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

HOWARD SOIL CONSERVATION DISTRICT — DATE 5-19-86

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 5/19/86

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT.

DIRECTOR, BUREAU OF HEALTH SERVICES — DATE 6-5-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

PLANNING INSPECTOR — DATE 6-6-86

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 6-6-86

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

DIRECTOR — DATE 5-26-86

CHIEF, BUREAU OF ENGINEERING — DATE 5-26-86

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

SIGNATURE OF ENGINEER — DATE 5-15-86

STATE OF MARYLAND — CHARLES WALTER BOENDER — No. 7718 — REGISTERED PROFESSIONAL ENGINEER

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS BUILT" PLAN OF THE POND WITHIN THIRTY DAYS OF COMPLETION.

SIGNATURE OF DEVELOPER — DATE May 15 1986

NOTE: DIRT USED FOR CORE TRENCH SHOULD BE CLASSIFIED AS ML-CL OR THE UNIFIED SOIL CLASSIFICATION SYSTEM

GENERAL NOTES

1. TAX MAP: 24 BLOCK: 5 PARCEL: 849
2. DEED REFERENCE: 1127/230
3. EX. ZONING: R-20
4. PROPOSED SITE USE: RELIGIOUS CENTER
5. AREA OF SITE: 2.80 AC. AREA OF SUBMISSION:
6. SUBJECT TO B.A. CASE NO 80-34-E
7. PUBLIC WATER AND PUBLIC SEWER ARE TO BE USED
8. PARKING TABULATIONS:
   REQUIRED: 1 PER 3 SEATS: 1200 ÷ 3 = 336 SEATS
   PROVIDED: 400 SPACES (PER B.A. CASE NO 80-34-E) INCLUDING 12 HANDICAPPED (12'x18'). ALL OTHER SPACES ARE 9'x18'
9. ALL ONSITE DRIVEWAYS AND PARKING AREAS ARE PRIVATE.
10. LANDSCAPED ISLANDS IN PARKING AREA:
    AREA OF PARKING LOT: 1.7 AC LANDSCAPED ISLAND AREA: 0.4 AC. OR 24%
11. AREA OF OPEN SPACE:
12. ST JOHN'S LANE IS AN EXISTING, PUBLIC ROAD
13. CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION/SURVEY DIVISION, 24 HRS PRIOR TO BEGINNING WORK
14. ALL EXTERIOR LIGHTING SHALL BE DIRECTED/REFLECTED AWAY FROM ADJACENT RESIDENTIALLY ZONED PROPERTIES AND PUBLIC ROAD VISIBILITY WAYS
15. LOWER LEVEL AND FELLOWSHIP LEVEL CAN NOT BE SERVICED BY GRAVITY SEWER.
16. HCE DESIGNATES HANDICAPPED ENTRANCE
17. ALL SURROUNDING PROPERTIES ZONED R-20
18. TOPOGRAPHY AND BOUNDARY SHOWN HEREON SUPPLIED BY THE ARCHITECT.

PROPOSED PARKING INFORMATION
PHASE A 250 SPACES
PHASE B 150 SPACES
TOTAL 400 SPACES

PHASE A CONSTRUCTION FOR MAX SEATING OF 500

LIGHTING SCHEDULE

- POLE MOUNTED LIGHTING FIXTURE WITH DOUBLE FIXTURES (POLE 30' HIGH)
- POLE MOUNTED LIGHTING WITH SINGLE FIXTURE (POLE 30' HIGH)

NOTE: ABOVE FIXTURE ARE 400 W., METAL HALIDE

- BOLLARD TYPE FIXTURE
- ACCENT LIGHT

BUILDING ELEVATION - (SECTION A-A)

11-4-85

PROP. SWM POND
NORMAL POOL EL 390.0
5 YR EL 396.0, 10 YR EL 396.2
ZONE EL 395.8

PROVIDE 2' CURB OPENING

PHASE A
UPPER LEVEL 410.0
LOWER LEVEL 406.83
FELLOWSHIP HALL LEVEL 406.0

PHASE B
NOTE: PROVIDE COMPACTED FILL W/ SANCTUARY IF PHASE B IS NOT CONSTRUCTED UNDER THIS CONTRACT (SEE SPOT ELEVS FOR FINISH GRADE)

HCE

6' HIGH SCREEN WALL (SEE ARCH DWGS)

OUTLET CONTROL STRUCTURE 3/2 — 60" CMP RISER SEE DETAIL

METAL END SECTION 5/1

STA 1+00 ENT 9 DAM

STA 0+00 BEGIN 9 DAM

40 LF 30" RCCMP, 14 GA @ 3.7% — 40 LF 4"-6" STONES MIN. THICK @ 0.0% OVER FILTER CONTROL CLOTH

30' LEVEL SECTION W/ WIER @ 0.0% EL 396.2

84 LF 4"-6" STONES @ 0.0% MIN 1' THICK OVER EROSION CONTROL CLOTH

BORING #1 — BORING #2 — BORING #3

ONSITE UNCONTROLLED D.A. 5.0 AC. SEE SHT. 5 OF 6 FOR D.A. TO POND

PROVIDE 2' CURB OPENING

PROVIDE 6' HIGH SCREEN WALL (SEE ARCH DWGS)

PROVIDE 6'-6" SONIC BAR FOR ATTIC SPACE (SEE MECH DWGS)

PROVIDE 2' CURB OPENING

PROVIDE 8" DIA. RECHARGE WELL

PROVIDE 4" DIA. PERF. UNDERDRAIN

PROVIDE 8" DIA. PERF. UNDERDRAIN

PROVIDE 8" VALVE

PROVIDE 8" DIA. CONNECTION

PROVIDE 20' DRAINAGE & UTILITY EASEMENT

LIMIT OF STD 7" CONC. CURB & GUTTER AT PT OF CURB BEGIN STD. MOUNTABLE CURB

LIMIT OF STD 7" CONC. CURB & GUTTER AT PT OF CURB BEGIN STD. MOUNTABLE CURB

NOTE REMOVE SHRUBBERY TO ALLOW FOR ADEQUATE SIGHT DISTANCE

4' HIGH BERM

5' WIDE BERM

INV. 418.19 — INV. 410.08 — INV. 406.75

CHURCH GATE ROAD — ST. JOHN'S LANE

N 18°26'30" W 119.36'
N 81°09'30" W 144.01'
N 80°27'10" W 147.07'
N 28°51'40" W 318.73'

EX. 8" W
PROP. 8" VALVE
PROP. 8"x8" TAPPING SLEEVE

EX. 8"S (CONTR. NO 80-E)
EX. 50' R/W
EX. 8"S
EX. 8"W (CO.E. + T.W.)

LOT 3 — LOT 2 — LOT 1

GLADE MANOR PLAT 3401 ZONED R-20

HAWES 200/493 ZONE: R-20

ONSITE UNCONTROLLED D.A. 5.0 AC. SEE SHT. 5 OF 6 FOR D.A. TO POND

OWNER/DEVELOPER
Bethel Presbyterian Church
(aka Blykmen's Road)
Phoenix, Maryland 21131
ATTN: David Chaplain Chairman
Building Project Committee

ADDRESS CHART					
LOT NUMBER	STREET ADDRESS	SECT./AREA	LOT/PARCEL	ELEC. DIST.	CENSUS TR.
PARCEL 1163	3615 ST. JOHNS LANE	PLAT # OR LOT NUMBER	ZONE	TAX/ZONE MAP	
SUBDIVISION NAME					
GLADE MANOR PLAT 3401					
WATER CODE		SEWER CODE			

VICINITY MAP — SCALE 1" = 1000'

N 72°38'

boender associates inc.
consulting engineers
land surveyors
land planners
COURTHOUSE SQUARE
3565 ELLICOTT MILLS DRIVE
ELLICOTT CITY, MD. 21043
(301) 465-7777

SDP-85-143

DATE	REVISIONS	BY
12-2-86	N.W. PARKING LOT REVERSED	

BETHEL PRESBYTERIAN CHURCH
2ND ELECTION DISTRICT — HOWARD COUNTY, MARYLAND — TAX MAP 24

DESIGNTECH · EAST
ARCHITECTS · PLANNERS · CONSULTANTS · WASHINGTON, D.C.

SHEET TITLE: SITE DEVELOPMENT PLAN
DATE: 1-14-86
SCALE: 1" = 40'
CHECKED:
APPROVED:

DRAWING NO. C-1
1 OF 6

85018

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

U.S. SOIL CONSERVATION SERVICE — DATE: 5-19-86

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

HOWARD SOIL CONSERVATION DISTRICT — DATE: 5/17/86

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER — DATE: 6-5-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

PLANNING DIRECTOR — DATE: 6-6-86

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE: 6-6-86

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

DIRECTOR — DATE: 5-29-86

CHIEF, BUREAU OF ENGINEERING — DATE: 5-26-86

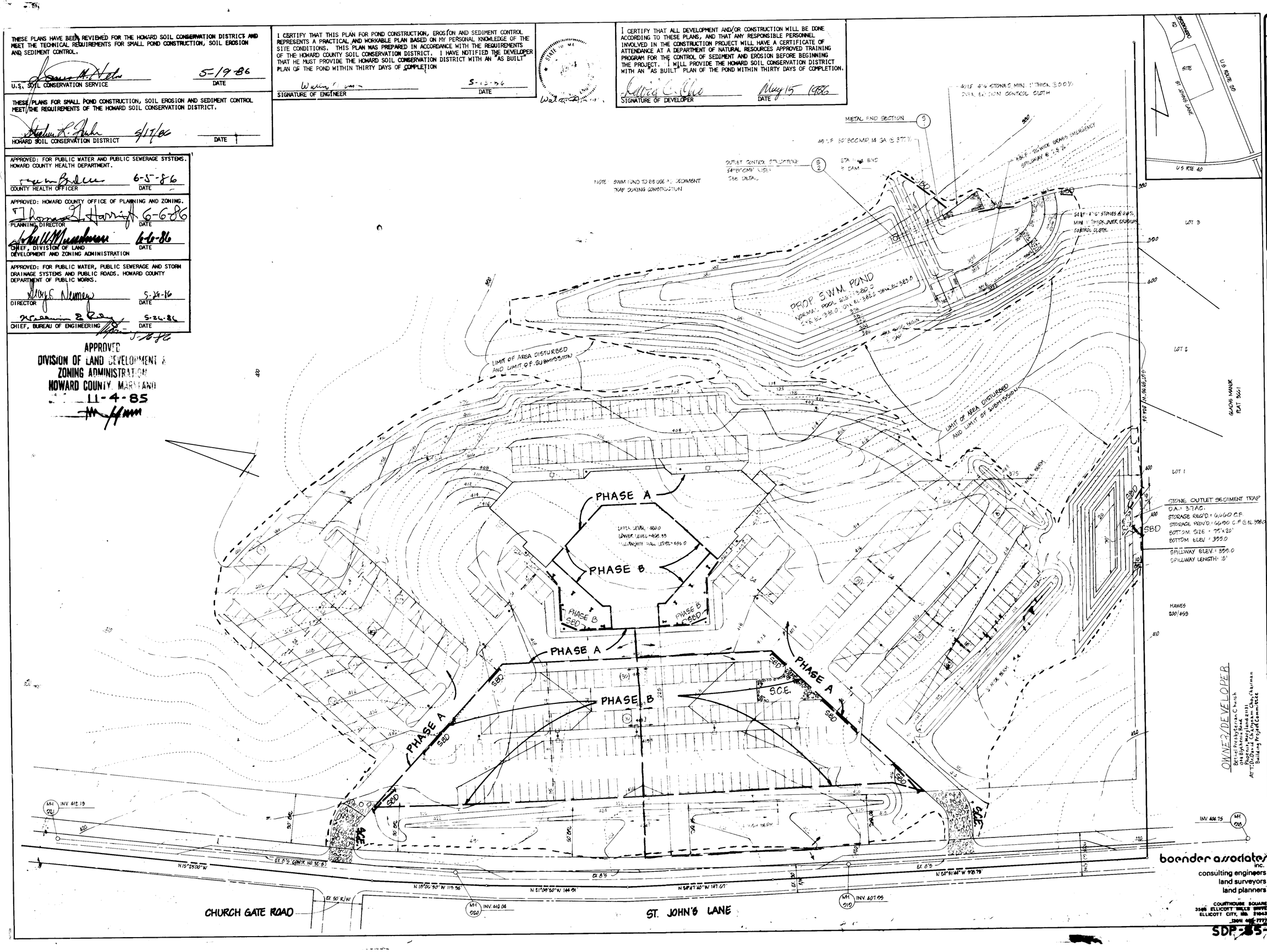
APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
11-4-85

