

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEM
 HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER: *John B. Smith* DATE: *7-3-83*

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
 PLANNING DIRECTOR: *John A. Smith* DATE: *7-4-83*

REVIEWED: DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION: *John A. Smith* DATE: *7-4-83*

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

DIRECTOR: *James M. ...* DATE: *7-26-83*

CHIEF BUREAU OF ENGINEERING: *James M. ...* DATE: *7-26-83*

HOWARD SOIL CONSERVATION DISTRICT
 THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
 DATE: *7-20-83*

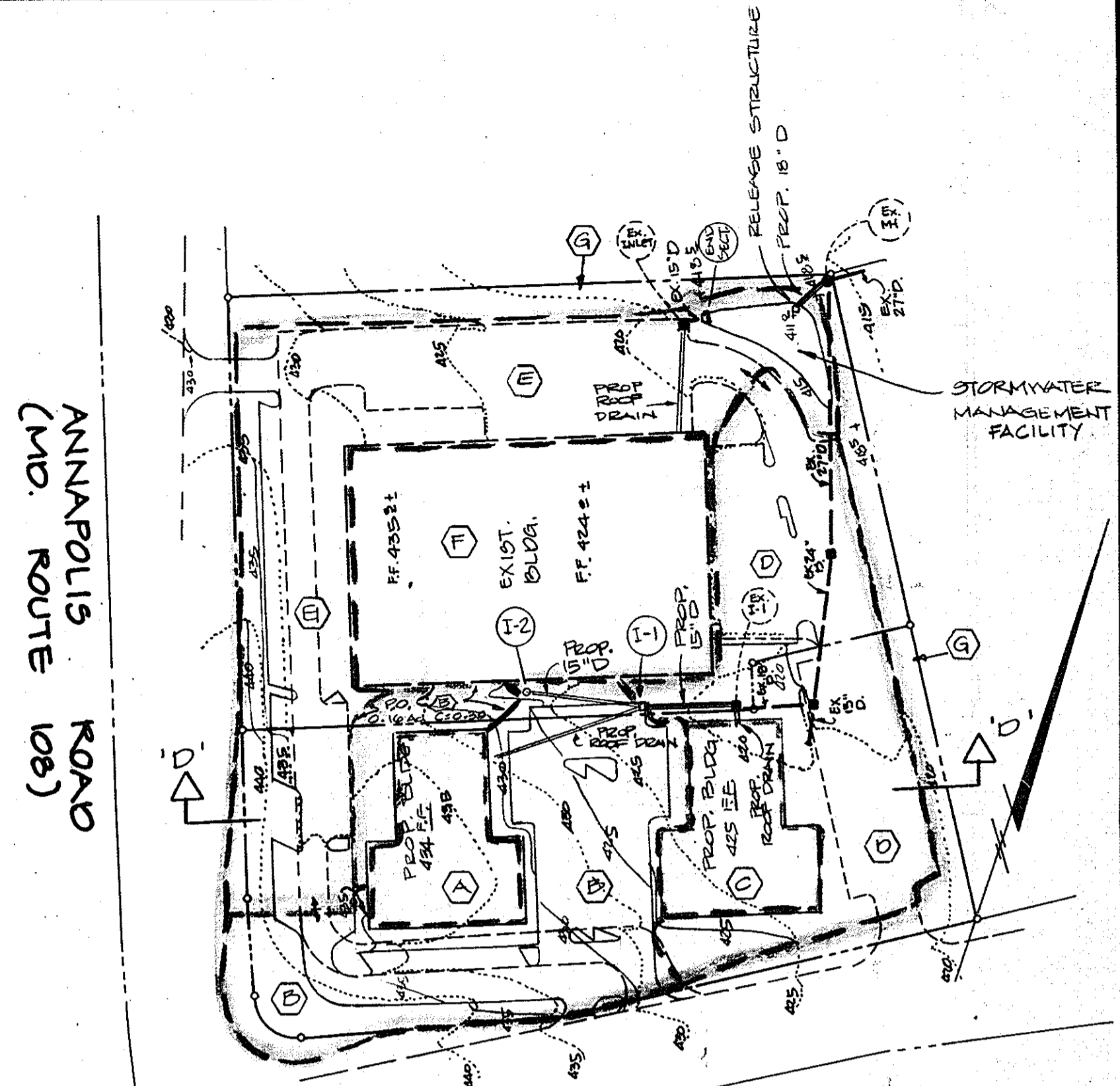
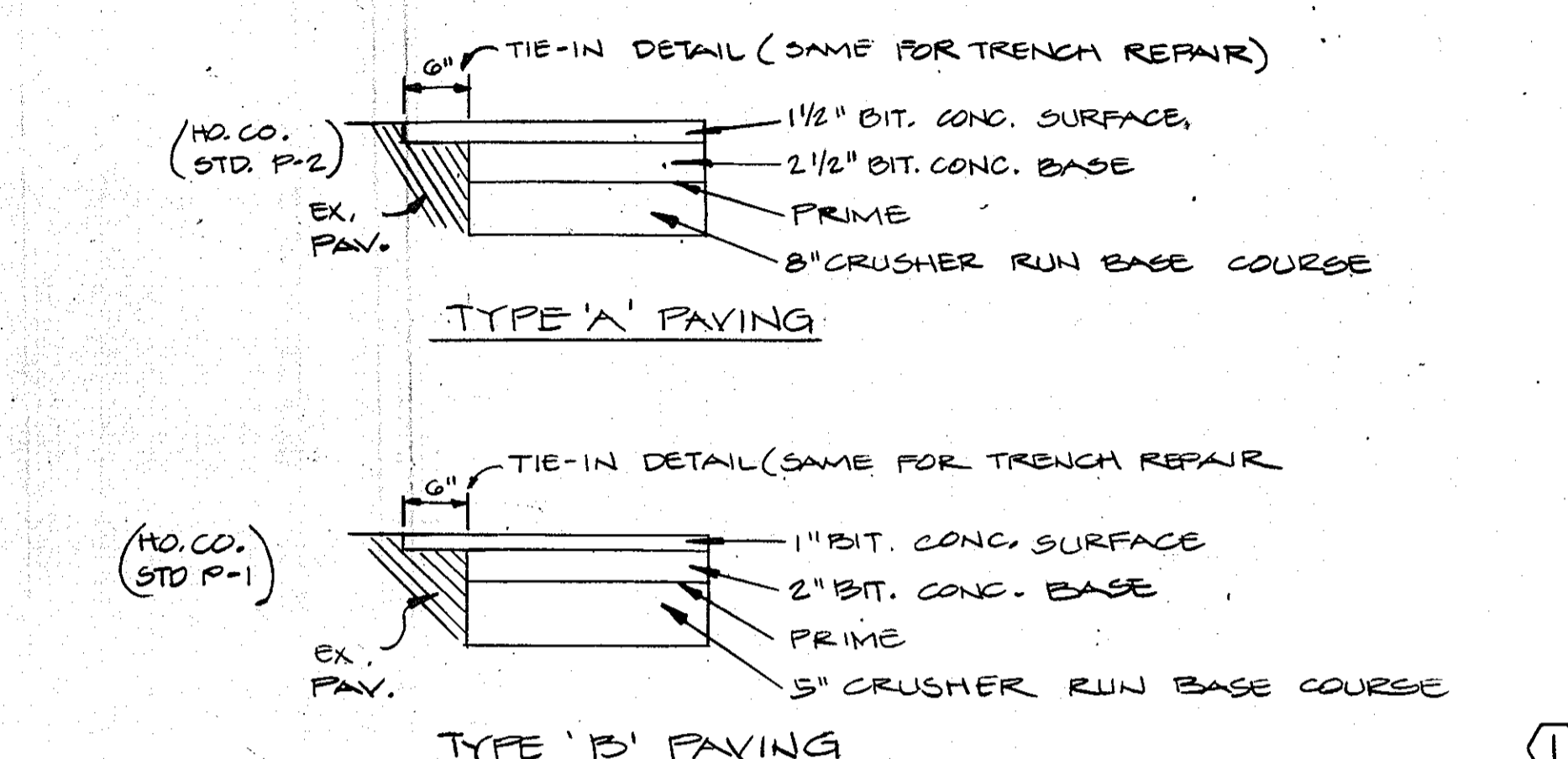
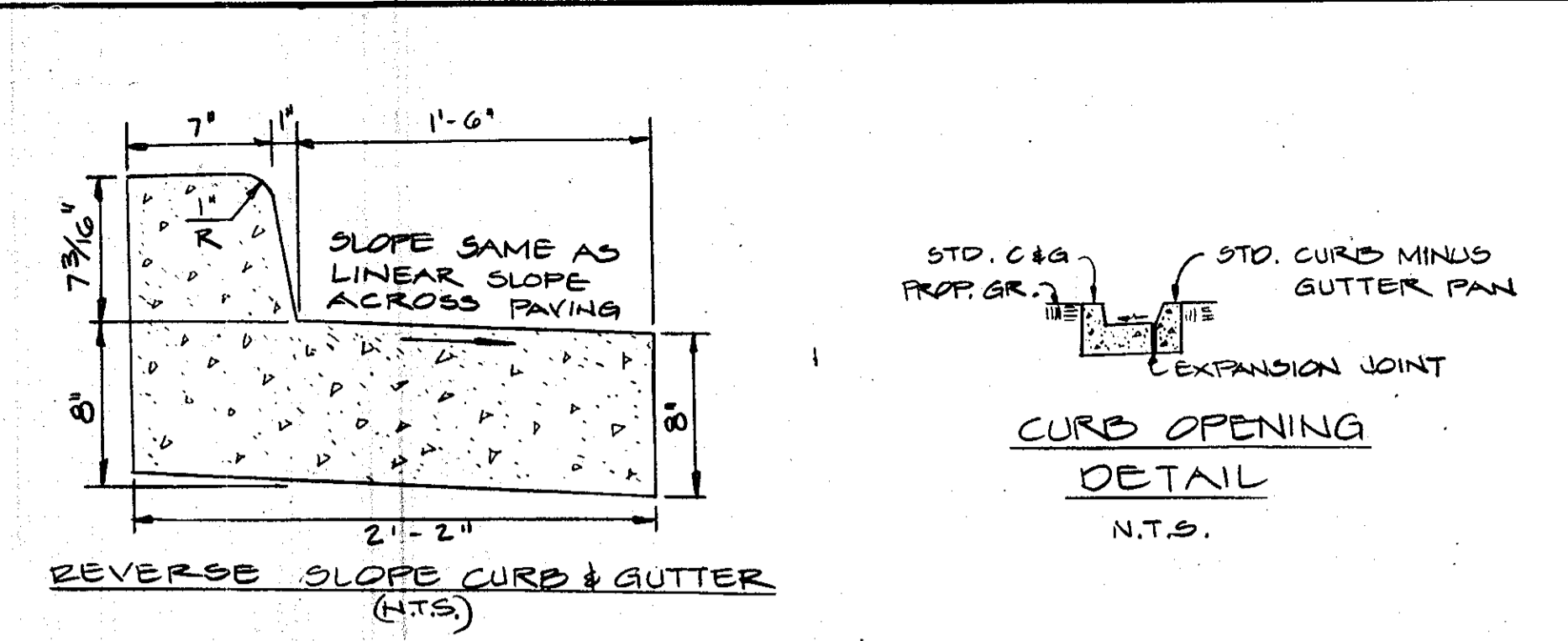
APPROVED: HOWARD SOIL CONSERVATION DISTRICT
 REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
 SIGNATURE: *James M. ...* DATE: *7-20-83*
 THE UNITED STATES SOIL CONSERVATION SERVICE

GENERAL NOTES

- Maximum Building Height = 50'.
- All areas not being paved or receiving building coverage shall be stabilized in accordance with the plans approved by the Howard Soil Conservation District.
- Any damage to public rights-of-way and/or adjacent properties shall be repaired immediately at the Contractor's expense.
- All areas not being paved or receiving building coverage shall be stabilized in accordance with the plans approved by the Howard Soil Conservation District.
- The Contractor shall maintain at least a 2' level bench behind all curbs and gutters in fill areas.
- The Contractor shall verify all existing utilities to his own satisfaction before starting construction.
- All slopes shall be 3:1 or flatter.
- All work shall be done in accordance with Howard County Standard Specifications and Details for Construction, or as shown on these plans.
- The Contractor shall notify the C & P Telephone Company and the C & P Electric Company five days prior to starting work shown on these plans by calling "Miss Utility". Call Collect 1-559-0100.
- The Contractor shall maintain a minimum of 3:5' cover over all proposed water lines.
- All rip-rap shall be placed on filter cloth.
- The Contractor or Developer shall contact the Construction Inspection/ Survey Division, 24 hours in advance of commencement of work at 392-2417 or 392-1878.
- The Contractor shall Remove All Existing Paving, Curb & Gutter, Etc. That May Interfere With Proposed Construction.
- Topography Shown Is According To A 1-17-79 Survey By Boarder Assoc.

