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SEE SHEET 5 FOR FOREST CONSERVATION WORKSHEET

FOREST CONSERVATION NOTE SDP 99-155, REV. 5-4/24/13 ADDITIONAL PARKING LOT

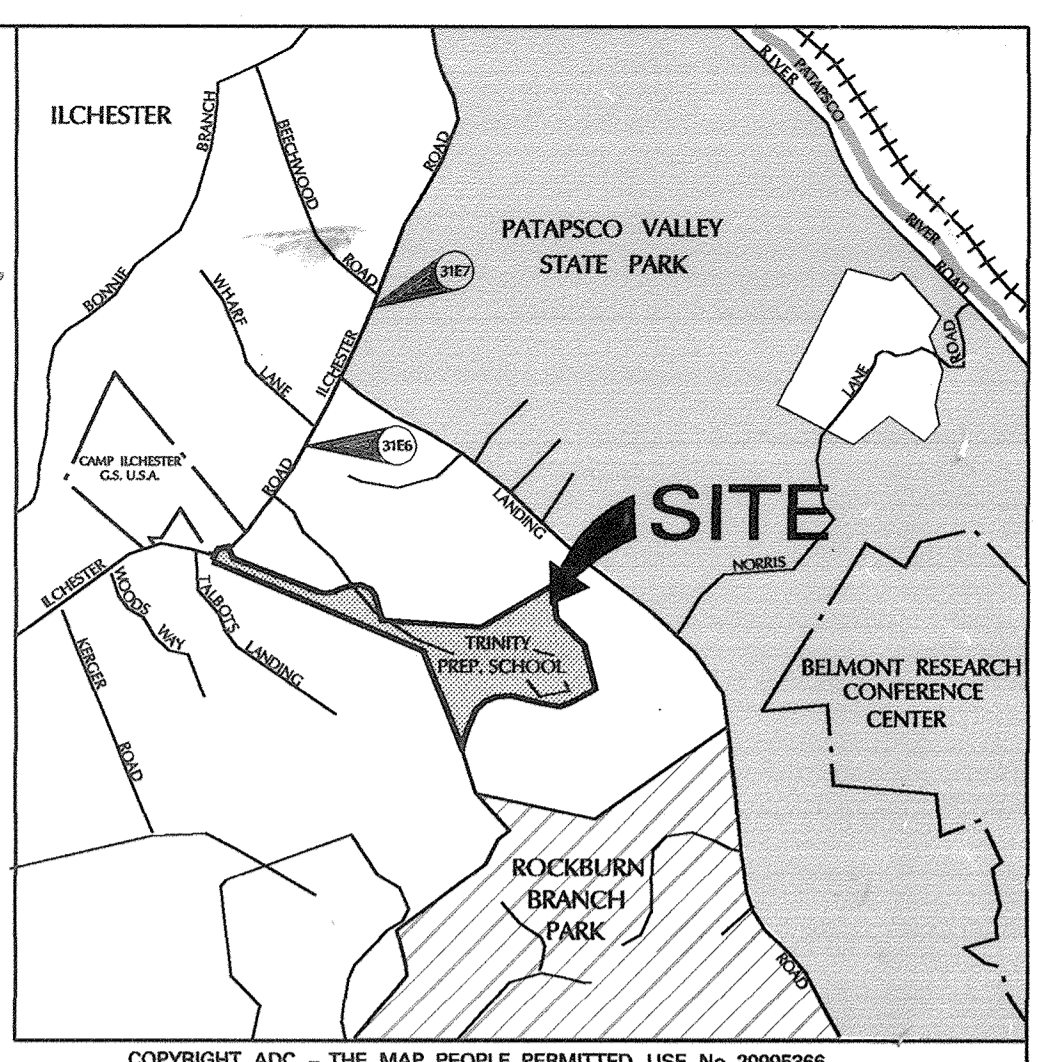
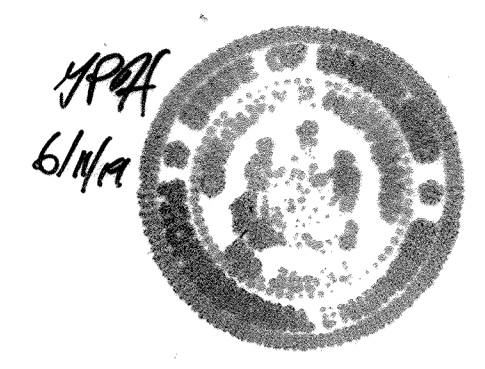
Construction of the parking lot will result in a limit of Disturbance of 0.4 acres (16,820 s.f.). No forest will be disturbed by this activity and site disturbance is less than 40,000 s.f. In accordance with Howard County policy the forest conservation obligation for this project can be based on the limit of disturbance without the need for a forest conservation waiver. A Note ratio of 15% of the net tract area (0.4 acres) or 0.6 acres must be provided to meet the forest conservation obligation for this project. The project developer proposes to meet this obligation through payment of the fee-in-lieu. The fee-in-lieu amount for this project is \$ 1,940.00 (0.4 x 4,850 s.f. x \$0.75/s.f.)

SITE ANALYSIS REVISION 5

TOTAL SITE AREA = 48.77 ac.
 AREA OF DISTURBANCE = 0.386 ac. (16,820 s.f.)
 WETLANDS OR WETLAND BUFFERS IN LOD: N/A
 SLOPES > 15%: NO NATURAL SLOPES > 15 IN LOD
 ERODIBLE SOILS: N/A

Site Development Plan for TRINITY SCHOOL ELLICOTT CITY, MD

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 No: 25534
 Expiration Date: 9/13/18
 Gregory Hoffmann
 As-Built Plan Certification by
 Gregory Hoffmann, P.E. 6/1/19

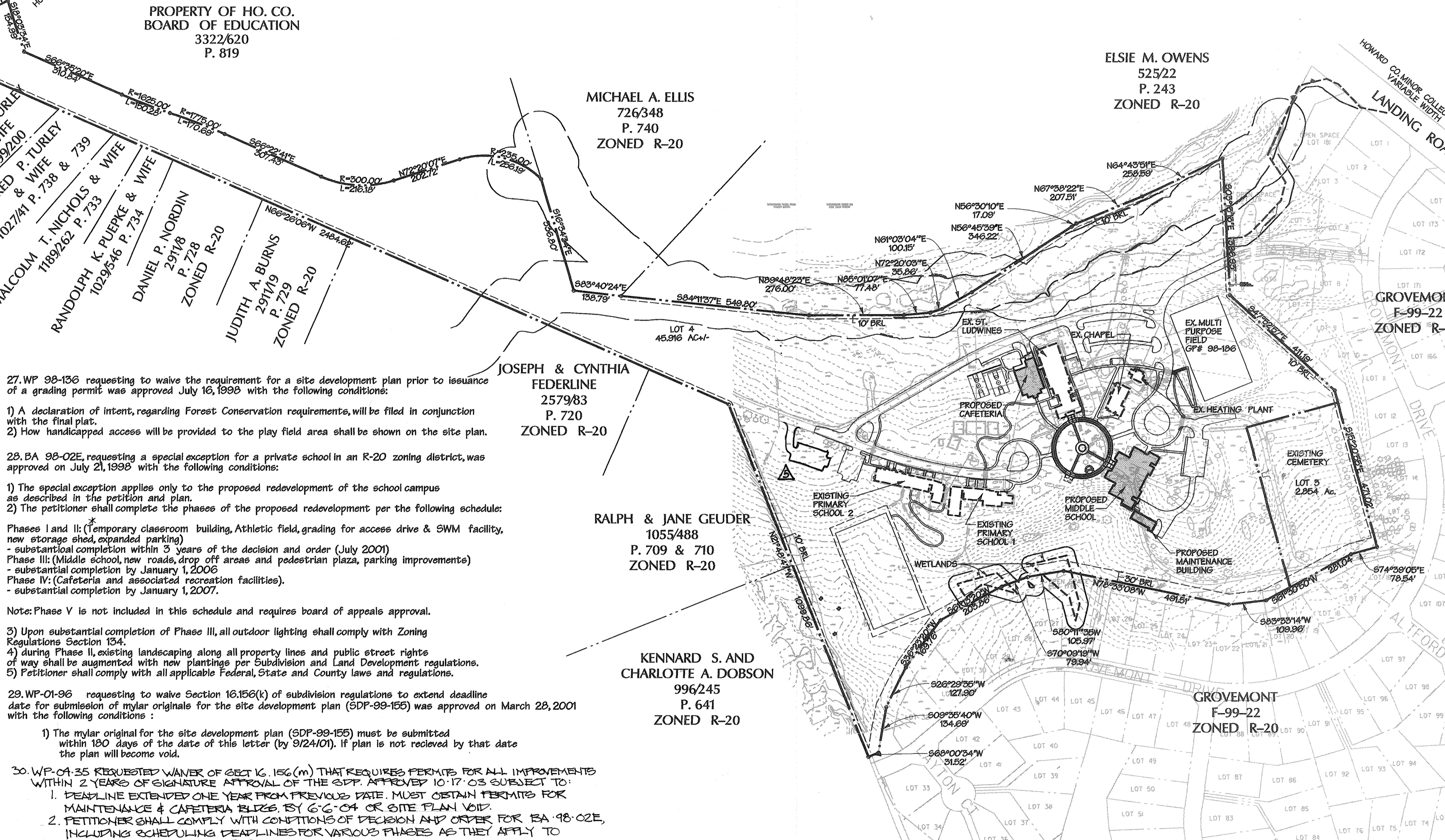


LOCATION MAP
 SCALE: 1" = 200'

DESCRIPTION	NAD'83	NAD'83
HO. CO. #3166	1/4 REBAR 05' BELOW SURFACE	HO. CO. #3167
1/4 SOUTHWEST OF ILICHESTER ROAD	PAVING 500' WEST OF WHARF LANE	1/4 REBAR 05' BELOW SURFACE
N 87°08'23.71" E 137°00'04.67"		1/4 SOUTHEAST OF ILICHESTER ROAD
		PAVING 250' WEST OF BEECHWOOD
		N 87°23'36.3503" E 137°00'04.0392"

GENERAL NOTES

- All construction shall be performed in accordance with the latest standards and specifications of Howard County, plus MSHA standards and specifications if applicable or as specified.
- Approximate location of existing utilities are based solely on available records. Contractor shall verify the location of any utilities which may be impacted by the work. The contractor shall take all necessary precautions to protect the existing utilities and maintain uninterrupted service. Any damage incurred due to contractor's operation shall be repaired immediately at the contractor's expense.
- The contractor shall test pit existing utilities at least five (5) days before starting work shown on these drawings to verify their location and elevation. The contractor shall notify the engineer immediately if location of utilities is other than shown.
- The contractor shall notify Miss Utility at 1-800-257-7777 at least 48 hours prior to any excavation work being done, and shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at (410) 313-1850 at least five (5) working days prior to the start of work.
- Any damage caused by the Contractor to existing public right-of-way, existing paving, existing curb and gutter, existing utilities, etc. shall be repaired at the Contractors expense.
- Topo taken from mass grading per GP-98-186 (revised) dated 5-14-98 by Daft McCune Walker, Inc. and from an Aerial Survey dated 1-26-98.
- Public water and sewer contract # 14-3785-D
- The subsurface exploration and geotechnical engineering analysis for this project was made by ESC dated September 18TH, 1998.
- All fill areas shall be compacted to a minimum of 95% of the maximum dry density as determined and verified in accordance with AASHTO T-180.
- Stormwater management for this site is provided in an extended detention facility and in the existing facilities in Grovemont F-99-22.
- A Declaration of Intent for Forest Conservation has been provided.
- Wetlands, floodplain, and stream, are shown on these plans. 100 year floodplain shown is per study by DMW.
- Traffic Study is not required for this development as there is no proposed increase in staff or student enrollment.
- Operating existing valves, switches, services or start up of new services shall be coordinated with the owners representative.
- The proposed buildings will be provided with a sprinkler system.
- An elevator is provided within the proposed Middle School.
- Trench compaction for storm drains within the road or street right of way limits shall be in accordance with Howard County Design Manual IV, Std. No. G-2.01.
- Unless otherwise noted, dimensions from curb are measured at face of curb.
- Refer to architectural drawings for building dimensions.
- The Contractor shall coordinate the location of all water, sewer, and drain house connections with the mechanical drawings.
- The Contractor shall maintain 2.0 feet minimum cover over all utilities during construction.
- Unless otherwise noted, all utility connections shall be capped or plugged five feet from buildings.
- Electric, telephone, gas, cable, lighting, and retaining walls to be designed by other. Where those facilities are shown, they are for coordination purposes only.
- All curb radii unless otherwise noted.
- There is a private cemetery in the southeast corner of this site. The cemetery has not, and will not, be disturbed except as permitted by State Law.
- WP 98-78 requesting not to grant the floodplain easement to Howard County, to not delineate wetlands, wetland buffers and stream buffers, to not require the dedication of open space, to not require a landscape plan, to not indicate the locations of floodplains, wetlands, wetland buffers and stream buffers, and to not require a forest conservation plan was approved on February 27, 1998 with the following conditions:
 1) The Grovemont Development Plans will show the above features.
 In addition the request to not require additional right-of-way along existing public roads was denied.



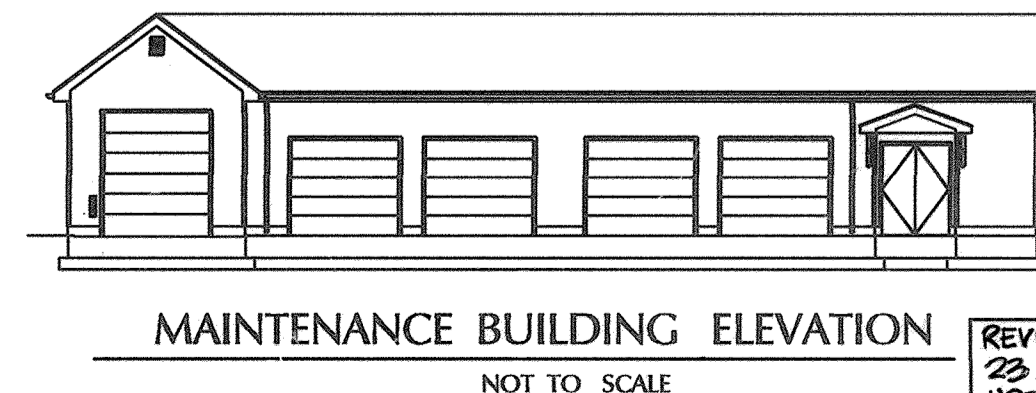
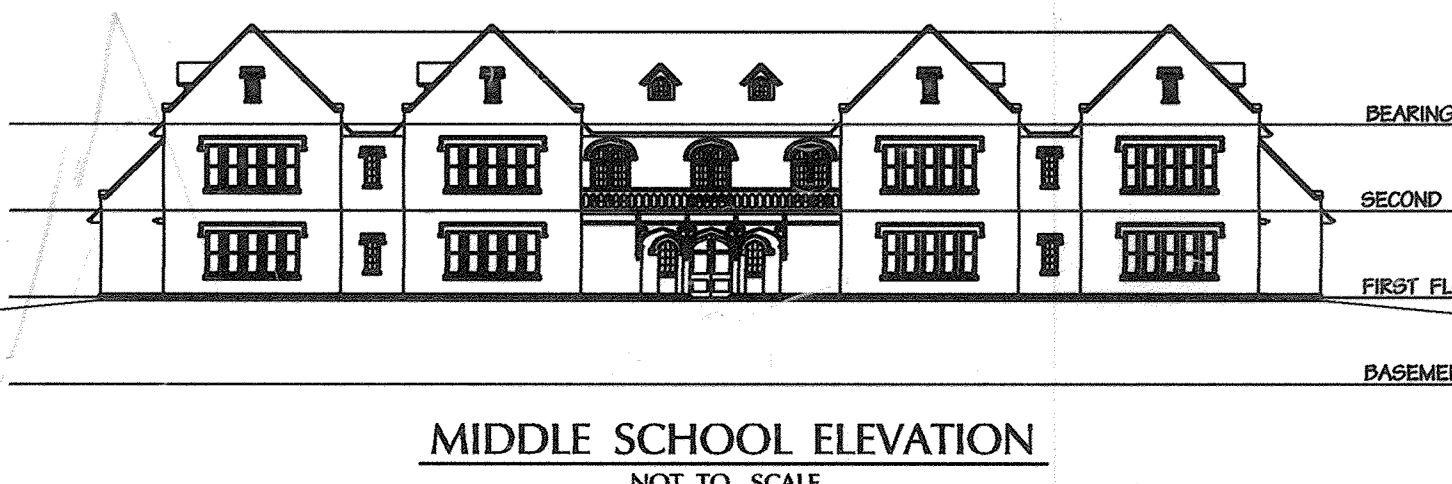
- WP 98-136 requesting to waive the requirement for a site development plan prior to issuance of a grading permit was approved July 16, 1998 with the following conditions:
 1) A declaration of intent, regarding Forest Conservation requirements, will be filed in conjunction with the final plan.
 2) How handicapped access will be provided to the play field area shall be shown on the site plan.
- BA 98-02E, requesting a special exception for a private school in an R-20 zoning district, was approved on July 21, 1998 with the following conditions:
 1) The special exception applies only to the proposed redevelopment of the school campus as described in the petition and plan.
 2) The petitioner shall complete the phases of the proposed redevelopment per the following schedule:
 Phases I and II: (Temporary classroom building, Athletic field, grading for access drive & SWM facility, new storage shed, expanded parking)
 - substantial completion within 3 years of the decision and order (July 2001)
 Phase III: (Middle school, new roads, drop off areas and pedestrian plaza, parking improvements)
 - substantial completion by January 1, 2006
 Phase IV: (Cafeteria and associated recreation facilities).
 - substantial completion by January 1, 2007.
 Note: Phase V is not included in this schedule and requires board of appeals approval.
- Upon substantial completion of Phase III, all outdoor lighting shall comply with Zoning Regulations Section 13-4.
 4) during Phase II, existing landscaping along all property lines and public street rights of way shall be augmented with new plantings per Subdivision and Land Development regulations.
 5) Petitioner shall comply with all applicable Federal, State and County laws and regulations.
- WP 01-96 requesting to waive Section 16.156(1) of subdivision regulations to extend deadline date for submission of mylar originals for the site development plan (SDP-99-155) was approved on March 28, 2001 with the following conditions:
 1) The mylar original for the site development plan (SDP-99-155) must be submitted within 180 days of the date of this letter (by 9/24/01). If plan is not received by that date the plan will become void.
 2) WP-01-35 REQUESTED WAIVER OF SET B.C. 15G (M) THAT REQUIRES PERMITS FOR ALL IMPROVEMENTS WITHIN 2 YEARS OF SIGNATURE APPROVAL OF THE SDP. APPROVED 10/17/03 SUBJECT TO:
 1. DEADLINE EXTENDED ONE YEAR FROM PREVIOUS DATE. MUST OBTAIN PERMITS FOR MAINTENANCE & CAFETERIA BLDGS BY 6/6/04 OR SITE PLAN VOID.
 2. PETITIONER SHALL COMPLY WITH CONDITIONS OF DECISION AND ORDER FOR BA 98-02E, INCLUDING SCHEDULING DEADLINES FOR VARIOUS PHASES AS THEY APPLY TO MAINTENANCE AND CAFETERIA BUILDINGS.

* FOR A PERIOD OF TIME THERE WILL BE A TEMPORARY CLASSROOM ONSITE. REFERENCE BOARD OF APPEALS CASE NO. 12-010 C.

SITE ANALYSIS DATA CHART

- General Site Data
 - Present Zoning: R-20
 - Applicable DPZ File References: WP 98-78, WP 98-136 AND BA 98-02E
 TU 97-02, GP-98-186, F 98-166, F 99-22 AND SDP 95-55, WP-01-96
 WP-01-11, F-01-103, WP-01-70, WP-01-44, WP-01-35, F-01-161
 - Proposed Use of Site or Structure(s): PRIVATE SCHOOL
 - Proposed Water and Sewer Systems: X Public - X Residential
 - Any Other Information Which May be Relevant: N/A
- Area Tabulation
 - Total Project Area: 48.85 Acres
 - Net Area of Site: 46.57 Acres
 - Area of 100 Year Floodplain: 2.28 Acres
 - Area of This Plan Submission: 10.92 Acres
 - Limit of Disturbed Area: 1.27 Acres and 2.6 % of Gross Area (Proposed)
 - Building Coverage of Site: 1.27 Acres and 2.6 % of Gross Area (Proposed)
 - Other Area:

- Open Space Data
 - Open Space on Site: 0 Acres 0 % of Gross Area
 - Area of Recreation Open Space Required by Subdivision and Land Development Regulations: N/A Acres N/A Acres Provided
 - Other: N/A
- Parking Space Data
 - Number of Parking Spaces Required by Zoning Regulations and Criteria: 1 SP. PER 6 STUDENTS. 500 MAX. STUDENTS = 84
 - Total Number of Parking Spaces Provided On-Site: 151 SPACES
 - Number of Handicap Parking Spaces Provided: 6 SPACES INCLUDING 2 VAN HANDICAP SPACES



OVERALL PROPERTY
 SCALE: 1" = 200'

REVISION # 4 - AMEND NOTE 28.2 TO REFER TO BA CASE 12-010C REGARDING THE TEMPORARY CLASSROOM. BLDG BY: ST. JOHN PROPERTIES

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

<i>[Signature]</i>	5/21/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>[Signature]</i>	6/5/01
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>[Signature]</i>	4/6/01
DIRECTOR	DATE

1-7-01	2	PRIMARY SCH & EAST END RECONSTRUCTION & MAINTENANCE BLDG REVISION
1-14-03	7	REVISED SITE ANALYSIS DATA CHART
Date	No.	Revision Description

Trinity School

OWNER:
 Trinity School, Inc., a Maryland Non-Profit Corporation
 4985 Ilchester Road, Ellicott City, MD 21043

DEVELOPER:
 Board of Trustees, Trinity School
 4985 Ilchester Road, Ellicott City, MD 21043

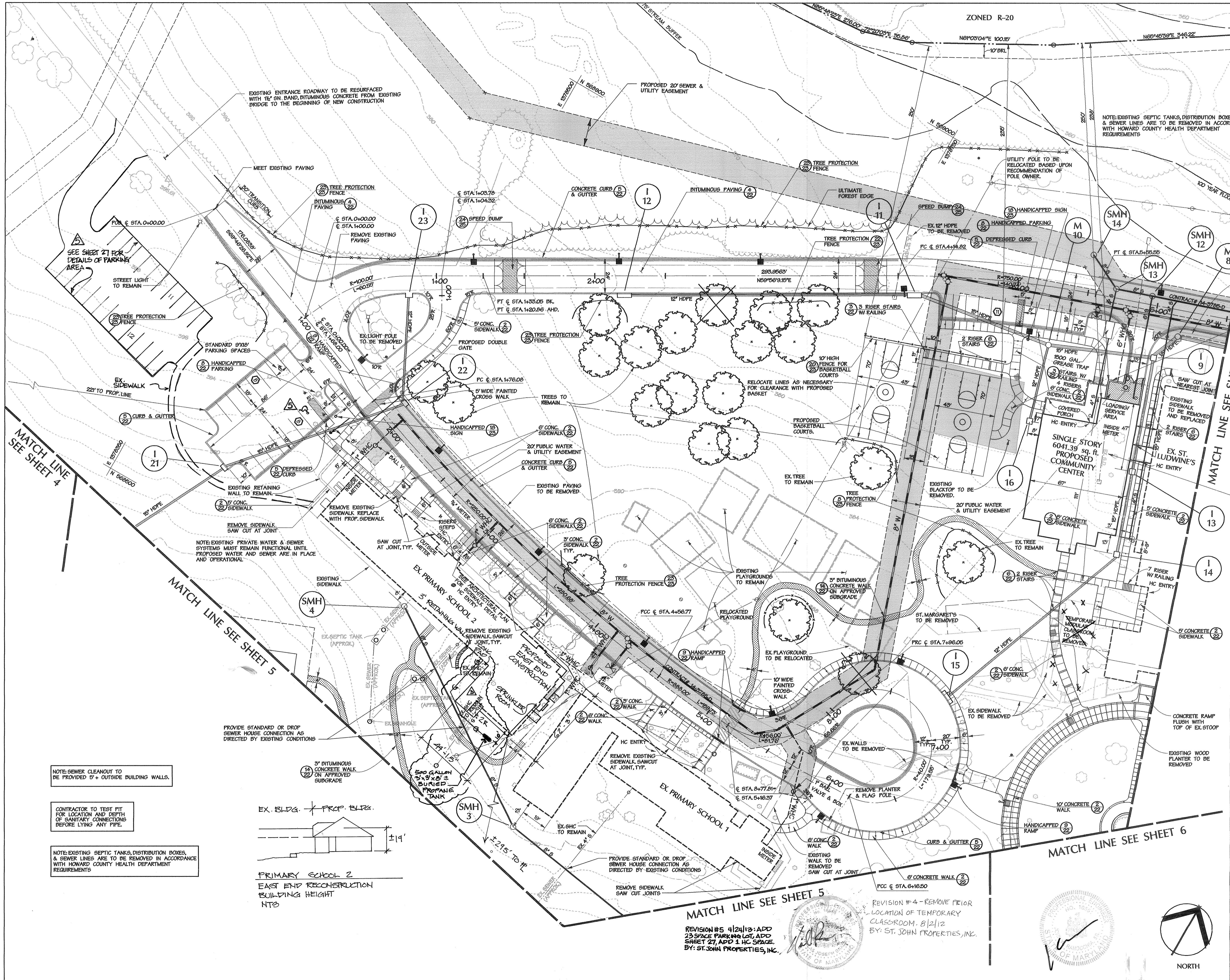
DMW
 Daft McCune Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3333
 Fax: 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

Subdivision Name: Notre Dame de Namur Inc. Property	LOT #	PARCEL #
Block: 14760	187	629
Zone: R-20	187	
Water Code: D-08	SWR CODE: 1254650	CENSUS TRACT: 610101

COVER SHEET

Des By: ADL	Scale: 1"=200'	Proj. No. 891526
Drn By: ADL	Date: 4-12-01	1 OF 28
Chk By:	Approved:	



LEGEND

- TREE PROTECTION LIMIT
- PROPOSED FOREST EDGE
- EXISTING FOREST EDGE
- EXISTING TREES
- SPECIMEN TREE TO BE REMOVED
- SPECIMEN TREES TO REMAIN
- 10' EXISTING CONTOUR
- 2' EXISTING CONTOURS
- 10' PROPOSED CONTOUR
- 2' PROPOSED CONTOUR
- REVERSE CURB & GUTTER R-3.01
- DEPRESSED CURB R-3.01
- STANDARD CURB & GUTTER
- PARKING COUNT
- VAN HANDICAPPED PARKING
- HANDICAPPED PARKING
- 2 STEPS
- SCORE LINE
- EXPANSION JOINT
- 3 OR MORE STEPS WITH RAILING
- TREE PROTECTION FENCE
- 12' HIGH PEDESTRIAN LIGHT
- 20' HIGH STREET LIGHT
- SOIL STABILIZATION MATTING OVER SEED & MULCH (EROSION CONTROL MATTING)

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

W.D. Sullivan 5/3/11
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Andy D'Amico 6/5/10
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Paul B. Ross 4/6/01
 DIRECTOR DATE

Date	No.	Revision Description
10-19-04	3	ADD PROPANE TANK
1-7-04	2	PRIM. EXH. 2 EAST END RECONSTRUCTION

Trinity School

OWNER:
 Trinity School, Inc., a Maryland Non-Profit Corporation,
 4985 Ilchester Road, Ellicott City, MD 21043

DEVELOPER:
 Board of Trustees, Trinity School
 4985 Ilchester Road, Ellicott City, MD 21043

DMW
 Dart-McCune-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3333
 Fax: 296-4705

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 Landscape Architects,
 Engineers, Surveyors &
 Environmental Professionals

SUBMISSION NAME	Part. Prov. Srs. of Notre Dame de Namur Inc. Property	SHEET #	4	TOTAL #	239
PLAT OR LOT	14769	BLOCK #	16,17,23	ZONING MAP	R-20
WATER CODE		SEWER CODE		ELECT. DISTRICT	15T

TITLE			Site Plan		
Des By:	TPC	Scale:	1"=30'	Proj. No.:	8913.G3
Drn By:	ADL	Date:	4-12-01		
Chk By:		Approved:			2 OF 28

LEGEND

- TREE PROTECTION LIMIT
- PROPOSED FOREST EDGE
- EXISTING FOREST EDGE
- EXISTING TREES
- SPECIMEN TREE TO BE REMOVED
- SPECIMEN TREES TO REMAIN
- 10' EXISTING CONTOUR
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- 12' HIGH PEDESTRIAN LIGHT
- 20' HIGH STREET LIGHT
- SOIL STABILIZATION MATTING OVER SEED & MULCH (EROSION CONTROL MATTING)

MATCHLINE SEE SHEET 2

MATCHLINE SEE SHEET 6

NOTE: EXISTING WELL TO REMAIN FOR NON-POTABLE USES

NOTE: EXISTING SEPTIC TANKS, DISTRIBUTION BOXES, & SEWER LINES ARE TO BE REMOVED IN ACCORDANCE WITH HOWARD COUNTY HEALTH DEPARTMENT REQUIREMENTS.

NOTE: A JURISDICTIONAL WETLAND DETERMINATION CONDUCTED ON OCTOBER 5, 1998 BY THE U.S. ARMY CORPS OF ENGINEERS CONFIRMED THAT NON TIDAL WETLANDS DO NOT EXIST IN THIS AREA. (CNAB-OP-RF-98-62645-3)

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 [Signature] 5/31/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 6/5/01
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 6/6/01
 DIRECTOR

Date	No.	Revision Description
4/24/01	5	Revise total no. of sheets

Trinity School

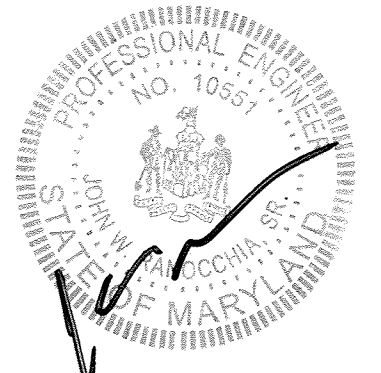
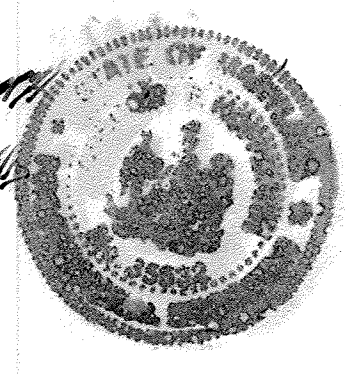
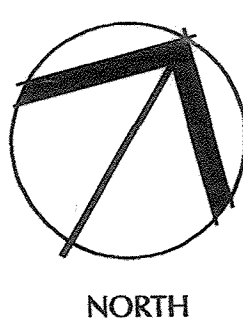
OWNER:
 OWNER: Trinity School, Inc., a Maryland Non-Profit Corporation.
 4985 Ilchester Road, Ellicott City, MD 21043
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 Board of Trustees, Trinity School
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DMW
 Daft McCune Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3333
 Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

SUBDIVISION NAME: Ball's Proj. Div. of Notre Dame de Namur Property
 LOT # 4
 PARCEL # 222
 PLAN OR LOT # 14648
 BLOCK # 1617/2221
 TAXZONE MAP # R-20
 ELECT. DISTRICT # 1ST
 CENSUS TRACT #

TITLE		Site Plan	
Des By: TPC	Scale: 1"=30'	Proj. No. 8913.03	
Drn By: ADL	Date: 4-12-01		
Chk By:	Approved:		3 OF 28

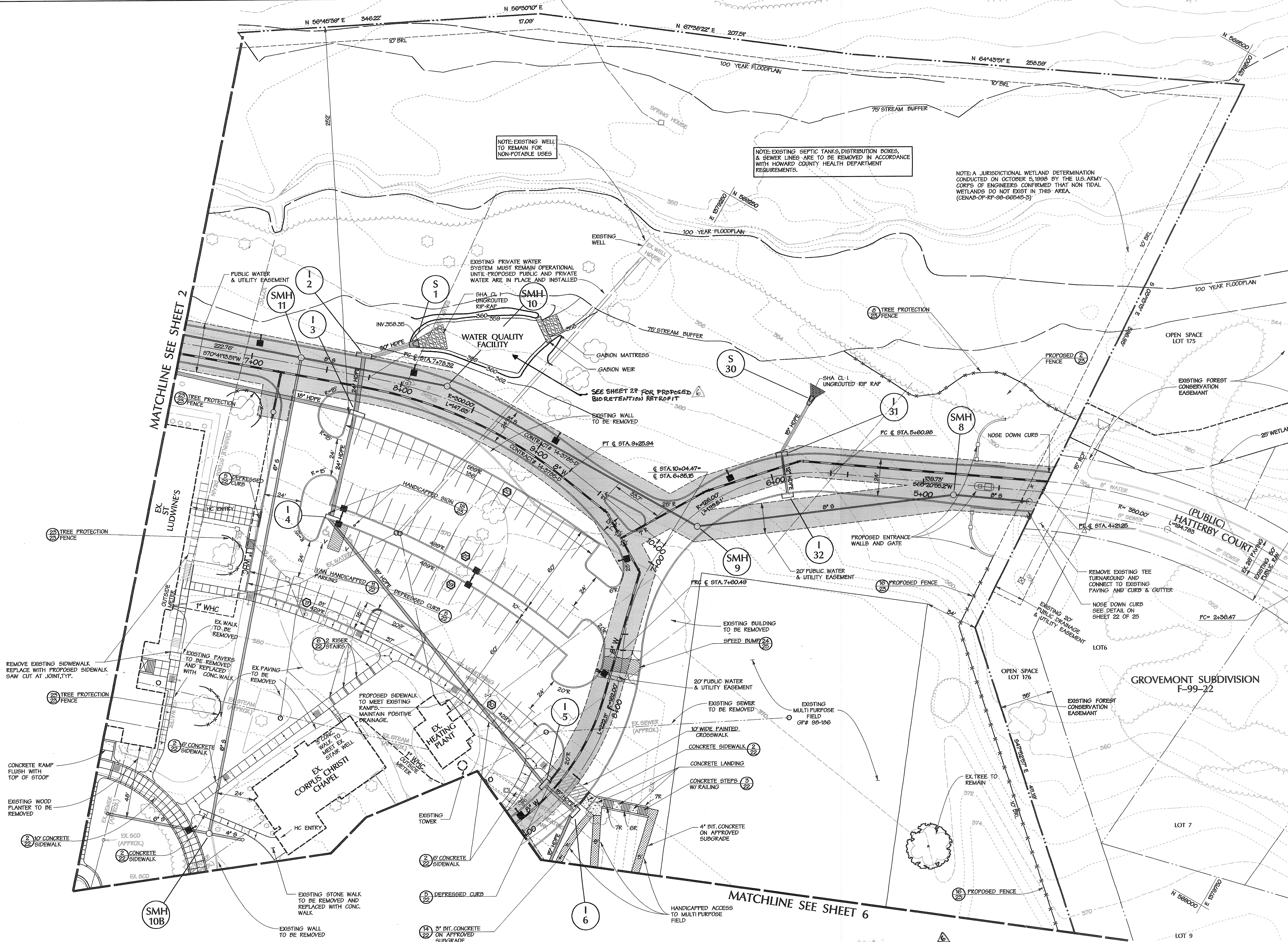


Professional Certification
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional under the laws of the State of Maryland.
 License No: 35539
 Expiration Date: 7/13/03
 Gregory Hoffmann

CONTRACTOR TO TEST PIT FOR LOCATION AND DEPTH OF SANITARY CONNECTIONS BEFORE LAYING ANY PIPE.

THE EXISTING HEATING PLANT, TOWER AND UNDERGROUND FUEL TANK TO BE REMOVED IN A LATER PHASE OF CONSTRUCTION. FUEL TANK TO BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH ENVIRONMENTAL REGULATIONS.

THE EXISTING EQUIPMENT SHED REMOVED AND SALVAGED. SHED TO BE RELOCATED PER OWNER INSTRUCTIONS AND PLACED ON PROPER FOOTING.



STORMWATER MANAGEMENT POND GENERAL CONSTRUCTION SPECIFICATIONS

1. GENERAL

ALL STORMWATER MANAGEMENT FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH PRINCE GEORGE'S COUNTY'S "STORMWATER MANAGEMENT DESIGN MANUAL (1991)" AND THE S.C.S. MARYLAND "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378, 1992).

THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS WITHIN THE SCOPE OF THE STANDARD PRACTICE MD-378. ALL REFERENCES TO ASTM AND AASHTO SPECIFICATIONS APPLY TO THE MOST RECENT VERSION.

2. SITE PREPARATION

AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1.

AREAS TO BE COVERED BY THE RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBJECTIONABLE 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 50 FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE CLEARED.

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED 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.

3. EARTH FILL

MATERIAL. THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREA. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6", FROZEN OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT AND CUT OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH OR CL. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGN AND CONSTRUCTION ARE SUPERVISED BY A GEOTECHNICAL ENGINEER.

PLACEMENT. AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF 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 PERMEABLE 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 SHEEPFOOT, RUBBER Tired 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.

ALL COMPACTION IS TO BE NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO SPECIFICATION T-99 (STANDARD PROCTOR) WITH A MOISTURE CONTENT WITHIN ± 2 PERCENT OF 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.

CUTOFF TRENCH AND IMPERVIOUS CORE. 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 GOVERNED BY THE EQUIPMENT USED FOR EXCAVATION, WITH THE MINIMUM WIDTH BEING FIVE FEET. THE DEPTH SHALL BE AT LEAST 5 FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE TOP WIDTH OF THE IMPERVIOUS CORE SHALL BE 5 FEET MINIMUM. THE HEIGHT OF THE CORE SHALL BE AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE CORE SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

4. STRUCTURAL BACKFILL

BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 4 INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN 4 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 FILL OF 24 INCHES OR GREATER OVER THE STRUCTURE OR PIPE.

5. REMOVAL AND REPLACEMENT OF DEFECTIVE FILL

FILL PLACED AT DENSITIES LOWER THAN SPECIFIED MINIMUM DENSITY OR AT MOISTURE CONTENTS OUTSIDE THE SPECIFIED ACCEPTABLE RANGE OF MOISTURE CONTENT OR OTHERWISE NOT CONFORMING TO THE REQUIREMENTS OF THE SPECIFICATIONS SHALL BE REWORKED TO MEET THE REQUIREMENTS OR REMOVED AND REPLACED BY ACCEPTABLE FILL. THE BOTTOMS OF SUCH EXCAVATIONS SHALL BE FINISHED FLAT OR GENTLY CURVING AND AT THE SIDES OF SUCH EXCAVATIONS THE ADJACENT SOUND FILL SHALL BE TRIMMED TO A SLOPE NOT STEEPER THAN 3 FEET HORIZONTALLY TO 1 FOOT VERTICALLY EXTENDING FROM THE BOTTOM OF THE EXCAVATION TO THE FILL SURFACE.

6. PIPE CONDUITS

ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION. ALL PERFORATED PIPE SHALL HAVE A MINIMUM OF 3.31 SQUARE INCHES OF OPENING PER SQUARE FOOT OF PIPE SURFACE (EX. 30 3/8 INCH HOLES PER SQUARE FOOT). PERFORATIONS ARE TO BE UNIFORMLY SPACED AROUND THE FULL PERIPHERY OF THE PIPE. ANY HOLES BLOCKED OR PARTIALLY BLOCKED BY BITUMINOUS COATING SHALL BE OPENED PRIOR TO INSTALLATION.

REINFORCED CONCRETE PIPE. ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR REINFORCED CONCRETE PIPE:

- MATERIALS - REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM DESIGNATION C-361.
- CRADLE - ALL REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE CRADLE FOR THEIR ENTIRE LENGTH. THIS CRADLE SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 50 PERCENT OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 6 INCHES, OR AS SHOWN ON THE DRAWINGS.
- LAYING PIPE - BELL AND SPIGOT 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 FOR THE ENTIRE LINE, THE CRADLE SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 3 FEET FROM THE RISER.
- BACKFILLING SHALL CONFORM TO "STRUCTURAL BACKFILL".
- CONNECTIONS - ALL CONNECTIONS (TO ANTI-SEEP COLLARS, RISER, ETC.) SHALL BE WATERTIGHT.
- OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.
- DUCTILE IRON PIPE
 - ALL PIPES TO BE CLASS 50 WITH TYTON JOINTS.
 - ALL FITTINGS SHALL BE IN ACCORDANCE WITH AWWA C-153.

8. CAST-IN-PLACE CONCRETE STRUCTURES

1. SPECIFICATIONS: MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION (SHA) "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS", OCTOBER, 1993 EDITION, FOR MATERIALS AND CONSTRUCTION, INCLUDING ALL INTERIM SPECIFICATIONS.

AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES", DATED 1989, FOR DESIGN, INCLUDING ALL INTERIM SPECIFICATIONS. CONCRETE DESIGN BY THE "SERVICE LOAD DESIGN METHOD".

2. CONCRETE: SHALL MEET THE REQUIREMENTS OF SHA SECTIONS 414 AND 902, MIX NO. 3

3. CONTRACTOR SHALL SUPPLY MIX DESIGN FOR APPROVAL PRIOR TO APPLICATION. LOAD AND MIX TICKETS SHALL BE SUPPLIED FOR EACH TRUCK DELIVERY. NO PARTIAL FIELD MIXES SHALL BE ALLOWED.

ALL CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS. DESIGN FC = 1,200 PSI.

ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4" X 3/4". ALL CONSTRUCTION KEYS ARE SHOWN NOMINAL SIZE.

4. REINFORCING STEEL: REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60. WHERE NOT INDICATED, BAR LAP SPICES SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATIONS. THE MINIMUM CONCRETE COVER SHALL BE 2 INCHES UNLESS OTHERWISE NOTED. DESIGN FS = 24,000 PSI.

5. FOUNDATION: PRESUMED SOIL BEARING CAPACITY = 2,500 PSF. THE ENGINEER MUST APPROVE ALL FOUNDATIONS PRIOR TO CONCRETE PLACEMENT. IF UNSUITABLE MATERIAL IS ENCOUNTERED, THE MATERIAL SHALL BE UNDERCUT AND BACKFILLED WITH STRUCTURAL BACKFILL.

9. ROCK RIP-RAP

ROCK RIP-RAP SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 901.02.

THE RIP-RAP SHALL BE PLACED TO THE REQUIRED THICKNESS IN ONE OPERATION. THE ROCK SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL INSURE THE RIP-RAP IN PLACE SHALL BE REASONABLY HOMOGENEOUS WITH THE LARGER ROCKS UNIFORMLY DISTRIBUTED AND FIRMLY IN CONTACT ONE TO ANOTHER WITH THE SMALLER ROCKS FILLING THE VOIDS BETWEEN THE LARGER ROCKS. FILTER CLOTH SHALL BE PLACED UNDER ALL RIP-RAP AND SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 921.09.

10. CARE 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 DIKES, 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 LEVELED 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 SUMPS FROM WHICH THE WATER SHALL BE PUMPED.

11. STABILIZATION

ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SLIGHTLY CONDITION. ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, SPOIL AND BORROW AREAS, AND BERMS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING IN ACCORDANCE WITH THE MARYLAND SOIL CONSERVATION SERVICE STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (MD-342) OR AS SHOWN ON THE ACCOMPANYING DRAWINGS.

12. 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 TO BE EMPLOYED DURING THE CONSTRUCTION PROCESS.

ALL DISTURBED AREAS SHALL BE CONTROLLED BY AN EROSION AND SEDIMENT CONTROL PLAN WHICH HAS BEEN APPROVED BY THE PRINCE GEORGE'S COUNTY SOIL CONSERVATION DISTRICT (P.G.S.C.D.) AND THE PRINCE GEORGE'S COUNTY DEPARTMENT OF ENVIRONMENTAL RESOURCES.

12. SEEDING

SEEDING, FERTILIZING AND MULCHING SHALL BE AS FOLLOWS:

- SEED MIX:
- 50% KENBLUE KENTUCKY BLUEGRASS
 - 40% PENNLAWN CREEPING RED FESCUE
 - 10% STREAKER REDTOP
- APPLIED AT A RATE OF 150 LBS. PER ACRE.
- (OR)
- KEBEL II TALL FESCUE (125 LBS. PER ACRE)
 - PENNFINE PERENNIAL RYEGRASS (45 LBS. PER ACRE)
 - KENBLUE KENTUCKY BLUEGRASS (10 LBS. PER ACRE)
- (OR)
- PENNLAWN CREEPING RED FESCUE (70 LBS. PER ACRE)
 - AURORA HARD FESCUE (50 LBS. PER ACRE)
 - COMMON WHITE CLOVER (8 LBS. PER ACRE)
 - WINTER RYE (45 LBS. PER ACRE)
- OPTIMUM SEEDING DATES: MARCH 1 TO APRIL 30.
- LIME: 2 TONS/ACRE DOLOMITIC LIMESTONE.
- FERTILIZER: 600 LBS./ACRE 10-10-10 FERTILIZER BEFORE SEEDING, 400 LBS./ACRE 30-0-0 UREA FORM FERTILIZER AT TIME OF SEEDING.
- MULCH: STRAW AT 4,000 LBS. PER ACRE.
- ANCHORING: MULCHING TOOL OR EMULSIFIED ASPHALT BINDER AT A RATE OF 6 GAL. PER 1,000 SQUARE FEET.

14. FILTER CLOTH

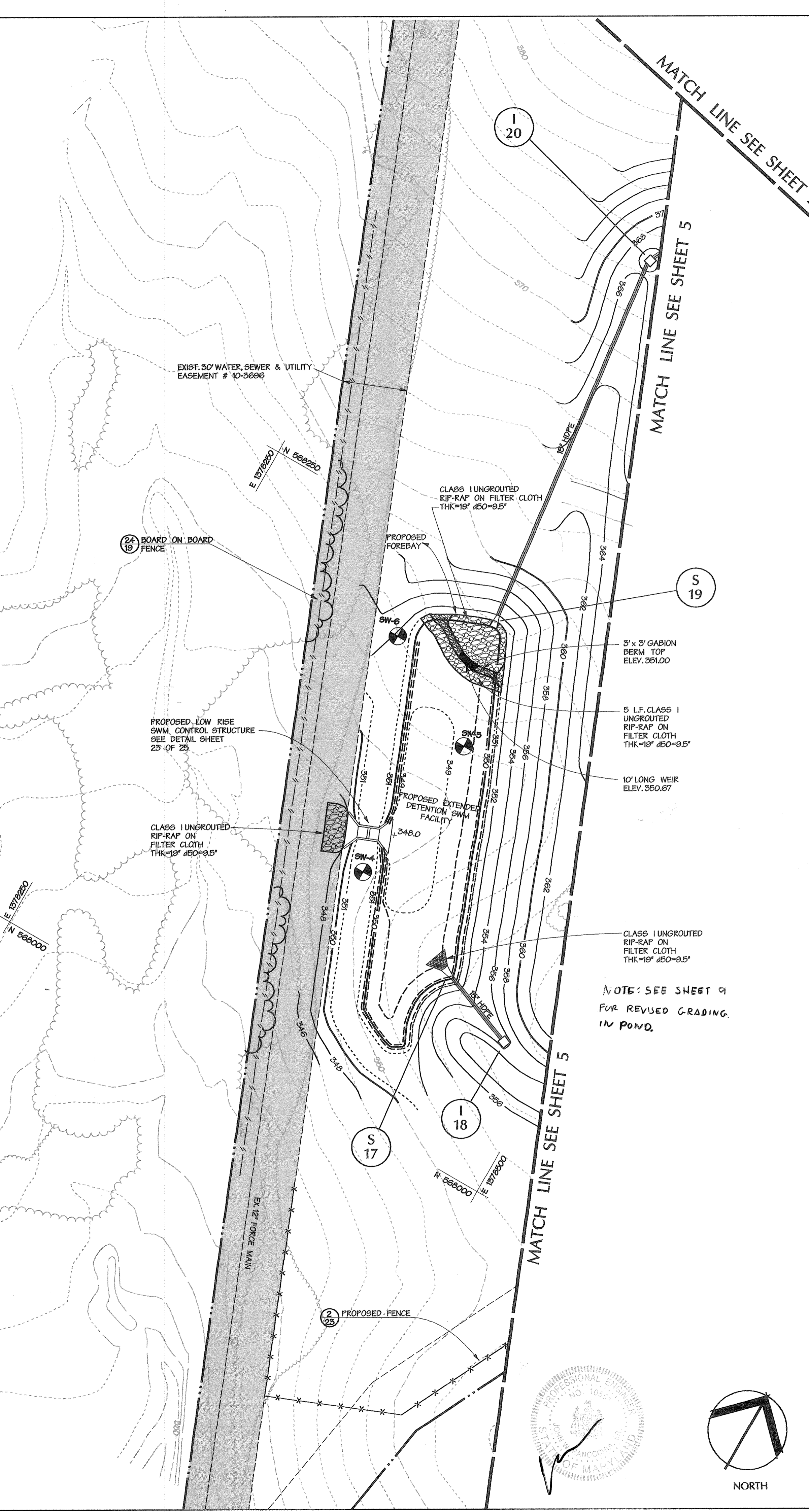
ALL FILTER CLOTH SHALL CONFORM TO MIRAFIL 140N, DUPONT TYPAR 3341 OR 3401, SUPAC 5P, AMOCO 4551 OR APPROVED EQUAL.