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

SIGNATURE OF ENGINEER — DATE: 5-13-86

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS BUILT" PLAN OF THE POND WITHIN THIRTY DAYS OF COMPLETION.

SIGNATURE OF DEVELOPER — DATE: May 15 1986



OWNER/DEVELOPER
Bethel Presbyterian Church
1914 Blythenia Road
Phoenix, Maryland 21131
ATT'D: David Chanyman Cho, Chairman
Building Project Committee

boender associates inc.
consulting engineers
land surveyors
land planners
COURTHOUSE SQUARE
3505 ELLICOTT MILLS DRIVE
ELLICOTT CITY, MD. 21043
(301) 465-7777

DATE	REVISIONS	REF	BY

BETHEL PRESBYTERIAN CHURCH
2ND ELECTION DISTRICT — TAX MAP 24 — HOWARD COUNTY, MARYLAND

DESIGNTECH · EAST
ARCHITECTS · PLANNERS · CONSULTANTS · WASHINGTON, D.C.

SHEET TITLE: SEDIMENT CONTROL AND PHASING PLAN

DATE: 1-14-86 | SCALE: 1"=40' | CHECKED: | APPROVED:

DRAWING NO. C-2
2 OF 6

SDP-85-143

85018

SEDIMENT CONTROL NOTES

1) A minimum of 24 hours notice must be given to the Howard County Office of Inpsection and Permits prior to the start of any construction. (992-2437)

2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

3) Following are initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.

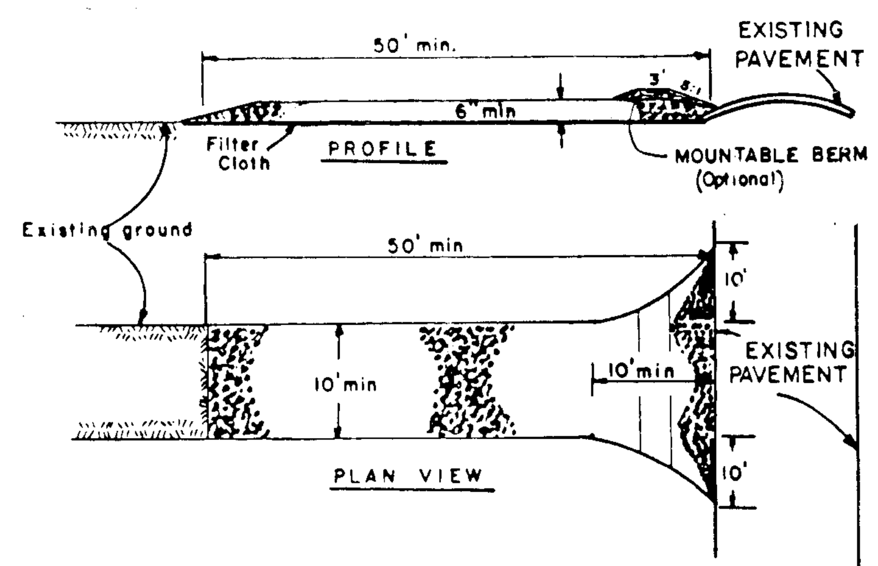
4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.

5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.

6) All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.

7) Site Analysis:
   - Total Area of SUBMISSION 10.0 Acres
   - Area Disturbed 9.3 Acres±
   - Area to be roofed or paved 3.5 Acres±
   - Area to be vegetatively stabilized 5.8 Acres±
   - Total Cut ____ Cu. yds.
   - Total Fill ____ Cu. yds.
   - Offsite waste/borrow area location N/A

8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

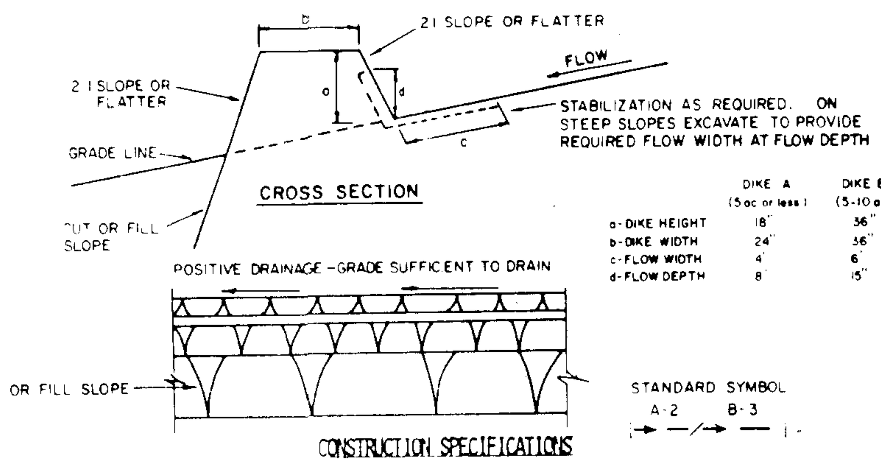


CONSTRUCTION SPECIFICATIONS

1. Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
3. Thickness - Not less than six (6) inches.
4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



	DIKE A (5 ac or less)	DIKE B (5-10 ac)
a-DIKE HEIGHT	18"	36"
b-DIKE WIDTH	24"	36"
c-FLOW WIDTH	4'	6'
d-FLOW DEPTH	8"	15"

CONSTRUCTION SPECIFICATIONS

1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
5. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
6. STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER THE CHART BELOW.

FLOW CHANNEL STABILIZATION

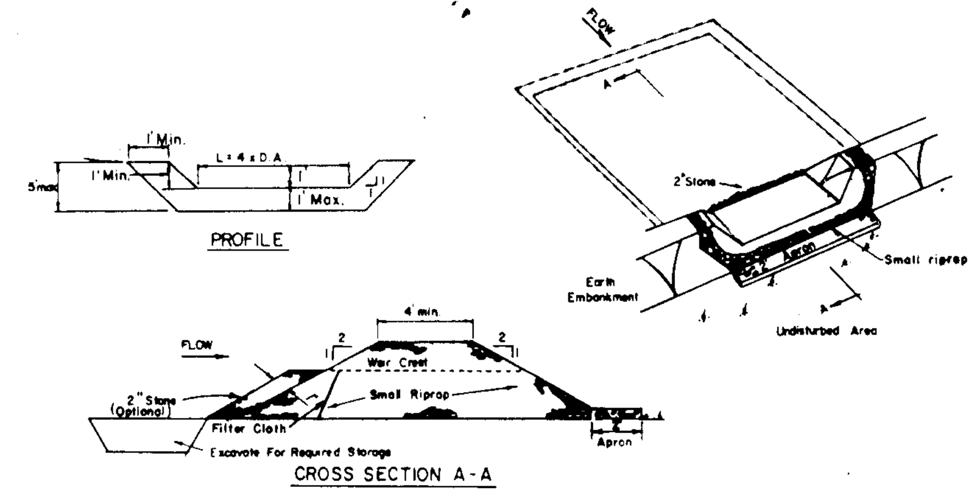
TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCELSIOR; SOD; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4-8"
4	8.1-20%	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL.
C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.

7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

EARTH DIKE

NOT TO SCALE



OPTION: A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the embedded filter cloth.

CONSTRUCTION SPECIFICATIONS FOR ST-V

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
3. All cut and fill slopes shall be 2:1 or flatter.
4. The stone used in the outlet shall be small riprap 4"-8" along with a 1' thickness of 2" aggregate placed on the up-grade side on the small riprap OR embedded filter cloth in the riprap.
5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to ½ the design depth of the trap.
6. The structure shall be inspected after each rain and repairs made as needed.
7. Construction operations shall be carried out in such a manner than erosion and water pollution is minimized.
8. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

Maximum Drainage Area: 5 Acres

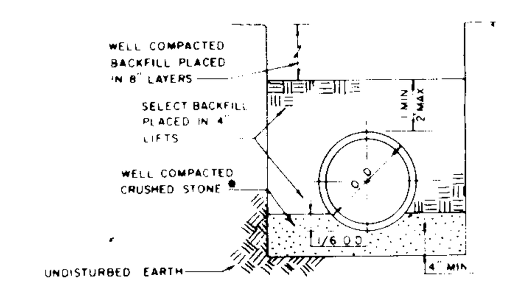
STONE OUTLET SEDIMENT TRAP

NOT TO SCALE

TRENCH WIDTH

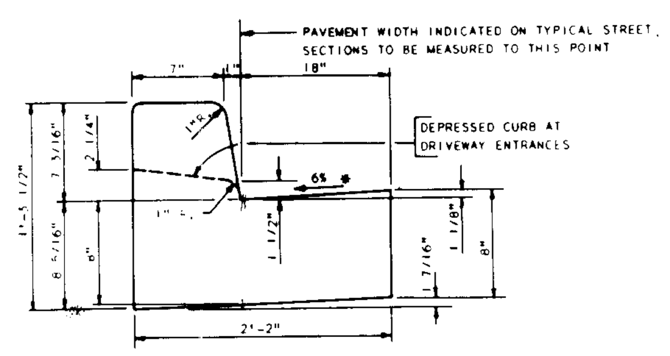
NOMINAL PIPE DIA	'A'
6"	11"
8"	10"
10"	9"
12" TO 15"	8"
18" TO 21"	10"
24" TO 30"	12"
33" TO 42"	15"
48" & LARGER	18"

