

PLANT LIST - LANDSCAPE PLAN SITE 2

KEY	QTY.	BOTAHICAL HAME COMMON HAME	9125	COHP.	KEMAKK4
\bigcirc	12	ACER RUBKUM RED SUHSET RED SUHSET MAPLE	21/2-3'41	B 1 B	
(A)	5	QUERCUS PALUSTRIS PILI DAK	21/2-3"(4)	P8 P	
(+)	23	TILIA CORDATA GREENSPIRE GREENSPIRE UNDEN	21/2-3"	おより	
₩	2	CRATABOUS VIRIDIS MILHER KIHC' WHITER KIHG HAWTHORH	8-10'HT	B1 B	
\$	58	PIHUS STROBUS EASTERH WHITE PIHE	6-5'HT	B & B	SPACE 10' O.C. STAGGER
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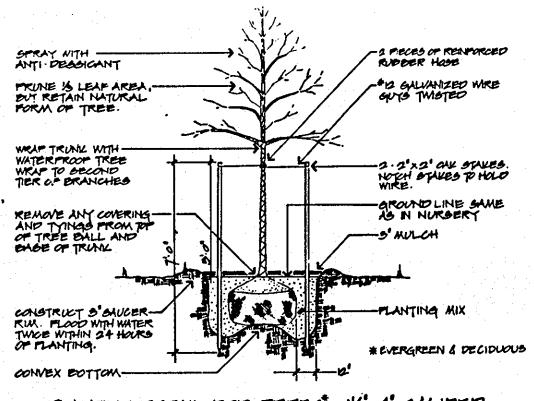
III PLANT LIST - FOREST CONSERVATION / SITE 2

	KEY	RTY.	BOTAHICAL HAME COMMOH HAME	6!ZE	MATTAN CONTROL	remarks
	<u>(20</u>	#1 5#	ACEK RUBRUM RED MAPLE	1"CAL 2"CAL	BLB	
		#0 =	PRAXILIUM PEHHMYLVAHICA	1"41-2"44	0.10	
	<u>a</u> 2a	#6#	RUBROUS PALUSTRIS PIH OAK	1" (AL 2"CAL	0+0	
	0	<i>≠</i> ≠0	LIRIODEHDROH TÜLIPIFERA TULIP POPLAK	1" CAL	8 + 8	
	B	#-4	AMELAHCHIER CAHADEH914 SERVICEBERRY	I"CAL	BID	
	\bigoplus	41	DOTRYA VIRGIHIAHA IKOHWOOD	じひし	8 + 8	
	Θ	#4	SASSAFRAS ALBIDUM SASSAFRAS	1"44.	BIB	
Ī	o	16	LINDERA BEHZOILI SPICEBLISH	18-24"	CH	SPACE 5'O.C. STACGER
	0	10	VIBURHUM DEHTATUM AKKOMWOOD VIBURHUM	18-24"	CAL	SPACE 5'OC STAGGER

GEHERAL HOTES / DETAILS & SPECIFICATIONS

NOTES:

- 1. Contractor to notify Miss Utility a minimum of 72 hours prior to digging. Telephone: 1-800-257-7777
- 2. The Landscape Architect is to be notified 48 hours before planting begins. The location of all plant material is to be approved in the field by the Landscape Architect.
- 3. This plan is to be used for planting only.
- 4. No tree or shrub planting pits are to be left open or unattended.
- 5 THE GROUND PLANE IN THE AFFORESTATION AREAS 15 TO BE CLEARED OF ALL INVASIVE PLANT MATERIAL. IF THE GROUND SOAKE DIRT HE AREA 15 TO BE MULCHED. TURF WILL HOT BE



SPRAY WITH -----9" MULCH (I" AROUND CONSTRUCT S'SAUCER-RIM. PLOOD WITH WATER TWICE WITHIN 24 HOURS OF PLANTING. REMOVE BURLAP FROM-TOP OF BALL. aanvex eattam. PLANTING DETAIL FOR EVERGREEN AND DECIDIOUS SHRUBS

PLANTING DETAIL FOR TREES - 14-4 CALIPER

ARCHITECTURAL

ARCHITECTS AND CONSTRUCTION CONSULTANTS

9192 RED BRANCH ROAD, SUITE 300

COL MBIA, MARYLAND 21045 (410) 995-4067

TECHNOLOGIES, INC.

IN ASSOCIATION WITH:

CIVIL & GEOTECH ENGINEER: STRUCTURAL ENGINEER: MECHANICAL & ELECTRICAL ENGINEER: FIRE PROTECTION ENGINEER:

LANDSCAPE REQUIREMENTS /SITE 2

- 1. HOLL-RESIDEHTIAL TO RESIDEHTIAL / TYPE C 1580 LF -165 LF EX. TREES TO REMAIL -490 LF PROPOSED AFFORESTATION * SEE NOTE BELOW
- 975 LF @ IT/40LF = 24 TREES 1E/20LF = 49 EVERGKEEHS 2. HOH-RESIDENTIAL TO ROAD /TYPE B
- 139LF @ IT/50LF = 3 1E/40 LF = 4 3. SCREEH SWM. FACILITY/TYPE B

HET TRACT AREX: 4.75 AC

AFFORESTATION MILIMUM: .71 AC.

FOREST TO BE CLEARED: 16AC.

FOREST TO BE RETAILED: .32 KG.

- 180 LF @ 17/50 LF = 9 1E/40 LF = 5
- 4. PROVIDE I TREE PER 20 PARKING SPACES 201 - 20 = 10 TKEED

TOTAL REQ'D .: 41 TREES
58 EVERGREEHS

AFFORESTATION REQUIREMENTS / SITE 2

EXISTING FOREST ON HET TRACT AREA: .48 AC.