15. CONSTRUCTION INSPECTION BY DESIGNATED ENGINEERS

THE CONSTRUCTION OF THE POND AND EMBANKMENT, AND CERTIFICATION THAT THE POND AND EMBANKMENT HAVE BEEN BUILT IN ACCORDANCE WITH THE PLANS SHALL BE UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER. THE ENGINEER SHALL BE NOTIFIED SUFFICIENTLY IN ADVANCE OF CONSTRUCTION IN ORDER THAT ARRANGEMENTS CAN BE MADE FOR (1) INSPECTION OF PIPE TRENCH AND BEDDING, (2) INSPECTION OF RISER AND ANTI-SEEP COLLARS AND (3) SUPERVISION OF EMBANKMENT CONSTRUCTION AND COMPACTION TESTING. THE ENGINEER SHALL DIRECT THE HANDLING OF WATER DURING CONSTRUCTION, MINOR CHANGES NOT AFFECTING THE INTEGRITY OF THE DAM IN ORDER TO COMPENSATE FOR UNUSUAL SOIL CONDITIONS, AND THE REMOVAL AND REPLACEMENT OF DEFECTIVE FILL.

LEGEND

- TREE PROTECTION LIMIT
- PROPOSED FOREST EDGE
- EXISTING FOREST EDGE
- EXISTING TREES
- SPECIMEN TREE TO BE REMOVED
- SPECIMEN TREES TO REMAIN
- 10' EXISTING CONTOUR
- 2' EXISTING CONTOURS
- 10' PROPOSED CONTOUR
- 2' PROPOSED CONTOUR
- REVERSE CURB & GUTTER R-30'
- DEPRESSED CURB & GUTTER R-30'
- STANDARD CURB & GUTTER
- PARKING COUNT
- VAN HANDICAPPED PARKING
- HANDICAPPED PARKING
- 2 STEPS
- SCORE LINE
- EXPANSION JOINT
- 3 OR MORE STEPS WITH RAILING
- TREE PROTECTION FENCE
- 12" HIGH PEDESTRIAN LIGHT
- 20" HIGH STREET LIGHT
- SOIL STABILIZATION MATTING OVER SEED & MULCH (EROSION CONTROL MATTING)



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development
 Director

5/31/01
 6/15/01
 6/6/01

Revise total # of sheets

Date	No.	Revision Description
	5	Revise total # of sheets

Trinity School

OWNER: Trinity School, Inc., a Maryland Non-Profit Corporation.
 4985 Ilchester Road, Ellicott City, MD 21043

DEVELOPER: Board of Trustees, Trinity School
 4985 Ilchester Road, Ellicott City, MD 21043

DMW
 Daft-McCune-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3333
 Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

SUBDIVISION NAME Belt Prov. Srvs. of Notre Dame de Namur Inc. Property	LOT 4	PARCEL # 292
TAXP. DISTRICT 14648	RECORD DISTRICT 1617825	TRAZZING MAP R-20
WATER CODE	SEWER CODE	TRCT. OF 1 ST

TITLE: **Site Plan**

Des By: TPC	Scale: 1"=50'	Proj. No. 89113.03
Drn By: JWM	Date: 4-12-01	4 OF 28
Chk By:	Approved:	

FOREST CONSERVATION WORKSHEET
Version 1.0

TRINITY SCHOOL SPP 99-155, REVISION #5

LEGEND

NET TRACT AREA		Acres
A. Total tract area		48.9
B. Area within 100 Year Floodplain		2.3
C. Area of lot outside Limit of Disturbance		46.2
D. Net Tract Area (Limit of Disturbance)		0.4

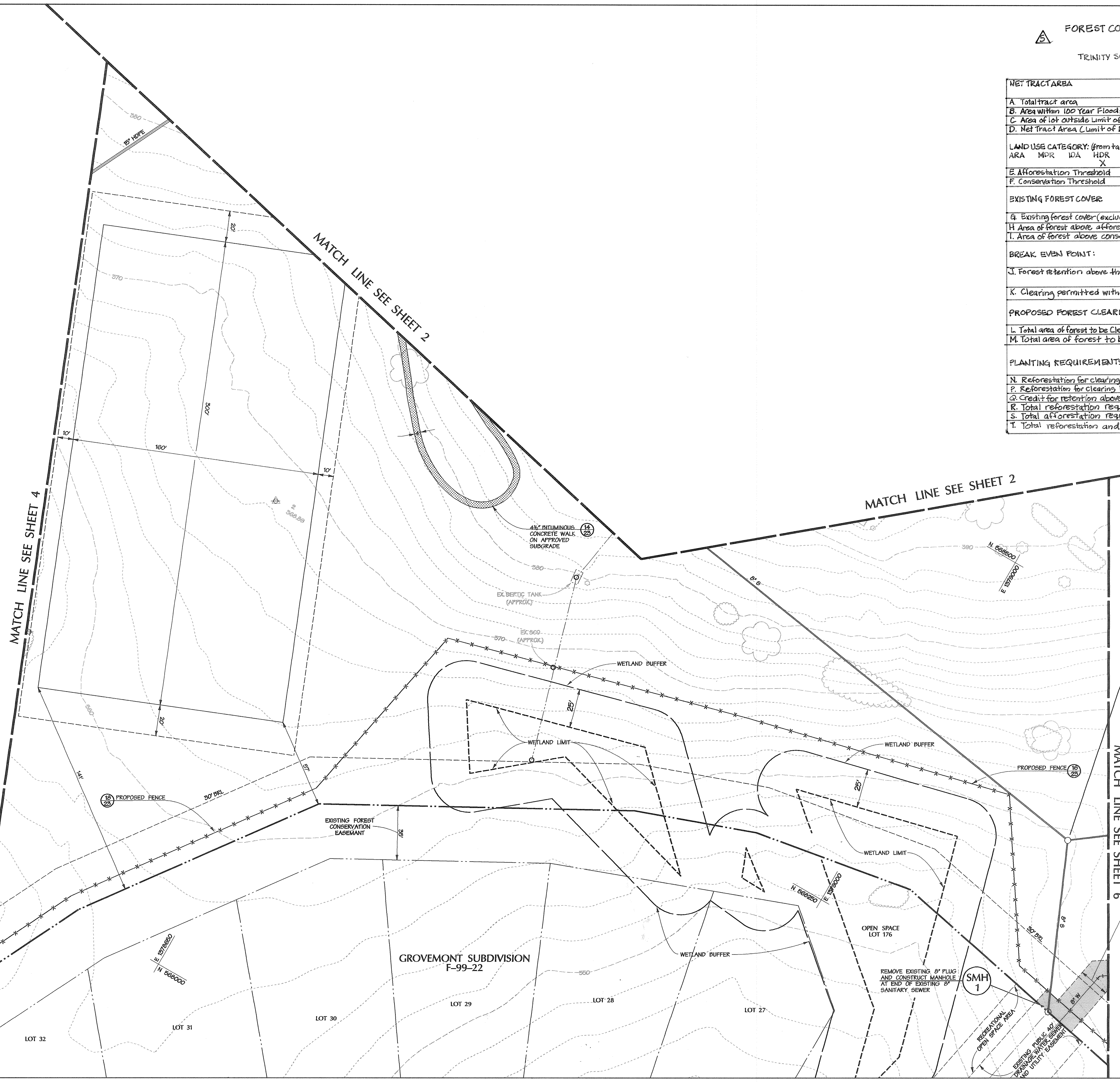
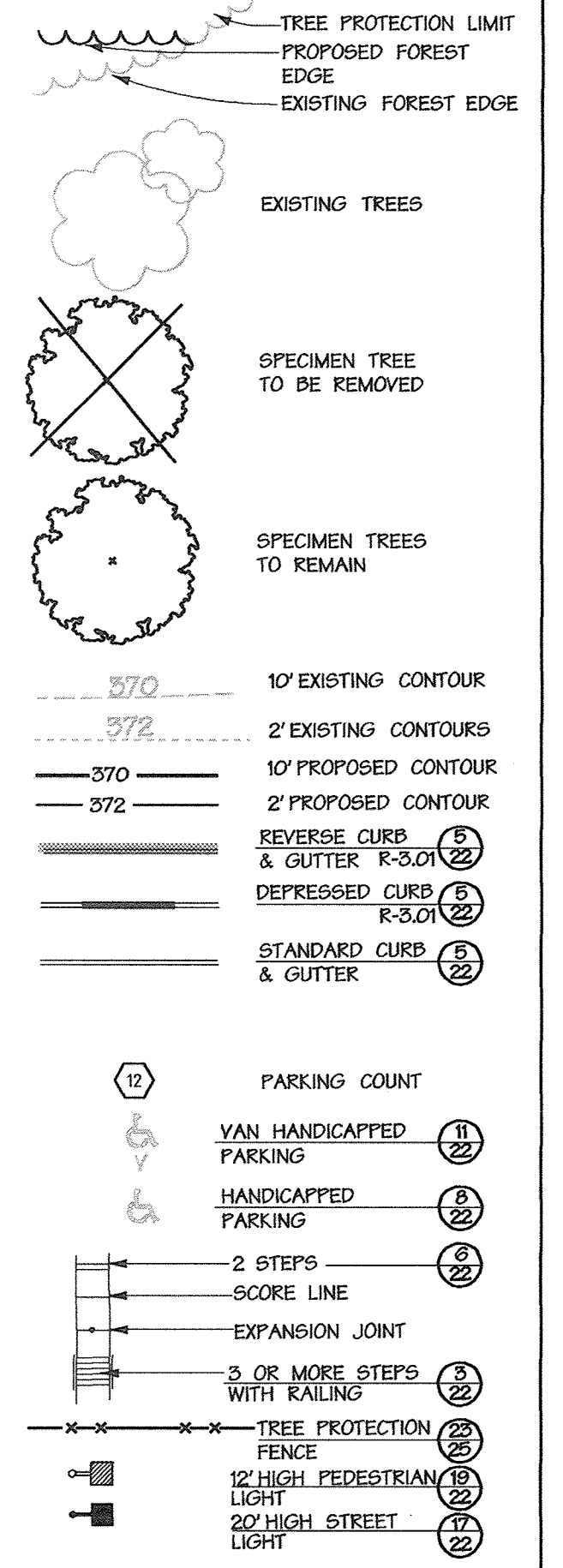
LAND USE CATEGORY: (from table 3.2.1, page 40, Manual)		
ARA	MPR	IDA
	HDR	MPD
		CIA
		X

EXISTING FOREST COVER		
G. Existing forest cover (excluding floodplain/gasline easement)		0.0
H. Area of forest above afforestation threshold		0.0
I. Area of forest above conservation threshold		0.0

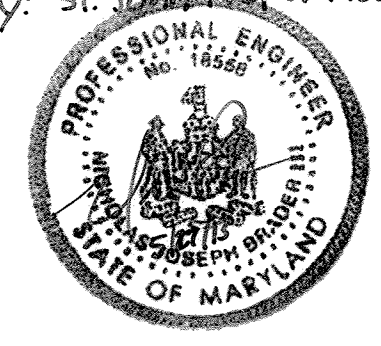
BREAK EVEN POINT:		
J. Forest retention above threshold with no mitigation	Break-Even Point	NA
K. Clearing permitted without mitigation		NA

PROPOSED FOREST CLEARING		
L. Total area of forest to be Cleared or retained Outside FCE		0.0
M. Total area of forest to be Retained in FCE		0.0

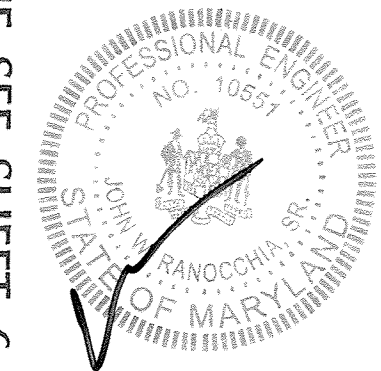
PLANTING REQUIREMENTS		
N. Reforestation for clearing above Conservation Threshold		NA
P. Reforestation for clearing below Conservation Threshold		NA
Q. Credit for retention above conservation threshold		NA
R. Total reforestation required		0.0
S. Total afforestation required		0.06
T. Total reforestation and afforestation required		0.06



Revision #5 4/24/13 - UPDATE
Total no. of sheets add Forest Conservation Worksheet.
By: St. John Properties, Inc.

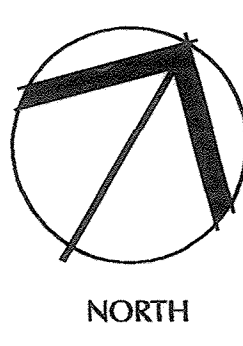


SMH 2
N 568362.7
E 1579118.8



20' PUBLIC WATER & UTILITY EASEMENT

CONTRACTOR TO TEST PIT FOR LOCATION AND DEPTH OF SANITARY CONNECTIONS BEFORE LYING ANY PIPE.



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

<i>[Signature]</i>	5/31/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>[Signature]</i>	6/5/01
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>[Signature]</i>	6/6/01
DIRECTOR	DATE

4/24/13 5 Reverse total # of sheets; add Forest Conservation Worksheet

Date	No.	Revision Description

Trinity School

OWNER:
OWNER: Trinity School, Inc., a Maryland Non-Profit Corporation.
4985 Ilchester Road, Ellicott City, MD 21043

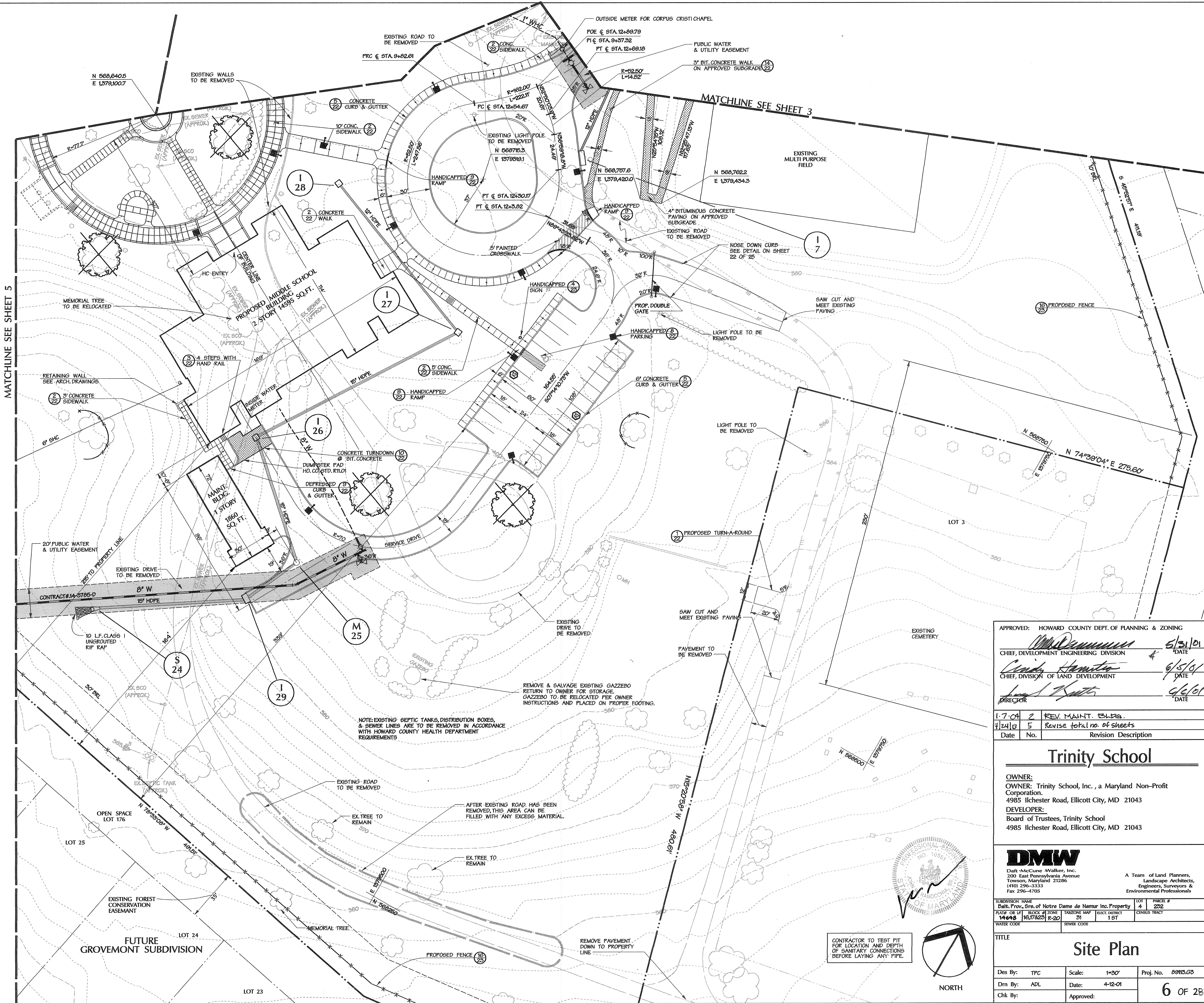
DEVELOPER:
Board of Trustees, Trinity School
4985 Ilchester Road, Ellicott City, MD 21043

DMW
Duff-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax: 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

SUBDIVISION NAME		LOT	SHEET #
Duff, Proj. Sps. of Notre Dame de Namur Inc. Property		4	232
PLAN OR L.P.	BLOCK # ZONE	TAXPAYER MAP	ELECT. DISTRICT
146-98	16,17&23 R-20	21	1 ST
WATER CODE	SEWER CODE		

TITLE		
Site Plan		
Des By: TPC	Scale: 1"=30'	Proj. No. 89113.03
Drn By: JMM	Date: 4-12-01	5 OF 28
Chk By:	Approved:	



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

<i>[Signature]</i>	5/31/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>[Signature]</i>	6/5/01
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>[Signature]</i>	6/6/01
DIRECTOR	DATE

1-7-04	2	REV. MAINT. 13-PA.
4-24-05	5	Revise total no. of sheets
Date	No.	Revision Description

Trinity School

OWNER:
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 4985 Ilchester Road, Ellicott City, MD 21043

DEVELOPER:
 Board of Trustees, Trinity School
 4985 Ilchester Road, Ellicott City, MD 21043

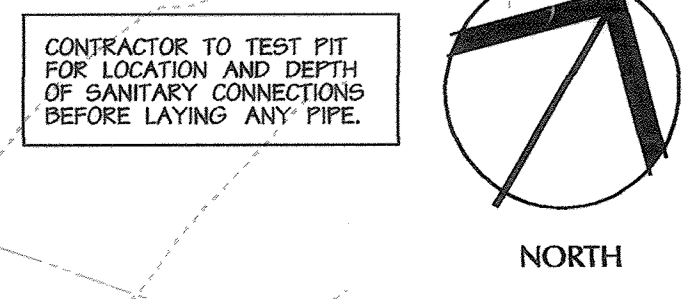
DMW
 Dart-McCune-Walker, Inc.
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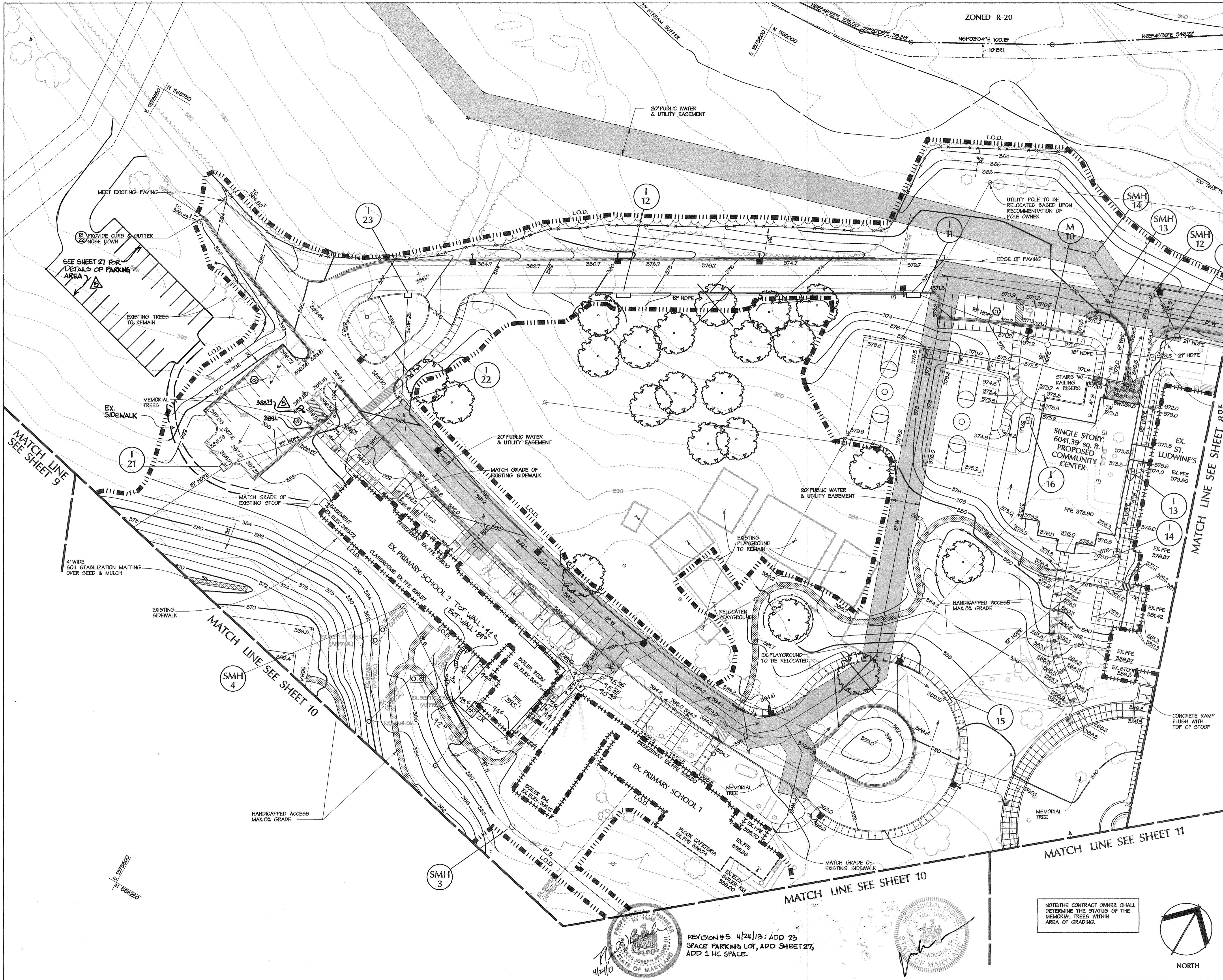
A Team of Land Planners,
 Landscape Architects,
 Engineers, Surveyors &
 Environmental Professionals.

SUBDIVISION NAME: *[Blank]* LOT # 4 PARCEL # 232
 PLAT OR REF: 14-648 BLOCK # 21 TAXING MAP 14-648 16377623 R-22 DISTRICT 1 ST CENSUS TRACT
 WATER CODE: *[Blank]* SEWER CODE: *[Blank]*

TITLE: **Site Plan**

Des By: TPC	Scale: 1"=30'	Proj. No. 09113.05
Drn By: ADL	Date: 4-12-01	6 OF 28
Chk By: <i>[Blank]</i>	Approved: <i>[Blank]</i>	





LEGEND

- TREE PROTECTION LIMIT
- PROPOSED FOREST EDGE
- EXISTING FOREST EDGE
- EXISTING TREES
- SPECIMEN TREE TO BE REMOVED
- SPECIMEN TREES TO REMAIN
- 10' EXISTING CONTOUR
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- DEPRESSED CURB R-3.01
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- 20' HIGH STREET LIGHT
- SOIL STABILIZATION MATTING OVER SEED & MULCH (EROSION CONTROL MATTING)

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Michael J. Stalor 5/10/13 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

Cindy Hamilton 4/15/14 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT

Paul S. Smith 4/16/14 DATE
 DIRECTOR

1-7-04	2	PRIM SCH 2 EAST END RECONSTRUCTION
Date	No.	Revision Description

Trinity School

OWNER:
 OWNER: Trinity School, Inc., a Maryland Non-Profit Corporation.
 4985 Ilchester Road, Ellicott City, MD 21043

DEVELOPER:
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 4985 Ilchester Road, Ellicott City, MD 21043

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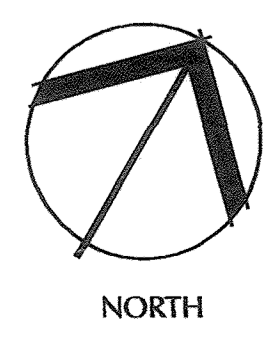
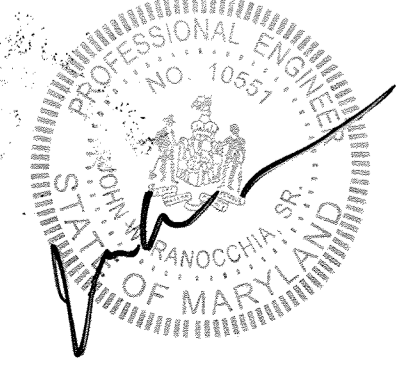
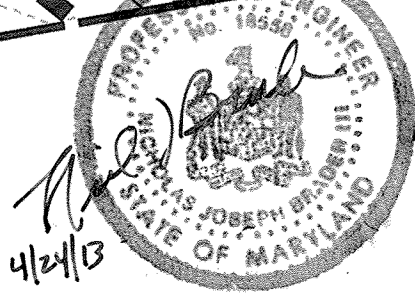
SUBMISSION NAME: Delts. Prov. Srvs. of Notre Dame de Namur Inc. Property		LOT # 4	PARCEL # 252
PLAT OR LE # 14-48	BLOCK # 16, 17, 22	ZONE R-20	TAXING MAP 1 ST
WATER CODE	SEWER CODE	BLK. DISTRICT	CENSUS TRACT

Grading Plan

Des By: TPC Scale: 1"=30' Proj. No. 0913.03
 Dwn By: ADL Date: 4-12-01
 Chk By: Approved: 7 OF 28

NOTE: THE CONTRACT OWNER SHALL DETERMINE THE STATUS OF THE MEMORIAL TREES WITHIN AREA OF GRADING.

REVISION # 5 4/24/13: ADD 23 SPACE PARKING LOT, ADD SHEET 27, ADD 1 HC SPACE.



LEGEND

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- PROPOSED FOREST EDGE
- EXISTING FOREST EDGE
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- 10' EXISTING CONTOUR
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- 12' HIGH PEDESTRIAN LIGHT
- 20' HIGH STREET LIGHT
- SOIL STABILIZATION MATTING OVER SEED & MULCH (EROSION CONTROL MATTING)



NOTE: EXISTING SEPTIC TANKS, DISTRIBUTION BOXES, & SEWER LINES ARE TO BE REMOVED IN ACCORDANCE WITH HOWARD COUNTY HEALTH DEPARTMENT REQUIREMENTS

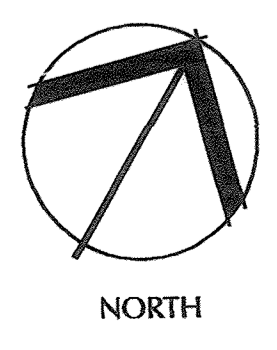
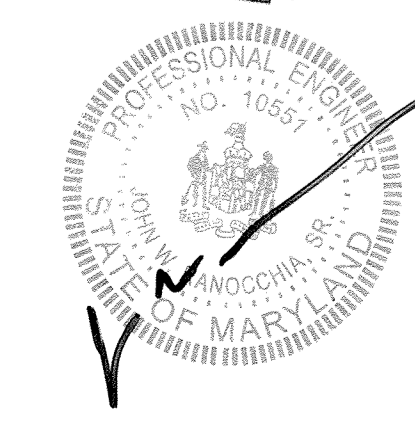
NOTE: A JURISDICTIONAL WETLAND DETERMINATION CONDUCTED ON OCTOBER 5, 1998 BY THE U.S. ARMY CORPS OF ENGINEERS CONFIRMED THAT NONTIDAL WETLANDS DO NOT EXIST IN THIS AREA. (CENAP-07-RF-98-000418-9)

REPLACE ALL EX WALK & STEPS WITH NEW WALKS & STEPS

CONTRACTOR TO TEST PIT FOR LOCATION AND DEPTH OF SANITARY CONNECTIONS BEFORE LAYING ANY PIPE.

THE EXISTING HEATING PLANT, TOWER AND UNDERGROUND FUEL TANK TO BE REMOVED IN A LATER PHASE OF CONSTRUCTION. FUEL TANK TO BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH ENVIRONMENTAL REGULATIONS.

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 No: 75523. Expiration Date: 7/12/18. Gregory Hoffmann



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 [Signature] 5/31/01 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 6/5/01 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 6/6/01 DATE
 DIRECTOR

12-11-12	5	Issue total # of sheets
1-14-03	1	REVISED LANDSCAPE DESIGN ALONG EAST PROPERTY LINE
4-10-03	2	PER AS-BUILT OF WQ. FACILITY (CMDM)
Date	No.	Revision Description

Trinity School

OWNER:
 Trinity School, Inc., a Maryland Non-Profit Corporation.
 4985 Ilchester Road, Ellicott City, MD 21043
 DEVELOPER:
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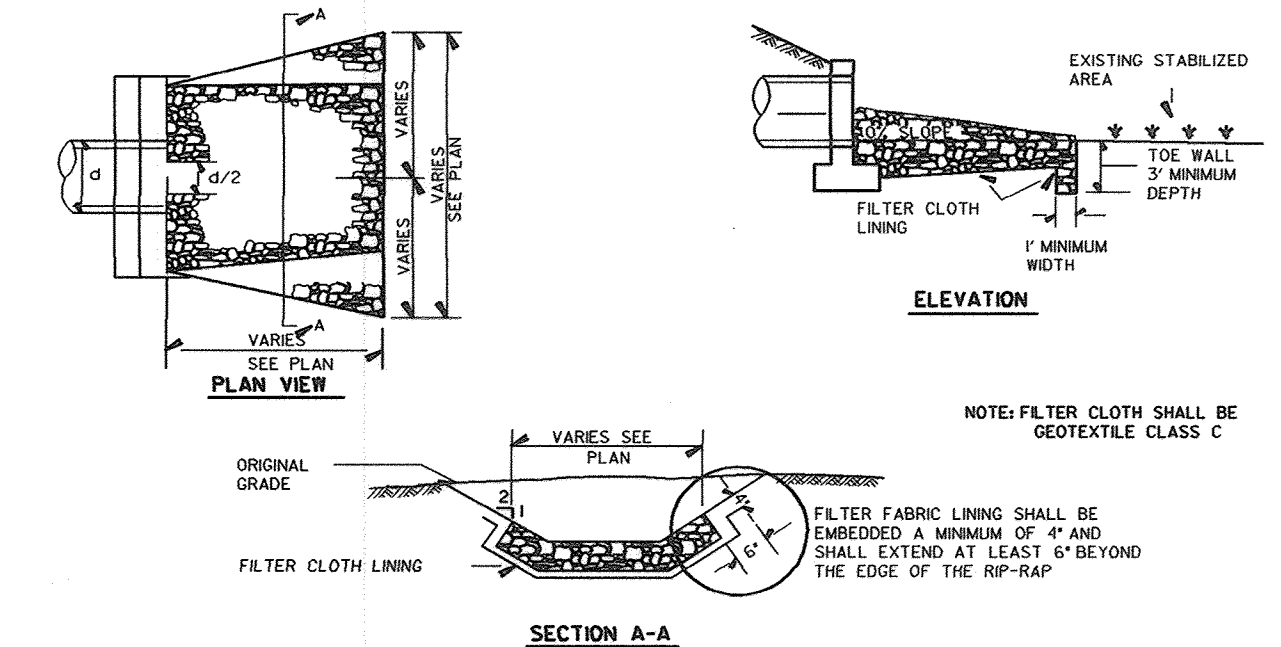
SUBDIVISION NAME	LOT	PANEL #
Balt. Prov. of Notre Dame de Namur Inc. Property	4	202
PLAT # OR U.I. #	SECTION	TAXATION MAP
16648	21	1 ST
DATE	DATE	CONTRACT
16-17-02	R-20	
WATER CODE	SEWER CODE	

Grading Plan

Des By:	TPC	Scale:	1"=20'	Proj. No.:	88113.05
Drn By:	ADL	Date:	4-12-01	8 OF 25	
Chk By:		Approved:			

LEGEND

- TREE PROTECTION LIMIT
- PROPOSED FOREST EDGE
- EXISTING FOREST EDGE
- EXISTING TREES
- SPECIMEN TREE TO BE REMOVED
- SPECIMEN TREES TO REMAIN
- 10' EXISTING CONTOUR
- 2' EXISTING CONTOURS
- 10' PROPOSED CONTOUR
- 2' PROPOSED CONTOUR
- REVERSE CURB & GUTTER
- DEPRESSED CURB & GUTTER
- STANDARD CURB & GUTTER
- PARKING COUNT
- VAN HANDICAPPED PARKING
- HANDICAPPED PARKING
- 2 STEPS
- SCORE LINE
- EXPANSION JOINT
- 3 OR MORE STEPS WITH RAILING
- TREE PROTECTION FENCE
- 12' HIGH PEDESTRIAN LIGHT
- 20' HIGH STREET LIGHT
- LIMIT OF DISTURBANCE
- SOIL STABILIZATION MATTING OVER SEED & MULCH (EROSION CONTROL MATTING)

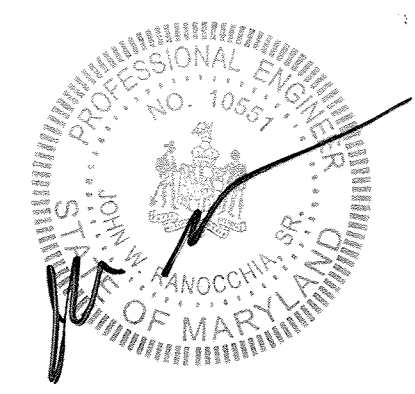
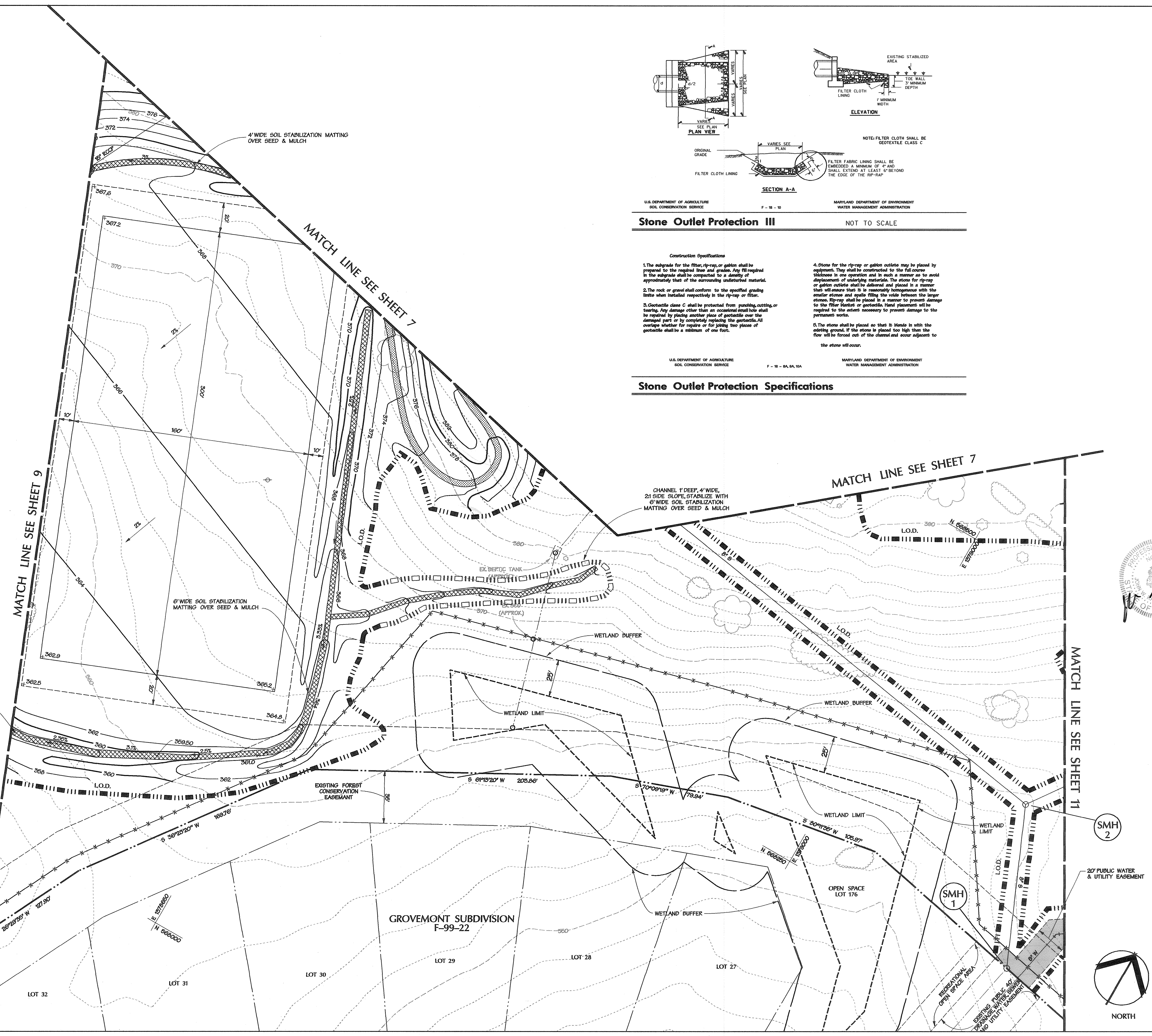


Stone Outlet Protection III

NOT TO SCALE

- Construction Specifications**
- The edgegrade for the filter, rip-rap, or gabion shall be prepared to the required line and grade. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
 - The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.
 - Geotextile class C shall be protected from puncturing, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps must be for repairs or for joining two pieces of geotextile shall be a minimum of one foot.
 - Stones for the rip-rap or gabion outlet may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacements of underlying materials. The stones for rip-rap or gabion outlet shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and equals filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter matting or geotextile. Hand placement will be required to the extent necessary to prevent damage to the permanent works.
 - The stones shall be placed so that it blends in with the existing ground. If the stones are placed too high then the flow will be forced out of the channel and scour adjacent to the stones will occur.

Stone Outlet Protection Specifications



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
<i>[Signature]</i>	5/21/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>[Signature]</i>	6/5/01
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>[Signature]</i>	4/6/01
DIRECTOR	DATE

4/24/03	5	Revise total # of sheets
Date	No.	Revision Description

Trinity School

OWNER:
 OWNER: Trinity School, Inc., a Maryland Non-Profit Corporation.
 4985 Ilchester Road, Ellicott City, MD 21043

DEVELOPER:
 Board of Trustees, Trinity School
 4985 Ilchester Road, Ellicott City, MD 21043

DMW		A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals	
Dart-McCune-Walker, Inc. 200 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296-3333 Fax: 296-0705			
SUBDIVISION NAME	LOT #	SHEET #	
PLAT OR REF	BLK #	TAX MAP	TRACT
14-46	16,17,22	R-20	181
WATER CODE	SEWER CODE		

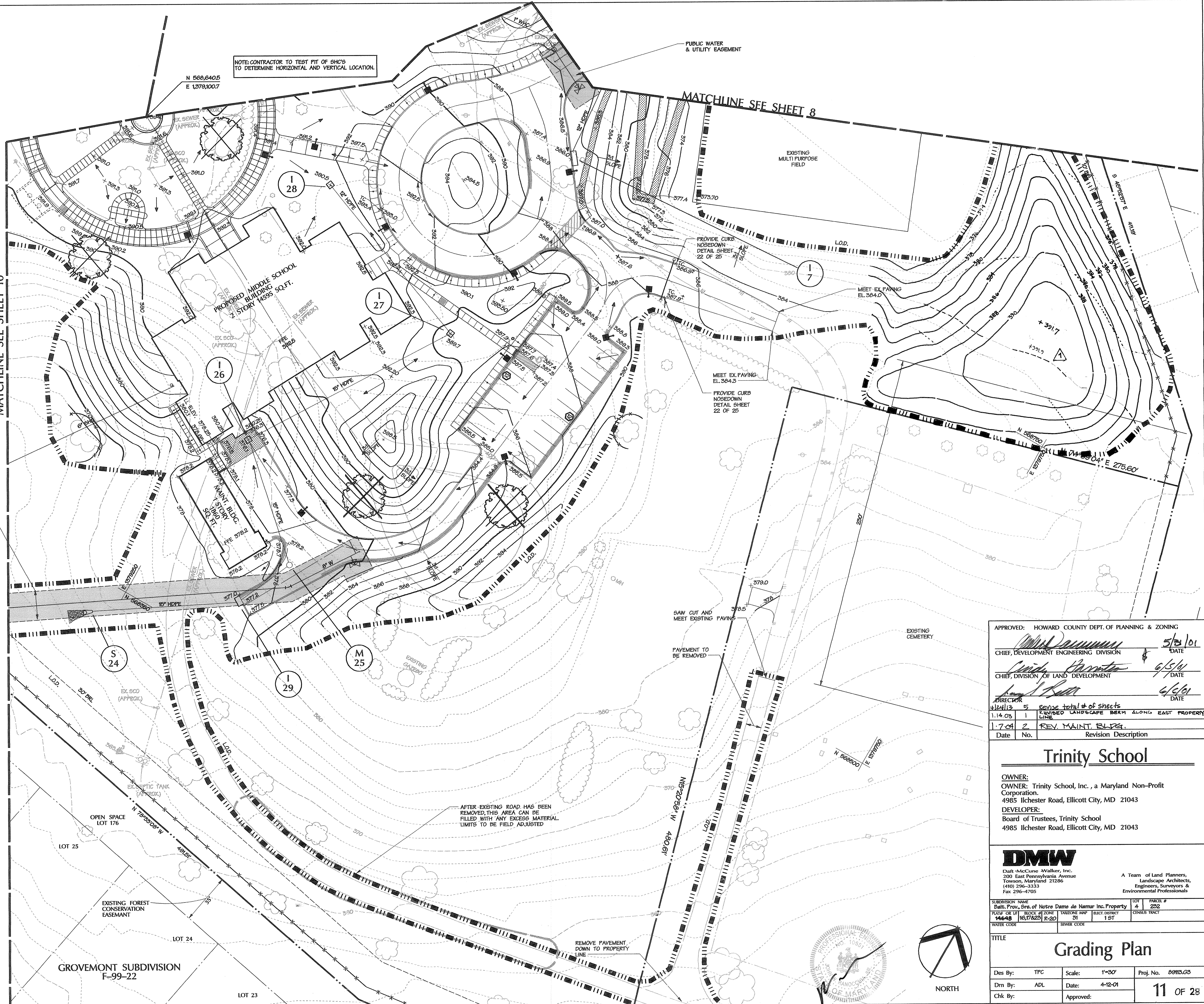
Grading Plan		
Des By: TPC	Scale: 1"=30'	Proj. No. 89113.G3
Drn By: JWM	Date: 4-12-01	10 OF 25
Chk By:	Approved:	

LEGEND

- TREE PROTECTION LIMIT
- PROPOSED FOREST EDGE
- EXISTING FOREST EDGE
- EXISTING TREES
- SPECIMEN TREE TO BE REMOVED
- SPECIMEN TREES TO REMAIN
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- STANDARD CURB & GUTTER
- NOSE DOWN CURB & GUTTER
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- 12' HIGH PEDESTRIAN LIGHT
- 20' HIGH STREET LIGHT
- SOIL STABILIZATION MATTING OVER SEED & MULCH
- LIMIT OF DISTURBANCE

MATCHLINE SEE SHEET 10

MATCHLINE SEE SHEET 8



NOTE-CONTRACTOR TO TEST FIT OF SHC'S TO DETERMINE HORIZONTAL AND VERTICAL LOCATION.

N 568,640.5
E 1378,100.7

PUBLIC WATER & UTILITY EASEMENT

PROVIDE CURB NOSEDOWN
DETAIL SHEET 22 OF 25

PROVIDE CURB NOSEDOWN
DETAIL SHEET 22 OF 25

SAW CUT AND MEET EXISTING PAVING

PAVEMENT TO BE REMOVED

AFTER EXISTING ROAD HAS BEEN REMOVED, THIS AREA CAN BE FILLED WITH ANY EXCESS MATERIAL. LIMITS TO BE FIELD ADJUSTED.

REMOVE PAVEMENT DOWN TO PROPERTY LINE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
	5/21/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
	6/5/01
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
	6/2/01
DIRECTOR	DATE
112413	5
1.14.03	1
1.7.01	2
Date	No.
Revision Description	
	REVISE TOTAL # OF SHEETS
	REVISED LANDSCAPE BERM ALONG EAST PROPERTY LINE
	REV. MAINT. BLDG.

