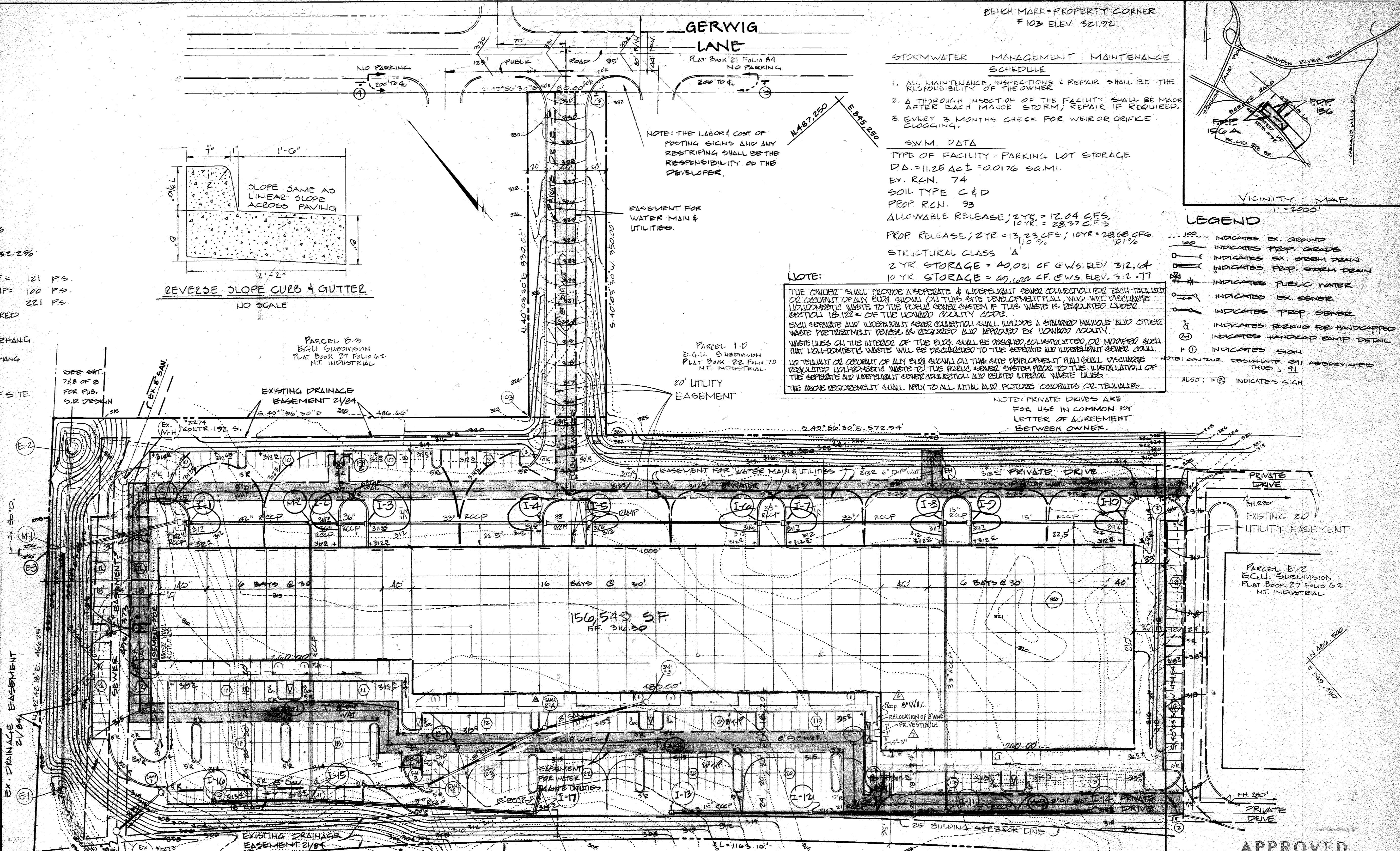


SITE DATA
TOTAL AREA OF SITE = 11.983 AC
ZONING = INT. INDUSTRIAL
F.D.P. 156-A
REF. PLAT. ENTITLED:
" COLUMBIA
E.G.U. SUBDIVISION
SECT. 2 AREA 3
PAR. 4-3
A RESUBDIVISION OF PARCEL A2 E C2
T.M. 42 P.O. PAR. A11
ED #6 H.O. CO. MD.
DATED 3-4-86
EXISTING USE: VACANT
PROPOSED USE: OFFICE & WAREHOUSE
TOTAL FLOOR AREA = 156,549 S.F.
TOTAL OFFICE AREA = 60,049 S.F.
TOTAL WAREHOUSE AREA = 96,500 S.F.
FLOOR AREA RATIO = 3.593 / 11.983 = 30.0%
BUILDING COVERAGE W/5 OVERHANGS =
148,225 SF = 3.363 / 11.983 = 32.2%
PARKING REQUIRED =
OFFICE = 60,049 SF @ 2 SF/1000 SF = 121 PS.
WAREHOUSE = 100 EMPLOYEES @ 1 EMP/100 SF = 100 PS.
TOTAL 221 PS
(HANDICAP PARKING SPACES REQUIRED
7 OUT OF 221)
PARKING PROVIDED = 221 @ 9'x18' w/6' OVERHANG
121 @ 9'x20'
1 @ 10'x18' w/6' OVERHANG
349 TOTAL
OPEN SPACE PROVIDED = 353 AC / 11.983 =
29.46% OF SITE

Lot 3
E.G.U. SUBDIVISION
PLAT 5600
INT. INDUSTRIAL

GENERAL NOTES
1. Maximum building height = 36'.
2. All areas not being paved or receiving building coverage shall be stabilized in accordance with the plans approved by the Howard Soil Conservation District.
3. Any damage to public rights-of-way and/or adjacent properties shall be repaired immediately at the contractor's expense.
4. The contractor shall maintain at least a 2' level bench behind all curb and gutter in fill areas.
5. The contractor shall verify all existing utilities to his own satisfaction before starting construction.
6. All slopes shall be 2:1 or flatter.
7. All work shall be done in accordance with Howard County Standard Specifications and Details for Construction, or as shown on these plans.
8. The contractor shall notify the C & P Telephone Co. and the Gas and Electric Company five days prior to starting work shown on these plans by calling "Area Utility". Call collect 301-281-2100.
9. For details of signs and signs for the handicapped see the Maryland Building Code for the Handicapped and signs as shown herein.
10. The contractor shall maintain a minimum of 2.5' cover over all proposed water lines.
11. All sign-post shall be placed on filler slots.
12. The contractor shall contact the Construction Inspection/Enforcement Division, 30 hours in advance of commencement of work at 939-2417 or 782-7272.
13. The contractor shall remove all existing parking, curb and gutter, etc. that may interfere with proposed construction.
14. All utilities installed shall receive full trench completion.
15. All water mains, sewer, gas, etc. shall be installed in accordance with Howard County design requirements.

HOWARD SOIL CONSERVATION DISTRICT
THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED: *Stephen P. Shuler* DATE: 1/13/87
HOWARD SOIL CONSERVATION DISTRICT
REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
SIGNATURE: *James M. Helms* DATE: 1/13/87
THE UNITED STATES SOIL CONSERVATION SERVICE
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
APPROVED: *James M. Helms* 2-17-87
COUNTY HEALTH OFFICER
APPROVED: *Thomas J. Amico* 2-18-87
PLANNING DIRECTOR
APPROVED: *John W. Williams* 2-18-87
CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
APPROVED: *John F. Murphy* 2-10-87
DIRECTOR
APPROVED: *John F. Murphy* 1-19-87
CHIEF BUREAU OF ENGINEERING



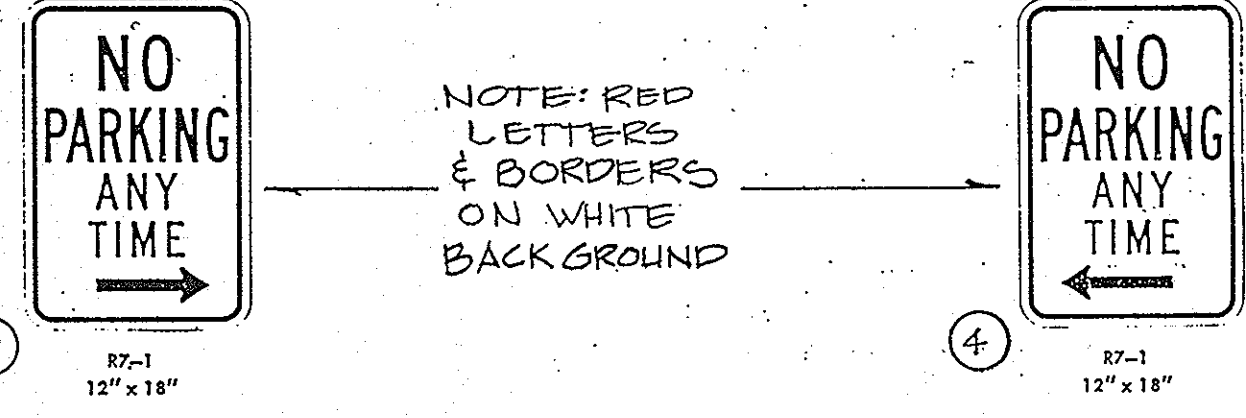
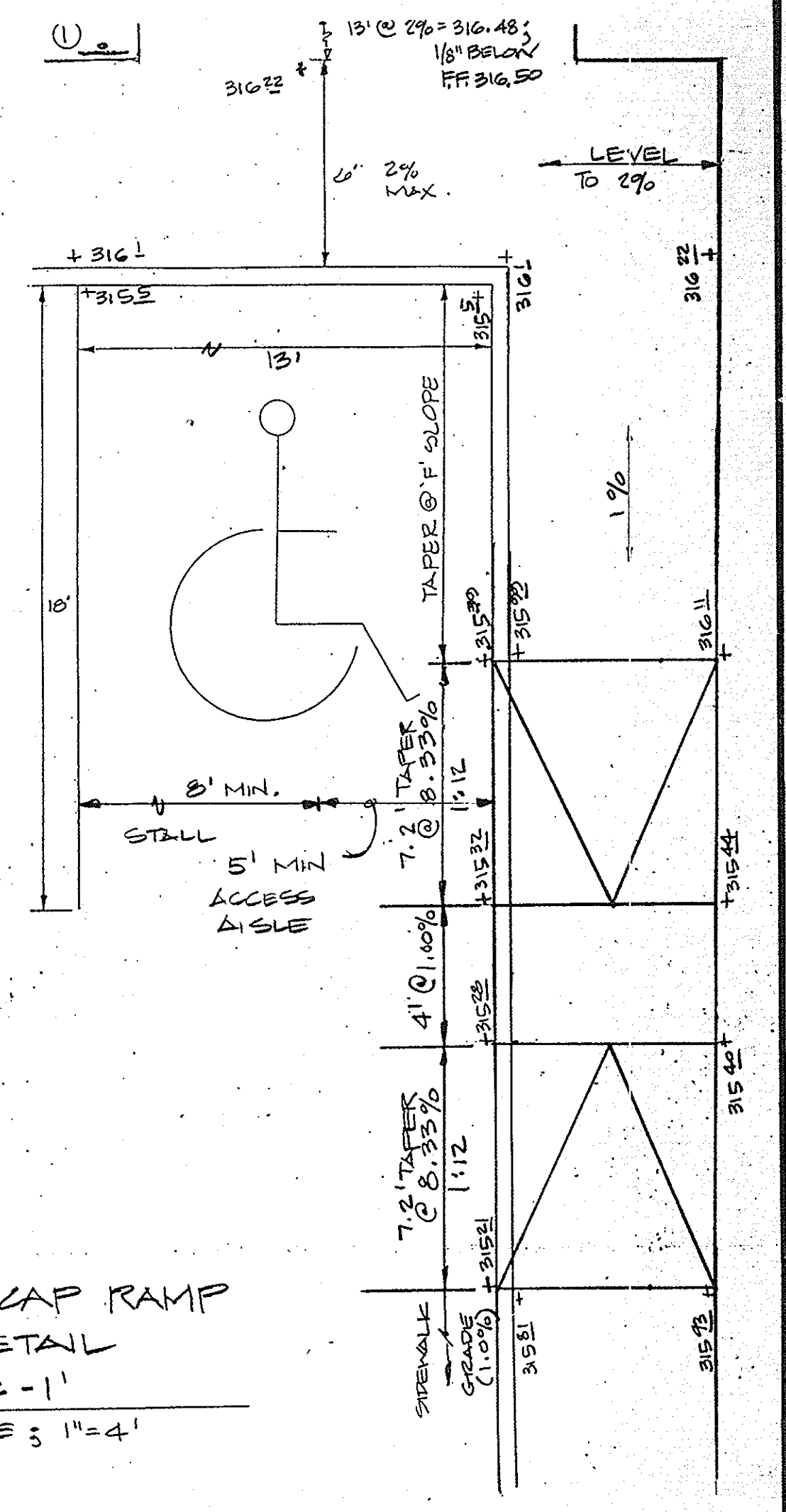
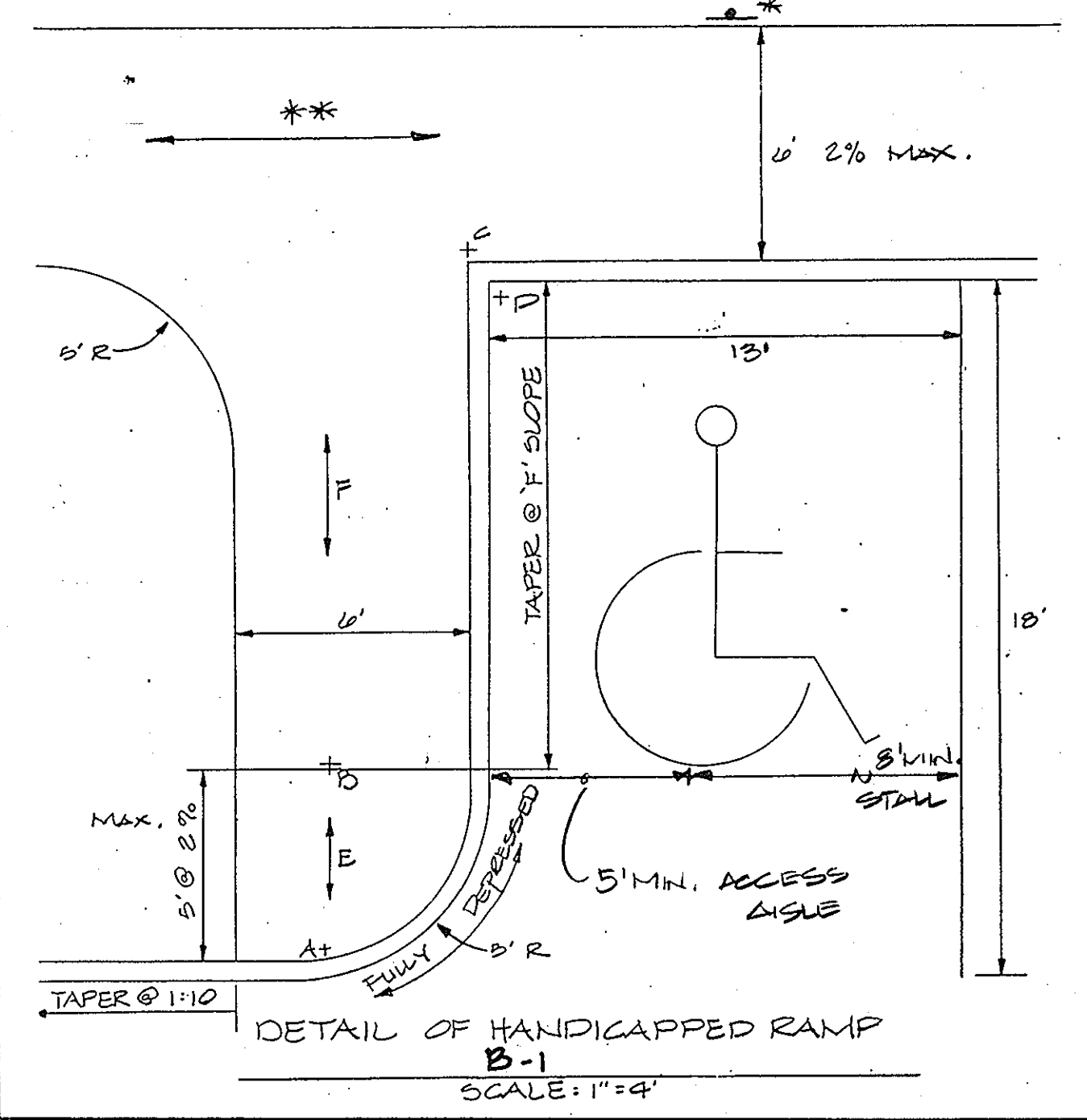
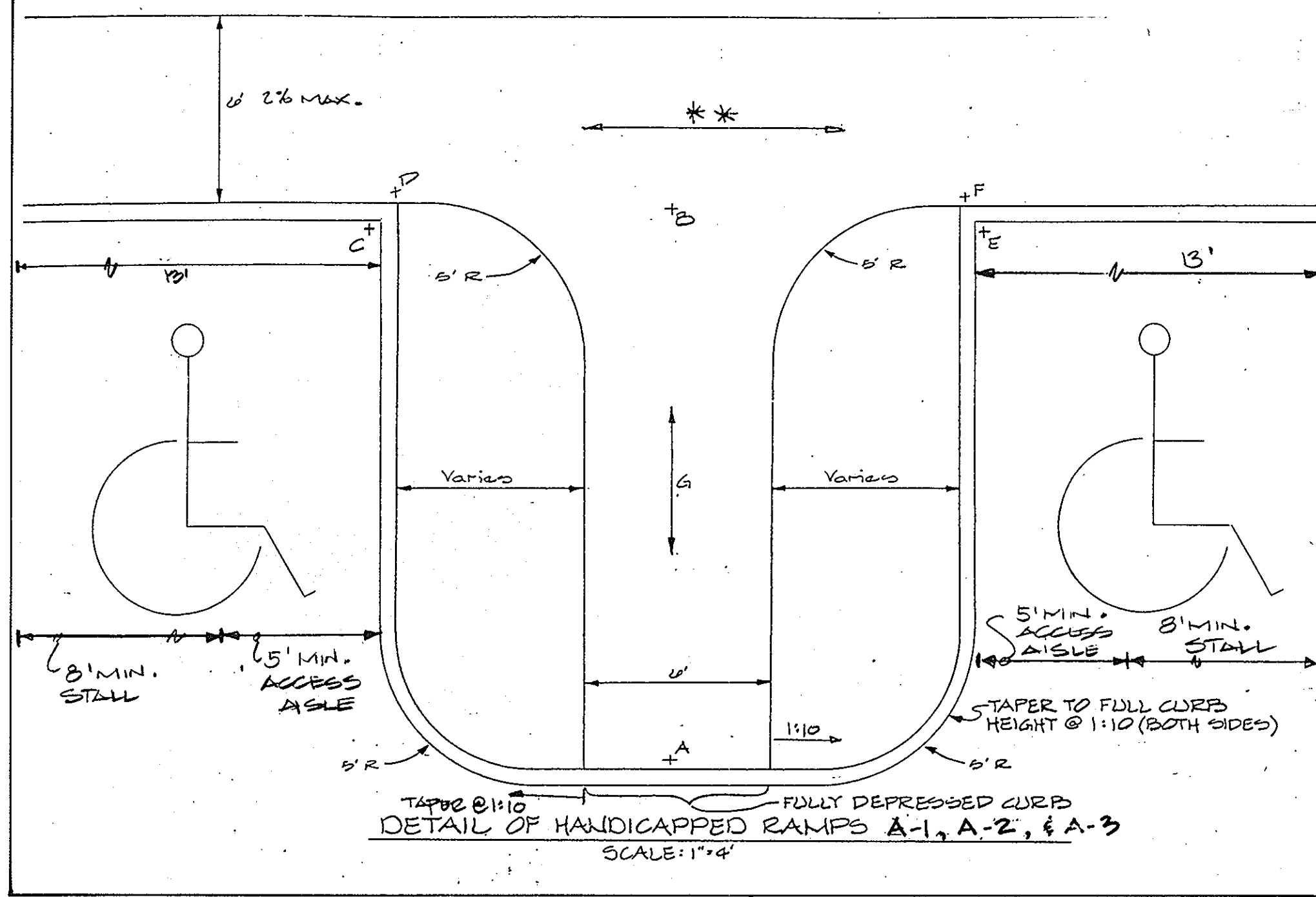
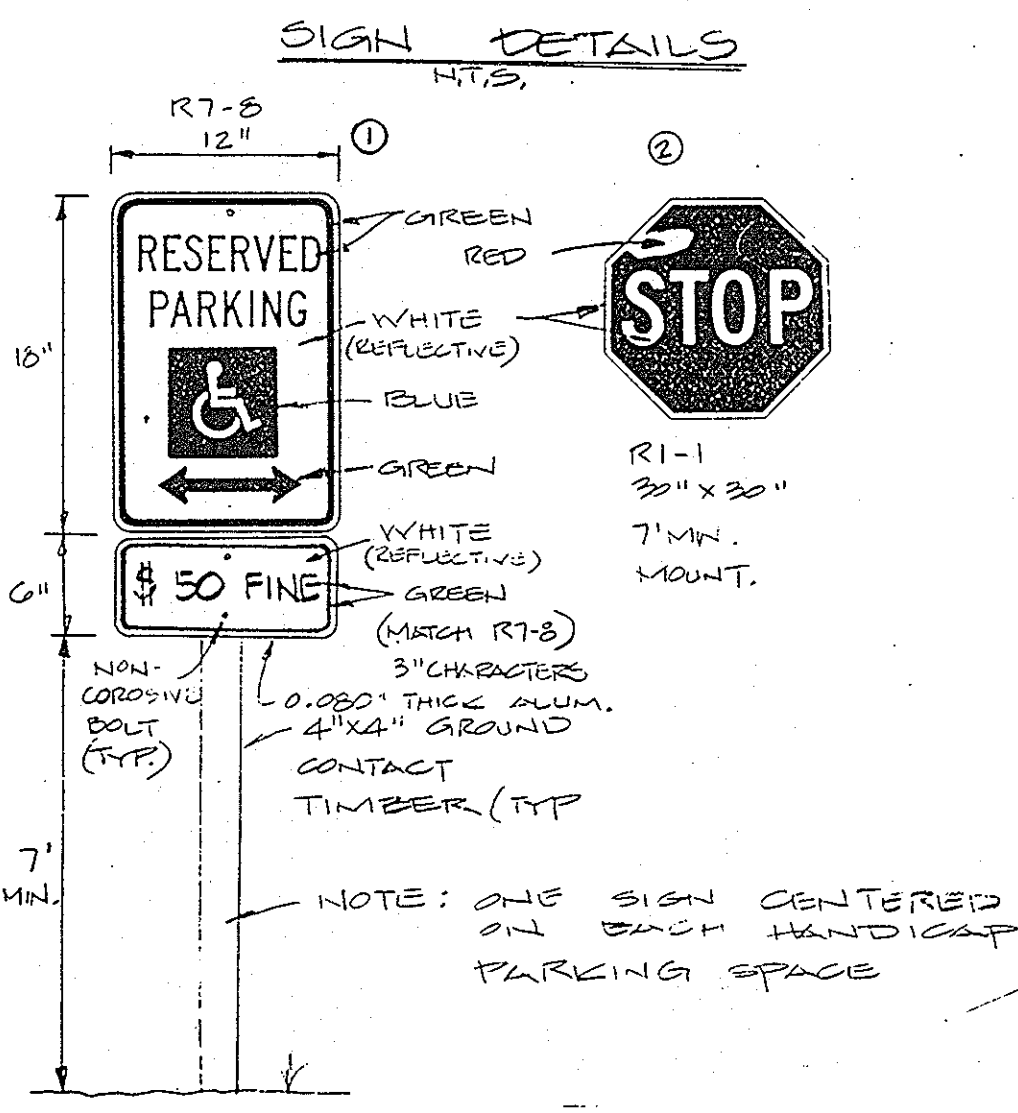
VEHICULAR INGRESS AND EGRESS IS RESTRICTED
RELOCATED MD. RTE. 32
SHA PLAT No. 46012
NOTE: THE LABOR & COST OF POSTING SIGNS AND ANY RESTRICTIONS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER.
NOTE: THE TOTAL LIMIT OF DISTURBANCE (LOD) IS ABOUT 250 SF AND THEREFORE, THIS PROJECT IS EXEMPT FROM SWM. ANY FUTURE DISTURBANCE ADDED TO THE 250 SF THAT EXCEEDS 5000 SF SHALL COMPLY WITH CURRENT SWM REQUIREMENTS.
PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21245, EXPIRATION DATE: JUNE 9, 2018.
APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE 10-15-86
ADDRESS CHART
BUILDING NO. 9515
STREET ADDRESS GERWIG LANE
SUBDIVISION NAME SECT. 2 AREA 3
PLAT, BLOCK, ZONE TAX/ZONE MAP ELECT. DIST. CENSUS TRACT
7225 10 INT. INDUSTRIAL 42 0001.23
WATER CODE E-14
SEWER CODE 524-1000

