECTIONS SHALL BE COLD ADHESIVE PREFORMED PLASTIC GASKETS, UNLESS OTHERWISE INDICATED.

5. UNLESS OTHERWISE INDICATED, CONE TOP SECTIONS SHALL BE PRECAST, ECCENTRIC TYPE WITH 24-INCH DIAMETER TOP OPENING CONFORMING TO ASTM C478. PROVIDE 8-INCH MINIMUM THICKNESS FLAT SLAB TOPS WITH ECCENTRIC 24-INCH DIAMETER OPENING, UNLESS OTHERWISE INDICATED.

6. PROVIDE A FLEXIBLE WATERTIGHT SEAL OF THE PIPE TO THE MANHOLE. NO ADHESIVES OR LUBRICANTS SHALL BE EMPLOYED IN THE INSTALLATION OF THE CONNECTOR INTO THE MANHOLE. THE RUBBER CONNECTOR SHALL COMPLY WITH ASTM C443 AND ASTM C923. ALL STAINLESS STEEL ELEMENTS OF THE CONNECTOR SHALL BE TOTALLY NON-MAGNETIC SERIES 316 STAINLESS, EXCLUDING THE WORM SCREW FOR TIGHTENING THE STEEL BAND AROUND THE PIPE, WHICH SHALL BE TORQUED BY A BREAKAWAY TORQUE WRENCH AVAILABLE FROM THE PRECAST MANHOLE SUPPLIER, AND SET FOR 60-70 INCH/LBS. THE CONNECTOR SHALL BE INSTALLED IN THE MANHOLE WALL BY ACTIVATING THE EXPANDING MECHANISM IN STRICT ACCORDANCE WITH THE RECOMMENDATION OF THE CONNECTOR MANUFACTURER.

7. FRAMES AND COVERS SHALL BE GREY IRON PER ASTM A48, CLASS 30B AND SHALL BE US FOUNDRY TYPE 227AS, TRAFFIC BEARING (AASHTO H-20 LOADING), UNLESS OTHERWISE NOTED IN THE DRAWINGS. CASTINGS SHALL BE SMOOTH, CLEAN, FREE FROM BLISTERS, BLOWHOLES, AND SHRINKAGE. RAISED LETTERING ON COVERS SHALL BE "STORM", "SEWER", OR AS OTHERWISE DETAILED ON THE DRAWINGS.

8. PROVIDE CAST IRON INLETS, FRAMES, AND GRATES IN ACCORDANCE WITH DETAILS ON THE DRAWINGS. ALL FRAMES AND INLET GRATES SHALL BE PRODUCTS OF U.S. FOUNDRY & MANUFACTURING CORPORATION, OR APPROVED EQUAL.

9. ALL METAL INLET GRATES SHALL BE SECURED BY CHAIN AND EYEBOLT TO THE TOP OF CONCRETE STRUCTURES, OR AS RECOMMENDED BY MANUFACTURER FOR OTHER GRATES OR STRUCTURES.

10. MANHOLE COATINGS AND FINISHES SHALL BE:

   A. SANITARY SEWER MANHOLE INTERIOR - BITUMINOUS EPOXY COATING, MINIMUM DRY FILM THICKNESS = 16 MILS.

   B. INTERIOR OF MANHOLES WHICH RECEIVE FORCE MAIN DISCHARGE - INTEGRALLY ATTACHED INTERIOR LINER, FULL HEIGHT, FIBERGLASS LINER. LINER THICKNESS TO BE IN ACCORDANCE WITH THE DRAWINGS. EXTERIOR - BITUMINOUS EPOXY COATING, MINIMUM DRY FILM THICKNESS = 16 MILS.

DEWATERING

1. WHERE NEEDED TO CONSTRUCT ALL PROPOSED SITE AND BUILDING IMPROVEMENTS (INCLUDING BUT NOT LIMITED TO: ALL UNDERGROUND UTILITIES, RETENTION AREAS, BUILDING, ELEVATOR SHAFTS ETC.), THE CONTRACTOR SHALL PROVIDE A DEWATERING SYSTEM DESIGNED USING ACCEPTED AND PROFESSIONAL METHODS CONSISTENT WITH CURRENT INDUSTRY PRACTICE. PROVIDE DEWATERING SYSTEM OF SUFFICIENT SIZE AND CAPACITY TO CONTROL GROUNDWATER IN A MANNER THAT PRESERVES STRENGTH OF FOUNDATION SOILS, DOES NOT CAUSE INSTABILITY OR RAVELING OF EXCAVATION SLOPES, AND DOES NOT RESULT IN DAMAGE TO EXISTING STRUCTURES. WHERE NECESSARY TO THESE PURPOSES, LOWER WATER LEVEL IN ADVANCE OF EXCAVATION, UTILIZING WELLS, WELLPOINTS, OR SIMILAR POSITIVE METHODS. MAINTAIN THE GROUNDWATER LEVEL TO A MINIMUM OF 2 FEET BELOW EXCAVATIONS. PROVIDE PIEZOMETERS IF DIRECTED BY THE ENGINEER TO DOCUMENT THAT THE GROUNDWATER LEVEL IS BEING MAINTAINED.

2. THE CONTRACTOR SHALL CONTROL, BY ACCEPTABLE MEANS, ALL WATER REGARDLESS OF SOURCE, AND SHALL BE FULLY RESPONSIBLE FOR DISPOSAL OF THE WATER. NO ADDITIONAL PAYMENT WILL BE MADE FOR ANY SUPPLEMENTAL MEASURES TO CONTROL SEEPAGE, GROUNDWATER, OR ARTESIAN HEAD.

3. OPEN PUMPING WITH SUMPS AND DITCHES SHALL BE ALLOWED, PROVIDED IT DOES NOT RESULT IN BOILS, LOSS OF FINES, SOFTENING OF THE GROUND, OR INSTABILITY OF SLOPES. SUMPS SHALL BE LOCATED OUTSIDE OF LOAD BEARING AREAS SO THAT THE BEARING SURFACES WILL NOT BE DISTURBED. WATER CONTAINING SILT IN SUSPENSION SHALL NOT BE PUMPED INTO SEWER LINES OR ADJACENT STREAMS. DURING NORMAL PUMPING, AND UPON DEVELOPMENT OF WELL(S), LEVELS OF FINE SAND OR SILT IN THE DISCHARGE WATER SHALL NOT EXCEED 5 PARTS PER MILLION (PPM).

4. THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN A GROUNDWATER APPROPRIATION PERMIT FOR THE DEWATERING SYSTEM FROM THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY.

5. CONTINUOUSLY MAINTAIN EXCAVATIONS IN A DRY CONDITION WITH POSITIVE DEWATERING METHODS DURING PREPARATION OF SUBGRADE, INSTALLATION OF PIPE, AND CONSTRUCTION OF STRUCTURES UNTIL THE CRITICAL PERIOD OF CONSTRUCTION AND/OR BACKFILL IS COMPLETED, TO PREVENT DAMAGE OF SUBGRADE SUPPORT, PIPING, STRUCTURE, SIDE SLOPES, AND ADJACENT FACILITIES FROM FLOTATION OR OTHER HYDROSTATIC PRESSURE IMBALANCE.

6. WHEN CONSTRUCTION IS COMPLETE, REMOVE ALL DEWATERING EQUIPMENT FROM THE SITE, INCLUDING WELLS AND RELATED TEMPORARY ELECTRICAL SERVICE.

7. DEWATERING DISCHARGE FROM THE SITE SHALL COMPLY WITH ALL NPDES GENERAL PERMIT REQUIREMENTS, AND STATE WATER QUALITY REGULATIONS. CONTRACTOR SHALL PROVIDE, AT CONTRACTOR'S COST, MEANS TO VERIFY COMPLIANCE AND ANY/ALL TREATMENT OR DISPOSAL METHODS REQUIRED TO MEET ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.

EROSION AND SEDIMENT CONTROL

1. THE CONTRACTOR SHALL NOTIFY THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY FORTY-EIGHT (48) HOURS BEFORE COMMENCING ANY LAND DISTURBING ACTIVITY AND, UNLESS WAIVED BY THE DEPARTMENT, SHALL BE REQUIRED TO HOLD A PRE-CONSTRUCTION MEETING WITH THEM OR THEIR REPRESENTATIVE, THEIR ENGINEER AND AN AUTHORIZED REPRESENTATIVE OF THE DEPARTMENT.

2. THE CONTRACTOR MUST OBTAIN INSPECTION AND APPROVAL BY THE CITY OF ALEXANDRIA AT THE FOLLOWING POINTS:

   A. AT THE REQUIRED PRE-CONSTRUCTION MEETING.
   B. FOLLOWING INSTALLATION OF SEDIMENT CONTROL MEASURES AND PRIOR TO ANY OTHER LAND DISTURBING ACTIVITY.
   C. DURING THE INSTALLATION OF A SEDIMENT BASIN OR STORMWATER MANAGEMENT STRUCTURE AT THE REQUIRED INSPECTION POINTS. NOTIFICATION PRIOR TO COMMENCING CONSTRUCTION IS MANDATORY.
   D. PRIOR TO REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL STRUCTURE(S).
   E. PRIOR TO FINAL ACCEPTANCE.

3. THE CONTRACTOR SHALL CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE APPROVED PLAN AND CONSTRUCTION SEQUENCE, SHALL HAVE THEM INSPECTED AND APPROVED BY THE CITY OF ALEXANDRIA PRIOR TO BEGINNING ANY OTHER LAND DISTURBANCES, SHALL ENSURE THAT ALL RUNOFF FROM DISTURBED AREAS IS DIRECTED TO THE SEDIMENT CONTROL DEVICES, AND SHALL NOT REMOVE ANY EROSION OR SEDIMENT CONTROL MEASURE WITHOUT PRIOR PERMISSION FROM THE CITY REPRESENTATIVES.

4. THE CONTRACTOR SHALL PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DEPOSITION OF MATERIALS ONTO TRAVERSED PUBLIC THOROUGHFARE(S). ALL MATERIALS DEPOSITED ONTO PUBLIC THOROUGHFARE(S) SHALL BE REMOVED IMMEDIATELY.

5. THE CONTRACTOR SHALL PERIODICALLY INSPECT AND CONTINUOUSLY MAINTAIN IN EFFECTIVE OPERATING CONDITION, ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL SUCH TIMES AS THEY ARE REMOVED WITH PRIOR PERMISSION FROM THE CITY. THE CONTRACTOR IS RESPONSIBLE FOR IMMEDIATELY REPAIRING OR REPLACING ANY SEDIMENT CONTROL MEASURES WHICH HAVE BEEN DAMAGED OR REMOVED BY THE PERMITTEE OR ANY OTHER PERSON.

6. ALL SEDIMENT BASINS, TRAP EMBANKMENTS, PERIMETER DIKES, AND ALL DISTURBED SLOPES STEEPER OR EQUAL TO 3:1 (H:V) SHALL BE STABILIZED WITH SOD, SEED, AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES, WITHIN SEVEN (7) CALENDAR DAYS OF ESTABLISHMENT. ALL AREAS DISTURBED OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM MUST BE MINIMIZED AND STABILIZED IMMEDIATELY. MAINTENANCE MUST BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION.

7. THE CONTRACTOR SHALL APPLY SOD, SEED, AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES, TO ALL DISTURBED AREAS WITHIN FOURTEEN (14) CALENDAR DAYS AFTER STRIPPING AND GRADING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ON THAT AREA. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION. ACTIVE CONSTRUCTION AREAS, SUCH AS BORROW OR STOCKPILE AREAS, ROADWAY IMPROVEMENTS, AND AREAS WITHIN FIFTY (50) FEET OF A BUILDING UNDER CONSTRUCTION MAY BE EXEMPT FROM THIS REQUIREMENT, PROVIDED THAT EROSION AND SEDIMENT CONTROL MEASURES ARE INSTALLED AND MAINTAINED TO PROTECT THOSE AREAS.

8. PRIOR TO REMOVAL OF SEDIMENT CONTROL MEASURES, THE CONTRACTOR SHALL STABILIZE ALL CONTRIBUTORY DISTURBED AREAS WITH REQUIRED SOIL AMENDMENTS AND TOPSOIL, USING SOD OR AN APPROVED PERMANENT SEED MIXTURE AND AN APPROVED ANCHORED MULCH. WOOD FIBER MULCH MAY ONLY BE USED IN SEEDING SEASON WHEN THE SLOPE DOES NOT EXCEED 10 PERCENT AND GRADING HAS BEEN DONE TO PROMOTE SHEET FLOW DRAINAGE. AREAS BROUGHT TO FINISHED GRADE DURING THE SEEDING SEASON SHALL BE PERMANENTLY STABILIZED WITHIN FOURTEEN (14) CALENDAR DAYS OF DISTURBANCE. WHEN PROPERTY IS BROUGHT TO FINISHED GRADE DURING THE MONTHS OF NOVEMBER THROUGH FEBRUARY, AND PERMANENT STABILIZATION IS FOUND TO BE IMPRACTICAL, AN APPROVED TEMPORARY SEED AND STRAW ANCHORED MULCH SHALL BE APPLIED TO DISTURBED AREAS. THE FINAL PERMANENT STABILIZATION OF SUCH PROPERTY SHALL BE COMPLETED PRIOR TO THE FOLLOWING APRIL 15.

9. THE SITE PERMIT, WORK, MATERIALS, APPROVED SC/SM PLANS, AND TEST REPORTS SHALL BE AVAILABLE AT THE SITE FOR INSPECTION BY DULY AUTHORIZED OFFICIALS OF CITY OF ALEXANDRIA.

10. SURFACE DRAINAGE FLOWS OVER UNSTABILIZED CUT AND FILL SLOPES SHALL BE CONTROLLED BY EITHER PREVENTING DRAINAGE FLOWS FROM TRAVERSING THE SLOPES OR BY INSTALLING MECHANICAL DEVICES TO LOWER THE WATER DOWN SLOPE WITHOUT CAUSING EROSION. DIKES SHALL BE INSTALLED AND MAINTAINED AT THE TOP OF CUT OR FILL SLOPES UNTIL THE UPSTREAM SLOPE AND DRAINAGE AREA ARE FULLY STABILIZED, AT WHICH TIME THEY MUST BE REMOVED AND FINAL GRADING DONE TO PROMOTE SHEET FLOW DRAINAGE. MECHANICAL DEVICES MUST BE PROVIDED AT POINTS OF CONCENTRATED FLOW WHERE EROSION IS LIKELY TO OCCUR.

11. PERMANENT SWALES OR OTHER POINTS OF CONCENTRATED WATER FLOW SHALL BE STABILIZED WITHIN SEVEN (7) CALENDAR DAYS OF DISTURBANCE WITH SOD OR SEED AND AN APPROVED EROSION CONTROL MATTING OR BY OTHER APPROVED STABILIZATION MEASURES.

12. UPON THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, THE TEMPORARY SEDIMENT CONTROL DEVICES SHALL BE REMOVED, WITHIN THIRTY (30) CALENDAR DAYS FOLLOWING ESTABLISHMENT OF PERMANENT STABILIZATION IN ALL CONTRIBUTORY DRAINAGE AREAS. STORMWATER MANAGEMENT STRUCTURES USED TEMPORARILY FOR SEDIMENT CONTROL SHALL BE CONVERTED TO THE PERMANENT CONFIGURATION WITHIN THIS TIME PERIOD AS WELL, UPON APPROVAL OF THE INSPECTOR.

13. NO PERMANENT CUT OR FILL SLOPE WITH A GRADIENT STEEPER THAN 3:1 (H:V) WILL BE PERMITTED IN LAWN MAINTENANCE AREAS OR ON RESIDENTIAL LOTS. A SLOPE GRADIENT OF UP TO 2:1 WILL BE PERMITTED IN NON-MAINTENANCE AREAS, PROVIDED THAT THOSE AREAS ARE INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN WITH A LOW-MAINTENANCE GROUND COVER SPECIFIED FOR PERMANENT STABILIZATION. SLOPE GRADIENT STEEPER THAN 2:1 WILL NOT BE PERMITTED WITH VEGETATIVE STABILIZATION.

14. THE CONTRACTOR SHALL INSTALL A SPLASHBLOCK AT THE BOTTOM OF EACH DOWNSPOUT UNLESS THE DOWNSPOUT IS CONNECTED BY A DRAIN LINE TO AN ACCEPTABLE OUTLET.

15. FOR FINISHED GRADING, THE CONTRACTOR SHALL PROVIDE ADEQUATE GRADIENTS SO AS TO PREVENT WATER FROM STANDING ON THE SURFACE OF LAWNS MORE THAN TWENTY-FOUR (24) HOURS AFTER THE END OF A RAINFALL, EXCEPT IN DESIGNATED DRAINAGE COURSES AND SWALE FLOW AREAS, WHICH MAY DRAIN AS LONG AS FORTY-EIGHT (48) HOURS AFTER THE END OF A RAINFALL.

16. TEMPORARY SEDIMENT TRAPS OR BASINS ARE NOT PERMITTED WITHIN 20 FEET OF A BUILDING WHICH IS EXISTING OR UNDER CONSTRUCTION. NO BUILDING MAY BE CONSTRUCTED WITHIN 20 FEET OF A TEMPORARY SEDIMENT TRAP OR BASIN.

17. ALL INLETS IN NON-SUMP AREAS SHALL HAVE ASPHALT BERMS INSTALLED AT THE TIME OF BASE PAVING ESTABLISHMENT.

18. THE SEDIMENT CONTROL INSPECTOR HAS THE OPTION OF REQUIRING ADDITIONAL SEDIMENT CONTROL MEASURES, AS DEEMED NECESSARY.

19. ALL TRAP ELEVATIONS ARE RELATIVE TO THE OUTLET ELEVATION, WHICH MUST BE ON EXISTING UNDISTURBED GROUND.

20. VEGETATIVE STABILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH THE VIRGINIA SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

21. TEMPORARY SEDIMENT TRAP(S) SHALL BE CLEANED OUT AND RESTORED TO THE ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO THE POINT OF ONE-HALF (1/2) THE WET VOLUME OF THE TRAP OR WHEN REQUIRED BY THE SEDIMENT CONTROL INSPECTOR.

22. SEDIMENT REMOVED FROM TRAPS SHALL BE PLACED AND STABILIZED IN APPROVED AREAS, BUT NOT WITHIN A FLOODPLAIN.

23. ALL SEDIMENT BASINS AND TRAPS MUST BE SURROUNDED WITH A WELDED WIRE SAFETY FENCE. THE FENCE MUST BE AT LEAST 42 INCHES HIGH, HAVE POSTS SPACED NO FARTHER APART THAN 8 FEET, HAVE MESH OPENINGS NO GREATER THAN 2 INCHES IN WIDTH AND 4 INCHES IN HEIGHT, WITH A MINIMUM OF 14 GAUGE WIRE. SAFETY FENCE MUST BE MAINTAINED IN GOOD CONDITION AT ALL TIMES.

24. NO EXCAVATION IN THE AREAS OF EXISTING UTILITIES IS PERMITTED UNLESS THEIR LOCATION HAS BEEN DETERMINED. CALL "MISS UTILITY" OF VIRGINIA AT 811 OR 1-800-552-7001, AT LEAST 48 HOURS PRIOR TO THE START OF WORK.

25. OFF-SITE SOIL OR BORROW AREAS MUST HAVE PRIOR APPROVAL BY THE CITY OF ALEXANDRIA.

26. SEDIMENT TRAP/BASIN DEWATERING FOR CLEANOUT OR REPAIR MAY ONLY BE DONE WITH THE CITY OF ALEXANDRIA INSPECTOR'S PERMISSION. THE INSPECTOR MUST APPROVE THE DEWATERING METHOD FOR EACH APPLICATION. THE FOLLOWING METHODS MAY BE CONSIDERED:

   A. PUMP DISCHARGE MAY BE DIRECTED TO ANOTHER ON-SITE SEDIMENT TRAP OR BASIN, PROVIDED IT IS OF SUFFICIENT VOLUME AND THE PUMP INTAKE IS FLOATED TO PREVENT AGITATION OR SUCTION OF DEPOSITED SEDIMENTS; OR
   B. THE PUMP INTAKE MAY UTILIZE A REMOVABLE PUMPING STATION AND MUST DISCHARGE INTO AN UNDISTURBED AREA THROUGH A NON-EROSIVE OUTLET; OR
   C. THE PUMP INTAKE MAY BE FLOATED AND DISCHARGE INTO A DIRT BAG (12 OZ. NON-WOVEN FABRIC), OR APPROVED EQUIVALENT, LOCATED IN AN UNDISTURBED BUFFER AREA.

   NOTE
   REMEMBER: DEWATERING OPERATION AND METHOD MUST HAVE PRIOR APPROVAL BY THE CITY OF ALEXANDRIA INSPECTOR.

27. THE CONTRACTOR MUST NOTIFY THE CITY OF ALEXANDRIA OF ALL UTILITY CONSTRUCTION ACTIVITIES WITHIN THE PERMITTED LIMITS OF DISTURBANCE PRIOR TO THE COMMENCEMENT OF THOSE ACTIVITIES.

28. TOPSOIL MUST BE APPLIED TO ALL PERVIOUS AREAS WITHIN THE LIMITS OF DISTURBANCE PRIOR TO PERMANENT STABILIZATION IN ACCORDANCE WITH THE VIRGINIA EROSION AND SEDIMENT CONTROL STANDARDS FOR TOPSOILING.

GRADING

1. GRADING SHOWN ON THESE PLANS IS PROVIDED TO THE CONTRACTOR TO EXPRESS THE GENERAL GRADING INTENT OF THE PROJECT. THE CONTRACTOR SHALL BE EXPECTED TO GRADE THE ENTIRE SITE TO PROVIDE POSITIVE DRAINAGE IN ALL AREAS THROUGHOUT THE SITE. SMOOTH TRANSITIONS SHALL BE PROVIDED BETWEEN CONTOURS OR SPOT ELEVATIONS AS SHOWN ON THE PLANS TO ACCOMPLISH THE GRADING INTENT. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER FINAL GRADING HAS BEEN COMPLETED. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER PRIOR TO DEMOBILIZATION OF GRADING EQUIPMENT TO DETERMINE THAT THE GRADING INTENT HAS BEEN ACHIEVED.

2. ALL PAVING SURFACES IN INTERSECTIONS AND ADJACENT SECTIONS SHALL BE GRADED TO DRAIN POSITIVELY AND TO PROVIDE A SMOOTHLY TRANSITIONED DRIVING SURFACE FOR VEHICLES WITH NO SHARP BREAKS IN GRADE, AND NO UNUSUALLY STEEP OR REVERSE CROSS SLOPES. THE STANDARD CROWN MAY HAVE TO BE CHANGED IN ORDER TO DRAIN POSITIVELY IN THE AREA OF INTERSECTIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH THE ABOVE AND THE ENGINEER SHALL BE CONSULTED SO THAT HE/SHE MAY MAKE ANY AND ALL REQUIRED INTERPRETATIONS OF THE PLANS OR GIVE SUPPLEMENTARY INSTRUCTIONS TO ACCOMPLISH THE INTENT OF THE PLANS.

3. THE CONTRACTOR SHALL UNIFORMLY SMOOTH GRADE THE SITE. DEPRESSIONS FROM SETTLEMENT SHALL BE FILLED AND COMPACTED. TOPS OF EMBANKMENTS AND BREAKS IN GRADE SHALL BE ROUNDED. FINISHED SURFACES SHALL BE REASONABLY SMOOTH, COMPACTED, FREE FROM IRREGULAR SURFACE CHANGES AND COMPARABLE TO THE SMOOTHNESS OBTAINED BY BLADE-GRADER OPERATIONS.

4. SLOPE GRADES TO DRAIN AWAY FROM STRUCTURES AT A MINIMUM OF ¼-INCH PER FOOT FOR 10 FEET. FINISHED SURFACES ADJACENT TO PAVED AREAS OR WITHIN 10 FEET OF STRUCTURES SHALL BE WITHIN 1 INCH OF THE PROPOSED GRADE. ALL OTHER AREAS SHALL BE WITHIN 3 INCHES OF THE PROPOSED GRADE.

5. NEWLY GRADED AREAS SHALL BE PROTECTED FROM TRAFFIC AND EROSION. ALL SETTLEMENT OR WASHING AWAY THAT MAY OCCUR FROM ANY CAUSE PRIOR TO SEEDING OR ACCEPTANCE SHALL BE REPAIRED AND GRADES RE-ESTABLISHED TO THE REQUIRED ELEVATIONS AND SLOPES AT NO ADDITIONAL COST TO THE OWNER.

ON-SITE FIRE PROTECTION WATER SYSTEMS

1. COMBUSTIBLE CONSTRUCTION CANNOT OCCUR UNTIL PROPER DOCUMENTATION HAS BEEN SUBMITTED TO THE LOCAL FIRE MARSHALL. DOCUMENTATION SHALL SHOW THAT HYDRANTS HAVE BEEN INSTALLED, TESTED, AND ARE IN PROPER WORKING ORDER.

2. THE FIRE LINE SHALL BE PRESSURE TESTED TO 200 PSI OR 50 PSI OVER STATIC PRESSURE (WHICHEVER IS GREATER) FOR A MINIMUM OF TWO HOURS, TESTED IN ACCORDANCE WITH NFPA 24-9-2.

3. THE CONTRACTOR INSTALLING THE UNDERGROUND FIRE PROTECTION PIPING SHALL HOLD A PROPER CERTIFICATION AS REQUIRED AND ISSUED BY THE STATE.

4. HYDRANTS SHALL BE MUELLER "CENTURION" (CATALOG # A-423), SHALL CONFORM TO AWWA C502 AND SHALL BE FURNISHED COMPLETE WITH WRENCH AND OTHER APPURTENANCES. MANUFACTURER'S CERTIFICATION OF COMPLIANCE WITH AWWA C502 AND TESTS LISTED THEREIN WILL BE REQUIRED.

5. THERE SHALL BE NO TREES, SHRUBS, OR LANDSCAPING PLANTED WITHIN 4 FEET OF THE FIRE HYDRANTS OR IN AREAS DESIGNATED AS FIRE LANES.

6. THE CONTRACTOR SHALL PROVIDE A POST-CONSTRUCTION FIRE FLOW TEST WITNESSED AND APPROVED BY THE ENGINEER AND THE UTILITY. HYDRANTS SHALL DELIVER A MINIMUM OF 500 GPM WITH A RESIDUAL PRESSURE OF 20 PSI.

7. ADDITIONAL REQUIRMENTS CAN BE FOUND IN THE ALEXANDRIA CODE OF ORDINANCES, TITLE 4, CHAPTER 2, ARTICLE B.

UTILITY GENERAL NOTES

1. THE UTILITY DATA SHOWN ON THESE PLANS WAS LOCATED BY THE RESPECTIVE UTILITY, OR IS BASED ON UTILITY DRAWINGS, MAPS, OR FIELD RECONNAISSANCE.

2. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATIONS OF THESE UTILITIES WITH THE OWNER OF THE UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLANS OR LOCATED BY THE UTILITY COMPANY. ANY UTILITIES, WHETHER SHOWN ON THESE PLANS OR NOT, THAT INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE CLOSELY COORDINATED WITH THE ENGINEER AND THE RESPECTIVE UTILITY COMPANY FOR RELOCATION OR PROPER INSTRUCTION.

3. A SINGLE POINT UTILITY IDENTIFICATION SERVICE HAS BEEN SET UP FOR EXISTING UTILITIES. THE CONTRACTOR IS TO CONTACT "MISS UTILITY" OF VIRGINIA (811 OR 1-800-552-7001) AT LEAST TWO (2) AND NO MORE THAN FIVE (5) WORKING DAYS PRIOR TO THE SPECIFIC CONSTRUCTION ACTIVITY FOR FIELD LOCATION. NOTE THAT NOT ALL UTILITIES PARTICIPATE IN THIS PROGRAM. THE CONTRACTOR SHOULD CONTACT ALL NON-PARTICIPATING UTILITIES SEPARATELY FOR FIELD LOCATION OF THEIR FACILITIES AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.

4. THE CONTRACTOR SHALL KEEP LOCATE TICKETS UP-TO-DATE AT ALL TIMES.

5. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH EACH UTILITY AND ALL COSTS ASSOCIATED WITH THE PROTECTION OF EXISTING FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL ALSO COORDINATE NECESSARY RELOCATIONS OR OTHER CONSTRUCTION RELATED MATTERS WITH EACH UTILITY.

6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN IN SERVICE ALL EXISTING PIPING ENCOUNTERED DURING CONSTRUCTION UNLESS OTHERWISE INDICATED IN THE DRAWINGS. ANY PIPING WHICH CAN BE REMOVED DURING CONSTRUCTION WITHOUT UNDUE INTERRUPTION OF SERVICE MAY BE REMOVED AND REPLACED BY THE CONTRACTOR WITH THE PERMISSION OF THE OWNER, THE ENGINEER, AND THE UTILITY COMPANY.

7. THE CONTRACTOR SHALL FIELD LOCATE ALL WATER AND SEWER SERVICES AND LATERALS WITHIN THE PROPOSED CONSTRUCTION AREA PRIOR TO CONSTRUCTION AND ADJUST THE PROPOSED CONSTRUCTION AS NEEDED TO ACCOMMODATE THESE EXISTING LINES.

8. TYPICAL DETAILS AS SHOWN ARE TO ILLUSTRATE THE ENGINEER'S INTENT AND ARE NOT PRESENTED AS A SOLUTION TO ALL CONSTRUCTION PROBLEMS ENCOUNTERED IN THE FIELD. THE CONTRACTOR MAY ALTER THE METHOD OF CONSTRUCTION TO SUIT FIELD CONDITIONS, PROVIDING A PROPOSAL IS SUBMITTED FOR THE ALTERNATE METHOD TO THE ENGINEER FOR APPROVAL AND USES MATERIALS AS DESIGNATED IN THE SPECIFICATIONS.

9. FOR EACH RESPECTIVE PIPELINE CONSTRUCTION REQUIRED, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION, DEPTH, AND ALIGNMENT OF ALL EXISTING PIPES, CABLES, ETC. TO BE CROSSED OR CONNECTED TO. IF THE CONTRACTOR DEEMS NECESSARY (A) A CHANGE IN ALIGNMENT OR DEPTH, OR THE NEED FOR ADDITIONAL FITTINGS, BENDS, OR COUPLINGS, WHICH REPRESENT A DEPARTURE FROM THE CONTRACT DRAWINGS, OR (B) A NEED FOR RELOCATION OF EXISTING UTILITIES, THEN DETAILS OF SUCH DEPARTURES, RELOCATIONS, OR ADDITIONAL FITTINGS, INCLUDING CHANGES IN RELATED PORTIONS OF THE PROJECT AND THE REASONS THEREFORE, SHALL BE SUBMITTED, ALONG WITH SHOP DRAWINGS. APPROVED DEPARTURES FOR THE CONTRACTOR'S CONVENIENCE SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.

10. THE CONTRACTOR SHALL PROVIDE, AT HIS OWN EXPENSE ,ALL NECESSARY TEST PUMPING EQUIPMENT, WATER, WATER METERS, PRESSURE GAUGES, AND OTHER EQUIPMENT, MATERIAL AND FACILITIES REQUIRED FOR ALL HYDROSTATIC, LEAKAGE, AND PRESSURE TESTING. THE CONTRACTOR SHALL CONTACT THE ENGINEER AND THE OWNER IN WRITTEN FORM, FORTY-EIGHT (48) HOURS IN ADVANCE OF PROPOSED TESTING. THE CONTRACTOR SHALL PERFORM SATISFACTORY PRETESTING PRIOR TO NOTIFICATION.

STORM SEWER SYSTEMS

1. ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) UNLESS OTHERWISE INDICATED ON THE DRAWINGS. ROUND CONCRETE PIPE SHALL COMPLY WITH ASTM C76. ELLIPTICAL CONCRETE PIPE SHALL COMPLY WITH ASTM C507. PIPE JOINTS AND O-RING GASKETS SHALL COMPLY WITH ASTM C443. MINIMUM COVER OVER THE PIPE, INCLUDING COVER OVER THE BELL OF THE PIPE WHERE APPLICABLE, SHALL BE 30 INCHES.

2. REINFORCED CONCRETE PIPE SHALL NOT BE SHIPPED FROM THE MANUFACTURER UNTIL THE COMPRESSIVE STRENGTH OF THE PIPE HAS REACHED 4000 PSI AND A MINIMUM OF 5 DAYS HAVE PASSED SINCE COMPLETION OF THE MANUFACTURING OR REPAIR OF THE PIPE.

3. CORRUGATED POLYETHYLENE PIPE AND FITTINGS 4-INCH THROUGH 10-INCH IN DIAMETER SHALL COMPLY WITH AASHTO M252, TYPE S. PIPE 12-INCH THROUGH 48-INCH IN DIAMETER SHALL COMPLY WITH AASHTO M294, TYPE S, AND ASTM F2306. PIPE 54-INCH THROUGH 60-INCH IN DIAMETER SHALL COMPLY WITH AASHTO M294. VIRGIN MATERIAL FOR THE PRODUCTION OF PIPE AND FITTINGS SHALL BE HIGH DENSITY POLYETHYLENE CONFORMING TO THE MINIMUM REQUIREMENTS OF CELL CLASSIFICATION 424420C FOR 4-INCH THROUGH 10-INCH DIAMETERS AND 435400C FOR 12-INCH THROUGH 60-INCH DIAMETERS PER ASTM D3350. THE 12-INCH THROUGH 60-INCH VIRGIN PIPE MATERIAL SHALL COMPLY WITH THE NOTCHED CONSTANT LIGAMENT-STRESS (NCLS) TEST AS SPECIFIED IN ASTM F2306. BELL JOINTS FOR 4-INCH THROUGH 10-INCH DIAMETER PIPE SHALL BE PUSH-ON SLEEVE. BELL JOINTS FOR 12-INCH THROUGH 60-INCH DIAMETER PIPE SHALL BE INTEGRALLY FORMED ON PIPE. PIPE JOINTS SHALL BE WATERTIGHT PER ASTM D3212. GASKETS SHALL BE INSTALLED BY PIPE MANUFACTURER AND SHALL COMPLY WITH ASTM F477.

4. UNLESS OTHERWISE NOTED, UNDERDRAIN PIPE SHALL BE PERFORATED POLYVINYL CHLORIDE PIPE IN ACCORDANCE WITH ASTM F758. FILTER FABRIC UNDERDRAIN SOCK SHALL BE PER VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) STANDARDS.

