

GENERAL LEGEND

	EXISTING SANITARY MANHOLE
	PROPOSED SANITARY SEWER
	EXISTING SANITARY SEWER
	PROPOSED FORCE MAIN WITH CONC. THRUST BLOCK
	PROPOSED WATER MAIN
	EXISTING FORCE MAIN WITH CONC. THRUST BLOCK
	EXISTING WATER LINE
	EXISTING U.G. UTILITIES (TELE., T.V., ELEC.)
	PROPOSED U.G. UTILITIES (TELE., T.V., ELEC.)
	EXISTING OVERHEAD ELEC.
	PROPOSED OVERHEAD ELEC.
	EXIST. STORM SEWER
	EXIST. STORM MANHOLE
	PROP. STORM SEWER
	PROP. STORM MANHOLE
	EXISTING GAS LINE
	PROPOSED GAS LINE
	TREE ROW
	WETLANDS
	RIGHT-OF-WAY
	EXISTING EASEMENT
	PROPOSED EASEMENT
	EXISTING EDGE OF PAVEMENT
	EXISTING CURBING
	PROPOSED CURBING (1' OFFSET)
	PROPOSED EDGE OF PAVEMENT
	LIMITS OF DISTURBANCE
	SOIL BOUNDARY
	SOIL BOUNDARY
	ZONING BOUNDARY
	EXISTING PROPERTY LINE
	PROPOSED PROPERTY LINE
	ADJOINER PROPERTY LINE
	BUILDING RESTRICTION/SETBACK LINE
	EXIST. CONTOUR LINE
	PROP. CONTOUR LINE
	EXIST. CHAIN-LINK FENCE
	EXIST. STOCKADE FENCE
	EXIST. GUIDE RAIL
	PROP. CHAIN-LINK FENCE
	PROP. STOCKADE FENCE
	PROP. GUIDE RAIL

	STORM SEWER ENDWALL
	FLARED END SECTION
	EXISTING SPOT GRADE
	PROPOSED SPOT GRADE
	PROPOSED CURB SPOT GRADE
	FOOTCANDLE INTENSITY
	FOUND IRON PIN & CONC. MON.
	IRON PIN & CONC. MON. TO BE SET
	BENCHMARK (ELEV.)
	EXISTING SIGNS
	PROPOSED SIGNS
	EXISTING LIGHT
	PROPOSED LIGHT
	UTILITY POLE
	UTILITY POLE WITH GUY WIRE
	EXISTING BUILDING
	PROPOSED BUILDING
	EXISTING CONC. SIDEWALK/PAD
	PROPOSED CONC. SIDEWALK/PAD
	POSSIBLE WELL LOCATION
	WATER VALVE, EXIST./PROP.
	GAS VALVE, EXIST./PROP.
	FIRE HYDRANT, EXIST./PROP.
	EXISTING STORM WATER INLET (TYPE C & M)
	PROPOSED STORM WATER INLET (TYPE C & M)
	POST DRAINAGE LINE
	PRE DRAINAGE LINE
	EXISTING TEST PIT AND CALL OUT

SITE DEVELOPMENT PLAN

PROPOSED BUILDING

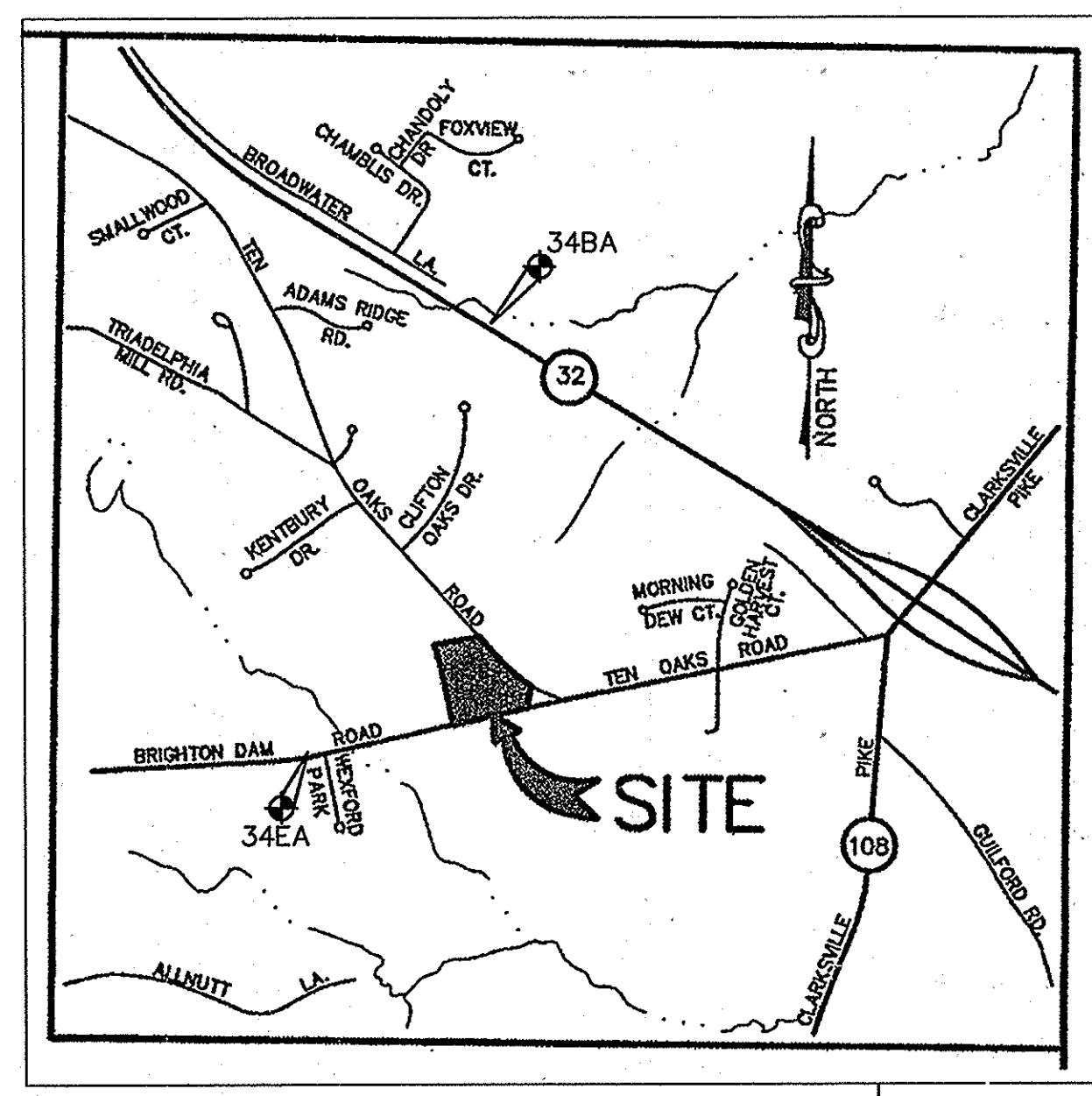
FOR

THE CHURCH OF

JESUS CHRIST

OF LATTER-DAY SAINTS

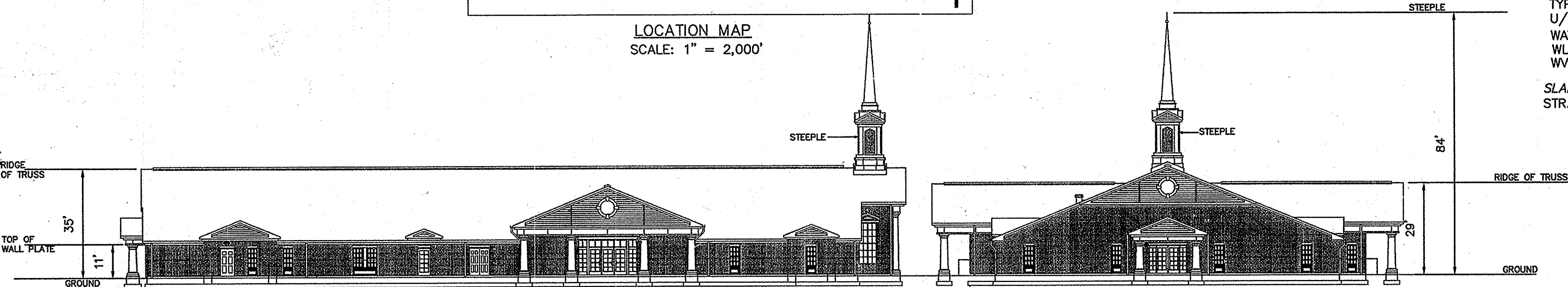
HOWARD COUNTY, MARYLAND
BRIGHTON DAM & TEN OAKS ROAD
CLARKSVILLE, MARYLAND



HOWARD COUNTY CONTROL STATIONS

STA. 34BA	N 563,852.4661	E 1,324,872.1963	EL. 450.84 (FEET)
STA. 34EA	N 559,441.247	E 1,320,528.02	EL. 496.36 (FEET)

NOTES:
1. HORIZONTAL DATUM IS BASED ON THE MARYLAND STATE COORDINATE SYSTEM NAD 83/91.
2. VERTICAL DATUM IS BASED ON HOWARD COUNTY MONUMENTS 34EA AND 34BA.

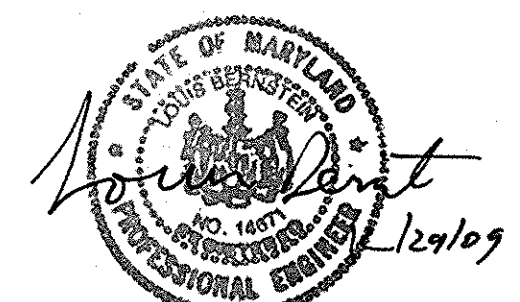


Sheet Number	Sheet Title
1 OF 32	COVER SHEET
2 OF 32	NOTES
3 OF 32	LAYOUT PLAN
4 OF 32	GRADING PLAN
5 OF 32	HANDICAPPED PARKING AREA BLOW-UPS/SOIL BORING
6 OF 32	UTILITY PLAN
7 OF 32	EROSION CONTROL PLAN
8 OF 32	SITE LIGHTING PLAN
9 OF 32	LIGHTING DETAILS
10 OF 32	CONSTRUCTION DETAILS
11 OF 32	CONSTRUCTION DETAILS
12 OF 32	LANDSCAPING PLAN
13 OF 32	EROSION CONTROL DETAILS
14 OF 32	EROSION CONTROL DETAILS
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27 OF 32	MAINTENANCE OF TRAFFIC PLAN
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29 OF 32	TEN OAKS ROAD SIGHT DISTANCE PLAN
30 OF 32	BRIGHTON DAM ROAD SIGHT DISTANCE PLAN

SIDE ELEVATION VIEW
SCALE: 1"=20'

FRONT ELEVATION VIEW
SCALE: 1"=20'

NO AS-BUILT INFORMATION IS REQUIRED



PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY CERTIFIED LICENSED PROFESSIONAL UNDER THE LAWS OF THE STATE OF MARYLAND.
Eduardo J. Jara 06/29/15
Robert W. Nelson MD, P.E. 6/10/18

PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland, License No. P.E. 29487.

PERMIT/ADDRESS CHART

PARCEL: 399	STREET ADDRESS: 6020 TEN OAKS ROAD
SUBDIVISION NAME: HUNTINGTON MANOR SEC. II	LOT # 6
PLAT # 10260	BLOCK #10 & #11 ZONING RR-DEO TAX MAP # 34
ELECT. DIST: 5TH	CENSUS TRACT: 6051.01 SECT./AREA SECTION 2
WATER CODE: PRIVATE	SEWER CODE: PRIVATE
FINAL PLAT #F-06-132	

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
COUNTY HEALTH OFFICER DATE 7/23/08
HOWARD COUNTY HEALTH DEPARTMENT

SITE ANALYSIS DATA CHART:

DEVELOPER/APPLICANT/OWNER: THE CORPORATION OF THE PRESIDING BISHOP OF THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS
A UTAH CORPORATION SOLE
50 EAST NORTH TEMPLE
SALT LAKE CITY, UTAH 84143

C/O MASER CONSULTING
2251 E BROADWAY DR
SUITE 110
STERLING, VA 20166
703-430-4220

SITE ADDRESS: 6020 TEN OAKS ROAD
ELECTION DISTRICT: 5TH, HOWARD COUNTY, MARYLAND
TOTAL PROJECT AREA: 52,276 SQ. FT. OR 11.99991 ACRES
AREA OF PLAN SUBMISSION: 52,276 SQ. FT. OR 11.99991 ACRES
LIMIT OF DISTURBED AREA: 4,366,117 SQ. FT. OR 10.01 AC

PRESENT ZONING DESIGNATION: RR-DEO
PROPOSED USES FOR SITE AND STRUCTURE: PLACE OF WORSHIP AND CHURCH
FLOOR SPACE ON EACH LEVEL: ONLY 1 FLOOR= 16,588 SQ. FT.
NUMBER PARKING SPACES REQUIRED BY HOWARD COUNTY REGULATIONS AND/OR BY FDP CRITERIA: 85 SPACES
NUMBER PARKING SPACES PROVIDED: 103 SPACES
BUILDING COVERAGE OF SITE 0.3798 ACRES AND 3.17% OF GROSS AREA
APPLICABLE DPZ FILE REFERENCES BA-04-07C, WP-03-150, F-86-128, VP-85-30, AND F-06-132(PLAT OF REVISION)

DEED BOOK LIBER: 01556 FOLIO: 0606
TAX MAP: 34 TAX GRID: 10 PARCEL: 399
TOTAL LOT AREA: 52,276 SQ. FT. OR 11.99991 ACRES
TOTAL NUMBER OF PROPOSED LOTS: 1
LOT: HUNTINGTON MANOR ESTATES SECTION 2, LOT 6
PROPOSED WATER SERVICE: PRIVATE
PROPOSED SANITARY SERVICE: PRIVATE

	ALLOWABLE/REQUIRED	PROPOSED
MAXIMUM LOT COVERAGE:	65%	25%
PARKING DATA:	REQUIRED SPACES BY ORDINANCE	PROPOSED
ZONING DATA:	RR-DEO	
PROPOSED USE:	CHURCH	
EXISTING USE:	UNDEVELOPED/WOODED	
ADJACENT LAND USE:	NORTH-RESIDENTIAL EAST-PUBLIC ROAD & RESIDENTIAL SOUTH-PUBLIC ROAD & AGRICULTURAL WEST-RESIDENTIAL	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE 6/16/08

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
DATE 6/12/08

ABBREVIATIONS LEGEND

NOTE: THIS IS A STANDARD LEGEND. ALL ITEMS SHOWN ON THIS LEGEND MAY NOT NECESSARILY APPEAR ON ANY OR ALL OF THE DRAWINGS INCLUDED WITHIN THIS SET OF DRAWINGS.

AC	ACRE(S)
BLDG	BUILDING
BRL	BUILDING RESTRICTION LINE
CHD	CHORD
C.I.	CAST IRON CORRUGATED METAL PIPE
C.O.	CLEANOUT
CONC	CONCRETE
DBL	DOUBLE YELLOW LINE
DYL	DOUBLE YELLOW LINE
DEP	DEPRESSED DUCTILE IRON PIPE
D.I.P.	DOWN
DN	DOWN
ELEC	ELECTRIC
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
EW	ENDWALL
EX; EXIST.	EXISTING
FC	FOOTCANDLE
FF	FINISH FLOOR
F.E.S.	FLARED END SECTION
FH	FIRE HYDRANT
FND	FOUND
GV	GAS VALVE
HC	HANDICAPPED
HDPE	HIGH DENSITY POLYETHYLENE
HERCP	HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE
HP	HIGH POINT
INV.	INVERT
IP	IRON PIN
L	LENGTH
LAT	LATERAL
LF	LINEAL FEET
LP	LOW POINT
MAX	MAXIMUM
M.H.	MANHOLE
MIN	MINIMUM
MON	MONUMENT
NTS	NOT TO SCALE
O.S.	OUTLET STRUCTURE
PIV	POST INDICATOR VALVE
PROP	PROPOSED
R; RAD	RADIUS
RCP	REINFORCED CONCRETE PIPE
RFO	ROCK FILTER OUTLET
ROW	RIGHT-OF-WAY
S	SLOPE
SAN.	SANITARY
SDP	SITE DEVELOPMENT PLAN
STM	STORM TANGENT
T	TOP OF CURB / BOTTOM OF CURB
TC/BC	TOP OF CURB / BOTTOM OF CURB
TOP	TOP OF DATE
TYP.	TYPICAL
U/G	UNDERGROUND
WAT	WATER
WL	WHITE LINE
WV	WATER VALVE

MARK	DATE	REVISION
1	9/13/05	PER COUNTY COMMENTS
2	1/9/06	PER COUNTY COMMENTS
3	3/10/06	PER COUNTY COMMENTS
4	6/29/06	PER COUNTY COMMENTS
5	10/25/06	PER COUNTY COMMENTS
6	1/12/07	PER COUNTY COMMENTS
7	4/18/07	PER COUNTY COMMENTS
8	7/2/07	PER COUNTY COMMENTS
9	9/20/07	PER COUNTY COMMENTS
10	10/24/07	PER COUNTY COMMENTS
11	06/29/15	SITE ANGL. SHIT INDEX

MGA #2782
MUHLENBERG GREENE ARCHITECTS, LTD.
400 Washington Street, Reading, Pennsylvania 19601
phone: 610.376.4927 fax: 610.376.0720

DRAWN BY: EVT CHECKED BY: CKL

MGA #2782
STAMP

PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION
HUNTINGTON MANOR ESTATES SECTION 2
AREA INFORMATION
TAX MAP 34, PARCEL 399
ZONED RR-DEO
5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND
PROJECT ADDRESS
BRIGHTON DAM & TEN OAKS ROAD
CLARKSVILLE, MARYLAND

SHEET TITLE
SITE DEVELOPMENT PLAN COVER SHEET
AS-BUILT

CURRENT BOARD OF APPEALS CASE #BA 04-007C
PROJECT DESIGNATION LDS 583-273-05
PROPERTY NUMBER 565-0248 SHEET NO. 1 OF 32
DEVELOPMENT NUMBER HER-COL-8-12
DATE 07/05/05



BA-04-07C, BOARD OF APPEALS

Decision and Order

The Howard County Board of Appeals (the "Board") convened on September 28, 2004 to hear the petition of the Church of Jesus Christ of Latter Day Saints, Petitioner, for a conditional use for a structure used primarily for religious activities in an RR-DEO (Rural Residential: Density Exchange Option) Zoning District. The petition was filed pursuant to Sections 131.N.38 of the Howard County Zoning Regulations (the "Zoning Regulations").

Notice of the hearing was advertised and notice of the hearing was sent to the property owner and the adjoining property owners as required by the Howard County Code. The Board members indicated that they had viewed the property as required by the Zoning Regulations. Barry M. Sanders, Assistant County Solicitor, served as legal advisor to the Board.

This case was conducted in accordance with Section 2.209 of the Board's Rules of Procedure. The Howard County Code, the Howard County Charter, the Howard County Zoning Regulations, the various technical staff reports, the Department of Planning and Zoning Technical Staff Report dated March 19, 2004, the General Plan for Howard County, the General Plan of Highways, and the Petition and plot submitted by the Petitioner were incorporated into the record by reference. This case comes before the Board on an appeal filed by John M. Brogg from the Decision of the Hearing Examiner dated June 28, 2004.

The Petitioner was represented by Thomas M. Meacham, Esquire. The following persons testified on behalf of the Petitioner: Clarence Johnson and Peter Stone. John M. Brogg testified in opposition to the petition.

Conclusions of Law

Based upon the foregoing Findings of Fact, the Board concludes as follows:

A. General Standards Required for Conditional Use Approval (Section 131.B).

A. General Plan: The Howard County General Plan designates the area in which the Property is located as "Rural Residential" land use. Church facilities are commonly found in rural residential areas and are presumptively considered compatible with residential land uses. The Petitioner's proposed use will be relatively moderate intensity on a 12 acre parcel. The Property is located near the intersection of two major collector highways. Accordingly, the nature and intensity of use, the size of the site in relation to the use, and the location of the site with the site area such that the site use will be in harmony with the land uses and policies indicated in the General Plan for the district in which is located. In accordance with Section 131.B.1.a.

B. Adverse Effect: Section 131.B.2 of the Zoning Regulations requires the Board to find that the proposed use "will not have adverse effects on vicinal properties above and beyond those ordinarily associated with such uses." Virtually every human activity, however, has the potential for adverse impact. Zoning recognizes this fact and, when concerned with conditions such as noise, dust, fumes, odors, vibrations, hazards or other physical conditions beyond those inherently associated with a religious facility in the RR zoning district, as required by section 131.B.2.a.

The Petitioner has met its burden in presenting sufficient evidence establishing that this proposed use will not have adverse effects on vicinal properties above and beyond those ordinarily associated with a religious facility use in the RR district.

1. Physical Conditions: The Petitioner's proposed religious facility will consist of typical religious and social activities that take place primarily on weekends and during evening hours. Activities on site will take place primarily indoors. Any noise or light generated by the use will be attenuated by distance and landscaping and will not be greater than that ordinarily associated with a church use. The proposed use will not generate inordinate adverse effects such as noise, dust, fumes, odors, vibrations, hazards or other physical conditions beyond those inherently associated with a religious facility in the RR zoning district, as required by section 131.B.2.a.

2. Structures and Landscaping: The proposed structure will be moderate in size and centrally located on the relatively large 12 acre parcel. The building will be well separated from vicinal properties by distance and adequately buffered from neighboring lots by Type "C" landscaping and existing woods. Consequently, the location, nature, and height of structures, wall and fences, and the nature and extent of landscaping on the site are such that the use will not hinder or discourage the use or development of the adjacent land and structures more at the subject site than it would generally elsewhere in the zone, in compliance with Section 131.B.2.b of the Zoning Regulations.

3. Parking and Drives: The required minimum parking spaces for a religious facility is one parking space for every three seats in the main assembly area. The petition provides for 169 parking spaces for 255 seats, which is adequate. The parking areas will be well separated by distance and adequately screened by a Type "C" landscaping from neighboring residential properties. The dumpster will be well separated and screened from vicinal properties. Consequently, parking areas and driveways are properly located and screened from public roads and residential uses to minimize adverse impacts on adjacent properties as required by Section 131.B.2.c.

4. Safe Access: The proposed church facility will be accessed by two two-way driveways, each over 150 feet long which will provide sufficient stacking space in case of overflow parking. The driveways will have over 500 feet of sight distance in both directions. The location of the church near two major collector roadways reduces the impact of traffic generated by the use on local roads. As such, the driveways will provide safe access with adequate sight distance, as required by Section 131.B.2.d.

B. Specific Criteria for Structures Used Primarily for Religious Activities (Section 131.N.38).

5. The lot coverage would be approximately 3.2 percent of the 12.0 acre site, well below the maximum lot coverage of 25 percent allowed by Section 131.N.38.a.

6. The church building does not exceed the maximum height allowed in the RR district; therefore, Section 131.N.38.b. is inapplicable.

ORDER
Based upon the foregoing, it is this 25 day of January, 2005, by the Howard County Board of Appeals, ORDERED:

That the Petition of the Church of Jesus Christ of Latter Day Saints, Petitioner, for a conditional use for a structure used primarily for religious activities in an RR-DEO (Rural Residential: Density Exchange Option) Zoning District, is hereby GRANTED, subject to the following conditions:

1. The conditional use shall apply only to the uses and structures as described in the petition and conditional use plan submitted to the Board on September 28, 2004, and not to any other activities, uses, or structures on the Property.

2. The Petitioner shall comply with all applicable Federal, State, and County laws and regulations.

3. A building permit must be obtained within 2 years of the Decision and Order on or before January 25, 2007 and substantial construction must be completed within 3 years from the Decision and Order date in accordance with Section 131.3 of the Zoning Regulations. On January 17, 2007, the Howard County Board of Appeals approved a request for an extension to obtain a building permit until January 25, 2010 and substantial construction must be completed by January 25, 2011.

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

APPROVED: DEVELOPMENT ENGINEERING DIVISION

APPROVED: DIVISION OF LAND DEVELOPMENT

APPROVED: COUNTY HEALTH OFFICER

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS

APPROVED: COUNTY HEALTH DEPARTMENT

SITE ACCESS AND WAIVER PETITION, WP-03-150

Name and File No. of Development Plan: Huntington Manor Estates, Section 2, Lot 6

Waiver Request(s): Section 16.120(a)(1) - For a waiver to allow direct driveway access onto restricted access roads, Ten Oaks Road and Brighton Dam Road (major collectors), for an existing recorded residential lot zoned "RR-DEO" to be developed as a religious facility via the Conditional Use process.

Site Description: The subject property is located at the northwest corner of Brighton Dam Road and Ten Oaks Road. The property is located on Tax Map 34, Grid Nos. 10 and 11, Parcel No. 339 in the Fifth Election District of Howard County, Md. The property is 12 acres and is zoned "RR-DEO" (Rural-Residential).

Brief Plan/Site History Relevant to Waiver Request:

VP-85-30 - A waiver petition to allow a use-in-common access driveway onto a major collector road in lieu of a public road.

F-86-129 - A final subdivision plat for 3 lots, Huntington Manor Estates, Section 2, Lots 4, 5 and 6 was recorded on June 2, 1986 as Plat No. 6745. The 3 lot subdivision was approved with one use-in-common access point onto Ten Oaks Road with all other public road frontage onto Ten Oaks Road and Brighton Dam Road as restricted.

Future Church Site - Lot 6 is intended to be developed as a church site via the Conditional Use approval process. A Conditional Use application will be submitted to DPZ depending on the outcome of this waiver petition application.

Waiver Action: The Division of Land Development recommends Approval for waiver of Section 16.120(a)(1) subject to the following conditions:

- 1. Compliance with the enclosed comments from the Development Engineering Division dated September 12, 2003 and the enclosed comments from the DPZ, Agricultural Land Preservation Program Administrator dated September 17, 2003.
2. Vehicular ingress/egress is restricted for Lot 6 along Ten Oaks Road and Brighton Dam Road, except for the two proposed entrance locations requested on the Waiver Petition plan exhibit. The exact width and location for the two new access points for Lot 6 shall be finalized with the processing and approval of the Conditional Use application and a site development plan for the religious facility. Prior to signature approval of the site development plan, the property owner for Lot 6 shall submit a final subdivision plat application to this Department for processing and approval to indicate the two approved access points for the proposed religious facility along Ten Oaks Road and Brighton Dam Road with all other public road frontage remaining as vehicular ingress and egress restricted.
3. The existing use-in-common access easement for Lots 4, 5 and 6 shall be for residential use only and not for the proposed church use. As part of the "Plat of Revision" for Lot 6, if there is an existing recorded use-in-common driveway maintenance easement for Lots 4, 5 and 6, it should be amended to indicate that Lot 6 is no longer associated with the use and maintenance responsibilities of the existing driveway with Lots 4 and 5.
4. WP-03-150 was approved by DPZ on 9/22/03.

JUSTIFICATION FOR RECOMMENDATION:

Extraordinary Hardship or Practical Difficulty - Strict compliance with the Regulations will cause unnecessary hardship and practical difficulties to occur if the proposed Conditional Use for a church is limited to the existing residential use-in-common driveway access onto Ten Oaks Road with Lots 4 and 5. The church use for this property will generate considerable traffic, therefore, the requested separate access entrances onto Ten Oaks Road and Brighton Dam Road will help alleviate ingress/egress problems for the site and help reduce traffic safety concerns. The existing shared driveway cannot be closed since it provides access to existing residential properties located adjacent to this site on Lots 4 and 5.

Alternative Proposal - The alternative proposal for the new site access points onto Ten Oaks Road and Brighton Dam Road for the proposed religious facility will be safer and more efficient in handling the church traffic entering and exiting the property. Since the proposed religious facility will generate considerably more traffic than a single residential lot, the preferred option is to allow the proposed separate access entrances onto Ten Oaks Road and Brighton Dam Road rather than to direct all the church traffic to the existing shared residential driveway. The proposed entrances for Lot 6 will be designed for maximum safety by facilitating traffic movements at a location that complies with the sight distance design criteria as established by the Howard County Design Manual.

Not Detrimental to the Public Interest - Approval of this waiver request will not be detrimental to the public interest because safe vehicular access will be provided for the proposed religious facility separate from the existing shared residential driveway onto Ten Oaks Road. See the applicant's justification statement submitted with the waiver petition application for additional justification.

Not Nullify the Intent or Purpose of the Regulations - The intent of the Regulations is to ensure that all non-residential uses have sufficient, legal and safe access onto an approved County or State road. Therefore, approval of the waiver request will not nullify the intent or purpose of the Regulations since the proposed entrances will comply with all required sight distance and intersection spacing requirements before a site development plan and a "Plat of Revision" is approved for the church use. All County and State agencies have recommended approval of the waiver request.

GENERAL NOTES

- 1. TOPOGRAPHIC INFORMATION CONCERNING UNDERGROUND UTILITIES HAVE BEEN COMPILED FROM OBSERVABLE FIELD MEASUREMENTS AND EXISTING MUNICIPAL DATUM.
2. PRIOR TO ANY EXCAVATIONS, UNDERGROUND UTILITIES MUST BE FIELD VERIFIED BY CALLING MISS UTILITY SYSTEM: 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.
3. SUBSURFACE, ENVIRONMENTAL, GEOLOGICAL AND ARCHEOLOGICAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THE SURVEY. NO STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONTAINERS OF FACILITIES THAT MAY AFFECT THE USE OR DEVELOPMENT OF THIS TRACT.
4. THIS PARCEL IS SUBJECT TO ANY ALL RECORDED (AND POSSIBLY UNRECORDED) EASEMENTS, RESTRICTIONS, AND COVENANTS.
5. UNLESS OTHERWISE NOTED, THERE ARE NOT ANY OF THE FOLLOWING ITEMS LOCATED ON THIS SITE: ROCK OUTCROPPINGS, WOODLANDS, STONE FIELDS, SINKHOLES, LAKES, PONDS OR STREAMS, FLOODWAYS OR FLOODPLAINS.
6. NO BUILDING, STRUCTURE, GRADE, PLANTINGS OR OTHER OBSTRUCTIONS BETWEEN 2.5 & 8 FEET HIGH ABOVE THE INTERSECTION OF CENTERLINES OF THE STREETS SHALL BE PLACED WITHIN THE REQUIRED SIGHT TRIANGLES.
7. THE CONTRACTOR IS TO VERIFY ALL DIMENSIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
8. THE CONTRACTOR SHALL PROTECT ALL BENCHMARKS AND MONUMENTS FROM DAMAGE.
9. THIS SITE DOES NOT CONTAIN ANY OF THE FOLLOWING: -AREAS WITHIN THE 100 YEAR FLOOD PLAN -ALLUVIAL SOILS -EXISTING BUILDINGS OVER 100 YEARS OLD -ROCK OUTCROPPINGS -SPILL PILES OR SINKHOLES -STREAMS, PONDS OR OTHER WATER TRIBUTARIES -CEMETERIES OR BURIAL GROUNDS
10. THERE IS NO REMAINING LAND ASSOCIATED WITH THIS PLAN.
11. DESIGNATED OPEN SPACE IS NOT PROPOSED.
12. THIS SDP IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL NO. 46-2003 AND THE AMENDED ZONING REGULATIONS PER COUNCIL BILL NO. 75-2003. DEVELOPMENT OR CONSTRUCTION ON THIS PROPERTY MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT A TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION OR BUILDING/GRADING PERMIT APPLICATIONS.
13. THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL WITH A FOREST CONSERVATION OBLIGATION OF 4.32 ACRES BY ACHIEVING THE BREAK-EVEN POINT AND PROVIDING 4.32 ACRES OF FOREST CONSERVATION SURETY IN THE AMOUNT OF \$2,638.00 IS PROVIDED FOR THE RETENTION EASEMENT AREA WITH THE DPW, DEVELOPER'S AGREEMENT.
14. THERE ARE NO CEMETERIES OR HISTORIC STRUCTURES LOCATED ON THE SUBJECT PROPERTY BASED ON THE COUNTY'S HISTORIC SITES INVENTORY AND CEMETERY SITES MAPS.
15. THE SUBJECT PROPERTY IS ZONED RR-DEO IN ACCORDANCE WITH THE 2/2/04 HOWARD COUNTY COMPREHENSIVE ZONING PLAN.
16. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY, AND ALSO MSIA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
17. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
18. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
19. ALL PLAN DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
20. INSPECTION OF THE POND SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378), THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.
21. THE PROPOSED STORM WATER MANAGEMENT FACILITY WILL BE PRIVATELY OWNED AND MAINTAINED. THE DETENTION POND IS A P-5 POCKET POND. THE DETENTION POND IS A HAZARD CLASSIFICATION "A".
22. THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
23. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY PATTON HARRIS RUST & ASSOCIATES DATED FEBRUARY 2004.
24. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NUMBERS #34EA AND #34BA WERE USED FOR THIS PROJECT.
25. WATER IS PRIVATE, SEWER IS PRIVATE.
26. EXISTING UTILITIES ARE BASED ON THE SURVEY.
27. NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
28. GEOTECHNICAL REPORT WAS PREPARED BY SPECIALIZED ENGINEERING, 9607 DR. PERRY ROAD, SUITE 102 JAMSVILLE, MARYLAND 21754 MARCH 12, 2004.
29. STREETLIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREETLIGHT AND ANY TREE.
30. ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2 1/2" GALVANIZED STEEL, PERFORATED TUBE SLEEVE (12 GAUGE) 3" LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
31. ALL EXTERIOR LIGHT FIXTURES SHALL BE ORIENTED TO DIRECT LIGHT INWARDS AND DOWNWARDS ON-SITE AWAY FROM ALL ADJOINING RESIDENTIAL PROPERTIES AND PUBLIC ROADS, AND THE LIGHT FIXTURES COMPLY WITH 0.1 FOOT CANDLE TRESPASS REQUIREMENT IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
32. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP DATED APRIL 5, 2005.
33. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, OR PLACEMENT OF NEW STRUCTURES IS PERMITTED WITHIN THE LIMIT OF WETLANDS OR THE 25' BUFFER AND FOREST CONSERVATION EASEMENTS, EXCEPT FOR THE BRIGHTON DAM ROAD ENTRANCE DRIVE LANE IMPROVEMENTS LOCATED WITHIN THE 25' WETLANDS BUFFER DETERMINED BY DPZ AS AN ESSENTIAL DISTURBANCE IN ACCORDANCE WITH SECTION 16.116(c) OF THE SUBDIVISION REGULATIONS.
34. ALL AREAS THAT ARE OUTSIDE OF THE PROPOSED TREE LINE AND ARE NOT GRADED WILL BE CLEARED UP TO THE PROPOSED TREE LINE.

NO AS-BUILT INFORMATION IS REQUIRED



The RBA Group logo and contact information: ENGINEERS • ARCHITECTS • PLANNERS, 7164 Columbia Gateway Drive, Suite 205, Columbia, Maryland 21046, Phone (410) 312-0988, Fax (410) 312-0897

Revision table with columns: MARK, DATE, REVISION. Contains 10 entries of revisions.

MGA ARCHITECTS, L.L.C. MUHLBERG GREENE ARCHITECTS, L.L.C. 400 Washington Street, Reading, Pennsylvania 19801, Phone: 610.376.4927 Fax: 610.376.0720

DRAWN BY: EVT, CHECKED BY: CKL, MGA #2782, STAMP

PROJECT FOR THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION HUNTINGTON MANOR ESTATES SECTION 2 AREA INFORMATION TAX MAP 34, PARCEL 399 ZONED RR-DEO 5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND PROJECT ADDRESS BRIGHTON DAM & TEN OAKS ROAD CLARKSVILLE, MARYLAND

SHEET TITLE SITE DEVELOPMENT PLAN GENERAL NOTES AS-BUILT

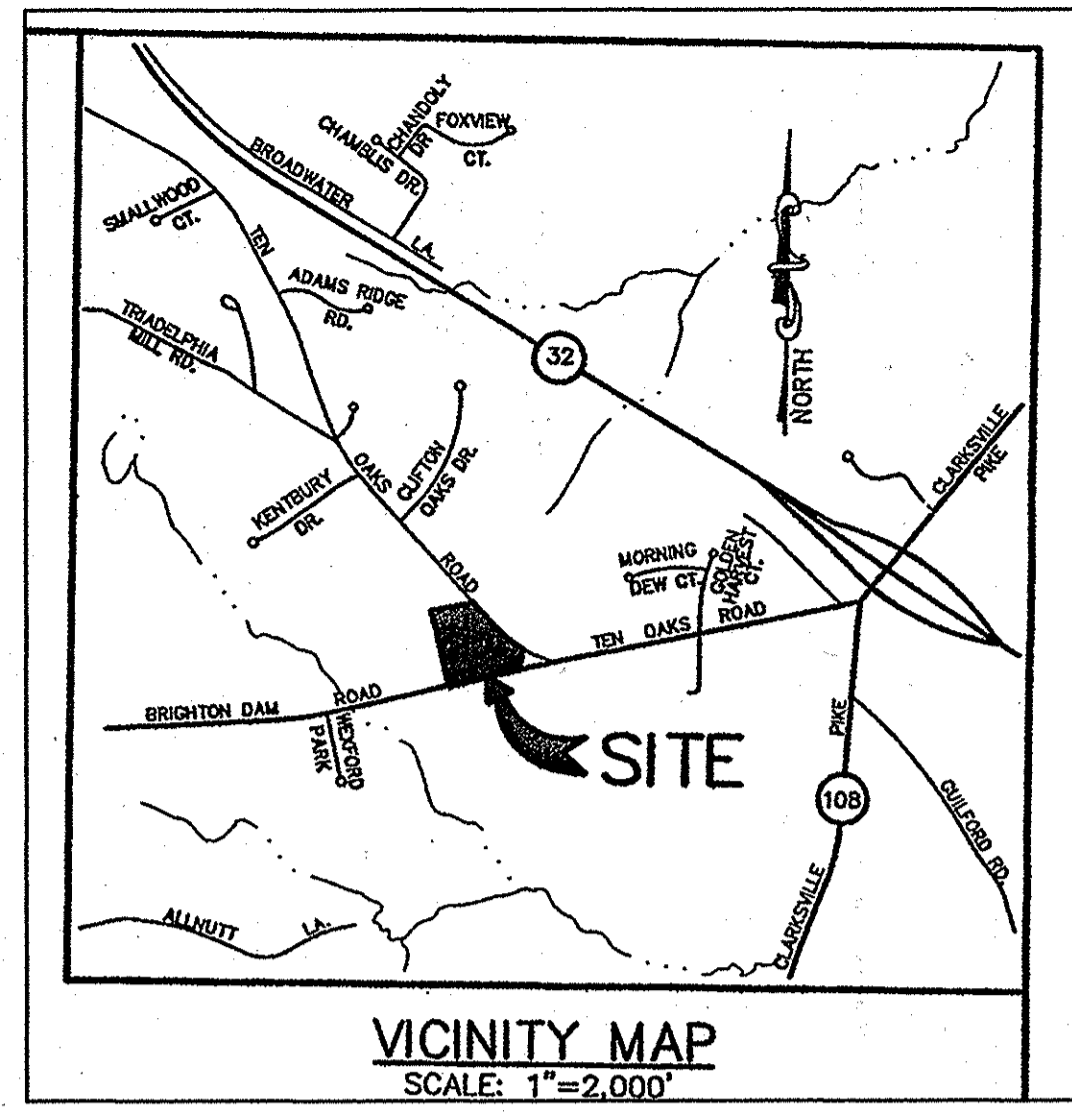
CURRENT BOARD OF APPEALS CASE #BA 04-07C PROJECT DESIGNATION LHS 583-0273-0501-0101 SHEET NO. 2 OF 32 DATE 07/05/05

MARYLAND LAW REQUIRES 48 HOURS NOTICE FOR ANY EXCAVATION
MISS UTILITY INC
 1-800-257-7777

GENERAL LEGEND

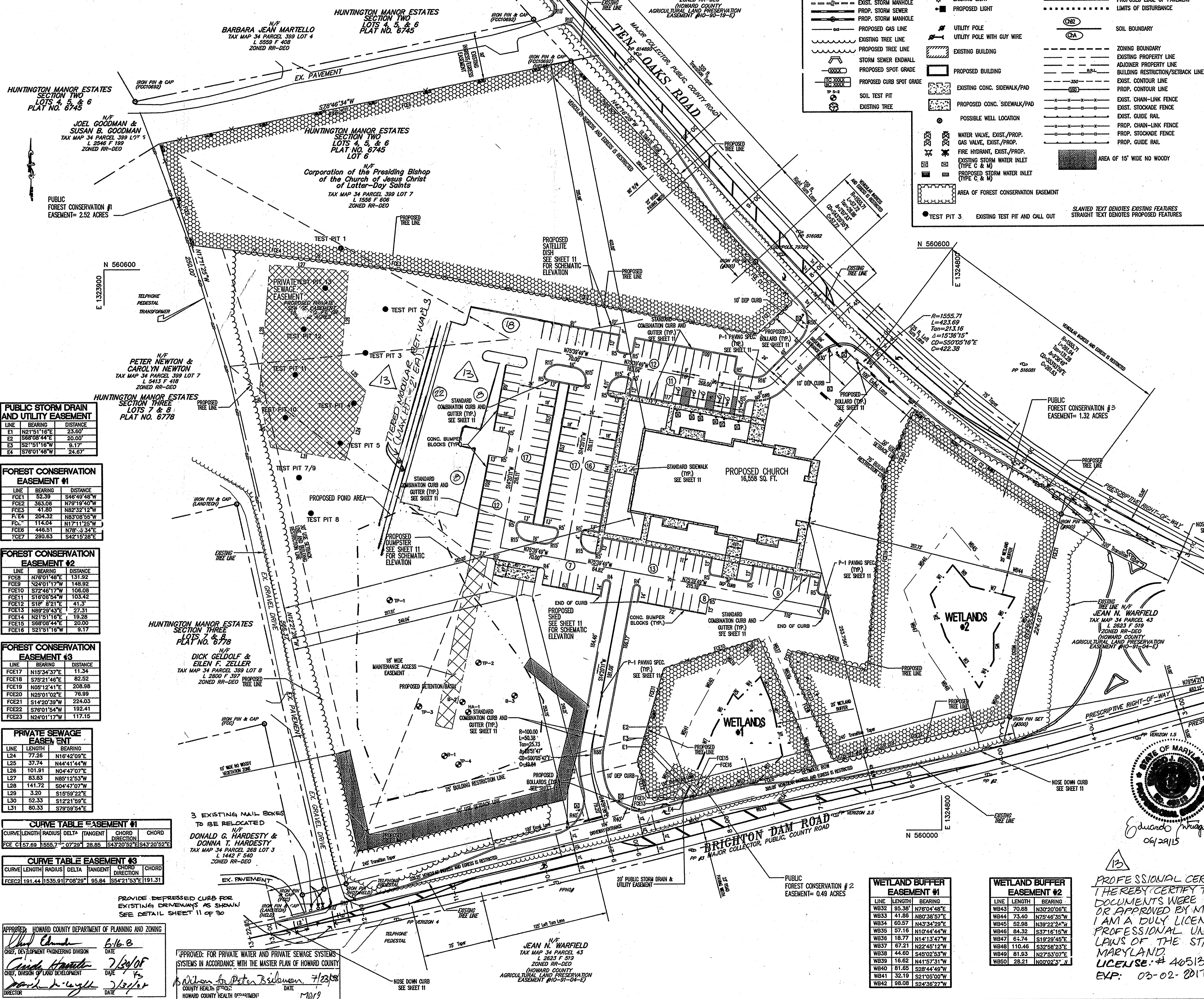
—●—	PROPOSED SANITARY SEWER	○	FOUND IRON PIN & CONC. MON.	---	WETLANDS
—○—	PROPOSED WATER MAIN	⊕	IRON PIN & CONC. MON. TO BE SET	---	RIGHT-OF-WAY
—○—	EXISTING U.G. UTILITIES (ELEC., T.V., ELEC.)	⊕	BENCHMARK (ELEV.)	---	EXISTING EASEMENT
—○—	PROPOSED U.G. UTILITIES (ELEC., T.V., ELEC.)	⊕	EXISTING SIGNS	---	PROPOSED EASEMENT
—○—	EXISTING OVERHEAD ELEC.	⊕	PROPOSED SIGNS	---	EXISTING EDGE OF PAVEMENT
—○—	PROPOSED OVERHEAD ELEC.	⊕	EXISTING LIGHT	---	EXISTING CURBING
—○—	EXIST. STORM SEWER	⊕	PROPOSED LIGHT	---	PROPOSED CURBING (1' OFFSET)
—○—	EXIST. STORM MANHOLE	⊕	PROPOSED GAS LINE	---	PROPOSED EDGE OF PAVEMENT
—○—	PROP. STORM SEWER	⊕	EXISTING TREE LINE	---	LIMITS OF DISTURBANCE
—○—	PROP. STORM MANHOLE	⊕	PROPOSED TREE LINE	---	
—○—	PROPOSED CURB SPOT GRADE	⊕	EXISTING BUILDING	---	
—○—	PROPOSED CURB SPOT GRADE	⊕	PROPOSED BUILDING	---	
—○—	PROPOSED CURB SPOT GRADE	⊕	EXISTING CONC. SIDEWALK/PAD	---	
—○—	PROPOSED CURB SPOT GRADE	⊕	PROPOSED CONC. SIDEWALK/PAD	---	
—○—	PROPOSED CURB SPOT GRADE	⊕	POSSIBLE WELL LOCATION	---	
—○—	PROPOSED CURB SPOT GRADE	⊕	WATER VALVE, EXIST./PROP.	---	
—○—	PROPOSED CURB SPOT GRADE	⊕	GAS VALVE, EXIST./PROP.	---	
—○—	PROPOSED CURB SPOT GRADE	⊕	FIRE HYDRANT, EXIST./PROP.	---	
—○—	PROPOSED CURB SPOT GRADE	⊕	EXISTING STORM WATER INLET (TYPE C & M)	---	
—○—	PROPOSED CURB SPOT GRADE	⊕	PROPOSED STORM WATER INLET (TYPE C & M)	---	
—○—	PROPOSED CURB SPOT GRADE	⊕	AREA OF FOREST CONSERVATION EASEMENT	---	
—○—	PROPOSED CURB SPOT GRADE	⊕	TEST PIT 3	---	
—○—	PROPOSED CURB SPOT GRADE	⊕	EXISTING TEST PIT AND CALL OUT	---	

SLANTED TEXT DENOTES EXISTING FEATURES
 STRAIGHT TEXT DENOTES PROPOSED FEATURES



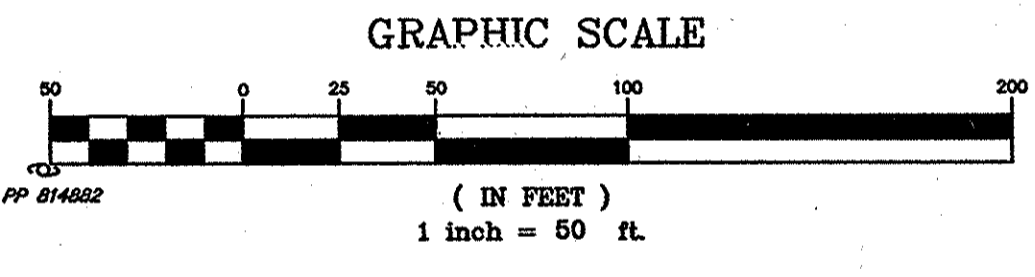
MARK	DATE	REVISION
1	9/13/05	PER COUNTY COMMENTS
2	1/9/06	PER COUNTY COMMENTS
3	3/10/06	PER COUNTY COMMENTS
4	6/29/06	PER COUNTY COMMENTS
5	10/25/06	PER COUNTY COMMENTS
6	1/12/07	PER COUNTY COMMENTS
7	4/18/07	PER COUNTY COMMENTS
8	7/2/07	PER COUNTY COMMENTS
9	9/20/07	PER COUNTY COMMENTS
10	10/27/07	PER COUNTY COMMENTS
11	9/3/09	EX. DRIVEWAY ENT.
12	11/18/09	AS-BUILT

MGA
 MUEHLBERG GREENE ARCHITECTS, L.L.C.
 400 Washington Street
 Reading, Pennsylvania 19601
 Phone: 610.370.4927 Fax: 610.370.6070



SIGN SCHEDULE

PLAN SYMBOL	MD DOT SERIES	SIZE	QTY.	MESSAGE
1	30-330	2	STOP	
2	12-114	4	UNSHIPPED PARKING	
3	12-114	2	TRUCK PARKING (VAN ACCESSIBLE)	
4	30-330	2	NO TRUCKS	
5	1-25	9	1	6820 TEN OAKS RD.



PUBLIC STORM DRAIN AND UTILITY EASEMENT

LINE	BEARING	DISTANCE
E1	N21°51'16"E	23.60
E2	S88°08'44"E	20.00
E3	S27°51'16"W	9.17
E4	S76°01'48"W	24.67

FOREST CONSERVATION EASEMENT #1

LINE	BEARING	DISTANCE
FCE1	N76°01'48"E	133.92
FCE2	N24°01'17"W	148.92
FCE3	S72°46'17"W	106.08
FCE4	S16°05'54"W	103.42
FCE5	S12°31'21"W	41.3
FCE6	N89°29'43"E	27.31
FCE7	N21°51'16"E	19.28
FCE8	S88°08'44"E	20.00
FCE9	S21°51'16"W	9.17

FOREST CONSERVATION EASEMENT #2

LINE	BEARING	DISTANCE
FCE10	N76°01'48"E	133.92
FCE11	N24°01'17"W	148.92
FCE12	S72°46'17"W	106.08
FCE13	S16°05'54"W	103.42
FCE14	S12°31'21"W	41.3
FCE15	N89°29'43"E	27.31
FCE16	N21°51'16"E	19.28
FCE17	S88°08'44"E	20.00
FCE18	S21°51'16"W	9.17

FOREST CONSERVATION EASEMENT #3

LINE	BEARING	DISTANCE
FCE19	N15°34'37"E	11.34
FCE20	S72°21'46"E	82.52
FCE21	N05°12'41"E	208.98
FCE22	N22°01'02"E	76.39
FCE23	S14°23'39"W	224.03
FCE24	S76°01'54"W	192.41
FCE25	N24°01'17"W	117.15

PRIVATE SEWAGE EASEMENT

LINE	LENGTH	BEARING
L24	77.55	N16°42'09"E
L25	37.74	N44°14'44"W
L26	101.91	N04°47'07"E
L27	83.83	N85°12'53"W
L28	141.72	S04°47'07"W
L29	3.20	S15°59'22"E
L30	52.33	S12°21'59"E
L31	50.33	S79°59'54"E

CURVE TABLE EASEMENT #1

CURVE LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD DIRECTION
157.89	1855.7	07°29'	28.85	1843.20	S43°20'52"E

CURVE TABLE EASEMENT #3

CURVE LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD DIRECTION
191.44	11335.91	7°08'29"	95.84	18421.53	S191.31

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 DATE: 6/16/08
 DATE: 7/23/08
 DATE: 7/23/08

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS
 SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
 DATE: 7/23/08



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 MEET THE APPROVED PLANS AND SPECIFICATIONS.

Eduardo Wragg
 06/29/15

LOUIS BERNSTEIN
 MD PE #1467
 DATE: 12/16/09

AS-BUILT SURVEY PERFORMED 11/16/09

WETLAND BUFFER EASEMENT #1

LINE	LENGTH	BEARING
WB32	85.38	N76°04'48"E
WB33	41.88	N80°38'57"E
WB34	60.57	N43°34'29"E
WB35	57.16	N10°44'44"W
WB36	18.77	N14°13'47"W
WB37	67.21	N22°45'12"W
WB38	44.60	S45°02'53"W
WB39	18.52	N41°57'31"W
WB40	81.85	S28°44'48"W
WB41	32.19	S21°03'00"W
WB42	88.08	S24°38'27"W

WETLAND BUFFER EASEMENT #2

LINE	LENGTH	BEARING
WB43	70.88	N30°20'08"E
WB44	73.40	N75°46'35"W
WB45	52.98	N39°22'24"W
WB46	84.32	S37°14'15"W
WB47	61.74	S19°29'45"E
WB48	110.46	S32°58'23"E
WB49	81.93	N27°53'07"E
WB50	28.21	N00°02'33"W

PROFESSIONAL CERTIFICATION:
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL UNDER THE LAWS OF THE STATE OF MARYLAND.
 LICENSE: # 40513
 EXP: 03-02-2017

The RBA Group
 ENGINEERS • ARCHITECTS • PLANNERS
 7184 Columbia Gateway Drive, Suite 205
 Columbia, Maryland 21048
 Phone (410) 312-0986, Fax. (410) 312-0897

13/6/29/15 PARKING EXP
 DRAWN BY: EVT
 CHECKED BY: CKL

MGA #2782
 STAMP
 PROJECT FOR:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION
 HUNTINGTON MANOR ESTATES SECTION 2
 AREA INFORMATION
 TAX MAP 34, PARCEL 399
 ZONED RR-DEO
 5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND
 PROJECT ADDRESS
 BRIGHTON DAM & TEN OAKS ROAD
 CLARKSVILLE, MARYLAND

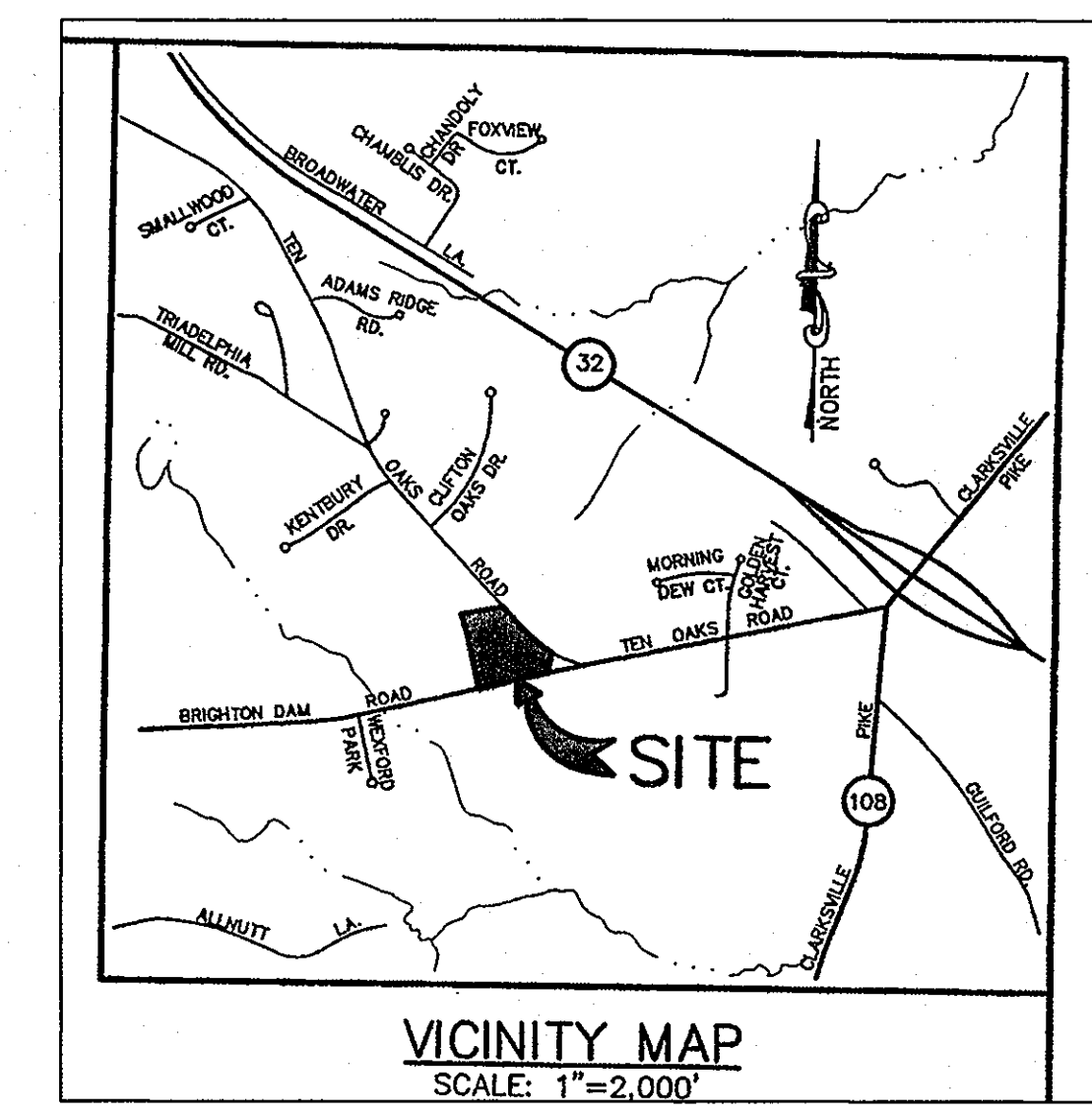
SHEET TITLE
SITE DEVELOPMENT PLAN LAYOUT PLAN AS-BUILT

CURRENT BOARD OF APPEALS CASE #BA 04-007C
 PROJECT DESIGNATION
 LDS 533-0273-050-0101
 PROPERTY NUMBER SHEET NO.
 565-0348
 DEVELOPMENT NUMBER
 3 of 32
 HFR-COL-98-12
 DATE
 07/05/09

MARYLAND LAW REQUIRES 48 HOURS NOTICE FOR ANY EXCAVATION
MISS UTILITY INC
 1-800-257-7777

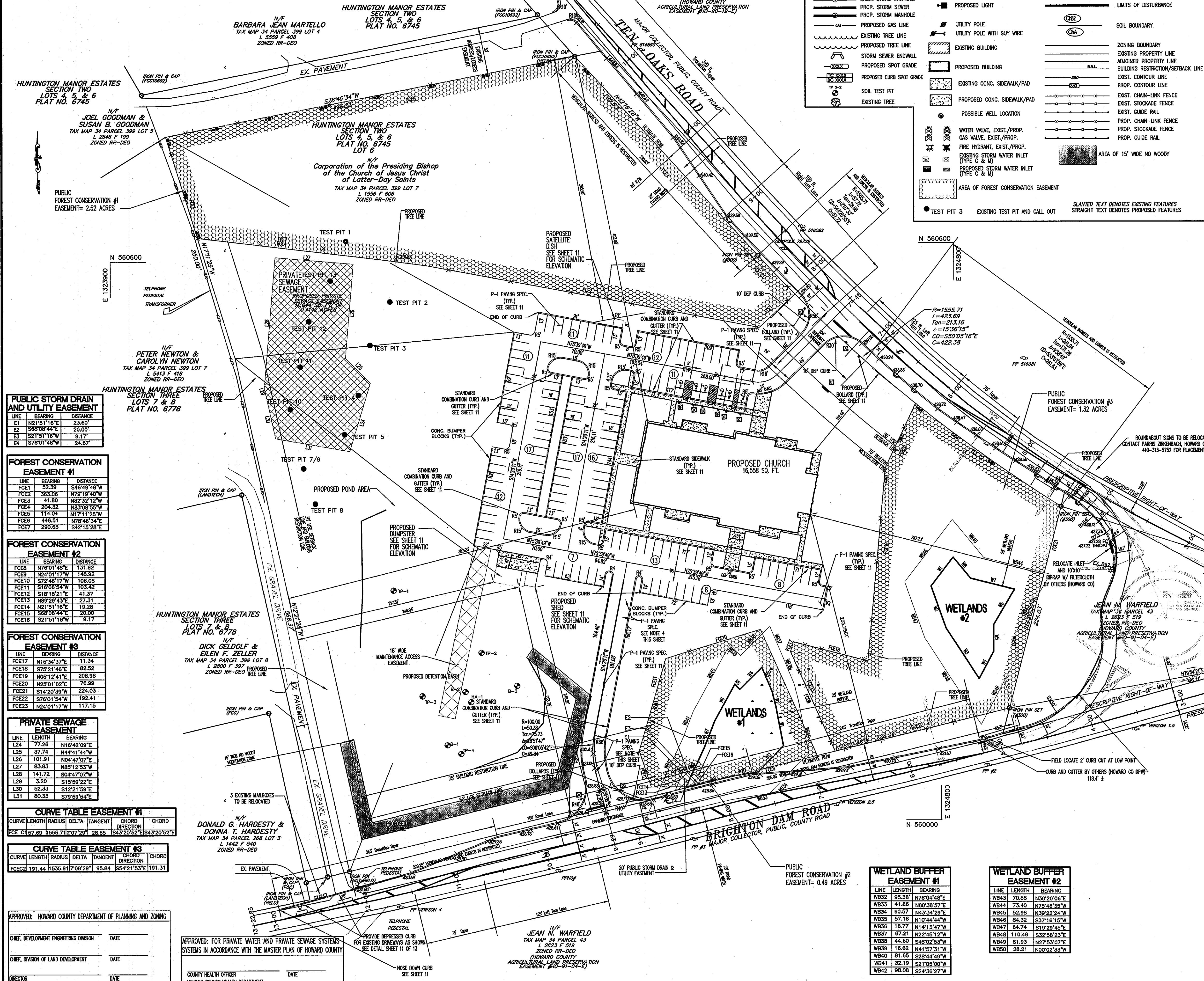
GENERAL LEGEND

<p>PROPOSED SANITARY SEWER</p> <p>PROPOSED WATER MAIN</p> <p>EXISTING U.G. UTILITIES (TELE, TV, ELEC.)</p> <p>PROPOSED U.G. UTILITIES (TELE, TV, ELEC.)</p> <p>EXISTING OVERHEAD ELEC.</p> <p>PROPOSED OVERHEAD ELEC.</p> <p>EXIST. STORM SEWER</p> <p>EXIST. STORM MANHOLE</p> <p>PROP. STORM SEWER</p> <p>PROP. STORM MANHOLE</p> <p>PROPOSED GAS LINE</p> <p>EXISTING TREE LINE</p> <p>PROPOSED TREE LINE</p> <p>STORM SEWER ENDWALL</p> <p>PROPOSED SPOT GRADE</p> <p>PROPOSED CURB SPOT GRADE</p> <p>SOIL TEST PIT</p> <p>EXISTING TREE</p>	<p>FOUND IRON PIN & CONC. MON.</p> <p>IRON PIN & CONC. MON. TO BE SET</p> <p>BENCHMARK (ELEV.)</p> <p>EXISTING SIGNS</p> <p>PROPOSED SIGNS</p> <p>EXISTING LIGHT</p> <p>PROPOSED LIGHT</p> <p>UTILITY POLE</p> <p>UTILITY POLE WITH GUY WIRE</p> <p>EXISTING BUILDING</p> <p>PROPOSED BUILDING</p> <p>EXISTING CONC. SIDEWALK/PAD</p> <p>PROPOSED CONC. SIDEWALK/PAD</p> <p>POSSIBLE WELL LOCATION</p> <p>WATER VALVE, EXIST./PROP.</p> <p>GAS VALVE, EXIST./PROP.</p> <p>FIRE HYDRANT, EXIST./PROP.</p> <p>EXISTING STORM WATER INLET (TYPE C & M)</p> <p>PROPOSED STORM WATER INLET (TYPE C & M)</p> <p>AREA OF FOREST CONSERVATION EASEMENT</p> <p>TEST PIT 3</p> <p>EXISTING TEST PIT AND CALL OUT</p>	<p>WETLANDS</p> <p>RIGHT-OF-WAY</p> <p>EXISTING EASEMENT</p> <p>PROPOSED EASEMENT</p> <p>EXISTING EDGE OF PAVEMENT</p> <p>EXISTING CURBING</p> <p>PROPOSED CURBING (1' OFFSET)</p> <p>EXISTING EDGE OF PAVEMENT</p> <p>LIMITS OF DISTURBANCE</p> <p>SOIL BOUNDARY</p> <p>ZONING BOUNDARY</p> <p>EXISTING PROPERTY LINE</p> <p>ADJONER PROPERTY LINE</p> <p>BUILDING RESTRICTION/SETBACK LINE</p> <p>EXIST. CONTOUR LINE</p> <p>PROP. CONTOUR LINE</p> <p>EXIST. CHAIN-LINK FENCE</p> <p>EXIST. STOCKADE FENCE</p> <p>PROP. CHAIN-LINK FENCE</p> <p>PROP. STOCKADE FENCE</p> <p>PROP. GUIDE RAIL</p> <p>AREA OF 15' WIDE NO WOODY</p> <p>SLANTED TEXT DENOTES EXISTING FEATURES</p> <p>STRAIGHT TEXT DENOTES PROPOSED FEATURES</p>
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MARK	DATE	REVISION
1	9/13/05	PER COUNTY COMMENTS
2	1/9/06	PER COUNTY COMMENTS
3	3/10/06	PER COUNTY COMMENTS
4	6/29/06	PER COUNTY COMMENTS
5	10/25/06	PER COUNTY COMMENTS
6	1/12/07	PER COUNTY COMMENTS
7	4/18/07	PER COUNTY COMMENTS
8	7/2/07	PER COUNTY COMMENTS
9	9/20/07	PER COUNTY COMMENTS
10	10/27/07	PER COUNTY COMMENTS
11	3/26/09	PER FIELD CONDITIONS
12	6/1/09	PER FIELD CONDITIONS
13	8/8/09	PER FIELD CONDITIONS
14	11/16/09	AS-BUILT

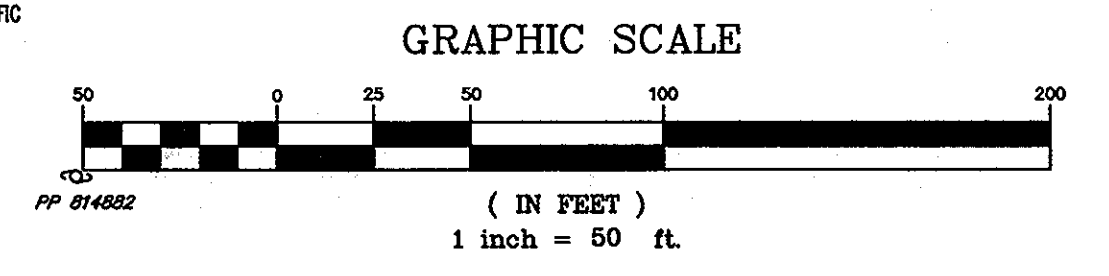
MGA
 MULHENSBERG GREEN ARCHITECTS, L.L.C.
 400 Washington Street, Reading, Pennsylvania 19601
 phone: 610.376.4927



SIGN SCHEDULE

PLAN SYMBOL	MD DOT SERIES	SIZE	QTY.	MESSAGE
(A)	30-30	2'	STOP	HANDICAPPED PARKING
(B)	12-12	2'	LIC. PARKING (VAN ACCESSIBLE)	
(C)	12-12	2'	LIC. PARKING (VAN ACCESSIBLE)	
(D)	30-30	2'	NO TRUCKS	
(E)	1-25 x 91	1'	6820 TEN OAKS RD.	

NOTES:
 1. EXISTING LINES MUST BE GROUND
 2. All pavement marking layouts for new, revised or removal of existing markings must be approved by Howard County Traffic prior to implementing any changes. Please contact the Traffic Division at 410-313-5752.
 3. Stone Outlet Protection behind curb-outs to be Class-1 Thickness - 10' Underlay with filter fabric.
 4. Where indicated, P-1 posting sign shall be 15" final surface, 3.5" max. or as indicated by CRB of base course, 4" CRB. Per Detail R-2.01 dated 5/7/07.



