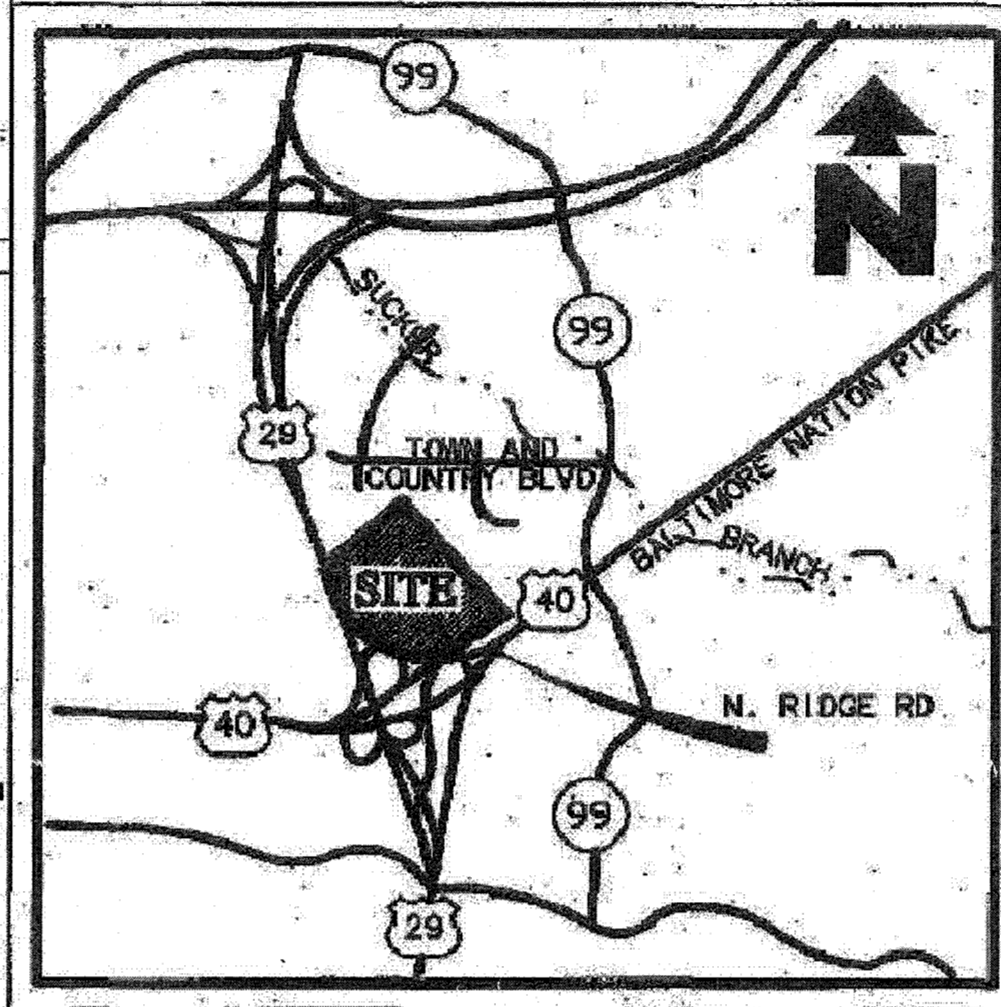


SITE DEVELOPMENT PLANS WAL-MART STORES, INC.

ROUTE 40 AND ROUTE 29

2ND ELECTION DISTRICT ELLCOTT CITY, MD HOWARD COUNTY



Vicinity Map

HOWARD CO. GEODETIC COORDINATES: 2402 AND 1861
ADC MAP 4815 GRID J-5

SCALE: 1"=2000'

STORE NUMBER 2412

SITE ANALYSIS:

AREA OF PARCEL: 799,847 Sq.Ft. OR 18.36 AC
PRESENT ZONING: B-2 ZONING BOARD CASE ZB-941
PROPOSED USE OF STRUCTURE: COMMERCIAL/RETAIL
FLOOR AREA: PROPOSED BLDG ADDITION = 1,115 SF
(FLOOR AREA EXCLUDING: OUTDOOR GREEN HOUSE AREA) EXISTING STORE GROSS AREA = 151,567 SF
GROSS AREA OF ACADEMY BUILDING ADDITION = 3,076 SF
TOTAL EXISTING AND PROPOSED GROSS FLOOR AREA = 162,662 SF

TOTAL # OF UNITS: 1 BUILDING
MAXIMUM # OF EMPLOYEES: 200-250 ASSOCIATES (70% FULL TIME)
PARKING RATIO: 4.3 sp./1000 Sq.Ft. = 611 spaces
RETAIL AREA = 162,662 S.F.
1 sp./1000 OUTDOOR GREEN HOUSE AREA = 6 sp.
OUTDOOR GREEN HOUSE AREA = 5,917 Sq. Ft.

OF PARKING SPACES (REQUIRED): 617 SPACES REQUIRED
OF PARKING SPACES (PROVIDED): 617 SPACES PROVIDED
AREA OF REFORESTATION (REQUIRED): 3.2 AC
AREA OF REFORESTATION (PROV.): SEE SDP-96-01 FOR FOREST CONSERVATION PLAN
BUILDING COVERAGE OF SITE: 19%
PAVED PARKING LOT/AREA OF SITE: 28%

REVISION 10 LIMIT OF DISTURBANCE: 4,966 S.F. OR 0.11 AC.

NOTE: ANY FUTURE REDLINE RESULTING IN AN ACCUMULATIVE OF GREATER THAN 8,000 S.F. WILL REQUIRE STORMWATER MANAGEMENT

SUBDIVISION "ELLCOTT CITY WAL-MART"
ELECTION DISTRICT NO. 2
TAX MAP 17 & 24
REZONING CASE NUMBER ZB-941
SKETCH PLAN S-95-01
PRELIMINARY PLAN P-95-21
SCALE 1"=50'
WATER NO. F03
ECP-11-007
RECORD PLAT F-98-157
F-12-023

HOWARD COUNTY, MARYLAND
DATED: OCTOBER 18, 1993
APPROVED: 12-2-1994
APPROVED: 6-6-95
DATE: SEPTEMBER 6, 1995
SEWER NOS. 1452800
APPROVED: 08-06-2010

ENGINEERING ASSOCIATES, INC.

ENGINEERS • PLANNERS • SURVEYORS
9175 Guilford Road, Suite 306, Columbia, MD 21046 (301) 490-4145
FAX (301) 490-4149

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
PARCEL B	3200 NORTH RIDGE ROAD

PERMIT INFORMATION CHART					
SUBDIVISION NAME	SECTION/AREA	PARCEL#	TAX ZONE MAP	ELECT. DIST.	CENSUS TRACT
ELLCOTT CITY WAL-MART	N.A.	B	24	2ND	6026

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *[Signature]* DATE: 5/21/96

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Signature: *[Signature]* DATE: 6/6/96

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *[Signature]* DATE: 6/6/96

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Signature: *[Signature]* DATE: 6/16/96

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: *[Signature]* DATE: 7/26/97

Signature: *[Signature]* DATE: 8-2-17

Signature: *[Signature]* DATE: 8-3-17

THIS DEVELOPMENT PLAN IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *[Signature]* DATE: 8-15-11

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *[Signature]* DATE: 7-25-11

ENGINEER'S CERTIFICATE

I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Signature: *[Signature]* DATE: 7-25-11

DEVELOPER'S CERTIFICATE

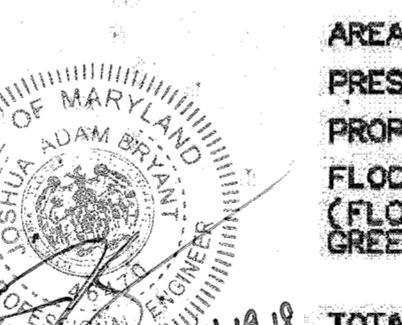
I/we certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

Signature: *[Signature]* DATE: 8-4-11

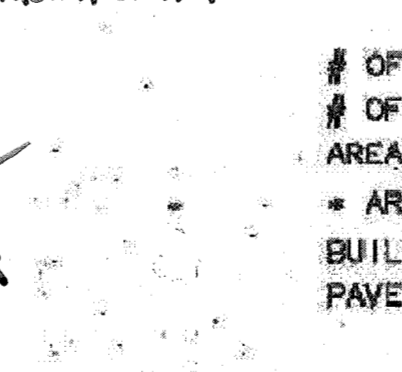
NO	DATE	DESCRIPTION	BY
1	07/25/11	BUILDING EXPANSION & PARKING MODIFICATION	JDT
2	1/6/17	ACADEMY ADDITION PARKING LOT MODIFICATION	JAB
3	3/15/18	REMOVAL OF ACADEMY ADD PARKING LOT MODIFICATION	JAB

- RESOURCE LIST:**
- SURVEYOR (TOPOGRAPHY)**
RIEMER MUEGGE AND ASSOCIATES, INC.
MR. RON ANDERSON
8818 CENTER PARK DRIVE, SUITE 200
COLUMBIA, MD 21045
(410) 997-8900
 - SURVEYOR (EASEMENT PLATS)**
SET, INC.
MR. JOHN MOSELEY
3098 NEWINGTON DR.
RIVA, MD 21140-1440
(410) 974-8086
 - BOUNDARY**
R.M. MOCHI GROUP
3500 N. RIDGE ROAD, SUITE 235
ELLCOTT CITY, MD 21043-3305
(410) 461-0078
 - MARYLAND STATE HIGHWAY ADMIN.**
ENGINEERING ACCESS PERMITS DIVISION
707 N. CALVERT STREET
P.O. BOX 717
BALTIMORE, MARYLAND 21203
(410) 333-1350
 - BELL ATLANTIC TELEPHONE**
MR. JOHN FIDLER
7133 RUTHERFORD RD.
2ND FLOOR
WOODLAWN, MD 21244
(410) 281-7532
 - DEVELOPMENT ENGINEERING DIVISION**
MR. CHARLES DAMMERS, P.E.
(410) 313-3364
 - DEPARTMENT OF PLANNING AND ZONING**
MS. REGINA TIRINNANZI
(410) 313-2393
 - DEPARTMENT OF INSPECTIONS LICENSES AND PERMITS DEPARTMENT**
(410) 313-2455
 - OWNER & DEVELOPER**
WALMART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SWDC
BENTONVILLE, AR 72716-0550
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000
 - CONTRACT PURCHASER (SUBDIVISION)**
MR. LOUIS MANGIONE
MANGIONE FAMILY ENTERPRISES
1205 YORK ROAD PENTHOUSE
LUTHERVILLE, MARYLAND 21093
(410) 825-8400
 - HOWARD COUNTY**
GEORGE HOWARD BUILDING
3430 COURTHOUSE DRIVE
ELLCOTT CITY, MARYLAND 21043
(410) 313-2393

- BALTIMORE GAS & ELECTRIC**
MS. ELLEN BAUMAN
7225 WINDSOR BLVD.
BALTIMORE, MD 21244
(410) 859-9065
- REMOVAL OF ACADEMY BUILDING ADDITION UTILITIES AND PARKING LOT MODIFICATION**
JOSHUA A. BRYANT, P.E.
11-19-18
- ACADEMY BUILDING ADDITION, UTILITIES AND PARKING LOT MODIFICATION**
FOR REVISION 10 ONLY
ANDREW G. STINE



JOSHUA A. BRYANT, P.E.
11-19-18



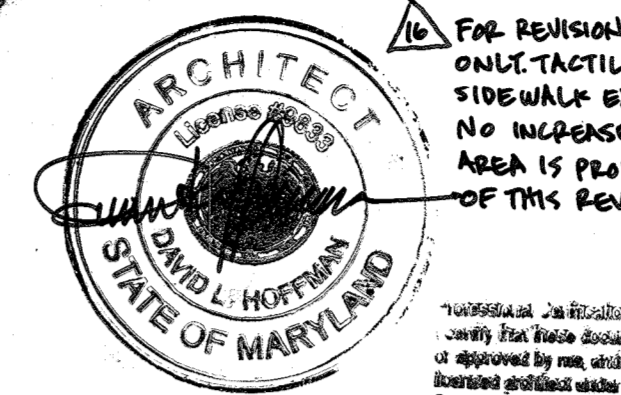
ANDREW G. STINE
11-19-18

FOR REVISION 10 ONLY
ANDREW G. STINE

PLAN INDEX

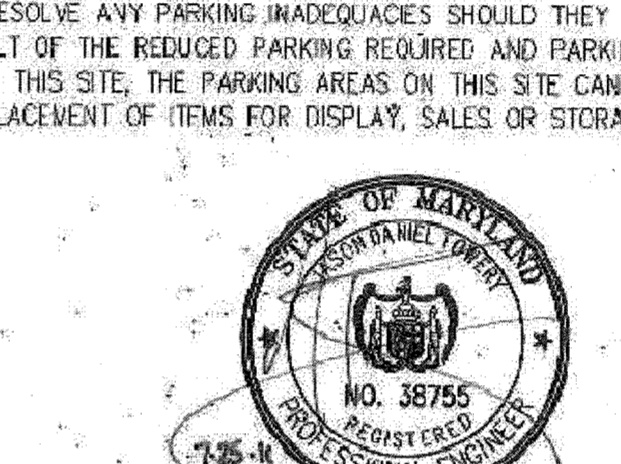
1. COVER	13. EROSION AND SEDIMENT CONTROL - PHASE I
2. SITE PLAN	14. EROSION AND SEDIMENT CONTROL - PHASE II
3. GRADING PLAN	15-16. EROSION AND SEDIMENT CONTROL DETAILS
4. UTILITY PLAN	17-21. SITE DETAILS
5. SEDIMENT AND EROSION CONTROL PLAN - PHASE IV	22. DRAINAGE DIVIDES
6. EROSION AND SEDIMENT DETAILS	23-25. BIO-RETENTION DETAILS
7. LANDSCAPE PLAN	26. SOIL BORINGS
8. LIGHTING PLAN	27-28. STORM PROFILES AND COMPUTATIONS
9. SOILS MAP	29-32. RETAINING WALL NOTES & SECTIONS
10. SCHEMATIC PROFILE	
11. SITE DETAIL SHEET	
12. SITE DETAIL SHEET	

- GENERAL NOTES**
- THE PROPERTY IS LOCATED ON TAX MAP 24 PART OF PARCEL 846.
 - THE LOCATION OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION AND DEPTH OF ANY EXISTING UTILITIES AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.
 - THE CONTRACTOR SHALL NOTE THAT IN CASE OF A DISCREPANCY BETWEEN THE SCALED AND FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
 - REZONING CASE NUMBER ZB-941, DATED OCTOBER 18, 1993; SKETCH PLAN S-95-01, APPROVED 12/2/94; PRELIMINARY PLAN P-95-21, APPROVED 6/6/95; FINAL PLANS FOR NORTH RIDGE ROAD F-96-01; MASS GRADING PLANS SDP-96-01, F-96-01, F-96-09.
 - WATER AND SEWER CONTRACT NUMBER 14-3444-D. ALL WATER AND SEWER ARE PROPOSED AS PART OF THIS PROJECT. THIS PROJECT IS LOCATED WITHIN THE METROPOLITAN DISTRICT. THERE ARE NO CONTIGUOUS SLOPES OF 25% OR GREATER WHICH ARE GREATER THAN 20,000 SQ. FT. IN THE AREA.
 - THIS PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS, WITH THE EXCEPTION OF A STORMWATER MANAGEMENT WAIVER FROM DESIGN MANUAL VOLUME 1, SECTION 10.2.6.5.a AND SECTION 10.2.6.6.a.
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
 - TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
 - THE EXISTING TOPOGRAPHY ON THESE PLANS IS BASED ON THE MASS GRADING TOPOGRAPHY AS SHOWN ON SDP-96-01.
 - THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 24C2 AND 18G1 WERE USED FOR THIS PROJECT.
 - STORMWATER MANAGEMENT FOR THE ENTIRE SITE WILL BE PROVIDED IN THE PROPOSED "PRIVATE" FACILITY AS DESIGNED IN SDP-96-01. WATER QUALITY WILL BE PROVIDED BY A STORMWATER SEWER SYSTEM ON THE PARCELS ZONED COMMERCIAL. EXTENDED DETENTION BY FOREBAY WILL PROVIDE WATER QUALITY MANAGEMENT FOR THE RESIDENTIAL SECTION. THE STORMWATER MANAGEMENT POND WILL BE OWNED AND MAINTAINED BY WAL-MART STORES, INC.
 - THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, DATED JUNE 7, 1994 WITH A SUPPLEMENT DATED OCTOBER 19, 1994, AND WAS APPROVED ON DECEMBER 2, 1994.
 - THERE SHALL BE NO CONSTRUCTION ALLOWED WITHIN THE WETLAND/WETLAND STREAM BUFFER AND/OR FOREST CONSERVATION EASEMENT.
 - ALL EROSION AND SEDIMENT CONTROLS FOR THE MASS GRADING AND THE CONSTRUCTION OF THE SEDIMENT BASIN ARE PART OF SDP-96-01 AND WILL BE EXISTING PRIOR TO THE START OF THIS CONSTRUCTION PLAN. THE USE OF THE SEDIMENT BASIN MUST CONTINUE UNTIL APPROVAL IS GRANTED BY THE EROSION AND SEDIMENT INSPECTOR FOR CONVERSION TO A STORM WATER MANAGEMENT POND.
- POND HAZARD CLASSIFICATION**
- CLASS "A" - STRUCTURES LOCATED IN RURAL, AGRICULTURAL OR URBAN AREAS DEDICATED TO REMAIN IN FLOOD TOLERANT USAGES WHERE FAILURE MAY DAMAGE NON-INHABITED BUILDINGS, AGRICULTURAL LAND, FLOODPLAINS OR COUNTY ROADS.
- NOTICE TO BIDDERS:**
- ALL QUESTIONS REGARDING THE GENERAL CONTRACTOR'S PREPARATION OF HIS BID SHALL BE DIRECTED TO THE WAL-MART CONSTRUCTION DEPARTMENT AT (501) 273-4940. SUBCONTRACTORS MUST DIRECT THEIR QUESTIONS THROUGH THE GENERAL CONTRACTOR ONLY. THE CONSULTING ARCHITECT AND/OR THE CONSULTING ENGINEER SHALL NOT BE CONTACTED DIRECT WITHOUT PRIOR AUTHORIZATION FROM WAL-MART.
- FLOOD CERTIFICATION:**
- THIS PROPERTY IS NOT LOCATED WITHIN ANY PRESENTLY ESTABLISHED 100-YEAR FLOOD PLAIN, AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP FOR THE ELLCOTT CITY, MARYLAND, COMMUNITY PANEL NUMBER 2400440 023 B.
- WETLAND CERTIFICATION:**
- THIS PROJECT DOES NOT REQUIRE A DEPARTMENT OF THE ARMY SECTION 404 PERMIT PER A DETERMINATION BY THE CORPS OF ENGINEERS, BALTIMORE DISTRICT. ALL WETLANDS SHOWN HAVE BEEN FIELD VERIFIED BY THE ARMY CORPS OF ENGINEERS.
- NOTICE TO CONTRACTOR:**
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.



DANIEL HOFFMAN, P.E.
12-05-2022

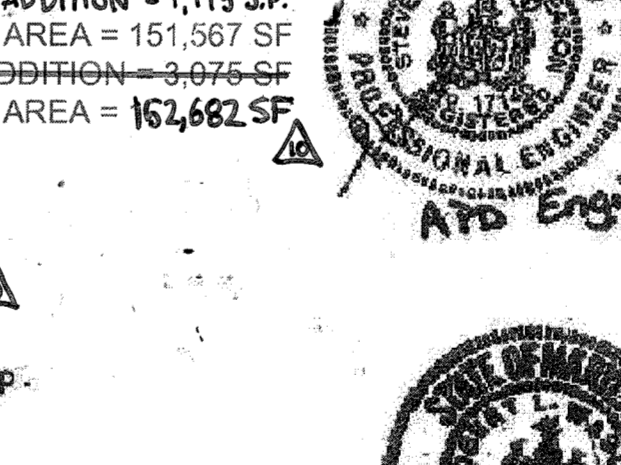
FOR REVISION 10 ONLY TACTILE SIDEWALK EXPANSION. NO INCREASE IN IMPERVIOUS AREA IS PROPOSED AS PART OF THIS REVISION.



BOWMAN CONSULTING GROUP
NO. 38755
PROFESSIONAL ENGINEER

Modified Parking Numbers, Building Floor Area for Building Expansion, "Modifications Only"

APPROVED: [Signature] DATE: 9/16/96



APT ENGINEERING
NO. 91469
PROFESSIONAL ENGINEER

APPROVED: [Signature] DATE: 6-6-96

FOR REVISION 10 ONLY
ANDREW G. STINE

PROFESSIONAL ENGINEER
L. ANDREW G. STINE
I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF MARYLAND UNDER LICENSE NO. 31671 EXPIRES 7/12/19

PART OF
LEONORA K. HOENES
LIBER 1107 FOLIO 204
ZONED RA-15

WILDER BUILDING
T.M. 17 PARCEL 711
"HOENES PROPERTY"
PARCEL "D"
ZONED RA-15

NORTH RIDGE ROAD
(BY OTHERS)

NORTH RIDGE ROAD (PUBLIC)
(BY OTHERS)

EX. NORTH RIDGE ROAD

HOWARD COUNTY
EXECUTIVE CENTER
PARCEL A-1
PLAT 7322

LEGEND
EXISTING
REINFORCED CONCRETE PIPE
CURB INLET
FENCE-LINE
EXISTING TREE LINE
EXISTING STREET LIGHT

NOTE: ALL DIMENSIONS AND RADII ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED. ALL RADII ARE 5' UNLESS NOTED.

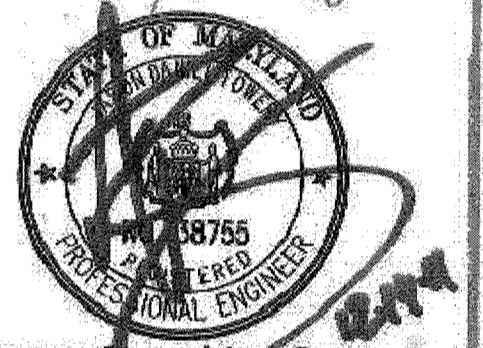
PROPOSED - GENERAL SYMBOLS
PROPERTY LINE
RIGHT OF WAY LINE/BOUNDARY LINE
CURB INLET
PROPOSED PARKING SPACES
BUILDING EXPANSION



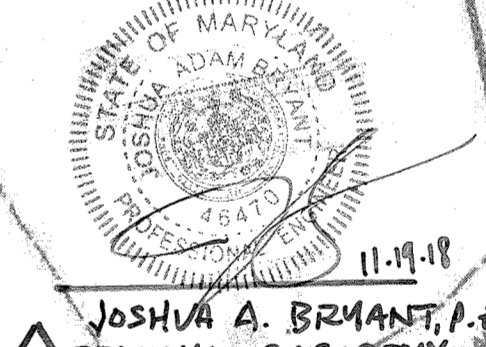
Bowman Consulting Group
BUILDING EXPANSION AND PARKING MODIFICATIONS ONLY.



ACADEMY BUILDING
ADDITION, UTILITIES AND PARKING LOT MODIFICATION



Bowman Consulting Group
TRASH COMPACTOR REMOVAL AND PARKING MODIFICATIONS ONLY.



JOSHUA A. BRYANT, P.E.
REMOVAL OF ACADEMY BUILDING ADDITION ON UTILITIES AND PARKING LOT MODIFICATION

OWNER & DEVELOPER
WALMART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SWDC
BENTONVILLE, AR 72716-0550
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000

ECP-11-007 (APPROVED: 08-06-2010)
RECORD PLAT F-98-157 & F-12-023
28-941, F-96-91, F-96-01
5-95-01, SDP-96-01
2-95-21, F-96-09

WAL-MART STORE #2412
ELICOTT CITY, WAL-MART, PARCEL B
ENGINEERING ASSOCIATES, INC.
9175 Guilford Road, Suite 306
Columbia, MD 21046
FAX (301) 490-4749
DATE: OCTOBER 3, 1995
SEWER NOS. 1452600

GENERAL SITE NOTES
A. ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
B. ALL LANDSCAPE AND CONCRETE SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 18A OF THE PUBLIC WORKS DESIGN MANUAL AND ALL APPROVED DETAILS.
C. ALL CURB FINISH SHALL BE 2'-0" OR 1'-0" AS SHOWN TYPICAL ON THIS PLAN UNLESS OTHERWISE NOTED.
D. UNLESS OTHERWISE SHOWN, ALL CURB SHALL BE 18" HIGH WITH A 1/4" RADIUS AT THE CORNERS.
E. ALL CURB AND GUTTER ADJACENT TO NORMAL PAVEMENT SHALL BE INSTALLED PER SECTION 18A.
F. PAVEMENT SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 18A OF THE PUBLIC WORKS DESIGN MANUAL AND ALL APPROVED DETAILS.
G. ALL PAVING LOT STRIPES SHALL BE PAINTED PER DETAILS 96, 98 AND 99.

SITE DETAILS
1. TYPE "A" CONCRETE CURB & GUTTER
2. TYPE "B" METAL CURB & GUTTER
3. CONCRETE SIDEWALK
4. CONCRETE SIDEWALK WITH CURB
5. ISLAND CURB (CONCRETE/PAVEMENT PROTECTION)
6. REGULAR DUTY PAVING
7. HEAVY DUTY PAVING
8. HEAVY DUTY CONCRETE PAVEMENT
9. ACCESSIBLE PARKING SPACES
10. PARKING SPACE STRIPING (TYP. SEE PLAN FOR SPACING)
11. ACCESSIBLE PARKING SPACE & SIGN (TYP.)
12. 8' WIDE ACCESSIBLE PARKING SPACE & SIGN (TYP.)
13. STOP SIGN (TYP.)
14. NO PARKING SIGN
15. "DRIVE ENTRANCE" SIGN W/ ARROW (SEE SECTION 18A FOR DETAILS)
16. "STREET CROSSING" SIGN
17. "TRUCK STOP" SIGN
18. "TRUCK STOP" SIGN W/ ARROW (SEE SECTION 18A FOR DETAILS)
19. "AHEAD" SIGN (TYPICAL AT ALL SIGNALS)
20. CHART SYMBOL (TO BE FURNISHED BY OTHERS)
21. TYPICAL LIGHTING POLE FOUNDATION AND FOUNDATION FOR LIGHT FIXTURES (SEE SECTION 18A FOR DETAILS)

SITE NOTES
1. REEDED FRONT YARD
2. CONCRETE TRASH COMPACTOR AREA, COMPACTOR WILL BE PROVIDED AND INSTALLED BY OTHERS (SEE ARCH. PLANS FOR APPROVED LOCATION)
3. CHAIN LINK STORAGE AREA (SEE ARCH. PLANS)
4. TRASH PORCH (SEE ARCH. PLANS)
5. TRASH TRUCK WITH STORAGE (SEE ARCH. PLANS)
6. EXISTING WALLS & TRUCK WALL (SEE ARCH. PLANS)
7. SIDEWALK (SEE ARCH. PLANS)
8. EXISTING SIDEWALK & SIDEWALK (SEE ARCH. PLANS)
9. RAMP IN SIDEWALK (SEE ARCH. PLANS)
10. SIDEWALK (SEE ARCH. PLANS)
11. SIDEWALK STRIPES (SEE SECTION 18A FOR DETAILS)
12. 4" TRAFFIC YELLOW LANE STRIPES (SEE SECTION 18A FOR DETAILS)
13. 4" TRAFFIC YELLOW LANE STRIPES (SEE SECTION 18A FOR DETAILS)
14. 4" TRAFFIC YELLOW LANE STRIPES (SEE SECTION 18A FOR DETAILS)
15. 4" TRAFFIC YELLOW LANE STRIPES (SEE SECTION 18A FOR DETAILS)
16. 4" TRAFFIC YELLOW LANE STRIPES (SEE SECTION 18A FOR DETAILS)
17. 4" TRAFFIC YELLOW LANE STRIPES (SEE SECTION 18A FOR DETAILS)
18. 4" TRAFFIC YELLOW LANE STRIPES (SEE SECTION 18A FOR DETAILS)
19. 4" TRAFFIC YELLOW LANE STRIPES (SEE SECTION 18A FOR DETAILS)
20. 4" TRAFFIC YELLOW LANE STRIPES (SEE SECTION 18A FOR DETAILS)
21. 4" TRAFFIC YELLOW LANE STRIPES (SEE SECTION 18A FOR DETAILS)

Expanded Garden Center fence Area to Northeast 41/2 S.P. Reconcile sidewalk, Access drive and curb islands along front of store at Garden Center. Added Parking east side of Parking Lot.

Re Modifications only 9/6/02 APD Engineering

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
Signature of Developer: [Signature]
DATE: 8/31/96

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.
Signature of Engineer: [Signature]
DATE: 6/6/96

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
T. M. [Signature]
DATE: 8-2-17
CHIEF, DIVISION OF LAND DEVELOPMENT
W. [Signature]
DATE: 8-3-17

NO.	DATE	DESCRIPTION	BY
6	7/25/11	BLDG EXPANSION & PARKING MOD.	JDT
5	5/11/02	Revised Per H.C. Redline Comments	JAB
4	4-17-96	REVISED PER H.C. REDLINE COMMENTS	SLJ/ACL
3	2-13-96	CHANGED PER PEER REVIEW	NAM
2	1-28-96	PRINTED FOR DESIGN CIVILS	NAM
1	1-17-96	REVISED SITE LAYOUT	NAM

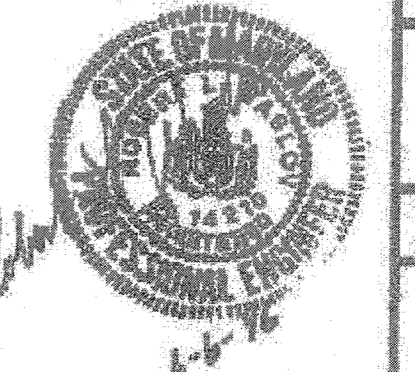
NO.	DATE	DESCRIPTION	BY
9	5/15/18	REMOVAL OF ACADEMY ADDITION	JAB
8	1/6/17	ACADEMY ADDITION	JAB
7	12/14/11	COMPACTOR REMOVAL & PARKING MOD.	JDT
10	2/22/2019	BLDG ADDITION AND GROCERY PICKUP CANOPY	BOHLER

THIS SHEET WILL SUPERSEDE SHEET NUMBER 2 DATED 1/7/96 APPROVED BY HOWARD COUNTY.



Professional Certificate
I certify that these drawings were prepared or approved by me and that I am a duly licensed professional engineer in the State of Maryland under license number 31671 EXPIRES 7/12/19

SUBDIVISION "ELICOTT CITY WAL-MART"
ELECTION DISTRICT NO. 2
TAX MAP 17 & 24
REZONING CASE NUMBER ZB-941
SKETCH PLAN S-95-01
PRELIMINARY PLAN P-95-21
SCALE 1"=50'
WATER NO. F03



NO ABSENT INFO. 6-5-13

SDP-96-11

FOR REVISION 10 ONLY
ANDREW G. STINE
PROFESSIONAL ENGINEER

Approved & sealed by the State of Maryland
I, Andrew G. Stine, hereby certify that these documents were prepared or approved by me and that I am a duly licensed professional engineer under the laws of the State of Maryland.
EXPIRES ON 5/15/18 EXPIRATION DATE: 7/12/14

PART OF
LEONORA K. HOENES
LIBER 1197 FOLIO 204
ZONED RA-15

WILDER BUILDING
T.M. 17 PARCEL 711
"HOENES' PROPERTY"
PARCEL "D"
ZONED RA-15

NORTH RIDGE ROAD
(BY OTHERS)

NORTH RIDGE ROAD (PUBLIC)
(BY OTHERS)

EX. NORTH RIDGE ROAD

"HOWARD COUNTY
EXECUTIVE CENTER"
PARCEL A-1
"PLAT 7322"

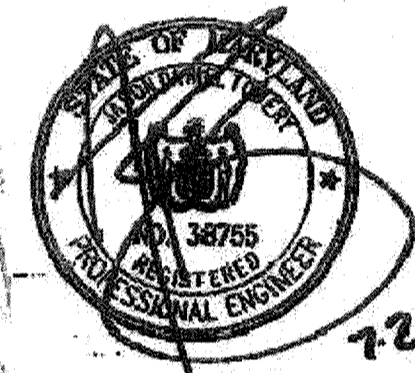
PARCEL "C"

PARCEL "B"

BULK
PARCEL "D"

WAL-MART
C-152E-SGL-NO
161,567 S.F.
411,000 F.F.E.

Revised grading in areas
of Garden Center Expansion
and access drive relocation.
Also revised grading in area
of added parking on east side.



7 Bowman Consulting Group
TRASH COMPACTOR
REMOVAL AND PARKING
MODIFICATIONS ONLY.

6 Bowman Consulting Group
BUILDING EXPANSION AND
PARKING MODIFICATIONS
ONLY.

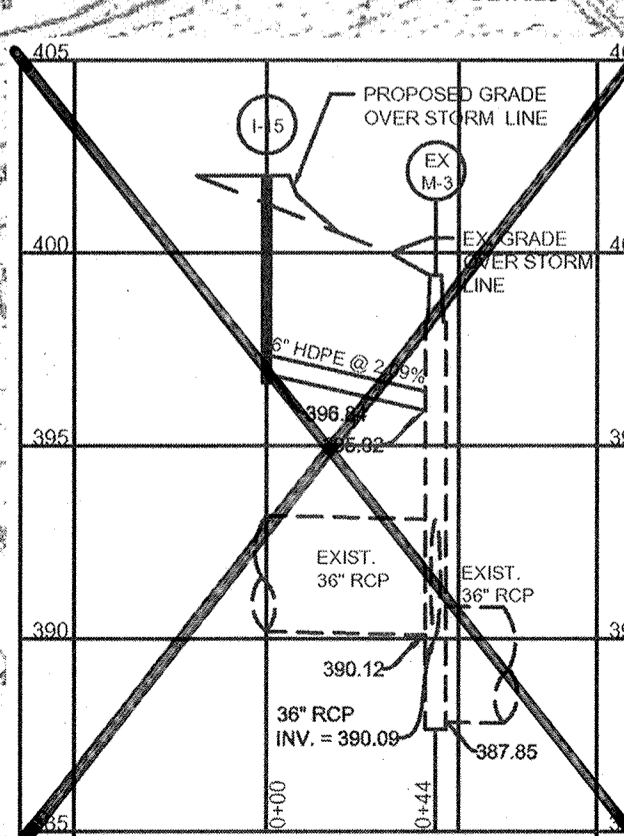
NOTE:
DUE TO DIFFERENT VERTICAL DATUM,
THERE IS A 1 FT. DIFFERENCE BETWEEN THE
ELEVATIONS SHOWN ON THIS REDLINE
REVISION DATED 01/14/2011 AND ORIGINAL
SITE PLAN SDP 96-11.
SEE SHEET 27 FOR PROPOSED STORM SEWER
PROFILES AND SHEET 28 FOR STORM SEWER
COMPUTATIONS.

OWNER & DEVELOPER
WALMART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SWDC
BENTONVILLE, AR 72716-0550
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000

ECP-11-007 (APPROVED: 08-06-2010)
RECORD PLAT F-98-157 & F-12-023

Table with columns: INITIAL DESIGN, DATE, PRN, PM, DES, CADD. Includes dates 8-28-94, 8-9-95, 12-2-95, 8-9-95.

WAL-MART STORE #2412
ELLICOTT CITY, WAL-MART, PARCEL B
ENGINEERING ASSOCIATES, INC.
8179 Calhoun Road, Suite 306
Columbia, MD 21046
CONTACT: (301) 490-4145
DATE: 05-20-98



JOSHUA A. BRANTNER P.E.
REMOVAL OF ACADEMY
BUILDING ADDITION
UTILITIES AND PARKING
LOT MODIFICATION

CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE ON SITE AND OFF-SITE

Revision table with columns: NO., DATE, DESCRIPTION, BY. Includes revisions for BLDG EXPANSION & PARKING MOD., COMPACTOR REMOVAL & PARKING MOD., and BLDG ADDITION AND GROCERY PICKUP CANOPY.

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 7/6/12
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 8-2-12
DIRECTOR
DATE: 8-9-12

SDP-96-11

THIS SHEET WILL SUPERSEDE SHEET NUMBER 4
(DATED 1/7/95) APPROVED BY HOWARD COUNTY.

PART OF
LEONORA K. HOENES
LIBER 1197 FOLIO 204
ZONED RA-15

FIRE LANES - TO BE INSTALLED
IN ACCORDANCE WITH FIRE CHIEF'S
OFFICE STANDARDS.

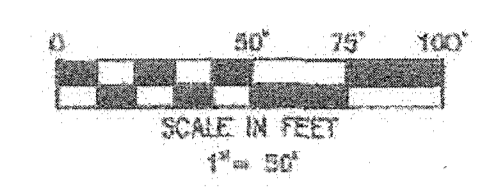
WILDER BUILDING
T.M. 17 PARCEL 711
"HOENES PROPERTY"
PARCEL "D"
ZONED RA-15

NORTH RIDGE ROAD
(BY OTHERS)

NORTH RIDGE ROAD
(BY OTHERS)

LEGEND
EXISTING
RCP REINFORCED CONCRETE PIPE
CURB INLET
FENCE-LINE
EXISTING TREE LINE
EXISTING STREET LIGHT
"HOWARD COUNTY
EXECUTIVE CENTER"
PARCEL A-1
PLAT 7322
SANITARY SEWER MANHOLE

PROPOSED - GENERAL SYMBOLS
PROPERTY LINE
RIGHT OF WAY LINE/BOUNDARY LINE
UNDERGROUND CONDUIT
STORM DRAIN
SANITARY STRUCTURE IDENTIFIER
BUILDING EXPANSION



WILDER BUILDING CORP.
T.M. 17 PARCEL 711
"HOENES PROPERTY PARCEL D"
PLAT NO. 9418
ZONED RA-15
UTILITY PLAN

- GENERAL NOTES: ALL ELECTRIC, TELEPHONE AND GAS EXTENSIONS AND SERVICE LINES TO BE COOPERATED TO THE APPROPRIATE UTILITY COMPANY SPECIFICATIONS. ALL UTILITY ENGINEERING TO BE COORDINATED WITH THE DESIGNATED UTILITY COMPANIES.
- ENGINEERING NOTES TO CONTRACTOR: THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT HIS LOCATION AND DEPTH OF SERVICE LINES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, THEREFORE, HEARSAY INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REVEAL EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELocate ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
- HISTORY TO CONTRACTOR: PRIOR TO INSTALLATION OF STORM OR SANITARY SEWER, THE CONTRACTOR SHALL EXCAVATE, VERIFY, AND CALCULATE ALL CROSSINGS AND DEPTHS AND SHALL HAVE THE CONCESS OF ANY CONFLICTS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL HOLD HARMLESS IN THE EVENT THE ENGINEER IS NOT NOTIFIED BY THE CONTRACTOR.
- THE SITE WORK FOR THIS PROJECT SHALL BE ON EXISTING 2" W/M-HART STANDARD SITE WORK SPECIFICATIONS.
- CONTRACTOR SHALL NOT START ON ANY PUBLIC UTILITY SYSTEM UNLESS WRITTEN APPROVAL HAS BEEN RECEIVED FROM THE COUNTY CITY AND CONTRACTOR HAS BEEN NOTIFIED BY THE CONTRACTOR.
- SANITARY SEWER AND WATER MAIN CONSTRUCTION ARE PROPOSED UNDER CONSTRUCTION PLAN #14-3444-D.
- STORM SEWER CONSTRUCTION IS PROPOSED UNDER SEP 85-01.
- REFER TO FINAL PLAT #14-3444-D FOR EXACT LOCATIONS AND DISTANCES OF ALL UTILITIES SHOWN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS, SUCH AS PLAT NUMBERS AND VERTICAL ACCESS RESTRICTIONS.

- SPECIAL NOTES: 1. ALL WATER LINES TO BE COP WITH 3/4" HDPE COVER. 2. ALL SANITARY SEWER LINES TO BE COP WITH 4" HDPE COVER. 3. HOPE TO APPROVED DISTRIBUTION.

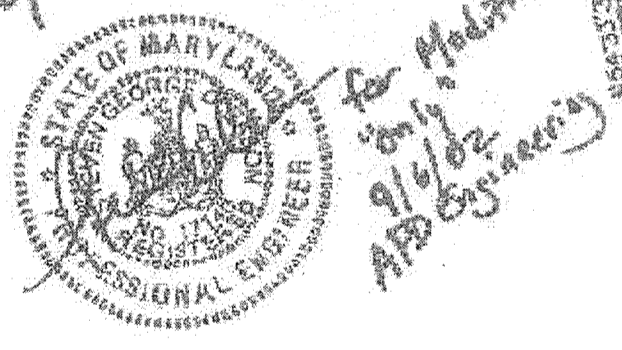
UTILITY DETAILS

5A	STANDARD POST CONDUIT
5B	GUARD POST (GROUP/FIRE HYDRANT PROTECTION)
13A	TYPICAL LIGHTING POLE FOUNDATION
34A	BACKFLOW PREVENTER (OPTION)
35A	FIRE HYDRANT ASSEMBLY - SEE DETAIL FOR BRAND & TYPE
42A	WATER MAIN FITTING
42B	SANITARY SEWER LINE FITTING

UTILITY NOTES

22C	1/2" GAS VALVE WITH ADJUSTABLE VALVE ROD AND THURST BLOWING (SEE NOTES THIS SHEET)
22D	1/2" GAS WITH THURST BLOWING (SEE NOTES THIS SHEET)
22E	1/2" GAS REDUCER (SEE NOTES THIS SHEET)
22F	1/2" GAS WITH THURST BLOWING (SEE NOTES THIS SHEET)
22G	1/2" GAS WITH THURST BLOWING (SEE NOTES THIS SHEET)
22H	1/2" GAS WITH THURST BLOWING (SEE NOTES THIS SHEET)
22I	SPRINKLER ENTRY PER ARIAL PLUMB (SEE NOTES THIS SHEET)
22J	METERED DOMESTIC WATER SERVICE SKIM PER ARIAL PLUMB (SEE NOTES THIS SHEET)
22K	PROPOSED WATER METER (SEE NOTES THIS SHEET)
22L	BUILDING SANITARY SEWER SERVICE CLEAN-OUT
22M	PROPOSED ELECTRIC TRANSFORMER
22N	ELECTRIC SERVICE ENTRY
22O	PROPOSED TELEPHONE ENTRY
22P	PROPOSED GAS METER
22Q	PROPOSED GAS ENTRY
22R	REGISTRATION CONTROLLER AND VALVES LOCATION
22S	REMOVE EX. 2" BLOW OFF AND EXTEND WATERLINE

Relocate hydrant at east end of parking at additional. Relocate hydrant and utility. Bolts to new curb location in front of Garden Center Expansion in front of Main Building. Add Engineering.



I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

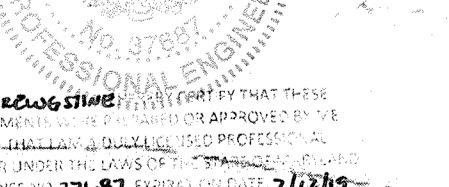
SIGNATURE OF DEVELOPER: [Signature] DATE: 5/31/96

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature] DATE: 7/6/97
CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature] DATE: 8-2-97
DIRECTOR: [Signature] DATE: 8-3-97

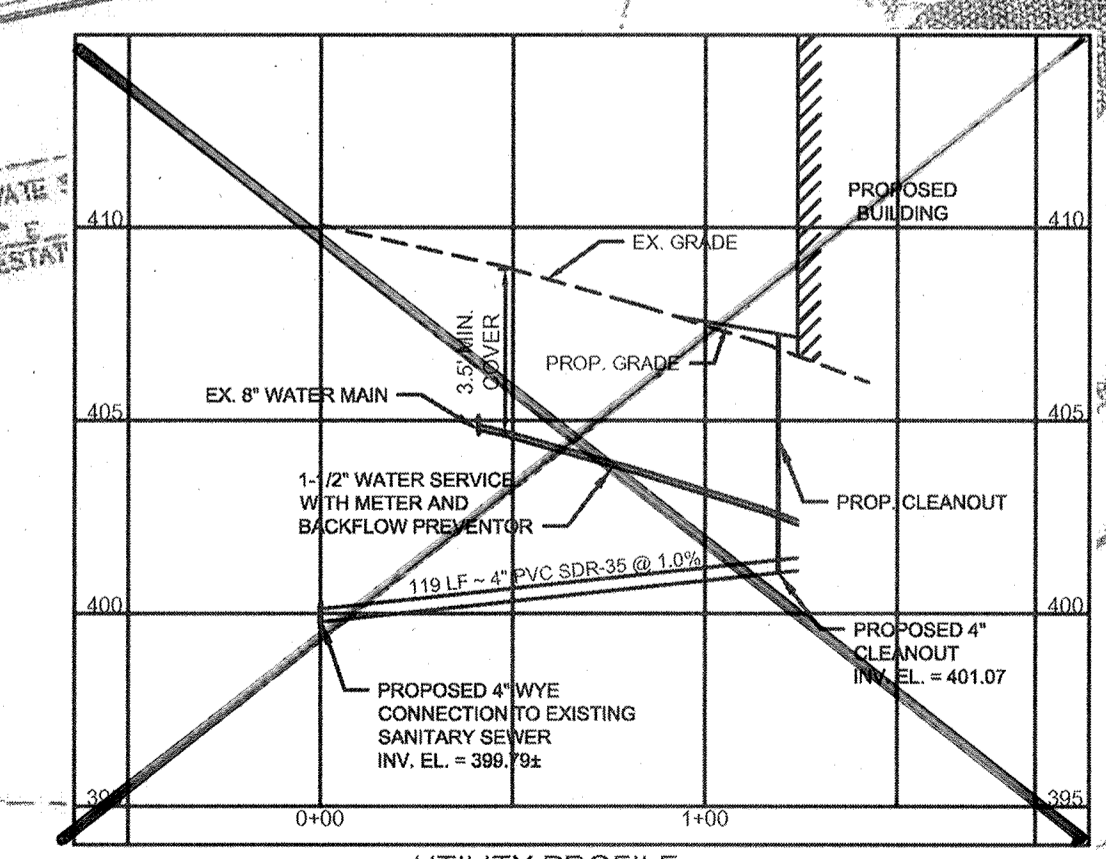
NO.	DATE	DESCRIPTION	BY
6	7/25/11	BLDG EXPANSION & PARKING MOD.	JDT
5	5/1/02	Rev. Per H.C. Building Comments	Sbc
4	4-17-96	REVISED PER H. C. REDLINE COMMENTS	NOI
3	2-13-96	CHANGED PER PEER REVIEW	MAN
2	1-26-96	PRINTED FOR DESIGN CIVILS	MAN
1	1-17-96	REVISED SITE LAYOUT	MAN

FOR REVISION 10 ONLY
ANDREW G. STINE
PROFESSIONAL ENGINEER

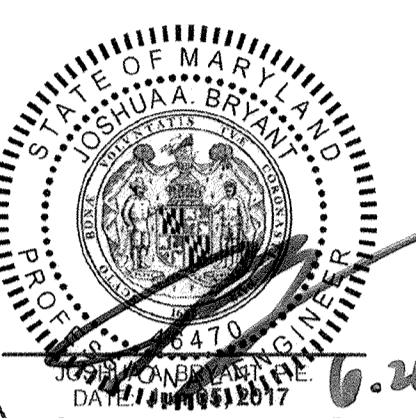


NO.	DATE	DESCRIPTION	BY
10	2/21/2019	BLDG ADDITION AND GROCERY PICKUP CANOPY	BOHLER

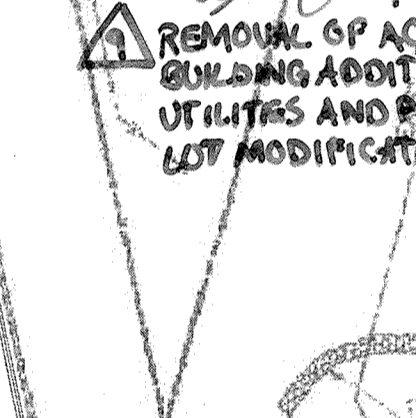
THIS SHEET FOR INFORMATION PURPOSES ONLY !!!
WATER AND SEWER MAIN CONSTRUCTION PROPOSED IN C # 14-3444-D.



UTILITY PROFILE
VERT. 1" = 5'
HORIZ. 1" = 50'
SUBDIVISION "ELICOTT CITY WAL-MART"
ELECTION DISTRICT NO. 2
TAX MAP 17 & 24
REZONING CASE NUMBER ZB-941
SKETCH PLAN S-95-01
PRELIMINARY PLAN P-95-21
SCALE 1"=50'
WATER NO. F03



Joshua A. Boyan, P.E.
DATE: 6-21-97



Joshua A. Boyan, P.E.
DATE: 7-25-97

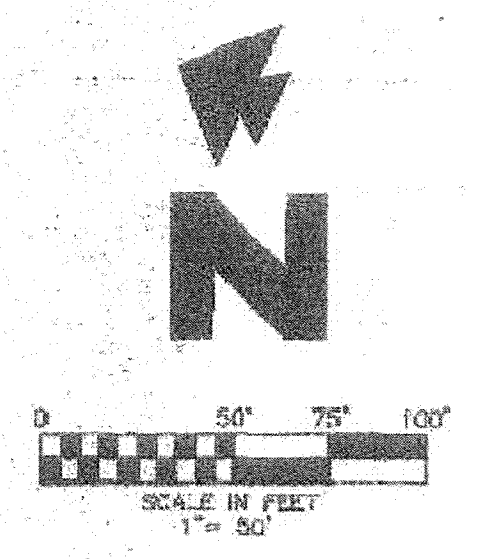
OWNER & DEVELOPER
WALMART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SWDC
BENTONVILLE, AR 72716-0550
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000

ECP-11-007 (APPROVED: 08-06-2010)
RECORD PLAT F-98-157 & F-12-023

2B-941	F-96-91	F-96-01
5-95-07	SDA-96-01	F-96-09
8-95-21		

WAL-MART STORE #2412
ELICOTT CITY, WAL-MART, PARCEL B

ENGINEERS	PLANNERS	SURVEYORS
ELICOTT CITY WAL-MART UTILITY PLAN	ENGINEERING ASSOCIATES, INC.	DATE: 05-29-98 SHEET 14 4 of 34



WILDER BUILDING
T.M. 17 PARCEL 711
"HOENES PROPERTY"
PARCEL "D"
ZONED RA-15

ALL EROSION AND SEDIMENT CONTROLS FOR THE MASS GRADING AND THE CONSTRUCTION OF THE SEDIMENT BASIN IS PART OF SDP 96-01 AND WILL BE EXISTING PRIOR TO THE START OF THIS CONSTRUCTION PLAN. THE USE OF THE SEDIMENT BASIN MUST CONTINUE UNTIL APPROVAL IS GRANTED BY THE EROSION AND SEDIMENT INSPECTOR FOR CONVERSION TO A STORM WATER MANAGEMENT POND.

PART OF
LEONORA K. HOENES
LIBER 1187 FOLIO 204
ZONED RA-15

EX NORTH RIDGE ROAD
M-3

NORTH RIDGE ROAD
NORTH RIDGE ROAD (PUBLIC)

LEGEND

EXISTING	
	STORM SEWER
	SANITARY SEWER
	WATERLINE
	RETAINING WALL
	TREE LINE

PROPOSED - GENERAL SYMBOLS

	PROPERTY LINE
	RIGHT OF WAY LINE/BOUNDARY LINE
	INDEX CONTOUR
	2' CONTOUR
	LIMITS OF PAVING
	SPOT ELEVATIONS

SEDIMENT CONTROL LEGEND

	LIMITS OF DISTURBANCE
	SSF SUPER SILT FENCE
	PROP. DRAINAGE AREAS
	EXISTING LIMITS OF DISTURBANCE
	EXISTING SUPER SILT FENCE

FOR REVISION 10 ONLY
ANDREW G. STINE
Professional Engineer

Added Parking on East Side, Revised curb island along front of Garden Center and expanded Garden Center fenced area.

FUTURE DEVELOPED
DA = 2.05
A = 4.10 AC
C = 0.22

For Modification Only 9/6/02
APD Engineering



THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

HOWARD SCD _____ DATE _____

FOR BASIN TABULAR DATA SEE SHEET 6.

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL

USDA - NATURAL RESOURCES CONSERVATION SERVICE _____ DATE _____

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT

John K. Robertson _____ DATE 6-10-11
HOWARD SOIL CONSERVATION DISTRICT

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature of Developer: _____ DATE: 5/3/10

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Signature of Engineer: _____ DATE: 6-6-96

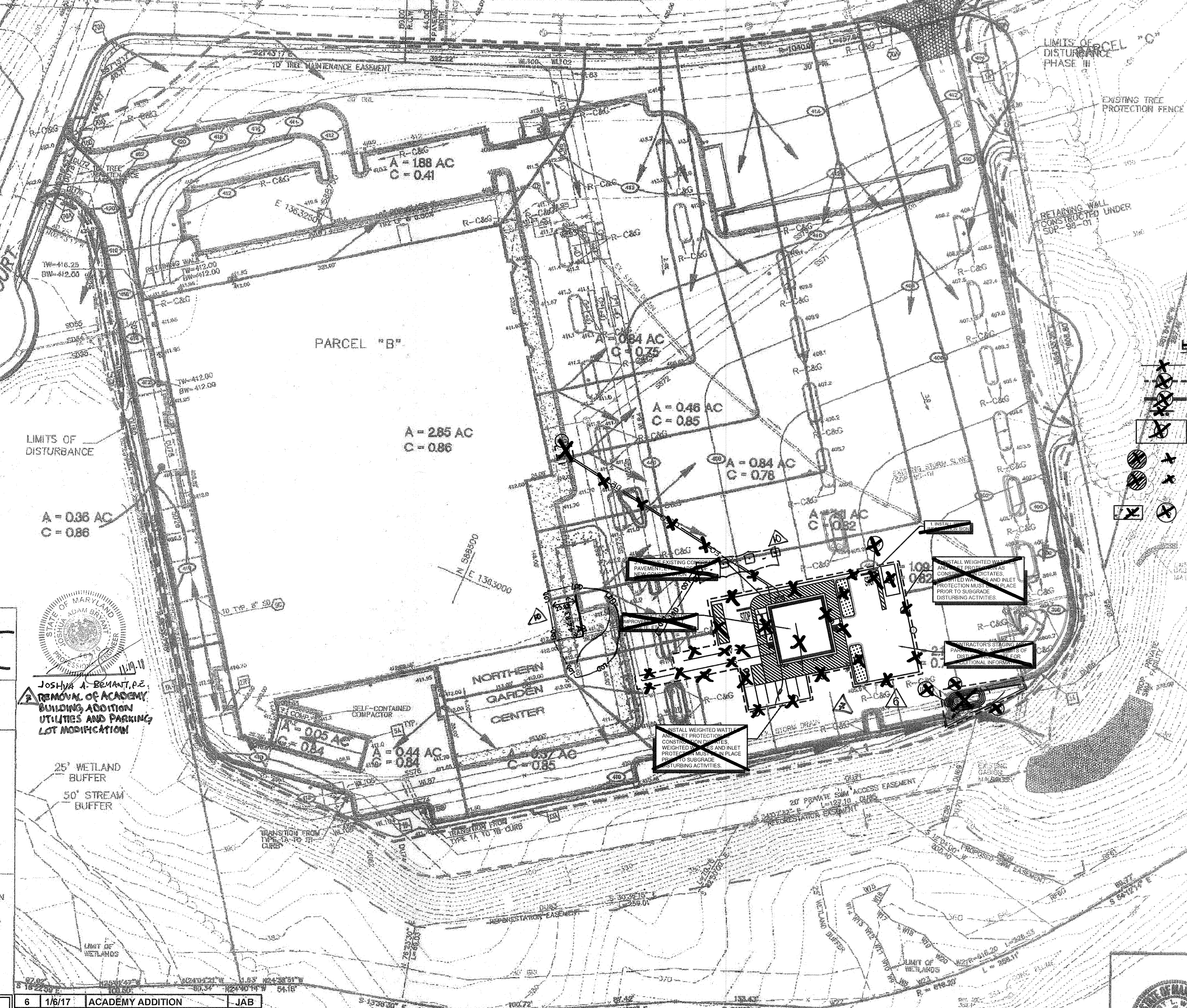
APPROVED: DEPARTMENT OF PLANNING AND ZONING

7/2/12
DATE

7/25/11
DATE

8-2-17
DATE

8-3-17
DATE



JOSHUA A. REMANT, P.E.
REMOVAL OF ACADEMY BUILDING ADDITION UTILITIES AND PARKING LOT MODIFICATION

25' WETLAND BUFFER
50' STREAM BUFFER

LEGEND

	LIMITS OF DISTURBANCE
	SSF SUPER SILT FENCE
	PROP. DRAINAGE AREAS
	EXISTING LIMITS OF DISTURBANCE
	EXISTING SUPER SILT FENCE
	BACK GRouted INLET PROTECTION
	CURB INLET PROTECTION
	PERMANENT EROSION CONTROL
	REPLACE DISTURBED AREA WITH LIVE PLANTS
	WATERWAY CONSTRUCTION

Professional Engineer seal for Joshua A. Remant, State of Maryland, No. 38765.

REVISED NEW EROSION AND SEDIMENT CONTROL PLANS PHASE I AND PHASE II, SEE SHEETS 13 AND 14 RESPECTIVELY.

OWNER & DEVELOPER
WALMART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SWDC
BENTONVILLE, AR 72716-0550
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000

ECP-11-007 (APPROVED: 08-06-2010)
RECORD PLAT F-98-157 & F-12-623

28-021	F-08-01
5-95-01	SDP-98-01
P-95-21	F-96-09

WAL-MART STORE #2412
ELLICOTT CITY, WAL-MART, PARCEL B

ENGINEERING ASSOCIATES, INC.

9175 Guilford Road, Suite 306
Columbia, MD 21046

(301) 480-4145
FAX (301) 480-4149

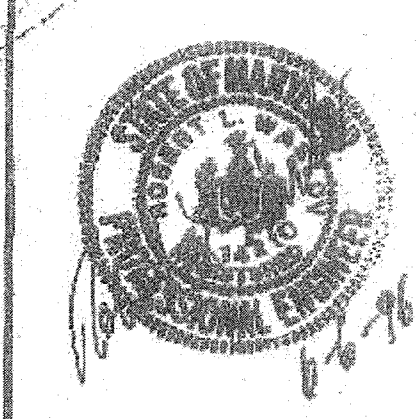
DATE: OCTOBER 18, 1983
APPROVED: 12-2-1994
DATE: OCTOBER 3, 1995
SEWER NOS. 1452800

THIS SHEET WILL SUPERSEDE SHEET NUMBER 5 (DATED 11/7/05) APPROVED BY HOWARD COUNTY.

REVISION 10 LIMIT OF DISTURBANCE 4,956 S.F. OR 0.11 AC.

NO.	DATE	DESCRIPTION	BY
6	1/6/17	ACADEMY ADDITION	JAB
5	7/25/11	BLDG EXPANSION & PARKING MOD.	JDT
4	8/1/02	Rev. Per H.C. Redline Comments	SLJ/ACL
3	4/17/06	REVISED PER H. C. REDLINE COMMENTS	SLJ/ACL
2	1-28-06	PRINTED FOR DESIGN CIVILS	NAM
1	1-17-06	REVISED SITE LAYOUT	MAM
10	2/21/2010	BLDG ADDITION AND GROCERY PICKUP CANOPY	BOHLER

SUBDIVISION "ELLICOTT CITY" WAL-MART
ELECTION DISTRICT NO. 2
TAX MAP 17 & 24
REZONING CASE NUMBER ZB-941
SKETCH PLAN S-95-01
PRELIMINARY PLAN P-95-21
SCALE: 1"=50'
WATER NO. F03



I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I HAVE ENGAGED A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER: *[Signature]* DATE: 11/27/95

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

SIGNATURE OF ENGINEER: *[Signature]* DATE: 11/14/95

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE: 3/26/96

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE: 3/29/96

APPROVED: DEPARTMENT OF PLANNING AND ZONING

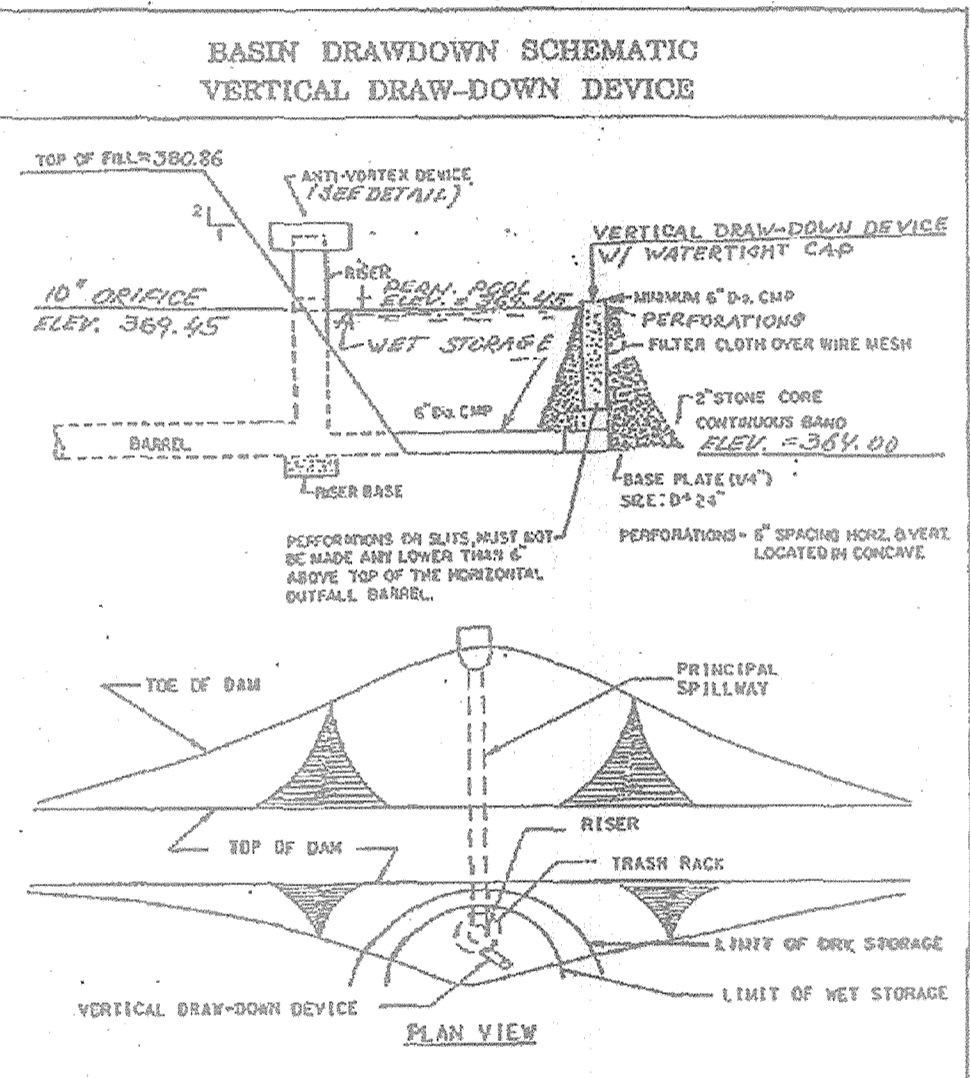
[Signature] DATE: 8/22/11
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] DATE: 9/26/11
 CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] DATE: 9/27/11
 DIRECTOR

HOWARD SOIL CONSERVATION DISTRICT
 STANDARD SEDIMENT CONTROL NOTES

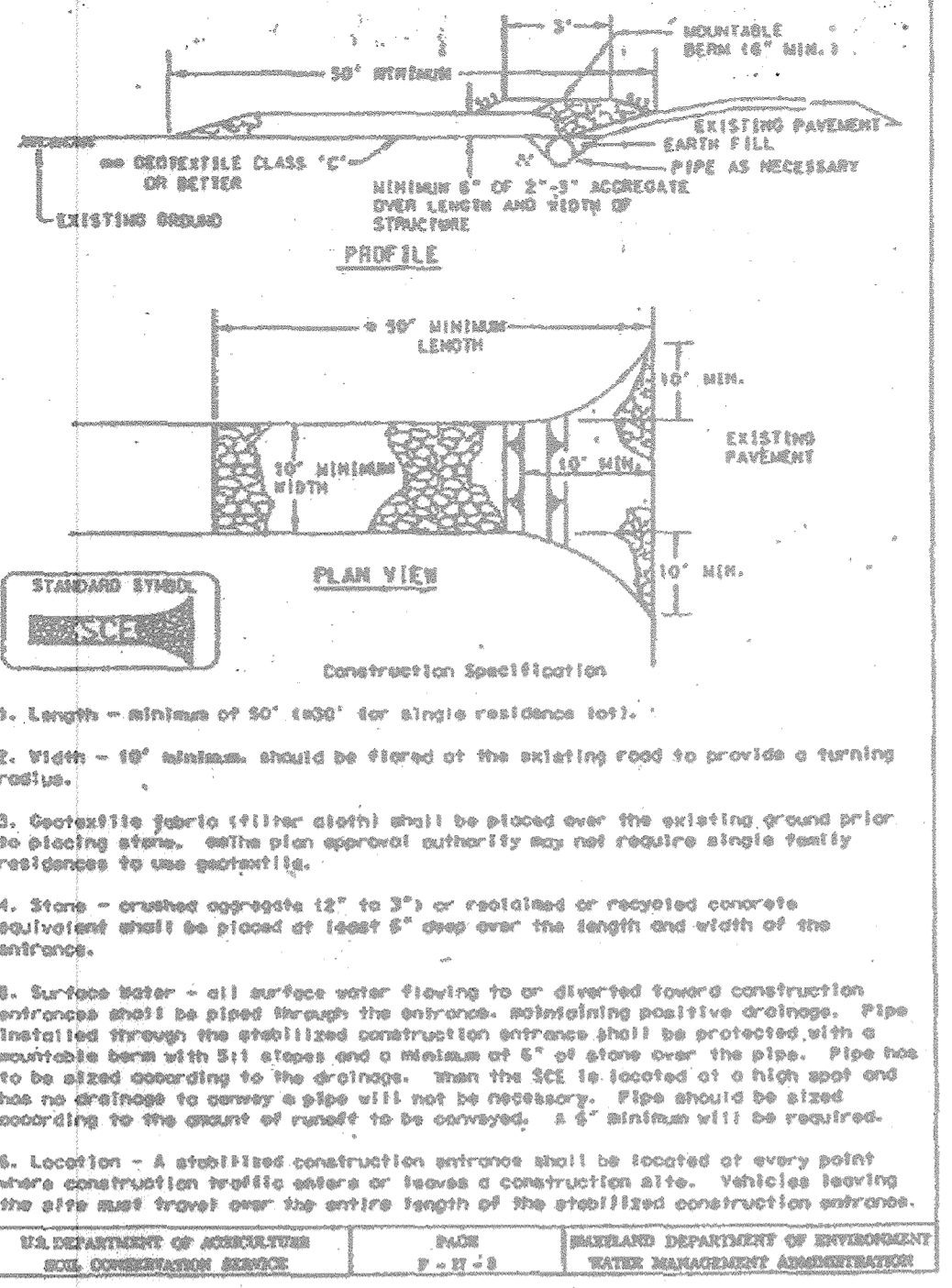
- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION. (410-343-1855)
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:
 TOTAL AREA OF SITE: 65.78 ACRES
 AREA TO BE ROOFED OR PAVED: 46.00 ACRES
 AREA TO BE VEGETATIVELY STABILIZED: 4.04 ACRES
 TOTAL CUT: 60,000 CU YD
 TOTAL FILL: 15,000 CU YD
 OFFSITE WASTE/BORROW AREA LOCATED AT NORTHEASTERN PORTION OF SITE EAST OF NORTH RIDGE.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING, OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.



Construction Specifications

- Perforations in the draw-down device may not extend into the wet storage.
- The total area of the perforations must be greater than 2 times the area of the inlet orifice.
- The perforation surface of the draw-down device shall be wrapped with 1/2" hardware cloth and geotextile fabric. The geotextile fabric shall meet the specifications for Geotextile Class C.
- Provide support of draw-down device to prevent sagging and flexation. An acceptable alternative to the support is to stake both sides of draw-down device with 1" steel angle, or 1" by 4" square or 2" round wooden posts set 3" minimum into the ground when joining them to the device by welding or with 15 degree minimum wire.

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

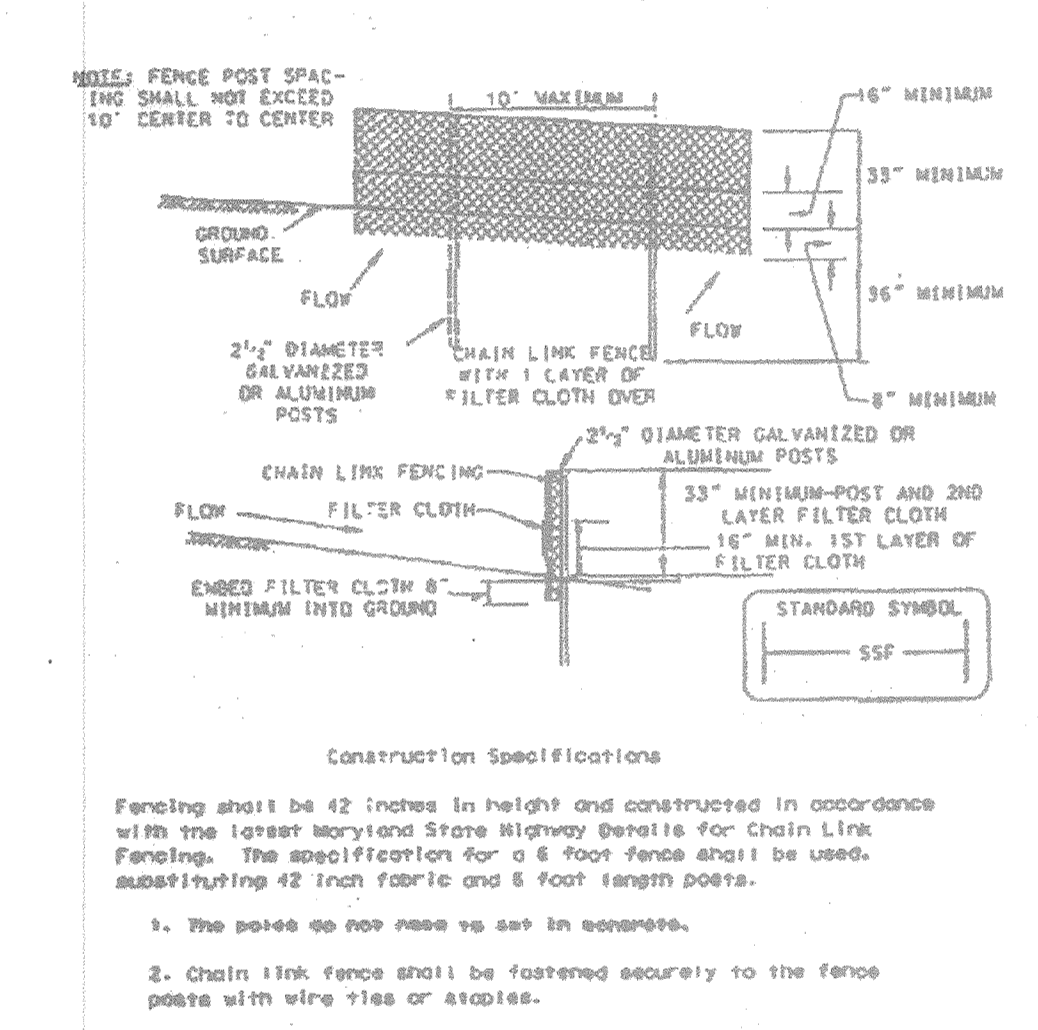


Construction Specifications

- Length - minimum of 90' (30' for single structure lot).
- Width - 18' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. Written plan approval authority may not require stone if geotextile is used.
- Stone - crushed aggregate 1 1/2" to 3" or recycled or recycled concrete equivalent shall be placed at least 6" over the length and width of the entrance.
- Surface water - all surface water flowing to or diverted toward construction entrances shall be placed through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a water-tight base with 3:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 5" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 2-11-2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 23 - SUPER SILT FENCE



Construction Specifications

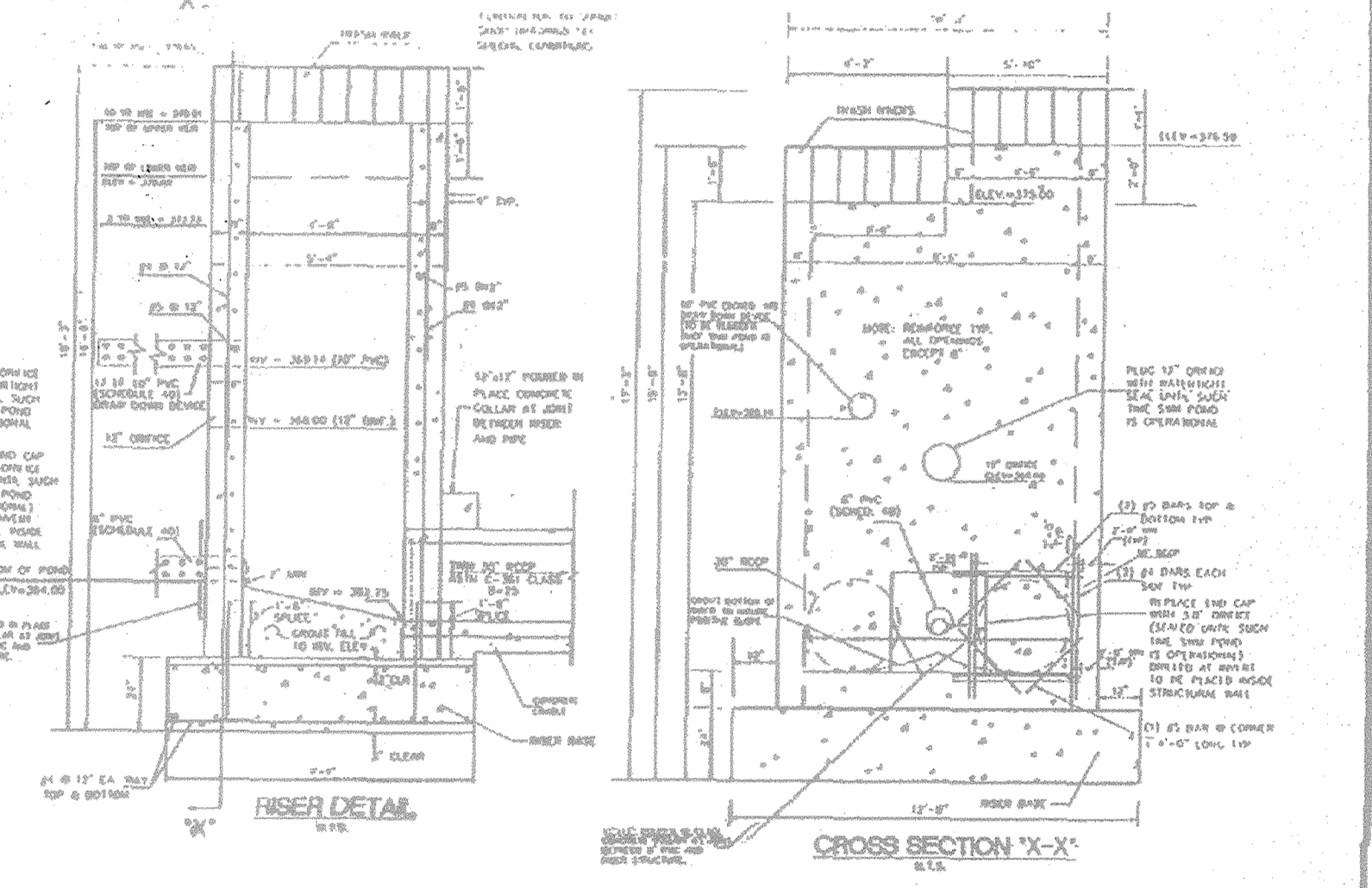
Fencing shall be 42 inches in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specifications for a 4 foot fence shall be used, substituting 42 inch fabric and 5 foot length posts.

- The fence do not have to set in concrete.
- Chain link fence shall be fastened securely to the fence posts with wire ties or staples.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" or the top and mid sections.
- Filter cloth shall be extended a minimum of 6" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
- Maintenance shall be performed as needed and silt buildup removed when "baggies" develop in the silt fence.

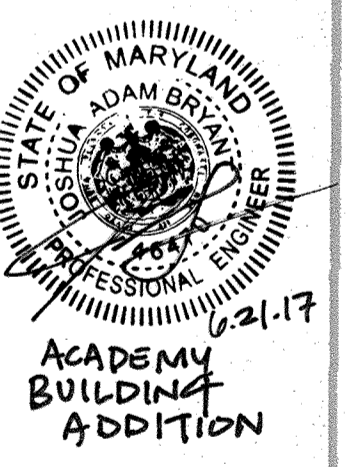
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 2-11-2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SEQUENCE OF CONSTRUCTION

- PHASE IV
- Obtain Grading Permit.
 - Continue Erosion and Sediment Control Measures from the Mass Grading Plans SDP-96-01, Phase III.
 - Stabilize all slopes according to the "seeding on slopes" section of the landscape plan, sheet 7. (2 Days)
 - Complete fine grading of the parking areas to an elevation which will accommodate pavement sections at proposed elevations as shown on the site plan (1 week).
 - Construct curb and gutter (2 weeks).
 - Once the curb and gutter is in place, remove the silt fence that is shown at the top of the fill slopes and the diversion dike near the stormwater management pond (1 day).
 - Remove on-site inlet protection and begin construction of the pavement sections in the parking lot (2 weeks).
 - Once the entire site has been stabilized, and approval is received from the inspector, convert the temporary sediment basin into a stormwater management facility by constructing the forebay, sealing the 10" draw down device and removing the water-tight seals at the 3 inch orifice and 12 inch orifice (1 week).
 - Remove the super silt fence at the toe of 2:1 slope once the reforestation planting has been completed.
- Note other plans which utilize the sediment basin must be stabilized before removal of basin.*



CONSTRUCTED UNDER SDP 96-01 FOR INFORMATION PURPOSES ONLY!



Bowman Consulting Group

SEE SHEETS 15 AND 16 FOR REVISED NEW EROSION & SEDIMENT CONTROL NOTES & DETAILS

HOWARD SOIL CONSERVATION DISTRICT
 PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- PREFERRED -- APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ. FT.) AND 500 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREA/FORM FERTILIZER (9 LBS./1000 SQ.FT.)
- ACCEPTABLE -- APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ. FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

SEEDING -- FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 80 LBS PER ACRE (1.4 LBS./1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 80 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS./1000 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY: OPTION (1) - 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) - USE SOD. OPTION (3) - SEED WITH 80 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING -- APPLY 1-1/2 TO 2 TONS PER ACRE (70-90 LBS./1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (9 GAL/1000 SQ.FT.) FOR ANCHORING.

MAINTENANCE -- INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

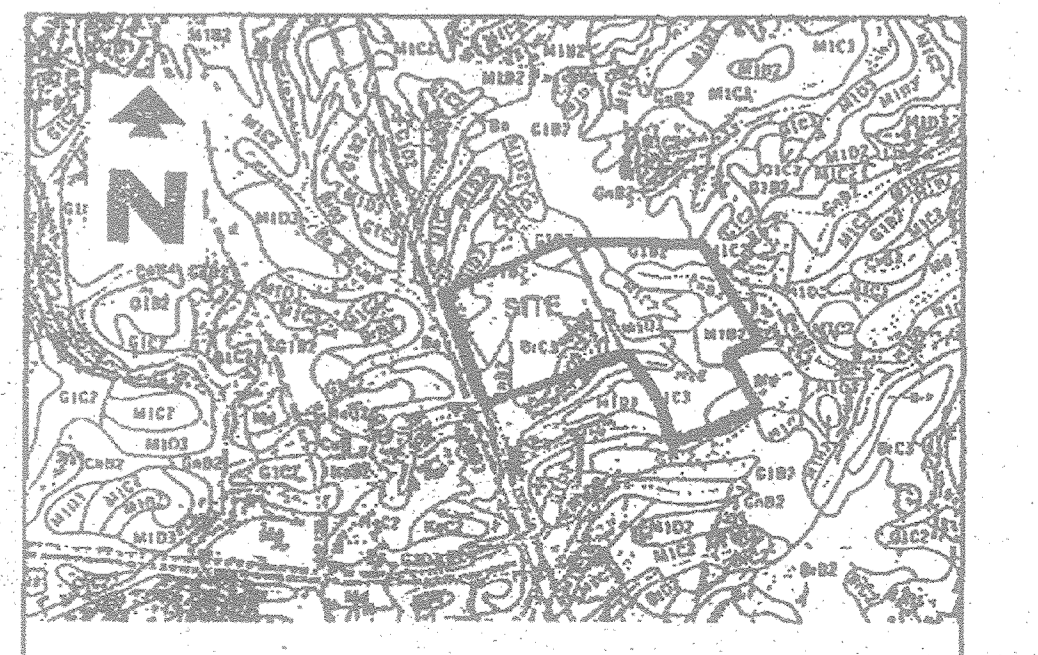
SEEDBED PREPARATION -- LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS -- APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ. FT.).

SEEDING -- FOR PERIODS MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH OCTOBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.). FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEDING LOVEGRASS (.07 LBS./1000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING -- APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED WEED FREE SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GAL PER ACRE (9 GAL/1000 SQ. FT.) FOR ANCHORING.

REFER TO THE 1995 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT COVERED.



Completed by: T.P. Date: 10/16/11 Checked by: Date: _____

Project name: ELLICOTT CITY WAL-MART BASIN #2

Location: _____

Emergency Spillway Data

17. Emergency spillway cap. $Q_c = Q_a - Q_b = \dots$ cfs

18. Width \dots ft; $H_p = \dots$ ft

19. Entrance channel slope \dots ft

20. Exit channel slope \dots ft

Anti-Slope Collar Design (if Required)

21. $y = \dots$ ft; $e = 7$ ft; pipe slope = 1:0.8 ft; $S = 24$ ft

22. Use 2 collars, 10 ft x 8 ft, in upper portion = 26.5 ft

23. Riser Crest = 312.50 ft

24. Dodge High Water = 312.50 ft

25. Emergency Spillway Crest = 312.50 ft

26. Min. settled top of dam = 312.50 ft

27. Penetration pool = 262.15 ft

28. Bottom of Basin = 262.15 ft

29. Draw-down orifice invert = 262.25 ft

29. Draw-down orifice invert = 262.25 ft

Surface Area Data

30. Min. basin surface area: $S_A \geq 0.0035 \times Q_c = 0.0035 \times 112 = 0.392$ ac @ 0.67 ft

Draw-down Device

31. Draw-down device orifice diameter = 10" in. (From Table 11)

32. $A_c =$ Total area of perforations = 2.4

$A_c = (n \text{ of perforations}) \times (\text{perforation area}) / (\text{perforation section length})$

$A_c = 2.20$ ft²

$A_c =$ Internal orifice area (from Table 11 or computed) = 0.55 FT²

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] Date: 8-18-11

Approved: Howard S.C.D.

OWNER & DEVELOPER
 WALMART REAL ESTATE BUSINESS TRUST
 2001 SOUTHEAST 10TH STREET, SWDC
 BENTONVILLE, AR 72716-0550
 CONTACT: MIKE THOMAS
 PHONE: (479) 273-4000

NO	DATE	DESCRIPTION	BY
1	07/25/11	BUILDING EXPANSION & PARKING MODIFICATION	JDT

SUBDIVISION "ELLICOTT CITY WAL-MART"
 ELECTION DISTRICT NO. 2
 TAX MAP 17 & 24
 REZONING CASE NUMBER ZB-941
 SKETCH PLAN S-95-01
 PRELIMINARY PLAN P-95-21
 SCALE 1"=50'
 WATER NO. F03
 PARCEL "B"

HOWARD COUNTY, MARYLAND
 P/O PARCEL 848
 DATED: OCTOBER 18, 1993
 APPROVED: 12-2-1994
 APPROVED: 6-6-95
 DATE: SEPTEMBER 6, 1995
 SEWER NOS. 1452800

ECP-11-007 (APPROVED: 08-06-2010)
 RECORD PLAT F-98-157 & F-12-023

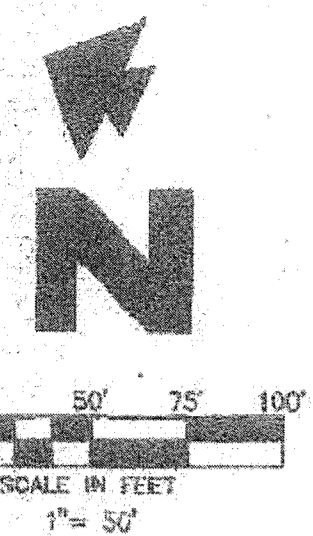
INITIAL DESIGN	DATE	PRN	FM	DES	IMP	TVV
	8-29-95	JDC	KLM	IMP	TVV	

WAL-MART STORES, INC.
 ELLICOTT CITY, WAL-MART, PARCEL B

ENGINEERING ASSOCIATES, INC.
 ENGINEERS PLANNERS SURVEYORS

9175 Gullford Road, Suite 306 (301) 490-6145 JOB NO: 9146
 Columbia, MD 21046 FAX (301) 490-6149 DATE: 08-29-94 SHEET NO. 6 of 34

NO ASBOUT INFO 6-8-13 SDP-96-11



WILDER BUILDING
T.M. 17 PARCEL 711
"HOENES PROPERTY"
PARCEL D
ZONED RA-15

ALL EROSION AND SEDIMENT CONTROLS FOR THE MASS GRADING AND THE CONSTRUCTION OF THE SEDIMENT BASIN IS PART OF SDP 96-01 AND WILL BE EXISTING PRIOR TO THE START OF THIS CONSTRUCTION PLAN. THE USE OF THE SEDIMENT BASIN MUST CONTINUE UNTIL APPROVAL IS GRANTED BY THE EROSION AND SEDIMENT INSPECTOR FOR CONVERSION TO A STORM WATER MANAGEMENT POND.