TOTAL AFFORESTATION REQ'D .: .55AC.

TOTAL PROVIDED = 41 TREES (2 MIHOR)
58 EVERGREENS

III NOTE: DUE TO THE WATER BOOSTER STATION INSTALLATION, AFFORESTATION AREA 'A' WAS DIST-DRBED. AS A RESULT, AREA 'A' HAS BEEN ELIMINATED AS PART OF THIS REDUNE REVISION. A TYPE 'C' LANDSCAPE BUFFER ALONG THE 494 LF PROFERTY LINE IS REQUIRED. UNDISTURBED TREES TYPE'C'REQUIREMENT EXTRA

SHADE TREES EVERGREENS

+ 18 EXTRA SHADE TREES IS EQUIVALENT TO 36 EVERGREENS WHICH EXCEEDS THE REQ'MI

INOTE: A FEE-IN-LIEU PAYMENT IN THE AMOUNT OF \$4,890.00 WAS PAID INTO THE HOWARD COUNTY FOREST CONSERVATION FUND ON 3/19/01 FOR 0.4 ACRES (10,300 SF) OF AFFORESTATION PLANTING THAT WAS ABANDONED WITH THIS RED-LINE REVISION.

Maintenances The Contractor shall be responsible during the contract and up to the time of acceptance, for keeping the planting and work incidintal therte in good condition, by replanting, plant replacement, watering, weeding, cultivating, pruning and apraying, restaking and cleaning up and by performing all other necessary operations of care for promotion of good plant growth so that all work is in actificatory condition at time of acceptance, at neadditional cost to the Owner.

15-211 CAL TREES (.15 × 100 = 15) 60% DOMHAHT = 39 40% ULIDER STORY = 26 50 - 1" CAL TREES (25 × 200:50) 60% DOMIHAUT = 13 40% UNDERSTORY = 9 22 - 1" CAL TREES (.11 X 200 = 22)

AREA (6) = .1 AC (2718 SF) 20% LAHDSGAPE OPTION (40 TREES PER 10000 SF) (120 SHRUBS PER 10000 SF) IT MAJOR TREES - 2"CAL.

98 TREES (63 DOMINANT/35 UNDERSTORY)

1.21 AC (9,148 SF) 33 TREES (24 DOMINANT / 9 UNDERSTORY) CONSTRUCTION SEQUENCE

1. Call Miss Utility. Coordinate all work with instructions shown on the site and sediment control plans.

AFFORESTATION PROVIDED: -AREA (A) = 11 AC (16300 SF)

AREA (D) = 1/140 (4970 6F)

- 2. Stake out parking lot. Stake and flag the limits of disturbance and afforestation area.
- 3. Notify Howard County Department of Planning and Zoning at (410) 313-2354 and Human & Rohde, Inc. at (410) 825-3885 to inspect the limits of disturbance and area to be afforested.
- 4. Selectively clear the wooded area adjacent to afforestation area C. Remove all invasive species of vines and groundcover and any plant material that is dead or diseased. Tree stumps are to remain. Consult Human & Rohde, Inc. for direction.
- 5. Install a three strand barbed wire fence and appropriate forest conservation signs along areas indicated on the
- 6. Install all sediment control devices.
- 7. Begin grading.
- 8. Monitor conditions of trees to be retained during construction and make corrective measures when appropriate. Decisions are to be made in conjunction with qualified professionals.
- 9. Plant afforestation areas and notify Howard County Office of Planning and Zoning when planting is completed. Planting should occur between October and April.
- 10. After construction is completed, continue to monitor retained trees to insure survival. The edge (15') of the surviving forest stand should be adjusted through selective clearing, thinning, pruning and removal of species susceptible to windthrow. Remove dead or diseased trees and damaged vegetation.
- 11. Remove all temporary protective devices (three strand fence and signage) and sediment control devices. Coordinate with sediment control plan.

SURVIVAL REQUIREMENT OF AFFORESATION AREAS

The minimum survival rate shall be 75% of the total number of trees planted per acre at the end of the three-year maintenance period. Wild tree seedlings from natural regeneration on the planting site may be counted towards the total survival number If they are healthy, native species at least 12 inches tall.

ALICHOR POSTS SHOULD BE MILIMUM 2" STEEL 'LL'
CHAHHEL OR 2 X 2" TIMBER 6' IH LEHGTH. ATTACH FLAG -STREWNERS TO BARBED WIRE FELICE AHCHOR POSTS MUST BE WITH WIRE CLIPS OR HUSTALLED TO A DEPTH OF HO LESS THAN 1/3 OF THE TOTAL HT. OF THE POST.

HOTES: FOREST PROTECTION DEVICE ONLY
. RETENTION AREA TO BE SET AS PART OF THE REVIEW PROCESS
. BOULD ARIES OF RETENTION AREA SHOULD BE STAKED A FLAGGED PRIOR TO 149TALLIHG DEVICE . AVOID ROOT DAMAGE WHEH PLACING AICHOR FOOTS · BAKBED WIRE SHOULD BE SECURELY ATTACHED TO POSTS. DEVICE SHOULD BE PROPERLY MAINTAINED DURING CONSTRUCTION PROTECTIVE SIGNAGE IS ALSO RECOMMENDED.

THREE STRANDED BARBED WIRE PENCE HUMAN & ROHDE, INC. Landscape Architects 110 E. Pennsylvania Avenue

> Towson, Maryland 21286 [410] 825 - 3885 **REVISIONS** REVISED AS PER COMMEHTS 7-13-95 1 4/4/01 - DECETION OF AFFORESTATION AREA (A) AND PLANT QUANTITY CHANGES.