PUBLIC STORM DRAIN AND UTILITY EASEMENT

LINE	BEARING	DISTANCE
E1	N21°51'16"E	23.60'
E2	S86°08'44"E	20.00'
E3	S21°51'16"W	9.17'
E4	S76°01'48"W	24.67'

FOREST CONSERVATION EASEMENT #1

LINE	BEARING	DISTANCE
FCE1	S23.38'	S46°49'48"W
FCE2	363.06'	N79°19'40"W
FCE3	41.80'	N82°32'12"W
FCE4	203.32'	N83°08'55"W
FCE5	114.04'	N17°11'25"W
FCE6	446.51'	N78°46'34"E
FCE7	290.63'	S42°15'28"E

FOREST CONSERVATION EASEMENT #2

LINE	BEARING	DISTANCE
FCE8	N76°01'48"E	131.92'
FCE9	N24°01'17"W	148.92'
FCE10	S72°46'17"W	106.08'
FCE11	S16°08'54"W	103.42'
FCE12	S18°18'21"E	41.37'
FCE13	N89°29'43"E	27.31'
FCE14	N21°51'16"E	19.28'
FCE15	S68°08'44"E	20.00'
FCE16	S27°51'16"W	9.17'

FOREST CONSERVATION EASEMENT #3

LINE	BEARING	DISTANCE
FCE17	N15°34'37"E	11.34'
FCE18	S75°21'46"E	82.52'
FCE19	N05°12'41"E	208.98'
FCE20	N25°01'02"E	76.99'
FCE21	S14°20'39"W	224.03'
FCE22	S76°01'54"W	192.41'
FCE23	N24°01'17"W	117.15'

PRIVATE SEWAGE EASEMENT

LINE	LENGTH	BEARING
L24	77.26'	N16°42'09"E
L25	37.74'	N44°41'44"W
L26	101.51'	N04°47'07"E
L27	83.63'	N85°12'53"W
L28	141.72'	S04°47'07"W
L29	3.20'	S15°59'22"E
L30	62.33'	S12°21'59"E
L31	80.33'	S79°59'54"E

CURVE TABLE EASEMENT #1

CURVE LENGTH	RADIUS	DELTA	TANGENT	CHORD	DIRECTION
CCE1	157.69	1558.71	207°29'28"	28.85	S43°20'52"E S43°20'52"E

CURVE TABLE EASEMENT #3

CURVE LENGTH	RADIUS	DELTA	TANGENT	CHORD	DIRECTION
CCE2	191.44	1535.91	70°28'28"	95.84	S54°21'53"E 191.31'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHEF, DEVELOPMENT ENGINEERING DIVISION DATE

CHEF, DIVISION OF LAND DEVELOPMENT DATE

DIRECTOR DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY

COUNTY HEALTH OFFICER DATE

HOWARD COUNTY HEALTH DEPARTMENT

WETLAND BUFFER EASEMENT #1

LINE	LENGTH	BEARING
WB32	95.38'	N76°04'48"E
WB33	41.68'	N82°38'57"E
WB34	60.57'	N43°34'29"E
WB35	57.16'	N10°44'44"W
WB36	18.77'	N14°13'47"W
WB37	67.21'	N22°45'12"W
WB38	44.60'	S45°02'53"W
WB39	16.62'	N41°57'31"W
WB40	81.68'	S28°44'49"W
WB41	32.19'	S21°05'00"W
WB42	98.08'	S24°36'27"W

WETLAND BUFFER EASEMENT #2

LINE	LENGTH	BEARING
WB43	70.68'	N32°02'06"E
WB44	73.40'	N24°46'36"W
WB45	52.98'	N39°22'24"W
WB46	84.32'	S37°16'16"W
WB47	64.74'	S19°28'45"E
WB48	110.48'	S32°58'23"E
WB49	81.93'	N27°53'07"E
WB50	28.21'	N02°02'33"W



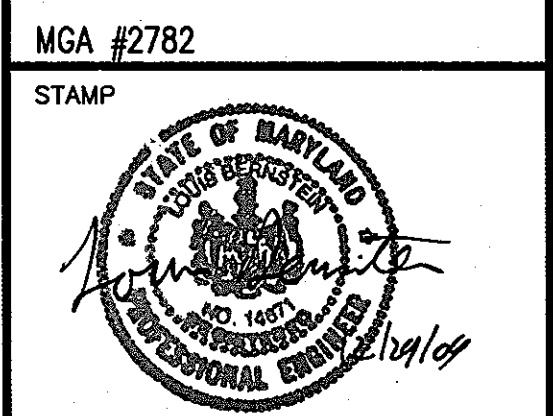
AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

Louis G. Zerkow
 LOUIS G. ZERKOW
 MD PE# 14571
 DATE 12/16/09

AS-BUILT SURVEY PERFORMED 11/16/09

The RBA- Group
 ENGINEERS • ARCHITECTS • PLANNERS
 7164 Columbia Gateway Drive, Suite 205
 Columbia, Maryland 21046
 Phone (410) 312-0986, Fax. (410) 312-0897

DRAWN BY: EVT
 CHECKED BY: CKL



PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION
HUNTINGTON MANOR ESTATES SECTION 2

AREA INFORMATION
 TAX MAP 34, PARCEL 399
 ZONED RR-DEO
 5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

PROJECT ADDRESS
BRIGHTON DAM & TEN OAKS ROAD CLARKSVILLE, MARYLAND

SHEET TITLE
SITE DEVELOPMENT PLAN LAYOUT PLAN AS-BUILT

CURRENT BOARD OF APPEALS CASE #BA 04-007C
 PROJECT DESIGNATION LDS 583-0273-0501-0101
 PROPERTY NUMBER SHEET NO. 565-0348
 DEVELOPMENT NUMBER 3A of 30
 HER-COL-98-12
 DATE 07/05/05

MARYLAND LAW REQUIRES 48 HOURS NOTICE FOR ANY EXCAVATION
MISS UTILITY INC
 1-800-257-7777

GENERAL LEGEND

<ul style="list-style-type: none"> PROPOSED SANITARY SEWER PROPOSED WATER MAIN EXISTING U.G. UTILITIES (TELE, TV, ELEC.) PROPOSED U.G. UTILITIES (TELE, TV, ELEC.) EXISTING OVERHEAD ELEC. PROPOSED OVERHEAD ELEC. EXIST. STORM MANHOLE PROP. STORM SEWER PROP. STORM MANHOLE PROPOSED GAS LINE EXISTING TREE LINE PROPOSED TREE LINE STORM SEWER ENDWALL PROPOSED SPOT GRADE PROPOSED CURB SPOT GRADE SOIL TEST PIT EXISTING TREE 	<ul style="list-style-type: none"> FOUND IRON PIN & CONC. MON. IRON PIN & CONC. MON. TO BE SET BENCHMARK (ELEV.) EXISTING SIGNS PROPOSED SIGNS EXISTING LIGHT PROPOSED LIGHT UTILITY POLE UTILITY POLE WITH GUY WIRE EXISTING BUILDING PROPOSED BUILDING EXISTING CONC. SIDEWALK/PAD PROPOSED CONC. SIDEWALK/PAD POSSIBLE WELL LOCATION WATER VALVE, EXIST./PROP. GAS VALVE, EXIST./PROP. FIRE HYDRANT, EXIST./PROP. EXISTING STORM WATER INLET (TYPE C & M) PROPOSED STORM WATER INLET (TYPE C & M) AREA OF FOREST CONSERVATION EASEMENT TEST PIT 3 EXISTING TEST PIT AND CALL OUT 	<ul style="list-style-type: none"> WETLANDS RIGHT-OF-WAY EXISTING EASEMENT PROPOSED EASEMENT EXISTING EDGE OF PAVEMENT EXISTING CURBING PROPOSED CURBING (1" OFFSET) PROPOSED EDGE OF PAVEMENT LIMITS OF DISTURBANCE SOIL BOUNDARY ZONING BOUNDARY EXISTING PROPERTY LINE ADJOINING PROPERTY LINE BUILDING RESTRICTION/SETBACK LINE EXIST. CONTOUR LINE PROP. CONTOUR LINE EXIST. CHAIN-LINK FENCE PROP. CHAIN-LINK FENCE EXIST. STOCKADE FENCE PROP. STOCKADE FENCE PROP. GUIDE RAIL AREA OF 15' WIDE NO WOODY
---	---	---

SLANTED TEXT DENOTES EXISTING FEATURES
 STRAIGHT TEXT DENOTES PROPOSED FEATURES

- GRADING NOTES**
- THE DETAILS SHOWN ON THE DETAIL SHEET ARE TO BE USED AS GUIDELINES. THE CONTRACTOR SHALL SUPPLY MATERIALS AND INSTALL SAID MATERIALS TO THE BETTER OF THE STANDARD SPECIFICATIONS AND PLANS OF THE DEPARTMENT OF TRANSPORTATION.
 - ALL WORK SHALL BE DONE WITHIN THE PROPERTY BOUNDARY OF THE OWNER. IF IT IS NECESSARY TO WORK BEYOND THESE AREAS, THE CONTRACTOR SHALL OBTAIN ADEQUATE APPROVAL FROM THE OWNER OF THE PROPERTY ON WHICH IT IS NECESSARY TO WORK. THE CONTRACTOR MUST SUBMIT WRITTEN NOTIFICATION TO THE TOWNSHIP THAT THE ADJOINING PROPERTY OWNER HAS BEEN INFORMED OF THE ENCROACHMENT AND THAT APPROVAL WAS GIVEN FOR THE CONTRACTOR.
 - AT COMPLETION OF ROUGH GRADING BY THE SITE CONTRACTOR, ALL GRADING WITHIN AREAS TO BE LANDSCAPED (INCLUDING ALL LAW AREAS) SHALL BE SIX INCHES (6") BELOW THE ESTABLISHED FINISHED GRADE. THIS IS TO ACCOMMODATE THE PLACEMENT OF A SIX INCH (6") LAYER OF TOPSOIL BY THE LANDSCAPE CONTRACTOR.
 - ALL EXCAVATION, FILLING AND COMPACTION OPERATIONS SHALL BE OBSERVED BY A LICENSED SOIL ENGINEER. CONTACT ALL SUBGRADERS WITHIN THE BUILDING OR PAVED AREA TO A MINIMUM OF 95% MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557.
 - REMOVE ALL UNSUITABLE AND DELETERIOUS MATERIAL AS ENCOUNTERED IN THE FIELD.
 - PRIOR TO FILL OPERATIONS, ALL AREAS WITHIN BUILDING AND PAVEMENT INFLUENCE THAT ARE TO BE RECLAIMED SHALL BE PROTECTED, AND ALL UNSUITABLE MATERIAL SHALL BE REMOVED OR STABILIZED IN PLACE, AND THEN COMPACTED TO A MINIMUM OF 95% MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557.
 - IMPORTED FILL FROM OFF-SITE BORROW PITS MUST BE MATERIAL SHOWN IN CONSENT TO HAVE MATERIAL. ALL IMPORTED FILL MATERIAL MUST BE TESTED AND HAVE THE APPROVAL OF A LICENSED SOILS ENGINEER.
 - FILL SHALL BE DEPOSITED IN EIGHT (8) INCH LOOSE LAYERS MAXIMUM, EXCEPT FILL WITHIN LANDSCAPED AREAS WHICH MAY BE DEPOSITED IN THIRTEEN (13) INCH LOOSE LAYERS MAXIMUM. ALL FILL SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DENSITY ASTM D-1557 (SOIL IN LANDSCAPED AREAS) AT ITS OPTIMUM MOISTURE CONTENT ± 2% UNLESS OTHERWISE SPECIFIED BY THE SOILS ENGINEER.
 - FILL DENSITY AND SOIL BEARING CAPACITY TESTS SHALL BE PERFORMED BY A LICENSED SOILS ENGINEER.
 - WHEN MET EXCAVATION IS ENCOUNTERED, THE EXCAVATED AREA SHALL BE DETERMINED AND KEPT FREE OF WATER. PROVIDE A PERMANENT SUBDRAINAGE SYSTEM IF NECESSARY. ALL SATURATED MATERIAL SHALL BE REMOVED.
 - PROVIDE ALL SOIL EROSION AND SEDIMENTATION CONTROL AS REQUIRED BY LOCAL AUTHORITIES AND PROTECT CONSTRUCTION PRACTICES AS NECESSITATED TO ELIMINATE ALL CONTAMINATED DISCHARGE FROM THE SITE DURING CONSTRUCTION.
 - PROVIDE SLOPE STABILIZATION ON ALL SITE SLOPES. STABILIZATION MAY BE BY TURF GRASSES, SOIL VEGETATION, GEOTEXTILE FABRICS OR OTHER MEANS AS REQUIRED BY THE DEGREE OF SLOPE TO BE PROTECTED.
 - THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, UTILITY LOCATIONS, AND DIMENSIONS PRIOR TO CONSTRUCTION. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN BY THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
 - ADJUST ALL EXISTING AND PROPOSED UTILITY FRAMES, GRATES, MANHOLE COVERS, VALVE BOXES, ETC. TO BE FLUSH WITH THE PROPOSED SURFACE ELEVATIONS WITHIN THE LIMITS OF CONSTRUCTION.
 - REMOVE AND DISPOSE OF PAVEMENT MATERIALS AT AN APPROVED DISPOSAL SITE. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH APPLICABLE STANDARDS.
 - ALL SINKHOLES SHALL BE REPAIRED (SEE DETAIL ON DETAIL SHEET). ANY NEW SINKHOLES THAT DEVELOP SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE OWNER.
 - ALL NON-PAVED AREAS SHALL NOT EXCEED A 2:1 SLOPE UNLESS SPECIFICALLY APPROVED BY A LICENSED SOILS ENGINEER. PROVIDE SLOPE STABILIZATION AS REQUIRED.
 - THE PROPOSED STORM WATER MANAGEMENT FACILITY WILL BE PRIVATELY OWNED AND MAINTAINED. THE DETENTION POND IS A P-5 POCKET POND. THE DETENTION POND IS A HAZARD CLASSIFICATION "A".

MARK	DATE	REVISION
1	9/13/05	PER COUNTY COMMENTS
2	1/9/06	PER COUNTY COMMENTS
3	3/10/06	PER COUNTY COMMENTS
4	6/29/06	PER COUNTY COMMENTS
5	10/25/06	PER COUNTY COMMENTS
6	1/12/07	PER COUNTY COMMENTS
7	4/18/07	PER COUNTY COMMENTS
8	7/2/07	PER COUNTY COMMENTS
9	9/20/07	PER COUNTY COMMENTS
10	10/24/07	PER COUNTY COMMENTS
11	7/3/09	EX. DRIVEWAY ENT.
12	11/16/09	AS-BUILT

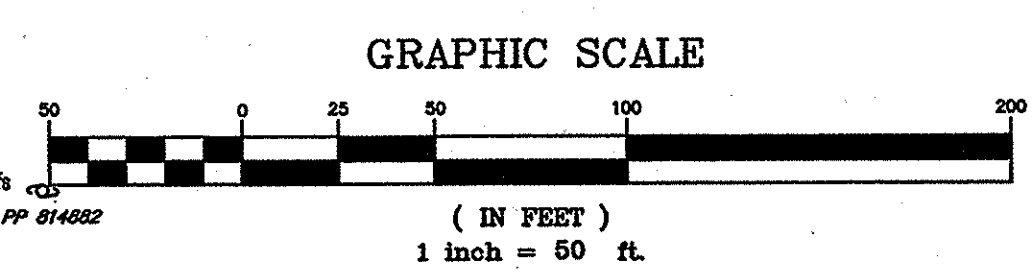
MGA
 MULHENSBERG GREENE ARCHITECTS, LTD.
 400 Washington Street, Reading, Pennsylvania 19601
 Phone: 610.376.9827 Fax: 610.376.9828

- NOTES**
- THE PROPOSED STORM WATER MANAGEMENT FACILITY WILL BE PRIVATELY OWNED AND MAINTAINED. THE DETENTION POND IS A P-5 POCKET POND.
 - PLEASE SEE SHEET 28 FOR MORE DETAIL OF DRAINAGE AREAS.

SUMMARY TABLE

1 YR. WSEL=432.16	13
2 YR. WSEL=432.42	
10 YR. WSEL=435.26	
100 YR. WSEL=434.09	

REV REQUIRED 0.071 AC-FT (PROVIDED BY GRASS SWALES)
 WQV REQUIRED 0.272 AC-FT PERMANENT POOL EL.=431.40 (0.13 AC-FT)
 WQV EL.= 431.80 (0.27 AC-FT)
 CPV REQUIRED 0.383 AC-FT
 10 QP REQUIRED 34.9 cfs
 10 QP PROVIDED 35.1 cfs
 100 Q OF REQUIRED 77.3 cfs
 100 Q PROVIDED 73.7 cfs



13/6/2015 GRADING
 DRAWN BY: EVT
 CHECKED BY: CKL

MGA #2782
 STAMP

PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION
 HUNTINGTON MANOR ESTATES SECTION 2

AREA INFORMATION
 TAX MAP 34, PARCEL 399
 ZONED RR-DEO
 5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

PROJECT ADDRESS
 BRIGHTON DAM & TEN OAKS ROAD
 CLARKSVILLE, MARYLAND

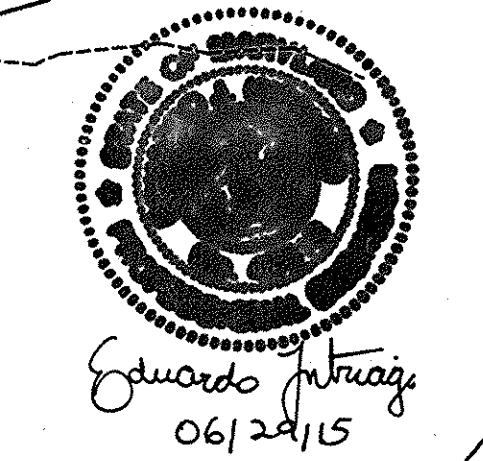
SHEET TITLE
SITE DEVELOPMENT PLAN GRADING PLAN
 AS-BUILT

CURRENT BOARD OF APPEALS CASE #BA 04-007C
 PROJECT DESIGNATION LDS 583-0273-0501-0101

PROPERTY NUMBER 565-0348
 SHEET NO. 4 of 32
 DEVELOPMENT NUMBER HER-COL-93-12
 D.T.E. 07/05/05

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 MEET THE APPROVED PLANS AND SPECIFICATIONS.

LOUIS BERNSTEIN
 MD PE #1467
 DATE 12/29/09



SOIL CLASSIFICATION

THIS SOIL TAKEN FROM THE SOIL SURVEY OF HOWARD COUNTY, MARYLAND PERFORMED BY THE U.S. DEPT. OF AGRICULTURE SOIL CONSERVATION SERVICE, DATED JULY 1968, THIS SITE IS FOUND ON MAP SHEET 23.

- ChA CHESTER SILT LOAM, 0 - 3% SLOPES (SCS-B)
- ChB2 CHESTER SILT LOAM, 3 - 8% SLOPES, MODERATELY ERODED (SCS-B)
- CgCz CHESTER GRAVELLY SILT LOAM, 8 - 15% SLOPES, MODERATELY ERODED (SCS-B)
- GnA GLENVILLE SILT LOAM, 0 - 3% SLOPES (SCS-C)

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.
 LIC: #46513
 EXP: 03-02-2017

RBA
 Group
 ENGINEERS • ARCHITECTS • PLANNERS
 7184 Columbia Gateway Drive, Suite 205
 Columbia, Maryland 21046
 Phone (410) 312-0088, Fax (410) 312-0897

REVIEWED FOR HOWARD SCC AND MEETS TECHNICAL REQUIREMENTS

DATE 6/16/08

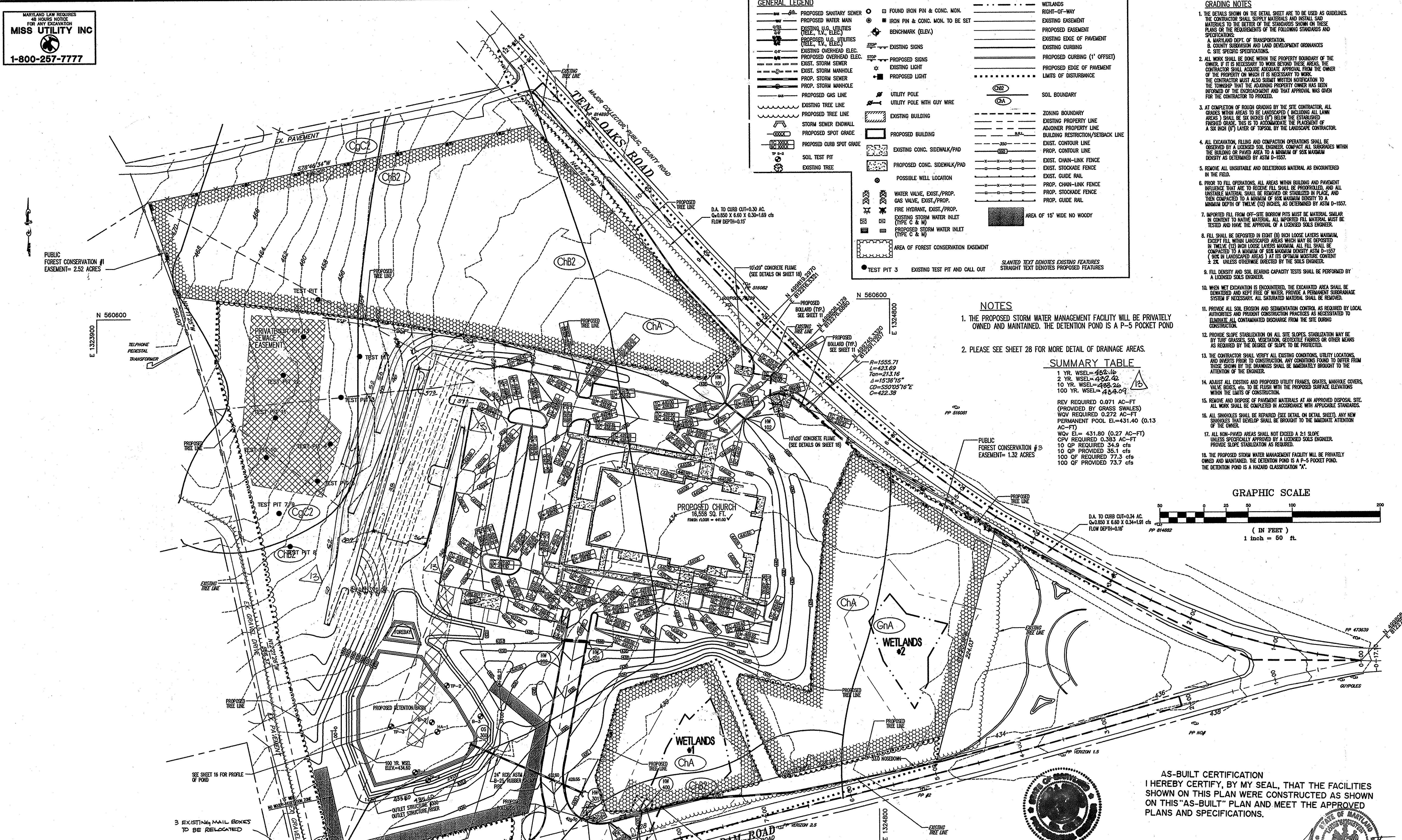
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief Engineer
 Date 7/2/08

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
 COUNTY HEALTH OFFICER
 Date 7/23/08

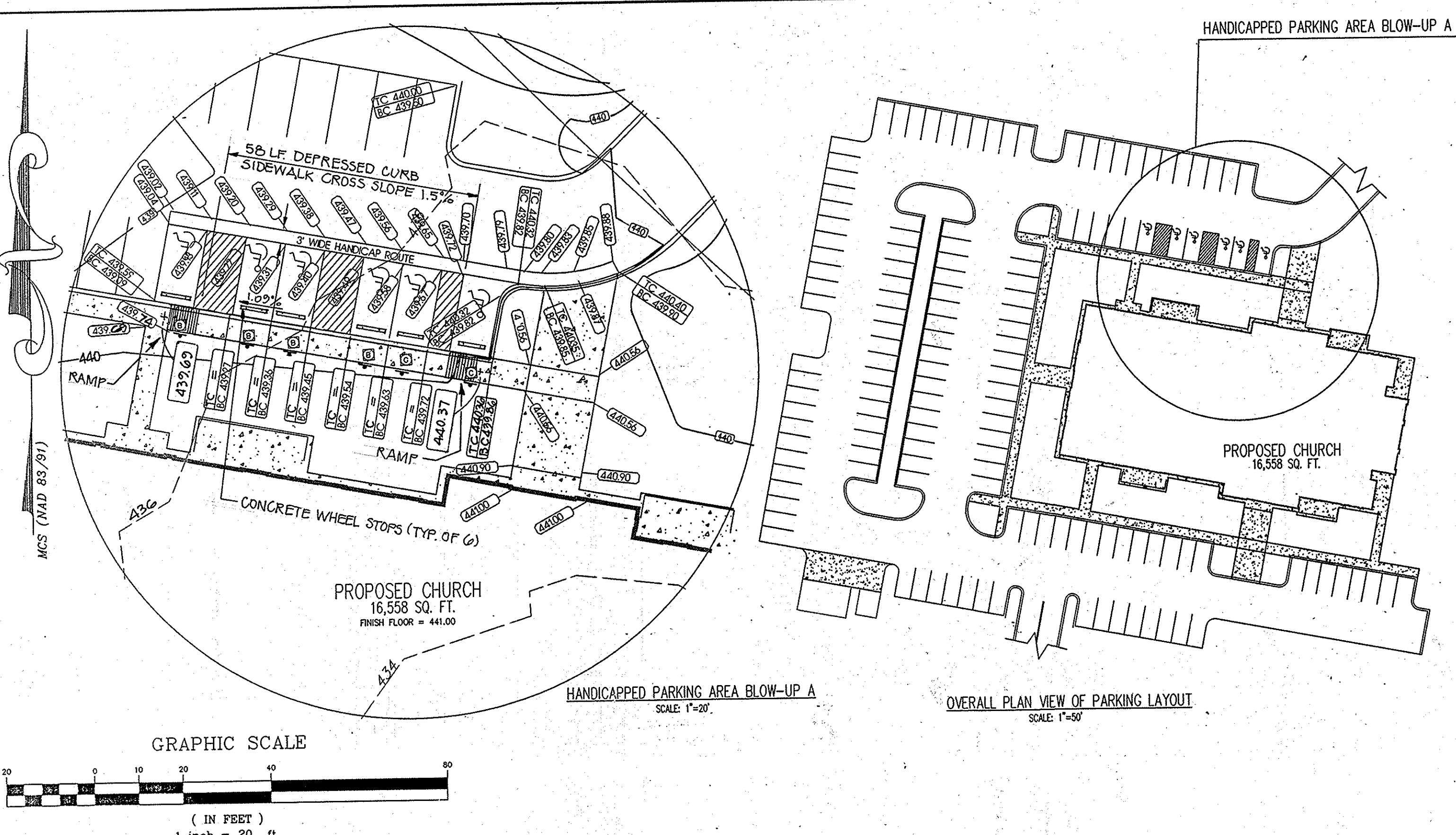
REVIEWED FOR HOWARD SCC AND MEETS TECHNICAL REQUIREMENTS

DATE 6/16/08

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
 COUNTY HEALTH OFFICER
 Date 7/23/08



11/10/07 Library E:\projects\107575\107575_SITESHIP\GARDENING\107575_Plan_0600.dwg



SPECIALIZED ENGINEERING
TEST PIT NUMBER TP-3
 PAGE 1 OF 1

CLIENT: Liberty Engineering
 PROJECT NAME: Howard County LDS
 PROJECT LOCATION: Clarksville, MD
 DATE STARTED: 11/20/06
 COMPLETED: 11/20/06
 GROUND ELEVATION: 445.0
 TEST PIT SIZE: _____

EXCAVATION CONTRACTOR: L&L, Inc.
 EXCAVATION METHOD: Backhoe
 LOGGED BY: P. Notton
 CHECKED BY: P. Notton

DEPTH (ft)	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNT (AVG)	SPT N VALUE A		
					PL	MC	LL
0	Grades to yellowish-brown and gray						
0.75	White to pink clayey silty, moist, medium stiff clay						

SPECIALIZED ENGINEERING
TEST PIT NUMBER TP-4
 PAGE 1 OF 1

CLIENT: Liberty Engineering
 PROJECT NAME: Howard County LDS
 PROJECT LOCATION: Clarksville, MD
 DATE STARTED: 11/20/06
 COMPLETED: 11/20/06
 GROUND ELEVATION: 443.0
 TEST PIT SIZE: _____

EXCAVATION CONTRACTOR: L&L, Inc.
 EXCAVATION METHOD: Backhoe
 LOGGED BY: P. Notton
 CHECKED BY: P. Notton

DEPTH (ft)	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNT (AVG)	SPT N VALUE A		
					PL	MC	LL
13	Presence of cobble-size quartz						
13.5	Yellowish-brown and gray silty sand, moist (SM)						

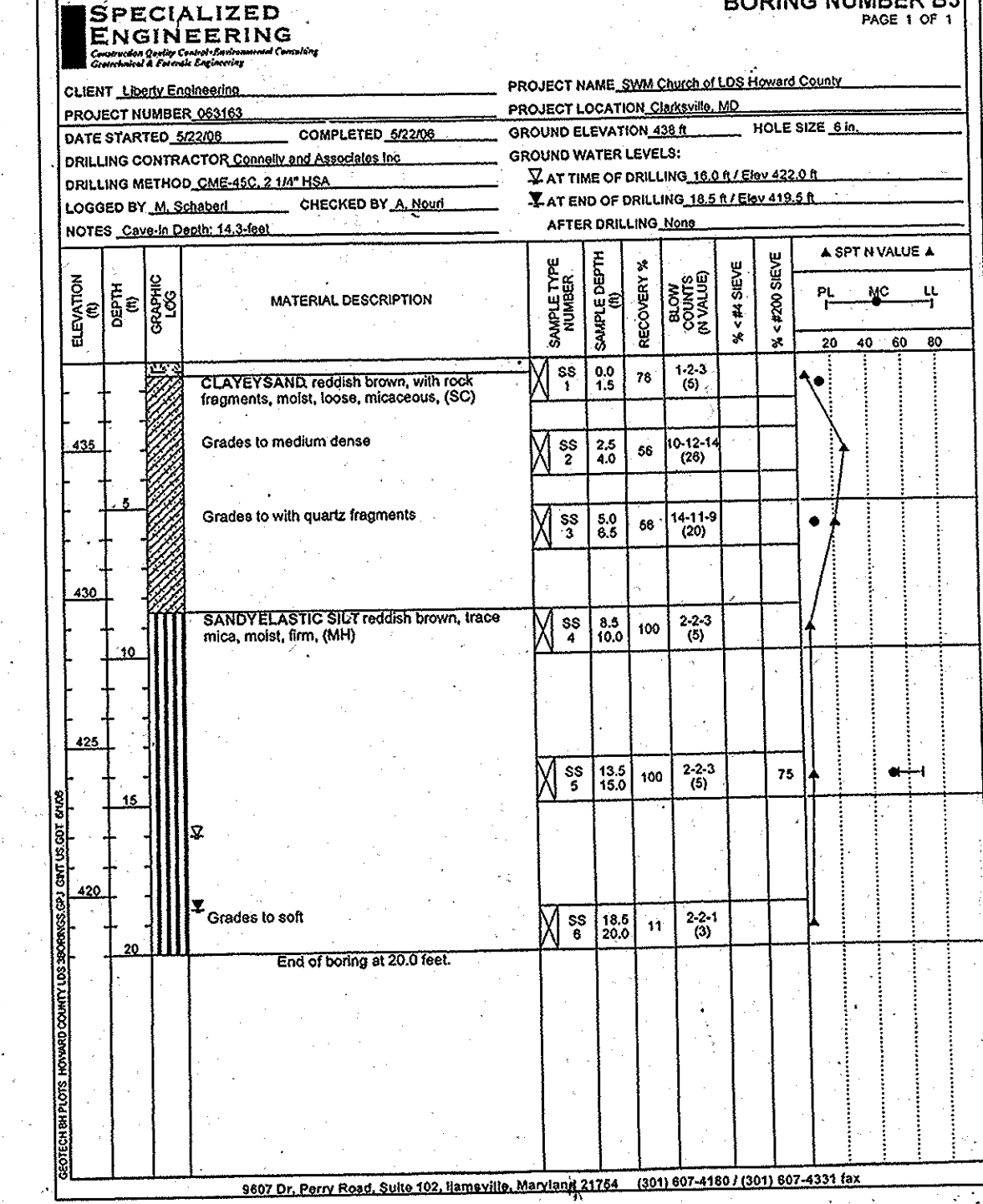
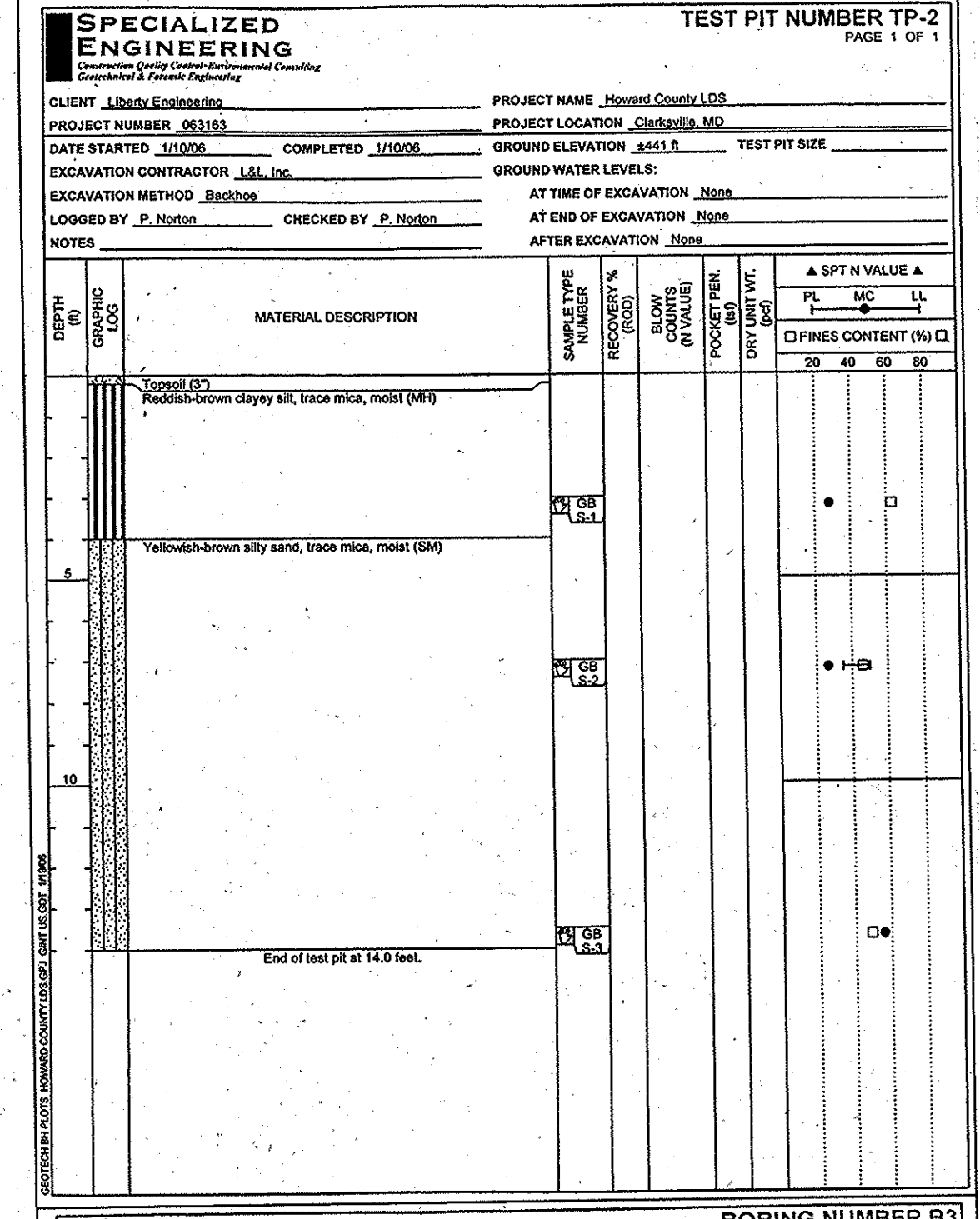
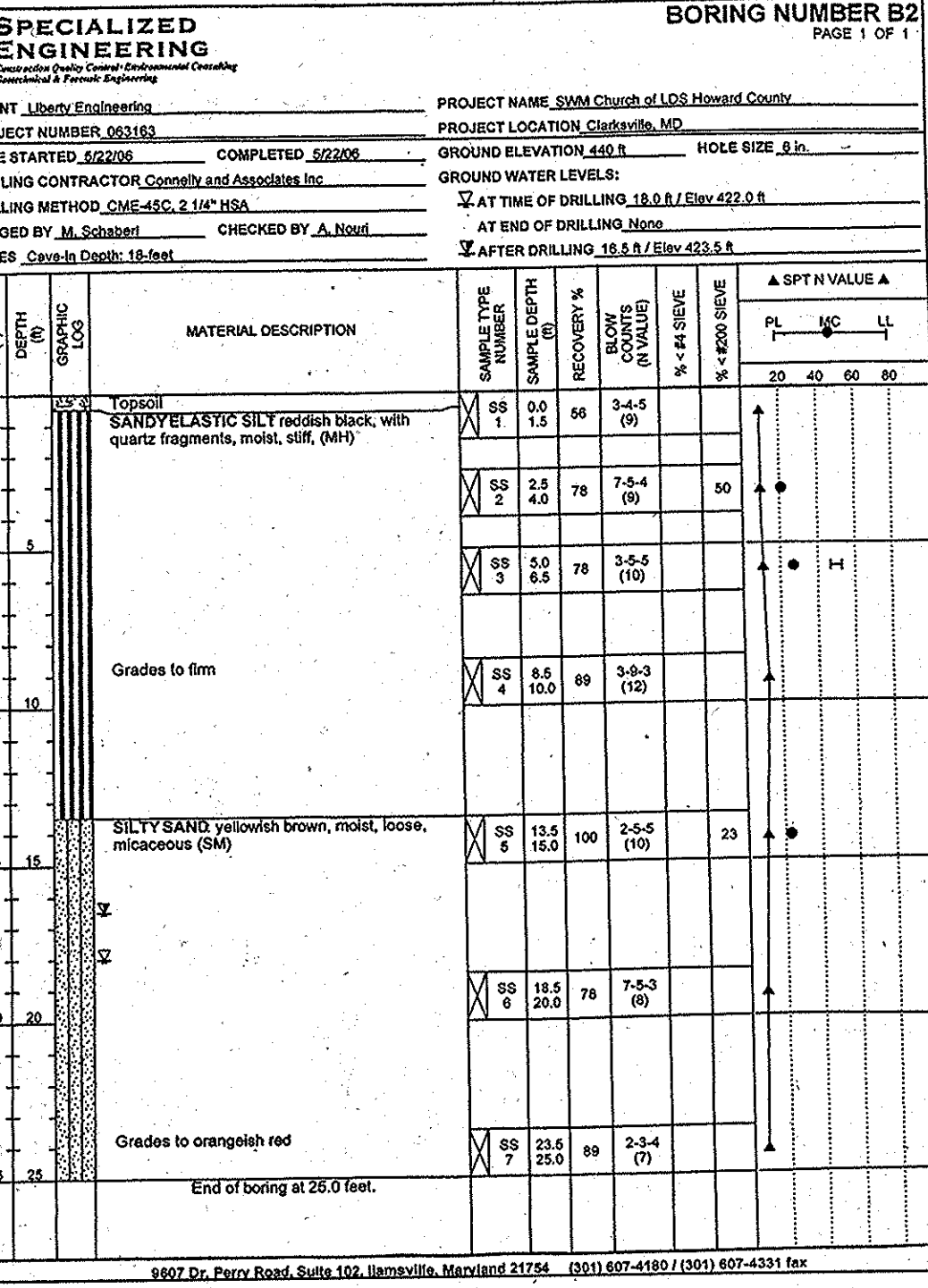
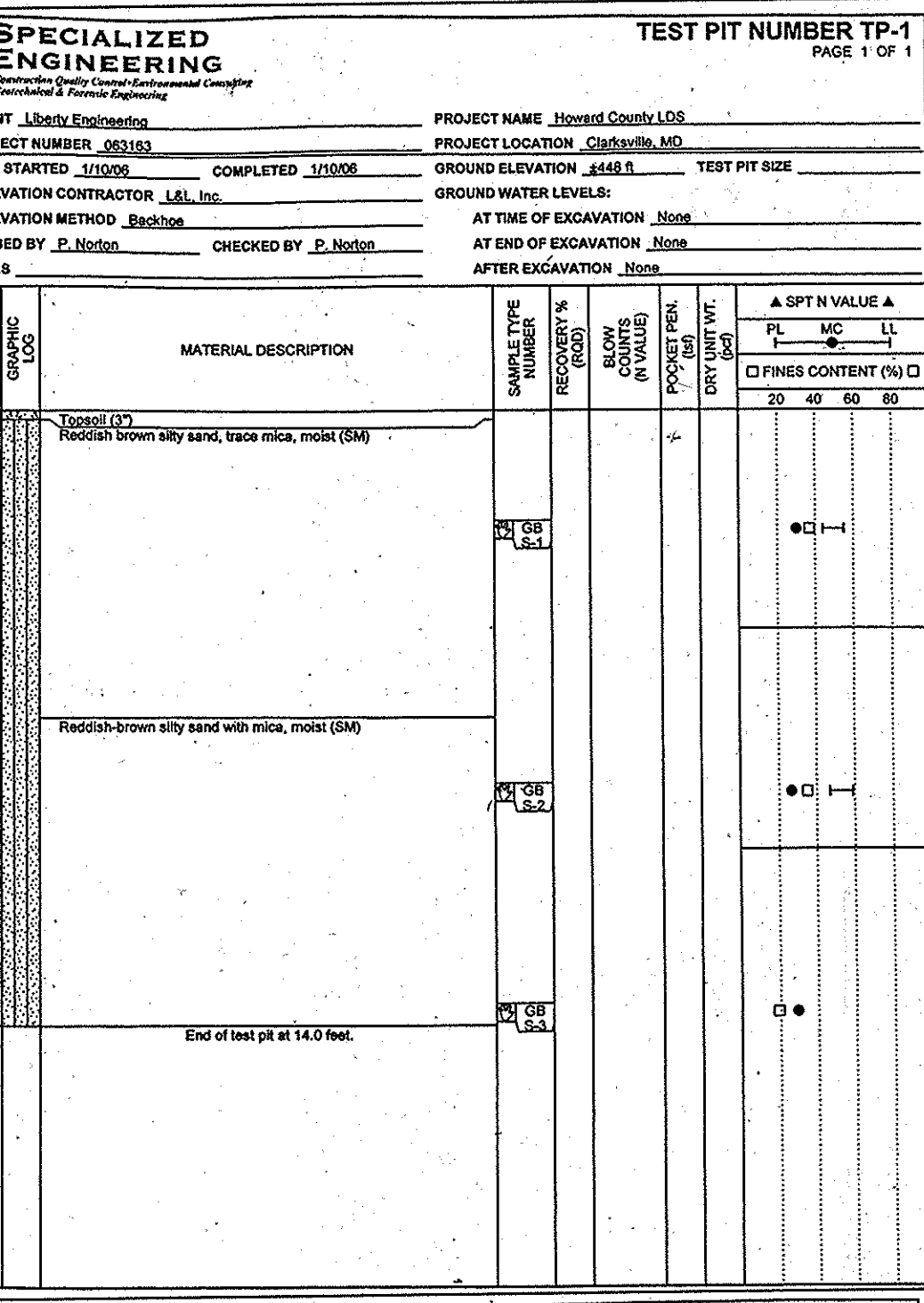
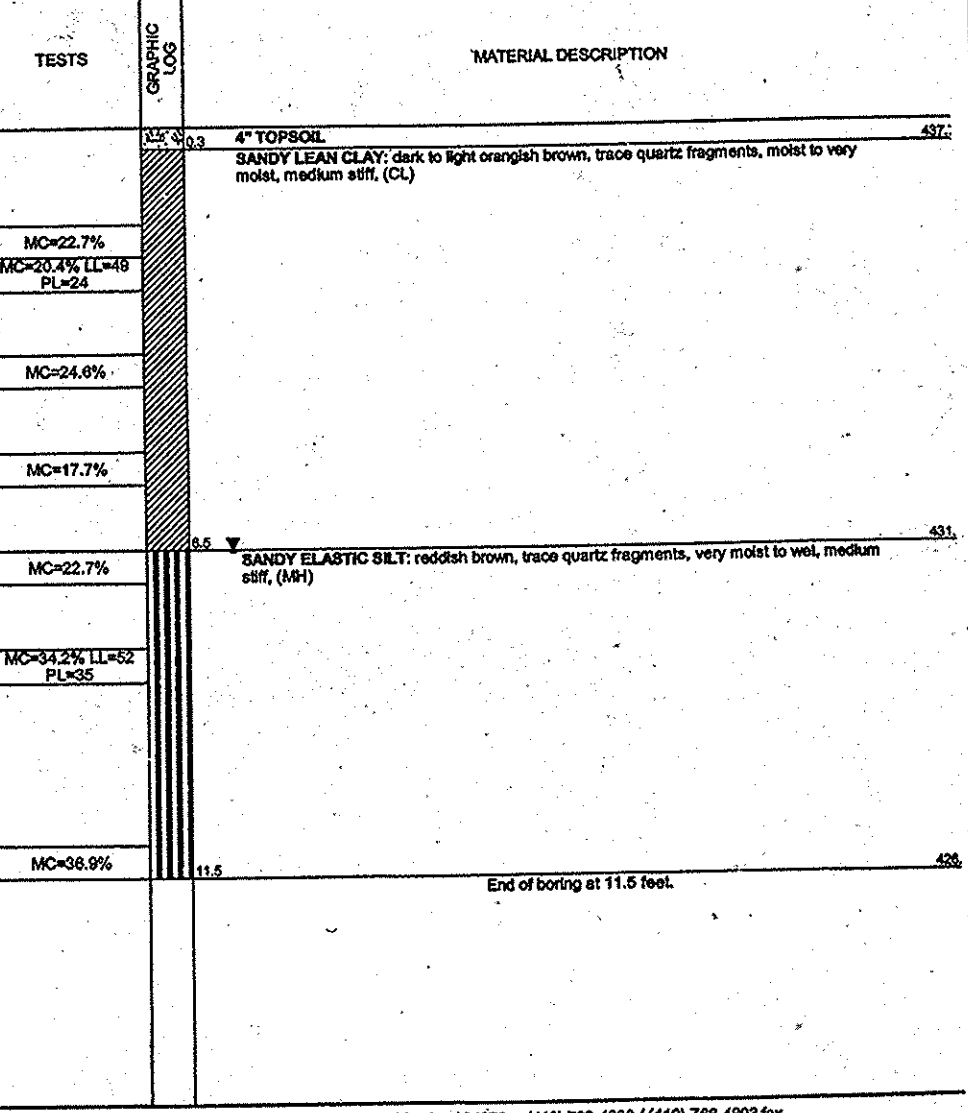
TABLE 1 - SUMMARY OF SOIL LABORATORY TEST RESULTS
PROPOSED SWM POND
LDS HOWARD COUNTY
CLARKSVILLE, HOWARD COUNTY, MARYLAND
SPECIALIZED ENGINEERING PROJECT NO.: 063163

TEST PIT NO.	SAMPLE DEPTH (FT.)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			PERCENT FINER THAN NO. 200 SIEVE
			LL	PL	PI	
TP-1	2.5	30.0	65	44	11	37
TP-1	8.5	26.5	69	47	12	35
TP-1	13.5	29.0	---	---	---	19
TP-2	3.0	28.0	---	---	---	63
TP-2	7.0	26.5	50	35	15	48
TP-2	13.5	56.0	---	---	---	49
TP-3	6.5	26.5	---	---	---	38
TP-3	13.0	44.0	70	45	25	59
TP-4	2.0	17.0	---	---	---	---
TP-4	9.0	20.0	52	35	17	47
TP-4	13.0	15.5	45	32	13	36

SPECIALIZED ENGINEERING
BORING NUMBER HA-1
 PAGE 1 OF 1

CLIENT: Liberty Engineering, Inc.
 PROJECT NAME: The Church of Jesus Christ of Latter-day Saints
 PROJECT LOCATION: Clarksville, MD
 DATE STARTED: 3/20/07
 COMPLETED: 3/20/07
 GROUND ELEVATION: 438.0
 HOLE SIZE: 2" ID

DRILLING CONTRACTOR: Specialized Engineering
 DRILLING METHOD: Hand Auger
 LOGGED BY: J. Schmitt
 CHECKED BY: J. Schmitt
 NOTES: Specialized Engineering performed test in adjacent borings



REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signatures and Dates]

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY

[Signatures and Dates]

NO AS-BUILT INFORMATION IS REQUIRED



MARYLAND LAW REQUIRES 48 HOURS NOTICE FOR ANY EXCAVATION

MISS UTILITY INC

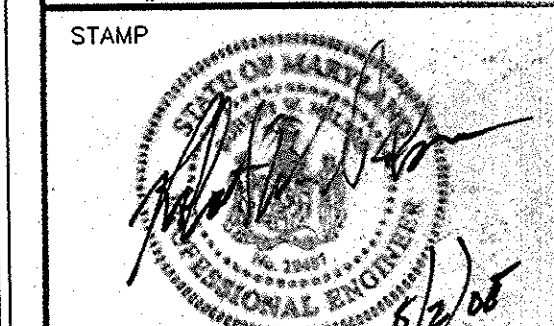
1-800-257-7777

MARK	DATE	REVISION
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9	9/20/07	PER COUNTY COMMENTS
10	10/27/07	PER COUNTY COMMENTS

MCA
 MULHENSBERG GREENE
 ARCHITECTS - LTD.

400 Washington Street, Reading, Pennsylvania 19601
 Phone: 610.376.6927 Fax: 610.376.6720

DRAWN BY: EVT
 CHECKED BY: CKL



PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION
 HUNTINGTON MANOR ESTATES
 SECTION 2

AREA INFORMATION
 TAX MAP 34, PARCEL 399
 ZONED RR-DEO
 5TH ELECTION DISTRICT OF
 HOWARD COUNTY, MARYLAND

PROJECT ADDRESS
 BRIGHTON DAM & TEN OAKS ROAD
 CLARKSVILLE, MARYLAND

SHEET TITLE
 SITE DEVELOPMENT PLAN
 HANDICAPPED PARKING AREA
 BLOW-UP/SOIL BORING
AS-BUILT

CURRENT BOARD OF APPEALS CASE
 #BA 04-007C

PROJECT DESIGNATION
 LDS 583-0273-0501-0101

PROPERTY NUMBER SHEET NO.
 565-0348
 5 of 32

DATE
 07/05/05

MARYLAND LAW REQUIRES 48 HOURS NOTICE FOR ANY EXCAVATION
MISS UTILITY INC
 1-800-257-7777

GENERAL LEGEND	
	PROPOSED SANITARY SEWER
	PROPOSED WATER MAIN
	EXISTING UG UTILITIES (TEL, W, ELEC)
	PROPOSED UG UTILITIES (TEL, W, ELEC)
	EXISTING OVERHEAD ELEC.
	PROPOSED OVERHEAD ELEC.
	EXIST. STORM SEWER
	PROP. STORM SEWER
	EXIST. STORM MANHOLE
	PROP. STORM MANHOLE
	PROPOSED GAS LINE
	EXISTING TREE LINE
	STORM SEWER ENDWALL
	PROPOSED SPOT GRADE
	PROPOSED CURB SPOT GRADE
	SOIL TEST PIT
	EXISTING TREE
	FOUND IRON PIN & CONC. MON.
	IRON PIN & CONC. MON. TO BE SET
	BENCHMARK (ELEV.)
	UTILITY POLE
	UTILITY POLE WITH GUY WIRE
	EXISTING BUILDING
	PROPOSED BUILDING
	EXISTING CONC. SIDEWALK/PAD
	PROPOSED CONC. SIDEWALK/PAD
	POSSIBLE WELL LOCATION
	WATER VALVE, EXIST./PROP.
	GAS VALVE, EXIST./PROP.
	FIRE HYDRANT, EXIST./PROP.
	EXISTING STORM WATER INLET (TYPE C & M)
	PROPOSED STORM WATER INLET (TYPE C & M)
	AREA OF FOREST CONSERVATION EASEMENT
	TEST PIT 3
	EXISTING TEST PIT AND CALL OUT
	WETLANDS
	RIGHT-OF-WAY
	EXISTING EASEMENT
	PROPOSED EASEMENT
	EXISTING EDGE OF PAVEMENT
	EXISTING CURBING
	PROPOSED CURBING (1' OFFSET)
	PROPOSED EDGE OF PAVEMENT
	LIMITS OF DISTURBANCE
	SOIL BOUNDARY
	ZONING BOUNDARY
	EXISTING PROPERTY LINE
	ADJOINER PROPERTY LINE
	BUILDING RESTRICTION/SETBACK LINE
	EXIST. CONTOUR LINE
	PROP. CONTOUR LINE
	EXIST. CHAIN-LINK FENCE
	PROP. STOCKADE FENCE
	PROP. CHAIN-LINK FENCE
	PROP. STOCKADE FENCE
	PROP. GUIDE RAIL
	AREA OF 15' WIDE NO WOODY
	SLANTED TEXT DENOTES EXISTING FEATURES
	STRAIGHT TEXT DENOTES PROPOSED FEATURES

GENERAL NOTES

- FIRE DEPARTMENT SIAMESE CONNECTION SHALL BE LOCATED ON THE FRONT OF BUILDING AS SHOWN ON THIS SHEET.
- NO LANDSCAPING SHALL BE PLATED WITHIN 7' OF EACH SIDE OF THE FIRE DEPARTMENT CONNECTION, WHICH IS LOCATED ON THE WATER STORAGE TANK.
- A KNOX BOX IS REQUIRED TO BE PLACED ON THE FRONT OF THE BUILDING. IT SHALL BE PLACED TO THE RIGHT OF THE MAIN ENTRANCE AT A RANGE OF 4'-5' IN HEIGHT AND NO MORE THAN 6' Laterally FROM THE DOOR. THE BOX SHALL BE ELECTRONICALLY SUPERVISED TO NOTIFY THE OWNER THAT IT IS BEING ACCESSED (INTEGRATED WITH THE FIRE ALARM SYSTEM). SEE LOCATION SHOWN ON THIS SHEET.
- THE PROPOSED STORM WATER MANAGEMENT FACILITY WILL BE PRIVATELY OWNED AND MAINTAINED. THE DETENTION POND IS A P-5 POCKET POND. THE DETENTION POND IS A HAZARD CLASSIFICATION "A".

MARK	DATE	REVISION
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8	7/2/07	PER COUNTY COMMENTS
9	9/20/07	PER COUNTY COMMENTS
10	10/27/07	PER COUNTY COMMENTS
11	11/04/08	SEPTIC FIELD, PUMP TANK GREASE TRAP
12	9/3/09	EXIST. DRIVEWAY, ROOF DRAIN
13	11/18/09	AS-BUILT
14	6/21/15	PARKING, MISC. UT.

MGA #2782
 MUHLBERG GREENE ARCHITECTS PLLC
 400 Washington Street, Reading, Pennsylvania 19603
 Phone: 610.376.4827 Fax: 610.376.6720

DRAWN BY: EVT
 CHECKED BY: CKL

PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

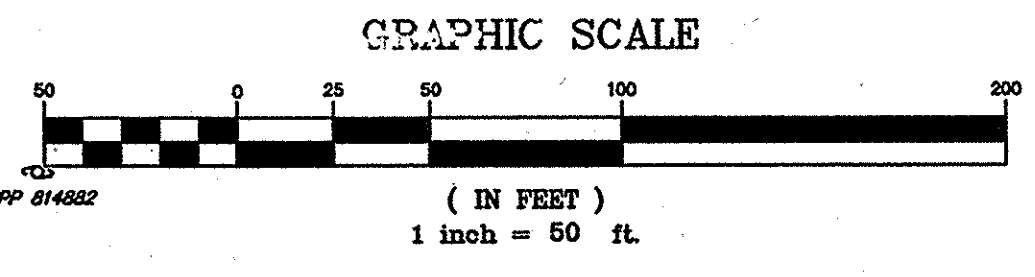
RECORDED SUBDIVISION
 BRIGHTON MANOR ESTATES SECTION 2

AREA INFORMATION
 TAX MAP 34, PARCEL 399
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 51ST ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

PROJECT ADDRESS
 BRIGHTON DAM & TEN OAKS ROAD
 ARKSVILLE, MARYLAND

SHEET TITLE
 SITE DEVELOPMENT PLAN
 UTILITY PLAN
 AS-BUILT

CURRENT BOARD OF APPEALS CASE #BA 04-079C
 PROJECT DESIGNATION LNE 58-0273-0501-0101
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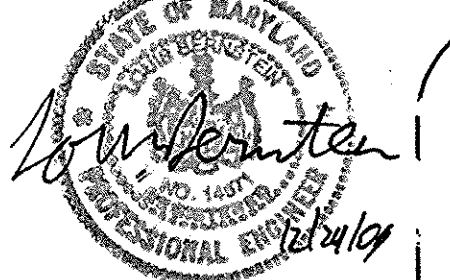


AS-BUILT CERTIFICATION
 I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

Louis Bernstein
 LOUIS BERNSTEIN
 MD PE #1467

12/19/09
 DATE

AS-BUILT SURVEY PERFORMED 11/16/09



The RBA- Group
 ENGINEERS • ARCHITECTS • PLANNERS
 7164 Columbia Gateway Drive, Suite 205
 Columbia, Maryland 21046
 Phone (410) 312-0800, Fax (410) 312-0897

Edward Frazee
 06/29/15
PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL UNDER THE LAWS OF THE STATE OF MARYLAND.
 LIC. # A0513
 EXP. 03-02-2017



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chad Anderson 6/16/8
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
John Hamilton 7/23/08
 CHIEF, DIVISION OF LAND DEVELOPMENT
David L. Leach 7/23/08
 DIRECTOR

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
William Peter Richardson 7/23/08
 COUNTY HEALTH OFFICER
 HOWARD COUNTY HEALTH DEPARTMENT

C:\327 Library\Engineering\3275 581756\UTILITY.dwg, 4/20/2008 3:53:39 PM, 6/16/08

MARYLAND LAW REQUIRES 48 HOURS NOTICE FOR ANY EXCAVATION MISS UTILITY INC 1-800-257-7777

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 MEET THE APPROVED PLANS AND SPECIFICATIONS.

LOUIS BERNSTEIN
MD PE #14671
DATE 12/29/07
BARBARA JEAN MARTELLO
TAX MAP 34 PARCEL 389 LOT 4
ZONED RR-DEO

HUNTINGTON MANOR ESTATES SECTION TWO LOTS 5, 6 & 7 PLAT NO. 6745

FRED T. LEWIS & MARY AGNES LEWIS
TAX MAP 34 PARCEL 160
L 2005 F 259
ZONED RR-DEO
AGRICULTURAL LAND PRESERVATION EASEMENT #10-91-15-2

HUNTINGTON MANOR ESTATES SECTION TWO LOTS 4, 5 & 6 PLAT NO. 6745

JOEL GOODMAN & SUSAN B. GOODMAN
TAX MAP 34 PARCEL 389 LOT 5
L 2005 F 259
ZONED RR-DEO

HUNTINGTON MANOR ESTATES SECTION TWO LOTS 5, 6 & 7 PLAT NO. 6745 LOT 6

Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-Day Saints
TAX MAP 34 PARCEL 389 LOT 7
L 1999 F 608
ZONED RR-DEO

PETER NEWTON & CAROLYN NEWTON
TAX MAP 34 PARCEL 389 LOT 7
L 5413 F 418
ZONED RR-DEO

HUNTINGTON MANOR ESTATES SECTION THREE LOTS 7 & 8 PLAT NO. 6778

HUNTINGTON MANOR ESTATES SECTION THREE LOTS 7 & 8 PLAT NO. 6778

DICK GELDOLF & EILEEN F. ZELLER
TAX MAP 34 PARCEL 389 LOT 8
L 2800 F 391
ZONED RR-DEO

SEE SHEET 31 FOR SEQUENCE OF CONSTRUCTION NOTES.

DONALD G. HARDESTY & DONNA T. HARDESTY
TAX MAP 34 PARCEL 266 LOT 3
L 142 F 540
ZONED RR-DEO

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE 6/16/08

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
DATE 7/2/08

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

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



Eduardo Patino
06/12/15
PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL UNDER THE LAWS OF THE STATE OF MARYLAND.
LIC.# 06513
EXP: 03-02-2017

JEAN N. WARFIELD
TAX MAP 34 PARCEL 43
L 2003 F 510
ZONED RR-DEO
AGRICULTURAL LAND PRESERVATION EASEMENT #10-91-04-2

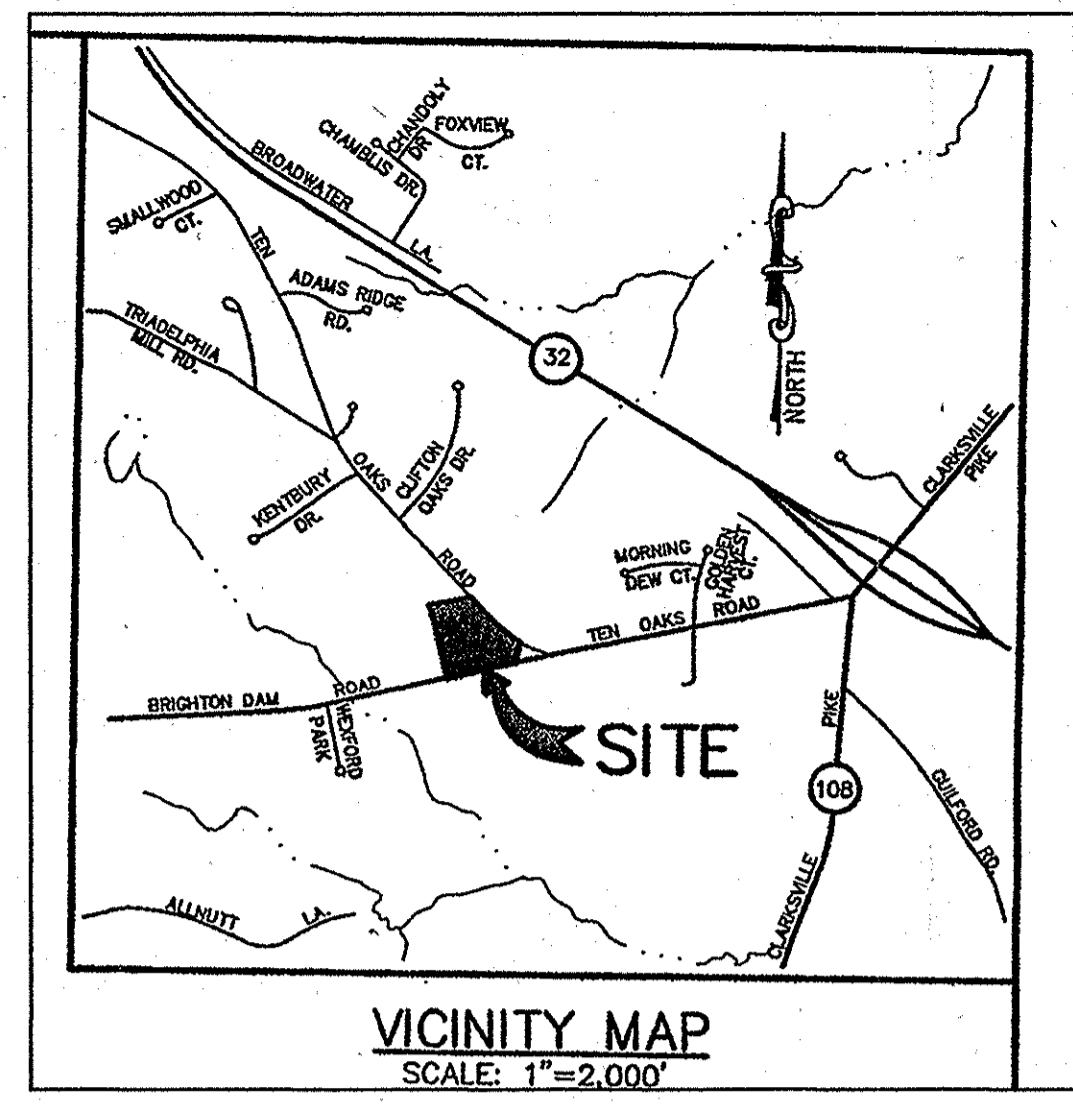
John C. Traylor JUNIOR
DATE 6/16/08

GENERAL LEGEND

- PROPOSED SANITARY SEWER
- PROPOSED WATER MAIN
- EXISTING U.G. UTILITIES (TELE, TV, ELEC.)
- PROPOSED U.G. UTILITIES (TELE, TV, ELEC.)
- EXISTING OVERHEAD ELEC.
- PROPOSED OVERHEAD ELEC.
- EXIST. STORM SEWER
- PROP. STORM SEWER
- EXIST. STORM MANHOLE
- PROP. STORM MANHOLE
- EXISTING TREE LINE
- PROPOSED TREE LINE
- STORM SEWER ENDWALL
- PROPOSED SPOT GRADE
- PROPOSED CURB SPOT GRADE
- SOIL TEST PIT
- EXISTING TREE
- FOUND IRON PIN & CONC. MON.
- IRON PIN & CONC. MON. TO BE SET
- BENCHMARK (ELEV.)
- EXISTING SIGNS
- PROPOSED SIGNS
- EXISTING LIGHT
- PROPOSED LIGHT
- UTILITY POLE
- UTILITY POLE WITH GUY WIRE
- EXISTING BUILDING
- PROPOSED BUILDING
- EXISTING CONC. SIDEWALK/PAD
- PROPOSED CONC. SIDEWALK/PAD
- POSSIBLE WELL LOCATION
- WATER VALVE, EXIST./PROP.
- GAS VALVE, EXIST./PROP.
- FIRE HYDRANT, EXIST./PROP.
- EXISTING STORM WATER INLET (TYPE C & M)
- PROPOSED STORM WATER INLET (TYPE C & M)
- AREA OF FOREST CONSERVATION EASEMENT
- TEST PIT 3
- EXISTING TEST PIT AND CALL OUT
- SLANTED TEXT DENOTES EXISTING FEATURES
- STRAIGHT TEXT DENOTES PROPOSED FEATURES

WETLANDS

- RIGHT-OF-WAY
- EXISTING EASEMENT
- PROPOSED EASEMENT
- EXISTING EDGE OF PAVEMENT
- EXISTING CURBING
- PROPOSED CURBING (1' OFFSET)
- PROPOSED EDGE OF PAVEMENT
- LIMITS OF DISTURBANCE
- SOIL BOUNDARY
- ZONING BOUNDARY
- EXISTING PROPERTY LINE
- ADJONER PROPERTY LINE
- BUILDING RESTRICTION/SETBACK LINE
- EXIST. CONTOUR LINE
- PROP. CONTOUR LINE
- EXIST. CHAIN-LINK FENCE
- EXIST. STOCKADE FENCE
- EXIST. GUIDE RAIL
- PROP. CHAIN-LINK FENCE
- PROP. STOCKADE FENCE
- PROP. GUIDE RAIL
- AREA OF 15' WIDE NO WOODY
- POST DRAINAGE LINE
- PRE DRAINAGE LINE



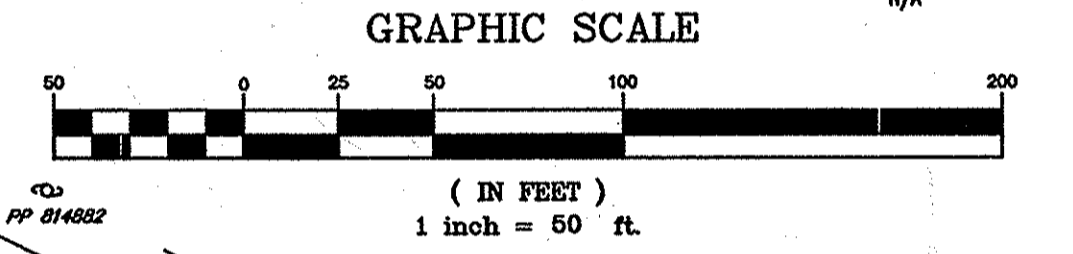
NOTE: THE PROPOSED STORM WATER MANAGEMENT FACILITY WILL BE PRIVATELY OWNED AND MAINTAINED. THE DETENTION POND IS A P-5 POCKET DETENTION POND.