FOR REVISION 10 ONLY
ANDREW C. STINE
PROFESSIONAL ENGINEER

LEGEND

EXISTING	REINFORCED CONCRETE PIPE
EXISTING	CURB INLET
EXISTING	FENCE LINE
EXISTING	EXISTING TREE LINE
EXISTING	EXISTING STREET LIGHT
PROPOSED	LIGHT POLE
PROPOSED	KENTUCKY BLUEGRASS SEED
PROPOSED	CROWNVECH SEED
PROPOSED	SEE REFORESTATION PLAN FOR SEEDING

Added Parking on East End of Parking Lot. Expanded Fenced Garden Center Area and relocated associated Access Road of Cumb Islands. Added one Willow Oak and relocated 5 Existing Willow Oaks.
For Modifications Only
9/6/02
APD Engineering

SCHEDULE B - PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	614
NUMBER OF TREES REQUIRED (1:20)	31
NUMBER OF TREES PROVIDED	31
SHADE TREES	31
OTHER TREES (2:11 SUBST.)	0
NO. OF LANDSCAPE ISLANDS REQ'D	31
PROVIDED	31

SCHEDULE A - PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO PROPOSED NORTH RIDGE ROAD	ADJACENT TO U.S. ROUTE 29	ADJACENT TO ROCK AND DIRT ROAD	ADJACENT TO ROUTE 29
LANDSCAPE TYPE	TYPE C BUFFER	TYPE C BUFFER	TYPE C BUFFER	TYPE C BUFFER
LINEAR FEET OF BOUNDARY	801'-12"	488'-52"	120'	120'
NUMBER OF PLANTS REQUIRED	81	25	12	12
SHADE TREES	81	25	12	12
OTHER TREES (2:11 SUBST.)	0	0	0	0
NUMBER OF PLANTS PROVIDED	81	25	12	12
SHADE TREES	81	25	12	12
OTHER TREES (2:11 SUBST.)	0	0	0	0

PLANT LIST

SYMBOL	KEY	QTY.	COMMON NAME	BOTANICAL NAME	ROOT SIZE	REMARKS
OR	14	14	WILLOW OAK	Quercus phellos	600 3" CAL.	REPLACED AT 140 LBS. TRUNK 8 FT.
OR	14	14	RED OAK	Quercus rubra	600 3" CAL.	
AR	24	24	RED MAPLE	Acer rubra	600 2" CAL.	
AS	7	7	SUGAR MAPLE	Acer saccharum	600 2" CAL.	
OK	2	2	KOUSA DOGWOOD	Quercus laevis	600 5'-6" FT.	
PS	20	20	EASTERN WHITE PINE	Pinus strobus	600 5'-6" FT.	
DI	0	0	DOGWOOD	Cornus florida	600 3'-6" FT.	
TD	60	60	SPREADING DOGWOOD	Quercus macrocarpa	600 3" CAL.	1'-0" O.D.
VC	10	10	SHRUBS	Various	600 3" CAL.	1'-0" O.D.
CH	30	30	CHRYSANTHEMUM	Various	600 3" CAL.	1'-0" O.D.

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *Self*
DATE: 5/31/06

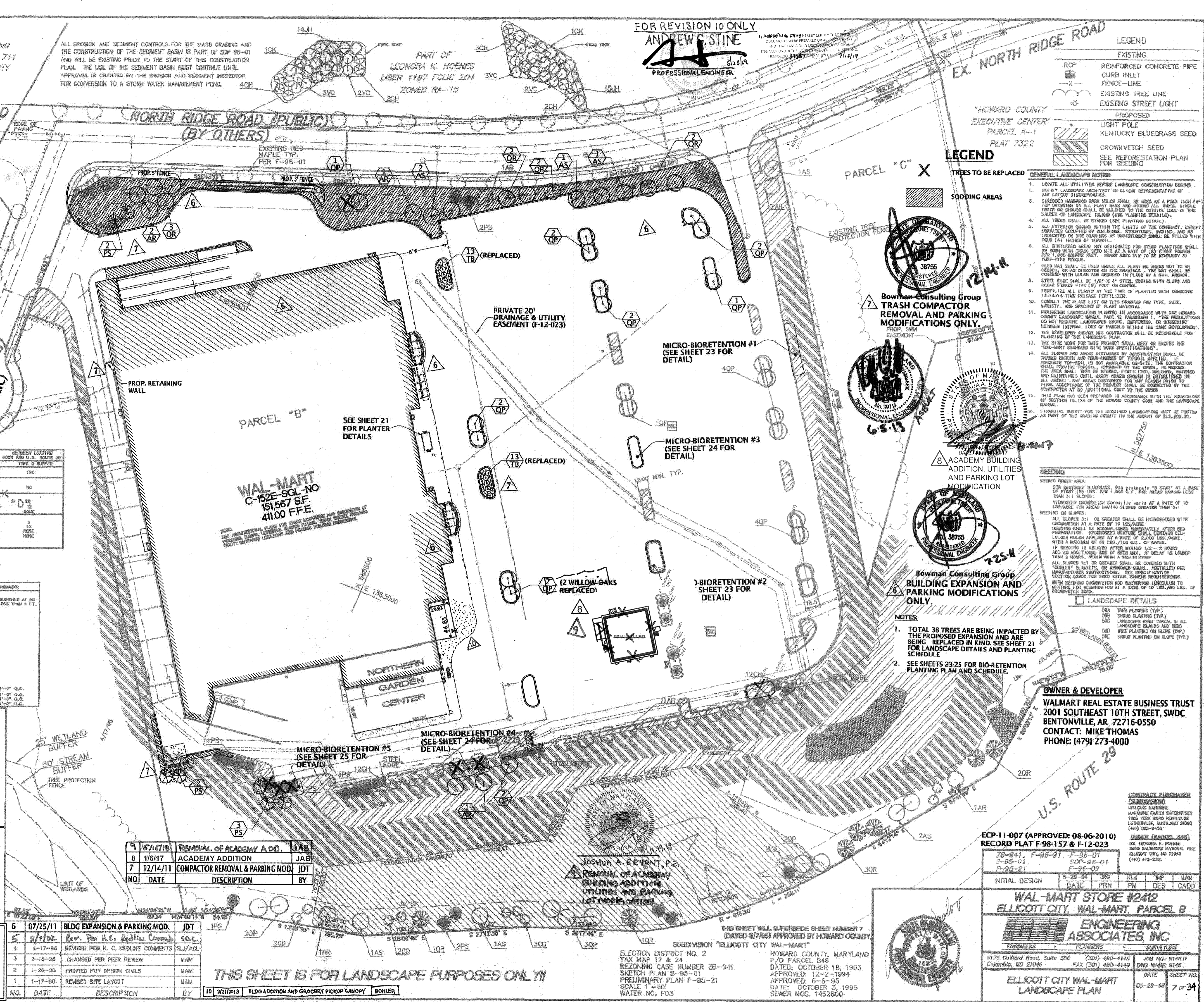
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Signature: *Walter J. J. J.*
DATE: 6/6/06

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
T. Marshall
DATE: 7/1/02

CHIEF, DIVISION OF LAND DEVELOPMENT
Walter J. J. J.
DATE: 8-3-07



NO.	DATE	DESCRIPTION	BY
9	5/15/15	REMOVAL OF ACADEMY ADD.	JAB
8	1/6/17	ACADEMY ADDITION	JAB
7	12/14/11	COMPACTOR REMOVAL & PARKING MOD.	JDT

NO.	DATE	DESCRIPTION	BY
6	07/25/11	BLDG EXPANSION & PARKING MOD.	JDT
5	5/1/02	REV. PER H.C. REDLINE COMMENTS	SAC
4	4-17-90	REVISED PER H. C. REDLINE COMMENTS	SLA/ACL
3	2-13-96	CHANGED PER PEER REVIEW	MM
2	1-26-96	PRINTED FOR DESIGN CIVILS	MAM
1	1-17-90	REVISED SITE LAYOUT	MAM

THIS SHEET IS FOR LANDSCAPE PURPOSES ONLY!!

ELECTION DISTRICT NO. 2
TAX MAP 17 & 24
REZONING CASE NUMBER ZB-941
SKETCH PLAN S-95-01
PRELIMINARY PLAN P-95-21
SCALE 1"=50'
WATER NO. F03

Bowman Consulting Group
TRASH COMPACTOR
REMOVAL AND PARKING
MODIFICATIONS ONLY.

Bowman Consulting Group
BUILDING EXPANSION AND
PARKING MODIFICATIONS
ONLY.

Bowman Consulting Group
BUILDING EXPANSION AND
PARKING MODIFICATIONS
ONLY.

NOTES:
1. TOTAL 38 TREES ARE BEING IMPACTED BY THE PROPOSED EXPANSION AND ARE BEING REPLACED IN KIND. SEE SHEET 21 FOR LANDSCAPE DETAILS AND PLANTING SCHEDULE.
2. SEE SHEETS 23-25 FOR BIO-RETENTION PLANTING PLAN AND SCHEDULE.

OWNER & DEVELOPER
WALMART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SWDC
BENTONVILLE, AR 72716-0550
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000

ECP-11-007 (APPROVED: 08-06-2010)
RECORD PLAT F-98-157 & F-12-023

INITIAL DESIGN	DATE	PRN	PH	DES	CADD
8-29-84	3/85	KLK	IMP	MAM	

WAL-MART STORE #2412
ELLCOTT CITY, WAL-MART, PARCEL B

ENGINEERING ASSOCIATES, INC.

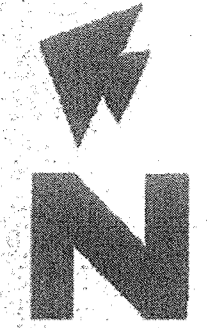
ENGINEERS PLANNERS SURVEYORS

1175 Guilford Road, Suite 306 (301) 480-9145
Columbia, MD 21046 FAX (301) 490-4149

ELLCOTT CITY WAL-MART
LANDSCAPE PLAN

DATE: 05-29-98 SHEET NO: 7 of 34

SDP-96-11



SCALE IN FEET
1" = 50'

WILDER BUILDING
T.M. 17 PARCEL 711
"HOENES PROPERTY"
PARCEL "D"
ZONED RA-15

ALL EROSION AND SEDIMENT CONTROLS FOR THE MASS GRADING AND THE CONSTRUCTION OF THE SEDIMENT BASIN IS PART OF SDP 96-01 AND WILL BE EXISTING PRIOR TO THE START OF THIS CONSTRUCTION PLAN. THE USE OF THE SEDIMENT BASIN MUST CONTINUE UNTIL APPROVAL IS GRANTED BY THE EROSION AND SEDIMENT INSPECTOR FOR CONVERSION TO A STORM WATER MANAGEMENT POND.

PART OF
LEONORA K. HOENES
LIBER 1197 FOLIO 204
ZONED RA-15

FOR REVISION 10 ONLY
ANDREW G. STINE

PROFESSIONAL ENGINEER

1. APPROVED BY ME WHEREBY I CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 38757 EXPIRES ON DATE 7/12/19

LEGEND

EXISTING	
RCP	REINFORCED CONCRETE PIPE
CI	CURB INLET
-X-	FENCE-LINE
○	EXISTING TREE LINE
○	EXISTING STREET LIGHT

"HOWARD COUNTY EXECUTIVE CENTER"
PARCEL A-1
PLAT 7322

PARCEL "C"

NORTH RIDGE ROAD
(BY OTHERS)

NORTH RIDGE ROAD
(BY OTHERS)
(PUBLIC)

WILDER BUILDING CORP.
T.M. 17 PARCEL 711
"HOENES PROPERTY PARCEL D"
PLAT NO. 9418
ZONED RA-15

Add Parking at East End of Parking lot. Expanded Garden Center fenced area, relocated curb islands, access drive and light pole.



For Modification Only
9/6/02
APD Engineering

CARLS COURT
(BY OTHERS)

BULK PARCEL "D"

WAL-MART
C-152E-SGL-NO
151,567 SF
411.00 F.F.E.

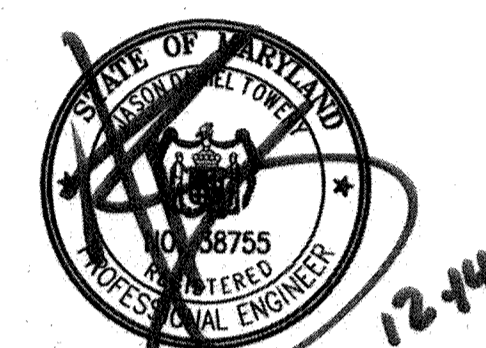
PROVIDE 3" PVC CONDUIT W/ PULLWIRE BELOW GRADE FOR POLE MOUNTED SECURITY CAMERAS

NEW SITE LIGHTING ENTRY

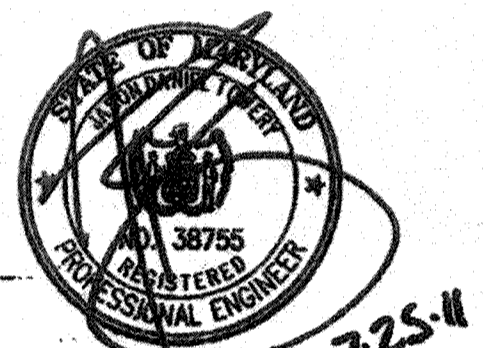
NORTHERN GARDEN CENTER

NOTES

- 13A TYPICAL LIGHTING POLE FOUNDATION AND FEATURE (SEE DETAIL SHEET FOR LIGHT FIXTURE ORDERING INFORMATION)
- 14A CONNECT TO ELECTRICAL JUNCTION BOX
- 14B NIGHT SECURITY CIRCUIT
- 14C INSTALL 110V LAMP IN CONDUIT TO POLE FOR OUTLET
- NEW LIGHT POLE / FIXTURE
- CAM POLE MOUNTED SECURITY CAMERA
- X REMOVE EXISTING LIGHT POLE



Bowman Consulting Group
TRASH COMPACTOR REMOVAL AND PARKING MODIFICATIONS ONLY.



Bowman Consulting Group
BUILDING EXPANSION AND PARKING MODIFICATIONS ONLY.

NOTE: THE LIGHTING ON THIS SITE WILL BE DIRECTED AWAY FROM THE ROADWAY IN ACCORDANCE WITH SECTION 133 C.F.1 OF THE ZONING ORDINANCE.

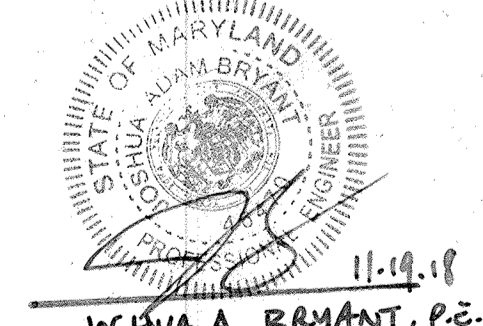
NOTE: WALLPACK LIGHTING TO BE LOCATED ON THE REAR OF THE BUILDING. LOCATION TO BE SPECIFIED ON THE ARCHITECTURAL DRAWINGS.

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER: [Signature]
DATE: 8/6/02

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

SIGNATURE OF REGISTERED PROFESSIONAL ENGINEER: [Signature]
DATE: 8/6/02



JOSHUA A. BERMAN, P.E.
REMOVAL OF ACADEMY BUILDING ADDITION UTILITIES AND PARKING LOT MODIFICATION

ECP-11-007 (APPROVED: 08-06-2010)
RECORD PLAT F-98-157 & F-12-023

2B-941	F-96-91	F-96-01			
S-95-01	SDP-96-01	F-96-09			
P-95-21					
INITIAL DESIGN	8-29-94	JRG	KLM	THP	MAM
	DATE	PRN	PM	DES	CADD

WAL-MART STORE #2412
ELICOTT CITY, WAL-MART, PARCEL B

ENGINEERING ASSOCIATES, INC.
ENGINEERS PLANNERS SURVEYORS

9175 Outland Road, Suite 306
Columbia, MD 21046
(301) 490-4145
FAX (301) 490-4140

ELICOTT CITY WAL-MART LIGHTING PLAN
DATE: 05-29-96
SHEET NO: 8 of 34

APPROVED: DEPARTMENT OF PLANNING AND ZONING

7/25/11	BLDG EXPANSION & PARKING MOD.	JDT	8	12/22/16	ACADEMY ADDITION	JAB
5/1/02	REV PER H.C. DESIGN COMMENTS	SLJ/AOL	7	12/14/11	COMPACTOR REMOVAL & PARKING MOD.	JDT
4-17-96	CHANGED PER H.C. REDLINE COMMENTS	MAM	9	5/15/10	REMOVAL OF ACADEMY ADD.	JAB
2-13-96	CHANGED PER PEER REVIEW	MAM				
1-25-96	PRINTED FOR DESIGN CIVLS	MAM				
1-17-96	REVISED SITE LAYOUT	MAM				

THIS SHEET WILL SUPERSEDE SHEET NUMBER 8 (DATED 11/7/95) APPROVED BY HOWARD COUNTY.

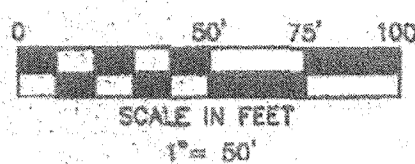
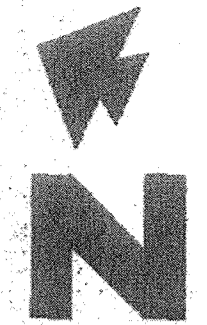
NO.	DATE	DESCRIPTION	BY	NO.	DATE	DESCRIPTION	BY
10	2/21/2019	BLDG ADDITION AND GROCERY PICKUP CANOPY	BOHLER				

SUBDIVISION "ELICOTT CITY WAL-MART"
HOWARD COUNTY, MARYLAND
P/O PARCEL 848
REZONING CASE NUMBER ZB-941
SKETCH PLAN S-95-01
APPROVED: 6-6-95
DATE: OCTOBER 3, 1995
SEWER NOS. 1452800



NO. 6-5-13

SDP-96-11



WILDER BUILDING
T.M. 17 PARCEL 711
"HOENES PROPERTY
PARCEL D"
ZONED RA-15

ALL EROSION AND SEDIMENT CONTROLS FOR THE MASS GRADING AND THE CONSTRUCTION OF THE SEDIMENT BASIN IS PART OF SDP 96-01 AND WILL BE EXISTING PRIOR TO THE START OF THIS CONSTRUCTION PLAN. THE USE OF THE SEDIMENT BASIN MUST CONTINUE UNTIL APPROVAL IS GRANTED BY THE EROSION AND SEDIMENT INSPECTOR FOR CONVERSION TO A STORM WATER MANAGEMENT POND.

PART OF
LEONORA K. HOENES
LIBER 1197 FOLIO 204
ZONED RA-15

LEGEND

- EXISTING
- RCP REINFORCED CONCRETE PIPE
- CURB INLET
- FENCE-LINE
- EXISTING TREE LINE
- EXISTING STREET LIGHT

NORTH RIDGE ROAD
(BY OTHERS)

NORTH RIDGE ROAD (PUBLIC)
(BY OTHERS)

EX. NORTH RIDGE ROAD

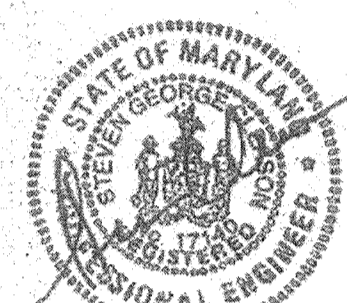
"HOWARD COUNTY
EXECUTIVE CENTER"
PARCEL A-1
PLAT 7322

PARCEL "C"

PARCEL "B"

CARLS COURT
(BY OTHERS)

Add Parking on East End
of Parking Lot. Expanded
Garden Center Fenced Area
and Relocated Access Road
and Curb along Front.



For Modification Only
9/6/02
APD Engineering
SOILS TABLE

MAP SYMBOL	SOIL NAME	SLOPE	EROSION POTENTIAL
BA	BAILE SILT LOAM	—	—
Brc3	BRANDYWINE LOAM	8 TO 15 PERCENT	SEVERELY ERODED
BrD2	BRANDYWINE LOAM	15 TO 25 PERCENT	MODERATELY ERODED
BrD3	BRANDYWINE LOAM	15 TO 25 PERCENT	SEVERELY ERODED
GIB2	GLENELG LOAM	3 TO 8 PERCENT	MODERATELY ERODED
GIC2	GLENELG LOAM	8 TO 15 PERCENT	MODERATELY ERODED
GnB2	GLENVILLE SILT LOAM	3 TO 8 PERCENT	MODERATELY ERODED
MID3	MANOR LOAM	15 TO 25 PERCENT	SEVERELY ERODED
ME	MANOR LOAM	25 TO 45 PERCENT	—

BRANDYWINE
PIPELINES, MORE THAN 7' TO GNEISS BEDROCK.
ROAD AND HIGHWAY LOCATION,
FAIR SUBSOIL STABILITY, GOOD
SUBSTRATUM STABILITY.
POND AND RESERVOIR SITES,
RAPID TO EXCESSIVE SEEPAGE,
MORE THAN 7' TO BEDROCK.

GLENELG
PIPELINES, 4 TO MORE THAN 10' TO SCHIST BEDROCK.
ROAD AND HIGHWAY LOCATION,
FAIR SUBSOIL STABILITY, GOOD
SUBSTRATUM STABILITY, MODERATE
SUSCEPTIBILITY TO FROST ACTION;
ELASTIC.

GLENVILLE
PIPELINES, SEASONAL HIGH
WATER TABLE; 4 TO 10' TO
MICA SCHIST BEDROCK.
ROAD AND HIGHWAY LOCATION,
SEASONAL HIGH WATER TABLE;
FAIR STABILITY, MODERATE
SUSCEPTIBILITY TO FROST ACTION.
POND AND RESERVOIR SITES,
MODERATE SUBSOIL SEEPAGE;
SLOW SUBSTRATUM SEEPAGE;
4 TO 10' TO BEDROCK.

WAL-MART
C-152E-SGL-NO
151,567 S.F.
41,100 F.F.E.

NORTHERN
GARDEN
CENTER



Bowman Consulting Group
TRASH COMPACTOR
REMOVAL AND PARKING
MODIFICATIONS ONLY.

Bowman Consulting Group
BUILDING EXPANSION AND
PARKING MODIFICATIONS
ONLY.

FOR REVISION 10 ONLY
ANDREW G. STINE
PROFESSIONAL ENGINEER

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER
DATE

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SIGNATURE OF REGISTERED PROFESSIONAL ENGINEER
DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE
7/19/12
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE
8-2-17
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE
8-3-17
DIRECTOR

NO.	DATE	DESCRIPTION	BY
6	7/25/11	BLDG EXPANSION & PARKING MOD.	JDT
5	8/1/02	REV. PER H.C. REG. COMMENTS	SJC
4	4-17-96	CHANGED PER PEER REVIEW	MAM
3	2-13-96	PRINTED FOR DESIGN CIVILS	MAM
2	1-28-96	REVISED SITE LAYOUT	MAM
1	1-17-96	REVISED SITE LAYOUT	MAM
7	12/14/11	COMPACTOR REMOVAL & PARKING MOD.	JDT
8	4/16/17	ACADEMY ADDITION	JAB
9	6/16/18	REMOVAL OF ACADEMY BUILDING ADDITION UTILITIES AND PARKING LOT MODIFICATION	JAB
10	2/21/2010	BLDG ADDITION AND GROCERY PICKUP CANOPY	BOHNER

THIS SHEET WILL SUPERSEDE SHEET NUMBER 9
(DATED 11/7/95) APPROVED BY HOWARD COUNTY.

THIS SHEET IS FOR SOILS IDENTIFICATION ONLY!



JOSHUA A. BRYANT, P.E.
REMOVAL OF ACADEMY
BUILDING ADDITION
UTILITIES AND PARKING
LOT MODIFICATION

OWNER & DEVELOPER
WALMART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SWDC
BENTONVILLE, AR 72716-0550
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000

CONTRACT PURCHASER (SUBDIVISION)
MELISSA HARRISON
HARRISON FAMILY ENTERPRISES
1205 YORK ROAD PETHOUSE
LITTLEVILLE, MARYLAND 21093
(410) 622-9400

OWNER (PARCEL 848)
MS. LEONORA K. HOENES
8508 BALTIMORE NATIONAL PARK
ELICOTT CITY, MD 21043
(410) 469-2321

ECIP-11-007 (APPROVED: 08-06-2010)
RECORD PLAT F-98-157 & F-12-023

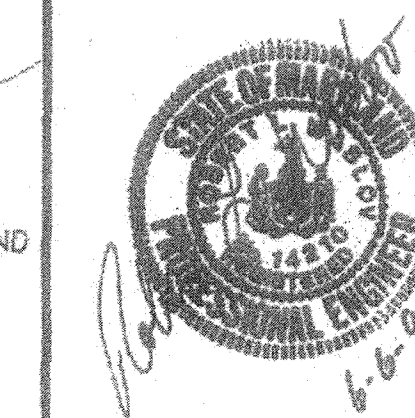
INITIAL DESIGN	DATE	PRN	KLM	TMP	MAM
8-29-94	8-29-94	JRG	KLM	TMP	MAM

WAL-MART STORE #2412
ELICOTT CITY, WAL-MART, PARCEL B

ENGINEERING ASSOCIATES, INC.
ENGINEERS PLANNERS SURVEYORS

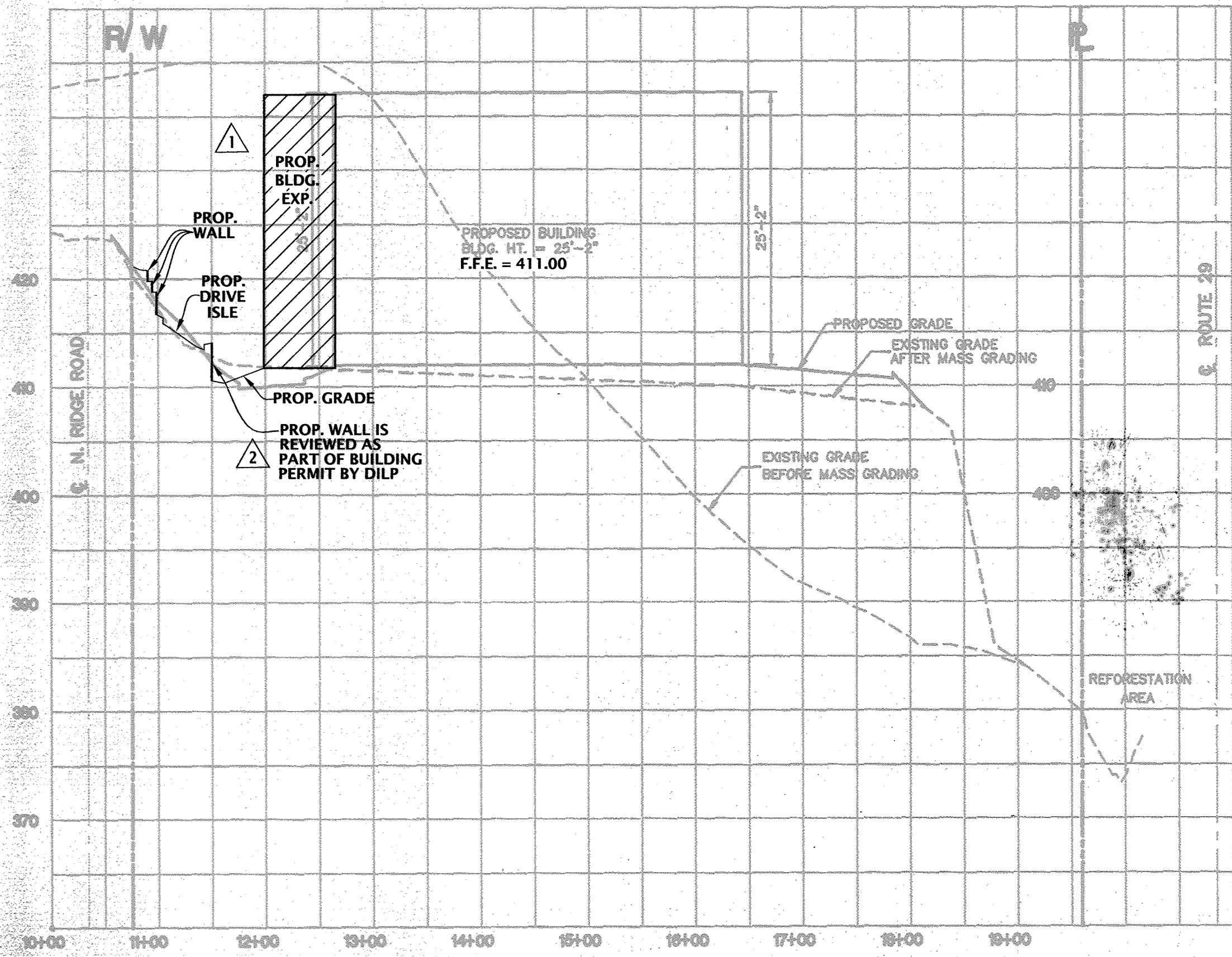
9178 Guilford Road, Suite 308
Columbia, MD 21046
PHONE: (301) 490-4145
FAX: (301) 490-4149
JOB NO.: 9146.0
DWC NAME: 9146

DATE: 05-29-96
SHEET NO.: 9 OF 34

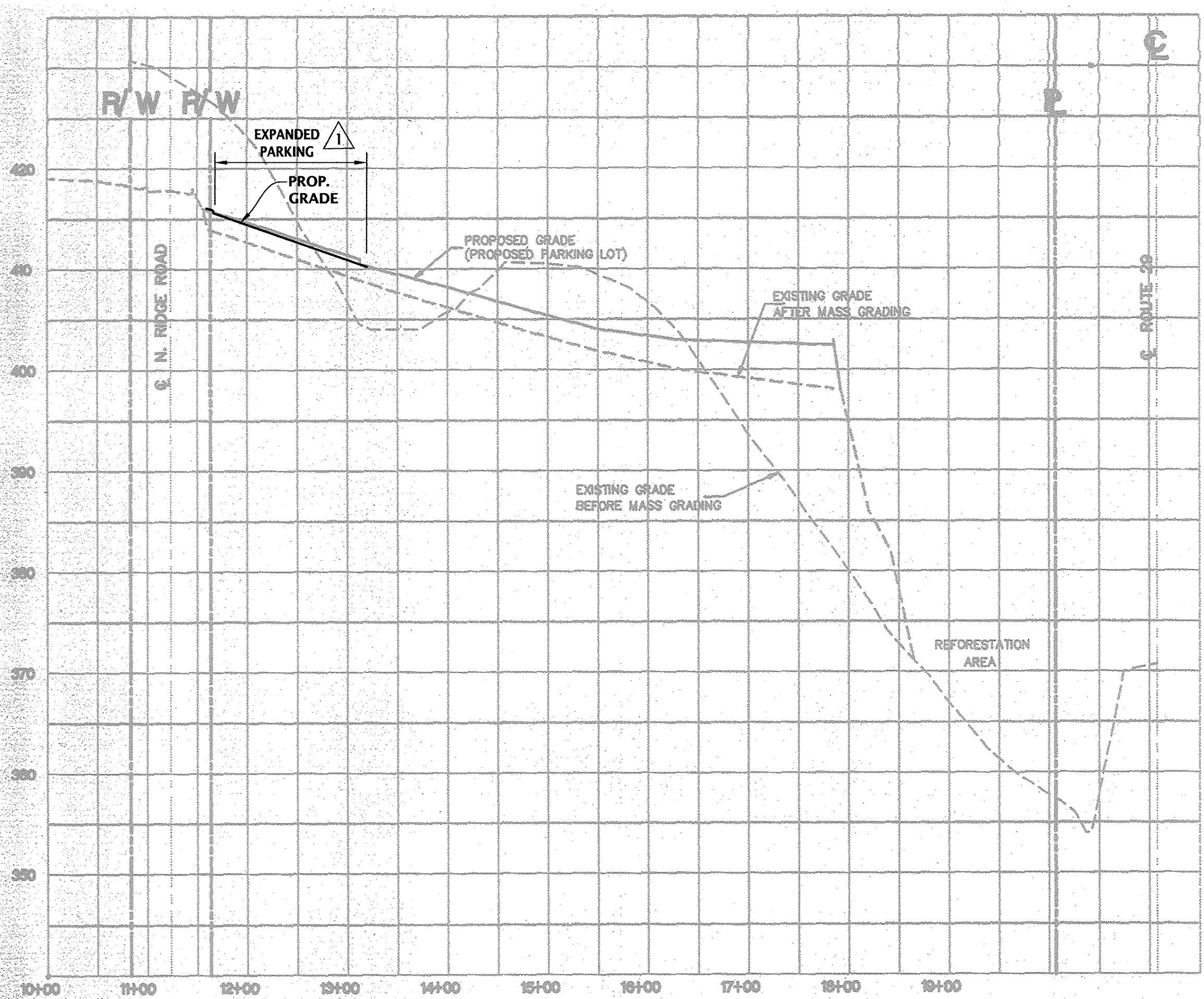


SUBDIVISION "ELICOTT CITY WAL-MART"
ELECTION DISTRICT NO. 2
TAX MAP 17 & 24
REZONING CASE NUMBER ZB-941
SKETCH PLAN S-95-01
PRELIMINARY PLAN P-95-21
SCALE: 1"=50'
WATER NO. F03

HOWARD COUNTY, MARYLAND
P/O PARCEL 848
DATED: OCTOBER 18, 1993
APPROVED: 6-6-95
DATE: OCTOBER 3, 1995
SEWER NOS. 1452800



CROSS SECTION 1-1
SCALE: 1"=100' HORIZ
1"= 10' VERT.



CROSS SECTION 2-2
SCALE: 1"=100' HORIZ
1"= 10' VERT.

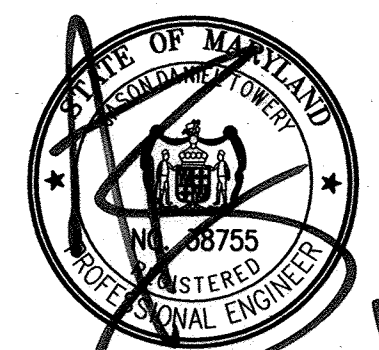
10 12/14/11 BLDG ADDITION AND GROCERY PICKUP CANOPY 8 06/08/11

2	12/14/11	TRASH COMPACTOR, REMOVAL & PARKING MODIFICATION	JDT
1	07/25/11	BUILDING EXPANSION & PARKING MODIFICATION	JDT
NO	DATE	DESCRIPTION	BY

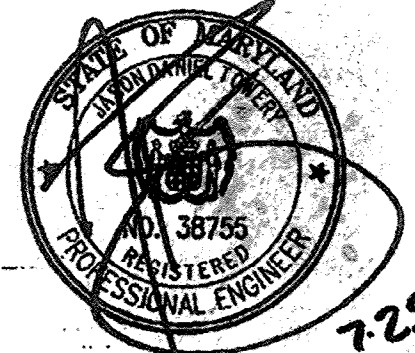
FOR REVISION 10 ONLY
ANDREW G. STINE

PROFESSIONAL ENGINEER
12-14-11

I, ANDREW G. STINE, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 37681, EXPIRATION DATE: 7/10/14



Bowman Consulting Group
TRASH COMPACTOR
REMOVAL AND PARKING
MODIFICATIONS ONLY.

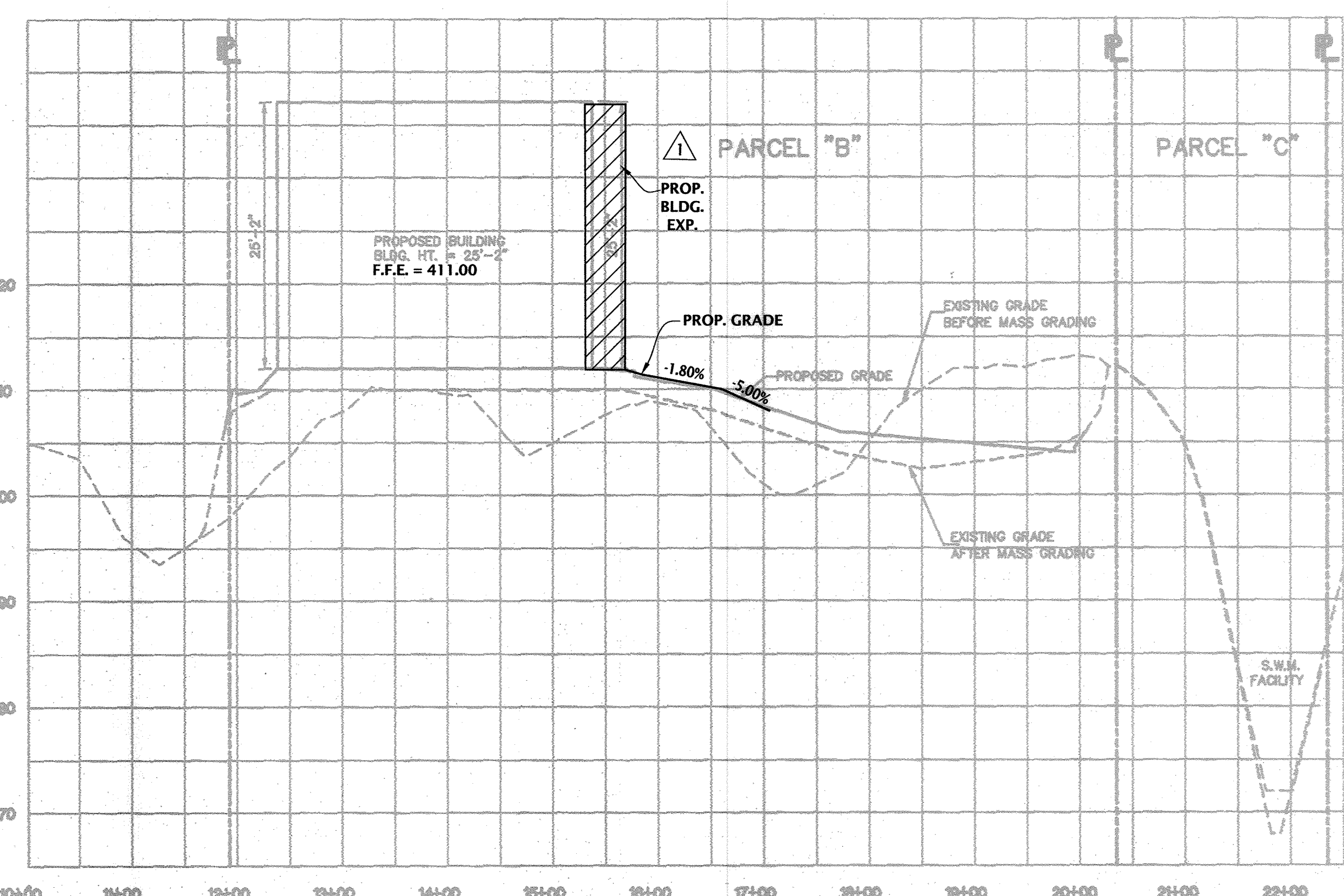


Bowman Consulting Group
BUILDING EXPANSION AND
PARKING MODIFICATIONS
ONLY.

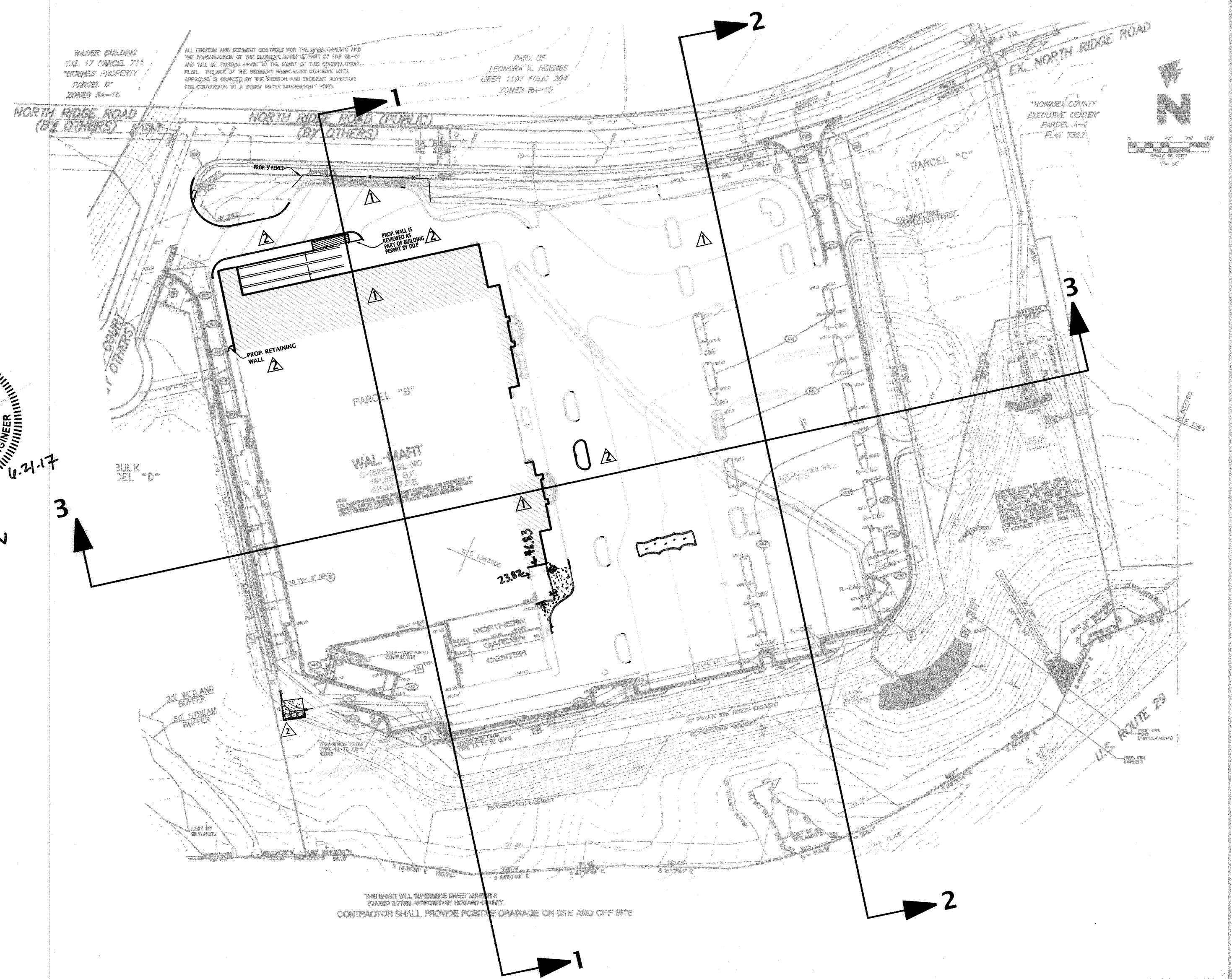
SUBDIVISION 'ELLICOTT CITY WALMART'

ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND
TAX MAP 17 & 24 P/O TM PARCEL 1085
REZONING CASE NUMBER ZB-941 DATED: OCTOBER 18, 1993
SKETCH PLAN S-95-01 APPROVED: 12-2-1994
PRELIMINARY PLAN P-95-21 APPROVED: 06-06-1995
SITE PLAN SDP-96-11 APPROVED: 06-21-1996
MASS GRADING PLAN SDP-96-001 APPROVED: 04-03-1996
FINAL ROAD CONSTRUCTION PLAN FOR NORTH RIDGE RD. F-96-01 APPROVED: 11-08-1995
ECP 11-007 APPROVED: 08-06-2010
FINAL RECORD PLATS F-96-009, F-96-091 & F-98-157
WATER NO. F03 SEWER NOS. 1452800

OWNER & DEVELOPER
WALMART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SWDC
BENTONVILLE, AR 72716-0550
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000



CROSS SECTION 3-3
SCALE: 1"=100' HORIZ
1"= 10' VERT.



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Signature of Developer: *[Signature]* DATE: 6-6-96

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Signature of Engineer: *[Signature]* DATE: 6-6-96

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *[Signature]* DATE: 1/11/12

Chief, Division of Land Development: *[Signature]* DATE: 1/18/12

Director: *[Signature]* DATE: 1/18/12

2B-941, F-96-91, F-96-01	8-29-94	JRG	KLM	TMP	MAM
S-95-01, P-95-21	DATE	PRN	PM	DES	CADD

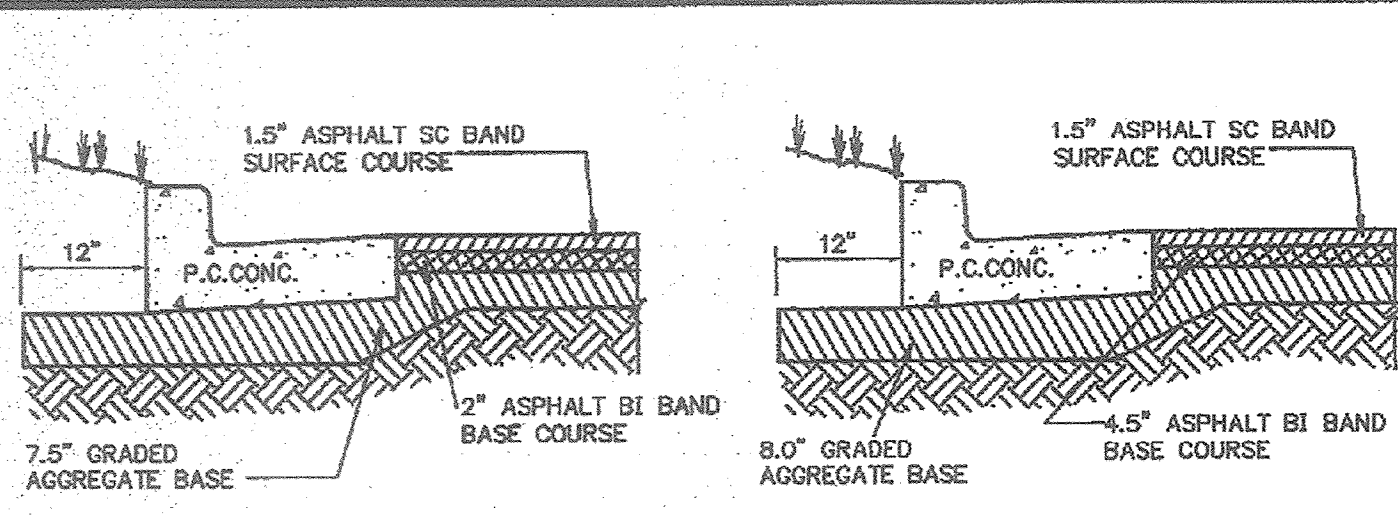
WAL-MART STORE #2412
ELLICOTT CITY, WAL-MART, PARCEL B

ENGINEERING ASSOCIATES, INC.
ENGINEERS PLANNERS SURVEYORS

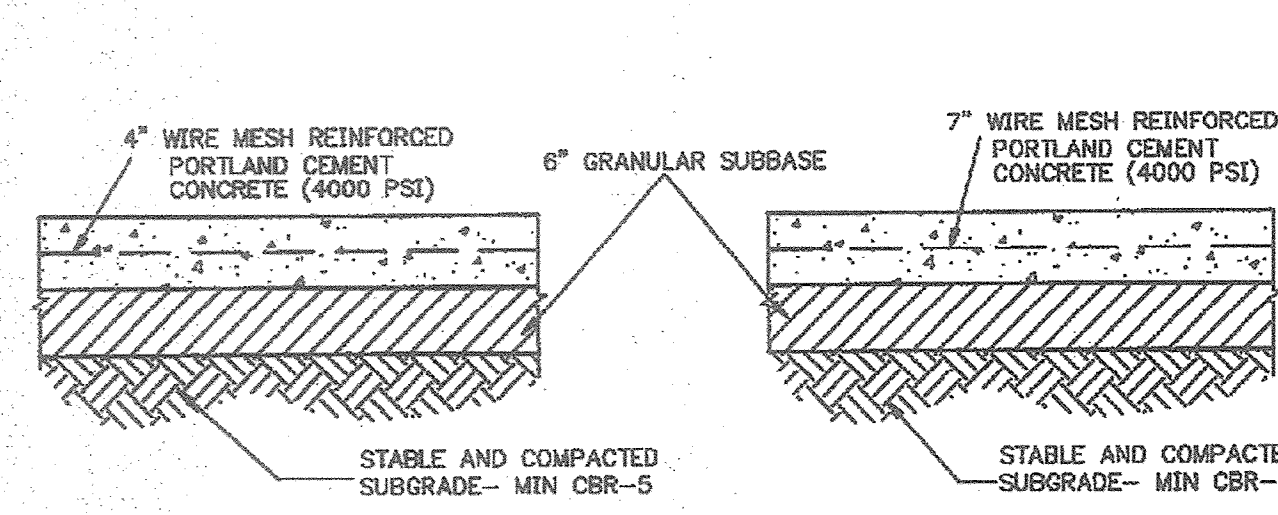
8175 Guilford Road, Suite 308 (301) 490-4145 JOB NO.: 9148.0.324
Columbia, MD 21046 FAX (301) 490-4149 DWG NAME: 91480324

ELLICOTT CITY WAL-MART SCHEMATIC PROFILE DATE: 05-29-96 SHEET NO.: 10 of 24

NO AERIAL INFO 6-5-13 SDP-96-011



REGULAR DUTY PAVING [8A]
HEAVY DUTY PAVING [8B]
STANDARD PAVING



REGULAR DUTY CONCRETE PAVING [8C]
HEAVY DUTY CONCRETE PAVING [8D]
OPTION TO STANDARD PAVING

PAVING DETAILS
NOT TO SCALE

- FLEXIBLE PAVEMENTS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE ASPHALT PAVEMENT DESIGN GUIDE FOR FLEXIBLE PAVEMENTS.
- ALL IMPORTED FILL MATERIAL IN PAVING AREA MUST BE CAPABLE OF PROVIDING A CSR VALUE OF 5.0 OR GREATER.
- UPPER 12" OF SUBGRADE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DRY DENSITY OBTAINED IN ACCORDANCE WITH ASTM D-1557 STANDARD PROCTOR.
- SEE THE GEOTECHNICAL REPORT PREPARED BY EGS, LTD. FOR FULL EXPLANATIONS.
- CONTRACTOR SHALL PLACE ASPHALT IN A DIRECTION PERPENDICULAR TO BUILDING FRONT.

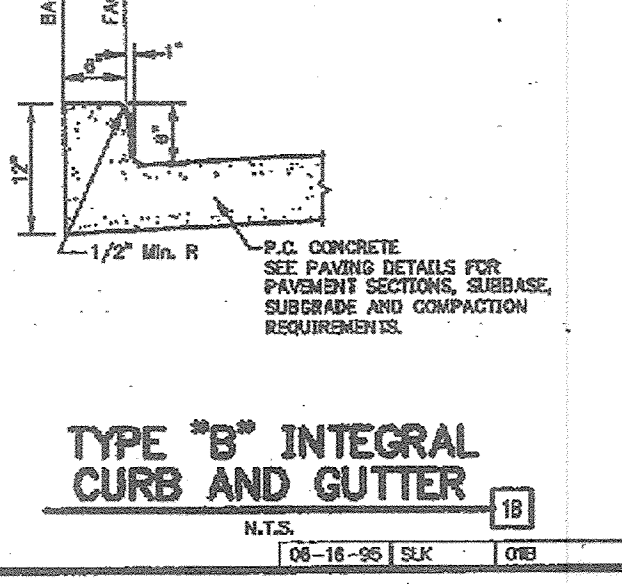
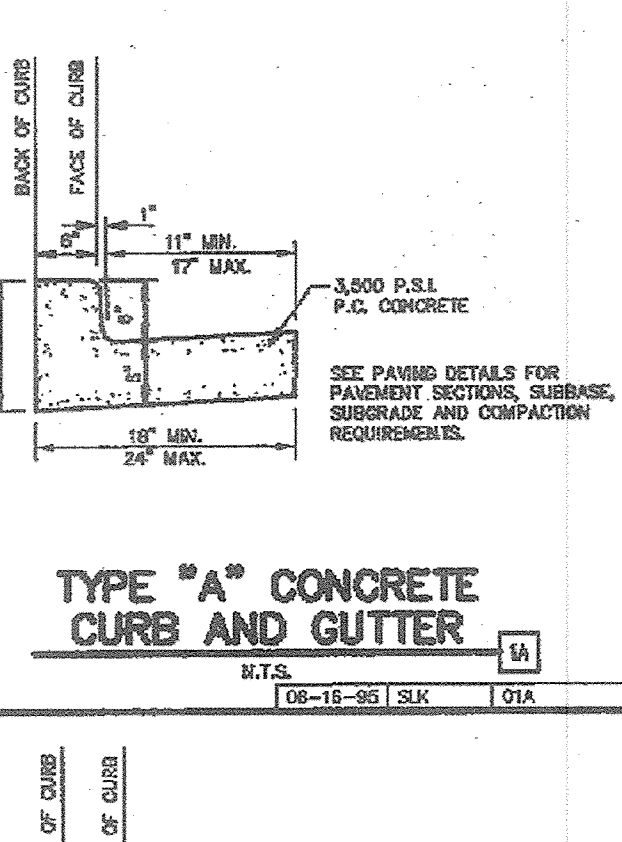
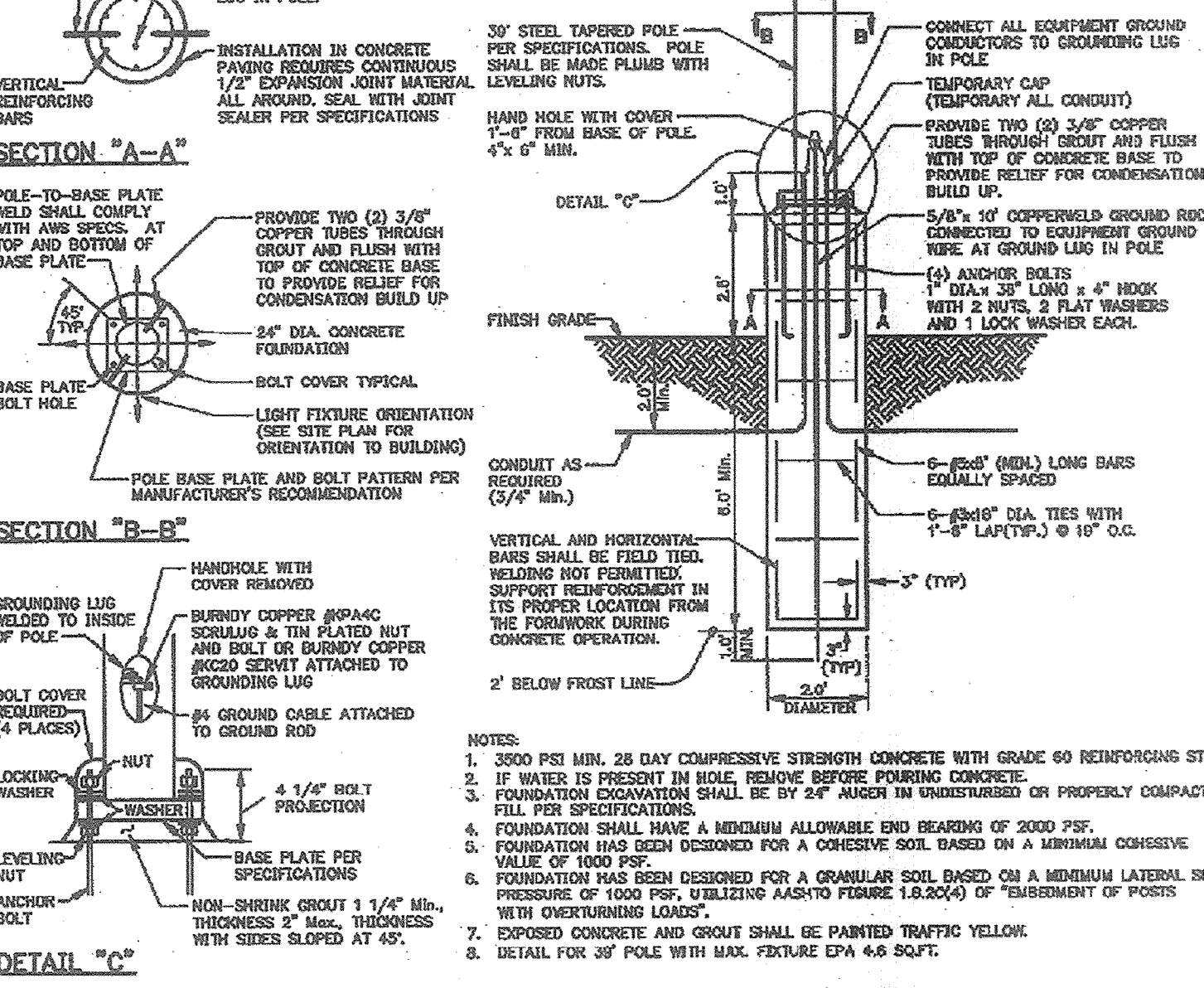
Cardco Lighting

NOTE: ALL PARTS LOT LIGHTING POLES AND FIXTURES, INCLUDING LAMPS AND PAINT, WILL BE PROVIDED BY WAL-MART AND INSTALLED BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL PROVIDE WAL-MART A ONE-YEAR WARRANTY CERTIFICATE. ALL INCREASED COSTS FOR RECEIVING, STORAGE, UNWRAPPING OF FACTORY PAINTED GOODS, LIABILITY AND WARRANTY LABOR SHALL BE INCLUDED IN THE INSTALLATION CONTRACT PRICE.

FIXTURE ORDER INFORMATION

NOTE: ALL PARTS LOT LIGHTING POLES AND FIXTURES, INCLUDING LAMPS AND PAINT, WILL BE PROVIDED BY WAL-MART AND INSTALLED BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL PROVIDE WAL-MART A ONE-YEAR WARRANTY CERTIFICATE. ALL INCREASED COSTS FOR RECEIVING, STORAGE, UNWRAPPING OF FACTORY PAINTED GOODS, LIABILITY AND WARRANTY LABOR SHALL BE INCLUDED IN THE INSTALLATION CONTRACT PRICE.

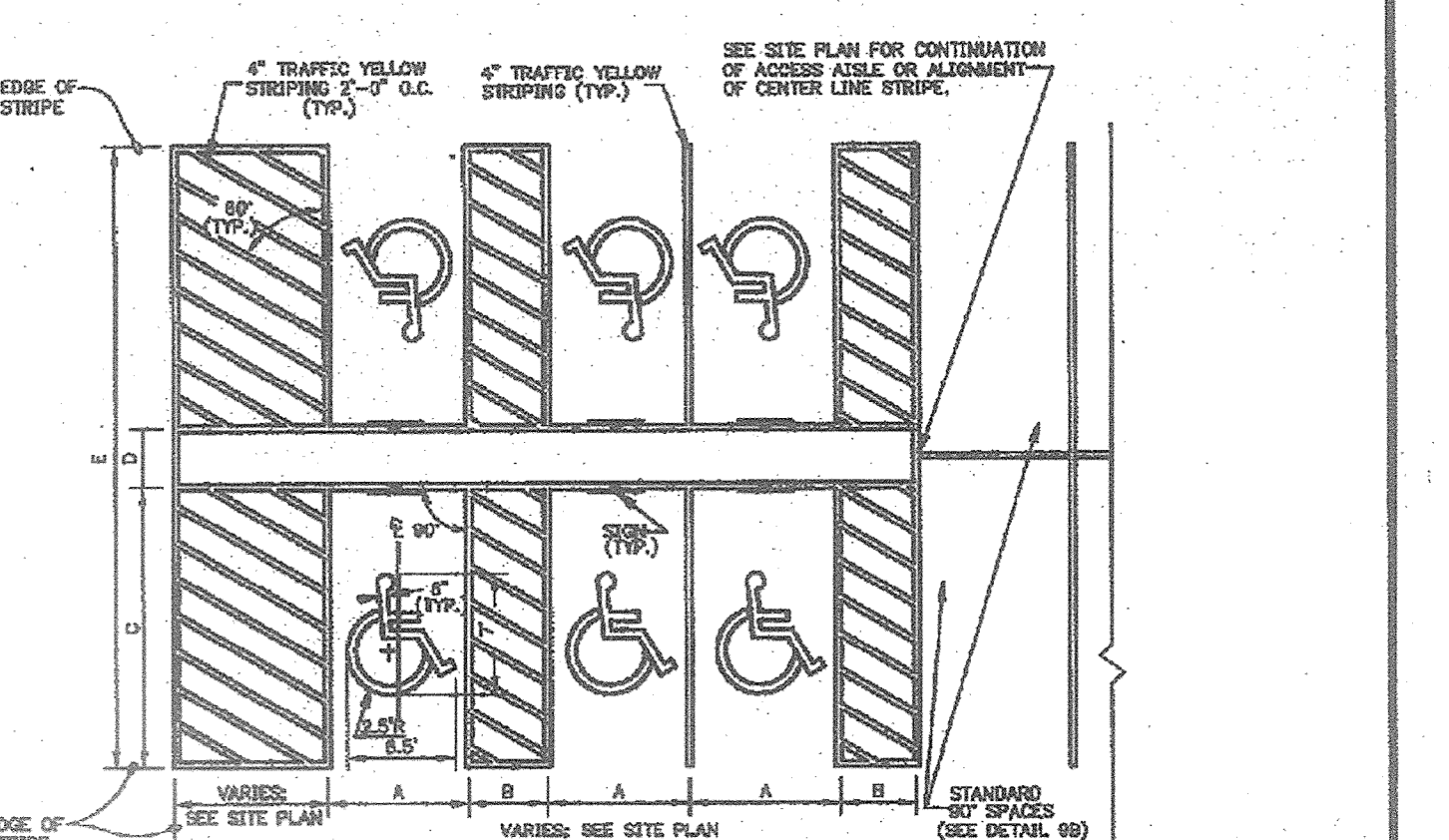
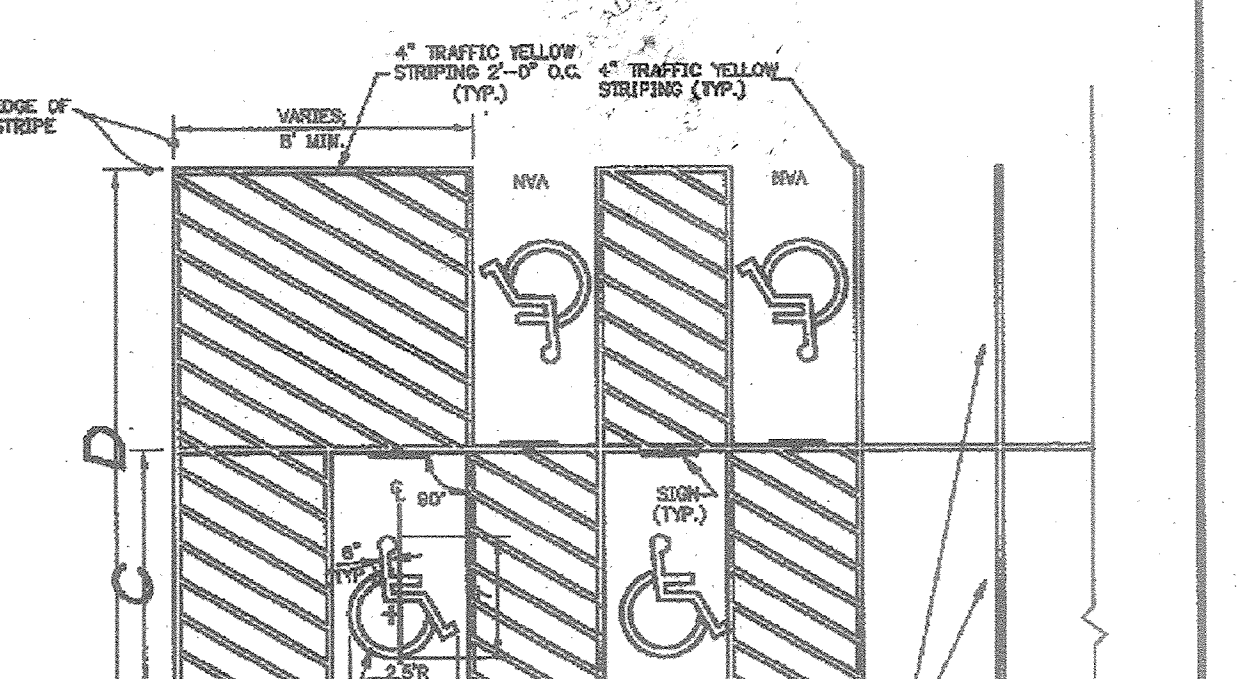
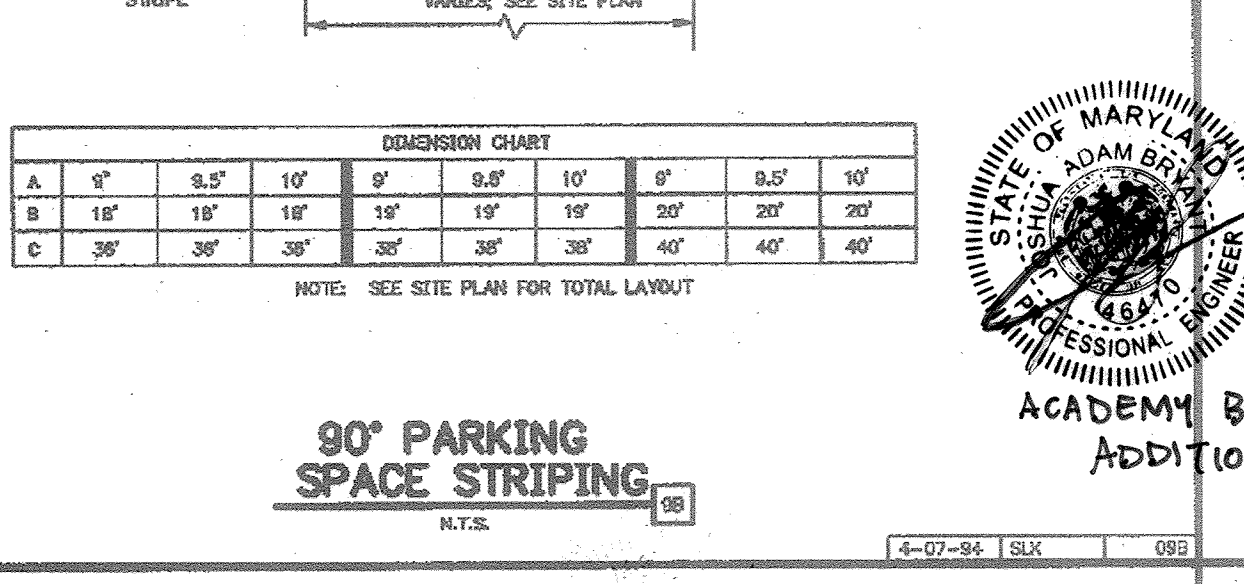
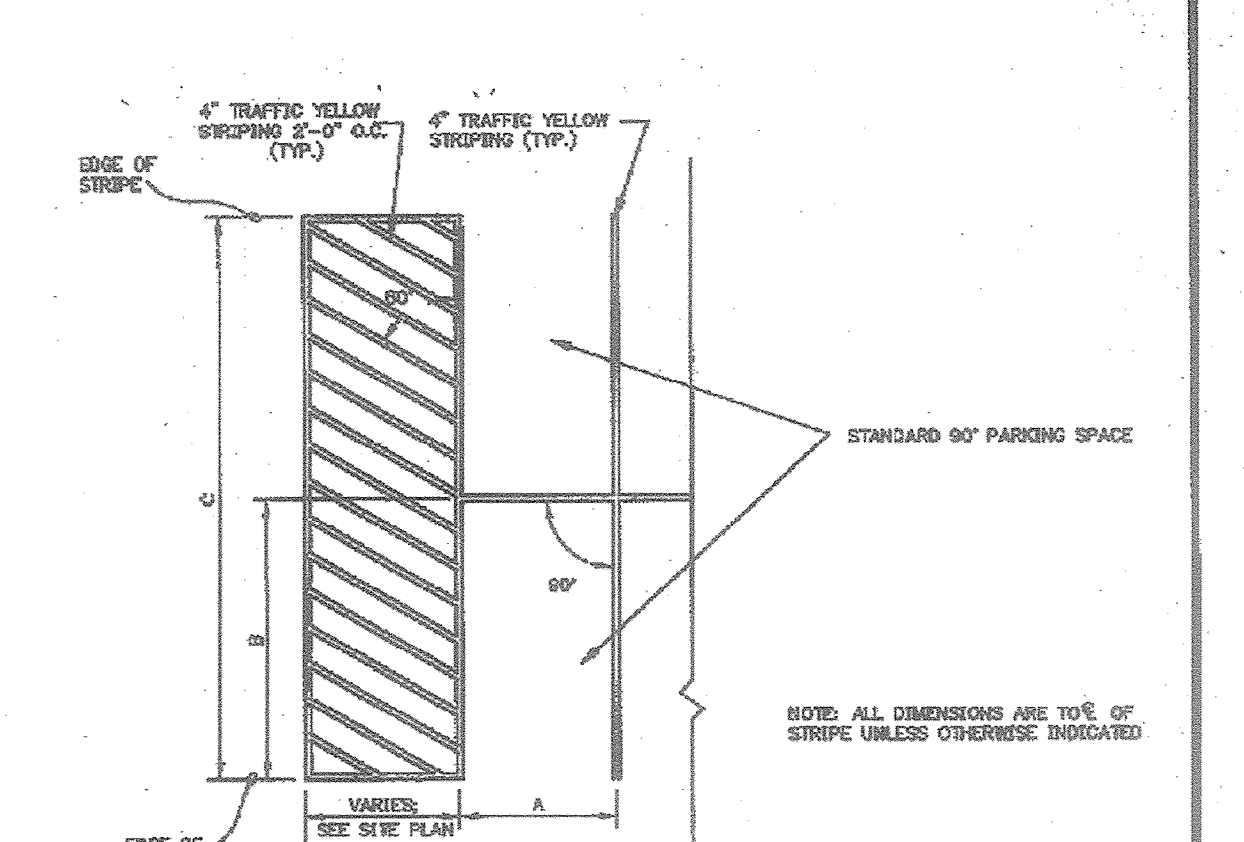
TYPE	QTY	CATALOG NUMBER	DESCRIPTION/LAMP
AV	3	102-1844S-600-600M-BLP	4-WAY (600 BU)
KWF1	1	102-1844S-600-600M-BLP	4-WAY (600 BU) SHIELD FLOOD (IN 400 U)
AVF2	2	102-1844S-600-600M-BLP	4-WAY (600 BU)
KV	7	102-1844S-600-600M-BLP	3-WAY (600 BU)
BV	1	102-1844S-600-600M-BLP	2-WAY (600 BU)
CV	1	102-1844S-600-600M-BLP	1-WAY (600 BU)
D	1	102-1844S-600-600M-BLP	1-WAY (600 BU)
E	1	102-1844S-600-600M-BLP	1-WAY (600 BU)
G	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
H	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
I	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
J	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
K	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
L	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
M	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
N	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
O	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
P	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
Q	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
R	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
S	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
T	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
U	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
V	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
W	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
X	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
Y	2	102-1844S-600-600M-BLP	1-WAY (600 BU)
Z	2	102-1844S-600-600M-BLP	1-WAY (600 BU)



Bowman Consulting Group

BUILDING EXPANSION AND PARKING MODIFICATIONS. SEE SHEETS 17 TO 21 FOR MODIFICATIONS DETAILS ONLY.

Professional Engineer Seal: State of Maryland, License No. 1755, Exp. 12-31-11.

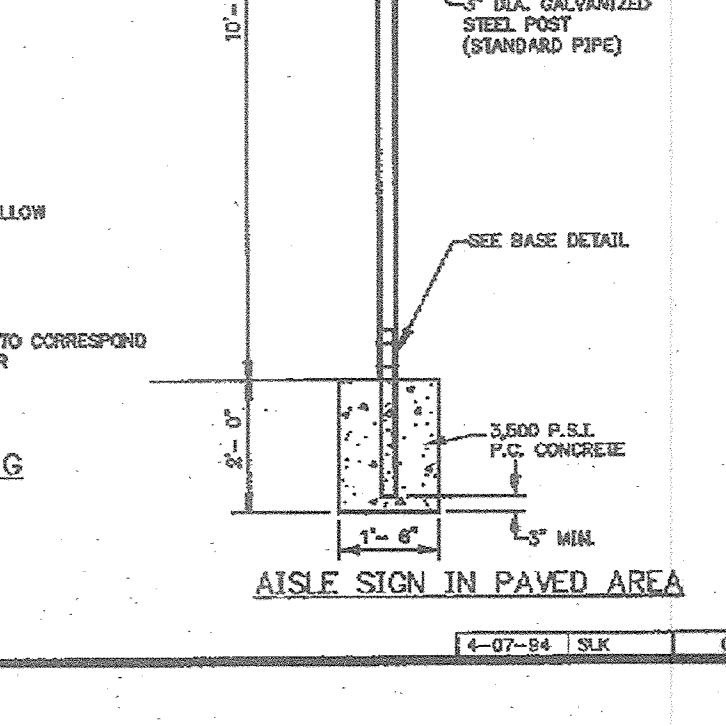
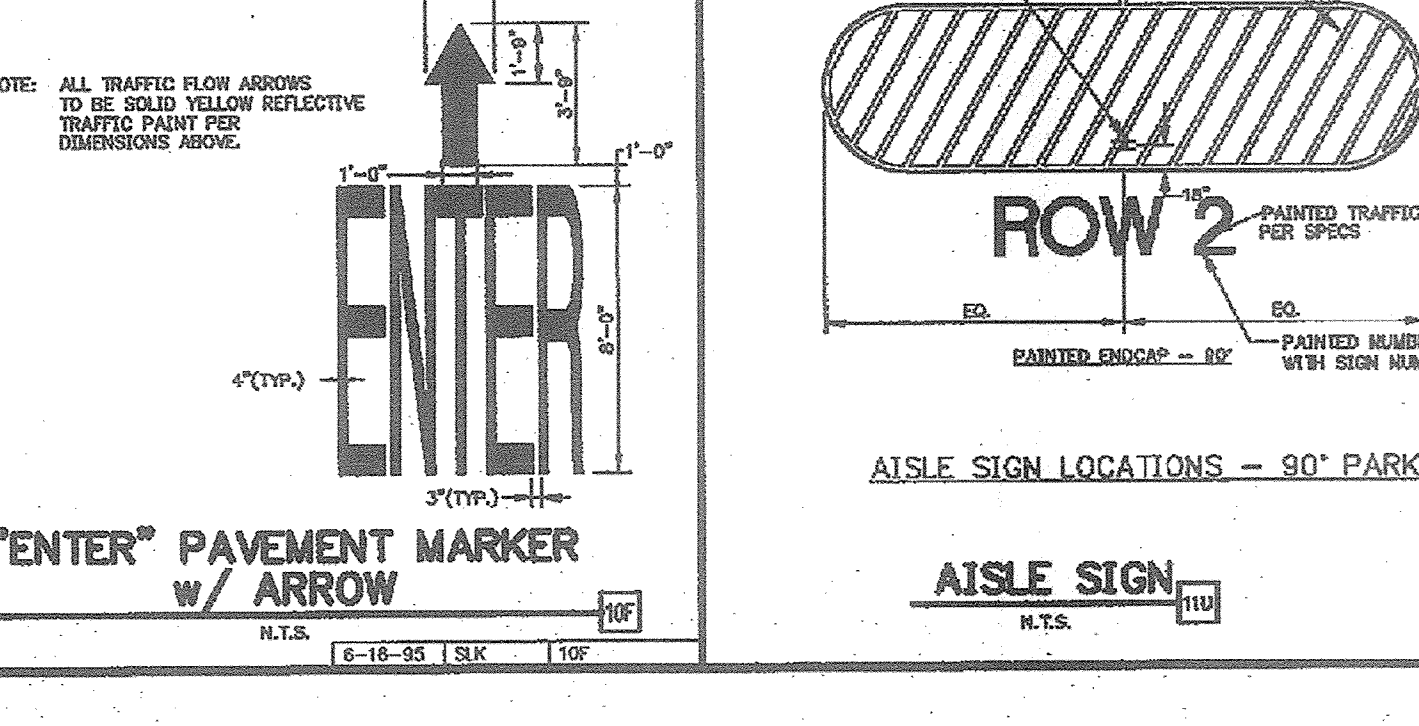
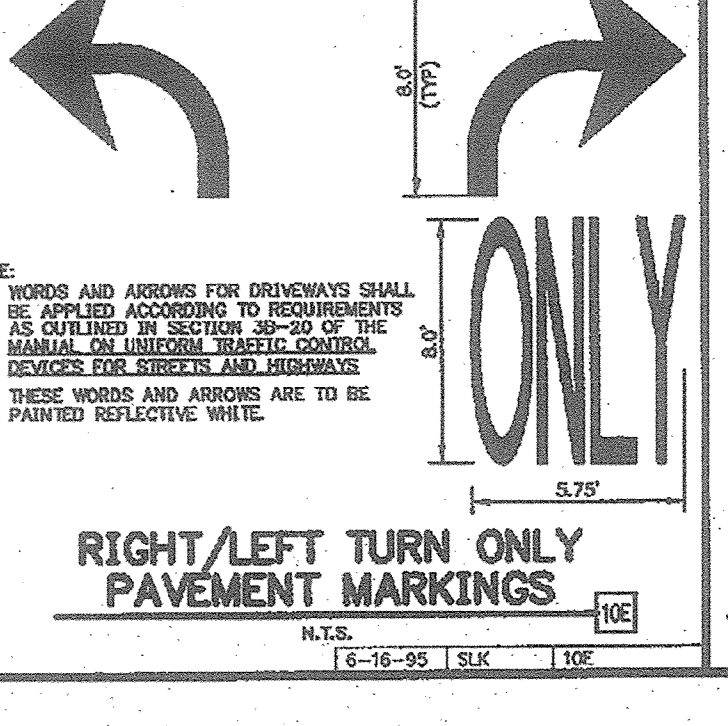
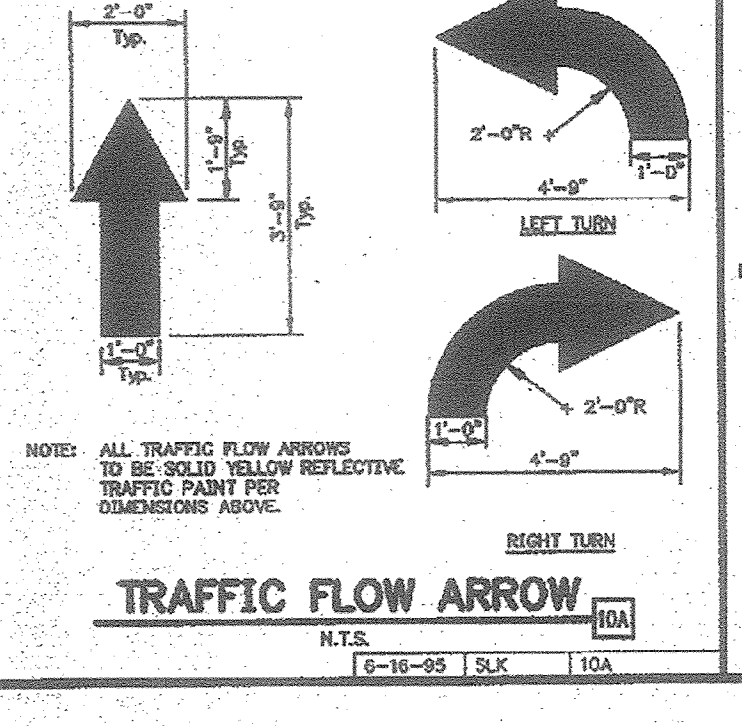
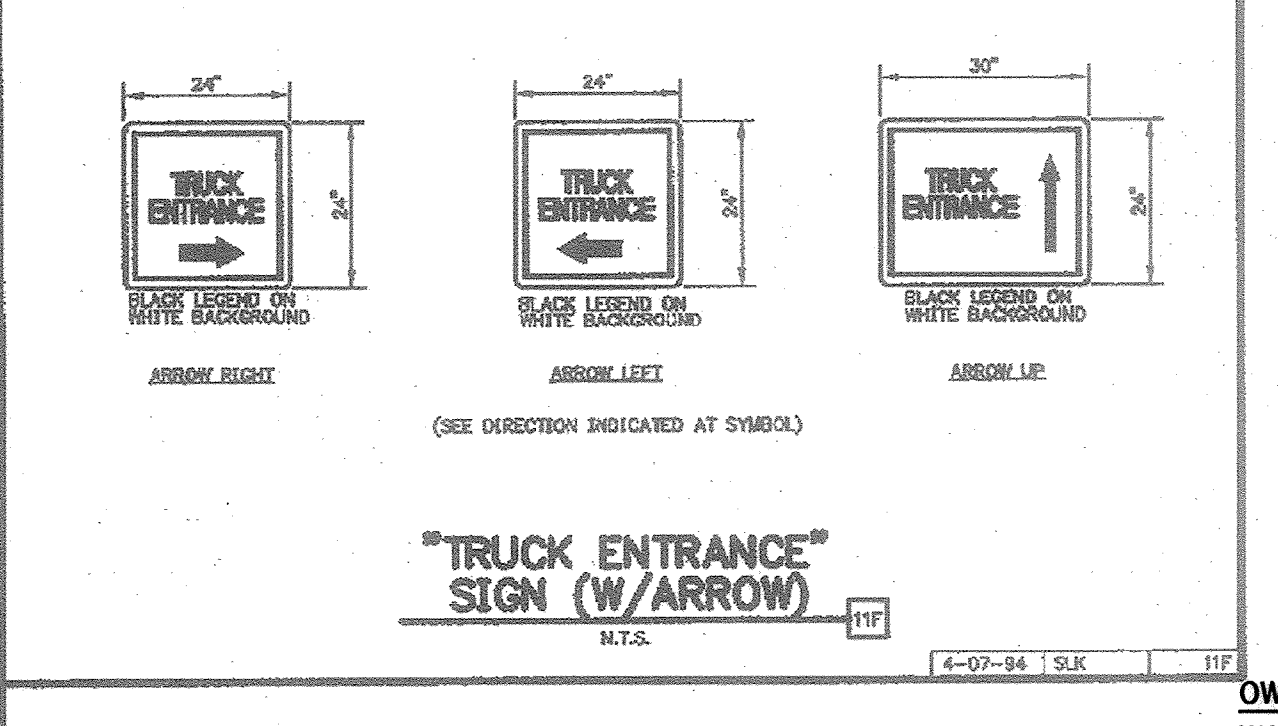
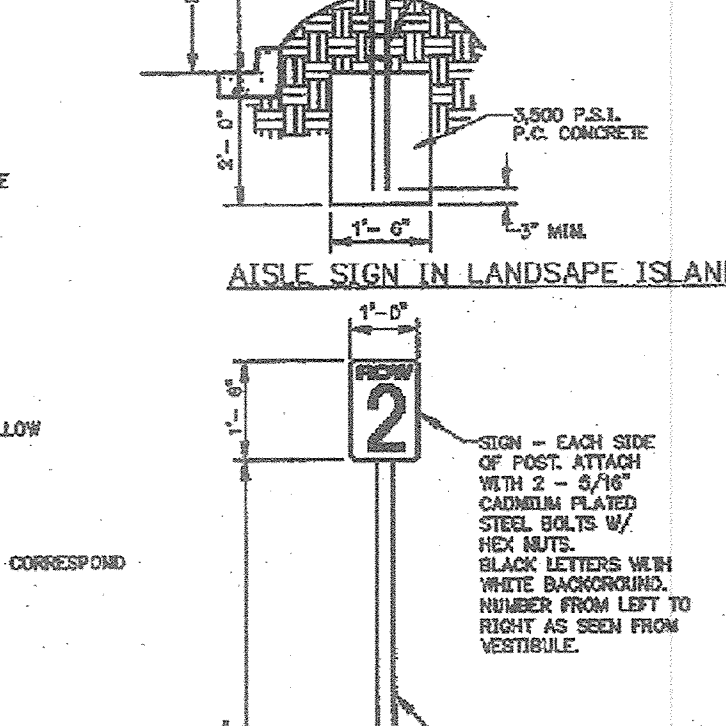
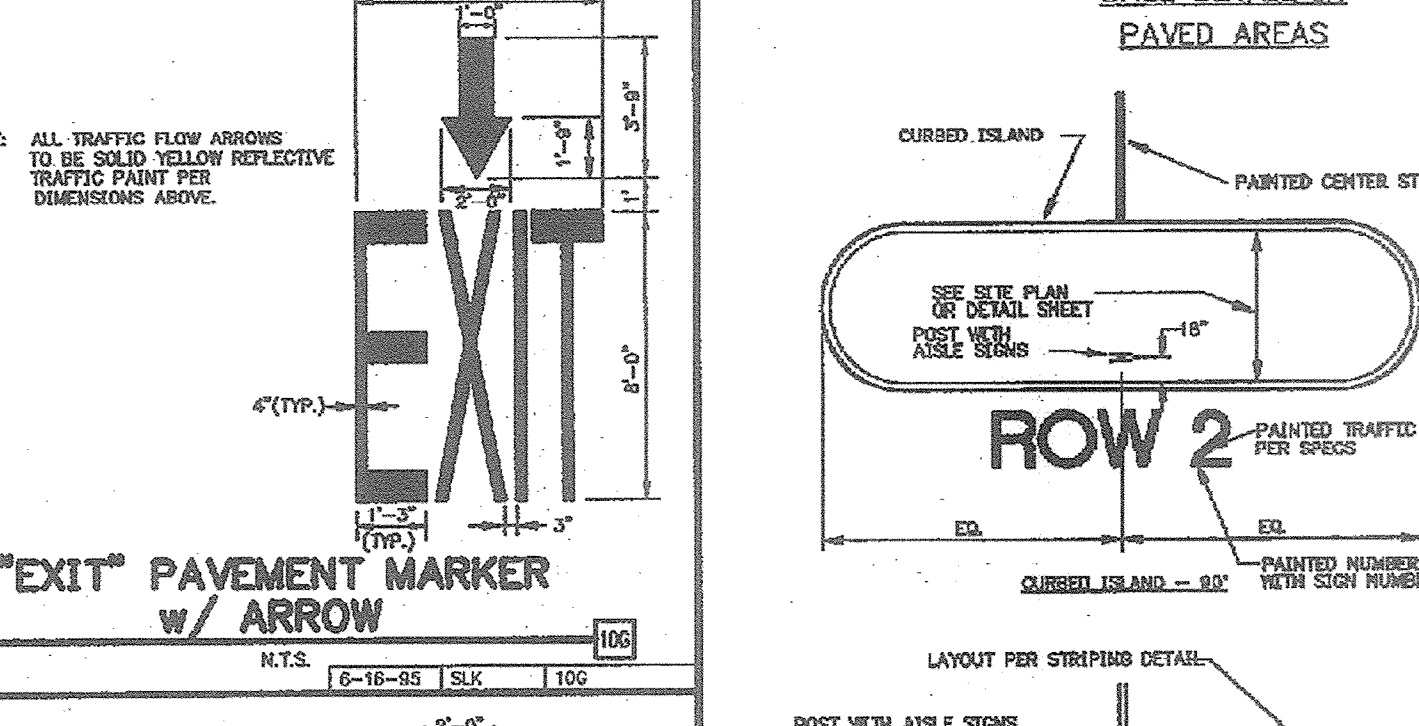
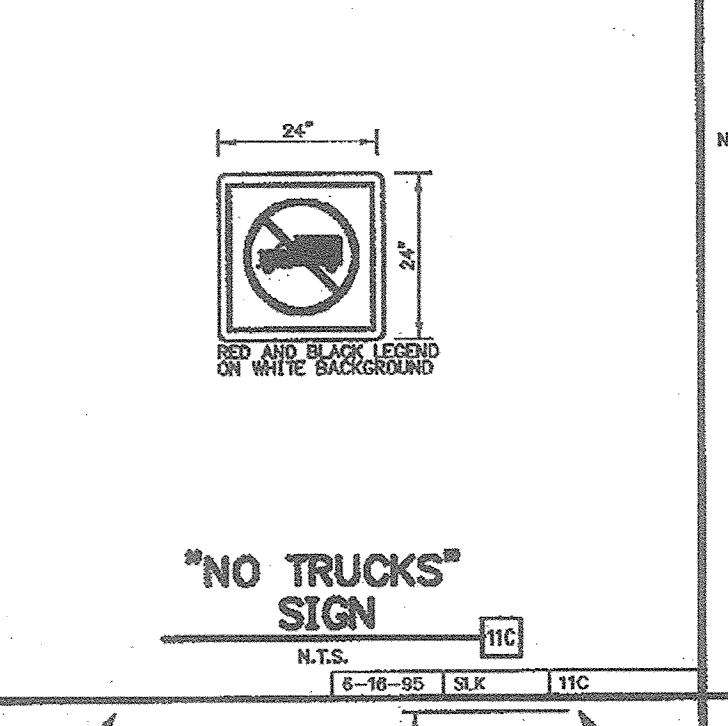
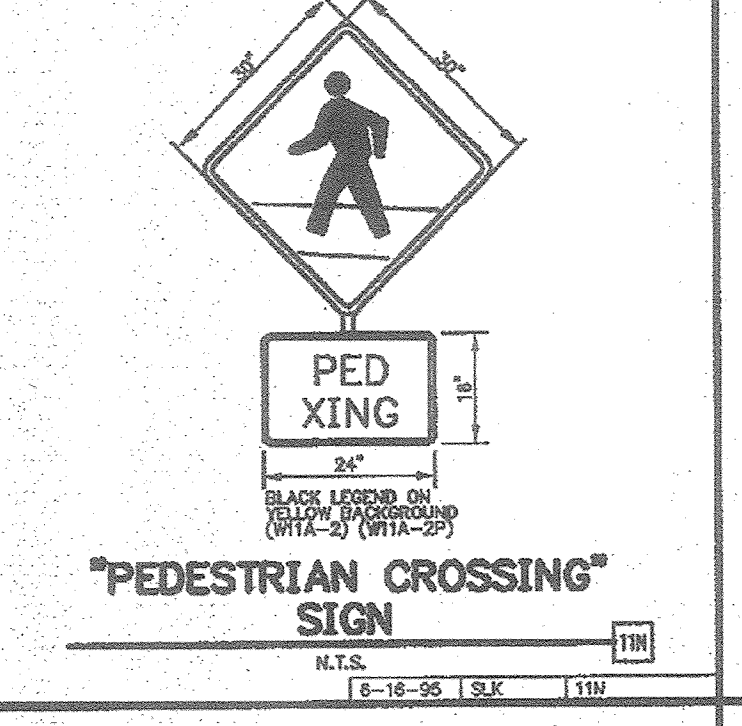
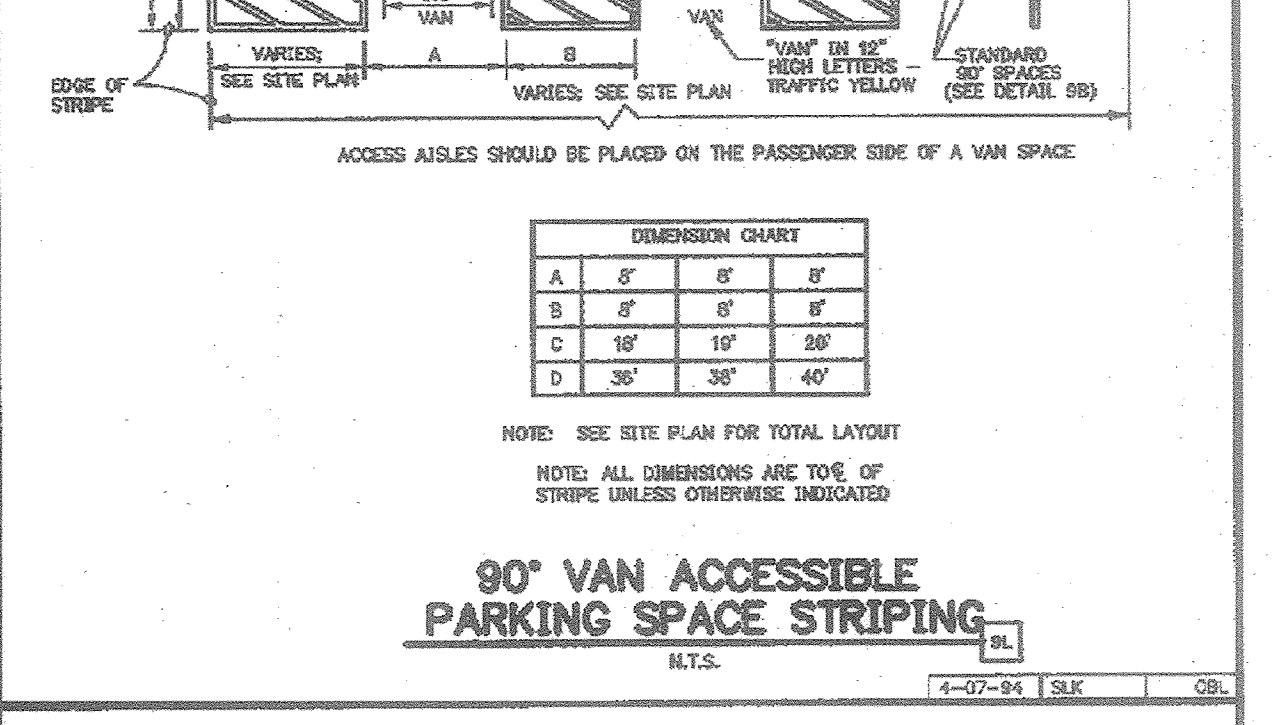
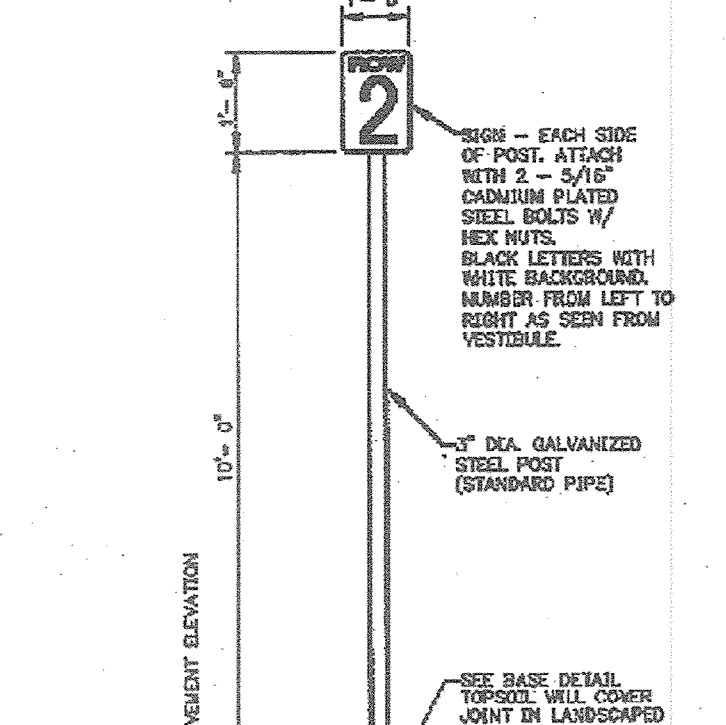
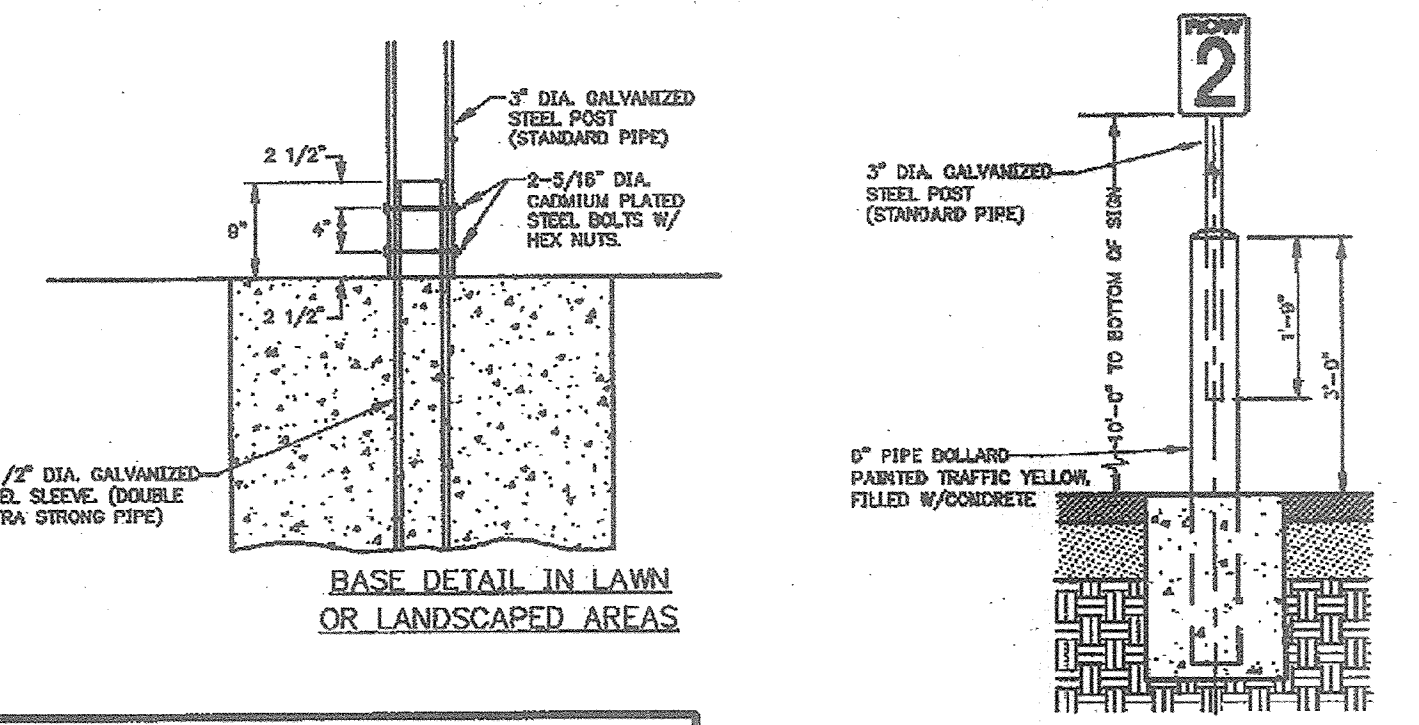
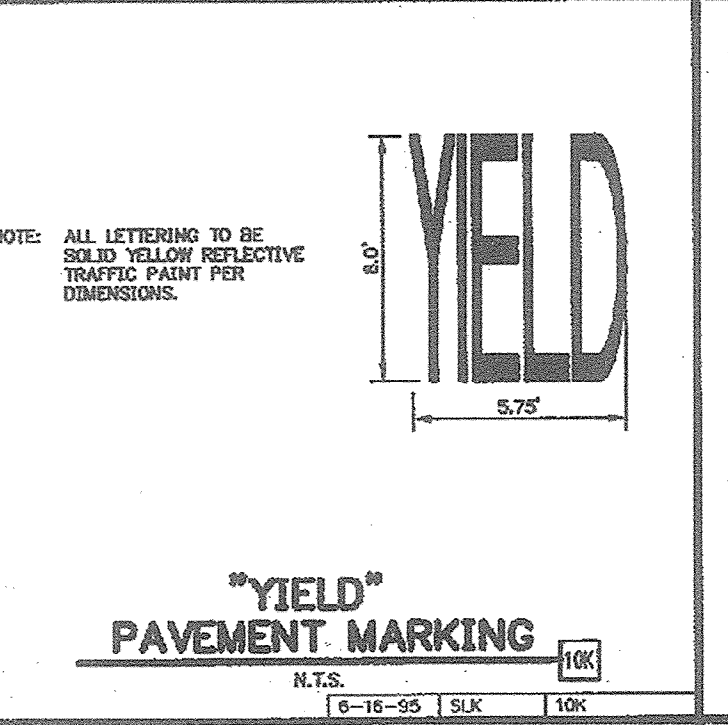
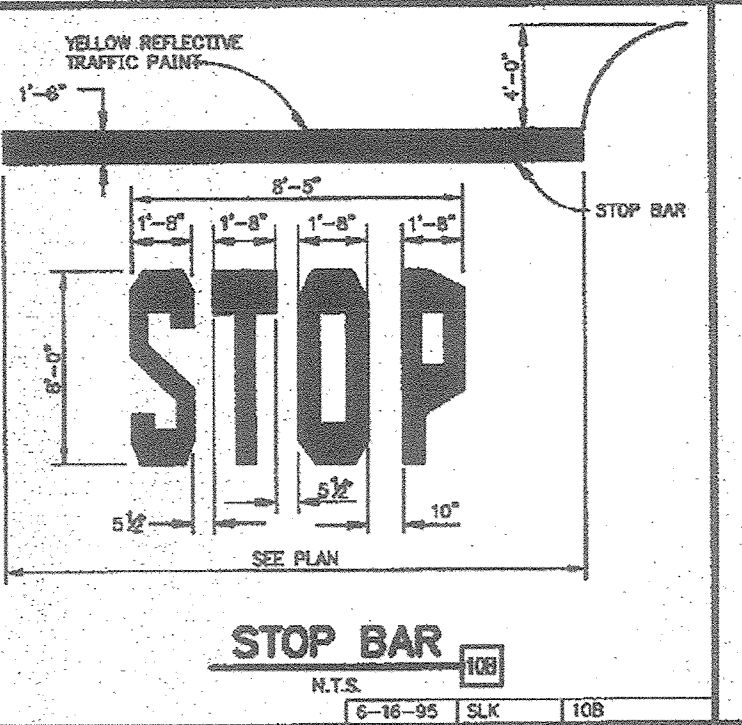