5. ALL PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC. FILTER FABRIC SHALL BE IN ACCORDANCE AND INSTALLED PER VDOT STANDARDS. PROVIDE MINIMUM 12-INCH OVERLAP.

6. INSTALL POLYETHYLENE PIPE IN ACCORDANCE WITH ASTM D2321. BACKFILL AND COMPACT EVENLY ON EACH SIDE TO PREVENT DISPLACEMENT. MINIMUM COVER OVER POLYETHYLENE PIPE SHALL BE AS FOLLOWS: A) PIPE UNDER FLEXIBLE PAVEMENT, RIGID PAVEMENT, OR UNPAVED AREAS WHERE BEDDING IS SUITABLE SOILS AS DEFINED IN THE GENERAL NOTES: MINIMUM COVER SHALL BE 36 INCHES OR ONE PIPE DIAMETER, WHICHEVER IS GREATER; B) PIPE UNDER FLEXIBLE PAVEMENT, RIGID PAVEMENT, OR UNPAVED AREAS WHERE BEDDING IS MANUFACTURED AGGREGATES CLASS 1A OR 1B AS DEFINED IN ASTM D2321: MINIMUM COVER SHALL BE 30 INCHES OR ONE PIPE DIAMETER, WHICHEVER IS GREATER.

7. INSTALL UNDERDRAINS IN ACCORDANCE WITH VDOT SPECIFICATION. INSTALL CLEANOUTS AS SHOWN ON THE DRAWINGS.

8. PRIOR TO INSPECTIONS AND TESTING, CLEAN ALL INSTALLED LINES AND STRUCTURES.

9. ALL STORM PIPE SHALL BE SUBJECT TO LEAKAGE TESTING. WHEN THE GROUNDWATER LEVEL IS ABOVE THE TOP OF THE PIPE, AN INFILTRATION TEST SHALL BE PERFORMED BY SEALING OFF A LENGTH OF PIPE AND MEASURING THE DEPTH OF FLOW OVER A MEASURING WEIR, OR BY PUMPING THE INFILTRATED WATER INTO CONTAINERS FOR MEASUREMENT. TESTS SHALL BE CONDUCTED FOR A MINIMUM OF FOUR HOURS. INFILTRATION LEAKAGE SHALL NOT EXCEED 150 GALLONS PER 24 HOURS, PER INCH DIAMETER, PER MILE OF PIPE. WHEN THE GROUNDWATER LEVEL IS BELOW THE TOP OF THE PIPE, THE PIPE SHALL BE TESTED FOR LEAKAGE BY EXFILTRATION. EXFILTRATION LEAKAGE TEST SHALL CONSIST OF ISOLATING THE PARTICULAR SECTION, FILLING WITH WATER TO A POINT 4 FEET ABOVE THE TOP OF THE PIPE AT THE UPPER MANHOLE OR INLET, AND ALLOWING IT TO STAND NOT LESS THAN FOUR HOURS. THE SECTION SHALL THEN BE REFILLED WITH WATER UP TO THE ORIGINAL LEVEL AND AFTER TWO HOURS THE DROP IN WATER SURFACE SHALL BE MEASURED. THE COMPUTED LEAKAGE SHALL NOT EXCEED 150 GALLONS PER INCH DIAMETER, PER 24 HOURS, PER MILE OF PIPE.

AS-BUILT DRAWING REQUIREMENTS

1. AS-BUILT DRAWINGS SHALL BE REFERENCED HORIZONTALLY TO THE NORTH AMERICAN DATUM OF 1983 (NAD83) AS REQUIRED BY THE CITY OF ALEXANDRIA.

2. AS-BUILT DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR TO THE ENGINEER THREE WEEKS PRIOR TO FINAL INSPECTION. ALL AS-BUILT DATA SHALL BE PROVIDED BY A VIRGINIA LICENSED SURVEYOR, SIGNED, SEALED AND DATED BY THE RESPONSIBLE PARTY.

3. AT THE COMPLETION OF THE WORK, DELIVER THE DRAWINGS DOCUMENTING AS-BUILT INFORMATION, MEASURED BY A LICENSED SURVEYOR, TO THE ENGINEER, IN GOOD CONDITION AND FREE FROM ANY EXTRANEOUS NOTATION. THE AS-BUILT INFORMATION MUST MEET THE MINIMUM STANDARDS OF THE REGULATORY AGENCIES LISTED WITHIN THESE PLANS (LISTED ON THE COVER SHEET) AND AT A MINIMUM MUST INCLUDE THE FOLLOWING:

   A. ALL RIM, TOP AND INVERT ELEVATIONS FOR ALL PRECAST STRUCTURES.

   B. HORIZONTAL LOCATIONS AND VERTICAL ELEVATIONS FOR ALL UTILITY AND STORM STRUCTURES INCLUDING, BUT NOT LIMITED TO, POTABLE WATER, SANITARY SEWER, STORM SEWER PIPELINES, MANHOLES, INLETS AND CLEANOUTS, INCLUDING STRUCTURE TOP, WEIR OPENINGS, SKIMMER TOPS AND BOTTOMS, AND INVERT ELEVATIONS.

   C. DISTANCE ALONG PIPELINES BETWEEN STRUCTURES.

   D. STORMWATER POND TOP OF BERM AND POND BOTTOM ELEVATIONS AT A MINIMUM OF TEN LOCATIONS PER POND AT LOCATIONS DESIGNATED BY THE ENGINEER. STORMWATER MANAGEMENT STRUCTURES TOP, BOTTOM, INVERTS AND TOP OF ACCESS PORTS.

   E. STORMWATER CONTROL STRUCTURE DIMENSIONS AND ELEVATIONS, INCLUDING ALL WEIRS, SLOTS, ORIFICES, GRATES, AND SKIMMERS.

   F. STORMWATER POND TOP AND BOTTOM HORIZONTAL DIMENSIONS MEASURED AT A MINIMUM OF TEN LOCATIONS PER POND AT LOCATIONS DESIGNATED BY THE ENGINEER WITH LOCATIONS TIED TO PROPERTY CORNERS, EASEMENTS, AND RIGHTS-OF-WAY.

   G. STORMWATER CONVEYANCE CHANNEL SYSTEMS INCLUDING DIMENSIONS, ELEVATIONS, CONTOURS AND CROSS SECTIONS.

   H. HORIZONTAL LOCATIONS AND VERTICAL ELEVATIONS OF ALL UTILITY VALVES, FITTINGS, CONNECTION POINTS, ETC.

   I. VERTICAL ELEVATIONS OF ALL PIPELINES AT CROSSINGS OF POTABLE WATER MAINS (WHETHER THE WATER MAIN IS EXISTING OR NEW) IN ORDER TO DOCUMENT THAT THE MINIMUM REQUIRED VERTICAL SEPARATION HAS BEEN MET.

   J. UTILITY PIPELINE TIED HORIZONTALLY TO EDGE OF PAVEMENT AND RIGHT-OF-WAY LINES, LOCATED EVERY 200 FEET PLUS ALL CHANGES IN HORIZONTAL OFFSET.

   K. PAVEMENT WIDTH AND ELEVATIONS AT THE CENTERLINE AND EDGE OF PAVEMENT EVERY 200 FEET PLUS AT ALL CHANGES IN LONGITUDINAL SLOPE, CROSS SLOPE, INLET LOCATIONS, AND AT ALL DRIVEWAY AND STREET INTERSECTIONS. FOR PARKING LOTS, RECORD CENTERLINE AND EDGE OF PAVEMENT ELEVATIONS ALONG ALL DRIVE AISLES AND ISLANDS.

   L. ALL PARKING AREAS AND SIDEWALK RAMPS DESIGNATED FOR HANDICAP ACCESS SHALL CONTAIN HORIZONTAL AND VERTICAL MEASUREMENTS IN ORDER TO VERIFY REQUIRED WIDTHS AND SLOPES HAVE BEEN MET.

   M. HORIZONTAL AND VERTICAL DATA FOR ANY CONSTRUCTION THAT DEVIATES FROM THE APPROVED ENGINEERING DRAWINGS.

   N. WHERE THE PLANS CONTAIN SPECIFIC HORIZONTAL LOCATION DATA, SUCH AS STATION AND OFFSET, THE AS-BUILT DRAWINGS ARE TO REFLECT THE ACTUAL HORIZONTAL LOCATION.

   O. WHERE THE PLANS CONTAIN SPECIFIC VERTICAL ELEVATION DATA, THE AS-BUILT DRAWINGS ARE TO REFLECT THE ACTUAL MEASURED VERTICAL ELEVATION.

   P. SUFFICIENT SURFACE ELEVATIONS TO DOCUMENT LOCATION OF GRADE BREAKS AND DIVISIONS OR DRAINAGE AREAS.

PAVING, SIDEWALKS, AND CURBING

1. MATERIALS AND CONSTRUCTION METHODS FOR THE ROADWAY AND PAVING CONSTRUCTION SHALL BE IN ACCORDANCE WITH VDOT'S TRAFFIC ENGINEERING MANUAL AND ROADWAY DESIGN MANUALS, LATEST EDITIONS, UNLESS OTHERWISE INDICATED ON PLANS OR WITHIN PROJECT SPECIFICATIONS OUTSIDE THE RIGHT-OF-WAY.

2. ROADWAY PAVING, BASE, AND SUBGRADE THICKNESS SHALL BE IN ACCORDANCE WITH DETAILS ON THESE DRAWINGS.

3. SIDEWALKS ARE TO BE CONSTRUCTED IN THE AREAS AS SHOWN ON THE CONSTRUCTION PLANS, IN ACCORDANCE WITH DETAILS ON THESE DRAWINGS. HANDICAP ACCESSIBLE RAMPS SHALL BE IN ACCORDANCE WITH THE ADA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION, LATEST EDITION.

4. CURBING SHALL BE CONSTRUCTED WHERE NOTED ON THE CONSTRUCTION PLANS. CONCRETE FOR CURBS SHALL BE PER VDOT'S TRAFFIC ENGINEERING AND ROAD DESIGN MANUALS WITH A 28-DAY COMPRESSION STRENGTH OF 3500 PSI. ALL CURBS SHALL HAVE SAW CUT CONTRACTION JOINTS AND SHALL BE CONSTRUCTED AT INTERVALS NOT TO EXCEED 10'-0" ON CENTER. CONSTRUCTION OF CURBS SHALL BE IN CONFORMANCE WITH VDOT'S TRAFFIC ENGINEERING AND ROAD DESIGN MANUALS (LATEST EDITION) AND DETAILS PROVIDED ON THE CONSTRUCTION PLANS.

5. PERVIOUS PAVEMENT SHALL BE IN ACCORDANCE WITH SAFEWAY CRITERIA AND THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK AS UPDATED OR LATEST EDITION.

UTILITY SEPARATION REQUIREMENTS

1. PROVIDE A MINIMUM OF FIVE (5) FEET HORIZONTAL SEPARATION BETWEEN WATER/SEWER PIPELINES AND OTHER UTILITIES AND STRUCTURES (MANHOLES, INLETS, VAULTS, POLES, ETC.).

2. THE HORIZONTAL SEPARATION BETWEEN WATER MAINS AND SANITARY SEWER, STORM SEWER, WASTEWATER FORCE MAINS, STORMWATER FORCE MAINS, RECLAIMED WATER MAINS AND ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

   A. PROVIDE A TEN (10) FOOT MINIMUM HORIZONTAL SEPARATION BETWEEN WATER MAINS AND STORM SEWER, STORMWATER FORCE MAIN, VACUUM TYPE SANITARY SEWER AND RECLAIMED WATER MAIN.

   B. THE OUTSIDE OF WATER MAINS SHALL BE A MINIMUM OF SIX (6) FEET FROM THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY SANITARY SEWER AND WASTEWATER FORCE MAIN. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN THE OUTSIDE OF WATER MAINS AND THE OUTSIDE OF GRAVITY SANITARY SEWERS CAN BE REDUCED TO THREE (3) FEET WHERE THE BOTTOM OF THE WATER MAIN IS AT LEAST SIX (6) INCHES ABOVE THE TOP OF THE SEWER.

3. THE VERTICAL SEPARATION BETWEEN WATER MAINS AND SANITARY AND STORM SEWER, WASTEWATER OR STORMWATER FORCE MAINS, AND RECLAIMED WATER MAINS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

   A. WHEREVER POSSIBLE, WATER MAINS SHALL CROSS OVER EXISTING OR PROPOSED GRAVITY SANITARY SEWER, VACUUM TYPE SANITARY SEWER, AND STORM SEWER, SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX (6) INCHES ABOVE THE OUTSIDE OF THE SEWER. WHERE IT IS NOT POSSIBLE FOR THE WATER MAIN TO CROSS OVER EXISTING OR PROPOSED GRAVITY SANITARY SEWER, VACUUM TYPE SANITARY SEWER, AND STORM SEWER, THEN THE WATER MAIN CAN CROSS UNDER THESE TYPES OF PIPELINE SYSTEMS PROVIDED THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE PIPELINE. AT THE CROSSING, THE PROPOSED PIPE JOINTS SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE (3) FEET FROM VACUUM TYPE SANITARY SEWER OR STORM SEWER JOINTS, AND AT LEAST SIX (6) FEET FROM GRAVITY SANITARY SEWER JOINTS.

   B. WHEREVER POSSIBLE, WATER MAINS SHALL CROSS OVER EXISTING OR PROPOSED RECLAIMED WATER MAINS, WASTEWATER FORCE MAINS AND STORMWATER FORCE MAINS. WHETHER THE WATER MAIN CROSSES OVER OR UNDER THESE TYPES OF PIPELINE SYSTEMS, THE OUTSIDE OF THE WATER MAIN SHALL BE AT LEAST 12 INCHES FROM THE OUTSIDE OF THE EXISTING OR PROPOSED RECLAIMED WATER MAIN, WASTEWATER FORCE MAIN AND STORMWATER FORCE MAIN. AT THE CROSSING, THE PROPOSED PIPE JOINTS SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE (3) FEET FROM RECLAIMED WATER MAIN JOINTS AND STORMWATER FORCE MAIN JOINTS, AND AT LEAST SIX (6) FEET FROM THE JOINTS OF WASTEWATER FORCE MAINS.

4. NO WATER MAIN SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SANITARY SEWER MANHOLE.

5. NEW OR RELOCATED FIRE HYDRANTS SHALL BE LOCATED SUCH THAT THE UNDERGROUND DRAIN (WEEP HOLE) IS AT LEAST:

   A. THREE (3) FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, RECLAIMED WATER MAIN, OR VACUUM TYPE SANITARY SEWER.

   B. SIX (6) FEET FROM ANY EXISTING OR PROPOSED GRAVITY SANITARY SEWER AND WASTEWATER FORCE MAIN.

   C. TEN (10) FEET FROM ANY ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM SUCH AS SEPTIC TANKS, DRAINFIELDS, AND GREASE TRAPS. ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS DO NOT INCLUDE PACKAGE SEWAGE TREATMENT FACILITIES AND PUBLIC WASTEWATER TREATMENT FACILITIES.

6. THE FOLLOWING ARE ACCEPTABLE ALTERNATIVE CONSTRUCTION VARIANCES WHERE IT IS NOT POSSIBLE TO MEET THE SEPARATION REQUIREMENTS, AND ARE ONLY TO BE IMPLEMENTED UPON RECEIPT OF EXPRESSED WRITTEN CONSENT FROM THE ENGINEER. IMPLEMENTATION OF THESE MEASURES WITHOUT THE EXPRESSED WRITTEN CONSENT OF THE ENGINEER COULD RESULT IN THE REQUIREMENT THAT THE INSTALLED UNAPPROVED MEASURES BE REMOVED AND REPLACED AT NO COST TO THE OWNER.

   A. WHERE A WATER MAIN IS LESS THAN THE REQUIRED MINIMUM HORIZONTAL DISTANCE FROM ANOTHER PIPELINE AND/OR WHERE A WATER MAIN CROSSES ANOTHER PIPELINE AND JOINTS IN THE WATER MAIN ARE LESS THAN THE MINIMUM REQUIRED DISTANCE BETWEEN THE JOINTS IN THE OTHER PIPELINE:

      a. USE OF PRESSURE RATED PIPE CONFORMING TO AWWA STANDARDS FOR A GRAVITY OR VACUUM TYPE PIPELINE.

      b. USE OF WELDED, FUSED, OR OTHERWISE RESTRAINED JOINTS FOR EITHER PIPELINE.

      c. USE OF WATERTIGHT CASING PIPE OR CONCRETE ENCASEMENT AT LEAST FOUR (4) INCHES THICK FOR EITHER PIPE.

   B. WHERE A WATER MAIN IS LESS THAN THREE (3) FEET HORIZONTALLY FROM ANOTHER PIPELINE AND/OR WHERE A WATER MAIN CROSSES ANOTHER PIPELINE LESS THAN THE REQUIRED MINIMUM SEPARATION:

      a. USE OF PIPE OR CASING PIPE, HAVING HIGH IMPACT STRENGTH (AT LEAST EQUAL TO 0.25-INCH THICK DUCTILE IRON PIPE), OR CONCRETE ENCASEMENT AT LEAST FOUR (4) INCHES THICK FOR THE WATER MAIN AND FOR THE OTHER PIPELINE IF THE OTHER PIPELINE CONVEYS WASTEWATER OR RECLAIMED WATER.

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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VA. LIC. NO. 0402047801
DATE: Aug 25, 2011

No.	Date	Revision	By
1	08/26/11	REVISION TO PLAN PER CITY OF ALEXANDRIA COMMENTS DATED AUGUST 5, 2011	
2			
3			
4			
5			
6			

Designed by:	J.L.
Drawn by:	R.K.R
Checked by:	J.L.
Approved by:	D.P.M.
Scale:	
Date:	07-15-2011
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GENERAL NOTES
SAFEWAY STORE #3250 (R4003)
SAFEWAY
3526 KING STREET
ALEXANDRIA, VIRGINIA 22302

Sheet No.
C-2

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SIGNS AND PAVEMENT MARKINGS

1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND THE LATEST IMPLEMENTED EDITION OF THE VDOT TRAFFIC ENGINEERING MANUAL. GENERALLY, ALL MARKINGS SHALL CONFORM TO THE FOLLOWING: 6-INCH EDGE LINES, 6-INCH LANE LINES, 6-INCH SINGLE CENTERLINES, AND 6-INCH DOUBLE LINE PATTERNS, UNLESS OTHERWISE NOTED ON THE PLANS.
2. PARKING STALL PAVEMENT MARKINGS SHALL BE DOUBLE COATED PAINT. PAINT SHALL MEET THE REQUIREMENTS OF VDOTSTANDARDS, NON-REFLECTIVE WHITE TRAFFIC PAINT.
3. ON-SITE PAVEMENT MARKINGS SHALL BE DOUBLE COATED PAINT. PAINT SHALL MEET THE REQUIREMENTS OF VDOT STANDARDS, NON-REFLECTIVE WHITE TRAFFIC PAINT.
4. ALL ROADWAY TRAFFIC SIGNS SHALL BE MANUFACTURED USING HIGH INTENSITY RETROREFLECTIVE MATERIALS. THE BACK OF ALL FINISHED PANELS SHALL BE STENCILED WITH THE DATE OF FABRICATION, THE FABRICATOR'S INITIALS, AND THE NAME OF THE SHEETING IN THREE-INCH LETTERS.
5. INTERNAL SITE TRAFFIC SIGNS ARE NOT REQUIRED TO BE RETROREFLECTIVE.
6. THE CONTRACTOR SHALL VERIFY THE REQUIRED LENGTH OF THE SIGN COLUMN SUPPORTS IN THE FIELD PRIOR TO FABRICATION.
7. ALL PAVEMENT MARKINGS REQUIRE LAYOUT APPROVAL IN THE FIELD BY THE ENGINEER PRIOR TO INSTALLATION.
8. PRIOR TO FINAL PAVEMENT MARKING INSTALLATION, A TWO WEEK CURE TIME OF THE ASPHALT IS REQUIRED.

EXCAVATION, TRENCHING, AND FILL

1. THE CONTRACTOR SHALL RECOGNIZE AND ABIDE BY ALL OSHA EXCAVATION SAFETY STANDARDS. ANY MATERIAL, CONSTRUCTION METHODS, OR MATERIAL COST TO COMPLY WITH THESE LAWS SHALL BE INCIDENTAL TO THE CONTRACT.
2. ROUGH EXCAVATE AND GRADE ANY PROPOSED STORMWATER PONDS AT THE START OF SITE GRADING ACTIVITIES. DIRECT SITE RUNOFF TO THE PONDS TO MINIMIZE RUNOFF TO OFFSITE AREAS.
3. FIELD DENSITY TESTING FREQUENCIES: A) ONE TEST FOR EACH 10,000 SQUARE FEET OR FRACTION THEREOF PER LIFT OF GENERAL BACKFILLING, MINIMUM 2 TESTS EACH LAYER; B) ONE TEST FOR EACH 100 SQUARE FEET OR FRACTION THEREOF OF BACKFILL AROUND AND UNDER STRUCTURES; C) ONE TEST FOR EACH 300 LINEAL FEET OR FRACTION THEREOF PER LIFT OF GENERAL BACKFILLING IN THE PIPELINE TRENCH; D) ONE TEST PER LIFT PER EACH CHANGE IN TYPE OF FILL; E) ONE TEST PER 1000 SQUARE FEET OF PAVEMENT SUBGRADE, MINIMUM OF 2 TESTS.
4. IT IS INTENDED THAT PREVIOUSLY EXCAVATED MATERIALS CONFORMING TO THE FOLLOWING REQUIREMENTS BE UTILIZED WHEREVER POSSIBLE.
   A. ACCEPTABLE MATERIALS: AASHTO M145 CLASSIFICATION A-1, A-3, A-2-4, A-2-6; ASTM D2487 CLASSIFICATION GW, GP, GM, SM, SW, SP; UNLESS OTHERWISE DISAPPROVED WITHIN THE SOIL AND SUBSURFACE INVESTIGATION REPORTS. NO MORE THAN 12% OF ACCEPTABLE MATERIALS SHALL PASS THE NUMBER 200 SIEVE.
   B. UNACCEPTABLE MATERIALS: AASHTO M145 CLASSIFICATION A-2-5, A-2-7, A-4, A-5, A-6, A-7, A-8; ASTM D2487 CLASSIFICATION GC, SC, ML, MH, CL, CH, OL, OH, PT; UNLESS OTHERWISE APPROVED WITHIN THE SOIL AND SUBSURFACE INVESTIGATION REPORTS.
5. PROVIDE BARRIERS, WARNING LIGHTS AND OTHER PROTECTIVE DEVICES AT ALL EXCAVATIONS.
6. SIDEWALKS, ROADS, STREETS, AND PAVEMENTS SHALL NOT BE BLOCKED OR OBSTRUCTED BY EXCAVATED MATERIALS, EXCEPT AS AUTHORIZED BY THE ENGINEER, IN WHICH CASE ADEQUATE TEMPORARY PROVISIONS MUST BE MADE FOR SATISFACTORY TEMPORARY PASSAGE OF PEDESTRIANS AND VEHICLES. MINIMIZE INCONVENIENCE TO PUBLIC TRAVEL OR TO TENANTS OCCUPYING ADJOINING PROPERTY.
7. FURNISH, INSTALL, AND MAINTAIN, WITHOUT ADDITIONAL COMPENSATION, SHEETING, BRACING, AND SHORING SUPPORT REQUIRED TO KEEP EXCAVATIONS WITHIN THE PROPERTY OR EASEMENTS PROVIDED, TO SUPPORT THE SIDES OF THE EXCAVATION, AND TO PREVENT ANY MOVEMENT WHICH MAY DAMAGE ADJACENT PAVEMENTS OR STRUCTURES, DAMAGE OR DELAY THE WORK, OR ENDANGER LIFE AND HEALTH. VOIDS OUTSIDE THE SUPPORTS SHALL BE IMMEDIATELY FILLED AND COMPACTED.
8. SHEETING, SHORING, AND BRACING USED FOR THE SUPPORT OF EXCAVATIONS OVER 20 FEET DEEP SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED BY THE STATE OF VIRGINIA.
9. ALL EXCAVATIONS SHALL BE MADE BY OPEN CUT UNLESS OTHERWISE INDICATED. SLOPE SIDES OF TRENCHES IN ACCORDANCE WITH OSHA REQUIREMENTS AND THE RECOMMENDATIONS CONTAINED WITHIN THE PROJECT GEOTECHNICAL REPORT.
10. EXCAVATE TRENCHES TO DEPTH INDICATED OR REQUIRED FOR INDICATED FLOW LINES AND INVERT ELEVATIONS. OVEREXCAVATE TRENCHES A MINIMUM OF 2 FEET WHERE EXCAVATIONS OCCUR WITHIN UNSUITABLE SOILS, AND REPLACE OVEREXCAVATED MATERIAL WITH SUITABLE SOILS.
11. EXCEPT AS OTHERWISE INDICATED, EXCAVATE FOR PRESSURE PIPING SO TOP OF PIPING IS MINIMUM 3 FEET BELOW FINISHED GRADE.
12. TRENCH BOTTOMS AND THE BOTTOMS OF ALL STRUCTURES SHALL BE KEPT DRY, COMPACTED, AND STABLE TO A DEPTH TWO FEET BELOW THE BOTTOM OF THE TRENCH OR STRUCTURE.
13. ALL BEDDING, FILL, AND BACKFILL MATERIAL SHALL BE SUITABLE SOILS OR FLOWABLE FILL. WHERE TRENCH OR EXCAVATION IS WITHIN THE INFLUENCE AREA OF ROADWAYS, STRUCTURES, FOUNDATIONS, OR SLABS, PLACE BACKFILL IN LAYERS OF 8 INCH LOOSE DEPTH. IN ALL OTHER AREAS, PLACE FILL AND BACKFILL IN LAYERS OF 12 INCH LOOSE DEPTH.
14. MINIMUM DENSITY REQUIREMENT (ASTM D1557 OR AASHTO T180): FILL UNDER AND WITHIN THE INFLUENCE AREA OF ROADWAYS, STRUCTURES, SLABS, FOUNDATIONS = 98 PERCENT; POND AND ROAD EMBANKMENT FILL = 95 PERCENT; ALL OTHER AREAS = 90 PERCENT.

TRAFFIC CONTROL

1. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A MAINTENANCE OF TRAFFIC (M.O.T.) PLAN PRIOR TO CONSTRUCTION. THE M.O.T. PLAN SHALL SHOW ALL PROPOSED TRAFFIC CONTROL SIGNS, PAVEMENT MARKINGS, BARRICADES, AND PEDESTRIAN ROUTES AND SHALL DETAIL ALL PROPOSED CONSTRUCTION SEQUENCING. THE M.O.T. PLAN SHALL BE APPROVED BY THE ENGINEER, OWNER, AND ROADWAY JURISDICTIONAL AGENCY PRIOR TO CONSTRUCTION. ALL PROPOSED ROADWAY AND DRIVEWAY LANE CLOSURES SHALL BE RESTRICTED TO THE HOURS BETWEEN 9:00 A.M. AND 4:00 P.M. UNLESS OTHERWISE AUTHORIZED IN THE APPROVED M.O.T. PLAN THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING THE PEDESTRIANS PATHWAYS ALONG THE PROJECT DURING CONSTRUCTION.
2. ALL CONSTRUCTION SIGNING AND MARKINGS SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING CONSTRUCTION IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL (2003 OR LATEST EDITION) AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THE PLACEMENT OF THE SIGNING AND MARKINGS SHALL BE APPROVED IN THE FIELD BY THE ENGINEER PRIOR TO CONSTRUCTION.
3. INSPECT TRAFFIC CONTROL DEVICES ON A DAILY BASIS TO ENSURE PLACEMENT OF BARRICADES AND FUNCTION OF LIGHTS IS MAINTAINED THROUGHOUT CONSTRUCTION.
4. CONTACT PROPERTY OWNERS AFFECTED BY CONSTRUCTION. COORDINATE TEMPORARY DRIVEWAY CLOSURES AND SEQUENCING. MAINTAIN ACCESS FOR ALL PROPERTY OWNERS DURING CONSTRUCTION.
5. WET UNSTABILIZED AREAS AS NECESSARY TO CONTROL DUST.
6. ADJUST TRAFFIC CONTROL DEVICES AS REQUIRED UNDER EMERGENCY CONDITIONS.
7. THE CONTRACTOR IS EXPECTED TO COORDINATE ITS ACTIVITIES WITH OTHER CONTRACTORS WHO MAY BE WORKING IN THE IMMEDIATE VICINITY.
8. WHEN WORK OCCURS WITHIN 15 FEET OF ACTIVE ROAD TRAVEL LANES BUT NO CLOSER THAN 2 FEET FROM THE EDGE OF PAVEMENT, SIGNAGE AND WARNING DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE VIRGINIA WORK PROTECTION MANUAL.
9. WHEN PAVEMENT DROP-OFFS ARE PRESENT. THE PLACEMENT OF TEMPORARY TRAFFIC CONTROL DEVICES SHALL FOLLOW THE VIRGINIA WORK PROTECTION MANUAL.