WRS WILLIAM R. SUDECK & ASSOCIATES, INC.
Consulting Engineers & Land Surveyors
112 South Main Street • Bel Air, Maryland 21014
301-879-4353 301-838-5833

ENGINEER
William R. Suduck PE: 4874 12/11/86
WILLIAM R. SUDECK REG. NO. DATE

DEVELOPER
MERRITT
2066 Lord Baltimore Drive
Baltimore, Maryland 21207
(301) 298-2600
LEROY M. MERRITT DATE 12/11/86
Leroy M. Merritt

SITE PLAN
FOR
PROPOSED OFFICE FOR RESEARCH & DEVELOPMENT
GUILFORD INDUSTRIAL PARK
PARCEL A-3 SECTION 2 AREA 3
COLUMBIA
TAX MAP # 42
HOWARD COUNTY, MD.
ELECTION DISTRICT #6
DATE: OCTOBER 1986
SCALE: 1"=50'
SHT. 1 OF 8
SDP 86-215 c



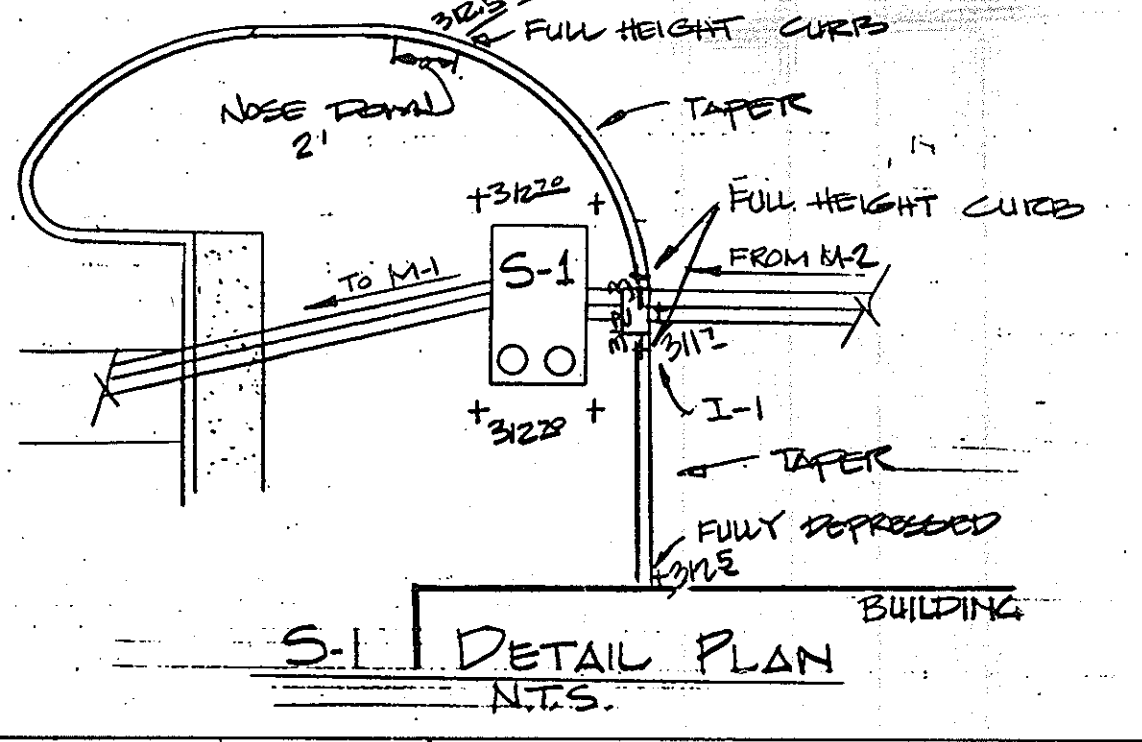
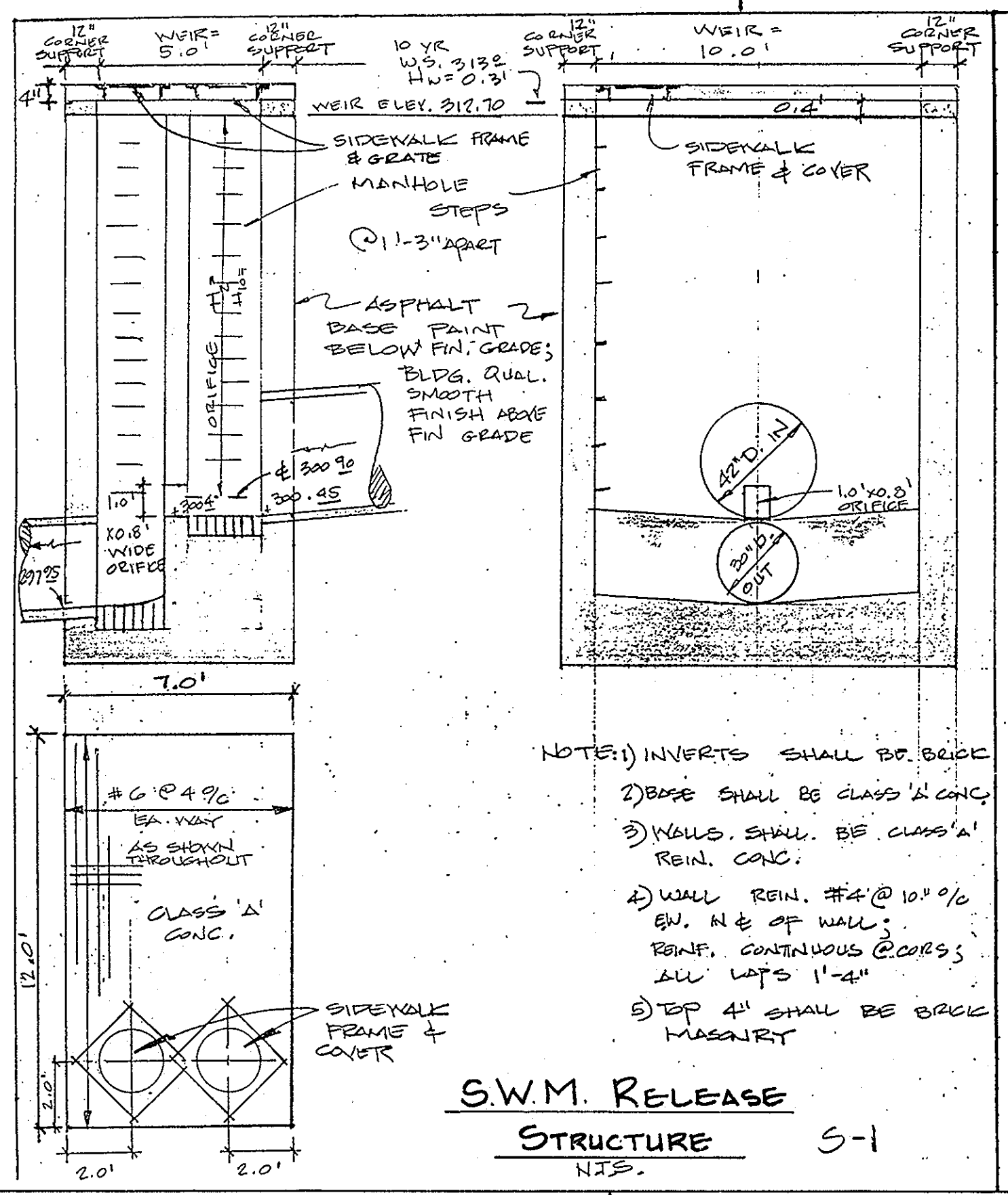
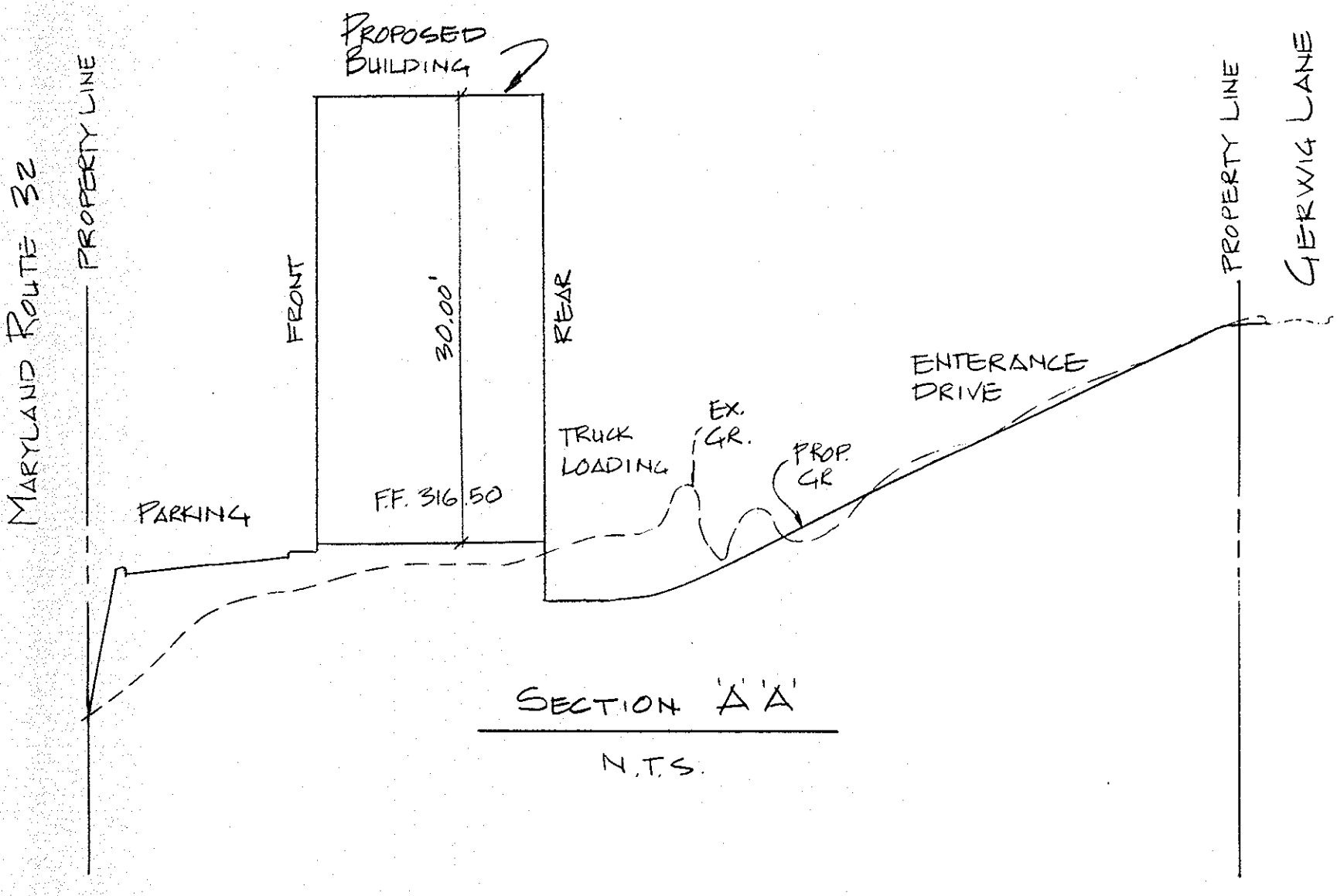
HANDICAP RAMP - ELEVATION SCHEDULE

| RAMP | A | B | C | D | E | F | G |
|------|------------|-------|-------|-------|-------|-------|-------|
| A-1 | 315.2 | 315.2 | 315.2 | 315.2 | 315.2 | 315.2 | 5.0% |
| A-2 | 315.2 | 316.1 | 315.5 | 316.1 | 315.2 | 316.1 | 4.33% |
| A-3 | 315.1 | 316.1 | 315.2 | 316.1 | 315.2 | 316.1 | 5.56% |
| B-1 | 314.2 | 314.2 | 315.2 | 315.2 | 2.00% | 3.89% | - |
| C-1 | SEE DETAIL | | | | | | |

STRUCTURE SCHEDULE

| NO. | TYPE | INV. IN | INV. OUT | TOP ELEV. | H.O.C.O. STR. DETAIL |
|-------|-------------------------|---------|----------|--------------------|-----------------------|
| I-1 | A-5 | 300.09 | 300.49 | 312.30 | SR-4.01, 2.5' WIDE |
| I-2 | " | 302.01 | 301.31 | 312.30 | " |
| I-3 | " | 302.20 | 302.13 | 312.15 | " |
| I-4 | " | 303.28 | 303.18 | 312.15 | " |
| I-5 | " | 303.70 | 303.50 | 312.20 | " |
| I-6 | " | 304.63 | 304.43 | 312.20 | " |
| I-7 | " | 305.00 | 304.75 | 312.30 | " |
| I-8 | " | 306.00 | 305.65 | 312.30 | " |
| I-9 | " | 307.22 | 307.02 | 312.30 | " |
| I-10 | A-5 | 307.24 | 312.30 | SR-4.01, 2.5' WIDE | |
| I-11 | DDL'S COMB. | 309.43 | 308.93 | 314.90 | SR-4.34 |
| I-12 | SGL'S COMB. | 310.14 | 309.64 | 314.90 | SR-4.32 |
| M-2 | BRK 42 MH | 301.60 | 301.10 | 312.00 | G-5.03 |
| I-13 | SGL'S COMB. | 310.85 | 314.90 | SR-4.32 | |
| SMH-1 | PRECAST MH | 300.29 | 303.77 | 314.6 | G-5.12 |
| SMH-2 | PRECAST MH | 301.75 | 304.23 | 316.0 | G-5.12 |
| SMH-3 | PRECAST MH | 302.70 | 305.60 | 316.3 | G-5.12 |
| SMH-4 | PRECAST MH | 303.73 | 305.26 | 315.31 | G-5.12 |
| SMH-5 | PRECAST MH | 311.80 | 311.70 | 316.3 | G-5.12 |
| SMH-6 | PRECAST MH | 312.10 | 312.00 | 316.3 | G-5.12 |
| SMH-7 | PRECAST MH | 312.10 | 312.00 | 316.3 | G-5.12 |
| SMH-8 | PRECAST MH | 312.10 | 312.00 | 316.3 | G-5.12 |
| S-1 | SWIM. RELEASE STRUCTURE | 300.45 | 297.95 | 313.43 | SEE DETAIL THIS SHEET |