Trinity School

OWNER:
Trinity School, Inc., a Maryland Non-Profit Corporation,
4985 Ilchester Road, Ellicott City, MD 21043

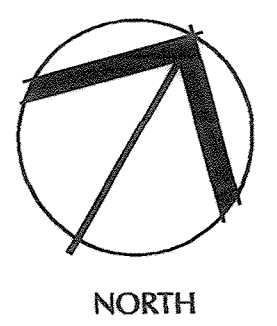
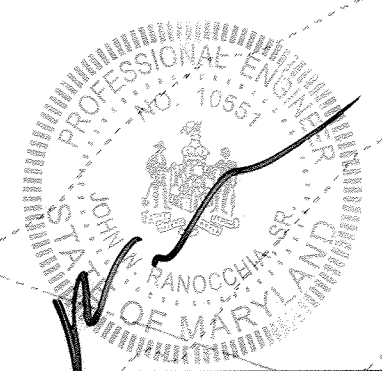
DEVELOPER:
Board of Trustees, Trinity School
4985 Ilchester Road, Ellicott City, MD 21043

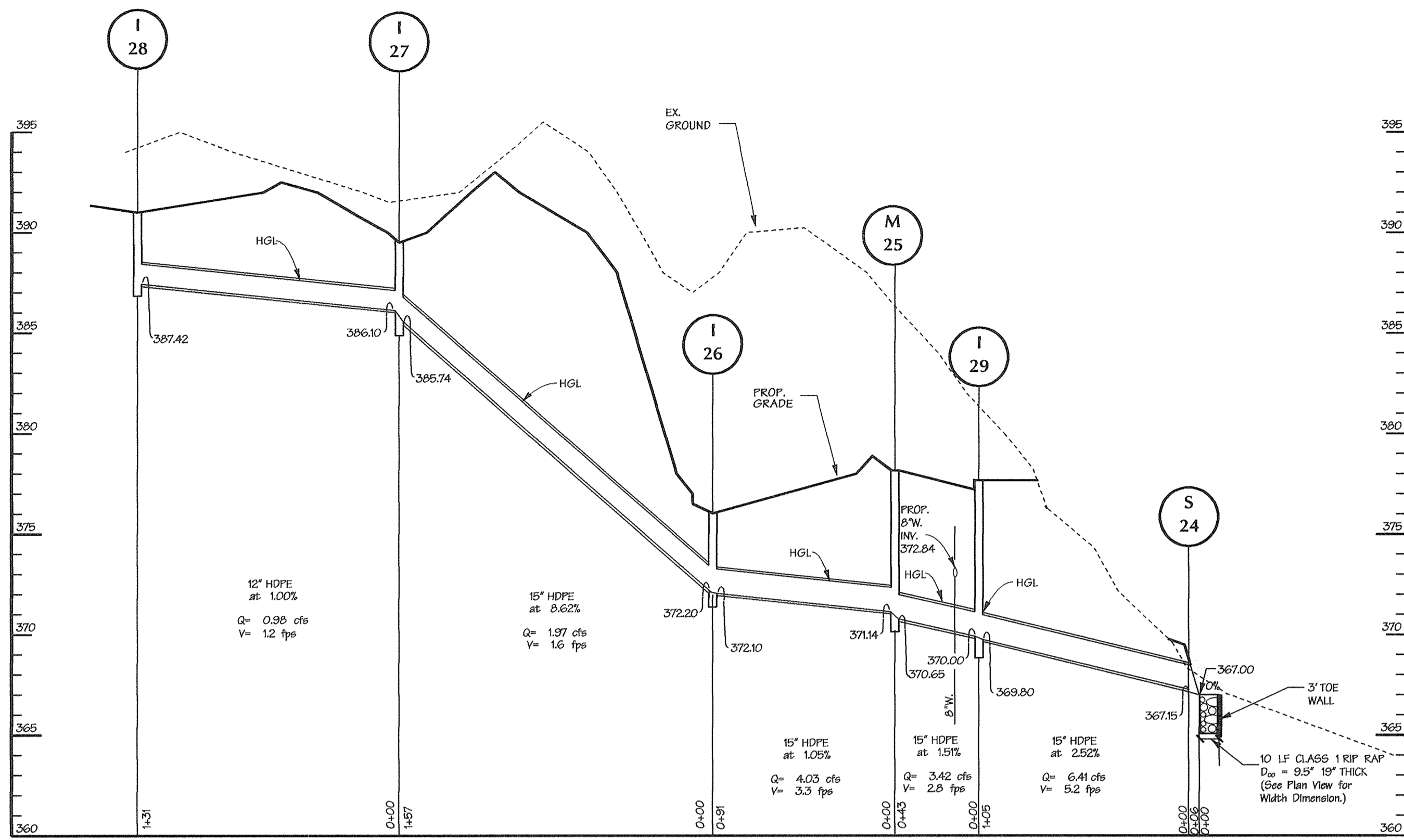
DMW
Daft McCune Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors &
Environmental Professionals

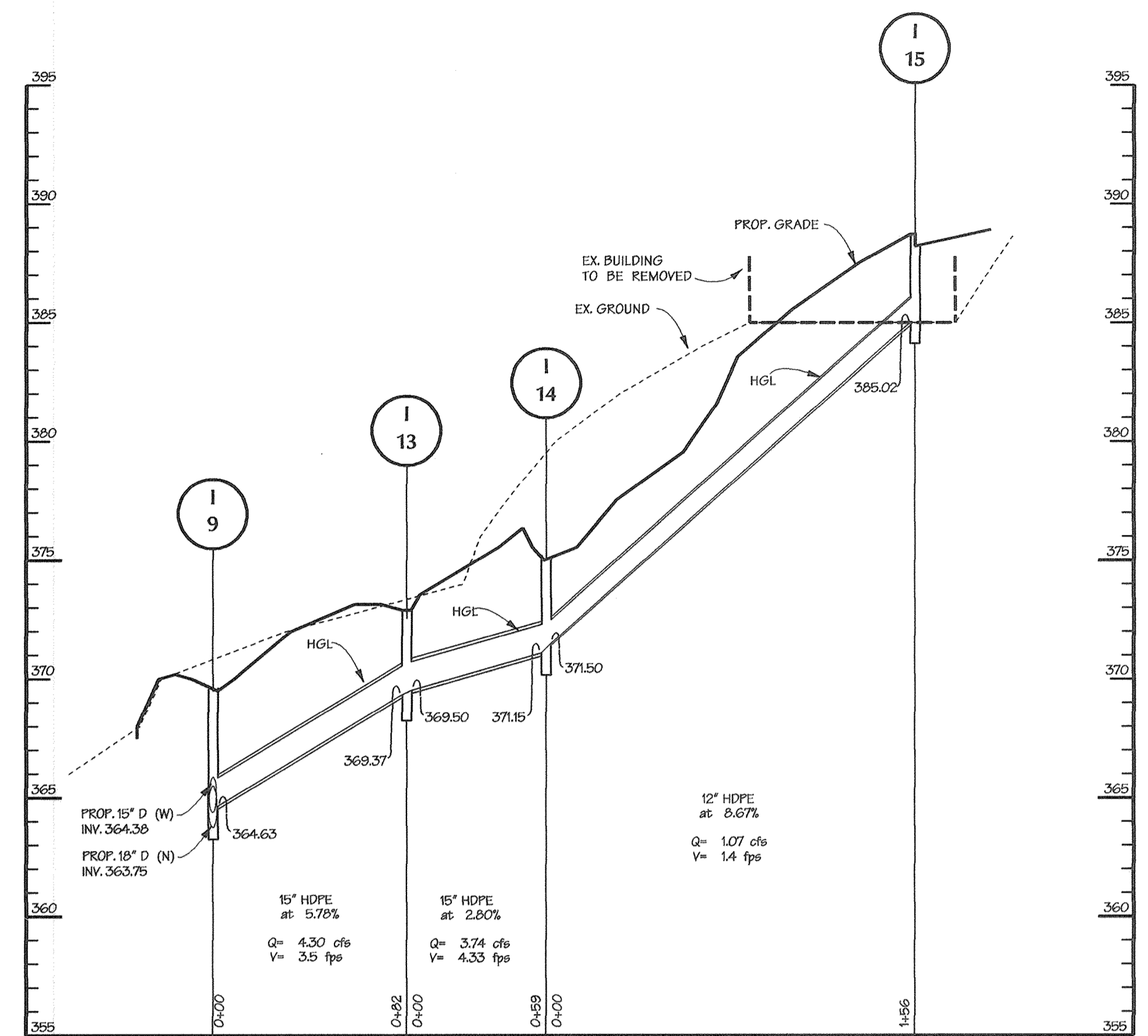
SUBDIVISION NAME	14648	LOT #	4	PANEL #	232
PLAT OR LOT	14648	BLOCK #	21	SECTION	1 ST
WATER CODE		SEWER CODE			

TITLE			
Grading Plan			
Des By:	TPC	Scale:	1"=30'
Dwn By:	ADL	Date:	4-12-01
Chk By:		Approved:	
		Proj. No.:	89103.03
		11	OF 28

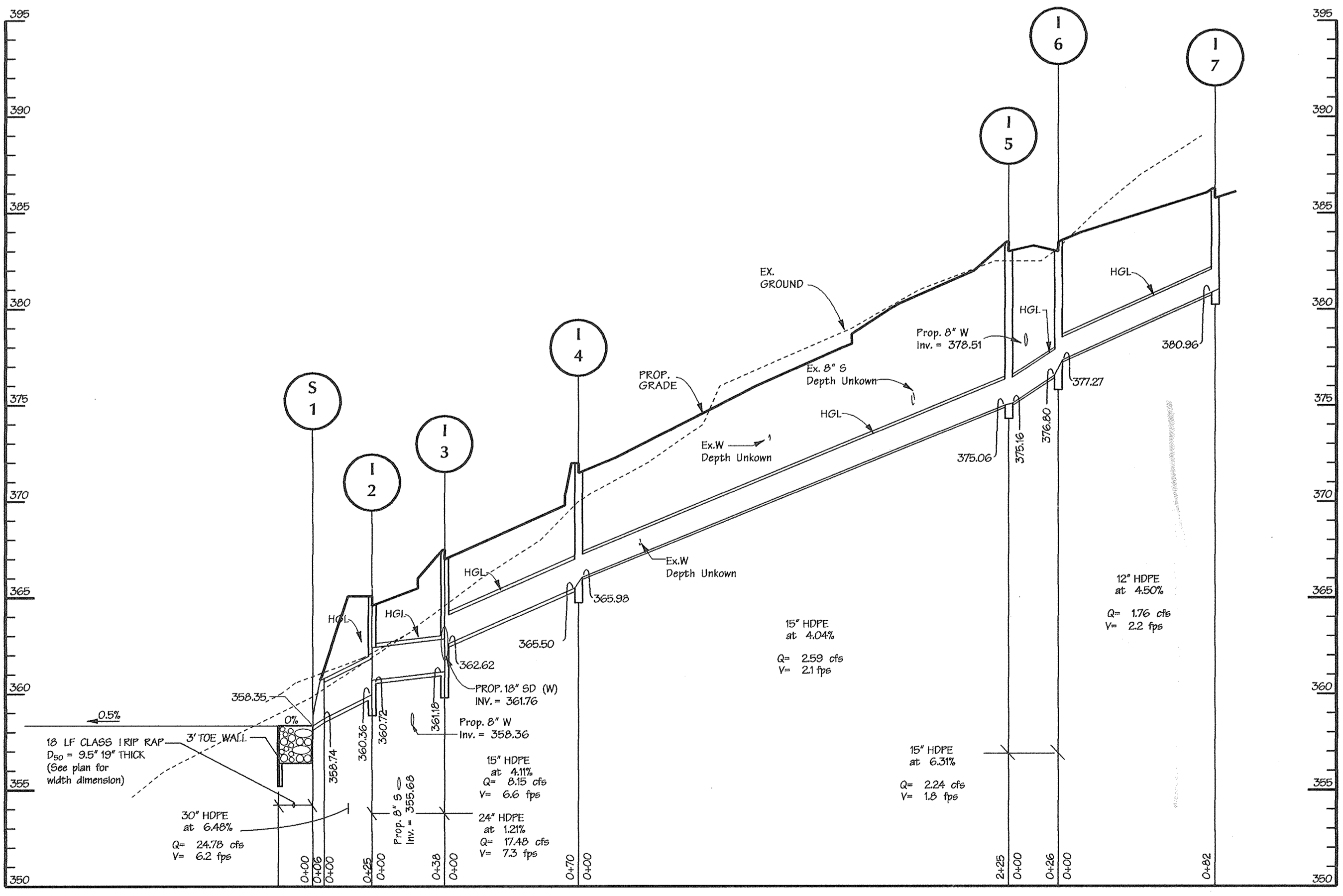




PROFILES
SCALE: HORIZ. 1"=50'
VERT. 1"=5'



PROFILES
SCALE: HORIZ. 1"=50'
VERT. 1"=5'



PROFILES
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

STRUCTURE SCHEDULE ^Δ

NO.	TYPE	INV. IN	INV. OUT	TOP ELEVATION		REMARKS	LOCATION
				UPPER	LOWER		
S-1	END SECTION Dia. = 24"	358.35	358.74				SEE PLAN
I-2	A-10 INLET W= 3'-0"	360.72	360.36	365.10		HO.CO. STD. S.D. 4.02	§ STA. 7+72.46
I-3	A-10 INLET W= 3'-0"	361.18	361.18	367.75	367.50	HO.CO. STD. S.D. 4.02	SEE PLAN
I-4	A-10 INLET W= 2'-6"	365.98	365.50	372.22	372.0	HO.CO. STD. S.D. 4.02	SEE PLAN
I-5	A-5 INLET W= 2'-6"	375.16	375.06	383.33	383.05	HO.CO. STD. S.D. 4.01	§ STA. 8+67.80
I-6	A-5 INLET W= 2'-6"	377.27	376.80	383.37	383.15	HO.CO. STD. S.D. 4.01	§ STA. 8+67.80
I-7	A-10 INLET W= 2'-6"		380.96		380.50	HO.CO. STD. S.D. 4.02	§ STA. 12+36.13
M-8	STD. MANHOLE DIA. = 4'-0"	363.52	363.29	370.00	MH TOP	HO.CO. STD. G. 5.11	§ STA. 6+18.21 18.53 R/L
I-9	SINGLE 'S' INLET	363.75	363.75	369.50	GRATE	HO.CO. STD. S.D. 4.22	§ STA. 6+04.35 36.67 R/L
M-10	STD. MANHOLE DIA. = 4'-0"	365.13	365.13	371.60	MH TOP	HO.CO. STD. G. 5.11	§ STA. 5+27.71 40.89 R/L
I-11	A-10 INLET W= 2'-6"	367.14	366.77	372.60	372.41	MD. 374.51 *	§ STA. 4+26.39
I-12	A-10 INLET W= 2'-6"		373.92		373.35	MD. 374.51 *	§ STA. 2+20.84
I-13	YARD INLET	369.50	369.37	373.30	GRATE	HO.CO. STD. S.D. 4.14	SEE PLAN
I-14	YARD INLET	371.50	371.5	375.00	GRATE	HO.CO. STD. S.D. 4.14	SEE PLAN
I-15	A-5 INLET W= 2'-6"		385.02		384.60	HO.CO. STD. S.D. 4.01	§ STA. 7+21.82
I-16	YARD INLET		368.50		371.50	GRATE	HO.CO. STD. S.D. 4.14
S-17	END SECTION Dia. = 15"	348.71	348.50				SEE PLAN
I-18	YARD INLET		381.56		387.00	GRATE	HO.CO. STD. S.D. 4.14
S-19	END SECTION Dia. = 15"	350.33	350.00				SEE PLAN
I-20	YARD INLET	360.35	360.25	365.80	GRATE	HO.CO. STD. S.D. 4.14	N 568412.26 E 1378355.69
I-21	A-5 INLET W= 2'-6"	381.59	381.49	387.21			SEE PLAN
I-22	A-10 INLET W= 2'-6"	383.30	382.95	390.20	389.90	HO.CO. STD. S.D. 4.02	§ STA. 1+91.65
I-23	A-5 INLET W= 2'-6"		384.00		387.42	387.14	HO.CO. STD. S.D. 4.01
S-24	END SECTION Dia. = 15"	368.15	367.00				N 568327.19 E 1379236.53
M-25	STD. MANHOLE DIA. = 4'-0"	370.65	370.65	378.12	MH TOP	HO.CO. STD. G. 5.11	
I-26	TYPE 'S' INLET	372.20	372.10	376.10	GRATE	HO.CO. STD. S.D. 4.22	SERVICE DRIVE § STA. 4+43.01 ON E
I-27	YARD INLET	386.10	385.74	389.70	GRATE	HO.CO. STD. S.D. 4.14	N 568615.31 E 1379356.69
I-28	YARD INLET		387.42		390.50	GRATE	HO.CO. STD. S.D. 4.14
I-29	A-10 INLET W= 2'-6"	370.00	369.80	377.50	377.85		SEE PLAN
S-30	END SECTION Dia. = 15"	356.45	356.00				§ STA. 5+75.04 44.3 R/L
I-31	A-5 INLET W= 2'-6"	369.05	369.30	366.75	367.17		HO.CO. STD. S.D. 4.01
I-32	A-10 INLET W= 2'-6"		360.33		366.57	367.23	HO.CO. STD. S.D. 4.02

Δ ALL INVERTS TO BE FULLY DEVELOPED.
* SEE MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION BOOK OF STANDARDS

** TC UNLESS OTHERWISE NOTED

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 [Signature] 5/12/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 6/5/01
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 6/6/01
 DIRECTOR

4/24/13 5 Revise total # of sheets

Date	No.	Revision Description

Trinity School

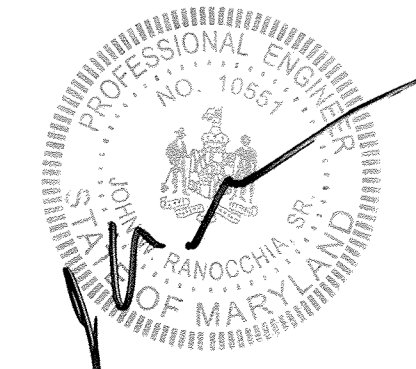
OWNER:
 OWNER: Trinity School, Inc., a Maryland Non-Profit Corporation.
 4985 Ilchester Road, Ellicott City, MD 21043
 DEVELOPER:
 Board of Trustees, Trinity School
 4985 Ilchester Road, Ellicott City, MD 21043

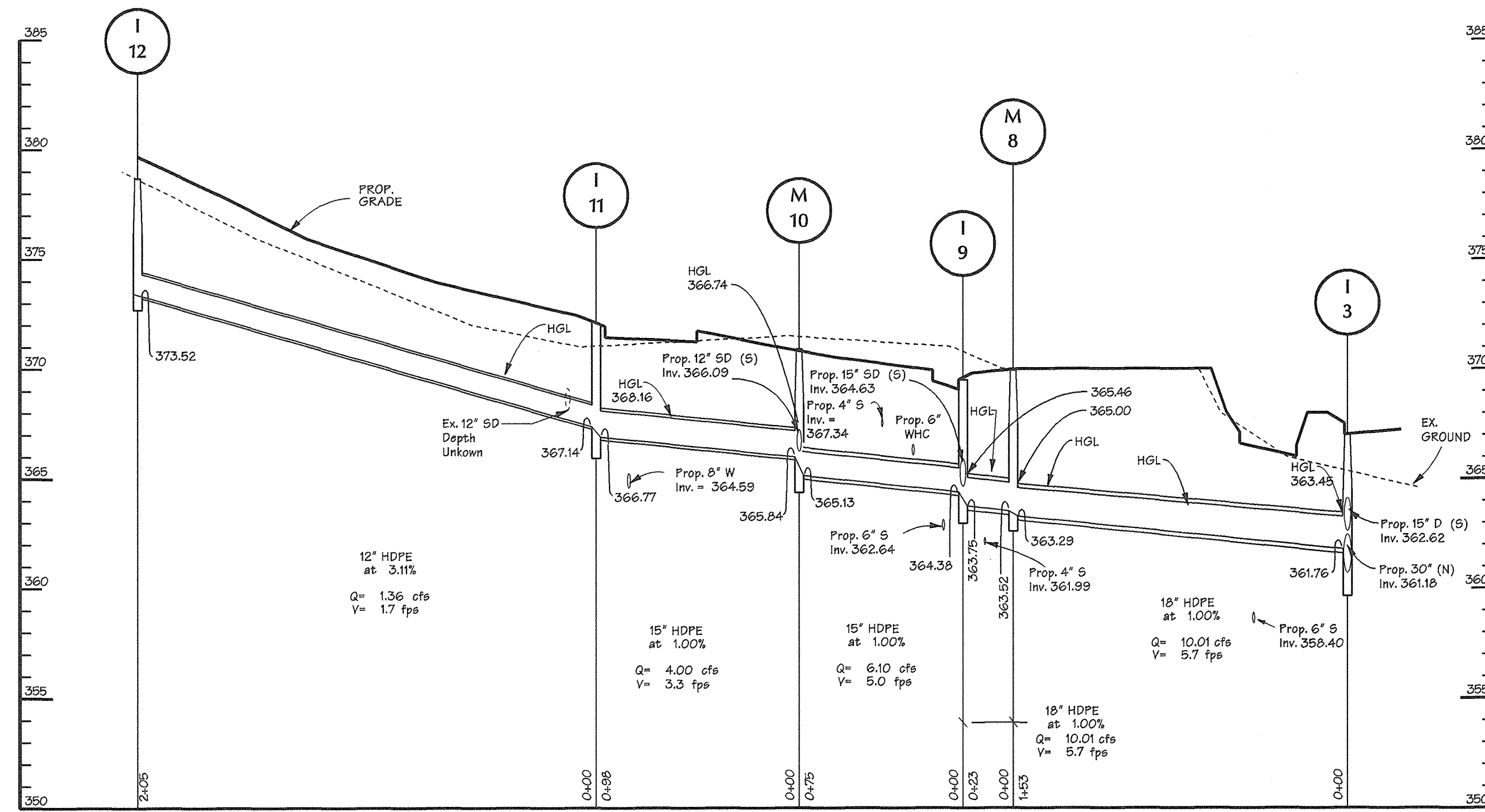
DMW
 Draft-McCune-Walker, Inc.
 200 East Potomac Avenue
 Towson, Maryland 21286
 (410) 296-3333
 Fax 296-4705
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

SUBMISSION NAME	LOT #	PARCEL #
Balt. Prov., Sec. of Notre Dame de Namur Inc. Property	4	232
FRAT. OR. TR. BLOCK # 7050	31	
14648 16170221 R-20	1 ST	DENSITY TRACT
WATER CODE	SEWER CODE	

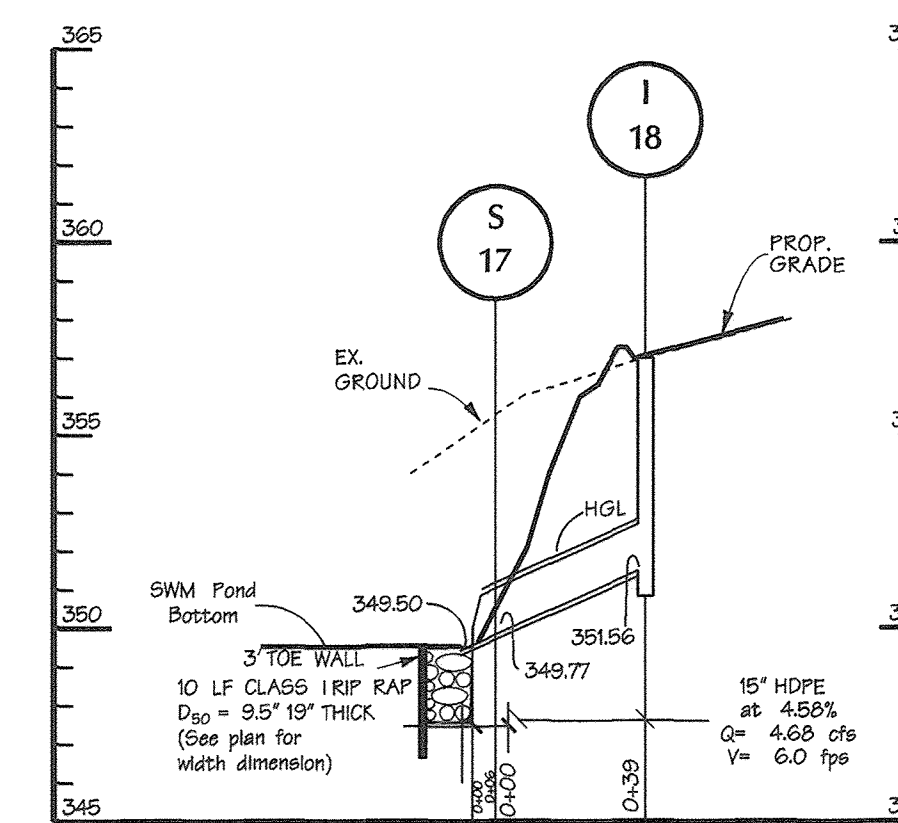
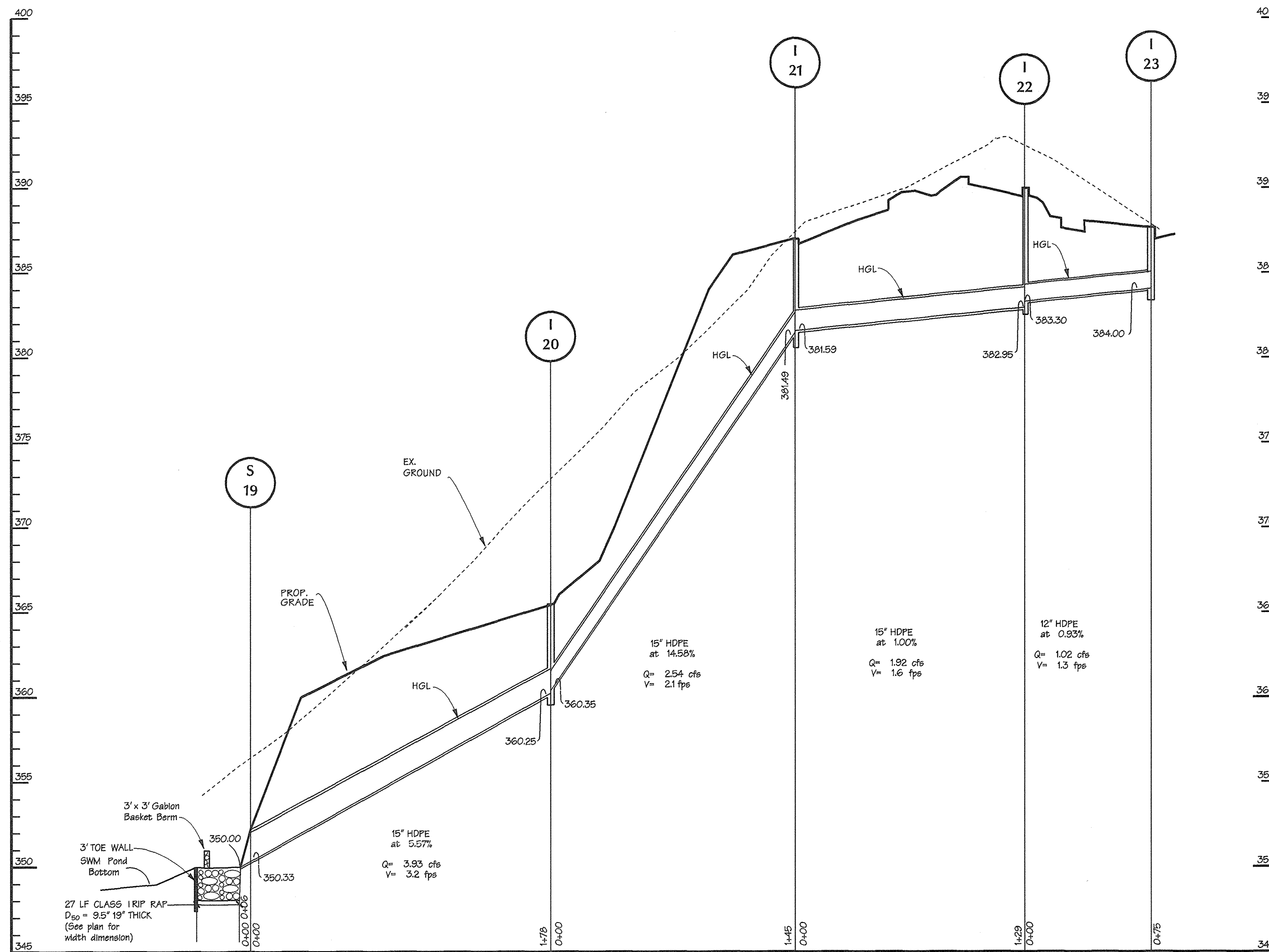
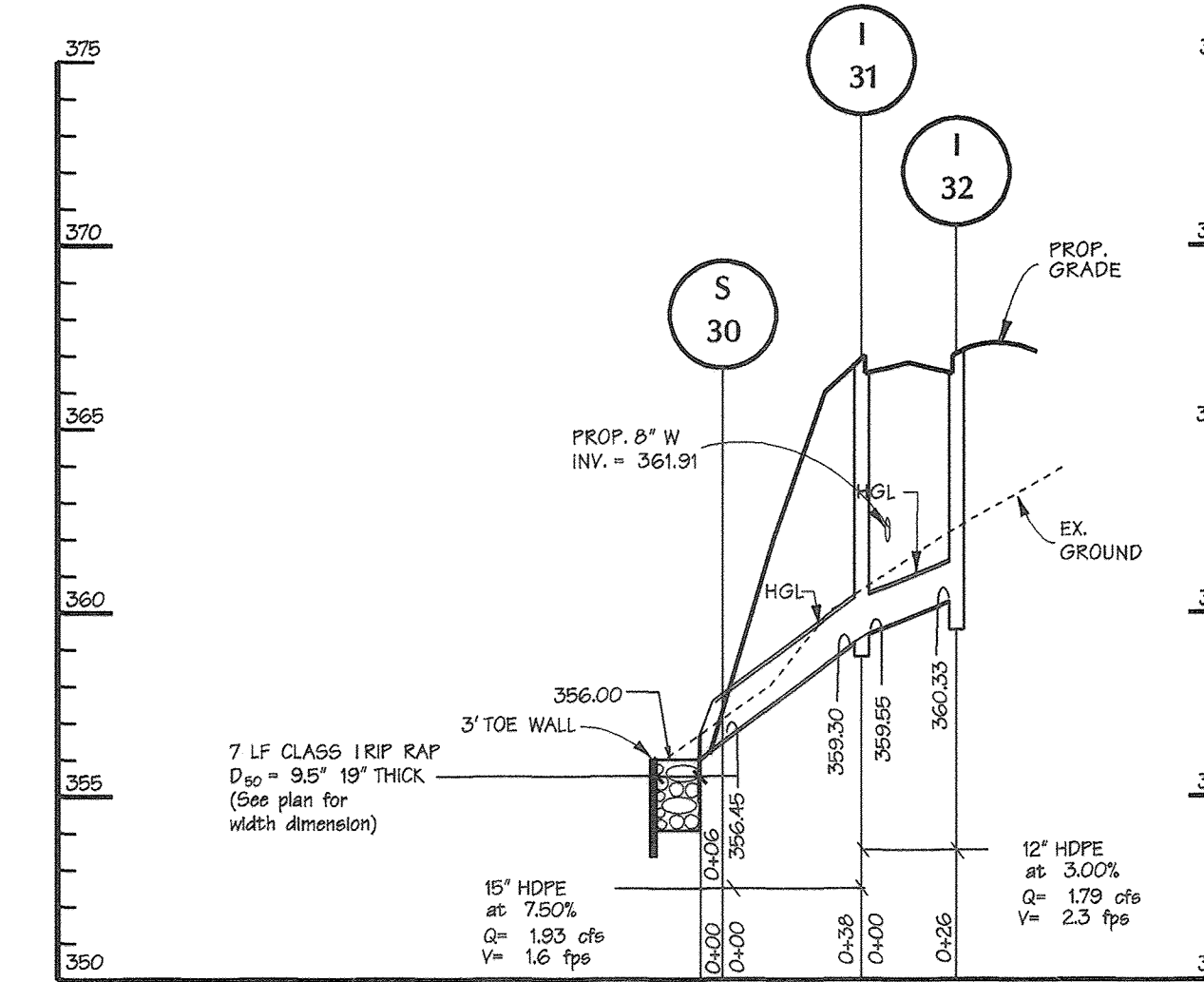
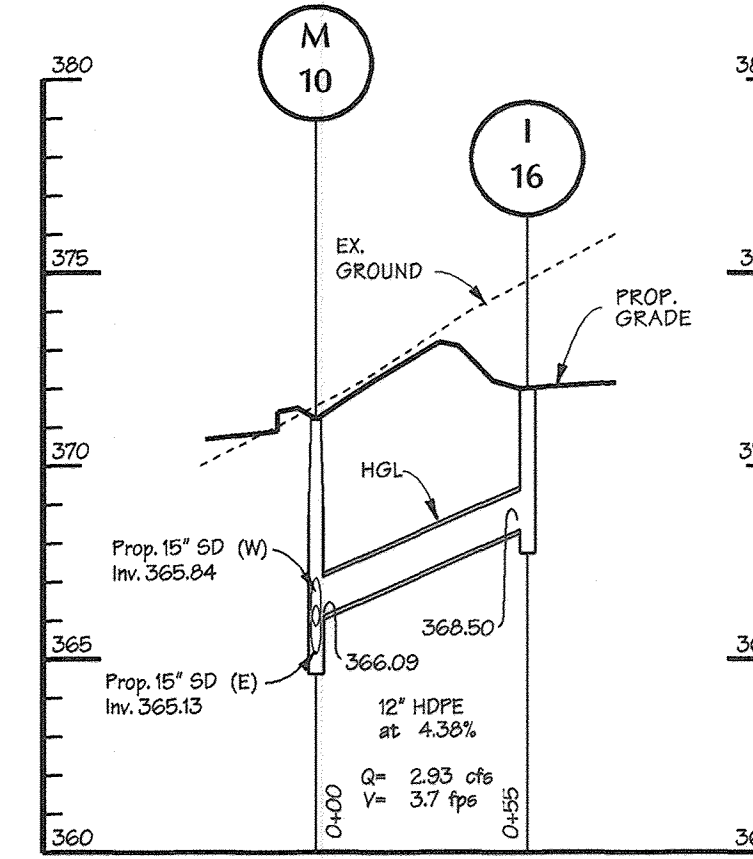
Storm Drain Profiles

Des By: JMH	Scale: 1"=50'	Proj. No. 89113.03
Dwn By: ADL	Date: 4-12-01	12 OF 28
Chk By:	Approved:	





PROFILES
SCALE: HORIZ. 1"=50'
VERT. 1"=5'



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 Chief, Development Engineering Division: *[Signature]* 5/31/01
 Chief, Division of Land Development: *[Signature]* 6/5/01
 Director: *[Signature]* 4/6/01

4/24/13	5	Revise total no. of sheets
Date	No.	Revision Description

Trinity School

OWNER:
 Trinity School, Inc., a Maryland Non-Profit Corporation.
 4985 Ilchester Road, Ellicott City, MD 21043
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 Board of Trustees, Trinity School
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DMW
 Dait-MacCune-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3333
 Fax 296-4705

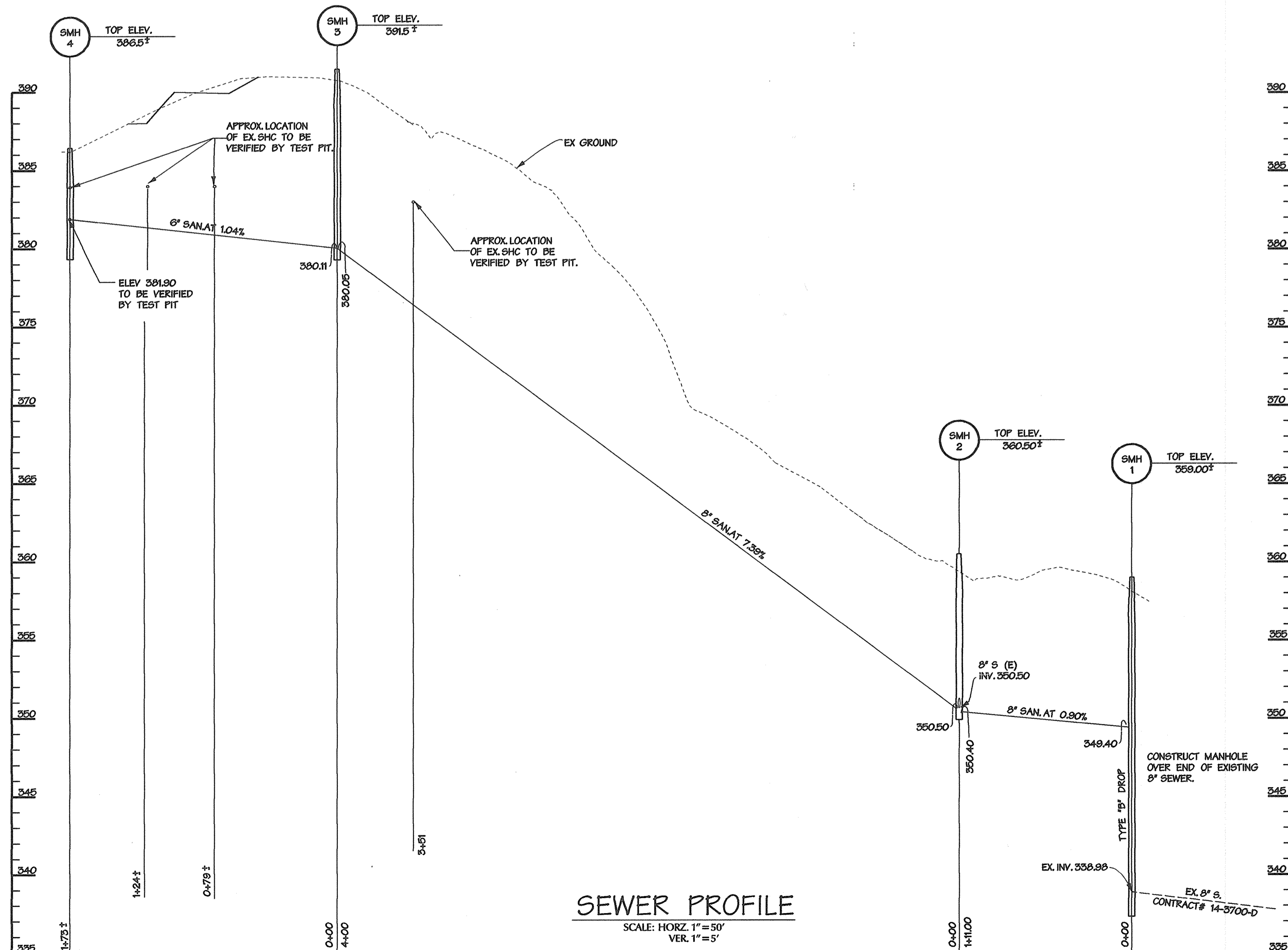
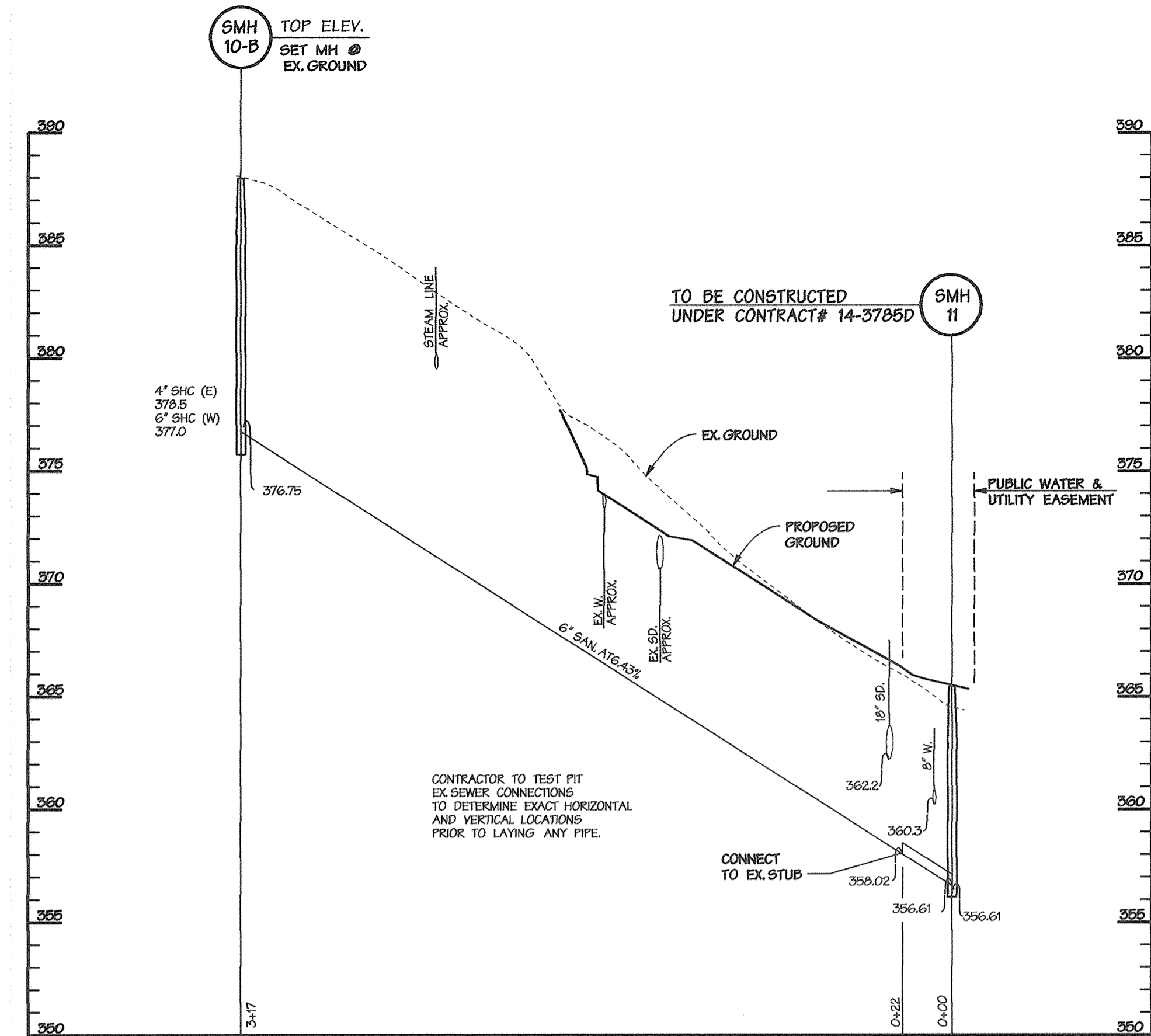
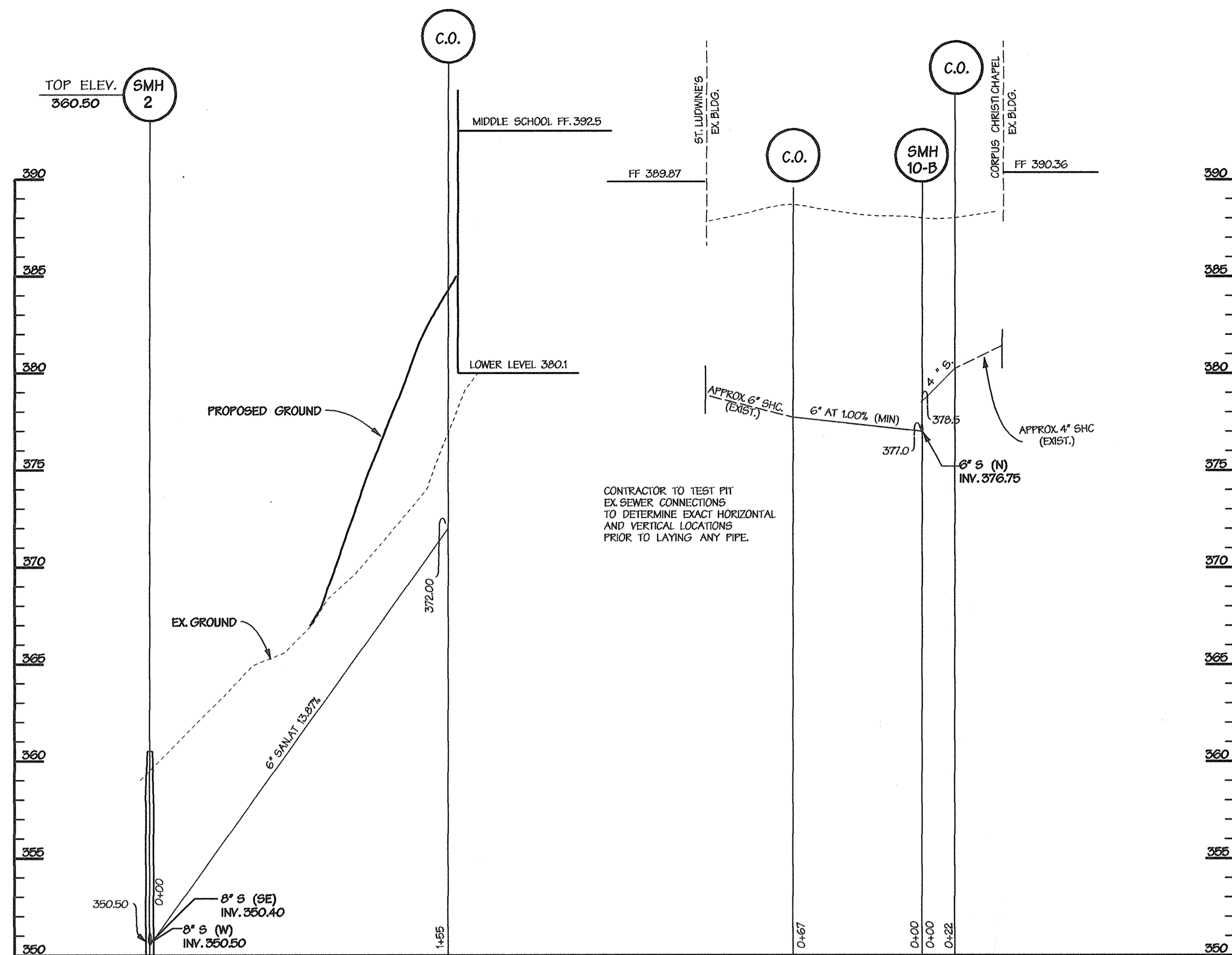
A Team of Land Planners,
 Landscape Architects,
 Engineers, Surveyors &
 Environmental Professionals

SUBDIVISION NAME	LOT #	PARCEL #
Balt. Prov. of Notre Dame de Namur Inc. Property	4	232
PLAT OR REF. TO PLAT	TOWNSHIP	ELECT. DISTRICT
14-6-6 [1517423] R-2D	31	1-31
WATER CODE	SEWER CODE	

Storm Drain Profiles

Des By: JMH Scale: 1"=50' Proj. No. 88113.05
 Dwn By: ADL Date: 4-12-01 13 OF 28
 Chk By: Approved:





SEWER PROFILE

SCALE: HORIZ. 1"=50'
VER. 1"=5'

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 Chief, Development Engineering Division: *[Signature]* 5/21/01
 Chief, Division of Land Development: *[Signature]* 6/5/01
 Director: *[Signature]* 4/6/01

Date	No.	Revision Description
4/24/03	5	Revise total no. of sheets

Trinity School

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 4985 Ilchester Road, Ellicott City, MD 21043
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DMW
 Draft-McCune-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3333
 Fax 296-4705
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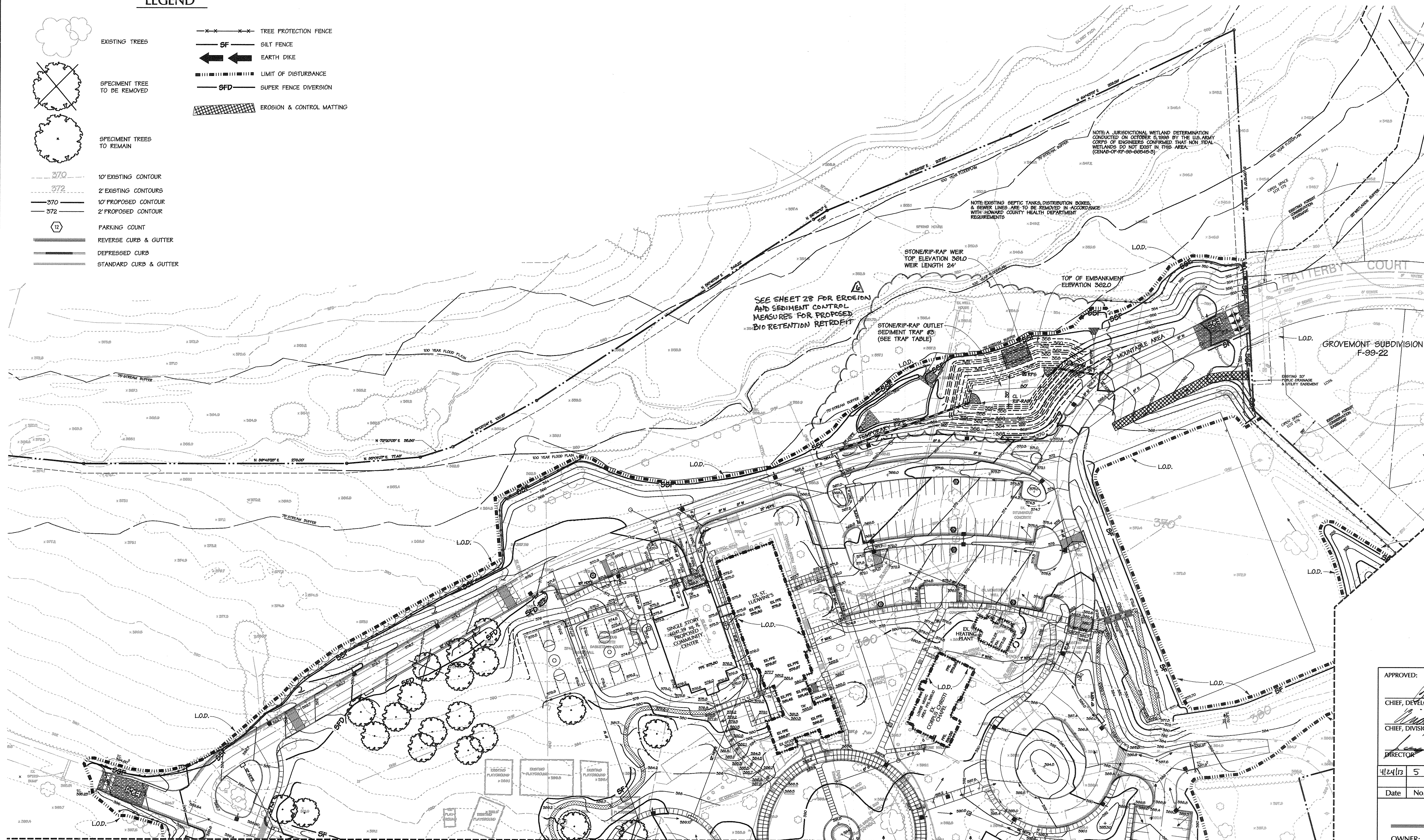
SUBDIVISION NAME	LOT #	PARCEL #
Balt. Prov., Str. of Notre Dame de Namur Inc. Property	4	232
PLAT OR L.I. NO.	BLK. # ZONE	TAXING MAP
14448	21	1517422
WATER CODE	SEWER CODE	ELECT. DISTRICT
		1 ST

TITLE		
Utility Profiles		
Des By: JWM	Scale: 1"=50'	Proj. No. 89113.03
Drn By: JWM / JMH	Date: 4-12-01	14 OF 28
Chk By:	Approved:	



LEGEND

- EXISTING TREES
- SPECIMEN TREE TO BE REMOVED
- SPECIMEN TREES TO REMAIN
- 10' EXISTING CONTOUR
- 2' EXISTING CONTOURS
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- REVERSE CURB & GUTTER
- DEPRESSED CURB
- STANDARD CURB & GUTTER
- TREE PROTECTION FENCE
- SILT FENCE
- EARTH DIKE
- LIMIT OF DISTURBANCE
- SUPER FENCE DIVERSION
- EROSION & CONTROL MATTING



MATCH LINE SEE SHEET 16

Professional Certification
 I 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 No: 35592
 Expiration Date: 3/13/18
 Gregory Hoffmann



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
<i>[Signature]</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	5/31/01 DATE
<i>[Signature]</i> CHIEF, DIVISION OF LAND DEVELOPMENT	6/5/01 DATE
<i>[Signature]</i> DIRECTOR	4/6/01 DATE