NOTES
1. FOR O.D. OF PIPE SEE MANUFACTURERS SPECIFICATIONS OR FIELD MEASURE CIRCUMFERENCE OF PIPE AND DIVIDE BY 3.14
2. WITHIN ROAD RIGHT-OF-WAY, TRENCH COMPACTION DENSITY SHALL BE 95% AS DETERMINED BY A.A.S.H.T.O. T-180-C
3. FOR CONDITIONS REQUIRING SOLID SHEETING OR TRENCH SHIELDS, 'A' SHALL NOT EXCEED 30"



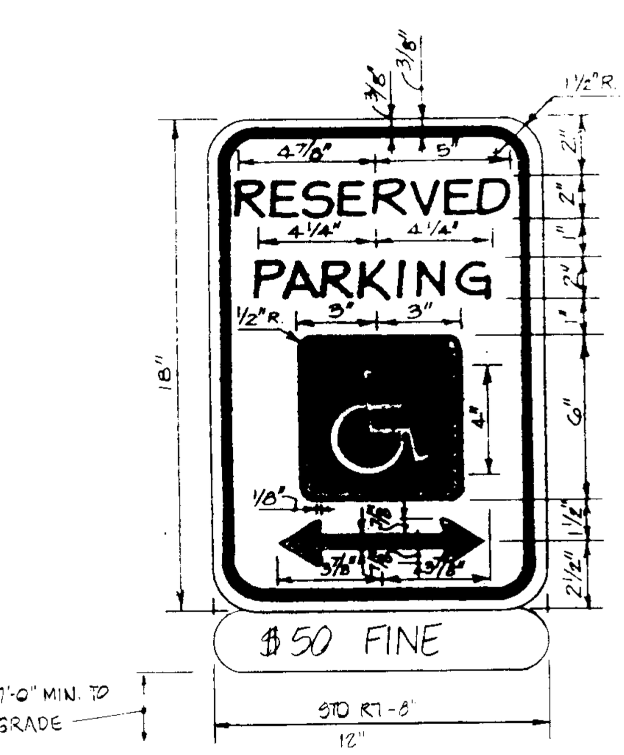
TRENCH DETAIL

NOT TO SCALE



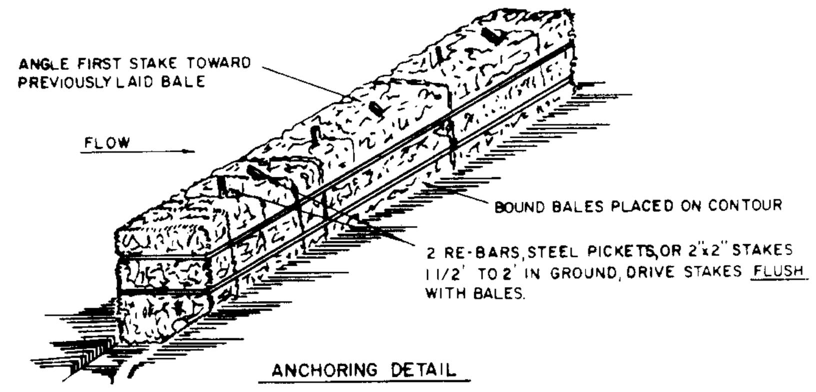
STD. 7" COMB. CURB & GUTTER

NOT TO SCALE



HANDICAPPED PARKING SIGN

NOT TO SCALE

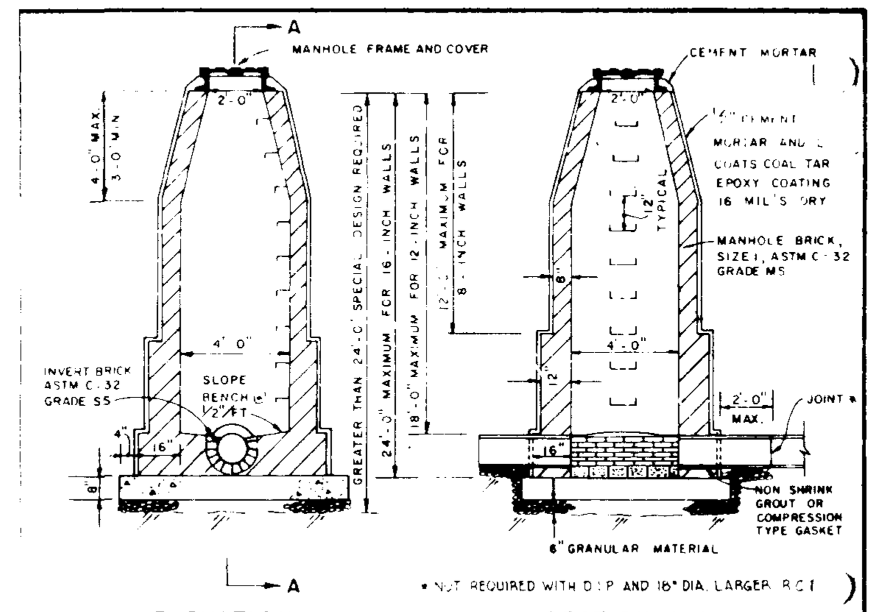


CONSTRUCTION SPECIFICATIONS

1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

STRAW BALE DIKE

NOT TO SCALE



GENERAL NOTES APPLICABLE TO ALL BRICK MANHOLES

1. MANHOLE BASE SHALL BE 8 INCH CAST IN PLACE CONCRETE SLAB, MIX NO 3 AIR ENTRAINED. ALL OTHER SLABS SHALL BE MIX NO 3 AIR ENTRAINED.
2. MANHOLE BASE SHALL BE BEDDED ON 6 INCH GRANULAR MATERIAL ON FIRM SUBGRADE.
3. EXCAVATION BELOW PIPES SHALL BE BACKFILLED WITH GRANULAR MATERIAL 1/3 OF WAY TO TOP OF PIPE.
4. CONNECTION BETWEEN MANHOLE WALL AND SEWER SHALL BE NON-SHRINK GROUT OR RUBBER GASKET COMPRESSION TYPE JOINT.
5. MANHOLE STEPS SHALL BE AS SPECIFIED ON DETAIL G5.21
6. MANHOLE COVER SHALL BE AS SHOWN ON DETAIL G5.51
7. PIPE JOINTS SHALL BE PROVIDED WITHIN 2' MAX FROM OUTSIDE OF MANHOLE WALL.
8. MANHOLE CHANNELS SHALL BE FORMED TO PROVIDE A SMOOTH TRANSITION BETWEEN PIPES. EXTEND BENCH TO FULL HEIGHT OF PIPE OPENING, AND FORM USING GRADE SS SEWER BRICK, ASTM C-32, SIZE NO 1.
9. MANHOLE WALL THICKNESS SHALL BE:

DEPTH BELOW MANHOLE COVER	WALL THICKNESS
TO 12'-0"	8"
12'-1" TO 18'-0"	12"
18'-0" TO 24'-0"	16"
GREATER THAN 24'-0"	SPECIAL DESIGN

REV. OCT. 1982 REV. JAN. 1982

HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS Approved [signature] 2-10-81 Chief - Bureau of Engineering	STANDARD SANITARY SEWER DETAILS 4'-0" BRICK MANHOLE FOR USE WITH PIPES 24" AND SMALLER	DRAWN BY: J.M.C. CHECKED BY: F.A. SCALE: NONE G 5.01

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, discing or other acceptable means before seeding.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules

1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square ft) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq ft).

2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.

Seeding - For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thre July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 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 1½ to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.

Matinenance - Inspect all seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

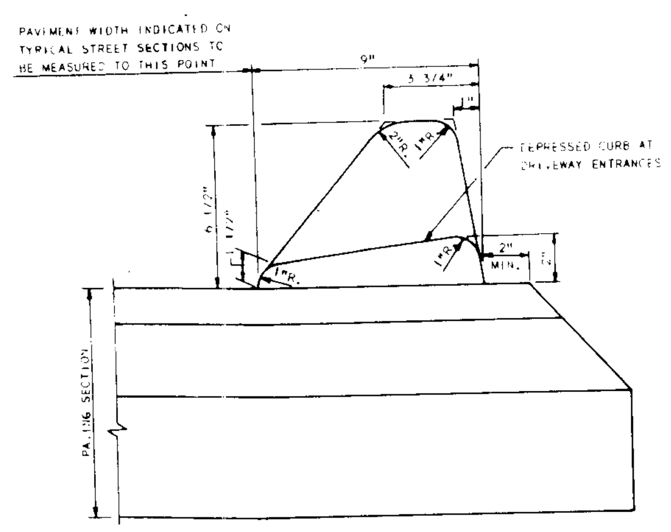
Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.

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

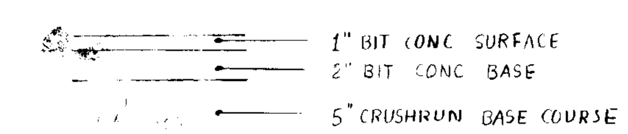
Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2½ bushel per acre of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1½ to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.



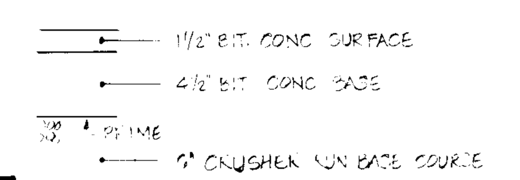
STD. BITUMINOUS CURB DETAIL

NOT TO SCALE



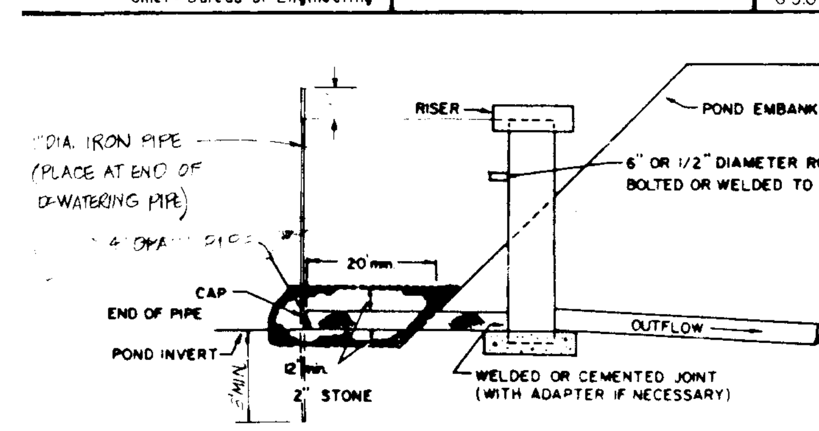
ON SITE PAVING SECT P-1

NOT TO SCALE



ACCELL-DECEL LANES - ST JOHN'S LANE PAVING SECTION - P-3

NOT TO SCALE



POND DEWATERING DEVICE

SEE SCS MANUAL, PG 18.24

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER ____ DATE ____

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

[signature] PLANNING DIRECTOR — DATE 6-6-86

[signature] CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 6-6-86

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

[signature] DIRECTOR — DATE 5-29-86

[signature] CHIEF, BUREAU OF ENGINEERING — DATE 5-26-86

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

[signature] U.S. SOIL CONSERVATION SERVICE — DATE 5-19-86

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

[signature] HOWARD SOIL CONSERVATION DISTRICT — DATE 5/19/86

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

[signature] SIGNATURE OF ENGINEER — DATE 5-15-86

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS BUILT" PLAN OF THE POND WITHIN THIRTY DAYS OF COMPLETION.