WATER DISTRIBUTION SYSTEMS

1. THE ENTITY THAT WILL OPERATE AND MAINTAIN THE WATER SHOWN ON THESE PLANS IS VIRGINIA-AMERICAN WATER. THE CONTRACTOR SHALL MEET ALL THE REQUIREMENTS OF VIRGINIA-AMERICAN WATER.
2. ALL WATER AND RECLAIMED WATER MAIN PIPE SHALL BE EITHER DUCTILE IRON OR PVC, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
3. BURIED DUCTILE IRON PIPE SHALL CONFORM WITH ANSI/AWWA C150/A21.50 AND C151/ A21.51, AND SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 PSI. BURIED PIPE SHALL COMPLY WITH THE FOLLOWING PRESSURE CLASS (PC) DESIGNATIONS UNLESS OTHERWISE INDICATED ON THE DRAWINGS: A) 12--INCH DIAMETER AND SMALLER = PC 350; B) 14-INCH THROUGH 24-INCH DIAMETER = PC 250; C) 30-INCH THROUGH 64-INCH DIAMETER = PC 200.
4. EXPOSED PIPE 4-INCH AND LARGER SHALL BE DUCTILE IRON FLANGED AND SHALL CONFORM WITH AWWA/ANSI C115/A21.15, AND SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 PSI. FLANGED PIPE SHALL COMPLY WITH THE FOLLOWING THICKNESS CLASS (TC) DESIGNATIONS UNLESS OTHERWISE INDICATED ON THE DRAWINGS: 4-INCH DIAMETER = TC 54; 6-INCH THROUGH 24-INCH DIAMETER = TC 53
5. DUCTILE IRON PIPE AND FITTINGS WITHIN 10 FEET OF GAS MAINS SHALL HAVE AN 8-MIL POLYETHYLENE WRAP IN ACCORDANCE WITH ANSI/ASTM D1248.
6. PVC PIPE 4-INCH TO 12-INCH SHALL CONFORM TO AWWA C900. PIPE 14INCH TO 36-INCH SHALL CONFORM TO AWWA C905. PIPE SHALL CONFORM TO ASTM D1784, TYPE I, GRADE I, 4000 PSI DESIGN STRESS, AND SHALL BE NATIONAL SANITATION FEDERATION (NSF) APPROVED. PIPE SHALL BE CLASS 150 (DR18) WITH MARKINGS ON EACH SECTION SHOWING CONFORMANCE TO THE ABOVE SPECIFICATIONS. JOINTS SHALL BE RUBBER GASKETED CONFORMING TO AWWA C900 OR C905 THE BELL SHALL BE INTEGRAL WITH THE PIPE AND OF EQUAL OR GREATER PRESSURE RATING. THE BELL OF PIPE AND FITTINGS USING PUSH-ON JOINTS SHALL HAVE AN INTEGRAL GROOVE TO RETAIN THE GASKET IN PLACE.
7. ALL FITTINGS SHALL BE MANUFACTURED OF DUCTILE IRON, CONFORMING TO ANSI/AWWA C110/A21.10 OR ANSI/AWWA C153/A21.53. ALL FULL BODY (C110/A21.10) FITTINGS SHALL BE PRESSURE RATED TO 250 PSI, MINIMUM. ALL COMPACT FITTINGS (C153/A21.53) SHALL BE PRESSURE RATED TO 350 PSI, MINIMUM.
8. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE LINED AND COATED. INTERIOR LINING SHALL BE STANDARD THICKNESS ANSI A21.4 CEMENT MORTAR LINING AND BITUMINOUS SEAL COAT. EXTERIOR COATING FOR BURIED PIPE AND FITTINGS SHALL HAVE AN ANSI A21.51 OR A21.10 BITUMINOUS COATING. EXTERIOR COATING OF EXPOSED PIPE AND FITTINGS SHALL BE FACTORY APPLIED RUST INHIBITING EPOXY PRIMER, MINIMUM 3 MILS DRY FILM THICKNESS. AFTER INSTALLATION, EXTERIOR SURFACES SHALL BE PAINTED WITH TWO COATS TNEMEC SERIES 2 TNEME-GLOSS, GLIDDEN LIFE MASTER PRO HIGH PERFORMANCE ACRYLIC NO. 6900 SERIES, OR EQUAL, AT MINIMUM 4 MILS DRY FILM THICKNESS PER COAT. PAINT COLOR TO BE IN ACCORDANCE WITH LOCAL UTILITY REQUIREMENTS.
9. MECHANICAL AND PUSH-ON JOINTS FOR DUCTILE IRON PIPE AND FITTINGS SHALL BE RUBBER GASKETED, CONFORMING TO ANSI/AWWA C111/A21.11. LUBRICANTS OTHER THAN THAT FURNISHED BY THE PIPE MANUFACTURER WITH THE PIPE SHALL NOT BE USED.
10. ALL FITTINGS SHALL BE RESTRAINED IN ACCORDANCE WITH DIPRA, "THRUST RESTRAINT DESIGNED FOR DUCTILE IRON PIPE". PIPE JOINTS SHALL BE RESTRAINED UPSTREAM AND DOWNSTREAM OF FITTINGS IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS OR THE TABLE SHOWN IN THE DRAWINGS, WHICHEVER IS GREATER. DUCTILE IRON RESTRAINED JOINTS SHALL BE AMERICAN FAST GRIP GASKET, FLEX-RING, FIELD FLEX-RING, LOK-RING, US PIPE TR-FLEX, EBAA MEGALUG, OR APPROVED EQUAL. PVC PIPE JOINTS SHALL BE RESTRAINED USING MECHANICAL DEVICES, UNI-FLANGE BLOCK BUSTER SERIES 1350 OR ENGINEER APPROVED EQUAL.
11. ALL SERVICE PIPING (½"-INCH TO 3-INCH) SHALL BE POLYETHYLENE. SDR-PR PE PIPE SHALL BE MANUFACTURED FROM PE3408 AND SHALL CONFORM TO AWWA C901. ALL PIPE SHALL BE DR9, PRESSURE CLASS 200 PSI. PIPE AND FITTINGS SHALL BE NSF APPROVED FOR THE USAGE TO WHICH THEY ARE TO BE APPLIED. JOINTS IN SDR-PR PE PIPE SHALL BE BUTT HEAT FUSION OR SOCKET HEAT FUSION TYPE. FITTINGS SHALL BE MANUFACTURED OF THE SAME MATERIAL AS THE PIPE AND SHALL BE OF THE SAME SDR OR LESS. PROVIDE ADAPTERS AS REQUIRED TO JOIN PE PIPE TO PIPE, FITTINGS AND EQUIPMENT OF OTHER MATERIALS.
12. ALL SERVICE SADDLES SHALL CONSIST OF DUCTILE IRON BODIES IN ACCORDANCE WITH ASTM A536, WITH DOUBLE STAINLESS STEEL STRAPS, BOLTS, WASHERS AND NUTS. STAINLESS STEEL TO BE TYPE 304. NUTS TO BE TEFLON COATED. DUCTILE IRON BODY TO BE FUSION BONDED NYLON COATING, MINIMUM THICKNESS 12 MILS. OUTLET OF SADDLE TO HAVE NPT THREADS.
13. UNLESS OTHERWISE NOTED IN THE PLANS, THE UTILITY COMPANY SHALL PROVIDE AND INSTALL WATER METERS AND RECLAIMED WATER METERS. CONTRACTOR SHALL CONSTRUCT WATER SERVICE AND RECLAIMED WATER SERVICE TO THE CORPORATION STOP.
14. UNLESS OTHERWISE INDICATED OR SPECIFIED, ALL VALVES TWO INCHES AND SMALLER SHALL BE ALL BRASS OR BRONZE; VALVES OVER TWO INCHES SHALL BE IRON BODY, FULLY BRONZE OR BRONZE MOUNTED.
15. VALVES 4 INCHES AND LARGER SHALL BE LINED AND COATED. INTERIOR OF VALVES SHALL BE COATED WITH A RUST INHIBITING EPOXY PRIMER, FOLLOWED BY A COAL TAR EPOXY, TOTAL MINIMUM DRY FILM THICKNESS OF 16 MILS, APPLIED AT THE FACTORY. EXTERIOR COATING ON BURIED VALVES SHALL BE RUST INHIBITING EPOXY PRIMER, FOLLOWED BY A COAL TAR EPOXY, TOTAL MINIMUM DRY FILM THICKNESS OF 16 MILS, APPLIED AT THE FACTORY. EXTERIOR COATING OF EXPOSED VALVES SHALL BE FACTORY-APPLIED RUST INHIBITING EPOXY PRIMER, MINIMUM 3 MILS DRY FILM THICKNESS. AFTER INSTALLATION, EXTERIOR SURFACES SHALL BE PAINTED WITH TWO COATS TNEMEC SERIES 2 TNEME-GLOSS, GLIDDEN LIFE MASTER PRO HIGH PERFORMANCE ACRYLIC NO. 6900 SERIES, OR EQUAL, AT 4 MILS MINIMUM DRY FILM THICKNESS PER COAT. PAINT COLOR TO BE IN ACCORDANCE WITH LOCAL UTILITY REQUIREMENTS.
16. ALL VALVES 12-INCH AND SMALLER SHALL BE GATE VALVES UNLESS OTHERWISE INDICATED ON THE DRAWINGS. GATE VALVES 3 INCHES TO 12 INCHES SHALL CONFORM TO AWWA C509. THE VALVES SHALL BE IRON BODY, CAST IRON FULLY ENCAPSULATED MOLDED RUBBER WEDGE COMPLYING WITH ASTM D2000, NON-RISING STEM WITH O-RING SEALS. VALVES SHALL OPEN COUNTER-CLOCKWISE.
17. TAPPING VALVES AND SLEEVES SHALL BE APPROVED AWWA TYPE OF THE SIZE REQUIRED. VALVES SHALL CONFORM TO THE REQUIREMENTS OF AWWA C509.
18. VALVES 14-INCH AND LARGER SHALL BE BUTTERFLY VALVES. BUTTERFLY VALVES SHALL MEET OR EXCEED THE DESIGN STRENGTH, TESTING AND PERFORMANCE REQUIREMENTS OF AWWA C504, CLASS 150. VALVE BODY SHALL BE MECHANICAL JOINT END TYPE VALVE CONSTRUCTED OF CAST IRON OR DUCTILE IRON. DISC SHALL BE ONE PIECE CAST DESIGN WITH NO EXTERNAL RIBS TRANSVERSE TO FLOW. DISC SHALL BE CAST IRON OR DUCTILE IRON. THE RESILIENT SEAT SHALL MATE WITH A 304 OR 316 STAINLESS STEEL SURFACE.
19. VALVE SEATS SHALL BE MECHANICALLY RETAINED, AND MAY BE INSTALLED ON EITHER THE BODY OR DISC. O-RING SEATS ON VALVE DISCS ARE UNACCEPTABLE. SEATS FOR VALVES 14-INCH DIAMETER AND LARGER SHALL BE FULLY FIELD REPLACEABLE WITHOUT THE USE OF SPECIAL TOOLS. OPERATORS OF THE ENCLOSED TRAVELING-NUT TYPE SHALL BE PROVIDED UNLESS OTHERWISE INDICATED.
20. ALL BURIED VALVES SHALL BE PROVIDED WITH ADJUSTABLE VALVE BOXES APPROXIMATELY 5 INCHES IN DIAMETER WITH A MINIMUM THICKNESS OF 3/16-INCH CAST IRON. BOXES SHALL BE OF SUFFICIENT LENGTH TO OPERATE ALL VALVES BURIED IN THE GROUND, CONSISTING OF BASE, CENTER SECTION, AND TOP SECTION WITH COVER. VALVE BOXES LOCATED IN UNPAVED AREAS SHALL BE SLIP TYPE DESIGN TO PERMIT MOVEMENT OF THE TOP SECTION WITHOUT TRANSMITTING FORCES ONTO THE VALVE BODY. VALVE BOXES CAST INTO CONCRETE OR ASPHALT SURFACING SHALL HAVE BRASS COVERS. ALL VALVE BOX COVERS SHALL BE INTERNALLY CHAINED TO VALVE BOXES WITH AN APPROXIMATE 18-INCH GALVANIZED CHAIN. VALVE BOX COVERS SHALL BE CAST WITH THE INSCRIPTION "WATER" OR "RECLAIMED WATER".
21. PVC PIPE SHALL BE COLOR CODED BLUE (WATER MAINS) OR PURPLE (RECLAIMED WATER MAINS), STENCILED "WATER LINE" OR "RECLAIMED WATER LINE", AS APPLICABLE, (2-INCH LETTERING ON TWO SIDES OF THE PIPE IN AT LEAST THREE AREAS PER PIPE SECTION).
22. INSTALL IDENTIFICATION TAPE ALONG ALL DUCTILE IRON PIPE AND PVC PIPE, MINIMUM THICKNESS 4 MILS, WIDTH 6 INCHES, LETTER SIZE 1 INCH. APPLY TAPE TO SURFACE OF PIPE, CONTINUOUSLY EXTENDING FROM JOINT TO JOINT. TAPE COLOR AND LETTERING SHALL BE BLACK PRINTING ON BLUE BACKGROUND (WATER MAINS), OR BLACK PRINTING ON PURPLE BACKGROUND (RECLAIMED WATER MAINS). PLACE TAPE AS FOLLOWS: 2-INCH TO 8-INCH PIPE - CENTER ALONG TOP HALF OF PIPE; 10-INCH TO 18-INCH PIPE - PLACE ALONG BOTH SIDES OF THE TOP HALF OF PIPE; 20"-INCHPIPE AND LARGER - PLACE ON BOTH SIDES OF TOP HALF OF PIPE WITH A THIRD STRIP CENTERED ALONG TOP HALF OF PIPE.
23. INSTALL WARNING TAPE ALONG ALL PIPELINES, PLACED 2 FEET ABOVE PIPE. TAPE SHALL BE 6-INCH WIDE VINYL CONTINUOUS TAPE. TAPE SHALL BE COLORED BLUE (WATER MAINS) OR PURPLE (RECLAIMED WATER MAINS) WITH BLACK LETTERING, CODED AND WORDED "CAUTION: WATER MAIN BURIED BELOW", OR "CAUTION: RECLAIMED WATER MAIN BURIED BELOW", AS APPLICABLE.
24. INSTALL LOCATING WIRE ALONG ALL PVC PIPELINES. WIRE SHALL BE COLOR-CODED 10 GAUGE CONTINUOUS INSULATED WIRE. COLOR CODING SHALL BE SIMILAR TO WARNING TAPE COLORS. INSTALL LOCATOR WIRE ALONG ALL PRESSURIZED PIPELINES 2-INCH AND LARGER. LOOP WIRE INTO ALL VALVE BOXES. LOOPING TO OCCUR EVERY 500 FEET MINIMUM. WHERE THERE ARE NO VALVE BOXES TO ALLOW LOOPING, PROVIDE ACCESS BOXES. CHECK WIRE FOR ELECTRICAL CONTINUITY.
25. ALL CHANGES IN DIRECTION SHALL BE MADE WITH FITTINGS OR APPROVED JOINT DEFLECTION. BENDING OF PIPE, EXCEPT COPPER AND POLYETHYLENE, IS PROHIBITED. JOINT DEFLECTION SHALL NOT EXCEED 75% OF THE MANUFACTURER'S RECOMMENDED MAXIMUM DEFLECTION.
26. TEST PROCEDURES SHALL BE APPROVED BY THE ENGINEER. ALL TESTS SHALL BE MADE IN THE PRESENCE OF THE ENGINEER AND UTILITY REPRESENTATIVE. NOTIFY THE ENGINEER AND THE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY WORK IS TO BE INSPECTED OR TESTED.
27. PROVIDE ALL EQUIPMENT FOR TESTING. INCREMENTS ON GAGES USED FOR LOW PRESSURE AIR TESTING SHALL BE OF SCALED TO THE NEAREST 0.1 PSI. GAGES, PUMPS, AND HOSES SHALL BE IN GOOD WORKING ORDER WITH NO NOTICEABLE LEAKS.
28. ALL SERVICE LINES SHALL BE COMPLETED PRIOR TO TESTING, AND ARE SUBJECT TO THE SAME TESTING REQUIREMENTS AS THE MAIN LINE.
29. APPLY HYDROSTATIC TEST PRESSURE OF 150 PSI (WATER MAINS), 200 PSI OR 50 PSI ABOVE STATICE (WHICHEVER IS GREATER) (FIRE MAINS), OR 100 PSI (RECLAIMED WATER MAINS) FOR 10 MINUTES AND FOR SUCH ADDITIONAL PERIOD NECESSARY FOR THE ENGINEER TO COMPLETE THE INSPECTION OF THE LINE UNDER TEST. DO NOT EXCEED PIPE MANUFACTURER'S SUGGESTED TIME DURATION AT THE TEST PRESSURE. IF DEFECTS ARE NOTED, REPAIRS SHALL BE MADE AND THE TEST REPEATED UNTIL ALL PARTS OF THE LINE WITHSTAND THE TEST PRESSURE.
30. APPLY LEAKAGE TEST PRESSURE OF 150 PSI (WATER MAINS), 200 PSI OR 50 PSI ABOVE STATICE (WHICHEVER IS GREATER) (FIRE MAINS) OR 100 PSI (RECLAIMED WATER MAINS). MAINTAIN RESSURE AT A MAXIMUM VARIATION OF 5% DURING THE ENTIRE LEAKAGE TEST. THE DURATION OF THE LEAKAGE TEST SHALL BE TWO HOURS MINIMUM, AND FOR SUCH ADDITIONAL TIME NECESSARY FOR THE ENGINEER TO COMPLETE INSPECTION OF THE SECTION OF LINE UNDER TEST. LEAKAGE MEASUREMENTS SHALL NOT BE STARTED UNTIL A CONSTANT TEST PRESSURE HAS BEEN ESTABLISHED. THE LINE LEAKAGE SHALL BE MEASURED BY MEANS OF A WATER METER INSTALLED ON THE SUPPLY SIDE OF THE PRESSURE PUMP.
31. NO LEAKAGE IS ALLOWED IN EXPOSED PIPING, BURIED PIPING WITH FLANGED, THREADED, OR WELDED JOINTS OR BURIED NON-POTABLE PIPING IN CONFLICT WITH POTABLE WATER LINES.
32. TESTED SECTIONS OF BURIED PIPING WITH SLIP-TYPE OR MECHANICAL JOINTS WILL NOT BE ACCEPTED IF IT HAS A LEAKAGE RATE IN EXCESS OF THAT RATE DETERMINED BY THE FORMULA L = SxDx(P^0.5)/148000, WHERE L = MAXIMUM PERMISSIBLE LEAKAGE RATE, IN GALLONS PER HOUR, THROUGHOUT THE ENTIRE LENGTH OF LINE BEING TESTED; S = LENGTH OF LINE TESTED (IN FEET); D = NOMINAL INTERNAL DIAMETER (IN INCHES) OF THE PIPE;AND P = THE SQUARE ROOT OF THE ACTUAL PRESSURE IN PSIG ON ALL JOINTS IN THE TESTED PORTION OF THE LINE. THIS ACTUAL PRESSURE SHALL BE DETERMINED BY FINDING THE DIFFERENCE BETWEEN THE AVERAGE ELEVATION OF ALL TESTED PIPE JOINTS AND THE ELEVATION OF THE PRESSURE GAUGE AND ADDING THE DIFFERENCE IN ELEVATION HEAD TO THE AUTHORIZED TEST PRESSURE.
33. ALL APPARENT LEAKS DISCOVERED WITHIN ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER SHALL BE LOCATED AND REPAIRED BY THE CONTRACTOR, REGARDLESS OF THE TOTAL LINE LEAKAGE RATE.
34. PRIOR TO DISINFECTION, CONDUCT FULL DIAMETER FLUSHING OF PIPELINE IN SECTIONS IN ORDER TO REMOVE ANY SOLIDS OR CONTAMINATED MATERIAL THAT MAY HAVE BECOME LODGED IN THE PIPE. OBTAIN A MINIMUM FLUSHING VELOCITY OF 2.5 FEET PER SECOND PER AWWA C651. ALL TAPS REQUIRED FOR FLUSHING AND THE TEMPORARY OR PERMANENT RELEASE OF AIR AS NEEDED FOR FLUSHING SHALL BE PROVIDED BY THE CONTRACTOR.
35. DISINFECT ALL POTABLE WATER LINES, FIRE LINES, VALVES, FITTINGS, AND HYDRANTS. ALL DISINFECTION WORK SHALL BE IN ACCORDANCE WITH THE VIRGINIA DEPARTMENT OF HEALTH.
36. IF ANY REQUIREMENTS OF THIS SECTION ARE IN CONFLICT WITH REQUIREMENTS OF THE AUTHORITY FOR DISINFECTION, THOSE OF THE AUTHORITY SHALL GOVERN. THE WATER MAIN DISINFECTION AND BACTERIOLOGICAL SAMPLING AND METHODS OF DISINFECTION FOR ALL WATER CONTAINMENT DEVICES AND PIPING SYSTEMS SHALL CONFORM TO AWWA C651.

ENVIRONMENTAL

1. PREVIOUS GROUNDWATER INVESTIGATIONS AT THE SITE HAVE YIELDED EVIDENCE OF CONTAMINATION, SPECIFICALLY BENZENE, TOLUENE, ETHYL BENZENE, TOTAL XYLENES, AND MTBE. THE PRESENCE OF THESE CONTAMINANTS IS LIKELY DUE TO LEAKING UNDERGROUND STORAGE TANKS (USTS) FROM THE ADJACENT GAS STATION. THIS ADJACENT PROPERTY IS NEITHER OWNER NOR OPERATED BY SAFEWAY. THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (VADEQ) CLOSED THEIR INVESTIGATION OF THESE USTS IN AUGUST 2003 AFTER CONCLUDING THAT THE TANKS "DO NOT REPRESENT AN IDENTIFIED RISK TO HUMAN HEALTH AND THE ENVIRONMENT."
2. DURING INVESTIGATIONS CONDUCTED IN MARCH AND APRIL 2011 BY TERRACON CONSULTANTS, INC., TRUE GROUNDWATER WAS NOT ENCOUNTERED WITHIN ANY OF THE 5 ENVIRONMENTAL OR 19 GEOTECHNICAL SOIL BORINGS PERFORMED AT THE SITE. THE DEPTH OF THESE BORINGS RANGED FROM 15 FEET TO 40 FEET. PERCHED GROUNDWATER WAS ENCOUNTERED IN SOME OF THE BORINGS, AT ELEVATIONS OF 15 FEET BELOW GRADE OR DEEPER, WHICH IS WELL BELOW THE SOILS THAT WILL BE DISTURBED AS A RESULT OF THE PROPOSED CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE EXCAVATION AND DISPOSAL OF ON-SITE MATERIALS WITH ENVIRONMENTAL CONSULTANT AND SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
3. TETRACHLOROETHENE WAS ALSO DETECTED IN A SOIL SAMPLE TAKEN AT THE LOCATION OF THE FORMER DRY CLEANING OPERATION, ALTHOUGH THE LEVELS ENCOUNTERED WERE BELOW USEPA GENERIC SCREENING LEVELS.

GENERAL NOTES (CITY OF ALEXANDRIA)

1. THE SUBJECT SITE IS LOCATED ON CITY OF ALEXANDRIA ASSESSMENT MAP NO. 032.01-01-04, PARCEL 901 AND 3915-03-01-01 AND IS ZONED CG (COMMERCIAL GENERAL)
2. OWNER: SAFEWAY STORE, INC.
3. DEED BOOK 1019, PAGE 97 & BOOK 1011, PAGE 184 & BOOK 471, PAGE 116
4. ADDRESS: 3526 KING STREET ALEXANDRIA, VA 22302
5. AREA TABULATION

TOTAL SITE AREA:	130,573 SF / 2.997 AC
DISTURBED AREA:	130,573 SF / 2.997 AC
EXISTING IMPERVIOUS AREA:	121,908 SF / 2.799 AC
EXISTING PERVIOUS AREA:	8,625 SF / 0.198 AC
PROPOSED IMPERVIOUS AREA:	113,162 SF / 2.598 AC
PROPOSED PERVIOUS AREA:	17,371 SF / 0.399 AC

6. THE NATURAL SOILS AT THE SITE CONSIST OF: LEONARDTOWN SILT LOAM PER FIGURE 11-8, "GENERALIZED ALEXANDRIA SOILS MAP" OF THE CITY ALEXANDRIA MASTER PLAN WATER QUALITY MANAGEMENT SUPPLMENT \ 4B - URBAN LAND-SASSAFRAS-NEABSCO COMPLEX, 3 TO 8 PERCENT SLOPES PER THE NATURAL RESOURCES CONSERVATION SERVICE (NRSC) SOIL RESOURCE REPORT PREPARED FROM NRSC WEB SITE
7. THE SITE IS LOCATED IN THE CAMERON RUN (A13) WATERSHED.
8. CONSTRUCTION PERMITS ARE REQUIRED FOR THIS PROJECT. THE APPROVED SITE PLAN MUST BE ATTACHED TO THE PERMIT APPLICATION THAT FULLY DETAILS THE CONSTRUCTION AS WELL AS LAYOUTS AND SCHEMATICS OF THE MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS.
9. ALL PUBLIC AND PRIVATE EASEMENTS OR ALL KNOWN PUBLIC AND PRIVATE EASEMENTS, INCLUDING ALL UTILITY, EGRESS, AND CONSERVATION RESTRICTIONS ARE SHOWN. THE APPLICANT SHALL NOT CONSTRUCT ANY PERMANENT STRUCTURES OVER ANY EXISTING OR PROPOSED PUBLIC AND/OR PRIVATE EASEMENTS UNLESS OTHERWISE APPROVED BY THE PLANNING COMMISSION AND CITY OF ALEXANDRIA COUNCIL.
10. PLAT SUBJECT TO RESTRICTIONS OF RECORD.
11. BUILDING HEIGHT SHALL NOT EXCEED THE ALLOWABLE LIMIT BY CITY OF ALEXANDRIA ZONING ORDINANCE OR AS APPROVED BY THE PLANNING COMMISSION AND CITY OF ALEXANDRIA COUNCIL.
12. ALL NEW CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ALEXANDRIA AND TO THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE (USBC).
13. FLOOR AREA WITH ALLOWABLE LIMITS, AS APPROVED BY PLANNING COMMISSION AND CITY COUNCIL, IS DEMONSTRATED HEREIN.
14. PRIOR TO COMMENCING NEW WORK, THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL EXISTING ADJACENT AREAS. IF CITY'S EXISTING PUBLIC INFRASTRUCTURE, INCLUDING BUT NOT LIMITED TO, STREETS, ALLEYWAYS, DRIVEWAY APRONS, SANITARY AND STORM SEWERS, STREET LIGHTING, TRAFFIC AND PEDESTRIAN SIGNALS, SIDEWALKS, CURB AND GUTTER, AND STORM WATER DROP INLET STRUCTURES ARE DAMAGED BY THE CONTRACTOR OR BY ACTIVITIES RELATING TO THE SITE CONSTRUCTION, THEN THE APPLICANT SHALL REPAIR THE SAME TO THE SATISFACTION OF DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES). A PRE-CONSTRUCTION WALK/SURVEY OF THE SITE SHALL OCCUR WITH CONSTRUCTION AND INSPECTION STAFF TO DOCUMENT EXISTING CONDITIONS PRIOR TO ANY LAND DISTURBING ACTIVITY.
15. ALL IMPROVEMENTS TO THE CITY'S RIGHT-OF-WAYS SUCH AS CURB, GUTTER, SIDEWALK, AND DRIVEWAY APRONS, ETC., ARE DESIGNED PER THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS.
16. ALL STREET CUT AND PATCH WORK LOCATED IN PUBLIC RIGHT-OF-WAYS, REQUIRED FOR ANY UTILITY INSTALLATION SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE CITY OF ALEXANDRIA STANDARDS AND SPECIFICATIONS AND TO THE SATISFACTION OF THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES).
17. CONTRACTOR MUST ENSURE THAT THERE IS NO DISTURBANCE ON ADJACENT PROPERTIES WITHOUT RECORDED EASEMENT OR MOTORIZED LETTER OF PERMISSION FROM THE ADJACENT PROPERTY OWNERS.
18. ALL REQUIRED STATE AND FEDERAL PERMITS, WHICH COULD INCLUDE PERMITS FROM THE VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION (VDCR), VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (VDEQ), VIRGINIA DEPARTMENT OF HISTORIC RESOURCES (VDHR), UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA), ARMY CORPS OF ENGINEERS AND VIRGINIA MARINE RESOURCES, MUST BE IN PLACE FOR ALL PROJECT CONSTRUCTION AND MITIGATION WORK PRIOR TO RELEASE OF THE FINAL SITE PLAN. THIS INCLUDES THE STATE REQUIREMENT FOR A VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) GENERAL PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES FOR LAND DISTURBING ACTIVITIES GREATER THAN 2,500 SF.
19. PERMITS FROM THE CITY OF ALEXANDRIA OFFICE OF ENVIRONMENTAL QUALITY (OEQ), TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES), AND BUILDING AND FIRE CODE ADMINISTRATION SHALL BE OBTAINED BY THE APPLICANT, AS REQUIRED AND DOCUMENTED HEREIN. THE CONTRACTOR CAN CONTACT ALEXANDRIA FIRE AND CODE ADMINISTRATION DEPARTMENT AT (703) 838-4644 OR (703) 746-4200 FOR ANY QUESTIONS OR ADDITIONAL INFORMATION.
20. ANY WORK IN THE PUBLIC RIGHT-OF-WAY SHALL REQUIRE A SEPARATE PERMIT FROM THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES. THE CONTRACTOR CAN CONTACT THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES AT (703) 746-4035 FOR ANY QUESTIONS OR ADDITIONAL INFORMATION.
21. THE PROPERTY ADDRESS MUST BE CLEARLY MARKED IN THE FRONT AND BACK OF THE PROPOSED DEVELOPMENT SITE DURING CONSTRUCTION FOR EMERGENCY RESPONSE PURPOSES IN CONTRASTING COLORS FOR EASY IDENTIFICATION.
22. THE APPLICANT SHALL CONTACT THE CRIME PREVENTION UNIT OF THE ALEXANDRIA POLICE DEPARTMENT AT (703) 838-4520 REGARDING SECURITY HARDWARE FOR NEW CONSTRUCTION. THIS SHALL BE COMPLETED PRIOR TO ISSUANCE OF BUILDING PERMIT.
23. ROOF DRAINAGE SYSTEM, SUMP PUMP DISCHARGE, AND FOUNDATION DRAIN SYSTEM MUST BE INSTALLED SO AS NEITHER TO ADVERSELY IMPACT UPON, NOR CAUSE EROSION DAMAGE TO, ADJACENT PROPERTIES OR THE PUBLIC RIGHT-OF-WAY.
24. THE CONTRACTOR MUST ENSURE THAT POSITIVE DRAINAGE OCCURS ON SITE TO PREVENT PONDING OR DRAINAGE PROBLEMS ON ADJACENT PROPERTIES,
25. IN THE EVENT THE PROPOSED ROOF DRAINAGEAND/OR SUMP PUMP DISCHARGE, AND FOUNDATION DRAIN SYSTEMS AND/OR GRADING ADVERSELY IMPACTS AND/OR CREATES A NUISANCE ON PUBLIC RIGHT-OF-WAY OR PRIVATE PROPERTIES, THEN THE APPLICANT SHALL BE RESPONSIBLE TO PROVIDE ADDITIONAL IMPROVEMENTS TO THE ROOF DRAINAGE AND/OR SUMP PUMP DISCHARGE AND FOUNDATION DRAIN SYSTEMS AND/OR GRADING TO THE SATISFACTION OF THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES.
26. PER THE REQUIREMENTS OF SECTION 8-1-12 OF THE CITY CHARTER AND CODE; WHEN THE BUILDING FOOTING HAS BEEN PLACED AND THE WALLS HAVE BEEN RAISED TO THE FIRST JOIST BEARING OR STORY HEIGHT ABOVE GRADE, A PLOT PLAN SHOWING THE EXACT LOCATION OF THE WALLS SHALL BE PREPARED BY A LICENSED, CERTIFIED PUBLIC LAND SURVEYOR OR PROFESSIONAL ENGINEER ON BEHALF OF THE CONTRACTOR AND FILED WITH THE BUILDING OFFICIAL FOR APPROVAL BEFORE PROCEEDING FURTHER WITH THE CONSTRUCTION.
27. A SEPARATE DESIGN IS REQUIRED FOR ALL WALLS 24" AND OVER IN HEIGHT FROM THE GRADE AND SUBJECT TO SEPARATE PERMITS TO BE OBTAINED BY THE OWNERS. GEOTECHNICAL AND STRUCTURAL DESIGN IS TO BE COMPLETED BY OTHERS. THIS FINAL SITE PLAN SHOWS LOCATIONS, PROPOSED GRADING, AND DESIGN OF ALL THE WALLS.
28. THE CONTRACTOR SHALL SUBMIT A SURVEY, CONSISTENT WITH THE REQUIREMENTS FOR CERTIFICATE OF OCCUPANCY CHECKLIST, TO THE DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES PRIOR TO REQUESTING AN INSPECTION FOR A CERTIFICATE OF OCCUPANCY.
29. ALL SANITARY LATERAL AND/OR SEWERS NOT SHOWN WITHIN AN EASEMENT SHALL BE OWNED AND MAINTAINED PRIVATELY.
30. ALL STORM DRAINS NOT SHOWN WITHIN AN EASEMENT ON IN A PUBLIC RIGHT-OF- WAY SHALL BE OWNED AND MAINTAINED PRIVATELY.
31. ALL WATER FACILITY CONSTRUCTION SHALL CONFORM TO VIRGINIA AMERICAN WATER COMPANY STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL CONTACT VIRGINIA AMERICAN WATER COMPANY AT (703) 549-7080 TO COORDINATE CONSTRUCTION AND INSPECTION OF WATER FACILITIES.
32. THE SIDEWALKS SHALL REMAIN OPENED DURING CONSTRUCTION OR PEDESTRIAN ACCESS SHALL BE MAINTAINED TO THE SATISFACTION OF THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES THROUGHOUT THE CONSTRUCTION OF THE PROJECT.
33. PRIOR TO THE RELEASE OF THE FINAL SITE PLAN, A TRAFFIC CONTROL PLAN FOR CONSTRUCTION DETAILING PROPOSED CONTROLS TO TRAFFIC MOVEMENT, LANE CLOSURES, CONSTRUCTION ENTRANCES, HAUL ROUTES, AND STORAGE AND STAGING SHALL BE PROVIDED FOR INFORMATION PURPOSE; HOWEVER, AN AMENDED TRAFFIC CONTROL PLAN, IF REQUIRED BY THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, SHALL BE SUBMITTED TO THE DIRECTOR OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, ALONG WITH THE BUILDING PERMIT APPLICATION. THE FINAL SITE PLAN SHALL INCLUDE A STATEMENT "FOR INFORMATION ONLY" ON THE TRAFFIC CONTROL PLAN SHEETS.
34. A CERTIFICATE OF OCCUPANCY SHALL BE OBTAINED PRIOR TO ANY OCCUPANCY OF THE BUILDING OR PORTION THEREOF, IN ACCORDANCE WITH VIRGINIA USBC 115.0.

NOTES

1. BOUNDARY AND TOPOGRAPHIC INFORMATION HAS BEEN PROVIDED TO OWNER AND CPH ENGINEERS, INC. SURVEY WAS PERFORMED BY BOHLER ENGINEERING IN OCTOBER 2010.
2. THIS PROPERTY LIES WITHIN ZONE X, (AREA DETERMINED TO BE OUTSIDE 500 YEAR FLOOD PLAIN) PER MAP ENTITLED "FIRM, FLOOD INSURANCE RATE MAP AND STREET INDEX, CITY OF ALEXANDRIA,
3. VIRGINIA, INDEPENDENT CITY, COMMUNITY PANEL NUMBER 515519 0005D, MAP REVISED MAY 15, 1991.
4. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR SITE LIGHTING AND PLACEMENT, LOCATIONS AND DIMENSION OF VESTIBULES, SLOPED PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
5. ALL CURBED RADII ARE TO BE 3 FEET UNLESS OTHERWISE NOTED.
6. ALL DIMENSIONS AND RADII ARE TO THE FACE OF CURB UNLESS NOTED (BOC) WHICH INDICATES BACK OF CURB.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, (UNLESS OTHERWISE NOTED ON PLANS), INCLUDING BUT NOT LIMITED TO: ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS, POLES, ETC., AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES' REQUIREMENTS AND PROJECT SITE WORK SPECIFICATIONS, AND SHALL BE APPROVED BY SUCH, ALL COSTS SHALL BE INCLUDED IN BASE BID.
8. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH UTILITY COMPANIES TO MATCH THE UTILITY TOP OF STRUCTURE WITH THE FINAL PAVEMENT GRADE.
9. THE SITE DOES NOT HAVE AREAS OF MARINE CLAY.
10. CONTRACTOR SHALL COMPLETE A SECURITY SURVEY BY CALLING THE COMMUNITY RELATIONS UNIT AT 703-838-4520 AS SOON AS CONSTRUCTION TRAILERS ARE PLACED ON THE SITE.
11. NOISE FROM CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE HOURS OF 7AM TO 6PM MONDAY THROUGH FRIDAY, AND 9AM TO 6PM ON SATURDAYS. NO CONSTRUCTION WORK SHALL BE PERFORMED ON SUNDAYS.

ALEXANDRIA, VIRGINIA
PHOSPHOROUS
LOADING COMPUTATIONS

WORKSHEET B: REDEVELOPMENT

1. Compile site-specific data.

		PRE-DEVELOPMENT	POST-DEVELOPMENT
A*		= 2.997 acres	= 2.997 acres
I_a	structures	= 1.01 acres	= 1.48 acres
	parking lot	= 1.70 acres	= 0.95 acres
	roadway	= ____ acres	= ____ acres
	other	= 0.07 acres	= 0.16 acres
		= ____ acres	= ____ acres
		= ____ acres	= ____ acres
	Total I_a	= 2.78 acres	= 2.59 acres

$I = (\text{total } I_{a/A}) \times 100$

= 93 percent expressed in whole numbers ; = 86 percent expressed in whole numbers

$R_v = 0.05 + (0.009 \times I)$

= 0.887 unitless ; = 0.824 unitless

C: I≥ 20 = 1.08mg/l
I< 20 = 0.26mg/l

= 1.08 mg/l ; = 1.08 mg/l

*A is the total area of the site
** I_a is the total impervious cover on the site

2. Calculate the pre-development load (L_{pre})

$L_{pre} = 8.16 \times R_{v\text{-}pre} \times C \times A$

$= 8.16 \times 0.887 \times 1.08 \times 2.997$

= 23.4 pounds per year

3. Calculate the post-development load (L_{post})

$L_{post} = 8.16 \times R_{v\text{-}post} \times C \times A$

$= 8.16 \times 0.824 \times 1.08 \times 2.997$

= 21.8 pounds per year

4. Calculate the pollutant removal requirement (RR).

$RR = L_{post} - (0.9 \times L_{pre})$; $\%RR = (RR/L_{post}) \times 100$

$= 21.8 - (0.9 \times 23.4)$; $= (0.74 / 21.8) \times 100$

= 0.74 pounds per year ; = 3.4 %

ALEXANDRIA, VIRGINIA
PHOSPHOROUS
LOADING COMPUTATIONS

WORKSHEET C: COMPLIANCE

Select BMP options using screening tools and list them below. Then calculate the load removed for each option. DO NOT LIST BMPs IN SERIES HERE.