4/24/13	5	Revise total no. of sheets
Date	No.	Revision Description

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DMW
 Daft-McCune-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3333
 Fax 296-4705
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

SUBDIVISION NAME	14648	16,17,22	R-20	31	1ST
PLAT OR LOT	BLOCK #	SECTION MAP	DIST. DISTRICT	CONDS TRACT	
WATER CODE	SEWER CODE				

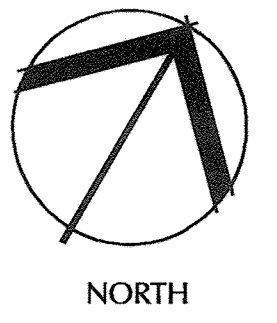
Erosion & Sediment Control Plan

Des By: JWM	Scale: 1"=50'	Proj. No. 89113.03
Drn By: JWM	Date: 4-12-01	15 OF 28
Chk By: RLH	Approved:	

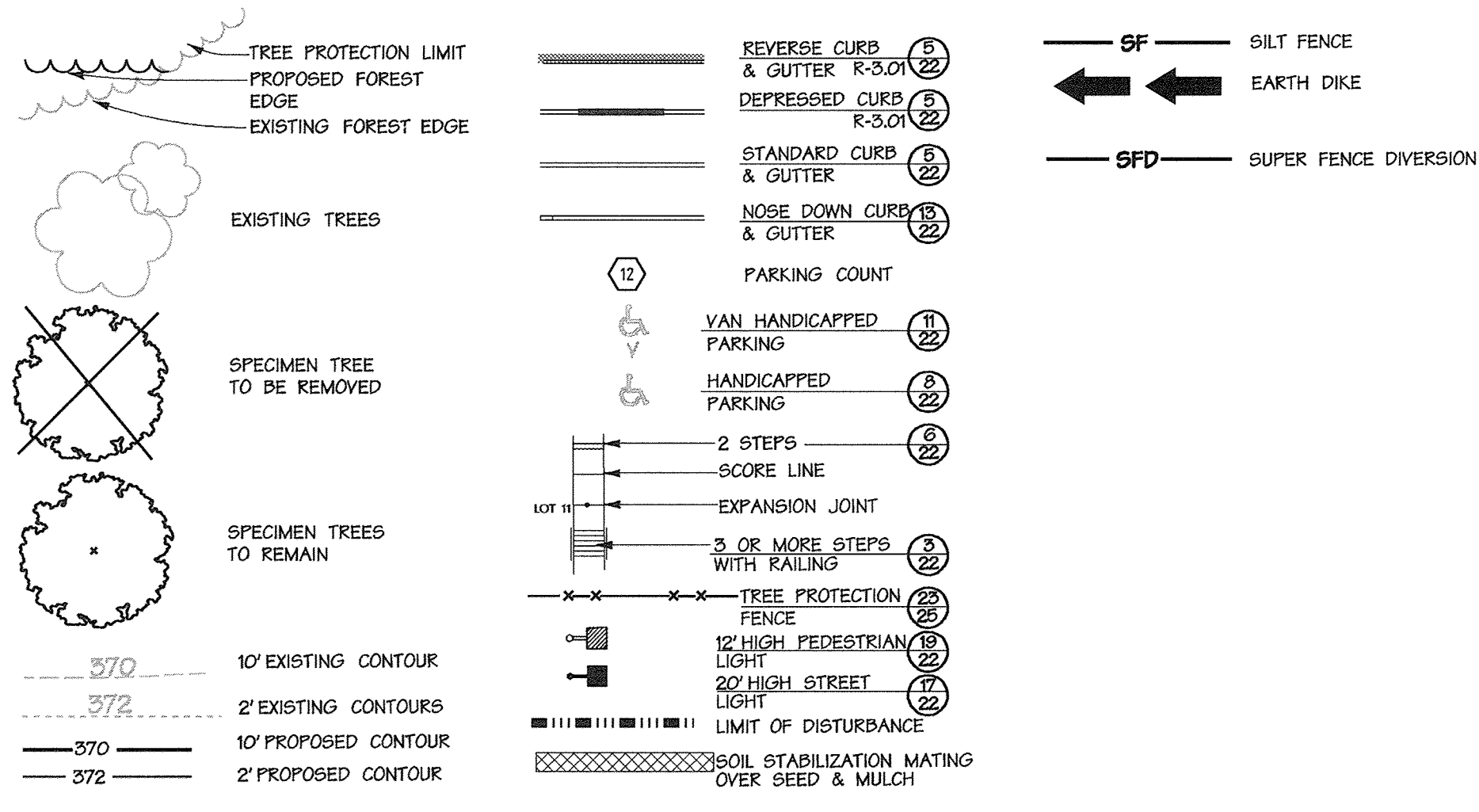
DEVELOPER'S CERTIFICATION:
 "WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."
[Signature]
 SIGNATURE OF DEVELOPER
 PRINT NAME BELOW SIGNATURE
SISTER CATHERINE PHELPS
 5-4-01
 DATE

ENGINEER'S CERTIFICATION:
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
[Signature]
 SIGNATURE OF ENGINEER
 PRINT NAME BELOW SIGNATURE
John W. Ransochie, Sr.
 5/9/01
 DATE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS
[Signature]
 U.S. NATURAL RESOURCES CONSERVATION SERVICE
 5/29/01
 DATE
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature]
 HOWARD S.C.D.
 5/29/01
 DATE



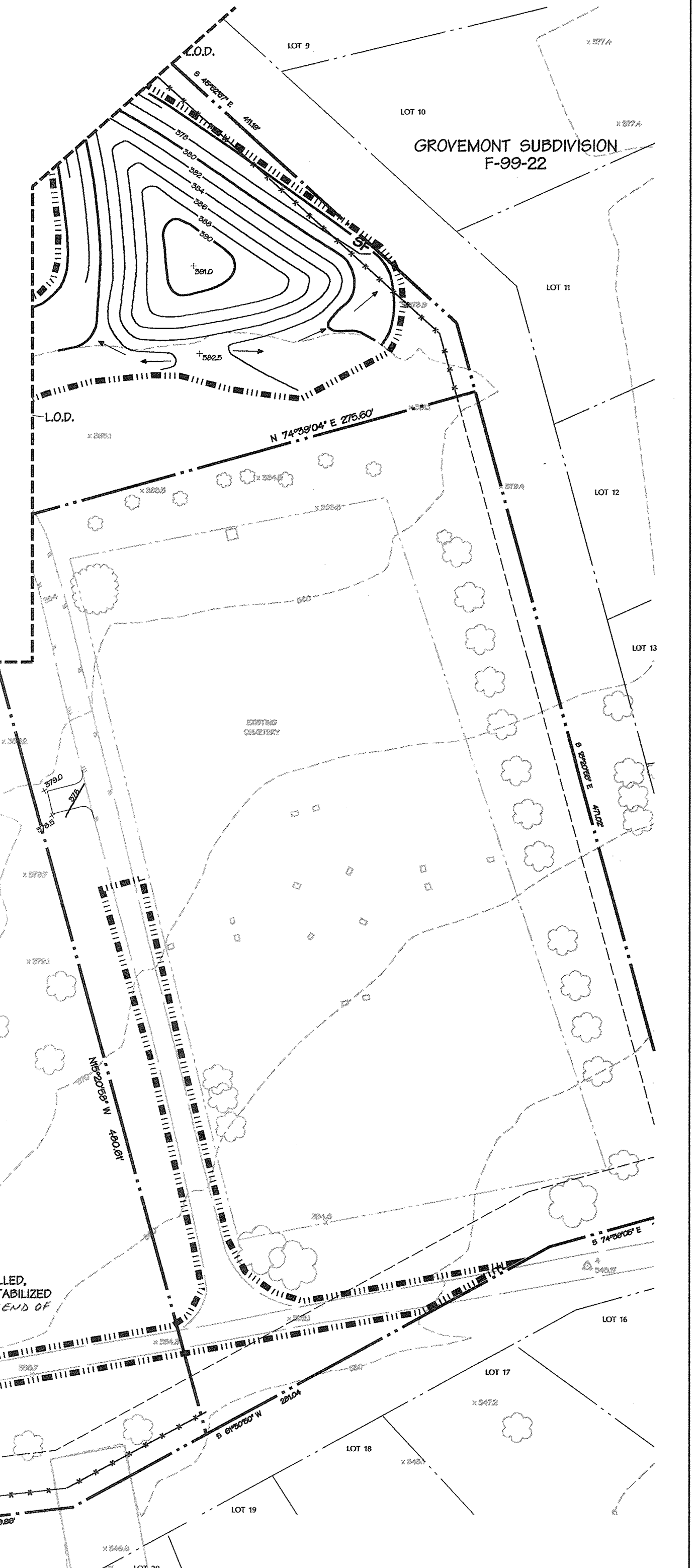
LEGEND



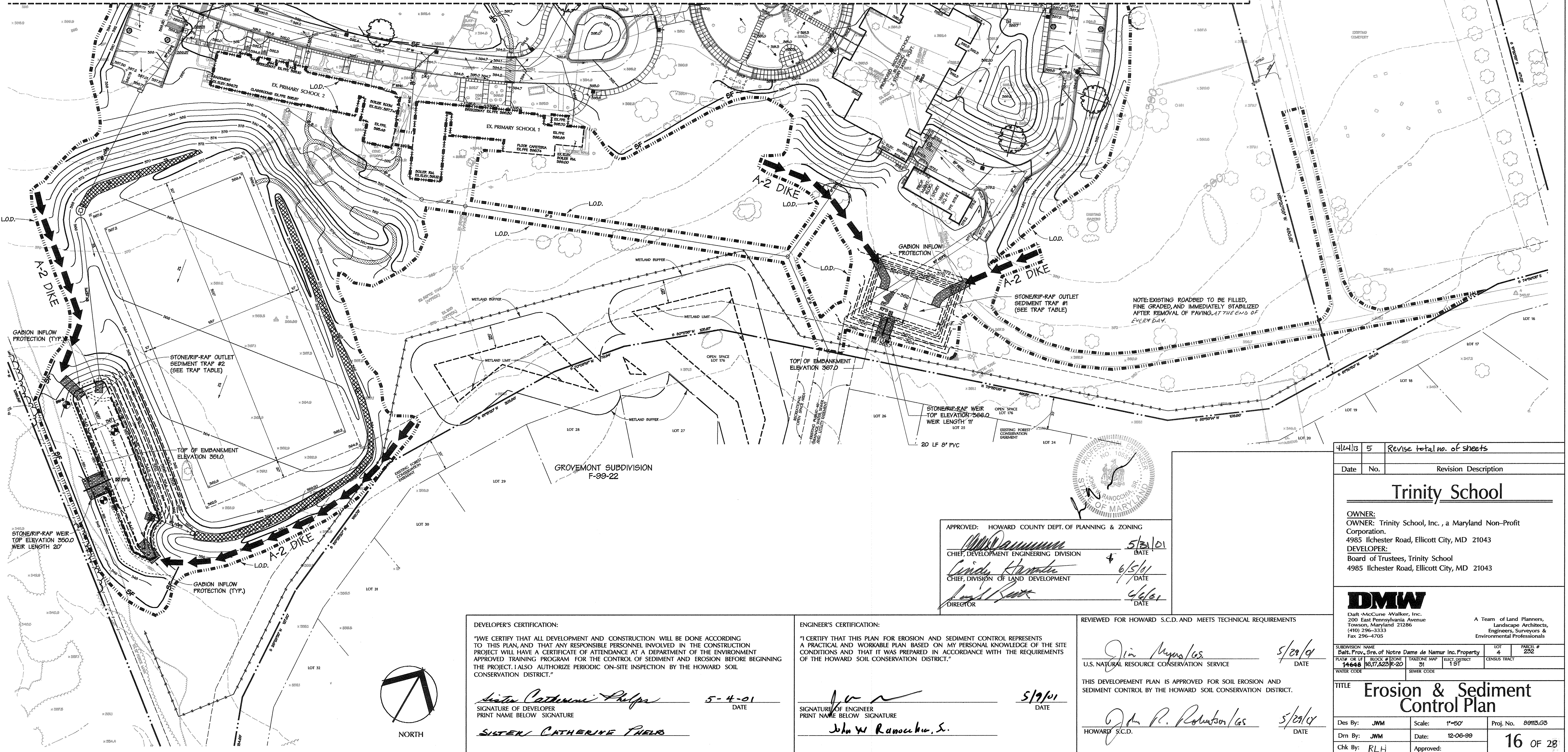
ESC TRAP TABLE

TRAP NUMBER	1	2	3
TRAP TYPE	S.R.O.S.T.	S.R.O.S.T.	S.R.O.S.T.
EXISTING DRAINAGE AREA AC.	2.0	4.6	1.8
PROPOSED DRAINAGE AREA AC.	2.6	5.0	7.4
STORAGE REQUIRED C.F.	WET 4,680 DRY 9,589	15,246 24,246	13,256 13,256
TOTAL	14,269	19,000	26,712
STORAGE PROVIDED C.F.	WET 4,680 DRY 10,924	12,730 16,206	13,603 19,258
TOTAL	15,604	28,936	33,461
EXISTING GROUND ELEV.	364.00	348.00	358.00
TOP EMBANKMENT ELEV.	367.00	351.00	362.00
WEIR CREST ELEV.	366.01	350.00	361.00
CLEANOUT ELEV.	365.01	346.71	355.65
BOTTOM ELEV.	362.00	346.00	353.00
DEPTH OF CHANNEL (d)	1.0'	1.0'	1.0'
OUTLET LENGTH	11.0'	20.0'	30.0'
BOTTOM DIMENSION	25' X 75'	36' X 165'	36' X 80'
TRAP SIDESLOPES	2 : 1	2 : 1	2 : 1
TRAP DEPTH	WET 2.02 DRY 1.98	1.4 2.6	4.5 3.7
TOTAL	4.0	4.0	8.0
WET STORAGE ZONE ELEV.	362.00-364.02	346.00-347.80	353.0-357.5
DRY STORAGE ZONE ELEV.	364.02-366.00	347.80-350.00	353.7-361.0
WET STORAGE OUTLET	364.00 (8" PVC)	347.40 (8" PVC)	357.7-6" & 3" PIPE

** 2 YR RELEASE RATE DURING CONSTRUCTION 2.24 EXIST. 2.2 PROP.



MATCH LINE SEE SHEET 15



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Howard County 5/31/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Linda Horvath 6/5/01
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

David J. ... 4/6/01
DIRECTOR DATE

DEVELOPER'S CERTIFICATION:

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

Sister Catherine Phelps 5-4-01
SIGNATURE OF DEVELOPER DATE
PRINT NAME BELOW SIGNATURE
SISTER CATHERINE PHELPS

ENGINEER'S CERTIFICATION:

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

John W. Ranochka, S. 5/19/01
SIGNATURE OF ENGINEER DATE
PRINT NAME BELOW SIGNATURE
John W. Ranochka, S.

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS

Jim Morales 5/29/01
U.S. NATURAL RESOURCE CONSERVATION SERVICE DATE

John P. Robinson/CS 5/29/01
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. DATE

4/24/03	5	Revise total no. of sheets
Date	No.	Revision Description
Trinity School		
OWNER: Trinity School, Inc., a Maryland Non-Profit Corporation. 4985 Ilchester Road, Ellicott City, MD 21043		
DEVELOPER: Board of Trustees, Trinity School 4985 Ilchester Road, Ellicott City, MD 21043		
DMW		
Darr McCune Walker, Inc. 200 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296-3333 Fax 296-4705		
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals		
SUBDIVISION NAME Balt. Prov. Srs. of Notre Dame de Namur Inc. Property	LOT # 4	PANEL # 232
DATE OF THIS PLAN 14668 1637.622 R-20	DATE OF THIS PLAN 1/31	CENSUS TRACT
WATER CODE	SEWER CODE	
Erosion & Sediment Control Plan		
Des By: JWM	Scale: 1"=50'	Proj. No. 09113.03
Drn By: JWM	Date: 12-06-99	16 OF 28
Chk By: RLH	Approved:	

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

DEFINITION
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

- This practice is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - 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.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.
- For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

- Topsoil salvages from the existing 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 Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experiment Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1-1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
 - Where the subsoil is either highly acidic or composed of heavy clay, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) 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.

PERMANENT SEEDING NOTES

- For sites having disturbed areas under 5 acres:
 - On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - 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.
 - Organic content of topsoil shall be not less than 15 percent by weight.
 - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - No seed or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

TEMPORARY SEEDING NOTES

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

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

Soil amendments: In lieu of soil test recommendations, use one of the following Schedules:

- Preferred** - Apply 2 tons per acre Dolomitic Limestone (92 lbs./1000 sq. ft.) and 1000 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 50-0-0 Ureaform Fertilizer (9 lbs./1000 sq. ft.).
- Acceptable** - Apply 2 tons per acre Dolomitic Limestone (92 lbs./1000 sq. ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs./1000sq.ft.) before seeding. Harrow or disk into upper three inches of soil.

Seeding - For the periods March 1 thru May 15 and August 15 thru October 15, seed with 60 lbs. per acre Kentucky 31 tall fescue (5-8 lbs./1000sq.ft.) of Kentucky 31 tall fescue. For the period May 15 thru July 31, seed with 60 lbs. per acre Kentucky 31 tall fescue per acre and 2 lbs. per acre 405-0-0 Ureaform Fertilizer (9 lbs./1000 sq. ft.) before seeding. During the period of October 15 thru February 28, protect site by Option (1) - 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) - Use sod. Option (3) - seed with 60 lbs./acre Kentucky 31 tall fescue and mulch with 2 tons/acre well anchored straw.

Mulching - Apply 1-1/2 to 2 tons per acre (70 - 90 lbs./1000sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000sq.ft.) of emulsified asphalt on flat areas. On slopes 3 feet or higher, use 348 gallons per acre (9 gal/1000 sq.ft.) for anchoring.

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

TEMPORARY SEEDING NOTES

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

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

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

Seeding - For the periods March 1 thru May 15, and August 1 thru October 15, seed with 2-1/2 bushel per acre of annual ryegrass (4 lbs./1000sq.ft.). For the period May 15 thru July 31 August 14, seed with 3 lbs. per acre of foxtail millet (107 lbs./1000sq.ft.). For the period October 15 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 sod.

Mulching - Apply 1-1/2 to 2 tons per acre (70 - 90 lbs./1000sq.ft.) of unrotted weed free small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 3 ft. or higher, use 348 gal. per acre (9 gal/1000 sq.ft.) for anchoring.

Refer to the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control for additional rates and methods not covered.

PERMANENT SEEDING NOTES

- When topsoiling, maintain needed erosion and sediment control practices such as diversion, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
- Grades on the areas to be topsoiled, which have been previously established, shall be maintained, about 4% - 8% higher in elevation.
- Topsoil shall be uniformly distributed in a 4% - 8% layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
- Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.
- Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
 - 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 sites having disturbed areas under 5 acres shall conform to the following requirements:
 - 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.
 - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 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.
 - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
 - Composted sludge shall be amended with a potassium fertilizer applied at a rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guidelines Specifications, Soil Preparation and Sodding, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute, Revised 1975.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

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

Soil amendments: In lieu of soil test recommendations, use one of the following Schedules:

- Preferred** - Apply 2 tons per acre Dolomitic Limestone (92 lbs./1000 sq. ft.) and 1000 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 50-0-0 Ureaform Fertilizer (9 lbs./1000 sq. ft.).
- Acceptable** - Apply 2 tons per acre Dolomitic Limestone (92 lbs./1000 sq. ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs./1000sq.ft.) before seeding. Harrow or disk into upper three inches of soil.

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Mulching - Apply 1-1/2 to 2 tons per acre (70 - 90 lbs./1000sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000sq.ft.) of emulsified asphalt on flat areas. On slopes 3 feet or higher, use 348 gallons per acre (9 gal/1000sq.ft.) for anchoring.

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

TEMPORARY SEEDING NOTES

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

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

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

Seeding - For the periods March 1 thru May 15, and August 1 thru October 15, seed with 2-1/2 bushel per acre of annual ryegrass (4 lbs./1000sq.ft.). For the period May 15 thru July 31 August 14, seed with 3 lbs. per acre of foxtail millet (107 lbs./1000sq.ft.). For the period October 15 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 sod.

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Refer to the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control for additional rates and methods not covered.

PERMANENT SEEDING NOTES

- When topsoiling, maintain needed erosion and sediment control practices such as diversion, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
- Grades on the areas to be topsoiled, which have been previously established, shall be maintained, about 4% - 8% higher in elevation.
- Topsoil shall be uniformly distributed in a 4% - 8% layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
- Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.
- Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
 - 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 sites having disturbed areas under 5 acres shall conform to the following requirements:
 - 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.
 - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 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.
 - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
 - Composted sludge shall be amended with a potassium fertilizer applied at a rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

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References: Guidelines Specifications, Soil Preparation and Sodding, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute, Revised 1975.

SEDIMENT CONTROL GENERAL NOTES

- A minimum of 24 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).
- 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.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within:
 - Three (3) calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1
 - Seven (7) calendar days as to all other disturbed or graded areas on the project site
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12 of the "Howard County Design Manual" storm drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control for permanent seedings, sod, temporary seedings, and mulching (section G). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:

Total area of site	48.85 acres
Area disturbed	18.16 acres
Area to be roofed or paved	4.4 acres
Area to be vegetatively stabilized	13.76 acres
Total cut	37000 cubic yards
Total fill	37000 cubic yards
Off-site waste/borrow area location waste	N/A
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment controls must be provided, if deemed necessary by the Howard County DFW Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized within one day, whichever is shorter.

SEDIMENT CONTROL GENERAL NOTES

SEDIMENT CONTROL GENERAL NOTES

- Excavate completely around the inlet to a depth of 18" below the notch elevation.
- Drive the 2' x 4' construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2' x 4' frame using the overlap joint shown on Detail. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.
- Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
- Stretch the Geotextile Class E tightly over the wire mesh with the geotextile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
- Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.
- If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
- The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

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SUPER SILT FENCE

NOTE: Fence post spacing shall not exceed 10' center to center.

Construction Specifications

- Fencing shall be 42 inches in height and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
- The posts do not need to be set in concrete.
- Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be six (6) gauge or heavier.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 6" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6' and folded.
- Maintenance shall be performed as needed and silt bulldozes removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE H - 26 - 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SUPER SILT FENCE

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- When two sections of filter cloth adjoin each other, they shall be overlapped by 6' and folded.
- Maintenance shall be performed as needed and silt bulldozes removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE H - 26 - 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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- When two sections of filter cloth adjoin each other, they shall be overlapped by 6' and folded.
- Maintenance shall be performed as needed and silt bulldozes removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE H - 26 - 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SUPER SILT FENCE

NOTE: Fence post spacing shall not exceed 10' center to center.

Construction Specifications

- Fencing shall be 42 inches in height and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
- The posts do not need to be set in concrete.
- Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be six (6) gauge or heavier.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 6" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6' and folded.
- Maintenance shall be performed as needed and silt bulldozes removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE H - 26 - 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE H - 26 - 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

NOT TO SCALE

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT.
- CLEAR AND GRUB AS NECESSARY FOR SEDIMENT AND EROSION CONTROL MEASURES.
- INSTALL THE PROPOSED SEDIMENT AND EROSION CONTROL MEASURES.
- ROUGH GRADE SITE EAST OF ST. LUDWINE'S AND EXCAVATE FOUNDATIONS FOR THE PROPOSED MIDDLE SCHOOL AND PROPOSED MAINTENANCE BUILDING.
- CONSTRUCT TRAP #3 & STORM DRAINS. CONSTRUCT INLETS 1-2, 1-31 AND 1-32 IMMEDIATELY AFTER TRAP #3 IS FUNCTIONING, CONNECTING S.D. AND TEMP. S.D. TO TRAP #3. CONSTRUCT WATER LINE AND SEWER LINE EAST OF ST. LUDWINE'S DOWN TO PROPOSED MAINTENANCE BUILDING, INCLUDING BOTH CONNECTIONS TO GROVEMONT FOR WATER AND SEWER.
- FINE GRADE AND CONSTRUCT BASE PAVING EAST OF ST. LUDWINE'S DOWN TO PROPOSED MAINTENANCE BUILDING.
- CONSTRUCT PROPOSED MIDDLE SCHOOL AND MAINTENANCE BUILDING.
- CONSTRUCT SIDEWALKS AND INSTALL SURFACE PAVING EAST OF ST. LUDWINE'S DOWN TO PROPOSED MAINTENANCE BUILDING.
- FINE GRADE AND STABILIZE DISTURBED AREA IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS.
- ROUGH GRADE REMAINING SITE AND EXCAVATE FOUNDATION FOR PROPOSED COMMUNITY CENTER.
- CONSTRUCT REMAINING STORM DRAINS, WATER LINE, AND SEWER LINE.
- FINE GRADE AND CONSTRUCT BASE PAVING FOR THE REMAINING SITE.
- CONSTRUCT PROPOSED COMMUNITY CENTER.
- CONSTRUCT SIDEWALKS AND INSTALL SURFACE PAVING FOR THE REMAINING SITE.
- FINE GRADE AND STABILIZE DISTURBED AREAS ON SITE IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS.
- CONVERT SEDIMENT TRAP #2 TO EXTENDED DETENTION FACILITY. REMOVE TEMP. S.D. @ TRAP #5 & CONSTRUCT PERMANENT OUTFALLS-1 & 5-30
- UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL MEASURES AND STABILIZE.

NOT TO SCALE

NOT TO SCALE

SEQUENCE OF CONSTRUCTION

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NOT TO SCALE

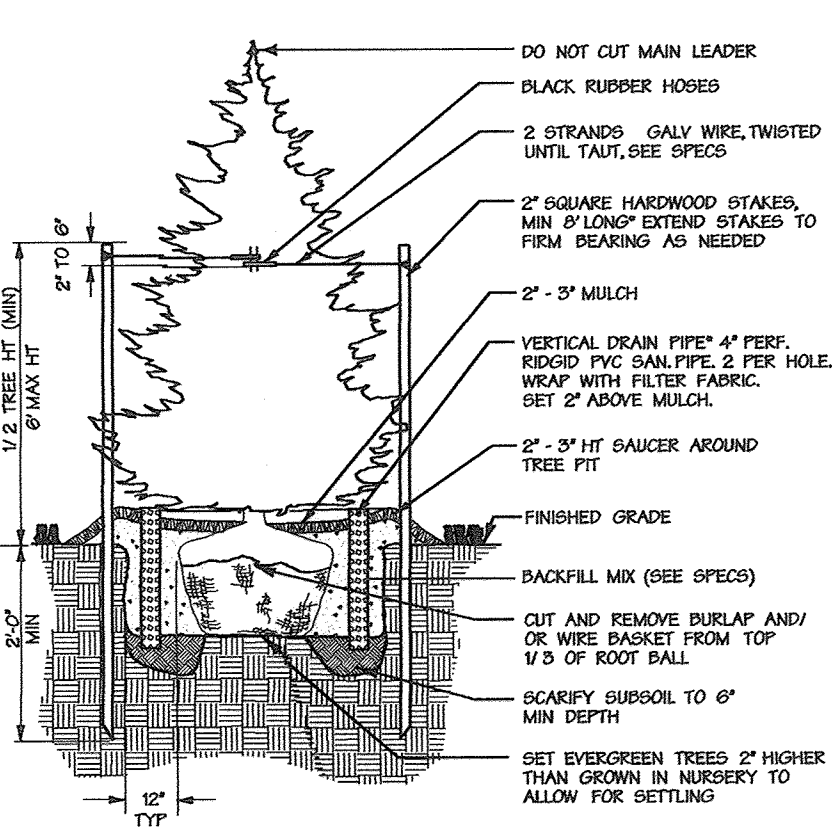
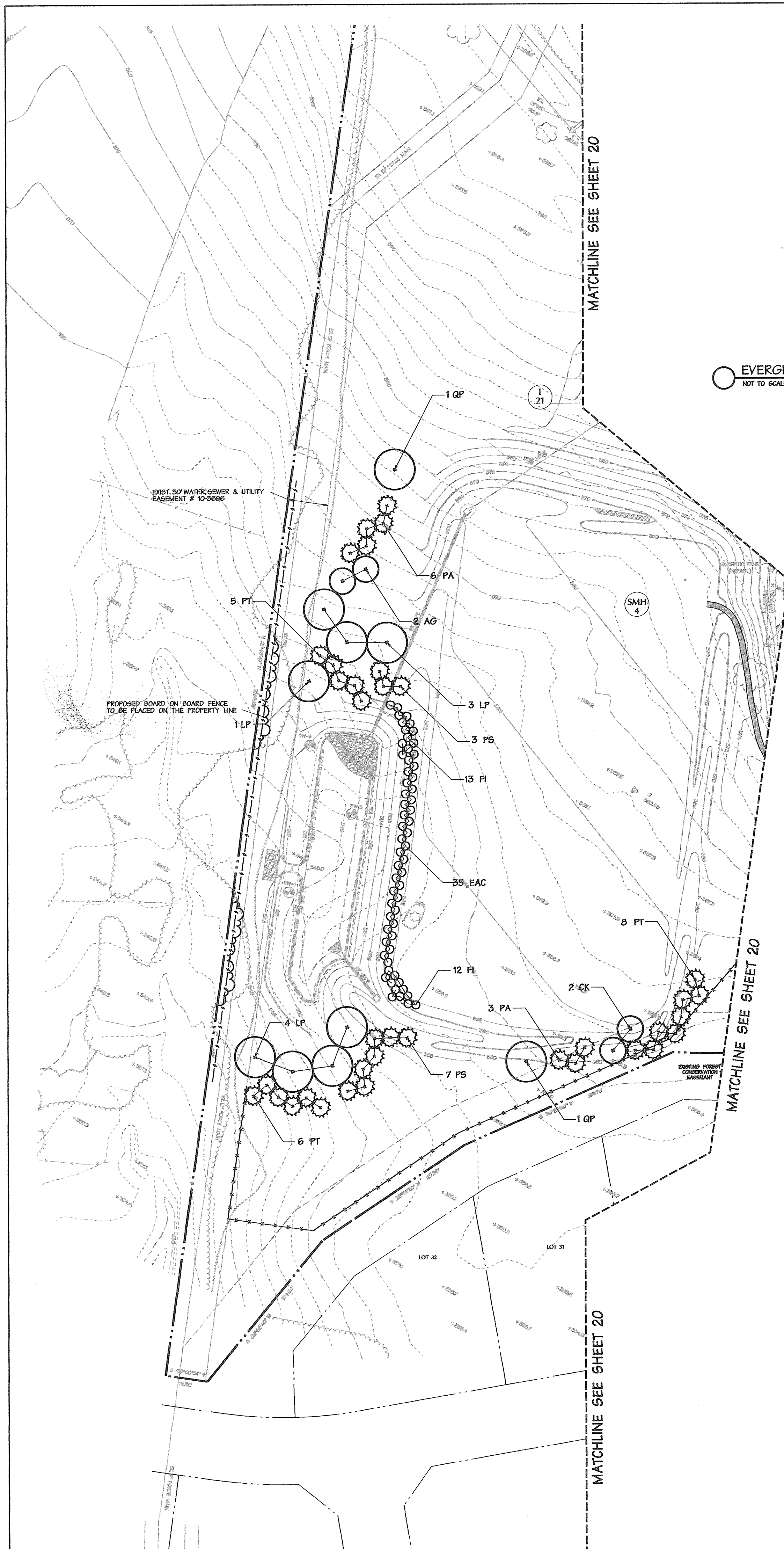
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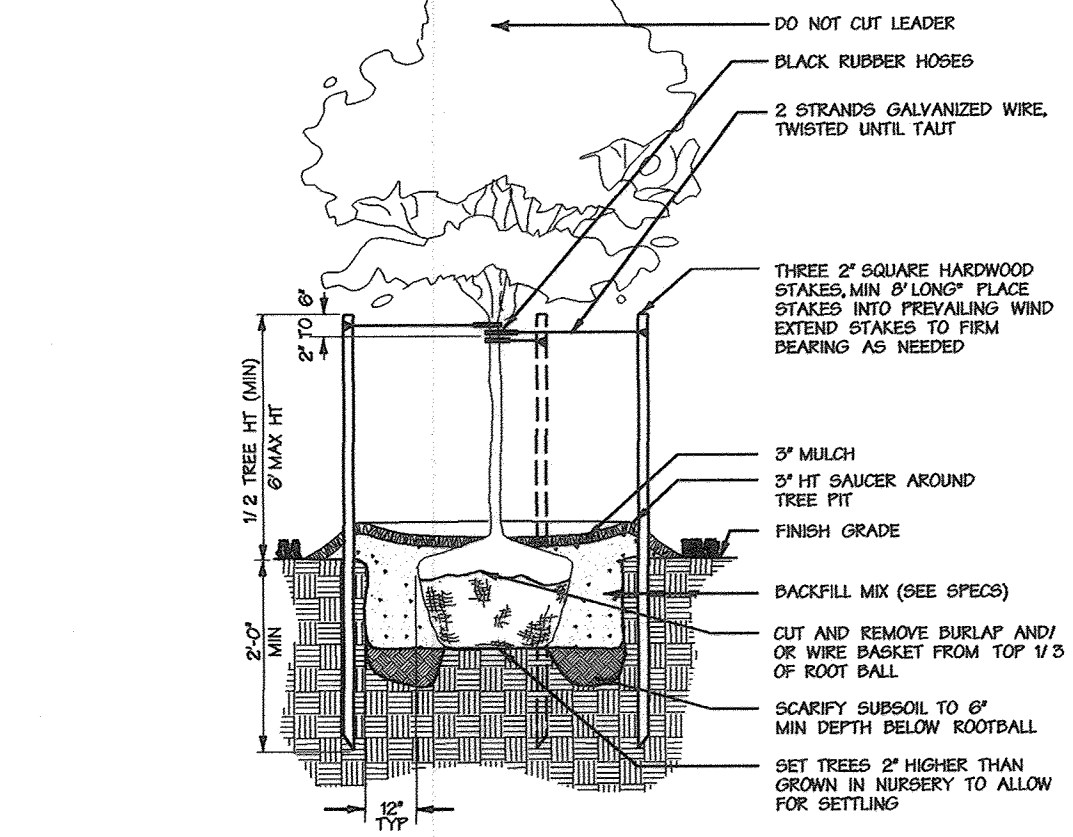
NOT TO SCALE

SEQUENCE OF CONSTRUCTION

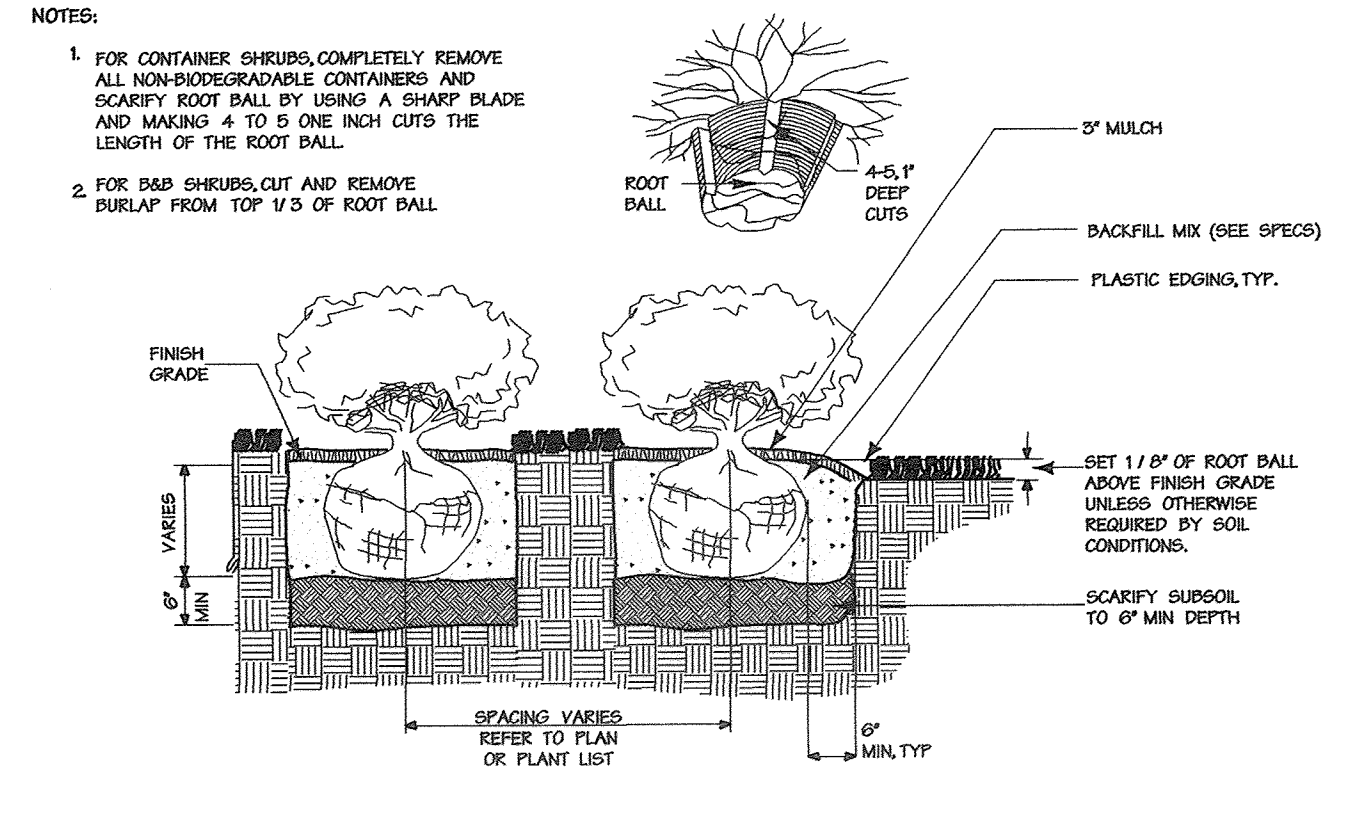
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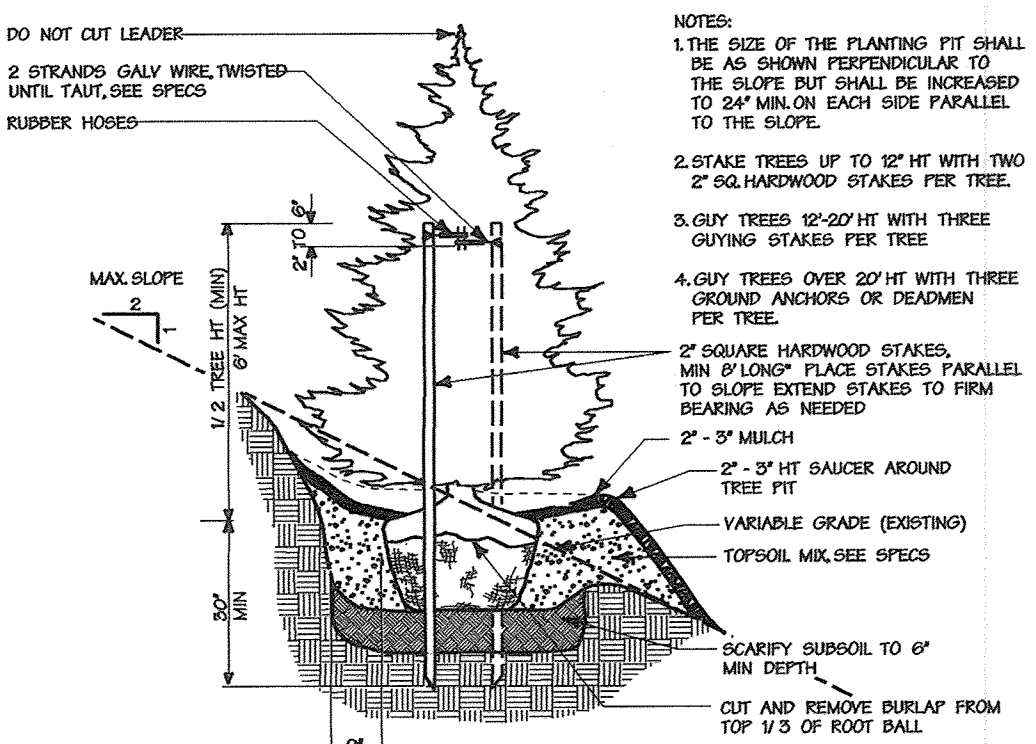
EVERGREEN TREE PLANTING
NOT TO SCALE



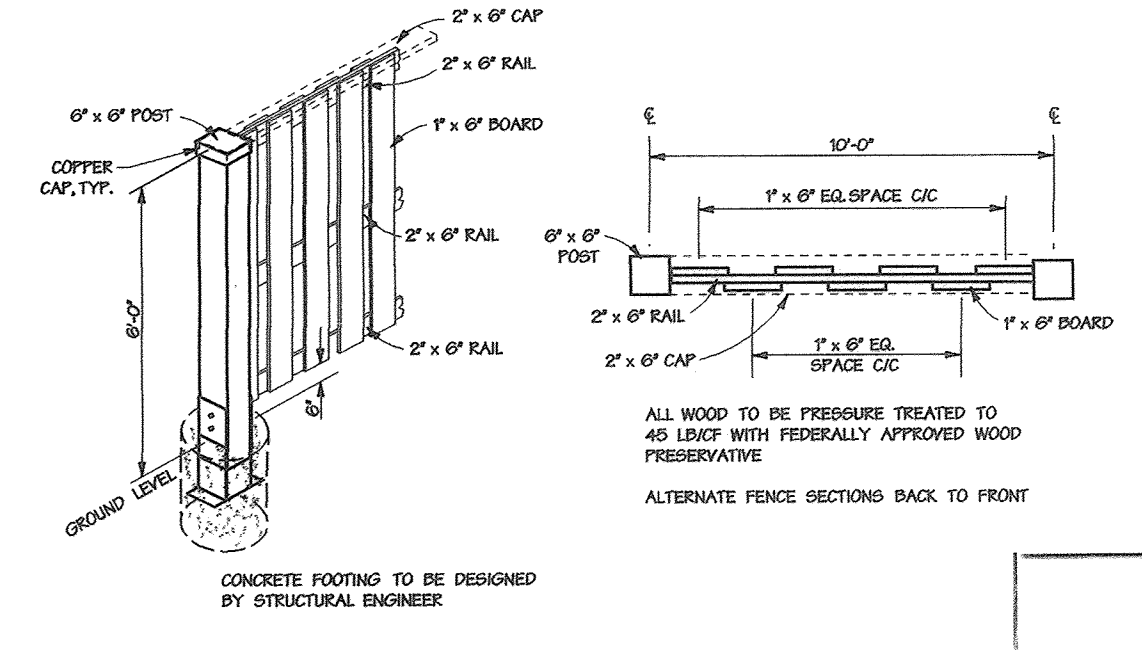
TREE PLANTING 2 1/2 - 3\"/>



SHRUB PLANTING
NOT TO SCALE



EVERGREEN TREE PLANTING ON SLOPE
NOT TO SCALE



BOARD ON BOARD FENCE
NOT TO SCALE

LEGEND

- NOTE: SEE THIS SHEET FOR PLANTING DETAILS
- TREE PROTECTION LIMIT
 - PROPOSED FOREST EDGE
 - EXISTING FOREST EDGE
 - EXISTING TREES
 - SPECIMEN TREE TO BE REMOVED
 - SPECIMEN TREES TO REMAIN
 - 370 10' EXISTING CONTOUR
 - 372 2' EXISTING CONTOURS
 - 370 10' PROPOSED CONTOUR
 - 372 2' PROPOSED CONTOUR
 - REVERSE CURB & GUTTER R-3.01
 - DEPRESSED CURB R-3.01
 - STANDARD CURB & GUTTER
 - 12 PARKING COUNT
 - VAN HANDICAPPED PARKING
 - HANDICAPPED PARKING
 - 2 STEPS
 - SCORE LINE
 - EXPANSION JOINT
 - 3 OR MORE STEPS WITH RAILING
 - TREE PROTECTION FENCE
 - 12\"/>

5.9.01
Date

Professional Landscape Architect No. 551

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Howard County Dept. of Planning & Zoning 5/14/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy Hamner 6/5/01
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

David R. Smith 6/6/01
DIRECTOR DATE

4/24/03	5	Revise total no. of sheets
Date	No.	Revision Description

Trinity School

OWNER:
OWNER: Trinity School, Inc., a Maryland Non-Profit Corporation
4985 Ilchester Road, Ellicott City, MD 21043

DEVELOPER:
Board of Trustees, Trinity School
4985 Ilchester Road, Ellicott City, MD 21043

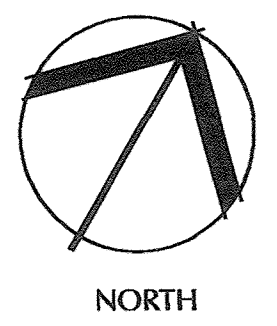
DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

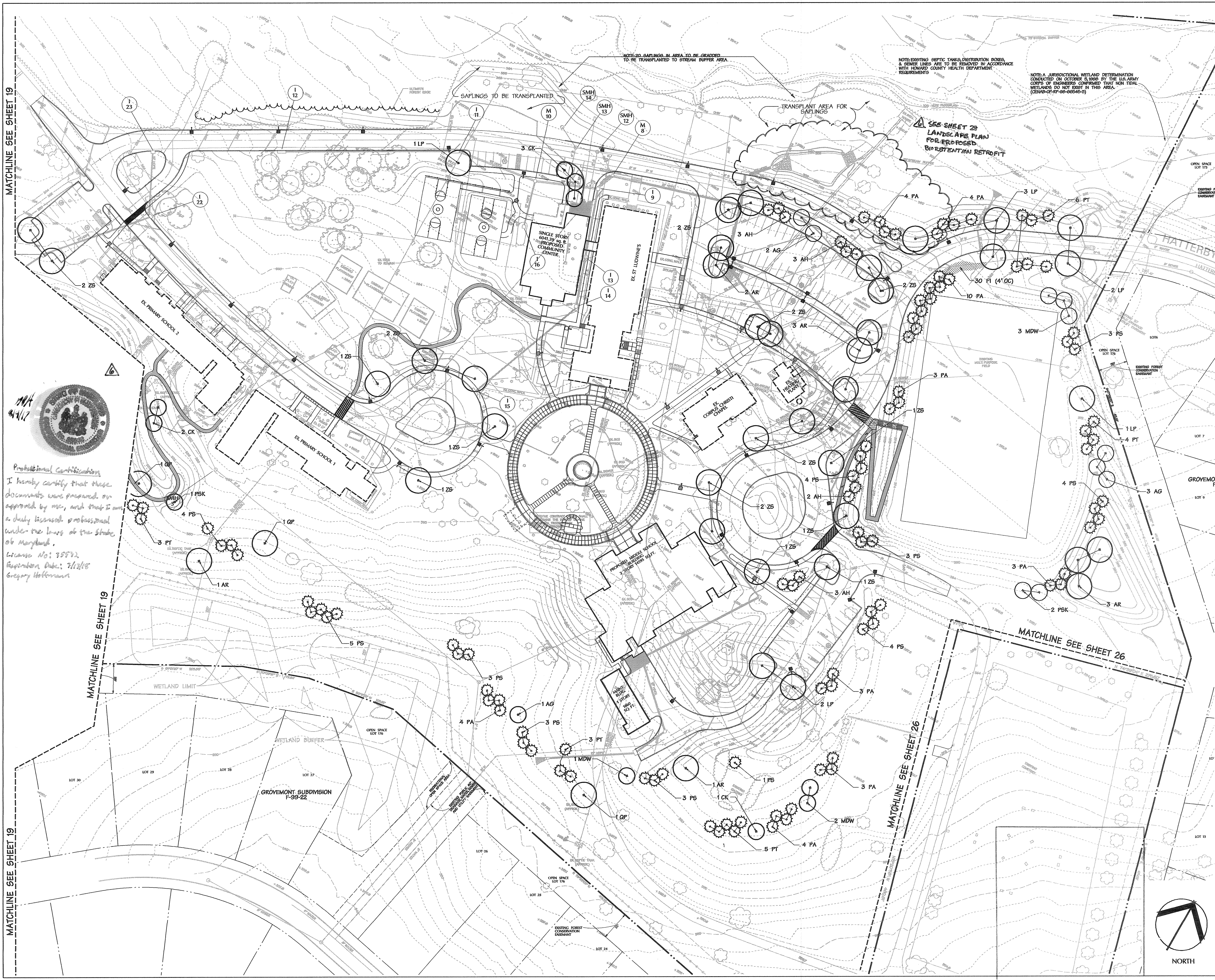
A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors &
Environmental Professionals

SUBDIVISION NAME	Block, Proj., Site of Notre Dame de Namur Inc. Property	LOT #	INDEX #
PLAT OR LOT	14648	16,17&25	R-20
WATER CODE	1ST	SEWER CODE	

TITLE
Landscape Plan & Details

Des By: TPC Scale: 1"=50' Proj. No. 8913.03
Dwn By: TPC Date: 11-2-98
Chk By: Approved: **19 OF 25**





