

**GENERAL NOTES**

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION" FOR WORK IN THE COUNTY RIGHT-OF-WAY.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 381-8800 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK, THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS/BUREAU OF HIGHWAYS AT (410) 381-2450 AT LEAST FIVE (5) WORKING DAYS BEFORE ANY CUT OUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER AND SEWER MAINS.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE STATE HIGHWAY ADMINISTRATION (SHA). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE PER HOWARD COUNTY RECORDS.
- THIS SITE IS LOCATED IN THE PATAPSCO RIVER LOWER NORTH BRANCH WATERSHED.
- ALL FILL AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED AND VERIFIED IN ACCORDANCE WITH ASTM D 1557 - STANDARD.
- CONTRACTOR SHALL MAINTAIN ALL SEWER CONTROL DEVICES WITHIN THE LIMITS OF THE SITE DURING CONSTRUCTION OF THE SITE IMPROVEMENTS. CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES AS MAY BE NECESSARY DURING CONSTRUCTION AND/OR BY GOVERNING AGENCIES.
- 100-YR FLOODPLAIN EXISTS ALONG NORTH AND NORTHEAST PROPERTY LINES WITHIN THE PROPERTY.
- THERE ARE STEEP SLOPES AND SOME HIGHLY ERODIBLE SOILS ON THE SITE.
- THERE ARE NO KNOWN CEMETERIES OR BURIAL GROUNDS ON THIS SITE. HOWEVER, UPON DISCOVERY OF ANY EVIDENCE OF BURIAL OR GRAVES, THE DEVELOPER WILL BE SUBJECT TO SECTION 16.1305 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- THE BOUNDARY INFORMATION FOR THIS SITE HAS BEEN PREPARED IN 2003. AERIAL TOPOGRAPHIC SURVEY HEREON WAS PERFORMED BY KING'S AERIAL MAPPING CO., INC. ON DECEMBER 30, 2003, AND PROVIDED BY THE RSA GROUP.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLAN COORDINATE SYSTEM. MONUMENT NUMBERS 4228 AND 4244 WERE USED FOR THIS PROJECT (MAD 05/4).
- ALL EXISTING UNDERGROUND UTILITIES TO BE FIELD VERIFIED. UTILITIES CONTRACTOR SHALL VERIFY THE SIZE AND LOCATIONS OF ALL UNDERGROUND UTILITIES AND TEST PIT ALL UTILITIES, INCLUDING PROPOSED TIE IN LOCATIONS, AT LEAST 5 DAYS PRIOR TO STARTING ANY WORK ON THESE DRAWINGS. DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IN ADVANCE OF CONSTRUCTION START.
- CONTRACTOR SHALL INSURE THAT CURRENT AS-BUILT RECORDS ARE MAINTAINED DURING CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION, CERTIFIED (L.S. P.E. STAMPED) AS-BUILT DRAWINGS SHALL BE SUBMITTED TO THE OWNER.
- THE SITE IS SUBJECT TO REDEVELOPMENT CRITERIA FOR STORMWATER MANAGEMENT. THE REDEVELOPMENT MANAGES THE WATER QUALITY FOR 226 (1.97 AC.) OF EXISTING IMPERVIOUS AREA, WHICH WILL BE PROVIDED BY A REDUCTION IN IMPERVIOUS COVERAGE (0.4) IN A BIORETENTION AREA (1.8 AC.). RECHARGE WILL BE MET BY THE PLACEMENT OF STONE BENEATH THE BIORETENTION. IT HAS BEEN DESIGNED IN ACCORDANCE WITH THE CRITERIA LISTED ON P. 3.31 TO 3.41 OF THE 2000 MD6 DESIGN REGULATIONS AND CONFORMS TO DETAIL F.1. THIS PLAN MEETS THE CRITERIA FOR TECHNICALLY COMPLETE AND IS PERMITTED TO CONTINUE WITH THE 2000 REGULATIONS FOR REDEVELOPMENT.
- THIS PROJECT COMPLIES WITH THE FOREST CONSERVATION REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE WITH A TOTAL OBLIGATION OF A MINIMUM OF 1.88 ACRES. THIS REQUIREMENT HAS BEEN SATISFIED BY PROVIDING NINE ON-SITE RETENTION FOREST CONSERVATION EASEMENTS TOTALING 3.12 ACRES. OF THE 3.12 ACRES, 2.47 ACRES ARE CREDITED RETENTION AND 0.66 ACRES ARE NON-CREDITED RETENTION.
- REFERENCES: SDP-08-16 SDP-08-4 SDP-07-124 SDP-07-125 SP-70-12 SDP-73-63 SDP-74-16 SDP-75-15 SDP-06-51 R-3670 GP-08-75 HP-05-125 HP-08-064 SDP-04-08 SDP-04-100 SDP-04-100 SDP-08-064 PETITION TO HAVE SUBDIVISION SECTION 16.55(a)(1), TO PERMIT NON-RESIDENTIAL DEVELOPMENT HP-05-125 - PETITION TO HAVE SECTIONS 16.22(a)(2) AND 16.55(a)(1) OF COUNTY SUBDIVISIONS & LAND DEVELOPMENT REGULATIONS TO PERMIT ISSUANCE OF A GRADING PERMIT, FOR A STOCKPILE WITHOUT AN APPROVED SITE DEVELOPMENT PLAN. 14-4602-D WATER & SEWER PLAN SDP-15-166 (P.C.) - PROPOSED CONSTRUCTION AND UTILITY EASEMENTS PLAN 2-2131-2-2134 SDP-15-166 (P.C.) - PROPOSED CONSTRUCTION AND UTILITY EASEMENTS PLAN
- ALL HANDICAP PARKING SPACES SHALL BE IN ACCORDANCE WITH THE HANDICAP PARKING ACT.
- UNLESS OTHERWISE NOTED, DIMENSIONS FROM CURB ARE MEASURED AT FACE OF CURB.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING ON THESE PLANS:  
-HSDG UTILITY 1-800-257-7777  
-HOWARD COUNTY DPW, BUREAU OF UTILITIES (410) 383-4900  
-BALTIMORE GAS AND ELECTRIC COMPANY CONTRACTOR SERVICES (410)360-4620  
-BALTIMORE GAS AND ELECTRIC COMPANY UNDERGROUND DAMAGE CONTROL (410)767-1066  
-VERISON 1-800-485-5266
- CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS AS NECESSARY TO GRADE THE SITE AND COMPLETE ANY REQUIRED EXCAVATIONS.
- Christopher consultants, Ltd. SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION, MEANS, METHODS, TECHNIQUES, OR PROCEDURES UTILIZED BY THE CONTRACTOR FOR THE SAFETY OF PUBLIC OR CONTRACTOR'S EMPLOYEES, OR FOR THE FAILURE OF THE CONTRACTOR TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND STANDARD CONSTRUCTION PRACTICES.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES WHICH ARE TO REMAIN FREE FROM DAMAGE AND MAINTAIN UNINTERRUPTED SERVICE TO ALL USERS. ANY DAMAGE INCURRED DUE TO THE CONTRACTOR'S OR SUBCONTRACTORS ACTIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- SCALING OF THESE PLANS IS DISCOURAGED UNLESS DIRECTED BY THE ENGINEER. IN THE EVENT OF A DISCREPANCY BETWEEN THE SCALED AND THE FIGURED DIMENSIONS, THE FIGURED DIMENSIONS SHALL BE HELD.
- T.B.R. = TO BE REVISED
- PROVIDE SIGNAGE ON THE BUILDING AND AT THE STREET IDENTIFYING THE BUILDING ADDRESS; IDENTIFY EACH SEPARATE SUITE BY LETTER.
- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (1/4 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (1/2 GAUGE) 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- PER HOWARD COUNTY BUILDING CODE SECTION 904.1.1 ALL BUILDINGS IN EXCESS OF 5,000 SF IN SIZE WILL HAVE A COMPLETE AUTOMATIC SPRINKLER DESIGNED IN ACCORDANCE WITH NFPA 88.
- A KNOX BOX FOR FIRE DEPARTMENT ACCESS IS REQUIRED TO BE PLACED ON THE FRONT OF THE BUILDING. IT SHALL BE PLACED TO THE RIGHT OF THE MAIN ENTRANCE APPROXIMATELY 4'-6" IN HEIGHT AND NO MORE THAN 6' LATERSALLY FROM THE DOOR. THE BOX SHALL BE ELECTRONICALLY SUPERVISED TO NOTIFY THE OWNER THAT IT IS BEING ACCESSED.
- TREES WITH MATURE HEIGHTS GREATER THAN 25' SHALL NOT BE PLANTED WITHIN 20' OF EITHER SIDE OF THE UTILITY POLE LINES. TREES WITH MATURE HEIGHTS GREATER THAN 40' SHALL NOT BE PLACED WITHIN 40' OF THE UTILITY POLE LINES. TREES PLANTED OR RETAINED TO COMPLY WITH THE FOREST CONSERVATION PLAN OR OTHER PERPETUAL EASEMENT REQUIREMENTS SHALL MEET THE ABOVE CONDITIONS. BGE SHALL HAVE THE PERPETUAL RIGHT TO TRIM OR REMOVE ANY PROTECTED TREES IF IN THE SOLE OPINION OF BGE, THE TREE OR TREES ARE ENDANGERING THE OVERHEAD ELECTRIC FACILITIES.
- NO GRADING, REMOVAL OF VEGETATION COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED METLANDS STRIP(S) OF THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100 YEAR FLOODPLAIN EXCEPT AS SHOWN ON THIS APPROVED PLAN.
- THERE WILL BE NO IMPROVEMENTS TO THE WATER OR SEWER SYSTEMS, THEREFORE NO ALLOCATIONS WILL BE APPLIED FOR.
- THE LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.02 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE FRAMEWORK FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING IN THE AMOUNT OF \$12,930.00 HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT. (31 SHADE TREES AND 121 SHRUBS).
- ALL EXTERIOR LIGHT FIXTURES SHALL BE ORIENTED TO DIRECT LIGHT INWARDS AND DOWNWARDS ON-SITE AWAY FROM ALL PUBLIC ROADS AND COMPLY WITH THE REQUIREMENTS OF SECTION 84 OF THE HOWARD COUNTY ZONING REGULATIONS.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS HAYVERS HAVE BEEN APPROVED.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH (MAXIMUM TWO FOOT) CONTOUR INTERVALS PREPARED BY Christopher consultants Ltd DATED July 30, 2008.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLAN COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. WERE USED FOR THIS PROJECT.
- WATER IS PUBLIC & PRIVATE.
- SEWER IS PRIVATE.
- IN ORDER TO MEET THE REDEVELOPMENT CRITERIA FOR SPM, A BIO-RETENTION SYSTEM IS PROPOSED AT THIS LOCATION. THIS BMP SHALL BE PRIVATELY OWNED AND MAINTAINED.
- EXISTING UTILITIES ARE BASED ON THE LATEST ALTA SURVEY.
- THERE IS FLOODPLAIN ON THIS SITE AS SHOWN AND IS TAKEN FROM A STUDY DONE BY HOWARD COUNTY DPW
- THERE ARE NO IMPACT TO METLANDS ON THIS SITE.
- THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY STREET TRAFFIC STUDIES LTD, ON APRIL 15, 2009
- NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
- THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY ECS,LLC (MD-ATLANTIC), DATED MARCH 25, 2008.
- SEE THE CHARTS ON SHEET 35 FOR THE BEARINGS AND DISTANCES OF THE 25' METLAND BUFFER AND EASEMENT LINES OF THE UTILITY EASEMENTS AND FOREST CONSERVATION EASEMENTS.
- THE FOREST CONSERVATION OBLIGATION FOR THIS PLAN HAS BEEN MET BY PROVIDING 3.12 ACRES OF ON-SITE RETENTION FOREST CONSERVATION EASEMENTS OF THE 3.12 ACRES OF ON-SITE RETENTION, 2.47 ACRES ARE LOCATED IN A CREDITED ON-SITE RETENTION FOREST CONSERVATION EASEMENT. THE REMAINING 0.66 ACRES OF FOREST RETENTION WILL REMAIN IN A NON-CREDITED EASEMENT. NO SURETY IS REQUIRED SINCE THE OBLIGATIONS HAS BEEN FULFILLED WITH THE RETENTION OF EXISTING FOREST.
- PLEASE REFER TO THE GEOTECH REPORT PREPARED BY ECS, LTD DATED 09/25/08 FOR DETAILED INFORMATION OF SOIL BORINGS DEPICTED IN OVERALL PLAN VIEW THIS SHEET.
- MATERIAL IN THE EX. STOCKPILE CAN BE USED AS FILL FOR BUILDING 5. REFER TO GEOTECHNICAL REPORT FOR COMPACTION SPECIFICATIONS.

# SITE DEVELOPMENT PLAN SET

## DORSEY RUN INDUSTRIAL CENTER

### NORTH SIDE REDEVELOPMENT

#### MONTEVIDEO ROAD & FUTURE DORSEY RUN ROAD

#### ELKBRIDGE, HOWARD COUNTY, MARYLAND

#### TAX PARCELS 97,344,346,441,572

#### 1st ELECTION DISTRICT

#### AS-BUILT CERTIFICATION

**PARKING TABULATION CHART**

REQUIRED WAREHOUSE 0.5 SPACES PER 1,000 S.F.  
OFFICE/MEZZANINE 3.3 SPACES PER 1,000 S.F.

EXISTING BUILDING "C"	
WAREHOUSE	270,000 S.F. 114 SPACES
OFFICE	220,000 S.F. 726 SPACES
TOTAL REQUIRED SPACES	840 SPACES
TOTAL PROVIDED SPACES	468 SPACES

PROPOSED BUILDING "B"	
WAREHOUSE	77,800 S.F. 31 SPACES
OFFICE	3,000 S.F. 10 SPACES
TOTAL REQUIRED SPACES	41 SPACES
TOTAL PROVIDED SPACES	49 SPACES

PROPOSED BUILDING "A"	
WAREHOUSE	41,371 S.F. 17 SPACES
OFFICE	3,144 S.F. 10 SPACES
MEZZANINE	98 S.F. 3 SPACES
TOTAL REQUIRED SPACES	20 SPACES
TOTAL PROVIDED SPACES	20 SPACES

TOTAL REQUIRED SITE PARKING	
EXISTING	840 SPACES
PROPOSED	41 SPACES
TOTAL	881 SPACES

**STORMWATER MANAGEMENT NOTE:**

THE EXISTING POND LOCATED ON PARCEL 8A, 8B AND 12 IS NOT AN MDE 376 POND AS IT HAS AN EMBANKMENT 6 FEET OR LESS AND HAS A CAPACITY OF LESS THAN 40,000 CF AT THE EMBANKMENT HEIGHT (22,300 CF).

**NOTE:** SURETY FOR LANDSCAPING WILL BE POSTED WITH THE GRADING PERMIT. THE SURETY IS ASSESSED AT 300¢ PER SHADE TREE AND 150¢ PER EVERGREEN TREE. THE TOTAL LANDSCAPE SURETY IS \$1,800 (2 SHADE TREES, 7 EVERGREEN TREES)

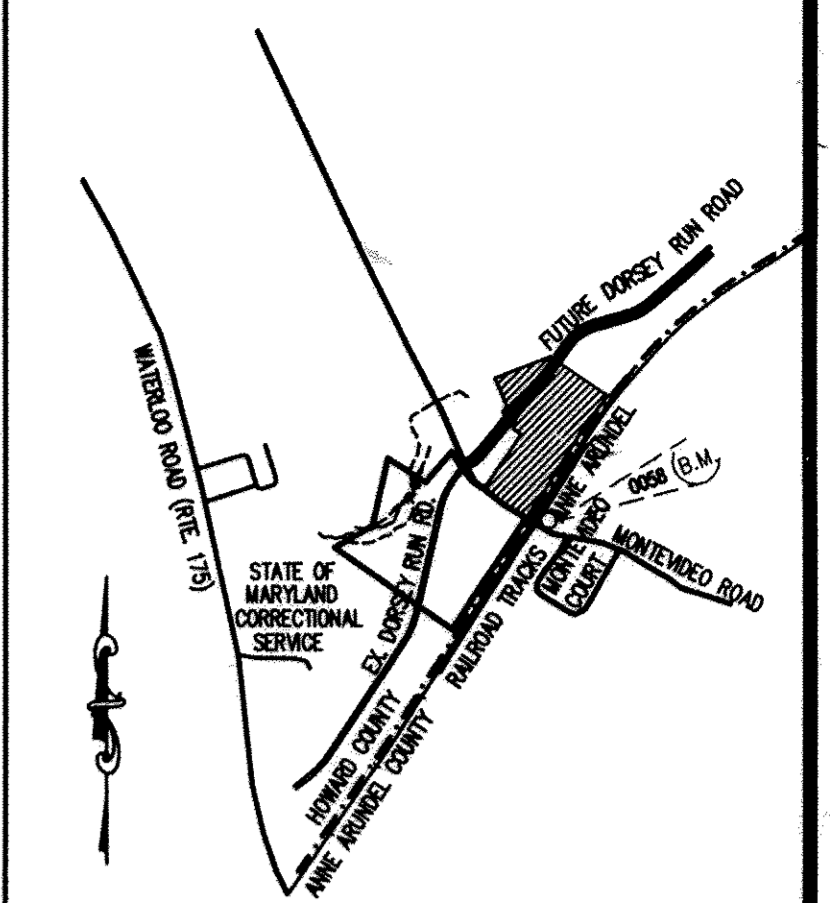
I HEREBY CERTIFY BY MY SEAL THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN, AND TO MEET THE APPROVED PLANS AND SPECIFICATIONS.

David Sharon  
 DAVID J. SHARON, PROFESSIONAL ENGINEER  
 MARYLAND REG. NO. 27223, EXPIRATION DATE: MARCH 19, 2018  
 DATE OF AS-BUILT: JUNE 17, 2014



**SITE ANALYSIS**

- TOTAL AREA OF PARCELS: 1,894,153 SQ. FT. (36.71 AC.)
- ZONING: M-2 (MANUFACTURING HEAVY)
- EXISTING USE: EX. BLDG "C" - ONE WAREHOUSE 226,732 SQ.FT.
- PROPOSED USE: TWO (2) WAREHOUSES (MANUFACTURING/INDUSTRIAL USES)
- BUILDING DATA: PROP. BLDG. 1<sup>ST</sup> - 82,800 SF, PROP. BLDG. 2<sup>ND</sup> - 75,504 SF
- PARKING DATA: SEE PARKING TABULATION CHART (THIS SHEET)
- IMPERVIOUS AREA: 9.36 ACRES (WITHIN THE L.O.D.)
- OPEN SPACE CALCULATIONS NOT REQUIRED FOR M-2 ZONE
- DEED REFERENCE: 6467/258
- PLAT REFERENCE: N/A
- RELATED FILES FOR THIS SITE: SDP 04-18, GP-08-75
- ELECTION DISTRICT NO. 1, HOWARD COUNTY MARYLAND
- TAX MAP: 43, GRID: 16, TAX PARCELS: 97,344,346,441,572 (PARCEL # 1,2,3,8,9 & 12 AS REFERENCED DEED 6467/258)
- AREA OF DISTURBANCE: 12.39 ACRES,
- BOTH PUBLIC AND PRIVATE WATER/SEWER SYSTEMS ARE PROPOSED AS PART OF THIS RE-DEVELOPMENT PROJECT.
- ZONING REGULATIONS:
  - MAXIMUM BUILDING HEIGHT (PRINCIPAL STRUCTURE): 50'
  - MINIMUM SETBACK REQUIREMENTS:
    - FROM PUBLIC STREET RIGHT-OF-WAY: 50'
    - FROM RESIDENTIAL DISTRICT:



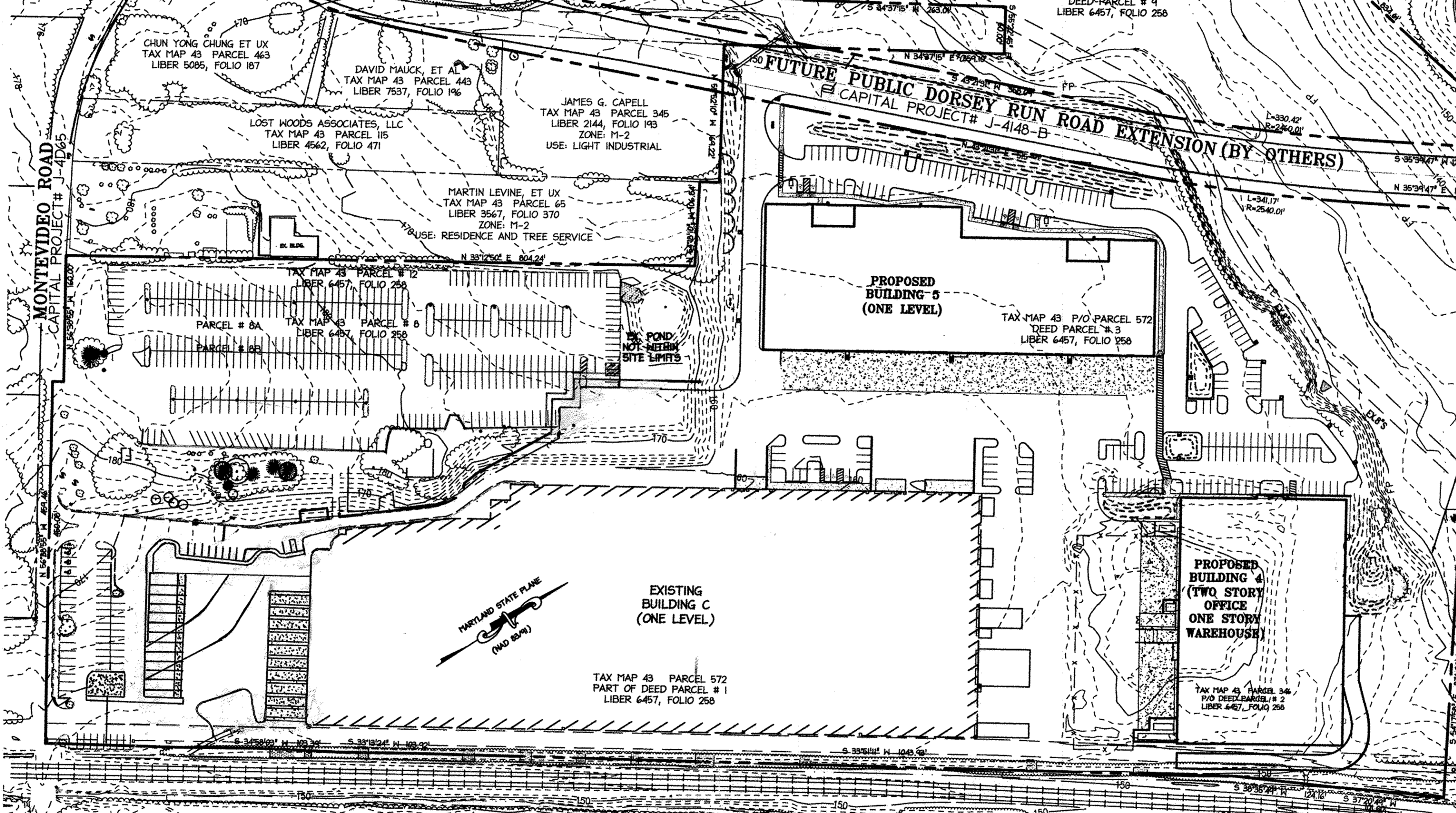
**VICINITY MAP** ADC# 20701323  
 SCALE 1"=2000'  
 HOWARD COUNTY MAP PAGE 20 - GRID K-1

**BENCHMARK**

Horizontal Datum: Maryland State Coordinates, MAD 83  
 Vertical Datum: MAD 29  
 Howard County Monument 494A  
 NS40761.72, E137937.37, Elev. 224.90  
 Howard County Monument 4936A  
 NS50601.61, E137666.05, Elev. 210.56  
 Howard County Monument 0058  
 NS44815.61, E137890.05, Elev. 157.10

**SHEET INDEX**

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**OVERALL PLAN VIEW**  
 SCALE: 1"=100'

LOT/PARCEL #	TAX PARCEL	AREA (AC.)
1		
2	572	26.51
3		
4	346	1.12
5		
6	97	1.19
7	344	6.86
8		
9	441	1.01

TYPE OF BUILDINGS: TWO (2) INDUSTRIAL WAREHOUSES  
 DRAINAGE AREA: 12.35 AC  
 TREATMENT PLANT: SAVAGE  
 WASTE WATER TREATMENT PLANT: PATAPASCO WWTP  
 NUMBER OF BUILDABLE LOTS: 4  
 NUMBER OF NON-BUILDABLE LOTS: 0  
 NUMBER OF W.H.C.: 2 (BLDG)  
 NUMBER OF S.H.C.: 2 (BLDG)

**SOIL BORING LOCATIONS**

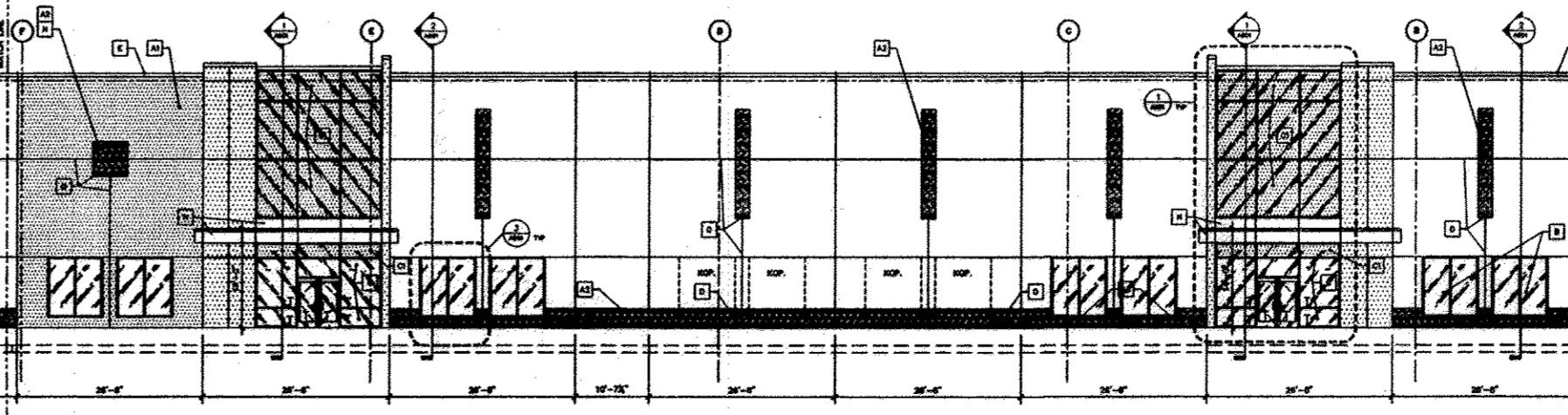
BORING #	NORTHING	EASTING
12	546421.64	1378784.37
13	546228.96	1378727.63
14	546393.46	1378911.53
15	546258.46	1378908.31
17	546300.21	1379030.11
21	546332.88	1379225.96
22	546343.67	1379106.80
23	546393.27	1379017.54

**PROFESSIONAL CERTIFICATION**

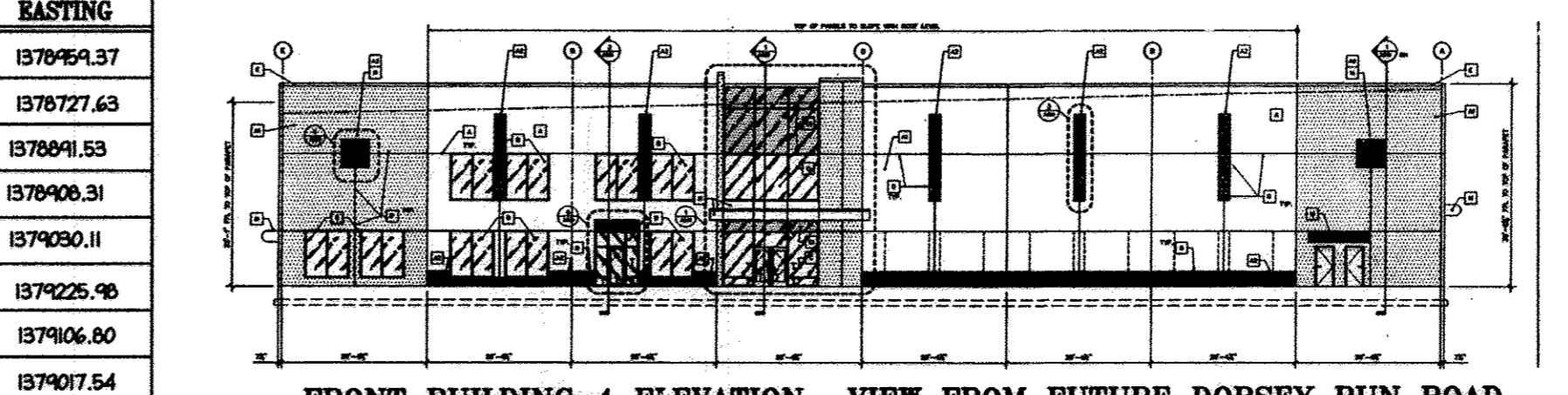
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

Signature of Engineer: William R. Zink, P.E.  
 M.D. LICENSE NUMBER: 20587  
 EXPIRATION DATE: 09-26-2014

DATE: 9.6.12



**FRONT GENERIC BUILDING 5 ELEVATION - VIEW FROM FUTURE DORSEY RUN ROAD**  
 SCALE: 1"=50'



**FRONT BUILDING 4 ELEVATION - VIEW FROM FUTURE DORSEY RUN ROAD**  
 SCALE: 1"=50'



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development: [Signature] Date: 10/2/12

Chief, Development Engineering Division: [Signature] Date: 10/2/12

Director, Department of Planning and Zoning: [Signature] Date: 10/2/12

3 4/2014 DEMO EX-LOADING, CONG. NEW-LOADING, RET. WALL & GRADING, RES. PARKING LOT/CONT. LOADING

2 11/2013 REDLINE REVISIONS - TRUCK DRN GRADING

11/2012 REDLINE REVISIONS

4 4/15 RETAINING WALL + WALL STUB

### NORTH SIDE REDEVELOPMENT

#### AT DORSEY RUN INDUSTRIAL CENTER

**OWNER / DEVELOPER**  
 MONTEVIDEO REALTY 140 W. GERMANTOWN PIKE, SUITE 150  
 BUSINESS TRUST PLYMOUTH MEETING, PA 19462  
 C/O EXETER PROPERTY GROUP TEL: (610) 828-0756  
 FAX: (610) 828-5550

**christopher consultants**  
 engineering • surveying • land planning  
 christopher consultants, Inc.  
 7172 Columbia Gateway Drive (Suite 100) Columbia, MD 21046-9990  
 410.272.8888 • fax: 410.272.8888

ADDRESS CHART		BUILDING
PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKBRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKBRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKBRIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441

PLAT#	GRID	ZONING	TAX MAP#	ELECT. DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02

WATER CODE	SEWER CODE
400 (TC 550)	801

**TITLE: COVER SHEET**

DESIGN:	SCALE:	PROJECT:
NP1	AS SHOWN	03067.008.07

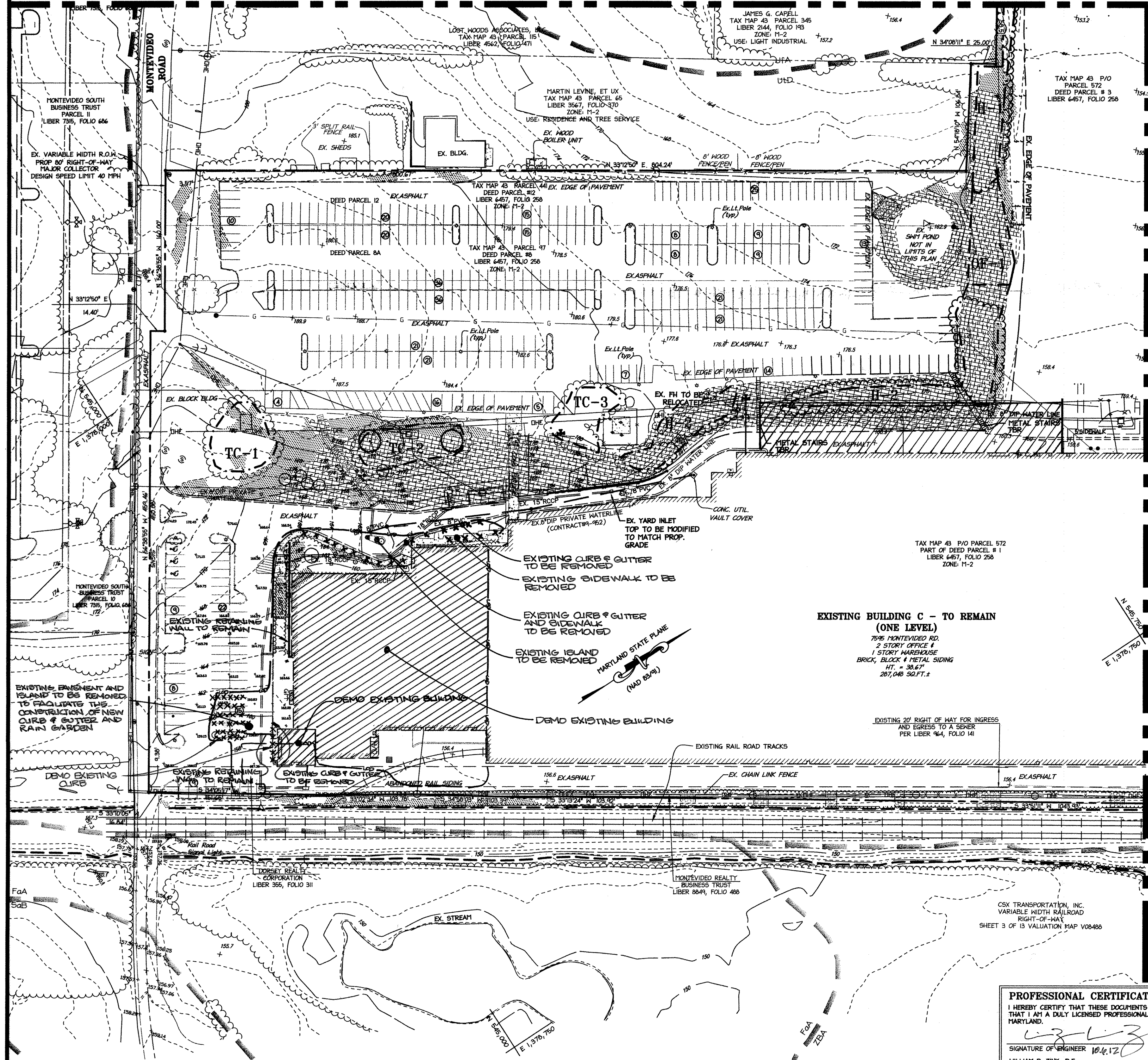
DRAWN:	DATE:
DAM1	SEPT 06 2012

CHECKED:	APPROVED:
ENJ	MRZ

**1 of 45**

MDC-855

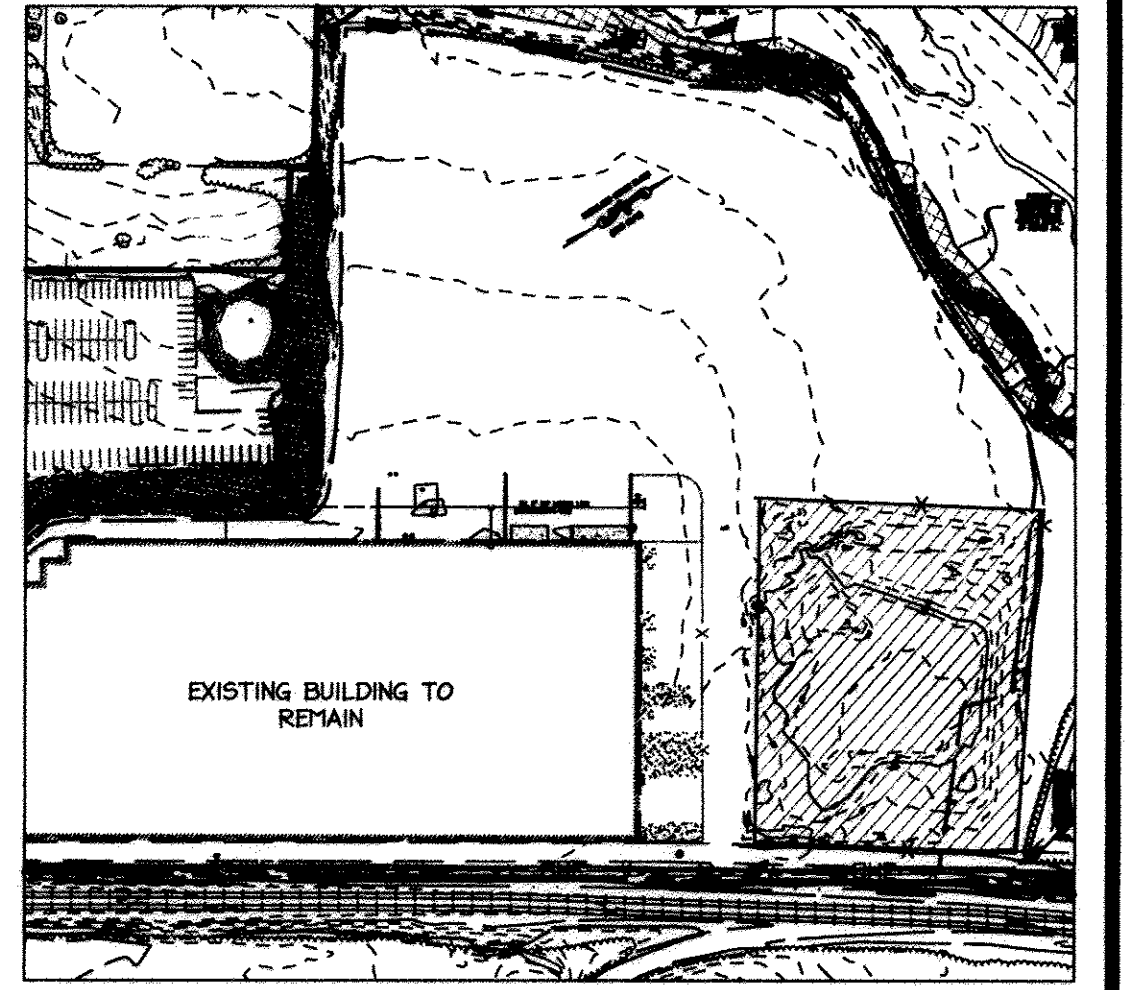
MATCHLINE - SEE SHEET 4 FOR CONTINUATION



MATCHLINE - SEE SHEET 3 FOR CONTINUATION

**LEGEND**

	(RFCE) RETENTION FOREST CONSERVATION EASEMENT
	EXISTING INTER CONTOUR
	EXISTING INDEX CONTOUR
	EXISTING SPOT ELEVATION
	PROPERTY LINE
	ADJACENT PROPERTY LINE
	FORMER PROPERTY LINE
	EXISTING WATER
	FIRE HYDRANT VALVE
	EXISTING SANITARY SEWER
	EXISTING STORM DRAIN INLETS
	MANHOLE
	EXISTING OVERHEAD UTILITY
	EXISTING GSA LINE
	FENCE (BARB WIRE)
	EXISTING CURBSIDE
	EXISTING BUILDINGS
	STREAM CENTERLINE
	RAILROAD DITCH
	EXISTING TREELINE
	SOILS LINE
	100' FLOODPLAIN
	WETLANDS
	50' STREAM BUFFER
	25' WETLAND BUFFER
	STEEP SLOPES 25% AND GREATER AREA: 79,045.34 50.0 FT = 1.677 AC.
	STEEP SLOPES 15% TO 25%
	FOREST STAND BOUNDARIES AND DESIGNATION
	EXISTING LIGHT POLE
	EXISTING SIGN
	GAS METER
	STORM
	WATER METER
	RAILROAD TRACKS



**LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR)**  
SCALE: 1" = 200'

AREA TO BE REMOVED

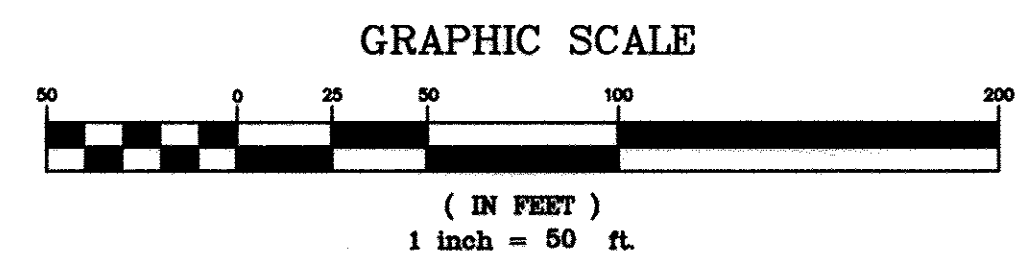
**AS-BUILT CERTIFICATION**  
DATE: 7/18/2017  
DATE OF AS-BUILT: 6/17/14 & 6/27/2017



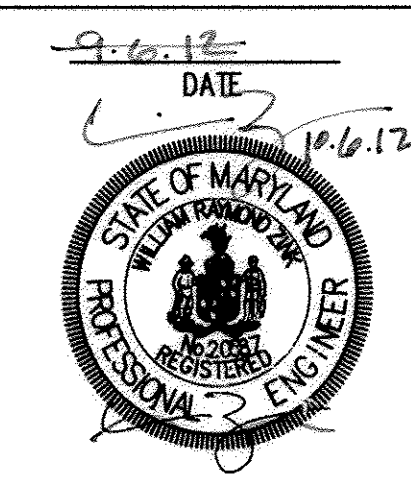
- NOTE**
- THE EXISTING CONDITIONS/FEATURES DEPICTED IN THIS AREA ARE APPROXIMATE ONLY AND ARE INTENDED TO BE DEPICTED FOR INFORMATIONAL PURPOSES ONLY. THESE EXISTING FEATURES SHALL BE FIELD VERIFIED.
  - PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ABOVE FOR LIMITS OF EXISTING PAVING FOR ENTIRE SITE.
  - SEE SHEET 4 FOR SOILS INFORMATION TABLE.
  - PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 34 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.

**EXISTING BUILDING C - TO REMAIN (ONE LEVEL)**  
75% MONTEVIDEO RD.  
2 STORY OFFICE & 1 STORY WAREHOUSE  
BRICK, BLOCK & METAL SIDING  
HT. = 30.67'  
207,048 SQ.FT.±

**MISS UTILITY**  
Service Protection Center  
CALL TOLL FREE 1-800-257-7777



**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.  
SIGNATURE OF ENGINEER: [Signature]  
WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20587  
EXPIRATION DATE: 09-26-2014  
DATE: 9.6.12



APPROVED: DEPARTMENT OF PLANNING AND ZONING

	Date: 10/31/12
	Date: 10/17/12
	Date: 11/2/12

3	1/2014	DEMO EX. LOADING DOCK; CONC. NEW LOADING DOCK; EX. WALL; REI DESIGN; LATOIT & CO. ST
2	11/2013	REDLINE REVISIONS, TRENCH DRAIN
1	11/2012	LOADING DOCK GRADING REDLINE REVISIONS

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**  
**OWNER / DEVELOPER**  
MONTEVIDEO REALTY BUSINESS TRUST  
C/O EXETER PROPERTY GROUP  
140 M. GERMANTOWN PIKE, SUITE 150  
PLYMOUTH MEETING, PA 19462  
TEL. (610) 828-0756  
FAX (610) 828-5550

**christopher consultants**  
engineering · surveying · land planning  
1712 columbia gateway drive (suite 100) · columbia, md. 21046-2990  
410.872.8800 · mfo 301.881.0146 · fax 410.872.8863

PARCEL#	STREET ADDRESS	BUILDING
1	7585 MONTEVIDEO ROAD, ELK RIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 4

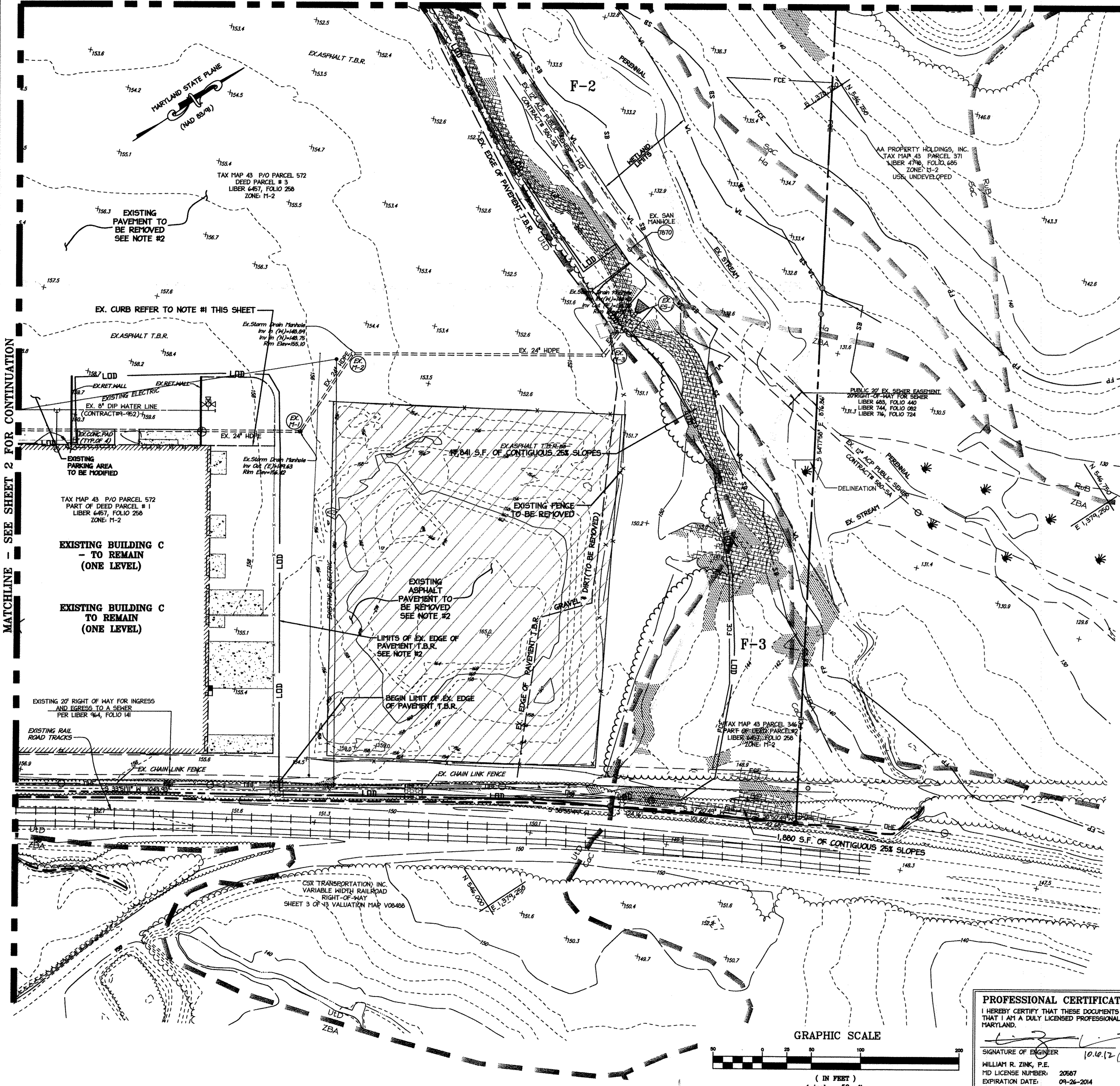
SUBDIVISION NAME		SECTION/AREA	LOT/PARCEL#		
DORSEY RUN INDUSTRIAL CENTER			572,346,97,344,441		
PLAT#	GRID#	ZONING	TAX MAP	ELECT. DISTR.	CENSUS TRACT
L6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE		SEWER CODE			
400 (IG 550)		B01			

TITLE: **EXISTING CONDITIONS AND DEMOLITION PLAN**

DESIGN: NH	SCALE: 1" = 50'	PROJECT: 03067.008.07
DRAWN: DAM	DATE: SEPT 06 2012	
CHECKED: ENJ	APPROVED: WRZ	<b>2 of 45</b>

10/15/12 DEMO BLDG, LOADING DOCK, TRUCK COURT, RAIN GARDEN

MATCHLINE - SEE SHEET 2 FOR CONTINUATION



### LEGEND

- EXISTING LIGHT POLE
- EXISTING SIGN
- GAS METER
- STORM
- WATER METER
- RAILROAD TRACKS
- TO BE REMOVED UTILITIES, PAVEMENT, SITE FEATURES UNLESS OTHERWISE NOTED TO RELOCATE OR MODIFY
- EXISTING INTER CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING SPOT ELEVATION
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- FORMER PROPERTY LINE
- 
- 
- 
- EXISTING OVERHEAD UTILITY
- EXISTING GSA LINE
- FENCE (BARB WIRE)
- EXISTING CURBLINE
- EXISTING BUILDINGS
- STREAM CENTERLINE
- RAILROAD DITCH
- EXISTING TREELINE TO BE REMOVED
- EXISTING TREELINE
- SOILS LINE
- PUBLIC 100 YR FLOODPLAIN
- WETLANDS
- 50' STREAM BUFFER
- 25' WETLAND BUFFER
- STEEP SLOPES 25% AND GREATER AREA: 73,046.34 SQ.FT. = 1.677 AC.
- STEEP SLOPES 15% TO 25%
- FOREST STAND BOUNDARIES AND DESIGNATION
- LIMITS OF DISTURBANCE
- LIMITS OF EX. STOCKPILE

### AS-BUILT CERTIFICATION

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

*David Shuman* 7/18/2017  
DATE

MARYLAND REG. NO. 27223 EXPIRATION DATE: 3/19/2018  
DATE OF AS-BUILT: 6/17/2019 & 6/27/2017



- NOTE**
- THE EXISTING CONDITIONS/FEATURES DEPICTED IN THIS AREA ARE APPROXIMATE ONLY AND ARE INTENDED TO BE FIELD VERIFIED FOR INFORMATIONAL PURPOSES ONLY. THESE EXISTING FEATURES SHALL BE FIELD VERIFIED.
  - PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ON SHEET 2 FOR LIMITS OF REMOVED AND PAVING TO REMAIN FOR ENTIRE SITE.
  - PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
  - MATERIAL IN THE EX. STOCKPILE CAN BE USED AS FILL FOR BUILDING 5. REFER TO GEOTECHNICAL REPORT FOR COMPACTION SPECIFICATIONS.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>Victor Shuman</i>	10/31/12
Chief, Division of Land Development	Date
<i>David Shuman</i>	10/17/12
Chief, Development Engineering Division	Date
<i>Joseph J. Coyle</i>	11/6/12
Director, Department of Planning and Zoning	Date

1	11/2012	REDLINE REVISIONS
---	---------	-------------------

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

**OWNER / DEVELOPER**  
 MONTEVIDEO REALTY BUSINESS TRUST  
 C/O EXETER PROPERTY GROUP

140 W. GERMANTOWN PIKE, SUITE 150  
 PLYMOUTH MEETING, PA 19462  
 TEL. (610) 828-0756  
 FAX (610) 828-9550

**christopher consultants**  
 engineering - surveying - land planning  
 christopher consultants, Inc.  
 7172 Columbia Gateway Drive Suite 100 Columbia, MD 21046-2980  
 410.872.8860 - memo: 301.981.0146 - fax: 410.872.8860

**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#			
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441			
PLAT#	GRID#	ZONING	TAX MAP#	ELECT. DIST.	CENSUS TRACT
L6457, F.258	16	M-2	43	1ST	8012.02
WATER CODE	400 (TG 550)	SEWER CODE	801		

**TITLE: EXISTING CONDITIONS AND DEMOLITION PLAN**

DESIGN: NY1	SCALE: 1" = 50'	PROJECT: 09067.006.07
DRAWN: DAM	DATE: SEPT 06 2012	
CHECKED: ENJ	APPROVED: WRZ	<b>3 OF 45</b>

**PROFESSIONAL CERTIFICATION**

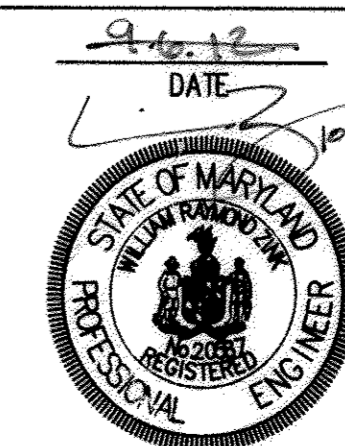
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

*William R. Zink* 10.14.12 9.6.12  
 SIGNATURE OF ENGINEER DATE

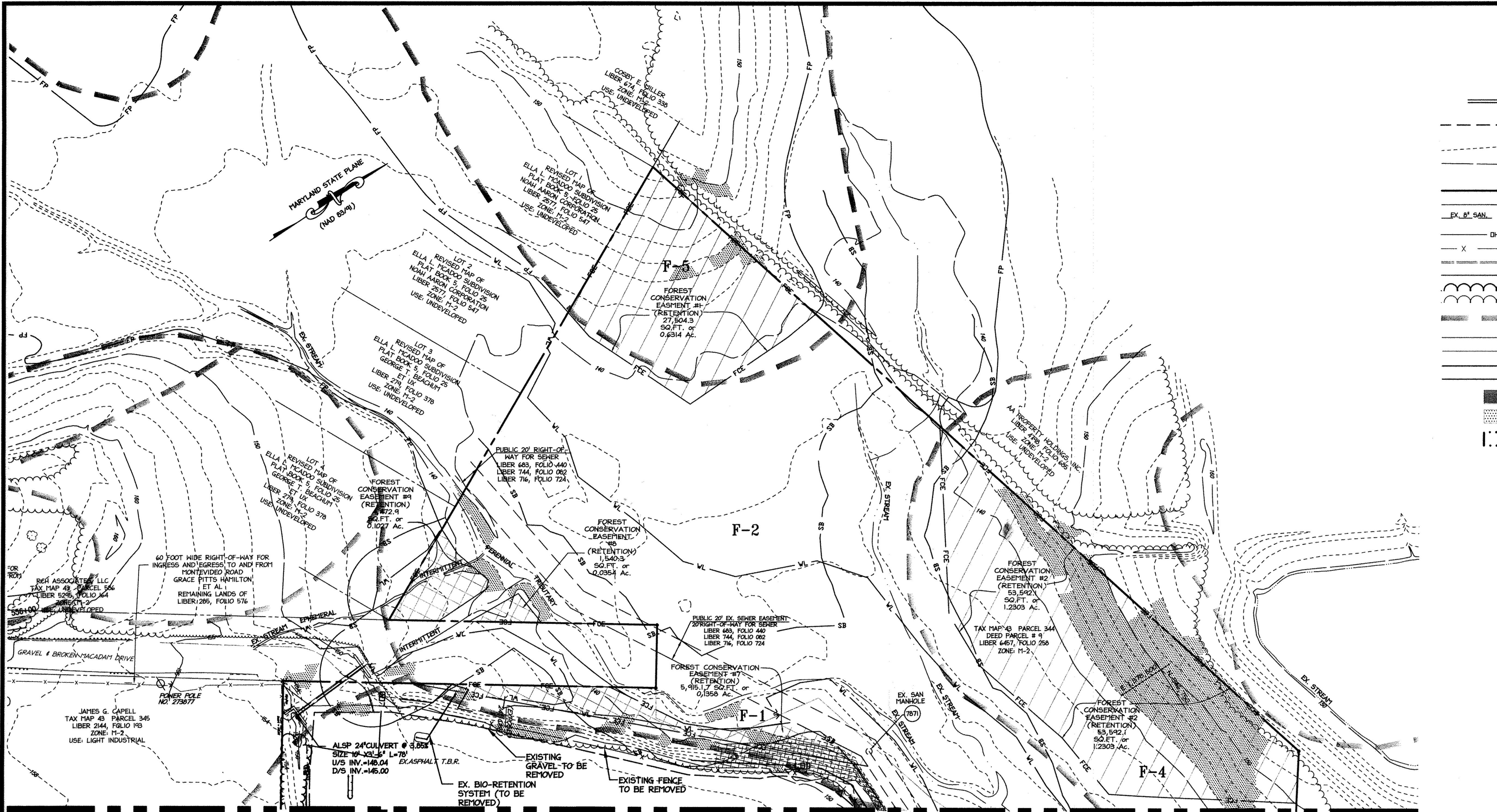
WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20587  
 EXPIRATION DATE: 09-26-2014

**MISS UTILITY**  
 Service Protection Center

**CALL TOLL FREE**  
 1-800-251-7777



MDC-855



**LEGEND**

---	TO BE REMOVED UTILITIES, PAVEMENT, SITE FEATURES UNLESS OTHERWISE NOTED TO RELOCATE OR MODIFY
-240	EXISTING INTER CONTOUR
-250	EXISTING INDEX CONTOUR
+154.8	EXISTING SPOT ELEVATION
---	PROPERTY LINE
---	ADJACENT PROPERTY LINE
EX. 8" SAN	EXISTING SANITARY SEWER
DHE	EXISTING OVERHEAD UTILITY
X	FENCE (B&B WIRE)
---	EXISTING CURBLINE
---	STREAM CENTERLINE
---	EXISTING TREELINE TO BE REMOVED
---	EXISTING TREELINE
BIA	SOILS LINE
SgE	PUBLIC 100 YR FLOODPLAIN
FP	WETLANDS
VL	50' STREAM BUFFER
SB	25' WETLAND BUFFER
VB	STEEP SLOPES 25% AND GREATER AREA: 75,045.39 SQ.FT. = 1.677 AC.
---	STEEP SLOPES 15% TO 25%
---	FOREST STAND BOUNDARIES

**NOTE**

- THE EXISTING CONDITIONS/FEATURES DEPICTED IN THIS AREA ARE APPROXIMATE ONLY AND ARE INTENDED TO BE DEPICTED FOR INFORMATIONAL PURPOSES ONLY. THESE EXISTING FEATURES SHALL BE FIELD VERIFIED.
- PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ON SHEET 2 FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE
- PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Veronica Shandor* 10/31/12  
 Chief, Division of Land Development Date

*James D. Cagle* 10/31/12  
 Chief, Development Engineering Division Date

*James D. Cagle* 11/2/12  
 Director, Department of Planning and Zoning Date

1 11/2012 RECLINE REVISIONS

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

**OWNER / DEVELOPER**

MONTEVIDEO REALTY 140 W. GERMANTOWN PIKE, SUITE 150  
 BUSINESS TRUST PLYMOUTH MEETING, PA 19462  
 TEL (610) 828-0756  
 C/O EXETER PROPERTY GROUP FAX (610) 828-5550

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 christopher consultants, inc.  
 7172 columbia gateway drive (suite 100) · columbia, md. 21046-2900  
 410.872.8880 · fax: 410.872.8883

**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7585 MONTEVIDEO ROAD, ELK RIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	SECTION/VAREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441
PLAT# L6457, F.258	GRID# 16 ZONING M-2 TAX MAP# 43 ELECT. DISTR. 1ST	CENSUS TRACT 6012.02
WATER CODE 400 (TG 550)	SEWER CODE 801	

**EXISTING CONDITIONS AND DEMOLITION PLAN**

DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.008.07
DRAWN: DAM	DATE: SEPT 06 2012	
CHECKED: ENJ	APPROVED: WRZ	4 OF 45

MATCHLINE - SEE SHEET 2 OF FOR CONTINUATION

MATCHLINE - SEE SHEET 3 FOR CONTINUATION

Key	A. Type of Forest Community (acres)	B. Area (acres)	C. Soil Information	D. Existing Vegetation (Dominant Species Approximate %)	E. Stand Characteristics	F. Forest Area in Sensitive Environments (acres)	G. Habitat Value
F-1	Forest	0.48	Ha UID -Mixed Hardwoods, mainly Oaks	50% Sweetgum 25% White Oak 10% Tulip Poplar	10" 30 Good	0.40	1
F-2	Forest	6.28	Ha CaC ZBA -Mixed Hardwoods, mainly Oaks -Upland Hardwoods & Virginia Pine -Wetland Species (hydric soil)	45% Sweet Gum 10% Birch 10% Sycamore 50% White Oak 30% Red Oak 15% Black Gum 5% Virginia Pine	10 - 14" 30+ Good	6.14	2 4
F-3	Forest	0.80	CaC -Upland Hardwoods & Virginia Pine	30% White Oak 30% Red Oak 20% Red Maple 10% Gums	10 - 14" 30+ Good	0.04	2
F-4	Forest	1.89	SaC -Upland Hardwoods, Mostly Oaks	30% Red Oak 20% Red Maple 10% Gums	16 - 20" 45+ Good	0.00	1
F-5	Forest	0.88	RuC -Mixed Oaks and Pines	30% White Oak 30% Red Oak 20% Red Maple 20% Gums	12 - 16" 40+ Good	0.06	-
H-1	Hedgerow	0.29	UID	30% Virginia Pine 25% Sweet Gum 25% Red Maple 20% Birch	4 - 10" 20- Good	0.15	-
H-2	Hedgerow	0.88	UID	50% Virginia Pine 30% Sweet Gum 20% Black Locust	4 - 6" 10-15 Good	0.00	-
OF-1	Open Field	0.11	UID	Oaks, Birch, Gums, Pines, and Maples Likely in Future	less than 2" 5- -	0.00	-
TC-1	Tree Cluster	0.10	UID	35% Tulip Poplar 35% White Pine 30% Sweet Gum	15 - 22" 45+ Good	0.00	-
TC-2	Tree Cluster	0.11	UID	75% White Pine 25% Pin Oak	15 - 24" 45+ Good	0.00	-
TC-3	Tree Cluster	0.08	UID	100% Virginia Pine	8 - 12" 15-20 Fair	0.00	-

NOTES: 1. INFORMATION FOR NEARLY CLASSIFIED UID SOILS NOT AVAILABLE.  
 2. THERE WERE NO SPECIMEN TREES FOUND ON THE PROPERTY.

**SOIL ANALYSIS**

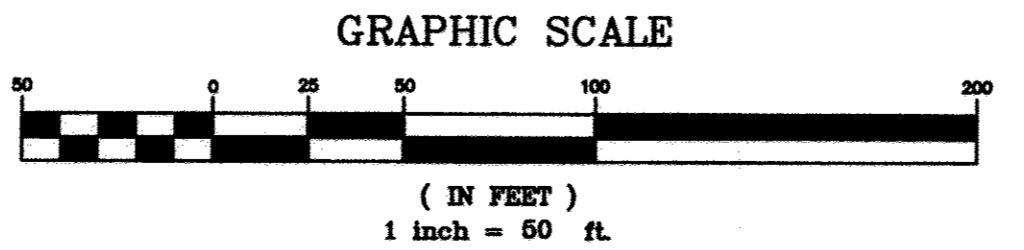
SYMBOL	SOIL	K FACTOR	ERODIBLE	HYDRIC	COUNTY	TAXONOMIC CLASS
CaC	CHILLUM	0.37	YES	NO	AA	TYPIC HAPLUDULTS
Ha	HATBORO-CODORUS	0.37	YES	YES	HON	FLUVAQUENTIC ENDOAQUEP
RuC	RUSSETT AND BELTSVILLE	0.24	NO	NO	HON	AQUIC HAPLUDULTS
SaC	SASSAFRAS LOAM	0.24	NO	NO	HON	TYPIC HAPLUDULTS
Ua	URBAN LAND-FALLSINGTON COMPLEX	0.02	NO	YES	HON	-
UID	URBAN LAND-UDORTHERTS COMPLEX	0.26	NO	NO	HON	-

**AS-BUILT CERTIFICATION**

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

*Dany Shon* 7/18/2017  
 DATE

MARYLAND REG. NO. 27223 EXPIRATION DATE: 3/19/2018  
 DATE OF AS-BUILT: 6/17/2014 & 6/27/2017

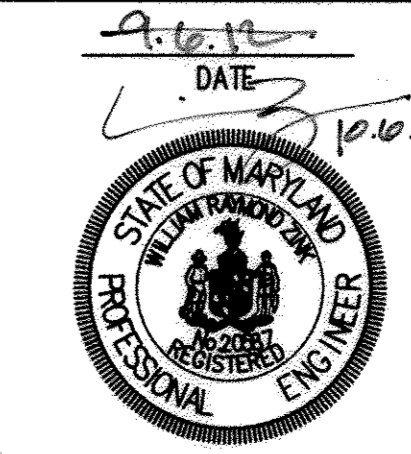


**PROFESSIONAL CERTIFICATION**

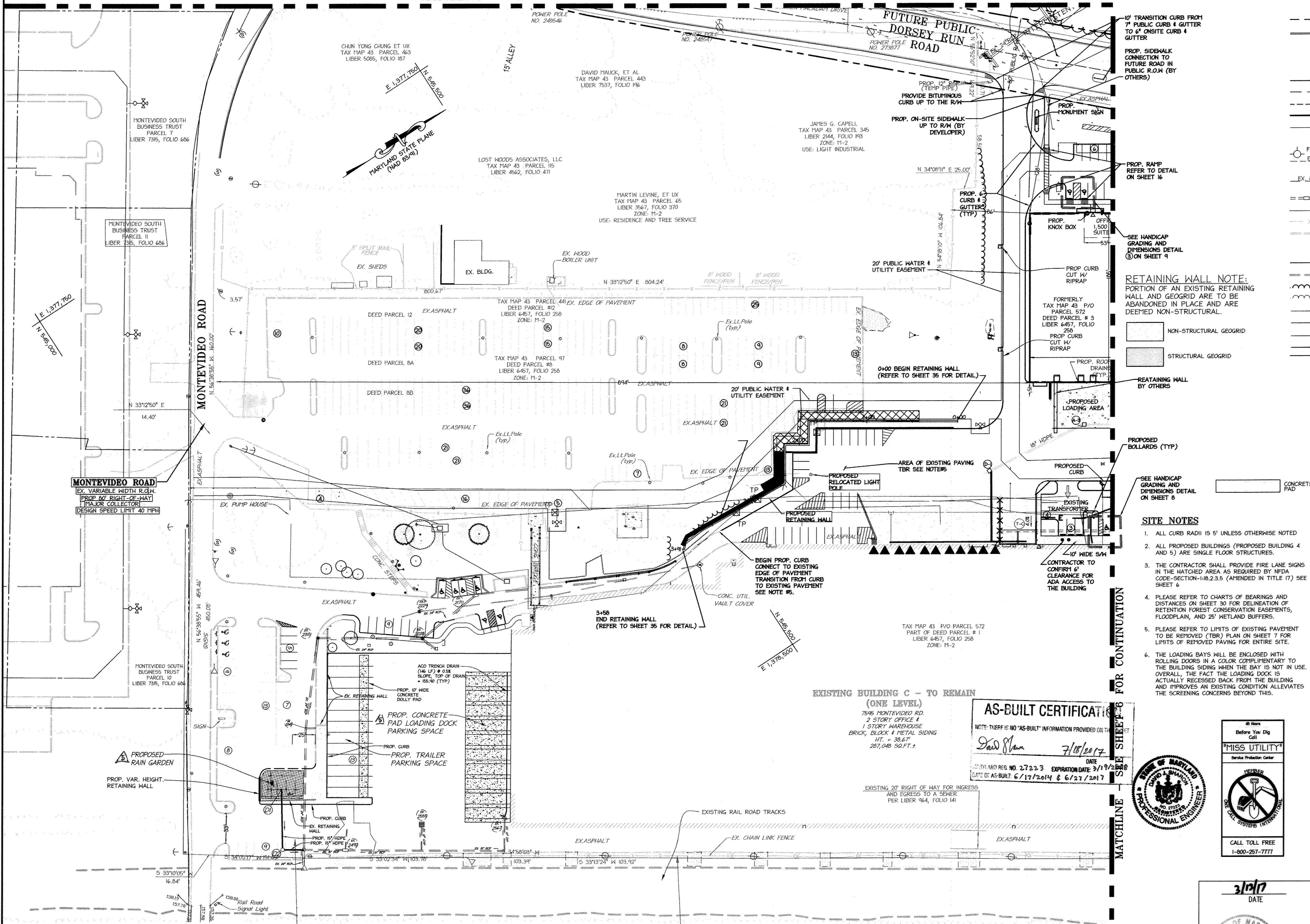
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

*William R. Zink* 9.6.12  
 SIGNATURE OF ENGINEER DATE

WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20687  
 EXPIRATION DATE: 09-26-2014



MATCHLINE - SEE SHEET 7 FOR CONTINUATION



LEGEND

- EDGE OF PAVEMENT TO BE REMOVED
- PROPOSED CURBLINE
- PROPOSED BUILDINGS
- PROPOSED PARKING SPACE
- LIMITS OF DISTURBANCE
- 50' BUILDING RESTRICTION LINES
- 30' PARKING RESTRICTION LINES
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- FORMER PROPERTY LINE
- FIRE HYDRANT
- EX. 8" WATER
- EX. 8" SAN
- EX. 24" RCP
- DHE
- EXISTING CURBLINE
- EXISTING BUILDINGS
- STREAM CENTERLINE
- RAILROAD DITCH
- PROPOSED TREELINE
- EXISTING TREELINE
- FP
- WL
- SB
- WB
- FCE
- EXISTING WATER
- EXISTING SANITARY SEWER
- EXISTING STORMDRAIN
- EXISTING OVERHEAD UTILITY
- FENCE
- EXISTING BUILDINGS
- STREAM CENTERLINE
- RAILROAD DITCH
- PROPOSED TREELINE
- EXISTING TREELINE
- PUBLIC 100 YR FLOODPLAIN
- WETLANDS
- 50' STREAM BUFFER
- 25' WETLAND BUFFER
- FOREST CONSERVATION EASEMENT
- EXISTING LIGHT POLE
- EXISTING SIGN
- GAS METER
- STORMDRAIN
- WATER METER
- RAILROAD TRACKS
- PROPOSED LIGHT (RFCE) RETENTION FOREST CONSERVATION EASEMENT
- RETENTION FOREST CONSERVATION EASEMENT
- NON CREDITED EASEMENT
- LIGHT DUTY PAVING
- HEAVY DUTY PAVING

**RETAINING WALL NOTE:**  
PORTION OF AN EXISTING RETAINING WALL AND GEOGRID ARE TO BE ABANDONED IN PLACE AND ARE DEEMED NON-STRUCTURAL.

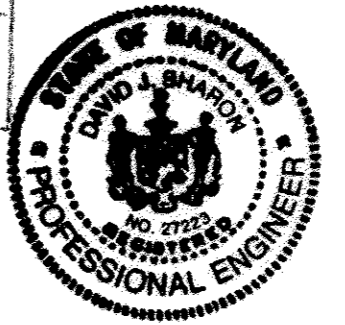
- NON-STRUCTURAL GEOGRID
- STRUCTURAL GEOGRID

SITE NOTES

1. ALL CURB RADI 15' 5" UNLESS OTHERWISE NOTED
2. ALL PROPOSED BUILDINGS (PROPOSED BUILDING 4 AND 5) ARE SINGLE FLOOR STRUCTURES.
3. THE CONTRACTOR SHALL PROVIDE FIRE LANE SIGNS IN THE HATCHED AREA AS REQUIRED BY NFPA CODE-SECTION-118.2.3.5 (AMENDED IN TITLE 17) SEE SHEET 6
4. PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
5. PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ON SHEET 7 FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE.
6. THE LOADING BAYS WILL BE ENCLOSED WITH ROLLING DOORS IN A COLOR COMPLEMENTARY TO THE BUILDING SIDING WHEN THE BAY IS NOT IN USE. OVERALL, THE FACT THE LOADING DOCK IS ACTUALLY RECESSED BACK FROM THE BUILDING AND IMPROVES AN EXISTING CONDITION ALLEVIATES THE SCREENING CONCERNS BEYOND THIS.

**EXISTING BUILDING C - TO REMAIN (ONE LEVEL)**  
7595 MONTEVIDEO RD.  
2 STORY OFFICE & 1 STORY WAREHOUSE  
BRICK, BLOCK & METAL SIDING  
HT. = 38.67'  
287,048 SQ.FT.±

**AS-BUILT CERTIFICATE**  
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.  
DATE: 7/15/2017  
DATE OF AS-BUILT: 6/17/2014 & 6/27/2017



**MISS UTILITY**  
Before You Dig  
Call 1-800-257-7777

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development	3-29-17
Chief, Development Engineering Division	3-23-17
Director, Department of Planning and Zoning	3-24-17

NO.	DATE	REVISIONS
1	11/2012	REDLINE REVISIONS
2	11/2013	REDLINE REVISIONS, TRENCH DRN, LOADING DOCK GRADING
3	4/2014	DEPO EX. LOADING, CONG. NEB LOADING, RET. WALL & GRADING, REV. PARKING LAYOUT/COUNT
4	4/15	RETAINING WALL + W/L STUB
5	10/16	DEPO BLDG, LOADING DOCK, TRUCK COURT, RAIN GARDEN

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

OWNER / DEVELOPER  
MONTEVIDEO REALTY BUSINESS TRUST  
C/O EXETER PROPERTY GROUP

140 W. GERMANTOWN PIKE, SUITE 150  
PLYMOUTH MEETING, PA 19462  
TEL. (610) 828-0756  
FAX (610) 828-5550

**christopher consultants**  
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christopher consultants, ltd.  
7172 columbus gateway drive (suite 100) - columbia, md. 21046-2590  
410.872.8890 - faxes 301.881.0148 - fax 410.872.8893

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

SUBDIVISION NAME		SECTION/AREA	LOT/PARCEL#		
DORSEY RUN INDUSTRIAL CENTER			572,346,97,344,441		
PLAT#	GRID#	ZONING	TAX MAP#	ELECT. DISTR.	CENSUS TRACT
L6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE	SEWER CODE				
400 (TC 550)	B01				

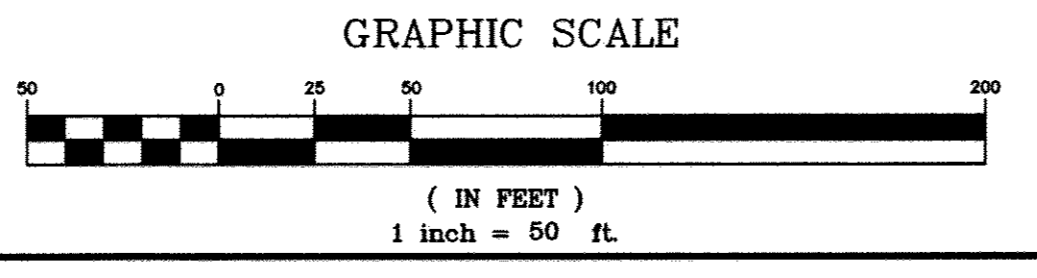
TITLE: **SITE LAYOUT PLAN**

DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.008.07
DRAWN: DAM	DATE: SEPT 06 2012	5 of 45
CHECKED: ENJ	APPROVED: WRZ	

**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.

SIGNATURE OF ENGINEER: *William R. Zink*  
WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20587  
EXPIRATION DATE: 09-06-2016

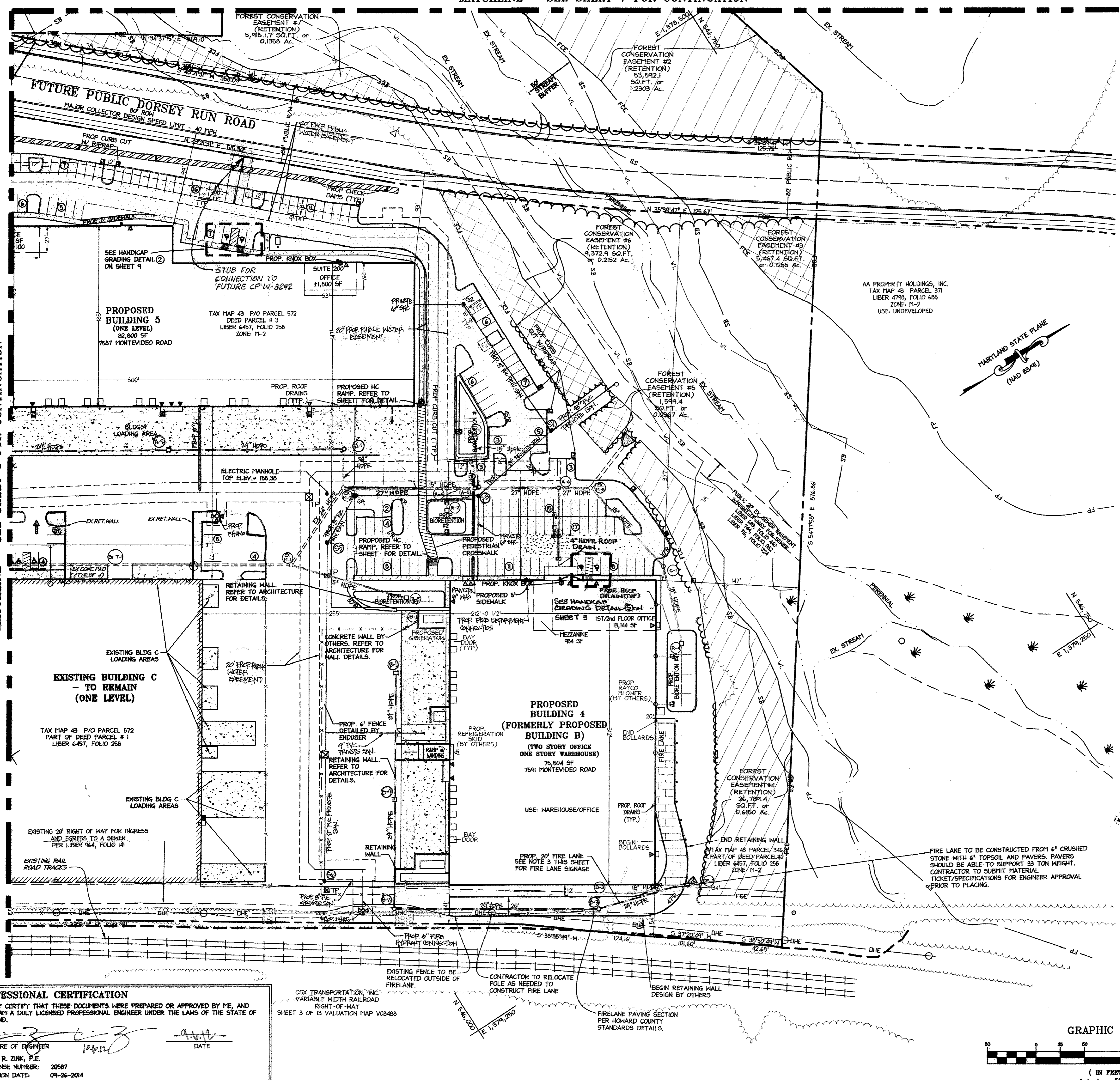
DATE: 3/13/17



SDP-08-116

MATCHLINE - SEE SHEET 7 FOR CONTINUATION

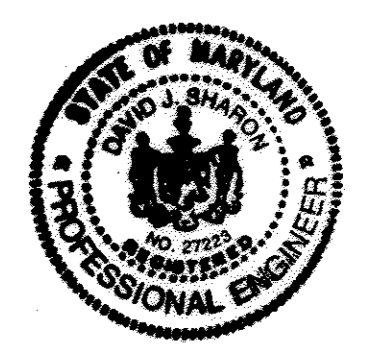
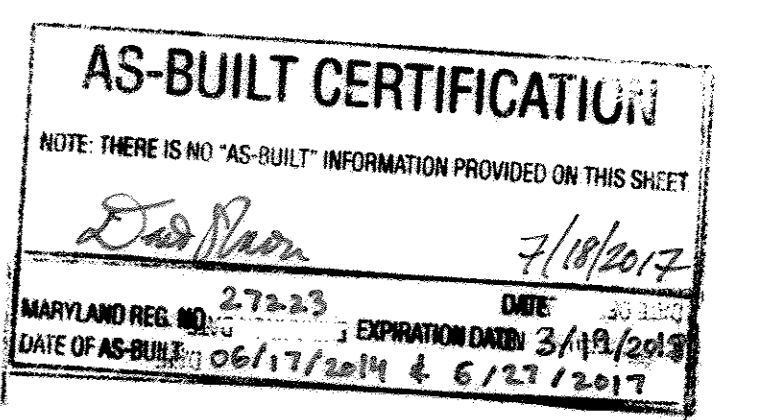
MATCHLINE - SEE SHEET 5 FOR CONTINUATION



**LEGEND**

	EDGE OF PAVEMENT TO BE REMOVED
	PROPOSED CURBLINE
	PROPOSED BUILDINGS
	PROPOSED PARKING SPACE COUNT
	LIMITS OF DISTURBANCE
	50' BUILDING RESTRICTION LINES
	30' PARKING RESTRICTION LINES
	PROPERTY LINE
	ADJACENT PROPERTY LINE
	FORMER PROPERTY LINE
	EXISTING WATER
	EXISTING SANITARY SEWER
	EXISTING STORMDRAIN
	EXISTING OVERHEAD UTILITY FENCE
	EXISTING CURBLINE
	EXISTING BUILDINGS
	STREAM CENTERLINE
	RAILROAD DITCH
	PROPOSED TREELINE
	EXISTING TREELINE
	PUBLIC 100 YR FLOODPLAIN
	WETLANDS
	50' STREAM BUFFER
	25' WETLAND BUFFER
	FOREST CONSERVATION EASEMENT
	EXISTING LIGHT POLE
	EXISTING SIGN
	GAS METER
	STORM
	WATER METER
	RAILROAD TRACKS
	PROPOSED LIGHT
	(RFCE) RETENTION FOREST CONSERVATION EASEMENT
	RETENTION FOREST CONSERVATION EASEMENT NON CREDITED EASEMENT
	GRASS CHANNEL
	LIGHT DUTY PAVING
	HEAVY DUTY PAVING
	HEAVY DUTY PAVERS
	LOADING DOCK

- NOTES**
- ALL CURB RADII IS 5' UNLESS OTHERWISE NOTED
  - ALL PROPOSED BUILDINGS (PROPOSED BUILDINGS 4 AND 5) ARE SINGLE FLOOR STRUCTURES.
  - THE CONTRACTOR SHALL PROVIDE FIRE LANE SIGNS IN THE HATCHED AREA AS REQUIRED BY NFPA CODE-SECTION-118.2.3.5 (AMENDED IN TITLE 17)
  - PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
  - PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ON SHEET 7 FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE
  - PLEASE REFER TO SHEET 30 FOR FLOODPLAIN ELEVATIONS.