Selected Option	Removal* Efficiency x (% 100)	Fraction of CBPA Drainage Area Served (expressed in decimal form) x	L_{post} = (lbs/yr)	Load Removed (lbs/yr)
DC Sand Filter	0.60	0.56	21.8	7.3
DE Sand Filter	0.60	0.06	21.8	0.8
Bioretention Filters	0.50	0.43	21.8	4.7

*For conventional BMPs, see Section IIa of the Northern Virginia BMP Handbook (NVBMPHB) published by the Northern Virginia Planning District Commission or Chapter 1 of the Alexandria Supplement to the NVBMPHB. For non-conventional BMPs, see Section IV, Chapter 1 of the Alexandria Supplement.

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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Lanham, MD 20706
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www.cphengineers.com

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JENNIFER LANGOSKI, P.E.
VA. LIC. NO. 0402047801
DATE: Aug 25, 2011

No.	Date	Revision	By
1	08/26/11	REVISION TO PLAN PER CITY OF ALEXANDRIA COMMENTS DATED AUGUST 5, 2011	
2			
3			
4			
5			
6			
7			

Designed by:	J.L.
Drawn by:	R.K.R
Checked by:	J.L.
Approved by:	D.P.M.
Scale:	
Date:	07-15-2011
Job No.:	S21823
File:	S21823-GENOTES.dwg

GENERAL NOTES
SAFEWAY STORE #3250 (R4003)
SAFEWAY
3526 KING STREET
ALEXANDRIA, VIRGINIA 22302

Sheet No.
C-2A

J:\S21823\DWG\Design\S21823-GENOTES.dwg Aug 25, 2011 - 4:17pm
PRINTED BY: rreid

METES AND BOUNDS DESCRIPTION

LOT 901
TAYLOR STREET CORPORATION
INSTR. #6184
AND
LOT 3915-03-01-01
TAYLOR STREET CORPORATION
D.B. 471 PG. 116

LANDS OF
SAFEWAY STORE, INCORPORATED
D.B. 1019 PG. 97
D.B. 1011 PG. 184
POTOMAC DISTRICT
CITY OF ALEXANDRIA, VIRGINIA

BEGINNING AT THE INTERSECTION OF THE SOUTHWESTERLY RIGHT-OF-WAY LIMITS OF KING STREET, VA RTE. 7 (165' WIDE RIGHT-OF-WAY), WITH THE DIVISION LINE BETWEEN LOT 901, TAYLOR STREET CORPORATION (INSTR. #6184) ON THE WEST, AND THE LANDS OF SUNOCO, INC. (R&M) (INSTR. #060010385) ON THE EAST, THENCE WITH SAID DIVISION LINE;

1. SOUTH 44 DEGREES - 02 MINUTES - 20 SECONDS WEST, 182.37 FEET TO A REBAR FOUND ON THE NORTHERLY RIGHT-OF-WAY LIMITS OF BRADDOCK ROAD, VA RTE. 620 (60' WIDE RIGHT-OF-WAY), THENCE WITH SAID NORTHERLY RIGHT-OF-WAY LIMITS;

2. NORTH 85 DEGREES - 38 MINUTES - 00 SECONDS WEST, 449.52 FEET, THENCE DEPARTING SAID NORTHERLY RIGHT-OF-WAY LIMITS AND WITH THE DIVISION LINE BETWEEN LOT 3915-03-02, TAYLOR STREET CORPORATION (D.B. 461 PG. 549) ON THE WEST, AND SAID LOT 901 ON THE EAST;

3. NORTH 44 DEGREES - 02 MINUTES - 20 SECONDS EAST, 234.67 FEET TO THE INTERSECTION OF SAID DIVISION LINE, WITH THE DIVISION LINE BETWEEN SAID LOT 3915-03-02 ON THE SOUTHWEST, AND LOT 3915-03-01-01, TAYLOR STREET CORPORATION (D.B. 471 PG. 116) ON THE NORTHEAST, THENCE WITH SAID DIVISION LINE;

4. NORTH 45 DEGREES - 57 MINUTES - 40 SECONDS WEST, 75.80 FEET TO THE INTERSECTION OF SAID DIVISION LINE, WITH THE DIVISION LINE BETWEEN LOT 1001, TAYLOR STREET CORPORATION (D.B. 1285 PG. 1630) ON THE NORTHWEST, AND SAID LOT 3915-03-01-01 ON THE SOUTHEAST, THENCE WITH SAID DIVISION LINE;

5. NORTH 44 DEGREES - 02 MINUTES - 20 SECONDS EAST, 234.67 FEET TO A POINT ON THE SAID SOUTHWESTERLY RIGHT-OF-WAY LIMITS OF KING STREET, THENCE WITH SAID SOUTHWESTERLY RIGHT-OF-WAY LIMITS;

6. SOUTH 45 DEGREES - 57 MINUTES - 40 SECONDS EAST, 421.79 FEET TO THE POINT OF BEGINNING.

CONTAINING 130,533 SQUARE FEET OR 2.997 ACRES

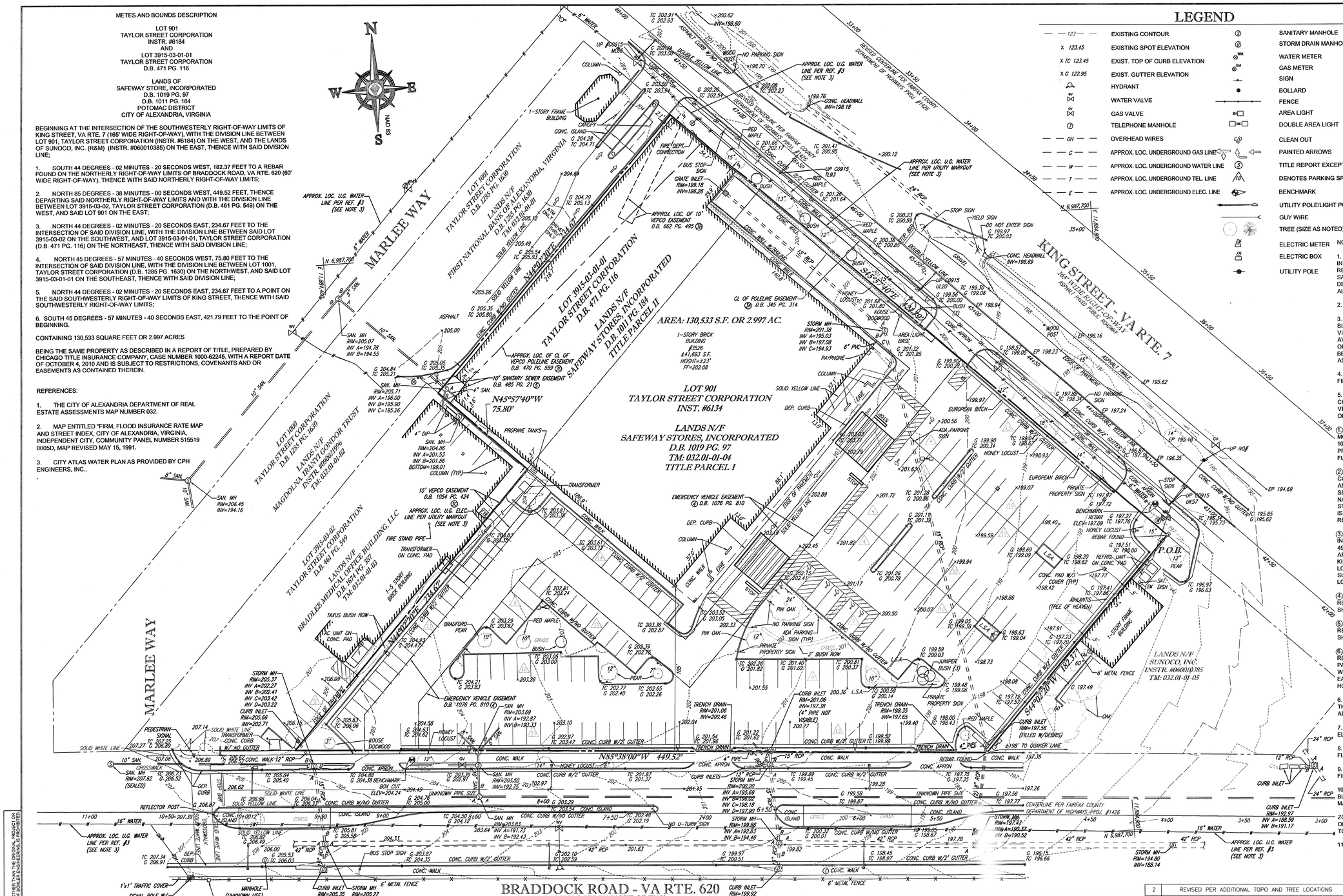
BEING THE SAME PROPERTY AS DESCRIBED IN A REPORT OF TITLE, PREPARED BY CHICAGO TITLE INSURANCE COMPANY, CASE NUMBER 1000-62245, WITH A REPORT DATE OF OCTOBER 4, 2010 AND IS SUBJECT TO RESTRICTIONS, COVENANTS AND OR EASEMENTS AS CONTAINED THEREIN.

REFERENCES:

1. THE CITY OF ALEXANDRIA DEPARTMENT OF REAL ESTATE ASSESSMENTS MAP NUMBER 032.

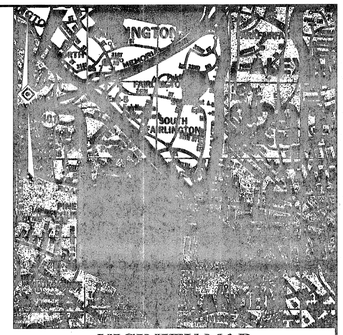
2. MAP ENTITLED "FIRM, FLOOD INSURANCE RATE MAP AND STREET INDEX, CITY OF ALEXANDRIA, VIRGINIA, INDEPENDENT CITY, COMMUNITY PANEL NUMBER 515519 0005D, MAP REVISED MAY 15, 1991.

3. CITY ATLAS WATER PLAN AS PROVIDED BY CPH ENGINEERS, INC..



LEGEND

123	EXISTING CONTOUR		SANITARY MANHOLE
x 123.45	EXISTING SPOT ELEVATION		STORM DRAIN MANHOLE
x TC 123.45	EXIST. TOP OF CURB ELEVATION	WM	WATER METER
x G 122.95	EXIST. GUTTER ELEVATION	GM	GAS METER
	HYDRANT		SIGN
WV	WATER VALVE		BOLLARD
GV	GAS VALVE		FENCE
	TELEPHONE MANHOLE		AREA LIGHT
OH	OVERHEAD WIRES		DOUBLE AREA LIGHT
G	APPROX. LOC. UNDERGROUND GAS LINE		CLEAN OUT
W	APPROX. LOC. UNDERGROUND WATER LINE		PAINTED ARROWS
T	APPROX. LOC. UNDERGROUND TEL. LINE		TITLE REPORT EXCEPTION
E	APPROX. LOC. UNDERGROUND ELEC. LINE		DENOTES PARKING SPACE COUNT
			BENCHMARK
			UTILITY POLE/LIGHT POLE
			GUY WIRE
			TREE (SIZE AS NOTED)
		EM	ELECTRIC METER
		EB	ELECTRIC BOX
			UTILITY POLE



VICINITY MAP

ADC THE MAP PEOPLE
PERMIT USE NO. 20602153-5
SCALE: 1"=2,000'

NOTES:

1. THE PROPERTY IS KNOWN AS LOT 901, TAYLOR STREET CORPORATION AS RECORDED IN INSTRUMENT NO. 6134 AND LOT 3915-03-01-01, TAYLOR STREET CORPORATION AS RECORDED IN DEED BOOK 471 PAGE 116, BOTH LOTS ALSO BEING KNOWN AS, THE LANDS OF SAFEWAY STORES, INCORPORATED AS RECORDED IN DEED BOOK 1019 AT PAGE 97 AND DEED BOOK 1011 PAGE 184, ALL RECORDED AMONG THE LAND RECORDS OF THE CITY OF ALEXANDRIA, AND HAVING A TAX MAP REFERENCE NO. OF 032.01-01-04.

2. AREA = 130,533 SQUARE FEET OR 2.997 ACRES.

3. LOCATION OF ALL UNDERGROUND UTILITIES ARE APPROXIMATE. ALL LOCATIONS AND SIZES ARE BASED ON UTILITY MARK OUTS, ABOVE GROUND STRUCTURES THAT WERE VISIBLE & ACCESSIBLE IN THE FIELD, AND THE MAPS AS LISTED IN THE REFERENCES AVAILABLE AT THE TIME OF THE SURVEY. AVAILABLE AS-BUILT PLANS AND UTILITY MARK OUT DOES NOT ENSURE MAPPING OF ALL UNDERGROUND UTILITIES AND STRUCTURES. BEFORE ANY EXCAVATION IS TO BEGIN, ALL UNDERGROUND UTILITIES SHOULD BE VERIFIED AS TO THEIR LOCATION, SIZE AND TYPE BY THE PROPER UTILITY COMPANIES.

4. THIS PLAN IS BASED ON INFORMATION PROVIDED BY A SURVEY PREPARED IN THE FIELD BY BOHLER ENGINEERING AND OTHER REFERENCE MATERIAL AS LISTED HEREON.

5. THIS SURVEY IS PREPARED WITH REFERENCE TO A REPORT OF TITLE PREPARED BY CHICAGO TITLE INSURANCE COMPANY, CASE NUMBER 1000-62245, LAND RECORDS ARE VERIFIED THROUGH SEPTEMBER 13, 2010, THE REPORT IS DATED OCTOBER 4, 2010. OUR OFFICE HAS REVIEWED THE FOLLOWING SURVEY RELATED EXCEPTIONS:

① DEED OF TRUST FROM SAFEWAY STORES, INC. TO WILLIAM H KING. JR. AND KENNETH MORAN, TRUSTEES, DATED MARCH 3, 1983 AND RECORDED MARCH 9, 1983 IN DEED BOOK 1085 AT PAGE 647, SECURING NATION FIDELITY LIFE INSURANCE COMPANY, IN THE PRINCIPAL AMOUNT OF $3,300,000.00; AS AFFECTED BY SUBSTITUTION OF TRUSTEE AND FULL RECONVEYANCE, RECORDED IN DEED BOOK 1713 AT PAGE 560; NOT SURVEY RELATED.

② TERMS, PROVISIONS, RESTRICTIONS, CONDITIONS, EASEMENTS AND RESERVATIONS CONTAINED IN INSTRUMENT(S) RECORDED IN DEED BOOK 346 AT PAGE 327, BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, OR SOURCE OF INCOME, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW; AFFECTS SUBJECT PROPERTY, NOT PLOTTABLE, USE RESTRICTIONS.

③ EASEMENT(S) GRANTED TO VIRGINIA ELECTRIC AND POWER COMPANY BY INSTRUMENT RECORDED IN (A) DEED BOOK 345 AT PAGE 314; (B) DEED BOOK 662 AT PAGE 495; (C) DEED BOOK 1054 AT PAGE 424 AND IN (D) DEED BOOK 470 AT PAGE 559; (A) MAY AFFECT THE SUBJECT PROPERTY, POLE LINE IS NORTHEAST OF SUBJECT PROPERTY ALONG KING STREET, POLE LINE SHOWN; (B) MAY AFFECT SUBJECT PROPERTY, APPROXIMATE LOCATION OF 10' VEPCO EASEMENT IS SHOWN WITHIN THE EXISTING BUILDING; (C) AFFECTS SUBJECT PROPERTY, SHOWN; (D) MAY AFFECT SUBJECT PROPERTY, APPROXIMATE LOCATION OF CENTERLINE OF VEPCO EASEMENT IS SHOWN WITHIN THE EXISTING BUILDING.

④ TERMS, CONDITIONS, RESTRICTION AND EASEMENTS CONTAINED IN AGREEMENT, RECORDED IN DEED BOOK 1076 AT PAGE 810; AFFECTS SUBJECT PROPERTY, EASEMENT IS SHOWN.

⑤ TERMS, CONDITIONS, RESTRICTIONS AND EASEMENTS CONTAINED IN DEED, RECORDED IN DEED BOOK 485 AT PAGE 21; AFFECTS SUBJECT PROPERTY, EASEMENT IS SHOWN.

⑥ TERMS, CONDITIONS, RESTRICTIONS AND EASEMENTS CONTAINED IN DEED OF RESUBDIVISION, DEDICATION AND BARGAIN AND SALE, RECORDED IN DEED BOOK 471 AT PAGE 116; REFERENCE DOCUMENT CREATES PARCEL II. NO EASEMENTS WERE CREATED WITH THIS DOCUMENT. THERE IS A NOTE THAT STATES "ACCESS TO REAR PARKING LOT BY EASEMENT AGREEMENT BETWEEN SAFEWAY STORES, INC. & JOHN E. DELASHMUTT", HOWEVER, NO RECORDING INFORMATION WAS SHOWN.

6. THE EXISTENCE OF UNDERGROUND STORAGE TANKS, IF ANY, WAS NOT KNOWN AT THE TIME OF THE FIELD SURVEY. THERE ARE ABOVE GROUND PROPANE TANKS LOCATED ADJACENT TO THE BUILDING.

7. ELEVATIONS ARE BASED ON NAVD 88 PER NGS MONUMENT GPS 49 WITH A PUBLISHED ELEVATION OF 48.80'.

8. THE PROPERTY IS LOCATED IN ZONE X (AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN) PER REFERENCE NO. 2.

9. UNDERGROUND WATER AND ELECTRIC UTILITIES ARE SHOWN PER MARKOUT AND FIELD LOCATION.

10. ZONING: CG (COMMERCIAL GENERAL)
BUILDING SETBACKS: NONE
MAXIMUM BUILDING HEIGHT = 50 FT.

ZONING INFORMATION IS PER ZONING ORDINANCE, CITY OF ALEXANDRIA, VIRGINIA ORDINANCE NO. 4678, AND ADOPTED JUNE 22, 2010 AND SHOULD BE VERIFIED PRIOR TO USE TO CONFIRM IT REPRESENTS CURRENT INFORMATION.

11. PARKING COUNT = 192 REGULAR SPACES
7 ADA SPACES
199 TOTAL SPACES

BOHLER ENGINEERING - ALL RIGHTS RESERVED
THIS DRAWING IS THE PROPERTY OF BOHLER ENGINEERING. ANY USE OF THIS DRAWING FOR ANY OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED WITHOUT THE WRITTEN PERMISSION OF BOHLER ENGINEERING IS PROHIBITED.

30 15 7.5 0 30
1"= 30'

UTILITIES:
THE FOLLOWING COMPANIES WERE NOTIFIED BY DELMARVA MISS UTILITY SYSTEM (1-800-552-7001) AND REQUESTED TO MARK OUT UNDERGROUND FACILITIES AFFECTING AND SERVICING THIS SITE. THE UNDERGROUND UTILITY INFORMATION SHOWN HEREON IS BASED UPON THE UTILITY COMPANIES RESPONSE TO THIS REQUEST. SERIAL NUMBER(S): B028500713-00B

UTILITY PLAN INDEX

UTILITY	COMPANY	Web/Mail Phone/Other	REQUESTED	RECEIVED
WATER	VIRGINIA AMERICAN WATER	M	10-12-10	10-12-10
SEWER	CITY OF ALEXANDRIA	M	10-12-10	10-12-10
STORM DRAIN	CITY OF ALEXANDRIA	M	10-12-10	10-12-10
ELECTRIC	DOMINION	M	10-12-10	10-12-10
GAS	WASHINGTON GAS	M	10-12-10	10-12-10
TELEPHONE	VERIZON	WILL NOT RELEASE PLANS		
CABLE	-	-	-	-
FIBER OPTIC	-	-	-	-

UTILITY COMPANY	PHONE NUMBER
CITY OF ALEXANDRIA	703-838-4488
COMCAST	866-808-0099
DOMINION VIRGINIA POWER	703-754-2116
FIBERLIGHT LLC	703-650-8465
VIRGINIA AMERICAN WATER	540-364-2005
VERIZON	434-942-8192
WASHINGTON GAS	703-368-4333

THIS SURVEY IS CERTIFIED TO:
SAFEWAY STORES, INCORPORATED
CHICAGO TITLE INSURANCE COMPANY
THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE "MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS," JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS IN 2005, AND INCLUDES ITEMS 2, 3, 4, 5, 6, 7(A), 7(B)(1), 7(C), 8, 9, 10, 11(A), 13 & 14 OF TABLE A THEREOF. PURSUANT TO THE ACCURACY STANDARDS AS ADOPTED BY ALTA AND NSPS AND IN EFFECT ON THE DATE OF THIS CERTIFICATION, UNDERSIGNED FURTHER CERTIFIES THAT IN MY PROFESSIONAL OPINION, AS A LICENSED LAND SURVEYOR REGISTERED IN THE COMMONWEALTH OF VIRGINIA, THE RELATIVE POSITIONAL ACCURACY OF THIS SURVEY DOES NOT EXCEED THAT WHICH IS SPECIFIED THEREIN.

COMMONWEALTH OF VIRGINIA
ROBERT C. HARR, JR.
No. 3111
NOT VALID UNTIL SEALED

8-25-11
DATE

ROBERT C. HARR, JR.
VIRGINIA LICENSED LAND SURVEYOR NO. 3111

THIS CERTIFICATION IS MADE TO ONLY NAMED PARTIES FOR PURCHASE AND/OR MORTGAGE OF HEREIN DELINEATED PROPERTY BY THE NAMED PURCHASER. NO RESPONSIBILITY OR LIABILITY IS ASSUMED BY SURVEYOR FOR THE USE OF SURVEY FOR ANY OTHER PURPOSE INCLUDING, BUT NOT LIMITED TO, USE FOR ESTABLISHING OWNERSHIP OF PROPERTY, OR TO ANY OTHER PERSON NOT LISTED IN CERTIFICATION, EITHER DIRECTLY OR INDIRECTLY.

No.	DESCRIPTION OF REVISION	BY:	DATE
2	REVISED PER ADDITIONAL TOPO AND TREE LOCATIONS	M.J.M.	08-25-11
1	REVISED PER ADDITIONAL TOPO AND R-O-W CENTERLINE	M.J.M.	07-13-11

FIELD DATE 07-12-11 10-14-10
FIELD BOOK NO. BS02-11 BS03-10
FIELD BOOK PG. 75 6-9
DRAWN: S.U.
REVIEWED: J.S.C.
APPROVED: R.C.H.
DATE 10-20-10
SCALE 1"=30'
FILE NO. S063604.SR
DWG. NO. 1 OF 1

ALTA/ACSM LAND TITLE SURVEY
SAFEWAY INC.
3526 KING STREET
POTOMAC DISTRICT
CITY OF ALEXANDRIA, VIRGINIA

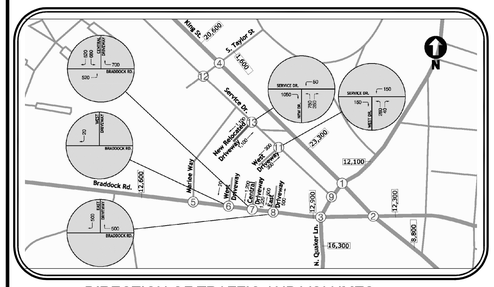
BOHLER ENGINEERING
22630 DAVIS DRIVE, SUITE 200
STERLING, VIRGINIA 20164
703.904.9400 · 703.904.9797 FAX
www.bohlerengineering.com
NEW JERSEY · PENNSYLVANIA · NEW YORK · VIRGINIA · MASSACHUSETTS · MARYLAND · FLORIDA

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.



DIRECTION OF TRAFFIC AND VOLUMES

(PROVIDED BY GOROVE/SLEDE ASSOCIATES, INC.)

PARKING LEGEND

SYMBOL	SIZE	DESCRIPTION
S	9' x 19'	STANDARD
1	9' x 18.5'	STANDARD
C	9' x 16'	COMPACT
C1	8' x 16'	COMPACT
C2	8.5' x 16'	COMPACT (NON-STANDARD)
C3	9' x 18'	COMPACT (NON-STANDARD)
C4	8' x 18'	COMPACT (NON-STANDARD)
A	8' x 18'	HC - ACCESSIBLE
A1	9' x 19'	HC - ACCESSIBLE
V	12' x 18'	HC - VAN ACCESSIBLE
V1	12' x 19'	HC - VAN ACCESSIBLE

LEGEND

- PROPERTY LINE
- LANDSCAPE PLANTER (REFER TO LANDSCAPE PLAN)
- CONCRETE (SEE SITE DETAILS)
- DECORATIVE SIDEWALK (REFER TO LANDSCAPING PLANS)
- CONCRETE SIDEWALK (CITY OF ALEXANDRIA STANDARD)
- STANDARD DUTY ASPHALT PAVEMENT (SEE SITE DETAILS)
- HEAVY DUTY ASPHALT PAVEMENT (SEE SITE DETAILS)
- LIGHTING FIXTURE (REFER TO ARCHITECT'S ELECTRICAL PLAN AND PHOTOMETRIC PLANS)
- N6,987,550 / E 11,984,720 — STATE PLANE COORDINATES
- ONSITE SIGN
- E.V. — EMERGENCY VEHICLE SIGN
- WHEEL STOP (SEE SITE DETAILS)
- PROPOSED BUILDING

PARKING SUMMARY:

9' X 19'	SPACES SURFACE	144 SPACES
9' X 18.5'	SPACES SURFACE	9 SPACES
8' X 16'	SPACES COMPACT	1 SPACES
9' X 16'	SPACES COMPACT	37 SPACES
8.5' X 16'	SPACES COMPACT (NON-STANDARD)	12 SPACES
9' X 18'	SPACES COMPACT (NON-STANDARD)	8 SPACES
8' X 18'	SPACES COMPACT (NON-STANDARD)	9 SPACES
8' X 18'	SPACES HANDICAPPED	1 SPACES
9' X 18'	SPACES HANDICAPPED	2 SPACES
12' X18'	SPACES HANDICAPPED	1 SPACES
12'X19'	SPACES HANDICAPPED	4 SPACES
COMPACT SPACES = 67/228 = 29.4%		228 SPACES TOTAL

1. SAFEWAY PARKING SPACES:
   PER SECTION 8-200 (16) & TABLE A OF THE ZONING ORDINANCE
   RETAIL USES GREATER THAN 20,000 SF REQUIRE 1.2 SPACES /230 SF =
   59,649 SF (NET) / 230 = 259.3 * 1.2 = 311.2 = 312 PARKING SPACES
2. RETAIL PARKING SPACES:
   PER SECTION 8-200 (16) & TABLE A OF THE ZONING ORDINANCE
   RETAIL USES LESS THAN 20,000 SF REQUIRE 1.2 SPACES /210 SF =
   3,136 SF (NET) / 210 = 14.9 * 1.2 = 17.9 = 18 PARKING SPACES
3. A TOTAL OF 330 PARKING SPACES ARE REQUIRED

LOADING REQUIREMENTS FOR SAFEWAY:
PER SECTION 8-200 (B) (2) OF THE ZONING ORDINANCE
1 SPACE / 20,000 SF =
61,323 SF/ 20,000 = 3.1 = 4 SPACES
A TOTAL OF 4 LOADING SPACES ARE REQUIRED/PROVIDED

TRIP GENERATION

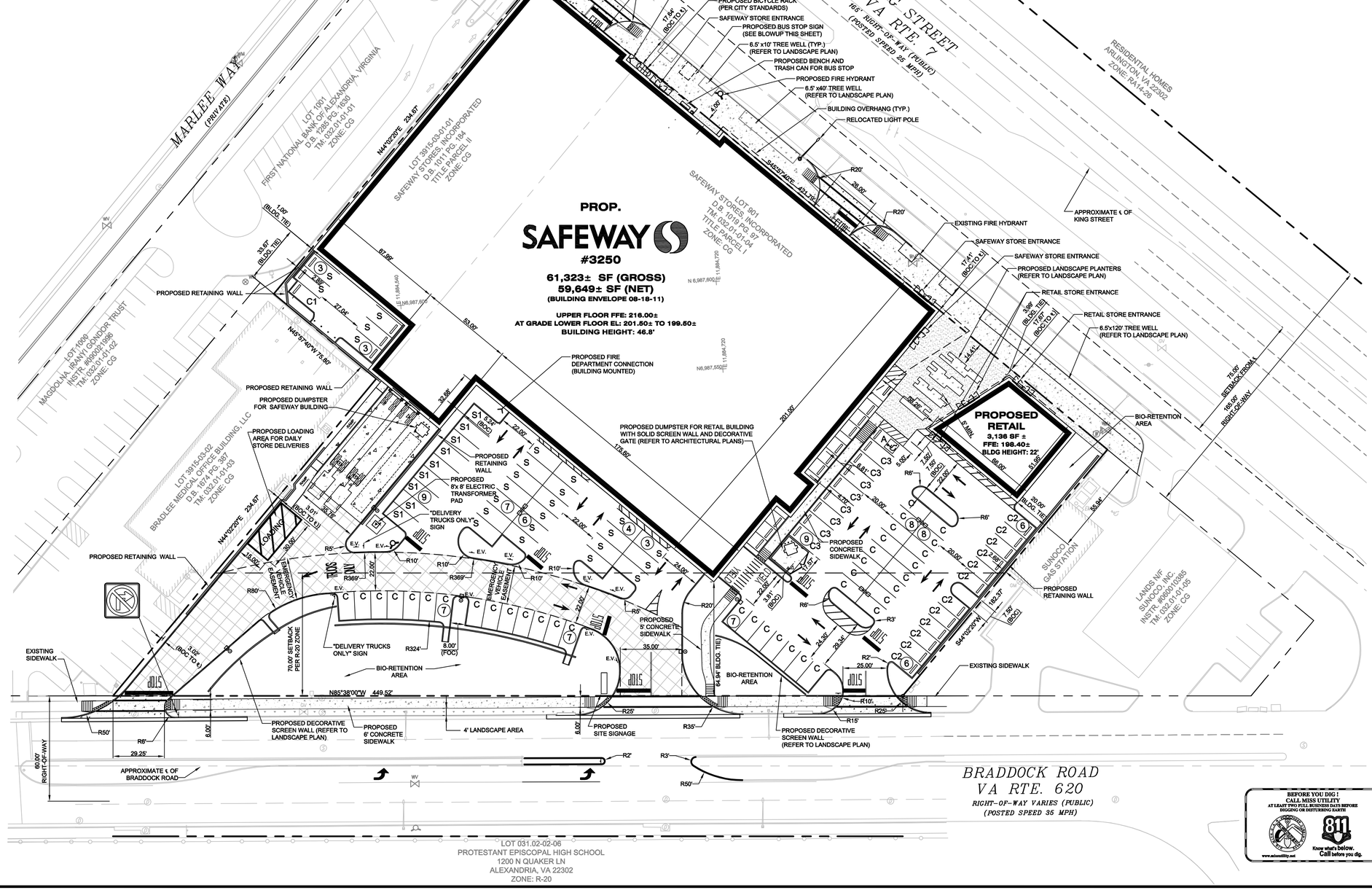
	S.F.	ITE CODE	ADT
EXISTING SAFEWAY	41,693	850	4,263
PROPOSED SAFEWAY	61,323	850	6,270
PROPOSED RETAIL	3,136	814	139
PROPOSED TOTAL	64,459		6,409

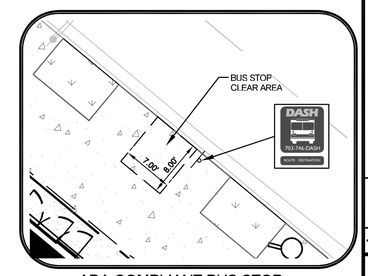
GENERAL NOTES (CITY OF ALEXANDRIA):

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

NOTES

1. REFER TO SHEET C-4B FOR SIGHT DISTANCE
2. REFER TO SHEET C-4B FOR VEHICLE TURNING MOVEMENTS
3. REFER TO C-7 FOR UTILITIES
4. REFER TO C-5 & C-5A FOR STORMWATER IMPROVEMENTS
5. SIDEWALKS FOR BICYCLE AND PEDESTRIAN USE ARE PROVIDED ALONG THE ROADWAYS UNDER BOTH EXISTING AND PROPOSED CONDITIONS. ADDITIONALLY SIDEWALK ACCESS FROM BRADDOCK ROAD TO KING STREET IS PROPOSED.





ADA COMPLIANT BUS STOP

SCALE: 1"=10'

GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

BEFORE YOU DIG ! CALL MISS UTILITY
AT LEAST TWO FULL BUSINESS DAYS BEFORE DIGGING OR DISTURBING EARTH
www.missutility.net
811 Know what's below. Call before you dig.