[signature] SIGNATURE OF DEVELOPER — DATE May 15 1986

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 11-4-85

OWNER / DEVELOPER
BETHEL PRESBYTERIAN CHURCH
3411 BLYTHENIA ROAD
PHOENIX, MD 21131
ATTN: DR DAVID CHANGNAM CHO, CHAIRMAN
BUILDING PROJECT COMMITTEE

boender associates inc.
consulting engineers
land surveyors
land planners

COURTHOUSE SQUARE
3565 ELLICOTT MILLS DRIVE
ELLICOTT CITY, MD. 21043
(301) 465-7777

DATE	REVISIONS	REF	BY

BETHEL PRESBYTERIAN CHURCH
2ND ELECTION DISTRICT — TAX MAP 24 — HOWARD COUNTY, MARYLAND

DESIGNTECH · EAST
ARCHITECTS · PLANNERS · CONSULTANTS · WASHINGTON, D.C.

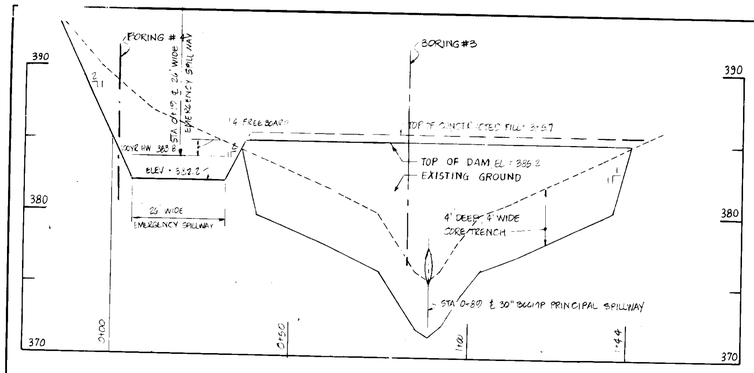
SHEET TITLE: MISCELLANEOUS DETAILS
DATE: 1-14-86
SCALE: AS NOTED
CHECKED:
APPROVED:

DRAWING NO. C-3
3 OF 6

SDP-85-143

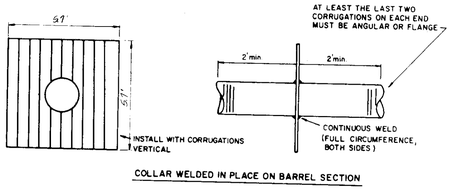
85018

N77338



PROFILE : TOP OF DAM

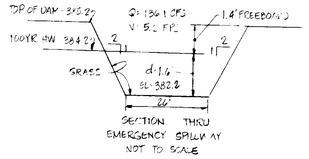
SCALE : 1" = 20' HORI
1" = 5' VERT



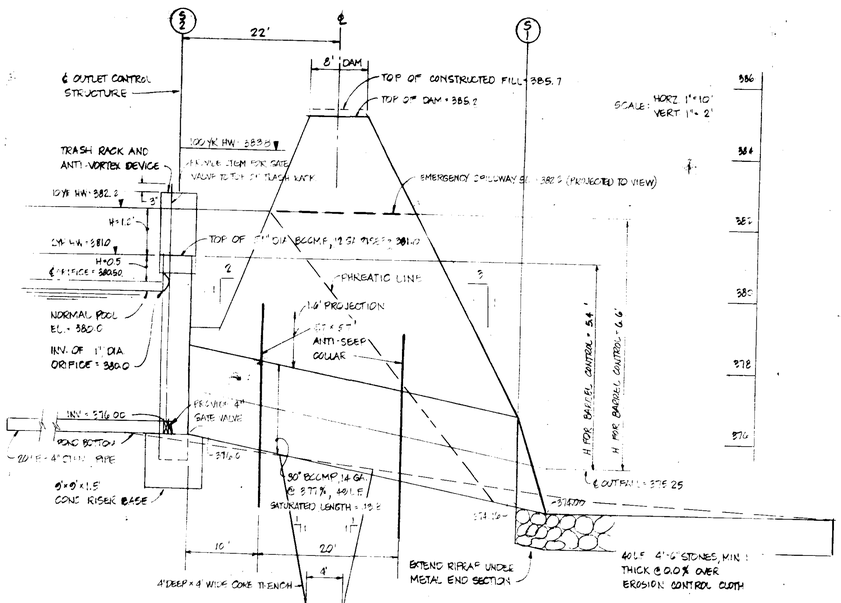
COLLAR WELDED IN PLACE ON BARREL SECTION

TYPICAL ANTI-SEEP COLLAR DETAIL

NOT TO SCALE

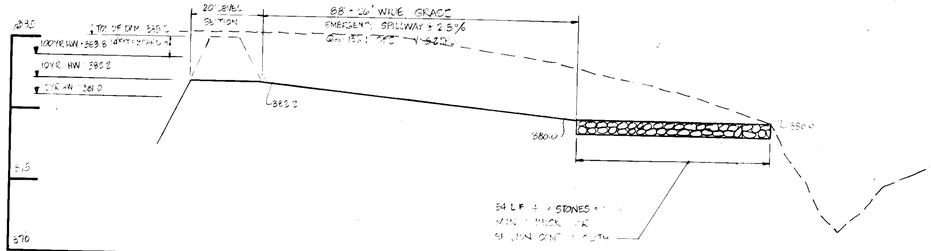


SECTION THRU EMERGENCY SPILLWAY
NOT TO SCALE



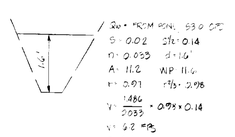
OUTLET CONTROL STRUCTURE & PRINCIPAL SPILLWAY

SCALE HORZ 1"=10'
VERT 1"=2'

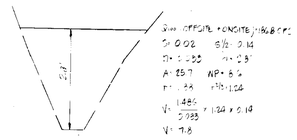


PROFILE : EMERGENCY SPILLWAY

SCALE HORZ 1"=20'
VERT 1"=5'

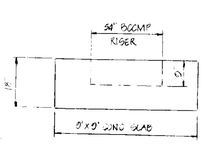


SECTION B-B

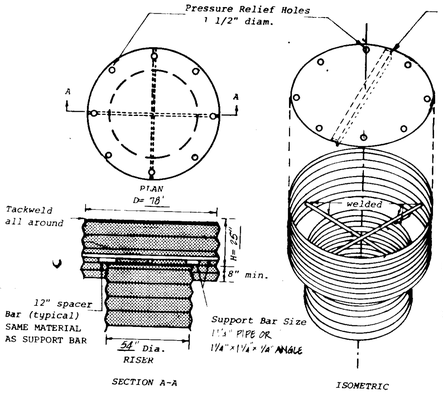


SECTION C-C

SEE SHT 1 OF 6 FOR SECTION LOCATIONS



CONC RISER BASE DETAIL
NOT TO SCALE



Top stiffener (if required) is N/A x x **angle welded to top and oriented perpendicular to** corrugations.

Top is 10 gage corrugated metal or 1/8" steel plate. Pressure relief holes may be ommitted, if ends of corrugations are left fully open when corrugated top is welded to cylinder.

Cylinder is 12 gage corrugated metal pipe or fabricated from 1/8" steel plate.

Notes:
1) The cylinder must be firmly fastened to the top of the riser.
2) Support bars are welded to the top of the riser or attached by straps bolted to top of riser.

TRASH RACK DETAIL

NOT TO SCALE

CONSTRUCTION SEQUENCE

PHASE A

1. OBTAIN BUILDING PERMIT . CALL MISS UTILITY @ 559-0100
2. NOTIFY THE HOWARD COUNTY BUREAU OF LICENSES, INSPECTIONS AND PERMITS AND THE CONSTRUCTION INSPECTION/SURVEYS DIVISION AT LEAST 24 HOURS PRIOR TO BEGINNING CONSTRUCTION
3. INSTALL TEMPORARY SEDIMENT CONTROL MEASURES, (S.C.S. , STONE OUTLET SEDIMENT TRAP, S.P.D.)
4. INSTALL S.W.M. POND AND USE AS SEDIMENT BASIN DURING CONSTRUCTION . BLOCK 6" DRAIN PIPE (SEE DETAIL SHT. 3 OF 6)
5. ROUGH GRADE SITE . INSTALL UTILITIES . STABILIZE AREAS TO BE PAVED WITH BASE COURSE .
6. CONSTRUCT BUILDING (PHASE A)
7. FOR AREAS TO BE PAVED . FINE GRADE SITE . APPLY PERMANENT STABILIZATION TO ALL DISTURBED AREAS
8. WITH THE PERMISSION OF THE BUREAU OF LICENSE, INSPECTIONS AND PERMITS, RETURN SEDIMENT BASIN TO S.W.M. POND AND REMOVE STONE OUTLET TRAP BY:
   - SEDIMENT BASIN :
     1) PUMP STANDING WATER ONTO STABILIZED OUTFALL
     2) REMOVE SEDIMENT AND DEPOSIT AT A LOCATION WHERE THERE IS AN APPROVED SED MENT PLAN
     3) SHAPE BASIN TO DESIGN SIZE AND APPLY PERMANENT STABILIZATION AND
   - STONE OUTLET TRAP :
     1) PUMP STANDING WATER ONTO STABILIZED OUTFALL,
     2) FILL IN TRAP TO MEET ORIGINAL GRADE
     3) STABILIZE WITH PERMANENT STABILIZATION AND REMOVE ALL TEMPORARY SEDIMENT CONTROL MEASURES