ACADEMY BUILDING ADDITION

90° ACCESSIBLE PARKING SPACE STRIPING

DIMENSION CHART									
A	B	C	D	E	F	G	H	I	J
9'	9.5'	10'	9'	9.5'	10'	9'	9.5'	10'	9'
18'	18'	18'	18'	18'	18'	18'	18'	18'	18'
36'	36'	36'	36'	36'	36'	36'	36'	36'	36'

NOTE: ALL DIMENSIONS ARE TO FACE OF STRIPE UNLESS OTHERWISE INDICATED.



OWNER & DEVELOPER
WALMART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SWDC
BENTONVILLE, AR 72716-0550
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature]
DATE: 8/2/11

CHIEF, DIVISION OF LAND DEVELOPMENT
[Signature]
DATE: 9/26/11

DIRECTOR
[Signature]
DATE: 9/27/11

4 SEE SHEETS 17 THRU 21 FOR REVISED NEW DETAILS

NO.	DATE	DESCRIPTION	BY
3	7/25/11	BLDG EXPANSION & PARKING MOD.	JDT
4	9-22-95	REVISED PER HOWARD COUNTY	MAM
2	7-24-95	SUBMITTED TO HOWARD COUNTY	
1	7-21-95	REVISED PER PEER REVIEW	

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER
[Signature]
DATE: 11/13/11

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

SIGNATURE OF ENGINEER
[Signature]
DATE: 3-1-96

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT
DATE: _____

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA - NATURAL RESOURCES CONSERVATION SERVICE
DATE: _____

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature]
DATE: 8/2/11

CHIEF, DIVISION OF LAND DEVELOPMENT
[Signature]
DATE: 9/26/11

DIRECTOR
[Signature]
DATE: 9/27/11

WAL-MART STORE #2412
ELLCOTT CITY, WAL-MART, PARCEL B

ENGINEERING ASSOCIATES, INC.

ENGINEERS * PLANNERS * SURVEYORS

9175 Guilford Road, Suite 306
Columbia, MD 21046

(301) 490-4145
FAX (301) 490-4149

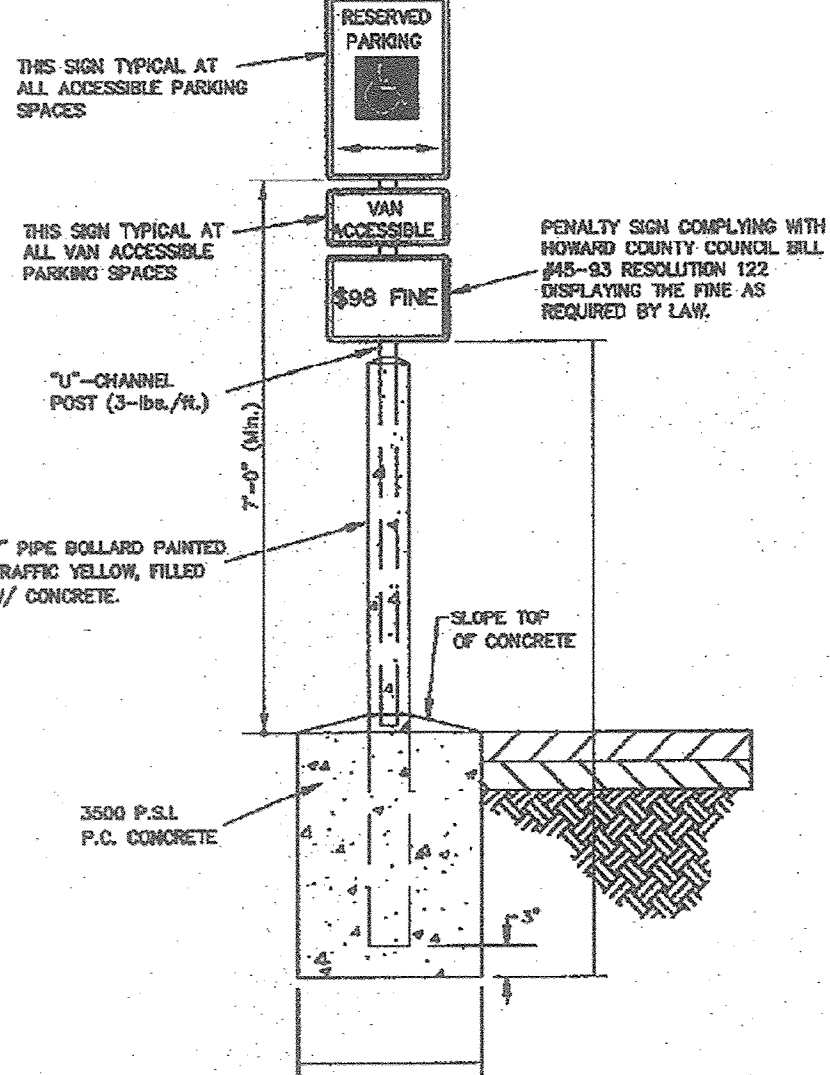
JOB NO.: 9146.0.350
DWG NAME: 9146DET5

DATE: 11-7-95
SHEET NO.: 11 of 34

ELLCOTT CITY WAL-MART SITE DETAIL SHEET

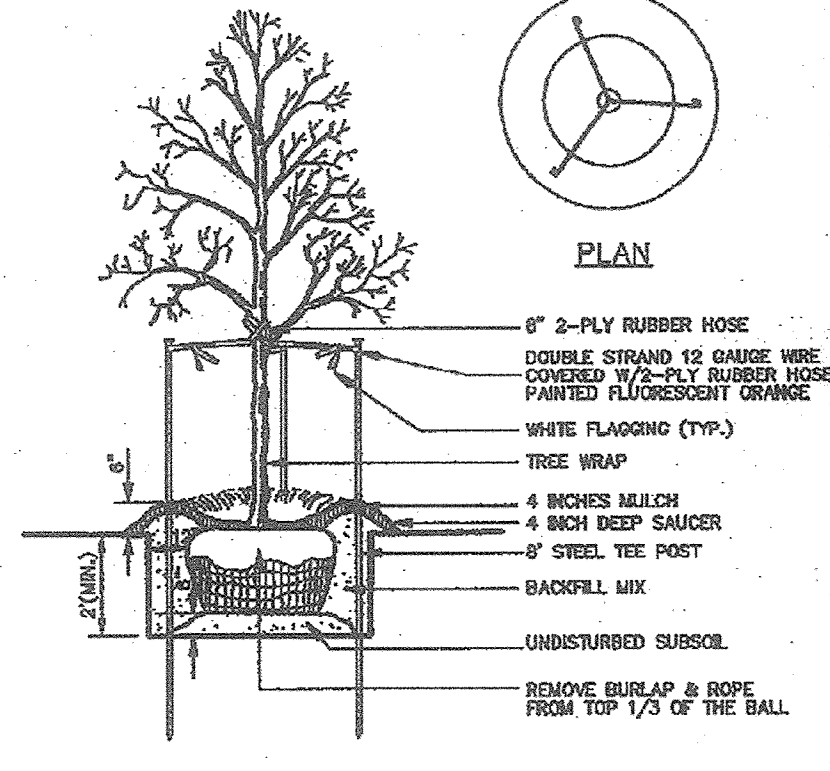
P:\1660 - Walmart - Ellicott City, MD\4660-01-002 (ENG) - Ellicott City, MD Walmart #2412-03(Engineering)\Engineering Plans\County Submission\Myar Submission\11 - Site Detail Sheet-Rev.dwg, 8/15/2011 11:21:50 AM

6/13/2009 9:45:53 AM SDP.DWG 9/16/2011 8:16:13 AM SDP.DWG



ACCESSIBLE PARKING SIGN
N.T.S.

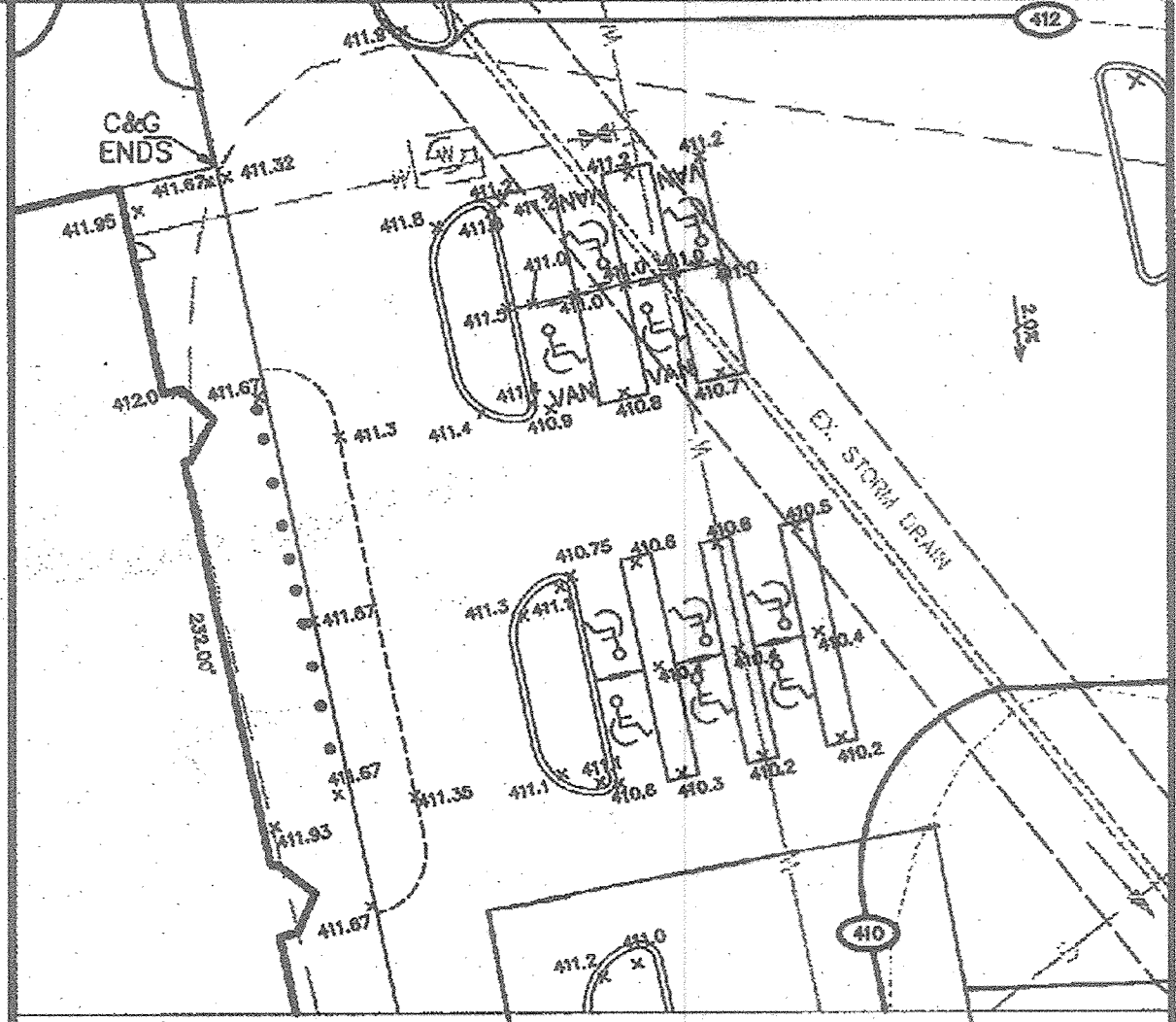
05-29-95 SLK 11460C15



TREE PLANTING
N.T.S.

NOTE: SEE LANDSCAPE NOTES FOR THE TYPE OF MULCH MATERIAL TO USE.

11-07-95 SLK 50A



HANDICAP PARKING GRADING DETAIL
1"=30'

FOUNDATION SUBSURFACE PREPARATION
WAL-MART
JOB # 01001308 ELLICOTT CITY, MD

THE FINAL SUBGRADE ELEVATION SHALL BE ESTABLISHED AT 10 INCHES BELOW FINISHED FLOOR ELEVATION TO ALLOW FOR A 4 INCH SLAB AND 6 INCHES OF SUBBASE UNDER A 6 MIL POLYETHYLENE VAPOR BARRIER (PROVIDED BY THE BUILDING CONTRACTOR). SUBBASE SHALL CONFORM TO A GRADED COARSE AGGREGATE OR DENSE GRADED AGGREGATE WITH PARTICLE SIZE NOT EXCEEDING ONE INCH AND LESS THAN 12 PERCENT PASSING THE NO. 200 SIEVE. THE SUBBASE LAYER SHALL BE COMPACTED TO 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698). THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ACCURATE MEASUREMENTS FOR ALL CUT AND FILL DEPTHS REQUIRED.

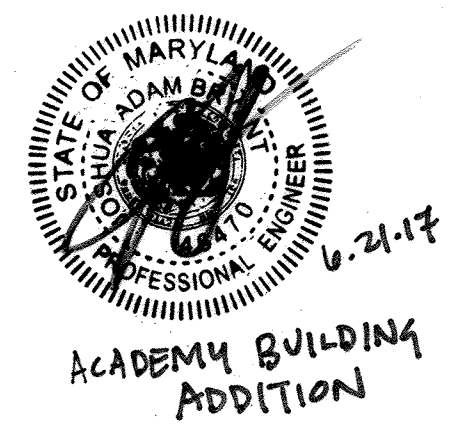
HARD RIPPING AND BLASTING WILL BE REQUIRED TO ACHIEVE FOUNDATION LEVELS IN SOME AREAS OF THE BUILDING PAD. VERY DENSE TO EXTREMELY DENSE AND ROCK TYPE MATERIALS SHALL BE REMOVED TO A MINIMUM OF 12 INCHES BELOW FOUNDATION BEARING LEVEL AND REPLACED WITH PROPERLY COMPACTED ON-SITE GRANULAR MATERIAL.

CLEARING, STRIPPING, PROOFROLLING AND FILLING OPERATIONS SHALL BE MONITORED TO MINIMIZE THE EXCESSIVE REMOVAL AND/OR MIXING OF NON-ORGANIC SUBSOILS WITH TOPSOIL AND OTHER ORGANICS, WHERE REQUIRED.

STRUCTURAL FILL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8 INCHES IN THICKNESS, AND COMPACTED TO AT LEAST 98 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM 698) AT A MOISTURE CONTENT WITHIN 3 PERCENT BELOW OPTIMUM TO OPTIMUM. STRUCTURAL FILL SHALL BE CLASSIFIED AS A NON-PLASTIC TO LOW PLASTICITY SM MATERIAL OR BETTER AND HAVE A PLASTICITY INDEX OF 12 OR LESS AND A LIQUID LIMIT OF 35 OR LESS. STRUCTURAL FILL AND ALL EXPOSED SUBGRADE WITHIN THE BUILDING PAD AREA AND EXTENDING A MINIMUM OF 20 FEET BEYOND THE BUILDING LIMITS IN EACH DIRECTION SHALL BE COMPACTED TO THE ABOVE SPECIFICATIONS.

SETTLEMENT PLATES SHALL BE INSTALLED IN AREAS OF DEEP FILL BEFORE AND AFTER THE PLACEMENT OF FILL. THE NUMBER, TYPE AND LOCATION OF SETTLEMENT PLATES SHALL BE AS RECOMMENDED BY THE OWNER'S GEOTECHNICAL REPRESENTATIVE IN THE SOILS REPORT BY ENGINEERING CONSULTING SERVICE, LTD., DATED OCTOBER 14, 1994 OR AS DETERMINED AT THE TIME OF CONSTRUCTION.

THE FOUNDATION SYSTEM SHALL BE ISOLATED SPREAD FOOTINGS AT COLUMNS AND CONTINUOUS SPREAD FOOTINGS AT WALLS (PROVIDED BY THE BUILDING CONTRACTOR).

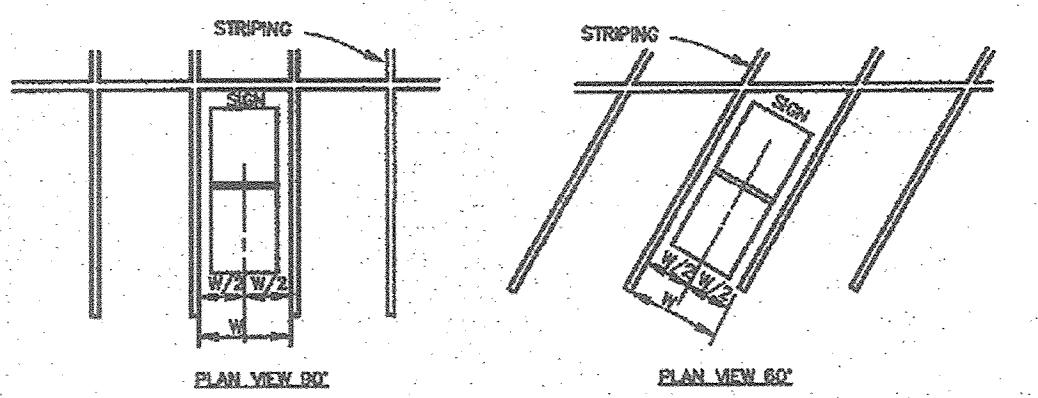


ACADEMY BUILDING ADDITION



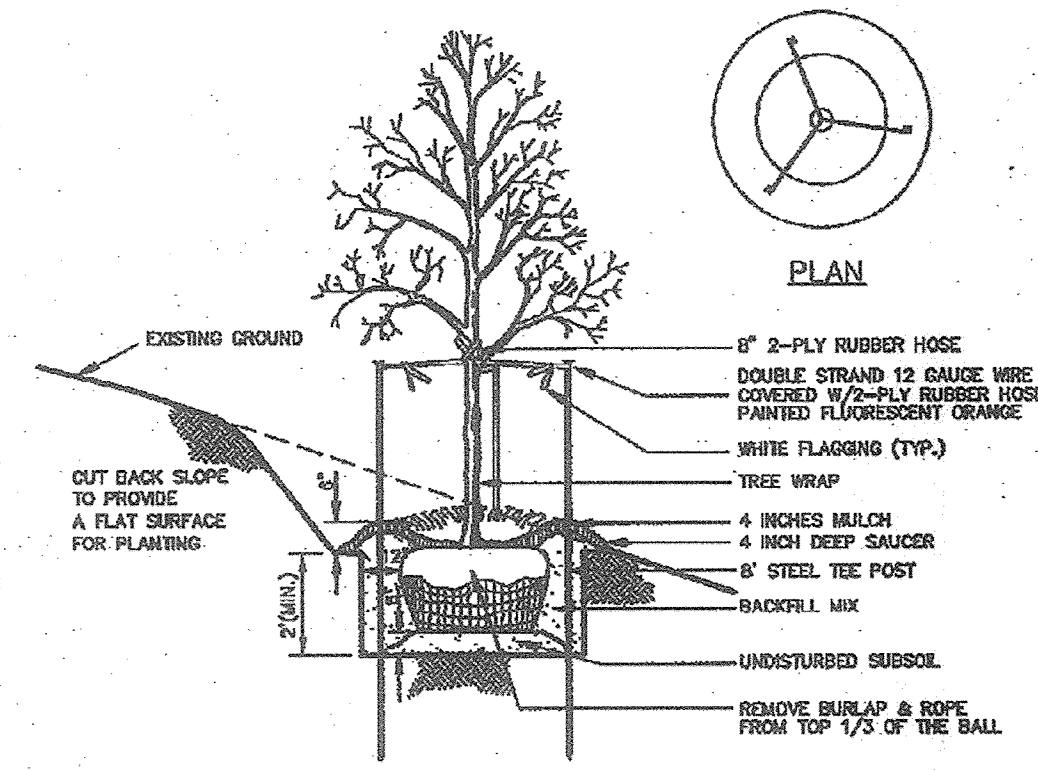
Bowman Consulting Group

BUILDING EXPANSION AND PARKING MODIFICATIONS. SEE SHEETS 17 THRU 21 FOR MODIFICATIONS DETAILS ONLY.



CART CORRAL
N.T.S.

4-07-94 SLK 12A



TREE PLANTING ON SLOPE
N.T.S.

NOTE: SEE LANDSCAPE NOTES FOR THE TYPE OF MULCH MATERIAL TO USE.

11-07-95 SLK 500

THE FOUNDATION SYSTEM SHALL BE ISOLATED SPREAD FOOTINGS AT COLUMNS AND CONTINUOUS SPREAD FOOTINGS AT WALLS (PROVIDED BY THE BUILDING CONTRACTOR).

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER: *[Signature]* DATE: 8/21/96

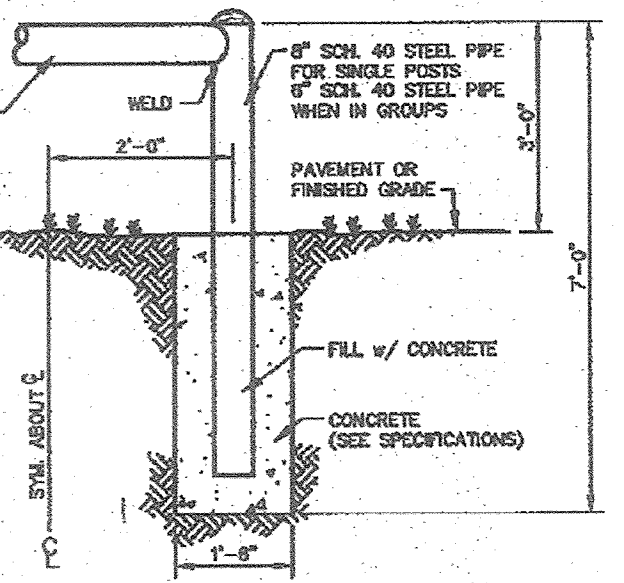
I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

SIGNATURE OF PROFESSIONAL ENGINEER: *[Signature]* DATE: 6/6/96

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *[Signature]* DATE: 8/23/11
 Chief, Division of Land Development: *[Signature]* DATE: 9/26/11
 Director: *[Signature]* DATE: 9/27/11

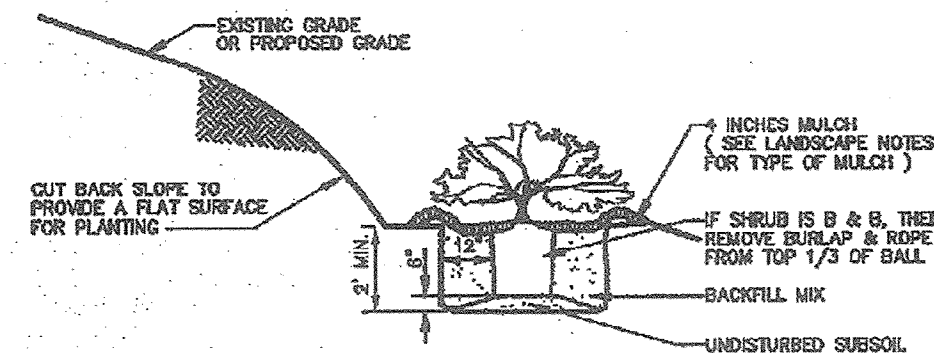
SEE SHEET 17 THRU 21 FOR REVISED NEW DETAILS.



GUARD POST
N.T.S.

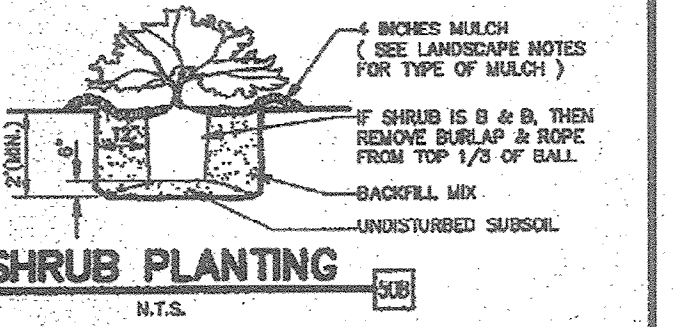
NOTE: ALL PIPES SHALL BE PAINTED TRAFFIC YELLOW (SEE LANDSCAPE NOTES FOR TYPE OF MULCH)

4-07-94 SLK 05A



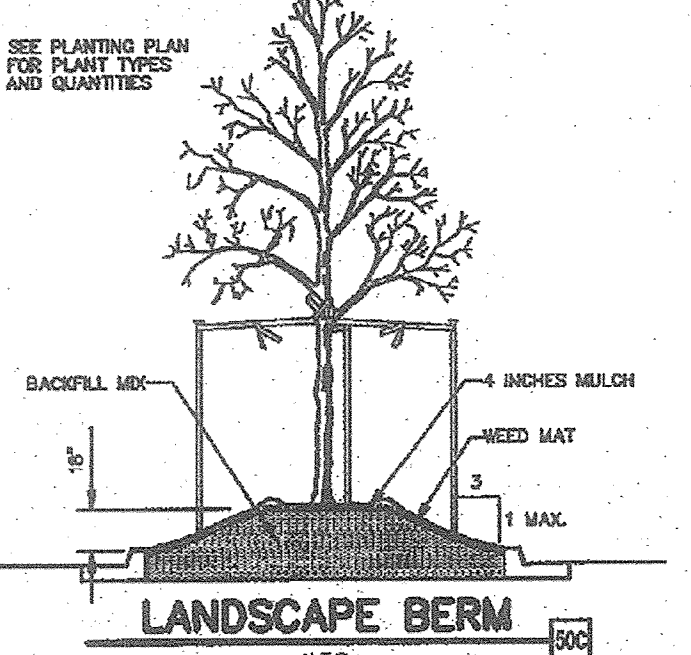
SHRUB PLANTING ON SLOPE
N.T.S.

11-07-95 SLK 50E



SHRUB PLANTING
N.T.S.

11-07-95 SLK 150B



LANDSCAPE BERM
N.T.S.

11-07-95 SLK 150C

THIS SHEET WILL SUPERSEDE SHEET NUMBER 12 (DATED 1/7/95) APPROVED BY HOWARD COUNTY.

SUBDIVISION "ELLICOTT CITY WAL-MART"
 ELECTION DISTRICT NO. 2
 TAX MAP 17 & 24
 REZONING CASE NUMBER ZB-941
 SKETCH PLAN S-95-01
 PRELIMINARY PLAN P-95-21
 SCALE 1"=50'
 WATER NO. F03

RECORD PLAT F-98-157 & F-12-023
 ECP-11-007 (APPROVED: 08-06-2010)

NO.	DATE	DESCRIPTION	BY
6	7/25/11	BLDG EXPANSION & PARKING MOD.	JDT
5	4/17/96	REVISED PER H. C. REDLINE COMMENTS	SLW/ACL
4	10-2-95	REVISED DET. 9S PER HOWARD COUNTY	MAM
3	9-22-95	REVISED PER HOWARD COUNTY	MAM
2	7-24-95	SUBMITTED TO HOWARD COUNTY	
1	7-21-95	REVISED PER PEER REVIEW	

OWNER & DEVELOPER
 WALMART REAL ESTATE BUSINESS TRUST
 2001 SOUTHEAST 10TH STREET, SWDC
 BENTONVILLE, AR 72716-0550
 CONTACT: MIKE THOMAS
 PHONE: (479) 273-4000

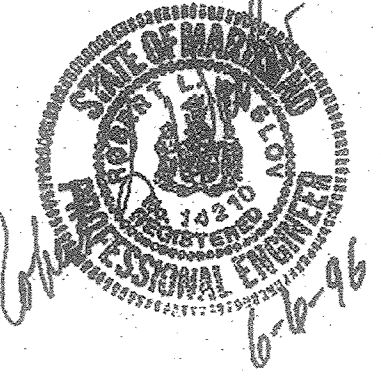
INITIAL DESIGN	DATE	PRN	FM	DES	CADD
	8-29-94	ARC	KLM	TMP	MAM

**WAL-MART STORE #2412
ELLICOTT CITY, WAL-MART, PARCEL B**

ENGINEERING ASSOCIATES, INC.
 ENGINEERS PLANNERS SURVEYORS

9175 Guilford Road, Suite 306 Columbia, MD 21046 (301) 490-4145 FAX (301) 490-4149

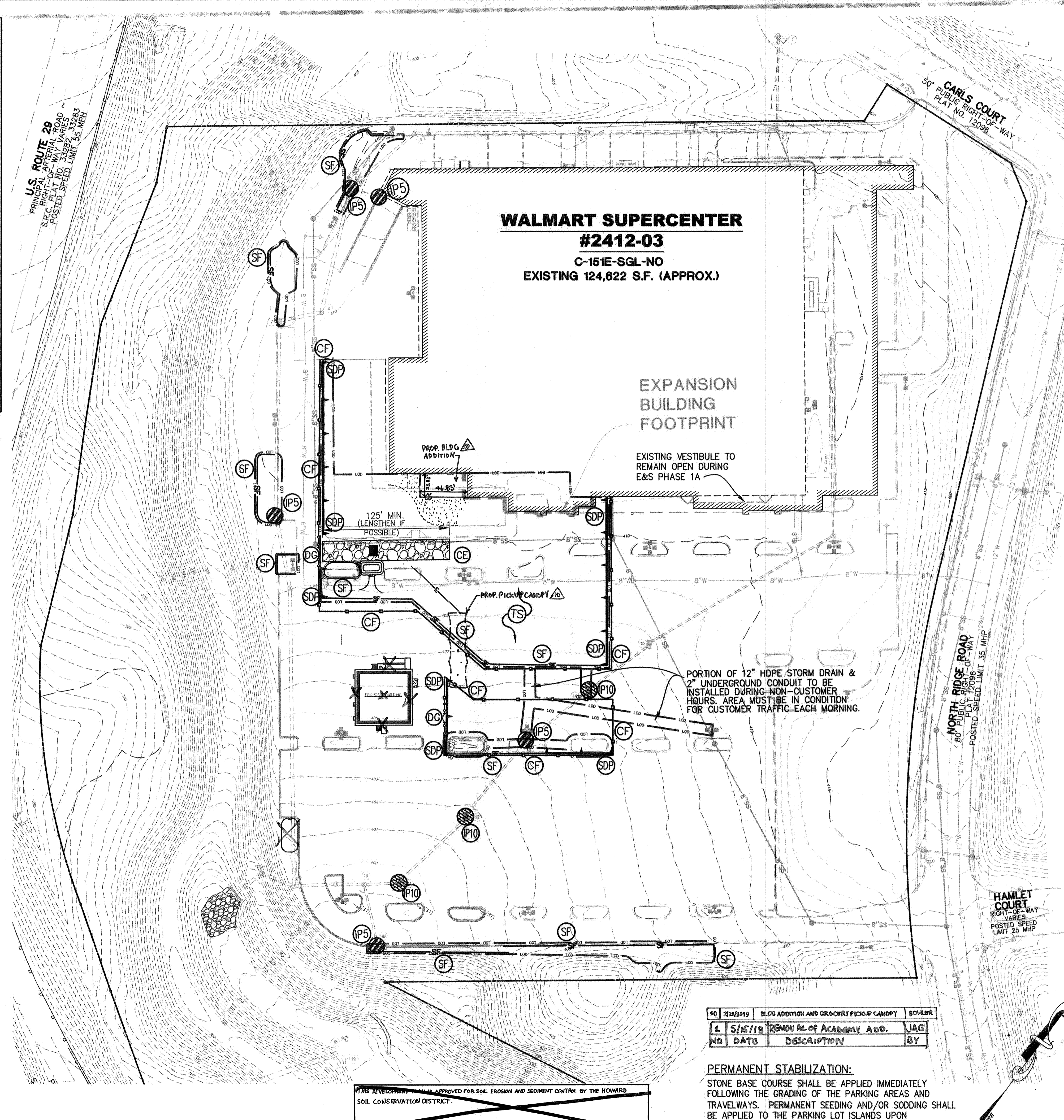
DATE: 05-29-96 SHEET NO: 12 OF 34



EROSION AND SEDIMENT CONTROL LEGEND

TITLE	KEY	SYMBOL
CONSTRUCTION FENCE	CF	
TEMPORARY STONE CONSTRUCTION ENTRANCE W/WASH RACK	CE	
SILT FENCE	SF	
GRAVEL AND WIRE MESH INLET SEDIMENT FILTER	IP3	
GRAVEL CURB INLET SEDIMENT FILTER	IP5	
BELOW GROUND INLET PROTECTION	IP10	
TEMPORARY CHAIN-LINK FENCE WITH DOUBLE GATE	DG	
SILT DIKE ON PAVEMENT	SDP	
TEMPORARY SEEDING	TS	

NOTE: FOR ALL EROSION AND SEDIMENTATION CONTROL DETAILS SEE SHEETS 15 AND 16.



WALMART SUPERCENTER
#2412-03
 C-151E-SGL-NO
 EXISTING 124,622 S.F. (APPROX.)

EXPANSION BUILDING FOOTPRINT

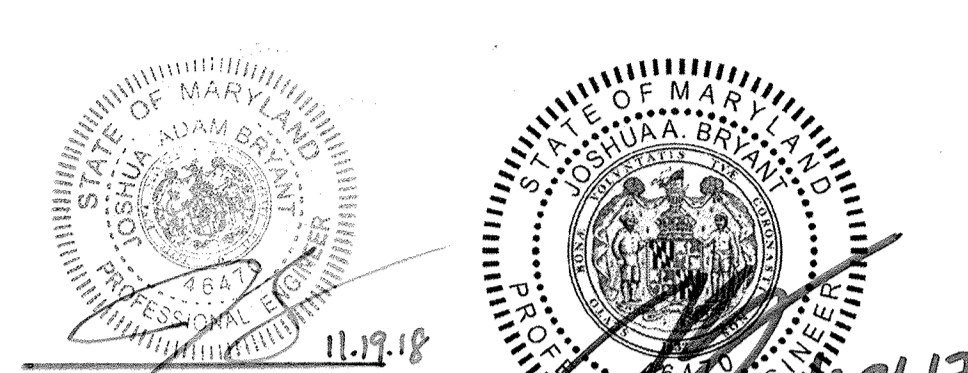
EXISTING VESTIBULE TO REMAIN OPEN DURING E&S PHASE 1A

PORTION OF 12" HDPE STORM DRAIN & 2" UNDERGROUND CONDUIT TO BE INSTALLED DURING NON-CUSTOMER HOURS. AREA MUST BE IN CONDITION FOR CUSTOMER TRAFFIC EACH MORNING.

LEGEND

SITE FEATURES

	BOUNDARY LINE
	PROPOSED LIMITS OF DISTURBANCE
	EXISTING CONTOUR ELEVATIONS
	PROPOSED CONTOUR ELEVATIONS
	EXISTING STORM DRAIN
	EXISTING CHAIN LINK FENCE



JOSHUA A. BRYANT, P.E.
 REMOVAL OF ACADEMY BUILDING ADDITION UTILITIES AND PARKING LOT MODIFICATION

JASON D. TOWER, P.E.
 ACADEMY BUILDING ADDITION, UTILITIES AND PARKING LOT MODIFICATION

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature: *John R. Robertson* DATE: 8-18-11
 HOWARD SCD

ENGINEER'S CERTIFICATE
 "I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
 Signature: *Jason D. Tower* DATE: 7-25-11
 SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE)

DEVELOPER'S CERTIFICATE
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."
 Signature: *Frank Lee-Dickerson* DATE: 8-9-11
 SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE)

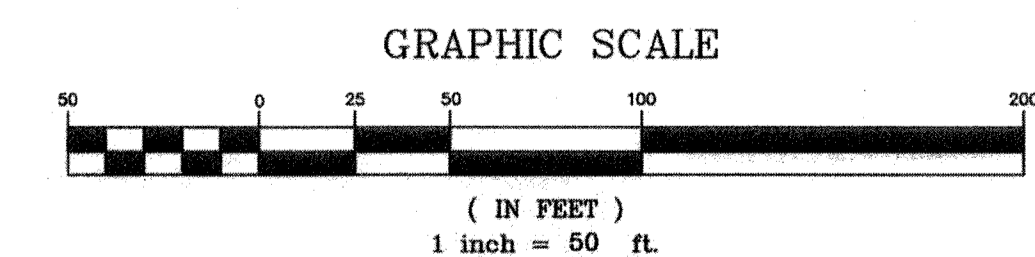
OWNER/DEVELOPER

WAL-MART REAL ESTATE BUSINESS TRUST
 2001 SOUTHEAST 10TH STREET, SWDC
 BENTONVILLE, AR 72716-0550
 CONTACT: MIKE THOMAS
 PHONE: (479) 273-4000

SUBDIVISION 'ELLCOTT CITY WALMART'

ELECTION DISTRICT NO. 2	HOWARD COUNTY, MARYLAND
TAX MAP 17 & 24	P/O TM PARCEL 1085
REZONING CASE NUMBER ZB-941	DATED: OCTOBER 18, 1993
SKETCH PLAN S-95-01	APPROVED: 12-2-1994
PRELIMINARY PLAN P-95-21	APPROVED: 06-06-1995
SITE PLAN SDP-96-11	APPROVED: 06-21-1996
MASS GRADING PLAN SDP-96-001	APPROVED: 04-03-1996
FINAL ROAD CONSTRUCTION PLAN FOR NORTH RIDGE RD. F-96-01	APPROVED: 11-08-1995
ECP 11-007	APPROVED: 08-06-2010
FINAL RECORD PLATS	F-96-009, F-96-091 & F-98-157
WATER NO. F03	SEWER NOS. 1452800 F-12-023

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION & DATE: 7/20/10
T. Martin Fuchs
 CHIEF, DIVISION OF LAND DEVELOPMENT & DATE: 8-2-17
Walter J. Jaffe
 DIRECTOR & DATE: 8-3-17



WALMART STORE #2412-03		
ELLCOTT CITY, WALMART, PARCEL B		
TM 24, TM GRID 8, P/O TM PARCEL 1085 2ND ELECTION DISTRICT, HOWARD COUNTY, MD		
EROSION AND SEDIMENT CONTROL PLAN	DATE	SHEET
PHASE IA	07/25/11	13
		OF 34 SHEETS

NO	DATE	DESCRIPTION	BY
10	2/21/2019	BLOG ADDITION AND GROCERY PICKUP CANOPY	BOHLER
1	5/15/18	REMOVAL OF ACADEMY ADD.	JAG

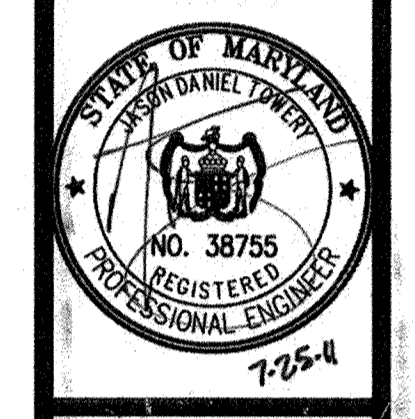
PERMANENT STABILIZATION:
 STONE BASE COURSE SHALL BE APPLIED IMMEDIATELY FOLLOWING THE GRADING OF THE PARKING AREAS AND TRAVELWAYS. PERMANENT SEEDING AND/OR SODDING SHALL BE APPLIED TO THE PARKING LOT ISLANDS UPON COMPLETION.

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 HOWARD SCD DATE

FOR REVISION 10 ONLY
 ANDREW G. STINE
AGS
 PROFESSIONAL ENGINEER

REVISIONS	BY
07/15/10-CONCEPT	BU/GD
01/14/11-1ST SUBM	BU/GD
07/25/11-2nd SUBM	BU/GD

Bowman CONSULTING
 Telephone: (703) 530-8093
 Fax: (703) 530-8475
 www.bowmanconsulting.com
 8813 Coburn Drive
 Manassas, Virginia 20110



SUPERCENTER #2412-03
 ELLCOTT CITY, HOWARD COUNTY, MARYLAND
 WAL-MART REAL ESTATE BUSINESS TRUST
 2001 SE 10TH STREET
 BENTONVILLE, AR 72716



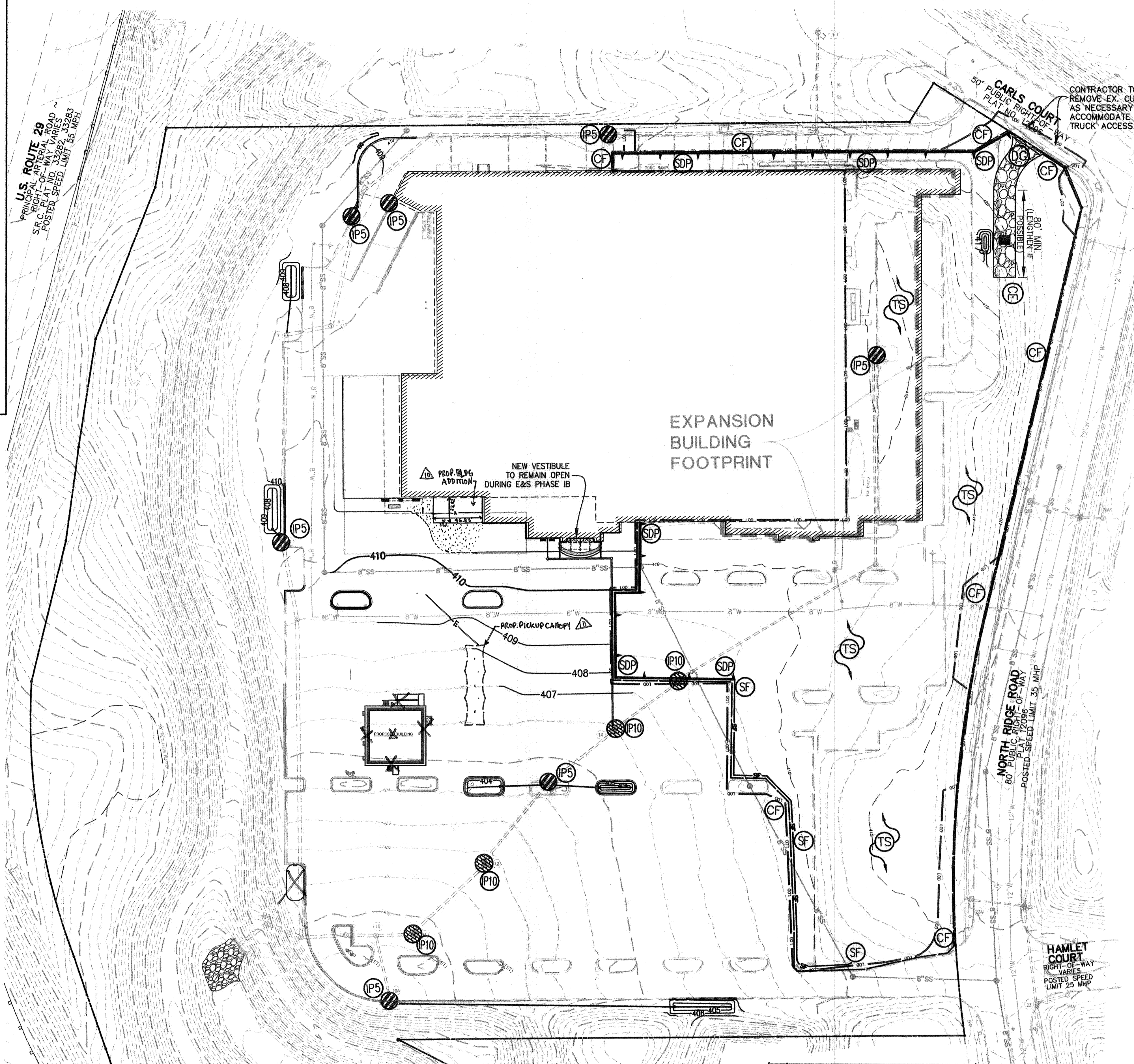
DESIGN DRAWN	BU
CHECKED	KJC
DATE	01/14/11
SCALE	1"=50'
JOB NO.	4680-01-002
SHEET	13
OF 34 SHEETS	

EROSION AND SEDIMENT CONTROL LEGEND

TITLE	KEY	SYMBOL
CONSTRUCTION FENCE	CF	[Symbol]
TEMPORARY STONE CONSTRUCTION ENTRANCE W/WASH RACK	CE	[Symbol]
SILT FENCE	SF	[Symbol]
GRAVEL AND WIRE MESH INLET SEDIMENT FILTER	IP3	[Symbol]
GRAVEL CURB INLET SEDIMENT FILTER	IP5	[Symbol]
BELOW GROUND INLET PROTECTION	IP10	[Symbol]
TEMPORARY CHAIN-LINK FENCE WITH DOUBLE GATE	DG	[Symbol]
SILT DIKE ON PAVEMENT	SDP	[Symbol]
TEMPORARY SEEDING	TS	[Symbol]

NOTE: FOR ALL EROSION AND SEDIMENTATION CONTROL DETAILS SEE SHEETS 15 AND 16.

U.S. ROUTE 29
PRINCIPAL ARTERIAL ROAD
SAC 6' RIGHT-OF-WAY VARIES
POSTED SPEED LIMIT 55 MPH



LEGEND

SITE FEATURES	
[Symbol]	BOUNDARY LINE
[Symbol]	PROPOSED LIMITS OF DISTURBANCE
[Symbol]	EXISTING CONTOUR ELEVATIONS
[Symbol]	PROPOSED CONTOUR ELEVATIONS
[Symbol]	EXISTING STORM DRAIN
[Symbol]	EXISTING CHAIN LINK FENCE

CONTRACTOR TO REMOVE EX. CURB AS NECESSARY TO ACCOMMODATE TRUCK ACCESS

80' MIN. LENGTH MIN. (LENGTH)

STATE OF MARYLAND
JOSHUA A. BRUNANT, P.E.
REMOVAL OF ACADEMY BUILDING ADDITION, UTILITIES AND PARKING LOT MODIFICATION
DATE: 8-24-11

STATE OF MARYLAND
ACADEMY BUILDING ADDITION, UTILITIES AND PARKING LOT MODIFICATION
DATE: 8-24-11

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John M. Robertson 8-18-11
HOWARD SCD DATE

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

JASON J. TOLVER 7-25-11
SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) DATE

DEVELOPER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Mike Thomas 8-4-11
SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE) DATE

OWNER/DEVELOPER

WAL-MART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SWDC
BENTONVILLE, AR 72716-0550
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000

SUBDIVISION 'ELLCOTT CITY WALMART'

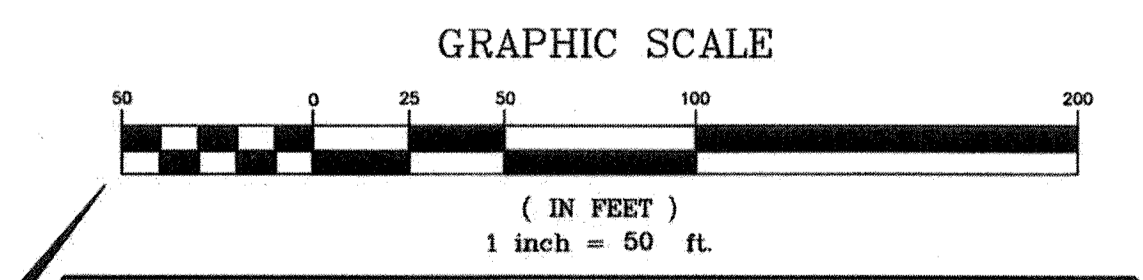
ELECTION DISTRICT NO. 2	HOWARD COUNTY, MARYLAND
TAX MAP 17 & 24	P/O TM PARCEL 1085
REZONING CASE NUMBER ZB-941	DATED: OCTOBER 18, 1993
SKETCH PLAN S-95-01	APPROVED: 12-2-1994
PRELIMINARY PLAN P-95-21	APPROVED: 06-06-1995
SITE PLAN SDP-96-11	APPROVED: 06-21-1996
MASS GRADING PLAN SDP-96-001	APPROVED: 04-03-1996
FINAL ROAD CONSTRUCTION PLAN FOR NORTH RIDGE RD. F-96-01	APPROVED: 11-08-1995
ECP 11-007	APPROVED: 08-06-2010
FINAL RECORD PLATS	F-96-009, F-96-091 & F-98-157
WATER NO. F03	SEWER NOS. 1452800 F-12-023

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION 7/24/11
DATE

T. M. ... 8-2-11
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Walter ... 8-3-11
DIRECTOR DATE



No.	DATE	DESCRIPTION	BY
1	5/15/10	REMOVAL OF ACADEMY ADD. JAS	
10	2/23/2010	BLD ADDITION AND GROCERY PICKUP CANOPY	BOHLER

PERMANENT STABILIZATION:
STONE BASE COURSE SHALL BE APPLIED IMMEDIATELY FOLLOWING THE GRADING OF THE PARKING AREAS AND TRAVELWAYS. PERMANENT SEEDING AND/OR SODDING SHALL BE APPLIED TO THE PARKING LOT ISLANDS UPON COMPLETION.

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SCD DATE

FOR REVISION TO ONLY
ANDREW C. STINE
5/24/11
PROFESSIONAL ENGINEER

1. Andrew C. Stine, P.E. is hereby certifying that these documents were prepared by him or under his direct supervision and that he is a duly licensed professional engineer in the State of Maryland. His license number is 97687 and expires on 7/14/17.

**WALMART STORE #2412-03
ELLCOTT CITY, WALMART, PARCEL B**

TM 24, TM GRID 6, P/O TM PARCEL 1085
2ND ELECTION DISTRICT, HOWARD COUNTY, MD

EROSION AND SEDIMENT CONTROL PLAN PHASE IB	DATE 07/25/11	SHEET 14 OF 34 SHEETS
--	------------------	--------------------------

REVISIONS BY

07/15/10-CONCEPT	BU/GO
01/14/11-1ST SUBM	BU/GO
07/25/11-2nd SUBM	BU/GO

Bowman CONSULTING
Bowman Consulting Group, Ltd.
9813 Cowlum Drive
Manassas, Virginia 20110
Telephone: (703) 530-9898
Fax: (703) 530-8475
www.bowmanconsulting.com

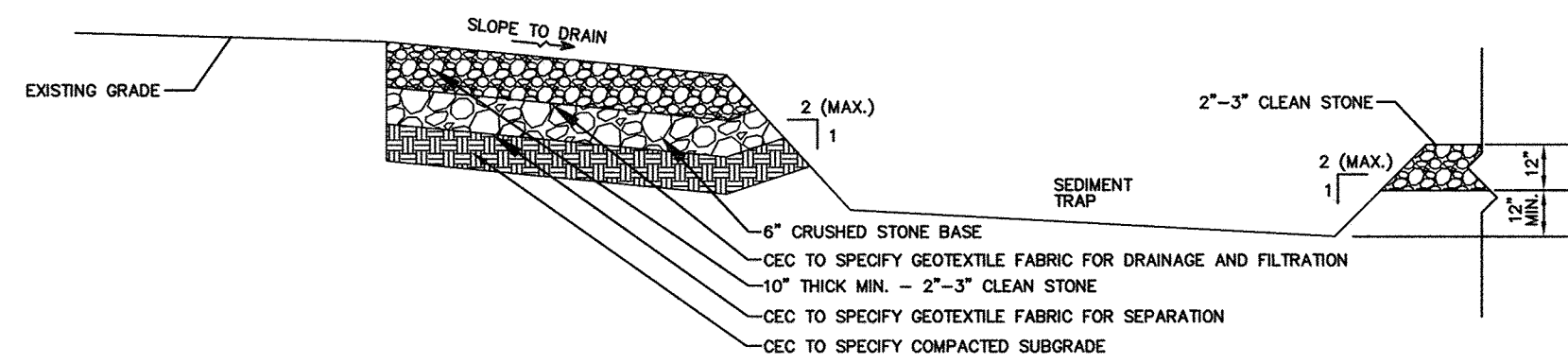
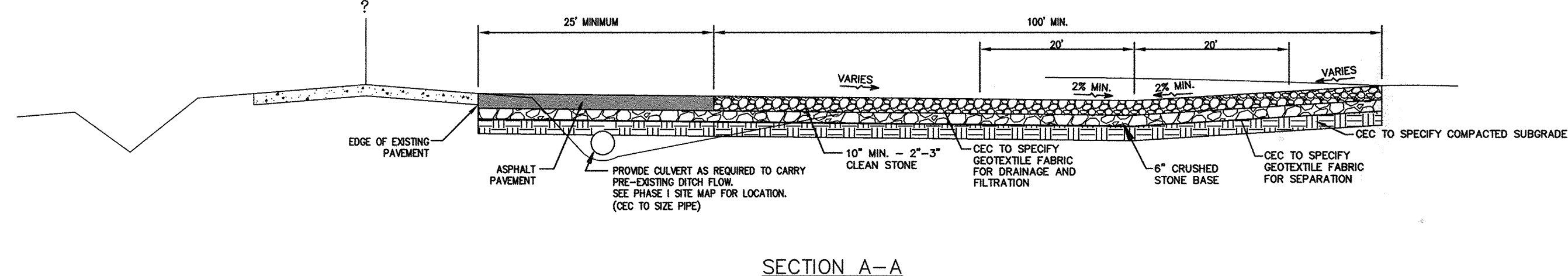
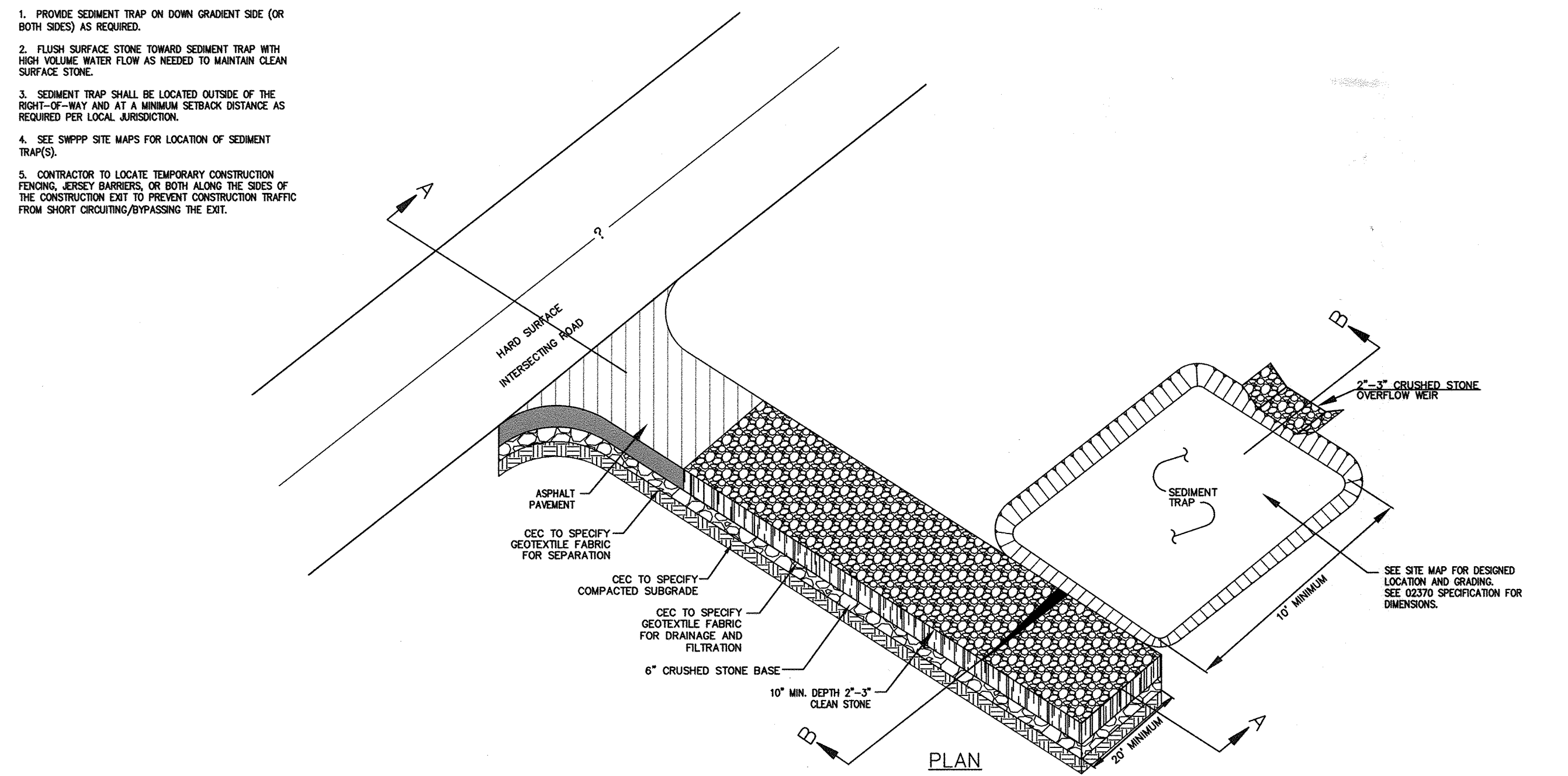
STATE OF MARYLAND
REGISTERED PROFESSIONAL ENGINEER
NO. 38755
7-25-11

SUPERCENTER #2412-03
ELLCOTT CITY, HOWARD COUNTY, MARYLAND
WAL-MART REAL ESTATE BUSINESS TRUST
2001 SE 10TH STREET
BENTONVILLE, AR 72716

Walmart

DESIGN DRAWN BY: KJC
CHECKED BY: GD
DATE: 01/14/11
SCALE: 1"=50'
JOB No. 4680-01-002
SHEET 14 OF 34 SHEETS
SDP-96-011

- NOTES:
1. PROVIDE SEDIMENT TRAP ON DOWN GRADIENT SIDE (OR BOTH SIDES) AS REQUIRED.
 2. FLUSH SURFACE STONE TOWARD SEDIMENT TRAP WITH HIGH VOLUME WATER FLOW AS NEEDED TO MAINTAIN CLEAN SURFACE STONE.
 3. SEDIMENT TRAP SHALL BE LOCATED OUTSIDE OF THE RIGHT-OF-WAY AND AT A MINIMUM SETBACK DISTANCE AS REQUIRED FOR LOCAL JURISDICTION.
 4. SEE SWPPP SITE MAPS FOR LOCATION OF SEDIMENT TRAP(S).
 5. CONTRACTOR TO LOCATE TEMPORARY CONSTRUCTION FENCING, SILT DIKES, AND INLET PROTECTION ALONG THE SIDES OF THE CONSTRUCTION EXIT TO PREVENT CONSTRUCTION TRAFFIC FROM SHORT CIRCUITING/BYPASSING THE EXIT.



CONSTRUCTION EXIT
N.T.S.

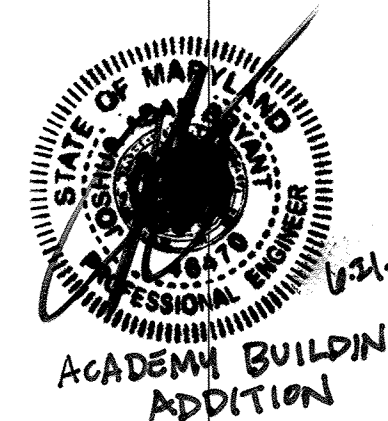
HOWARD SOIL CONSERVATION DISTRICT

STANDARD SEDIMENT CONTROL NOTES

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855).
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol 1, Chapter 12 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
6. All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
7. Site Analysis:

Total Area of Site	18.36 Acres
Area Disturbed	4.70 Acres
Area to be roofed or paved	3.97 Acres
Area to be vegetatively stabilized	0.73 Acres
Total Cut	5,624 Cu. Yds.
Total Fill	4,425 Cu. Yds.
Offsite waste/borrow area location:	N/A
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
11. Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized by the end of each work day, whichever is shorter.

Rev. 9/99



HOWARD SOIL CONSERVATION DISTRICT

PERMANENT SEEDING NOTES

- Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
- Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.
- Soil Amendments:** In lieu of soil test recommendations, use one of the following schedules:
1. Preferred -- Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs/acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.)
 2. Acceptable -- Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.
- Seeding:** For the periods March 1 -- April 30, and August 1 -- October 15, seed with 60 lbs/acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 -- July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs/acre (.05 lbs/1000 sq. ft.) of weeping lovegrass. During the period of October 16 -- February 28, protect site by:
- Option 1 -- Two tons per acre of well anchored straw mulch and seed as soon as possible in the spring.
Option 2 -- Use sod. Option 3 -- Soer with 60 lbs/acre Kentucky 30 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

Maintenance: Inspect all seeding areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES.

Apply to graded or cleared areas likely to be re-disturbed where a short-term vegetative cover is needed.

Seedbed preparation: -- Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: -- Apply 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.).

Seeding: For periods March 1 -- April 30 and from August 15 -- October 15, seed with 2-1/2 bushel per acre of annual ryegrass (3.2 lbs/1000 sq. ft.). For the period May 1 -- August 14, seed with 3 lbs/acre of weeping lovegrass (.07 lbs/1000 sq. ft.). For the period November 16 -- February 28, protect site by applying 2 tons/acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1-1/2 to 2 tons/acre (70 to 90 lbs/1000 sq. ft.) of unrotted weed-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 8 ft. or higher, use 348 gal. per acre (8 gal/1000 sq. ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

CONSTRUCTION SEQUENCE:

PHASE IA

1. INSTALL TEMPORARY CONSTRUCTION ENTRANCE WITH WASH RACK AND WASH RACK'S SEDIMENT TRAP AS SHOWN ON E&S PHASE IA
2. INSTALL CONSTRUCTION FENCING WITH GATES
3. INSTALL SILT FENCE, SILT DIKES, AND INLET PROTECTION APPROPRIATE TO THE CURRENT LIMITS OF CONSTRUCTION AS SHOWN ON E&S PHASE IA PLAN.
4. CLEAR AND GRUB WITHIN THE LIMITS OF DISTURBANCE
5. BEGIN CONSTRUCTION ACTIVITY AS SHOWN ON GRADING AND SITE PLANS
6. PROVIDE TEMPORARY SEEDING FOR ANY EXPOSED AREAS IN ACCORDANCE WITH HOWARD SOILS CONSERVATION DISTRICT NOTES ON THIS SHEET
7. UPON COUNTY INSPECTOR APPROVAL, PROCEED WITH PHASE IB ACTIVITIES.

PHASE IB

1. INSTALL TEMPORARY CONSTRUCTION ENTRANCE WITH WASH RACK AND WASH RACK'S SEDIMENT TRAP AS SHOWN ON E&S PHASE IB.
2. INSTALL CONSTRUCTION FENCING WITH GATES
3. INSTALL SILT FENCE, SILT DIKES, DIVERSION DIKES AND INLET PROTECTION APPROPRIATE TO THE CURRENT LIMITS OF CONSTRUCTION AS SHOWN ON PHASE IB.
4. CLEAR AND GRUB WITHIN THE LIMITS OF DISTURBANCE
5. BEGIN CONSTRUCTION ACTIVITY AS SHOWN ON GRADING AND SITE PLANS
6. PROVIDE TEMPORARY SEEDING FOR ANY EXPOSED AREAS IN ACCORDANCE WITH HOWARD SOILS CONSERVATION DISTRICT NOTES ON THIS SHEET
7. UPON COUNTY INSPECTOR APPROVAL, PROCEED WITH PHASE II ACTIVITIES

PHASE II

1. ONCE THE PHASE I CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED, CONTRACTOR MAY PROCEED TO E&S PHASE II. MAINTAIN PHASE I EROSION CONTROLS IN AN OPERATIVE CONDITION.
2. AS THE PROPOSED STORM SEWER IS BEING INSTALLED AND THE INLETS ARE FUNCTIONAL, INSTALL THE INLET PROTECTIONS AS SHOWN ON E&S PHASE II PLAN.
3. UPON THE COMPLETION OF ALL CONSTRUCTION AND LAND DISTURBING ACTIVITIES, AND WHEN THE DISTURBED AREAS HAVE BEEN STABILIZED, THE EROSION AND SEDIMENT CONTROL MEASURES MAY BE REMOVED WITH THE APPROVAL OF THE COUNTY INSPECTOR.