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. _____

cph
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Phone: 301.918.2662
Fax: 301.918.2663
www.cphengineers.com

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JENNIFER LONGOBARDI, P.E.
VA. LIC. NO. 046206700
DATE: Aug 25, 2011

No.	Date	Revision	By
1	07/15/11	REVISION TO PLAN PER CITY OF ALEXANDRIA COMMENTS DATED JULY 1, 2011	
2	08/26/11	REVISION TO PLAN PER CITY OF ALEXANDRIA COMMENTS DATED AUGUST 5, 2011	
3			
4			
5			

Designed by:	J.L.
Drawn by:	R.A.R.
Checked by:	J.L.
Approved by:	D.P.M.
Scale:	1"=30'
Date:	07-15-2011
Job No.:	S21823
File:	S21823-SDP.dwg

SITE DEVELOPMENT PLAN
SAFEWAY STORE #3250 (R4003)
SAFEWAY
3526 KING STREET
ALEXANDRIA, VIRGINIA 22302

Sheet No.
C-4

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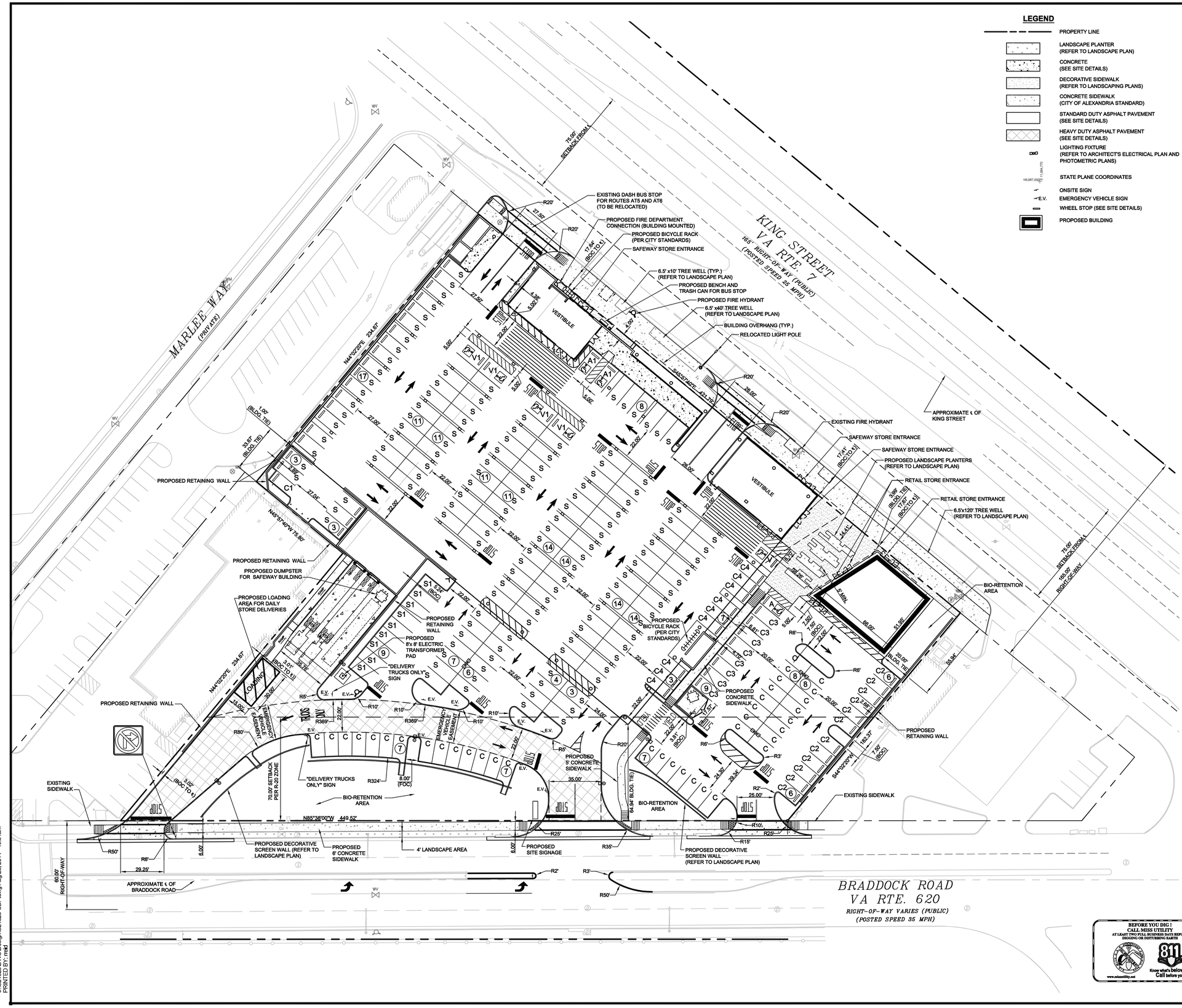
PRINTED BY: mad



LEGEND

- PROPERTY LINE
- LANDSCAPE PLANTER (REFER TO LANDSCAPE PLAN)
- CONCRETE (SEE SITE DETAILS)
- DECORATIVE SIDEWALK (REFER TO LANDSCAPING PLANS)
- CONCRETE SIDEWALK (CITY OF ALEXANDRIA STANDARD)
- STANDARD DUTY ASPHALT PAVEMENT (SEE SITE DETAILS)
- HEAVY DUTY ASPHALT PAVEMENT (SEE SITE DETAILS)
- LIGHTING FIXTURE (REFER TO ARCHITECT'S ELECTRICAL PLAN AND PHOTOMETRIC PLANS)
- STATE PLANE COORDINATES
- ONSITE SIGN
- E.V. EMERGENCY VEHICLE SIGN
- WHEEL STOP (SEE SITE DETAILS)
- PROPOSED BUILDING

PARKING LEGEND

SYMBOL	SIZE	DESCRIPTION	# OF SPACES
S	9' x 19'	STANDARD	144
1	9' x 18.5'	STANDARD	9
C	9' x 16'	COMPACT	37
C1	8' x 16'	COMPACT	1
C2	8.5' x 16'	COMPACT (NON-STANDARD)	12
C3	9' x 18'	COMPACT (NON-STANDARD)	8
C4	8' x 18'	COMPACT (NON-STANDARD)	9
A	8' x 16'	HC - ACCESSIBLE	1
A1	9' x 19'	HC - ACCESSIBLE	2
V	12' x 18'	HC - VAN ACCESSIBLE	1
V1	12' x 19'	HC - VAN ACCESSIBLE	4

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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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JENNIFER LONGOBARDI, P.E.
VA. LIC. NO. 046204701
DATE: Aug 25, 2011

No.	Date	Revision	By
1	08/26/11	REVISION TO PLAN PER CITY OF ALEXANDRIA COMMENTS DATED AUGUST 5, 2011	
2	07/15/11	REVISION TO PLAN PER CITY OF ALEXANDRIA COMMENTS DATED JULY 1, 2011	
3			
4			
5			
6			
7			

Designed by:	J.L.
Drawn by:	R.K-R
Checked by:	J.L.
Approved by:	D.P.M.
Scale:	1"=30'
Date:	07-15-2011
Job No.:	S21823
File:	S21823-SDP.dwg

SITE DEVELOPMENT PLAN
SAFEWAY STORE #3250 (R4003)
SAFEWAY
3526 KING STREET
ALEXANDRIA, VIRGINIA 22302

Sheet No.
C-4A

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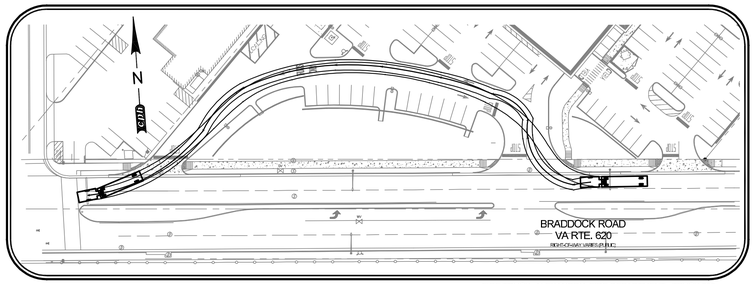
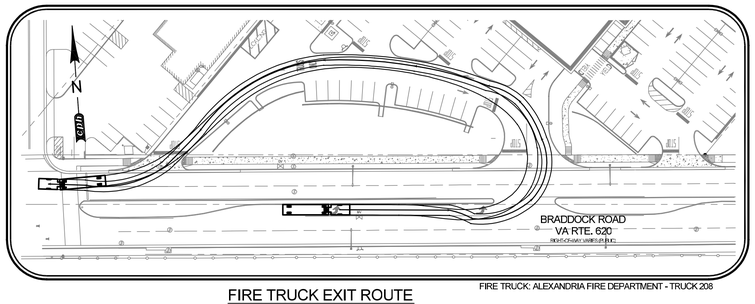


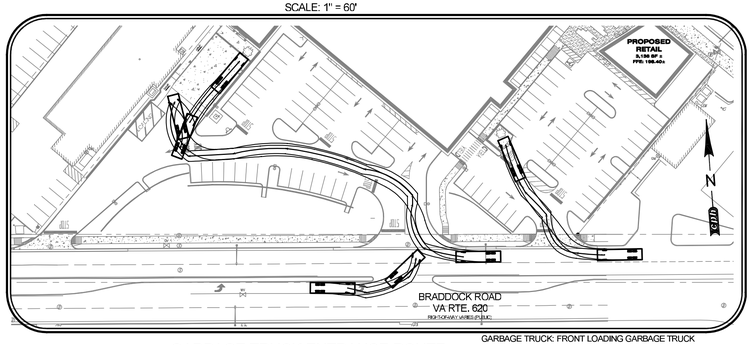
FIRE TRUCK: ALEXANDRIA FIRE DEPARTMENT - TRUCK 208

FIRE TRUCK ENTRANCE ROUTE
SCALE: 1" = 60'



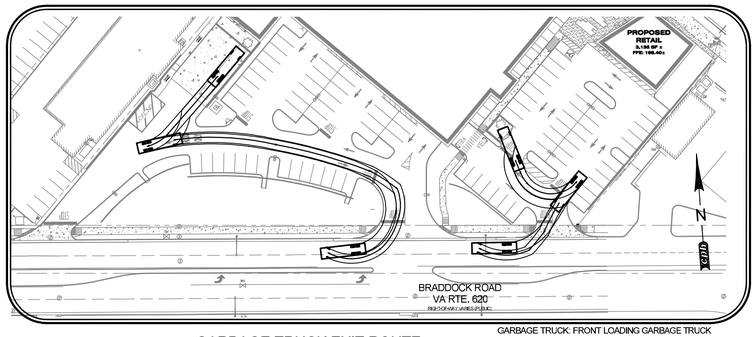
FIRE TRUCK: ALEXANDRIA FIRE DEPARTMENT - TRUCK 208

FIRE TRUCK EXIT ROUTE
SCALE: 1" = 60'



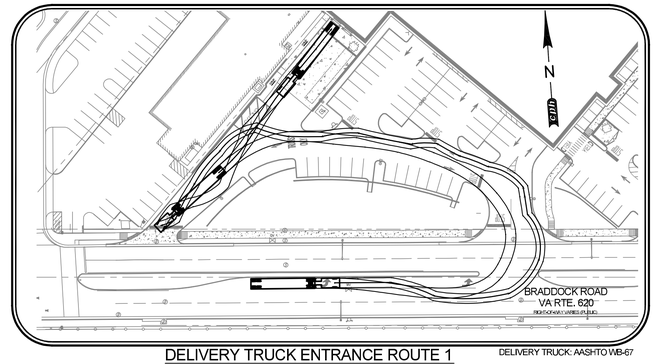
GARBAGE TRUCK: FRONT LOADING GARBAGE TRUCK

GARBAGE TRUCK ENTRANCE ROUTE
SCALE: 1" = 60'



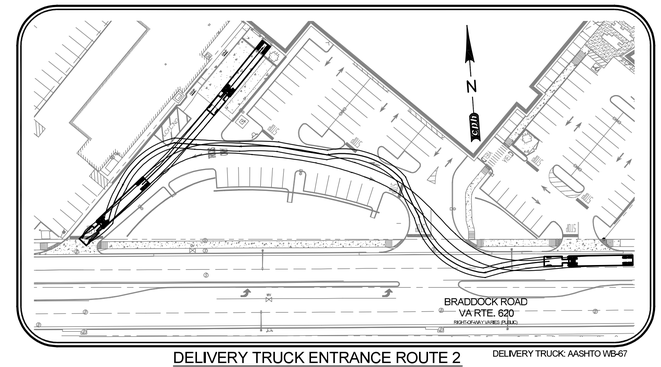
GARBAGE TRUCK: FRONT LOADING GARBAGE TRUCK

GARBAGE TRUCK EXIT ROUTE
SCALE: 1" = 60'



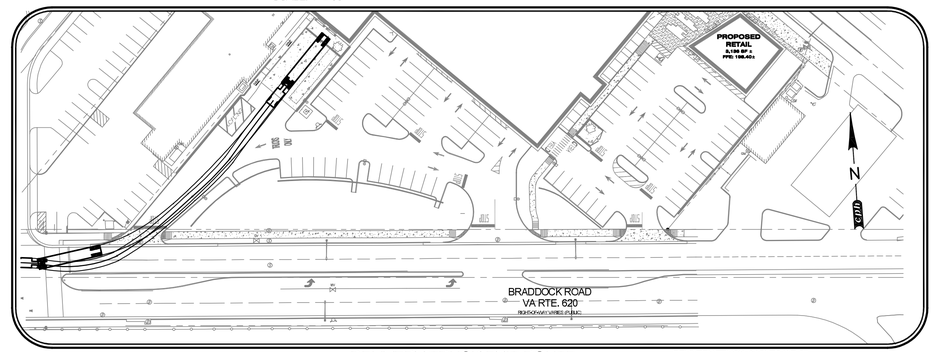
DELIVERY TRUCK: AASHTO WB-67

DELIVERY TRUCK ENTRANCE ROUTE 1
SCALE: 1" = 60'



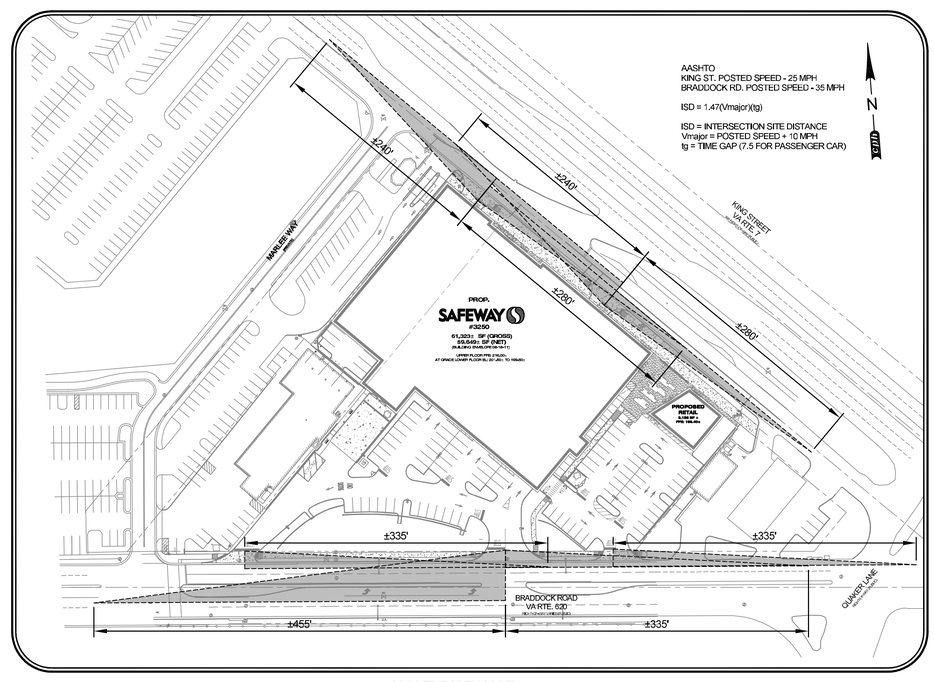
DELIVERY TRUCK: AASHTO WB-67

DELIVERY TRUCK ENTRANCE ROUTE 2
SCALE: 1" = 60'



DELIVERY TRUCK: AASHTO WB-67

DELIVERY TRUCK EXIT ROUTE
SCALE: 1" = 60'



SIGHT DISTANCE
SCALE: 1"=80'

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CHAIRMAN, PLANNING COMMISSION DATE

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VA. LIC. NO. 046204701
DATE: Aug 25, 2011

No.	Date	Revision	By
4			
3			
2			
1			
4	08/26/11	REVISION TO PLAN PER CITY OF ALEXANDRIA COMMENTS DATED AUGUST 5, 2011	
3	07/15/11	REVISION TO PLAN PER CITY OF ALEXANDRIA COMMENTS DATED JULY 1, 2011	

Designed by:	J.L.
Drawn by:	R.A.R.
Checked by:	J.L.
Approved by:	D.P.M.
Scale:	1"=30'
Date:	07-15-2011
Job No.:	S21823
File:	S21823-VEHICLE TURN.dwg

VEHICLE TURNING MOVEMENT PLAN
SAFEWAY STORE #3250 (R4003)

SAFEWAY
3526 KING STREET
ALEXANDRIA, VIRGINIA 22302

Sheet No.
C-4B

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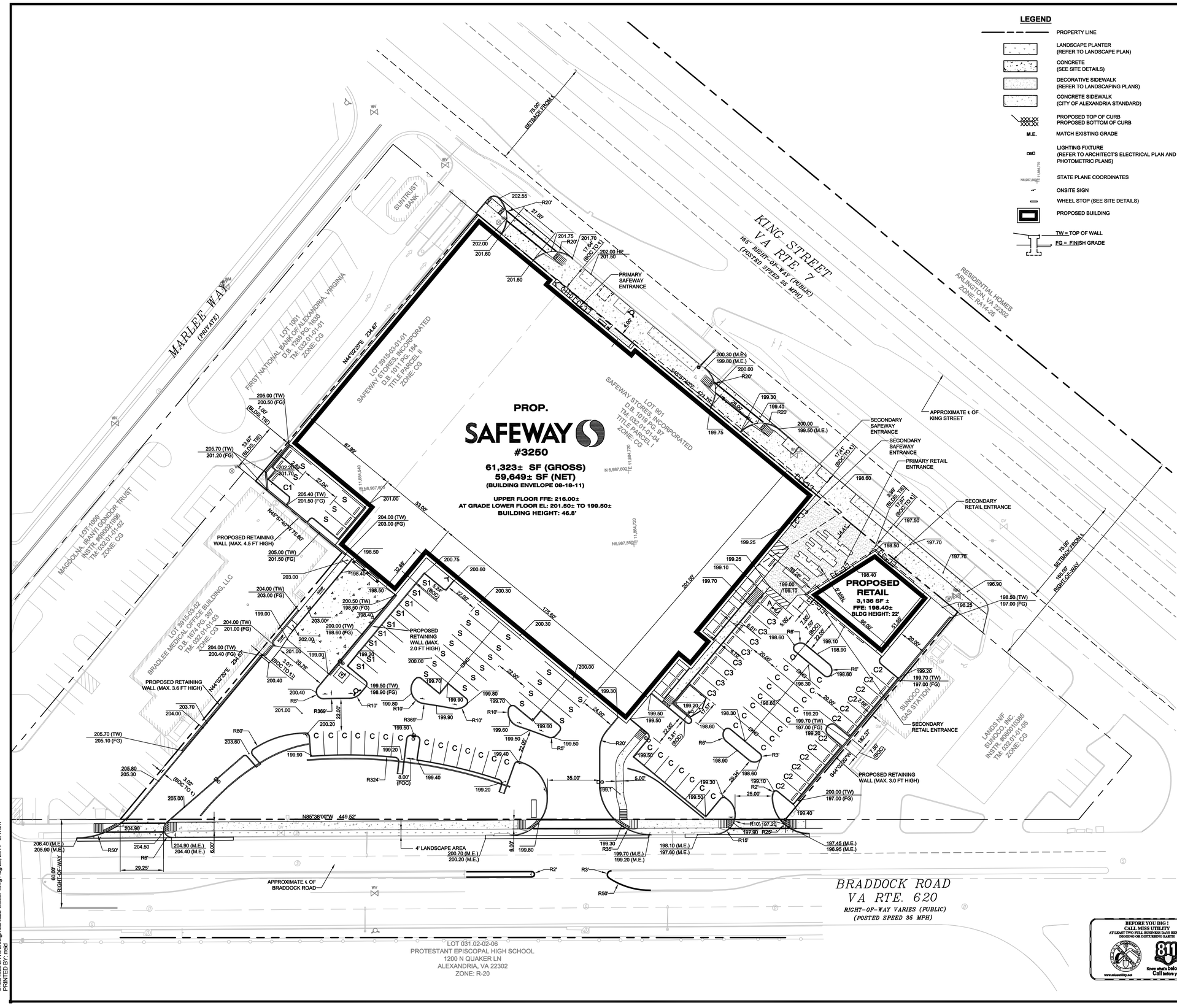

LEGEND

- PROPERTY LINE
- LANDSCAPE PLANTER (REFER TO LANDSCAPE PLAN)
- CONCRETE (SEE SITE DETAILS)
- DECORATIVE SIDEWALK (REFER TO LANDSCAPING PLANS)
- CONCRETE SIDEWALK (CITY OF ALEXANDRIA STANDARD)
- PROPOSED TOP OF CURB / PROPOSED BOTTOM OF CURB
- M.E. — MATCH EXISTING GRADE
- LIGHTING FIXTURE (REFER TO ARCHITECT'S ELECTRICAL PLAN AND PHOTOMETRIC PLANS)
- STATE PLANE COORDINATES
- ONSITE SIGN
- WHEEL STOP (SEE SITE DETAILS)
- PROPOSED BUILDING
- TW = TOP OF WALL
- FG = FINISH GRADE

PARKING LEGEND

SYMBOL	SIZE	DESCRIPTION
S	9' x 19'	STANDARD
1	9' x 18.5'	STANDARD
C	9' x 16'	COMPACT
C1	8' x 16'	COMPACT
C2	8.5' x 16'	COMPACT (NON-STANDARD)
C3	9' x 18'	COMPACT (NON-STANDARD)
C4	8' x 18'	COMPACT (NON-STANDARD)
A	8' x 18'	HC - ACCESSABLE
A1	9' x 19'	HC - ACCESSABLE
V	12' x 18'	HC - VAN ACCESSABLE
V1	12' x 19'	HC - VAN ACCESSABLE

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VA. LIC. NO. 046206701
DATE: Aug 26, 2011

No.	Date	Revision	By
4			
3			
2			
1			
4	08/26/11	REVISION TO PLAN PER CITY OF ALEXANDRIA COMMENTS DATED AUGUST 5, 2011	
3	07/15/11	REVISION TO PLAN PER CITY OF ALEXANDRIA COMMENTS DATED JULY 1, 2011	

Designed by:	J.L.
Drawn by:	R.A.R.
Checked by:	J.L.
Approved by:	D.P.M.
Scale:	1"=30'
Date:	07-15-2011
Job No.:	S21823
File:	S21823-SDIMP.dwg

SITE DIMENSION PLAN
SAFEWAY STORE #3250 (R4003)
SAFEWAY
3526 KING STREET
ALEXANDRIA, VIRGINIA 22302

Sheet No.
C-5

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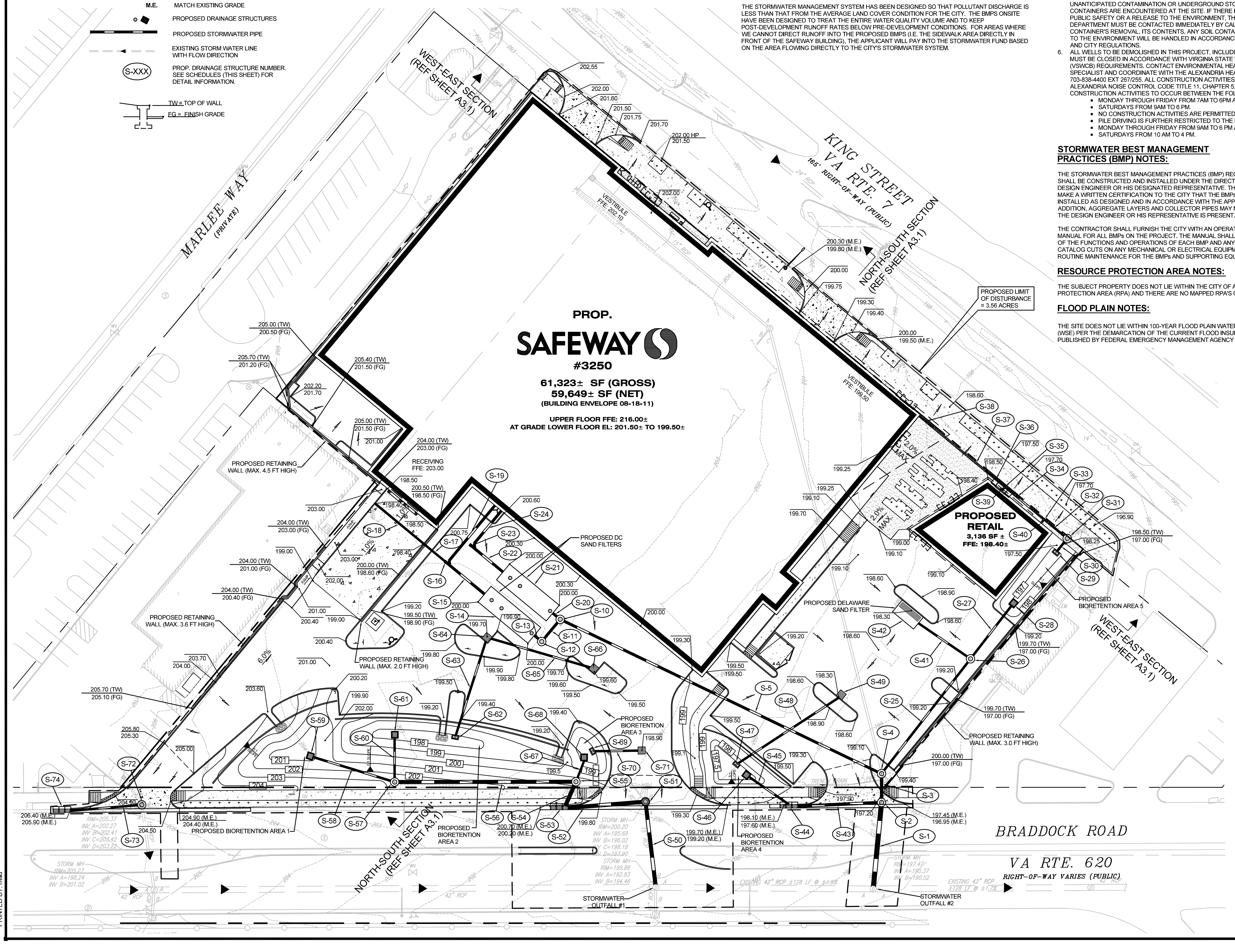
LEGEND

- PROPERTY LINE
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED WALL (REFER TO ARCHITECT'S PLANS FOR STYLE AND DETAILS.)
- CONCRETE (SEE SITE DETAILS)
- DECORATIVE SIDEWALK (REFER TO LANDSCAPING PLANS)
- CONCRETE SIDEWALK (CITY OF ALEXANDRIA STANDARD)
- 2% MAX — SLOPE DIRECTION
- XXX.XX / XXX.XX — PROPOSED TOP OF CURB / PROPOSED BOTTOM OF CURB
- + 288.89 — EXISTING SPOT GRADE
- 289 — EXISTING CONTOUR
- 289 — PROPOSED CONTOUR ELEVATION
- OVER LAND FLOW DIRECTION
- M.E. — MATCH EXISTING GRADE
- PROPOSED DRAINAGE STRUCTURES
- PROPOSED STORMWATER PIPE
- EXISTING STORM WATER LINE WITH FLOW DIRECTION
- S-XXX — PROP. DRAINAGE STRUCTURE NUMBER. SEE SCHEDULES (THIS SHEET) FOR DETAIL INFORMATION.
- TW = TOP OF WALL
- FG = FINISH GRADE



STORMWATER NARRATIVE:

THE CURRENTLY DEVELOPED SITE IS 2.997 ACRES WITH 93% IMPERVIOUS COVER. THERE ARE NO STORMWATER BMPS OR CONTROLS CURRENTLY ONSITE. STORMWATER RUNOFF IS DIRECTED FROM THE BUILDING AND PARKING AREAS VIA SHEET FLOW TO AN EXISTING STORMWATER INLET LOCATED AT THE SOUTHEAST CORNER OF THE SITE. THE INLET FLOWS DIRECTLY INTO THE CITY OWNED STORMWATER SYSTEM WITHIN THE BRADDOCK ROAD RIGHT OF WAY.

THE POST-DEVELOPMENT SITE WILL BE 2.997 ACRES WITH 87% IMPERVIOUS COVER, WHICH REPRESENTS A 6% REDUCTION. THE PROPOSED STORMWATER SYSTEM IN THE POST-DEVELOPMENT CONDITION HAS BEEN DESIGNED TO MEET THE REQUIREMENTS OF THE CITY FOR BOTH WATER QUALITY AND WATER QUANTITY. FIVE BIO-RETENTION FILTERS AND THREE UNDERGROUND SAND FILTERS ARE PROPOSED AT THE SITE.

BIO-RETENTION: THE NORTHEASTERN BIO-RETENTION FILTER WILL COLLECT RUNOFF FROM THE SMALL RETAIL BUILDING AND THE VESTIBULES OF THE SAFEWAY STORE. THE THREE BIO-RETENTION FILTERS LOCATED IN THE SOUTHWEST AREA OF THE PROPERTY WILL COLLECT RUNOFF FROM THE PARKING AREAS NEAR THE WESTERNMOST DRIVEWAY, AS WELL AS THE PARKING AREA LOCATED DIRECTLY NORTH OF THE FILTERS, AND THE CENTER DRIVEWAY. THE BIO-RETENTION FILTER LOCATED IN THE SOUTHEAST CORNER OF THE SITE WILL COLLECT RUNOFF FROM THE PARKING AREA DIRECTLY NORTH OF THE FILTER. THE BIO-RETENTION FILTERS WILL DISCHARGE TO THE EXISTING STORMWATER SYSTEM WITHIN THE BRADDOCK ROAD RIGHT OF WAY.

UNDERGROUND SAND FILTER: TWO UNDERGROUND DC SAND FILTERS ARE PROPOSED SOUTH OF THE SAFEWAY BUILDING. THE FILTERS WILL BE POSITIONED TO ACCEPT RUNOFF FROM THE SAFEWAY BUILDING'S ROOF, AS WELL AS THE TRUCKWELL AREA. A DELAWARE SAND FILTER IS ALSO PROPOSED WITHIN THE PARKING LOT SOUTH OF THE RETAIL BUILDING. THE FILTERS WILL DISCHARGE TO THE EXISTING STORMWATER SYSTEM LOCATED WITHIN THE BRADDOCK ROAD RIGHT OF WAY.

THE STORMWATER MANAGEMENT SYSTEM HAS BEEN DESIGNED SO THAT POLLUTANT DISCHARGE IS LESS THAN THAT FROM THE AVERAGE LAND COVER CONDITION FOR THE CITY. THE BMPS ONSITE HAVE BEEN DESIGNED TO TREAT THE ENTIRE WATER QUALITY VOLUME AND TO KEEP POST-DEVELOPMENT RUNOFF RATES BELOW PRE-DEVELOPMENT CONDITIONS. FOR AREAS WHERE WE CANNOT DIRECT RUNOFF INTO THE PROPOSED BMPS (I.E. THE SIDEWALK AREA DIRECTLY IN FRONT OF THE SAFEWAY BUILDING), THE APPLICANT WILL PAY INTO THE STORMWATER FUND BASED ON THE AREA FLOWING DIRECTLY TO THE CITY'S STORMWATER SYSTEM.

ENVIRONMENTAL SITE ASSESSMENT (CITY OF ALEXANDRIA):

1. THERE ARE NO TIDAL WETLANDS, TIDAL SHORES, TRIBUTARY STREAMS, FLOODPLAINS,CONNECTED TIDAL WETLANDS, ISOLATED WETLANDS, HIGHLY ERODABLE / PERMEABLE SOILS OR BUFFER AREAS ASSOCIATED WITH SHORES, STREAMS, OR WETLANDS LOCATED ON THE SITE. FURTHER, THERE ARE NO WETLAND PERMITS REQUIRED FOR THIS DEVELOPMENT PROJECT.
2. PREVIOUS GROUNDWATER INVESTIGATIONS AT THE SITE HAVE YIELDED EVIDENCE OF CONTAMINATION, SPECIFICALLY BENZENE, TOLUENE, ETHYL BENZENE, TOTAL XYLENES, AND MTBE. THE PRESENCE OF THESE CONTAMINANTS IS LIKELY DUE TO LEAKING UNDERGROUND STORAGE TANKS (USTS) FROM THE ADJACENT GAS STATION. THIS ADJACENT PROPERTY IS NEITHER OWNER NOR OPERATED BY SAFEWAY. THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (VADEQ) CLOSED THEIR INVESTIGATION OF THESE USTS IN AUGUST 2003 AFTER CONCLUDING THAT THE TANKS "DO NOT REPRESENT AN IDENTIFIED RISK TO HUMAN HEALTH AND THE ENVIRONMENT."
3. DURING INVESTIGATIONS CONDUCTED IN MARCH AND APRIL 2011 BY TERRACON CONSULTANTS, INC., TRUE GROUNDWATER WAS NOT ENCOUNTERED WITHIN ANY OF THE 5 ENVIRONMENTAL OR 19 GEOTECHNICAL SOIL BORINGS PERFORMED AT THE SITE. THE DEPTH OF THESE BORINGS RANGED FROM 15 FEET TO 40 FEET. PERCHED GROUNDWATER WAS ENCOUNTERED IN SOME OF THE BORINGS, AT ELEVATIONS OF 15 FEET BELOW GRADE OR DEEPER, WHICH IS WELL BELOW THE SOILS THAT WILL BE DISTURBED AS A RESULT OF THE PROPOSED CONSTRUCTION.
4. TETRACHLOROETHENE WAS ALSO DETECTED IN A SOIL SAMPLE TAKEN AT THE LOCATION OF THE FORMER DRY CLEANING OPERATION, ALTHOUGH THE LEVELS ENCOUNTERED WERE BELOW USEPA GENERIC SCREENING LEVELS.
5. 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.
6. ALL WELLS TO BE DEMOLISHED IN THIS PROJECT, INCLUDING MONITORING WELLS MUST BE CLOSED IN ACCORDANCE WITH VIRGINIA STATE WATER CONTROL BOARD (VSWCB) REQUIREMENTS. CONTACT ENVIRONMENTAL HEALTH SPECIALIST AND COORDINATE WITH THE ALEXANDRIA HEALTH DEPARTMENT AT 703-838-4400 EXT 267/255. ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE ALEXANDRIA NOISE CONTROL CODE TITLE 11, CHAPTER 5, WHICH PERMITS CONSTRUCTION ACTIVITIES TO OCCUR BETWEEN THE FOLLOWING HOURS:
   - MONDAY THROUGH FRIDAY FROM 7AM TO 6PM AND
   - SATURDAYS FROM 9AM TO 6 PM.
   - NO CONSTRUCTION ACTIVITIES ARE PERMITTED ON SUNDAYS.
   - PILE DRIVING IS FURTHER RESTRICTED TO THE FOLLOWING HOURS:
   - MONDAY THROUGH FRIDAY FROM 9AM TO 6 PM AND
   - SATURDAYS FROM 10 AM TO 4 PM.

STORMWATER BEST MANAGEMENT PRACTICES (BMP) NOTES:

THE STORMWATER BEST MANAGEMENT PRACTICES (BMP) REQUIRED FOR THIS PROJECT SHALL BE CONSTRUCTED AND INSTALLED UNDER THE DIRECT SUPERVISION OF THE DESIGN ENGINEER OR HIS DESIGNATED REPRESENTATIVE. THE DESIGN ENGINEER SHALL MAKE A WRITTEN CERTIFICATION TO THE CITY THAT THE BMPs ARE CONSTRUCTED AND INSTALLED AS DESIGNED AND IN ACCORDANCE WITH THE APPROVED SITE PLAN. IN ADDITION, AGGREGATE LAYERS AND COLLECTOR PIPES MAY NOT BE INSTALLED UNLESS THE DESIGN ENGINEER OR HIS REPRESENTATIVE IS PRESENT.