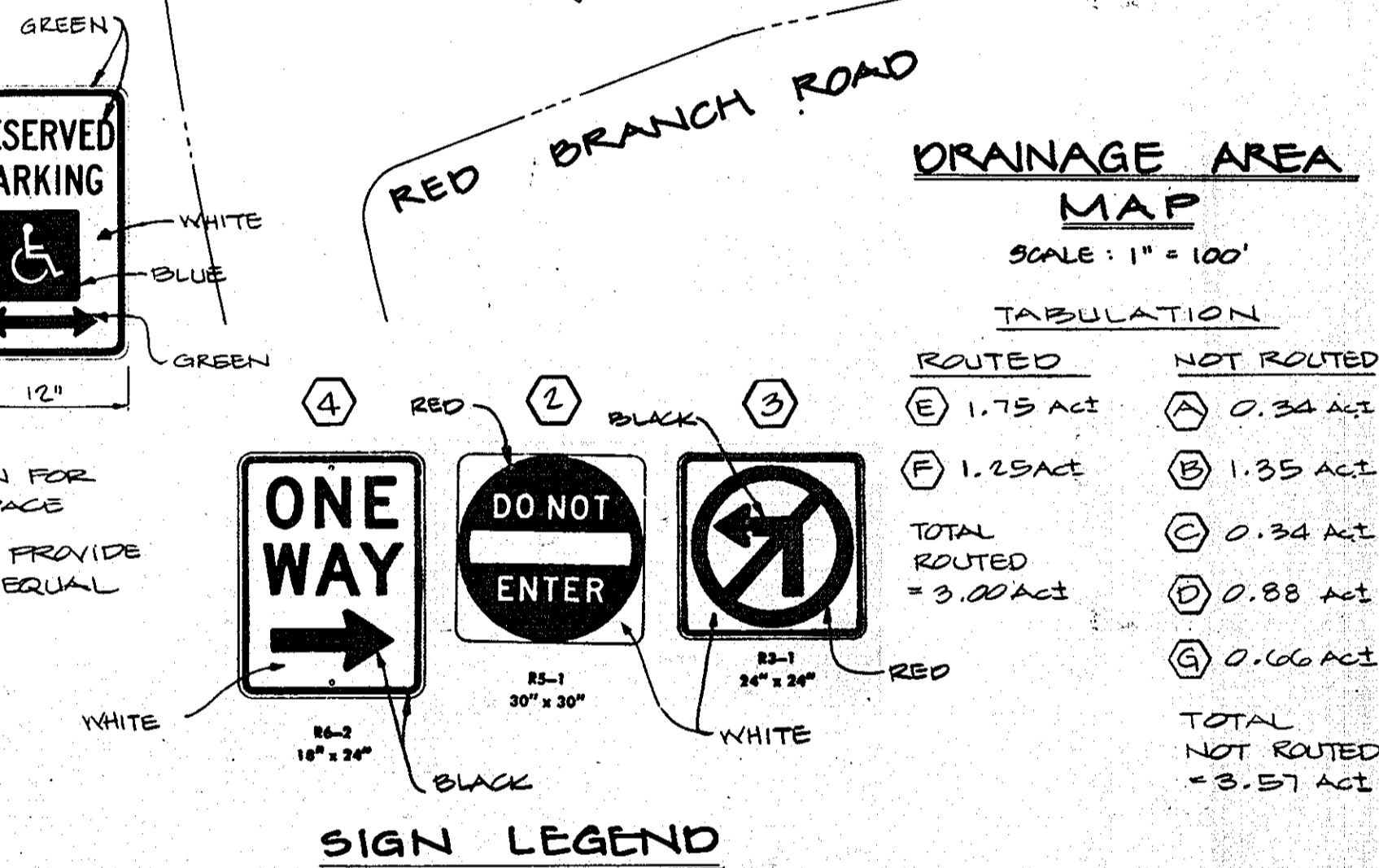
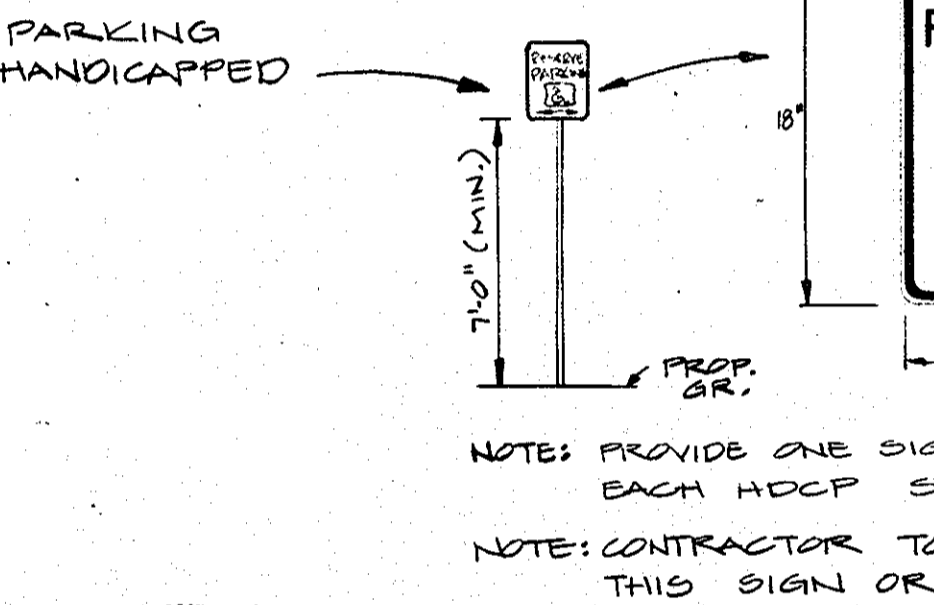
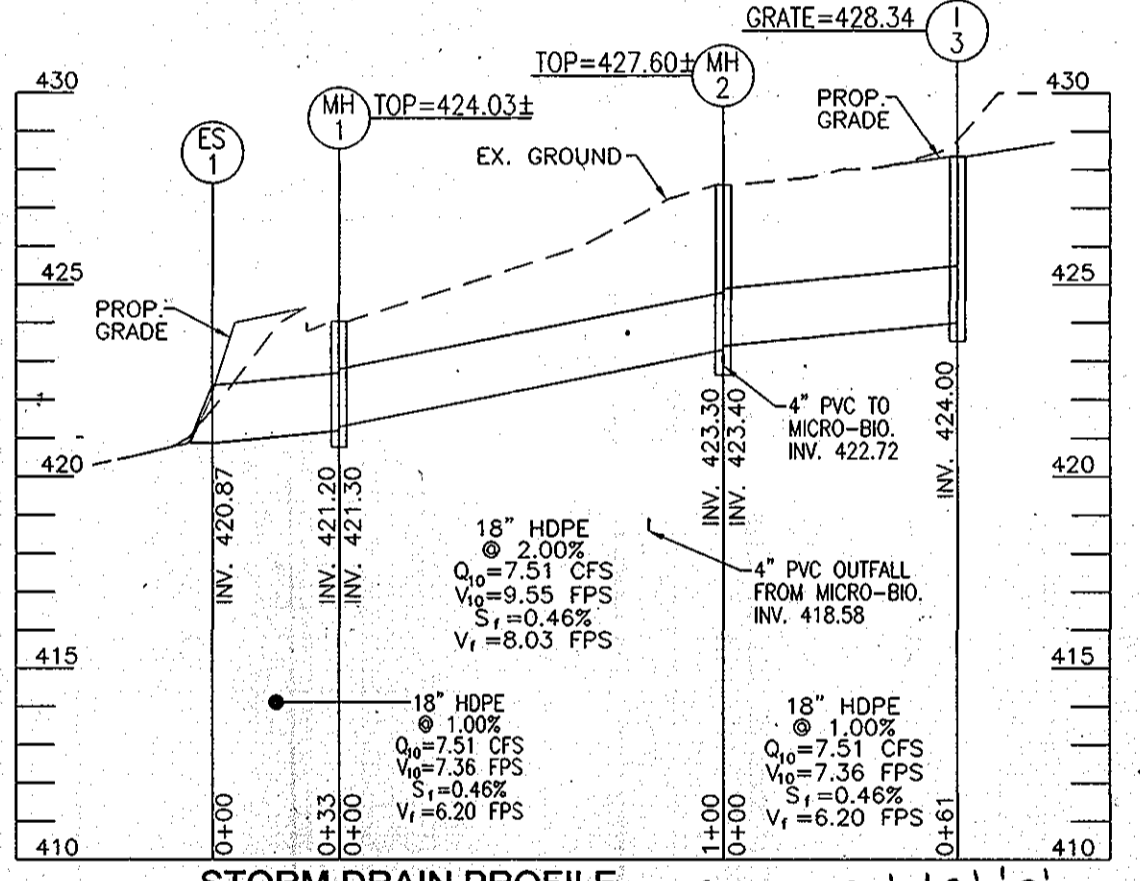
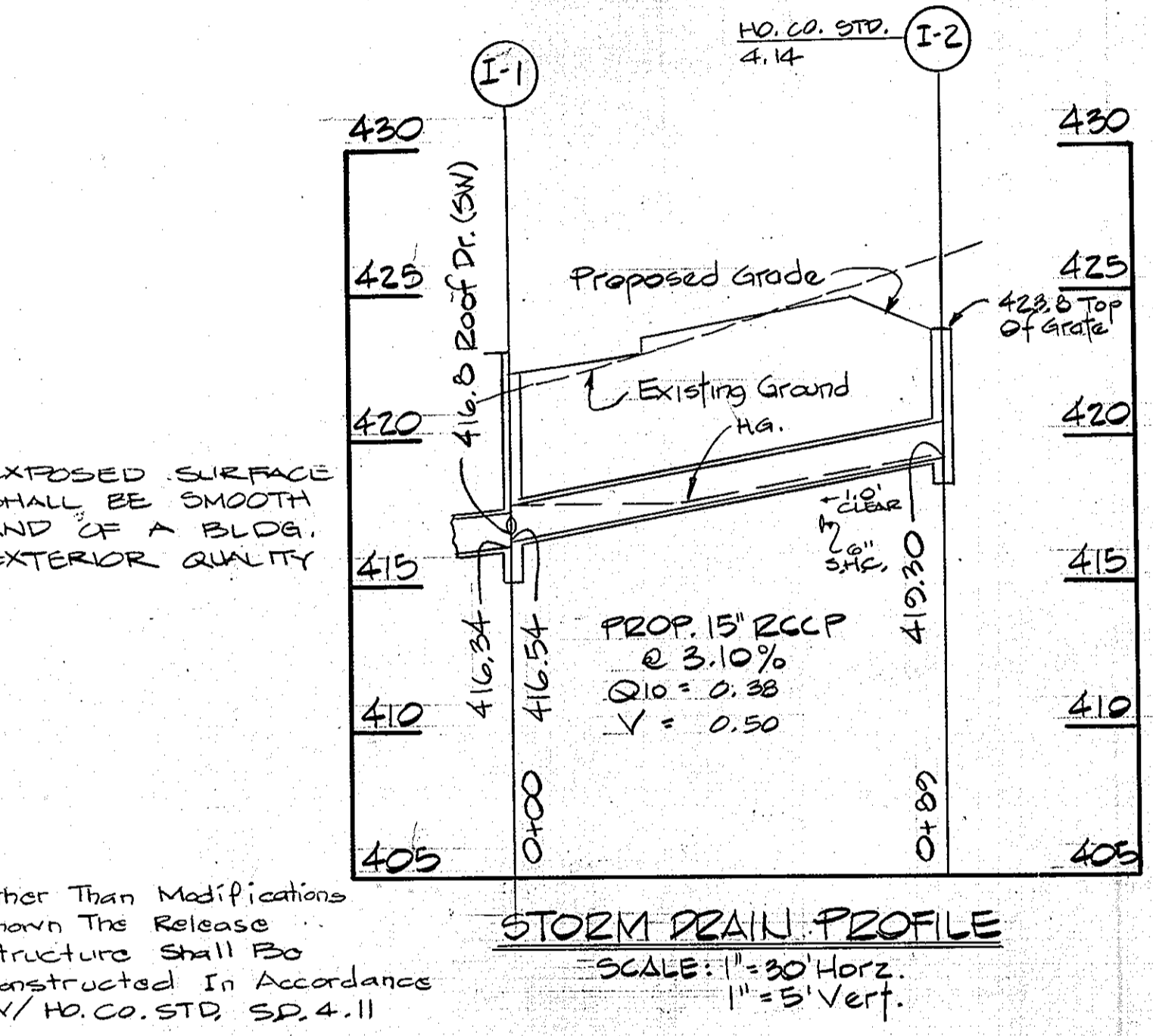
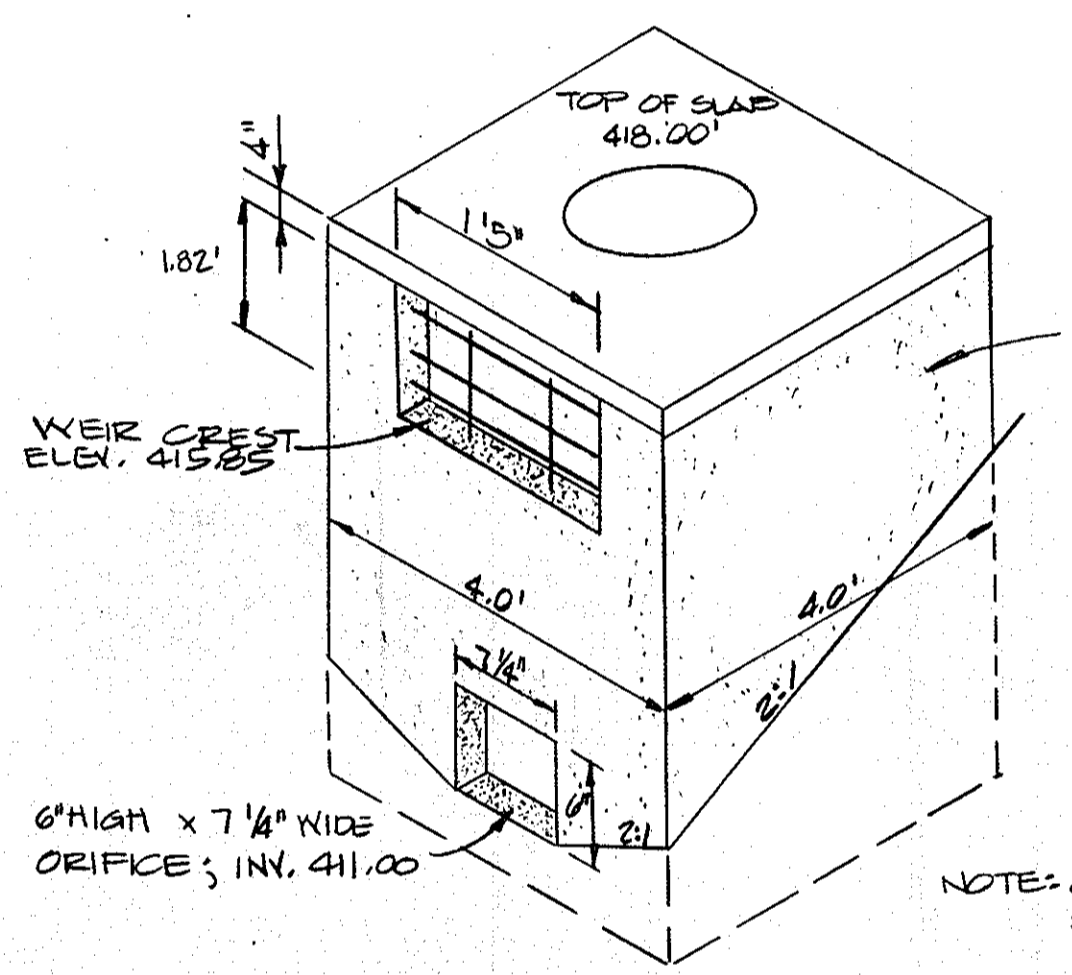
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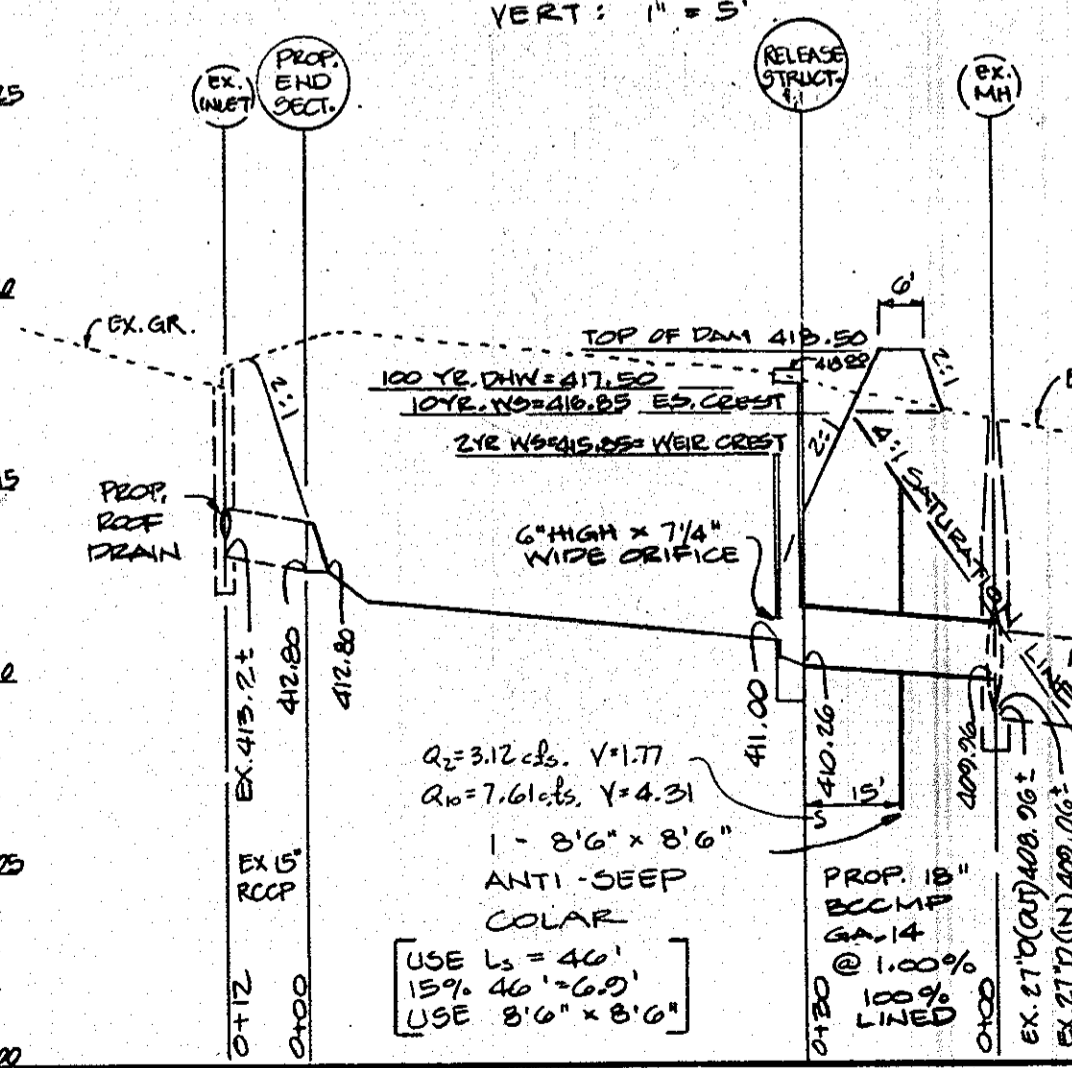