LEGEND

- NOTE: SEE SHEET 19 FOR PLANTING DETAILS
- TREE PROTECTION LIMIT
 - PROPOSED FOREST EDGE
 - EXISTING FOREST EDGE
 - EXISTING TREES
 - ⊗ SPECIMEN TREE TO BE REMOVED
 - SPECIMEN TREES TO REMAIN
 - 10' EXISTING CONTOUR
 - 2' EXISTING CONTOURS
 - 10' PROPOSED CONTOUR
 - 2' PROPOSED CONTOUR
 - REVERSE CURB & GUTTER R-3.01 (2)
 - DEPRESSED CURB R-3.01 (2)
 - STANDARD CURB & GUTTER (2)
 - Ⓜ PARKING COUNT
 - Ⓜ VAN HANDICAPPED PARKING (11)
 - Ⓜ HANDICAPPED PARKING (8)
 - 2 STEPS SCORE LINE (2)
 - EXPANSION JOINT (2)
 - 3 OR MORE STEPS WITH RAILING (2)
 - TREE PROTECTION (2)
 - FENCE (2)
 - 12" HIGH PEDESTRIAN LIGHT (2)
 - 20" HIGH STREET LIGHT (2)
 - SOIL STABILIZATION MATTING OVER SEED & MULCH (EROSION CONTROL MATTING)

MATCHLINE SEE SHEET 19

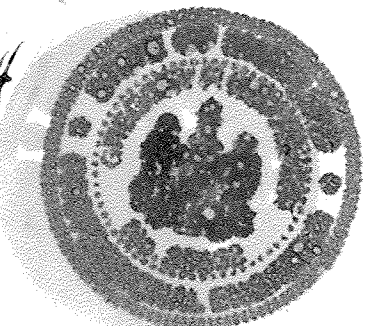
MATCHLINE SEE SHEET 19

MATCHLINE SEE SHEET 19

MATCHLINE SEE SHEET 26

MATCHLINE SEE SHEET 26

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 No: 35572
 Expiration Date: 7/12/18
 Gregory Hoffmann



5-9-01
 Date

Professional Landscape Architect No. 551

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

<i>[Signature]</i>	5/8/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>[Signature]</i>	6/5/01
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>[Signature]</i>	6/6/01
DIRECTOR	DATE

4/24/05 5 Revise total no. of sheets

Date	No.	Revision Description

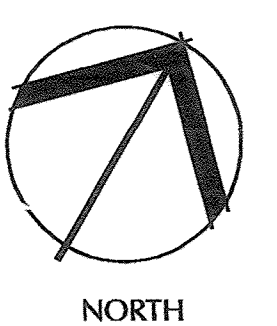
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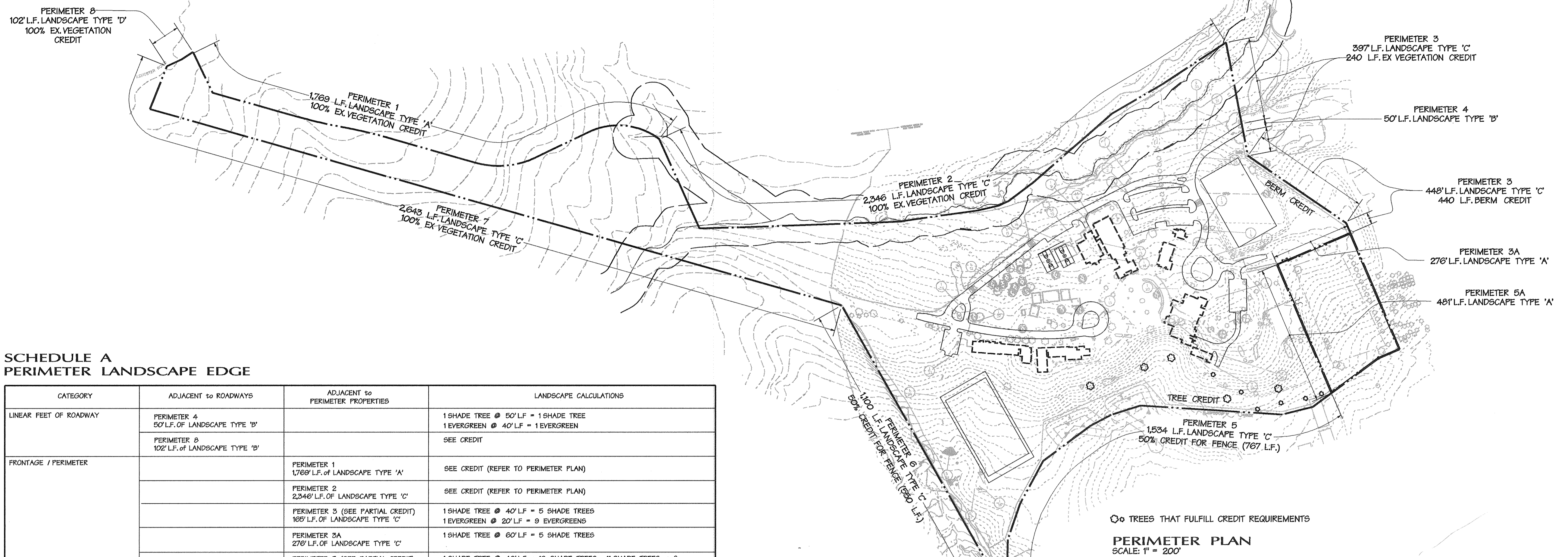
DMW Daft McCune Walker, Inc. 200 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296-3333 Fax 296-4705		A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals	
SUBDIVISION NAME Dells Prov. Srvs. of Notre Dame de Namur Inc. Property	LOT # 4	PARCEL # 222	
TRACT OR LOT BLOCK # 1444 16,17,22	TRAILING MAP 21	SECTION CORNER 1 ST	CROSS TRACT
WATER CODE	SEWER CODE		

TITLE Landscape Plan			
Des By: TPC	Scale: 1"=50'	Proj. No. 88115.05	
Drn By: TPC	Date: 4-12-01	20	OF 29
Chk By:	Approved:		



LANDSCAPE NOTES

- The contractor shall review architectural / engineering plans to become thoroughly familiar with grading and surface utilities.
- All equipment and tools shall be placed so as not to interfere or hinder the pedestrian and vehicular traffic flow.
- The contractor shall coordinate with a lighting contractor regarding the timing of the installation of plant material.
- The contractor shall insure that his work does not interrupt established or projected drainage patterns.
- During planting operations, excess waste materials shall be promptly and frequently removed from the site.
- The contractor is advised of the existence of underground utilities on the site. Their exact location shall be verified in the field with the owner or general contractor prior to the commencement of any digging operations. In the event they are uncovered, the contractor shall be held responsible for all damage to utilities and such damage shall not result in any additional expenses to the owner.
- If utility lines are encountered in excavation of tree pits, other locations for trees shall be made by the contractor without additional compensation. No changes of location shall be made without approval of the landscape architect.
- Maintain positive drainage out of planting beds at a minimum 2% slope. All grades, dimensions, and existing conditions shall be verified by the contractor on site before construction begins. Any discrepancies shall be brought to the attention of the landscape architect or owner.
- Every possible safeguard shall be taken to protect building surfaces, equipment, and furnishings. The contractor shall be responsible for any damage or injury to person or property which may occur as a result of his negligence in the execution of the work.
- In the event of variation between quantities shown on the plant list and the plans, the plans shall control. The contractor is responsible for verifying all plant quantities prior to the commencement of work. All discrepancies shall be reported to the landscape architect, for clarification prior to bidding. The contractor shall furnish plant materials in sizes as specified in the plant list.
- The contractor shall stake all materials located on the site for review and/or adjustment by the landscape architect prior to planting. All locations are to be approved by the landscape architect before excavation.
- Plants shall conform to current "American Standards for Nursery Stock" by American Association of Nurserymen (AAN), particularly with regard to size, growth, size of ball, and density of branch structure.
- All plants (B & B or container) shall be properly identified by weather-proof labels securely attached thereto before delivery to project site. Labels shall identify plants by name, species, and size. Labels shall not be removed until the final inspection by the landscape architect or agent in charge.
- Any material and/or work may be rejected by the landscape architect if it does not meet the requirements of the specifications. All rejected material shall be removed from the site by the contractor.
- No substitutions shall be made without the written consent of the owner or landscape architect.
- The landscape architect or owner shall have the right at any stage of the operations, to reject any and all work and material which, in his opinion, does not meet the requirements of these plans and specifications.
- The contractor shall be wholly responsible for stability and conditions of all trees and shrubs and shall be legally liable for any damage caused by instability or any plant material.
- All proposed trees to be installed either entirely in or entirely out of planting beds. Planting beds lines are not to obstructed. All shrubs and ground cover areas shall be planted in continuous prepared beds and top dressed with 3-inch shredded hardwood mulch. Mulch shall be shredded within the last six months.
- All planting beds adjacent to lawn, sod, or seeded areas shall be spade edged.
- Maintenance shall begin after each plant has been installed and shall continue until 90 days after final acceptance by the architect or owner representative. Maintenance includes mowing of turf, watering, pruning, weeding, fertilizing, mulching, replacement of sick or dead plants, and other care necessary for the proper growth of the plant material. The contractor must be able to provide continued maintenance if requested by the owner.
- Upon completion of all landscaping, an acceptance of the work shall be held. The contractor shall notify the landscape architect or owner for scheduling the inspection at least seven (7) days prior to the anticipated inspection date.
- All trees shall be guaranteed for 12 months from the date of acceptance. All shrubs and ground covers shall be guaranteed for 12 months from the date of acceptance.
- The contractor shall dispose of stumps and major roots of all plants to be removed. Any depression caused by the removal operations shall be refilled with fertile, friable soil placed and compacted so as to re-establish proper grade for new planting and / or lawn areas.
- The contractor shall insure adequate vertical drainage in all plant beds and planters.
- All disturbed areas on the site not planted with shrubs or ground cover shall be fine graded and seeded as noted on the landscape plan.
- This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and Landscape Manual.
- Financial surety for the required landscaping has been posted as part of the DPW Developers agreement in the amount of \$ 29,850.00



SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES	LANDSCAPE CALCULATIONS
LINEAR FEET OF ROADWAY	PERIMETER 4 50' L.F. OF LANDSCAPE TYPE 'B'		1 SHADE TREE @ 50' L.F. = 1 SHADE TREE 1 EVERGREEN @ 40' L.F. = 1 EVERGREEN
	PERIMETER 6 102' L.F. OF LANDSCAPE TYPE 'B'		SEE CREDIT
FRONTAGE / PERIMETER		PERIMETER 1 1,769' L.F. OF LANDSCAPE TYPE 'A'	SEE CREDIT (REFER TO PERIMETER PLAN)
		PERIMETER 2 2,346' L.F. OF LANDSCAPE TYPE 'C'	SEE CREDIT (REFER TO PERIMETER PLAN)
		PERIMETER 3 (SEE PARTIAL CREDIT) 168' L.F. OF LANDSCAPE TYPE 'C'	1 SHADE TREE @ 40' L.F. = 5 SHADE TREES 1 EVERGREEN @ 20' L.F. = 9 EVERGREENS
		PERIMETER 3A 278' L.F. OF LANDSCAPE TYPE 'C'	1 SHADE TREE @ 60' L.F. = 5 SHADE TREES
		PERIMETER 5 (SEE PARTIAL CREDIT) 767' L.F. OF LANDSCAPE TYPE 'C'	1 SHADE TREE @ 40' L.F. = 19 SHADE TREES - 11 SHADE TREES = 8 1 EVERGREEN @ 20' L.F. = 38 EVERGREENS
		PERIMETER 5A 481' L.F. OF LANDSCAPE TYPE 'A'	1 SHADE TREE @ 60' L.F. = 8 SHADE TREES
		PERIMETER 6 500' L.F. OF LANDSCAPE TYPE 'C'	1 SHADE TREE @ 40' L.F. = 14 SHADE TREES - 9 FOR SWM = 5 1 EVERGREEN @ 20' L.F. = 28 EVERGREENS - 18 FOR SWM = 10
CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED)		PERIMETER 7 2,643' L.F. OF LANDSCAPE TYPE 'C'	SEE CREDIT (REFER TO PERIMETER PLAN)
CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED)			PERIMETER 1 - 1,769' L.F. PERIMETER 2 - 2,346' L.F. PERIMETER 3 - 240' L.F. PERIMETER 5 - 11 EX. SHADE TREES PERIMETER 7 - 2,643' L.F. PERIMETER 6 - 102' L.F.
CREDIT FOR BERM (DESCRIBE BELOW IF NEEDED)			PERIMETER 3 - 440' L.F.
NUMBER OF PLANTS REQUIRED			
SHADE TREES			32
EVERGREEN TREES			58
SHRUBS			0
NUMBER OF PLANTS PROVIDED			
SHADE TREES			37
EVERGREEN TREES			117
OTHER TREES (2:1 SUBSTITUTION)			2
SHRUBS (10:1 SUBSTITUTION)			0
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)			

* NOTE: 2 FLOWERING TREES ARE SUBSTITUTED FOR 2 EVERGREEN TREES

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	129
NUMBER OF TREES REQUIRED @ 1/20 PKG. SPACES	6
NUMBER OF TREES PROVIDED	6
SHADE TREES	
OTHER TREES (2:1 SUBSTITUTION)	
NUMBER OF ISLANDS REQUIRED @ 1 PER 20 PKG. SP.	6
NUMBER OF ISLANDS PROVIDED @ 1 PER 20 PKG. SP.	6

PLANT LIST

QTY	SYM	BOTANICAL NAME / COMMON NAME	SIZE	REMARKS
LARGE TREES				
10	AR	Acer rubrum 'October Glory' / OCTOBER GLORY RED MAPLE	2 1/2" - 3" CAL. 12' - 14' HT.	B & B FULL HEAD
17	LP	Platanus x acerifolia 'Bloodgood' / BLOODGOOD LONDON PLANE TREE	2 1/2" - 3" CAL. 12' - 14' HT.	B & B FULL HEAD
5	QP	Quercus palustris / PIN OAK	2 1/2" - 3" CAL. 12' - 14' HT.	B & B FULL HEAD
21	ZS	Zelkova serrata 'Village Green' / VILLAGE GREEN JAPANESE ZELKOVA	2 1/2" - 3" CAL. 12' - 14' HT.	B & B FULL HEAD
FLOWERING TREES				
8	AG	Acer ginnala / AMUR MAPLE	8' - 10' HT.	B & B SINGLE STEM
6	CK	Cornus kousa / KOUSA DOGWOOD	8' - 10' HT.	B & B
7	MDW	Malus 'Donald Wyman' / DONALD WYMAN CRABAPPLE	8' - 10' HT.	B & B
3	PK	Prunus serrulata 'Kwanzan' / KWANZAN CHERRY	8' - 10' HT.	B & B
EVERGREEN TREES				
11	AH	Ilex opaca / AMERICAN HOLLY	6' - 8' HT.	B & B (ONE MALE)
46	PA	Picea abies / NORWAY SPRUCE	6' - 8' HT.	B & B
47	PS	Pinus strobus / EASTERN WHITE PINE	6' - 8' HT.	B & B UNSHEARED
40	PT	Pinus thunbergia / JAPANESE BLACK PINE	6' - 8' HT.	B & B
SHRUBS				
35	EAC	Euonymus alatus 'compactus' / WINGED EUONYMUS	30" - 36" HT.	B & B
55	FI	Forseythia x intermedia / BORDER FORSYTHIA	30" - 36" HT.	B & B

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	728' L.F. OF LANDSCAPE EDGE 'B'
NUMBER OF TREES REQUIRED	15
SHADE TREES @ 1/50 L.F.	10
EVERGREEN TREES @ 1/40 L.F.	
CREDIT FOR EXISTING VEGETATION	N/A
CREDIT FOR OTHER LANDSCAPING	N/A
NUMBER OF TREES PROVIDED	
SHADE TREES	9
EVERGREEN TREES	10
SHRUBS	60*

* COMMENTS: 60 SHRUBS ARE SUBSTITUTED FOR 6 SHADE TREES AT THE STORMWATER MANAGEMENT FACILITY.

5.9.01
Date

Professional Engineer No. 5591

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: *Melvin J. Smith* 5/31/01 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT: *Chris Hamilton* 6/5/01 DATE

DIRECTOR: *David R. Smith* 4/6/01 DATE

4/14/13 5 Revise total no. of sheets

Date	No.	Revision Description

Trinity School

OWNER:
OWNER: Trinity School, Inc., a Maryland Non-Profit Corporation.
4985 Ilchester Road, Ellicott City, MD 21043

DEVELOPER:
Board of Trustees, Trinity School
4985 Ilchester Road, Ellicott City, MD 21043

DMW
Dart-MacCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

SUBDIVISION NAME	LOT #	PANEL #
Balt. Prov. Div. of Notre Dame de Namur Inc. Property	4	222
PLAT OR REF. TO RECORD BOOK	1	1
14648 163,172,223 R-20	31	1ST
WATER CODE		SEWER CODE

TITLE: **Landscape Details**

Des By: **CBC** Scale: **NOT TO SCALE** Proj. No.: **89113.03**

Drn By: **CBC** Date: **4-12-01**

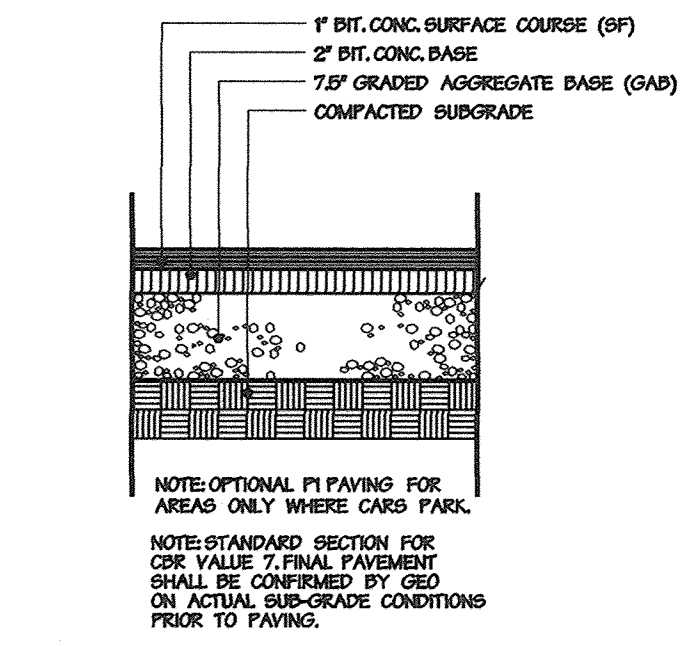
Chk By: **MM** Approved: **21 OF 23**

DEVELOPER'S / BUILDER'S CERTIFICATE

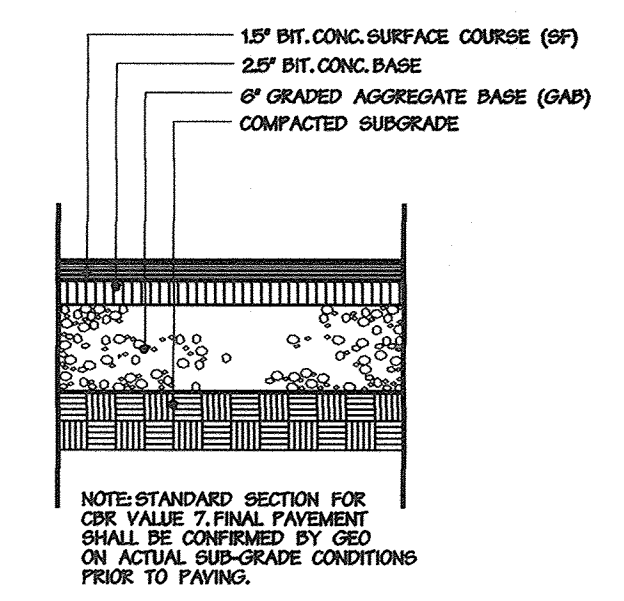
THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES & WALLS. ALL PLANT MATERIAL SHALL BE MAINTAINED IN GOOD GROWING CONDITION AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

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

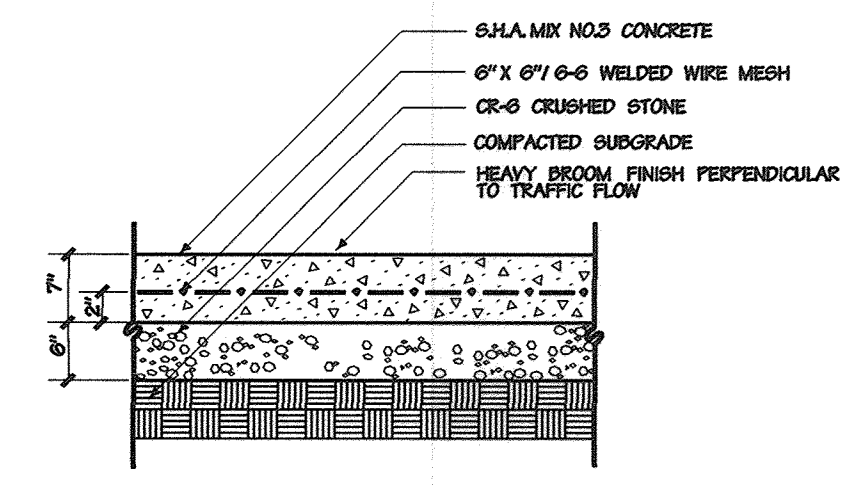
Melvin J. Smith 5-4-01
NAME DATE



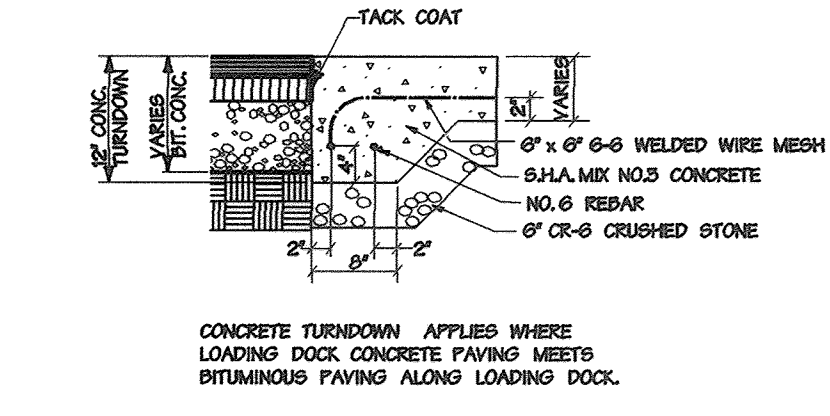
1 P1 Paving (Light Duty)
Not To Scale



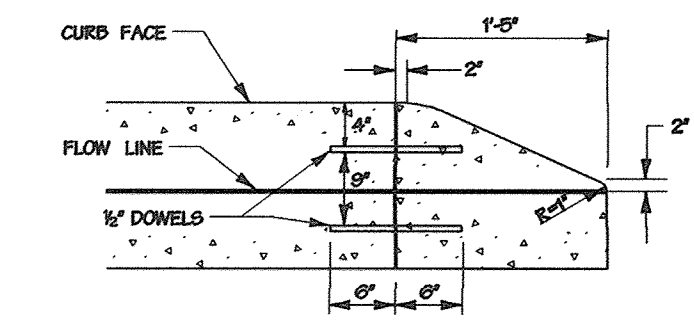
4 P2 Paving (Heavy Duty)
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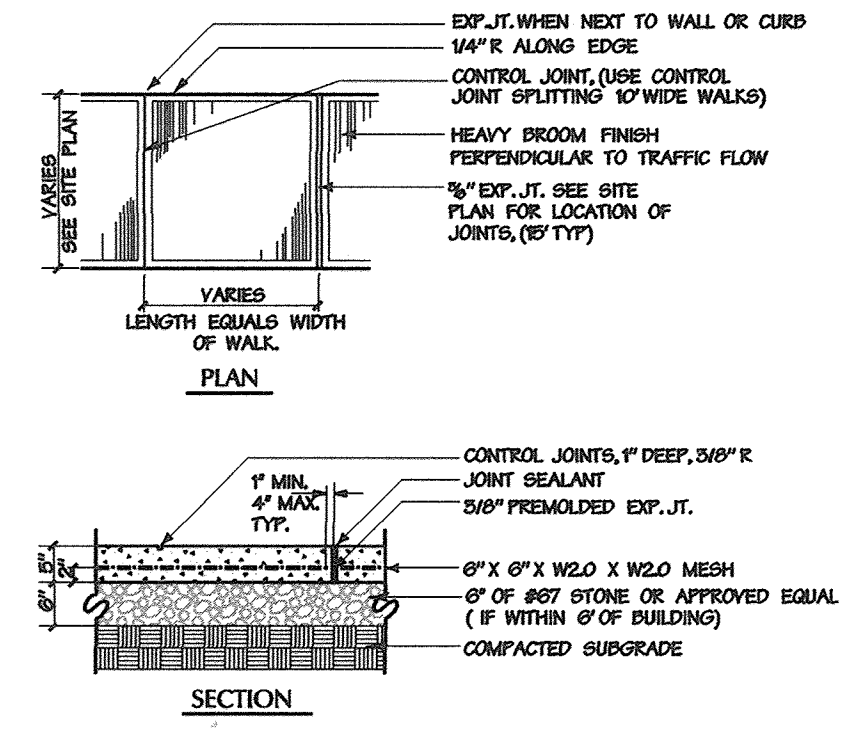
7 Loading Dock Concrete Paving and Pad
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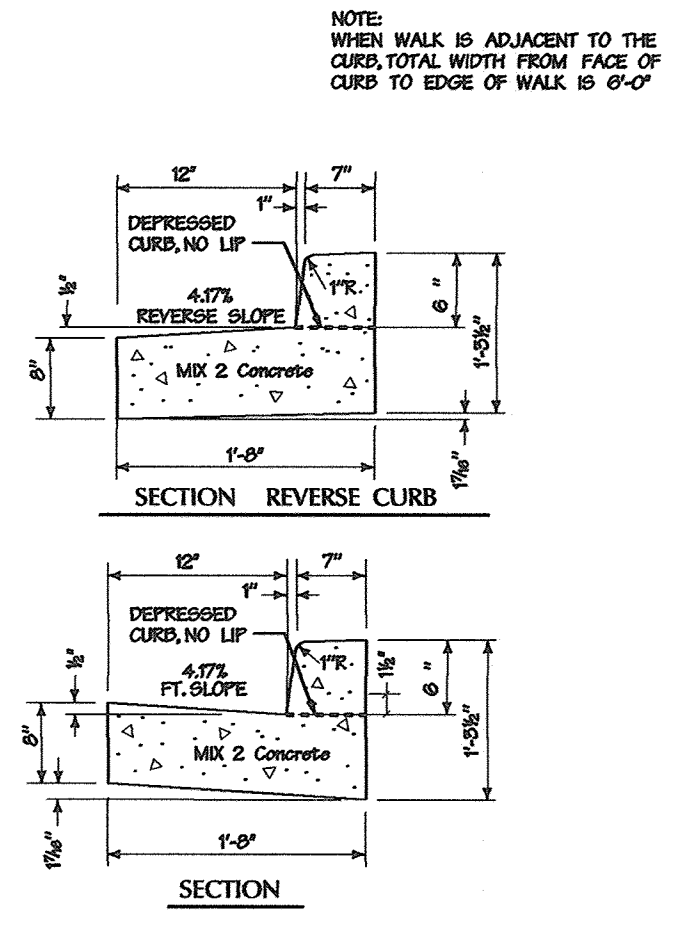
10 Concrete Turndown @ Bit. Conc.
Not To Scale



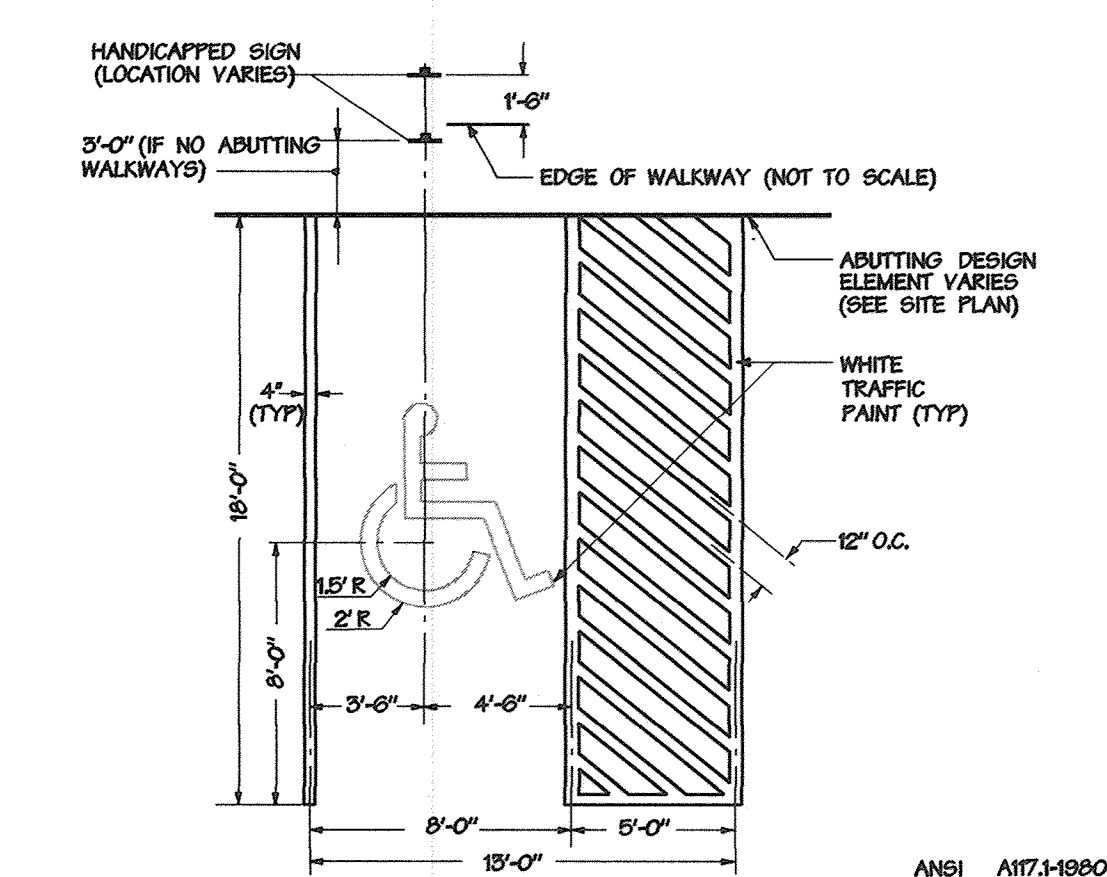
13 Nose Down Curb
Not To Scale



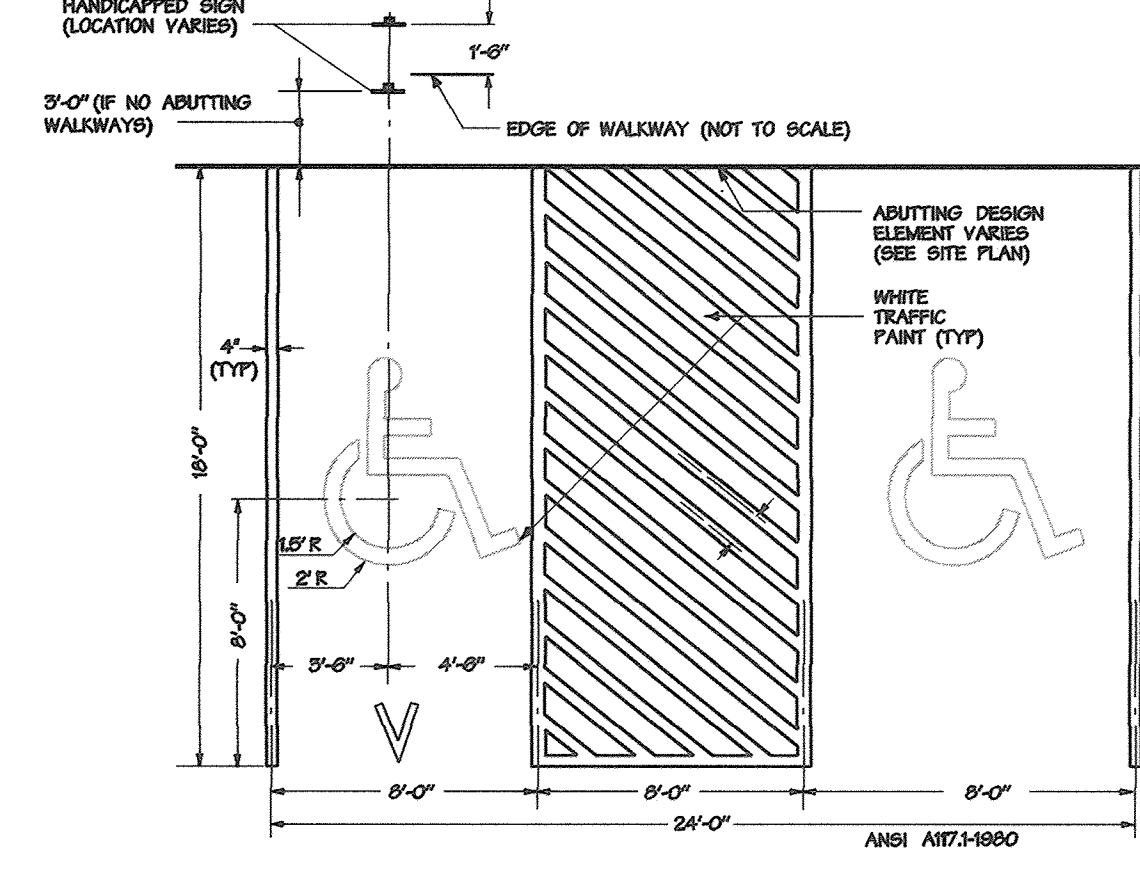
2 Concrete Walk
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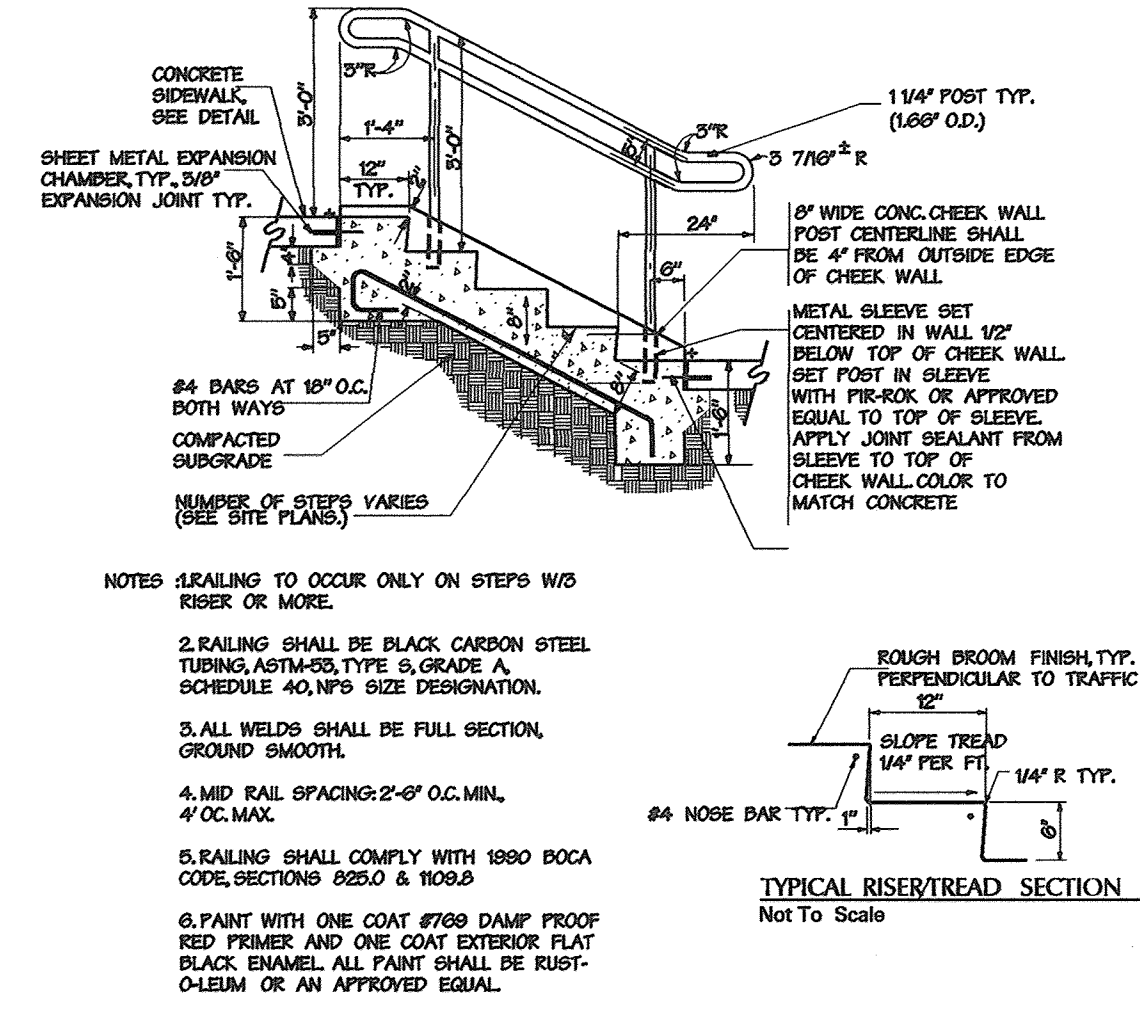
5 Concrete Curb / Depressed Curb, Typ.
Not To Scale



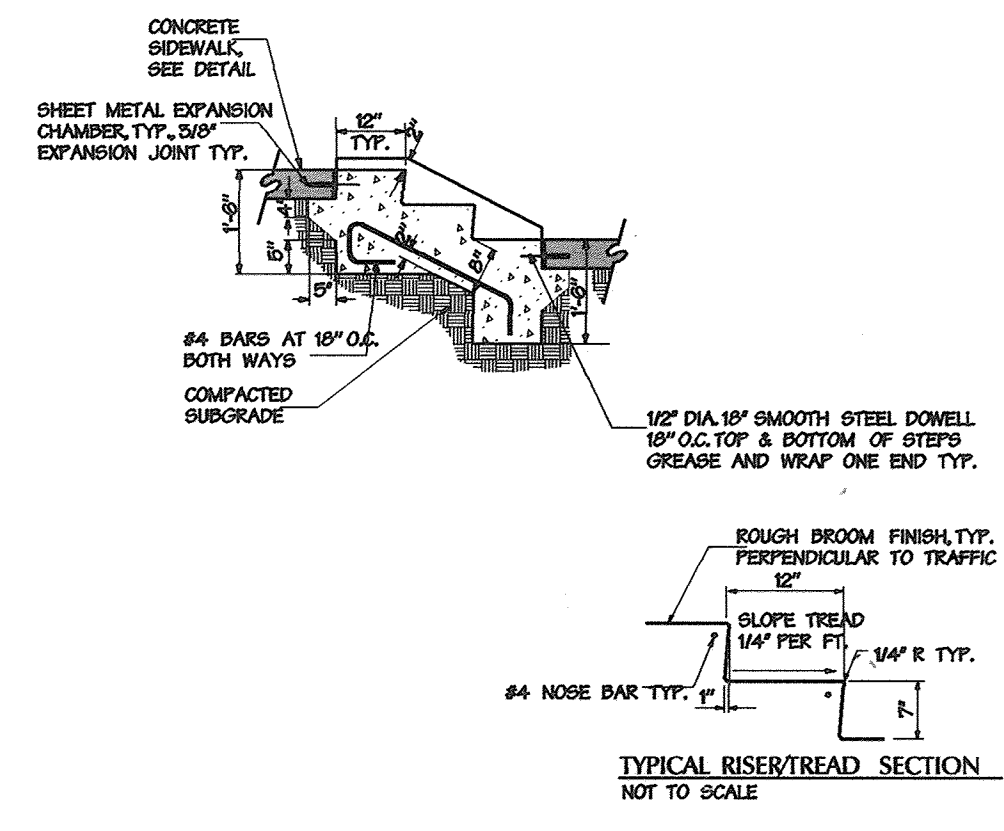
8 Handicapped Parking Space
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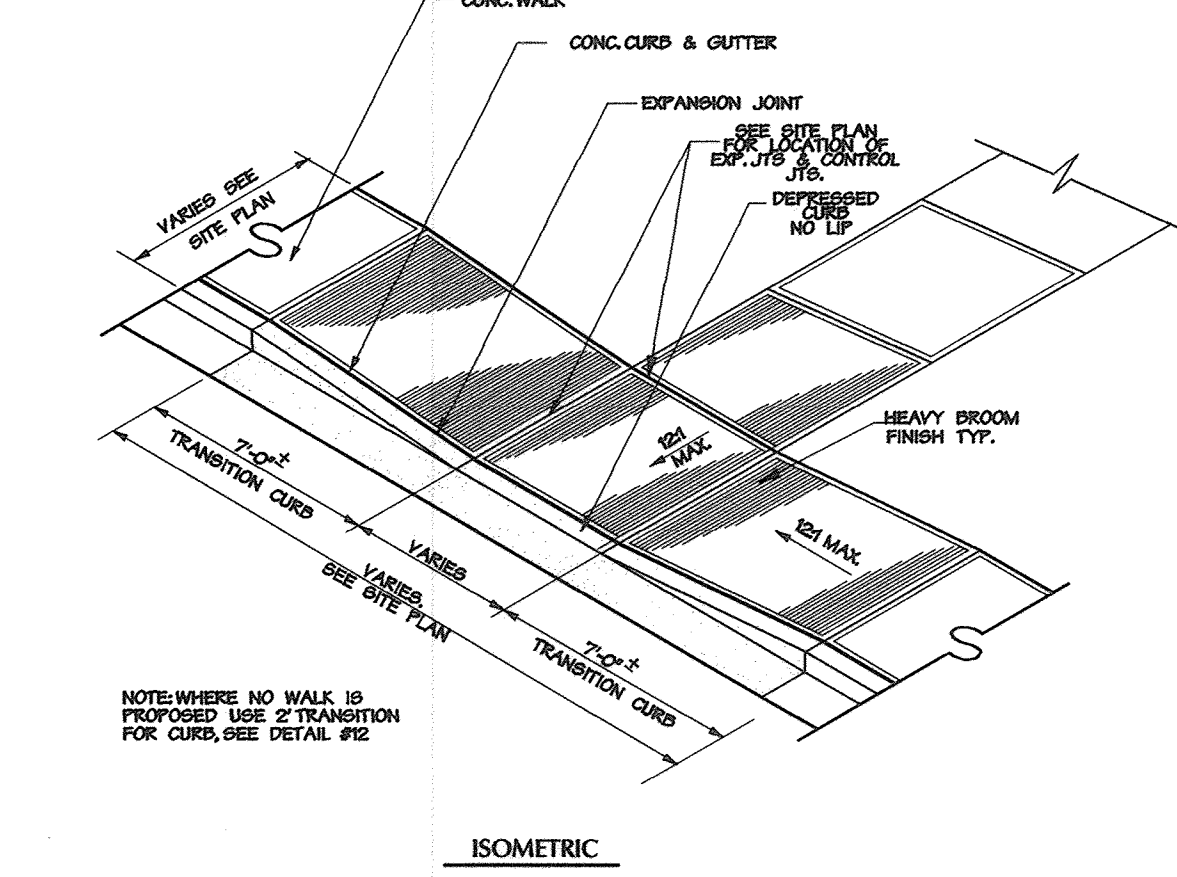
11 Handicapped Parking Space (Van)
Not To Scale



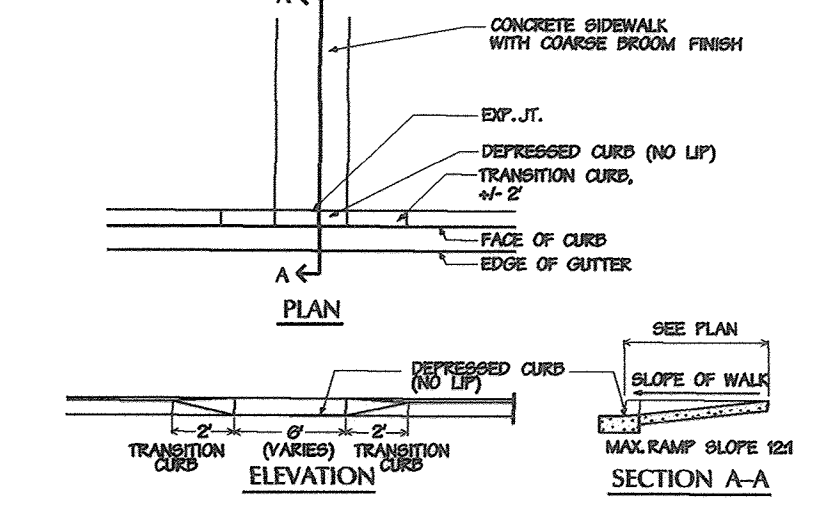
3 Concrete Steps with Railing
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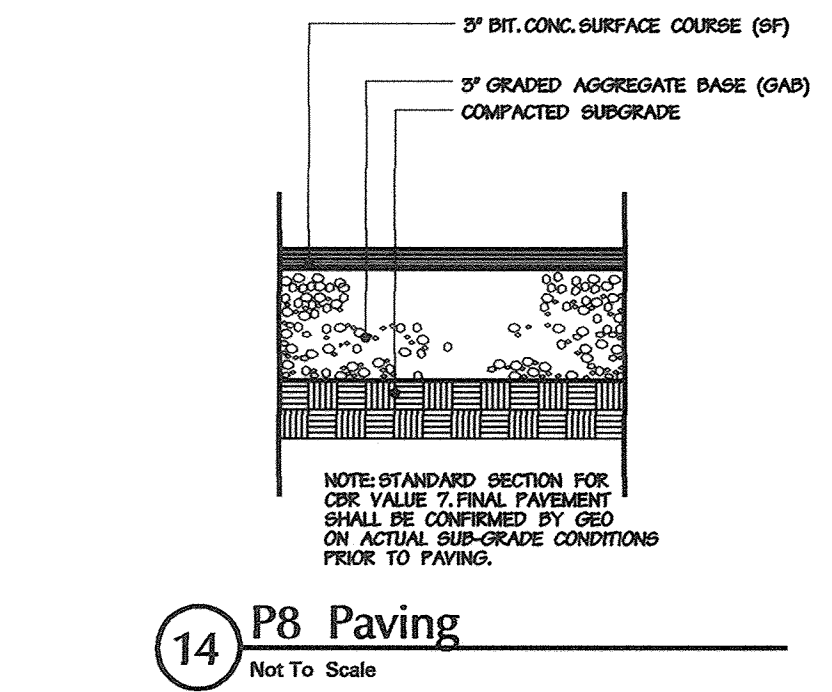
6 Concrete Steps with 2 Risers/No Railing
Not To Scale



9 Handicapped Ramp
Not To Scale



12 Handicapped Ramp
Not To Scale



14 P8 Paving
Not To Scale

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

5/13/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

6/5/01
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

6/6/01
DIRECTOR DATE

4/24/13 5 Reverse total no. of sheets

Date	No.	Revision Description

Trinity School

OWNER: Trinity School, Inc., a Maryland Non-Profit Corporation.
4985 Ilchester Road, Ellicott City, MD 21043

DEVELOPER: Board of Trustees, Trinity School
4985 Ilchester Road, Ellicott City, MD 21043

DMW
Dart-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax: 296-0705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

SUBMISSION NAME: Parls. Prov. Strs. of Notre Dame de Namur Inc. Property LOT # 4 SHEETS # 252