THE CONTRACTOR SHALL FURNISH THE CITY WITH AN OPERATION AND MAINTENANCE MANUAL FOR ALL BMPs ON THE PROJECT. THE MANUAL SHALL INCLUDE AN EXPLANATION OF THE FUNCTIONS AND OPERATIONS OF EACH BMP AND ANY SUPPORTING UTILITIES, CATALOG CUTS ON ANY MECHANICAL OR ELECTRICAL EQUIPMENT AND A SCHEDULE OF ROUTINE MAINTENANCE FOR THE BMPs AND SUPPORTING EQUIPMENT.

RESOURCE PROTECTION AREA NOTES:

THE SUBJECT PROPERTY DOES NOT LIE WITHIN THE CITY OF ALEXANDRIA RESOURCE PROTECTION AREA (RPA) AND THERE ARE NO MAPPED RPA'S ON THIS PROPERTY.

FLOOD PLAIN NOTES:

THE SITE DOES NOT LIE WITHIN 100-YEAR FLOOD PLAIN WATER SURFACE ELEVATION (WSE) PER THE DEMARCATION OF THE CURRENT FLOOD INSURANCE RATE MAP (FIRM) PUBLISHED BY FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).

ARCHAEOLOGY NOTES:

1. ALL REQUIRED ARCHAEOLOGICAL PRESERVATION MEASURES SHALL BE COMPLETED PRIOR TO GROUND-DISTURBING ACTIVITIES (SUCH AS CORING, GRADING, FILLING, VEGETATION REMOVAL, UNDERGROUND UTILITIES, PILE DRIVING, LANDSCAPING AND OTHER EXCAVATIONS AS DEFINED IN SECTION 2-151 OF THE ZONING ORDINANCE) OR A RESOURCE MANAGEMENT PLAN MUST BE IN PLACE TO PRESERVE AND/OR RECOVER SIGNIFICANT RESOURCES IN CONCERT WITH CONSTRUCTION ACTIVITIES. TO CONFIRM, CALL ALEXANDRIA ARCHAEOLOGY AT (703) 838-4399.
2. CALL ALEXANDRIA ARCHAEOLOGY (703) 838-4399 TWO WEEKS BEFORE THE STARTING DATE OF ANY GROUND DISTURBANCE SO THAT AN INSPECTION OR MONITORING SCHEDULE FOR CITY ARCHAEOLOGISTS CAN BE ARRANGED.
3. THE APPLICANT SHALL CALL ALEXANDRIA ARCHAEOLOGY IMMEDIATELY (703) 838-4399 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.
4. 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.

CEMETERY AND/OR BURIAL GROUNDS:

THERE IS NO OBSERVABLE, HISTORICAL, OR ARCHAEOLOGICAL EVIDENCE OF CEMETERIES OR BURIAL GROUNDS ON THIS PROPERTY.

GENERAL NOTES:

1. BOUNDARY AND TOPOGRAPHIC INFORMATION HAS BEEN PROVIDED TO OWNER AND CPH ENGINEERS, INC. SURVEY WAS PERFORMED BY BOHLER ENGINEERING, DATED OCTOBER OF 2010
2. THIS PROPERTY LIES WITHIN ZONE X, (AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN) MAP ENTITLED "FIRM, FLOOD INSURANCE RATE MAP AND STREET INDEX, CITY OF ALEXANDRIA, VIRGINIA, INDEPENDENT CITY COMMUNITY PANEL NUMBER 515519 0005D, MAP REVISED MAY 15, 1991.
3. INFORMATION CONCERNING EXISTING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF EXISTING UTILITIES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF TRENCHING.
4. ALL FILL, COMMON BORROW, AND/OR TRENCH BACKFILL SHALL BE COMPACTED ACCORDING TO VDOT ROAD AND BRIDGE SPECIFICATION 2007 EDITION OR LATEST EDITION. AT A MINIMUM, COMPACTION TESTS SHALL BE COMPLETED A FREQUENCY OF ONCE PER 150 LINEAR FEET OF TRENCH OR LANE WIDTH PER LIFT, EXCEPT THAT THERE SHALL BE AT LEAST ONE COMPACTION TEST PER LIFT AND AT LEAST TWO PER DAY. CONTRACTOR SHALL SUPPLY THE INSPECTOR WITH CERTIFIED COMPACTION TEST RESULTS FROM AN INDEPENDENT FIRM THAT PROVIDES GEOTECHNICAL SERVICES. THE TEST REPORT SHALL BE SIGNED, SEALED AND DATED BY A PROFESSIONAL ENGINEER LICENSED BY THE STATE OF VIRGINIA.
5. UNLESS OTHERWISE SPECIFIED, ALL FILL, COMMON BORROW, AND/OR TRENCH BACKFILL MATERIAL SHALL BE A MINIMUM OF 100 LBS/FT^3 FOR THE MAXIMUM DRY DENSITY ACCORDING AASHTO T-180 AND SHALL NOT BE MH, CH, OH OR PT AS DETERMINED FROM ASTM D-2487.
6. PROVIDE POSITIVE DRAINAGE OF ALL AREAS DISTURBED BY CONSTRUCTION. MINIMUM SLOPE IN PAVED AREAS IS 1%. MINIMUM SLOPE OF GRADED AREAS IS 2%. MAXIMUM SLOPE ON EARTH BANKS IS 3:1.
7. WHEN TYING INTO EXISTING PAVEMENT, SAW CUT EXISTING PAVING EDGE TO PROVIDE A CLEAN, STRAIGHT AND VERTICAL JOINT. WHEN REMOVING EXISTING CURB OR SIDEWALK, REMOVE TO THE NEAREST JOINT. CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL PAVEMENT MARKINGS AND SIGNAGE IN ACCORDANCE WITH THE PLANS.

STORM SYSTEM NOTES:

1. ALL PROPOSED INLET GRATES IN PAVED AREAS (EXCEPT SIDEWALKS) SHALL BE RETICULINE STEEL H-20 LOADING TRAFFIC BEARING GRATES AND SHALL BE SECURELY FASHIONED PER MANUFACTURER'S RECOMMENDATIONS.
2. ALL DRAINAGE STRUCTURES LOCATED UNDER PAVED AREAS (EXCEPT SIDEWALKS) SHALL BE H-20 LOAD RATED.
3. ALL DRAINAGE STRUCTURES, INCLUDING CLEAN-OUTS, SHALL BE INSTALLED WITH H-20 LOADING TRAFFIC BEARING GRATES, TOPS, RINGS AND COVERS, ETC. AS APPLICABLE.
4. CONTRACTOR SHALL SECURE DRAINAGE MANHOLES.
5. CONCRETE DESIGN SHALL MEET THE REQUIREMENTS OF ACI 350, ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES, WITH FREEZING AND THAWING EXPOSURES. CONCRETE SHALL BE A TYPE II OR IIA CEMENT, WITH A 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI FOR CAST-IN-PLACE AND 5000 PSI FOR PRE-CAST STRUCTURES. CONCRETE SHALL ALSO MEET THE REQUIREMENTS OF VIRGINIA DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 420, MIX NO. 6.
6. ALL PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC. FILTER FABRIC SHALL BE IN ACCORDANCE WITH VDOT STANDARDS. PROVIDE MINIMUM 12-INCH OVERLAP.
7. CONTRACTOR SHALL INSTALL 6 INCH DIAMETER PERFORATED UNDERDRAINS WITHIN LANDSCAPE PLANTERS. CONTRACTOR TO CONNECT DRAINS TO STORMWATER COLLECTION SYSTEM. SEE LANDSCAPE PLANS.
8. CONTRACTOR SHALL REMOVE EXISTING MANHOLE TOP SECTION AND REPLACE WITH NEW TOP SECTION TO MATCH DRIVEWAY GRADE, WHERE APPLICABLE. SUBMIT SHOP DRAWING TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING NEW TOP SECTION.
9. THE PLAN DEMONSTRATES THAT THE SITE HAS BEEN DEVELOPED NOT TO INCREASE THE POST-DEVELOPMENT PEAK RUNOFF RATE FROM THE PRE-DEVELOPMENT PEAK RUNOFF RATE FOR A TWO-YEAR AND TEN-YEAR STORM CONSIDERED INDIVIDUALLY PER THE REQUIREMENTS OF ARTICLE 13-109(F)(1) OF THE ALEXANDRIA ZONING ORDINANCE. THEREFORE, NO DETENTION IS PROVIDED.
10. THE PIPES AND STORM SEWER SYSTEM DEMONSTRATE THAT A TEN-YEAR STORM IS CONTAINED WITHIN THE PIPE OR SYSTEM AND THE HYDRAULIC GRADE LINE (HGL) IS AT LEAST TWO FEET BELOW THAT TOP OF THE MANHOLE; THEREFORE, AN ADEQUATE STORM WATER OUTFALL IS ASSUMED TO BE AVAILABLE.
11. A SEPARATE STRUCTURAL BUILDING PERMIT WILL BE REQUIRED FOR CONSTRUCTION OF THE SAND FILTERS.

MOSQUITO CONTROL NOTES:

1. SINCE STORMWATER MANAGEMENT (SWM) AND BEST MANAGEMENT PRACTICE (BMP) SYSTEMS THAT HOLD WATER FOR MORE THAN 5 DAYS BETWEEN THE MONTHS OF MAY-OCTOBER HAVE THE POTENTIAL TO CAUSE MOSQUITO BREEDING HABITATS, SUCH BMPs SHALL BE TREATED WITH A REGISTERED MOSQUITO LARVAL CONTROL PRODUCT. ALL LABELS SHOULD BE FOLLOWED FOR APPLICATION RATES AND AMOUNTS.
2. SINCE EXCESSIVE VEGETATION IN EXISTING BMPs ALSO INCREASES THE POTENTIAL FOR MOSQUITO PROBLEMS, VEGETATION SHALL BE CONTROLLED AND CUT TO REDUCE MOSQUITO BREEDING.
3. CONTACT THE CITY OF ALEXANDRIA ENVIRONMENTAL HEALTH VECTOR BORNE ILLNESS PROGRAM (703-838-4400 EXT. 326/327)) FOR QUESTIONS OR TREATMENTS ASSISTANCE.

GRAPHIC SCALE

0 15' 30' 60'

(IN FEET)
1 inch = 30 ft.

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VA. LIC. NO. 0402047801
DATE: Aug 25, 2011

No.	Date	Revision	By
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Drawn by:	R.K.R
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SITE GRADING AND DRAINAGE PLAN
SAFEWAY STORE #3250 (R4003)

SAFEWAY
3526 KING STREET
ALEXANDRIA, VIRGINIA 22302

Sheet No.
C-6

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LEGEND

- PROPERTY LINE
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED WALL (REFER TO ARCHITECT'S PLANS FOR STYLE AND DETAILS.)
- CONCRETE (SEE SITE DETAILS)
- DECORATIVE SIDEWALK (REFER TO LANDSCAPING PLANS)
- CONCRETE SIDEWALK (CITY OF ALEXANDRIA STANDARD)
- 2% MAX — SLOPE DIRECTION
- XXX.XX / XXX.XX — PROPOSED TOP OF CURB / PROPOSED BOTTOM OF CURB
- + 288.89 — EXISTING SPOT GRADE
- —289— EXISTING CONTOUR
- 289 — PROPOSED CONTOUR ELEVATION
- OVER LAND FLOW DIRECTION
- M.E. — MATCH EXISTING GRADE
- PROPOSED DRAINAGE STRUCTURES
- PROPOSED STORMWATER PIPE
- EXISTING STORM WATER LINE WITH FLOW DIRECTION
- S-XXX — PROP. DRAINAGE STRUCTURE NUMBER. SEE SCHEDULES (THIS SHEET) FOR DETAIL INFORMATION.
- TW = TOP OF WALL
- FG = FINISH GRADE

STORMWATER OUTFALL ANALYSIS

OUTFALL #1

CONTRIBUTORY DRAINAGE AREA = 1.034 ACRES
WEIGHTED RUNOFF COEFFICIENT = 0.67

Q = ciA

Q_{10} = (0.67)*(9.0)*(1.034) = 6.24 CFS

OUTFALL PIPE #1 TO BE REPLACED WITH 24" RCP AT 0.5%

$Q_{PIPE} = \frac{1.49}{n} R^{2/3} S^{1/2} A$

$Q_{PIPE} = \frac{1.49}{0.013} * (0.50)^{2/3} * (0.005)^{1/2} * (3.14) = 16.03$ CFS

$Q_{PIPE} > Q_{10}$ THEREFORE, OUTFALL #1 IS ADEQUATE

OUTFALL #2

CONTRIBUTORY DRAINAGE AREA = 2.478 ACRES
WEIGHTED RUNOFF COEFFICIENT = 0.87

Q = ciA

Q_{10} = (0.87)*(9.0)*(2.478) = 19.40 CFS

OUTFALL PIPE #2 TO BE REPLACED WITH 30" RCP AT 0.5%

$Q_{PIPE} = \frac{1.49}{n} R^{2/3} S^{1/2} A$

$Q_{PIPE} = \frac{1.49}{0.013} * (0.63)^{2/3} * (0.005)^{1/2} * (4.91) = 29.24$ CFS

$Q_{PIPE} > Q_{10}$ THEREFORE, OUTFALL #2 IS ADEQUATE

BIORETENTION FILTER	WATER SURFACE ELEVATION (FT) 2-YEAR	10-YEAR
1	201.80	201.87
2	199.32	199.37
3	199.14	199.22
4	198.38	198.56
5	197.83	197.99

NOTE
WATER QUALITY WORKSHEET A, B, AND C CAN BE FOUND ON SHEET C-2A.

STORM WATER COMPUTATIONS

DISCHARGE POINT	2-YEAR STORM			10-YEAR STORM		
	EXISTING RUNOFF (CFS)	PROPOSED RUNOFF (CFS)	NET CHANGE IN RUNOFF (CFS)[1]	EXISTING RUNOFF (CFS)	PROPOSED RUNOFF (CFS)	NET CHANGE IN RUNOFF (CFS)[1]
1	3.43	1.26	2.17	5.10	2.49	2.61
2	10.88	10.20	0.68	15.90	14.97	0.93
3	1.72	0.93	0.79	2.51	1.37	1.14
4	0.00	0.08	-0.08	0.01	0.12	-0.11
5	0.65	0.96	-0.31	0.95	1.41	-0.46

NOTE:
1. NEGATIVE NET CHARGE INDICATES AN INCREASE IN RUNOFF. POSITIVE NET CHARGE INDICATES A DECREASE IN RUNOFF.

PROJECT DESCRIPTION:

REDEVELOPMENT

DRAINAGE AREA	IMPERVIOUS	PERVIOUS	TOTAL
SITE AREA	2.593	0.404	2.997
ON-SITE TREATED	2.649	0.282	2.931
OFF-SITE TREATED	0.091	0.034	0.125
TOTAL TREATED	2.741	0.316	3.057
ANY ON-SITE DISCONNECTION BY A VEGETATED BUFFER (25 FT)	NO		
TOTAL ON-SITE TREATED OR DISCONNECTED			3.057

WATER TREATMENT ONSITE

WATER QUALITY VOLUMES REQUIRED 1/2 IN. OVER THE SITE (2.997 ACRES) = 0.125 AC.-FT.

BMP TYPE	AREA TREATED BY BMP (ACRES)	IMPERVIOUS AREA TREATED BY BMP (ACRES)	BMP EFFICIENCY (%)	WATER QUALITY VOL. (ACRE-FEET)
BIORETENTION FILTER	1.296	0.898	50	0.048
DC SAND FILTER	1.665	1.650	60	0.069
DE SAND FILTER	0.191	0.183	60	0.008
TOTAL	3.152	2.731	--	0.125

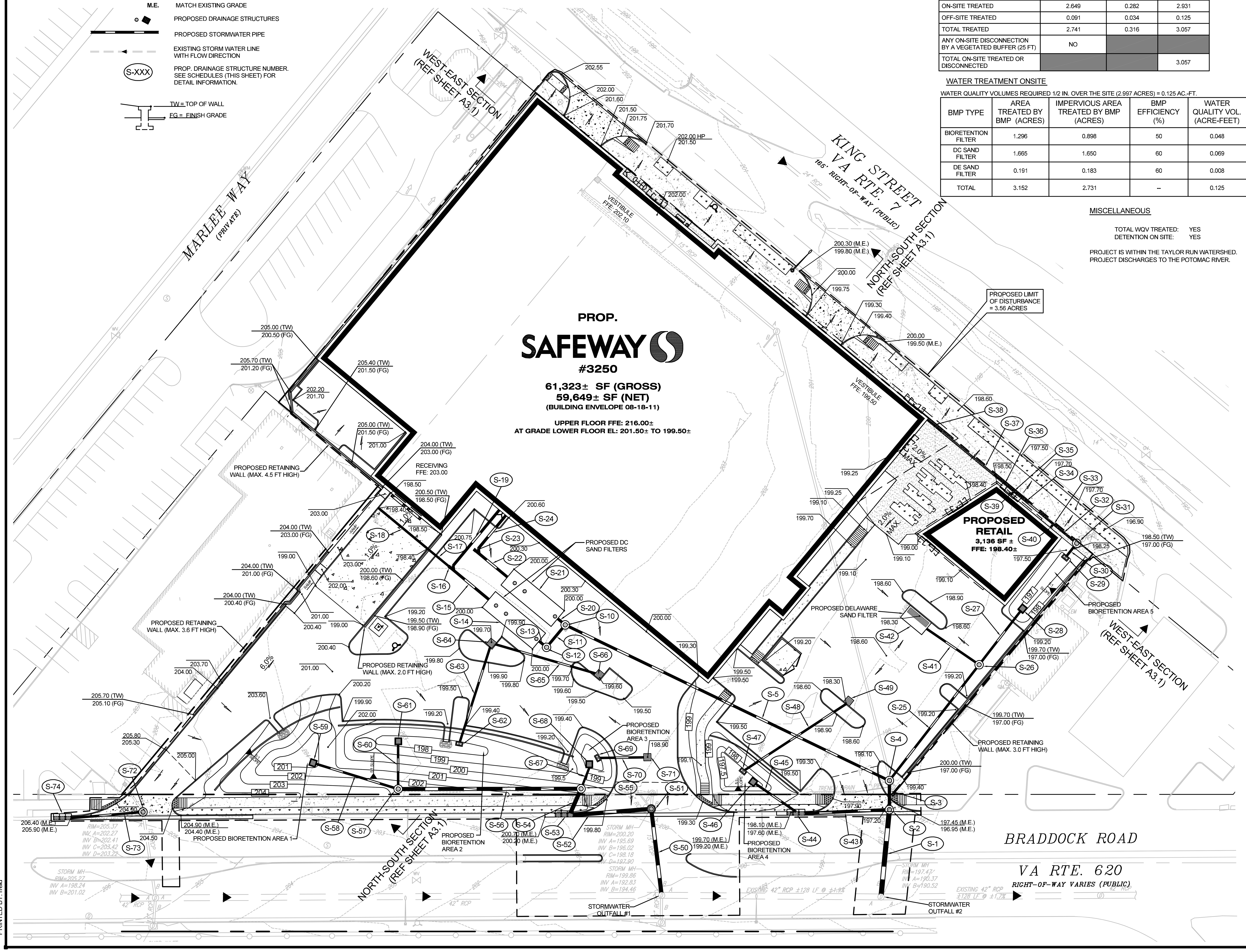
MISCELLANEOUS

TOTAL WQV TREATED: YES
DETENTION ON SITE: YES

PROJECT IS WITHIN THE TAYLOR RUN WATERSHED.
PROJECT DISCHARGES TO THE POTOMAC RIVER.

STORM WATER SCHEDULE

- S-1 PROPOSED 30" RCP STORMWATER OUTFALL PIPE (TO REPLACE EXISTING) 47 LF ~ @ 0.5%
- S-2 4Ø MANHOLE TOP EL = 197.50 (N) INV IN = 190.61 (W) INV IN = 192.92 INV OUT = 190.61
- S-3 12 LF ~ 18" RCP @ 0.5%
- S-4 4Ø MANHOLE TOP EL = 200.00 (W) INV IN = 190.67 (NE) INV IN = 190.73 INV OUT = 190.67
- S-5 205 LF ~ 15" RCP @ 0.25%
- S-6 NOT USED
- S-7 NOT USED
- S-8 NOT USED
- S-9 NOT USED
- S-10 4Ø MANHOLE TOP EL = 199.90 (W) INV IN =191.20 (S) INV IN = 191.16 INV OUT = 191.16
- S-11 12 LF ~ 15" RCP @ 0.25%
- S-12 4Ø MANHOLE TOP EL = 199.90 INV IN = 191.19 INV OUT = 191.19
- S-13 3 LF ~ 15" RCP @ 0.25%
- S-14 SAND FILTER TOP EL = 200.00 INV IN = 194.17 INV OUT = 191.22
- S-15 29 LF ~ 15" RCP @ 0.5%
- S-16 CLEAN OUT TOP EL = 200.50 (N) INV IN = 194.31 (W) INV IN = 194.31 INV OUT = 194.31
- S-17 18 LF ~ 12" RCP @ 0.5%
- S-18 TRENCH DRAIN 37 LF TOP EL = 198.40 INV OUT = 194.40
- S-19 45 LF ~ 15" RCP @ 0.5%
- S-20 3 LF ~ 15" RCP @ 0.25%
- S-21 SAND FILTER TOP EL = 200.00 INV IN = 194.13 INV OUT = 191.19
- S-22 24 LF ~ 15" RCP @ 0.5%
- S-23 CLEAN OUT TOP EL = 200.50 INV IN = 194.25 INV OUT = 194.25
- S-24 20 LF ~ 15" RCP @ 0.5%
- S-25 80 LF ~ 12" RCP @ 0.5%
- S-26 4Ø MANHOLE TOP EL = 199.30 (N) INV IN = 194.13 (W) INV IN = 191.07 INV OUT = 191.07
- S-27 37 LF ~ 12" RCP @ 1.0%
- S-28 CONTROL STRUCTURE TOP EL = 198.00 0.5' WEIR = 197.67 INV OUT = 194.50
- S-29 BUBBLER INV = 193.98
- S-30 7 LF ~ 12" RCP @ 0.5%
- S-31 4Ø MANHOLE TOP EL = 198.15 INV IN = 194.01 INV OUT = 194.01
- S-32 15 LF ~ 12" RCP @ 0.5%
- S-33 CLEAN OUT TOP EL = 198.30 INV IN = 194.08 INV IN = 194.08 INV OUT = 194.08
- S-34 29 LF ~ 12" RCP @ 0.5%
- S-35 CLEAN OUT TOP EL = 198.30 INV IN = 194.22 INV IN = 194.22 INV OUT = 194.22
- S-36 16 LF ~ 12" RCP @ 0.5%
- S-37 TRENCH DRAIN 40 LF TOP EL = 198.30 INV IN = 194.30 INV OUT = 194.30
- S-38 10 LF ~ 12" RCP @ 0.5%
- S-39 2 LF ~ 12" RCP @ 0.5%
- S-40 2 LF ~ 6" RCP @ 1.0%
- S-41 35 LF ~ 12" STORM @ 0.5%
- S-42 SAND FILTER TOP EL = 198.30 INV OUT = 191.25
- S-43 47 LF ~ 18" RCP @ 2.0%
- S-44 PRECAST TRIPLE GRATE DROP INLET PER VDOT STANDARD - DI-2A TOP EL = 198.50 INV IN = 194.71 INV OUT = 193.86
- S-45 29 LF ~ 12" STORM @ 1.0%
- S-46 CONTROL STRUCTURE TOP EL = 198.50 0.5' WEIR = 198.17 INV OUT = 195.00
- S-47 BUBBLER INV = 194.12
- S-48 71 LF ~ 12" RCP @ 0.25%
- S-49 PRECAST SINGLE GRATE DROP INLET PER VDOT STANDARD - DI-1 TOP EL = 198.30 INV OUT = 194.30
- S-50 PROPOSED 24" RCP STORMWATER OUTFALL PIPE (TO REPLACE EXISTING) 47 LF ~ @ 0.5%
- S-51 REPLACE EXISTING DROP INLET WITH 4Ø MANHOLE TOP EL = 199.50 INV IN = 193.10 INV OUT = 193.10
- S-52 43 LF ~ 24" RCP @ 0.5%
- S-53 PRECAST TRIPLE GRATE DROP INLET PER VDOT STANDARD - DI-2A TOP EL = 201.00 INV IN = 193.31 INV OUT = 193.31
- S-54 13 LF ~ 24" RCP @ 0.5%
- S-55 4Ø MANHOLE TOP EL = 200.50 (N) INV IN = 195.39 (W) INV IN = 194.25 INV OUT = 193.37
- S-56 102 LF ~ 24" STORM @ 1.0%
- S-57 4Ø MANHOLE TOP EL = 200.50 (N) INV IN = 195.27 (W) INV IN = 197.56 INV OUT = 195.27
- S-58 47 LF ~ 12" STORM @ 2.0%
- S-59 CONTROL STRUCTURE TOP EL = 202.00 0.5' WEIR = 201.67 INV OUT = 198.50
- S-60 23 LF ~ 12" STORM @ 1.0%
- S-61 CONTROL STRUCTURE TOP EL = 199.25 0.5' WEIR = 199.00 INV OUT = 195.50
- S-62 BUBBLER INV = 195.01
- S-63 58 LF ~ 12" STORM @ 0.5%
- S-64 PRECAST SINGLE GRATE DROP INLET PER VDOT STANDARD - DI-1 TOP EL = 199.70 INV IN = 195.30 INV OUT = 195.30
- S-65 61 LF ~ 12" STORM @ 0.5%
- S-66 PRECAST SINGLE GRATE DROP INLET PER VDOT STANDARD - DI-1 TOP EL = 199.60 INV OUT = 195.60
- S-67 11 LF ~ 12" STORM @ 1.0%
- S-68 CONTROL STRUCTURE TOP EL = 199.25 0.5' WEIR = 199.005 INV OUT = 195.50
- S-69 BUBBLER INV = 194.78
- S-70 25 LF ~ 12" STORM @ 0.5%
- S-71 PRECAST SINGLE GRATE DROP INLET PER VDOT STANDARD - DI-1 TOP EL = 198.90 INV OUT = 194.90
- S-72 REPLACE EXISTING DROP INLET WITH 4Ø MANHOLE TOP EL = 204.90 (N) INV IN = 202.41(EXISTING) (W) INV IN = 202.27 INV OUT = 202.27 ± M.E.
- S-73 40 LF ~ 12"x18" ELLIPTICAL RCP @ 0.5%
- S-74 PRECAST TRIPLE GRATE DROP INLET PER VDOT STANDARD - DI-2A TOP EL = 206.00 INV OUT = 202.47



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SITE GRADING AND DRAINAGE PLAN
SAFEWAY STORE #3250 (R4003)

SAFEWAY
3526 KING STREET
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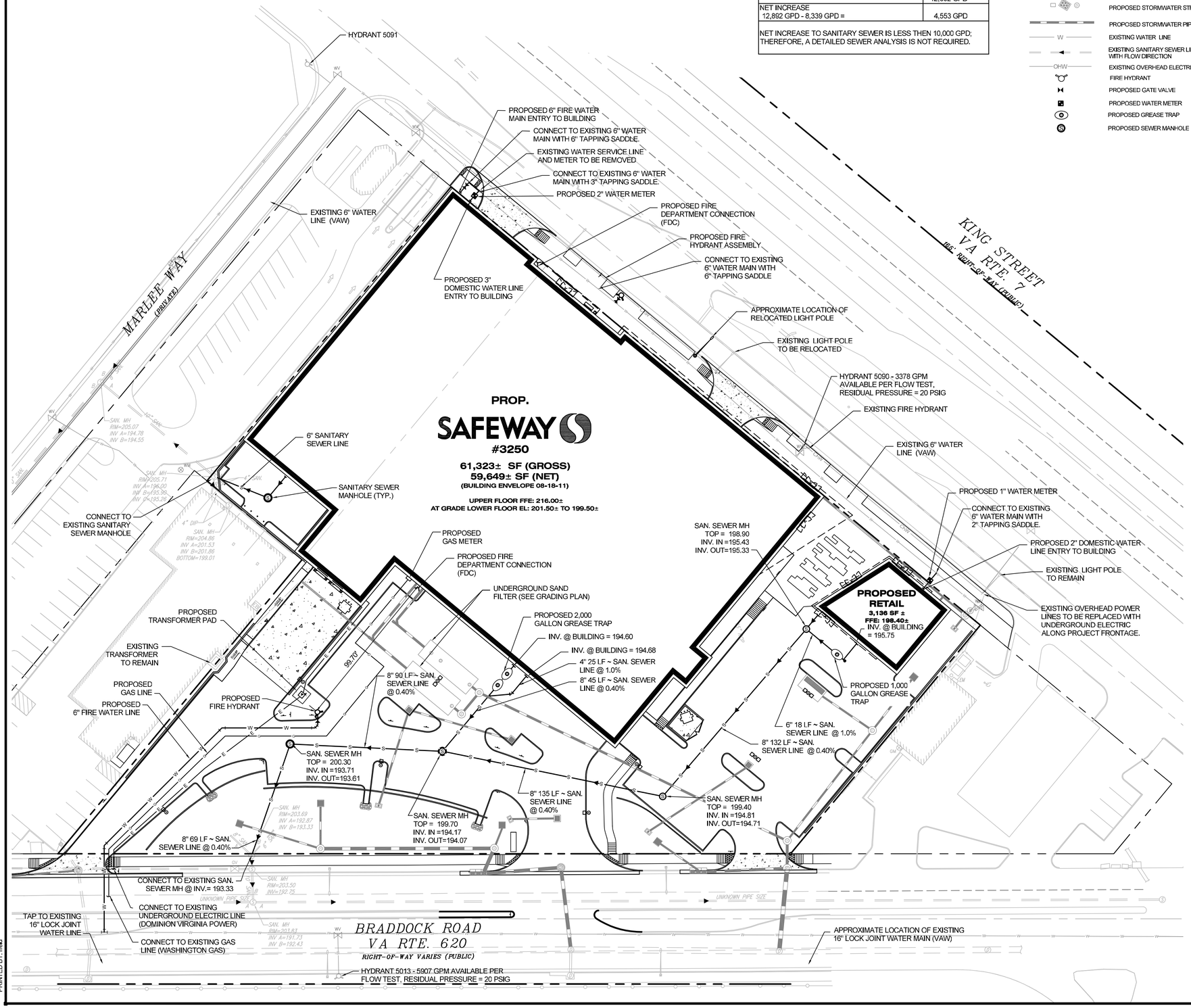
SANITARY SEWER ANALYSIS	
CITY OF ALEXANDRIA GENERATION RATE FOR OFFICE/COMMERCIAL USE IS:	200 GPD/1000 SF
EXISTING 41,695 SF X 200 GPD/1000 SF =	8,339 GPD
PROPOSED 61,323 SF X 200 GPD/1000 SF = 3,136 SF X 200 GPD/1000 SF =	12,265 GPD 627 GPD 12,892 GPD
NET INCREASE 12,892 GPD - 8,339 GPD =	4,553 GPD
NET INCREASE TO SANITARY SEWER IS LESS THEN 10,000 GPD; THEREFORE, A DETAILED SEWER ANALYSIS IS NOT REQUIRED.	

LEGEND

- PROPERTY LINE
- PROPOSED SANITARY SEWER LINE WITH FLOW DIRECTION
- PROPOSED WATER LINE
- PROPOSED WATER SERVICE LINE
- PROPOSED ELECTRIC LINE WITH TRANSFORMER
- PROPOSED STORMWATER STRUCTURES
- PROPOSED STORMWATER PIPE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE WITH FLOW DIRECTION
- EXISTING OVERHEAD ELECTRIC LINE
- FIRE HYDRANT
- PROPOSED GATE VALVE
- PROPOSED WATER METER
- PROPOSED GREASE TRAP
- PROPOSED SEWER MANHOLE

GENERAL UTILITY NOTES:

1. ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS ONLY AND HAVE BEEN COMPILED FROM THE LATEST AVAILABLE MAPPING. THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
2. GENERAL CONTRACTOR TO COORDINATE WITH THE LOCAL UTILITY COMPANIES FOR ALL LOCATIONS AND CONNECTIONS. A PRE-CONSTRUCTION MEETING WITH THE VARIOUS UTILITY COMPANIES, IS REQUIRED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.
3. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE DUG AT ALL LOCATIONS WHERE SEWERS CROSS EXISTING UTILITIES, AND THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT ENGINEER AND SAFEWAY CONSTRUCTION MANAGEMENT IN THE EVENT OF ANY UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED UTILITIES, SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE.
4. THE CONTRACTOR SHALL INSURE THAT ALL UTILITY COMPANIES AND CITY STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY COMPANY. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY COMPANIES AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTION, RELOCATIONS, INSPECTIONS, AND DEMOLITION.
5. ALL VALVE BOXES AND CURB BOXES SHALL BE ADJUSTED TO THE FINAL GRADES. ALL CURB BOXES SHALL BE LOCATED IN GRASSED AREAS UNLESS INDICATED OTHERWISE ON THE PLANS.
6. SANITARY LATERAL SHALL MAINTAIN (6' MIN. HORIZONTAL 1' VERTICAL MIN.) SEPARATION DISTANCE FROM WATER LINES UNLESS OTHERWISE SHOWN. OR ADDITIONAL PROTECTION MEASURES WILL BE REQUIRED. WHERE WATER LINE CROSSES ABOVE SANITARY LATERAL BY LESS THAN 2' VERTICAL, A CONCRETE ENCASEMENT SHALL BE INSTALLED, CONTRACTOR SHALL CENTER ONE JOINT OF PIPE AT CROSSING.
7. THIS PLAN DETAILS PIPES UP TO 5' FROM THE BUILDING FACE. REFER TO THE ARCHITECT'S BUILDING PLANS FOR BUILDING CONNECTIONS. SUPPLY AND INSTALL PIPE ADAPTERS AS NECESSARY.
8. ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT AND REPLACED IN ACCORDANCE WITH THE PAVEMENT REPAIR REQUIREMENTS OF THE GOVERNING AUTHORITY.
9. ALL PVC PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED PROCEDURE.
10. ISO CALCULATIONS FOR THE PROPOSED SAFEWAY STORE INDICATE A REQUIRED FIRE FLOW OF 1,250 GALLONS PER MINUTE (GPM).



