

**SHEET INDEX**

| NO | DESCRIPTION                                |
|----|--|
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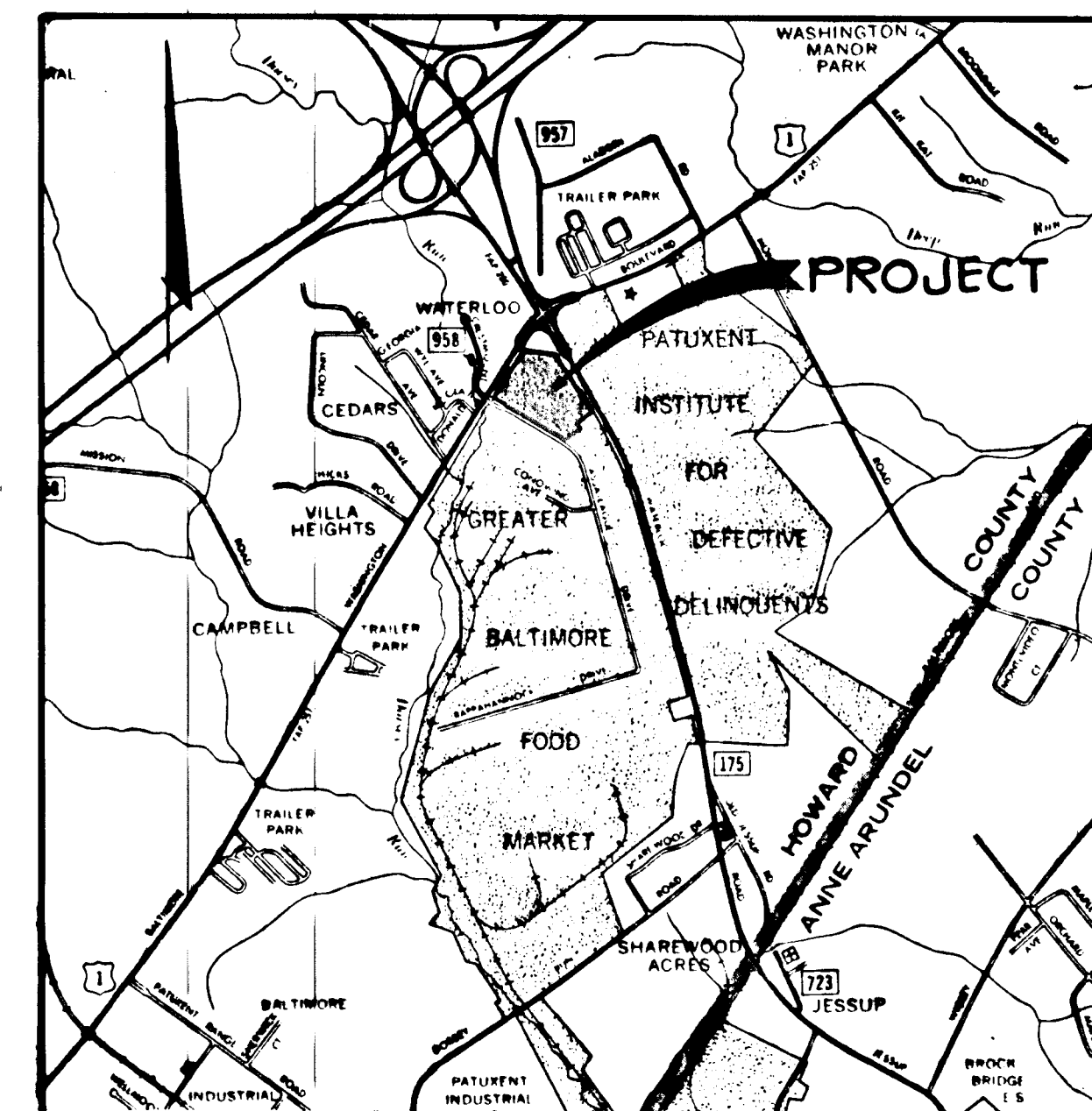
# STORM DRAINS