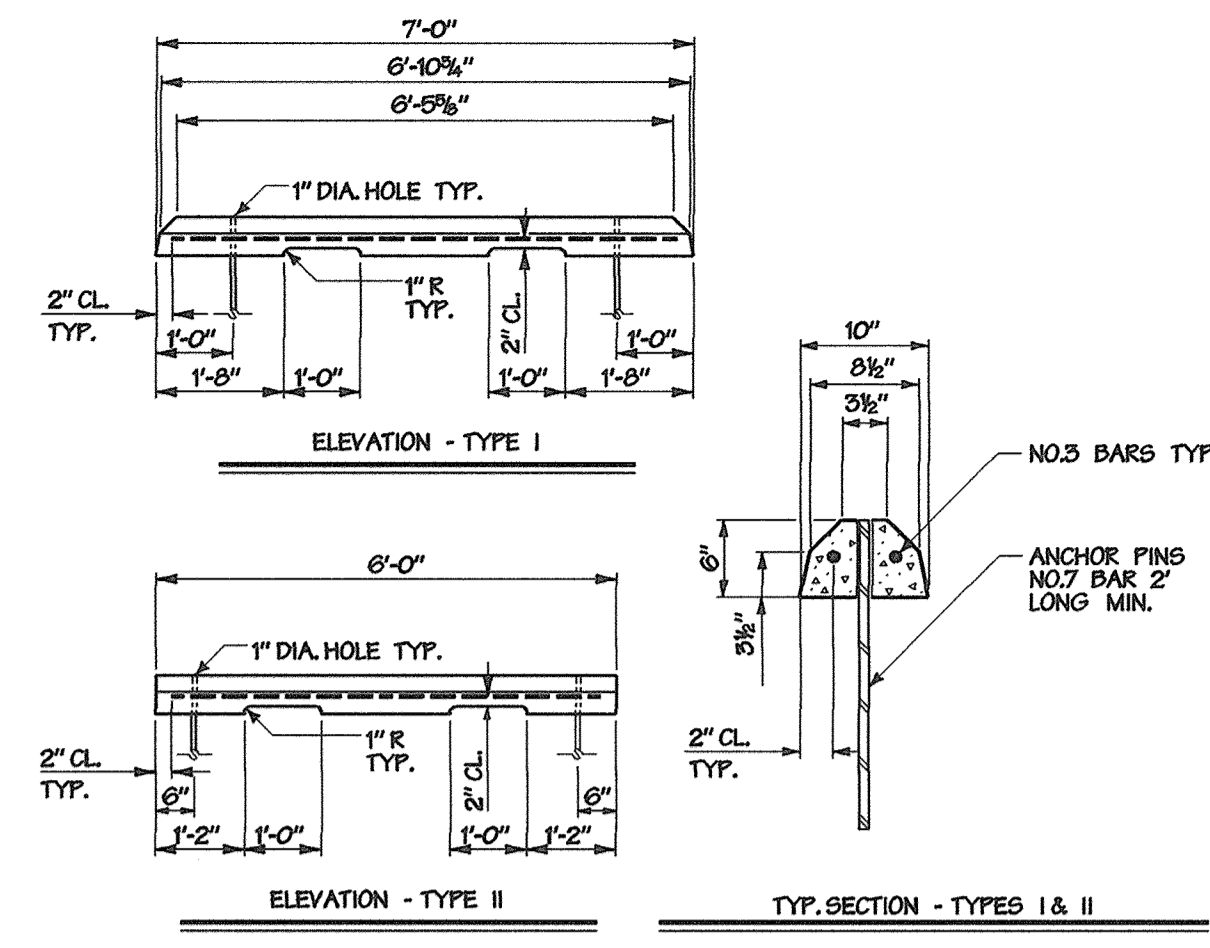
PLAT OR L.P. BLOCK # ZONE TAXING MAP RECD. DISTRICT CENSUS TRACT
14-6-46 16,17,625 R-20 31 1ST

WATER CODE: SEWER CODE:

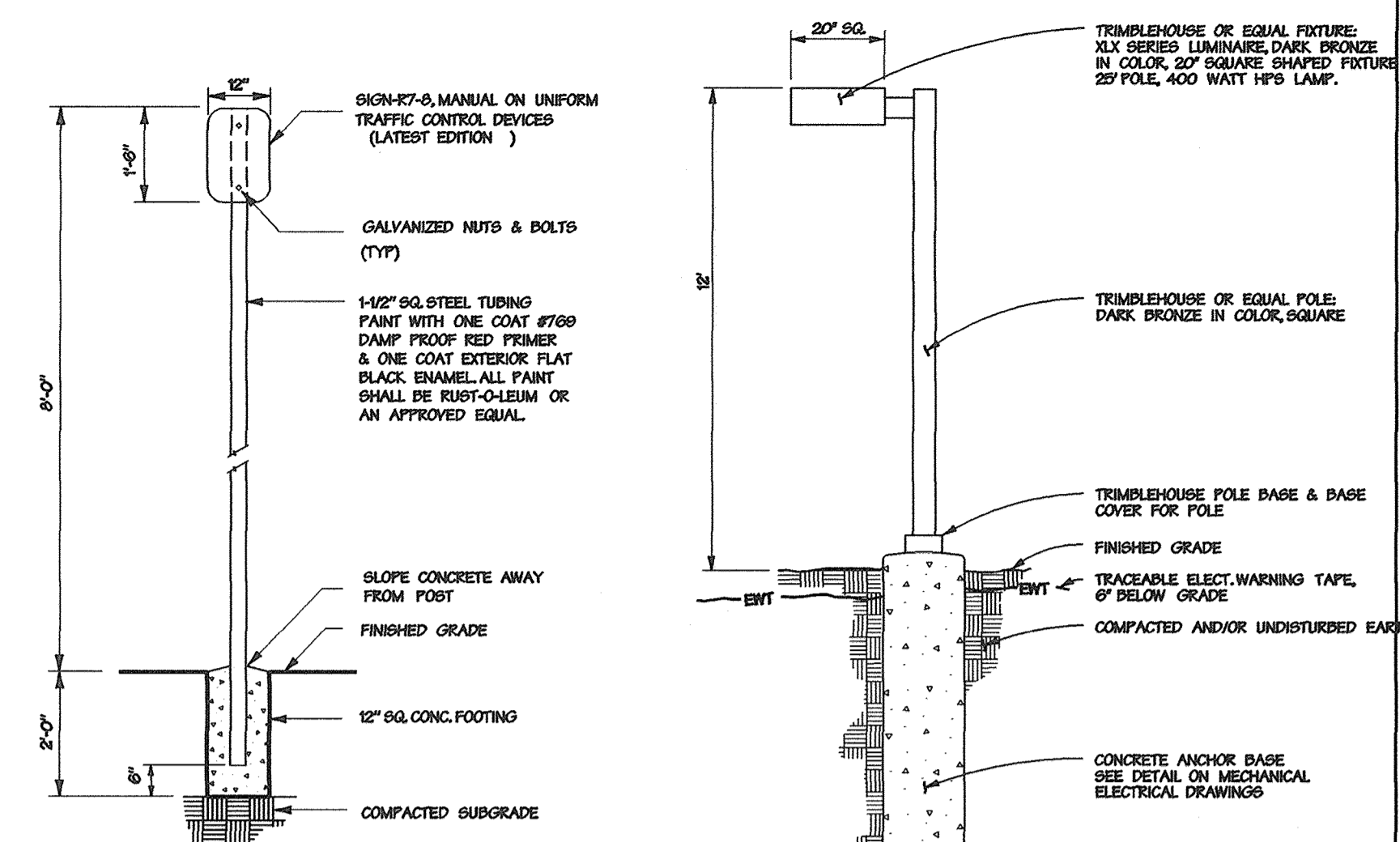
TITLE: **Site Details**

Des By: TPC Scale: NOT TO SCALE Proj. No. 89113.G3
Dwn By: ADL Date: 4-12-01
Chk By: Approved: 22 OF 28

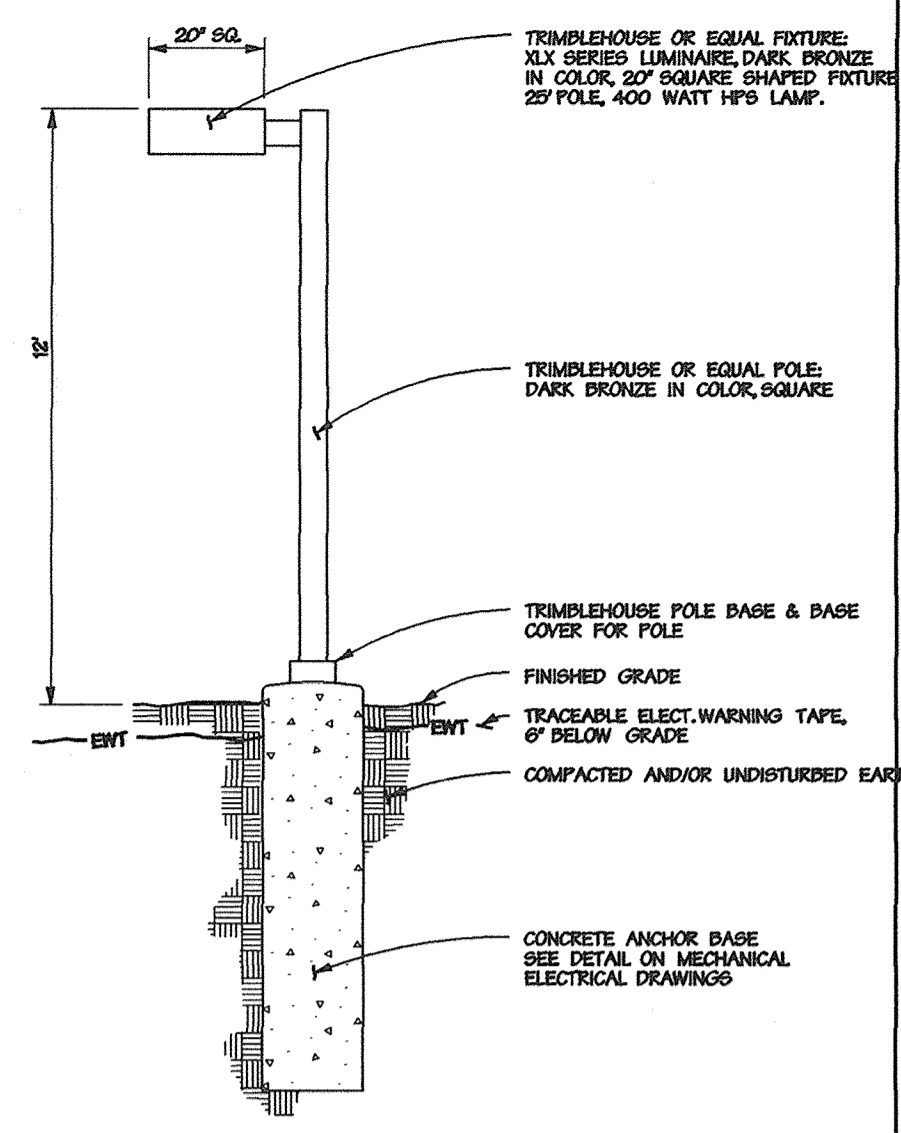
15 Concrete Precast Wheel stop
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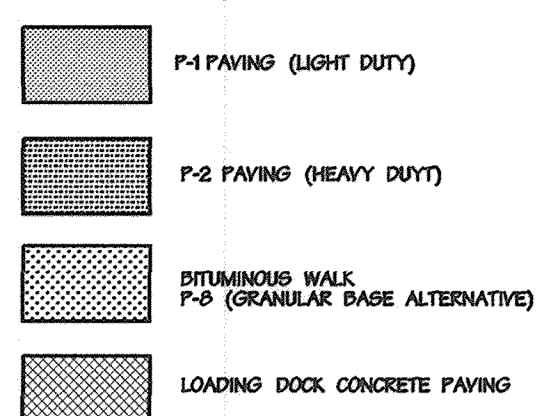
18 Handicapped Sign
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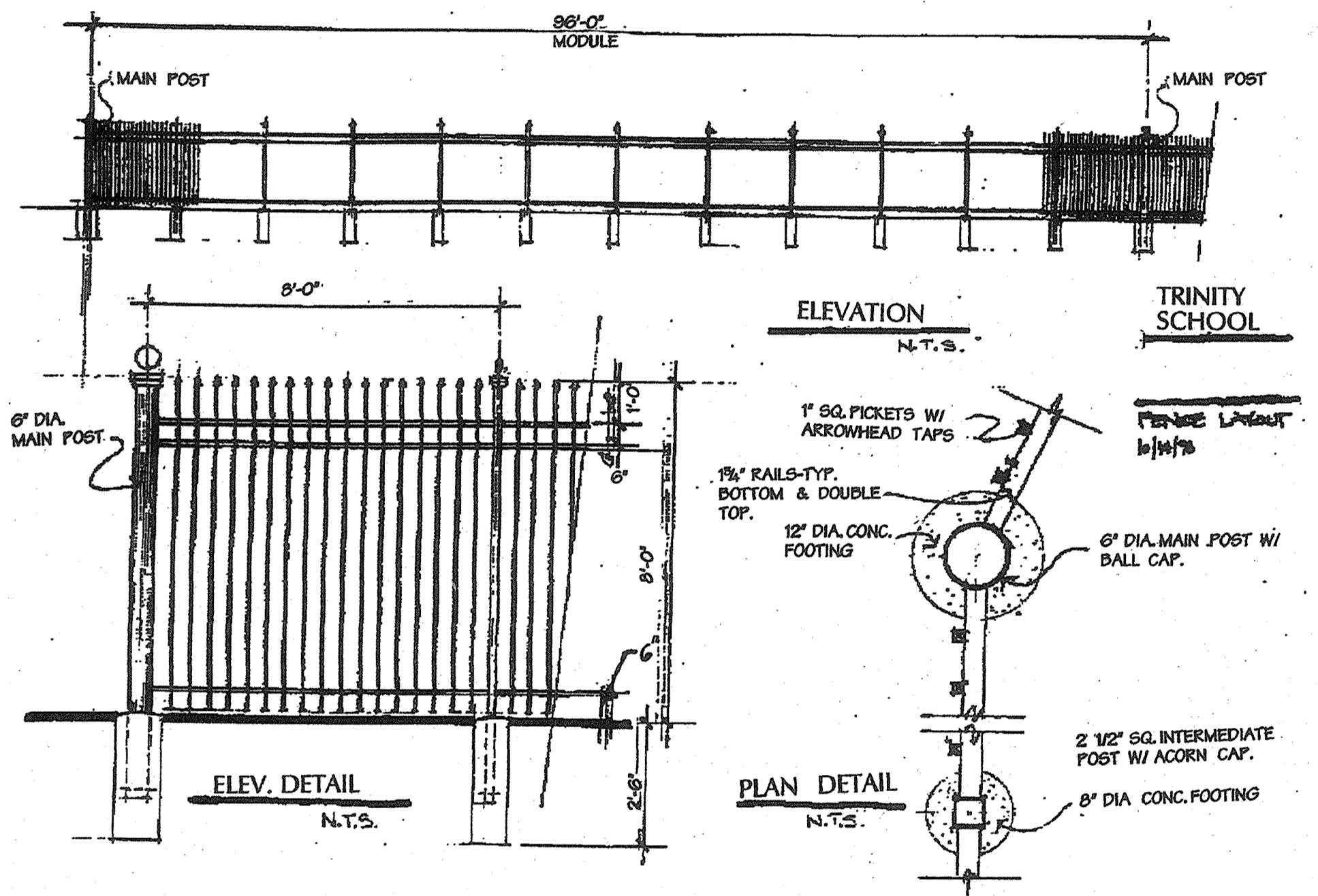
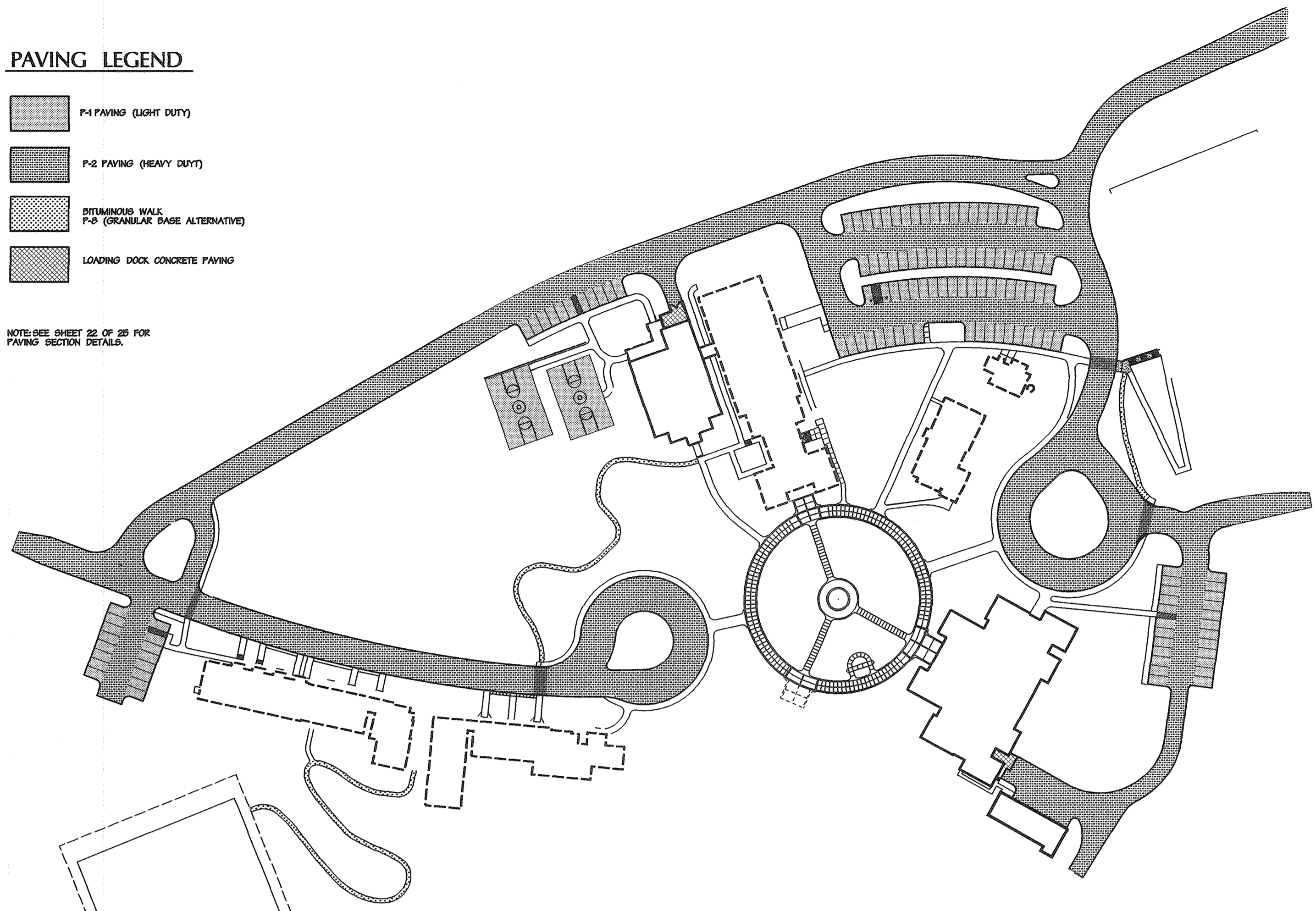
19 Pedestrian Light
Not To Scale



PAVING LEGEND

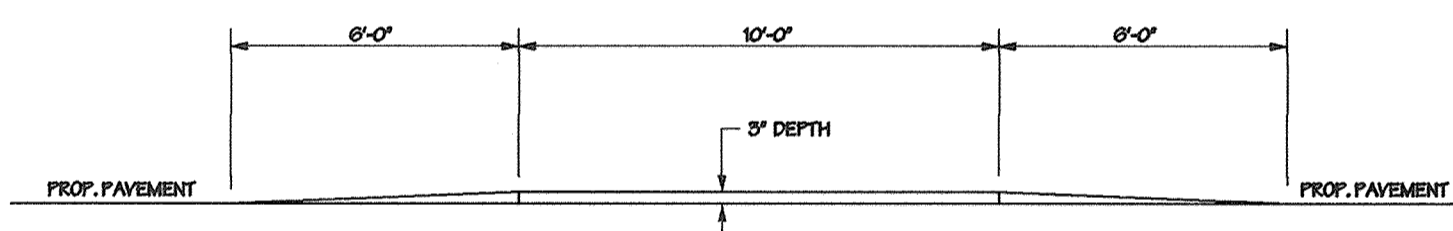


NOTE: SEE SHEET 22 OF 25 FOR PAVING SECTION DETAILS.

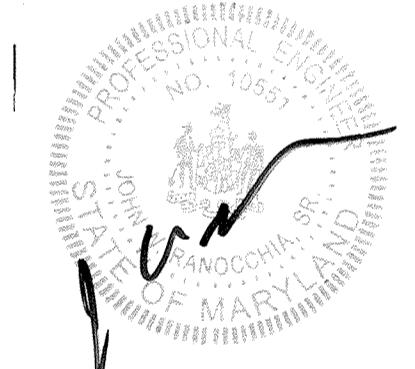
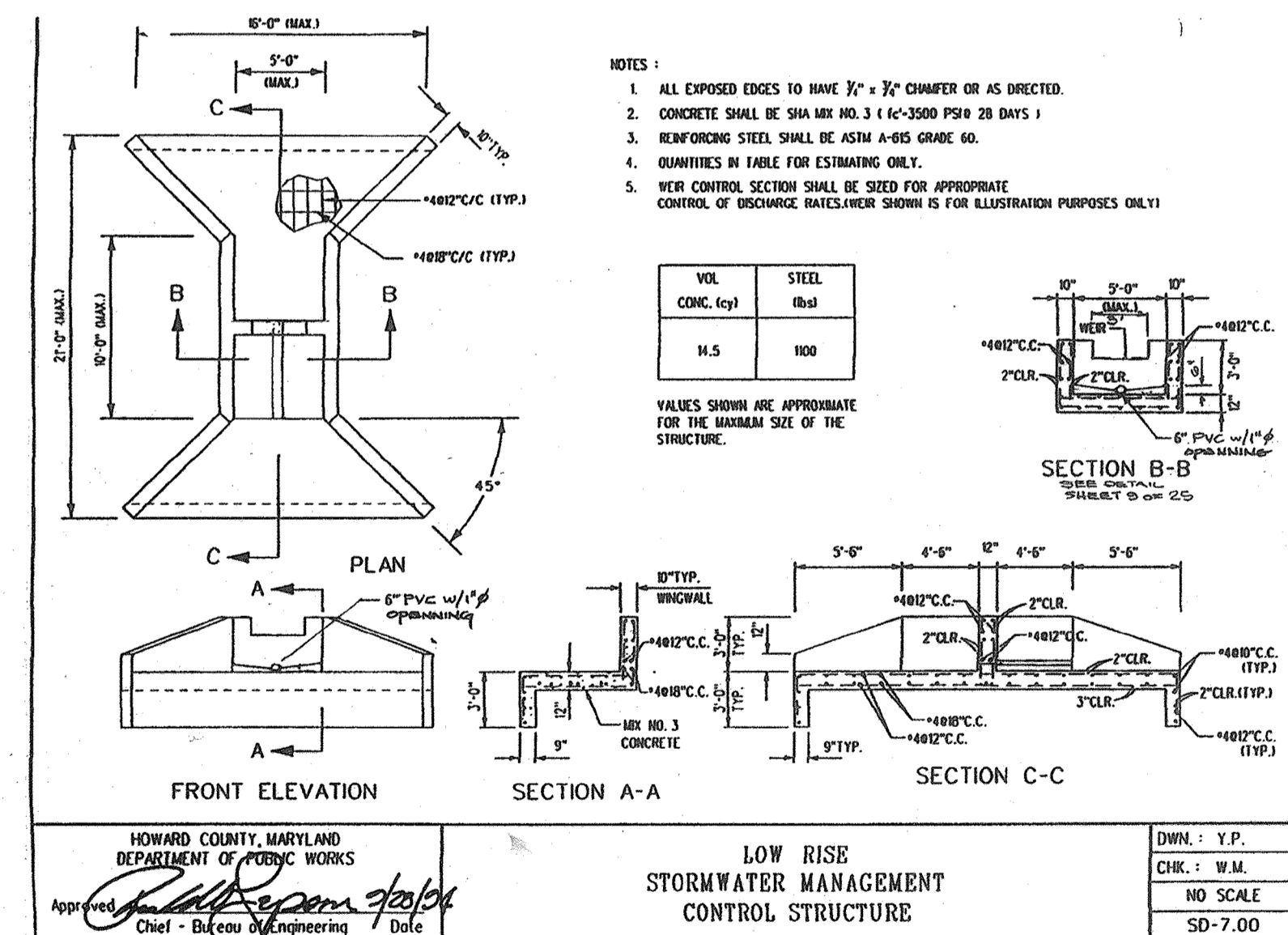


16 Fence Detail
Not To Scale

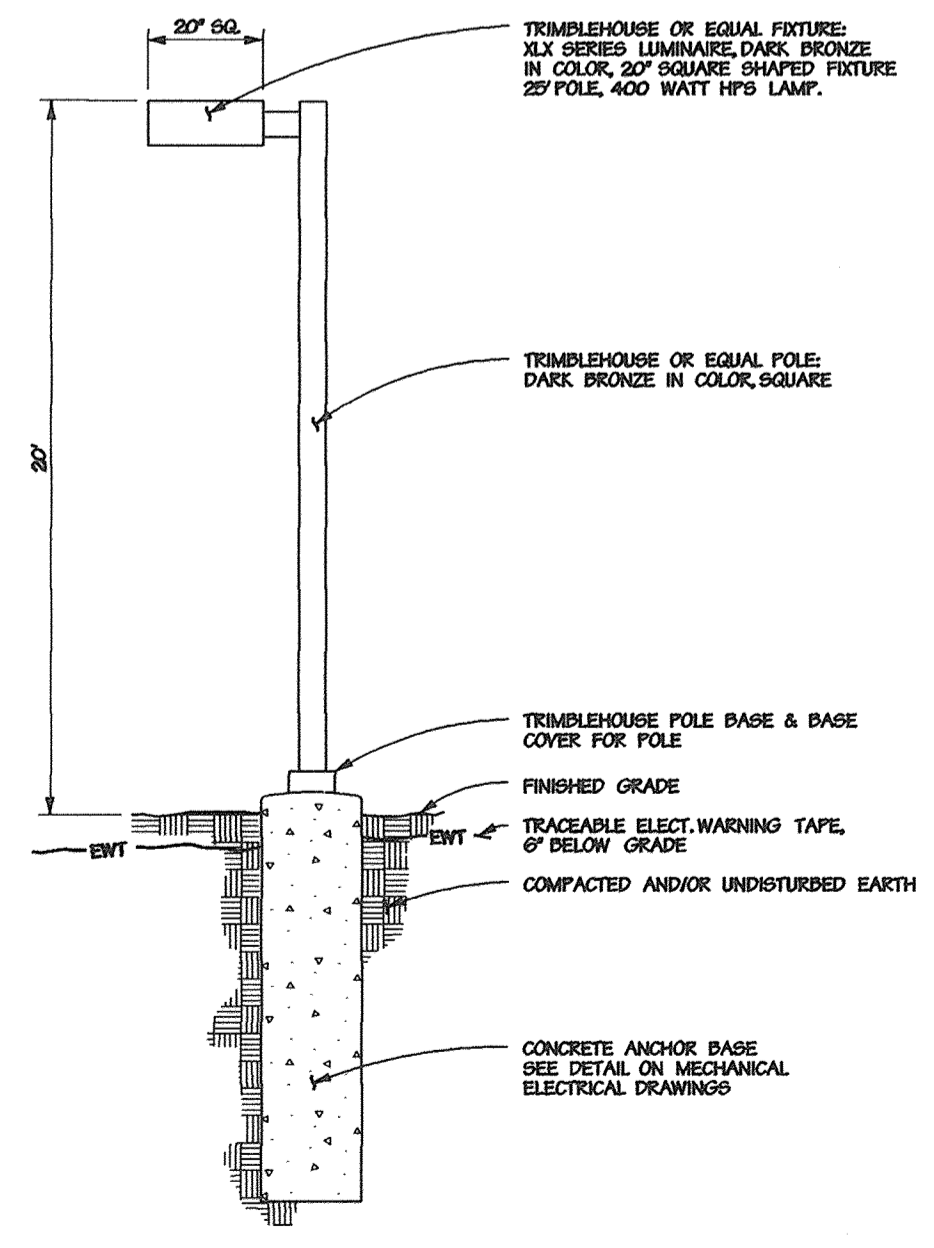
24 Flat Top Speed Hump Detail
Not To Scale



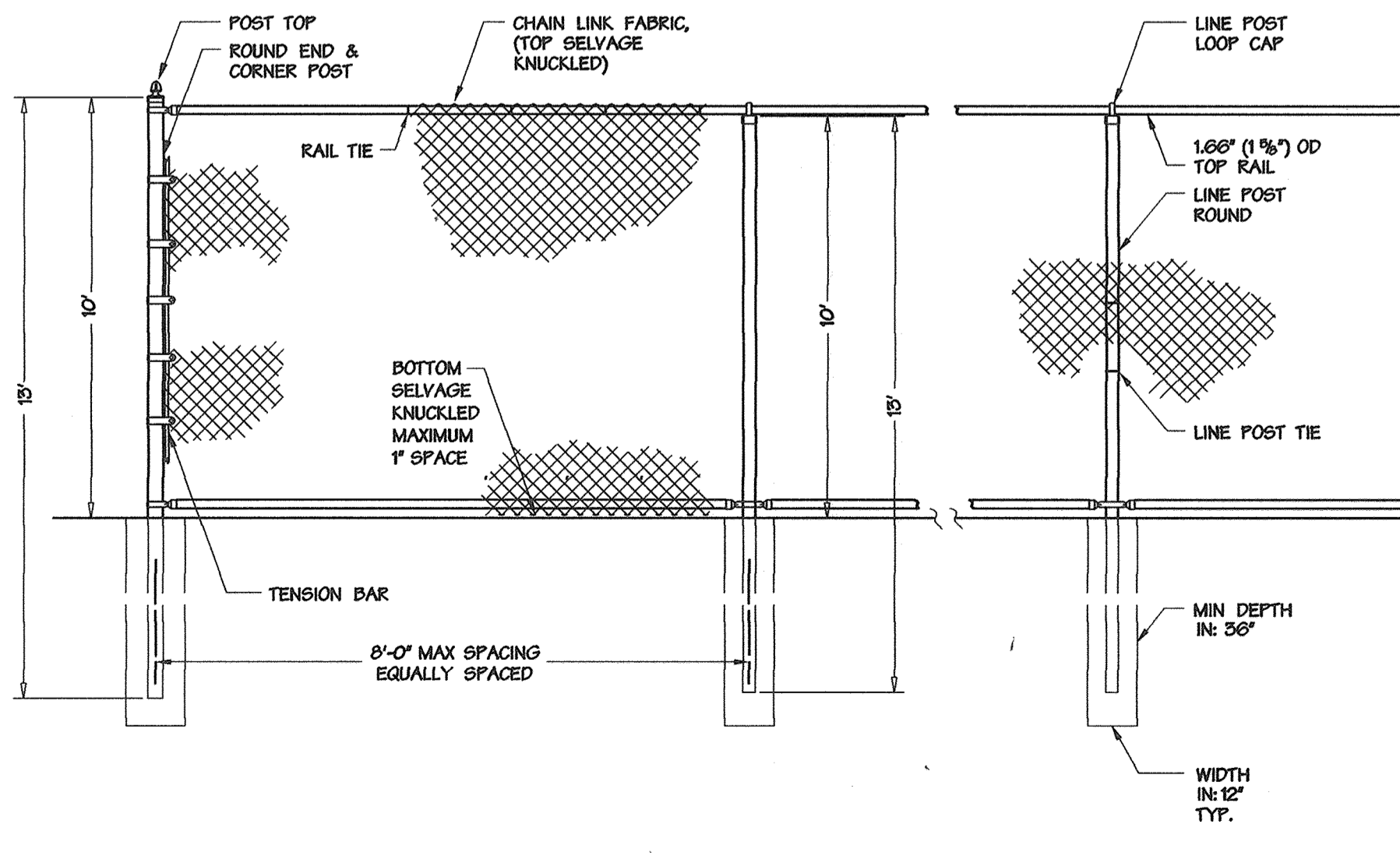
21 Trinity School Paving Plan
Not To Scale



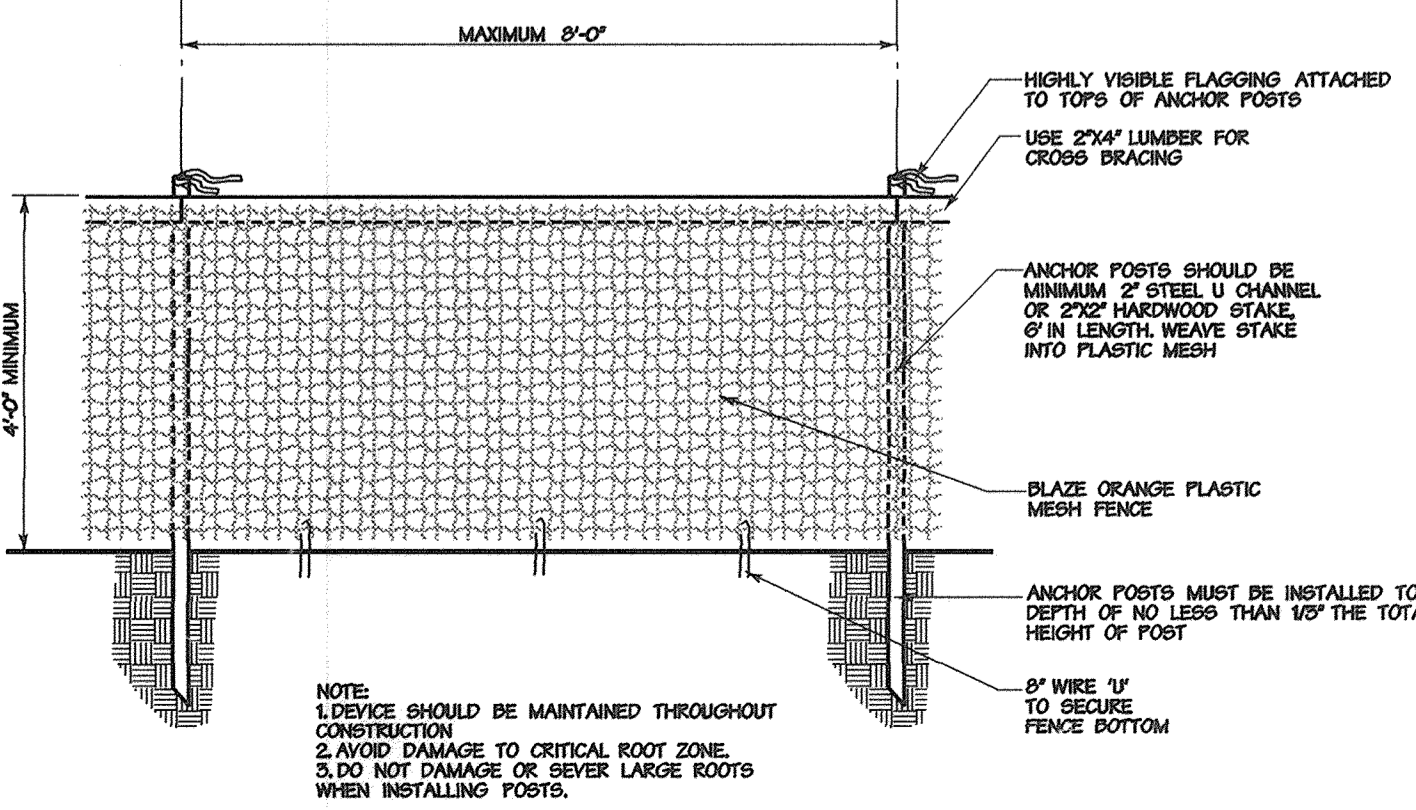
17 Street Light
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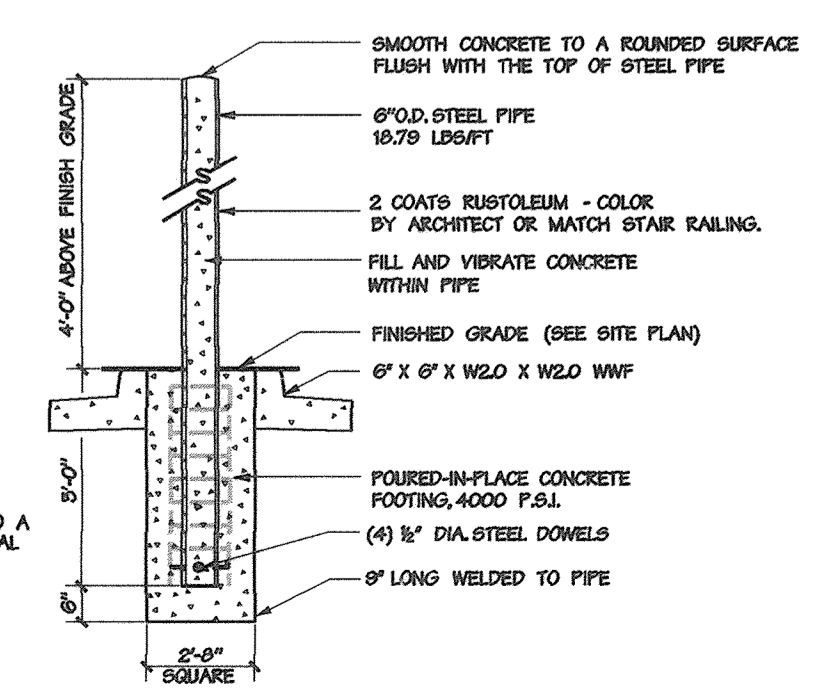
20 Galvanized Chain Link Fence
Not To Scale



23 Plastic Mesh Tree Protection Fence
Not To Scale



22 Bollard
Not To Scale



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 Chief, Development Engineering Division: *W.D. Dammann* 5/21/01
 Chief, Division of Land Development: *David Hamilton* 6/5/01
 Director: *Joseph R. Rutz* 4/6/01

Date	No.	Revision Description
4/24/01	5	Revise total no. of sheets

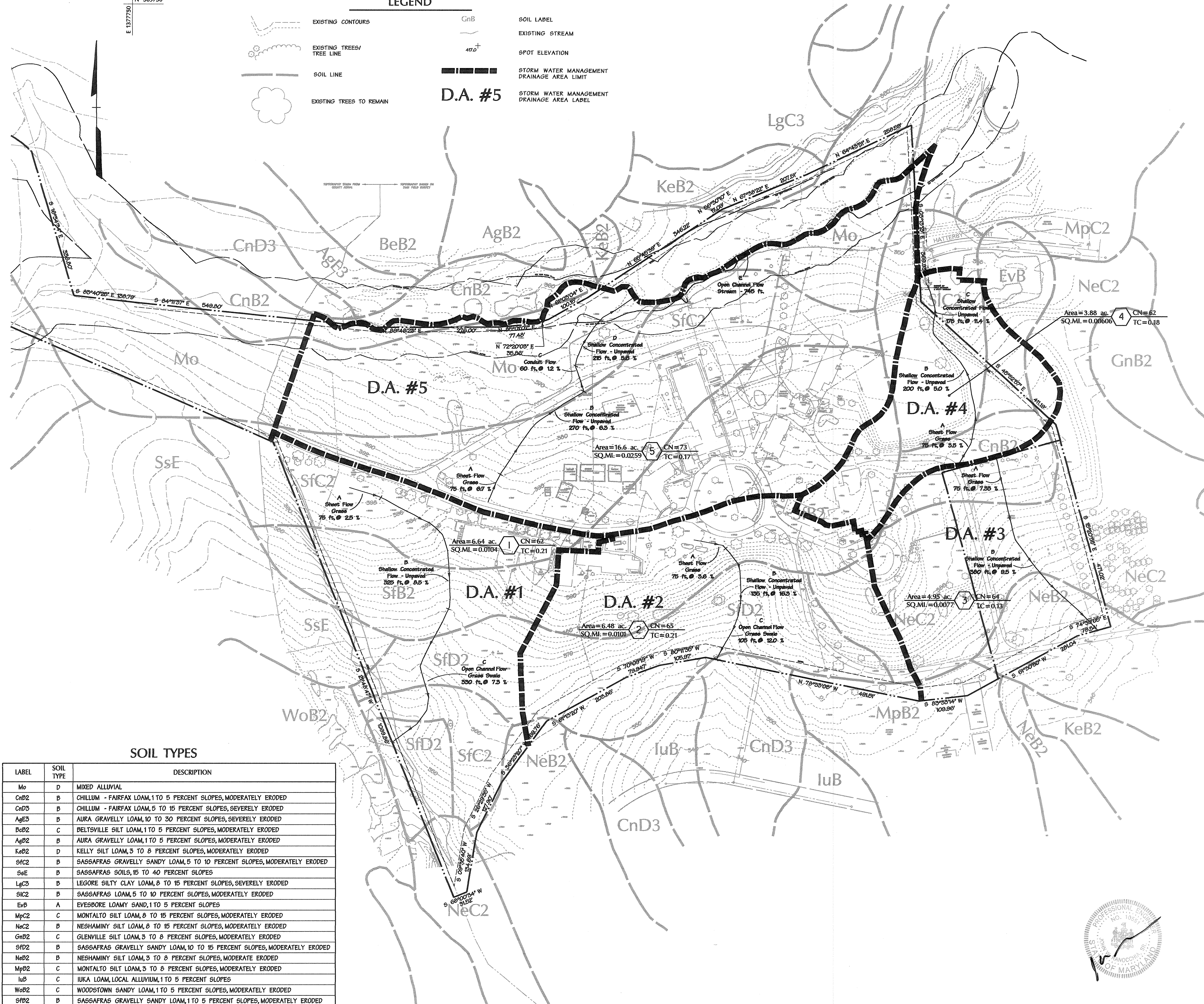
Trinity School
 OWNER: Trinity School, Inc., a Maryland Non-Profit Corporation.
 4985 Ilchester Road, Ellicott City, MD 21043
 DEVELOPER: Board of Trustees, Trinity School
 4985 Ilchester Road, Ellicott City, MD 21043

DMW
 Draft-McCune-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3333
 Fax: 296-4705

SUBMISSION NAME		LOT	PANEL #
Balt. Prov., Srs. of Notre Dame de Nemur Inc. Property		4	252
PLAT OR L.P.	BLOCK # ZONE	TAXING MAP	ELECT. DISTRICT
14648	1637823 R-20	21	1ST
WATER CODE	SEWER CODE	CENSUS TRACT	
TITLE			
Site Details			
Des By: TPC	Scale: NOT TO SCALE	Proj. No. 89113.G3	
Drn By: ADL	Date: 4-12-01		
Chk By:	Approved:		

LEGEND

- EXISTING CONTOURS
- EXISTING TREES/TREE LINE
- SOIL LINE
- EXISTING TREES TO REMAIN
- CnB
- 47.0'
- D.A. #5
- SOIL LABEL
- EXISTING STREAM
- SPOT ELEVATION
- STORM WATER MANAGEMENT DRAINAGE AREA LIMIT
- STORM WATER MANAGEMENT DRAINAGE AREA LABEL



SOIL TYPES

LABEL	SOIL TYPE	DESCRIPTION
Mo	D	MIXED ALLUVIAL
CnB2	B	CHILLUM - FAIRFAX LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED
CnD3	B	CHILLUM - FAIRFAX LOAM, 5 TO 15 PERCENT SLOPES, SEVERELY ERODED
AgE3	B	AURA GRAVELLY LOAM, 10 TO 30 PERCENT SLOPES, SEVERELY ERODED
BcB2	C	BELTSVILLE SILT LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED
AgB2	B	AURA GRAVELLY LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED
KeB2	D	KELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
Sfc2	B	SASSAFRAS GRAVELLY SANDY LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED
SsE	B	SASSAFRAS SOILS, 15 TO 40 PERCENT SLOPES
LgC3	B	LEGOKE SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
Sic2	B	SASSAFRAS LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED
EvB	A	EVEBORE LOAMY SAND, 1 TO 5 PERCENT SLOPES
MpC2	C	MONTALTO SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
NeC2	B	NEHAMINY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
GnB2	C	GLENNVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
SfD2	B	SASSAFRAS GRAVELLY SANDY LOAM, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED
NeB2	B	NEHAMINY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
MpB2	C	MONTALTO SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
LuB	C	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES
WoB2	C	WOODSTOWN SANDY LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED
SfB2	B	SASSAFRAS GRAVELLY SANDY LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

William D. Hamilton 5/31/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

David Hamilton 6/5/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Robert R. Smith 6/6/01
 DIRECTOR DATE

4/21/03	5	Revise total no. of sheets
Date	No.	Revision Description

Trinity School

OWNER:
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 Fax 296-4705

A Team of Land Planners,
 Landscape Architects,
 Engineers, Surveyors &
 Environmental Professionals

SUBDIVISION NAME	Block, Proj. Site of Notre Dame de Namur Property	LOT	PARCEL #
RATE OR L.F.	BLOCK # ZONE	TAXING MAP	NO. 1055
14648	1617/223 R-20	21	4
WATER CODE	SEWER CODE	ELECT. DISTRICT	CENSUS TRACT
		1ST	

Exist. Drainage Area Map

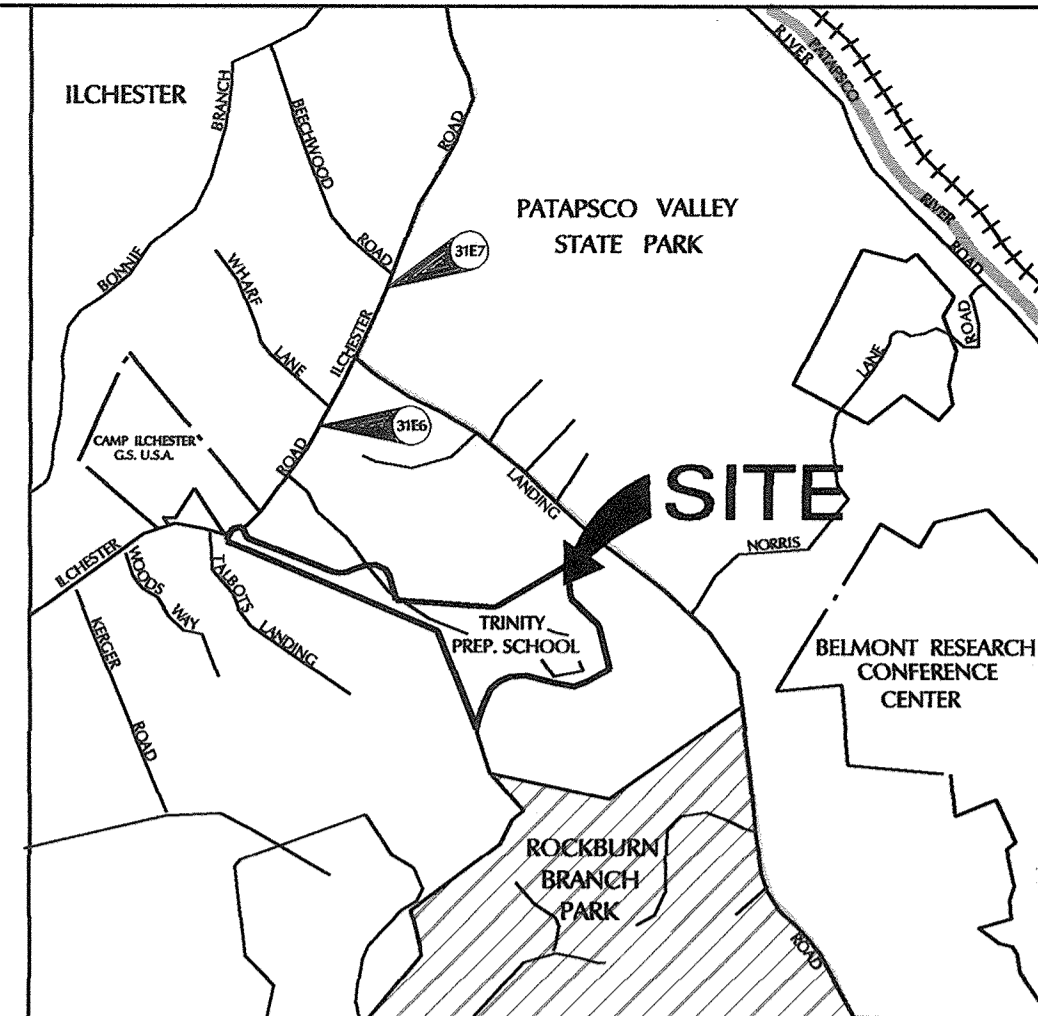
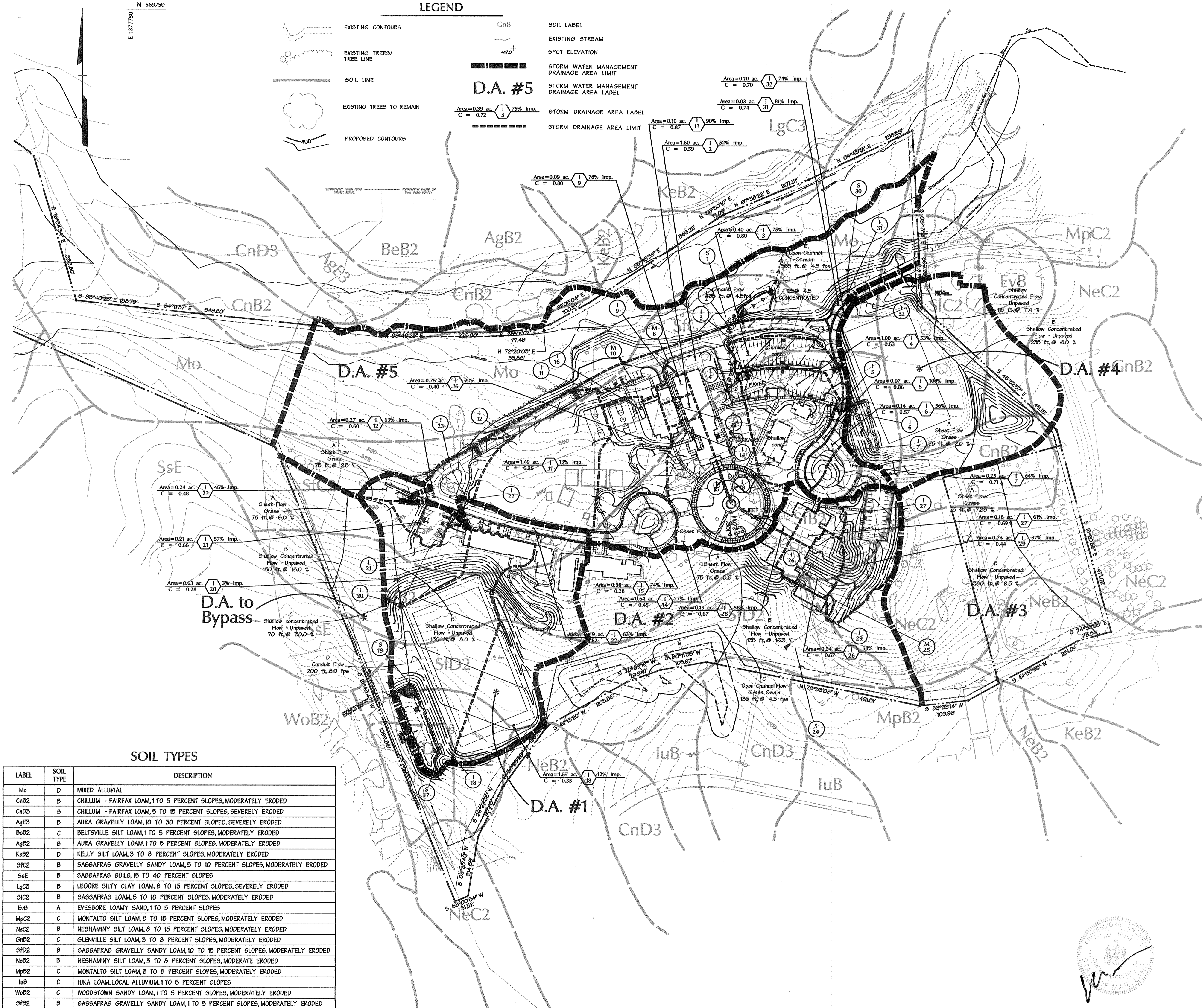
Des By:	JMH	Scale:	1" = 100'	Proj. No.	0911025
Drn By:	FJZ	Date:	4-12-01	24 OF 28	
Chk By:		Approved:			