** = LEVEL TO 2.00%
 * = SEE SITE PLAN & SIGN DETAILS (THIS SHEET)
 NOTE: 1) MAXIMUM LEAD WALK GRADE = 2.00%
 2) MAXIMUM SILL HEIGHT = 1/2"



HOWARD SOIL CONSERVATION DISTRICT
 THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED: *Stephen L. Hahn* DATE: 1/13/87
 HOWARD SOIL CONSERVATION DISTRICT

REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
 SIGNATURE: *James M. Helmer* DATE: 1/13/87
 THE UNITED STATES SOIL CONSERVATION SERVICE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
 SIGNATURE: *Joyan Egan* DATE: 2-17-87
 COUNTY HEALTH OFFICER

APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING
 SIGNATURE: *Thomas A. Agnew* DATE: 2-18-87
 PLANNING DIRECTOR

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 SIGNATURE: *George F. Neman* DATE: 2-10-87
 DIRECTOR

CHIEF BUREAU OF ENGINEERING
 SIGNATURE: *William R. Sudeck* DATE: 1/19/87

WRS
 WILLIAM R. SUDECK & ASSOCIATES, INC.
 Consulting Engineers & Land Surveyors
 112 South Main Street • Bel Air, Maryland 21014
 301-879-4353 301-838-5833

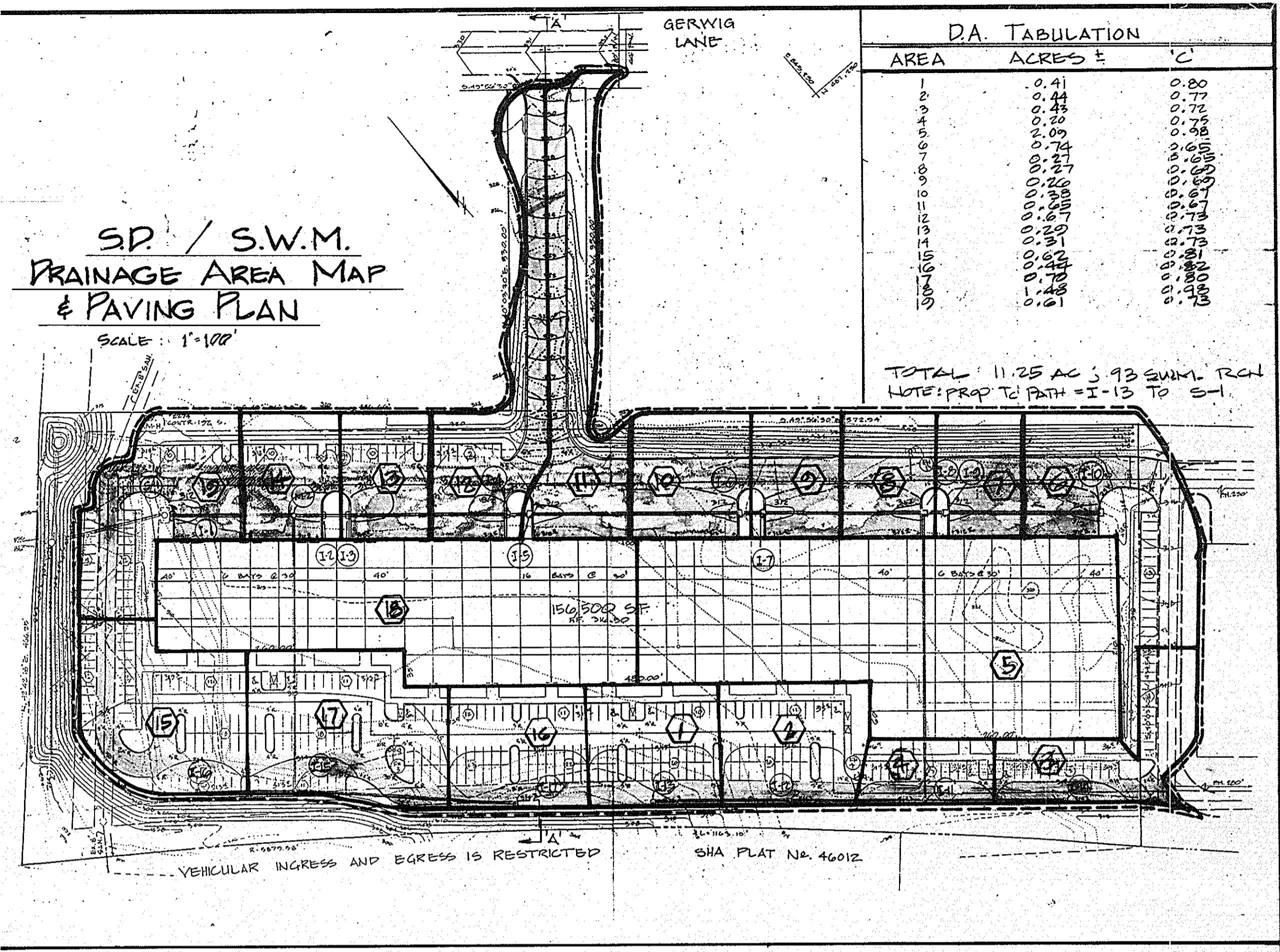
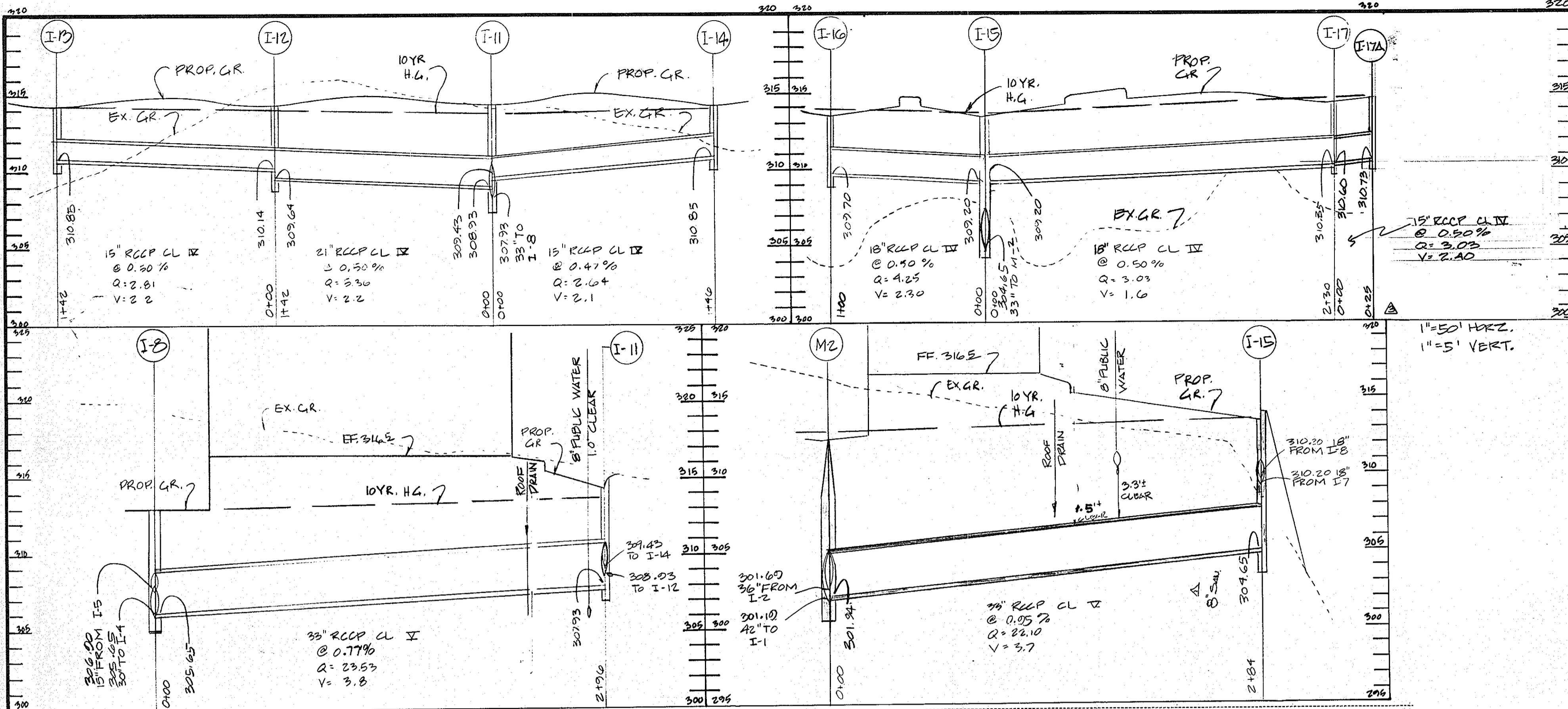
ENGINEER
 WILLIAM R. SUDECK
 PE. 4814
 REG. N.S.
 12/11/86
 DATE

DEVELOPER
 MERRITT
 2066 Lord Baltimore Drive
 Baltimore, Maryland 21207
 (301) 298-2600

DESIGNED: K.W.R.
DRAWN: K.M.G.
CHECKED: K.W.R.
REVISIONS:
 1. Rev. 5/11/87
 2. Rev. 5/11/87
 3. Rev. 5/11/87
 4. Rev. 5/11/87
 5. Rev. 5/11/87
 6. Rev. 5/11/87
 7. Rev. 5/11/87
 8. Rev. 5/11/87
 9. Rev. 5/11/87
 10. Rev. 5/11/87
 11. Rev. 5/11/87
 12. Rev. 5/11/87
 13. Rev. 5/11/87
 14. Rev. 5/11/87
 15. Rev. 5/11/87
 16. Rev. 5/11/87
 17. Rev. 5/11/87
 18. Rev. 5/11/87
 19. Rev. 5/11/87
 20. Rev. 5/11/87
 21. Rev. 5/11/87
 22. Rev. 5/11/87
 23. Rev. 5/11/87
 24. Rev. 5/11/87
 25. Rev. 5/11/87
 26. Rev. 5/11/87
 27. Rev. 5/11/87
 28. Rev. 5/11/87
 29. Rev. 5/11/87
 30. Rev. 5/11/87
 31. Rev. 5/11/87
 32. Rev. 5/11/87
 33. Rev. 5/11/87
 34. Rev. 5/11/87
 35. Rev. 5/11/87
 36. Rev. 5/11/87
 37. Rev. 5/11/87
 38. Rev. 5/11/87
 39. Rev. 5/11/87
 40. Rev. 5/11/87
 41. Rev. 5/11/87
 42. Rev. 5/11/87
 43. Rev. 5/11/87
 44. Rev. 5/11/87
 45. Rev. 5/11/87
 46. Rev. 5/11/87
 47. Rev. 5/11/87
 48. Rev. 5/11/87
 49. Rev. 5/11/87
 50. Rev. 5/11/87
 51. Rev. 5/11/87
 52. Rev. 5/11/87
 53. Rev. 5/11/87
 54. Rev. 5/11/87
 55. Rev. 5/11/87
 56. Rev. 5/11/87
 57. Rev. 5/11/87
 58. Rev. 5/11/87
 59. Rev. 5/11/87
 60. Rev. 5/11/87
 61. Rev. 5/11/87
 62. Rev. 5/11/87
 63. Rev. 5/11/87
 64. Rev. 5/11/87
 65. Rev. 5/11/87
 66. Rev. 5/11/87
 67. Rev. 5/11/87
 68. Rev. 5/11/87
 69. Rev. 5/11/87
 70. Rev. 5/11/87
 71. Rev. 5/11/87
 72. Rev. 5/11/87
 73. Rev. 5/11/87
 74. Rev. 5/11/87
 75. Rev. 5/11/87
 76. Rev. 5/11/87
 77. Rev. 5/11/87
 78. Rev. 5/11/87
 79. Rev. 5/11/87
 80. Rev. 5/11/87
 81. Rev. 5/11/87
 82. Rev. 5/11/87
 83. Rev. 5/11/87
 84. Rev. 5/11/87
 85. Rev. 5/11/87
 86. Rev. 5/11/87
 87. Rev. 5/11/87
 88. Rev. 5/11/87
 89. Rev. 5/11/87
 90. Rev. 5/11/87
 91. Rev. 5/11/87
 92. Rev. 5/11/87
 93. Rev. 5/11/87
 94. Rev. 5/11/87
 95. Rev. 5/11/87
 96. Rev. 5/11/87
 97. Rev. 5/11/87
 98. Rev. 5/11/87
 99. Rev. 5/11/87
 100. Rev. 5/11/87

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE: 10-15-86
 10/15/86

PROPOSED OFFICE FOR RESEARCH & DEVELOPMENT
 GUILFORD INDUSTRIAL PARK
 PARCEL A-3 SECTION 2 AREA 3
 COLUMBIA
 TAX MAP # 42
 HOWARD COUNTY, MD.
 ELECTION DISTRICT # 6
 SCALE: 1"=50'
 SHEET 2 OF 8
 DATE: FEBRUARY 1986
 SDP 86-216



DA TABULATION

| AREA | ACRES ± | 'C' |
|------|---------|------|
| 1 | 0.41 | 0.80 |
| 2 | 0.44 | 0.77 |
| 3 | 0.43 | 0.75 |
| 4 | 0.20 | 0.75 |
| 5 | 0.27 | 0.75 |
| 6 | 0.27 | 0.75 |
| 7 | 0.27 | 0.75 |
| 8 | 0.27 | 0.75 |
| 9 | 0.27 | 0.75 |
| 10 | 0.27 | 0.75 |
| 11 | 0.27 | 0.75 |
| 12 | 0.27 | 0.75 |
| 13 | 0.27 | 0.75 |
| 14 | 0.27 | 0.75 |
| 15 | 0.27 | 0.75 |
| 16 | 0.27 | 0.75 |
| 17 | 0.27 | 0.75 |
| 18 | 0.27 | 0.75 |
| 19 | 0.27 | 0.75 |
| 20 | 0.27 | 0.75 |
| 21 | 0.27 | 0.75 |
| 22 | 0.27 | 0.75 |
| 23 | 0.27 | 0.75 |
| 24 | 0.27 | 0.75 |
| 25 | 0.27 | 0.75 |
| 26 | 0.27 | 0.75 |
| 27 | 0.27 | 0.75 |
| 28 | 0.27 | 0.75 |
| 29 | 0.27 | 0.75 |
| 30 | 0.27 | 0.75 |
| 31 | 0.27 | 0.75 |
| 32 | 0.27 | 0.75 |
| 33 | 0.27 | 0.75 |
| 34 | 0.27 | 0.75 |
| 35 | 0.27 | 0.75 |
| 36 | 0.27 | 0.75 |
| 37 | 0.27 | 0.75 |
| 38 | 0.27 | 0.75 |
| 39 | 0.27 | 0.75 |
| 40 | 0.27 | 0.75 |
| 41 | 0.27 | 0.75 |
| 42 | 0.27 | 0.75 |
| 43 | 0.27 | 0.75 |
| 44 | 0.27 | 0.75 |
| 45 | 0.27 | 0.75 |
| 46 | 0.27 | 0.75 |
| 47 | 0.27 | 0.75 |
| 48 | 0.27 | 0.75 |
| 49 | 0.27 | 0.75 |
| 50 | 0.27 | 0.75 |
| 51 | 0.27 | 0.75 |
| 52 | 0.27 | 0.75 |
| 53 | 0.27 | 0.75 |
| 54 | 0.27 | 0.75 |
| 55 | 0.27 | 0.75 |
| 56 | 0.27 | 0.75 |
| 57 | 0.27 | 0.75 |
| 58 | 0.27 | 0.75 |
| 59 | 0.27 | 0.75 |
| 60 | 0.27 | 0.75 |
| 61 | 0.27 | 0.75 |
| 62 | 0.27 | 0.75 |
| 63 | 0.27 | 0.75 |
| 64 | 0.27 | 0.75 |
| 65 | 0.27 | 0.75 |
| 66 | 0.27 | 0.75 |
| 67 | 0.27 | 0.75 |
| 68 | 0.27 | 0.75 |
| 69 | 0.27 | 0.75 |
| 70 | 0.27 | 0.75 |
| 71 | 0.27 | 0.75 |
| 72 | 0.27 | 0.75 |
| 73 | 0.27 | 0.75 |
| 74 | 0.27 | 0.75 |
| 75 | 0.27 | 0.75 |
| 76 | 0.27 | 0.75 |
| 77 | 0.27 | 0.75 |
| 78 | 0.27 | 0.75 |
| 79 | 0.27 | 0.75 |
| 80 | 0.27 | 0.75 |
| 81 | 0.27 | 0.75 |
| 82 | 0.27 | 0.75 |
| 83 | 0.27 | 0.75 |
| 84 | 0.27 | 0.75 |
| 85 | 0.27 | 0.75 |
| 86 | 0.27 | 0.75 |
| 87 | 0.27 | 0.75 |
| 88 | 0.27 | 0.75 |
| 89 | 0.27 | 0.75 |
| 90 | 0.27 | 0.75 |
| 91 | 0.27 | 0.75 |
| 92 | 0.27 | 0.75 |
| 93 | 0.27 | 0.75 |
| 94 | 0.27 | 0.75 |
| 95 | 0.27 | 0.75 |
| 96 | 0.27 | 0.75 |
| 97 | 0.27 | 0.75 |
| 98 | 0.27 | 0.75 |
| 99 | 0.27 | 0.75 |
| 100 | 0.27 | 0.75 |

