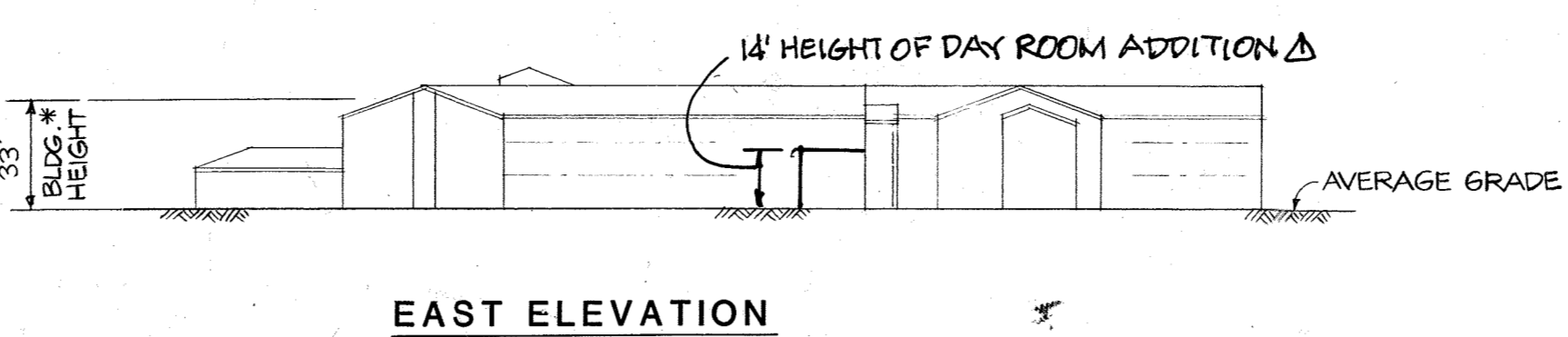


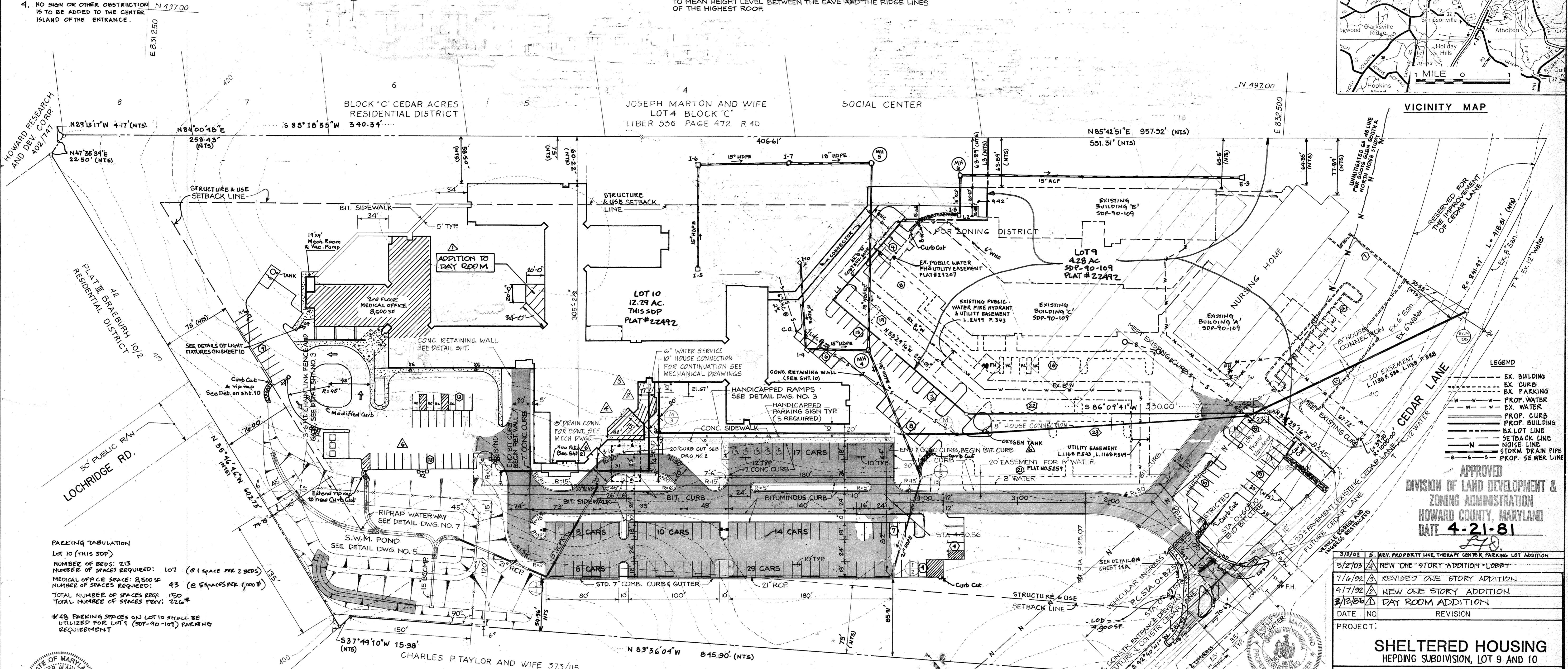
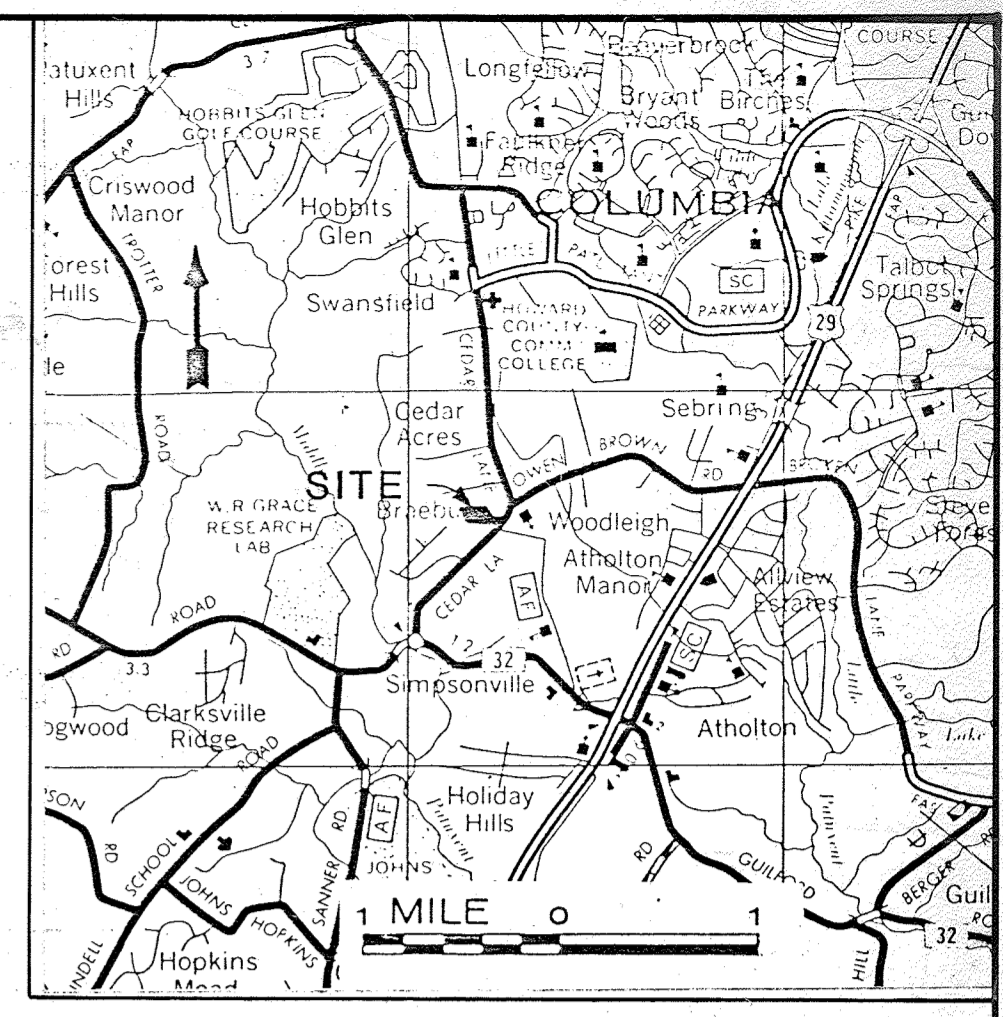
- NOTE:**
1. THE CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION SURVEY DIVISION, 24 HOURS IN ADVANCE OF COMMENCEMENT OF WORK, AT 992-2417 OR 992-2418.
 2. THE OWNER/DEVELOPER SHALL MAKE APPLICATION TO THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS FOR A BUILDING PERMIT FOR THE PROPOSED THERAPY CENTER BUILDING WITHIN ONE YEAR (1) FROM THE DATE OF APPROVAL OF THIS RED-LINE REVISION BY OED.
- ADDITIONAL GENERAL NOTES ON SHEET 11.**
3. ADVISORY: THE RED-LINE FOR THE ENTRANCE CHANGE MUST BE SUBMITTED TO THE DEPARTMENT OF INSPECTION, LICENSES AND PERMITS WITH 1-YEAR FROM THE DATE OF APPROVAL OF THE RED-LINE REVISION.
 4. NO SIGN OR OTHER OBSTRUCTION IS TO BE ADDED TO THE CENTER ISLAND OF THE ENTRANCE.

ADDRESS CHART

| | |
|------------------------------------|-----------------|
| LOT 9 HARMONY HALL ASSISTED LIVING | 6354 CEDAR LANE |
| LOT 10 LORIE NURSING HOME | 6356 CEDAR LANE |



- SITE ANALYSIS**
1. AREA OF PARCEL: 12.286 AC ± 535,171 SF (LOT 10)
 2. PRESENT ZONING: FOR (PLANNED OFFICE RESEARCH)
 3. FLOOR SPACE:
 - A. BASEMENT: 9,332 SF
 - B. FIRST FLOOR: 62,040 SF
 - C. SECOND FLOOR: 49,856 SF
 - D. THIRD FLOOR: 49,856 SF
 4. OPEN SPACE: 6.9 AC ± (56%)
- BUILDING COVERAGE: 62,040 SF ± (11.6%)



PARKING TABULATION
LOT 10 (THIS SDP)

NUMBER OF BEDS: 215
NUMBER OF SPACES REQUIRED: 107 (0.1 space per 2 beds)
MEDICAL OFFICE SPACE: 8,500 SF
NUMBER OF SPACES REQUIRED: 43 (0.5 spaces per 1,000 SF)
TOTAL NUMBER OF SPACES REQ: 150
TOTAL NUMBER OF SPACES PROV: 226*

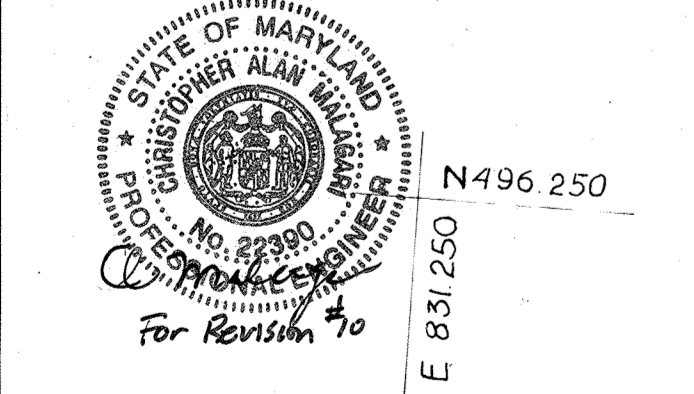
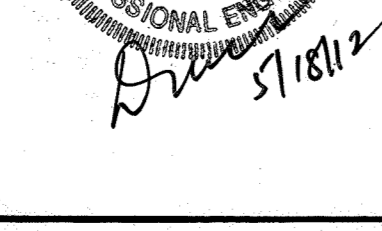
*48 PARKING SPACES ON LOT 10 SHALL BE UTILIZED FOR LOT 9 (SDP-90-109) PARKING REQUIREMENT

- LIGHT FIXTURE NOTES:**
1. THE LIGHT FIXTURES WILL HAVE SHIELDS AS REQUIRED BY ZONING REGULATIONS, SECTION 134.
 2. LIGHT TRESPASS ONTO ADJOINING PROPERTY WILL NOT EXCEED 0.1 CANDLES AS REQUIRED BY ZONING REGULATIONS, SECTION 134.
 3. SEE SHEET 10 FOR DETAILS OF LIGHT FIXTURES.

- LEGEND TO LIGHTING:**
- X1 400 WATT HD LAMP WITH 30' POLE
 - X2 DOUBLE 400 WATT HD LAMP WITH 30' POLE
 - X4 175 WATT HD LAMP WITH 10' POLE
 - X6 175 WATT WALL MOUNTED HD LAMP

PROPERTY LINE DATA

| LINE | BEARING | DISTANCE |
|------|-------------|----------|
| L1 | N36°25'54"E | 113.32' |
| L2 | N86°09'29"E | 92.29' |
| L3 | N03°50'31"W | 98.61' |



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. 22390, Expiration Date: 6-30-21

REVISIONS

| DATE | NO. | BY | REVISION |
|----------|-----|-----|--|
| 6/15/21 | 10 | BEI | UPDATE THERAPY CENTER, CONVERT A PORTION OF BED AREA TO MEDICAL OFFICE, UPDATE PARKING TABULATIONS |
| 2-4-2020 | 7 | BEI | REVISE NUMBER OF UNITS TO 275 IN SITE ANALYSIS |
| 09/15/19 | 6 | KCE | ADD ENTRANCE IMPROVEMENT AND TRAFFIC SIGNAL PLAN |
| 7/29/11 | 5 | KCE | IMPROVEMENT TO ROAD ENTRANCE & LIGHT FIXTURE ADDITION |
| 4/25/10 | 4 | KCE | REVISED PARKING LOT 9, ADDED TEMP. CONNECTOR |

LIGHTING:
● (C) 25' POLE MOUNTED SHARP ANGLE CUT OFF FIXTURE (LAMP SIZE 75 W Hg)
NOTE: ALL EXTERIOR LIGHTING SHALL BE DIRECTED/REFLECTED AWAY FROM ADJACENT RESIDENTIALLY ZONED PROPERTIES AND PUBLIC RIGHT-OF-WAY.

INDEX TO DRAWINGS (SITE DEVELOPMENT)

| DWG. NO. | TITLE |
|----------|--|
| 1 | LAYOUT AND UTILITY PLAN |
| 2 | GRADING PLAN |
| 3 | MISCELLANEOUS DETAILS |
| 4 | UTILITY PROFILES AND DETAILS |
| 5 | STORM WATER MANAGEMENT POND PLAN AND DETAILS |
| 6 | SEDIMENT CONTROL AND DRAINAGE AREA MAP |
| 7 | SEDIMENT CONTROL DETAILS - I |
| 8 | MAJOR TREE PLANTING AND SCREENING FOR PERIPHERY |
| 9 | AREA AND PARKING AREA & FOREST CONSERVATION PLAN |
| 10 | SEDIMENT CONTROL DETAILS - II |
| 11 | SITE DETAILS |
| 11A | DETAIL PLAN - THERAPY CENTER & PARKING LOTS |
| 11B | IMPROVEMENTS TO ENTRANCE - DETAIL PLAN |
| 11C | TRAFFIC SIGNAL PLAN |

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
Joseph J. ... DATE: 6-4-81

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.
Louis F. Dumas DATE: 6-4-81

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
Howard County Department of Public Works
George F. Nummy DATE: 6-4-81

APPROVED: CONSULTING ENGINEERS
Whitney, Bailey, Cox & Magnani
DATE: April 23, 1981

DESIGNED BY: U.E.
DRAWN BY: S.P.
PROJECT NO.: 616
DATE: 8/22/80
SCALE: AS NOTED
DRAWING NO.: 1 OF 11

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 4-21-81

| DATE | NO. | REVISION |
|---------|-----|---|
| 3/19/03 | 5 | REV. PROPERTY LINE, THERAPY CENTER, PARKING, LOT ADDITION |
| 5/2/02 | 4 | NEW ONE STORY ADDITION - LOBBY |
| 7/6/02 | 3 | REVISED ONE STORY ADDITION |
| 4/7/02 | 2 | NEW ONE STORY ADDITION |
| 3/13/00 | 1 | DAY ROOM ADDITION |

PROJECT: SHELTERED HOUSING
HEPENDING SUBDIVISION, LOT 9 AND 10

AREA: TAX MAP NO. 35, PARCEL NO. 365
5TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
FILE NO. E-11-045

TITLE: LAYOUT AND UTILITY PLAN

OWNER: NICHOLAS B. MANGIONE
1205 York Road
Lutherville, Maryland 21093

HEPENDING PROPERTY SUBDIVISION
RECORD PLAT NO: 21207
DEED REFERENCE: 74/52, 785/211
AA-02-30, E-02-01, E-02-02

ENGINEERS: WHITNEY, BAILEY, COX & MAGNANI
CONSULTING ENGINEERS
Suite 311 Green Spring Station
2360 West Joppa Road
Lutherville, Maryland 21093
301-296-4200

NET TRACT AREA:

A. Total tract area 12.29
 B. Land dedication areas (parks, county facility, etc.) 0.00
 C. Land dedication for roads or utilities 0.00
 D. Area to remain in commercial agricultural production/use 0.00
 E. Other deductions (previously developed land outside new LOD) 11.43
 F. Net Tract Area 0.86

BREAK EVEN POINT:

M. Clearing permitted without mitigation 0.00
 N. Total area of forest to be cleared 0.00
 O. Total area of forest to be retained 0.00

PROPOSED FOREST CLEARING:

N. Total area of forest to be cleared 0.00
 O. Total area of forest to be retained 0.00

PLANTING REQUIREMENTS:

P. Reforestation for clearing above conservation threshold 0.00
 Q. Reforestation for clearing below conservation threshold 0.00
 R. Credit for retention above conservation threshold 0.00
 S. Total reforestation required 0.00
 T. Total afforestation required 0.10
 U. Credit for landscaping (may not exceed 20% of 'S') 0.00
 V. Total reforestation and afforestation required 0.10

LAND USE CATEGORY: COMMERCIAL
 G. Afforestation Threshold 15% x F = 0.10
 H. Conservation Threshold 15% x F = 0.10

EXISTING FOREST COVER:

I. Existing forest cover 0.00
 J. Area of forest above afforestation threshold 0.00
 K. Area of forest above conservation threshold 0.00

NET TRACT AREA:

A. Total tract area 12.29
 B. Land dedication areas (parks, county facility, etc.) 0.00
 C. Land dedication for roads or utilities 0.00
 D. Area to remain in commercial agricultural production/use 0.00
 E. Other deductions (previously developed land outside new LOD) 11.43
 F. Net Tract Area 0.86

BREAK EVEN POINT:

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 N. Total area of forest to be cleared 0.00
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 O. Total area of forest to be retained 0.00

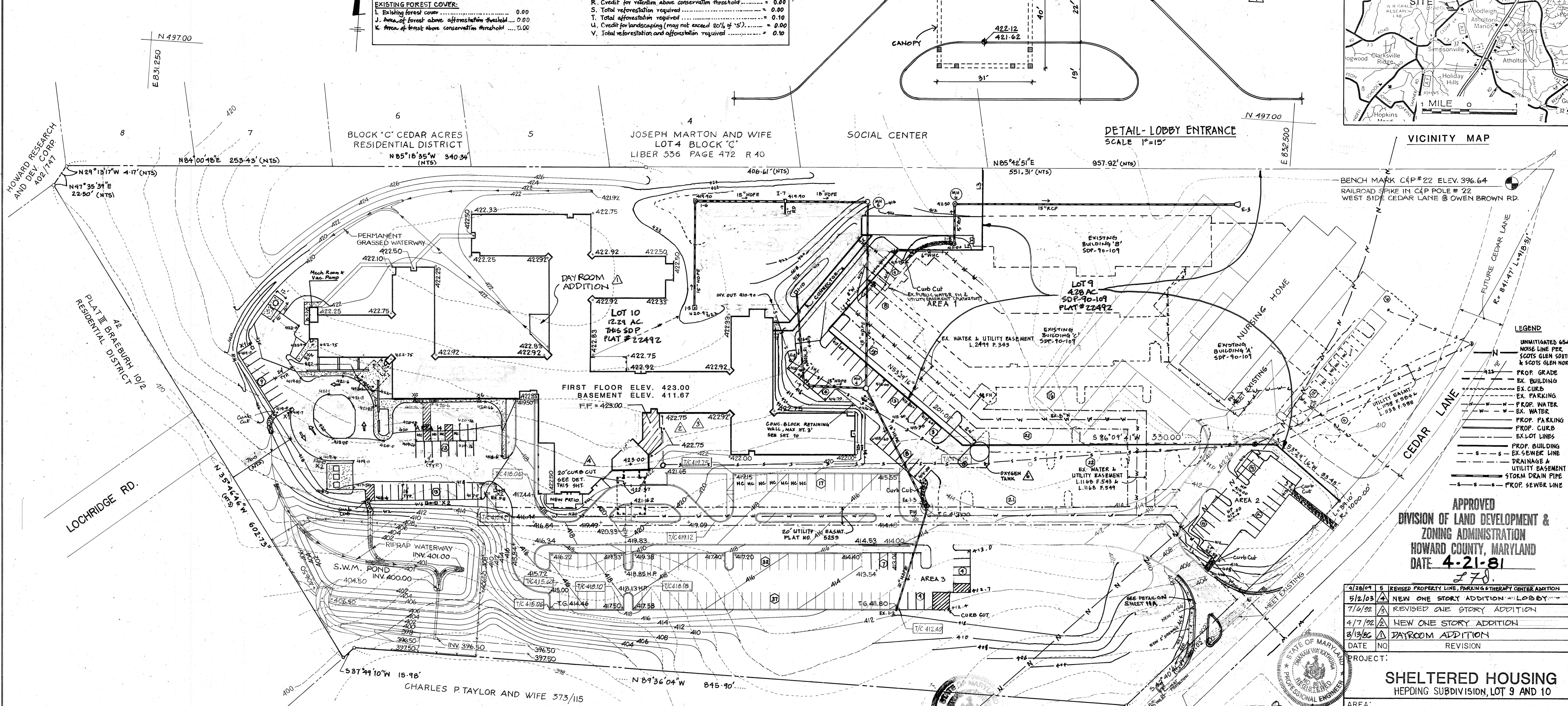
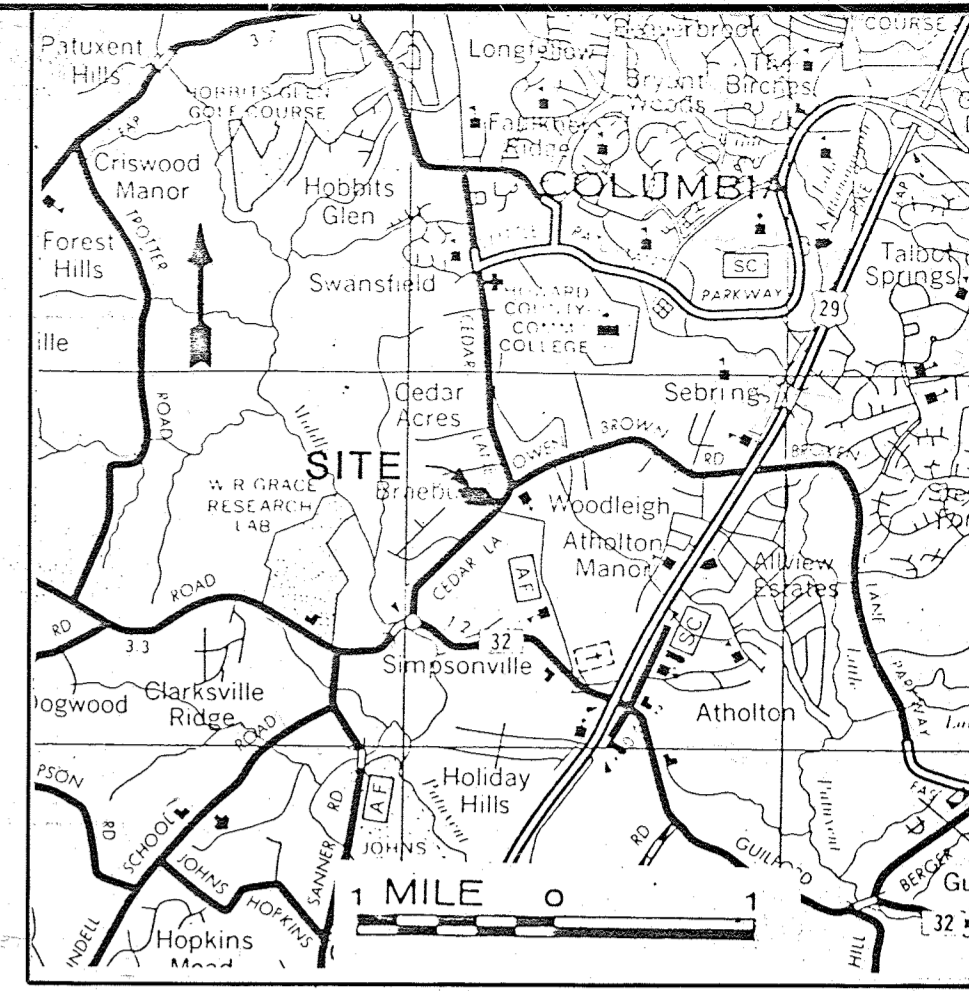
PLANTING REQUIREMENTS:

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 Q. Reforestation for clearing below conservation threshold 0.00
 R. Credit for retention above conservation threshold 0.00
 S. Total reforestation required 0.00
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 U. Credit for landscaping (may not exceed 20% of 'S') 0.00
 V. Total reforestation and afforestation required 0.10

LAND USE CATEGORY: COMMERCIAL
 G. Afforestation Threshold 15% x F = 0.10
 H. Conservation Threshold 15% x F = 0.10

EXISTING FOREST COVER:

I. Existing forest cover 0.00
 J. Area of forest above afforestation threshold 0.00
 K. Area of forest above conservation threshold 0.00



VICINITY MAP
SCALE 1"=15'

BENCH MARK C&P #22 ELEV. 396.64
RAILROAD SPIKE IN CAP POLE # 22
WEST SIDE CEDAR LANE @ OWEN BROWN RD.

LEGEND

- UNMITIGATED 65dB NOISE LINE PER SCOTS GLEN SOUTH & SCOTS GLEN NORTH
- PROP. GRADE
- EX. BUILDING
- EX. CURB
- EX. PARKING
- PROP. WATER
- EX. WATER
- PROP. PARKING
- PROP. CURBS
- EX. LOT LINES
- PROP. BUILDING
- EX. SEWER LINE
- DRAINAGE & UTILITY BASEMENT
- STORM DRAIN PIPE
- PROP. SEWER LINE

APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 4-21-81
JFD

PROJECT:

| | | |
|---------|-----|--|
| 4/28/09 | 5 | REVISED PROPERTY LINE, PARKING & THERAPY CENTER ADDITION |
| 5/12/03 | 4 | NEW ONE STORY ADDITION - LOBBY |
| 7/1/92 | 3 | REVISED ONE STORY ADDITION |
| 4/7/92 | 2 | NEW ONE STORY ADDITION |
| 3/13/86 | 1 | DAY ROOM ADDITION |
| DATE | NO. | REVISION |

SHELTERED HOUSING
HEPENDING SUBDIVISION, LOT 9 AND 10

AREA: TAX MAP NO. 35, PARCEL NO. 365
5TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: **GRADING PLAN**

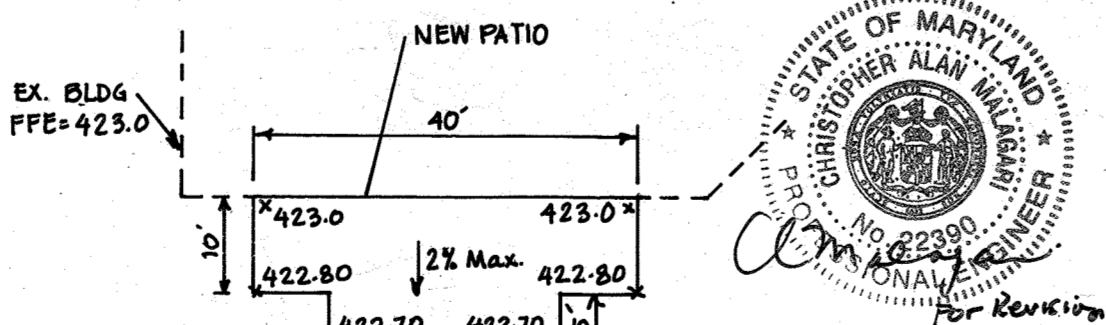
OWNER: NICHOLAS B. MANGIONE
1205 York Road
Lutherville, Maryland 21093

HEPENDING PROPERTY SUBDIVISION RECORD PLAT NO. 2107
DEED REFERENCE: 74/62, 785/211
F-11002, F-11-012

ENGINEERS: WHITNEY, BAILEY, COX & MAGNANI
CONSULTING ENGINEERS
Suite 301 Green Spring Station
2360 West Joppa Road
Lutherville, Maryland 21093
301-296-4200

DATE: April 23, 1981

DESIGNED BY: U.E.
 DRAWN BY: S.P.
 PROJECT NO.: 616
 DATE: 8 / 22 / 80
 SCALE: AS NOTED
 DRAWING NO.: 2 OF 11



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. 22390 Expiration Date: 6-30-21

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

APPROVED: COUNTY HEALTH OFFICER
 DATE: 6-4-81

APPROVED: PLANNING DIRECTOR
 DATE: 6-4-81

APPROVED: CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION
 DATE: 6-4-81

APPROVED: DIRECTOR
 DATE: 6-4-81

APPROVED: CHIEF, BUREAU OF ENGINEERING
 DATE: 6/13/81

LEGEND FOR LIGHTING:

X1 400 WATT HD LAMP WITH 30' POLE
 X2 DOUBLE 400 WATT HD LAMP WITH 30' POLE
 X4 175 WATT HD LAMP WITH 10' POLE
 X6 175 WATT WALL MOUNTED HD LAMP

LEGEND

--- 414 --- EXISTING CONTOUR
 --- 416 --- PROPOSED CONTOUR
 +410.86 PROPOSED SPOT ELEVATION
 T.G.415.42 TOP OF CURB ELEVATION
 T.G.414.46 TOP OF GRATE ELEVATION
 H.P. HIGH POINT

| LINE | BEARING | DISTANCE |
|------|-------------|----------|
| L1 | N36°25'54"E | 113.32' |
| L2 | N84°09'24"E | 92.29' |
| L3 | N05°50'31"W | 99.61' |

REVISION

| DATE | NO. | BY | REVISION |
|----------|-----|-----|---|
| 6/15/21 | 9 | BEI | DELETE THERAPY CENTER, LABEL EXIST BUILDINGS AND LOT 9 |
| 05/15/12 | 8 | KCE | ADD ENTRANCE IMPROVEMENTS AND TRAFFIC SIGNAL PLAN |
| 06/29/11 | 7 | KCE | IMPROVEMENT TO ROAD ENTRANCE AND LIGHT FIXTURE ADDITION |
| 9/28/10 | 6 | KCE | REVISE PARKING LOT 4, ADD TEMP CONNECTOR, FC WORKSHEET |

LOCHRIDGE RD.
N 496.250
E 831.250

PLAT III BREBURH 1012
RESIDENTIAL DISTRICT

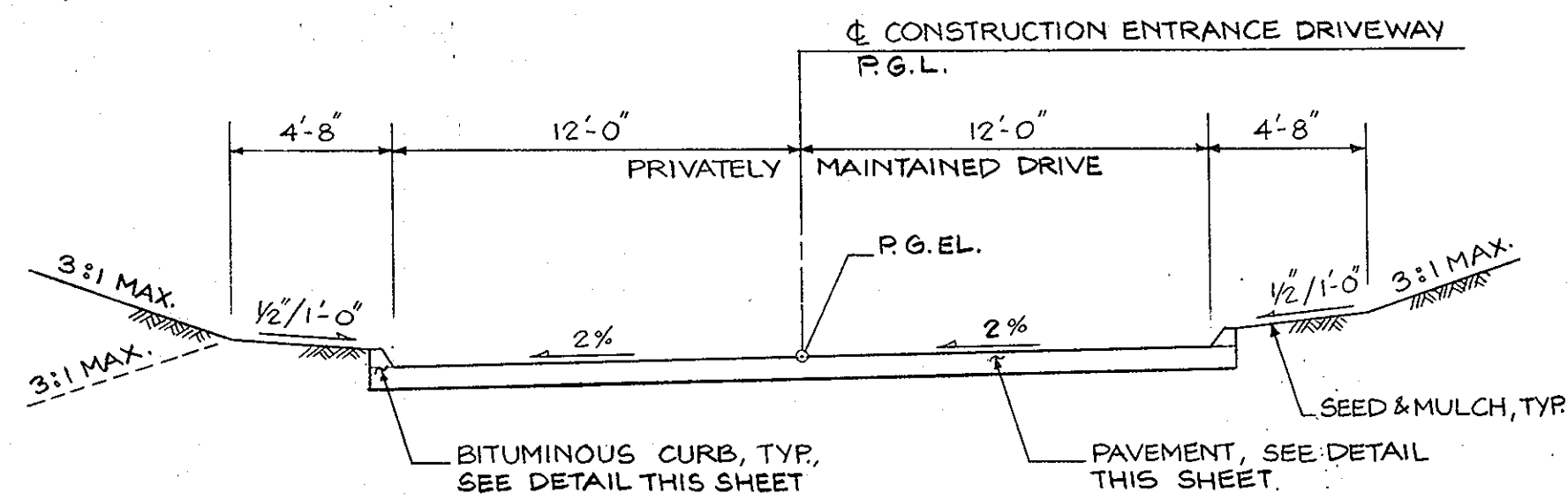
CHARLES P TAYLOR AND WIFE 373/115
RESIDENTIAL DISTRICT

RESIDENTIAL DISTRICT

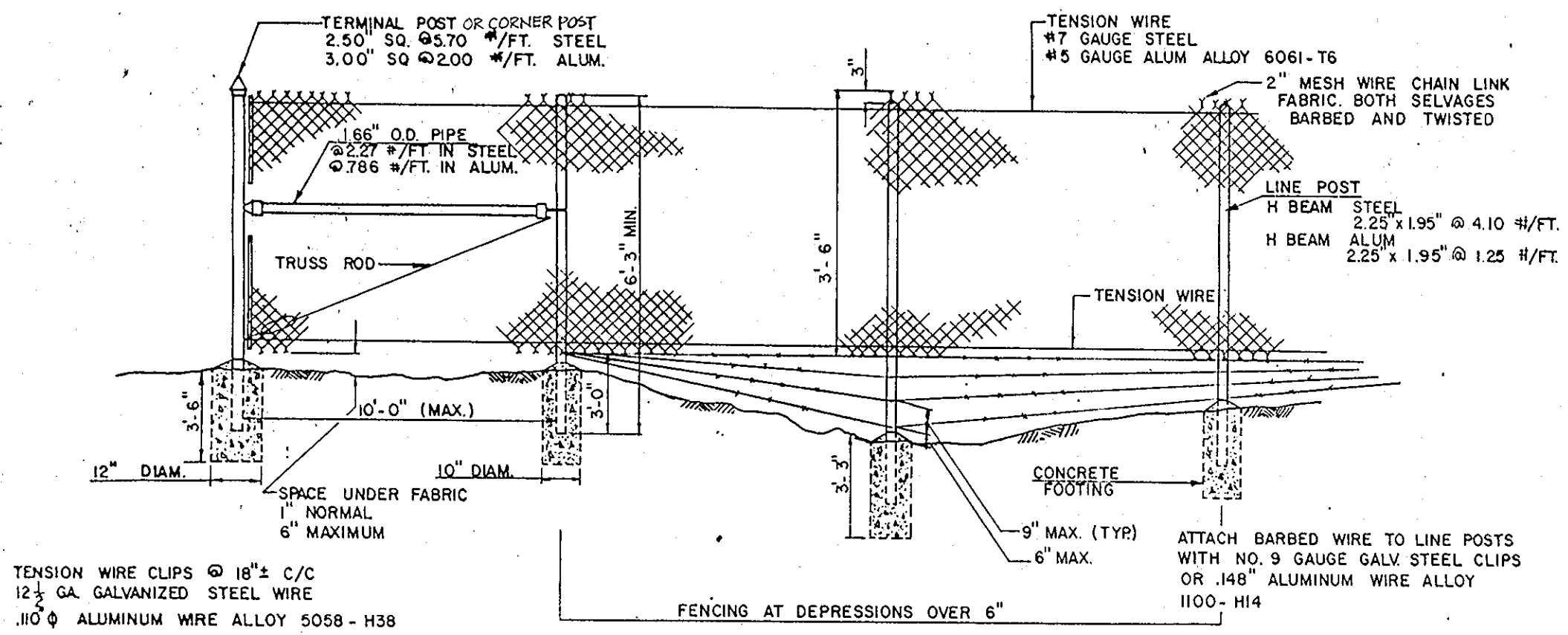
PLAN
SCALE: 1"=50'

FREETOWN RD.