N 569750
E 1377750

N 569750
E 1380250

LEGEND

- EXISTING CONTOURS
- EXISTING TREES/TREE LINE
- SOIL LINE
- EXISTING TREES TO REMAIN
- PROPOSED CONTOURS
- GnB
- 47.0'
- D.A. #5**
- Area=0.39 ac, 1/3, 79% Imp., C=0.72
- SOIL LABEL
- EXISTING STREAM
- SPOT ELEVATION
- STORM WATER MANAGEMENT DRAINAGE AREA LIMIT
- STORM WATER MANAGEMENT DRAINAGE AREA LABEL
- STORM DRAINAGE AREA LABEL
- STORM DRAINAGE AREA LIMIT



COPYRIGHT ADC - THE MAP PEOPLE, PERMITTED USE No. 20996386
LOCATION MAP
 SCALE: 1" = 2000'

BENCHMARK DESCRIPTION

HO. CO. #3166	HO. CO. #3167
1/4" REBAR 0.5' BELOW SURFACE	1/4" REBAR 0.5' BELOW SURFACE
5' SOUTHWEST OF ILCHESTER ROAD	5' SOUTHWEST OF ILCHESTER ROAD
PAVING 500' WEST OF WHARF LANE	PAVING 250' WEST OF BEECHWOOD
N 570862.5717' E 1376700.6467'	N 572236.2603' E 1377504.0332'

SOIL TYPES

LABEL	SOIL TYPE	DESCRIPTION
Mo	D	MIXED ALLUVIAL
CnB2	B	CHILLUM - FAIRFAX LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED
CnD3	B	CHILLUM - FAIRFAX LOAM, 5 TO 15 PERCENT SLOPES, SEVERELY ERODED
AgE3	B	AURA GRAVELLY LOAM, 10 TO 30 PERCENT SLOPES, SEVERELY ERODED
BcB2	C	BELTSVILLE SILT LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED
AgB2	B	AURA GRAVELLY LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED
KeB2	D	KELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
SfC2	B	SASSAFRAS GRAVELLY SANDY LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED
SsE	B	SASSAFRAS SOILS, 15 TO 40 PERCENT SLOPES
LgC3	B	LEGOKE SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
SfC2	B	SASSAFRAS LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED
EvB	A	EVEBOKE LOAMY SAND, 1 TO 5 PERCENT SLOPES
MpC2	C	MONTALTO SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
NcC2	B	NESHAMINY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
GnB2	C	GLENNVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
SfD2	B	SASSAFRAS GRAVELLY SANDY LOAM, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED
NcB2	B	NESHAMINY SILT LOAM, 5 TO 8 PERCENT SLOPES, MODERATE ERODED
MpB2	C	MONTALTO SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
IuB	C	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES
WoB2	C	WOODSTOWN SANDY LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED
SfB2	B	SASSAFRAS GRAVELLY SANDY LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
Howard County Seal
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 5/31/01 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT 6/15/01 DATE
 DIRECTOR 6/16/01 DATE

4/24/05	5	Revise total no. of sheets
Date	No.	Revision Description

Trinity School

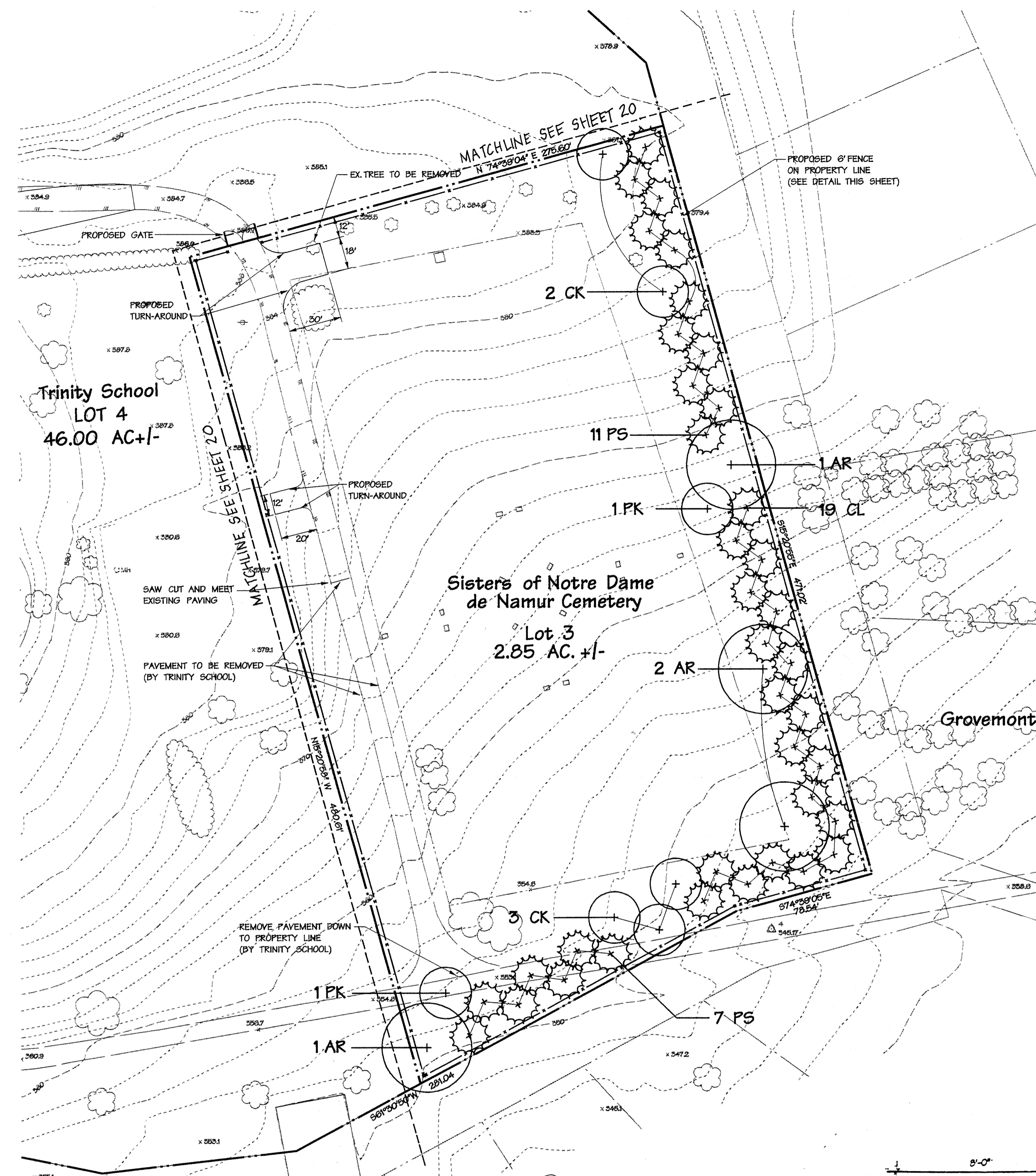
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 4985 Ilchester Road, Ellicott City, MD 21043
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 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

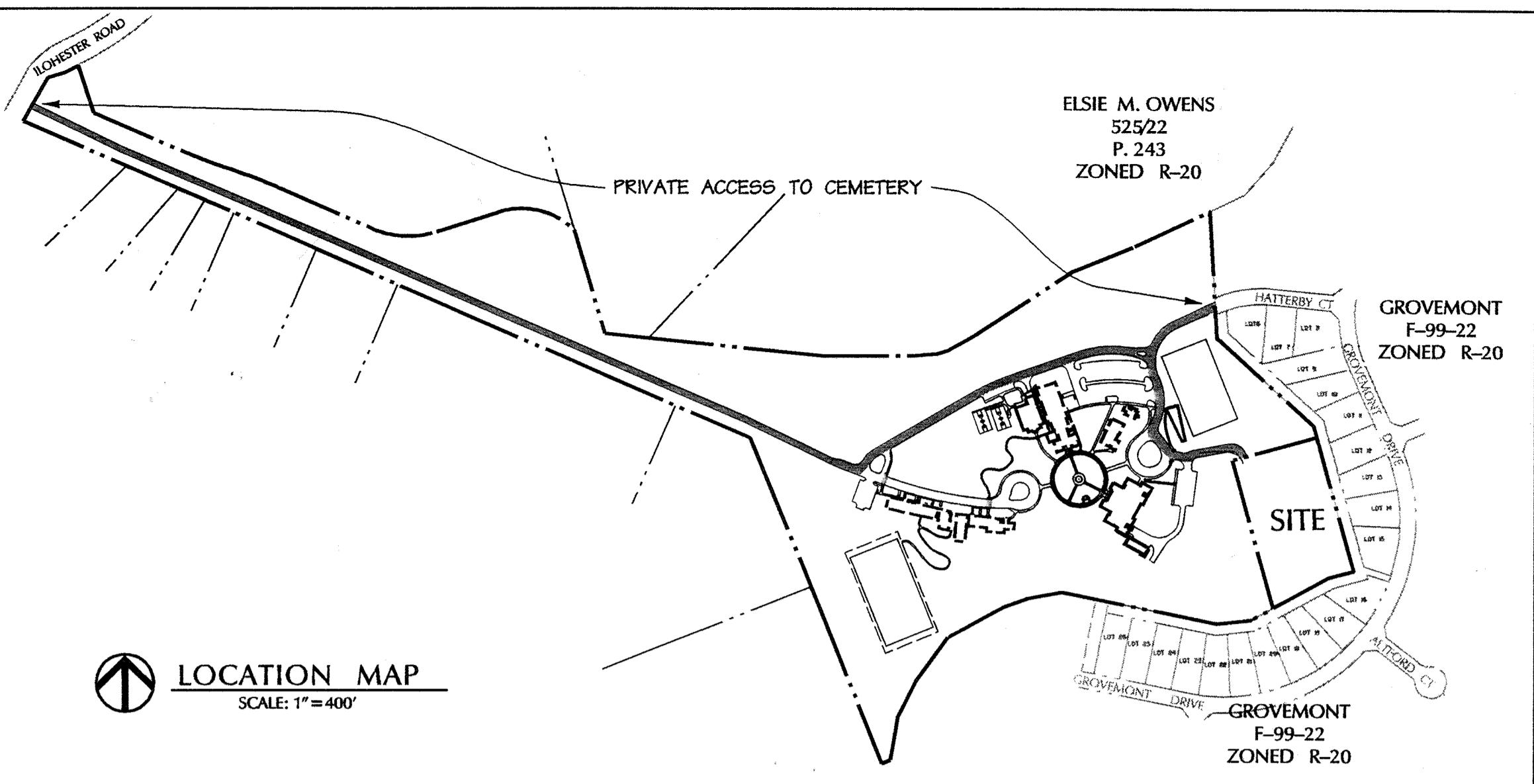
SUBDIVISION NAME	Bluffs Prov. Sns of Notre Dame de Namur Inc. Property	LOT #	4	PAGE #	222
PLAT OR L.I. #	146-48	BLOCK #	16,17,22,23	TAXZONE MAP	R-20
TRACT OR L.I. #		BLK. DISTRICT	1ST	TRACT	
WATER CODE		SEWER CODE			

Prop. Drainage Area Map

Des By: JMH	Scale: 1" = 100'	Proj. No. 8913.03
Drn By: FJZ	Date: 12-06-99	25 OF 28
Chk By:	Approved:	



- NOTES:
1. A blank perpetual access easement to provide access to and from Lot 3 to all adjoining public Rights-of-Way through the use of all internal roads and paths within Lot 4, was recorded in the Land Records of Howard County at L-5355, F.0534.
 2. The cemetery lot shall be a non-buildable lot with a cemetery designation.
 3. The cemetery shall be held by the Baltimore Province of the Sisters of Notre Dame de Namur, Inc., a religious organization, and its successors in interest.
 4. Baltimore Province of the Sisters of Notre Dame de Namur, Inc. and its successors in interest, will maintain the cemetery property.
 5. The cemetery shall be used as a cemetery in perpetuity.
 6. There are no existing, executed covenants relating to the cemetery.
 7. The boundaries of the cemetery have been approved by the Howard County Department of Planning and Zoning.
 8. The Cemetery Accommodation Plan is hereby made a part of and incorporated into SDP-99-155.
 9. A waiver of the Howard County Code §16.1304(a)(1) will be submitted, seeking a waiver of the requirement that public access be provided to the cemetery. **WP-01-70 was approved on 2/13/01.**
 10. There will be two points of access provided to the cemetery drive, both by means of private drive as shown on the location map.

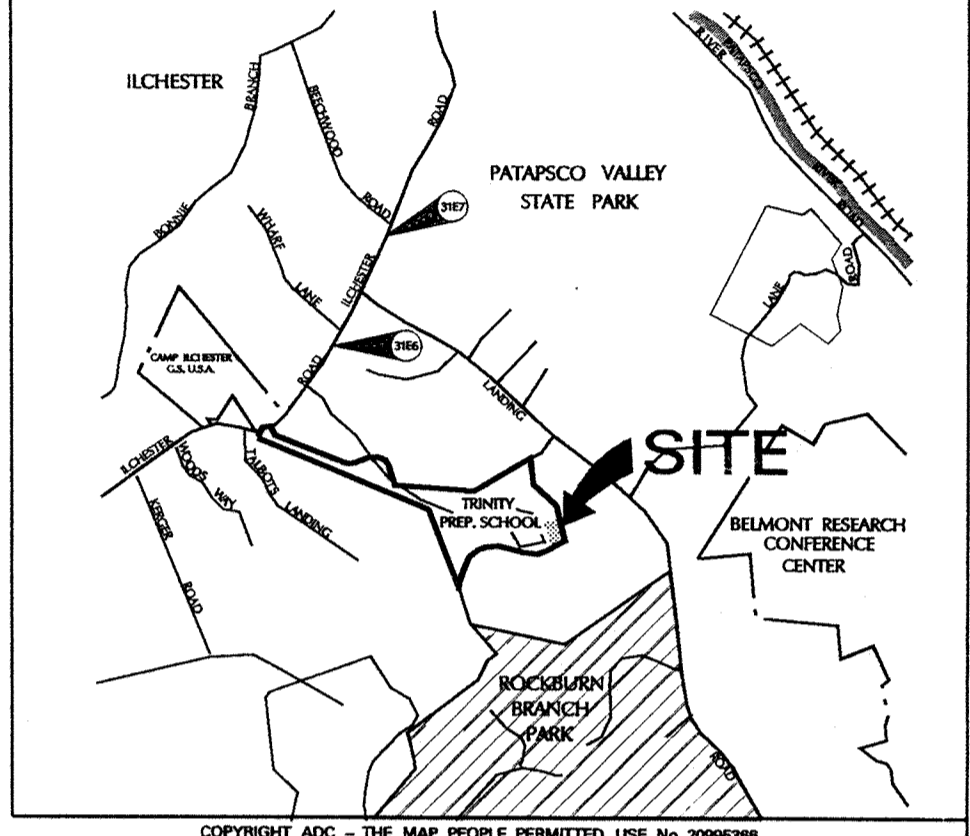


Planting Notes:

1. Plant material substitutions will not be accepted without approval of the landscape architect.
2. Plant material shall be tagged at the source by the landscape architect or pictures provided with scale reference unless this requirement is specifically waived.
3. The landscape contractor shall take all material located on the site for review and/or adjustments by the landscape architect prior to planting.
4. All shrubs and groundcover areas shall be planted in continuous prepared planting beds.
5. All shrub beds shall be mulched with hardwood mulch as detailed and specified except where noted on plans.
6. Maintain positive drainage out of planting beds at a minimum two percent slope.
7. Plant quantities are provided for the convenience of the contractor, if discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan shall take precedence.
8. All areas within contract limits disturbed during or prior to construction not designated to receive plantings and mulch shall be fine graded and seeded in accordance with planting and construction.
9. The contractor shall notify Miss Utility (800-251-7777) a minimum of three working days prior to planting and construction.
10. All plant material shall be nursery grown and shall conform to American Nurserymen Association standards.
11. All planting procedures shall conform to Landscape Contractors Association specification guidelines for Baltimore/Washington metropolitan area (latest edition) and Daft-McCune-Walker, Inc., specifications.

PLANT LIST

QTY	SYM	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
LARGE TREES				
4	AR	Acer rubrum 'October Glory' OCTOBER GLORY RED MAPLE	2 1/2" - 3" CAL. 12' - 14' HT.	B & B FULL HEAD
FLOWERING TREES				
5	CK	Cornus kousa KOUSA DOGWOOD	8' - 10' HT.	B & B
2	PK	Prunus serrulata 'Kwanzan' KWANZAN CHERRY	8' - 10' HT.	B & B
EVERGREEN TREES				
19	CL	Cupressocyparis leylandii LEYLAND CYPRESS	6'-8' HT.	Cont. Only
16	PS	Pinus strobus WHITE PINE	6'-8' HT.	B & B UNSHADED



BENCHMARK

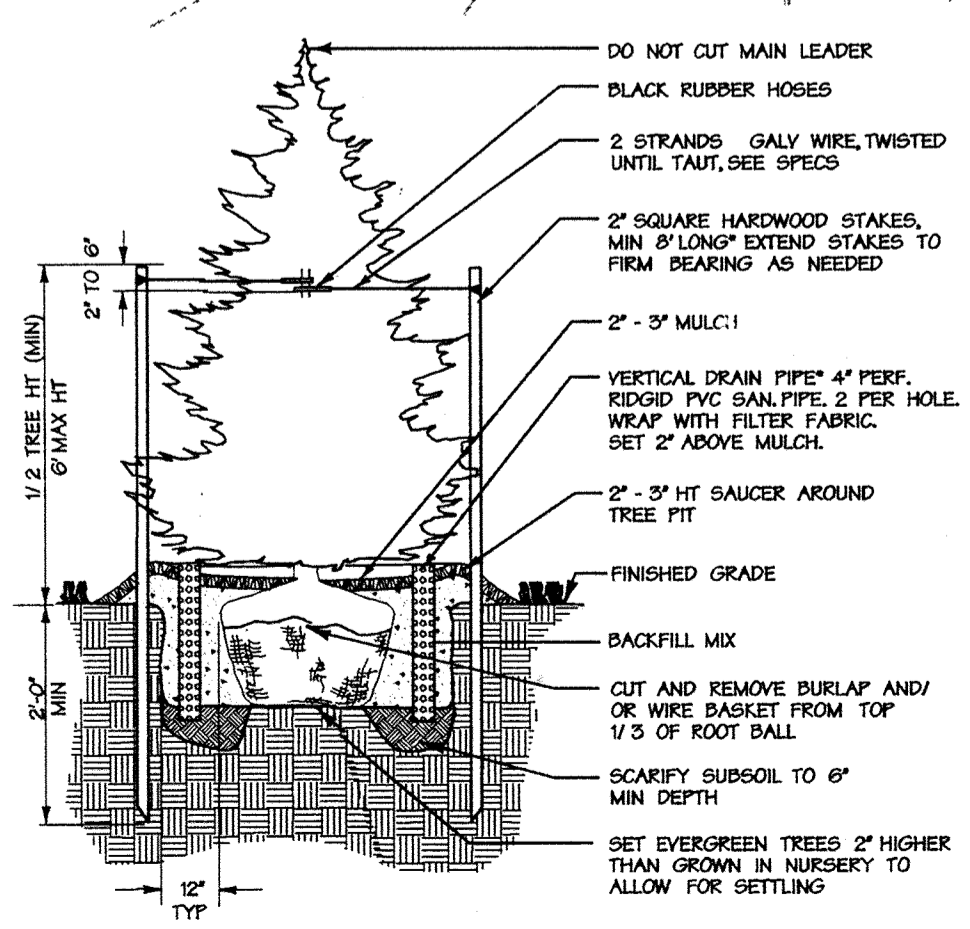
DESCRIPTION

NO. CO. #2168	NAD'83	NO. CO. #2167
3/4" REBAR 0.5' BELOW SURFACE	3/4" REBAR 0.5' BELOW SURFACE	3/4" REBAR 0.5' BELOW SURFACE
9" SOUTHWEST OF ILCHESTER ROAD	9" SOUTHWEST OF ILCHESTER ROAD	9" SOUTHWEST OF ILCHESTER ROAD
PAVING 200' WEST OF WALK LANE	PAVING 200' WEST OF WALK LANE	PAVING 200' WEST OF WALK LANE
N 57°08'27.7" E 157'870.6487'	N 57°23'06.2505" E 577'704.0352'	

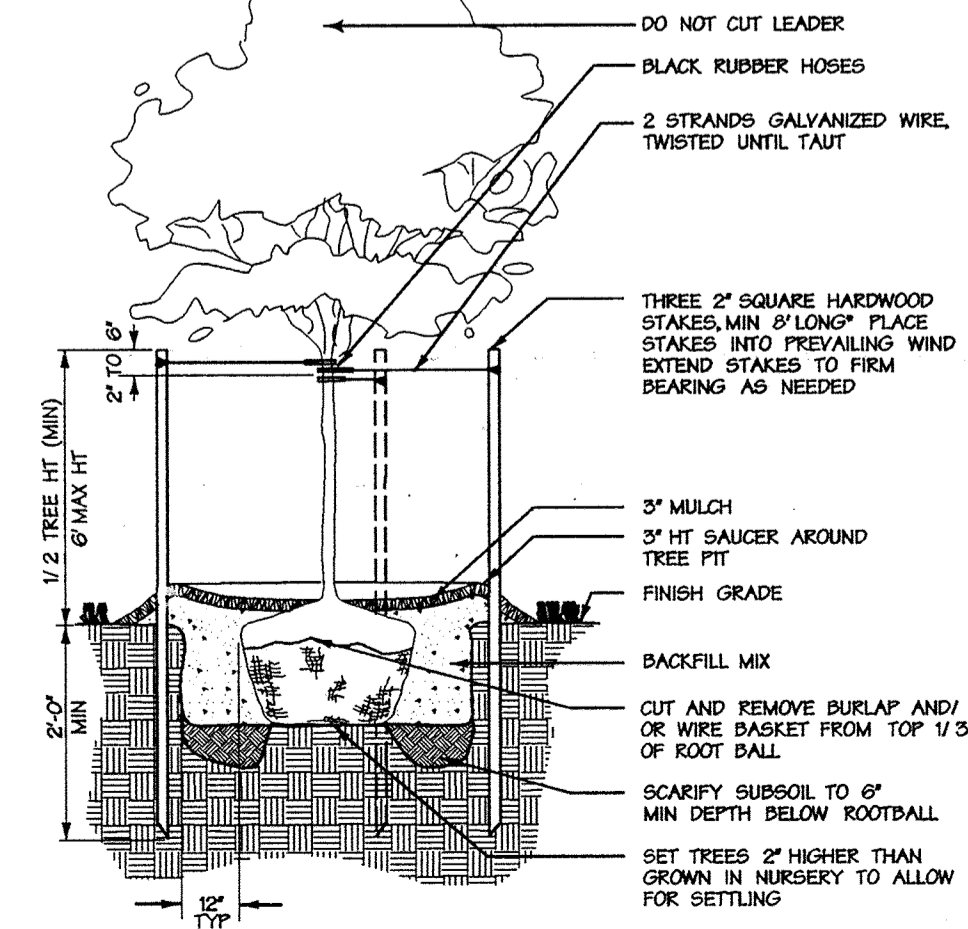
DATA SOURCE:
THE TOPOGRAPHY FOR THE TRINITY SCHOOL SITE WAS COMPILED BY PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHY DATED 1-26-98 BY AIR SURVEY CORP. STERLING, VIRGINIA. THE TOPOGRAPHY AND UTILITIES EAST OF THE SITE AND UTILITIES SOUTH OF THE SITE WERE TAKEN FROM F-99-22 AND PREPARED BY BENCHMARK ENGINEERING. THE BOUNDARY FOR THE TRINITY SCHOOL SITE WAS OBTAINED FROM PLAT F-99-166.

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

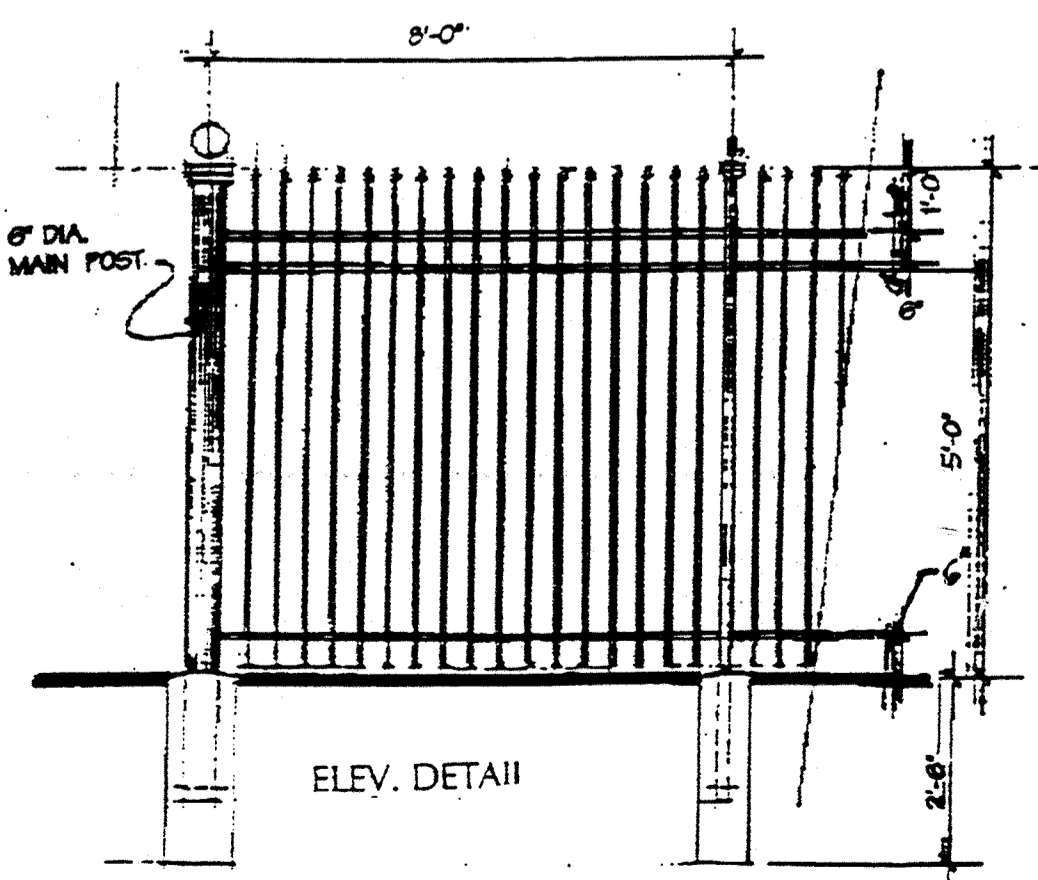
<i>[Signature]</i>	5/3/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>[Signature]</i>	6/5/01
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>[Signature]</i>	6/6/01
DIRECTOR	DATE



EVERGREEN TREE PLANTING
NOT TO SCALE



TREE PLANTING (LESS THAN 3" CALIPER)
NOT TO SCALE



FENCE DETAIL
NOT TO SCALE

5-3-01

LANDSCAPE ARCHITECT 551

Trinity School

OWNER:
Baltimore Province of the Sisters of Notre Dame de Namur, Inc.
Sister Marian Schaechtel, President
1531 Greenspring Avenue, Stevenson, MD 21153

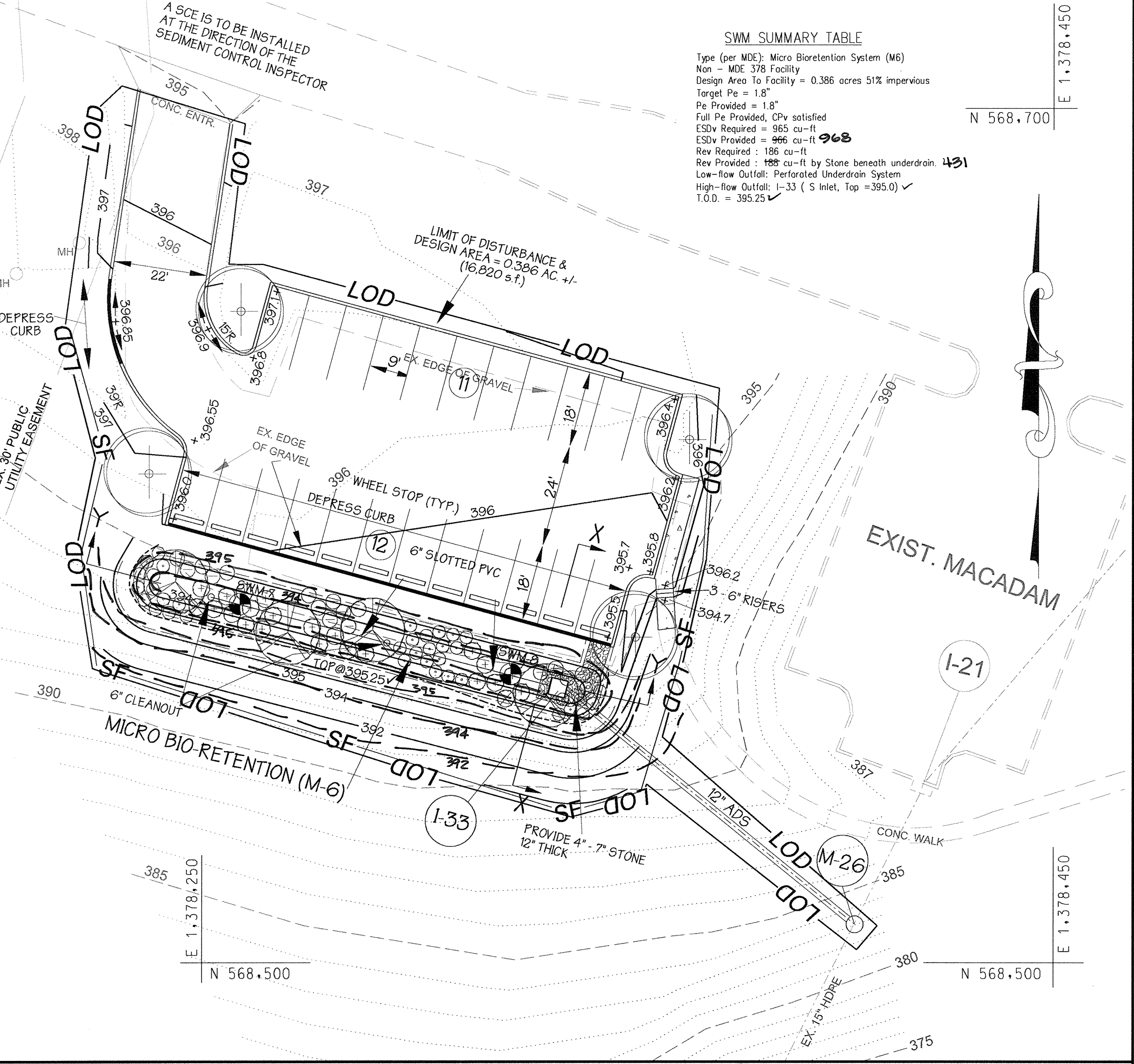
DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors &
Environmental Professionals

SUBDIVISION NAME	LOT	PARCEL #
Balt. Prov. of Notre Dame de Namur Inc. Property	3	222
PLAT OR DEED RECORD # ZONING	TOWNSHIP MAP	ELECT. DISTRICT
14-6-46 16,17,625 R-20	MS1	1-51
WATER CODE	SEWER CODE	CENSUS TRACT

TITLE
CEMETERY ACCOMMODATION PLAN

Des By: FWK	Scale: 1"=40'	Proj. No.: 89113.05
Drn By: FWK	Date: 1/02/01	
Chk By: MM	Approved:	26 of 28



SWM SUMMARY TABLE

Type (per MDE): Micro Bio-retention System (M6)
 Non - MDE 376 Facility
 Design Area to Facility = 0.386 acres 51% impervious
 Target P₂ = 1.2"
 Pe Provided = 1.8"
 Full Pe Provided, CPV satisfied
 ESDV Required = 965 cu-ft
 ESDV Provided = 966 cu-ft **96B**
 Rev Required = 186 cu-ft
 Rev Provided = 188 cu-ft by Stone beneath underdrain
 Low-flow Outlet: Perforated Underdrain System
 High-flow Outlet: 12" (5' inlet, Top = 395.0)
 I.O.D. = 395.25

SPECIALIZED ENGINEERING

BORING NUMBER SWM-7

CLIENT: St. John Properties, Inc. PROJECT NAME: Trinity School Parking Lot SWM Facility
 PROJECT NUMBER: 200912 COMPLETED: 12/20/12 GROUND ELEVATION: 394.5 ft HOLE SIZE: 4 in.
 DRILLING CONTRACTOR: Specialized Engineering GROUND WATER LEVELS:
 DRILLING METHOD: Hand Auger AT TIME OF DRILLING: None
 LOGGED BY: J. Adams CHECKED BY: J. Woodrum AFTER DRILLING: Backfilled upon completion

DEPTH (ft)	DIAMETER (in)	RECOVERY (%)	DESCRIPTION
0.0	4.0	100	TOPSOIL (T)
0.5	4.0	100	FILL: dark brown clayey sand, with gravel, moist, medium dense
1.5	4.0	100	SANDY CLAY: orange brown, trace gravel, moist, stiff (CL)
2.5	4.0	100	SAND: light yellowish brown, fine to coarse grained, trace silt & gravel, moist, medium dense, (SP)
3.5	4.0	100	SAND: orange brown, fine to coarse grained, trace silt & gravel, moist, medium dense, (SP)
4.5	4.0	100	Auger refusal at 7 ft. boring offset and redilled
5.5	4.0	100	Auger refusal at 9.0 feet

SPECIALIZED ENGINEERING

BORING NUMBER SWM-8

CLIENT: St. John Properties, Inc. PROJECT NAME: Trinity School Parking Lot SWM Facility
 PROJECT NUMBER: 200912 COMPLETED: 12/20/12 GROUND ELEVATION: 394.5 ft HOLE SIZE: 4 in.
 DRILLING CONTRACTOR: Specialized Engineering GROUND WATER LEVELS:
 DRILLING METHOD: Hand Auger AT TIME OF DRILLING: None
 LOGGED BY: J. Adams CHECKED BY: J. Woodrum AFTER DRILLING: Backfilled upon completion

DEPTH (ft)	DIAMETER (in)	RECOVERY (%)	DESCRIPTION
0.0	4.0	100	TOPSOIL (T)
0.5	4.0	100	FILL: dark brown clayey sand, with gravel, moist, medium dense
1.5	4.0	100	SANDY CLAY: orange brown, trace gravel, moist, stiff (CL)
2.5	4.0	100	SAND: light yellowish brown, fine to coarse grained, trace silt & gravel, moist, medium dense, (SP)
3.5	4.0	100	SAND: orange brown, fine to coarse grained, trace silt & gravel, moist, medium dense, (SP)
4.5	4.0	100	Auger refusal at 7 ft. boring offset and redilled
5.5	4.0	100	Auger refusal at 9.0 feet

APPENDIX B.1.1 - SUPPLEMENTAL POND SPECIFICATIONS (NON-378)

SUPPLEMENTAL STORMWATER PONDS AND WETLAND SPECIFICATIONS (NON-378)

THESE NOTES AND SPECIFICATIONS ARE IN ADDITION TO THE MD-378 SPECIFICATIONS. IF THERE IS ANY QUESTION AS TO THE APPLICABILITY, THE MD-378 SPECIFICATIONS SUPERCEDE.

- IT IS PREFERRED TO USE THE SAME MATERIAL IN THE EMBANKMENT AS IS BEING INSTALLED FOR THE CORE TRENCH. IF THIS IS NOT POSSIBLE BECAUSE THE APPROPRIATE MATERIAL IS NOT AVAILABLE, A DAM CORE WITH A SHALL MAY BE USED. THE DAM CORE (UP TO 10-YEAR WATER SURFACE ELEVATION) AS WELL AS THE ACCEPTABLE MATERIALS FOR THE SHELL. THE SHAPE OF THE DAM CORE AND THE MATERIAL TO BE USED IN THE SHELL SHOULD BE PROVIDED BY THE GEOTECHNICAL ENGINEER.
- IF THE COMPACTION TESTS FOR THE SITE IMPROVEMENTS IS USING MODIFIED PROCTOR (AASHTO T-99), THEN TO MAINTAIN ON-SITE CONSISTENCY, THE MODIFIED PROCTOR MAY BE USED IN LIEU OF A STANDARD PROCTOR (ASTM D-155). THE MINIMUM DENSITY USING THE MODIFIED PROCTOR TEST METHOD SHALL BE AT LEAST 92% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT OF ±2% OF THE OPTIMUM. THE MINIMUM REQUIRED DENSITY USING THE STANDARD PROCTOR TEST METHOD SHALL BE AT LEAST 95% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT OF ±2% OF THE OPTIMUM.
- FOR ALL STORMWATER MANAGEMENT FACILITIES, A GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE MUST BE PRESENT TO VERIFY COMPACTION IN ACCORDANCE WITH THE SELECTED TEST METHOD. THIS INFORMATION NEEDS TO BE PROVIDED IN A REPORT TO THE DESIGN ENGINEER, SO THAT CERTIFICATION OF THE CONSTRUCTION OF THE FACILITY, IN ACCORDANCE WITH MD-378 SPECIFICATIONS, CAN BE MADE.
- A 4-INCH LAYER OF TOPSOIL SHALL BE PLACED ON ALL DISTURBED AREAS OF THE DAM EMBANKMENT. SEEDING, LIMING, FERTILIZING, MULCHING, ETC. SHALL BE IN ACCORDANCE WITH MARYLAND SOIL CONSERVATION SERVICE MD-342 OR THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, "PERMANENT SEEDING" SECTION IN CHAPTER 20. THE PURPOSE OF THE TOPSOIL IS TO ESTABLISH A GOOD GROWTH OF GRASS, WHICH IS NOT ALWAYS POSSIBLE WITH SOME OF THE MATERIALS THAT MAY BE PLACED FOR THE EMBANKMENT FILL.
- GEOTEXTILE PLACED BENEATH RIP-RAP SHALL BE CLASS "C" GEOTEXTILE OR BETTER (SEE SECTION 2410, MATERIAL SPECIFICATIONS, 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, (MDE, 1994). SOME ACCEPTABLE GEOTEXTILES THAT MEET THE CLASS "C" CRITERIA INCLUDE:
 AMOCO 4552 CARTRIDGE FX-705
 GEOLON N70 MIRAFI 180-N
 WETEC N07

THIS IS ONLY A PARTIAL LISTING OF AVAILABLE GEOTEXTILES BASED ON INFORMATION PROVIDED BY THE MANUFACTURERS OF THE 1997 SPECIFIER'S GUIDE DATED DECEMBER 1996. IT IS THE RESPONSIBILITY OF THE ENGINEER TO VERIFY THE ADEQUACY OF THE MATERIAL, AS THERE ARE CHANGES IN THE MANUFACTURING PROCESS AND THE TYPE OF FABRIC USED, WHICH MAY AFFECT THE CONTINUED ACCEPTANCE.

- A RULE OF THUMB TO DETERMINE WHEN AN EXCAVATED POND MAY NEED TO BE CONSIDERED OF EMBANKMENT IS AS FOLLOWS:
 PROVIDE CALCULATION OF 10H + 20 FEET = L, WHERE H HEIGHT FROM POND BOTTOM TO TOP OF DAM. IF THE PROJECTION OF L DOWNSTREAM IS A HORIZONTAL LINE FROM THE UPSTREAM TOE OF SLOPE TO BELOW EXISTING GROUND, THE POND CAN BE CONSIDERED AN EXCAVATED POND. IN ADDITION, THE EXISTING GROUND SLOPE, DOWNSTREAM OF THE TOE, MUST BE LESS THAN 10%.
- THE DESIGN ENGINEER AND GEOTECHNICAL ENGINEER SHOULD MAKE THE DETERMINATION THAT THE SETTLEMENT OF THE POND WILL NOT CAUSE EXCESSIVE JOINT EXTENSION. FOR FURTHER INFORMATION ON JOINT ANALYSIS, SEE NCEC PUBLICATION 18-18.
- FILL PLACEMENT SHALL NOT EXCEED A MAXIMUM 8-INCH. EACH LIFT SHALL BE CONTINUOUS FOR THE ENTIRE LENGTH OF THE EMBANKMENT.
- THE EMBANKMENT FILL SHALL NOT BE PLACED HIGHER THAN THE CENTERLINE OF THE PRINCIPAL SPILLWAY UNTIL AFTER THE PRINCIPAL SPILLWAY HAS BEEN INSTALLED. IF THE EMBANKMENT NEEDS TO BE EXCAVATED TO INSTALL THE PRINCIPAL SPILLWAY, THE SIDE SLOPE SHALL BE NO LESS THAN 2:1.
- THE SLOPES OF A CUT TO REPAIR A DAM, INSTALL A PRINCIPAL SPILLWAY FOR AN EXCAVATED POND, OR OTHER REPAIR WORK, SHALL BE NO LESS THAN 2:1.