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

John R. Kolbert
HOWARD SCD
DATE: 8-18-11

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

JASON D. POWERY
SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE)
DATE: 7-25-11

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

WAL-MART REAL ESTATE BUSINESS TRUST
SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE)
DATE: 8-4-11

OWNER/DEVELOPER

WAL-MART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SWDC
BENTONVILLE, AR 72716-0550
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000

SUBDIVISION 'ELLCOTT CITY WALMART'

ELECTION DISTRICT NO. 2	HOWARD COUNTY, MARYLAND
TAX MAP 17 & 24	P/O TM PARCEL 1085
REZONING CASE NUMBER ZB-941	DATED: OCTOBER 18, 1993
SKETCH PLAN S-95-01	APPROVED: 12-2-1994
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ECP 11-007	APPROVED: 08-06-2010
FINAL RECORD PLATS	F-96-009, F-96-091 & F-98-157
WATER NO. F03	SEWER NOS. 1452800

APPROVED: DEPARTMENT OF PLANNING AND ZONING

John R. Kolbert
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 8/22/11

Walter D. ...
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 9/22/11

Thomas J. Butcher
DIRECTOR
DATE: 9/22/11

**WALMART STORE #2412-03
ELLCOTT CITY, WALMART, PARCEL B**

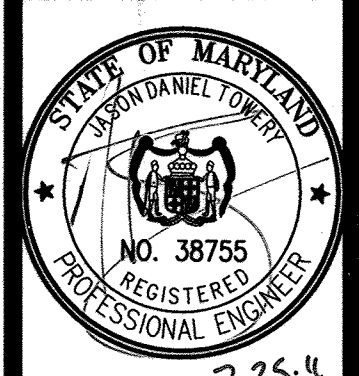
TM 24, TM GRID 6, P/O TM PARCEL 1085
2ND ELECTION DISTRICT, HOWARD COUNTY, MD

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS	DATE	SHEET
	07/25/11	16 OF 34 SHEETS

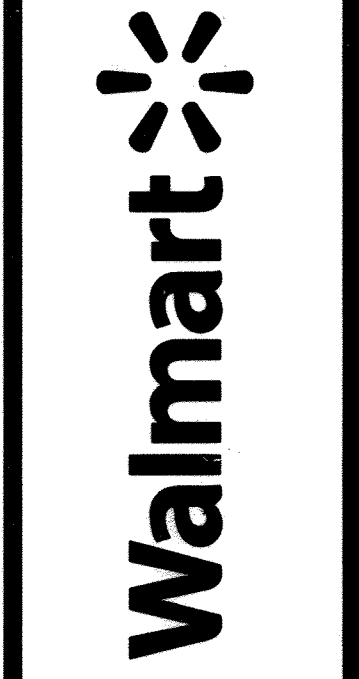
REVISIONS	BY
07/15/10-CONCEPT	BU/GD
01/14/11-1ST SUBM	BU/GD
07/25/11-2nd SUBM	BU/GD

Bowman CONSULTING

Bowman Consulting Group, Ltd.
Telephone: (703) 530-8093
Fax: (703) 530-8475
www.bowmanconsulting.com
9813 Gowin Drive
Manassas, Virginia 20110



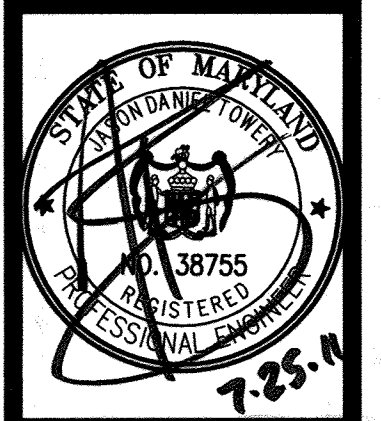
SUPERCENTER #2412-03
ELLCOTT CITY, HOWARD COUNTY, MARYLAND
WAL-MART REAL ESTATE BUSINESS TRUST
2001 SE 10TH STREET
BENTONVILLE, AR 72716



DESIGN DRAWN	BU	KJC
CHECKED	GD	
DATE	01/14/11	
SCALE		
JOB No.	4680-01-002	
SHEET	16	
OF 34 SHEETS		

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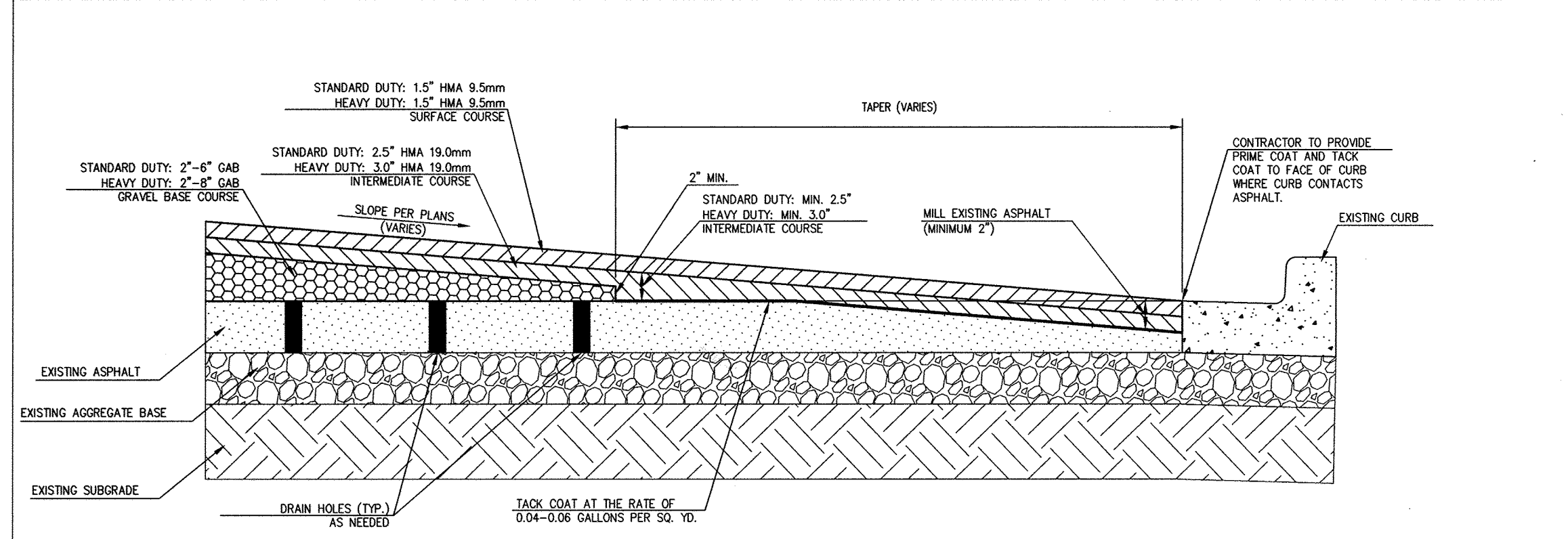
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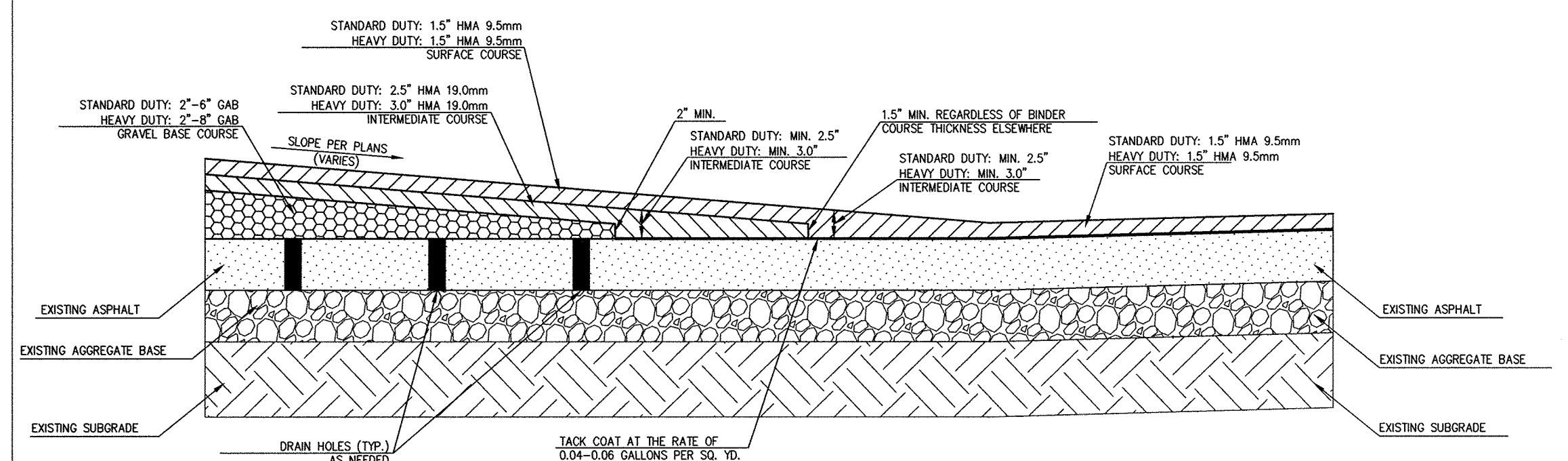
Walmart
 SUPERCENTER #2412-03
 ELLICOTT CITY, HOWARD COUNTY, MARYLAND
 WAL-MART REAL ESTATE BUSINESS TRUST
 2001 SE 10TH STREET
 BENTONVILLE, AR 72716

Walmart

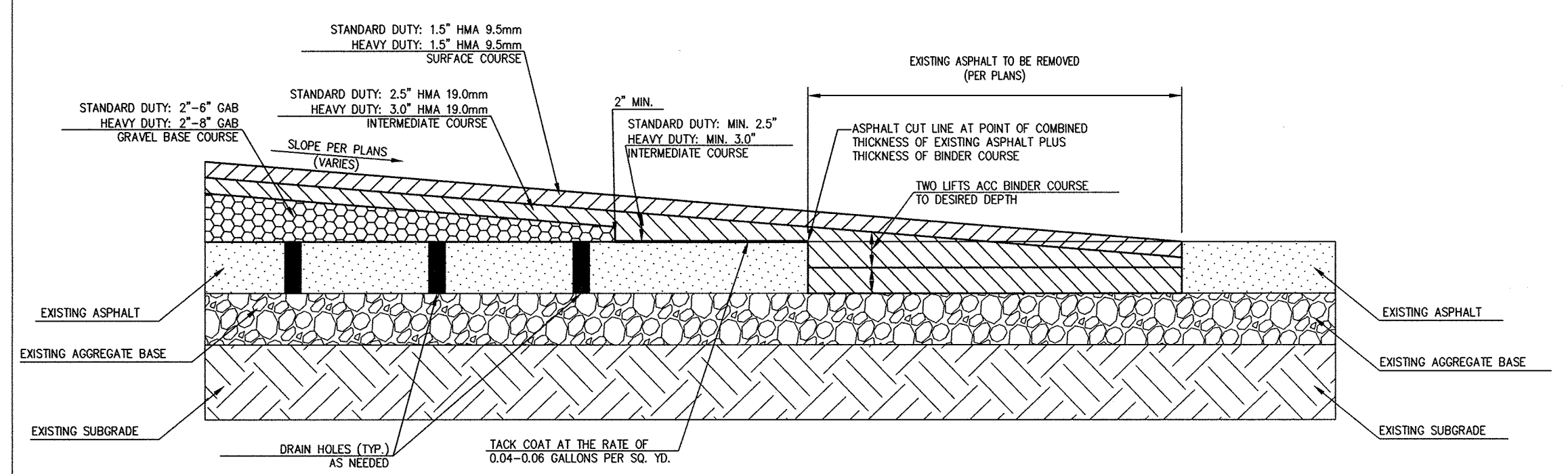
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DATE	01/14/11	
SCALE		
JOB No.	4680-01-002	
SHEET	17	
OF SHEETS	34	



PAVEMENT TRANSITION WEDGE AGAINST CURB



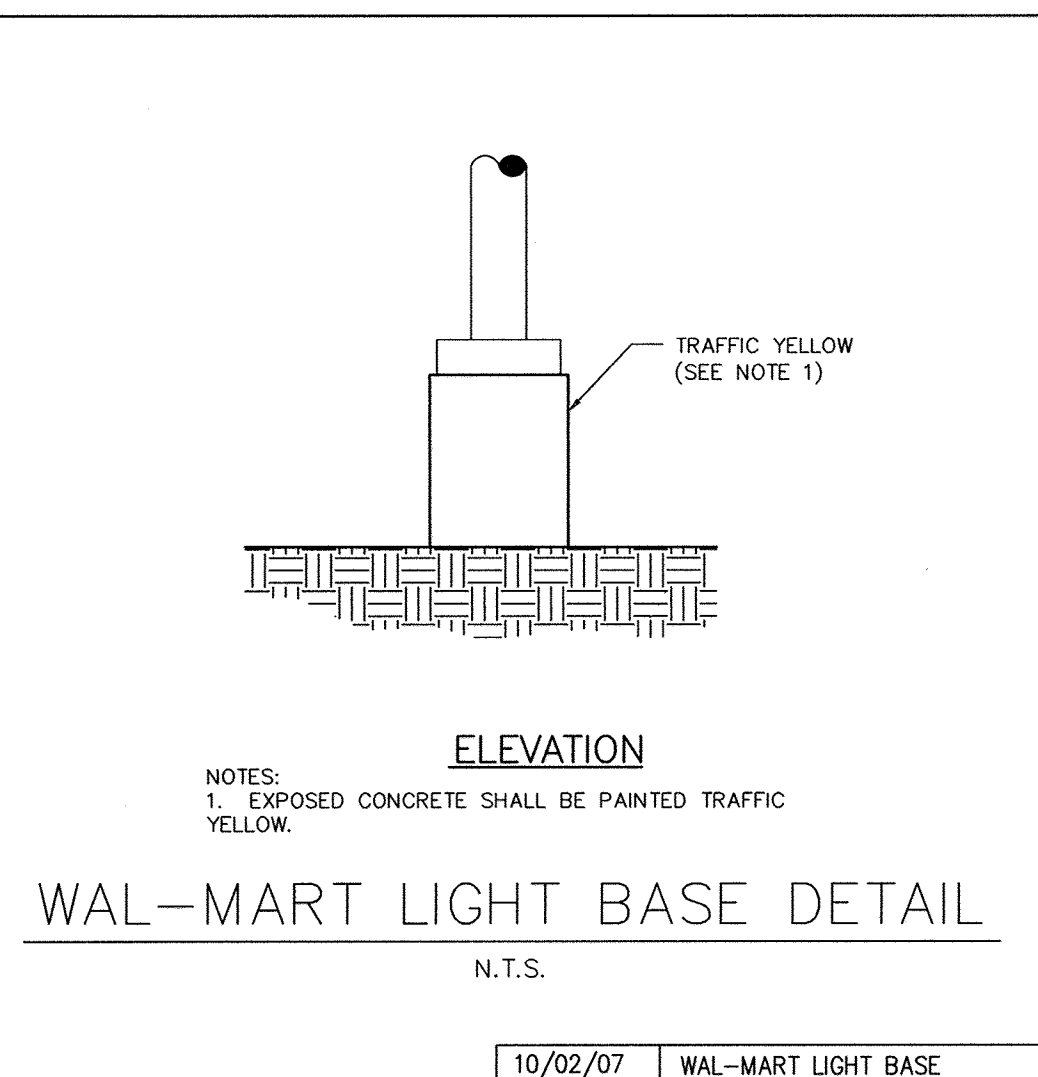
PAVEMENT TRANSITION WITH OVERLAY



PAVEMENT TRANSITION AGAINST EXISTING ASPHALT

PAVEMENT TRANSITION DETAILS

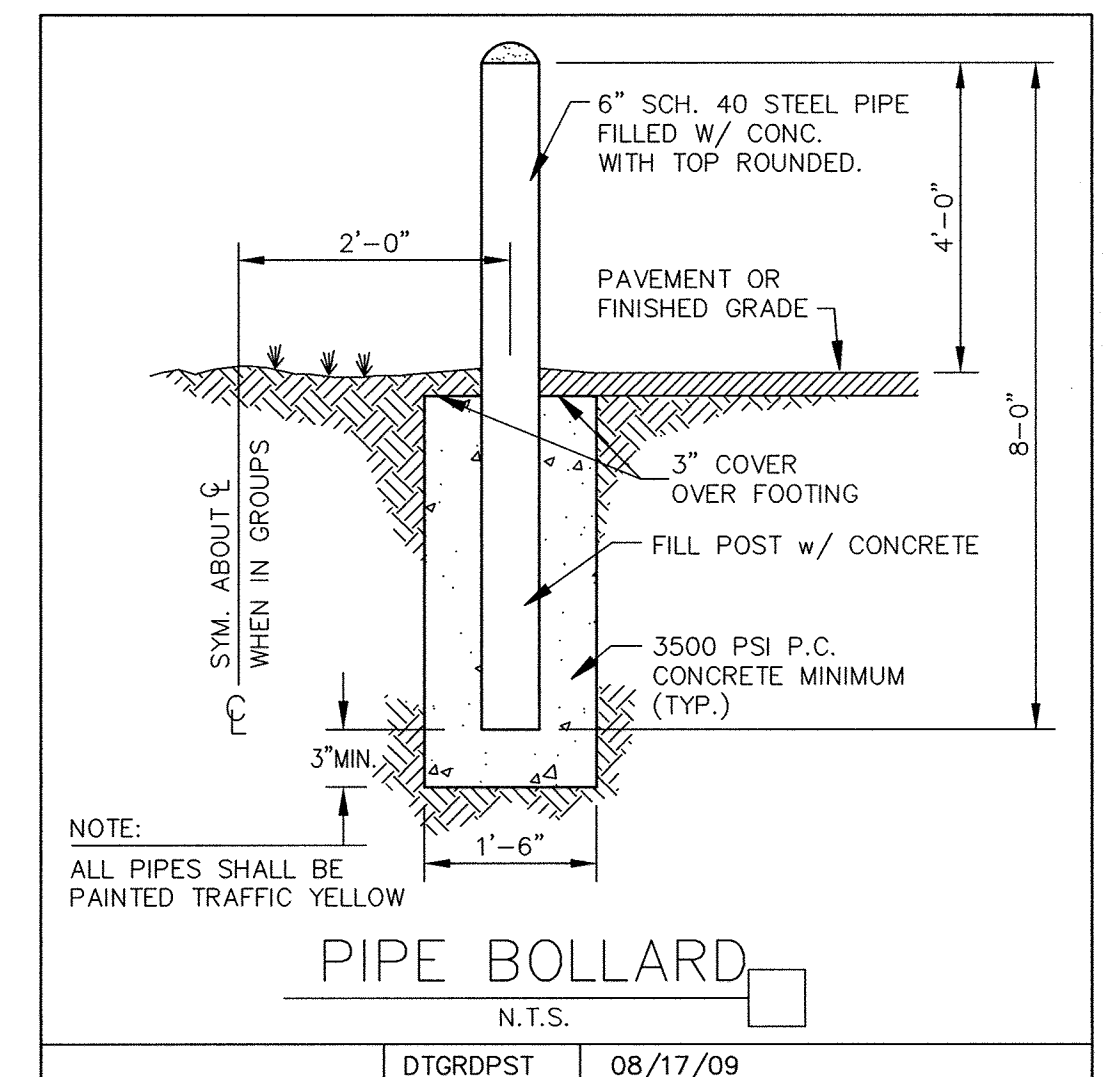
03/11/10 PVMNT TRNS



ELEVATION

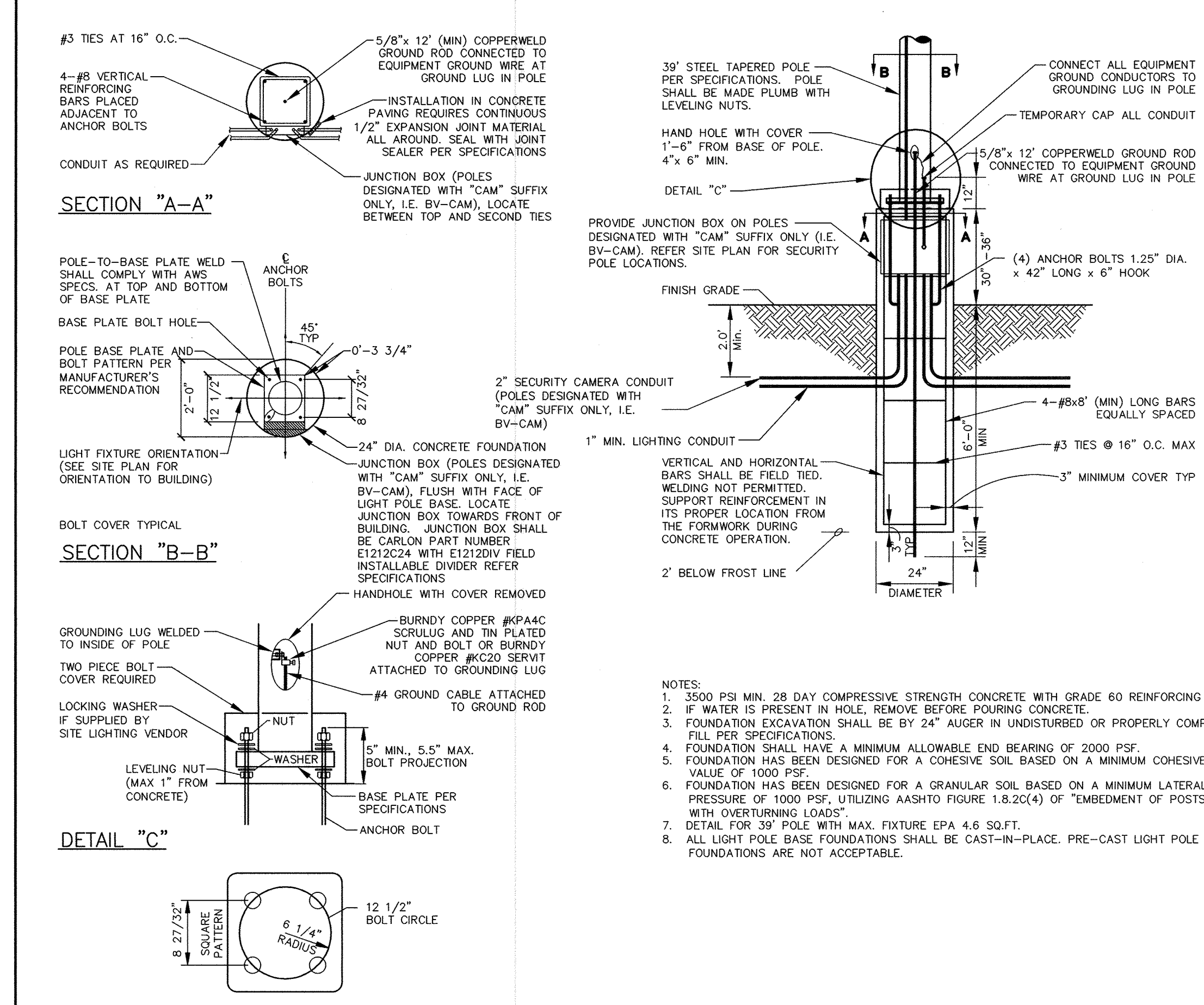
WAL-MART LIGHT BASE DETAIL

10/02/07 WAL-MART LIGHT BASE



PIPE BOLLARD

DTGRDPT 08/17/09



SECTION "A-A"

SECTION "B-B"

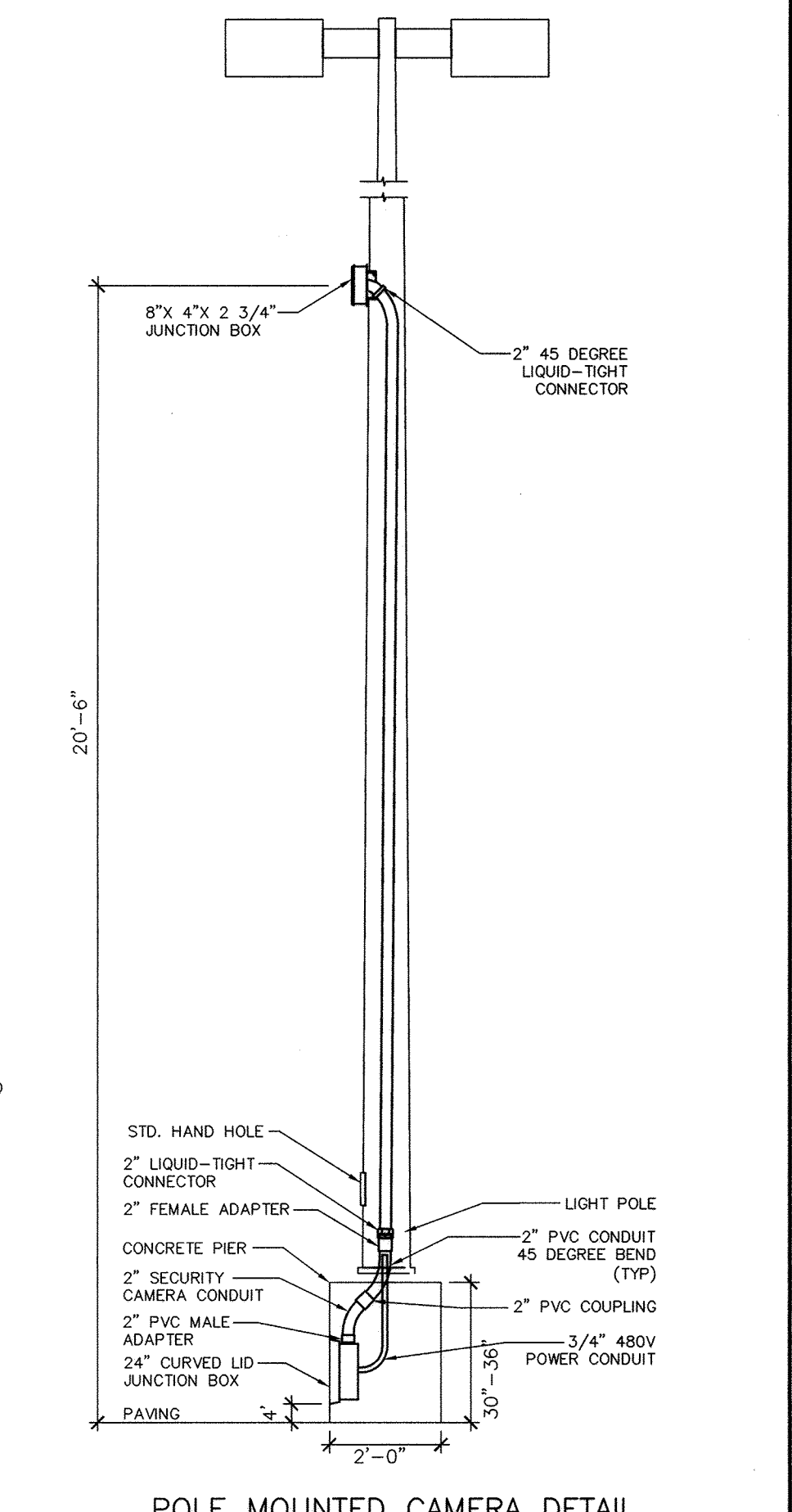
DETAIL "C-C"

TYPICAL ANCHOR BOLT SPACING

10/02/07

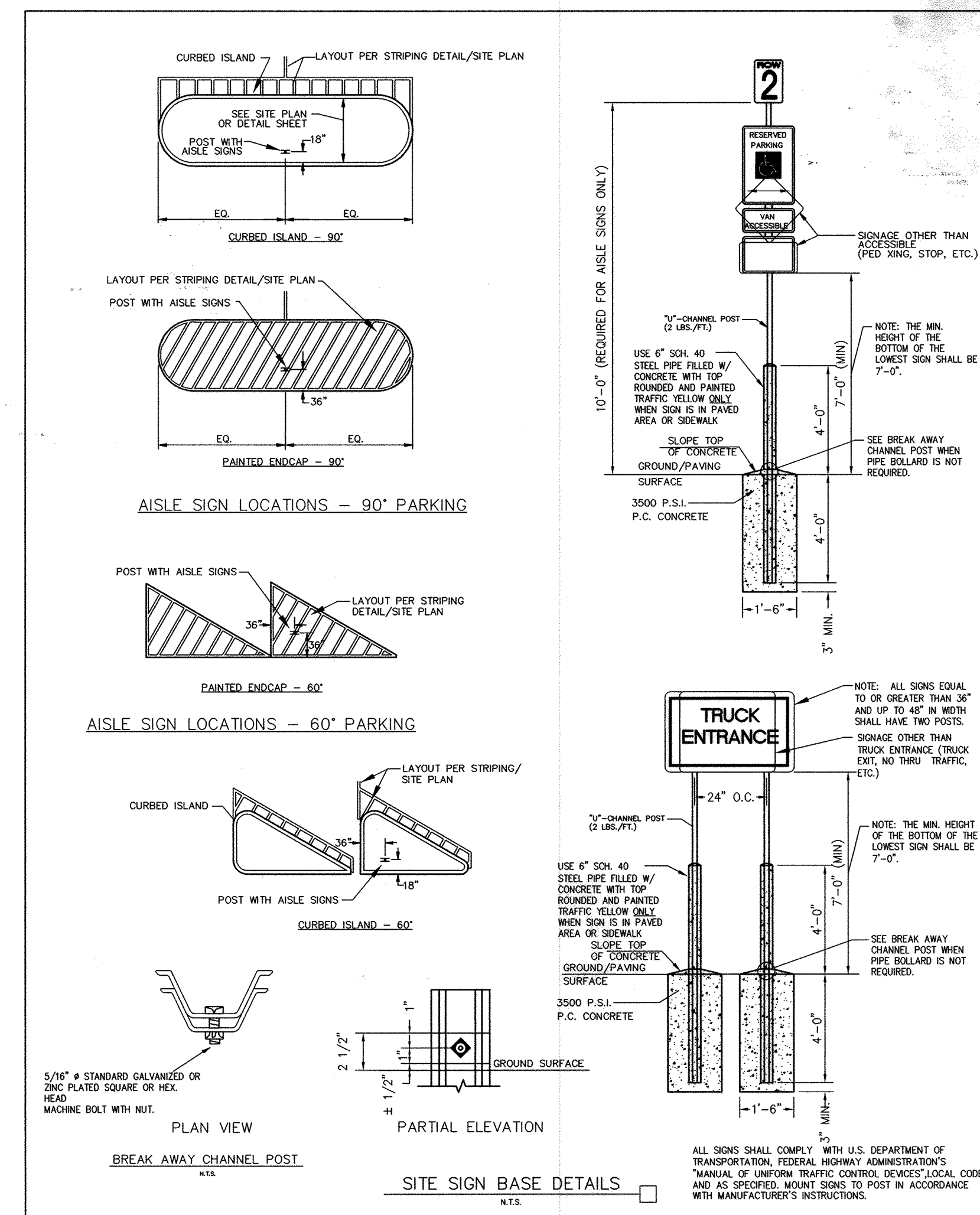
TYPICAL LIGHTING POLE BASE DETAIL

10/02/07



POLE MOUNTED CAMERA DETAIL

NOTE: ONLY FOR POLE LOCATIONS DESIGNATED WITH "CAM" SUFFIX ONLY, I.E. BV-CAM. CAMERAS AND WIRING BY OTHERS.



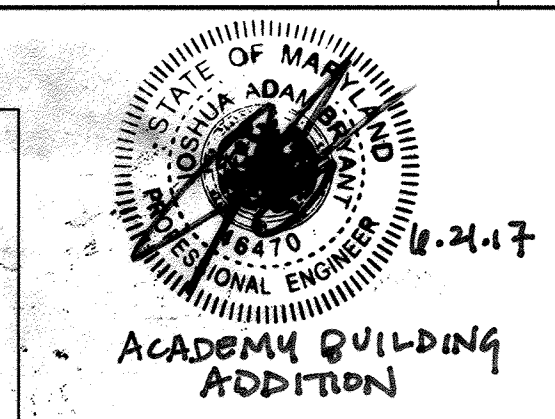
AISLE SIGN LOCATIONS - 90° PARKING

AISLE SIGN LOCATIONS - 60° PARKING

TRUCK ENTRANCE

SITE SIGN BASE DETAILS

08/23/09



ACADEMY BUILDING ADDITION

OWNER/DEVELOPER
 WAL-MART REAL ESTATE BUSINESS TRUST
 2001 SOUTHEAST 10TH STREET, SWDC
 BENTONVILLE, AR 72716-0550
 CONTACT: MIKE THOMAS
 PHONE: (479) 273-4000

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 SEWER NOS. 1452800 F-12-023

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Adam M. Adams 8/24/11
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Tommas J. Butler 9/20/11
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Thomas J. Butler 9/20/11
 DIRECTOR DATE

WALMART STORE #2412-03
ELLCOTT CITY, WALMART, PARCEL B
 TM 24, TM GRID 8, P/O TM PARCEL 1085
 2ND ELECTION DISTRICT, HOWARD COUNTY, MD

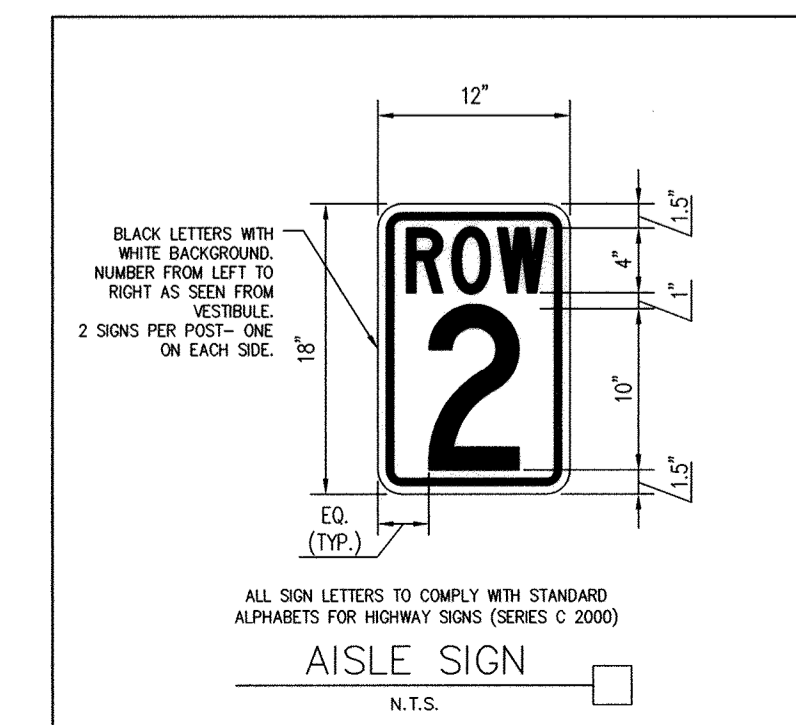
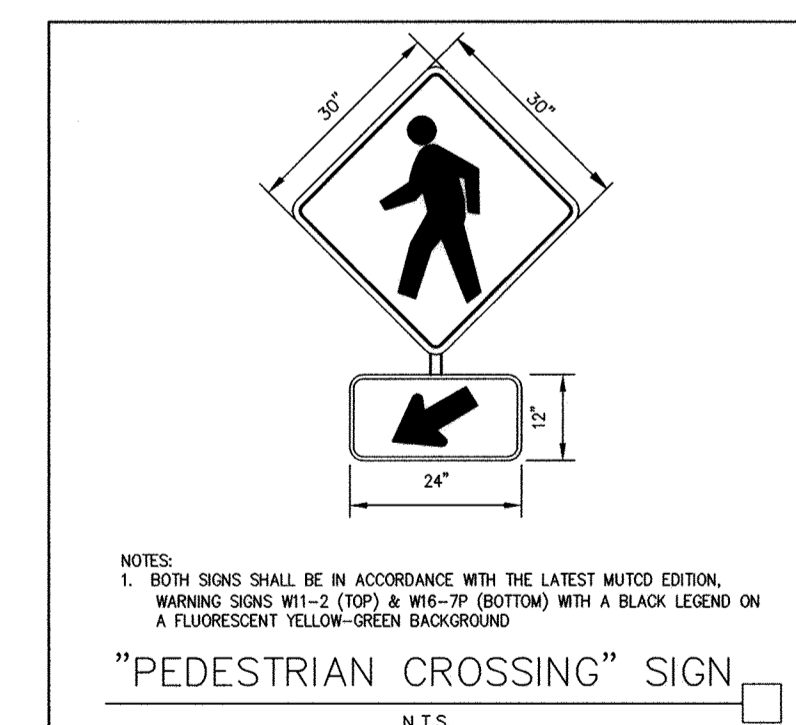
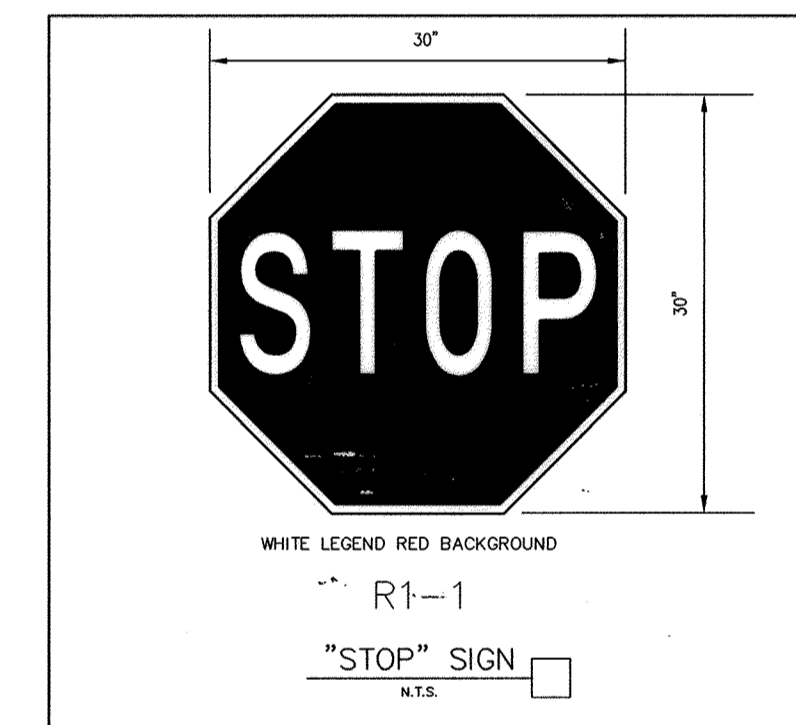
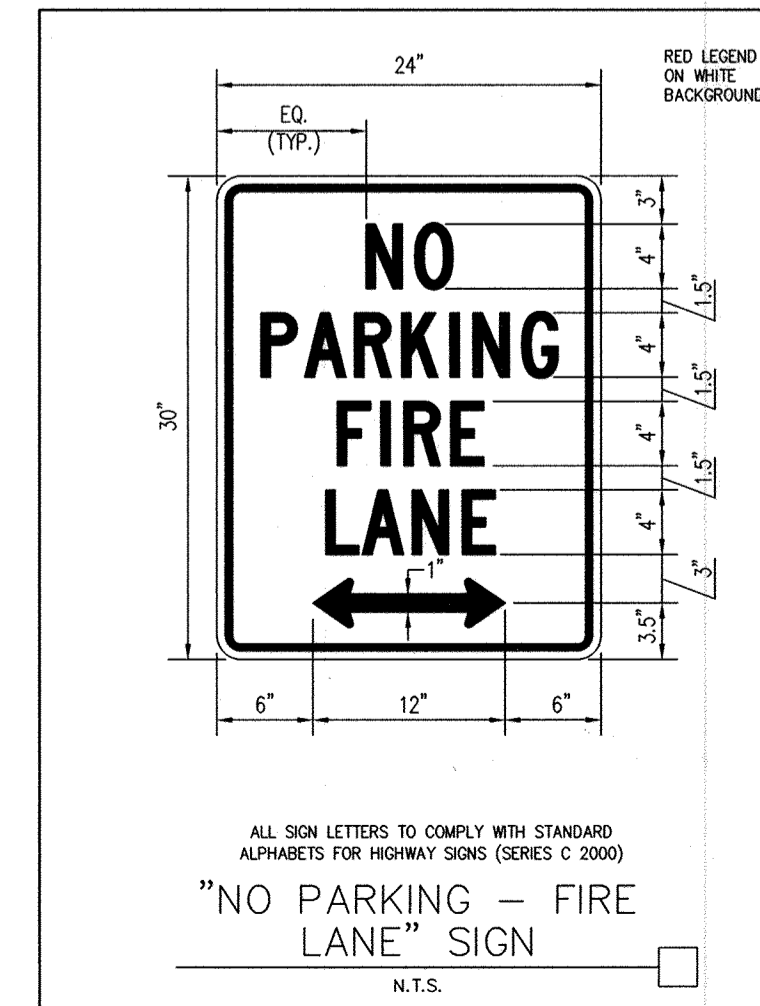
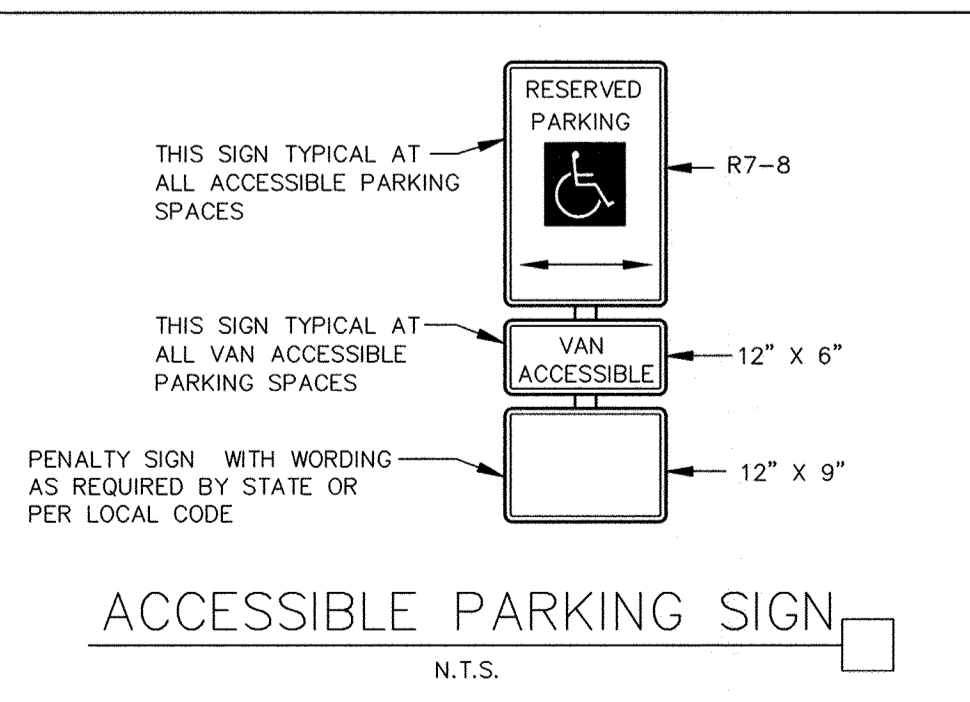
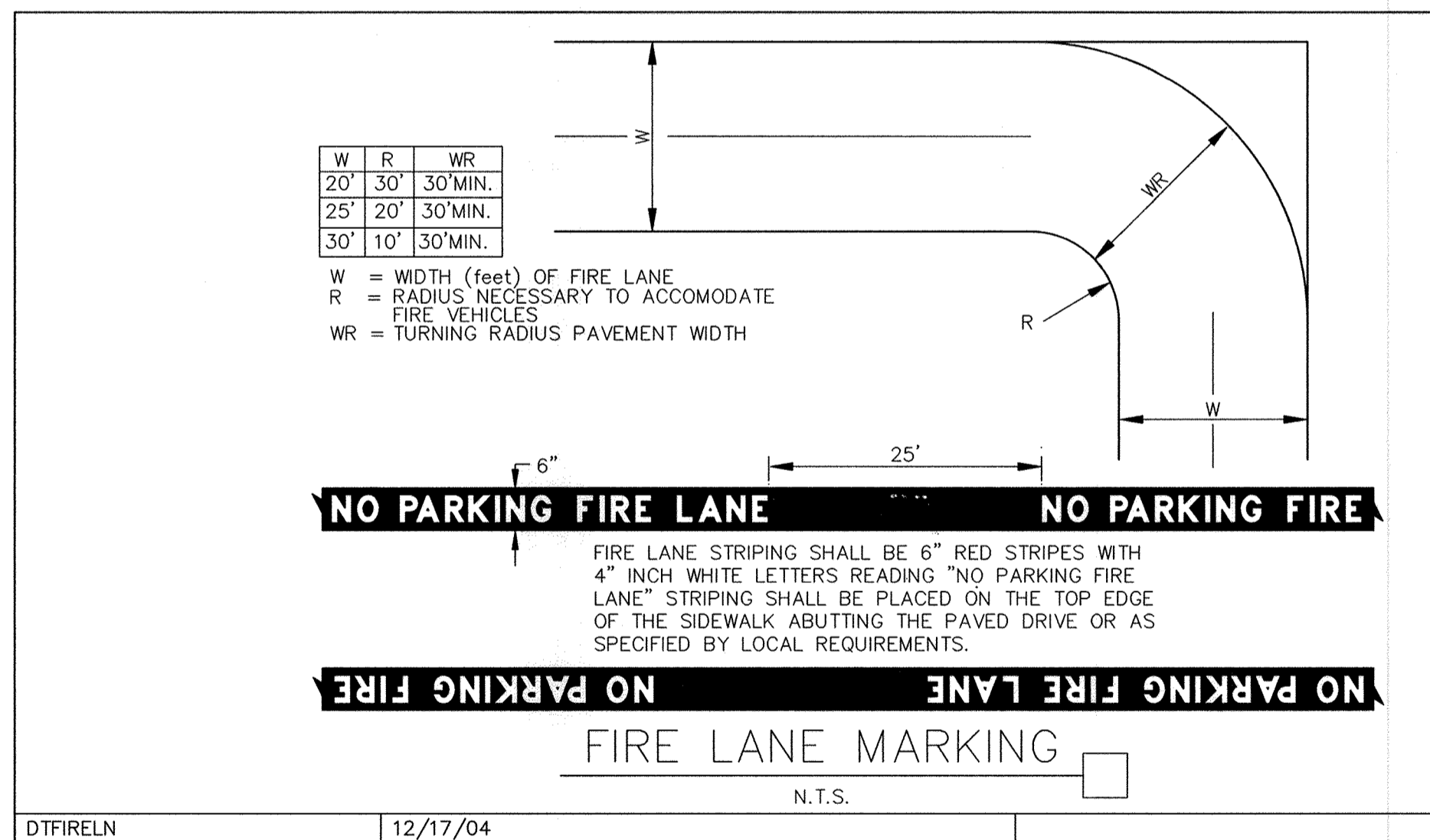
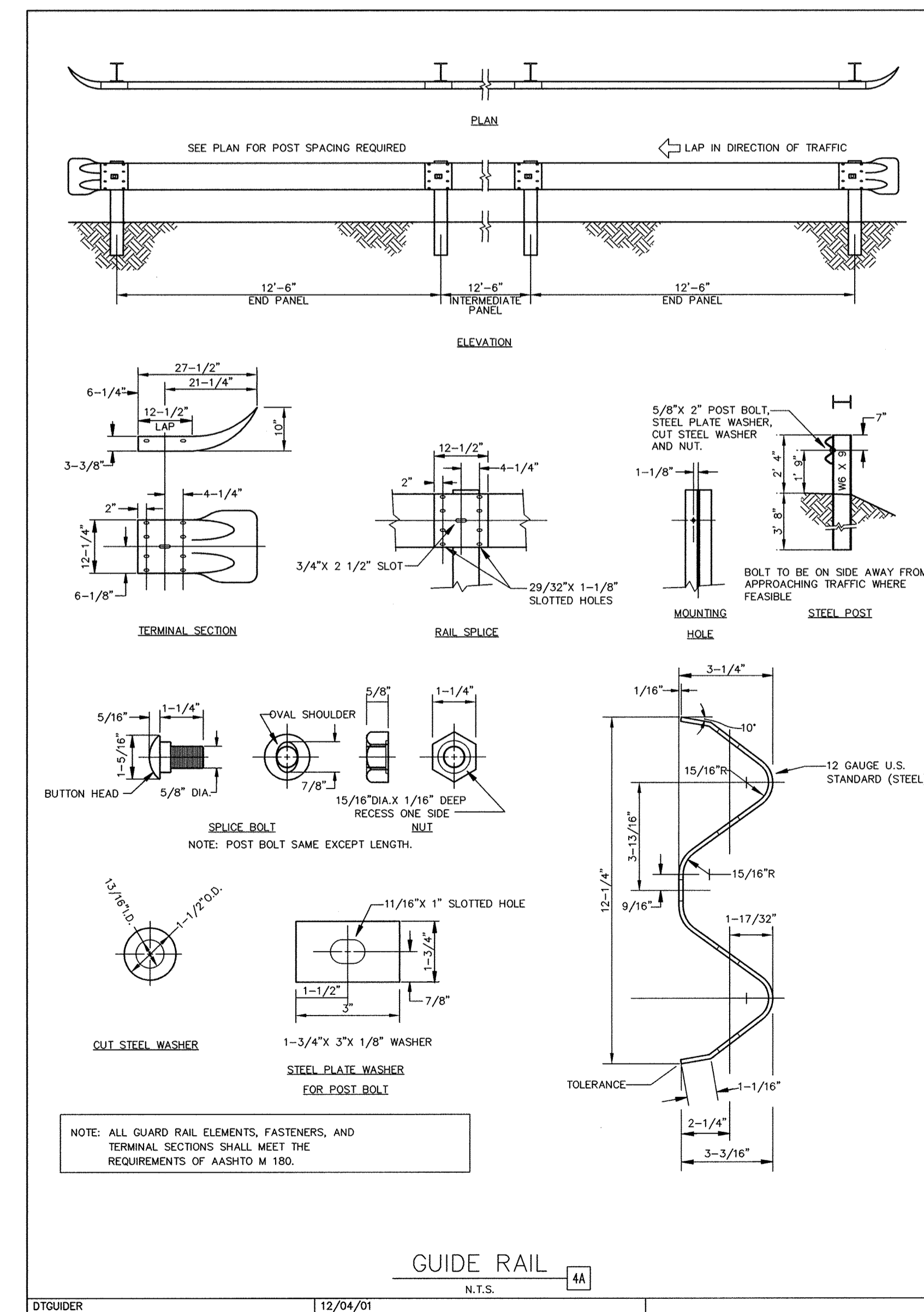
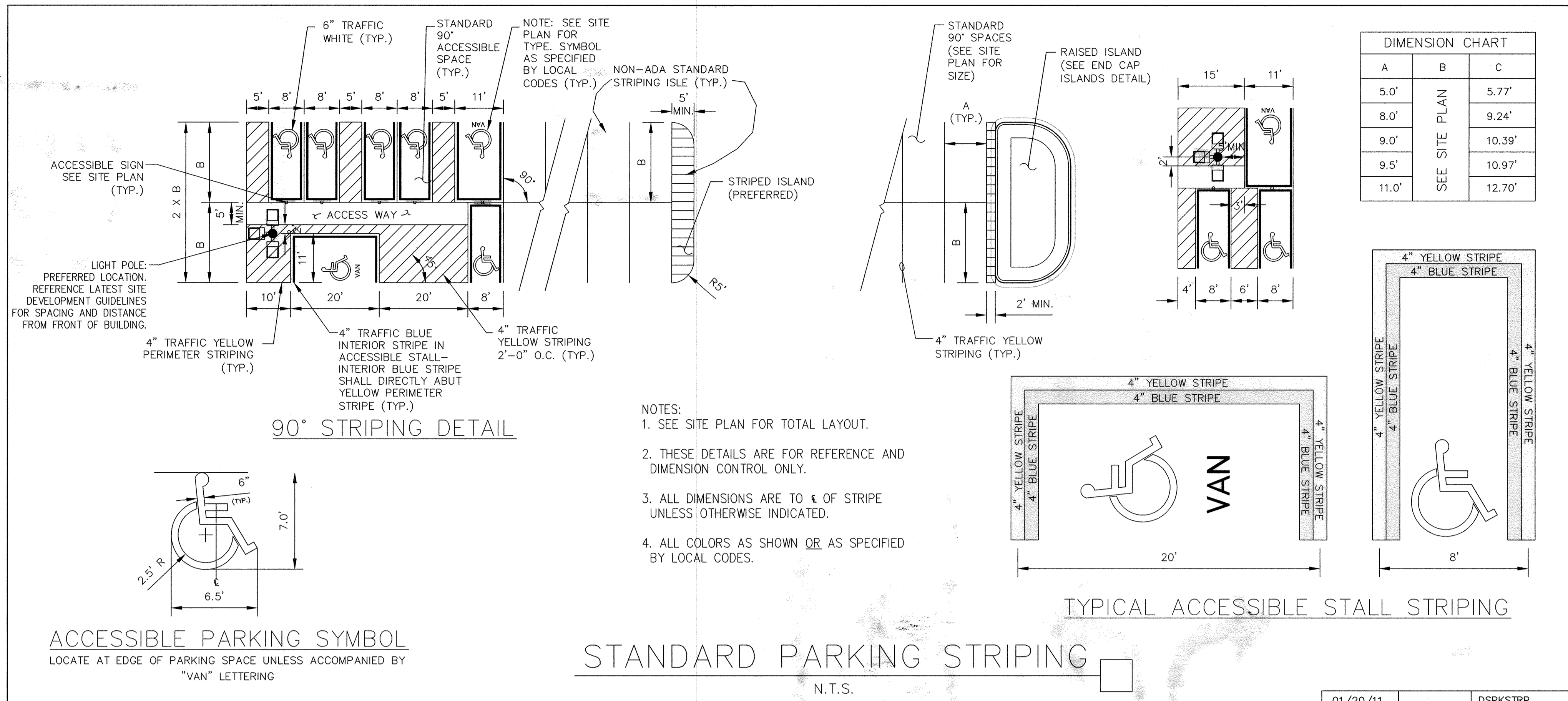
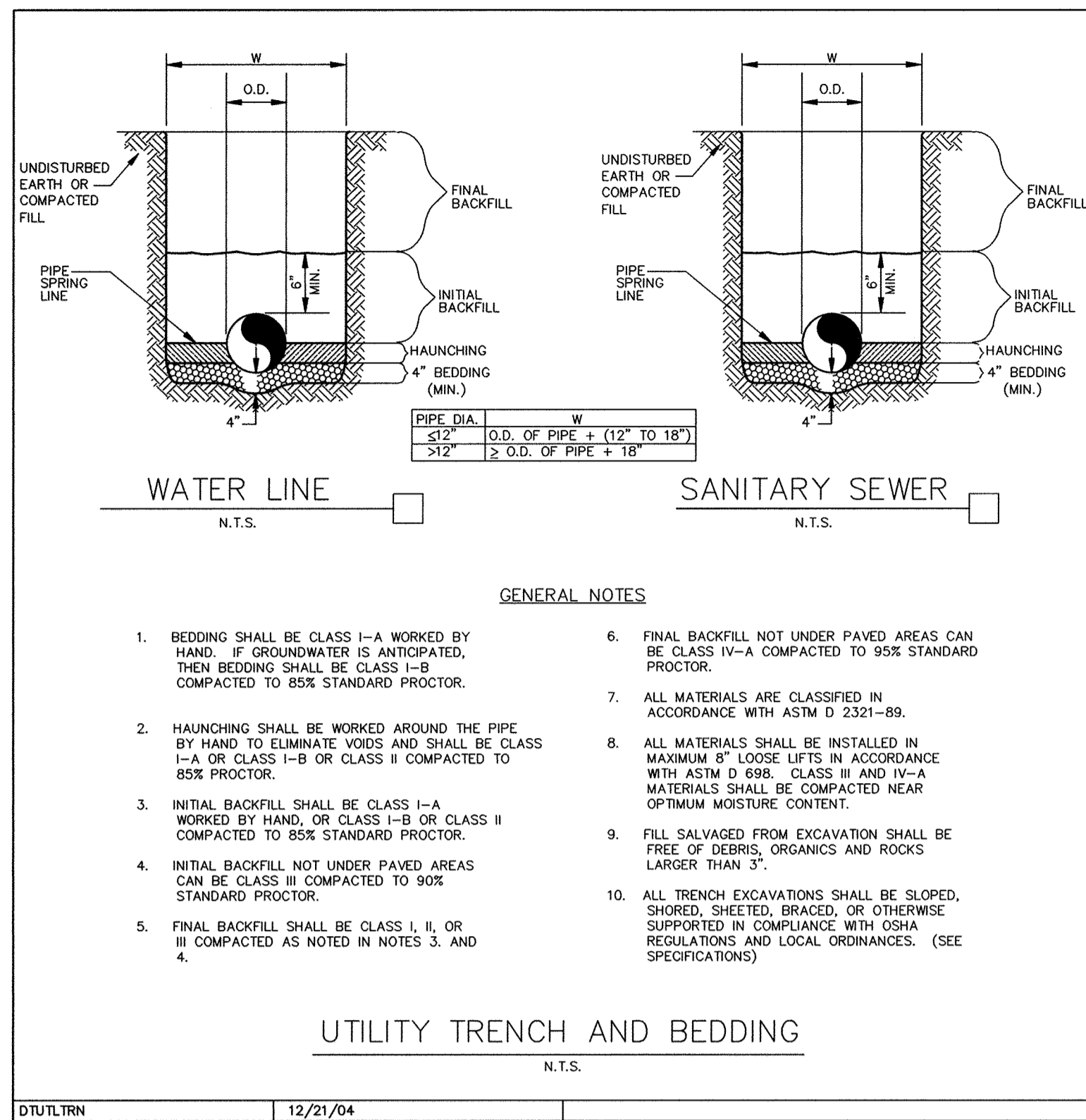
CONSTRUCTION DETAILS	DATE	SHEET
	07/25/11	17 OF 34 SHEETS

NO ASBUILT INFO GS-12

SDP-96-011

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OWNER/DEVELOPER
 WAL-MART REAL ESTATE BUSINESS TRUST
 2001 SOUTHEAST 10TH STREET, SWDC
 BENTONVILLE, AR 72716-0550
 CONTACT: MIKE THOMAS
 PHONE: (479) 273-4000

SUBDIVISION 'ELLCOTT CITY WALMART'

ELECTION DISTRICT NO. 2
 TAX MAP 17 & 24
 REZONING CASE NUMBER ZB-941
 SKETCH PLAN S-95-01
 PRELIMINARY PLAN P-95-21
 SITE PLAN SDP-96-11
 MASS GRADING PLAN SDP-96-001
 FINAL ROAD CONSTRUCTION PLAN FOR NORTH RIDGE RD. F-96-01
 ECP 11-007
 FINAL RECORD PLATS
 WATER NO. F03

HOWARD COUNTY, MARYLAND
 P/O TM PARCEL 1085
 DATED: OCTOBER 18, 1993
 APPROVED: 12-2-1994
 APPROVED: 06-06-1995
 APPROVED: 06-21-1996
 APPROVED: 04-03-1996

APPROVED: 11-08-1995
 APPROVED: 08-06-2010
 F-96-009, F-96-091 & F-98-157
 SEWER NOS. 1452800

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Michael J. ...
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

...
 CHIEF, DIVISION OF LAND DEVELOPMENT

Thomas J. Butler
 DIRECTOR

WALMART STORE #2412-03
ELLCOTT CITY, WALMART, PARCEL B

TM 24, TM GRID 6, P/O TM PARCEL 1085
 2ND ELECTION DISTRICT, HOWARD COUNTY, MD

CONSTRUCTION DETAILS

DATE: 07/25/11

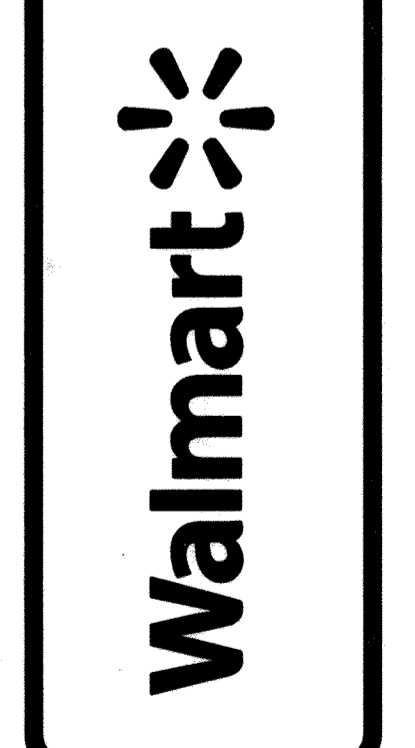
SHEET 18 OF 34 SHEETS

REVISIONS	BY
07/15/10-CONCEPT	BU/GD
01/14/11-1ST SUBM	BU/GD
07/25/11-2nd SUBM	BU/GD

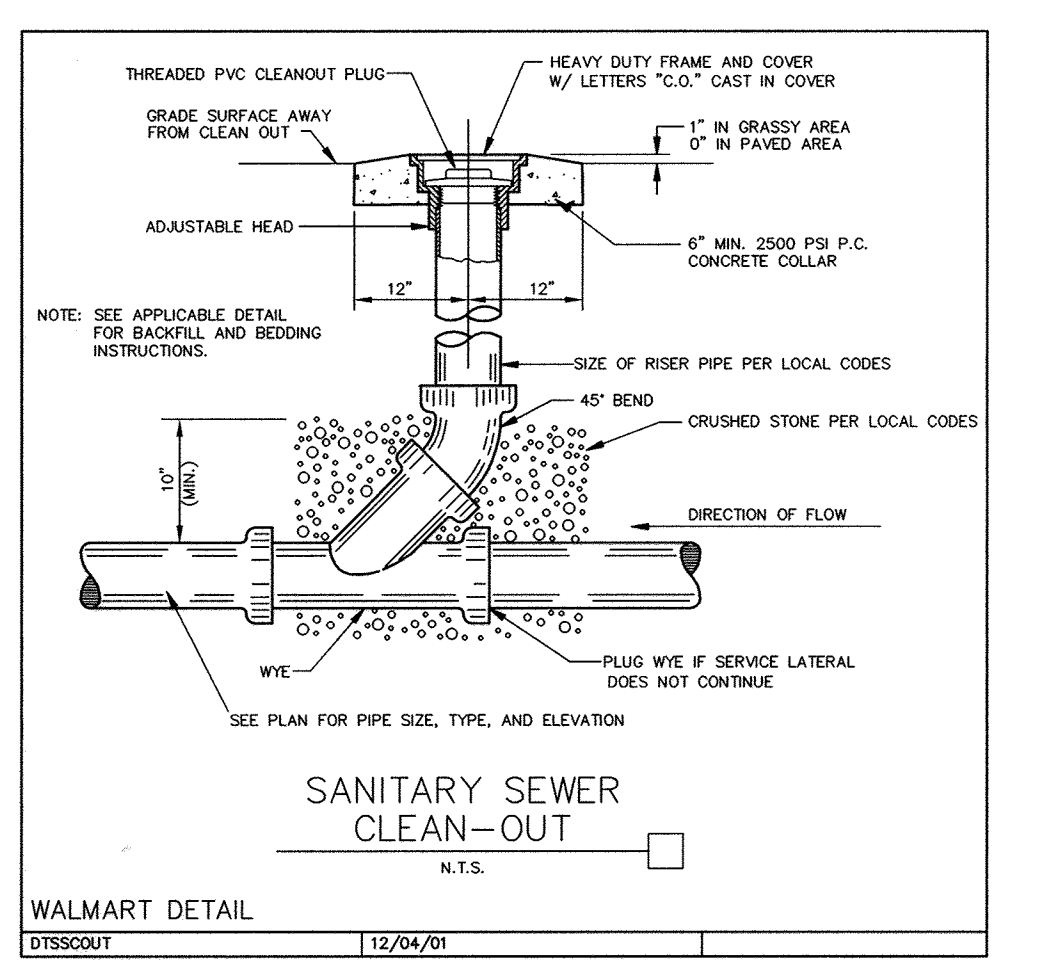
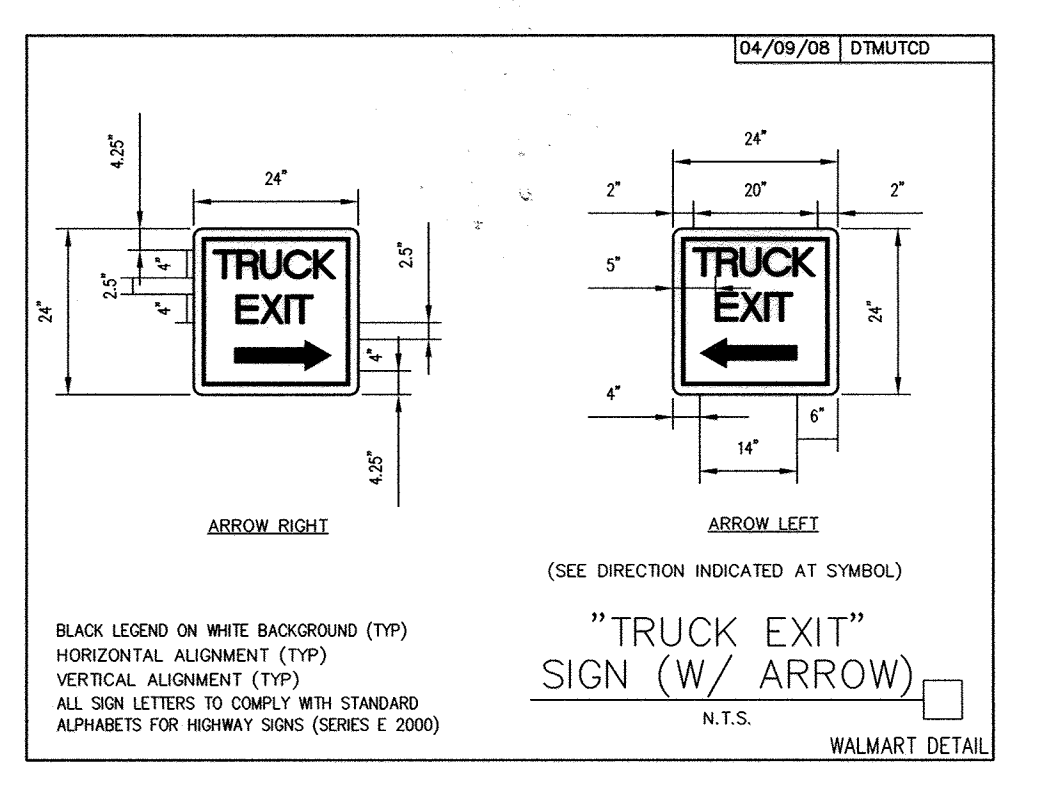
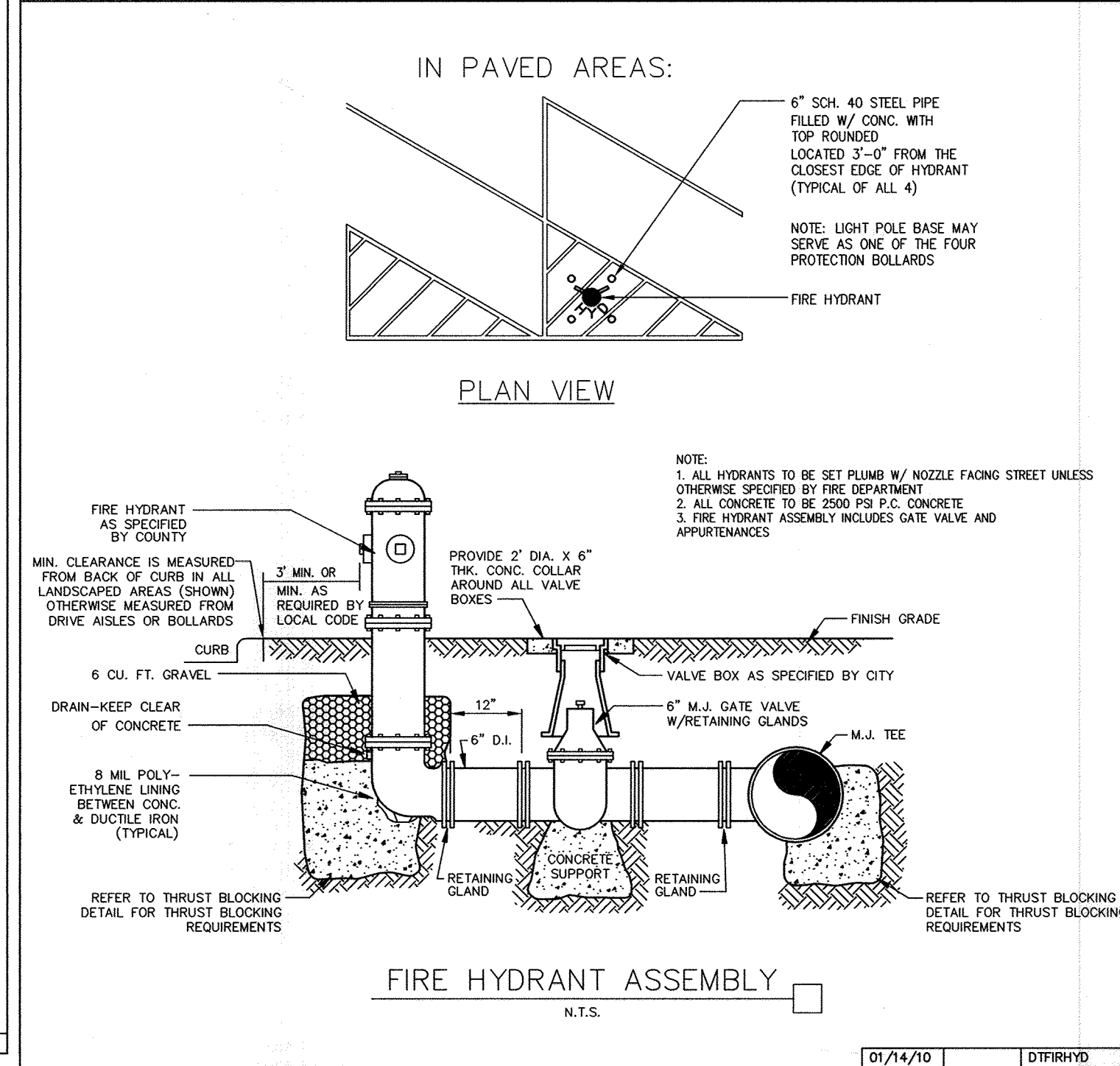
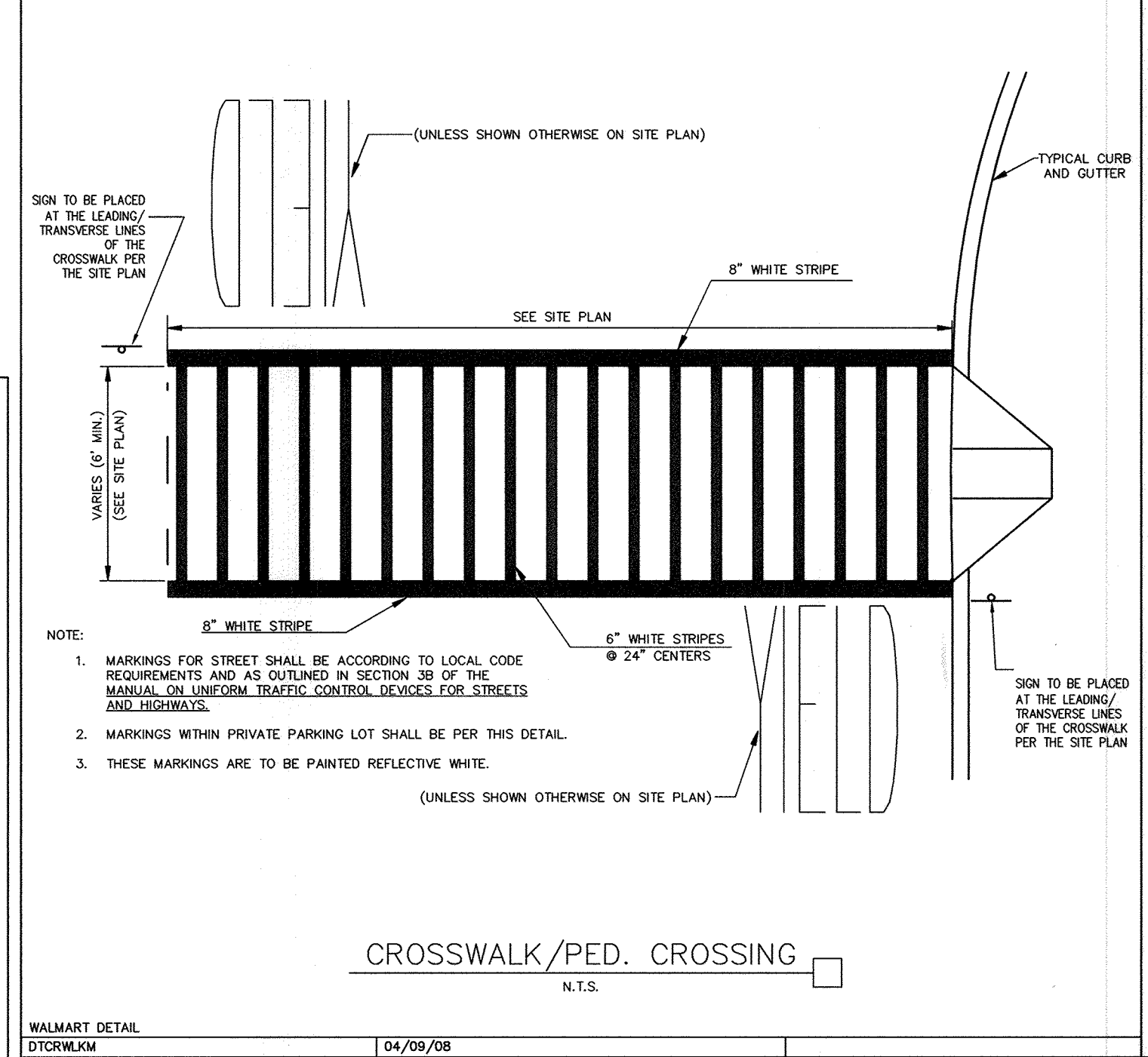
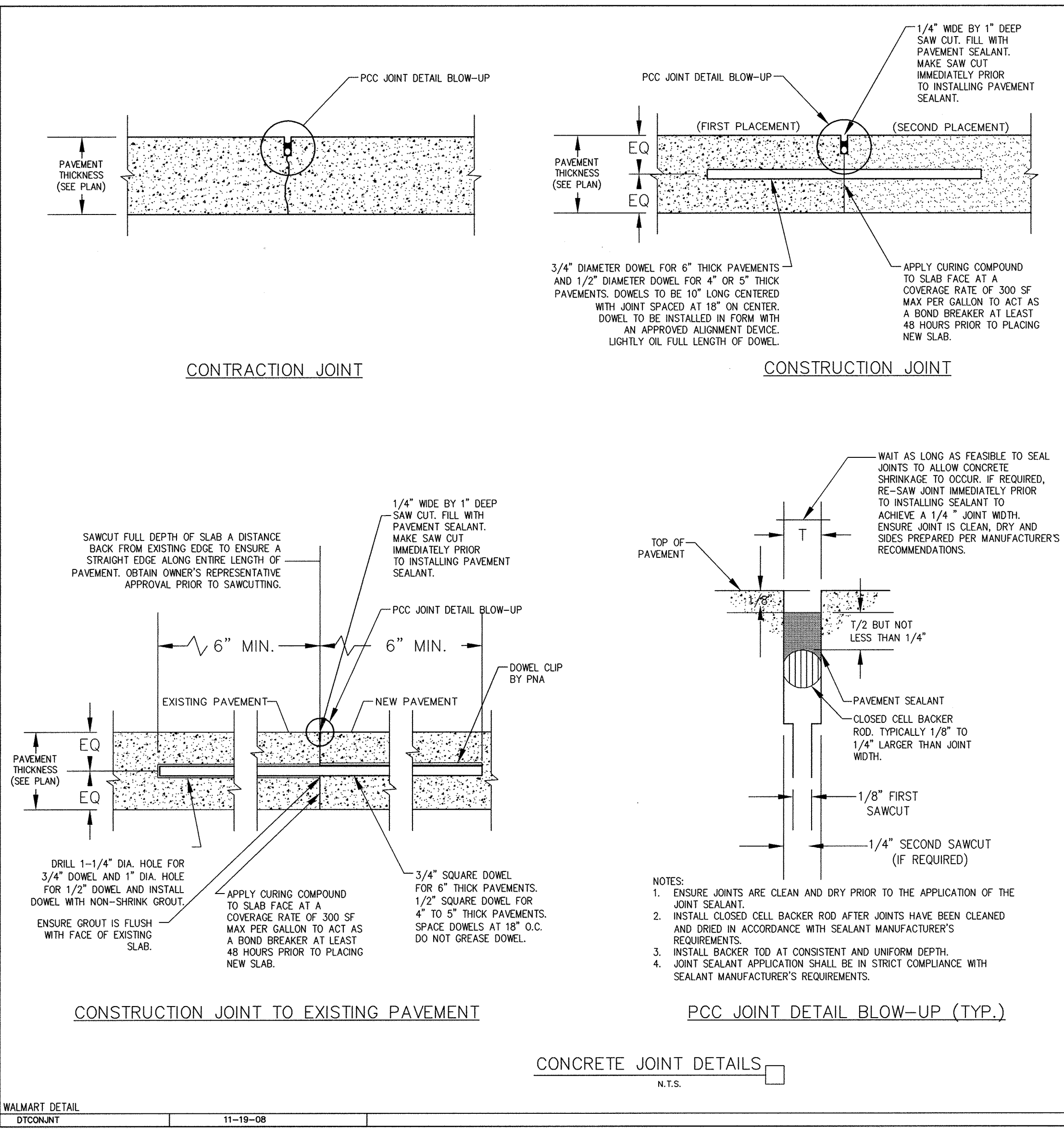
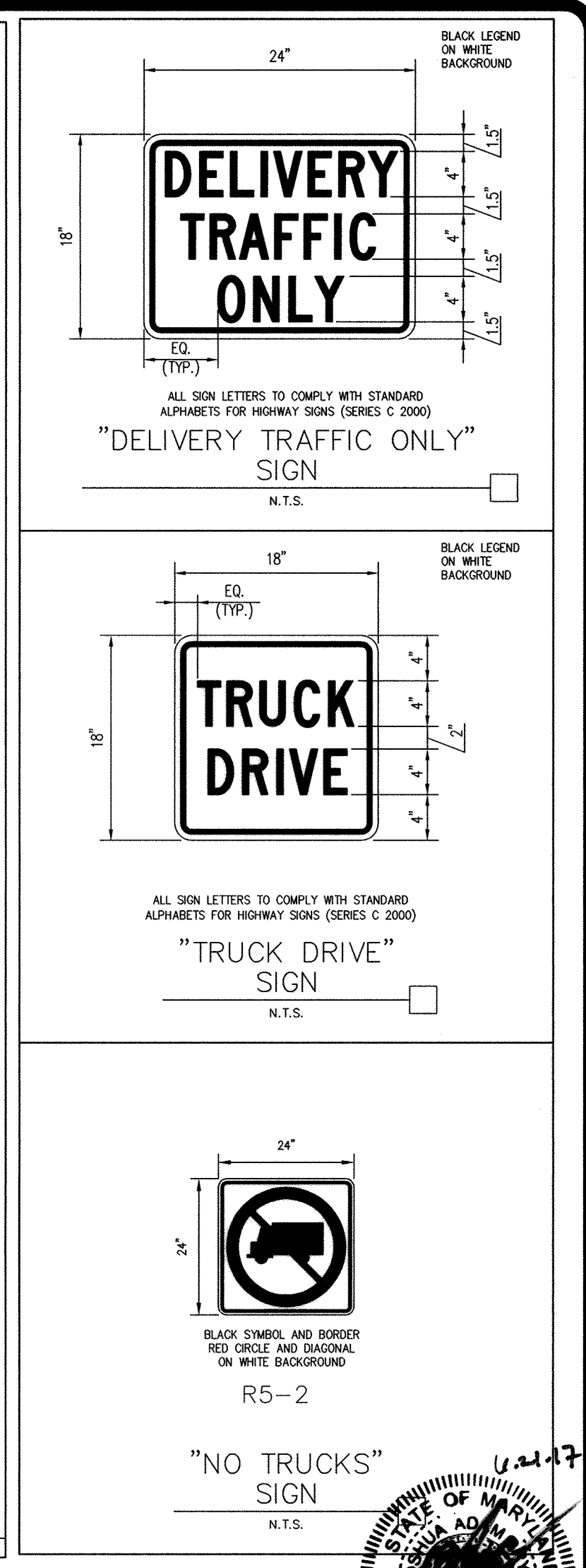
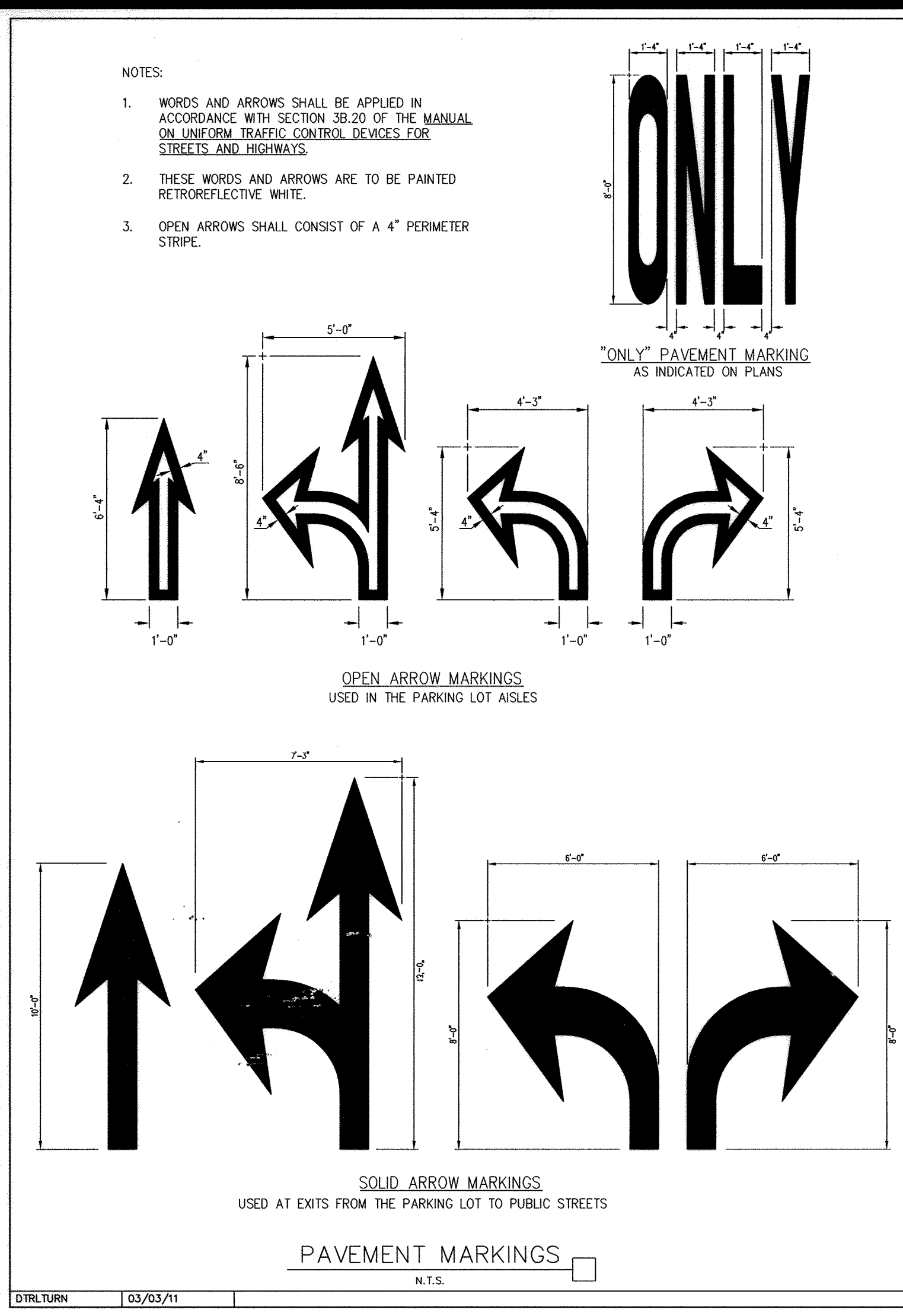
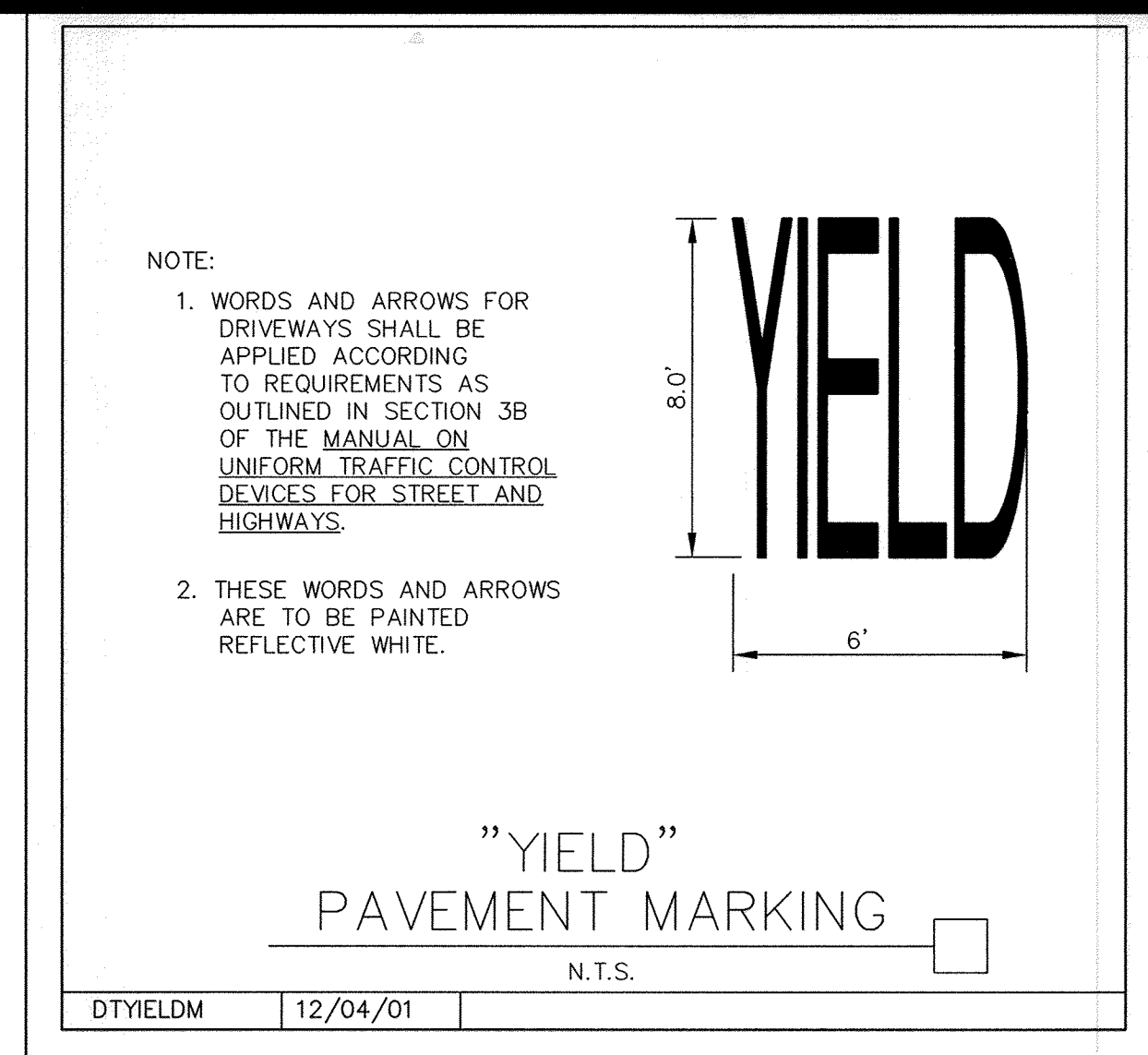
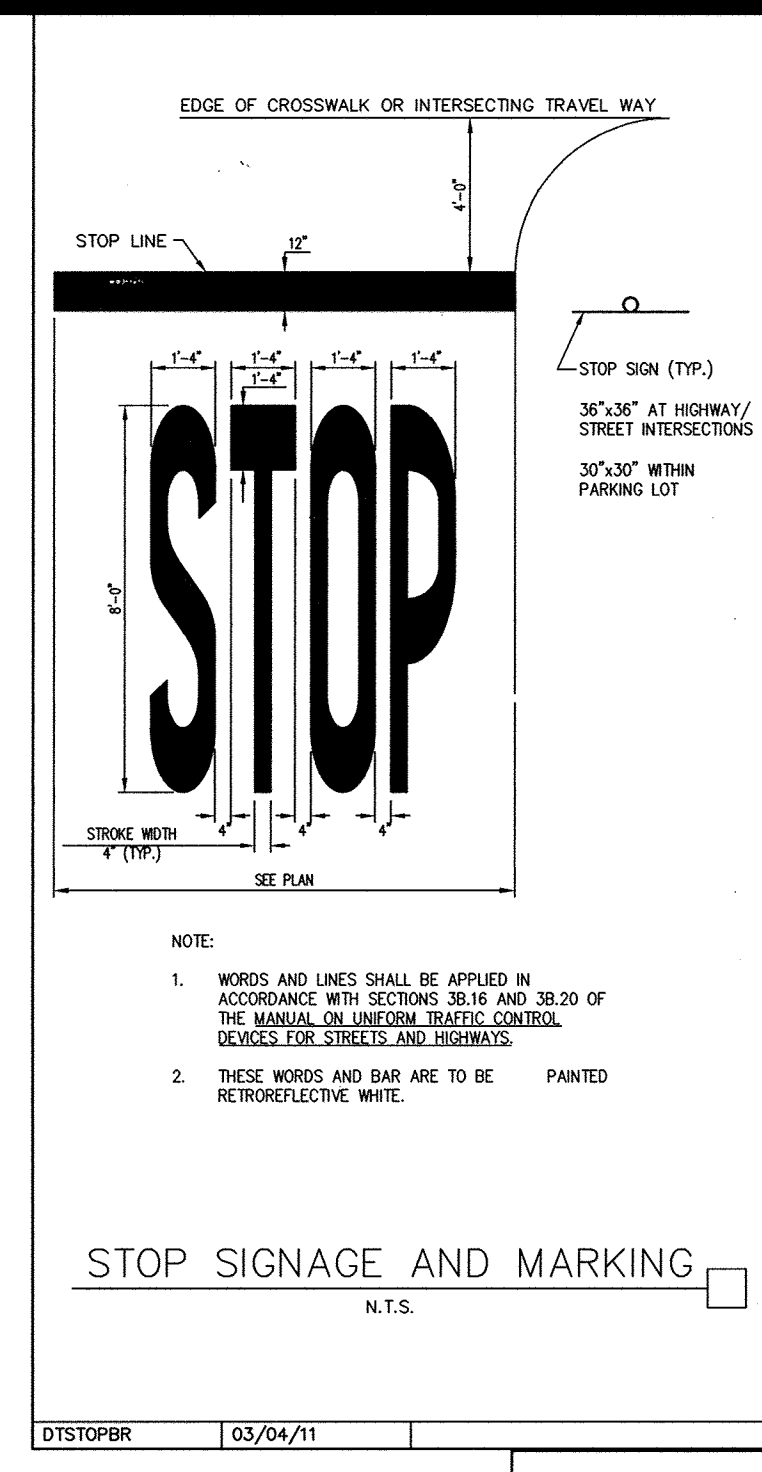
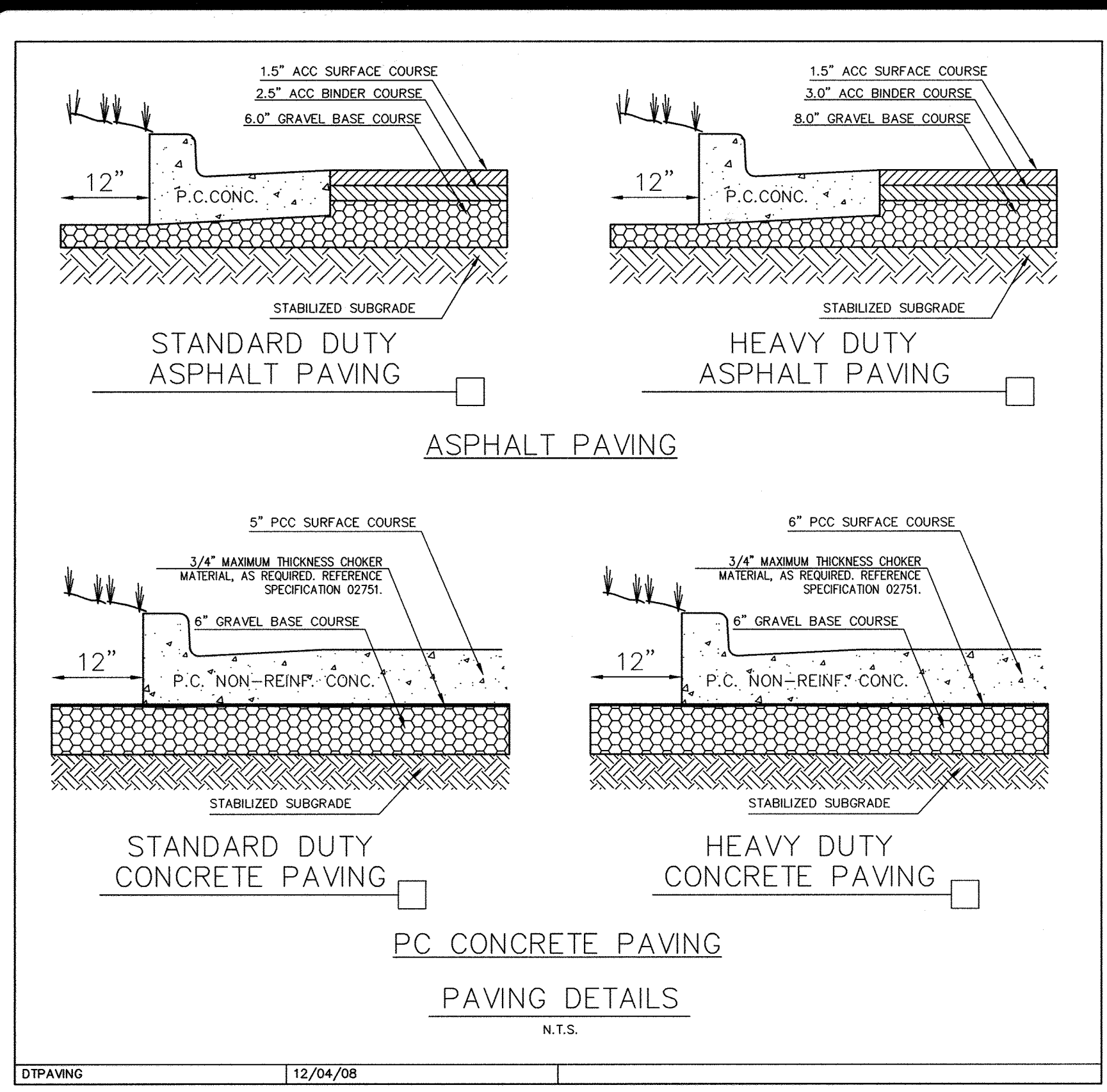
Bowman CONSULTING
 Telephone: (703) 530-8093
 Fax: (703) 530-8475
 www.bowmanconsulting.com
 9813 Gowin Drive
 Manassas, Virginia 20110

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 NO. 38755
 REGISTERED PROFESSIONAL ENGINEER
 7-254

SUPERCENTER #2412-03
 ELLCOTT CITY, HOWARD COUNTY, MARYLAND
 WAL-MART REAL ESTATE BUSINESS TRUST
 2001 SE 10TH STREET
 BENTONVILLE, AR 72716



DESIGN DRAWN BY KJC
 CHECKED BY
 DATE 01/14/11
 SCALE
 JOB No. 4860-01-002
 SHEET 18 OF 34 SHEETS
 SDP-96-011



OWNER/DEVELOPER
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 F-96-009, F-96-091 & F-98-157
 SEWER NOS. 1452800

F-12-023

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Mike Thomas
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 8/23/11