SOIL EROSION CONTROL LEGEND

- SSF SUPER SILT FENCE
- SF SILT FENCE
- LIMITS OF DISTURBANCE
- SOILS BOUNDARY
- POST DRAINAGE AREA TO POND
- PRE DRAINAGE AREA TO POND
- SWALE
- EARTH DIKE
- STABILIZED CONSTRUCTION ENTRANCE
- RIP-RAP APRON
- EROSION CONTROL MATTING (ECM)
- ROCK FILTER FOR OUTLET STRUCTURE
- REMOVABLE PUMPING STATION
- LEVEL SPREADER

SITE ANALYSIS:

TOTAL SITE AREA: 522,716 SQ. FT. OR 11.9991 AC.
TOTAL DISTURBED AREA: 27,028 SQ. FT. OR 0.65 AC.
TOTAL IMPERVIOUS AREA: 82,373 SQ. FT. OR 1.8810 ACRES
TOTAL AREA TO BE VEGETATIVELY STABILIZED: 11,100 SQ. FT. OR 0.27 AC.
TOTAL CUT: 8500 YD.
TOTAL FILL: 0 YD.
OFFSITE WASTE AREA TO HAVE ACTIVE GRADING PERMIT: N/A



STOCKPILE ACCESS:
CONTRACTOR SHALL ACCESS STOCKPILE AREA FROM BRIGHTON DAM ROAD ACCESS DRIVE, AROUND SOUTH AND WEST SIDES OF DETENTION BASIN AND ABOVE PERIMETER SWALE NO.3.

SEQUENCE OF CONSTRUCTION

- Obtain all grading permits (7 days)
- Install and establish stabilized construction entrances at all Brighton Dam Road and Ten Oaks Road at the locations indicated on the plans (1 day)
- Install all erosion control measures throughout the property at locations indicated on the plans (7 days)
- Install and maintain the perimeter swales, head walls #1 & #2, slope side and outlet pipes up and outlet under the Oaks Road across the basins 201 and 202. At four week intervals (14 days), install ECM immediately after disturbance. Continue to maintain the perimeter of the sediment control structure to prevent from the site.
- Strip topsoil from the area of Sediment Basin. Stockpile topsoil on spoil mounds at location indicated on plan and stabilize immediately (14 days)
- Construct sediment bank, drainage, silttrap, baffle, RPS, permanent filter, vertical diverting drain and berm along to E#301. Stockpile disturbed area immediately (14 days)
- Construct to construct the dry stack mat that runs from the fanway to the well pump house and line with ECM on all faces immediately after disturbance as shown. Verify perimeter flow to be down.
- Rough grade remainder of project site when permission from inspector is obtained. (14 days)
- Begin construction of building including roof and sewer lines. Repair any erosion control features that are disturbed (6 months)
- Rough grade driveway and parking lots, install curbing and sidewalks, place stone in driveway and parking lots. (20 days)
- Perform final grade of areas around building addition including driveway, parking lots, areas of a sidewalk. (7 days)
- Final all remaining areas as shown. (5 days)
- Permanently stabilize all disturbed areas. (5 days)
- Once tertiary areas to the basin have a uniform percent percent vegetative cover, remove temporary BMPs that partition from the basin to allow. Temporary BMPs include all fences, construction entrance and silt traps, remove accumulated sediment from basin. Remove the temporary diverting drain and set up permanent outlet structure for storm construction drainage. Re-stabilize areas of the pond which are disturbed. All areas disturbed from the removal of the BMPs shall be stabilized immediately. (5 days)

MARK	DATE	REVISION
1	9/13/05	PER COUNTY COMMENTS
2	1/9/06	PER COUNTY COMMENTS
3	3/10/06	PER COUNTY COMMENTS
4	6/29/06	PER COUNTY COMMENTS
5	10/25/06	PER COUNTY COMMENTS
6	1/12/07	PER COUNTY COMMENTS
7	4/18/07	PER COUNTY COMMENTS
8	7/2/07	PER COUNTY COMMENTS
9	9/20/07	PER COUNTY COMMENTS
10	10/27/07	PER COUNTY COMMENTS
11	9/3/07	EX. DRIVEWAY ENT.
12	11/19/09	AS-BUILT

MGA #2782
MULHENSBERG GREENE ARCHITECTS, L.T.D.
400 Washington Street
Reading, Pennsylvania 19601
phone: 610.376.4827 fax: 610.376.0720

6/29/15 GR. L.M. / E.T.S.
DRAWN BY: EVT
CHECKED BY: CKL

STAMP

PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION
HUNTINGTON MANOR ESTATES SECTION 2
AREA INFORMATION
TAX MAP 34, PARCEL 399
ZONED RR-DEO
5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND
PROJECT ADDRESS
BRIGHTON DAM & TEN OAKS ROAD
CLARKVILLE, MARYLAND

SHEET TITLE
**SITE DEVELOPMENT PLAN
EROSION CONTROL PLAN
AS-BUILT**

CURRENT BOARD OF APPEALS CASE #BA 04-007C
PROJECT DESIGNATION LDS 583-0273-0201-0101
PROPERTY NUMBER SHEET NO. 565-0348
DEVELOPMENT NUMBER 7.0132
HER-COL-98-12
DATE 07/05/05

The **RBA** Group
ENGINEERS • ARCHITECTS • PLANNERS
7184 Columbia Gateway Drive, Suite 205
Columbia, Maryland 21046
Phone (410) 312-0966, Fax (410) 312-0897

MARYLAND LAW REQUIRES 48 HOURS NOTICE FOR ANY EXCAVATION
MISS UTILITY INC
 1-800-257-7777

GENERAL LEGEND

- PROPOSED SANITARY SEWER
- PROPOSED WATER MAIN
- EXISTING U.G. UTILITIES (ELE., TV, ELEC.)
- PROPOSED U.G. UTILITIES (ELE., TV, ELEC.)
- EXISTING OVERHEAD ELEC.
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- EXIST. STORM MANHOLE
- PROP. STORM SEWER
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 PROPOSED CURBING (1' OFFSET)
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SOIL BOUNDARY
 CH2
 CHA

ZONING BOUNDARY
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 EXIST. STOCKADE FENCE
 EXIST. GUIDE RAIL
 PROP. CHAIN-LINK FENCE
 PROP. STOCKADE FENCE
 PROP. GUIDE RAIL

AREA OF 15' WIDE NO WOODY

LUMINAIRE SCHEDULE

SYM.	MANUFACTURER	TYPE	LAMP TYPE	MOUNTING	REMARKS
F9	LITHONIA LUMINAIRE MCHLESEN EXCELLINE LS	WST-505-MD-120 HPT120-120 111-111-505S-120 SMT-505S-120-525A 655353-1 6W5353SPF120	70 LUSO MED (4000 LUMENS)	10' WALL	NET LOCATION RATED. FINISH TO MATCH PARKING LOT FIXTURES. SEE A2.1 AND A2.2 FOR MOUNTING DETAILS (FULL CUT-OFF)
F10	LIGHTOLIER PORTIFOLIO LITHONIA CAPRI PRESSE-LITE DMF	LD77WHW/AD7V505A W7007-8025-1773P LQH-505-70W-FTL-120-507200 H51-1058-50W-120-510-20 6553-505PSE-M71-120-SCA-20 DHSV60062Z(FRESNEL)	70 LUSO/MED (4000 LUMENS)	RECESSED 8' A.F.F.	INSTALL WITH 20 DEG. SLOPED CEILING ADAPTOR. (FULL CUT-OFF)
F19	LITHONIA LUMINAIRE EXCELLINE LUM	KAD1050837B H519-03-150-206 AVI-3-150APS-208 SHARVIL-2 15A/16A/15/150HPS208/SCBA 6271H310HPS2M	175 E23 1/2 LUSO (15000 LUMENS)	18' ALUM. POLE	PARKING AREA LIGHTING. 200 VOLTS SEE FIXTURE SCHEDULE NOTE
F20	LITHONIA	CHL250830LGTPLFLSALD8B DARK BRONZE (w/ 12" ARM)	300 E23 1/2 LUSO (28000 LUMENS)	30' FIBERGLASS POLE	STREET LIGHT LIGHTING. 200 VOLTS (POLE # - RFP 30 8-310) (SEM CUT-OFF)

FIXTURE SCHEDULE NOTE:
 SEE SHEET G1.4 FOR POLE BASE DETAIL. BASE SHALL BE HINGED. ORIENT BASE SO THAT POLE MAY BE LOWERED WITHOUT HITTING ANY OBSTRUCTION. SEE SPECIFICATIONS FOR FIXTURE AND POLE FINISH AND COLOR.

PARTIAL GENERAL LEGEND

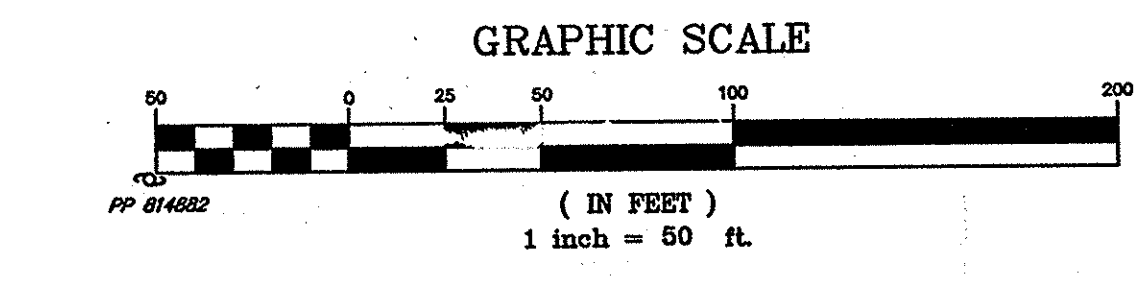
- PROPOSED LIGHT STANDARDS
- PROPOSED BUILDING LIGHT
- PROPOSED RECESSED BUILDING LIGHT
- TRANSFORMER
- 1.0 FOOTCANDLE INTENSITY

ELECTRIC UTILITY NOTES

- THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ASPECTS OF THE ELECTRICAL SERVICE WITH THE RESPECTIVE UTILITY COMPANY AND WITH OTHER TRADES.
- THE ROUTING OF UTILITIES IS SUBJECT TO ADJUSTMENT TO MEET UTILITY COMPANY REQUIREMENTS AND SPECIFICS OF BUILDING DESIGN. RECORD ADJUSTMENTS ON AS-BUILT DRAWINGS.
- ALL UTILITY LINES SHALL BE RUN UNDERGROUND UNLESS SPECIFICALLY NOTED OTHERWISE.
- ALL TRENCHING, INSTALLATION, AND BACKFILL RELATED TO ELECTRIC UTILITY AND SITE LIGHTING SHALL BE PERFORMED BY THE ELECTRICAL CONTRACTOR.
- ALL UTILITY CROSSOVERS SHALL COMPLY WITH INDIVIDUAL UTILITY COMPANY SPECIFICATIONS.
- THE ELECTRICAL UTILITY FOR THE PROJECT IS ONE GAS & ELECTRICAL NEW BUSINESS DEPARTMENT 7317 PARKWAY DRIVE, SOUTH HANOVER, MD 20708 PHONE 1-800-268-6177 WORK ORDER NO. (130)

AREA LIGHTING NOTES

- PROVIDE (15) NEW F19 TYPE LUMINAIRE AS INDICATED ON PLAN. CONNECT USING (2) #10 & (1) #100 - 3/4".



NOTE
 THE PROPOSED STORM WATER MANAGEMENT FACILITY WILL BE PRIVATELY OWNED AND MAINTAINED. THE DETENTION POND IS A P-5 POCKET POND. THE DETENTION POND IS A HAZARD CLASSIFICATION "X".

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 MEET THE APPROVED PLANS AND SPECIFICATIONS.

Louisa
 LOUISA BERNSTEIN
 MD PE #14671

12/29/09
 DATE

THE RBA GROUP
 ENGINEERS • ARCHITECTS • PLANNERS
 7164 Columbia Gateway Drive, Suite 205
 Columbia, Maryland 21048
 Phone (410) 312-0986, Fax. (410) 312-0897

MARK	DATE	REVISION
1	9/13/05	PER COUNTY COMMENTS
2	1/9/06	PER COUNTY COMMENTS
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11	11/18/09	AS-BUILT

MGA
 MULHENSBERG GREENE ARCHITECTS, L.L.C.
 400 Washington Street, Reading, Pennsylvania 19601
 Phone: 610.376.4827 Fax: 610.376.0720

12	06/29/14	RELO. LIGHTS
DRAWN BY:	EVT	CHECKED BY: CKL

MGA #2782
 STAMP
[Signature]
 6/2/14

PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION HUNTINGTON MANOR ESTATES SECTION 2

AREA INFORMATION
 TAX MAP 34, PARCEL 399
 ZONED RR-DEO
 5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND

PROJECT ADDRESS
 BRIGHTON DAM & TEN OAKS ROAD
 CLARKSVILLE, MARYLAND

SHEET TITLE
 SITE DEVELOPMENT PLAN LIGHTING PLAN
 AS-BUILT

CURRENT BOARD OF APPEALS CASE #BA 04-007C	SHEET NO. 8 of 32
PROJECT DESIGNATION LDS 583-0273-0501-0101	DATE 07/05/05
PROPERTY NUMBER 565-0348	
DEVELOPMENT NUMBER HER-COL-98-12	

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.

HOWARD SCD DATE 6/16/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 6/16/08
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

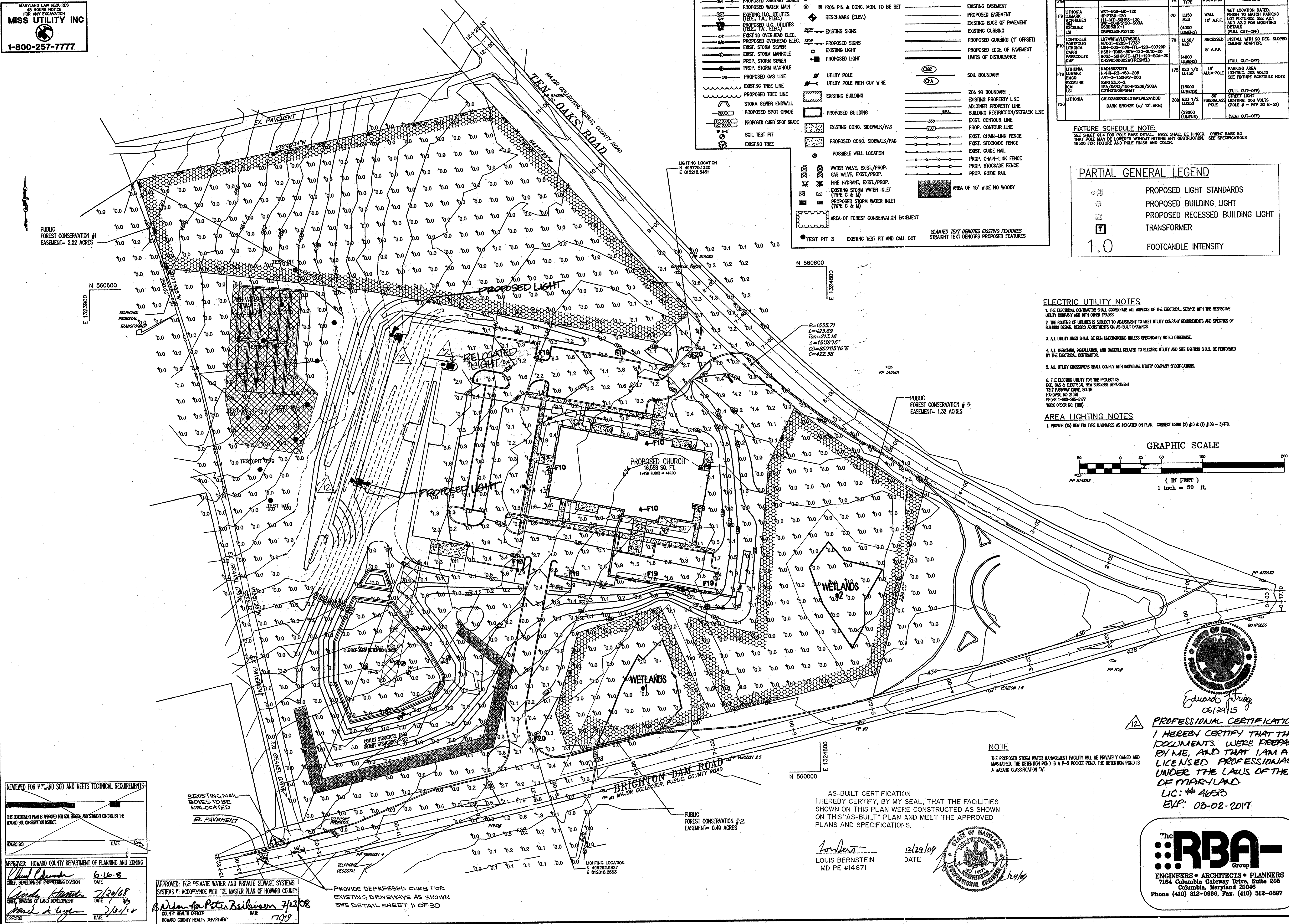
[Signature] 7/20/08
 CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 7/21/08
 DIRECTOR

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY

[Signature] 7/23/08
 COUNTY HEALTH OFFICER
 HOWARD COUNTY HEALTH DEPARTMENT

PROVIDE DEPRESSED CURB FOR EXISTING DRIVEWAYS AS SHOWN SEE DETAIL SHEET 11 OF 30



C:\Users\peter\Documents\Projects\2008\20080629\20080629.dwg, 6/23/08 10:52:38 AM, vba11

LITHONIA LIGHTING
FEATURES & SPECIFICATIONS
INTENDED USE - Ideal for parking areas, street lighting, walkways and car lots.

CONSTRUCTION - Rugged, die-cast, soft corner aluminum housing with 0.125 nominal wall thickness. Extruded 4" soft corner arm for pole or wall mounting is standard. Die-cast door frame has impact-resistant, tempered glass lens that is fully gasketed with one-piece tubular silicone.

FINISH - Standard finish is dark bronze (DOB) polyester powder, with other architectural colors available.

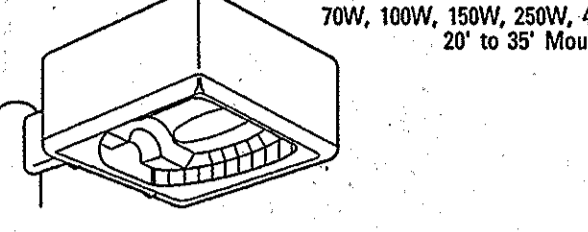
OPTICAL SYSTEM - Anodized aluminum hydroformed reflectors: IES full cutoff distributions R2 (asymmetric), R3 (asymmetric), R4 (forward throw) and R5 (reverse). High-performance anodized, segmented aluminum reflectors: IES full cutoff distributions SR2 (asymmetric), SR3 (asymmetric) and SR4C (forward throw, sharp cutoff). Segmented reflectors attach with tool-less fasteners and are rotatable and interchangeable.

ELECTRICAL SYSTEM - High performance, high power ballast for 70/100/150W. Constant-voltage autotransformer for 250/300W. Ballast is copper-wound and 100% factory-tested.

Forcibly, horizontally oriented, mega-base socket with copper alloy, nickel-plated screw shell and center contact. UL listed 100W, 50V, 48V pulse-rated.

LISTING - UL Listed (standard), CSA Certified (see Options). UL listed for wet locations. IP65 rated in accordance with standard IEC 529.

Soft Square Cutoff Lighting
KAD
HIGH PRESSURE SODIUM
70W, 100W, 150W, 250W, 400W
20' to 35' Mounting



Standard Dimensions
EPA: 1.2/1.2
Weight: 42 lbs (18.1 kg)
Length: 17-1/2" (44.5 cm)
Width: 17-1/2" (44.5 cm)
Depth: 7-1/8" (18.1 cm)

ORDERING INFORMATION
Choose the boldface catalog nomenclature that best suits your needs and write it on the appropriate line. Order accessories as separate catalog number.

Example: KAD 400S R2 120 SPD04 LPI

Series	Voltage	Mounting	Options
KAD 70S	120	SPD04 Square pole (4" arm)	Shipped Installed
KAD 100S	240	SPD04 Square pole (8" arm)	Standard Colors
KAD 150S	240	SPD09 Square pole (8" arm)	DOB Dark bronze (standard)
KAD 250S	277	RPD04 Round pole (4" arm)	255
KAD 300S	347	RPD09 Round pole (8" arm)	347
KAD 400S	347	WVD04 Wood pole or wall (4" arm)	407
		WVD09 Wood pole or wall (8" arm)	407
		WVD09 Wood pole or wall (8" arm)	407
		WVD09 Wood pole or wall (8" arm)	407
		WVD09 Wood pole or wall (8" arm)	407

NOTES:
1. House-side shield available.
2. Optional multiple ballast (120, 200, 300, 240, 277V).
3. The SPD09, RPD09 or WVD09 must be used when two or more lamps are connected on a 90° girding pattern.
4. May be ordered as accessory.
5. Additional architectural colors available please see Architectural Colors brochure, form no. 3743.
6. Must be ordered with SR2, SR3, and SR4C optics.
7. Consult factory for availability in Canada.
8. Only available with SR2, SR3, and SR4C optics.

Accessories: Tenon Mounting Slipfitter

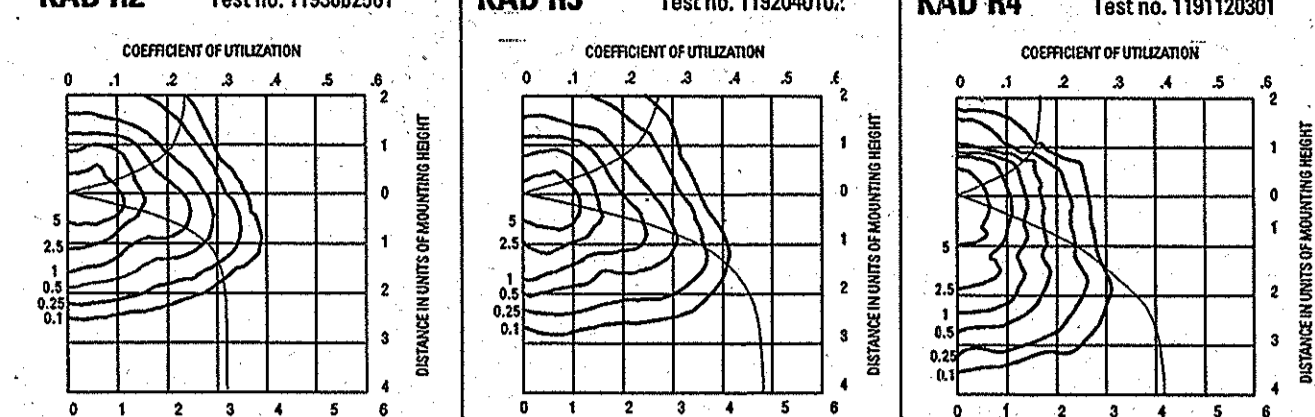
Order as separate catalog number.

Number of fixtures:
Tenon O.D. One Two Three Four Five Six Seven Eight Nine Ten
2-3/8" T20-150 T20-200 T20-250 T20-300 T20-350 T20-400
2-7/8" T25-100 T25-200 T25-250 T25-300 T25-350 T25-400
4" T35-150 T35-200 T35-250 T35-300 T35-350 T35-400

Outdoor Sheet #: KAD-S AL-380

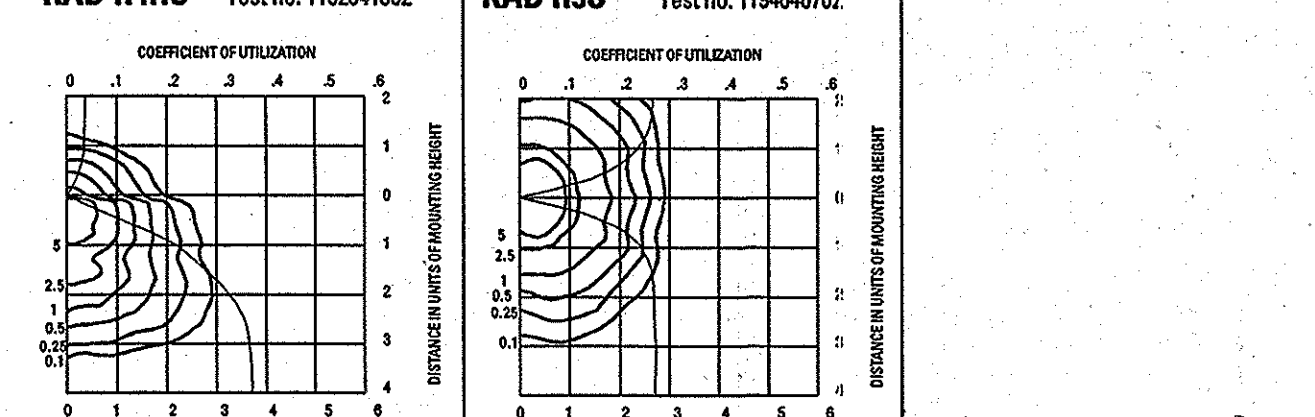
KAD 400S Arm-mounted Soft Square Cutoff

KAD R2 Test no. 1193022901
KAD R3 Test no. 1192041001
KAD R4 Test no. 1191120301



400W High Pressure Sodium lamp, 50,000 rated lumens. Footcandle value based on 30' mounting height. Distribution Type III, cutoff.

KAD R4HS Test no. 1192041302
KAD R5S Test no. 1194047002



400W High Pressure Sodium lamp, 50,000 rated lumens. Footcandle value based on 30' mounting height. Distribution Type IV, cutoff.

ELECTRICAL CHARACTERISTICS

Wattage/ballast	Line current (amps)	Primary voltage starting	Input wattage	Power factor (%)	Line V _a Lamp lumens	
120	2.25/2.30	88				
400 CWA	2.08	1.50/2.48	158			
Autoregulator	2.40	1.30/2.15	180	465	50+	±10% ±10%
	2.77	1.10/1.98	208			
	3.50	1.00/1.70	288			
	4.50	0.75/1.12	383			

LITHONIA LIGHTING
Acuity Lighting Group, Inc.
One Lithonia Way, Covington, GA 30022
Phone: 770-822-5000 Fax: 770-819-1209
In Canada: 160 Avenue Labrosse, Pointe-Claire, P.Q., H8R 1A1
www.lithonia.com

LITHONIA LIGHTING
FEATURES & SPECIFICATIONS
INTENDED USE - Ideal for parking areas, street lighting, walkways and car lots.

CONSTRUCTION - Rugged, die-cast, soft corner aluminum housing with 0.125 nominal wall thickness. Extruded 4" soft corner arm for pole or wall mounting is standard. Die-cast door frame has impact-resistant, tempered glass lens that is fully gasketed with one-piece tubular silicone.

FINISH - Standard finish is dark bronze (DOB) polyester powder, with other architectural colors available.

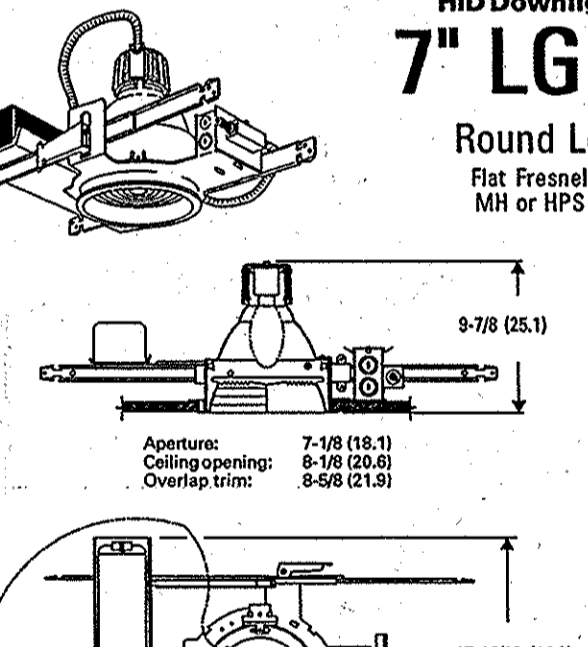
OPTICAL SYSTEM - Anodized aluminum hydroformed reflectors: IES full cutoff distributions R2 (asymmetric), R3 (asymmetric), R4 (forward throw) and R5 (reverse). High-performance anodized, segmented aluminum reflectors: IES full cutoff distributions SR2 (asymmetric), SR3 (asymmetric) and SR4C (forward throw, sharp cutoff). Segmented reflectors attach with tool-less fasteners and are rotatable and interchangeable.

ELECTRICAL SYSTEM - High performance, high power ballast for 70/100/150W. Constant-voltage autotransformer for 250/300W. Ballast is copper-wound and 100% factory-tested.

Forcibly, horizontally oriented, mega-base socket with copper alloy, nickel-plated screw shell and center contact. UL listed 100W, 50V, 48V pulse-rated.

LISTING - UL Listed (standard), CSA Certified (see Options). UL listed for wet locations. IP65 rated in accordance with standard IEC 529.

HID Downlights
7" LGH
Round Lens
Flat Fresnel Lens
MH or HPS Lamp



Standard Dimensions
Aperture: 7-1/8" (18.1 cm)
Screw spacing: 8-3/8" (21.3 cm)
Overlap trim: 8-5/8" (21.3 cm)

ORDERING INFORMATION
Choose the boldface catalog nomenclature that best suits your needs and write it on the appropriate line. Order accessories as separate catalog number.

Example: LGH 100M 7RW FFL 120

Series	Wattage/Lamp	Door/frame	Voltage	Options
LGH	Metal Halide	7RW Regressed white splay	120	WLP With lamp (shipped separately).
	50M MXR50/CUMED	5SB Stepped black handle	277	LRC Provides compatibility with Lithonia Reloc System 820.
	70M M100/CUMED	7FW Round white	347	QRC Quartz resistor system (see maximum 100W DC base quartz lamp by others).
	100M M100/CUMED	Door	347	OR5T Quartz resistor system with time delay.
	Color Corrected Metal Halide			EC Emergency circuit (DC socket with leads for connection to external emergency power source; maximum 100W lamp).
	50MHC MFC50/CUMED			SF Single lens.
	70MHC MFC70/CUMED			TRDA Tempproof (includes two tempproof screws).
	100MHC MFC100/CUMED			CSA Listed and labeled to comply with Canadian Standards.
	High Pressure Sodium			HEB Hooded ceiling adaptor.
	30S LU90/W/ED			SOWA Super CWA pulse start ballast
	70S LU100/W/ED			
	100S LU100/W/ED			

NOTES:
1. Ceramic arc tube construction color lamp.
2. Philips MasterColor or GE Constant-Color.
3. 100S, 150W, 150W max.
4. 100S, 150W max. with RL 250 watt max with RL 2.
5. 100S, 150W max. with RL 250 watt max with RL 2.
6. 100S, 150W max. with RL 250 watt max with RL 2.
7. Pulse start MH only.
8. HPS only.
9. 150, 277V only. Not available in TB.
10. 200, 347, 480V only. Not available in TB.
11. May be ordered as an accessory.

Outdoor Sheet #: CHLD-M-M-V-S RL-120

LITHONIA LIGHTING
FEATURES & SPECIFICATIONS
INTENDED USE - For building and well-ventilated applications.

CONSTRUCTION - Rugged, die-cast, wall-mounted housing. Die-cast door frame has a 1/8" thick tempered glass lens. Door frame is fully gasketed with one-piece tubular silicone.

FINISH - Standard finish is new textured dark bronze (DOB) corrosion-resistant polyester powder finish, with other architectural colors available.

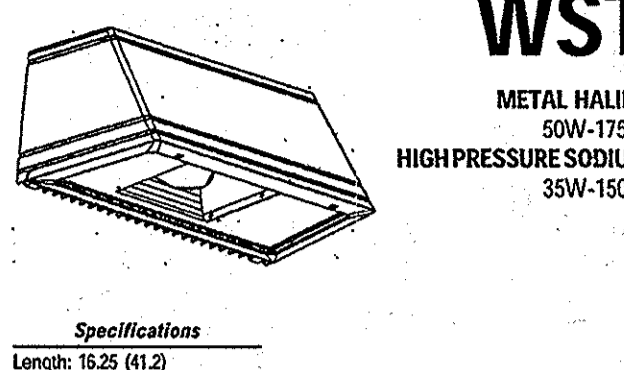
OPTICAL SYSTEM - Segmented reflectors for superior uniformity and control. Reflectors are interchangeable. Three full cutoff distributions available: FT (forward throw), MD (medium throw) and WT (wide throw).

ELECTRICAL SYSTEM - 50W-150W utilizes a high performance, high power factor ballast. 300W utilizes a reactance high power factor ballast. 170W utilizes a constant-voltage autotransformer ballast. Quick disconnect plug easily disconnects reflector from ballast. Ballasts are copper-wound and 100% factory-tested. Porcelain, medium-base socket with copper alloy, nickel-plated screw shell and center contact. UL listed 60W, 50V, 48V pulse rated.

INSTALLATION - Universal mounting mechanism with integral mounting support allows fixture to hinge down. Bubble level pre-cuts correct alignment with each installation.

LISTING - UL Listed (standard), CSA Certified (see Options). Suitable for wet locations (lamp location listed in lens-up orientation). WLU option offers wet location listing in up orientation (see Options). IP65 rated.

Decorative Wall-Mounted Lighting
WST
METAL HALIDE
50W-175W
HIGH PRESSURE SODIUM
35W-150W



Specifications
Length: 16.5" (41.2 cm)
Depth: 9.13" (23.2 cm)
Overall Height: 7.25" (18.4 cm)
Max. Weight: 30 lbs (13.6 kg)

All dimensions are inches (centimeters) unless otherwise specified.

ORDERING INFORMATION
Choose the boldface catalog nomenclature that best suits your needs and write it on the appropriate line.

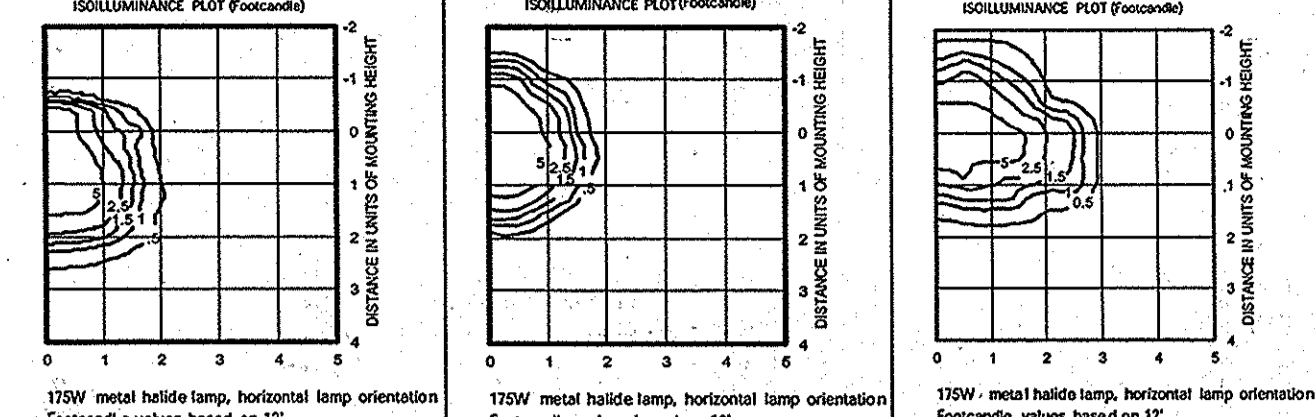
Example: WST 175M FT 120 SF LPI DNAT

Series	Wattage/Source	Distribution	Voltage	Options
WST	Metal Halide	FT Forward throw	120	Shipped Installed in Fixture
	50M	MD Medium throw	240	SF Single fuse (20, 27, 34V, n/a TB)
	70M	WT Wide throw	277	DC Double fuse (208, 240V, n/a TB or TB)
	100M		277	EF Emergency circuit (25W max 120V, incandescent lamp included)
	150M		347	EC Emergency circuit (25W max 120V, incandescent lamp included)
	175M		347	TB*

LITHONIA LIGHTING
Acuity Lighting Group, Inc.
One Lithonia Way, Covington, GA 30022
Phone: 770-822-5000 Fax: 770-819-1209
In Canada: 160 Avenue Labrosse, Pointe-Claire, P.Q., H8R 1A1
www.lithonia.com

WST Metal Halide, High Pressure Sodium Building Mounted

WST 175M FT TEST NO. LTL11069
WST 175M MD TEST NO. LTL11068
WST 175M WT TEST NO. LTL11070



175W metal halide lamp, horizontal lamp orientation. Footcandle values based on 12' mounting height. 150W rated lumens. Luminaire Efficiency: 62.9%.

ORDERING INFORMATION
Choose the boldface catalog nomenclature that best suits your needs and write it on the appropriate line.

Example: WST 175M FT 120 SF LPI DNAT

Series	Wattage/Source	Distribution	Voltage	Options
WST	Metal Halide	FT Forward throw	120	Shipped Installed in Fixture
	50M	MD Medium throw	240	SF Single fuse (20, 27, 34V, n/a TB)
	70M	WT Wide throw	277	DC Double fuse (208, 240V, n/a TB or TB)
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5	10/25/06	PER COUNTY COMMENTS
6	1/12/07	PER COUNTY COMMENTS
7	4/18/07	PER COUNTY COMMENTS
8	9/20/07	PER COUNTY COMMENTS
9	10/24/07	PER COUNTY COMMENTS

MGA
MUEHLBACH GREENE ARCHITECTS, LTD.
400 Washington Street
Reading, Pennsylvania 19601
phone: 610-376-4927 fax: 610-376-0720

LITHONIA LIGHTING
FEATURES & SPECIFICATIONS
INTENDED USE - Ideal for parking areas, street lighting, walkways and car lots.

CONSTRUCTION - Rugged, die-cast, soft corner aluminum housing with 0.125 nominal wall thickness. Extruded 4" soft corner arm for pole or wall mounting is standard. Die-cast door frame has impact-resistant, tempered glass lens that is fully gasketed with one-piece tubular silicone.

FINISH - Standard finish is new textured dark bronze (DOB) corrosion-resistant polyester powder finish, with other architectural colors available.

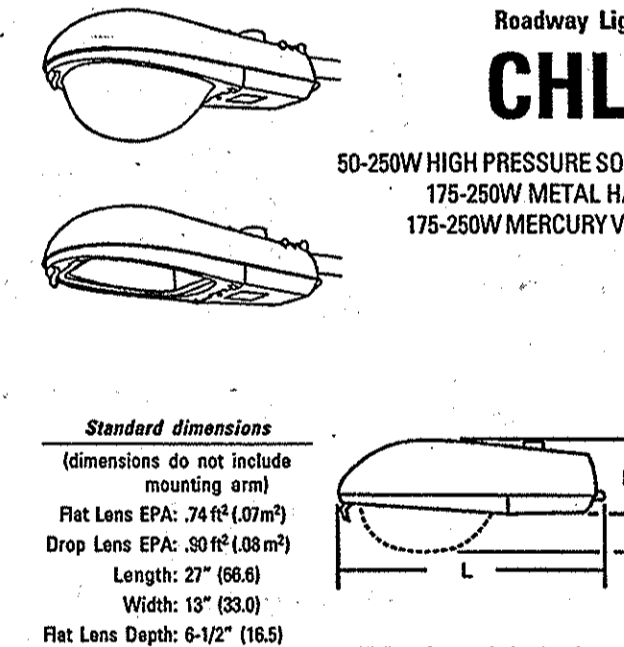
OPTICAL SYSTEMS - Segmented reflectors for superior uniformity and control. Reflectors are interchangeable. Three full cutoff distributions available: FT (forward throw), MD (medium throw) and WT (wide throw).

ELECTRICAL SYSTEMS - 50W-150W utilizes a high performance, high power factor ballast. 300W utilizes a reactance high power factor ballast. 170W utilizes a constant-voltage autotransformer ballast. Quick disconnect plug easily disconnects reflector from ballast. Ballasts are copper-wound and 100% factory-tested. Porcelain, medium-base socket with copper alloy, nickel-plated screw shell and center contact. UL listed 60W, 50V, 48V pulse rated.

INSTALLATION - Universal mounting mechanism with integral mounting support allows fixture to hinge down. Bubble level pre-cuts correct alignment with each installation.

LISTING - UL Listed (standard), CSA Certified (see Options). Suitable for wet locations (lamp location listed in lens-up orientation). WLU option offers wet location listing in up orientation (see Options). IP65 rated.

High Pressure Sodium
CHLD
50-250W HIGH PRESSURE SODIUM
175-250W MERCURY VAPOR



Standard Dimensions
(Dimensions do not include mounting arm)
Flat Lens EPA: 74 1/4" (1870mm)
Drop Lens EPA: 50 1/4" (1275mm)
Length: 27" (68.6 cm)
Width: 15" (38.1 cm)
Flat Lens Depth: 6-1/2" (16.5 cm)
Drop Lens Depth: 10-1/8" (25.7 cm)
Weight: 33 lbs (15 kg)

All dimensions are inches (centimeters) unless otherwise noted.

ORDERING INFORMATION
Choose the boldface catalog nomenclature that best suits your needs and write it on the appropriate line. Order accessories as separate catalog number.

Example: CHLD 150S R2 DLG 120 PER LPI

Series	Distribution	Voltage	Ballast Options	Options
CHLD	R2	120	(blank) Standard ballast (see above)	Shipped Installed in Fixture
	R3	208	RNP Reactor normal power factor	LPI Lamp included
		240	RHP Reactor high power factor	L/LP Less lamp
		277	PER NEMA twist-lock PE (photocontrol not included)	PER NEMA twist-lock PE (photocontrol not included)
		428	S0H2 50 hertz	LSA Single lightning surge arrester*
		50S	DLG Drop lens glass (standard)	SF Single 5amp fuse*
		70S	DLP Drop lens	CWI CWI ballast
		150S	DLP Drop lens	BLV Bubble level
		150/100S	FL Flat tempered glass lens*	CWA Constant voltage autotransformer
		250S	FLX Flat tempered glass lens, high performance*	4BM 4-bolt mounting
		175M	SLG Slag lens glass	2EF 2-bolt internal 2-bolt only)
		175M		MA2 2-bolt internal 2-bolt only)
		250M		XHP High reactance (lag) high power factor*
				XNP High reactance (lag) normal power factor*

NOTES:
1. 100S, 175W, 150W max.
2. HPS only. 150 watt max with RL 250 watt max with RL 2.
3. Optional multi-tap ballast (120, 208, 240, 277V, TB).
4. HVA with RHP or RHP.
5. Consult factory.
6. Shipped without ballast/electrical components.

Outdoor Sheet #: CHLD-M-M-V-S RL-120

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE: 6-16-08

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
DATE: 7/23/08

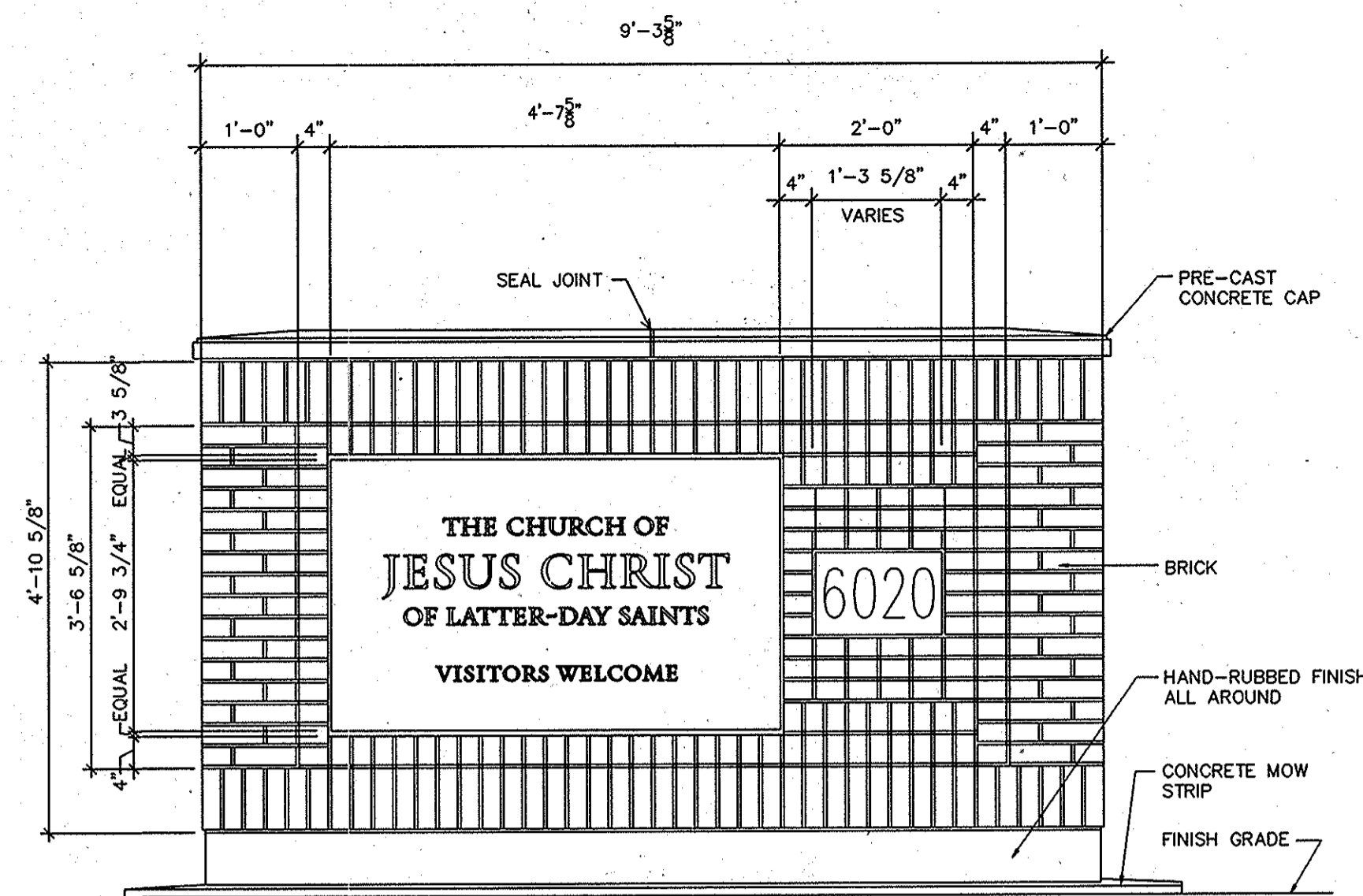
REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
DATE: 7/23/08

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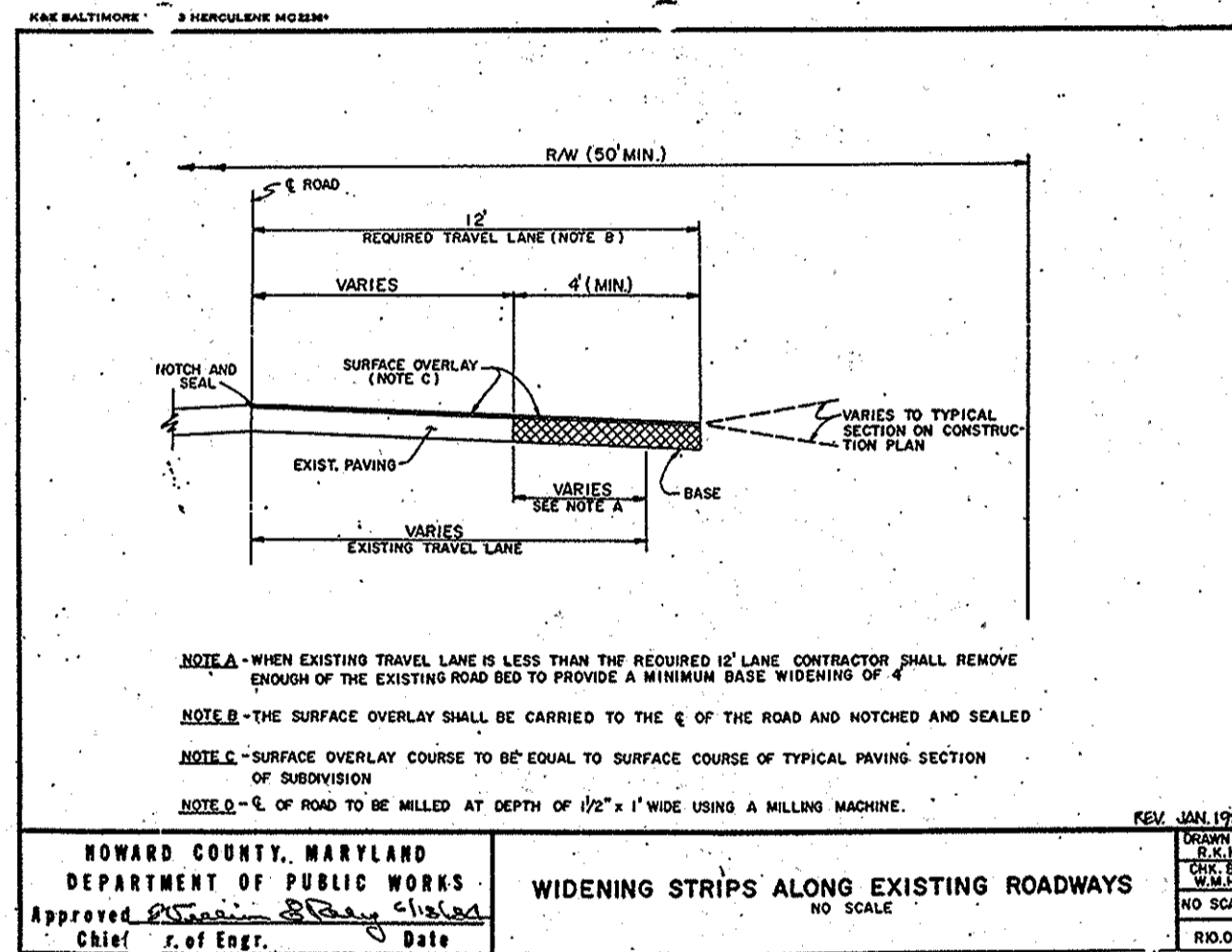
RBA Group
ENGINEERS • ARCHITECTS • PLANNERS
7184 Columbia Gateway Drive, Suite 205
Columbia, Maryland 21046
Phone (410) 312-0966, Fax (410) 312-0997



ENTRANCE SIGN
NOT TO SCALE

NOTE
THE PROPOSED ENTRANCE SIGN SIZE AND LOCATION IS TO BE APPROVED BY THE COUNTY'S SIGN CODE ADMINISTRATOR, DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS.

- GENERAL NOTES**
- PRIOR TO BEGINNING ANY WORK, CONTRACTOR SHALL BE FAMILIAR WITH THE MOST CURRENT MASTER SPECIFICATION FOR MEETINGHOUSES OF THE LDS CHURCH AS PERTAINS TO PROJECT.
 - MASONRY CONTRACTOR SHALL SET/INSTALL STONE SIGN, ITS ASSOCIATED ANCHORS, FINIS, AND ACCESSORIES AS RECOMMENDED BY THE SIGN FABRICATOR.
 - WHEN SETTING STONE SIGN:
1. BRACE SIGN, AS REQUIRED, FOR MORTAR TO SUFFICIENTLY SET UP.
2. CLEAN STONE AND MASONRY SURFACES WHEN BRACING IS REMOVED.
 - MODIFY EXISTING IRRIGATION SYSTEM TO NOT SPRAY ON MASONRY WALL AND STONE SIGN.
 - IF VEGETATION IS NEAR SIGN, USE ONLY LOW VEGETATION TO MAINTAIN VISIBILITY.



MATERIAL SPECIFICATION

P300

The P300 permanent turf reinforcement mat shall be a machine-produced mat of 100% UV stable polypropylene fiber. The matting shall be of consistent thickness with synthetic fibers evenly distributed over the entire area of the mat. The matting shall be covered on the top with black heavyweight UV stabilized polypropylene netting having ultraviolet additives to prevent breakdown and an approximate 0.50 x 0.50 inch (1.27 x 1.27 cm) mesh size. The bottom net shall also be UV stabilized polypropylene, with a 0.625 x 0.625 inch (1.57 x 1.57 cm) mesh size. The matting shall be sewn together on 1.50 inch (3.81 cm) centers with UV stabilized polypropylene thread.

The P300 shall meet requirements established by the Erosion Control Technology Council (ECTC) Specification and the U.S. Department of Transportation, Federal Highway Administration's (FHWA) Standard Specifications For Construction of Roads and Bridges on Federal Highway Projects, FP-03 2003 Section 713.18 as a Type 5A or B Permanent Turf Reinforcement Mat.

The P300 is also available upon request with the DOT System™. The DOT System™ consists of installation staple patterns clearly marked on the erosion control blanket with environmentally safe paint. The blanket shall be manufactured with a colored line or thread stitched along both outer edges (approximately 2-5 inches [5-12.5 cm] from the edge) to ensure proper material overlapping.

The turf reinforcement mat shall be P300 as manufactured by North American Green, or equivalent.

The P300 permanent erosion control/turf reinforcement mat shall have the following properties:

Material Content	
Matrix	100% UV Stable Polypropylene Fiber (0.70 lb/yd²) (0.38 kg/m²)
Netting	Top side heavyweight UV stabilized (5.0 lbs/1,000 ft² [2.44 kg/100 m²] approximate weight) Bottom side heavyweight UV stabilized (3.0 lbs/1,000 ft² [1.47 kg/100 m²] approximate weight)
Thread	100% Black Polypropylene

P300 is Available with the Following Physical Specifications Per Roll (English Units (Metric Units))

Width	6.67 ft (2.03 m)
Length	108.0 ft (32.92 m)
Weight ± 10%	61.0 lbs (27.66 kg)
Area	80.0 yd² (66.89 m²)

Roll Widths Also Available Upon Special Request

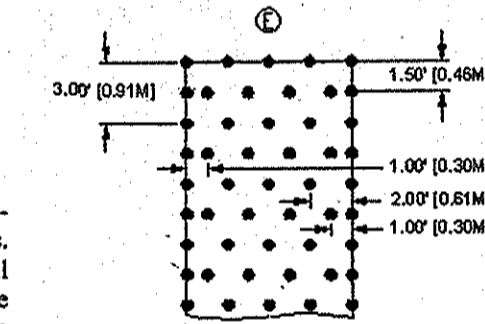
Width	8.0 ft (2.43 m)	13.3 ft (4.05 m)
Length	108.0 ft (32.92 m)	108.0 ft (32.92 m)
Weight ± 10%	73.44 lbs (33.31 kg)	122.40 lbs (55.52 kg)
Area	96.0 yd² (80.26 m²)	160.0 yd² (133.78 m²)

Stitch Spacing for All Rolls = 1.50 inches (3.81 cm)

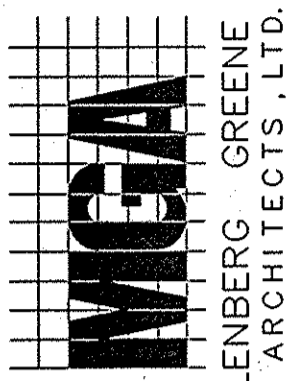
Updated 1/2004



Staple Pattern E
8 ft (2.4m) wide rolls
Install using 3.6 staples/yd² (4.3 staples/m²), 6-in (15.2 cm), 11 ga. wire "U" shaped staples. Longer staples may be required for loose soil conditions. Larger gauge staples may be needed for compacted or rocky soils. Secure RECPs by placing staples/stakes using the noted spacing.



MARK	DATE	REVISION
1	9/13/05	PER COUNTY COMMENTS
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5	10/25/06	PER COUNTY COMMENTS
6	1/12/07	PER COUNTY COMMENTS
7	4/18/07	PER COUNTY COMMENTS
8	7/2/07	PER COUNTY COMMENTS
9	9/20/07	PER COUNTY COMMENTS
10	10/27/07	PER COUNTY COMMENTS

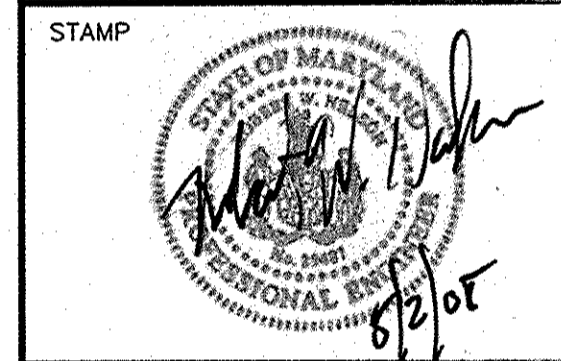


MUHLEBERG GREEN ARCHITECTS, LTD.

400 Washington Street, Reading, Pennsylvania 19601
phone: 610.376.4927 fax: 610.376.0720

DRAWN BY: EVT
CHECKED BY: CKL

MGA #2782



PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION
HUNTINGTON MANOR ESTATES SECTION 2

AREA INFORMATION
TAX MAP 34, PARCEL 399
ZONED RR-DEO
5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND
PROJECT ADDRESS
BRIGHTON DAM & TEN OAKS ROAD
CLARKSVILLE, MARYLAND

SHEET TITLE
SITE DEVELOPMENT PLAN
CONSTRUCTION DETAILS
AS-BUILT

CURRENT BOARD OF APPEALS CASE #A 04-007C

PROJECT DESIGNATION
LDS 583-0273-0501-0101

PROPERTY NUMBER
565-0348

DEVELOPMENT NUMBER
HER-COL-98-12

DATE
04/18/05

SHEET NO.
10 of 32

NO AS-BUILT INFORMATION IS REQUIRED

The RBA Group
ENGINEERS • ARCHITECTS • PLANNERS
7164 Columbia Gateway Drive, Suite 205
Columbia, Maryland 21046
Phone (410) 312-0886, Fax. (410) 312-0887

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.