RELEASE STRUCTURE DETAIL (MODIFIED TYPE D INLET) N.T.S.

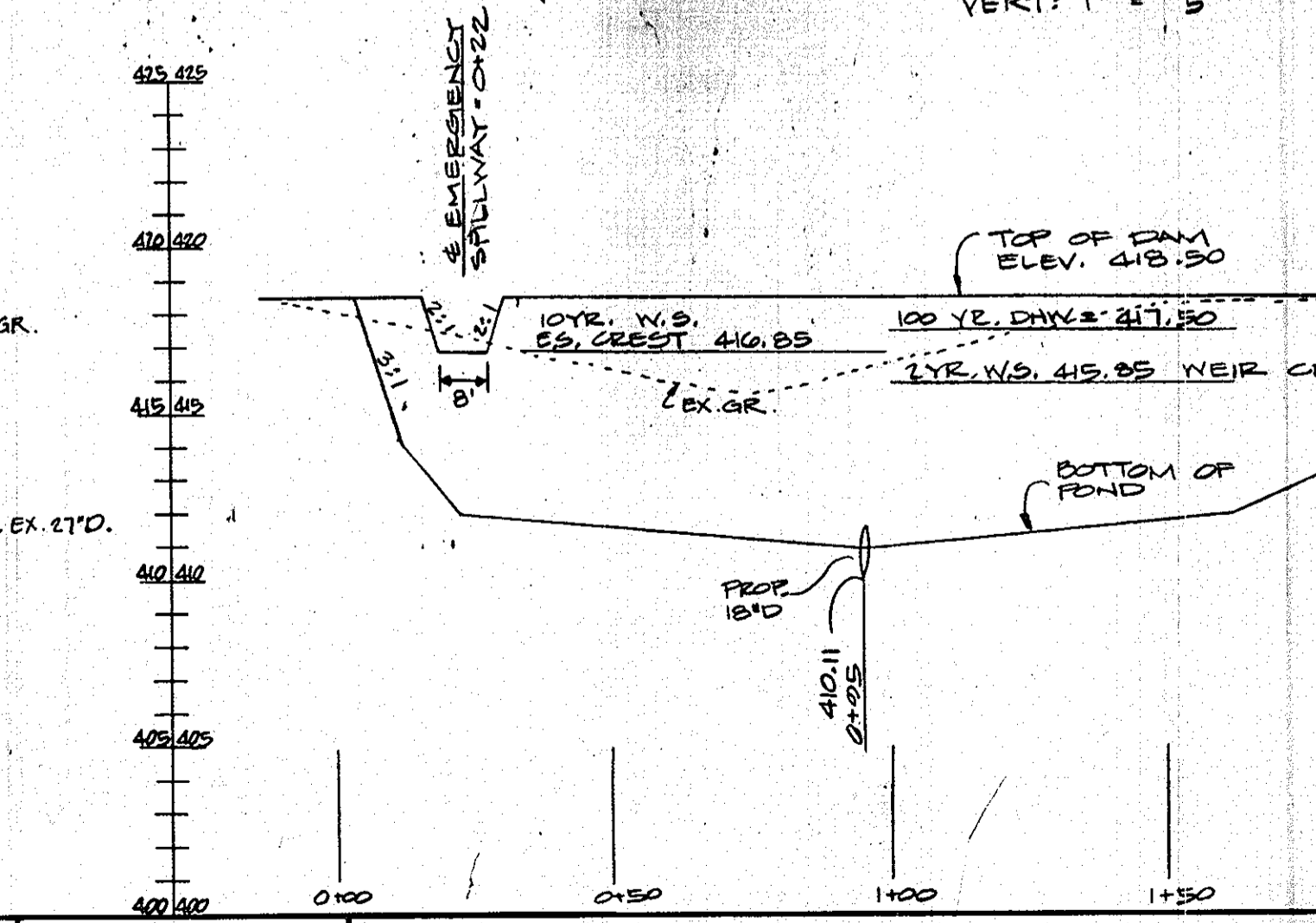
TRASH RACKS #6 Rebar @ 6" O.C. OR AS SHOWN. Embed Vert. Bar 18" Into Wall; Embed Horz. Bar 6" Into Wall; Paint w/ Non-Corrosive Paint or Epoxy



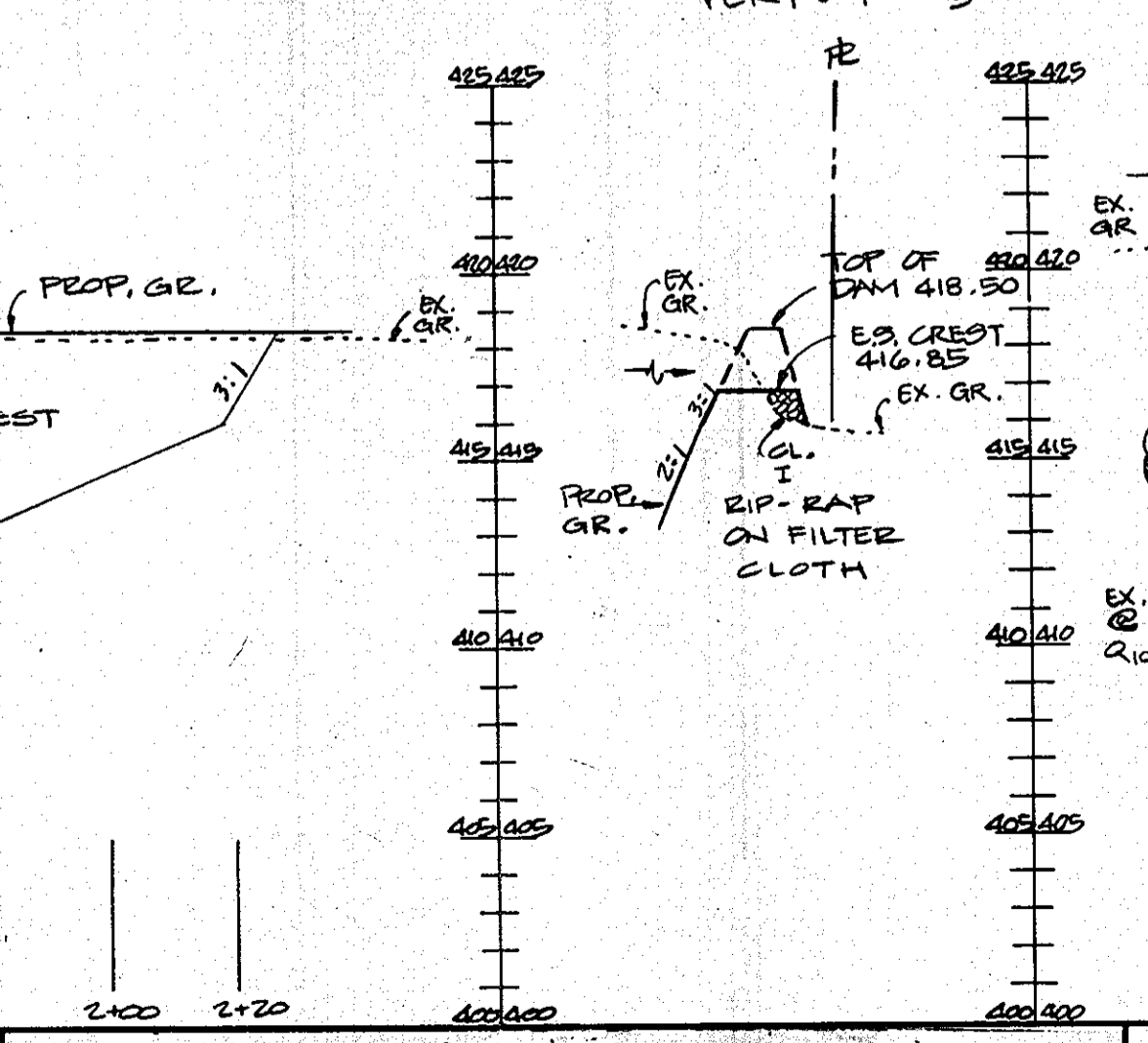
SECTION 'A'-'A' SCALE
 HORIZ: 1" = 30'
 VERT: 1" = 5'



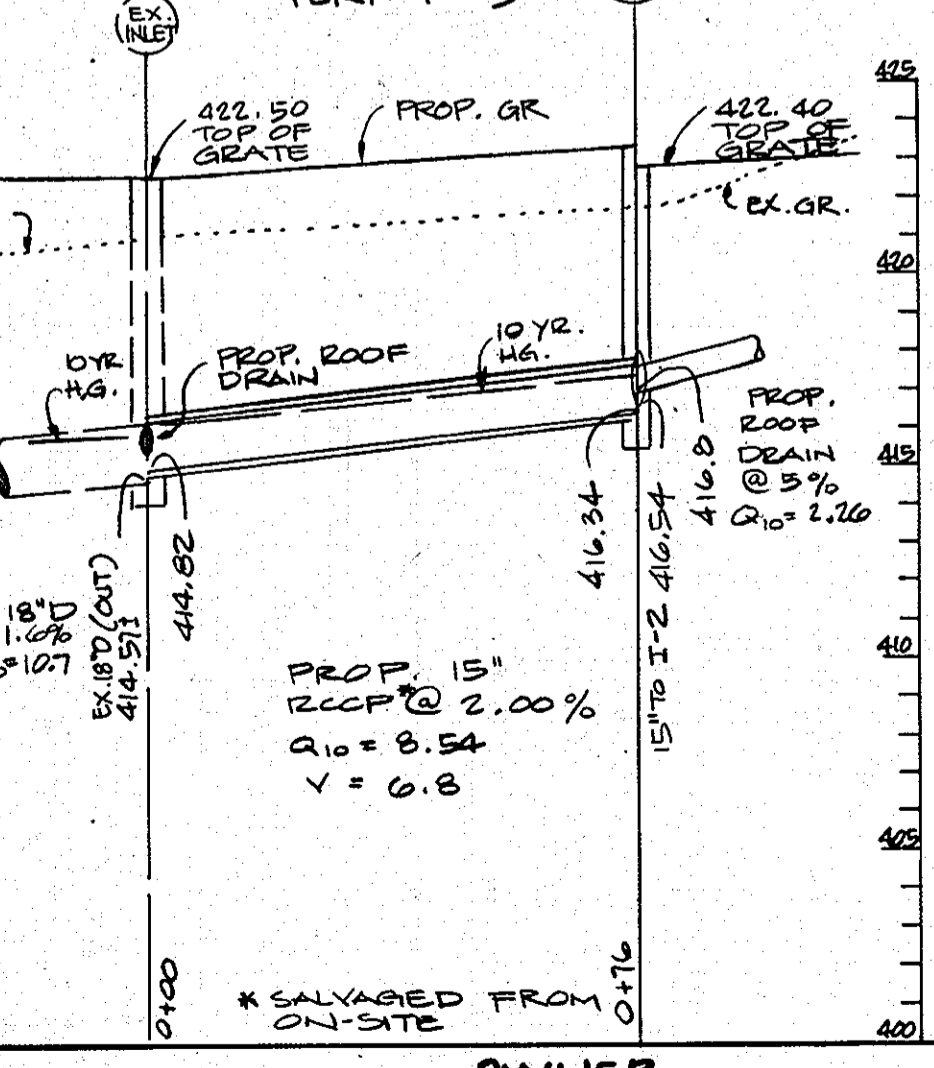
SECTION 'B'-'B' SCALE
 HORIZ: 1" = 30'
 VERT: 1" = 5'



SECTION 'C'-'C' SCALE
 HORIZ: 1" = 30'
 VERT: 1" = 5'



SECTION 'D'-'D' SCALE
 HORIZ: 1" = 30'
 VERT: 1" = 5'



APPROVED
 PLANNING BOARD OF HOWARD COUNTY
 DATE: *4-20-83*
M. J. ...