# MARYLAND WHOLESALE FOOD CENTER

## BLOCK B                  PARCEL B-1

## 6 TH ELECTION DISTRICT

## HOWARD COUNTY, MARYLAND



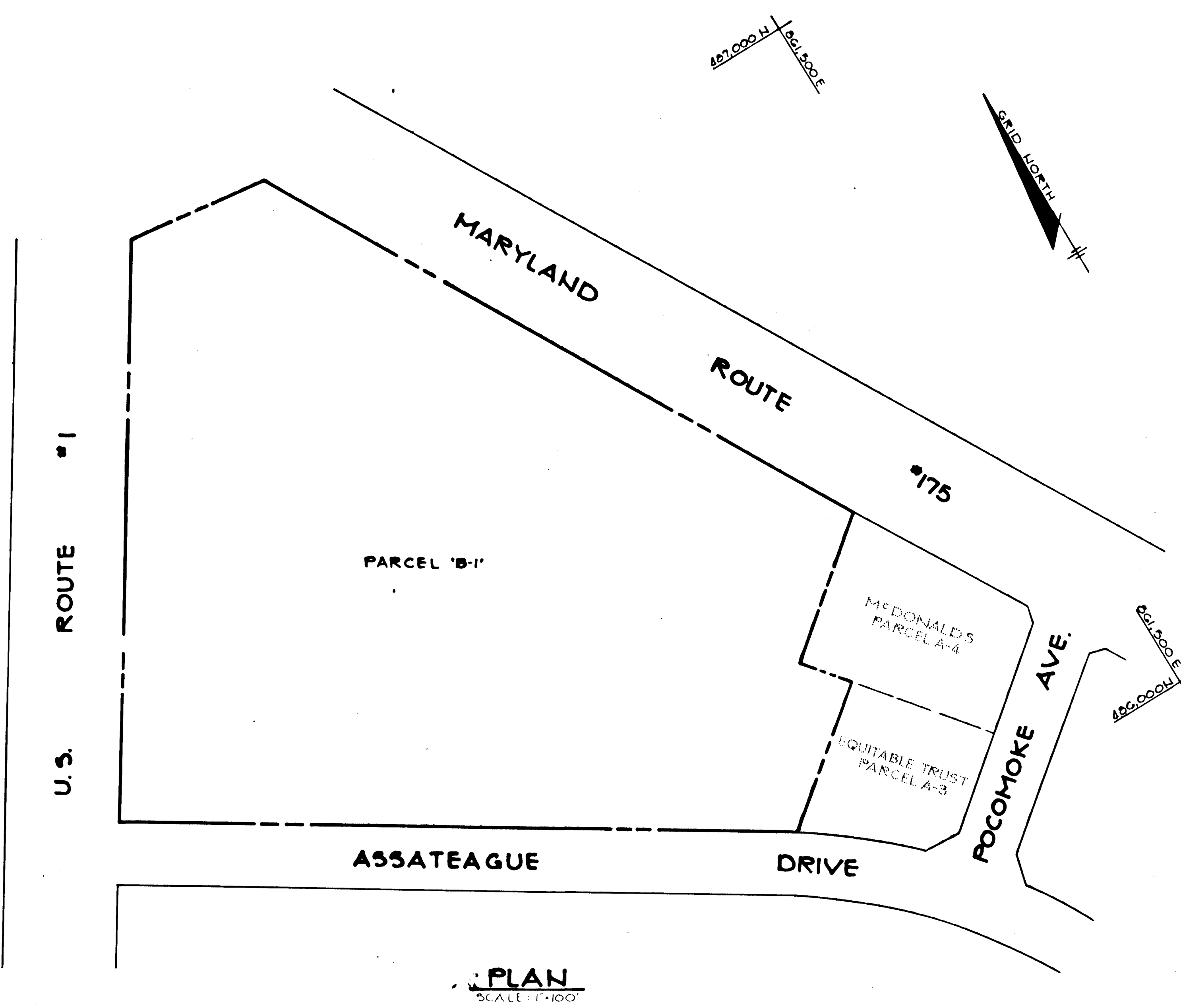
**VICINITY MAP**  
SCALE: 1"=2,000'

**GENERAL NOTES**

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. 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 ENGINEER A MINIMUM OF TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
 

|   |                    |
|---|--------------------|
| MISS UTILITY  | 559-0100           |
| BELL TELEPHONE SYSTEM                                 | 393-3649           |
| LONG DISTANCE CABLE DIVISION                          | 393-3553 OR 3554   |
| BALTIMORE GAS AND ELECTRIC COMPANY                    | 539-8000, EXT. 691 |
| HOWARD COUNTY BUREAU OF UTILITIES                     | 992-2366           |
| HOWARD COUNTY CONSTRUCTION/INSPECTION SURVEY DIVISION | 792-7272           |

 (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)
- ALL STREET CURB RETURNS SHALL HAVE 35.0' RADII UNLESS OTHERWISE NOTED.
- STORM DRAIN TRENCHES WITHIN HOWARD COUNTY RIGHT-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING, AND SIGNING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 1971 EDITION.
- PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
- ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
- ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM 95% COMPACTION.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- SUBJECT PROPERTY ZONED B-1.
- TOPO TAKEN FROM FIELD RUN SURVEY DATED FEBRUARY 4, 1983 BY HUDKINS ASSOCIATES
- ALL STORM DRAINAGE WITHIN THE RIGHT-OF-WAY OF U.S. ROUTE 1 AND ROUTE 175 SHALL BE CONSTRUCTED IN ACCORDANCE WITH MARYLAND STATE HIGHWAY ADMINISTRATION STANDARDS AND APPLICABLE PROVISIONS OF THE ENTRANCE PERMIT ISSUED BY THE MARYLAND STATE HIGHWAY ADMINISTRATION FOR THIS PROJECT.
- ALL CORRUGATED METAL PIPE IS SHOWN AS BITUMINOUS COATED. ALUMINIZED CORRUGATED METAL PIPE MAY BE SUBSTITUTED. ALL CORRUGATIONS SHALL BE 5" UNLESS OTHERWISE NOTED.
- PIPE TO BE BEDDED ON AN ADEQUATE UNIFORM FOUNDATION BACKFILLED WITH SELECTED GRANULAR MATERIAL PLACED IN 6" LAYERS EVENLY ON BOTH SIDES OF THE STRUCTURE. PROVIDE 95% COMPACTION FOR FULL TRENCH DEPTH.
- TRENCH SHALL BE PROTECTED FROM RUN-OFF BY CONSTRUCTING A BERM AROUND THE OPEN EXCAVATION AT THE END OF EACH DAY'S WORK. OPEN END OF PIPE SHALL BE TEMPORARILY BULKHEADED AT THE END OF EACH DAY'S WORK. (SEE DETAIL SHEET 4 OF 5).