FOREST RETENTION APPORESTATION AREA PROTECTION SIGN 616HAGE — Min 11°——— **FOREST** Forest **Conservation Area** RETENTION **AREA** MACHLNERY, DUMPING REFORESTATION OR STORAGE OF **PROJECT** ANY MATERIALS IS **PROHIBITED**

FOKEST CONSERVATION SIGHS

DESIGN CERTIFICATION

VIOLATORS ARE SUBJECT TO FINES AS IMPOSED BY THE

MARYLAND FOREST

CONSERVATION ACT OF

DATE

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

SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) Kenneth M. Johns

Trees for Your

Future

OWNER'S/DEVELOPER'S CERTIFICATION

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

SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE)

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

3 -8 - 94

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

LAND DEVELOPMENT

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

2/25/91

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

DATE U. S. SOIL CONSERVATION SERVICE

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

LAHDSCAPE / FOREST COHSERVATION 10 OF 56 DERILG - SITE 2 CAPITAL HOWARD COUNTY PROJECT NO. PUBLIC SAFETY COMPLEX - PHASE 2

SCAGGSVILLE ANNEX 11226 ROUTE 216

DRAWING NO. C-9 of 14 LAUREL, MARYLAND 20707

DATE: 7-16-93

EBA ENGINEERING, INC. QODESH ENGINEERING SERVICES, INC. BHARGAVA INTERNATIONAL, INC. STANTON ENGINEERING

SDP 93.66

PPROVED BY:

<u>SPECIFICATIONS</u>

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

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.

EARTH FILL

MATERIAL - THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6", FROZEN OR OTHER 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.

<u>COMPACTION</u> — 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 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.

WHERE A MINIMUM REQUIRED DENSITY IS SPECIFIED, IT SHALL NOT BE LESS THAN 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN ?2% OF THE OPTIMUM. EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY. AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99.

CUT OFF TRENCH - THE CUTOFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE BOTTOM WIDTH OF THE TRENCH SHALL BE GOVERNED BY THE EQUIPMENT USED FOR EXCAVATION. WITH THE MINIMUM WIDTH BEING FOUR FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

STRUCTURE 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 FOUR 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 FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE OR PIPE, UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE.

PIPE CONDUITS

ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

CORRUGATED METAL PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR CORRUGATED METAL PIPE:

1. MATERIALS - (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. STEEL PIPES WITH POLYMERIC COATINGS SHALL HAVE A MINIMUM COATING THICKNESS OF 0.01 INCH (10 MIL) ON BOTH SIDES OF THE PIPE. THE FOLLOWING COATINGS OR AN APPROVED EQUAL MAY BE USED: NEXON, PLASTI-COTE, BLAC-KLAD, AND BETH-CU-LOY. COATED CORRUGATED STEEL PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M-245 AND M-246.

MATERIALS - (ALUMINUM COATED STEEL PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-274 WITH WATERTIGHT COUPLING BANDS OR FLANGES. ANY ALUMINUM 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 OR FLANGES. 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 BETWEEN 4

- 2. 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.
- 3. <u>CONNECTIONS</u> 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. ANTI-SEEP COLLARS SHALL BE CONNECTED TO THE PIPE IN SUCH A MANNER AS TO BE COMPLETELY WATERTIGHT. DIMPLE BANDS ARE NOT CONSIDERED TO BE WATERTIGHT.

ALL CONNECTIONS SHALL USE A RUBBER OR NEOPRENE GASKET WHEN JOINING PIPE SECTIONS. THE END OF EACH PIPE SHALL BE RE-ROLLED AN ADEQUATE NUMBER OF CORRUGATIONS TO ACCOMMODATE THE BAND WIDTH. THE FOLLOWING TYPE CONNECTIONS ARE ACCEPTABLE FOR PIPES LESS THAN 24" IN DIAMETER: FLANGES ON BOTH ENDS OF THE PIPE, A 12" WIDE STANDARD LAP TYPE BAND WITH 12" WIDE BY 3/8" THICK CLOSED CELL CIRCULAR NEOPRENE GASKET; AND A 12" WIDE HUGGER TYPE BAND WITH 0-RING GASKETS HAVING A MINIMUM DIAMETER OF 1/2" GREATER THAN THE CORRUGATION DEPTH. PIPES 24" IN DIAMETER AND LARGER SHALL BE CONNECTED BY A 24" LONG ANNULAR CORRUGATED BAND USING RODS AND LUGS. A 12" WIDE BY 3/8" THICK CLOSED CELL CIRCULAR NEOPRENE GASKET WILL BE INSTALLED ON THE END OF EACH PIPE FOR A TOTAL OF

HELICALLY CORRUGATED PIPE SHALL HAVE EITHER CONTINUOUSLY WELDED SEAMS OR HAVE LOCK SEAMS WITH INTERNAL CAULKING OR A NEOPRENE BEAD.

- 4. BEDDING THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.
- 5. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL".
- 6. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

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

- 1. MATERIALS REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM DESIGNATION C-361.
- 2. BEDDING ALL REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING 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 OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 3 INCHES, 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. THE FIRST JOINT MUST BE LOCATED WITH 2 FEET FROM THE
- 4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL".

5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

POLYVINYL CHLORIDE (PVC) PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR POLYVINYL CHLORIDE (PVC) PIPE:

- 1. MATERIALS PVC PIPE SHALL BE PVC-1120 OR PVC-1220 CONFORMING TO ASTM D-1785 OR ASTM D-2241.
- 2. JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS SHALL BE COMPLETELY
- 3. <u>BEDDING</u> 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
- 4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL".
- 5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

CONCRETE

CONCRETE SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 608, MIX NO.