TOTAL: 11.25 AC ± 93 SWIM. RCH
NOTE: PROP TO PATH = I-13 TO S-1

| LOCATION | AREA | COEFF. | CA | CA | CA | PIPE CONC. - MIN | ENTER | Q - C.F.S. | PIPE n = 0.014 | REMARKS | | |
|---------------|------|--------|------|-----|-----|------------------|-------|------------|----------------|---------|-------------------------|-------------------------|
| Park Lot 1-13 | 0.41 | 0.80 | 0.33 | 5.0 | 5.0 | 8.5 | 2.81 | 15" | 0.21 | 142' | SOL "S" Coab. RCP CL IV | |
| Park Lot 1-15 | 0.44 | 0.77 | 0.34 | 5.0 | 5.0 | 8.5 | 2.81 | 15" | 0.21 | 142' | SOL "S" Coab. RCP CL IV | |
| Park Lot 1-12 | 0.44 | 0.85 | 0.34 | 5.0 | 5.0 | 8.5 | 2.81 | 15" | 0.21 | 142' | SOL "S" Coab. RCP CL IV | |
| Park Lot 1-11 | 0.43 | 0.72 | 0.31 | 5.0 | 5.0 | 8.5 | 2.64 | 15" | 0.18 | 146' | SOL "S" Coab. RCP CL IV | |
| Park Lot 1-14 | 0.20 | 0.75 | 0.15 | 5.0 | 5.0 | 8.5 | 1.28 | 15" | 0.18 | 146' | SOL "S" Coab. RCP CL IV | |
| Park Lot 1-11 | 2.09 | 0.75 | 0.15 | 5.0 | 5.0 | 8.5 | 17.43 | 15" | 0.18 | 146' | SOL "S" Coab. RCP CL IV | |
| Park Lot 1-11 | 3.57 | 0.65 | 0.48 | 5.0 | 5.0 | 8.5 | 23.53 | 33" | 0.22 | 296' | SOL "S" Coab. RCP CL IV | |
| Park Lot 1-10 | 0.74 | 0.65 | 0.48 | 5.0 | 5.0 | 8.5 | 4.08 | 15" | 0.45 | 3.2 | 156' | A-5 Inlet RCP CL IV |
| Park Lot 1-9 | 0.27 | 0.65 | 0.18 | 5.0 | 5.0 | 8.5 | 1.53 | 15" | 0.45 | 3.2 | 156' | A-5 Inlet RCP CL IV |
| Park Lot 1-9 | 6.7 | 1.01 | 0.68 | 5.0 | 5.0 | 8.5 | 5.61 | 15" | 0.65 | 4.5 | 30' | A-5 Inlet RCP CL IV |
| Park Lot 1-8 | 0.27 | 0.69 | 0.19 | 5.0 | 5.0 | 8.5 | 1.42 | 15" | 0.65 | 4.5 | 30' | A-5 Inlet RCP CL IV |
| Park Lot 1-8 | 8 | 4.85 | 0.69 | 5.0 | 5.0 | 8.5 | 28.21 | 33" | 0.32 | 4.6 | 162' | A-5 Inlet RCP CL IV |
| Park Lot 1-7 | 0.26 | 0.69 | 0.18 | 5.0 | 5.0 | 8.5 | 1.53 | 15" | 0.32 | 4.6 | 162' | A-5 Inlet RCP CL IV |
| Park Lot 1-7 | 9 | 5.11 | 0.69 | 5.0 | 5.0 | 8.5 | 28.63 | 33" | 0.32 | 4.6 | 162' | A-5 Inlet RCP CL IV |
| Park Lot 1-6 | 0.30 | 0.67 | 0.25 | 5.0 | 5.0 | 8.5 | 2.13 | 15" | 0.37 | 5.0 | 192' | A-5 Inlet RCP CL IV |
| Park Lot 1-5 | 0.65 | 0.67 | 0.44 | 5.0 | 5.0 | 8.5 | 3.74 | 15" | 0.37 | 5.0 | 192' | A-5 Inlet RCP CL IV |
| Park Lot 1-5 | 11 | 6.14 | 0.67 | 5.0 | 5.0 | 8.5 | 32.34 | 33" | 0.42 | 5.4 | 30' | A-5 Inlet RCP CL IV |
| Park Lot 1-4 | 0.67 | 0.73 | 0.49 | 5.0 | 5.0 | 8.5 | 4.17 | 15" | 0.50 | 5.8 | 190' | A-5 Inlet RCP CL IV |
| Park Lot 1-3 | 0.29 | 0.73 | 0.21 | 5.0 | 5.0 | 8.5 | 1.79 | 15" | 0.50 | 5.8 | 190' | A-5 Inlet RCP CL IV |
| Park Lot 1-3 | 13 | 7.10 | 0.73 | 5.0 | 5.0 | 8.5 | 35.81 | 36" | 0.32 | 5.0 | 30' | A-5 Inlet RCP CL IV |
| Park Lot 1-2 | 0.31 | 0.73 | 0.23 | 5.0 | 5.0 | 8.5 | 1.96 | 15" | 0.35 | 5.1 | 30' | A-5 Inlet RCP CL IV |
| Park Lot 1-2 | 14 | 7.41 | 0.73 | 5.0 | 5.0 | 8.5 | 37.31 | 36" | 0.35 | 5.1 | 30' | A-5 Inlet RCP CL IV |
| Park Lot 1-16 | 0.62 | 0.81 | 0.50 | 5.0 | 5.0 | 8.5 | 4.25 | 18" | 0.18 | 2.3 | 100' | SOL "S" Coab. RCP CL IV |
| Park Lot 1-15 | 0.62 | 0.81 | 0.50 | 5.0 | 5.0 | 8.5 | 4.25 | 18" | 0.18 | 2.3 | 100' | SOL "S" Coab. RCP CL IV |
| Park Lot 1-17 | 0.44 | 0.82 | 0.36 | 5.0 | 5.0 | 8.5 | 3.03 | 15" | 0.24 | 2.3 | 230' | SOL "S" Coab. RCP CL IV |
| Park Lot 1-15 | 0.44 | 0.82 | 0.36 | 5.0 | 5.0 | 8.5 | 3.03 | 15" | 0.24 | 2.3 | 230' | SOL "S" Coab. RCP CL IV |

STORM DRAIN PROFILE 1"=50' HORIZ. 1"=5' VERT.

| SECTION NUMBER | ROAD AND STREET CLASSIFICATION | FULL DEPTH BIT. CONC. ALTERNATE | GRANULAR BASE ALTERNATES |
|----------------|---|--|--|
| P-1 | PARKING AREAS AND TRAVELWAYS APARTMENTS AND COMMERCIAL INDUSTRIAL ZONES WITH NO HEAVY TRUCKS | 1" BIT. CONC. SURFACE 4" BIT. CONC. BASE | 1" BIT. CONC. SURFACE 2" BIT. CONC. BASE PRIME 9" CRUSHED RIM BASE COURSE OR 4" CRUSHED GRANULIZED AGGREGATE BASE COURSE |
| P-3 | RESIDENTIAL ZONES MINOR AND MAJOR COLLECTORS APARTMENTS AND COMMERCIAL LOCAL AND COL-DE-SAC STREETS ALLEYS PARKING AREAS APARTMENTS AND COMMERCIAL INDUSTRIAL ZONES WITH HEAVY TRUCKS FOR DAY | 1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE PRIME 5" BIT. CONC. BASE | 1 1/2" BIT. CONC. SURFACE 4 1/2" BIT. CONC. BASE PRIME 9" CRUSHED RIM BASE COURSE OR 4 1/2" CRUSHED GRANULIZED AGGREGATE BASE COURSE |

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

APPROVED: *Stephen L. Pugh* DATE: 1/13/87
HOWARD SOIL CONSERVATION DISTRICT

REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND METS TECHNICAL REQUIREMENTS

SIGNATURE: *James M. Helman* DATE: 1/13/87
THE UNITED STATES SOIL CONSERVATION SERVICE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD

James M. Helman 2-17-87
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

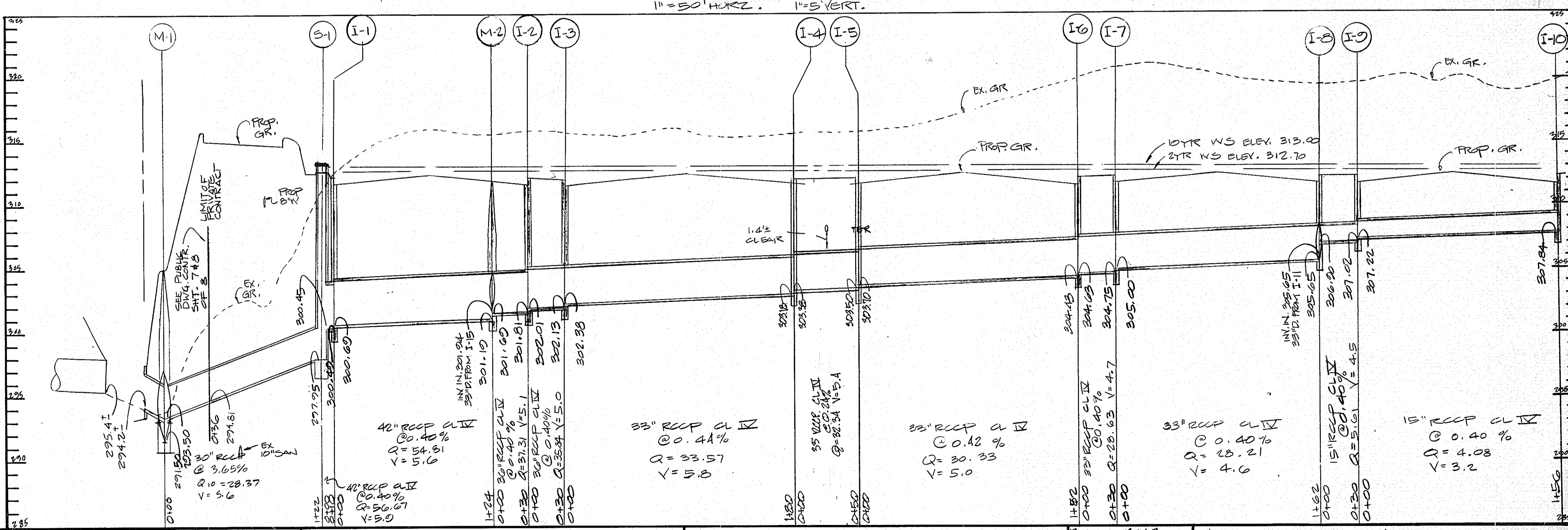
Thomas A. Harris 2-18-87
PLANNING DIRECTOR DATE

John W. ... 2-18-87
CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

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

John F. Neumaier 2-10-87
DIRECTOR DATE

James M. Helman 1-19-87
CHIEF BUREAU OF ENGINEERING DATE



WRS
WILLIAM R. SUDECK & ASSOCIATES, INC.
Consulting Engineers & Land Surveyors
112 South Main Street • Bel Air, Maryland 21014
301-879-4333 301-838-5833

ENGINEER
WILLIAM R. SUDECK
Reg. No. PE 4874
DATE 12/11/86

MERRITT
2066 Lord Baltimore Drive
Baltimore, Maryland 21207
(301) 298-2600

DEVELOPER
LEROY M. MERRITT
DATE 12/11/86

DESIGNED: K.W.R.
DRAWN: K.M.G.
CHECKED: K.W.R.

PROFILES & DETAILS FOR
PROPOSED OFFICE FOR RESEARCH & DEVELOPMENT
GUILFORD INDUSTRIAL PARK
PARCEL A-3 SECTION 2 AREA 3
COLUMBIA
TX MAP # 42
ELECTION DISTRICT #0
DATE: 12/11/86
SDP 80-215

SEDIMENT CONTROL NOTES

- A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (993-2537)
- 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.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within 30 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.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 31) and (Sec. 32), temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:
 - Total Area of Site: 11,983 Acres
 - Area Disturbed: 6,253 Acres
 - Area to be vegetatively stabilized: 5,730 Acres
 - Total Cut: 20,000 Cu. Yds.
 - Total Fill: 20,000 Cu. Yds.
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be reinstalled on the same day of disturbance.
- Additional sediment controls must be provided, if deemed necessary by the Howard County DPN sediment control inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

PERMANENT SEEDING NOTES

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

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

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

- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 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).
- 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 50 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru 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 15 thru February 28, protect site by: Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 1/2 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 2 1/2 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 3 1/2 gal per acre (8 gal/1000 sq ft) for anchoring.

Maintenance: 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.

Seeding Preparation: Loosen upper three inches of soil by raking, disking 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 1 thru November 15, seed with 30 lbs/acre of annual ryegrass (12 lbs/1000 sq ft). For the period May 1 thru August 31, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 15 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring of use sod.

Mulching: Apply 1/2 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 2 1/2 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 ft or higher, use 3 1/2 gal per acre (8 gal/1000 sq ft) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

SEE PUBLIC SD DRAWING FOR GABION INLET PROTECTION DETAIL SHT 7 & 8 OF B

LOT 3 E.G.H. SUBDIVISION PLAT 5660

SEE SHEET 5 OF G FOR INTERIM STORMWATER MANAGEMENT & COMPUTATIONS FOR STONE OUTLET SEDIMENT TRAP

LIMIT OF DISTURBANCE

SITE AREA: 11,983 AC; 521,980.00 S.F.
 DIST. AREA: 11,983 AC; 521,980.00 S.F.
 AREA TO BE VEG. STAB.: 3.53 AC; 153,767.00 S.F.
 BLDG. & PAV. AREAS: 8.453 AC; 368,213.00 S.F.

EXCAVATION = 20,000 C.Y.±
 FILL (INCL. 10%)
 COMPACTION = 20,000 C.Y.±
 NOTE: THIS IS A BALANCED EARTHWORK PROJECT.

HOWARD SOIL CONSERVATION DISTRICT

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

APPROVED: *Stephen L. Huber* DATE: 11/21/87
 HOWARD SOIL CONSERVATION DISTRICT

REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

SIGNATURE: *James M. Nelson* DATE: 11/23/87
 THE UNITED STATES SOIL CONSERVATION SERVICE

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

James M. Nelson 2-17-87
 COUNTY HEALTH OFFICER

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

James M. Nelson 2-18-87
 PLANNING OFFICER

John W. Lush 2-18-87
 CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

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

Gregory F. Newmyer 2-10-87
 DIRECTOR

Richard S. Kelly 1-19-87
 CHIEF BUREAU OF ENGINEERING

APPROVED PLANNING BOARD OF HOWARD COUNTY

DATE 10-15-86

44 L.F. 12" BCCMP 100% LINED @ 2.27% INV. IN @ 233.27 INV. OUT @ 234.07 CREST @ 237.79

TRAP #1 RELOCATED

TRAP #2

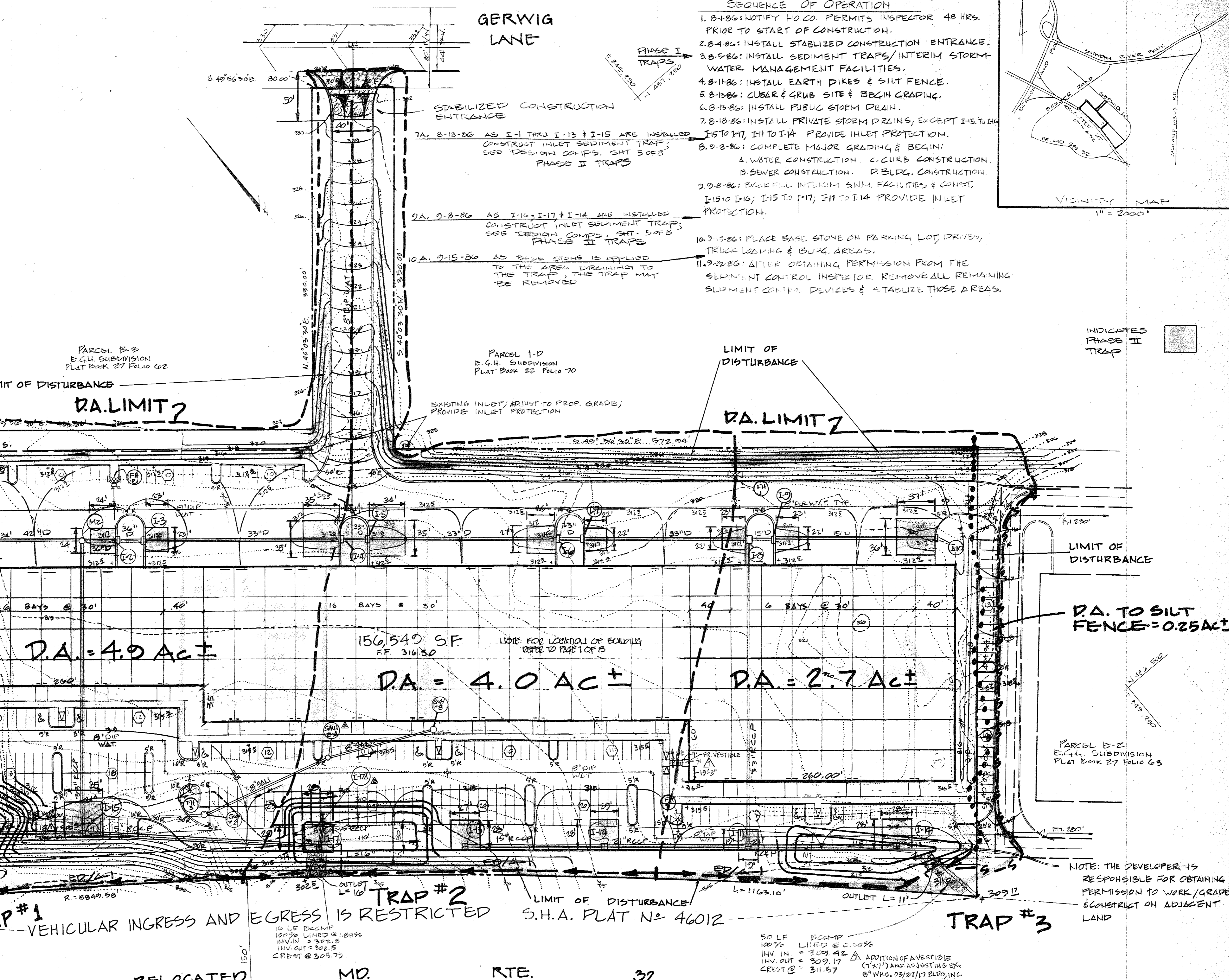
TRAP #3

VEHICULAR INGRESS AND EGRESS IS RESTRICTED

MD. RTE. 32

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21249, EXPIRATION DATE: JUNE 9, 2016.



ENGINEER'S CERTIFICATE

"I certify that this plan for erosion, and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer: *William R. Sudeck* Reg. No. P2 8874 Date: 12/11/86

WRS

WILLIAM R. SUDECK & ASSOCIATES, INC.

Consulting Engineers & Land Surveyors

112 South Main Street • Bel Air, Maryland 21014

301-879-4353 301-838-5833

MERRITT

2066 Lord Baltimore Drive
 Baltimore, Maryland 21207
 (301) 298-2600

DEVELOPER'S CERTIFICATE

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 also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.

DESIGNED: R.W.R.
 DRAWN: K.M.G.
 CHECKED: R.W.R.

REVISIONS:
 Δ Rev. SWL Aug 5/11/87
 Δ Add Small 2-A 7/1/88
 Δ Add I-17A 7/1/88

Signature of Developer: *James M. Nelson* Date: 12/11/86

| ADDRESS CHART | | | |
|------------------|-------------|--------------|--------------|
| BUILDING NO. | STREET | ADDRESS | |
| | GERWIG LANE | | |
| SUBDIVISION NAME | SECT./AREA | LOT/PARCEL # | |
| E.G.H. | 2/3 | A-3 | |
| PLAT | BLOCK | ZONE | TAX/ZONE MAP |
| G78B | 10 | INDUSTRIAL | 42 |
| WATER CODE | | | ELECT. DIST. |
| E-14 | | | 6001-03 |
| | | | CENSUS TRACT |
| | | | 6001-03 |
| | | | SEWER CODE |
| | | | 524100 |

GRADING, EROSION, & SEDIMENT CONTROL PLAN

PROPOSED OFFICE FOR RESEARCH & DEVELOPMENT

GUILDFORD INDUSTRIAL PARK

PARCEL A-3 SECTION 2 AREA 3

COLUMBIA TX MAP # 42

HOWARD COUNTY, MD.