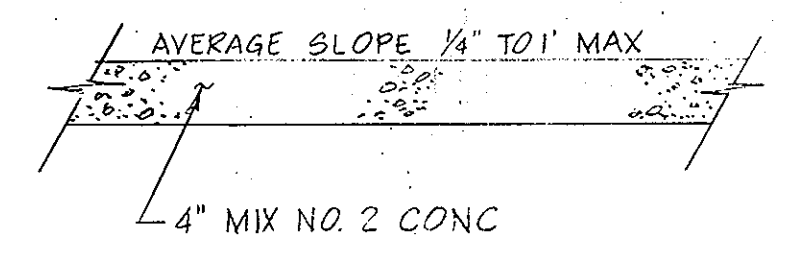
CEEDAR LANE



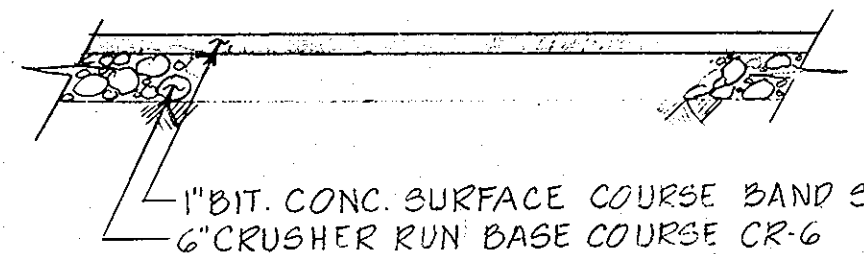
TYPICAL ENTRANCE DRIVEWAY SECTION
SCALE: 1"=5'



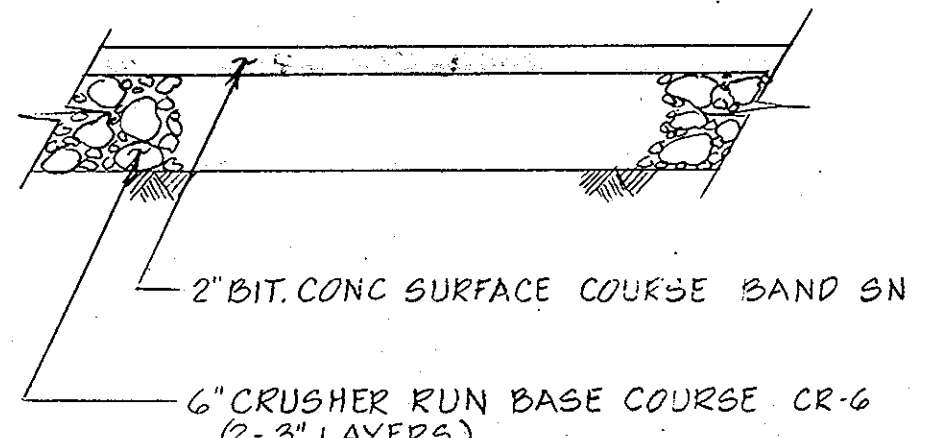
CHAIN LINK FENCE AND GATE
NOT TO SCALE



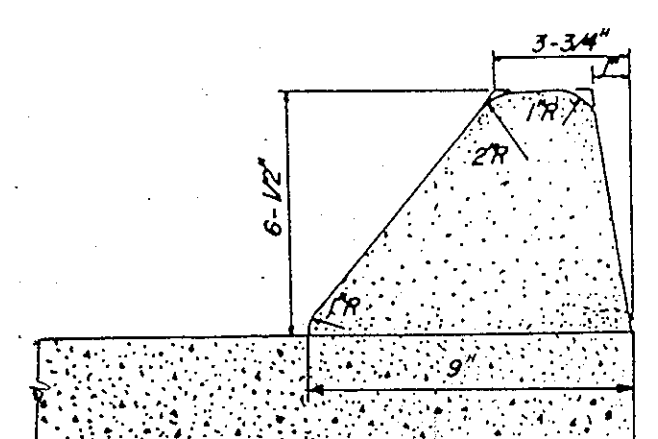
CONCRETE SIDEWALK
NOT TO SCALE



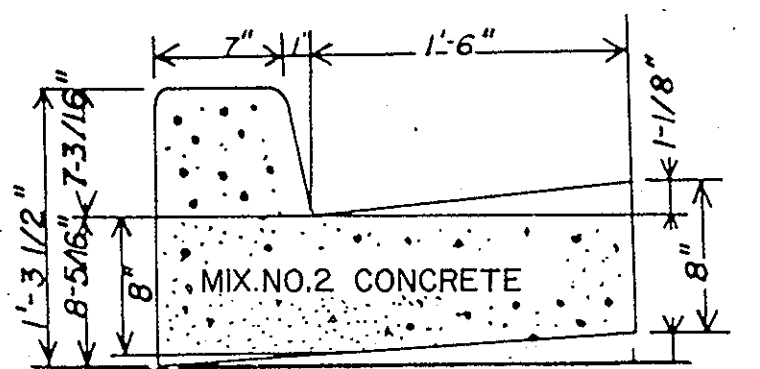
BITUMINOUS SIDEWALK
NOT TO SCALE



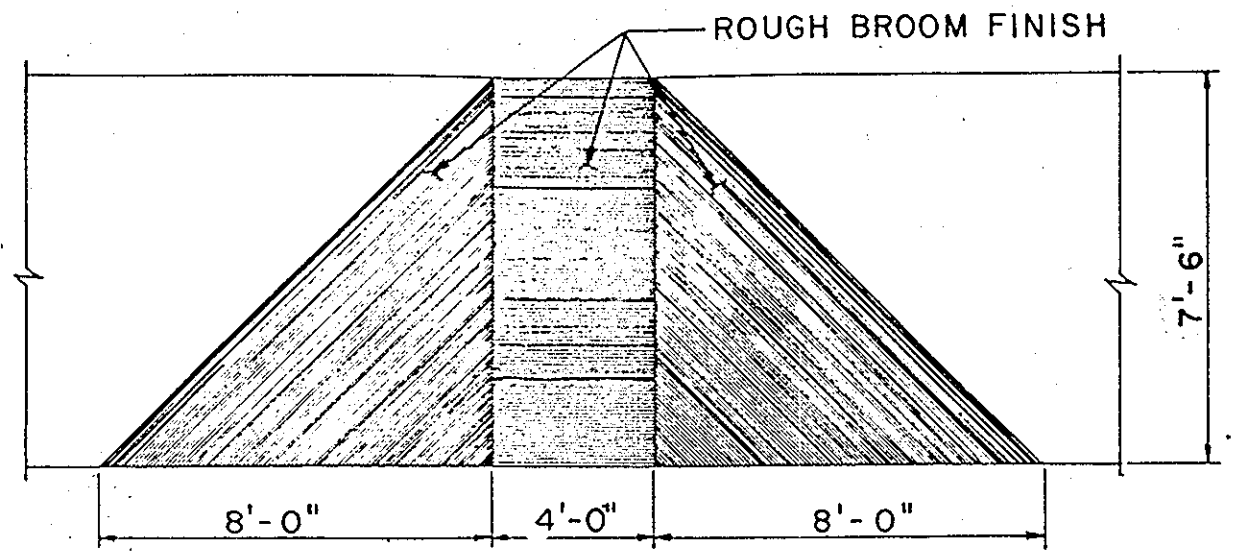
DRIVEWAY AND PARKING PAVEMENT SECTION
NOT TO SCALE



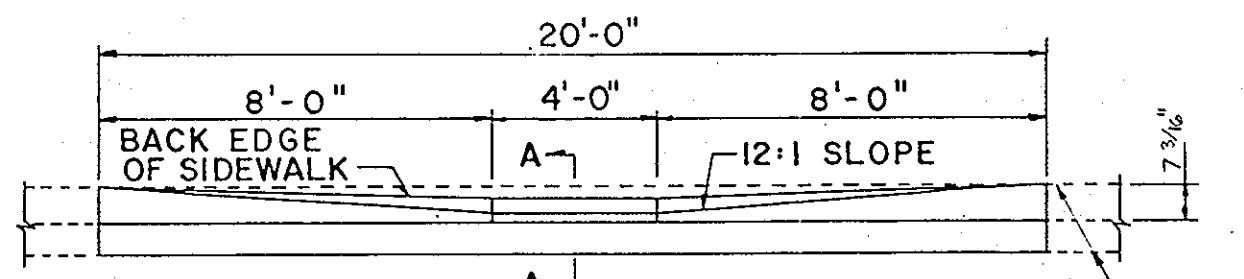
BITUMINOUS CURB
NOT TO SCALE



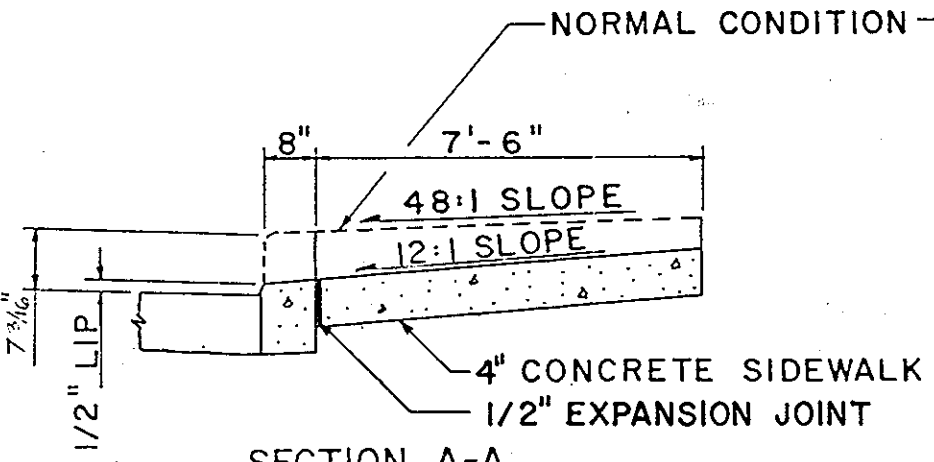
STD. 7" COMBINATION CURB AND GUTTER
NOT TO SCALE



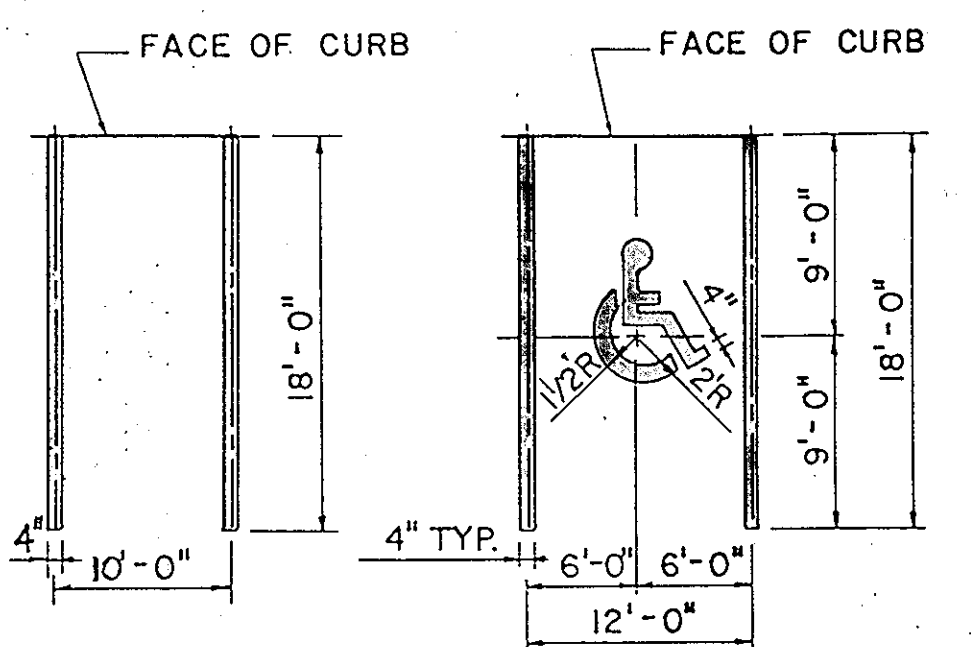
PLAN



ELEVATION

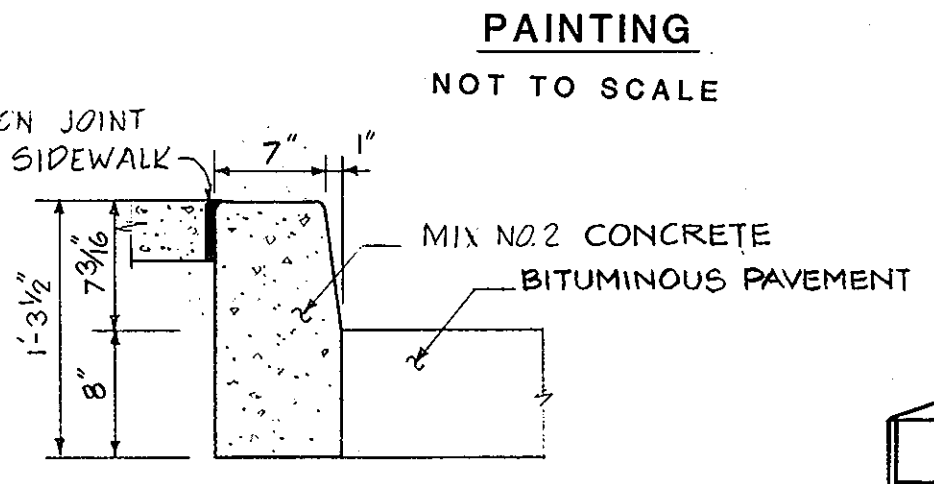


HANDICAPPED RAMP
NOT TO SCALE

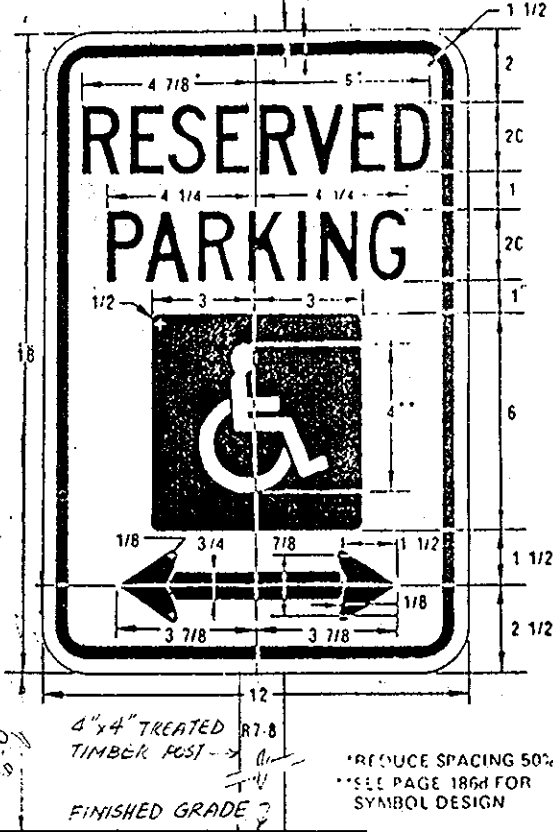


NOTE: ALL PAINT LINES SHALL BE WHITE TRAFFIC PAINT

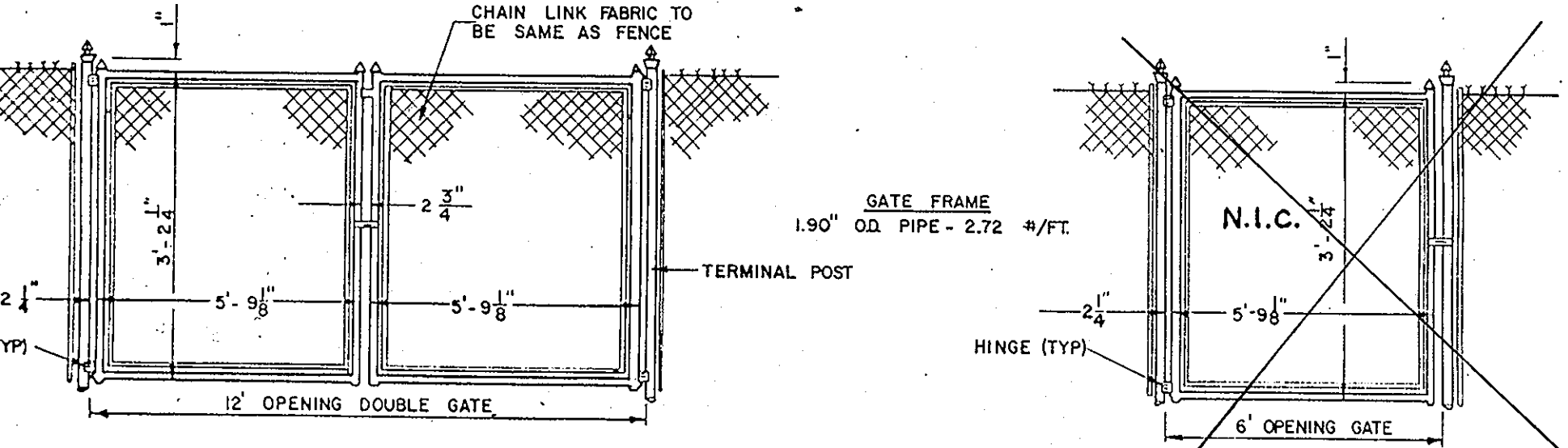
PERPENDICULAR PARKING HANDICAPPED PARKING



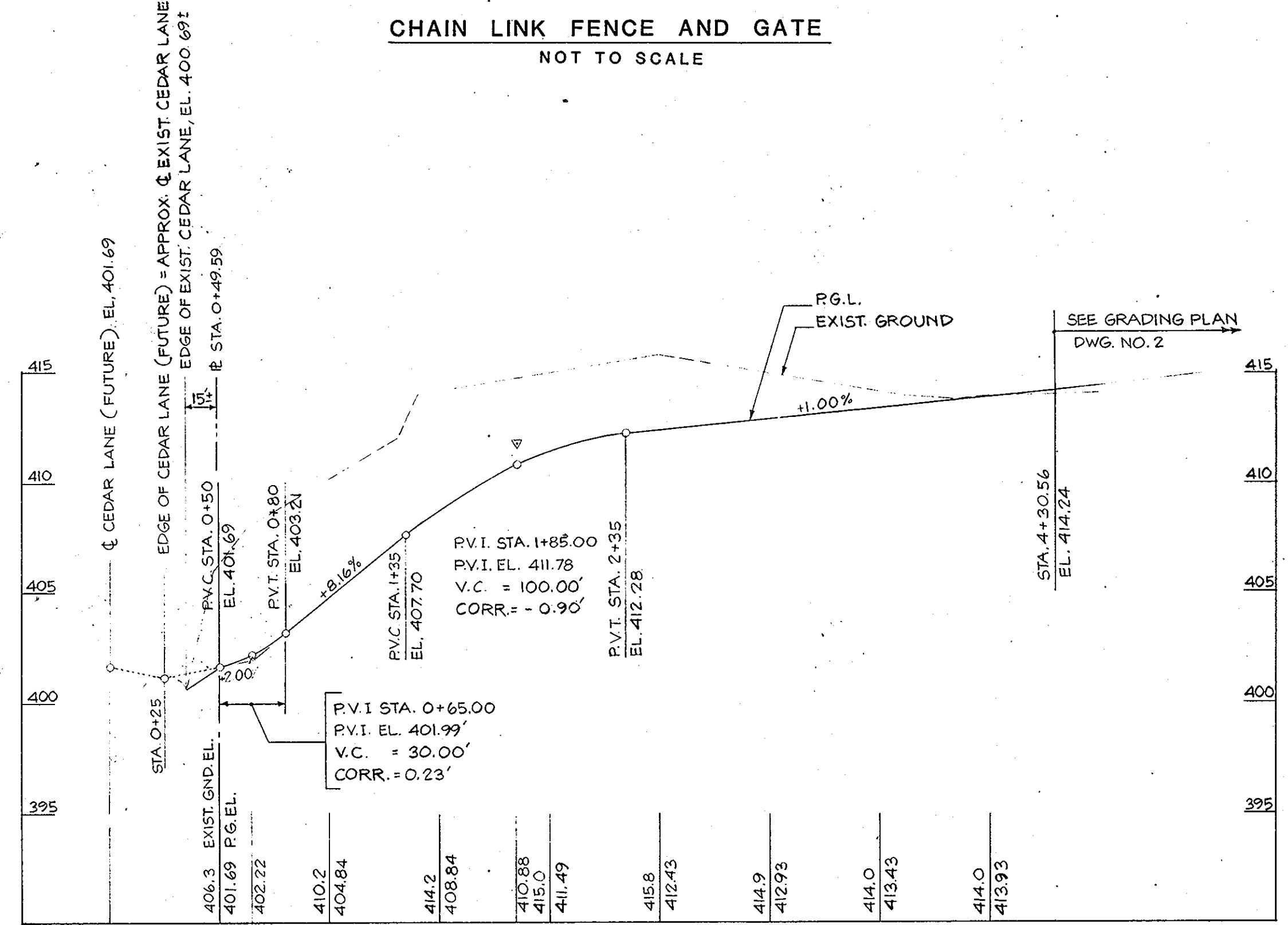
7" CONCRETE CURB
NOT TO SCALE



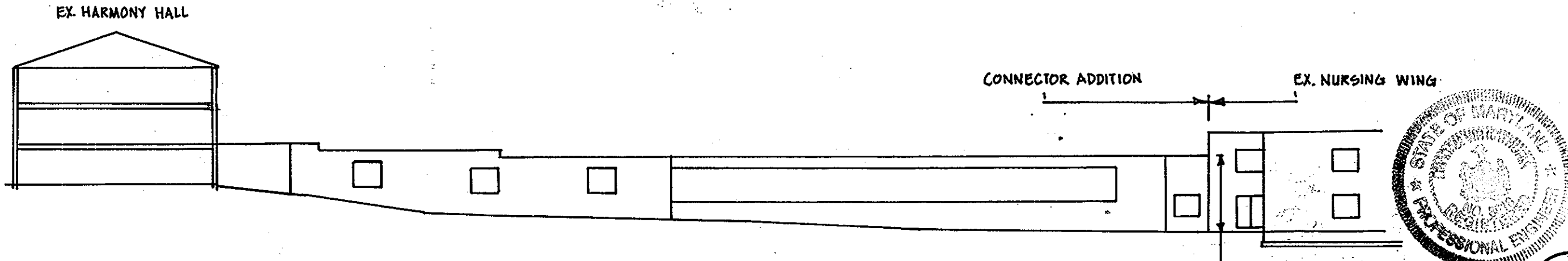
HANDICAPPED PARKING SIGN
NOT TO SCALE



CHAIN LINK FENCE AND GATE
NOT TO SCALE



ENTRANCE DRIVEWAY PROFILE
SCALE: HORIZ. 1"=50' VERT. 1"=5'



ELEVATION-TEMPORARY CONNECTOR
SCALE 1"=25'

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Henry F. Nemura 6-4-81
DIRECTOR DATE

William S. Paly 6/15/81
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.
John M. Maccubbin 6-4-81
PLANNING DIRECTOR DATE
Lois F. Duma 6-4-81
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
Joseph B. ... 6-4-81
COUNTY HEALTH OFFICER DATE

| | | |
|---------|-----|-------------------------------|
| 1/24/11 | 3 | REVISE TITLE BLOCK |
| 4/28/10 | 2 | ADD TEMP. CONNECTOR ELEVATION |
| 3/3/09 | 1 | REVISED PARCEL NO., SHEET NO. |
| DATE | NO. | REVISION |

PROJECT: SHELTERED HOUSING
HEPENDING SUBDIVISION, LOTS 9&10

AREA: TAX MAP NO. 35, PARCEL NO. 265
5TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

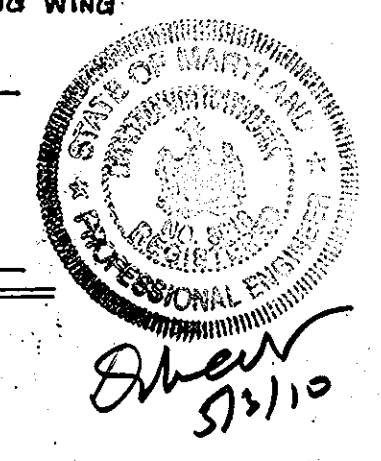
TITLE: MISCELLANEOUS DETAILS

OWNER: NICHOLAS B. MANGIONE
1205 York Road
Lutherville, Maryland 21093

HEPENDING PROPERTY SUBDIVISION
RECORD PLAT NO: 21227
DEED REFERENCE: 74172, 785/211
P-11-015, P-11-002

ENGINEERS: WHITNEY, BAILEY, COX & MAGNANI
CONSULTING ENGINEERS
Suite 311 Green Spring Station
2350 West Joppe Road
Lutherville, Maryland 21093
301-296-4200

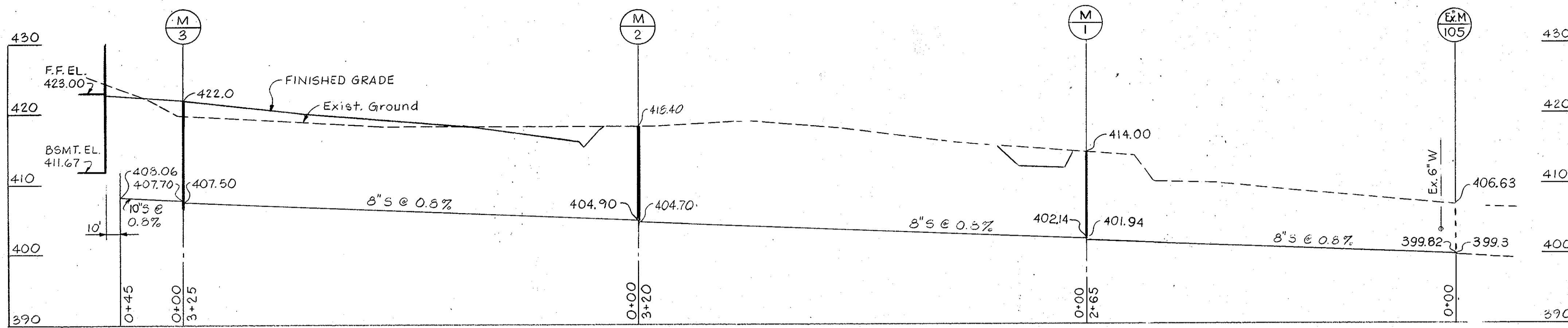
DATE: *Apr 23 1981*
DESIGNED BY: U.E.
DRAWN BY: R.G.
PROJECT NO.: 616
DATE: 8/22/80
SCALE: AS NOTED
DRAWING NO.: 3 OF 11



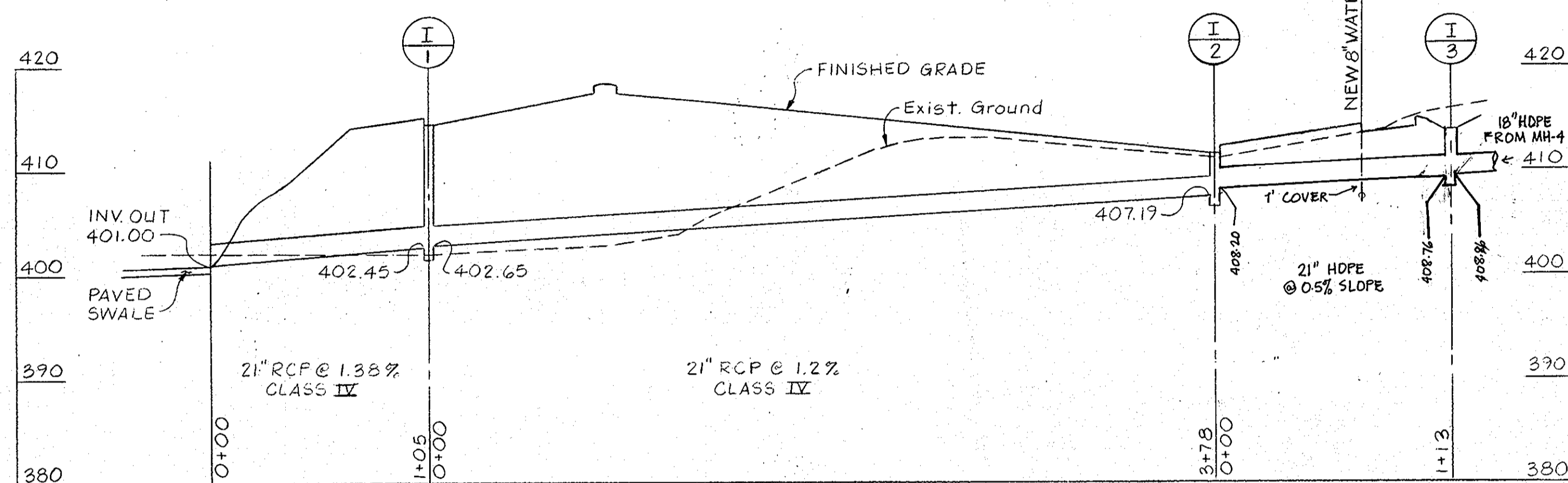
APPROVED
DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 4-21-81
LFD

NOTE: PAVEMENT, SIDEWALK AND CURB SHALL BE CONSTRUCTED IN ACCORDANCE WITH MARYLAND STATE HIGHWAY SPECIFICATIONS
BASE COURSE ARTICLE 32.03 CONC. CURB ARTICLE 35.03
SURFACE COURSE ARTICLE 33.07 CONC. SIDEWALK ARTICLE 35.04
BIT. CURB ARTICLE 35.00

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY "ROAD CONSTRUCTION CODE AND STANDARD SPECIFICATIONS" AND "STANDARD SPECIFICATION AND DETAILS FOR WATER MAINS AND SANITARY SEWERS."
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN ON PLANS. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES, WHERE DIRECTED BY THE ARCHITECT. A MINIMUM OF TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST THREE DAYS BEFORE STARTING WORK SHOWN ON THIS/THESE DRAWINGS:
 C & P TELEPHONE COMPANY 725-9976
 HOWARD COUNTY BUREAU OF UTILITIES 992-2366
 AT&T CABLE LOCATION DIVISION 393-3553
 BALTIMORE GAS AND ELECTRIC COMPANY 685-0123
 STATE HIGHWAY ADMINISTRATION 531-5533
- THE CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION/SURVEY DIVISION 24 HOURS IN ADVANCE OF COMMENCEMENT OF WORK AT 992-2417 OR 992-2418.