ROCK RIPRAP

ROCK RIPRAP SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 905.

THE RIPRAP SHALL BE PLACED TO THE REQUIRED THICKNESS IN ONE OPERATION. THE ROCK SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL INSURE THE RIPRAP 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 RIPRAP AND SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 919.12.

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 PARAT 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 COMPACTING 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.

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, 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.

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.

OPERATION, MAITENANCE AND INSPECTION

INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER(S) AND ANY HEIRS, SUCCESOR OR ASSIGNS SHALL BE RESPOSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER (S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR

DESIGN CERTIFICATION

"I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/ SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION." 2/19/1

SIGNATURE OF ENGINEER

(PRINT NAME BELOW SIGNATURE) Kenneth M. Johns

SIGNATURE OF DEVELOPER

OWNER'S/DEVELOPER'S CERTIFICATION

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

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

(PRINT NAME BELOW SIGNATURE) Daneil W Bennett

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Just Suth	3/24/99
A) CHIEF, DIVISION OF COMMUNITY PLANNING AND	3/29/94
A/CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE. STORM DRAINAGE SYSTEMS AND PUBLIC ROADS

	HOWARD COUNTY DEP	ARTMENT OF PUBI	LIC WORKS
lames	n Ilm	• •	2/25/9
DIRECTOR	AU OF ENGINEERING		DATE 2/25/2
CHIÉF, BÛRÊ	AU OF ENGINEERING		DATE

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

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

POND SPECIFICATIONS

SCAGGSVILLE ANNEX

11226 ROUTE 216

LAUREL, MARYLAND 20707

11 OF 56

HOWARD COUNTY PROJECT NO. PUBLIC SAFETY COMPLEX - PHASE II

DATE: 8-25-93

DRAWING NO. C-10 of 14

ARCHITECTURAL TECHNOLOGIES, INC.

ARCHITECTS AND CONSTRUCTION CONSULTANTS 9192 RED BRANCH ROAD, SUITE 300 COLUMBIA, MARYLAND 21045 (410) 995-4067 IN ASSOCIATION WITH:

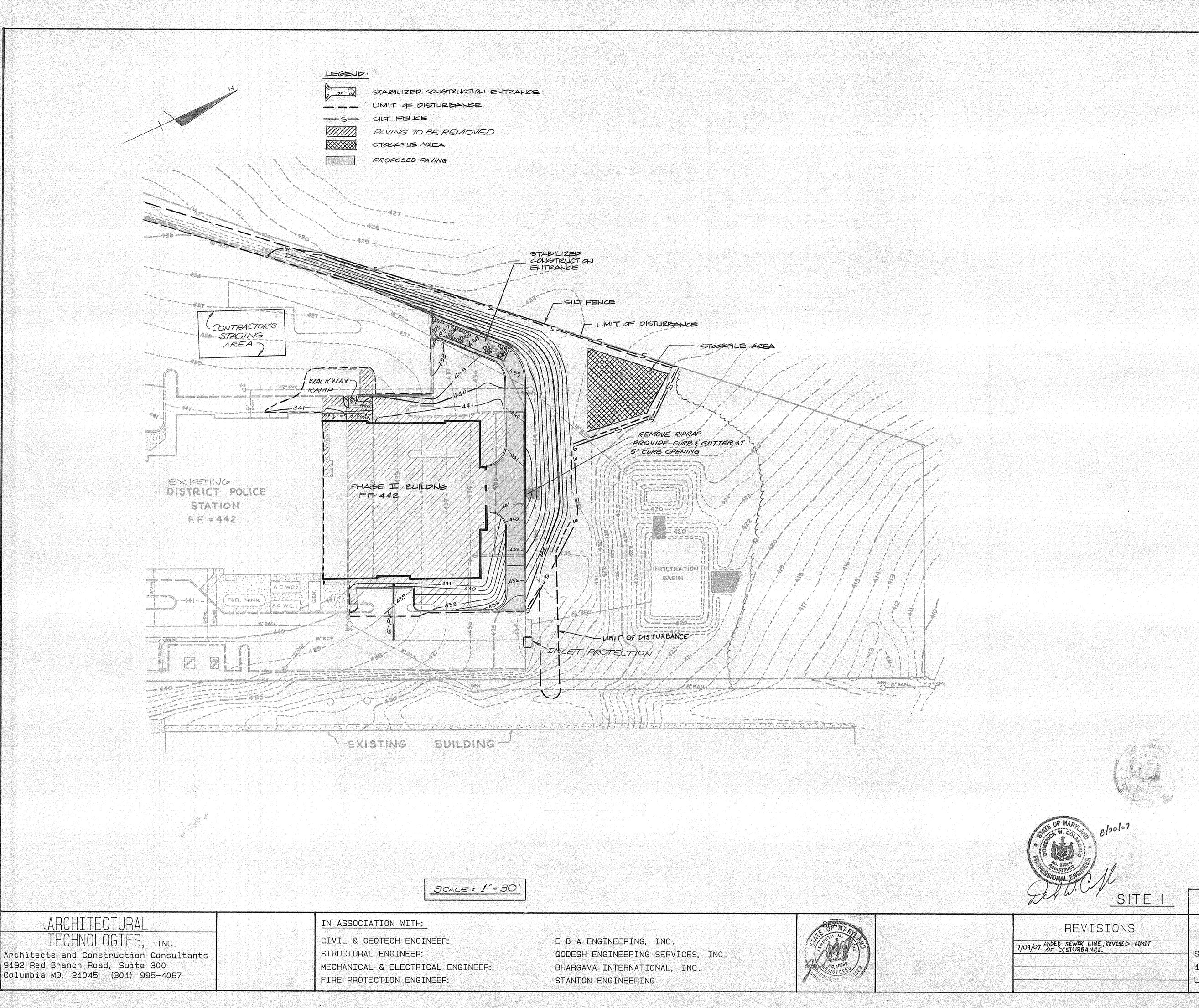
CIVIL & GEOTECH ENGINEER: STRUCTURAL ENGINEER: MECHANICAL & ELECTRICAL ENGINEER: FIRE PROTECTION ENGINEER:

EBA ENGINEERING. INC. QODESH ENGINEERING SERVICES. INC. BHARGAVA INTERNATIONAL, INC. STANTON ENGINEERING



L. CUBAS J. PLUM K. JOHNS APPROVED BY:

REVISIONS



DESIGN CERTIFICATION I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. MD REGISTRATION NO. 10989 KENNETH MIJOHNS (P.E) R.L.S. OR R.L.A. (CIRCLE) OWNER'S/DEVELOPER'S CERTIFICATION "I/WE HEREBY CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND 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 PRINTED NAME AND TITLE APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT. 3-8 -94

Achief, Division of Community Planning and Coff Date Land Development

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

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

DIRECTOR DATE

DIRECTOR DATE

2/25/94

2/25/94

CHIEF, BUREAU OF ENDINEERING DATE

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

APPROVED DATE

REVIEWED FOR HOWARD S.C.D.

AND MEETS TECHNICAL REQUIREMENTS

Patricia Egles /65.
SIGNATURE

U.S. SOIL CONSERVATION SERVICE

EROSION & SEDIMENT CONTROL PLAN

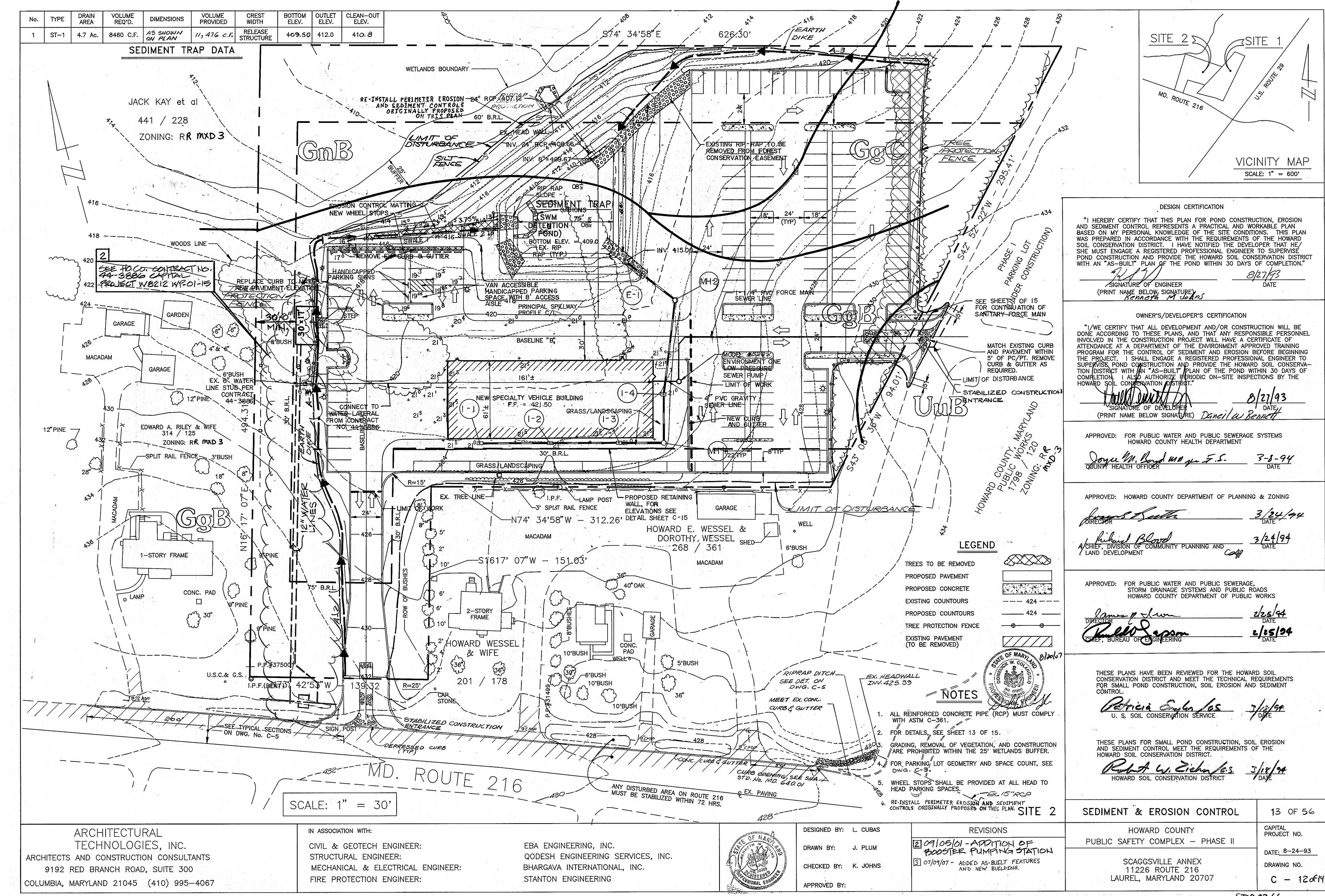
HOWARD COUNTY

PUBLIC SAFETY COMPLEX — PHASE II

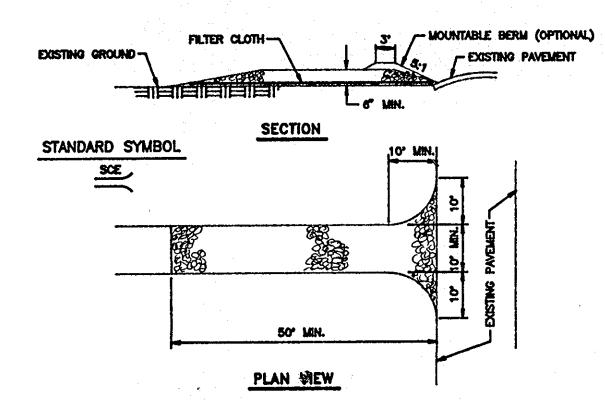
SCAGGSVILLE ANNEX 11226 ROUTE 216 LAUREL, MD. 20707 PROJECT NO. C - 0227 DATE: 8-25-93 DRAWING NO. C-110614

12 OF 56

CAPITAL



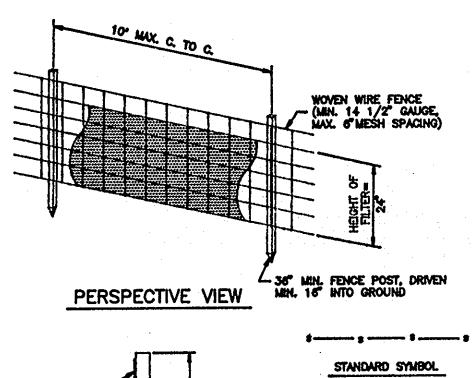
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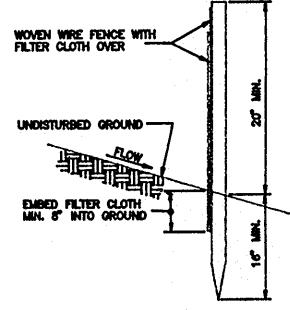


CONSTRUCTION SPECIFICATIONS:

- 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 RESIDENTIAL 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 INGRESS OR EGRESS OCCURS.
- 5. FILTER CLOTH TO BE PLACED OVER THE ENTIRE AREA PIYOR TO PLACING OF STONE. FILTER CLOTH 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 WAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS—OF—WAY NUST BE REMOVED IMMEDIATELY.
- 8. WASHING WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS—OF—WAYS. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT
- 9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE





CONSTRUCTION NOTES FOR

- FABRICATED SILT FENCE
 WOVEN WIRE FENCE TO BE FASTENED SECURELY
- TO FENCE POSTS WITH WIRE TIES OR STAPLES.

 2. FILTER CLOTH TO BE FASTENED SECURELY TO

WOVEN WIRE FENCE WITH TIES SPACED EVERY

- 24° AT TOP AND BOTTOM.

 3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED
- BY 6" AND FOLDED.

 4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN BULGES DEVELOP

IN THE SILT FENCE.

POSTS: STEEL (EITHER T OR U TYPE) OR 2" HARDWOOD

FENCE: WOVEN WIRE, 14 1/2 GAUGE,
6" MAX. MESH OPENING

FILTER CLOTH: FILTER X, MIRAFI 100X,
STABLINKA T140N OR APPROVED EQUAL

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

SILT FENCE

SECTION

ARCHITECTURAL
TECHNOLOGIES, INC.
ARCHITECTS AND CONSTRUCTION CONSULTANTS
9192 RED BRANCH ROAD, SUITE 300
COLUMBIA, MARYLANC 21045 (410) 295-4067

IN ASSOCIATION WITH:

CIVIL & GEOTECH ENGINEER:
STRUCTURAL ENGINEER:
MECHANICAL & ELECTRICAL ENGINEER:
FIRE PROTECTION ENGINEER:

CUT OR FILL SLOPE -

CROSS SECTION

CONSTRUCTION SPECIFICATIONS

1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.

4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED, SAFE OUTLET.

6. STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH IF NOT IN SEEDING SEASON OR (B) FLOW CHANNEL PER THE CHART BELOW.

GRADE

TREATMENT

TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.

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.

FLOW CHANNEL STABILIZATION

B. AN 8"(MIN.) THICK LAYER OF 4-8" RIP-RAP PRESSED INTO THE SOIL

EARTH DIKE

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

SEED AND STRAW MULCH

C. APPROVED EQUIVALENTS MAY BE SUBSTITUTED FOR ANY OF THE ABOVE WATERIALS.

2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.

c - FLOW WIDTH
d - FLOW DEPTH

DIKE B

SEED AND STRAW MULCH

SEED USING JUTE OR EXCELSIOR; SOD; 2" STONE

LINED RIP-RAP 4-8

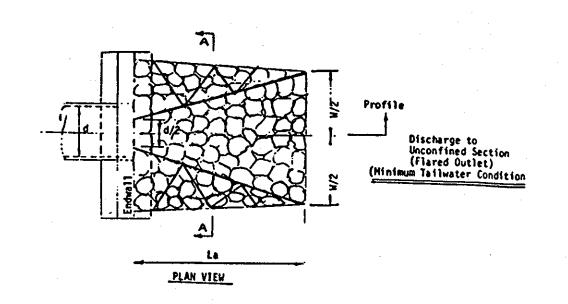
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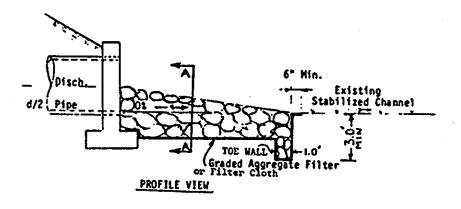
EBA ENGINEERING, INC.