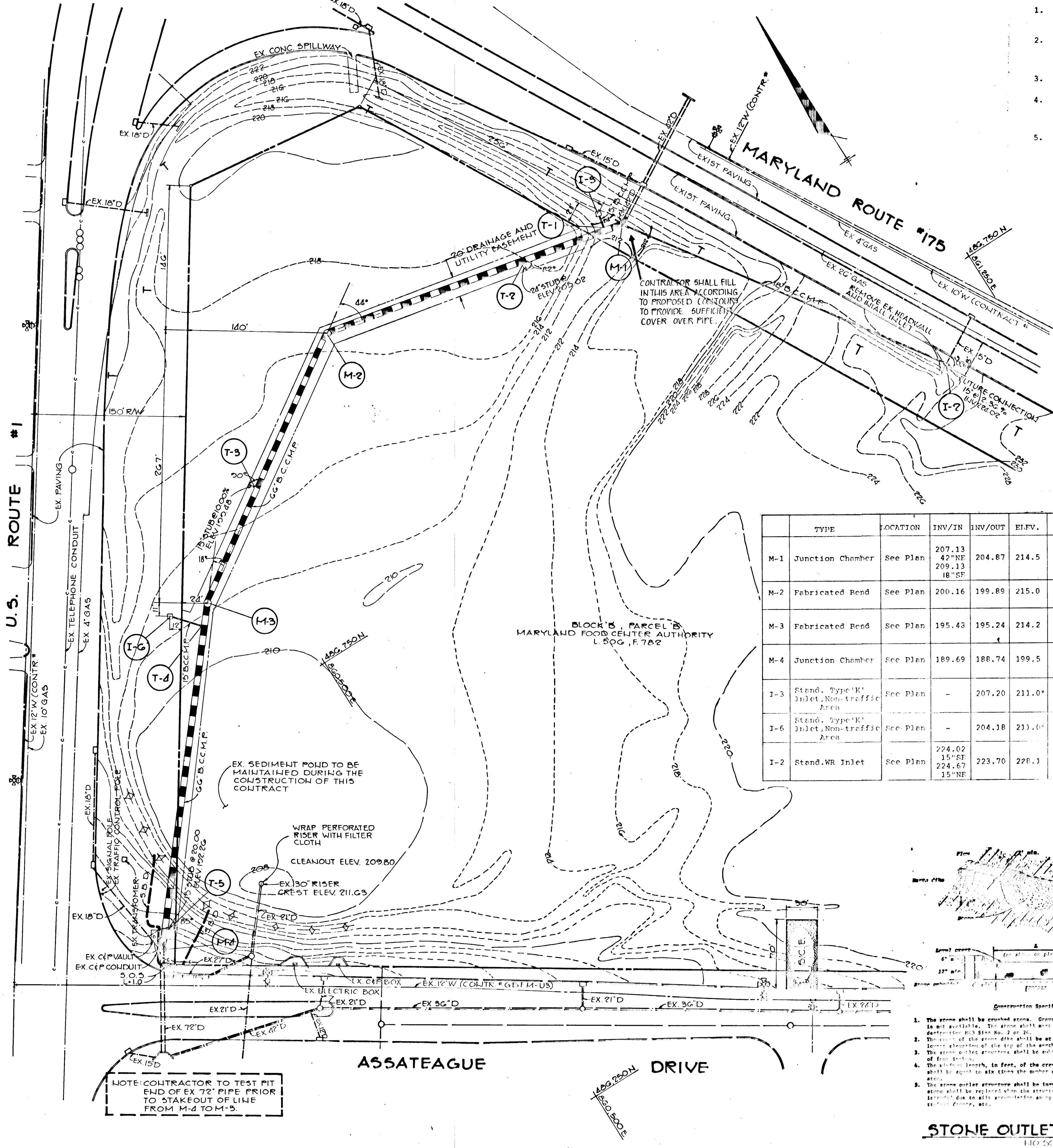


|  |                       |
|--|-----------------------|
| APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  |                       |
| <i>[Signature]</i>   | 4-29-83               |
| CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION  | DATE                  |
| APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS   |                       |
| <i>[Signature]</i>   | 5-2-83                |
| CHIEF, BUREAU OF ENGINEERING   | DATE                  |
| 5/2/83   | REVISED PROJECT TITLE |
| DATE   | NO. REVISION          |
| OWNER/DEVELOPER  |                       |
| MARYLAND WHOLESALE CENTER ASSOCIATION LIMITED PARTNERSHIP<br>1000 EQUITABLE BANK CENTER<br>COLUMBIA, MARYLAND 21044  |                       |
| PROJECT: MARYLAND WHOLESALE FOOD CENTER  |                       |
| AREA RECORD PLAT RECORDING REF #9<br>TAX MAP 1723<br>6TH ELECTION DISTRICT<br>HOWARD COUNTY, MARYLAND  |                       |
| TITLE: TITLE SHEET   |                       |
| <b>THE RIEMER GROUP, INC.</b>  |                       |
| <small>The Riemer Group, Inc. A Land Planning, Design &amp; Civil Engineering Firm<br/>8659 Baltimore National Pike, Ellicott City, Maryland, 21043 301 461-2690</small> |                       |
| 3-16-83<br>DATE  | DESIGNED BY: G R B    |
|  | DRAWN BY: J S K       |