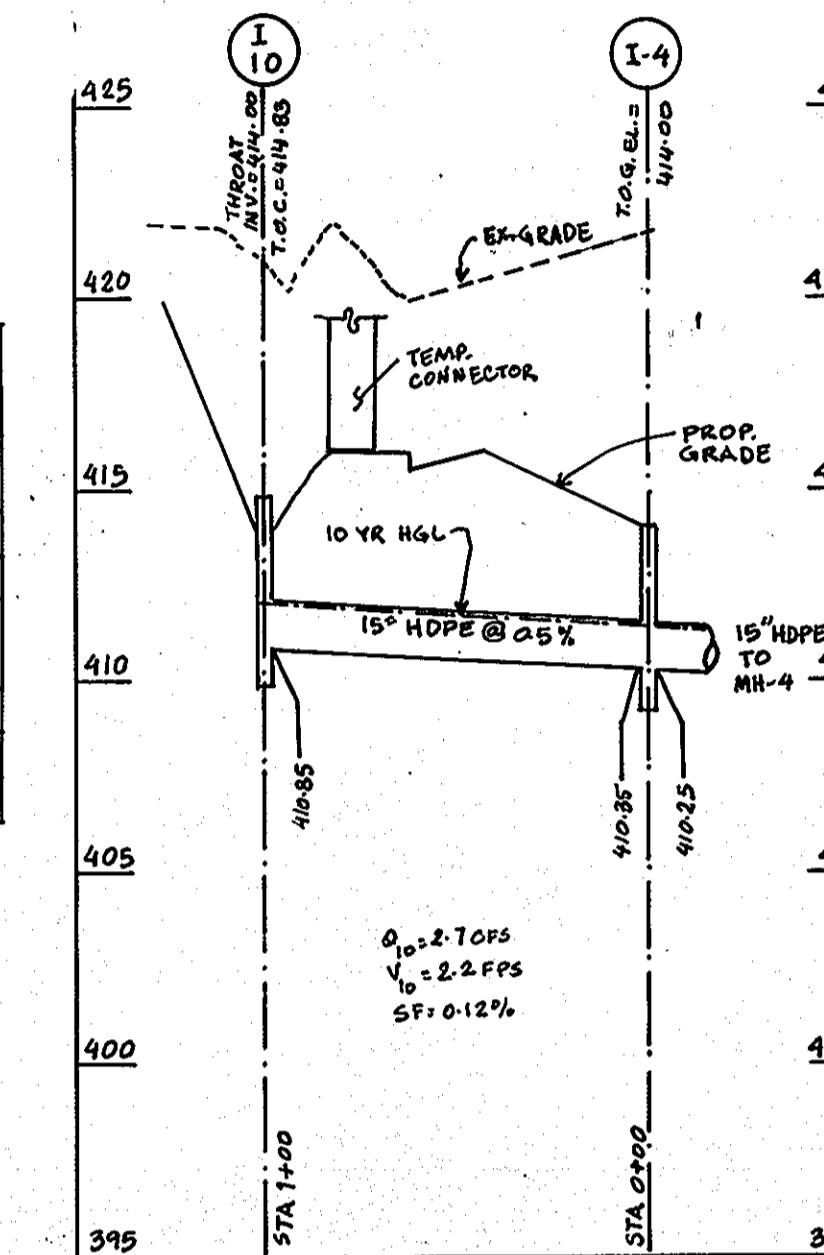
8" HOUSE CONNECTION PROFILE
 SCALE: HORIZ. 1" = 50'
 VERT. 1" = 10'



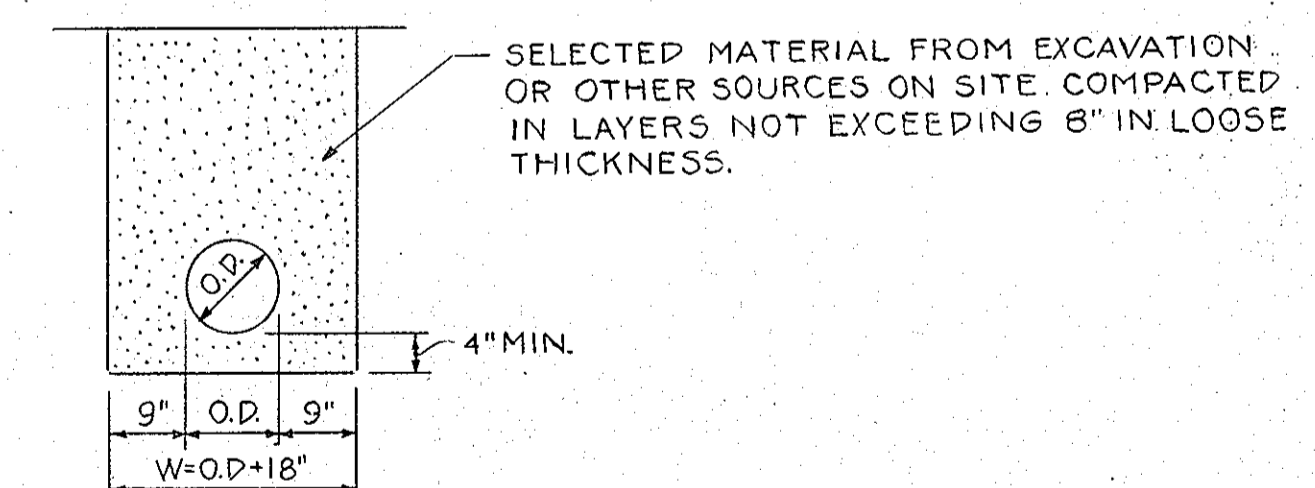
STORM DRAIN PROFILE
 SCALE: HORIZ. 1" = 50'
 VERT. 1" = 10'

| STRUCTURE SCHEDULE | | | | | |
|--------------------|-----------------------|-----------------|------------------|----------------------|---------------------|
| NO. | TYPE | INV. ELEV. (IN) | INV. ELEV. (OUT) | TOP OF COVER / GRADE | HO. CO. STR. DETAIL |
| 1-5 | TYPE 'D' INLET | - | 411.90 | 421.80 | D-4.11 |
| 1-6 | TYPE 'D' INLET | 416.20 | 416.00 | 420.73 | D-4.11 |
| 1-7 | TYPE 'D' INLET | 414.95 | 412.82 | 420.73 | D-4.11 |
| MH-5 | STD. BRICK MANHOLE | 411.91 | 411.71 | 416.50 | G-9.01 |
| MH-4 | SHALLOW BRICK MANHOLE | 410.68 | 409.55 | 416.00 | G-9.05 |
| 1-4 | TYPE A5 INLET | 410.24 | 414.00 | 414.00 | D-4.01 |
| I-10 | TYPE 'D' INLET | - | 410.85 | 414.83 | D-4.11 |

| PIPE SCHEDULE | |
|---------------|--------|
| TYPE | LENGTH |
| 15" HDPE | 300' |
| 18" HDPE | 435' |
| 21" HDPE | 115' |



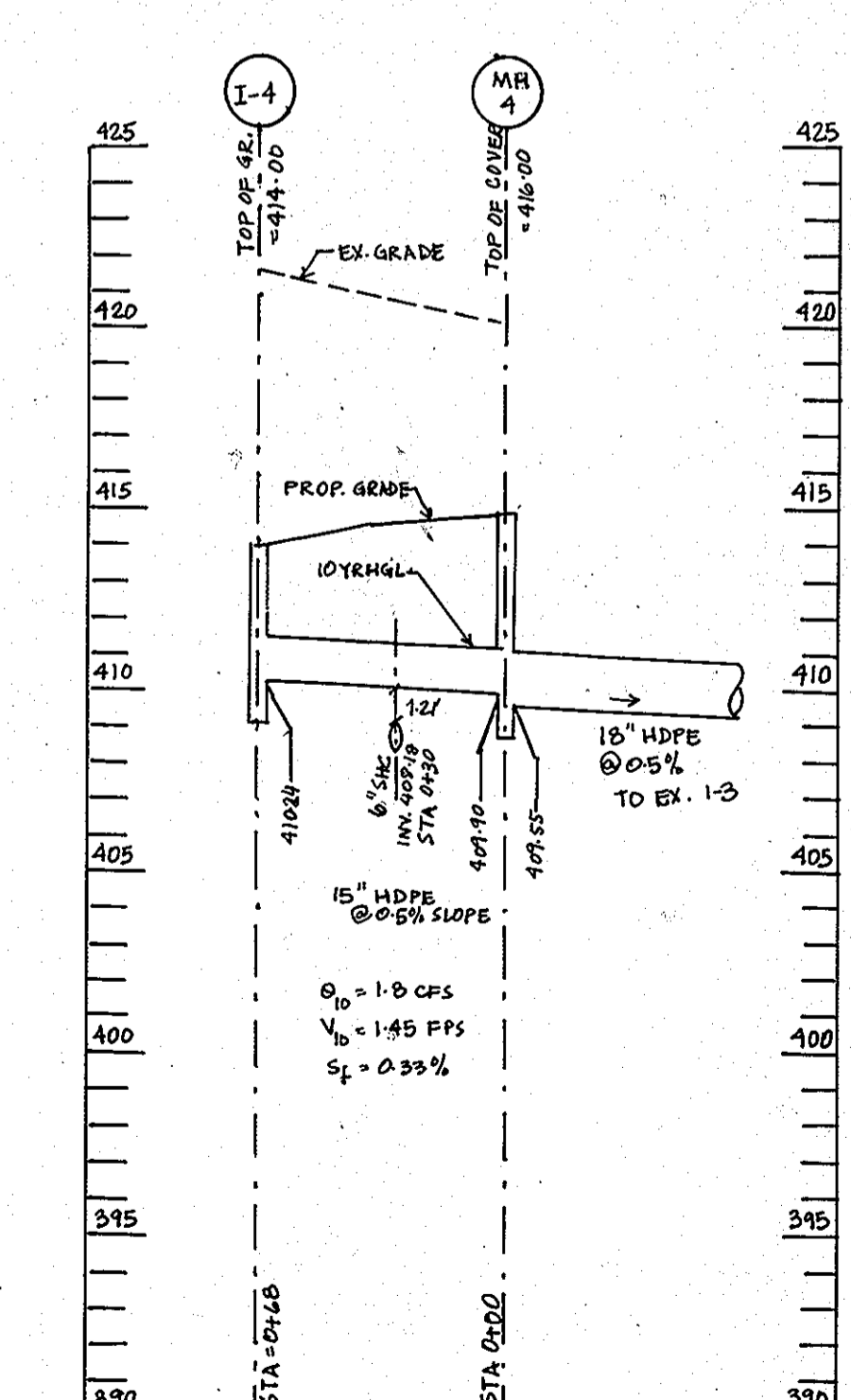
STORM DRAIN PROFILE FROM I-10 TO I-4
 SCALE: 1" = 5' V, 1" = 50' H



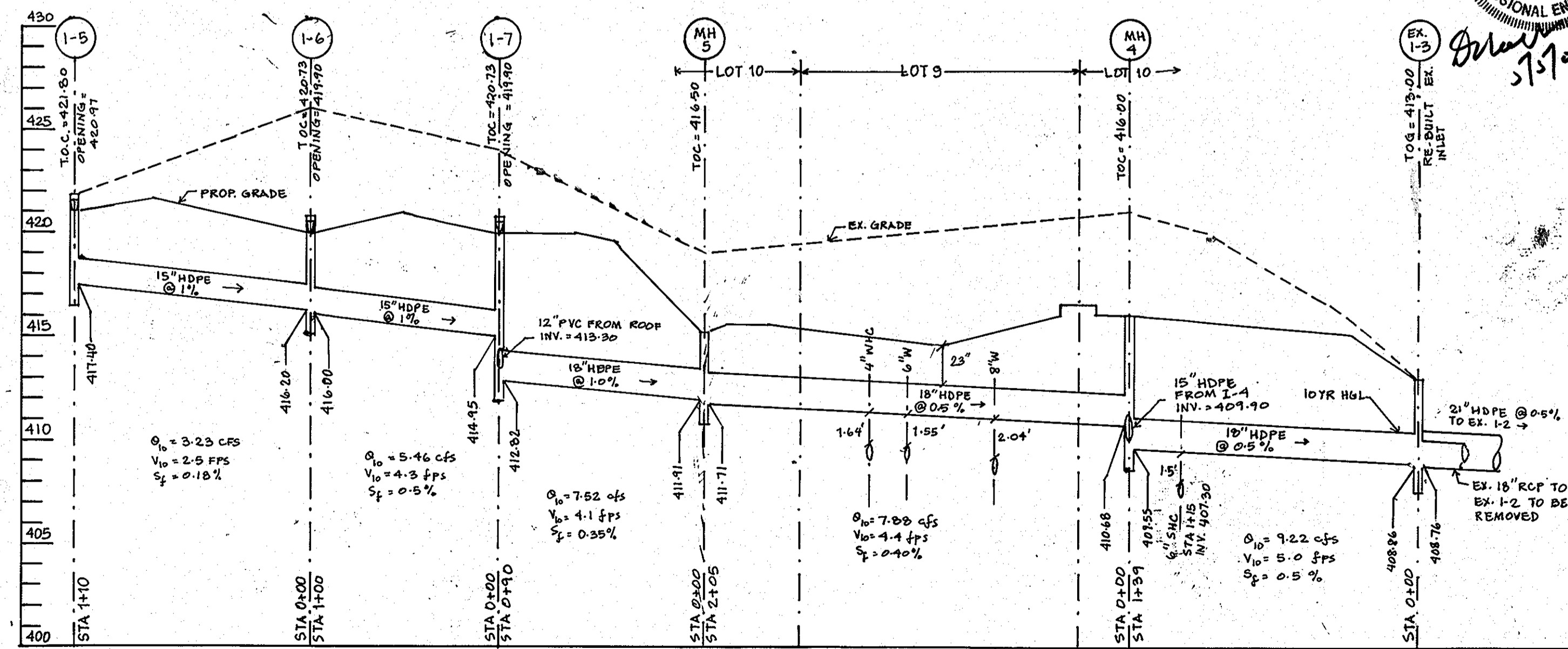
TRENCH BEDDING DETAIL
 NOT TO SCALE

| INLET SCHEDULE | | | | | |
|----------------|----------------------|---------------|----------------|-----------|----------------------------|
| NO | TYPE | INV. IN ELEV. | INV. OUT ELEV. | TOP ELEV. | HOWARD COUNTY STANDARD NO. |
| I-1 | "S" COMB. DOUBLE GR. | 402.65 | 402.45 | 414.46 | DWG. D-99 |
| I-2 | "S" COMB. DOUBLE GR. | 407.69 | 407.19 | 411.80 | DWG. D-99 |
| I-3 | "K" INLET | - | 408.76 | 413.00 | DWG. D-93* |

* NO CONC. GUTTERS



STORM DRAIN PROFILE FROM I-4 TO MH-4
 SCALE: 1" = 5' V, 1" = 50' H



STORM DRAIN PROFILE FROM I-5 TO EX-1-3
 SCALE: 1" = 5' V, 1" = 50' H

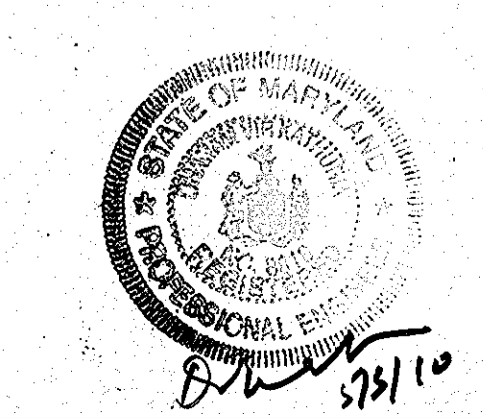
NOTE: INVERTS OF EXISTING WATER MAIN TAKEN FROM CONT# 44-3048-D.
 CONTRACTOR TO VERIFY MIN. OF 12" CLEARANCE FOR ALL UTILITY CROSSINGS

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Director: *Norm F. Nemmy* 6-5-81
 DATE: 6-5-81
 Chief, Bureau of Engineering: *William E. Papp* 6/3/81
 DATE: 6-3-81
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.
 Planning Director: *John M. Muschman* 6-4-81
 DATE: 6-4-81
 Chief, Division of Land Development and Zoning Administration: *Acting Louis F. Davis* 6-4-81
 DATE: 6-4-81
 APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
 County Health Officer: *Joseph Boyer* 6-4-81
 DATE: 6-4-81

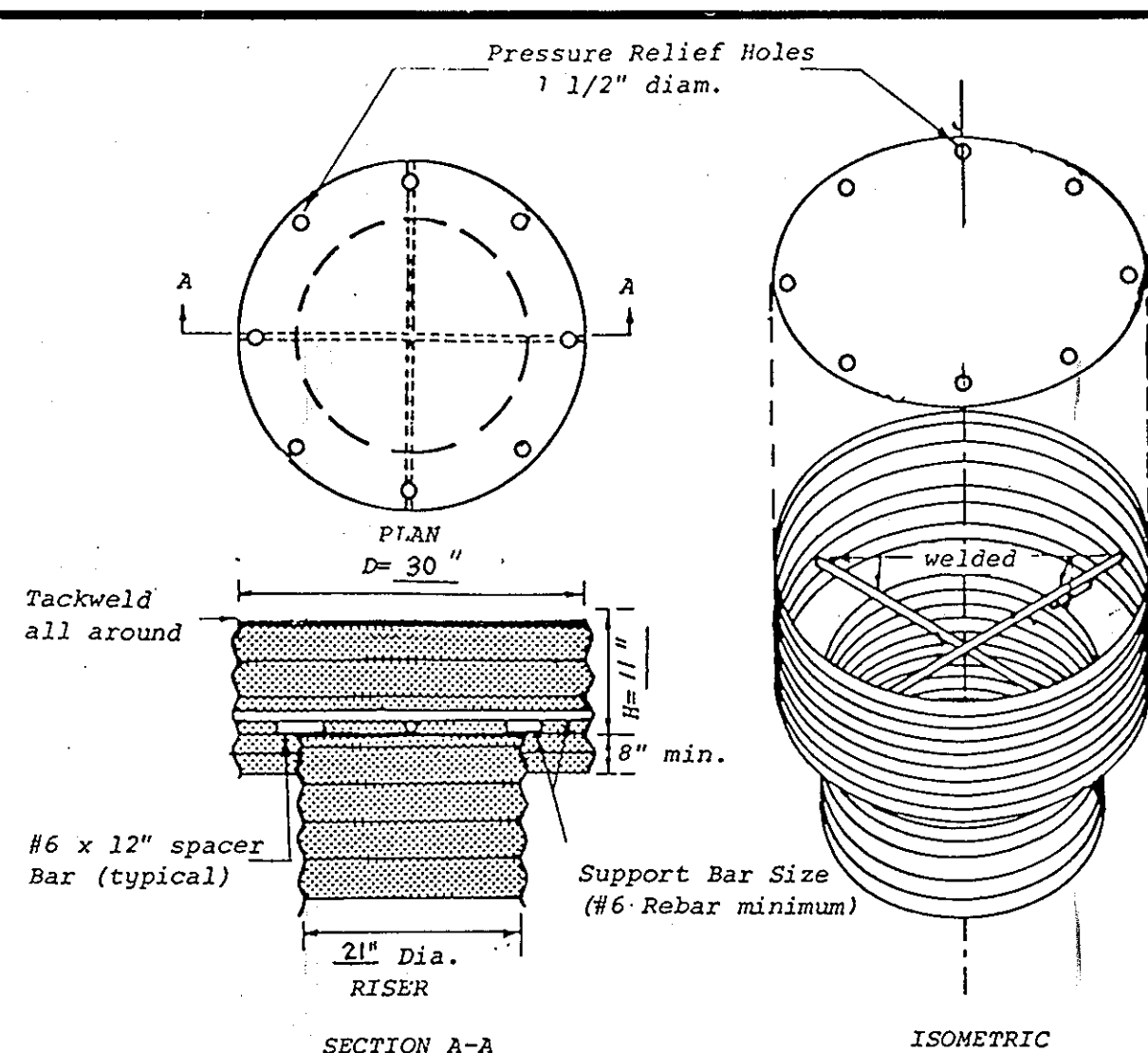
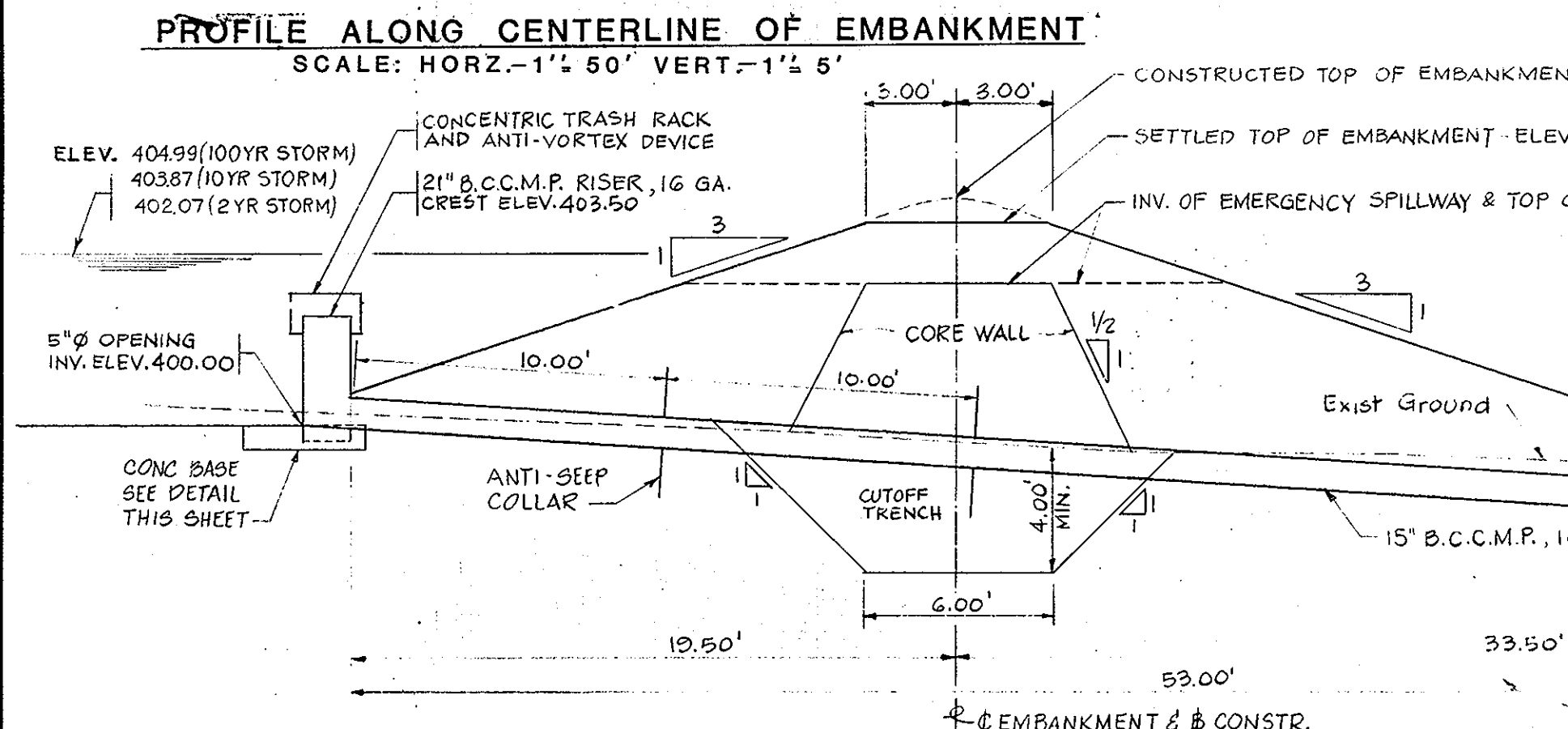
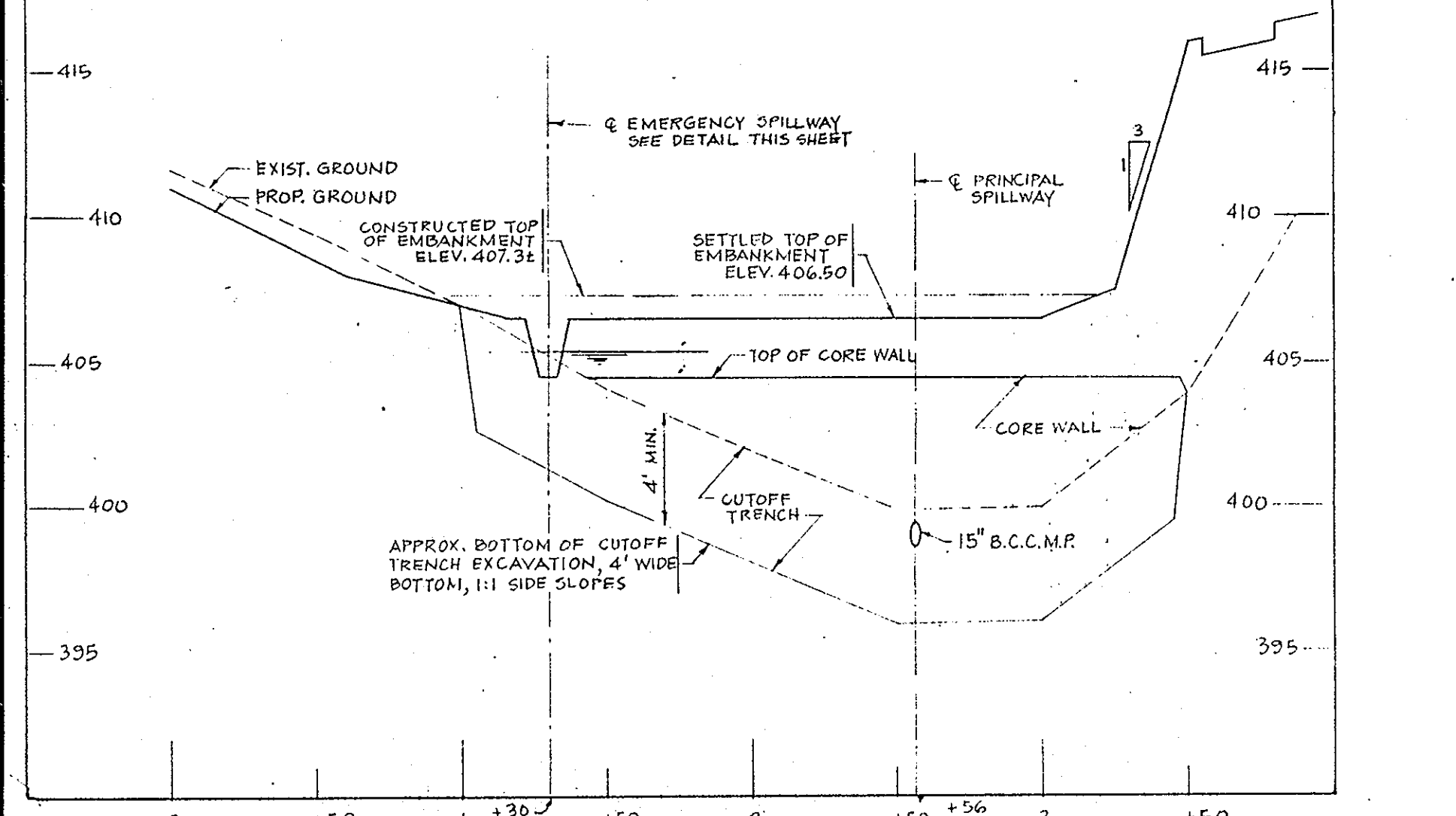
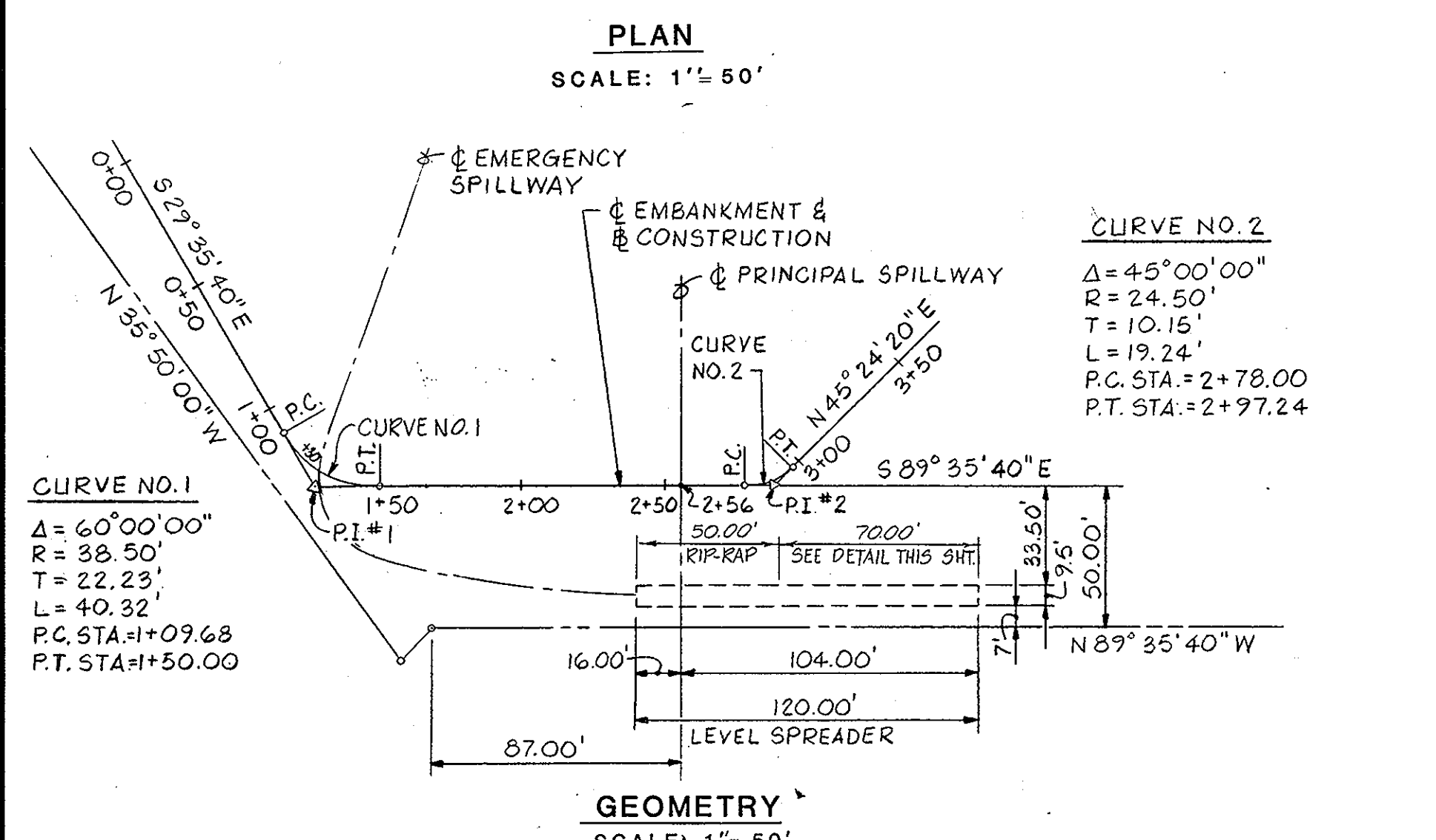
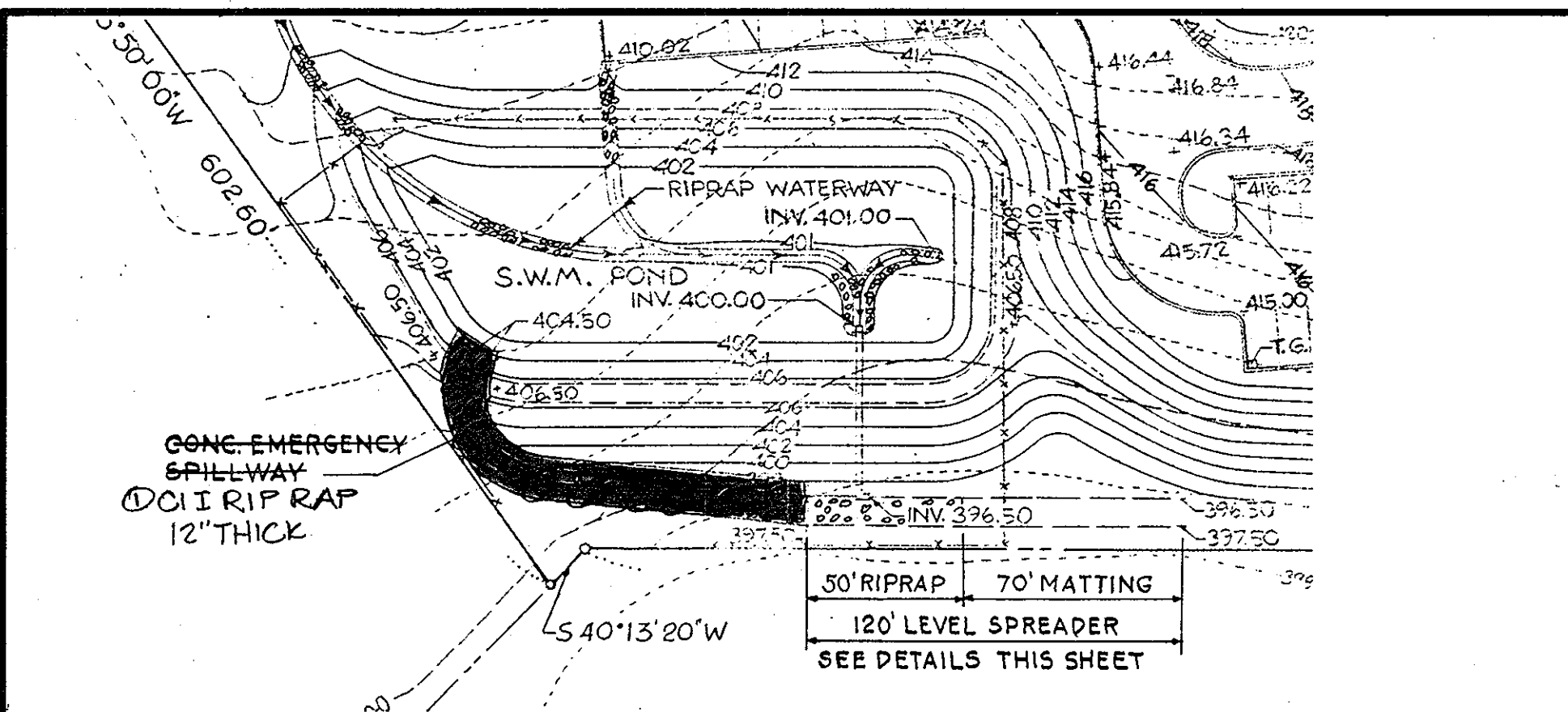
| DATE | NO. | REVISION |
|---------|-----|---|
| 7/29/81 | 7 | REVISE TITLE BLOCK |
| 4/28/80 | 6 | ADD PROFILE 1-10 TO 1-4, REVISE SCHEDULES |
| 4/28/80 | 5 | ADDED PROFILE, REVISED STRUCTURE SCHEDULE |