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Division of Land Development 10/31/12  
 Chief, Development Engineering Division 10/12/12  
 Director, Department of Planning and Zoning 11/2/12

1 11/2012 REDLINE REVISIONS  
 4 4/15 RETAINING WALL + H/L STUB  
**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**  
 OWNER / DEVELOPER  
 MONTEVIDEO REALTY 140 W. GERTMANTOWN PIKE, SUITE 150 FLYBOOTH MEETING, PA 19462  
 C/O EXETER PROPERTY GROUP BUSINESS TRUST PLYMOUTH MEETING, PA 19462  
 TEL: (610) 828-0756 FAX: (610) 828-9550



**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKCRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKCRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKCRIDGE, MD	PROP. BLDG 4

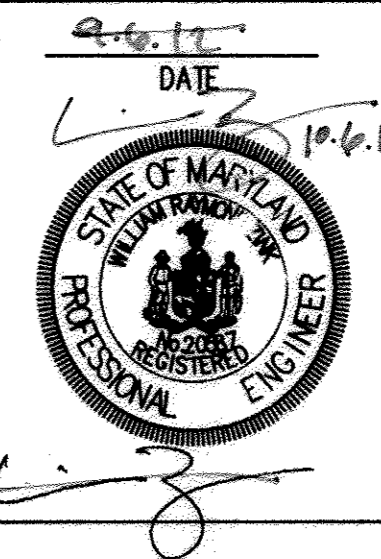
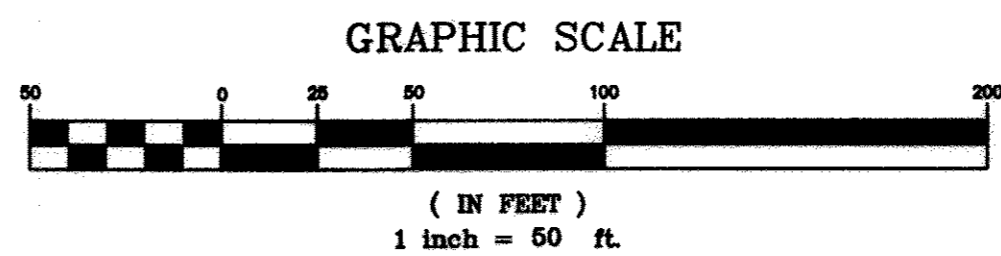
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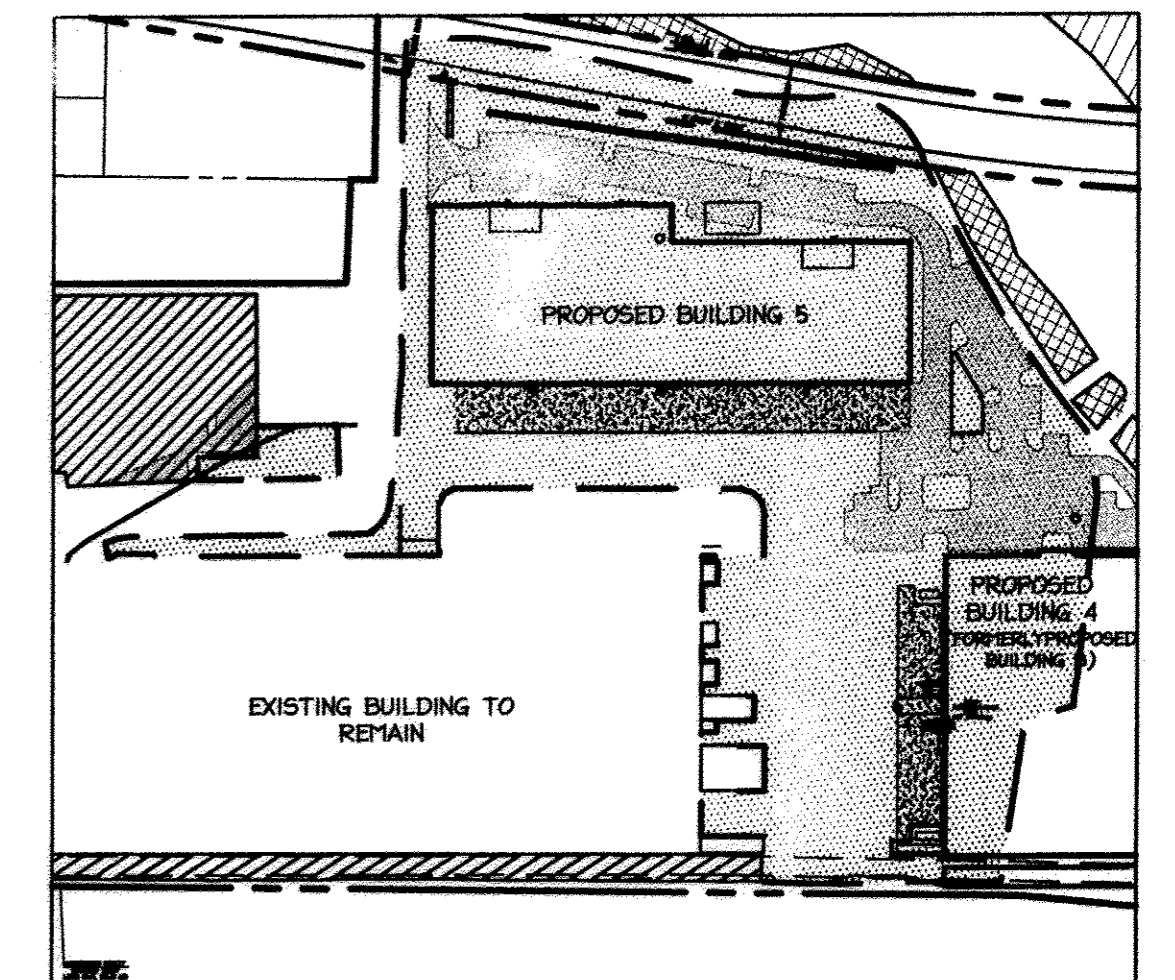
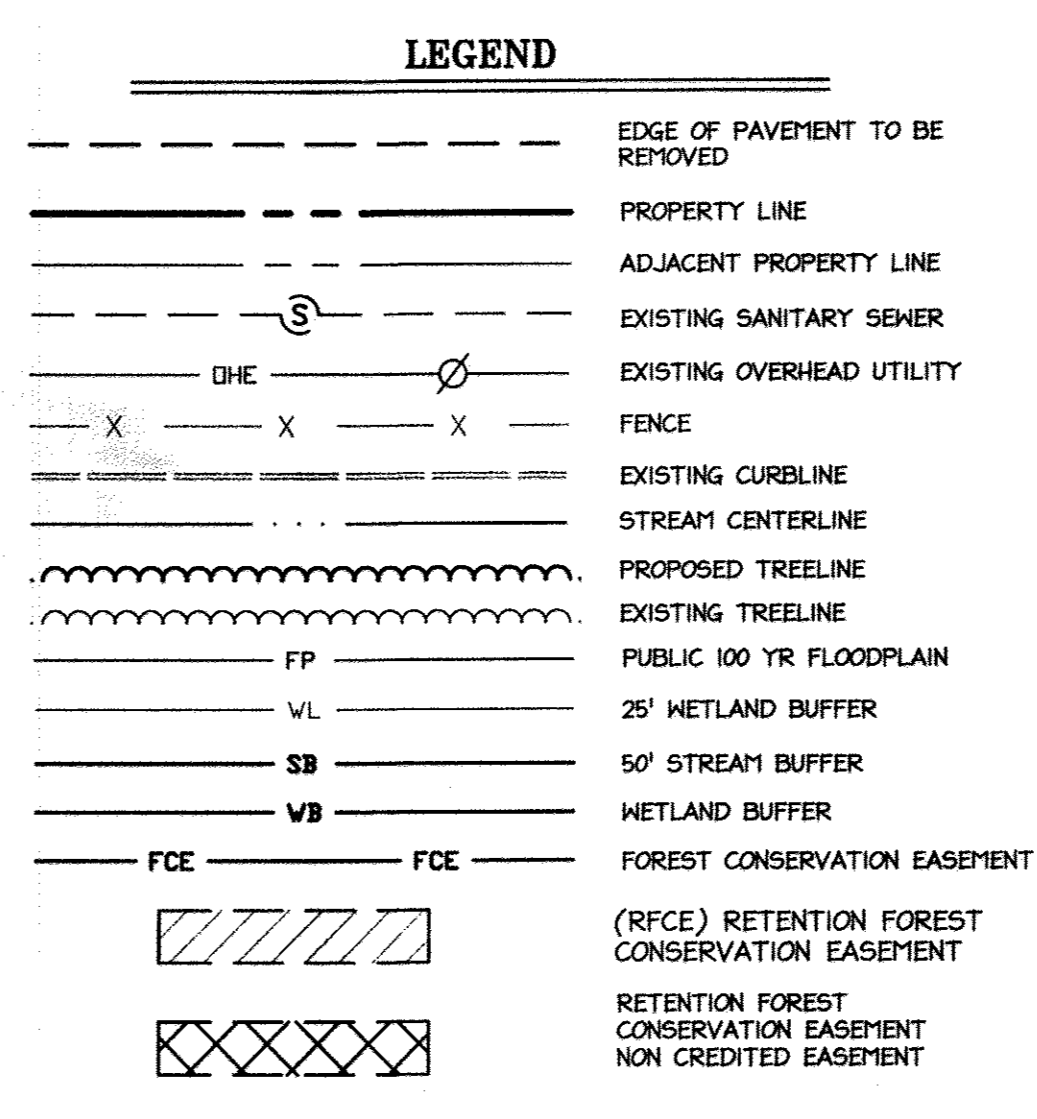
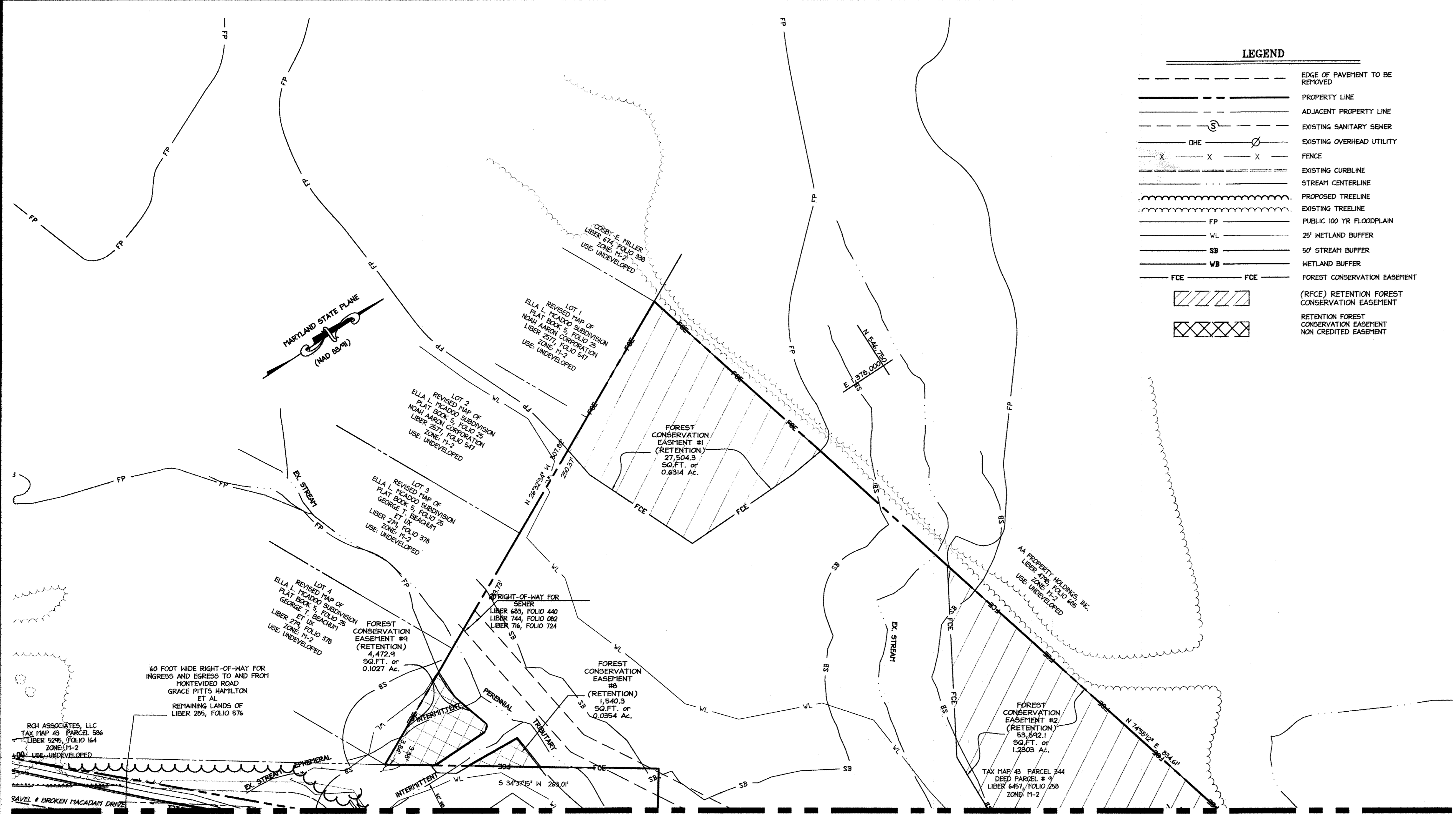
SUBDIVISION NAME DORSEY RUN INDUSTRIAL CENTER	SECTION/AREA 43	LOT/PARCEL# 572,346,97,344,441
PLAT# L6457, F.258	GRID# 16	ZONING M-2
TAX MAP# 43	ELECT. DISTR. 1ST	CENSUS TRACT 6012.02
WATER CODE 400 (TG 550)	SEWER CODE 801	

**SITE LAYOUT PLAN**

DESIGN: NY1	SCALE: 1" = 50'	PROJECT: 09067.008.07
DRAWN: DAM1	DATE: SEPT 06 2012	
CHECKED: ENJ	APPROVED: WRZ	<b>6 of 45</b>

**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.  
 SIGNATURE OF ENGINEER: [Signature]  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20567  
 EXPIRATION DATE: 09-26-2014





- ### NOTES
- PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
  - PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ABOVE FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE

**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.

SIGNATURE OF ENGINEER: [Signature] DATE: 9.6.12

WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20587  
EXPIRATION DATE: 09-26-2014

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 10/31/12  
Chief, Division of Land Development Date

[Signature] 10/17/12  
Chief, Development Engineering Division Date

[Signature] 10/16/12  
Director, Department of Planning and Zoning Date

1 11/2012 REDLINE REVISIONS

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

OWNER / DEVELOPER  
MONTEVIDEO REALTY BUSINESS TRUST 140 W. GERMANTOWN PIKE, SUITE 150 PLYMOUTH MEETING, PA 19462  
C/O EXETER PROPERTY GROUP TEL: (610) 828-0756 FAX: (610) 828-5550

**christopher consultants**  
engineering · surveying · land planning  
christopher consultants, inc.  
7172 columbia gateway drive (suite 100) columbia, md. 21046-2990  
410.872.8800 · faxes 301.881.0148 · fax 410.872.8868

**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7585 MONTEVIDEO ROAD, ELKCRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKCRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKCRIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441

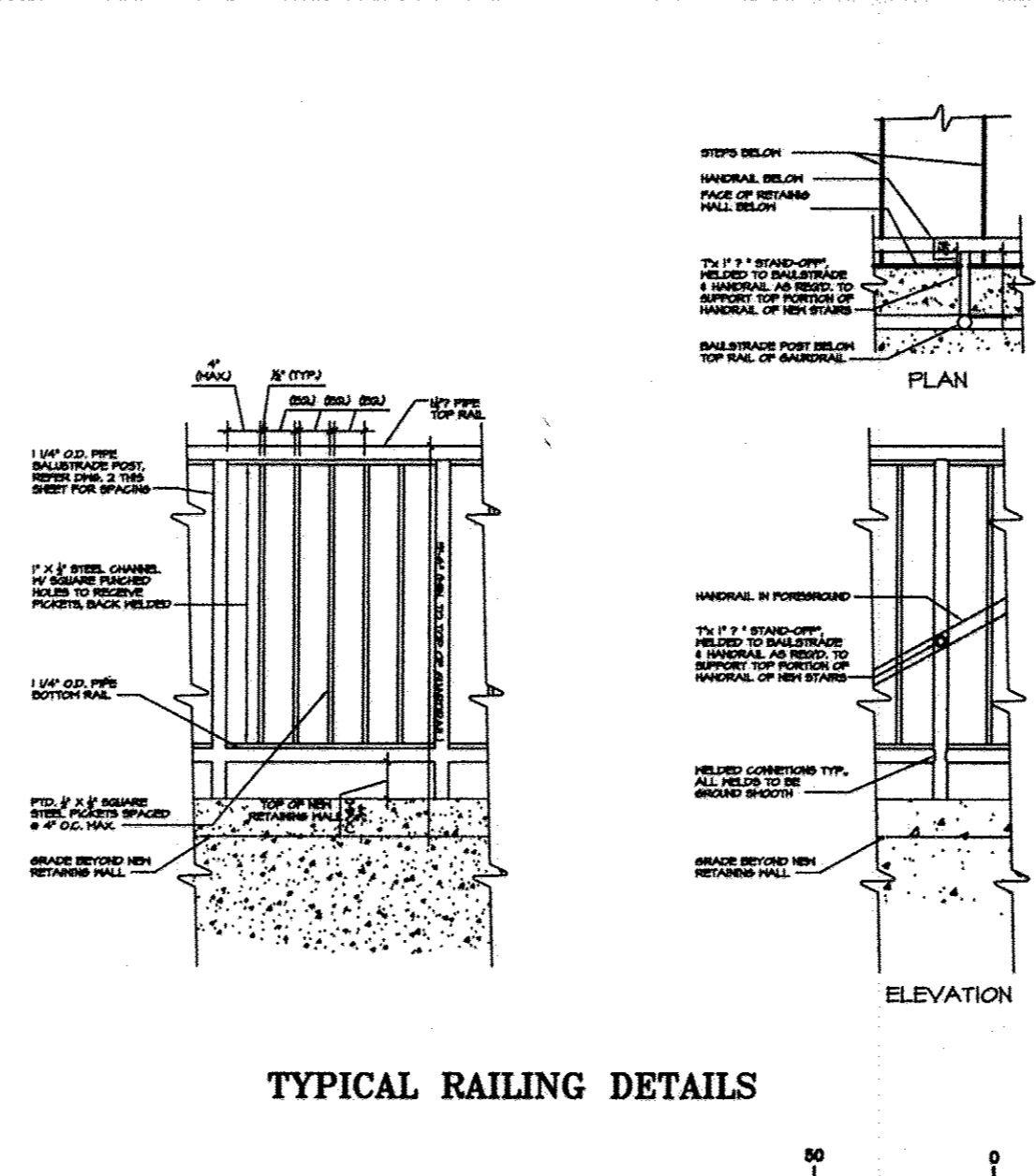
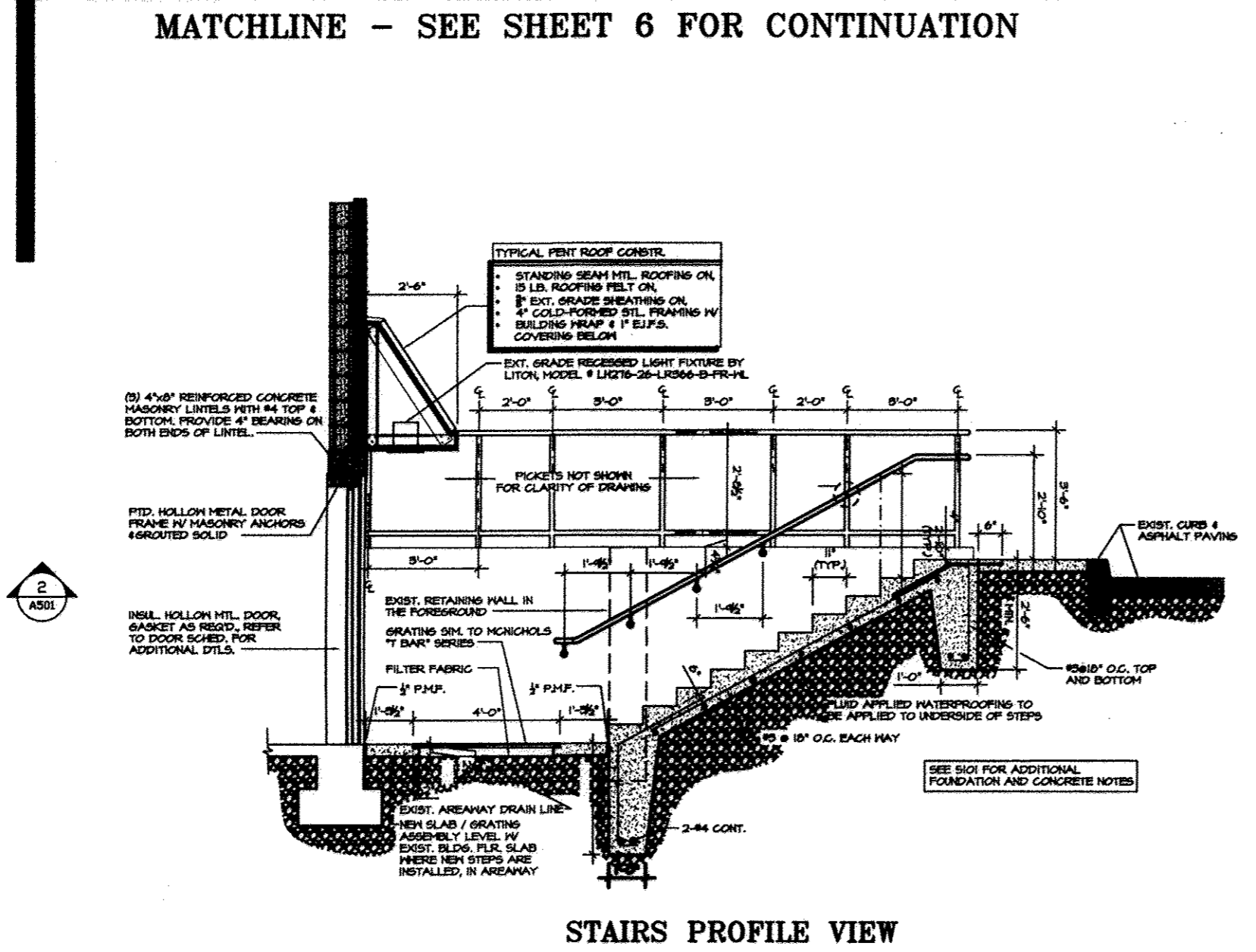
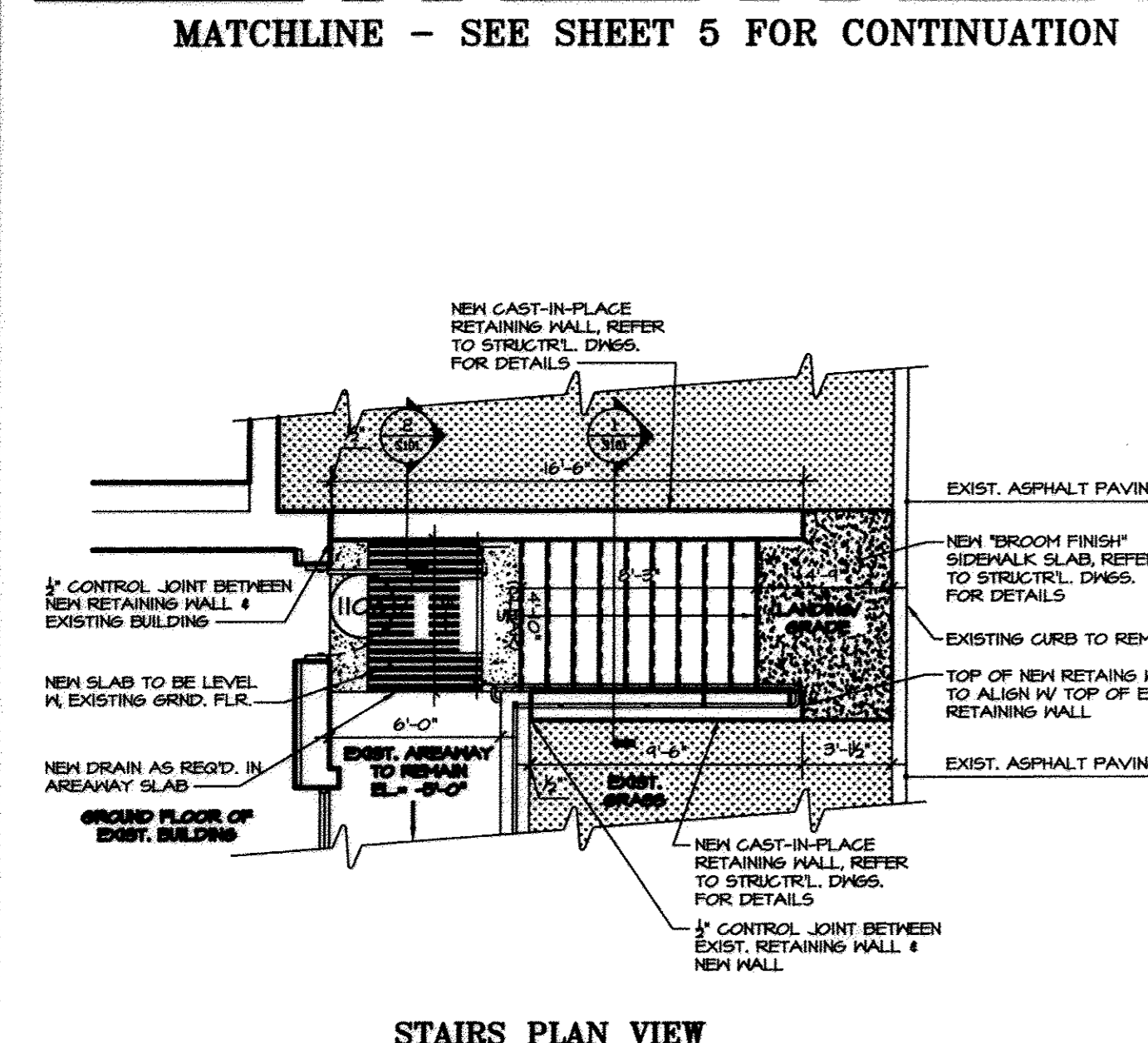
PLAT#	GRID#	ZONING	TAX MAP#	ELECT. DISTR.	CENSUS TRACT
L6457, F.258	16	M-2	43	1ST	6012.02

WATER CODE 400 (TG 550) SEWER CODE 801

TITLE: **SITE LAYOUT PLAN**

DESIGN: NM SCALE: 1" = 50' PROJECT: 09067.008.07  
 DRAWN: DAM DATE: SEPT 06 2012  
 CHECKED: ENJ APPROVED: HRZ

7 of 45



**AS-BUILT CERTIFICATION**

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

[Signature] 7/18/2017 DATE

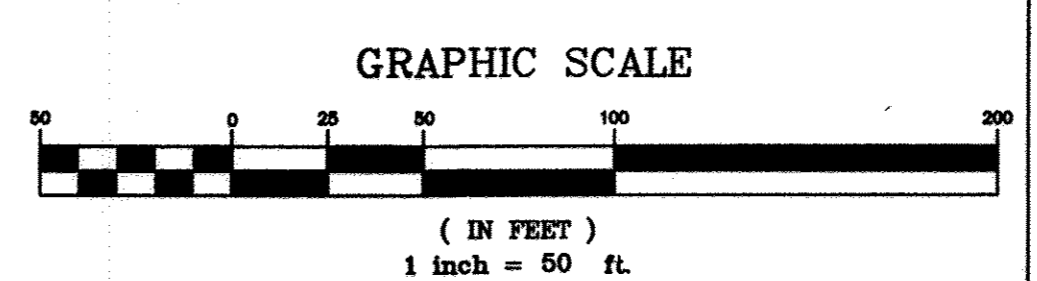
MARYLAND REG. NO. 27223 EXPIRATION DATE 3/19/2018  
 DATE OF AS-BUILT: 6/17/2014 & 6/27/2017

**MISS UTILITY**  
Service Protection Center  
CALL TOLL FREE 1-800-257-7777

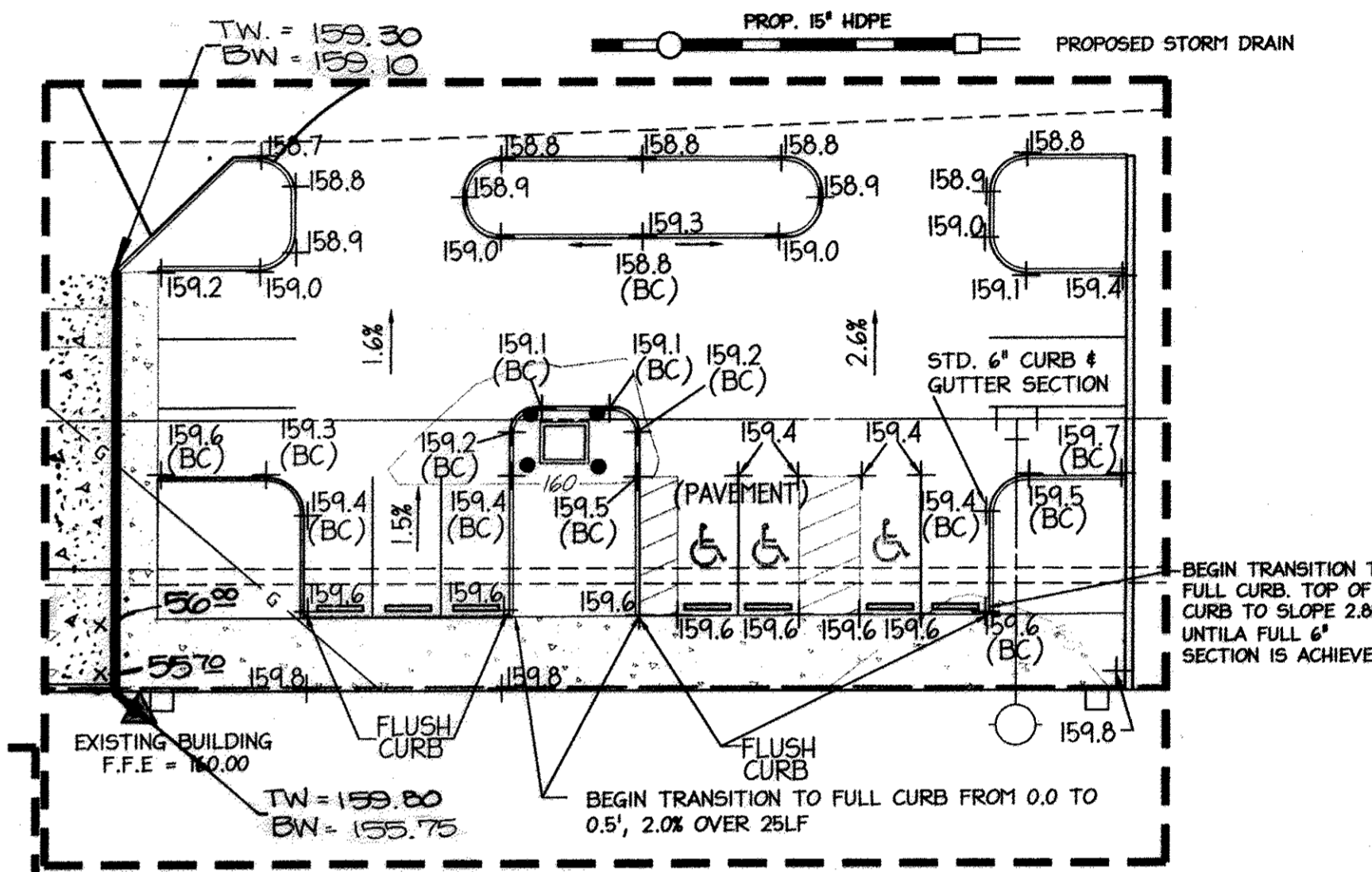
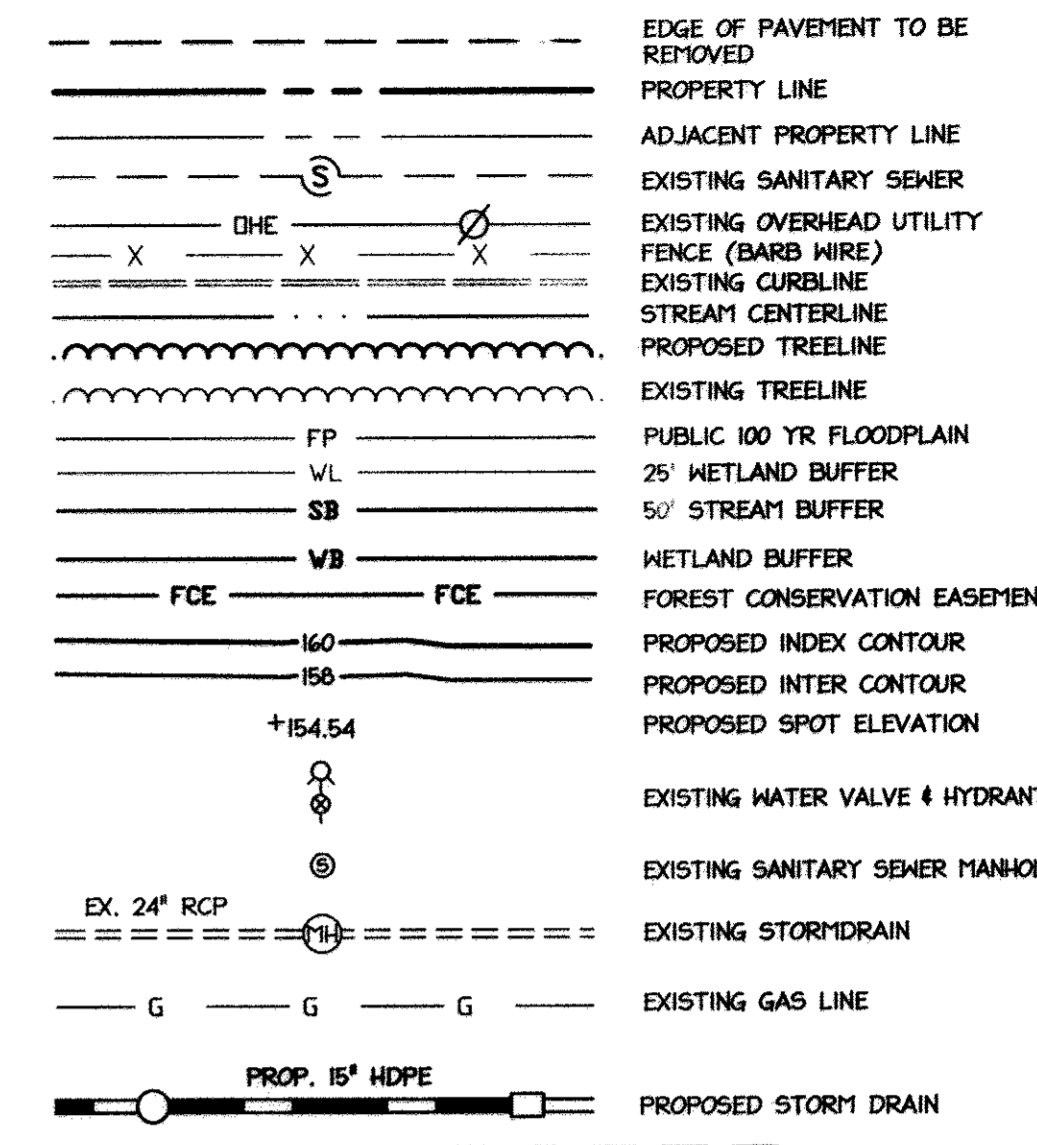
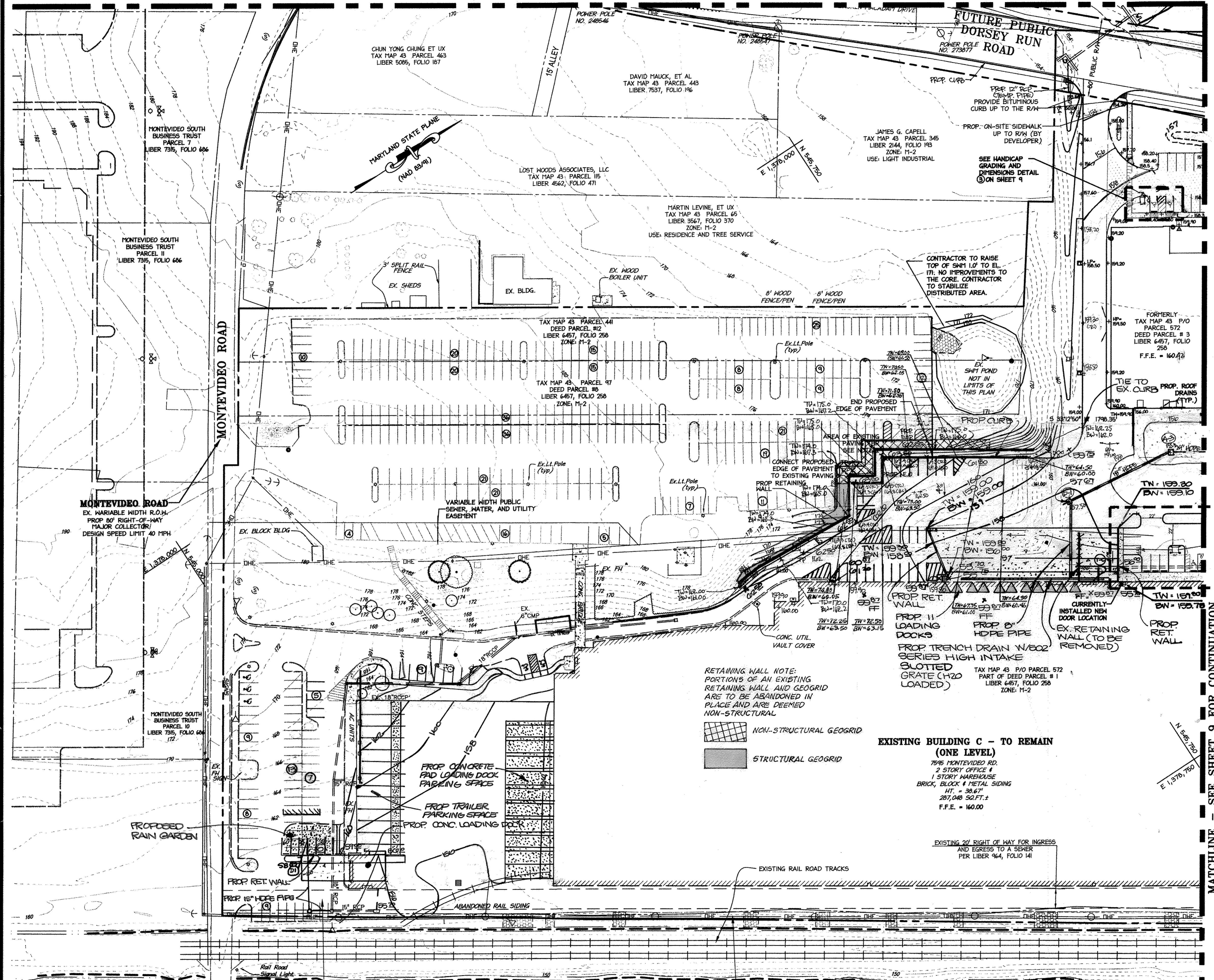
**STATE OF MARYLAND PROFESSIONAL ENGINEER**

DATE: 9.6.12

**STATE OF MARYLAND REGISTERED PROFESSIONAL ENGINEER**



MATCHLINE - SEE SHEET 10 FOR CONTINUATION



HANDICAP AND PARKING DETAIL

1" = 20'  
 NOTE: ALL SPOTS ARE TOP OF CURB UNLESS NOTED OTHERWISE.

SEE HANDICAP GRADING AND DIMENSIONS DETAIL ON THIS SHEET

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development *[Signature]* Date 10/31/12

Chief, Development Engineering Division *[Signature]* Date 10/17/12

Director, Department of Planning and Zoning *[Signature]* Date 10/16/12

3	4/2014	DEM OX LOADING CONC. NEW LOADING DOCK, RET. WALL AND GRADING, REV. PARKING COUNTS
2	11/2013	REDLINE REVISIONS TRENCH DRAIN LOADING DOCK, GRADING
1	1/2012	REDLINE REVISIONS
4	4/15	RETAINING WALL + WALL STUD

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

OWNER / DEVELOPER  
 MONTEVIDEO REALTY BUSINESS TRUST  
 C/O EXETER PROPERTY GROUP

140 N. GERMANTOWN PIKE, SUITE 150  
 PLYMOUTH MEETING, PA 19462  
 TEL: (610) 828-0756  
 FAX: (610) 828-5550

**christopher consultants**  
 engineering · surveying · land planning  
 christopher consultants, llc  
 7172 columbia gateway drive (suite 100) · columbia, md · 21046-2590  
 410.872.8888 · exts 301/381/0146 · fax 410.872.8883

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441

PLAT#	GRID#	ZONING	TAX MAP#	ELECT. DISTR.	CENSUS TRACT
L6457, F258	18	M-2	43	1ST	6012.02

WATER CODE	SEWER CODE
400 (TG 550)	B01

TITLE:  
**GRADING AND STORMDRAIN PLAN**

DESIGN:	SCALE:	PROJECT:
N1	1" = 50'	03067.008.07

DRAWN:	DATE:
DAM	SEPT 06 2012

CHECKED:	APPROVED:
ENJ	HRZ

8 of 45

**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.

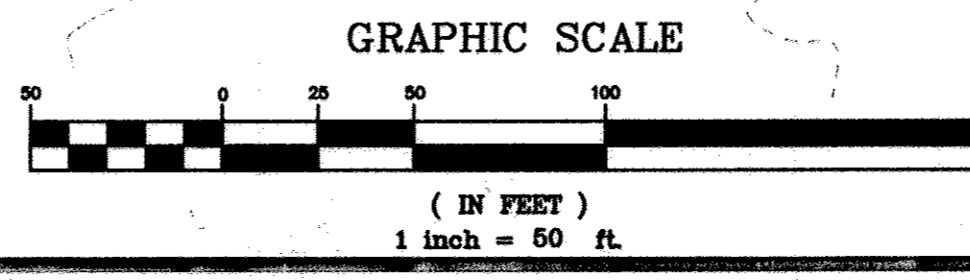
*[Signature]*  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20567  
 EXPIRATION DATE: 09-26-2014

DATE: 9.6.17

**AS-BUILT CERTIFICATION**  
 I HEREBY CERTIFY BY MY SEAL THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN, AND TO MEET THE APPROVED PLANS AND SPECIFICATIONS.

*[Signature]*  
 DAVID J. SHARON, PROFESSIONAL ENGINEER  
 MARYLAND REG. NO. 27223, EXPIRATION DATE: MARCH 14, 2015  
 DATE OF AS-BUILT: JUNE 17, 2014

DATE: 7/18/2017

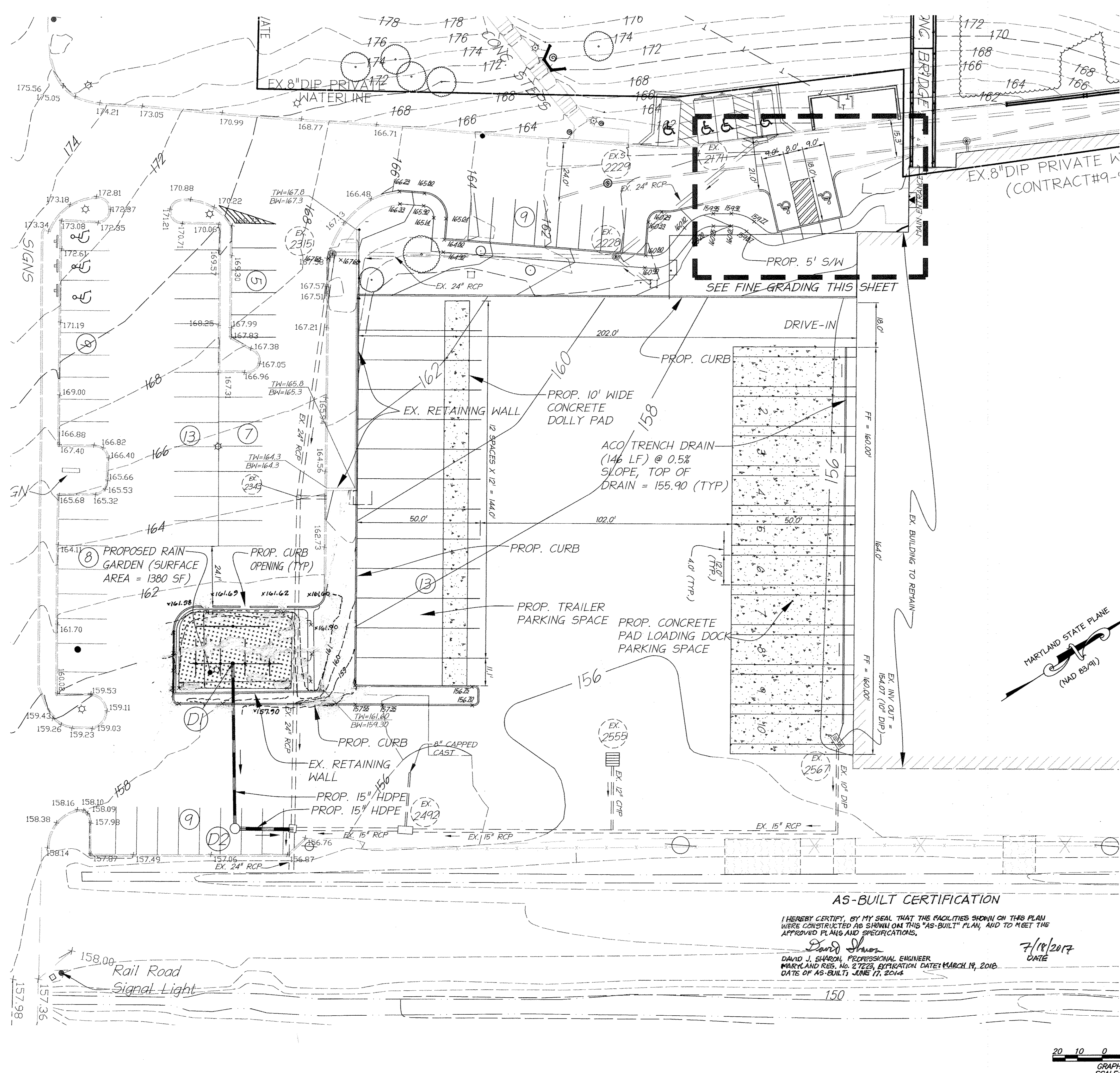


CSX TRANSPORTATION, INC.  
 VARIABLE WIDTH RAILROAD  
 RIGHT-OF-WAY  
 SHEET 3 OF 13 VALUATION MAP V08488

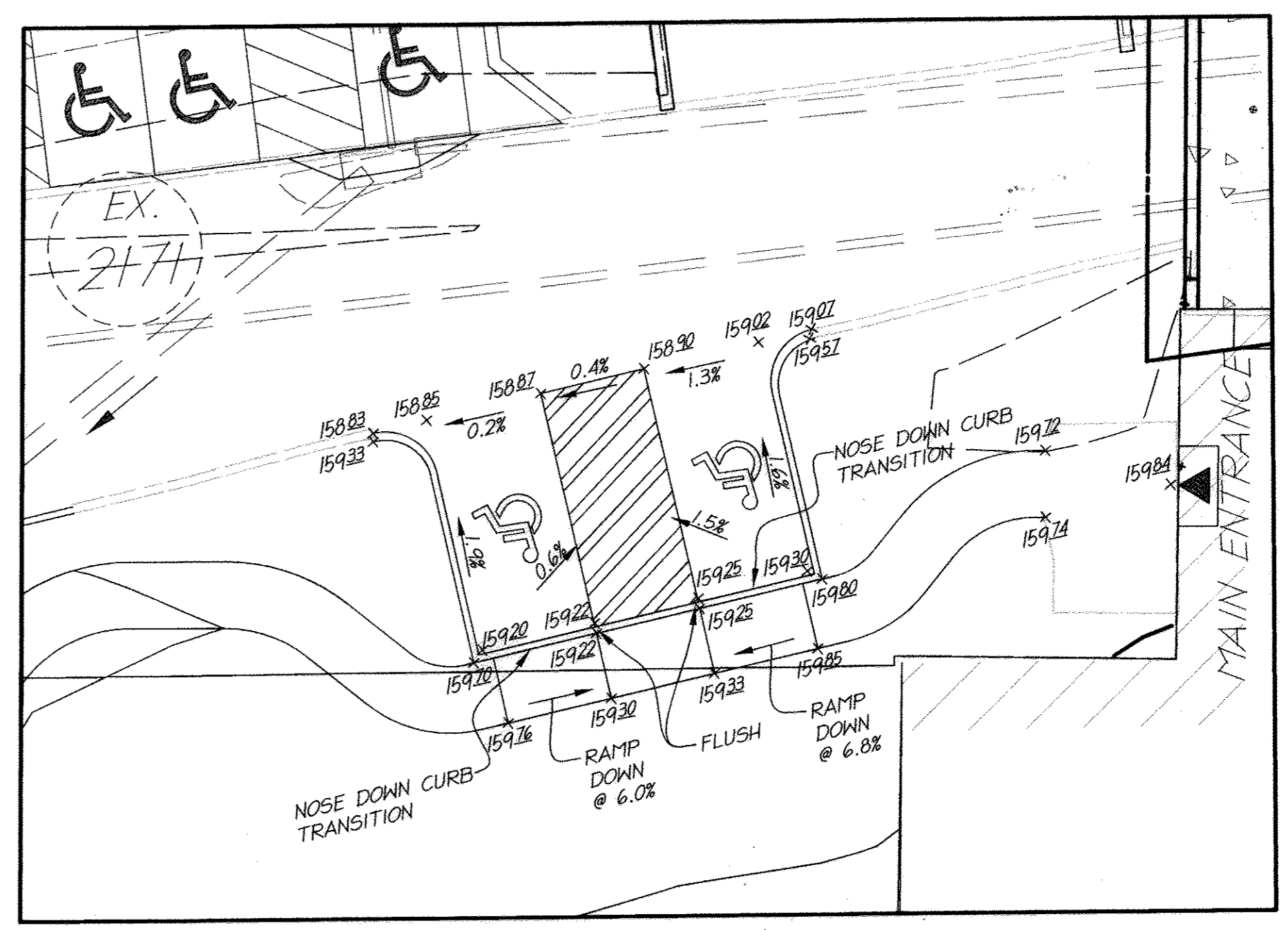
MATCHLINE - SEE SHEET 9 FOR CONTINUATION

DEMO BLDG, LOADING DOCK, TRUCK COURT, RAIN GARDEN

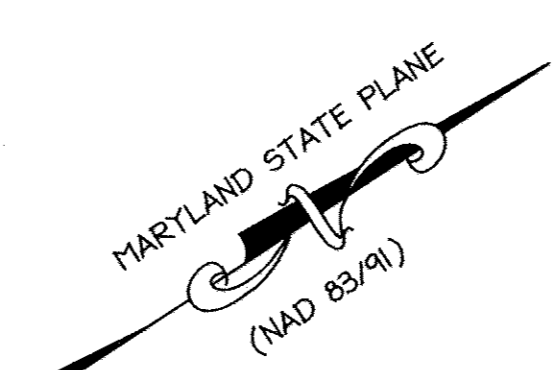




**PROFESSIONAL CERTIFICATION**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 SIGNATURE OF ENGINEER: *W.R. Zink*  
 DATE: 3/13/17  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20587  
 EXPIRATION DATE: 09-06-2016



FINE GRADING  
 SCALE: 1" = 10'



APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>Kestel</i>	3-29-17
Chief, Division of Land Development	Date
<i>W. J. Miller</i>	3-23-17
Chief, Development Engineering Division	Date
<i>W. J. Miller</i>	3-29-17
Director, Department of Planning and Zoning	Date

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

OWNER / DEVELOPER  
 MONTEVIDEO REALTY BUSINESS TRUST  
 C/O EXETER PROPERTY GROUP

140 W. GERMANTOWN PIKE, SUITE 150  
 PLYMOUTH MEETING, PA 19462  
 TEL (610) 828-0756  
 FAX (610) 828-5550

**christopher consultants**  
 engineering · surveying · land planning  
 christopher consultants, inc.  
 1712 columbian gateway drive suite 100 · columbia, md. 21046-2990  
 410.872.8890 · mobile 301.881.0148 · fax 410.872.8893

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME DORSEY RUN INDUSTRIAL CENTER	SECTION/AREA 43	LOT/PARCEL# 572,346,97,344,441
PLAT# L6457, F.258	GRID# 16	ZONING M-2
TAX MAP# 43	ELECT. DISTR. 1ST	CENSUS TRACT 6012.02
WATER CODE 400 (TG 550)	SEWER CODE B01	

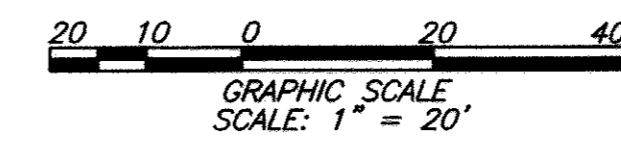
TITLE:  
**GRADING AND STORMDRAIN PLAN ENLARGEMENT**

DESIGN: NM1	SCALE: 1" = 20'	PROJECT: 03067.008.07
DRAWN: DAM1	DATE: SEPT 06 2012	
CHECKED: ENJ	APPROVED: WRZ	<b>8A of 45</b>

**AS-BUILT CERTIFICATION**

I HEREBY CERTIFY, BY MY SEAL THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN, AND TO MEET THE APPROVED PLANS AND SPECIFICATIONS.

*David Sharon*  
 DAVID J. SHARON, PROFESSIONAL ENGINEER  
 MARYLAND REG. NO. 27223, EXPIRATION DATE: MARCH 19, 2018  
 DATE OF AS-BUILT: JUNE 17, 2014  
 DATE: 7/18/2017

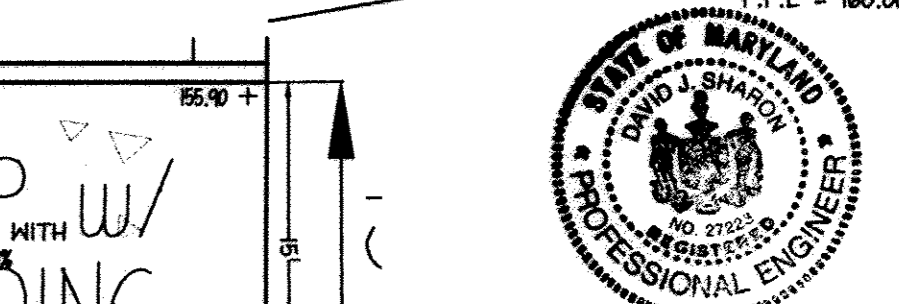
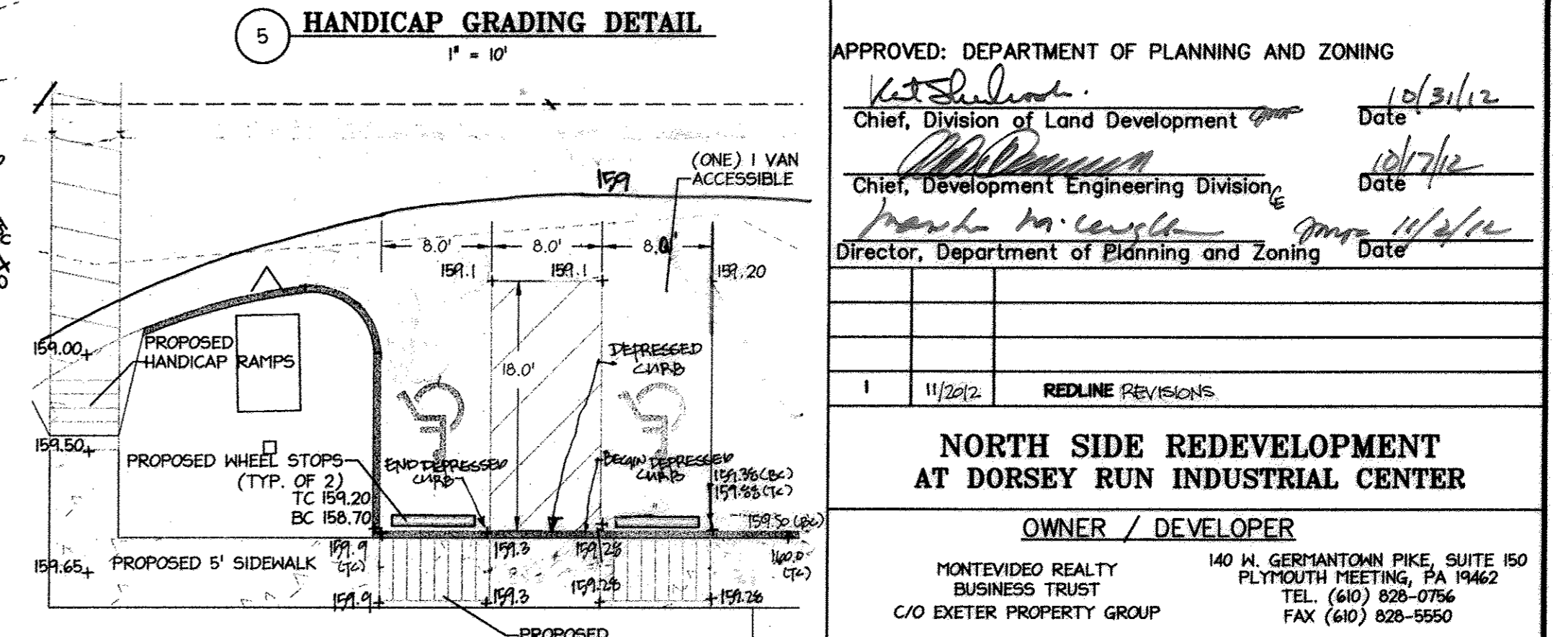
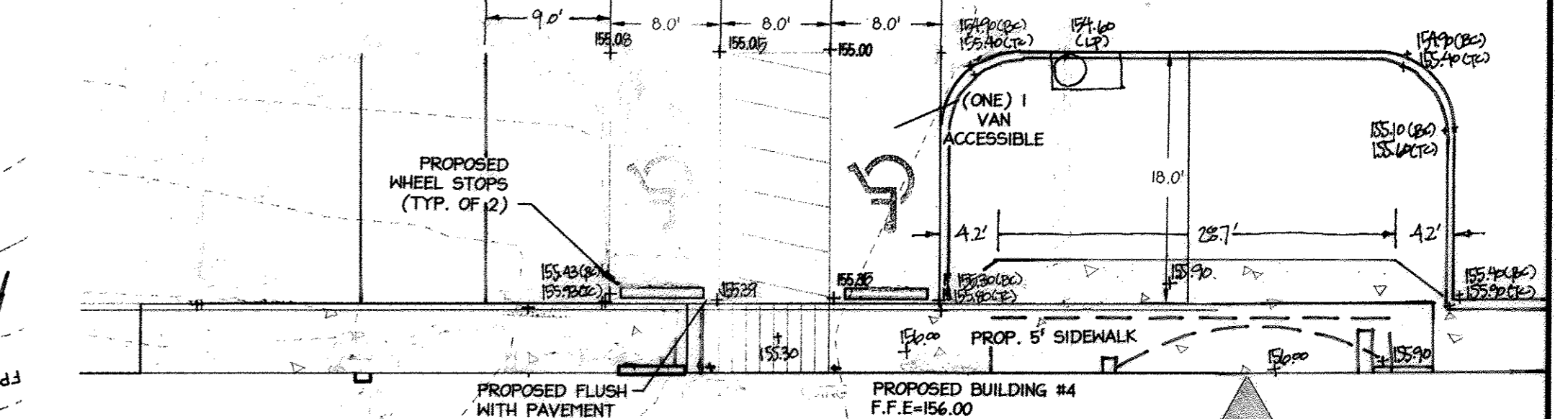
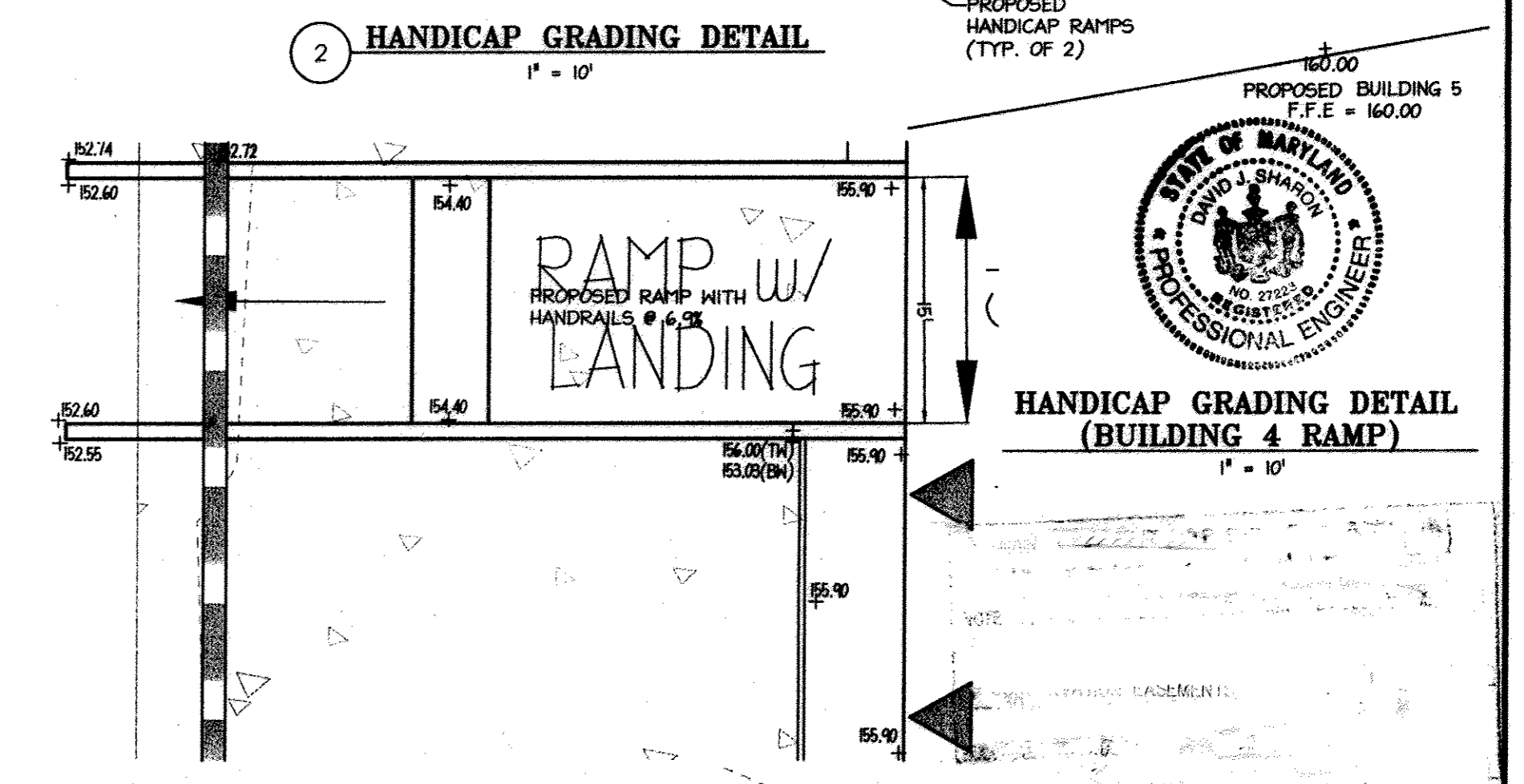
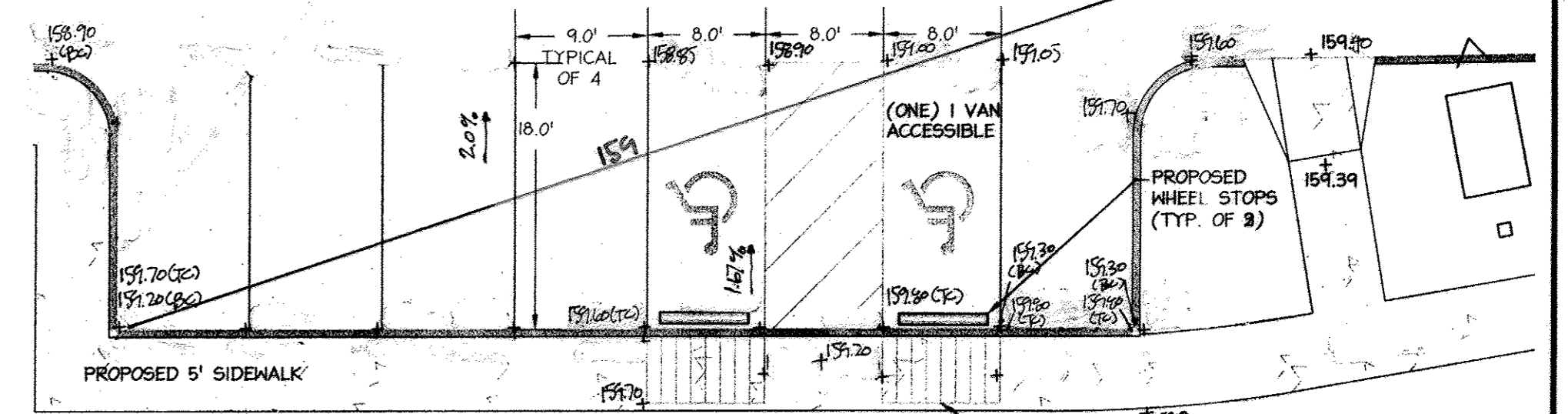
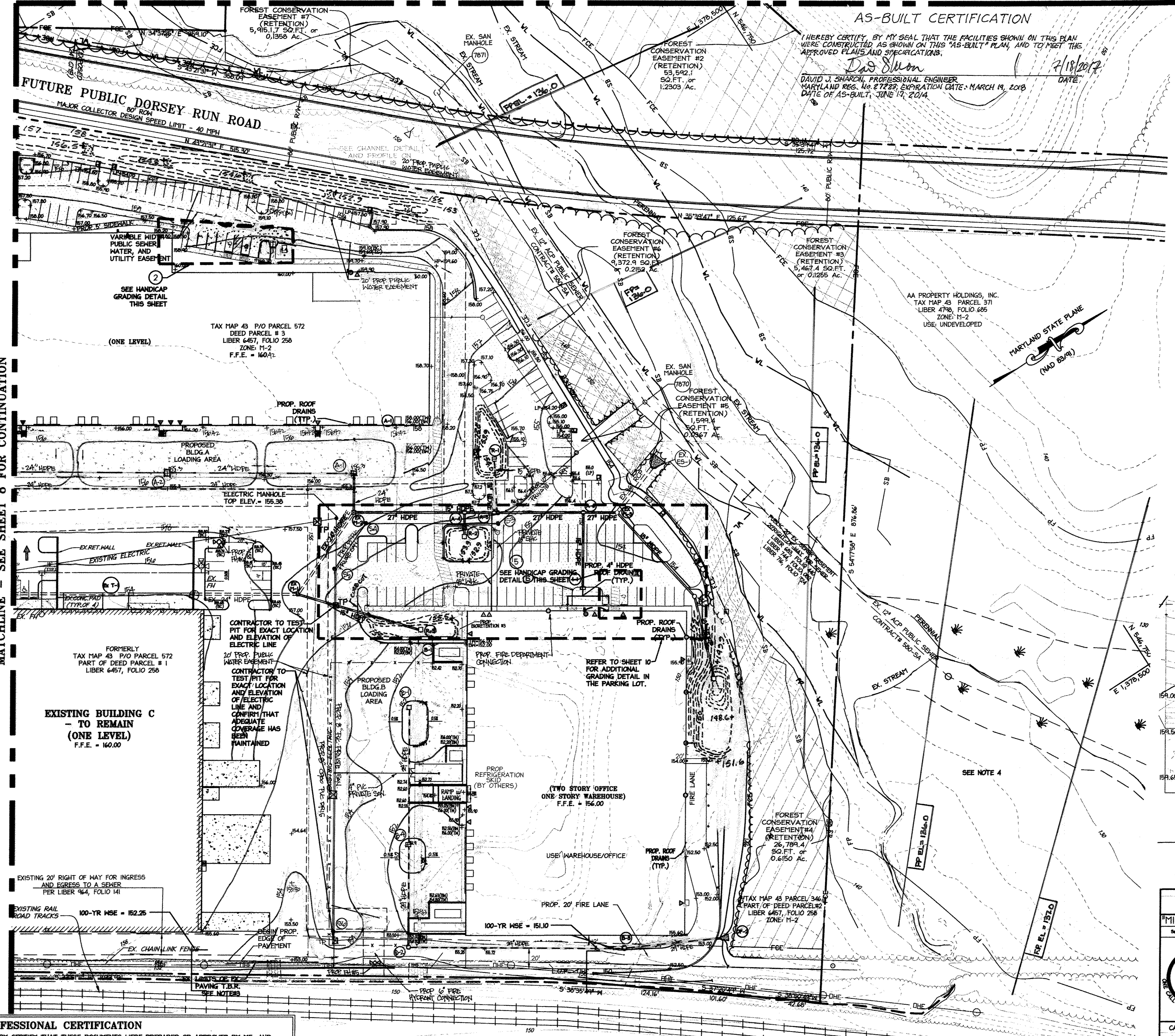


MATCHLINE - SEE SHEET 10 FOR CONTINUATION

AS-BUILT CERTIFICATION

I HEREBY CERTIFY BY MY SEAL THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN, AND TO MEET THE APPROVED PLANS AND SPECIFICATIONS.

*David J. Sharni*  
 DAVID J. SHARNI, PROFESSIONAL ENGINEER  
 MARYLAND REG. NO. 87222, EXPIRATION DATE - MARCH 19, 2018  
 DATE OF AS-BUILT, JUNE 19, 2014



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*David J. Sharni* 10/31/12  
 Chief, Division of Land Development Date

*Mark A. Carls* 10/17/12  
 Chief, Development Engineering Division Date

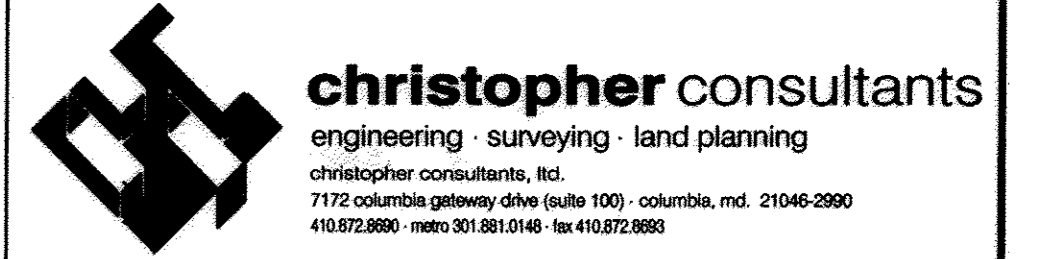
*Mark A. Carls* 10/17/12  
 Director, Department of Planning and Zoning Date

11/22/12 REDLINE REVISIONS

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

OWNER / DEVELOPER  
 MONTVIDEO REALTY BUSINESS TRUST  
 C/O EXETER PROPERTY GROUP

140 N. GERMANTOWN PIKE, SUITE 150  
 PLYMOUTH MEETING, PA 19462  
 TEL (610) 828-0756 FAX (610) 828-5550



PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART	
SUBDIVISION NAME DORSEY RUN INDUSTRIAL CENTER	SECTION/AREA 572,346,97,344,441
PLAT# L6457, F.258	GRID# M-2
ZONING M-2	TAX MAP# 43
ELECT. DIST. 151	CENSUS TRACT 6012.02
MATER. CODE 400 (TG 550)	SENER CODE B01

TITLE: GRADING AND STORMDRAIN PLAN		
DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.008.07
DRAWN: DAM	DATE: SEP 06 2012	
CHECKED: ENJ	APPROVED: WRZ	9 OF 45

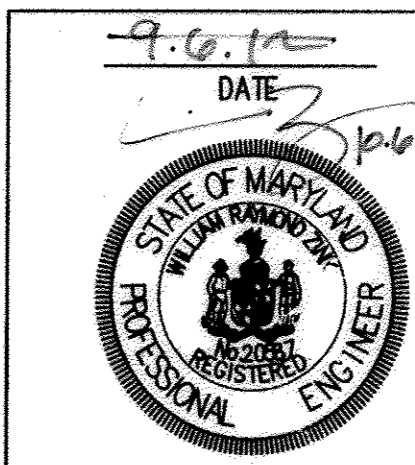
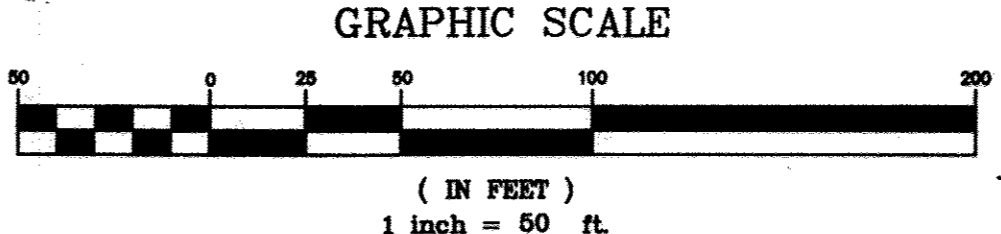
**PROFESSIONAL CERTIFICATION**

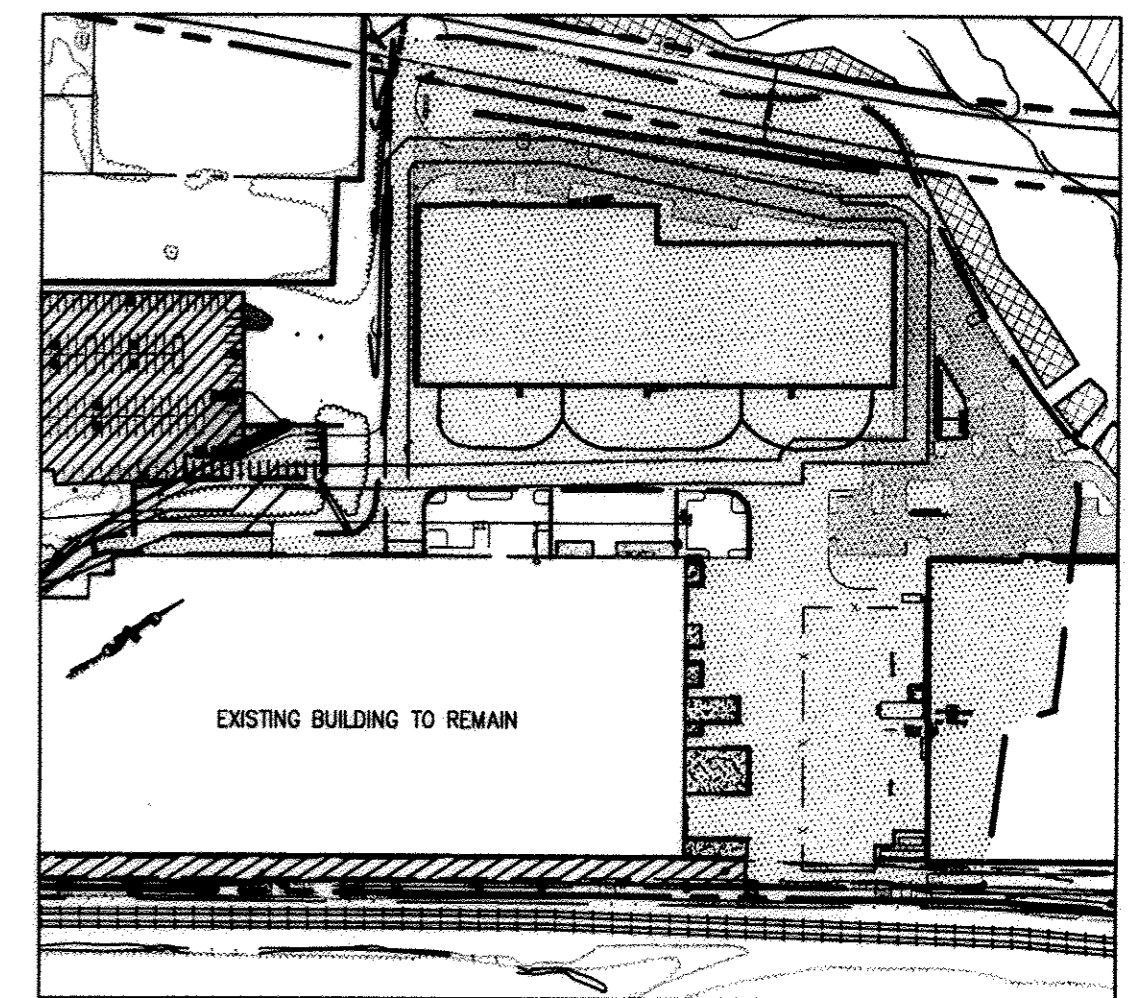
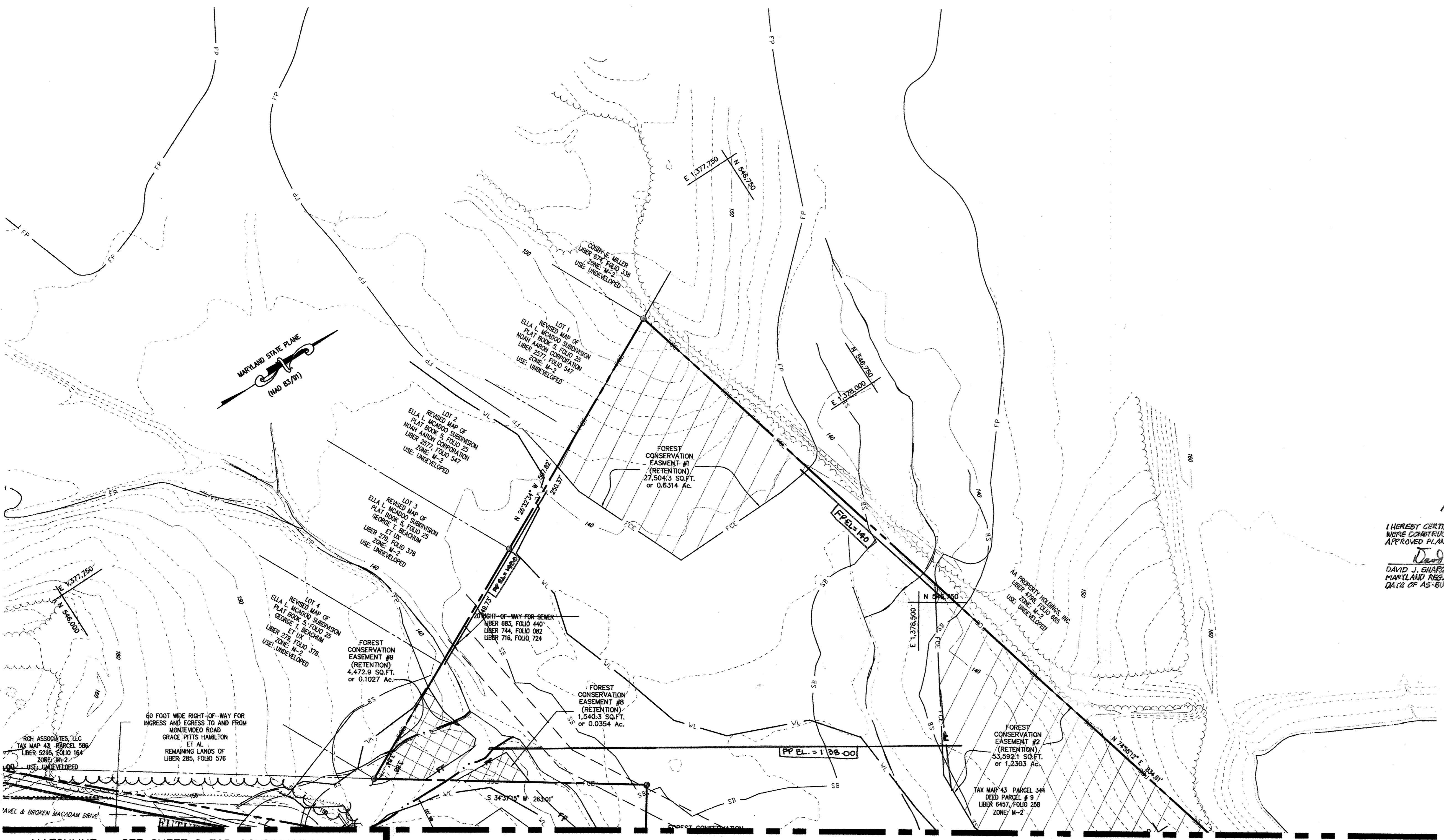
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

*William R. Zink*  
 SIGNATURE OF ENGINEER  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20567  
 EXPIRATION DATE: 09-26-2014

DATE: 9.6.12

CSX TRANSPORTATION, INC.  
 VARIABLE WIDTH RAILROAD.  
 RIGHT-OF-WAY  
 1/3 OF 13 VALUATION MAP V08468





**LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR)**  
 SCALE: 1" = 200'  
 EXISTING PAVEMENT TO BE REMOVED [Symbol]  
 EXISTING PAVEMENT TO BE REMAIN [Symbol]

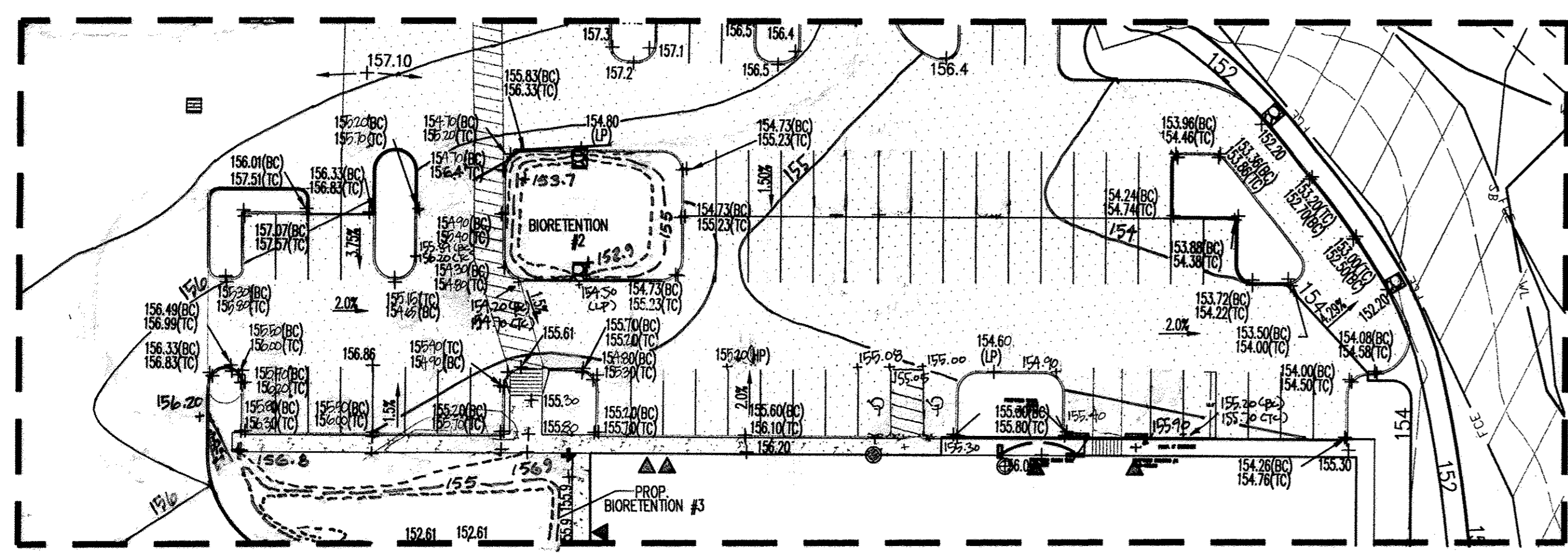
- NOTES**
- PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
  - PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ABOVE FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE.

**AS-BUILT CERTIFICATION**

I HEREBY CERTIFY, BY MY SEAL THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN, AND TO MEET THE APPROVED PLANS AND SPECIFICATIONS.  
 David Sharon 7/18/2014  
 DAVID J. SHARON, PROFESSIONAL ENGINEER  
 MARYLAND REG. NO. 27223, EXPIRATION DATE: MARCH 19, 2016  
 DATE OF AS-BUILT: JUNE 17, 2014

MATCHLINE - SEE SHEET 8 FOR CONTINUATION

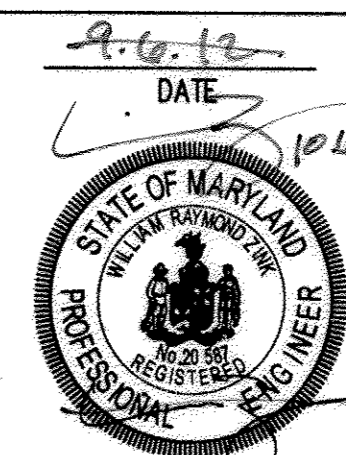
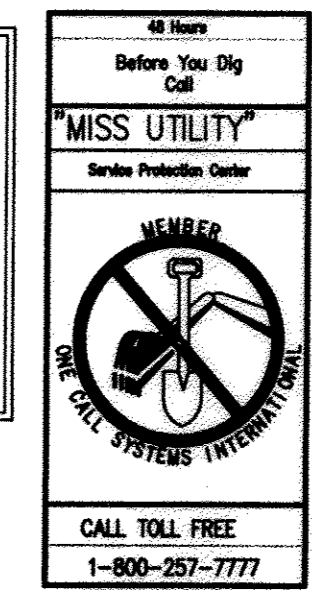
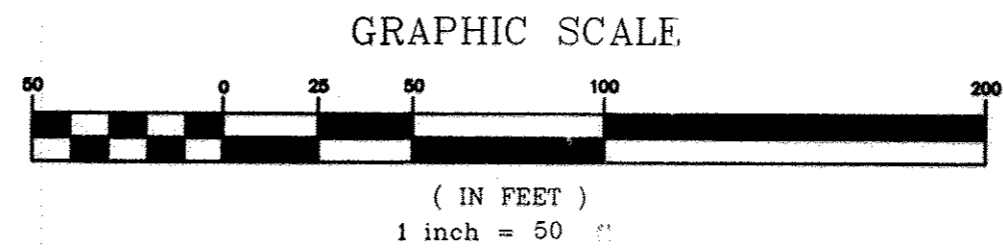
MATCHLINE - SEE SHEET 9 FOR CONTINUATION



**LEGEND**

[Symbol]	EDGE OF PAVEMENT TO BE REMOVED
[Symbol]	PROPERTY LINE
[Symbol]	ADJACENT PROPERTY LINE
[Symbol]	EXISTING SANITARY SEWER
[Symbol]	DHE
[Symbol]	EXISTING OVERHEAD UTILITY
[Symbol]	FENCE (BARB WIRE)
[Symbol]	EXISTING CURBLINE
[Symbol]	STREAM CENTERLINE
[Symbol]	PROPOSED TREELINE
[Symbol]	EXISTING TREELINE
[Symbol]	PUBLIC 100 YR FLOODPLAIN
[Symbol]	25' WETLAND BUFFER
[Symbol]	50' STREAM BUFFER
[Symbol]	WETLAND BUFFER
[Symbol]	FOREST CONSERVATION EASEMENT
[Symbol]	RETENTION FOREST CONSERVATION EASEMENT (NONE ON THIS SHEET)
[Symbol]	RETENTION FOREST CONSERVATION EASEMENT NON CREDITED EASEMENT

**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.  
 SIGNATURE OF ENGINEER [Signature] DATE 9.6.12  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20587  
 EXPIRATION DATE: 09-28-2014



**APPROVED: DEPARTMENT OF PLANNING AND ZONING**  
 [Signature] 10/31/12  
 Chief, Division of Land Development  
 [Signature] 10/17/12  
 Chief, Development Engineering Division  
 [Signature] 11/3/12  
 Director, Department of Planning and Zoning

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**  
 OWNER / DEVELOPER  
 MONTEVIDEO REALTY BUSINESS TRUST 140 W. GERMANTOWN PIKE, SUITE 150 PLYMOUTH MEETING, PA 19462  
 C/O EXETER PROPERTY GROUP TEL: (610) 828-0756 FAX: (610) 828-5550

**christopher consultants**  
 engineering · surveying · land planning  
 christopher consultants, ltd.  
 7172 columbia gateway drive (suite 100) · columbia, md. 21046-2890  
 410.872.2800 · 410.872.0111 · fax 410.872.2880

**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG 6
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

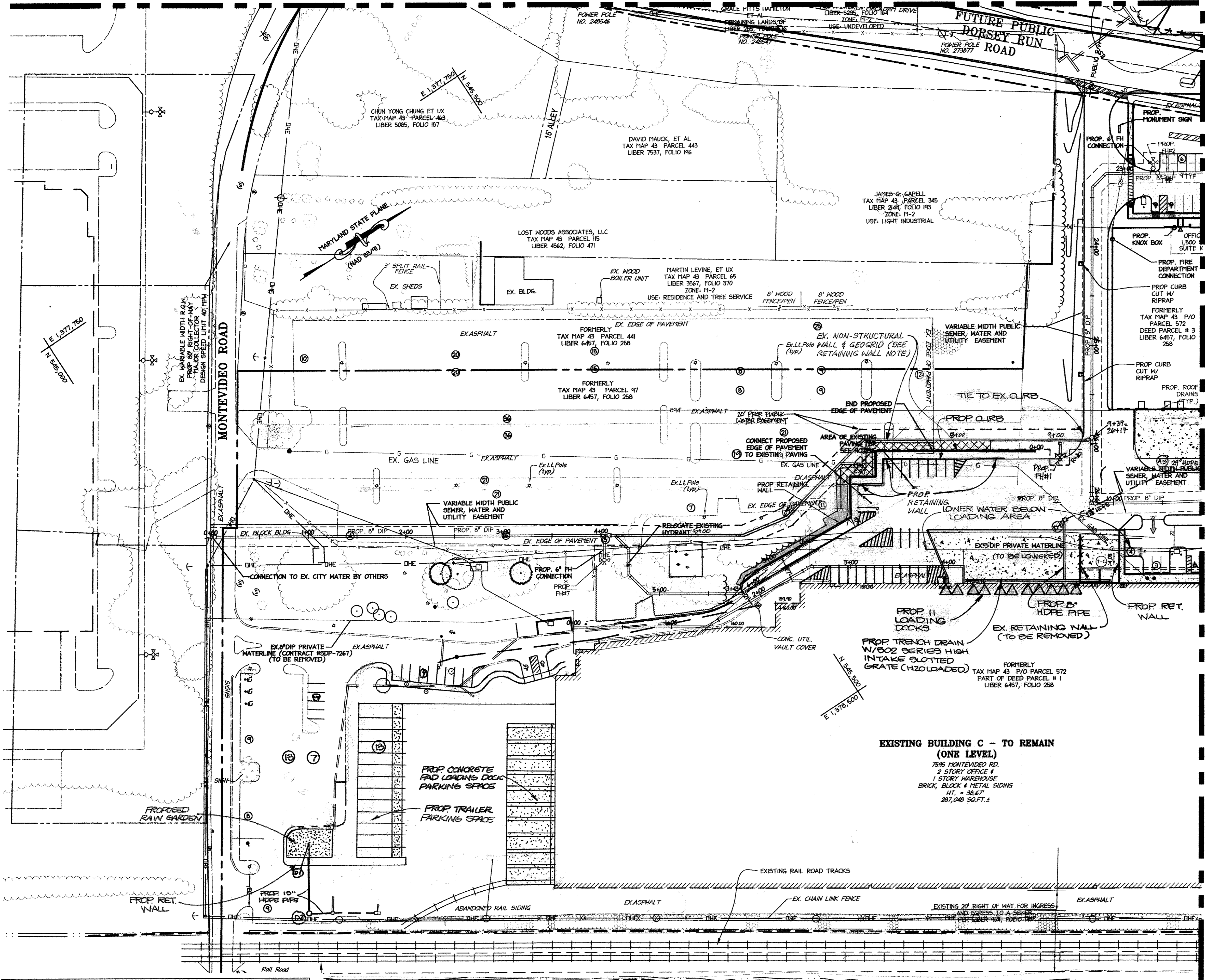
SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER	4.3	572,346,97,344,441

**TITLE: GRADING AND STORMDRAIN PLAN**

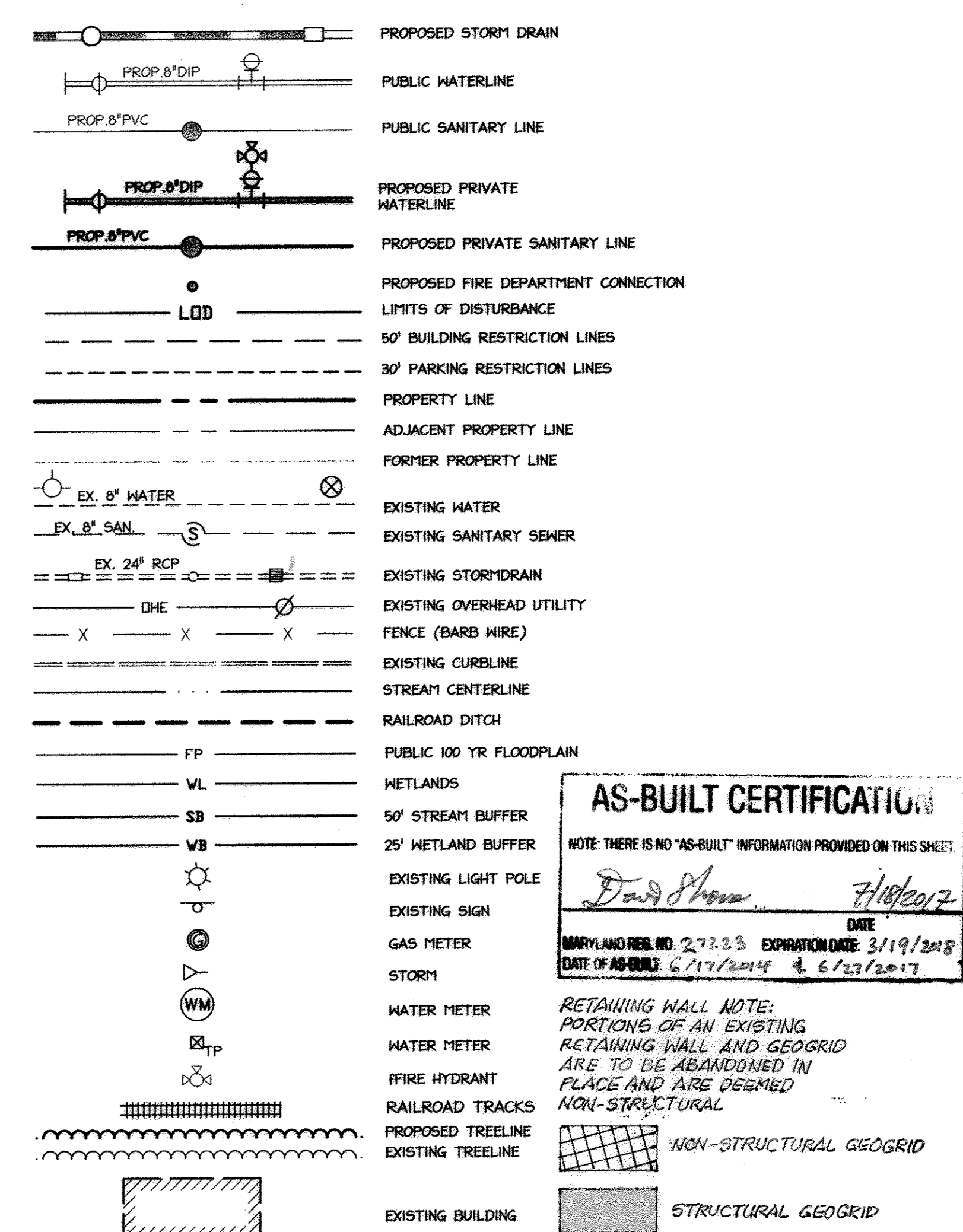
DESIGN	SCALE	DATE	PROJECT
NM	1" = 50'	SEPT 06 2012	03067.008.07
DAM			
ENJ			

10 OF 45

MATCHLINE - SEE SHEET 13 FOR CONTINUATION



LEGEND



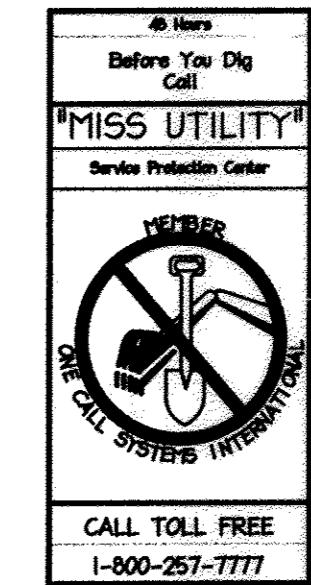
**AS-BUILT CERTIFICATION**  
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.  
 David Shuman 7/18/2012  
 DATE  
 MARYLAND REG. NO. 27223 EXPIRATION DATE: 3/19/2018  
 DATE OF AS-BUILT: 6/17/2014 & 6/27/2017

**RETAINING WALL NOTE:**  
 PORTIONS OF AN EXISTING  
 RETAINING WALL AND GEOGRID  
 ARE TO BE ABANDONED IN  
 PLACE AND ARE DEEMED  
 NON-STRUCTURAL

MATCHLINE - SEE SHEET 12 FOR CONTINUATION

NOTE

- PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
- PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TR) PLAN ON SHEET 19 FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE.