ENGINEER
 GEORGE WILLIAM STEPHENS, JR. AND ASSOCIATES, INC.
 ENGINEERS & SURVEYORS
 503 ALLEGHENY AVE., TOWSON, MD. 21284
 815-8120



ENGINEER
Tapobrata Chakrabarti 8930 2-17-83
 TAPOBRATA CHAKRABARTI REG. NO. DATE

OWNER
 A.M.F. INCORPORATED
 9198 RED BRANCH ROAD
 COLUMBIA, MARYLAND, 21043

DEVELOPER
 GLEN ARM DEVELOPMENT & CONSTRUCTION CO., INC.
 11100 OLD CARRIAGE ROAD
 GLEN ARM, MARYLAND, 21057

OWNER
Herb Druppo DATE: *2/15/83*
 TITLE: *Agent*

DESIGN: R.W.R.
 DRAWN: R.W.R.
 CHECKED: T.C.
 REVISIONS
 7/13/83 Add Storm Drain Profile I-1 to I-2

PROFILES & DETAILS
 SECTION I; LOT 1
 OAKLAND RIDGE INDUSTRIAL PARK
 PARCEL 'A' & PARCEL 'B'
 PROPOSED IMPROVEMENTS; PROPOSED OFFICE BLDG'S
 NORTHEAST CORNER OF MD. RTE. 108 & RED BRANCH ROAD
 HOWARD COUNTY, MD. COLUMBIA, MD. ELECTION DISTRICT #2
 SCALE: 1" = 30' P.N. 4737 FEBRUARY 13, 1983

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEM
 HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER: *James Boyer* DATE: 8-3-83

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
 PLANNING DIRECTOR: *William Stephens* DATE: 8-4-83

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION: *William Stephens* DATE: 8-4-83

APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS, AND ROADS
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DIRECTOR: *James M. Slaw* DATE: 7-26-83

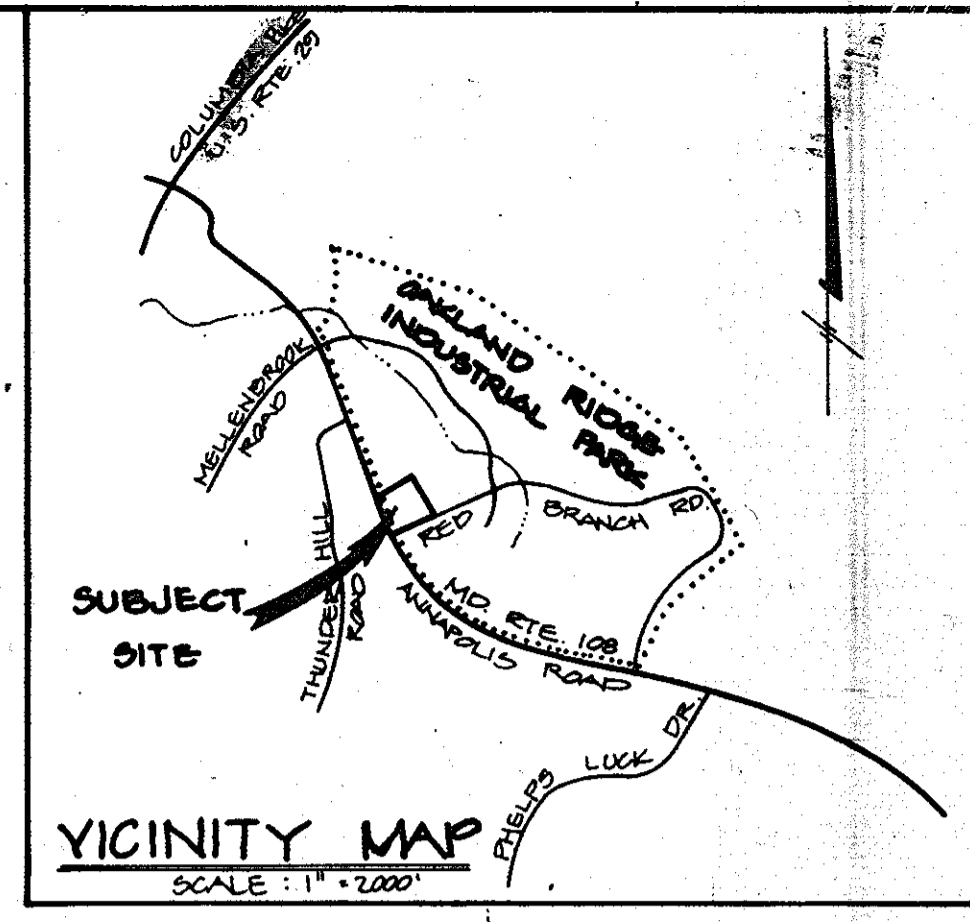
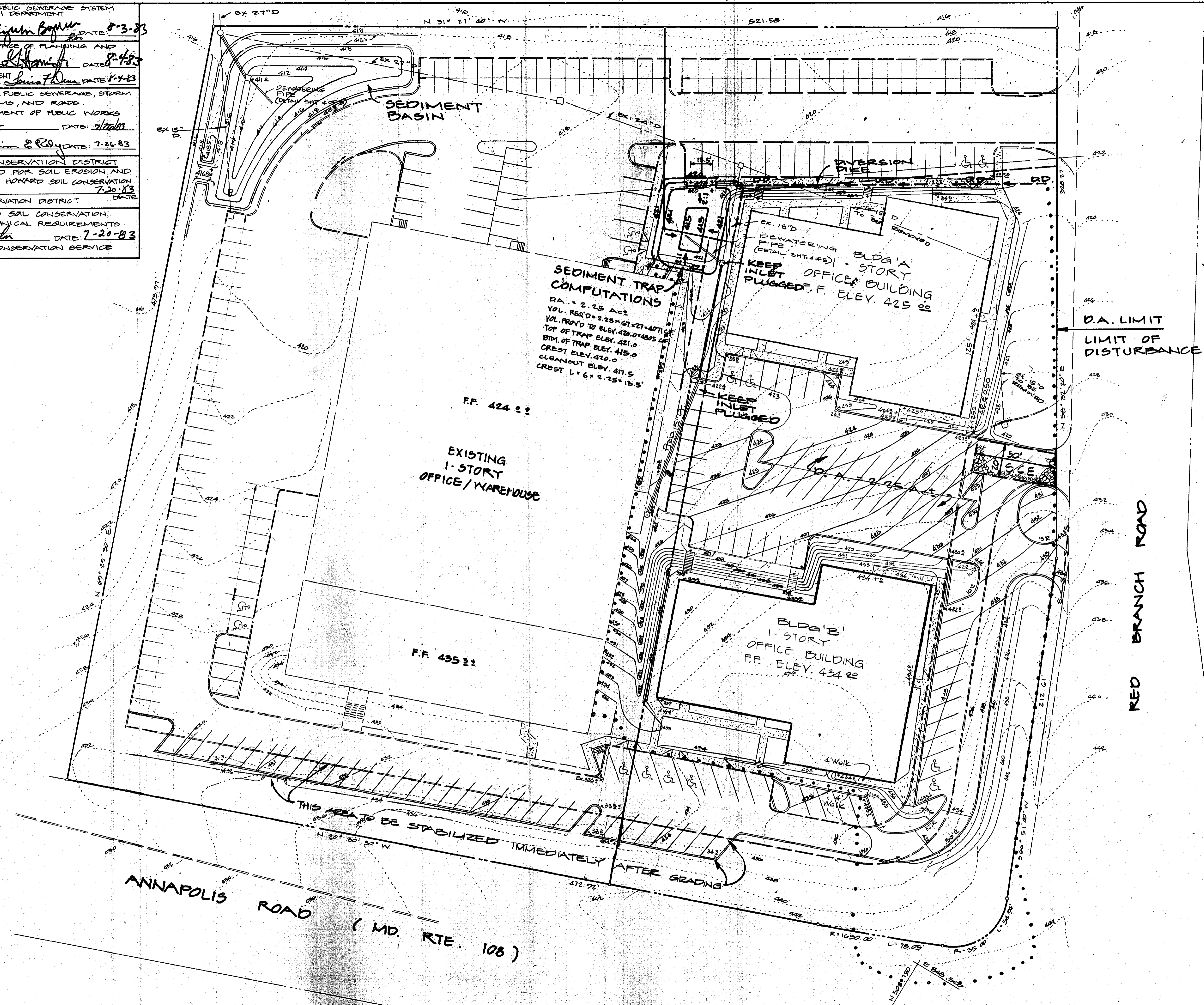
CHIEF, BUREAU OF ENGINEERING: *William Stephens & Raymond* DATE: 7-26-83

HOWARD SOIL CONSERVATION DISTRICT
 THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
 DATE: 7-20-83

APPROVED: HOWARD SOIL CONSERVATION DISTRICT

REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
 SIGNATURE: *James M. Slaw* DATE: 7-20-83

THE UNITED STATES SOIL CONSERVATION SERVICE



APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE: 4-20-83
 MS 1870

ENGINEER
 GEORGE WILLIAM STEPHENS, JR. AND ASSOCIATES INC.
 ENGINEERS & SURVEYORS
 505 ALLEGHENY AVE., TOWSON, MD. 21284
 825-8120



ENGINEER'S 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 that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Tajobrata Chakrabarti 8930 2-17-83
 TAJOBRATA CHAKRABARTI REG. NO. DATE

OWNER
 A.M.F. INCORPORATED
 9198 RED BRANCH ROAD
 COLUMBIA, MARYLAND, 21045

DEVELOPER
 GLEN ARM DEVELOPMENT & CONSTRUCTION CO., INC.
 11100 OLD CARRIAGE ROAD
 GLEN ARM, MARYLAND, 21057

OWNER'S CERTIFICATION
 I hereby certify that all development and/or construction will be done according to this plan of development and plan for erosion and sediment control. And I also authorize periodic on-site inspections by the Howard Soil Conservation District or their authorized agents as are deemed necessary. I also certify that any responsible person 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 & erosion before beginning the project.

Neil Drayton TITLE: Agent DATE: 2/15/83

DESIGN: R.W.R.
 DRAWN: R.W.R.
 CHECKED: T.C.

REVISIONS
 7/18/83 Add 15' Dr And Change Layout Of Sidewalks Around Bldgs.

EROSION & SEDIMENT CONTROL PLAN
 SECTION 1; LOT 1
 OAKLAND RIDGE INDUSTRIAL PARK
 PARCEL 'A' & PARCEL 'B'

PROPOSED IMPROVEMENTS; PROPOSED OFFICE BLDG'S
 NORTHEAST CORNER OF MD. RTE. 108 & RED BRANCH ROAD
 HOWARD COUNTY, MD. COLUMBIA
 SCALE: 1" = 30' TAX MAP #30 ELECTION DISTRICT #2 PA. 4157 FEBRUARY 14, 1983

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEM
HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER: *[Signature]* DATE: 8-3-83

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
PLANNING DIRECTOR: *[Signature]* DATE: 7-20-83

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION: *[Signature]* DATE: 7-20-83

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

DIRECTOR: *[Signature]* DATE: 7-20-83

CHIEF, BUREAU OF ENGINEERING: *[Signature]* DATE: 7-20-83

HOWARD SOIL CONSERVATION DISTRICT
THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. *[Signature]* DATE: 7-20-83

APPROVED: HOWARD SOIL CONSERVATION DISTRICT
REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
SIGNATURE: *[Signature]* DATE: 7-20-83
THE UNITED STATES SOIL CONSERVATION SERVICE

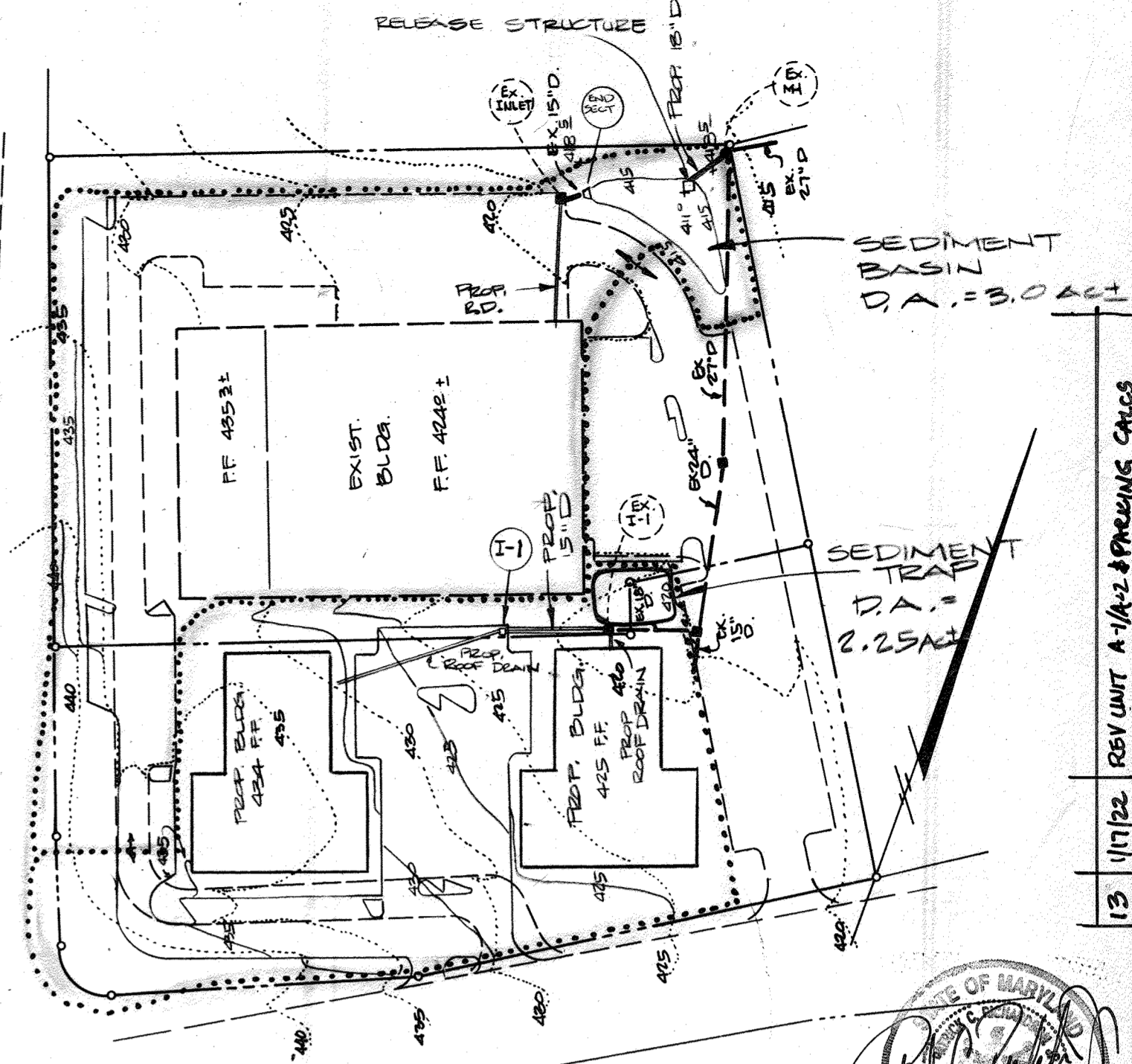
EROSION & SEDIMENT CONTROL GENERAL NOTES