|  | PROJECT NO: 000400    |
|  | DATE: 3-16-83         |
|  | SCALE: AS SHOWN       |
| PROFESSIONAL ENGR. NO. 8707  | DRAWING NO. 1 OF 5    |



1. 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. (922-2070)
2. 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.
3. SITE CONSTRUCTION WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
4. ALL DISTURBED AREAS ARE TO BE DRESSED AND STABILIZED ACCORDING TO THE TEMPORARY SEEDING SCHEDULES AS SOON AS PROPER WEATHER CONDITIONS EXIST FOR THE ESTABLISHMENT OF A PERMANENT VEGETATIVE COVER.
5. 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.

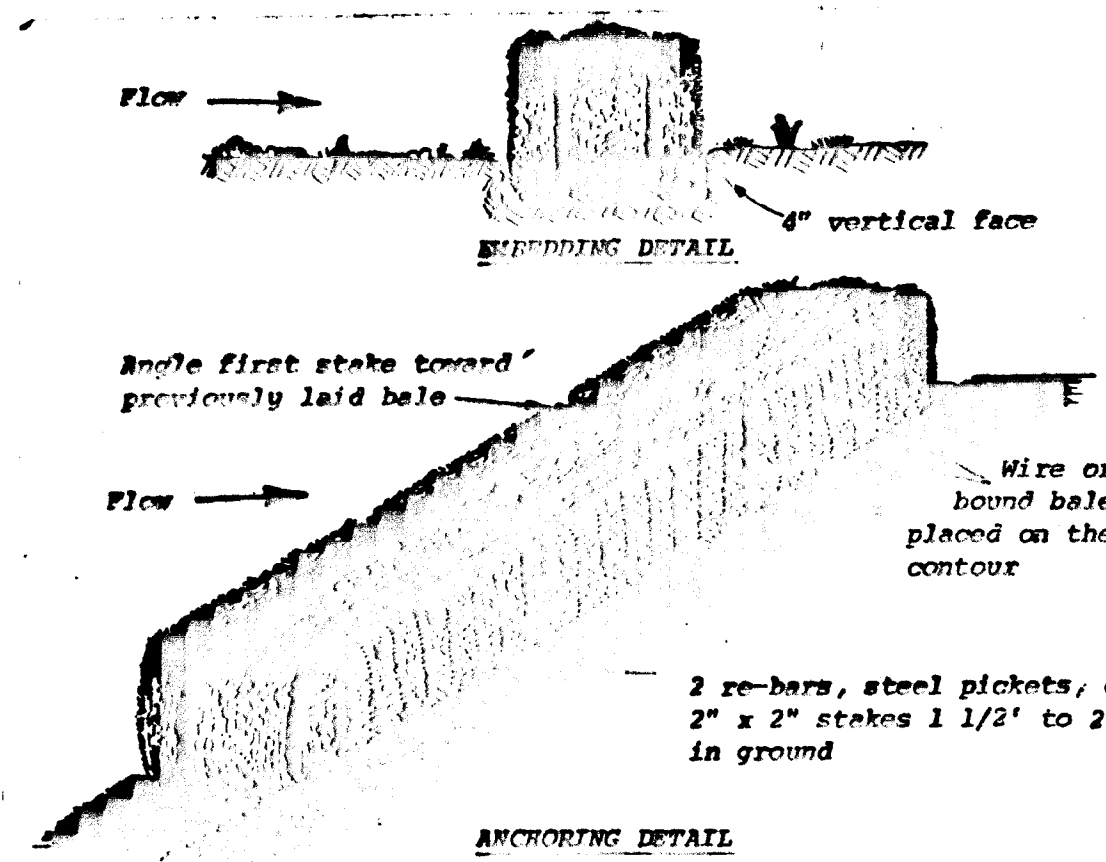
1. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
2. INSTALL STRAW BALE DIKE AND STONE OUTLET STRUCTURE. WRAP RISER WITH FILTER CLOTH.
3. MAINTAIN EXISTING SEDIMENT CONTROL POND DURING CONSTRUCTION OF STORM DRAIN.
4. RESTORE AND TEMPORARY SEED THE OUTSIDE SLOPE OF SEDIMENT CONTROL POND BERM IMMEDIATELY AFTER CONSTRUCTION.
5. UPON COMPLETION OF CONSTRUCTION, CLEAN THE SEDIMENT CONTROL POND, BUT DO NOT REMOVE THE FACILITY.
6. UPON APPROVAL OF SEDIMENT CONTROL INSPECTOR REMOVE THE STRAW BALE DIKE AND STONE OUTLET STRUCTURE.
7. IT IS THE INTENT OF THIS CONTRACT TO DIVERT THE EXISTING STORM WATER THRU THIS PROJECT IN ORDER TO CONSTRUCT THE IMPROVEMENTS SHOWN ON SDP-83-144.