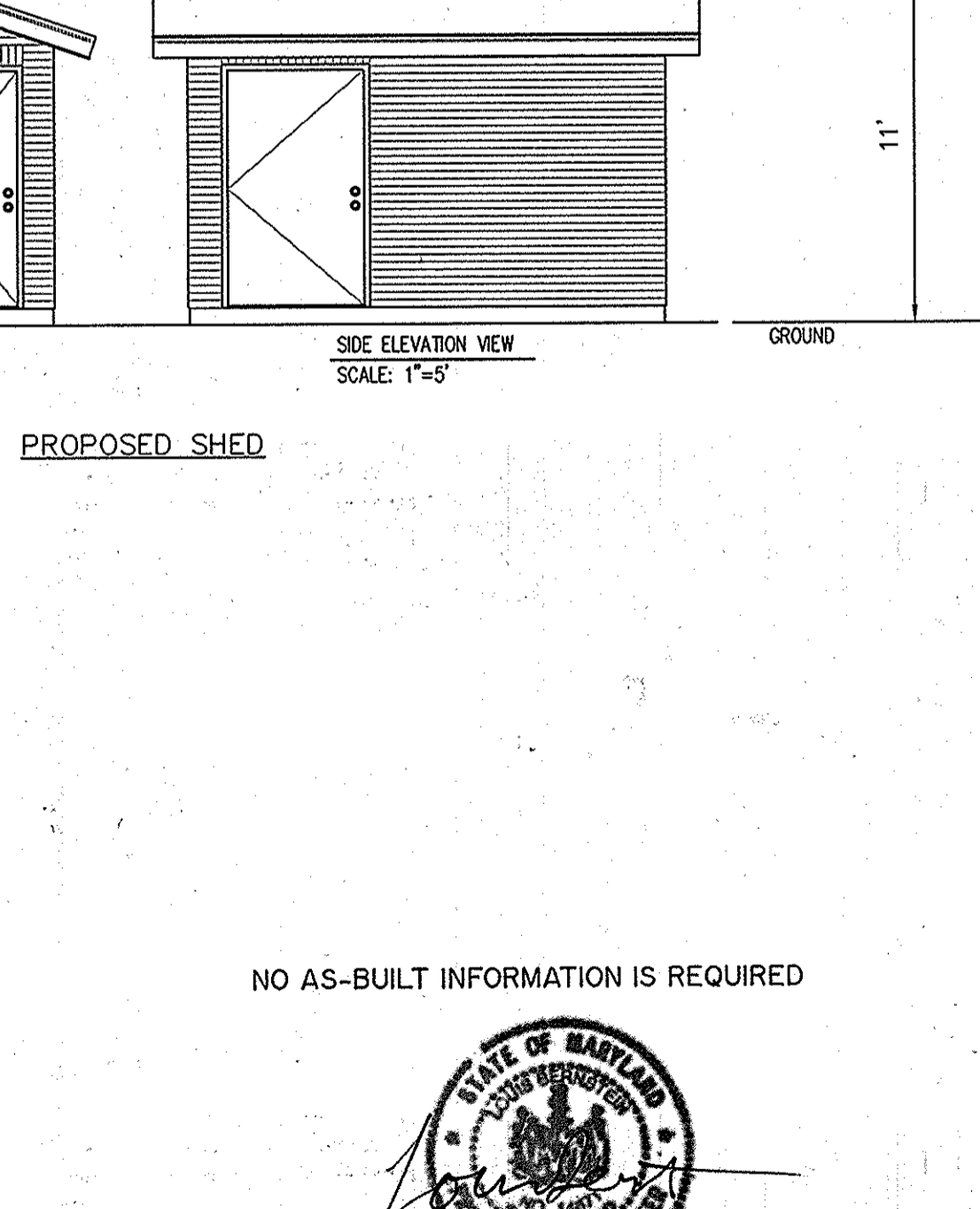
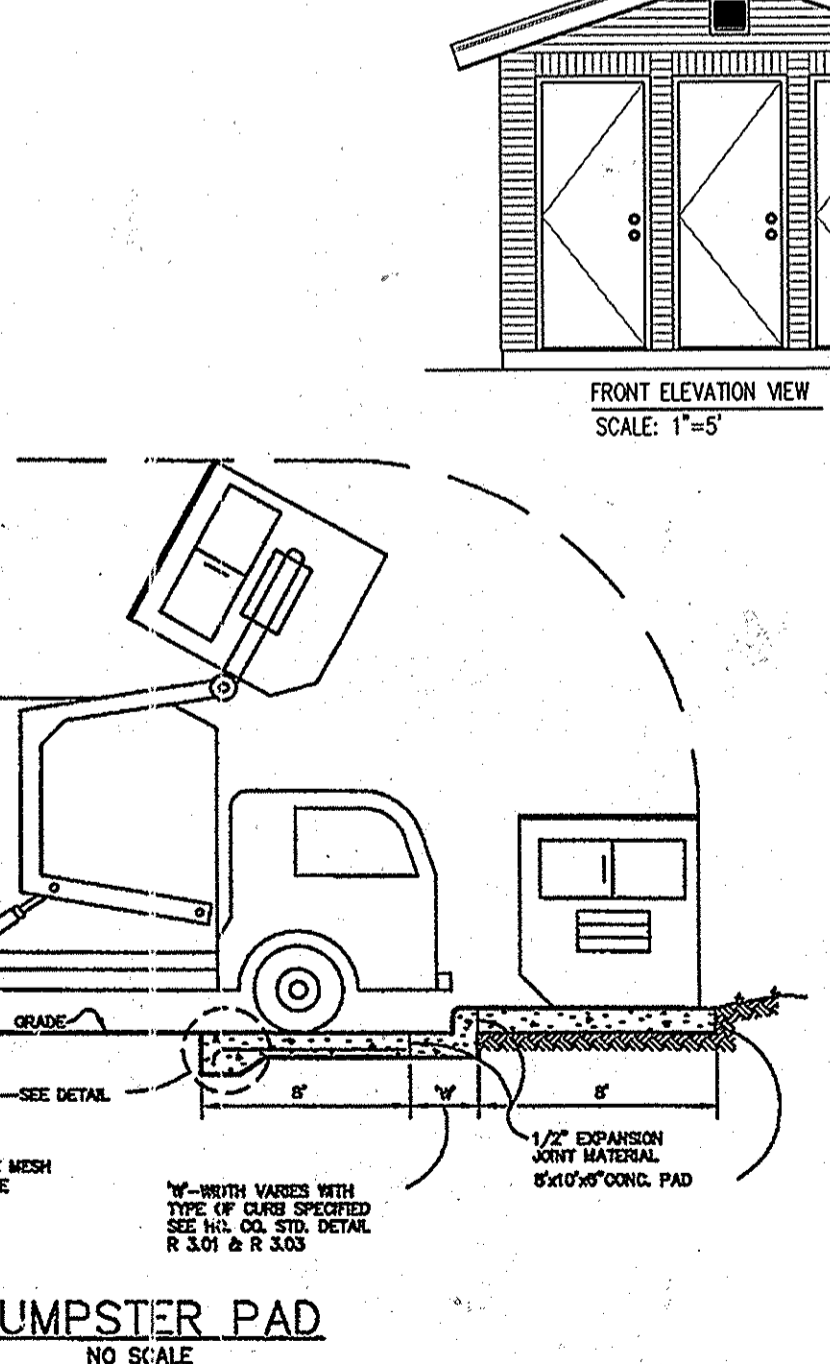
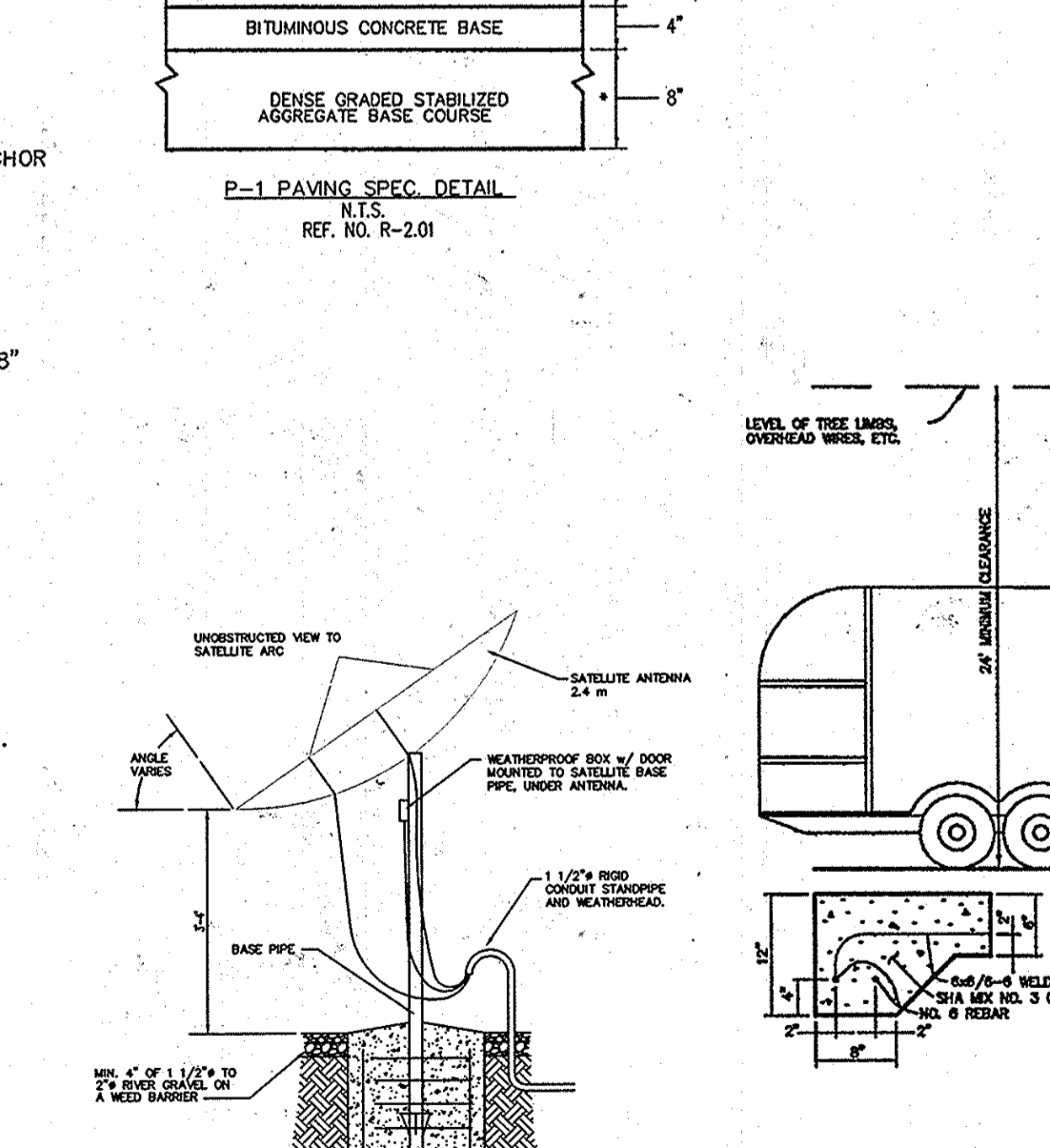
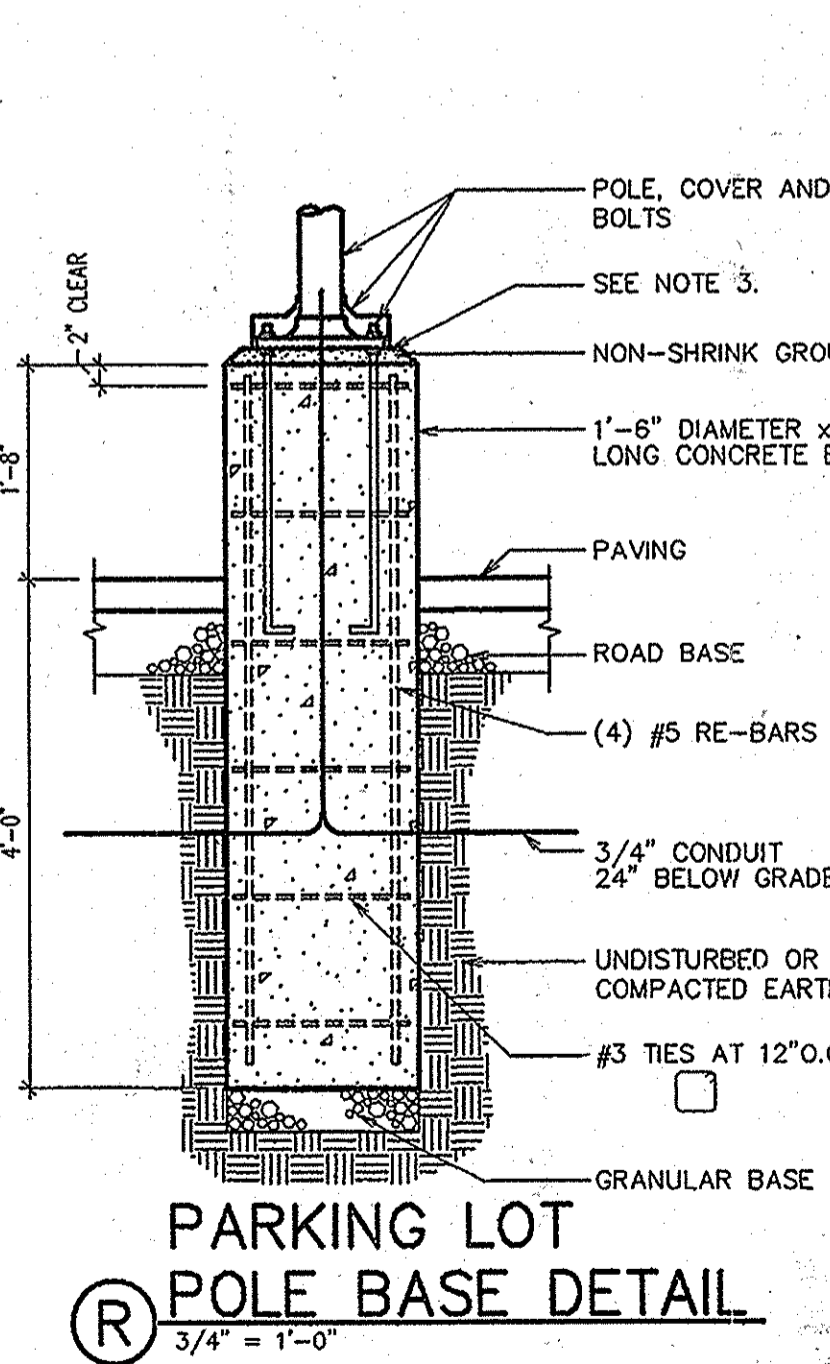
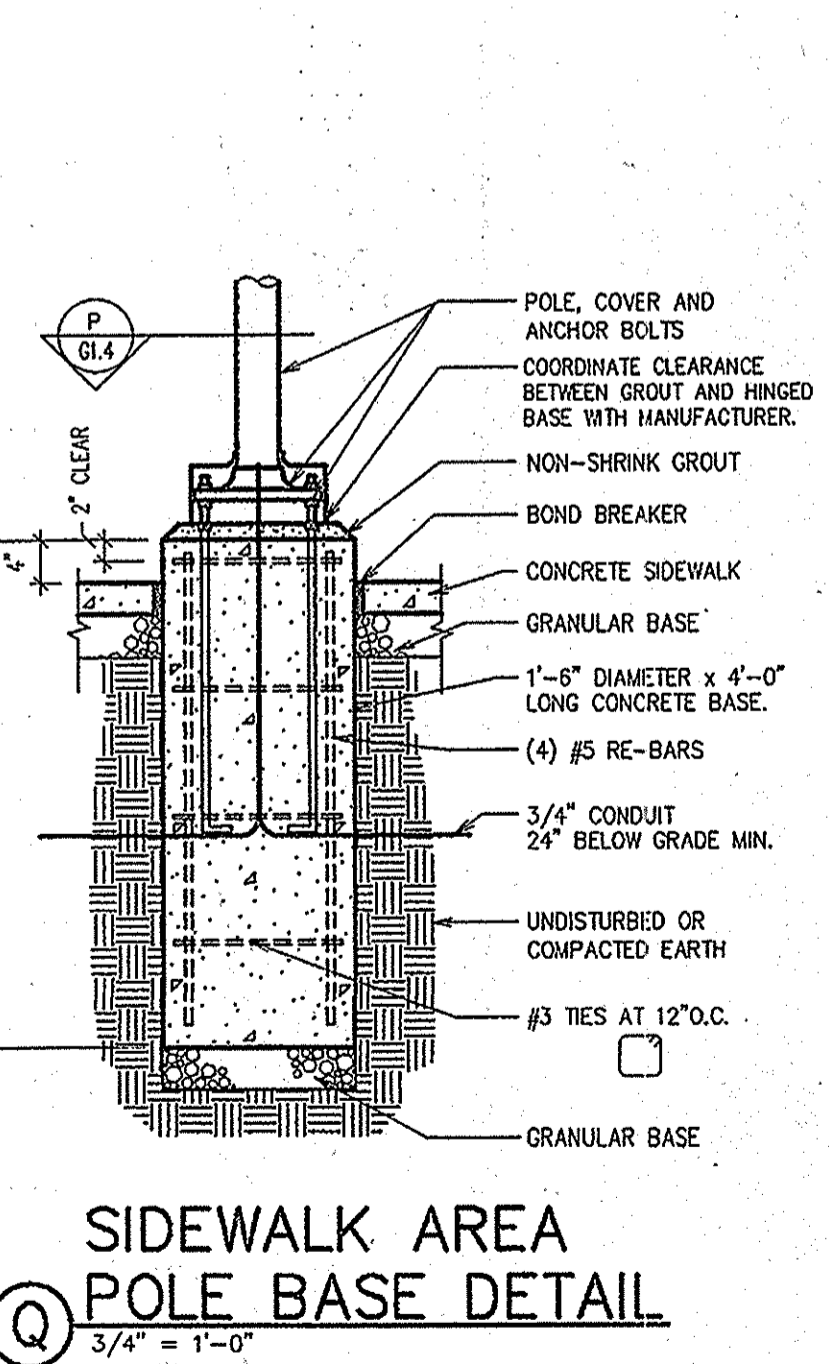
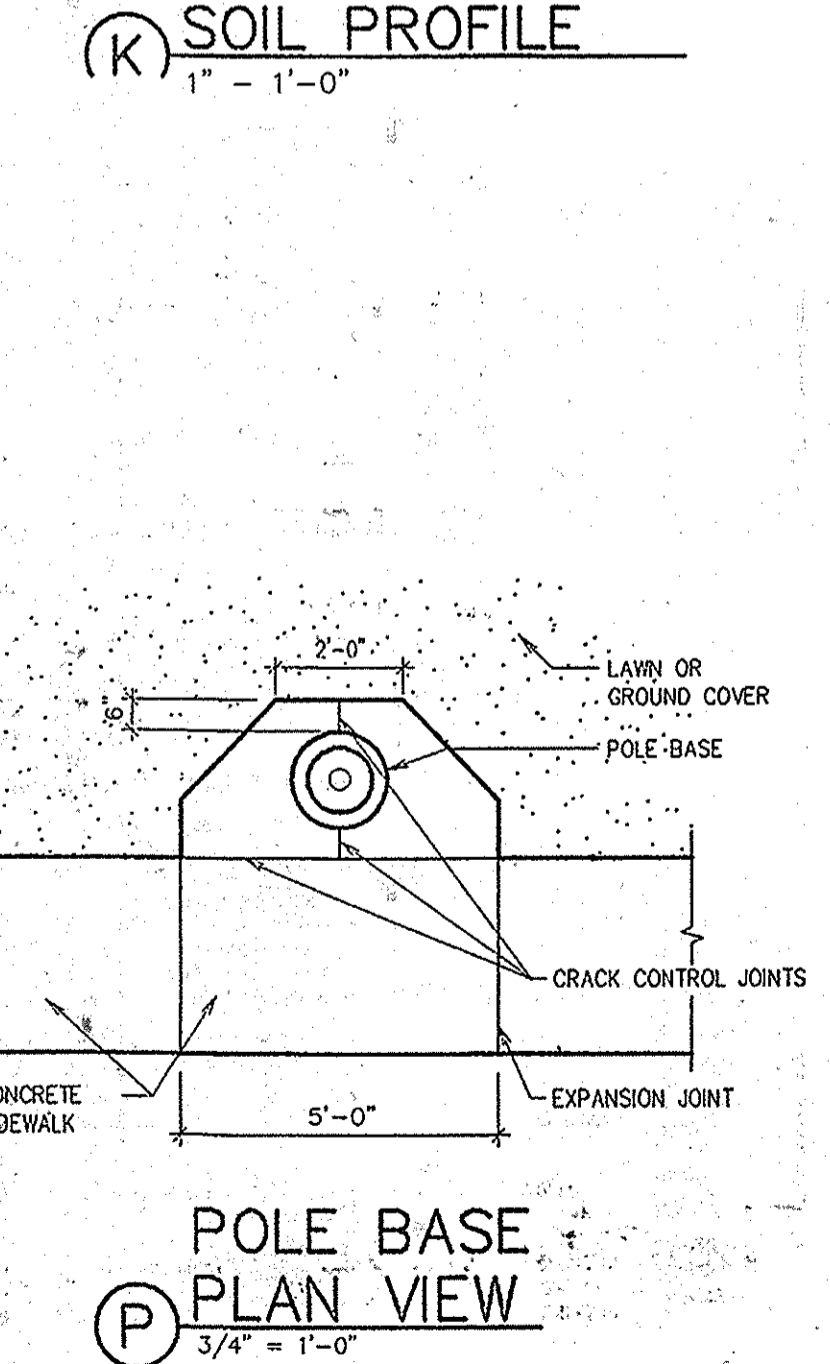
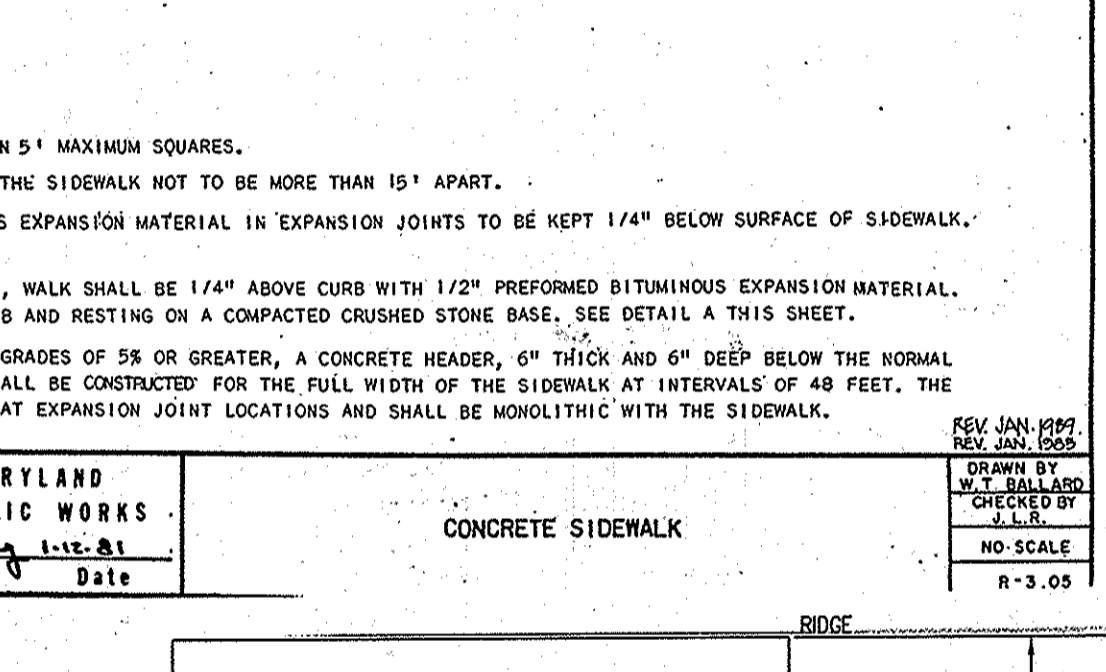
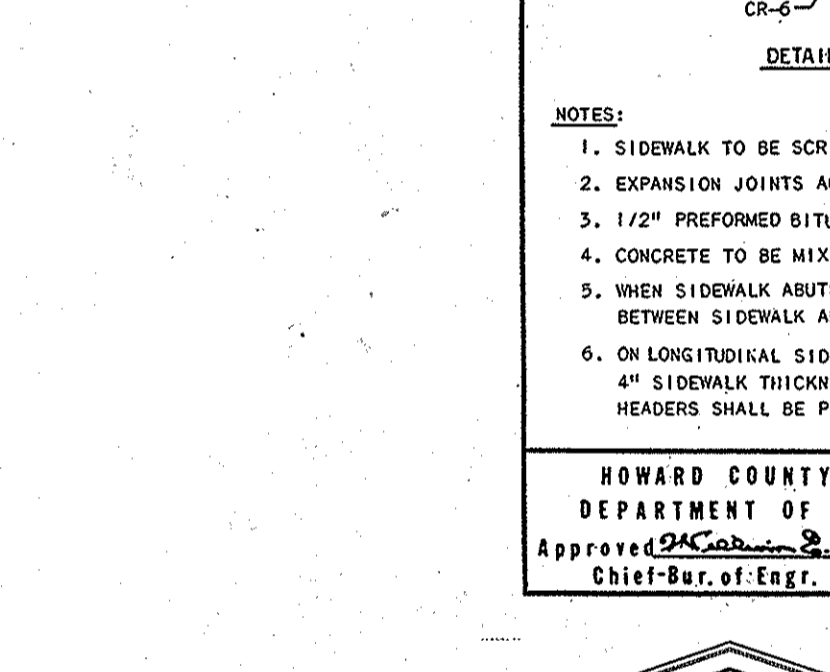
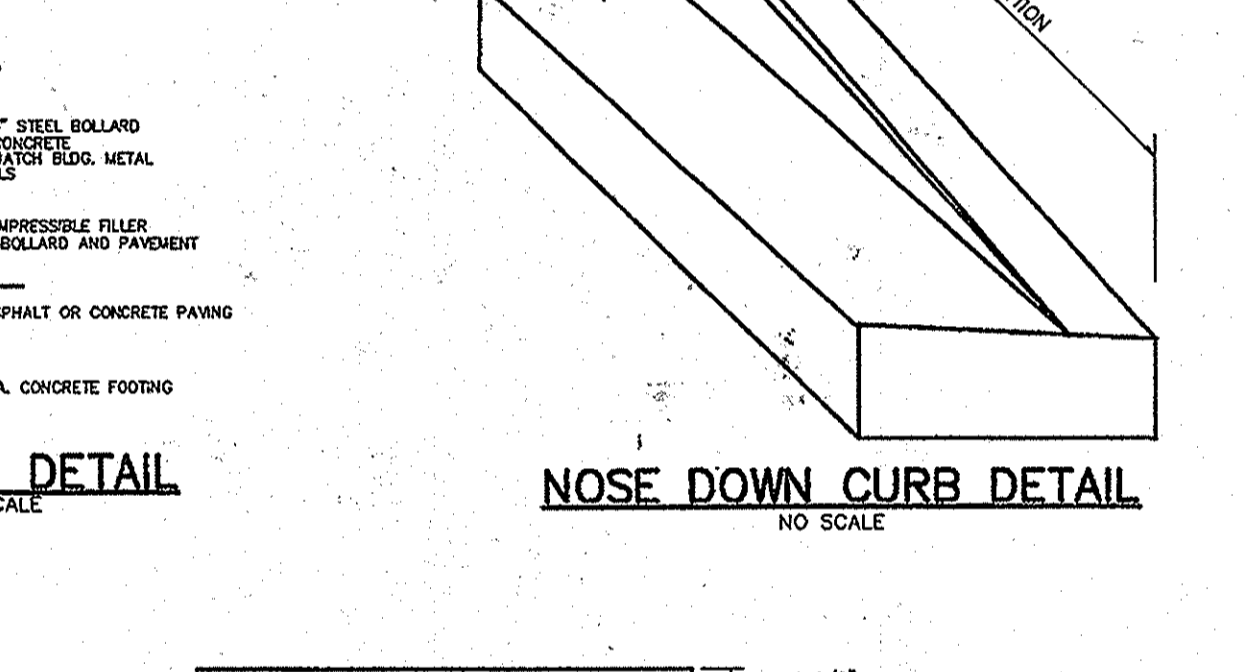
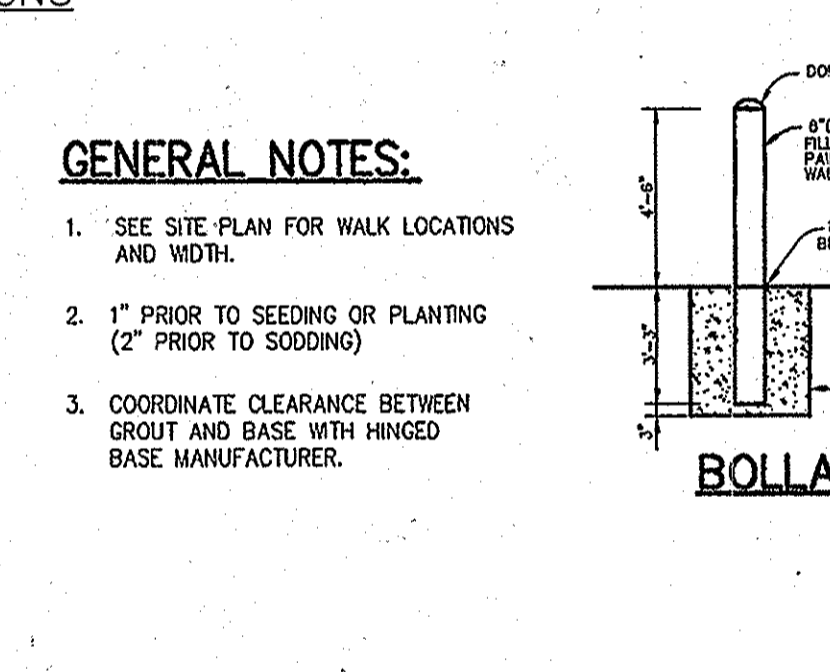
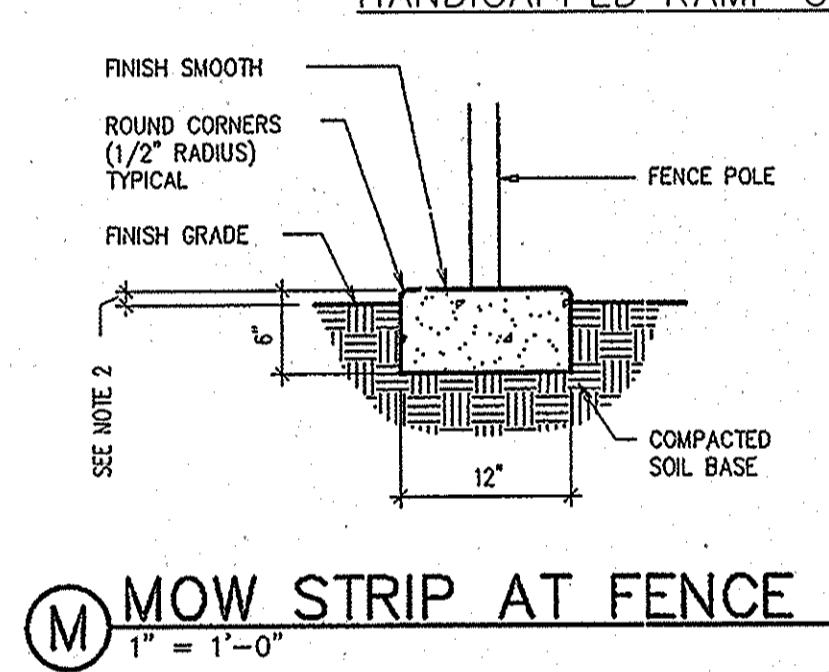
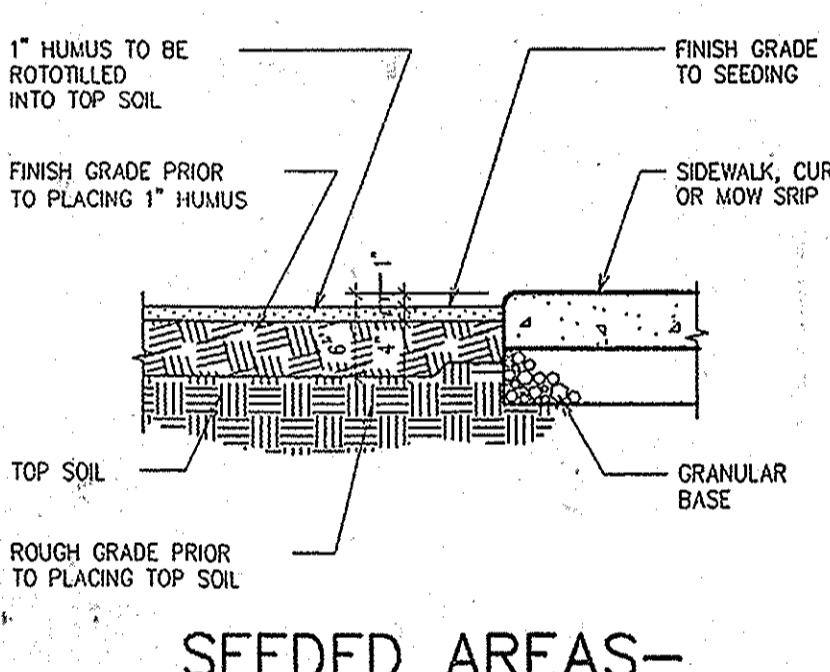
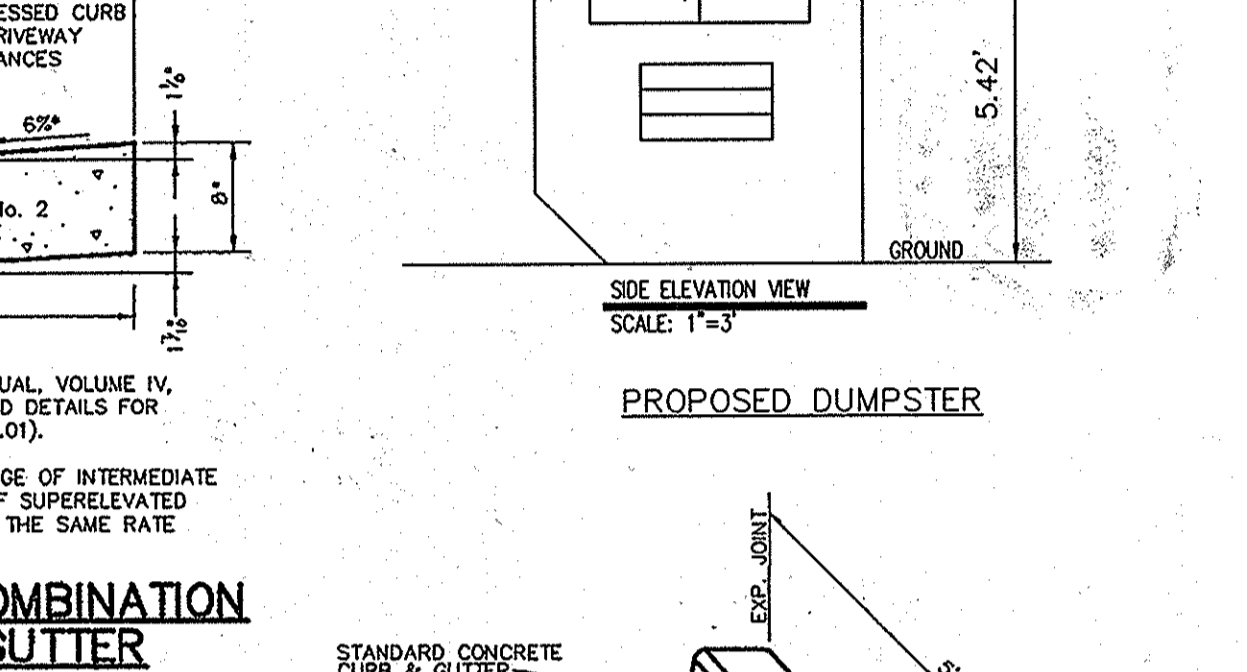
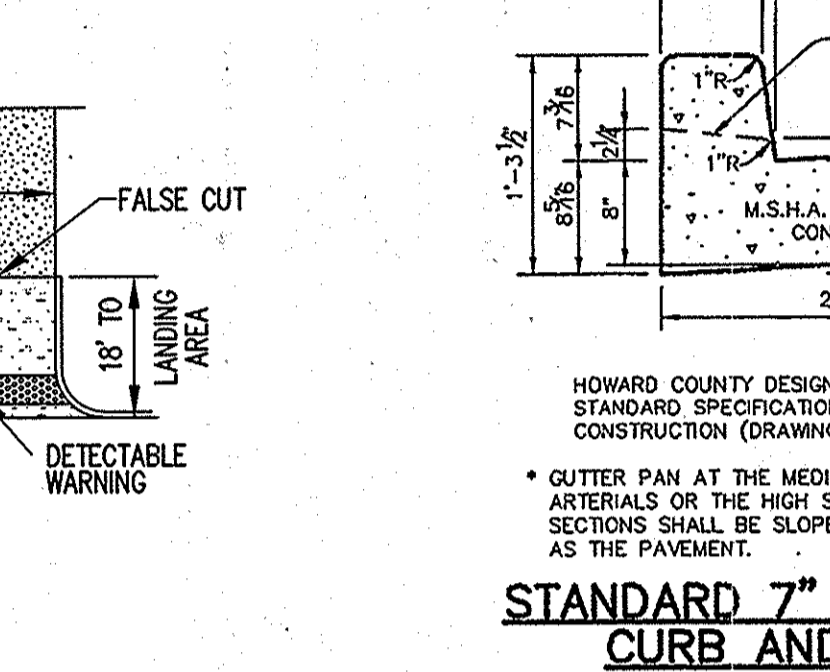
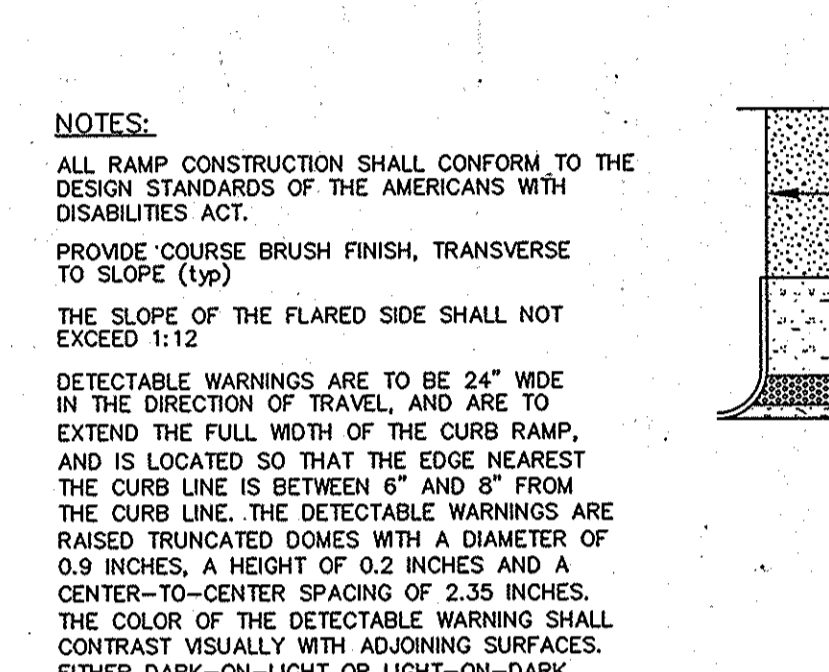
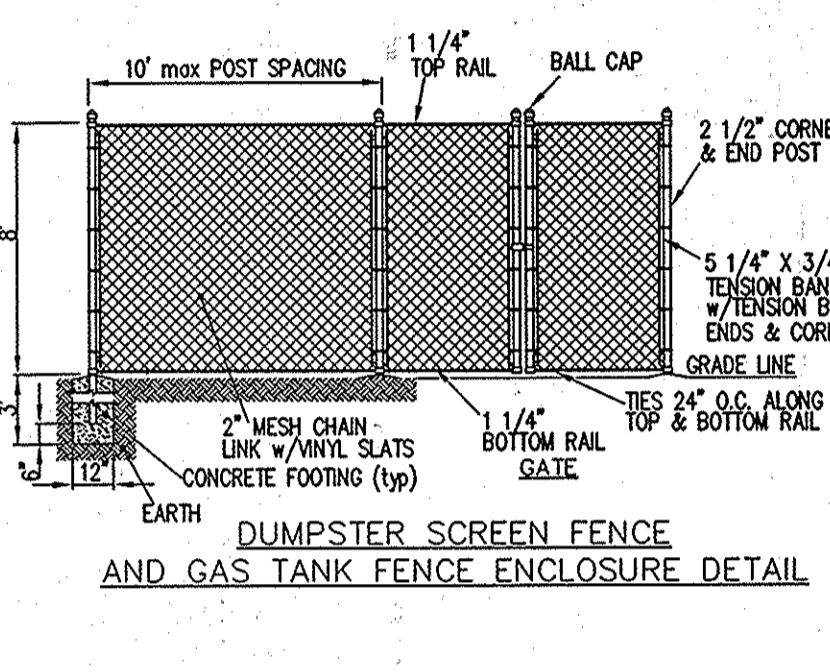
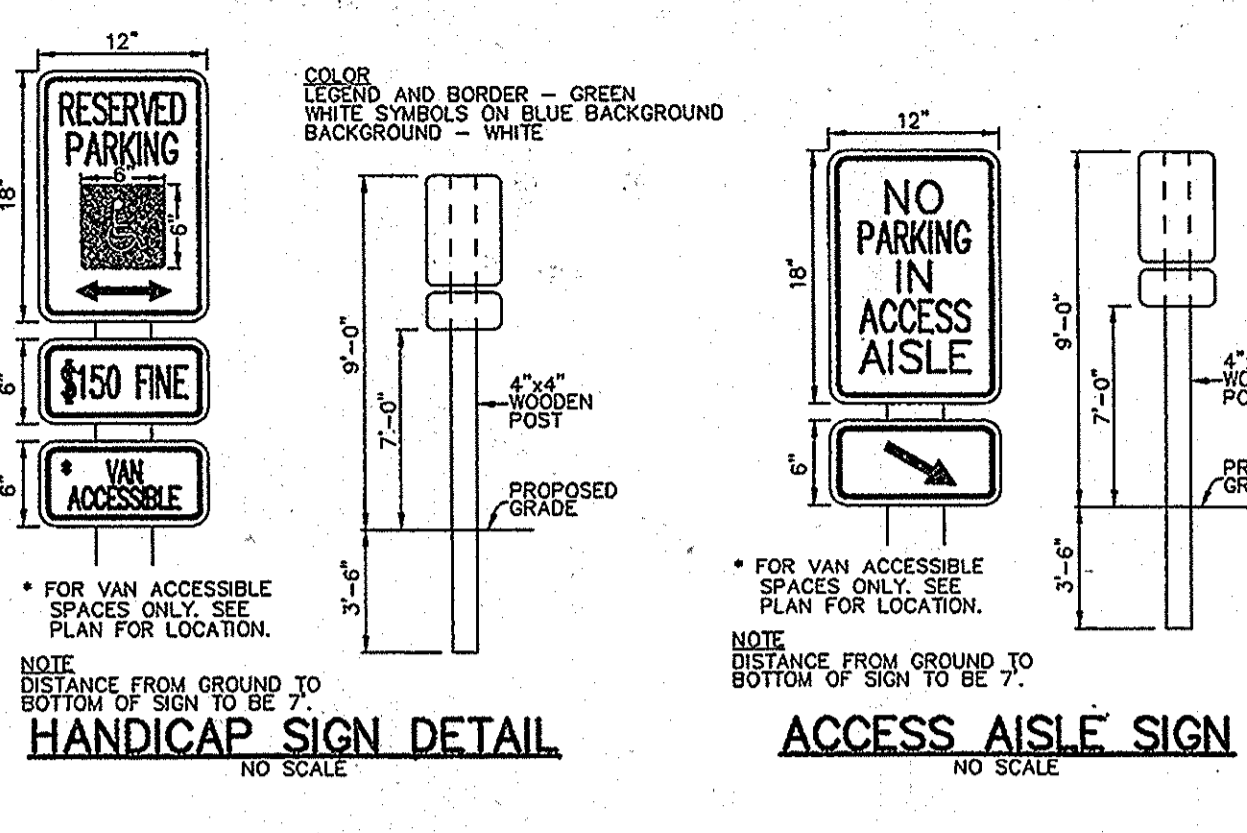
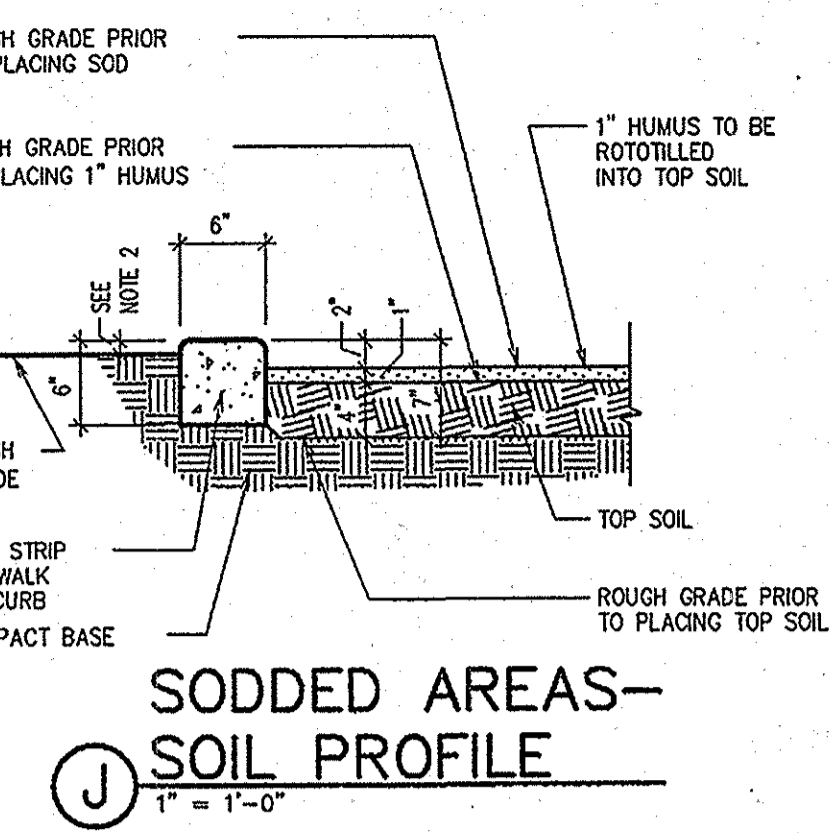
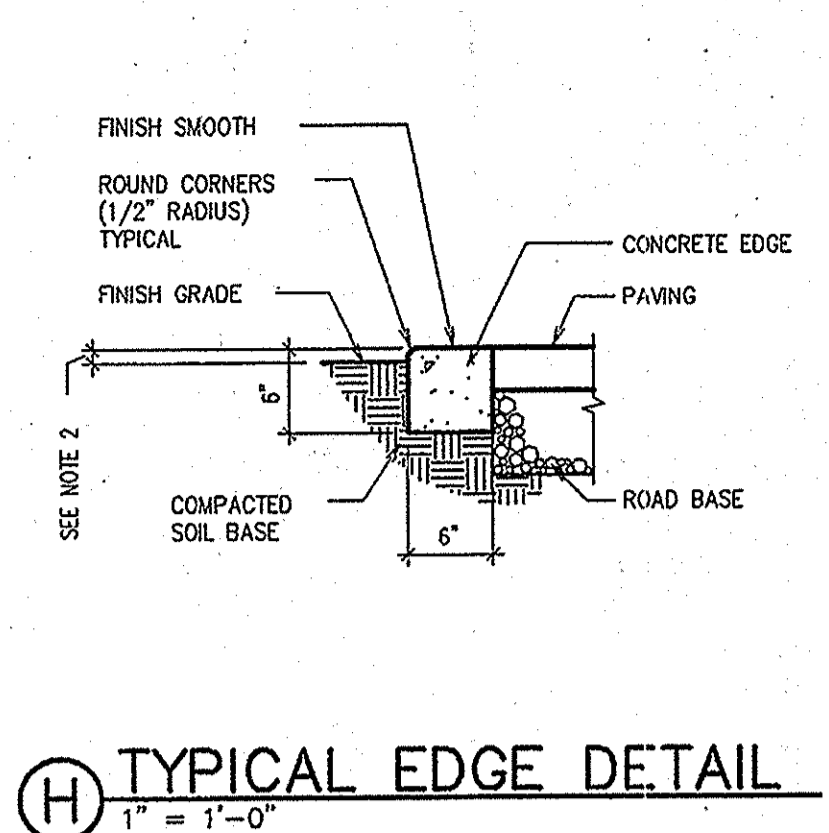
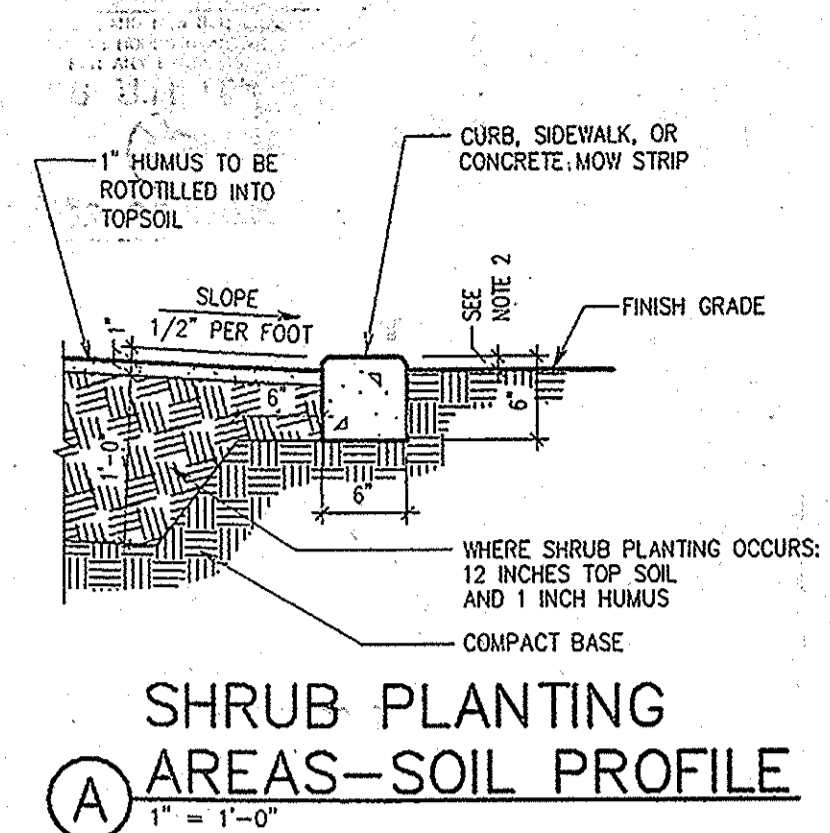
HOWARD SCD DATE: [Signature]

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division DATE: 6.16.08
Chief, Division of Land Development DATE: 7/23/08
Director DATE: 7/23/08

US Patent # 6126817

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY

HOWARD COUNTY HEALTH DEPARTMENT DATE: 7/23/08



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 Date: 6-16-08

REMOVED FOR HOWARD SOD AND MEETS TECHNICAL REQUIREMENTS
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL-CONSERVATION AND SEEDING CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
 Date: 7/24/08

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS
 SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
 County Health Officer
 Date: 7/23/08

MARYLAND LAW REQUIRES
 48 HOURS NOTICE
 FOR ANY EXCAVATION
 MISS UTILITY INC
 1-800-257-7777

The RBA-Group
 ENGINEERS • ARCHITECTS • PLANNERS
 7164 Columbia Gateway Drive, Suite 205
 Columbia, Maryland 21046
 Phone (410) 312-0868, Fax (410) 312-0897

NO AS-BUILT INFORMATION IS REQUIRED

MARK	DATE	REVISION
1	9/13/05	PER COUNTY COMMENTS
2	1/9/06	PER COUNTY COMMENTS
3	3/10/06	PER COUNTY COMMENTS
4	6/29/06	PER COUNTY COMMENTS
5	10/25/06	PER COUNTY COMMENTS
6	1/12/07	PER COUNTY COMMENTS
7	4/18/07	PER COUNTY COMMENTS
8	9/20/07	PER COUNTY COMMENTS
9	10/27/07	PER COUNTY COMMENTS
10		

MGA
 MUHLBERG GREENE
 ARCHITECTS, LTD.
 400 Washington Street, Reading, Pennsylvania 19601
 phone: 610.376.4927 fax: 610.376.0720

DRAWN BY: EVT
 CHECKED BY: CKL

MGA #2782
 STAMP
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief-Dir. of Engr.

PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION
 HUNTINGTON MANOR ESTATES
 SECTION 2
 AREA INFORMATION
 TAX MAP 34, PARCEL 399
 ZONED RR-DEO
 5TH ELECTION DISTRICT OF
 HOWARD COUNTY, MARYLAND
 PROJECT ADDRESS
 BRIGHTON DAM & TEN OAKS ROAD
 CLARKSVILLE, MARYLAND

SHEET TITLE
 SITE DEVELOPMENT PLAN
 CONSTRUCTION DETAILS
 AS-BUILT

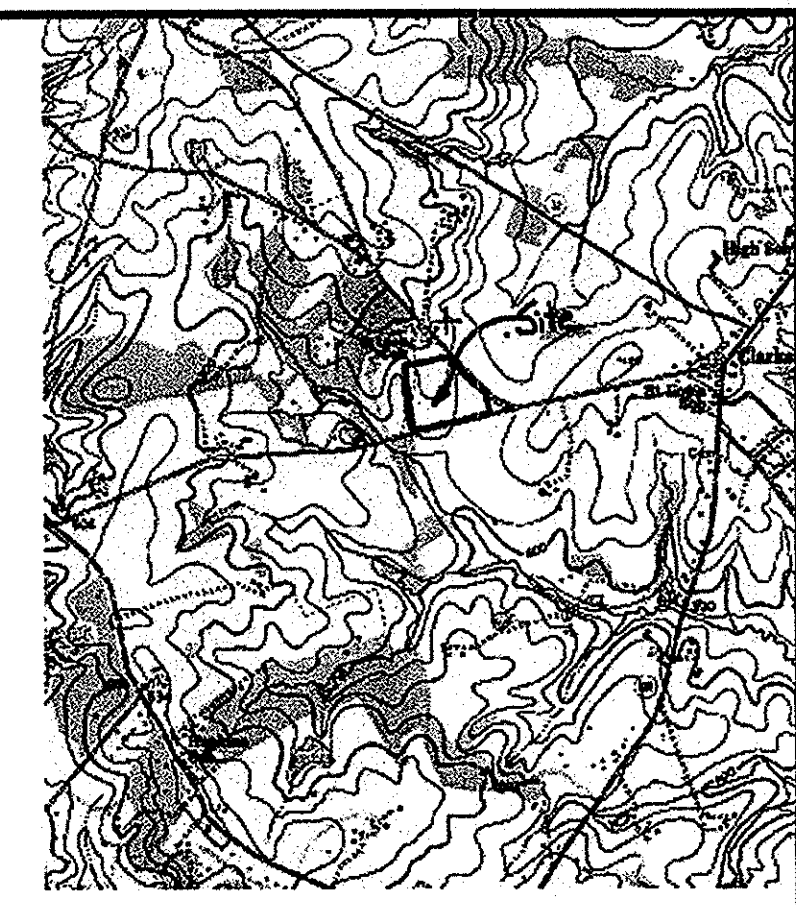
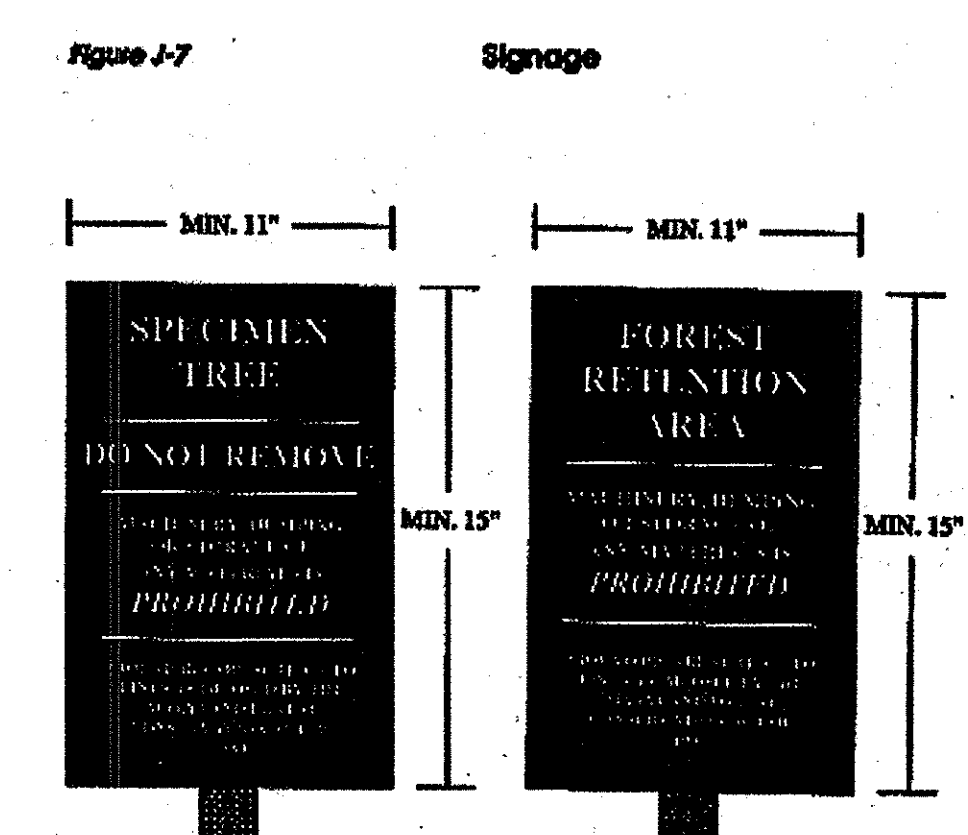
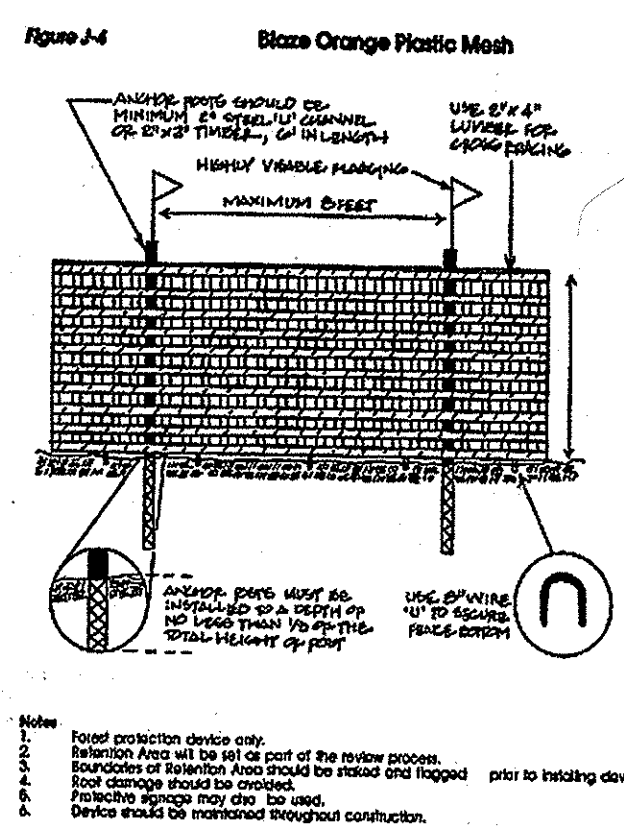
CURRENT BOARD OF APPEALS CASE
 #BA 04-007C
 PROJECT DESIGNATION
 LDS 583-0273-0501-0101
 PROPERTY NUMBER
 565-0348
 SHEET NO.
 11 of 32
 DEVELOPMENT NUMBER
 HER-COL-98-12
 DATE
 07/05/05

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 1-800-257-7777

SOIL DESCRIPTIONS
 CgC2 - Chester gravelly silt loam, 8-15%, moderately eroded, K-factor - (Type B)
 ChB2 - Chester silt loam, 3-8%, moderately eroded, K-factor - (Type B)
 ChA - Chester silt loam, 0-3%, K-factor - (Type B)
 GA - Glenville silt loam, 0-3%, K-factor + (Type C)

LEGEND
 Protective Barrier Fencing
 Protective Signage
 Forest Retention Area
 Specimen Tree

SPECIMEN TREES
 38" Red Oak
 45" Double Trunk Pin Oak
 31" Pin Oak - To Be Removed
 32" Double Trunk Tulip Poplar



MARK	DATE	REVISION
1	9/13/05	PER COUNTY COMMENTS
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5	10/25/06	PER COUNTY COMMENTS
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7	4/18/07	PER COUNTY COMMENTS
8	9/20/07	PER COUNTY COMMENTS
9	10/27/07	PER COUNTY COMMENTS
10	9/3/09	EX. DRIVEWAY ENT.
11	11/18/09	AS-BUILT

MGA
 MUHLBERG GREENE ARCHITECTS, L.L.C.
 Reading, Pennsylvania 19601
 400 Washington Street
 Phone: 610.376.4927
 Fax: 610.376.0720

PUBLIC FOREST CONSERVATION EASEMENT #1
 AREA = 2.52 ACRES

"This project complies with the requirements of Section 16.1200 of the Howard County Code and Forest Conservation Manual with a forest conservation obligation of 4.32 acres for achieving the break-even point providing 4.32 acres of forest retention easement. Forest conservation surety in amount of \$37,696.00 is provided for the retention easement area with the DPW, Developers Agreement."

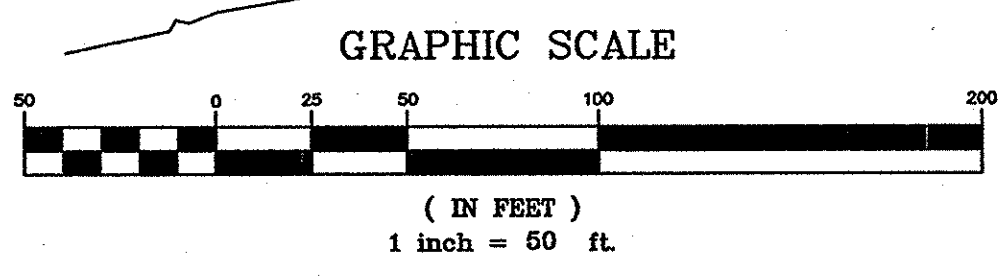
15' NO WOODY ZONE

CONSTRUCTION TIME TABLE
 Construction on the site is anticipated to begin in the spring of 2006. The sequence of construction shall be as follows:
 -Stake forest retention area edges in the field with respect to the critical root zones (C.R.Z.) and apply stress reduction measures as necessary.
 -Install temporary and permanent protective devices around the forest retention areas.
 -Hold pre-construction meeting at the project site with DPW and Sediment Control Inspectors.
 -Install soil erosion control structures.
 -Site inspection by officer of the Howard County Department of Planning and Zoning.
 -Begin site work and building construction.
 -Perform post-construction corrective measures (stress reduction, dead and dying tree removal, etc.).
 -Remove temporary forest protection structures after inspection by the Howard County Department of Planning and Zoning.
 -Site inspection by project inspector.
 -Commencement of forest conservation area protective agreements.

32" TULIP POPLAR - DOUBLE TRUNK (SPECIMEN TREE)
 3 EXISTING MAIL BOXES TO BE RELOCATED

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development
 Director

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
 Director
 Director



PROTECTIVE FENCE DETAIL

PROTECTIVE SIGNAGE DETAIL

Notes

- The base topographic, property line, and outbound information was derived from the Existing Features Plan for the Church of Jesus Christ of Latter-Day Saints, prepared by Muhlenberg Green Architects, Inc., Reading, PA, dated April 18, 2005.
- The total tract area is 11.99± acres.
- The site is zoned RR-DEO.
- The soil locations and types are taken from the Howard County Soil Survey.
- The forest stand delineation fieldwork was performed by Vortex Environmental on July 8, 2005.
- Notification from the Maryland Natural Heritage indicates no records for Federal or State rare, threatened, or endangered plants or animals within the project site.
- No Slopes greater than 25% or greater than 15% with a K value greater than 0.35 as measured off approved topographic maps, using a minimum area of 10,000 square feet were observed on the site.
- The owner/developer of the property is the Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-Day Saints, A Utah Corporation Sole, 50 East North Temple, Salt Lake City, Utah 84150. c/o Liberty Engineering, Inc., 7353 Windsor Drive, Suite B-102, Allentown, PA 18195.
- A 100 year floodplain is not present in accordance with Howard County, MD FEMA maps.
- The site information is tax map 34, grid 10, parcel 339 and deed reference 1556/0606.
- Approximately 20 acres of contiguous forest are located to the north and west of the project site.
- Temporary debris stockpile areas shall be kept outside of the proposed bufferyard areas. Stockpile areas have been located hereon for use during initial construction activities and are not to be used for permanent disposal.
- Final Plat Number 19990 upon Recordation of the Plat, F-06-132, RECORDED C16108.

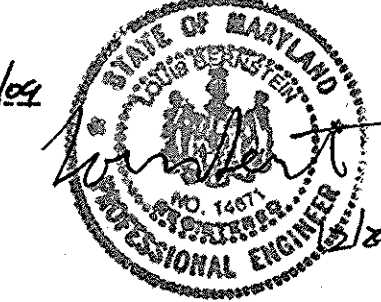
PUBLIC FOREST CONSERVATION EASEMENT SUMMARY

Public Forest Conservation Easement Area 1 - 2.52 Acres
 Public Forest Conservation Easement Area 2 - 1.32 Acre
 Public Forest Conservation Easement Area 3 - 0.49 Acre
 Total 4.33 Acres

PUBLIC FOREST CONSERVATION EASEMENT #3
 AREA = 1.32 ACRES

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 MEET THE APPROVED PLANS AND SPECIFICATIONS.

LOUIS BERNSTEIN
 MD PE #14671



The RBA Group
 ENGINEERS • ARCHITECTS • PLANNERS
 7164 Columbia Gateway Drive, Suite 205
 Columbia, Maryland 21046
 Phone (410) 312-0988, Fax (410) 312-0897

NET TRACT AREA:	
A. Total tract area	12.00
B. Area within 100 year floodplain	0.00
C. Area to remain in agricultural production	0.00
D. Net tract area	12.00

LAND USE CATEGORY: (from table 3.2.1, page 40, Manual)					
Input the number "1" under the appropriate land use zoning, and "1" to only one entry.					
ARR	MFR	IDA	HR	MFD	GA
0	0	1	0	0	0
E. Afforestation on Threshold	15%	x D =	1.80		
F. Conservation on Threshold	20%	x D =	2.40		

EXISTING FOREST COVER:	
G. Existing forest cover (excluding floodplains)	12.00
H. Area of forest above afforestation threshold	10.20
I. Area of forest above conservation threshold	9.60

BREAK-EVEN POINT:	
J. Forest retention above threshold with no mitigation	4.32
K. Clearing permitted without mitigation	7.68

PROPOSED FOREST CLEARING:	
L. Total area of forest to be cleared	7.67
M. Total area of forest to be retained	4.32

PLANTING REQUIREMENTS:	
N. Reforestation for clearing above conservation threshold	0.00
O. Reforestation for clearing below conservation threshold	0.00
P. Reforestation for retention above conservation threshold	0.00
Q. Reforestation for retention below conservation threshold	0.00
R. Total reforestation required	0.00
S. Total afforestation required	0.00
T. Total afforestation and reforestation required	0.00

DRAWN BY: EVT
 CHECKED BY: CKL

MGA #2782
 STAMP
 5/2/05

PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION
 HUNTINGTON MANOR ESTATES SECTION 2
 AREA INFORMATION
 TAX MAP 34, PARCEL 399
 ZONED RR-DEO
 5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND
 PROJECT ADDRESS
 BRIGHTON DAM & TEN OAKS ROAD
 CLARKSVILLE, MARYLAND

SHEET TITLE
FOREST CONSERVATION PLAN AS-BUILT

CURRENT BOARD OF APPEALS CASE #BA 04-007C
 PROJECT DESIGNATION LDS 583-0273-0501-0101
 PROPERTY NUMBER 565-0348
 SHEET NO. 21 of 32
 DEVELOPMENT NUMBER
 HER-COL-98-12
 DATE 07/05/05

MARK	DATE	REVISION
1	9/13/05	PER COUNTY COMMENTS
2	1/09/06	PER COUNTY COMMENTS
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10	10/27/07	PER COUNTY COMMENTS
11	11/18/09	AS-BUILT

MCA
MUHLBERG GREENE
ARCHITECTS, L.L.C.
 400 Washington Street, Reading, Pennsylvania 19601
 phone: 610.376.4927 fax: 610.376.0720

DRAWN BY: EVT
 CHECKED BY: CKL

MCA #2782
 STAMP
[Signature]
 6/10/09

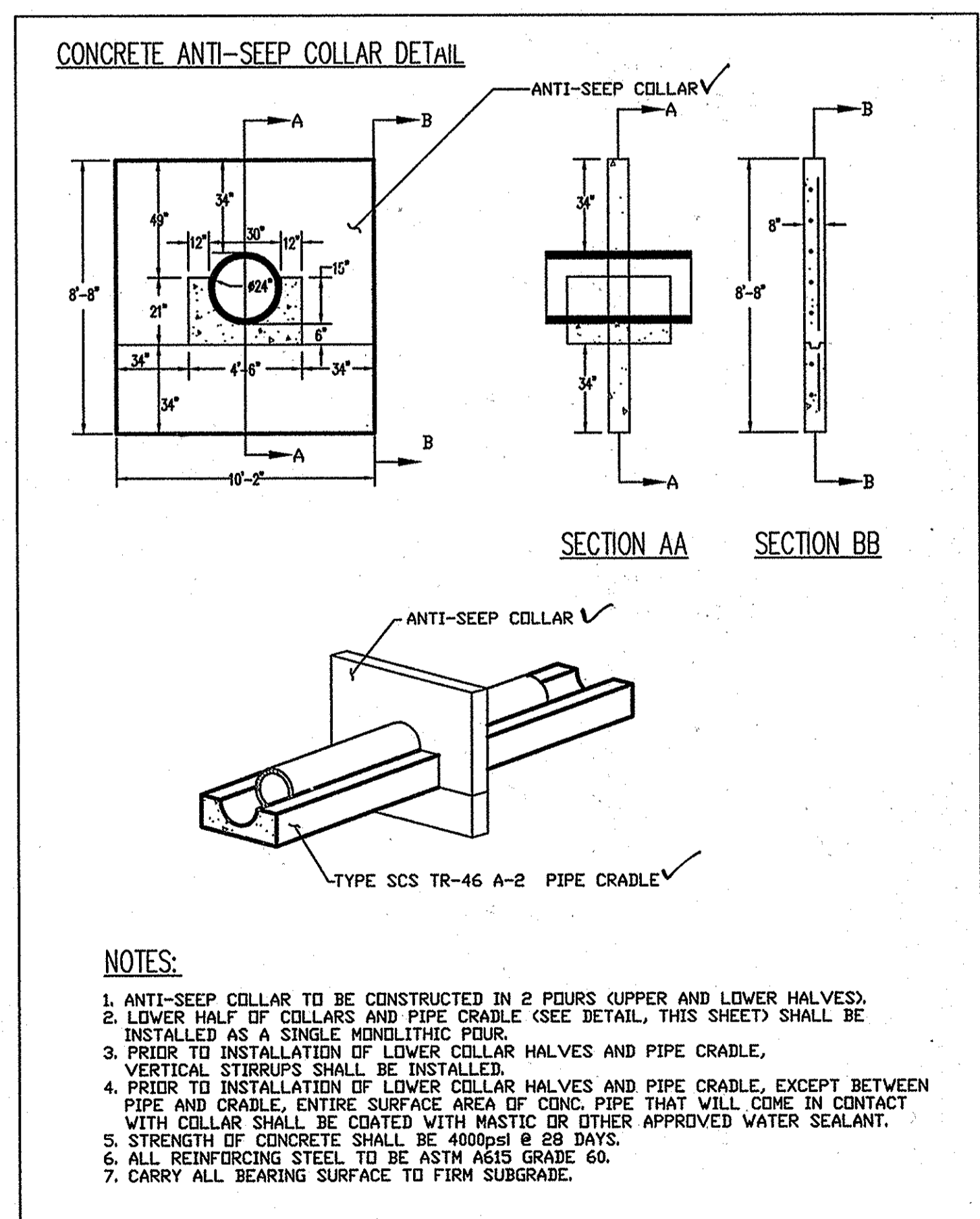
PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION
 HUNTINGTON MANOR ESTATES
 SECTION 2
 AREA INFORMATION
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 5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND
 PROJECT ADDRESS
 BRIGHTON DAM & TEN OAKS ROAD
 CLARKSVILLE, MARYLAND

SHEET TITLE
 SITE DEVELOPMENT PLAN
 EROSION CONTROL DETAILS
AS-BUILT

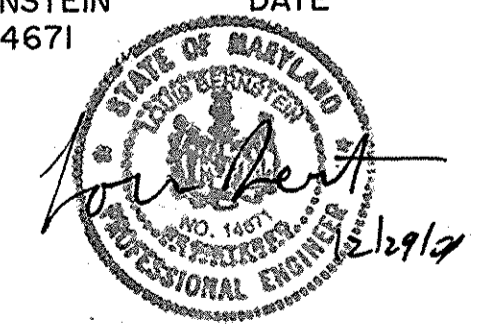
CURRENT BOARD OF APPEALS CASE #BA 04-007C
 PROJECT DESIGNATION LDS 583-0273-0501-0101
 PROPERTY NUMBER 565-0348
 SHEET NO. 13 of 32
 DEVELOPMENT NUMBER
 HER-COL-98-1-
 DATE 04/14/05

MARYLAND LAW REQUIRES 48 HOURS NOTICE FOR ANY EXCAVATION
MISS UTILITY INC
 1-800-257-7777



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 MEET THE APPROVED PLANS AND SPECIFICATIONS.