GRAPHIC SCALE

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UTILITY PLAN
SAFEWAY STORE #3250 (R4003)
SAFEWAY
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ALEXANDRIA, VIRGINIA 22302

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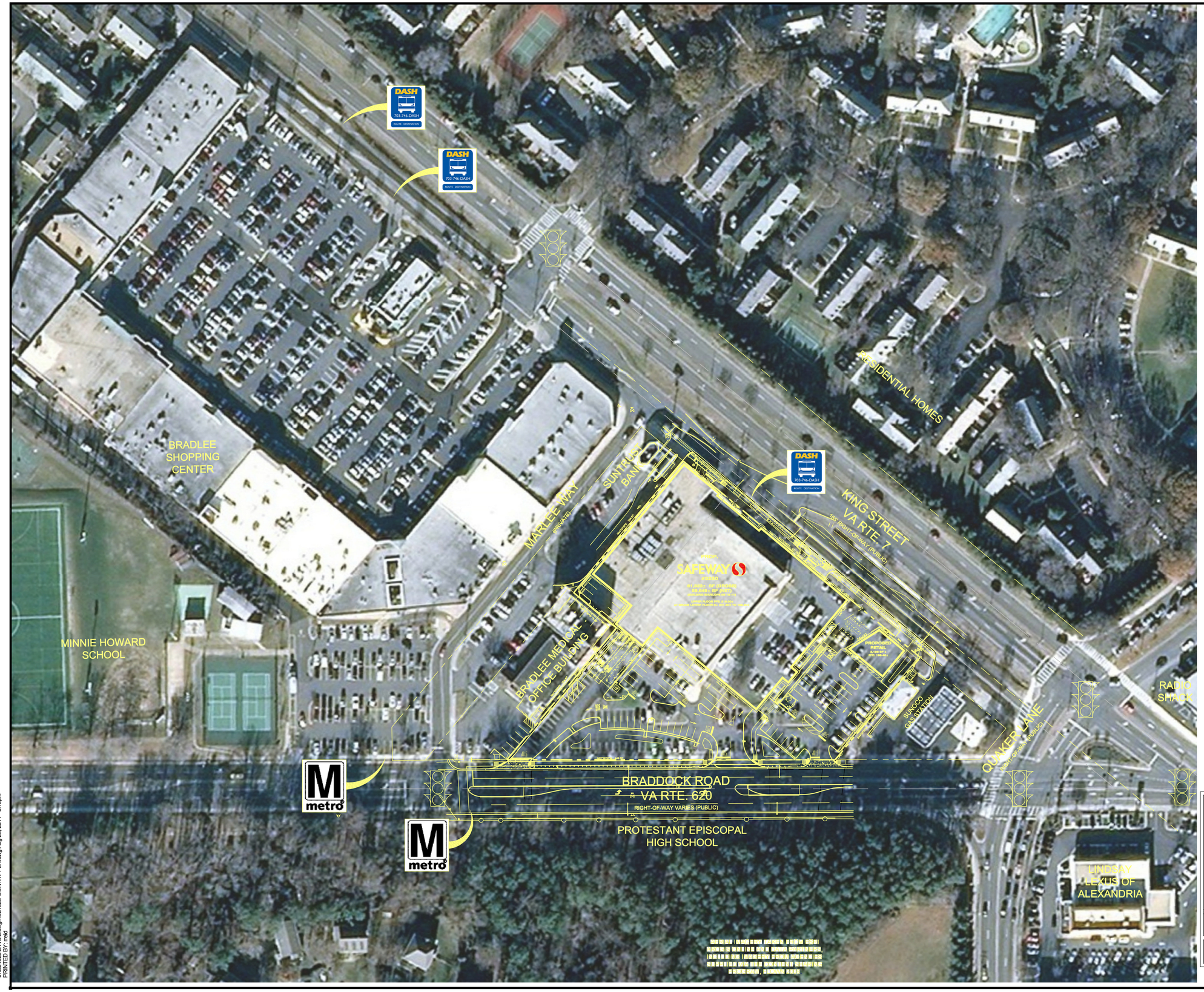

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JENNIFER LANGOSKI, P.E.
VA. LIC. NO. 046004701
DATE: Aug 25, 2011

No.	Date	Revision	By
1	08/26/11	REVISION TO PLAN PER CITY OF ALEXANDRIA COMMENTS DATED AUGUST 5, 2011	
2	07/15/11	REVISION TO PLAN PER CITY OF ALEXANDRIA COMMENTS DATED JULY 1, 2011	

Designed by:	J.L.
Drawn by:	R.K.R.
Checked by:	J.L.
Approved by:	D.P.M.
Scale:	1"=30'
Date:	07-15-2011
Job No.:	S21823
File:	S21823-CONTXT PLN.dwg

CONTEXTUAL PLAN
SAFEWAY STORE #3250 (R4003)
SAFEWAY
3526 KING STREET
ALEXANDRIA, VIRGINIA 22302

Sheet No.
C-8

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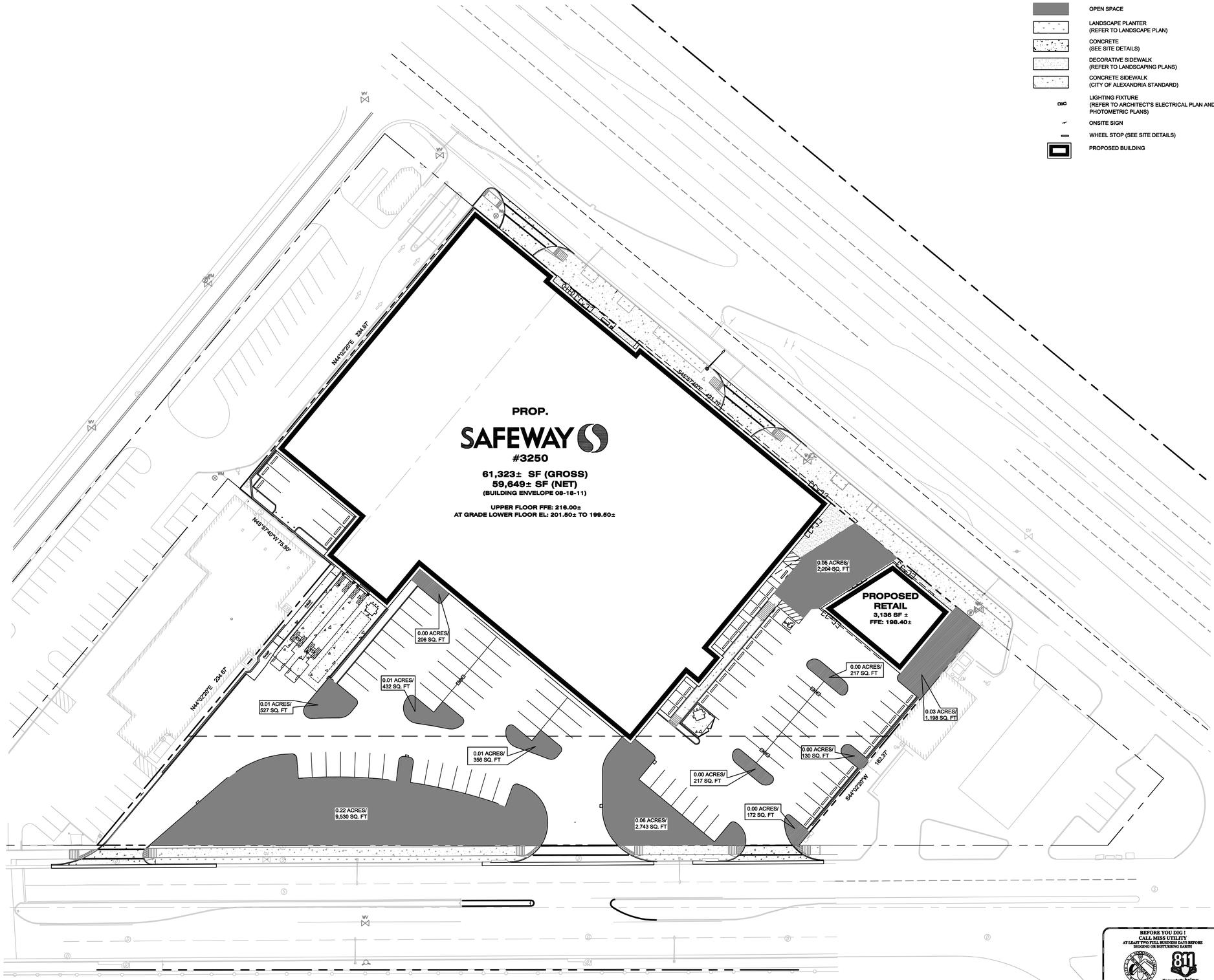
PRINTED BY: rread



LEGEND

- PROPERTY LINE
- OPEN SPACE
- LANDSCAPE PLANTER (REFER TO LANDSCAPE PLAN)
- CONCRETE (SEE SITE DETAILS)
- DECORATIVE SIDEWALK (REFER TO LANDSCAPING PLANS)
- CONCRETE SIDEWALK (CITY OF ALEXANDRIA STANDARD)
- LIGHTING FIXTURE (REFER TO ARCHITECT'S ELECTRICAL PLAN AND PHOTOMETRIC PLANS)
- ONSITE SIGN
- WHEEL STOP (SEE SITE DETAILS)
- PROPOSED BUILDING

OPEN SPACE SUMMARY

OPEN SPACE REQUIRED	NONE FOR COMMERICIAL USE
GROUND LEVEL	17,932 ± SF / 0.412 AC / 13.7%
ROOFTOP	0 SF / 0 AC / 0%
TOTAL	17,932 ± SF / 0.412 AC / 13.7%

GRAPHIC SCALE

0 15' 30' 60'

(IN FEET)
1 inch = 30 ft.

N

GRID

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CALL MISS UTILITY
AT LEAST TWO FULL BUSINESS DAYS BEFORE DIGGING OR DISTURBING EARTH
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811 Know what's below. Call before you dig.

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DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. _____

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED _____

INSTRUMENT NO. DEED BOOK NO. PAGE NO.

cph
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JENNIFER LONGOBARDI, P.E.
VA. LIC. NO. 046204701
DATE: Aug 25, 2011

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Job No.:	S21823
File: S21823-OPEN SPACE.dwg	

OPEN SPACE PLAN
SAFEWAY STORE #3250 (R4003)
SAFEWAY
3526 KING STREET
ALEXANDRIA, VIRGINIA 22302

Sheet No.
C-9

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PLANT KEY

QUERCUS PHELLOS
WILLOW OAK
MATURE HT: 40'-60'

QP

ACER RUBRUM
RED MAPLE
MATURE HT: 40'-55'

AR

BETULA NIGRA
RIVER BIRCH
MATURE HT: 20'-35'

RB

CARPINUS BETULUS
EUROPEAN HORNBEAM
MATURE HT: 15'-20'

CB

TAXODIUM DISTICHUM
BALD CYPRESS
MATURE HT: 15'-35'

TD

STANDARDS AND REQUIREMENTS

1. All protection and preservation measures for existing vegetation, including maintenance shall be approved by the City Arborist in-field prior to commencement of any site disturbing activity.

2. Specification for all plantings shall be in accordance with the current and most up to date edition of ANSI-Z60.1, The American Standard for Nursery Stock as produced by the American Association of Nurserymen; Washington, DC.

3. The applicant has made suitable arrangements for pre-selection tagging, pre-contract growing, or is undertaking specialized planting stock development with a nursery or grower that is conveniently located to the project site, other procedures that will ensure availability of specified materials. In the event that shortages and/or inability to obtain specified plantings occurs, remedial efforts including species changes, additional plantings and modification to the landscape plan shall be undertaken by the applicant. All remedial efforts shall, with prior approval by the city, be performed to the satisfaction of the Directors of Planning & Zoning, Recreation, Parks & Cultural Activities and Transportation & Environmental Services.

4. In lieu of more strenuous specifications, all landscape related work shall be installed and maintained in accordance 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.

5. Prior to commencement of landscape installation/planting operations, a pre-installation/construction meeting will be scheduled with the City's Arborist and Landscape Architects to review the scope of installation procedures and processes.

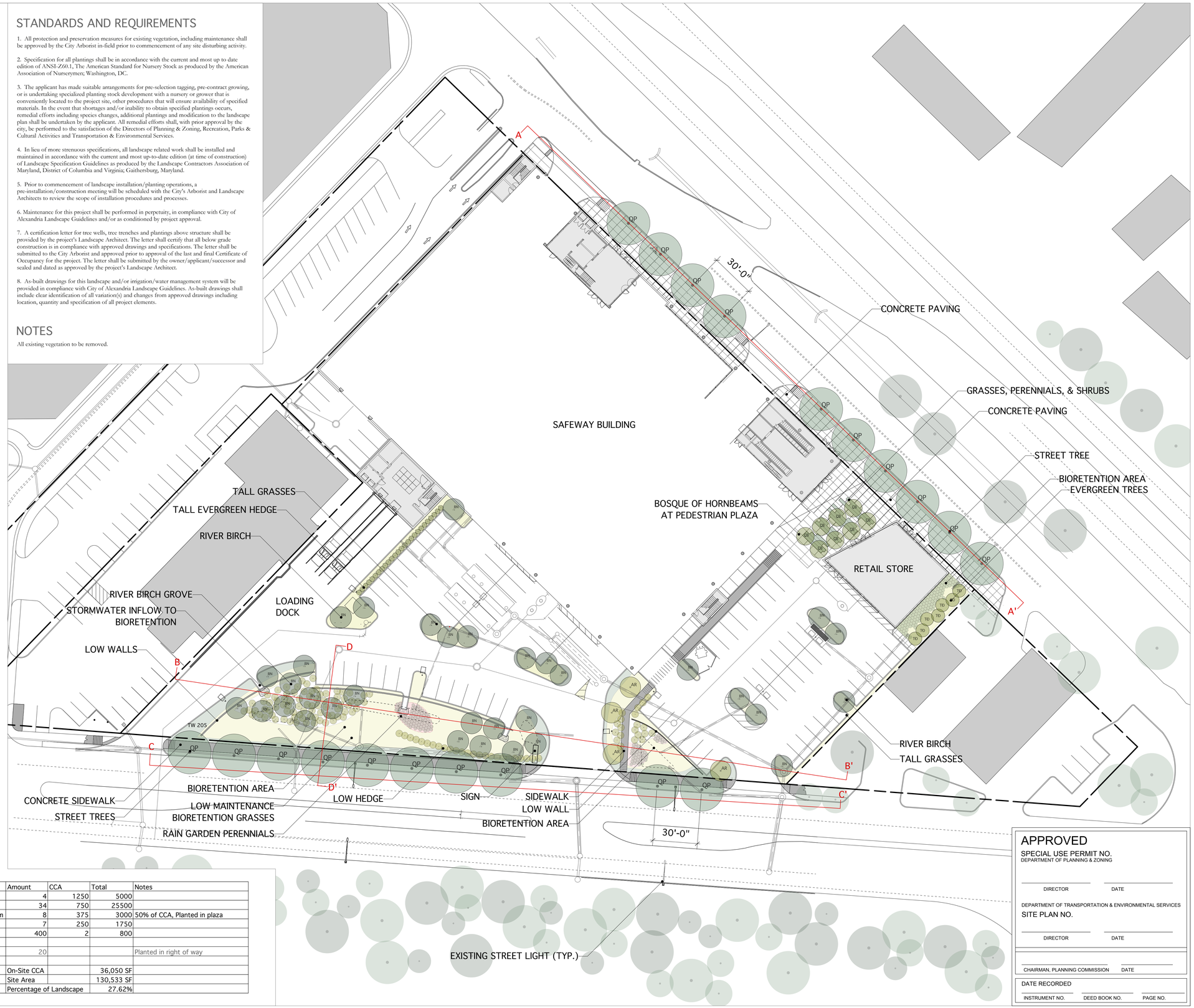
6. Maintenance for this project shall be performed in perpetuity, in compliance with City of Alexandria Landscape Guidelines and/or as conditioned by project approval.

7. A certification letter for tree wells, tree trenches and plantings above structure shall be provided by the project's Landscape Architect. The letter shall certify that all below grade construction is in compliance with approved drawings and specifications. The letter shall be submitted to the City Arborist and approved prior to approval of the last and final Certificate of Occupancy for the project. The letter shall be submitted by the owner/applicant/successor and sealed and dated as approved by the project's Landscape Architect.

8. As-built drawings for this landscape and/or irrigation/water management system will be provided in compliance with City of Alexandria Landscape Guidelines. As-built drawings shall include clear identification of all variation(s) and changes from approved drawings including location, quantity and specification of all project elements.

NOTES

All existing vegetation to be removed.



CROWN COVERAGE CALCULATION

	Latin Name	Common Name	Amount	CCA	Total	Notes
On-Site Plantings	Acer rubrum	Red Maple	4	1250	5000	
	Betula nigra	River Birch	34	750	25500	
	Carpinus betulus	European Hornbeam	8	375	3000	50% of CCA, Planted in plaza
	Taxodium distichum	Bald Cypress	7	250	1750	
	Various Shrubs		400	2	800	
Off-Site Plantings	Quercus phellos	Willow Oak	20			Planted in right of way
			On-Site CCA		36,050 SF	
			Site Area		130,533 SF	
			Percentage of Landscape		27.62%	

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SITE PLAN NO.

DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED

INSTRUMENT NO. DEED BOOK NO. PAGE NO.

CAMPION
Landscape Architecture
26 South Street, Annapolis, Maryland 21401
t: 410.878.7117
www.campionla.com

Consultants:

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Project #: 21105

SAFEWAY

3526 King Street
Alexandria, VA 22302

11 APRIL 2011

#	Date	Description
1	04/11/11	SCHEMATIC PLAN
2	04/20/11	PLAN FOR 3D RENDER
3	05/06/11	PLAN SUBMISSION
4	06/10/11	REC PRELIMINARY SUBMISSION
5	07/15/11	CONCEPT II REC SUBMISSION
6	08/25/11	CONCEPT II REC SUBMISSION

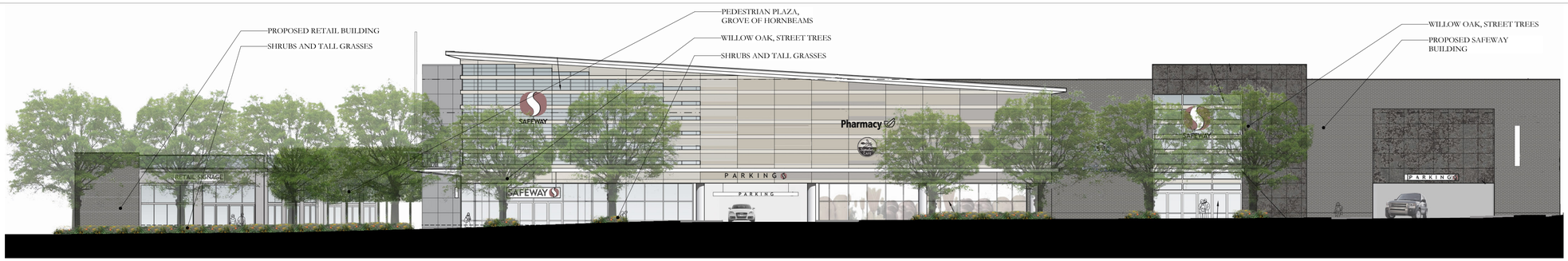
Drawn By: JLC Approved By: KJC

N

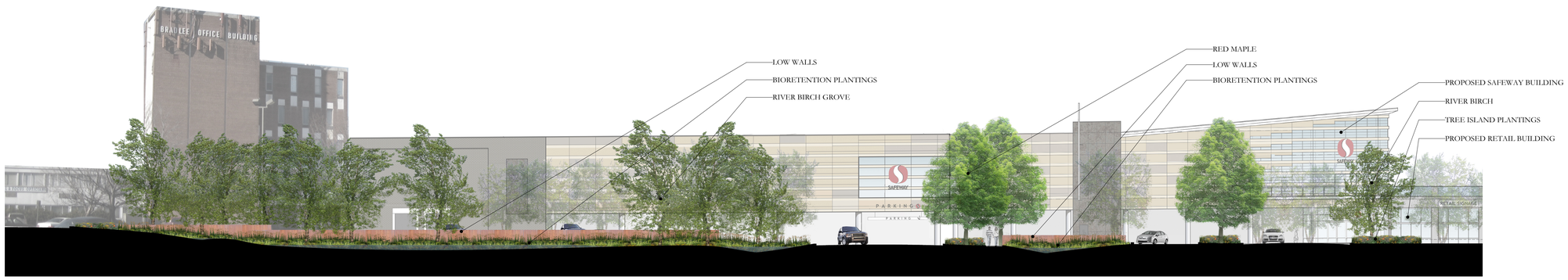
SCALE: 1"=30'-0"

LANDSCAPE PLAN

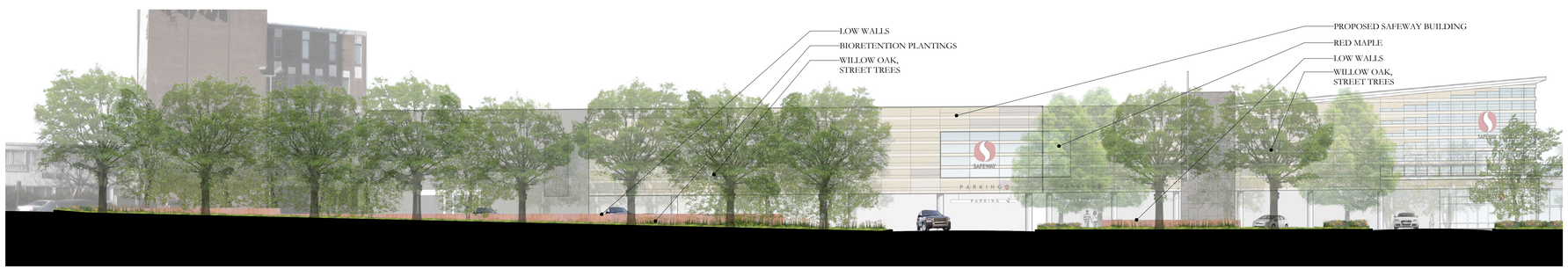
LP100



A / LS500 ELEVATION A-A'
Scale: 1/16" = 1'-0"



B / LS500 ELEVATION B-B'
Scale: 1/16" = 1'-0"



C / LS500 ELEVATION C-C'
Scale: 1/16" = 1'-0"

D / LS500 ELEVATION D-D'
Scale: 3/16" = 1'-0"

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SAFEWAY

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6	08/25/11	CONCEPT II REC SUBMISSION

Drawn By: JLC Approved By: KJC

N

LANDSCAPE SECTION

LP500

STATISTICS

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
East Parking	✳	4.0 fc	10.0 fc	0.8 fc	12.5:1	5.0:1
Loading Dock	+	3.7 fc	11.8 fc	1.0 fc	11.8:1	3.7:1
Main Calc Grid	+	2.7 fc	10.0 fc	0.1 fc	100.0:1	27.0:1
Property Line	+	0.6 fc	3.7 fc	0.0 fc	N / A	N / A
Property Plus 15'	+	0.2 fc	1.7 fc	0.0 fc	N / A	N / A
South Drive	✳	2.4 fc	4.0 fc	1.1 fc	3.6:1	2.2:1
South Parking	✳	3.1 fc	7.2 fc	0.7 fc	10.3:1	4.4:1
West Drive	✳	1.8 fc	4.1 fc	0.7 fc	5.9:1	2.6:1
West Parking	+	3.2 fc	5.6 fc	0.8 fc	7.0:1	4.0:1

LUMINAIRE SCHEDULE

Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
	F1	2	G18-1-400PSMH	GULLWING BY GARDCO	CLEAR HORIZONTAL 400PSMH RATED FOR 40000 LUMENS	G18-1-400P.IES	40000	0.68	452
	F2T	1	G18-2XL-400PSMH	GULLWING BY GARDCO	CLEAR HORIZONTAL 400PSMH RATED FOR 40000 LUMENS	G18-2XL-400P.IES	40000	0.68	904
	F3	2	G18-3XL-400PSMH	GULLWING BY GARDCO	CLEAR HORIZONTAL 400PSMH RATED FOR 40000 LUMENS	G18-3XL-400P.IES	40000	0.68	452
	F4	1	G18-4XL-400PSMH	GULLWING BY GARDCO	CLEAR HORIZONTAL 400PSMH RATED FOR 40000 LUMENS	G18-4XL-400P.IES	40000	0.68	452
	F4T	2	G18-4XL-400PSMH	GULLWING BY GARDCO	CLEAR HORIZONTAL 400PSMH RATED FOR 40000 LUMENS	G18-4XL-400P.IES	40000	0.68	904
	A	2	DR150PS-XXX	AccuLite Polaris, Full Cut Off Decorative Wall Mounted Security & Accent Luminaire Heavy Duty Half Round Die Cast Aluminum Housing, Wide Throw Distribution Specular Reflector, Flat Clear Borosilicate Glass Lens Dark Sky Association Seal of Approval	(1) - 150W Clear ED17 Pulse Start MH Lamp, Lumen Rating = 12600	DR150PS-XXX Clear.IES	12600	0.68	185

NOTE: ALL GULLWING FIXTURES ARE POLE MOUNTED AT 30'-0" ABOVE GRADE.
WALLPACK FIXTURES ARE MOUNTED AT 24'-0" ABOVE GRADE.

SITE PHOTOMETRIC PLAN

1" = 30'-0"

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DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

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

BRANDT ENGINEERING, INC.
MIDLOTHIAN, VA 23113
2840 POLO PARKWAY, SUITE 200
PHONE: (804)794-6656
FAX: (804)794-8588
EMAIL: cadd@beiric.com

SITE PHOTOMETRIC PLAN

SAFEWAY STORE #3250
3526 KING STREET
ALEXANDRIA, VIRGINIA 22302

SCALE: 1" = 30'-0"
DRAWING DATE: 00-00-00

SHEET
PH1
OF
2

DRAWN BY: SDF
DESIGNED BY: RKS
CHECKED BY: RKS

REVISIONS

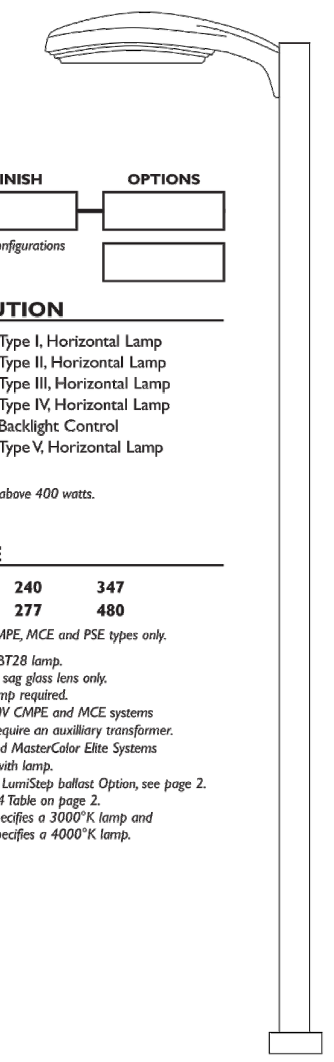
Job:
Type:
Notes:

Gullwing

Page 1 of 3

G18 Area Luminaires

The Philips Gardco Gullwing is an area luminaire defined by its sleek profile and rugged construction. The housing is one-piece, die cast aluminum and mounts directly to a pole or wall without the need of a separate support arm. The multifaceted arc-image duplicating optical systems provide IES Types I, II, III, IV and V distributions. The door frame is single-piece diecast aluminum and retains an optically clear tempered flat glass lens. The luminaire is completely sealed and gasketed preventing intrusion from moisture, dust and insects. Gullwing luminaires are finished with a fade and abrasion resistant TGIC powdercoat. Flat glass lens luminaires provide full cutoff performance. Sag Lens luminaires provide cutoff performance.



PREFIX	MOUNTING	DISTRIBUTION	WATTAGE	VOLTAGE	FINISH	OPTIONS

Enter the order code into the appropriate box above. Note: Gardco reserves the right to refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.

PREFIX

G18 18" Gullwing Luminaire

MOUNTING

- **1** Single Pole Mount
- **2** Twin Pole Mount at 180°
- **2@90** Twin Pole Mount at 90°
- **3** 3-way Pole Mount at 90°
- **3@120°**[1] 3-way Pole Mount at 120°
- **4** 4-way Pole Mount
- **W** Wall Mount, Recessed J-Box
- **WS** Wall Mount, Surface Conduit

1. Not available with PTF option.

DISTRIBUTION

- **1**[2] Type I, Horizontal Lamp
- **2XL** Type II, Horizontal Lamp
- **3XL** Type III, Horizontal Lamp
- **4XL** Type IV, Horizontal Lamp
- **BLC**[2] Backlight Control
- **Q**[2] Type V, Horizontal Lamp

2. Not available above 400 watts.

WATTAGE

Pulse Start MH Magnetic Ballast	100MH[5] / 150MH[5] / 175PSMH Ⓔ	250PSMH Ⓔ / 250PS90** Ⓔ / 320PSMH[3] Ⓔ	350PSMH[3] Ⓔ / 400PSMH[3] Ⓔ / 750PSMH[4]	875PSMH[4]
Standard MH Magnetic Ballast	175MH*	250MH*	400MH*[3]	
CosmoPolis Electronic System (See Notes 6,7,8,9)	60CMPE	90CMPE / 140CMPE		
MasterColor Elite Electronic System (See Notes 6,7,9,10)	210MCE-3K Ⓔ / 210MCE-4K Ⓔ	315MCE-3K Ⓔ / 315MCE-4K Ⓔ		
Pulse Start MH Electronic Ballast (See Note 9)	150PSE[5] Ⓔ	175PSE Ⓔ	250PSE Ⓔ	320PSE[3] Ⓔ
High Pressure Sodium Magnetic Ballast	70HPS / 100HPS	150HPS / 250HPS	400HPS / 600HPS	750HPS[4]
Low Pressure Sodium Magnetic Ballast	35LPS			

* 175MH, 250MH and 400MH not available for sale in the United States.

** 250PS90 includes a 90% efficient magnetic PSMH ballast, meeting the requirements of California Title 20, effective 1/1/2010.

Ⓔ *Wattages marked with Circle "E" meet federal energy efficiency standards applicable to 150 watt through 500 watt metal halide luminaires only.*

VOLTAGE

120 **240** **347**
208 **277** **480**
200-277 *CMPE, MCE and PSE types only.*

3. Requires E28/BT28 lamp.
4. Furnished with sag glass lens only.
5. Mogul base lamp required.
6. 347V and 480V CMPE and MCE systems include and require an auxiliary transformer.
7. CosmoPolis and MasterColor Elite Systems are supplied with lamp.
8. Available with LumiStep ballast Option, see page 2.
9. See QS / Q924 Table on page 2.
10. "-3K" suffix specifies a 3000°K lamp and "-4K" suffix specifies a 4000°K lamp.

1611 Clovis Barker Road, San Marcos, TX 78666
(800) 227-0758 (512) 753-1000 FAX: (512) 753-7855 sitelighting.com
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79115-85/0711

PHILIPS GARDCO

Gullwing

Page 2 of 3

G18 Area Luminaires

FINISH

- **BRP** Bronze Paint
- **BLP** Black Paint
- **WP** White Paint
- **NP** Natural Aluminum Paint
- **OC** Optional Color Paint — *Specify Optional Color or RAL ex: OC-LGP or OC-RAL7024.*
- **SC** Special Paint — *Specify. Must supply color chip.*

OPTIONS

- **F**[11] Fusing In Head
- **LF** In-Line/In-Pole Fusing
- **PC**[12] Photocontrol and Receptacle
- **PCR** Photocontrol Receptacle only
- **POLY**[13] Polycarbonate Sag Lens
- **SG**[14] Sag Glass Lens
- **HS** Internal Houseside Shield
- **QS**[9] Quartz Standby
- **QST**[9] Quartz Standby - Timed Delay
- **Q924**[9] Quartz Emergency
- **QT924**[9] Quartz Emergency - Timed Delay
- **RPA1**[15] 3" Round Pole Adapter
- **RPA2**[16] 4" and 5" Round Pole Adapter
- **MF**[17] Mast Arm Fitter
- **TR1**[18] Single Transition
- **TR2**[18] Twin Transition
- **PTF2**[19] Pole Top Fitter - 2 3/8" - 3" Dia. Tenon
- **PTF3**[19] Pole Top Fitter - 3" - 3 1/2" Dia. Tenon
- **PTF4**[19] Pole Top Fitter - 3 1/2" - 4" Dia. Tenon
- **SQPTF**[20] Square Pole Top Fitter
- **GMR**[21] Provision for Gardco Motion Response
- **L6**[22] LumiStep Ballast 6 hour
- **L8**[22] LumiStep Ballast 8 hour
- **L10**[22] LumiStep Ballast 10 hour

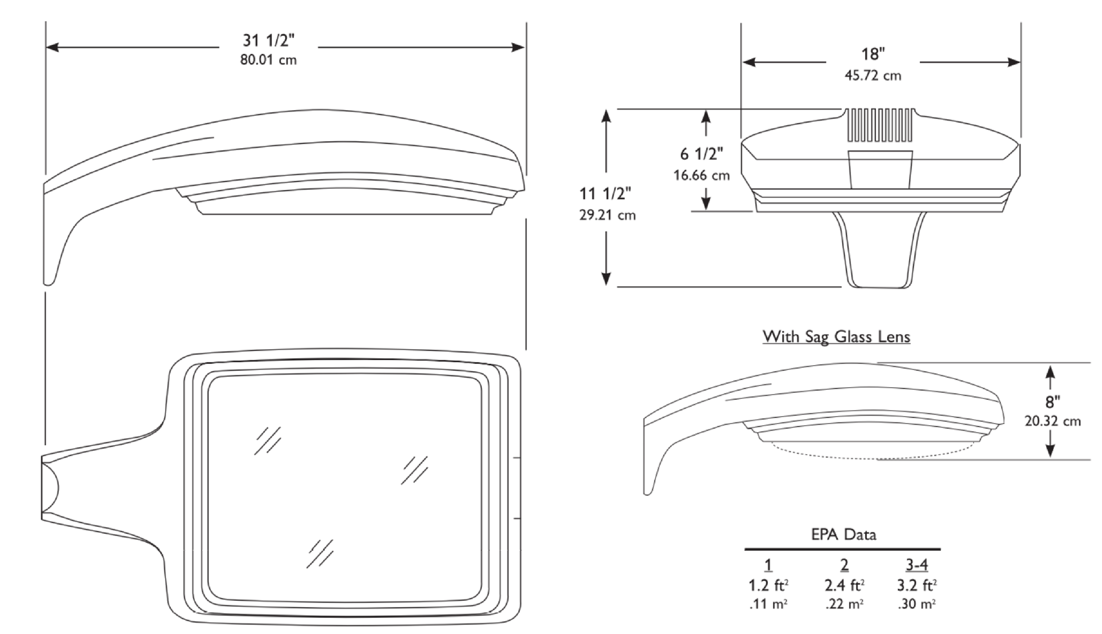
9. See QS/Q924 Table.
11. Not available above 400 watt.
12. Not available in 480V. Provide specific input voltage.
13. 250W maximum. Polycarbonate lenses carry a 1 year warranty only.
14. In lieu of flat glass. Supplied standard and required with 750 watt and higher wattages.
15. Required for 3" O.D. round or tapered round poles where top O.D. is less than 4".
16. Required for 4"- 5" O.D. round poles.
17. Mounts to a 2-3/8" O.D. mast arm.
18. Mounts to a 2-3/8" Top Tenon. Specify a pole with a 4.50" O.D. for a smooth transition.
19. Not available in 120° mounting configurations.
20. Requires a 2-3/8" O.D. x 4" tenon or a 2.4" round pole top O.D. Specify Drilling (1, 2, 2@90, 3 or 4 only.)
21. Available only with 175PSMH through 400PSMH and 150HPS through 400HPS wattages. Includes dual-level capacitor and wiring to connect to Gardco Motion Response System.
22. Available with CosmoPolis system only. See submittal sheet GE200-005 for complete information on LumiStep ballasts.