**TEMPORARY SEEDING**

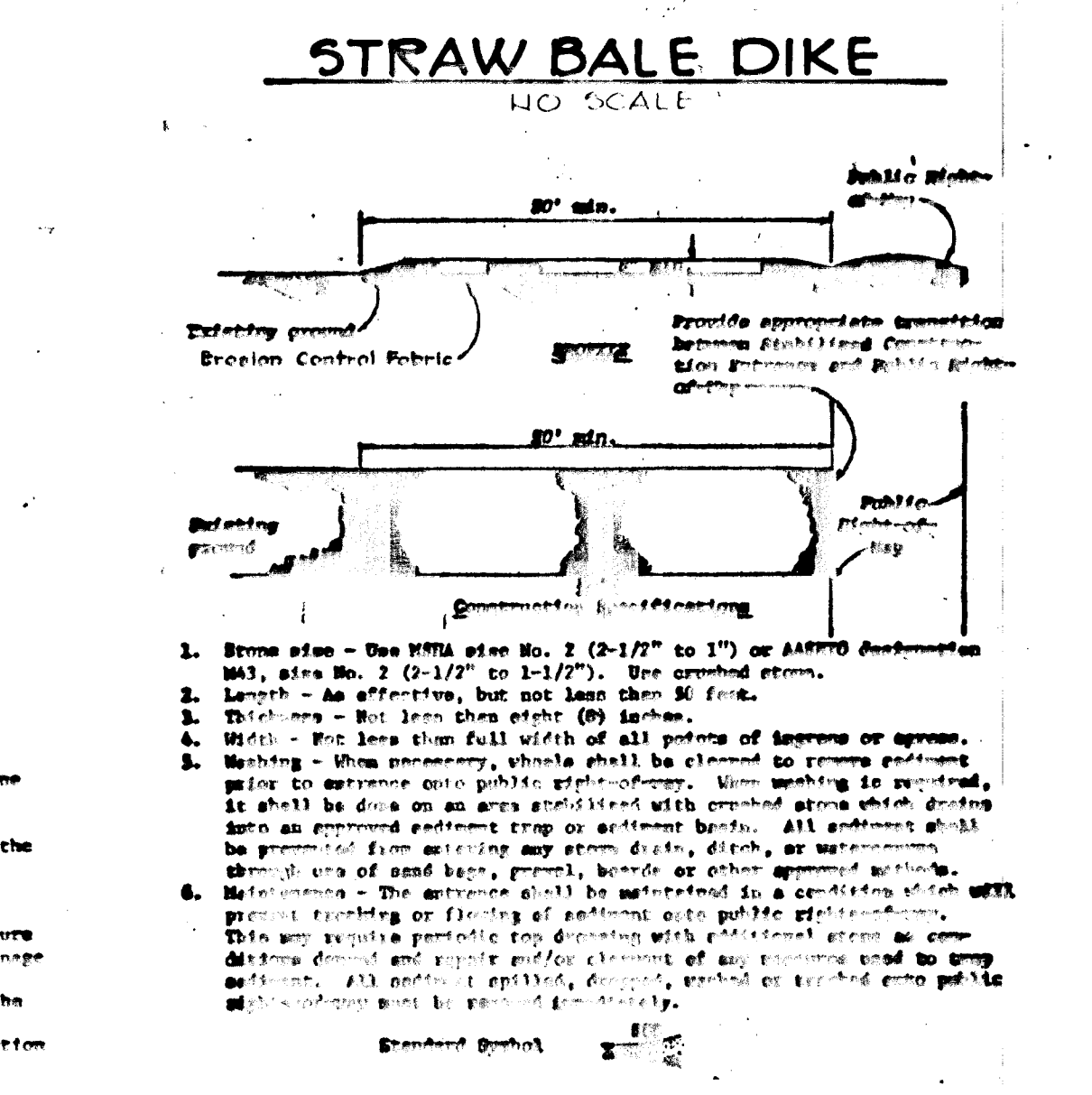
AREA TO BE SEEDED SHALL BE RECENTLY LOOSENEED. IF THE GROUND IS PACKED, CRUSTED OR HARD, THE TOP LAYER OF SOIL SHALL BE LOOSENEED BY DISCING, RAKING OR OTHER ACCEPTABLE MEANS.

- A. APPLY 10-20-10 FERTILIZER (OR EQUIVALENT) AT THE RATE OF 600 LBS. PER ACRE OR 15 LBS. PER 1000 SQ. FT.
- B. WHERE SOIL IS KNOWN TO BE HIGHLY ACID, APPLY DOLOMITIC LIMESTONE AT THE RATE OF 1 TON PER ACRE.
- C. 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.
- D. 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 GALLONS PER 1000 SQ. FT.