Mike Thomas
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 9/22/11

Thomas & Butcher
 DIRECTOR
 DATE: 9/27/11

WALMART STORE #2412-03
ELLCOTT CITY, WALMART, PARCEL B

TM 24, TM GRID 6, P/O TM PARCEL 1085
 2ND ELECTION DISTRICT, HOWARD COUNTY, MD

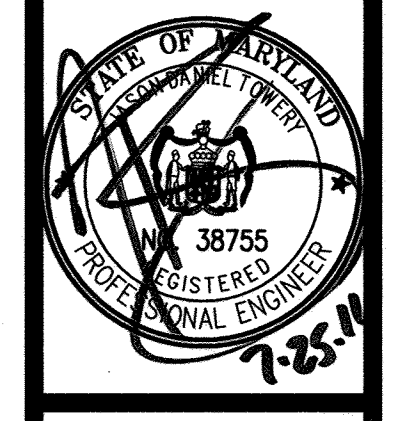
CONSTRUCTION DETAILS

DATE: 07/25/11

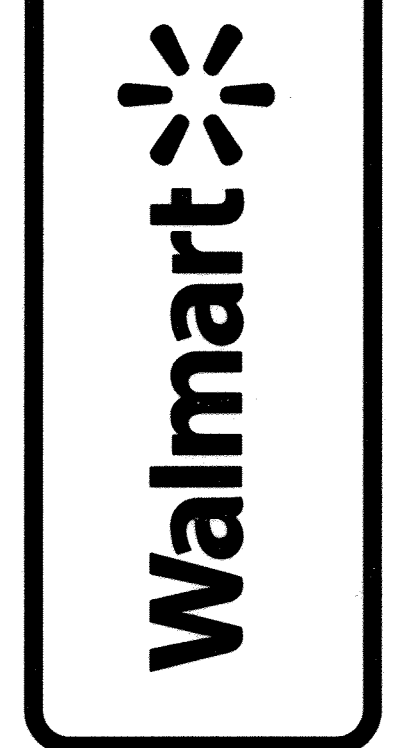
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01/14/11-1ST SUBM	BU/GD
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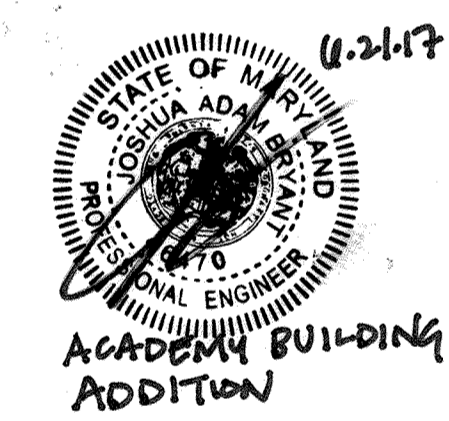
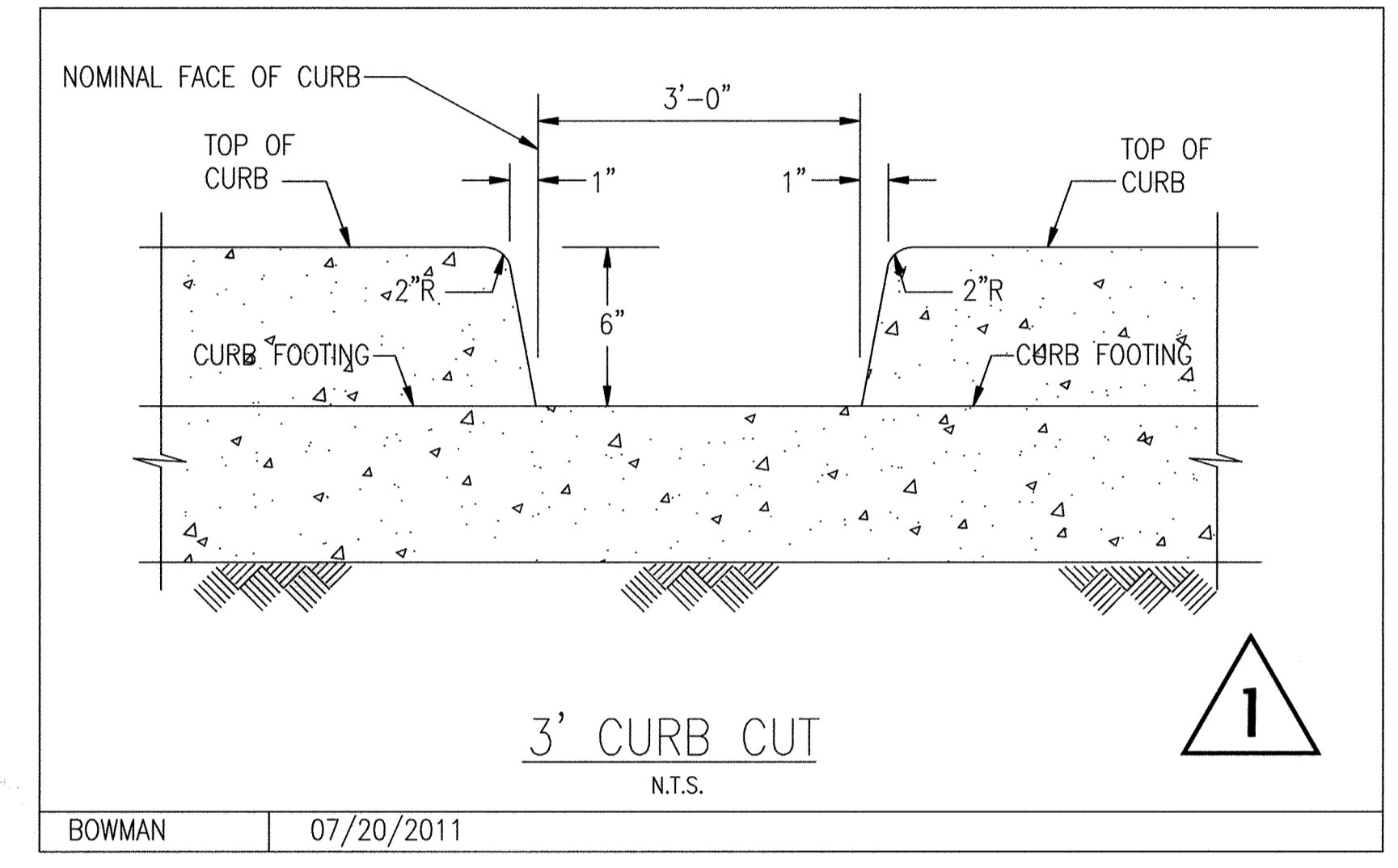
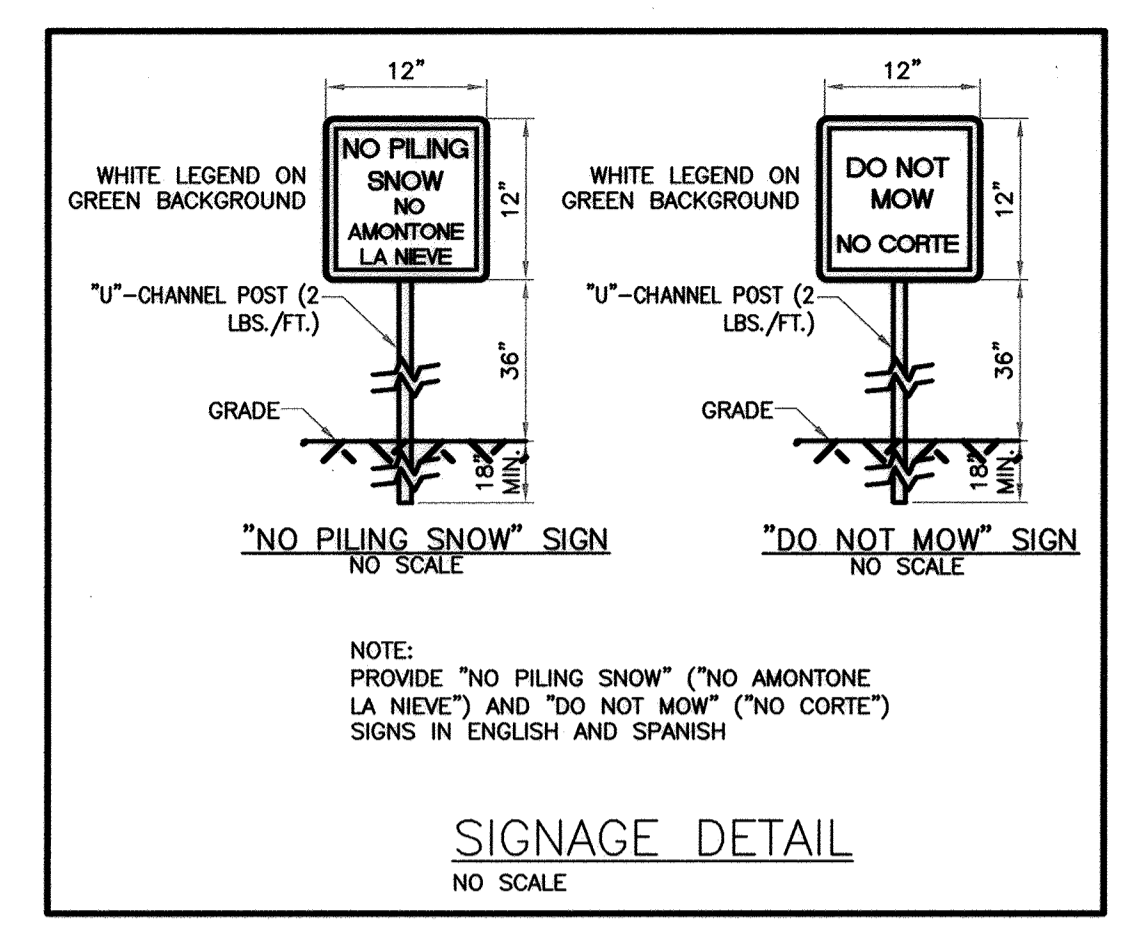
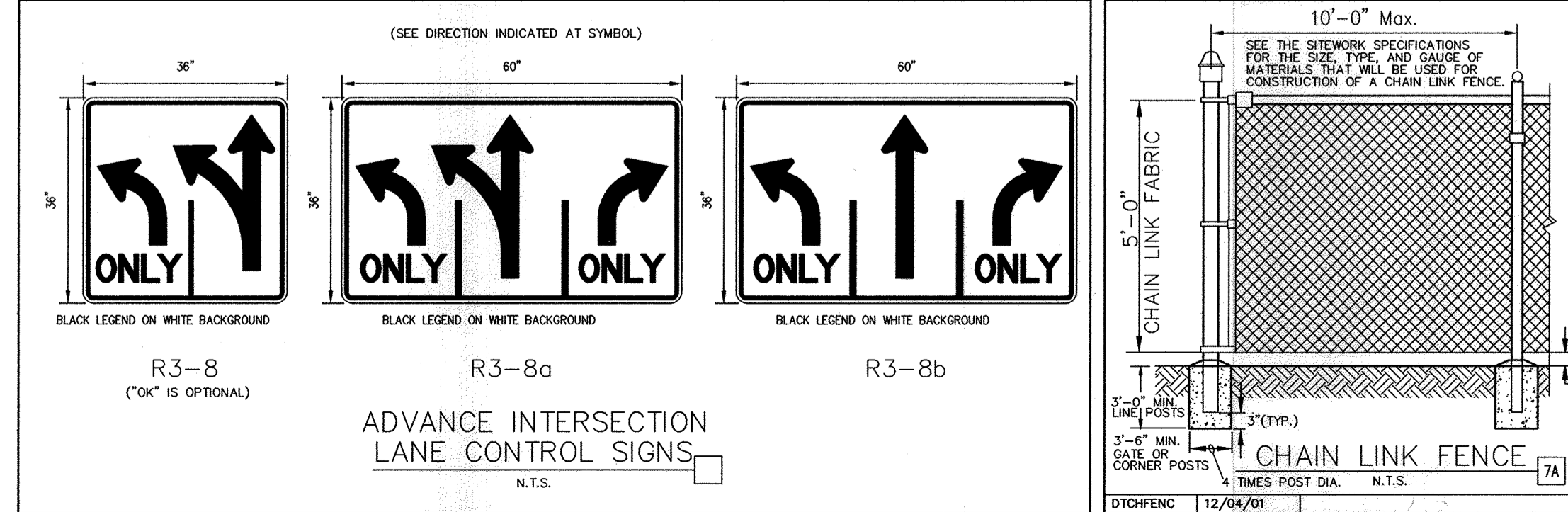
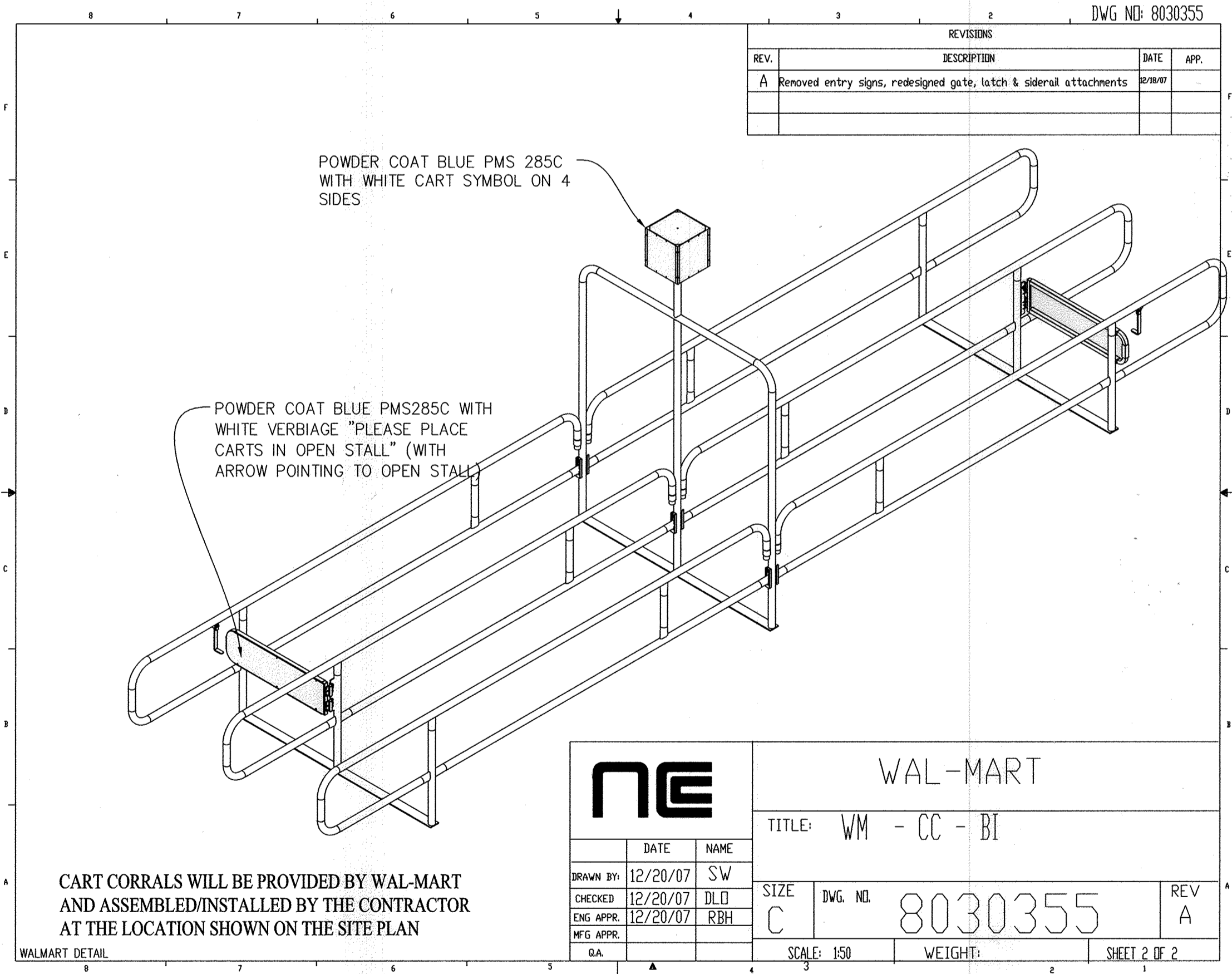
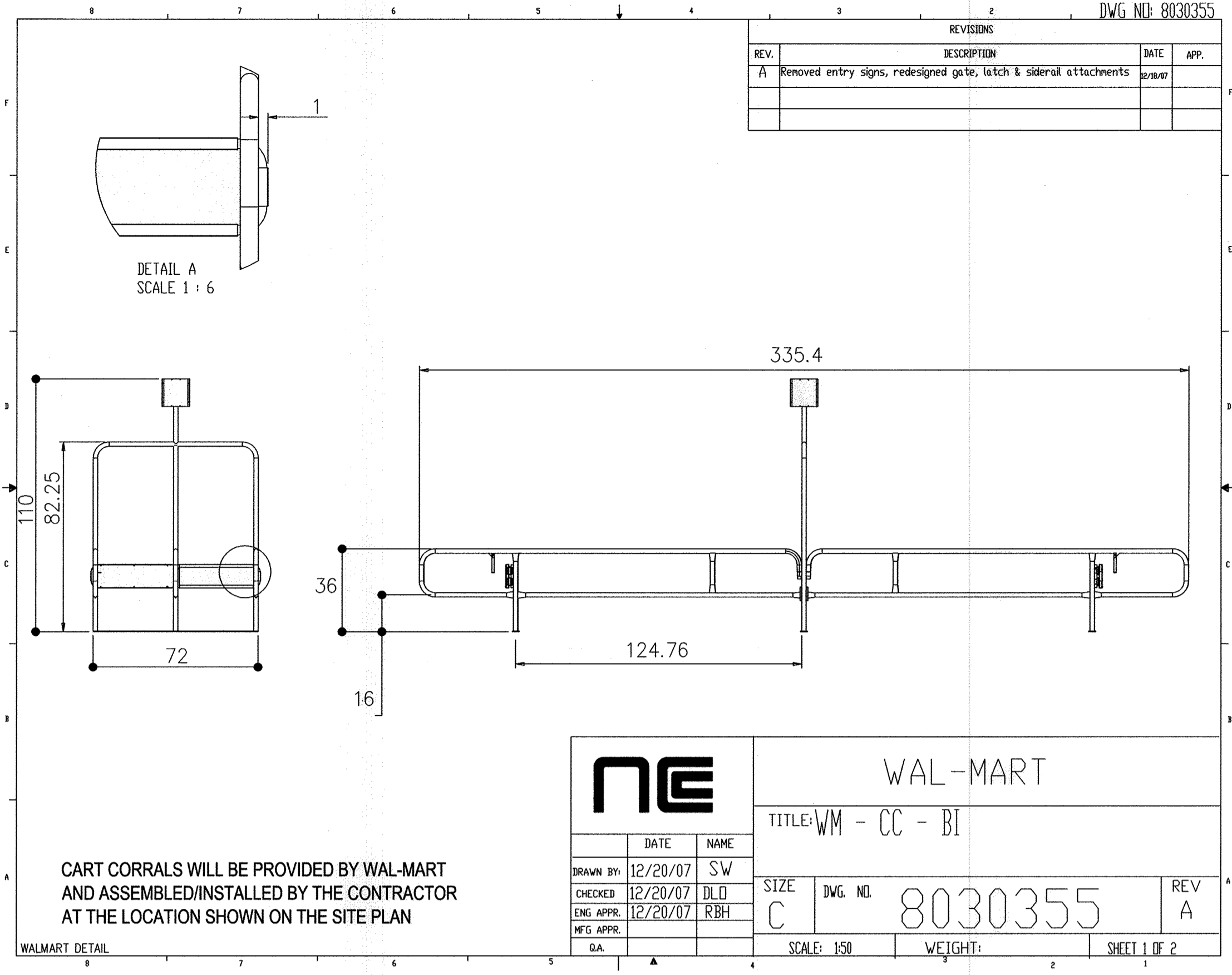
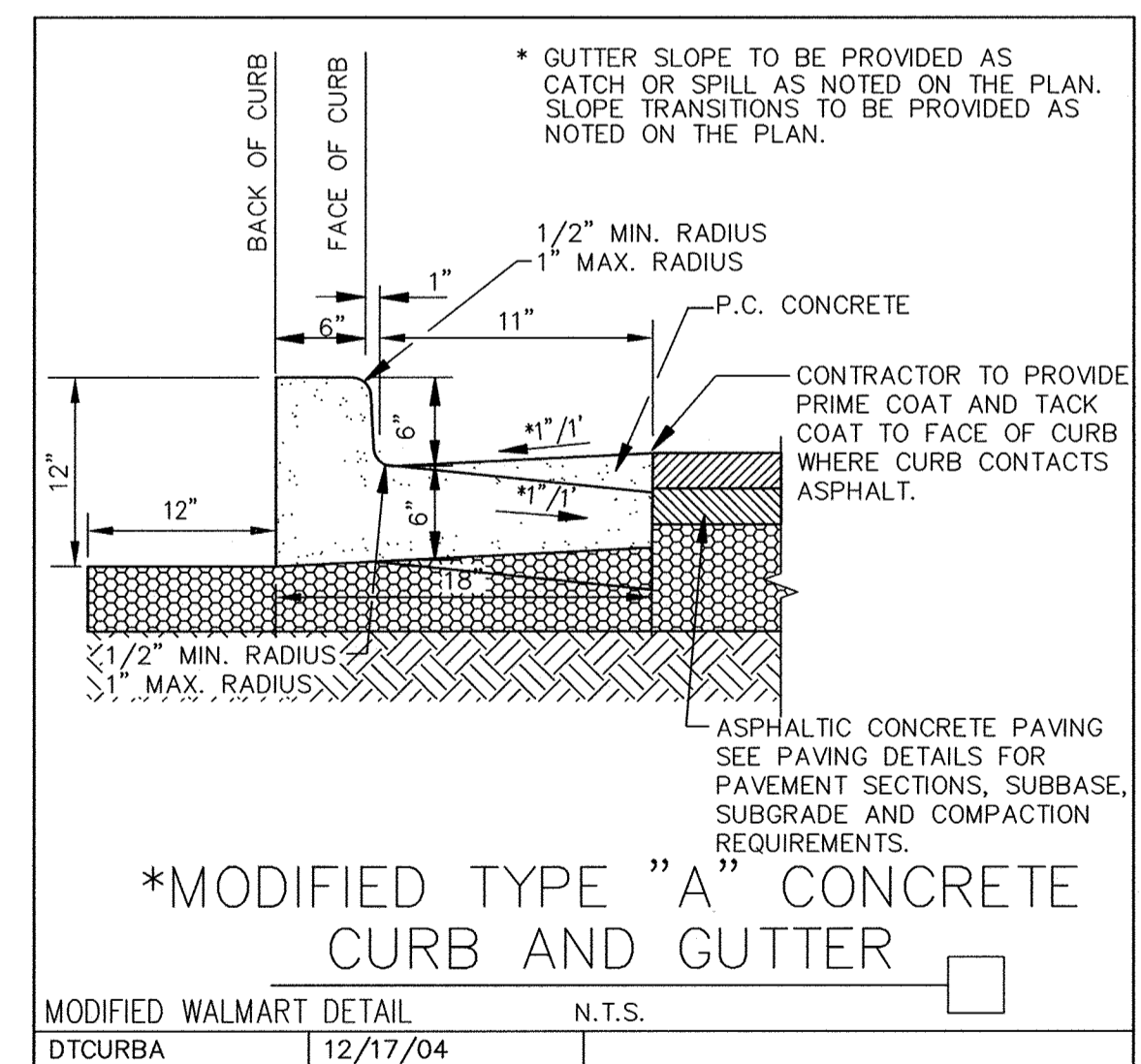
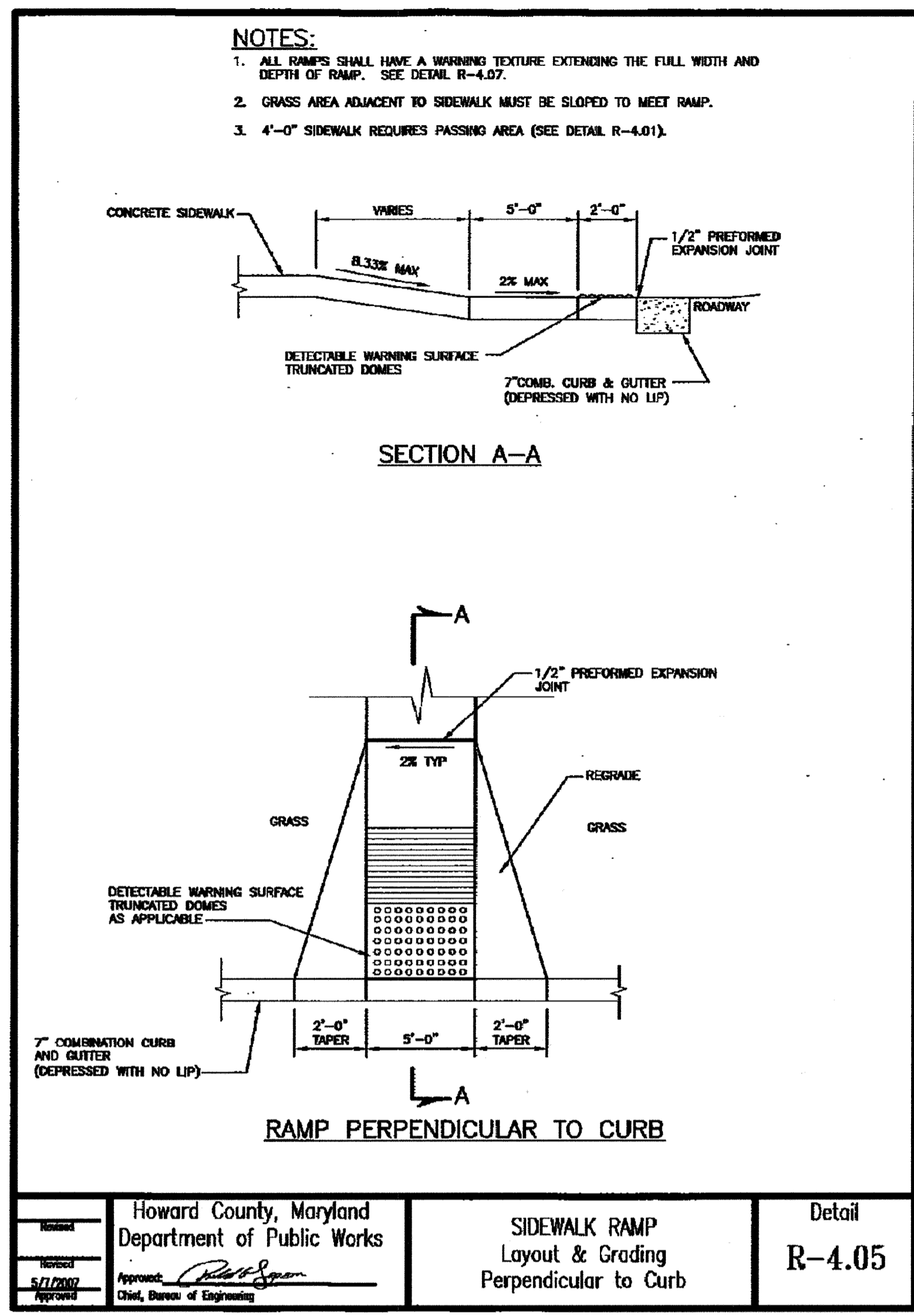
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SUPERCENTER #2412-03
 ELLCOTT CITY, HOWARD COUNTY, MARYLAND
 WAL-MART REAL ESTATE BUSINESS TRUST
 2001 SE 10TH STREET
 BENTONVILLE, AR 72716



DESIGN DRAWN BY: BU, KJC
 CHECKED BY: GD
 DATE: 01/14/11
 SCALE:
 JOB No. 4660-01-002
 SHEET 19 OF 32 SHEETS
 SDP-96-011



OWNER/DEVELOPER
WAL-MART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SWDC
BENTONVILLE, AR 72716-0550
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000

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FINAL RECORD PLATS	F-96-009, F-96-091 & F-98-157
WATER NO. F03	SEWER NOS. 1452800 F-12-023

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chad Edwards
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 1/11/12

Keith Standen
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 1/18/12

Monica S. Butler
DIRECTOR
DATE: 1/18/12

NO	DATE	DESCRIPTION	BY
1	12/14/11	COMPACTOR REMOVAL & PARKING MOD.	JDT

**WALMART STORE #2412-03
ELLCOTT CITY, WALMART, PARCEL B**

TM 24, TM GRID 6, P/O TM PARCEL 1085
2ND ELECTION DISTRICT, HOWARD COUNTY, MD

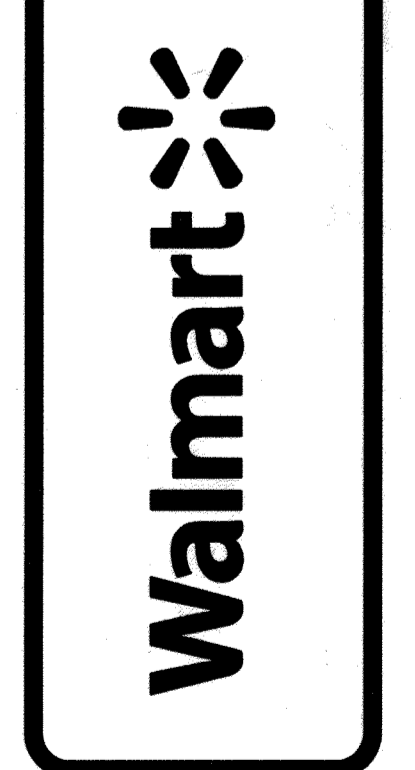
CONSTRUCTION DETAILS	DATE	SHEET
	12/14/11	20 OF 24 SHEETS

REVISIONS	BY
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01/14/11-1ST SUBM	BU/GD
07/25/11-2nd SUBM	BU/GD

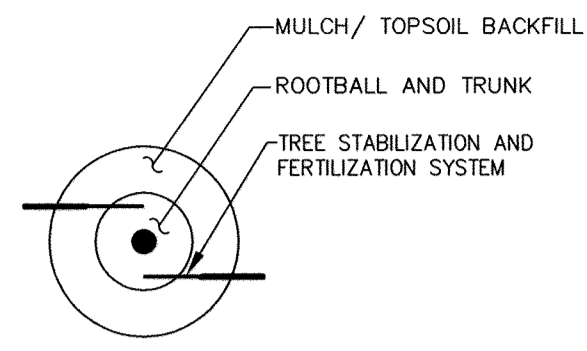
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Telephone: (703) 830-8093
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REGISTERED PROFESSIONAL ENGINEER
No. 38755

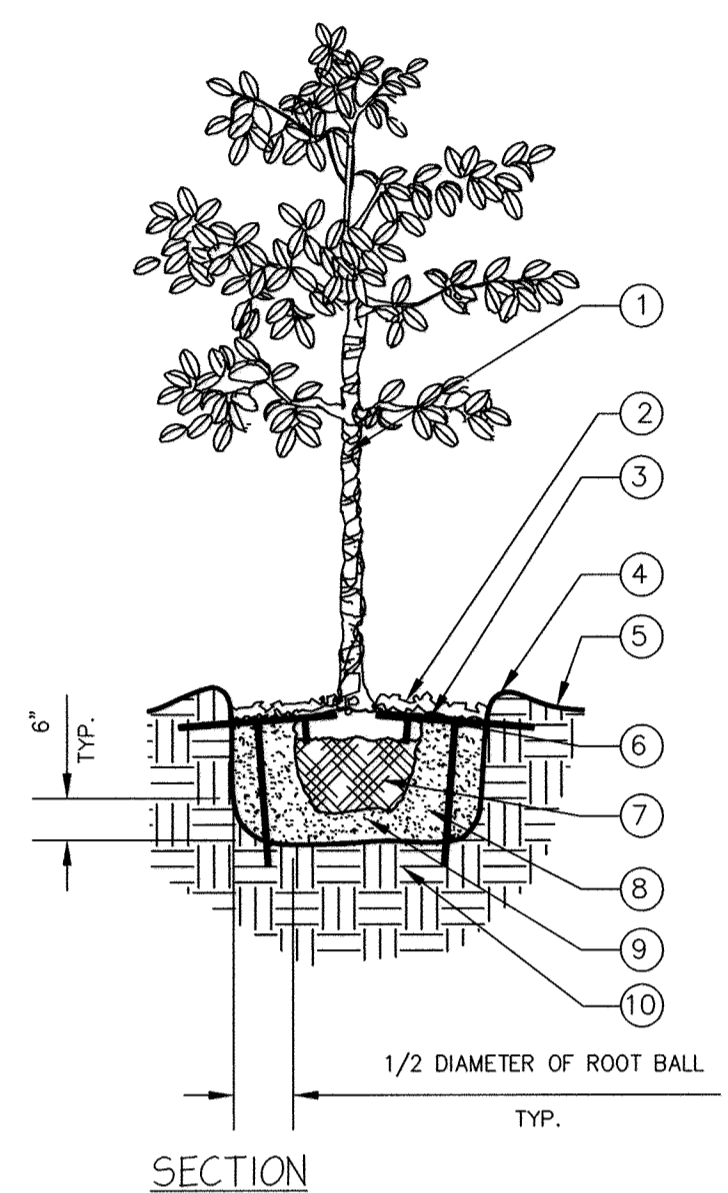
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DESIGN DRAWN BY: KJC
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JOB No. 4660-01-002
SHEET 20 OF 24 SHEETS
SDP-96-011



PLAN



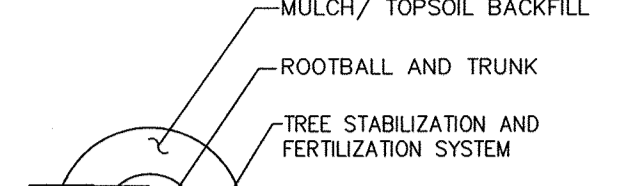
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LARGE TREE PLANTING
(14' OR GREATER)
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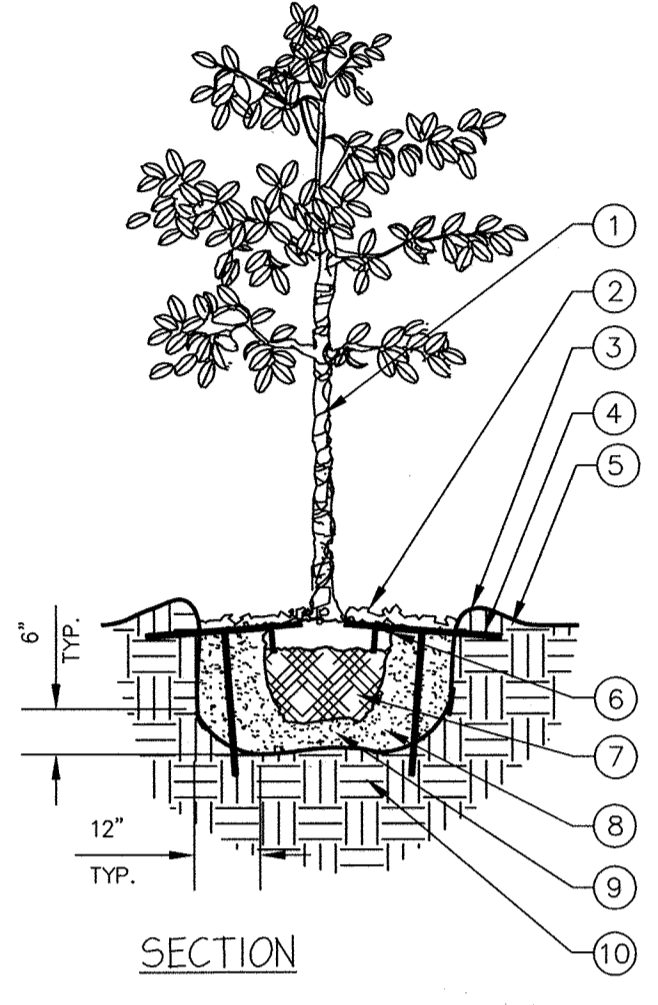
- TREE WRAP
- 4" MINIMUM OF HARDWOOD BARK MULCH COMPACTED OR AS SPECIFIED.
- STAKE SIZE SHALL BE ONE SIZE HIGHER THAN REQUIRED FOR SIZE OF TREE. REFER TO SITEWORK SPECIFICATIONS FOR APPROVED MATERIALS AND INSTALLATION REQUIREMENTS. GUY AS NECESSARY IN EXTREME WIND CONDITIONS WITH #10 GAUGE WIRE.
- 3" HIGH SOIL BERM TO HOLD WATER.
- FINISHED GRADE (SEE GRADING PLAN)
- TOP OF ROOTBALL MIN. 1" ABOVE FINISHED GRADE
- B & B OR CONTAINERIZED (SEE SPECIFICATIONS FOR ROOT BALL REQUIREMENTS).
- PREPARED PLANTING SOIL AS SPECIFIED.
- ROOTBALLS GREATER THAN 24" DIAMETER SHALL BE PLACED ON MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING ROOTBALLS SMALLER THAN 24" IN DIA. MAY SIT ON COMPACTED EARTH.
- UNDISTURBED SUBSOIL

NOTES:

- FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.
- REMOVE BURLAP, WIRE AND STRAPS (ANYTHING THAT COULD GIRDLE TREE OR RESTRICT ROOT GROWTH) ON UPPER 1/3 OF ROOTBALL.
- SEE LANDSCAPE NOTES FOR THE TYPE OF MULCH MATERIAL TO USE.
- PRUNE TREE AS DIRECTED BY LANDSCAPE ARCHITECT.
- BRANCHING HEIGHT TO A.A.N. STANDARDS.



PLAN



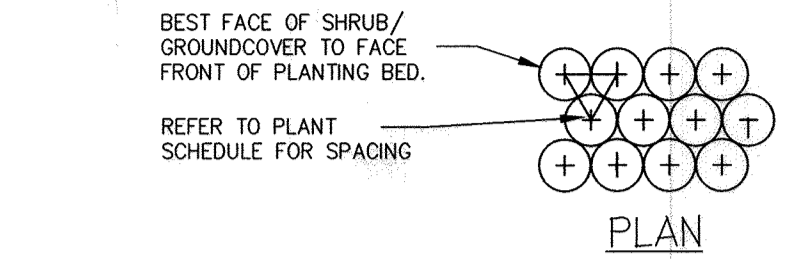
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SMALL TREE PLANTING
(14' OR LESS)
N.T.S.

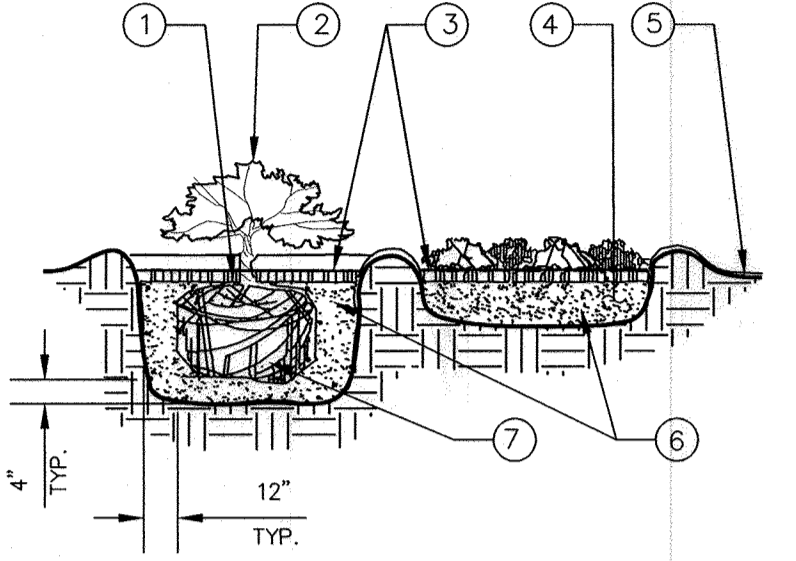
- TREE WRAP
- 4" MINIMUM OF HARDWOOD BARK MULCH COMPACTED OR AS SPECIFIED.
- 3" HIGH SOIL BERM TO HOLD WATER.
- STAKE SIZE SHALL BE ONE SIZE HIGHER THAN REQUIRED FOR SIZE OF TREE. REFER TO SITEWORK SPECIFICATIONS FOR APPROVED MATERIALS AND INSTALLATION REQUIREMENTS. GUY AS NECESSARY IN EXTREME WIND CONDITIONS WITH #10 GAUGE WIRE.
- FINISHED GRADE (SEE GRADING PLAN)
- TOP OF ROOTBALL MIN. 1" ABOVE FINISHED GRADE
- B & B OR CONTAINERIZED (SEE SPECIFICATIONS FOR ROOT BALL REQUIREMENTS).
- PREPARED PLANTING SOIL AS SPECIFIED.
- ROOTBALLS GREATER THAN 24" DIAMETER SHALL BE PLACED ON MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING ROOTBALLS SMALLER THAN 24" IN DIA. MAY SIT ON COMPACTED EARTH.
- UNDISTURBED SUBSOIL

NOTES:

- FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.
- REMOVE BURLAP, WIRE AND STRAPS (ANYTHING THAT COULD GIRDLE TREE OR RESTRICT ROOT GROWTH) ON UPPER 1/3 OF ROOTBALL.
- SEE LANDSCAPE NOTES FOR THE TYPE OF MULCH MATERIAL TO USE.
- PRUNE TREE AS DIRECTED BY LANDSCAPE ARCHITECT.
- BRANCHING HEIGHT TO A.A.N. STANDARDS.



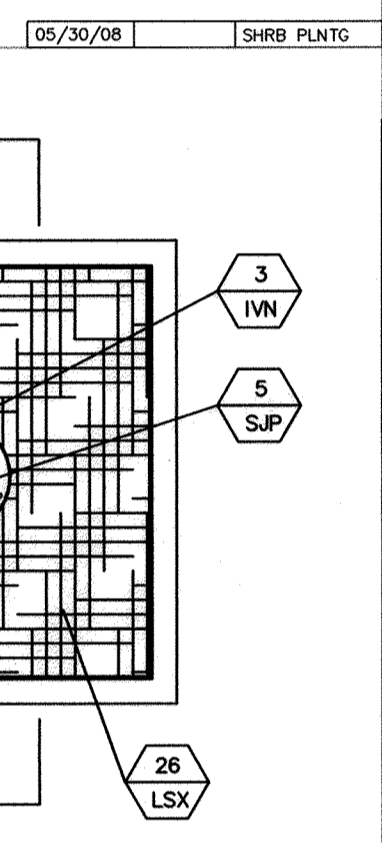
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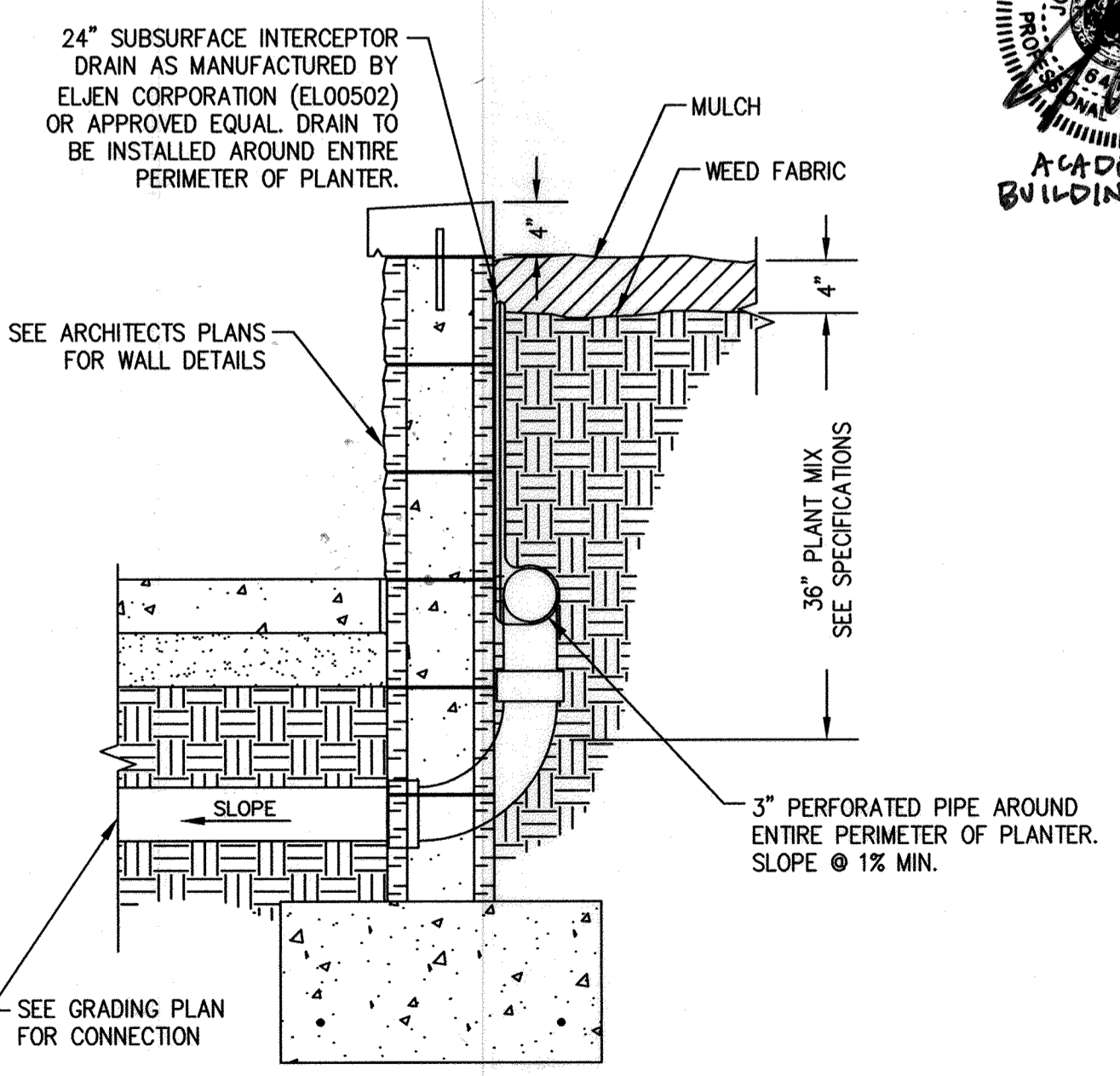
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SHRUB/GROUNDCOVER PLANTING
N.T.S.

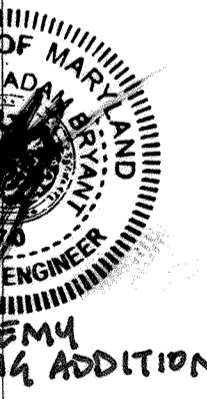
- TOP OF SHRUB ROOTBALLS TO BE PLANTED 1" - 2" HIGH WITH SOIL MOUNDING UP TO THE TOP OF ROOTBALL.
- WHEN USED IN MASSES- PRUNE ALL SHRUBS TO ACHIEVE A UNIFORM MASS/HEIGHT
- 4" MINIMUM OF HARDWOOD BARK MULCH COMPACTED OR AS SPECIFIED.
- EXCAVATE ENTIRE BED SPECIFIED FOR GROUNDCOVER BED.
- 4" MINIMUM OF TOPSOIL TO BRING TO FINISHED GRADE (SEE GRADING PLAN).
- PREPARED PLANTING SOIL AS SPECIFIED. NOTE: WHEN GROUND- COVERS AND SHRUBS USED IN MASSES ENTIRE BED TO BE AMENDED WITH PLANTING SOIL MIX AS SPECIFIED.
- SCARIFY ROOTBALL SIDES AND BOTTOM.



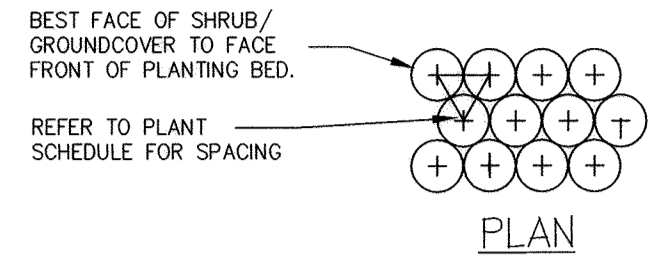
RAISED PLANTER
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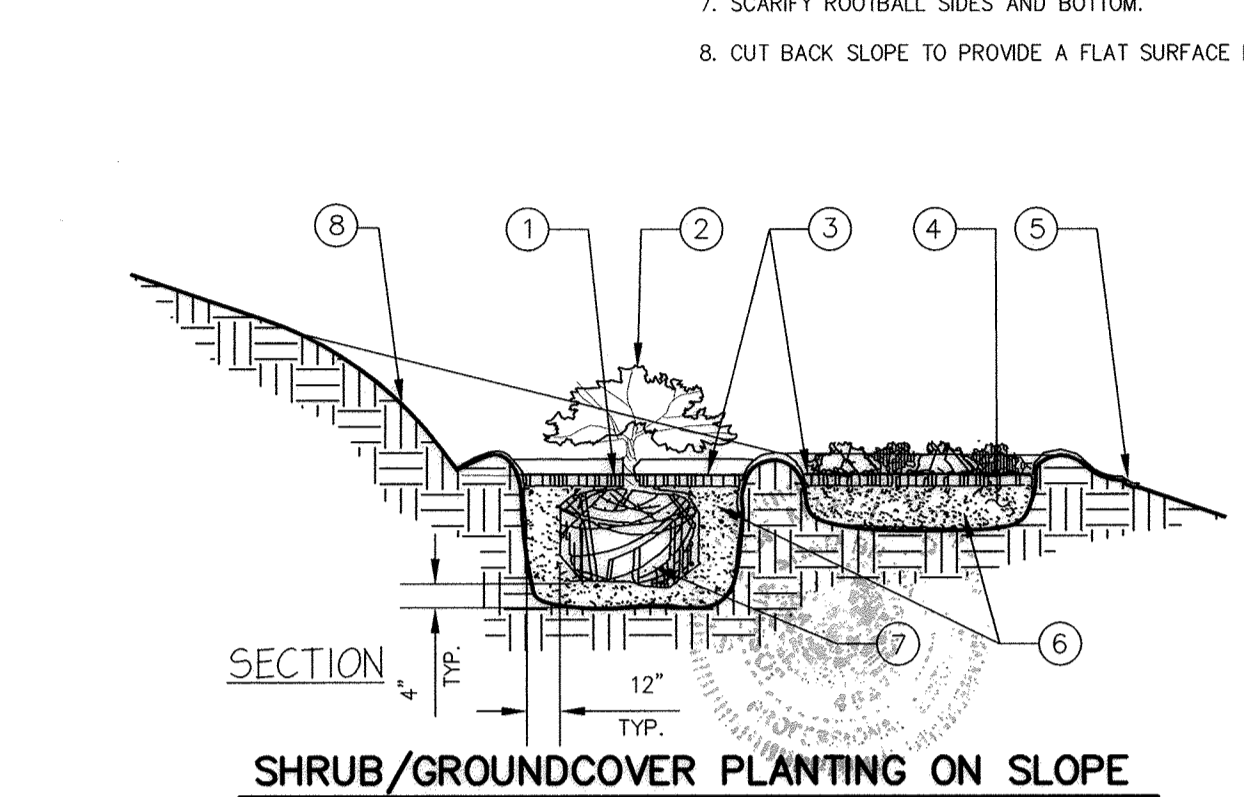
SECTION A-A - SUBSURFACE INTERCEPTOR DRAIN SYSTEM
N.T.S.



- TOP OF SHRUB ROOTBALLS TO BE PLANTED 1" - 2" HIGH WITH SOIL MOUNDING UP TO THE TOP OF ROOTBALL.
- WHEN USED IN MASSES- PRUNE ALL SHRUBS TO ACHIEVE A UNIFORM MASS/HEIGHT
- 4" MINIMUM OF HARDWOOD BARK MULCH COMPACTED OR AS SPECIFIED.
- EXCAVATE ENTIRE BED SPECIFIED FOR GROUNDCOVER BED.
- 4" MINIMUM OF TOPSOIL TO BRING TO FINISHED GRADE (SEE GRADING PLAN).
- PREPARED PLANTING SOIL AS SPECIFIED. NOTE: WHEN GROUND- COVERS AND SHRUBS USED IN MASSES ENTIRE BED TO BE AMENDED WITH PLANTING SOIL MIX AS SPECIFIED.
- SCARIFY ROOTBALL SIDES AND BOTTOM.
- CUT BACK SLOPE TO PROVIDE A FLAT SURFACE FOR PLANTING.



PLAN



SECTION

SHRUB/GROUNDCOVER PLANTING ON SLOPE
N.T.S.

PLANT SCHEDULE

KEY	QTY. (EA)	BOTANICAL NAME	COMMON NAME	SIZE CAL./HT.	ROOT COND.
TREES					
Large Deciduous					
AR	4	ACER RUBRUM	RED MAPLE	2" CAL	B&B
AS	4	ACER SACCHARUM	SUGAR MAPLE	3" CAL	B&B
QP	16	QUERCUS PHELLOS	WILLOW OAK	2" CAL	B&B
OR	7	QUERCUS RUBRA (BOREALIS)	RED OAK	3" CAL	B&B
LN	1	LAGERSTROEMIA X NATCHEZ	NATCHEZ	1" CAL	B&B
Large Evergreen					
PS	7	PINUS STROBUS	EASTERN WHITE PINE	5-6 FT.	B&B
SHRUBS					
TB	26	SPREADING ENGLISH YEW	TAXUS BACCATA 'REPANDENS'	CONT. 3-GAL.	B&B
LSX	52	LIRIOPIS SPICATA	LILLYTURF	1 GAL.	B&B
SSA	14	SEDUM TELEPHIUM 'AUTUMN JOY'	AUTUMN JOY SEDUM	1 GAL. (12" HT.)	B&B
SJP	10	SPIREA JAPONICA 'LITTLE PRINCESS'	LITTLE PRINCESS SPIREA	16" - 24" HT.	B&B
IVN	6	ILEX VOMITORIA 'NANA'	DWARF YA-U-PON HOLLY	16" - 24" HT.	B&B

OWNER/DEVELOPER

WAL-MART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SWDC
BENTONVILLE, AR 72716-0550
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000

SUBDIVISION 'ELLCOTT CITY WALMART'

ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND
TAX MAP 17 & 24 P/O TM PARCEL 1085
REZONING CASE NUMBER ZB-941 DATED: OCTOBER 18, 1993
SKETCH PLAN S-95-01 APPROVED: 12-2-1994
PRELIMINARY PLAN P-95-21 APPROVED: 06-06-1995
SITE PLAN SDP-96-11 APPROVED: 06-21-1996
MASS GRADING PLAN SDP-96-001 APPROVED: 04-03-1996
FINAL ROAD CONSTRUCTION PLAN FOR NORTH RIDGE RD. F-96-01
ECP 11-007 APPROVED: 11-08-1995
FINAL RECORD PLATS APPROVED: 08-06-2010
WATER NO. F03 F-96-009, F-96-091 & F-98-157
SEWER NOS. 1452800 F-17-023

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chris D. Dismore 8/23/11
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Ed DeLoach 9/26/11
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Thomas J. Buttle 9/27/11
DIRECTOR DATE

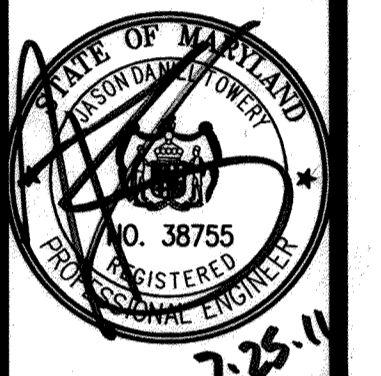
**WALMART STORE #2412-03
ELLCOTT CITY, WALMART, PARCEL B**

TM 24, TM GRID 8, P/O TM PARCEL 1085
2ND ELECTION DISTRICT, HOWARD COUNTY, MD

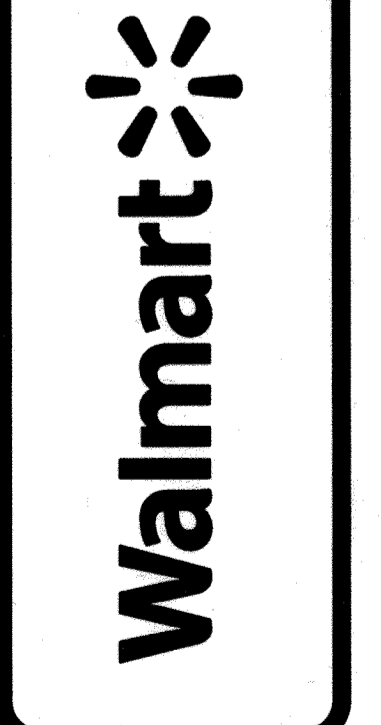
SITE DETAILS	DATE	SHEET 21 OF 34 SHEETS
	07/25/11	

REVISIONS	BY
07/15/10-CONCEPT	BU/GD
01/14/11-1ST SUBM	BU/GD
07/25/11-2nd SUBM	BU/GD

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9813 Gowin Drive
Manassas, Virginia 20110
www.bowmanconsulting.com
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Fac: (703) 830-8475



SUPERCENTER #2412-03
ELLCOTT CITY, HOWARD COUNTY, MARYLAND
WAL-MART REAL ESTATE BUSINESS TRUST
2001 SE 10TH STREET
BENTONVILLE, AR 72716

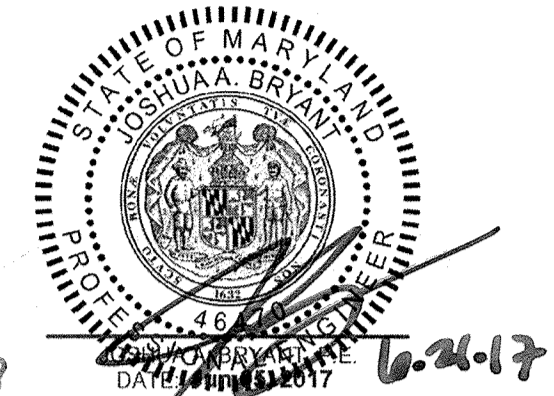


DESIGN DRAWN BY BU KJC
CHECKED BY BU KJC
DATE 01/14/11
SCALE N/A
JOB No. 4680-01-002
SHEET 21 OF 34 SHEETS

FOR REVISION 10 ONLY
ANDREW G. STINE

PROFESSIONAL ENGINEER

1. APPROVED BY THE BOARD OF PROFESSIONAL ENGINEERS AND SURVEYORS OF THE STATE OF MARYLAND
ENGINEER UNDER THE JURISDICTION OF THE STATE OF MARYLAND
LICENSE NO. 37167



JOSHUA A. BRYANT, P.E.
REMOVAL OF ACADEMY BUILDING ADDITION UTILITIES AND PARKING LOT MODIFICATION

ACADEMY BUILDING ADDITION UTILITIES AND PARKING LOT MODIFICATION

LEGEND

- SITE FEATURES**
- BOUNDARY LINE
 - PROPOSED LIMITS OF DISTURBANCE
 - EXISTING CONTOUR ELEVATIONS
 - PROPOSED CONTOUR ELEVATIONS
 - EXISTING STORM DRAIN
 - EXISTING CHAIN LINK FENCE
 - DRAINAGE DIVIDES

OWNER/DEVELOPER

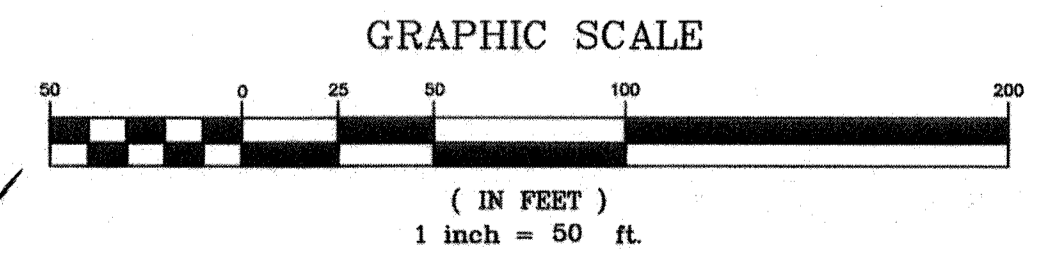
WAL-MART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SWDC
BENTONVILLE, AR 72716-0550
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000

SUBDIVISION 'ELLICOTT CITY WALMART'

ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND
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WATER NO. F03 SEWER NOS. 1452800 F-12-023

APPROVED: DEPARTMENT OF PLANNING AND ZONING

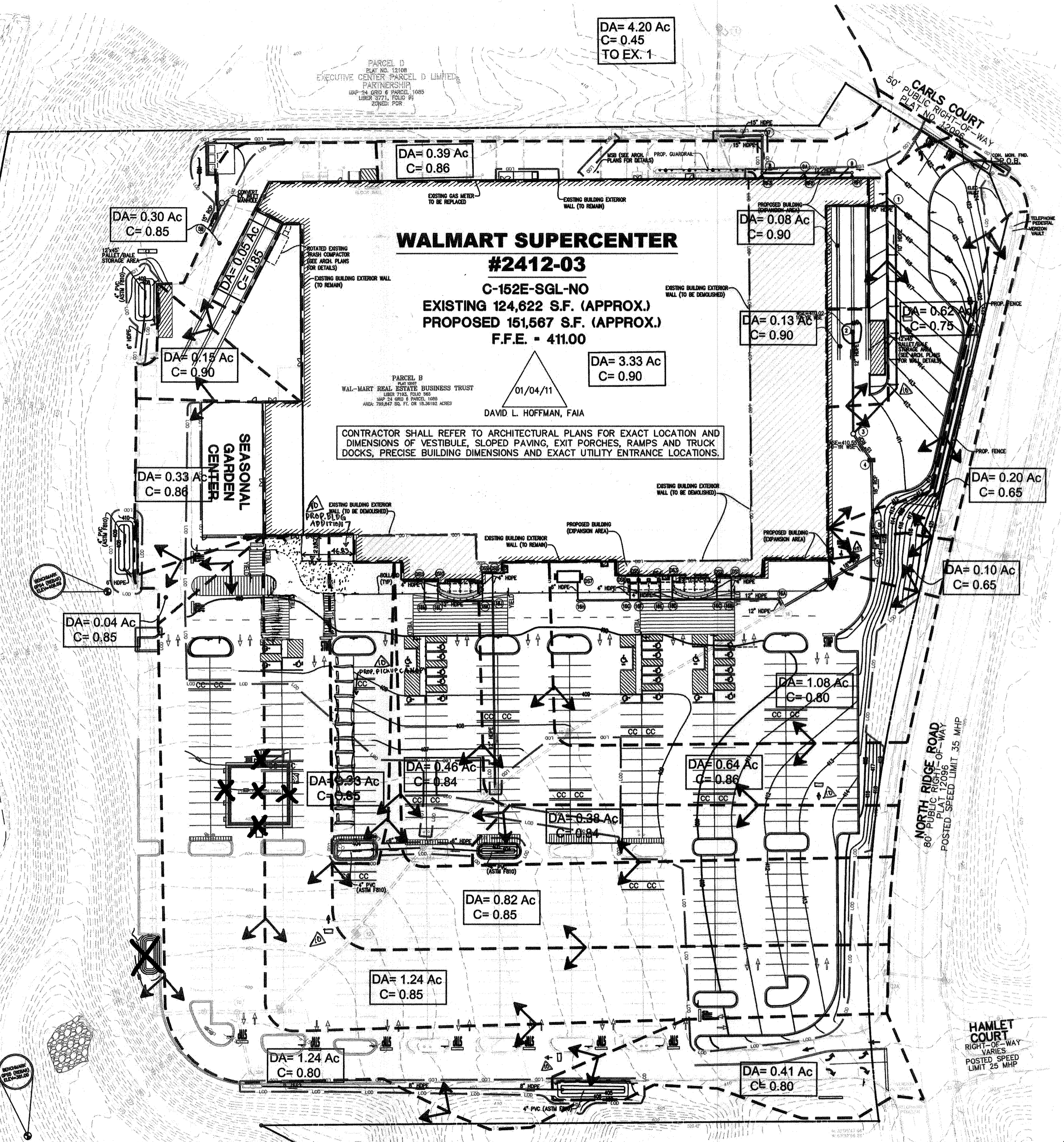
CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* 7/26/17 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* 8-2-17 DATE
DIRECTOR *[Signature]* 8-3-17 DATE



WALMART STORE #2412-03
ELLICOTT CITY, WALMART, PARCEL B
TM 24, TM GRID 6, P/O TM PARCEL 1085
2ND ELECTION DISTRICT, HOWARD COUNTY, MD

DRAINAGE DIVIDE PLAN	DATE	SHEET
	07/25/11	22
		OF 34 SHEETS

NO	DATE	DESCRIPTION	BY
1	6/16/10	REMOVAL OF ACADEMY ADD.	JAB
10	2/21/2010	BLDG ADDITION AND GROCERY PICKUP CANOPY	SDMLR

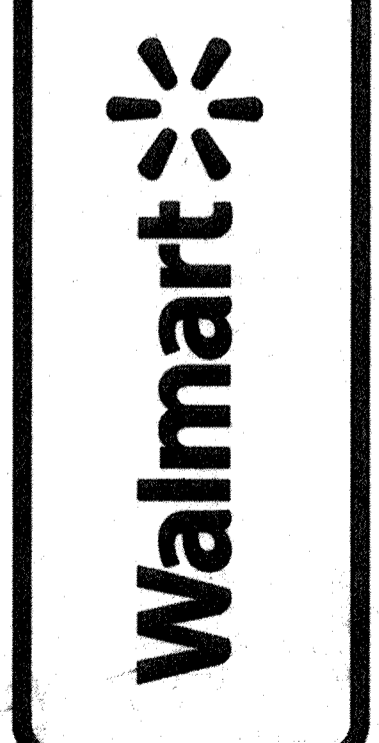


REVISIONS	BY
07/15/10-CONCEPT	BU/GD
01/14/11-1ST SUBM	BU/GD
07/25/11-2nd SUBM	BU/GD

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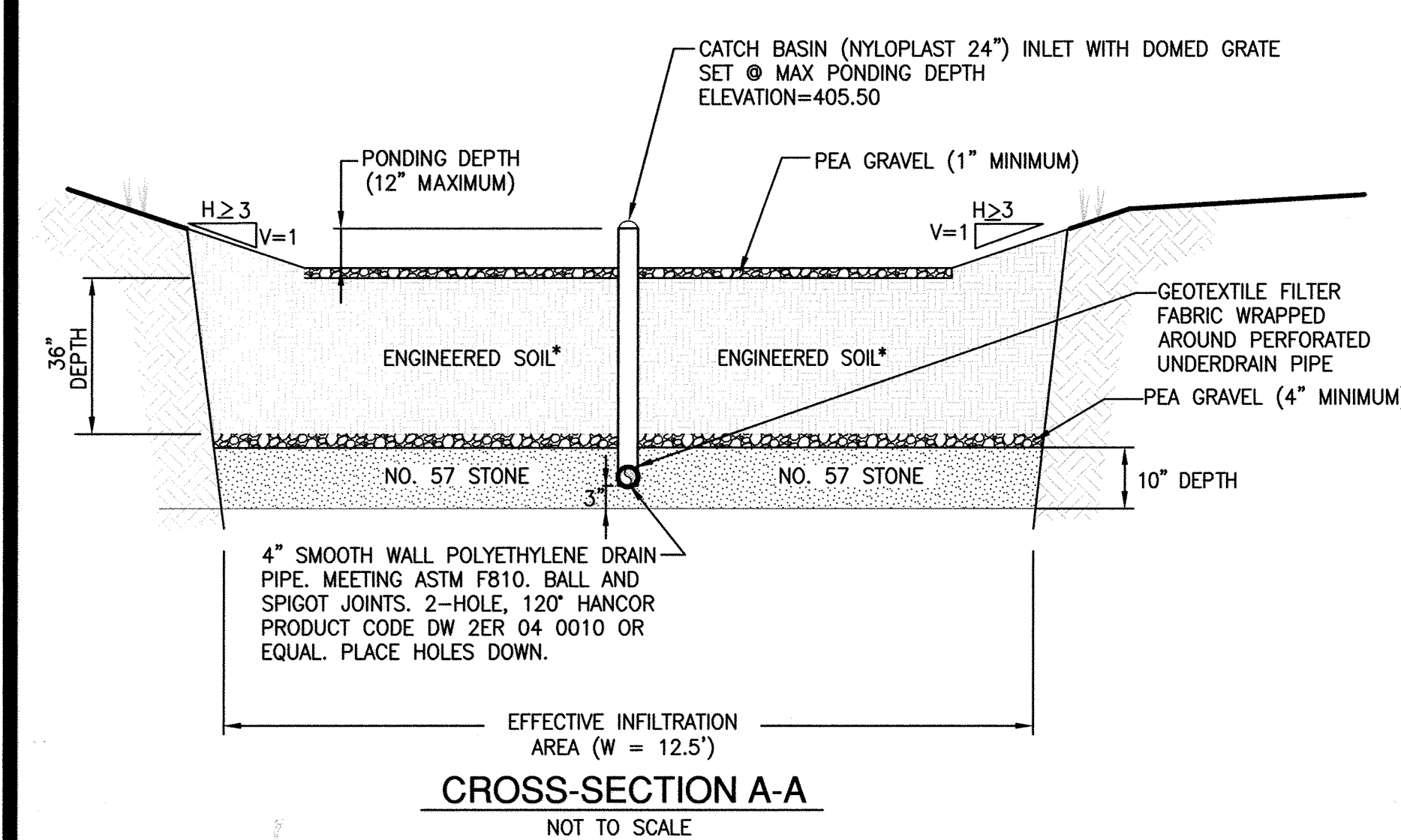
JOSHUA A. BRYANT, P.E.
7-25-11

SUPERCENTER #2412-03
ELLICOTT CITY, HOWARD COUNTY, MARYLAND
WAL-MART REAL ESTATE BUSINESS TRUST
2001 SE 10TH STREET
BENTONVILLE, AR 72716

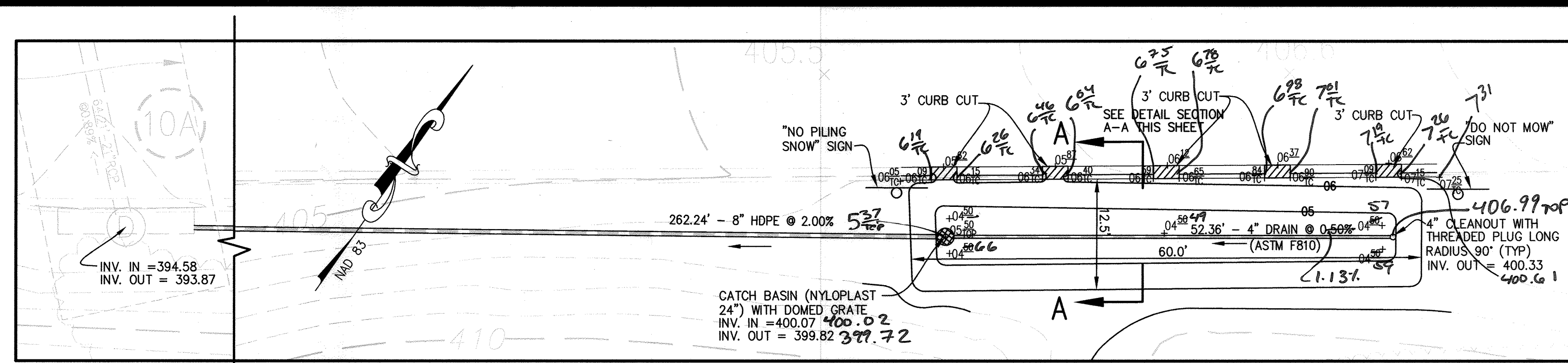


DESIGN DRAWN BY BU
CHECKED BY KJC
DATE 01/14/11
SCALE 1"=50'
JOB No. 4680-01-002
SHEET 22
OF 34 SHEETS

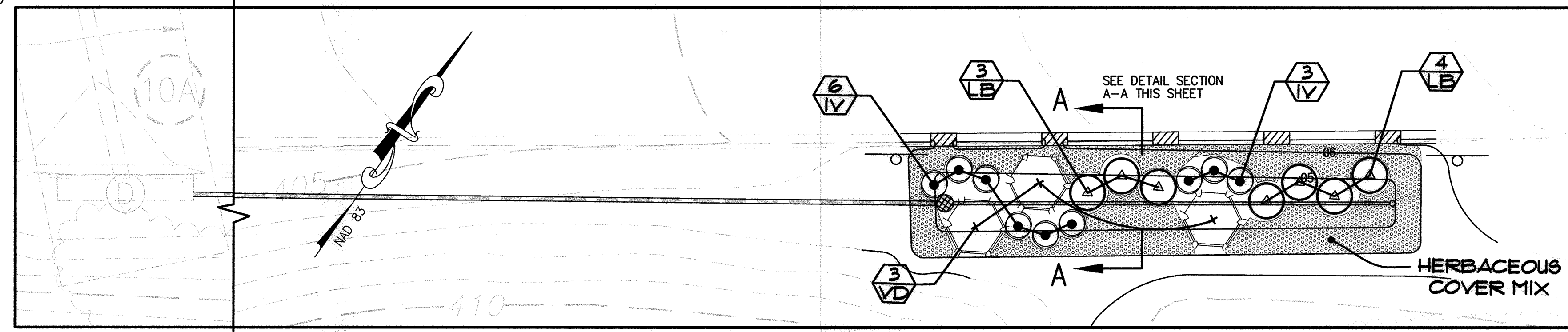
P:\4660 - Walmart Ellicott City, MD\4660-01-002 (ENG) - Ellicott City, MD Walmart #2412-03\Engineering\Engineering Plans\County Subm22 - Drainage Divides.dwg, 8/15/2011 12:04:34 PM



CROSS-SECTION A-A
NOT TO SCALE



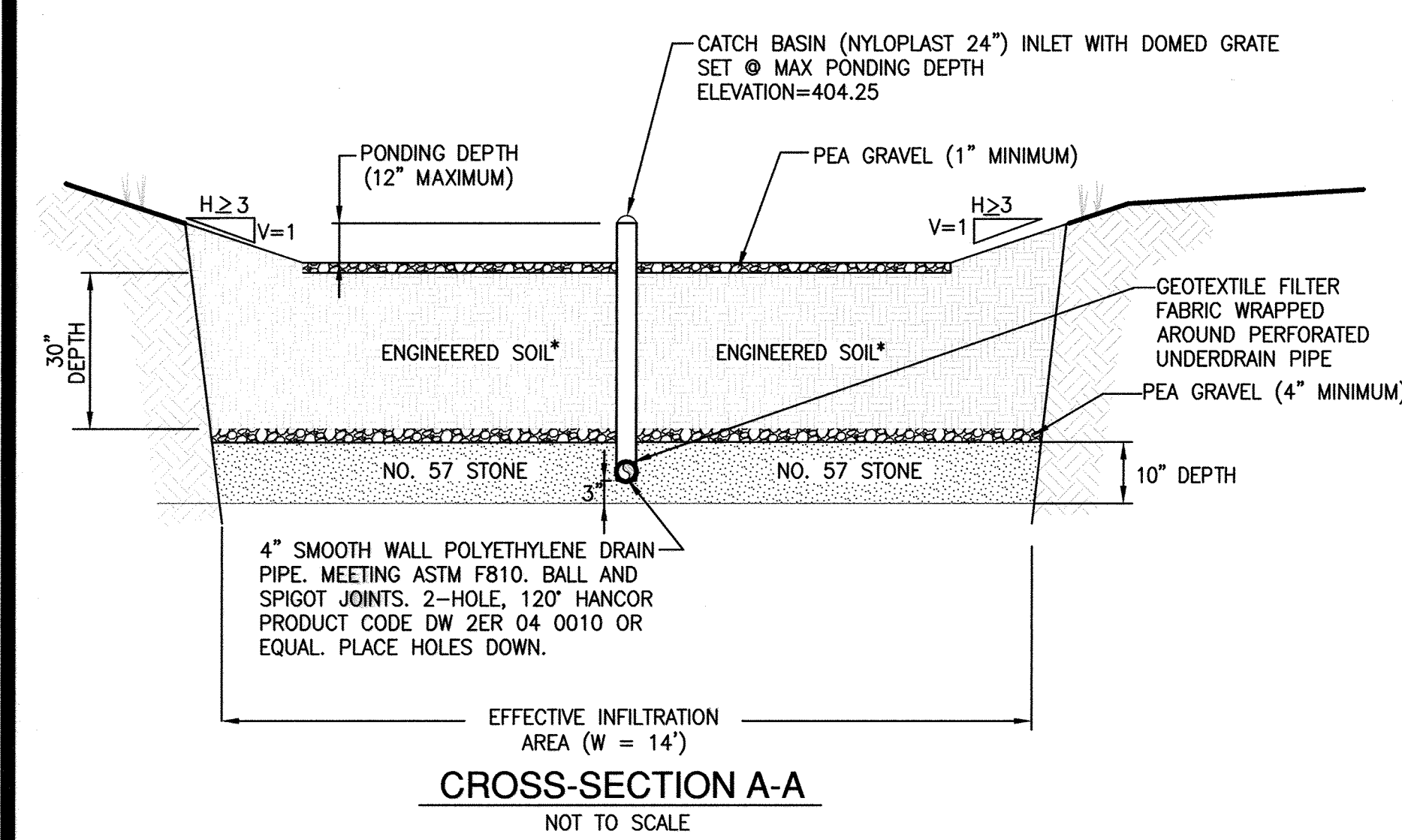
BIORETENTION FACILITY #1 PLAN VIEW
SCALE: 1"=10'



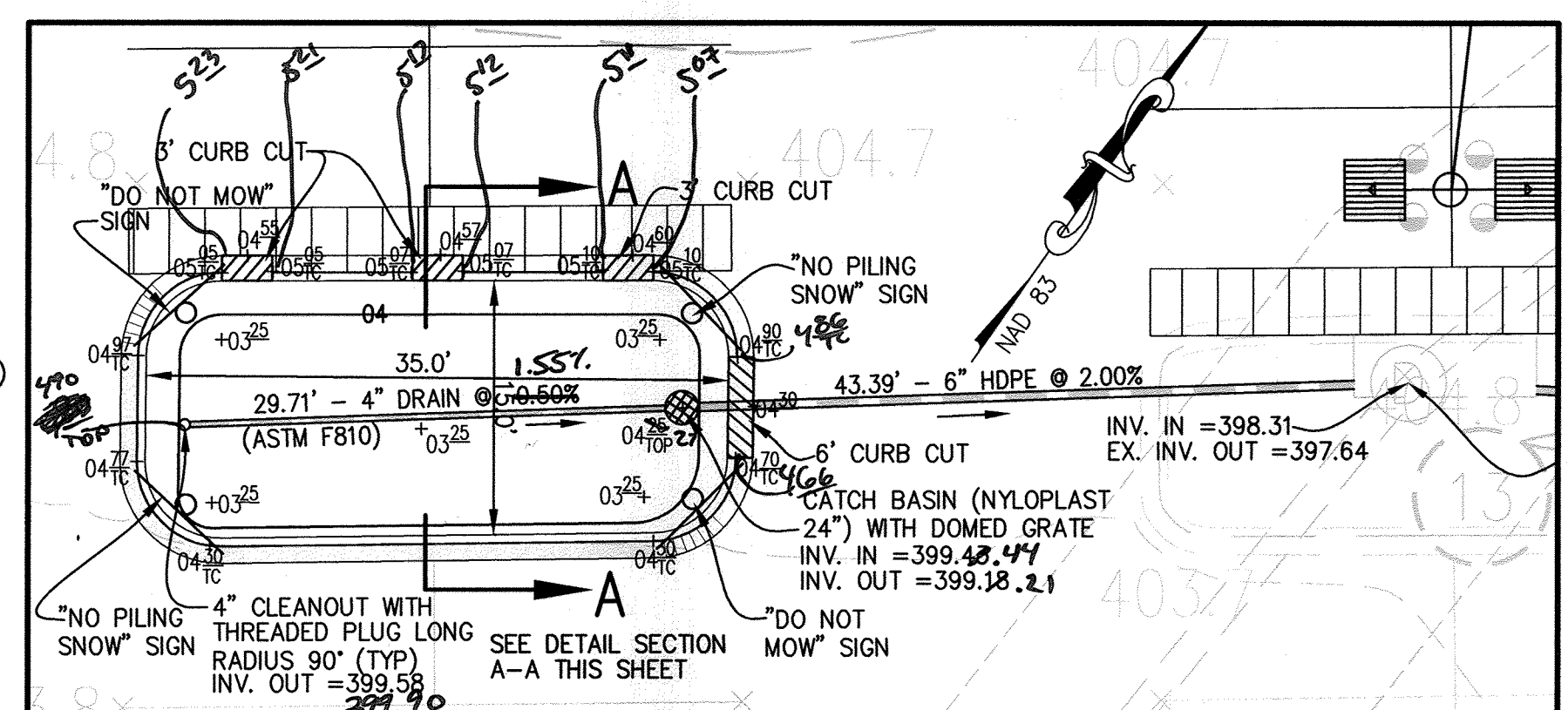
BIORETENTION FACILITY #1 LANDSCAPE VIEW
SCALE: 1"=10'

BIORETENTION FILTER CALCULATIONS (BIORETENTION FILTER #1)

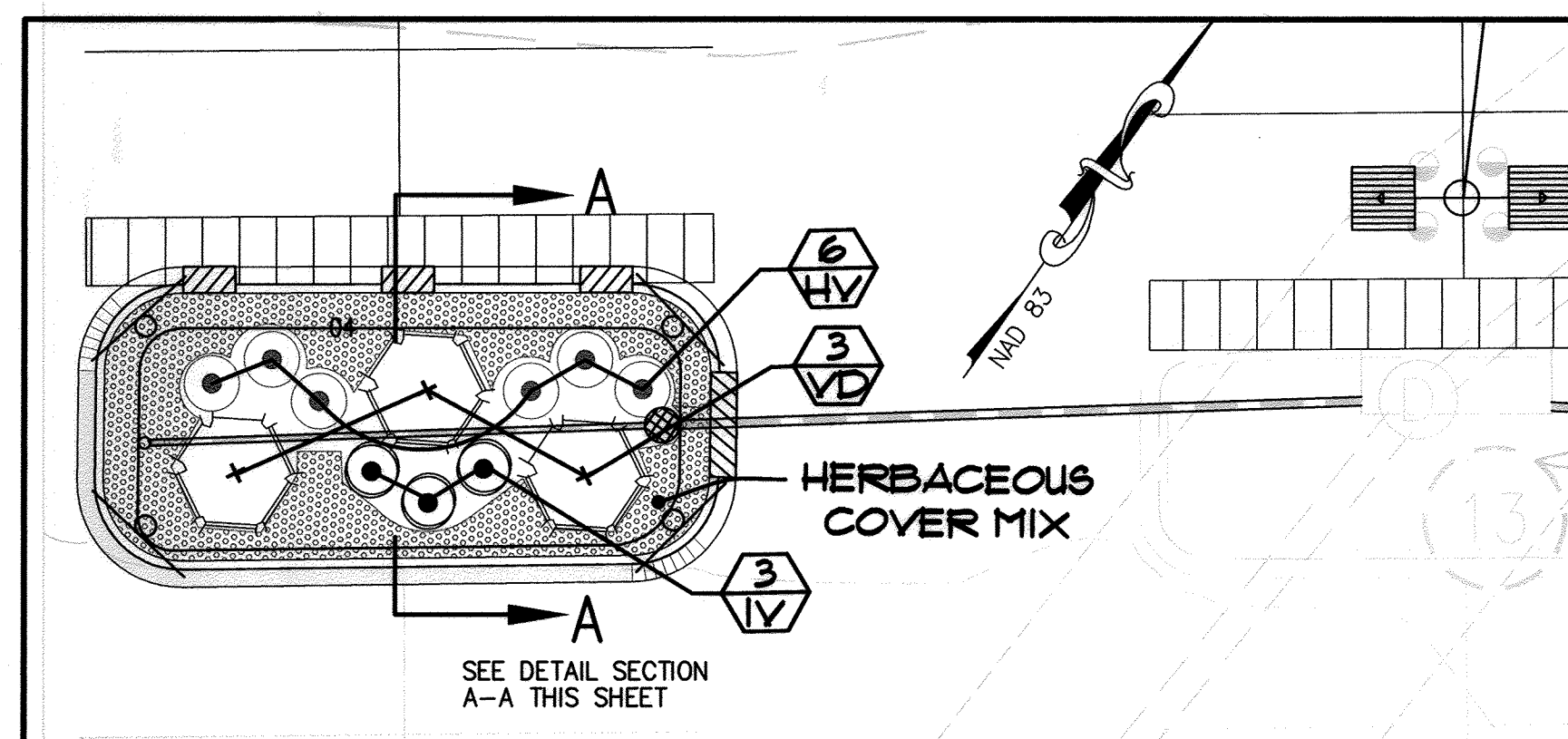
DRAINAGE AREA (MAXIMUM 20,000 SF)	A _{DRN} 17860 ft ²
SIZE RATIO (LENGTH / WIDTH)	R _{LW} 5.45 : 1
SIDE SLOPE OF PONDING AREA (MAXIMUM 3:1)	S _{SIDE} 3.0 : 1
DEPTH OF SOIL (MAXIMUM 4')	D _{SOIL} 3.0 ft
LENGTH OF BASIN (MINIMUM 15')	L _{BASIN} 60.0 ft
WIDTH OF BASIN (MINIMUM 10')	W _{BASIN} 12.5 ft
AREA AT TOP OF PONDING (MINIMUM 150ft ²)	A _{TOP} 750.0 ft ²
VOLUME OF PONDING (MAXIMUM 1' DEEP)	V _{POND} 550.5 ft ³
STORAGE VOLUME OF SOIL (SOIL POROSITY 0.30)	V _{SOIL} 734.9 ft ³
TOTAL FACILITY VOLUME	V _{BASIN} 1285.4 ft ³



CROSS-SECTION A-A
NOT TO SCALE



BIORETENTION FACILITY #2 PLAN VIEW
SCALE: 1"=10'



BIORETENTION FACILITY #2 LANDSCAPE VIEW
SCALE: 1"=10'

BIORETENTION FILTER CALCULATIONS (BIORETENTION FILTER #2)

DRAINAGE AREA (MAXIMUM 20,000 SF)	A _{DRN} 14375 ft ²
SIZE RATIO (LENGTH / WIDTH)	R _{LW} 2.33 : 1
SIDE SLOPE OF PONDING AREA (MAXIMUM 3:1)	S _{SIDE} 3.0 : 1
DEPTH OF SOIL (MAXIMUM 4')	D _{SOIL} 2.5 ft
LENGTH OF BASIN (MINIMUM 15')	L _{BASIN} 35.0 ft
WIDTH OF BASIN (MINIMUM 10')	W _{BASIN} 14.0 ft
AREA AT TOP OF PONDING (MINIMUM 150ft ²)	A _{TOP} 490.0 ft ²
VOLUME OF PONDING (MAXIMUM 1' DEEP)	V _{POND} 361.0 ft ³
STORAGE VOLUME OF SOIL (SOIL POROSITY 0.30)	V _{SOIL} 408.2 ft ³
TOTAL FACILITY VOLUME	V _{BASIN} 767.2 ft ³

SEE SHEET 25 FOR PLANT SCHEDULE & ESD VOLUME COMPUTATIONS

STATE OF MARYLAND
ADAM B. ADAMS
PROFESSIONAL ENGINEER
ACADEMY BUILDING ADDITION
6-5-13

OWNER/DEVELOPER
WAL-MART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SWDC
BENTONVILLE, AR 72716-0550
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000

SUBDIVISION 'ELLCOTT CITY WALMART'
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WATER NO. F03 SEWER NOS. 1452800 **F-12-023**

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: [Signature] 9/22/11
Chief, Division of Land Development: [Signature] 9/22/11
Director: [Signature] 9/27/11