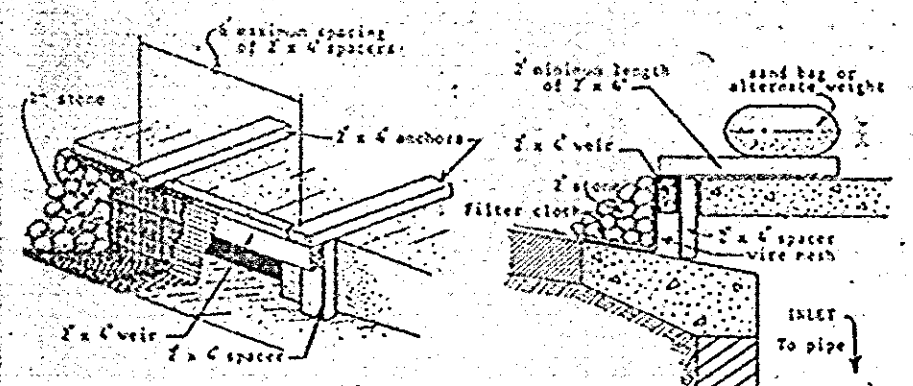
ELECTION DISTRICT #6

SCALE: 1"=50'

SHT. 4 OF 8

DATE: 8/20/86

SDP 86 215



STANDARD SYMBOL

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Construction Specifications

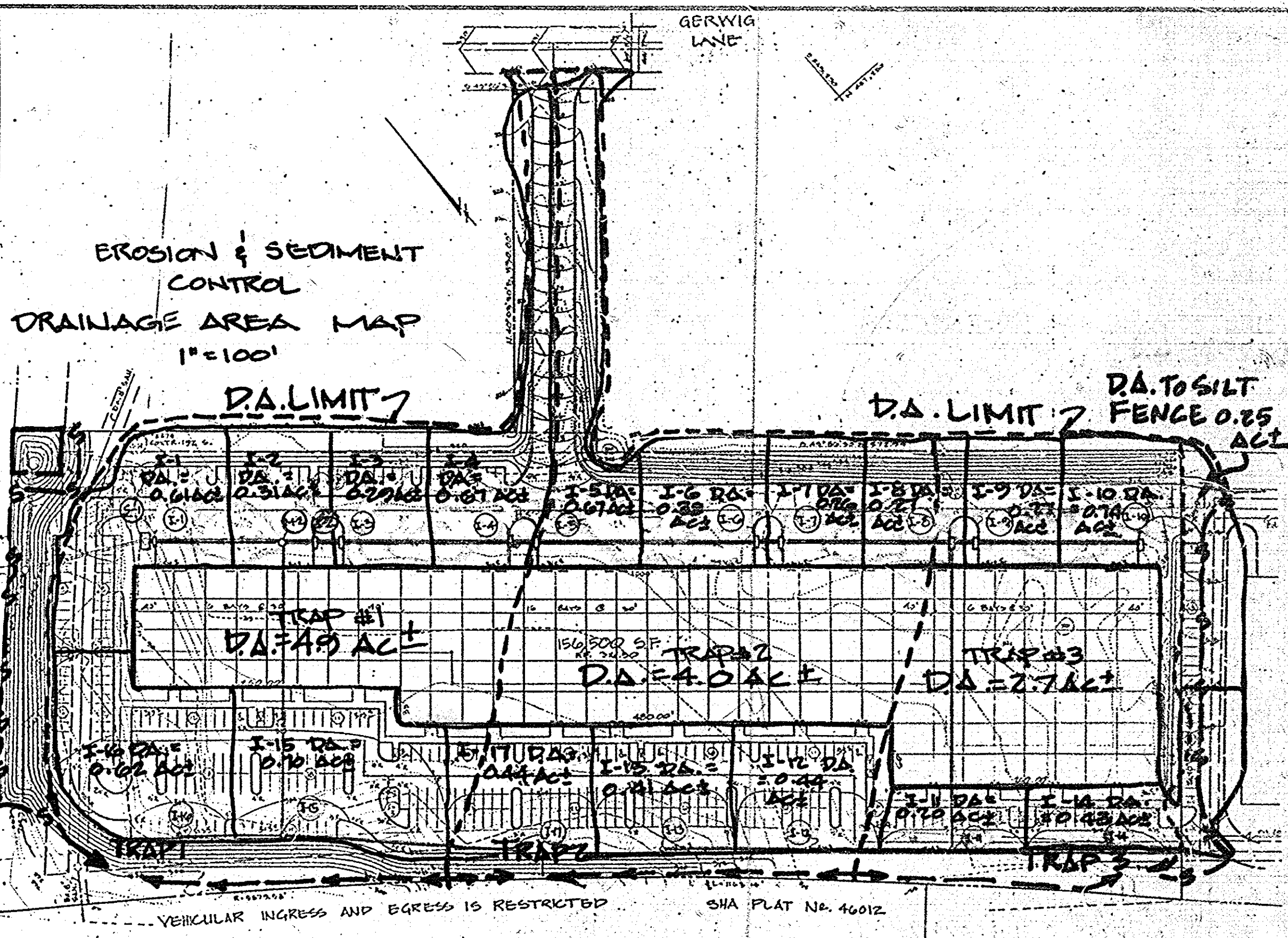
- I. Materials
A. Wooden frame is to be constructed of 2" x 4" construction grade lumber.
B. Wire mesh must be of sufficient strength to support filter fabric...
C. Filter cloth must be of a type approved for this purpose...
D. Stone is to be 1 1/2" in size and class, stone fines would clog the cloth.
II. Procedure
A. 1. Awaie, ditchline or yard inlet protection.
1. Excavate completely around inlet to a depth of 18" below notch elevation.
2. Drive 2 x 4 post 1 foot ground at four corners of inlet.
3. Stretch wire mesh tightly around frame and fasten securely.
4. Stretch filter cloth tightly over wire mesh, the cloth must extend from top of frame to 18" below inlet notch elev.
5. Backfill around inlet in compacted 6" layers until layer of earth is even with notch elevation on side and top elevation on other.
6. If the inlet is not in a low point, construct a compacted earth dike to the ditchline below it.
7. This structure must be inspected frequently and the filter fabric replaced when clogged.
B. Curb Inlet Protection.
1. Attach a continuous piece of wire mesh (30" dia. width by 18" length) to the 2" x 4" wire.
2. Place a piece of approved filter cloth (40-85 alum) of the same dimension as the wire mesh over the wire mesh and securely attach to the 2" x 4" wire.
3. Securely nail the 2" x 4" wire to 8" long vertical spacers to be located between the wire and inlet face (max. 6" apart).
4. Place the assembly against the inlet throat and nail (minimum 2" length of 2" x 4" to the top of the wire at spacer locations. These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
5. The assembly shall be placed so that the end spacers are a minimum 1" beyond both ends of the throat opening.
6. Fasten the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place clean 2" stone over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediments.
C. Maintenance
1. Inspect Daily. Repair And/or Replace As Required.

Table with 4 columns: TRAP NO., SEP. VOL. REQ., BTM. ELEV., etc. for stone outlet sediment trap.

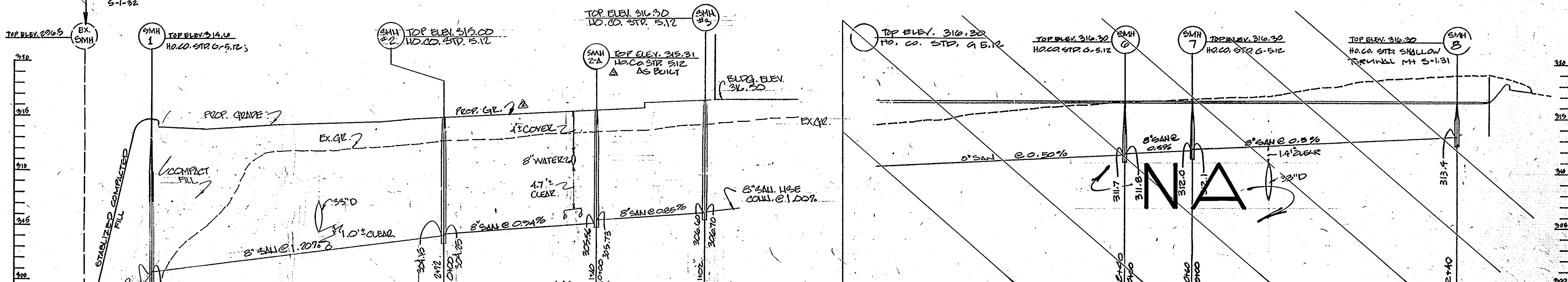
Table with 4 columns: INLET NO., INLET AREA, INLET VOLUME, etc. for storm inlet sediment trap.



- 1. Sediment shall be removed and the trap restored to its original dimensions...
2. The volume of sediment storage shall be 1800 cubic feet per acre of contributing drainage area...
3. The structure shall be inspected after each rain and repairs made as needed.
4. Construction operations shall be carried out in such a manner that erosion and water pollution shall be minimized.
5. The sediments shall be removed and the area stabilized when the contributing drainage area has been properly stabilized.
6. All cut slopes shall be 1:1 or flatter.
Maximum Drainage Area: 3 Acres

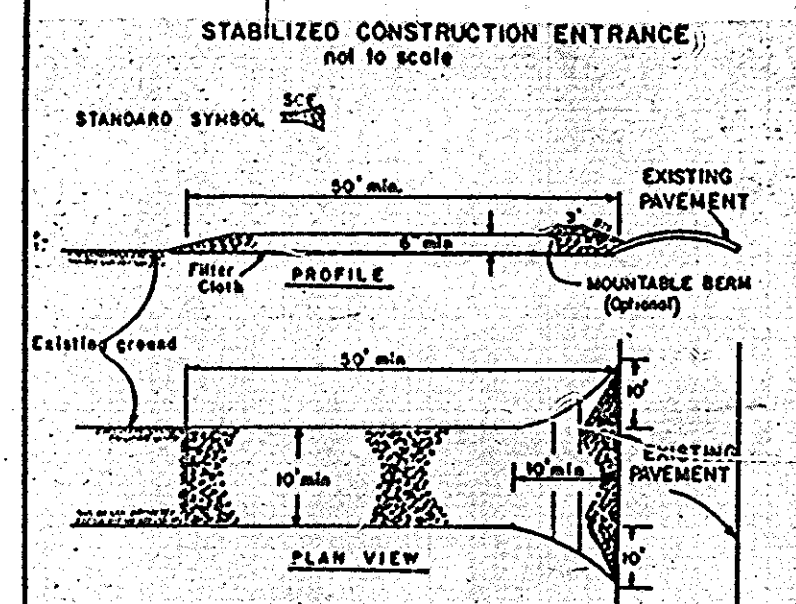


SEWER PROFILES SCALE: HORIZ. 1"=50' VERT. 1"=5'

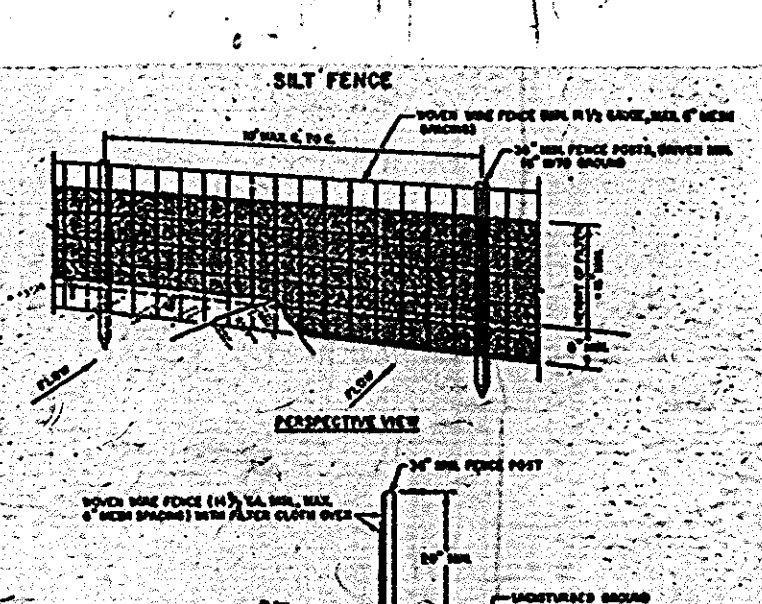


HOWARD SOIL CONSERVATION DISTRICT
THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED: Stephen L. Huber DATE: 1/13/87
HOWARD SOIL CONSERVATION DISTRICT
REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND METRO TECHNICAL REQUIREMENTS
SIGNATURE: James M. Belmont DATE: 1/13/87
THE HOWARD SOIL CONSERVATION SERVICE
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS AND PUBLIC SEWERAGE, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CHIEF BUREAU OF ENGINEERING

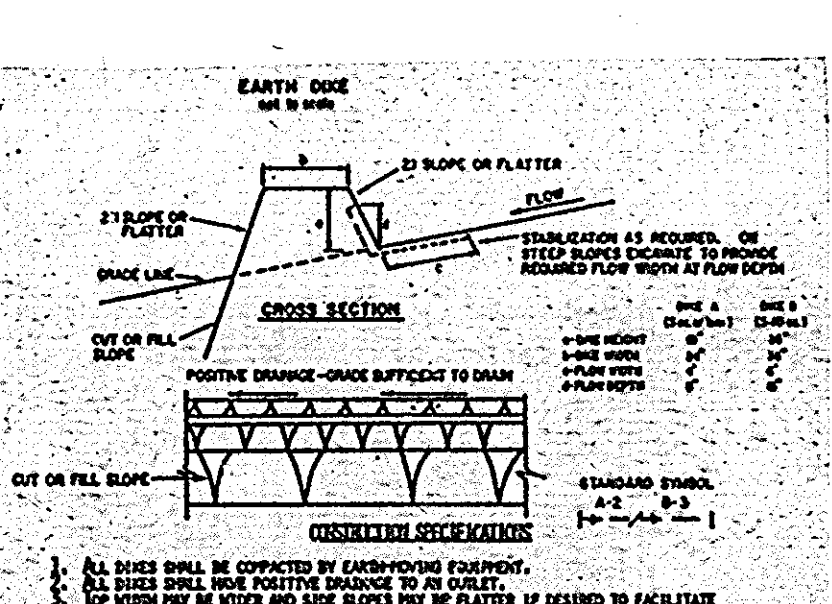
APPROVED PLANNING BOARD OF HOWARD COUNTY DATE: 10-15-86



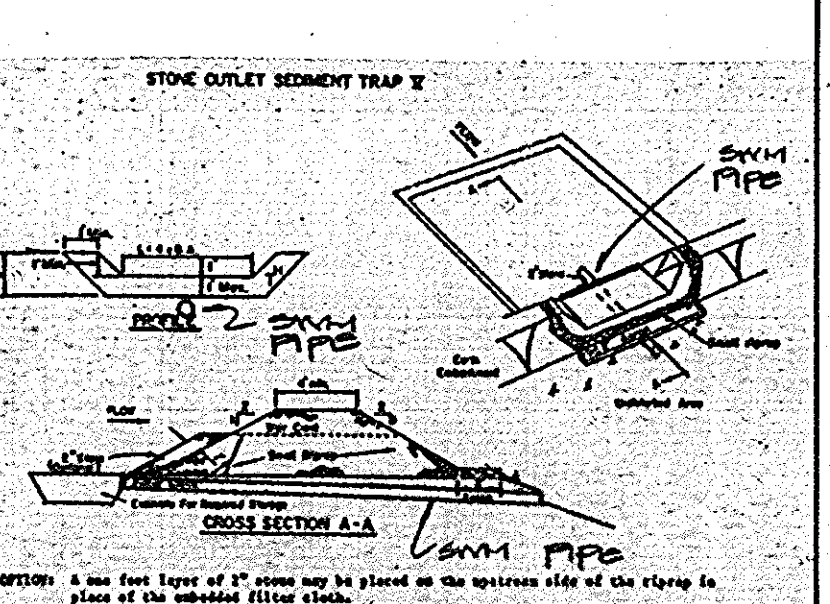
- 1. Stone Size - Use 2" stone, or recycled concrete equivalent.
2. Length - As required, but not less than 30 feet (except on a single cast-in-place concrete curb where a 30 foot minimum length would apply).
3. Thickness - Not less than 4 1/2" inches.
4. Width - Two (2) feet minimum, but not less than the full width at the outside edge of the curb.
5. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be replaced on a daily basis.
6. Surface Water - All surface water flowing or directed toward construction entrance shall be piped across the entrance, if piping is impractical, a portable basin with 1/2" slope will be provided.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto the roadway. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleaning of any sediment used to trap sediments. All sediments spilled, dropped, washed or tracked onto public rights-of-way must be cleaned immediately.
8. Washing - Trucks 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 trap.
9. Periodic inspection and needed maintenance shall be provided after each rain.



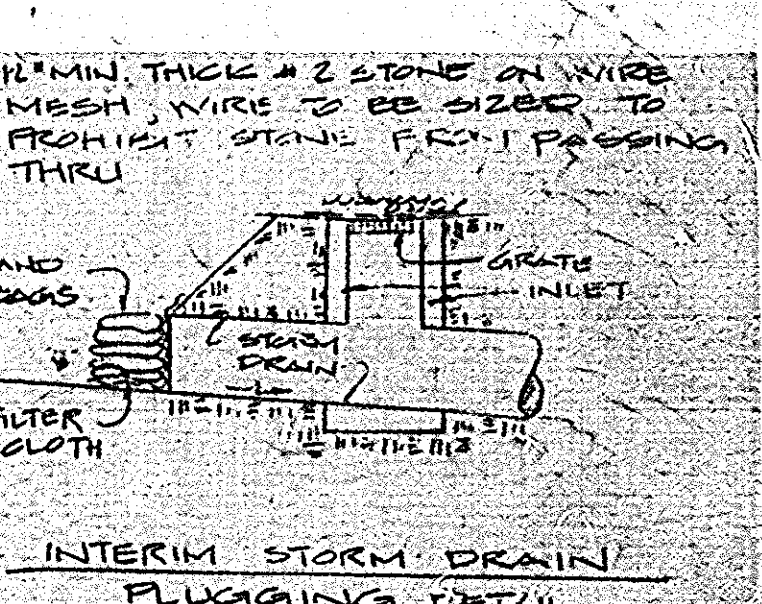
- 1. Make sure fence is to be fastened securely to PILES WITH RIGID TIES OR BRACKETS.
2. Fasten ties to be fastened securely to PILES WITH RIGID TIES OR BRACKETS.
3. Make the bottom of filter cloth secure once they are secured, filter cloth shall be supported by six inches of poles.
4. Maintenance shall be performed as needed and material removed and replaced as needed.
5. Periodic inspection and needed maintenance shall be provided after each rain.



- 1. All dikes shall be compacted by hand power equipment.
2. All dikes shall have a minimum height of 2 feet.
3. All dikes shall be constructed of earth or concrete.
4. All dikes shall be constructed to a minimum width of 18 inches at the top and 24 inches at the base.
5. All dikes shall be constructed with a 1:1 slope.



- 1. A two foot layer of 2" stone may be placed on the upstream side of the trap to prevent sediment from passing through.
2. The stone shall be placed on the upstream side of the trap to prevent sediment from passing through.
3. All cut slopes shall be 1:1 or flatter.
4. The volume of sediment storage shall be 1800 cubic feet per acre of contributing drainage area.
5. The structure shall be inspected after each rain and repairs made as needed.



NOTE: AT THE END OF EACH WORKING DAY DURING LAYOUT & CONSTRUCTION OF STORM DRAINS THE UPPER END OF THE INCOMPLETE SYSTEM SHALL BE PLUGGED TO PREVENT SEDIMENTATION OF PIPE SYSTEM. NOTE: INLETS TO REMAIN PLUGGED UNTIL SITE IS STABILIZED.