[Signature]
 LOUIS BERNSTEIN
 MD PE #14671
 DATE 11/19/09



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 6/12/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 6-16-08
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
[Signature] 7/29/08
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
[Signature] 7/29/08
 DIRECTOR DATE

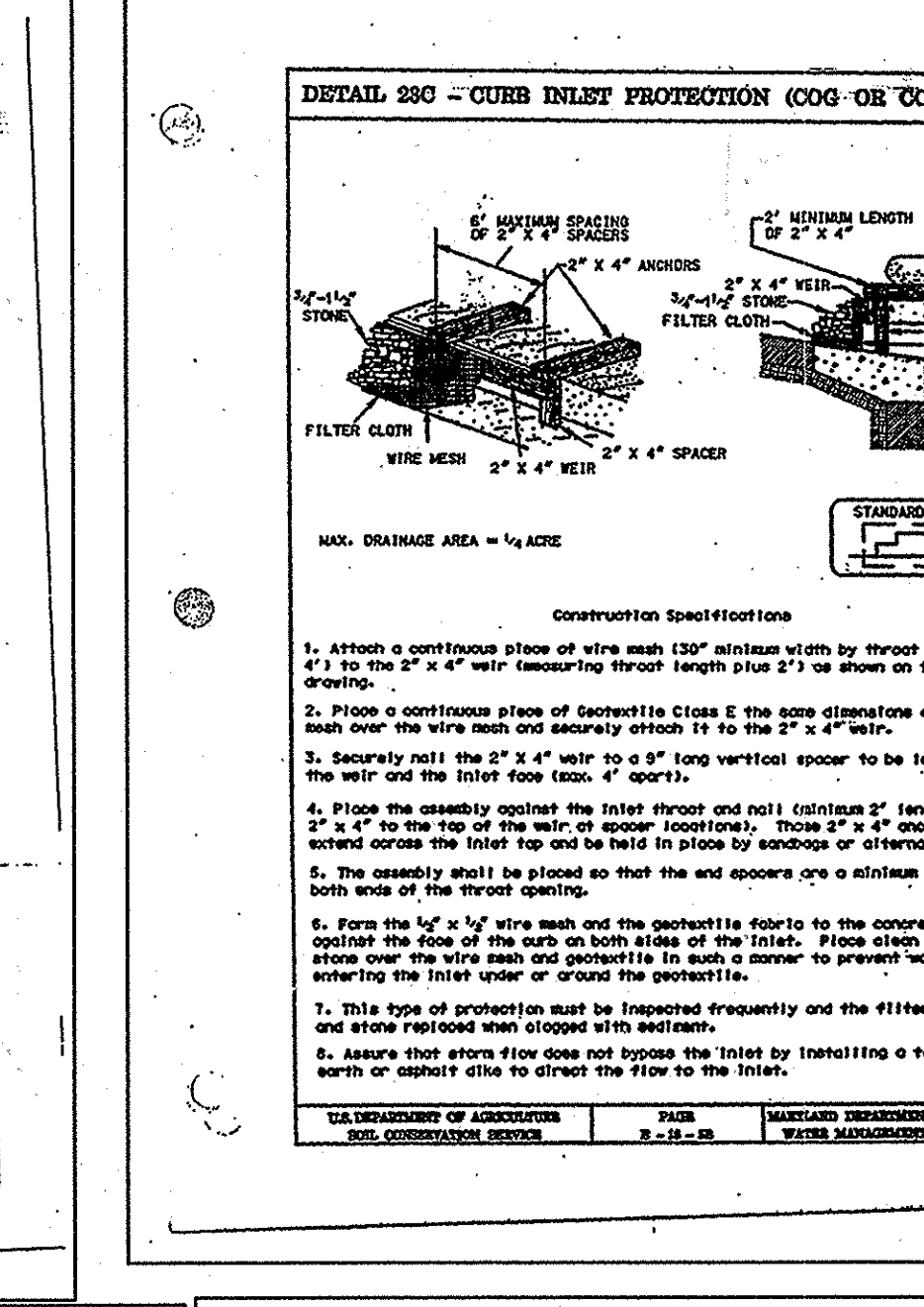
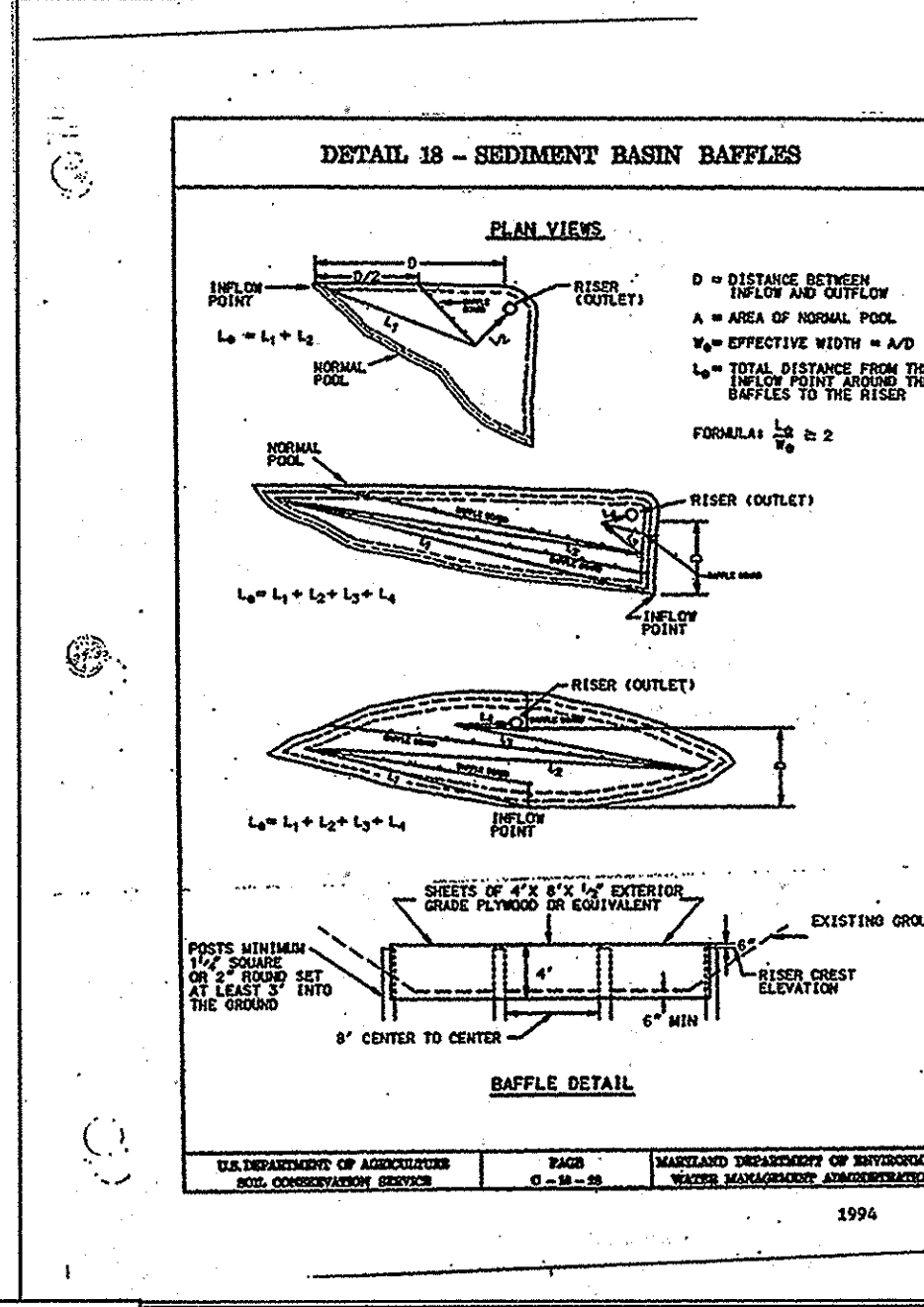
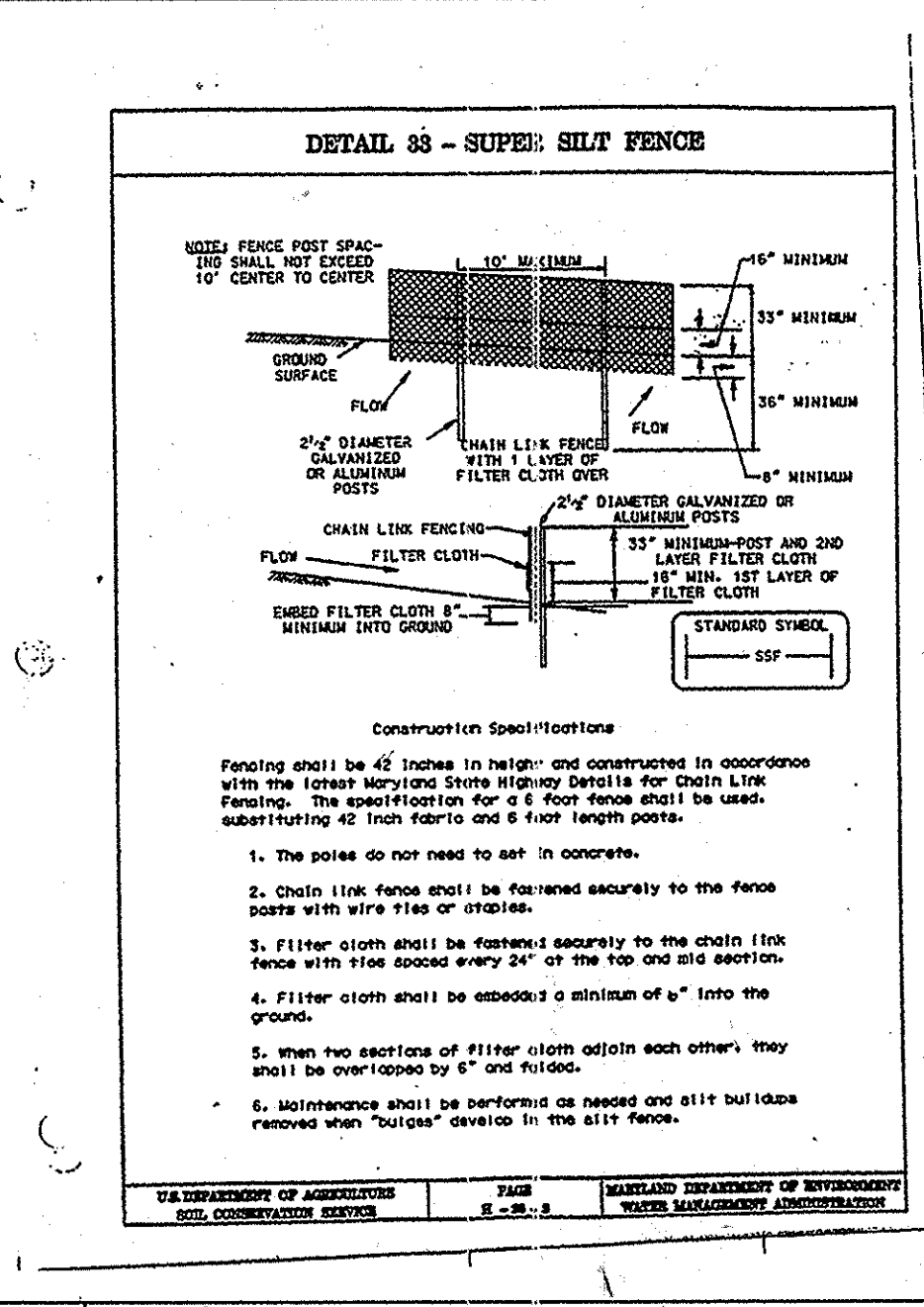
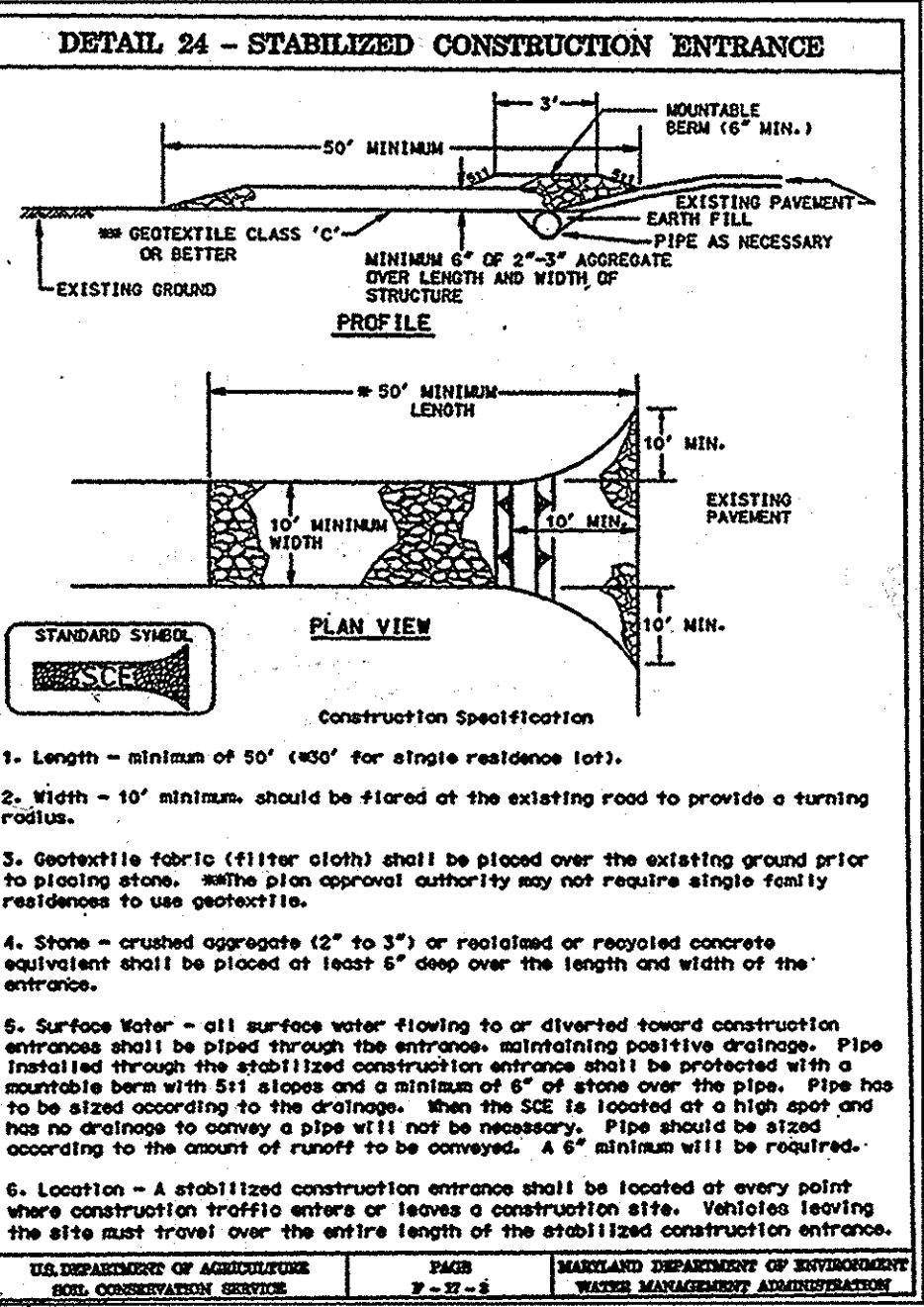
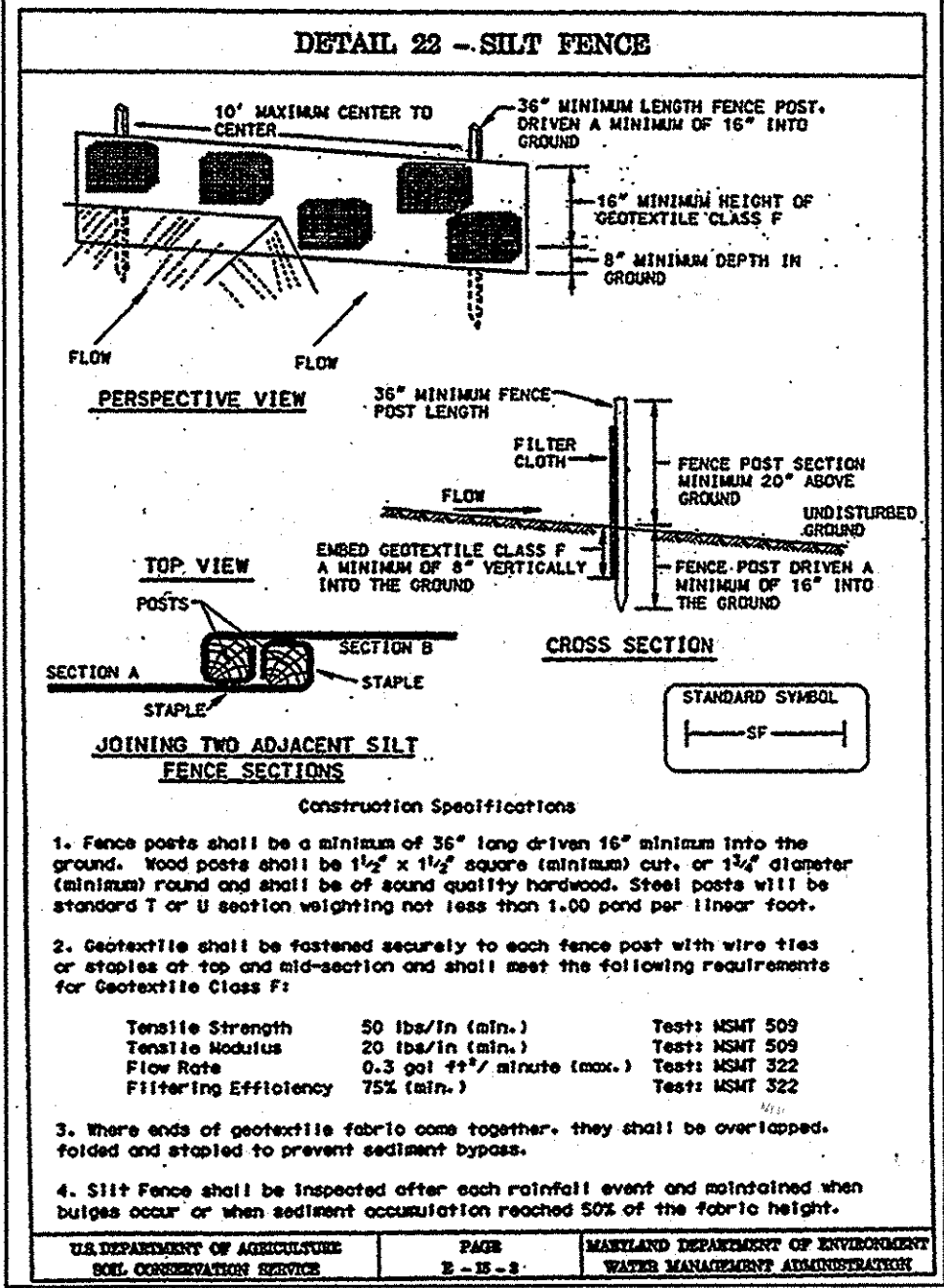
APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
[Signature] 7/23/08
 COUNTY HEALTH OFFICER DATE
 HOWARD COUNTY HEALTH DEPARTMENT

The **RBA-** Group
ENGINEERS • ARCHITECTS • PLANNERS
 7164 Columbia Gateway Drive, Suite 205
 Columbia, Maryland 21046
 Phone (410) 312-0886, Fax (410) 312-0897

MARK	DATE	REVISION
1	9/13/05	PER COUNTY COMMENTS
2	1/09/06	PER COUNTY COMMENTS
3	3/10/06	PER COUNTY COMMENTS
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10	10/27/07	PER COUNTY COMMENTS

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MISS UTILITY INC
1-800-257-7777

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MULLENBERG GREENE
ARCHITECTS, LTD.
400 Washington Street, Reading, Pennsylvania 19601
Phone: 610.376.4927 Fax: 610.376.0770



MAINTENANCE AND INSPECTION NOTES

INSPECTION OF THE FENCE SHALL BE PERFORMED AT LEAST ONCE ANNUALLY IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA SCS STANDARDS AND SPECIFICATIONS FOR FENCES (2007). THE FENCE OWNER AND ANY REPAIRS, REPAIRS, OR REPAIRS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE FENCE AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION AND MAINTENANCE THEREOF. THE FENCE OWNER SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE STRESS, URGENT REPAIRS, SLIP, OR SLIPING.

FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FENCE IS WORKING PROPERLY.

TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MAINTAINED TO A MINIMUM OF TWO TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES, THE BOTTOM OF THE FENCE, AND MAINTENANCE ACCESS SHOULD BE MAINTAINED AS NEEDED.

DEBRIS AND LITTER NEXT TO THE OUTLET STRUCTURE SHALL BE REMOVED DURING REGULAR MAINTENANCE OPERATIONS, AND AS NEEDED.

VISIBLE SIGNS OF EROSION IN THE POND AS WELL AS RIPRAP OUTLET AREA SHALL BE REPAIRED AS SOON AS IT IS NOTICED.

STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, RISER, AND THE PILES SHALL BE REPAIRED FROM THE SECTION OF ANY DAMAGE. THE COMPONENTS SHOULD BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.

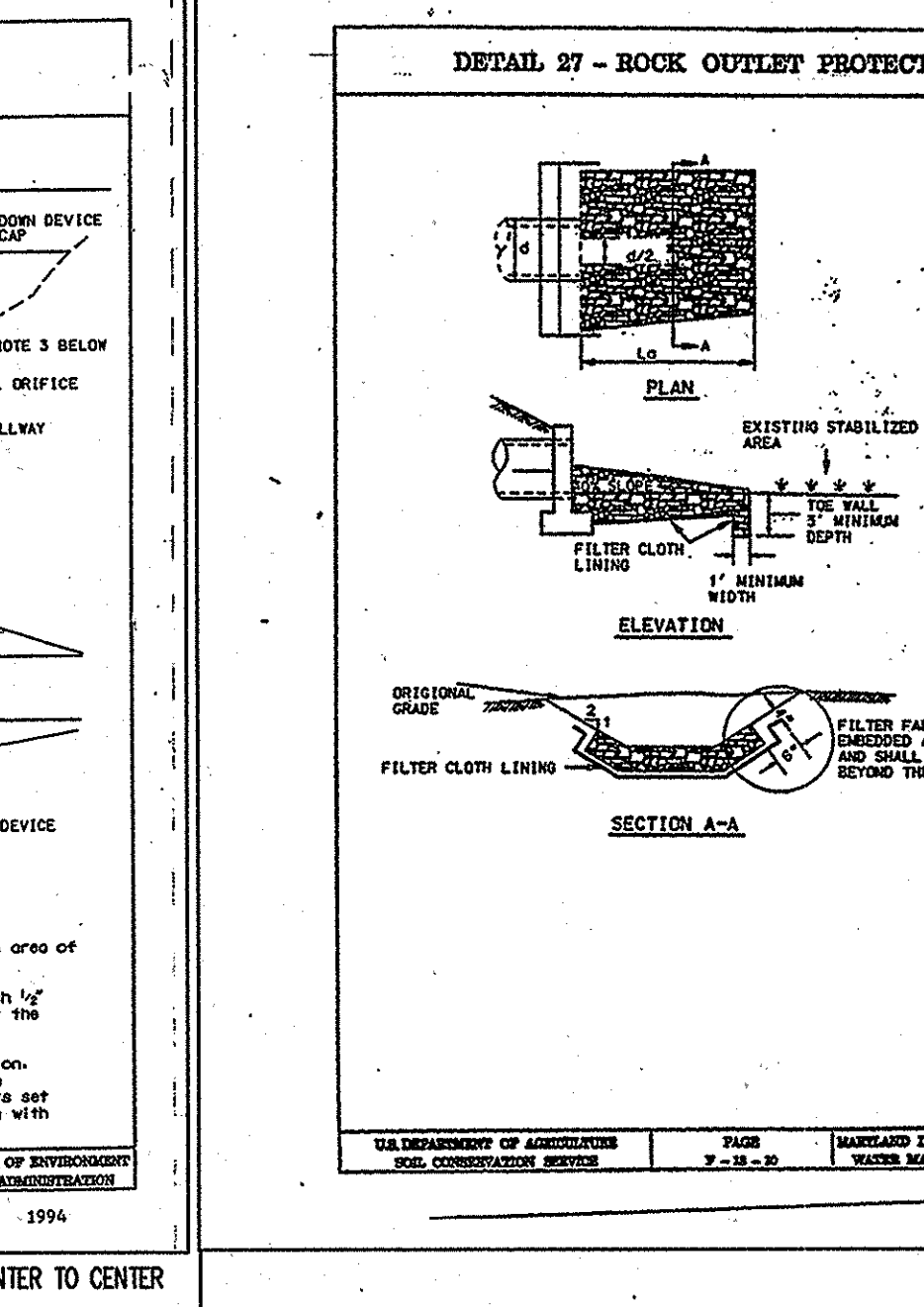
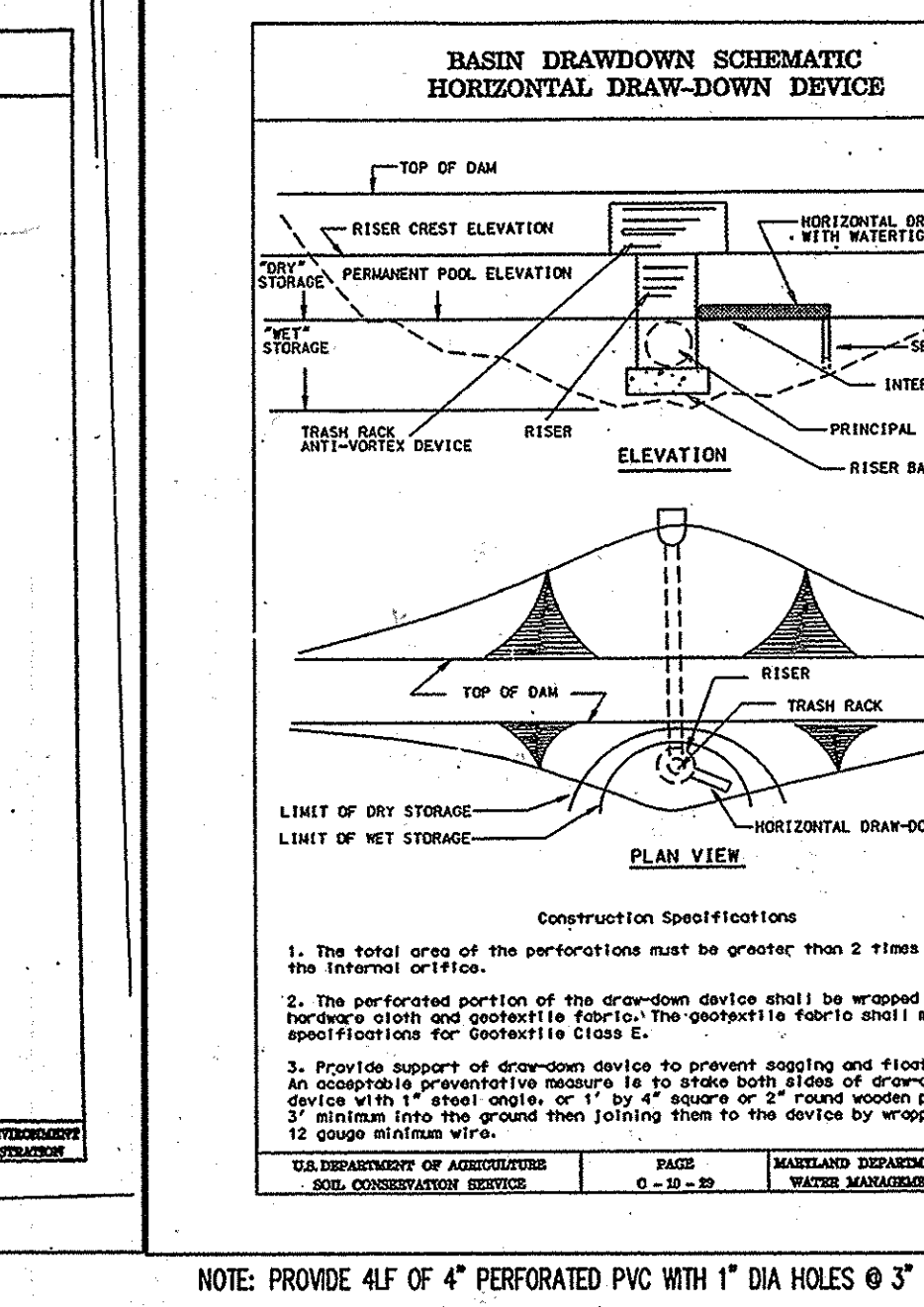
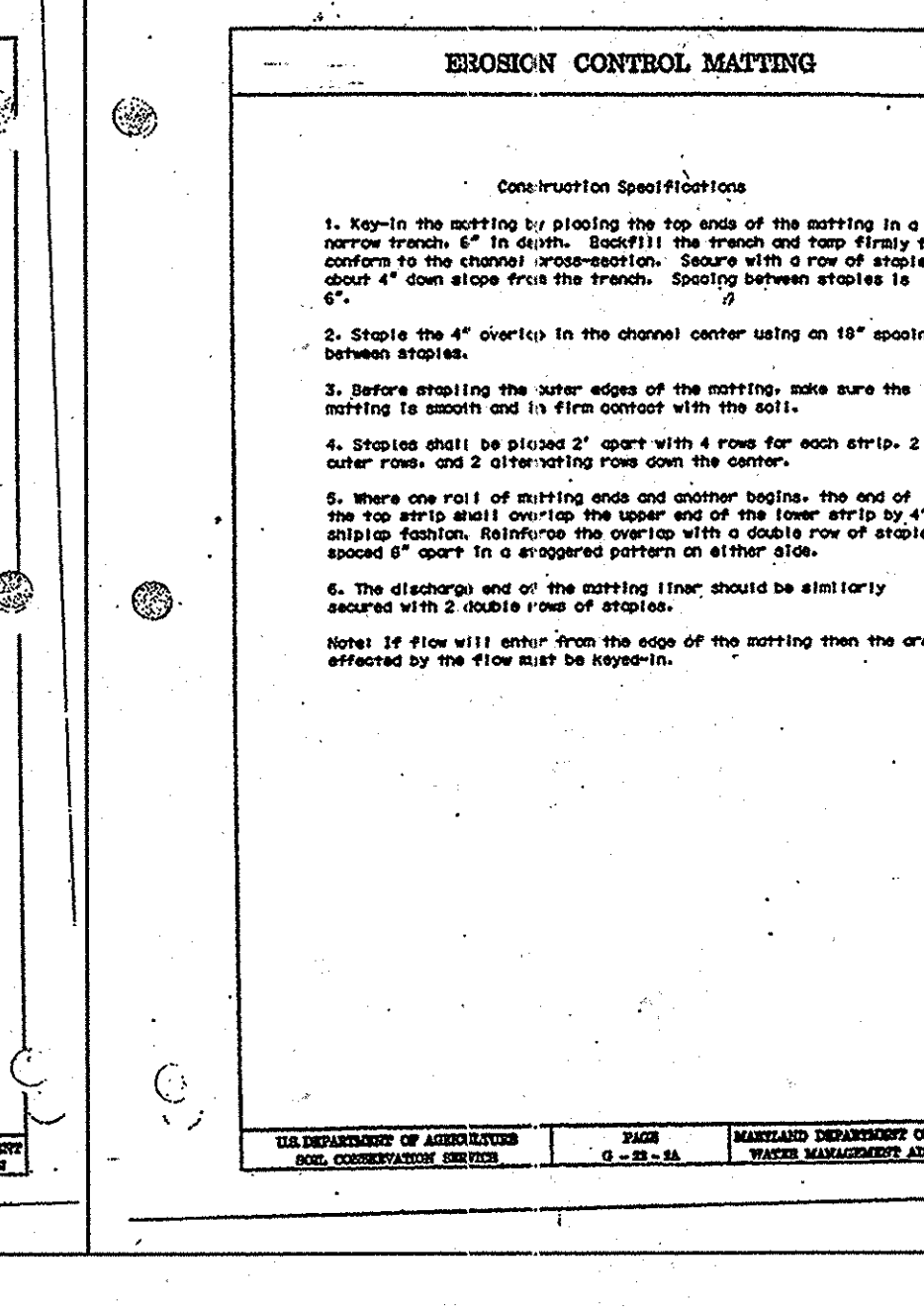
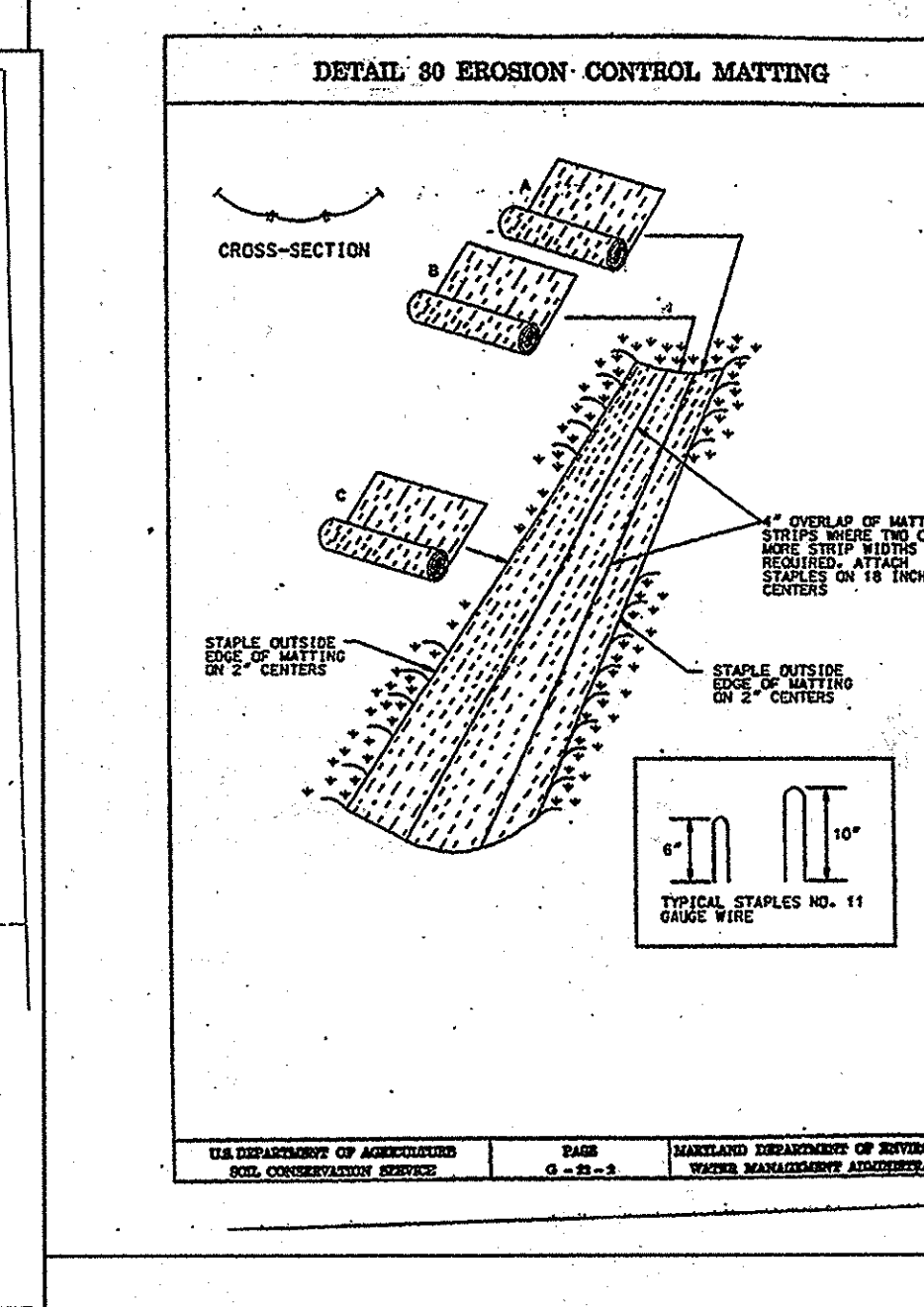
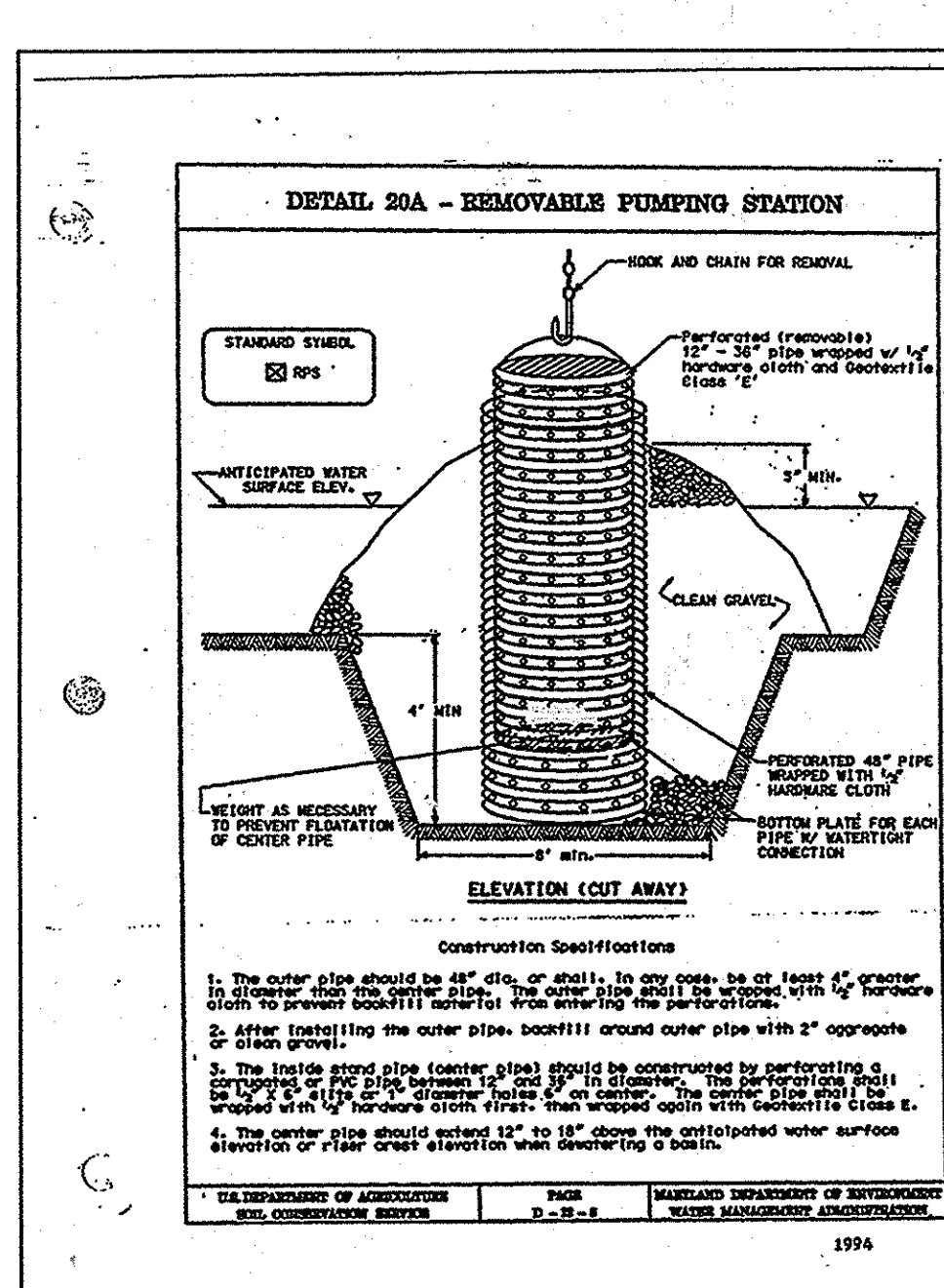
SEDIMENT SHOULD BE REMOVED WHEN ITS ACCUMULATION SIGNIFICANTLY REDUCES THE LESON STORAGE. INTERSEDE WITH THE FUNCTION OF THE RISER, WHEN REMOVED NECESSARY FOR AESTHETIC REASONS, OR WHEN DEEDED NECESSARY BY THE LOCAL COUNTY DEPARTMENT OF PUBLIC WORKS.

ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYERS, AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASHOUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DAMAGE AND REPAIRS AND REPLACEMENT WILL ADDRESS DEAD MATERIAL AND PRUNING.

SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BOUND TREATMENT. TREATMENT OF ALL DAMAGED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFUNCT STAKES AND WIRES.

MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.

SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.



NOTE: PROVIDE 4LF OF 4" PERFORATED PVC WITH 1" DIA HOLES @ 3" CENTER TO CENTER

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.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE: 6/12/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE: 6-16-08

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
DATE: 7/2/08

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
DATE: 7/2/08

RECORDED SUBDIVISION HUNTINGTON MANOR ESTATES SECTION 2
AREA INFORMATION
TAX MAP 34, PARCEL 399
ZONED RR-DEO
5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND
PROJECT ADDRESS
BRIGHTON DAM & TEN OAKS ROAD
CLARKSVILLE, MARYLAND

SHEET TITLE
SITE DEVELOPMENT PLAN
EROSION CONTROL DETAILS
AS-BUILT

CURRENT BOARD OF APPEALS CASE #BA 04-007C
PROJECT DESIGNATION LDS 583-0273-0501-0101
PROPERTY NUMBER 565-0348
SHEET NO. 14 of 32
DEVELOPMENT NUMBER HER-COL-98-12
DATE 07/05/05

NO AS-BUILT INFORMATION IS REQUIRED

RBA
Group
ENGINEERS • ARCHITECTS • PLANNERS
7164 Columbia Gateway Drive, Suite 505
Columbia, Maryland 21046
Phone (410) 312-0886, Fax (410) 312-0897

SDP-06-01

MARK	DATE	REVISION
1	9/13/05	PER COUNTY COMMENTS
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6	1/12/07	PER COUNTY COMMENTS
7	4/18/07	PER COUNTY COMMENTS
8	7/2/07	PER COUNTY COMMENTS
9	9/20/07	PER COUNTY COMMENTS
10	10/27/07	PER COUNTY COMMENTS
11	6/29/15	NOTES DELETED

MGA
MUHLENBERG GREENE ARCHITECTS, L.L.C.
 400 Washington Street
 Reading, Pennsylvania 19601
 phone: 610.376.4927 fax: 610.376.0720

100-378 STANDARDS AND SPECIFICATIONS

SPECIFICATIONS
 THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS WITHIN THE SCOPE OF THE STANDARD FOR PRACTICE HD-378. ALL REFERENCES TO ASTM AND AASHTO SPECIFICATIONS APPLY TO THE MOST RECENT VERSION.
SOIL PREPARATION
 AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTABLE MATERIAL SHALL BE REMOVED. CHANGE DURING THE REMOVAL SHALL BE CLEARED TO NO GREATER THAN 14'. ALL TREES SHALL BE CLEARED AND GRUBBED WITHIN 15 FEET OF THE TOE OF THE EMBANKMENT. AREAS TO BE COVERED BY THE RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBJECTABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS. TREES, BRUSH AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH THE GROUND SURFACE. FOR DRY STORMWATER MANAGEMENT PONDS, A MINIMUM OF A 25 FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE CLEARED. ALL LIMBS AND GRUBBED MATERIAL SHALL BE DEPOSITED OUTSIDE AND BELOW THE LIMITS OF THE DAM AND RESERVOIR AS DETERMINED BY THE OWNER OR HIS REPRESENTATIVE. WHEN SPECIFIED, A SUFFICIENT QUANTITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

GRASS FILL
 MATERIAL - THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6", FROZEN OR OTHER OBJECTABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT, AND CUT OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION CC, SC, CL OR CL AND MUST HAVE AT LEAST 30% PASSING THE #200 SIEVE. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGNED BY A GEOTECHNICAL ENGINEER. SUCH SPECIAL DESIGNS MUST HAVE CONSTRUCTION SUPERVISOR BY A GEOTECHNICAL ENGINEER.
 PLACEMENT - AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OR FILL. FILL MATERIALS SHALL BE PLACED IN MAXIMUM 8-INCH THICK (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST REMEASURABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.
 COMPACTION - THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRaversED BY NOT LESS THAN ONE TREAD TRACK OF THE EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER TIRE OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORMED INTO A BALL IT WILL NOT CRUMBLE YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT.
 WHEN REQUIRED BY THE REVIEWING AGENCY THE MINIMUM REQUIRED DENSITY SHALL NOT BE LESS THAN 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN +/- 2% OF THE OPTIMUM. EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99 (STANDARD PROCTOR).
 CUTOFF TRENCH - THE CUTOFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE BOTTOM WIDTH OF THE TRENCH SHALL BE COVERED BY THE EQUIPMENT USED FOR PLACEMENT, WITH THE MINIMUM WIDTH BEING FOUR FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAPEPERS TO ASSURE MAXIMUM DENSITY AND MAXIMUM PERMEABILITY. EMBANKMENT CORE - THE CORE SHALL BE PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE TOP WIDTH OF THE CORE SHALL BE A MINIMUM OF FOUR FEET. THE DEPTH SHALL EXTEND UP TO AT LEAST THE TOE OF THE SUBORDINATE SLOPE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES SHALL BE 1 TO 1 OR FLATTER. THE CORE SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS OR HAND TAPEPERS TO ASSURE MAXIMUM DENSITY AND MAXIMUM PERMEABILITY. IN ADDITION, THE CORE SHALL BE PLACED CONCURRENTLY WITH THE OUTER SLOPE OF THE EMBANKMENT.

STRUCTURE BACKFILL
 BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE FLOWING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAPEPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL SHALL BE FILLED COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL OPEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE OR PIPE. UNLESS THERE IS A COMPACTED LIFT OF 24" OR GREATER OVER THE STRUCTURE OR PIPE.
 STRUCTURE BACKFILL MAY BE FLOWABLE FILL MEETING THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 313 AS MODIFIED. THE MIXTURE SHALL HAVE A 100-200 PSI, 28 DAY UNCOMPACTED COMPRESSIVE STRENGTH. THE FLOWABLE FILL SHALL HAVE A MINIMUM PH OF 4.0 AND A MINIMUM RESISTIVITY OF 200 OHM-CM. MATERIAL SHALL BE PLACED SUCH THAT A MINIMUM OF 6" UNCOMPACTED FILL SHALL BE UNDER (BEDDING) OVER AND ON THE SIDES OF THE PIPE. IT ONLY NEEDS TO EXTEND UP TO THE GROUND LINE FOR ROAD CONDITIONS. AVERAGE SLURP OF THE FILL SHALL BE 77 TO ASSURE FLOWABILITY OF THE MATERIAL. ADEQUATE MEASURES SHALL BE TAKEN (SAND BAGS, ETC.) TO PREVENT FLOWING THE PIPE WHEN USING FLOWABLE FILL. ALL METAL PIPE SHALL BE BITUMINOUS COATED. ANY ADDITIONAL FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAPEPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL SHALL COMPLETELY FILL ANY VOIDS ADJACENT TO THE FLOWABLE FILL ZONE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A STRUCTURE OR PIPE UNLESS THERE IS A COMPACTED LIFT OF 24" OR GREATER OVER THE STRUCTURE OR PIPE. BACKFILL MATERIAL ADJACENT TO THE STRUCTURE BACKFILL (FLOWABLE FILL) ZONE SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE CORE OF THE EMBANKMENT OR OTHER EMBANKMENT MATERIALS.

PIPE CONDUITS
 ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.
 CORRUGATED METAL PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR CORRUGATED METAL PIPE:
 1. MATERIALS - POLYMER COATED STEEL PIPE - STEEL PIPE WITH POLYMER COATING SHALL HAVE A MINIMUM COATING THICKNESS OF 0.01 UNITS (10 MIL) ON BOTH SIDES OF THE PIPE. THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATIONS M-245 & M-246 WITH WATER TIGHT COUPLING BANDS OR FLANGES.
 MATERIALS - ALUMINUM COATED STEEL PIPE - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATIONS M-274 WITH WATER TIGHT COUPLING BANDS OR FLANGES. ALUMINUM COATED STEEL PIPE, WHEN USED WITH FLOWABLE FILL OR WHEN SOIL AND/OR WATER CONDITIONS WARRANT THE NEED FOR INCREASED DURABILITY, SHALL BE FULLY BITUMINOUS COATED PER REQUIREMENTS OF AASHTO SPECIFICATION M-190 TYPE A. ANY ALUMINUM COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER OR TWO COATS OF ASPHALT. HOT DIP GALVANIZED BOLTS MAY BE USED FOR CONNECTIONS. THE PH OF THE SUBORDINATE SOIL SHALL BE BETWEEN 4 AND 9.
 MATERIALS - ALUMINUM PIPE - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATIONS M-196 OR M-211 WITH WATER TIGHT COUPLING BANDS OR FLANGES. ALUMINUM PIPE, WHEN USED WITH FLOWABLE FILL OR WHEN SOIL AND/OR WATER CONDITIONS WARRANT THE NEED FOR INCREASED DURABILITY, SHALL BE FULLY BITUMINOUS COATED PER REQUIREMENTS OF AASHTO SPECIFICATION M-190 TYPE A. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER OR TWO COATS OF ASPHALT. HOT DIP GALVANIZED BOLTS MAY BE USED FOR CONNECTIONS. THE PH OF THE SUBORDINATE SOIL SHALL BE BETWEEN 4 AND 9.
 2. COUPLING BANDS, ANTI-SEEP COLLARS, END SECTIONS, ETC., MUST BE COMPOSED OF THE SAME MATERIAL AND COATED AS THE PIPE. METALS MUST BE INSULATED FROM DISSIMILAR MATERIALS SUCH OF RUBBER OR PLASTIC INSULATING MATERIALS AT LEAST 24 INCH THICKNESS.
 3. CONNECTIONS - ALL CONNECTIONS MUST BE COMPLETELY WATER TIGHT. THE DRAIN PIPE OR BARREL CONNECTION TO THE RISER SHALL BE WELDED ALL AROUND WHEN THE PIPE AND RISER ARE METAL. ANTI-SEEP COLLARS SHALL BE CONNECTED TO THE PIPE IN SUCH A MANNER AS TO BE COMPLETELY WATER TIGHT. DOUBLE BANDS ARE NOT CONSIDERED TO BE WATER TIGHT.
 ALL CONNECTIONS SHALL USE A RUBBER OR NEOPRENE GASKET WHEN JOINING PIPE SECTIONS. THEN END OF EACH PIPE SHALL BE RE-FLATTED ON ADEQUATE NUMBER OF CIRCUMFERENCES TO ACCOMMODATE THE DAM WIDTH. THE FOLLOWING PIPE CONNECTIONS ARE ACCEPTABLE FOR PIPES LESS THAN 24" IN DIAMETER: FLANGES ON BOTH ENDS OF THE PIPE WITH A CIRCULAR 5/8" INCH CLOSED CELL NEOPRENE GASKET, PREPOSITIONED TO THE FLANGE GASKET ORGLES SANDWICHED BETWEEN ADJACENT FLANGES; A 12 INCH WIDE STANDARD LAP TYPE BAND WITH 12 INCH WIDE BY 3/8" INCH THICK CLOSED CELL CIRCULAR NEOPRENE GASKET; AND A 12 INCH WIDE HIGHER TYPE BAND WITH O-RING GASKETS HAVING A MINIMUM DIAMETER OF 1/2 INCH GREATER THAN THE CORRUGATION DEPTH. PIPES 24 INCHES IN DIAMETER AND LARGER SHALL BE CONNECTED BY A 24 INCH LONG AND 24 INCH CORRUGATED BAND USING A MINIMUM OF 4 (FOUR) RODS AND LUGS, 2. A 24 INCH WIDE BY 3/8" INCH THICK CLOSED CELL CIRCULAR NEOPRENE GASKET WILL BE INSTALLED WITHIN 12 INCH OF THE END OF EACH PIPE. FLANGED JOINTS WITH 3/8" INCH CLOSED CELL GASKETS THE FULL WIDTH OF THE FLANGE IS ALSO ACCEPTABLE.
 HEAVILY CORRUGATED PIPE SHALL HAVE EITHER CONTINUOUSLY WELDED SEAMS OR HAVE LOCK WITH INTERNAL CALLING OR A NEOPRENE BEAD.
 4. BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTION TO PROVIDE ADEQUATE SUPPORT.
 5. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL".
 6. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC) SHALL BE AS SHOWN ON THE DRAWINGS.
 REINFORCED CONCRETE PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR REINFORCED CONCRETE PIPE.
 1. MATERIALS - REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPROUT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM DESIGNATION C-361.
 2. BEDDING - ALL REINFORCED CONCRETE PIPE CONDUITS SHALL BE Laid IN A CONCRETE BEDDING ORGABLE FOR THEIR ENTIRE LENGTH. THIS BEDDING SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDE OF THE PIPE AT LEAST 50% OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 6 INCHES. WHERE A CONCRETE ORGABLE IS NOT NEEDED FOR STRUCTURAL REASONS, FLOWABLE FILL MAY BE USED AS DESCRIBED IN THE "STRUCTURE BACKFILL" SECTION OF THIS STANDARD. GRASS BEDDING IS NOT PERMITTED.
 3. LAYING PIPE - BELL AND SPROUT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL. AFTER THE JOINTS ARE SEALED THE ENTIRE LENGTH OF THE PIPE SHALL BE CHECKED FOR PROPER BEDDING AND THE PIPE SHALL BE EXPOSED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 4 FEET FROM THE RISER.
 4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL".
 5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC) SHALL BE AS SHOWN ON THE DRAWINGS.

CONCRETE
 CONCRETE SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS. SECTION 414, MIX NO. 3.
ROCK RIPRAP
 ROCK RIPRAP SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 414, CLASS C.

CASE OF WATER DURING CONSTRUCTION
 ALL WORK ON PERMANENT STRUCTURES SHALL BE CARRIED OUT IN AREAS FREE FROM WATER. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL TEMPORARY DAMS, LEVEES, COFFERDAMS, DRAINAGE CHANNELS AND STREAM DIVERSIONS NECESSARY TO PROTECT THE AREAS TO BE OCCUPIED BY THE PERMANENT WORKS. THE CONTRACTOR SHALL ALSO FURNISH, INSTALL, OPERATE AND MAINTAIN ALL NECESSARY PUMPING AND OTHER EQUIPMENT REQUIRED FOR REMOVAL OF WATER FROM THE VARIOUS PARTS OF THE WORK AND FOR MAINTAINING THE EXCAVATIONS, FOUNDATION AND OTHER PARTS OF THE WORK FREE FROM WATER AS REQUIRED OR DIRECTED BY THE ENGINEER. FOR CONSTRUCTING EACH PART OF THE WORK, AFTER HAVING SERVED THEIR PURPOSE, ALL TEMPORARY PROTECTIVE WORKS SHALL BE REMOVED OR LEXED AND GRADED TO THE EXTENT REQUIRED TO PREVENT OBSTRUCTION IN ANY DEGREE WHATSOEVER OF THE FLOW OF WATER TO THE SPILLWAY OR OUTLET WORKS AND SO AS NOT TO INTERFERE IN ANY WAY WITH THE OPERATION OR MAINTENANCE OF THE STRUCTURE. STREAM DIVERSIONS SHALL BE MAINTAINED UNTIL THE FULL FLOW CAN BE PASSED THROUGH THE PERMANENT WORKS. THE REMOVAL OF WATER FROM THE REQUIRED EXCAVATION AND THE FOUNDATION SHALL BE ACCOMPLISHED IN A MANNER AND TO THE EXTENT THAT WILL MAINTAIN STABILITY OF THE EXCAVATED SLOPES AND BOTTOM OF REQUIRED EXCAVATIONS AND WILL ALLOW SATISFACTORY PERFORMANCE OF ALL CONSTRUCTION OPERATIONS. DURING THE PLACING AND COMPACTION OF MATERIAL IN REQUIRED EXCAVATIONS, THE WATER LEVEL AT THE LOCATIONS BEING REFILLED SHALL BE MAINTAINED BELOW THE BOTTOM OF THE EXCAVATION AT SUCH LOCATIONS WHICH MAY REQUIRE DRAINING THE WATER TO STAGES FROM WHICH THE WATER SHALL BE PUMPED.
STABILIZATION
 ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SIGHTLY CONDITION. ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, SPILL AND BORROW AREAS, AND BENS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING IN ACCORDANCE WITH THE NATURAL RESOURCES CONSERVATION SERVICE STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (400-342) OR AS SHOWN ON THE ACCOMPANYING DRAWINGS ONLY.
EROSION AND SEDIMENT CONTROL
 CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED AND WATER AND AIR POLLUTION MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT WILL BE FOLLOWED. CONSTRUCTION PLANS SHALL DETAIL EROSION AND SEDIMENT CONTROL MEASURES. REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

TEMPORARY SEEDING NOTES
 APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTRIBUTED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.
 SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
 SOIL AMENDMENTS: IN USE OF SOIL TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
 1. FERTILIZER - APPLY 2 TONS PER ACRE DOLOMITE LIMESTONE (92 LBS PER 1000 SQ. FT.) AND 800 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS. PER 1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-00 NITROGEN OR STEEPER (6 LBS. PER 1000 SQ. FT.)
 2. ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITE LIMESTONE (92 LBS. PER 1000 SQ. FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS. PER 1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.
 SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2-1/2 BUSSELS PER ACRE OF ANNUAL RYE (3.2 LBS PER 1000 SQ. FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 4 LBS. PER ACRE OF WHEAT (0.07 LBS. PER 1000 SQ. FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOU.
 MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS. PER 1000 SQ. FT.) OF UNROTTED SILL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL. PER 1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES, 8 FT. OR HIGHER, USE 347 GAL. PER ACRE (8 GAL. PER 1000 SQ. FT.) FOR ANCHORING.
 REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

PERMANENT SEEDING NOTES
 APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.
 SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
 SOIL AMENDMENTS: IN USE OF SOIL TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
 1. FERTILIZER - APPLY 2 TONS PER ACRE DOLOMITE LIMESTONE (92 LBS. PER 1000 SQ. FT.) AND 800 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS. PER 1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-00 NITROGEN OR STEEPER (6 LBS. PER 1000 SQ. FT.)
 2. ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITE LIMESTONE (92 LBS. PER 1000 SQ. FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS. PER 1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.
 SEEDING: FOR THE PERIOD MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU OCTOBER 15, SEED WITH 40 LBS. PER ACRE (1.4 LBS PER 1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. PER ACRE (2.1 LBS PER 1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU OCTOBER 15, SEED WITH 100 LBS. PER ACRE (3.5 LBS PER 1000 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OCTOBER 16 THRU FEBRUARY 28, PROTECT THE SITE BY ONE OF THE FOLLOWING OPTIONS:
 1. 2 TONS PER ACRE OF WELL-ANCHORED MULCH STRAW AND SEED AS SOON AS POSSIBLE IN THE SPRING.
 2. USE SOU.
 3. SEED WITH 60 LBS. PER ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE WELL ANCHORED STRAW.
 MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS. PER 1000 SQ. FT.) OF UNROTTED SILL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL. PER 1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES, 8 FT. OR HIGHER, USE 347 GAL. PER ACRE (8 GAL. PER 1000 SQ. FT.) FOR ANCHORING.
 MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

OPERATION, MAINTENANCE AND INSPECTION
 INSPECTION OF THE POND SHOWN HEREON SHALL BE PERFORMED AT LEAST ONCE ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN SDS "STANDARDS AND SPECIFICATION OF PONDS" (00378). THE POND OWNER AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION AND MAINTENANCE THEREOF. THE POND OWNER SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE SEPARATE, TURBO SEPARATE, SLIDING OR SLUMPING.
210 STANDARD AND SPECIFICATIONS FOR TOPSOIL FERTILITY
 PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.
PURPOSE:
 TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
CONDITIONS WHERE PRACTICE APPLIES:
 1. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
 C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
 D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
 2. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.
CONSTRUCTION AND MATERIAL SPECIFICATIONS:
 1. TOPSOIL SALVAGED FROM THE DESIGN SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SURVEY PUBLISHED BY USDA-SIS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTATION STATION.
 2. TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 A. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND, SANDY SILT, SILTY SAND, SILTY CLAY, CLAY SILT, OR CLAY. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REARLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF COBBLES, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, BRASH OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
 B. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUAKERS GRASS, JOHNSONGRASS, NITSEED, POISON IVY, THISTLE OR OTHERS AS SPECIFIED.
 C. WHERE SUBSOIL IS EITHER HEAVILY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 LBS PER 1000 SQ. FT.) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES:
 1. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
 a. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 200 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
 b. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
 i. ON SOIL TESTING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
 1. PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.
 2. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
 3. TOPSOIL HAVING SUITABLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION STRONGLY OR CHEMICALLY USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.
 ii. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQ. FT.
 iii. TOPSOIL SUBSTITUTES TO AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY MAY BE USED IN LIEU OF NATURAL TOPSOIL.
 iv. NOTE: TOPSOIL SUBSTITUTES TO AMENDMENTS, AS SPECIFIED IN 200 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
 v. TOPSOIL APPLICATION
 a. WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS OVERSLOES, GRADE STABILIZATION STRUCTURES, EARTH PILES, SLOPE SALT FENCE AND SEDIMENT TRAPS AND BASINS.
 b. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ABOUT 4"-8" HIGHER IN ELEVATION.
 c. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4"-6" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SOODING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY HIGHLIGHTS IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
 2. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
 i. ALTERNATIVE FOR PERMANENT SEEDING - INSTEAD OF APPLYING THE FULL AMOUNT OF LIME AND COMMERICAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW.
 ii. COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITE HAVING DISTURBED AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING:
 a. COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS THAT ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.
 b. COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 15 PERCENT NITROGEN, 1.5 PERCENT PHOSPHORUS AND 2.0 PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.
 c. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQ. FT.
 d. COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LB./1,000 SQ. FT. AND 1/3 THE NORMAL LIME APPLICATION RATE.
 REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SOODING. MD-VA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES. REVISED 1973.

STANDARD SEDIMENT CONTROL NOTES
 1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
 2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.
 3. FOLLOWING INITIAL SOIL DISTURBANCE OR DE-RESTURANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERMETER SEDIMENT CONTROL STRUCTURES, DICES, PERMETER SLOPES, AND ALL SLOPES STEEPER THAN 3:1; B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
 4. ALL SEDIMENT TRAPS/BASINS SHALL BE FENCED AND WARNING SIGNS POSTED AROUND THE PERMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
 5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. FOR PERMANENT SEEDING, SOU, TEMPORARY SEEDING AND MULCHING (SEC. 6), TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
 6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
 7. TOTAL AREA OF SITE: 522,716 SQ. FT. OR 11,999.91 ACRES
 AREA DISTURBED: 376,469 SQ. FT. OR 8,742.6 ACRES
 AREA TO BE ROOFED OR PAVED: 82,373 SQ. FT. OR 1,880 ACRES
 AREA TO BE VEGETATIVELY STABILIZED: 23,968 SQ. FT. OR 0.547424 ACRES
 TOTAL CUT: 21,088 CU. YDS.
 TOTAL FILL: 11,500 CU. YDS.

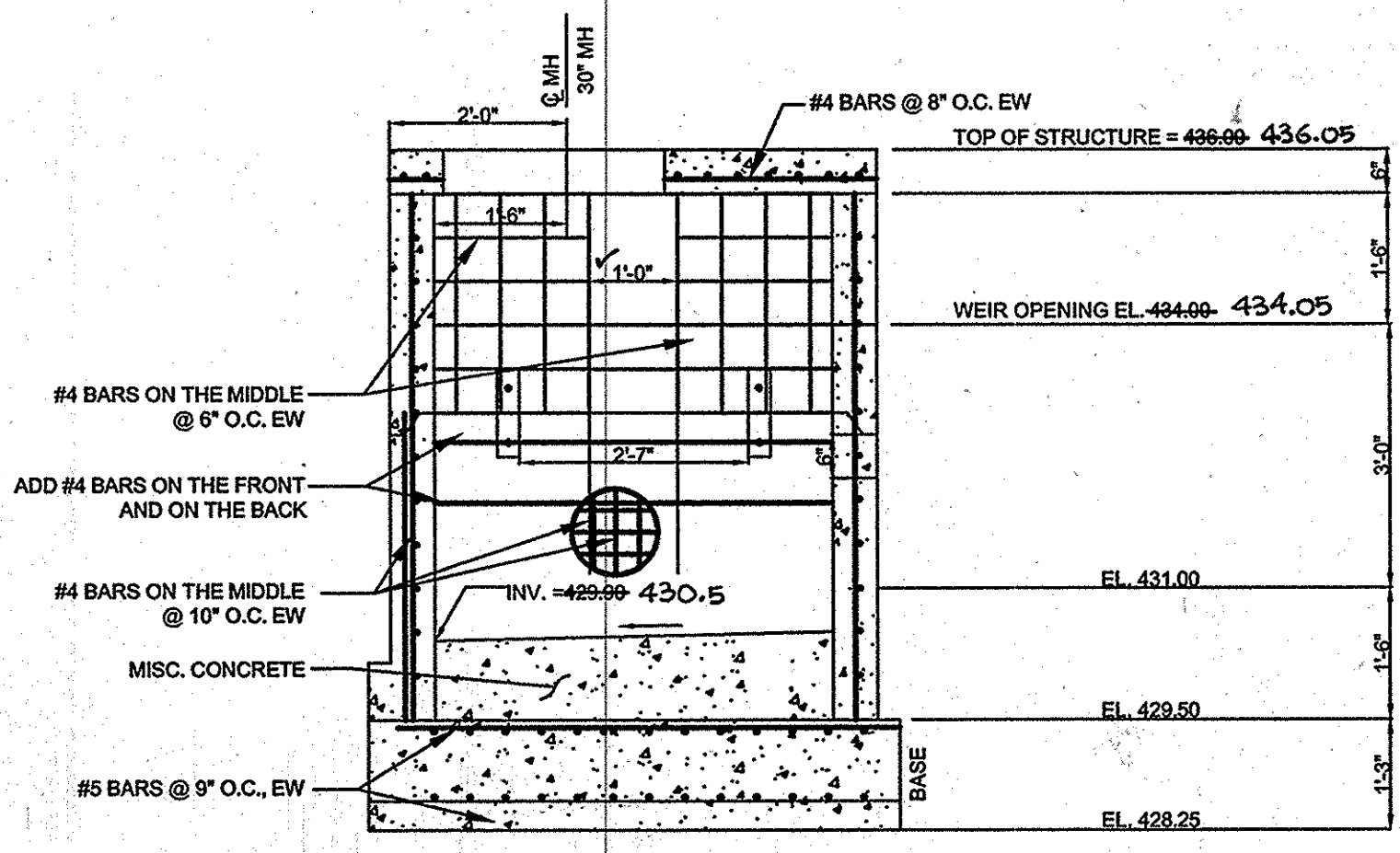
OFF-SITE WASTE AREA LOCATION TO HAVE ACTIVE GRASSING PERMIT. N/A.
 8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF INTERFERENCE.
 9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
 10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE WITHHELD UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
 11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
 12. SITE GRADING WILL BE ONLY AFTER ALL PERMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
 13. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
 14. CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL STRUCTURAL FILL OR EMBANKMENT MATERIAL. NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.

OPERATION AND MAINTENANCE SCHEDULE OF PRIVATELY OWNED AND MAINTAINED RESTORATION FACILITY
 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 WEED MANIPULATION.
 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 TREES AND SHRUBS AND REPLACEMENT OF ALL DEFUNCT STAKES AND WIPES.
 3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE EXCESS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
 4. SOIL EROSION TO BE INSPECTED ON AS NEEDED BASIS WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

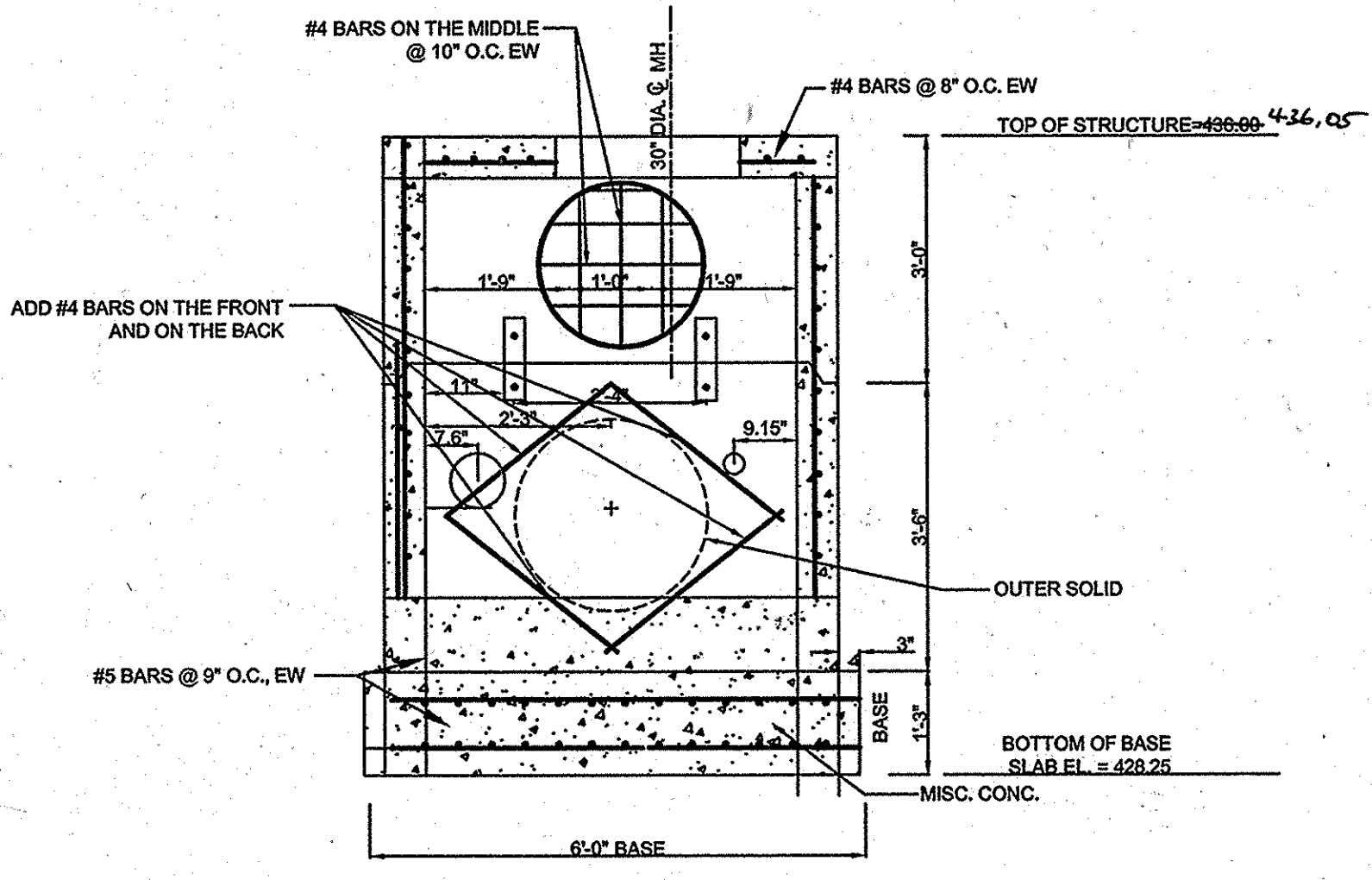
OPERATION AND MAINTENANCE SCHEDULE OF PRIVATELY OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITY (DRY POND)
ROUTINE MAINTENANCE
 1. FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE POND IS FUNCTIONING PROPERLY.
 2. TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOVED A MINIMUM OF TWO (2) TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES, THE BOTTOM OF THE POND, AND MAINTENANCE ACCESS SHOULD BE MOVED AS NEEDED.
 3. FERRES AND LITTER NEXT TO THE OUTLET STRUCTURE SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
 4. VISIBLE SNIGS OF EROSION IN THE POND AS WELL AS RIPRAP OUTLET AREA SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
NON-ROUTINE MAINTENANCE
 1. STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, RISER, AND THE PIPES SHALL BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
 2. SEDIMENT SHOULD BE REMOVED WHEN ITS ACCUMULATION SIGNIFICANTLY REDUCES THE DESIGN STORAGE, INTERFERE WITH

GENERAL NOTES
 1. The Sequence of Construction is to be used for guiding the installation of EASPC measures. It is not intended to dictate construction sequences.
 2. It is imperative that EASPC measures are implemented before construction begins.
 3. Mulching without erosion control can be used as an interim stabilization control during non-growing seasons of the year.
 4. Any deviation from the Sequence of Construction must be discussed with the engineer.
 5. Unknowns such as weather conditions, exact start date, contractor, etc. do not allow for definition of specific time frames.
 6. No clearing and/or grading of the site may take place until all the erosion stabilization controls, as outlined in the sequence, have been installed and are functional.
 7. At the end of each day any sediment deposited on Ten Oaks Road is to be removed, returned to the site, stockpiled and stabilized.
 8. Miss Utility Inc must be notified prior to any earthmoving activity.
 9. Each stage of the sequence must be completed prior to commencing the next stage.
 10. No earthmoving may commence until all structures associated with the basin construction are on site.
 11. All structures associated with the construction of sediment removal facilities must be available on-site prior to any earthmoving.
 12. If at any time prior to stabilization and EASPC, problems occur and require additional measures, immediate action must be taken to correct the problem.