PHASE B

1. OBTAIN BUILDING PERMIT
2. NOTIFY THE HOWARD COUNTY BUREAU OF LICENSES, INSPECTIONS AND PERMITS AND THE CONSTRUCTION INSPECTION/SURVEYS DIVISION AT LEAST 24 HOURS PRIOR TO BEGINNING CONSTRUCTION
3. INSTALL TEMPORARY SEDIMENT CONTROL MEASURES, (S.C.S. AND S.P.D.)
4. ROUGH GRADE . INSTALL UTILITIES . STABILIZE AREAS TO BE PAVED WITH BASE COURSE . APPLY TEMPORARY STABILIZATION
5. CONSTRUCT BUILDING (PHASE B)
6. PAVE AREAS TO BE PAVED . FINE GRADE . APPLY PERMANENT STABILIZATION .
7. REMOVE TEMPORARY SEDIMENT CONTROL MEASURES WITH APPROVAL OF THE BUREAU OF LICENSES, INSPECTIONS AND PERMITS

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT.
COUNTY HEALTH OFFICER — DATE 6-5-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.
PLANNING DIRECTOR — DATE 6-6-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 6-6-86

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
DIRECTOR — DATE 5-29-86
CHIEF, BUREAU OF ENGINEERING — DATE 5-26-86

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
HOWARD SOIL CONSERVATION DISTRICT — DATE 5/19/86

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
U.S. SOIL CONSERVATION SERVICE — DATE 5-19-86

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS BUILT" PLAN OF THE POND WITHIN THIRTY DAYS OF COMPLETION
SIGNATURE OF ENGINEER — DATE 5-15-86

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS BUILT" PLAN OF THE POND WITHIN THIRTY DAYS OF COMPLETION.
SIGNATURE OF DEVELOPER — DATE May 15 1986

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 11-4-85

STATE OF MARYLAND — WALTER HOWARD — NO. 7298 — REGISTERED PROFESSIONAL ENGINEER

OWNER / DEVELOPER
BETHEL PRESBYTERIAN CHURCH
13411 SCYTHENIA ROAD
PHOENIX, MD. 21131
ATTN: DR. SOMO CHAUGNAM CHO, CHAIRMAN
BUILDING PROJECT COMMITTEE

boender associates inc.
consulting engineers
land surveyors
land planners
COURTHOUSE SQUARE
3565 ELLICOTT MILLS DRIVE
ELLICOTT CITY, MD. 21043
(301) 465-7777

DATE	REVISIONS	BY

BETHEL PRESBYTERIAN CHURCH
TAX MAP 24 HOWARD COUNTY MARYLAND
5TH ELECTION DISTRICT

DESIGNTECH · EAST
ARCHITECTS · PLANNERS · CONSULTANTS · WASHINGTON, D.C.

SHEET TITLE: S.W.M. DETAILS & SECTIONS
DATE: 1-14-86
SCALE: AS SHOWN
CHECKED:
APPROVED:
DRAWING NO. C-4 4 OF 6

SDP-85-143
85018

SOIL CONSERVATION SERVICE MARYLAND CONSTRUCTION SPECIFICATIONS FOR PONDS

I. SITE PREPARATION

Areas under the borrow areas, embankment, and structural works shall be cleared, grubbed and the topsoil stripped to remove all trees, vegetation, roots or other objectionable material. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas covered by the pond or 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.

All cleared and grubbed material shall be disposed of outside 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.

II. EARTH FILL

Material

The fill material shall be taken from approved designated borrow area or areas. It shall be free of roots, stumps, wood, rubbish, over-size stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased above the design elevation (including freeboard) as shown on the plans.

Placement

Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in 8-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.

Compaction

The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction can be obtained with the equipment used.

Cutoff Trench

Where specified, a cutoff trench shall be excavated 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 four feet. The depth shall be at least four feet or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill material for the cutoff trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability.

III. STRUCTURAL BACKFILL

Backfill material 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 four inches in thickness and compacted by hand tampers or other 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 four feet, measured horizontally, to any part of a structure. Under no circumstances shall the contractor drive equipment over any part of a concrete structure or pipe unless there is a compacted fill of twenty-four inches or greater over the structure or pipe.

IV. PIPE CONDUITS

A. Corrugated Metal Pipe

1. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands. Coupling bands, anti-seep collars, end sections, etc. must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be less than 9 and greater than 4.

Helically corrugated pipe in addition to the requirements above shall have either continuously welded seams or have lock seams which are caulked, during fabrication, with a neoprene bead.

2. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Watertight coupling bands shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight.

3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

4. Laying pipe - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.

5. Backfilling shall conform to structural backfill as shown above.

6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

B. Reinforced Concrete Pipe

1. Materials - Reinforced concrete pipe shall have a rubber gasket joint and shall equal or exceed ASTM Specification C-361. Approved equivalents are AWWA Specification C-300, 301, and 302.

2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its diameter with a minimum thickness of 3", or as shown on the drawings.

3. 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 bedding 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.

4. Backfilling shall conform to structural backfill as shown above.

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

C. For pipes of other materials, specific specifications shall be shown on the drawings.

V. CONCRETE

1. Materials

a. Cement - Normal Portland cement shall conform to the latest ASTM Specification C-150.

b. Water - The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other objectionable substances.

c. Sand - The sand used in concrete shall be clean, hard, strong and durable, and shall be well graded with 100 percent passing a one-quarter inch sieve. Limestone sand shall not be used.

d. Coarse Aggregate - The coarse aggregate shall be clean, hard, strong and durable, and free from clay or dirt. It shall be well graded with a maximum size of one and one-half (1-1/2) inches.

e. Reinforcing Steel - The reinforcing steel shall be deformed bars of intermediate grade billet steel or rail steel conforming to ASTM Specification A-615.

2. Design Mix - The concrete shall be mixed in the following proportions, measured by weight. The water-cement ratio shall be 5-1/2 to 6 U. S. gallons of water per 94 pound bag of cement. The proportion of materials for the trial mix shall be 1:2:3-1/2. The combination of aggregates may be adjusted to produce a plastic and workable mix that will not produce harshness in placing or honeycombing in the structure.

3. Mixing - The concrete ingredients shall be mixed in batch mixers until the mixture is homogeneous and of uniform consistency. The mixing of each batch shall continue for not less than one and one-half minutes after all the ingredients, except the full amount of water, are in the mixer. The minimum mixing time is predicted on proper control of the speed of rotation of the mixer and of the introduction of the materials, including water, into the mixer. Water shall be added prior to, during, and following the mixer-charging operations. Excessive overmixing requiring the addition of water to preserve the required concrete consistency shall not be permitted. Truck mixing will be allowed provided that the use of this method shall cause no violation of any applicable provisions of the specifications given here.

4. Forms - The forms shall have sufficient strength and rigidity to hold the concrete and to withstand the necessary pressure, tamping, and vibration without deflection from the prescribed lines. They shall be mortar-tight and constructed so that they can be removed without hammering or prying against the concrete.

The inside of forms shall be oiled with a non-staining mineral oil or thoroughly wetted before concrete is placed.

Forms may be removed 24 hours after the placement of concrete. All wire ties and other devices used shall be recessed from the surface of the concrete.

5. Reinforcing Steel - All reinforcing material shall be free of dirt, rust, scale, oil, paint or any other coatings. The steel shall be accurately placed and securely tied and blocked into position so that no movement of the steel will occur during placement of concrete.

6. Consolidating - Concrete shall be consolidated with internal type mechanical vibrators. Vibration shall be suplemented by spading and hand tamping as necessary to insure smooth and dense concrete along form surfaces, in corners, and around embedded items.

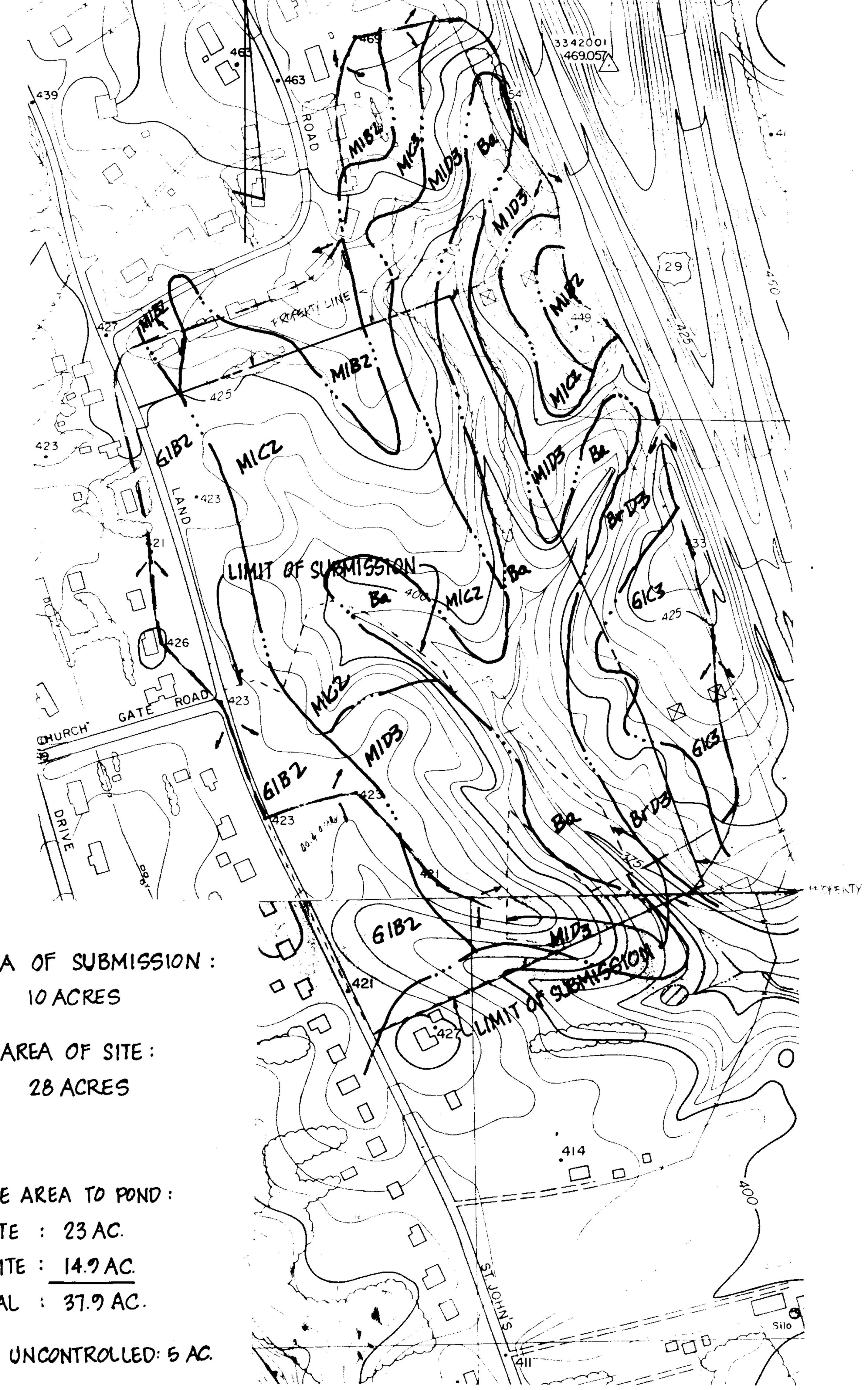
7. Finishing - Defective concrete, honeycombed areas, voids left by the removal of tie rods, ridges on all concrete surfaces permanently exposed to view or exposed to water on the finished structure, shall be repaired immediately after the removal of forms. All voids shall be reamed and completely filled with dry-patching mortar.