**WALMART STORE #2412-03
ELLCOTT CITY, WALMART, PARCEL B**

TM 24, TM GRID 6, P/O TM PARCEL 1085
2ND ELECTION DISTRICT, HOWARD COUNTY, MD

BIO-RETENTION DETAILS

DATE: 07/25/11 SHEET: 23 OF 34 SHEETS

REVISIONS	BY
07/15/10-CONCEPT	BU/GD
01/14/11-1ST SUBM	BU/GD
07/25/11-2nd SUBM	BU/GD

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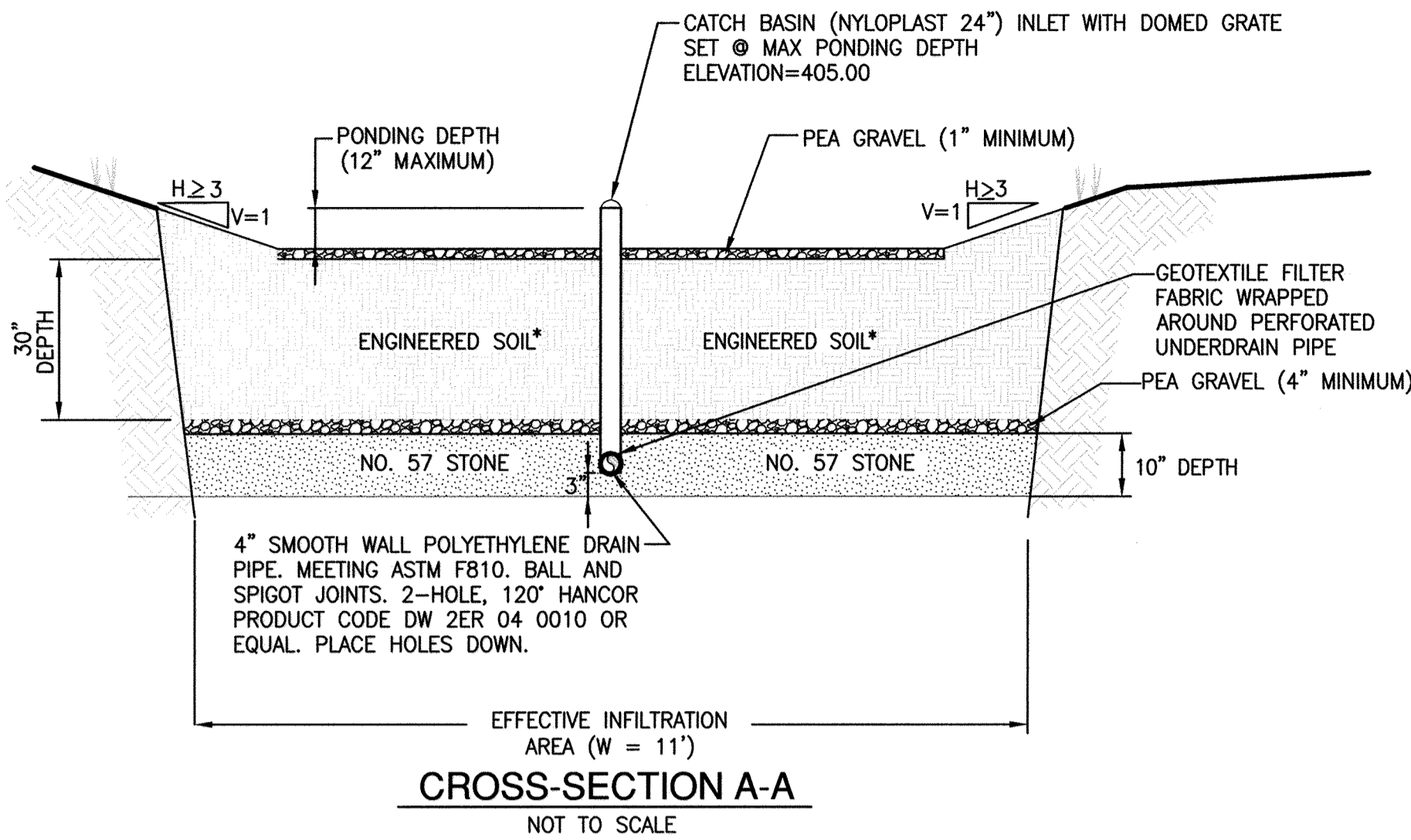
STATE OF MARYLAND
PROFESSIONAL ENGINEER
7-25-11

SUPERCENTER #2412-03
ELLCOTT CITY, HOWARD COUNTY, MARYLAND
WAL-MART REAL ESTATE BUSINESS TRUST
2001 SE 10TH STREET
BENTONVILLE, AR 72716

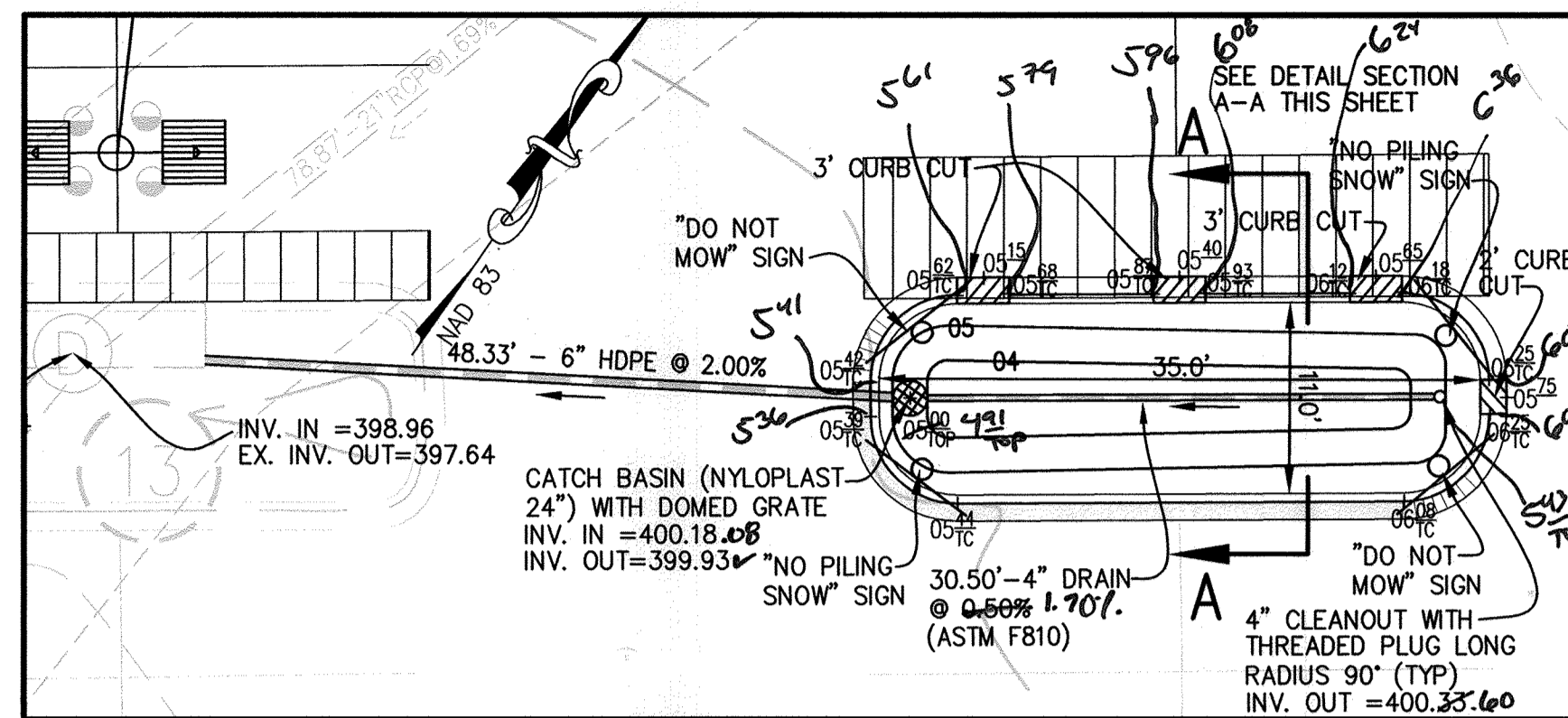
Walmart

DESIGN DRAWN BY: KJC
CHECKED BY: GD
DATE: 01/14/11
SCALE: N/A
JOB No. 4660-01-002
SHEET 23 OF 34 SHEETS

SDP-96-011

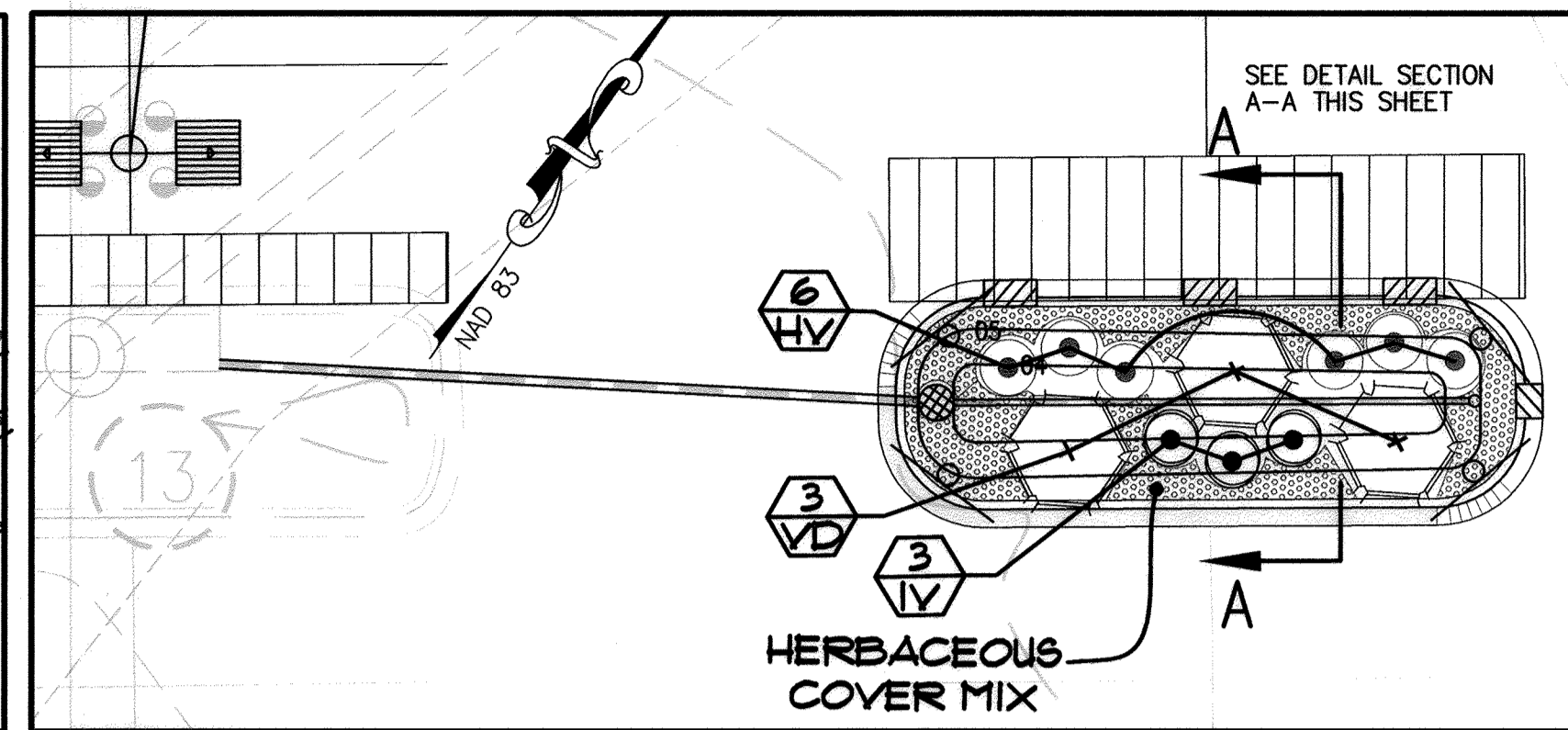


CROSS-SECTION A-A
NOT TO SCALE



BIORETENTION FACILITY #3 PLAN VIEW

SCALE: 1"=10'

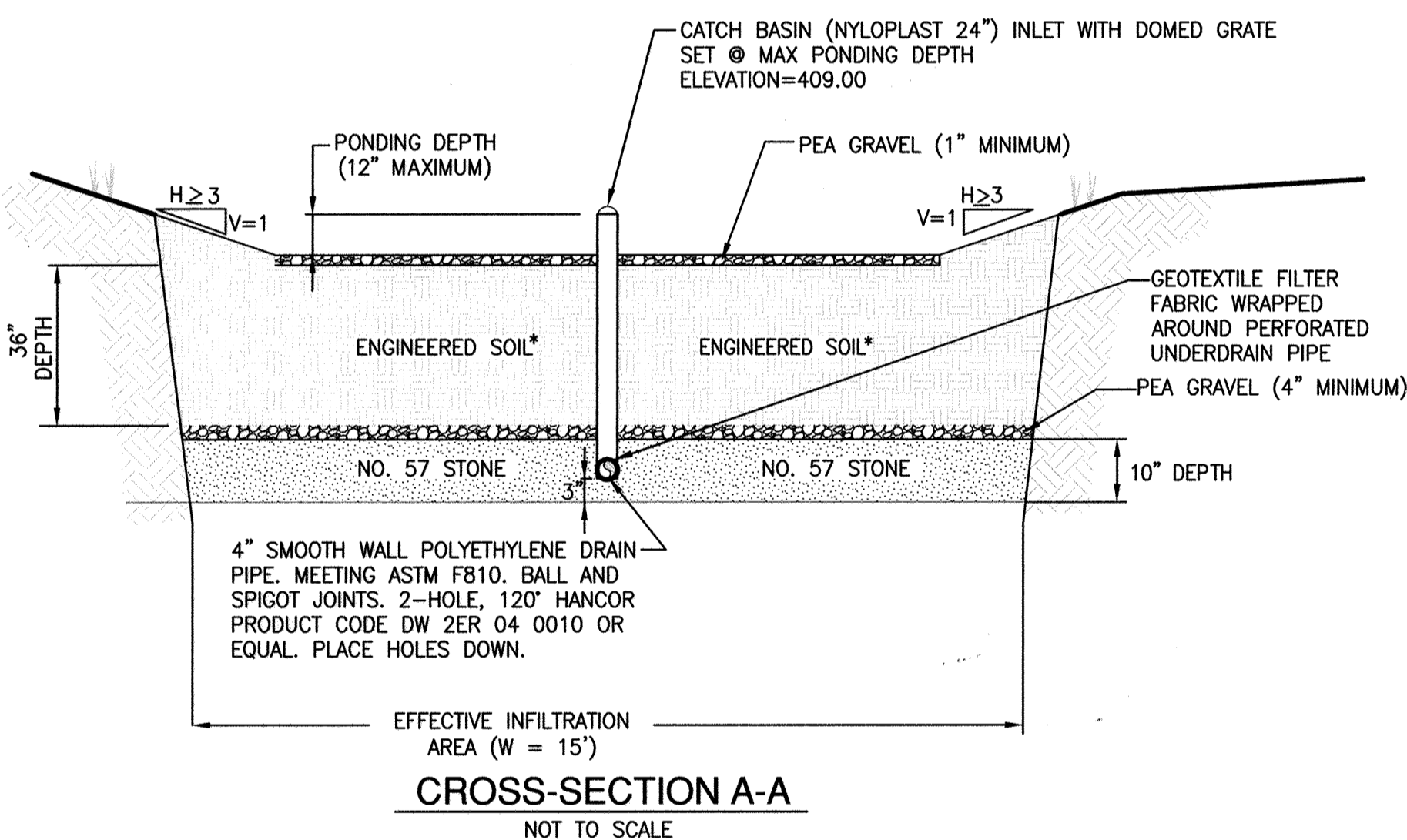


BIORETENTION FACILITY #3 LANDSCAPE VIEW

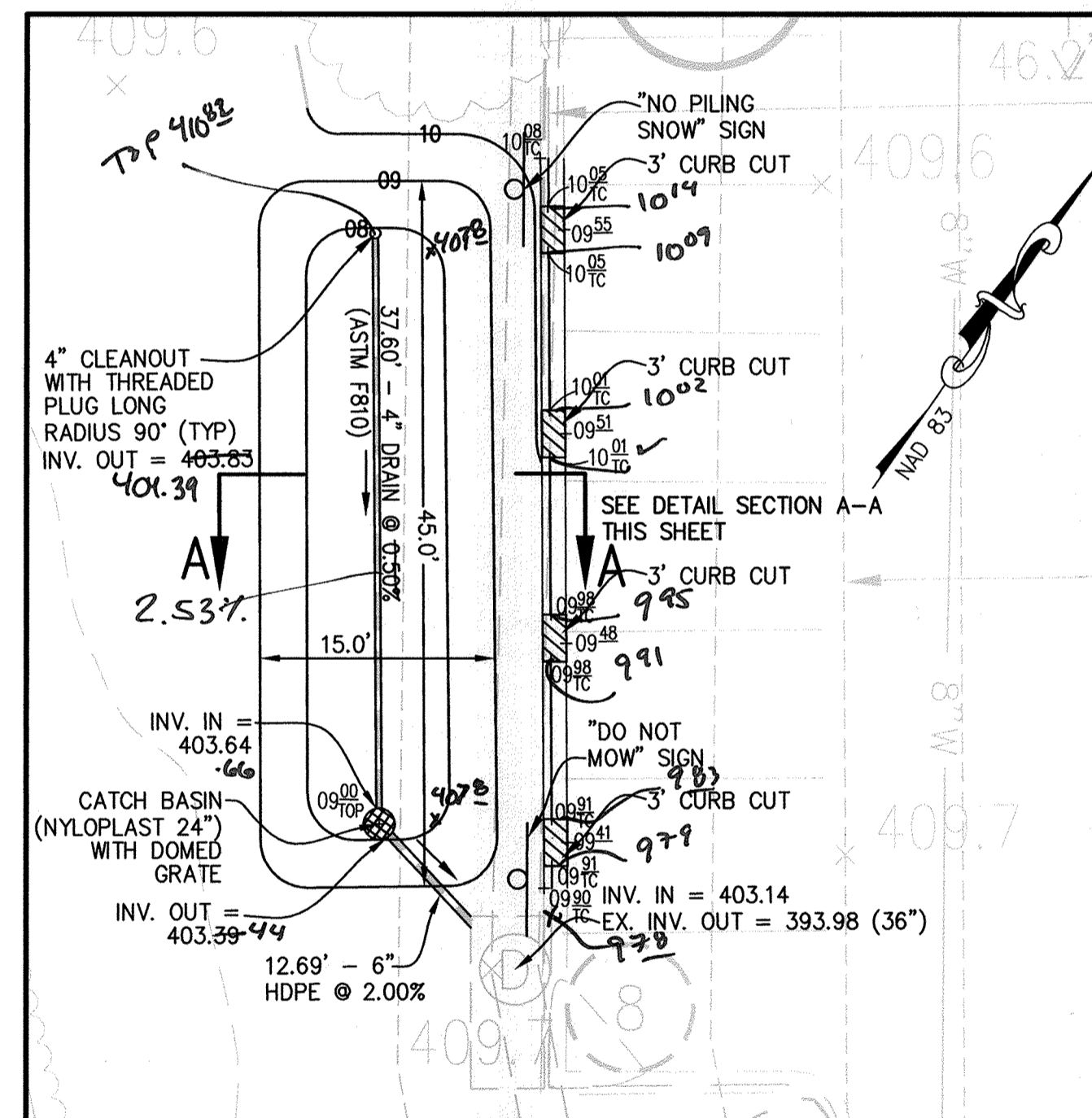
SCALE: 1"=10'

BIORETENTION FILTER CALCULATIONS (BIORETENTION FILTER #3)

DRAINAGE AREA (MAXIMUM 20,000 SF)	A_{DRN} 16553 ft^2
SIZE RATIO (LENGTH / WIDTH)	$R_{L/W}$ 3.18 :1
SIDE SLOPE OF PONDING AREA (MAXIMUM 3:1)	S_{SIDE} 3.0 :1
DEPTH OF SOIL (MAXIMUM 4')	D_{SOIL} 2.5 ft
LENGTH OF BASIN (MINIMUM 15')	L_{BASIN} 35.0 ft
WIDTH OF BASIN (MINIMUM 10')	W_{BASIN} 11.0 ft
AREA AT TOP OF PONDING (MINIMUM 150 ft^2)	A_{TOP} 385.0 ft^2
VOLUME OF PONDING (MAXIMUM 1' DEEP)	V_{POND} 265.0 ft^3
STORAGE VOLUME OF SOIL (SOIL POROSITY 0.30)	V_{SOIL} 324.8 ft^3
TOTAL FACILITY VOLUME	V_{BASIN} 589.8 ft^3

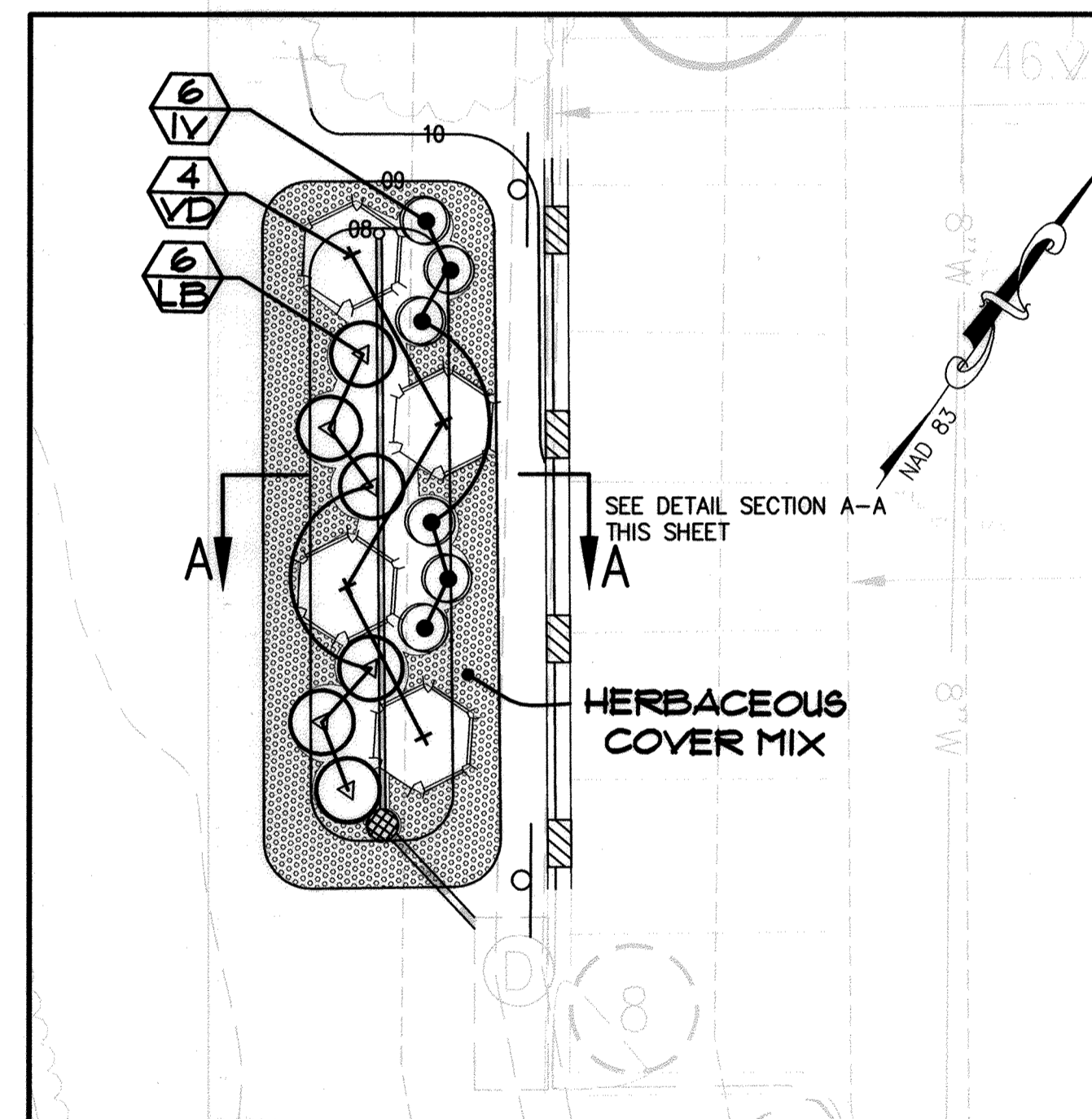


CROSS-SECTION A-A
NOT TO SCALE



BIORETENTION FACILITY #4 PLAN VIEW

SCALE: 1"=10'



BIORETENTION FACILITY #4 LANDSCAPE PLAN

SCALE: 1"=10'

BIORETENTION FILTER CALCULATIONS (BIORETENTION FILTER #4)

DRAINAGE AREA (MAXIMUM 20,000 SF)	A_{DRN} 14375 ft^2
SIZE RATIO (LENGTH / WIDTH)	$R_{L/W}$ 3.00 :1
SIDE SLOPE OF PONDING AREA (MAXIMUM 3:1)	S_{SIDE} 3.0 :1
DEPTH OF SOIL (MAXIMUM 4')	D_{SOIL} 3.0 ft
LENGTH OF BASIN (MINIMUM 15')	L_{BASIN} 45.0 ft
WIDTH OF BASIN (MINIMUM 10')	W_{BASIN} 15.0 ft
AREA AT TOP OF PONDING (MINIMUM 150 ft^2)	A_{TOP} 675.0 ft^2
VOLUME OF PONDING (MAXIMUM 1' DEEP)	V_{POND} 513.0 ft^3
STORAGE VOLUME OF SOIL (SOIL POROSITY 0.30)	V_{SOIL} 656.1 ft^3
TOTAL FACILITY VOLUME	V_{BASIN} 1169.1 ft^3

OWNER/DEVELOPER

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BENTONVILLE, AR 72716-0550
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PHONE: (479) 273-4000

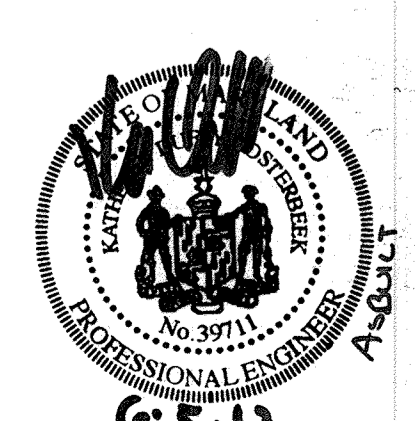
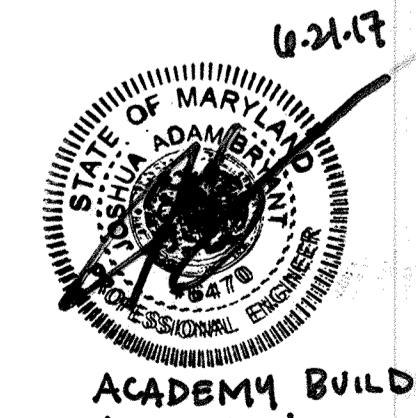
SUBDIVISION 'ELLCOTT CITY WALMART'

ELECTION DISTRICT NO. 2	HOWARD COUNTY, MARYLAND
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**WALMART STORE #2412-03
ELLCOTT CITY, WALMART, PARCEL B**

TM 24, TM GRID 6, P/O TM PARCEL 1085
2ND ELECTION DISTRICT, HOWARD COUNTY, MD

BIO-RETENTION DETAILS	DATE	SHEET
	07/25/11	24 OF 32 SHEETS



SEE SHEET 25 FOR PLANT SCHEDULE & ESD VOLUME COMPUTATIONS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>Mike Butler</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE: 8/24/11
<i>Mike Butler</i> CHIEF, DIVISION OF LAND DEVELOPMENT	DATE: 9/26/11
<i>Mike Butler</i> DIRECTOR	DATE: 9/27/11

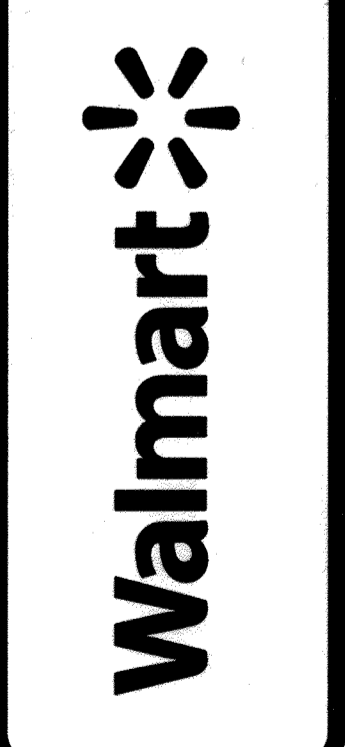
REVISIONS

07/15/10-CONCEPT	BU/GD
01/14/11-1ST SUBM	BU/GD
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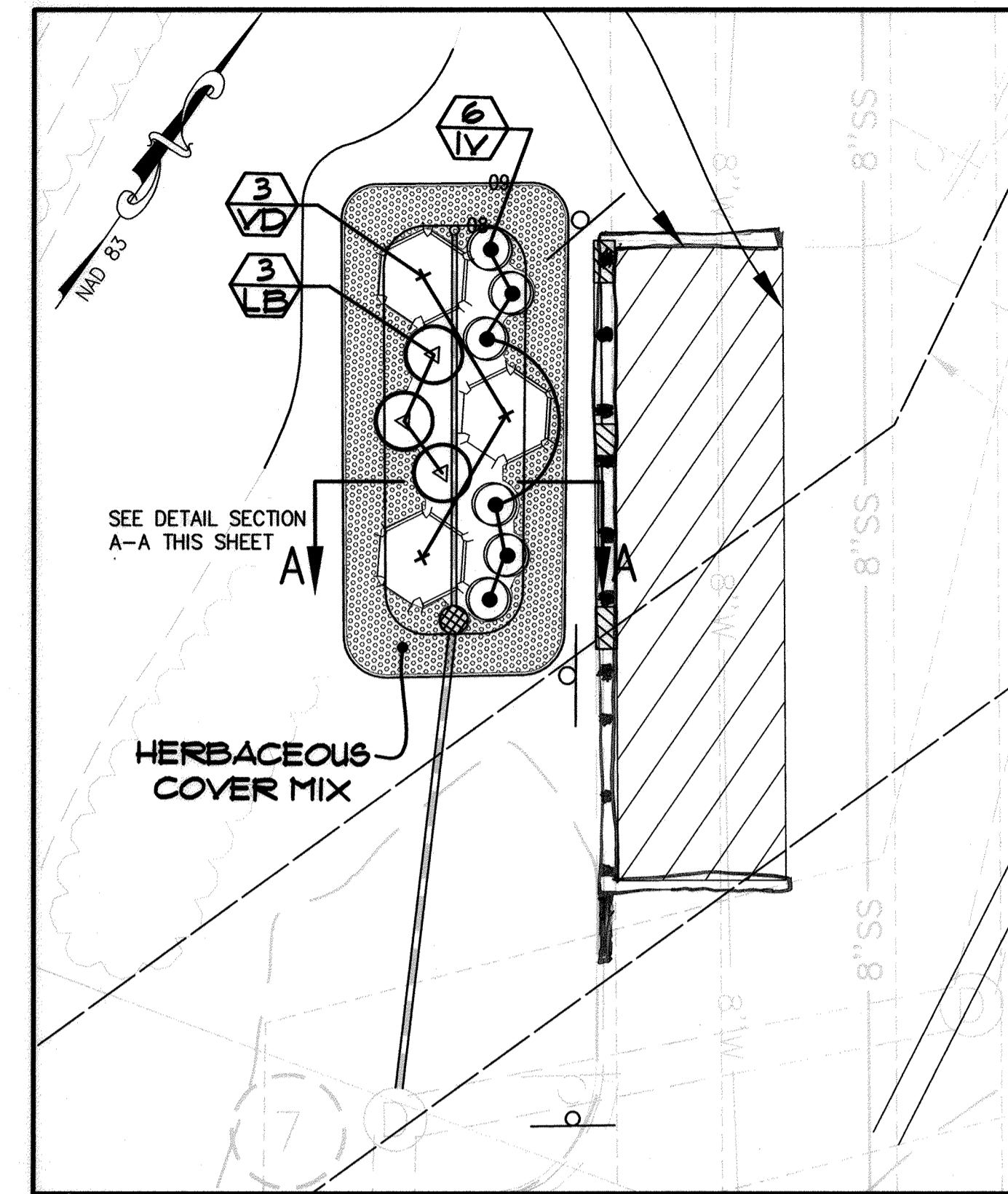
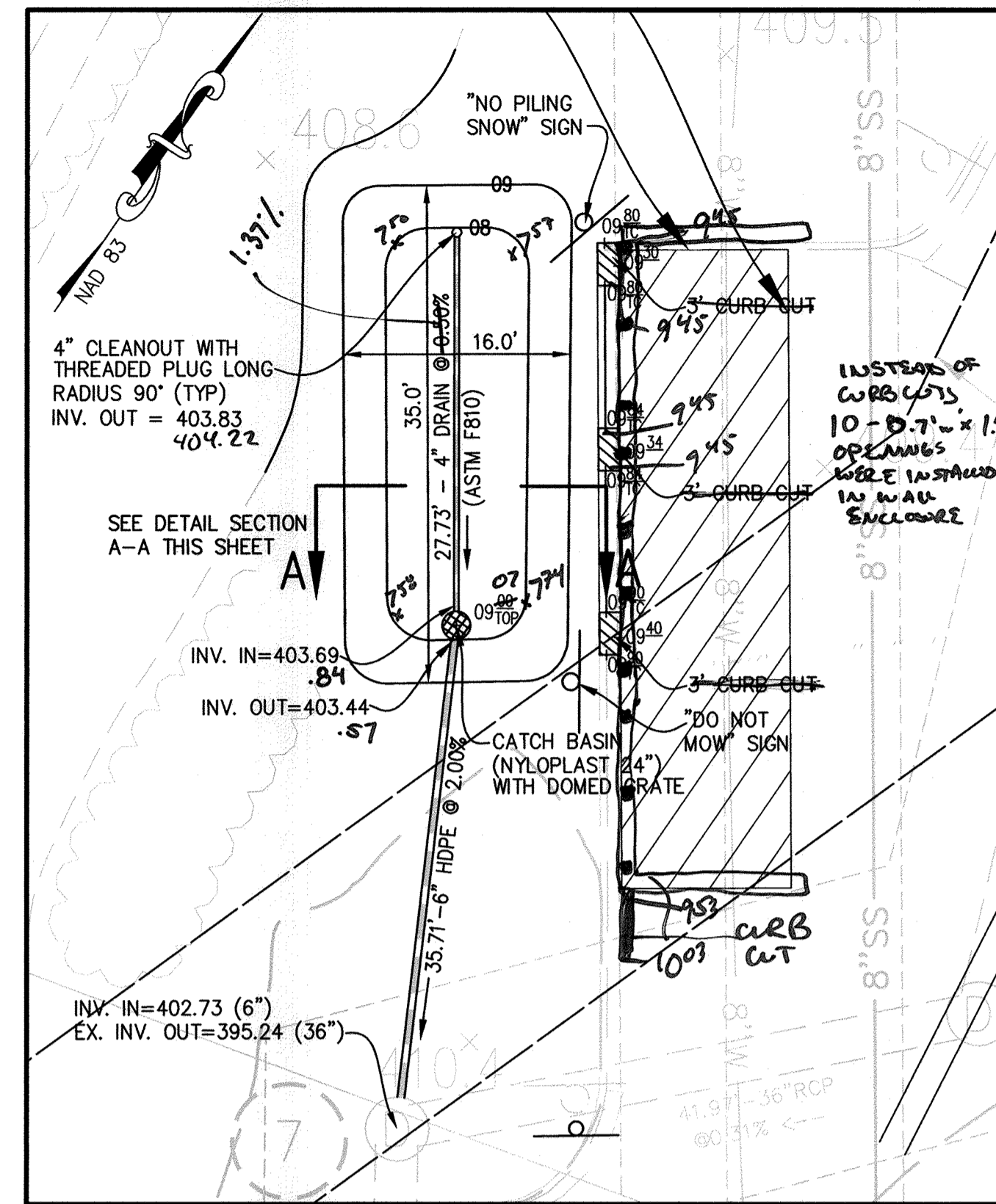
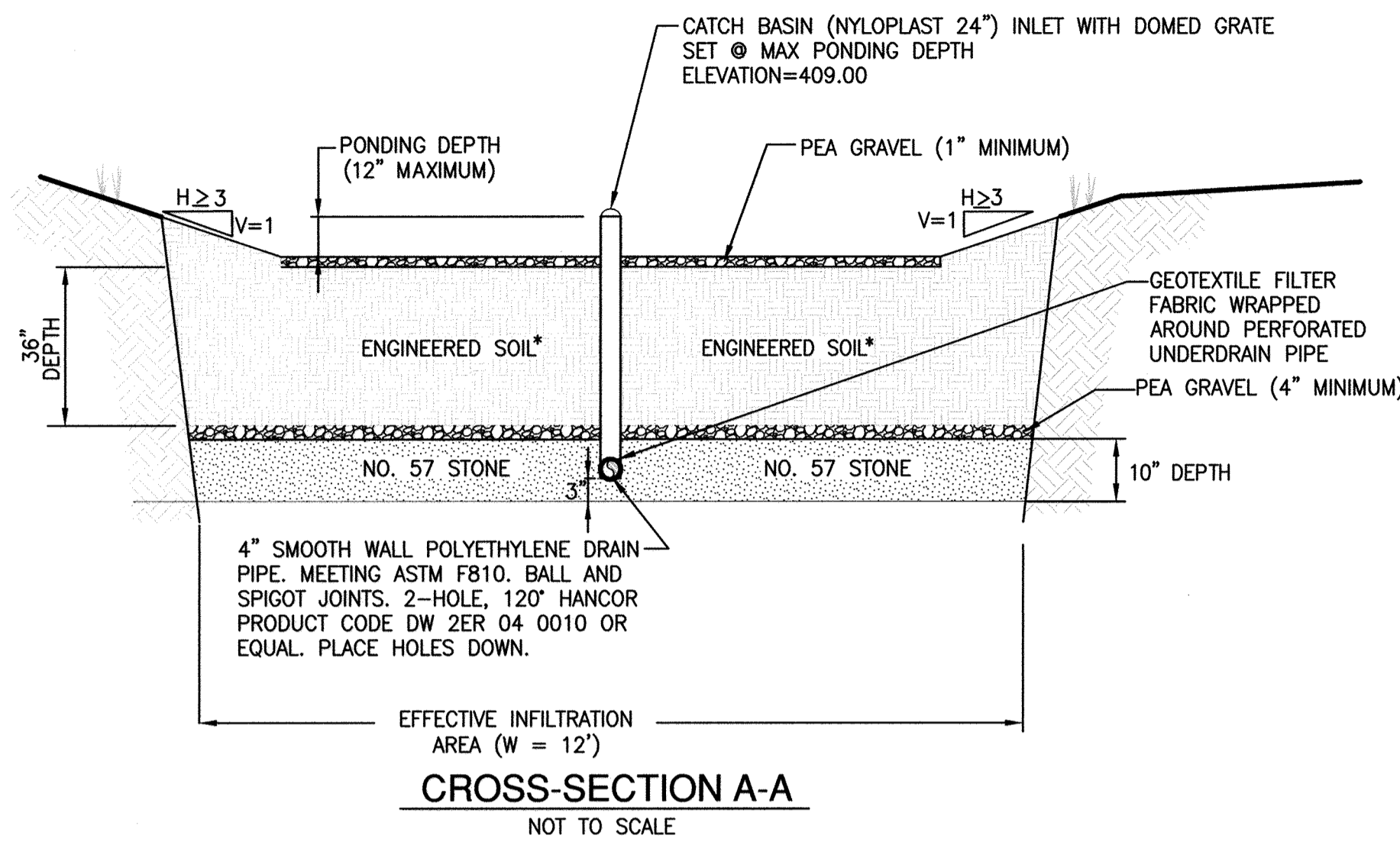
Bowman CONSULTING
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SUPERCENTER #2412-03
ELLCOTT CITY, HOWARD COUNTY, MARYLAND
WAL-MART REAL ESTATE BUSINESS TRUST
2001 SE 10TH STREET
BENTONVILLE, AR 72716



DESIGN DRAWN BU KJC
CHECKED GD
DATE 01/14/11
SCALE N/A
JOB No. 4680-01-002
SHEET 24 OF 32 SHEETS



BIORETENTION FILTER CALCULATIONS
(BIORETENTION FILTER #5)

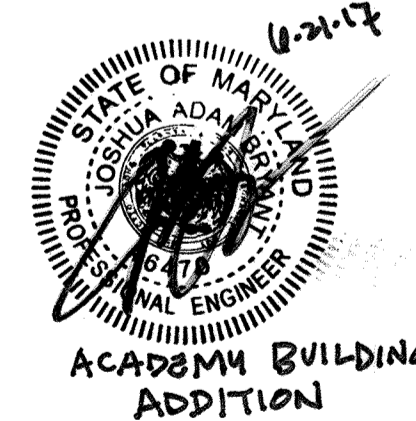
DRAINAGE AREA (MAXIMUM 20,000 SF)	A _{ORN} 6534 ft ²
SIZE RATIO (LENGTH / WIDTH)	R _{LW} 3.75 : 1
SIDE SLOPE OF PONDING AREA (MAXIMUM 3:1)	S _{SIDE} 3.0 : 1
DEPTH OF SOIL (MAXIMUM 4')	D _{SOIL} 3.0 ft
LENGTH OF BASIN (MINIMUM 15')	L _{BASIN} 35.0 ft
WIDTH OF BASIN (MINIMUM 10')	W _{BASIN} 16.0 ft
AREA AT TOP OF PONDING (MINIMUM 150ft ²)	A _{TOP} 560.0 ft ²
VOLUME OF PONDING (MAXIMUM 1' DEEP)	V _{POND} 425.0 ft ³
STORAGE VOLUME OF SOIL (SOIL POROSITY 0.30)	V _{SOIL} 544.5 ft ³
TOTAL FACILITY VOLUME	V _{BASIN} 969.5 ft ³

ESD VOLUME COMPUTATIONS

SITE CONDITIONS			
DEVELOPABLE AREA (Ac.) =	4.81		
HYDROLOGIC SOIL TYPES	RCN*	AREA (Ac.)	PERCENT
A	38	0.00	0%
B	55	3.48	72%
C	70	1.33	28%
D	77	0	0%
* RCN for "Woods in good condition" per Table 2.2 of TR-55			
REDEVELOPMENT			
EXISTING IMPERVIOUS AREA (Ac.) =	3.01		
PROPOSED IMPERVIOUS AREA (Ac.) =	4.17		
INCREASE IN IMPERVIOUSNESS (Ac.) =	1.16		
50% EXISTING IMPERVIOUS AREA (Ac.) =	1.51		
SITE IMPERVIOUSNESS (%) =	60%		
Prop. Impervious over Ex. Green (Ac.) =	1.16		
Because this is a redevelopment, 50% of the existing impervious area within LOD only requires WQv (1") treatment and proposed impervious area over existing green area requires full WQv (2.6") to be treated. A weighted P _e will be used for ESDv facility sizing.			
Weighted P _e =	(1.16)(2.6") + (1.51)(1")		
	(4.81-1.51)		
Weighted P _e =	1.37		
ESDv SIZING COMPUTATIONS			
AREA TREATED BY ESD - B SOILS (Ac.) =	0.92	Rv = 0.05 + 0.009 * (60)	ESDv = (1.37) * (0.59) * (1.6 Ac.)
AREA TREATED BY ESD - C SOILS (Ac.) =	0.68	Rv = 0.59	12
PERVIOUS AREA (Ac.) =	0.64		ESDv = 0.1075 Ac-ft ESDv = 4681 cf
ESDv REQUIRED = 4,681 CF. ESDv PROVIDED = 4,780 CF. 4746 provided asbuilt. 4746 > 4681			

OPERATION AND MAINTENANCE SCHEDULE FOR LANDSCAPE INFILTRATION (M-3) MICRO-BIORETENTION (M-6), RAIN GARDENS (M-7), BIORETENTION SWALE (M-8), ENHANCED FILTERS (M-9)

- The Owner shall maintain the plant material, mulch layer and soil layer annually. Maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material is limited to the following: 2000 Maryland Stormwater Design Manual Volume II, Table A.4.1 and 2.
- The Owner shall perform a plant in the spring and in the fall of each year. During the inspection, the Owner shall remove dead and diseased vegetation considered beyond treatment, replace dead plant material with acceptable replacement plant material, treat diseased trees and shrubs, and replace all deficient stakes and wires.
- The Owner shall inspect the mulch each spring. The mulch shall be replaced every two to three years. The previous mulch layer shall be removed before the new layer is applied.
- The Owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.



STORMWATER MANAGEMENT DESIGN NARRATIVE

THE PROJECT CONSISTS OF APPROXIMATELY 26,800 SQUARE FEET EXPANSION TO THE EXISTING WALMART STORE #2412 AND CONSTRUCTION OF ADDITIONAL PARKING SPACES AT 3200 NORTH RIDGE ROAD, ELLICOTT CITY, HOWARD COUNTY, MARYLAND. THE SUBJECT SITE IS APPROXIMATELY 18.36 ACRES, AND IS BOUNDED BY COLUMBIA PIKE (RT. 29) TO THE WEST, UNDEVELOPED PROPERTY TO THE NORTH, NORTH RIDGE ROAD TO THE EAST, AND AN EXISTING OFFICE BUILDING WITH SURFACE PARKING TO THE SOUTH.

THE SUBJECT SITE CURRENTLY HAS AN EXISTING RETAIL BUILDING AND ASSOCIATED PARKING LOT. THERE ARE SOME AREAS WITH STEEP SLOPES OF 25% OR MORE LOCATED ALONG THE WESTERN BOUNDARY OF THE SITE HOWEVER THE REST OF SITE HAS GRADUAL SLOPES SINCE THE MAJORITY OF SITE IS ALREADY DEVELOPED. ON-SITE EXISTING VEGETATION CONSISTING OF TREES AND SHRUBS ARE LOCATED AT THE WESTERN AND SOUTHERN PORTION OF THE SITE. THERE IS ALSO 1.5 ACRES FOREST CONSERVATION AREA DEDICATED AT THE WESTERN PART OF THE SITE. THE SUBJECT SITE HAS B AND C HYDROLOGIC SOIL TYPES.

ON-SITE EXISTING IMPERVIOUS COVER INCLUDES EXISTING ONE-STORY RETAIL BUILDING AND PARKING LOT. THE EXISTING BUILDING FOOTPRINT IS 124,622 SQUARE FOOT AND OVERALL EXISTING IMPERVIOUS COVER FOR THE SUBJECT SITE EQUALS TO 9.84 ACRES. THIS PROJECT PROPOSES AN EXPANSION OF 26,800 SQUARE FOOT TO THE EXISTING BUILDING, AN ADDITIONAL LOADING DOCK AND PARKING SPACES, WHICH ACCUMULATES 1.16 ACRES INCREASE IN IMPERVIOUS AREA AND BRINGS THE TOTAL PROPOSED SITE IMPERVIOUSNESS TO 11 ACRES.

NON-STRUCTURAL MICRO-BIORETENTION FACILITIES HAVE BEEN SELECTED AS ESD TO THE MEP IN ORDER TO MEET THE STORMWATER MANAGEMENT REQUIREMENTS. MICRO-BIORETENTION FACILITIES ARE STRATEGICALLY LOCATED ON-SITE AROUND THE EXISTING PARKING LOT AND IN THE PARKING LOT ISLANDS IN ORDER TO RECEIVE A SHEET FLOW FROM GRADUAL SLOPES (< 5%) AND FROM DRAINAGE AREAS NOT MORE THAN 20,000 SQUARE FEET. DEPRESSED CURB CUTS HAVE BEEN PLACED ALONG THE CURBS WHERE THE MICRO-BIORETENTION FACILITIES ARE LOCATED TO PROVIDE SUFFICIENT INFLOW OF STORM WATER INTO THE FILTERING BED AND OUTFLOW CLEANOUTS ARE PROVIDED WITHIN THE MICRO-BIORETENTION FACILITIES IN ORDER TO CONVEY THE EXCESSIVE STORMWATER ABOVE ESDv LEVEL INTO THE EXISTING STORM DRAIN SYSTEM. UNDERDRAIN SYSTEMS ARE ALSO PLACED FOR EACH BIO-RETENTIONS FACILITY TO DISCHARGE TREATED STORMWATER SAFELY DOWNSTREAM. EXISTING STORM DRAIN SYSTEM ON SITE ADEQUATELY CONVEYS THE TREATED STORMWATER FROM MICRO-BIORETENTION FACILITIES AND THE INTERCEPTED STORMWATER BY STORM STRUCTURES INTO THE EXISTING POND LOCATED AT THE SOUTHERN PORTION OF THE PROPERTY. AS SHOWN ON THE CONCEPT PLAN, EXISTING DRAINAGE DIVIDES AND ON-SITE NATURAL FLOW PATTERNS HAVE BEEN HONORED BY THE PROPOSED DEVELOPMENT. REQUIRED ESD VOLUME FOR THE MICRO-BIORETENTION FACILITIES HAVE BEEN DETERMINED AND ASSOCIATED SIZING COMPUTATIONS HAVE BEEN SHOWN ON THIS SHEET.

IT'S OUR OPINION THAT STORMWATER MANAGEMENT REQUIREMENTS UNDER GOVERNING REDEVELOPMENT REGULATIONS HAVE BEEN MET AND THE REQUIRED WATER QUALITY TREATMENT FOR THE SUBJECT SITE HAS BEEN ACHIEVED BY PROPOSED ON-SITE MICRO-BIORETENTION FACILITIES.

BIORETENTION FACILITY PLANT SCHEDULE

QTY.	SYM	SCIENTIFIC NAME	COMMON NAME	TYPE	SIZE
HERBACEOUS COVER MIX					
30%		Andropogon Virginicus	Broomsedge	HERBACEOUS	
25%		Eupatorium Perpurea	Joe Pye Weed	HERBACEOUS	
25%		Lobelia Cardinalis	Cardinal Flower	HERBACEOUS	
20%		Panicum Virgatum	Switchgrass	HERBACEOUS	
SHRUBS					
16	LB	Lindera Benzoin	Spicebush	SHRUB	30"-36"
27	IV	Ilex Verticillata	Winterberry	SHRUB	30"-36"
16	VD	Viburnum Dentatum	Arrow-wood	SHRUB	30"-36"
12	HV	Hamamelis Virginiana	Witch Hazel	SHRUB	30"-36"

OWNER/DEVELOPER

WAL-MART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SWDC
BENTONVILLE, AR 72716-0550
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000

SUBDIVISION 'ELLICOTT CITY WALMART'

ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND
TAX MAP 17 & 24 P/O TM PARCEL 1085
REZONING CASE NUMBER ZB-941 DATED: OCTOBER 18, 1993
SKETCH PLAN S-95-01 APPROVED: 12-2-1994
PRELIMINARY PLAN P-95-21 APPROVED: 06-06-1995
SITE PLAN SDP-96-11 APPROVED: 06-21-1996
MASS GRADING PLAN SDP-96-001 APPROVED: 04-03-1996
FINAL ROAD CONSTRUCTION PLAN APPROVED: 11-08-1995
FOR NORTH RIDGE RD. F-96-01 APPROVED: 08-06-2010
ECP 11-007 APPROVED: 08-06-2010
FINAL RECORD PLATS F-96-009, F-96-091 & F-98-157
WATER NO. F03 SEWER NOS. 1452800 F-12-023

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 8/23/11
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 9/26/11
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 9/27/11
DIRECTOR DATE

WALMART STORE #2412-03
ELLICOTT CITY, WALMART, PARCEL B

TM 24, TM GRID 6, P/O TM PARCEL 1085
2ND ELECTION DISTRICT, HOWARD COUNTY, MD

DATE	SHEET
07/25/11	25
	OF 34 SHEETS

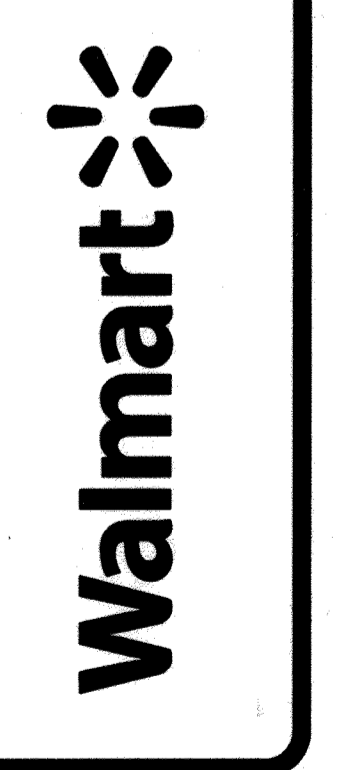
BIO-RETENTION DETAILS

REVISIONS	BY
07/15/10-CONCEPT	BU/GD
01/14/11-1ST SUBM	BU/GD
07/25/11-2nd SUBM	BU/GD

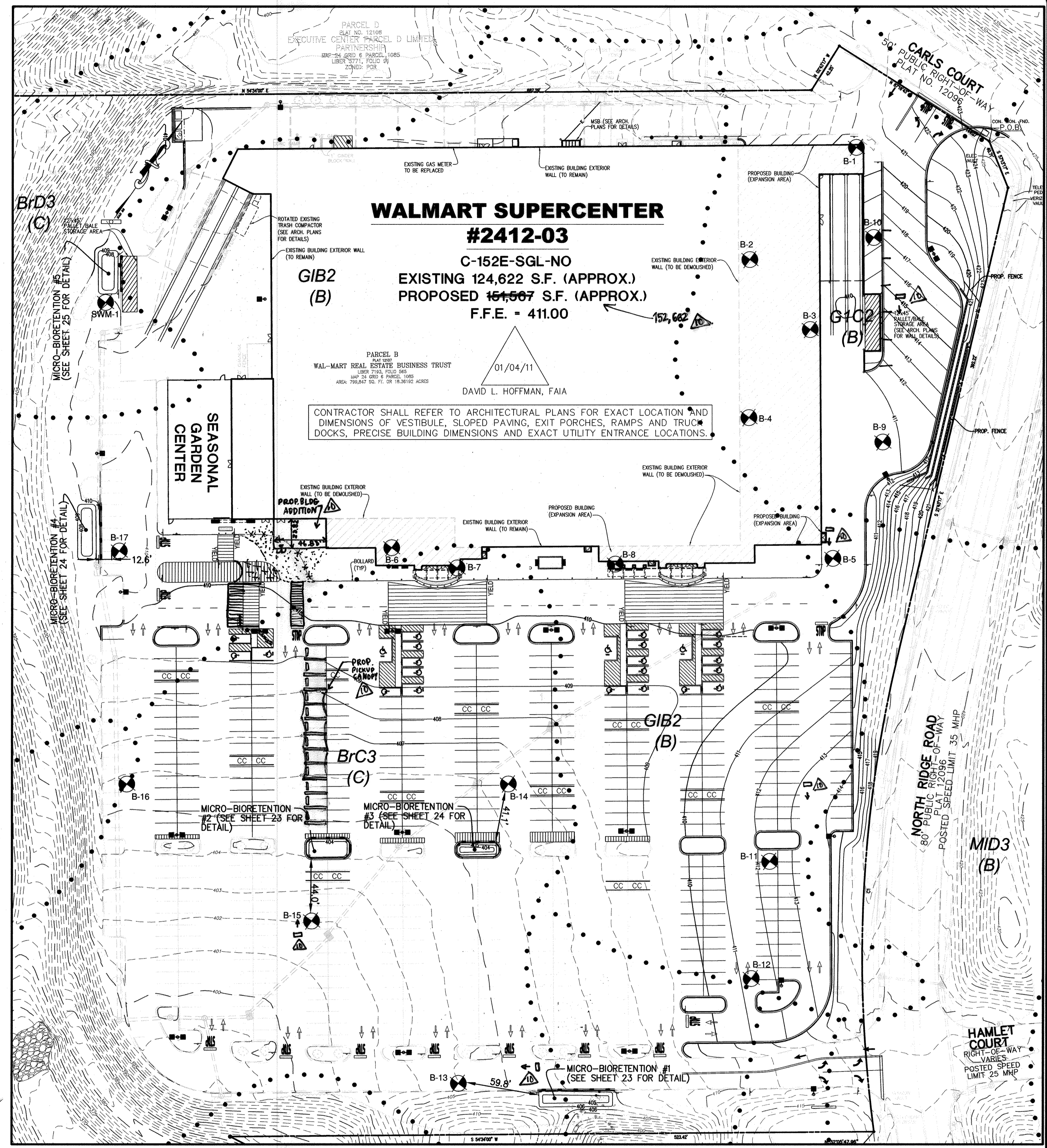
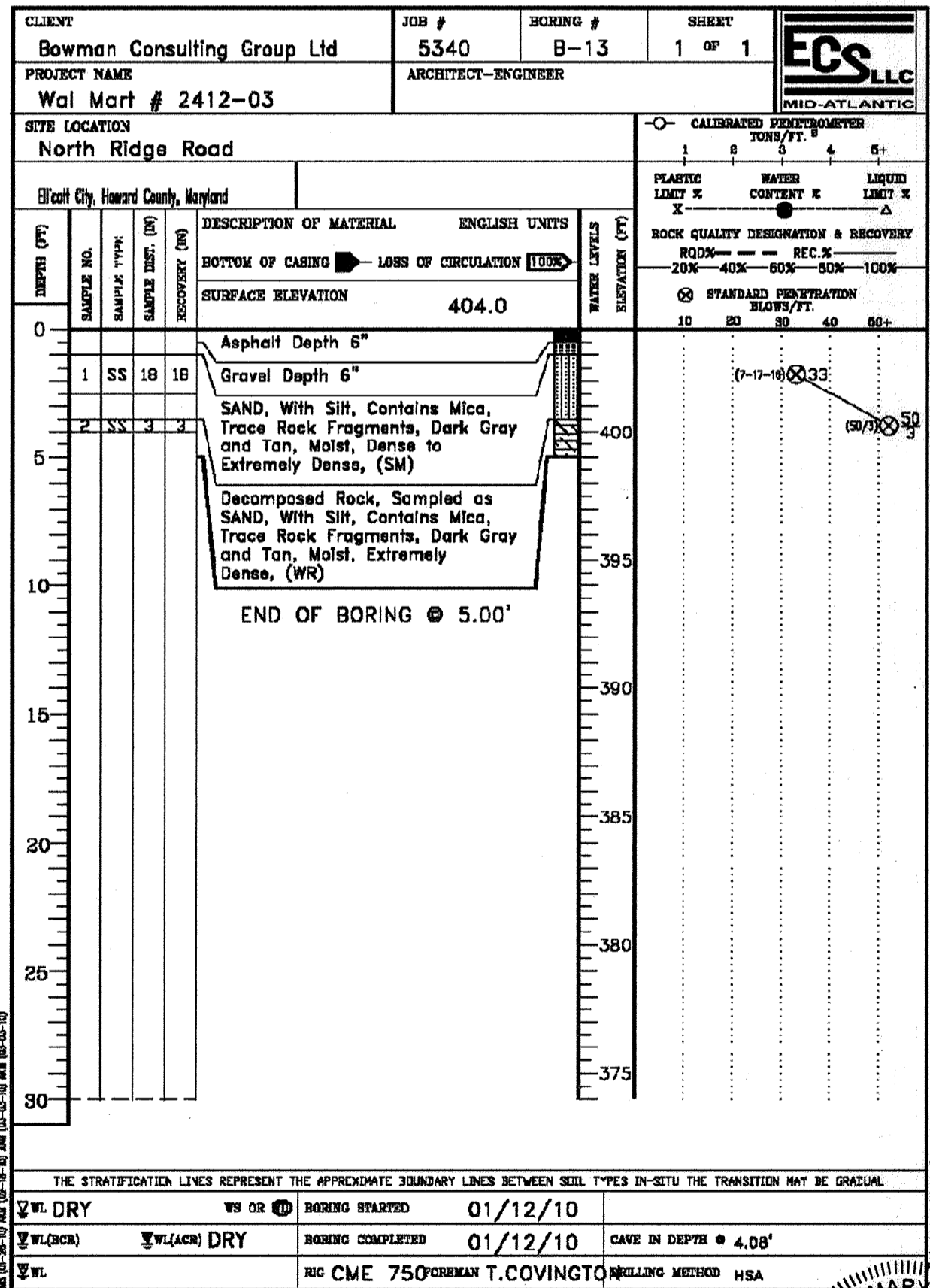
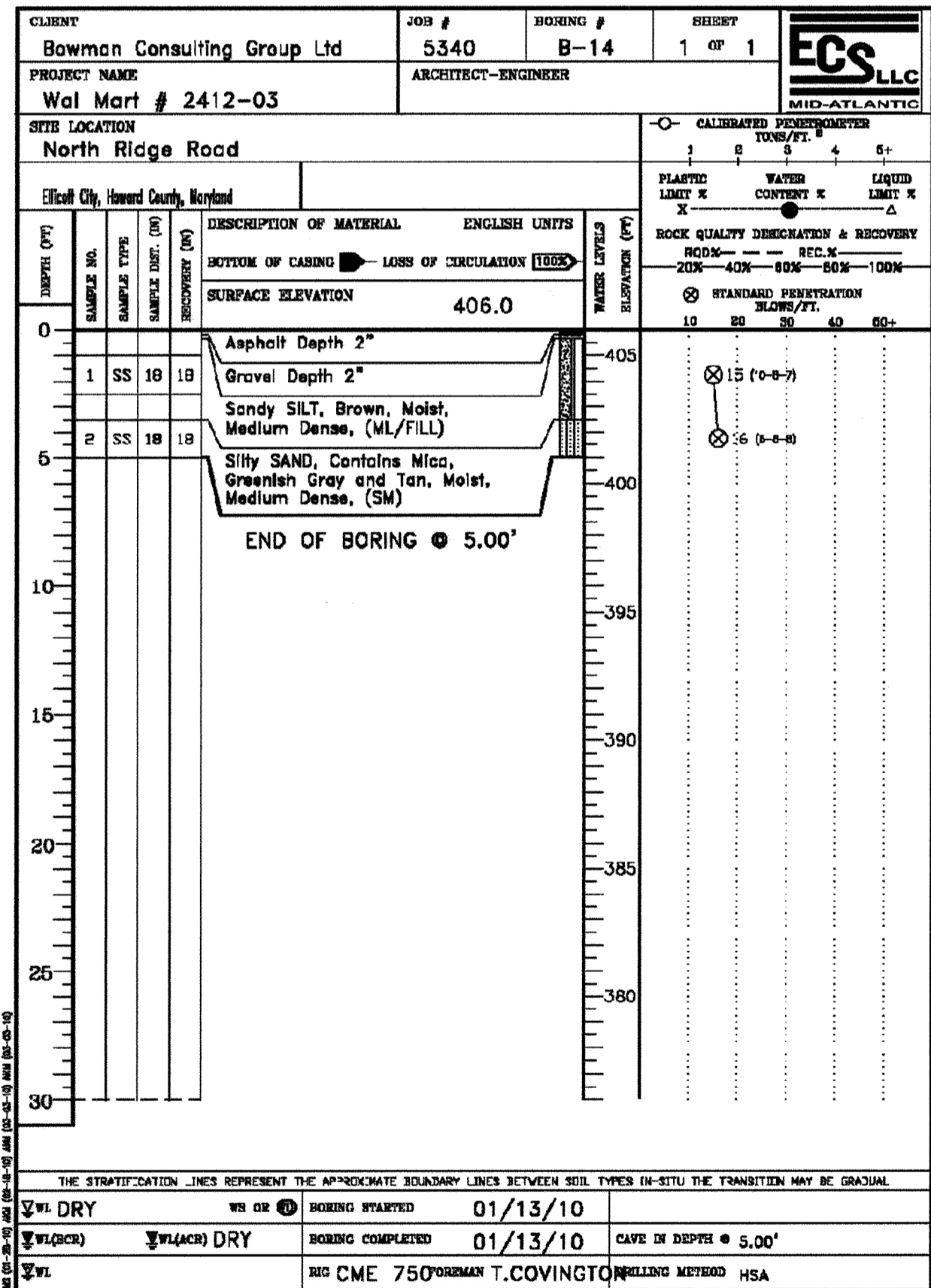
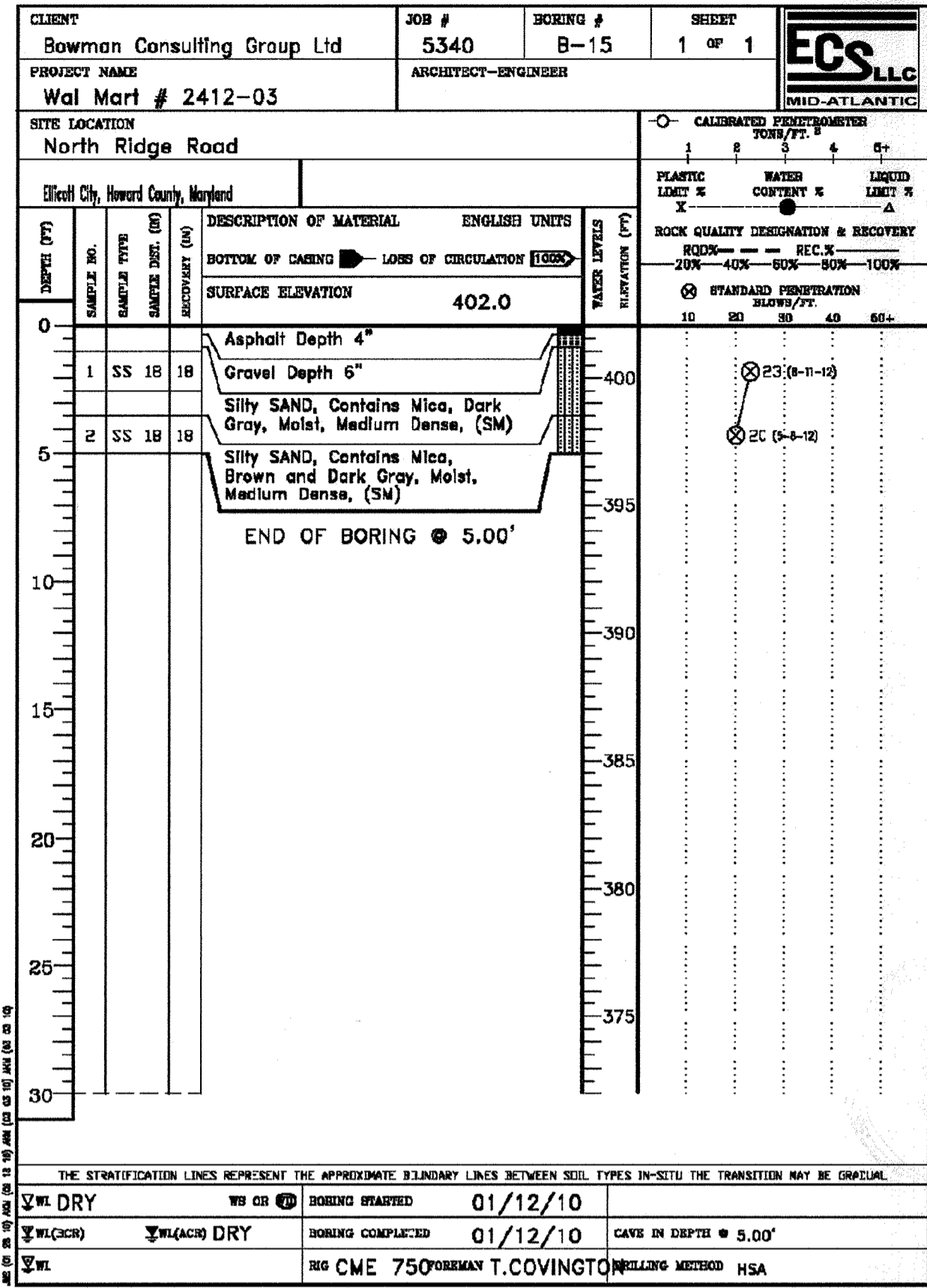
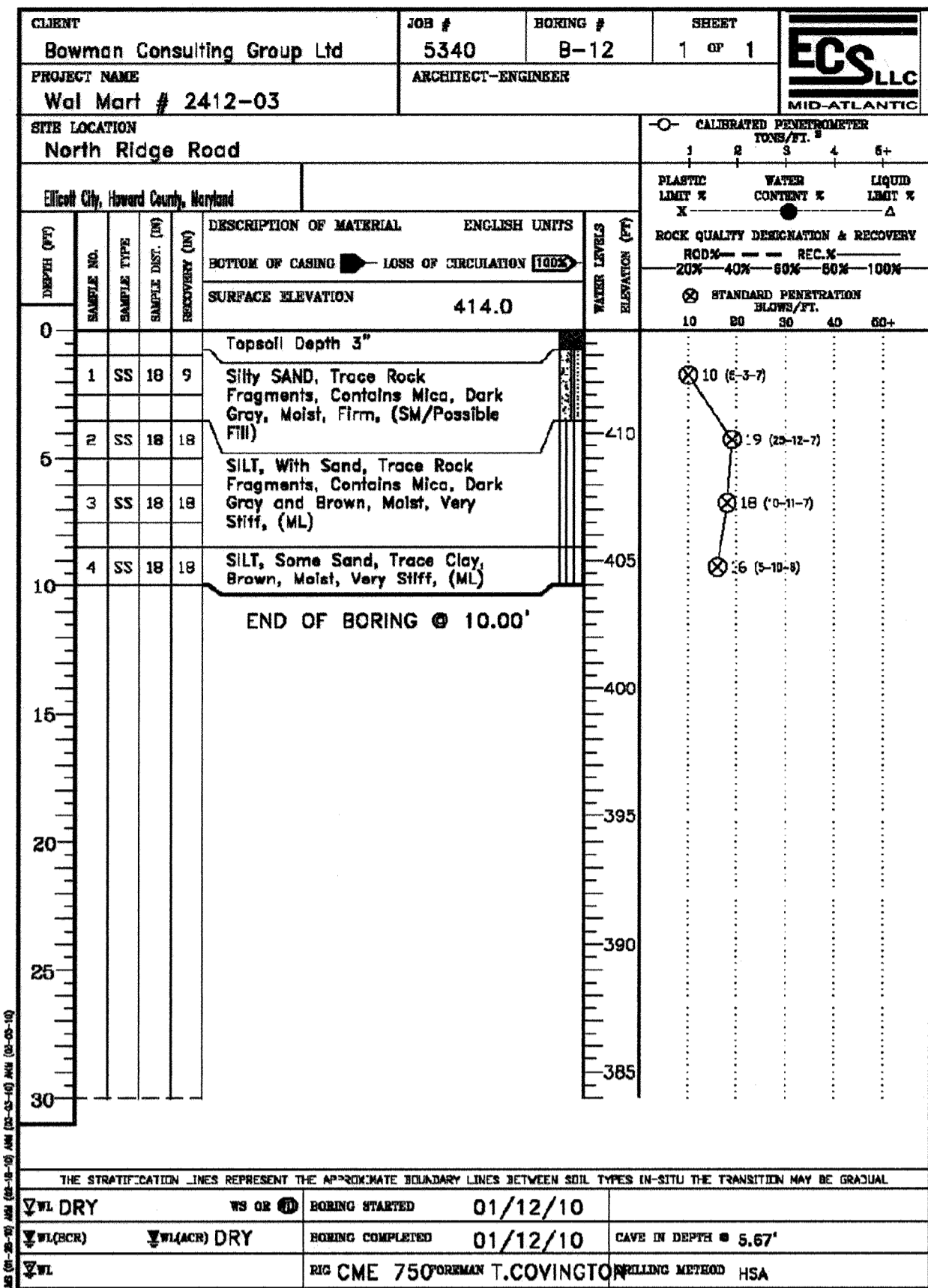
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9813 Gowen Drive
Manassas, Virginia 20110
www.bowmanconsulting.com
Telephone: (703) 530-8083
Fax: (703) 530-8475

STATE OF MARYLAND
REGISTERED PROFESSIONAL ENGINEER
38755
2-25-11

SUPERCENTER #2412-03
ELLICOTT CITY, HOWARD COUNTY, MARYLAND
WAL-MART REAL ESTATE BUSINESS TRUST
2001 SE 10TH STREET
BENTONVILLE, AR 72716



DESIGN DRAWN BU KJC
CHECKED GD
DATE 01/14/11
SCALE N/A
JOB No. 4680-01-002
SHEET 25 OF 34 SHEETS
SDP-96-011



ECS Mid-Atlantic, LLC
 Baltimore, MD
 Boring Log Details

Project Number: 5340-A Boring Number: SWM-1
 Boring Depth: 3.00 Surface Elevation:

Depth (FT)	Description of Material (Visual Classification)	Sample No.	Sample Type	Sample Dist. (IN)	Recovery (IN)	N Value	Tests Ordered	Depth (FT)
0	Surface Material -> Topsoil [Depth 3.00"]							
1	Silty Micaceous SAND, Trace Gravel, Brown, Moist, (SM)							1
2								2
3	AR @ 3.00'							3

FOR REVISION 10 ONLY
 ANDREW G. STINE
 PROFESSIONAL ENGINEER

OWNER/DEVELOPER
 WAL-MART REAL ESTATE BUSINESS TRUST
 2001 SOUTHEAST 10TH STREET, SWDC
 BENTONVILLE, AR 72716-0550
 CONTACT: MIKE THOMAS
 PHONE: (479) 273-4000

SUBDIVISION 'ELLCOTT CITY WALMART'
 ELECTION DISTRICT NO. 2
 TAX MAP 17 & 24
 REZONING CASE NUMBER ZB-941
 SKETCH PLAN S-95-01
 PRELIMINARY PLAN P-95-21
 SITE PLAN SDP-96-11
 MASS GRADING PLAN SDP-96-001
 FINAL ROAD CONSTRUCTION PLAN FOR NORTH RIDGE RD. F-96-01
 ECP 11-007
 FINAL RECORD PLATS WATER NO. F03

HOWARD COUNTY, MARYLAND
 P/O TM PARCEL 1085
 DATED: OCTOBER 18, 1993
 APPROVED: 12-2-1994
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 APPROVED: 04-03-1996

APPROVED: 11-08-1995
 APPROVED: 08-06-2010
 F-96-009, F-96-091 & F-98-157
 SEWER NOS. 1452800 F-12-023

SOIL BORING LOCATIONS - PLAN VIEW
 SCALE: 1"=50'

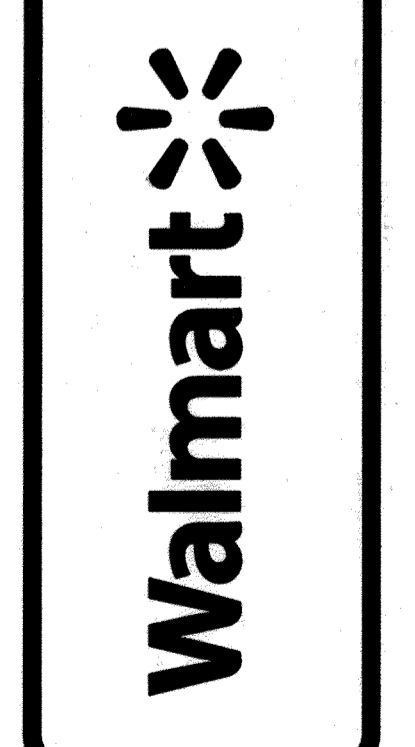
REVISIONS

NO.	DATE	DESCRIPTION	BY
07/15/10	CONCEPT	BU/GD	
01/14/11	1ST SUBM	BU/GD	
07/25/11	2nd SUBM	BU/GD	

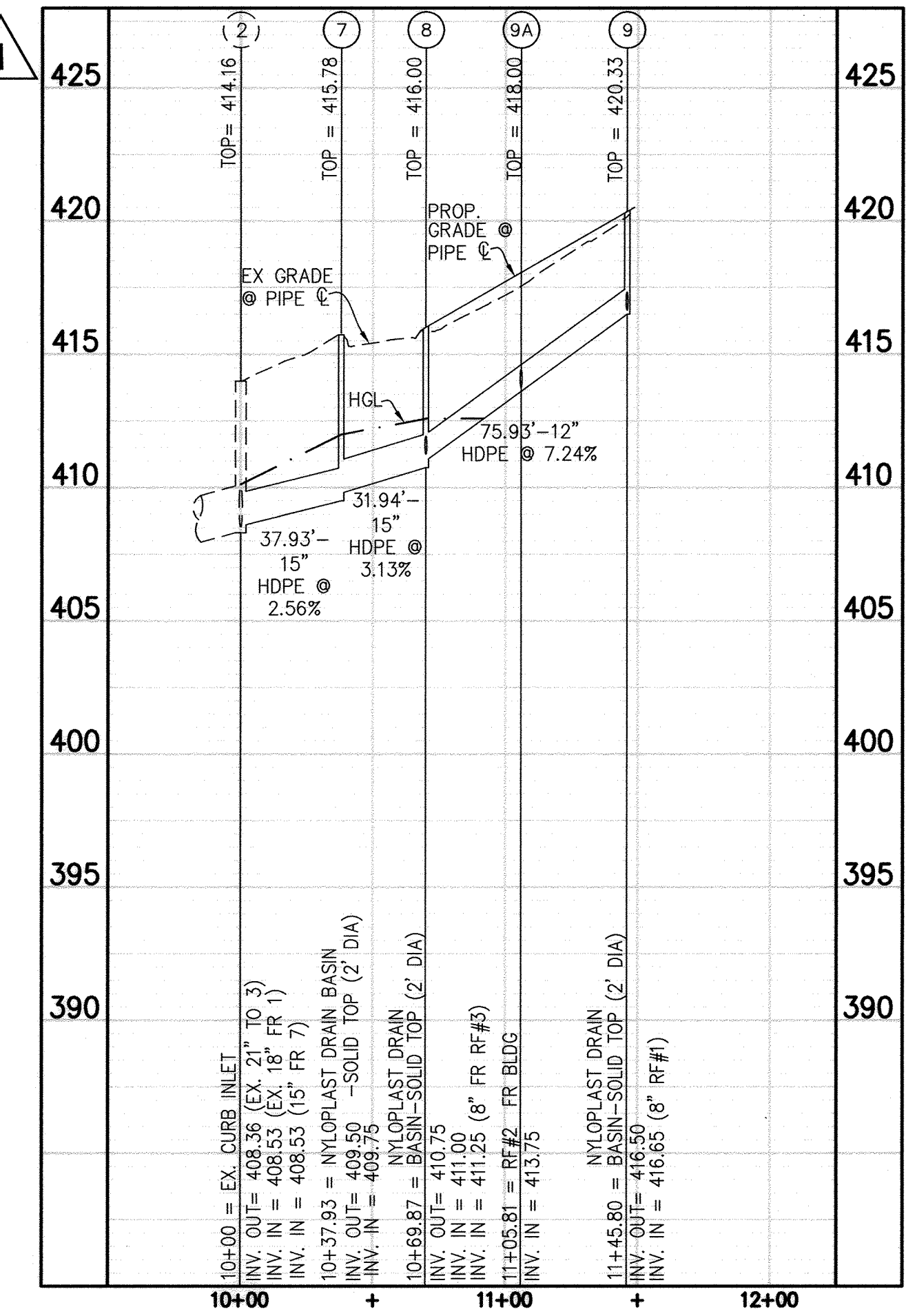
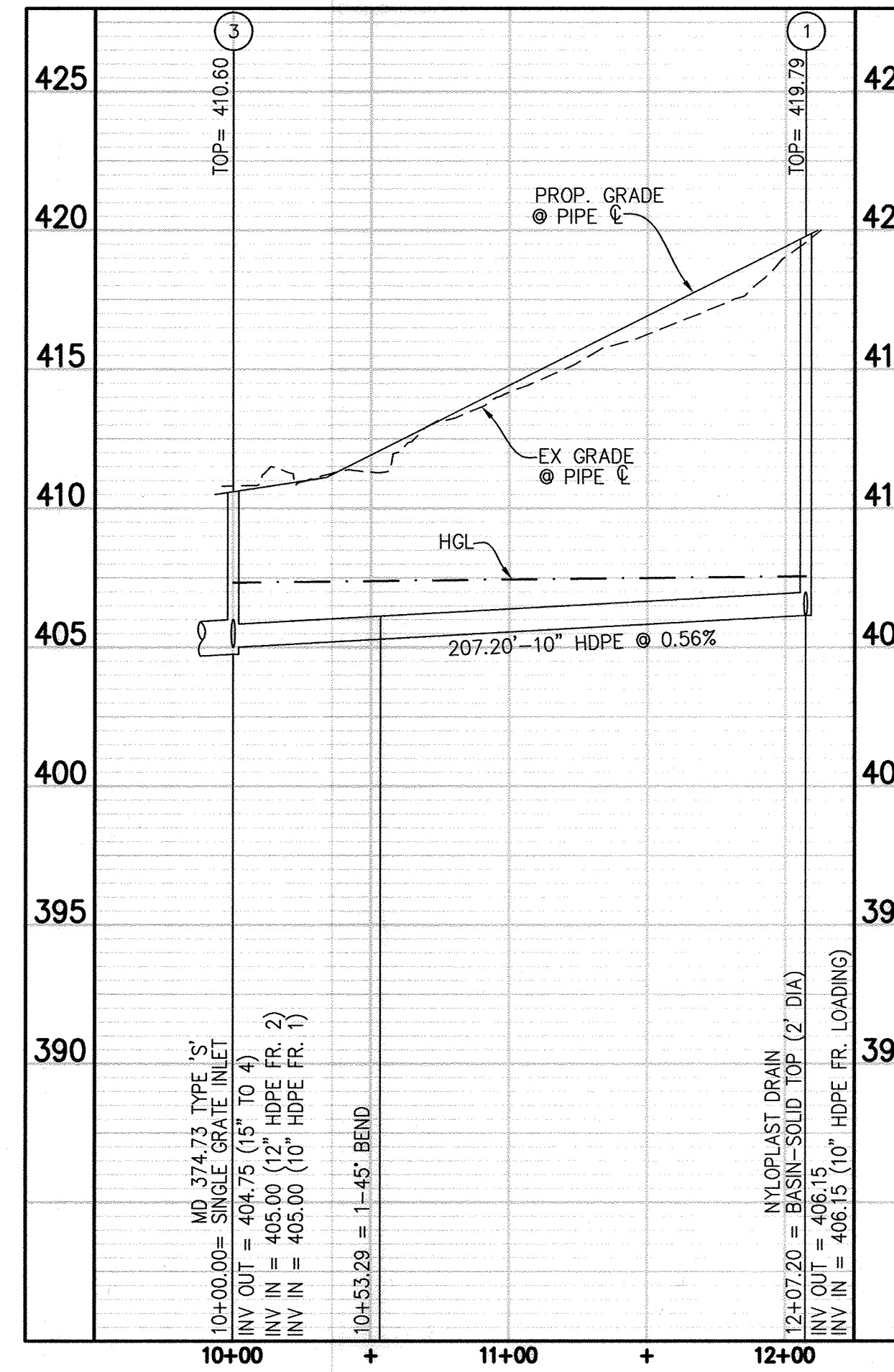
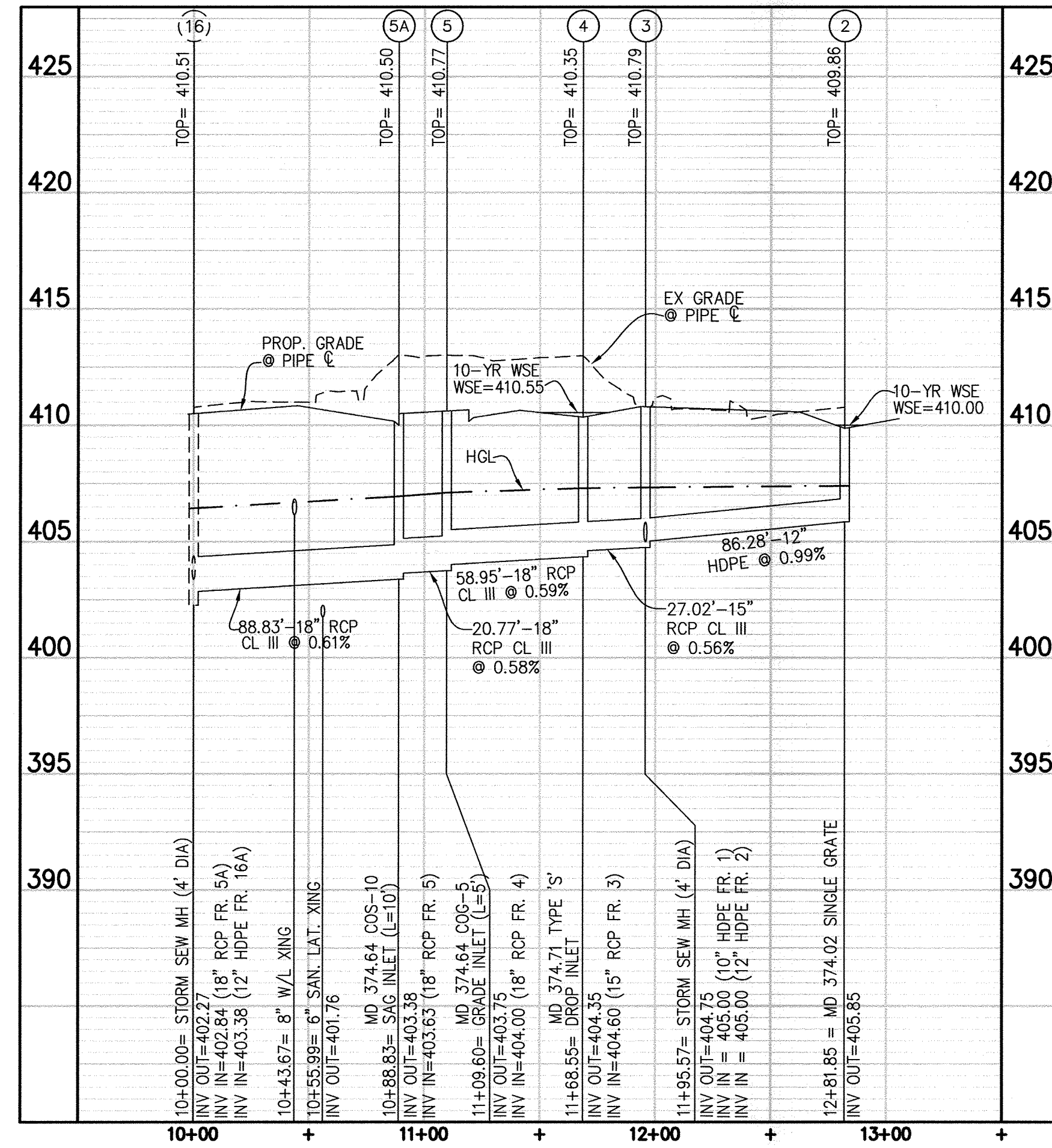
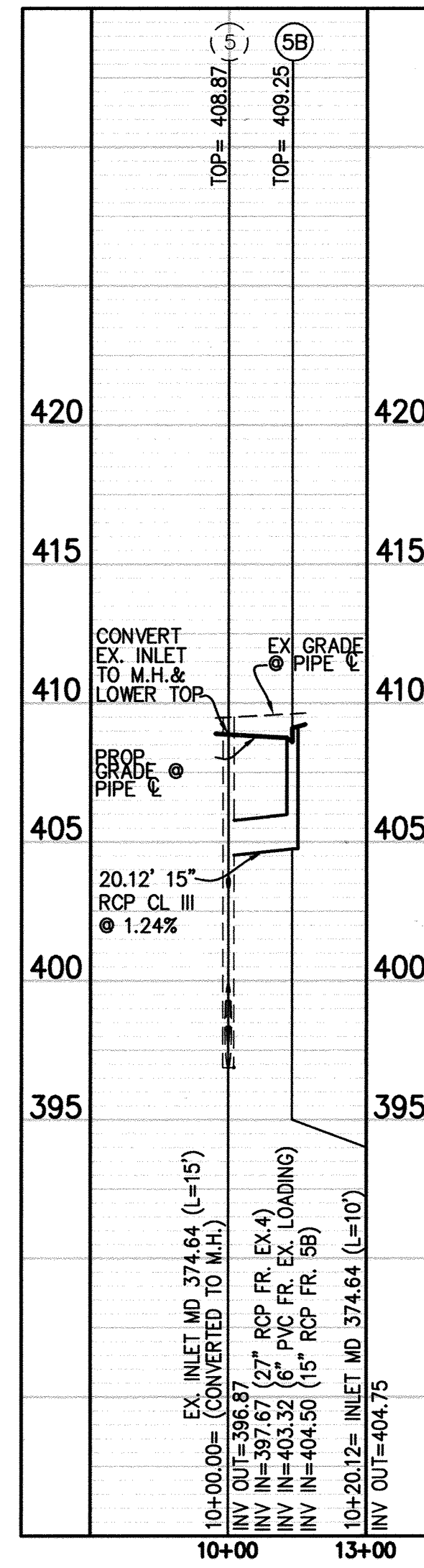
Bowman CONSULTING
 Bowman Consulting Group, Ltd.
 9813 Gowin Drive
 Manassas, Virginia 20110

Professional Engineer
 License No. 38755

SUPERCENTER #2412-03
 ELLICOTT CITY, HOWARD COUNTY, MARYLAND
 WAL-MART REAL ESTATE BUSINESS TRUST
 2001 SE 10TH STREET
 BENTONVILLE, AR 72716



DESIGN DRAWN BY: BU, KJC
 CHECKED BY: GD
 DATE: 01/14/11
 SCALE: N/A
 JOB NO.: 4660-01-002
 SHEET: 26 OF 32 SHEETS



Bowman Consulting Group
 TRASH COMPACTOR
 REMOVAL AND PARKING
 MODIFICATIONS ONLY.