APPENDIX B.3

B.3.B. - SPECIFICATIONS FOR BIO-RETENTION FACILITIES

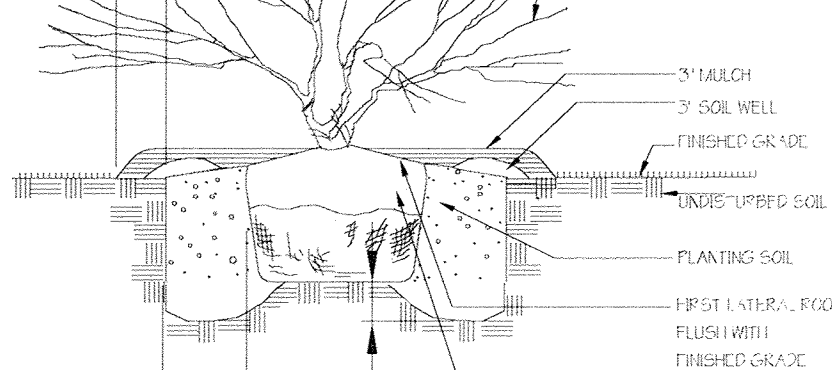
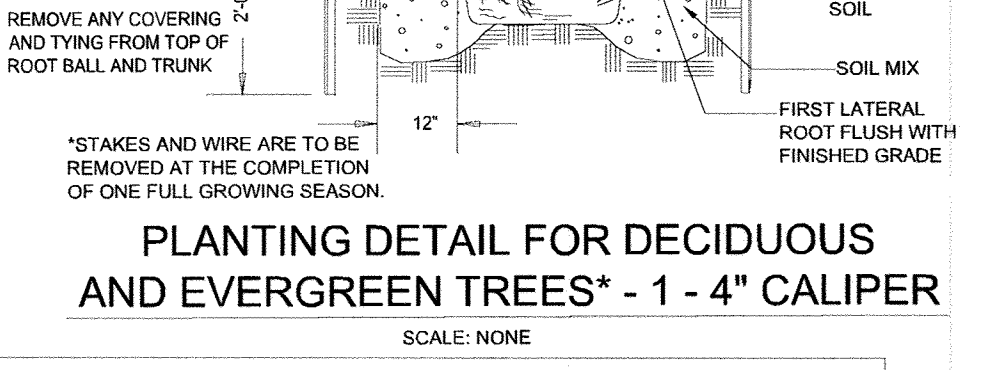
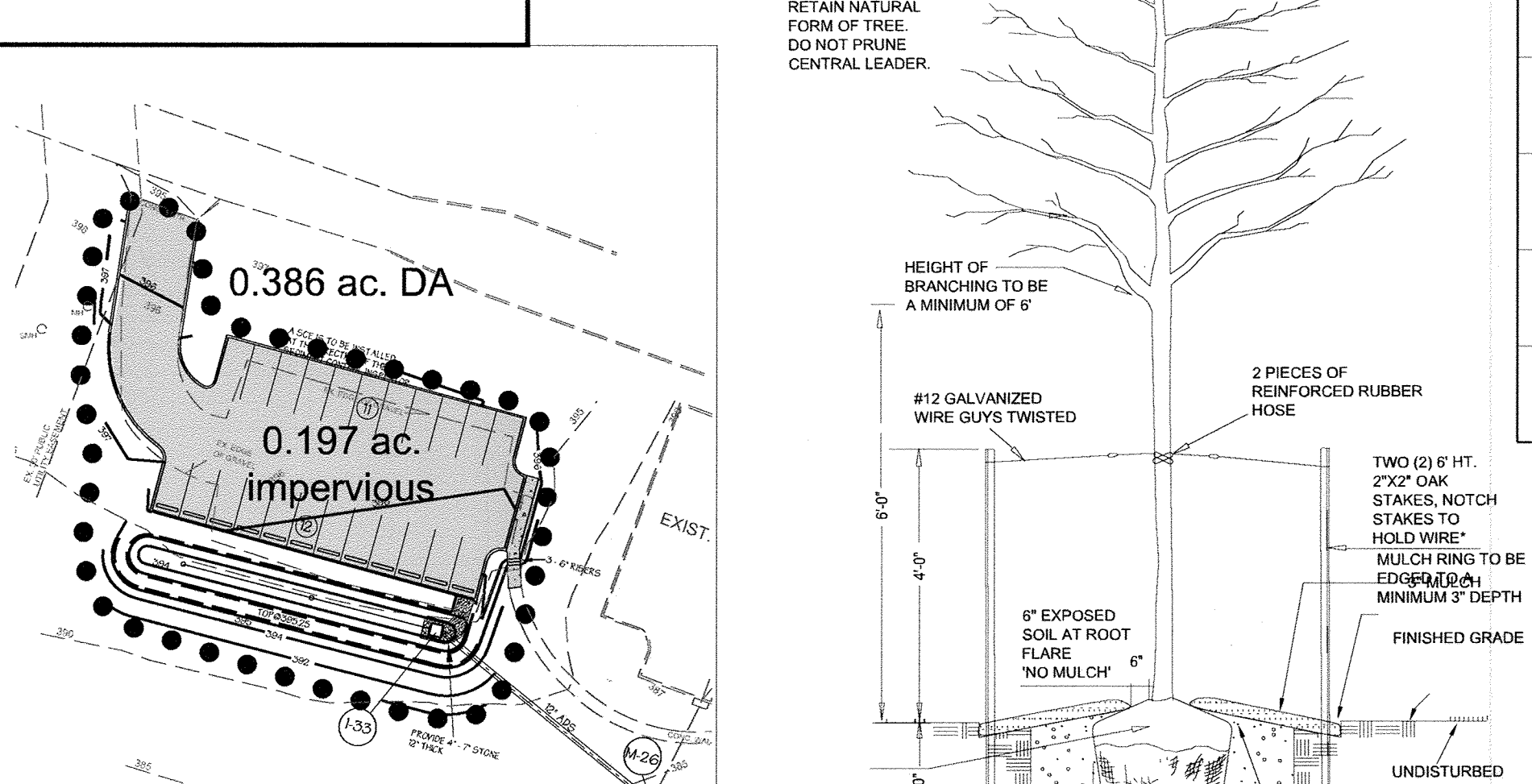
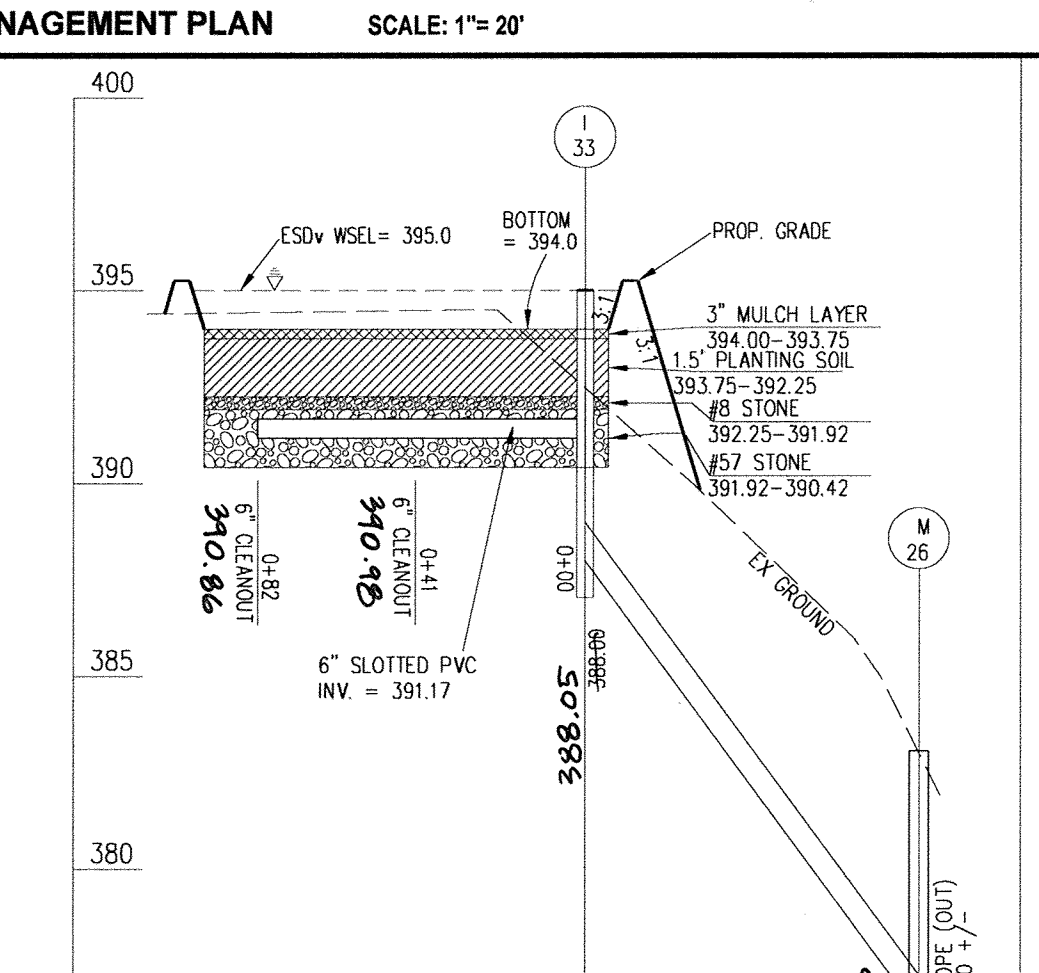
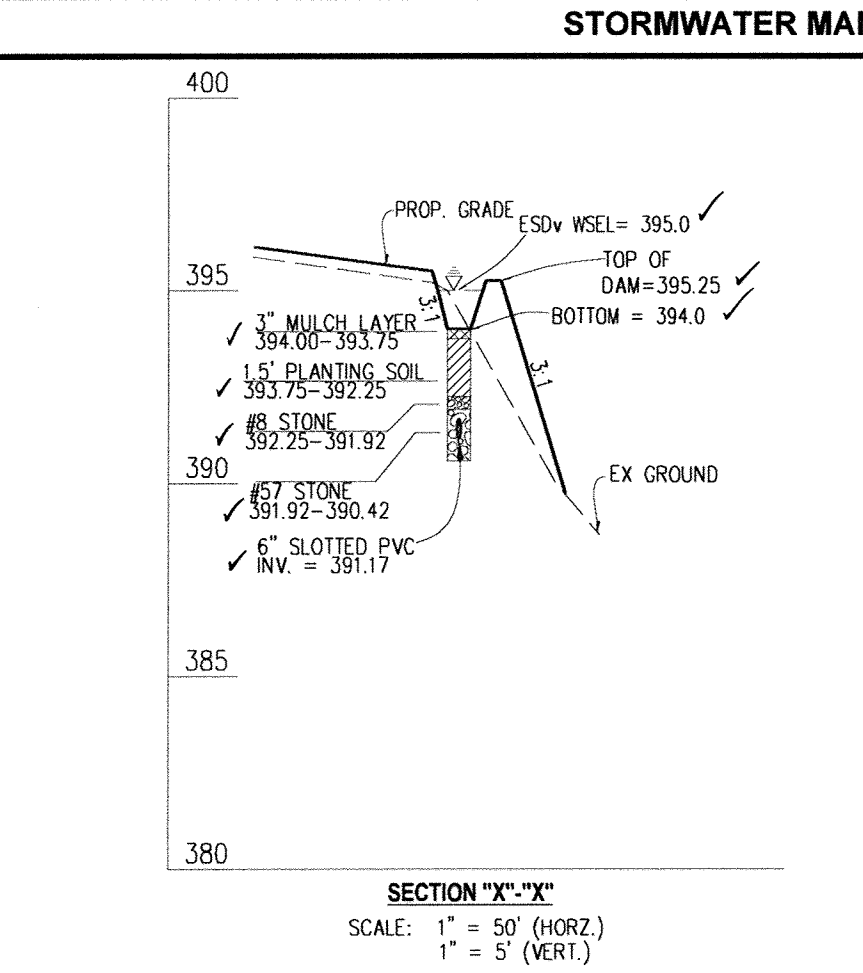
- MATERIAL SPECIFICATIONS
 THE ALLOWABLE MATERIALS TO BE USED IN BIORETENTION AREA ARE DETAILED IN TABLE B.3.2.
- PLANTING SOIL
 THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE BIORETENTION AREA THAT MAY BE HARMFUL TO PLANT GROWTH OR PROVIDE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOxious WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.
 THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:
 PH RANGE: 5.2 - 7.0
 ORGANIC MATTER: 1.5 - 4% (BY WEIGHT)
 MAGNESIUM: 35 LB./AC
 PHOSPHORUS (PHOSPHATE - P2O5): 75 LB./AC
 POTASSIUM (POTASH - K2O): 85 LB./AC
 SOLUBLE SALTS: NOT TO EXCEED 500 PPM
- COMPACTION
 ALL BIORETENTION AREAS SHALL HAVE A MINIMUM OF ONE TEST. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, PHOSPHORUS, AND POTASSIUM AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOP SOIL WAS EXCAVATED.
 SINCE DIFFERENT LABS CALIBRATE THEIR TESTING EQUIPMENT DIFFERENTLY, ALL TESTING RESULTS SHALL COME FROM THE SAME TESTING FACILITY. SHOULD THE PH FALL OUT OF THE ACCEPTABLE RANGE, IT MAY BE MODIFIED (HIGHER) WITH LIME OR (LOWER) WITH IRON SULFATE PLUS SULFUR.
- COMPACTION
 IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF THE BIORETENTION AREA AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF BIORETENTION APPENDIX B.3 CONSTRUCTION SPECIFICATIONS FOR SAND FILTERS, BIORETENTION AND OPEN CHANNELS & B.5 AREAS ARE EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF-TYPE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.
 COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL FLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.
 ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDING WATER BEFORE PREPARING (ROTOTILLING) BASE.
 WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.
 WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 18" DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.
- PLANT MATERIAL
 SEE PLANTINGS THIS SHEET
- PLANT INSTALLATION
 MULCH SHOULD BE PLACED TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.
 ROOT STOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION.
 TREES SHALL BE BRANDED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL.
 GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.
 THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS, DEFEATS, OR AT A MINIMUM, IMPEDS THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.
- UNDERDRAINS
 UNDERDRAINS ARE TO BE PLACED ON A 3'-0" WIDE SECTION OF FILTER CLOTH. PIPE IS PLACED NEXT, FOLLOWED BY THE GRAVEL BEDDING. THE ENDS OF UNDERDRAIN PIPES NOT TERMINATING IN AN OBSERVATION WELL SHALL BE CAPPED.
 THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5% OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).
- MISCELLANEOUS
 THE BIORETENTION FACILITY MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

Design Narrative:

- The project of paving an existing gravel parking lot does not affect any protected natural resource areas and minimizes disturbance.
- The overflow from the facility is conveyed downstream via a storm drain in the same direction in which runoff now flows.
- The proposed paved parking lot is proposed where a gravel lot currently exists; thus avoiding impacting any other open space.
- The area is small enough where only silt fence is needed.
- The proposed bio-retention facility is designed for the full ESD volume.
- No waivers are proposed.
- Sediment Control will be per the Howard Soil Conservation District Standard Erosion and sediment Control Plan for Minor Earth Disturbances between 5,000 and 30,000 sq. ft. Reference Requirement C for sequence of work.
- FOREST CONSERVATION NOTE - SDP-99-155 REV. 5 - 1/23/13 - ADDITIONAL PARKING LOT Construction of the parking lot will result in a Limit of Disturbance of 0.4 acres (16,820 sq. ft. +/-). No forest will be disturbed by this activity and site disturbance is less than 40,000 sq. ft. In accordance with Howard County policy the forest conservation obligation for the project can be based on the limit of disturbance without the need for a forest conservation waiver. Afforestation of 15 percent of the net tract area (0.4 acres), or 0.06 acres, must be provided to meet the forest conservation obligation for this project. The project developer proposes to meet this obligation through payment of the fee-in-lieu. The fee-in-lieu amount for this project is \$1,960.00 (0.4 ac x 43,560 sq. ft. x \$0.75/sq. ft.).

PLANT LIST

KEY	QTY.	BOTANICAL NAME COMMON NAME	SIZE	COND.	REMARKS
⊕	4	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY MAPLE	2 1/2' 3" CAL.	B&B	
⊕	4	BETULA NIGRA 'HERITAGE' HERITAGE RIVER BIRCH	6'-8' HT.	B&B	CLUMP FORM 3-4 STEM
⊕	21	ILEX VERTICILLATA 'RED SPRITE' RED SPRITE WINTERBERRY HOLLY	24 - 30" HT.	CONT.	SPACE 4' O.C. STAGGER
⊕	2	ILEX VERTICILLATA 'JIM DANDY' JIM DANDY WINTERBERRY HOLLY (MALE)	24 - 30" HT.	CONT.	SPACE 4' O.C. STAGGER
⊕	18	ITEA VIRGINICA 'LITTLE HENRY' 'LITTLE HENRY' SWEETSPIRE	18" 24" HT.	CONT.	SPACE 3 1/2' O.C.
⊕	39	PANICUM VIRGATUM 'SHENANDOAH' SHENANDOAH SWITCH GRASS	#1	CONT.	SPACE 3' O.C.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

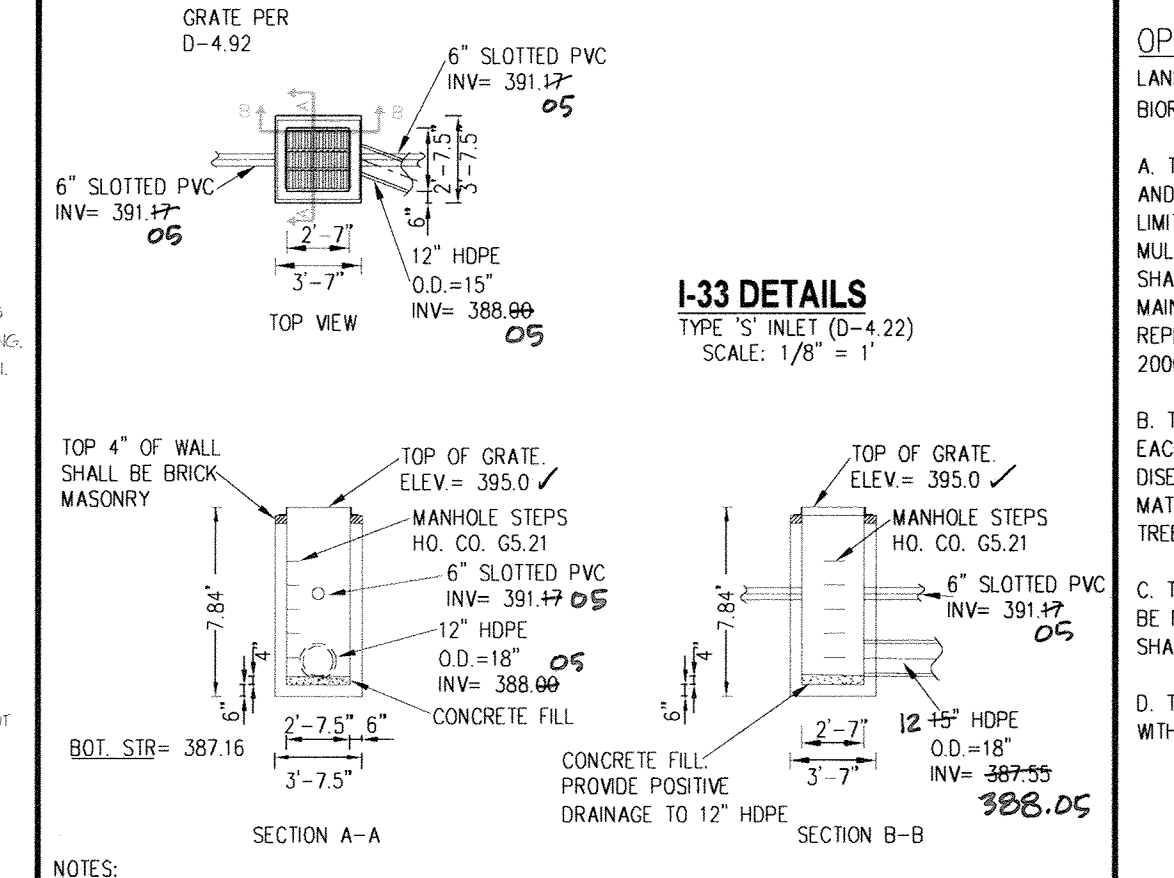
Director: *Kate Salvo* 8/6/13
 Chief, Division of Land Development: *John Salvo* 8/6/13
 Chief, Development Engineering Division: *John Salvo* 8/7/13

S.D. STRUCTURE SCHEDULE

NO.	TYPE	WIDTH (INSIDE)	TOP ELEVATION		INVERT ELEVATION		STANDARD DETAIL	LOCATION	OWNERSHIP & MAINTENANCE
			UPPER	LOWER	UPPER	LOWER			
I-33	S' INLET	2'-7.5"	395.00	---	---	388.05	HO. CO. D. 4.22	N: 5685.90.3 E: 1.378.508.1	PRIVATE
M-26	STD MANHOLE	4'	383.0 +/-	---	376.90	375.0	HO. CO. G. 5.12	N: 5685.509.0 E: 1.378.403.3	PRIVATE

S.D. Pipe Summary Table
PRIVATELY OWNED AND MAINTAINED

Size (in.)	Type	Quantity (L.F.)	Remarks
6	SLOTTED PVC	82	SCHEDULE 40
12	HOPE	87	ADS N12 or equiv.



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

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING:
 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
- THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRE.
- THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM ONCE PER MONTH AND AFTER EACH HEAVY STORM.

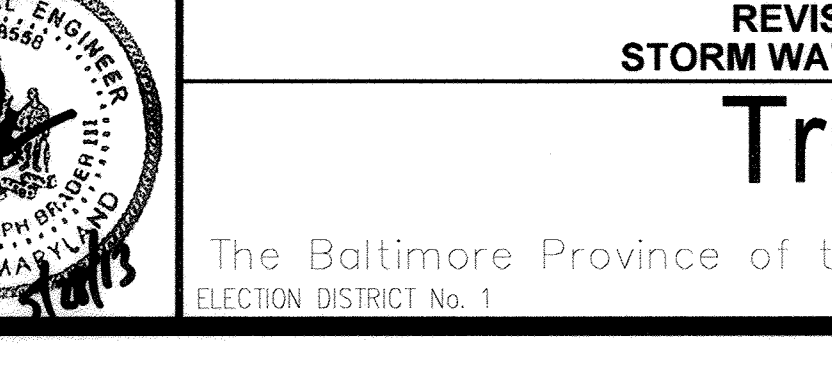
PURPOSE OF REVISED SITE DEVELOPMENT PLAN:
 THIS NEW SHEET HAS BEEN ADDED TO SDP 99-155
 PROVIDE DETAIL TO PAVE AN EXISTING GRAVEL
 PARKING LOT AND TO PROVIDE THE REQUIRED
 STORM WATER MANAGEMENT & LANDSCAPING.

DES. N.B.	DRN. N.B.	CHK. N.B.	DATE	REVISION	BY	APPR.

Engineer:
 St. John Properties, Inc.
 2560 Lord Baltimore Drive
 Baltimore, MD 21244

PREPARED FOR:
 Trinity School, Inc.
 4985 Ilchester Road
 Ellicott City, MD 21043

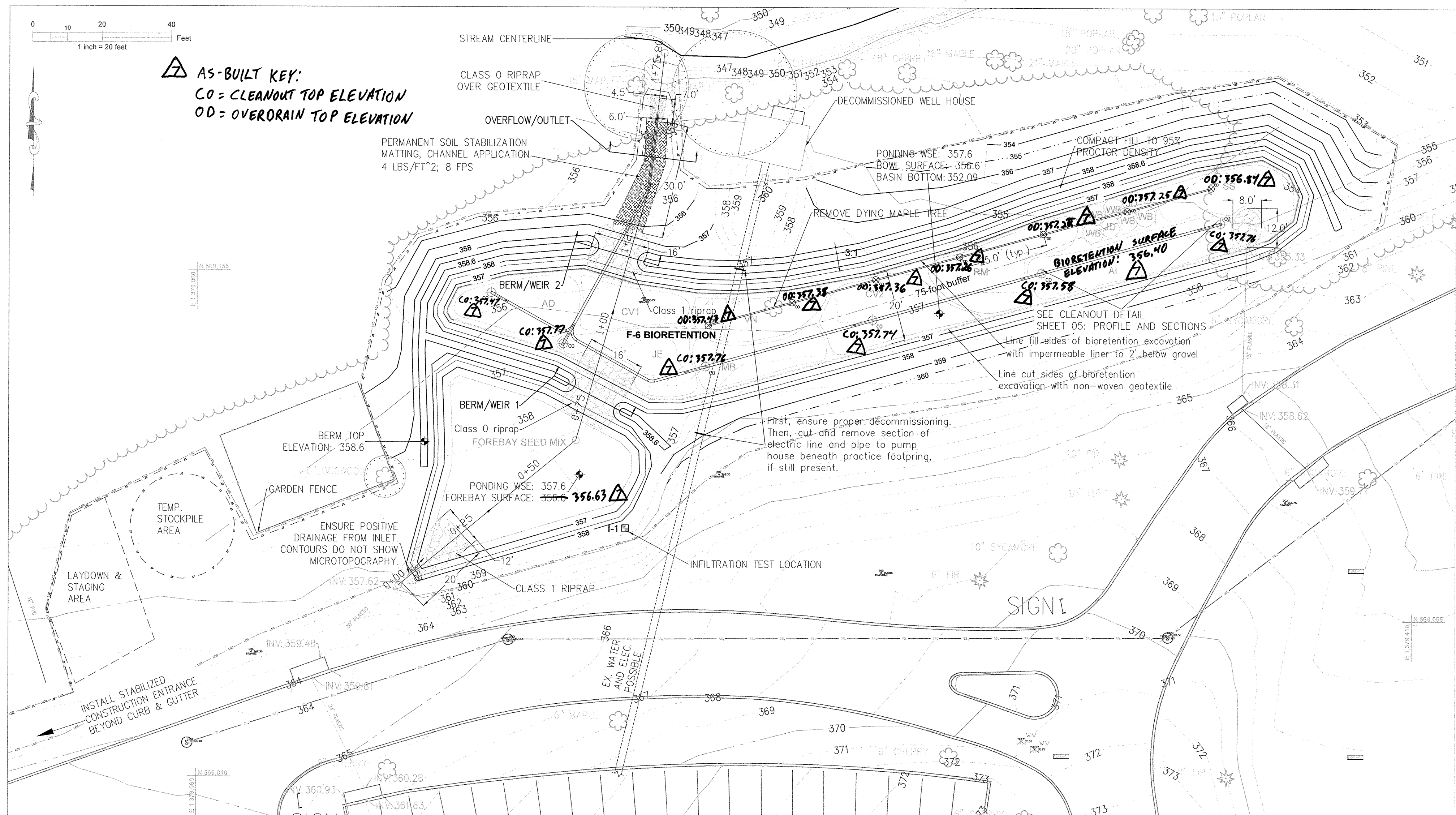
PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
 LICENSE NO. 18558
 EXPIRATION DATE: JANUARY 12, 2014



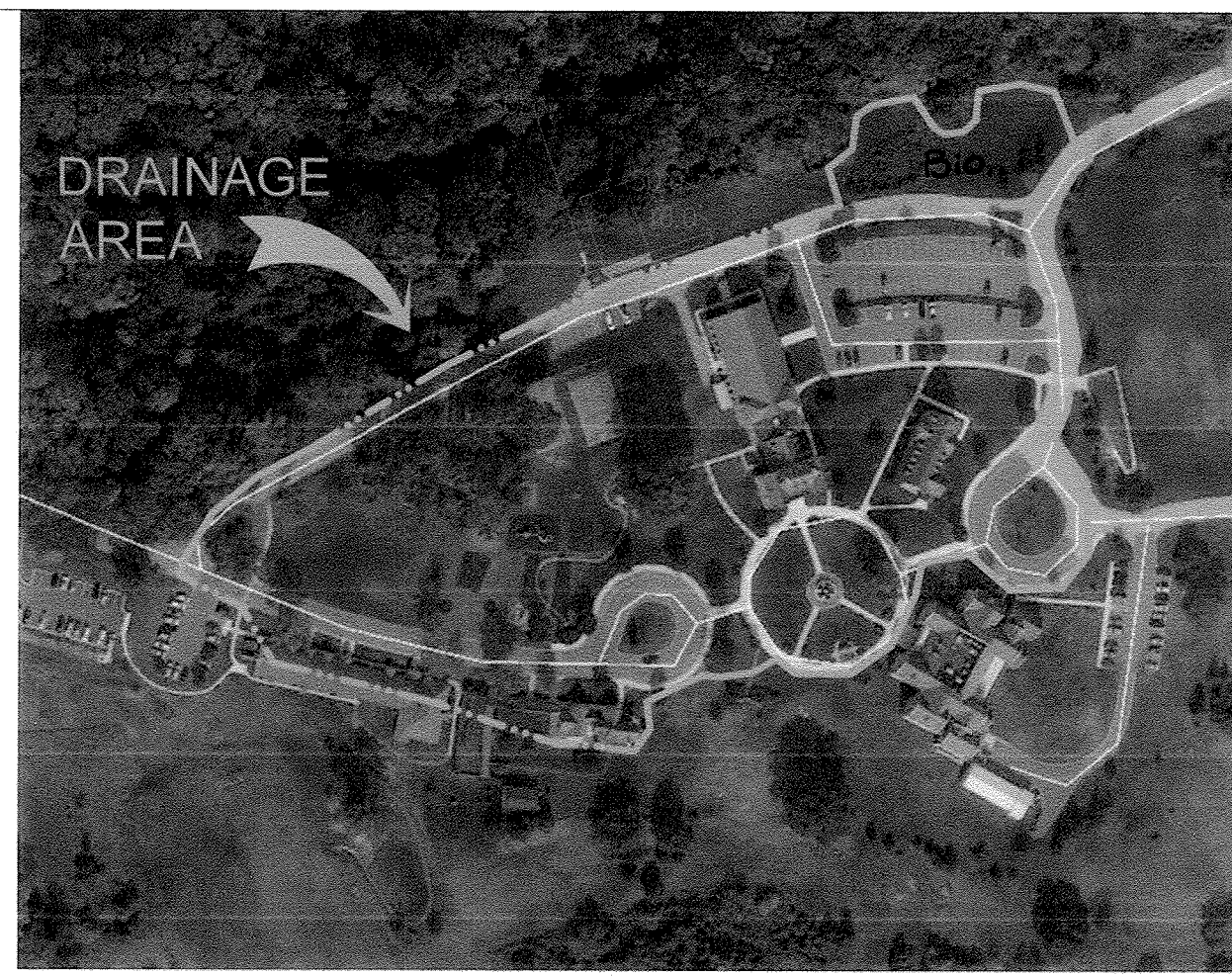
REVISED SITE DEVELOPMENT PLAN
 STORM WATER MANAGEMENT PLAN & DETAILS
Trinity School
 Lot 4
 The Baltimore Province of the Sisters of Notre Dame de Namur Inc. Property
 ELECTION DISTRICT No. 1

SCALE	ZONING	Plot
As Shown	R-20	14760
DATE	TAX MAP - PARCEL	SHEET
MAR., 2013	31 - 839	27

SDP-99-155



AS-BUILT KEY:
 CO = CLEANOUT TOP ELEVATION
 OD = OVERRAIN TOP ELEVATION



DRAINAGE AREA MAP
 SCALE 1"=200'

Impervious surface: 2.8 acres
 Pervious surface: 5.7 acres
 Total area: 8.5 acres

SSURGO underlying soil type:
 RsC: 12.3%
 SIB: 40.1%
 SrC: 46.3%
 SrD: 1.2%
 Hydrologic Soil Group (HSG): B

Infiltration test at 6.0-foot depth in proposed practice location yielded 0.06 in/hr rate.
 Location symbol: [Symbol]

PROJECT SCOPE
 APPROXIMATELY 8.5 ACRES, 33% OF WHICH IS IMPERVIOUS AREA, DRAINS TO AN EXISTING PLANTED DEPRESSION WHICH CURRENTLY MOST CLOSELY RESEMBLES "CONSERVATION LANDSCAPE." A BIORETENTION RETROFIT IS PROPOSED.

NO NEW IMPERVIOUS SURFACES WILL BE CREATED, AND NO NEW DEVELOPMENT WILL OCCUR.

PROJECT INFORMATION
 THE PROJECT IS IN THE PATAPSCO RIVER LOWER NORTH BRANCH WATERSHED (MDE 8-DIGIT: 02130906 | HUC: 02060003). THE PROJECT LIMIT OF DISTURBANCE WILL CROSS WITHIN THE 50- AND 75-FOOT STREAM BUFFERS. THE PROPERTY IS ZONED R-20.

THE STREAM IS DESIGNATED "USE 1". THE DISTURBANCE IS CONSIDERED "NECESSARY DISTURBANCE" DUE TO THE CURRENT LACK OF WATER QUALITY TREATMENT OF RUNOFF ON SITE. THE DRAINAGE AREA FOR THIS PROPOSED WATER QUALITY TREATMENT PRACTICE CURRENTLY FLOWS TO AN OPEN AREA WITH WILD GRASSES, BUT NO STORMWATER RETENTION OR DETENTION, AKIN TO CONSERVATION LANDSCAPING. THE PROPOSED BEST MANAGEMENT PRACTICE WILL PROVIDE RETENTION AND RUNOFF REDUCTION, WITH ASSOCIATED QUANTIFIABLE WATER QUALITY BENEFITS UNDER THE CHESAPEAKE BAY PROGRAM PROTOCOLS.

THE PROJECT IS NEAR OR IN THE FOLLOWING AREAS OR REGISTRIES:

- MD AMPHIBIAN AND REPTILES ATLAS GRID MARA BLOCK ID: 1092 -- 110 FEET NE FROM PROJECT
- STREAM BUFFER 75-FOOT
- FOREST CONSERVATION ACT EASEMENT OWENS PROPERTY, AKA CIDER MILL FARM -- 170 FEET NNW FROM PROJECT
- GREEN INFRASTRUCTURE HUB AND GAP AREA WITHIN BORDERS
- DNR TARGETED ECOLOGICAL AREA IMMEDIATELY ADJACENT TO PROJECT AREA
- MD INVENTORY OF HISTORIC PLACES TRINITY SCHOOL (DONALDSON SCHOOL) -- CLASS-SITE #/MHPSORT: HO-453

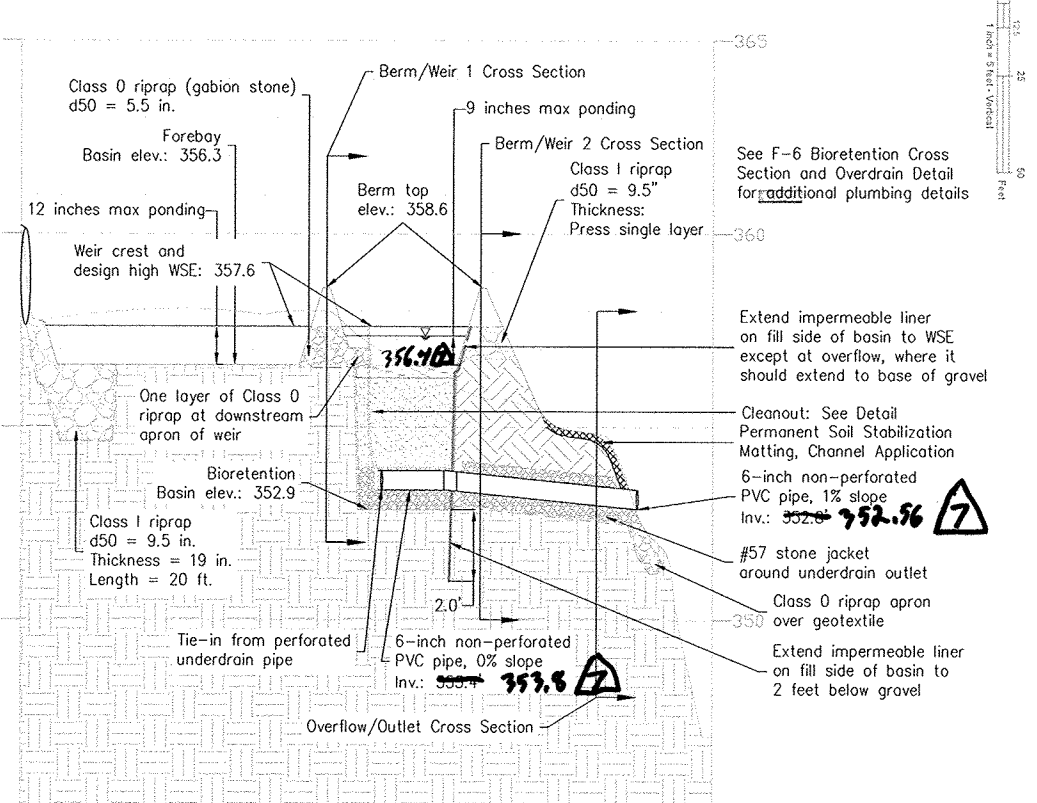
NO IMPACTS TO ANY OF THE FOLLOWING: FLOODPLAIN, WETLANDS, CRITICAL AREAS, MD AMPHIBIAN AND REPTILE HABITAT, FOREST CONSERVATION ACT EASEMENTS

NONE OF THE FOLLOWING WILL BE CHANGED: EXISTING SITE AREA, EXISTING BUILDING AREA, EXISTING PARKING

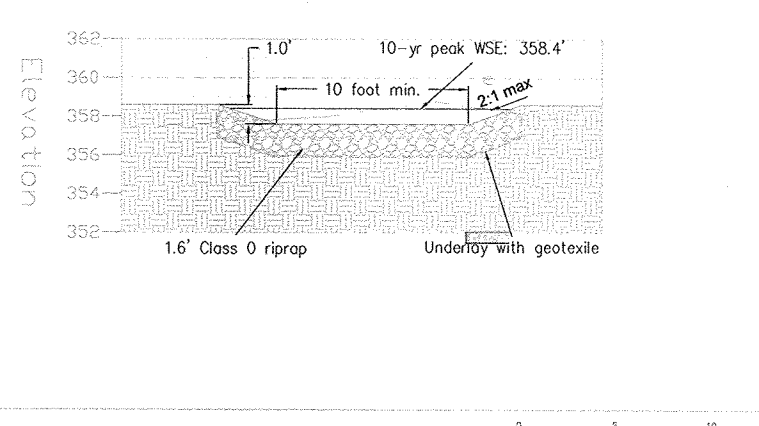
Hydrology Calculations

Parameter	Value	Units	Source/Notes
Impervious Drainage Area	2.8	acres	Aerial imagery and topo
Pervious Drainage Area	5.7	acres	Aerial imagery and topo
Total Drainage Area	8.5	acres	
Impervious Proportion (Imp)	33%	percent	
Runoff Coefficient (Rc)	0.35		0.009*Imp+0.05
Outlet S-1, 10-year peak flow	24.78	cfs	SDP-99-155
Outlet S-30, 10-year peak flow	1.93	cfs	SDP-99-155
Combined peak 10-year flow (Q)	26.71	cfs	SDP-99-155 combined S-1 and S-30
Combined peak 10-year flow (Q) (alt)	27.6	cfs	TR-55, Class C soils, Tc=0.2, RCN=82, Howard County
Water Quality Volume (WQv)	10,707	cubic feet	Impervious area [d] * (1/12)
Treatment volume provided (V)	11,611	cubic feet	Surface storage volume / 0.75 [MDE Tech Memo #3]
Achieved P _i	1.02	inches	#HF(WQv<V)/WQv+1/(WQv-1)/4
Achieved treatment	2.86	acres	Impervious acreage * (P _i)
Total disturbed area	29,845	square feet	
Cut	871	cubic yards	Plans
Fill	597	cubic yards	Plans
Haul	274	cubic yards	Plans

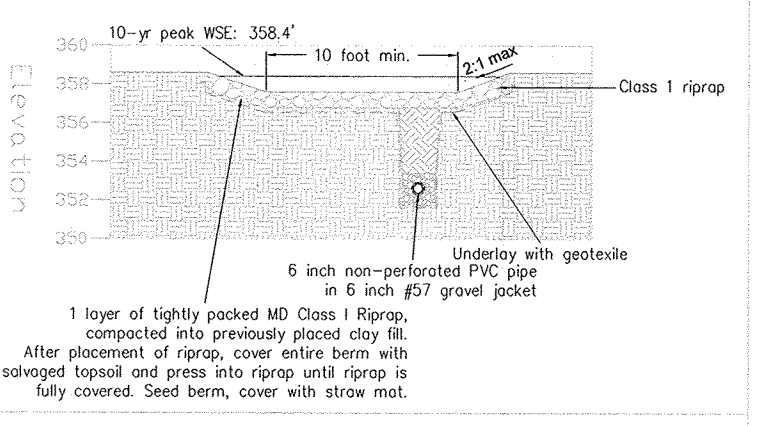
F-6 Bioretention Profile



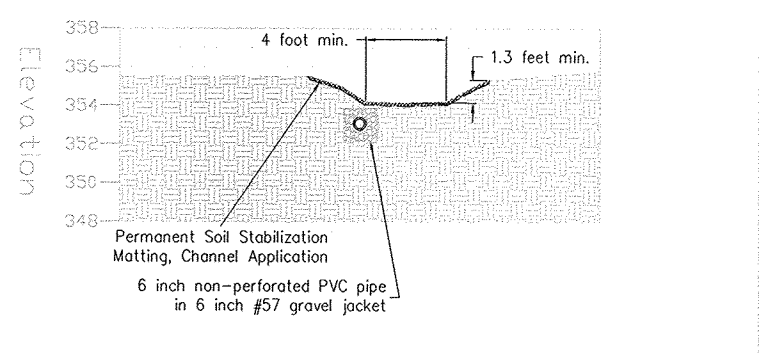
Berm/Weir 1



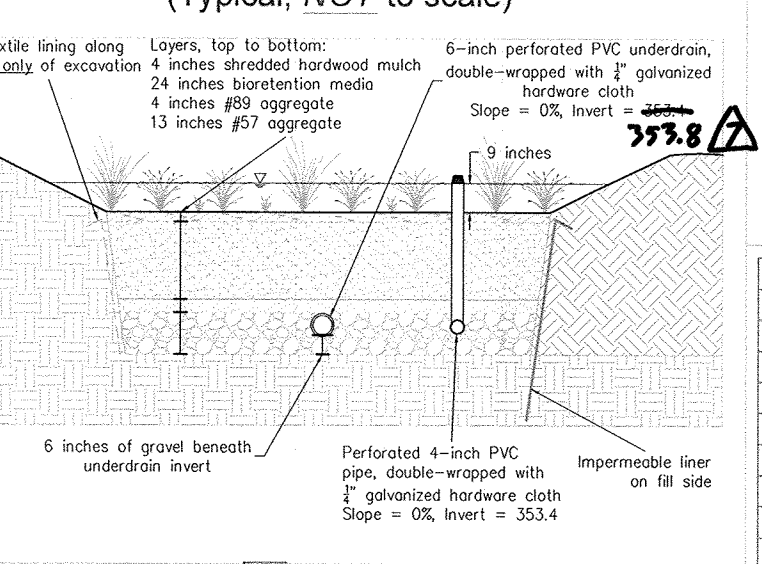
Berm/Weir 2



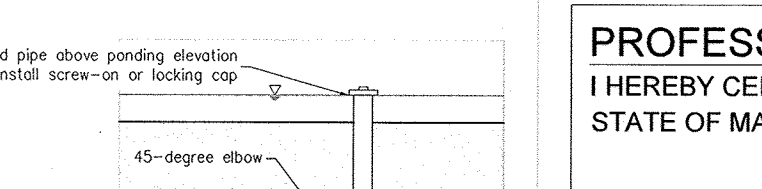
Overflow/Outlet



F-6 Bioretention Cross Section and Overdrain Detail
 (Typical, NOT to scale)



Cleanout Detail
 (NOT to scale)



TRINITY SCHOOL BIORETENTION PLANT SCHEDULE

Key Botanical Name	Common Name	W/S	Size	Spacing	Qty
Shrubs					
YB	Yucca verticillata	Wentleyberry (male)	FACW	1-2 ft	As Shown
JD	Juncus effusus	Common rush	FACW	1-2 ft	As Shown
Grasses					
CV	Carex pensylvanica	Pennsylvania sedge	FAC	12" o.c.	415
Perennials					
VA	Veronica novboracensis	New York ironweed	FACW	12" o.c.	490
SB	Solidago sempervirens	Seaside goldenrod	FACW	12" o.c.	565
AD	Aster novae-angliae	New England aster	FACW	12" o.c.	590
RM	Rudbeckia maxima	great coneflower	FACW	12" o.c.	725
MB	Monarda bradburiana	eastern beebalm	FAC	12" o.c.	485
AT	Asclepias tuberosa	butterfly milkweed	FAC	12" o.c.	810
Total shrubs					2
Total perennials					5450

Forebay Seed Mix shall conform to Ernst Seed Mix ERNMX - 854. VA Northern Piedmont Detention Basin Mix.
<http://www.ernstseed.com/seed-mix/?category-id=194>

Seeding rate: 1/4 lb per 1,000 square feet (1/4 lb total, broadcast evenly)

For permanent seeding and vegetation establishment for disturbed areas and steep slopes immediately surrounding bioretention basin, and between bioretention and stream, use Ernst Seed Mix ERNMX - 114. 5311 Conservation Mix.
<http://www.ernstseed.com/seed-mix/?category-id=14>

Seeding rate: 100-200 lb/acre, or 3-5 lb per 1,000 square feet

Weir Flow Calculations

Parameter	Value	Units
Q	26.71	cfs
Cd	0.6	
H	32.2	ft
H	0.83	ft

Lot/Parcel Number	Facility Name & Number	Practice Type (Quantity)	Public	Private	HOA Maintains	Misc.
4/839	Bioretention	F-6 bioretention (1)		X		

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: Trinity School Boring No. T-1
 Location: Ellicott City, Maryland Job # S16156

Date: Google Earth Hammer Wt. n/a Box Hole Diameter 6 Foreman N. Fulford
 Surf. Elev. 359 Ft. Hammer Drop n/a in. Rock Core Diameter n/a Inspector N. Fulford
 Date Started 8/16/2016 Pipe Size 2.75 in. Boring Method Hand Auger Date Completed 8/16/2016

ELEVATION / DEPTH	SOIL SAMPLES / SAMPLE CORRELATIONS	Description	Boring and Sampling Notes	Rec.	DD	MD	DI	SI	SO	SP
359.5		Dark brown, moist to wet, SILT, some organics, trace clay, trace fine sand. (OL, TOPSOIL) (SILT)								
357.5		Light orange to gray, moist to wet, silty CLAY, trace fine to medium sand, trace fine to medium gravel. (CL-ML) (SILTY CLAY)								
355.5		Light orange to gray, moist to wet, silty CLAY, some fine to medium sand, trace fine to medium gravel. (CL-ML) (CLAY)								
353.5		Light orange, wet to saturated, sandy CLAY, some silt, trace fine to medium gravel. (CL-SC) (SANDY CLAY LOAM)								
351.5			Infiltration testing conducted at 6 feet.							
349.5			Hand auger terminated at 8 feet.							

New Plumbing Structure Schedule

Item	Quantity	Length (ft)	Diameter (in)	High Invert	Low Invert	Slope (ft/ft)	Notes
Underdrain branches	220	6	353.4	353.3	0.00		perforated/slotted
Underdrain outlet	70	6	353.4	352.8	0.01		non-perforated
Cleanout/Obs. Well	6	3	357.6	353.3	Vertical		non-perforated
45-degree elbow	6	-	-	-	-	-	
45-degree wye	3	-	-	-	-	-	
45-degree double wye	1	-	-	-	-	-	
22.5-degree elbow	1	-	-	-	-	-	
Overdrain standpipe	7	3	357.4	353.4	Vertical		non-perforated
4-inch diome grate cap	7	-	-	-	-	-	
Sumo distribution pipe	150	4	353.4	353.4	0.00		perforated/slotted
90-degree elbow	2	-	-	-	-	-	
90-degree tee	5	-	-	-	-	-	

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.

GREGORY HOFFMANN
 ENGINEER'S NAME, P.E.
 MD REGISTRATION NO. 35532, EXPIRATION DATE: 3/13/2018

HOWARD CO. SOIL CONSERVATION DISTRICT
 APPROVED BY: [Signature] District Manager

DATE: 8-18-17

SCD APPROVAL FOR SEDIMENT AND EROSION CONTROL IS CONTINGENT UPON ISSUANCE OF ALL APPLICABLE REGULATORY PERMITS.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] Chief, Development Engineering Division
 Date: 8-18-17

[Signature] Chief, Division of Land Development & Planning
 Date: 9-19-17
 [Signature] Director
 Date: 9-20-17

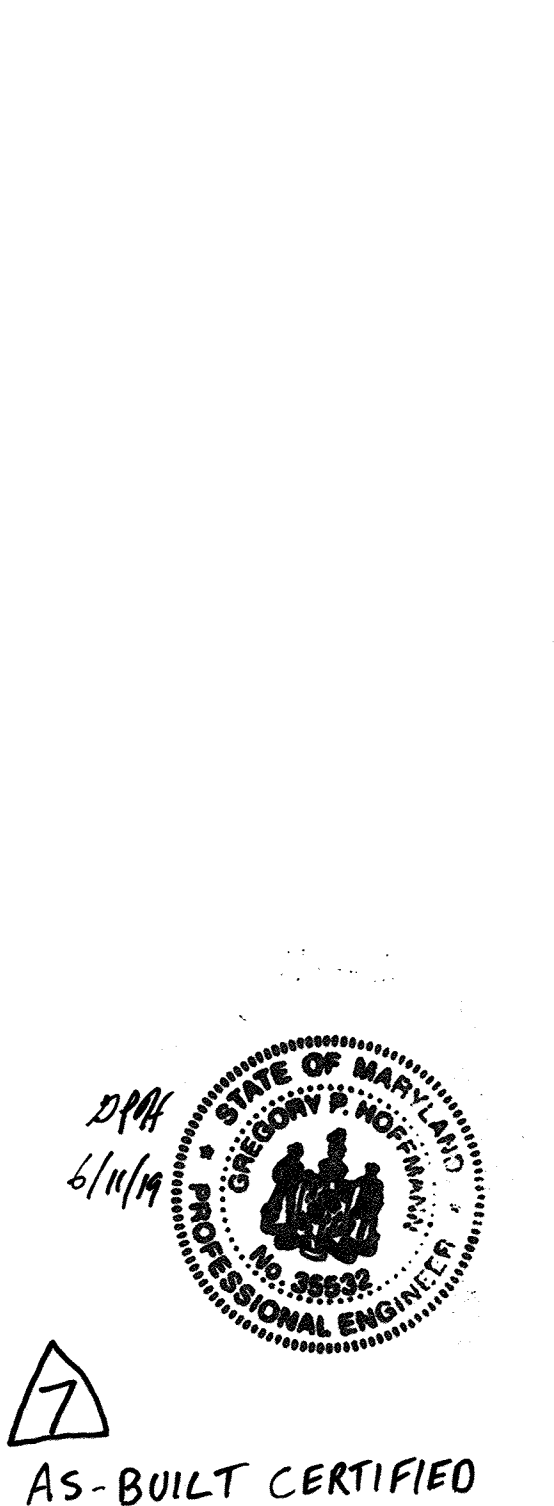
- LEGEND**
- 1 Numbered notes: see sidebar
 - Stabilized Construction Entrance
 - Site Fence
 - Curb and Paint Lines
 - Existing Major Contours
 - Existing Minor Contours
 - Proposed Major Contours
 - Proposed Minor Contours
 - Berm Contour (elevation shown)
 - Stream Buffer
 - Existing Grade
 - Proposed Grade
 - Cleanout
 - Overdrain standpipe
 - Limit of Disturbance (LOD)
 - Silt Fence
 - Tree Protection/Caution Area
 - Geotextile (non-woven)
 - Impermeable liner
 - BMP Borders
 - Underdrain Pipe
 - Perforated Underdrain Pipe
 - Water Surface Elevation (WSE)
 - Mulch
 - Biofilter Media
 - Choker Stone (as labeled)
 - Gravel/Riprap (as labeled)
 - Undisturbed Soils
 - Backfilled Soils

OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS (F-6)

- Annual maintenance of plant material, mulch layer and soil layer is required. Maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning.
- 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 deficient 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.

NOTES:

- For general notes, specifications, and details, see Sheets 1, 4, 17, 18.
- References to this sheet are on Sheets 1, 3, 8, 12, 13, 15, 20.
- At final grading, any slopes steeper than 4:1 must receive either sod, or seed plus Temporary Soil Stabilization Matting - Slope Application (MDE Specification B-4-6, detail B-4-6-B). Slopes shallower than 4:1 may be seeded and stabilized with straw mulch.



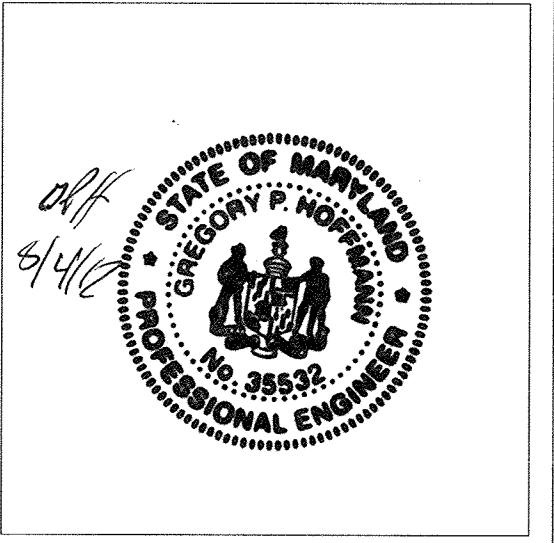
AS-BUILT CERTIFIED
 BY Gregory Hoffmann, P.E.
 Greg Hoffmann
 6/11/19
 P.E. # 35532
 Exp. Date: 3/13/2020

Revised Site Development Plan

OWNER:
 Trinity School, Inc., a Maryland Non-Profit Corp.
 4985 Ilchester Rd.
 Ellicott City, MD 21043

DEVELOPER:
 Board of Trustees, Trinity School
 4985 Ilchester Rd.
 Ellicott City, MD 21043

ENGINEER:
 Center for Watershed Protection, Inc.
 3290 N Ridge Road, Suite #290
 Ellicott City, MD 21043
 410-461-8323



Date	No.	Revision Desc.
5/5/2017	3	SECP comment responses
4/11/2017	1	SECP comment responses

SHEET TITLE:
SWM - BIORETENTION RETROFIT

SCALE: Varies: see viewpoint
 DESIGN BY: ADD
 DRAWN BY: GPH
 CHECKED BY: W-18-008
 PROJECT ID: 2017.02.28
 DATE: 2017.02.28

SHEET NUMBER: 28 of 28