EROSION AND SEDIMENTATION CONTROL NOTES
 SEEDING: CLASS OF TURFGRASS SOU SHALL BE MARYLAND VIRGINIA STATE CERTIFIED APPROVED. SOU SHALL BE TRANSPORTED WITHIN 36 HOURS OF HARVESTING. EACH STRIP OF SOU IS TO BE PLANTED WITH LONG EDGES PARALLEL TO CONTOURS AND ROLLER, TAPEPERS, PEGGED OR OTHERWISE SECURED FROM STANDARDS SECTION 624-10.
 THESE REQUIREMENTS DO NOT APPLY TO THOSE AREAS ON WHICH ACTUAL CONSTRUCTION ACTIVITIES ARE CURRENTLY BEING PERFORMED, OR TO INTERIOR AREAS OF A STRUCTURE WHERE THE STABILIZATION MATERIAL WOULD CONTINUE TO PROVIDE THE NECESSARY RESOURCE. MAINTENANCE OF EROSION AND SEDIMENT CONTROL PRACTICES AND DEVICES SHALL BE PERFORMED AS NECESSARY TO ENSURE THAT THE DISTURBED AREAS CONTINUOUSLY MEET THE APPROPRIATE REQUIREMENTS OF THE 1994 STANDARDS OR ITS LATEST REVISION, AND THAT RUNOFF FROM THESE AREAS DOES NOT ADVERSELY AFFECT DOWNSTREAM PROPERTIES.
 IF CONDITIONS WARRANT, AND WITH THE ENGINEER'S APPROVAL, ALTERNATIVE MEASURES MAY BE EMPLOYED AS CONSTRUCTION PROCEEDS, TO ENSURE EFFECTIVE EROSION AND SEDIMENT CONTROL ON-SITE.
 THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL REQUIRED EASEMENTS AND/OR RIGHTS-OF-WAY PURSUANT TO THE DISCHARGE FROM THE SEDIMENT AND EROSION CONTROL PRACTICES, STORMWATER MANAGEMENT PRACTICES, AND THE DISCHARGE OF STORMWATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES AFFECTED BY THIS PLAN (ALSO FOR GRADING OR OTHER WORK).
 THE CONTRACTOR IS REQUIRED TO PROTECT ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS TO PREVENT THE DEPOSITION OF MATERIALS ONTO PUBLIC ROADS. ALL MATERIALS DEPOSITED ONTO PUBLIC ROADS SHALL BE REMOVED IMMEDIATELY.
 THE CONTRACTOR WILL INSPECT ALL EROSION AND SEDIMENT CONTROL PRACTICES AND DEVICES AFTER EACH STORM EVENT AND MAINTAIN THEM IN AN EFFECTIVE OPERATING CONDITION UNTIL SUCH TIME AS THEY ARE REMOVED AS PART OF THE NORMAL SEQUENCE OF CONSTRUCTION, AND AFTER PERMISSION FROM THE INSPECTION AGENCY REPRESENTATIVE.
 ALL SEDIMENT TRAPS SHOULD BE FENCED AND WARNING SIGNS POSTED AROUND THE PERM

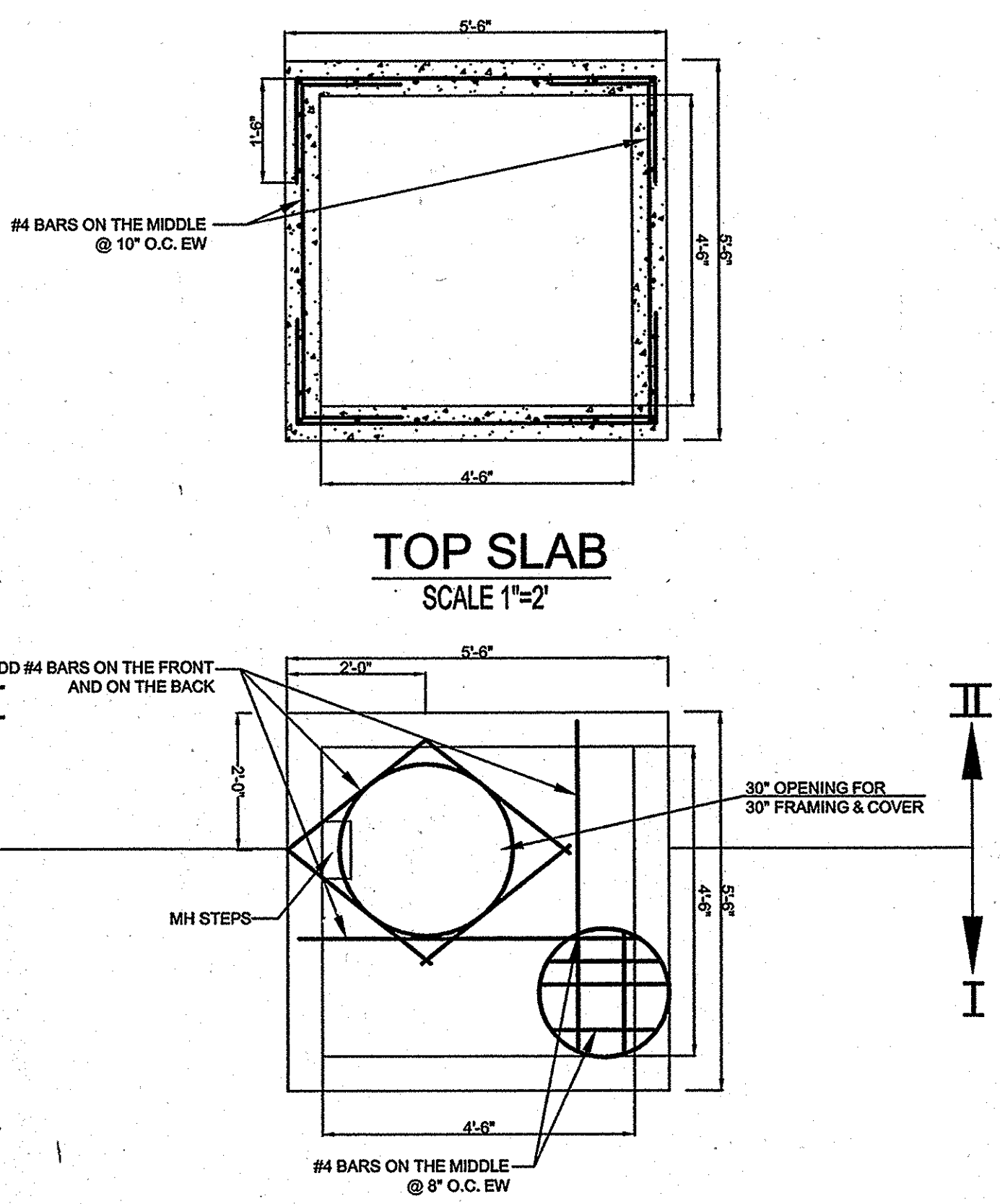


SECTION I-I
SCALE 1"=2'



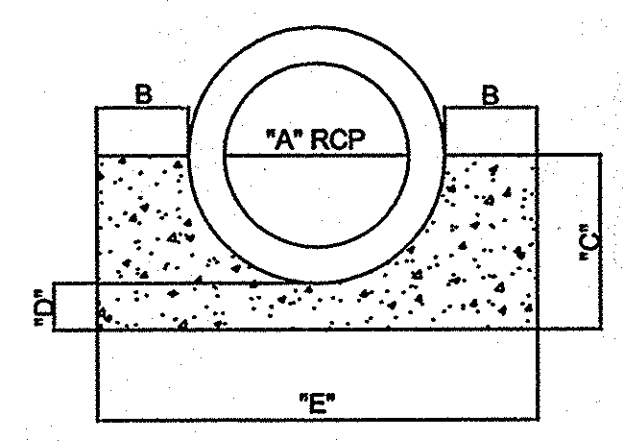
SECTION II-II
SCALE 1"=2'

SECTION A-A
SCALE 1"=2'



TOP SLAB
SCALE 1"=2'

DIMENSION SCHEDULE					
LOCATION	"A"	"B"	"C"	"D"	"E"
POND #1	24"	1'-0"	1'-9"	6"	4'-6"



- NOTES**
- POUR CONCRETE AGAINST UNDISTURBED EARTH.
 - CONCRETE SHALL BE MSHA MIX NO. 3 (f' = 3,500 PSI)
 - BARREL MAY BE PLACED ON PRECAST CONCRETE BLOCKS PRIOR TO CRADLE POUR.
 - POURING AN ADDITIONAL 4" TO 6" THICK "MUDMAT" MAY BE ACCEPTABLE IF SUBGRADE IS WET AND WITH APPROVAL OF GEOTECHNICAL ENGINEER.
 - IF ALL OF CONCRETE CRADLE CANNOT BE POURED AT ONCE, ONE HORIZONTAL JOINT IS ALLOWED. PLACE A MINIMUM OF THREE (3) 4" LONG #6 REBAR DOVELS TO CONNECT POURS.
 - IF A CRADLE VERTICAL JOINT IS USED, DO NOT LOCATED WITHIN 2' OF PIPE JOINT.

**SCS TR 46-A-2
CONCRETE CRADLE**
N.T.S.

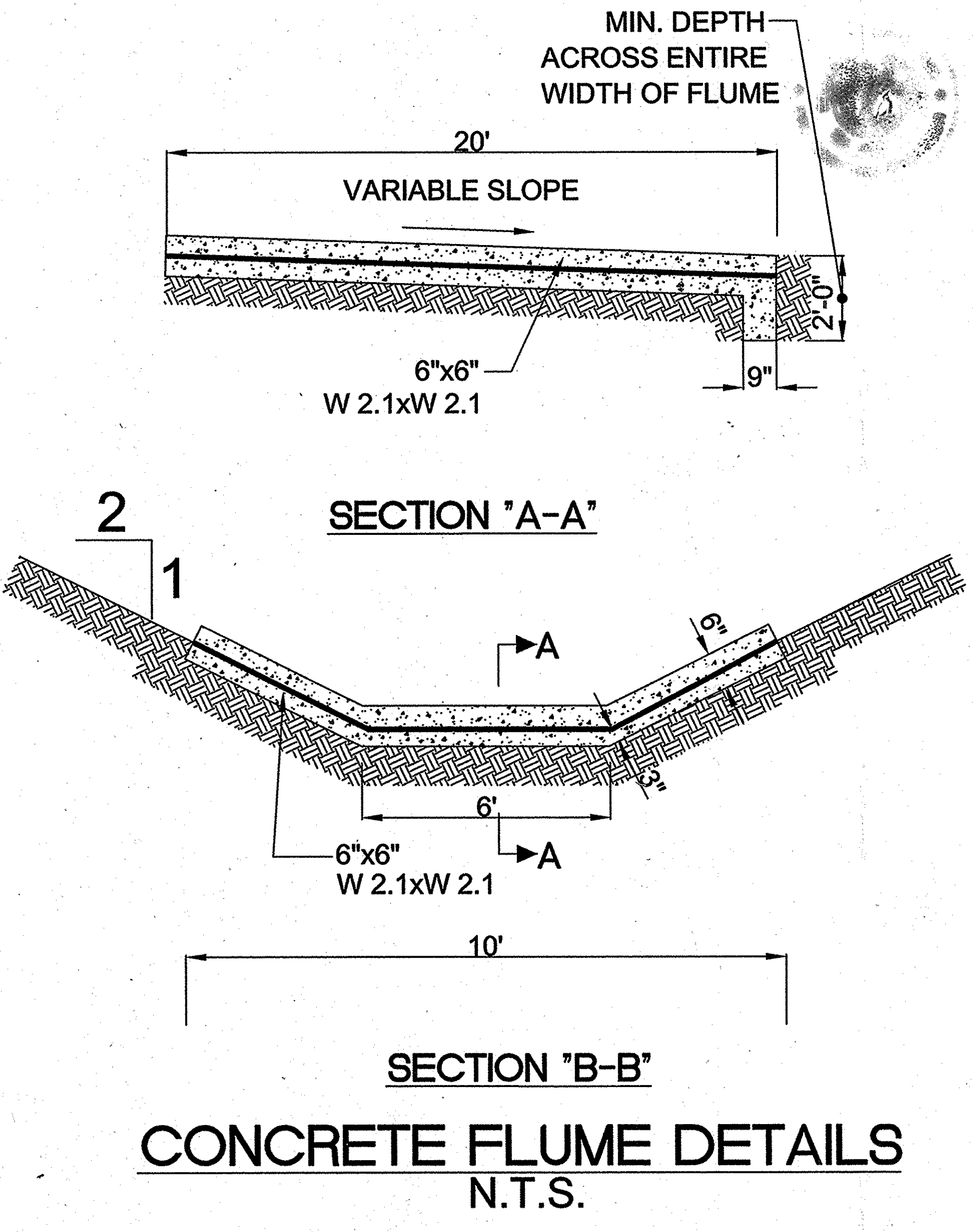
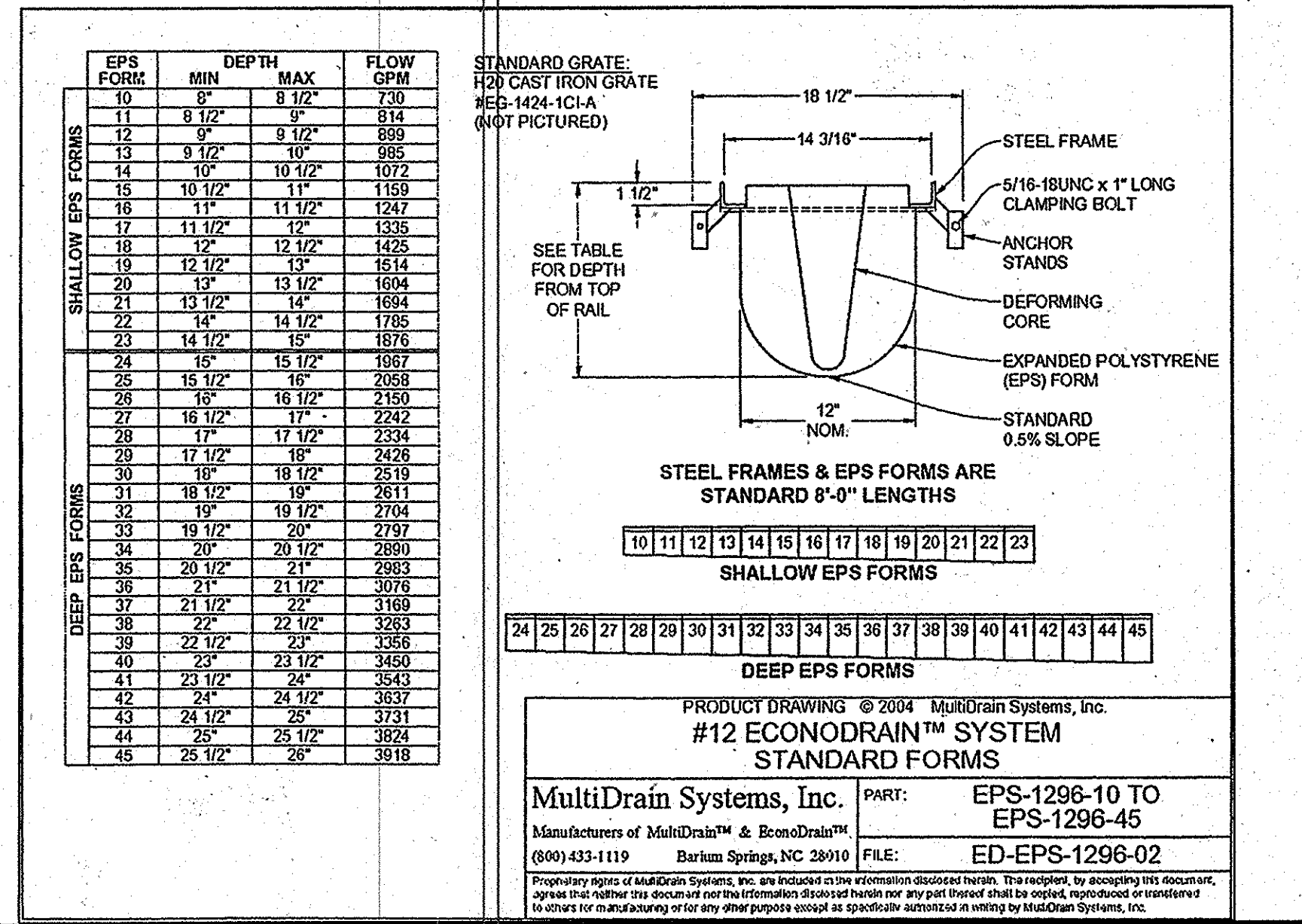
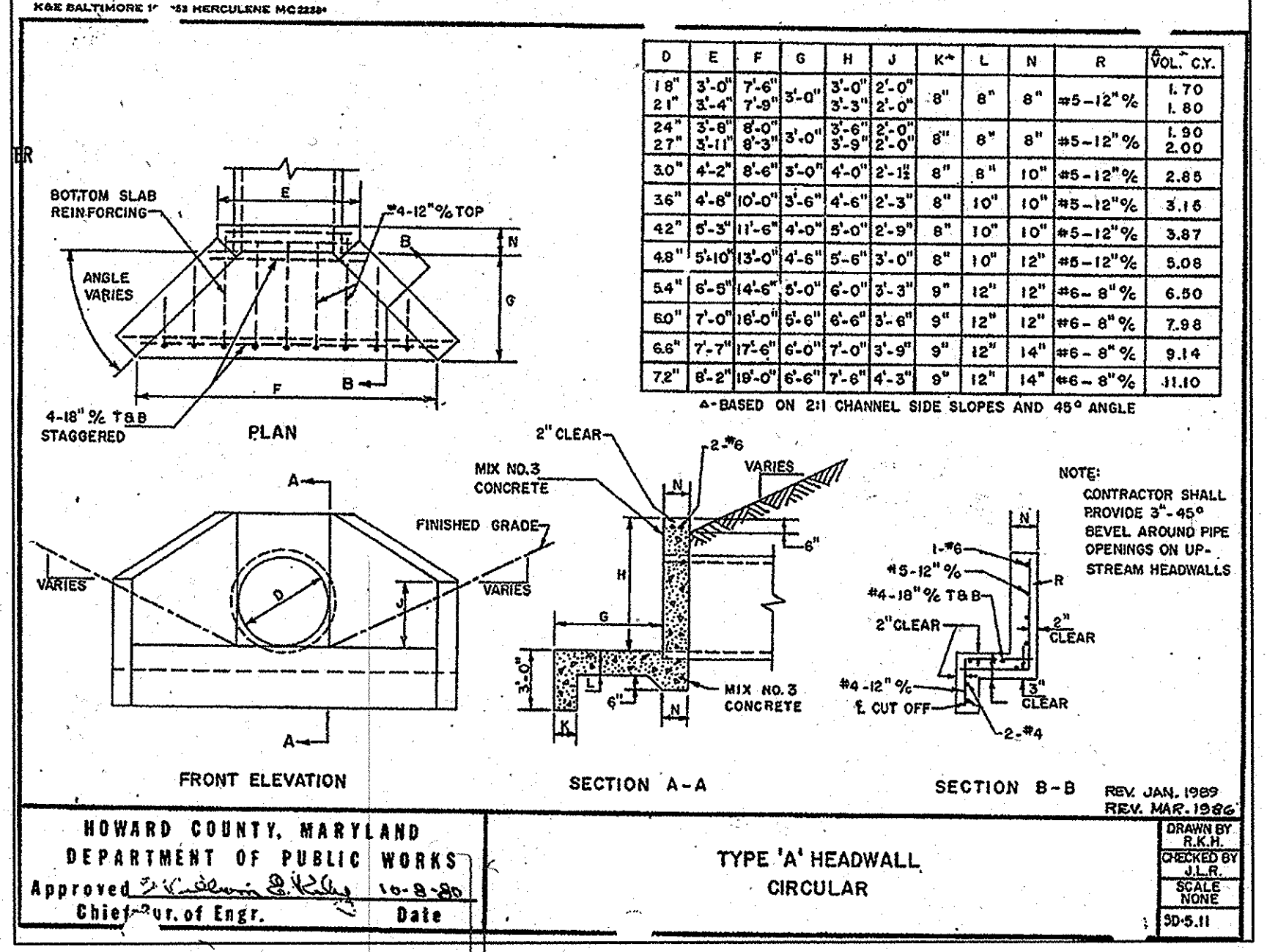
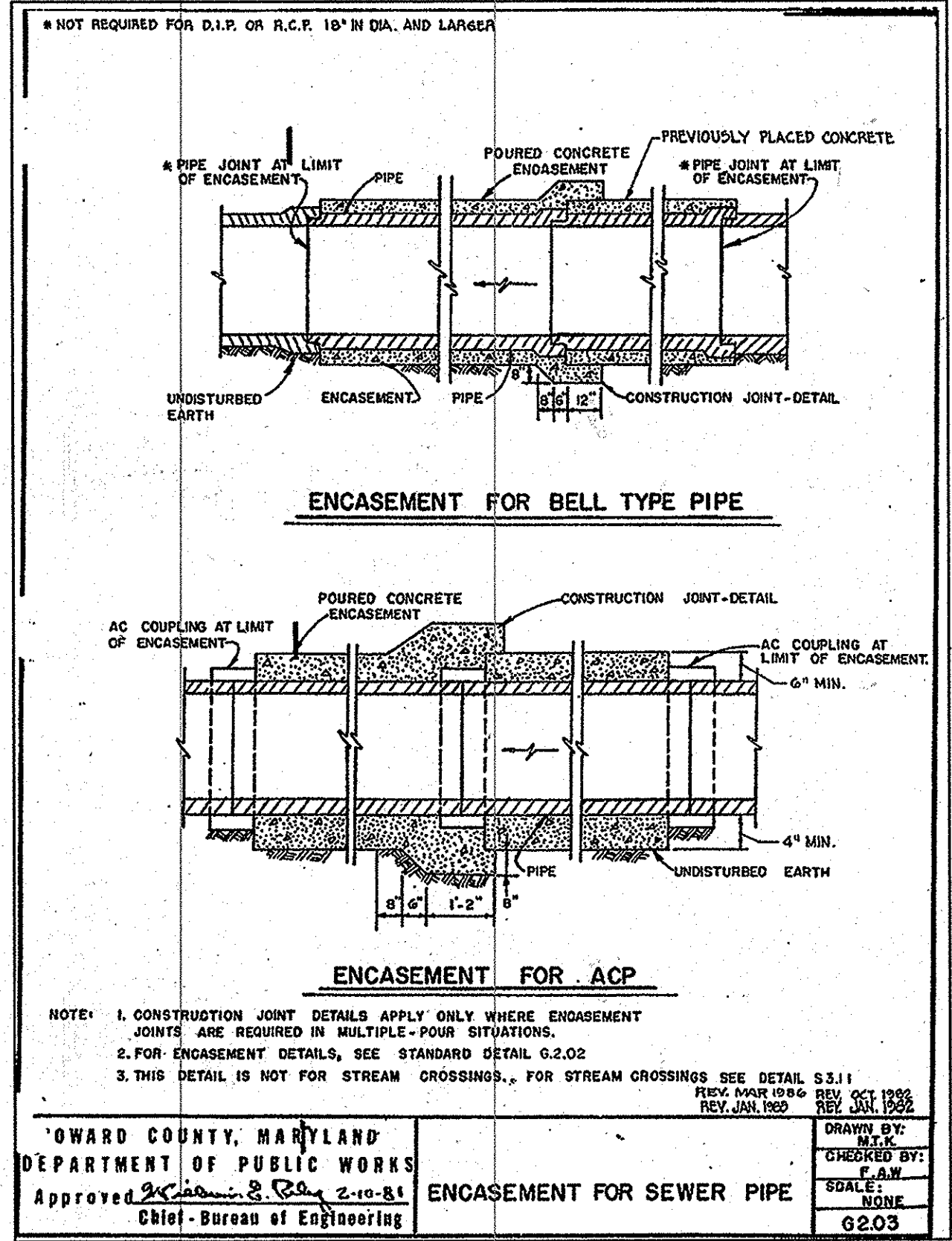
AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

LOUIS BERNSTEIN
DATE 12/16/09
STATE OF MARYLAND
PROFESSIONAL ENGINEER
NO. 1601
EXPIRES 12/31/12

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE 6/16/8
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE 7/16/08
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE 12/16/08
DIRECTOR

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
DATE 7/23/08
COUNTY HEALTH DEPARTMENT

The RBA Group
ENGINEERS • ARCHITECTS • PLANNERS
7164 Columbia Gateway Drive, Suite 205
Columbia, Maryland 21046
Phone (410) 312-0966, Fax. (410) 312-0897



CONCRETE FLUME DETAILS
N.T.S.

MARK	DATE	REVISION
1	9/13/05	PER COUNTY COMMENTS
2	1/09/06	PER COUNTY COMMENTS
3	3/10/06	PER COUNTY COMMENTS
4	6/29/06	PER COUNTY COMMENTS
5	10/25/06	PER COUNTY COMMENTS
6	1/12/07	PER COUNTY COMMENTS
7	4/18/07	PER COUNTY COMMENTS
8	7/2/07	PER COUNTY COMMENTS
9	9/20/07	PER COUNTY COMMENTS
10	10/20/07	PER COUNTY COMMENTS
11	11/18/09	AS-BUILT

MGA
MUHLBERG GREENE ARCHITECTS, LTD.
400 Washington Street
Reading, Pennsylvania 19601
Phone: 610.376.4927

DRAWN BY: EVT
CHECKED BY: CKL

MGA #2782
STAMP
[Signature]
6/10/09

PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION
HUNTINGTON MANOR ESTATES SECTION 2
AREA INFORMATION
TAX MAP 34, PARCEL 399
ZONED RR-DEO
5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND
PROJECT ADDRESS
BRIGHTON DAM & TEN OAKS ROAD
CLARKSVILLE, MARYLAND

SHEET TITLE
SITE DEVELOPMENT PLAN
STORMWATER MANAGEMENT
DETAILS-II
AS-BUILT

CURRENT BOARD OF APPEALS CASE #BA 04-007C

PROJECT DESIGNATION
LDS 583-0273-0501-0101

PROPERTY NUMBER 565-0348
SHEET NO. 18 of 32
DEVELOPMENT NUMBER HER-COL-98-12
DATE 07/05/05

SEWAGE BED DESIGN CRITERIA

DAILY FLOW RATE: 5 GALLONS/PERSON/DAY
 247 OCCUPANTS (USE 300)
 247 X 5 = 1235 GALLONS

STANDARD TRENCH PERC RATE: 0.8 GALLONS PER SQUARE FOOT

SEEPAGE BED AREA: 1235 GALLON/0.8 = 1544 SQ. FT.

USE 3 FT WIDE TRENCH: 1544 SQ FT/ 3 FT TRENCH = 515 FT LENGTH

TABLE "B" TRENCH DECREASE, 2' SIDEWALL = 0.62

515 FT X 0.62 = 320 FT TRENCH LENGTH

PRELIMINARY DEEP TRENCH AREA - PERC HOLES 11, 12 & 13

SOIL PROFILE RANGE: PERC 11 (5.5/12.0)
 PERC 12 (6.0/12.5)
 PERC 13 (6.0/13.0)

AVERAGE RANGE: 6/12 = 2 FT SIDEWALL/3FT BOTTOM

(4) 54 FT LONG TRENCHES, 3 FT WIDE WITH 9 FT SPACING BETWEEN TRENCHES.

PERFORMANCE CURVE

PEAK FLOW=1235gpd/24= 51.5gph/60=0.86 gpm

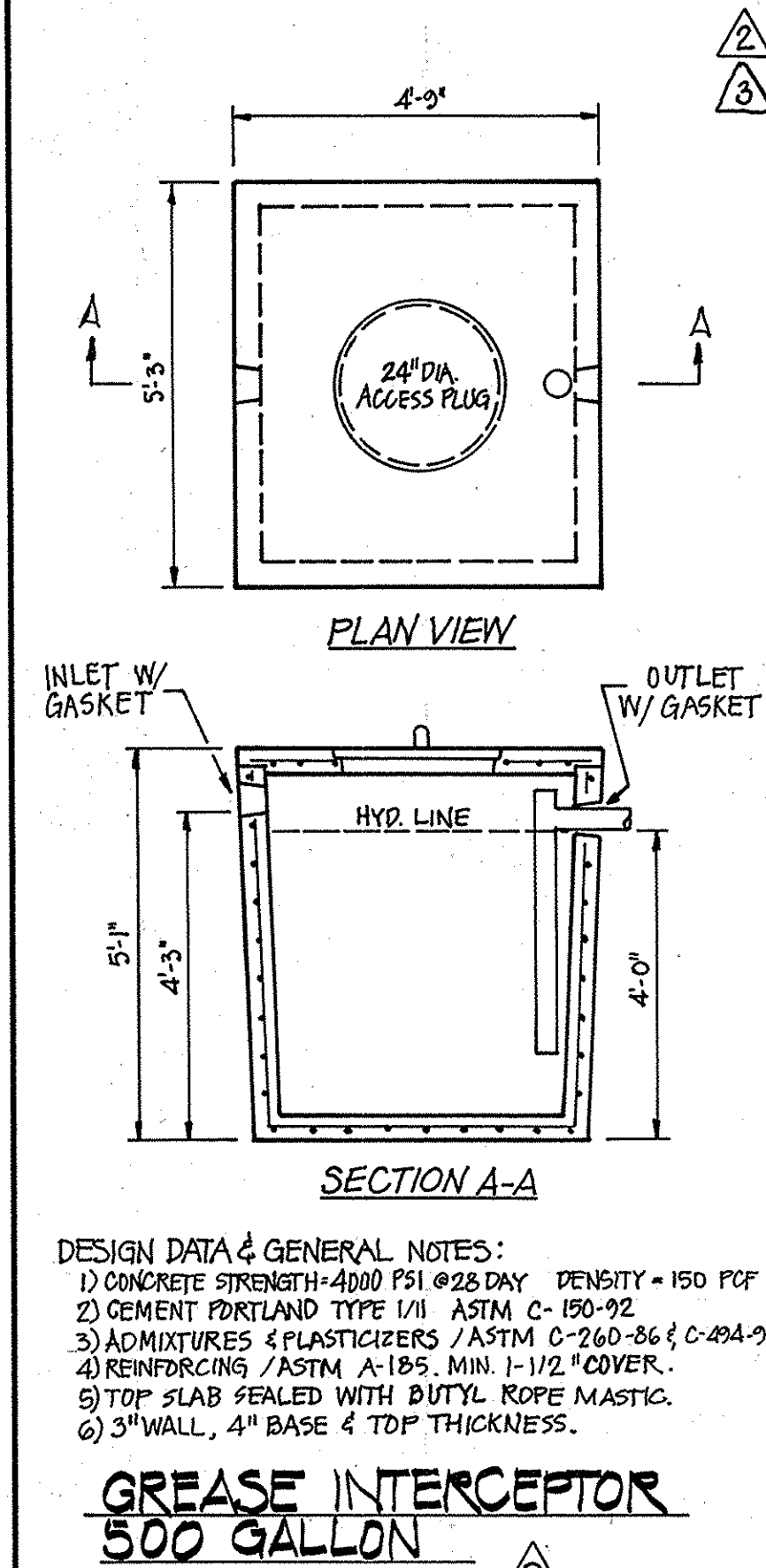
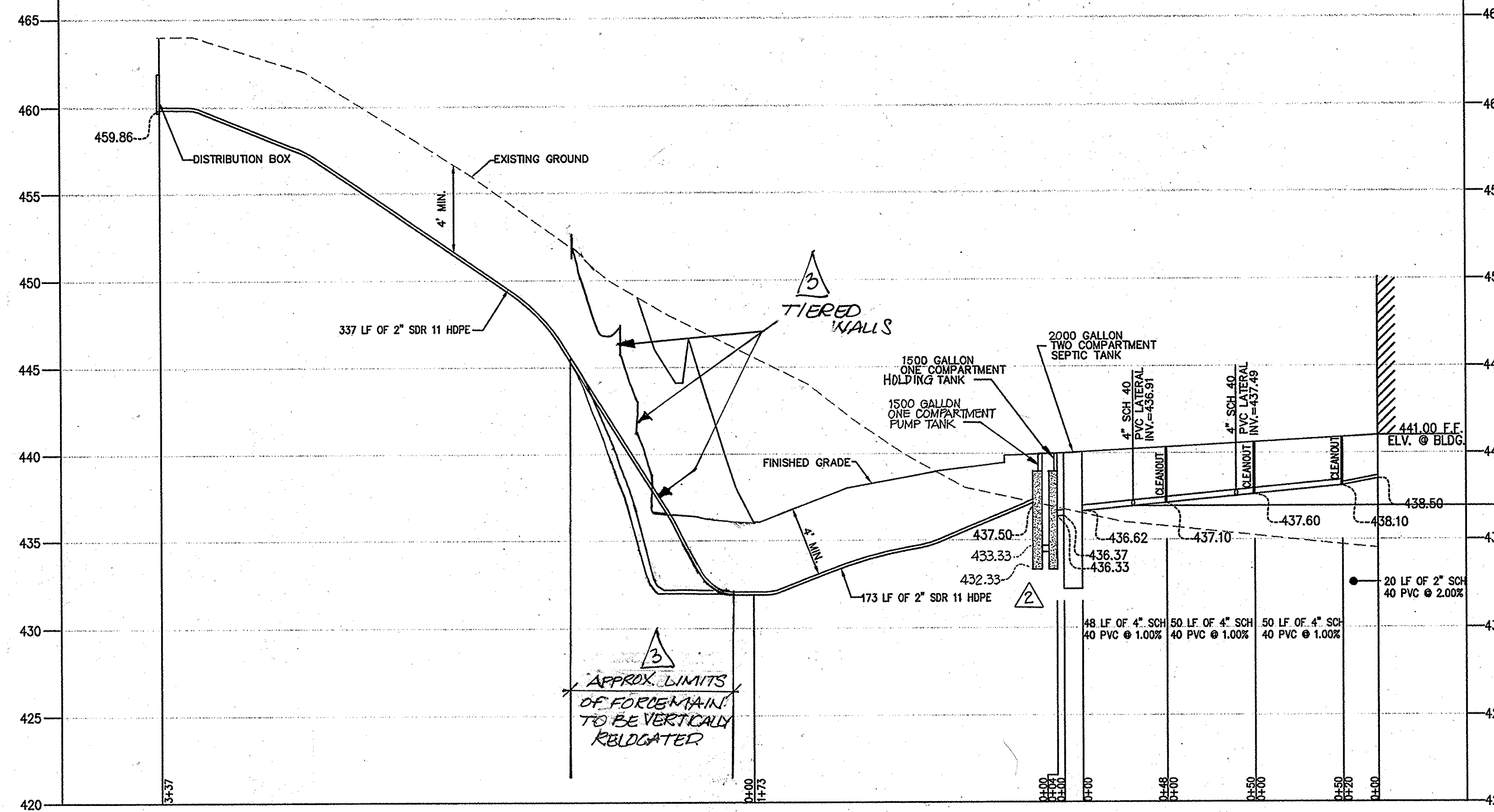
TOTAL DYNAMIC HEAD (TDH)=
 STATIC LIFT+MAIN PIPE LOSS NETWORK LOSS

- STATIC LIFT=31 FT.

- MAIN PIPE LOSS=500 FT+2-90° STD. ELBOW=2x9 FT/ELBOW=18 FT.
 +1-45° STD. ELBOW=1x4 FT./ELBOW=4 FT.=TOTAL 522 FT.

2" SDR 11 HDPE PIPE FRICTION LOSS=1.12 FT/100
 5.22x1.12=5.85 FT.

- NETWORK LOSSES= 5 FT.
 31 FT=5.85 FT+5.00= [11.85 FT]

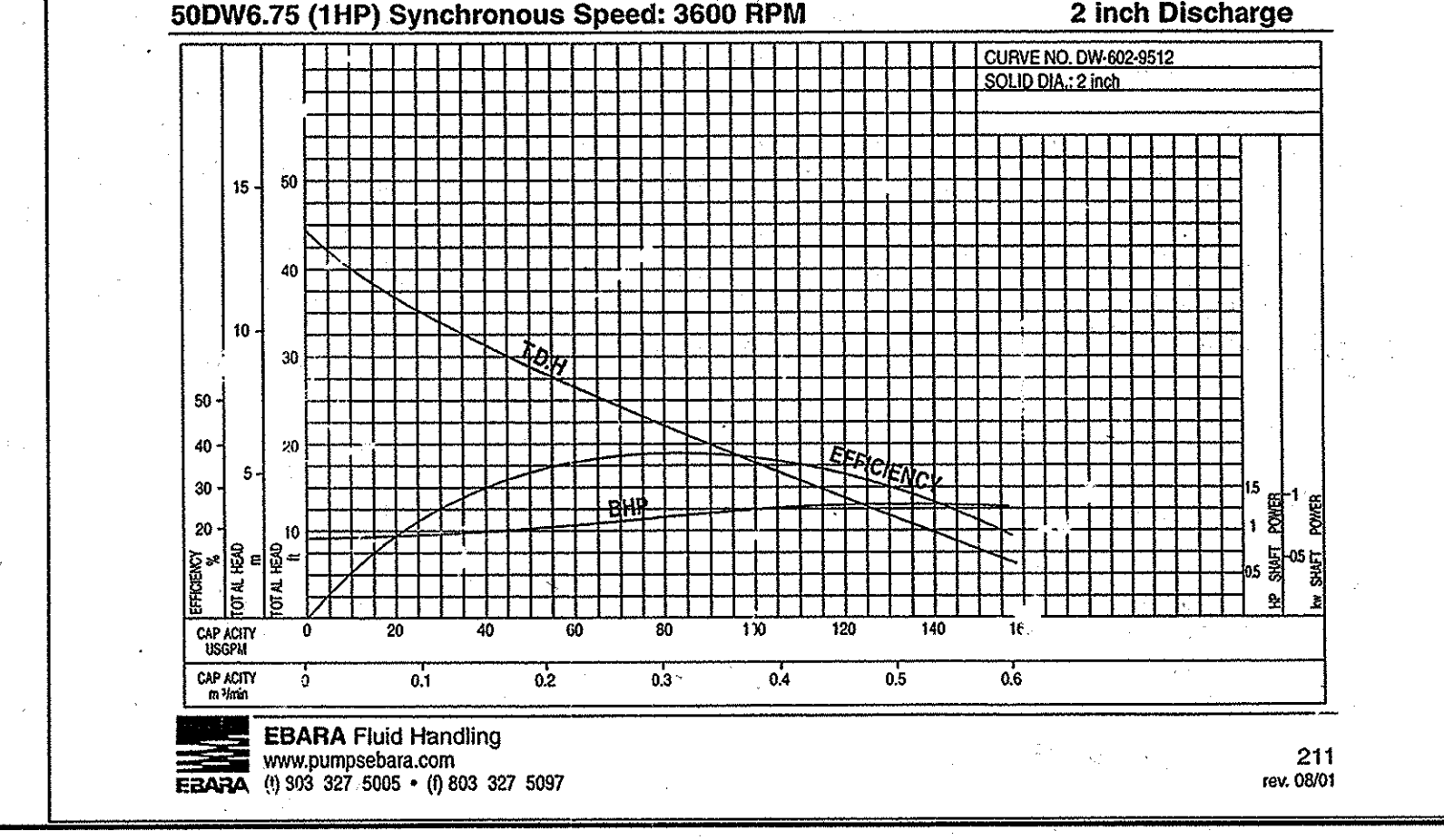
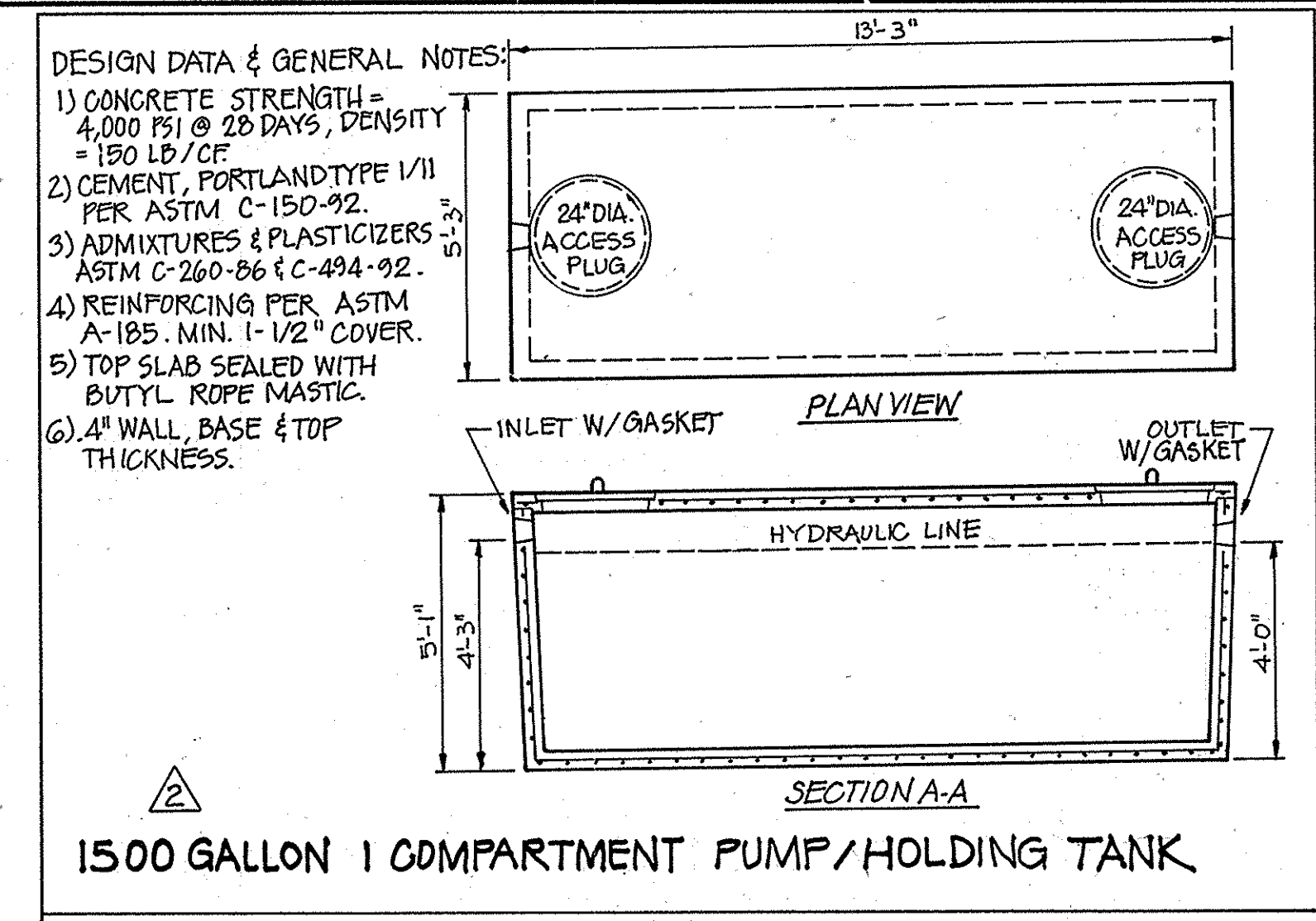
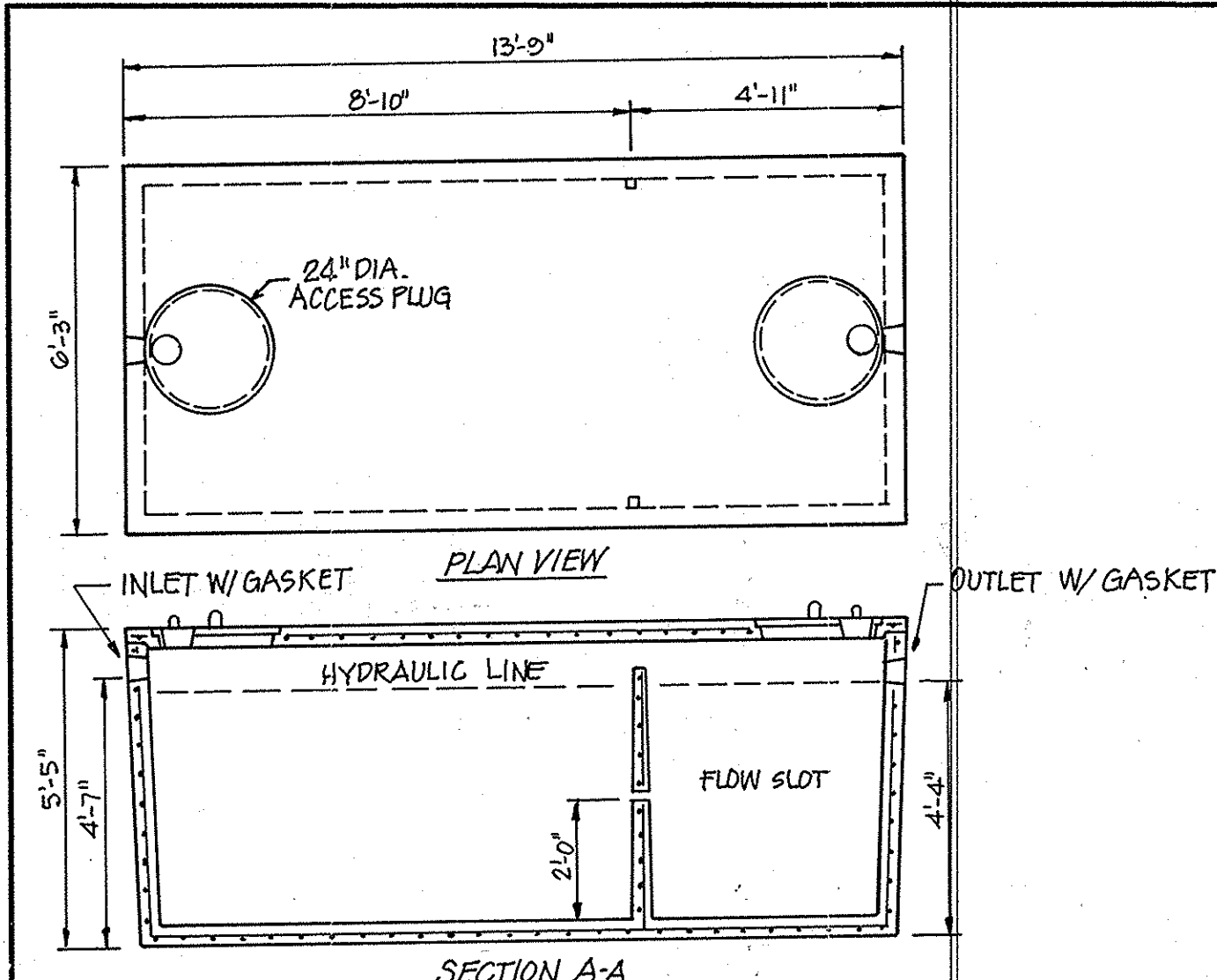


**GREASE INTERCEPTOR
 500 GALLON**

DESIGN DATA & GENERAL NOTES:
 1) CONCRETE STRENGTH=4000 PSI @28 DAY DENSITY=150 PCF
 2) CEMENT PORTLAND TYPE 1/II ASTM C-150-92
 3) ADMIXTURES & PLASTICIZERS /ASTM C-260-86 & C-494-92
 4) REINFORCING /ASTM A-185, MIN. 1-1/2\"/>

SANITARY SYSTEM PROFILE

SCALE: 1"=50' (HORZ.)
 1"=5' (VERT.)



EBARA Submersible Stainless Steel Sewage Pumps

Model DWU, DWXU
 Automatic/Manual Operation Pumps

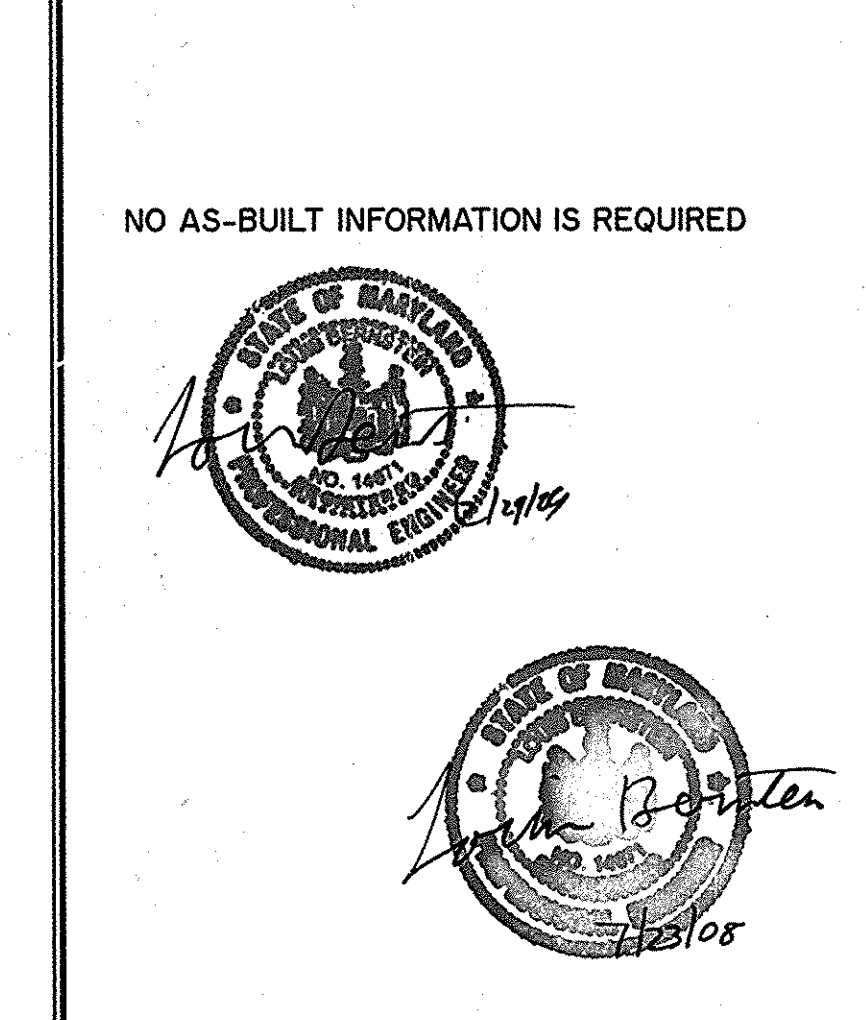
Unit: inch (mm)

Phase	Size s	Output kw	HP	Pump H (mm)	Weight - Lbs (kg) Threaded	Weight - Lbs (Kg) Flanged
Single	2" (50mm)	0.4	1/2	21 1/2 (550)	35 (16)	37 (17)
		0.75	1	22 1/2 (580)	40 (18)	42 (19)
		0.4	1/2	10" (485)	35 (16)	37 (17)
		0.75	1	20" (515)	40 (18)	42 (19)
		1.1	1 1/2	20 1/2 (515)	44 (20)	46 (21)
Three	2" (50mm)	0.4	1/2	19 1/2 (485)	33 (15)	35 (16)
		0.75	1	19 1/2 (485)	35 (16)	37 (17)
		1.1	1 1/2	20 1/2 (515)	40 (18)	42 (19)
		1.5	2	2 1/2 (515)	44 (20)	46 (21)

PROFESSIONAL CERTIFICATION

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

LC: # 46513
 EXP: 03-02-2017



NO AS-BUILT INFORMATION IS REQUIRED

The **RBA-Group**
ENGINEERS • ARCHITECTS • PLANNERS
 7164 Columbia Gateway Drive, Suite 205
 Columbia, Maryland 21046
 Phone (410) 312-0866, Fax. (410) 312-0897

REVISIONS

9/20/07	PER COUNTY COMMENTS
11/4/08	SEPTIC TANKS + CALCS.
10/29/15	F.M. PROFILE

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THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS
 BRIGHTON DAM AND TEN OAKS ROADS
 CLARKSVILLE, MARYLAND

SHEET TITLE
SANITARY SYSTEM PROFILE AS-BUILT

DATE: 11-5-07
 JOB NUMBER: M3757
 FILE NAME: SWG-2
 PLOTTED: 11-5-07
 DRAWN BY:

19 of 32

SDP-06-01

C:\3757 Liberty Engineering\3757 SHITS\REVISED 071408 19_SANITARY SYSTEM PROFILE.dwg, 7/23/2008 1:49:52 PM, Mhoyes

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS
 SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY

B. Williams
 COUNTY HEALTH OFFICER
 HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chris Harris
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

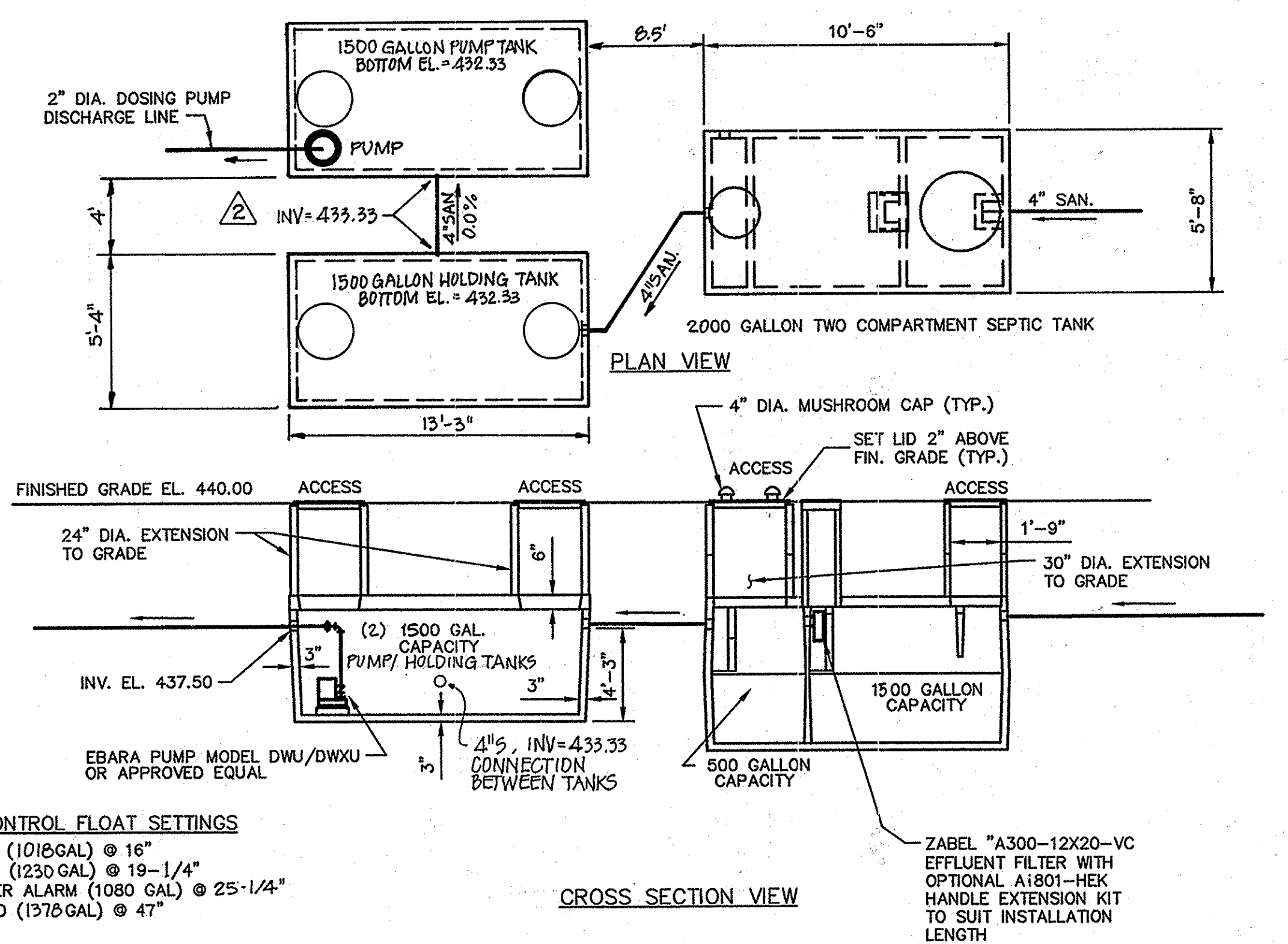
Mark A. Wynn
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DIRECTOR

REVISIONS
9/20/07 PER COUNTY COMMENTS
11/6/08 PERG FIELD+TANKS

The RBA-Group
 ENGINEERS • ARCHITECTS • PLANNERS
 7184 Columbia Gateway Drive, Suite 205
 Columbia, Maryland 21046
 Phone (410) 312-0988, Fax (410) 312-0887

THE CHURCH OF
 JESUS CHRIST
 OF LATTER-DAY SAINTS
 BRIGHTON DAM AND TEN OAKS ROADS
 CLARKSVILLE, MARYLAND

SHEET TITLE	
SANITARY SYSTEM DETAILS	
AS-BUILT	
DATE:	11-5-07
JOB NUMBER:	M3757
FILE NAME:	SWG-3
PLOTTED:	11-5-07
DRAWN BY:	
	20 of 32
SHEET	

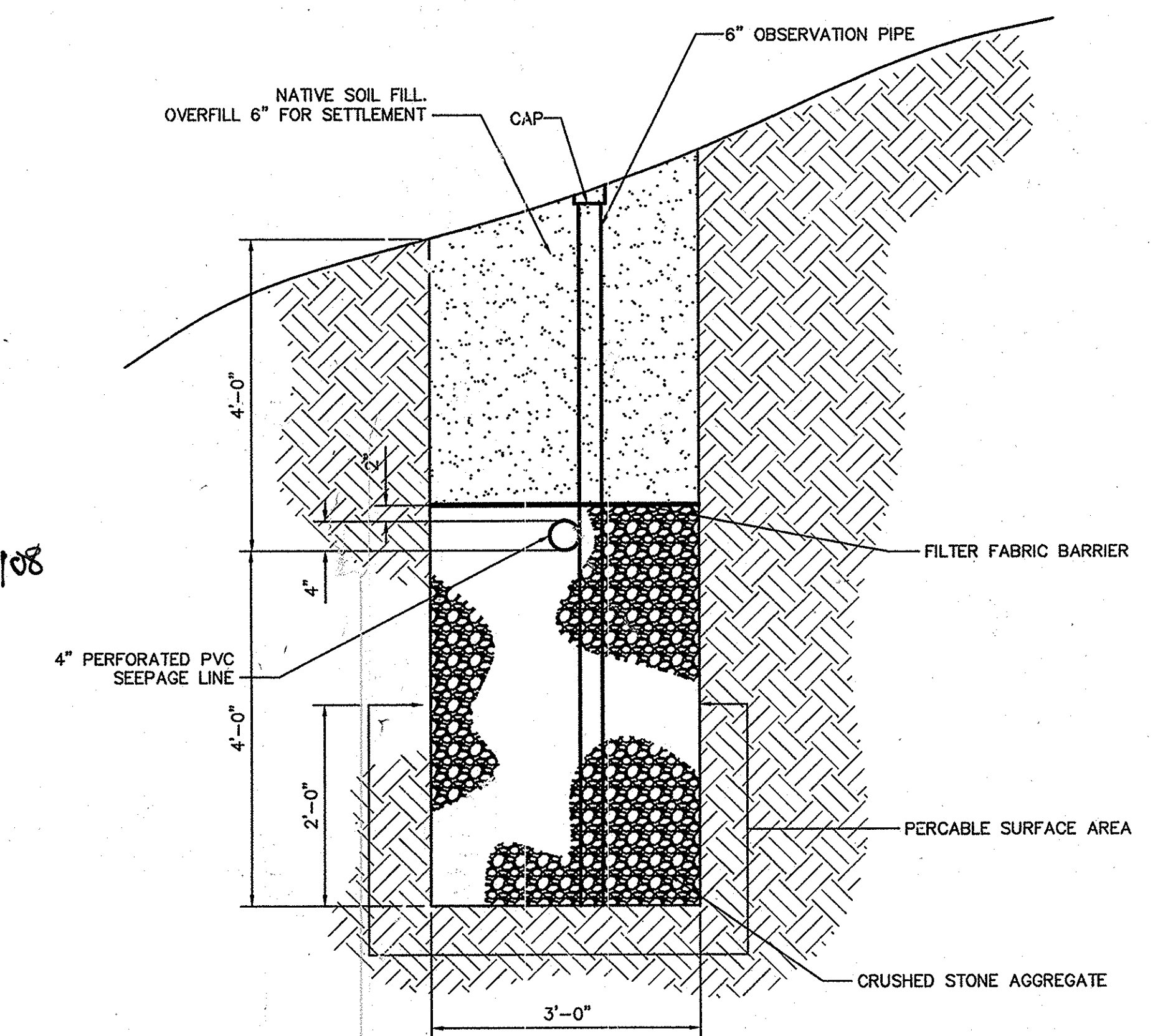


PUMP CONTROL FLOAT SETTINGS
 PUMP OFF (1018 GAL) @ 16"
 PUMP ON (1230 GAL) @ 19-1/4"
 HIGH WATER ALARM (1080 GAL) @ 25-1/4"
 FREEBOARD (1378 GAL) @ 47"

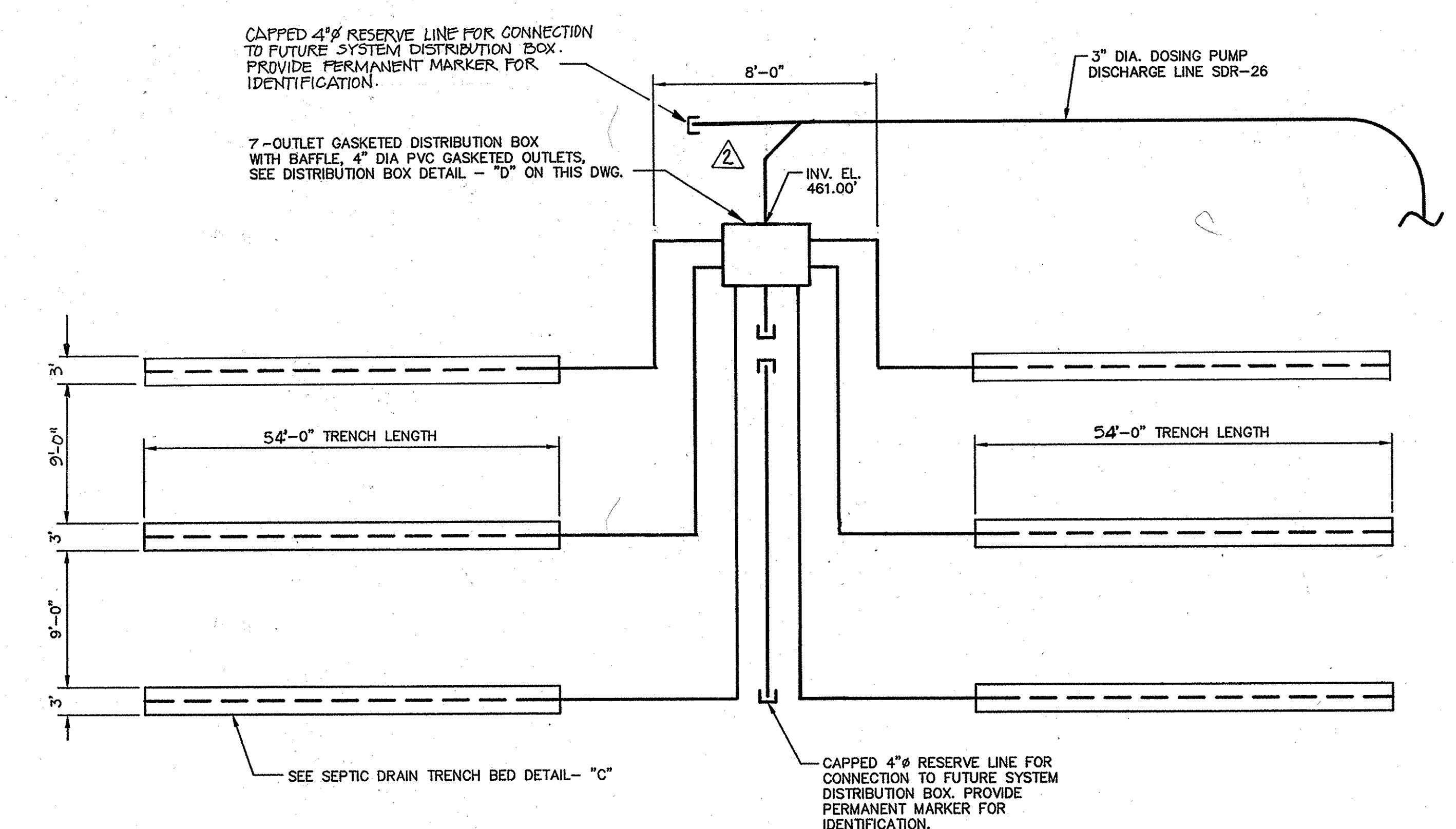
1500 GALLON ONE COMPARTMENT PUMP/HOLDING TANK SPECIFICATION:
 MINIMUM CONCRETE STRENGTH - 3,500 PSI @28 DAYS
 STEEL REINFORCEMENT - 6"x6"x 6GA. WIRE MESH IN SIDES AND BAFFLES, #4 REBAR IN LID AND BOTTOM
 JOINT - SEALED WITH SYNTHETIC RESIN SEALANT OR EQUIVALENT
 DESIGN - SEPTIC TANK AND PUMP CHAMBER SHALL BE AS MANUFACTURED BY MODERN CONCRETE SEPTIC TANK COMPANY

2000 GALLON TWO COMPARTMENT SEPTIC TANK SPECIFICATION:
 MINIMUM CONCRETE STRENGTH - 3,500 PSI @28 DAYS
 STEEL REINFORCEMENT - 6"x6"x 10GA. WIRE MESH IN BOTTOM, #4 REBAR IN LID, #3 REBAR IN SIDES
 JOINT - SEALED WITH SYNTHETIC RESIN SEALANT OR EQUIVALENT
 DESIGN - SEPTIC TANK AND PUMP CHAMBER SHALL BE AS MANUFACTURED BY MODERN CONCRETE SEPTIC TANK COMPANY

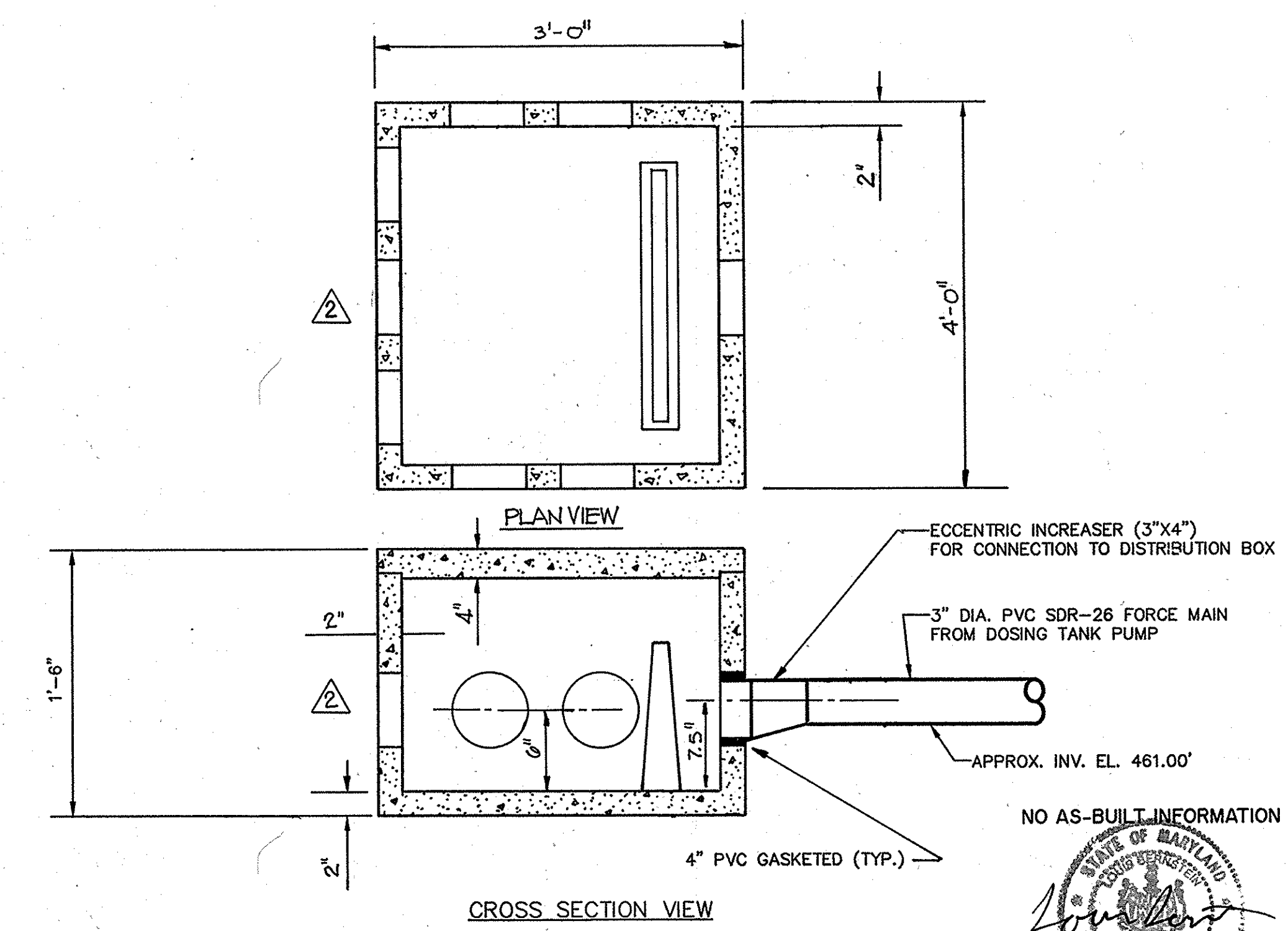
SEPTIC TANK DETAIL
 SCALE: NONE



SEPTIC DRAIN TRENCH BED DETAIL
 SCALE: NONE



DISTRIBUTION BOX AND DRAIN BED DETAIL
 SCALE: NONE



7-OUTLET GASKETED DISTRIBUTION BOX WITH BAFFLE SPECIFICATION
 MINIMUM CONCRETE STRENGTH - 3,500 PSI AT 28 DAYS
 STEEL REINFORCEMENT - 6"x6"x 10GA. WIRE MESH IN LID, #3 REBAR IN SIDES
 DESIGN - DISTRIBUTION BOX SHALL BE AS MANUFACTURED BY MODERN CONCRETE SEPTIC TANK COMPANY
 PROVIDE PERMANENT MARKER TO LOCATE DISTRIBUTION BOX AFTER INSTALLATION.