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Division of Land Development  
 Chief, Development Engineering Division  
 Director, Department of Planning and Zoning

3	4/2014	DEP EX GRADING, CONC. PAD, LOADING DOCK, GRAD
2	11/2013	REDLINE REVISIONS, TRENCH DRAIN
1	11/2012	LOADING DOCK, GRADING
4	4/15	RETAINING WALL + W/L STUB

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**  
 OWNER / DEVELOPER  
 MONTEVIDEO REALTY BUSINESS TRUST  
 C/O EXETER PROPERTY GROUP

**christopher consultants**  
 engineering · surveying · land planning  
 christopher consultants, llc  
 7172 columbia gateway drive (suite 100) · columbia, md. 21046-2990  
 410.872.8600 · memo:301.861.0148 · fax:410.872.8603

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELK RIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 4

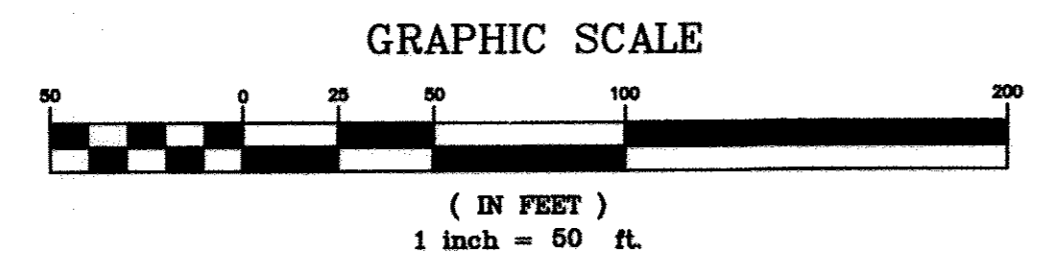
PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441
PLAT# L6457, F.258	GRID# 16 ZONING M-2 TAX MAP# 43 ELECT. DISTR. 1ST CENSUS TRACT 6012.02	
WATER CODE 400 (TG 550)	SEWER CODE 801	

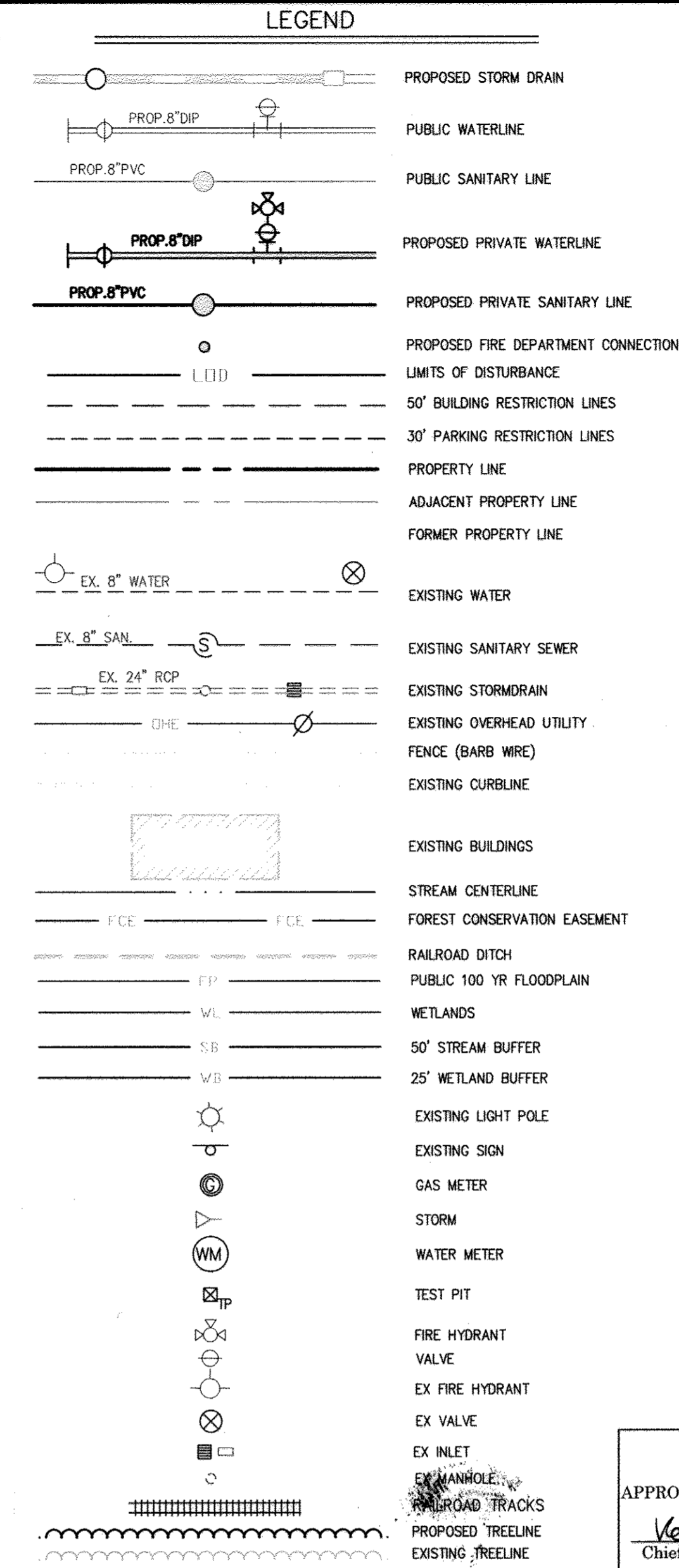
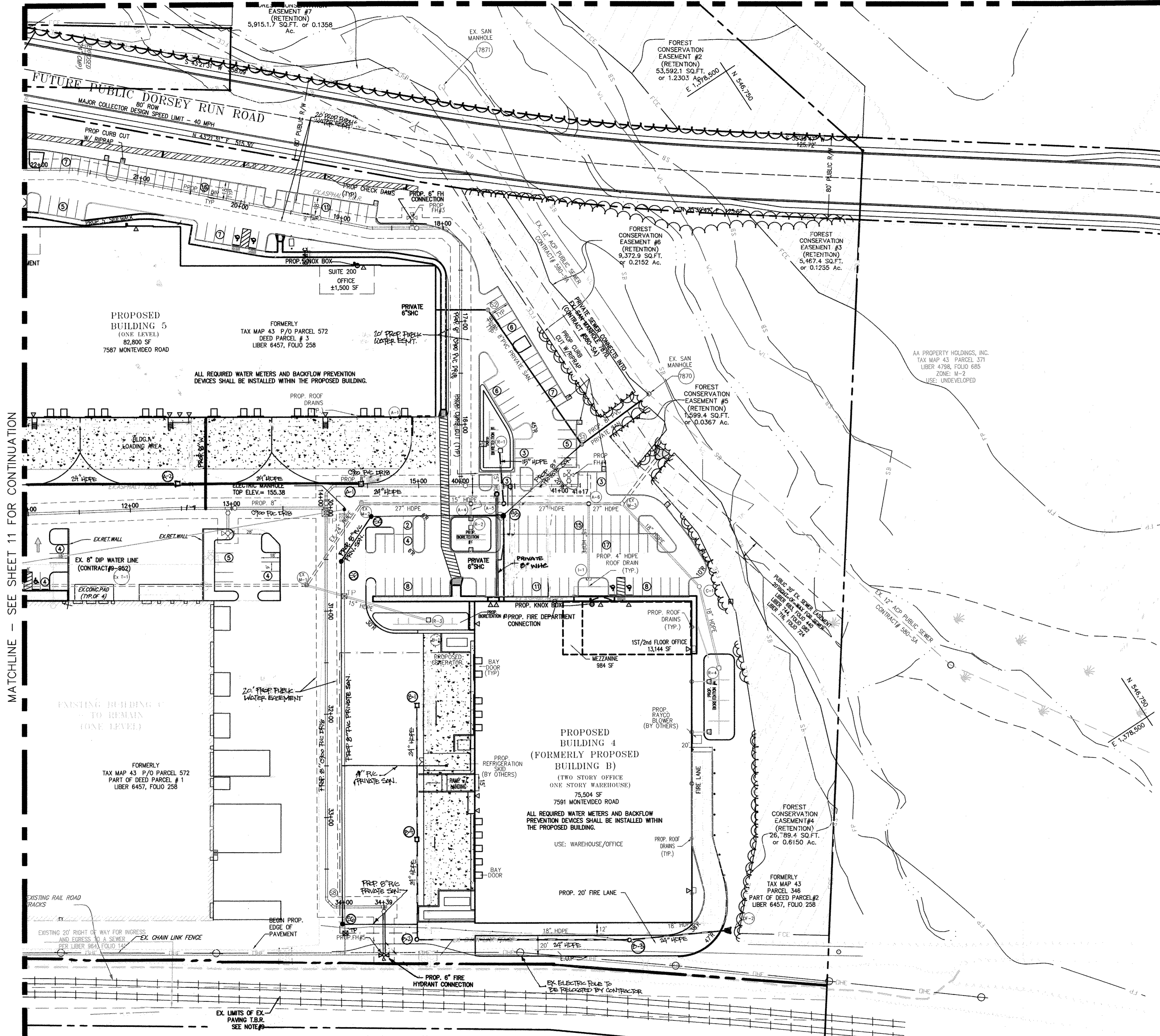
TITLE: **UTILITY PLAN**

DESIGN: NM	SCALE: 1" = 50'	PROJECT: 09067.008.07
DRAWN: DAP1	DATE: SEPT 06 2012	
CHECKED: ENJ	APPROVED: WRZ	11 OF 45

**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.  
 SIGNATURE OF ENGINEER: [Signature]  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20567  
 EXPIRATION DATE: 09-26-2014



MATCHLINE - SEE SHEET 13 FOR CONTINUATION



- GENERAL NOTES:**
- ALL WATER MAINS AND 8" SEWER MAINS ASSOCIATED WITH THIS REDEVELOPMENT PROJECT SHALL BE D.I.P. CLASS 54 (0-900 PVC IN CORROSION "HOT-SPOT" ONLY).
  - THE VERTICAL AND HORIZONTAL LOCATION OF THE EXISTING 8" WATERMAIN HAS NOT BEEN FIELD VERIFIED SO, THE GENERAL CONTRACTOR SHALL PROVIDE TEST PITS TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF THE EXISTING WATERMAIN PRIOR TO MAKING NEW CONNECTIONS FOR EXTENSIONS.
  - ALL REQUIRED WATER METERS AND BACKFLOW PREVENTION DEVICES SHALL BE INSTALLED WITHIN THE PROPOSED BUILDING.
  - THE PURPOSE OF THIS PLAN IS TO DEPICT THE DESIGN LAYOUT OF PUBLIC WATER AND SEWER LINES ONLY. ALL OTHER PROPOSED IMPROVEMENTS DEPICTED ON THIS PLAN ARE FOR INFORMATIONAL PURPOSES ONLY AND WILL BE CONSTRUCTED BY OTHERS AS PART OF A SITE DEVELOPMENT PLAN.
  - ANY FILL REQUIRED UNDER A PROPOSED WATERMAIN SHALL BE 95% COMPACTED PER AASHTO STANDARD T-180.
  - EXISTING VALVES SHALL BE CLOSED TEMPORARILY WHEN A NEW WATERMAIN CONNECTION IS MADE TO THE EXISTING LINES. THE SERVICE TO EXISTING FIRE HYDRANT LOCATED TO THE NORTH OF THE EXISTING BUILDING WILL BE INTERRUPTED BY CLOSING EXISTING VALVE. WHILE THIS CONNECTION IS MADE, USE TAPPING SLEEVE AND VALVES FOR CONNECTION TO EXISTING WATER MAIN.
  - THE PUBLIC SEWER MANHOLES PROPOSED AS PART OF THIS PLAN SET SHALL BE STANDARD PRECAST MANHOLES PER COUNTY DETAIL 05.11 AND THE DROP MANHOLES SHALL BE TYPE "A" STANDARD COUNTY DETAIL 51.32.
  - PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 34 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
  - PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ON SHEET 13 FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE.
  - PLEASE REFER TO SHEET 34 FOR FLOODPLAIN ELEVATIONS.
  - CONTRACTOR TO TEST PIT FOR EXACT LOCATION (HORIZONTAL AND VERTICAL) OF EXISTING PRIVATE WATER LINE AND SEWER LINE. IF THE ELEVATION PROVIDED IS GREATER THAN 1.0' CONTACT THE ENGINEER IMMEDIATELY TO CONFIRM PROPOSED ALIGNMENT.

**AS-BUILT CERTIFICATION**

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

*David J. Zink* 7/18/2017  
DATE

MARYLAND REG. NO. 27223 EXPIRATION DATE: 3/19/2018  
DATE OF AS-BUILT: 6/17/2014 & 6/27/2017



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Veronica...* 10/3/12  
Chief, Division of Land Development Date

*...* 10/17/12  
Chief, Development Engineering Division Date

*...* 11/2/12  
Director, Department of Planning and Zoning Date

1 11/2012 REDUCE REVISIONS

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

**OWNER / DEVELOPER**  
MONTEVIDEO REALTY BUSINESS TRUST  
C/O EXETER PROPERTY GROUP

140 W. GERMANTOWN PIKE, SUITE 150  
PLYMOUTH MEETING, PA 19462  
TEL. (610) 828-0756  
FAX (610) 828-5550

**christopher consultants**  
engineering · surveying · land planning

christopher consultants, inc.  
7172 columbian gateway drive, suite 100, columbia, md. 21046-2900  
410.872.8880 · fax: 410.872.8883

**ADDRESS CHART**

PARCEL #	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELK RIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441
PLAT # L6457, F.258	GRID # 16	ZONING M-2
TAX MAP # 43	ELECT. DIST. 1ST	CENSUS TRACT 6012.02
WATER CODE 400	(TG 550)	SEWER CODE B01

**UTILITY PLAN**

DESIGN:	NM	SCALE:	1" = 50'	PROJECT:	03067.008.07
DRAWN:	DAM	DATE:	SEPT 06 2012		
CHECKED:	ENJ	APPROVED:	WRZ		

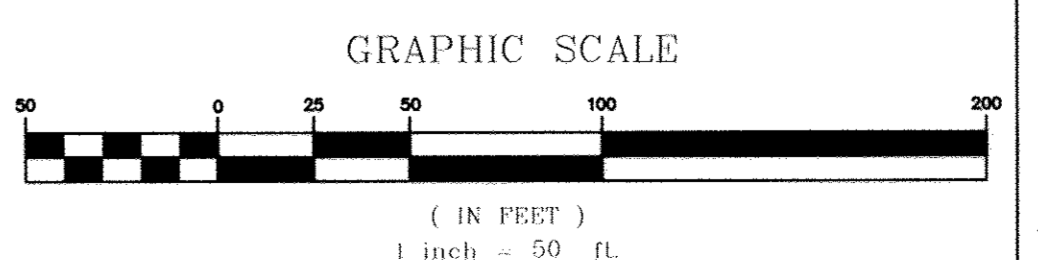
**PROFESSIONAL CERTIFICATION**

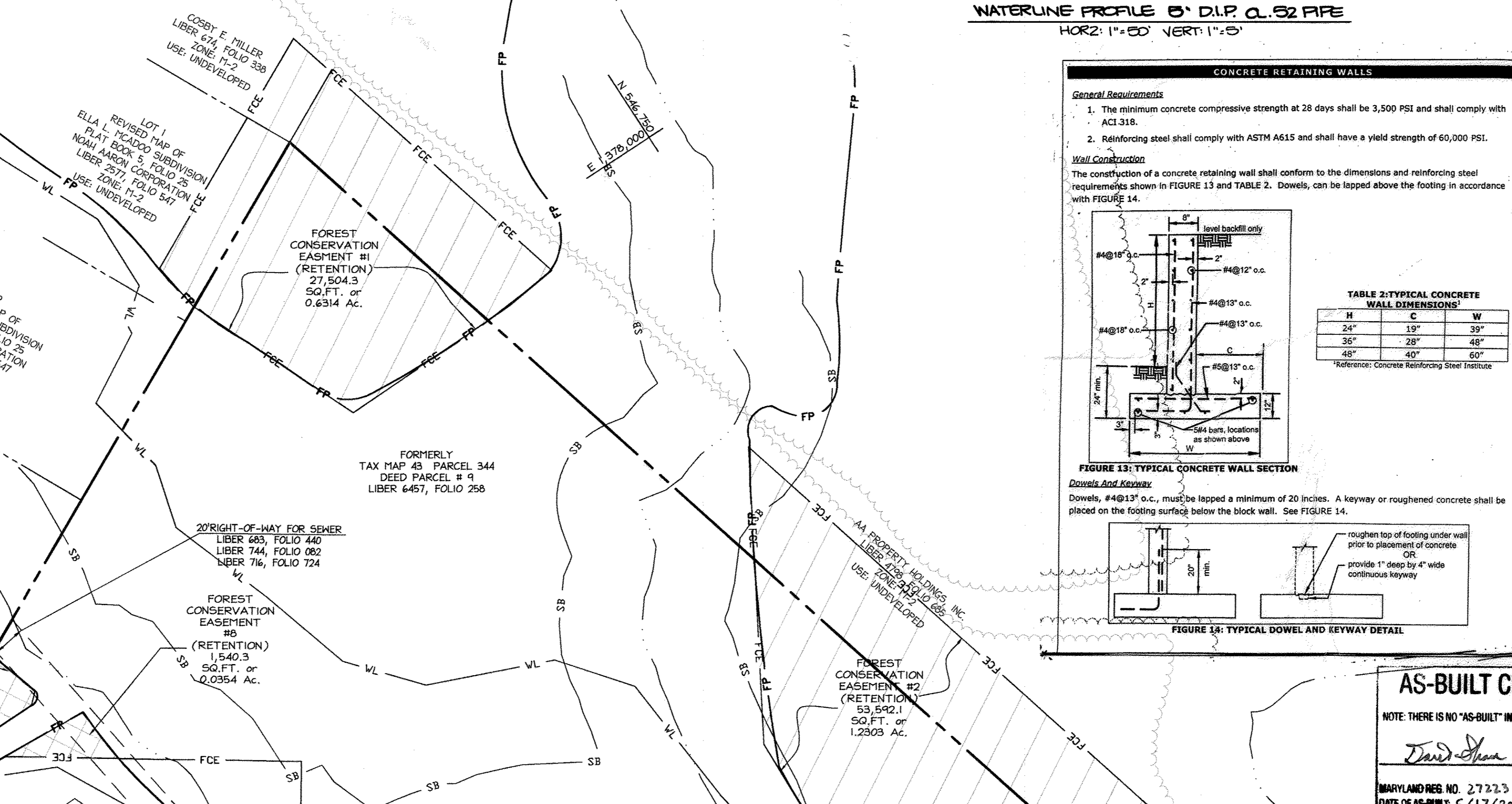
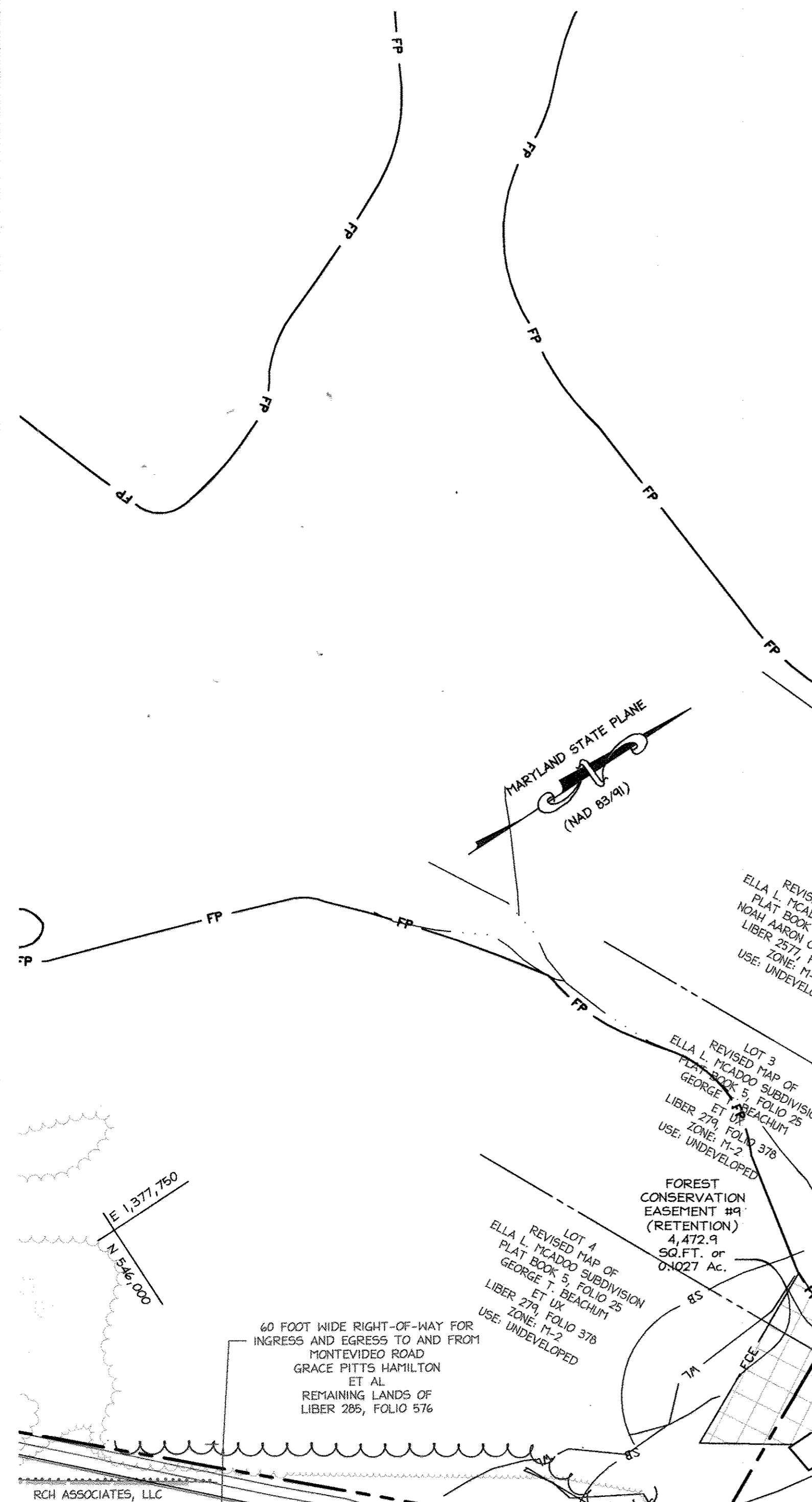
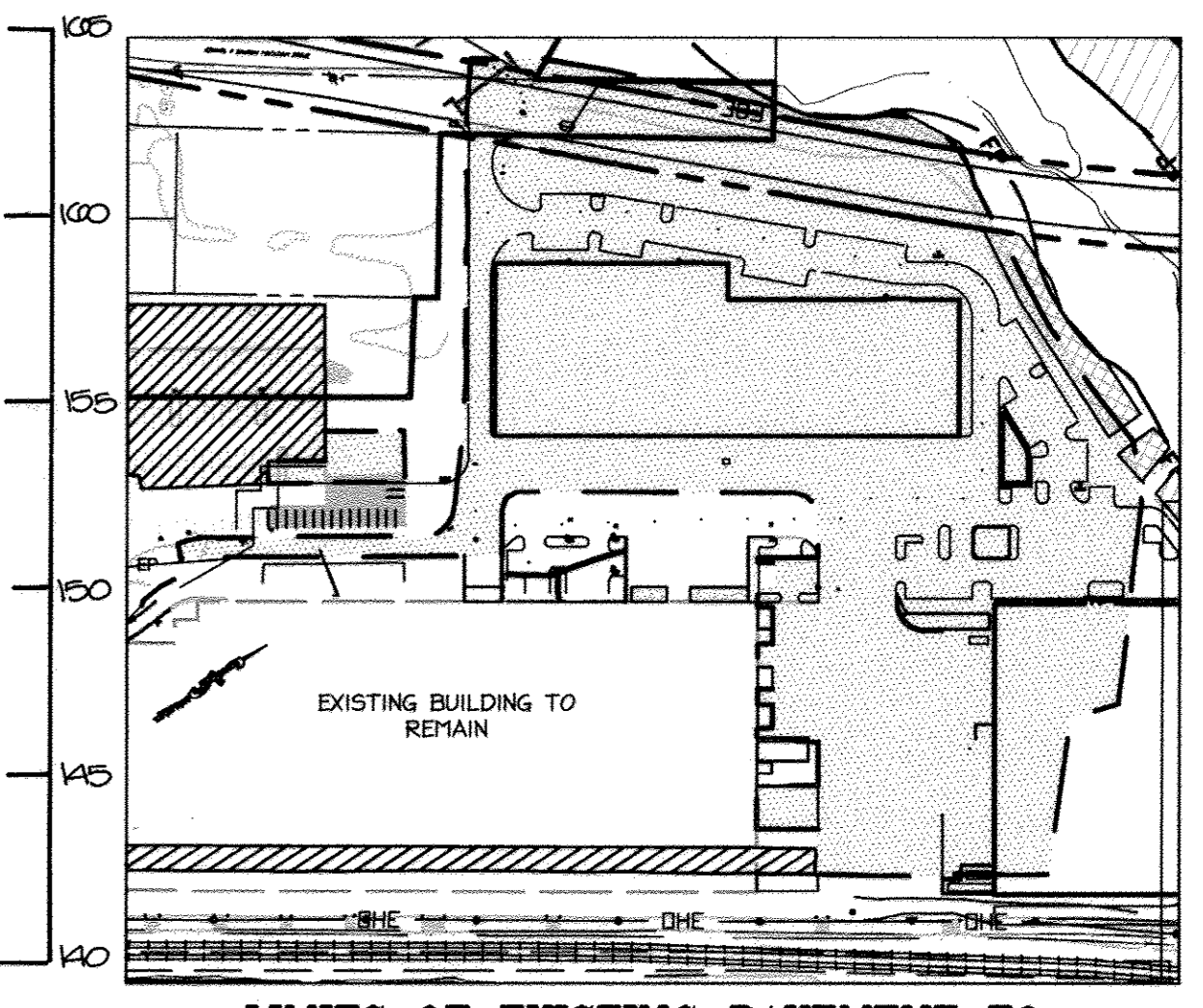
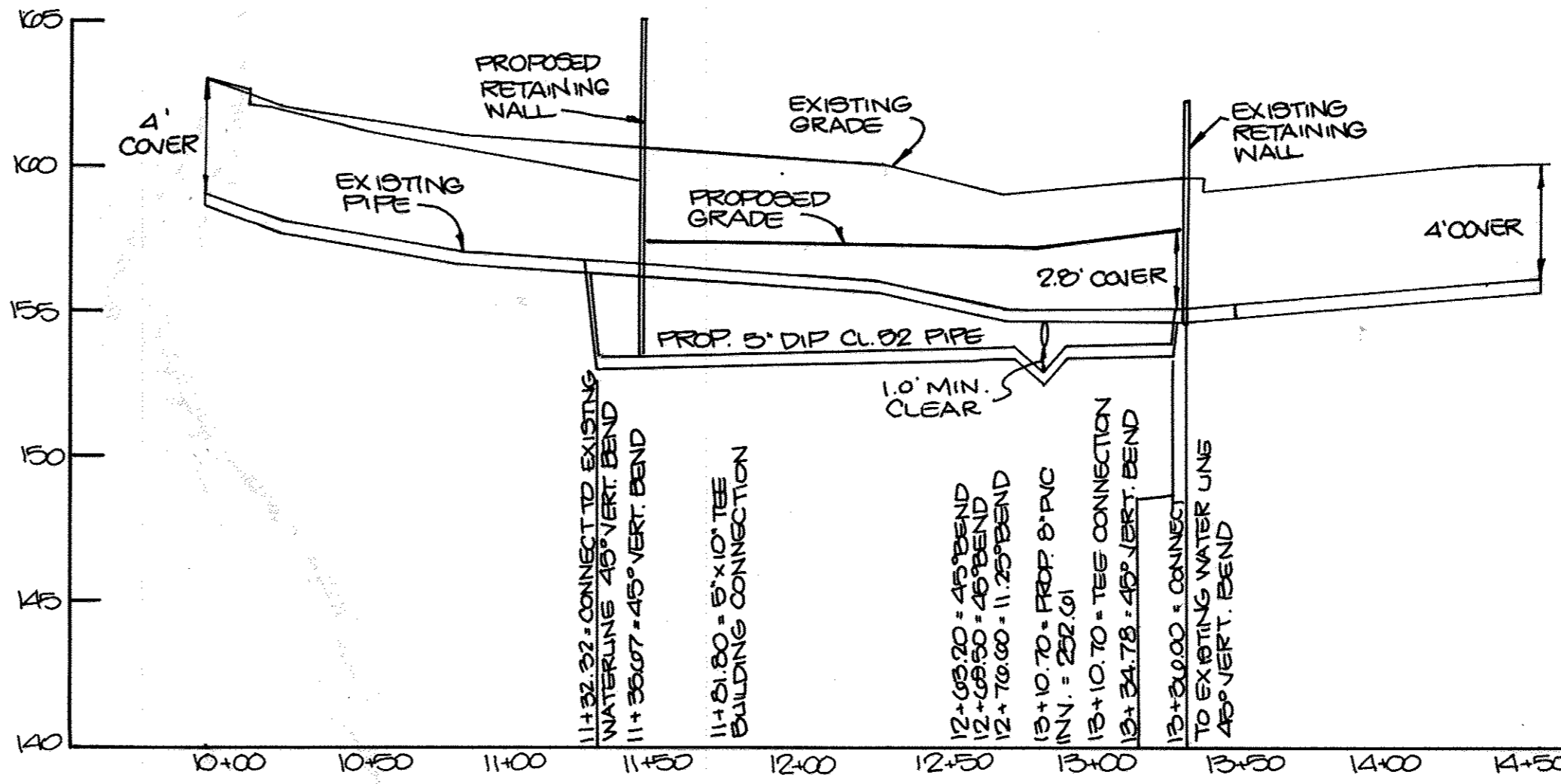
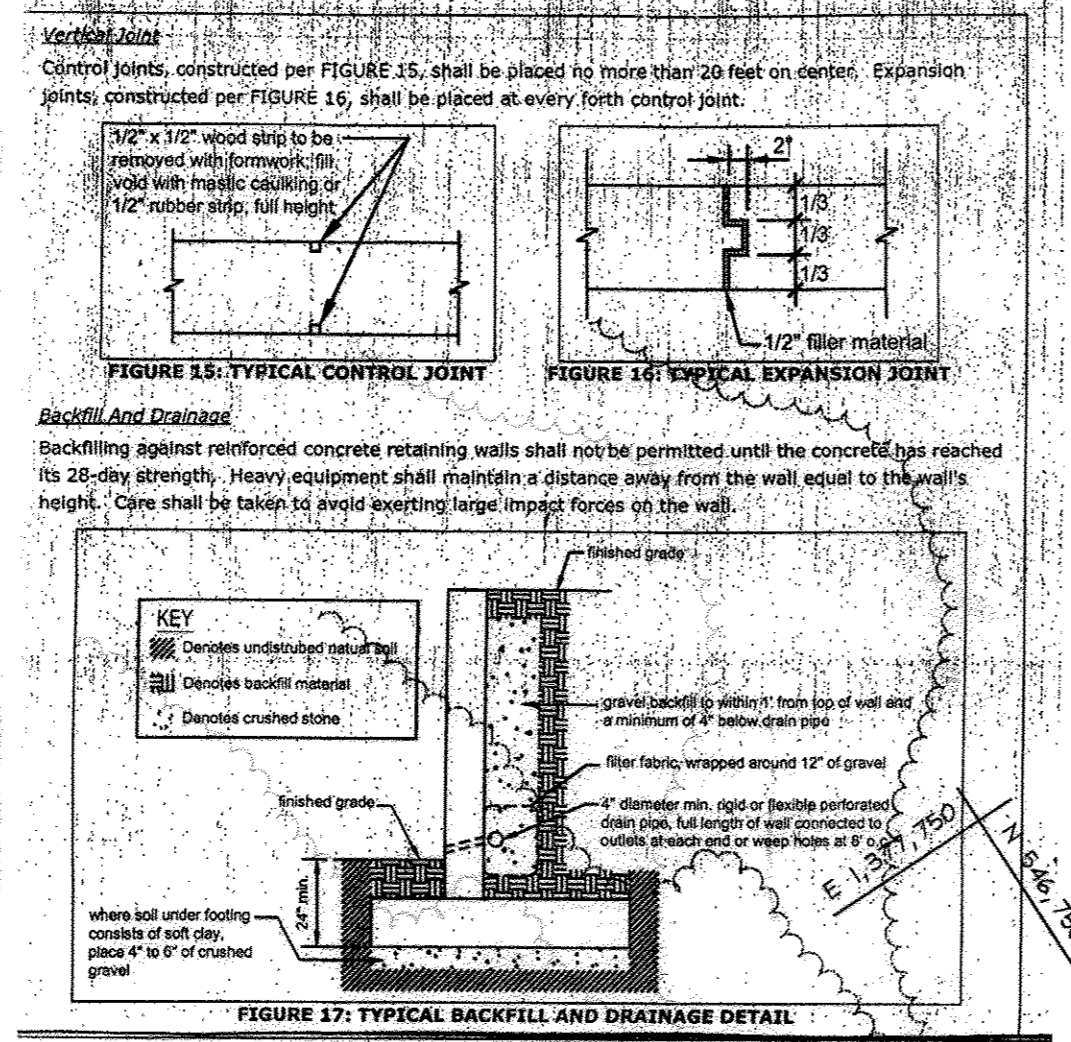
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

*William R. Zink* 10/6/12  
SIGNATURE OF ENGINEER DATE

WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20587  
EXPIRATION DATE: 09-26-2014

CSX TRANSPORTATION, INC.  
VARIABLE WIDTH RAILROAD  
RIGHT-OF-WAY  
SHEET 3 OF 13 VALUATION MAP V08488





### CONCRETE RETAINING WALLS

**General Requirements**

- The minimum concrete compressive strength at 28 days shall be 3,500 PSI and shall comply with ACI 318.
- Reinforcing steel shall comply with ASTM A615 and shall have a yield strength of 60,000 PSI.

**Wall Construction**

The construction of a concrete retaining wall shall conform to the dimensions and reinforcing steel requirements shown in Figure 13 and Table 2.

**TABLE 2: TYPICAL CONCRETE WALL DIMENSIONS**

H	C	W
24"	19"	39"
36"	28"	48"
48"	40"	60"

**FIGURE 13: TYPICAL CONCRETE WALL SECTION**

**Dowels and Keyways**

Dowels, #4@12" o.c., must be lapped a minimum of 20 inches. A keyway or roughened concrete shall be placed on the footing surface below the block wall. See Figure 14.

**FIGURE 14: TYPICAL DOWEL AND KEYWAY DETAIL**

### LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR)

SCALE: 1" = 200'

EXISTING PAVEMENT TO BE REMOVED [Symbol]

EXISTING PAVEMENT TO BE REMAIN [Symbol]

**NOTES**

- PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 34 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
- PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ABOVE FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE

### 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.

Signature of Engineer: *William R. Zink* DATE: 5/9/13

WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20587  
EXPIRATION DATE: 09-26-2014



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development: *Robert J. ...* Date: 6/7/13

Chief, Development Engineering Division: *...* Date: 6/3/13

Director, Department of Planning and Zoning: *...* Date: 6/7/13

### AS-BUILT CERTIFICATION

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

Signature: *David ...* Date: 7/18/2017

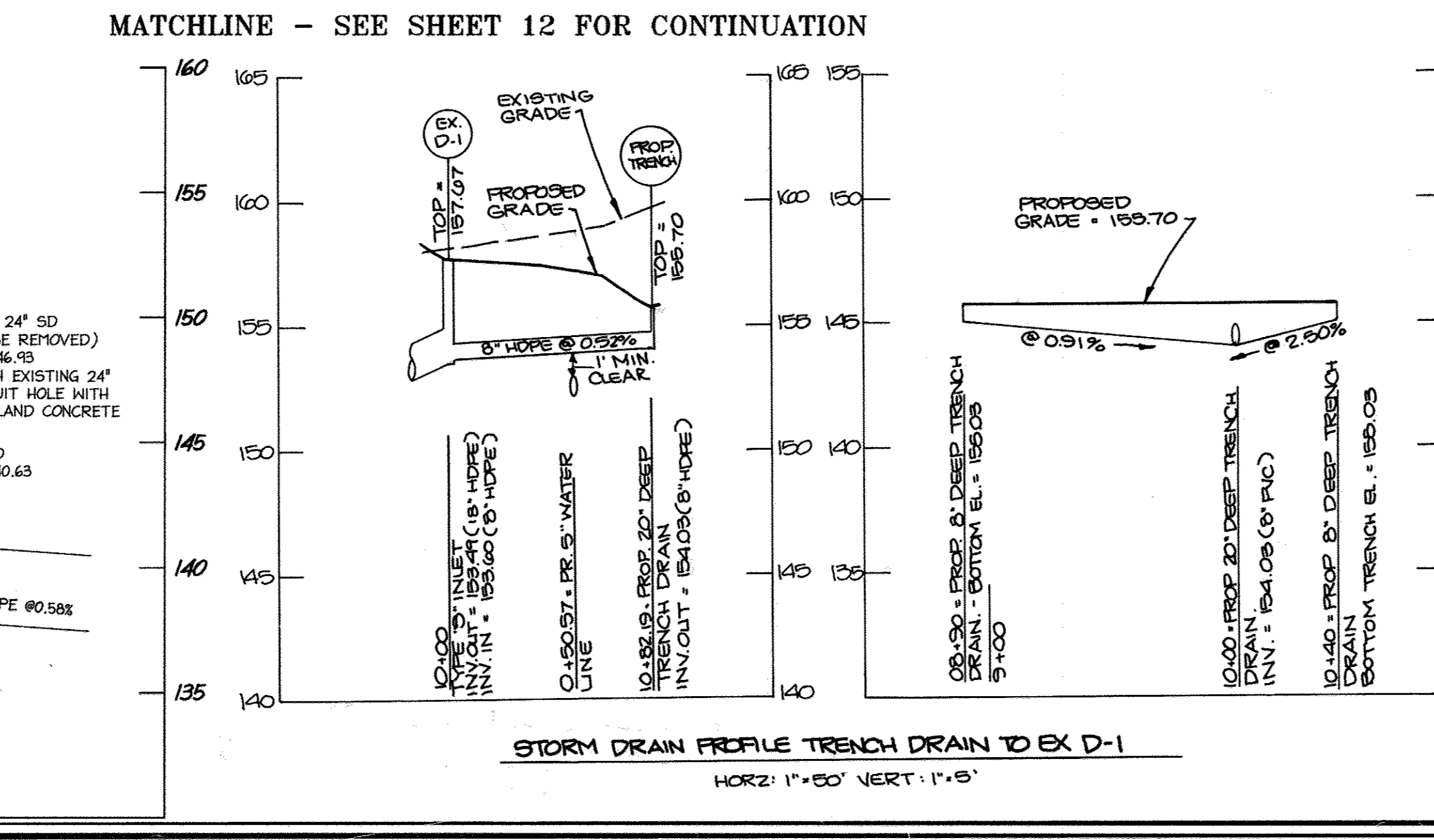
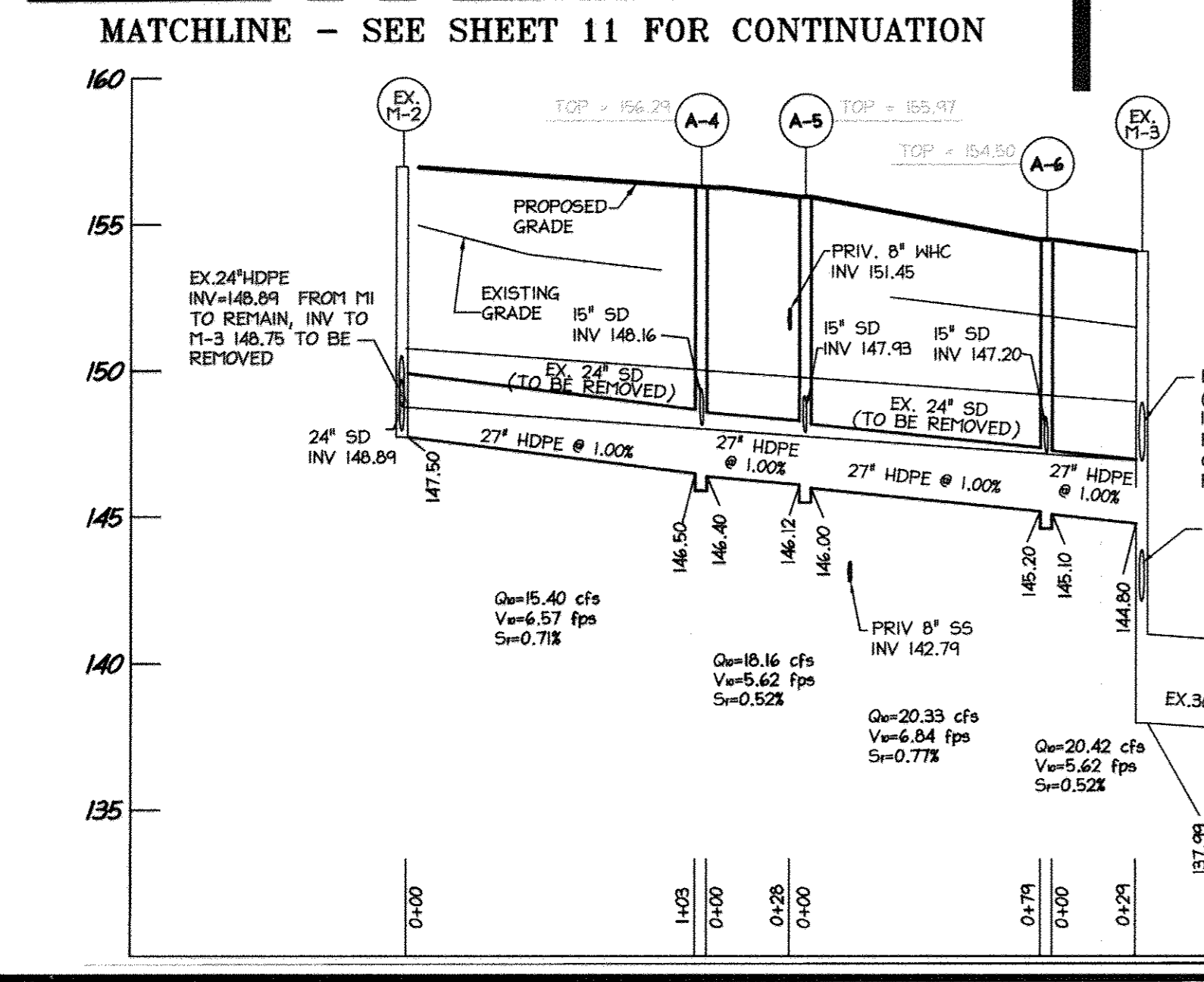
MARYLAND REG. NO. 27273 EXPIRATION DATE: 3/19/2018  
DATE OF AS-BUILT: 6/17/2014 & 6/27/2017

### NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST  
C/O EXETER PROPERTY GROUP

140 W. GERRHANTOWN PIKE, SUITE 150  
PLYMOUTH MEETING, PA 19462  
TEL: (610) 828-0756  
FAX: (610) 828-5550



### LEGEND

- EDGE OF PAVEMENT TO BE REMOVED
- [Symbol] (RFCE) RETENTION FOREST CONSERVATION EASEMENT - CREDIT
- [Symbol] (RFCE) RETENTION FOREST CONSERVATION EASEMENT - NON-CREDIT
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EX. 8" SAN.
- EXISTING SANITARY SEWER
- DHE
- EXISTING OVERHEAD UTILITY
- FENCE (BARB WIRE)
- EXISTING CURBLINE
- STREAM CENTERLINE
- FP
- PUBLIC 100 YR FLOODPLAIN
- WL
- WETLANDS
- SB
- 50' STREAM BUFFER
- WB
- 25' WETLAND BUFFER
- FCE
- FOREST CONSERVATION EASEMENT

**GRAPHIC SCALE**

( IN FEET )  
1 inch = 50 ft.

### christopher consultants

engineering - surveying - land planning

1712 columbia gateway drive suite 100 - columbia, md. 21046-2990  
410.872.8600 - mobile: 301.881.0148 - fax: 410.872.8633

**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELK RIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441

**UTILITY PLAN**

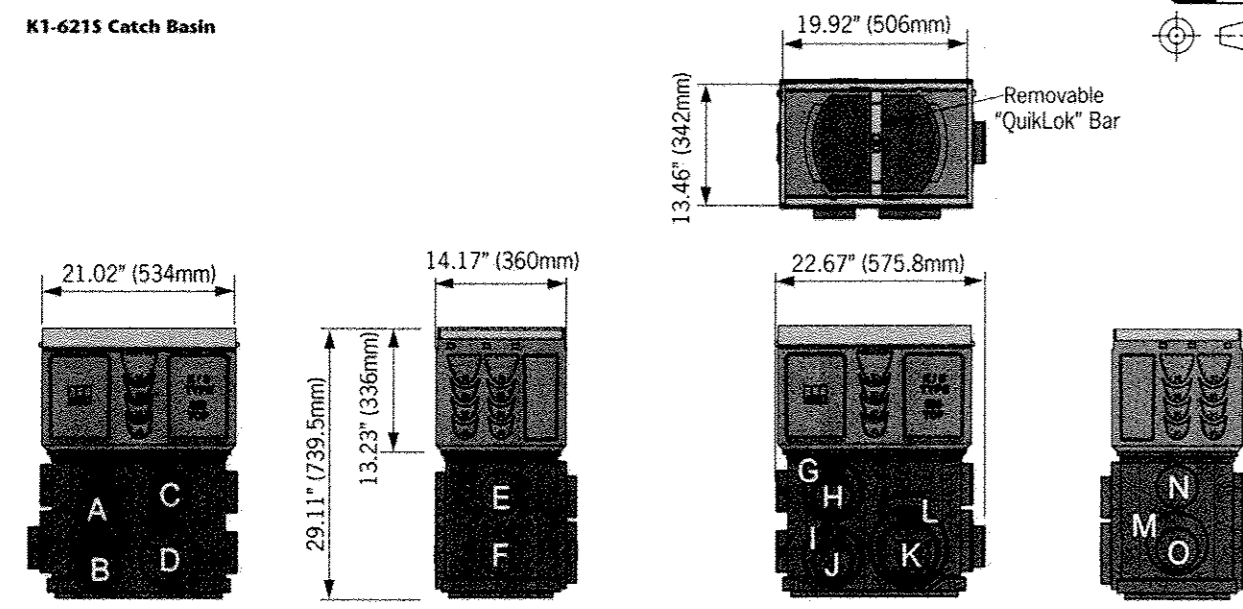
DESIGN:	ENJ	SCALE:	1" = 50'	PROJECT:	03067.008.07
DRAWN:	DAM	DATE:	SEPT 26 2012	CHECKED:	ENJ
APPROVED:	WRZ				

13 of 45

MDC-855

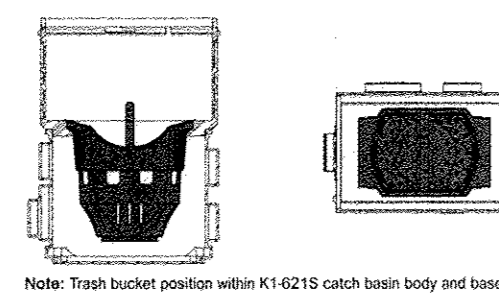
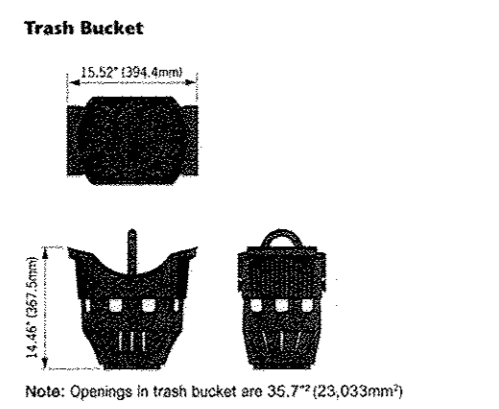


**ACO DRAIN**  
**K1-6215 Catch Basin**



**Outlet flow rates**

Outlet	Product	Outlet size (Sch. 40)	Invert Depth	GPM	CFS
A	Type K1-6215	4" round	21.29"	230	0.53
B	Type K1-6215	4" round	27.79"	276	0.62
C	Type K1-6215	4" round	19.72"	229	0.51
D	Type K1-6215	6" round	27.79"	610	1.30
E	Type K1-6215	4" round	19.84"	230	0.51
F	Type K1-6215	4" round	28.34"	269	0.60
G	Type K1-6215	6" round	20.62"	514	1.15
H	Type K1-6215	4" round	20.07"	231	0.51
I	Type K1-6215	6" round	27.76"	609	1.30
J	Type K1-6215	4" round	27.19"	273	0.61
K	Type K1-6215	6" round	27.19"	602	1.34
L	Type K1-6215	6" round	27.76"	1061	2.36
M	Type K1-6215	6" round	26.28"	591	1.32
N	Type K1-6215	6" round	19.16"	228	0.50
O	Type K1-6215	4" round	25.86"	268	0.59

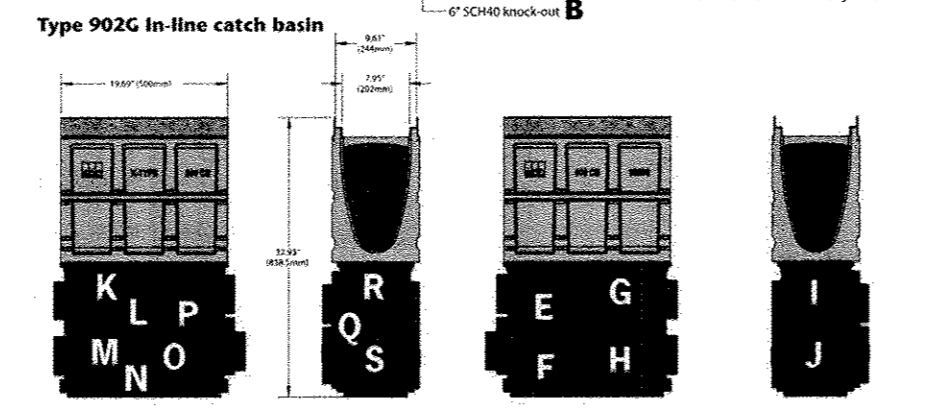
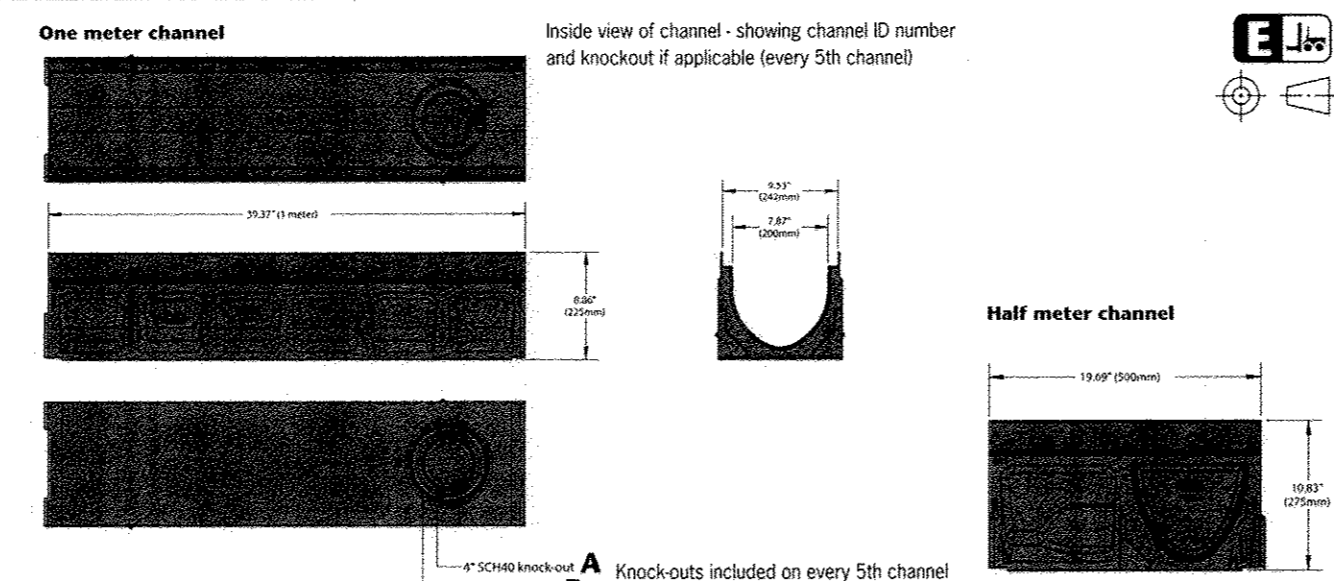


Apr 13/2 www.ACOdrain.us



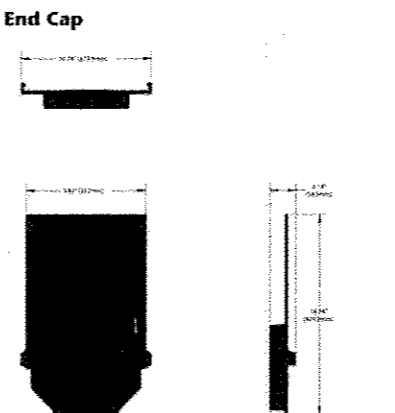
ACO Specification Information

**ACO DRAIN**  
**KlassikDrain - K200 Galvanized steel edge rail channel system**



**Outlet flow rates**

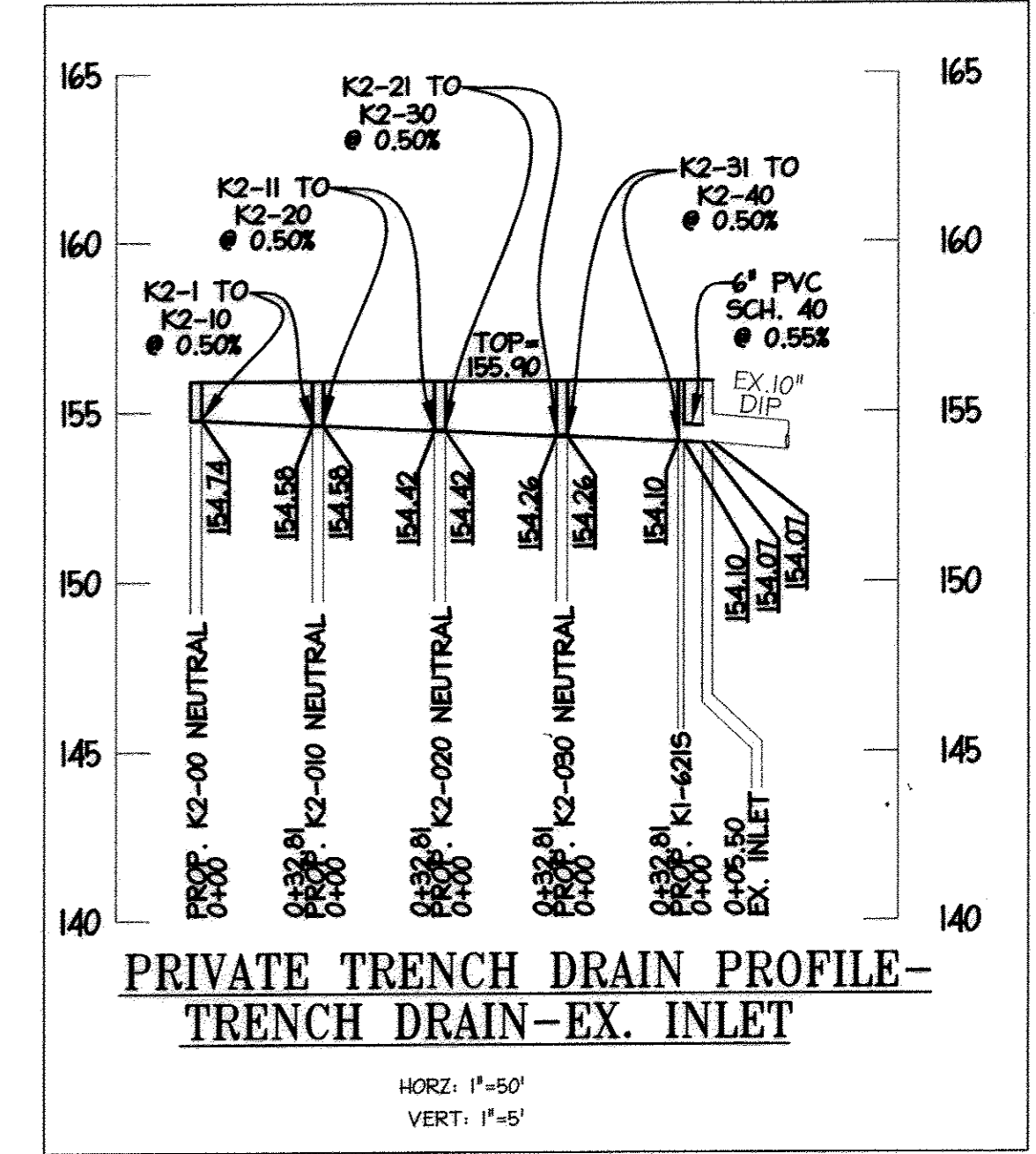
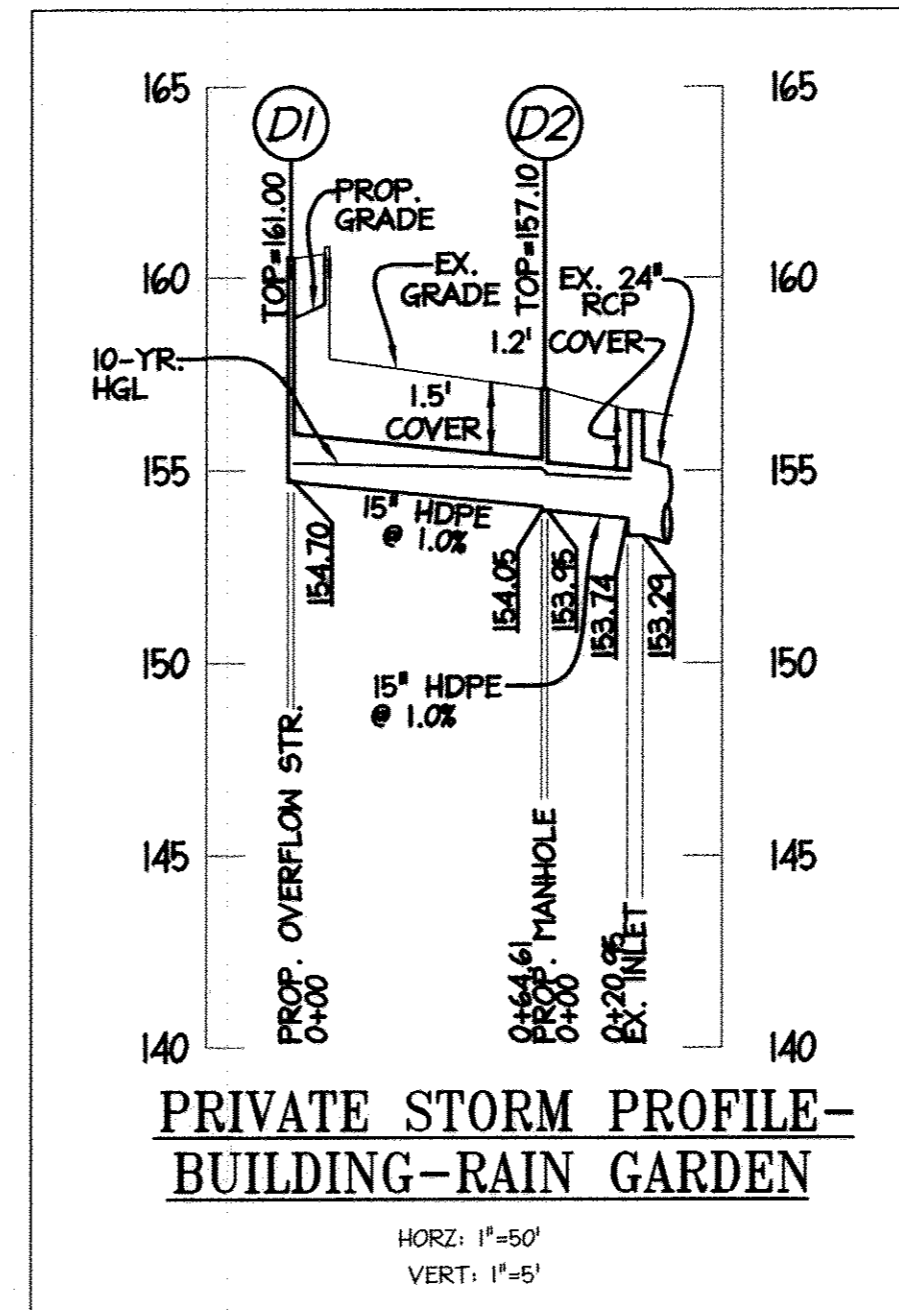
Outlet	Product	Outlet size (Sch. 40)	Invert Depth	GPM	CFS
A	Bottom outlet - K2-00	4" round	7.57"	153	0.34
B	Bottom outlet - K2-040	4" round	15.75"	216	0.48
C	Bottom outlet - K2-040	6" round	7.57"	344	0.77
D	End outlet - K2-00	4" round	7.57"	132	0.29
E	End outlet - K2-040	4" round	15.75"	202	0.46
F	End outlet - K2-10	6" round	9.84"	320	0.71
G	End outlet - K2-40	6" round	15.75"	437	0.97
H	Type K2-902G	4" round	25.31"	293	0.59
I	Type K2-902G	4" round	31.83"	297	0.65
J	Type K2-902G	4" round	23.76"	254	0.57
K	Type K2-902G	4" round	31.83"	656	1.47
L	Type K2-902G	4" round	23.91"	255	0.57
M	Type K2-902G	6" round	24.68"	570	1.27
N	Type K2-902G	4" round	24.13"	256	0.57
O	Type K2-902G	6" round	21.82"	658	1.47
P	Type K2-902G	4" round	31.26"	294	0.66
Q	Type K2-902G	6" round	31.26"	651	1.45
R	Type K2-902G	6" round	30.32"	640	1.43
S	Type K2-902G	4" round	23.19"	261	0.56
T	Type K2-902G	4" round	29.90"	282	0.54



September 2016 www.ACOdrain.us



ACO Specification Information

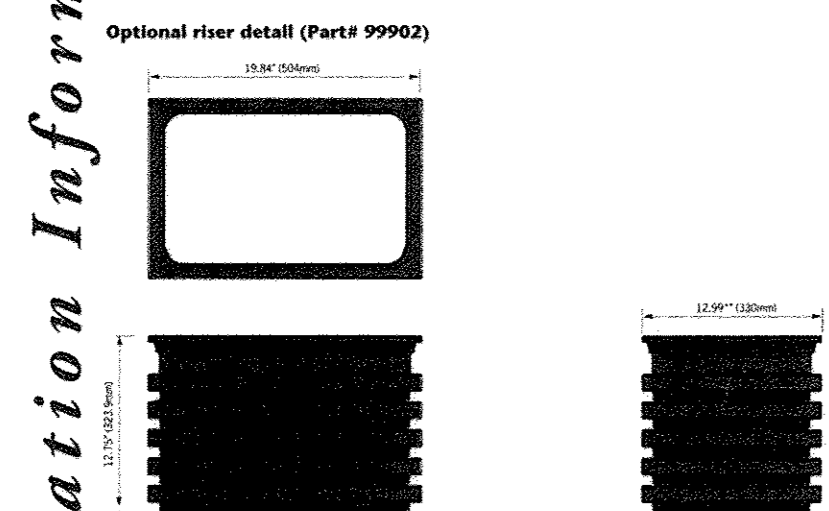


**AS-BUILT CERTIFICATION**  
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.  
*[Signature]* 7/10/2017  
DATE  
MARYLAND REG. NO. 2-722-3 EXPIRES 3/19/2018  
DATE OF AS-BUILT: 6/17/2014 & 6/27/2017



**ACO DRAIN**  
**K1-6215 Catch Basin**

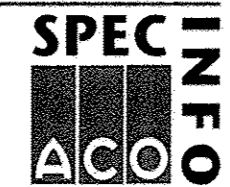
Description	Part No.	Invert Depth	Weight
Type K1-6215 Catch basin assembly, top, removable "QuickLock" bar, trash bucket & base	94616	28.65	733.2
94616	28.65	733.2	55.8



**Specifications**

General	Self proof	Water absorption	Optional Riser
The catch basin shall be ACO Drain K1-6215 Catch Basin consisting of top section, trash bucket and base as manufactured by ACO Polymer Products, Inc. or similar approved.	Diure acid and alkali resistant	Water absorption: 0.03% Frost proof: YES Diure acid and alkali resistant: YES	Optional riser can be useful between polymer concrete top unit and HDPE base unit. Use of riser is determined by access and local building codes.

**ACO Polymer Products, Inc.**  
Northwest Sales Office: P.O. Box 245, Clayton, OH 44024  
West Sales Office: P.O. Box 12007, Casa Grande, AZ 85130  
Southwest Sales Office: 4211 Prosser Road, Fort Mill, SC 29708  
Electronics Contact: info@aco.com  
Tel: (440) 285-7000  
Fax: (440) 285-7000  
Tel: (800) 543-4764  
Fax: (800) 421-9989  
Tel: (888) 490-9552  
Fax: (800) 421-9989



Apr 13/2 www.ACOdrain.us

**ACO DRAIN**  
**KlassikDrain - K200 Galvanized steel edge rail channel system**

Description	Part No.	Invert	Wgt	Description	Part No.	Invert	Wgt		
K2-00 Neutral channel - 39.37" (1m)	75041	7.87	200	83.6	K2-28 Sloped channel - 39.37" (1m)	75028	13.39	340	113.3
K2-1 Sloped channel - 39.37" (1m)	75001	8.07	205	83.6	K2-39 Sloped channel - 39.37" (1m)	75039	13.58	345	114.4
K2-2 Sloped channel - 39.37" (1m)	75002	8.27	210	84.7	K2-50 Sloped channel - 39.37" (1m)	75050	13.78	350	115.5
K2-3 Sloped channel - 39.37" (1m)	75003	8.46	215	85.8	K2-60 Neutral channel - 19.69" (0.5m)	75047	13.78	350	115.5
K2-4 Sloped channel - 39.37" (1m)	75004	8.66	220	86.9	K2-000 Neutral channel - 19.69" (0.5m)	75048	13.78	350	115.5
K2-5 Sloped channel - 39.37" (1m)	75005	8.86	225	88.0	K2-31 Sloped channel - 39.37" (1m)	75031	13.98	355	116.6
K2-6 Sloped channel - 39.37" (1m)	75006	9.06	230	89.1	K2-42 Sloped channel - 39.37" (1m)	75042	14.17	360	117.7
K2-7 Sloped channel - 39.37" (1m)	75007	9.25	235	90.2	K2-53 Sloped channel - 39.37" (1m)	75033	14.37	365	118.8
K2-8 Sloped channel - 39.37" (1m)	75008	9.45	240	91.3	K2-64 Sloped channel - 39.37" (1m)	75034	14.57	370	119.9
K2-9 Sloped channel - 39.37" (1m)	75009	9.65	245	92.4	K2-75 Sloped channel - 39.37" (1m)	75035	14.76	375	121.0
K2-10 Sloped channel - 39.37" (1m)	75010	9.84	250	93.5	K2-86 Sloped channel - 39.37" (1m)	75036	14.96	380	122.1
K2-11 Sloped channel - 39.37" (1m)	75011	10.04	255	94.6	K2-97 Sloped channel - 39.37" (1m)	75037	15.16	385	123.2
K2-12 Sloped channel - 39.37" (1m)	75012	10.24	260	95.7	K2-38 Sloped channel - 39.37" (1m)	75038	15.35	390	124.3
K2-13 Sloped channel - 39.37" (1m)	75013	10.43	265	96.8	K2-49 Sloped channel - 39.37" (1m)	75039	15.55	395	125.4
K2-14 Sloped channel - 39.37" (1m)	75014	10.63	270	97.9	K2-60 Sloped channel - 39.37" (1m)	75040	15.75	400	126.5
K2-15 Sloped channel - 39.37" (1m)	75015	10.83	275	99.0	K2-71 Sloped channel - 39.37" (1m)	75041	15.95	405	127.6
K2-16 Sloped channel - 39.37" (1m)	75016	11.02	280	100.1	K2-82 Sloped channel - 39.37" (1m)	75042	16.15	410	128.7
K2-17 Sloped channel - 39.37" (1m)	75017	11.22	285	101.2	K2-93 Sloped channel - 39.37" (1m)	75043	16.35	415	129.8
K2-18 Sloped channel - 39.37" (1m)	75018	11.41	290	102.3	K2-040 Neutral channel - 19.69" (0.5m)	75049	15.75	400	126.5
K2-19 Sloped channel - 39.37" (1m)	75019	11.61	295	103.4	K2-040 Neutral channel - 19.69" (0.5m)	75050	15.75	400	126.5
K2-20 Sloped channel - 39.37" (1m)	75020	11.81	300	104.5	K2-040 Neutral channel - 19.69" (0.5m)	75051	15.75	400	126.5
K2-200 Neutral channel - 19.69" (0.5m)	75045	11.81	300	104.5	K2-040 Neutral channel - 19.69" (0.5m)	75052	15.75	400	126.5
K2-21 Sloped channel - 39.37" (1m)	75021	12.01	305	105.6	K2-040 Neutral channel - 19.69" (0.5m)	75053	15.75	400	126.5
K2-22 Sloped channel - 39.37" (1m)	75022	12.20	310	106.7	K2-040 Neutral channel - 19.69" (0.5m)	75054	15.75	400	126.5
K2-23 Sloped channel - 39.37" (1m)	75023	12.40	315	107.8	K2-040 Neutral channel - 19.69" (0.5m)	75055	15.75	400	126.5
K2-24 Sloped channel - 39.37" (1m)	75024	12.60	320	108.9	K2-040 Neutral channel - 19.69" (0.5m)	75056	15.75	400	126.5
K2-25 Sloped channel - 39.37" (1m)	75025	12.80	325	110.0	K2-040 Neutral channel - 19.69" (0.5m)	75057	15.75	400	126.5
K2-26 Sloped channel - 39.37" (1m)	75026	13.00	330	111.1	K2-040 Neutral channel - 19.69" (0.5m)	75058	15.75	400	126.5
K2-27 Sloped channel - 39.37" (1m)	75027	13.19	335	112.2	K2-040 Neutral channel - 19.69" (0.5m)	75059	15.75	400	126.5

**Specifications**

General	Water absorption	Optional Riser
The surface drainage system shall be ACO Drain KlassikDrain consisting of top section, trash bucket and base as manufactured by ACO Polymer Products, Inc. or similar approved.	Water absorption: 0.03% Frost proof: YES Diure acid and alkali resistant: YES	Optional riser can be useful between polymer concrete top unit and HDPE base unit. Use of riser is determined by access and local building codes.

**ACO Polymer Products, Inc.**  
Northwest Sales Office: P.O. Box 245, Clayton, OH 44024  
West Sales Office: P.O. Box 12007, Casa Grande, AZ 85130  
Southwest Sales Office: 4211 Prosser Road, Fort Mill, SC 29708  
Electronics Contact: info@aco.com  
Tel: (440) 285-7000  
Fax: (440) 285-7000  
Tel: (800) 543-4764  
Fax: (800) 421-9989  
Tel: (888) 490-9552  
Fax: (800) 421-9989



September 2016 www.ACOdrain.us

**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.  
*[Signature]* 7/10/17  
SIGNATURE OF ENGINEER  
WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20587  
EXPIRATION DATE: 09-06-2016



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* 3-29-17  
Date  
Chief, Division of Land Development  
*[Signature]* 3-22-17  
Date  
Chief, Development Engineering Division  
*[Signature]* 3-29-17  
Date  
Director, Department of Planning and Zoning  
PRIVATE STORM STORAGE - BLDG. TO RAIN GARDEN  
PRIVATE TRENCH DRAIN - EXISTING INLET

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

**OWNER / DEVELOPER**  
MONTVEDO REALTY 140 M. GERMANTOWN PIKE, SUITE 150 PLYMOUTH MEETING, PA 19462  
BUSINESS TRUST TEL: (610) 828-0756  
C/O EXETER PROPERTY GROUP FAX: (610) 828-9550

**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVEDO ROAD, ELKRDGE, MD	EX. BLDG C
1	7587 MONTEVEDO ROAD, ELKRDGE, MD	PROP. BLDG 5
1	7591 MONTEVEDO ROAD, ELKRDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441

**UTILITY PROFILES**

DESIGN#	N#1	SCALE:	AS SHOWN	PROJECT:	03067.008.07
DRAWN:	DAH	DATE:	SEPT 06 2012	CHECKED:	ENJ
APPROVED:	HRZ	DATE:	7/10/2017		

ACO Specification Information

ACO Specification Information

SDP-08-116

MDC-855





**PLANTING SPECIFICATIONS FOR BIORETENTION**

- I. GENERAL NOTES
  - A. SCOPE: THE LANDSCAPE CONTRACTOR SHALL VERIFY ALL QUANTITIES OF PLANT MATERIAL SHOWN ON THE PLAN IN THE PLANT LIST, AND SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT TO COMPLETE ALL LANDSCAPE WORK AS SHOWN ON THE PLANS AND SPECIFICATIONS.
  - B. UTILITIES: THE LANDSCAPE CONTRACTOR SHALL NOTIFY M&D UTILITY (1-800-257-7777) TO VERIFY THE LOCATION OF ALL MAIN UTILITIES AND SHALL ASK THE GENERAL CONTRACTOR TO LOCATE LIGHTING AND OTHER ON-SITE UTILITIES IN THE FIELD BEFORE PROCEEDING WITH THE INSTALLATION OF ANY PLANTING. IF CONDITIONS ARISE IN THE FIELD WHICH NECESSITATE THE SHIFTING OF A PLANT LOCATION MORE THAN 6", THE LANDSCAPE ARCHITECT IS TO BE CONSULTED.
  - C. SUBSTITUTIONS: ANY CHANGE IN THE TYPE, SIZE AND QUANTITY OF PLANT MATERIAL BY THE LANDSCAPE CONTRACTOR MUST BE APPROVED BY THE ENVIRONMENTAL CONSULTANT PRIOR TO INSTALLATION.
  - D. PLANT STANDARDS: PLANTS SUPPLIED SHALL CONFORM IN ALL RESPECTS TO THE CURRENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z603) CLASS REPRESENTATIVES OF THEIR SPECIES AND VARIETIES. NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE AND GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT. PLANT NAMES SHALL BE THOSE GIVEN IN THE LATEST EDITION OF STANDARD PLANT NAMES, AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE. PLANTS SHALL BE SOUND, VIGOROUS AND HEALTHY, WELL BRANCHED, AND DENSELY FOLIATED WHEN IN LEAF. THEY SHALL BE FREE OF DISEASE AND INSECT PESTS AND SHALL HAVE HEALTHY, WELL DEVELOPED ROOT SUBSTANCE. TRUNKS AND BRANCHES SHALL BE FREE OF CUTS AND ABRASIONS OVER ONE INCH (1") IN ANY DIMENSION. PLANTS IN LEAF SHALL BE SPRAYED WITH ANTI-DESICCANT IMMEDIATELY BEFORE DIGGING TO FLIP THE LEAVES, BRANCHES, AND TWIGS. SHADE TREES WITH BROKEN, DAMAGED OR MULTIPLE LEADERS WILL BE REJECTED. BALLED AND BURLAPPED PLANTS SHALL BE DUG WITH A FIRM NATURAL ROOT BALL. PLANTS WITH SOFT, BROKEN OR DAMAGED LIMBS WILL BE REJECTED. PLANTS SHALL BE TAGGED WITH LABELS IDENTIFYING THE BOTANICAL AND COMMON NAMES OF THE PLANTS. NO CHANGE IN THE KIND, QUANTITY, QUALITY, OR SIZE OF PLANTS SPECIFIED SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE APPROVING AGENCY. ALL PLANTS SHALL BE CERTIFIED PEST-FREE BY THE DEPARTMENT OF AGRICULTURE OF THEIR STATE OF ORIGIN. MAJOR SHADE TREES SHALL BE 2-1/2" CALIPER OR LARGER (EXCEPT WHEN WITHIN 2 YEAR WHEEL, THEN 1-1/4" - 1-1/2" CAL. WILL BE PERMITTED); ORNAMENTAL TREES SHALL HAVE A MINIMUM CALIPER OF 1-1/4", (EVERGREEN WITHIN 2' HEIGHT OF 6" AND SHALL BE FULL TO THE GROUND AND HEAVILY BRANCHED, SHRUBS SHALL HAVE A SPREAD OF AT LEAST 18". NO BARE ROOT TREES OR SHRUBS WILL BE ACCEPTED WITHOUT WRITTEN APPROVAL OF THE APPROVING AGENCY.
  - E. PLANTING MATERIALS: TOPSOIL SHALL BE FERTILE, FRIABLE AND TYPICAL OF THE PROJECT SITE WITHOUT DISTURBANCE. IT SHALL HAVE A MINIMUM ORGANIC CONTENT OF 2.5% BY VOLUME AND SHALL BE FREE OF STONES, LUMPS, ROOTS, STICKS, AND DEBRIS LARGER THAN 2" IN ANY DIMENSION. IT SHALL NOT BE LOADED, DELIVERED, SPREAD OR OTHERWISE HANDLED IN A MUDDY OR FROZEN CONDITION. (SEE BIORETENTION SPECS.) PLANTING (BACKFILL) MIX SHALL BE COMPOSED OF THREE PARTS OF THE SOIL IMMEDIATELY ADJACENT TO THE PLANT PIT OR BED TO ONE PART APPROVED ORGANIC MATTER. TREE STAKING MATERIALS SHALL BE ROUGH-SAWN HARDWOOD 2" BY 2" STOCK OF A LENGTH TO CONFORM TO THE REQUIREMENTS OF THE TREE PLANTING DETAIL SHOWN ON THE PLANTING PLAN. STAKING TIES SHALL BE DOUBLE STRANDED OF 12 OR 14 GAUGE GALVANIZED STEEL WIRE, TWISTED, FURNISHED WITH PROTECTIVE SECTIONS OF CORDED 3/4" DIAMETER RUBBER HOSE OR NYLON WEBBING AT LEAST 1-1/2" WIDE OR POLYPROPYLENE CHAINLOCK STRAPPING MANUFACTURED FOR THE PURPOSE OR OTHER MATERIALS APPROVED BY THE APPROVING AGENCY. ALL DUG PLANT MATERIAL SHALL HAVE BEEN DUG BEFORE BUD BREAK OR AFTER LEAF MATURATION. ANY PLANT MATERIAL EXHIBITING DROOPING NEW GROWTH WITHIN TWO (2) WEEKS OF BEING PLANTED WILL BE REJECTED AND MUST BE REMOVED FROM THE JOB. POOR DRAINAGE: NO PLANT SHALL BE PLANTED IN SITUATIONS THAT SHOW OBVIOUS POOR DRAINAGE. SUCH SITUATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENVIRONMENTAL CONSULTANT AND OWNER, AND IF THEY DEEM NECESSARY, THE PLANTS SHALL BE RELOCATED OR THE CONTRACTOR SHALL BE ADJUSTED TO ALLOW FOR DRAINAGE CORRECTION AT A NEGOTIATED COST. SITE PREPARATION: IT SHALL BE THE GENERAL CONTRACTOR'S RESPONSIBILITY TO PRESENT "CLEAN" SOIL CONDITIONS TO THE LANDSCAPE CONTRACTOR PRIOR TO ANY LANDSCAPE INSTALLATION. "CLEAN" SOIL MAY INCLUDE ON-SITE SOIL MUST BE FREE OF PAVEMENT MATERIALS, MUCK, ROOT SYSTEMS, PETROLEUM OR OTHER CHEMICAL SUBSTANCES, BLUE STONE, CONSTRUCTION DEBRIS AND OTHER MATERIALS LARGER THAN 2" IN DIAMETER. THE "CLEAN" SOIL SHALL EXTEND TO THE FOLLOWING MINIMUM DEPTHS: 12" WHERE TREES ARE PROPOSED, 12" WHERE SHRUBS ARE PROPOSED AND 4" WHERE LAWN IS PROPOSED. IF THE LANDSCAPE CONTRACTOR ENCOUNTERS ANY AREA TO BE DEFICIENT REGARDING THESE "CLEAN" SOIL SPECIFICATIONS, HE SHALL REPORT THIS CONDITION TO THE ENVIRONMENTAL CONSULTANT AND OWNER PRIOR TO PLANTING IN THOSE AREAS. WORKMANSHIP: DURING PLANTING, ALL AREAS SHALL BE KEPT NEAT AND CLEAN, AND ALL REASONABLE PRECAUTIONS SHALL BE TAKEN TO AVOID DAMAGE TO EXISTING PLANTS, TURF AND STRUCTURES. UPON COMPLETION, ALL DEBRIS AND WASTE MATERIAL, RESULTING FROM PLANTING OPERATIONS SHALL BE REMOVED FROM THE PROJECT AND THE AREA CLEANED UP. ANY DAMAGED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. WATER: IF AVAILABLE ON-SITE, THE OWNER SHALL SUPPLY WATER AT NO EXTRA COST. IT WILL BE THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO SUPPLY WATER IF THERE IS NONE ON THE SITE. PLANTING METHODS: PLANTING BEDS: STAKE-OUT OUTLINES OF PLANTING BEDS AND CENTERS OF INDIVIDUAL PLANTING PITS. THESE LOCATIONS ARE TO BE APPROVED IN THE FIELD BY THE APPROVING AGENCY BEFORE PLANTING OPERATIONS BEGIN. EXCAVATE STAKE OUT AREAS AND PREPARE PLANTING MIX (SEC. E 4 2). ONLY PLANTING MIX SHALL BE USED TO BACKFILL THE PLANTING PITS AND BEDS. TREE/SHRUB PITS: SET PLANTS SO THAT THE ROOTBALL REST ON FIRM GROUND AND THE ROOT CROWN IS 3"-4" HIGHER THAN THE SURROUNDING GRADE. BACKFILL WITH PLANTING MIX AND TAMP LIGHTLY IN EIGHT (8) INCREMENTS. WATER THOROUGHLY TO ELIMINATE AIR POCKETS IN THE BACKFILL. REMOVE ALL MATERIALS OTHER THAN UNTREATED BURLAP, JUTE TWINE AND WIRE BASKET FROM THE TOP 1/3 OF THE BALL. COMPLETE BACKFILLING WITH PLANTING MIX TO BRING SOIL LEVEL TO SURROUNDING GRADE. PROTECT PLANTS AT ALL TIMES FROM SUN AND DRYING WINDS. PLANTS THAT CANNOT BE PLANTED IMMEDIATELY SHALL BE KEPT IN THE SHADE, WELL PROTECTED WITH TOPSOIL, PEAT MOSS OR OTHER ACCEPTABLE MATERIAL AND SHALL BE KEPT WELL WATERED. PLANTS SHALL NOT REMAIN UNPLANTED FOR MORE THAN THREE (3) CALENDAR DAYS. PLANTS SHALL NOT BE SOUND WITH WIRE OR ROPE AT ANYTIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES AND TWIGS. PLANTS SHALL BE LIFTED FROM THE BOTTOM OF THE BALL ONLY. MULCH ALL BEDS AND PLANTING PITS WITH A THREE INCH (3") LAYER OF MULCH IMMEDIATELY AFTER PLANTING. ALL PLANTS ARE TO BE WATERED THOROUGHLY ON THE DAY OF PLANTING, EVEN IF IT IS RAINING. TREE BRACING: STAKE PLANTS IMMEDIATELY AFTER PLANTING, TAKING CARE THAT THEY STAND PLUMB AFTER STAKING. STAKED AND STAKING MATERIALS SHALL BE REMOVED AT THE END OF THE GUARANTEE PERIOD AND DISPOSED OF OFF-SITE BY THE CONTRACTOR. TREE WRAP: WRAP DECIDUOUS TREE TRUNKS STARTING AT THE BASE OF THE TREE UP TO THE SECOND BRANCH. REMOVE WRAPPING AT THE END OF THE GUARANTEE PERIOD. PRUNING: PRUNE PLANT AT THE TIME OF PLANTING AS DIRECTED BY THE APPROVING AGENCY, TAKING CARE TO RETAIN THE NATURAL FORM AND CHARACTER OF THE PLANT. "N.C.": ANY ITEMS NOT ADDRESSED IN THIS SECTION SHALL BE IN CONFORMANCE WITH THE APPLICABLE REQUIREMENTS OF THE LANDSCAPE SPECIFICATION GUIDELINES OF THE LANDSCAPE CONTRACTORS ASSOCIATION, MD-DC-VA. HETLAND PLANTING NOTES: CONTRACTOR SHALL PROVIDE A MINIMUM SOIL DEPTH OF 4" AT THE COMPLETION OF FINAL GRADING. ANY LARGE STONES, DEBRIS OR CONSTRUCTION MATERIALS SHALL BE REMOVED AT THIS TIME. COMPACTED SOILS SHALL BE SKIMMED TO A DEPTH NO LESS THAN 6" PRIOR TO BASH PLANTING AND FLOODING. A SPRING OR EARLY SUMMER PLANTING SHALL BE REQUIRED. PLANTING MATERIALS SHALL NOT BE STORED ON-SITE LONGER THAN 48 HOURS. PLANT ROOTS SHALL BE KEPT MOIST. PLANTS SHALL BE STORED OUT OF DIRECT SUNLIGHT. WETLAND PLANTING: PLANTS SHALL BE STORED AT THE SAME DEPTH (OR A LITTLE DEEPER) THAT THE SOIL LEVEL IN THE POT. THE POT SHALL BE REMOVED RIGHT BEFORE PLANTING POTTED PLANTS. MAKE A HOLE IN THE SUBSTRATE WIDE ENOUGH TO TAKE THE POTTED PLANT, AND DEEP ENOUGH THAT THE WETLAND SUBSTRATE IS AT THE SAME DEPTH (OR A LITTLE DEEPER) THAT THE SOIL LEVEL IN THE POT. THE POT SHALL BE REMOVED RIGHT BEFORE PLANTING TO FACILITATE THE ROOT SPREADING. THE OVERALL DEPTH SHOULD BE APPROXIMATELY 4"-6". PRESS THE SUBSTRATE FIRMLY AROUND THE PEAT POT. EACH PLANT IS TO BE SIDE DRESSED AT THE TIME OF PLANTING WITH 30 GRAMS OSMOCOTE 18-4-12 SLOW RELEASE FERTILIZER OR AN EQUIVALENT. SOURCE OF AQUATIC PLANTS: RUPPERT ENVIRONMENTAL, ASHTON, MARYLAND (301)774-0400 AND ENVIRONMENTAL CONCERN, INC., ST. MICHAELS, MARYLAND (407)46-9620. SEEDING AND SODDING: ALL DISTURBED AREAS NOT COVERED BY BUILDINGS, PAVEMENTS AND PLANTING BEDS ARE TO BE ESTABLISHED IN A LAWN OF KENTUCKY-31 TALL FESCUE EITHER BY SEEDING OR SOOD, OR COMBINATION, DEPENDING ON THE TIME OF YEAR, AVAILABILITY OF MATERIALS AND OWNER'S PREFERENCE. THE STABILIZATION SHALL BE IN CONFORMANCE TO STANDARDS AND SPECIFICATIONS FOR SOIL AND SEDIMENT CONTROL, PUBLISHED BY THE STATE OF MARYLAND. GUARANTEE: ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR TO BE IN HEALTHY AND VIGOROUS CONDITION AT THE BEGINNING OF THE SECOND GROWING SEASON FOLLOWING ACCEPTANCE BY THE APPROVING AGENCY. PLANTS WITH GREATER THAN 33% DIEBACK, OR HAVE NOT GROWN 50% AS TO EMERGE FROM THE WATER SURFACE, SHALL BE REPLACED AT THE NEXT PLANTING SEASON. MAINTENANCE: REMOVE LITTER AND DEBRIS AS REQUIRED DURING THE FIRST GROWING SEASON AND AT THE BEGINNING OF THE SECOND GROWING SEASON. REPLACE UNSUCCESSFUL TRANSPLANTS MONTHLY FOR 6 MONTHS AND AT THE BEGINNING OF THE SECOND GROWING SEASON.

**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED BIORETENTION FACILITIES**

- ROUTINE MAINTENANCE:**
1. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. 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.
  2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREE AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND TIRES.
  3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
  4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.
  5. FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
  6. TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES PER YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND SHALL BE MOWED AS NEEDED.
  7. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AS NEEDED.
  8. VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
- NON-ROUTINE MAINTENANCE:**
1. STRUCTURAL COMPONENTS OF THE FACILITY SUCH AS THE EMBANKMENT, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHALL BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
- OPERATION, MAINTENANCE AND INSPECTION**
- INSPECTION OF THE FACILITY SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY. THE FACILITY OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE FACILITY AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE FACILITY OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS OF ANY UNUSUAL OBSERVATIONS OF ANY INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUFFING.