8. Protection and Curing - Exposed surfaces of concrete shall be protected from the direct rays of the sun for at least the first three (3) days. All concrete shall be kept continuously moist for at least ten (10) days after being placed. Moisture may be applied by spraying or sprinkling as necessary to prevent the concrete from drying. Concrete shall not be exposed to freezing during the curing period. Curing compounds may also be used.

9. Placing Temperature - Concrete may not be placed at temperatures below 37° F with the temperature falling, or 34° with the temperature rising.

VI. STABILIZATION

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, fertilizing and mulching (if required) in accordance with the vegetative treatment specifications shown on or accompanying the drawings.



AREA OF SUBMISSION :
10 ACRES

TOTAL AREA OF SITE :
28 ACRES

DRAINAGE AREA TO POND :
ONSITE : 23 AC.
OFFSITE : 14.9 AC.
TOTAL : 37.9 AC.

ONSITE UNCONTROLLED: 5 AC.

DRAINAGE AREA MAP

SCALE: 1"=200'

SOILS MAP

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY MARYLAND
DATE 11-4-85

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER — DATE 6-5-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

PLANNING DIRECTOR — DATE 6-5-86

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 6-12-86

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

DIRECTOR — DATE

CHIEF, BUREAU OF ENGINEERING — DATE 5-26-86

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

U.S. SOIL CONSERVATION SERVICE — DATE 5-19-86

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

HOWARD SOIL CONSERVATION DISTRICT — DATE

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

SIGNATURE OF ENGINEER — DATE 5-15-86

STATE OF MARYLAND — WALTER NOVASH — REGISTERED PROFESSIONAL ENGINEER

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS BUILT" PLAN OF THE POND WITHIN THIRTY DAYS OF COMPLETION.

SIGNATURE OF DEVELOPER — DATE May 15 1986

OWNER / DEVELOPER
BETHEL PRESBYTERIAN CHURCH
ATTN: DR. DAVID CHANGNAM CHO CHAIRMAN
BUILDING PROJECT COMMITTEE

boender associates inc.
consulting engineers
land surveyors
land planners
COURTHOUSE SQUARE
3565 ELLICOTT MILLS DRIVE
ELLICOTT CITY, MD. 21043
(301) 465-7777

BETHEL PRESBYTERIAN CHURCH
HOWARD COUNTY MARYLAND

DESIGNTECH · EAST
ARCHITECTS · PLANNERS · CONSULTANTS · WASHINGTON, D.C.

DATE	REVISIONS	REF	BY

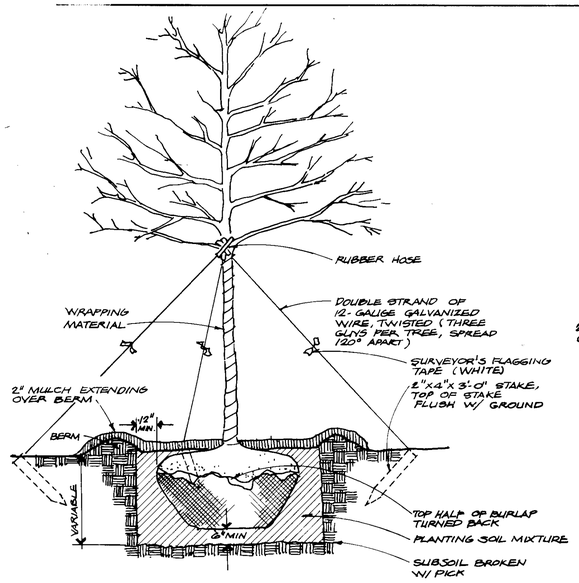
SHEET TITLE: S.W.M. POND SPECS.

DATE: | SCALE: AS SHOWN | CHECKED: | APPROVED:

DRAWING NO. C-5

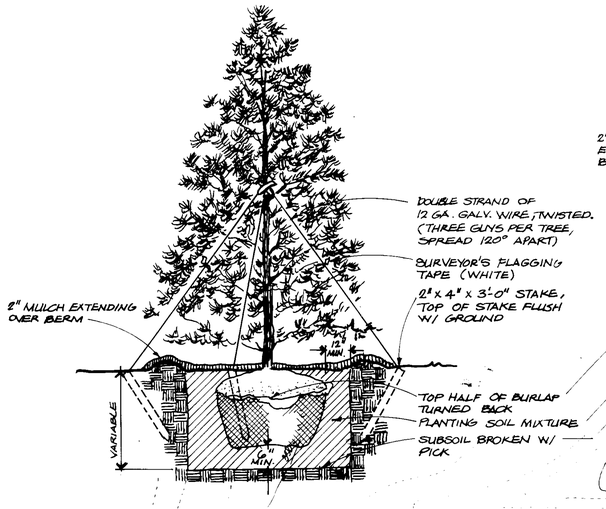
5 OF 6

SDP-85-143



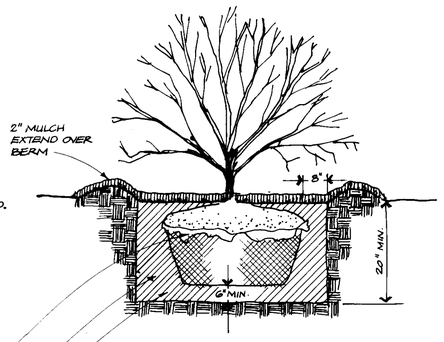
PLANTING & GUYING DETAIL

FOR DECIDUOUS TREES UNDER 4" CAL., 6' AND MORE IN HEIGHT
(NOT - TO - SCALE)



PLANTING & GUYING DETAIL

FOR EVERGREEN TREES BETWEEN 6' AND 12' IN HEIGHT
(NOT - TO - SCALE)

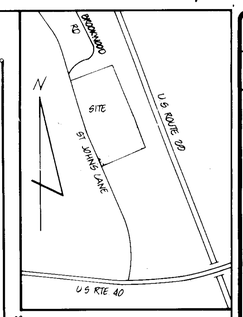


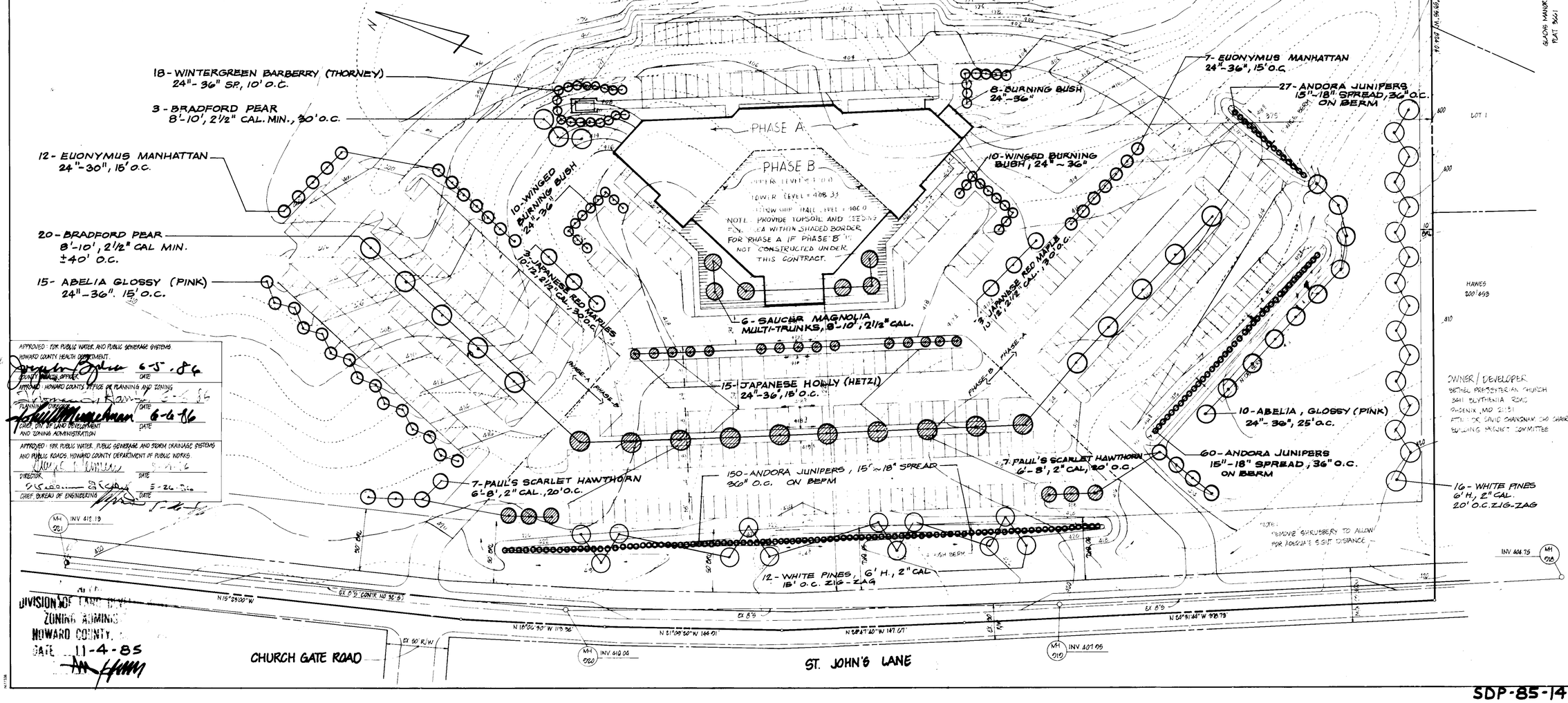
SHRUB PLANTING DETAIL

(NOT - TO - SCALE)

GENERAL NOTES :

1. ALL AREAS DISTURBED & NEWLY GRADED SHALL BE SODDED ON SLOPES 3:1 OR STEEPER, AND SEEDED ON ALL OTHER AREAS. IF SEEDING & SODDING CANNOT BE ACCOMPLISHED DURING CONSTRUCTION PERIOD (LIKE WINTER), PROVISIONS SHALL BE MADE TO PROTECT DISTURBED AREAS WITH ANCHORED MULCH, OR, JUTE MESH.
2. ALL PLANT SPECIMENS SHALL BE NURSERY GROWN & IN GOOD HEALTH & QUALITY.
3. LEGEND :
   - ⊙ = PLANTING INCL. IN PHASE - A CONSTRUCTION
   - ▨ = PLANTING INCL. IN PHASE - B CONSTRUCTION





APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.
DIRECTOR — DATE 6-5-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
PLANNING DIRECTOR — DATE 5-5-86
CHIEF, DIV. OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 6-6-86

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
DIRECTOR — DATE 5-20-86
CHIEF, BUREAU OF ENGINEERING — DATE 5-16-86

DIVISION OF LAND DEV.
ZONING & MINING
HOWARD COUNTY, MD.
DATE 11-4-85

DATE	REVISIONS	BY
4/16/86	ADDED WHITE PINES PER SDP REVIEW COMMENTS	A.R.