WRS WILLIAM R. SUDECK & ASSOCIATES, INC. Consulting Engineers & Land Surveyors 112 South Main Street • Bel Air, Maryland 21014 301-879-4353 301-838-5833

ENGINEER: WILLIAM R. SUDECK PE 4814 REG. ME. DATE: 12/11/86

DEVELOPER: MERRITT 2066 Lord Baltimore Drive Baltimore, Maryland 21207 (301) 298-2600

DESIGNED BY: LEROY M. MERRITT DRAWN BY: R.K.M.G. CHECKED BY: R.W.R. REVISIONS: A. 1/12/87... DATE: 12/11/86

EROSION CONTROL DETAILS PROPOSED OFFICE FOR RESEARCH & DEVELOPMENT GUILFORD INDUSTRIAL PARK PARCEL A3 SECTION 2 AREA 3 COLUMN A DATE: 1/12/87

PLANT LIST

Note: All plant material to be supplied balled in burlap.

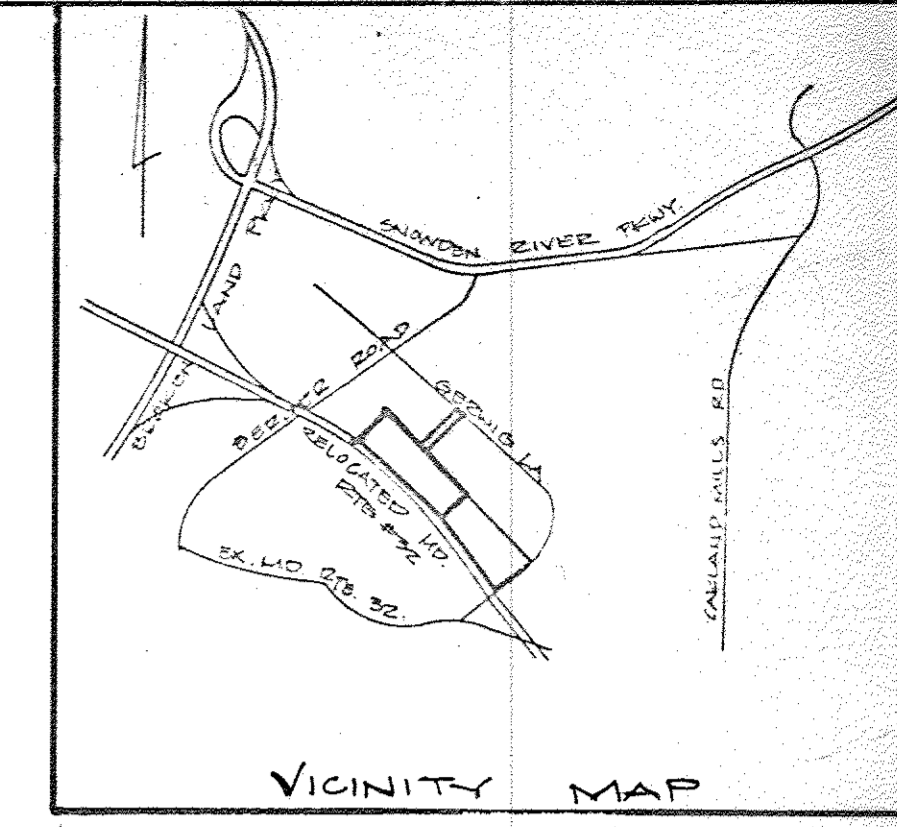
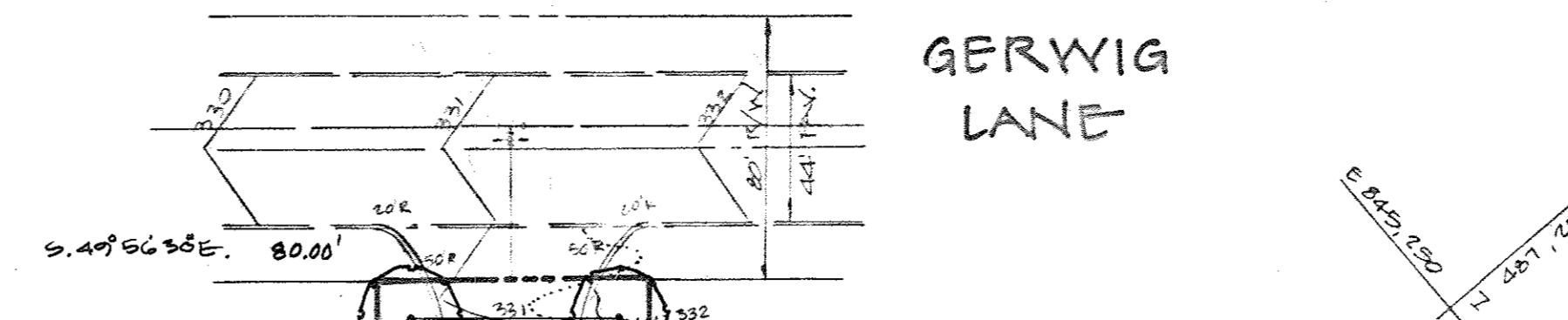
| KEY | QUAN | BOTANICAL NAME/COMMON NAME | MIN. CAL. | MIN. HT. | SPACING |
|------------------------|------|--|-----------|----------|------------|
| Shade Trees | | | | | |
| AR | 41 | Acer rubrum 'Red Sunset' | 2 1/2-3" | 12-14' | 20-25'oc |
| FP | 45 | Fraxinus pennsylvanica lanceolata 'Marshall's' | 2 1/2-3" | 12-14' | 20-35'oc |
| TC | 34 | Tilia cordata 'Greenspire' | 2 1/2-3" | 12-14' | 25'oc |
| ZS | 26 | Zelcova serrata Japanese Zelcova | 2 1/2-3" | 12-14' | 20-25'oc |
| Flowering Trees | | | | | |
| CO | 9 | Crataegus oxycantha 'Superba' | 2-2 1/2" | 8-10' | 12'oc min. |
| PC | 15 | Pyrus calleryana 'Redspire' | 2-2 1/2" | 8-10' | 12'oc min. |
| Evergreen Trees | | | | | |
| CL | 40 | X. Cupressocyparis leylandii Leyland Cypress | 2-2 1/2" | 6-8' | 8'oc |
| PA | 58 | Picea abies Norway Spruce | 2-2 1/2" | 6-8' | 8-15'oc |
| PS | 66 | Pinus strobus Eastern White Pine | 2-2 1/2" | 6-8' | 8-15'oc |

PLANTING NOTES

- Plant locations may be field adjusted to avoid final utility placements.
- All trees shall be mulched to a minimum of 18" beyond the edge of the root ball.
- All trees shall be supplied balled in burlap.
- All wire and non-biodegradable plastic ball ties shall be removed.

LANDSCAPE SPECIFICATIONS

All plant material shall be equal to or better than the requirements of the "U.S.A. Standard Nursery Stock" as published by the American Association of Nurserymen.



MINIMUM TREE REQUIREMENT

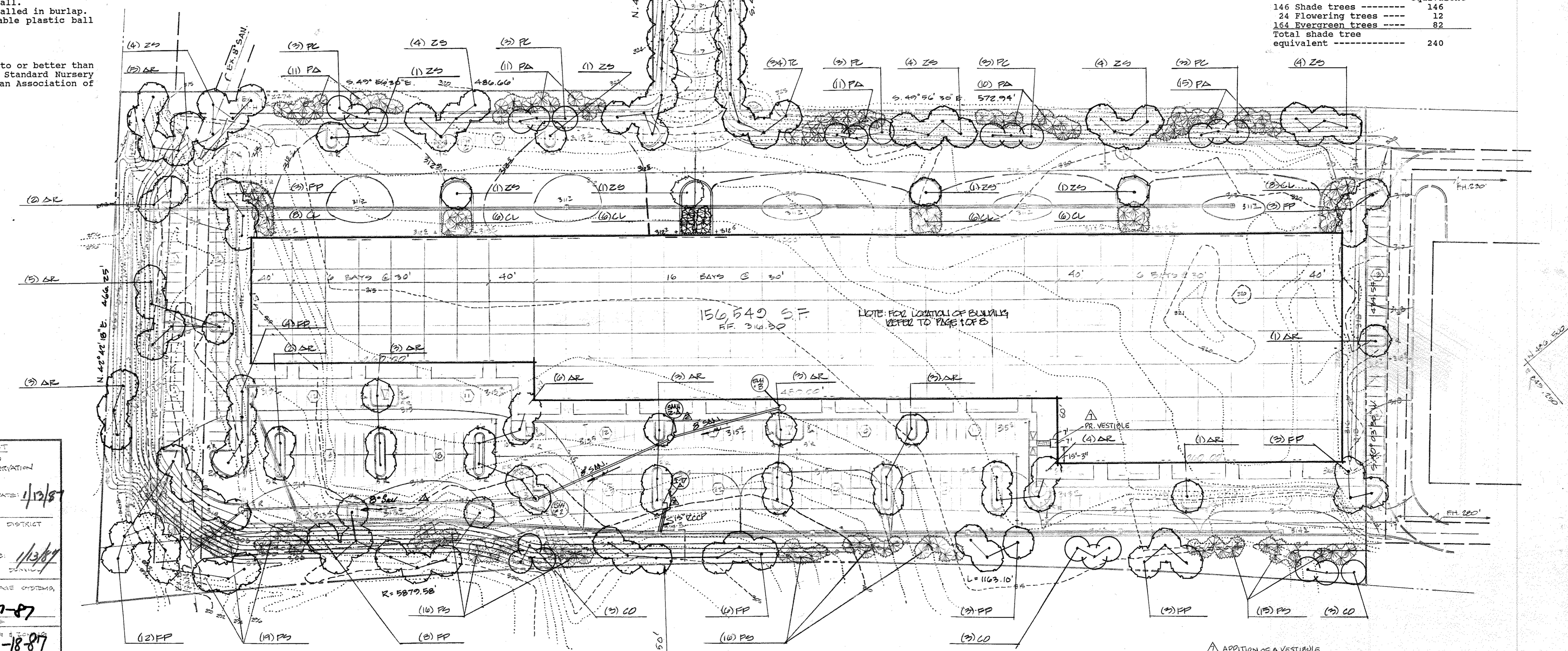
Site acreage -- 11.98
 Site type ----- Office/Industrial
 Trees required -- 20 trees/acre x 11.98 acres = 240 shade trees (equivalent to 60 shade trees)

Minimum 25% flowering or evergreen substitution -- 120 trees (equivalent to 60 shade trees)

Maximum 50% flowering or evergreen substitution -- 240 trees (equivalent to 120 shade trees)

TREES SHOWN

| Trees Shown | Shade tree equivalent |
|--|-----------------------|
| 146 Shade trees ----- | 146 |
| 24 Flowering trees ---- | 12 |
| 164 Evergreen trees ---- | 82 |
| Total shade tree equivalent ----- | 240 |



APPROVED FOR THE HOWARD SOIL CONSERVATION DISTRICT
 APPROVED: *Stephen R. Decker* DATE: 1/13/87
 HOWARD SOIL CONSERVATION DISTRICT

APPROVED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
 SIGNATURE: *James M. Helmer* DATE: 1/13/87
 THE UNITED STATES SOIL CONSERVATION SERVICE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
Joyce Egan 2-17-87
 HEALTH DEPARTMENT

APPROVED FOR THE HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Thomas A. Davis 2-18-87
 PLANNING & ZONING DEPARTMENT

APPROVED FOR THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
John W. Muschman 2-18-87
 DEPARTMENT OF PUBLIC WORKS

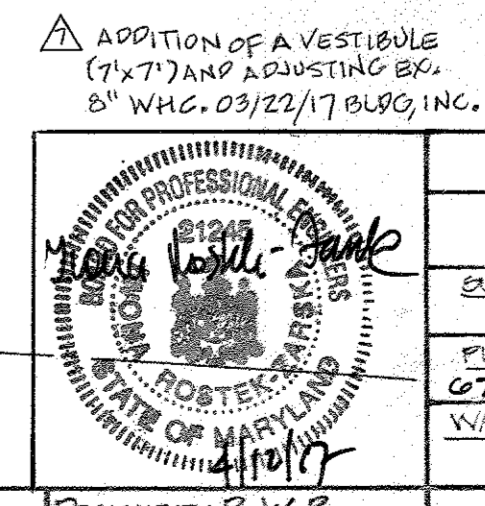
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
George F. Neumeier 2-10-87
 DEPARTMENT OF PUBLIC WORKS

APPROVED FOR THE HOWARD COUNTY DEPARTMENT OF ENGINEERING
William R. Sudeck 1-19-87
 DEPARTMENT OF ENGINEERING

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
 DATE: 10-15-86

RELOCATED MD. RTE. 32

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21245, EXPIRATION DATE: JUNE 9, 2018.



ADDRESS CHART

| BUILDING NO. | STREET | ADDRESS |
|--------------|-------------|---------|
| 1 | GERWIG LANE | |

| SUBDIVISION NAME | SECT./AREA | LOT/PARCEL # |
|------------------|------------|--------------|
| E.G.U. | 2/3 | A-2 & C-2 |

| PLAT | BLOCK | ZONE | TAX/ZONE MAP | ELECT. DIST. | CENSUS TRACT |
|------|-------|------------|--------------|--------------|--------------|
| G728 | 10 | Industrial | 22 | 0 | 0001.03 |

WATER CODE: E-06
 SEWER CODE: 5241400

WRS
WILLIAM R. SUDECK & ASSOCIATES, INC.
 Consulting Engineers & Land Surveyors
 112 South Main Street • Bel Air, Maryland 21014

WFK
WILLIAM F. KIRWIN, INC.
 Land Planning/Landscape Architecture
 28 E. Susquehanna Avenue
 Towson, MD 21284
 Phone 301/537-6841

MERRITT
 2066 Lord Baltimore Drive
 Baltimore, Maryland 21207
 (301) 298-2600

DEVELOPER
 LEROY M. MERRITT
 12/1/86

DESIGNED: R.W.R.
 DRAWN: K.M.G.
 CHECKED: R.W.R.
 REVISIONS:
 1. Proj. Sum. Aug. 5/16/87
 2. Add SNAZ & I-7A 7/1/88

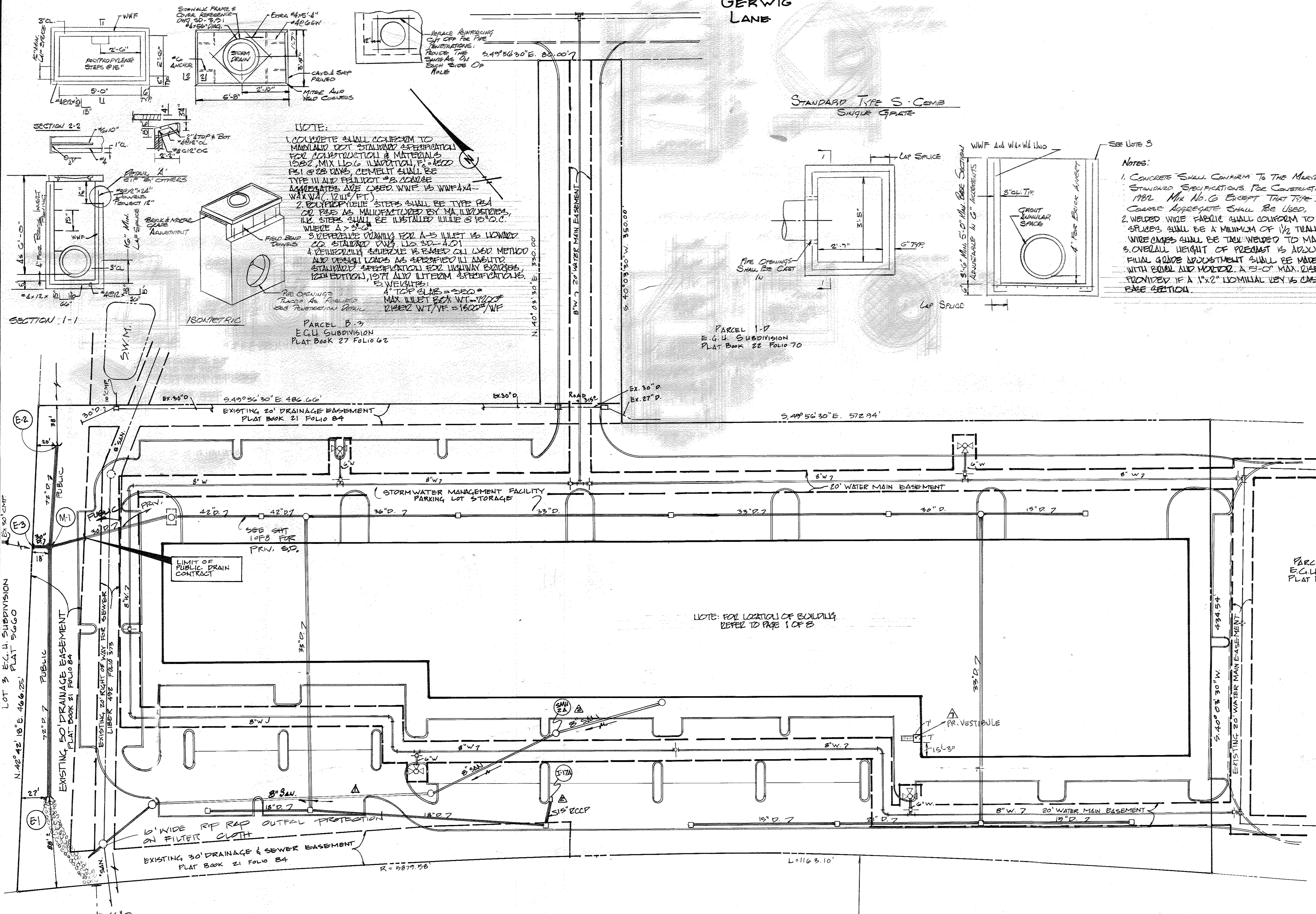
LANDSCAPE PLAN FOR PROPOSED OFFICE FOR RESEARCH & DEVELOPMENT GUILFORD INDUSTRIAL PARK SECTION 2 AREA 3 COLUMBIA TAX MAP # 42 HOWARD COUNTY, MD. ELECTION DISTRICT #8 SCALE: 1"=80' SHT. 6 OF 8 DATE: 2/20/88