**CONSTRUCTION SPECIFICATIONS FOR BIORETENTION**

- GENERAL PLANTING SPECIFICATIONS**
- ROOT STOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT FROM THE SOURCE TO THE JOB SITE AND UNTIL PLANTED.
- WALLS OF PLANTING PITS SHALL BE DUG SO THAT THEY ARE VERTICAL.
- THE DIAMETER OF THE PLANTING PIT MUST BE A MINIMUM OF SIX INCHES (6") LARGER THAN THE DIAMETER OF THE BALL OF THE TREE.
- THE PLANTING PITS SHALL BE DEEP ENOUGH TO ALLOW 1/4" OF THE BALL TO BE ABOVE THE EXISTING GRADE.
- LOOSE SOIL AT THE BOTTOM OF THE PIT SHALL BE TAMPED BY HAND.
- THE APPROPRIATE AMOUNT OF FERTILIZER IS TO BE PLACED IN THE PLANTING PIT BY LIFTING AND CARRYING THE PLANT BY ITS BALL (NEVER LIFT BY BRANCHES OR TRUNK).
- SET THE PLANT STRAIGHT AND IN THE CENTER OF THE PIT SO THAT THE TOP OF THE BALL IS APPROXIMATELY 1/4" ABOVE THE FINAL GRADE.
- BACKFILL PLANTING PIT WITH EXISTING SOIL.
- MAKE SURE PLANT REMAINS STRAIGHT DURING BACKFILLING PROCEDURE.
- NEVER COVER THE TOP OF THE BALL WITH SOIL.
- TREES SHALL BE BRACED BY USING 2" BY 2" WHITE OAK STAKES. STAKES SHALL BE PLACED PARALLEL TO MAINWALKS AND BUILDINGS. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL, UTILIZING HOSE AND WIRE SO THE TREE IS BRACED TO THE STAKES.
- PLANTING GRASS GROUND COVER**
- GRASSES AND LEGUME SEED SHALL BE TILLED INTO THE SOIL TO A DEPTH OF AT LEAST 2 INCHES BY WITHER HARROWING OR DISCING. FERTILIZER SHALL BE APPLIED AT THE SAME RATE AND UTILIZING THE SAME PROCESS FOR NON-GRASS GROUND COVER.
- GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING TECHNIQUES.
- FERTILIZER**
- ALL GROUND COVERS SHALL BE FERTILIZED WITH A 10-4-4 ANALYSIS FERTILIZER AS A NET APPLICATION AT THE RATE OF 3 LBS. PER 100 SQUARE FEET OF THE GRASS SEED GROUND COVER.
- FERTILIZATION**
- TREE AND SHRUB FERTILIZER SHALL BE 21 GPH, TIGHTLY COMPRESSED, LONG LASTING, SLOW RELEASE (2 YEAR) FERTILIZER TABLET WITH A MINIMUM GUARANTEED ANALYSIS OF 20-10-5:
- TOTAL NITROGEN (N) 20%  
 WATER SOLUBLE ORGANIC NITROGEN 7%  
 WATER INSOLUBLE ORGANIC NITROGEN 15%  
 AVAILABLE PHOSPHORIC ACID (P2O5) 10%  
 SOLUBLE POTASH (K2O) 5%
- FOR CONTAINERIZED TREES AND SHRUBS, PLACE THE SPECIFIC FERTILIZER TABLET(S) IN THE BOTTOM OF THE PLANTING PIT ACCORDING TO THE FOLLOWING RATES:
- 1 GAL. CONTAINER 1 EA. 21 GPH. TABLETS  
 3 GAL. CONTAINER 2 EA. 21 GPH. TABLETS  
 5 GAL. CONTAINER 3 EA. 21 GPH. TABLETS  
 7 GAL. CONTAINER 5 EA. 21 GPH. TABLETS
- PLANTING NON-GRASS GROUND COVER**
- THE GROUND COVER PLANTING HOLES SHALL BE DUG THROUGH THE MULCH WITH ONE OF THE FOLLOWING: HAND TROWEL, SHOVEL, BULB PLANTER, OR HOE (THIS DOES NOT APPLY TO GRASSES OR LEGUMES). SPACING SHALL BE 2' ON CENTER.
- BEFORE PLANTING, BIODEGRADABLE POTS SHALL BE SPLIT, AND NON-BIODEGRADABLE POTS SHALL BE REMOVED. ROOT SYSTEMS OF ALL POTTED PLANTS SHALL BE SPLIT OR CRUMPLED.
- THE GROUND COVER SHALL BE PLANTED SO THAT THE ROOTS ARE SURROUNDED BY THE SOIL BELOW THE MULCH, POTTED PLANTS SHALL BE SET SO THAT THE CROWN.
- SPRAY THE MULCHED AND PLANTED GROUND COVER BED WITH A PRE-EMERGENT HERBICIDE.
- THE ENTIRE GROUND COVER BED SHALL BE THOROUGHLY WATERED.

**BIORETENTION SOIL & MATERIAL REQUIREMENTS**

1. SOIL TEXTURE AND STRUCTURE:
 

TOPSOIL FOR BIORETENTION SHALL HAVE A SANDY LOAM, LOAMY TEXTURE PER USDA TEXTURAL TRIANGLE. MAXIMUM CLAY CONTENT IS 5% SOIL MIXTURE SHALL BE 50-60% SAND, 20-30% LEAF MULCH, 20-30% TOPSOIL. THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS, OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE POSED OR DUMPED WITHIN THE BIORETENTION THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERBERIS GRASS, QUACKGRASS, JOHNSON GRASS, HUGWORT, NUTSEDGE, POISON IVY, CANADIAN THISTLE, OR OTHER NOXIOUS WEEDS.
2. SOIL TESTING:
 

PLANTING SOIL FOR BIORETENTION AREAS MUST BE TESTED PRIOR TO INSTALLATION FOR PH AND ORGANIC MATTER. THE SOIL SHOULD MEET THE FOLLOWING CRITERIA (LANDSCAPE CONTRACTORS ASSOCIATION, 1996).

PH RANGE 5.5-6.5  
 ORGANIC MATTER 1.5-3.0%

IT IS REQUIRED THAT A SEIVE ANALYSIS, PH, AND ORGANIC MATTER TEST BE PERFORMED PER EACH BIORETENTION AREA.
3. SOIL PLACEMENT:
 

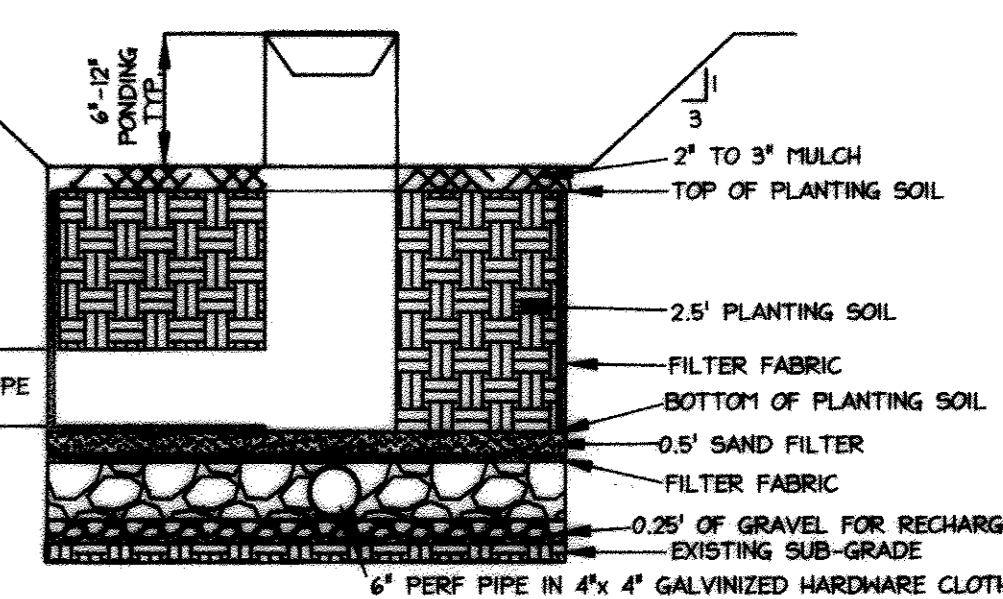
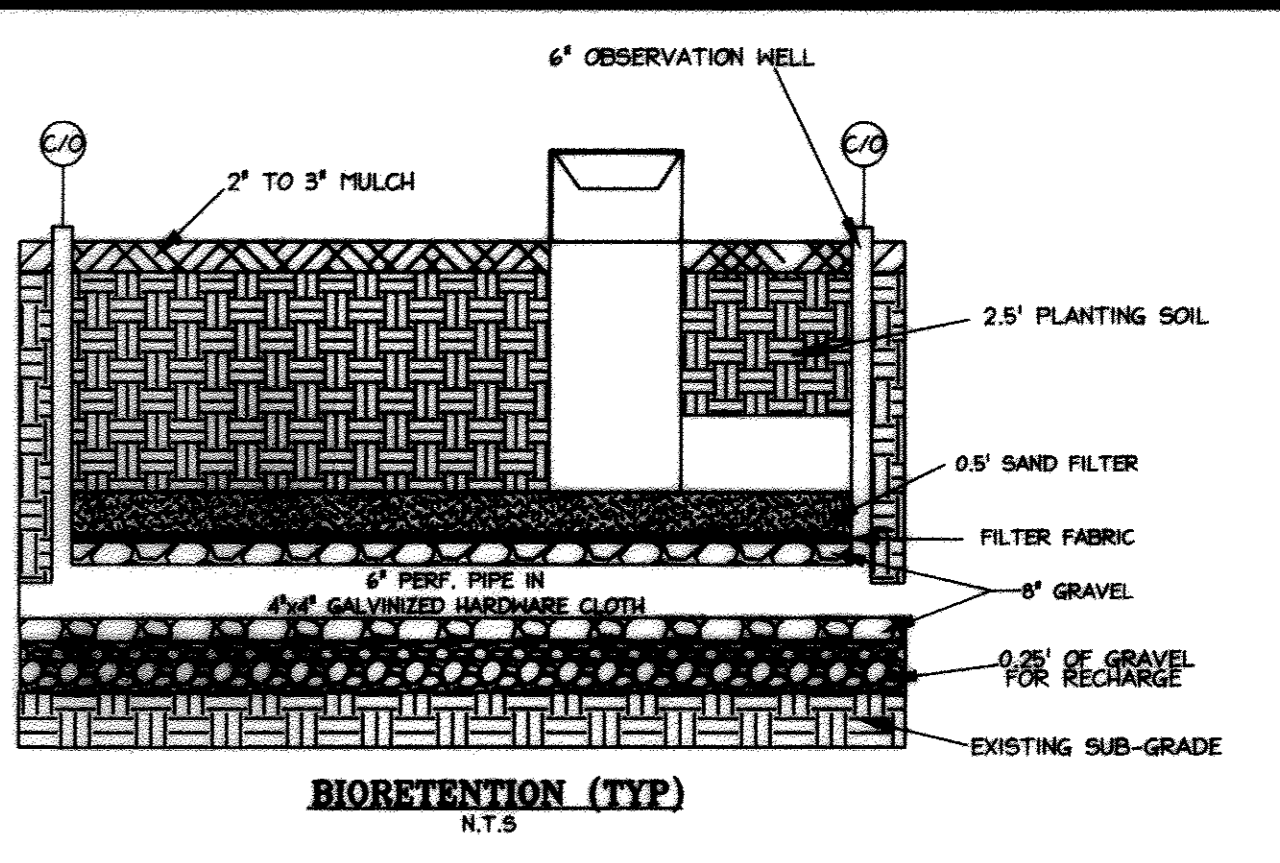
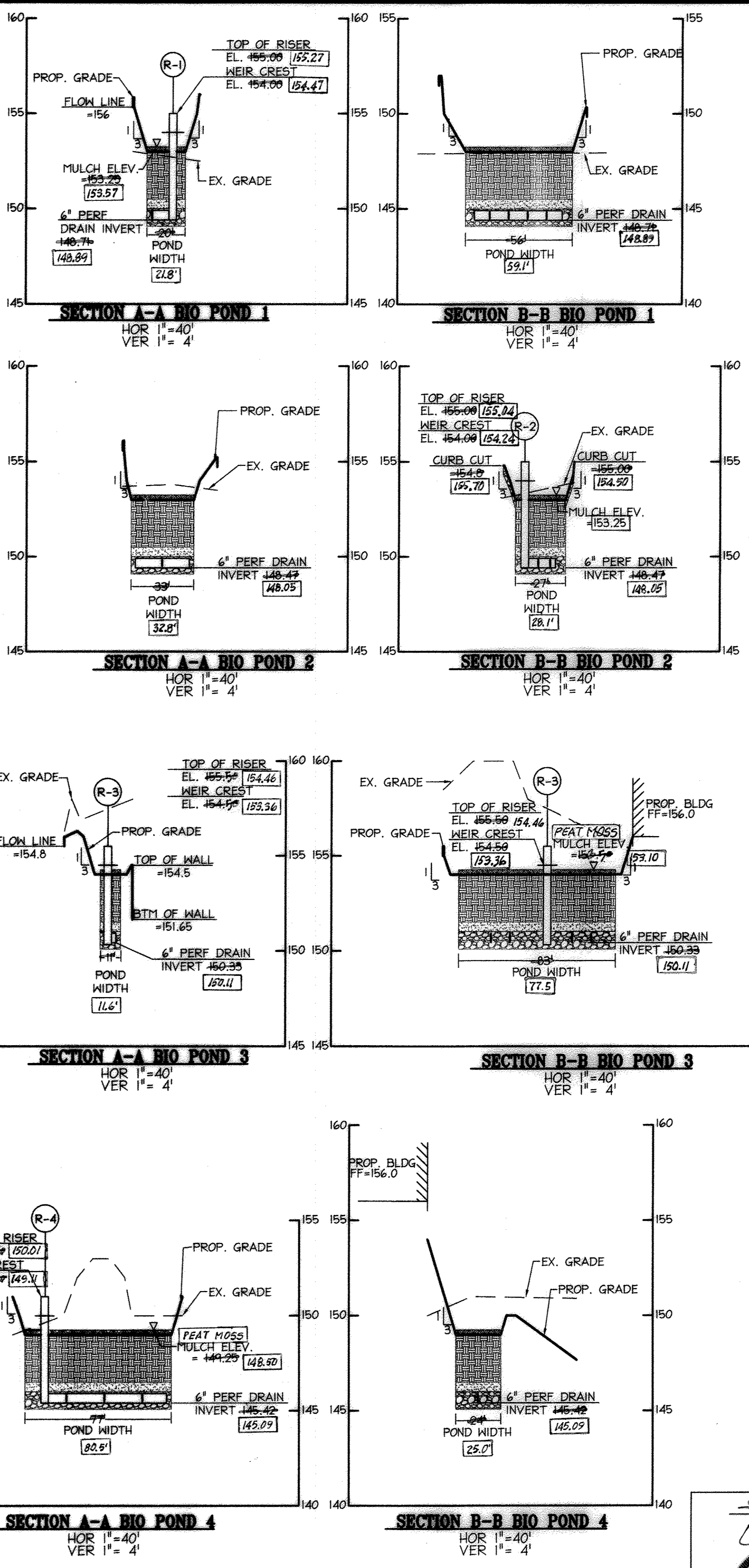
PLACEMENT OF THE PLANTING SOIL IN THE BIORETENTION AREA SHOULD BE IN LIFTS OF 12 TO 18 INCHES AND LIGHTLY COMPACTED. MINIMAL COMPACTION EFFORT CAN BE APPLIED TO THE SOIL BY TAMPING WITH A BUCKET FROM A DEEPER OR BACKHOE. REFER ALSO TO "COMPACTION".
4. MULCH SPECIFICATIONS:
 

INDIVIDUAL PLANTING SHALL BE MULCHED (REFER TO LANDSCAPING DETAILS). ACCEPTABLE MULCH SHALL BE SHREDED HARDWOOD ONLY. MULCH MUST BE WELL AGED, UNIFORM IN COLOR, AND FREE OF FOREIGN MATERIAL INCLUDING PLANT MATERIAL. WELL AGED MULCH IS DEFINED AS MULCH THAT HAS BEEN STOCKPILED OR STORED FOR AT LEAST TWELVE (12) MONTHS.
5. SAND SPECIFICATIONS:
 

PROVIDE CLEAN SAND, FREE OF DELETERIOUS MATERIALS. SAND SHALL MEET ASTM M-4 OR ASTM C-33 WITH GRAN SIZE OF 0.075-0.04".
6. GEOTEXTILE SPECIFICATIONS:
 

GEOTEXTILE FABRIC SHALL MEET ASTM D-771 (FUNCTION STRENGTH - 125 LB)  
 ASTM D-1117 (MULLIN BURST STRENGTH - 400 PSI)  
 ASTM D-1682 (TENSILE STRENGTH - 300 LB)  
 FABRIC SHALL HAVE 0.075" THICK EDGES, OF 180 SLEVE, AND MAINTAIN 125 GPH PER SQ. FT. FLOW RATE.
7. GRAVEL FILTER SPECIFICATIONS:
 

UNDERDRAIN GRAVEL BLANKET SHALL BE DOUBLE WASHED, #57 STONE, 1-1/2" IN SIZE. PEA GRAVEL SHALL BE WASHED, RIVER-RUN, ROUND DIAMETER 1/4" - 1/2" IN SIZE.
8. INSPECTION REQUIREMENTS:
  - ( ) THE CONTRACTOR SHALL ARRANGE A "PRECONSTRUCTION MEETING" WITH THE OWNER AND LANDSCAPE ARCHITECT/ENGINEER PRIOR TO BEGINNING WORK IN THE BIORETENTION FACILITY.
  - ( ) AT THE COMPLETION OF EXCAVATION TO INSPECT SUB GRADE PREPARATION.
  - ( ) DURING UNDERDRAIN AND FILTER INSTALLATION.
  - ( ) BACK FILL OF SOIL INTO THE BIORETENTION AREAS. SOIL CERTIFICATIONS FOR BACK FILL ARE REQUIRED.
  - ( ) THE FINAL TOPSOIL LAYERS SHOULD BE THOROUGHLY WETTED TO ACHIEVE SETTLEMENT OF THE SOIL/SAND BACKFILL MIX.
  - ( ) THE WORK SHALL BE INSPECTED BY THE OWNER/LANDSCAPE ARCHITECT PRIOR TO FINAL STABILIZATION AND PLANTING.
  - ( ) SEDIMENT AND EROSION CONTROL PRACTICES MAY BE REMOVED UPON APPROVAL BY THE COUNTY INSPECTOR.



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 11/31/12 Date

*[Signature]* 12/17/12 Date

*[Signature]* 11/21/12 Date

Director, Department of Planning and Zoning

11/21/2012 REDLINE REVISION

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST  
 C/O EXETER PROPERTY GROUP

140 W. GERRYMANTON PIKE, SUITE 150  
 PLYMOUTH MEETING, PA 19462  
 TEL: (610) 828-0756  
 FAX: (610) 828-9550

**christopher consultants**  
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 christopher consultants, inc.  
 7172 columbia gateway drive suite 100, columbia, md. 21046-2900  
 410.872.8880 metro 301.581.0148 fax 410.872.8883

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441

PLAT#	GRID#	ZONING	TAX MAP#	ELECT. DISTR.	CENSUS TRACT
L6457, F.258	16	M-2	43	151	6012.02

WATER CODE 400 (TG 550) SEWER CODE B01

TITLE: **BIO-RETENTION NOTES & DETAILS**

DESIGN: NM	SCALE: AS SHOWN	PROJECT: 09067.008.07
DRAWN: DM1	DATE: SEPT 06 2012	
CHECKED: ENJ	APPROVED: HRZ	17 of 45

**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.

SIGNATURE OF ENGINEER: *[Signature]* DATE: 10/17/12

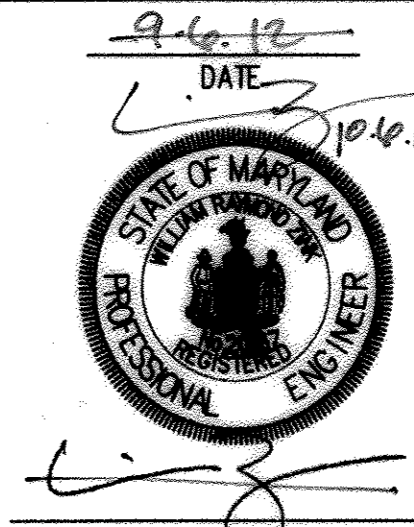
WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20587  
 EXPIRATION DATE: 09-26-2014

**AS-BUILT CERTIFICATION**

I HEREBY CERTIFY, BY MY SEAL THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN, AND TO MEET THE APPROVED PLANS AND SPECIFICATIONS.

*[Signature]* DATE: 7/18/2012

DAVID J. SHARON, PROFESSIONAL ENGINEER  
 MARYLAND REG. NO. 21223, EXPIRATION DATE: MARCH 19, 2018  
 DATE OF AS-BUILT: JUNE 17, 2014



MDC-8355



**B.3.C Specifications for Open Channels and Filter Strips**

**1. Material Specifications**

The recommended construction materials for open channels and filter strips are detailed in Table B.3.3.

**2. Dry Swales**

Permeable soil mixture (20" to 30" deep) should meet the bioretention specifications.

Check dams, if required, shall be placed as specified.

System to have 6" of freeboard, minimum above 2 year water surface elevation.

Side slopes to be 3:1 maximum; (4:1 or flatter is preferred).

No gravel or perforated pipe is to be placed under driveways.

Bottom of facility to be above the seasonally high water table per Table 2 of Appendix D.1.

Seed with flood/drought resistant grasses; see Appendix A, Section 2.4.

Longitudinal slope to be 4%, maximum.

Bottom width to be 8' maximum to avoid braiding; larger widths may be used if proper berming is supplied. Width to be 2' minimum.

**3. Wet Swales**

Follow above information for dry swales, with the following exceptions: the seasonally high water table may truncate the swale; but not above the design bottom of the channel [NOTE: if the water table is stable within the channel, the WQ<sub>v</sub> storage may start at this point - see Figure 3.19]

Excavate into undisturbed soils; do not use an underdrain system.

**4. Filter Strips**

Construct pea gravel diaphragms 12" wide, minimum, and 24" deep minimum.

Pervious berms to be a sand/gravel mix [sand (35-60%), silt (30-55%), and gravel (10-25%)]. Berms to have overflow weirs with 6 inch minimum head.

Slope range to be 2% minimum to 6% maximum.

**5. Plant Selection**

Recommended grass species for use in establishing permanent ground cover are provided in Section 2.4 of Appendix A.

**A.2.4 Open Channels**

Consult Table A.7 for grass species that perform well in the stressful environment of an open channel. For more detailed information, please consult the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control. If a BMP is likely to receive excessive amounts of deicing salt, salt tolerant plants should be used.

**A.2.5 Filter Strips and Stream Buffer**

For design and plant selection of filter strips and stream buffers, please consult the USDA Natural Resources Conservation Service Maryland Conservation Practice Standard No. 391 "Riparian Stream Buffers."

**Table A.7 Common Grass Species for Open Channels**

Common Name	Scientific Name	Characteristics
Big Bluestem	<i>Andropogon gerardii</i>	Warm, not for Wet Swale
Creeping Bentgrass	<i>Agrostis palustris</i>	Cool,
Red Fescue	<i>Festuca rubra</i>	Cool, not for Wet Swale
Reed Canary grass	<i>Phalaris arundinacea</i>	Cool, Wet Swale
Redtop	<i>Agrostis alba</i>	Cool,
Smooth Bromc	<i>Bromus inermis</i>	Cool, not for Wet Swale
Switch grass	<i>Panicum virgatum</i>	Warm

**Note 1:** These grasses are sod-forming and can withstand frequent inundation, and are thus ideal for the swale or grass channel environment. Most are salt-tolerant, as well. Cool refers to cool season grasses that do well in the western part of the State, Warm refers to warm season grasses that work well in the eastern part of the State (see Table A.8).

**Note 2:** Where possible, one or more of these grasses should be in the seed mixes. For a more thorough listing of seed mixes, consult the 1994 Maryland Standard and Specifications for Soil Erosion and Sediment Control (MDE, 1994) or the MD NRCS Code 391 Riparian Forest Buffer Standard, Table 2 (Zone 3).

**CONSTRUCTION SPECIFICATIONS:**

- SWALES AND DITCHES SHALL BE PREPARED IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS DESCRIBED IN SECTION A-2, STANDARDS AND SPECIFICATIONS FOR TEMPORARY SWALE.
- THE CHECK DAM SHALL BE CONSTRUCTED OF 4" TO 7" STONE. THE STONE SHALL BE PLACED SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL AND KEYS INTO THE CHANNEL BANKS.
- THE TOP OF THE CHECK DAM SHALL BE CONSTRUCTED SO THAT THE CENTER IS APPROXIMATELY 6 INCHES LOWER THAN THE OUTER EDGES, FORMING A WEIR THAT WATER CAN FLOW ACROSS.
- THE MAXIMUM HEIGHT OF THE CHECK DAM AT THE CENTER SHALL NOT EXCEED 2'.
- THE UPSTREAM SIDE OF THE CHECK DAM SHALL BE LINED WITH APPROXIMATELY 1" OF 3/4"-1 1/2" AGGREGATE.
- ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS BUILT UP TO 1/2" OF THE ORIGINAL HEIGHT OF THE WEIR CREST.

**SEDIMENT REMOVAL**

WHILE THIS PRACTICE IS NOT INTENDED TO BE USED FOR SEDIMENT TRAPPING, SOME SEDIMENT WILL ACCUMULATE BEHIND THE CHECK DAM. CHECK DAMS SHOULD BE CHECKED PERIODICALLY AND AFTER EACH SIGNIFICANT RAINFALL. ACCUMULATED SEDIMENT SHOULD BE REMOVED WHEN IT HAS REACHED 1/2 OF THE ORIGINAL HEIGHT OF THE WEIR CREST.

**CHECK DAM REMOVAL**

IN TEMPORARY SWALES AND CHANNELS, CHECK DAMS SHOULD BE REMOVED AND THE DITCH FILLED IN WHEN IT IS NO LONGER NEEDED. IN PERMANENT CHANNEL STRUCTURES, CHECK DAMS MAY BE REMOVED WHEN A PERMANENT LINING CAN BE INSTALLED. IN THE CASE OF GRASS LINED DITCHES, CHECK DAMS MAY BE REMOVED WHEN THE GRASS HAS MATURED SUFFICIENTLY TO PROTECT THE SWALE OR CHANNEL. THE AREA BENEATH THE CHECK DAMS SHOULD BE SEEDED AND MULCHED IMMEDIATELY AFTER THEY ARE REMOVED.

**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY SWALES**

**ROUTINE MAINTENANCE:**

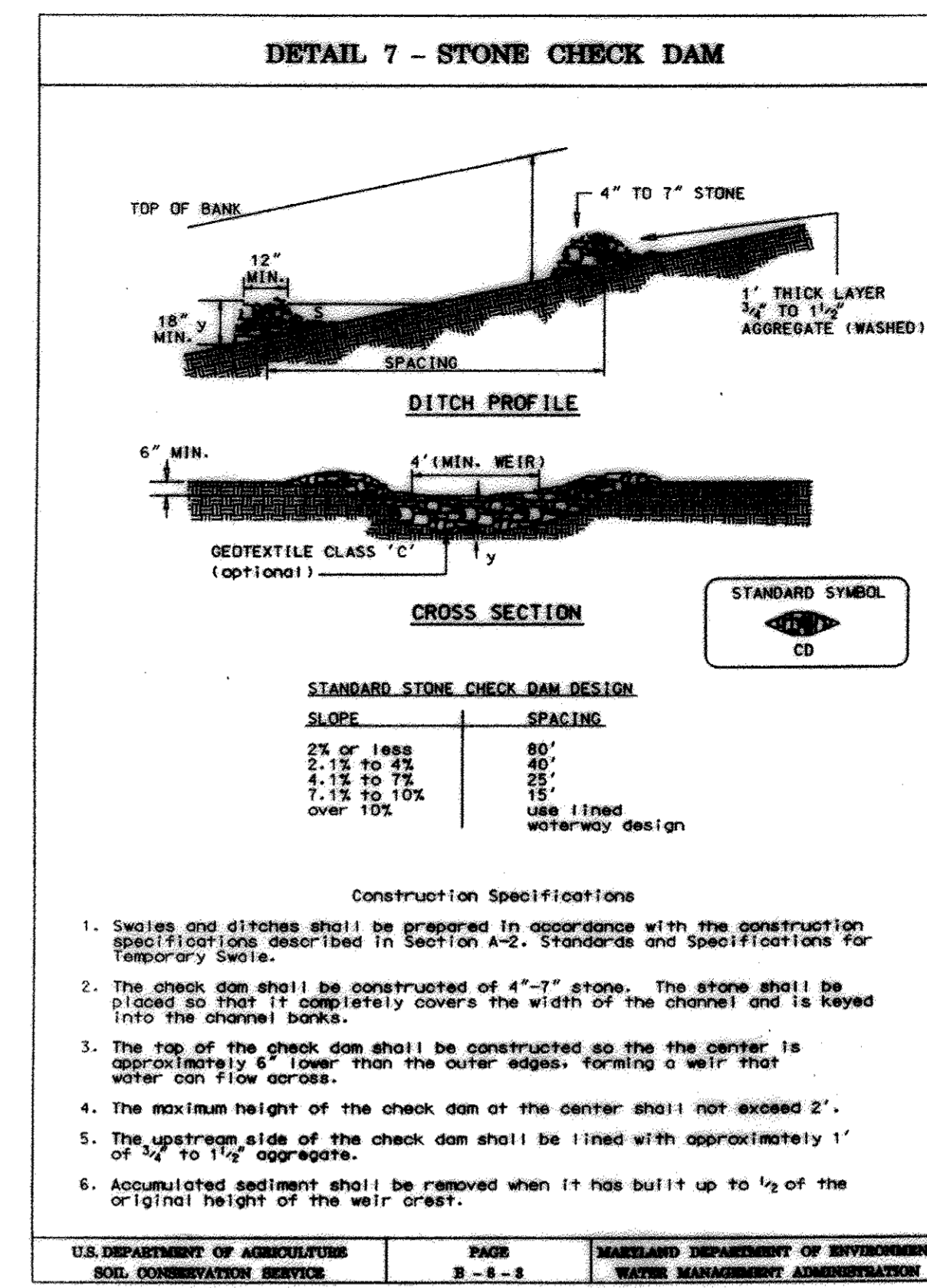
- SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORMS EVENTS.
- FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
- TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES PER YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER.
- DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AS NEEDED.
- VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.

**NON-ROUTINE MAINTENANCE:**

- STRUCTURAL COMPONENTS OF THE FACILITY SUCH AS THE EMBANKMENT, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHALL BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.

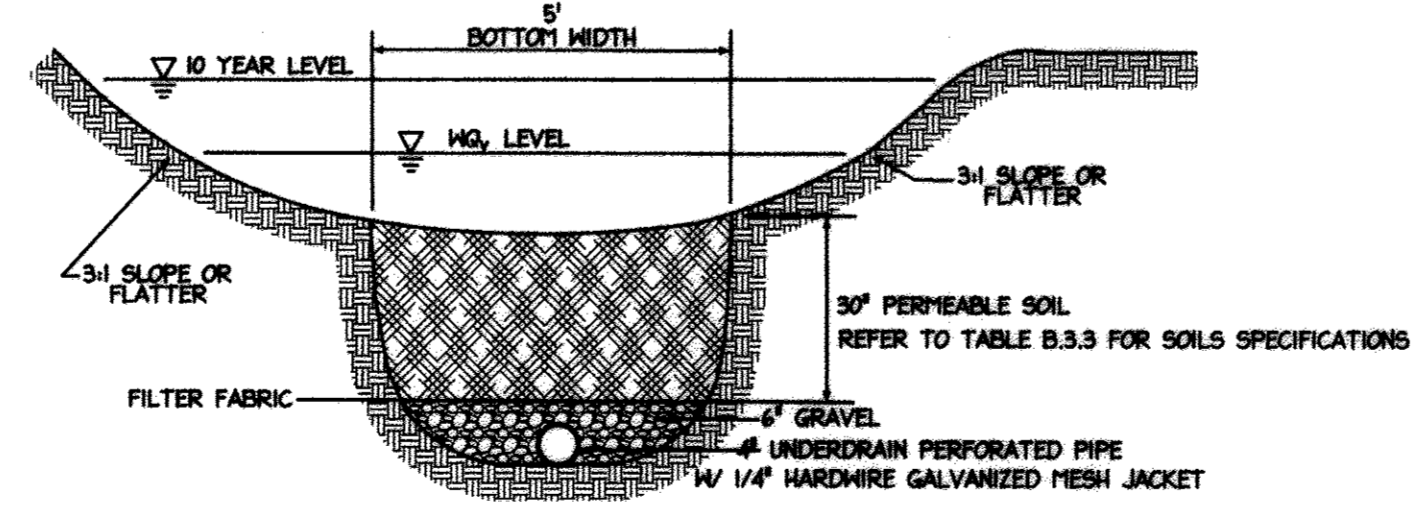
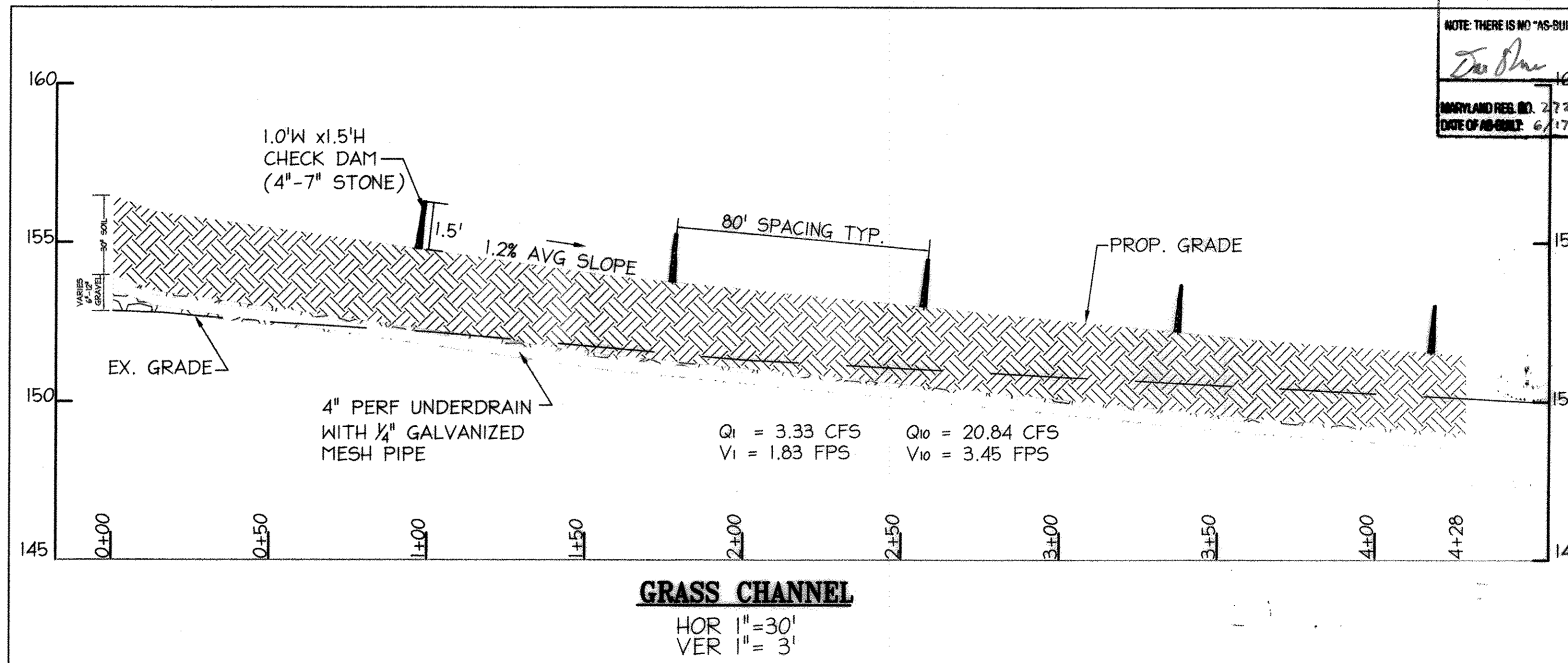
**OPERATION, MAINTENANCE AND INSPECTION**

INSPECTION OF THE FACILITY SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY. THE FACILITY OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE FACILITY AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE FACILITY OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.



**Table B.3.3 Open Channel Systems and Filter Strip Materials Specifications**

Material	Specification	Note	Notes
dry swale soil	USCS: ML, SM, SC	n/a	soil with a higher percent organic content is preferred
dry swale sand	ASTM C-33 fine aggregate concrete sand	0.02" to 0.04"	
check dam (pressure treated)	AWPA Standard C6	6" by 6" or 8" by 8"	do not coat with creosote; embed at least 3' into side slopes
check dam (natural wood)	Black Locust, Red Mulberry, Cedars, Catalpa, White Oak, Chestnut Oak, Black Walnut	6" to 12" diameter; notch as necessary	do not use the following, as these species have a predisposition towards rot: Ash, Beech, Birch, Elm, Hackberry, hemlock, Hickories, Maples, Red and Black Oak, Pines, Poplar, Spruce, Sweetgum, Willow
filter strip sand/gravel pervious berm	sand: per dry swale sand gravel; AASHTO M-43	sand: 0.02" to 0.04" gravel: 1/2" to 1"	mix with approximately 25% loam soil to support grass cover crop; sand (35-60%), silt (30-55%), and gravel (10-25%) see Bioretention planting soil notes for more detail.
pea gravel diaphragm and curbside drain	ASTM D 448	varies (No. 6) or (1/8" to 3/8")	use clean bank-run gravel
underdrain gravel	AASHTO M-43	0.25" to 0.75"	
underdrain	F 758 Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes
geotextile	Class "C" - apparent opening size (ASTM-D-4751), grab tensile strength (ASTM-D-4832), puncture resistance (ASTM-D-4833)	n/a	
rip rap	per county criteria; if none given, use MSHA Standards and Specs Section 906	size per county DOT requirements based on 10-year design flows	



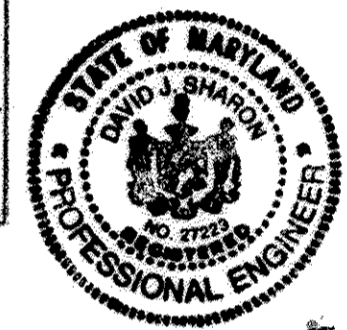
**AS-BUILT CERTIFICATION**

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

DATE: 2/19/2012

EXPIRATION DATE: 3/19/2018

DATE OF AS-BUILT: 6/17/2014 & 6/27/2017



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development: 10/31/12

Chief, Development Engineering Division: 10/17/12

Director, Department of Planning and Zoning: 11/21/12

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST  
140 M. GERMANTOWN PIKE, SUITE 150  
PLYMOUTH MEETING, PA 19462  
TEL (610) 828-0756  
C/O EXETER PROPERTY GROUP FAX (610) 828-5550

**christopher consultants**  
engineering - surveying - land planning  
christopher consultants, inc.  
2732 colts Neck gateway drive (suite 100) columbia, md 21046-2990  
410.872.8800 - fax 410.872.8888

**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441
PLAT# L6457, F.258	GRID# 16 ZONING M-2	TAX MAP# 43 ELECT. DISTR. 1ST
WATER CODE 400 (TG 550)	SEWER CODE 801	CENSUS TRACT 8012.02

**SWM NOTES & DETAILS**

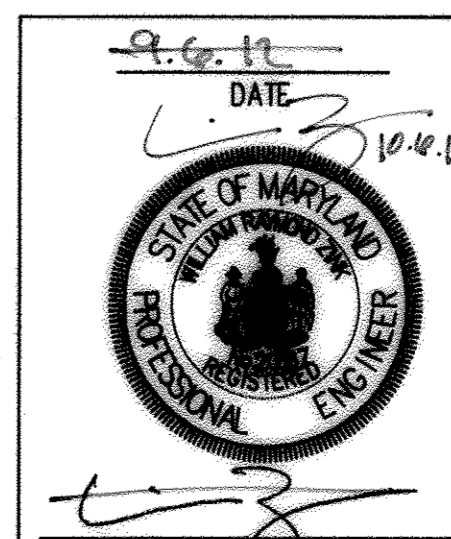
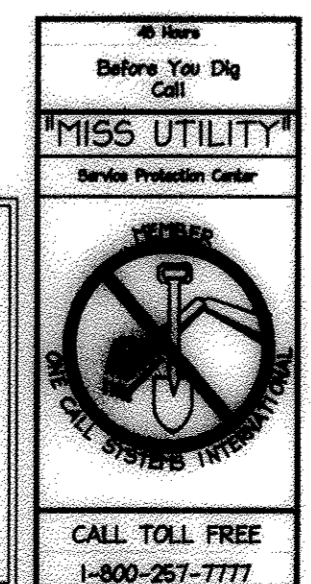
DESIGN#	SCALE	PROJECT
N#1	AS SHOWN	02067.008.07
DRAWN: DAFI	DATE: SEPT 06 2012	
CHECKED: ENJ	APPROVED: HRZ	18 of 45

**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.

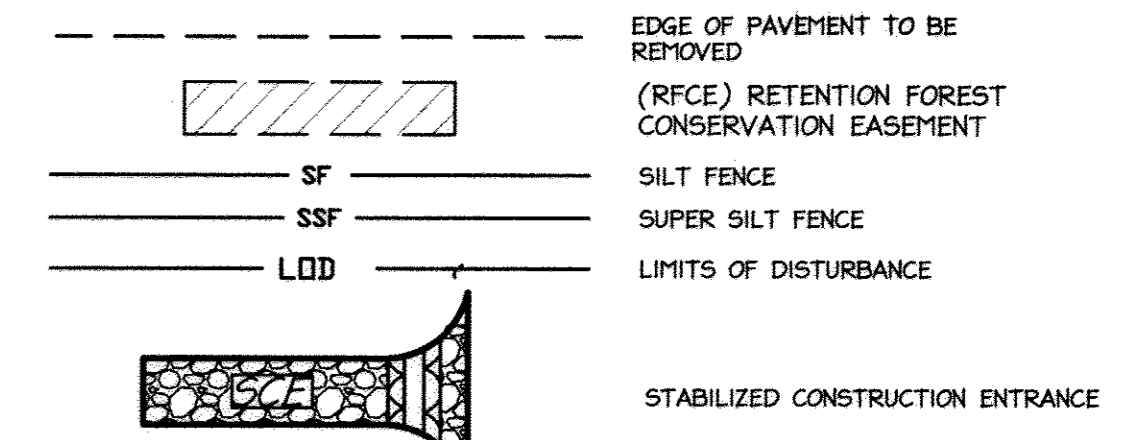
SIGNATURE OF ENGINEER: [Signature] DATE: 10/12/12

WILLIAM R. ZINK, P.E.  
MD LICENSE NUMBER: 20567  
EXPIRATION DATE: 09-26-2014



MATCHLINE - SEE SHEET 21 FOR CONTINUATION

LEGEND



NOTE - SFOP - SILT FENCE ON PAVEMENT

- PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
- PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ON SHEET 21 FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE.

DEVELOPER'S CERTIFICATE

I/We certify that all development and construction will be done according to this plan, 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 also authorize periodic on-site inspection by the Howard Soil Conservation District.

Signature of Developer: *Scott Daugherty* Date: 7/6/12  
 Print name below signature: Scott Daugherty

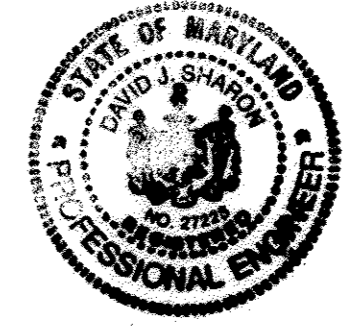
ENGINEER'S CERTIFICATE

I certify that this plan for erosion and sediment 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 of Engineer: *Yolanda L. Langhorne-Thompson* Date: 7/5/12  
 Print name below signature: YOLANDA L. LANGHORNE THOMPSON

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
 Signature: *Howard SCD* Date: 7/10/12



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: *Kate E. Dwyer* Date: 10/31/12  
 Chief, Division of Land Development

Signature: *David S. Langford* Date: 10/17/12  
 Chief, Department Engineering Division

Signature: *Daniel D. Cagle* Date: 11/2/12  
 Director, Department of Planning and Zoning

NO.	DATE	REVISION
3	4/20/12	DEM EXCAVATING EXISTING CONCR. NEW LOADING DOCK
2	11/20/11	RET. WALL, GRADING AND EX. PAVEMENTS
1	11/20/11	LOADING DOCK, GRADING
1	11/20/11	REDLINE REVISIONS

**AS-BUILT CERTIFICATION**

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

Signature: *David S. Langford* Date: 7/18/2012

MARYLAND REG. NO. 27223 EXPIRATION DATE: 3/19/2018  
 DATE OF AS-BUILT: 6/17/2014 & 6/27/2017

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

OWNER / DEVELOPER  
 MONTEVIDEO REALTY 140 N. GERMANTOWN PIKE SUITE 150  
 BUSINESS TRUST PLYMOUTH MEETING, PA 19462  
 C/O EXETER PROPERTY GROUP TEL. (610) 828-0756 FAX (610) 828-5550

**christopher consultants**  
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 7172 columbia gateway drive (suite 100) · columbia, md · 21046-2990  
 410.372.2990 · mext 301.951.0146 · fax 410.872.8990

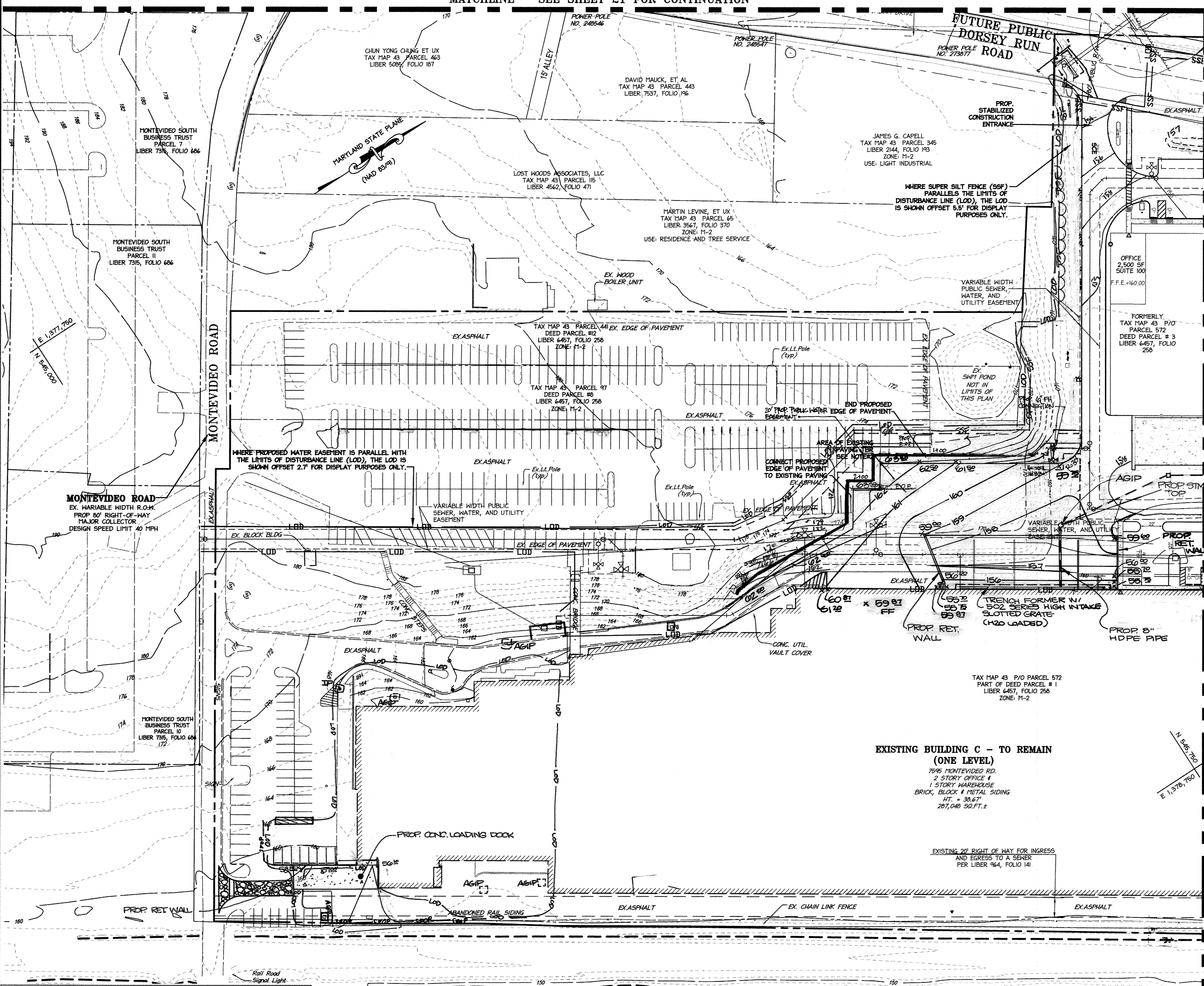
PARCEL#	STREET ADDRESS	BUILDING
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1	7587 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#			
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441			
PLAT#	GRID#	ZONING	TAX MAP#	ELECT. DISTR.	CENSUS TRACT
L6457, F.258	16	M-2	43	1ST	6012.02
MATER. CODE	400 (TC 500)	SEWER CODE	B01		

TITLE: **SEDIMENT AND EROSION CONTROL PLANS**

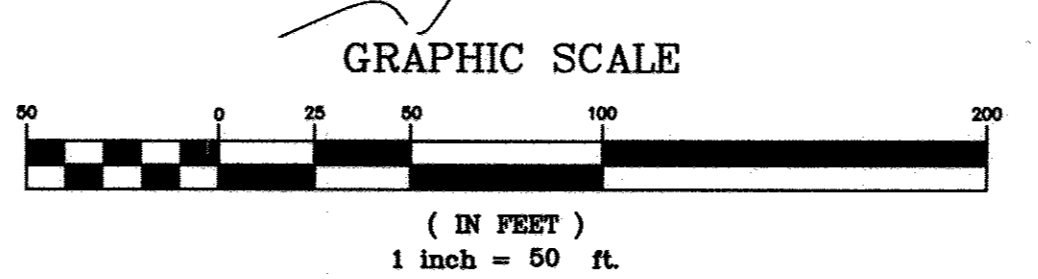
DESIGN#	SCALE	PROJECT#
N1	1" = 50'	03067.008.07
DRAWN: DAM	DATE: JUNE 27, 2012	
CHECKED: ENJ	APPROVED: YLL	<b>19 of 45</b>



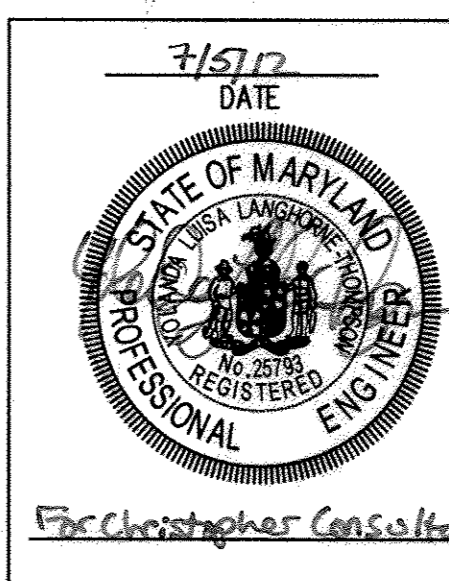
**PROFESSIONAL CERTIFICATION**

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.

Signature: *Yolanda L. Langhorne-Thompson* Date: 7/5/12  
 YOLANDA L. LANGHORNE-THOMPSON, P.E.  
 MD LICENSE NUMBER: 25793  
 EXPIRATION DATE: 06-21-2013

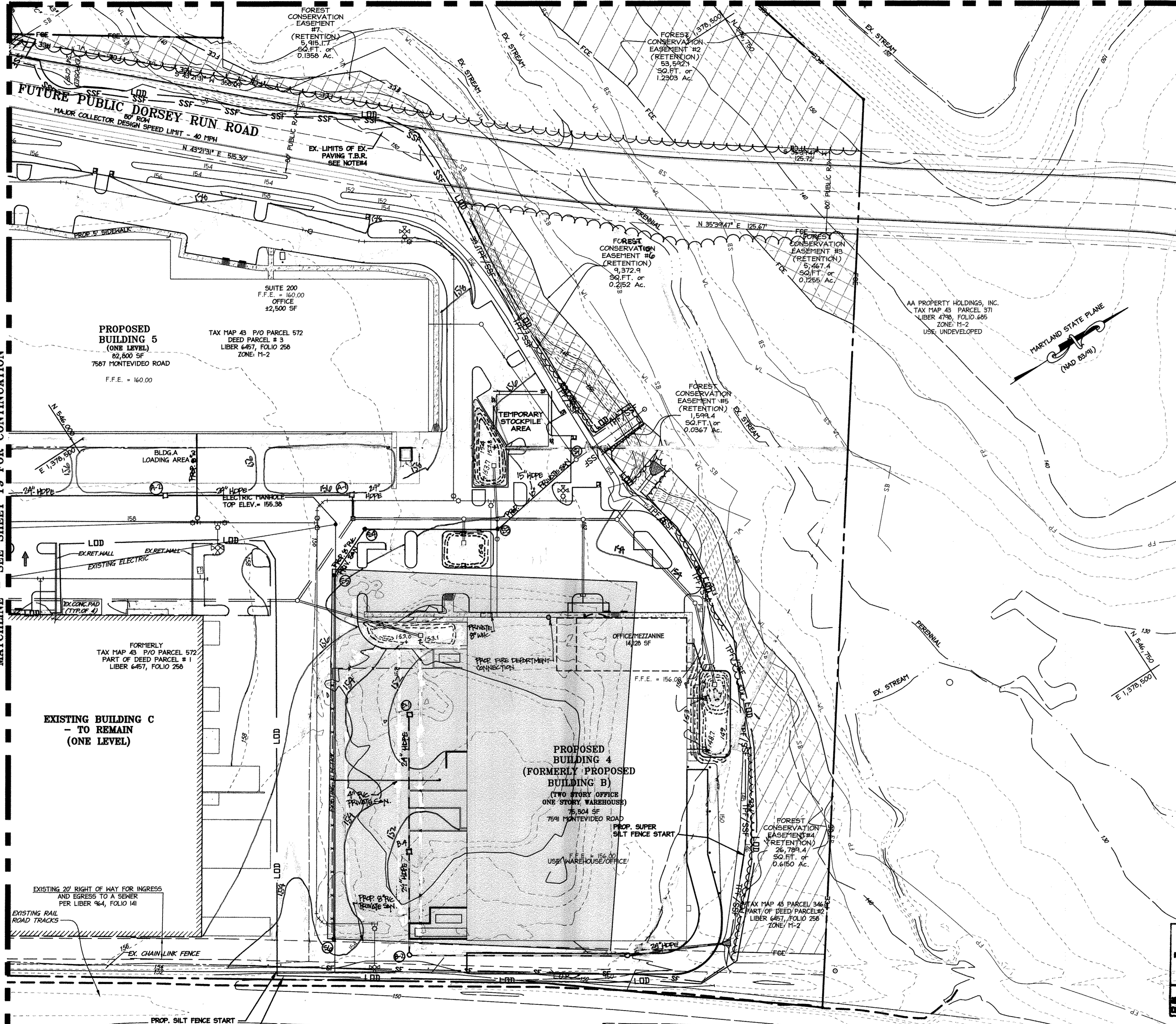


CSX TRANSPORTATION, INC.  
 VARIABLE WIDTH RAILROAD  
 RIGHT-OF-WAY  
 SHEET 3 OF 18 VALUATION MAP V06488



10/16' EXIST. BLDG. LOADING DOCK, TRUCK COURT, RAIN GARDEN

MATCHLINE - SEE SHEET 21 FOR CONTINUATION



**MISS UTILITY**  
Before You Dig  
Call  
Service Protection Center  
1-800-257-7177

**DEVELOPER'S CERTIFICATE**  
I/We certify that all development and construction will be done according to this plan, 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 also authorize periodic on-site inspection by the Howard Soil Conservation District.  
Signature of Developer: *Scott Daugherty* Date: 7/6/12  
Print name below signature: Scott Daugherty

**ENGINEER'S CERTIFICATE**  
I certify that this plan for erosion and sediment 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 of Engineer: *Yolanda Langhorne-Thompson* Date: 7/5/12  
Print name below signature: Yolanda Langhorne-Thompson

**REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.**  
This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
Signature: *John P. White* Date: 7/10/12  
Howard SCD

**LEGEND**

- SF SILT FENCE
- SSF SUPER SILT FENCE
- LOD LIMITS OF DISTURBANCE
- TPF/SSF SILT FENCE TREE PROTECTION
- IP STANDARD INLET PROTECTION BLOCKING
- CIP CURB INLET PROTECTION BLOCKING
- STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED CURBLINE
- 50' BUILDING RESTRICTION LINES
- 30' PARKING RESTRICTION LINES
- SOILS LINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- FORMER PROPERTY LINE
- EX. 8" WATER
- EX. 8" SAN
- EX. 24" RCP
- DHE EXISTING OVERHEAD UTILITY FENCE (BARB WIRE)
- EXISTING CURBLINE
- EXISTING BUILDINGS
- STREAM CENTERLINE
- RAILROAD DITCH
- PROPOSED TREETLINE
- EXISTING TREETLINE
- FP PUBLIC 100YR FLOODPLAIN
- WL WETLANDS
- SB 50' STREAM BUFFER
- WB 25' WETLAND BUFFER
- FCE FOREST CONSERVATION EASEMENT
- EXISTING LIGHT POLE
- EXISTING SIGN
- GAS METER
- STORM
- WATER METER
- RAILROAD TRACKS
- GRASS CHANNEL
- STOCKPILE AREA
- RETENTION FOREST CONSERVATION EASEMENT (NONE ON THIS SHEET)
- RETENTION FOREST CONSERVATION EASEMENT NON CREDITED EASEMENT

- NOTES**
- IT IS THE INTENT OF THIS PLAN TO PROVIDE A STOCKPILE AREA AT THE SHOWN LOCATION. THE STOCKPILE AREA WILL ONLY BE REMOVED DURING THE LATER STAGES OF CONSTRUCTION PRIOR TO INSTALLING THE BIO-RETENTION SYSTEM AT THE SAME LOCATION. ANY FIELD CHANGES OF THE STOCKPILE AREA LOCATION DURING CONSTRUCTION SHALL BE INFORMED TO THE COUNTY BY THE GENERAL CONTRACTOR AND OBTAIN A WRITTEN APPROVAL REQUIRED BY THE COUNTY. ANY CLEARING/DISTURBANCE ASSOCIATED WITH THE PROVISION OF A STOCK PILE AREA SHALL BE PERFORMED DURING THE INITIAL CONSTRUCTION ACTIVITY.
  - PLEASE NOTE THAT THESE EROSION AND SEDIMENT CONTROL PLANS REPRESENT ALL DEVELOPMENT CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL REFER TO THE SEQUENCE OF CONSTRUCTION ACTIVITIES ON SHEET 20 FOR FURTHER DETAILS.
  - PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 21 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
  - PLEASE REFER TO DEMOLITION PLANS 2-4 AND SHEET 19 FOR LIMITS OF EXISTING PAVEMENT TO BE REMOVED.
  - PLEASE REFER TO SHEET 31 FOR FLOODPLAIN ELEVATIONS.
  - MATERIAL IN THE EX. STOCKPILE CAN BE USED AS FILL FOR BUILDING 5. REFER TO GEOTECHNICAL REPORT FOR COMPACTION SPECIFICATIONS.

**APPROVED: DEPARTMENT OF PLANNING AND ZONING**  
Signature: *Ket Sheehan* Date: 10/31/12  
Chief, Division of Land Development  
Signature: *Michelle...* Date: 10/12/12  
Chief, Development Engineering Division  
Signature: *Brand...* Date: 11/2/12  
Director, Department of Planning and Zoning

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**  
**OWNER / DEVELOPER**  
MONTEVIDEO REALTY 140 W. GERMANTOWN PIKE, SUITE 150  
BUSINESS TRUST PLYMOUTH MEETING, PA 19462  
C/O EXETER PROPERTY GROUP TEL (610) 828-0756 FAX (610) 828-5550

**christopher consultants**  
engineering - surveying - land planning  
christopher consultants, ltd.  
7172 columbia gateway drive (suite 100) - columbia, md 21046-2990  
410.272.2950 - fax 410.272.2950

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441
PLAT# L6457, F.258	GRID# 16 ZONING M-2 TAX MAP# 43 ELECT. DIST# 1ST CENSUS TRACT 6012.02	
WATER CODE 400 (TG 550)	SEWER CODE 801	

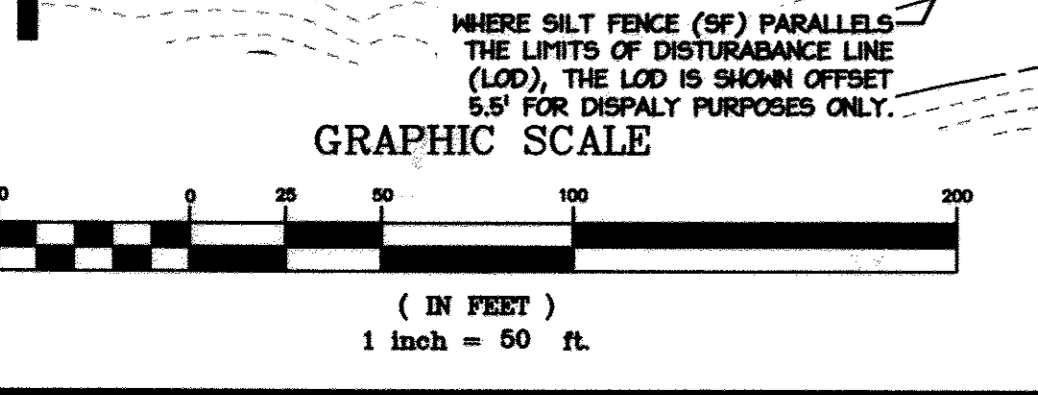
DESIGN#	SCALE	PROJECT#
N#1	1" = 50'	09067.008.07
DRAWN: DA#1	DATE: JUNE 27, 2012	
CHECKED: ENJ	APPROVED: YLL	20 OF 45

**AS-BUILT CERTIFICATION**  
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.  
Signature: *Des...* Date: 7/18/2012  
SURVEYOR'S ID: 27223 EXPIRATION DATE: 3/19/2019  
DATE OF AS-BUILT: 6/17/2014 & 6/27/2017

**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.  
Signature of Engineer: *Yolanda L. Langhorne-Thompson, P.E.* Date: 7/5/12  
MD LICENSE NUMBER: 25793  
EXPIRATION DATE: 06-21-2013



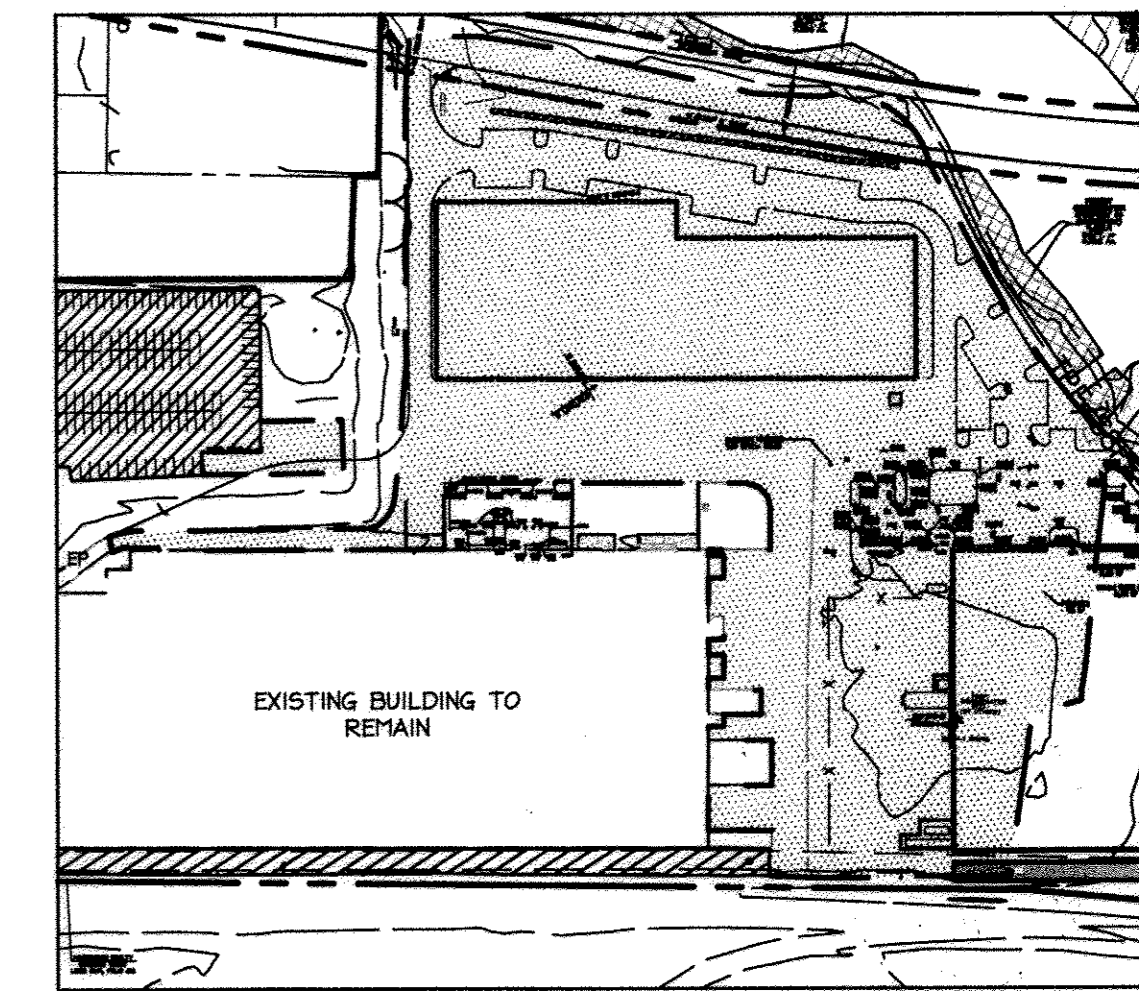
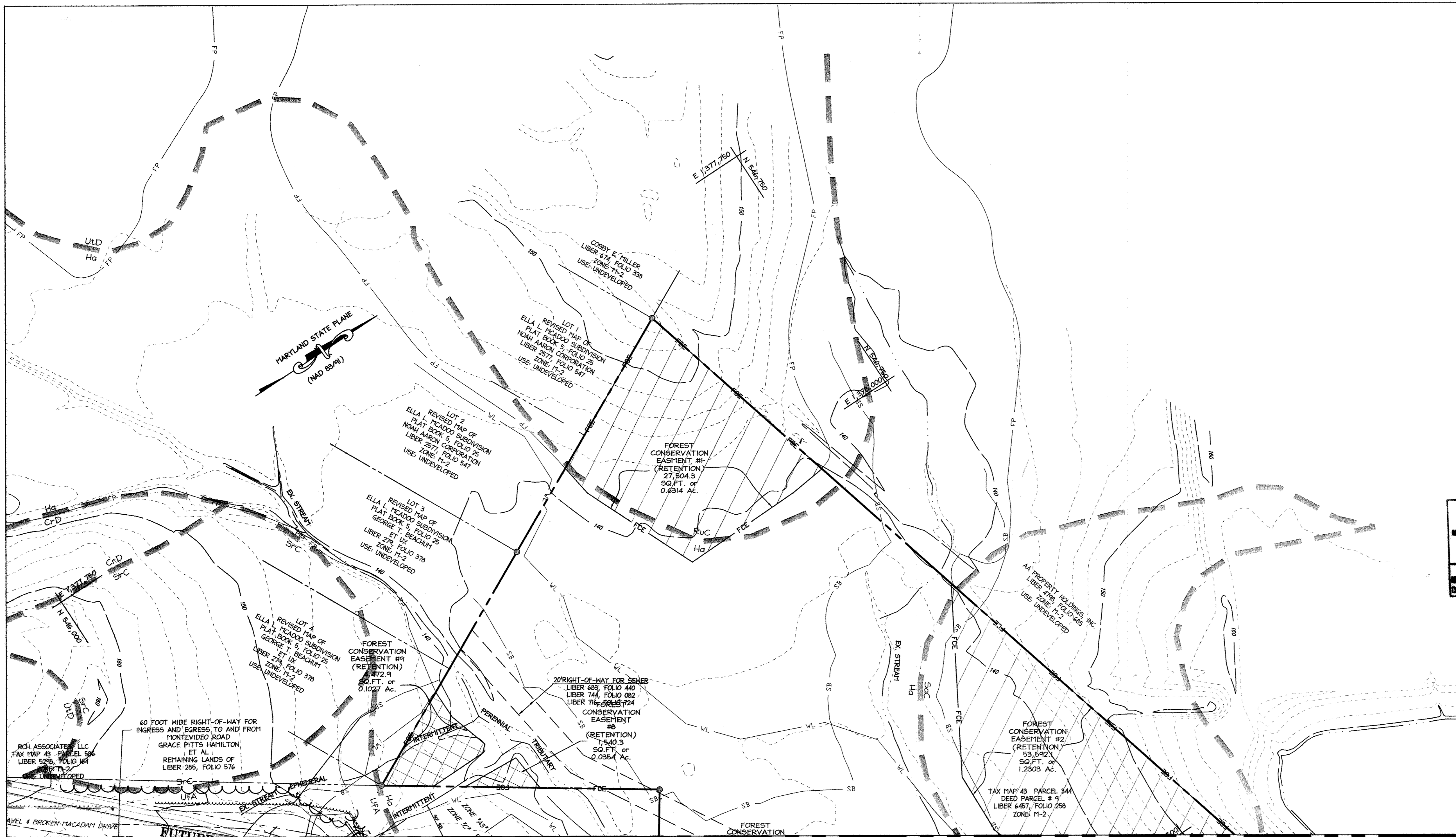
MATCHLINE - SEE SHEET 19 FOR CONTINUATION



WHERE SILT FENCE (SF) PARALLELS THE LIMITS OF DISTURBANCE LINE (LOD), THE LOD IS SHOWN OFFSET 5.5' FOR DISPLAY PURPOSES ONLY.

CSX TRANSPORTATION, INC. VARIABLE-WIDTH RAILROAD RIGHT-OF-WAY SHEET 3 OF 13 VALUATION MAP V00688

MDC-855



**LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR)**

SCALE: 1" = 200'  
 EXISTING PAVEMENT TO BE REMOVED [Symbol]  
 EXISTING PAVEMENT TO BE REMAIN [Symbol]

**NOTES**

- PLEASE REFER TO CHARTS OF BEARINGS AND DISTANCES ON SHEET 30 FOR DELINEATION OF RETENTION FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
- PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ABOVE FOR LIMITS OF REMOVED PAVING FROM EXISTING SITES.

**AS-BUILT CERTIFICATION**

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.  
 DATE: 7/10/2012  
 EXPIRATION DATE: 3/19/2018  
 DATE OF AS-BUILT: 6/17/2014 & 6/27/2017



**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

Chief, Division of Land Development [Signature] 10/31/12 Date  
 Chief, Development Engineering Division [Signature] 10/17/12 Date  
 Director, Department of Planning and Zoning [Signature] 10/12/12 Date

1	11/2/12	REDLINE REVISIONS
---	---------	-------------------

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

**OWNER / DEVELOPER**  
 MONTEVIDEO REALTY BUSINESS TRUST  
 C/O EXETER PROPERTY GROUP  
 140 M. GERMANTOWN PIKE, SUITE 150  
 PLYMOUTH MEETING, PA 19462  
 TEL: (610) 828-0756  
 FAX: (610) 828-5550



PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART		
SUBDIVISION NAME: DORSEY RUN INDUSTRIAL CENTER	SECTION/AREA: 43	LOT/PARCEL#: 572,346,97,344,441
PLAT#: L6457, F.258	GRID#: 16	TAX MAP#: M-2
ELECT. DISTR.: 1ST	CENSUS TRACT: 6012.02	
WATER CODE: 400 (TG 550)	SEWER CODE: B01	

**TITLE: SEDIMENT AND EROSION CONTROL PLANS**

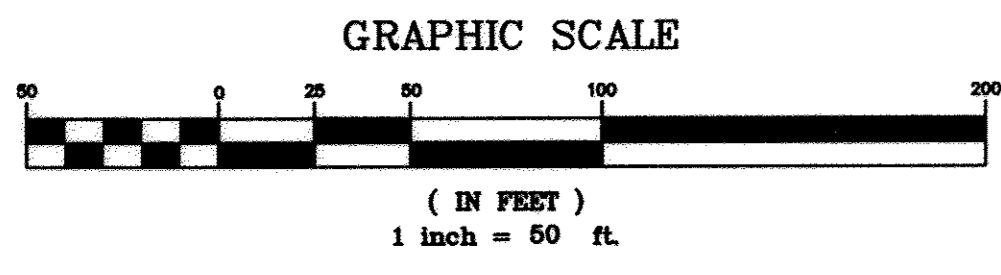
DESIGN: NP1	SCALE: 1" = 50'	PROJECT: 03067.008.07
DRAWN: DAM	DATE: JUNE 27, 2012	
CHECKED: ENJ	APPROVED: YLL	21 OF 45

MATCHLINE - SEE SHEET 18 FOR CONTINUATION

MATCHLINE - SEE SHEET 20 FOR CONTINUATION

**LEGEND**

- [Symbol] EDGE OF PAVEMENT TO BE REMOVED
- [Symbol] (RFCE) RETENTION FOREST CONSERVATION EASEMENT
- [Symbol] EXISTING INTER CONTOUR
- [Symbol] EXISTING INDEX CONTOUR
- [Symbol] EXISTING SPOT ELEVATION
- [Symbol] PROPERTY LINE
- [Symbol] ADJACENT PROPERTY LINE
- [Symbol] EXISTING SANITARY SEWER
- [Symbol] EXISTING OVERHEAD UTILITY
- [Symbol] FENCE (BARB WIRE)
- [Symbol] EXISTING CURBLINE
- [Symbol] STREAM CENTERLINE
- [Symbol] EXISTING TREELINE TO BE REMOVED
- [Symbol] EXISTING TREELINE
- [Symbol] SOILS LINE
- [Symbol] PUBLIC 100YR FLOODPLAIN
- [Symbol] WETLANDS
- [Symbol] 50' STREAM BUFFER
- [Symbol] 25' WETLAND BUFFER
- [Symbol] FOREST CONSERVATION EASEMENT



**DEVELOPER'S CERTIFICATE**

"I/We certify that all development and construction will be done according to this plan, 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 also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer: Scott Dougherty  
 Date: 7/6/12

**ENGINEER'S CERTIFICATE**

I certify that this plan for erosion and sediment 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.

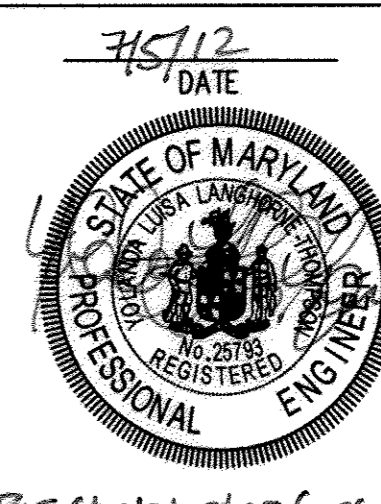
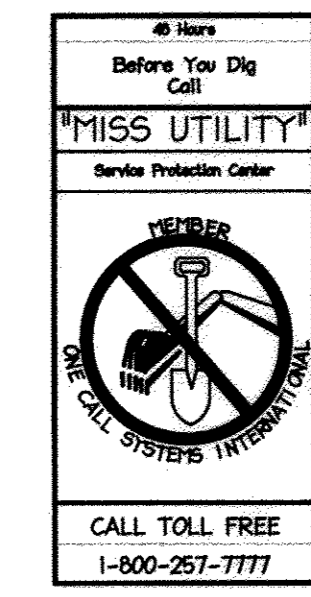
Signature of Engineer: Yolanda L. Langhorne-Thompson  
 Date: 7/15/12

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.  
 Signature of Howard SCD: [Signature]  
 Date: 7/10/12

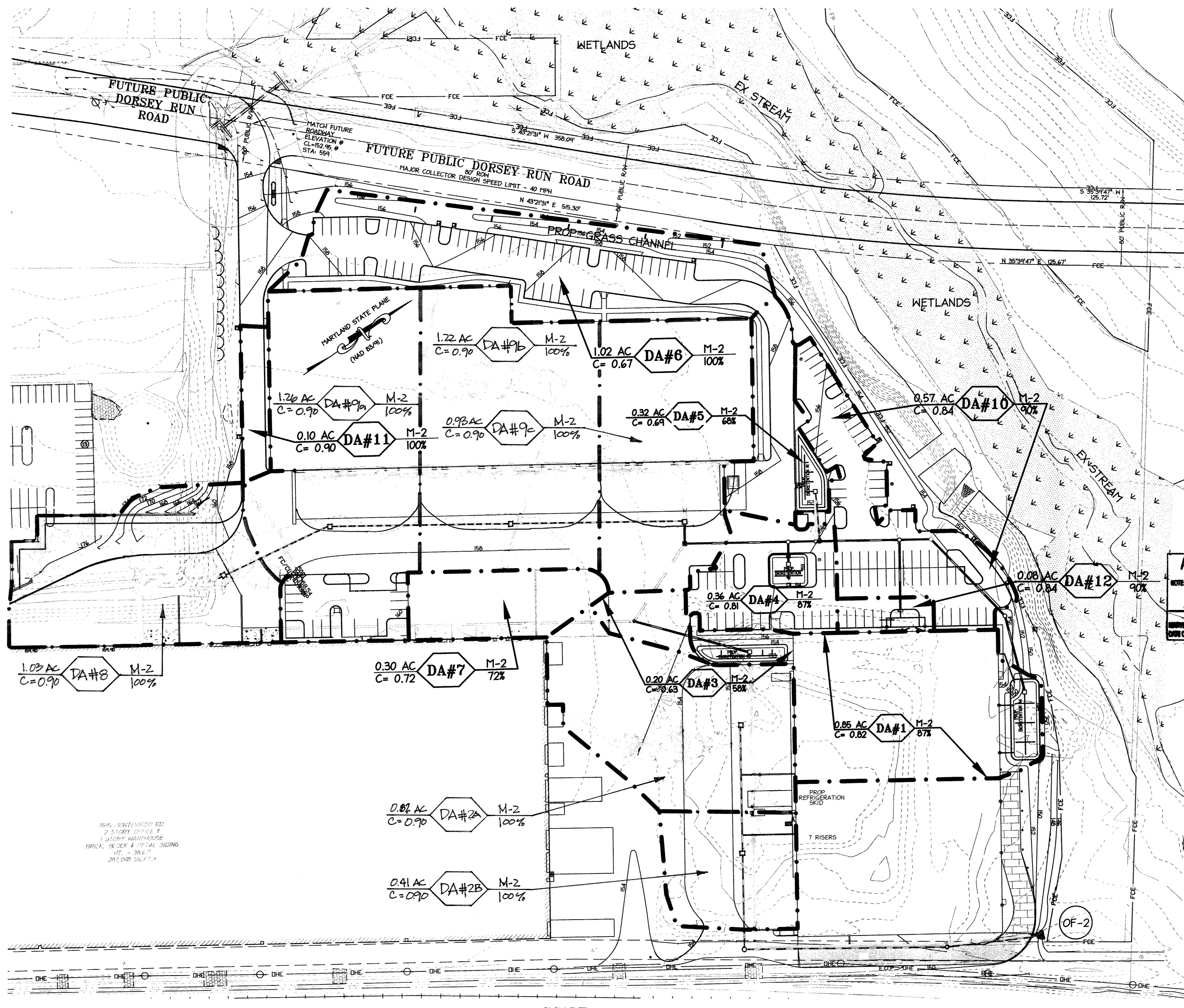
**PROFESSIONAL CERTIFICATION**

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.  
 Signature of Engineer: Yolanda L. Langhorne-Thompson, P.E.  
 MD LICENSE NUMBER: 25743  
 EXPIRATION DATE: 06-21-2013  
 Date: 7/15/12



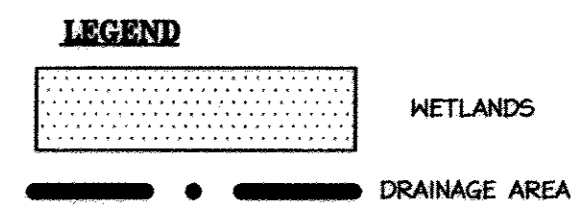






DRAINAGE AREA SCHEDULE				
DA	AREA	ACREAGE	% IMPERVIOUS	C
1	36,962 S.F.	0.85 Ac.	87	0.82
2	53,579 S.F.	1.23 Ac.	100	0.90
3	8,475 S.F.	0.20 Ac.	58	0.63
4	15,954 S.F.	0.36 Ac.	87	0.81
5	13,725 S.F.	0.32 Ac.	64	0.64
6	44,346 S.F.	1.02 Ac.	65	0.67
7	12,902 S.F.	0.30 Ac.	72	0.72
8	27,388 S.F.	0.63 Ac.	66	0.68
9	144,619 S.F.	3.32 Ac.	100	0.90
10	24,920 S.F.	0.57 Ac.	90	0.84
11	4,500 S.F.	0.10 Ac.	100	0.90
12	3,501 S.F.	0.08 Ac.	90	0.84

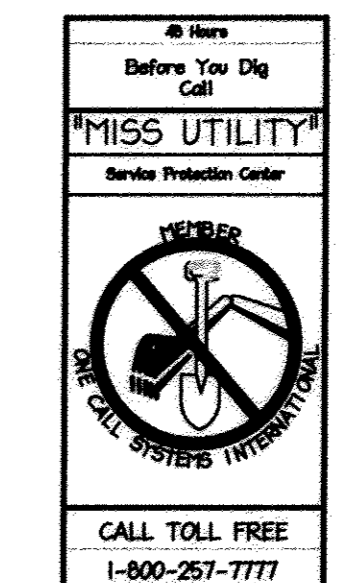
OUTFALL SUMMARY TABLE	
DRAINAGE AREA	RECEIVING STRUCTURES
1	Bio-retention system through roof leaders and discharged to existing manhole (T-1-3)
2	An 18" HDPE (Trench Drain) and outfall at OF-2 to existing stream.
3	Bio-retention system through curb cuts and discharged to existing manhole (T-1-1)
4	Bio-retention system through curb cuts and discharged to existing stormdrain via manhole (A-4)
5	Bio-retention system through curb cuts and discharged to existing stormdrain via manhole (A-5)
6	Drains through curb cuts to grass channel
7	An existing 24" HDPE Trench Drain (T-1) and discharged to existing manhole (T-1-1)
8	An 18" HDPE (Trench Drain) and discharged to existing Trench Drain (T-1)
9	An 18" HDPE (Trench Drain) and discharged to existing manhole (T-1-2)
10	Drains through curb cuts to existing stream
11	Drains through curb cuts to existing drainage ditch
12	Inlet to existing stormdrain via manhole (A-6)



**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.  
 SIGNATURE OF ENGINEER: *[Signature]* DATE: 10/31/12  
 WILLIAM R. ZINK, P.E.  
 MD LICENSE NUMBER: 20587  
 EXPIRATION DATE: 09-26-2014

**AS-BUILT CERTIFICATION**  
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.  
 DATE: 7/18/2013  
 MARYLAND REG. NO. 27223 EXPIRATION DATE: 3/19/2018  
 DATE OF AS-BUILT: 6/17/2014 & 6/27/2017

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Division of Land Development: *[Signature]* Date: 10/31/12  
 Chief, Development Engineering Division: *[Signature]* Date: 10/17/12  
 Director, Department of Planning and Zoning: *[Signature]* Date: 10/12/12



**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**  
 OWNER / DEVELOPER  
 MONTEVIDEO REALTY BUSINESS TRUST  
 140 N. GERMANTOWN PIKE, SUITE 150 PLYMOUTH MEETING, PA 19462  
 TEL: (610) 828-0756 FAX: (610) 828-5560

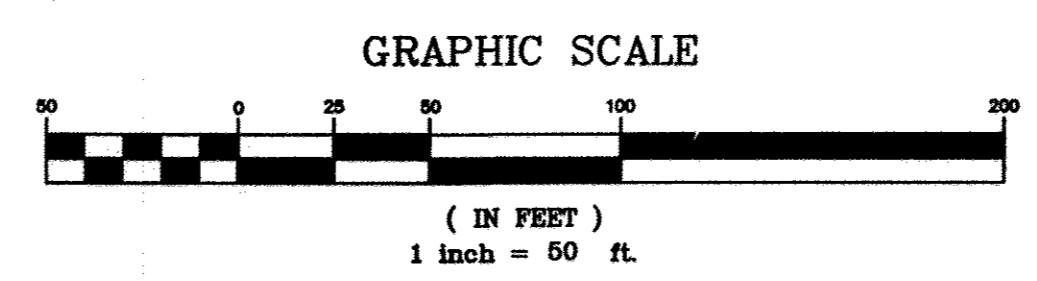
**christopher consultants**  
 engineering · surveying · land planning  
 christopher consultants, llc  
 7172 columbia gateway drive (suite 109) - columbia, md. 21046-2890  
 410.872.8800 - fax: 410.872.8800

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKGRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKGRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKGRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART		
SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441
PLAT# L6457, F.258	GRID# 16 ZONING M-2 TAX MAP# 43 ELECT. DISTR. 1ST CENSUS TRACT 6012.02	
MATER CODE 400 (TG 550)	SEWER CODE B01	

TITLE: STORM DRAINAGE AREA MAP		
DESIGN#	SCALE	PROJECT#
NM	1" = 50'	09067.008.07
DRAWN: DAM	DATE: SEPT 06 2012	
CHECKED: ENJ	APPROVED: WRZ	<b>23 of 45</b>

SCALE  
1" = 50'





NO.	DEPTH	SOILS	REMARKS
1	0-1	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
2	1-2	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
3	2-3	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
4	3-4	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
5	4-5	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
6	5-6	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
7	6-7	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
8	7-8	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
9	8-9	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
10	9-10	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
11	10-11	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
12	11-12	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
13	12-13	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
14	13-14	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
15	14-15	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
16	15-16	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
17	16-17	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
18	17-18	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
19	18-19	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
20	19-20	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	

NO.	DEPTH	SOILS	REMARKS
1	0-1	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
2	1-2	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
3	2-3	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
4	3-4	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
5	4-5	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
6	5-6	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
7	6-7	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
8	7-8	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
9	8-9	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
10	9-10	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
11	10-11	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
12	11-12	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
13	12-13	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
14	13-14	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
15	14-15	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
16	15-16	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
17	16-17	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
18	17-18	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
19	18-19	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
20	19-20	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	

NO.	DEPTH	SOILS	REMARKS
1	0-1	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
2	1-2	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
3	2-3	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
4	3-4	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
5	4-5	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
6	5-6	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
7	6-7	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
8	7-8	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
9	8-9	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
10	9-10	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
11	10-11	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
12	11-12	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
13	12-13	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
14	13-14	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
15	14-15	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
16	15-16	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
17	16-17	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
18	17-18	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
19	18-19	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
20	19-20	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	

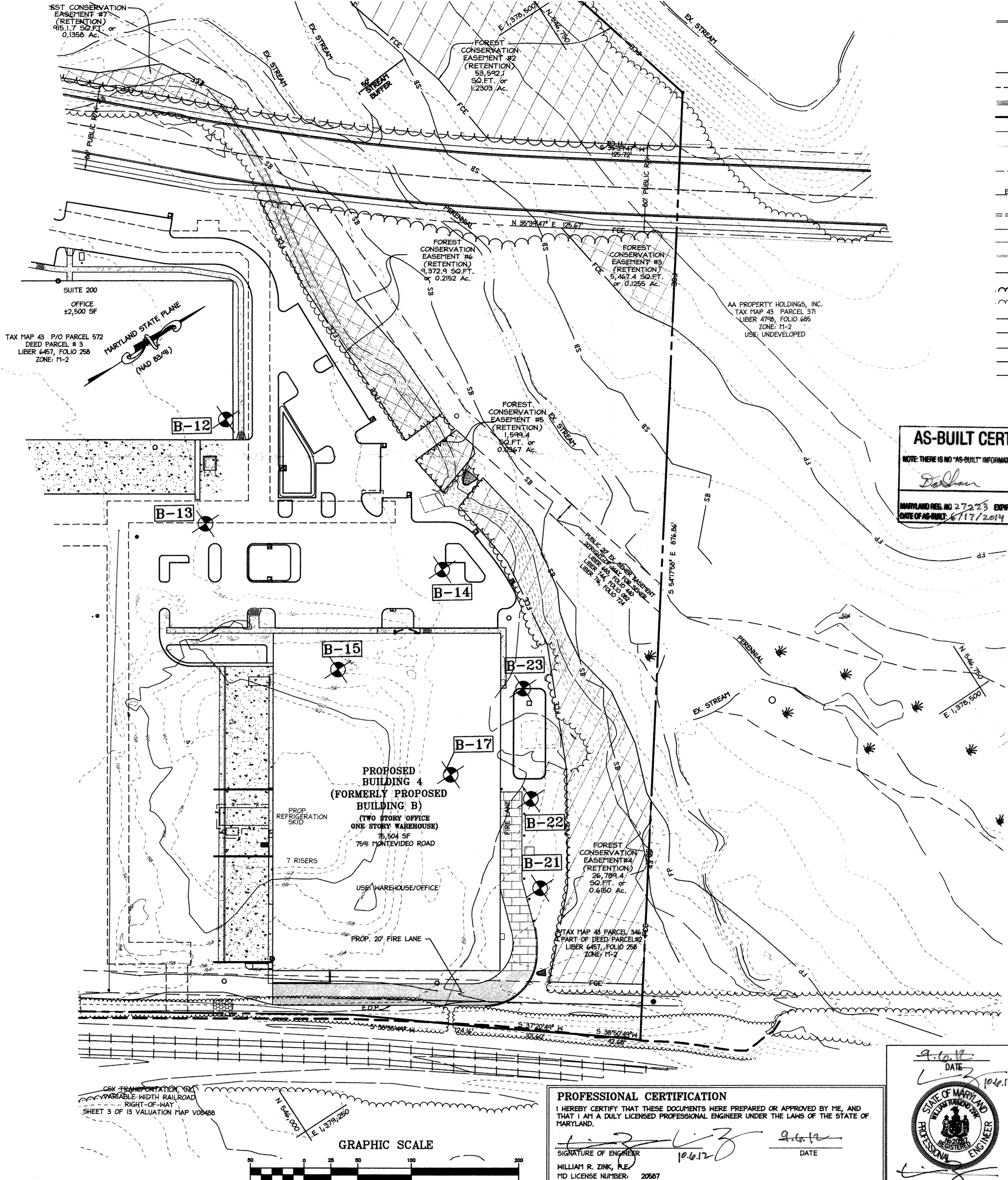
NO.	DEPTH	SOILS	REMARKS
1	0-1	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
2	1-2	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
3	2-3	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
4	3-4	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
5	4-5	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
6	5-6	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
7	6-7	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
8	7-8	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
9	8-9	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
10	9-10	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
11	10-11	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
12	11-12	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
13	12-13	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
14	13-14	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
15	14-15	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
16	15-16	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
17	16-17	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
18	17-18	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
19	18-19	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
20	19-20	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	

NO.	DEPTH	SOILS	REMARKS
1	0-1	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
2	1-2	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
3	2-3	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
4	3-4	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
5	4-5	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
6	5-6	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
7	6-7	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
8	7-8	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
9	8-9	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
10	9-10	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
11	10-11	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
12	11-12	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
13	12-13	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
14	13-14	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
15	14-15	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
16	15-16	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
17	16-17	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
18	17-18	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
19	18-19	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
20	19-20	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	

NO.	DEPTH	SOILS	REMARKS
1	0-1	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
2	1-2	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
3	2-3	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
4	3-4	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
5	4-5	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
6	5-6	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
7	6-7	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
8	7-8	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
9	8-9	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
10	9-10	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
11	10-11	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
12	11-12	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
13	12-13	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
14	13-14	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
15	14-15	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
16	15-16	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
17	16-17	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
18	17-18	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
19	18-19	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
20	19-20	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	

NO.	DEPTH	SOILS	REMARKS
1	0-1	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
2	1-2	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
3	2-3	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
4	3-4	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
5	4-5	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
6	5-6	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
7	6-7	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
8	7-8	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
9	8-9	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
10	9-10	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
11	10-11	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
12	11-12	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
13	12-13	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
14	13-14	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
15	14-15	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
16	15-16	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
17	16-17	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
18	17-18	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
19	18-19	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
20	19-20	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	

NO.	DEPTH	SOILS	REMARKS
1	0-1	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
2	1-2	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
3	2-3	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
4	3-4	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
5	4-5	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
6	5-6	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
7	6-7	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
8	7-8	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
9	8-9	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
10	9-10	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
11	10-11	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
12	11-12	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
13	12-13	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
14	13-14	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
15	14-15	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
16	15-16	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
17	16-17	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
18	17-18	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
19	18-19	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	
20	19-20	CLAY, Trace Sand, Trace Gravel, Medium Dense, (CL)	



### LEGEND

	PROPOSED CURBLINE
	PROPOSED BUILDINGS
	50' BUILDING RESTRICTION LINES
	30' PARKING RESTRICTION LINES
	SOILS LINE
	PROPERTY LINE
	ADJACENT PROPERTY LINE
	FORMER PROPERTY LINE
	EXISTING WATER
	EXISTING SANITARY SEWER
	EXISTING STORMDRAIN
	EXISTING OVERHEAD UTILITY
	FENCE (BARB WIRE)
	EXISTING CURBLINE
	STREAM CENTERLINE
	PROPOSED TREELINE
	EXISTING TREELINE
	PUBLIC 100 YR FLOODPLAIN
	WETLANDS
	50' STREAM BUFFER
	25' WETLAND BUFFER
	FOREST CONSERVATION EASEMENT
	RAILROAD TRACKS
	SOIL BORING

**AS-BUILT CERTIFICATION**

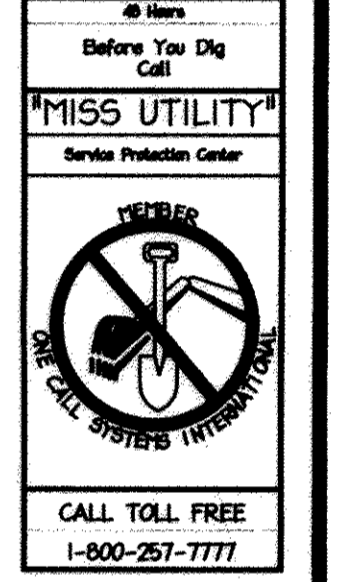
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

*Dorlan* 7/10/12

DATE: 7/10/12

MARYLAND REG. NO. 27293 EXPIRATION DATE: 3/17/2018

DATE OF AS-BUILT: 6/17/2014 & 6/27/2017



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Vet. J. DeLoach* 10/31/12  
Chief, Division of Land Development Date

*William J. DeLoach* 10/17/12  
Chief, Development Engineering Division Date

*Frank M. Wells* 11/2/12  
Director, Department of Planning and Zoning Date

1 11/2012 PRELIM REVISIONS

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST 140 W. GERMANTOWN PIKE, SUITE 150 PLYMOUTH MEETING, PA 19462 TEL: (610) 528-0756 FAX: (610) 528-5550

C/O EXETER PROPERTY GROUP

**christopher consultants**  
engineering · surveying · land planning  
christopher consultants, inc.  
1712 columbian gateway drive (suite 100) columbia, md 21046-2980  
410.872.9800 · metro 301.581.0145 · fax 410.872.9880

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/VAREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441
PLAT# L6457, F.258	GRID# 16 ZONING M-2 TAX MAP# 43 ELECT. DISTR. 1ST CENSUS TRACT 6012.02	
WATER CODE 400 (TG 550)	SEWER CODE 801	

TITLE: **SOIL BORING PLAN**

DESIGN: N1 SCALE: 1" = 50' PROJECT: 03067.008.07

DRAWN: DA1 DATE: SEPT 06 2012

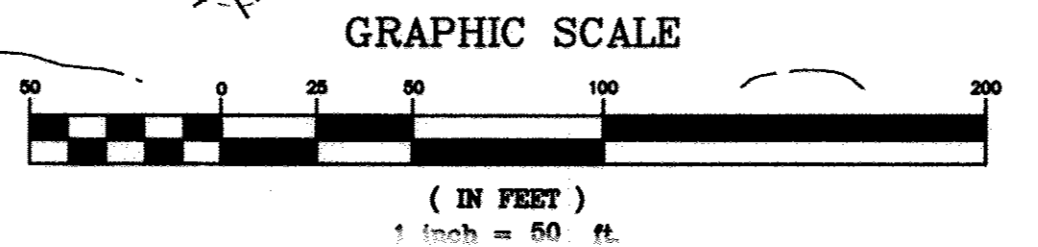
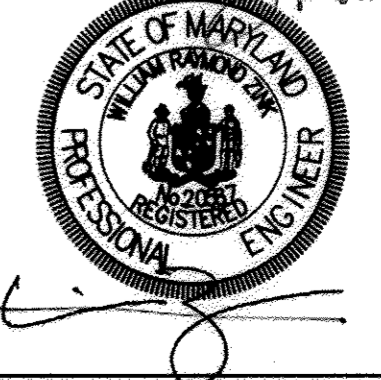
CHECKED: ENU APPROVED: WRZ **24 of 45**

**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.

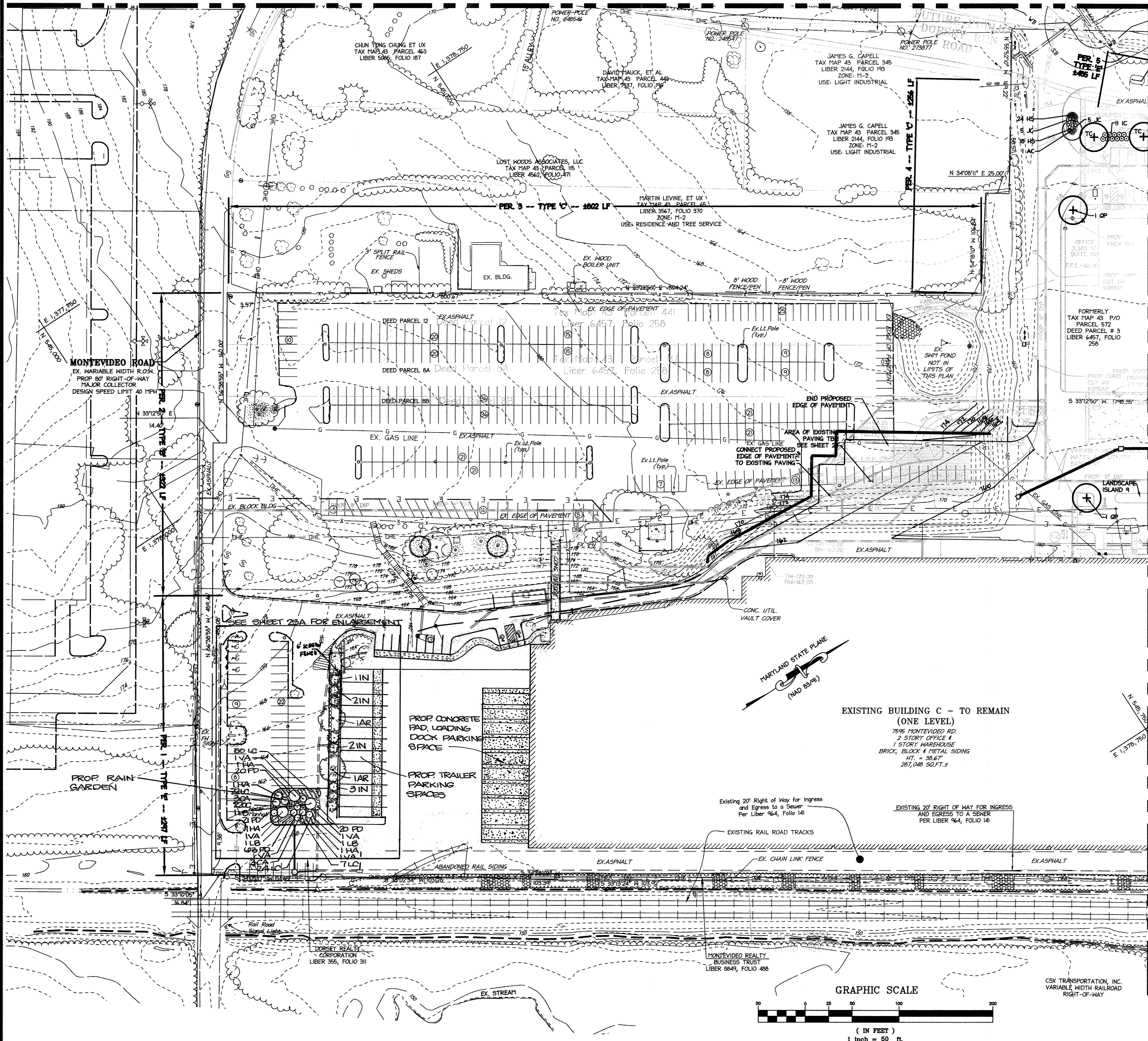
*William R. Zink* 9.6.12  
SIGNATURE OF ENGINEER DATE

WILLIAM R. ZINK, P.E.  
MID LICENSE NUMBER: 20567  
EXPIRATION DATE: 09-26-2014



MDC-855

MATCHLINE - SEE SHEET 27 FOR CONTINUATION



NOTE: SURETY FOR LANDSCAPING WILL BE POSTED WITH THE GRADING PERMIT. THE SURETY IS ASSESSED AT 300 \$ PER SHADE TREE AND 150 \$ PER EVERGREEN TREE. THE TOTAL LANDSCAPE SURETY IS 1,800 \$ (2 SHADE TREES, 8 EVERGREEN TREES).