BETHEL PRESBYTERIAN CHURCH
3RD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGNTECH · EAST
ARCHITECTS PLANNERS CONSULTANTS WASHINGTON, D.C.

SHEET TITLE: LANDSCAPE PLANTING PLAN
SCALE: 1" = 40'
DATE: 1-14-85
DRAWING NO. C-6
6 OF 6

SDP-85-143

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 5-19-86

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

HOWARD SOIL CONSERVATION DISTRICT 5/19/86 — DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER — DATE 6-5-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

PLANNING DIRECTOR — DATE 6-6-86

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 6-6-86

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

DIRECTOR — DATE 5-24-86

CHIEF, BUREAU OF ENGINEERING — DATE 5-24-86

5-26-86

LIGHTING SCHEDULE

- POLE MOUNTED LIGHTING FIXTURE WITH DOUBLE FIXTURES (POLE 20' HIGH)
- POLE MOUNTED LIGHTING WITH SINGLE FIXTURE (POLE 20' HIGH)

NOTE: ABOVE FIXTURE ARE 400 W., METAL HALIDE

- BOLLARD TYPE FIXTURE
- ACCENT LIGHT

BUILDING ELEVATION - (SECTION A-A)

SCALE: 1" = 40'

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 11-4-85

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

SIGNATURE OF ENGINEER — DATE 5-15-86

I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS BUILT" PLAN OF THE POND WITHIN THIRTY DAYS OF COMPLETION.

SIGNATURE OF DEVELOPER — DATE May 15 1986

STATE OF MARYLAND — WALTER "HOWARD" WATSON — No. 7218 — REGISTERED PROFESSIONAL ENGINEER

GENERAL NOTES

1. TAX MAP: 24 , BLOCK: 5 , PARCEL : 848
2. DEED REFERENCE: 1127/230
3. EX. ZONING: R-20
4. PROPOSED SITE USE : RELIGIOUS CENTER.
5. AREA OF SITE: 28.0 AC.; AREA OF SUBMISSION :
6. SUBJECT TO B.A. CASE NO. 84-34 E
7. PUBLIC WATER AND PUBLIC SEWER ARE TO BE USED
8. PARKING TABULATIONS:
   REQUIRED: 1 PER 3 SEATS; 1000 ÷ 3 = 334 SEATS
   PROVIDED: 400 SPACES (PER B.A. CASE NO 84-34 E)
   INCLUDING 12 HANDICAPPED (12'×18')
   ALL OTHER SPACES ARE 9'×18'
9. ALL ONSITE DRIVEWAYS AND PARKING AREAS ARE PRIVATE.
10. LANDSCAPED ISLANDS IN PARKING AREA:
    AREA OF PARKING LOT : 1.7 AC. LANDSCAPED ISLAND AREA: 0.4 AC. OR 24%
11. AREA OF OPEN SPACE:
12. ST. JOHN'S LANE IS AN EXISTING, PUBLIC ROAD.
13. CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION/SURVEY DIVISION, 24 HRS. PRIOR TO BEGINNING WORK
14. ALL EXTERIOR LIGHTING SHALL BE DIRECTED/REFLECTED AWAY FROM ADJACENT RESIDENTIALLY ZONED PROPERTIES AND PUBLIC ROAD RIGHT-OF-WAYS.
15. LOWER LEVEL AND FELLOWSHIP LEVEL CAN NOT BE SERVICED BY GRAVITY SEWER.
16. H.C.E. DESIGNATES HANDICAPPED ENTRANCE
17. ALL SURROUNDING PROPERTIES ZONED R-20.
18. TOPOGRAPHY AND BOUNDARY SHOWN HEREON SUPPLIED BY THE ARCHITECT.

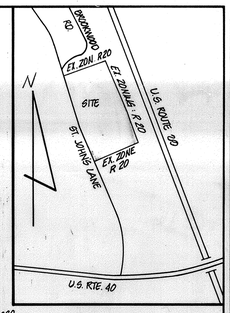
PHASED PARKING INFORMATION:
PHASE A : 198 SPACES
PHASE B : 150 SPACES
TOTAL : 400 SPACES

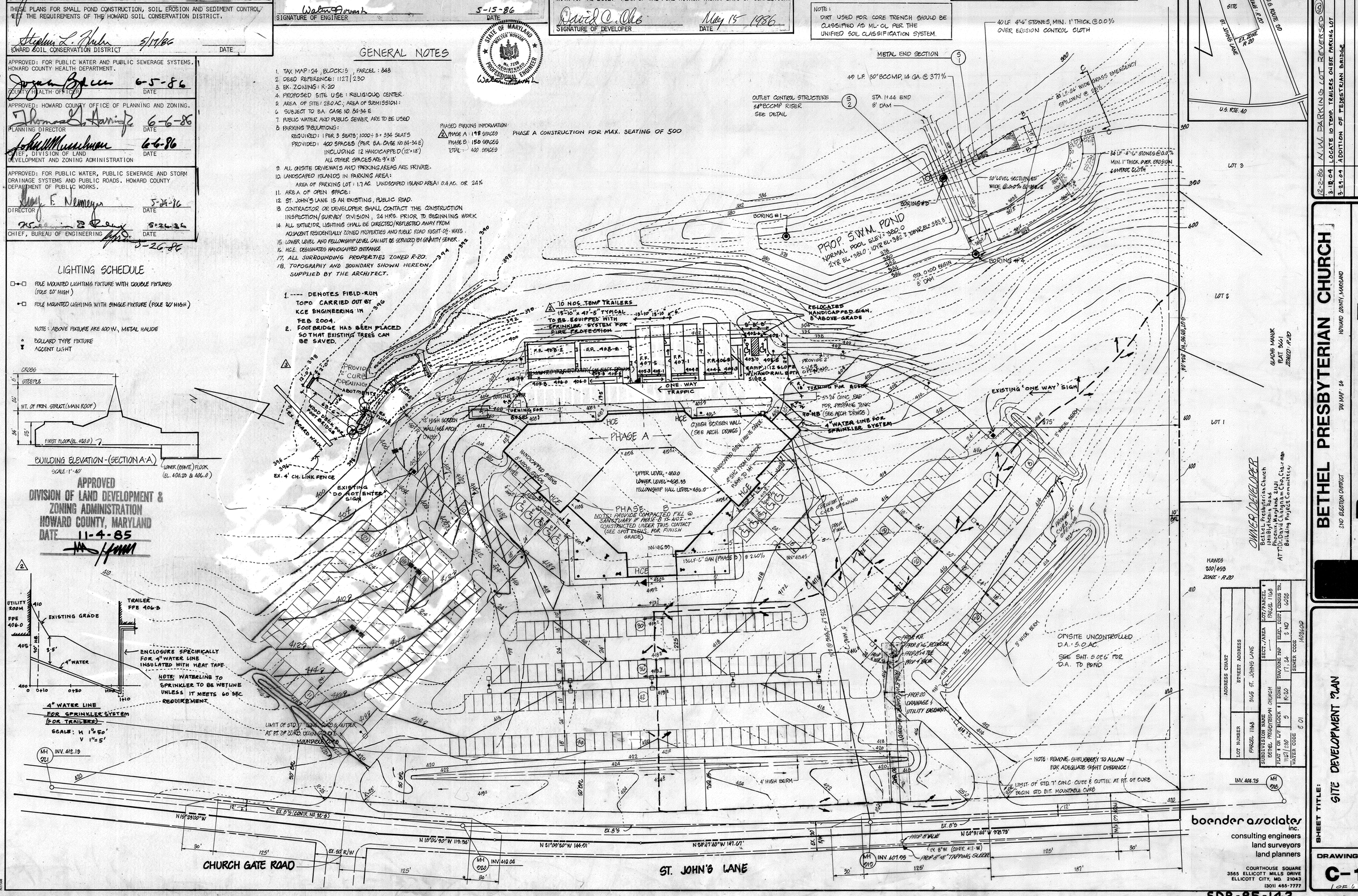
PHASE A CONSTRUCTION FOR MAX. SEATING OF 500

1. ---- DENOTES FIELD-RUN TOPO CARRIED OUT BY KCE ENGINEERING IN FEB 2004.
2. FOOTBRIDGE HAS BEEN PLACED SO THAT EXISTING TREES CAN BE SAVED.

NOTE: DIRT USED FOR CORE TRENCH SHOULD BE CLASSIFIED AS ML-OL PER THE UNIFIED SOIL CLASSIFICATION SYSTEM.

⚠2 NOTE: CONDITIONAL USE PETITION CASE NO. BA-03-05 C, WAS FILED AND APPROVED BY THE COUNTY FOR THE PROPOSED 10-TRAILER & BRIDGE PROJECT DATED 11/24/03





4" WATER LINE FOR SPRINKLER SYSTEM (FOR TRAILERS)

SCALE: H 1"=50' V 1"=5'

ADDRESS CHART					
STREET ADDRESS	3105 ST. JOHNS LANE	SECT./AREA	LOT/PARCEL #	PARCEL 1168	
LOT NUMBER	PARCEL 1168	SUBDIVISION NAME	BETHEL PRESBYTERIAN CHURCH	ZONE	R-20
PLAT # OR L/F	PLAT # 5401 L/F 1127/230	TAX/ZONE MAP	24	ELEC. DIST.	6 TH
WATER CODE	E 01	SEWER CODE	W2024.00	CENSUS TR.	6088

OWNER/DEVELOPER
Bethel Presbyterian Church
3105 St. Johns Lane
Ellicott City, Maryland 21043
Attn: Dr. David Chaigneau, Chairman
Building Project Committee

boender associates inc.
consulting engineers
land surveyors
land planners
COURTHOUSE SQUARE
3565 ELLICOTT MILLS DRIVE
ELLICOTT CITY, MD. 21043
(301) 465-7777

DATE	REVISIONS	BY
12-2-86	N.W. PARKING LOT REVERSED (6)	KCE
3-18-04	⚠1 LOCATE 10 TEMP. TRAILERS ON BET. PARKING LOT	KCE
5-21-04	⚠2 ADDITION OF PEDESTRIAN BRIDGE	KCE

BETHEL PRESBYTERIAN CHURCH
3RD MAP 24 — HOWARD COUNTY, MARYLAND

DESIGNTECH · EAST
ARCHITECTS · PLANNERS · CONSULTANTS · WASHINGTON, D.C.