REINFORCING PLAN BELOW 1" SLABS

FLW 4" TOP SLAB

FIRE PENETRATION DETAIL

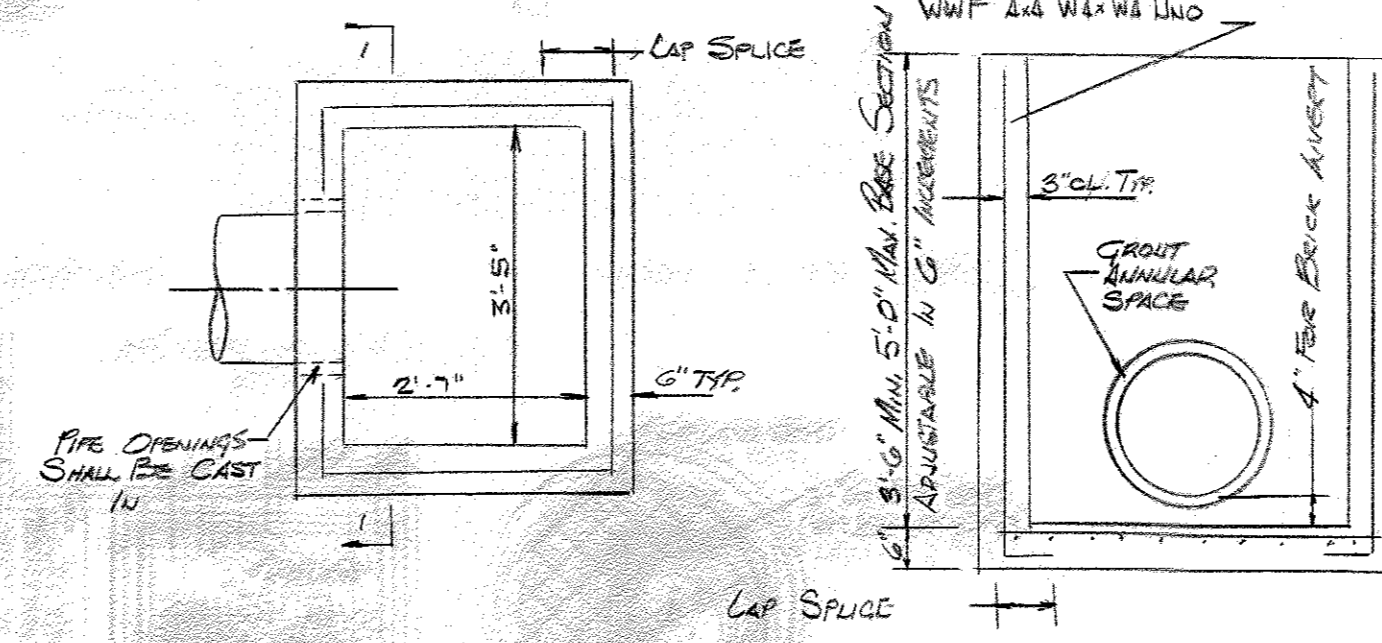
GERWIG LANE



NOTE:
 1. CONCRETE SHALL CONFORM TO THE MARYLAND POT SHA, STANDARD SPECIFICATIONS FOR CONSTRUCTION & MATERIALS 1982 MIX NO. 6 EXCEPT THAT TYPE III CEMENT # ASTM C-59 #2 COARSE AGGREGATE SHALL BE USED.
 2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185, LAP SPICES SHALL BE A MINIMUM OF 1/2 TRANSVERSE WIRE SPACES. WIRE CAGES SHALL BE TIGHT WELDED TO MAKE A RIGID UNIT.
 3. OVERALL HEIGHT OF PRECAST IS ADJUSTABLE IN 6" INCREMENTS. FINAL GRADE ADJUSTMENT SHALL BE MADE BY THE CONTRACTOR WITH BENCH AND MORTAR. A 5'-0" MAX. CHISEL SECTION MAY BE PROVIDED IF A 1"x2" NOMINAL KEY IS CAST ON THE TOP OF THE BASE SECTION.
 4. CONCRETE SHALL CONFORM TO THE MARYLAND POT SHA, STANDARD SPECIFICATIONS FOR CONSTRUCTION & MATERIALS 1982 MIX NO. 6 EXCEPT THAT TYPE III CEMENT # ASTM C-59 #2 COARSE AGGREGATE SHALL BE USED.
 5. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185, LAP SPICES SHALL BE A MINIMUM OF 1/2 TRANSVERSE WIRE SPACES. WIRE CAGES SHALL BE TIGHT WELDED TO MAKE A RIGID UNIT.
 6. OVERALL HEIGHT OF PRECAST IS ADJUSTABLE IN 6" INCREMENTS. FINAL GRADE ADJUSTMENT SHALL BE MADE BY THE CONTRACTOR WITH BENCH AND MORTAR. A 5'-0" MAX. CHISEL SECTION MAY BE PROVIDED IF A 1"x2" NOMINAL KEY IS CAST ON THE TOP OF THE BASE SECTION.

Notes:
 1. CONCRETE SHALL CONFORM TO THE MARYLAND POT SHA, STANDARD SPECIFICATIONS FOR CONSTRUCTION & MATERIALS 1982 MIX NO. 6 EXCEPT THAT TYPE III CEMENT # ASTM C-59 #2 COARSE AGGREGATE SHALL BE USED.
 2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185, LAP SPICES SHALL BE A MINIMUM OF 1/2 TRANSVERSE WIRE SPACES. WIRE CAGES SHALL BE TIGHT WELDED TO MAKE A RIGID UNIT.
 3. OVERALL HEIGHT OF PRECAST IS ADJUSTABLE IN 6" INCREMENTS. FINAL GRADE ADJUSTMENT SHALL BE MADE BY THE CONTRACTOR WITH BENCH AND MORTAR. A 5'-0" MAX. CHISEL SECTION MAY BE PROVIDED IF A 1"x2" NOMINAL KEY IS CAST ON THE TOP OF THE BASE SECTION.

STANDARD TYPE S-COMB SINGLE SPACE



NOTE: FOR LOCATION OF BUILDING REFER TO PAGE 1 OF B

PARCEL E-2 E.C.U. SUBDIVISION PLAT BOOK 27 FOLIO 63

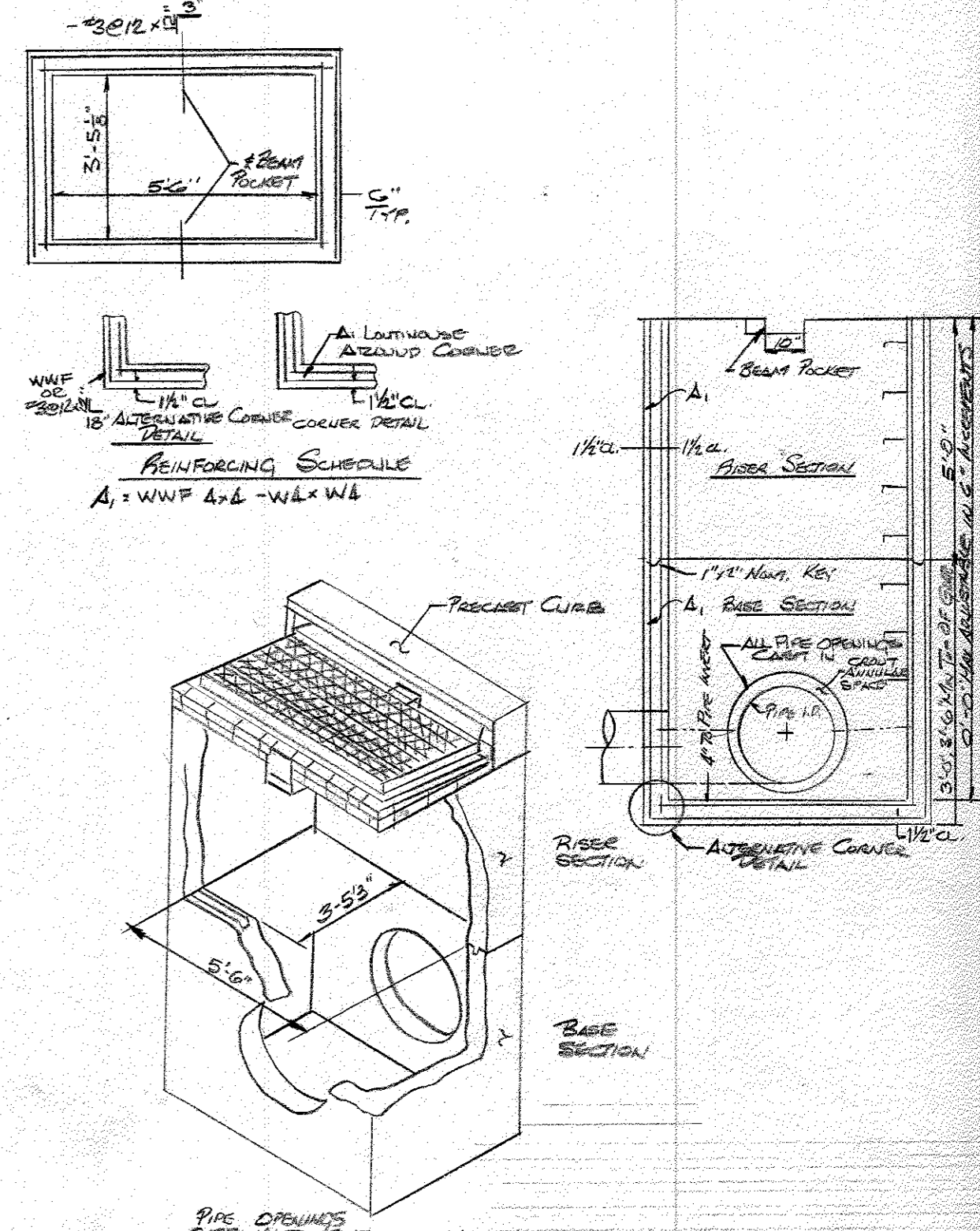


TABLE 3: COMBINATION INLET
 1. CONCRETE SHALL CONFORM TO THE MARYLAND POT SHA, STANDARD SPECIFICATIONS FOR CONSTRUCTION & MATERIALS 1982 MIX NO. 6 EXCEPT THAT TYPE III CEMENT # ASTM C-59 #2 COARSE AGGREGATE SHALL BE USED.
 2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185, LAP SPICES SHALL BE A MINIMUM OF 1/2 TRANSVERSE WIRE SPACES. WIRE CAGES SHALL BE TIGHT WELDED TO MAKE A RIGID UNIT.
 3. OVERALL HEIGHT OF PRECAST IS ADJUSTABLE IN 6" INCREMENTS. FINAL GRADE ADJUSTMENT SHALL BE MADE BY THE CONTRACTOR WITH BENCH AND MORTAR. A 5'-0" MAX. CHISEL SECTION MAY BE PROVIDED IF A 1"x2" NOMINAL KEY IS CAST ON THE TOP OF THE BASE SECTION.

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER: *[Signature]* DATE: 2-17-87
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 PLANNING DIRECTOR: *[Signature]* DATE: 2-18-87
 CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
 APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DIRECTOR: *[Signature]* DATE: 2-10-87
 CHIEF BUREAU OF ENGINEERING: *[Signature]* DATE: 1-19-87

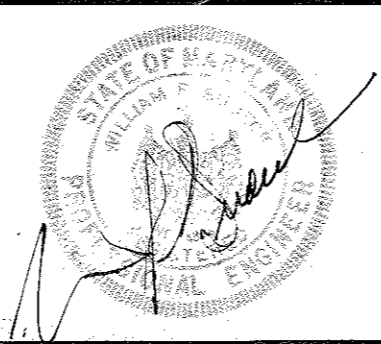
HOWARD SOIL CONSERVATION DISTRICT
 THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED: *[Signature]* DATE: 1/13/87
 HOWARD SOIL CONSERVATION DISTRICT
 REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND METS TECHNICAL REQUIREMENTS
 SIGNATURE: *[Signature]* DATE: 1/13/87
 THE UNITED STATES SOIL CONSERVATION SERVICE

RELOCATED MD. RTE. 32
APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE 10-15-86
[Signature]

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21245, EXPIRATION DATE: JUNE 9, 2018.

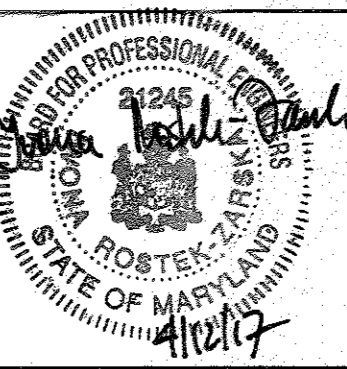
PLAN 1"=50'

WRS WILLIAM R. SUDECK & ASSOCIATES, INC.
 Consulting Engineers & Land Surveyors
 112 South Main Street • Bel Air, Maryland 21014
 301-879-4353 301-838-5833



| | | |
|--------------|--------------|---------------|
| DESIGN: RWR | CHKD: RWR | DATE: 3/10/86 |
| REV. 1: PWS | DATE: 7/6/86 | |
| REV. 2: KMG | | |
| REV. 3: RWR | | |
| REV. 4: RWR | | |
| REV. 5: RWR | | |
| REV. 6: RWR | | |
| REV. 7: RWR | | |
| REV. 8: RWR | | |
| REV. 9: RWR | | |
| REV. 10: RWR | | |
| REV. 11: RWR | | |
| REV. 12: RWR | | |
| REV. 13: RWR | | |
| REV. 14: RWR | | |
| REV. 15: RWR | | |
| REV. 16: RWR | | |
| REV. 17: RWR | | |
| REV. 18: RWR | | |
| REV. 19: RWR | | |
| REV. 20: RWR | | |

PUBLIC
STORM DRAIN
 PLAN & PROFILE
 CONTRACT NO.



| | | |
|------------------|----------------|---------------|
| BUILDING NO. | STREET ADDRESS | LANE |
| 1 | 0915 | GERWIG |
| SUBDIVISION NAME | SECTION | LOT/PARCEL # |
| E.C.U. | 2/3 | A-3 |
| PLAT | BLOCK | TAX ZONE MAP |
| 678 | 10 | 42 |
| WATER CODE | ELECT. DIST. | GENUINE TRACT |
| E-06 | 6 | 6001.03 |
| | OWNER CODE | |
| | 524-1400 | |

GUILFORD INDUSTRIAL PARK
 SECTION 2' AREA 3' PARCEL A-3
 COLUMBIA
 HOWARD COUNTY, MARYLAND ELECTION DISTRICT #6
 SCALE AS SHOWN
 1"=50'
 SHEET 7 OF 8
 SDC 86-215

STORM DRAIN COMPUTATIONS

| LOCATION | FROM | TO | AREA | ACRES | COEFF | CA | 1/2 CA | TIME CONC. MIN | INTEN | 0' C/A | PIPE DIA | REMARKS | |
|----------|------|-----|------------|-------|-------|-------|--------|----------------|-------|--------|----------|---------|-------------|
| | | | SUB. TOTAL | | | | | | | | | | |
| E-2 | 1 | | 72.0 | 0.84 | 60.48 | | | 23.0 | - | 23.0 | 4.3 | 260.06 | SD -5.11 |
| E-2 | M-1 | 1 | | 72.0 | | 60.48 | | 23.0 | - | 23.0 | 4.3 | 260.06 | |
| E-3 | 2 | | 4.6 | 0.84 | 3.86 | | | 12.7 | - | 12.7 | 5.9 | 22.77 | SD -5.21 |
| E-3 | M-1 | 2 | | 4.6 | | 3.86 | | 12.7 | - | 12.7 | 5.9 | 22.77 | |
| SWH | M-1 | 3 | | 11.25 | 0.42 | 4.70 | | 12.0 | - | 12.0 | 6.1 | 28.68 | SWH RELEASE |
| M-1 | E-1 | 1-3 | | 87.85 | | 69.04 | | 23.0 | 0.2 | 23.2 | 4.3 | 296.87 | |

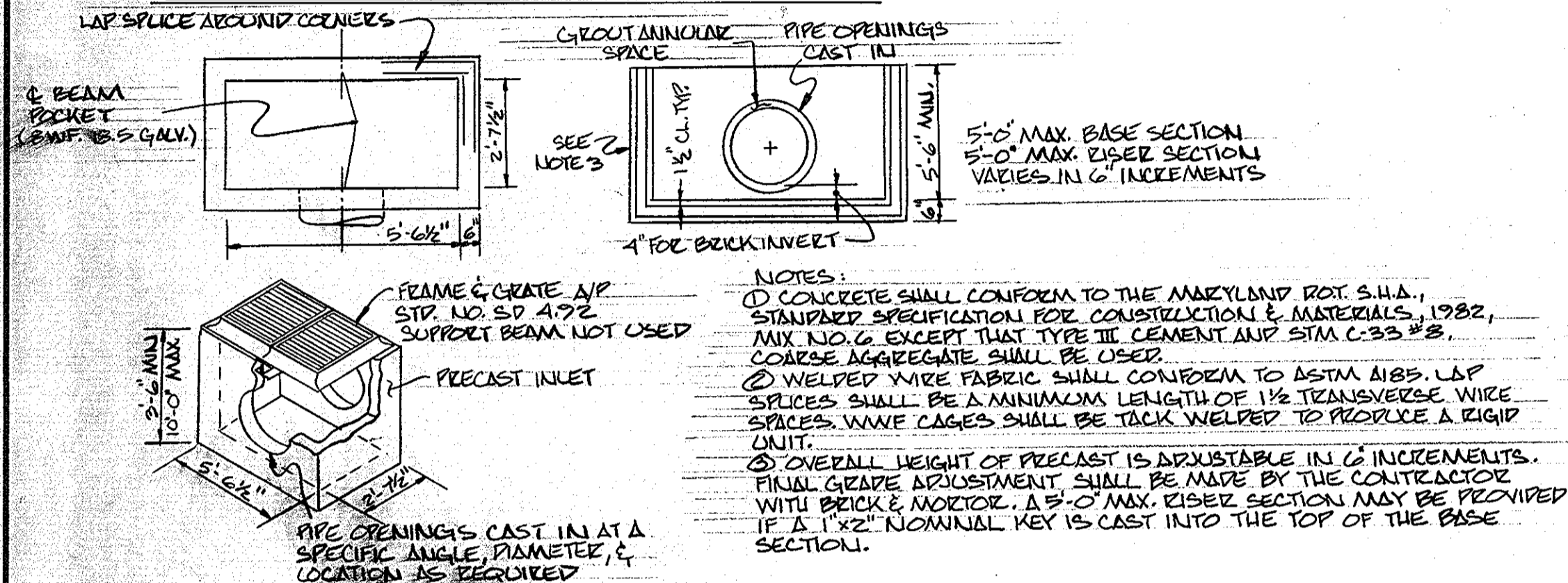
E-2 INLET OPTION #2

THE EXISTING ROCK FORMATION CAN BE UTILIZED IN THE CONSTRUCTION OF THE CATCH BASIN. REMOVE SOFT AREAS WHERE THE ROCK MATERIAL HAS UNDERGONE ADVANCED WEATHERING. THESE AREAS CAN BE IDENTIFIED BY STRIKING WITH A HANDHELD CHECKER. SIMILARLY, REMOVE THE FETTERED MATERIAL. THESE AREAS WILL HAVE A ROLL SOUND AND WILL BE EASILY DISLOADED. ADDITIONALLY, THESE UNSUITABLE ROCK MATERIALS CAN BE BROKEN BY HAND PRESSURE.