**LEGEND**

- EDGE OF PAVEMENT TO BE REMOVED
- (RFCE) RETENTION FOREST CONSERVATION EASEMENT
- EXISTING INTER CONTOUR
- EXISTING INDEX CONTOUR
- PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TREELINE
- PROPOSED TREELINE
- EXISTING TREE
- PROPOSED SHADE TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED SHRUBS
- ADDITIONAL SHADE TREE - SCREENING
- ADDITIONAL EVERGREEN TREE - SCREENING

- GENERAL NOTES**
- TREES WITH MATURE HEIGHTS GREATER THAN 25' SHALL NOT BE PLANTED WITHIN 20' OF EITHER SIDE OF THE UTILITY POLE LINES. TREES WITH MATURE HEIGHTS GREATER THAN 40' SHALL NOT BE PLACED WITHIN 45' OF THE UTILITY POLE LINES. TREES PLANTED OR RETAINED TO COMPLY WITH THE FOREST CONSERVATION PLAN OR OTHER PERPETUAL EASEMENT REQUIREMENTS SHALL MEET THE ABOVE CONDITIONS. BGE SHALL HAVE THE PERPETUAL RIGHT TO TRIM OR REMOVE ANY PROTECTED TREES IF IN THE SOLE OPINION OF BGE, THE TREE OR TREES ARE ENDANGERING THE OVERHEAD ELECTRIC FACILITIES.
  - THE LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING IN THE AMOUNT OF \$12,300.00 HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT. (30 SHADE TREES AND 110 SHRUBS).
  - PLEASE REFER TO TABLES ON SHEET 34 FOR BEARINGS AND DISTANCES, DELINEATION OF FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.

**AS-BUILT CERTIFICATION**

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

DATE: 7/18/2017  
 DATE OF AS-BUILT: 6/17/2014 & 6/27/2017

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development	Date: 10/31/12
Chief, Development Engineering Division	Date: 10/17/12
Director, Department of Planning and Zoning	Date: 10/26/12



MISS UTILITY! Service Protection Center

CALL TOLL FREE 1-800-267-7777

**1 11/2012 REDLINE REVISIONS**

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

**OWNER / DEVELOPER**

MONTEVIDEO REALTY BUSINESS TRUST  
 C/O EXETER PROPERTY GROUP

140 W. GERMANTOWN PIKE, SUITE 150  
 PLYMOUTH MEETING, PA 19462  
 TEL: (610) 828-0756  
 FAX: (610) 828-9550

**christopher consultants**  
 engineering · surveying · land planning

christopher consultants, inc.  
 7172 columbia gateway drive (suite 100) · columbia, md. 21046-2900  
 410.872.8880 · fax: 301.881.0148 · fax: 410.872.8883

**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#			
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441			
PLAT#	GRID#	ZONING	TAX MAP#	ELECT. DISTR.	CENSUS TRACT
L6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE	SEWER CODE				
400 (TG 550)	801				

**LANDSCAPE PLAN**

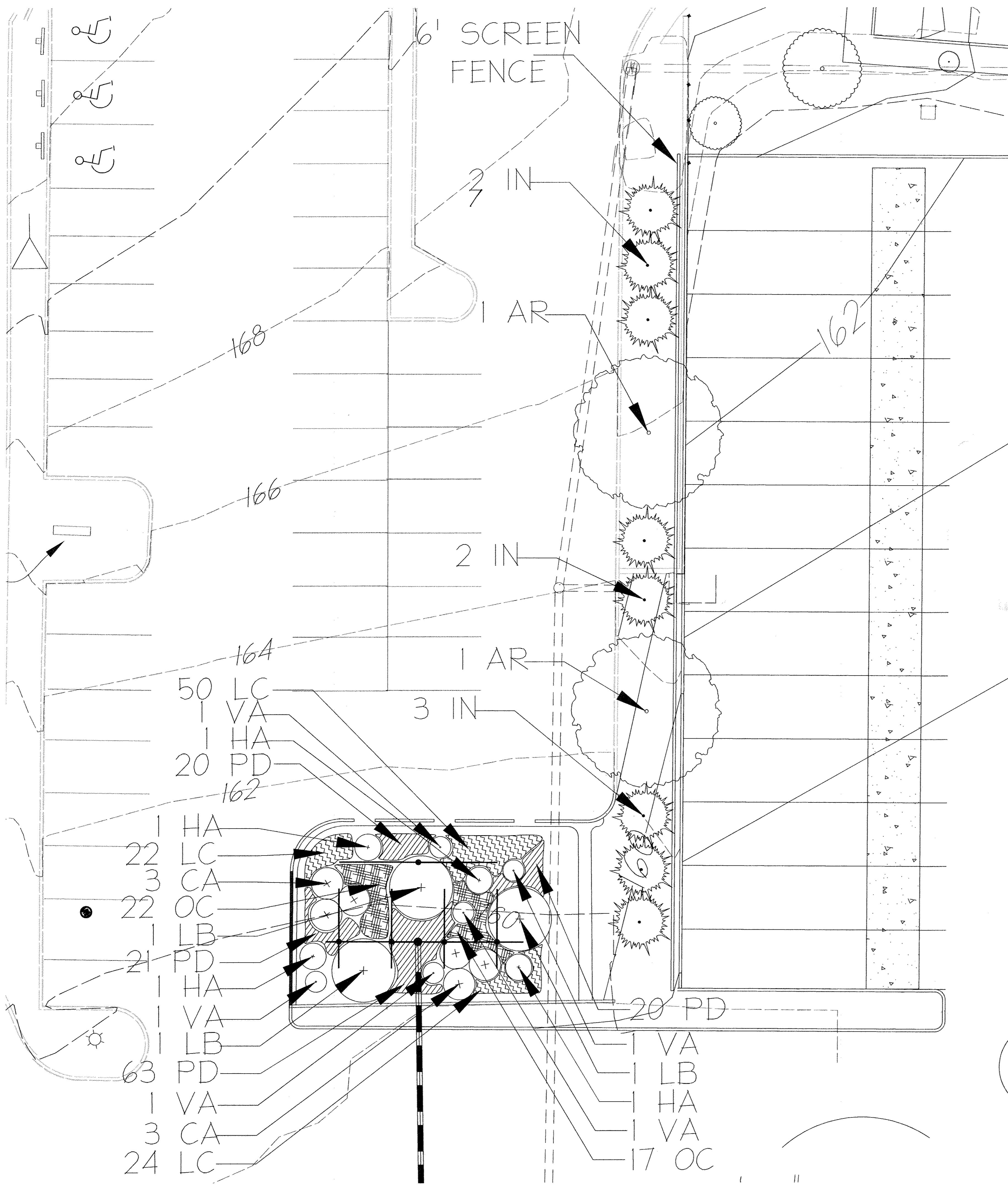
DESIGN: LING	SCALE: 1" = 50'	PROJECT: 09067.006.07
DRAWN: DAM	DATE: JULY 2012	25 OF 45
CHECKED: LING	APPROVED: YLL	

SDP-08-116

MATCHLINE - SEE SHEET 26 FOR CONTINUATION

10/19/10 DEMO BLDG., LOADING DOCK, TRUCK COURT, RAIN GARDEN

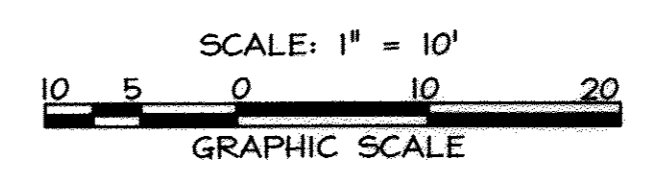
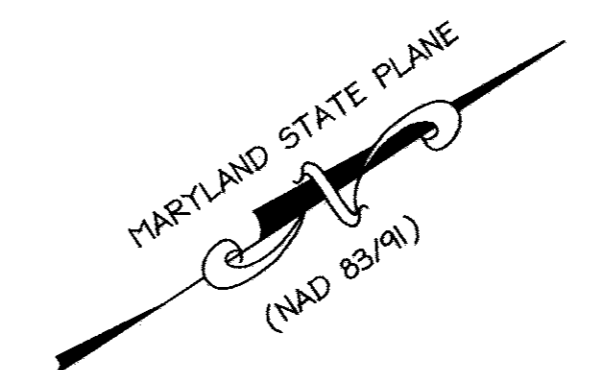
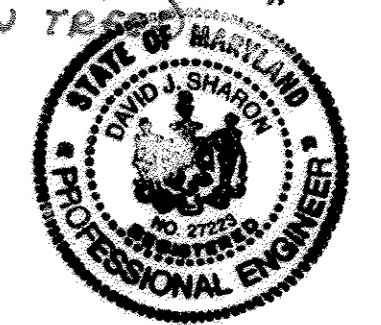
MDC-855



**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.  
 SIGNATURE OF ENGINEER: *W.R. Zink* DATE: 3/13/17  
 WILLIAM R. ZINK, P.E. MD LICENSE NUMBER: 20567 EXPIRATION DATE: 09-06-2016

NOTE: SEE SHEET 28 FOR PLANTING SCHEDULE FOR THE BUFFER AND RAIN GARDEN.  
 NOTE: SURETY FOR LANDSCAPING WILL BE POSTED WITH THE GRADING PERMIT. THE SURETY IS ASSESSED AT \$300 PER SHADE TREE AND \$150 PER EVERGREEN TREE. THE TOTAL LANDSCAPE SURETY IS \$900. \$1,600.00 (2 SHADE TREES, 8 EVERGREEN TREES)

**AS-BUILT CERTIFICATION**  
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.  
 DATE: 7/18/2017  
 MARYLAND REG. NO. 27223 EXPIRATION DATE: 3/19/2018  
 DATE OF AS-BUILT: 6/17/2014 & 6/27/2017



3/13/17  
 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Division of Land Development: 3-29-17  
 Chief, Development Engineering Division: 3-27-17  
 Director, Department of Planning and Zoning: 3-29-17

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**  
 OWNER / DEVELOPER  
 MONTEVIDEO REALTY BUSINESS TRUST  
 140 N. GERMANTOWN PIKE, SUITE 150  
 PLYMOUTH MEETING, PA 19462  
 TEL: (610) 828-0756  
 C/O EXETER PROPERTY GROUP FAX: (610) 828-5550

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 christopher consultants, inc.  
 7172 columbia gateway drive (suite 100) - columbia, md. 21046-2890  
 410.872.8690 - metro 301.881.0148 - fax 410.872.8693

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

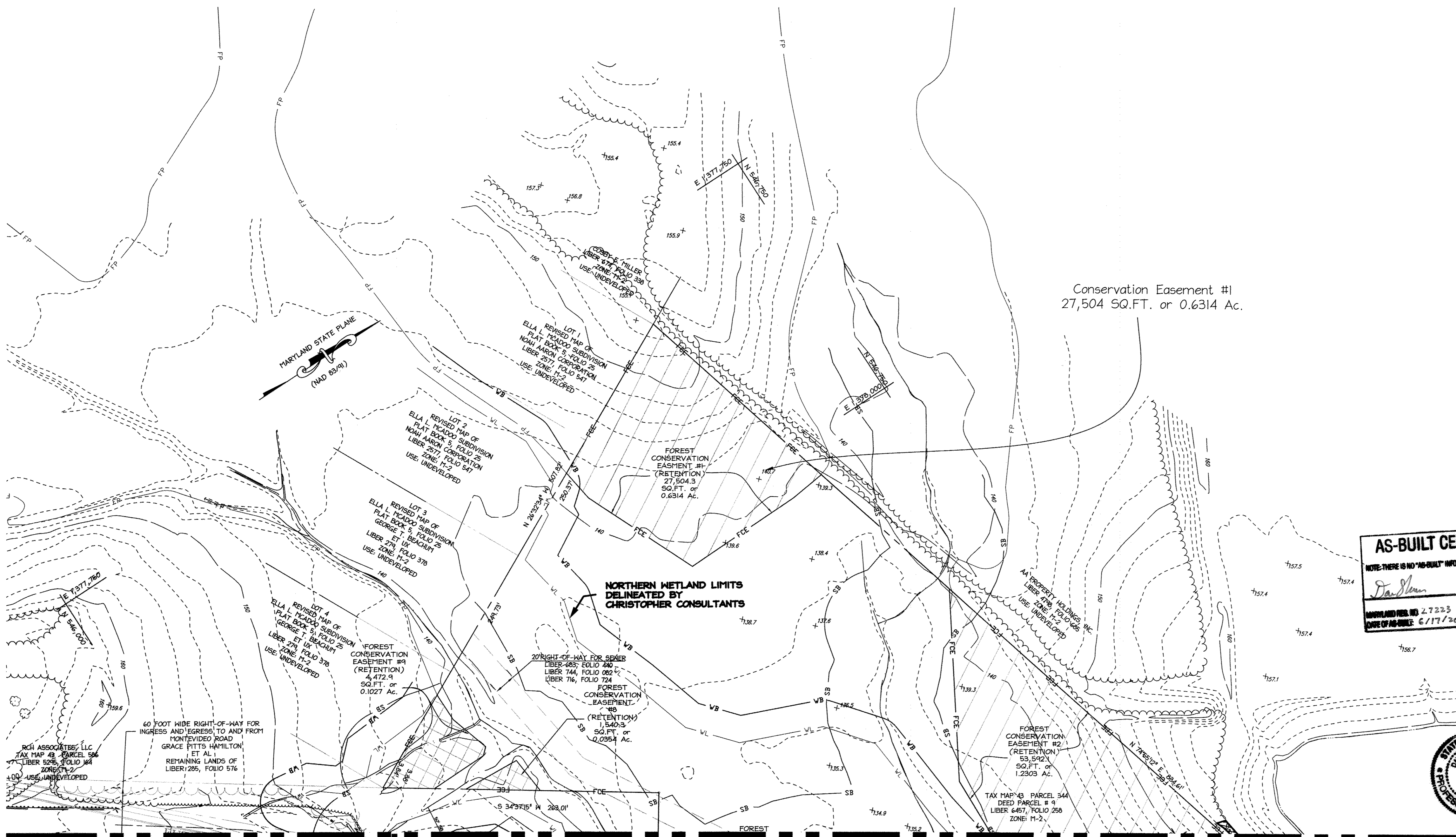
PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441
PLATE L6457, F.258	GRID# 16 ZONING M-2 TAX MAP# 43 ELECT DIST. 1ST	CENSUS TRACT 6012.02
WATER CODE 400 (TG 550)	SEWER CODE B01	

TITLE: **LANDSCAPE PLAN ENLARGEMENT**

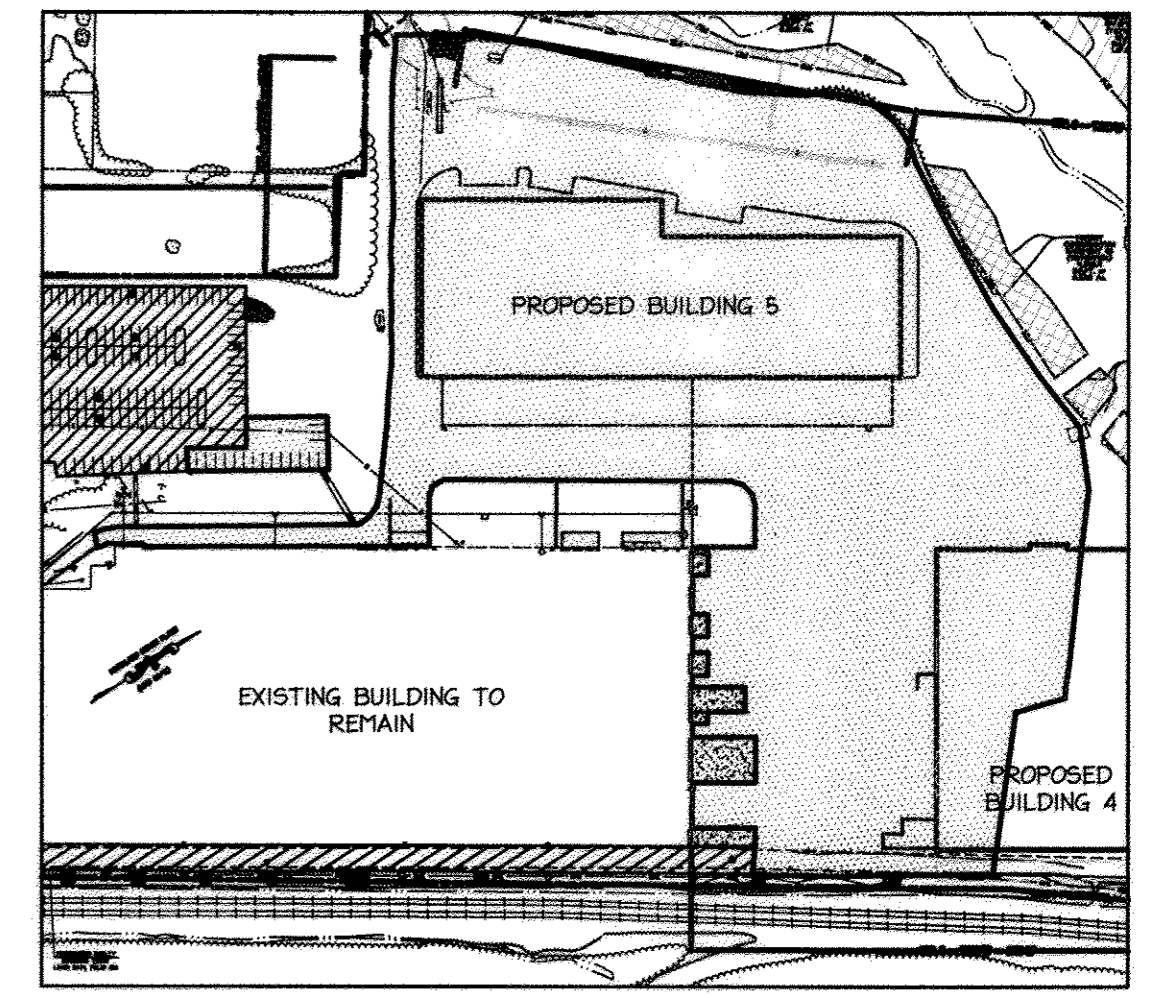
DESIGN: N1	SCALE: 1" = 10'	PROJECT: 03067.008.07
DRAWN: DAM	DATE: SEPT 06 2012	
CHECKED: ENJ	APPROVED: WRZ	<b>25A of 45</b>





Conservation Easement #1  
27,504 SQ.FT. or 0.6314 Ac.

NORTHERN WETLAND LIMITS  
DELINEATED BY  
CHRISTOPHER CONSULTANTS



**LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR)**  
SCALE: 1" = 200'  
EXISTING PAVEMENT TO BE REMOVED [Hatched Box]  
EXISTING PAVEMENT TO BE REMAIN [Solid Box]

- GENERAL NOTES**
- TREES WITH MATURE HEIGHTS GREATER THAN 25' SHALL NOT BE PLANTED WITHIN 20' OF EITHER SIDE OF THE UTILITY POLE LINES. TREES WITH MATURE HEIGHTS GREATER THAN 40' SHALL NOT BE PLACED WITHIN 45' OF THE UTILITY POLE LINES. TREES PLANTED OR RETAINED TO COMPLY WITH THE FOREST CONSERVATION PLAN OR OTHER PERPETUAL EASEMENT REQUIREMENTS SHALL MEET THE ABOVE CONDITIONS. BGE SHALL HAVE THE PERPETUAL RIGHT TO TRIM OR REMOVE ANY PROTECTED TREES IF IN THE SOLE OPINION OF BGE, THE TREE OR TREES ARE ENDANGERING THE OVERHEAD ELECTRIC FACILITIES.
  - THE LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING IN THE AMOUNT OF \$12,300.00 HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT. (30 SHADE TREES AND 110 SHRUBS).
  - PLEASE REFER TO TABLES ON SHEET 34 FOR BEARINGS AND DISTANCES, DELINEATION OF FOREST CONSERVATION EASEMENTS, FLOODPLAIN, AND 25' WETLAND BUFFERS.
  - PLEASE REFER TO LIMITS OF EXISTING PAVEMENT TO BE REMOVED (TBR) PLAN ABOVE FOR LIMITS OF REMOVED PAVING FOR ENTIRE SITE.

**AS-BUILT CERTIFICATION**  
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.  
*David Slone* *Hilbert*  
DATE: 3/19/2018  
MONTGOMERY COUNTY PERMITS NO. 27223 EXPIRATION DATE: 6/17/2019 & 6/27/2017

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Katherine Loden* 10/31/12  
Chief, Division of Land Development Date  
*John Williams* 10/17/12  
Chief, Development Engineering Division Date  
*Richard H. Cox* 11/2/12  
Director, Department of Planning and Zoning Date

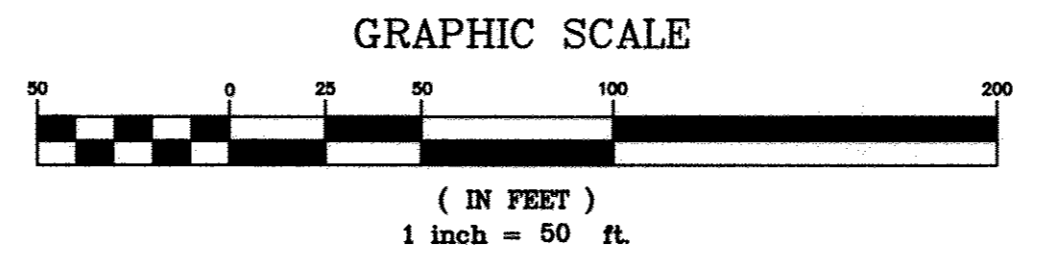


MATCHLINE - SEE SHEET 25 FOR CONTINUATION

MATCHLINE - SEE SHEET 26 FOR CONTINUATION

**LEGEND**

	EXISTING INTER CONTOUR
	EXISTING INDEX CONTOUR
	PROPERTY LINE
	EXISTING PROPERTY LINE
	EXISTING TREELINE
	PROPOSED TREELINE
	EXISTING TREE
	PROPOSED SHADE TREE
	PROPOSED ORNAMENTAL TREE
	PROPOSED SHRUBS
	RETENTION FOREST CONSERVATION EASEMENT (SEE SHEET 30)
	RETENTION FOREST CONSERVATION EASEMENT NON CREDITED EASEMENT



Before You Dig Call  
**MISS UTILITY**  
Service Protection Center  
  
CALL TOLL FREE 1-800-257-7777

10.4.2012 DATE  
**LANDSCAPE ARCHITECT**  
LINDA N. GIBBS  
STATE OF MARYLAND

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**  
OWNER / DEVELOPER  
MONTEVIDEO REALTY BUSINESS TRUST 140 W. GERMANTOWN PIKE, SUITE 150 PLYMOUTH MEETING, PA 19462  
C/O EXETER PROPERTY GROUP TEL: (610) 828-0756 FAX: (610) 828-9550

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410.872.8892 · mco: 301.881.0148 · fax: 410.872.8893

**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELK RIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

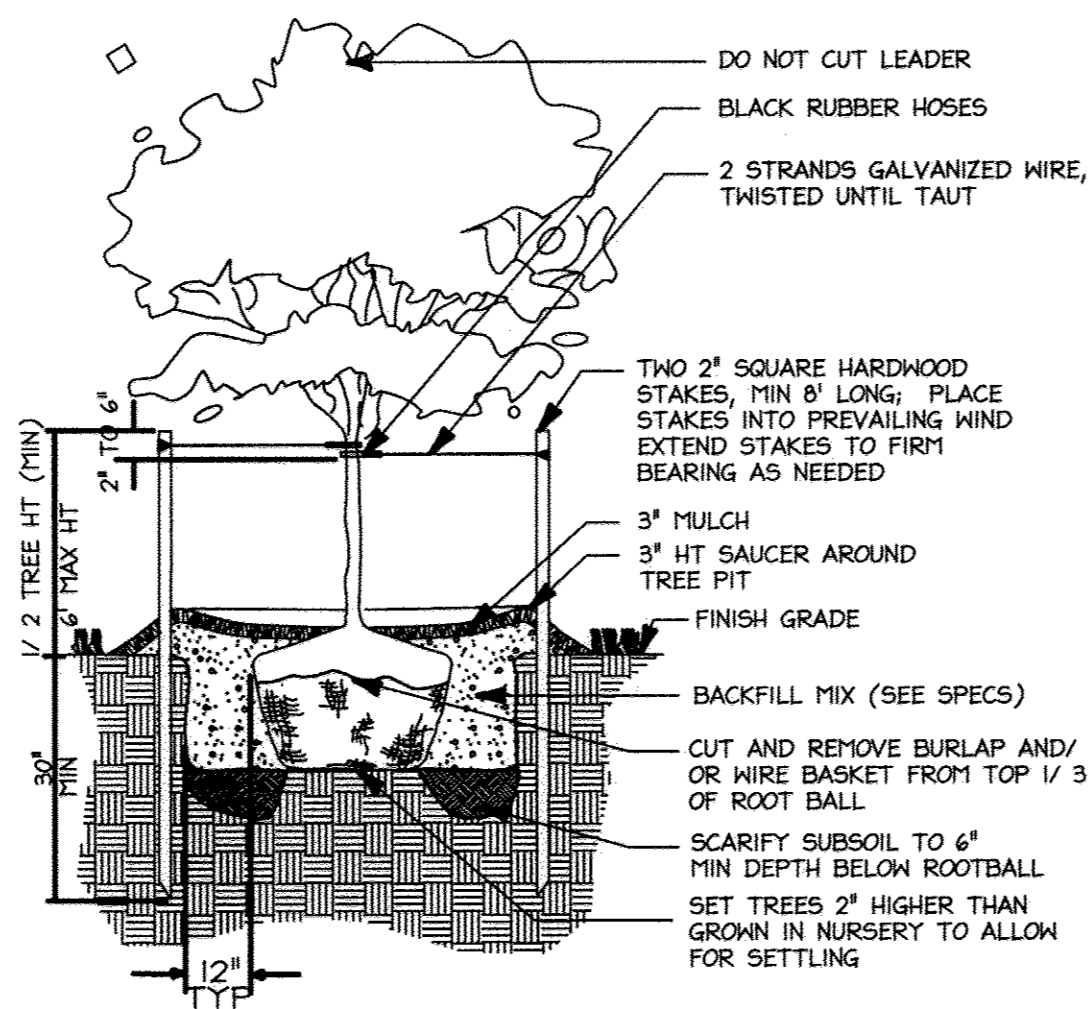
SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#			
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441			
PLAT#	GRID#	ZONING	TAX MAP#	ELECT. DIST.	CENSUS TRACT
L6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE	SEWER CODE				
400 (TG 550)	801				

TITLE: **LANDSCAPE PLAN**

DESIGN: LNG	SCALE: 1" = 50'	PROJECT: 09067.006.07
DRAWN: DAM	DATE: JULY 2012	
CHECKED: LNG	APPROVED: YLL	<b>27 OF 45</b>

**GENERAL PLANTING NOTES**

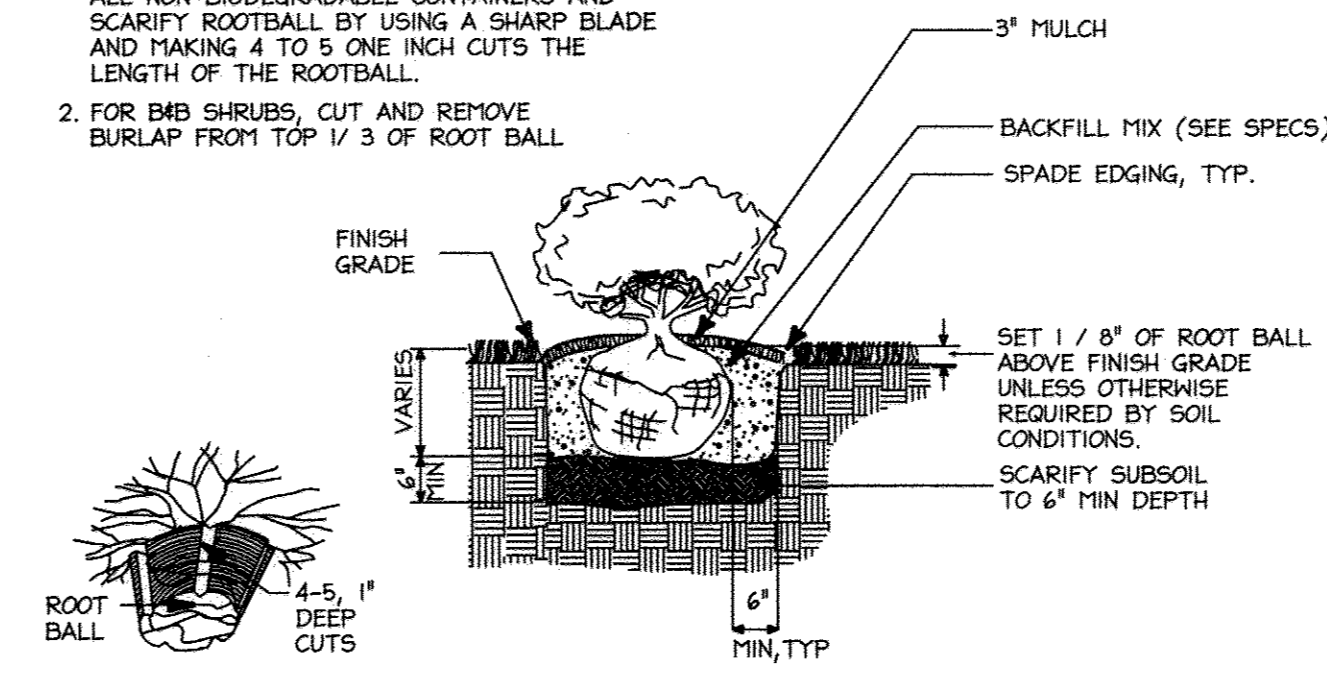
- ALL PLANT MATERIAL TO MEET A.A.N. STANDARDS.
- LANDSCAPING CONTRACTOR TO FOLLOW LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE WASHINGTON METRO AREA APPROVED BY LCAPM.
- NO SUBSTITUTIONS TO BE MADE WITHOUT CONSENT OF LANDSCAPE ARCHITECT OR OWNER.
- IN THE EVENT OF VARIATION BETWEEN QUANTITIES SHOWN ON THE PLANT LIST AND THE PLANS, THE PLANS SHALL CONTROL. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PLANT QUANTITIES PRIOR TO THE COMMENCEMENT OF WORK. SOQ QUANTITY TAKE-OFFS ARE THE RESPONSIBILITY OF THE CONTRACTOR. ALL DISCREPANCIES SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT FOR CLARIFICATION PRIOR TO BIDDING. THE CONTRACTOR SHALL FURNISH PLANT MATERIAL IN SIZES AS SPECIFIED IN THE PLANT LIST.
- ALL BEDS TO BE TOPPED WITH THREE INCHES OF HARDWOOD MULCH.
- LANDSCAPE CONTRACTOR TO VERIFY LOCATION OF UTILITIES WITH OWNERS BEFORE PLANTING.
- LANDSCAPE ARCHITECT/OWNER SHALL SELECT, VERIFY AND/OR APPROVE ALL PLANT MATERIAL. AT OWNER'S DISCRETION, SPECIMEN AND OTHER PLANT MATERIAL WILL BE SELECTED.
- LANDSCAPE CONTRACTOR SHALL COORDINATE PLANT BED FILLING OPERATIONS AND PLANT MATERIAL INSTALLATION WITH GENERAL CONTRACTOR AND UTILITIES CONTRACTOR. AT THE TIME OF FINAL INSPECTION WITH ACCEPTANCE, ALL ELECTRIC, WATER, DRAINAGE, AND FOUNTAIN UTILITIES, AS WELL AS ALL PLANT MATERIALS, SHALL REMAIN UNDAMAGED. LIKEWISE, LANDSCAPE CONTRACTOR AND UTILITIES CONTRACTOR SHALL COORDINATE EFFORTS TO ENSURE THAT SURFACE UTILITIES ARE AT THE PROPER ELEVATION RELATIVE TO FINAL GRADES.
- CONTRACTOR SHALL NOTIFY MISS UTILITY 72 HOURS PRIOR TO CONSTRUCTION.
- THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- TOPSOIL MIX
  - PLANTING MIX SHALL BE PREPARED AT APPROVED ON-SITE STAGING AREA USING APPROVED ON-SITE EXISTING SOIL. MIX MINIMUM QUANTITIES OF 20 CUBIC YARDS OR SUFFICIENT MIX FOR ENTIRE JOB IF LESS THAN 20 CUBIC YARDS IS REQUIRED.
  - THOROUGHLY MIXED IN THE FOLLOWING PROPORTIONS FOR TREE AND SHRUB PLANTING MIX:
    - .5 CY EXISTING SOIL
    - .2 CY SHARP SAND
    - .3 CY WOOD RESIDUALS
    - 4.5 LBS TREBLE SUPERPHOSPHATE
    - 5 LBS DOLMONTITE LIMESTONE (ELIMINATE FOR ACID LOVING PLANTS)
  - FOR BED PLANTING, SHRUBS AND GROUND COVER SPACES 24 INCHES OR CLOSER, INCORPORATE THE FOLLOWING INGREDIENTS PER 20 SF AND INCORPORATE INTO TOP 8 INCHES OF EXISTING SOILS BY ROTOTILLING OR SIMILAR METHOD OF INCORPORATION.
    - .2 CY SHARP SAND
    - .3 CY ORGANIC MATERIAL
    - 4.5 LBS TREBLE SUPERPHOSPHATE
    - 5 LBS DOLMONTITE LIMESTONE (ELIMINATE FOR ACID LOVING PLANTS)
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL WITH 31 SHADE TREES AND 121 SHRUBS PROVIDED WITH LANDSCAPE SURETY IN THE AMOUNT OF \$12,930.00 (30 SHADE TREES @ \$300.00 EA., AND 110 SHRUBS @ \$30.00 EA)
- AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS.
- TREES WITH MATURE HEIGHTS GREATER THAN 25' SHALL NOT BE PLANTED WITHIN 20' OF EITHER SIDE OF THE UTILITY POLE LINES. TREES WITH MATURE HEIGHTS GREATER THAN 40' SHALL NOT BE PLACED WITHIN 45' OF THE UTILITY POLE LINES. TREES PLANTED OR RETAINED TO COMPLY WITH THE FOREST CONSERVATION PLAN OR OTHER PERPETUAL EASEMENT REQUIREMENTS SHALL MEET THE ABOVE CONDITIONS. BGE SHALL HAVE THE PERPETUAL RIGHT TO TRIM OR REMOVE ANY PROTECTED TREES IF IN THE SOLE OPINION OF BGE, THE TREE OR TREES ARE ENDANGERING THE OVERHEAD ELECTRIC FACILITIES.



**A Tree Planting Detail**  
Not To Scale

**NOTES:**

- FOR CONTAINER SHRUBS, COMPLETELY REMOVE ALL NON-BIODEGRADABLE CONTAINERS AND SCARIFY ROOTBALL BY USING A SHARP BLADE AND MAKING 4 TO 5 ONE INCH CUTS THE LENGTH OF THE ROOTBALL.
- FOR B&B SHRUBS, CUT AND REMOVE BURLAP FROM TOP 1/3 OF ROOT BALL.



**B SHRUB BED PLANTING DETAIL**  
NOT TO SCALE

**SCHEDULE B  
PARKING LOT INTERNAL LANDSCAPING**

NUMBER OF NEW PARKING SPACES PROPOSED	178
INTERNAL ISLANDS REQUIRED (1 ISLAND/20 PARKING SPACES)	9
INTERNAL ISLANDS PROVIDED (200 SQ. FT./ISLAND)	12
NUMBER OF TREES REQUIRED (1 SHADE TREE/20 PARKING SPACES)	9
NUMBER OF TREES PROVIDED (SHADE TREES OTHER TREES (2:1 SUBSTITUTION))	12 0

NOTE: SURETY FOR LANDSCAPING WILL BE POSTED WITH THE GRADING PERMIT. THE SURETY IS ASSESSED AT \$300 PER SHADE TREE AND \$30 PER EVERGREEN TREE. THE TOTAL LANDSCAPE SURETY IS 1,800 (2 SHADE TREES, 8 EVERGREEN TREES)

**PLANT LIST (PLEASE REFER TO SHEETS 24-26):**

SYMBOL	LATIN NAME	COMMON NAME	QUANTITY	SIZE	REMARKS
QP	QUERCUS PHELLOS	WILLOW OAK	13	2 1/2" - 3" caliper	B&B
AR	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	4	2 1/2" - 3" caliper	B&B
TC	TILIA CORDATA 'GREENSPIRE'	LITTLE LEAF LINDEN	12	2 1/2" - 3" caliper	B&B
CC	CERCIS CANADENSIS	'FOREST PANSY' REDBUD	20	1 1/2" - 2" caliper	B&B
AC	AMELANCHIER CANADENSIS	SERVICEBERRY	1	1 1/2" - 2" caliper	B&B
IC	ILEX CRENATA	GREEN LUSTER HOLLY	121	24"-30" HT	3 GAL
JC	JUNIPERUS CHINENSIS 'SARGENTII'	SARGENTS JUNIPER	10	18"-24" HT	1 GAL
HS	HEMEROCALLIS 'STELLA D'ORO'	STELLA D'ORO DAYLILY	42	1 QT.	18" O.C.

IN ILEX "NEWELL R. STEVENS" NEWELL STEVENS HOLLY 8 6'-8" HT. 8 BFB

**BIORETENTION PLANT LIST (REFER TO SHEETS 25 & 25A)**

CA	CLETHRA ALNIFOLIA	CLETHRA ANIFOLIA	6	3 GAL	0' O.C.
HA	HYDRANGEA ARBORESCENS	ANNABELLE HYDRANGEA	4	3 GAL.	
LB	LINDERA BENZOIN	SPICEBUSH	3	3 GAL.	
VA	VIBURNUM ACERIFOLIUM	MAPLELEAF VIBURNUM	5	3 GAL.	
LC	LOBELIA CARDINALIS	CARDINAL FLOWER	97	1 GAL.	18" O.C.
OC	OSMUNDA CINNAMOMEA	CINNAMON FERN	40	1 GAL.	2' O.C.
PD	PHLOX DIVARICATA	WOODLAND PHLOX	120	QT.	18" O.C.

**ADDED TRUCK DOCK SCREENING - TYPE 'D' (REFER TO SHEETS 25 & 25A)**

100 LF OF SCREENING  
1 SHADE TREE PER 100 LF = 3 SHADE TREES  
1 EVERGREEN PER 10 LF = 10 EVERGREEN TREES  
= 30% CREDIT FOR SCREENING FENCE

2 SHADE TREES  
8 EVERGREEN TREES

**SCHEDULE A  
PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO ROADWAYS					ADJ. TO PER. PROP.			TOTAL
	P 1	P 2	P 3	P 4	P 5	P 6	P 7	P 8	
PERIMETER						416 LF.	745 LF.	600 LF.	
LANDSCAPE TYPE "A" L.F. OF PER.									
LANDSCAPE TYPE "B" L.F. OF PER.		322 LF.							
LANDSCAPE TYPE "C" L.F. OF PER.			802 LF.	254 LF.					
LANDSCAPE TYPE "E" L.F. OF PER.	247 LF.					485 LF.			
CREDIT FOR EX. VEG. BELOW IF NEEDED	EX. VEG. 247 LF.	EX. VEG. 322 LF.	N/A	EX. VEG. N/A	EX. VEG. N/A	EX. VEG. N/A	EX. VEG. N/A	N/A	
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	N/A	N/A	YES EX 802 LF WOOD FENCE	N/A	N/A	N/A	N/A	N/A	802 LF
EXISTING BOARD ON BOARD FENCE									
NO. OF PLANTS REQ.									
SHADE TREES	0	0	0	0	12	0	0	0	22
EVG. TREES	0	0	0	0	0	0	0	0	0
SHRUBS	0	0	0	0	121	0	0	0	121
NO. OF PLANTS PROV.									
SHADE TREES	0	0	0	0	12	0	0	0	12
EVG. TREES	0	0	0	0	0	0	0	0	0
OTHER TREES	0	0	0	0	0	0	0	20+	20
SHRUBS	0	0	0	0	121	0	0	0	121

NOTE: \* TWENTY(20) "FOREST PANSY" REDBUD WERE SUBSTITUTED FOR SHADE TREES DUE TO THE LOCATION OF OVERHEAD UTILITIES WITHIN THE LANDSCAPE PERIMETER.

**LUMINAIRE SCHEDULE**

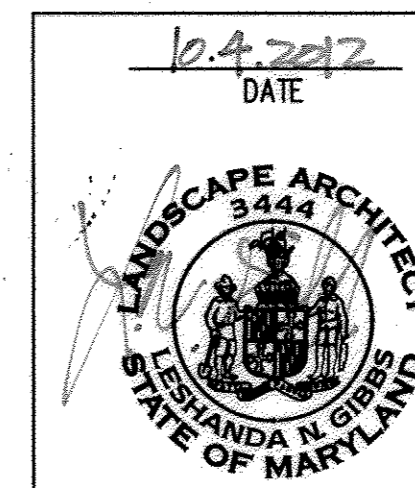
Symbol	Label	Qty	Catalog Number	Description	Lamp	Lumens	LLF
⏏	SINGL	4	AU1 400 MH (VOLT) III LG PM AS4 (COLOR)	PAPPI LIGHTING AURAFORM POLE MOUNTED LUMINAIRE WITH SEGMENTED REFLECTOR AND FLAT TEMP. GLASS LENS	ONE 40W ED28 CLEAR METAL HELIXE LAMP.	32000	0.75

**D LIGHTING DETAIL AND SCHEDULE**  
NOT TO SCALE

**DEVELOPER'S/BUILDER'S CERTIFICATE**

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPING MANUAL. I/WE FURTHER CERTIFY THAT UPON TREES COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE-YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

8/1/12  
DATE



**AS-BUILT CERTIFICATION**

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.  
J. Shan 7/18/2017  
DATE  
MARYLAND REG. NO. 27223 EXPIRATION DATE 3/19/2018  
DATE OF AS-BUILT: 6/17/2014 & 6/27/2017

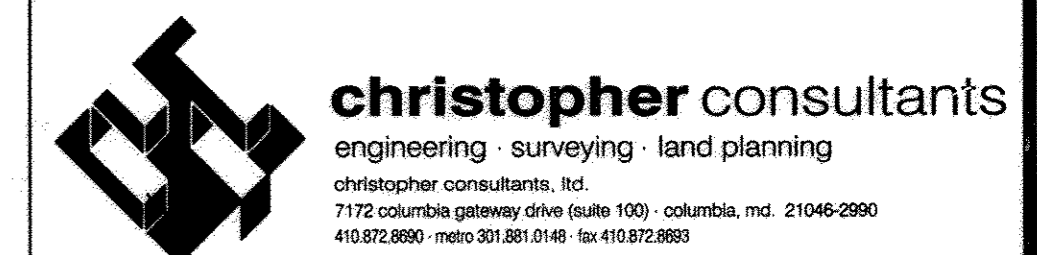


APPROVED: DEPARTMENT OF PLANNING AND ZONING  
K. J. ... 10/31/12  
Chief, Division of Land Development Date  
... 10/17/12  
Chief, Development Engineering Division Date  
... 11/2/12  
Director, Department of Planning and Zoning Date

1 11/2012 REDLINE REVISIONS

**NORTH SIDE REDEVELOPMENT  
AT DORSEY RUN INDUSTRIAL CENTER**

OWNER / DEVELOPER  
MONTEVIDEO REALTY 140 W. GERMANTOWN PIKE, SUITE 150  
BUSINESS TRUST PLYMOUTH MEETING, PA 19462  
C/O EXETER PROPERTY GROUP TEL (610) 828-0756 FAX (610) 828-5550



**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7585 MONTEVIDEO ROAD, ELK RIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#			
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441			
PLAT#	GRID#	ZONING	TAX MAP#	ELECT. DISTR.	CENSUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE	SEWER CODE				
400 (TG 550)	B01				

TITLE:  
**LANDSCAPE DETAILS**

DESIGN: LING	SCALE: AS SHOWN	PROJECT: 03067.008.07
DRAWN: DAM	DATE: JULY 2012	28 of 45
CHECKED: LING	APPROVED: YLL	

10116 DEMO BLDG. LOADING DOCK. TRACK COURT. RAIN GARDEN

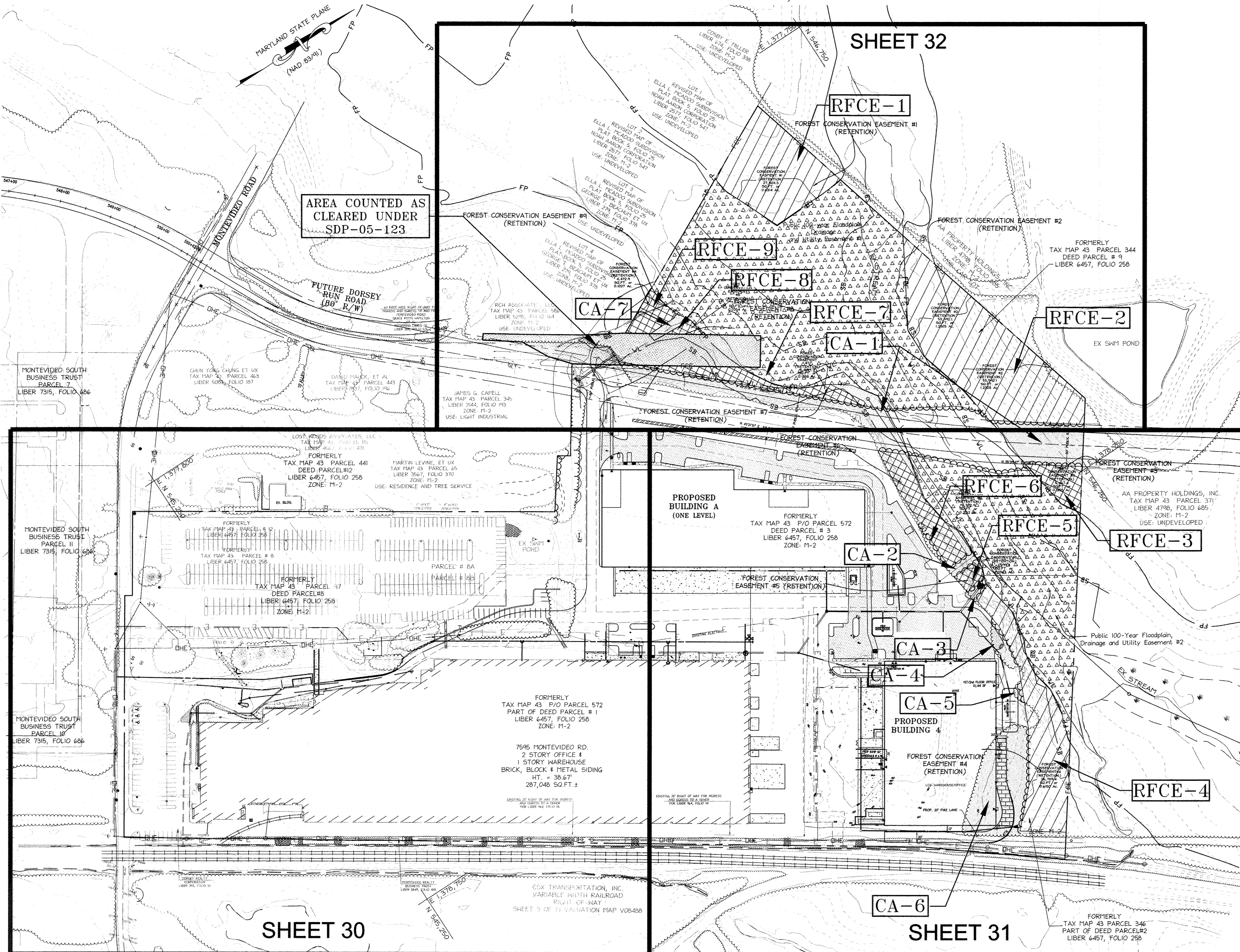
MDC-855



# FOREST CONSERVATION PLAN

DORSEY RUN INDUSTRIAL CENTER  
 NORTH SIDE REDEVELOPMENT  
 7595 MONTEVIDEO ROAD, JESSUP  
 PARCELS 1,2,3,8,9, & 12  
 1st ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND 20794

SHEET 32



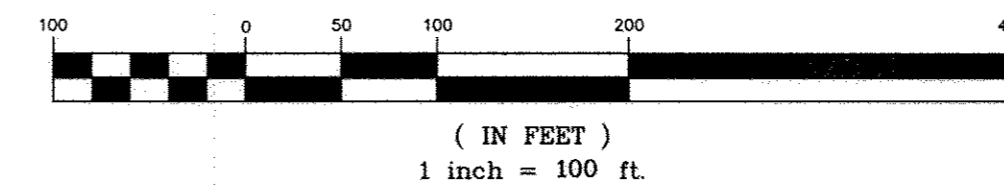
AREA COUNTED AS  
 CLEARED UNDER  
 SDP-05-123

SHEET 30

SHEET 31

OVERALL PLAN VIEW  
 SCALE: 1"=100'

GRAPHIC SCALE



## FOREST CONSERVATION SHEET INDEX

NO	SHEET TITLE
26	COVER SHEET
29	FOREST CONSERVATION PLAN
30	FOREST CONSERVATION PLAN
31	FOREST CONSERVATION PLAN

## WOODLAND CLEARING AREAS (NON-FLOODPLAIN ONLY)

AREA# (CA)	TOTAL AREA
CA-1	27,556.2 SQ.FT. 0.63 AC.
CA-2	2,550.3 SQ.FT. 0.06 AC.
CA-3	781.7 SQ.FT. 0.02 AC.
CA-4	1,701.4 SQ.FT. 0.04 AC.
CA-5	380.9 SQ.FT. 0.00 AC.
CA-6	17,823.0 SQ.FT. 0.41 AC.
CA-7	1,173.3 SQ.FT. 0.03 AC.
SITE TOTAL WOODLAND CLEARING	51,966.8 SQ.FT. 1.19 AC.

## FOREST CONSERVATION NOTES

- THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16-1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY THE PROVISION OF A MINIMUM OF AT LEAST 2.79 ACRES OF PRESERVATION IN A FOREST CONSERVATION EASEMENT. NINE RETENTION FOREST CONSERVATION EASEMENTS TOTALING 3.13 ACRES HAVE BEEN PROVIDED ON THIS SITE AS SHOWN ON THIS PLAN AND PLAT F-00-000 THAT IS RECORDED IN THE LAND RECORDS OF HOWARD COUNTY, MD. THIS PLAN COVERS CLEARING FOR THE PROPOSED DORSEY RUN ROAD (TO BE BUILT BY OTHERS), SITE IMPROVEMENTS, STORMWATER MANAGEMENT OUTFALL CONSTRUCTION AND SEWER LINE CONSTRUCTION NECESSARY FOR THE REDEVELOPMENT OF THE DORSEY RUN INDUSTRIAL PARK NORTH OF MONTEVIDEO ROAD.
- IN JUNE 2006, SDP-05-123 WAS APPROVED FOR THE CONSTRUCTION OF THE PARCEL 3 ACCESS ON WHAT WAS THEN PROPERTY OF THE MONTEVIDEO SOUTH BUSINESS TRUST REPRESENTED BY TRAMMELL CROWN COMPANY. THIS PLAN INCLUDED THE CLEARING OF 0.65 ACRES FOR THE CONSTRUCTION OF THE ACCESS ROAD WITHIN AN EXISTING ACCESS EASEMENT THAT WAS PRESUMED TO BE THE RIGHT OF WAY FOR FUTURE DORSEY RUN ROAD.
- SINCE THE TIME OF THE PREPARATION AND APPROVAL OF THESE SITE PLANS, THE PROPOSED ALIGNMENT OF DORSEY RUN ROAD HAS CHANGED. THIS ALIGNMENT IS FURTHER TO THE SOUTHEAST OF THE PREVIOUS ALIGNMENT, AND IS NO LONGER WITHIN THE ACCESS EASEMENT. SINCE THE CURRENT ROAD ALIGNMENT IS NOT IN THE PREVIOUS EASEMENT, IT IS FEASIBLE THAT SOME OF THE PREVIOUSLY PROPOSED CLEARING MAY NOT OCCUR. HOWEVER, THE FEE IN LIEU PAYMENT WAS MADE FOR ALL OF THIS CLEARING BY TRAMMELL CROWN UNDER SDP-05-123, ESSENTIALLY MEANING THAT THIS AMOUNT OF CLEARING HAS BEEN PROPERLY ACCOUNTED FOR, SHOULD THE ROAD BE CONSTRUCTED.
- A SMALL AMOUNT OF SITE WORK AND STORMWATER MANAGEMENT CONSTRUCTION HAS OCCURRED AS OF JUNE 2008, UNDER GP-08-75, WITH A WAIVER PETITION FILED (WP-08-064) THAT WAS APPROVED AND INDICATED THAT THE AREA OF FOREST REMOVED FOR THE STORM DRAIN OUTFALL SHALL BE ACCOUNTED FOR ON ANY FUTURE SITE DEVELOPMENT PLAN SUBMITTED FOR THIS SITE. THIS CLEARING AREA IS SHOWN AS CA-3 AND HAS BEEN INCLUDED IN THE CALCULATIONS AS IF IT WAS NEBLY PROPOSED.
- THIS PLAN SHOWS THE CLEARING OF 1.19 ACRES, PRESERVATION OF 3.13 ACRES OUTSIDE OF THE FLOODPLAIN, SEWER, AND ROAD EASEMENTS AND PRESERVATION ALL OF THE FLOODPLAIN AREAS, EXCEPT THOSE WITHIN THE GRADING LIMITS OF THE PROPOSED ROADWAY (DORSEY RUN ROAD - TO BE CONSTRUCTED BY OTHERS).
- THE FOREST CONSERVATION OBLIGATION FOR THIS PLAN HAS BEEN MET BY PROVIDING 2.47 ACRES OF CREDITED ON-SITE RETENTION FOREST CONSERVATION EASEMENT. FOR PURPOSES OF THE WOODLAND CONSERVATION WORKSHEET, RFCE AREAS 3 & 4-9 ARE COUNTED AS CLEARED (0.65 ACRES). THE EX. WOODS ARE TO REMAIN IN A NON-CREDITED EASEMENT.

## CREDITED RETENTION FOREST CONSERVATION EASEMENTS (RFCE)

RFCE #	TOTAL AREA
RFCE-1	27,504 SQ.FT. 0.6314 AC
RFCE-2	53,584 SQ.FT. 1.2302 AC
RFCE-4	26,788 SQ.FT. 0.6150 AC
SITE TOTAL FOREST CONSERVATION	107,881 SQ.FT. (2.47 AC)

## NON-CREDITED RETENTION FOREST CONSERVATION EASEMENTS (RFCE)

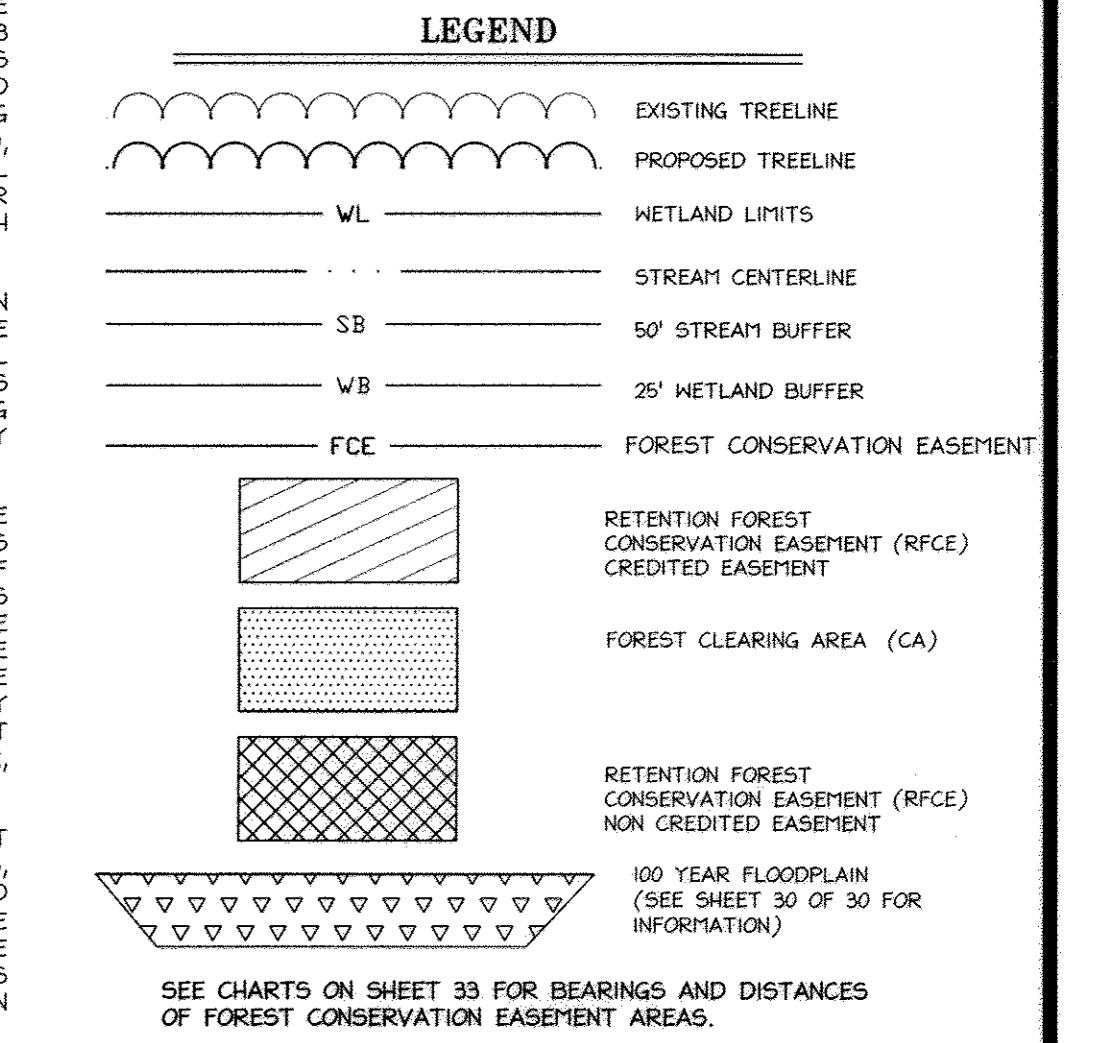
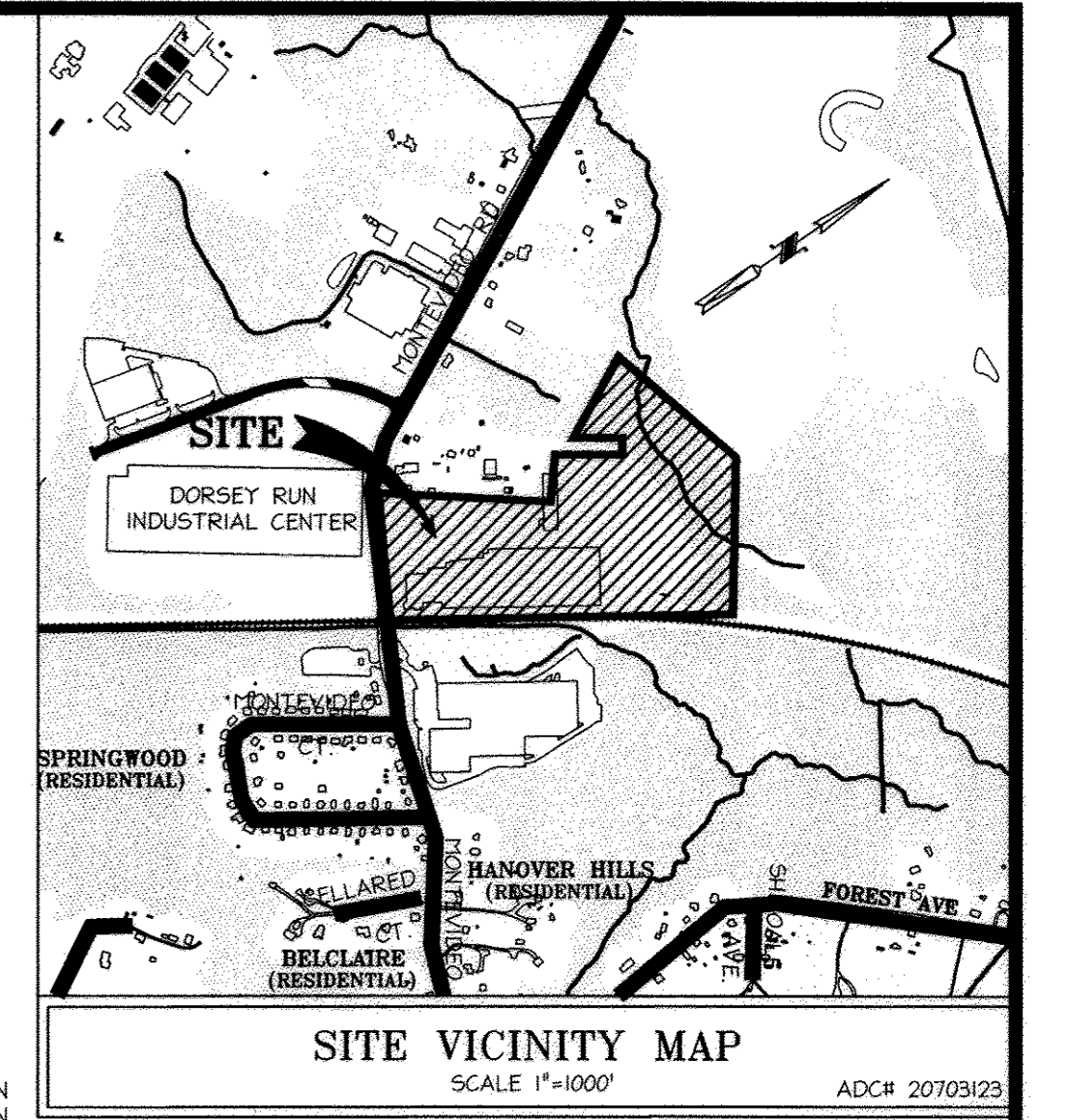
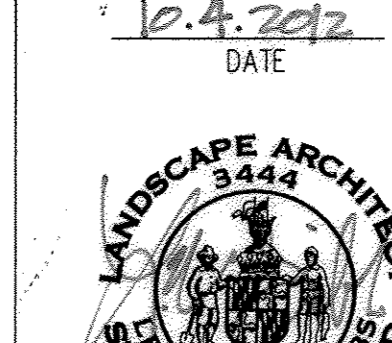
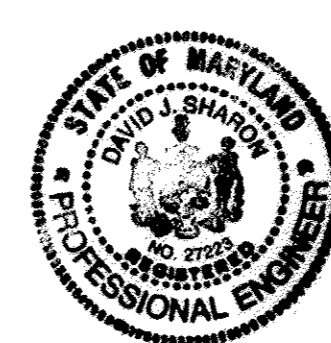
RFCE #	TOTAL AREA
RFCE-3	5,467 SQ.FT. 0.1255 AC
RFCE-5	1,582 SQ.FT. 0.0367 AC
RFCE-6	1,215 SQ.FT. 0.0282 AC
RFCE-7	7,258 SQ.FT. 0.1664 AC
RFCE-8	953 SQ.FT. 0.0218 AC
RFCE-9	4,139 SQ.FT. 0.0947 AC
SITE TOTAL NON-CREDITED FOREST CONSERVATION	22,863 SQ.FT. 0.5248 AC

## AS-BUILT CERTIFICATION

NOTE: THERE IS NO AS-BUILT INFORMATION PROVIDED ON THIS SHEET.

DATE: 7/19/2012  
 EXPIRATION DATE: 7/19/2018  
 DATE OF AS-BUILT: 6/27/2014

DATE: 10.4.2012



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Division of Land Development  
 Chief, Development Engineering Division  
 Director, Department of Planning and Zoning

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**  
 OWNER / DEVELOPER  
 MONTEVIDEO REALTY BUSINESS TRUST  
 C/O EXETER PROPERTY GROUP

**christopher consultants**  
 engineering - surveying - land planning  
 christopher consultants, inc.  
 7112 columbia gateway drive (suite 100) - columbia, md. 21046-2990  
 410.872.8880 - metro 301.981.9148 - fax 410.872.8863

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELK RIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 4

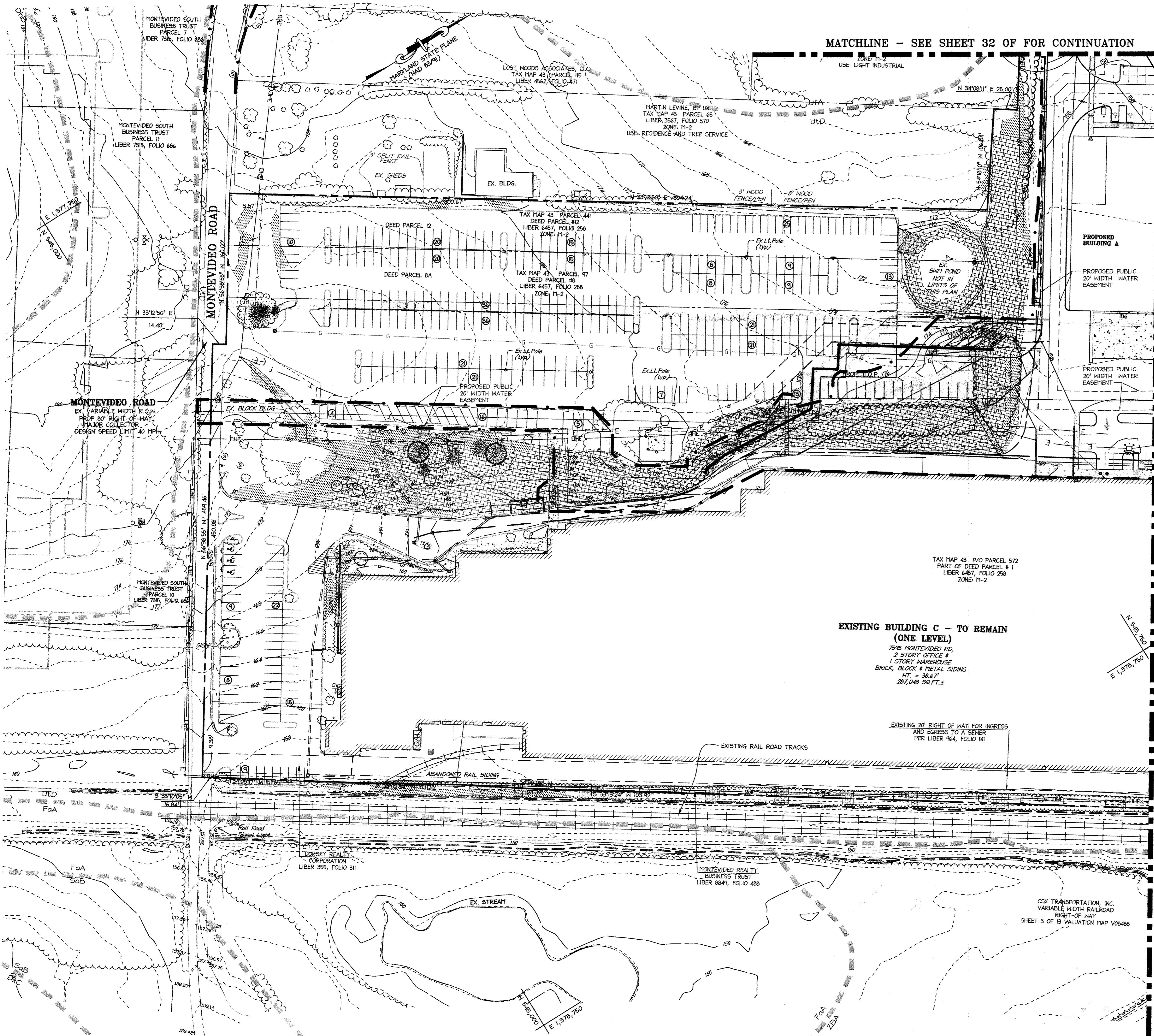
SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#			
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441			
PLAT#	GRID#	ZONING	TAX MAP#	ELECT. DISTR.	CENSUS TRACT
L6457, F.258	16	M-2	43	1ST	6012.02
WATER CODE	SEWER CODE				
400 (TG 550)	801				

TITLE: **COVER SHEET**

DESIGN: NM	SCALE: 1" = 100'	PROJECT: 09067.008.07
DRAWN: DAM	DATE: JULY 2012	
CHECKED: ENJ	APPROVED: YLL	<b>29 OF 45</b>

SDP-08-116

MDC-855



**LEGEND**

- 250- - - - - EXISTING INTER CONTOUR
- 250- - - - - EXISTING INDEX CONTOUR
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING WATER
- EXISTING CURBLINE
- EXISTING TREELINE
- PROPOSED TREELINE
- PROP. 15" CMP
- PROPOSED STORM DRAIN
- PROPOSED WATERLINE
- PROPOSED SANITARY LINE
- STREAM CENTERLINE
- SOILS LINE
- SB
- WB
- TPF
- FCE
- WL
- LIMITS OF DISTURBANCE
- RETENTION FOREST CONSERVATION EASEMENT (NONE ON THIS SHEET)
- FOREST CLEARING AREA (NONE ON THIS SHEET)
- RETENTION FOREST CONSERVATION EASEMENT NON CREDITED EASEMENT
- PERMANENT TREE PROTECTION SIGNAGE
- 25% AND GREATER STEEP SLOPES
- 15% TO 25% STEEP SLOPES
- 100 YEAR FLOODPLAIN (SEE SHEET 30 OF 31 FOR INFORMATION)

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Victoria J. ...* 10/31/12  
 Chief, Division of Land Development Date

*...* 10/17/12  
 Chief, Development Engineering Division Date

*...* 11/4/12  
 Director, Department of Planning and Zoning Date

1	11/20/12	REDLINE REVISIONS
---	----------	-------------------

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

**OWNER / DEVELOPER**

MONTEVIDEO REALTY BUSINESS TRUST  
 C/O EXETER PROPERTY GROUP

140 W. GERMANTOWN PIKE, SUITE 150  
 PLTWOOD MEETING, PA 19462  
 TEL: (610) 828-0756  
 FAX: (610) 828-5550

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 7172 columbia gateway drive (suite 100) columbia, md. 21046-2990  
 410.872.8890 - metro 301.981.0148 - fax 410.872.8893

**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441
PLAT# L6457, F.258	GRID# 16 ZONING M-2 TAX MAP# 43 ELECT. DISTR. 1ST CENSUS TRACT 6012.02	
MATER CODE 400 (TG 550)	SEWER CODE B01	

**TITLE: FOREST CONSERVATION PLAN**

DESIGN: NH1	SCALE: 1" = 50'	PROJECT: 03067.008.07
DRAWN: DAM	DATE: JULY 2012	
CHECKED: ENJ	APPROVED: YLL	<b>30 OF 45</b>

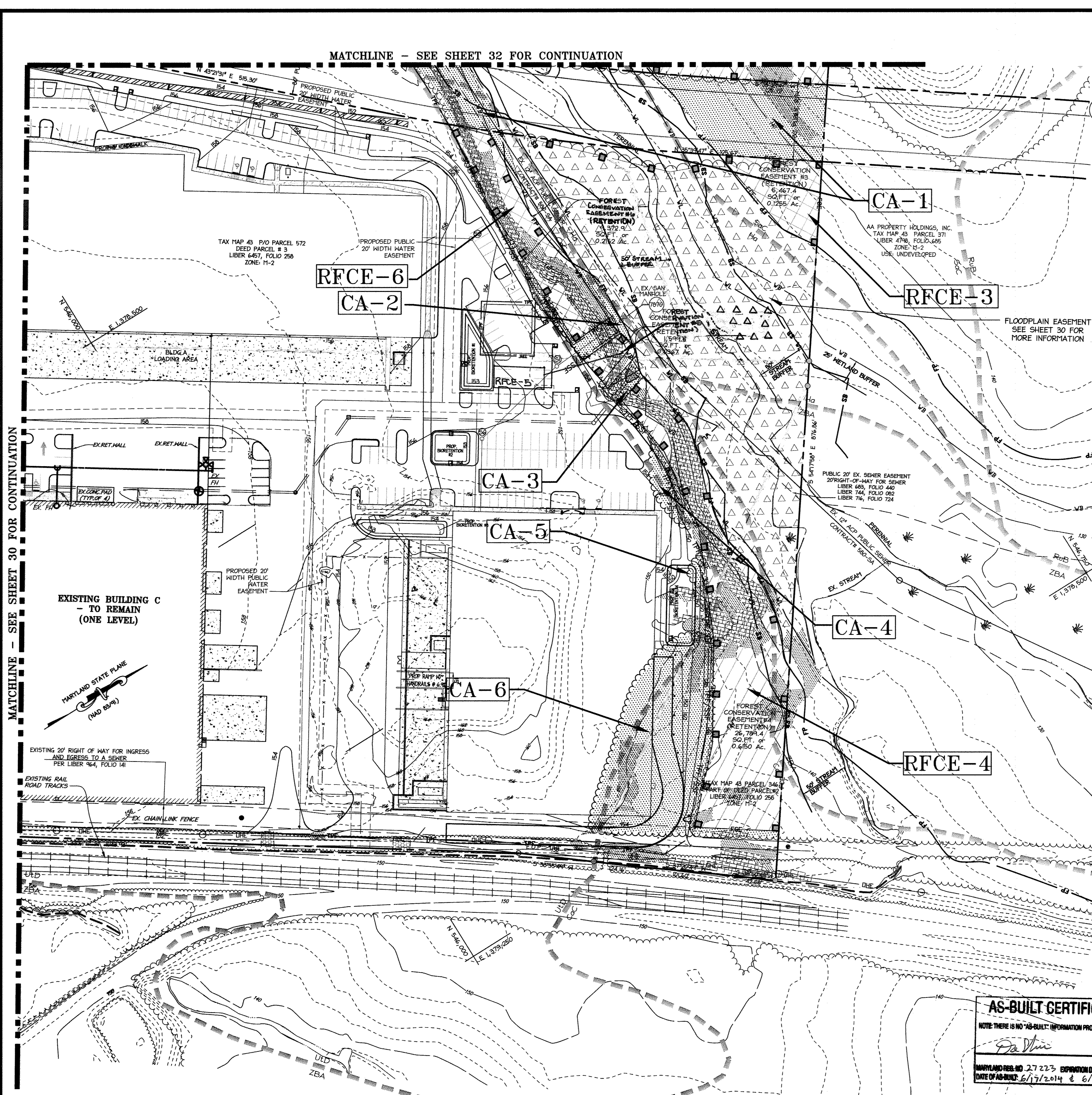
**AS-BUILT CERTIFICATION**

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

*Tom ...* 7/18/2017  
 DATE

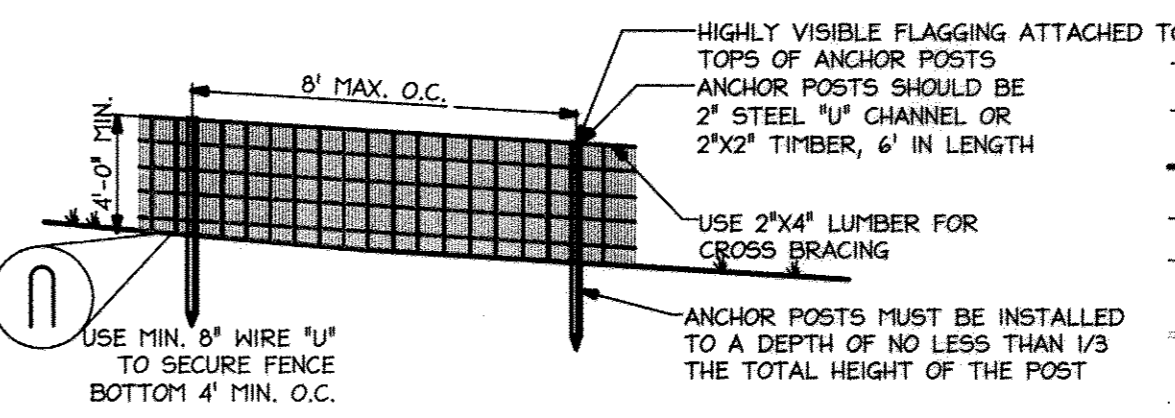
MARYLAND REG. NO. 27223 EXPIRATION DATE: 3/19/2018  
 DATE OF AS-BUILT: 6/17/2014 & 6/27/2017





MATCHLINE - SEE SHEET 30 FOR CONTINUATION

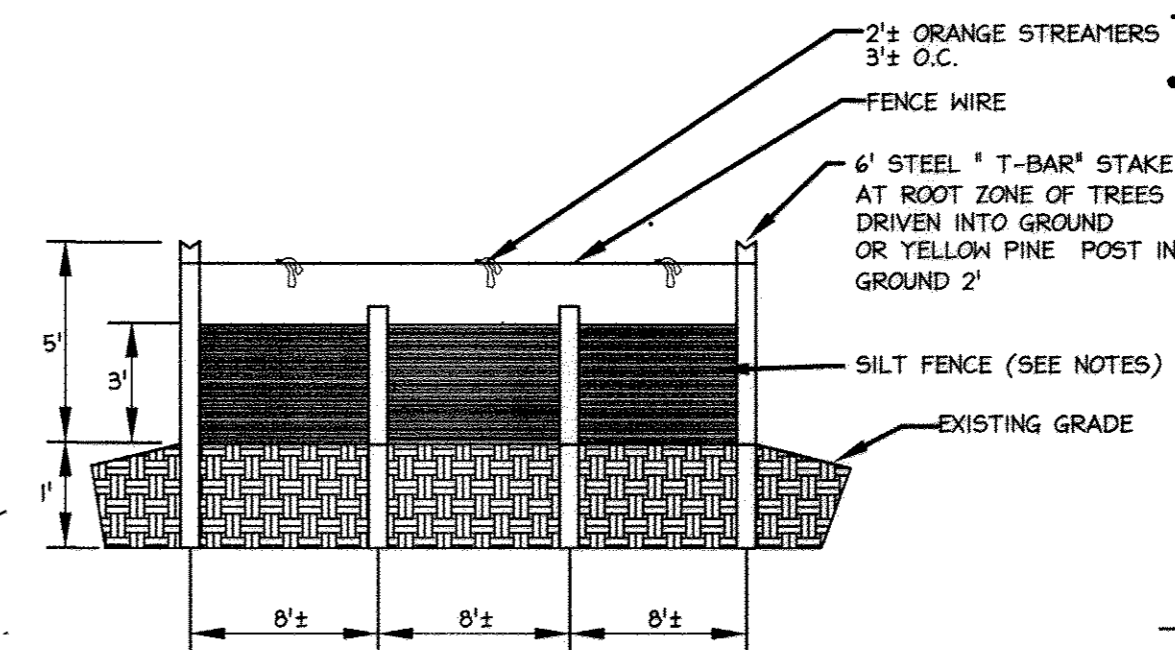
MATCHLINE - SEE SHEET 32 FOR CONTINUATION



- NOTES:**
- BLAZE ORANGE OR BLUE PLASTIC MESH FENCE FOR FOREST PROTECTION DEVICE, ONLY.
  - BOUNDARIES OF RETENTION AREA WILL BE ESTABLISHED AS PART OF THE FOREST CONSERVATION PLAN REVIEW PROCESS.
  - BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
  - AVOID DAMAGE TO CRITICAL ROOT ZONE. DO NOT DAMAGE OR SEVER LARGE ROOTS WHEN INSTALLING POSTS.
  - PROTECTION SIGNS ARE REQUIRED. 6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

SOURCE: Adapted from Prince George's County, Maryland Woodland Conservation Manual and Forest Conservation Manual, 1991.