- Any change to the grading proposed on this plan requires it to be re-submitted to the Soil Conservation District.
- All slopes 3:1 or greater to be stabilized with "Permanent Slope Seeding" immediately after grading operation (see note #13). * 2:1 to 3:1 WHERE SHOWN
- All other disturbed areas not intended to be paved or receive building coverage shall be stabilized with "Permanent Seeding" (see note #12).
- Any damage to diversion dikes, sediment trap, sediment basin, etc. during grading operation or utility installation shall be repaired immediately.
- The sediment trap shall be cleaned out when silt deposits reach elevation shown on the plan.
- The sediment basin shall be cleaned out when silt deposits reach elevations shown on the plan.
- No sediment control measure shall be removed without permission from the Sediment Control Inspector.
- Upon installation of storm drains, inlets shall be kept plugged until site is stabilized. Positive drainage must be maintained at all times.
- During the layout of sediment control practices shown herein, minor adjustments can and will be made to assure the arrest and control of any sediment before it leaves the construction site. These said changes require approval from the Sediment Control Inspector and the Soil Conservation District.
- All site work is to be done in accordance with "Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas", July 1975, and this plan of sediment control approved by the Howard County Soil Conservation District and the Department of Public Works.
- At the end of each working day, all sediment control measures will be inspected and left in operational condition.
- PERMANENT SEEDING:
Seedbed Preparation: Loosen upper 3 inches of soil by raking, disking or other acceptable means before seeding.
Soil Amendments: Apply 2 T./Ac. (92 Lbs./1,000 S.F.) Dolomitic Limestone and 600 Lbs./Ac. (14 Lbs./1,000 S.F.) 0-20-20 fertilizer. Harrow or disc time and fertilizer into upper 3 inches of soil. At time of seeding, apply 400 Lbs./Ac. (9.2 Lbs./1,000 S.F.) of 38-0-0 Ureaform fertilizer and 500 Lbs./Ac. (11.5 Lbs./1,000 S.F.) of 10-20-20 fertilizer.
Seeding: For periods March 1-April 30 and August 1-October 15, seed with 60 Lbs./Ac. (1.4 Lbs./1,000 S.F.) of Kentucky 31 Tall Fescue. For the period May 1-July 31, seed with 60 Lbs./Ac. of Kentucky 31 Tall Fescue and 2 Lbs./Ac. (0.5 Lbs./1,000 S.F.) of Weeping Lovegrass. During the period of October 16-February 28, protect site by: Option (1) 2 T./Ac. of well anchored straw-mulch and seed as soon as possible in the Spring. Option (2) Use sod. Option (3) Seed with 60 Lbs./Ac. of Kentucky 31 Tall Fescue and mulch with 2 T./Ac. well anchored straw.
Mulching: Apply 1.5-2 T./Ac. (70-90 Lbs./1,000 S.F.) of unrotted, small grain straw immediately after seeding. Anchor mulch immediately after application using 200 Ga./Ac. (5 Ga./1,000 S.F.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 Ga./Ac. (8 Ga./1,000 S.F.) for anchoring.
Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseedings.
- PERMANENT SLOPE SEEDING: Spread 4 inches of topsoil, seed shall be a mixture of 30% inoculated Crownvetch and 70% Kentucky 31 Tall Fescue applied at a rate of 60 Lbs./Ac. fertilizer and mulching shall be the same as Note #14 above.
- TEMPORARY SEEDING: See Note #12.
Seedbed Preparation: See Note #12.
Soil Amendments: Apply 600 Lbs./Ac. (15 Lbs./Ac. (15 Lbs./1,000 S.F.) of 10-20-20 fertilizer.
Seeding: For periods March 1 - April 30 and from August 15 - November 15, seed with 2.5 Bu./Ac. (3.2 Lbs./1,000 S.F.) of Annual Rye. For the period May 1 - August 14, seed with 3 Lbs./Ac. (0.07 Lbs./1,000 S.F.) of Weeping Lovegrass.
Mulching: See Note #12.
- Disturbed earth left idle for more than 30 days shall be stabilized with temporary seed and mulch (see note #14).
- SOD SPECIFICATION (USE WHERE SPECIFIED BY LANDSCAPE ARCH)
Sod shall be K-31 Sod which has not been cut and rolled more than 2 days in advance; all sod shall be fastened securely with at least 2 stakes not more than 2 feet apart with the flat side against the slope and stake flush with top of sod; sod "bed preparation" and "soil amendments" shall be in accordance with General Note #12.

SEQUENCE OF OPERATIONS

- Notify Howard County Department of Licenses and Permits Inspector at least 48 hours before beginning any work.
- Install stabilized construction entrance.
- Install sediment trap and dewater pipe and plug adjacent existing inlet.
- Install sediment basin and plug lower orifice opening by installing dewater pipe. Sediment basin to be constructed in accordance with the approved storm water management pond specifications. Remove Ex. 15' to 17' from Basin & Install End Section As Shown
- Begin major grading, maintaining positive drainage to sediment trap.
- Install storm drains and plug inlets as noted.
- Install other utilities.
- Install foundation walls for building. Lay subbase in areas receiving building coverage and paving.
- Install curb and gutter and pave areas receiving paving.
- Fine grade remaining areas and stabilize.
- Remove diversion dikes, silt fence and stabilized construction entrance and unplug storm drains after obtaining permission from Sediment Control Inspector. Pave area used as construction entrance. Clean out trap, backfill and stabilize.
- Upon final approval of Sediment Control Inspector, convert sediment basin to storm water management pond by: 1) Removing any sediment and restabilizing if necessary, 2) Removing plug from lower orifice and stabilize.

IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES:
CENTRAL MARYLAND: MARCH 1 TO MAY 15; AUGUST 15 TO OCTOBER 15 (HARDWOOD FORESTS);
SOUTHERN MARYLAND: MARCH 1 TO MAY 15; AUGUST 15 TO OCTOBER 15 (HARDWOOD FORESTS);
SEE TABLE B1 (TEMPORARY SEEDING FOR STABILIZATION LOCATED ON THIS SHEET)



PARKING TABULATION

USE	AREA (SF)	OTHER	RATIO REQUIRED	PARKING REQ'D
SENIOR DAYCARE	10,000	MAX 10 EMPLOYEES	1 SP/EMPLOYEE	15
OFFICE	23,486		3.3 SP/1000 SF	78
SCHOOL OF MUSIC	1,545	3 STUDENTS (MAX)	1 SP/STUDENT	3
WAREHOUSE	8,542		0.75/1000 SF	6
CHURCH	8,573	1000-2000 SEATING	1 SP/1000 SF (DAY CARE)	21 (DO NOT OPERATE COOLING UNIT)
COMMERCIAL SCHOOL	3,150		5 SP/1000 SF	16 SP
RETAIL (GALPAX)	1,284		5 SP/1000 SF	32 SP
9194 RED BRANCH ROAD				
USE	AREA (SF)	OTHER	RATIO REQUIRED	PARKING REQ'D
OFFICE	7,543		3.3 SP/1000 SF	25
HAIR SALON	3,500		5 SP/1000 SF	18
	5,267		5 SP/1000 SF	27
9192 RED BRANCH ROAD				
USE	AREA (SF)	OTHER	RATIO REQUIRED	PARKING REQ'D
OFFICE	11,907		3.3/1000 SF	40
MEDICAL	1,248		5/1000 SF	7
UTILITY FOYER	1,923		0	0
RETAIL	382		5/1000 SF	2
WAREHOUSE	890		0.75/1000 SF	7

TOTAL PARKING REQUIRED WITHOUT SHARED PARKING REDUCTION: 287 SPACES
TOTAL PARKING REQUIRED UTILIZING SHARED PARKING REDUCTION: 166 SPACES
TOTAL PARKING PROVIDED: 166 SPACES (ON EXISTING & EXISTING TO BE REMOVED = 150 EXISTING; 163 PROPOSED SHARED SPACES PROVIDED; 4 EXISTING TO REMAIN) WITH PROPOSED = 15 PROVIDED

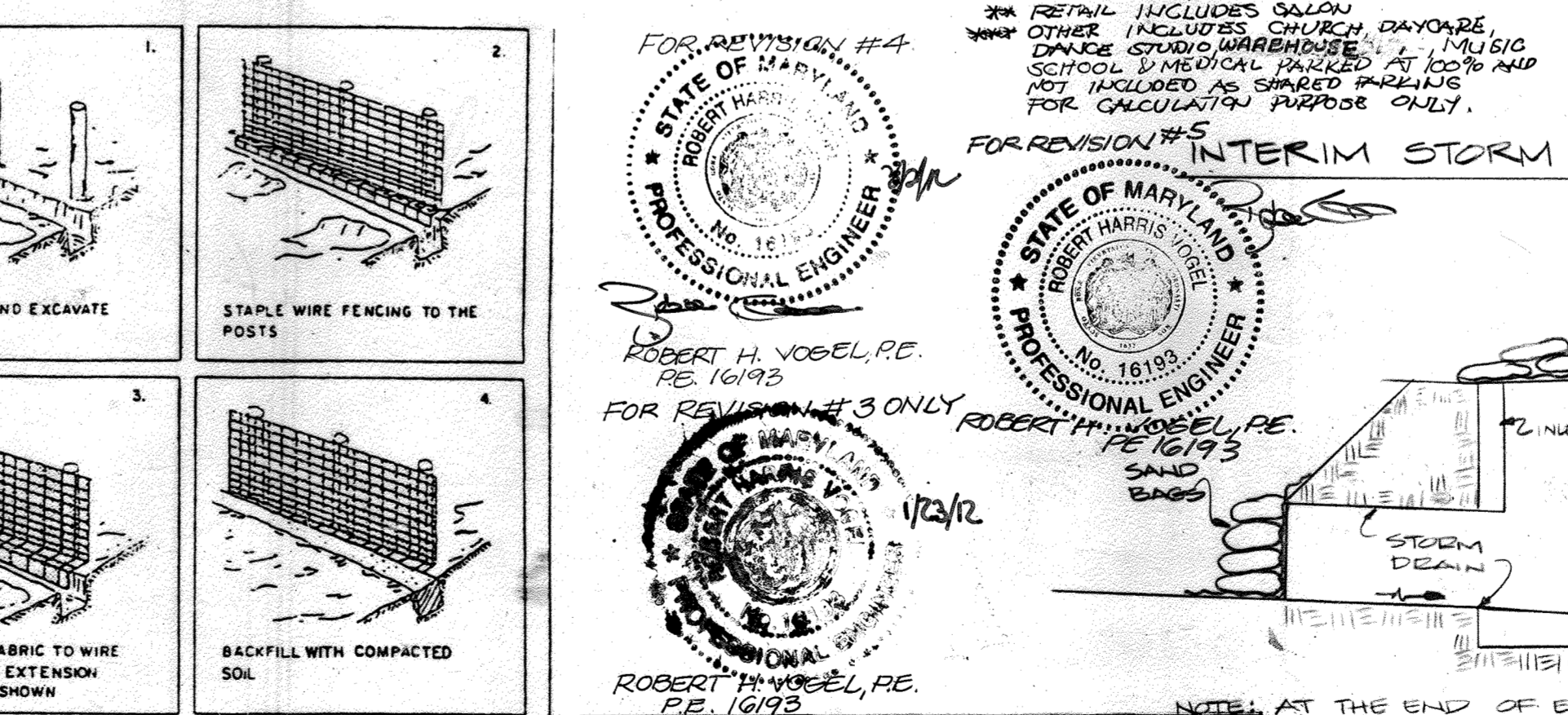
SHARED PARKING TABULATION ADJUSTMENT

USE	WEEKDAY MORNING 6:00am-9:00am	MID-DAY 9:00am-3:00pm	AFTERNOON 3:00pm-5:00pm	EVENING 5:00pm-12:00am	WEEKEND DAYTIME 9:00am-12:00pm	EVENING 6:00pm-12:00am	NIGHTTIME 12:00am-6:00am
* OFFICE	80% / 114	100% / 143	100% / 143	10% / 14	10% / 14	5% / 7	5% / 7
** RETAIL	20% / 12	60% / 37	60% / 37	90% / 55	100% / 61	70% / 43	5% / 3
MEDICAL OFFICE	80% / 15	100% / 18	100% / 18	10% / 2	10% / 2	5% / 1	5% / 1
TOTAL SHARED	141	198	198	71	77	51	11
*** OTHER	70	70	70	70	70	70	70
TOTAL	211	268	268	141	147	121	81

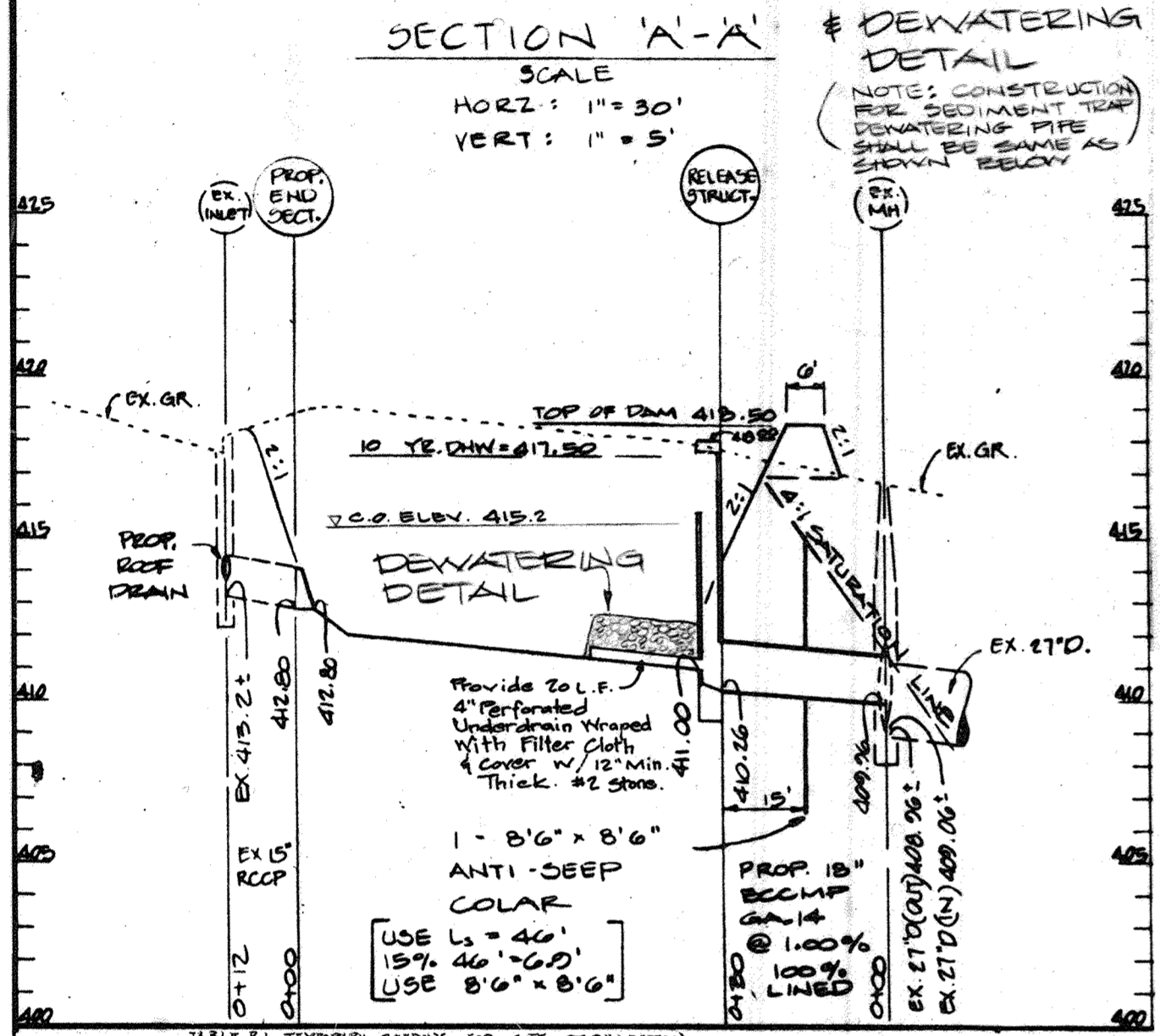
COMPACT SPACES TABULATION:
78 TOTAL SPACES REQUIRED (OFFICE) 28%
78 COMPACT SPACES PROVIDED
78 COMPACT SPACES PROVIDED (EXCESS OF MIN. PERmitted)

PARKING NOTE: PER FDP PHASE IIIA, SECTION 125-C-3-D(3), ONE PARKING SPACE FOR EACH TWO EMPLOYEES SHALL BE PROVIDED FOR ALL INDUSTRIAL USES.
THIS PARKING TABULATION CALCULATIONS FOR EXISTING USES ARE SUBJECT TO CHANGE PER THE ZONING REGULATIONS IN EFFECT AT THE TIME OF FUTURE REVISIONS TO THE PARKING TABULATION.