DISTRIBUTION BOX DETAIL
 SCALE: 1-1/2" = 1'-0"

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS
 SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
 COUNTY HEALTH OFFICER
 HOWARD COUNTY HEALTH DEPARTMENT
 DATE: 7/21/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 DEVELOPMENT ENGINEERING DIVISION
 DATE: 7/21/08
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 7/21/08

NO AS-BUILT INFORMATION IS REQUIRED

Professional Engineer Seal: *James Beuten*, No. 14678, State of Maryland, Professional Engineer, 7/21/08

Professional Engineer Seal: *James Beuten*, No. 14678, State of Maryland, Professional Engineer, 7/21/08

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 Phone (410) 312-0988, Fax (410) 312-0887

MARYLAND LAW REQUIRES
48 HOURS NOTICE
FOR ANY EXCAVATION
MISS UTILITY INC
1-800-257-7777

SOIL DESCRIPTIONS

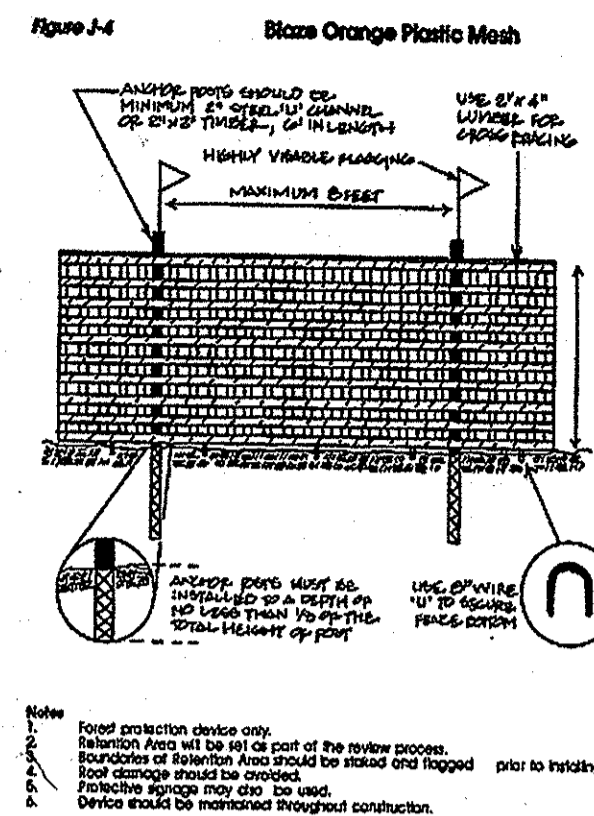
- CgC2 - Chester gravelly silt loam, 8-15%, moderately eroded, K-factor - (Type B)
- ChB2 - Chester silt loam, 3-8%, moderately eroded, K-factor - (Type B)
- ChA - Chester silt loam, 0-3%, K-factor - (Type B)
- GaA - Glenville silt loam, 0-3%, K-factor + (Type C)

LEGEND

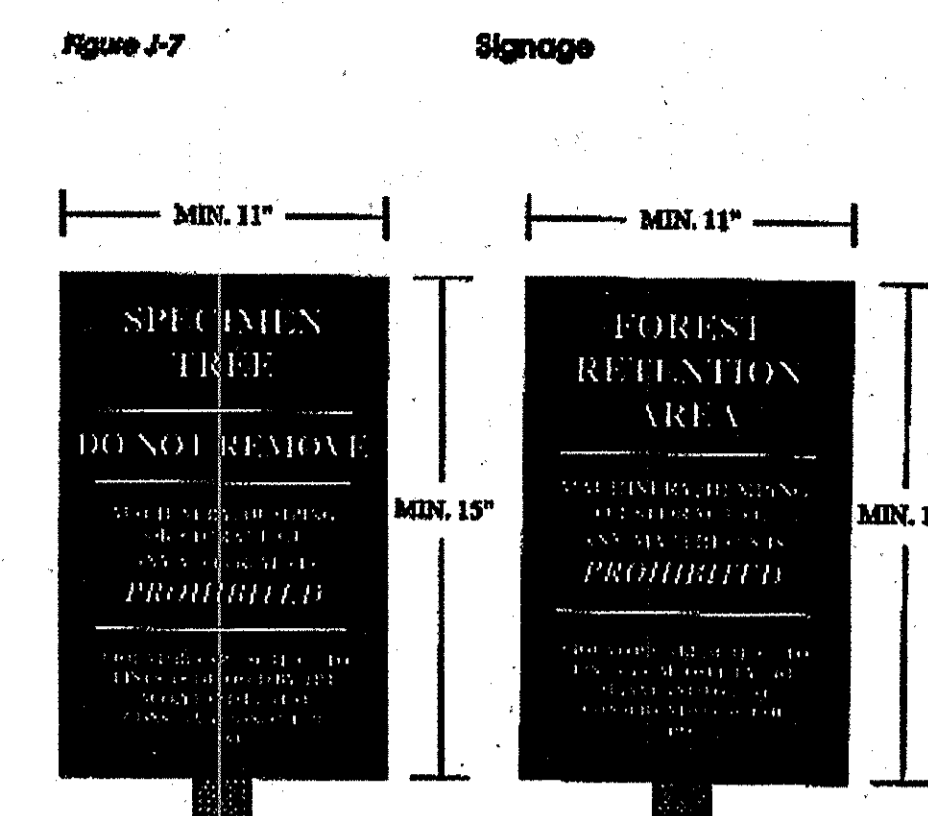
- Protective Barrier Fencing
- Protective Signage
- Forest Retention Area
- Specimen Tree

SPECIMEN TREES

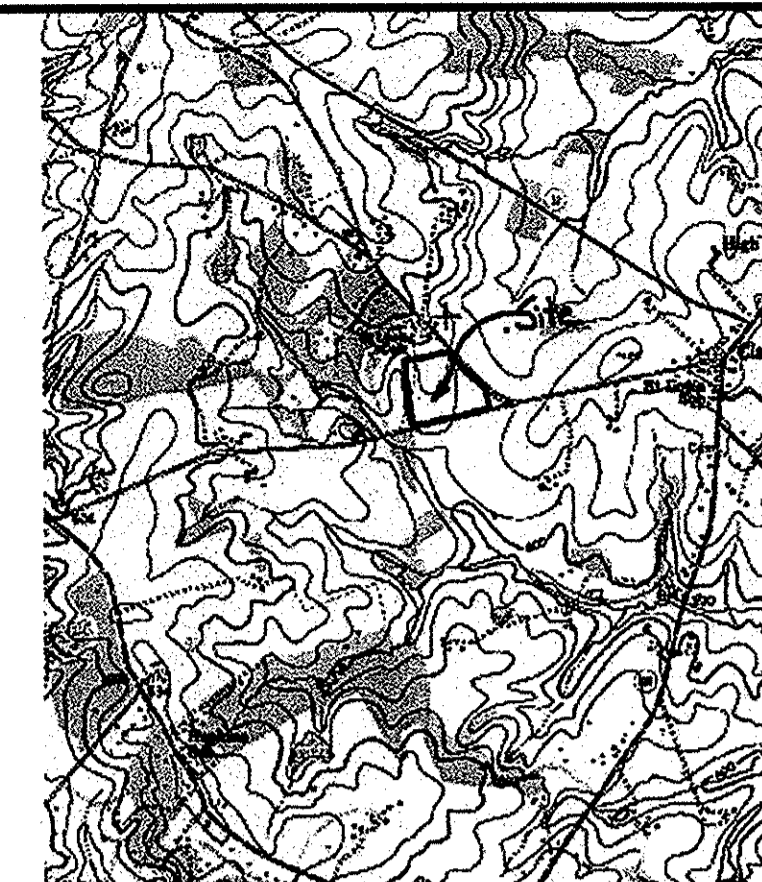
- 38" Red Oak
- 45" Double Trunk Pin Oak
- 31" Pin Oak - To Be Removed
- 32" Double Trunk Tulip Poplar



PROTECTIVE FENCE DETAIL



PROTECTIVE SIGNAGE DETAIL



LOCATION MAP

Notes

1. The base topographic, property line, and outbound information was derived from the Existing Features Plan for the Church of Jesus Christ of Latter-Day Saints, prepared by Muhlenberg Green Architects, Inc., Reading, PA, dated April 18, 2005.
2. The total tract area is 11.99± acres.
3. The site is zoned RR-DEO.
4. The soil locations and types are taken from the Howard County Soil Survey.
5. The forest stand delineation fieldwork was performed by Vortex Environmental on July 8, 2005.
6. Notification from the Maryland Natural Heritage indicates no records for Federal or State rare, threatened, or endangered plants or animals within the project site.
7. No Slopes greater than 25% or greater than 15% with a K value greater than 0.35 as measured off approved topographic maps, using a minimum area of 10,000 square feet were observed on the site.
8. The owner/developer of the property is the Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-Day Saints, A Utah Corporation Sole, 50 East North Temple, Salt Lake City, Utah 84150. c/o Liberty Engineering, Inc., 7353 Windsor Drive, Suite B-102, Allentown, PA 18195.
9. A 100 year floodplain is not present in accordance with Howard County, MD FEMA maps.
10. The site information is tax map 34, grid 10, parcel 339 and deed reference 1556/0606.
11. Approximately 20 acres of contiguous forest are located to the north and west of the project site.
12. Temporary debris stockpile areas shall be kept outside of the proposed buffer areas. Stockpile areas have been located hereon for use during initial construction activities and are not to be used for permanent disposal.
13. Final Plat Number 19960 upon Recordation of the Plat, F-06-132, RECORDED 616108.

PUBLIC FOREST CONSERVATION EASEMENT SUMMARY

Public Forest Conservation Easement Area 1 - 2.52 Acres
Public Forest Conservation Easement Area 2 - 1.32 Acre
Public Forest Conservation Easement Area 3 - 0.49 Acre
Total 4.33 Acres

PUBLIC FOREST CONSERVATION EASEMENT #3
AREA = 1.32 ACRES

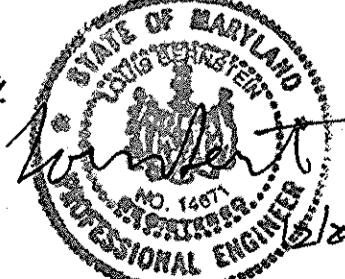
PROPOSED CHURCH
16,558 SQ. FT.
FIRST FLOOR = 44,000

FOREST RETENTION AREA
WETLANDS #2

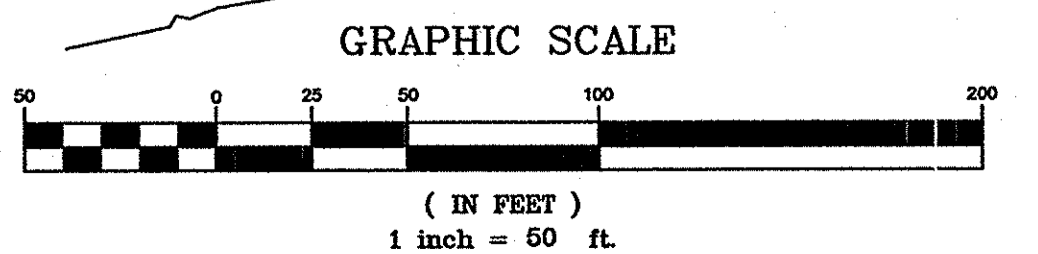
FOREST RETENTION AREA
WETLANDS #1

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 MEET THE APPROVED PLANS AND SPECIFICATIONS.

LOUIS BERNSTEIN
MD PE #14671



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7164 Columbia Gateway Drive, Suite 205
Columbia, Maryland 21046
Phone (410) 312-0988, Fax (410) 312-0897



PUBLIC FOREST CONSERVATION EASEMENT #1
AREA = 2.52 ACRES

"This project complies with the requirements of Section 16.1200 of the Howard County Code and Forest Conservation Manual with a forest conservation obligation of 4.32 acres by achieving the break-even point providing 4.32 acres of forest retention easement. Forest conservation surety in amount of \$37,696.00 is provided for the retention easement area with the DPW, Developers Agreement."

CONSTRUCTION TIME TABLE

- Construction on the site is anticipated to begin in the spring of 2006. The sequence of construction shall be as follows:
- Stake forest retention area edges in the field with respect to the critical root zones (C.R.Z.) and apply stress reduction measures as necessary.
 - Install temporary and permanent protective devices around the forest retention areas.
 - Hold pre-construction meeting at the project site with DPW and Sediment Control Inspectors.
 - Install soil erosion control structures.
 - Site inspection by officer of the Howard County Department of Planning and Zoning.
 - Begin site work and building construction.
 - Perform post-construction corrective measures (stress reduction, dead and dying tree removal, etc.).
 - Remove temporary forest protection structures after inspection by the Howard County Department of Planning and Zoning.
 - Site inspection by project inspector.
 - Commencement of forest conservation area protective agreements.

QUALIFIED PROFESSIONAL
DAWN MICHELLE BOHACZ
PER COMAR-08-19.06.01

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division
Chief, Division of Land Development
Director

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS
SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
County Health Officer

MARK	DATE	REVISION
1	9/13/05	PER COUNTY COMMENTS
2	1/9/06	PER COUNTY COMMENTS
3	3/10/06	PER COUNTY COMMENTS
4	6/29/06	PER COUNTY COMMENTS
5	10/25/06	PER COUNTY COMMENTS
6	1/12/07	PER COUNTY COMMENTS
7	4/18/07	PER COUNTY COMMENTS
8	9/20/07	PER COUNTY COMMENTS
9	10/27/07	PER COUNTY COMMENTS
10	9/3/09	EX. DRIVEWAY INT.
11	11/18/09	AS-BUILT

MGA
MULHENBERG GREENE
ARCHITECTS, L.T.D.
400 Washington Street, Reading, Pennsylvania 19601
Phone: 610.376.4927 Fax: 610.376.0720

DRAWN BY: EVT
CHECKED BY: CKL

MGA #2782

STAMP
[Signature]
5/2/05

PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION
HUNTINGTON MANOR ESTATES SECTION 2
AREA INFORMATION
TAX MAP 34, PARCEL 399
ZONED RR-DEO
5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND
PROJECT ADDRESS
BRIGHTON DAM & TEN OAKS ROAD
CLARKSVILLE, MARYLAND

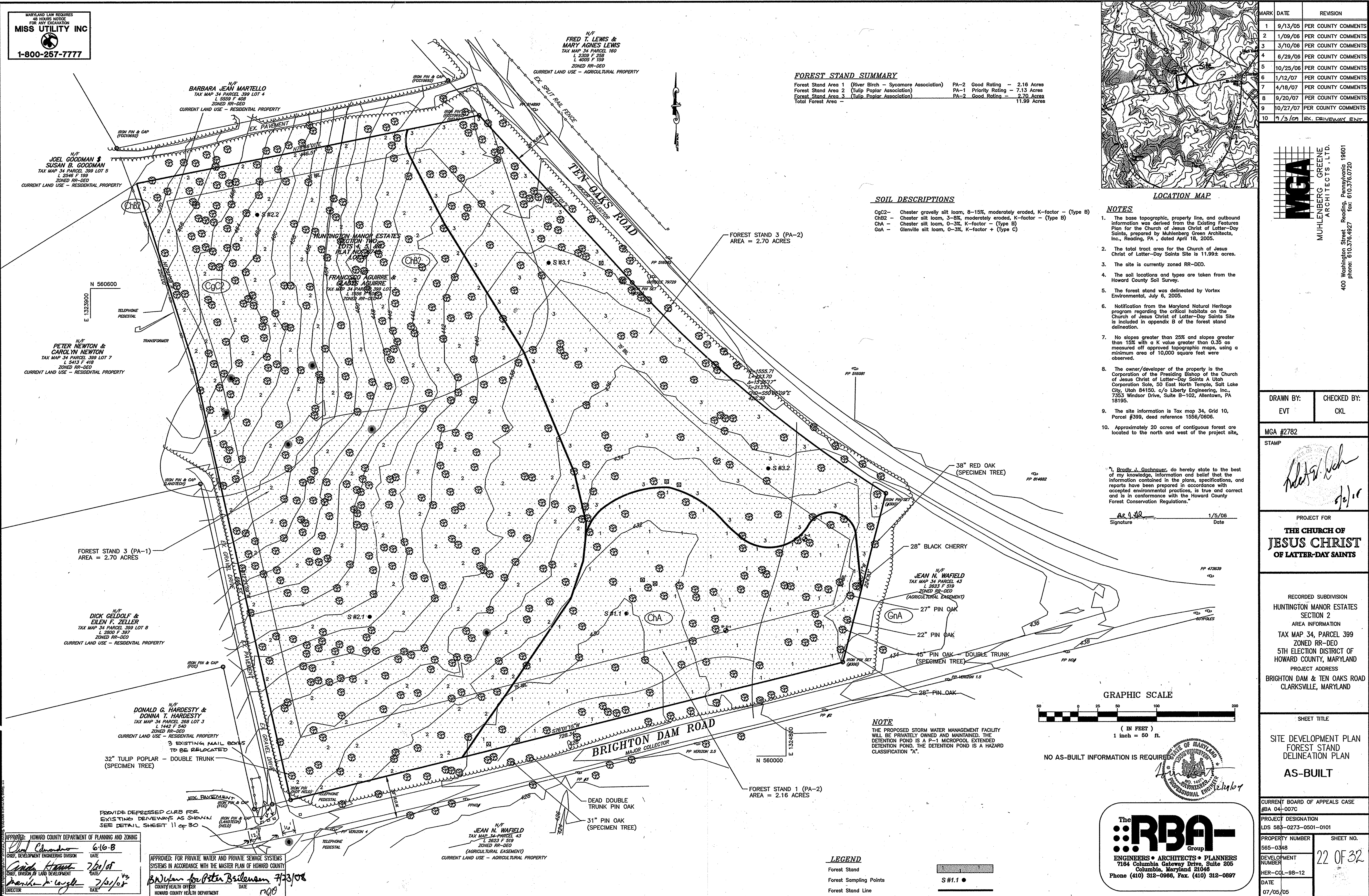
SHEET TITLE
FOREST CONSERVATION PLAN AS-BUILT

CURRENT BOARD OF APPEALS CASE #BA 04-007C

PROJECT DESIGNATION
LDS 583-0273-0501-0101

PROPERTY NUMBER: 565-0348
SHEET NO.: 21 of 32
DEVELOPMENT NUMBER: 12108
HER-COL-98-12
DATE: 07/05/05

MARYLAND LAW REQUIRES
48 HOURS NOTICE
FOR ANY EXCAVATION
MISS UTILITY INC
1-800-257-7777



FOREST STAND SUMMARY

Forest Stand Area 1 (River Birch - Sycamore Association)	PA-2	Good Rating	- 2.16 Acres
Forest Stand Area 2 (Tulip Poplar Association)	PA-1	Priority Rating	- 7.13 Acres
Forest Stand Area 3 (Tulip Poplar Association)	PA-2	Good Rating	- 2.70 Acres
Total Forest Area			11.99 Acres

SOIL DESCRIPTIONS

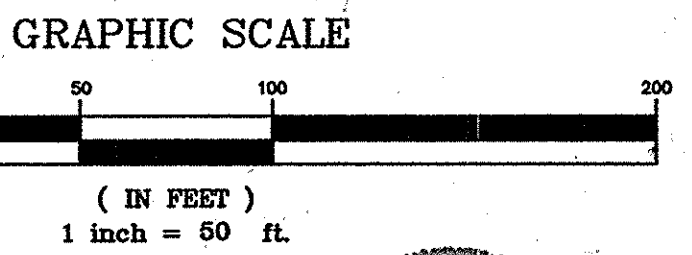
- CgC2 - Chester gravelly silt loam, 8-15%, moderately eroded, K-factor - (Type B)
- ChB2 - Chester silt loam, 3-8%, moderately eroded, K-factor - (Type B)
- ChA - Chester silt loam, 0-3%, K-factor - (Type B)
- GaA - Glenview silt loam, 0-3%, K-factor + (Type C)

NOTES

1. The base topographic, property line, and outbound information was derived from the Existing Features Plan for the Church of Jesus Christ of Latter-day Saints, prepared by Muhlenberg Green Architects, Inc., Reading, PA, dated April 18, 2005.
2. The total tract area for the Church of Jesus Christ of Latter-day Saints Site is 11.99± acres.
3. The site is currently zoned RR-DEO.
4. The soil locations and types are taken from the Howard County Soil Survey.
5. The forest stand was delineated by Vortex Environmental, July 6, 2005.
6. Notification from the Maryland Natural Heritage program regarding the critical habitats on the Church of Jesus Christ of Latter-day Saints Site is included in appendix B of the forest stand delineation.
7. No slopes greater than 25% and slopes greater than 15% with a K value greater than 0.35 as measured off approved topographic maps, using a minimum area of 10,000 square feet were observed.
8. The owner/developer of the property is the Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-day Saints A Utah Corporation Sole, 50 East North Temple, Salt Lake City, Utah 84150, c/o Liberty Engineering, Inc., 7353 Windsor Drive, Suite B-102, Allentown, PA 18195.
9. The site information is Tax map 34, Grid 10, Parcel #399, deed reference 1556/0606.
10. Approximately 20 acres of contiguous forest are located to the north and west of the project site.

I, Brady J. Gochbauer, do hereby state to the best of my knowledge, information and belief that the information contained in the plans, specifications, and reports have been prepared in accordance with accepted environmental practices, is true and correct and is in conformance with the Howard County Forest Conservation Regulations.

Brady J. Gochbauer 1/5/06
Signature Date



NO AS-BUILT INFORMATION IS REQUIRED

NOTE
THE PROPOSED STORM WATER MANAGEMENT FACILITY WILL BE PRIVATELY OWNED AND MAINTAINED. THE DETENTION POND IS A P-1 MICROPOOL EXTENDED DETENTION POND. THE DETENTION POND IS A HAZARD CLASSIFICATION "A".

LEGEND

- Forest Stand
- Forest Sampling Points
- Forest Stand Line

The RBA-Group
ENGINEERS • ARCHITECTS • PLANNERS
7164 Columbia Gateway Drive, Suite 205
Columbia, Maryland 21046
Phone (410) 312-0986, Fax (410) 312-0897

MARK	DATE	REVISION
1	9/13/05	PER COUNTY COMMENTS
2	1/09/06	PER COUNTY COMMENTS
3	3/10/06	PER COUNTY COMMENTS
4	6/29/06	PER COUNTY COMMENTS
5	10/25/06	PER COUNTY COMMENTS
6	1/12/07	PER COUNTY COMMENTS
7	4/18/07	PER COUNTY COMMENTS
8	9/20/07	PER COUNTY COMMENTS
9	10/27/07	PER COUNTY COMMENTS
10	1/3/08	EX. DRIVEWAY ENT.

LOCATION MAP



DRAWN BY: EVT
CHECKED BY: CKL

MGA #2782

STAMP
[Signature]
1/5/06

PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION
HUNTINGTON MANOR ESTATES SECTION 2
AREA INFORMATION
TAX MAP 34, PARCEL 399
ZONED RR-DEO
5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND
PROJECT ADDRESS
BRIGHTON DAM & TEN OAKS ROAD
CLARKSVILLE, MARYLAND

SHEET TITLE
SITE DEVELOPMENT PLAN
FOREST STAND DELINEATION PLAN
AS-BUILT

CURRENT BOARD OF APPEALS CASE #BA 04-007C
PROJECT DESIGNATION LDS 583-0273-0501-0101
PROPERTY NUMBER 565-0348
SHEET NO. 22 OF 32
DEVELOPMENT NUMBER
HER-COL-98-12
DATE 07/05/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 6/16/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 7/21/08
CHIEF, DIVISION OF LAND DEVELOPMENT
[Signature] 7/21/08
DIRECTOR

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
[Signature] 7/23/08
COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT

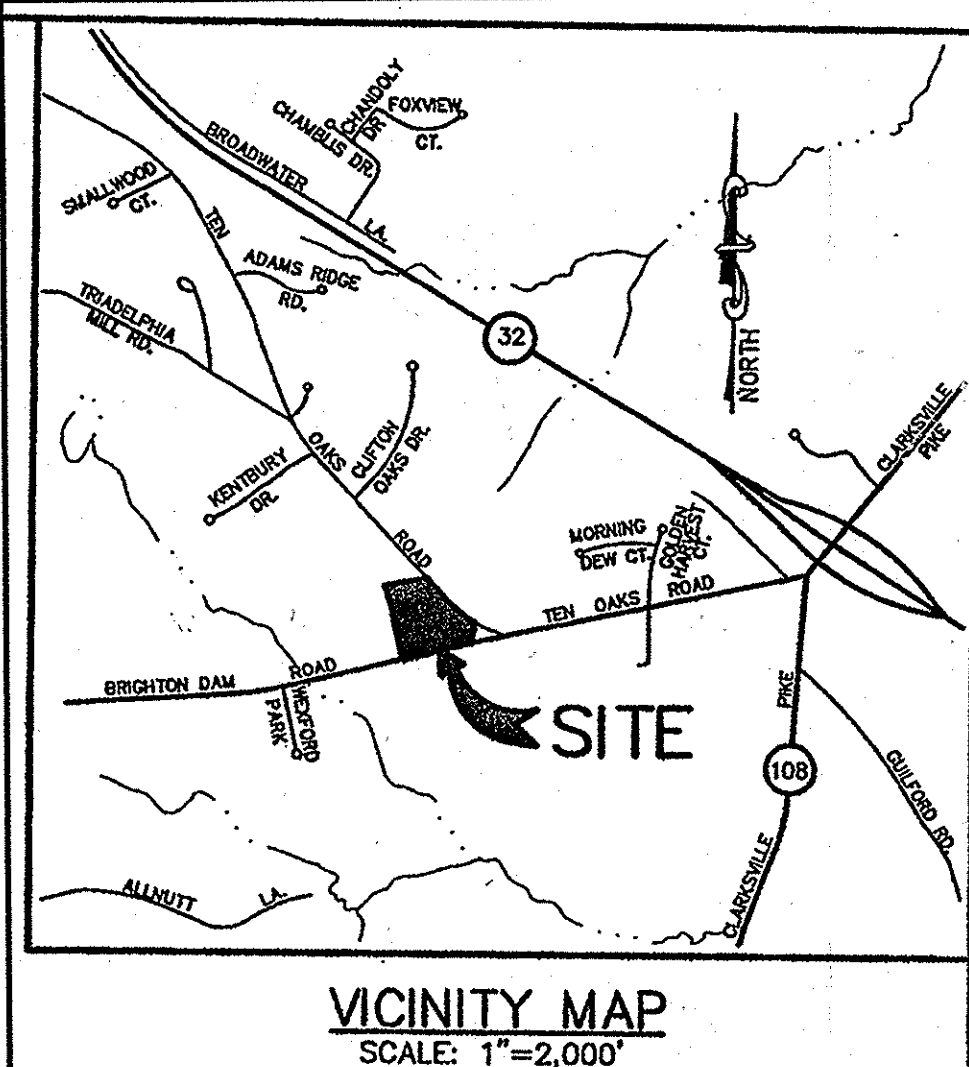
MGA
MUHLENBERG GREENE ARCHITECTS, LTD.
Reading, Pennsylvania 19601
400 Washington Street
phone: 610.376.4927 fax: 610.376.0720

MARYLAND LAW REQUIRES
48 HOURS NOTICE
FOR ANY EXCAVATION
MISS UTILITY INC
1-800-257-7777

GENERAL LEGEND

<ul style="list-style-type: none"> EXISTING SANITARY MANHOLE PROPOSED SANITARY SEWER EXISTING SANITARY SEWER PROPOSED FORCE MAIN WITH CONC. THROST BLOCK PROPOSED WATER MAIN EXISTING FORCE MAIN WITH CONC. THROST BLOCK EXISTING WATER LINE PROPOSED WATER LINE EXISTING U.G. UTILITIES (TEL., T.V., ELEC.) PROPOSED U.G. UTILITIES (TEL., T.V., ELEC.) EXISTING OVERHEAD ELEC. PROPOSED OVERHEAD ELEC. EXIST. STORM MANHOLE PROP. STORM SEWER PROP. STORM MANHOLE EXISTING GAS LINE PROPOSED GAS LINE PROPOSED CONC. SIDEWALK/PAD EXISTING CONC. SIDEWALK/PAD POSSIBLE WELL LOCATION (WITH 100' ISOLATION DISTANCE) WATER VALVE, EXIST./PROP. GAS VALVE, EXIST./PROP. FIRE HYDRANT, EXIST./PROP. EXISTING STORM WATER INLET (TYPE C & M) PROPOSED STORM WATER INLET (TYPE C & M) FOOTCANDLE INTENSITY SOIL TEST PIT 	<ul style="list-style-type: none"> FOUND IRON PIN & CONC. MON. IRON PIN & CONC. MON. TO BE SET BENCHMARK (ELEV.) EXISTING SIGNS PROPOSED SIGNS EXISTING LIGHT PROPOSED LIGHT UTILITY POLE UTILITY POLE WITH GUY WIRE EXISTING BUILDING PROPOSED BUILDING EXISTING CONC. SIDEWALK/PAD PROPOSED CONC. SIDEWALK/PAD WETLANDS RIGHT-OF-WAY EXISTING EASEMENT PROPOSED EASEMENT EXISTING EDGE OF PAVEMENT EXISTING CURBING PROPOSED CURBING (1' OFFSET) EXISTING EDGE OF PAVEMENT LIMITS OF CONSTRUCTION SOIL BOUNDARY ZONING BOUNDARY EXISTING PROPERTY LINE PROPOSED PROPERTY LINE ADJOINER PROPERTY LINE BUILDING RESTRICTION/SETBACK LINE EXIST. CONTOUR LINE PROP. CONTOUR LINE EXIST. CHAIN-LINK FENCE EXIST. STOCKADE FENCE EXIST. GUIDE RAIL PROP. CHAIN-LINK FENCE PROP. STOCKADE FENCE PROP. GUIDE RAIL POST DRAINAGE LINE PRE DRAINAGE LINE
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SLANTED TEXT DENOTES EXISTING FEATURES
STRAIGHT TEXT DENOTES PROPOSED FEATURES



MARK	DATE	REVISION
1	9/13/05	PER COUNTY COMMENTS
2	1/09/06	PER COUNTY COMMENTS
3	3/10/06	PER COUNTY COMMENTS
4	10/25/06	PER COUNTY COMMENTS
5	1/12/07	PER COUNTY COMMENTS
6	4/18/07	PER COUNTY COMMENTS
7	7/2/07	PER COUNTY COMMENTS
8	7/20/07	PER COUNTY COMMENTS
9	9/20/07	PER COUNTY COMMENTS
10	10/24/07	PER COUNTY COMMENTS

MGA
MULLENBERG GREENE
ARCHITECTS, L.L.C.
400 Washington Street, Reading, Pennsylvania 19601
Phone: 610.376.9827 fax: 610.376.0720

DRAWN BY: EVT
CHECKED BY: CKL

MGA #2782
STAMP
[Signature]
5/2/08

PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION
HUNTINGTON MANOR ESTATES
SECTION 2
AREA INFORMATION
TAX MAP 34, PARCEL 399
ZONED RR-DEO
5TH ELECTION DISTRICT OF
HOWARD COUNTY, MARYLAND
PROJECT ADDRESS
BRIGHTON DAM & TEN OAKS ROAD
CLARKSVILLE, MARYLAND

SHEET TITLE
SITE DEVELOPMENT PLAN
PRE DRAINAGE MAP
AS-BUILT

CURRENT BOARD OF APPEALS CASE
#BA 04-007C
PROJECT DESIGNATION
LDS 583-0273-0501-0101
PROPERTY NUMBER
585-0348
SHEET NO.
23 of 32
DEVELOPMENT NUMBER
HER-COL-98-12
DATE
07/05/05

Pre-Development Drainage

Drainage Area = 27.25 Acres
0.04258 sq. mi.

Time of Concentration

Flow Type	Surface	Length	Mannings	Slope (ft/ft)	Velocity (fps)	Time (min.)
Sheet	paved	50	0.011	0.01	NA	0.816
Concentrated	vegetated	300		0.013	2.3	2.174
Channel	vegetated	500		0.048	NA	3.008
Channel	vegetated	500		0.054	NA	2.691
Channel	vegetated	500		0.036	NA	3.358
Channel	vegetated	500		0.02	NA	4.211
Channel	vegetated	180		0.008	NA	2.728
Channel	vegetated	2530				

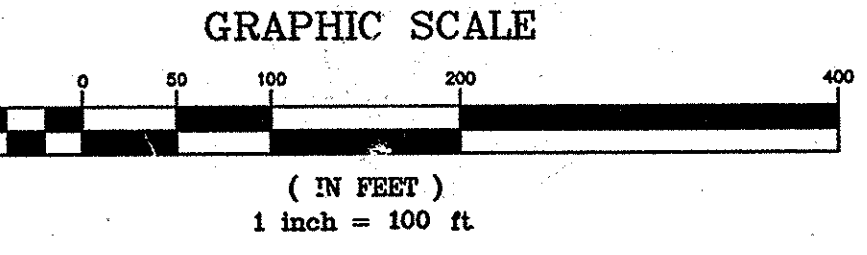
Travel Time = 19.088 min.
0.318 hr.

Curve Number

CN	Acres
55	16.16
70	1.02
58	6.58
71	0.88
98	2.23 (0.100)
	27.25

Weighted CN = 60.35

Curve Data:
R=1555.71
L=423.69
Tm=213.16
A=153615"
CD=SS07516"E
C=422.38



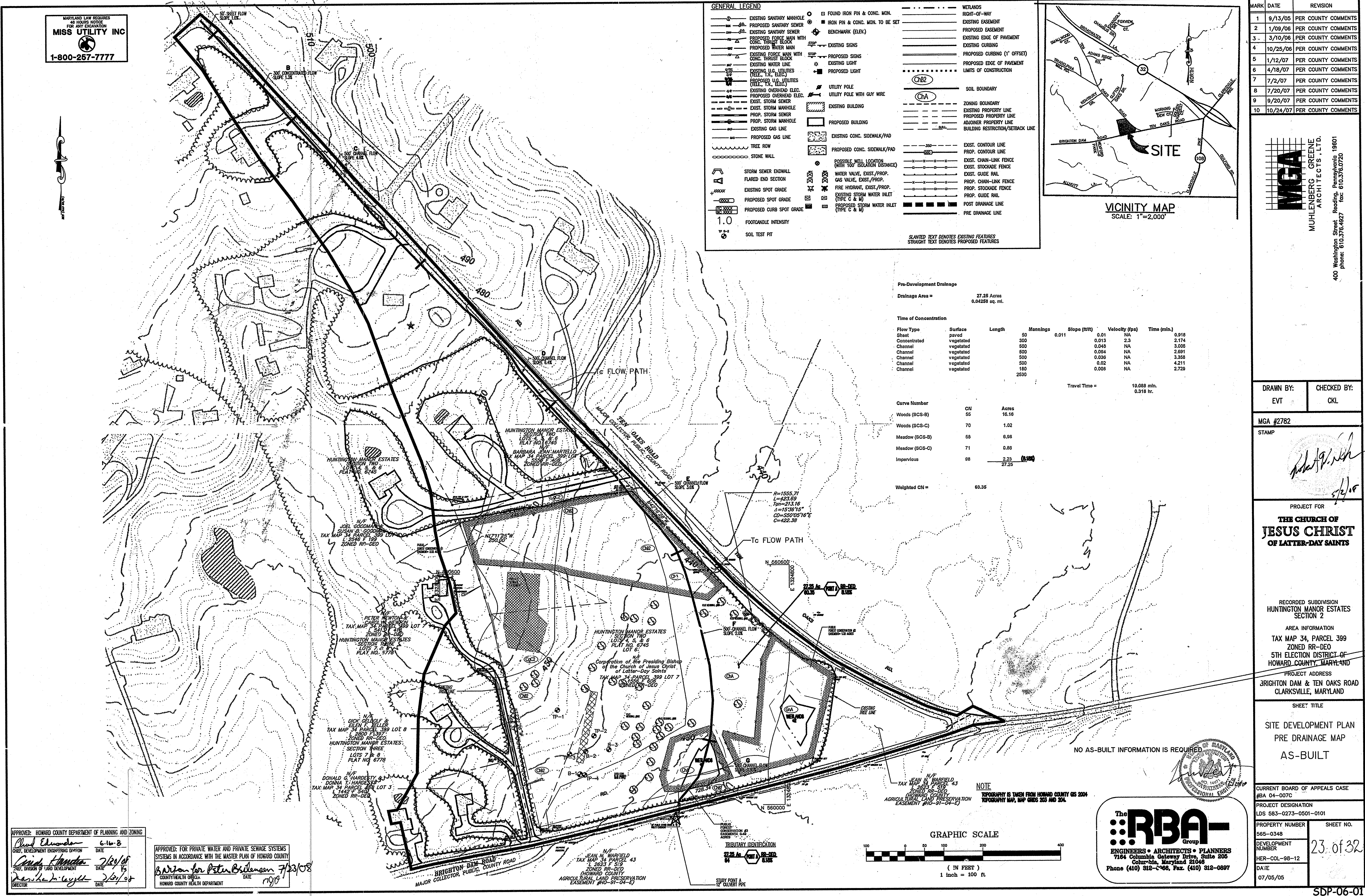
NO AS-BUILT INFORMATION IS REQUIRED

Professional Engineer Seal
The Board of Professional Engineers
Professional Engineer
No. 14110
Date: 7/5/05

The RBA Group
ENGINEERS • ARCHITECTS • PLANNERS
7164 Columbia Gateway Drive, Suite 205
Columbia, Maryland 21046
Phone (410) 312-2466, Fax (410) 312-0897

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief Edward 6-16-08
DATE
DATE 7/23/08
DATE 7/23/08
DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS
SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
Barbara for Peter Brinson 7/23/08
DATE
DATE 7/23/08
DATE



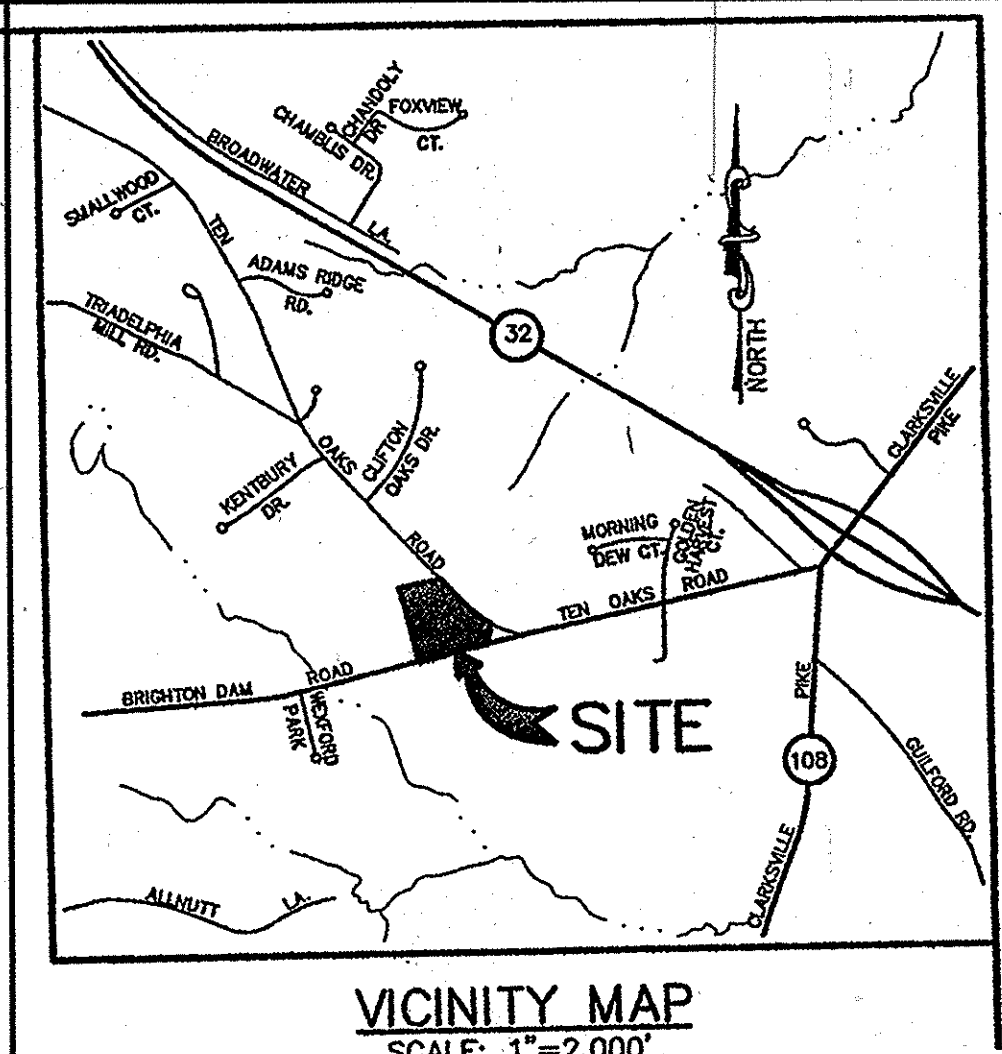
MARYLAND LAW REQUIRES
48 HOURS NOTICE
FOR ANY EXCAVATION
MISS UTILITY INC
1-800-257-7777

N/F
BARBARA JEAN MARTELLO
TAX MAP 34 PARCEL 399 LOT 4
L 2559 F 408
ZONED RR-DEO

GENERAL LEGEND

EXISTING SANITARY MANHOLE	FOUND IRON PIN & CONC. MON.	WETLANDS
PROPOSED SANITARY SEWER	IRON PIN & CONC. MON. TO BE SET	RIGHT-OF-WAY
EXISTING SANITARY SEWER	BENCHMARK (ELEV.)	EXISTING EASEMENT
PROPOSED FORCE MAIN WITH CONC. THRUST BLOCK	EXISTING SIGNS	EXISTING EDGE OF PAVEMENT
PROPOSED WATER MAIN	PROPOSED SIGNS	EXISTING CURBING
EXISTING FORCE MAIN WITH CONC. THRUST BLOCK	PROPOSED LIGHT	PROPOSED CURBING (1' OFFSET)
EXISTING WATER LINE	UTILITY POLE	PROPOSED EDGE OF PAVEMENT
EXISTING U.G. UTILITIES (TEL., T.V., ELEC.)	UTILITY POLE WITH GUY WIRE	LIMITS OF CONSTRUCTION
PROPOSED U.G. UTILITIES (TEL., T.V., ELEC.)	EXISTING BUILDING	SOIL BOUNDARY
PROPOSED OVERHEAD ELEC.	PROPOSED BUILDING	CHB2
EXIST. STORM SEWER	EXISTING CONC. SIDEWALK/PAD	CHA
EXIST. STORM MANHOLE	PROPOSED CONC. SIDEWALK/PAD	EXISTING PROPERTY LINE
PROP. STORM SEWER	PROPOSED CONC. SIDEWALK/PAD	ADJONER PROPERTY LINE
PROP. STORM MANHOLE	POSSIBLE WELL LOCATION (WITH 100' ISOLATION DISTANCE)	BUILDING RESTRICTION/SETBACK LINE
EXISTING GAS LINE	WATER VALVE, EXIST./PROP.	EXIST. CONTOUR LINE
PROPOSED GAS LINE	GAS VALVE, EXIST./PROP.	PROP. CONTOUR LINE
STORM SEWER ENDWALL	FIRE HYDRANT, EXIST./PROP.	EXIST. CHAIN-LINK FENCE
FLARED END SECTION	EXISTING STORM WATER INLET (TYPE C & M)	EXIST. STOCKADE FENCE
PROPOSED SPOT GRADE	PROPOSED STORM WATER INLET (TYPE C & M)	EXIST. GUIDE RAIL
PROPOSED CURB SPOT GRADE		PROP. CHAIN-LINK FENCE
SOIL TEST PIT		POST DRAINAGE LINE
		PRE DRAINAGE LINE

SLANTED TEXT DENOTES EXISTING FEATURES
STRAIGHT TEXT DENOTES PROPOSED FEATURES



MARK	DATE	REVISION
1	9/13/05	PER COUNTY COMMENTS
2	1/09/06	PER COUNTY COMMENTS
3	3/10/06	PER COUNTY COMMENTS
4	6/29/06	PER COUNTY COMMENTS
5	10/25/06	PER COUNTY COMMENTS
6	1/12/07	PER COUNTY COMMENTS
7	4/18/07	PER COUNTY COMMENTS
8	7/2/07	PER COUNTY COMMENTS
9	9/20/07	PER COUNTY COMMENTS
10	10/24/07	PER COUNTY COMMENTS
11	7/3/09	PK. DRIVEWAY ENT.
12	11/18/09	AS-BUILT

MGA
MUEHLBERG GREENE ARCHITECTS, L.L.C.
400 Washington Street, Reading, Pennsylvania 19601
phone: 610.376.4927 fax: 610.376.0720

SUMMARY TABLE

1 YR. WSEL=429.40
2 YR. WSEL=429.40
10 YR. WSEL=429.36
100 YR. WSEL=429.04

REV REQUIRED 0.071 AC-FT (PROVIDED BY GRASS SWALES)
WOV REQUIRED 0.272 AC-FT
PERMANENT POOL EL.=431.40 (0.13 AC-FT)
WV EL.=431.80 (0.27 AC-FT)
CPV REQUIRED 0.383 AC-FT
10 OP REQUIRED 35.8 cfs
10 OP PROVIDED 34.9 cfs
100 OF REQUIRED 77.3 cfs
100 OF PROVIDED 73.7 cfs

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
Area 1	Open space; grass cover > 75%	(good) B	.6	61
	Paved parking lots, roofs, driveways	C	3.4	98
Total Area / Weighted Curve Number				4 / 92

Sub-Area Time of Concentration Details

Sub-Area Identifier/Sheet	Flow Length (ft)	Slope (ft/ft)	Manning's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Area 1 SHEET SHALLOW	50	0.0100	0.240				0.180
CHANNEL	290	0.0100	0.025			1.500	0.040
Time of Concentration							0.313

13/02/15 DRN.DN/TABLE
DRAWN BY: EVT
CHECKED BY: CKL

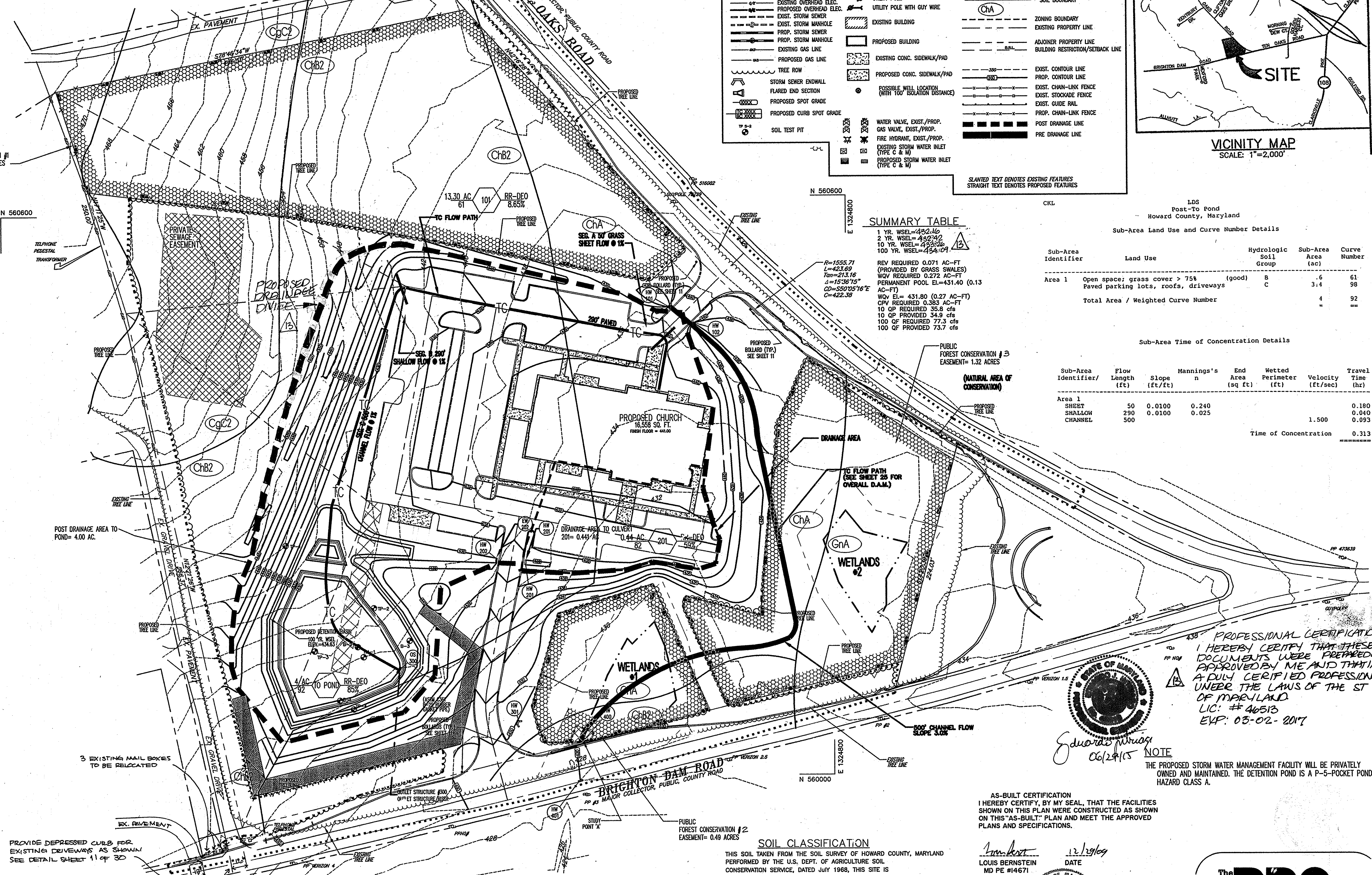
MGA #2782
STAMP
Robert W. Nelson
6/2/08

PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION
HUNTINGTON MANOR ESTATES SECTION 2
AREA INFORMATION
TAX MAP 34, PARCEL 399
ZONED RR-DEO
5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND
PROJECT ADDRESS
BRIGHTON DAM & TEN OAKS ROAD
CLARKSVILLE, MARYLAND

SHEET TITLE
SITE DEVELOPMENT PLAN
ONSITE POST DRAINAGE MAP (POND ONLY)
AS-BUILT

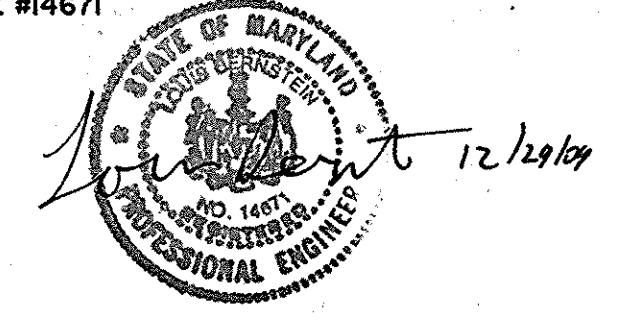
CURRENT BOARD OF APPEALS CASE #BA 04-007C
PROJECT DESIGNATION
LDS 583-0273-0501-0101
PROPERTY NUMBER 565-0348
SHEET NO. 24 of 32
DEVELOPMENT NUMBER
HER-COL-98-12
DATE 07/05/05



PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY CERTIFIED PROFESSIONAL UNDER THE LAWS OF THE STATE OF MARYLAND.
LIC. # 46513
EXP. 03-02-2017

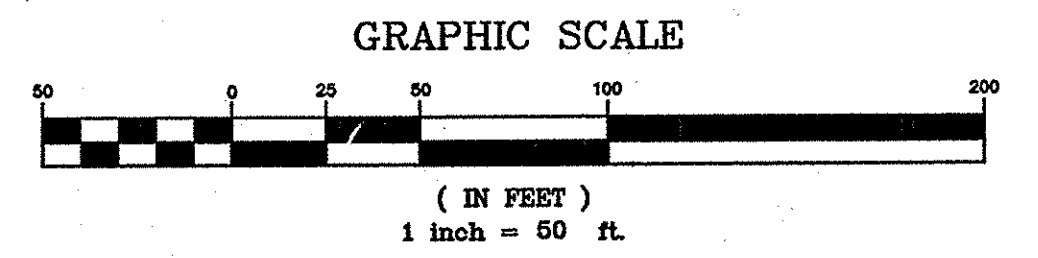
AS-BUILT CERTIFICATION
I HEREBY CERTIFY, BY MY SEAL, THAT THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS "AS-BUILT" PLAN AND MEET THE APPROVED PLANS AND SPECIFICATIONS.

LOUIS BERNSTEIN
MD PE #14671
DATE 12/29/09



SOIL CLASSIFICATION
THIS SOIL TAKEN FROM THE SOIL SURVEY OF HOWARD COUNTY, MARYLAND PERFORMED BY THE U.S. DEPT. OF AGRICULTURE SOIL CONSERVATION SERVICE, DATED JULY 1968, THIS SITE IS FOUND ON MAP SHEET 23.

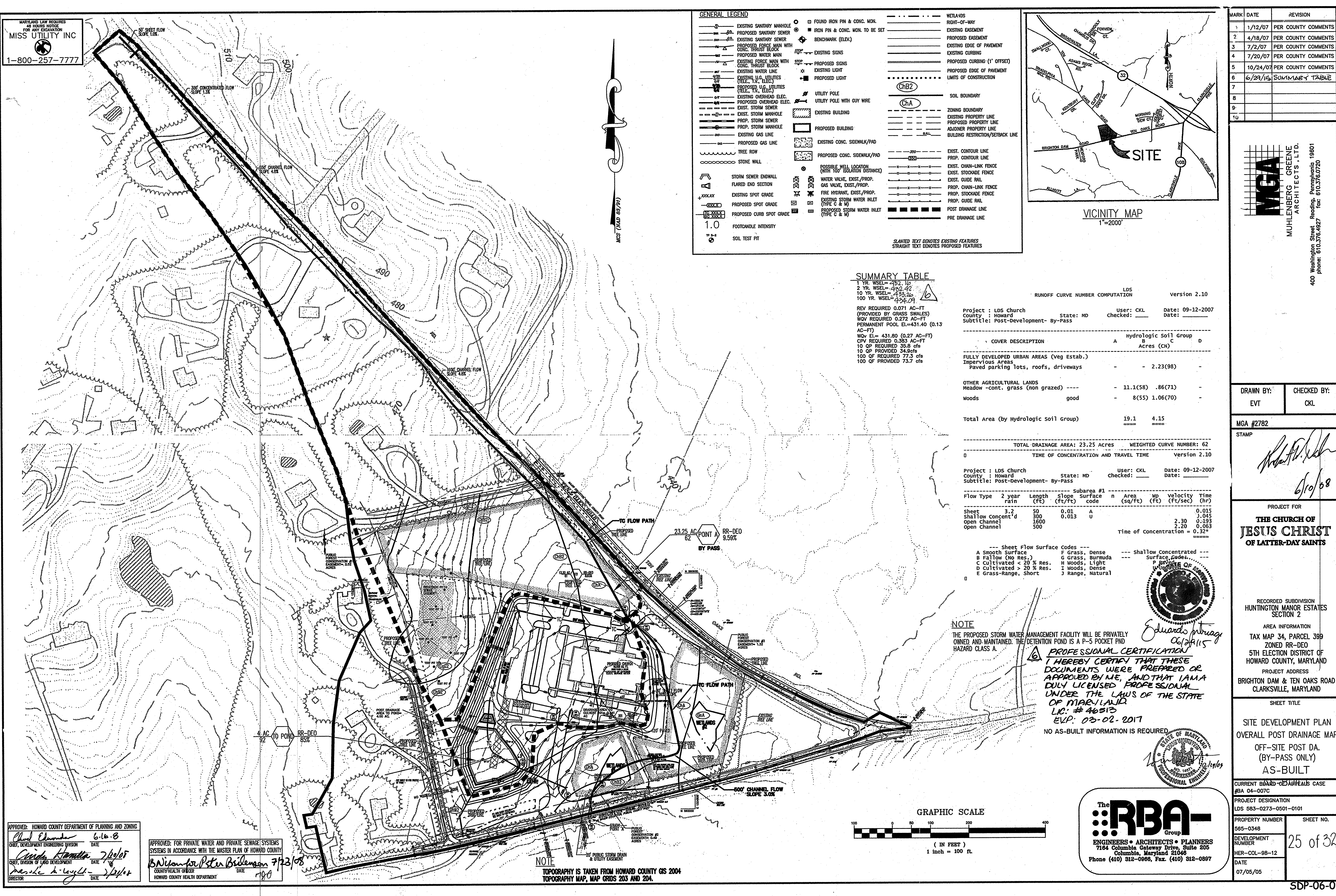
- ChA CHESTER SILT LOAM, 0 - 3% SLOPES (SCS-B)
- ChB2 CHESTER SILT LOAM, 3 - 8% SLOPES, MODERATELY ERODED (SCS-B)
- CgC2 CHESTER GRAVELLY SILT LOAM, 8 - 15% SLOPES, MODERATELY ERODED (SCS-B)
- GnA GLENVILLE SILT LOAM, 0 - 3% SLOPES (SCS-C)



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
David Edwards 6/16/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION
David Hamilton 7/20/08
DEPT. CHIEF OF LAND DEVELOPMENT
Barbara A. Wynn 7/23/08
DIRECTOR

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
Barbara A. Wynn 7/23/08
COUNTY HEALTH DEPARTMENT

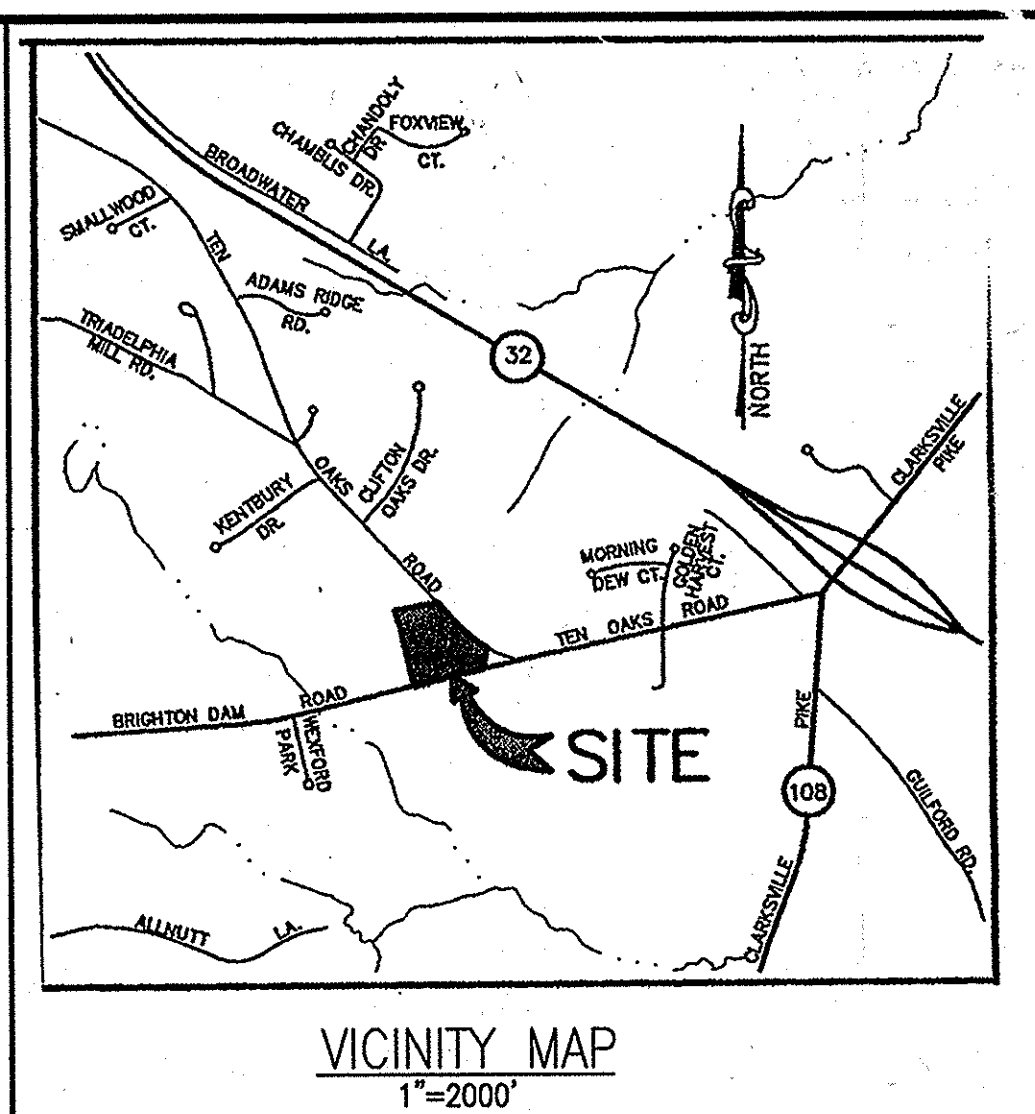
MARYLAND LAW REQUIRES
48 HOURS NOTICE
FOR ANY EXCAVATION
MISS UTILITY INC
1-800-257-7777



GENERAL LEGEND

EXISTING SANITARY MANHOLE	FOUND IRON PIN & CONC. MON.	WETLANDS
PROPOSED SANITARY SEWER	IRON PIN & CONC. MON. TO BE SET	RIGHT-OF-WAY
EXISTING SANITARY SEWER	BENCHMARK (ELEV.)	EXISTING EASEMENT
PROPOSED FORCE MAIN WITH CONC. THRUST BLOCK	EXISTING SIGNS	PROPOSED EASEMENT
PROPOSED WATER MAIN	PROPOSED SIGNS	EXISTING EDGE OF PAVEMENT
EXISTING FORCE MAIN WITH CONC. THRUST BLOCK	EXISTING LIGHT	EXISTING CURBING
EXISTING WATER LINE	PROPOSED LIGHT	PROPOSED CURBING (1' OFFSET)
EXISTING U.G. UTILITIES (TEL., TV, ELEC.)	UTILITY POLE	PROPOSED EDGE OF PAVEMENT
PROPOSED U.G. UTILITIES (TEL., TV, ELEC.)	UTILITY POLE WITH GUY WIRE	LIMITS OF CONSTRUCTION
EXISTING OVERHEAD ELEC.	EXISTING BUILDING	SOIL BOUNDARY
PROPOSED OVERHEAD ELEC.	PROPOSED BUILDING	ZONING BOUNDARY
EXIST. STORM SEWER	EXISTING CONC. SIDEWALK/PAD	EXISTING PROPERTY LINE
EXIST. STORM MANHOLE	PROPOSED CONC. SIDEWALK/PAD	PROPOSED PROPERTY LINE
PROP. STORM SEWER	POSSIBLE WELL LOCATION (WITH 100' ISOLATION DISTANCE)	ADJONER PROPERTY LINE
PROP. STORM MANHOLE	WATER VALVE, EXIST./PROP.	BUILDING RESTRICTION/SETBACK LINE
EXISTING GAS LINE	GAS VALVE, EXIST./PROP.	
PROPOSED GAS LINE	FIRE HYDRANT, EXIST./PROP.	
TREE ROW	EXISTING STORM WATER INLET (TYPE C & M)	
STONE WALL	PROPOSED STORM WATER INLET (TYPE C & M)	
STORM SEWER ENDWALL	SOIL TEST PIT	
FLARED END SECTION		
EXISTING SPOT GRADE		
PROPOSED SPOT GRADE		
PROPOSED CURB SPOT GRADE		
FOOTCANDLE INTENSITY		
1.0		

SLANTED TEXT DENOTES EXISTING FEATURES
STRAIGHT TEXT DENOTES PROPOSED FEATURES



SUMMARY TABLE

1 YR. WSEL=432.10
2 YR. WSEL=432.42
10 YR. WSEL=433.26
100 YR. WSEL=434.01

REV REQUIRED 0.071 AC-FT (PROVIDED BY GRASS SWALES)
WOV REQUIRED 0.272 AC-FT
PERMANENT POOL EL.=431.40 (0.13 AC-FT)

Wov El= 431.80 (0.27 AC-FT)
CPV REQUIRED 0.383 AC-FT
10 OP REQUIRED 35.8 cfs
10 OP PROVIDED 34.0 cfs
100 OF REQUIRED 77.3 cfs
100 OF PROVIDED 73.7 cfs

RUNOFF CURVE NUMBER COMPUTATION Version 2.10

Project : LDS Church
County : Howard State: MD User: CKL Date: 09-12-2007
Checked: Post-Development- By-Pass

COVER DESCRIPTION	Hydrologic Soil Group		
	A	B	C
	Acres (CN)		
FULLY DEVELOPED URBAN AREAS (Veg Estab.)			
Impervious Areas			
Paved parking lots, roofs, driveways	-	-	2.23(98)
OTHER AGRICULTURAL LANDS			
Meadow -cont. grass (non grazed)	---	---	11.1(58) .86(71)
woods	good	-	8(55) 1.06(70)
Total Area (by Hydrologic Soil Group)	19.1	4.15	

TOTAL DRAINAGE AREA: 23.25 ACRES WEIGHTED CURVE NUMBER: 62

0 TIME OF CONCENTRATION AND TRAVEL TIME Version 2.10

Project : LDS Church
County : Howard State: MD User: CKL Date: 09-12-2007
Checked: Post-Development- By-Pass

Flow Type	2 year rain	Length (ft)	Slope Surface (ft/ft)	code	n	Area (sq/ft)	Wp (ft)	velocity (ft/sec)	Time (hr)
Sheet	3.2	50	0.01	A				0.015	
Shallow Concent'd		300	0.013	U				0.045	
Open Channel		1600						2.30	0.193
		500						2.20	0.063
									0.32*

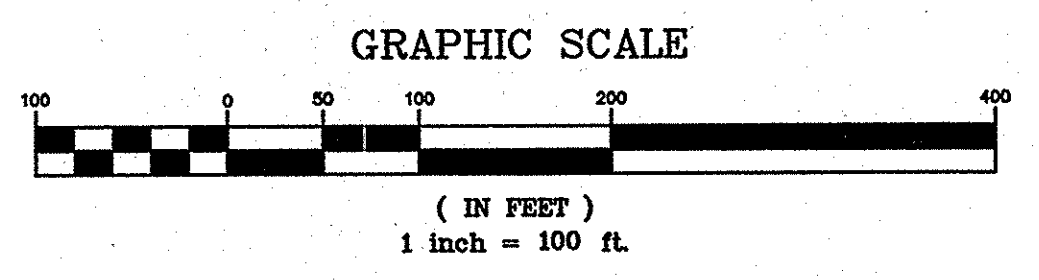
Time of Concentration =

Sheet Flow Surface Codes

A Smooth Surface	F Grass, Dense	Shallow Concentrated
B Fallow (No Res.)	G Grass, Bermuda	Surface Codes
C Cultivated < 20% Res.	H Woods, Light	P Paved
D Cultivated > 20% Res.	I Woods, Dense	U Upland
E Grass-Range, Short	J Range, Natural	

NOTE
THE PROPOSED STORM WATER MANAGEMENT FACILITY WILL BE PRIVATELY OWNED AND MAINTAINED. THE DETENTION POND IS A P-5 POCKET PND HAZARD CLASS A.