**Tree Protection Fence**  
Not To Scale

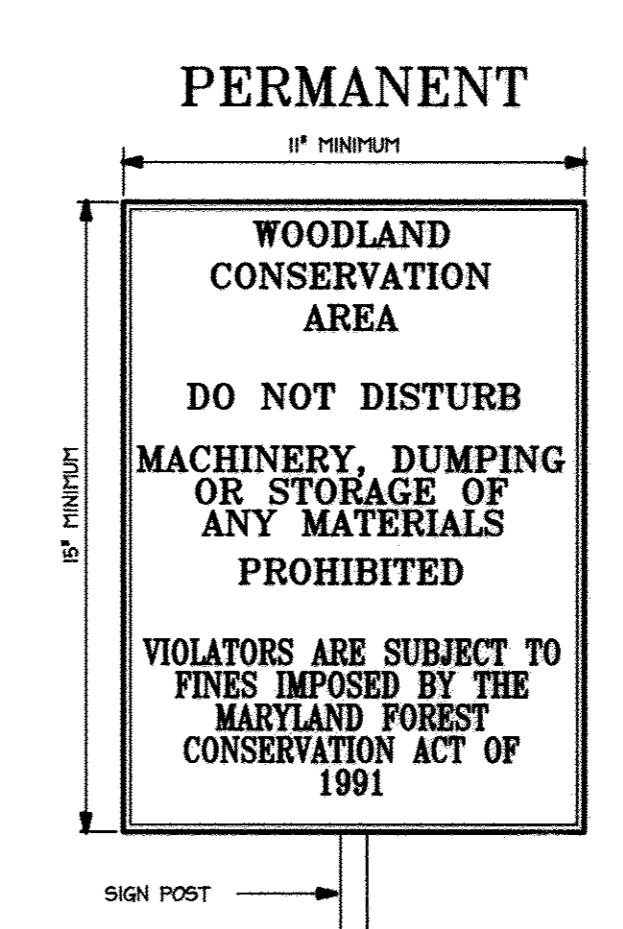


- NOTES:**
- SILT FENCE TO BE INSTALLED PER SCS DETAIL.
  - WIRE, SNOW FENCE, ETC. FOR TREE PROTECTION ONLY.
  - BOUNDARIES OF RETENTION AREA WILL BE ESTABLISHED AS PART OF THE FOREST CONSERVATION PLAN REVIEW PROCESS.
  - LIMITS OF DISTURBANCE SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
  - AVOID ROOT DAMAGE WHEN PLACING ANCHOR POSTS. (SEE ROOT PRUNING DETAIL.)
  - DEVICE SHOULD BE PROPERLY MAINTAINED THROUGHOUT CONSTRUCTION.
  - PROTECTION SIGNS MAY BE PLACED ON FENCE AS NOTED ON PLAN.
  - LOCATE FENCE OUTSIDE THE CRITICAL ROOT ZONE.

**COMBINATION SILT FENCE AND TREE PROTECTION DEVICE - TYPE II**  
Not To Scale

**LEGEND**

	EXISTING INTER CONTOUR
	EXISTING INDEX CONTOUR
	PROPERTY LINE
	ADJACENT PROPERTY LINE
	EXISTING WATER
	EXISTING CURBLINE
	EXISTING TREELINE
	PROPOSED TREELINE
	PROPOSED STORM DRAIN
	PROPOSED WATERLINE
	PROPOSED SANITARY LINE
	STREAM CENTERLINE
	SOILS LINE
	50' STREAM BUFFER
	25' WETLAND BUFFER
	TREE PROTECTION FENCE
	LIMITS OF DISTURBANCE
	RETENTION FOREST CONSERVATION EASEMENT (NONE ON THIS SHEET)
	FOREST CLEARING AREA (NONE ON THIS SHEET)
	RETENTION FOREST CONSERVATION EASEMENT NON CREDITED EASEMENT
	PERMANENT TREE PROTECTION SIGNAGE
	FOREST CONSERVATION EASEMENT
	WETLAND LIMITS
	25% AND GREATER STEEP SLOPES
	15 TO 25% STEEP SLOPES
	100 YEAR FLOODPLAIN (SEE SHEET 30 OF 31 FOR INFORMATION)



- NOTES:**
- BOTTOM OF SIGNS TO BE 5'-0" ABOVE FINISHED GRADE OR ATTACHED TO THE PERMANENT TREE PROTECTION FENCE WITH SCREWS.
  - SIGN TO BE ATTACHED TO A 2" (MIN.) STEEL U-CHANNEL POST OR 2"x2" TIMBER AT LEAST 6" IN LENGTH. THE POST SHALL BE SUNK INTO THE GROUND TO A DEPTH OF AT LEAST 1/3 ITS LENGTH.
  - SIGNS TO BE PLACED APPROXIMATELY 50' APART. SITE CONDITIONS AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART.
  - ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.

**Forest Retention Area Signage**  
Not To Scale

APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>[Signature]</i>	Date: 10/31/12
Chief, Division of Land Development	
<i>[Signature]</i>	Date: 10/17/12
Chief, Development Engineering Division	
<i>[Signature]</i>	Date: 11/2/12
Director, Department of Planning and Zoning	

1 11/2012 **REDLINE REVISIONS**

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

**OWNER / DEVELOPER**

MONTEVIDEO REALTY TRUST 140 W. GERMANTOWN PIKE, SUITE 150 PLYMOUTH MEETING, PA 19462  
TEL: (610) 828-0756 FAX: (610) 828-5550

**christopher consultants**  
engineering · surveying · land planning  
christopher consultants, inc.  
1772 columbia gateway drive (suite 100) -columbia, md. 21046-2990  
410.872.8880 - metro: 301.881.0148 - fax: 410.872.8883

**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7585 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

SUBDIVISION NAME DORSEY RUN INDUSTRIAL CENTER	SECTION/AREA	LOT/PARCEL# 572,346,97,344,441
PLAT# L8457, F.258	GRID# 16	ZONING M-2
TAX MAP# 43	ELECT. DISTR. 1ST	CENSUS TRACT 6012.02
WATER CODE 400 (TG 550)	SEWER CODE 801	

TITLE: **FOREST CONSERVATION PLAN**

DESIGN: NM	SCALE: 1" = 50'	PROJECT: 03067.008.07
DRAWN: DAM	DATE: JULY 2012	
CHECKED: ENJ	APPROVED: TLL	

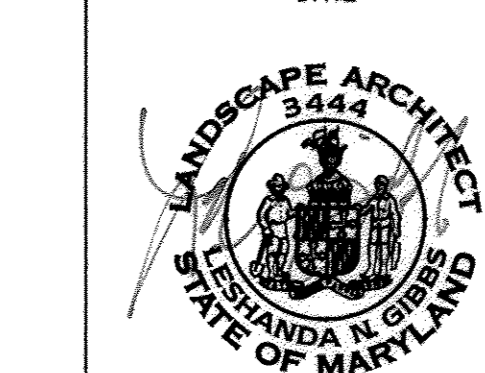
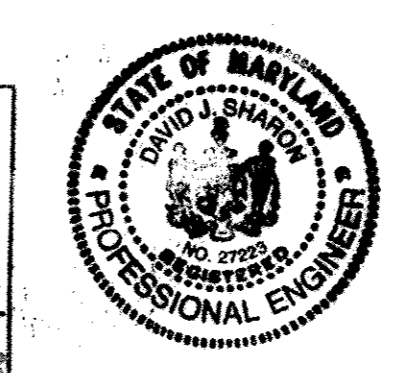
**AS-BUILT CERTIFICATION**  
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

*[Signature]* 7/18/2012

DATE: 7/18/2012

MARYLAND REG. NO. 27223 EXPIRATION DATE: 3/19/2018

DATE OF AS-BUILT: 6/17/2014 & 6/27/2017



**FOREST CONSERVATION CALCULATIONS**

**BASIC SITE DATA**

GROSS SITE AREA	36.71 Ac.
AREA WITHIN 100 YEAR FLOODPLAIN	5.58 Ac. ①
MISC. AREA (PREV. DISTURBANCE)	22.7 Ac. ②
NET TRACT AREA	8.43 Ac.
LAND USE CATEGORY	C-1-A

**INFORMATION FOR CALCULATIONS**

A. NET TRACT AREA	8.43 Ac.
B. REFORESTATION THRESHOLD (15% X A)	1.26 Ac.
C. AFFORESTATION MINIMUM (15% X A)	1.26 Ac.
D. EXISTING FOREST ON NET TRACT AREA	4.32 Ac.
E. CLEARED AREA COUNTED ON SDP-05-123	0.65 Ac.

**INFORMATION FOR REQUIREMENTS**

A. NET TRACT AREA	8.43 Ac.
B. REFORESTATION THRESHOLD (15% X A)	1.26 Ac.
C. EXISTING FOREST ON NET TRACT AREA	4.32 Ac.
D. FOREST AREA TO BE CLEARED	1.85 Ac. ③
E. FOREST AREAS TO REMAIN	2.47 Ac.
F. FOREST AREAS ABOVE AFFORESTATION THRESHOLD	3.06 Ac.
G. FOREST AREAS ABOVE CONSERVATION THRESHOLD	3.06 Ac.
H. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD WITH NO MITIGATION	1.88 Ac.
I. REFORESTATION FOR CLEARING ABOVE REFORESTATION THRESHOLD	0.46 Ac.
J. REFORESTATION FOR CLEARING BELOW REFORESTATION THRESHOLD	0.00 Ac.
K. CREDIT FOR RETENTION ABOVE THRESHOLD	1.20 Ac.
L. TOTAL REFORESTATION REQUIRED	0.00 Ac.
M. REFORESTATION PROVIDED	0.00 Ac.

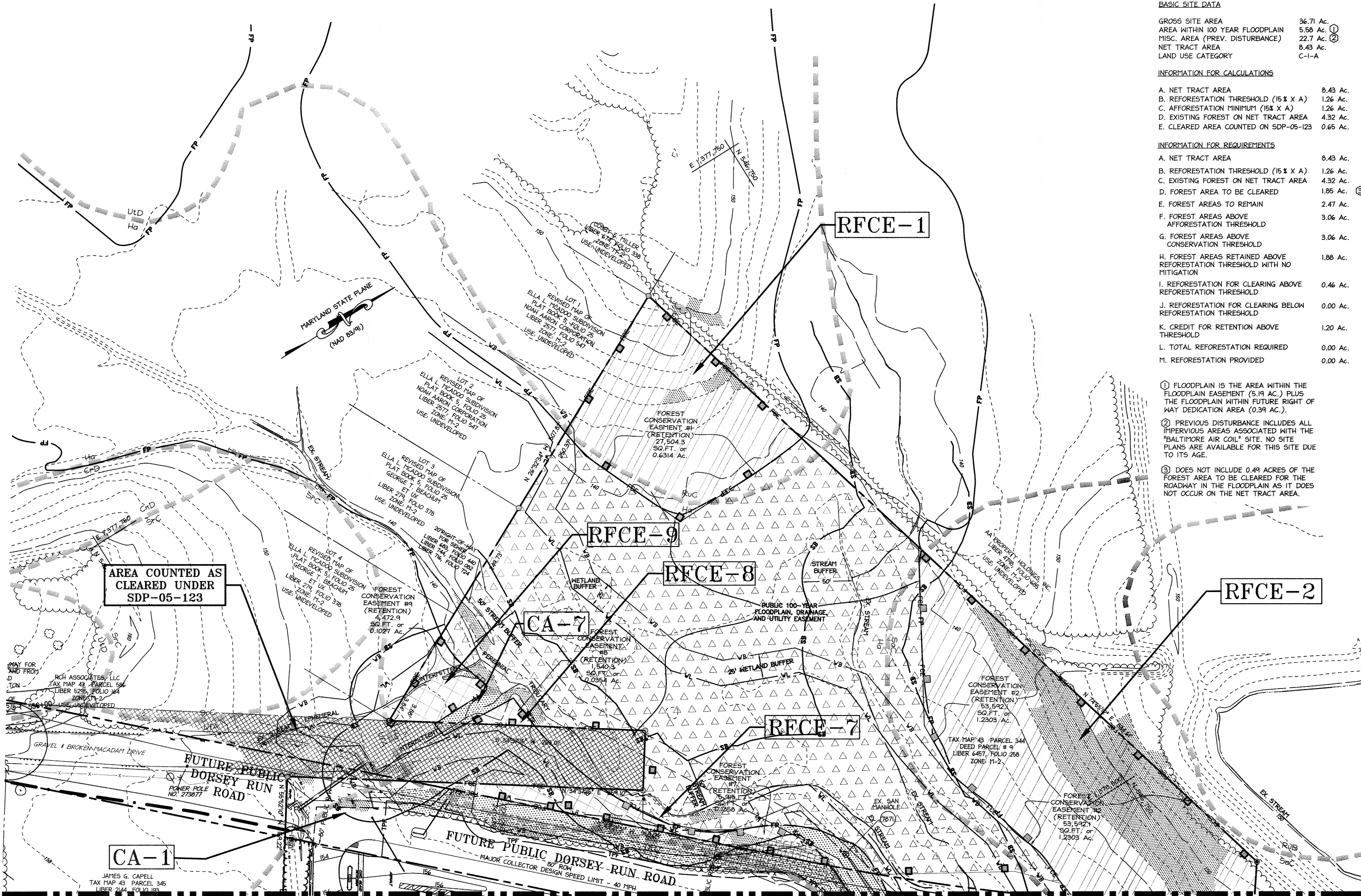
① FLOODPLAIN IS THE AREA WITHIN THE FLOODPLAIN EASEMENT (5.19 AC.) PLUS THE FLOODPLAIN WITHIN FUTURE RIGHT OF WAY DEDICATION AREA (0.39 AC.).

② PREVIOUS DISTURBANCE INCLUDES ALL IMPERVIOUS AREAS ASSOCIATED WITH THE "BALTIMORE AIR COIL" SITE. NO SITE PLANS ARE AVAILABLE FOR THIS SITE DUE TO ITS AGE.

③ DOES NOT INCLUDE 0.49 ACRES OF THE FOREST AREA TO BE CLEARED FOR THE ROADWAY IN THE FLOODPLAIN AS IT DOES NOT OCCUR ON THE NET TRACT AREA.

**LEGEND**

- EXISTING INDEX CONTOUR
- EXISTING INTER CONTOUR
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING WATER
- EXISTING CURBLINE
- EXISTING TREELINE
- PROPOSED TREELINE
- PROPOSED 15' CMP
- PROPOSED STORM DRAIN
- PROPOSED WATERLINE
- PROPOSED SANITARY LINE
- STREAM CENTERLINE
- SOILS LINE
- 50' STREAM BUFFER
- 25' WETLAND BUFFER
- TREE PROTECTION FENCE
- LIMITS OF DISTURBANCE
- RETENTION FOREST CONSERVATION EASEMENT (NONE ON THIS SHEET)
- FOREST CLEARING AREA (NONE ON THIS SHEET)
- RETENTION FOREST CONSERVATION EASEMENT NON CREDITED EASEMENT
- PERMANENT TREE PROTECTION SIGNAGE
- FOREST CONSERVATION EASEMENT
- WETLAND LIMITS
- 25% AND GREATER STEEP SLOPES
- 15 TO 25% STEEP SLOPES
- 100 YEAR FLOODPLAIN (SEE SHEET 30 OF 31 FOR INFORMATION)



APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>Kat S. Lewis</i>	10/31/12
Chief, Division of Land Development	Date
<i>John J. ...</i>	10/17/12
Chief, Development Engineering Division	Date
<i>... ..</i>	10/2/12
Director, Department of Planning and Zoning	Date

1 11/2012 REDLINE REVISIONS

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

**OWNER / DEVELOPER**  
 MONTEVIDEO REALTY 140 M. GERTMANTOWN PIKE, SUITE 150  
 BUSINESS TRUST PLYMOUTH MEETING, PA 19462  
 C/O EXETER PROPERTY GROUP TEL: (610) 828-0756 FAX: (610) 828-5550

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 410.872.8800 - metro 301.981.0148 - fax 410.872.8883

**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELK RIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441
PLAT# L6457, F.258	GRID# 16 ZONING M-2	TAX MAP# 43 ELECT. DISTR. 1ST CENSUS TRACT 6012.02
WATER CODE 400 (TG 550)	SEWER CODE B01	

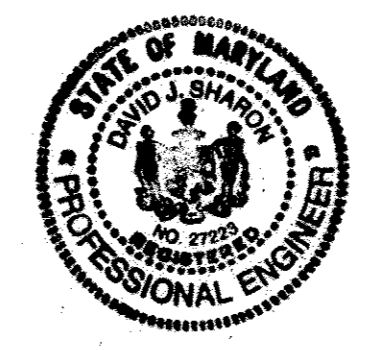
**TITLE: FOREST CONSERVATION PLAN**

DESIGN: NM1	SCALE: 1" = 50'	PROJECT: 03067.008.07
DRAWN: DAM	DATE: JULY 2012	<b>32 of 45</b>
CHECKED: ENJ	APPROVED: TLL	

**OPTION 5: FOREST CONSERVATION OBLIGATION ADDRESSED ON-SITE**

FILE NUMBER: SDP-08-116	PROJECT/SUBDIVISION NAME: NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER	FOREST CONSERVATION DATA SUMMARY				
LAND USE: MANUFACTURING/WAREHOUSE	WATERSHED: DEEP RUN	ON-SITE MID GRID N 76°46'30"	ON-SITE MID GRID E 39°09'45"	NET TRACT AREA	TOTAL SITE DISTURBANCE (AC)	
				8.43 AC	12.15 AC	
PRIORITY DIST. WITHIN TOTAL DISTURBED AREA	% PRIORITY DISTURBANCE	EX. FOREST (AC)	ON-SITE RETENTION (AC)	OFF-SITE RETENTION (AC)	CLEARED FOREST (AC)	
22.70 AC	0%	4.32 AC	2.47 AC	N/A	1.85 AC	
ON-SITE REFORESTATION (AC)	ON-SITE REFOREST. (AC)	OFF-SITE AFFORESTATION (AC)	OFF-SITE AFFORESTATION (AC)	OFF-SITE MID GRID N	ON-SITE MID GRID E	
0.46 AC	N/A	N/A	N/A	39°09'45"		
TOTAL AC. IN EASEMENT	TOTAL AC. IN PRIOR. AREA WITHIN TOTAL EASEMENT	% PRIORITY AREA WITHIN TOTAL EASEMENT	AMOUNT OF SURETY POSTED	AMOUNT OF FEE-IN-LIEU	TOTAL AC. IN EASEMENT	OFF-SITE SUBWATERSHED NUMBER
3.13 AC	N/A	N/A	N/A	N/A	3.13 AC	N/A

**AS-BUILT CERTIFICATION**  
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.  
*De Shaver* 7/18/2012  
 MARYLAND REG. NO. 27223 EXPIRES 3/19/2018  
 DATE OF AS-BUILT: 6/17/2014 & 6/27/2017



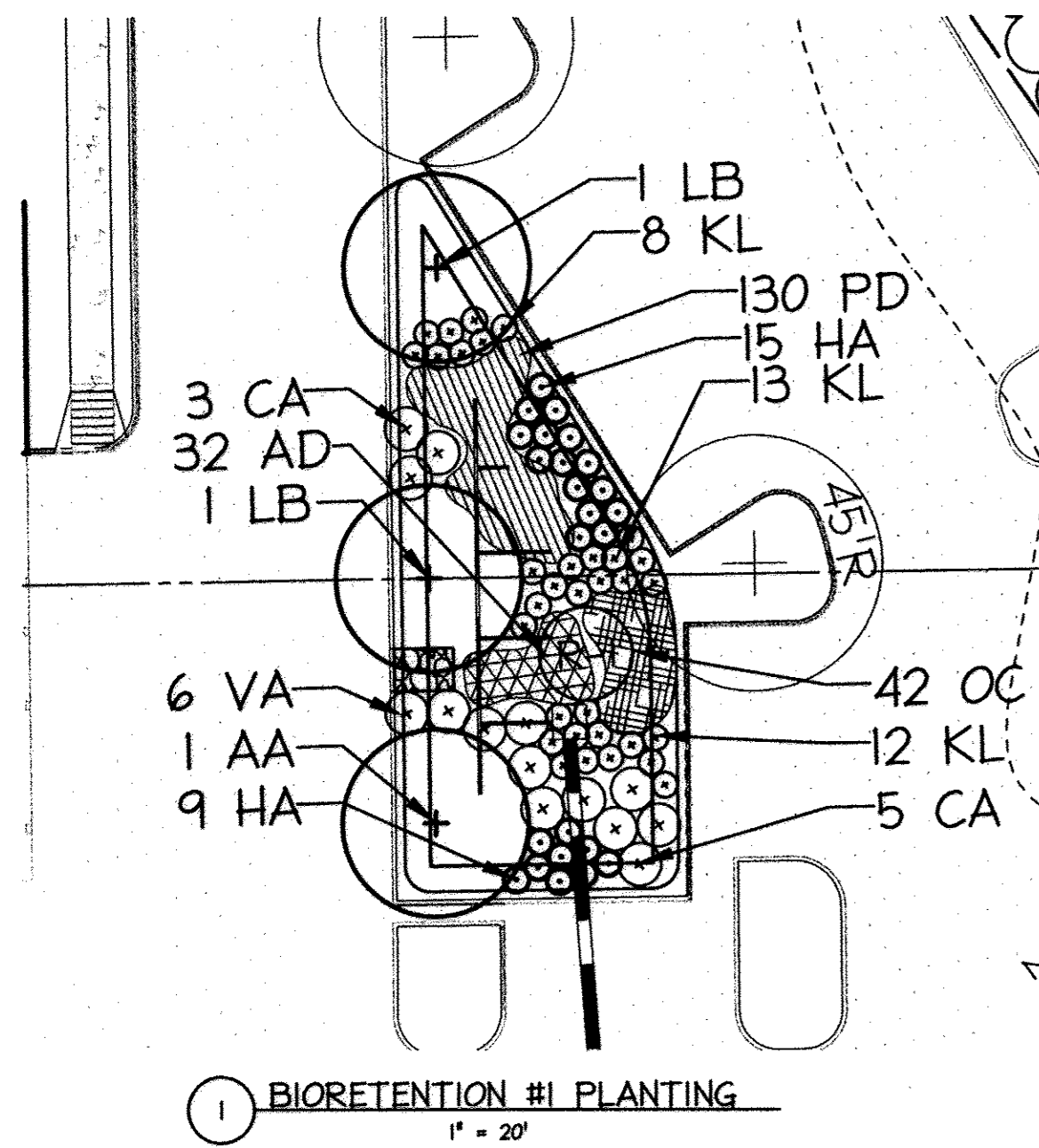
10.9.2012 DATE  
 LANDSCAPE ARCHITECT  
 ESTHER ANDA N. GIBBS  
 STATE OF MARYLAND

**SOIL ANALYSIS**

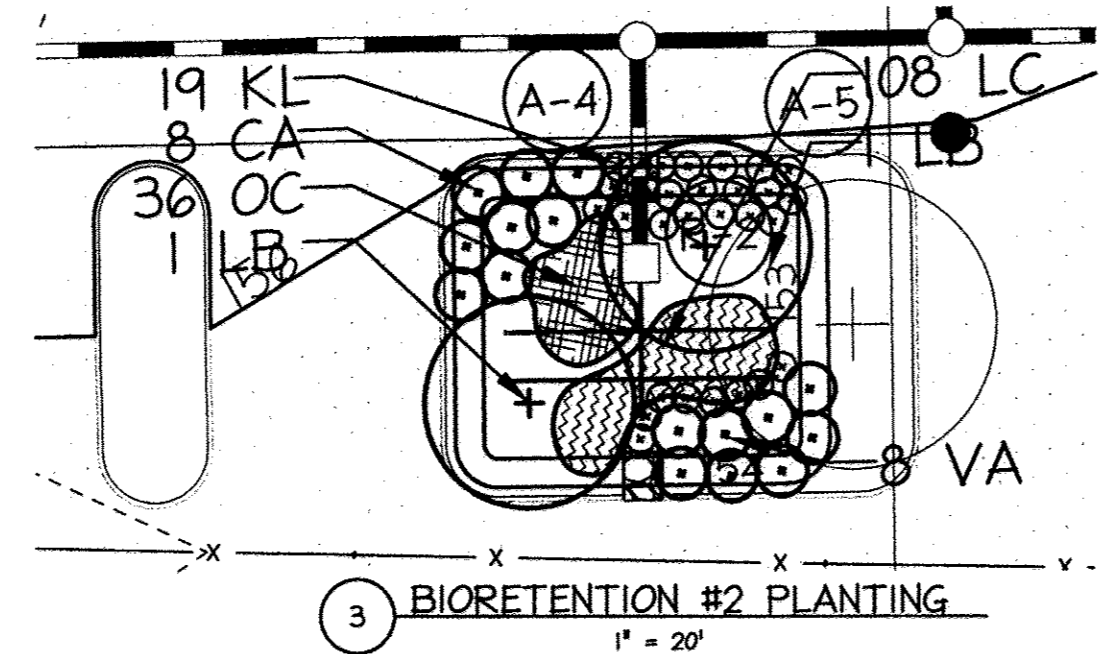
SYMBOL	SOIL	K FACTOR	ERODIBLE	HYDRIC	COUNTY	TAXONOMIC CLASS
CoC	CHILLIPI	0.37	YES	NO	AA	TYPIC HAPLUDULTS
Ha	HATBORO-CODORUS	0.37	YES	YES	HOW	FLUVAQUENTIC ENDOAQUEP
RuC	RUSSETT AND BELTSVILLE	0.24	NO	NO	HOW	AQUIC HAPLUDULTS
Soc	SASSAFRAS LOAM	0.24	NO	NO	HOW	TYPIC HAPLUDULTS
Ufa	URBAN LAND-FALLSINGTON COMPLEX	0.02	NO	YES	HOW	-
ULD	URBAN LAND-UDORTHERTS COMPLEX	0.26	NO	NO	HOW	-

MATCHLINE - SEE SHEET 30 FOR CONTINUATION

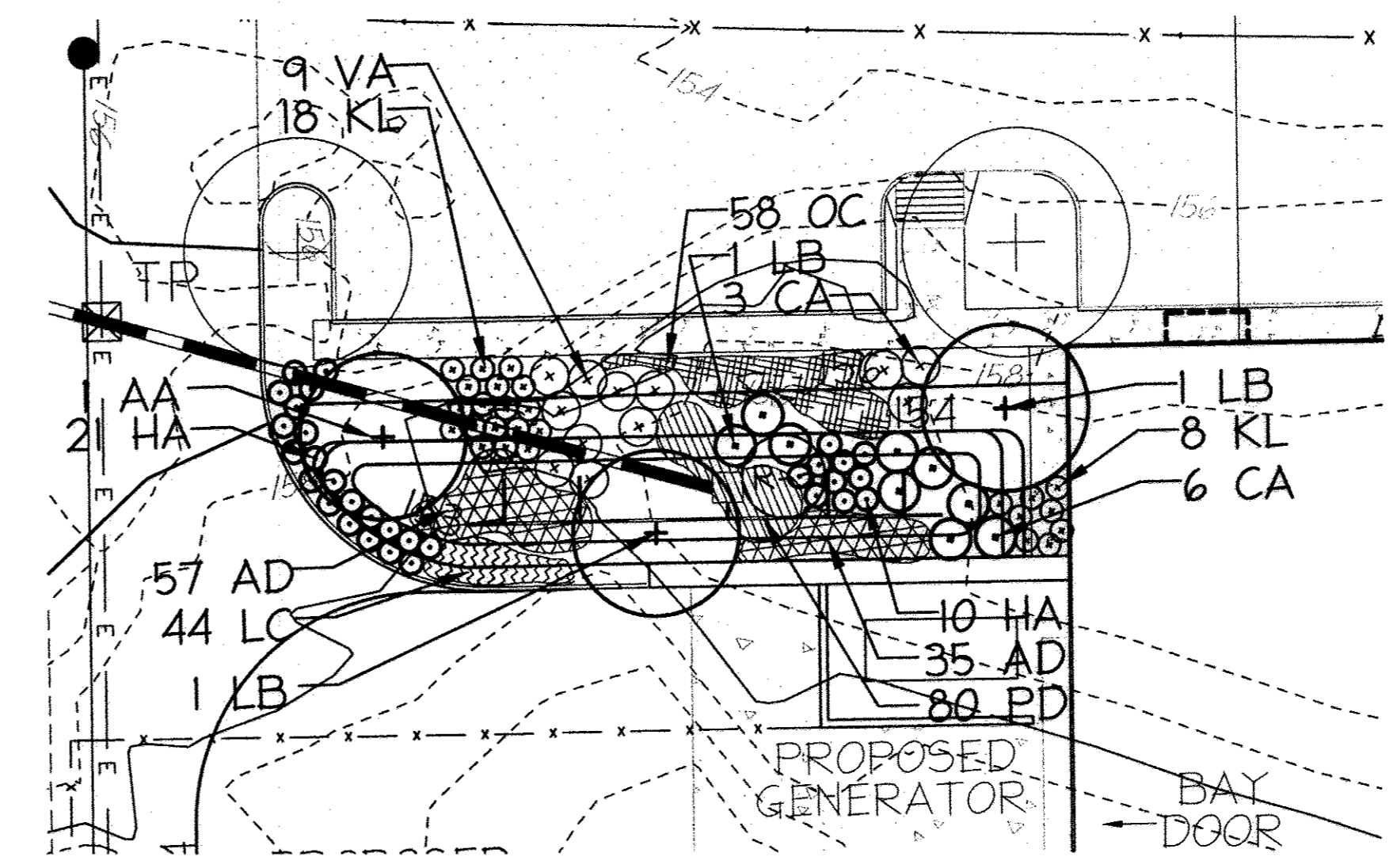
MATCHLINE - SEE SHEET 31 FOR CONTINUATION



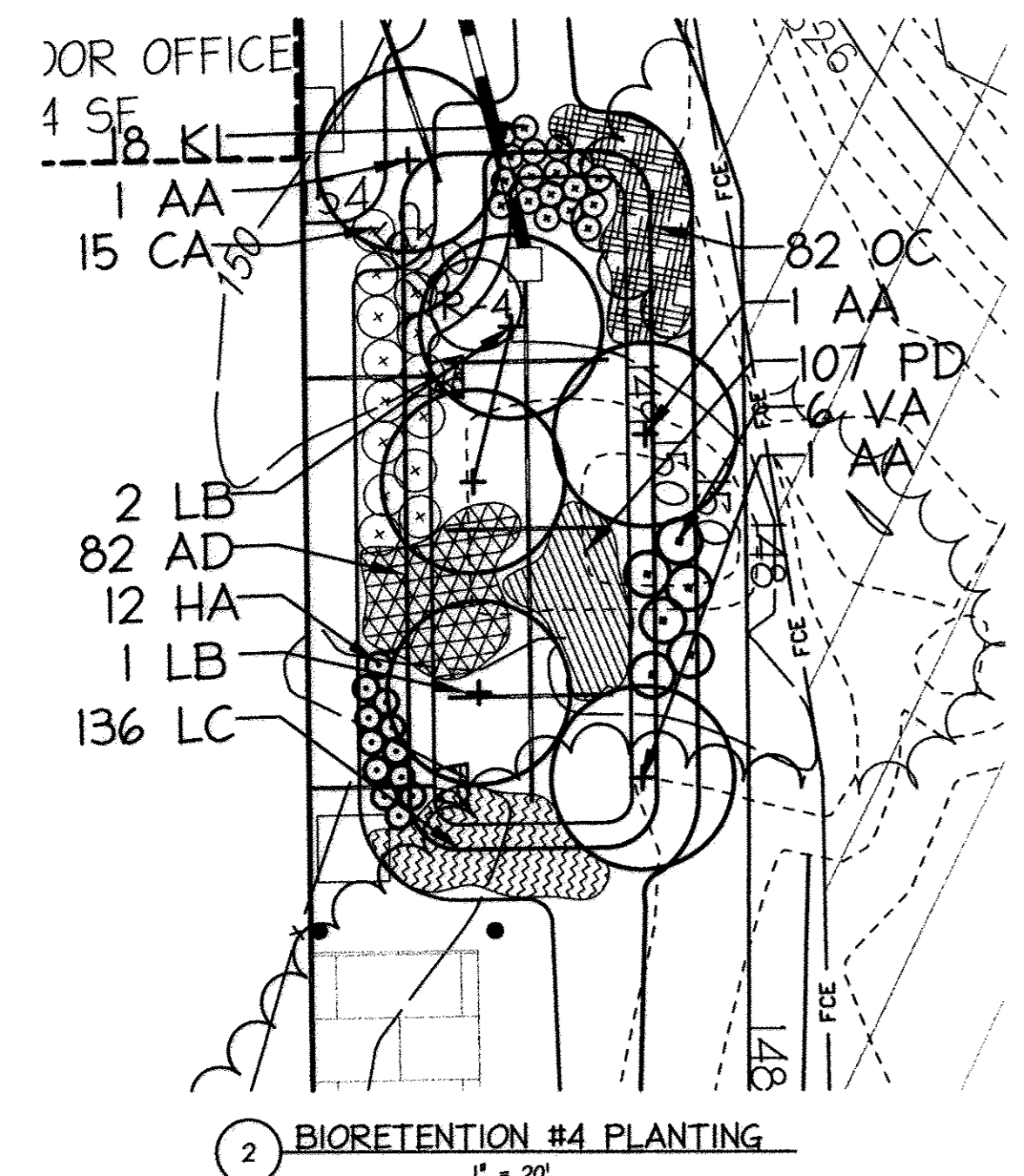
1 BIORETENTION #1 PLANTING  
1" = 20'



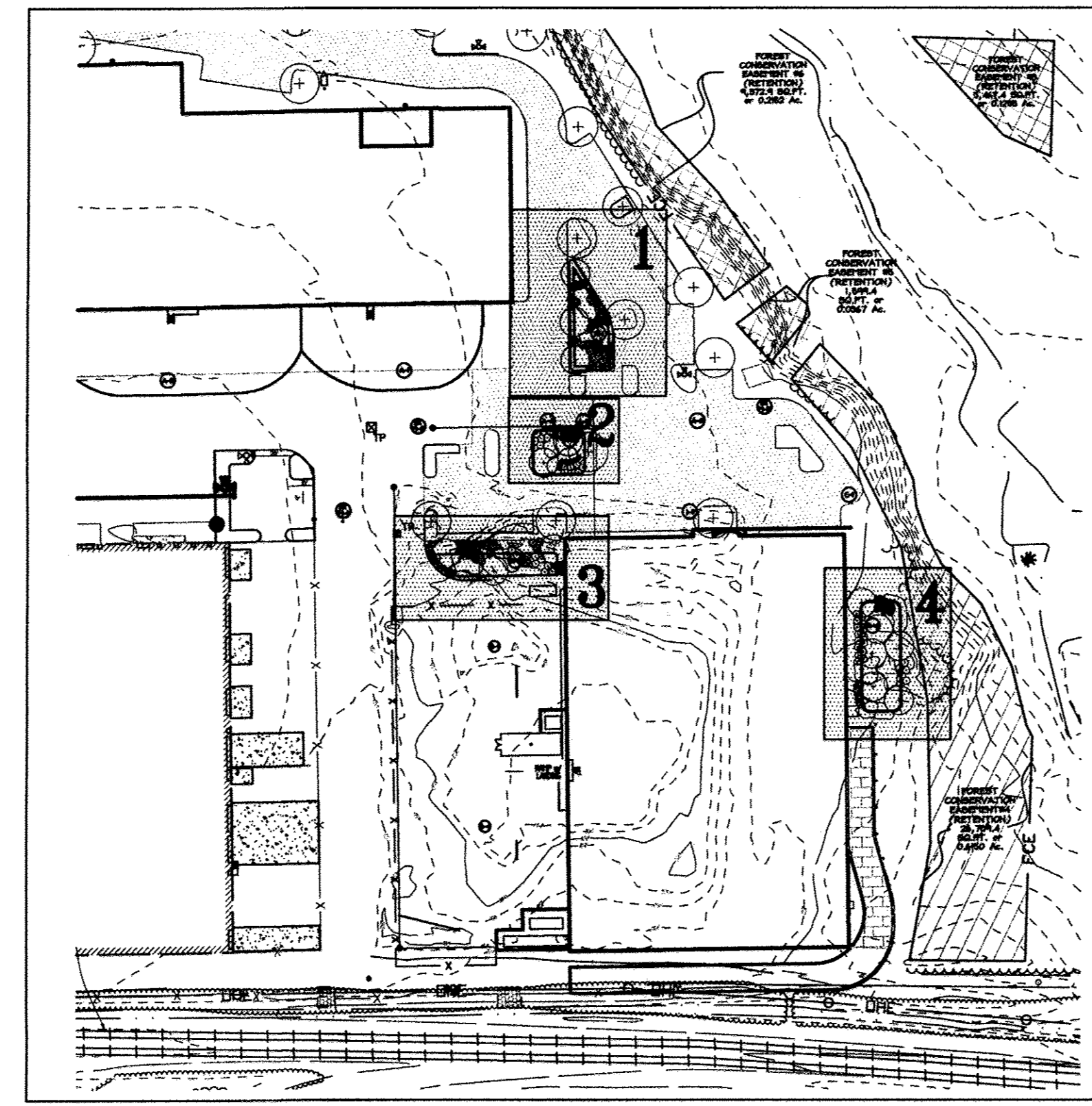
3 BIORETENTION #2 PLANTING  
1" = 20'



4 BIORETENTION #3 PLANTING  
1" = 20'



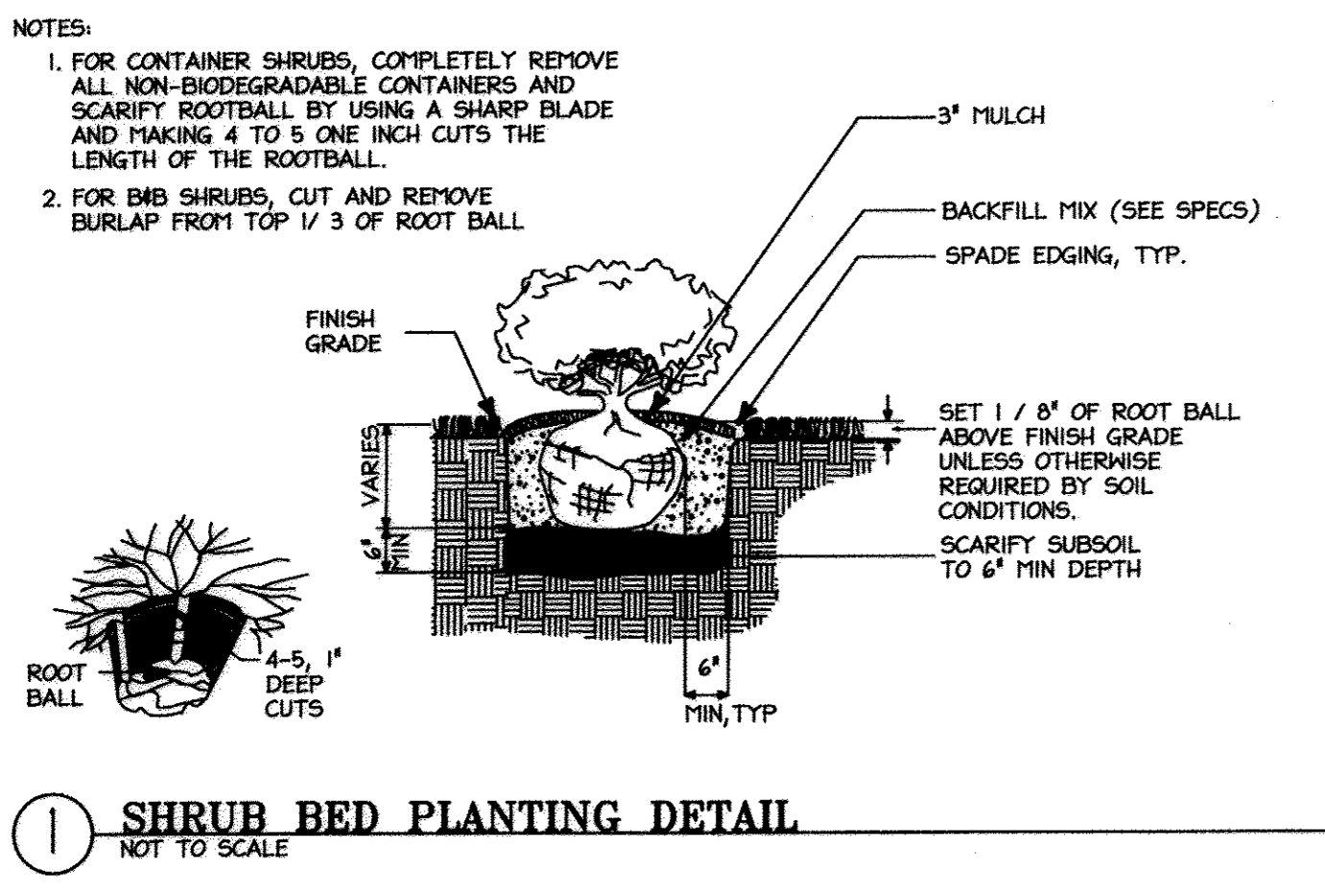
2 BIORETENTION #4 PLANTING  
1" = 20'



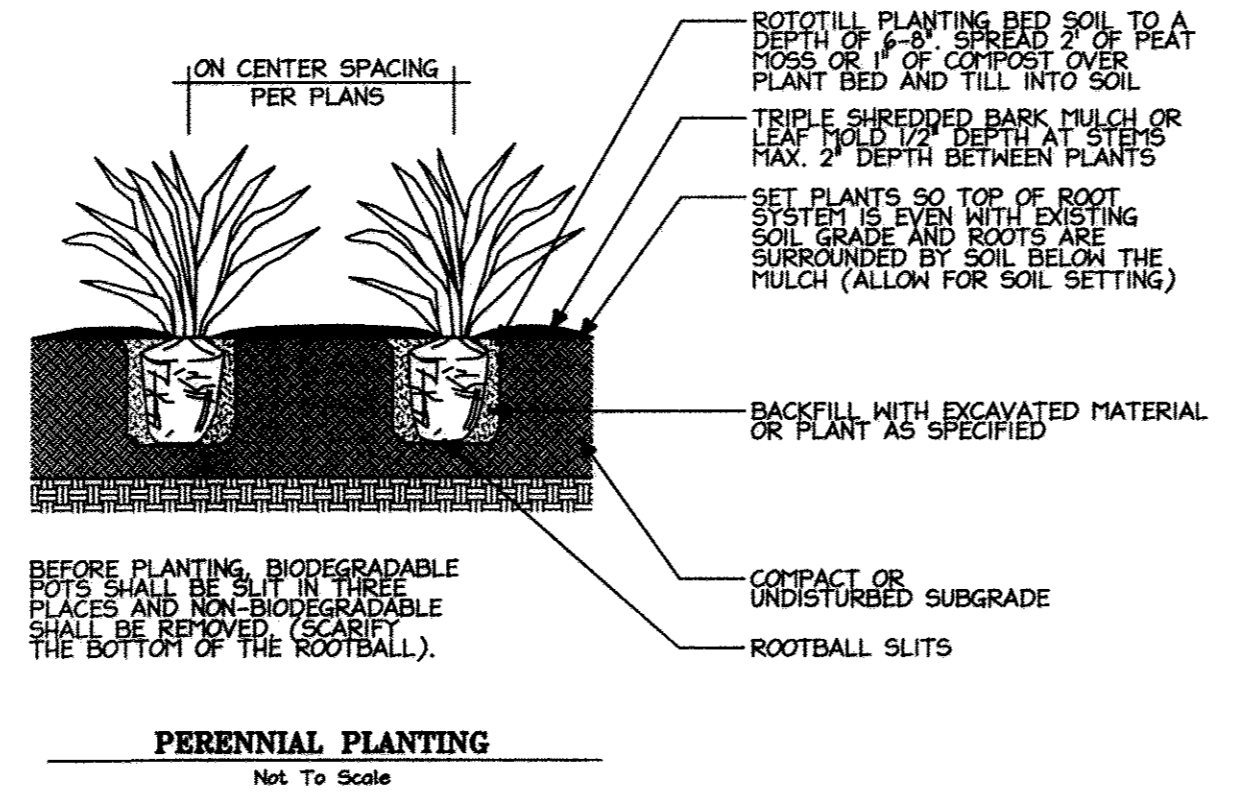
5 BIORETENTION AREAS  
1" = 100'

BIORETENTION PLANTING PLANT LIST:

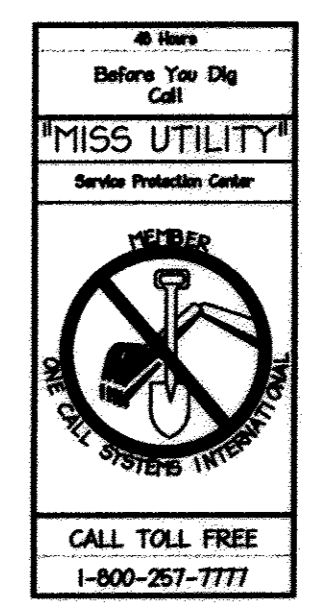
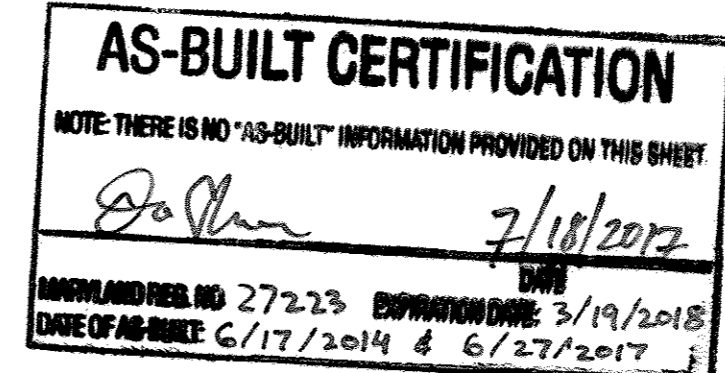
SYMBOL	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE	NOTES
HA	67	HYDRANGEA ARBORESCENS	ANNABELLE HYDRANGEA	3 GAL	3' O.C.
LB	10	LINDERA BENZOIN	SPLICEBUSH	3 GAL	6' O.C.
KL	96	KALMIA LATIFOLIA	MOUNTAIN LAUREL	3 GAL	3' O.C.
OC	216	OSHUNDA CINNAMOMEA	CINNAMON FERN	1 GAL	2' O.C.
AD	206	ASTER DIVARICATUS	WOOD'S ASTER	1 GAL	2' O.C.
AA	6	AMELANGCHIER ARBOREA	DOWNY SERVICEBERRY	1/2" - 2" caliper	3' O.C.
LC	288	LOBELIA CARINALIA	CARDINAL FLOWER	1 GAL	18' O.C.
CA	40	CLETHRA ALNIFOLIA	CLETHRA ALNIFOLIA 'RUBY SPICE' CLETHRA	3 GAL	6' O.C.
VA	29	VIBURNUM ACERFOLIUM	'MAPLELEAF' VIBURNUM	3 GAL	8' O.C.
PD	317	PHLOX DIVARICATA	WOODLAND PHLOX	QT.	18' O.C.



1 SHRUB BED PLANTING DETAIL  
NOT TO SCALE



PERENNIAL PLANTING  
Not To Scale



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Division of Land Development Date: 10/26/12  
 Chief, Development Engineering Division Date: 10/17/12  
 Director, Department of Planning and Zoning Date: 10/17/12

1 11/2012 REDLINE REVISIONS

**NORTH SIDE REDEVELOPMENT  
AT DORSEY RUN INDUSTRIAL CENTER**

OWNER / DEVELOPER  
 MONTEVIDEO REALTY 140 W. GERMANTOWN PIKE, SUITE 150  
 BUSINESS TRUST PLYMOUTH MEETING, PA 19462  
 C/O EXETER PROPERTY GROUP TEL: (410) 828-0756 FAX: (410) 828-5550

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ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELK RIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441

PLAT#	GRID#	ZONING	TAX MAP#	ELECT. DISTR.	CENSUS TRACT
L6457, F.258	16	M-2	43	1ST	6012.02

WATER CODE	SEWER CODE
400 (TG 550)	B01

TITLE:  
**LANDSCAPE PLAN FOR  
BIORETENTION AREAS**

DESIGN:	SCALE:	PROJECT:
NM1	1" = 50'	08067.008.07
DRAWN:	DATE:	
DAM1	SEPT 06 2012	
CHECKED:	APPROVED:	
ENJ	HRZ	

**33 of 45**

LINE	BEARING	DISTANCE
U1	N 331°45' E	42.64'
U2	N 56°33'02" H	10.98'
U3	S 33°03'40" H	20.00'
U4	S 54°40'18" H	10.98'
U5	N 331°45' E	46.91'
U6	N 44°26'57" E	293.52'
U7	N 331°45' E	393.93'
U8	N 56°40'18" H	9.83'
U9	N 331°45' E	20.00'
U10	S 54°40'18" H	4.83'
U11	N 331°45' E	27.55'
U12	N 331°45' E	28.20'
U13	S 54°40'18" H	228.80'
U14	N 331°45' E	86.41'
U15	N 54°40'18" H	10.00'
U16	N 331°45' E	20.00'
U17	S 54°40'18" H	10.00'
U18	N 331°45' E	11.28'
U19	S 54°40'18" H	20.00'
U20	S 33°03'40" H	248.77'
U21	S 56°54'20" E	308.24'
U22	N 33°03'40" H	56.02'
U23	S 56°54'20" E	66.34'
U24	S 33°03'40" H	20.00'
U25	N 56°54'20" H	46.02'
U26	S 33°03'40" H	56.02'
U27	N 56°54'20" H	386.74'
U28	S 33°03'40" H	76.05'
U29	N 33°03'40" H	24.29'
U30	S 33°03'40" H	20.00'
U31	N 56°42'50" H	24.29'
U32	S 32°24'41" H	36.18'
U33	S 31°25'11" H	20.00'
U34	S 33°03'40" H	171.82'
U35	S 1°42'50" H	44.07'
U36	S 33°03'40" H	114.78'
U37	S 0°11'48" H	61.63'
U38	S 33°03'40" H	102.40'
U39	S 70°11'45" H	36.47'
U40	N 56°40'18" H	9.14'
U41	N 331°45' E	26.00'
U42	N 56°40'18" H	20.00'
U43	S 33°03'40" H	379.16'
U44	N 56°38'55" H	20.00'
U45	N 331°45' E	404.10'
U46	N 70°11'45" H	28.20'
U47	S 54°40'18" H	28.82'
U48	N 70°11'45" H	19.92'
U49	N 331°45' E	86.76'
U50	N 0°11'48" H	61.63'
U51	N 331°45' E	20.00'
U52	S 54°40'18" H	31.62'
U53	N 331°45' E	35.23'
U54	N 1°42'50" H	44.07'
U55	N 331°45' E	114.63'
U56	N 56°40'18" H	41.82'
U57	N 331°45' E	19.00'
U58	N 44°26'57" E	293.52'
U59	N 331°45' E	71.62'
U60	S 54°40'18" H	221.29'
U61	S 33°03'40" H	31.62'
U62	S 56°54'20" E	65.47'
U63	N 331°45' E	20.00'
U64	N 11°56'20" H	145.27'
U65	N 44°26'57" E	293.52'
U66	N 331°45' E	71.62'
U67	N 70°11'45" H	11.72'
U68	S 54°40'18" H	221.29'
U69	S 33°03'40" H	31.62'
U70	S 56°54'20" E	65.47'
U71	N 331°45' E	65.47'
U72	S 33°03'40" H	46.26'
U73	S 31°2'48" H	212.27'
U74	S 33°03'40" H	50.33'
U75	N 56°40'18" H	307.53'
U76	N 1°56'20" H	11.64'

LINE	BEARING	DISTANCE
WB1	N 63°21'24" E	120.6761'
WB2	N 88°28'59" E	50.1350'
WB3	N 60°41'30" W	41.8124'
WB4	N 29°40'17" W	42.9818'
WB5	N 79°14'35" E	34.5886'
WB6	N 78°22'33" W	42.4134'
WB7	S 71°48'19" W	117.5947'
WB8	N 49°03'54" E	41.1143'
WB9	S 22°11'52" W	73.6908'
WB10	N 52°05'25" E	77.1109'
WB11	S 82°59'28" W	142.5666'
WB12	N 73°27'04" E	69.9142'
WB13	S 87°54'40" W	108.7075'
WB14	S 87°55'51" E	91.7859'
WB15	S 82°32'22" E	102.2065'
WB16	N 62°36'11" E	73.4951'
WB17	N 89°13'54" E	57.1275'
WB18	N 62°13'05" E	76.1404'
WB19	S 72°06'49" W	47.4884'
WB20	S 84°13'47" W	38.9945'
WB21	N 68°28'57" E	83.3764'
WB22	S 51°28'21" W	53.3512'
WB23	S 24°13'13" W	68.1423'
WB24	N 89°17'39" W	29.6858'
WB25	S 84°31'59" E	67.0277'
WB26	S 79°22'28" E	50.6842'
WB27	N 87°40'58" E	32.0878'
WB28	S 68°21'11" E	81.0784'
WB29	N 63°51'32" E	31.6440'
WB30	N 56°40'59" W	34.3780'
WB31	N 90°00'00" W	38.2483'
WB32	N 79°29'20" W	35.1241'
WB33	N 81°05'12" E	37.1104'
WB34	N 88°15'50" E	167.9896'
WB35	S 82°20'04" E	101.8508'
WB36	S 86°53'09" E	41.5882'
WB37	N 76°08'40" E	71.2287'
WB38	N 21°42'37" E	18.3518'
WB39	S 88°26'06" E	37.7203'
WB40	N 24°32'41" E	68.7748'
WB41	N 30°50'59" E	51.5859'
WB42	N 41°01'14" E	156.2024'
WB43	N 24°03'40" E	21.8811'
WB44	N 53°52'49" E	13.5932'
WB45	N 80°00'00" W	17.9791'
WB46	S 46°56'19" E	35.4259'
WB47	N 09°11'40" E	18.4941'
WB48	S 41°14'41" W	30.8900'
WB49	S 62°00'16" W	37.0616'
WB50	N 24°50'02" E	35.8563'
WB51	N 11°47'13" E	46.0886'
WB52	N 09°15'44" W	31.0883'
WB53	S 30°58'41" W	23.8177'
WB54	S 73°33'02" W	16.8188'
WB55	S 84°44'10" E	17.7136'
WB56	N 29°49'29" E	33.0487'
WB57	S 74°54'14" W	18.2118'
WB58	N 66°06'35" E	29.2826'
WB59	S 54°16'31" W	22.8252'
WB60	N 09°20'57" W	17.7580'
WB61	S 07°29'37" W	30.4710'
WB62	S 38°31'52" W	27.4199'
WB63	S 00°00'00" E	7.9313'
WB64	N 44°26'57" W	21.6195'
WB65	S 08°03'12" E	80.1499'

LINE	BEARING	DISTANCE
FPAB	N 26°32'54" H	160.64'
FPAA	N 74°58'12" E	20.30'
FPA1	S 06°34'42" E	34.07'
FPB	S 01°07'50" E	103.98'
FP2	S 64°40'09" H	116.42'
FP3	N 81°27'44" E	30.83'

AREA = 27,504 SQ.FT. OR 0.6314 AC.

LINE	BEARING	DISTANCE
FPAC	N 74°58'12" E	20.30'
FPAB	S 54°17'50" E	126.72'
FPAA	S 89°34'47" H	106.72'
FP1	S 83°10'34" H	70.17'
FP7	S 75°58'46" H	104.74'
FP6	N 88°19'31" H	57.39'
FP5	N 59°52'54" H	178.64'

AREA = 53,591 SQ.FT. OR 1.2302 AC.

LINE	BEARING	DISTANCE
FP2A	N 52°34'47" E	107.46'
FP2B	S 54°17'50" E	67.24'
FP21	S 50°00'47" H	39.15'
FP23	S 81°07'47" H	101.50'

AREA = 9,467 SQ.FT. OR 0.2155 AC.

LINE	BEARING	DISTANCE
FP24	N 74°58'12" E	64.42'
FP25	S 54°17'50" E	20.85'
FP26	S 75°58'46" H	21.07'
FP27	N 89°17'39" W	42.54'
FP28	S 83°39'27" E	26.71'
FP29	N 79°14'35" E	62.84'
FP30	S 82°04'07" E	52.54'
FP31	S 70°04'29" E	46.84'
FP32	S 84°16'09" E	84.79'
FP33	S 54°17'50" E	164.79'
FP34	S 34°34'05" H	87.67'
FP35	N 46°42'22" H	86.67'
FP36	N 57°24'34" H	108.65'
FP37	N 62°24'42" H	117.39'
FP38	N 82°33'29" H	86.19'
FP39	S 07°06'01" H	62.64'
FP40	N 85°50'01" H	34.67'

AREA = 26,780 SQ.FT. OR 0.6160 AC.

LINE	BEARING	DISTANCE
L15	N 74°41'06" E	20.30'
L16	S 70°47'01" E	6.56'
L17	S 16°56'01" E	46.06'
L18	S 6°29'01" N	34.00'
L19	N 05°08'28" H	47.89'

AREA = 1,691 SQ.FT. OR 0.0387 AC.

LINE	BEARING	DISTANCE
L20	N 09°10'51" E	56.76'
L21	S 76°19'46" E	38.06'
L22	N 03°22'52" E	44.81'
L23	N 05°00'51" E	67.91'
L24	S 05°08'28" H	42.00'
L25	S 09°29'02" H	178.87'
L26	N 05°52'50" H	87.26'

AREA = 9,372 SQ.FT. OR 0.2152 AC.

LINE	BEARING	DISTANCE
L27	N 34°10'46" E	184.24'
FP14	N 82°49'57" E	78.24'
FP13	N 41°50'53" E	46.71'
FP12	N 25°10'52" E	60.46'
L28	N 09°10'51" E	72.02'
L29	N 04°10'59" E	118.84'
L30	N 04°10'59" E	118.84'

AREA = 7,258 SQ.FT. OR 0.1666 AC.

LINE	BEARING	DISTANCE
L1	S 34°10'46" H	64.40'
L2	N 05°41'12" E	54.05'
FP16	N 84°19'21" E	36.73'

AREA = 963 SQ.FT. OR 0.0219 AC.

LINE	BEARING	DISTANCE
L3	S 34°10'46" H	40.00'
L4	N 26°32'54" H	100.00'
FP21	N 84°48'46" E	27.62'
FP20	N 73°03'54" E	34.38'
L5	S 49°25'51" E	51.60'
L6	S 00°32'50" E	55.05'

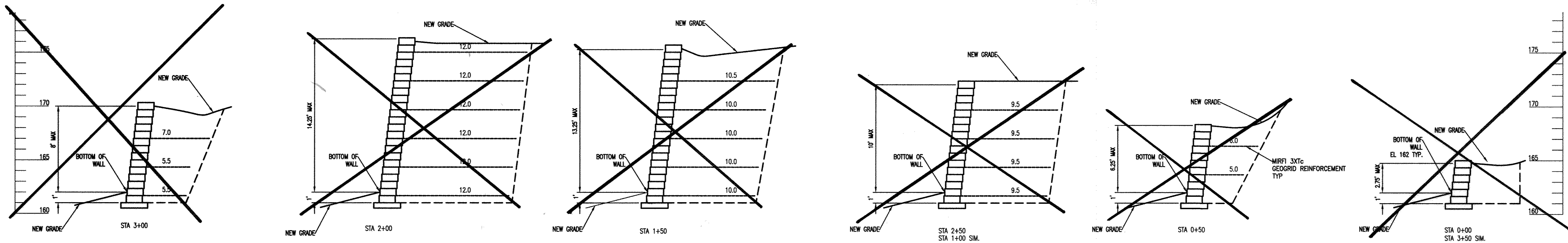
AREA = 4,191 SQ.FT. OR 0.095 AC.

LINE	BEARING	DISTANCE
ML1	S 95°52'21" E	5.98'
ML2	S 29°40'17" E	47.40'
ML3	N 74°14'35" E	52.45'
ML4	S 79°14'35" E	34.24'
ML5	N 78°22'33" W	42.98'
ML6	N 79°14'35" E	60.40'
ML7	N 49°03'54" E	52.45'
ML8	N 22°11'52" E	74.66'
ML9	N 52°05'25" E	51.71'
ML10	N 60°30'30" E	83.70'
ML11	N 60°30'30" E	62.53'
ML12	N 72°18'41" E	63.47'
ML13	S 82°24'21" E	54.51'
ML14	N 82°34'44" E	51.71'
ML15	S 82°34'44" E	51.71'
ML16	S 82°34'44" E	102.00'
ML17	S 82°34'44" E	46.21'
ML18	S 82°34'44" E	65.67'
ML19	S 82°34'44" E	35.34'
ML20	S 82°34'44" E	28.53'
ML21	S 82°34'44" E	27.64'
ML22	S 82°34'44" E	46.80'
ML23	S 82°34'44" E	14.74'
ML24	S 82°34'44" E	64.38'
ML25	S 82°34'44" E	32.55'
ML26	S 82°34'44" E	46.13'
ML27	S 82°34'44" E	24.08'
ML28	S 82°34'44" E	10.50'
ML29	S 82°34'44" E	11.27'
ML30	S 82°34'44" E	47.38'
ML31	S 82°34'44" E	17.58'
ML32	S 82°34'44" E	4.42'
ML33	S 82°34'44" E	11.16'
ML34	S 82°34'44" E	85.82'
ML35	S 82°34'44" E	60.00'
ML36	S 82°34'44" E	25.82'
ML37	S 82°34'44" E	300.42'

LINE	BEARING	DISTANCE	ELEVATION
FP22	N 35°34'47" E	10.22'	140.68'
FP23	N 87°07'47" E	10.50'	136.29'
FP24	N 55°02'47" E	34.15'	136.70'
FP24A	S 54°17'50" E	48.23'	X
FP25	N 64°08'09" H	5.41'	136.80'
FP26	N 70°04'29" H	46.84'	136.80'
FP27	N 82°04'07" H	52.54'	134.37'
FP28	S 76°19'46" H	42.54'	134.78'
FP29	N 83°39'27" H	26.71'	135.04'
FP30	N 75°31'57" H	21.07'	X
FP31	N 62°27'29" H	20.46'	133.50'
FP32	N 79°14'35" H	62.84'	133.81'
FP33	S 72°51'17" H	70.34'	133.50'
FP34	N 70°47'01" H	32.42'	134.42'
FP35	N 67°24'34" H	72.54'	134.78'
FP36	S 62°04'07" H	20.71'	134.78'
FP37	S 81°05'21" H	46.81'	136.56'
FP38	N 76°19'46" H	87.44'	136.32'
FP39	N 76°19'46" H	87.44'	136.32'

AREA = 75,405 SQ.FT. OR 1.7387 ACRES

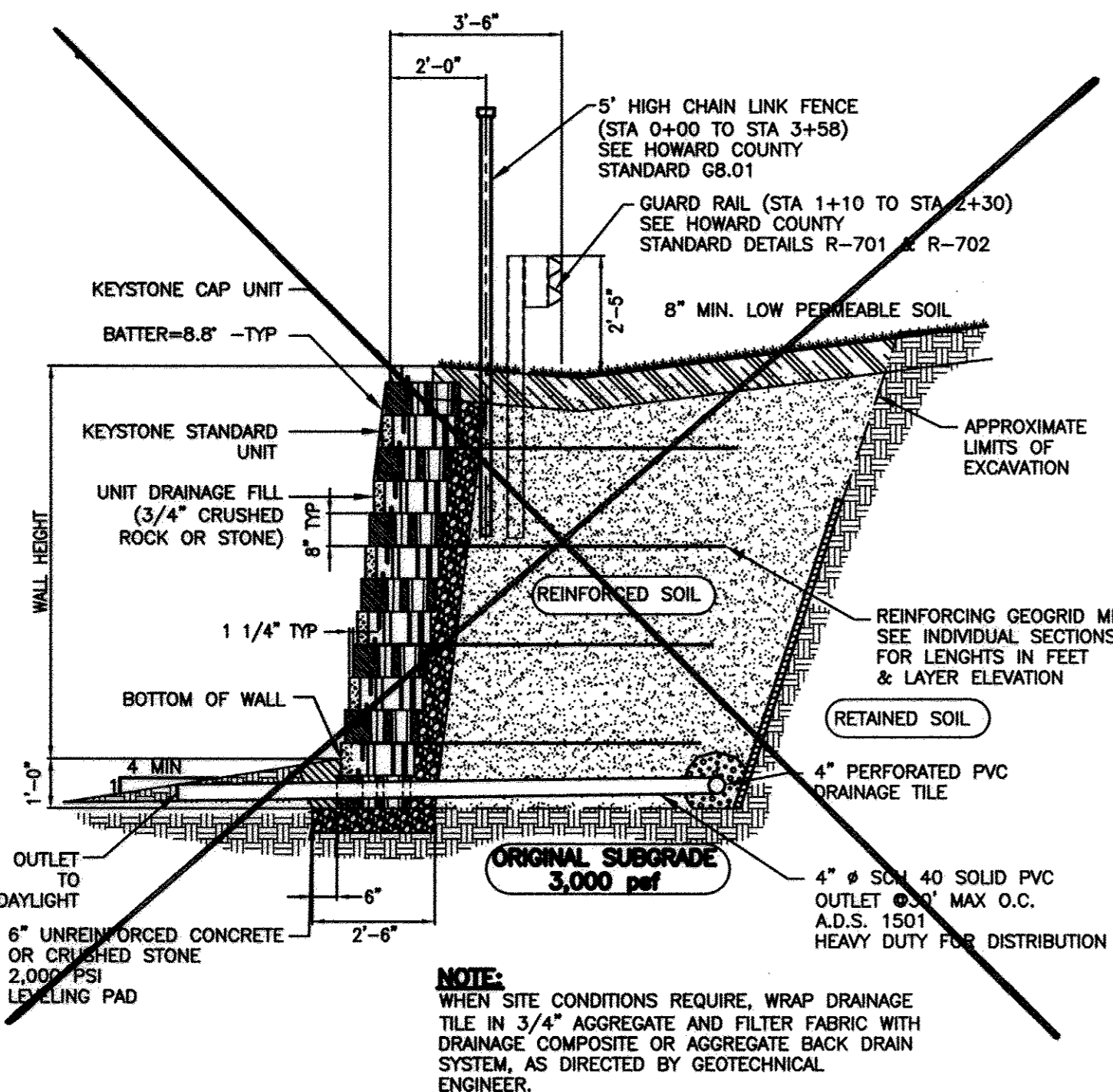
LINE	BEARING	DISTANCE	ELEVATION
FP1	N 82°17'44" E	30.83'	141.04'
FP2	N 64°40'09" E	116.42'	140.83'
FP3	N 07°10'18" H	113.98'	134.95'
FP4	N 05°41'12" H	34.02'	134.74'
FP5	N 74°55'12" E	140.11'	X
FP6	S 84°50'32" E	179.64'	136.91'
FP7	S 86°19'31" E	57.39'	136.69'
FP8	N 73°03'54" E	104.74'	136.70'
FP9	N 83°15'47" H	70.17'	136.24'
FP10	S 84°16'09" H	24.26'	136.54'
FP11	S 55°46'01" H	53.63'	134.91'
FP12	N 67°24'34" H	40.98	



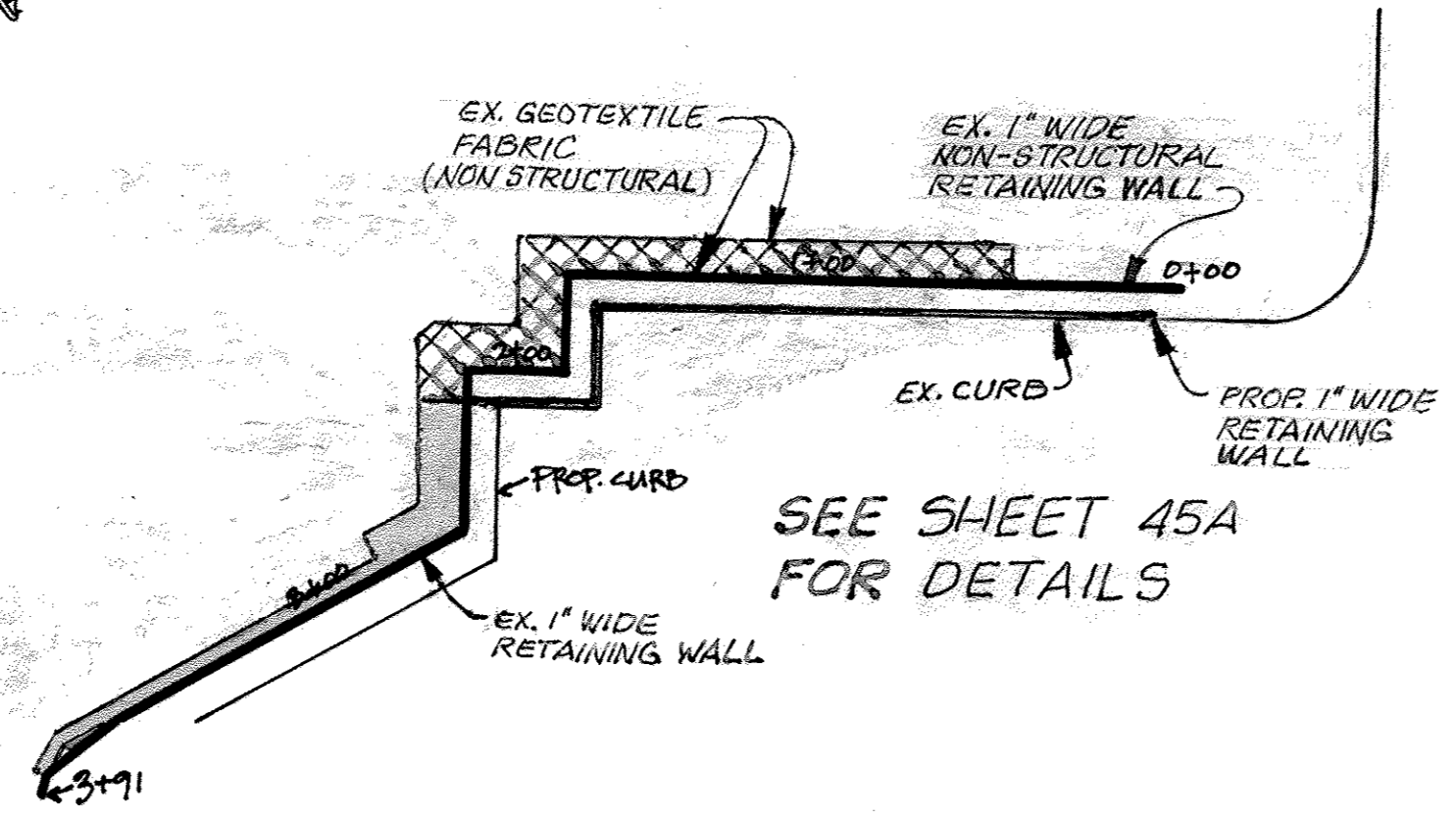
**RETAINING WALL SECTIONS**  
SCALE: 1"=5'

**GENERAL NOTES**

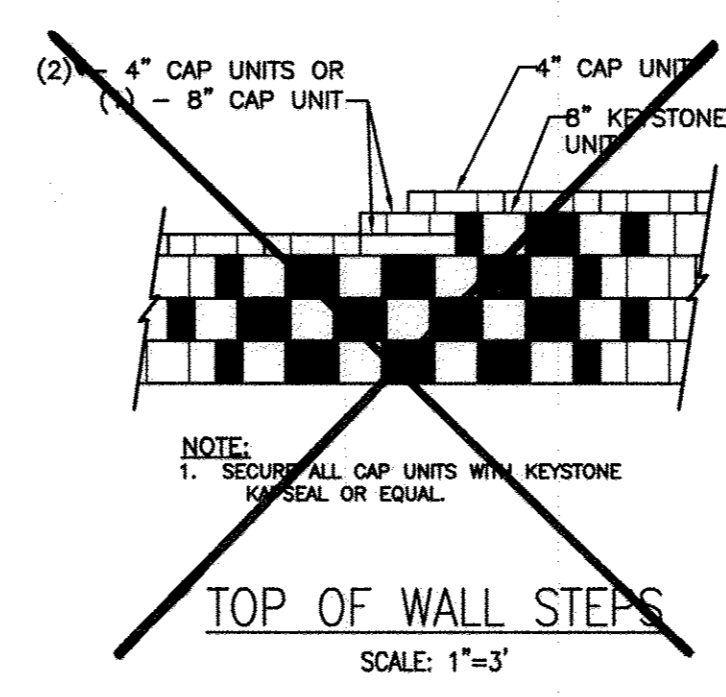
- GENERAL**
- ALL NOTES ON THE DRAWING SHALL BE ASSUMED TYPICAL UNLESS OTHERWISE SHOWN OR NOTED.
  - A GEOTECHNICAL REPORT OF SUBSURFACE EXPLORATION AND ENGINEERING ANALYSIS HAS BEEN PREPARED AND IS AVAILABLE FOR REVIEW.
  - RETAINING WALLS SHALL BE CONSTRUCTED UNDER THE OBSERVATION OF A REGISTERED PROFESSIONAL ENGINEER AND A (NICET, W ACEL OR EQUIVALENT) CERTIFIED SOILS TECHNICIAN.
  - THE REQUIRED BEARING PRESSURE BENEATH THE FOOTING OF THE WALL SHALL BE VERIFIED IN THE FIELD BY A CERTIFIED SOILS TECHNICIAN, TO BE A MINIMUM OF 3,000 psf. TESTING DOCUMENTATION MUST BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION. THE REQUIRED TEST PROCEDURE SHALL BE THE DYNAMIC CONE PENETROMETER TEST ASTM 1576-99A.
  - THE SUITABILITY OF FILL MATERIAL SHALL BE CONFIRMED BY THE ON-SITE SOILS TECHNICIAN. EACH EIGHT INCH LIFT MUST BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTO DENSITY AND THE TESTING REPORT SHALL BE MADE AVAILABLE TO THE HOWARD COUNTY INSPECTOR UPON COMPLETION OF CONSTRUCTION.
- COMPACTED FILL AND BACKFILLING**
- THE FILL MATERIAL SHALL BE CLEAN, COARSE-GRAINED, WELL GRADED, SAND WITH LITTLE OR NO FINES, IN ACCORDANCE WITH ASTM D2487, CLASSIFICATION SM. ON SITE MATERIAL MAY BE USED WITH THE CONCURRENCE OF THE GEOTECHNICAL ENGINEER.
  - THE FILL MATERIAL SHALL BE PLACED IN LAYERS, WHICH, BEFORE COMPACTION, SHALL NOT EXCEED 8". EACH LAYER SHALL BE SPREAD UNIFORMLY AND EVENLY AND SHALL BE THOROUGHLY MIXED DURING THE SPREAD TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER.
  - EACH LAYER OF THE FILL SHALL BE UNIFORMLY COMPACTED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557. THE GEOTECHNICAL ENGINEER SHALL OBSERVE AND TEST COMPACTED FILL.
  - WHERE BACKFILL OCCURS ON BOTH SIDES OF WALL, BACKFILL BOTH SIDES SIMULTANEOUSLY.
- SEGMENTAL RETAINING WALL SYSTEM**
- THE SEGMENTAL RETAINING WALL DESIGN SHOWN IS BASED ON KEYSTONE WALL SYSTEM.
  - THE SEGMENTAL RETAINING WALL SYSTEM, IF OTHER THAN KEYSTONE, SHALL BE DESIGNED IN ITS ENTIRETY IN ACCORDANCE WITH THE NCHA DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND. DESIGN ASSUMPTIONS, PRODUCT MANUAL, CALCULATIONS AND FIELD DETAILS SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.
  - SECTIONS AND COMPONENTS SHOWN ON DRAWING AND NOTED HEREIN ARE FOR ILLUSTRATIVE PURPOSES ONLY AND ARE THE MINIMUM TO BE USED. GEOGRID LAYERS SHALL NOT EXCEED 2 FEET.
  - BACKFILL SHALL BE PLACED AND SPREAD IN SUCH A MANNER AS TO ELIMINATE WRINKLES OR MOVEMENT OF THE GEOSYNTHETIC REINFORCEMENT AND THE SRW UNITS.
  - SRW CAPS ARE TO BE ADHERED TO UNDERLYING UNITS WITH A FLEXIBLE HIGH-STRENGTH CONCRETE ADHESIVE.
  - GUARD RAIL W. BEAM. GENERAL NOTES AND DETAILS. REF. HOWARD COUNTY STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. R-7.01 AND R-7.02 APPLY.