- Construction Specifications**
1. Bales shall be placed in a row with ends tightly abutting the adjacent bales.
  2. Each bale shall be embedded in the soil a minimum of 4".
  3. Bales shall be securely anchored in place by stakes or re-bars driven through the bales. The first stake in each bale shall be angled toward previously laid bale to force bales together.
  4. Inspection shall be frequent and repair or replacement shall be made promptly as needed.
  5. Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

| TYPE | LOCATION                                | INV/IN   | INV/OUT                            | ELEV.            | REMARKS                                |
|------|---|----------|------------------------------------|------------------|--|
| M-1  | Junction Chamber                        | See Plan | 207.13<br>42"NE<br>209.13<br>18"SE | 204.87<br>214.5  | See Detail Sheet 4 of 5                |
| M-2  | Fabricated Bend                         | See Plan | 200.16                             | 199.89<br>215.0  | See Detail Sheet 4 of 5                |
| M-3  | Fabricated Bend                         | See Plan | 195.43                             | 195.24<br>214.2  | See Detail Sheet 4 of 5                |
| M-4  | Junction Chamber                        | See Plan | 189.69                             | 188.74<br>199.5  | See Detail Sheet 4 of 5                |
| I-3  | Stand. Type 'K' Inlet, Non-traffic Area | See Plan | -                                  | 207.20<br>211.0' | SEE MD 378.03 SEE DETAIL SHEET 4 OF 5. |
| I-6  | Stand. Type 'K' Inlet, Non-traffic Area | See Plan | -                                  | 204.18<br>211.0' | SEE MD 378.03 SEE DETAIL SHEET 4 OF 5. |
| I-2  | Stand. WR Inlet                         | See Plan | 224.02<br>15'SE<br>224.67<br>15'NE | 223.70<br>228.1  | SEE MD 374.04 SEE DETAIL SHEET 4 OF 5. |



- Construction Specifications**
1. The stone shall be crushed stone. Gravel may be used if crushed stone is not available. The stone shall meet Size No. 2 or AASHTO designation M33 Size No. 2 or 24.
  2. The crest of the stone dike shall be at least six (6) inches above the lowest elevation of the top of the arch dike and shall be level.
  3. The stone outlet structure shall be embedded into the soil a minimum of four (4) feet.
  4. The stone length, in feet, of the crest of the stone outlet structure shall be equal to six (6) times the number of arches of contributing drainage area.
  5. The stone outlet structure shall be tampered after each rain, and the stone shall be replaced when the structure ceases to function as intended due to any accumulation along the crest, without consideration of erosion, etc.

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 EROSION BEFORE BEGINNING THE PROJECT."

*Patrick McCuan* 4/26/83  
DEVELOPER: PATRICK MCCUAN 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."

*Arthur E. Muegge* 3-16-83  
ENGINEER: ARTHUR E. MUEGGE DATE

REVIEWED FOR HOWARD COUNTY: S.C.D.

AND MEETS TECHNICAL REQUIREMENTS

*James M. Delon* 4-28-83  
U.S. SOIL CONSERVATION SERVICE DATE

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

*Wm J. Rowe* 4-28-83  
HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

*William M. Johnson* 4-29-83  
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Robert E. R. R. R.* 5-2-83  
CHIEF, BUREAU OF ENGINEERING DATE

5/2/83 REVISOR PROJECT TITLE

DATE NO. REVISION

OWNER/DEVELOPER  
MARYLAND WHOLESALE CENTER ASSOCIATION  
LIMITED PARTNERSHIP  
1000 EQUITABLE BANK CENTER  
COLUMBIA, MARYLAND 21044

PROJECT: MARYLAND WHOLESALE FOOD CENTER

AREA RECORD PLAT RECORDING REFERENCE  
TAX MAP 14183  
G1 ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

TITLE: STORM DRAIN PLAN AND SEDIMENT CONTROL PLAN

THE RIEMER GROUP, INC.  
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm  
8659 Baltimore National Pike, Ellicott City Maryland 21043 301-411-2193

3-16-83 DATE

DESIGNED BY: V.L.S.

DRAWN BY: L.J.D.