PROJECT: SHELTERED HOUSING
 HEPPING SUBDIVISION, LOTS 9 & 10
 AREA: TAX MAP NO. 35, PARCEL NO. 365
 5TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 TITLE: UTILITY
 PROFILES AND DETAILS
 OWNER: NICHOLAS B. MANGIONE
 1205 York Road
 Lutherville, Maryland 21093
 RECORD PLAT NO: 21207
 DEED REFERENCE: 74152, 785/211
 F-11-13002
 ENGINEERS: WHITNEY, BAILEY, COX & MAGNANI
 CONSULTING ENGINEERS
 Suite 301 Green Spring Station
 2360 West Joppa Road
 Lutherville, Maryland 21093
 301-296-4200

DATE: *Jan 23, 1981*
 DESIGNED BY: U.E.
 DRAWN BY: R.G.
 PROJECT NO.: 616
 DATE: 8/22/80
 SCALE: AS NOTED
 DRAWING NO.: 4 OF 11
 PROFESSIONAL ENGR. NO. 4039



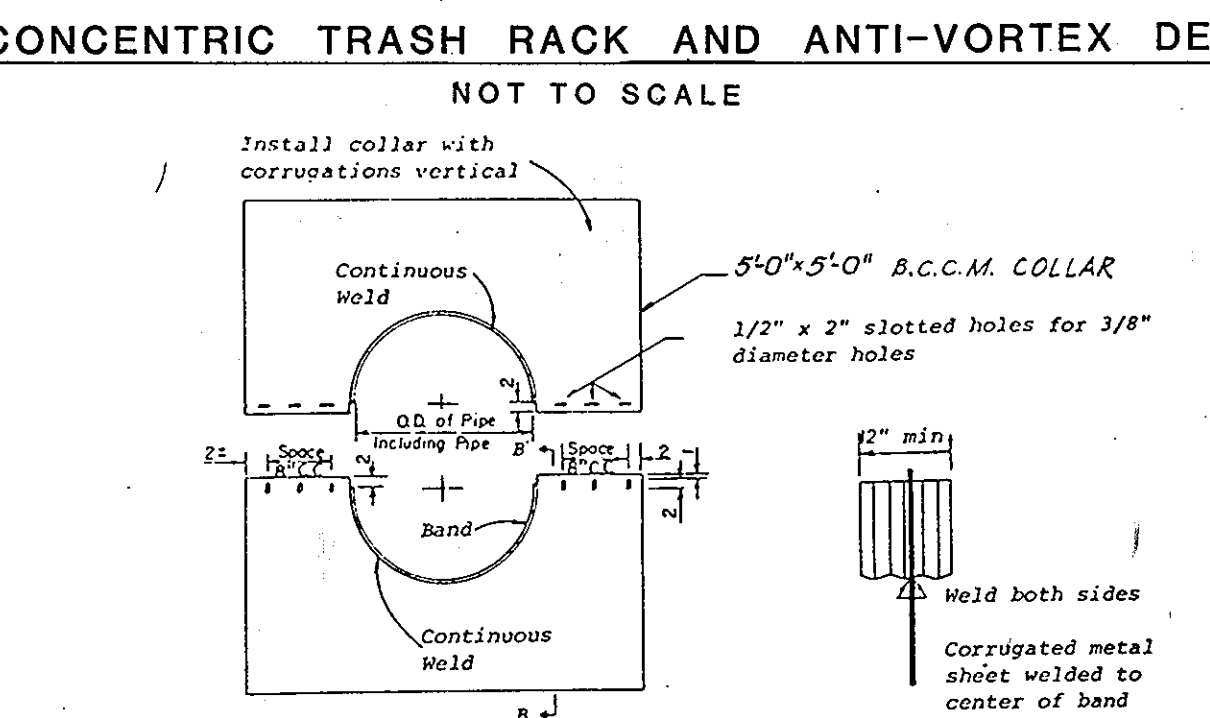
APPROVED
 DIVISION OF LAND DEVELOPMENT &
 ZONING ADMINISTRATION
 HOWARD COUNTY, MARYLAND
 DATE: 4-21-81
FJD



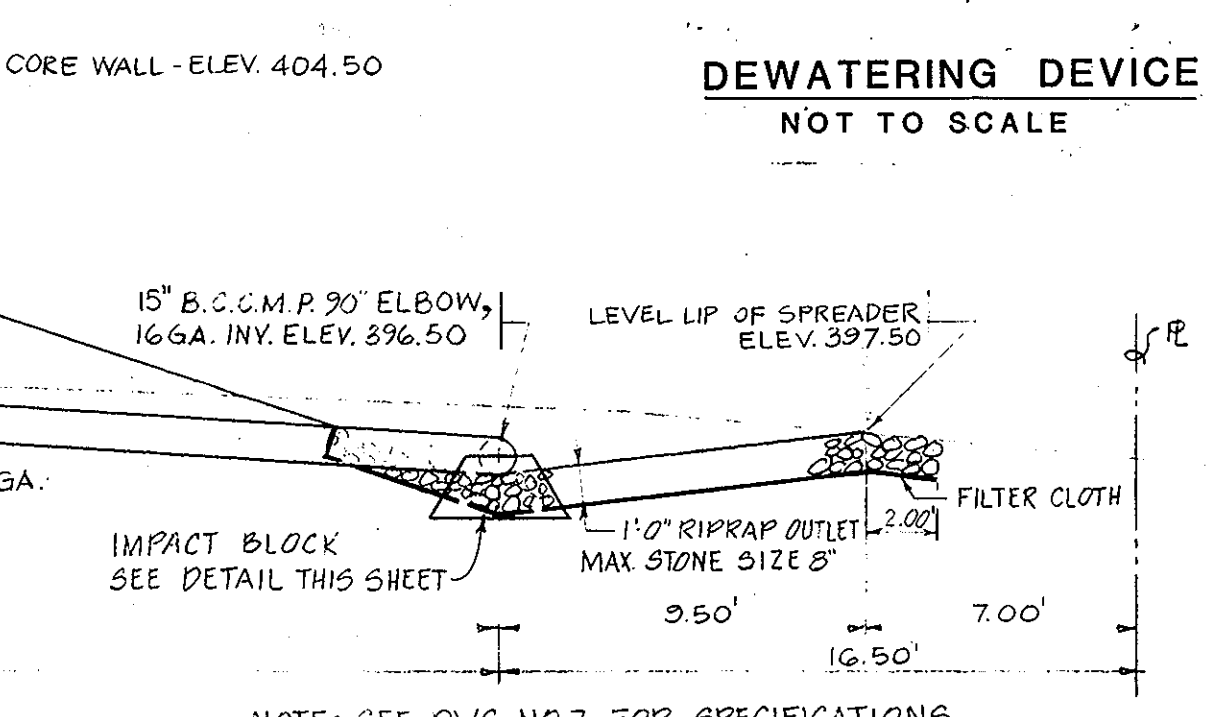
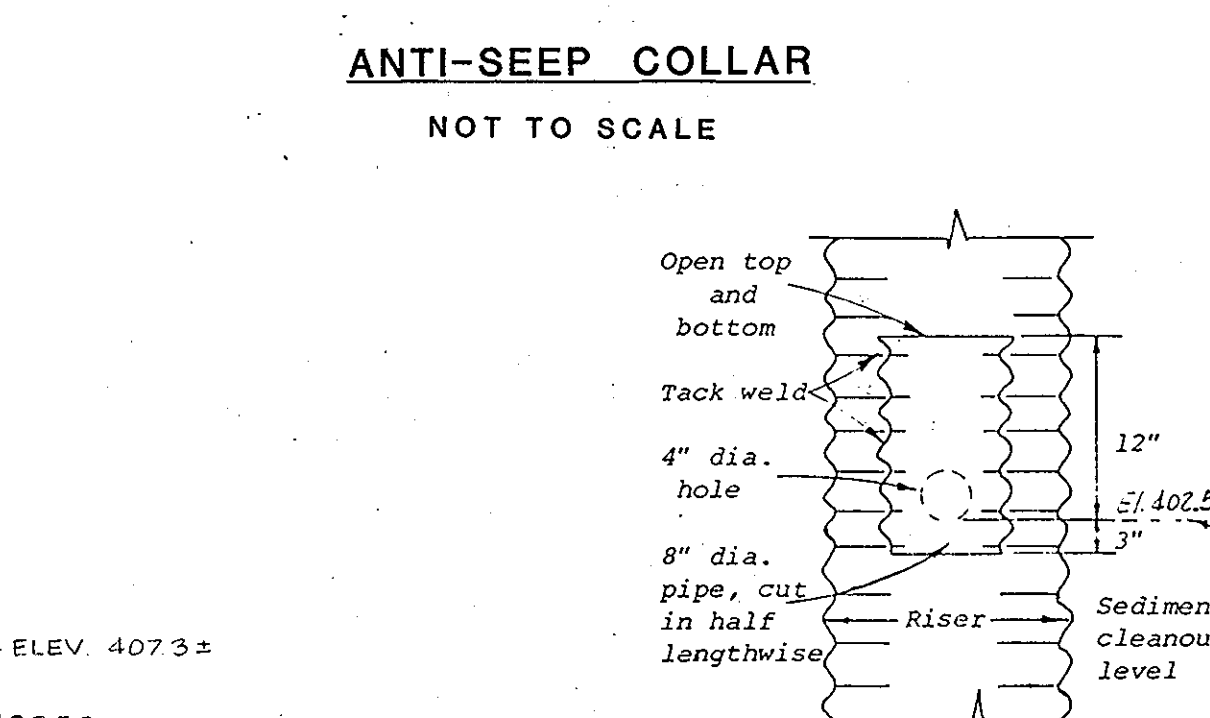
Top is 1/16 gage corrugated metal or 1/8" steel plate. Pressure relief holes may be omitted, if ends of corrugations are left fully open when corrugated top is welded to cylinder.

Cylinder is 1/16 gage corrugated metal pipe or fabricated from 1/8" steel plate.

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

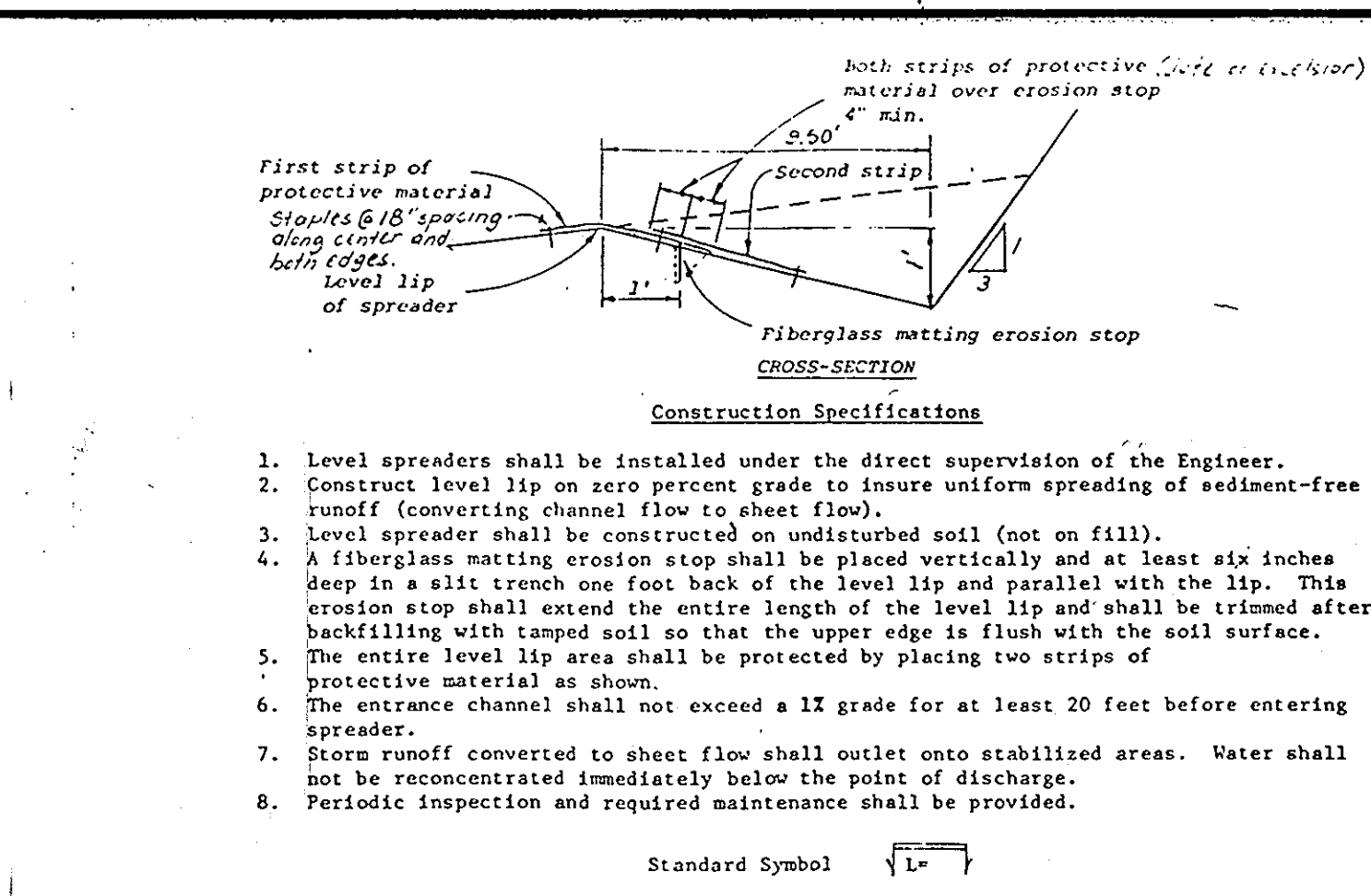


NOTES FOR COLLARS:
 1. All materials to be in accordance with construction and construction material specifications.
 2. When specified on the plans, coating of collars shall be in accordance with construction and construction material specifications.
 3. Unassembled collars shall be marked by painting or tagging to identify matching pairs.
 4. The lap between the two half sections and between the pipe and connecting band shall be caulked with asphalt mastic at time of installation.
 5. Each collar shall be furnished with two 1/2" diameter rods with standard tank lugs for connecting collars to pipe.

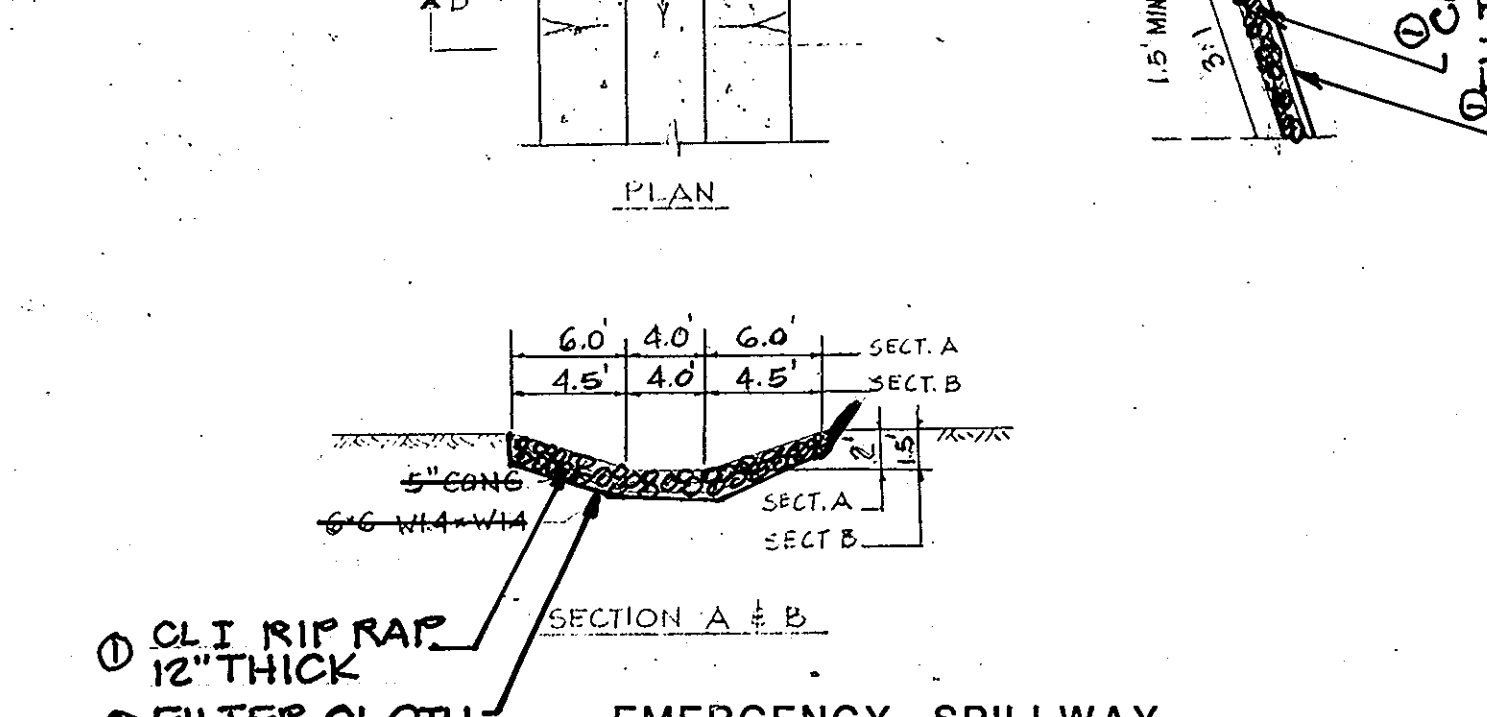
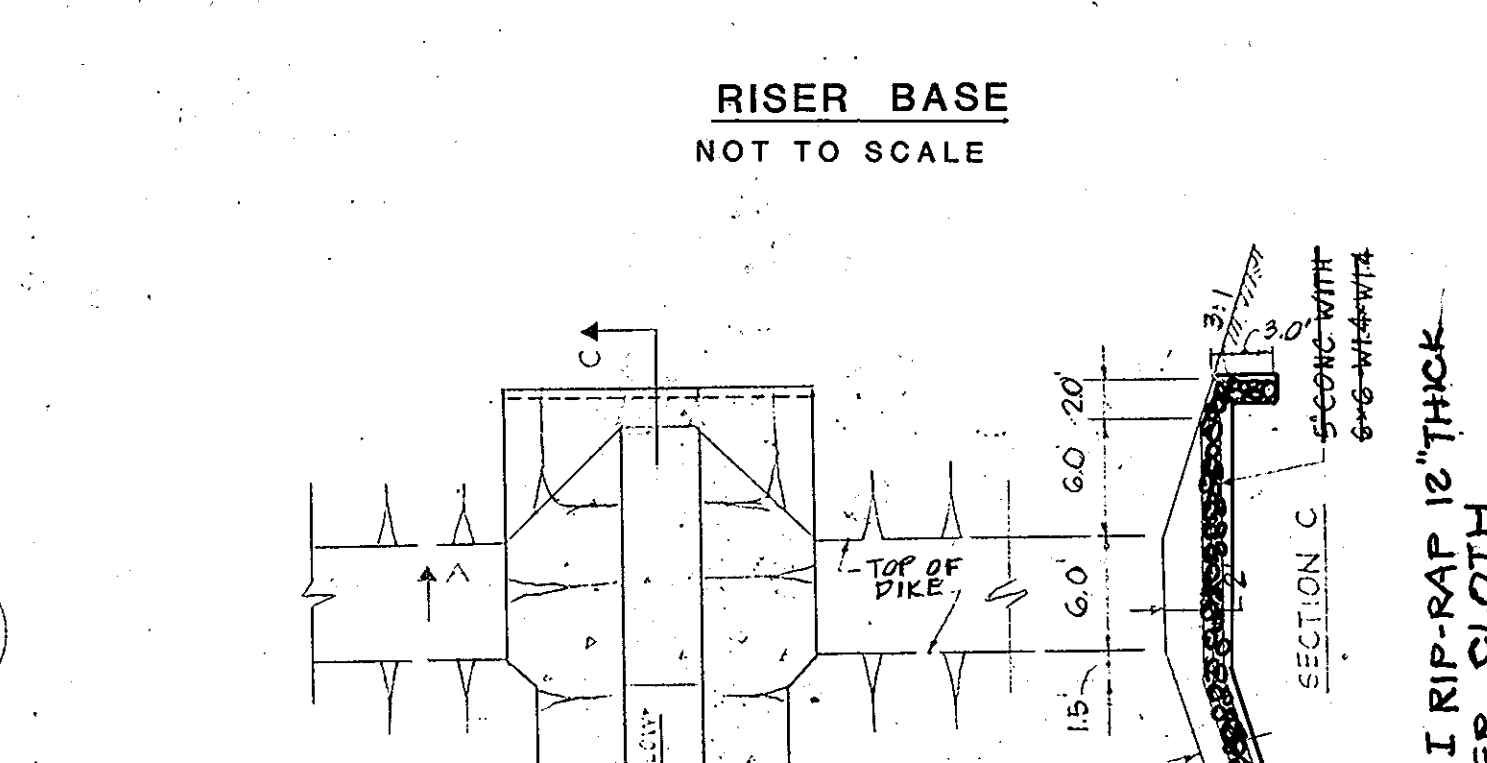
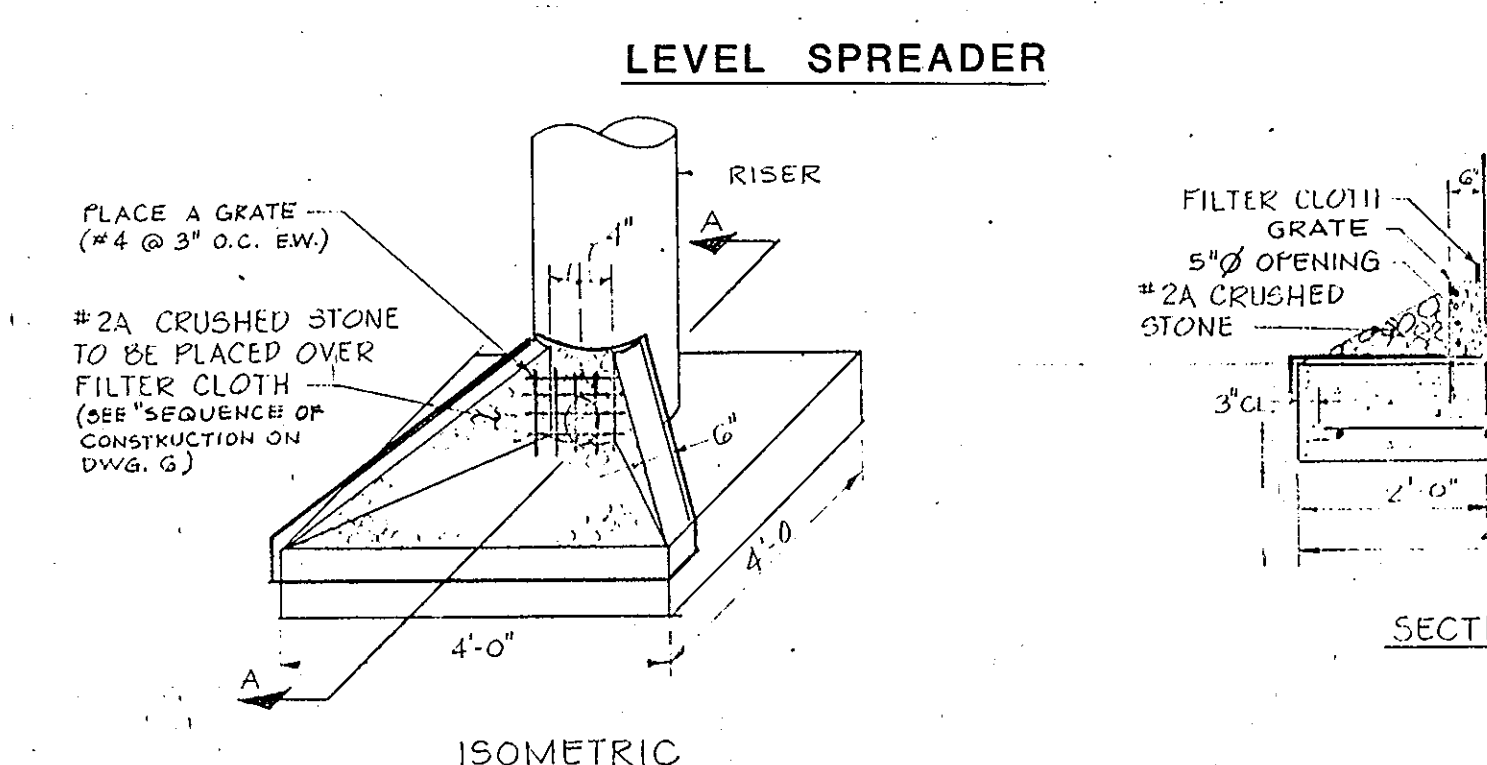


Dam inspection checklist - repair items

1. Upstream & downstream slope of the dam - remove unhealthy trees.
2. Repair riprap channel down of curb cut in parking lot.
3. Low flow outlet - remove debris.
4. Principal spillway pipe - remove debris.
5. Stilling basin - pipe outflow and concrete stilling basin to be cleaned of all debris, repair if necessary.
6. Outlet channel - clear vegetation and other obstructions.
7. Emergency spillway - remove trees & shrubs, any other obstructions from the channel.
8. Ditches in reservoir - repair riprap channels.



1. Level spreaders shall be installed under the direct supervision of the Engineer.
2. Construct level lip on zero percent grade to insure uniform spreading of sediment-free runoff (converting channel flow to sheet flow).
3. Level spreader shall be constructed on undisturbed soil (not on fill).
4. A fiberglass matting erosion stop shall be placed vertically and at least six inches deep in a slit trench one foot back of the level lip and parallel with the lip. This erosion stop shall extend the entire length of the level lip and shall be trimmed after backfilling with compacted soil so that the upper edge is flush with the soil surface.
5. The entire level lip area shall be protected by placing two strips of protective material as shown.
6. The entrance channel shall not exceed a 1% grade for at least 20 feet before entering spreader.
7. Storm runoff converted to sheet flow shall outlet onto stabilized areas. Water shall not be reconcentrated immediately below the point of discharge.
8. Periodic inspection and required maintenance shall be provided.



APPROVED
 DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
 HOWARD COUNTY, MARYLAND
 DATE 4-21-81

NOTE I: THE OWNER SHALL RETAIN A GEOTECHNICAL ENGINEER, REGISTERED IN THE STATE OF MARYLAND, SUBJECT TO THE APPROVAL OF THE ARCHITECT TO CONDUCT ADDITIONAL SUBSURFACE INVESTIGATIONS AND TESTING, AS MAY BE REQUIRED, TO DETERMINE THE SUITABILITY OF INSITU SOILS FOR USE IN THE CONSTRUCTION OF EARTH DAM. THE GEOTECHNICAL ENGINEER'S WRITTEN REPORT, INCLUDING HIS FINDINGS, AND RECOMMENDATIONS FOR DESIGNATED BORROW AREAS, CONSTRUCTION PROCEDURES, AND ANY OTHER PERTINENT DATA SHALL BE SUBMITTED TO THE ARCHITECT FOR HIS REVIEW BEFORE CONSTRUCTION OF THE DAM BEGINS.

NOTE II: THE OWNER SHALL RETAIN AN INDEPENDENT INSPECTION AGENCY SUBJECT TO THE APPROVAL OF THE ARCHITECT, FOR THE INSPECTION AND TESTING OF SOILS AND COMPACTION FOR CONSTRUCTION OF THE DAM. THE AGENCIES RESPONSIBILITIES SHALL INCLUDE:
 a. INSPECTING EXPOSED SUBGRADE AFTER CLEARING AND GRUBBING AND TOPSOIL STRIPPING PRIOR TO PLACING ANY EMBANKMENT FOR DAM.
 b. APPROVING ALL MATERIALS USED FOR FILL AND/OR BACKFILL AND BORROW FOR DAM.
 c. MAINTAINING ACCURATE RECORDS IN REGARD TO EXCAVATION AND FILL OR BACK-FILLING.
 d. APPROVING ALL FILL PLACEMENT PROCEDURES.
 e. VERIFY COMPACTING BY IN-PLACE DENSITY TESTS.

NOTE III: THE OWNER SHALL RETAIN AN ENGINEER, SUBJECT TO THE APPROVAL OF THE ARCHITECT TO INSPECT THE OVERALL CONSTRUCTION OF THE SEDIMENT BASIN. AFTER COMPLETION, THE ENGINEER SHALL PREPARE AS-BUILT DRAWINGS AND AFFIX HIS SEAL TO THE DRAWINGS.

NOTE IV: SEE DWG. NO. 7 FOR "CONSTRUCTION SPECIFICATIONS FOR THE POND".

NOTE V: SEE DWG. NO. 6 FOR "SEQUENCE OF CONSTRUCTION".

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
 COUNTY HEALTH OFFICER: *[Signature]* DATE: 6-4-81

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.
 PLANNING DIRECTOR: *[Signature]* DATE: 6-4-81

APPROVED: CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION.
[Signature] DATE: 6-4-81

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DIRECTOR: *[Signature]* DATE: 6-4-81

APPROVED: CHIEF, BUREAU OF ENGINEERING.
[Signature] DATE: 6-3-81

BY THE DEVELOPER:
 "I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
 DEVELOPER: NICHOLAS B. MANGIONE DATE: 4/23/81

BY THE ENGINEER:
 "I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
 ENGINEER: ALEXANDER WHITNEY, JR. DATE: 4/23/81

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
 U.S. SOIL CONSERVATION SERVICE DATE: 5-5-81

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 HOWARD S.C.D. DATE: 5-5-81

PROJECT: SHELTERED HOUSING
 HEDDING SUBDIVISION, LOTS 9 & 10

AREA: TAX MAP NO. 35, PARCEL NO. 365
 5TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: STORM WATER MANAGEMENT POND
 PLAN AND DETAILS

OWNER: NICHOLAS B. MANGIONE
 1205 York Road
 Lutherville, Maryland 21093

HEDDING PROPERTY SUBDIVISION
 RECORD PLAT NO: 24297
 DEED REFERENCE: 74/28, 78/211
 F-11-015

ENGINEERS: WHITNEY, BAILEY, COX & MAGNANI
 CONSULTING ENGINEERS
 Suite 301 Green Spring Station
 2350 West Joppa Road
 Lutherville, Maryland 21093
 301-296-4200

DATE: April 23, 1981

DESIGNED BY: U.E.
 DRAWN BY: R.G.
 PROJECT NO.: 616
 DATE: 8/22/80
 SCALE: AS NOTED
 DRAWING NO.: 5 OF 11

SDP-81-36

NOTES:
 NOTE I: THE OWNER SHALL RETAIN A GEOTECHNICAL ENGINEER, REGISTERED IN THE STATE OF MARYLAND, SUBJECT TO THE APPROVAL OF THE ARCHITECT TO CONDUCT ADDITIONAL SUBSURFACE INVESTIGATIONS AND TESTING, AS MAY BE REQUIRED, TO DETERMINE THE SUITABILITY OF INSITU SOILS FOR USE IN THE CONSTRUCTION OF EARTH DAM. THE GEOTECHNICAL ENGINEER'S WRITTEN REPORT, INCLUDING HIS FINDINGS, RECOMMENDATIONS FOR DESIGNATED BORROW AREAS, CONSTRUCTION PROCEDURES, AND ANY OTHER PERTINENT DATA SHALL BE SUBMITTED TO THE ARCHITECT FOR HIS REVIEW BEFORE CONSTRUCTION OF THE DAM BEGINS.

NOTE II: THE OWNER SHALL RETAIN AN INDEPENDENT INSPECTION AGENCY SUBJECT TO THE APPROVAL OF THE ARCHITECT, FOR THE INSPECTION AND TESTING OF SOILS AND COMPACTION FOR CONSTRUCTION OF THE DAM. THE AGENCIES RESPONSIBILITIES SHALL INCLUDE:

- INSPECTING EXPOSED SUBGRADE AFTER CLEARING AND GRUBBING AND TOPSOIL STRIPPING PRIOR TO PLACING ANY EMBANKMENT FOR DAM.
- APPROVING ALL MATERIALS USED FOR FILL AND/OR BACKFILL AND BORROW FOR DAM.
- MAINTAINING ACCURATE RECORDS IN REGARD TO EXCAVATION AND FILL OR BACK-FILLING.
- APPROVING ALL FILL PLACEMENT PROCEDURES.
- VERIFY COMPACTING BY IN-PLACE DENSITY TESTS.

NOTE III: THE OWNER SHALL RETAIN AN ENGINEER, SUBJECT TO THE APPROVAL OF THE ARCHITECT TO INSPECT THE OVERALL CONSTRUCTION OF THE SEDIMENT BASIN. AFTER COMPLETION, THE ENGINEER SHALL PREPARE AS-BUILT DRAWINGS AND AFFIX HIS SEAL TO THE DRAWINGS.