**TYPICAL SECTION-REINFORCED SEGMENTAL RETAINING WALL**  
SCALE: 1"=3'

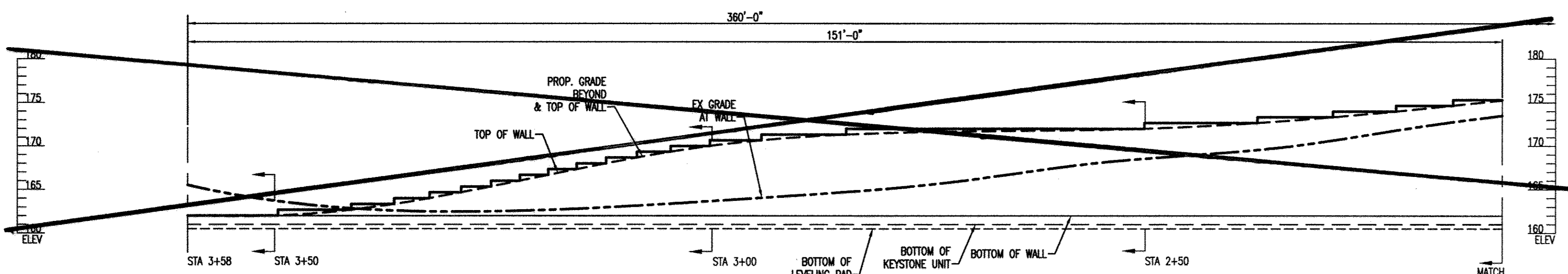


**RETAINING WALL PLAN**  
SCALE: 1"=50'

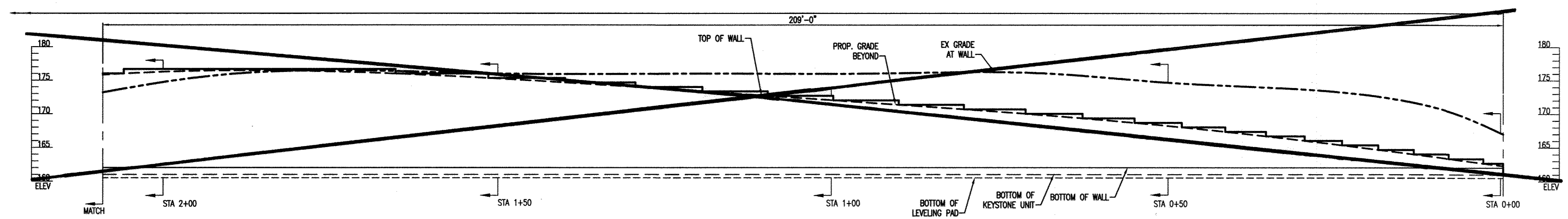


**TOP OF WALL STEPS**  
SCALE: 1"=3'

REFERENCE DRAWING:  
CHRISTOPHER CONSULTANTS  
DORSEY RUN INDUSTRIAL CENTER  
GRAVING AND DRAINAGE PLAN, MAY 2008



**RETAINING WALL ELEVATION STA 2+00 TO STA 3+50**  
SCALE: 1"=10'



**RETAINING WALL ELEVATION STA 0+00 TO STA 2+00**  
SCALE: 1"=10'

**AS-BUILT CERTIFICATION**  
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.  
*Shao Sha* 7/18/2017  
DATE OF AS-BUILT: 6/17/2014 & 6/27/2017



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development	10/31/12
Chief, Development Engineering Division	10/27/12
Director, Department of Planning and Zoning	11/4/12

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**  
OWNER / DEVELOPER  
MONTEVIDEO REALTY BUSINESS TRUST  
C/O EXETER PROPERTY GROUP  
140 N. GERMANTOWN PIKE, SUITE 150  
PLYMOUTH MEETING, PA 19462  
TEL. (610) 828-0756  
FAX (610) 828-5550

**christopher consultants**  
engineering · surveying · land planning  
christopher consultants, llc  
7172 columbia gateway drive suite 100 · columbia, md · 21046-2990  
410.872.8999 · mpls 301.981.0148 · fax 410.872.8999

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELK RIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME DORSEY RUN INDUSTRIAL CENTER	SECTION/AREA 43	LOT/PARCEL# 572,346,97,344,441
PLAT# L6457, F.258	GRID# M-2	ELECT. DISTR. 1ST
CENSUS TRACT 6012.02	TAX MAP# 400 (TG 550)	SEWER CODE B01

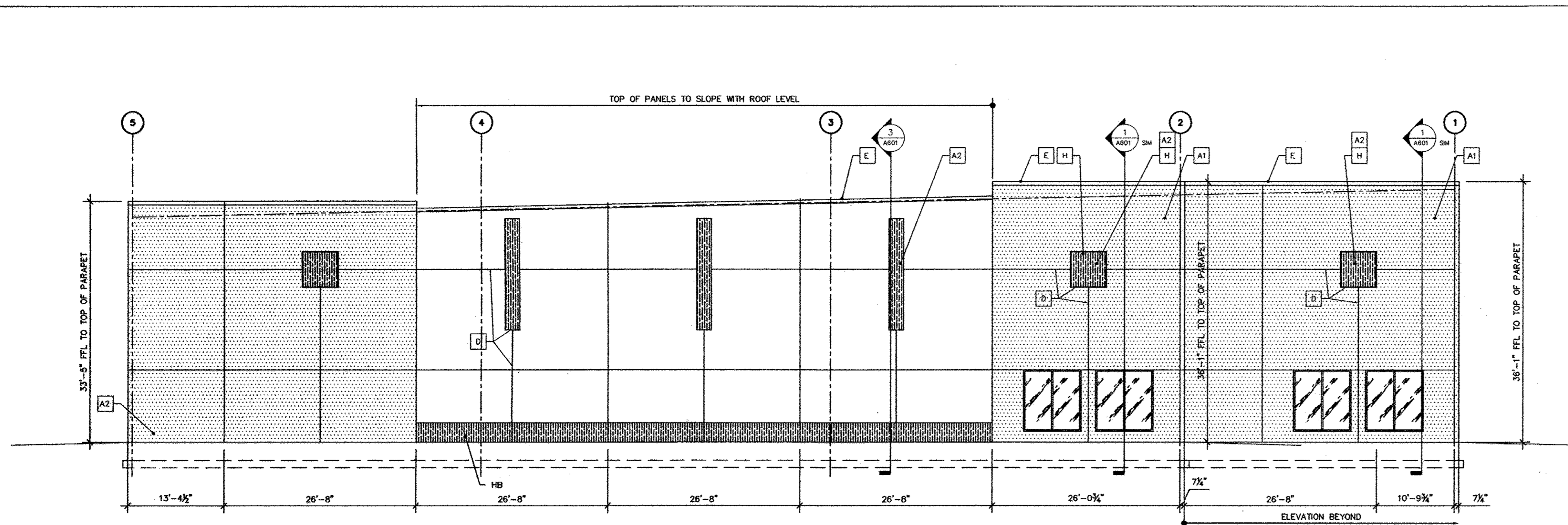
TITLE: **SEGMENTAL RETAINING WALL SYSTEM**

DESIGN: N1	SCALE: AS SHOWN	PROJECT: 03067.008.07
DRAWN: DAM	DATE: JULY 2012	
CHECKED: ENJ	APPROVED: YLL	<b>35 OF 45</b>

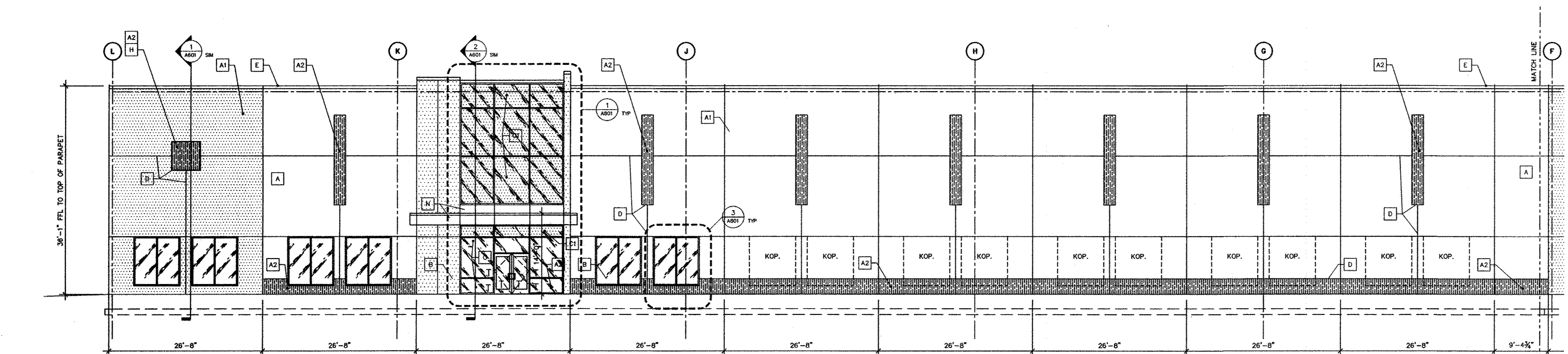
MDC-855



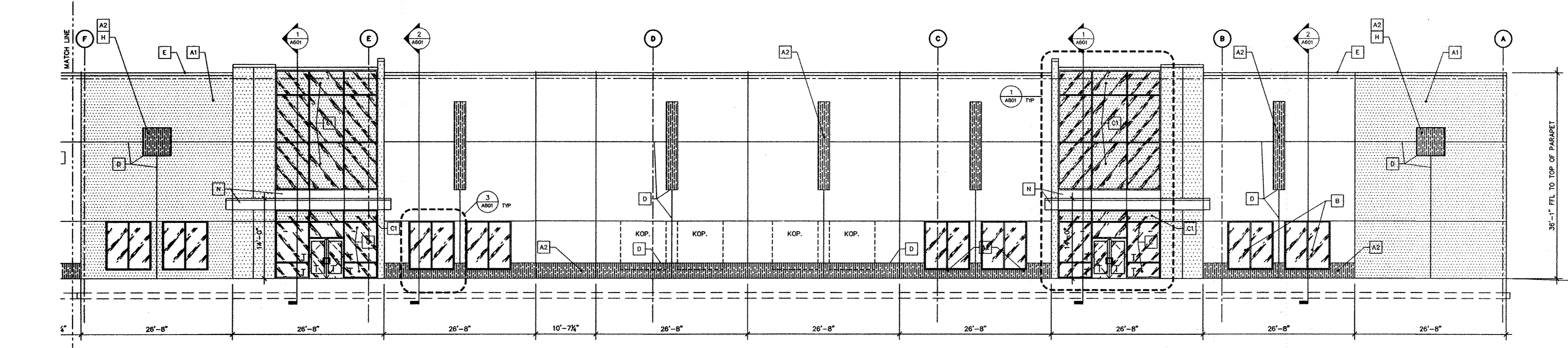




2 NORTH ELEVATION  
1/8" = 1'-0"



1a WEST ELEVATION PARTIAL  
1/8" = 1'-0"



1 WEST ELEVATION PARTIAL  
1/8" = 1'-0"

EXT. FINISH MATERIAL KEY:

A	AREA OF CONCRETE TILT-UP PANEL WITH SMOOTH FINISH ELASTOMERIC PAINT, COLOR TBD BY ARCHITECT
A1	SAME AS "A" BUT, RENDERED IN ACCENT COLOR ELASTOMERIC PAINT, COLOR TBD BY ARCHITECT
A2	SAME AS "A" BUT, CORRUGATED FORM TO CREATE TEXTURED FINISH W/ ELASTOMERIC PAINT, COLOR TO BE SELECTED BY ARCHITECT
B	THERMALLY BROKEN ALUM. WINDOW FRAMING SYSTEM, WITH 1" INSUL. GLAZING, FRAMING TO BE MED. BRONZE ANODIZED, GLAZING TO BE BRONZE TINTED WITH A .47 U VALUE AND .50 SHGC.
C	THERMALLY BROKEN ALUM. CURTAINWALL ENTRANCE SYSTEM, FRAME AND GLAZING TINT TO MATCH "B". DOORS TO BE "A" SINGLE PANE GLAZING TO MATCH "B".
C1	SAME AS "B" EXCEPT SPANDREL GLASS.
D	3/4" x 3/4" V GROOVE
E	ALUMINUM COPING, COLOR TO BE SELECTED BY ARCHITECT
F	LOAD GAUGE ALUMINUM BOX GUTTER, COLOR TO MATCH "E"
G	RAIN WATER DOWNSPOUT TO GRADE, COLOR TO MATCH "E"
H	KNOCKOUT PANEL (KOP)
J	30,000 LB DOCK LEVELER BY 'SERCO'
K	DOCK BUMPER, BY 'SERCO'
L	DOCK SEALS, TBD BY OWNER
M	PRE-MANUFACTURED METAL CANOPY TO MATCH EXISTING BUILDINGS
N	METAL PANEL FASCIA AND SOFFIT - ROUT AND RETURN PANELS
T	TEMPERED GLASS WHERE INDICATED

**Environetics**  
Environmental Design, Inc.  
1417 29<sup>th</sup> Ave., Suite 1000  
Pikesville, MD 21076  
Tel: 410.222.8822  
Fax: 410.222.8823  
www.environmentaldesign.com  
Architect - William Lingo -  
Civil Engineer

CLIENT:  
**EXETER PROPERTY GROUP**  
7595 Montevideo Road, Suite 120  
Jensop, MD 20794  
410-799-3393

CONTRACT:

**AS-BUILT CERTIFICATION**  
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.  
*David Shon* 7/18/2017  
DATE  
MARYLAND REG. NO. 27223 EXPIRATION DATE: 3/19/2018  
DATE OF AS-BUILT: 6/17/2014 & 6/27/2017



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Victor J. Duma* 10/31/12  
Chief, Division of Land Development Date  
*William J. Williams* 10/7/12  
Chief, Development Engineering Division 4 Date  
*Mark L. Long* 11/6/12  
Director, Department of Planning and Zoning Date

1 11/2012 REDLINE REVISIONS

**NORTH SIDE REDEVELOPMENT  
AT DORSEY RUN INDUSTRIAL CENTER**

OWNER / DEVELOPER  
MONTEVIDEO REALTY 140 M. GERMANTOWN PIKE, SUITE 150  
BUSINESS TRUST FLYCATCH MEETING, PA 19462  
C/O EXETER PROPERTY GROUP TEL. (610) 828-0756  
FAX (610) 828-5550

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7172 columbia gateway drive (suite 100) columbia, md. 21046-2990  
410.322.8500 · metro 301.981.0146 · fax 410.322.8993

ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441
PLAT# L6457, F.258	GRID# 16 ZONING M-2 TAX MAP# 43 ELECT. DISTR. 1ST CENSUS TRACT 6012.02	
WATER CODE 400 (TG 550)	SEWER CODE B01	

TITLE:  
**ARCHITECTURE**

DESIGN: NM SCALE: AS SHOWN PROJECT: 03067.008.07  
DRAWN: DAM DATE: JULY 2012  
CHECKED: ENJ APPROVED: YLL **37 OF 45**

**Dorsey Commerce Center  
Building 5**  
7595 Montevideo Drive  
Jensop, Maryland 20794  
CLIENT: Exeter Property Group

DESIGN DELIVERABLE: ISSUED FOR PERMIT  
ISSUE DATE: 06/29/2012

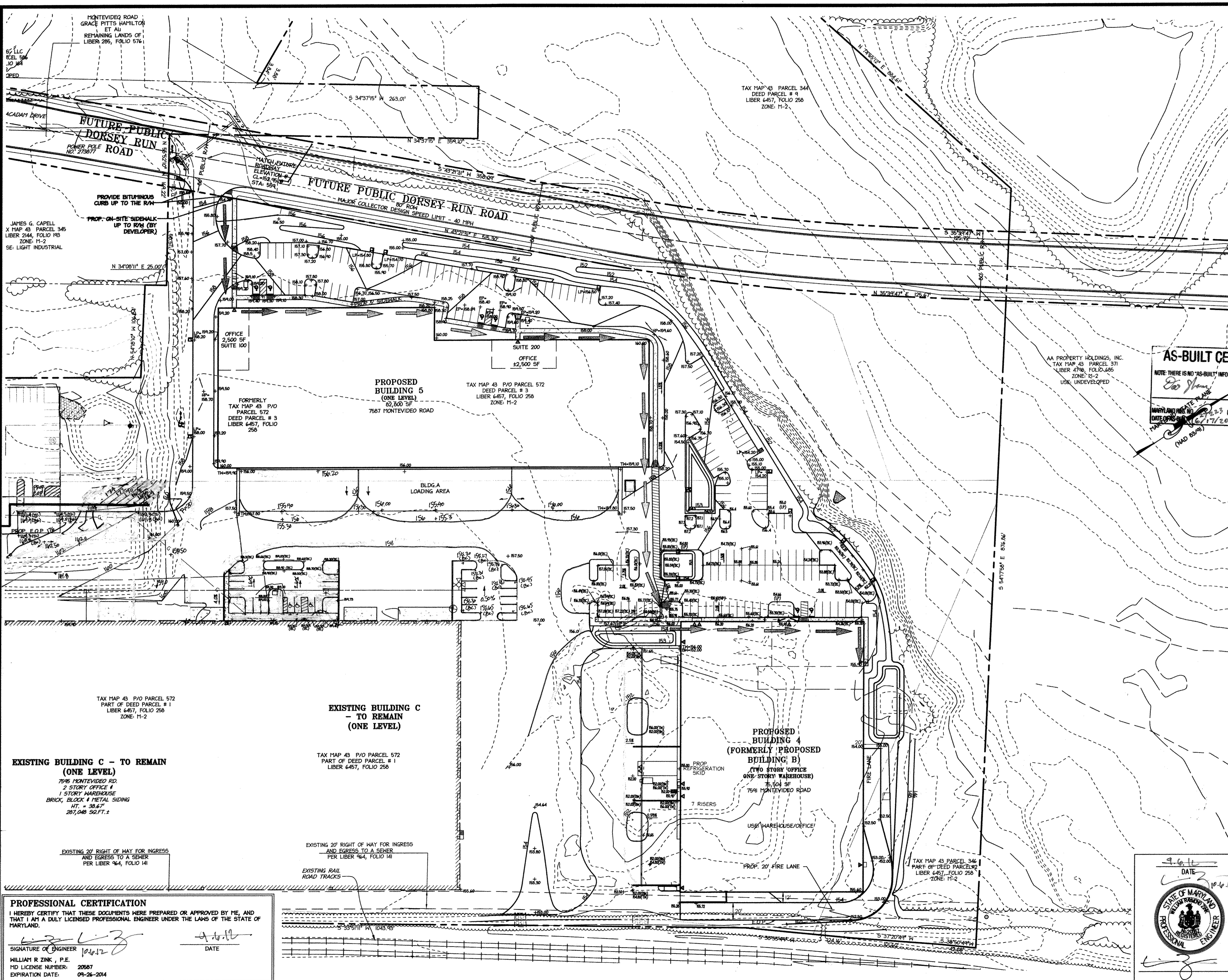
PROJECT NUMBER: 12-102

DRAWN BY: GJS  
CHECKED BY: GJS

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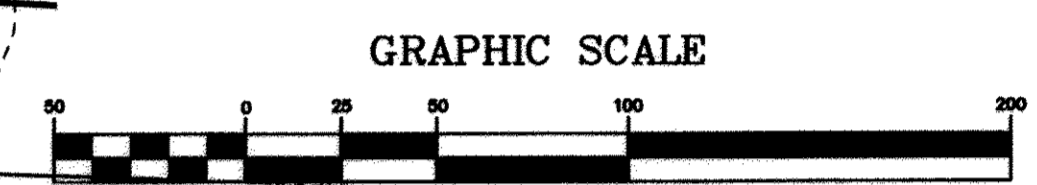
**BUILDING ELEVATIONS  
NORTH & WEST**

SHEET NUMBER:  
**A202**



**LEGEND**

[Symbol]	PROPOSED CURBLINE
[Symbol]	PROPOSED BUILDINGS
[Symbol]	PROPERTY LINE
[Symbol]	ADJACENT PROPERTY LINE
[Symbol]	EXISTING OVERHEAD UTILITY
[Symbol]	FENCE
[Symbol]	EXISTING CURBLINE
[Symbol]	EXISTING BUILDINGS
[Symbol]	RAILROAD DITCH
[Symbol]	PROPOSED TREELINE
[Symbol]	EXISTING TREELINE
[Symbol]	EXISTING SIGN
[Symbol]	RAILROAD TRACKS
[Symbol]	PROPOSED LIGHT
[Symbol]	ADA ROUTE



**AS-BUILT CERTIFICATION**

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

DATE: 7/18/2017

EXPIRATION DATE: 3/19/2018

DATE OF REVISION: 6/17/2014 & 6/27/2017

(140 85-94)



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development: 10/31/12

Chief, Development Engineering Division: 10/7/12

Director, Department of Planning and Zoning: 10/6/12

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

**OWNER / DEVELOPER**

MONTEVIDEO REALTY BUSINESS TRUST  
C/O EXETER PROPERTY GROUP

140 M. GERMANTOWN PIKE, SUITE 150  
PLYMOUTH MEETING, PA 19462  
TEL: (410) 828-0756  
FAX: (410) 828-5550

**christopher consultants**  
engineering · surveying · land planning  
christopher consultants, inc.  
7172 columbia gateway drive (suite 100) · columbia, md. 21046-2990  
410.872.8800 · mto 301.861.0148 · fax 410.872.8883

**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKCRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKCRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKCRIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#			
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441			
PLAT#	GRID#	ZONING	TAX MAP#	ELECT. DISTR.	CENSUS TRACT
L6457, F.258	16	M-2	43	151	6012.02
WATER CODE	400 (TG 550)	SEWER CODE	801		

**TITLE: ADA ROUTE PLAN**

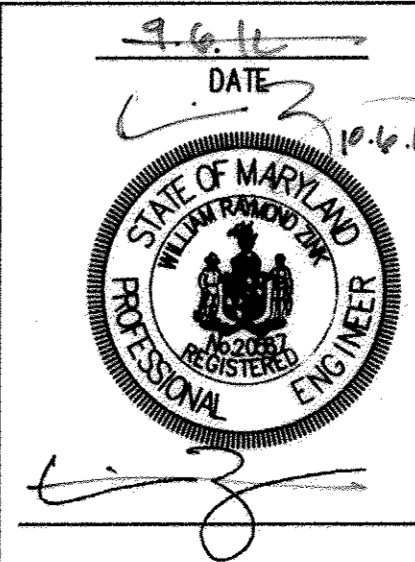
DESIGN: NM1	SCALE: 1" = 50'	PROJECT: 03067.008.07
DRAWN: DAM	DATE: SEPT 06 2012	
CHECKED: ENJ	APPROVED: HRZ	<b>38 of 45</b>

**PROFESSIONAL CERTIFICATION**

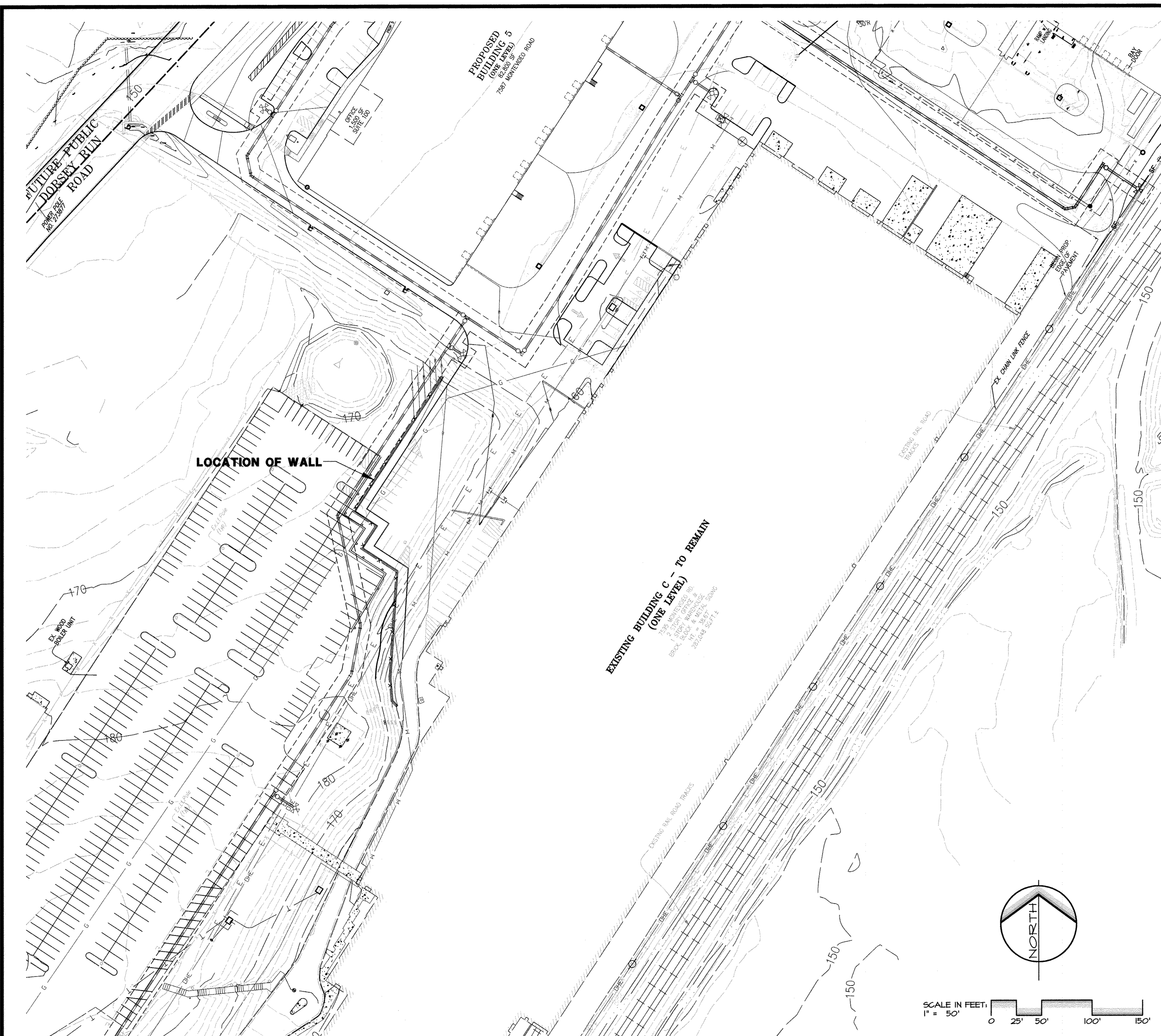
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

SIGNATURE OF ENGINEER: [Signature]  
DATE: 10/12/12

WILLIAM R ZINK, P.E.  
MD LICENSE NUMBER: 20587  
EXPIRATION DATE: 09-26-2014



MDC-855

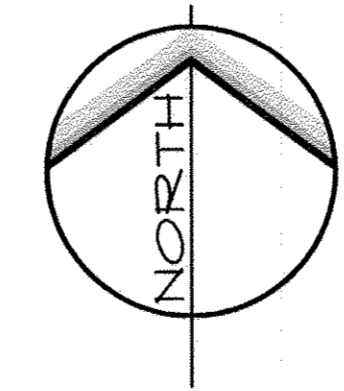


**OVERALL PLAN**  
SCALE: 1" = 50'

**NOTES:**

1. THESE PLANS SHALL ONLY BE USED FOR THE CONSTRUCTION OF THE SEGMENTAL RETAINING WALL. THE CONTRACTOR SHALL VERIFY ALL GRADES, UTILITIES AND AMENITIES AND REPORT ANY DISCREPANCIES TO ELA GROUP, INC. IMMEDIATELY.
2. AUTOCAD FILES WERE PROVIDED BY: CHRISTOPHER CONSULTANTS, LTD. 7172 COLUMBIA GATEWAY DRIVE, SUITE 100 COLUMBIA, MARYLAND 21046
3. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE WALL WITH ELA GROUP, INC., CHRISTOPHER CONSULTANTS, LTD., THE GENERAL CONTRACTOR AND THE PROJECT OWNER PRIOR TO CONSTRUCTION.
4. ALL WORK SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF A GEOTECHNICAL ENGINEER. ONLY COMPETENT CONTRACTORS WHO HAVE SIGNIFICANT EXPERIENCE AND HAVE DEMONSTRATED EXPERTISE IN SEGMENTAL RETAINING WALL CONSTRUCTION SHOULD CONSTRUCT THE WALL. THE CONTRACTOR IS REQUIRED TO PROVIDE CERTIFICATION FROM A LICENSED GEOTECHNICAL ENGINEER STATING THAT THE WALL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THIS PLAN.
5. SLOPE, SHORE, BRACE, UNDERPIN OR OTHERWISE PROTECT ALL EXCAVATIONS AND SURROUNDING STRUCTURES IN ACCORDANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND OTHER STATE OR LOCAL REGULATIONS AS APPLICABLE.
6. CARE SHOULD BE TAKEN TO PROTECT ALL EXCAVATED AREAS FROM WATER PRIOR TO ESTABLISHING FINISHED GRADES. POSITIVE DRAINAGE AWAY FROM THE WORK AREA SHOULD BE MAINTAINED AT ALL TIMES. EROSION AND SEDIMENT CONTROLS ARE RECOMMENDED TO MANAGE SEDIMENT-LADEN RUNOFF.
7. IF GROUNDWATER IS ENCOUNTERED AT ANYTIME DURING CONSTRUCTION, THE EARTHWORK CONTRACTOR SHALL REMOVE THE WATER FROM THE WORK AREA AND CONTACT ELA GROUP, INC. AND THE GEOTECHNICAL ENGINEER IMMEDIATELY.
8. EXERCISE CARE DURING GRADING OPERATIONS TO PRESERVE THE COMPETENCY OF THE SUBGRADE SOILS. MINIMIZE CONSTRUCTION TRAFFIC ON PREPARED SUBGRADES.
9. STORMWATER SHALL NEITHER BE ENCOURAGED NOR ALLOWED TO INFILTRATE/SATURATE THE REINFORCING ZONE OF ALL WALLS WITHIN THESE SEGMENTAL RETAINING WALL PLANS.
10. THE CONTRACTOR TO MAINTAIN PROPER EMBEDMENT (TOE OF WALL BELOW GRADE) FOR THESE SEGMENTAL RETAINING WALLS.
11. KEYSTONE COMPAC III BLOCK AND STRATA GRID 56200 WERE UTILIZED IN THE DESIGN OF THE WALL. IF A CHANGE IN BLOCK AND GEOSYNTHETIC REINFORCEMENT IS REQUIRED, ELA GROUP, INC. SHALL BE CONTACTED IMMEDIATELY TO VERIFY THAT THE CHANGE IN BLOCK AND REINFORCEMENT IS ACCEPTABLE.

**AS-BUILT CERTIFICATION**  
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.  
*Di. Shen* 7/18/2017  
DATE  
MARYLAND REG. NO. 27223 EXPIRATION DATE: 3/19/2019  
DATE OF AS-BUILT: 6/17/2014 & 6/27/2017



SCALE IN FEET:  
1" = 50'  
0 25' 50' 100' 150'

**RETAINING WALL ENGINEER**



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*V. J. Shalinski* 6/27/13  
Date  
Chief, Division of Land Development  
*John DeMunnich* 10/3/13  
Date  
Chief, Development Engineering Division  
*Paul P. Guggisberg* 6/7/13  
Date  
Director, Department of Planning and Zoning

2	03/2013	RETAINING WALL, STORM DRAIN & SEWER
1	11/2012	REDLINE REVISIONS

**REVISED NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

**OWNER / DEVELOPER**  
MONTEVIDEO REALTY BUSINESS TRUST  
C/O EXETER PROPERTY GROUP  
140 N. GERMANTOWN PIKE, SUITE 150  
PLYMOUTH MEETINGS, PA 19462  
TEL: (610) 828-0756  
FAX: (610) 828-5550



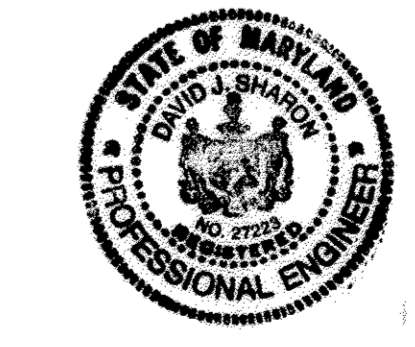
**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELK RIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

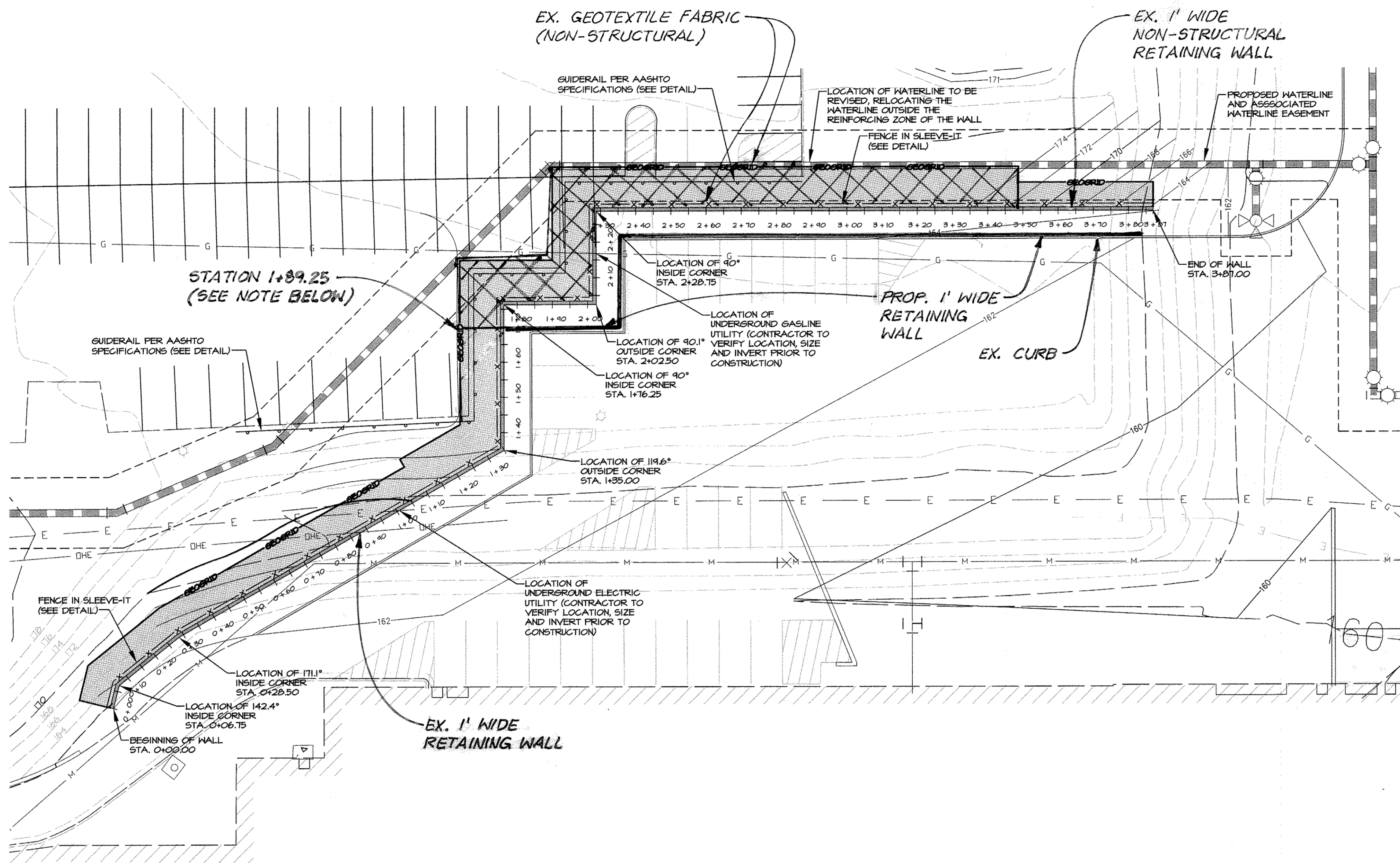
SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#			
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441			
PLAT#	GRID#	ZONING	TAX MAP#	ELECT. DISTR.	GENUS TRACT
L-6457, F-258	16	M-2	43	1ST	6012.02
WATER CODE	SEWER CODE				
400 (TG 550)	801				

TITLE:



5/7/13  
DATE  
*Di. Shen*  
Professional Engineer

DESIGN: ENJ	SCALE:	PROJECT: 03061008/01
DRAWN: DAM	DATE: SEPT 26 2012	
CHECKED: ENJ	APPROVED: HRZ	<b>39 OF 45</b>



WALL LAYOUT PLAN  
SCALE: 1" = 20'

NOTE: THE NON-STRUCTURAL RETAINING WALL AND GEOGRID BEGINS AT STATION 1+89.25

RETAINING WALL ENGINEER



APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>Victor E. Decker</i>	Date	6/07/13
Chief, Division of Land Development		
<i>William J. ...</i>	Date	6/13/13
Chief, Development Engineering Division		
<i>Mark P. ...</i>	Date	6/13/13
Director, Department of Planning and Zoning		

4	4/15	RETAINING WALL + MAL STUD
2	03/2013	RETAINING WALL, STORM DRAIN & SEWER
1	11/2012	REDLINE REVISIONS

REVISED  
NORTH SIDE REDEVELOPMENT  
AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST C/O EXETER PROPERTY GROUP	140 W. GERMANTOWN PIKE, SUITE 150 PLYMOUTH MEETING, PA 19462 TEL: (610) 828-0766 FAX: (610) 828-5550
--	---



ADDRESS CHART

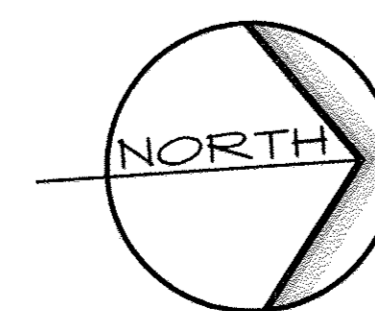
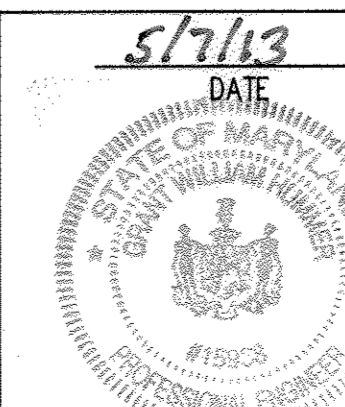
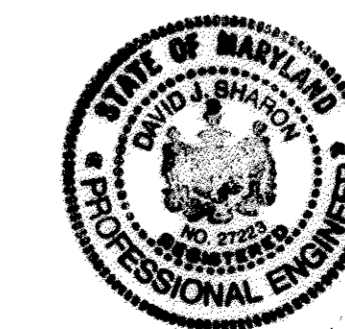
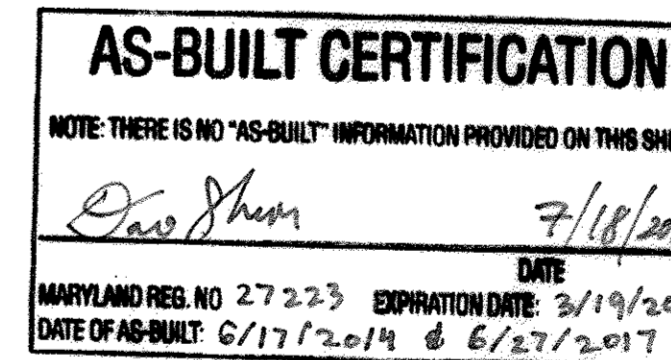
PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

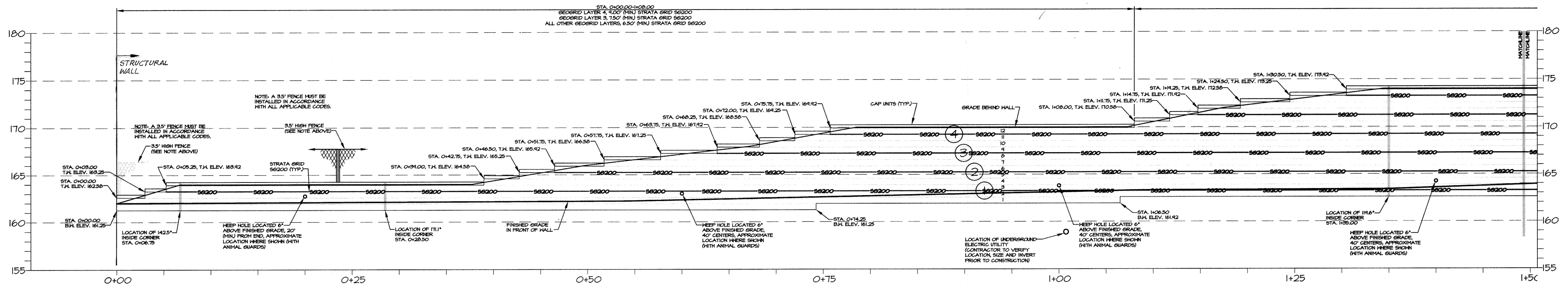
SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,37,344,441
PLAT# L6457, F.258	GRID# 16 ZONING M-2 TAX MAP# 43 ELECT. DISTR. 1ST	CENSUS TRACT 8012.02
WATER CODE 400 (TG 550)	SEWER CODE 801	

TITLE:

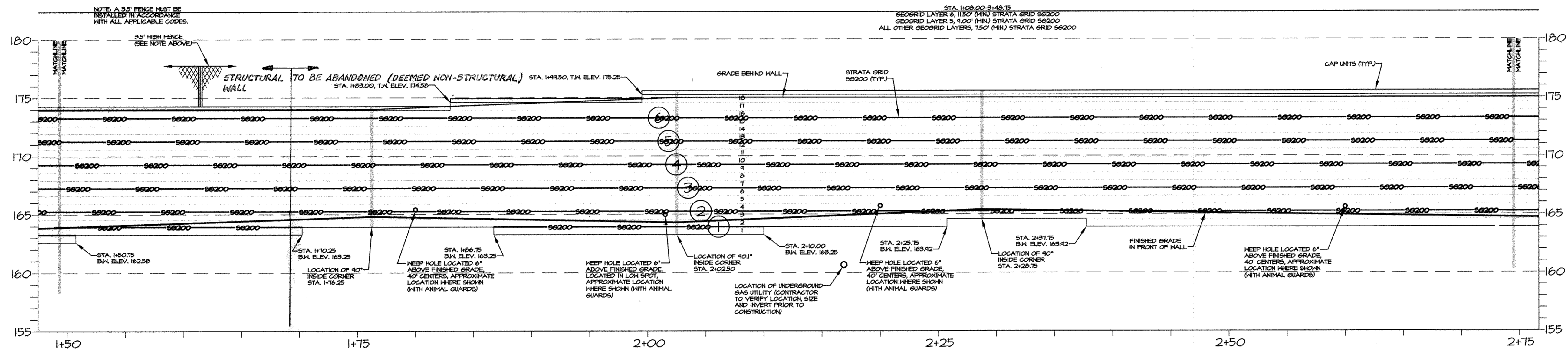
DESIGN: ENJ	SCALE:	PROJECT: 03061008.01
DRAWN: DAM	DATE: SEPT 26 2012	
CHECKED: ENJ	APPROVED: HRZ	40 OF 45



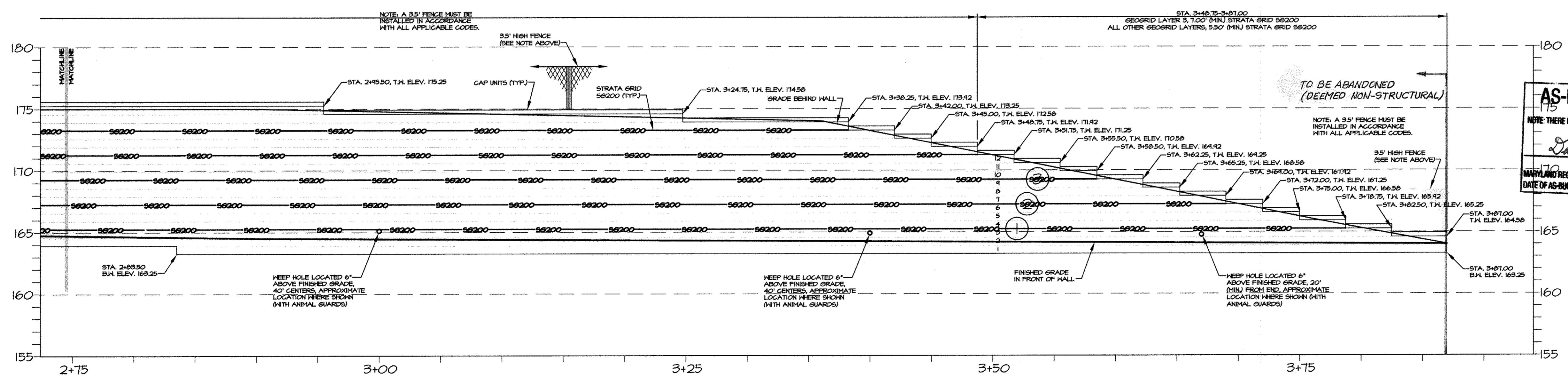
SCALE IN FEET:  
1" = 20'



WALL ELEVATION  
SCALE: 1/5" = 1'-0"



WALL ELEVATION  
SCALE: 1/5" = 1'-0"



WALL ELEVATION  
SCALE: 1/5" = 1'-0"

NOTE: EX. WALL TO BE STRUCTURAL FROM 0+00 TO 1+69.25 AND NON-STRUCTURAL FROM 1+69.25 TO 3+87

RETAINING WALL ENGINEER

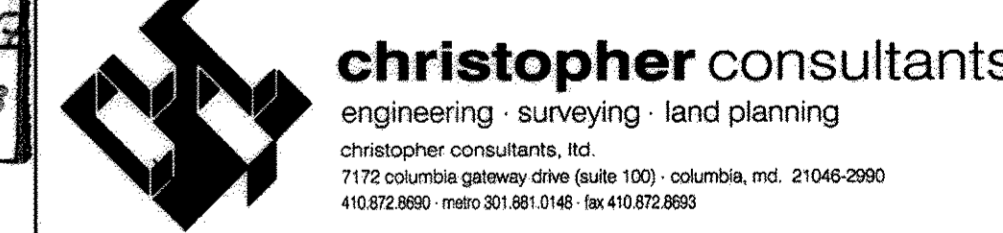


APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Division of Land Development: *6/17/13*  
 Chief, Development Engineering Division: *6/17/13*  
 Director, Department of Planning and Zoning: *6/17/13*

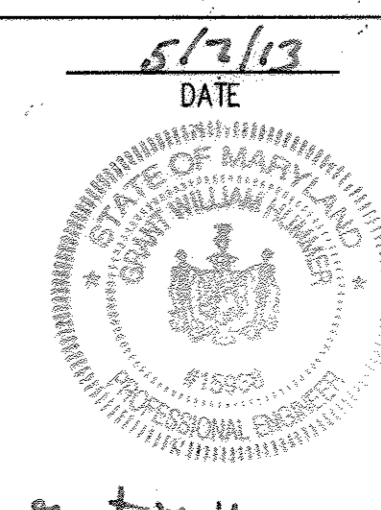
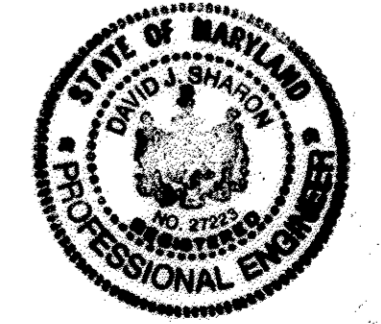
4	4/15	RETAINING WALL + W/L 3TUB
2	03/2013	RETAINING WALL LOCATIONS
1	11/2012	REDLINE REVISIONS

REVISED  
NORTH SIDE REDEVELOPMENT  
AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER  
 MONTEVIDEO REALTY BUSINESS TRUST  
 C/O EXETER PROPERTY GROUP  
 140 W. GERMANTOWN PIKE, SUITE 150  
 FLYMOUTH MEETING, PA 19462  
 TEL (610) 828-0754  
 FAX (610) 828-5550



AS-BUILT CERTIFICATION  
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.  
 Date: 7/18/2013  
 Maryland Reg. No. 27223  
 Expiration Date: 3/19/2018  
 Date of AS-Built: 6/17/2014 & 6/27/2017



ADDRESS CHART

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELK RIDGE, MD	EX BLDG C
1	7587 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 4

PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441

PLAT#	GRID#	ZONING	TAX MAP#	ELECT. DIST.	CENSUS TRACT
L6457, F.258	16	M-2	43	1ST	6012.02

WATER CODE: 400 (TG 550) SEWER CODE: B01

TITLE:

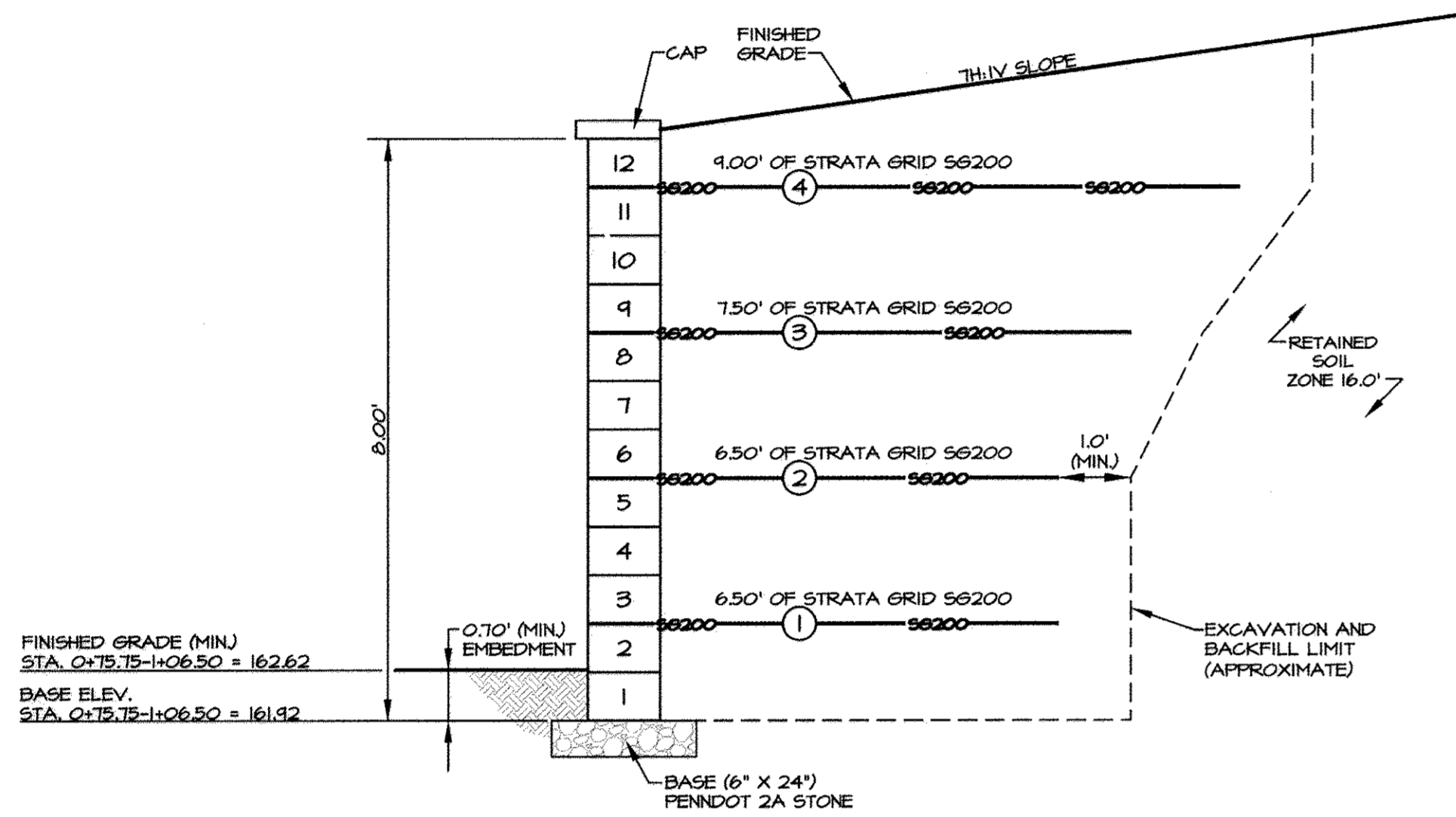
DESIGN: ENJ	SCALE:	PROJECT: 0306T.000.01
DRAWN: DAM	DATE: SEPT 26 2012	
CHECKED: ENJ	APPROVED: HRZ	41 OF 45

ALL SOILS MUST MEET THE BELOW LISTED CRITERIA:

1. INTERNAL ANGLE OF FRICTION  $\geq 28^\circ$  (MIN) (REINFORCING SOIL)
2. INTERNAL ANGLE OF FRICTION  $\geq 28^\circ$  (RETAINED SOIL)
3. CALCULATED BEARING PRESSURE  $\geq 2811$  PSF
4. UNIT WEIGHT OF SOIL  $\geq 120$  PCF (MIN) (REINFORCING SOIL)
5. UNIT WEIGHT OF SOIL  $\leq 120$  PCF (MAX) (RETAINED SOIL)

BACK FILL, DRAIN PIPE, KEEP HOLE AND FENCE OMITTED FOR CLARITY SEE ADDITIONAL DETAILS AND TYPICAL WALL SECTION (BACK FILL, COMPONENT MATERIALS AND NOTES)

A LICENSED GEOTECHNICAL ENGINEER SHALL VERIFY ALL SOIL PARAMETERS PRIOR TO CONSTRUCTION.



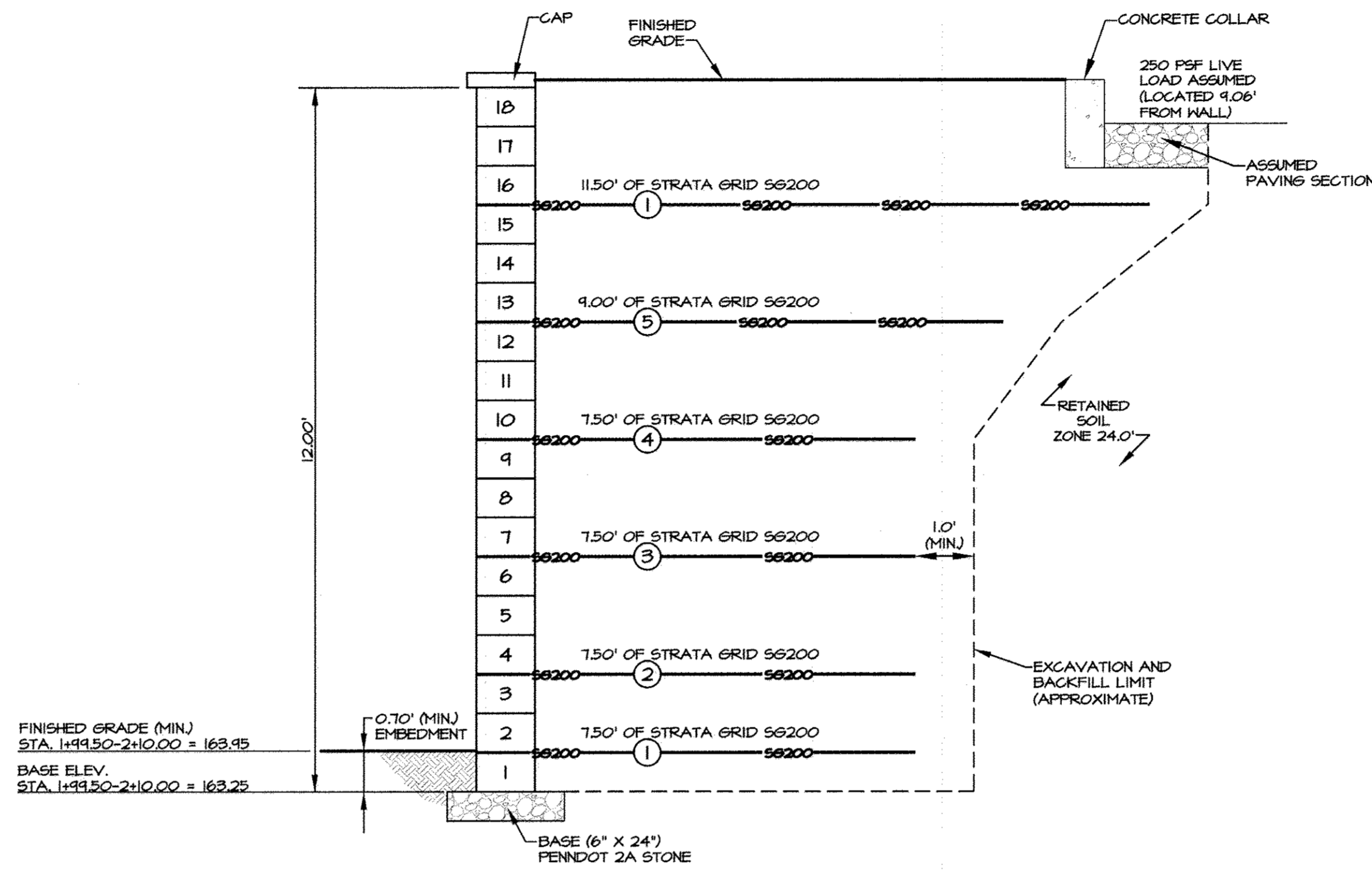
TYPICAL SECTION STA. 0+00.00-1+08.00 (SHOWN AT STA. 0+94.00)  
SCALE: 1/2" = 1'-0"

ALL SOILS MUST MEET THE BELOW LISTED CRITERIA:

1. INTERNAL ANGLE OF FRICTION  $\geq 28^\circ$  (MIN) (REINFORCING SOIL)
2. INTERNAL ANGLE OF FRICTION  $\geq 28^\circ$  (RETAINED SOIL)
3. CALCULATED BEARING PRESSURE  $\geq 2811$  PSF
4. UNIT WEIGHT OF SOIL  $\geq 120$  PCF (MIN) (REINFORCING SOIL)
5. UNIT WEIGHT OF SOIL  $\leq 120$  PCF (MAX) (RETAINED SOIL)

BACK FILL, DRAIN PIPE, KEEP HOLE AND FENCE OMITTED FOR CLARITY SEE ADDITIONAL DETAILS AND TYPICAL WALL SECTION (BACK FILL, COMPONENT MATERIALS AND NOTES)

A LICENSED GEOTECHNICAL ENGINEER SHALL VERIFY ALL SOIL PARAMETERS PRIOR TO CONSTRUCTION.



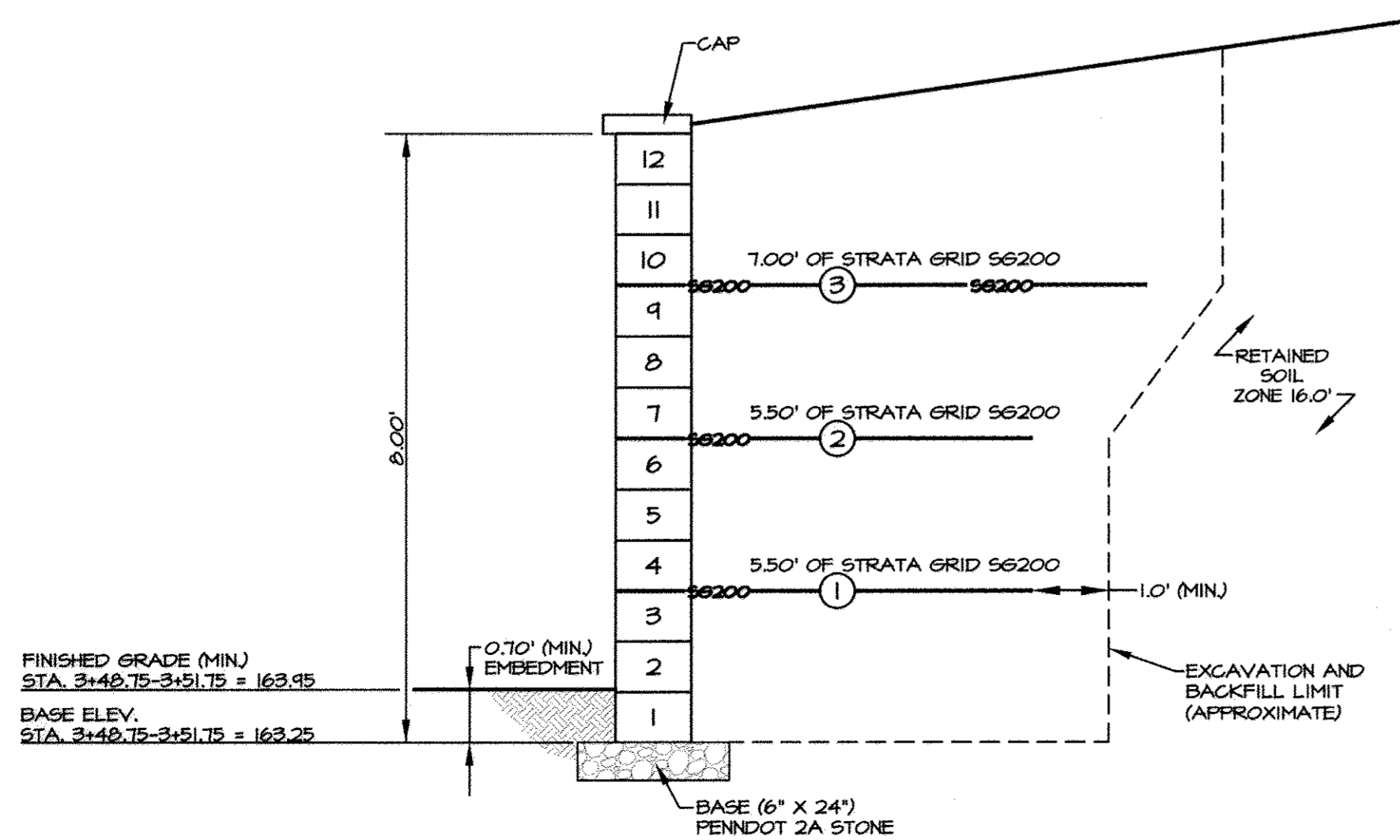
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SCALE: 1/2" = 1'-0"

ALL SOILS MUST MEET THE BELOW LISTED CRITERIA:

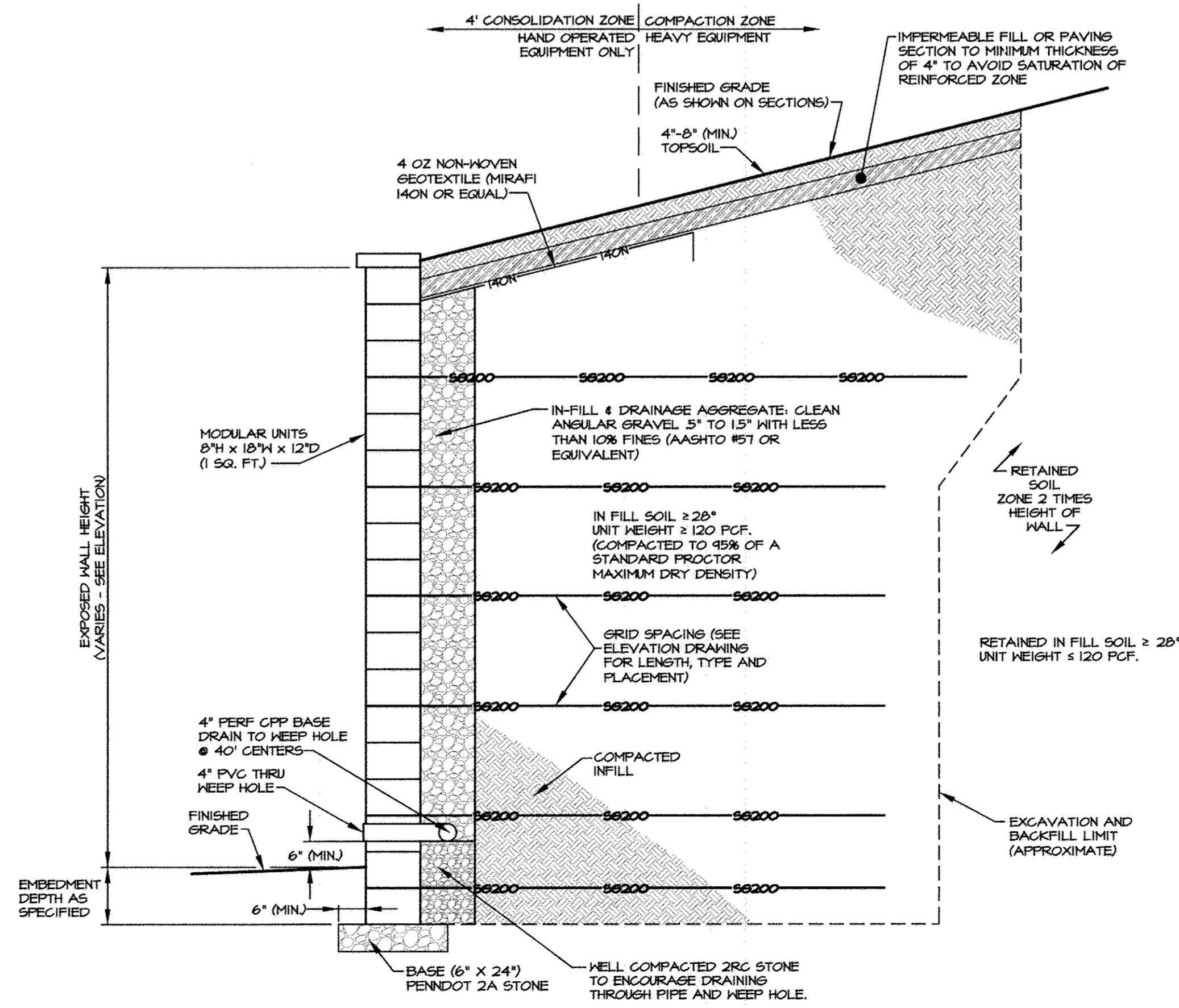
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2. INTERNAL ANGLE OF FRICTION  $\geq 28^\circ$  (RETAINED SOIL)
3. CALCULATED BEARING PRESSURE  $\geq 1331$  PSF
4. UNIT WEIGHT OF SOIL  $\geq 120$  PCF (MIN) (REINFORCING SOIL)
5. UNIT WEIGHT OF SOIL  $\leq 120$  PCF (MAX) (RETAINED SOIL)

BACK FILL, DRAIN PIPE, KEEP HOLE AND FENCE OMITTED FOR CLARITY SEE ADDITIONAL DETAILS AND TYPICAL WALL SECTION (BACK FILL, COMPONENT MATERIALS AND NOTES)

A LICENSED GEOTECHNICAL ENGINEER SHALL VERIFY ALL SOIL PARAMETERS PRIOR TO CONSTRUCTION.



TYPICAL SECTION STA. 3+48.75-3+87.00 (SHOWN AT STA. 3+50.50)  
SCALE: 1/2" = 1'-0"



TYPICAL WALL SECTION (BACKFILL, COMPONENT MATERIALS AND NOTES)  
NO SCALE

**AS-BUILT CERTIFICATION**

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

*David W. Hannon* 7/18/2017  
DATE

MARYLAND REG. NO. 27223 EXPIRATION DATE: 3/19/2018  
DATE OF AS-BUILT: 6/17/2014 & 6/27/2017



5/7/13  
DATE

*David W. Hannon*

RETAINING WALL ENGINEER



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Kit Stalene* 6/07/13  
Chief, Division of Land Development Date

*John P. ...* 6/2/13  
Chief, Development Engineering Division Date

*Harold ...* 6/2/13  
Director, Department of Planning and Zoning Date

2	03/2013	RETAINING WALL LOCATIONS
1	11/2012	REDLINE REVISIONS

REVISED  
NORTH SIDE REDEVELOPMENT  
AT DORSEY RUN INDUSTRIAL CENTER

OWNER / DEVELOPER

MONTEVIDEO REALTY BUSINESS TRUST  
C/O EXETER PROPERTY GROUP

140 N. GERMANTOWN PIKE, SUITE 150  
FLYMOUTH MEETINGS, PA 19462  
TEL: (610) 828-0756  
FAX: (610) 828-5550



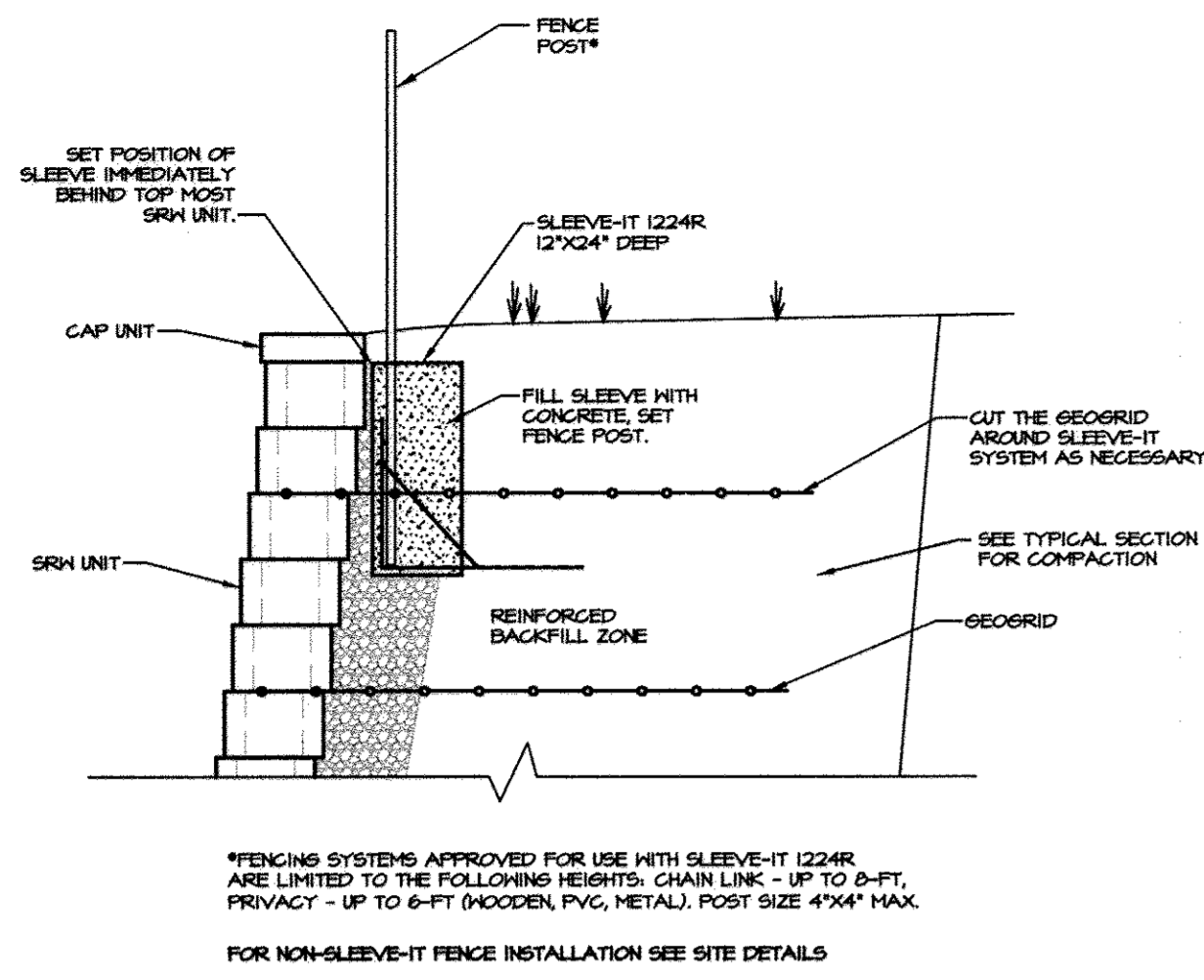
PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELK RIDGE, MD	EX BLDG C
1	7587 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 4

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572, 346, 97, 344, 441

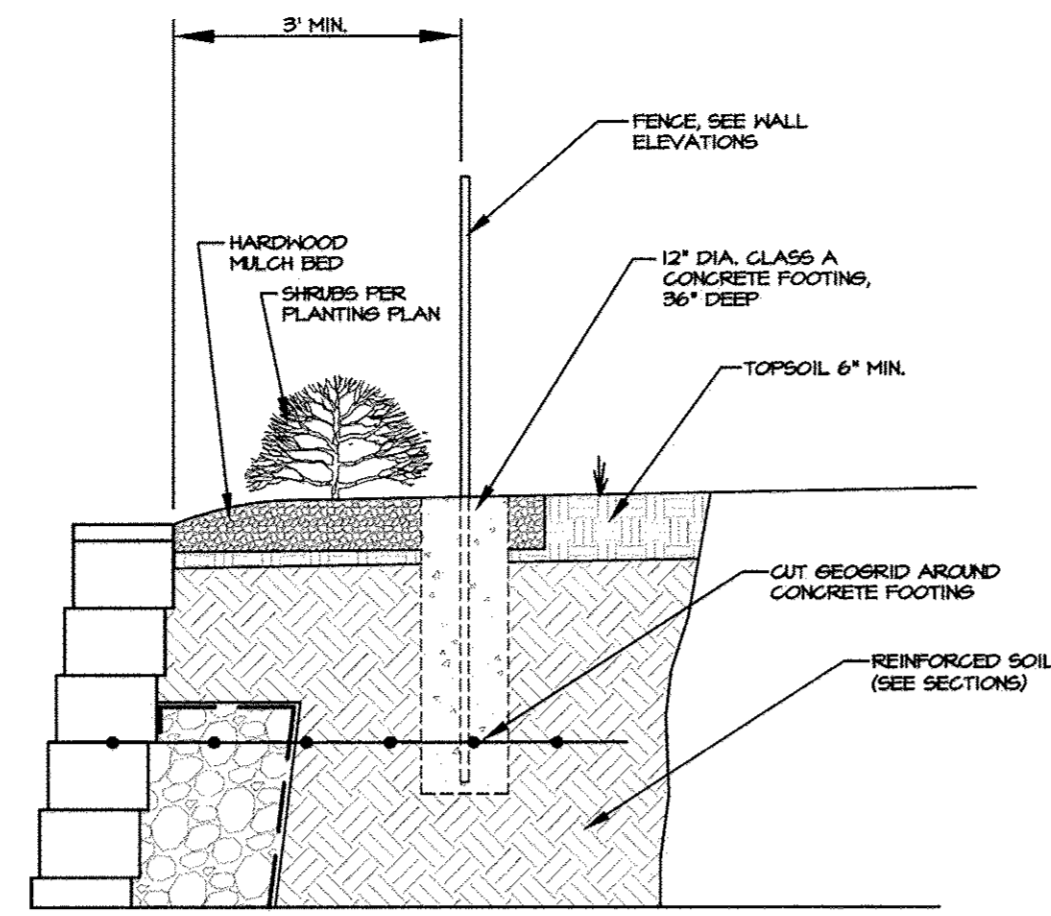
PLAT#	GRID#	ZONING	TAX MAP#	ELECT. DIST.	GENUS TRACT
L.6457, F.258	16	M-2	43	1ST	6012.02

WATER CODE	SEWER CODE
400 (TO 550)	801

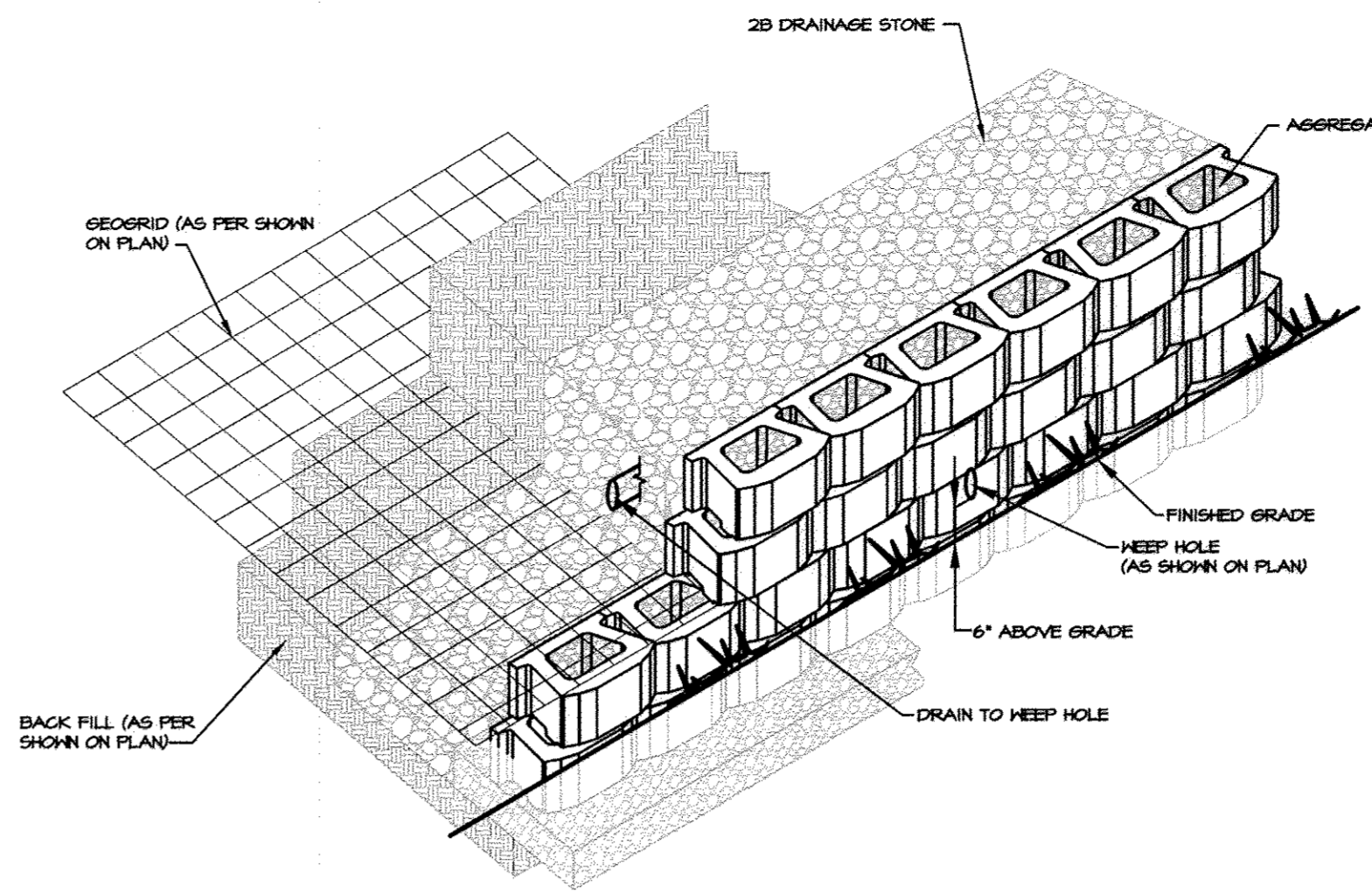
DESIGN	ENJ	SCALE	PROJECT
DESIGN	ENJ	SCALE	PROJECT: 03061008.01
DRAWN	DAM	DATE: SEPT 26 2012	
CHECKED	ENJ	APPROVED: MRZ	42 OF 45



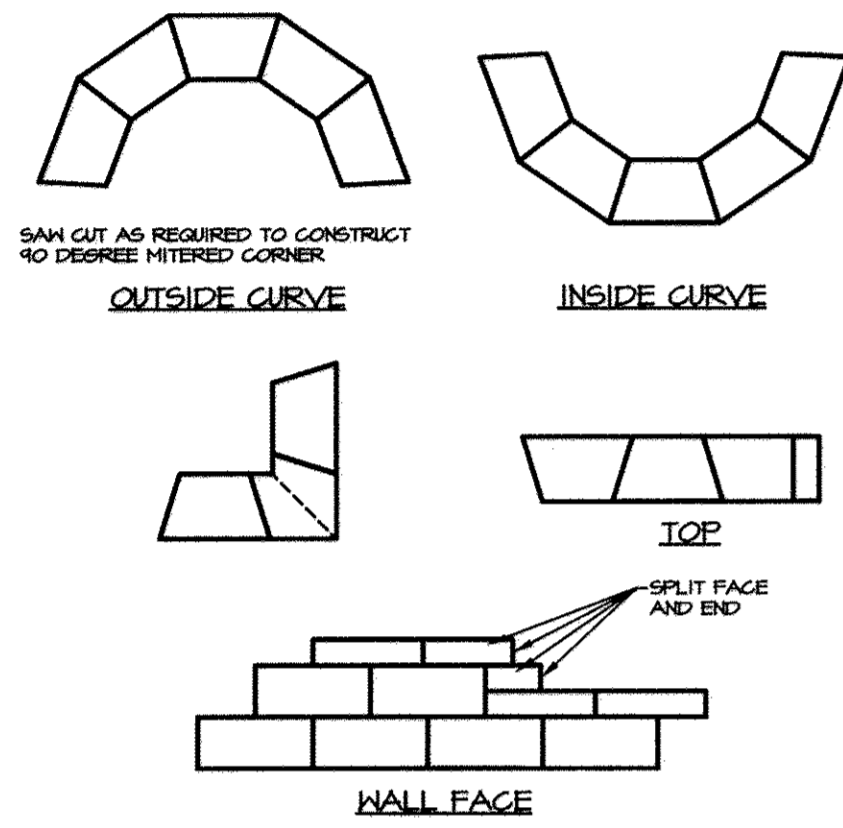
**SLEEVE-IT FENCE DETAIL**  
NO SCALE



**FENCE DETAIL**  
NO SCALE

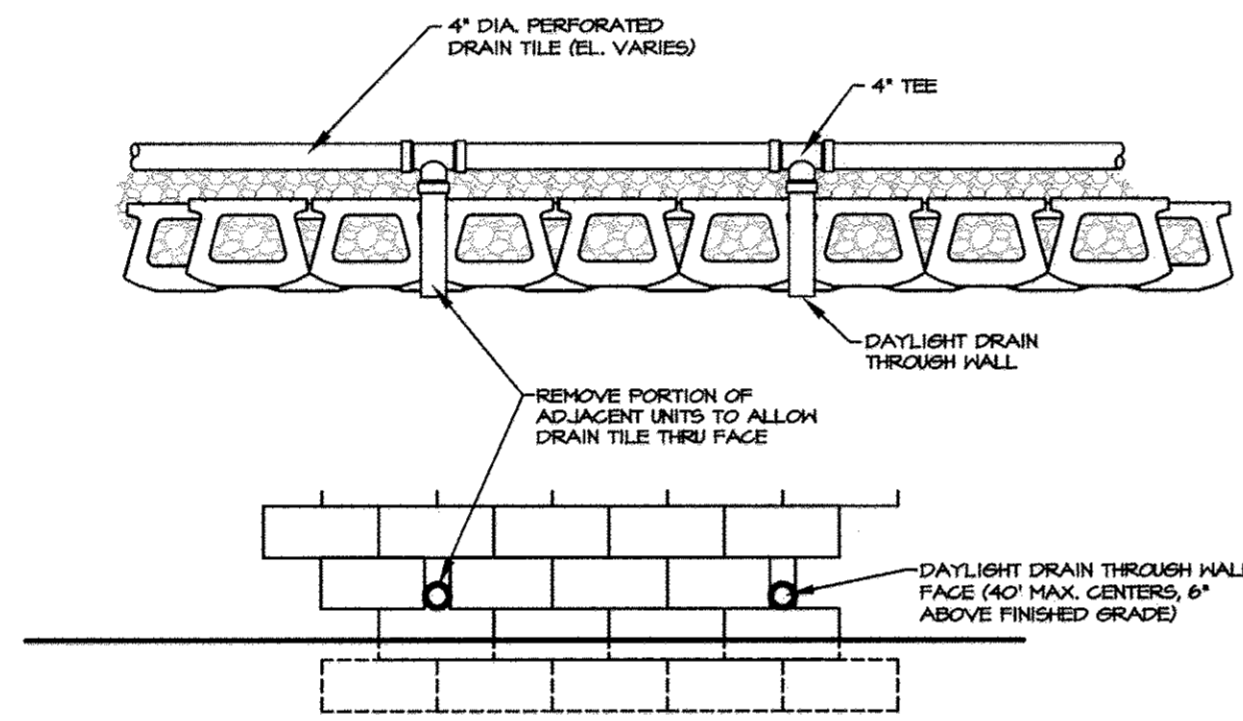


**SRW INFILL DETAIL**  
NO SCALE

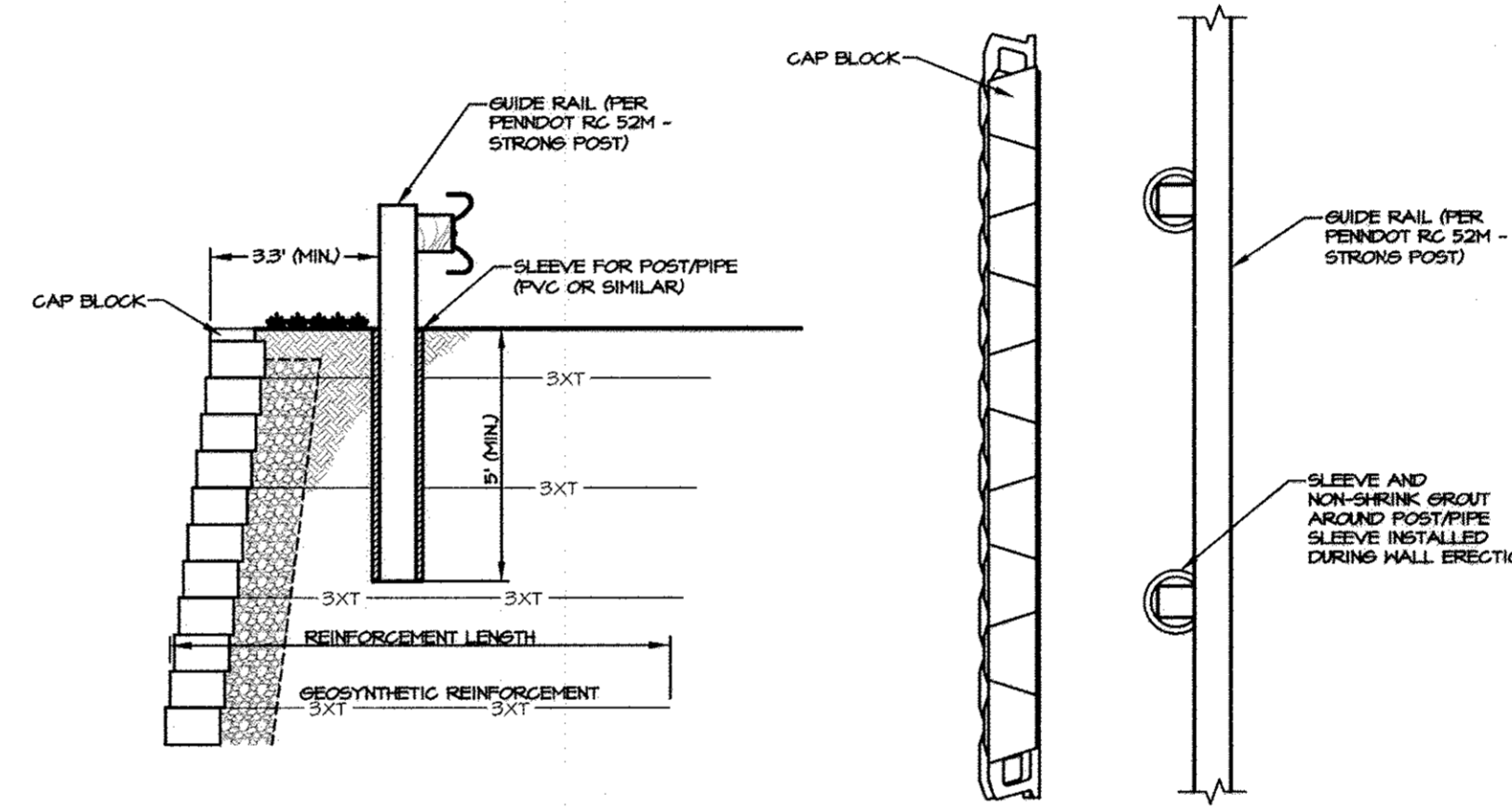


1. ALWAYS START CAPPING WALL FROM THE LOWEST ELEVATION.
2. LAYOUT CAPS PRIOR TO USING ADHESIVE.
3. CUT CAPS TO FIT. VARIOUS COMBINATIONS OF LONG AND SHORT CAP FACES WILL BE NECESSARY FOR RADIi GREATER THAN THE MINIMUM.
4. ALTERNATE SHORT AND LONG CAP FACES EVERY OTHER CAP TO ACHIEVE A STRAIGHT ROW OF CAPS.
5. USE EXTERIOR-GRADE CONSTRUCTION ADHESIVE TO SECURE CAPS.

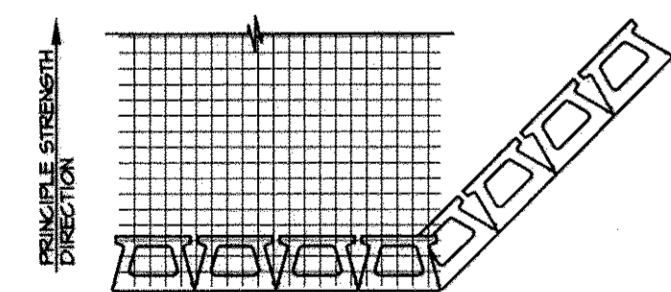
**CAP BLOCK DETAIL**  
NOT TO SCALE



**WEEP HOLE DAYLIGHT THRU WALL DETAIL**  
NOT TO SCALE

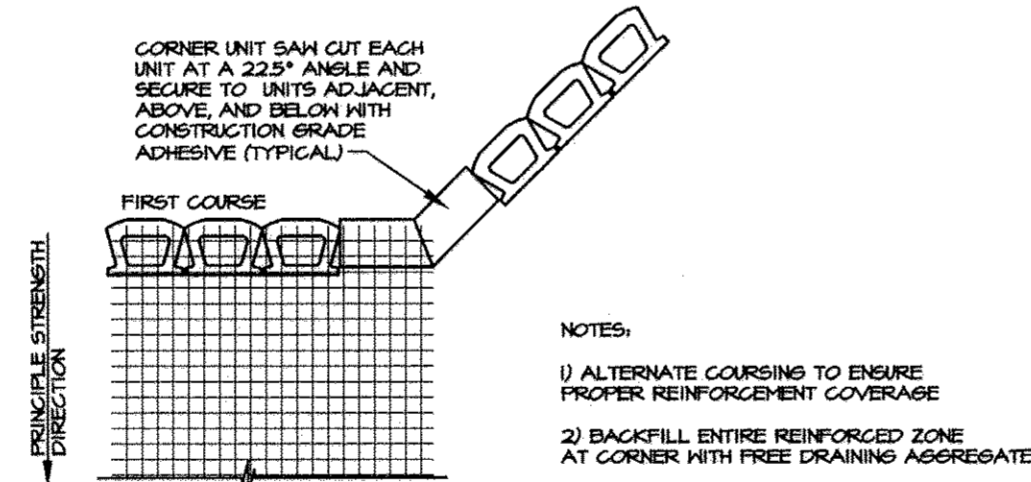


**GUIDE RAIL DETAIL**  
NO SCALE



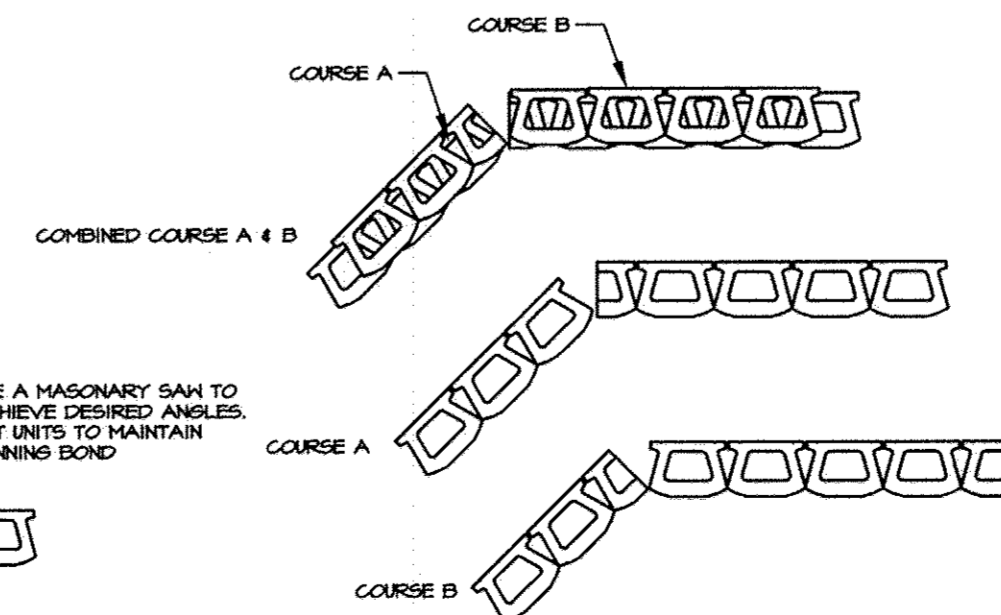
- NOTES:
- 1) ALTERNATE COURSING TO ENSURE PROPER REINFORCEMENT COVERAGE
  - 2) BACKFILL ENTIRE REINFORCED ZONE AT CORNER WITH FREE DRAINING AGGREGATE.

**OUTSIDE ANGLE DETAIL WITH REINFORCEMENT**  
NO SCALE



- NOTES:
- 1) ALTERNATE COURSING TO ENSURE PROPER REINFORCEMENT COVERAGE
  - 2) BACKFILL ENTIRE REINFORCED ZONE AT CORNER WITH FREE DRAINING AGGREGATE.

**INSIDE ANGLE DETAIL**  
NO SCALE



**INSIDE ANGLE DETAIL**  
NO SCALE

**RETAINING WALL ENGINEER**

**EA group, inc.**  
ENGINEERS & LANDSCAPE ARCHITECTS  
2015 SANDY DRIVE, SUITE 103  
STATE COLLEGE, PA 16803  
(814) 961-5520 FAX (814) 961-5505  
www.eagroup.com

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Ket Stoen* 6/07/13  
Chief, Division of Land Development Date

*David W. Hanning* 6/13/13  
Chief, Development Engineering Division Date

*David W. Hanning* 6/7/10  
Director, Department of Planning and Zoning Date

2	03/2013	RETAINING WALL LOCATION
1	11/2012	REDLINE REVISIONS

**REVISED**  
**NORTH SIDE REDEVELOPMENT**  
**AT DORSEY RUN INDUSTRIAL CENTER**  
**OWNER / DEVELOPER**  
MONTEVIDEO REALTY 140 N. GERMANTOWN PIKE, SUITE 150  
BUSINESS TRUST PLYMOUTH MEETING, PA 19462  
C/O EXETER PROPERTY GROUP TEL: (610) 928-0756 FAX: (610) 928-5550

**AS-BUILT CERTIFICATION**  
NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET  
*David W. Hanning* 7/18/2017  
DATE  
MARYLAND REG. NO. 27223 EXPIRATION DATE: 3/19/2018  
DATE OF AS-BUILT: 6/17/2014 & 6/21/2017



**christopher consultants**  
engineering · surveying · land planning  
christopher consultants, inc.  
7172 COLUMBIA GATEWAY DRIVE (SUITE 100) COLUMBIA, MD 21046-2590  
410.872.8890 · INFO 301.881.0148 · FAX 410.872.8893

**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELK RIDGE, MD	EX BLDG C
1	7587 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

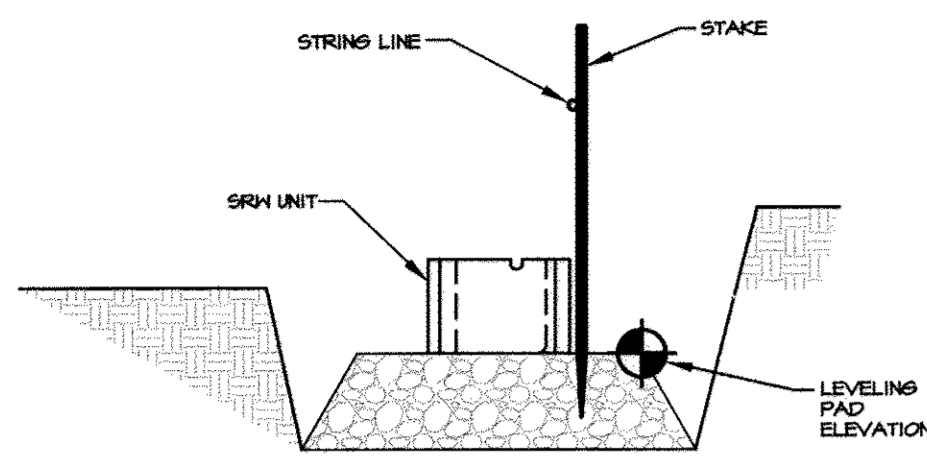
SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572, 346, 97, 344, 441

PLAT#	GRID#	ZONING	TAX MAP#	ELECT. DIST.	GENUS TRACT
L 6457, F 258	16	M-2	43	1ST	6012.02

WATER CODE 400 (TG 550) SEWER CODE 801

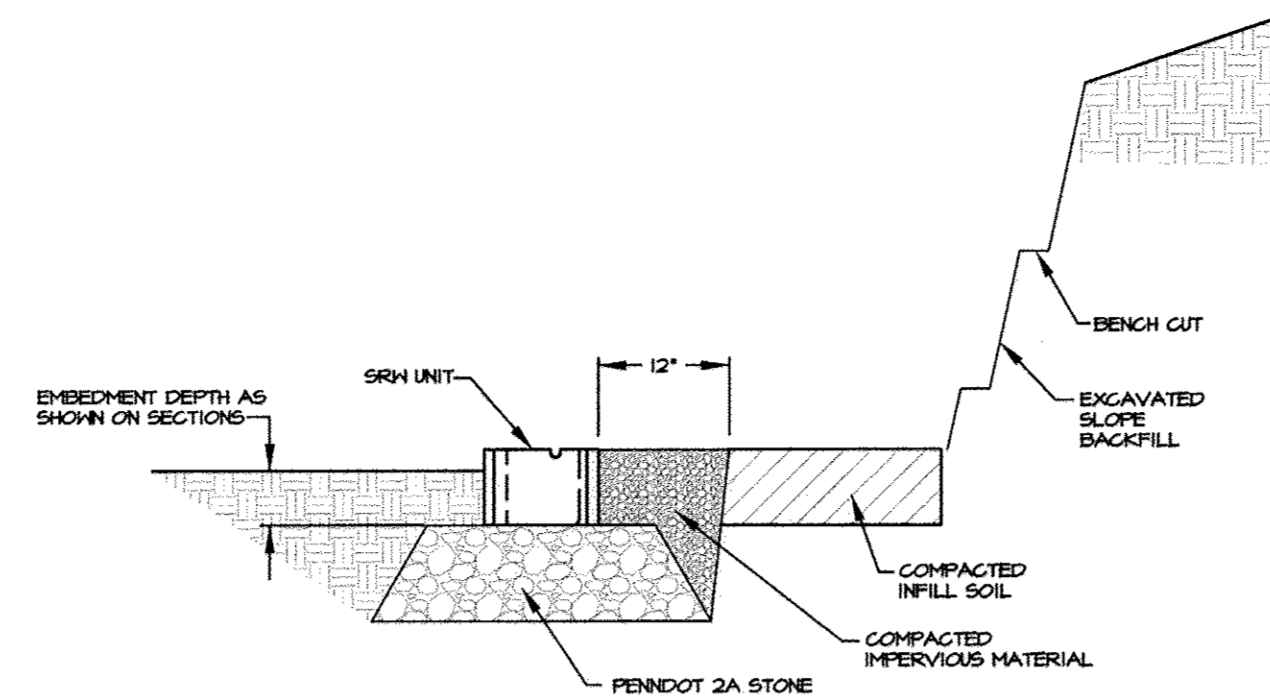
TITLE:

DESIGN: ENJ	SCALE:	PROJECT: 03061008.01
DRAWN: DAM	DATE: SEPT 26 2012	
CHECKED: ENJ	APPROVED: HRZ	43 OF 45



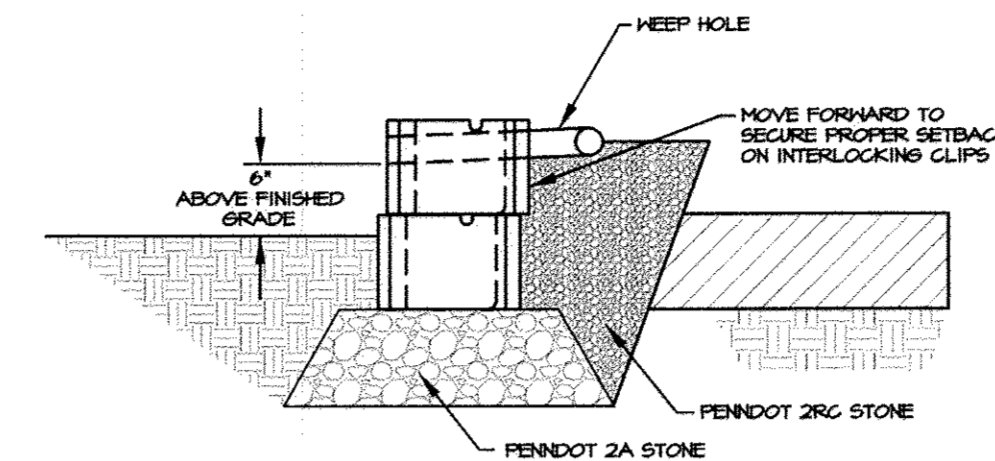
**A. SETTING FIRST COURSE OF SRW UNITS**

1. CHECK LEVELING PAD ELEVATION AND SMOOTH LEVELING PAD SURFACE.
2. VERIFY BEARING CAPACITY OF SOIL.
3. STAKE AND STRING LINE THE WALL LOCATION. PAY CLOSE ATTENTION TO EXACT LOCATION OF CURVES, CORNERS, VERTICAL AND HORIZONTAL STEPS. STRING LINE MUST BE ALONG A MOLDED FACE OF THE SRW UNIT, AND NOT ALONG A BROKEN BLOCK FINISH SURFACE.
4. INSTALL FIRST COURSE OF SRW UNITS, CHECKING LEVEL AS PLACED.