SHEET TITLE: SITE DEVELOPMENT PLAN
DATE: 1-14-86 — SCALE: 1"=40' — CHECKED: — APPROVED:
DRAWING NO. C-1 1 OF 6

SDP-85-143

85018

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 5-19-86

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

HOWARD SOIL CONSERVATION DISTRICT 5/17/86 — DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT.

COUNTY HEALTH OFFICER — DATE 6-5-86

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

PLANNING DIRECTOR — DATE 6-6-86

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE 6-6-86

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAINAGE SYSTEMS AND PUBLIC ROADS. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

DIRECTOR — DATE 5-24-86

CHIEF, BUREAU OF ENGINEERING — DATE 5-26-86

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SIGNATURE OF ENGINEER — DATE 5-15-86

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SIGNATURE OF DEVELOPER — DATE May 15 1986

STATE OF MARYLAND — WALTER "HOWARD" BOWERS — No. 7239 — REGISTERED PROFESSIONAL ENGINEER

GENERAL NOTES

1. TAX MAP: 24, BLOCK: 5, PARCEL: 848
2. DEED REFERENCE: 1127/230
3. EX. ZONING: R-20
4. PROPOSED SITE USE: RELIGIOUS CENTER.
5. AREA OF SITE: 28.0 AC.; AREA OF SUBMISSION:
6. SUBJECT TO B.A. CASE NO. 84-34 E
7. PUBLIC WATER AND PUBLIC SEWER ARE TO BE USED
8. PARKING TABULATIONS:
   REQUIRED: 1 PER 3 SEATS; 1000 ÷ 3 = 334 SEATS
   PROVIDED: 400 SPACES (PER B.A. CASE NO 84-34 E) INCLUDING 12 HANDICAPPED (12'×18') ALL OTHER SPACES ARE 9'×18'
9. ALL ONSITE DRIVEWAYS AND PARKING AREAS ARE PRIVATE.
10. LANDSCAPED ISLANDS IN PARKING AREA:
    AREA OF PARKING LOT: 1.7 AC LANDSCAPED ISLAND AREA: 0.4 AC. OR 24%
11. AREA OF OPEN SPACE:
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16. H.C.E. DESIGNATES HANDICAPPED ENTRANCE
17. ALL SURROUNDING PROPERTIES ZONED R-20.
18. TOPOGRAPHY AND BOUNDARY SHOWN HEREON SUPPLIED BY THE ARCHITECT.

PHASED PARKING INFORMATION:
PHASE A: 208 SPACES
PHASE B: 150 SPACES
TOTAL: 358 SPACES

PHASE A CONSTRUCTION FOR MAX. SEATING OF 500

NOTE: DIRT USED FOR CORE TRENCH SHOULD BE CLASSIFIED AS ML-CL PER THE UNIFIED SOIL CLASSIFICATION SYSTEM.

NOTE: CONDITIONAL USE PETITION CASE NO. BA-03-05C, WAS FILED AND APPROVED BY THE COUNTY FOR THE PROPOSED 10-TRAILER & BRIDGE PROJECT DATED 11/24/03

1. ---- DENOTES FIELD-RUN TOPO CARRIED OUT BY KCE ENGINEERING IN FEB 2004.
2. FOOT BRIDGE HAS BEEN PLACED SO THAT EXISTING TREES CAN BE SAVED.

LIGHTING SCHEDULE

- POLE MOUNTED LIGHTING FIXTURE WITH DOUBLE FIXTURES (POLE 20' HIGH)
- POLE MOUNTED LIGHTING WITH SINGLE FIXTURE (POLE 20' HIGH)

NOTE: ABOVE FIXTURE ARE 400 W., METAL HALIDE

- BOLLARD TYPE FIXTURE
- ACCENT LIGHT

BUILDING ELEVATION - (SECTION A-A)
SCALE: 1"=40'

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 11-4-85

4" WATER LINE FOR SPRINKLER SYSTEM (FOR TRAILERS)
SCALE: H 1"=50' V 1"=5'

NOTE: WATERLINE TO SPRINKLER TO BE WETLINE UNLESS IT MEETS 60 SEC. REQUIREMENT

PROP. S.W.M. POND
NORMAL POOL ELEV. = 380.0
2YR EL. = 380.0, 10YR EL. = 382.2 & 100YR EL. 383.8

5 NOS. TEMP TRAILERS 12'×60'±40" TYPICAL TO BE EQUIPPED WITH SPRINKLER SYSTEM FOR FIRE PROTECTION.

NOTE:
1. HANDICAP RAMP SLOPE MAX. 1 IN 12.
2. MAX. DROP WITHOUT LANDING = 30"
3. RAILING HT. 34"-36"
4. RAILING < 4" SPACING

ONE WAY TRAFFIC

EXISTING 'ONE WAY' SIGN

PROVIDE CURB OPENINGS

RELOCATED HANDICAP SIGNS 8' ABOVE GRADE

PHASE A

PHASE B

NOTE: PROVIDE COMPACTED FILL @ SAND/CLAY IF PHASE B IS NOT CONSTRUCTED UNDER THIS CONTACT (SEE SPOT ELEVS. FOR FINISH GRADE)

UPPER LEVEL = 410.0
LOWER LEVEL = 406.33
FELLOWSHIP HALL LEVEL = 406.0

HANDICAPPED SIGN 7' ABOVE GRADE

METAL END SECTION

40 LF 4"ø STONES, MIN. 1' THICK @ 0.0% OVER EROSION CONTROL CLOTH

40 LF 30" BCCMP, 14 GA. @ 37.7%

OUTLET CONTROL STRUCTURE 54" BCCMP RISER SEE DETAIL

STA. 1+44 END 8' DAM

20 LF 26" WIDE GRASS EMERGENCY SPILLWAY @ 2.0%

10' LEVEL SECTION 60' WIDE @ 0.0% SLOPE

36 LF 4"-6" STONES @ 0.0% MIN. 1' THICK OVER EROSION CONTROL CLOTH

STA. 0+00 BEGIN 8' DAM

BORING #1

BORING #2

BORING #3

EX. TRAILER

EX. 8" CURB

EX. 4" WATER

EX. 8" SAN

EX. 4' CH. LINK FENCE

EXISTING DO NOT ENTER SIGN

EX. BOARD WALK

WOOD DECK FOOT BRIDGE

NEW ELECTRICAL CONC. PAD TO S-40 10'×5' (SEE ARCH. DRGS.)

EX. TRANSF.

EX. UTILITY POLE

TURNING FOR BUSES

HANDICAP RAMP (TYP.) W/HANDRAIL BOTH SIDES

PROVIDE 2' CURB OPENING

8' TURNING FOR BUSES

5'×25' CONC. PAD FOR PROPANE TANK

TO HB (SEE MECH. DRWGS.)

4" WATER LINE FOR SPRINKLER SYSTEM

CMU HIGH SCREEN WALL (SEE ARCH. DRWGS.)

RELOCATED HANDICAP SIGNS 8' ABOVE GRADE

HANDICAPPED SIGNS 8' ABOVE GRADE

4' HIGH BERM

3' WIDE BERM

ONSITE UNCONTROLLED D.A.: 5.0 AC.
SEE SHT. 5 OF 6 FOR D.A. TO POND

PROP. K.I. PROP. 6"ø REDUCER PROP. 6"×4" TEE PROP. 4" VALVE

PROP. 20' DRAINAGE & UTILITY EASEMENT

PROP. 8" SAN @ 0.40%

PROP. 8" SAN @ 2.60%

130 LF "C" SAN (PHASE B) @ 2.60%

INV. 416.90

INV. 418.45

INV. 407.05

PROP. 8" WM

PROP. 8" TAPPING SLEEVE

(X) 8"W (CONTR. NO. 32-B)

INV. 404.75

NOTE: REMOVE SHRUBBERY TO ALLOW FOR ADEQUATE SIGHT DISTANCE

LIMIT OF STD. 7" CONC. CURB & GUTTER AT PT. OF CURB BEGIN STD. BIT. MOUNTABLE CURB

INV. 412.19

INV. 412.04

N 15°23'00" W

N 18°06'30" W 119.92'

N 21°08'20" W 144.01'

N 23°47'40" W 147.67'

N 24°31'46" W 892.78'

CHURCH GATE ROAD

ST. JOHN'S LANE

EX. 60' R/W

EX. 8"S

EX. 8"W

EX. 30' R/W

12' ± EX. 8"S (CONTR. NO. 32-B)

50' BRL

125'

30'

157'

LOT 3

LOT 2

LOT 1

GLADE MANOR PLAT 3001 ZONED R-20

HAINES 200/459 ZONE: R-20

OWNER/DEVELOPER
Bethel Presbyterian Church
10455 Maple Ave.
Phoenix, Maryland 21131
ATTN: David Chaughn Chg, Chairman
Building Project Committee

ADDRESS CHART			
LOT NUMBER	STREET ADDRESS	SECT./AREA	CITY/PARCEL #
PARCEL 1165	9145 ST. JOHNS LANE		PARCEL 1165
SUBDIVISION NAME		ZONE	TAX/ZONE MAP
BETHEL PRESBYTERIAN CHURCH		R-20	17, 24
PLAT # OR L/F	BLOCK #	ELEC. DIST.	CENSUS TR.
11971/380	5	6 ND	6028
WATER CODE		SEWER CODE	
C 01		W-4/26.00	

boender associates inc.
consulting engineers
land surveyors
land planners
COURTHOUSE SQUARE
3565 ELLICOTT MILLS DRIVE
ELLICOTT CITY, MD. 21043
(301) 465-7777

REF	BY	DATE	REVISIONS
4	KCE	8-30-04	LOCATE & TEMP. TRAILERS ON EX. PARKING LOT
3	KCE	3-24-04	ADDITION OF PEDESTRIAN BRIDGE
2	KCE	3-12-04	LOCATE 10 TEMP. TRAILERS ON EXIST PARKING LOT
1		12-2-86	N.W. PARKING LOT REVERSED

BETHEL PRESBYTERIAN CHURCH
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
TAX MAP 24

DESIGNTECH · EAST
ARCHITECTS · PLANNERS · CONSULTANTS · WASHINGTON, D.C.

SHEET TITLE: SITE DEVELOPMENT PLAN
SCALE: 1"=40'
DATE: 1-14-86
CHECKED:
APPROVED:
DRAWING NO. C-1 (SHT 6 OF 6)

SDP-85-143

85018