ADDITIONAL PARKING NOTES:
1. THE NUMBER OF SPACES FOR THIS PROJECT/USE SHALL MONITOR THE PARKING SPACES FOR THIS PROJECT AND RESERVE ANY EXCESS SPACES SHOULD THEY ARISE.
2. THE REDUCED PARKING RATIO FOR THE ADULT DAYCARE IS APPROVED SUBJECT TO THE LETTER DATED MAY 7, 2008 SUBMITTED BY THE ARCHITECTURAL GROUP VERIFYING THAT A MAJORITY OF THE SENIORS WILL ARRIVE TO THE DAYCARE BY BUS OR BE DROPPED OFF/ PICKED UP BY A MEMBER OF THE SENIORS FAMILY OR BE DROPPED OFF/ PICKED UP BY A MEMBER OF THE SENIORS FAMILY ON THE ADULT DAY CARE HOURS. VERIFYING THE PARKING SITUATION ON THE PROPERTY AND ADDRESSING PARKING INADEQUACIES SHOULD PARKING SITUATION OCCUR FOR THIS USE.

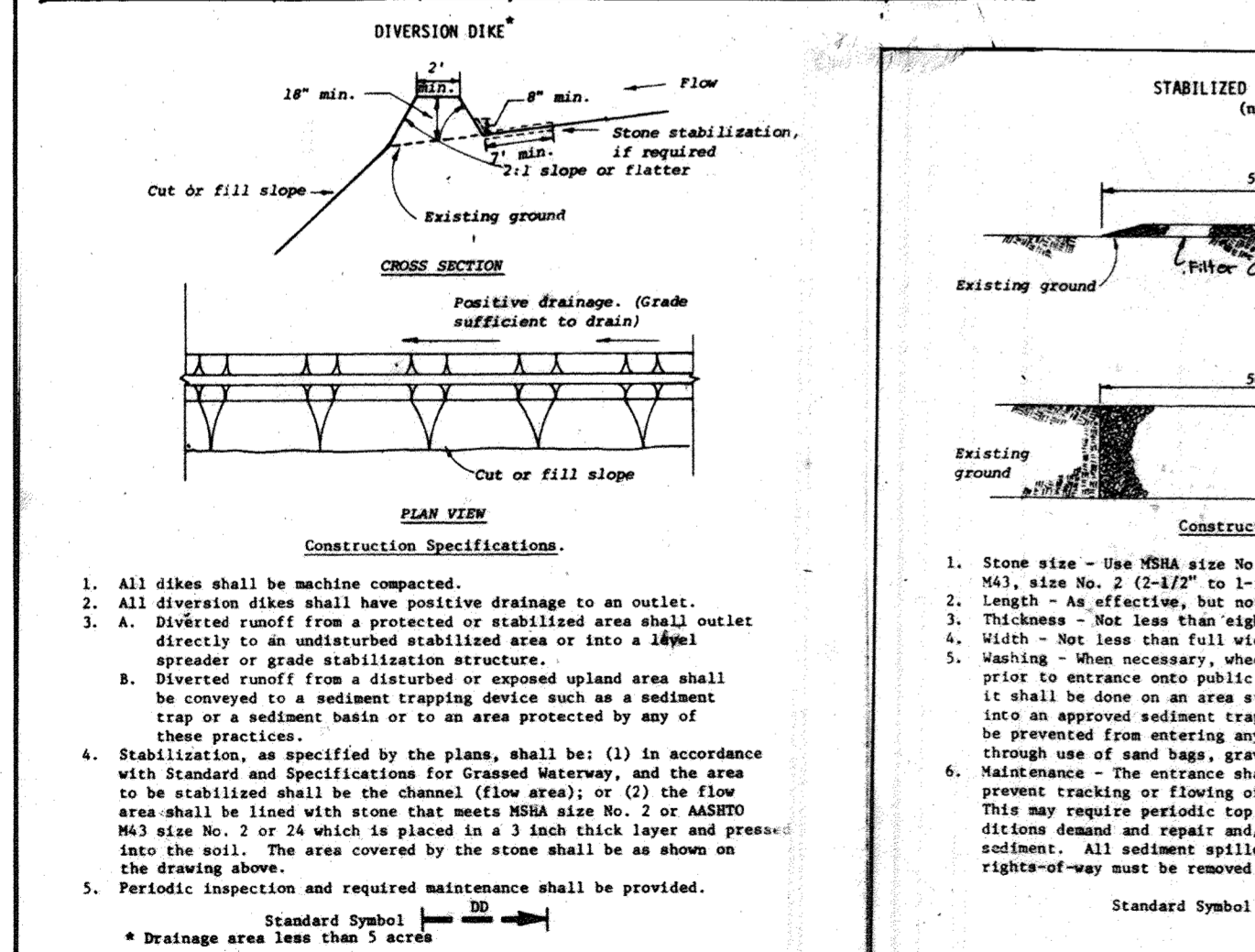


NO.	REVISION	DATE
1	REVISION TO SHOW DIMENSIONS TO PARKING AREAS	05/23/12
2	REVISION TO SHOW DIMENSIONS TO TRUNK SPACES	10/16/12
3	ADD INTERIOR WAREHOUSE AND	9/11/12
4	REVISE THE PLAN TO SHOW AN UPDATED PARKING TABULATION	11/21/12



USDA NRCS (NATIONAL) STANDARD FOR SITE EROSION CONTROL

PLANT SPECIES	SEEDING RATE (LBS./AC.)	SEEDING DATE (M/M)	APPROXIMATE SEEDING DATES BY MONTH
GRASS (PERMANENT)	70	1.0	MARCH TO NOVEMBER
GRASS (TEMPORARY)	90	2.2	MARCH TO NOVEMBER
LEGUME (PERMANENT)	72	1.7	MARCH TO NOVEMBER
LEGUME (TEMPORARY)	100	3.5	MARCH TO NOVEMBER
LEGUME (PERMANENT) (CROWN)	112	2.8	MARCH TO NOVEMBER
LEGUME (TEMPORARY) (CROWN)	150	0.7	MARCH TO NOVEMBER
LEGUME (PERMANENT) (CROWN)	80	0.5	MARCH TO NOVEMBER



NO.	REVISION	DATE
1	REVISION TO SHOW DIMENSIONS TO PARKING AREAS	05/23/12
2	REVISION TO SHOW DIMENSIONS TO TRUNK SPACES	10/16/12
3	ADD INTERIOR WAREHOUSE AND	9/11/12
4	REVISE THE PLAN TO SHOW AN UPDATED PARKING TABULATION	11/21/12

ENGINEER
GEORGE WILLIAM STEPHENS, JR. AND ASSOCIATES, INC.
ENGINEERS & SURVEYORS
303 ALLEGHEMY AVE., TOWSON, MD. 21284
825-8120

ENGINEER'S 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 that it was Prepared in Accordance With the Requirements of the Howard Soil Conservation District.
[Signature] 8930 2-17-83
TABORATA CHAKRABARTI REG. NO. DATE

OWNER
A.M.F. INCORPORATED
9198 RED BRANCH ROAD
COLUMBIA, MARYLAND, 21043

DEVELOPER
GLEN ARM DEVELOPMENT & CONSTRUCTION CO., INC.
11109 OLD CARRIAGE ROAD
GLEN ARM, MARYLAND, 21057

OWNER'S CERTIFICATION
I hereby certify that all development and/or construction will be done according to this plan of development and plan for erosion and sediment control, and I also authorize periodic on-site inspection by the Howard Soil Conservation District of their Authorized Agents as are Deemed Necessary. I also certify that any responsible person 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 Erosion Before Beginning the Project.
[Signature] DATE: 2/15/83

EROSION & SEDIMENT CONTROL DETAILS
SECTION 1; LOT 1
OAKLAND RIDGE INDUSTRIAL PARK
PARCEL 'A' & PARCEL 'B'
PROPOSED IMPROVEMENTS & PROPOSED OFFICE BLDG'S.
NORTHEAST CORNER OF MD. RTE. 108 & RED BRANCH ROAD
COLUMBIA, MARYLAND
HOWARD COUNTY, MD. ELECTION DISTRICT 42
SCALE: AS SHOWN
RN. 4791
FEBRUARY 14, 1983

DESIGN: R.W.R.
DRAWN: R.W.R.
CHECKED: T.C.
REVISIONS

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE: 4-20-83
1240

APPROVED
STATE OF MARYLAND
PROFESSIONAL ENGINEER
ROBERT H. VOGEL, PE
16193
DATE: 2/28/14

APPROVED
STATE OF MARYLAND
PROFESSIONAL ENGINEER
ROBERT H. VOGEL, PE
16193
DATE: 2/28/14

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEM
 HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER: *James Boyle* DATE: 8-23-83

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
 PLANNING DIRECTOR: *Thomas L. Arnold* DATE: 8-15-83