NO	DATE	DESCRIPTION	BY
1	12/14/11	COMPACTOR REMOVAL & PARKING MOD.	JDT

OWNER/DEVELOPER
 WAL-MART REAL ESTATE BUSINESS TRUST
 2001 SOUTHEAST 10TH STREET, SWDC
 BENTONVILLE, AR 72716-0550
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SUBDIVISION 'ELLCOTT CITY WALMART'
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 WATER NO. F03 SEWER NOS. 1452800 F-12-023



ACADEMY BUILDING ADDITION

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chad Edwards 1/11/12
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Keith Sheehy 1/18/12
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Monica J. Juller 1/18/12
 DIRECTOR DATE

WALMART STORE #2412-03
ELLCOTT CITY, WALMART, PARCEL B

TM 24, TM GRID 6, P/O TM PARCEL 1085
 2ND ELECTION DISTRICT, HOWARD COUNTY, MD

STORM SEWER PROFILES

DATE: 12/14/11 SHEET: 27 OF 34 SHEETS

REVISIONS	BY
07/15/10-CONCEPT	BU/GD
01/14/11-1ST SUBM	BU/GD
07/25/11-2nd SUBM	BU/GD

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REGISTERED PROFESSIONAL ENGINEER
 No. 38755

SUPERCENTER #2412-03
 ELLCOTT CITY, HOWARD COUNTY, MARYLAND
 WAL-MART REAL ESTATE BUSINESS TRUST
 2001 SE 10TH STREET
 BENTONVILLE, AR 72716



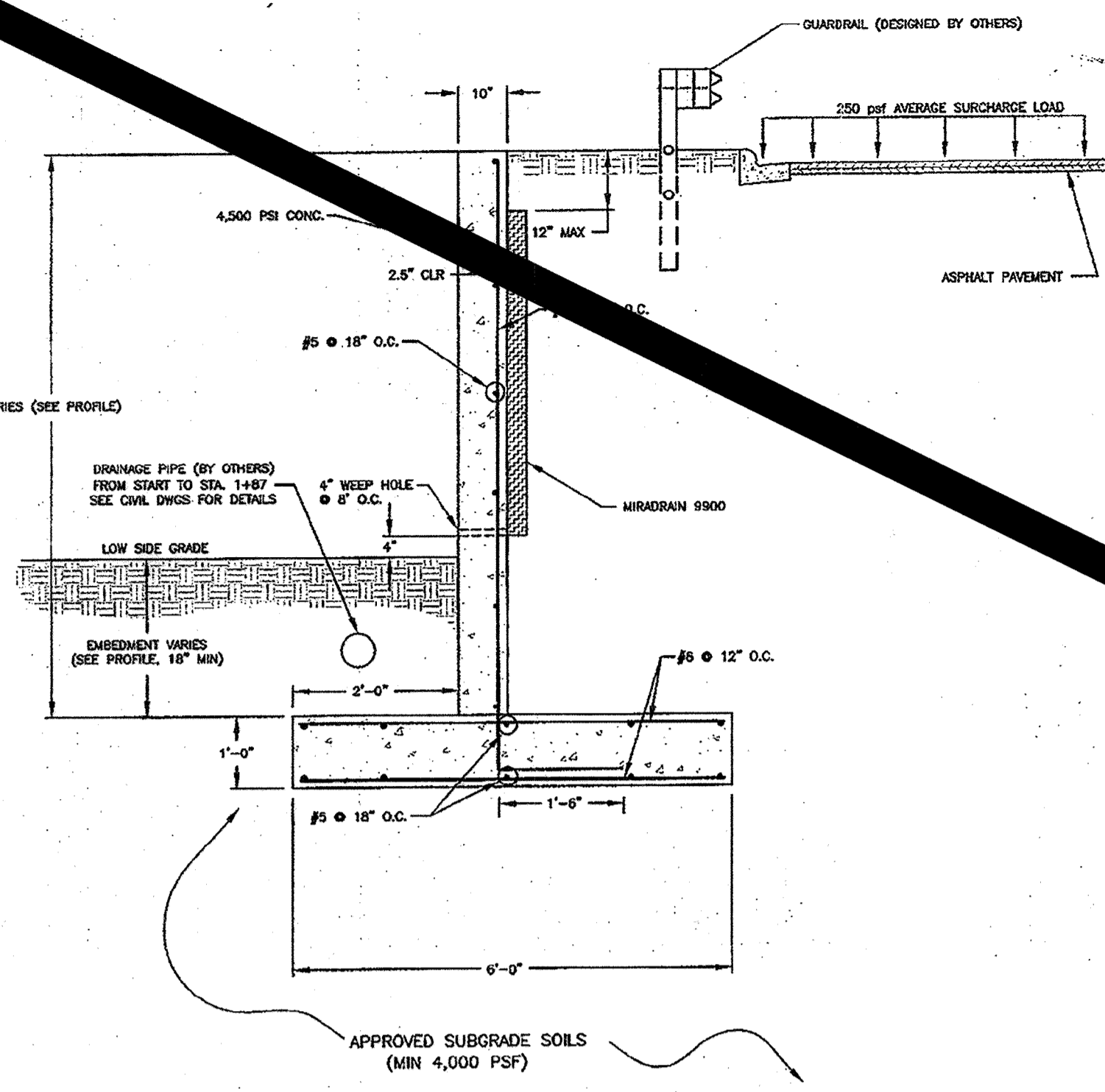
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CHECKED	KJC
DATE	01/14/11
SCALE	HOR. 1"=50' VER. 1"=5'
JOB No.	4660-01-002
SHEET	27
OF SHEETS	34

STORM SEWER HGL COMPUTATIONS

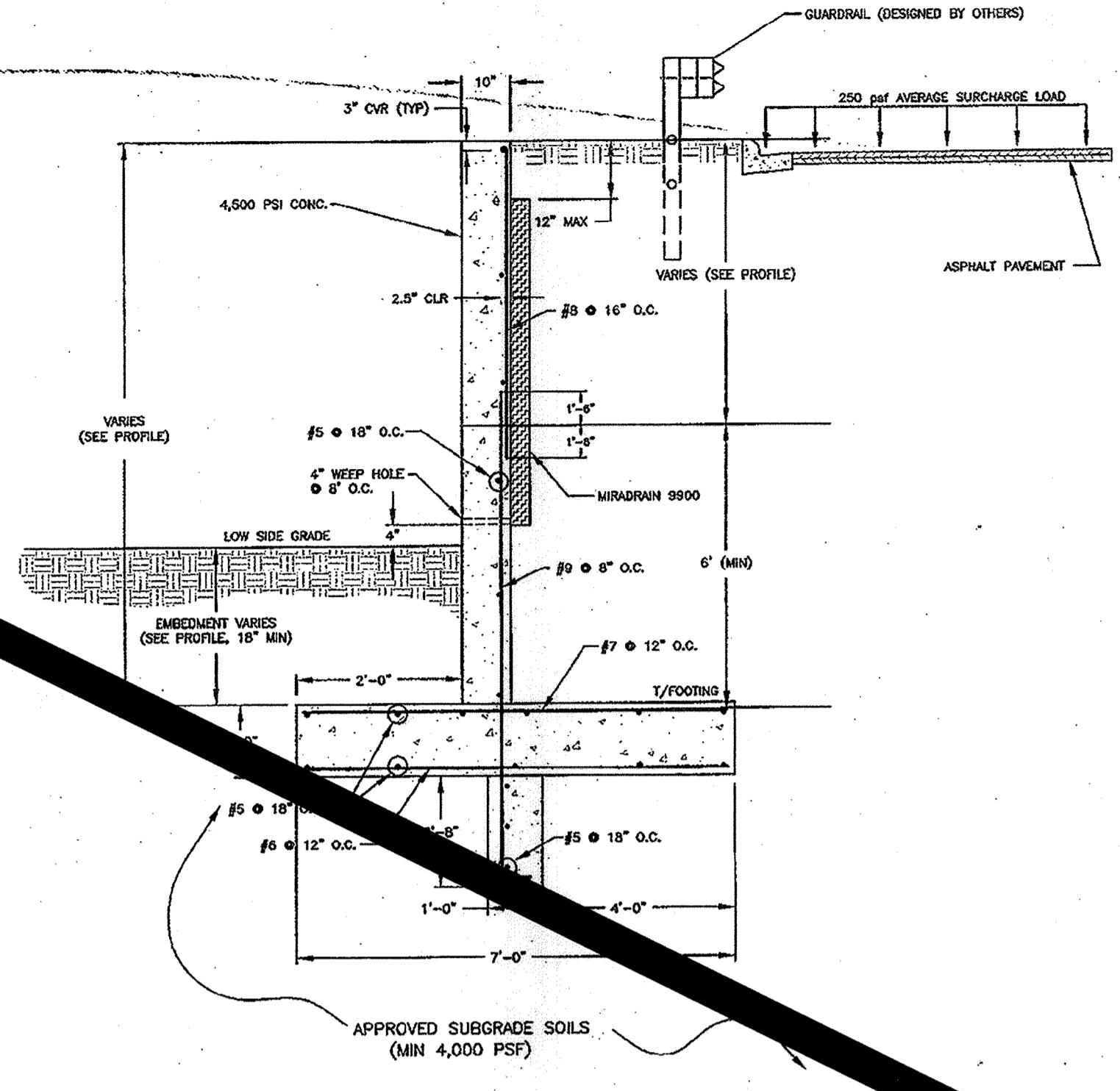
INLET STATION	UPSTREAM INLET	Outlet Water Surface Elev. (2)	Do (3)	Qo (4)	Lo (5)	Sfo (6)	Hf (7)	JUNCTION LOSS										Inlet Water Surface Elev. (20)	RIM ELEV. (21)	HGL BELOW RIM ELEV. (22)			
								Vo (8)	Ho (9)	Qi (10)	Vi (11)	QVi (12)	2 Vi / 2g (13)	Hl (14)	Angle (15)	Hd (16)	Ht (17)				1.3 x Ht (18)	0.5 x Ht (19)	
EX9B		376.93	36	91.68	32.85	1.88	0.62	12.97	0.65										376.93		376.93		
EX9A	EX9	384.65	36	91.68	34.30	1.88	0.64	12.97	0.65	91.68	12.97	1189.22	2.61	0.59	59	1.42	2.98	0.00	1.49	2.11	379.04	388.25	3.60
EX9	STC1	36								40.69	5.76	234.22	0.51	0.18	90	0.36					386.09	399.00	6.22
	STC2	30								51.00	10.39	529.79	1.68	0.59	0	0.00							
STC2	EX10	392.56	30	51.00	41.37	1.54	0.64	10.39	0.42												393.70	400.11	6.41
EX10	EX11	393.70	30	51.00	27.96	1.54	0.43	10.39	0.42	51.00	10.39	529.79	1.68	0.90	0	0.20	1.52	0.00	0.76	1.19	394.89	399.20	4.31
	EX10A	24								40.44	12.87	520.46	2.57	0.90	0	0.00							
EX11	EX12	394.89	24	40.44	36.69	3.18	1.17	12.87	0.64	10.56	4.39	46.36	0.30	0.10	79	0.20					397.24	399.50	2.26
EX12	EX13	397.24	24	32.00	90.00	1.99	1.79	10.19	0.40					0.56	41	0.63	1.83	2.38	1.19	2.36	399.65	401.68	2.03
EX13	EX14	399.65	21	24.18	91.51	2.32	2.12	10.05	0.39	24.18	10.05	243.16	1.57	0.55	0	0.00	0.95	1.24	0.62	2.41	399.65	404.77	2.53
EX14	EX15	402.24	21	18.54	78.87	1.36	1.07	7.71	0.23	18.54	7.71	142.89	0.92	0.32	0	0.00	0.72	0.93	0.46	2.59	402.24	404.77	2.53
EX15	EX16	403.69	18	14.14	73.85	1.80	1.33	8.00	0.25	14.14	8.00	113.08	0.99	0.10	0	0.00	0.35	0.46	0.23	1.56	405.25	407.91	2.66
EX16	5A	405.25	18	7.66	208.15	0.53	1.11	4.34	0.07	7.66	4.34	33.34	0.29	0.09	0	0.00	0.17	0.00	0.08	1.19	406.44	410.55	4.11
	16A	12								7.22	4.08	29.47	0.26	0.09	0	0.00							
	5A	406.44	18	7.22	88.83	0.47	0.42	4.08	0.06	0.46	0.58	0.27	0.01	0.00	90	0.00							
	5	406.44	18	6.66	20.77	0.40	0.08	3.77	0.06	6.66	3.77	25.13	0.22	0.05	0	0.00	0.11	0.14	0.07	0.15	407.11	410.77	3.66
	4	407.11	18	5.56	58.95	0.28	0.16	3.15	0.04	5.56	3.15	17.49	0.15	0.01	0	0.00	0.05	0.06	0.03	0.20	407.30	410.35	3.05
	3	407.30	15	1.61	27.02	0.06	0.02	1.31	0.01	1.61	1.31	2.10	0.03	0.01	0	0.01	0.03	0.00	0.01	0.03	407.33	410.79	3.46
	2	407.33	12	0.99	86.28	0.08	0.07	1.27	0.01	0.99	1.27	1.26	0.02	0.01	45	0.00	0.01	0.00	0.01	0.07	407.40	409.86	2.46
	1	407.40	10	0.61	200.73	0.08	0.16	1.12	0.00	0.61	1.12	0.69	0.02	0.00	0	0.00	0.00	0.00	0.00	0.16	407.56	419.79	12.23
	16A	406.44	12	0.46	7.98	0.02	0.00	0.58	0.00	0.46	0.58	0.27	0.01	0.00	0	0.00	0.00	0.00	0.00	0.00	406.45	410.65	4.20
	16J	406.45	12	0.61	159.20	0.03	0.05	0.78	0.00	0.61	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.05	406.49	410.64	4.15
	CANOPY1	392.78	36	40.69	292.72	0.37	1.08	5.76	0.13	40.69	5.76	234.22	0.51	0.18	10	0.03	0.34	0.00	0.17	1.26	394.04	409.10	13.46
	EX8	395.64	36	40.69	75.53	0.37	0.28	5.76	0.13	38.14	5.40	205.83	0.45	0.16	0	0.00	0.29	0.37	0.19	0.47	396.11	409.61	13.08
	EX7	396.53	36	38.14	188.64	0.33	0.61	5.40	0.11	38.14	5.40	205.83	0.45	0.16	77	0.29	0.56	0.00	0.28	0.90	397.43	410.44	12.67
	EX6	397.77	36	38.14	41.97	0.33	0.14	5.40	0.11	38.14	5.40	205.83	0.45	0.16	65	0.26	0.53	0.00	0.27	0.40	398.17	409.89	11.72
	EX5	398.17	36	38.14	125.90	0.33	0.41	5.40	0.11	38.14	5.40	205.83	0.45	0.47	0	0.45	1.04	0.00	0.52	0.93	399.10	409.00	5.28
	EX4	399.47	27	36.89	83.02	1.41	1.17	9.28	0.33	36.89	9.28	342.33	1.34	0.47	36	0.45							
	EX3	402.13	27	18.92	168.64	0.37	0.63	4.76	0.09	18.92	4.76	89.99	0.35	0.12	39	0.13	0.59	0.00	0.29	1.47	400.94	409.88	7.75
	EX2	404.61	21	16.07	188.03	1.02	1.92	6.68	0.17	16.07	6.68	107.30	0.69	0.45	0	0.90	1.52	1.98	0.99	2.91	407.52	414.16	4.43
	EX1	409.73	18	16.07	90.87	2.33	2.11	9.09	0.32	16.07	9.09	146.05	1.28	0.00	90	0.00	0.32	0.42	2.21	2.32	412.05	415.29	3.24
	0	412.80	12	3.67	75.93	1.06	0.80	4.68	0.08	3.67	4.68	17.17	0.34	0.00	0	0.00	0.18	0.00	0.04	0.84	413.64	420.33	6.69
EX2																							
7		411.50	15	5.51	37.93	0.72	0.27	4.49	0.08	5.51	4.49	24.72	0.31	0.11	90	0.22	0.41	0.00	0.20	0.48	411.98	415.78	3.53
8		412.25	15	5.51	31.94	0.72	0.23	4.49	0.08	3.67	4.68	17.17	0.34	0.12	90	0.00	0.20	0.00	0.10	0.33	412.58	416.00	3.20
9		412.80	12	3.67	75.93	1.06	0.80	4.68	0.08	3.67	0.00	0.00	0.00	0.00	0	0.00	0.08	0.00	0.04	0.84	413.64	420.33	6.69

STORM SEWER DESIGN COMPUTATIONS

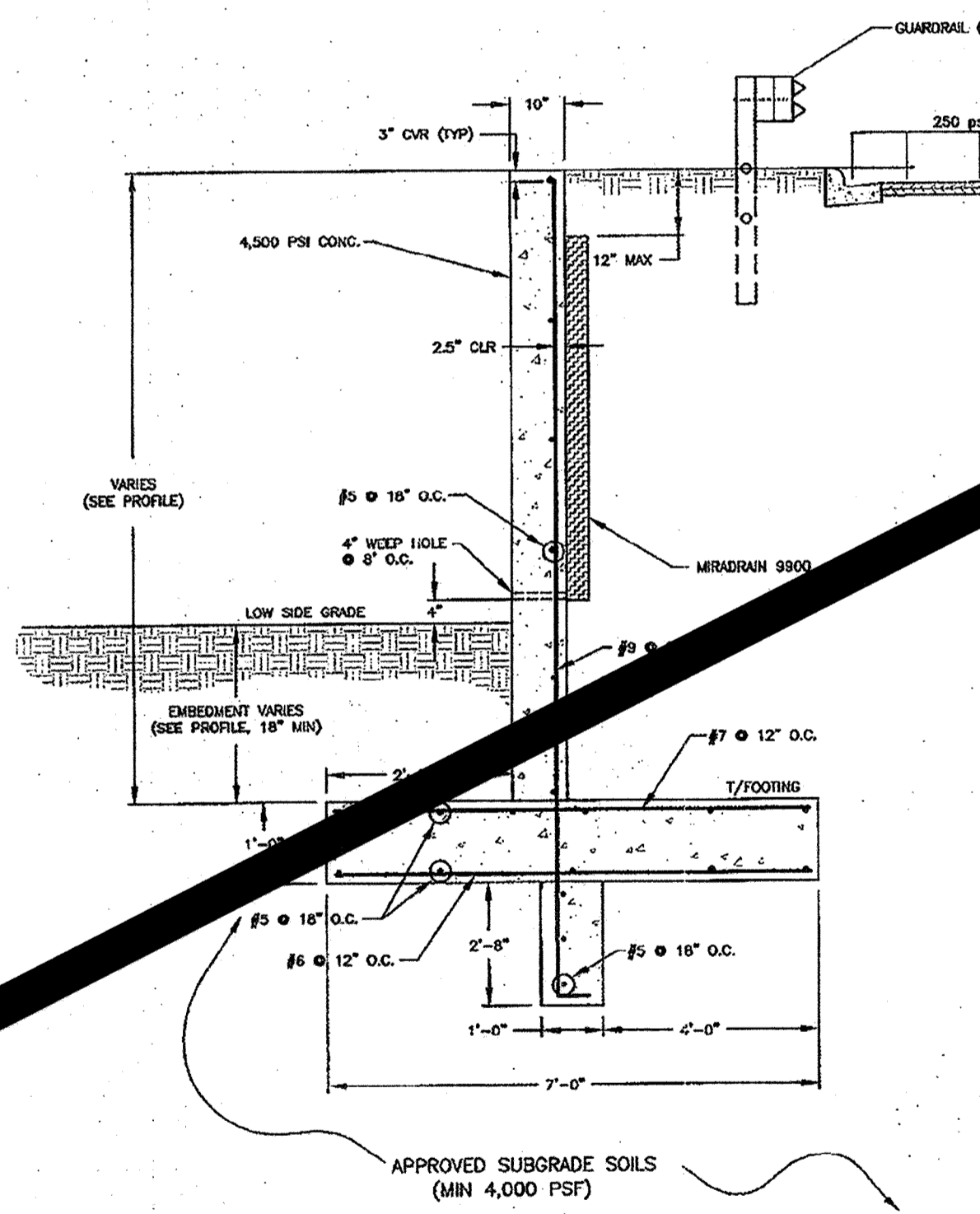
FROM POINT	TO POINT	DRAIN AREA ACRES	RUNOFF COEFF C	CA INCREM	CA ACCUM	INLET TIME MIN	RAINFALL INTENSITY IN/HR	Q RUNOFF CFS	INVERT UPPER FT	INVERT LOWER FT	LENGTH FT	SLOPE FT/FT	DIA IN	n	CAPACITY CFS	VELOCITY FPS	FLOW TIME SEC	REMARKS
EX1	EX2	4.20	0.45	1.89	1.89	5.0	8.50	16.1	410.75	408.53	90.87	2.44%	18	0.013	16.4	10.8	8.4	
9	8	0.48	0.90	0.43	0.43	5.0	8.50	3.7	416.50	411.00	75.93	7.24%	12	0.013	9.6	11.5	6.6	
8	7	0.24	0.90	0.22	0.65	5.0	8.50	5.5	410.75	409.75	31.94	3.13%	15	0.013	11.4	9.3	3.4	
7	EX2	0.00	0.00	0.00	0.65	5.0	8.50	5.5	409.50	408.53	37.93	2.56%	15	0.013	10.3	8.7	4.4	
EX2	EX3	0.00	0.00	0.00	2.54	5.0	8.50	21.6	408.36	403.21	188.03	2.74%	21	0.013	26.2	12.4	15.2	
EX3	EX4	0.39	0.86	0.34	2.87	5.0	8.50	24.4	402.56	400.33	168.64	1.32%	27	0.013	35.6	9.8	17.2	
EX BLDG	EX4	2.35	0.90	2.12	2.12	5.0	8.50	18.0	407.00	400.33	39.17	17.03%	18	0.013	43.3	23.7	1.7	
EX4	EX5	0.00	0.00	0.00	4.99	5.0	8.50	42.4	399.70	397.67	83.02	2.45%	27	0.013	48.4	14.0	5.9	
EXLOAD	EX5	0.05	0.90	0.05	0.05	5.0	8.50	0.4	406.33	403.32	27.24	11.05%	6	0.013	1.9	7.6	3.6	
5B	EX5	0.45	0.85	0.38	0.38	5.0	8.50	3.3	404.75	404.50	20.12	1.24%	15	0.013	7.2	5.8	3.5	
EX5	EX6	0.00	0.00	0.00	5.42	6.0	8.00	43.3	396.87	395.60	125.90	1.01%	36	0.013	67.0	10.2	12.3	
EX6	EX7	0.00	0.00	0.00	5.42	6.0	8.00	43.3	395.50	395.37	41.97	0.31%	36	0.013	37.1	5.4	7.8	ADEQUATE HGL
EX7	EX8	0.00	0.00	0.00	5.42	6.0	8.00	43.3	395.24	394.13	188.64	0.59%	36	0.013	61.2	8.2	22.9	
EX8	STC1	0.37	0.86	0.32	5.73	6.0	8.00	45.9	393.98	393.24	75.53	0.98%	36	0.013	66.0	10.3	7.4	
STC1	EX9	0.00	0.00	0.00	5.73	6.0	8.00	45.9	392.74	390.38	292.72	0.81%	36	0.013	89.9	9.5	30.9	
CANOPY1	16J	0.08	0.90	0.07	0.07	5.0	8.50	0.6	406.46	405.88	57.80	1.00%	12	0.010	4.6	4.2	13.9	
16J	EX14	0.00	0.00	0.00	0.07	5.0	8.50	0.6	404.37	401.00	159.20	2.12%	12	0.010	6.7	5.4	29.2	
CANOPY2	16A	0.06	0.90	0.05	0.07	5.0	8.50	0.6	405.16	403.46	169.75	1.00%	12	0.010	4.8	4.2	40.8	
16A	EX16																	



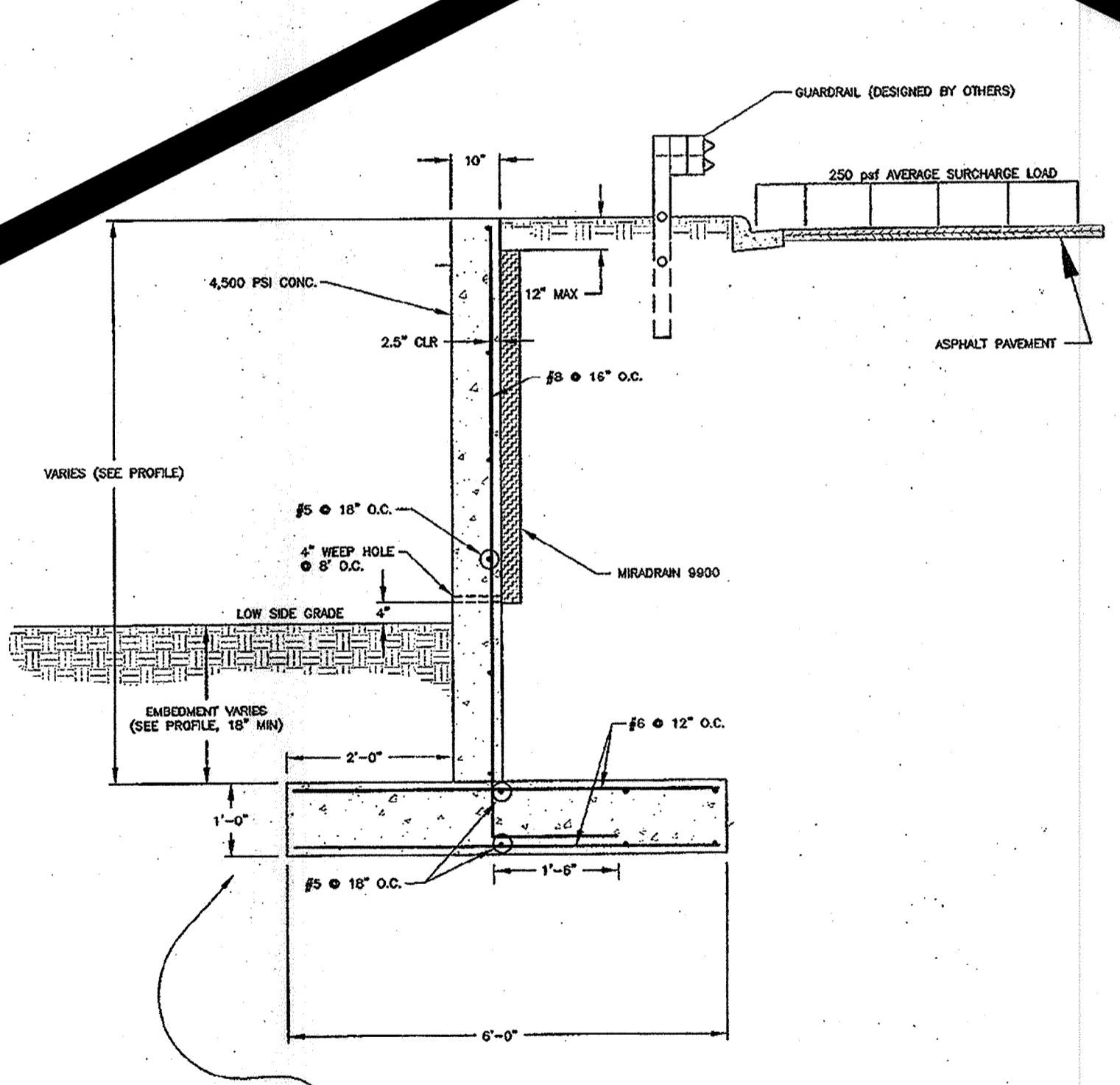
**WALL 4 TYPICAL SECTION
(START - STA. 1+00)**
NTS



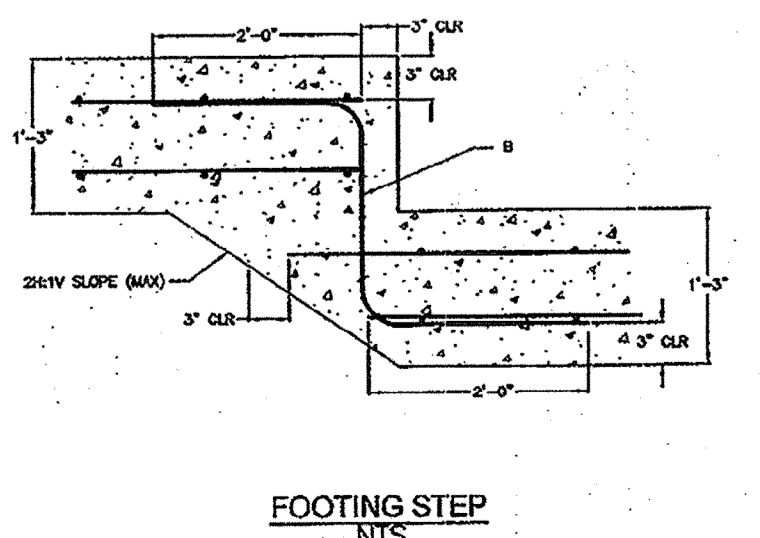
**WALL 4 TYPICAL SECTION
(STA. 1+00 - STA. 1+97.4; STA 2+21 - STA. 3+00)**
NTS



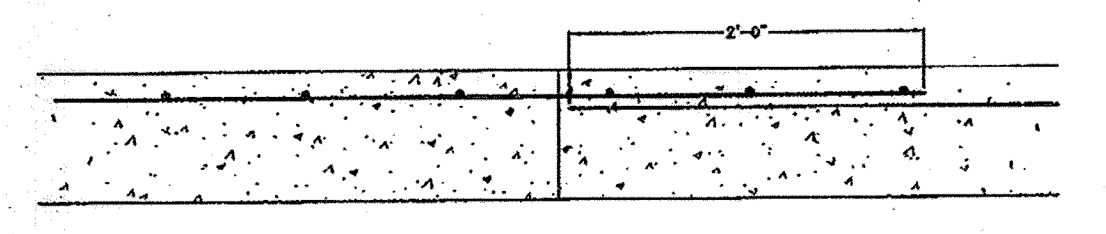
**WALL 4 TYPICAL SECTION (CANOPY AREA)
(STA. 1+97.4 - STA 2+21)**
NTS



**WALL 4 TYPICAL SECTION
(STA. 3+00 - END)**
NTS



FOOTING STEP
NTS



CONSTRUCTION JOINT
NTS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Clayton Edmund
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 1/11/12

Walt Sheelander
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 1/18/12

Thomas P. Butler
DIRECTOR
DATE: 1/18/12

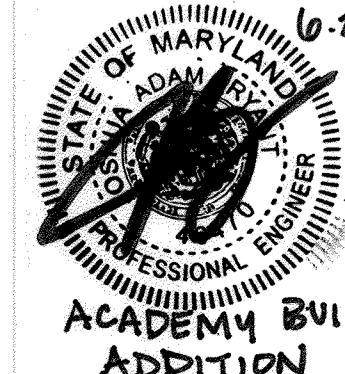
Retaining Wall Specifications and Guidelines

- Part 1: General**
- 1.01 Description
A. Retaining walls must be constructed under the supervision of a Maryland Registered Professional Engineer.
B. Work includes preparation of foundation soils, furnishing all materials, and installing all materials to the lines and grades shown on the construction drawings.
- 1.02 Codes and Standards
A. International Building Code - 2006, International Code Council, Inc.
B. ACI Manual of Concrete Practice - Parts 1 Through 5 - 2001
C. Manual of Standard Practice - Concrete Steel Reinforcing Institute
D. American Society for Testing and Materials
- 1.03 Damage, Storage, and Handling
A. The Contractor shall check the materials upon delivery to ensure that the proper materials have been received.
B. The Contractor shall properly handle and store the materials to prevent damage to the materials. Damaged materials shall not be used into the wall.
- 1.04 Quality Assurance
A. The Owner shall engage a qualified testing agency to provide observation and testing services as described below.
B. Concrete Placement
1. The agency shall inspect the formwork and reinforcing steel placement for compliance with the contract documents. Reinforcing steel should be inspected for correct size, quantity, and spacing.
2. Fresh concrete shall be sampled in accordance with ASTM C 172, and tested for slump, air entrainment, and temperature.
3. Test cylinders shall be molded in accordance with ASTM C 31. Four test cylinders shall be molded for each day's pour, or for every 50 cubic yards of concrete placed, whichever is greater.
C. Fill Placement
1. All soil fills shall be tested in accordance with ASTM D 2922.
2. A minimum of one compaction test per lift should be made per 2,500 square feet of area, but not fewer than two tests per lift should be made.
3. The elevations and locations of the field density tests should be clearly identified on the drawings to indicate the location of fill placement and compaction.
- Part 2: Materials**
- 2.01 Concrete
A. Concrete shall conform to Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414.
B. Concrete shall have a minimum 28-day compressive strength of 4,500 psi.
C. Concrete shall have a maximum slump of 6 inches and shall be entrained to 6% (+/- 1%) by volume.
D. Concrete shall have a minimum density of 145 pcf and a minimum water-to-cement ratio of 0.50.
- 2.02 Steel Reinforcement
A. Steel reinforcing shall conform to ASTM A 615 Grade 60.
B. Submit shop drawings at least 15 business days before date reviewed submittals will be needed. Shop drawings shall bear the contractor's stamp of approval which shall constitute that he has verified all field measurements, construction criteria, materials, and similar data, and has checked each drawing for completeness, coordination, and compliance with contract documents.
- 2.03 Soil Backfill
A. Material should conform to the classification as SM, SC, or more granular, in accordance with ASTM D 2487.
B. Material should contain no particles larger than 2.5 inches and shall contain at least 30 percent, by weight, retained on the U.S. No. 200 sieve.
C. Materials shall have a Liquid Limit less than 40, and a Plasticity Index less than 12.
D. Material shall have a minimum friction angle of 30 degrees and a minimum dry unit weight of 118 pcf.
E. The Contractor should submit samples of the proposed backfill soils to the Geotechnical Engineer of Record for approval prior to their use.
- 2.04 Drainage Board
A. Drainage board used behind the walls shall consist of Miradrain 9900.
- Part 3: Construction**
- 3.01 General
A. All existing underground utilities shall be properly marked, and relocated if necessary, prior to construction.
B. All proposed underground utilities or structures in the general wall area shall be completely installed prior to the construction of the wall.
C. Protect all existing and/or new structures from damage by construction equipment. Immediately repair any damage that may occur.
- 3.02 Foundation
A. The wall foundation shall be excavated to the grades and lines as shown on the construction drawings. Contractor should take care not to disturb foundation soils beyond the lines and grades shown.
B. The foundation shall bear on the minimum embedment depths indicated, as measured from the final grade at the front of the wall.
C. The foundation subgrade soils shall be tested by a qualified representative of the Geotechnical Engineer to verify the availability of the design bearing pressure of 4,000 pcf.
D. If unsuitable soils are encountered at design foundation levels, the unsuitable soils shall be removed and the over-excavated areas shall be replaced with compacted structural fill.
- 3.03 Steel Reinforcement
A. All steel reinforcing shall have a minimum clear cover of 3 inches unless otherwise noted on the contract documents.
B. Where applicable, splices for reinforcing steel shall be made by contact tension lap splices.
C. Welding and field-bending of reinforcing steel is not permitted.
D. Furnish all accessories, chairs, spacers, supports, etc. necessary to secure reinforcing.
- 3.04 Cast-in-Place Concrete.
A. Footing Concrete
1. The vertical faces of the footing and key excavation may be used as forms for placement of foundation concrete.
2. Foundation concrete, or protective mud mats, should be placed the same day that the foundation subgrade is approved.
3. Provide concrete protection against freezing during placement and for 5 days thereafter.
B. Wall Concrete
1. Furnish and erect concrete forms to the lines and grades shown on the construction drawings.
2. Locate all construction joints as to not impair the strength of the structure, but not more than 80 feet in any direction. Provide continuous bentonite strip waterstrip at all construction joints.
3. Make stops in the wall using vertical bulkheads.
4. All reinforcing shall be continuous through joints and bulkheads.
5. Chamfer exposed corners 3/4\"/>



Bowman Consulting Group

**CONCRETE RETAINING WALL (WALL 4)
IS REMOVED. PLEASE SEE SHEET 30A
FOR PROPOSED WALL.**



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 29553, Expiration Date: 12/31/11

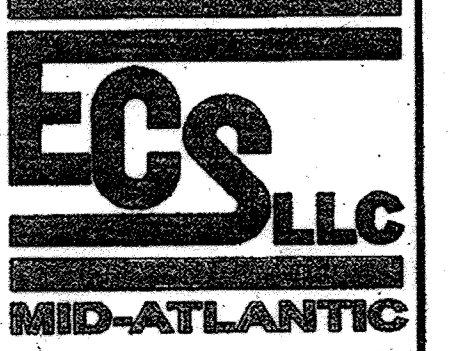
OWNER/DEVELOPER
WAL-MART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SUCC
STONEMANVILLE, MS 38755
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000

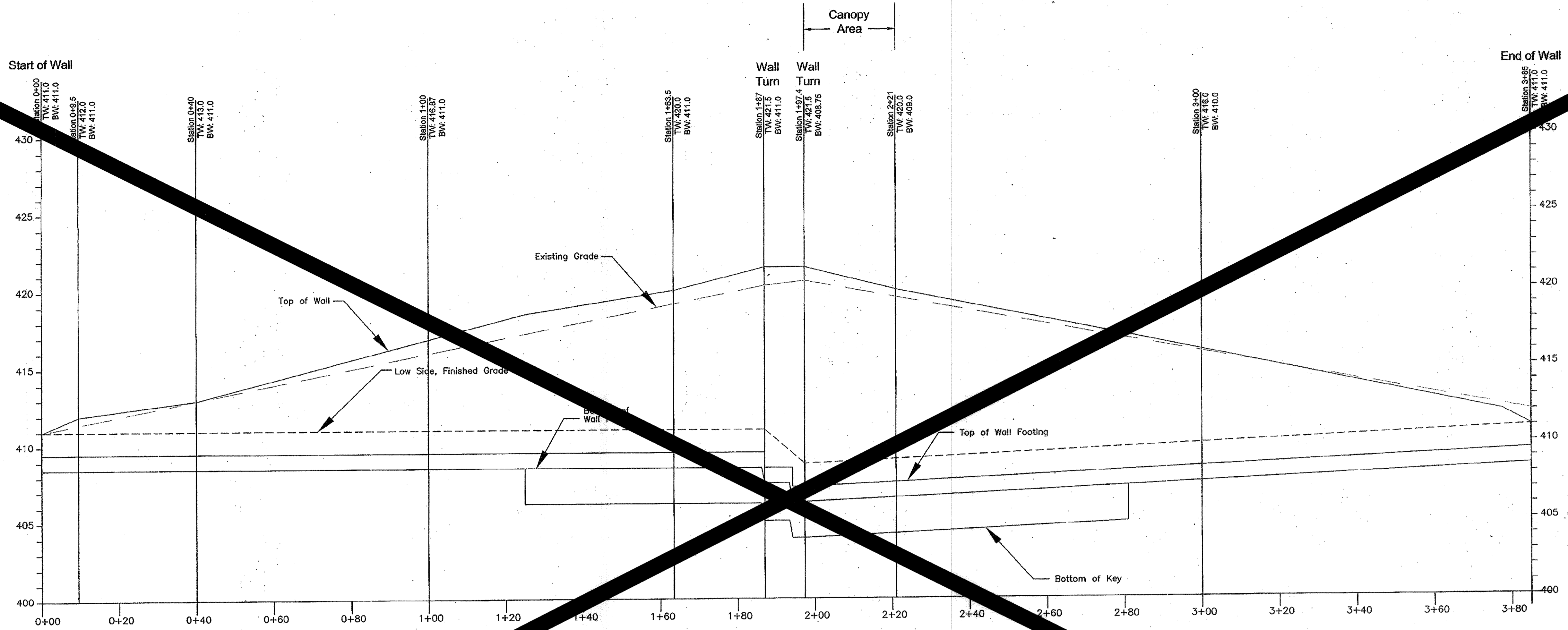
SUBDIVISION 'ELICOTT CITY WALMART'
ELECTION DISTRICT
TAX MAP 17 & 24
REZONING CASE NUMBER 20
APPROVED: 12-2-1994
PRELIMINARY PLAN P-95-21
SITE PLAN SDP-96-11
CLASS GRADING PLAN SDP-96-001
FINAL ROAD CONSTRUCTION PLAN
FOR NORTH RIDGE RD. F-96-01
EGP-11-007
FINAL RECORD PLATS
WATER NO. F03

HOWARD COUNTY, MARYLAND
P/O TM PARCEL 1085
DATED: OCTOBER 18, 1995
APPROVED: 12-2-1994
APPROVED: 06-06-1995
APPROVED: 06-21-1999
APPROVED: 04-03-1995
APPROVED: 08-09-1995
APPROVED: 08-09-2010
F-96-008, F-96-015
SEWER NOS. 14528-157

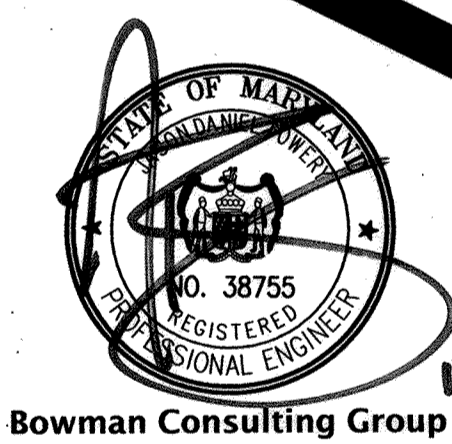
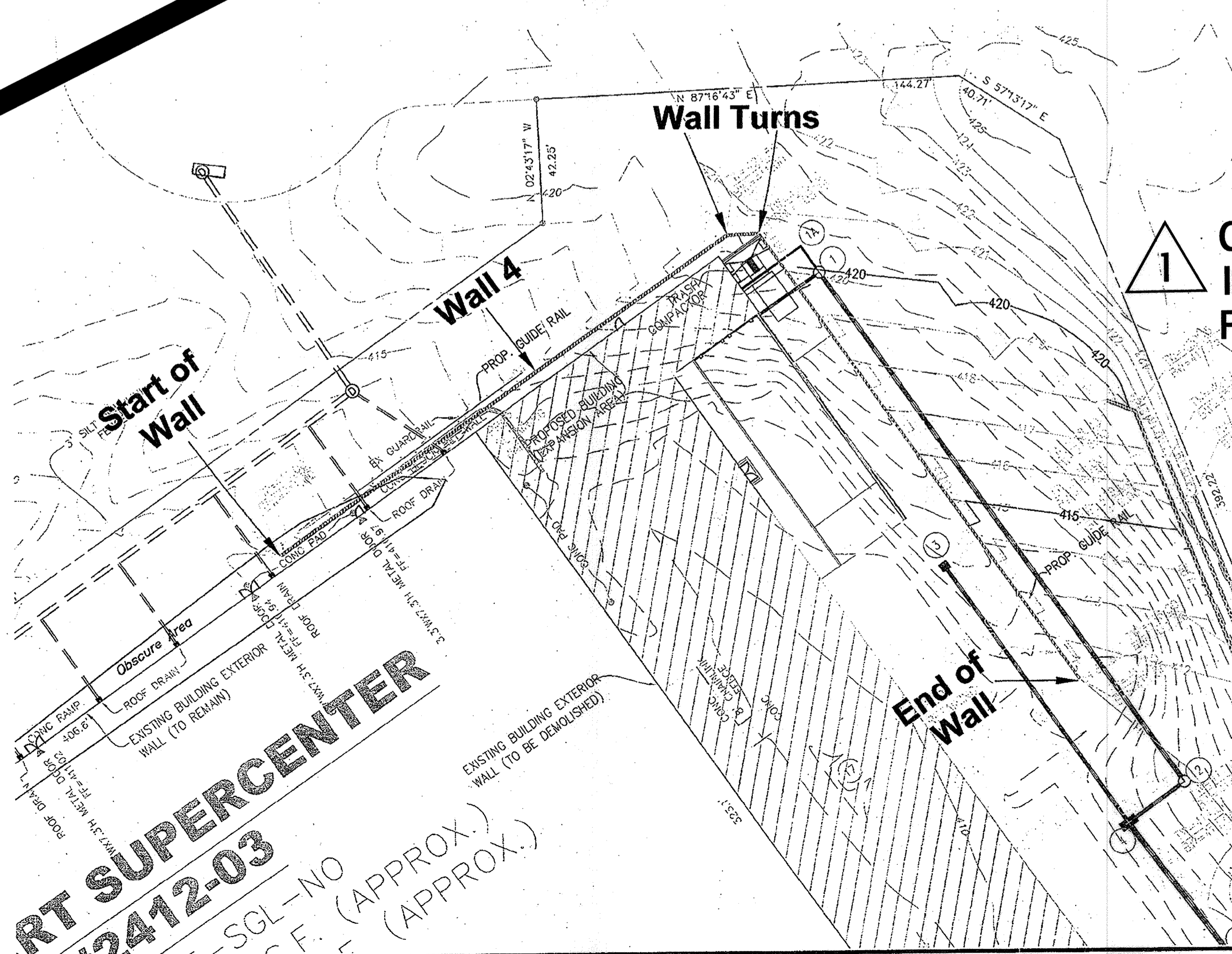
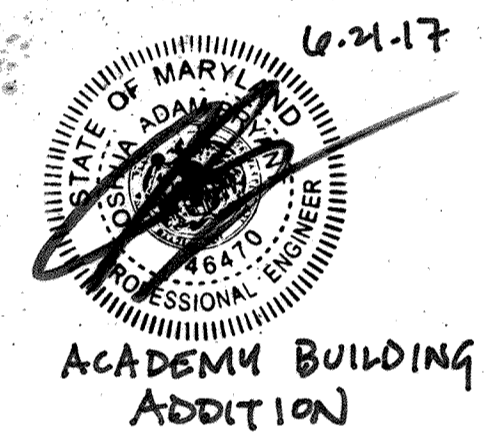
NO.	REVISIONS	DATE
1	CONCRETE RETAINING WALL (WALL 4) REMOVED	12-14-2011
CONCRETE RETAINING WALL (WALL 4) Walmart Store #2412-03, Ellicott City, Walmart, Parcel B TM 24, TM Grid 6, P/O TM Parcel 1085 2nd Election District, HOWARD COUNTY, MD		
BOWMAN CONSULTING GROUP, LTD		
DMA	DMA	08-15-11
	5340-A	29 OF 34

ECS MID-ATLANTIC, LLC
1340 CHARWOOD ROAD, SUITE P
HANOVER, MARYLAND 21076
OFFICE (410) 859-4300
FAX (410) 859-4824
"Setting The Standard For Service"





WALL 4 PROFILE



CONCRETE RETAINING WALL (WALL 4) IS REMOVED. PLEASE SEE SHEET 30A FOR PROPOSED WALL.

OWNER/DEVELOPER
 WM-MART REAL ESTATE BUSINESS TRUST
 7001 SOUTHEAST 10TH STREET, SUCC
 ROCKVILLE, MD 20850
 PROJECT NO. 273-4000

SUBDIVISION: ELICOTT CITY WALMART
 ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND
 TAX MAP 17 & 24 P/O TM PARCEL 1085
 REZONING CASE NUMBER ZB-941 DATED: OCTOBER 18, 1993
 SKETCH PLAN S-95-01 APPROVED: 12-2-1994
 PRELIMINARY PLAN P-95-21 APPROVED: 05-06-1995
 SITE PLAN SDP-96-11 APPROVED: 05-21-1996
 MASS GRADING PLAN SDP-96-001 APPROVED: 05-21-1996
 FINAL ROAD CONSTRUCTION PLAN FOR NORTH RIDGE RD. F-96-01 APPROVED: 11-06-1996
 ECP-11-007 APPROVED: 08-06-1997
 FINAL RECORD PLATS F-96-005, F-96-091, F-96-092 APPROVED: 08-06-1997
 WATER NO. F03 SEWER NOS. 1452800

NO.	REVISIONS	DATE
1	CONCRETE RETAINING WALL (WALL 4) REMOVED	12-14-2011

CONCRETE RETAINING WALL (WALL 4)
 Walmart Store #2412-03, Ellicott City, Walmart, Parcel B
 TM 24, TM Grid 6, P/O TM Parcel 1085
 2nd Election District, HOWARD COUNTY, MD
 BOWMAN CONSULTING GROUP, LTD

DMA DMA 08-15-11 5340-A 30 OF 34

ECS MID-ATLANTIC, LLC
 1340 CHARWOOD ROAD, SUITE P
 HANOVER, MARYLAND 21076
 OFFICE (410) 859-4300
 FAX (410) 859-4324
 "Setting The Standard For Service"
ECS LLC MID-ATLANTIC

APPROVED: DEPARTMENT OF PLANNING AND ZONING

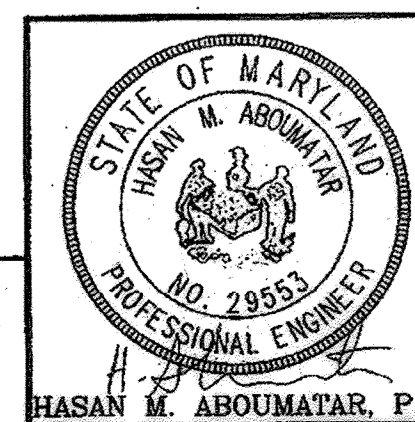
Chad E. Smith 1-11-12
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

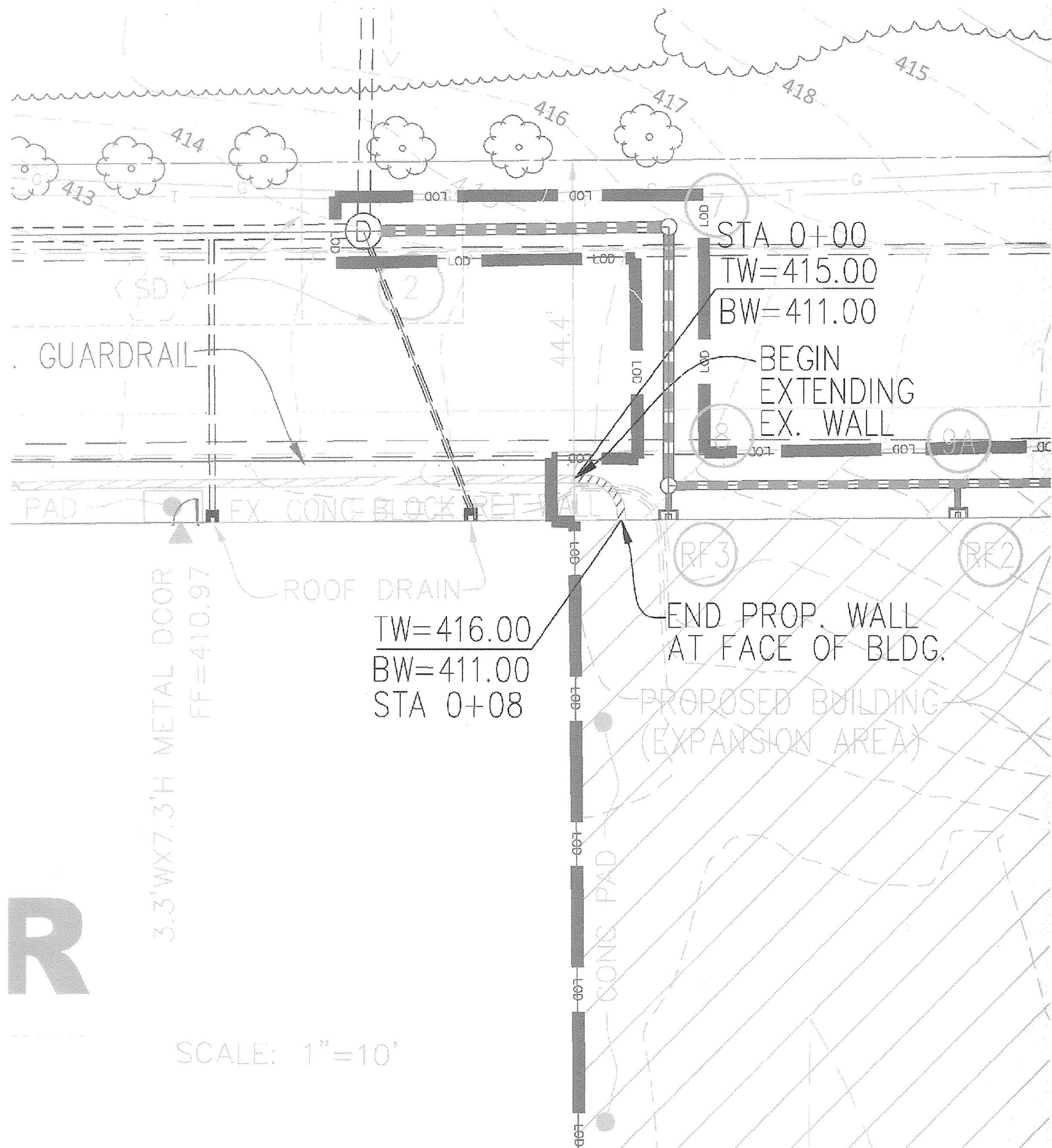
Keith Sheehy 1/18/12
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Thomas J. Fubler 1/18/12
 DIRECTOR DATE

Scale: 1"=30'

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 29553, Expiration Date: 12/31/11



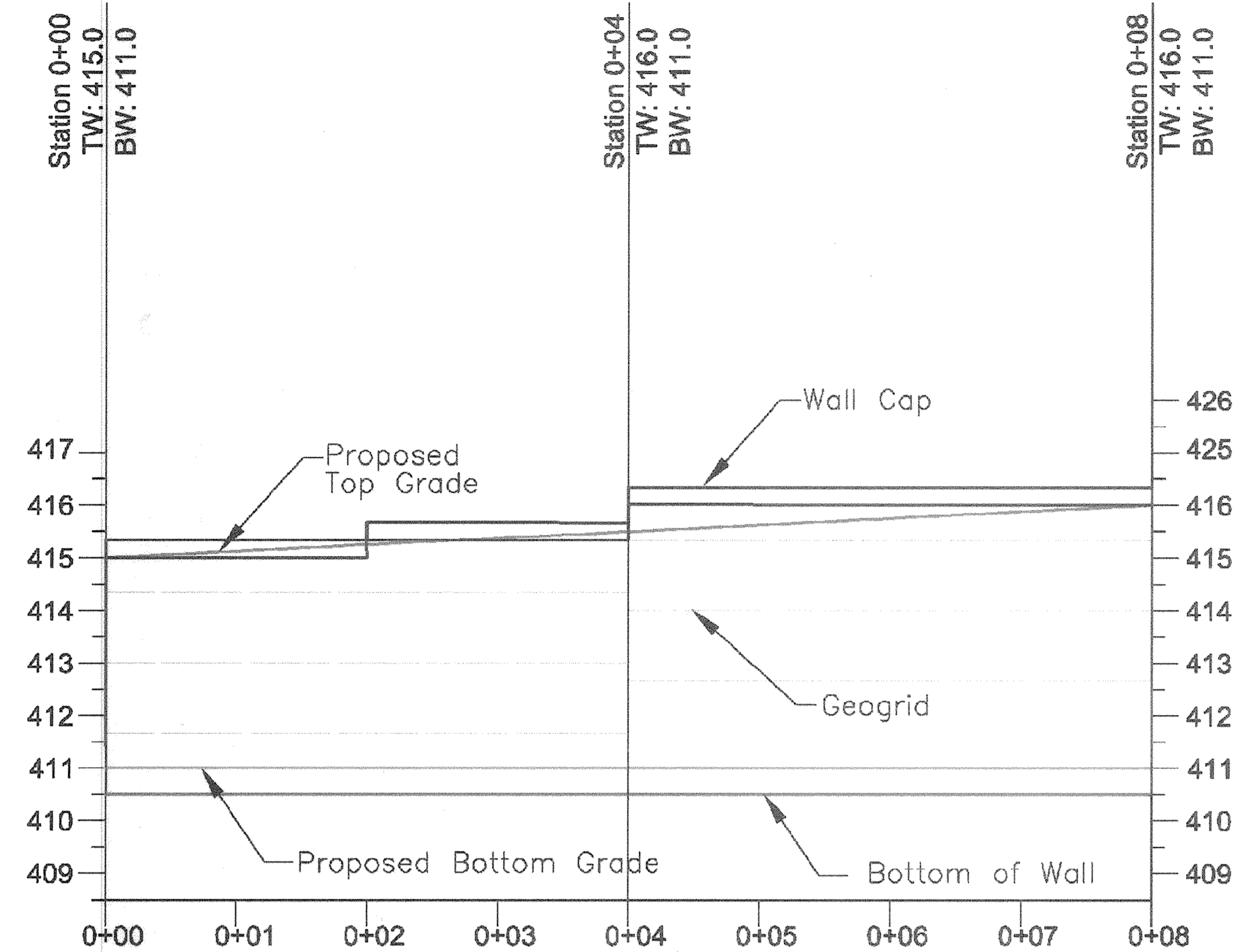


R

SCALE: 1"=10'

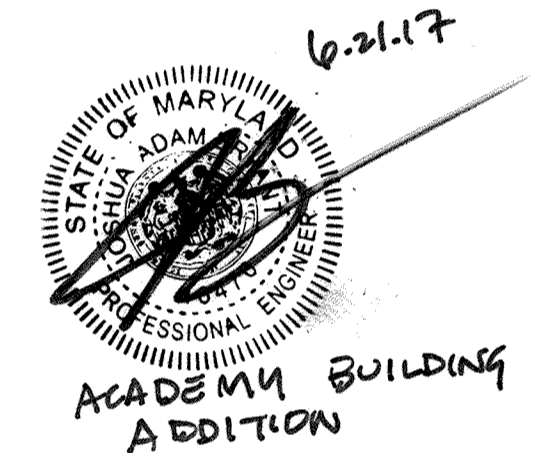
Start of Wall
Start of Curve

End of Wall
End of Curve



WALL 4

All geogrids shall be Mirafi 5XT and shall be 5 ft long



OWNER/DEVELOPER

WAL-MART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SWDC
BENTONVILLE, AR 72716-0550
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000

SUBDIVISION 'ELLCOTT CITY WALMART'

ELECTION DISTRICT NO. 2	HOWARD COUNTY, MARYLAND
TAX MAP 17 & 24	P/O TM PARCEL 1085
REZONING CASE NUMBER ZB-941	DATED: OCTOBER 18, 1993
SKETCH PLAN S-95-01	APPROVED: 12-2-1994
PRELIMINARY PLAN P-95-21	APPROVED: 06-06-1995
SITE PLAN SDP-96-II	APPROVED: 06-21-1996
MASS GRADING PLAN SDP-96-001	APPROVED: 04-03-1996
FINAL ROAD CONSTRUCTION PLAN FOR NORTH RIDGE RD. F-96-01	APPROVED: 11-08-1995
ECP II-007	APPROVED: 08-06-2010
FINAL RECORD PLATS	F-96-009, F-96-091 & F-98-157
WATER NO. F03	SEWER NOS. 1452800 F-12-023

NO.	REVISIONS	DATE

Segmental Retaining Wall 4
Walmart Store #2412-03, Ellicott City, Walmart, Parcel B
TM 24, TM Grid 6, P/O TM Parcel 1085
2nd Election District, HOWARD COUNTY, MD

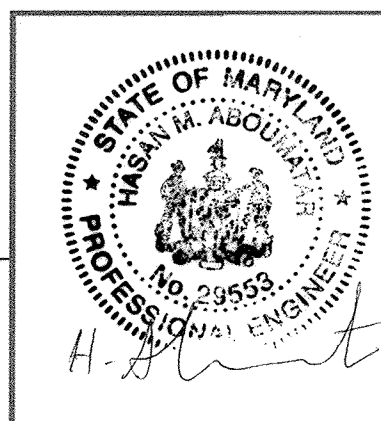
Bowman Consulting Group, Ltd.

DMA	DMA	06-29-11	5340-A	30A of 3234
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APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>Chad Edwards</i>	1/11/12
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>R. J. Salas</i>	1/18/12
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>Thomas P. Butler</i>	1/16/12
DIRECTOR	DATE

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 29553, Expiration Date: 9/31/13



ECS MID-ATLANTIC, LLC
1340 CHARWOOD ROAD, SUITE P
HANOVER, MARYLAND 21076
OFFICE (410) 859-4500
FAX (410) 859-4324
"Setting The Standard For Service"

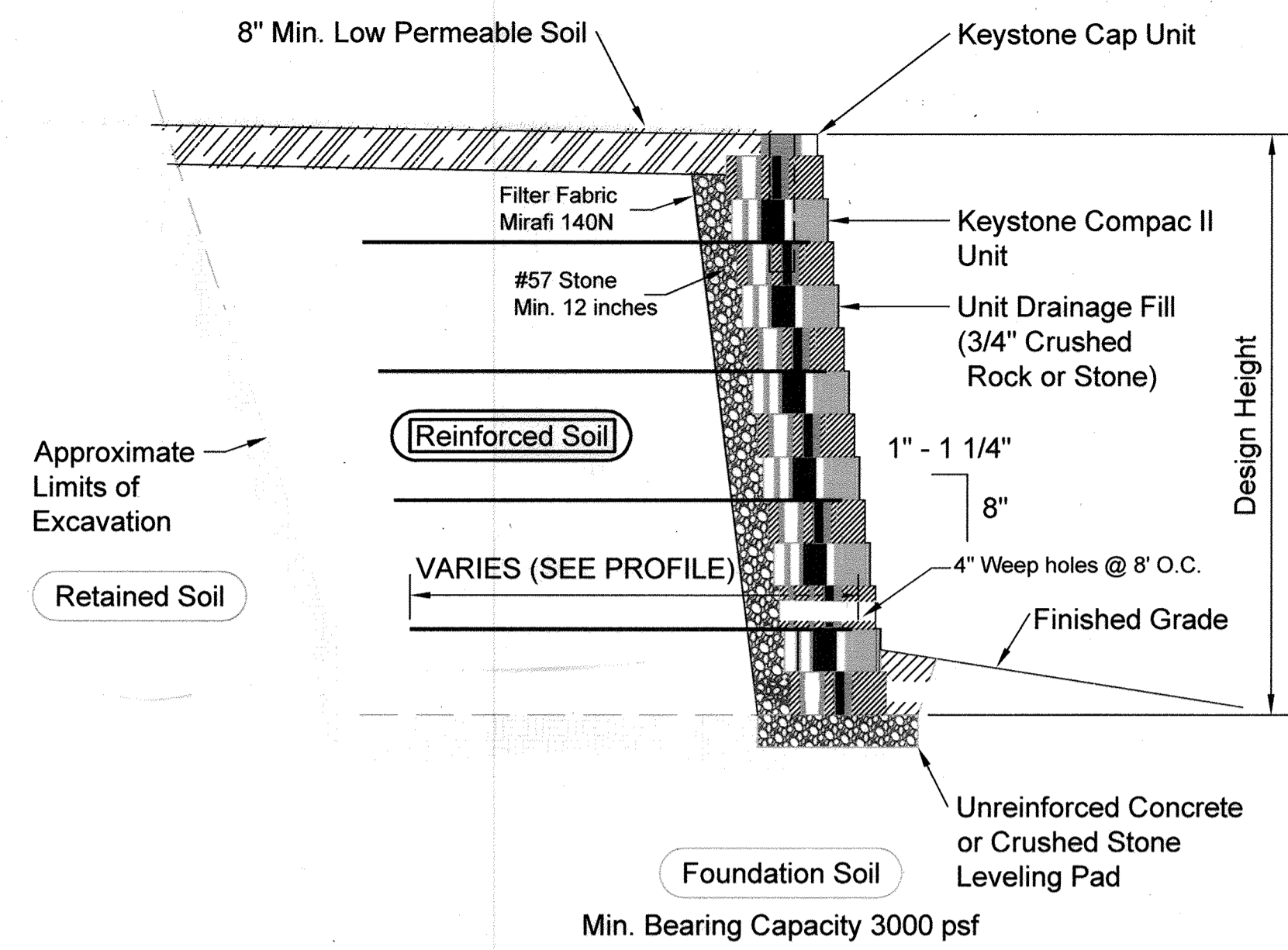
RETAINING WALL SPECIFICATION GUIDELINES

- PART 1: GENERAL**
- 1.01 Description
- Retaining walls must be constructed under the supervision of a Maryland Registered Professional Engineer.
 - Work includes furnishing and installing concrete modular block retaining wall units to the lines and grades shown on the construction drawings and as specified herein.
 - Work includes preparing foundation soil, furnishing and installing leveling pad, unit fill and reinforced backfill to the lines and grades shown on the construction drawings.
 - Work includes furnishing and installing all related materials required for construction of the retaining wall as shown on the construction drawings.
- 1.02 Reference Standards
- ASTM C 90 Load Bearing Concrete Masonry Units.
 - ASTM C 140 Sampling and Testing Concrete Masonry Units.
 - ASTM D 448 Sizes of Aggregate for Road and Bridge Construction.
 - ASTM D 698 Laboratory Compaction Characteristics using Standard Effort.
- 1.03 Delivery, Storage and Handling
- Contractor shall check the materials upon delivery to assure that proper materials have been received.
 - Contractor shall prevent excessive mud, wet cement, epoxy, and similar materials (which may affix themselves) from coming in contact with the materials.
 - Contractor shall protect the materials from damage and exposure to sunlight. Damaged materials shall not be incorporated into the retaining wall structure and backfill.
- 1.04 Quality Assurance
- Owner will be responsible for soil testing and construction observations for quality control during earthwork and retaining wall construction operations.
- PART 2: MATERIALS**
- 2.01 Definitions
- Modular Wall Units - KEYSTONE modular concrete facing and corner units, machine made from portland cement, water, and mineral aggregates.
 - Structural Geogrid - a structural geogrid formed by a regular network of integrally connected tensile elements with apertures of sufficient size to allow interlocking with surrounding soil, rock, or earth and function primarily as reinforcement.
 - Unit Fill/Drainage Aggregate - drainage aggregate, such as No. 57 Stone, which is placed within the cells of the modular concrete units and immediately behind the units to a width of at least 12 inches.
 - Reinforced Backfill - Compacted soil which is within the reinforced soil zone as shown on the plans.
 - Excavation Face - The interface between the reinforced backfill and the retained fill. During construction, measures shall be taken to avoid developing a shear plane at this interface.
 - Retained Backfill - On-site material located behind the reinforced zone of soil.
- 2.02 Concrete Units
- Concrete segmental units shall conform to the requirements of NCMATX 2-4 and have a minimum 28-day compression strength of 4,000 psi. The units shall also pass 150 freeze thaw cycles in water with less than 1% weight loss for samples tested in accordance with ASTM C-1262.
 - Wall Face Units for general wall construction shall be KEYSTONE Compac II Units. Sculptured face or straight (flat) face may be used.
 - Top of wall Cap Units shall be KEYSTONE Cap Units with fiberglass connecting pins.
 - KEYSTONE Compac II Units shall be tan in color, based on manufacturer's availability.
- 2.03 Fiberglass Connecting Pins
- Connecting pins shall be 1/2" diameter thermostat isopthalic polyester resin-pultruded fiberglass reinforcement rods supplied by the unit manufacturer.
- 2.04 Construction Adhesive
- Construction adhesive for top of wall cap blocks shall be KEYSTONE KapSealTM. Material shall conform to ASTM 2339 and shall be supplied by the block unit supplier.
- 2.05 Soil Fill Materials
- Base Leveling and Pad Material
 - Material shall consist of crushed stone (GA S/B) as shown on the construction drawing. The leveling pad shall be, at a minimum, 6-inches thick. MSHA No. 57 Stone or pea gravel is not permitted.
 - Unit Fill/Drainage Aggregate
 - Fill for units shall be free draining crushed stone or gravel, with a maximum aggregate size of 1/2" to 3/4" and no more than 5% passing the No. 50 sieve and conforming to ASTM D 448. Gradation of the unit fill shall be approved by the Geotechnical Engineer. Pea gravel shall not be used. MSHA No. 57 stone may be used.
 - Reinforced Backfill
 - Material shall consist of soil classified as SM, SC or more granular soils per USCS with minimum soil parameters as indicated under design parameters. The backfill material shall contain no particles greater than 2.5 inches in diameter. The backfill material shall contain at least 30 percent by weight retained on the US Standard No. 200 sieve. Other backfill materials may be approved by the Geotechnical Engineer.
 - Impervious Soil
 - Material may be imported or site excavated soils exhibiting a USCS designation of a lean clay (CL) or clayey sand (SC). The material shall contain no less than 40 percent by weight passing the US Standard No. 200 sieve and exhibit a plasticity index no less than 4 and no greater than 20. Other materials may be approved by the Geotechnical Engineer.
 - Sample Submittal
 - The contractor shall submit samples and material specifications of the proposed backfill soils (unit fill, pad material, reinforced backfill) to the Geotechnical Engineer for approval.
 - Soil must meet or exceed the friction angle specified in design parameters.
- 2.07 Structural Geogrid
- The geogrid identified for the retaining wall consists of the following:
 - Mirafi 5XT.
 - The material shall be protected from sunlight and weather while stored on site in accordance with the manufacturer's recommendation.
- 2.08 Geotextile
- A non-woven geotextile shall be utilized as shown on the plans to provide a filter between the unit fill/drainage aggregate and the reinforced backfill.
 - The geotextile shall consist of a Mirafi 140N.
 - Where geogrids are located, the geotextile shall be placed as illustrated on the plans. At junctions and ends, the geotextile shall be overlapped at least 12 inches. The geotextile shall be placed so that intimate contact is made between the geotextile and the backfill material.
 - Ripped or otherwise damaged material shall not be used. The material shall be protected from sunlight and weather while stored on site in accordance with the manufacturer's recommendation.

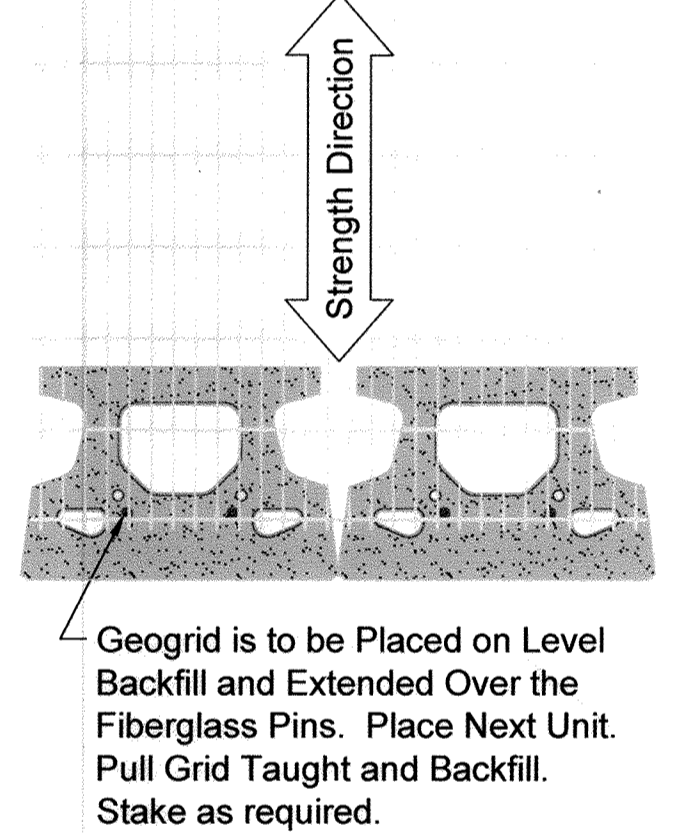
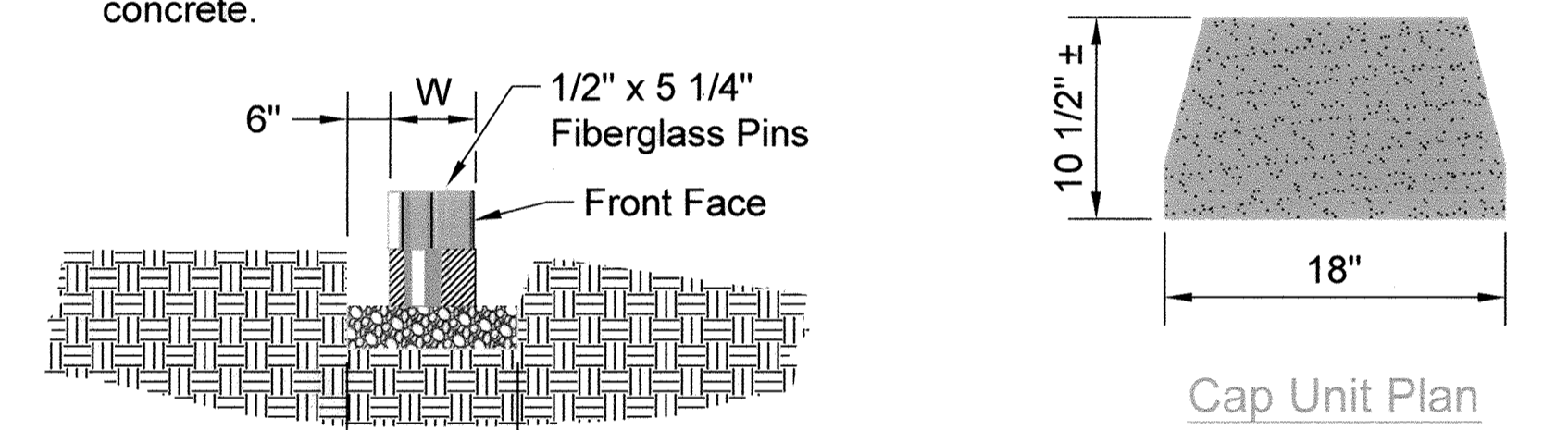
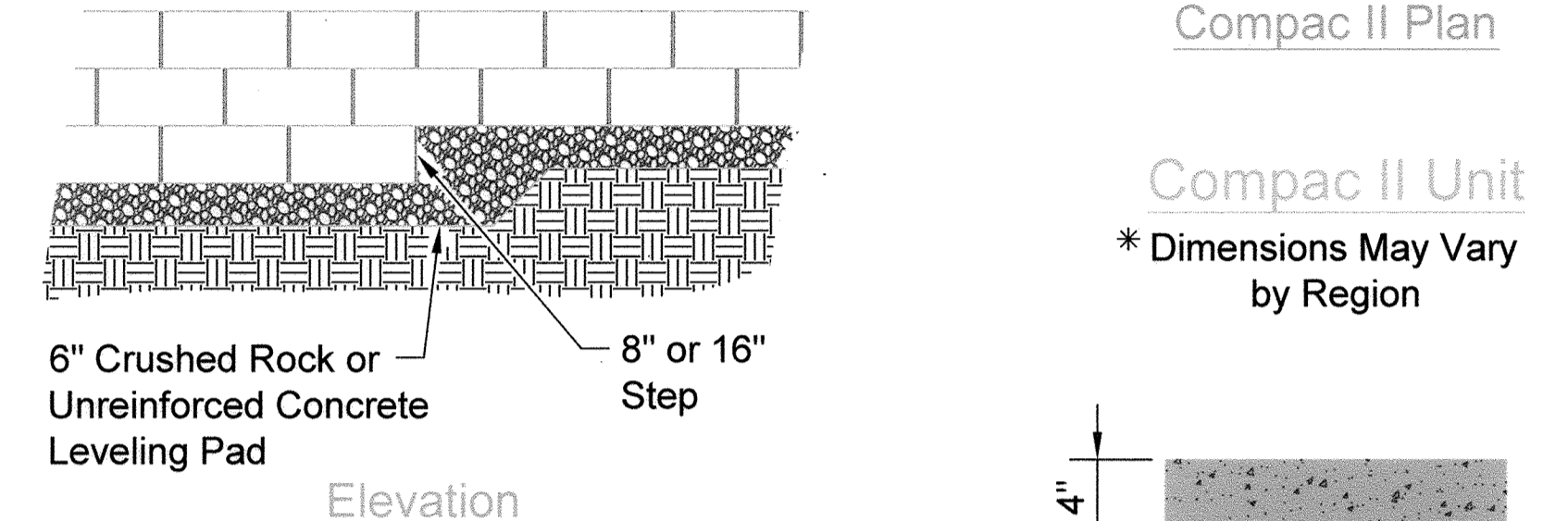
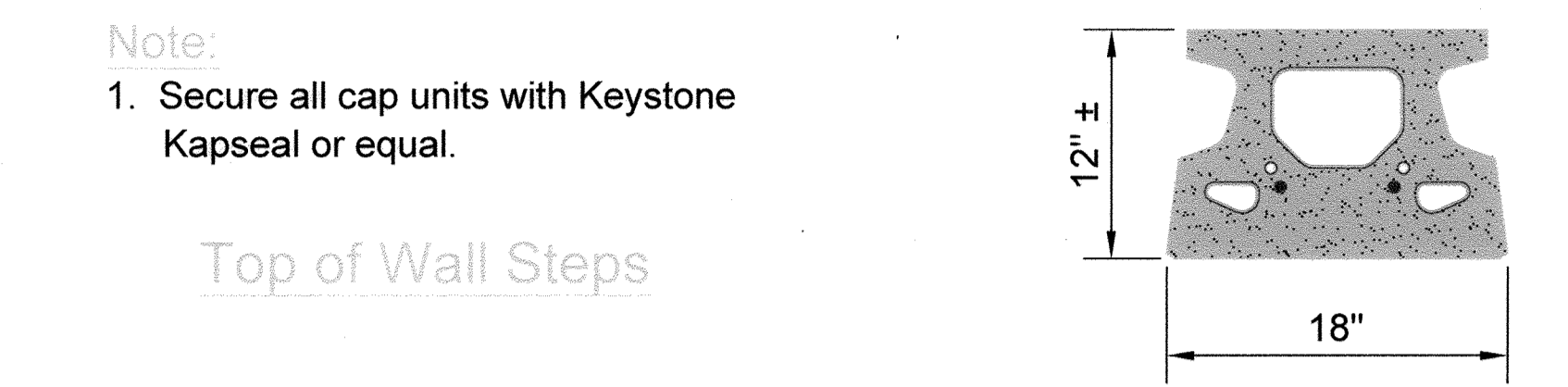
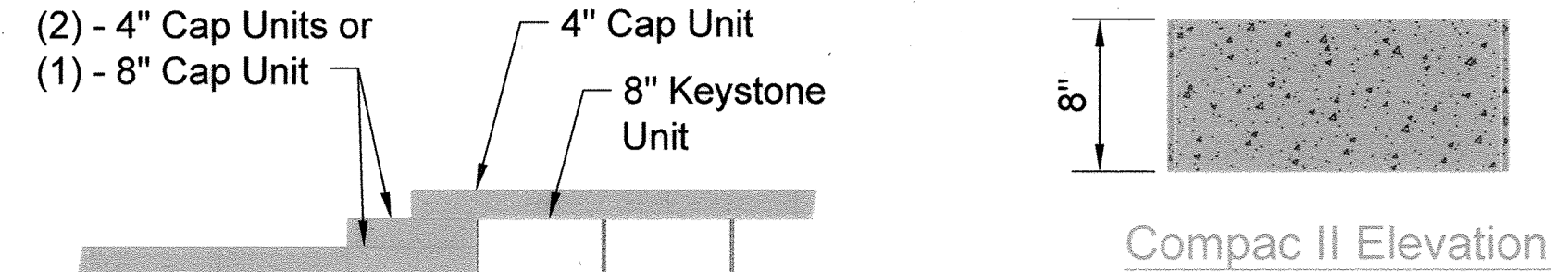
- PART 3: INSTALLATION**
- 3.01 Excavation
- Contractor shall excavate to the lines and grades shown on the construction drawings. Contractor shall be careful not to disturb embankment and foundation materials beyond lines shown.
 - All existing topsoil, rootstock and other soft or unsuitable materials shall, at a minimum, be removed from the footprint of the retained soil mass.
 - If groundwater is encountered during the excavation of the backslope, a backslope drainage system shall be utilized. The system shall tie into the internal wall drainage system to provide adequate release of any water which accumulates behind the reinforced zone.
- 3.02 Foundation Preparation
- Foundation shall be excavated as required for leveling pad dimensions shown on the construction drawings, or as directed by the Geotechnical Engineer.
 - The required bearing pressure beneath the footing of the wall must be verified in the field by a Geotechnical Engineer.
 - Unsuitable soils shall be removed and replaced with approved material.
 - Over-excavated areas shall be backfilled with approved, compacted backfill material or as approved by the Geotechnical Engineer.
- 3.03 Base Leveling Pad
- Leveling pad materials shall be placed upon an approved foundation as shown on the construction drawings to a minimum thickness of 6 inches.
 - Aggregate material shall be compacted to provide a dense, level surface on which to place the first course of modular units. Compaction shall be to at least 95% of the maximum dry density as determined by the Standard Proctor Compaction Test (ASTM D 698). Leveling pad shall be prepared and leveled to ensure complete contact of retaining wall unit with base.
- 3.04 Unit Installation
- The first course of concrete modular units shall be carefully placed on the base leveling pad. Each unit shall be checked for level (in both directions) and alignment.
 - Install fiberglass connecting pins and fill all voids in and around the modular units with unit fill material. Tamp or rod unit fill to ensure that all voids are completely filled.
 - Sweep excess material from top of units and install the next course. Ensure that the units of each course are completely filled, backfilled and compacted prior to proceeding to next course.
 - Place each subsequent course, ensuring that pins protrude into adjoining courses a minimum of 1 inch. Two pins are required per unit. Pull each unit forward to obtain the desired offset (as noted on the plans), away from the fill zone, locking against the pins in the previous course and backfill as the course is completed.
 - Repeat procedure to the extent of wall height. Wall construction shall not exceed 2 courses in height before reinforced backfill is placed.
 - Follow wall erection and unit fill placement closely with any other backfilling required. Compaction of all soils shall be to 95% of the maximum dry density as determined in accordance with ASTM D 698.
 - As appropriate where the wall changes elevation, units can be stepped with the grade or turned into the embankment with a convex return end. Provide appropriate buried units on compacted leveling pad in area of convex return end.
- 3.05 Geogrid Installation
- The geogrid type and length (direction perpendicular to the wall face) shall conform to those indicated on the construction drawings. Geogrid shall be laid continuously at the proper elevations and orientation as shown on the construction drawings or as directed by the Geotechnical Engineer.
 - Correct orientation (roll direction) of the geogrid shall be verified by the Contractor.
 - The geogrid shall be connected to the modular wall units by placing the geogrid over fiberglass pins and laying the grid back to the fill side.
 - A filtering, non-woven geotextile shall be located between the drainage aggregate/unit fill and the reinforced backfill. The geotextile shall be folded back parallel, above and below the geogrid as necessary to ensure continuous grid placement.
 - The geogrid shall be pulled taut to set the geogrid against the fiberglass pins and to eliminate loose folds in the material. The fill surface shall be level. To tension the geogrid, backfill shall be placed over the geogrid from immediately behind the wall to the back end of the geogrid.
 - No geogrid overlaps will be allowed in any length of geogrid perpendicular to the wall face except at corners or angled locations. The geogrid shall overlap rather than provide no coverage. A minimum of 4 inches of soil cover is required between overlapping layers of geogrid.
- 3.06 Drainage Installation
- Provide 4-inch weep holes every 8 feet along the wall.
- 3.07 Fill Placement
- Backfill material shall be placed in 8 inch loose lifts and compacted to at least 95% of the maximum dry density as determined by ASTM D 698. The in-place moisture content shall be in the range of the optimum moisture content to 2 percentage points higher than the optimum moisture content, as determined in accordance with ASTM D 698.
 - Backfill shall be placed, spread and compacted in such a manner that minimizes the development of slack or loss of pretension of the geogrid. Backfill shall be placed in horizontal layers. The excavation face shall be stepped or notched to provide compaction of backfill on a level surface and to increase the interlock between the retained soils and the reinforced backfill.
 - Only hand-operated compaction equipment shall be allowed within 5 feet of the back surface of the KEYSTONE or equivalent units.
 - Backfill shall be placed from immediately behind the wall towards the excavation face/retained soils and compacted to the specifications presented herein with appropriate compaction equipment.
 - Tracked construction equipment shall not be operated directly on the geogrid. A minimum backfill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. Turning of tracked vehicles shall not be permitted overtop the geogrid.
 - Rubber-tired equipment may pass over the geogrid reinforcement at slow speeds (less than 10 mph). Avoid sudden braking and sharp turning.
 - The suitability of the fill material must be confirmed by a Geotechnical Engineer.
 - The upper 8 inches of wall backfill shall consist of impervious soil, compacted to at least 95% of the maximum dry density as determined by ASTM D 698. The in-place moisture content shall be in the range of the optimum moisture content to 2 percentage points higher than the optimum moisture content, as determined in accordance with ASTM D 698.
- 3.08 Cap Installation
- Provide permanent mechanical connection to wall units with KEYSTONE KapSealTM. Apply adhesive to top surface of lower unit and place cap unit atop adhesive.
 - Place Cap Units over projecting pins from the units below. Pull forward to setback position.
 - Backfill and compact to finished grade.