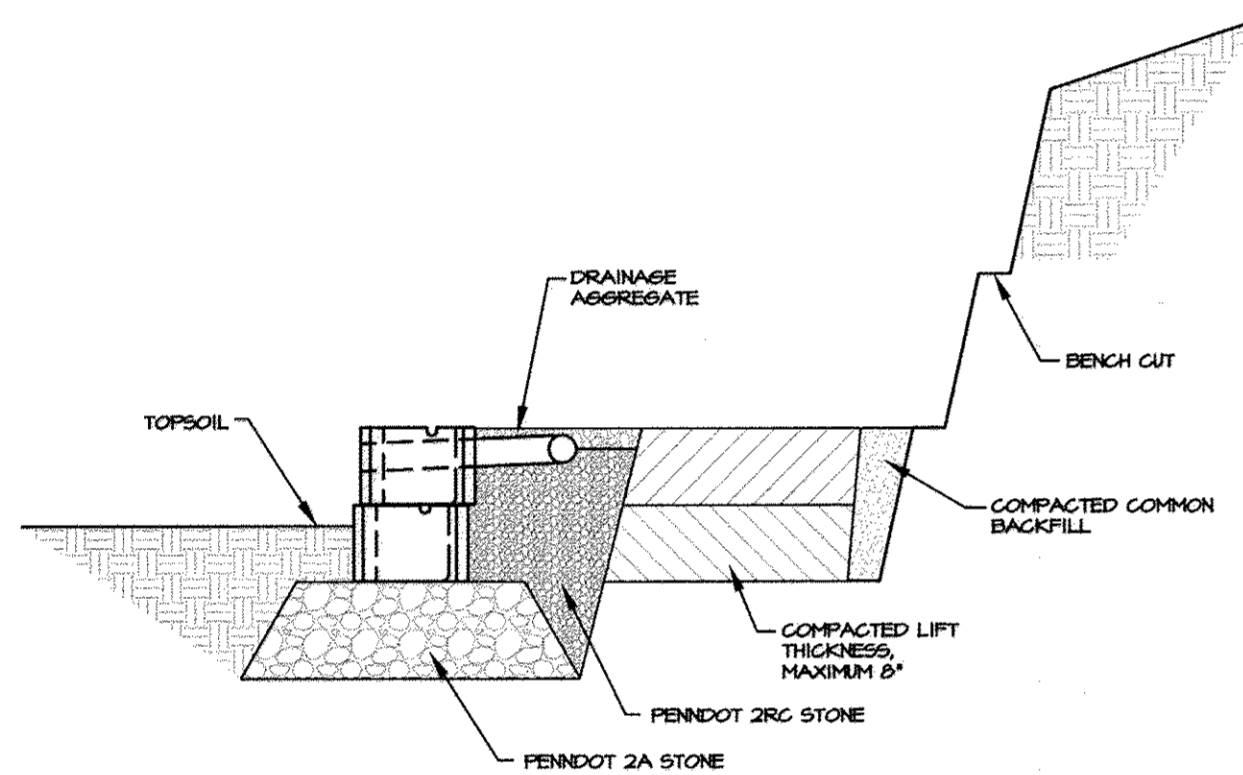
**B. BACKFILLING FIRST COURSE OF SRW UNITS**

1. RECHECK WALL LOCATION.
2. USE DRAINAGE AGGREGATE TO FILL ANY OPENINGS IN AND BETWEEN SRW UNITS.
3. CAREFULLY PLACE COMPACTED IMPERVIOUS MATERIAL BEHIND AND UP TO THE HEIGHT OF SRW UNIT TO ASSURE PROPER DRAINAGE TO DRAIN PIPE (NOT INCLUDED IN THIS STEP). INSTALL GEOTEXTILE IF REQUIRED.
4. PLACE AND COMPACT INFILL SOIL BEHIND WALL DRAIN.
5. PLACE FILL SOIL IN FRONT OF SRW UNIT.
6. COMPACT AGGREGATE AND INFILL SOIL.



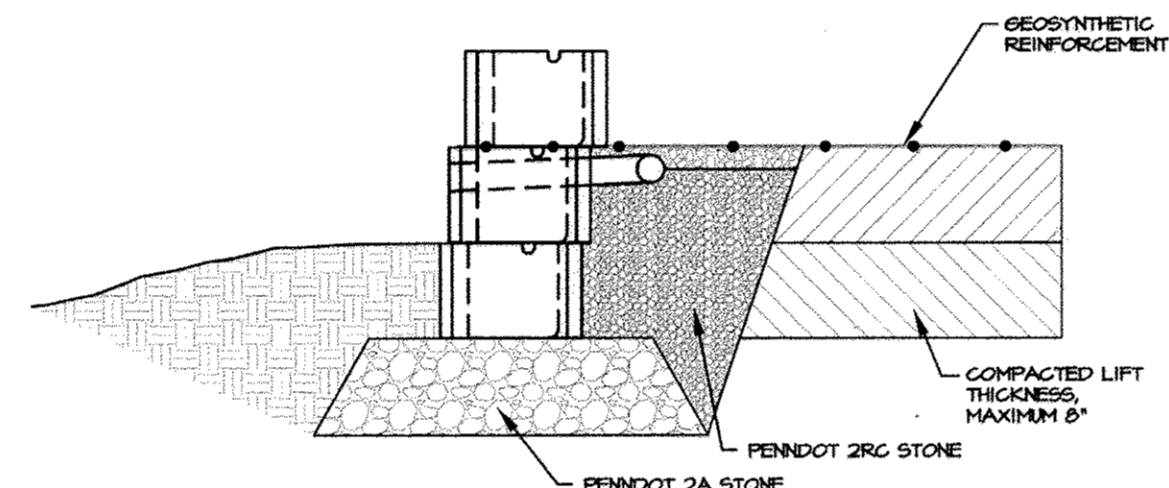
**C. INSTALLING SUCCESSIVE COURSES OF SRW UNITS**

1. INSTALL DRAIN PIPE AND KEEP HOLE AS SHOWN IN THE DETAILS.
2. ENSURE THE AGGREGATE IS LEVEL WITH OR SLIGHTLY BELOW THE TOP OF SRW UNIT BELOW.
3. CLEAN DEBRIS OFF TOP OF UNIT.
4. MOVE SRW UNIT TO ENGAGE LIP AND ESTABLISH PROPER SETBACK.
5. PLACE AND COMPACT UP TO THE SPRING LINE OF THE DRAIN PIPE.
6. INSTALL KEEP HOLES THROUGH BLOCK FACE (6\"/>



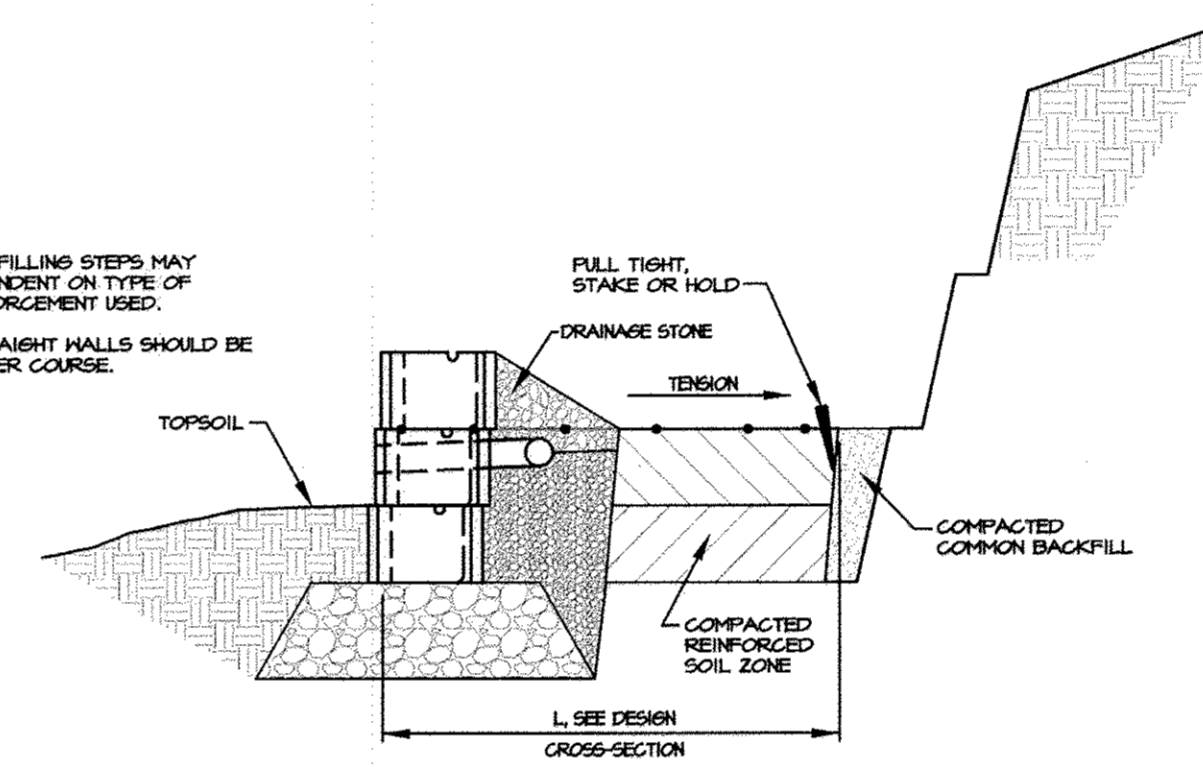
**D. FILL PLACEMENT AND COMPACTION**

1. USE DRAINAGE AGGREGATE TO FILL OPENINGS IN AND BETWEEN SRW UNITS.
2. PLACE DRAINAGE AGGREGATE BEHIND AND UP TO HEIGHT OF SRW UNIT TO CONTINUE WALL FACE DRAIN. INSTALL GEOTEXTILE IF REQUIRED.
3. PLACE AND COMPACT INFILL SOIL BEHIND WALL DRAIN.
4. COMPACT DRAINAGE AGGREGATE AND INFILL SOIL.
5. VERIFY FILL COMPACTION AT EVERY LIFT OF FILL HEIGHT.



**E. PLACEMENT OF GEOSYNTHETIC REINFORCEMENT**

1. ENSURE WALL FACE DRAINAGE AGGREGATE IS LEVEL WITH OR SLIGHTLY ABOVE THE TOP OF SRW UNIT.
2. CLEAN DEBRIS OFF TOP OF UNIT.
3. CUT GEOSYNTHETIC REINFORCEMENT TO DESIGN LENGTH "L" AS SHOWN ON PLANS AND INSTALL WITH STRENGTH DIRECTION PERPENDICULAR TO WALL FACE.
4. PLACE SRW UNIT ON TOP OF GEOSYNTHETIC.
5. MOVE SRW UNIT TO ENGAGE LIP AND ESTABLISH PROPER SETBACK.

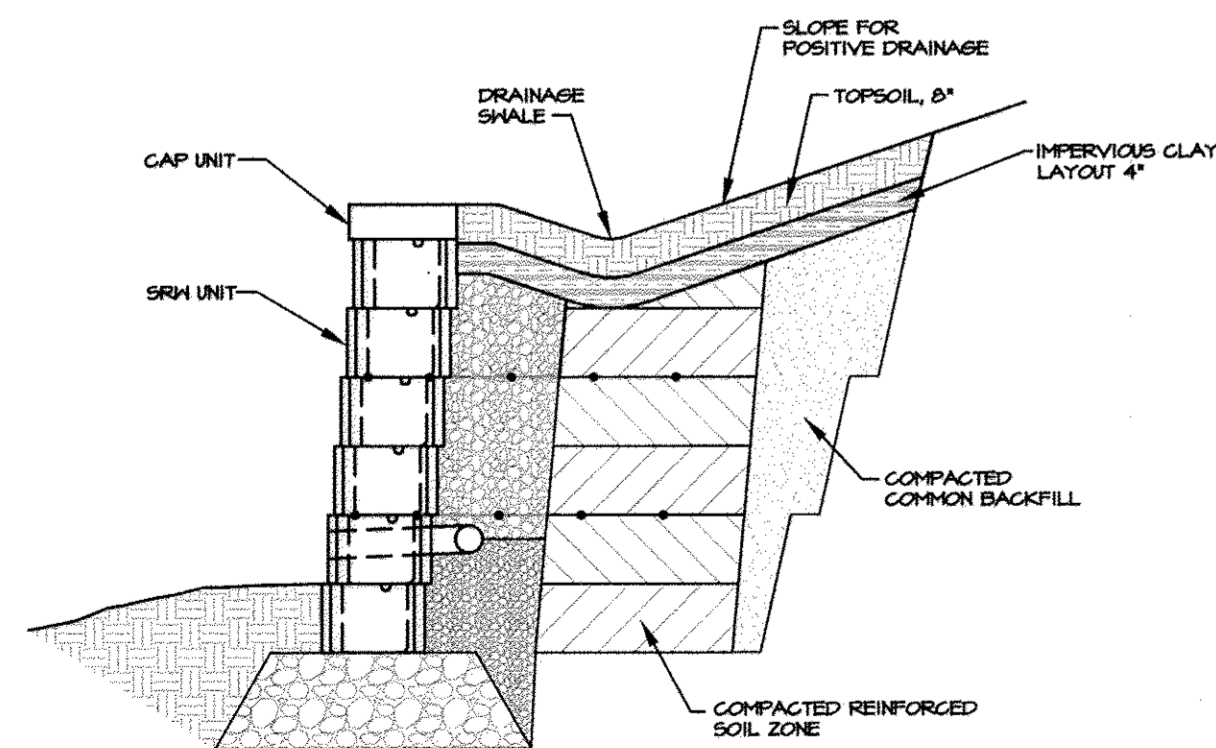


**NOTES:**

1. SEQUENCE OF BACKFILLING STEPS MAY VARY AND ARE DEPENDENT ON TYPE OF GEOSYNTHETIC REINFORCEMENT USED.
2. ALIGNMENT OF STRAIGHT WALLS SHOULD BE CHECKED EVERY OTHER COURSE.

**F. BACKFILLING OVER GEOSYNTHETIC REINFORCEMENT**

1. FULL GEOSYNTHETIC REINFORCEMENT TAUT, USING UNIFORM TENSION HOLD OR STAKE TO MAINTAIN TENSION THROUGHOUT FILL PLACEMENT PROCESS.
2. PLACE DRAINAGE AGGREGATE FOR WALL FACE DRAIN IN AND BETWEEN SRW UNITS.
3. PLACE INFILL SOIL.
4. COMPACT INFILL SOIL.
5. COMPACT DRAINAGE AGGREGATE.
6. PLACE REMAINDER OF AGGREGATE DRAIN.
7. VERIFY FILL COMPACTION AT EVERY LIFT OF FILL HEIGHT.



**G. COMPLETED REINFORCED SRW**

1. CONTINUE WALL TO FULL HEIGHT USING STEPS C THRU F.
2. INSTALL SRW CAP/CORNING UNIT.
3. PLACE AND COMPACT FINAL BACKFILL.
4. FINISH GRADE FOR POSITIVE DRAINAGE AWAY FROM WALL FACE.
5. PLACE TOPSOIL AND VEGETATE SLOPES ABOVE AND AROUND WALL ENDS.

**CONSTRUCTION SEQUENCE**

**AS-BUILT CERTIFICATION**  
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET  
 DATE: 7/18/2017  
 MARYLAND REG. NO. 27223 EXPIRATION DATE: 3/19/2018  
 DATE OF AS-BUILT: 6/17/2014 & 6/27/2017



5/7/13  
 DATE  
 STATE OF MARYLAND  
 PROFESSIONAL ENGINEER

**RETAINING WALL ENGINEER**



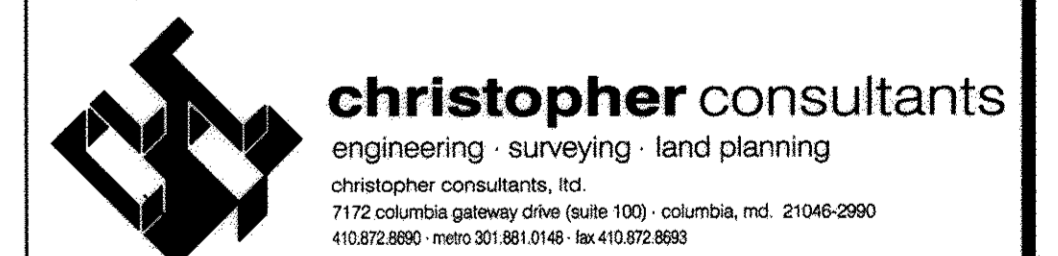
**APPROVED: DEPARTMENT OF PLANNING AND ZONING**

Chief, Division of Land Development  
 Chief, Development Engineering Division  
 Director, Department of Planning and Zoning

2	03/2013	RETAINING WALL
1	11/2012	REDLINE REVISIONS REVISED RETAINING WALL

**REVISED NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

**OWNER / DEVELOPER**  
 MONTEVIDEO REALTY BUSINESS TRUST  
 C/O EXETER PROPERTY GROUP  
 140 N. GERMANTOWN PIKE, SUITE 150  
 PLYMOUTH MEETING, PA 19462  
 TEL: (610) 828-0756 FAX: (610) 828-5550



**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#			
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441			
PLAT#	GRID#	ZONING	TAX MAP#	ELECT. DISTR.	CENSUS TRACT
L-6457, F-258	16	M-2	43	1ST	6012.02
WATER CODE	SEWER CODE				
400 (TG 550)	801				

TITLE:

DESIGN:	ENJ	SCALE:	PROJECT:
DRAWN:	DAM	DATE:	03091008.01
CHECKED:	ENJ	APPROVED:	MRZ



# SPECIFICATIONS FOR SEGMENTAL RETAINING WALL SYSTEMS:

- PART 1. GENERAL**
- 1.01 DESCRIPTION**
- WORK INCLUDES FURNISHING AND INSTALLING SEGMENTAL RETAINING WALL (SRW) UNITS TO THE LINES AND GRADES DESIGNATED ON THE CONSTRUCTION DRAWINGS. ALSO, INCLUDED IS FURNISHING AND INSTALLING APPROPRIATE MATERIALS REQUIRED FOR CONSTRUCTION OF THE RETAINING WALL, AS SHOWN ON THE CONSTRUCTION DRAWINGS.
- 1.02 REFERENCES**
- A. ENGINEERING DESIGN**
- NCHM DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS, THIRD EDITION.
  - ASTM D 6630 - STANDARD TEST METHOD FOR DETERMINING THE CONNECTION STRENGTH BETWEEN GEOSYNTHETICS REINFORCEMENT AND CONCRETE UNITS.
  - ASTM D 4816 - STANDARD TEST METHOD FOR DETERMINING THE SHEAR STRENGTH BETWEEN SEGMENTAL CONCRETE UNITS.
- B. SEGMENTAL RETAINING WALL UNITS**
- ASTM C 140 - STANDARD TEST METHODS FOR SAMPLING AND TESTING CONCRETE MASONRY UNITS AND RELATED UNITS.
  - ASTM C 1662 - STANDARD TEST METHOD FOR EVALUATING THE FREEZE-THAW DURABILITY OF MANUFACTURED CONCRETE MASONRY UNITS AND RELATED CONCRETE UNITS.
  - ASTM C 1872 - STANDARD SPECIFICATION FOR DRY-CAST SEGMENTAL RETAINING WALL UNITS.
- C. GEOSYNTHETIC REINFORCEMENT**
- ASTM D 4849 - STANDARD TEST METHOD FOR TENSILE PROPERTIES OF GEOTEXTILES BY THE WIDE-NITTH STRIP METHOD.
  - ASTM D 5262 - STANDARD TEST METHOD FOR EVALUATING THE UNCONFINED TENSION CREEP AND CREEP RUPTURE BEHAVIOR OF GEOSYNTHETICS.
  - ASTM D 5931 - STANDARD TEST METHOD FOR DETERMINING THE COEFFICIENT OF SOIL AND GEOSYNTHETIC OR GEOSYNTHETIC FRICTION BY THE DIRECT SHEAR METHOD.
  - ASTM D 5916 - STANDARD PRACTICE FOR EXPOSURE AND RETRIEVAL OF SAMPLES TO EVALUATE INSTALLATION DAMAGE OF GEOSYNTHETICS.
  - ASTM D 6697 - STANDARD TEST METHOD FOR DETERMINING TENSILE PROPERTIES OF GEOTEXTILES BY THE SINGLE OR MULTI-RIP TENSILE METHOD.
  - ASTM D 6706 - STANDARD TEST METHOD FOR MEASURING GEOSYNTHETIC FALLOUT RESISTANCE IN SOIL.
  - ASTM D 6942 - STANDARD TEST METHOD FOR ACCELERATED TENSILE CREEP AND CREEP-RUPTURE OF GEOSYNTHETIC MATERIALS BASED ON THE TEMPERATURE SUPERPOSITION USING STEPPED ISOTHERMAL METHOD.
- D. SOILS**
- ASTM D 422 - STANDARD TEST METHOD FOR PARTICLE-SIZE ANALYSIS OF SOILS.
  - ASTM D 690 - STANDARD TEST METHOD FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING STANDARD EFFORT.
  - ASTM D 1556 - STANDARD TEST METHOD FOR DENSITY AND UNIT WEIGHT OF SOIL IN PLACE BY THE SAND-CONE METHOD.
  - ASTM D 1957 - STANDARD TEST METHOD FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING MODIFIED EFFORT.
  - ASTM D 2487 - STANDARD PRACTICE FOR CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES (UNIFIED SOIL CLASSIFICATION SYSTEM).
  - ASTM D 4930 - STANDARD TEST METHOD FOR IN-PLACE DENSITY AND WATER CONTENT OF SOIL AND SOIL-AGGREGATE BY NUCLEAR METHODS (SHALLOW DEPTH).
  - ASTM D 4918 - STANDARD TEST METHODS FOR LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS.
  - ASTM D 4183 - STANDARD TEST METHODS FOR PARTICLE-SIZE DISTRIBUTION (GRADATION) OF SOILS USING SIEVE ANALYSIS.
  - ASTM D 51 - STANDARD TEST METHOD FOR MEASURING pH OF SOIL FOR USE IN CORROSION TESTING.
- E. DRAINAGE PIPE**
- ASTM F 405 - STANDARD SPECIFICATION FOR CORRUGATED POLYETHYLENE (PE) PIPE AND FITTINGS.
  - ASTM F 788 - STANDARD SPECIFICATION FOR SMOOTH-WALL POLY(VINYL CHLORIDE) (PVC) PLASTIC UNDERDRAIN SYSTEMS FOR HIGHWAY, AIRPORT, AND SIMILAR DRAINAGE.
- 1.03 DESIGN STANDARDS**
- ALL DESIGN METHODOLOGY IS IN ACCORDANCE WITH THE NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA), LATEST EDITION.
  - THE GEOSYNTHETIC REINFORCEMENT VERTICAL SPACING SHALL NOT EXCEED 2 FEET OR 3 BLOCK UNITS.
  - GEOSYNTHETIC REINFORCEMENT SHALL HAVE 100% HORIZONTAL COVERAGE PARALLEL TO THE LENGTH OF THE WALL.
  - THE SEGMENTAL RETAINING WALLS HAVE BEEN DESIGNED IN ACCORDANCE TO THE NCMA DESIGN MANUAL, LATEST EDITION, THE MINIMUM FACTORS OF SAFETY SHALL MEET OR EXCEED THE FOLLOWING:
 

<b>DESIGN CRITERIA FOR EXTERNAL STABILITY ANALYSIS</b>	
FS SLIDING	1.50
FS OVERTURNING	2.00
FS BEARING CAPACITY	2.00
BASE GEOSYNTHETIC RATIO (L/W)	0.60
  - DESIGN CRITERIA FOR INTERNAL STABILITY ANALYSIS**

FS TENSILE OVERSTRESS	1.50
FS FALLOUT	1.50
ANCHORAGE LENGTH (FT)	1.00
  - DESIGN CRITERIA FOR FACING STABILITY ANALYSIS**


FS GEOSYNTHETIC-WALL CONNECTION	1.50
FS CREST TOPPLING	1.50
MAX. REINFORCEMENT SPACING	2.00
- 1.04 DELIVERY, STORAGE AND HANDLING**
- THE CONTRACTOR SHALL INSPECT ALL MATERIALS DELIVERED TO THE SITE TO ENSURE PROPER TYPE AND GRADE OF MATERIALS HAVE BEEN RECEIVED AS PER THESE SPECIFICATIONS AND THE SPECIFICATIONS FOUND IN THE ATTACHED RETAINING WALL REPORT.
  - THE CONTRACTOR SHALL ENSURE PROPER STORAGE, HANDLING AND PROTECTION FROM DAMAGE OF THE MATERIALS. DAMAGED MATERIALS SHALL NOT BE USED IN THE CONSTRUCTION OF THE SEGMENTAL RETAINING WALL.
  - THE CONTRACTOR SHALL PREVENT EXCESSIVE MIX, WET CONCRETE, AND LIKE MATERIALS FROM COMING IN CONTACT WITH THE WALL MATERIALS.
- PART 2. MATERIALS**
- 2.01 CONCRETE SEGMENTAL RETAINING WALL UNITS**
- SEGMENTAL RETAINING WALL UNITS SHALL BE MACHINE FORMED, PORTLAND CEMENT CONCRETE BLOCKS SPECIFICALLY DESIGNED FOR RETAINING WALL APPLICATIONS. THE SRW UNITS APPROVED FOR THIS PROJECT IS: **KEYSTONE CORPAC III** AS MANUFACTURED BY YORK BUILDING PRODUCTS.
- 2.02 BASE LEVELING PAD MATERIALS**
- MATERIAL FOR THE LEVELING PAD SHALL CONSIST OF COMPACTED GRAVEL. THIS GRAVEL SHALL MEET PENNDOT 2A STONE AND SHALL MEET THE FOLLOWING CRITERIA:
 

SIEVE SIZE	PERCENT PASSING
2 INCH	100
3/4 INCH	52-100
3/8 INCH	36-70
NO. 4	24-30
NO. 16	10-30
- 2.03 BACKFILL ZONES**
- REINFORCED SOIL: THE REINFORCED GEOSYNTHETIC ZONE**
    - THE SOILS USED MUST MEET OR EXCEED THE DESIGN FRICTION ANGLE STATED IN THE PROJECT'S GENERAL NOTES AND NOTED ON THE TYPICAL WALL SECTION AND DESIGN CROSS-SECTIONS. THE OWNER'S GEOTECHNICAL ENGINEER MUST VERIFY THE DESIGN FRICTION ANGLE. THE OWNER'S GEOTECHNICAL ENGINEER MUST VERIFY ALL DESIGN PARAMETERS INCLUDING, BUT NOT LIMITED TO: FRICTION ANGLE, UNIT WEIGHT OF SOILS, BEARING CAPACITY, COMPACTION AND PLACEMENT. THE REINFORCED MATERIAL SHALL BE FREE OF DEBRIS AND ORGANIC MATERIAL (I.E. - NO TREE LIMBS, ROOT MATTER, TOP SOIL, ETC.). THE REINFORCED ZONE MATERIAL SHALL NOT CONSIST OF CH (FAT CLAY), CL (LEAN CLAY), MH (ELASTIC SILT) OR OH/OLPT (ORGANIC SILT). THE EXISTING SOILS IN THE RETAINED ZONE OR THAT IS SUITABLE TO BE USED IN THE REINFORCED ZONE, NO CONSTRUCTION SHALL BE PERFORMED UNTIL THE OWNER'S GEOTECHNICAL ENGINEER VERIFIES THE PARAMETERS AND REPORTS THE RESULTS TO ELA GROUP, INC. ELA GROUP, INC. MAY AT THEIR DISCRETION MAKE ANY CHANGES, RECOMMENDATIONS OR EVEN REDISIGN THE WALL BASED UPON THE UPDATED GEOTECHNICAL INFORMATION. THIS MATERIAL SHALL BE COMPACTED TO 98% OF THE MAXIMUM DRY DENSITY AS SPECIFIED BY THE STANDARD PROCTOR METHOD OR AS APPROVED BY THE OWNER'S GEOTECHNICAL ENGINEER.
    - GRANULAR INFILL MATERIAL MAY BE USED AS LONG AS IT MEETS THE SPECIFICATIONS FOUND BELOW. THE SPECIFICATIONS BELOW ARE GRADATIONS MEETING SPECIFICATIONS FOR PENNDOT 2A STONE.
 

SIEVE SIZE	PERCENT PASSING
2 INCH	100
3/4 INCH	52-100
3/8 INCH	36-70
NO. 4	24-30
NO. 16	10-30
  - RETAINED SOIL: THE AREA BEYOND THE REINFORCED SOIL AND EXTENDING TO A DISTANCE OF THREE TIMES THE EXPOSED WALL HEIGHT**
    - THE OWNER'S GEOTECHNICAL ENGINEER SHALL VERIFY THE RETAINED SOIL, VERIFYING THAT THE RETAINED SOIL MEETS OR EXCEEDS THE DESIGN PARAMETERS AS LISTED IN THE GENERAL NOTES AND SHOWN ON THE SECTIONS. NO CONSTRUCTION SHALL BE PERFORMED UNTIL THE OWNER'S GEOTECHNICAL ENGINEER VERIFIES THESE PARAMETERS AND REPORTS THE RESULTS TO ELA GROUP, INC.
    - ONCE EXCAVATED BACK TO THE DEPTH REQUIRED FOR THE INSTALLATION OF THE GEOSYNTHETICS THE OWNER'S GEOTECHNICAL ENGINEER SHALL CONFIRM OR DENY THE USE OF EXISTING MATERIAL WITHIN THIS ZONE. THE SOILS IN THE RETAINED ZONE OR THAT IS SUITABLE TO BE USED IN THE RETAINED ZONE MUST MEET THE MINIMUM CRITERIA AS SPECIFIED ON THE RESPECTIVE CROSS-SECTIONS AND IN THE GENERAL NOTES. IF THE SOIL DOES NOT MEET THE SPECIFIED PROPERTIES, ELA GROUP, INC. MUST BE CONTACTED IMMEDIATELY AND IN COOPERATION WITH THE OWNER'S GEOTECHNICAL ENGINEER EITHER REANALYZE THE WALL OR RECOMMEND ALTERNATE MEASURES. THE RETAINED ZONE IS IDENTIFIED AS THE HORIZONTAL DISTANCE OF TWO TIMES THE HEIGHT OF THE WALL.
    - THIS SOILS MUST MEET OR EXCEED THE DESIGN FRICTION ANGLE STATED IN THE PROJECT'S GENERAL NOTES AND NOTED ON THE TYPICAL WALL SECTION AND DESIGN CROSS-SECTIONS AND BE VERIFIED BY THE OWNER'S GEOTECHNICAL ENGINEER. THIS SOIL MUST BE COMPACTED TO 98% OF A STANDARD PROCTOR MAXIMUM DRY DENSITY. THE SOIL WITHIN THE RETAINED ZONE MUST BE TESTED AND MUST MEET OR EXCEED THE DESIGN PARAMETERS AS STATED ON THE CROSS-SECTIONS AND WITHIN THE GENERAL NOTES.
- C. FOUNDATION SOIL: THE AREA UNDER THE WALLS FOOTINGS AND UNDER THE REINFORCING GEOSYNTHETIC ZONE**
- THE FOUNDATION SOIL MUST MEET OR EXCEED THE ANTICIPATED BEARING PRESSURE AS LISTED IN THESE PLANS. THE SUB-GRADE MUST BE VIRGIN (NATURAL UNDISTURBED) OR FILL MEETING THE SPECIFICATIONS OF THE RETAINED SOIL) COMPACTED TO 98% OF A STANDARD PROCTOR MAXIMUM DRY DENSITY. THE CONTRACTOR MUST TEST THE FOUNDATION SOIL AND PROVE THAT THE BEARING CAPACITY EXCEEDS THE ANTICIPATED BEARING PRESSURE. IF THE FOUNDATION SOIL DOES NOT HAVE AN ALLOWABLE BEARING CAPACITY AS STATED IN THE PLANS, THE CONTRACTOR SHALL CONTACT ELA GROUP, INC. IMMEDIATELY AND IN RECOMMENDATION WILL BE MADE AS TO ADDITIONAL STEPS TO REMEDY THE SITUATION.
- D. SOIL DESIGN STANDARDS**
- THE FOLLOWING SOIL PARAMETERS, AS DETERMINED BY THE OWNER'S GEOTECHNICAL ENGINEER SHALL BE USED FOR THE PREPARATION OF THE FINAL DESIGN:
 

UNIT WEIGHT (PCF)	INTERNAL FRICTION ANGLE (DEGREES)	COHESION (C) (PSF)	
REINFORCED FILL	120	20	0
RETAINED SOIL	120	20	0
FOUNDATION SOIL	120	20	0
  - SHOULD THE OWNER'S GEOTECHNICAL ENGINEER FIND THAT THE ACTUAL SOIL CONDITIONS OBSERVED DURING CONSTRUCTION DIFFER FROM THOSE ASSUMED FOR THE DESIGN, THE DESIGN SHALL BE REVIEWED BY ELA GROUP, INC. AT THE OWNER'S DIRECTION.
- 2.04 DRAINAGE AND UNIT INFILL AGGREGATE**
- DRAINAGE AGGREGATE SHALL BE CLEAN CRUSHED GRAVEL CONSISTING OF AASHTO #57 STONE OR EQUIVALENT STONE (I.E. - MEDIAN STONE SIZE 1/2 INCH TO 1 1/2 INCH).
  - DRAINAGE AGGREGATES SHALL BE PLACED IN ALL UNIT VOIDS AND 6 INCHES TO 12 INCHES BEHIND THE WALL UNITS WITH UNIFORM PARTICLE SIZE LESS THAN 1 INCH AND NOT MORE THAN 5% PASSING THROUGH THE NO. 200 SIEVE.
  - ROUNDED 'PEA' GRAVEL TYPE AGGREGATE IS NOT PERMISSIBLE SINCE IT DOES NOT HAVE THE NECESSARY FRICTIONAL PROPERTIES.
  - RECYCLED STONE MAY BE UTILIZED; HOWEVER, IT MUST HAVE LESS THAN 10% FINES.
- 2.06 DRAINAGE PIPE**
- DRAINAGE PIPE SHALL BE PERFORATED PVC OR CORRUGATED HDPE PIPE WITH A MINIMUM SIZE OF 4" IN DIAMETER.
- 2.07 GEOTEXTILE FABRIC**
- THE GEOTEXTILES SHALL BE A 4 OZ NON-HOVEN GEOTEXTILE.
  - THE GEOTEXTILES WHEN USED AS A SOIL SEPARATOR SHALL BE PERMEABLE ALLOWING WATER TO EFFECTIVELY PASS THROUGH THE FABRIC OPENINGS.
- 2.08 CONCRETE ADHESIVE: FOR INSTALLATION OF CAPPING UNITS**
- THE ADHESIVE SHALL BE HIGH STRENGTH EXTERIOR GRADE CONCRETE ADHESIVE THAT WILL PERMANENTLY SECURE THE CONCRETE CAP UNITS TO THE TOP UNITS OR STRIPS.
  - CONCRETE ADHESIVE SHALL ONLY BE UTILIZED IN SECURING CAPPING UNITS TO THE SEGMENTAL RETAINING WALL BLOCK. NO ADHESIVE SHALL BE USED TO SECURE BLOCK TO BLOCK CONNECTIONS.
- PART 3. CONSTRUCTION**
- 3.01 INSPECTION**
- THE OWNER OR OWNER'S GEOTECHNICAL ENGINEER IS RESPONSIBLE FOR VERIFYING THAT THE WALL INSTALLER MEETS ALL OF THE REQUIREMENTS OF THESE SPECIFICATIONS. THIS INCLUDES ALL SUBMITTALS FOR MATERIALS, QUALIFICATIONS, PROPER INSTALLATION OF THE WALL SYSTEM AND SOIL PARAMETERS. ALL WALLS MUST HAVE THE CONSTRUCTION CERTIFIED BY A LICENSED GEOTECHNICAL ENGINEER REGISTERED IN THE JURISDICTION OF THE PROJECT.
  - THE WALL INSTALLER'S FIELD CONSTRUCTION SUPERVISOR SHALL HAVE DEMONSTRATED EXPERIENCE AND BE QUALIFIED TO DIRECT ALL WORK AT THE SITE.
- 3.02 EXCAVATION**
- THE CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE PROJECT GRADING PLANS. THE WALL INSTALLER SHALL TAKE SECTIONS SHOWN ON THESE PLANS TO MINIMIZE OVER-EXCAVATION. OVER-EXCAVATION SHALL BE FILLED WITH COMPACTED INFILL MATERIALS OR AS DIRECTED BY THE OWNER'S GEOTECHNICAL ENGINEER.
  - BACK EXCAVATED CUT SHALL NOTCHED BENCHES OF 5 FEET VERTICAL FOR EVERY 2 FEET HORIZONTAL BENCH OR AS PER THE OWNER'S GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
  - ALL EXCAVATED MATERIALS THAT ARE USED FOR BACKFILLING REINFORCEMENT ZONE SHALL BE PROTECTED FROM THE WEATHER.
  - THE WALL INSTALLER SHALL VERIFY LOCATION OF EXISTING STRUCTURES AND UTILITIES PRIOR TO EXCAVATION. THE WALL INSTALLER SHALL ENSURE ALL SURROUNDING STRUCTURES ARE PROTECTED FROM THE EFFECTS OF WALL EXCAVATION. EXCAVATION SUPPORT (SHORING), IF REQUIRED, IS THE RESPONSIBILITY OF THE WALL INSTALLER.
- 3.03 FOUNDATION PREPARATION**
- FOUNDATION TRENCH SHALL BE EXCAVATED TO THE DIMENSIONS INDICATED ON THESE PLANS.
  - FOLLOWING EXCAVATION, THE FOUNDATION SOILS SHALL BE EXAMINED BY THE OWNER'S GEOTECHNICAL ENGINEER TO ASSURE THAT THE ACTUAL FOUNDATION SOIL STRENGTH MEETS OR EXCEEDS THE ALLOWABLE DESIGN BEARING CAPACITY.
  - SOILS NOT MEETING REQUIRED STRENGTH SHALL BE REMOVED AND REPLACED WITH APPROVED SELECT STRUCTURAL FILL OR GRAVEL AND COMPACTED TO 98% OF A STANDARD PROCTOR MAXIMUM DRY DENSITY FOR THE FULL DEPTH.
  - FOUNDATION MATERIALS SHALL BE COMPACTED TO A MINIMUM OF 98% STANDARD PROCTOR DRY DENSITY OR GREATER, BEFORE PLACING LEVELING PAD.
  - IN CASES OF POOR BEARING CAPACITY OR FILL SOILS, AN ALTERNATE BASE SHALL BE REQUIRED BASED UPON THE OWNER'S GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. ANY CHANGES TO THE DESIGN DUE TO POOR ON-SITE SOIL CONDITIONS MUST BE REQUESTED THROUGH ELA GROUP, INC. ELA GROUP, INC. WILL FORWARD THE REQUESTED CHANGES TO THE APPROPRIATE AUTHORITY. THE SUB-GRADE MUST BE COMPACTED WITH A "L-TAMP" OR "JUMPING JACK" TYPE COMPACTOR WITH A MINIMUM OF THREE PASSES PRIOR TO GEOSYNTHETIC REINFORCEMENT.
- 3.04 BASE LEVELING PAD**
- THE LEVELING PAD SHALL BE PLACED AS SHOWN IN THESE PLANS WITH A MINIMUM THICKNESS OF 6 INCHES AND A MINIMUM WIDTH OF 24 INCHES. THE LEVELING PAD SHALL BE AT A MINIMUM EXPOSED LATERALLY AT LEAST A DISTANCE OF 6" FROM THE TOE AND HEEL OF THE FIRST COURSE OF SEGMENTAL RETAINING WALL BLOCKS.
  - THE LEVELING PAD SHALL BE LEVEL HORIZONTALLY AND BACK TO FRONT TO ENSURE THE FIRST COURSE OF UNITS ARE LEVEL.
  - THE LEVELING PAD MATERIAL SHALL BE COMPACTED WITH A VIBRATORY PLATE COMPACTOR TO ACHIEVE A FIRM LEVEL-BEARING SURFACE ON WHICH TO PLACE THE FIRST COURSE OF SEGMENTAL RETAINING WALL UNITS.
  - CONSTRUCTION SHALL BE WITH MECHANICAL PLATE COMPACTORS TO ACHIEVE 98% OF A STANDARD PROCTOR MAXIMUM DRY DENSITY.
  - A THIN LAYER NOT EXCEEDING 1/4 OF AN INCH OF HELL GRADED SAND OR STONE DUST SHALL BE USED TO SMOOTH THE TOP OF THE LEVELING PAD.
- 3.05 UNIT INSTALLATION**
- ALL SRW UNITS SHALL BE INSTALLED AT THE PROPER ELEVATION AND ORIENTATION AS SHOWN ON THE WALL PROFILES AND DETAILS ON THESE PLANS.
  - THE SEGMENTAL RETAINING WALL UNITS SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA), LATEST EDITION, AND IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS.
  - THE DESIGN ENGINEER OR RECORD ENGINEER, ELA GROUP, INC., SPECIFICATIONS AND DRAWINGS SHALL GOVERN IN ANY CONFLICT BETWEEN THE NCMA AND MANUFACTURERS REQUIREMENTS.
  - THE FIRST COURSE OF SEGMENTAL RETAINING WALL UNITS SHALL BE PLACED ON THE LEVELING PAD. THE UNITS SHALL BE LEVELLED SIDE-TO-SIDE, FRONT-TO-REAR AND WITH ADJACENT UNITS, AND ALIGNED TO ENSURE SUFFICIENT CONTACT WITH THE LEVELING PAD. THE FIRST COURSE IS THE MOST IMPORTANT TO ENSURE ACCURATE AND ACCEPTABLE RESULTS. ALIGNMENT MAY BE DONE BY HEARS OF A STRING LINE OR OFFSETS FROM THE BASE LINE TO THE BACK OF THE UNITS. SRW UNITS SHALL HAVE A MINIMUM 4 INCH OVERLAP OF UNITS ON EACH SUCCESSIVE COURSE SO THAT THE WALL IS INTERLOCKED AND CONTINUOUS. NO GAPS GREATER THAN 1/4 OF AN INCH BETWEEN THE FACES OF ADJACENT UNITS ARE PERMITTED.
  - LAYOUT OF CURVES AND CORNERS SHALL BE INSTALLED IN ACCORDANCE WITH THE PLAN DETAILS OR IN ACCORDANCE WITH THE NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA), LATEST EDITION, AND IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS.
  - USE THE SMOOTH BACK OF THE UNITS FOR ALIGNMENT AND MEASURING TO ENSURE SMOOTH CURVES AND STRAIGHT WALLS.
  - THE SECOND COURSE OF SEGMENTAL RETAINING WALL UNITS SHALL BE PLACED TO ENSURE THE PROPER SETBACK (I.E. LUGS, LIPS OR FINS).
  - ALL UNITS SHALL BE LAID SNUGLY TOGETHER AND PARALLEL TO THE STRAIGHT OR CURVED LINES.
- 3.06 CAP INSTALLATION**
- SEGMENTAL RETAINING WALL CAPS SHALL BE PROPERLY ALIGNED AND SECURED TO THE UNDERLYING SEGMENTAL RETAINING WALL UNITS.
  - STRING LINES FOR STRAIGHT WALLS OR FLEX PIPES FOR CURVED WALLS SHALL BE USED TO ALIGN CAPPING UNITS.
  - THE CORNERSTONE STRAIGHT OR REVERSIBLE CAPS SHALL BE SECURED WITH AN ALL WEATHER EXTERIOR GRADE HIGH STRENGTH CONCRETE ADHESIVE.
  - SEGMENTAL RETAINING WALL CAPS UNITS SHALL BE PLACED WITH AN OVERLAP.
  - CAPS AND WALL UNITS SHALL BE CLEAR OR ALL DIRT, DUST AND STANDING WATER BEFORE PLACING THE CONCRETE ADHESIVE.
- 3.07 DRAINAGE GRAVEL**
- THE DRAINAGE AGGREGATE SHALL BE ASHTO #57 STONE OR EQUIVALENT AND DOES NOT NEED MECHANICAL COMPACTION.
  - DRAINAGE AGGREGATE SHALL BE INSTALLED TO THE LINE, GRADES AND SECTIONS SHOWN ON THESE PLANS. THE DRAINAGE GRAVEL SHALL BE PLACED TO A MINIMUM THICKNESS OF 12 INCHES BEHIND THE SEGMENTAL RETAINING WALL UNITS.
  - DRAINAGE GRAVEL SHALL ALSO FILL ALL VOIDS BETWEEN AND WITHIN THE UNITS. SEGMENTAL RETAINING WALL UNITS SHALL BE FILLED WITH DRAINAGE AGGREGATE. ENGINEER'S RECOMMENDATIONS. UNITS MAY NOT BE STAKED IN TWO OR THREE COURSE LIFTS THEN FILLED.
  - DRAINAGE PIPES ARE MANDATORY AND SHALL BE VENTED TO DAYLIGHT (AT THE END) OF THE WALL, AT A CENTRAL LOW POINT OF THE WALL, OR THROUGH THE WALL FACE AT MAXIMUM INTERVALS OF 40 FEET OR CENTER, NO MORE THAN 6 INCHES ABOVE FINISHED GRADE WHEN VENTED THROUGH THE WALL FACE.
  - THE DRAINAGE PIPES SHALL MAINTAIN GRAVITY FLOW OF WATER OUTSIDE THE REINFORCED GEOSYNTHETIC ZONE. THE DRAINAGE PIPES SHALL DAYLIGHT INTO A STORM SEWER OR ALONG A SLOPE AT AN ELEVATION LOWER THAN THE LOWEST POINT OF THE DRAINAGE PIPE WITHIN THE DRAINAGE AGGREGATE.
  - CHIMNEY DRAINS ARE ONLY REQUIRED WHEN GROUNDWATER IS ENCOUNTERED OR WHEN DIRECTED BY THE OWNER'S GEOTECHNICAL ENGINEER.
  - FILTER FABRIC IS NEITHER REQUIRED NOR RECOMMENDED BETWEEN THE 12 INCH DRAINAGE LAYER AND THE COMPACTED REINFORCED SOIL. THE EXISTION IS WHEN THE REINFORCED SOIL IS CLASSIFIED AS POORLY GRADED OR HELL GRADED SAND (SP OR SW) SINCE THESE SOILS ARE NON-COHESIVE AND COULD POTENTIALLY SLOUGH, CLOGGING THE DRAINAGE LAYER.
- 3.08 BACKFILL PLACEMENT**
- THE REINFORCED BACKFILL SHALL BE PLACED AS SHOWN IN THESE PLANS IN THE MAXIMUM COMPACTED LIFT THICKNESS OF 8 INCHES AND SHALL BE COMPACTED TO A MINIMUM OF 98% OF A STANDARD PROCTOR MAXIMUM DRY DENSITY AND AT A MOISTURE CONTENT WITHIN 2% OF OPTIMUM.
  - BACKFILL THE REINFORCED GEOSYNTHETIC ZONE BY PLACING MATERIALS FROM THE BACK OF THE WALL TOWARDS THE END OF THE GEOSYNTHETICS IN ORDER TO MAINTAIN TENSION ON THE REINFORCEMENT.
  - CONTRACTOR SHALL LEAVE A 12 INCH TRENCH BETWEEN THE BACK OF THE WALL AND THE REINFORCED ZONE MATERIALS TO ALLOW FOR CLEAN GRAVEL DRAINAGE MATERIALS. THIS PROCESS WILL PREVENT UNDER SOIL PRESSURES THAT COULD ROTATE THE SEGMENTAL RETAINING WALL UNITS FORWARD AND REDUCE THE SET BACK OF THE WALL. WALL COMPACTING THE REINFORCED ZONE.
  - THE BACKFILL SHALL BE PLACED AND SPREAD IN SUCH A MANNER AS TO ELIMINATE ANY IRREGULARITIES OR MOVEMENT OF THE GEOSYNTHETIC REINFORCEMENT AND THE SEGMENTAL RETAINING WALL UNITS.
  - COMPACTION TESTING SHALL BE DONE AT EVERY VERTICAL FOOT OF THE WALL HEIGHT AND EVERY 200 HORIZONTAL SQUARE FOOT OR AS SPECIFIED BY THE OWNER'S GEOTECHNICAL ENGINEER.
  - ONLY A VIBRATORY PLATE OR SMALL-SCALE VIBRATORY SMOOTH DRUM COMPACTOR EQUIPMENT SHALL BE ALLOWED WITHIN 4 FEET OF THE FRONT OF THE WALL FACE. COMPACTION WITHIN THE 4 FEET BEHIND THE WALL FACE SHALL BE ACHIEVED BY AT LEAST THREE PASSES OF A LIGHTWEIGHT MECHANICAL PLATE COMPACTOR OR ROLLER.
  - AT THE END OF EACH DAY OF OPERATION, THE WALL CONTRACTOR SHALL SLOPE THE LAST LEVEL OF BACKFILL AWAY FROM THE WALL FACING TO DIRECT WATER RUNOFF AWAY FROM THE WALL.
  - SOIL DENSITY TESTING SHALL NOT BE TAKEN WITHIN THE 2 FOOT AREA DIRECTLY BEHIND THE SEGMENTAL RETAINING WALL BLOCKS TO AVOID TESTING METHODS CONFLICTING WITH THE DRAINAGE COLLAR OF THE WALL.
- 3.09 CAP INSTALLATION**
- SEGMENTAL RETAINING WALL CAPS SHALL BE PROPERLY ALIGNED AND SECURED TO THE UNDERLYING SEGMENTAL RETAINING WALL UNITS.
  - STRING LINES FOR STRAIGHT WALLS OR FLEX PIPES FOR CURVED WALLS SHALL BE USED TO ALIGN CAPPING UNITS.
  - THE CORNERSTONE STRAIGHT OR REVERSIBLE CAPS SHALL BE SECURED WITH AN ALL WEATHER EXTERIOR GRADE HIGH STRENGTH CONCRETE ADHESIVE.
  - SEGMENTAL RETAINING WALL CAPS UNITS SHALL BE PLACED WITH AN OVERLAP.
  - CAPS AND WALL UNITS SHALL BE CLEAR OR ALL DIRT, DUST AND STANDING WATER BEFORE PLACING THE CONCRETE ADHESIVE.

## RETAINING WALL ENGINEER



**ENGINEERS & LANDSCAPE ARCHITECTS**  
 804 S. STATE COLLEGE, PA 16803  
 (814) 961-8220 FAX (814) 961-9505  
 www.elagroup.com

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Vest Shadash* Chief, Division of Land Development Date: 6/27/13

*William* Chief, Engineering Division Date: 6/27/13

*Daniel H.icycle* Director, Department of Planning and Zoning Date: 6/27/13

REVISIONS

2	03/2013	RETAINING WALL LOCATION
1	11/2012	REDLINE REVISIONS

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**

**OWNER / DEVELOPER**

MONTEVIDEO REALTY BUSINESS TRUST  
 C/O EXETER PROPERTY GROUP

140 N. GERMANTOWN PIKE, SUITE 150  
 PLYMOUTH MEETING, PA 19462  
 TEL: (610) 928-0766  
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 7172 columbia gateway drive (suite 100) columbia, md 21046-2900  
 410.872.8800 · fono 301.281.0148 · fax 410.872.8803

**ADDRESS CHART**

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELK RIDGE, MD	EX BLDG C
1	7587 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELK RIDGE, MD	PROP. BLDG 4

**PERMIT INFORMATION CHART**

SUBVISION NAME	SECTION/AREA	LOT/PARCEL#			
DORSEY RUN INDUSTRIAL CENTER		572,346,97,344,441			
FLAT#	GRID#	ZONING	TAX MAP#	ELECT. DISTR.	GENUS TRACT
L6457, F258	16	M-2	43	1ST	6012.02
WATER CODE	SEWER CODE				
400 (TG 550)	801				

DATE: 5/7/13

**AS-BUILT CERTIFICATION**

NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.

*Dr. Plan* 7/18/2012 DATE

RECORD AND REG. NO. 27223 EXPIRATION DATE: 3/19/2018 DATE OF AS-BUILT: 6/17/2014 & 6/17/2017

STATE OF MARYLAND PROFESSIONAL ENGINEER

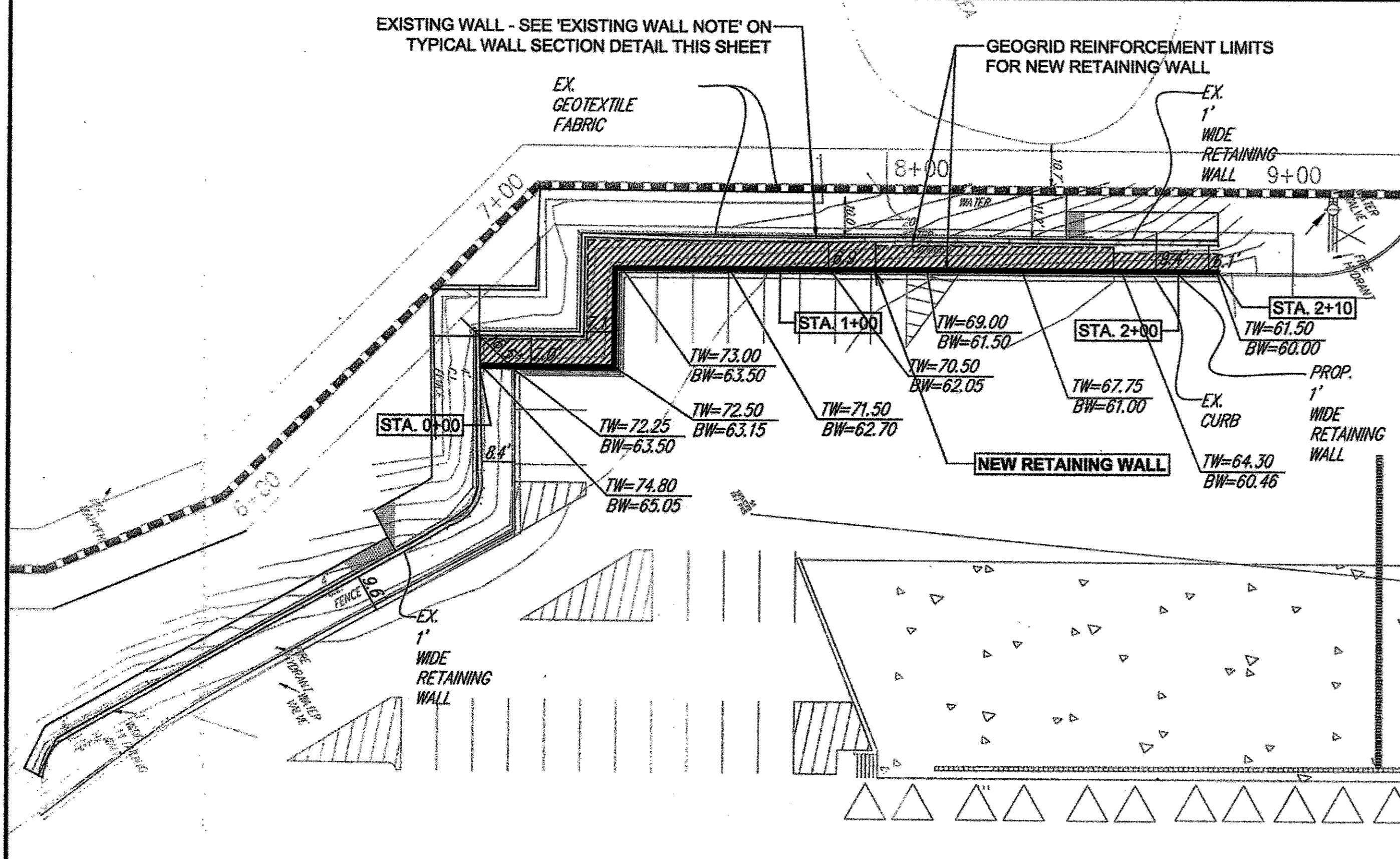
STATE OF MARYLAND PROFESSIONAL ENGINEER

DESIGN: ENJ SCALE: PROJECT: 03061.008.07  
 DRAWN: DAM DATE: SEPT 26 2012  
 CHECKED: ENJ APPROVED: HRZ

45 OF 45

SDP-08-116

MDC-855

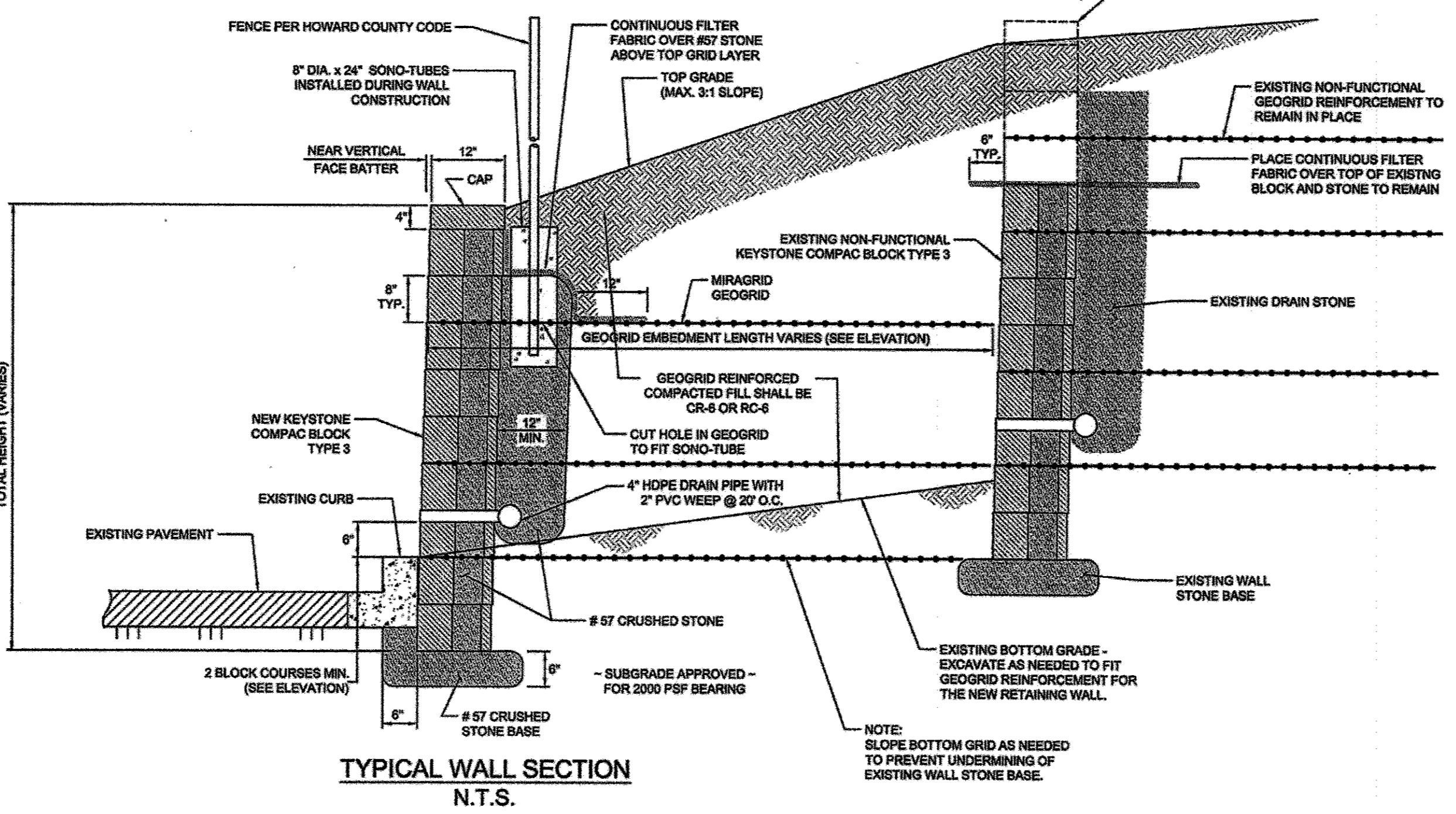


**NEW WALL LOCATION PLAN**  
1" = 20'  
(N.T.S.)

**SPECIFICATIONS**  
**MODULAR CONCRETE BLOCK RETAINING WALL**

- PART 1: GENERAL**
- 1.01 DESCRIPTION**
- A. WORK SHALL CONSIST OF FURNISHING AND CONSTRUCTION OF A MODULAR RETAINING WALL SYSTEM IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, DESIGN, AND DIMENSIONS SHOWN ON THE PLANS.
- B. WORK INCLUDES PREPARING FOUNDATION SOIL, FURNISHING AND INSTALLING LEVELING PAD, UNIT DRAINAGE FILL AND BACKFILL TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS.
- C. WORK INCLUDES FURNISHING AND INSTALLING GEORGRID SOIL REINFORCEMENT OF THE TYPE, SIZE, LOCATION, AND LENGTHS DESIGNATED ON THE CONSTRUCTION DRAWINGS.
- 1.02 DELIVERY, STORAGE AND HANDLING**
- A. CONTRACTOR SHALL CHECK ALL MATERIALS UPON DELIVERY TO ASSURE THAT THE PROPER TYPE, GRADE, COLOR, AND CERTIFICATION HAS BEEN RECEIVED.
- B. CONTRACTOR SHALL PROTECT ALL MATERIALS FROM DAMAGE DUE TO JOB SITE CONDITIONS AND IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS. DAMAGED MATERIALS SHALL NOT BE INCORPORATED INTO THE WORK.
- PART 2: PRODUCTS**
- 2.01 MODULAR CONCRETE RETAINING WALL UNITS**
- A. MODULAR CONCRETE UNITS SHALL CONFORM TO THE FOLLOWING ARCHITECTURAL REQUIREMENTS:  
FACE FINISH - SCULPTURED ROCK FACE IN ANGULAR TRI-PLANNER OR FLAT CONFIGURATION. OTHER FACE FINISHES WILL NOT BE ALLOWED WITHOUT WRITTEN APPROVAL OF OWNER.  
BOND CONFIGURATION - RUNNING WITH BONDS NOMINALLY LOCATED AT MIDPOINT BETWEEN ADJACENT UNITS, IN BOTH STRAIGHT AND CURVED ALIGNMENTS.  
EXPOSED SURFACES OF UNITS SHALL BE FREE OF CHIPS, CRACKS OR OTHER IMPERFECTIONS WHEN VIEWED FROM A DISTANCE OF 10 FEET UNDER OUPLED LIGHTING.
- B. MODULAR CONCRETE MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C1972 - STANDARD SPECIFICATIONS FOR SEGMENTAL RETAINING WALL UNITS.
- C. MODULAR CONCRETE UNITS SHALL CONFORM TO THE FOLLOWING STRUCTURAL AND GEOMETRIC REQUIREMENTS MEASURED IN ACCORDANCE WITH APPROPRIATE REFERENCED STANDARDS:  
COMPRESSIVE STRENGTH = 3500 PSI MINIMUM;  
ABSORPTION = 9% MAXIMUM (9% IN NORTHERN STATES) FOR STANDARD WEIGHT AGGREGATES;  
DIMENSIONAL TOLERANCES = ±1/8" FROM NOMINAL UNIT DIMENSIONS NOT INCLUDING ROUGH SPLIT FACE, ±1/16"  
UNIT HEIGHT - TOP AND BOTTOM PLANES; UNIT SIZE - 8" (H) X 16" (W) X 12" (D) MINIMUM.
- 2.02 SHEAR CONNECTORS**
- A. SHEAR CONNECTORS SHALL BE 1/2 INCH DIAMETER THERMOSET EPOXY RESIN FIBERGLASS REINFORCED RODS OR EQUIVALENT TO PROVIDE CONNECTION BETWEEN VERTICALLY AND HORIZONTALLY ADJACENT UNITS. STRENGTH OF SHEAR CONNECTORS BETWEEN VERTICAL ADJACENT UNITS SHALL BE APPLICABLE OVER A DESIGN TEMPERATURE OF 10 DEGREES F TO +100 DEGREES F. B. SHEAR CONNECTORS SHALL BE CAPABLE OF HOLDING THE GEORGRID IN THE PROPER DESIGN POSITION DURING GRID PRE-TENSIONING AND BACKFILLING.
- 2.03 BASE LEVELING PAD MATERIAL**
- A. MATERIAL SHALL CONSIST OF A COMPACTED #57 CRUSHED STONE BASE AS SHOWN ON THE CONSTRUCTION DRAWINGS.
- 2.04 UNIT DRAINAGE FILL**
- A. UNIT DRAINAGE FILL SHALL CONSIST OF #57 CRUSHED STONE.
- 2.05 REINFORCED BACKFILL**
- A. REINFORCED BACKFILL SHALL TYPE SM, BE FREE OF DEBRIS AND MEET THE FOLLOWING GRADATION TESTED IN ACCORDANCE WITH ASTM D-422 AND MEET OTHER PROPERTIES SHOWN ON THE PLAN:
- | SILO SIZE | PERCENT PASSING |
|-----------|-----------------|
| 2 INCH    | 100-75          |
| 3/4 INCH  | 100-75          |
| NO. 40    | 0-40            |
| NO. 200   | 0-35            |
- PLASTICITY INDEX (PI) <10 AND LIQUID LIMIT <35 PER ASTM D-4318.
- B. MATERIAL CAN BE SITE EXCAVATED SOILS WHERE THE ABOVE REQUIREMENTS CAN BE MET. UNSUITABLE SOILS FOR BACKFILL (HIGH PLASTIC CLAYS OR ORGANIC SOILS) SHALL NOT BE USED IN THE REINFORCED SOIL MASS.
- 2.06 GEORGRID SOIL REINFORCEMENT**
- A. GEOSYNTHETIC REINFORCEMENT SHALL CONSIST OF GEORGRIDS MANUFACTURED SPECIFICALLY FOR SOIL REINFORCEMENT APPLICATIONS AND SHALL BE
- UNIT WEIGHT - 75 LBS/UNIT MINIMUM FOR STANDARD WEIGHT AGGREGATES;  
INTER-UNIT SHEAR STRENGTH - 1000 PLF MINIMUM AT 2 PSI NORMAL PRESSURE; AT 2 PSI NORMAL FORCE.  
GEORGRID UNIT PEAK CONNECTION STRENGTH - 1000 PLF MINIMUM
- D. MODULAR CONCRETE UNITS SHALL CONFORM TO THE FOLLOWING CONSTRUCTION REQUIREMENTS:  
VERTICAL SETBACK = 1/8" PER COURSE (NEAR VERTICAL) OR 1" PER COURSE PER THE DESIGN; ALIGNMENT AND GRID POSITIONING MECHANISM - FIBERGLASS FWS, TWO PER UNIT MINIMUM;  
MAXIMUM HORIZONTAL GAP BETWEEN ERECTED UNITS SHALL BE - 1/2 INCH.
- 2.07 DRAINAGE PIPE**
- A. THE DRAINAGE PIPE SHALL BE PERFORATED CORRUGATED HDPE PIPE MANUFACTURED IN ACCORDANCE WITH ASTM D-1248.
- PART 3: EXECUTION**
- 3.01 EXCAVATION**
- A. CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS. OWNER'S REPRESENTATIVE SHALL BE RESPONSIBLE FOR INSPECTING AND APPROVING THE EXCAVATION PRIOR TO PLACEMENT OF LEVELING MATERIAL OR FILL SOILS.
- 3.02 BASE LEVELING PAD**
- A. LEVELING PAD MATERIAL SHALL BE PLACED TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS, TO A MINIMUM THICKNESS OF 8 INCHES AND EXTEND LATERALLY A MINIMUM OF 6" IN FRONT AND BEHIND THE MODULAR WALL UNIT.  
B. LEVELING PAD SHALL BE PREPARED TO INSURE FULL CONTACT TO THE BASE SURFACE OF THE CONCRETE UNITS.
- 3.03 MODULAR UNIT INSTALLATION**
- A. FIRST COURSE OF UNITS SHALL BE PLACED ON THE LEVELING PAD AT THE APPROPRIATE LINE AND GRADE. ALIGNMENT AND LEVEL SHALL BE CHECKED IN ALL DIRECTIONS AND INSURE THAT ALL UNITS ARE IN FULL CONTACT WITH THE BASE AND PROPERLY SEATED.  
B. PLACE THE FRONT OF UNITS SIDE-BY-SIDE. DO NOT LEAVE GAPS BETWEEN ADJACENT UNITS. LAYOUT OF CORNERS AND CURVES SHALL BE IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.  
C. INSTALL SHEARCONNECTING DEVICES PER MANUFACTURERS' RECOMMENDATIONS.  
D. PLACE AND COMPACT DRAINAGE FILL WITHIN AND BEHIND WALL UNITS. PLACE AND COMPACT BACKFILL SOIL BEHIND DRAINAGE FILL FOLLOW WALL ERECTION AND DRAINAGE FILL CLOSELY WITH STRUCTURE BACKFILL.  
E. MAXIMUM STACKED VERTICAL HEIGHT OF WALL UNITS, PRIOR TO UNIT DRAINAGE FILL AND BACKFILL PLACEMENT AND CONSTRUCTION, SHALL NOT EXCEED THREE COURSES.
- 3.04 STRUCTURAL GEORGRID INSTALLATION**
- A. GEORGRID SHALL BE ORIENTED WITH THE HIGHEST STRENGTH AXIS PERPENDICULAR TO THE WALL ALIGNMENT.  
B. GEORGRID REINFORCEMENT SHALL BE PLACED AT THE STRENGTH, LENGTHS, AND ELEVATIONS SHOWN ON THE CONSTRUCTION DESIGN DRAWINGS OR AS DIRECTED BY THE ENGINEER.  
C. THE GEORGRID SHALL BE LAY HORIZONTALLY ON COMPACTED BACKFILL AND ATTACHED TO THE MODULAR WALL UNITS. PLACE THE NEXT COURSE OF MODULAR CONCRETE UNITS OVER THE GEORGRID. THE GEORGRID SHALL BE PULLED TAUT, AND ANCHORED PRIOR TO BACKFILL PLACEMENT ON THE GEORGRID.  
D. GEORGRID REINFORCEMENTS SHALL BE CONTINUOUS
- THROUGHOUT THEIR EMBEDMENT LENGTHS AND PLACED SIDE-BY-SIDE TO PROVIDE 100% COVERAGE AT EACH LEVEL. SPICED CONNECTIONS BETWEEN SHORTER PIECES OF GEORGRID OR GAPS BETWEEN ADJACENT PIECES OF GEORGRID ARE NOT PERMITTED.
- 3.05 REINFORCED BACKFILL PLACEMENT**
- A. REINFORCED BACKFILL SHALL BE PLACED, SPREAD, AND COMPACTED IN SUCH A MANNER THAT MINIMIZES THE DEVELOPMENT OF SLACK IN THE GEORGRID AND INSTALLATION DAMAGE.  
B. REINFORCED BACKFILL SHALL BE PLACED AND COMPACTED IN SUCH A MANNER THAT EXCEEDS 8 INCHES WHERE HAND COMPACTION IS USED, OR 8 - 10 INCHES WHERE HEAVY COMPACTION EQUIPMENT IS USED. LIFT THICKNESS SHALL BE DECREASED TO ACHIEVE THE REQUIRED DENSITY AS REQUIRED.  
C. REINFORCED BACKFILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D958. THE MOISTURE CONTENT OF THE BACKFILL MATERIAL PRIOR TO AND DURING COMPACTION SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT EACH LAYER AND SHALL BE + 3% TO - 3% OF OPTIMUM.  
D. ONLY LIGHTWEIGHT HAND-OPERATED EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET FROM THE TAIL OF THE MODULAR CONCRETE UNIT.  
E. TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY UPON THE GEORGRID REINFORCEMENT. A MINIMUM FILL THICKNESS OF 8 INCHES IS REQUIRED PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEORGRID. TRACKED VEHICLE TIRING SHOULD BE KEPT TO A MINIMUM TO PREVENT TRACKS FROM DISPLACING THE FILL AND DAMAGING THE GEORGRID.  
F. RUBBER Tired EQUIPMENT MAY PASS OVER GEORGRID REINFORCEMENT AT SLOW SPEEDS, LESS THAN 10 MPH. SUDDEN BRAKING AND SHARP TURNING SHALL BE AVOIDED.  
G. AT THE END OF EACH DAY'S OPERATION, THE CONTRACTOR SHALL SLOPE THE LAST LIFT OF REINFORCED BACKFILL AWAY FROM THE WALL UNITS TO DIRECT RUNOFF AWAY FROM WALL FACE. THE CONTRACTOR SHALL NOT ALLOW SURFACE RUNOFF FROM ADJACENT AREAS TO ENTER THE WALL CONSTRUCTION SITE.
- 3.06 CAP INSTALLATION**
- A. CAP UNITS SHALL BE GLUED TO UNDERLYING UNITS WITH AN ALL-WEATHER ADHESIVE RECOMMENDED BY THE MANUFACTURER.  
B. AS A MINIMUM, QUALITY ASSURANCE TESTING SHOULD INCLUDE FOUNDATION SOIL INSPECTION, SOIL AND BACKFILL TESTING, VERIFICATION OF DESIGN PARAMETERS, AND OBSERVATION OF CONSTRUCTION FOR GENERAL COMPLIANCE WITH DESIGN DRAWINGS AND SPECIFICATIONS.

**EXISTING WALL NOTE:**  
WITH THE NEW WALL IN PLACE, EXISTING WALL SYSTEM (BLOCKS AND GEORGRIDS) SITUATED BEHIND NEW WALL WILL NO LONGER BE FUNCTIONAL. EXISTING BLOCK COURSES FOR THE EXISTING WALL MAY THEN BE DEMOLISHED OR STAY IN PLACE (BURIED) AT CONTRACTOR'S DISCRETION.



**TYPICAL WALL SECTION**  
N.T.S.

**HOWARD COUNTY NOTES:**

- NO TREES SHALL BE PLANTED WITHIN 10 FEET OF THE TOP OF THE RETAINING WALL.
- RETAINING WALLS SHALL ONLY BE CONSTRUCTED UNDER THE OBSERVATION OF A REGISTERED PROFESSIONAL ENGINEER AND A REGISTERED, LICENSED, OR EQUIVALENT CERTIFIED SOILS TECHNICIAN.
- ONE SOIL BORING SHALL BE REQUIRED EVERY ONE HUNDRED FEET ALONG THE ENTIRE LENGTH OF THE WALL. COPIES OF ALL BORING REPORTS SHALL BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION.
- THE REQUIRED BEARING PRESSURE BENEATH THE WALL SYSTEM SHALL BE VERIFIED IN THE FIELD BY A CERTIFIED SOILS TECHNICIAN. TESTING DOCUMENTATION MUST BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO START OF CONSTRUCTION. THE REQUIRED BEARING TEST SHALL BE THE DYNAMIC CONE PENETROMETER TEST ASTM STP-399.
- THE SUITABILITY OF FILL MATERIAL SHALL BE CONFIRMED BY THE ON-SITE SOILS TECHNICIAN. EACH 8" LIFT MUST BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY AND THE TESTING REPORT SHALL BE MADE AVAILABLE TO THE HOWARD COUNTY INSPECTOR UPON COMPLETION OF CONSTRUCTION.
- WALLS SHALL NOT BE CONSTRUCTED ON UNCERTIFIED FILL MATERIAL.
- WALLS SHALL NOT BE CONSTRUCTED WITHIN A HOWARD COUNTY RIGHT-OF-WAY OR EASEMENT.

**PROFESSIONAL CERTIFICATION**  
I HEREBY CERTIFY THAT THESE PLANS 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. 2488  
EXPIRATION DATE: 08/31/21



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Walter Landwehr* 9-28-16  
 Chief, Division of Land Development  
*John Johnson* 9-26-16  
 Chief, Development Engineering Division  
*William J. Zappala* 9-30-16  
 Director, Department of Planning and Zoning

4 4/15 RETAINING WALL + W/L STUB

**NORTH SIDE REDEVELOPMENT AT DORSEY RUN INDUSTRIAL CENTER**  
**OWNER / DEVELOPER**  
 MONTEVIDEO REALTY 140 N. GERMANTOWN PIKE, SUITE 150  
 BUSINESS TRUST PLYMOUTH MEETING, PA 19462  
 C/O EXETER PROPERTY GROUP TEL: (610) 828-0756  
 FAX: (610) 828-5550

**christopher consultants**  
 engineering - surveying - land planning  
 christopher consultants, inc.  
 7172 columbia gateway drive suite 100 | columbia, md 21046-2990  
 410.672.8890 - fax: 410.672.8893

ADDRESS CHART		
PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKCRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKCRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKCRIDGE, MD	PROP. BLDG 4

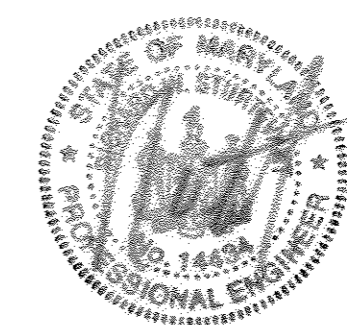
PERMIT INFORMATION CHART		
SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER	572,346,97,344,441	
PLAT# L6457, E 258	GRID# 16 ZONING M-2 TAX MAP# 43 ELECT. DISTR. 1ST CENSUS TRACT 6012.02	
WATER CODE 400 (TG 550)	SEWER CODE 801	

TITLE: **WALL SECTIONS**

DESIGN: NY SCALE: PROJECT: 03067.006.07  
 DRAWN: DAM DATE: SEPT 06 2012  
 CHECKED: ENJ APPROVED: WRZ

45A OF 45

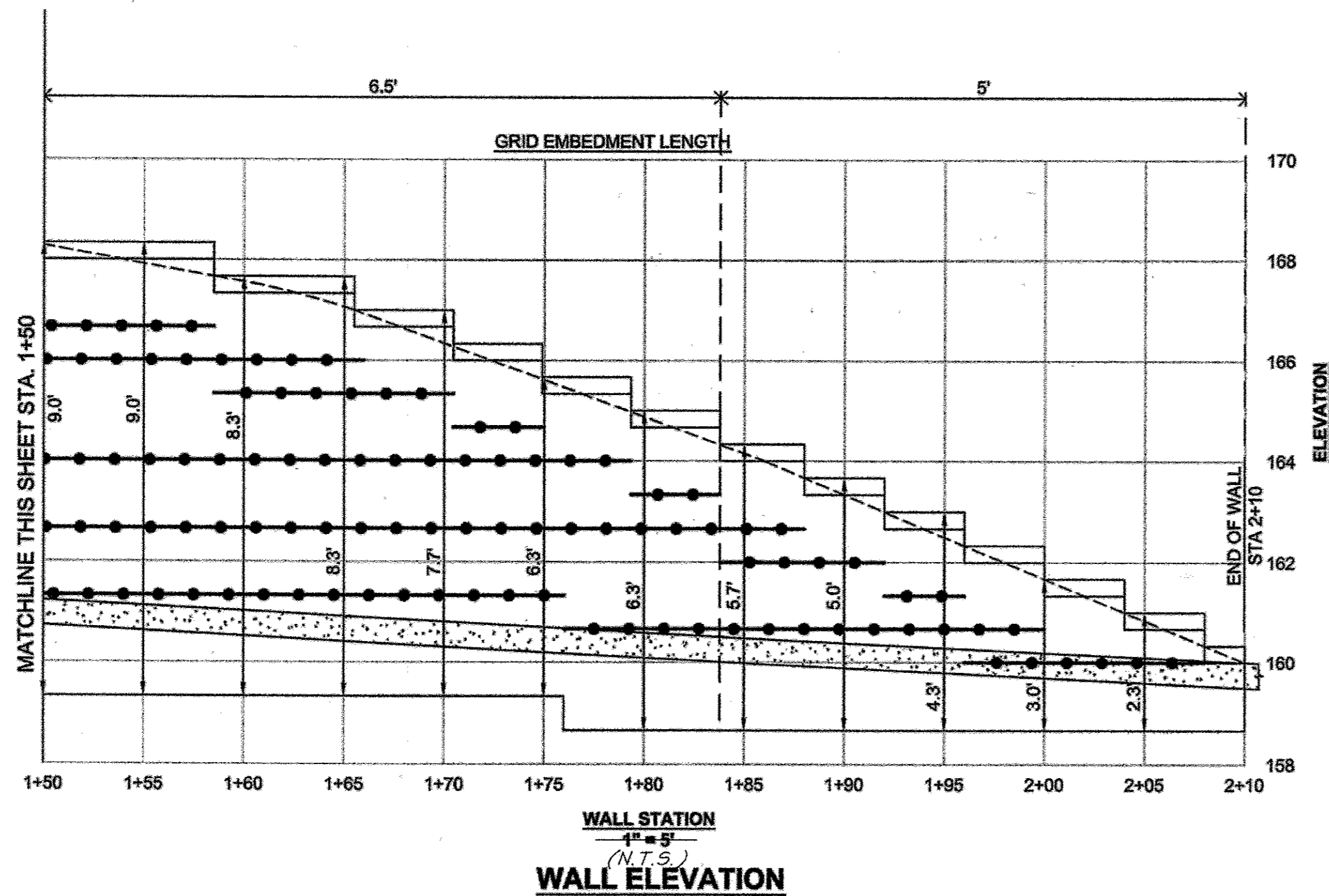
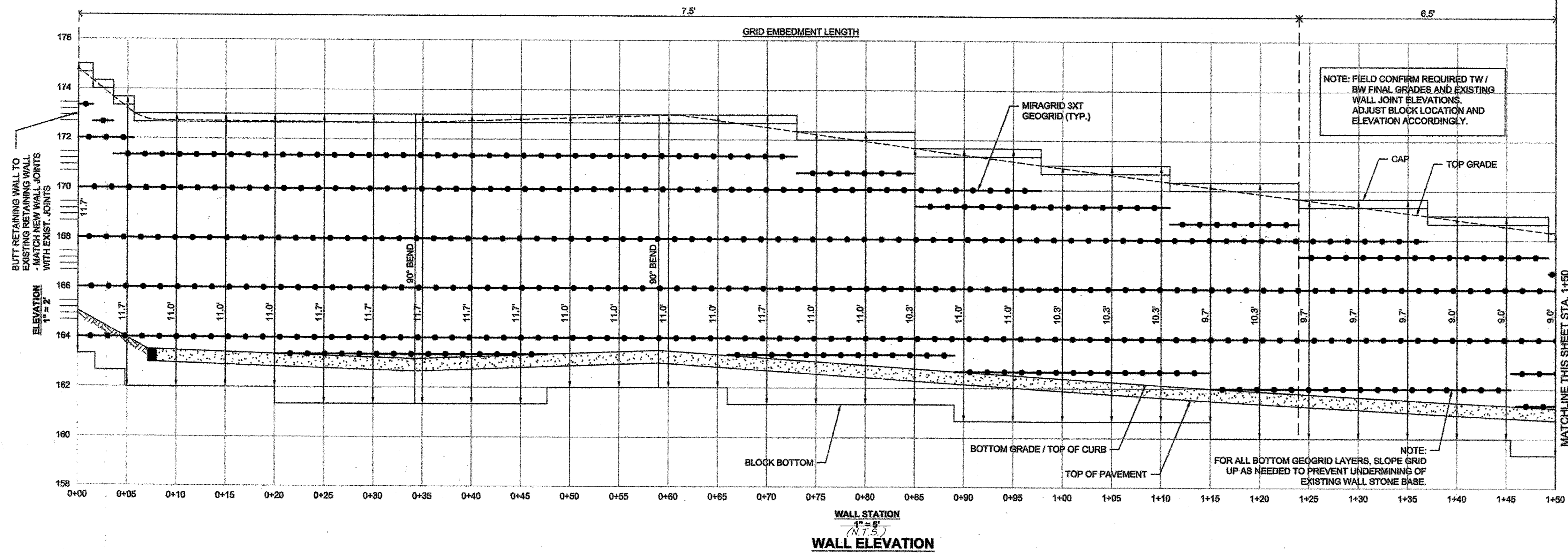
**AS-BUILT CERTIFICATION**  
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.  
*David S. Hillis* 7/18/2017  
 DATE  
 MARYLAND REG. NO. 27223 EXPIRATION DATE: 3/19/2018  
 DATE OF AS-BUILT: 6/17/2014 & 6/27/2017



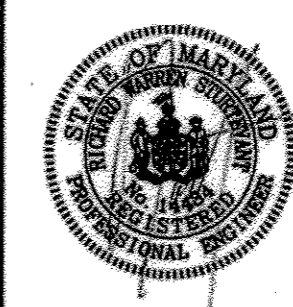
**HILLIS-CARNES ENGINEERING ASSOCIATES**  
 12075 Guilford Road, Suite A Annapolis Junction, Maryland  
 (410) 890-4788 WWW.HCEA.COM Fax: (410) 890-4098

**NEW RETAINING WALL PLAN & CONSTRUCTION DETAILS**  
**DORSEY RUN INDUSTRIAL CENTER**  
 HOWARD COUNTY, MARYLAND

REVISION NO.	DESCRIPTION	DATE	JOB NUMBER:	DESIGNED BY:
			15439-A	HM
			SCALE: AS SHOWN	DRAWN BY: HM
			DATE: 10/19/2015	APPROVED BY: RWS



PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE PLANS 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. 14836  
 EXPIRATION DATE: 8/31/21



**HILLIS-CARNES**  
 ENGINEERING ASSOCIATES  
 10979 Guilford Road, Suite A  
 Annapolis Junction, Maryland  
 (410) 880-4788 WWW.HCEA.COM Fax: (410) 880-4098

**NEW RETAINING WALL ELEVATION  
 DORSEY RUN INDUSTRIAL CENTER  
 HOWARD COUNTY, MARYLAND**

REVISION NO.	DESCRIPTION	DATE

JOB NUMBER: 15439-A	DESIGNED BY: HM
SCALE: AS SHOWN	DRAWN BY: HM
DATE: 10/19/2015	APPROVED BY: RWS

2 of 2 SHEET

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Robert L. ...* 9-28-16  
 Chief, Division of Land Development Date  
*Chris ...* 9-26-16  
 Chief, Development Engineering Division Date  
*William ...* 9-30-16  
 Director, Department of Planning and Zoning Date

4 A/15 RETAINING WALL + W/L STUB

**NORTH SIDE REDEVELOPMENT  
 AT DORSEY RUN INDUSTRIAL CENTER**

OWNER / DEVELOPER  
 MONTEVIDEO REALTY 140 W. GERMANTOWN PIKE, SUITE 150  
 BUSINESS TRUST PLYMOUTH MEETING, PA 19462  
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 410.572.8690 · metro 301.581.0148 · fax 410.872.8693

PARCEL#	STREET ADDRESS	BUILDING
1	7595 MONTEVIDEO ROAD, ELKRIDGE, MD	EX. BLDG C
1	7587 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 5
1	7591 MONTEVIDEO ROAD, ELKRIDGE, MD	PROP. BLDG 4

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL#
DORSEY RUN INDUSTRIAL CENTER		572, 346, 97, 344, 441
PLAT# L6457, F.258	GRID# 16 ZONING M-2 TAX MAP# 43 ELECT. DIST. 1ST CENSUS TRACT 6012.02	
WATER CODE 400 (TG 550)	SEWER CODE B01	

DESIGN: NM	SCALE: 1"=2'	PROJECT: 09067.008.07
DRAWN: DAM	DATE: SEPT 06 2012	<b>45B</b> of 45
CHECKED: ENJ	APPROVED: WRZ	

**AS-BUILT CERTIFICATION**  
 NOTE: THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET.  
*David Spitzer* 7/18/2017  
 MARYLAND REG. NO. 27223 EXPIRATION DATE: 2/19/2018  
 DATE OF AS-BUILT: 6/17/2014 & 6/27/2017