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
James F. ... DATE: 8-15-83

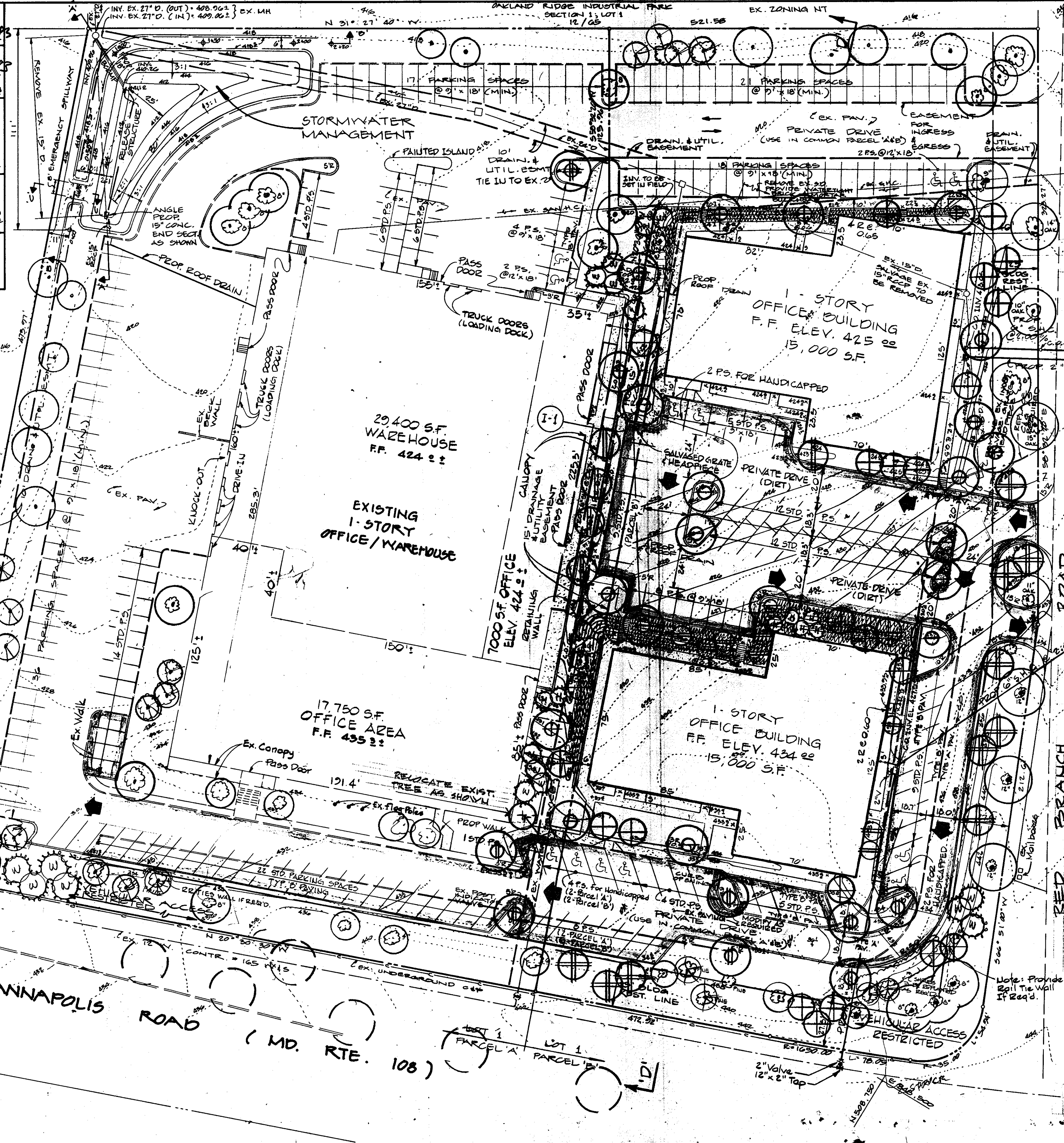
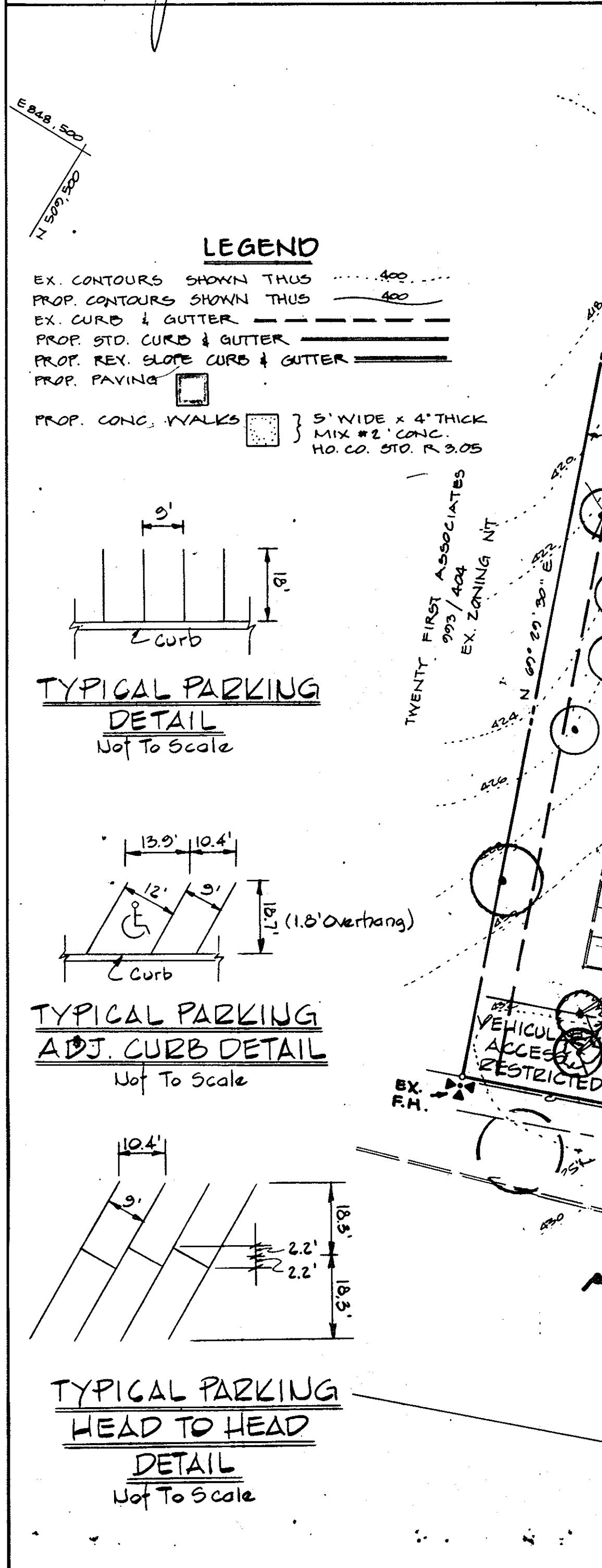
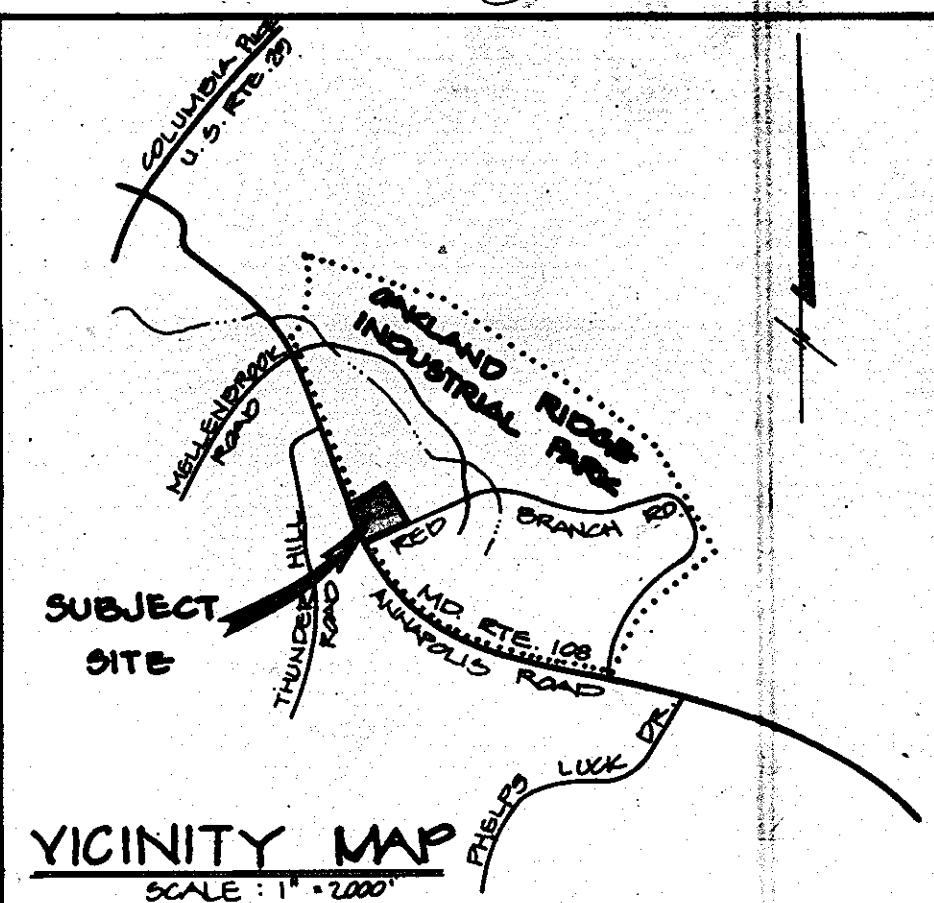
APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS, AND ROADS.
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR: *James F. ...* DATE: 7-26-83

CHIEF, BUREAU OF ENGINEERING
William E. ... DATE: 7-26-83

HOWARD SOIL CONSERVATION DISTRICT
 THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
 DATE: 7-20-83

APPROVED: HOWARD SOIL CONSERVATION DISTRICT
 REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
 SIGNATURE: *James F. ...* DATE: 7-20-83
 THE UNITED STATES SOIL CONSERVATION SERVICE



PLANT SCHEDULE

KEY	PLANT NAME	SIZE	QUANT	REMARKS
⊕	ACER RUBRUM OCTOBER GLORY	2 1/2-3" CAL	6	BTD
⊕	OCTOBER GLORY MAPLE	12-14" HT.		HEAVY HEADS
⊕	QUERCUS PALUSTRIS PIN OAK	2 1/2-3" CAL	14	
⊕	LIRIODENDRON SYRACULUA SWEET GUM	2 1/2-3" CAL	8	
⊕	FRAXINUS P. LANCEOLATA SEEDLESS GREEN ASH	2 1/2-3" CAL	1	
⊕	MALUS RADIANT RADIANT CRABAPPLE	8-10" HT.	24	
⊕	PRUNUS SERRULATA KWANZAN KWANZAN CHERRY	8-10" HT.	10	
⊕	PYRUS CALLERIANA BRADFORD BRADFORD PEAR	8-10" HT.	5	
⊕	AMELANCHIER CANADENSIS SERVICEBERRY CLUMP	8-10" HT.	8	
⊕	JUNIPERUS FITZ. COMPACTA COMPACT PFTZER JUN.	3-4' SP.	4	
⊕	TSUGA CANADENSIS CANADIAN HEMLOCK	6-8" HT.	12	
⊕	PINUS STROPPUS EASTERN WHITE PINE	6-8" HT.	18	BTD
⊕	AREAS TO BE PLANTED IN GROUND COVER, I.C. I.V., BAR HARD I.S.H.			PLANT FOR SOLID COVER
⊕	EXISTING TREES TO BE SAVED		68	

NOTE: ALL PLANTING TO BE IN COMPLIANCE WITH STANDARD HRD PLANTING SPECIFICATIONS.
 CONTRACTOR TO VERIFY LOCATION OF UNDERGROUND UTILITIES BEFORE DIGGING.

STATE OF MARYLAND
 OFFICE OF THE REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT
Wayne L. ...

APPROVED
 PLANNING BOARD OF HOWARD COUNTY
 DATE: 4-20-83
 177

NEU VALLEY NURSERY
 ELKRIDGE, MD 21227 796-4195

ENGINEER
 GEORGE WILLIAM STEPHENS, JR. AND ASSOCIATES INC.
 ENGINEERS & SURVEYORS
 303 ALLEGHENY AVE., TOWSON, MD 21284
 285-8120

OWNER
 A.M.F. INCORPORATED
 9198 RED BRANCH ROAD
 COLUMBIA, MARYLAND, 21043

DEVELOPER
 GLEN ARM DEVELOPMENT & CONSTRUCTION CO., INC.
 11100 OLD CARRIAGE ROAD
 GLEN ARM, MARYLAND, 21037

OWNER
 GLEN ARM DEVELOPMENT & CONSTRUCTION CO., INC.
 11100 OLD CARRIAGE ROAD
 GLEN ARM, MARYLAND, 21037

DATE: 2/15/83

DESIGN: R.W.R.
DRAWN: R.W.R.
CHECKED: T.C.

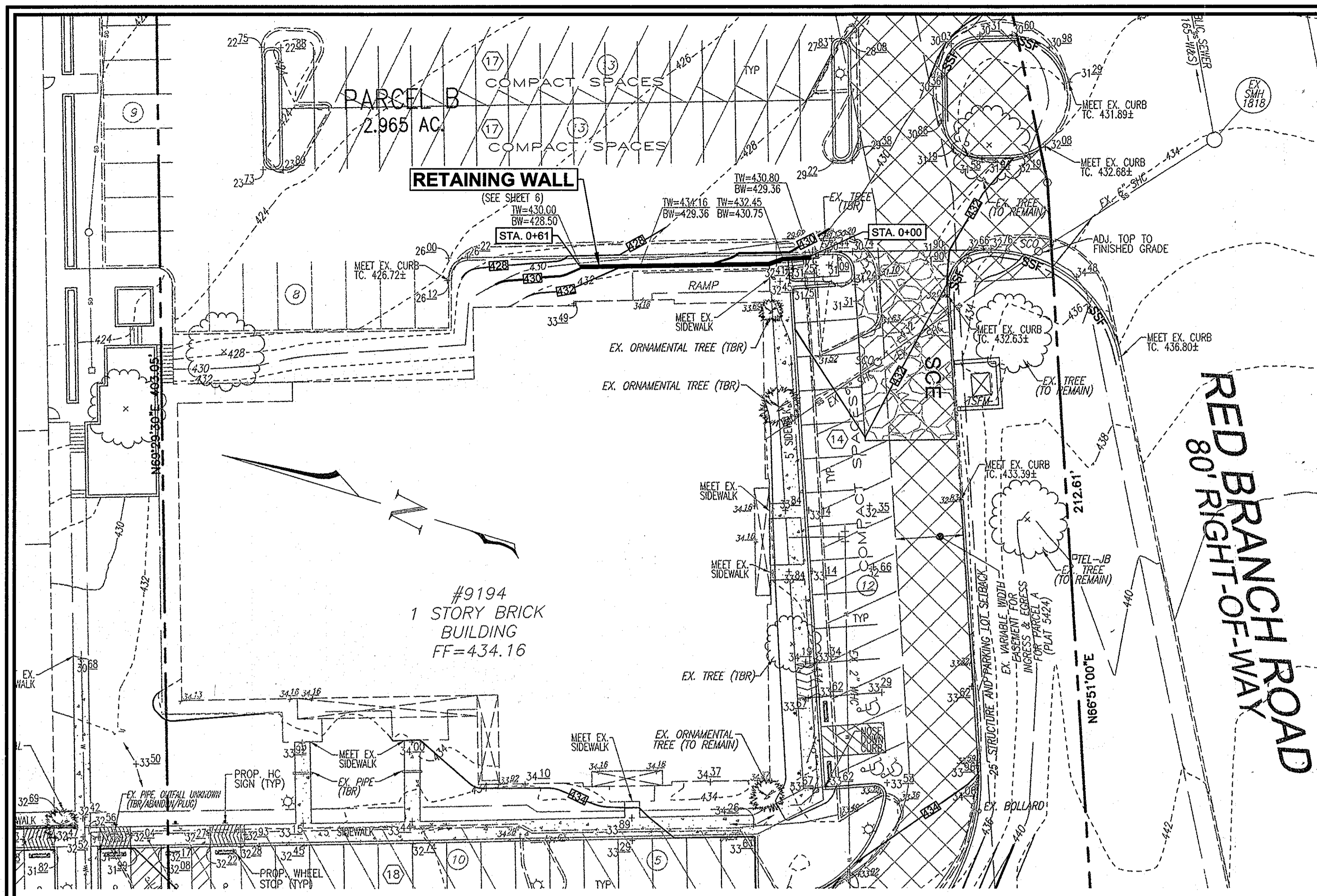
REVISIONS
 1 3/29/83
 2 4/18/83

DATE: 2/15/83

LANDSCAPE PLANTING PLAN
 SECTION 1: LOT 1
 OAKLAND RIDGE INDUSTRIAL PARK
 PARCEL 'A' & PARCEL 'B'

PROPOSED IMPROVEMENTS & PROPOSED OFFICE BLDGS.
 NORTHEAST CORNER OF MD RTE. 108 & RED BRANCH ROAD
 HOWARD COUNTY, MD. COLUMBIA, MD. ELECTION DISTRICT #2
 SCALE 1"=30' PA.4157 FEBRUARY 14, 1983

SHT. 5 OF 5
 SDR 83-127C



WALL LOCATION PLAN
1" = 20'

SPECIFICATIONS
MODULAR CONCRETE BLOCK RETAINING WALL

PART 1: GENERAL

1.01 Description

A. Work shall consist of furnishing and construction of a Modular Retaining Wall System in accordance with these specifications and in reasonably close conformity with the lines, grades, design, and dimensions shown on the plans.

B. Work includes preparing foundation soil, furnishing and installing leveling pad, unit drainage fill and backfill to the lines and grades shown on the construction drawings.

C. Work includes furnishing and installing geogrid soil reinforcement of the type, size, location, and lengths designated on the construction drawings.

1.02 Delivery, Storage and Handling

A. Contractor shall check all materials upon delivery to assure that the proper type, grade, color, and certification has been received.

B. Contractor shall protect all materials from damage due to job site conditions and in accordance with manufacturer's recommendations. Damaged materials shall not be incorporated into the work.

PART 2: PRODUCTS

2.01 Modular Concrete Retaining Wall Units

A. Modular concrete units shall conform to the following architectural requirements: face color - color may be specified by the Owner.

face finish - sculptured rock face in angular tri-planer or flat configuration. Other face finishes will not be allowed without written approval of Owner.

bond configuration - running with bonds nominally located at midpoint vertically adjacent units, in both straight and curved alignments.

exposed surfaces of units shall be free of chips, cracks or other imperfections when viewed from a distance of 10 feet under diffused lighting.

B. Modular concrete materials shall conform to the requirements of ASTM C1372 - Standard Specifications for Segmental Retaining Wall Units.

C. Modular concrete units shall conform to the following structural and geometric requirements measured in accordance with appropriate references:

compressive strength = 3000 psi minimum; absorption = 8% maximum (6% in northern states) for standard weight aggregates;

dimensional tolerances = ±1/8" from nominal unit dimensions not including rough split face, ±1/16"

unit height - top and bottom planes; unit size - 8" (H) x 18" (W) x 12 (D) minimum;

unit weight - 75 lbs/unit minimum for standard weight aggregates;

inter-unit shear strength - 1000 pcf minimum at 2 psi normal pressure; at 2 psi normal force.

geogrid/unit peak connection strength - 1000 pcf minimum

D. Modular concrete units shall conform to the following constructability requirements: (if applicable)

vertical setback = 1/8" per course (near vertical) or 1" per course per the design;

alignment and grid positioning mechanism - fiberglass pins, two per unit minimum;

maximum horizontal gap between erected units shall be - 1/2 inch.