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

James M. Hahn 5-5-81
 U.S. SOIL CONSERVATION SERVICE DATE

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

APPROVED *Robert W. Zickm* 5-5-81
 HOWARD S.C.D. DATE

BY THE DEVELOPER:

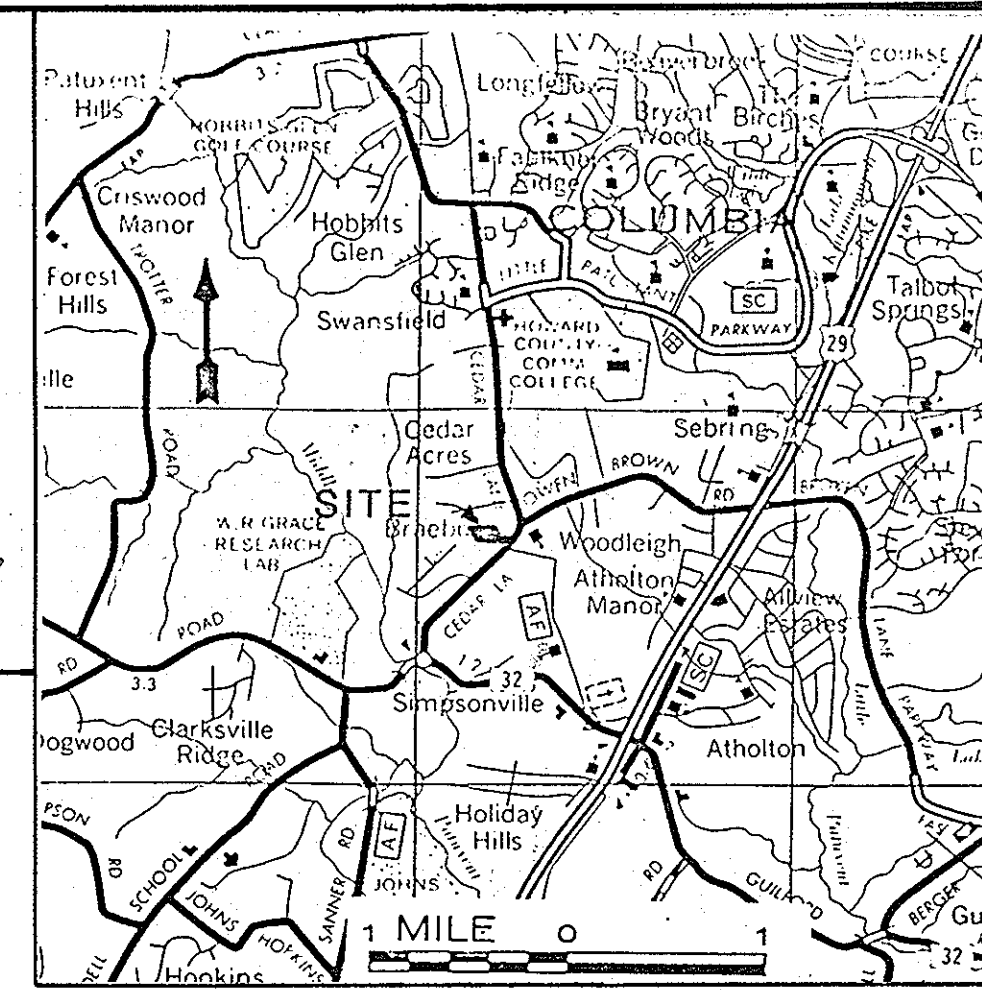
"I CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL, AND I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

Nicholas B. Mangione 4/23/81
 DEVELOPER - NICHOLAS B. MANGIONE DATE

BY THE ENGINEER:

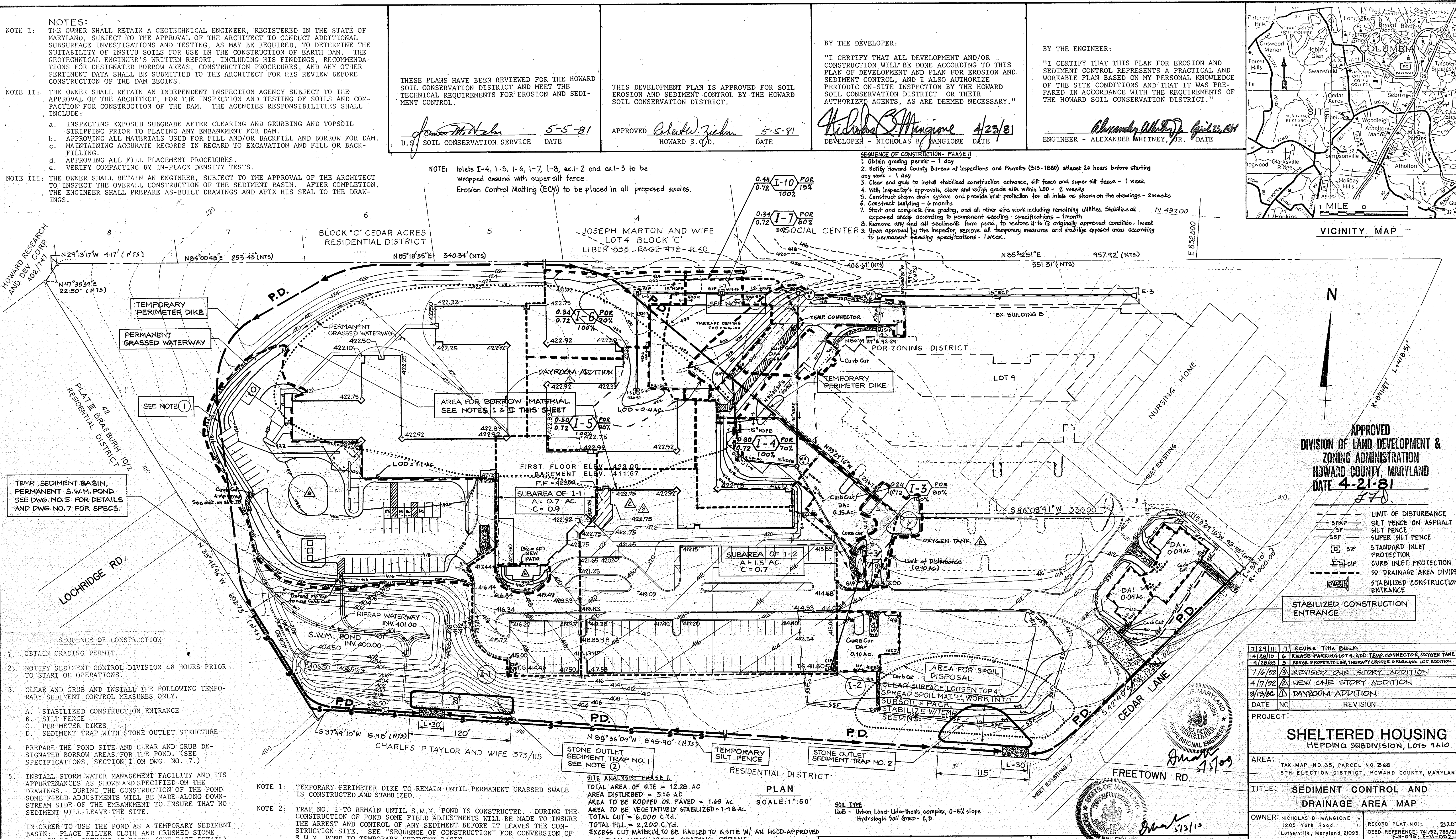
"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Alexander Whitney, Jr. 4/23/81
 ENGINEER - ALEXANDER WHITNEY, JR. DATE



VICINITY MAP

NOTE: Inlets I-4, I-5, I-6, I-7, I-8, exl-2 and exl-3 to be wrapped around with super silt fence. Erosion Control Matting (ECM) to be placed in all proposed swales.



APPROVED
 DIVISION OF LAND DEVELOPMENT & ZONING ADMINISTRATION
 HOWARD COUNTY, MARYLAND
 DATE 4-21-81
J.F.D.

- SFAP — LIMIT OF DISTURBANCE
- SF — SILT FENCE ON ASPHALT
- SF — SILT FENCE
- SSF — SUPER SILT FENCE
- SIP — STANDARD INLET PROTECTION
- SIP — CURB INLET PROTECTION
- SD — 50' DRAINAGE AREA DIVIDE
- SCS — STABILIZED CONSTRUCTION ENTRANCE

STABILIZED CONSTRUCTION ENTRANCE

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT.
- NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF OPERATIONS.
- CLEAR AND GRUB AND INSTALL THE FOLLOWING TEMPORARY SEDIMENT CONTROL MEASURES ONLY.
 - STABILIZED CONSTRUCTION ENTRANCE
 - SILT FENCE
 - PERIMETER DIKES
 - SEDIMENT TRAP WITH STONE OUTLET STRUCTURE
- PREPARE THE POND SITE AND CLEAR AND GRUB DESIGNATED BORROW AREAS FOR THE POND. (SEE SPECIFICATIONS, SECTION I ON DWG. NO. 7.)
- INSTALL STORM WATER MANAGEMENT FACILITY AND ITS APPURTENANCES AS SHOWN AND SPECIFIED ON THE DRAWINGS. DURING THE CONSTRUCTION OF THE POND SOME FIELD ADJUSTMENTS WILL BE MADE ALONG DOWN-STREAM SIDE OF THE EMBANKMENT TO INSURE THAT NO SEDIMENT WILL LEAVE THE SITE.

IN ORDER TO USE THE POND AS A TEMPORARY SEDIMENT BASIN: PLACE FILTER CLOTH AND CRUSHED STONE OVER 5" DIA. OPENING OF RISER (SEE BASE DETAIL)

- START AND COMPLETE GRADING OF THE SITE, ON-SITE STORM DRAIN SYSTEM, AND ALL OTHER SITE WORK. STABILIZE ALL EXPOSED AREAS ACCORDING TO PERMANENT SEEDING SPECIFICATIONS.
- UPON APPROVAL BY THE SOIL CONSERVATION DISTRICT, REMOVE ALL TEMPORARY MEASURES AND STABILIZE EXPOSED AREAS ACCORDING TO PERMANENT SEEDING SPECIFICATIONS. IN ORDER TO CONVERT THE TEMPORARY SEDIMENT BASIN INTO PERMANENT STORM WATER MANAGEMENT POND:
 - PUMP STANDING WATER DOWN THE RISER, REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS.
 - DEPOSIT THE REMOVED SEDIMENT IN DESIGNATED SPOIL AREA.
 - STABILIZE ALL EXPOSED SURFACES.
 - REMOVE THE FILTER CLOTH AND CRUSHED STONE OVER THE 5" OPENING OF THE RISER.

- NOTE 1: TEMPORARY PERIMETER DIKE TO REMAIN UNTIL PERMANENT GRASSED SWALE IS CONSTRUCTED AND STABILIZED.
- NOTE 2: TRAP NO. 1 TO REMAIN UNTIL S.W.M. POND IS CONSTRUCTED. DURING THE CONSTRUCTION OF POND SOME FIELD ADJUSTMENTS WILL BE MADE TO INSURE THE ARREST AND CONTROL OF ANY SEDIMENT BEFORE IT LEAVES THE CONSTRUCTION SITE. SEE "SEQUENCE OF CONSTRUCTION" FOR CONVERSION OF S.W.M. POND TO TEMPORARY SEDIMENT BASIN.

STONE OUTLET SEDIMENT TRAP DATA

| | TRAP NO. 1 | TRAP NO. 2 |
|---------------------------|------------|------------|
| DRAINAGE AREA: | 5.0 ACRES | 4.8 ACRES |
| BOTTOM DIMENSIONS: | 20'x120' | 115'x45' |
| BOTTOM ELEV.: | 397.0 | 400.0 |
| TOP OF EARTH DIKE ELEV.: | 401.0 | 403.0 |
| STONE OUTLET CREST ELEV.: | 400.0 | 402.0 |
| CLEANOUT ELEV.: | 398.5 | 401.0 |
| STORAGE VOLUME: | 9900 C.F. | 8700 C.F. |

SITE ANALYSIS - PHASE II
 TOTAL AREA OF SITE = 12.28 AC
 AREA DISTURBED = 3.16 AC
 AREA TO BE ROOFED OR PAVED = 1.68 AC
 AREA TO BE VEGETATIVELY STABILIZED = 1.48 AC
 TOTAL CUT = 6,000 C.Y.
 TOTAL FILL = 2,200 C.Y.
 EXCESS CUT MATERIAL TO BE HAULED TO A SITE W/ AN HSCD-APPROVED PLAN AND AN ACTIVE GRADING PERMIT.

PLAN

SCALE: 1"=50'

SOIL TYPE
 U08 - Urban Land-Use/Intents complex, 0-8% slope
 Hydrologic Soil Group - C,D

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

Joseph Boyner 6-4-81
 COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

Shirley Murchman 6-4-81
 PLANNING DIRECTOR DATE

Acting Louis F. Dwyer 6-4-81
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

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

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Wayne F. Nemery 6-4-81
 DIRECTOR DATE

William S. Ray 6-3-81
 CHIEF, BUREAU OF ENGINEERING DATE

| DATE | NO. | REVISION |
|---------|-----|---|
| 7/21/11 | 7 | Revise Title Block |
| 4/23/10 | 6 | REVISE PARKING LOT 4, ADD TEMP. CONNECTOR, OXYGEN TANK |
| 4/23/10 | 5 | REVISE PROPERTY LINE, THERAPY CENTER & PARKING LOT ADDITION |
| 7/14/02 | 4 | REVISED ONE STORY ADDITION |
| 4/17/92 | 3 | NEW ONE STORY ADDITION |
| 8/12/86 | 2 | DAYROOM ADDITION |

SHELTERED HOUSING
 HEPDING SUBDIVISION, LOTS 4 & 10

AREA: TAX MAP NO. 35, PARCEL NO. 308
 5TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT CONTROL AND DRAINAGE AREA MAP

OWNER: NICHOLAS B. MANGIONE
 1205 York Rd.
 Lutherville, Maryland 21093

ENGINEERS: WHITNEY, BAILEY, COX & MAGNANI
 CONSULTING ENGINEERS
 Suite 311 Green Spring Station
 2360 West Joppa Road
 Lutherville, Maryland 21093
 301-296-4200

DATE: 4/23/81
 DESIGNED BY: U.E.
 DRAWN BY: S.P.
 PROJECT NO.: 616
 DATE: 8/22/80
 SCALE: AS NOTED
 DRAWING NO.: 6 OF 11

GENERAL NOTES

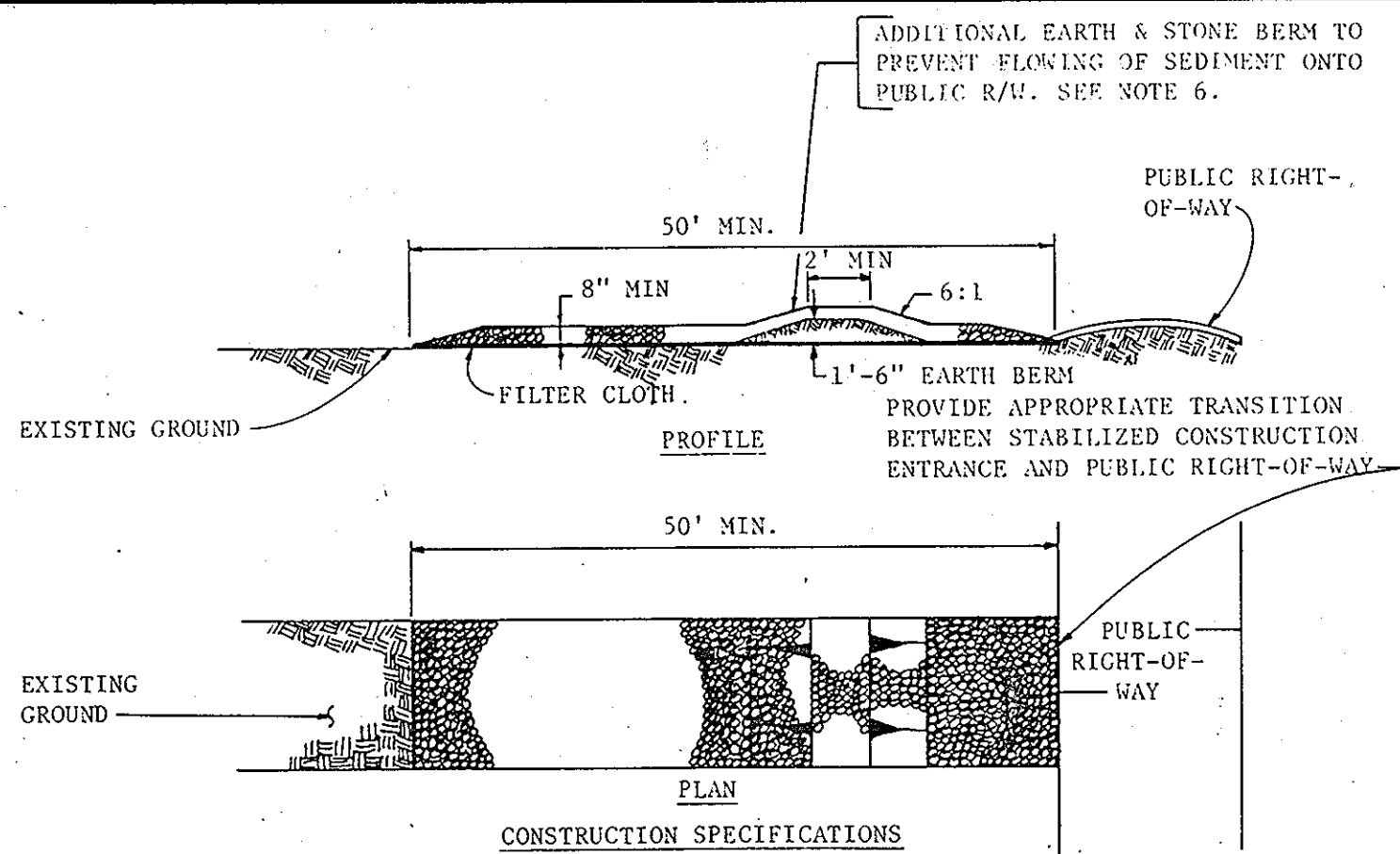
- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (992-2436).
- ALL SEDIMENT CONTROL STRUCTURES WILL BE INSTALLED IN ACCORDANCE WITH "THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS" AS PREPARED BY THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE.
- SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
- ALL DISTURBED AREAS ARE TO BE DRESSED AND STABILIZED ACCORDING TO THE TEMPORARY OR PERMANENT SEEDING SCHEDULES AS SOON AS PROPER WEATHER CONDITIONS EXIST FOR THE ESTABLISHMENT OF A PERMANENT VEGETATIVE COVER.
- SEDIMENT WILL BE REMOVED FROM TRAPS WHEN THE DEPTH REACHES THE CLEAN OUT ELEVATION SHOWN ON THE PLANS.
- FERTILIZER AND LIME RATES MAY BE CHANGED THROUGH AUTHORIZATION BY THE HOWARD SOIL CONSERVATION DISTRICT IF SOIL TESTS DETERMINE A REDUCTION IN THE SPECIFIED RATES IS JUSTIFIED.
- 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.
- REFERENCES CALLED FOR ON THE SEDIMENT CONTROL CONSTRUCTION PLAN AND DETAILS ARE MADE TO "THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS".
- SEDIMENT CONTROL WILL BE INSTALLED BEFORE CLEARING AND GRUBBING REMAINDER OF SITE.

TEMPORARY SEEDING

- AREA TO BE SEEDED SHALL BE RECENTLY LOOSENEED. IF THE GROUND IS PACKED, CRUSTED OR HARD, THE TOP LAYER OF SOIL SHALL BE LOOSENEED BY DISCING, RACKING OR OTHER ACCEPTABLE MEANS.
- APPLY 10-20-10 FERTILIZER (OR EQUIVALENT) AT THE RATE OF 600 LBS. PER ACRE OR 15 LBS. PER 1000 SQ. FT.
 - WHERE SOIL IS KNOWN TO BE HIGHLY ACID, APPLY DOLOMITIC LIMESTONE AT THE RATE OF 1 TON PER ACRE.
 - WORK BOTH INTO SOIL AND SEED WITH CYCLONE SEEDER, DRILL, CULTIPAKER SEEDER OR HYDROSEEDER (SLURRY WILL INCLUDE SEED AND FERTILIZER) AT THE RATE OF 40 LBS. PER ACRE OF ITALIAN OR PERENNIAL RYEGRASS.
 - MULCH WITH UNWEATHERED SMALL GRAIN STRAW AT THE RATE OF 1 1/2 TO 2 TONS, PER ACRE AND ANCHOR WITH A CUTBACK ASPHALT OR EMULSIFIED ASPHALT AT THE RATE OF 5 GAL. PER 1000 SQ. FT.

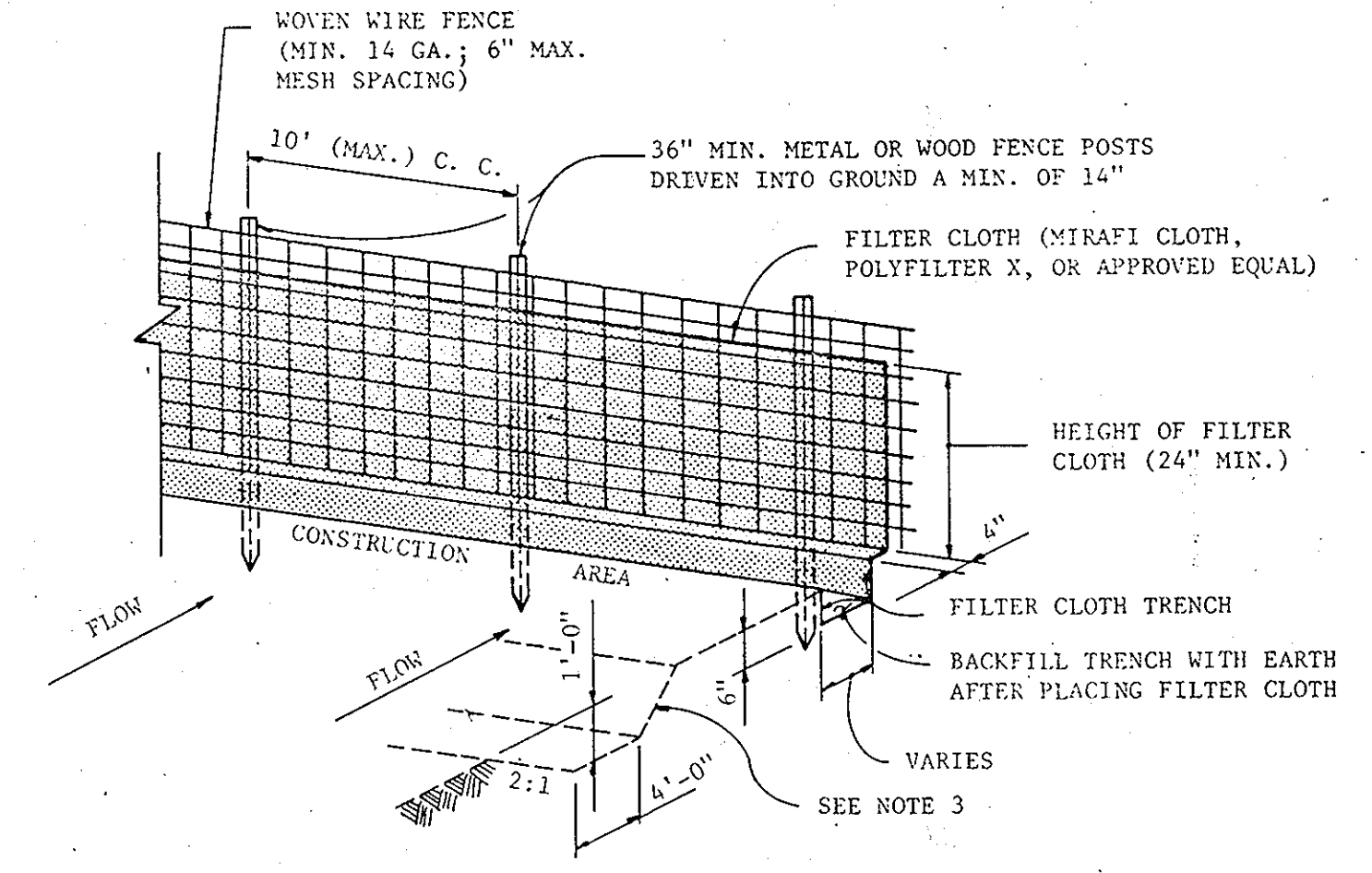
PERMANENT SEEDING

- FINAL STABILIZATION WILL TAKE PLACE AS SOON AS POSSIBLE AS WEATHER CONDITIONS PERMIT, AS FOLLOWS:
- APPLY DOLOMITIC LIMESTONE AT THE RATE OF 2 TONS PER ACRE (ONE TON PER ACRE IF APPLICATION OF TON PER ACRE WAS MADE FOR TEMPORARY SEEDING).
 - APPLY 0-20-20 FERTILIZER AT THE RATE OF 600 LBS. PER ACRE HARROW OR DISC LIME AND 0-20-20 FERTILIZER INTO THE SOIL TO A MINIMUM DEPTH OF 3" LAWNS OR HIGH MAINTENANCE AREAS WILL BE DRAGGED AND LEVELED WITH A YORK RAKE. AT THE TIME OF SEEDING APPLY 400 POUNDS OF 38-0-0 UREAFORM FERTILIZER AND 500 LBS. OF 10-20-20 OR EQUIVALENT FERTILIZER PER ACRE.
 - SEED WITH A MIXTURE OF CERTIFIED "MERION" KENTUCKY BLUEGRASS - 40 LBS. PER ACRE; COMMON KENTUCKY BLUEGRASS @ 40 LBS. PER ACRE; RED FESCUE, PENNLAWN OR JAMESTOWN @ 20 LBS. PER ACRE.
 - MULCH WITH UNWEATHERED SMALL GRAIN STRAW AT THE RATE OF 1 1/2 TO 2 TONS PER ACRE AND ANCHOR WITH A CUTBACK ASPHALT OR EMULSIFIED ASPHALT AT THE RATE OF 5 GAL. PER 1000 SQ. FT.
 - SEED ALL SLOPES WITH A MIXTURE OF CERTIFIED KENTUCKY 31 TALL FESCUE @ 50 LBS. PER ACRE AND INOCULATED KOREAN LESPEDEZA @ 15 LBS. PER ACRE.



- STONE SIZE - USE MSHA SIZE NO. 2 (2-1/2" TO 1") OR AASHTO DESIGNATION M43, SIZE NO. 2 (2-1/2" TO 1-1/2"). USE CRUSHED STONE.
- LENGTH - AS EFFECTIVE, BUT NOT LESS THAN 50 FEET.
- THICKNESS - NOT LESS THAN EIGHT (8) INCHES.
- WIDTH - NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
- WASHING - WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE THROUGH USE OF SAND BAGS, GRAVEL, BOARDS OR OTHER APPROVED METHODS.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- STABILIZED CONSTRUCTION ENTRANCE APPLIES TO ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS.

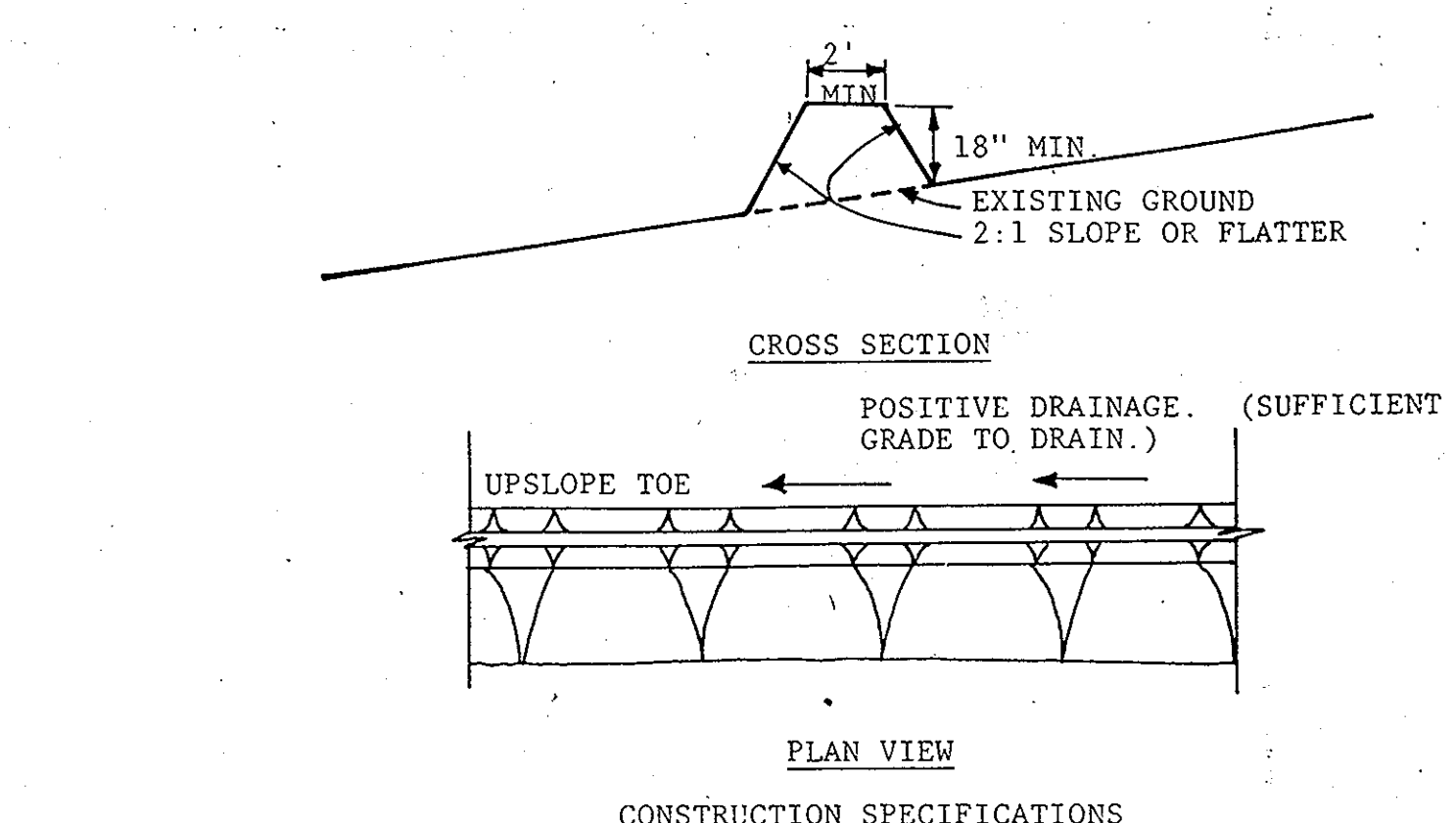
STABILIZED CONSTRUCTION ENTRANCE



NOTES:

- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS BY USE OF WIRE TIES.
- FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE BY USE OF WIRE TIES SPACED EVERY 24" X 24".
- A DEPRESSION WILL BE CONSTRUCTED IF CONCENTRATED FLOWS ARE PRESENT. THE DEPRESSION SHALL BE ADJUSTED TO PREVENT DAMAGE TO TREES.

SILT FENCE DETAIL



- All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the waterway.
- The waterway shall be excavated or shaped to line, grade, and cross section as required to meet the criteria specified herein, and be free of bank projections or other irregularities which will impede normal flow.
- Fills shall be compacted as needed to prevent unequal settlement that would cause damage in the complete waterway.
- All earth removed and not needed in construction shall be spread or disposed of so that it will not interfere with the functioning of the waterway.
- Stabilization shall be done according to the appropriate Standard and Specifications for Vegetative Practices.

GRASSED WATERWAY
(SEE PERMANENT SEEDING
SPECS. THIS SHEET)

STANDARD SYMBOLS

GRASSED WATERWAY

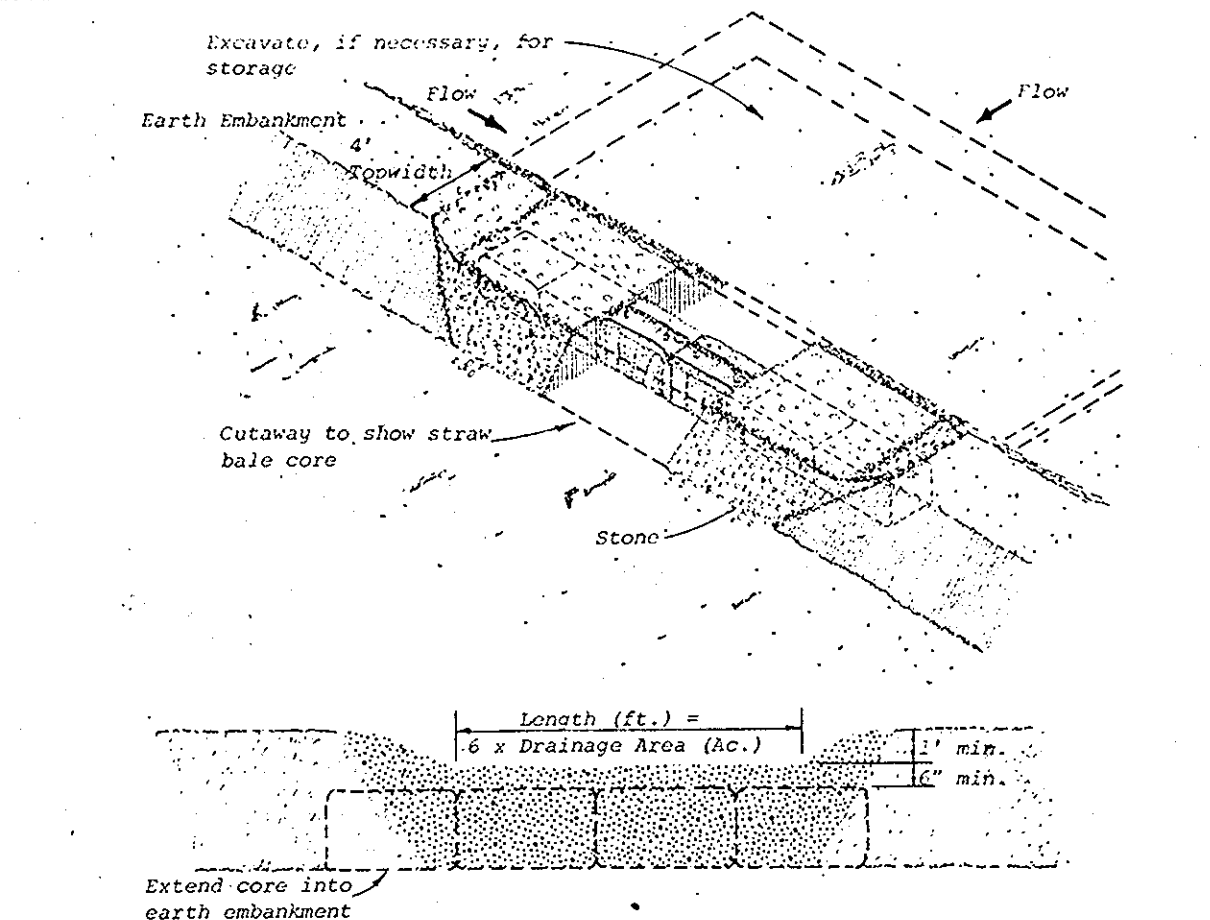
12" THICK RIPRAP
MAX. STONE SIZE 8"

RIPRAP WATERWAY

GRASSED OR RIPRAP WATERWAY

PERIMETER DIKE

- ALL DIKES SHALL BE MACHINE COMPACTED.
- DIVERTED RUNOFF FROM A DISTURBED OR EXPOSED UPLAND AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS SEDIMENT TRAP OR A SEDIMENT BASIN OR TO AN AREA PROTECTED BY ANY OF THESE PRACTICES.
- STABILIZATION SHALL BE DONE IN ACCORDANCE WITH VEGETATIVE NOTES - ENTIRE DIKE TO BE STABILIZED.
- PERIODIC INSPECTION AND REQUIRED MAINTENANCE SHALL BE PROVIDED.