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.
LIC: #46513
EXP: 03-02-2017
NO AS-BUILT INFORMATION IS REQUIRED.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division
Candice Hamilton 7/20/08
Chief, Division of Land Development
Dorothy A. Loyell 7/20/08

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS
SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
B. Wilson for Peter Birkenson 7/23/08
COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT

NOTE
TOPOGRAPHY IS TAKEN FROM HOWARD COUNTY GIS 2004
TOPOGRAPHY MAP, MAP GRIDS 203 AND 204.

The RBA- Group
ENGINEERS • ARCHITECTS • PLANNERS
7184 Columbia Gateway Drive, Suite 205
Columbia, Maryland 21048
Phone (410) 312-0968, Fax. (410) 312-0887

MARK	DATE	REVISION
1	1/12/07	PER COUNTY COMMENTS
2	4/18/07	PER COUNTY COMMENTS
3	7/2/07	PER COUNTY COMMENTS
4	7/20/07	PER COUNTY COMMENTS
5	10/24/07	PER COUNTY COMMENTS
6	6/29/15	SUMMARY TABLE
7		
8		
9		
10		

MCA
MUHLBERG GREENE
ARCHITECTS, L.T.D.
400 Washington Street, Reading, Pennsylvania 19601
phone: 610.376.4927 fax: 610.376.0720

DRAWN BY: EVT
CHECKED BY: CKL

MCA #2782
STAMP
[Signature]
6/10/08

PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

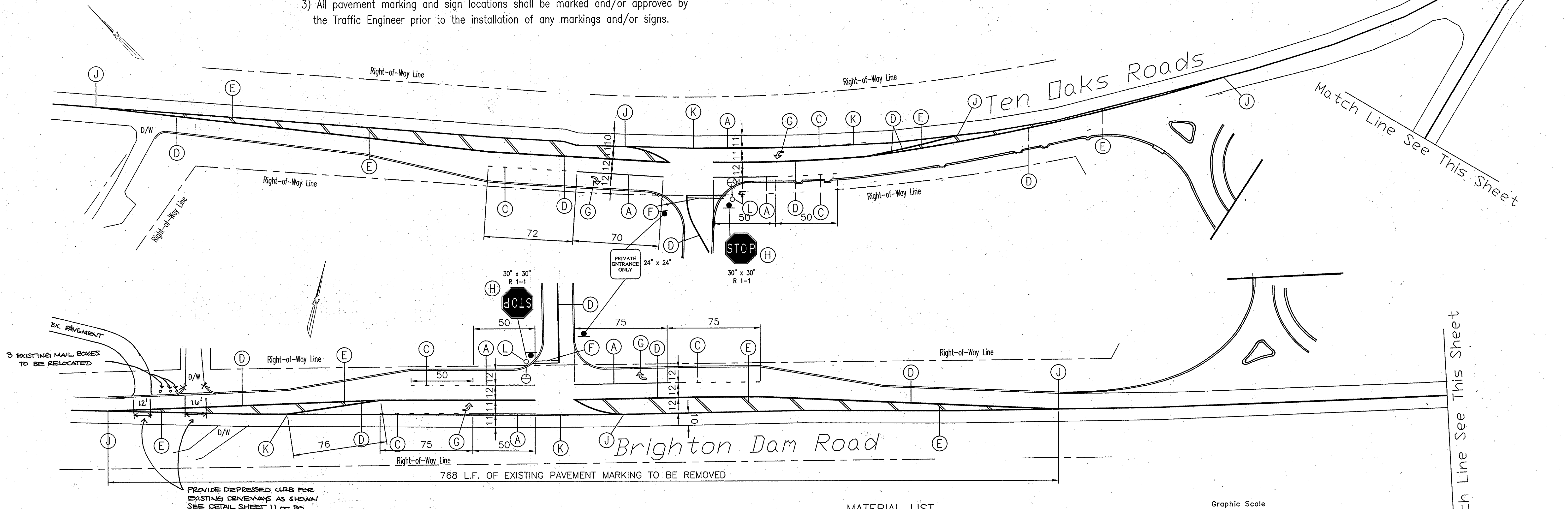
RECORDED SUBDIVISION
HUNTINGTON MANOR ESTATES
SECTION 2
AREA INFORMATION
TAX MAP 34, PARCEL 399
ZONED RR-DEO
5TH ELECTION DISTRICT OF
HOWARD COUNTY, MARYLAND
PROJECT ADDRESS
BRIGHTON DAM & TEN OAKS ROAD
CLARKSVILLE, MARYLAND

SHEET TITLE
SITE DEVELOPMENT PLAN
OVERALL POST DRAINAGE MAP
OFF-SITE POST DA.
(BY-PASS ONLY)
AS-BUILT

CURRENT BOARD OF APPEALS CASE
#BA 04-007C
PROJECT DESIGNATION
LDS 583-0273-0501-0101
PROPERTY NUMBER
565-0348
SHEET NO.
25 of 32
DEVELOPMENT NUMBER
HER-COL-98-12
DATE
07/05/08

NOTES:

- Existing pavement markings are to remain or to be removed by grinding as detailed.
- All sign posts used for traffic control signs installed in the County right-of-way shall be mounted on a 2 in. galvanized steel perforated, square tube post (14 gauge) inserted into a 2-1/ in. galvanized steel, perforated square tube sleeve (12 gauge) - 3 ft. long. A galvanized steel pole cap shall be mounted on top of each post.
- All pavement marking and sign locations shall be marked and/or approved by the Traffic Engineer prior to the installation of any markings and/or signs.



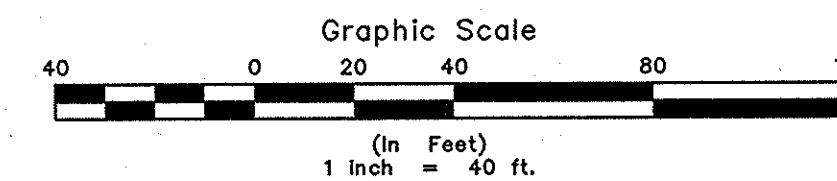
PAVEMENT MARKING DETAILS

- A. Install 5 in. wide solid white paint pavement marking for lane line.
- B. Install 5 in. wide solid white paint pavement marking for edge line.
- C. Install 5 in. wide solid white broken point pavement marking (2 ft. segment - 6 ft. gap) for lane line.
- D. Install 5 in. wide solid double yellow paint pavement marking for center line.
- E. Install 16 in. wide solid yellow paint pavement marking for gore area.
- F. Install 24 in. wide solid white thermoplastic pavement marking for stop line.
- G. Install pavement marking symbol as shown.
- H. Install ground mounted sign as shown.
- J. Tie new pavement markings into existing pavement markings.
- K. Remove existing pavement markings by grinding.
- L. Street Light (250-watt HPS vapor pendant fixture (sag) mounted at 30' on bronze fiberglass, 12 ft. arm) to be installed by Howard County DPW.

MATERIAL LIST

Material to be furnished and/or installed by the Contractor. All material in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	MD-SHA Specification Section	Description
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
400	LF	539	5 in. wide white pavement marking - (Paint).
4120	LF	549	5 in. wide yellow pavement marking - (Paint).
320	LF	549	16 in. wide point - yellow for gore area.
60	LF	549	24 in. wide Thermoplastic - white for stop line.
2	EA	549	Thermoplastic symbol - white "LEFT Arrow".
2	EA	549	Thermoplastic symbol - white "RIGHT Arrow".
2	EA	813	36 in. x 36 in. R 1-1 Sign for ground mounting.
30	LF	813	Square tube steel sign post.
850	LF	---	Removal of existing pavement markings by grinding.



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 MEET THE APPROVED PLANS AND SPECIFICATIONS.

Louis Bernstein 12/28/09
 LOUIS BERNSTEIN DATE
 MD PE #14671



MARK	DATE	REVISION
1	3/10/06	PER COUNTY COMMENTS
2	6/29/06	PER COUNTY COMMENTS
3	10/25/06	PER COUNTY COMMENTS
4	1/12/07	PER COUNTY COMMENTS
5	4/18/07	PER COUNTY COMMENTS
6	7/2/07	PER COUNTY COMMENTS
7	9/20/07	PER COUNTY COMMENTS
8	10/24/07	PER COUNTY COMMENTS
9	10/24/07	PER COUNTY COMMENTS
10	9/3/09	EX. DRIVEWAY ENT.
11	11/18/09	AS-BUILT

SITE DEVELOPMENT PLAN

Pavement Marking and Signing Plan

AS-BUILT THE CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS

Tax Map No.: 34 Parcel No.: 399
 5th Election District Howard County, Maryland
 Scale: 1" = 40' Zoned: RR-DEO

Building Permit/CD Review January 9, 2006
 Sheet 26 OF 30

SDP-06-01

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chad Chambers 6/16/08
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Cindy Hamilton 7/20/08
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
Marsha A. Leight 7/21/08
 DIRECTOR DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
Brian Webster 7/23/08
 COUNTY HEALTH OFFICER DATE
 HOWARD COUNTY HEALTH DEPARTMENT

The RBA-Group
ENGINEERS • ARCHITECTS • PLANNERS
 7164 Columbia Gateway Drive, Suite 205
 Columbia, Maryland 21046
 Phone (410) 312-0966, Fax. (410) 312-0897

The Traffic Group
 The Traffic Group, Inc.
 Suite H
 9900 Franklin Square Drive
 Baltimore, Maryland 21236
 410-931-6600
 1-800-583-8411
 Fax 410-931-6601

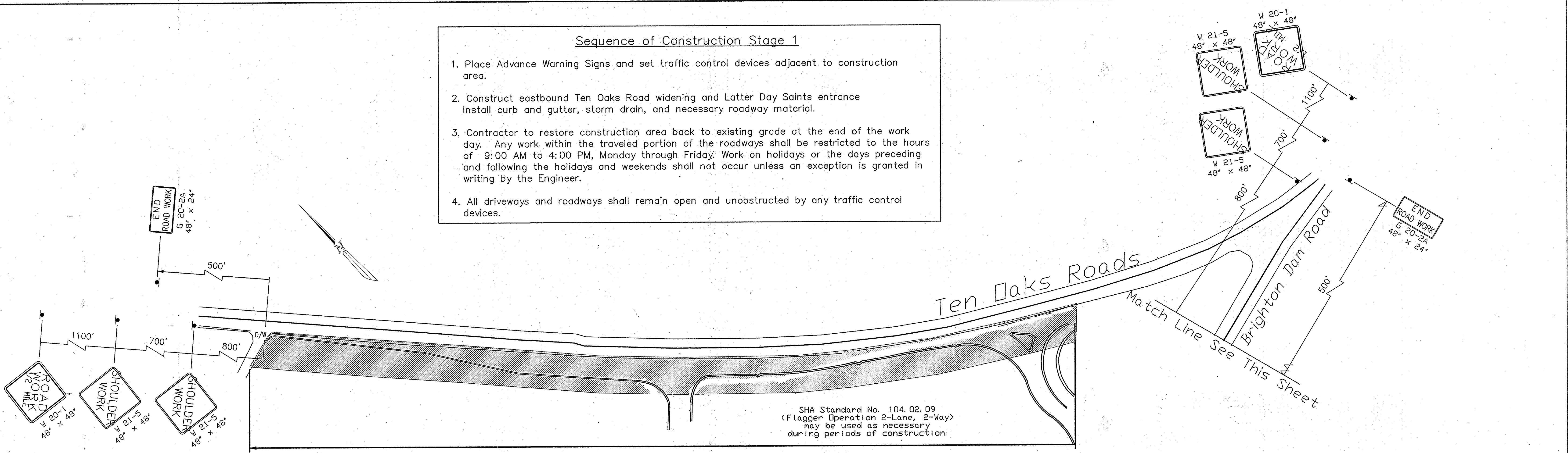
PREPARED FOR
 THE CHURCH OF JESUS CHRIST
 OF LATTER DAY SAINTS
 C/O L2M ARCHITECTS
 811 CROMWELL PARK DR., SUITE 113
 GLEN BURNIE, MARYLAND 21061
 410-863-1302

Address Chart	
Parcel Number	Street Address
P 339	6020 TEN OAKS ROAD
CURRENT BOARD OF APPEALS CASE #BA 04-007C	
Project	Section/Area Parcel
The Church of Jesus Christ of Latter-Day Saints	SECTION 2 339
Deed Ref. Block No. Zone Tax Map Elec. Dist. Census Tr.	
LIBER: 01556 10 & 11 HR-DEO 34 5TH 6051.01	
FOLIO: 0608	
Water Code	Sewer Code
PRIVATE	PRIVATE

AS-BUILT THE CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS
 Tax Map No.: 34 Parcel No.: 399
 5th Election District Howard County, Maryland
 Scale: 1" = 40' Zoned: RR-DEO
 Building Permit/CD Review January 9, 2006
 Sheet 26 OF 30

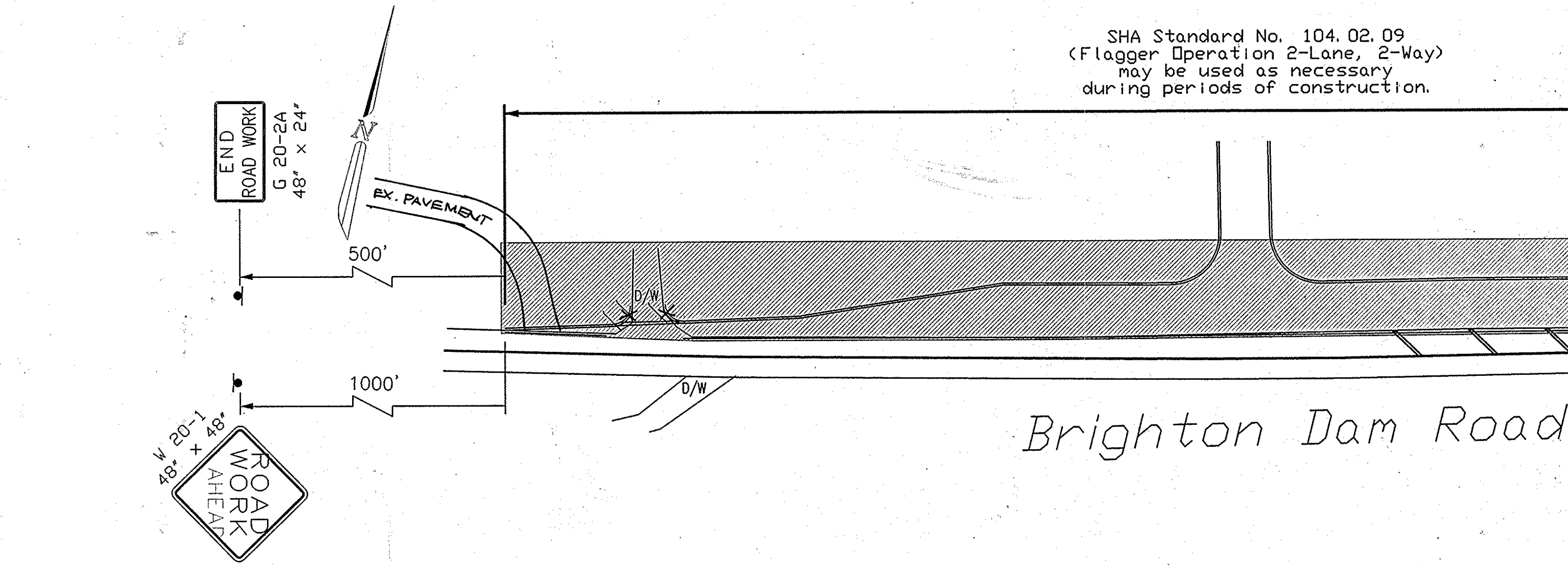
Sequence of Construction Stage 1

1. Place Advance Warning Signs and set traffic control devices adjacent to construction area.
2. Construct eastbound Ten Oaks Road widening and Latter Day Saints entrance. Install curb and gutter, storm drain, and necessary roadway material.
3. Contractor to restore construction area back to existing grade at the end of the work day. Any work within the traveled portion of the roadways shall be restricted to the hours of 9:00 AM to 4:00 PM, Monday through Friday. Work on holidays or the days preceding and following the holidays and weekends shall not occur unless an exception is granted in writing by the Engineer.
4. All driveways and roadways shall remain open and unobstructed by any traffic control devices.



SHA Standard No. 104.02.09
(Flagger Operation 2-Lane, 2-Way)
may be used as necessary
during periods of construction.

SHA Standard No. 104.02.09
(Flagger Operation 2-Lane, 2-Way)
may be used as necessary
during periods of construction.



Sequence of Construction Stage 2

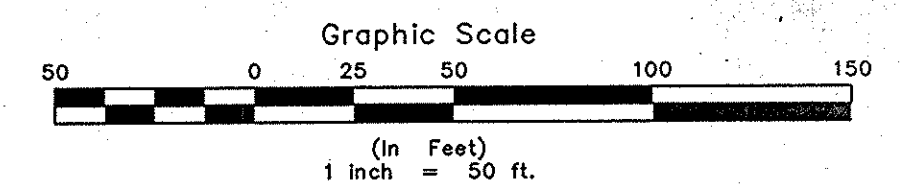
1. Place Advance Warning Signs and set traffic control devices adjacent to construction area.
2. Construct westbound Brighton Dam Road widening and Latter Day Saints entrance. Install curb and gutter, storm drain, and necessary roadway material.
3. Contractor to restore construction area back to existing grade at the end of the work day. Any work within the traveled portion of the roadways shall be restricted to the hours of 9:00 AM to 4:00 PM, Monday through Friday. Work on holidays or the days preceding and following the holidays and weekends shall not occur unless an exception is granted in writing by the Engineer.
4. All driveways and roadways shall remain open and unobstructed by any traffic control devices.

Drop Off Policy

Contractor to maintain less than 5 in. of drop-off during periods of non-construction.

LEGEND

- Work Zone
- Existing Geometrics
- Proposed Geometrics
- Construction Signs
- Channelizing Devices (Drums)
- Arrow Panel
- Direction of Travel
- Type III Barricade

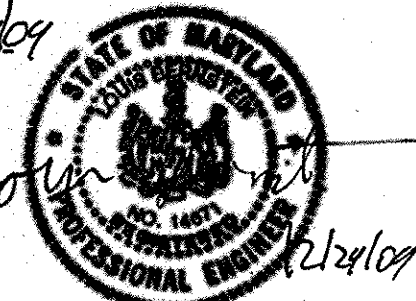


MARK	DATE	REVISION
1	3/10/06	PER COUNTY COMMENTS
2	6/29/06	PER COUNTY COMMENTS
3	10/25/06	PER COUNTY COMMENTS
4	1/12/07	PER COUNTY COMMENTS
5	4/18/07	PER COUNTY COMMENTS
6	7/20/07	PER COUNTY COMMENTS
7	10/24/07	PER COUNTY COMMENTS
8	9/3/09	RR DRIVEWAY BMT.
9	11/18/09	AS-BUILT
10		

SITE DEVELOPMENT PLAN

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signatures and Dates: 6/16/08, 7/29/08, 1/31/09]

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 MEET THE APPROVED PLANS AND SPECIFICATIONS.
 [Signatures and Dates: 12/16/09]



The RBA-Group
 ENGINEERS • ARCHITECTS • PLANNERS
 7164 Columbia Gateway Drive, Suite 205
 Columbia, Maryland 21046
 Phone (410) 312-0968, Fax (410) 312-0897

The Traffic Group
 The Traffic Group, Inc.
 Suite H
 9900 Franklin Square Drive
 Baltimore, Maryland 21236
 410-931-6600
 1-800-583-8411
 Fax 410-931-6601

PREPARED FOR
 THE CHURCH OF JESUS CHRIST
 OF LATTER DAY SAINTS
 C/O L2M ARCHITECTS
 811 CROMWELL PARK DR., SUITE 113
 GLEN BURNIE, MARYLAND 21061
 410-863-1302

Address Chart	
Parcel Number	Street Address
P 339	6020 TEN OAKS ROAD
CURRENT BOARD OF APPEALS CASE #BA 04-007C	
Project	Section/Area
The Church of Jesus Christ of Latter-Day Saints	SECTION 2
Deed Ref. Block No. Zone Tax Map Elec. Dist. Census Tr.	Parcel
LIBER: 01556 10 & 11 RR-DEO 34 5TH 6051.01	339
Water Code	Sewer Code
PRIVATE	PRIVATE

Maintenance of Traffic Plan
AS-BUILT
The Church of Jesus Christ of Latter-Day Saints
 Tax Map No.: 34 Parcel No.: 399
 5th Election District Howard County, Maryland
 Scale: 1" = 50' Zoned RR-DEO
 Building Permit/CD Review Date: January 9, 2006
 Sheet 27 of 30

GENERAL NOTES FOR TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATIONS (TTCTA)

- 1.0 INTRODUCTION
- 1.1 The General Notes (GN) supplement the TTCTA setups, and have been assembled to provide additional directions on the installation and application of traffic control devices shown on these standards. The GN's also provide additional guidelines and other useful information that will facilitate the installation of appropriate temporary traffic controls. Users of these standards shall also comply with the provisions of the Manual on Uniform Traffic Control Devices (MUTCD), the Standard Specifications for Construction and Materials, and General Provisions for Construction Contracts.
- 1.2 The TTCTA show the minimum requirements necessary to plan for the safety of workers, motorists, pedestrians and other traffic throughout the temporary traffic control zone for various types of activity along roadways. Typically, more traffic control devices are required for long-term stationary work activities than for short-term stationary work activities. Additional temporary traffic control devices may be necessary because of other traffic factors such as the roadway's accident history, expected traffic backups, high truck traffic, roadway geometrics or characteristics, and other conditions that may adversely affect the smooth flow of traffic. The users of these TTCTA should review the temporary traffic control setup once in place to insure that traffic is traveling smoothly throughout the traffic control zone, meeting driver expectations, and no other adjustments to the temporary traffic control devices are necessary. This review is to be repeated on a frequent basis as noted elsewhere.
- 1.3 The TTCTA address a wide variety of different applications, however, every situation could not be shown. Therefore, charts have been provided which show standard devices to be used for the proposed work zone activity, and the placement of these devices for certain roadway conditions and work durations. The user is expected to combine the information of these charts into a workable traffic control plan.
- 1.4 In applying these standards and guidelines, questions for applications and interpretations should be referred to the State Highway Administration's Assistant District Engineer-Traffic, County Traffic Engineer, City Traffic Engineer, Public Works Department and so forth, who are the experts in traffic engineering and who have jurisdiction on the appropriate roadways for applying such controls. The user should also refer to the appropriate speed criteria for the appropriate speed condition and other operational and/or elements.
- 4.0 SIGNS
- 4.1 Signs should be spaced at the distances shown on the typical application diagrams.
- 4.2 See the 'Sign and Buffer Spacing Charts/Standard Temporary Traffic Control Operations' for the appropriate spacing of the advance warning signs for lower speed highway facilities.
- 4.3 The advance warning area may need to be lengthened with additional signs in order to provide sufficient warning to upstream motorists, especially if traffic is expected to backup past any of the warning signs near the work site.
- 4.4 When bus and/or truck volumes are high, as determined by the Engineer, an initial advance warning sign may be placed on the left side of a multilane undivided roadway.
- 4.5 Fluorescent Orange High Performance Wide Angle Retro Reflective Sign Sheeting material shall be used on all warning signs erected in construction zones along freeways, and major expressways with an Average Daily Traffic of 50,000 vehicles or more. These signs shall also be used on the highway ramps leading to these roadways.
- 4.6 FHPRMA Retro reflective Sign Sheeting material may be used for maintenance work along freeways and major expressways at the discretion of the Engineer.
- 4.7 Approved temporary roll up signs may be used for maintenance work along all roadways.
- 4.8 On 60 mph and 65 mph highways, special temporary traffic control regulatory speed signing shall be required for work activities of one hour duration or longer, unless otherwise directed by the Engineer. These signs are to be placed as directed in the General Notes.
- 4.9 Sign designations and messages for the most common signs used in work zones are shown within these General Notes. See Specification 104.08.05 for information on other temporary traffic signs.
- 4.10 Hat and Shovel signs shall be used for projects lasting greater than two months in duration, unless otherwise specified by the Engineer.
- 4.11 In urban areas along streets where the prevailing speed is 35 mph or less, and along secondary roads where the Average Daily Traffic (ADT) is less than 1000 vehicles, the minimum sign size of 36 in. x 36 in. may be used.
- 4.12 For utility operations, advance warning signs may utilize the word 'AHEAD' in lieu of distances up to 1500 feet. At greater distances, such as 1/2 mile or 1 mile, however, the correct distance value is to be used on such warning signs. Also the UTILITY WORK AHEAD sign may be used in lieu of ROAD WORK _____, or SHOULDER WORK _____ signs only.
- 4.13 Warning signs mounted on wood posts, and those mounted on approved portable supports shall be mounted in conformance with Standard No. MD 104.00.26.
- 4.14 Existing regulatory, warning, and guide signs that do not apply due to temporary traffic conditions will be covered with the approval of the Engineer.
- 4.15 All work zone signing shall be in accordance with the typical sign placement shown on this plan and shall not obstruct existing traffic control devices.
- 5.0 PORTABLE VARIABLE MESSAGE SIGNS
- 5.1 The sequential arrow mode display is prohibited on portable variable message signs.
- 6.0 ARROW PANELS
- 6.1 Arrow panels that are installed along the shoulder or median of roadways with prevailing speeds greater than 40 mph shall be provided with a minimum shoulder closure taper of 1/3 the taper length. (See 7.0 Channelizing Devices). For all other roadways a 100 foot minimum shoulder closure taper shall be used.
- 7.0 CHANNELIZING DEVICES
- 7.1 Taper Formulas:
 $L = WS$ for speeds greater than 40 mph
 $L = WS^2/60$ for speeds equal to or less than 40 mph
 Where: L = minimum length of taper (ft)
 S = maximum value of prevailing travel speed or speed limit (MPH), whichever is higher, prior to work starting.
 W = width of offset (ft.)
- 7.2 Maximum spacing between channelizing devices:
 a. Taper Channelization - shall be equal in feet to the posted speed limit.
 b. Tangent Channelization - shall be equal in feet to twice the posted speed limit.
- 7.3 Channelizing devices, especially at horizontal or vertical curves, are to be extended to a point where they are visible to approaching traffic. A full taper length on two-lane, two-way roadways shall always be provided in advance of curves.
- 7.4 Drums should always be used to form the taper on roadways having a posted or prevailing travel speed (whichever is higher) equal to or greater than 40 MPH.
- 7.5 Storing channelizing devices along any roadway is prohibited without approval of the Engineer.
- 7.6 Type 3 object markers (VP-1) are required for barrier flare/tangent points.
- 7.7 The appropriate channelizing devices (including approved barriers) to separate opposing traffic shall be as shown on the plans or as directed by the Engineer.

- 8.0 PAVEMENT MARKINGS
- 8.1 Pavement markings no longer applicable shall be completely removed or obliterated. Temporary markings shall be used as necessary. Operations less than 12 hours or undertaken during the daytime may require that the permanent markings be temporarily covered with black tape as specified below.
- 8.2 Pavement marking lines adjacent to any lane transition or lane closure taper shall be removed or covered with SH approved black pavement marking tape as specified on TTCTA for over 12 hours or nighttime use, unless otherwise directed by the Engineer. Pavement marking lines shall be re-installed (or uncovered) prior to re-opening the closed lane(s).
- 8.3 Temporary markings on intermediate pavement surfaces shall be painted placed to full dimensions per the Contract Documents. (i.e., continuous double yellow center lines; single dashed yellow center line [10 ft. segments, 30 ft. gaps] to denote passing when allowed; lane lines [10 ft. segments, 30 ft. gaps]).
- 8.4 On straight sections of roadway with full dimension center and/or lane lines, but without edge lines, channelizing drums may be used to delineate the edge of the roadway and may be spaced up to 500 ft. apart where no undue hazards exist and when directed by the Engineer. On curve sections, this spacing shall be reduced to a value equal to the posted speed limit, unless otherwise directed by the Engineer.
- 9.0 FLAGGING
- 9.1 Where two or more flaggers are to be used and are unable to see each other, two-way radio communications shall be used.
- 9.2 If the entire work area is visible from one station, a single flagger may be used, subject to other safety considerations.
- 9.3 All channelizing devices and flag person(s) shall be moved accordingly as construction progresses.
- 9.4 All persons designated as Flaggers shall be MD-SHA certified.
- 10.0 VEHICLES
- 10.1 Work vehicles should not occupy or be stopped in a lane beyond a horizontal curve or a vertical curve (hill). Instead, vehicles stopping are to be pulled as far off the road as possible or be otherwise parked in a manner as to inhibit the movement of traffic as little as possible. If stopping is necessary and no protection vehicle is available, place channelizing devices in conformance with the placement of channelizing devices at curves as specified in 7.0, Channelizing Devices.
- 10.2 Work vehicles, if required, should not occupy any part of the buffer area. Instead vehicle(s) may occupy part of the work area.
- 10.3 Vehicle safety lights (amber in color) shall be approved by the Office of Traffic & Safety.
- 10.4 A protection vehicle with a rear truck-mounted attenuator (TMA) shall be required for all work operations on freeways, where no formal lane closure exists. A formal lane closure includes a full complement of advance warning devices, a lane closure taper of channelizing devices and channelizing devices to define the work area as required. A protection vehicle shall also be required for highway marking and may be required under other traffic and work conditions in conformance with SH policy or as directed by the Engineer. The protection vehicle may be considered the initial advance warning for some mobile work operations. This vehicle should be used in advance of horizontal and/or vertical curves to provide the advance warning for a work operation hidden by curves. Consideration should also be given to placing an additional temporary advance warning sign(s) on truck-mounted variable message sign no less than 500 ft. and no more than 1500 ft. (or no more than 1/2 mile for expressway conditions) in advance of the protection vehicle, when one or more of the traffic factors listed under General Notes 1.2 exist.
- 11.0 WORK RESTRICTIONS
- 11.1 Work within a lane, or within 15 ft. of the nearest edge line is prohibited during the peak hours 8 AM - 9 AM and 3 PM - 7 PM, Monday - Friday. Also, such work is not permitted on Saturdays, Sundays, National or State holidays or days preceding and following said holidays. These work restrictions apply unless otherwise specified in the Contract Document or permitted by the Engineer.
- 11.2 Travel lanes shall be a minimum of ten feet in width. When only one lane is open, a certified flag person(s) properly trained and attired with the appropriate signing shall be provided. The roadway should be reopened to two lanes in accordance with work hour restrictions.
- 11.3 All open trenches shall be closed at the end of each day. If steel plates are to be used, appropriate signing will be required.
- 11.4 Access shall be provided to all existing driveways at all times. The Contractor is to insure during one lane flagging operation that no vehicles exit from any driveways between both flag persons in the incorrect direction.
- 12.0 TRAFFIC CONTROL PLANS
- 12.1 Alternate traffic control plans may be presented to the MD-SHA for approval in conformance with Specification 104.01.
- 12.2 For emergency repair operations, a minimum number of traffic control devices (TCD's) may be used. This generally will consist of one sign per direction. Flashing lights on the vehicle, a minimum number of channelizing devices, and flags or high level warning devices. Additional TCD's such as, arrow panel(s), noise signing, etc., will be placed as soon as possible to present an array of devices which are consistent with the standard TTCTA.
- 12.3 All signs, channelizing devices, and other traffic control devices shall be in conformance with the latest edition of the MUTCD.

DROP-OFF GUIDELINES FOR WORK AREAS WHERE TRAFFIC IS BEING MAINTAINED

During work activities involving pavement surface work, including shoulders, it often becomes necessary to maintain traffic along-side or near lanes and shoulders having different elevations (drop-offs). Special traffic control devices are needed to safely protect and guide traffic through such areas. The traffic control requirements for drop-off situations are described in these guidelines.

I. PAVING, RESURFACING, GRINDING AND MILLING

1. Pavement Drop-Offs of 2 inches or Less:
 Adjacent pavement elevation differences, drop-offs, of two inches or less may be safely crossed by traffic. Drop-offs of two inches or less shall be indicated to traffic through the use of the UNEVEN PAVEMENT warning sign.

The UNEVEN PAVEMENT warning sign is to be placed in advance of and repeated throughout the limits of the drop-off in accordance with Standard No. MD-104.89-01. When needed, the GROOVED warning supplemental sign plate shall be mounted below each sign.

NOTE: Adjacent pavement elevation differences, drop-offs, exceeding two inches shall be matched with the abutting lanes or shoulders on the same working day. As a result of this the complete pavement section including shoulders shall be at the same elevation at the end of each working day.

2. Pavement Edge Drop-Offs of 2 inches or Less:
 Pavement edge elevation differences, drop-offs, of two inches or less shall be indicated to traffic through the use of the UNEVEN PAVEMENT warning sign. The pavement edge is defined as being between travel lane and shoulder.

The UNEVEN PAVEMENT warning sign is to be placed in advance of and repeated throughout the limits of the drop-off in accordance with Standard No. MD-104.89-02.

3. Shoulder Edge Drop-Offs of 2 inches or Less:
 No advance warning for traffic is necessary when shoulder edge elevation differences, drop-offs, of two-inches or less exist. The shoulder edge is defined as being between shoulder and earth grading.

4. Tie-in to Existing Pavement:
 Temporary tie-in transitions during the paving operation shall be a minimum of 4 feet in length for each 1 inch of course depth. The longitudinal tie-in shall be completed prior to traffic being allowed on the pavement.

II. PAVEMENT RECONSTRUCTION

1. Pavement Edge and Shoulder Edge Drop-Offs Greater Than 2 inches, But 5 inches or Less:
 Drop-offs between lane and shoulder and shoulder and earth grading, exceeding two inches, but equal to or less than five inches shall be provided with an abutting wedge with a slope of 4:1 or flatter at all times while no work is being performed. See Standard No. MD-104.90 for wedge details. Drums or other suitable channelizing devices are used to mark the area even when a traversable wedge is in place.

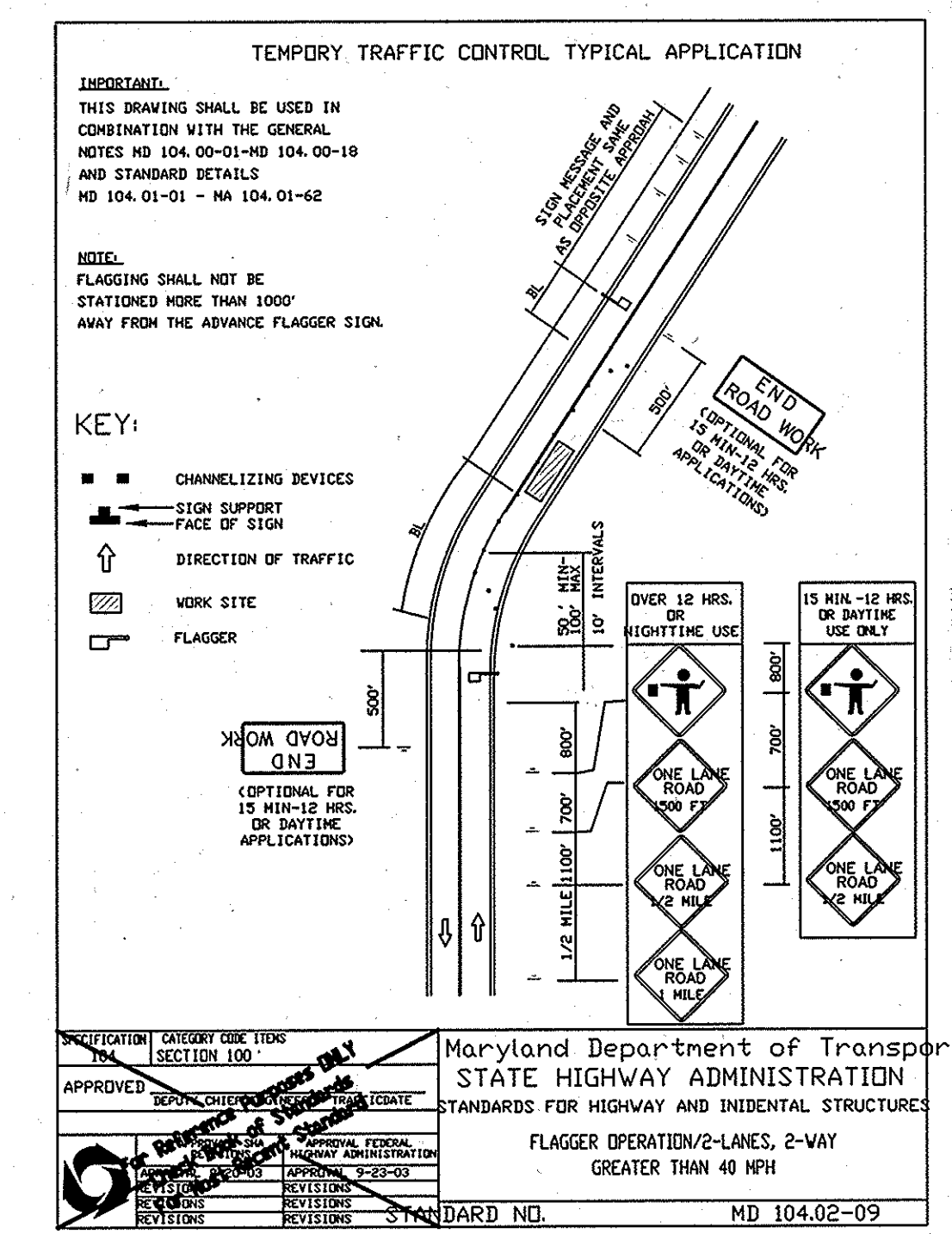
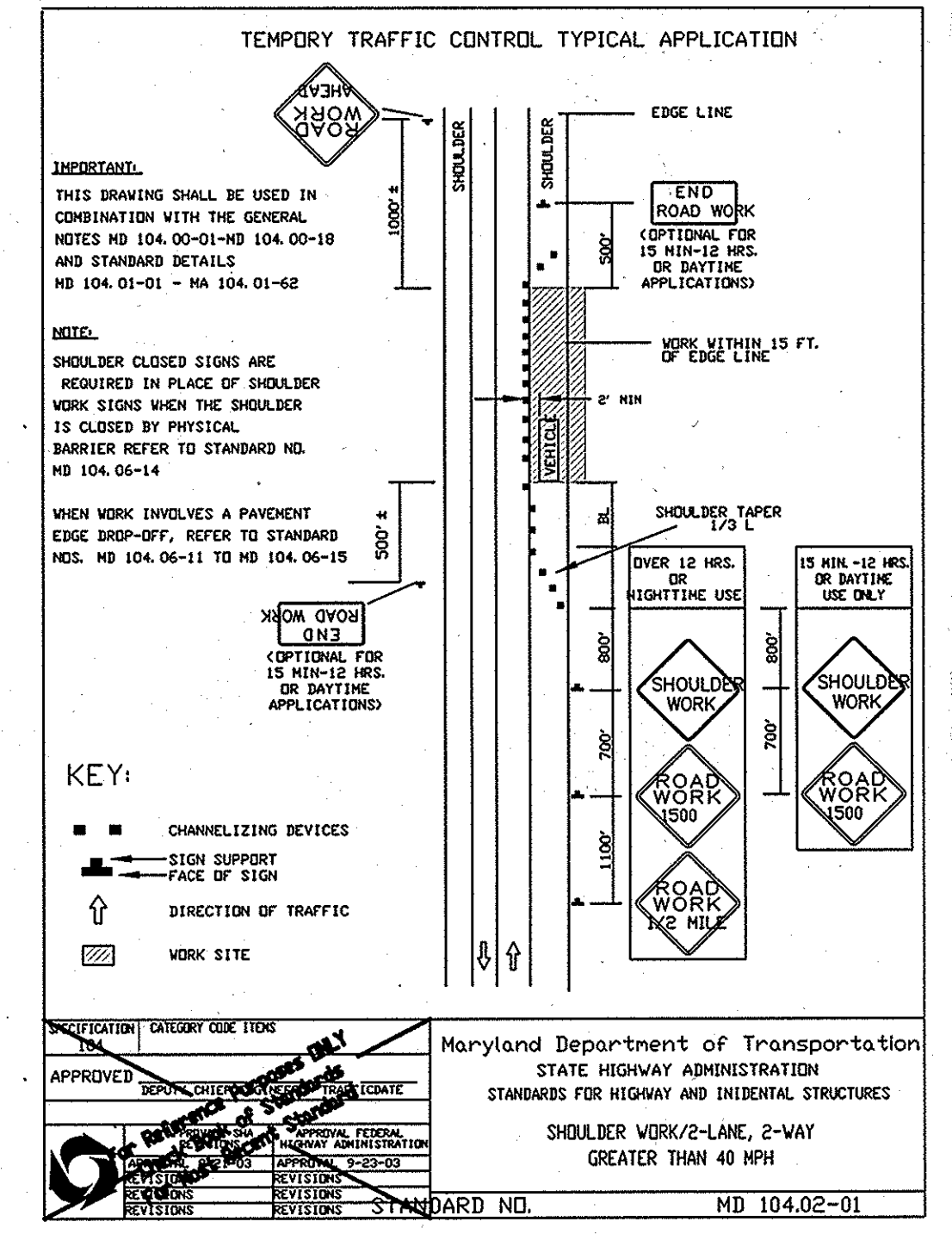
Drop-offs in this range shall be indicated to traffic through the use of Standard No. MD-104.95.

2. Drop-Offs Exceeding 5 inches:
 Continuous drop-offs exceeding five inches if next to or within 12 feet of a lane of traffic, shall be provided with a temporary concrete barrier or other suitable barrier as may be approved by the Engineer, to preclude crossing the drop-off throughout its entire length. See Standard No. MD-104.91-01.

Continuous drop-offs exceeding five inches, but greater than 12 feet away from traffic, shall be provided with an approved barrier shall be provided with an abutting wedge with a slope of 4:1 or flatter at all times while no work is being performed. See Standard No. MD-104.91-02 for wedge details. Drums or other suitable channelizing devices are needed to mark the area.

For a series of drop-offs within a lane or a shoulder typically as a result of concrete joint or pavement repair, all areas where the pavement material has been removed shall be repaired the same working day. When traffic is permitted to occupy the adjacent lane(s) to this work, drums or other suitable channelizing devices shall be placed in front and completely across the excavated area, in addition to the traffic control requirements for the lane or shoulder work.

The decision to use barrier to separate the work space from traffic will be determined by the Design Engineering Team. This team should consider such things as traffic volumes; vehicle speeds and weaving; trucks; highway geometrics; length of work space; duration of work; etc. ...



General Notes & Standards Are For Reference Purposes ONLY Check the MD-SHA Standards For Highway and Incidental Structures For The Most Recent Standards

All Construction Signs Are To Be Fabricated Utilizing Fluorescent Orange High Performance Sign Material

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION SIGN AND BUFFER SPACING CHARTS STANDARD TEMPORARY TRAFFIC CONTROL OPERATIONS

SPEED (MPH)	MINIMUM DISTANCE FROM TAPER TO FIRST SIGN	ADDITIONAL SIGNS IN SERIES TO BE SPACED AT MINIMUM	MINIMUM DISTANCE BETWEEN ADVANCED WARNING SIGNS
0 - 25	300'	3	600'
30 - 35	300'	3	900'
36 - 40	300'	3	1500'
41 - 45	900'	7	2600' (1/2 MILE)
			3500' (1 MILE)

* SPEED LIMIT OR PREVAILING TRAVEL SPEED, WHICHEVER IS HIGHER.
 BELOW EXCEPTED LINES ONE-WAY ROADWAY TRAVEL LIMIT IS 35 MPH/PREVAILING SPEED IS 35 MPH USE 40 MPH

The RBA Group
 ENGINEERS • ARCHITECTS • PLANNERS
 7164 Columbia Gateway Drive, Suite 205
 Columbia, Maryland 21046
 Phone (410) 312-0868, Fax. (410) 312-0897

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 DATE: 6-16-08

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
 DATE: 7/2/08

APPROVED: COUNTY HEALTH DEPARTMENT
 DATE: 7/2/08

The Traffic Group
 The Traffic Group, Inc.
 Suite H
 9900 Franklin Square Drive
 Baltimore, Maryland 21236
 410-931-6600
 1-800-583-8411
 Fax 410-931-6601

ENGINEER'S CERTIFICATE

I hereby Certify That This Plan For Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.

Signature of Engineer: *[Signature]* Date: 4/3/08

Reviewed For Howard-County Soil Conservation District And Meets Technical Requirements.

U.S.D.A. - Natural Resources Conservation Service Date: _____

DEVELOPER'S CERTIFICATE

I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources 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 Or Their Authorized Agents, As Are Deemed Necessary.

Signature of Developer: *[Signature]* Date: 4/3/08

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

District Howard Soil Conservation Dist. Date: _____

Address Chart

Parcel Number	Street Address
P 339	6020 TEN OAKS ROAD
	CURRENT BOARD OF APPEALS CASE #BA 04-007C

Project	Section/Area	Parcel
The Church of Jesus Christ of Latter-Day Saints	SECTION 2	339

Deed Ref.	Block No.	Zone	Tax-Map	Elec. Dist.	Census Tr.
LIBER: 01556	10 & 11	RR-DEO	34	5TH	6051.01

Water Code: PRIVATE
 Sewer Code: PRIVATE

SITE DEVELOPMENT PLAN

Maintenance of Traffic

AS-BUILT
 General Notes
The Church of Jesus Christ of Latter-Day Saints

Tax Map No.: 34
 5th Election District
 Scale: 1" = 50'

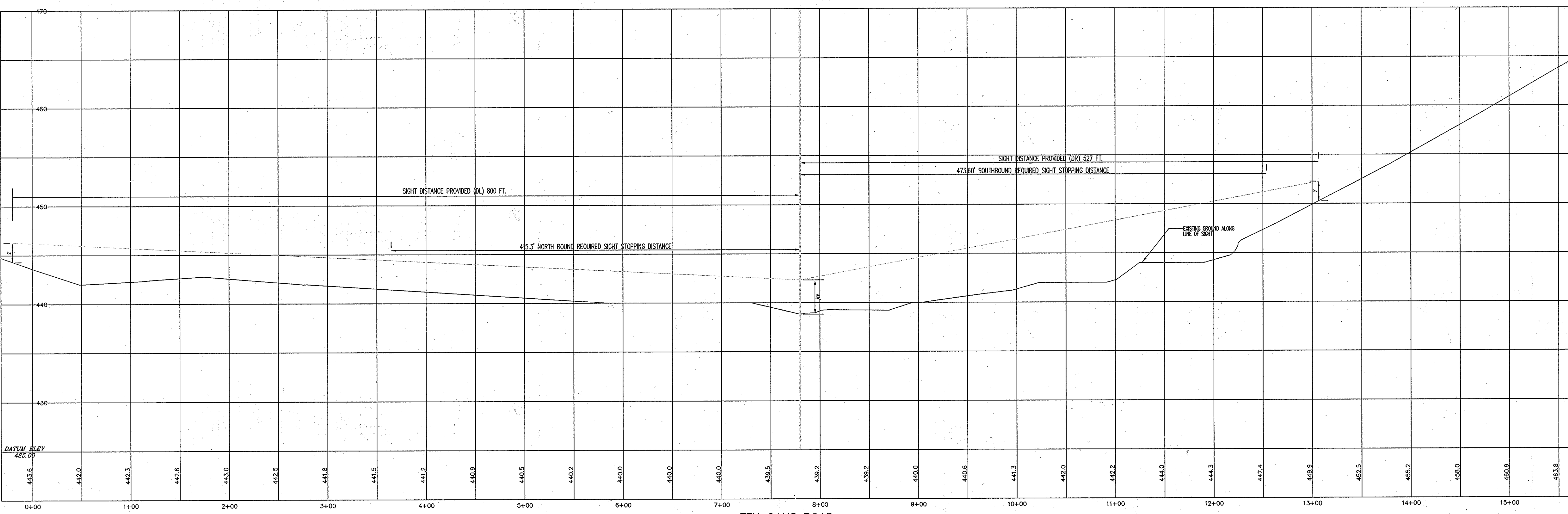
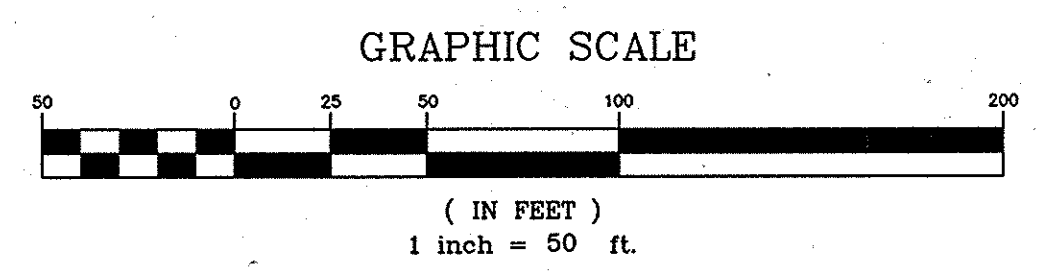
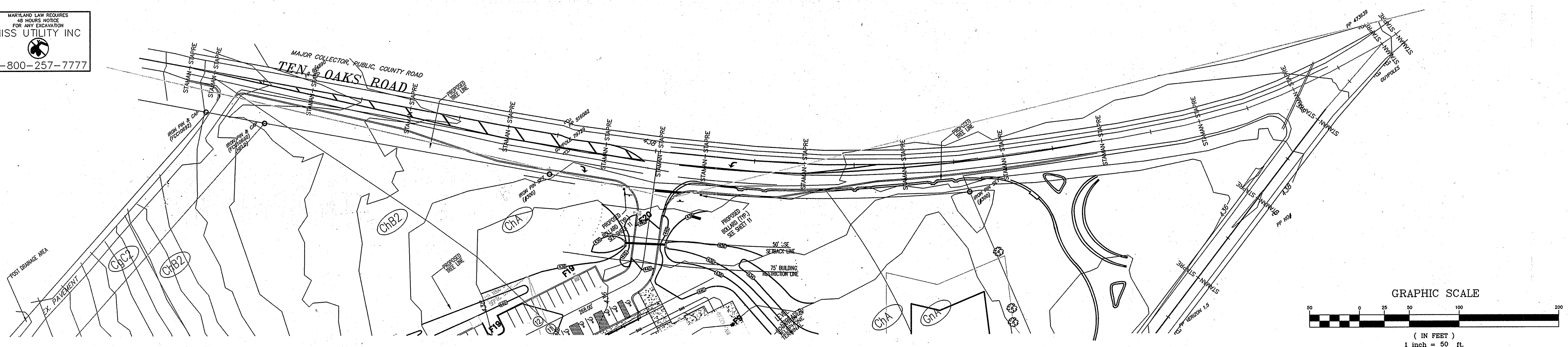
Parcel No.: 399
 Howard County, Maryland
 Zoned RR-DEO

Building Permit/CD Review Date: January 9, 2006
 Sheet 28 of 30

SDP-06-01

MARK	DATE	REVISION
1	3/10/06	PER COUNTY COMMENTS
2	6/29/06	PER COUNTY COMMENTS
3	10/25/06	PER COUNTY COMMENTS
4	1/12/07	PER COUNTY COMMENTS
5	4/18/07	PER COUNTY COMMENTS
6	9/20/07	PER COUNTY COMMENTS
7		
8		
9		
10		

MARYLAND LAW REQUIRES
48 HOURS NOTICE
FOR ANY EXCAVATION
MISS UTILITY INC
1-800-257-7777



TEN OAKS ROAD
1"=50' (HORIZONTAL)
1"=5' (VERTICAL)

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 MEET THE APPROVED
PLANS AND SPECIFICATIONS.

Louis Bernstein
LOUIS BERNSTEIN
MD PE #14671
DATE 7/29/08

DL
85TH PERCENTILE OPERATING SPEED = 53 M.P.H.
LEFT TURN REQUIRED = 1,250 FT.
STOPPING SIGHT DISTANCE = 473.6 FT.
PROVIDED SIGHT DISTANCE = 527 FT.

DL
85TH PERCENTILE OPERATING SPEED = 50 M.P.H.
LEFT TURN REQUIRED = 750 FT.
RIGHT TURN REQUIRED = 1,140 FT.
STOPPING SIGHT DISTANCE = 415.3 FT.
PROVIDED SIGHT DISTANCE = 800 FT.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Shed Edwards 6/16/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION
Conita Hamilton 7/29/08
CHIEF, DIVISION OF LAND DEVELOPMENT
David A. Goff 7/21/08
DIRECTOR

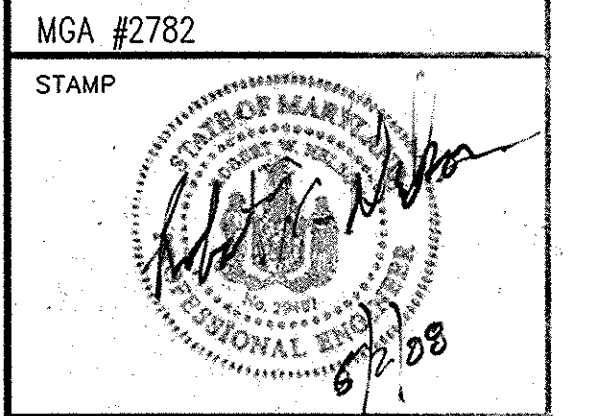
APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS
SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
Brian P. Peterson 7/23/08
COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT



MARK	DATE	REVISION
1	1/12/07	PER COUNTY COMMENTS
2	10/27/07	PER COUNTY COMMENTS
3	11/18/09	AS-BUILT
4		
5		
6		
7		
8		
9		
10		

MGA
MUHLENBERG GREENE
ARCHITECTS, L.T.D.
400 Washington Street, Reading, Pennsylvania 19601
phone: 610.376.4927 fax: 610.376.0720

DRAWN BY: EVT
CHECKED BY: CKL



PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION
HUNTINGTON MANOR ESTATES
SECTION 2
AREA INFORMATION
TAX MAP 34, PARCEL 399
ZONED RR-DEO
5TH ELECTION DISTRICT OF
HOWARD COUNTY, MARYLAND
PROJECT ADDRESS
BRIGHTON DAM & TEN OAKS ROAD
CLARKSVILLE, MARYLAND

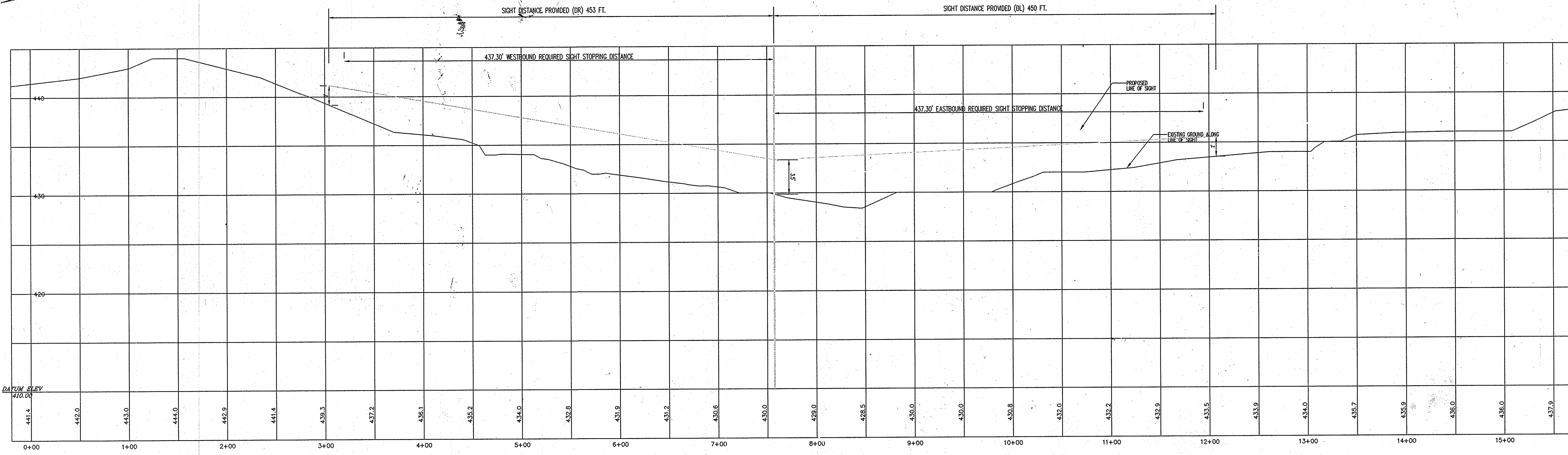
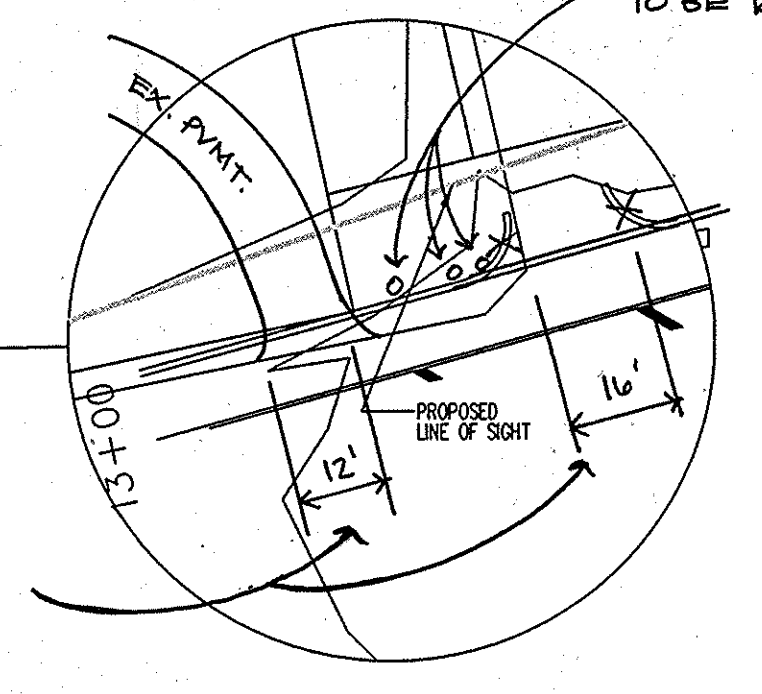
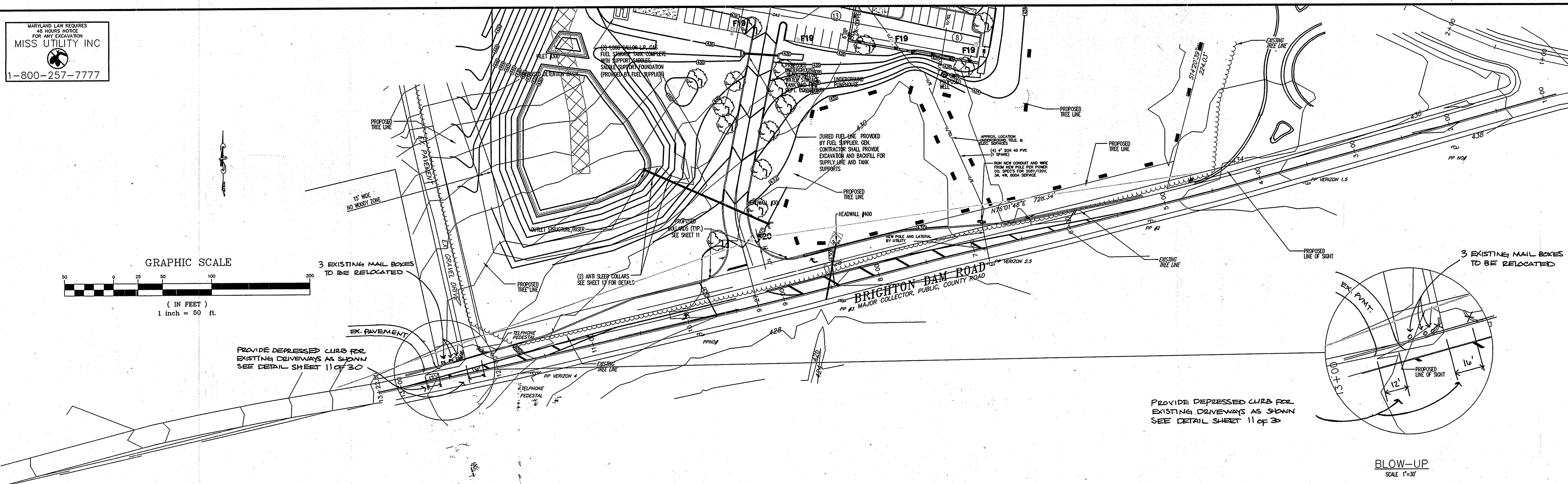
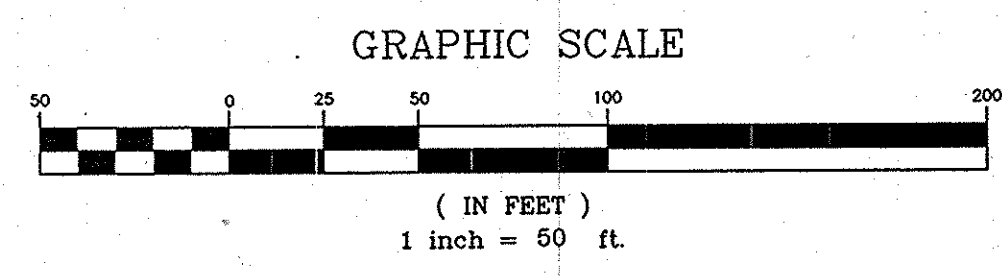
SHEET TITLE
SITE DEVELOPMENT PLAN
TEN OAKS ROAD
SIGHT DISTANCE PLAN
AS-BUILT

CURRENT BOARD OF APPEALS CASE
#BA 04-007C
PROJECT DESIGNATION
LDS 583-0273-0501-0101
PROPERTY NUMBER 565-0348
DEVELOPMENT NUMBER 29 of 32
HER-COL-98-12
DATE 07/05/05

MARYLAND LAW REQUIRES
48 HOURS NOTICE
FOR ANY EXCAVATION
MISS UTILITY INC
1-800-257-7777

MARK	DATE	REVISION
1	1/12/07	PER COUNTY COMMENTS
2	10/27/07	PER COUNTY COMMENTS
3	7/13/09	EX. DRIVEWAY ENT.
4	11/18/09	AS-BUILT
5		
6		
7		
8		
9		
10		

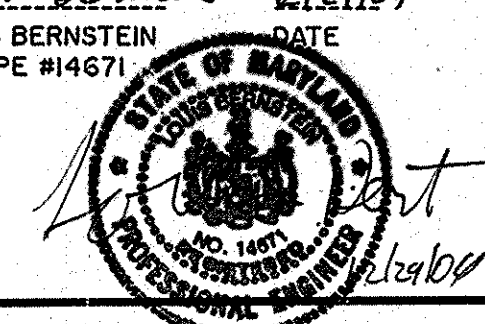
MGA
MULHENSBERG GREENE
ARCHITECTS P.L.L.C.
400 Washington Street, Reading, Pennsylvania 19601
phone: 610.376.4927 fax: 610.376.0720



BRIGHTON DAM ROAD
1"=50' (HORIZONTAL)
1"=5' (VERTICAL)

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 MEET THE APPROVED PLANS AND SPECIFICATIONS.

Louis Bernstein
LOUIS BERNSTEIN
MD PE #14671



The RBA-Group
ENGINEERS • ARCHITECTS • PLANNERS
7164 Columbia Gateway Drive, Suite 205
Columbia, Maryland 21046
Phone (410) 312-0966, Fax (410) 312-0887

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
John Edwards 6/16/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION
Jana Hadden 7/21/08
CHIEF, DIVISION OF LAND DEVELOPMENT
Kevin D. Taylor 7/21/08
DIRECTOR

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWAGE SYSTEMS
SYSTEMS IN ACCORDANCE WITH THE MASTER PLAN OF HOWARD COUNTY
Robert L. P. Steiner 9/23/09
COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT
DATE 7/09

DR
85TH PERCENTILE OPERATING SPEED = 50 M.P.H.
LEFT TURN REQUIRED = 1,200 FT.
STOPPING SIGHT DISTANCE = 437.3 FT.
PROVIDED SIGHT DISTANCE = 453 FT.

DL
85TH PERCENTILE OPERATING SPEED = 50 M.P.H.
LEFT TURN REQUIRED = 780 FT.
RIGHT TURN REQUIRED = 1,140 FT.
STOPPING SIGHT DISTANCE = 437.3 FT.
PROVIDED SIGHT DISTANCE = 450 FT.

DRAWN BY: EVT
CHECKED BY: CKL

MGA #2782
STAMP
[Professional Engineer Seal]

PROJECT FOR
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

RECORDED SUBDIVISION
HUNTINGTON MANOR ESTATES
SECTION 2
AREA INFORMATION
TAX MAP 34, PARCEL 399
ZONED RR-DEO
5TH ELECTION DISTRICT OF
HOWARD COUNTY, MARYLAND
PROJECT ADDRESS
BRIGHTON DAM & TEN OAKS ROAD
CLARKSVILLE, MARYLAND

SHEET TITLE
SITE DEVELOPMENT PLAN
BRIGHTON DAM ROAD
SIGHT DISTANCE PLAN
AS-BUILT

CURRENT BOARD OF APPEALS CASE
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PROJECT DESIGNATION
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SHEET NO. 30 of 32
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HER-COL-98-12
DATE 07/05/05