QODESH ENGINEERING SERVICES, INC.

BHARGAVA INTERNATIONAL, INC.

STANTON ENGINEERING





Original Grade

RIPRAP OUTLET PROTECTION-I

CROSS SECTION A-A

SEQUENCE OF CONSTRUCTION

- 1. OBTAIN GRADING PERMIT FROM HOWARD COUNTY DEPARTMENT OF INSPECTORS, LICENSES AND PERMITS. (3 days)
- COORDINATE SEQUENCE OF OPERATIONS WITH SEQUENCE OF CONSTRUCTION ON DWG C-9.
- 3. INSTALL ALL SEDIMENT CONTROL MEASURES STABILIZED CONSTRUCTION ENTRANCES, SILT FENCE, EARTH DIKE, SEDIMENT TRAPS, ETC. AS SHOWN ON PLANS. ON SITE 2 INSTALL RELEASE STRUCTURE AND 24"RCP; TEMPORARILY PLUG 3" & 8" DIAM. ORIFICES. (10 days)
- 4. DEMOLISH AND DISPOSE EXISTING CURB AND GUTTER AND PAVEMENTS AS SHOWN ON PLANS. (3 days)
- 5. PERFORM GRADING. INSTALL ALL UTILITIES; CONSTRUCT BUILDING, CONSTRUCT ACCEL AND DECEL LANES, CONSTRUCT PARKING LOT AND ROADWAYS, PROVIDE TEMPORARY STABILIZATION. (8 MHs.)
- 6. THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING ALL SEDIMENTS ATTRIBUTED TO HIS/HER WORK, FROM EXISTING BASIN.
- 7. WHEN SITE IS STABILIZED, REMOVE TEMPORARY ORIFICE PLUGS.
 INSTALL 3" PERFORATED PVC LOW FLOW PIPE, EXCAVATE
 DETENTION POND TO FINAL GRADING AND REPAIR RELEASE
 STRUCTURE TO CONFORM, TO ITS FINAL DESIGN. (2 days)
- 8. PROVIDE PERMANENT STABILIZATION. (1 day)

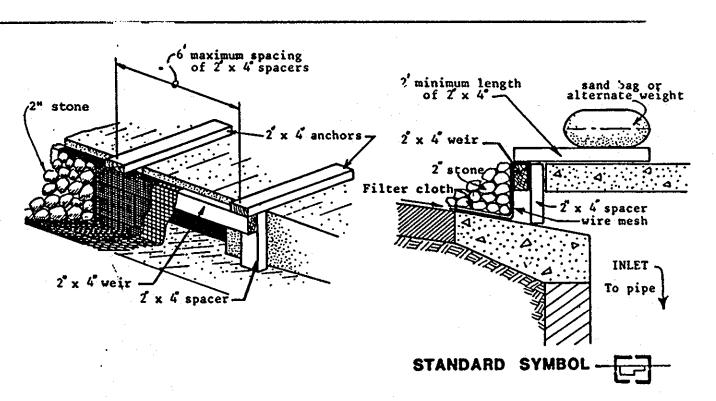
L. CUBAS

J. PLUM

K. JOHNS

9. UPON APPROVAL OF THE EROSION/SEDIMENT CONTROL INSPECTOR REMOVE ALL SEDIMENT CONTROL DEVICES. (1 day)

REVISIONS



CURB INLET PROTECTION DETAIL

DESIGN CERTIFICATION

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

SIGNATURE OF ENGINEER
(PRINT NAME BELOW SIGNATURE)

KENNETH M. JUANS

1 /1. (3)/15

OWNER'S/DEVELOPER'S CERTIFICATION

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

SIGNATURE OF DEVELOPER DATE (PRINT NAME BELOW SIGNATURE) Daneil W Bennett

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

COUNTY HEALTH OFFICER DATE DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

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

DIRECTOR 2/25/94

DATE

2/25/94

DATE

DATE

DATE

DATE

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

U. S. SOIL CONSERVATION SERVICE

JANE 10 DATE

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

HOWARD SOIL CONSERVATION DISTRICT

DETAILS

CAPITAL PROJECT NO.

HOWARD COUNTY
PUBLIC SAFETY COMPLEX - PHASE II

SCAGGSVILLE ANNEX 11226 ROUTE 216 LAUREL, MARYLAND 20707

C-/30F14

DATE: 8-25-93

SDP .93.66

GENERAL NOTES FOR SEDIMENT & EROSION CONTROL

- 1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION, (313-1855).
- 2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVSIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL". AND REVISIONS THERETO.
- 3. FOLLOWING INITIAL SOIL DISTURBANCE OR 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 CONTROL 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 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- 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.