2.02 Shear Connectors (if applicable)

A. Shear connectors shall be 1/2 inch diameter thermoset isophthalic polyester resin-impregnated fiberglass reinforcement rods or equivalent to provide connection between vertically and horizontally adjacent units. Strength of shear connectors between vertical adjacent units shall be applicable over a design temperature of 10 degrees F to +100 degrees F. D. Shear connectors shall be capable of holding the geogrid in the proper design position during grid pre-tensioning and backfilling.

2.03 Base Leveling Pad Material

A. Material shall consist of a compacted #57 crushed stone base as shown on the construction drawings.

2.04 Unit Drainage Fill

A. Unit drainage fill shall consist of #57 crushed stone

2.05 Geogrid Reinforced Backfill

A. Reinforced backfill shall type SM, be free of debris and meet the following gradation tested in accordance with ASTM D-422 and meet other properties shown on the plan:

Sieve Size	Percent Passing
2 inch	100-75
3/4 inch	100-75
No. 40	0-60
No. 200	0-35

Plasticity Index (PI) <10 and Liquid Limit <35 per ASTM D-4318.

B. Material can be site excavated soils where the above requirements can be met. Unsuitable soils for backfill (high plastic clays or organic soils) shall not be used in the reinforced soil mass.

2.06 Geogrid Soil Reinforcement

A. Geosynthetic reinforcement shall consist of geogrids manufactured specifically for soil reinforcement applications and shall be manufactured from high tenacity polyester yarn.

2.07 Drainage Pipe

A. The drainage pipe shall be perforated corrugated HDPE pipe manufactured in accordance with ASTM D-1248.

PART 3 EXECUTION

3.01 Excavation

A. Contractor shall excavate to the lines and grades shown on the construction drawings. Owner's representative shall be responsible for inspecting and approving the excavation prior to placement of leveling material or fill soils.

3.02 Base Leveling Pad

A. Leveling pad material shall be placed to the lines and grades shown on the construction drawings, to a minimum thickness of 6 inches and extend laterally a minimum of 6" in front and behind the modular wall unit.

B. Leveling pad shall be prepared to insure full contact to the base surface of the concrete units.

3.03 Modular Unit Installation

A. First course of units shall be placed on the leveling pad at the appropriate line and grade. Alignment and level shall be checked in all directions and insure that all units are in full contact with the base and properly seated.

B. Place the front of units side-by-side. Do not leave gaps between adjacent units. Layout of corners and curves shall be in accordance with manufacturer's recommendations.

C. Install shearcnecting devices per manufacturer's recommendations.

D. Place and compact drainage fill within and behind wall units. Place and compact backfill soil behind drainage fill. Follow wall erection and drainage fill closely with structure backfill.

E. Maximum stacked vertical height of wall units, prior to unit drainage fill and backfill placement and compaction, shall not exceed three courses.

3.04 Structural Geogrid Installation

A. Geogrid shall be oriented with the highest strength axis perpendicular to the wall alignment.

B. Geogrid reinforcement shall be placed at the strengths, lengths, and elevations shown on the construction design drawings or as directed by the Engineer.

C. The geogrid shall be laid horizontally on compacted backfill and attached to the modular wall units. Place the next course of modular concrete units over the geogrid. The geogrid shall be pulled taut, and anchored prior to backfill placement on the geogrid.

3.05 Reinforced Backfill Placement

A. Reinforced backfill shall be placed, spread, and compacted in such a manner that minimizes the development of slack in the geogrid and installation damage.

B. Reinforced backfill shall be placed and compacted in lifts not to exceed 6 inches where hand compaction is used, or 8 - 10 inches where heavy compaction equipment is used. Lift thickness shall be decreased to achieve the required density as required.

C. Reinforced backfill shall be compacted to 95% of the maximum density as determined by ASTM D569. The moisture content of the backfill material prior to and during compaction shall be uniformly distributed throughout each layer and shall be + 3% to - 3% of optimum.

D. Only lightweight hand-operated equipment shall be allowed within 3 feet from the tail of the modular concrete unit.

E. Tracked construction equipment shall not be operated directly upon the geogrid reinforcement. A minimum lift thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. Tracked vehicle turning should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid.

F. Rubber tired equipment may pass over geogrid reinforcement at slow speeds, less than 10 MPH. Sudden braking and sharp turning shall be avoided.

G. At the end of each day's operation, the Contractor shall slope the last lift of reinforced backfill away from the wall units to direct runoff away from wall face. The Contractor shall not allow surface runoff from adjacent areas to enter the wall construction site.

3.06 Cap Installation

A. Cap units shall be glued to underlying units with an all-weather adhesive recommended by the manufacturer.

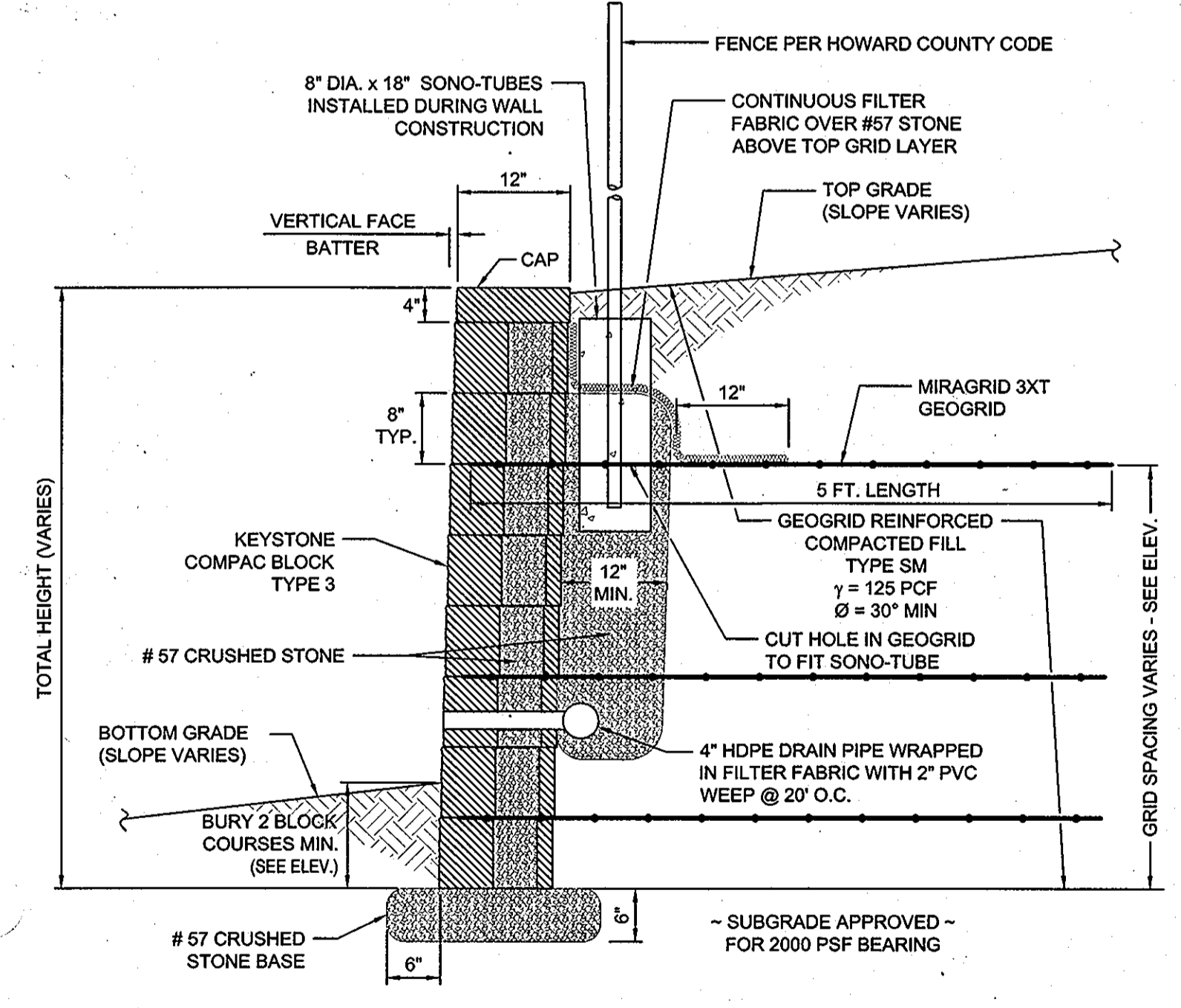
3.07 Field Quality Control

A. The Owner shall engage inspection and testing services, including independent laboratories, to provide quality assurance and testing services during construction.

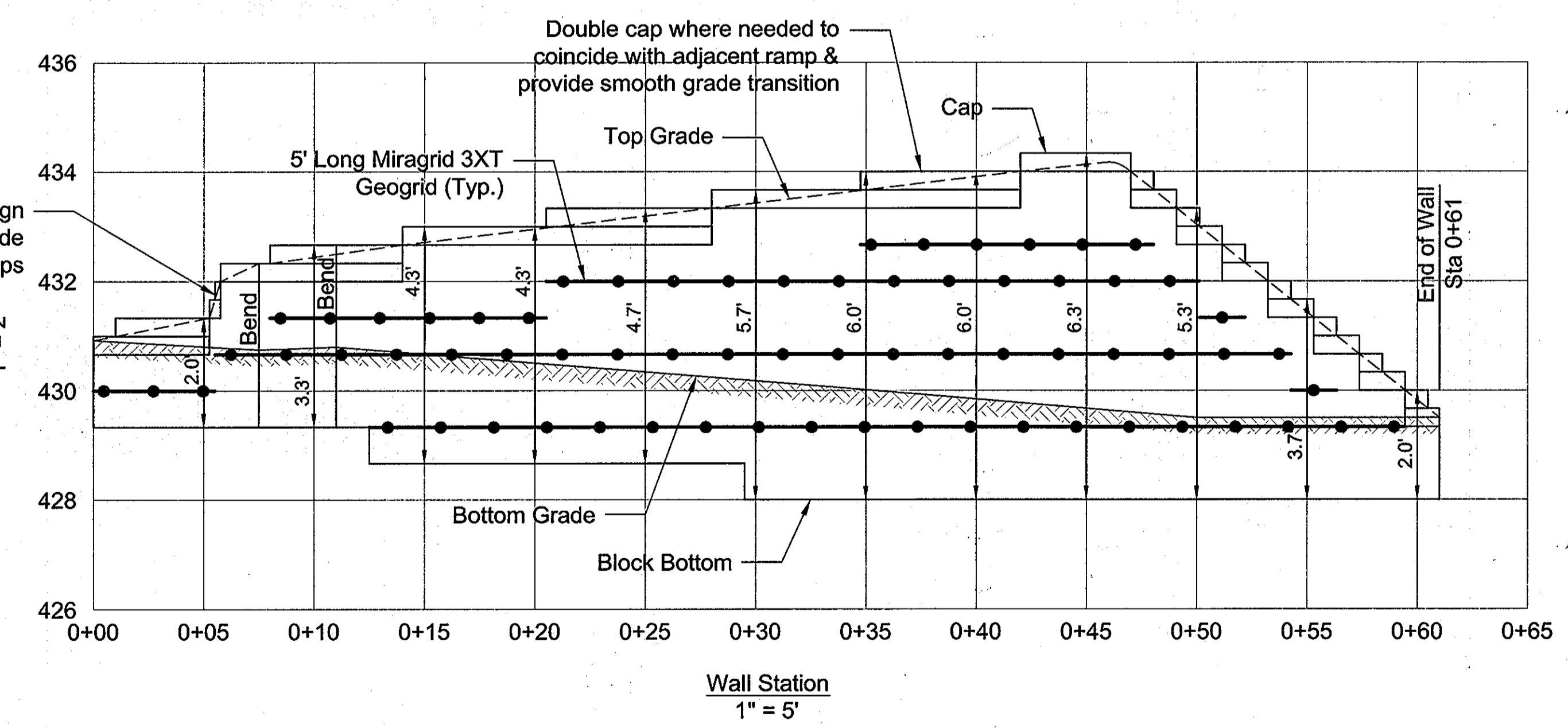
B. As a minimum, quality assurance testing should include foundation soil inspection, soil and backfill testing, verification of design parameters, and observation of construction for general compliance with design drawings and specifications.

NOTES:

- No trees shall be planted within 10 feet of the top of the retaining wall.
- Retaining walls shall only be constructed under the observation of a registered professional engineer and a (NICET, WAQEC, or equiv.) certified soils technician.
- One soil boring shall be required every one hundred feet along the entire length of the wall. Copies of all boring reports shall be provided to the Howard County Inspector Prior to the start of construction.
- The required bearing pressure beneath the wall system shall be verified in the field by a certified soils technician. Testing documentation must be provided to the Howard County Inspector prior to start of construction. The required bearing test shall be the Dynamic Cone Penetrometer test ASTM STP-399.
- The suitability of fill material shall be confirmed by the on-site soils technician. Each 8' lift must be compacted to a minimum 95% standard proctor density and the testing report shall be made available to the Howard County Inspector upon completion of construction.
- Walls shall not be constructed on uncertified fill materials.
- Walls shall not be constructed within a Howard Co. right-of-way or easement.



TYPICAL WALL SECTION
N.T.S.



WALL ELEVATION
1" = 5'

OWNER/DEVELOPER
9198 LIMITED PARTNERSHIP LLLP
8600 SNOWDEN RIVER PARKWAY
SUITE 207
COLUMBIA, MD 21045
(301) 596-0222

REVISED SITE DEVELOPMENT PLAN
RETAINING WALL CONSTRUCTION DETAILS

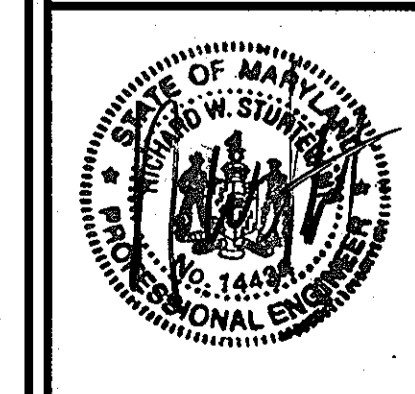
OAKLAND RIDGE INDUSTRIAL PARK
9192, 9194, 9198 RED BRANCH ROAD
SECTION 1/AREA 1
TAX MAP 30 BLOCK 17 2ND ELECTION DISTRICT
PARCEL A & PARCEL B
PARCEL 239 PARCELS A & B
HOWARD COUNTY, MARYLAND

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief Engineer 1-6-14
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Chief of Land Development 1-14-14
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Director 2/24/14
DIRECTOR DATE



PROFESSIONAL CERTIFICATE

DESIGN BY: HM
DRAWN BY: HM
CHECKED BY: RWS
DATE: JUNE 17, 2013
SCALE: AS SHOWN
JOB NO.: 13261-A

6 SHEET OF 6