NOTE - Drawings show straw bales used for core. Bales are anchored as per Standard and Specifications for Straw Bale Dike. Other materials (e.g., timber or concrete block) may also be used for core. Firmly anchor all core material to ground.

- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
- The fill material for the embankment shall be free of roots or other woody vegetation as well as over sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
- Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
- The structure shall be inspected after each rain and repairs made as needed.
- Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
- The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
- All cut and fill slopes shall be 2:1 or flatter.
- The crushed stone used in the outlet shall meet AASHTO designation M43, Size No. 2 or 24 or its equivalent such as MSHA No. 2. Gravel, meeting the above gradation, may be used if crushed stone is not available. Crusher run is not acceptable.

STONE OUTLET SEDIMENT TRAP

Construction Specification For The Pond

SITE PREPARATION

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

AREAS COVERED BY THE POND WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS. TREES, BRUSH AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH THE GROUND SURFACE.

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE DAM AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. A SUFFICIENT QUANTITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

EARTH FILL

MATERIAL - THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREA OR AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, OVERSIZE STONES, FROZEN OR OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE CONSTRUCTED TO AN ELEVATION WHICH PROVIDES FOR ANTICIPATED SETTLEMENT TO THE DESIGN ELEVATION. THE FILL HEIGHT ALL ALONG THE LENGTH OF THE EMBANKMENT SHALL BE INCREASED ABOVE THE DESIGN ELEVATION (INCLUDING FREEBOARD) AS SHOWN ON THE PLANS. RELATIVELY PERVIOUS MATERIALS SUCH AS SAND AND GRAVEL (UNIFIED SOIL CLASSES GW, GP, SW & SP) SHALL NOT BE PLACED IN THE EMBANKMENT.

PLACEMENT - AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIALS SHALL BE PLACED IN 8-INCH MAXIMUM THICKNESS (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST POROUS MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT.

COMPACTION - THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSED BY NOT LESS THAN ONE TREAD TRACK OF THE EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER TIERED OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION CAN BE OBTAINED WITH THE EQUIPMENT USED.

CUTOFF TRENCH AND CORE WALL - WHERE SPECIFIED, A CUTOFF TRENCH SHALL BE EXCAVATED ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE BOTTOM WIDTH OF THE TRENCH SHALL BE COVERED BY THE EQUIPMENT USED FOR EXCAVATION. WITH THE MINIMUM WIDTH BEING FOUR FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL MATERIAL FOR THE CUTOFF TRENCH AND CORE WALL SHALL BE THE MOST IMPERVIOUS MATERIAL AVAILABLE AND SHALL BE COMPACTED WITH EQUIPMENT OR ROLLERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY. TRENCH SHALL BE DEWATERED DURING BACKFILLING-COMPACTING OPERATIONS.

STRUCTURAL BACKFILL

BACKFILL MATERIAL SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR DRIVE EQUIPMENT OVER ANY PART OF A CONCRETE STRUCTURE OR PIPE UNLESS THERE IS A COMPACTED FILL OF TWENTY-FOUR INCHES OR GREATER OVER THE STRUCTURE OR PIPE.

CORRUGATED METAL PIPE

MATERIALS - (STEEL PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL BE GALVANIZED AND FULLY BITUMINOUS COATED AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-190 TYPE A WITH WATER-TIGHT COUPLING BANDS. ANY BITUMINOUS COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND.

CONNECTIONS - ALL CONNECTIONS WITH PIPES MUST BE COMPLETELY WATERTIGHT. THE DRAIN PIPE OR BARREL CONNECTION TO THE RISER SHALL BE WELDED ALL AROUND WHEN THE PIPE AND RISER AND METAL WATERTIGHT COUPLING BANDS SHALL BE USED AT ALL JOINTS. ANTI-SEEP COLLARS SHALL BE CONNECTED TO THE PIPE IN SUCH A MANNER AS TO BE COMPLETELY WATERTIGHT.

BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

LAYING PIPE - THE PIPE SHALL BE PLACED WITH INSIDE CIRCUMFERENTIAL LAPS POINTING DOWNSTREAM AND WITH THE LONGITUDINAL LAPS AT THE SIDES.

BACKFILLING - BACKFILLING SHALL CONFORM TO STRUCTURAL BACKFILL AS SHOWN ABOVE.

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

CONCRETE

MATERIALS

- CEMENT - NORMAL PORTLAND CEMENT SHALL CONFORM TO THE LATEST ASTM SPECIFICATION C-150.
- WATER - THE WATER USED IN CONCRETE SHALL BE CLEAN, FREE FROM OIL, ACID, ALKALI, SCALES, ORGANIC MATTER OR OTHER OBJECTIONABLE SUBSTANCES.
- SAND - THE SAND USED IN CONCRETE SHALL BE CLEAN, HARD, STRONG AND DURABLE, AND SHALL BE WELL GRADED WITH 100 PERCENT PASSING A ONE-QUARTER INCH SIEVE. LIMESTONE SAND SHALL NOT BE USED.
- COARSE AGGREGATE - THE COARSE AGGREGATE SHALL BE CLEAN, HARD, STRONG AND DURABLE, AND FREE FROM CLAY OR DIRT. IT SHALL BE WELL GRADED WITH A MAXIMUM SIZE OF ONE AND ONE-HALF (1-1/2) INCHES.
- REINFORCING STEEL - THE REINFORCING STEEL SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE BILLET STEEL AND WIRE FABRIC CONFORMING TO ASTM SPECIFICATION A-815.

DESIGN MIX - THE CONCRETE SHALL BE MIXED IN THE FOLLOWING PROPORTIONS, MEASURED BY WEIGHT. THE WATER-CEMENT RATIO SHALL BE 5-1/2 TO 6 U.S. GALLONS OF WATER PER 94 POUND BAG OF CEMENT. THE PROPORTION OF MATERIALS FOR THE TRIAL MIX SHALL BE 1:2:3-1/2. THE COMBINATION OF AGGREGATES MAY BE ADJUSTED TO PRODUCE A PLASTIC AND WORKABLE MIX THAT WILL NOT PRODUCE HARSHNESS IN PLACING OR HONEYCOMBING IN THE STRUCTURE.

MIXING - THE CONCRETE INGREDIENTS SHALL BE MIXED IN BATCH MIXERS UNTIL THE MIXTURE IS HOMOGENEOUS AND OF UNIFORM CONSISTENCY. THE MIXING OF EACH BATCH SHALL CONTINUE FOR NOT LESS THAN ONE AND ONE-HALF MINUTES AFTER ALL THE INGREDIENTS, EXCEPT THE FULL AMOUNT OF WATER, ARE IN THE MIXER. THE MINIMUM MIXING TIME IS PREDICTED ON PROPER CONTROL OF THE SPEED OF ROTATION OF THE MIXER AND OF THE INTRODUCTION OF THE MATERIALS, INCLUDING WATER, INTO THE MIXER. WATER SHALL BE ADDED PRIOR TO, DURING, AND FOLLOWING THE MIXER-CHARGING OPERATIONS. EXCESSIVE OVERMIXING REQUIRING THE ADDITION OF WATER TO PRESERVE THE REQUIRED CONCRETE CONSISTENCY SHALL NOT BE PERMITTED. TRUCK MIXING WILL BE ALLOWED PROVIDED THAT THE USE OF THIS METHOD SHALL CAUSE NO VIOLATION OF ANY APPLICABLE PROVISIONS OF THE SPECIFICATIONS GIVEN HERE.

REINFORCING STEEL - ALL REINFORCING MATERIAL SHALL BE FREE OF DIRT, RUST, SCALE, OIL, PAINT OR ANY OTHER COATINGS. THE STEEL SHALL BE ACCURATELY PLACED AND SECURELY TIED AND BLOKED INTO POSITION SO THAT NO MOVEMENT OF THE STEEL WILL OCCUR DURING PLACEMENT OF CONCRETE.

CONSOLIDATING - CONCRETE SHALL BE CONSOLIDATED WITH INTERNAL TYPE MECHANICAL VIBRATORS. VIBRATION SHALL BE SUPPLEMENTED BY SPADING AND HAND TAMPING AS NECESSARY TO INSURE SMOOTH AND DENSE CONCRETE ALONG FORM SURFACES, IN CORNERS, AND AROUND EMBEDDED ITEMS.

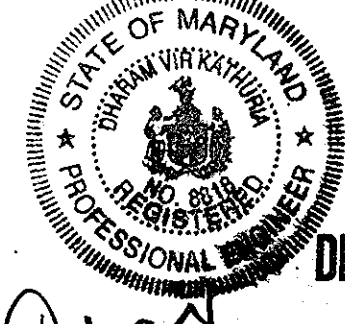
FINISHING - DEFECTIVE CONCRETE, HONEYCOMBED AREAS, VOIDS LEFT BY THE REMOVAL OF THE FORMS, RIDGES ON ALL CONCRETE SURFACES PERMANENTLY EXPOSED TO VIEW OR EXPOSED TO WATER ON THE FINISHED STRUCTURE, SHALL BE REPAIRED IMMEDIATELY AFTER THE REMOVAL OF FORMS. ALL VOIDS SHALL BE REANED AND COMPLETELY FILLED WITH DRY-PATCHING MORTAR.

PROTECTION AND CURING - EXPOSED SURFACES OF CONCRETE SHALL BE PROTECTED FROM THE DIRECT RAYS OF THE SUN FOR AT LEAST THE FIRST THREE (3) DAYS. ALL CONCRETE SHALL BE KEPT CONTINUOUSLY MOIST FOR AT LEAST TEN (10) DAYS AFTER BEING PLACED. MOISTURE MAY BE APPLIED BY SPRAYING OR SPRINKLING AS NECESSARY TO PREVENT THE CONCRETE FROM DRYING. CONCRETE SHALL NOT BE EXPOSED TO FREEZING DURING THE CURING PERIOD. CURING COMPOUNDS MAY ALSO BE USED.

PLACING TEMPERATURE - CONCRETE MAY NOT BE PLACED AT TEMPERATURE BELOW 37° F WITH THE TEMPERATURE FALLING, OR 34° WITH THE TEMPERATURE RISING.

STABILIZATION

ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SLIGHTLY CONDITION. ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, SPOIL AND BORROW AREAS, AND BERMS SHALL BE STABILIZED BY SEEDING, FERTILIZING AND MULCHING (IF REQUIRED) IN ACCORDANCE WITH THE VEGETATIVE TREATMENT SPECIFICATIONS SHOWN ON OR ACCOMPANYING THE DRAWINGS.



APPROVED
DIVISION OF LAND DEVELOPMENT &
ZONING ADMINISTRATION
HOWARD COUNTY, MARYLAND
DATE 4-21-81

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

Jorge M. Bradley 6-4-81
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

John W. Marchman 6-4-81
PLANNING DIRECTOR DATE

Army Louis Quinn 6-4-81
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

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

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Walter F. Newmyer 6-4-81
DIRECTOR DATE

Walter E. Ray 6/3/81
CHIEF, BUREAU OF ENGINEERING DATE

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

James P. Hahn 5-5-81
U.S. SOIL CONSERVATION SERVICE DATE

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

APPROVED *Robert J. Zichow* 5-5-81
HOWARD S.P.D. DATE

BY THE DEVELOPER:

"I 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

Nicholas B. Mangione 4/23/81
DEVELOPER - NICHOLAS B. MANGIONE DATE

BY THE ENGINEER:

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

Alexander Whitney, Jr. 4/23/81
ENGINEER - ALEXANDER WHITNEY, JR. DATE

| | | |
|---------|---|--------------------------------------|
| 9/24/81 | 2 | REVISE TITLE BLOCK |
| 3/3/80 | 1 | PARCEL NO. CHANGED, SHEET RENUMBERED |

DATE NO. REVISION

PROJECT: SHELTERED HOUSING
HEPPING SUBDIVISION, LOTS 9 & 10

AREA: TAX MAP NO. 35, PARCEL NO. 365
5TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT CONTROL DETAILS

OWNER: NICHOLAS B. MANGIONE
1205 York Road
Lutherville, Maryland 21093

ENGINEERS: WHITNEY, BAILEY, COX & MAGNANI
CONSULTING ENGINEERS
Suite 301 Green Spring Station
2360 West Joppa Road
Lutherville, Maryland 21093
301-296-4200

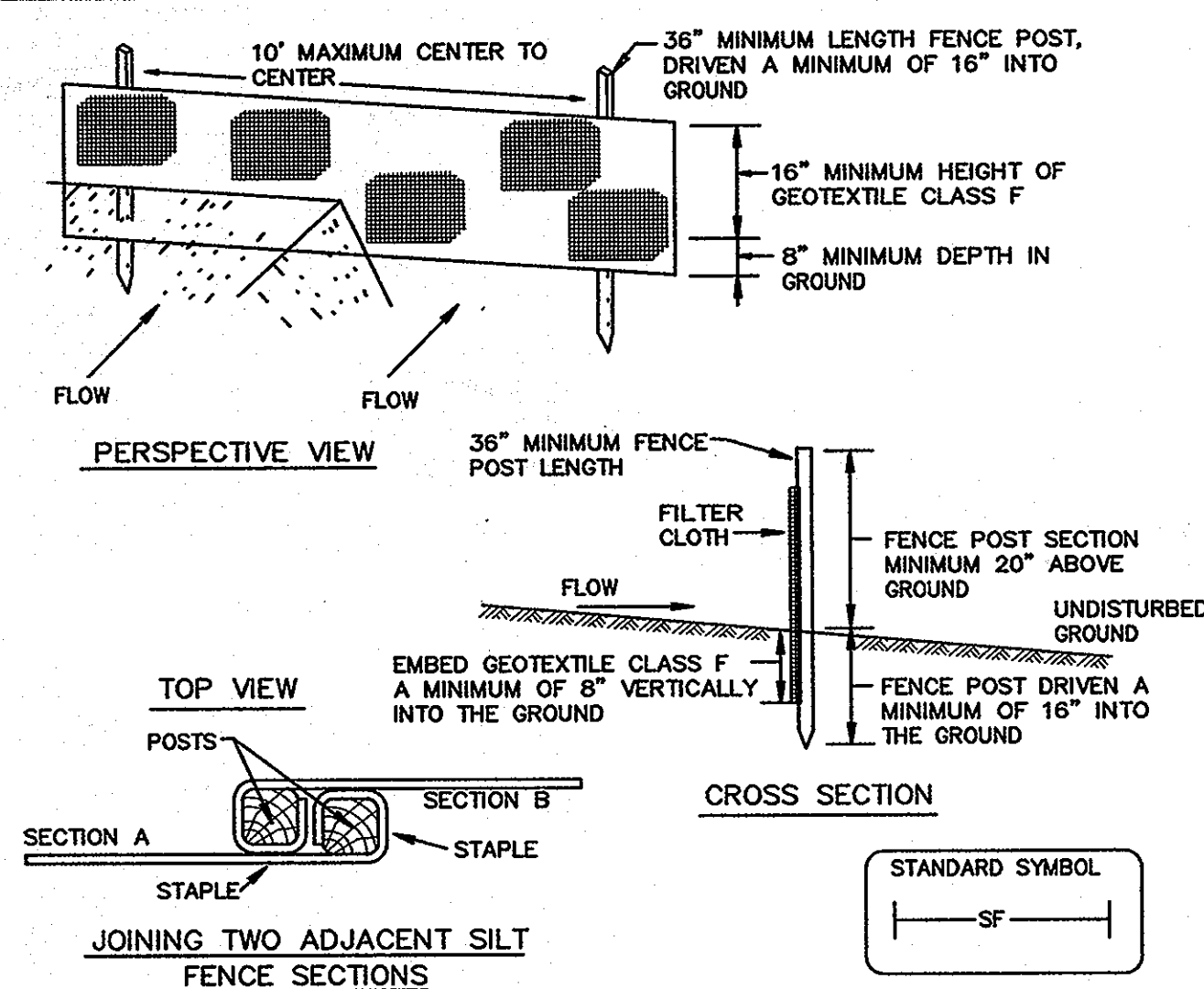
DATE: 4/23/81

DESIGNED BY: U.E.
DRAWN BY: R.G.
PROJECT NO.: 616

DATE: 8/22/80
SCALE: NOT TO SCALE
DRAWING NO.: 7 OF 11

PROFESSIONAL ENGR. NO. 4039
SDP-81-36

DETAIL 22 - SILT FENCE



Construction Specifications

- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.
- Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

| | | |
|----------------------|--|----------------|
| Tensile Strength | 50 lbs/in (min.) | Test: MSMT 509 |
| Tensile Modulus | 20 lbs/in (min.) | Test: MSMT 509 |
| Flow Rate | 0.3 gal/ft ² /minute (max.) | Test: MSMT 322 |
| Filtering Efficiency | 75% (min.) | Test: MSMT 322 |

- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

| | | |
|---|----------------|---|
| U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE E-15-3 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION |
|---|----------------|---|

SILT FENCE

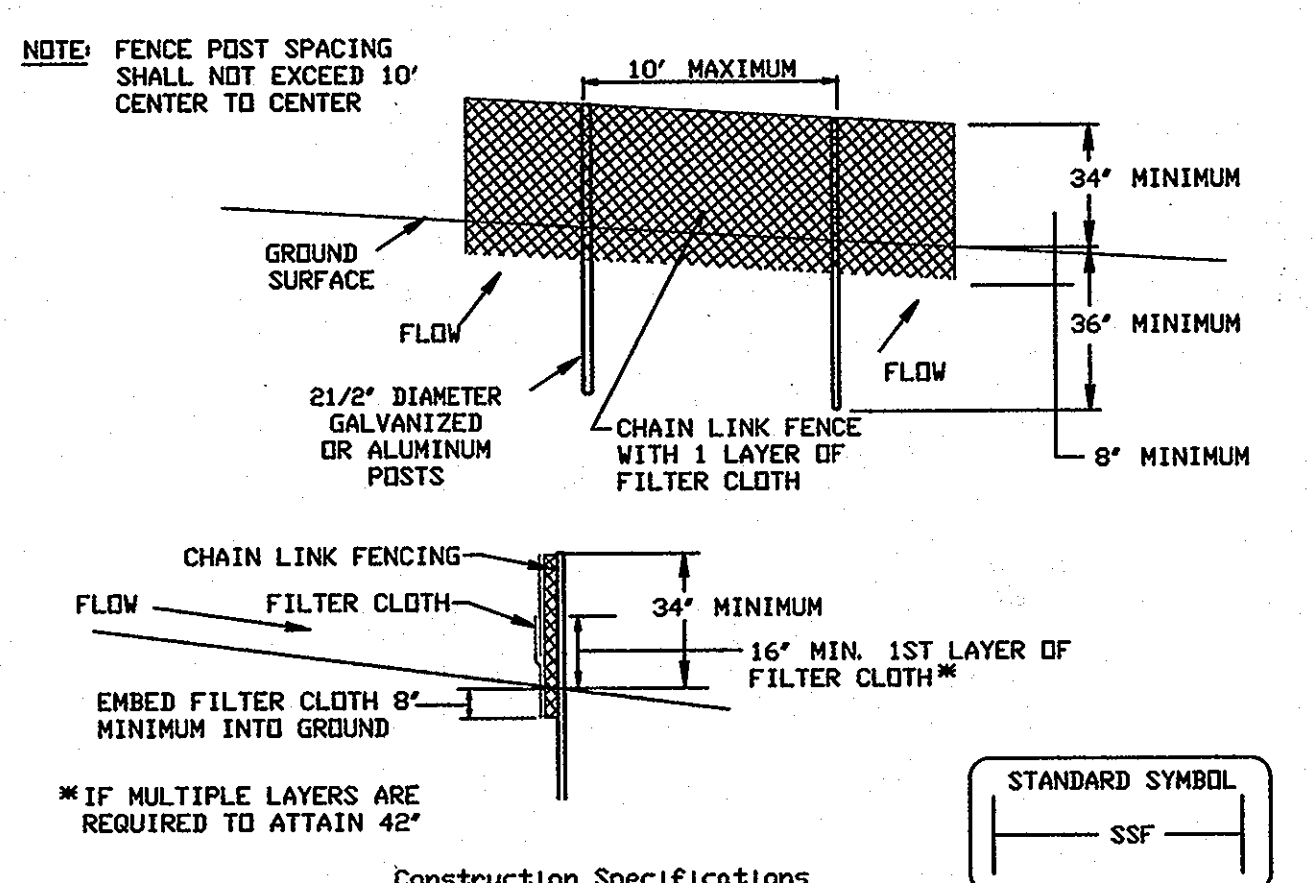
Silt Fence Design Criteria

| Slope Steepness | (Maximum) Slope Length | (Maximum) Silt Fence Length |
|-------------------|------------------------|-----------------------------|
| Flatter than 50:1 | unlimited | unlimited |
| 50:1 to 10:1 | 125 feet | 1,000 feet |
| 10:1 to 5:1 | 100 feet | 750 feet |
| 5:1 to 3:1 | 60 feet | 500 feet |
| 3:1 to 2:1 | 40 feet | 250 feet |
| 2:1 and steeper | 20 feet | 125 feet |

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

| | | |
|---|-----------------|---|
| U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE E-15-3A | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION |
|---|-----------------|---|

DETAIL 33 - SUPER SILT FENCE



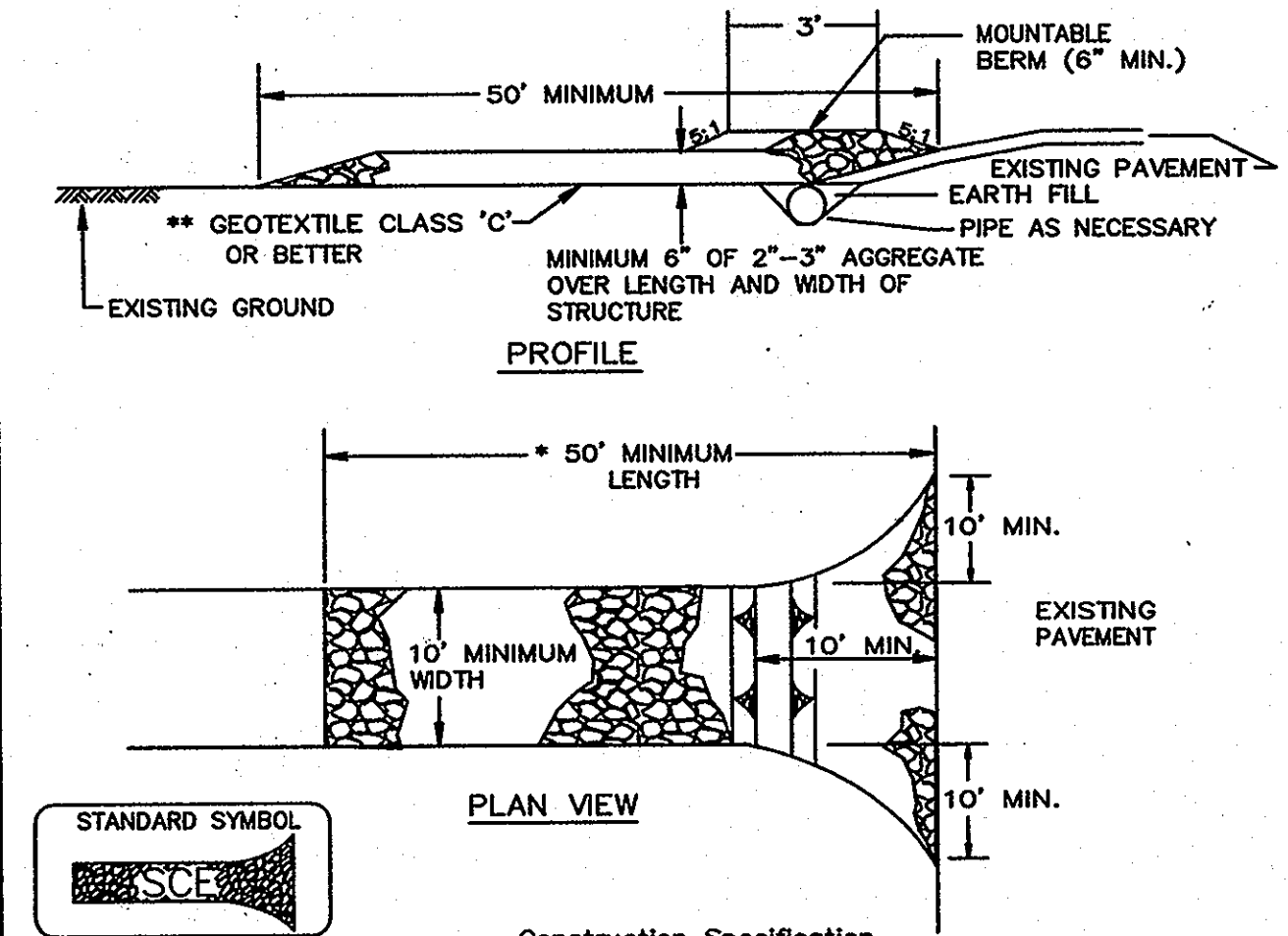
Construction Specifications

- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
- Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 8" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
- Maintenance shall be performed as needed and silt buildups removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height
- Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

| | | |
|----------------------|--|----------------|
| Tensile Strength | 50 lbs/in (min.) | Test: MSMT 509 |
| Tensile Modulus | 20 lbs/in (min.) | Test: MSMT 509 |
| Flow Rate | 0.3 gal/ft ² /minute (max.) | Test: MSMT 322 |
| Filtering Efficiency | 75% (min.) | Test: MSMT 322 |

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

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

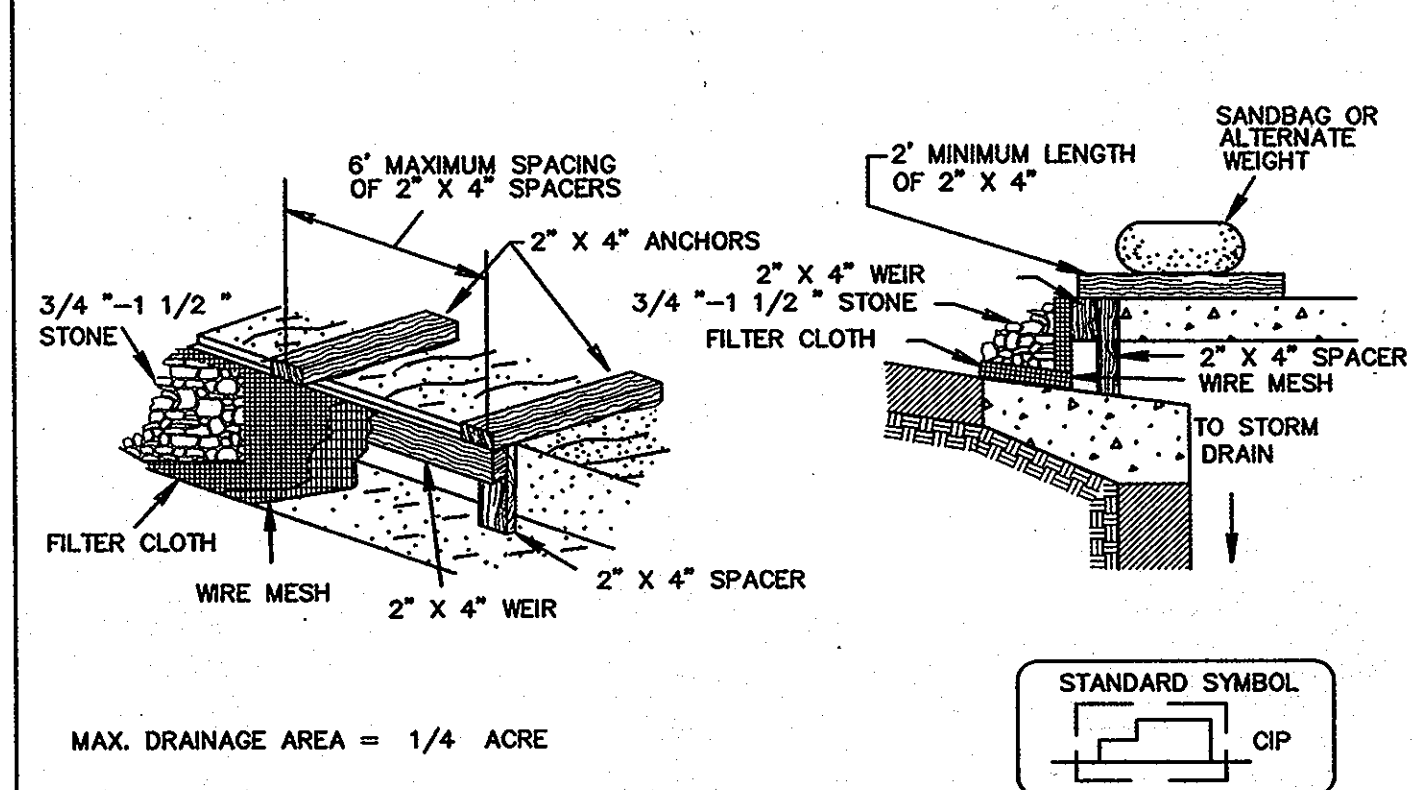


Construction Specification

- Length - minimum of 50' (*30' for single residence lot).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.
- Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

| | | |
|---|----------------|---|
| U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE F-17-3 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION |
|---|----------------|---|

DETAIL 23C - CURB INLET PROTECTION (COG OR COS INLETS)

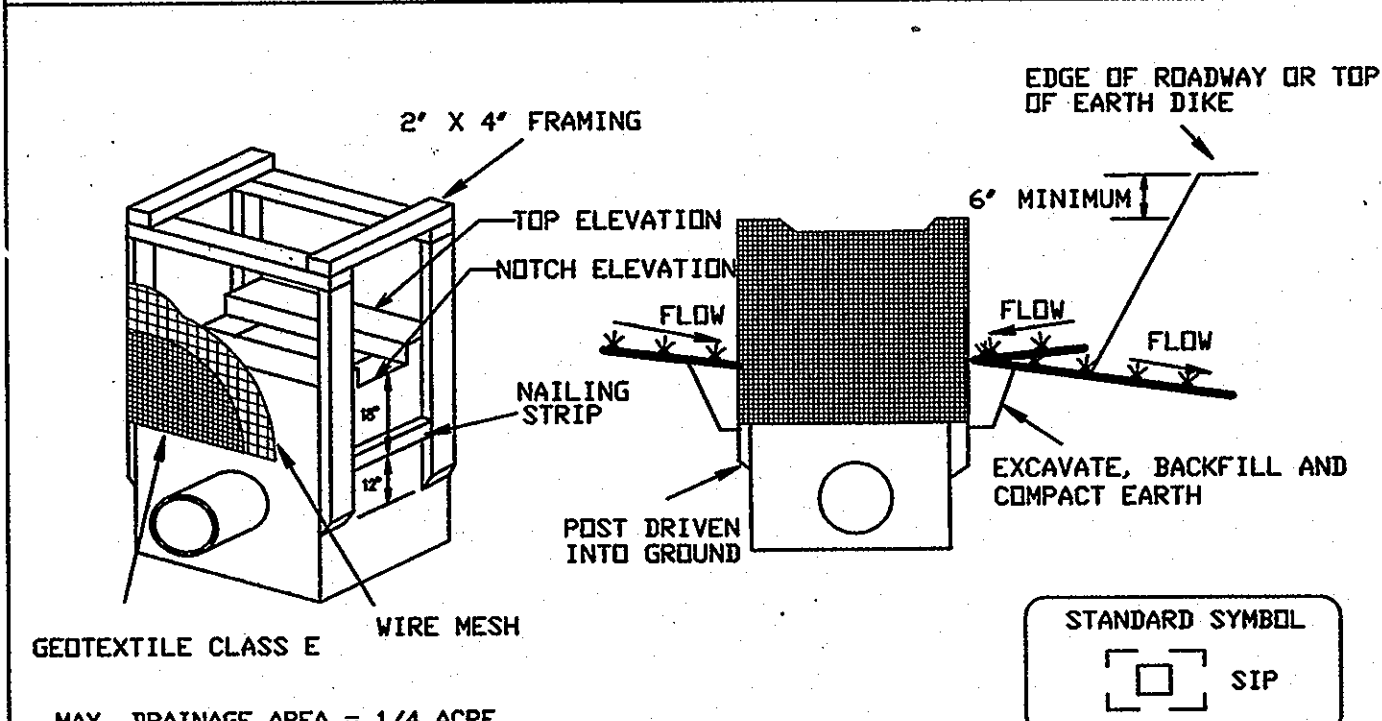


Construction Specifications

- Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4") to the 2" x 4" weir (measuring throat length plus 2") as shown on the standard drawing.
- Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.
- Securely nail the 2" x 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 4" apart).
- Place the assembly against the inlet throat and nail (minimum 2" lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
- The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
- Form the 1/2" x 1/2" wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4" x 1 1/2" stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.
- This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
- Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

| | | |
|---|-----------------|---|
| U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE E-16-5B | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION |
|---|-----------------|---|

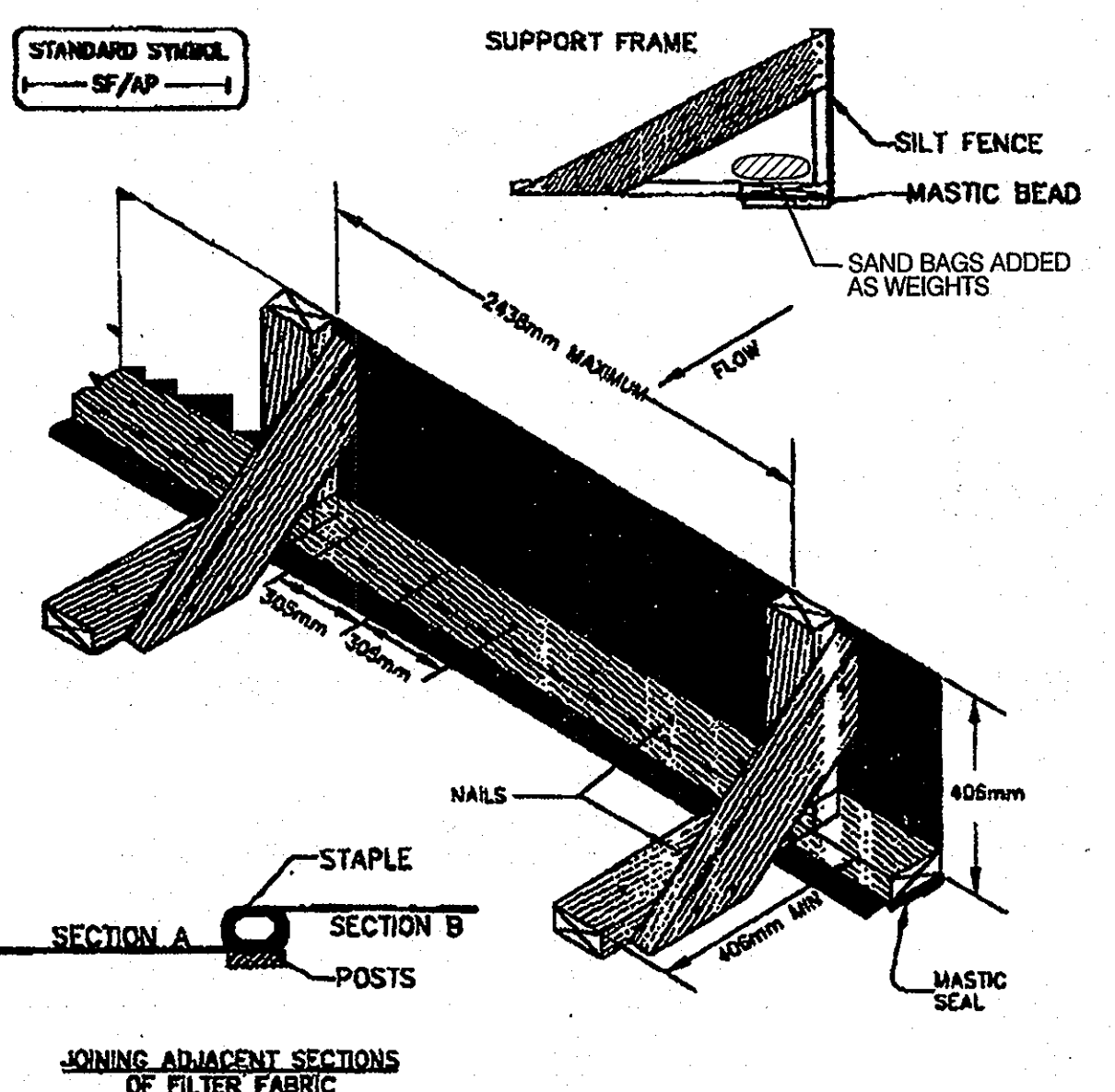
DETAIL 23A - STANDARD INLET PROTECTION



Construction Specifications

- Excavate completely around the inlet to a depth of 18" below the notch elevation.
- Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.
- Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
- Stretch the Geotextile Class E tightly over the wire mesh with the geotextile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
- Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.
- If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
- The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

| | | |
|---|----------------|---|
| U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE E-16-5 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION |
|---|----------------|---|



Construction Specifications

- All finished lumber shall be 2" x 4" minimum.
- A mastic seal shall be provided, as shown, to prevent sediment laden water escaping untreated beneath silt fence installation.
- Silt fence shall be taut and securely stapled to face of upright supports.
- Nails used to secure boards to pavement shall be 20d x 102mm minimum length.
- Application design and materials criteria shall be as stated in the Maryland Standards and Specifications for Soil Erosion and Sediment Control.
- The symbol is "--SFAP--".