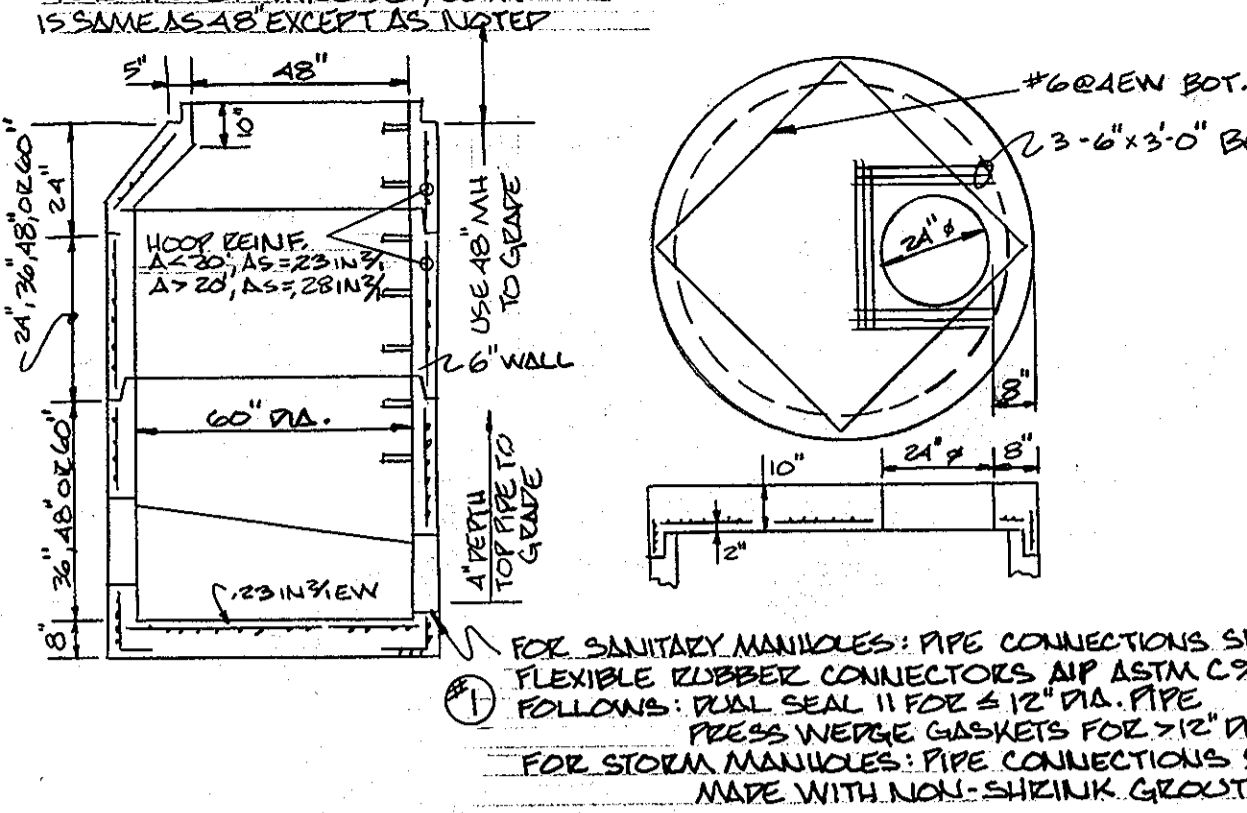
AFTER REMOVAL OF THE SOFT AREAS, THE REMAINING MATERIAL SHOULD BE CLEANED AND TREATED WITH SURTACRETE. THE SURTACRETE IS TO BE APPLIED TO THE ENTIRE SURFACE OF THE ROCK. THE SURTACRETE IS TO BE APPLIED TO THE ENTIRE SURFACE OF THE ROCK. THE SURTACRETE IS TO BE APPLIED TO THE ENTIRE SURFACE OF THE ROCK.

THE WORK SHALL BE EXECUTED UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER OR A SOILS INSPECTOR UNDER HIS DIRECTION.

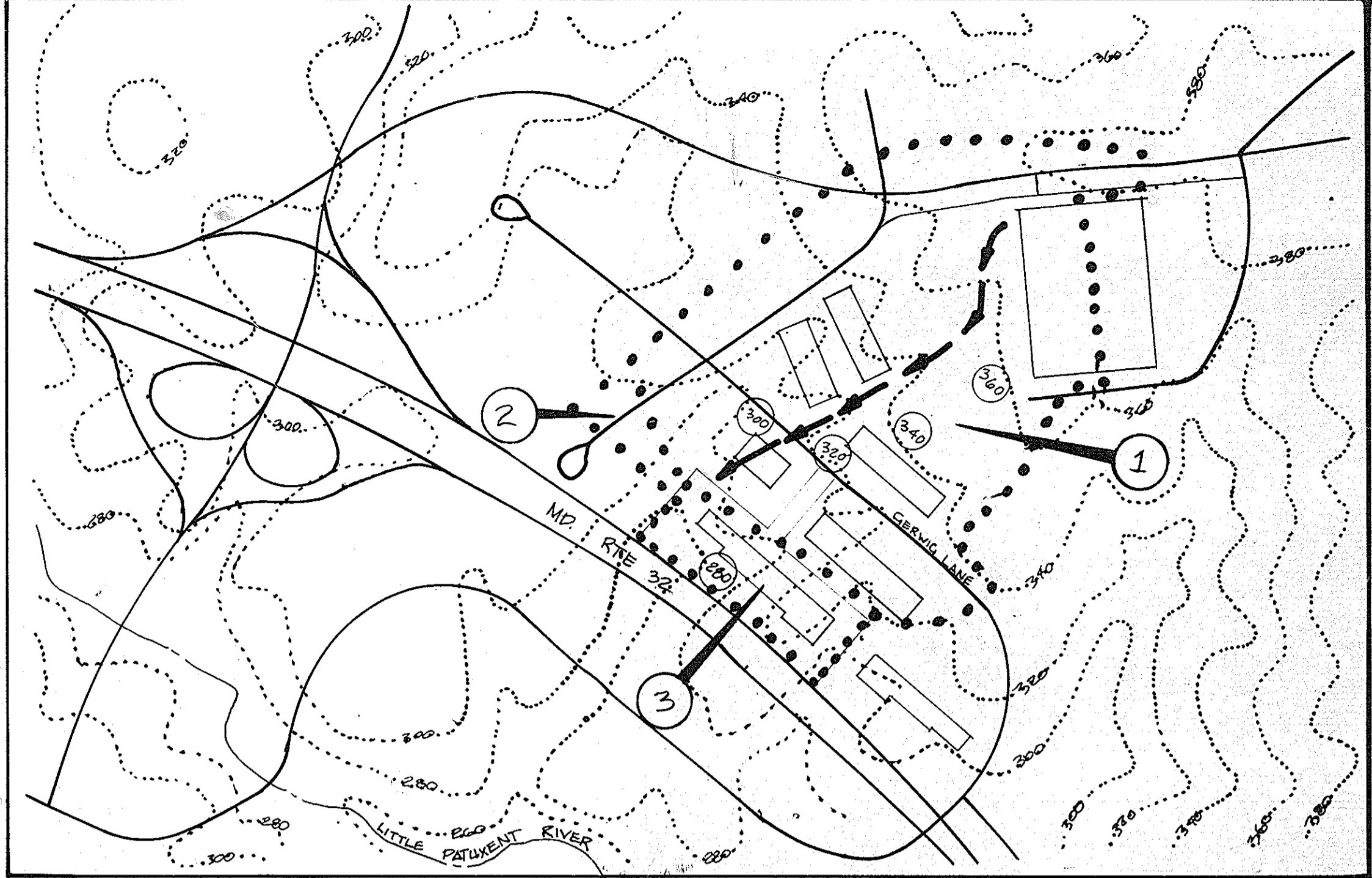
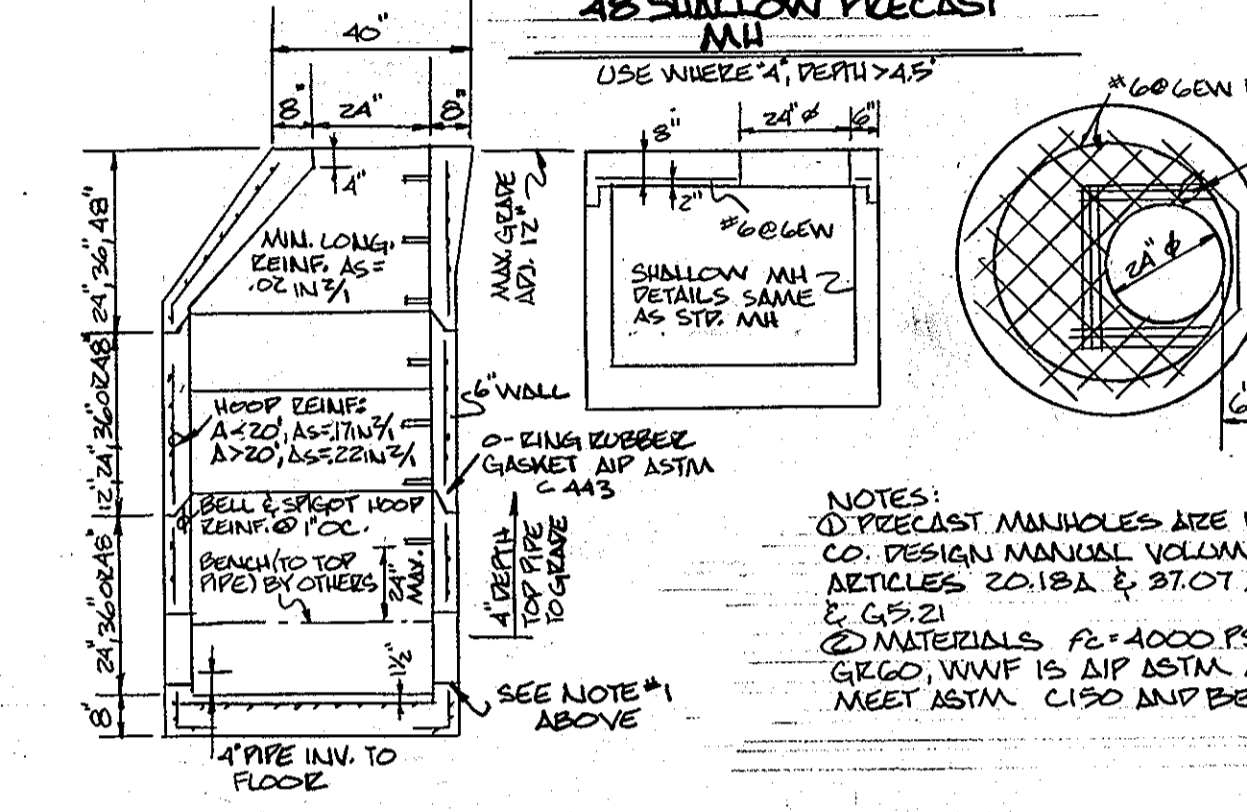
PRECAST ROBBLE TYPE 'S' REFERENCE NO. SD 4-23



60" STR. PRECAST MH. SHALLOW MH. SLAB



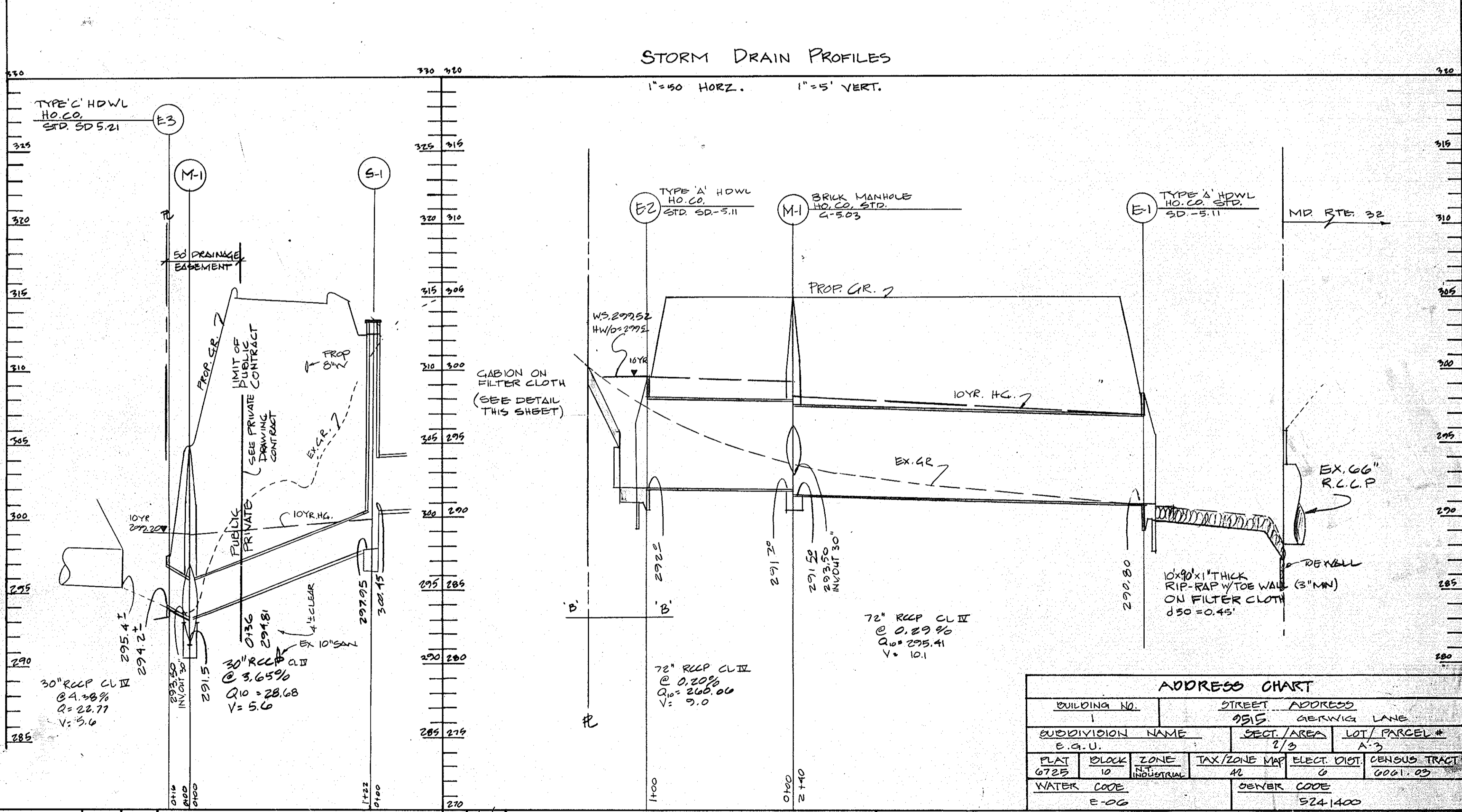
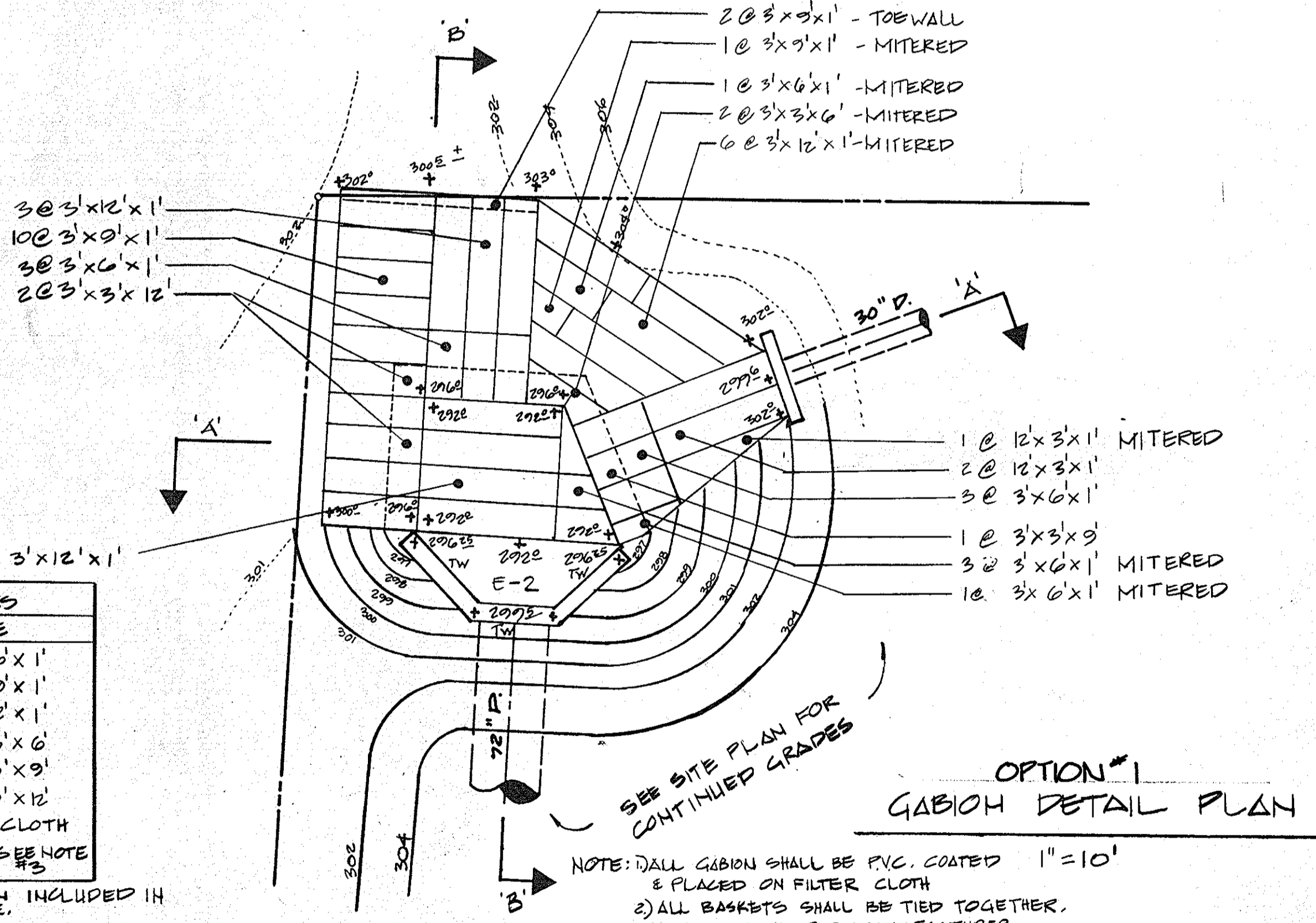
48" STR. PRECAST MH. SHALLOW MH. SLAB



DRAINAGE AREA MAP

NOTE: TOPOGRAPHY DERIVED FROM USGS.

| PA. | ACI | C' |
|-----|-------|------|
| 1 | 72.0 | 0.84 |
| 2 | 4.6 | 0.84 |
| 3 | 11.25 | 0.84 |



APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER: *[Signature]* DATE: 2-11-87

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 PLANNING DIRECTOR: *[Signature]* DATE: 2-18-87

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DIRECTOR: *[Signature]* DATE: 2-10-87

HOWARD SOIL CONSERVATION DISTRICT
 THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 APPROVED: *[Signature]* DATE: 1/13/87

REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
 SIGNATURE: *[Signature]* DATE: 1/13/87

APPROVED PLANNING BOARD OF HOWARD COUNTY
 DATE: 10-15-86

WRS WILLIAM R. SUDECK & ASSOCIATES, INC.
 Consulting Engineers & Land Surveyors
 112 South Main Street • Bel Air, Maryland 21014
 301-879-4333 301-838-5833

| DESIGN: R.W.R. | DATE: 7/2/86 |
|-----------------|--------------|
| DRAWN: K.M.G. | DATE: 7/2/86 |
| CHECKED: K.W.K. | |
| DATE: 3/10/86 | |

PUBLIC STORM DRAIN PLAN & PROFILE
 CONTRACT NO. _____

GUILFORD INDUSTRIAL PARK
 SECTION 2 AREA 3 PARCEL A-3
 HOWARD COUNTY, MARYLAND ELECTION DISTRICT #6
 SCALE AS SHOWN SHEET 8 OF 8