DESIGN PARAMETERS

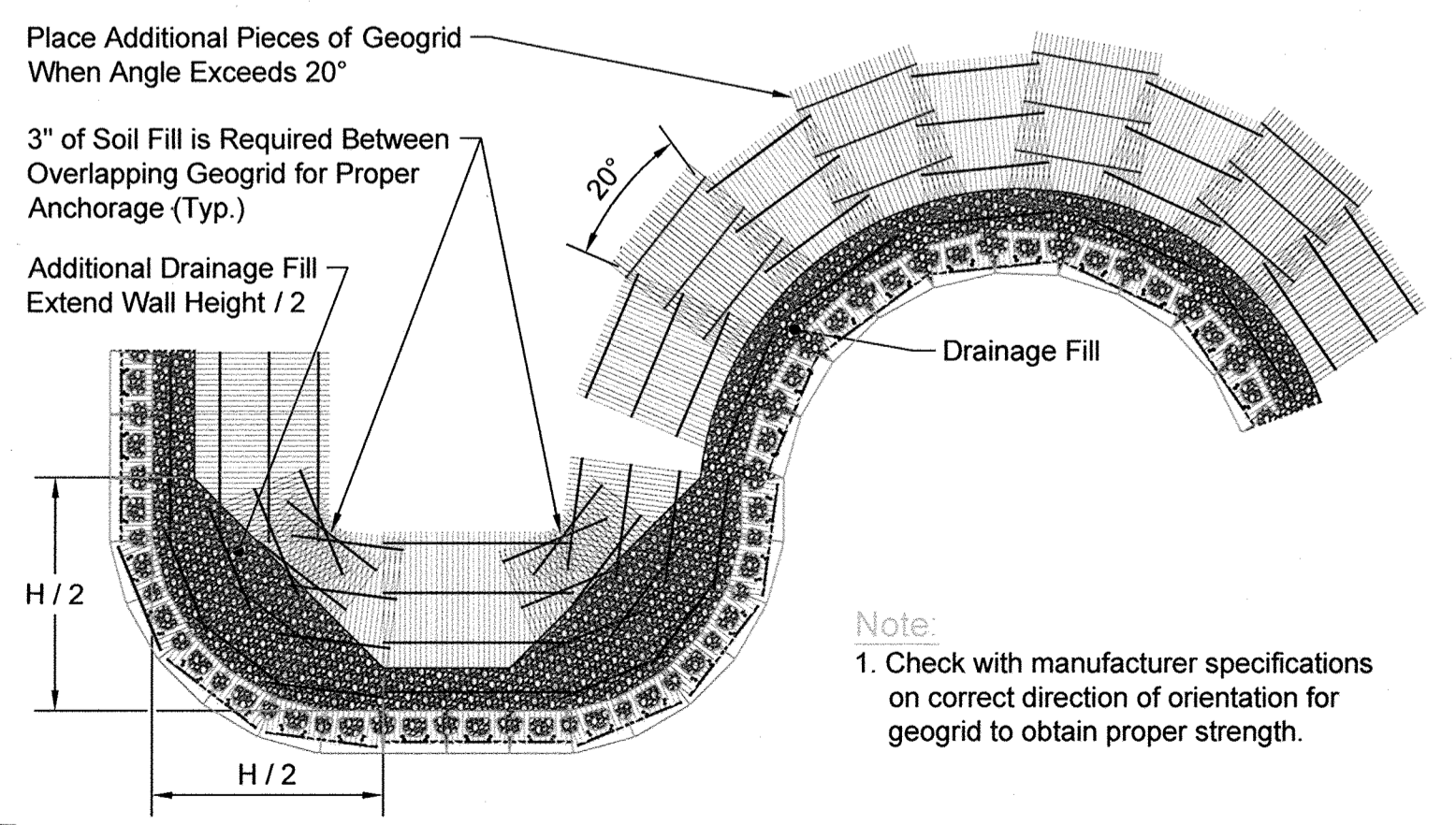
Characteristics:	Soil Parameters:	Minimum Friction Angle	Minimum Unit Weight (pcf)
Configuration: Battered face wall (4 DEG.)	Soil Type		
Maximum Exposed Wall Height / Minimum Allowable Bearing Pressure (psf): 3'-6" / 3,000	Reinforced fill (CL, SC, or more granular)	30	118
Backslope Angle: Varies (10H:1V maximum)	Retained soils	30	118
Toe Slope Angle: Varies (10H:1V maximum)	Foundation soils	32	120
Wall Embedment: Varies (6 inches minimum) (See Profile)			



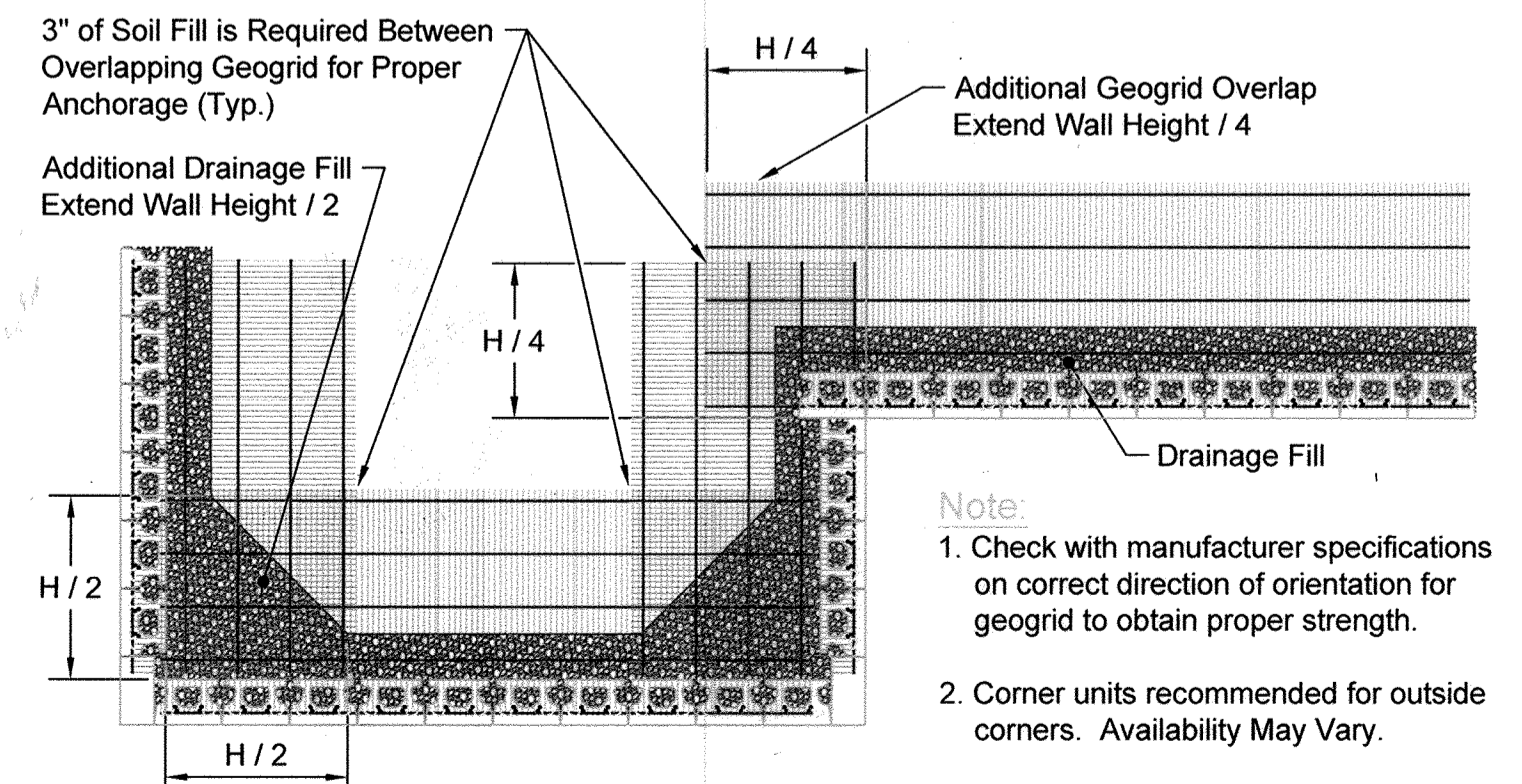
Typical Reinforced Wall Section
Geogrid Layers and Length Vary - See Profile



Grid & Pin Connection



Geogrid Installation on Curves



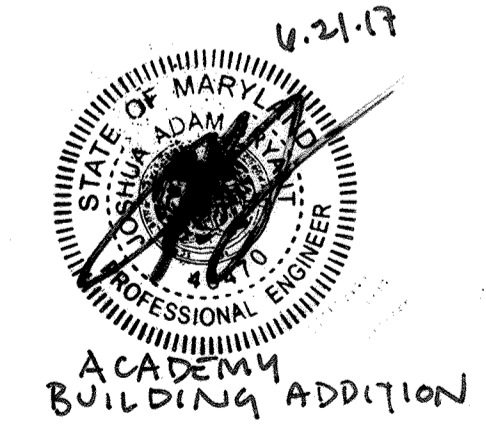
Geogrid Installation at Corners

OWNER/DEVELOPER

WAL-MART REAL ESTATE BUSINESS TRUST
2001 SOUTHEAST 10TH STREET, SWDC
BENTONVILLE, AR 72716-0550
CONTACT: MIKE THOMAS
PHONE: (479) 273-4000

SUBDIVISION 'ELLCOTT CITY WALMART'

ELECTION DISTRICT NO. 2
TAX MAP P/O TM PARCEL 1085
REZONING CASE NUMBER ZB-941
SKETCH PLAN S-95-01
APPROVED: 12-2-1994
PRELIMINARY PLAN P-95-21
APPROVED: 06-05-1995
SITE PLAN SDP-96-11
APPROVED: 05-21-1996
MASS GRADING PLAN SDP-96-001
FOR NORTH RIDGE RD. F-96-01
ECP-11-007
APPROVED: 06-06-2010
FINAL ROAD CONSTRUCTION PLAN
FOR NORTH RIDGE RD. F-96-01
F-96-009, F-96-001 & F-98-157
SEWER NOS. 1452800
HOWARD COUNTY, MARYLAND
DATED: OCTOBER 18, 1993
APPROVED: 12-2-1994
APPROVED: 06-05-1995
APPROVED: 05-21-1996
APPROVED: 04-03-1996
F-12-023



NO.	REVISIONS	DATE

Segmental Retaining Walls
Walmart Store #2412-03, Ellicott City, Walmart, Parcel B
TM 24, TM Grid 6, P/O TM Parcel 1085
2nd Election District, Howard County, MD

Bowman Consulting Group, Ltd.
DMA DMA 08-15-11 5340-A 32 of 34

ECS MID-ATLANTIC, LLC
1340 CHARWOOD ROAD, SUITE P
HANOVER, MARYLAND 21076
OFFICE (410) 859-4300
FAX (410) 859-4324
"Setting The Standard For Service"
ECS LLC
MID-ATLANTIC

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
CHIEF, DIVISION OF PLANNING AND DEVELOPMENT
DIRECTOR
DATE: 8/23/11

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 29553, Expiration Date: 12/31/11



OVERALL STORMWATER NARRATIVE

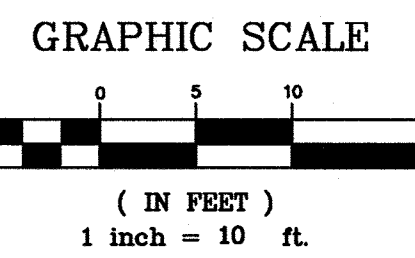
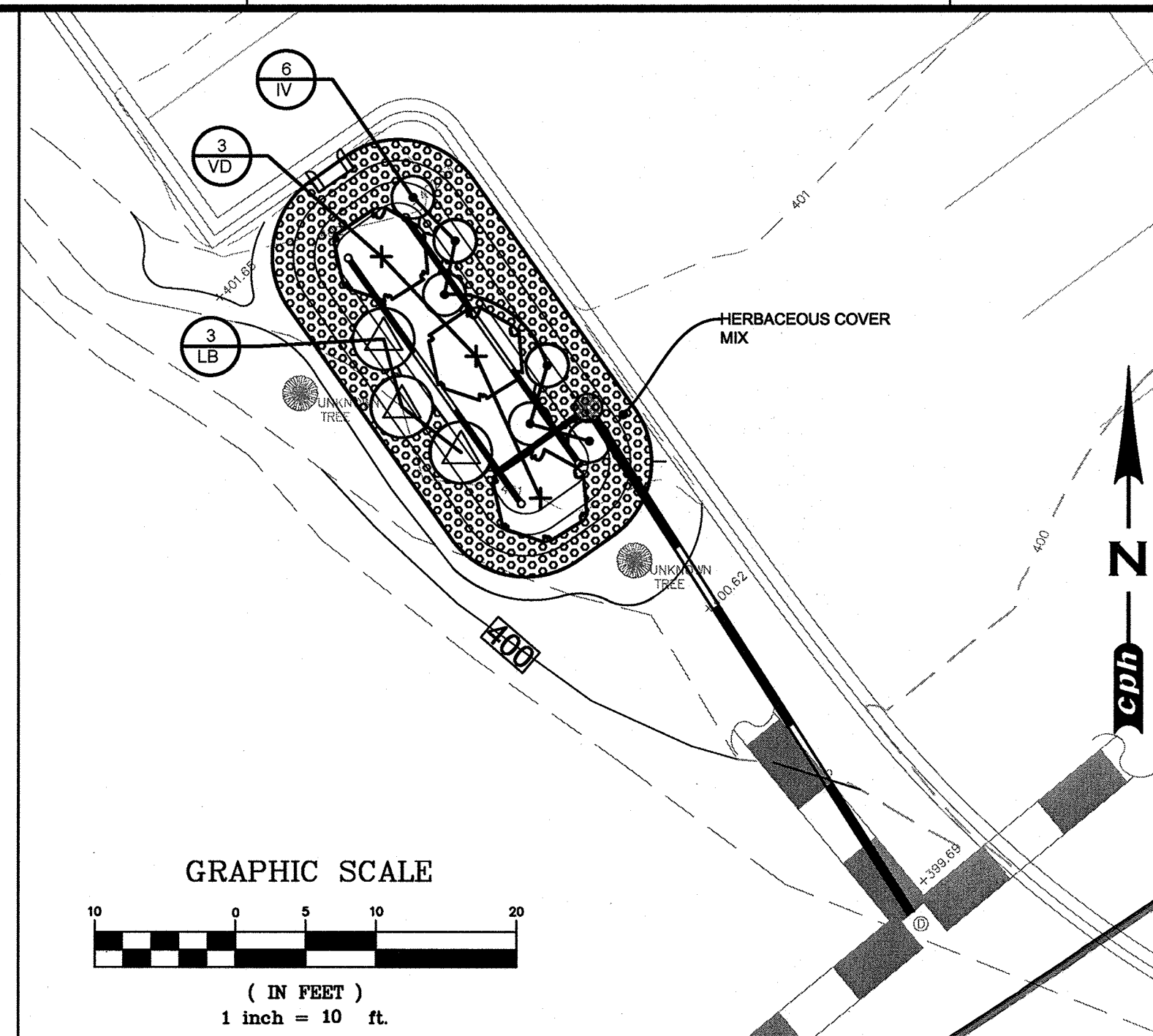
THE PROJECT CONSISTS OF INSTALLING A 3,075 SQUARE FOOT MODULAR BUILDING (LEARNING ACADEMY) IN THE EXISTING PARKING LOT OF WALMART STORE #2412 LOCATED AT 2202 NORTH RIDGE ROAD, ELLICOTT CITY, HOWARD COUNTY, MARYLAND. THE SUBJECT PROPERTY IS APPROXIMATELY 18.36 ACRES AND IS BOUNDED BY COLUMBIA PIKE ROAD (ROUTE 29) TO THE WEST, UNDEVELOPED PROPERTY TO THE NORTH, NORTH RIDGE ROAD TO THE EAST AND AN EXISTING OFFICE DEVELOPMENT TO THE SOUTH. THE STORMWATER ANALYSIS IS LIMITED TO THE SPECIFIC LIMITS OF DISTURBANCE ASSOCIATED WITH THE PROJECT SCOPE.

THE OVERALL SUBJECT PROPERTY IS CURRENTLY DEVELOPED AS A WALMART SUPERCENTER RETAIL BUILDING WITH ASSOCIATED PARKING AND INFRASTRUCTURE. SLOPES ACROSS THE SITE ARE GENERALLY LESS THAN 5% EXCEPT FOR PERIMETER AREAS ALONG THE WESTERN SIDE OF THE PROPERTY WITH STEEP SLOPES OF 25% OR MORE. THE SOUTHERN AND WESTERN SIDES OF THE PROPERTY INCLUDE TREES AND SHRUBS. PARKING LOT ISLANDS AND EXISTING MICRO-BIORETENTION AREAS THROUGHOUT THE SITE INCLUDE TREES AND SHRUBS AS WELL. THE WESTERN PART OF THE SITE INCLUDES 1.5 ACRES OF FOREST CONSERVATION AREA. NONE OF THE PROPOSED DEVELOPMENT ASSOCIATED WITH THIS PROJECT WILL IMPACT THE FOREST CONSERVATION AREA.

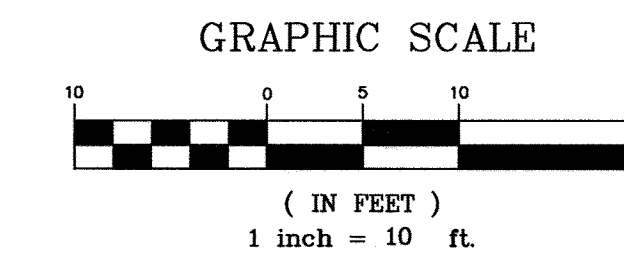
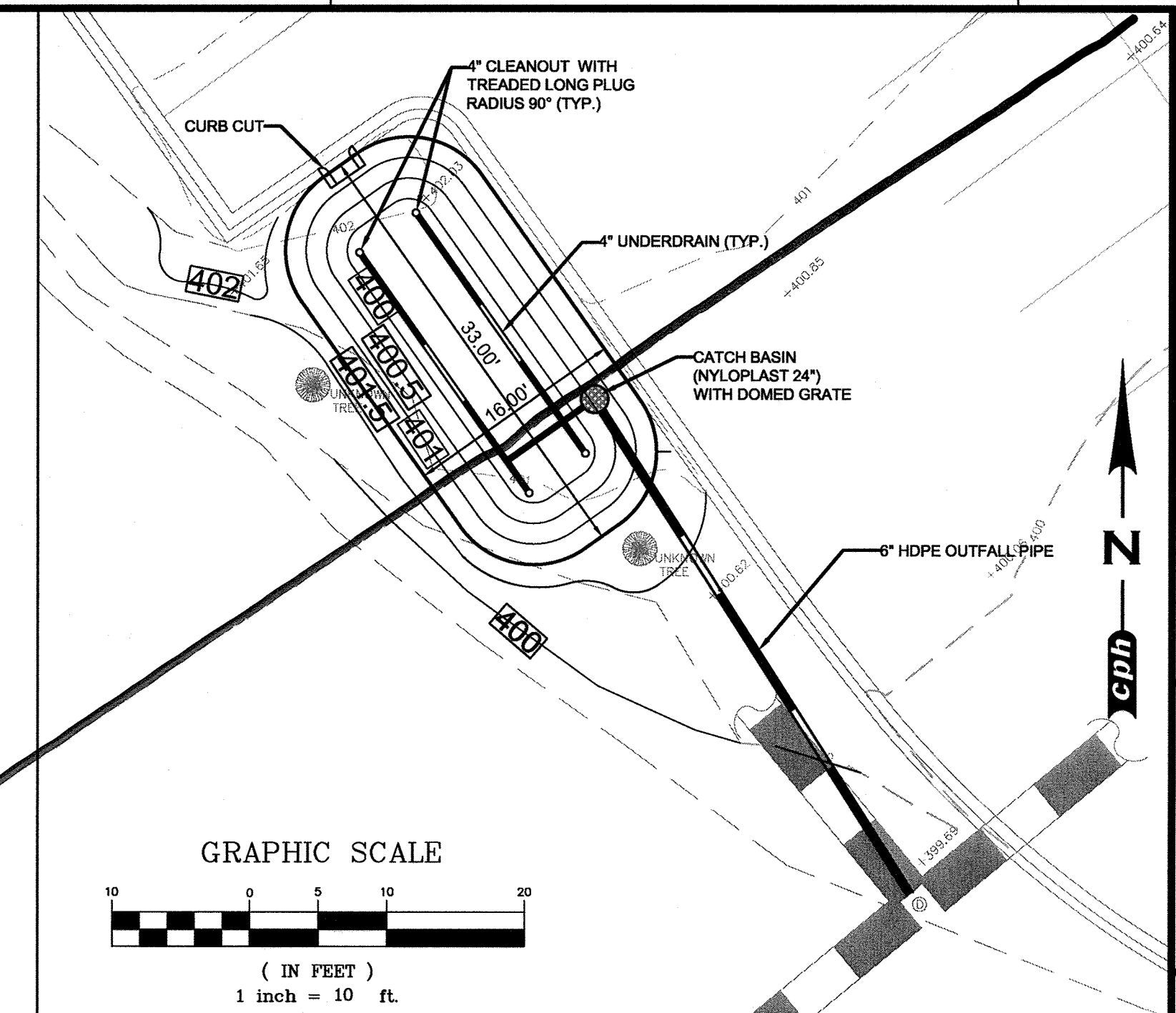
EXISTING ON-SITE IMPERVIOUS AREA INCLUDES A 151,422 SQUARE FOOT WALMART SUPERCENTER RETAIL BUILDING, ASSOCIATED PARKING, AND DRIVE AISLES. THE TOTAL EXISTING IMPERVIOUS AREA FOR THE ENTIRE SITE IS 11 ACRES. THE PROPOSED WALMART LEARNING ACADEMY WILL BE LOCATED IN AN EXISTING IMPERVIOUS PAVEMENT AREA. AS A RESULT, NO INCREASE IN IMPERVIOUS AREA WILL RESULT FROM THE PROPOSED DEVELOPMENT. THE SOILS WITHIN THE SUBJECT AREA ARE GLENNVILLE SILT LOAM (HSG C) AND MANOR LOAM (HSG B).

A NON-STRUCTURAL MICRO-BIORETENTION AREA HAS BEEN PROPOSED ALONG THE WEST SIDE OF THE EXISTING PARKING LOT IN AN EXISTING GREEN SPACE AS THE ESD PRACTICE TO TREAT THE REQUIRED STORMWATER TO THE MAXIMUM EXTENT POSSIBLE (MEP). THE MICRO-BIORETENTION AREA HAS BEEN LOCATED TO RECEIVE SHEETFLOW FROM THE EXISTING PARKING LOT; THE CONTRIBUTING AREA IS LESS THAN 20,000 SQUARE FEET AND THE SLOPES ARE LESS THAN 5%. THE SHEET FLOW ENTERS THE MICRO-BIORETENTION FACILITY VIA CURB CUT. UNDERDRAINS ARE PROVIDED TO ACCOMMODATE THE TREATED STORMWATER AND AN OVERFLOW INLET CONNECTED TO THE OVERALL STORMWATER SYSTEM IS PROVIDED TO ACCOMMODATE FLOW IN EXCESS OF THE ESDV AND TO CONVEY IT DOWNSTREAM TO THE EXISTING STORMWATER POND. THE PROPOSED SYSTEM DOES NOT DISRUPT THE EXISTING STORMWATER PATTERNS PRESENT AT THE SITE.

THE COMPUTATIONS INCLUDED ON THIS SHEET SHOW THAT THE PROPOSED SYSTEM COMPLIES WITH STORMWATER REQUIREMENTS FOR REDEVELOPMENT PROJECTS.



BIORETENTION FACILITY #6 LANDSCAPE PLAN



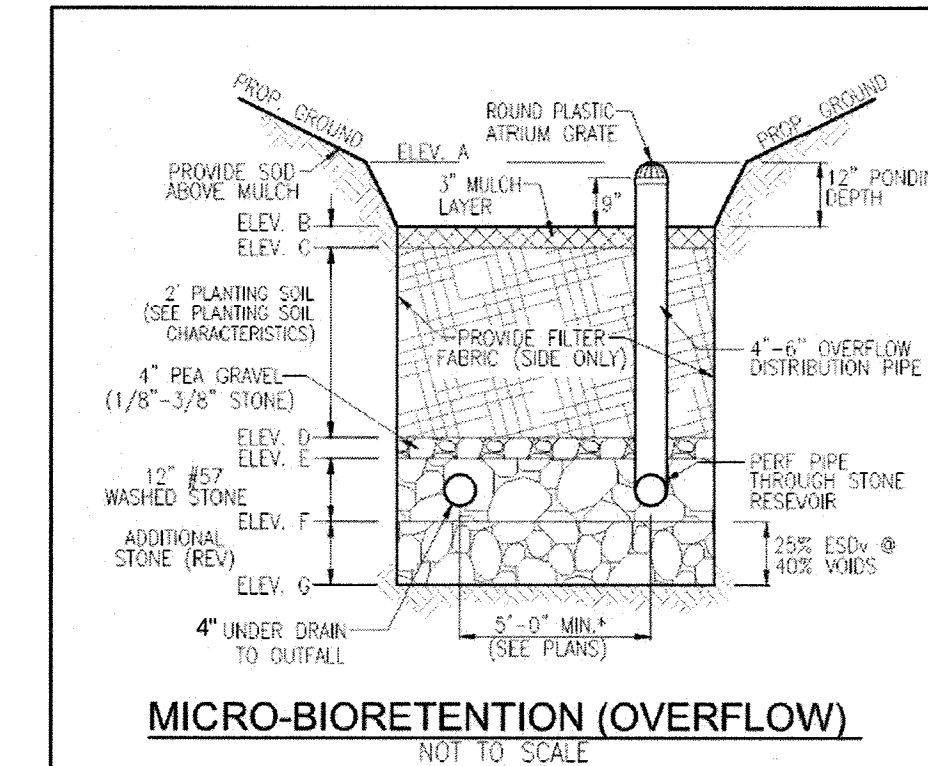
MICRO-BIORETENTION FACILITY #6 PLAN VIEW (M-6)

BIORETENTION FACILITY PLANT SCHEDULE

QTY.	SYM	SCIENTIFIC NAME	COMMON NAME	TYPE	SIZE
HERBACEOUS COVER MIX					
30%		Andropogon Virginicus	Broomsedge	HERBACEOUS	
25%		Eupatorium Perpureum	Joe-Pye Weed	HERBACEOUS	
25%		Lobelia Cardinalis	Cardinal Flower	HERBACEOUS	
20%		Panicum Virgatum	Switchgrass	HERBACEOUS	
SHRUBS					
3	LB	Lindera Benzoin	Spicebush	SHRUB	30"-36"
5		Ilex Verticillata	Winterberry	SHRUB	30"-36"
3	VD	Alnus Incana	Arrow-wood	SHRUB	30"-36"

STORMWATER MANAGEMENT INFORMATION

LOT/PARCEL NUMBER	FACILITY NAME & NUMBER	PRACTICE TYPE (QUANTITY)	PUBLIC	PRIVATE	HOA MAINTAINS	MISC.
1065	FACILITY #6	MICRO-BIORETENTION			✓	



MICRO-BIORETENTION (OVERFLOW) NOT TO SCALE

MICROBIORETENTION NOTES:

- ONLY THE SIDES OF MICROBIORETENTION ARE TO BE WRAPPED IN FILTER FABRIC. FILTER FABRIC BETWEEN LAYERS OR AT THE BOTTOM OF THE MICROBIORETENTION WILL CAUSE THE MBR TO FAIL, AND THEREFORE SHALL NOT BE INSTALLED.
- WRAP THE PERFORATED MBR UNDERDRAIN PIPE WITH 1/4" MESH (4x4) OR SMALLER GALVANIZED HARDWARE CLOTH.
- PROVIDE 6" MINIMUM SPACING BETWEEN UNDERDRAIN AND PERFORATED PIPE THROUGH STONE RESERVOIR OR SPACE PIPE EQUALLY ACROSS BOTTOM FOR SMALL BIOS. (SEE DETAIL)

KEY	ELEVATIONS
A	401.00'
B	400.00'
C	398.75'
D	397.75'
E	397.42'
F	396.84'
G	396.59'

BIORETENTION FILTER CALCULATIONS

DRAINAGE AREA (MAX 20,000 SF)
A_{DRN} = 5,640 SF

SIZE RATIO (LENGTH / WIDTH)
R_{LW} = 2.06:1

SIDE SLOPE OF PONDING AREA (MAX 3:1)
S_{SIDE} = 3:1

DEPTH OF SOIL (MAX 4")
D_{SOIL} = 2"

LENGTH OF BASIN (MIN 15')
L_{BASIN} = 33'

WIDTH OF BASIN (MIN 10')
W_{BASIN} = 16'

AREA AT TOP OF PONDING (MIN 150 FT²)
A_{TOP} = 369 SF

VOLUME OF PONDING (MAX 1' DEEP)
V_{POD} = 368.5 CF

STORAGE VOLUME OF SOIL (SOIL POROSITY 0.30)
V_{SOIL} = 221.1 CF

TOTAL FACILITY VOLUME
V_{BASIN} = 590 CF

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

THE OWNER SHALL MAINTAIN THE MATERIAL MULCH LAYER AND SOIL ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A-4.1 AND 2.

B. THE OWNER SHALL PERFORM A PLAN IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.

C. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.

D. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM.

Concept ESD Calculations

Site Area (New Improvement Area)	4,097 sf	
Existing Impervious Area	3,500 sf	
Existing Impervious %	85.4 %	If >40%, then Redevelopment
Req'd Redevelopment Treatment/Removal	1,750 sf	50% of Existing Impervious must be treated and/or removed for Redevelopment
Proposed Impervious Area Removed	3,500 sf	
Impervious Area Req'd for Treatment	1,750 sf	
	0.040 ac	
ESDv = Pe * Rv * A/12		
Pe	1 inch	for Redevelopment
Rv	0.950	0.05 + 0.009(I); I = 100%
A	0.040 acre	
ESDv	0.003 ac-ft	Treatment Volume Req'd
	139 cf	Treatment Volume Req'd

MICRO-BIORETENTION X

Basin Area, A	5,640 ft²	
Impervious Area	4,338 ft²	
Impervious %, I	76.9	
Rv	0.742	Rv = 0.05 + 0.009 * I
Micro Bioretention Area # X		
Surface Area, Af	369 ft²	
Ponding Depth, Dp	1 ft	
Ponding Volume, Vp	368.5 ft³	Vp = Af * Dp
Porosity, n	0.3	
Filter Media Depth, Dm	2 ft	
Storage w/in the Practice, Vs	221.1 ft³	Vs = n * Af * Dm
ESDv Provided in micro-bioretention	590 ft³	ESDv = Vp + Vs
1yr 24hr Rainfall, Pm	2.6 in	
ESDv Max Allowed	907 ft³	ESDmax = (Pm) * (Rv) * (A) / 12
Use ESD Volume	590 ft³	Use lesser of ESDv & ESDmax

Summary of Storage Provided

DA X	590 cf	
	590 cf	139 cf ESDv Treatment Vol. Req'd
Summary of Impervious Area Treated		
DA X	4,338 sf	
	4,338 sf	1,750 sf Imperv. Area Req'd for Treatment

STORMWATER COMPUTATION NARRATIVE

NOTE: FOR EROSION CONTROL PURPOSES, WALMART DEFINES THEIR LIMITS OF DISTURBANCE TO INCLUDE ALL AREAS OF WORK ACTIVITY, INCLUDING GROUND AREAS THAT ARE NOT PHYSICALLY TURBED SUCH AS STAGING AREAS. THIS IS A MEASURE TO ENSURE THAT ANY SEDIMENT ASSOCIATED WITH THE WORK ACTIVITY IN GENERAL IS NOT RELEASED OFF-SITE, BUT IT DOES NOT REPRESENT THE ACTUAL LIMITS OF PHYSICAL GROUND DISTURBANCE.

THIS PROJECT ONLY DISTURBS GROUND AREAS ASSOCIATED WITH THE BUILDING FOOTPRINT, PAVEMENT REPAIR DUE TO UTILITY EXTENSIONS AND CONSTRUCTION OF THE PROPOSED MICRO-BIORETENTION ESD. BECAUSE THE PAVEMENT ASSOCIATED WITH THE UTILITY EXTENSIONS IS REPAIRED TO THE SAME ORIGINAL CONDITION, THE ONLY NEW IMPROVEMENT AREAS ASSOCIATED WITH THE PROJECT ARE THE BUILDING FOOTPRINT AND THE PROPOSED MICRO-BIORETENTION. AS A RESULT, THESE ARE THE AREAS THAT HAVE BEEN CONSIDERED FOR STORMWATER MANAGEMENT.

THE BUILDING FOOTPRINT INCLUDES 3,500 SF OF IMPERVIOUS AREA AND THE NEW PROPOSED MICRO-BIORETENTION AREA INCLUDES 597 SF OF PERVIOUS AREA. THESE NEW IMPROVEMENT AREAS RESULTING IN PHYSICAL GROUND DISTURBANCE HAVE BEEN ILLUSTRATED ON THIS SHEET.

THE EXISTING SUBJECT SITE AREA HAS A REDEVELOPMENT IMPERVIOUS AREA PERCENTAGE GREATER THAN 40%, THEREFORE THE PROJECT QUALIFIES AS "REDEVELOPMENT" PER HOWARD COUNTY AND MARYLAND STATE REQUIREMENTS. FOR REDEVELOPMENT PROJECTS, 50% OF THE NEW IMPERVIOUS AREA QUANTITY, MUST BE REMOVED OR TREATED. THIS EQUATES TO A REQUIRED TREATMENT AREA OF 1,750 SF. DEVELOPMENTS REQUIRE 1 INCH OF TREATMENT. FOR THE SUBJECT AREA THIS EQUATES TO 139 CF OF TREATMENT VOLUME THAT IS REQUIRED.

A NON-STRUCTURAL MICRO-BIORETENTION ESD AREA HAS BEEN PROPOSED AT THE SOUTHWEST CORNER OF THE PARKING LOT IN AN EXISTING GREEN SPACE THAT WILL CAPTURE AND TREAT 4,338 SF OF IMPERVIOUS AREA, WHICH IS GREATER THAN THE REQUIRED 1,750 SF THAT IS REQUIRED. THE MICRO-BIORETENTION PROVIDES TREATMENT STORAGE IN THE PONDING AREA OF 368.5 CF AND STORAGE AREA WITHIN THE FILTER MEDIA OF 221.1 CF. THIS STORAGE AREA VOLUME WITHIN THE ESD EXCEEDS THE 139 CF REQUIREMENT.

UNDERDRAINS ARE PROPOSED BELOW THE FILTER MEDIA WITHIN THE MICRO-BIORETENTION TO DISCHARGE THE TREATED STORMWATER DOWNSTREAM INTO THE EXISTING STORMWATER SYSTEM. AN OVERFLOW INLET IS ALSO PROPOSED WITHIN THE PONDING AREA TO DISCHARGE EXCESS STORMWATER RUNOFF DOWNSTREAM INTO THE EXISTING STORMWATER SYSTEM. THE OVERFLOW AND UNDERDRAINS ARE PROPOSED TO TIE INTO AN EXISTING STORMWATER MANHOLE LOCATED APPROXIMATELY 41 FEET TO THE SOUTH.

REMOVAL OF ACADEMY BUILDING ADDITION UTILITIES AND PARKING LOT MODIFICATION

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: 2/4/17

CHIEF, DIVISION OF LAND DEVELOPMENT: 8-2-17

DIRECTOR: 8-2-17

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Designed by:	R.K.R.	Checked by:	J.A.B.	Approved by:	J.A.B.	Date:	07/26/16	Job No.:	W/13912	Revision

BIO-RETENTION DETAILS

Walmart
LEARNING ACADEMY
STORE NO. 2412, ELLICOTT CITY, HOWARD COUNTY, MARYLAND

Sheet No. **33 of 33**

ALL DETAILS (EXCEPT PAVEMENT DETAILS) ON THIS SHEET WERE PROVIDED BY WALMART AND ARE FOR INFORMATIONAL PURPOSES ONLY. BOHLER ENGINEERING SHALL BE HELD HARMLESS IN THE EVENT OF ERRONEOUS INFORMATION CONTAINED WITHIN THESE DETAILS AND/OR STRUCTURAL FAILURE.

CANOPY GENERAL NOTES

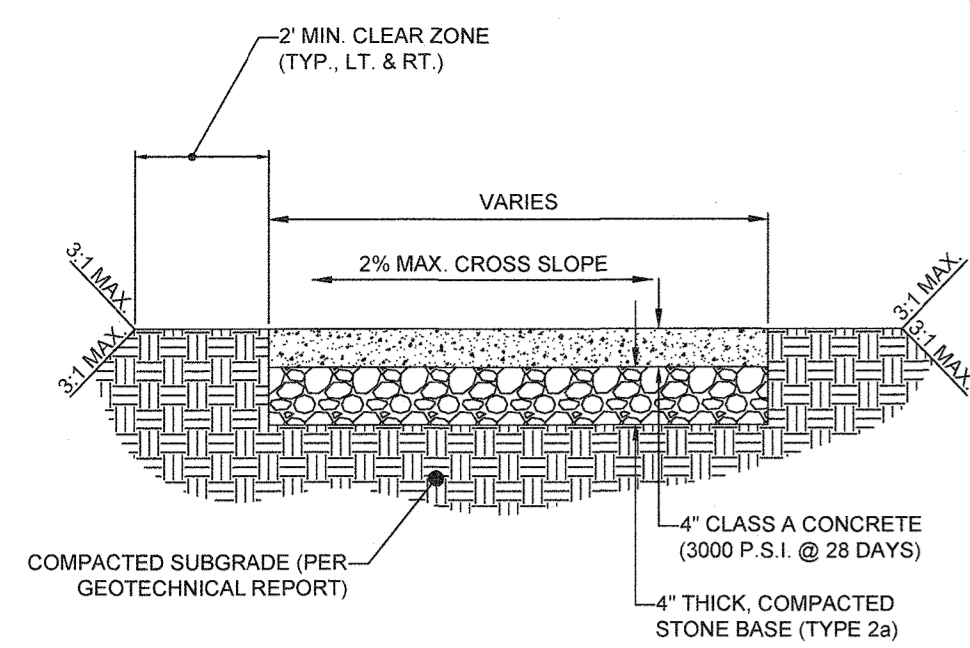
- FABRIC
- CANOPY FURNISHED BY WALMART, INSTALLED BY G.C.
 - LIGHT FIXTURES TO BE FURNISHED BY VENDOR AND INSTALLED BY G.C.
 - FOOTINGS TO BE INSTALLED BY G.C. AND DESIGNED BY WALMART STRUCTURAL ENGINEER.
 - CANOPY STEEL TO BE PREFINISHED TO MATCH P126 BY VENDOR, UNLESS OTHERWISE NOTED.
 - ELECTRICAL FOR LIGHTS BY G.C.

SIGNAGE GENERAL NOTES

- CANOPY AND BUILDING SIGNAGE FURNISHED BY WALMART. INSTALLED BY OTHERS. SITE DIRECTIONAL PLACARDS FURNISHED BY WALMART, INSTALLED BY G.C. POLE FURNISHED AND INSTALLED BY G.C. PAVEMENT PAINT FURNISHED AND INSTALLED BY G.C.
- GENERAL CONTRACTOR RESPONSIBILITIES:
 - REMOVE EXISTING BUILDING SIGNAGE AS INDICATED.
 - BY END OF FIRST WEEK OF CONSTRUCTION, REVIEW EXISTING CONSTRUCTION WHERE SIGN(S) WILL BE INSTALLED. IF EXISTING CONDITIONS DO NOT MATCH SIGN ATTACHMENT DETAILS SHOWN, REQUEST APPROVAL FROM CONSTRUCTION MANAGER TO SUBMIT RFI IN ACCORDANCE WITH SECTION 01255. NOTE DIFFERENCES IN CONSTRUCTION, INCLUDING DIMENSIONS, AND INCLUDE PHOTOGRAPHS FOR CLARIFICATION.
 - PROVIDE JUNCTION BOXES AND CIRCUITRY TO NEW "Pickup" AND "spark" SIGNAGE.
 - VERIFY VOLTAGE AT CIRCUITS FEEDING LIGHTED SIGNAGE. REFER TO ELECTRICAL.
 - MAKE FINAL TERMINATIONS ON LIGHTED SIGNAGE.
 - INSTALL CHECK-IN KIOSKS & COORDINATE W/ VENDOR.
 - WHEN REQUIRED BY A.H.J. G.C. IS RESPONSIBLE TO ACQUIRE SEPARATE PERMIT(S) FOR INSTALLATION OF SITE SIGNS.
 - ALL SIGN PLACARDS FURNISHED BY WALMART AND INSTALLED BY GENERAL CONTRACTOR. ALL PAINT FOR PAVEMENT MARKINGS IS FURNISHED AND PAINTED BY THE GENERAL CONTRACTOR.
- SIGNAGE CONTRACTOR RESPONSIBILITIES:
 - FURNISH SPECIFIED CONDUIT FOR LIGHTED SIGNAGE.
 - MAKE REQUIRED EXTERIOR WALL PENETRATIONS, INSTALL CONDUIT, AND SEAL PENETRATIONS PER SPECIFICATION SECTION 07900.
 - INSTALL SIGNAGE PER DETAILS ON THIS SHEET.

FINISH KEY

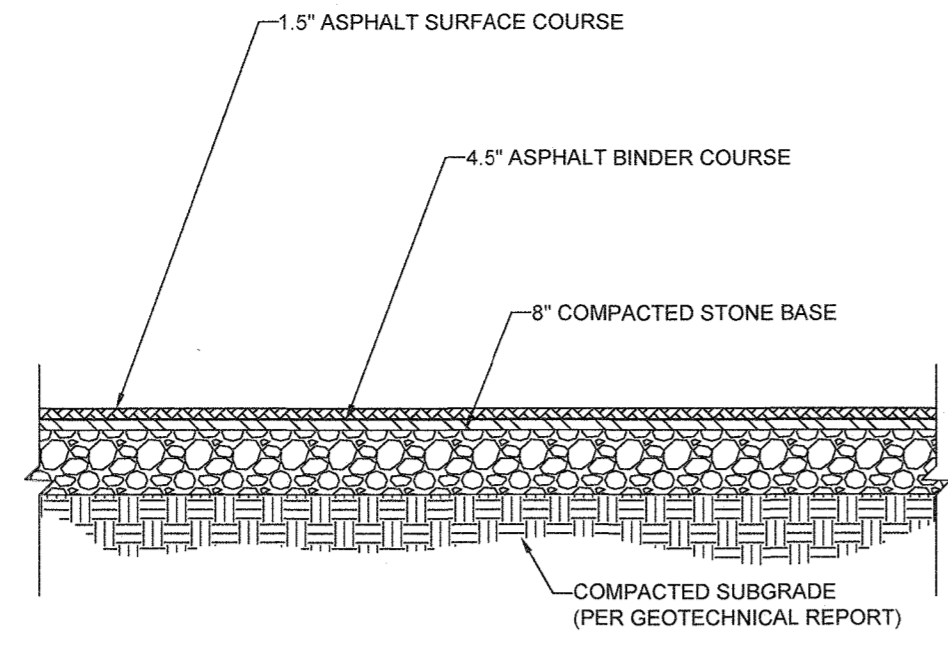
P5	OSHA STANDARD "SAFETY YELLOW"
P101	GUSTO GOLD SW #6904
P126	KNOCKOUT ORANGE SW #6885



NOTE:

1. EXPANSION JOINTS 1/2" WIDE PREMOLDED BIT. MATERIAL SHALL BE INSTALLED AT 30' INTERVALS. CRACK CONTROL JOINTS TO BE SPACED AT INTERVALS EQUAL TO SIDEWALK WIDTH.

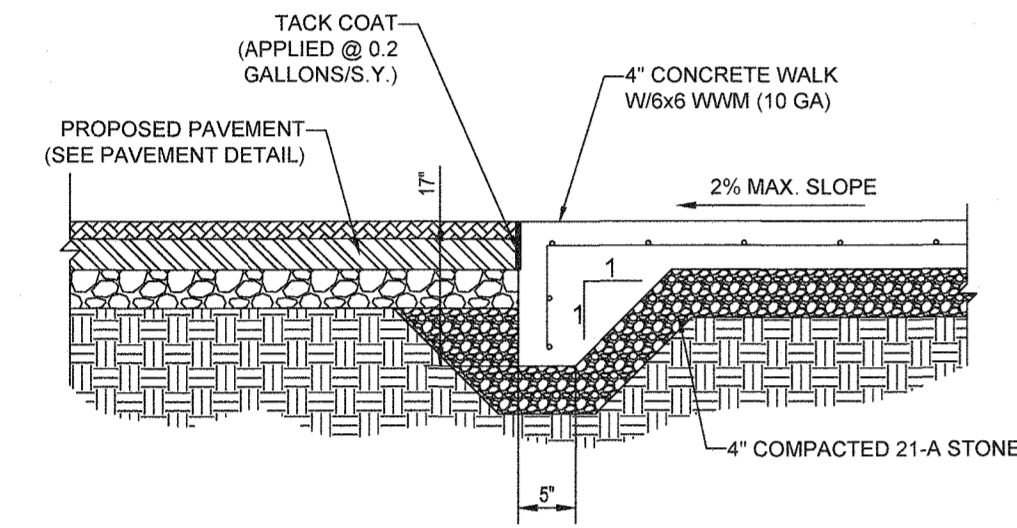
CONCRETE SIDEWALK DETAIL
NOT TO SCALE



NOTE:

1. SECTION SHOWN WAS PREPARED WITHOUT THE BENEFIT OF A GEOTECHNICAL REPORT. FINAL DESIGN TO BE PROVIDED BY GEOTECHNICAL ENGINEER ONCE FINAL CBR'S ARE AVAILABLE ON COMPACTED SUB-BASE.

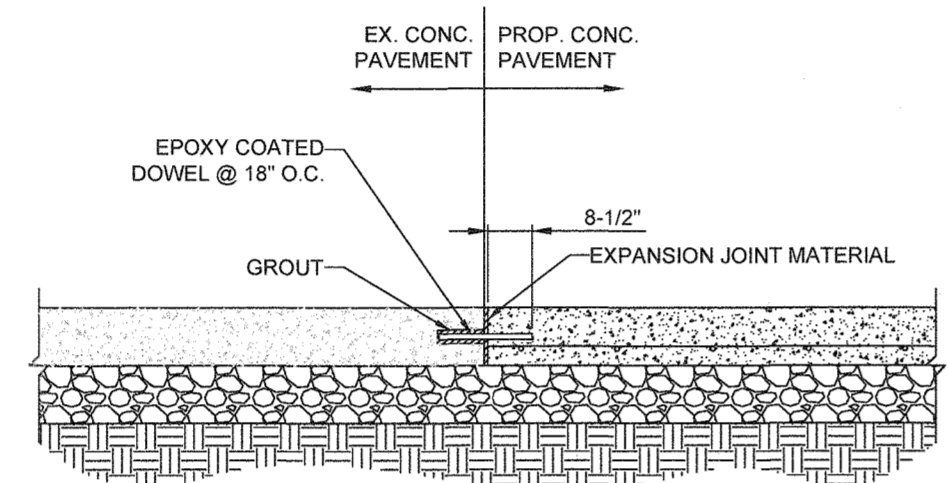
STANDARD DUTY ASPHALT PAVEMENT SECTION
NOT TO SCALE



NOTE:

1. CONCRETE TO BE 4000 P.S.I. @ 28 DAYS.

MONOLITHIC CURB & FLUSH SIDEWALK DETAIL
NOT TO SCALE

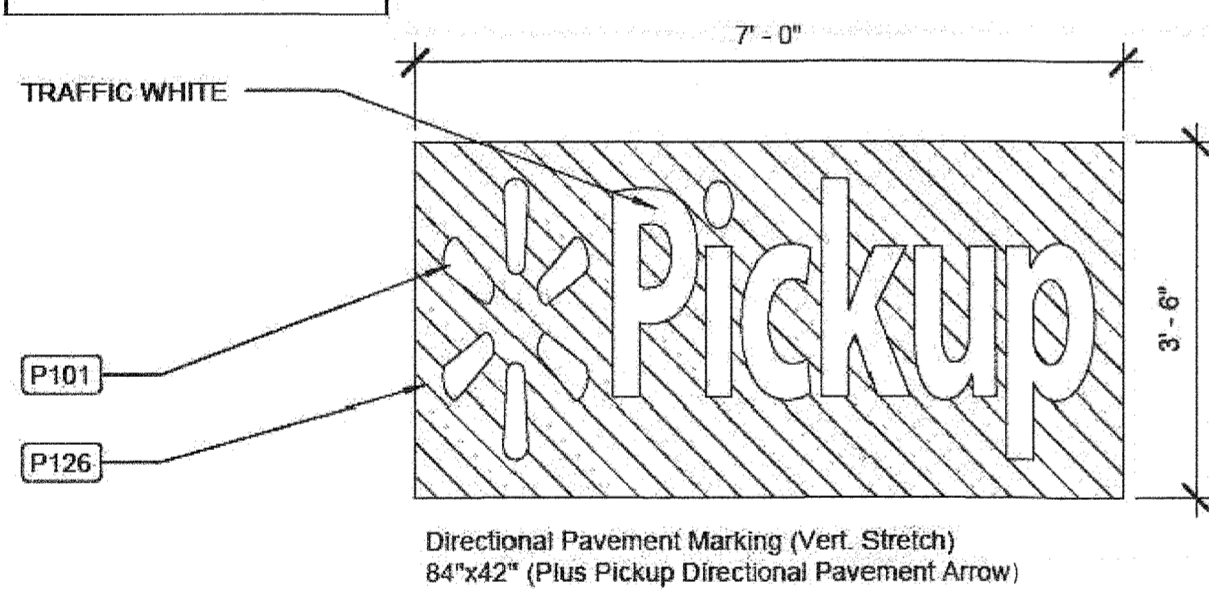


NOTE:

1. CONTRACTOR TO BLOW OUT DUST FROM DRILLED HOLES PRIOR TO APPLYING GROUT.

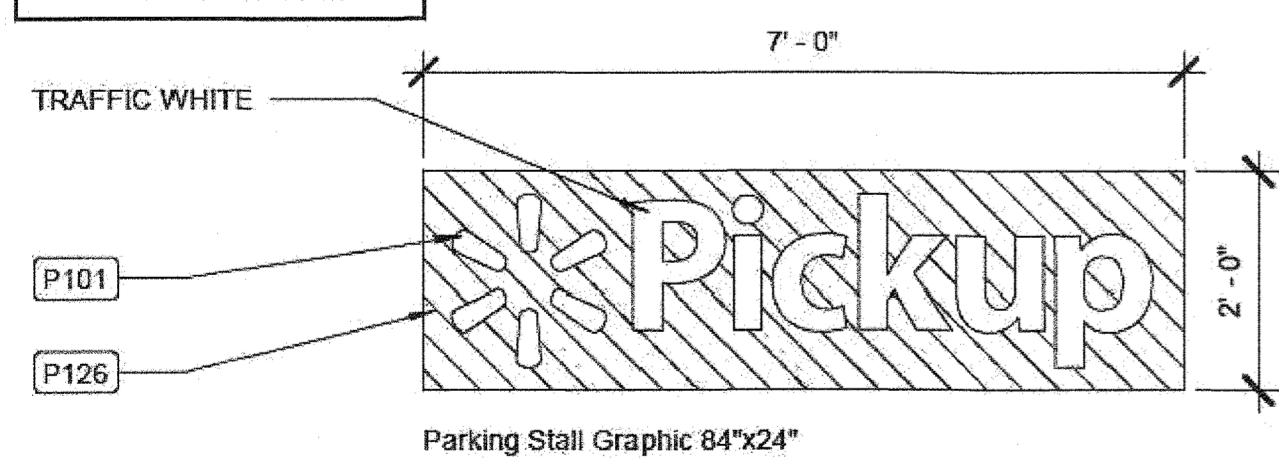
CONCRETE DOWELING DETAIL
NOT TO SCALE

G.C. TO ORDER SIGN STENCILS FROM JONATHAN THOMPSON AT OUTLINE INDUSTRIES OR CALL 1.800.STENCILS



4 DIRECTIONAL PAVEMENT MARKING
NTS

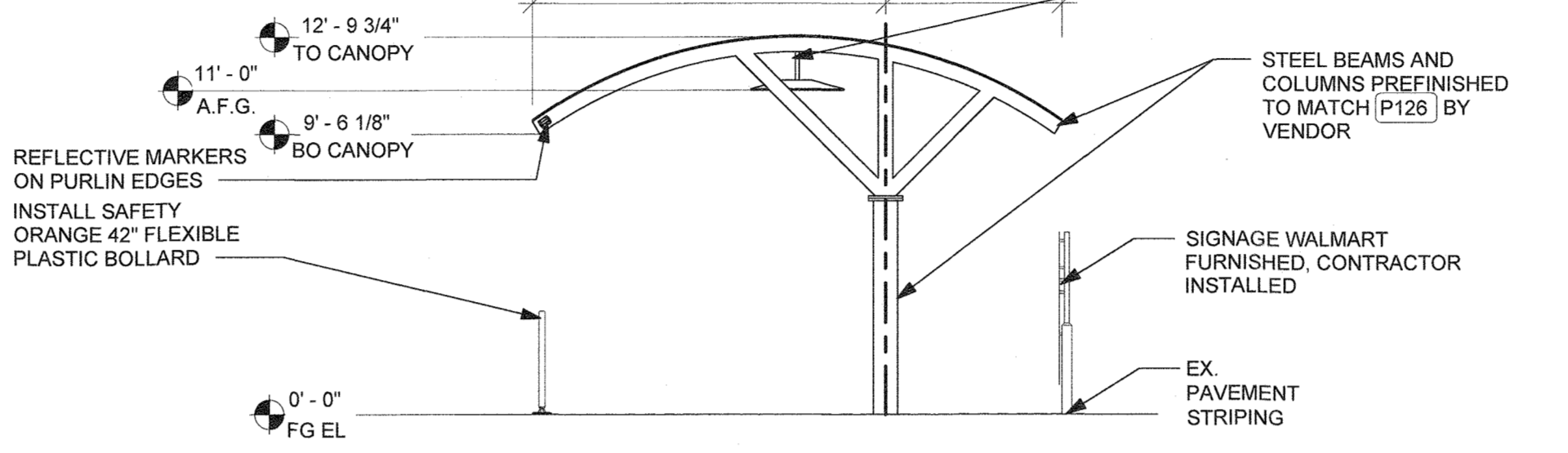
G.C. TO ORDER SIGN STENCILS FROM JONATHAN THOMPSON AT OUTLINE INDUSTRIES OR CALL 1.800.STENCILS



5 PICKUP PAVEMENT MARKING
NTS

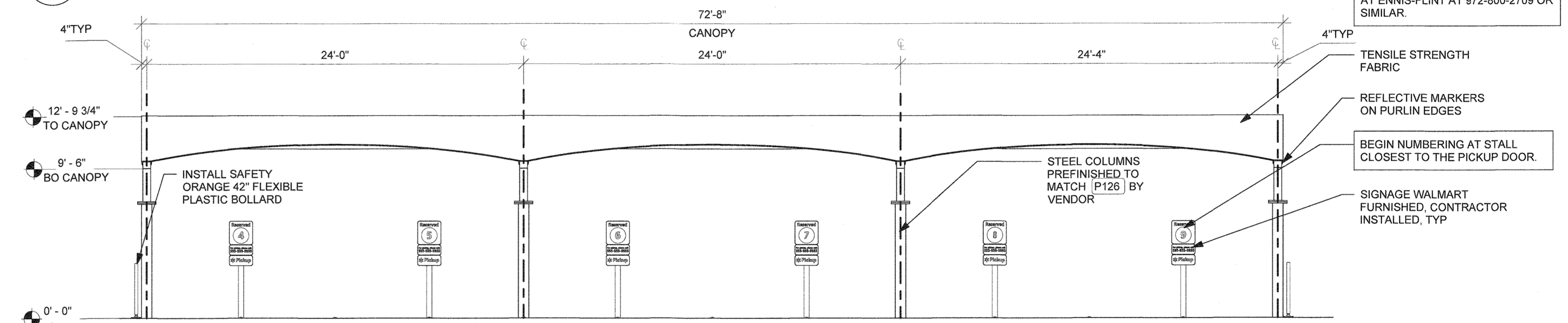
G.C. TO ORDER FLEXIBLE BOLLARD FROM BC SITE SERVICE AT 604-598-8414 OR SIMILAR.

G.C. TO ORDER REFLECTIVE MARKERS FROM LORI DULLWORTH AT ENNIS-FLINT AT 972-800-2709 OR SIMILAR.

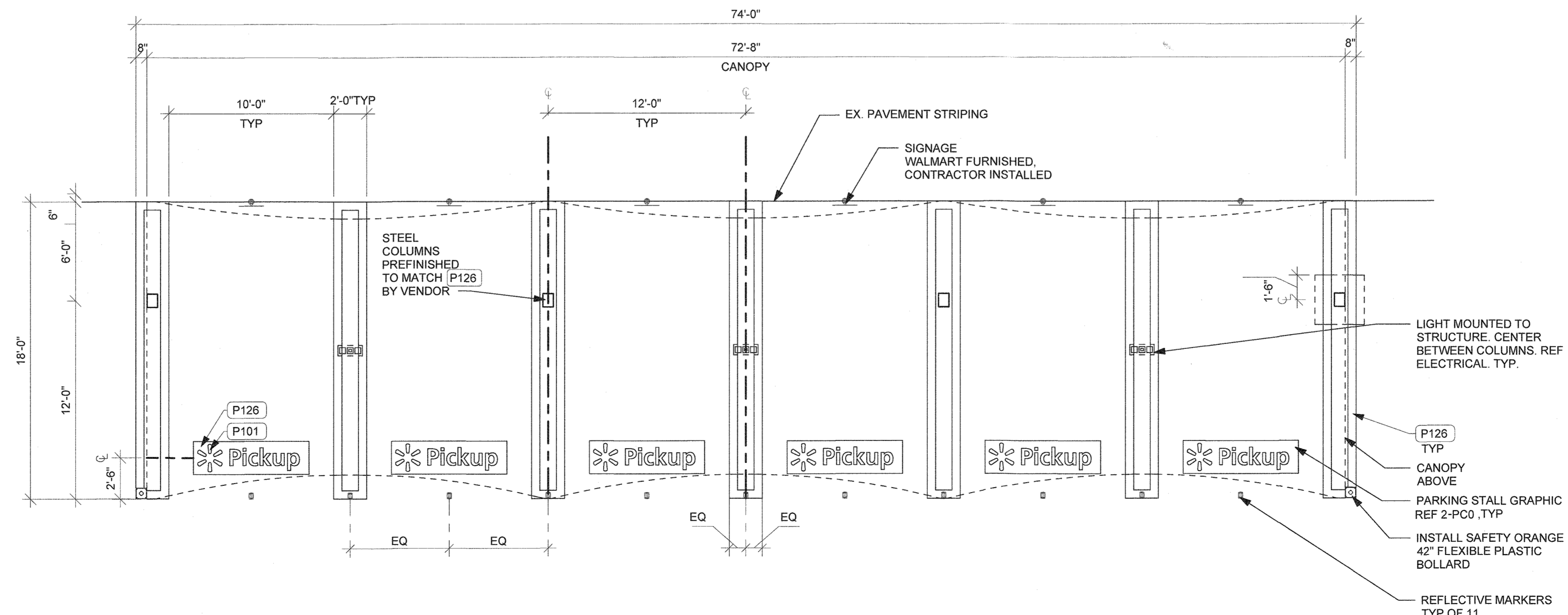


3 CANOPY ELEVATION - TENSILE STRENGTH CURVED FABRIC
NTS

G.C. TO ORDER REFLECTIVE MARKERS FROM LORI DULLWORTH AT ENNIS-FLINT AT 972-800-2709 OR SIMILAR.



2 CANOPY ELEVATION - TENSILE STRENGTH CURVED FABRIC
NTS



1 CANOPY SITE PLAN - TENSILE STRENGTH CURVED FABRIC
NTS

OWNER/DEVELOPER:	WALMART REAL ESTATE BUSINESS TRUST PO BOX 8050 MS 0950 BENTONVILLE, AR 72712-8050 ATTN: MARK RICHARDSON PHONE: (478) 277-2915
TAX MAP:	24 GRID: 6 ZONED: B-2 PARCELS: 1085
SUBDIVISION NAME:	ELLICOTT CITY WALMART SECTION/AREA: N/A DEED # 07193 / 00565
PREVIOUS FILE No.:	ZB-841, S-95-01, P-95-21, F-98-01, F-98-09

BOHLER ENGINEERING
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	DRAWN BY	CHECKED BY
10	2/21/2019	BUILDING ADDITION AND GROCERY PICKUP CANOPY	RMS	JCB

811
Know what's below.
Call before you dig.
ALWAYS CALL 811
It's fast. It's free. It's the law.

NOT APPROVED FOR CONSTRUCTION

PROJECT No.: MD182146
DRAWN BY: RMS
CHECKED BY: JCB
DATE: 2/21/2019
SCALE: AS NOTED
CAD I.D.: MD182146-00D

REVISED SITE DEVELOPMENT PLAN FOR Walmart

STORE # 2412 GROCERY PICKUP
3200 NORTH RIDGE ROAD
ELLICOTT CITY, MD 21043
TM 24, GRID 6, PARCEL 1085
HOWARD COUNTY
2ND ELECTION DISTRICT
ZONE: B-2

BOHLER ENGINEERING
801 DULANEY VALLEY ROAD, SUITE 801
TOWSON, MARYLAND 21284
Phone: (410) 821-7900
Fax: (410) 821-7987
MD@BohlerEng.com

ANDREW G. STINE
PROFESSIONAL ENGINEER
MARYLAND LICENSE NO. 17272
I, ANDREW G. STINE, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR SUPERVISED BY ME AND THAT I AM A duly licensed PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 17272-66888-0001 (DATE: 7/1/2019)

SHEET TITLE:
SITE DETAILS

SHEET NUMBER:
33 OF 34

APPROVED: DEPARTMENT OF PLANNING AND ZONING

6-10-19
DATE

6-6-19
DATE

6-10-19
DATE

H:\18102146\DRAWINGS\PLAN SETS\REDLINED SDP\REDLINE 10MD182146-00D-33-JAVOUT 33 - CONSTRUCTION DETAILS

FINISH LEGEND	
P5	OS-A STANDARD "SAFETY YELLOW"
P128	KNOCKOUT ORANGE SW #6885

BOHLER ENGINEERING
 SITE CIVIL AND CONSULTING ENGINEERING
 LAND SURVEYING
 PROGRAM MANAGEMENT
 LANDSCAPE ARCHITECTURE
 SUSTAINABLE DESIGN
 PERMITTING SERVICES
 TRANSPORTATION SERVICES

REVISIONS				
REV	DATE	COMMENT	BY	CHKD
10	2/21/2019	BUILDING ADDITION AND GROCERY PICKUP CANOPY	RMS	JCB

811
 Know what's below.
 Call before you dig.
 ALWAYS CALL 811
 It's fast. It's free. It's the law.

NOT APPROVED FOR CONSTRUCTION

PROJECT NO.: MD182146
 DRAWN BY: RMS
 CHECKED BY: JCB
 DATE: 2/21/2019
 SCALE: AS NOTED
 CAD ID: MD182146-00-D

REVISED SITE DEVELOPMENT PLAN FOR

Walmart

STORE # 2412 GROCERY PICKUP
 3200 NORTH RIDGE ROAD
 ELLICOTT CITY, MD 21043
 TM 24, GRID 6, PARCEL 1085
 HOWARD COUNTY
 2ND ELECTION DISTRICT
 ZONE B-2

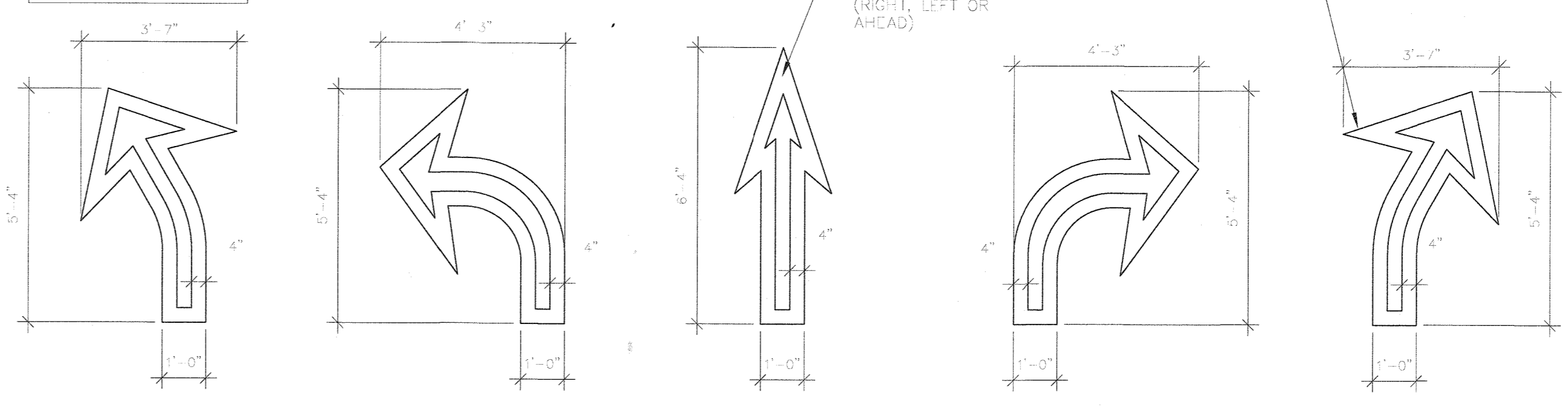
BOHLER ENGINEERING
 801 DULANEY VALLEY ROAD, SUITE 801
 TOWSON, MARYLAND 21284
 Phone: (410) 821-7900
 Fax: (410) 821-7987
 MD@BohlerEng.com

ANDREW G. STINE
 PROFESSIONAL ENGINEER
 License No. 27969, Expiration Date: 7/21/19

SHEET TITLE:
CONSTRUCTION DETAILS

SHEET NUMBER:
34 OF 34

G.C. TO ORDER SIGN STENCILS FROM JONATHAN THOMPSON AT OUTLINE INDUSTRIES OR CALL 1.800.STENCILS



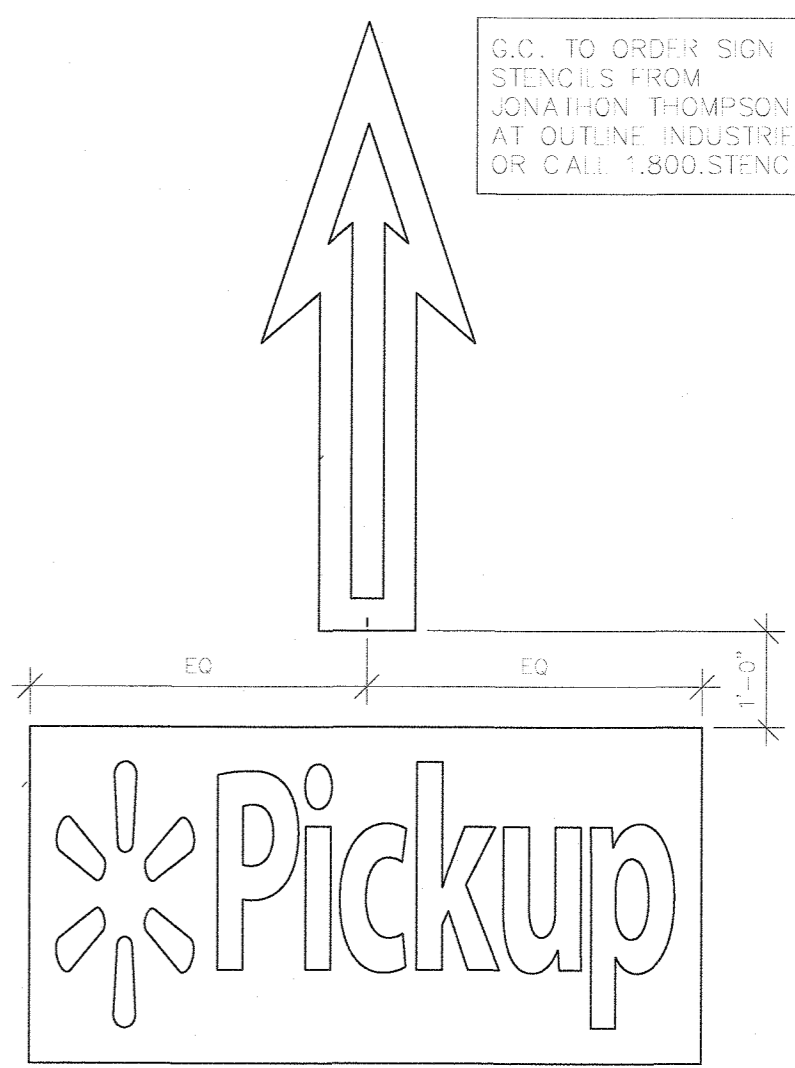
8 PICKUP DIRECTIONAL PAVEMENT ARROWS
 NTS

NOTE: PAVEMENT MARKING SHALL MEET UNISPEC SECTION 02787 - PAVEMENT MARKING

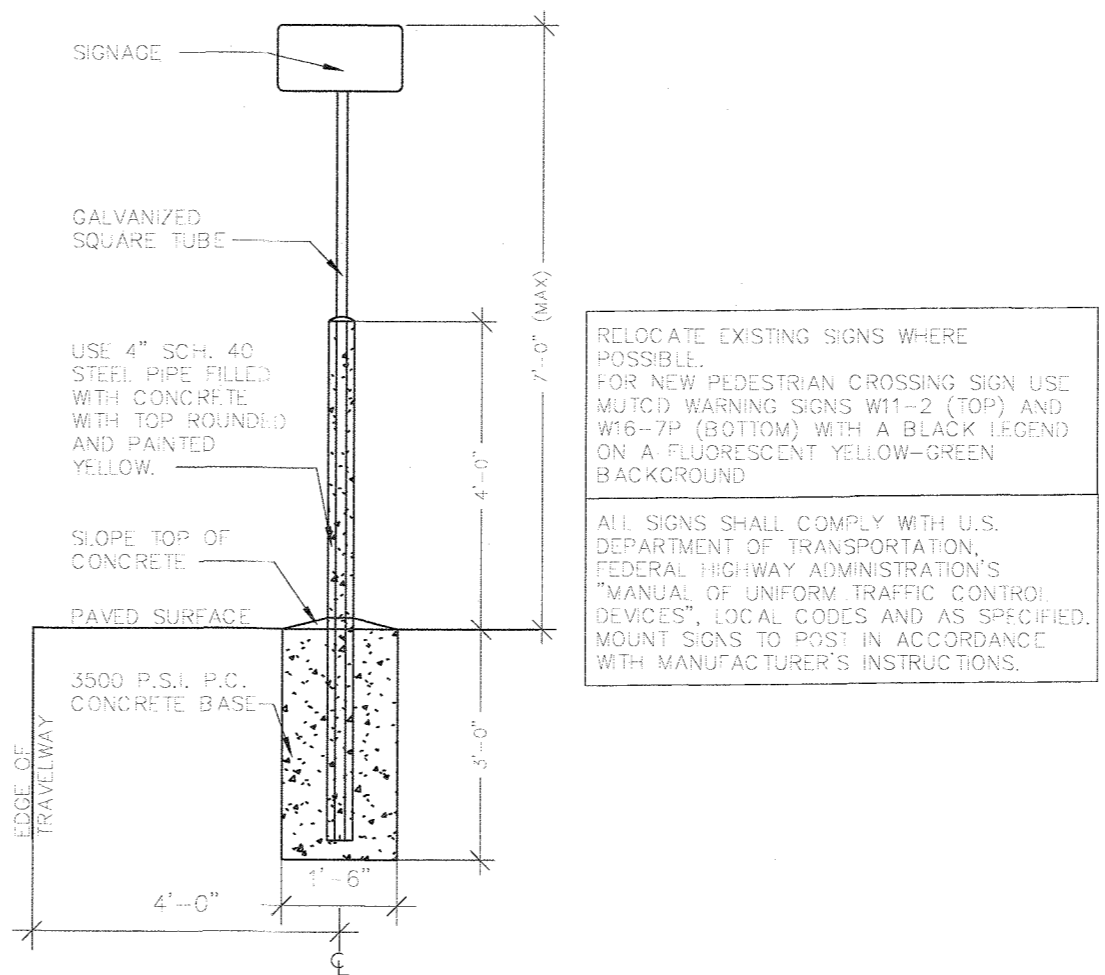
ARROWS SHALL BE PAINTED P128, TYP.

SEE SITE PLAN FOR TYPE OF ARROW (RIGHT, LEFT OR AHEAD)

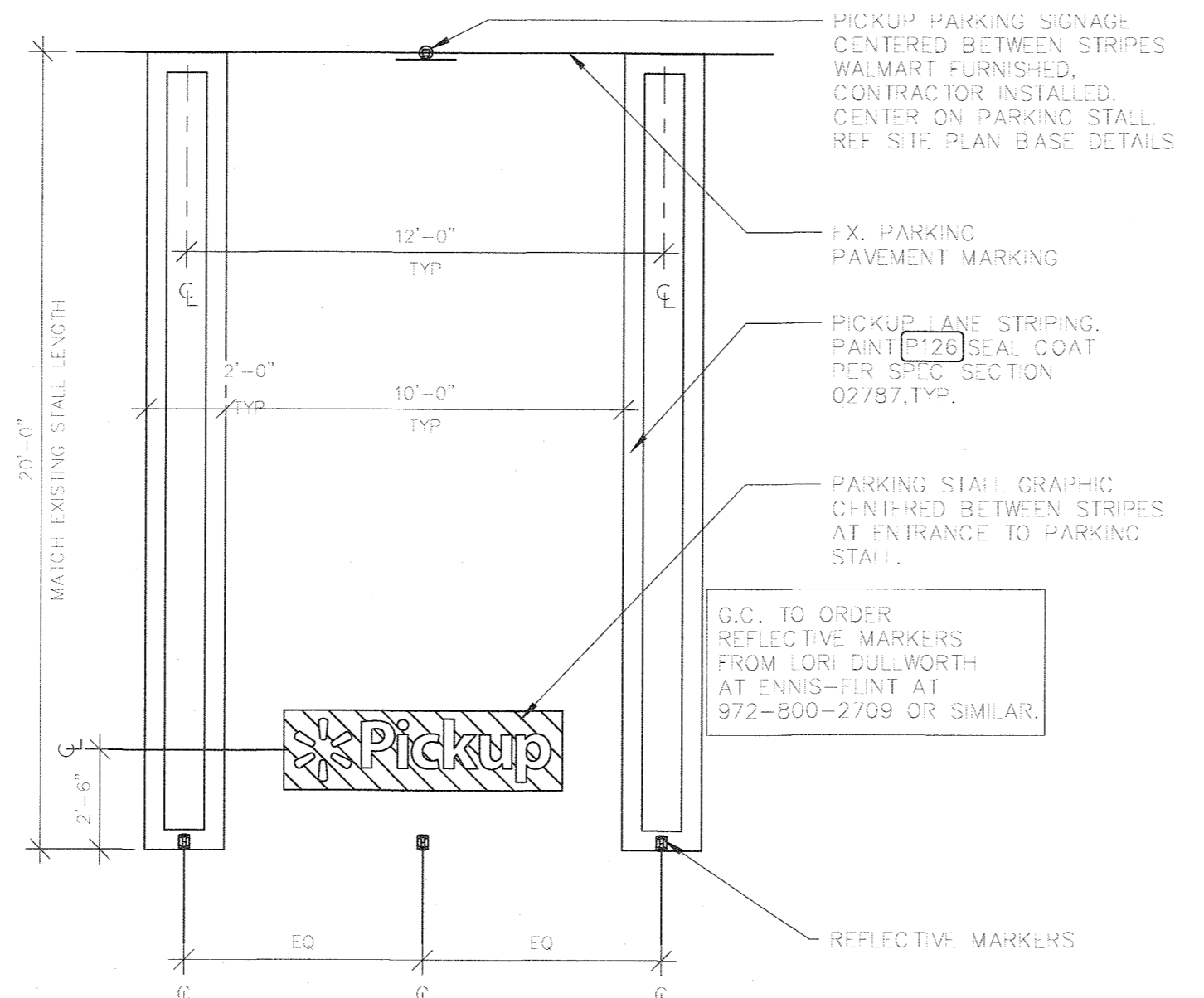
G.C. TO ORDER SIGN STENCILS FROM JONATHAN THOMPSON AT OUTLINE INDUSTRIES OR CALL 1.800.STENCILS



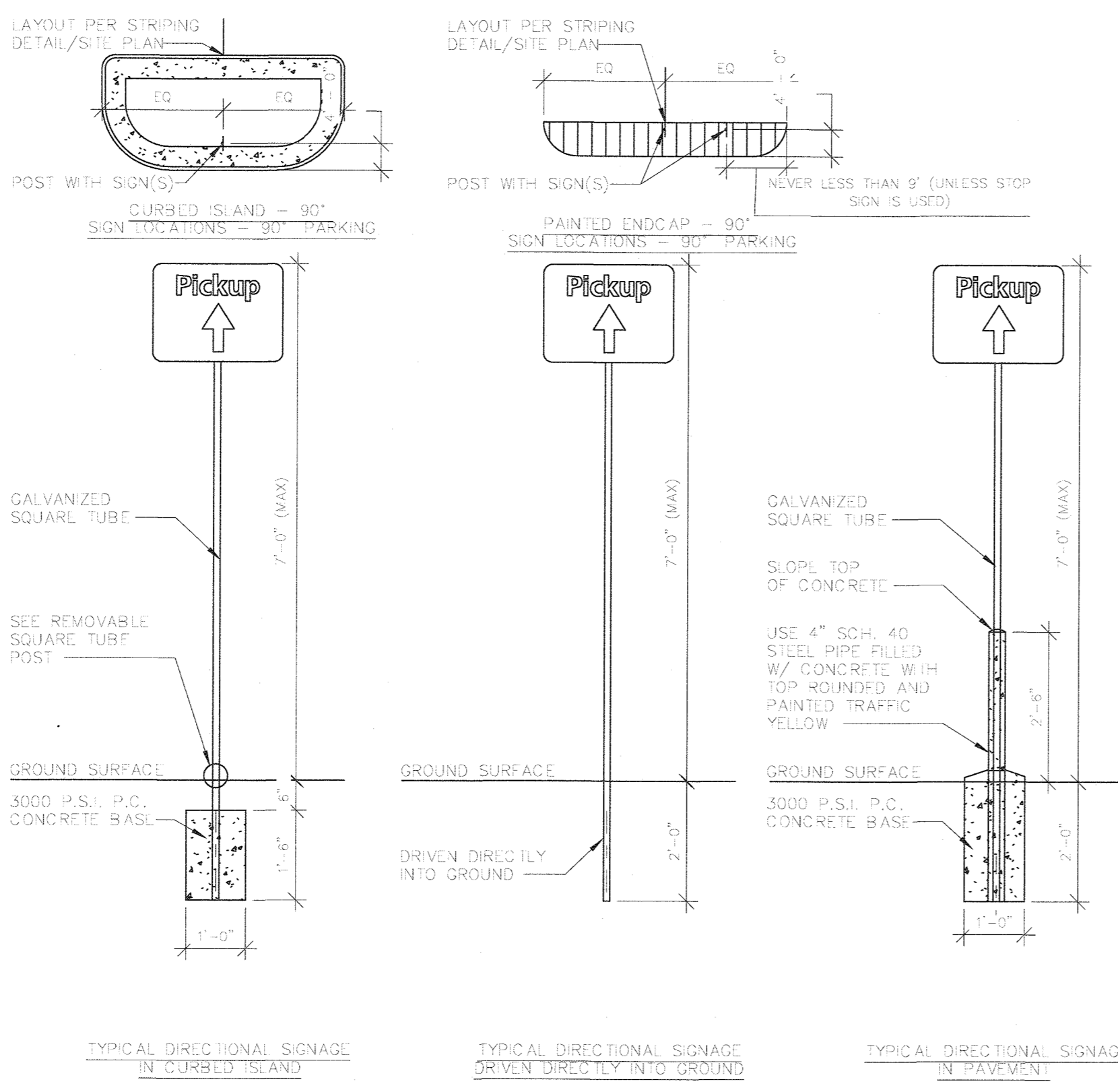
9 PICKUP PAVEMENT MARKING
 NTS



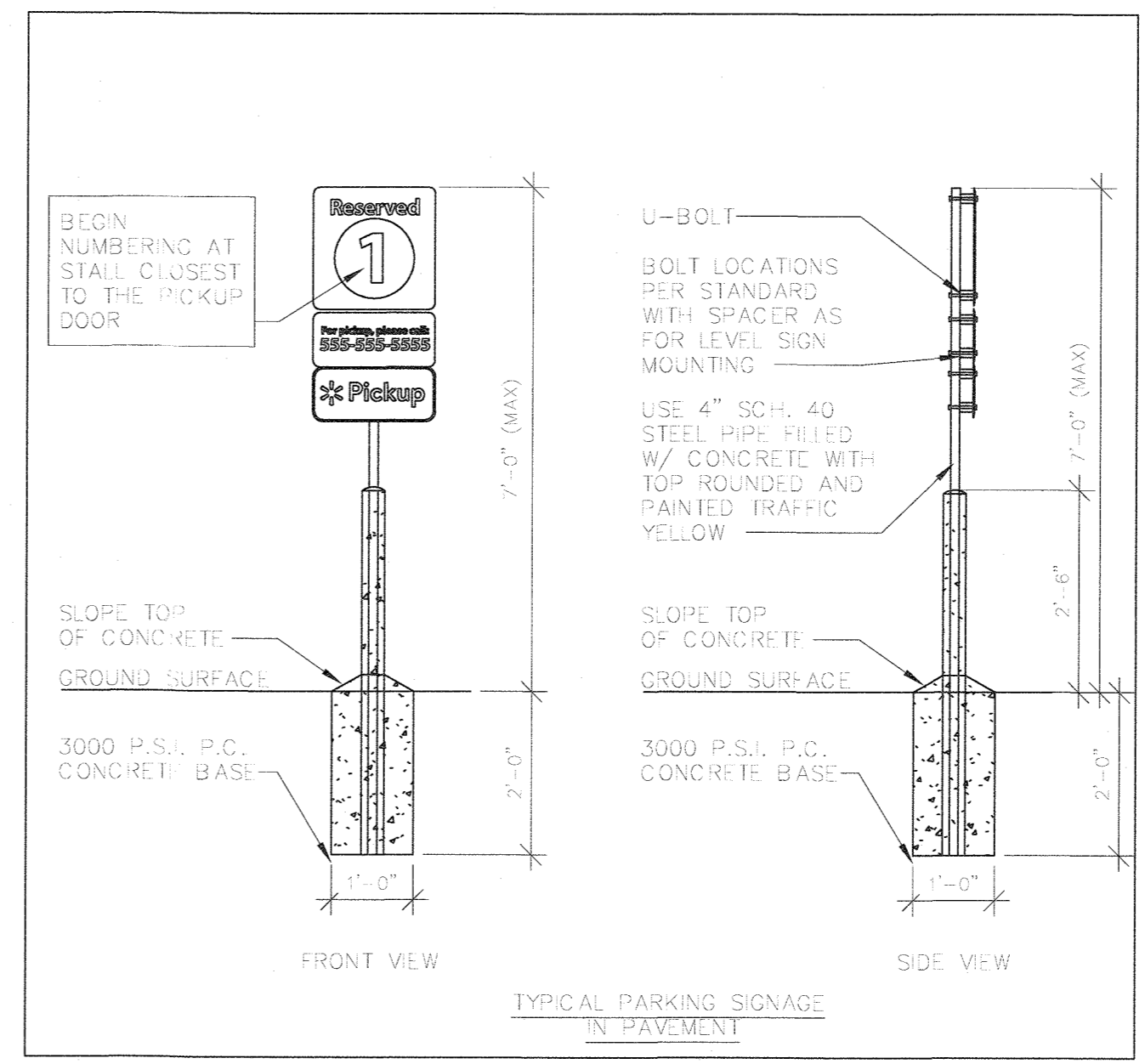
3 SITE SIGN WITH NEW BASE
 NTS



5 PICKUP PARKING STALL DETAIL
 NTS



2 DIRECTIONAL SIGN MOUNTING AND BASE
 NTS



1 PARKING SIGN MOUNTING AND BASE
 NTS

ALL DETAILS ON THIS SHEET WERE PROVIDED BY WALMART AND ARE FOR INFORMATIONAL PURPOSES ONLY. BOHLER ENGINEERING SHALL BE HELD HARMLESS IN THE EVENT OF ERRONEOUS INFORMATION CONTAINED WITHIN THESE DETAILS AND/OR STRUCTURAL FAILURE.

SIGNS FURNISHED BY WALMART ATTACHMENT TO WALL OR BOLLARD BY G.C.

Reserved 1-5
 Reserved 6-10
 Reserved 11-12

Logo Signs (Small) 18" x 8" 1.00 SF

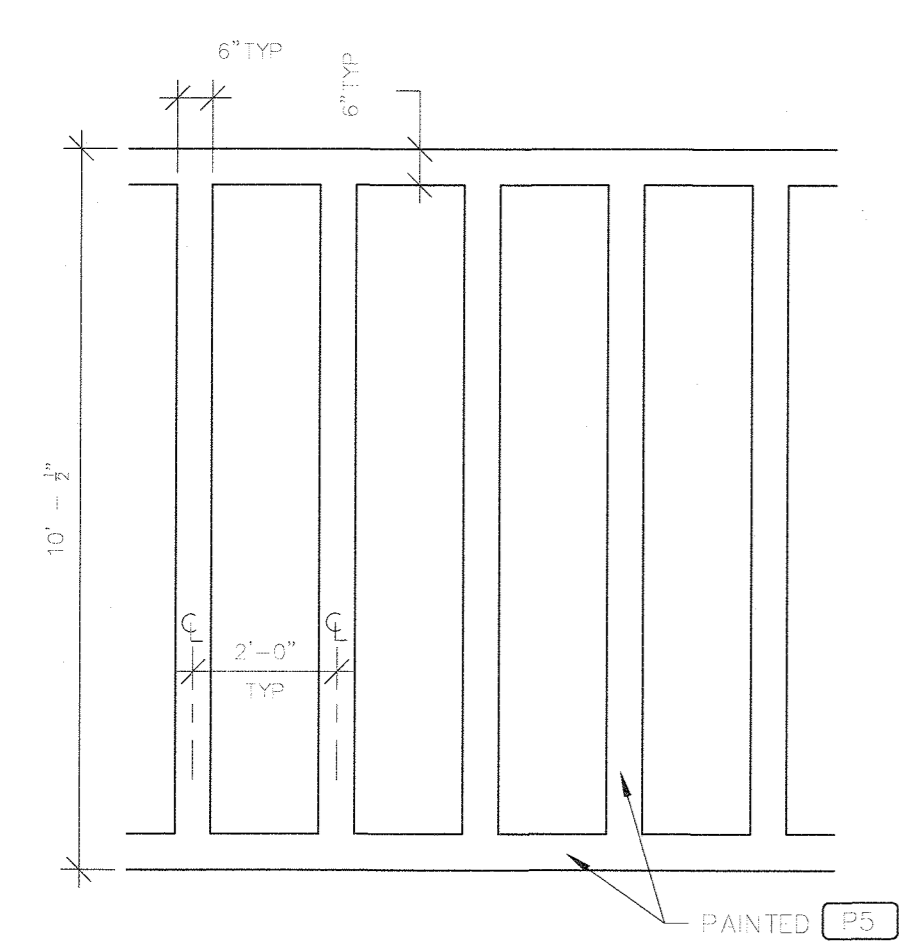
Stall Designation Signs 18" x 18" 3.00 SF

Pickup Pickup Pickup
 Directional Signs (Left / Straight / Right) 18" x 24" 3.00 SF

Call In Sign 18" x 8" 1.00 SF

Parking Stall Placard

7 PICKUP SIGNAGE
 NTS



6 ASSOCIATE PATH
 NTS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

6-10-19
 DATE

6-6-19
 DATE

6-10-19
 DATE

11/16/2018 14:48:10 P:\MSP\18101244-0000-NA\OUT-34-CONSTRUCTION DETAILS