DETAIL OF SILT FENCE ON ASPHALT PAVEMENT

| | | |
|---|-----|--------------------|
| 7/24/11 | 1 | Revise Title Block |
| DATE | NO. | REVISION |
| REVIEWED FOR HOMERD SCD AND MBSTS TECHNICAL REQUIREMENTS | | |
| USDA-NATURAL RESOURCES CONSERVATION SERVICE | | |
| THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. | | |
| APPROVED: <i>[Signature]</i> | | DATE: 5/12/09 |
| APPROVED: DEPARTMENT OF PLANNING AND ZONING | | |
| Chief, Development Engineering Division | | Date: 5/12/09 |
| Chief, Division of Land Development | | Date: 5/12/09 |
| Director, DEP | | Date: 6/12/09 |

*Note: No As-built on record, refer to MDE for enforcement. 2378 checklist (Appendix H) documents this for repair and monitoring.

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE

SEDIMENT CONTROL DETAILS-2

SHELTERED HOUSING

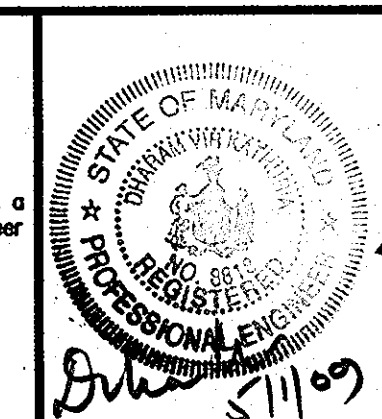
REVISED SITE DEVELOPMENT PLAN
HEPENDING SUBDIVISION, PLAT NO. 21207
PARCEL 365, TAX MAP 35, LOTS 9 & 10
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
PREVIOUS FILE NO. F-11-002, F-11-015



KCE ENGINEERING, INC.
EXECUTIVE CENTER
3300 NORTH RIDGE ROAD, SUITE 315
ELLCOTT CITY, MARYLAND 21043
PHONE (410) 203-9800 FAX (410) 203-9228

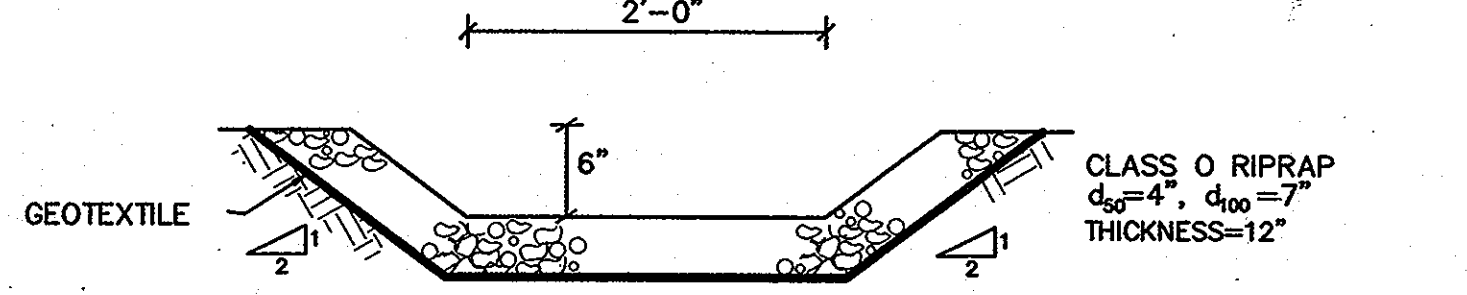
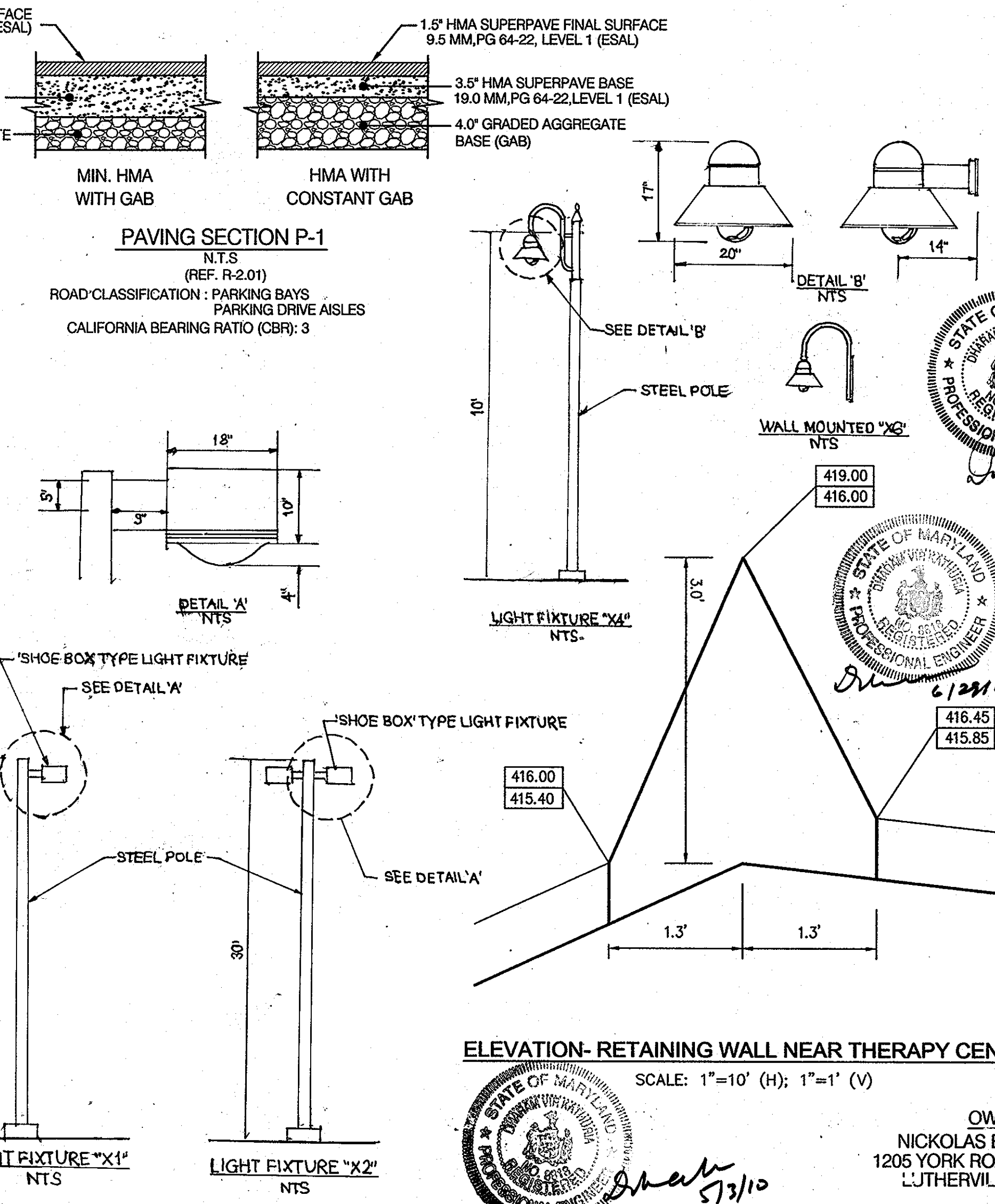
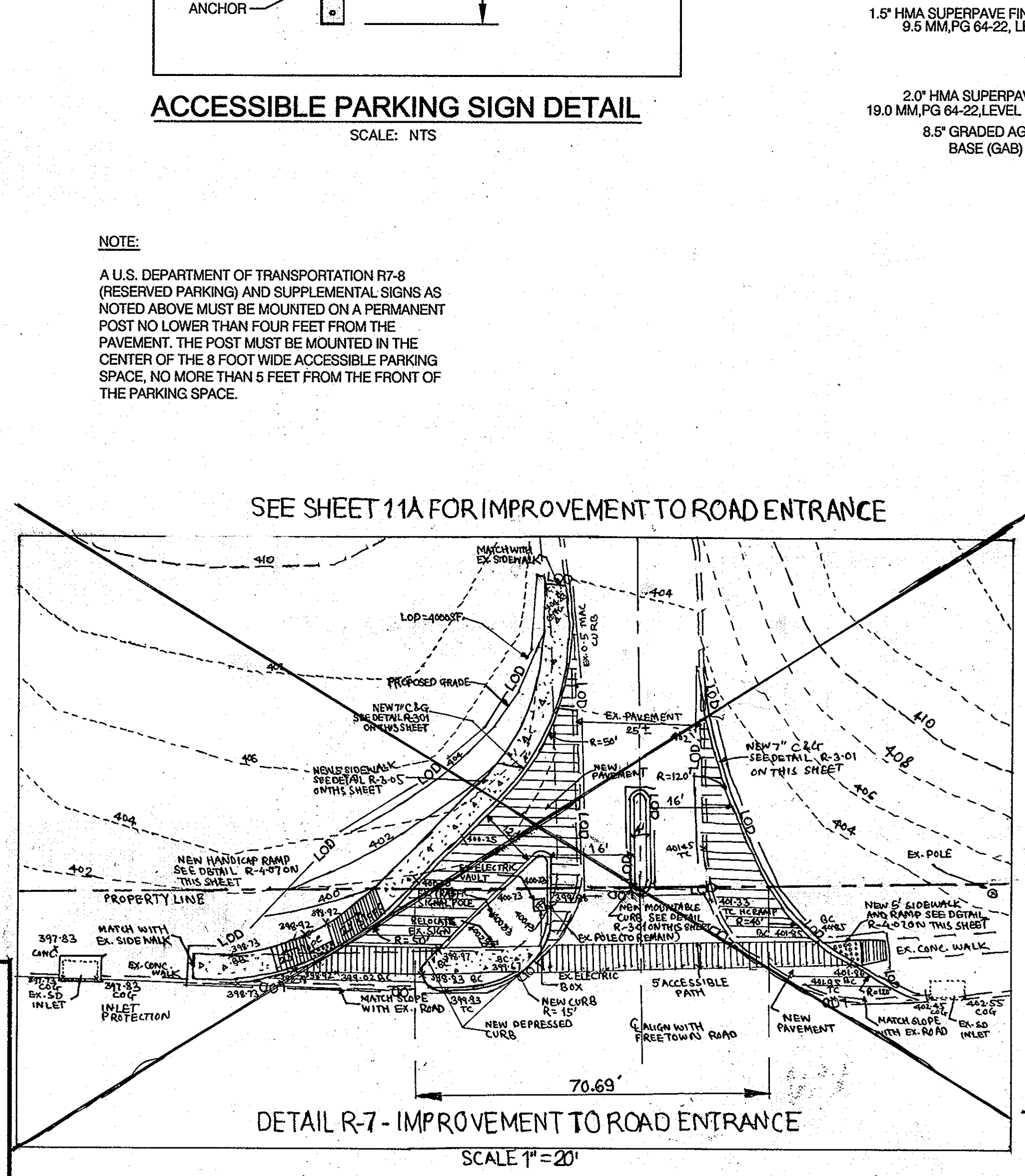
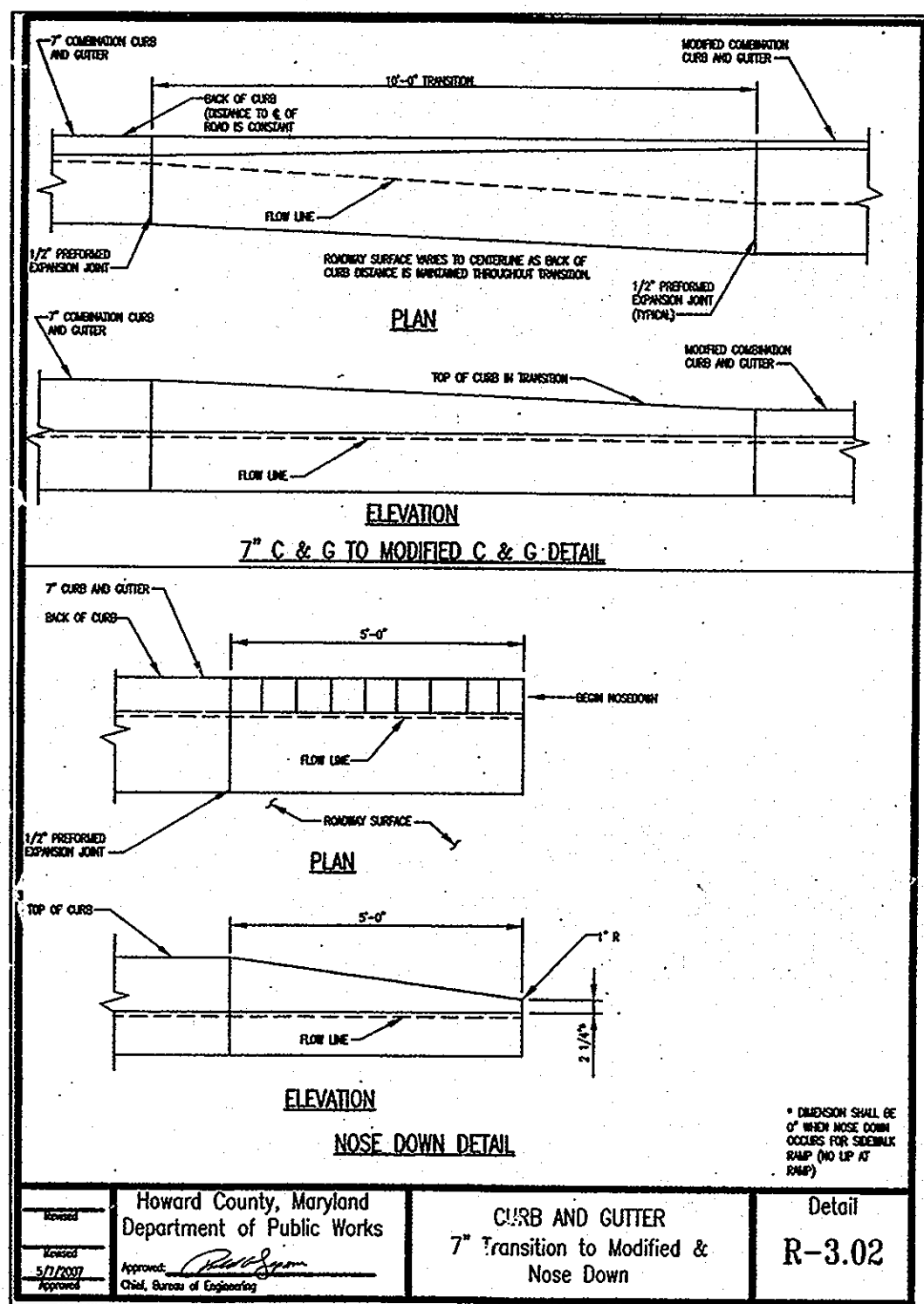
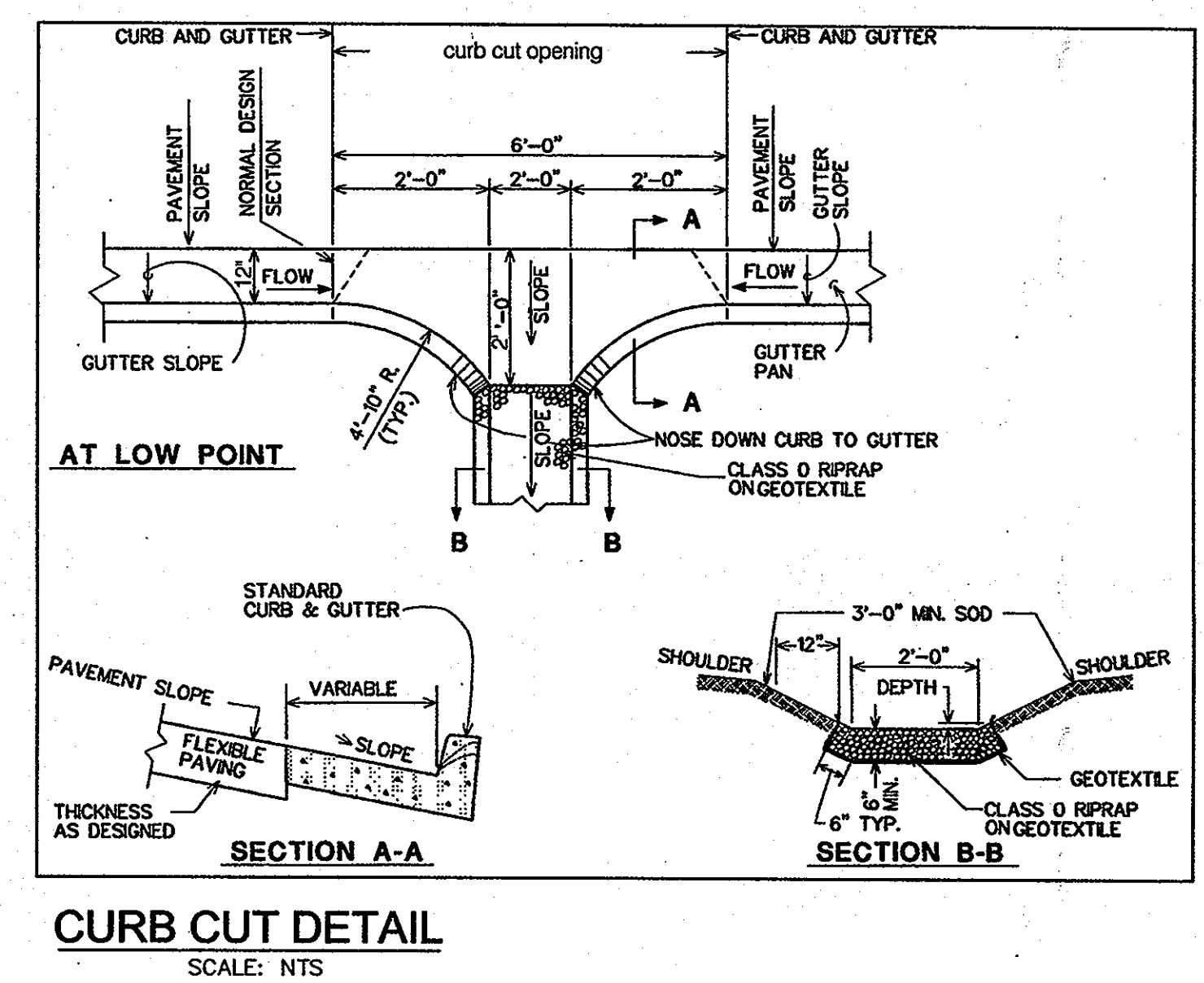
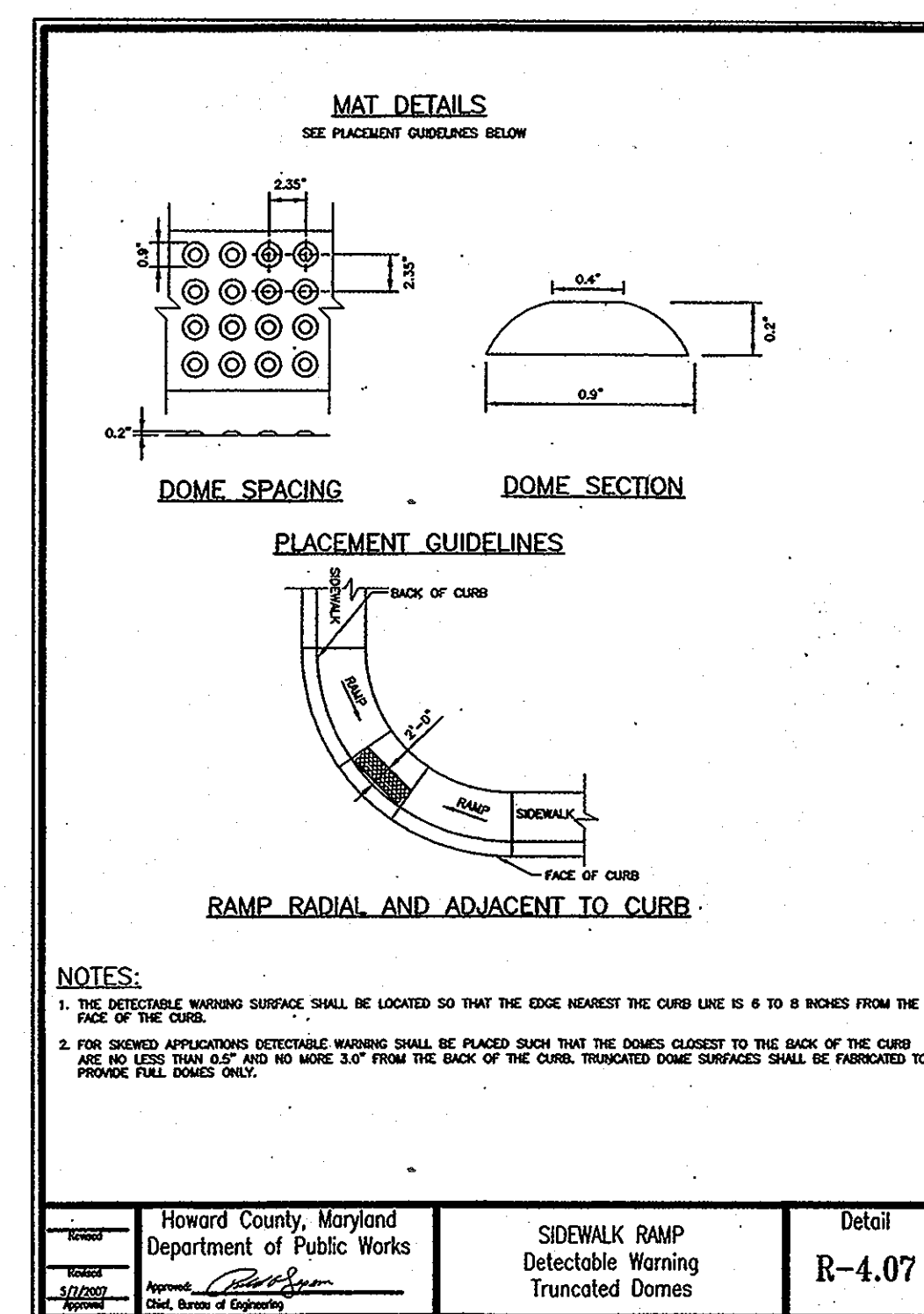
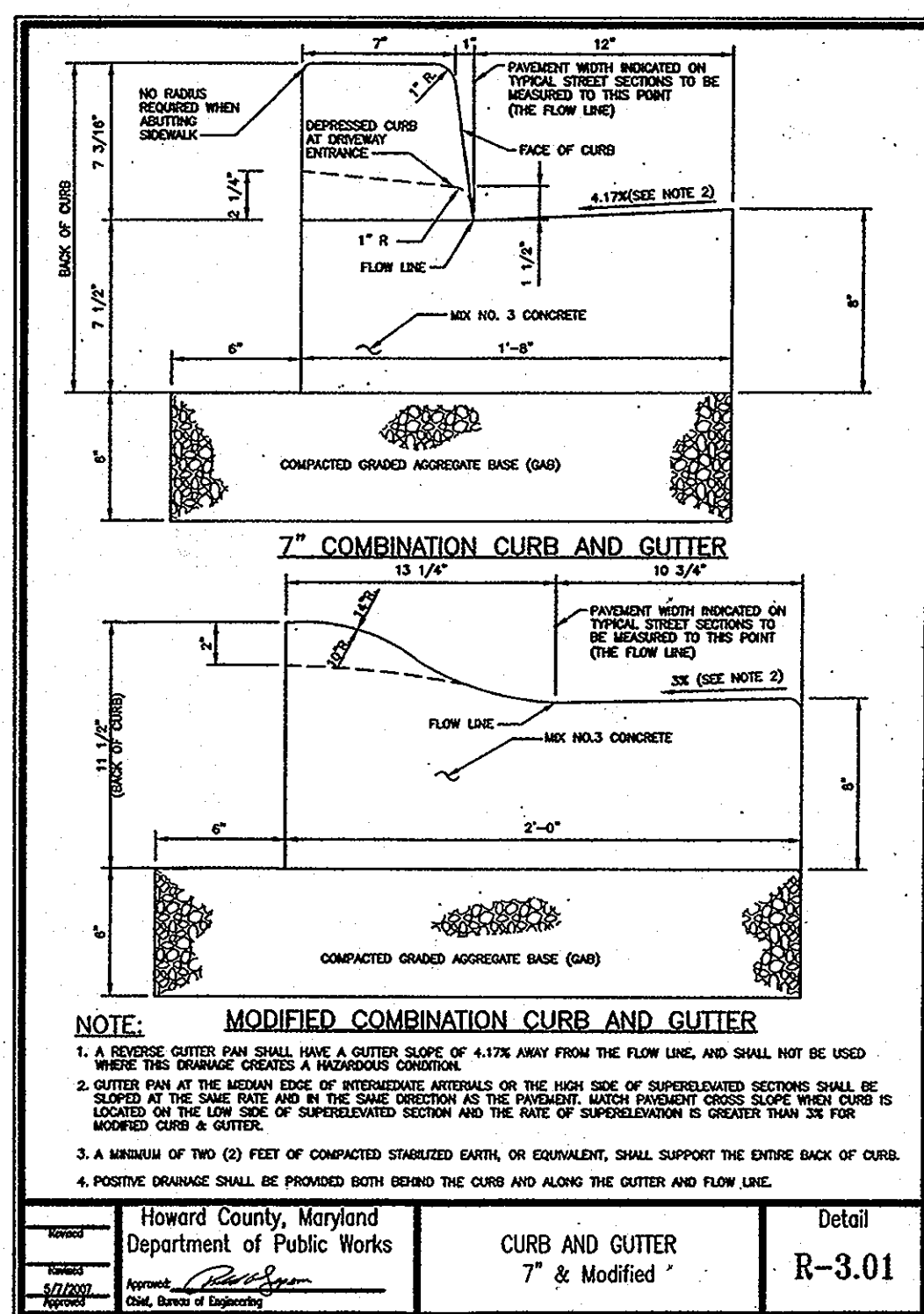
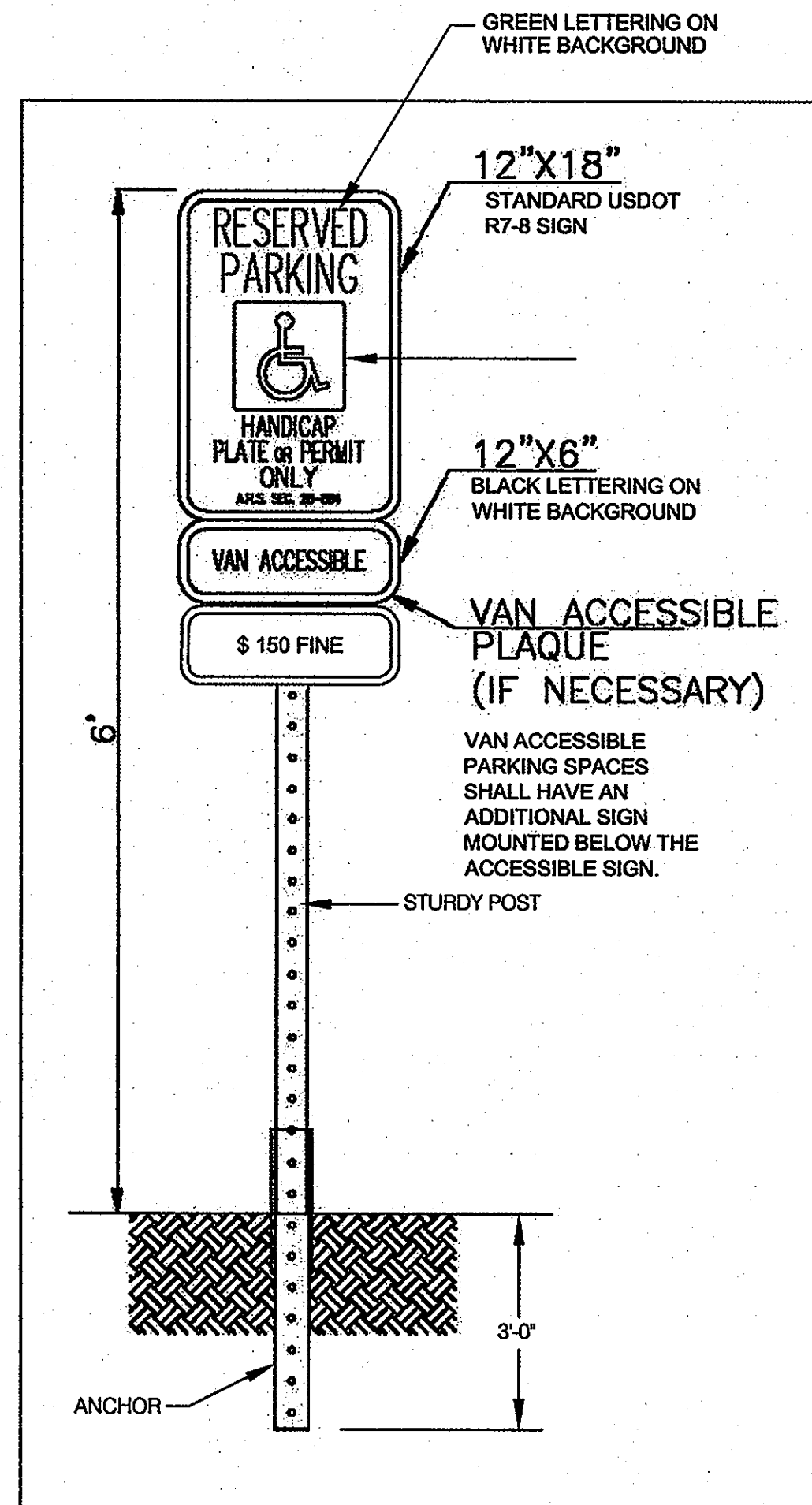
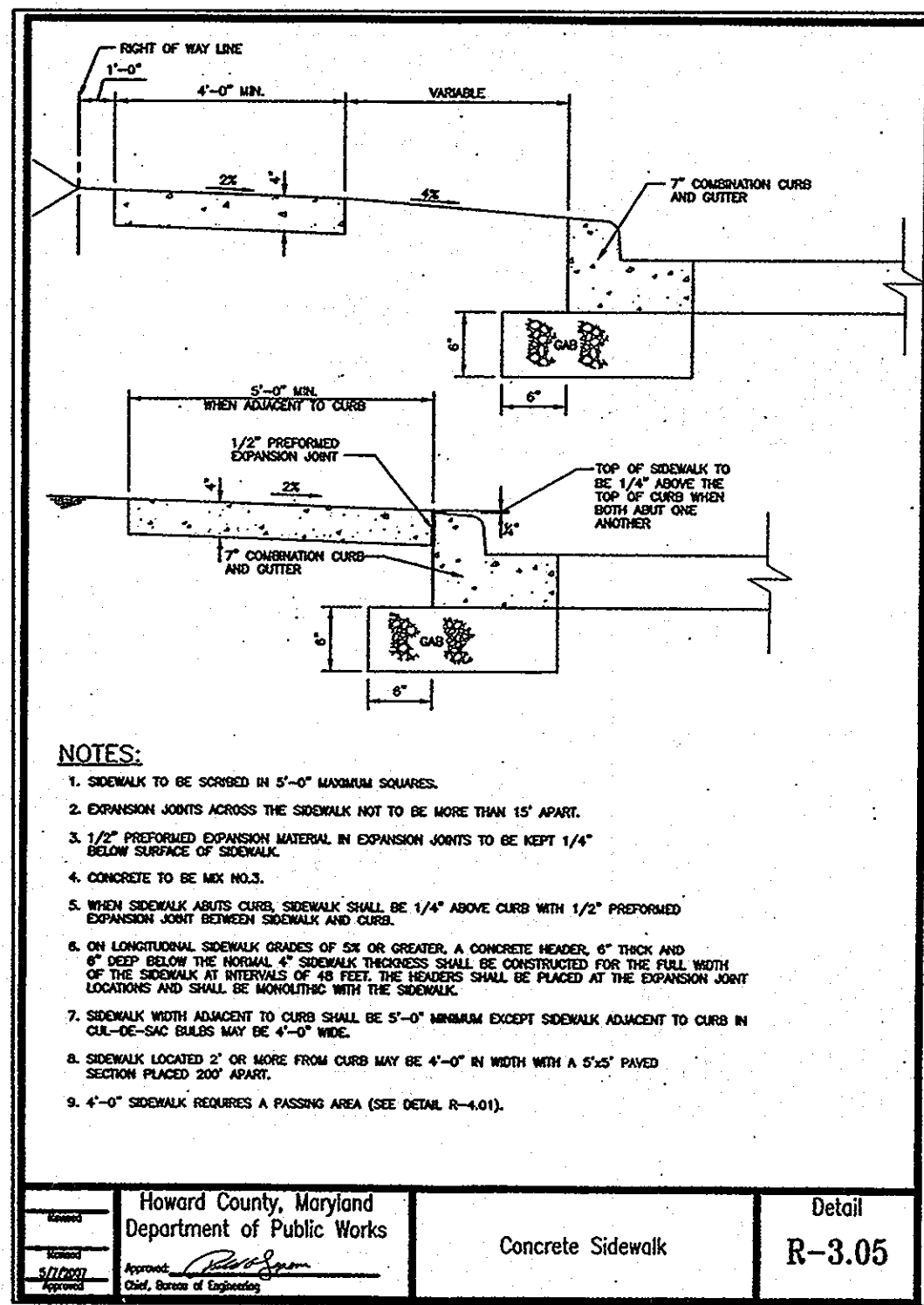
THE PURPOSE OF THIS DRAWING IS TO ADD EROSION & SEDIMENT CONTROL DETAILS