(Note 9) QS / Q924 Table

HID Lamp Watts	Maximum Quartz Lamp Watts
175 watts or less	100 Watts
Above 175 watts up to 400 watts	150 Watts

QS, QST, Q924, QT924 are not available with CMPE, MCE or PSE wattages or in luminaires above 400 watts HID.

DIMENSIONS AND EPA



EPA Data

1	2	3-4
1.2 ft²	2.4 ft²	3.2 ft²
.11 m²	.22 m²	.30 m²

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PHILIPS GARDCO

SITE LUMINAIRE - "A"

H.6.1.11

AccuLite

POLARIS™

Project: Safeway 2797
Fixture Type: EXT7, EXT7B & EXT7E
Location: Olney, Maryland
Contact/Phone:

DR - HALF ROUND
FULL CUT-OFF SECURITY LIGHTING
WIDE THROW OPTICS

To create the catalog number fill in the grey "Product Codes" boxes below
Cat. No.: DR ___ ___ - ___ (Series, Lamp, Volts, Beam, Options)

PRODUCT DESCRIPTION

The Polaris™ decorative wall mounted security and accent luminaire is offered with wide throw optics.

IDA Seal of Approval The full cut-off optics of Polaris™ downlighting luminaires meet the International Dark Sky Association specifications for full cut-off luminaires

PRODUCT SPECIFICATIONS

Optics IES Full cut-off wide throw reflectors

"Dark Sky" Half Sphere Styling Polaris luminaires with wide throw optics meets IES and International Dark Sky Association full cut-off standards

"Easy-Install" Mounting Mounts to a standard 3 1/2" or 4" junction box • Using the built-in level, align the bracket and secure it • Hang the luminaire and secure with heavy duty set screws

Construction Heavy duty die cast aluminum housing • Concealed cover screws secure the door assembly • Lens is secured mechanically and sealed with a silicone rubber gasket, no silicone sealants are used • Stainless steel external hardware • Tempered glass lens

Emergency Lighting* Emergency CF ballasts for 0°C to 55°C or -18°C to 55°C • 12V emergency circuit (CF & HID) for one or two MR11 lamps • 120V emergency circuit (CF & HID) for double contact bayonet base quartz lamps

Auxiliary Lighting* Double contact bayonet base quartz lamp • Cold start/Hot restrike • Hot restrike only

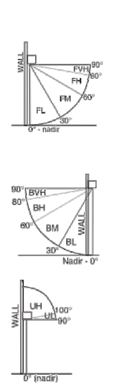
Lampholder HID: Specification grade porcelain, medium base • Compact Fluorescent: 4-pin electronic

Finish Polyester powder coat finish • Bronze, black or white

Ballasts Low temperature starting magnetic • Probe Start MH -30°C, Pulse Start MH -40°C, HPS -40°C • Electronic CF -18°C

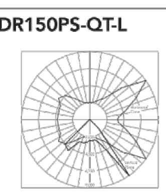
Certification Certified to UL1598/CSA C22.2 250 • Suitable for wet locations • IDA Full Cut-Off

PHOTOMETRICS



Optical Assembly			Wide Throw
Lamp			150PS
Lamp Lumens			12,500
Forward Light			
Luminaire Lumens			4,651
% Lamp Lumens			37.2%
Low	FL	(0° - 30°)	7.7%%
Mid	FM	(30° - 60°)	27.6%%
High	FH	(60° - 80°)	1.9%
Very High	FVH	(80° - 90°)	0.1%
Back Light			
Luminaire Lumens			4,370
% Lamp Lumens			35.0%
Low	BL	(0° - 30°)	7.8%
Mid	BM	(30° - 60°)	25.1%
High	BH	(60° - 80°)	2.1%
Very High	BVH	(80° - 90°)	0.1%
Up Light			
Luminaire Lumens			0
% Lamp Lumens			0.0%
Low	UL	(90° - 100°)	0.0%
High	UH	(100° - 180°)	0.0%
Trapped Light			
Luminaire Lumens			3,478
% Lamp Lumens			27.8%

DR150PS-QT-L

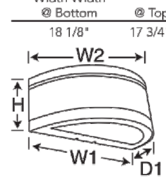


Wide throw distribution
IES Classification: Type I
150W clear pulse start metal halide
LLI0704-01B
Cut-Off Classification: Full Cut-off
Clear lamp, Lumen rating - 12,500
Downward Efficiency 86.8%,
Maximum Candela Angle: 35H / 35V

DIMENSIONS

DR Series

W1 Width @ Bottom	W2 Width @ Top	R Radius	H Height
18 1/8"	17 3/4"	9 1/4"	7 1/8"



† See "Emergency Lighting - Emergency Ballast" specification sheet for full description.

Juno Lighting Group by Schneider Electric

H.6.1.12

To create the catalog number fill in the grey "Product Codes" boxes below
Cat. No.: DR ___ ___ - ___ (Series, Lamp, Volts, Beam, Options)

PRODUCT CODES

Fill in the red lines (use the bold type below, options are listed on the following page)

Series	Lamp (Watts/Type)	Volts	Reflector	Options
DR			-	
DR	**Pulse Start Metal Halide†** ED17 - Medium base **50PS, 70PS, 100PS, 150PS** **Probe Start Metal Halide†** BD17 - Medium base 🍁{**175MH** **High Pressure Sodium** B17 - Medium base **35HP, 50HP, 70HP 100HP, 150HP** **Compact Fluorescent** One Lamp - GX24Q Base **26CF, 32CF, 42CF** Two Lamps - GX24Q Base **226CF, 232CF, 242CF**	**Magnetic Ballast** 35W & 50W HPS lamps **- 120** 120V **- 277** 277V **- 347** 347V 50W thru 150PS, 175W MH, 70W thru 150W HPS **- QT‡** Quad Tap 120V, 208V, 240V, 277V **- TT** Tri Tap 120V, 277V, 347V 100W thru 175W lamps **- 480‡** - 480V **Electronic Ballast** 26W thru 42W CF **- UN** - 120V/277V, **- E12** 120V **- E27** 277V **- E34** 347V	Wide Throw **No suffix**	see below

Options:

Lamp
- **- L** Clear H.I.D.
- **- CL** Coated H.I.D.

By others Compact Fluorescent

Photocontrol
- **- PC** On Multi-Tap ballasts replace "-QT" & "-TT" with the line voltage suffix

Frosted Lens
- **- FG** Frosted glass bottom lens

Tamper Resistant Hardware
- **- TP** Tamper resistant screws

Emergency Ballast, Dual Function Lamp†
Specify line voltage, 120V or 277V
For use with one or two CF lamps.
The CF lamp(s) operate off the CF ballast, the lamp selected for dual function also operates off the emergency ballast.
- **- EMB** Minimum 0°C
- **- EMX** Minimum -18°C

Emergency Ballast, Dedicated Emergency Lamp†
Specify line voltage, 120V or 277V
For use with two CF lamps
One lamp operates off the CF ballast and is dedicated to general lighting, the second lamp is dedicated to emergency lighting and operates off the emergency ballast.
- **- EMBD** Minimum 0°C
- **- EMXD** Minimum -18°C

Emergency Circuit, 120V Quartz Lamp
For use with HID & CF luminaires
Quartz lamp not included
Double contact, bayonet base Quartz lamp should not exceed wattage of HID lamp. For 35W - 100W use 100W quartz lamp.
- **- ES** Socket only, for external 120V emergency power supply

Emergency Circuit, 12V MR11 Halogen Lamp
For use with HID & CF luminaires
Requires remote battery pack
MR11 lamp(s) included,
Field aimable 2 pin G4 base MR11 lamp, 35W lamp(s) supplied, 12VDC supply
- **- DC12** With one MR11 lamp
- **- 2DC12** With two MR11 lamps

By others Remote Battery Pack

Auxiliary Quartz Lighting
Double contact, bayonet base
Quartz lamp should not exceed wattage of HID lamp. For 35W thru 100W use 100W quartz lamp.
Quartz lamp not included.
For use with HID luminaires
- **- Q** Cold Start/Hot Restrike
- **- HQ** Hot Restrike only

Color
- No suffix Bronze (Standard)
- **- BL** Black
- **- WH** White

* See "Emergency Lighting - Emergency Ballast" specification sheet for full description.

† **Metal Halide Lamps**:
EISA - Pulse Start MH: 150W wet location luminaires are EISA exempt.

🍁 **ITEMS MARKED WITH A MAPLE LEAF ARE ONLY AVAILABLE IN CANADA**
175W Probe Start MH lamps do not meet the EISA standard.

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SITE LUMINAIRE - "F1", "F2T", "F3", "F4", "F4T"

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DIRECTOR ______ DATE ______

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MIDLOTHIAN, VA 23113
PHONE: (804)794-6656
FAX: (804)794-8588
EMAIL: cadd@beiric.com

LIGHTING FIXTURE CUTSHEETS

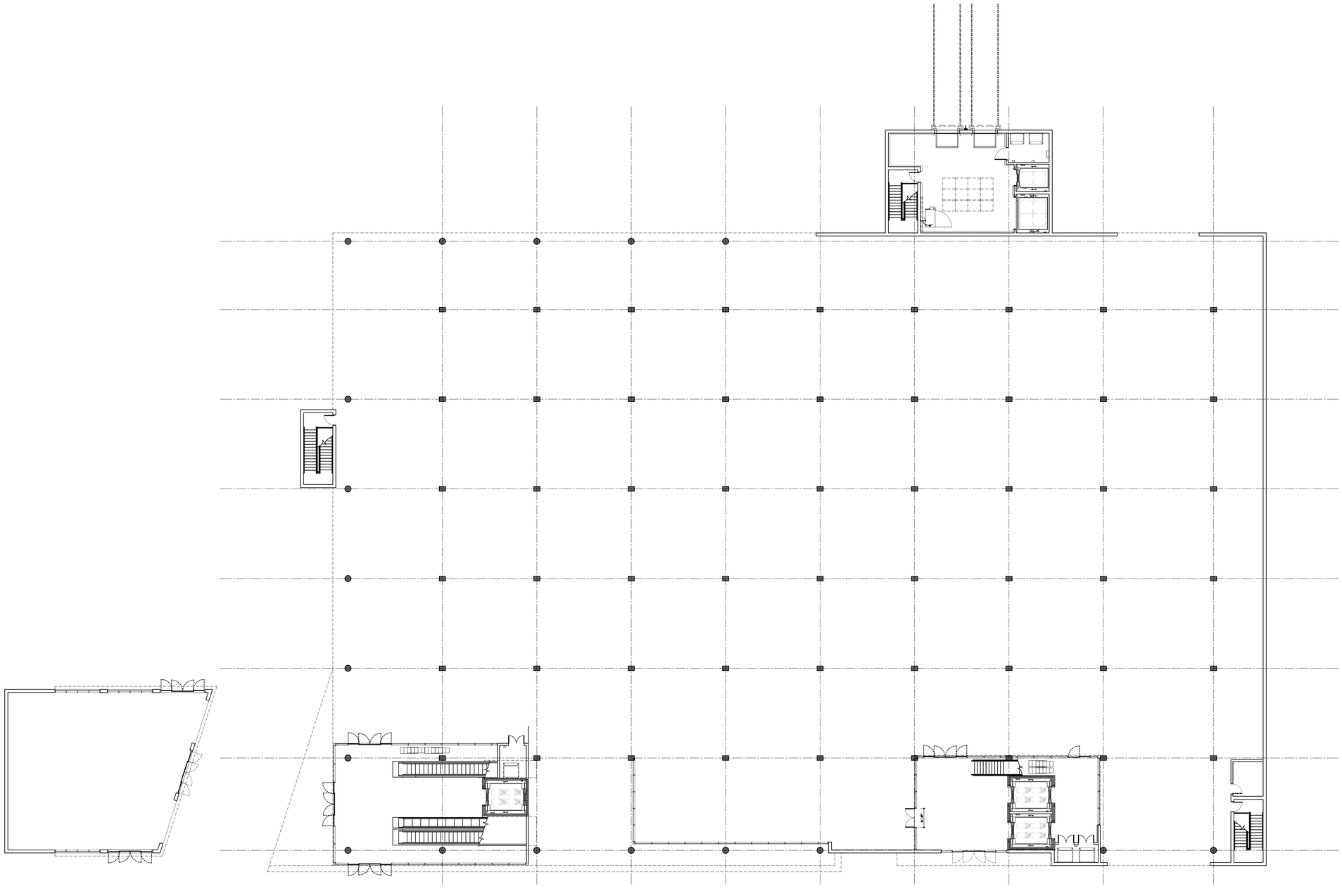
SAFEWAY STORE #3250
3526 KING STREET
ALEXANDRIA, VIRGINIA 22302

SCALE: 1" = 20'-0"
DRAWING DATE: 00-00-00

SHEET
PH2
OF
2

DRAWN BY: SDF
DESIGNED BY: RKS
CHECKED BY: RKS

REVISIONS



N

1 **GARAGE LEVEL FLOOR PLAN**
SCALE: 1/16" = 1'-0"

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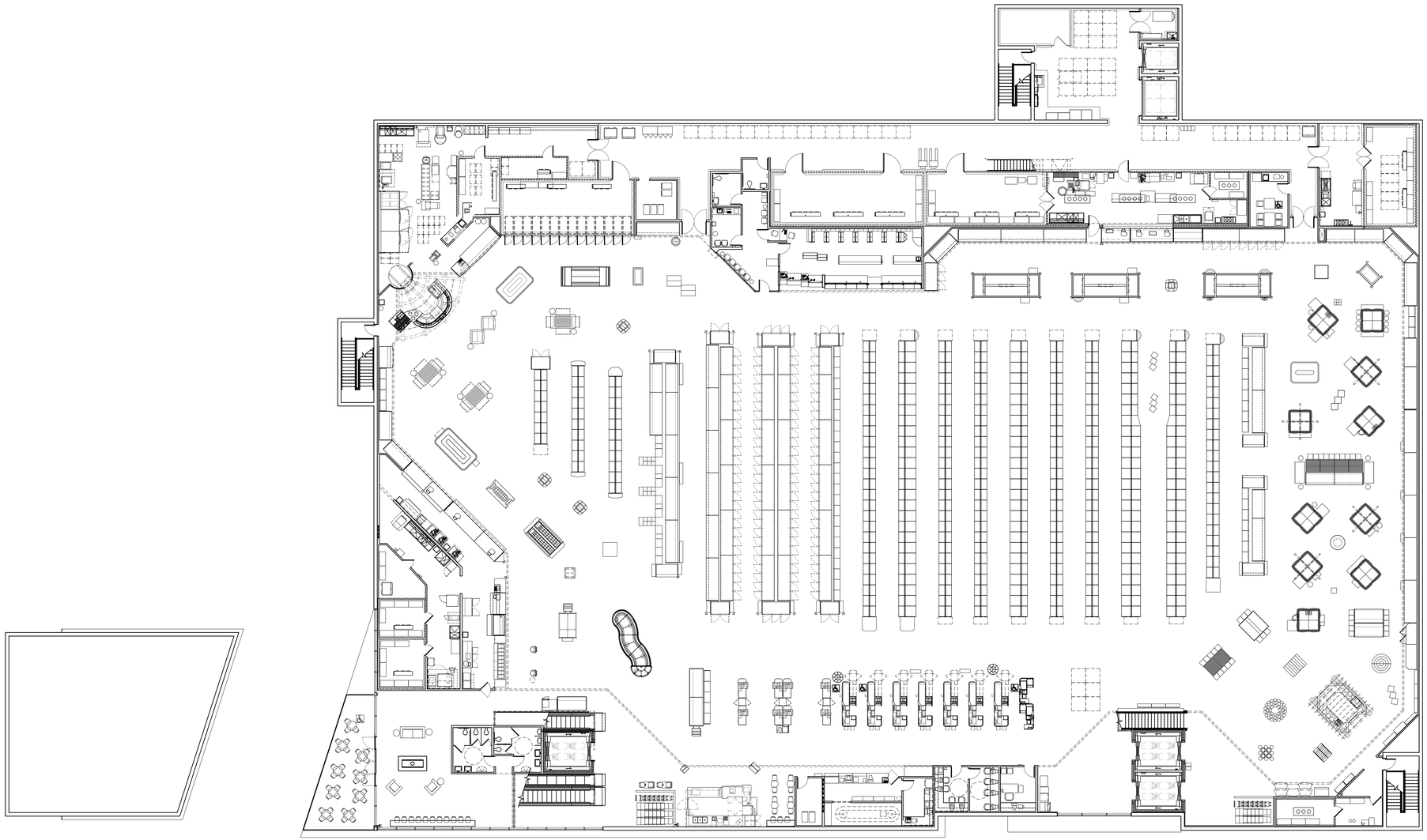
SAFEWAY STORE #3250
35-3250-000-0001
3526 KING STREET
ALEXANDRIA, VIRGINIA

ISSUE:	08-15-11
PROJECT NO:	1061
DWG FILE:	3250A10.DWG
DRAWN BY:	DJS
CHECKED BY:	DJS
DESIGNER:	BILL JONES

SHEET TITLE
GARAGE LEVEL FLOOR PLAN

SHEET NO.
A1.0
01 OF 02



N

1 STORE LEVEL FLOOR PLAN

SCALE: 1/16" = 1'-0"

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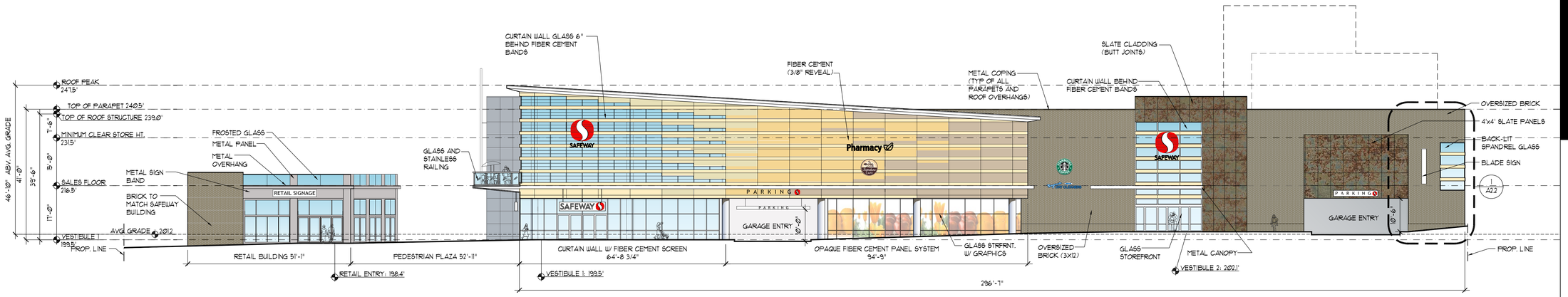
SHEET TITLE

MAIN LEVEL FLOOR PLAN

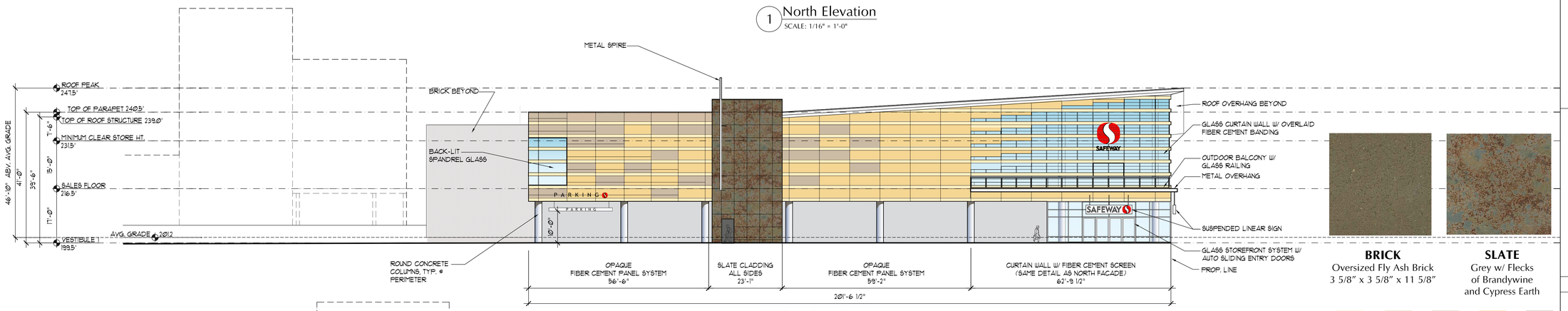
SHEET NO.

A1.1

02 OF 02



1 North Elevation
SCALE: 1/16" = 1'-0"



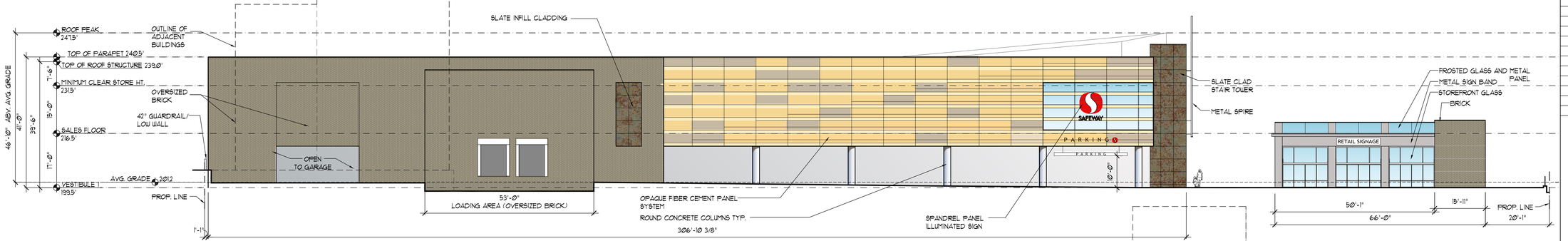
BRICK
Oversized Fly Ash Brick
3 5/8" x 3 5/8" x 11 5/8"

SLATE
Grey w/ Flecks of Brandywine and Cypress Earth

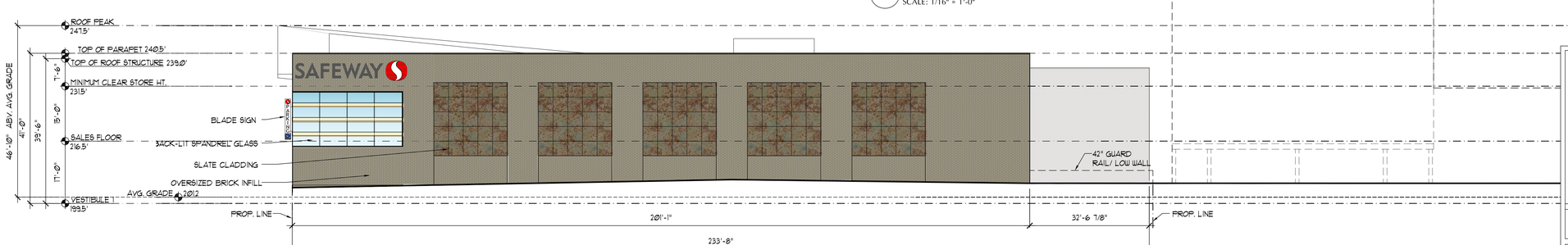
2 East Elevation
SCALE: 1/16" = 1'-0"

LIFESTYLE COLOR PALETTE

CHAMOIS | SAFARI | MUFFIN TAN | BAY RUM | SEAHAWK



3 South Elevation
SCALE: 1/16" = 1'-0"



4 West Elevation
SCALE: 1/16" = 1'-0"

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0 16' 32'

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SAFEWAY STORE # 3250

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CQA #21034

Drawing Title

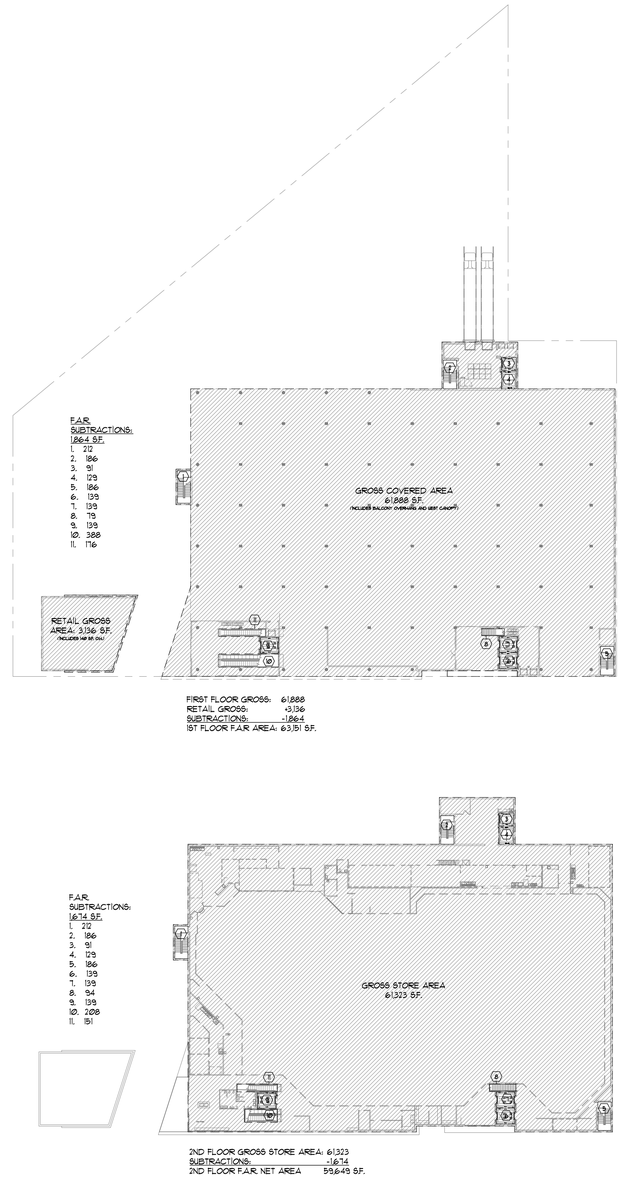
Building Elevations

SCALE 1" =16'	DRAWN BY JP
DATE 7/15/11	CHECKED BY LQ
	SHEET NUMBER A2.1

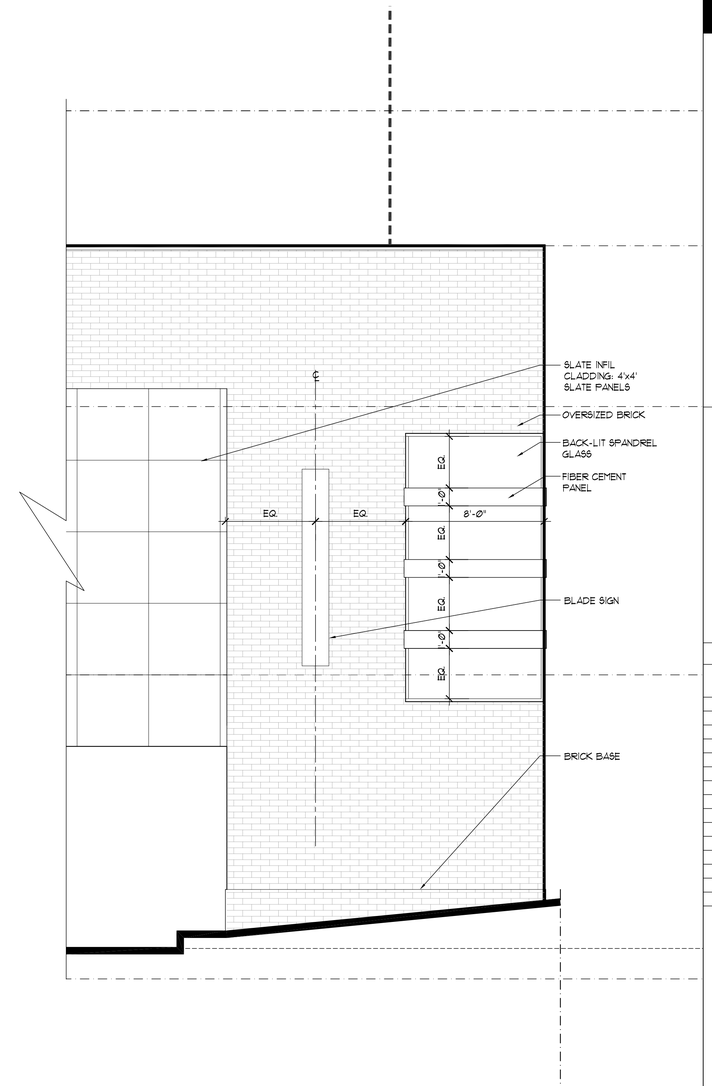
3 King Street Massing View
N.T.S.

4 Pedestrian Plaza Massing Detail
N.T.S.

5 Massing View looking East on King St.
N.T.S.



2 F.A.R. Area Calculation Diagrams
1" = 50'



1 North Elevation Detail
SCALE: 1/4" = 1'-0"

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Drawing Title

Elevation Detail/ Massing Studies/ FAR Diagrams

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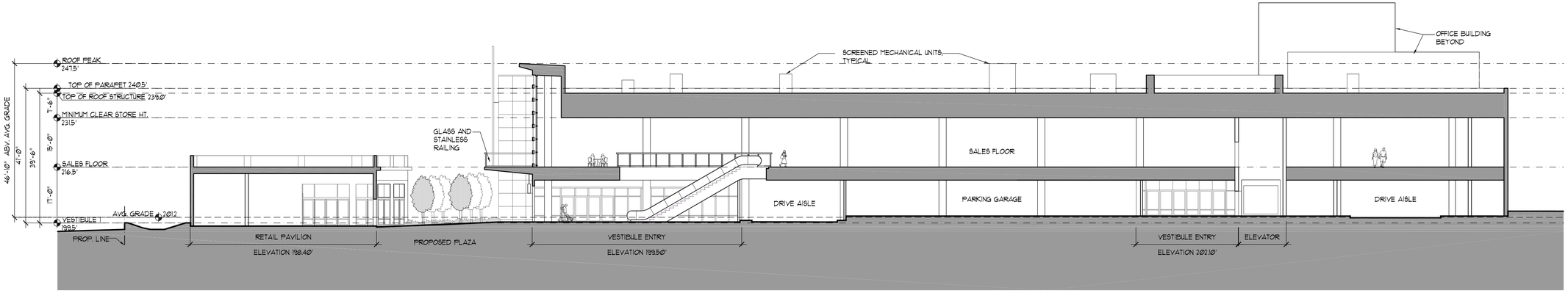
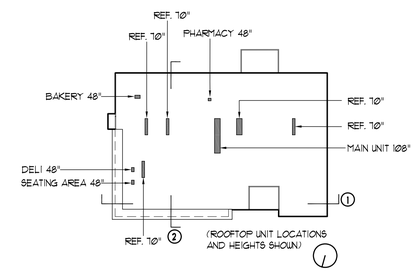
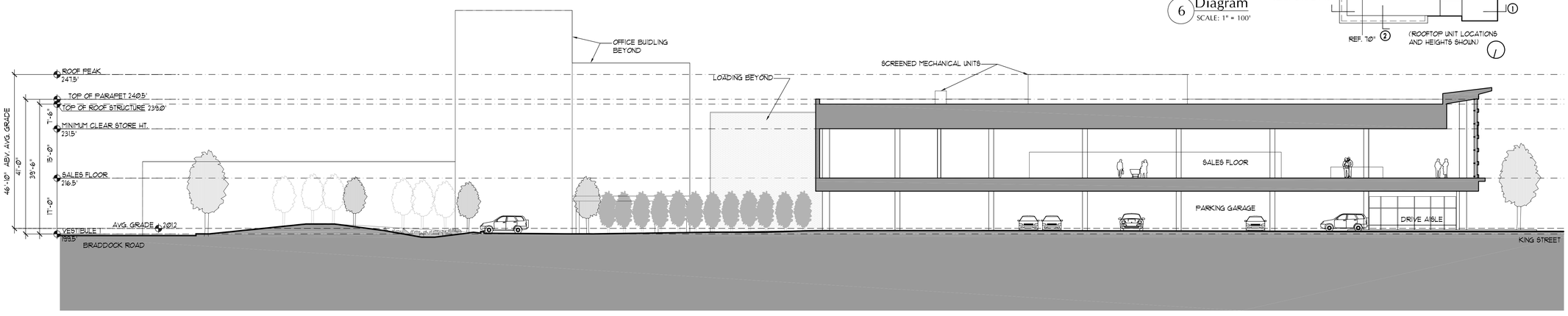


1 East/West Section
SCALE: 1/16" = 1'-0"



6 Roof Plan Diagram
SCALE: 1" = 100'



2 North/South Section
SCALE: 1/16" = 1'-0"

4 East Massing View
N.T.S.

3 King Street Massing View
N.T.S.

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Building and Site Sections/ Massing Studies

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