10.47 AC 4.0 AC. 2.5 AC 1.5 AC

6415 CU. YDS.

6242 CU. YDS.

- 7. SITE ANALYSIS:
 - TOTAL DISTURBED AREA OF SITE AREA DISTURBED
 - AREA TO BE ROOFED OR PAVED
 - AREA TO BE VEGETATIVELY STABILIZED TOTAL CUT
 - TOTAL FILL OFFSITE WASTE/BORROW AREA LOCATION
- 8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- 9. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- 10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING, OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- 11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

PERMANENT SEEDING SPECIFICATIONS

- 1. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED
- 2. SEEDED BED PREPARATION THE TOP LAYER OF SOIL SHALL BE LOOSENED BY DISCING OR RAKING (SHALL BE DONE ON CONTOUR) TO A DEPTH OF AT LEAST 3" BEFORE SEEDING OCCURS, APPLY TWO (2) TON PER ACRE OF LIME AND 1000 LBS. PER ACRE OF 10-10-10 FERTILIZER OR EQUIVALENT. THOROUGHLY MIX INTO SOIL TO A MINIMUM OF 3".
- 3. SEEDING METHOD OF APPLICATION APPLY SEED UNIFORMLY WITH A CYCLONE SEED DRILL, CULTIPACKER SEEDER OR HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
- 4. SEEDING USE 50% KENTUCKY BLUEGRASS, 40% PENNLAWN CREEPING RED FESCUE AND 10% OF RED TOP AT THE RATE OF 90 LBS. PER ACRE. PERMANENT SEEDING TO BE DONE ONLY DURING THE PERIOD OF 2/1 TO 4/30 AND 8/15 TO 10/31.
- 5. MULCHING USE CLEAN, UNWEATHERED, UNCHOPPED SMALL GRAIN STRAW AT THE RATE OF 1 1/2 TO 2 TONS PER ACRE ANCHORED DOWN WITH CUTBACK ASPHALT AT THE RATE OF 5-8 GALLONS PER 1000 SQ. FT.

SODDING

CLASS OF TURFGRASS SOD SHALL BE MARYLAND OR VIRGINIA STATE CERTIFIED. OR MARYLAND OR VIRGINIA STATE APPROVED SOD. SOD SHALL BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD SHALL BE LAID ON SOIL PREPARED IN ACCORDANCE WITH NOTE 2 PERMANENT SEEDING. SOD IS TO BE LAID WITH THE LONG EDGES PARALLEL TO THE CONTOUR WITH STAGGERED JOINTS WITH ALL ENDS TIGHTLY ABUTTING AND NOT OVERLAPPING. SOD SHALL BE ROLLED AND THOROUGHLY WATERED WITHIN EIGHT HOURS OF INSTALLATION. DAILY WATERING TO MAINTAIN 4 INCH DEPTH OF MOISTURE FOR THE FIRST WEEK IS REQUIRED IN THE ABSENCE OF RAINFALL. SOD IS NOT TO BE APPLIED ON FROZEN GROUND.

TEMPORARY SEEDING SPECIFICATIONS

- 1. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED
- 2. SEEDED BED PREPARATION THE TOP LAYER OF SOIL SHALL BE LOOSENED BY DISCING OR RAKING (SHALL BE DONE ON CONTOUR) TO A DEPTH OF AT LEAST 3" BEFORE SEEDING OCCURS, APPLY TWO (2) TON PER ACRE OF LIME AND 1000 LBS. PER ACRE OF 10-10-10 FERTILIZER OR EQUIVALENT. THOROUGHLY MIX INTO SOIL TO A MINIMUM OF 3". APPLY 2" OF TOPSOIL.
- 3. SEEDING METHOD OF APPLICATION APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER DRILL, CULTIPACKER SEEDER OR HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
- 4. SEEDING FOR THE PERIOD 2/1 4/30 AND 8/15 11/30 USE ITALIAN OR PERENNIAL RYEGRASS 40 LBS./ACRE OR .92 LBS./1000 SQ. FT. DURING THE PERIOD 5/1 - 8/14 USE MILLET 40 LBS./ACRE OR .92 LBS./1000 SQ. FT.
- 5. MULCHING USE CLEAN, UNWEATHERED, UNCHOPPED SMALL GRAIN STRAW AT THE RATE OF 1 1/2 TO 2 TONS PER ACRE ANCHORED DOWN WITH CUTBACK ASPHALT AT THE RATE OF 5-8 GALLONS PER 1000 SQ. FT.
- 6. DISCING AND HARROWING SHALL BE DONE ON CONTOUR.

STANDARD STABILIZATION NOTE:

"FOLLOWING INITIAL SOIL DISTURBANCE OF REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES. DITCHES. PERIMETER SLOPES. AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND FOURTEEN DAYS (14) AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE."

DESIGN CERTIFICATION

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

SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE), Kenneth M. Johns

OWNER'S/DEVELOPER'S CERTIFICATION

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

SIGNATURE OF DEVELOPER (PRINT NAME BELOW SIGNATURE) Danell W BenneT

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

LAND DEVELOPMENT

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

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

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

HOWARD SOIL CONSERVATION DISTRICT.

ARCHITECTURAL TECHNOLOGIES, INC. ARCHITECTS AND CONSTRUCTION CONSULTANTS 9192 RED BRANCH ROAD, SUITE 300

COLUMBIA, MARYLAND 21045 (410) 995-4067

IN ASSOCIATION WITH:

CIVIL & GEOTECH ENGINEER: STRUCTURAL ENGINEER: MECHANICAL & ELECTRICAL ENGINEER: FIRE PROTECTION ENGINEER:

EBA ENGINEERING, INC. QODESH ENGINEERING SERVICES. INC. BHARGAVA INTERNATIONAL, INC. STANTON ENGINEERING



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	DRAWN BY:		
		J.	P
	CHECKED BY:		

K. JOHNS APPROVED BY:

PLUM

REVISIONS

HOWARD COUNTY PUBLIC SAFETY COMPLEX - PHASE II

EROSION AND SEDIMENT CONTROL NOTES

SCAGGSVILLE ANNEX 11226 ROUTE 216 LAUREL, MARYLAND 20707 CAPITAL PROJECT NO. DATE: 8-25-93

DRAWING NO.

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