OWNER
NICKOLAS B. MANGIONE
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MD 21093



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. 8818, Expiration Date: 10/17/10

DRAWN BY: MG
CHECKED BY: DVK
SCALE: AS SHOWN
DATE: 04/28/2009



| SITE DETAILS | | |
|--------------|-----|---|
| 05/15/12 | KCE | ADD ENTRANCE IMPROVEMENTS AND TRAFFIC SIGNAL PLAN |
| 07/21/11 | KCE | IMPROVEMENT TO ROAD ENTRANCE AND LIGHT FIXTURE ADDITION |
| 04/28/10 | KCE | DELETE RETAINING WALL NEAR SWM POND |

THE PURPOSE OF THIS DRAWING IS TO ADD SITE DETAILS

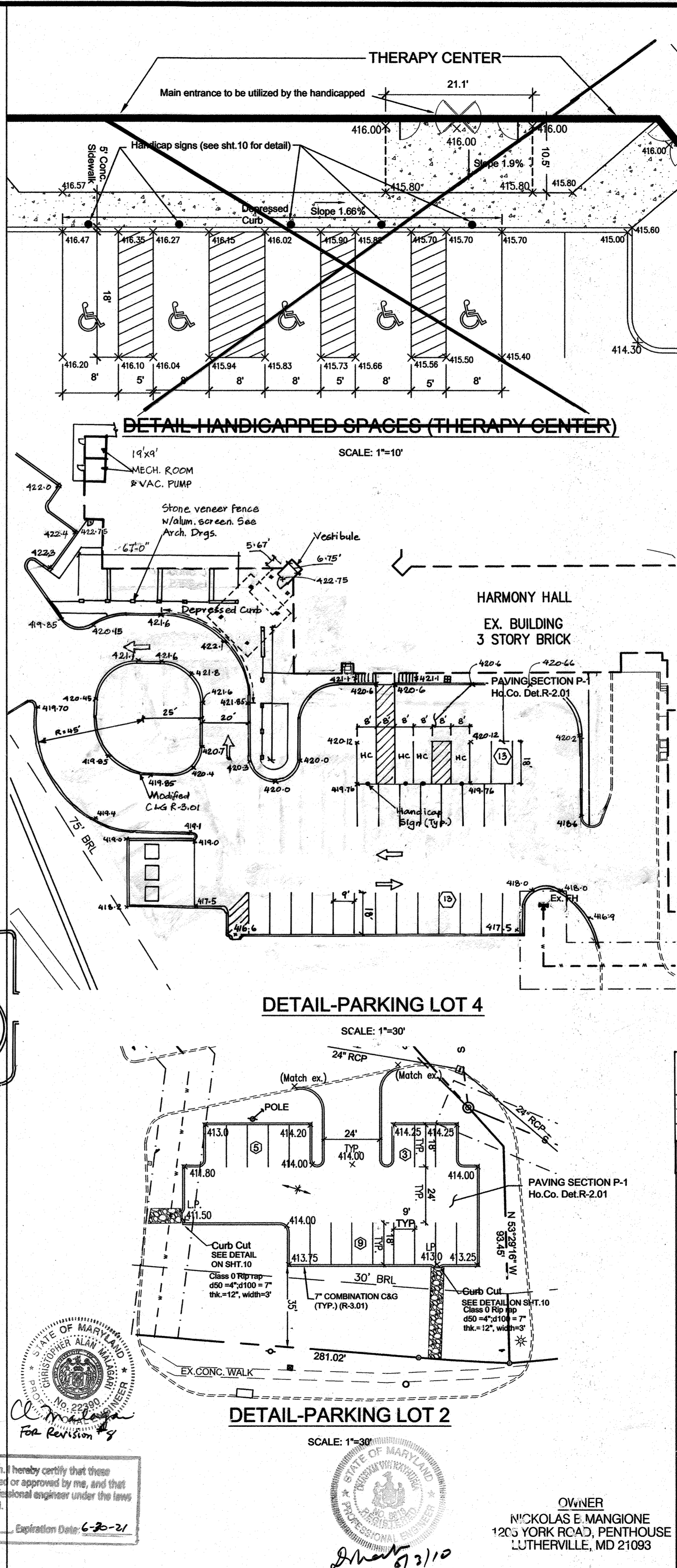
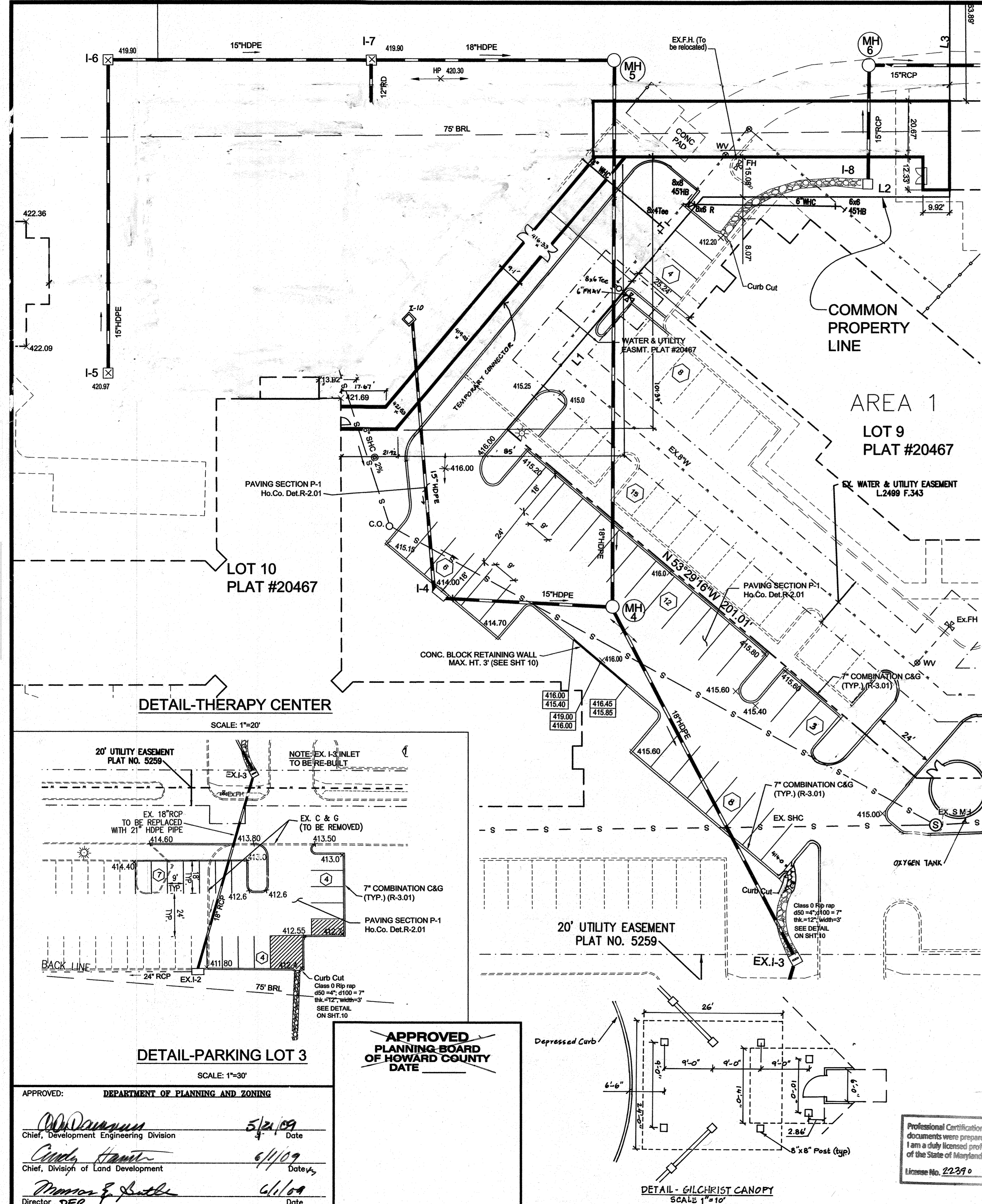
SHELTERED HOUSING
REVISED SITE DEVELOPMENT PLAN
HEPDING SUBDIVISION, PLAT NO. 21207
PARCEL 365, TAX MAP 35, LOTS 9 & 10
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
PREVIOUS FILE NO. F-11-002, F-11-015

KCE ENGINEERING, INC.
EXECUTIVE CENTER
3300 NORTH RIDGE ROAD, SUITE 315
ELLCOTT CITY, MARYLAND 21043
PHONE (410) 203-9800 FAX (410) 203-9228

| | | | |
|--|---|------------------|-----------|
| Professional Certification | STATE OF MARYLAND PROFESSIONAL ENGINEER | DRAWN BY: MG | SHEET: 10 |
| 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. 8818, Expiration Date: 10/17/10. | | CHECKED BY: DVK | OF 11 |
| | | SCALE: AS SHOWN | |
| | | DATE: 04/28/2009 | |

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division 5/2/09
Chief, Division of Land Development 6/1/09
Director 6/1/09



- NOTES:
1. THE OWNER / DEVELOPER SHALL MAKE APPLICATION TO THE DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS FOR A BUILDING PERMIT FOR THE PROPOSED THERAPY CENTER BUILDING WITHIN ONE YEAR (1) FROM THE DATE OF APPROVAL OF THIS RED-LINE REVISION BY DED.
 2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
 3. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
 4. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
 5. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 6. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 35 F1 AND 35 FA WERE USED FOR THIS PROJECT.
 7. WATER IS PUBLIC, CONTRACT #44-3048D, AND THE SEWER IS PRIVATE.
 8. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM 2 FOOT CONTOUR INTERVALS PREPARED BY SILL, ADCOCK & ASSOCIATES LLC, DATED JULY, 2007.
 9. EXISTING UTILITIES ARE BASED ON CONT. # 44-3048-D, 24-0957-D, 44-1066-D & SDP-90-109
 10. THERE IS NO FLOODPLAIN ON THIS SITE.
 11. THERE ARE NO WETLANDS ON THIS SITE.
 12. STORMWATER MANAGEMENT IS PROVIDED BY A STORMWATER MANAGEMENT POND LOCATED AT THE SOUTH-WEST CORNER OF THE PROPERTY, DESIGNED FOR AN ULTIMATE CONTRIBUTING DRAINAGE AREA OF 6.12 ACRES. THE POND IS PRIVATELY OWNED & MAINTAINED. STORMWATER MANAGEMENT FOR PROPOSED BUILDING ADDITION & PARKING LOTS HAS BEEN ADDRESSED IN ACCORDANCE WITH THE REDEVELOPMENT POLICY IN THE 2000 MARYLAND STORMWATER DESIGN MANUAL & HOWARD COUNTY DESIGN MANUAL, VOLUME 1.
 13. A TRAFFIC AND PARKING ANALYSIS FOR THIS PROJECT WAS PERFORMED BY THE TRAFFIC GROUP, DATED FEBRUARY 5, 2009 WHICH CONCLUDES THAT THE PROPOSED REVISION SATISFIES HOWARD COUNTY ADEQUATE ROAD FACILITIES TEST EVALUATION REQUIREMENTS.
 14. ADMINISTRATIVE ADJUSTMENT CASE NO. 08-20 WAS GRANTED ON 8TH DAY OF OCTOBER, 2008 FROM SECTION 115.D.3.a OF THE HOWARD COUNTY ZONING REGULATIONS TO REDUCE THE 75 FOOT SETBACK FROM RESIDENTIAL DISTRICTS TO 60 FEET TO CONSTRUCT AN ADDITION TO AN EXISTING NURSING HOME, SUBJECT TO THE FOLLOWING CONDITIONS:
 - i) THE PETITIONER SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE & COUNTY LAWS & REGULATIONS.
 - ii) A BUILDING PERMIT FOR THE PROPOSED DEVELOPMENT SHALL BE OBTAINED WITHIN TWO YEARS FROM THE DATE OF THIS ORDER & SUBSTANTIAL CONSTRUCTION SHALL BE COMPLETED WITHIN THREE YEARS.
 - iii) THE GRANTED ADMINISTRATIVE ADJUSTMENT SHALL APPLY SOLELY TO THE THERAPY CENTER BUILDING AS DEPICTED ON THE ADMINISTRATIVE ADJUSTMENT PLAN SUBMITTED BY THE PETITIONER & NOT TO ANY OTHER STRUCTURE, ADDITION BUILDING OR USE. THE PETITIONER SHALL SUBMIT A COPY OF THIS DECISION & ORDER WITH THE BUILDING PERMIT APPLICATION.
 - iv) THIS DECISION AND ORDER SHALL BE MAINTAINED IN THE OWNER'S PROPERTY RECORDS AND SHALL BE TRANSFERRED TO ANY SUCCEEDING OWNER OF THE PROPERTY.
 15. AA-08-020 EXPIRES ON 10/08/2010.
 16. A BUILDING PERMIT FOR THE PROPOSED DEVELOPMENT SHALL BE APPLIED FOR WITHIN 1 YEAR MEASURED FROM THE DED APPROVAL LETTER FOR THE REDLINE REVISIONS. PROPERTY LINE CHART
- | NO. | BEARING | DISTANCE |
|-----|----------------|----------|
| L1 | N 36°25'54\"/> | |

| NO. | BEARING | DISTANCE |
|-----|----------------|----------|
| L1 | N 36°25'54\"/> | |

THE PURPOSE OF THIS DRAWING IS TO ADD DETAIL PLANS

DETAIL PLAN-THERAPY CENTER & PARKING LOTS

SHELTERED HOUSING
 REVISED SITE DEVELOPMENT PLAN
 HEPPING SUBDIVISION, PLAT NO. 21207
 PARCEL 365, TAX MAP 35, LOTS 9 & 10
 PREVIOUS FILE NO. F-11-002, F-11-045
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

KCE ENGINEERING, INC.
 EXECUTIVE CENTER
 3300 NORTH RIDGE ROAD, SUITE 315
 ELLICOTT CITY, MARYLAND 21043
 PHONE (410) 203-9800 FAX (410) 203-9228

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. 8818, Expiration Date: 10/17/10

OWNER
 NICKOLAS E. MANGIONE
 1203 YORK ROAD, PENTHOUSE
 LUTHERVILLE, MD 21093

DRAWN BY: MG
 CHECKED BY: DVK
 SCALE: 1\"/>

APPROVED: DEPARTMENT OF PLANNING AND ZONING

William J. ... 5/21/09 Date
 Chief, Development Engineering Division

Carol ... 6/1/09 Date
 Chief, Division of Land Development

Monica ... 6/1/09 Date
 Director, DEP.

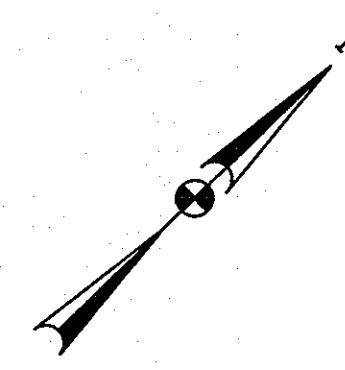
Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 22390 Expiration Date: 6-20-21

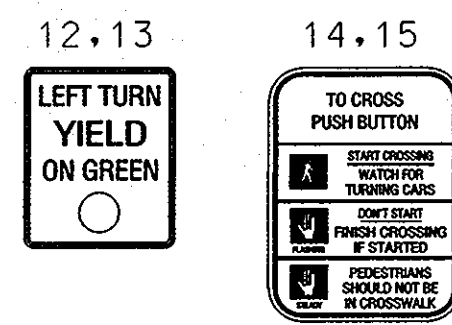
EQUIPMENT LIST

EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE TRAFFIC SIGNAL CONTRACTOR.

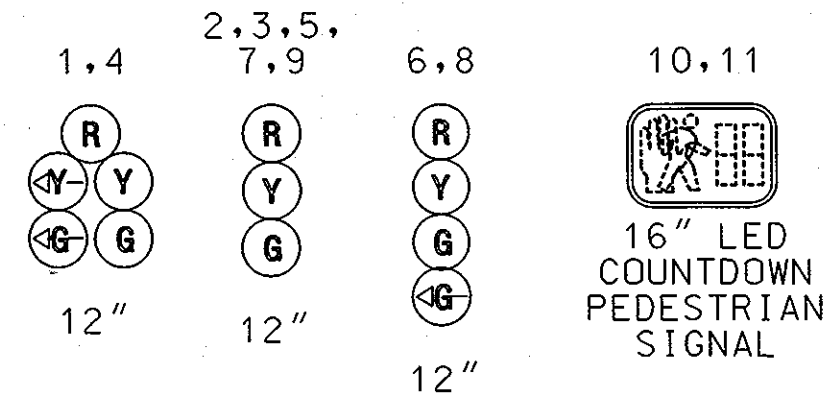
| QUANTITY | UNITS | DESCRIPTION |
|----------|-------|---|
| LUMP SUM | LS | MOT - HWY. |
| .25 | CY | CONCRETE FOUNDATION. |
| 50 | LF | 2 IN. CONDUIT PVC SCHED 80 - TRENCHED. |
| 50 | LF | 2 IN. CONDUIT PVC SCHED 80 - BORED. |
| 165 | LF | 2 COND 14 AWG IMSA 19-I ELECTRICAL CABLE. |
| 1 | EA | RELOCATED EXISTING PUSHBUTTON POLE. |
| 1 | EA | ADJUST VIDEO DETECTOR CAMERA. |
| 2 | EA | ADJUST HANDBOX FRAME/COVER |
| 170 | LF | 5 IN. SOLID YELLOW (Heat Applied) THERMOPLASTIC PAVEMENT MARKING. |
| 30 | LF | 12 IN. SOLID WHITE (Heat Applied) THERMOPLASTIC PAVEMENT MARKING. |
| 30 | LF | 24 IN. SOLID WHITE (Heat Applied) THERMOPLASTIC PAVEMENT MARKING. |
| 1 | EA | 36" x 36" RI-2 SIGN FOR GROUND MOUNTING |
| 1 | EA | 30" x 30" W4-3(I) SIGN FOR GROUND MOUNTING |
| 2 | EA | 30" x 30" W11-9 SIGN FOR GROUND MOUNTING |
| 2 | EA | 24" x 12" W16-7P SIGN FOR GROUND MOUNTING |



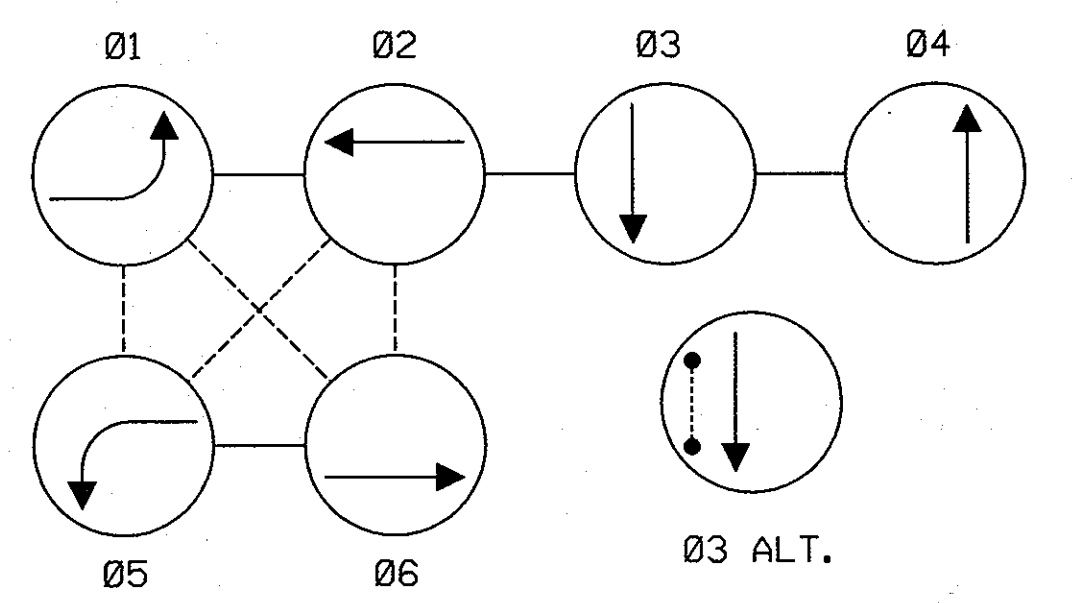
EXISTING SIGNS



EXISTING SIGNALS

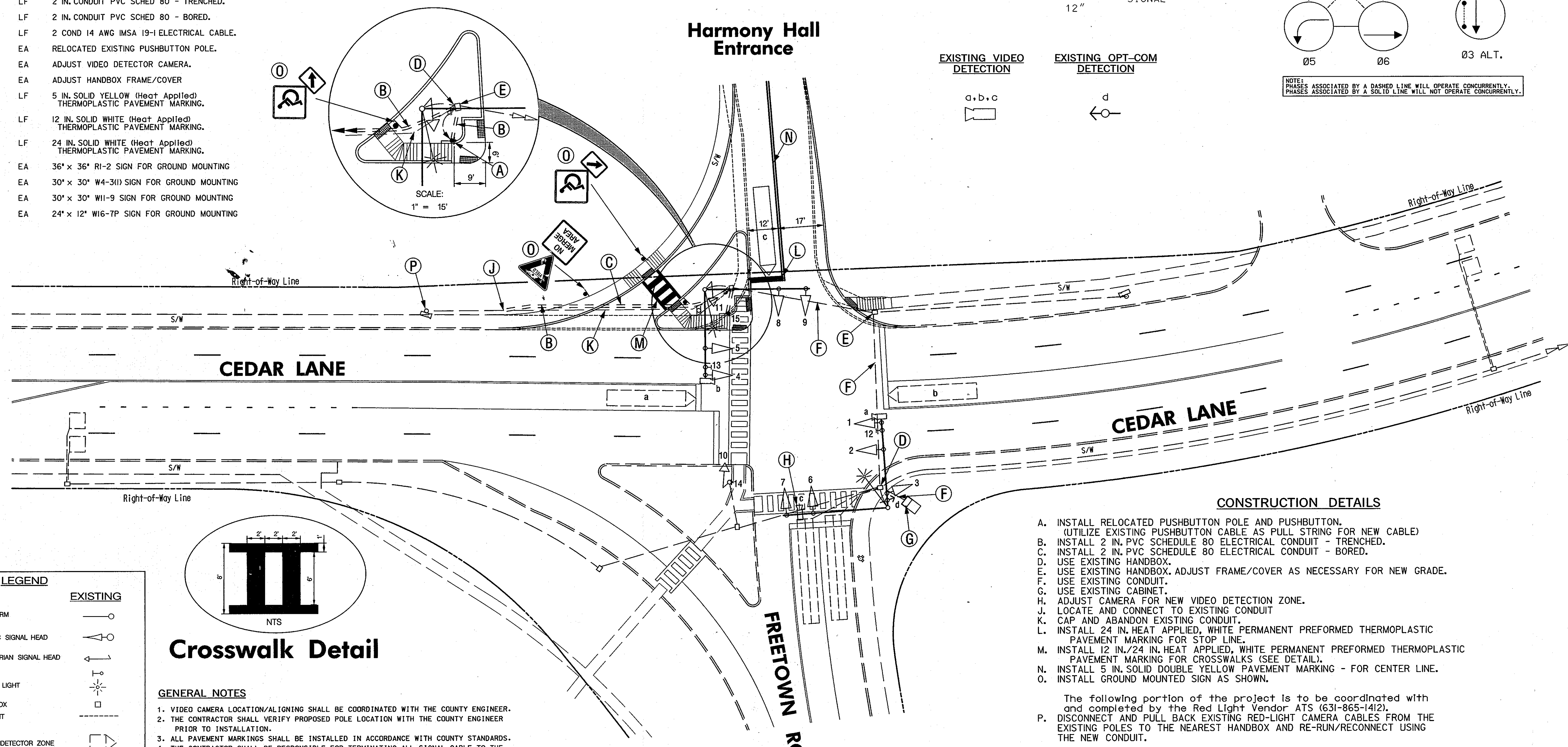


NEMA PHASING



NOTES:
PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.
PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.

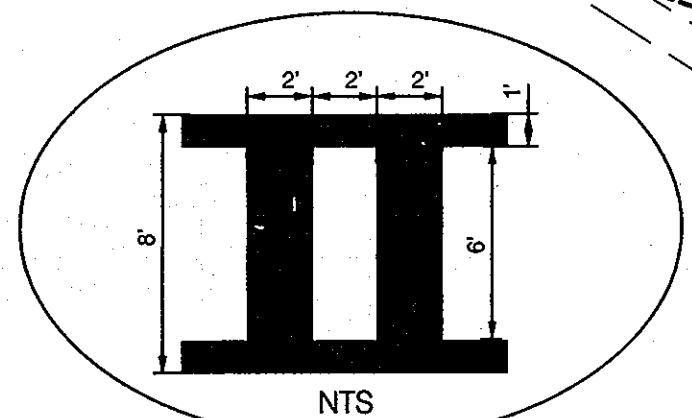
Harmony Hall Entrance



CEDAR LANE

CEDAR LANE

FREETOWN ROAD



Crosswalk Detail

GENERAL NOTES

- VIDEO CAMERA LOCATION/ALIGNING SHALL BE COORDINATED WITH THE COUNTY ENGINEER.
- THE CONTRACTOR SHALL VERIFY PROPOSED POLE LOCATION WITH THE COUNTY ENGINEER PRIOR TO INSTALLATION.
- ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH COUNTY STANDARDS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
- THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS SHOULD ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
- ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
- THE CONTRACTOR SHALL COORDINATE WITH THE COUNTY ENGINEER 48 HOURS PRIOR TO INSTALLING FOUNDATIONS.
- GROUND MOUNT SIGN SUPPORTS SHALL BE 2" GALVANIZED STEEL (PERFORATED) SQUARE TUBE POST (14 gauge) INSERTED INTO A 3' LONG - 2.5" GALVANIZED STEEL (PERFORATED) SQUARE TUBE SLEEVE (12 gauge) WITH A GALVANIZED STEEL POLE CAP MOUNTED ON TOP OF THE POST.

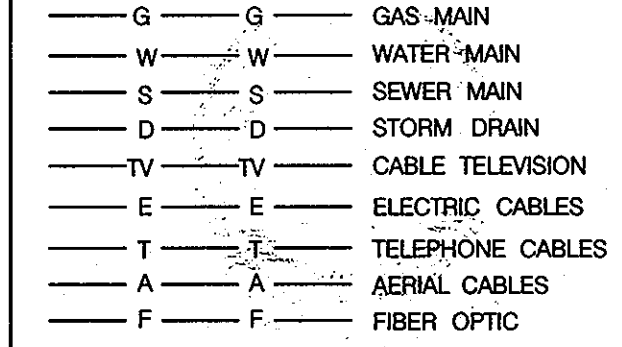
CONSTRUCTION DETAILS

- INSTALL RELOCATED PUSHBUTTON POLE AND PUSHBUTTON. (UTILIZE EXISTING PUSHBUTTON CABLE AS PULL STRING FOR NEW CABLE)
- INSTALL 2 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
- INSTALL 2 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - BORED.
- USE EXISTING HANDBOX.
- USE EXISTING HANDBOX. ADJUST FRAME/COVER AS NECESSARY FOR NEW GRADE.
- USE EXISTING CONDUIT.
- USE EXISTING CABINET.
- ADJUST CAMERA FOR NEW VIDEO DETECTION ZONE.
- LOCATE AND CONNECT TO EXISTING CONDUIT
- CAP AND ABANDON EXISTING CONDUIT.
- INSTALL 24 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR STOP LINE.
- INSTALL 12 IN./24 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALKS (SEE DETAIL).
- INSTALL 5 IN. SOLID DOUBLE YELLOW PAVEMENT MARKING - FOR CENTER LINE.
- INSTALL GROUND MOUNTED SIGN AS SHOWN.

The following portion of the project is to be coordinated with and completed by the Red Light Vendor ATS (631-865-1412).

P. DISCONNECT AND PULL BACK EXISTING RED-LIGHT CAMERA CABLES FROM THE EXISTING POLES TO THE NEAREST HANDBOX AND RE-RUN/RECONNECT USING THE NEW CONDUIT.

UTILITY LEGEND

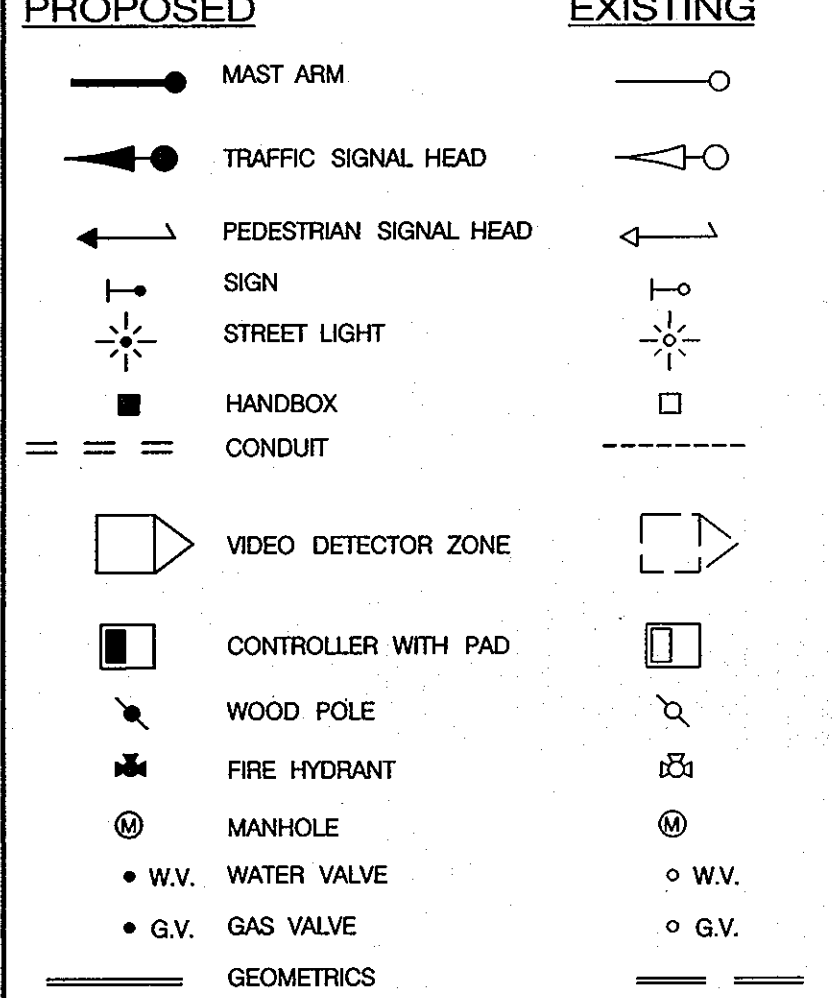


PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 33316 EXPIRATION DATE: 7/13/12



LEGEND



APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division: *[Signature]* 6/14/12
 Chief, Division of Land Development: *[Signature]* 6/18/12
 Director: *[Signature]* 6/18/12

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 DIRECTOR OF PUBLIC WORKS: *[Signature]* DATE: 6-7-12
 CHIEF TRAFFIC ENG. DIVISION / DATE: *[Signature]* CHIEF, BUREAU OF HIGHWAYS / DATE

The Traffic Group, Inc.
 Suite H
 9000 Freetown Square Dr.
 Baltimore, Maryland
 410-951-6000
 1-800-563-9411
 Fax: 410-951-6001

| | | | |
|--------------------|--------|--|------|
| DRN: JUD | | | |
| CHK: JUD | | | |
| DATE: May 22, 2012 | JUD 1 | Relocate Ped Pushbutton and RLC cables | 512 |
| | BY NO. | REVISION | DATE |

600' SCALE MAP NO. _____ DATE: _____

TRAFFIC SIGNAL PLAN SHEET
 SHELTERED HOUSING - REVISED SITE DEVELOPMENT PLAN
 CEDAR LANE
 AT
 FREETOWN ROAD

SCALE:
 1" = 20'
 SHEET
 11B OF 11