PROJECT NO: 000400

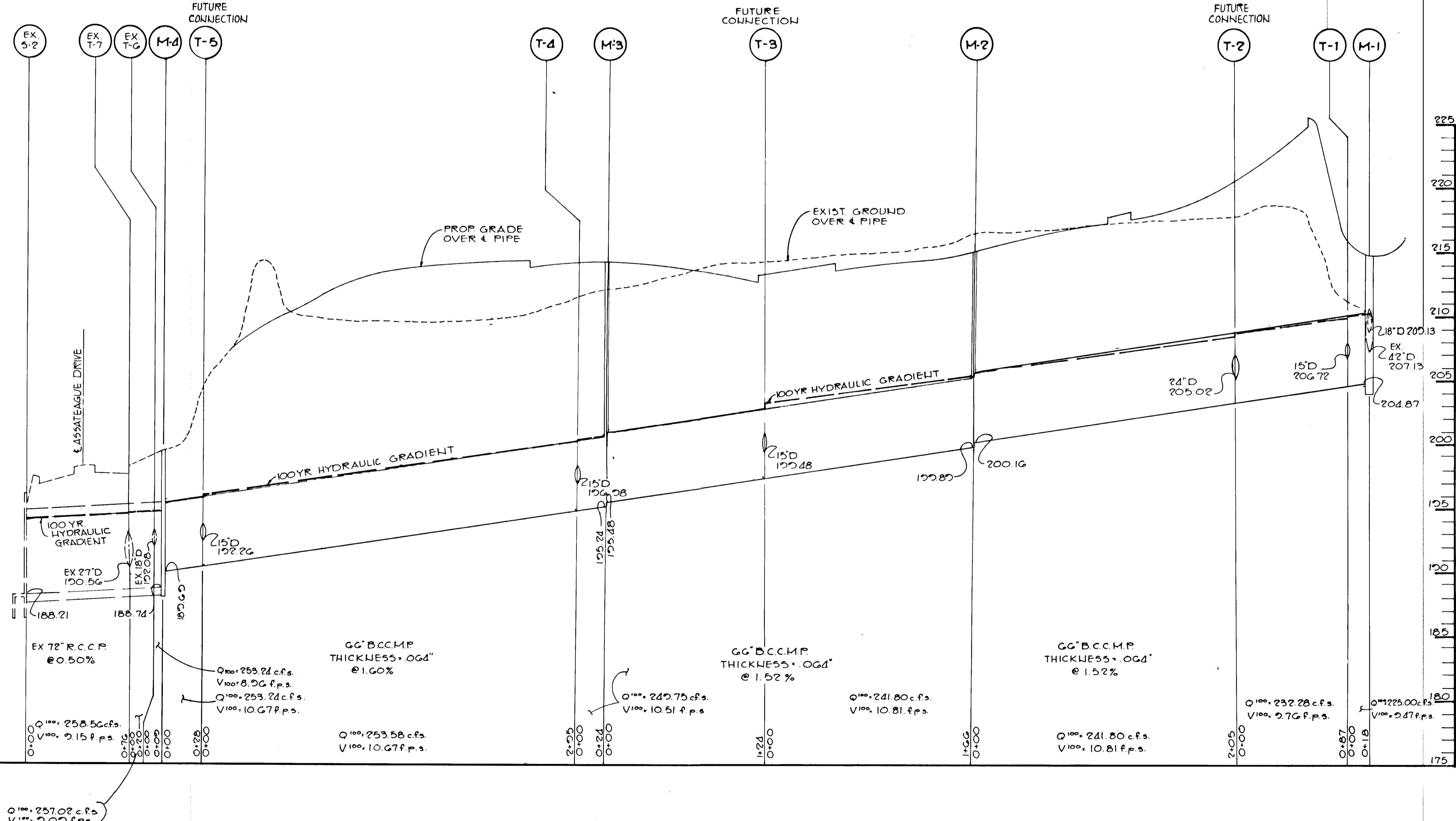
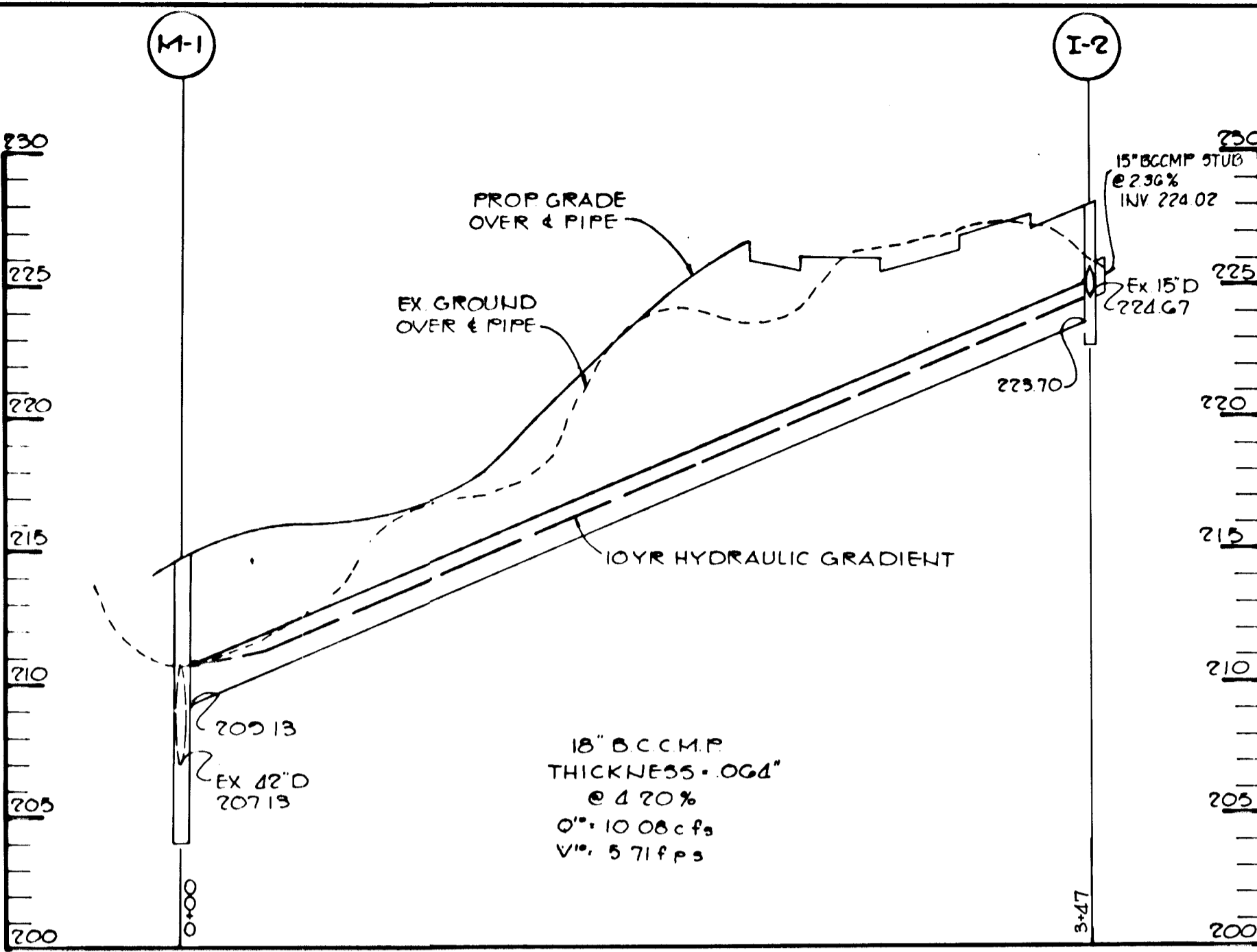
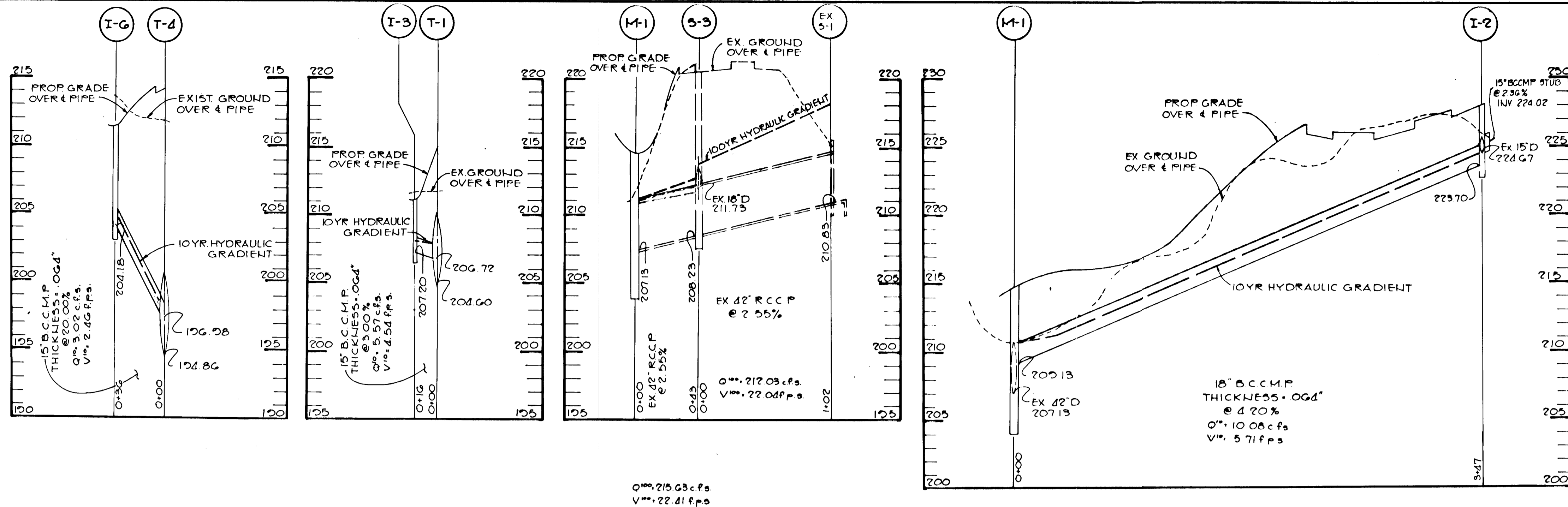
DATE: 3-16-83

SCALE: 1"=50'

DRAWING NO. 2 OF 5

*Arthur E. Muegge*  
PROFESSIONAL ENGR. NO. 8707

STONE OUTLET STRUCTURE STABILIZED CONSTRUCTION ENTRANCE  
NO SCALE



APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION  
 DATE: 4-27-83

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 CHIEF, BUREAU OF ENGINEERING  
 DATE: 5-2-83  
 7/25/83: ADDED QIV BETWEEN EX 70 AND M-1  
 5/2/83: REVISED PROJECT TITLE

OWNER/DEVELOPER  
 MARYLAND WHOLESALE CENTER ASSOCIATION LIMITED PARTNERSHIP  
 1000 EQUITABLE BANK CENTER  
 COLUMBIA, MARYLAND 21044

PROJECT: MARYLAND WHOLESALE FOOD CENTER

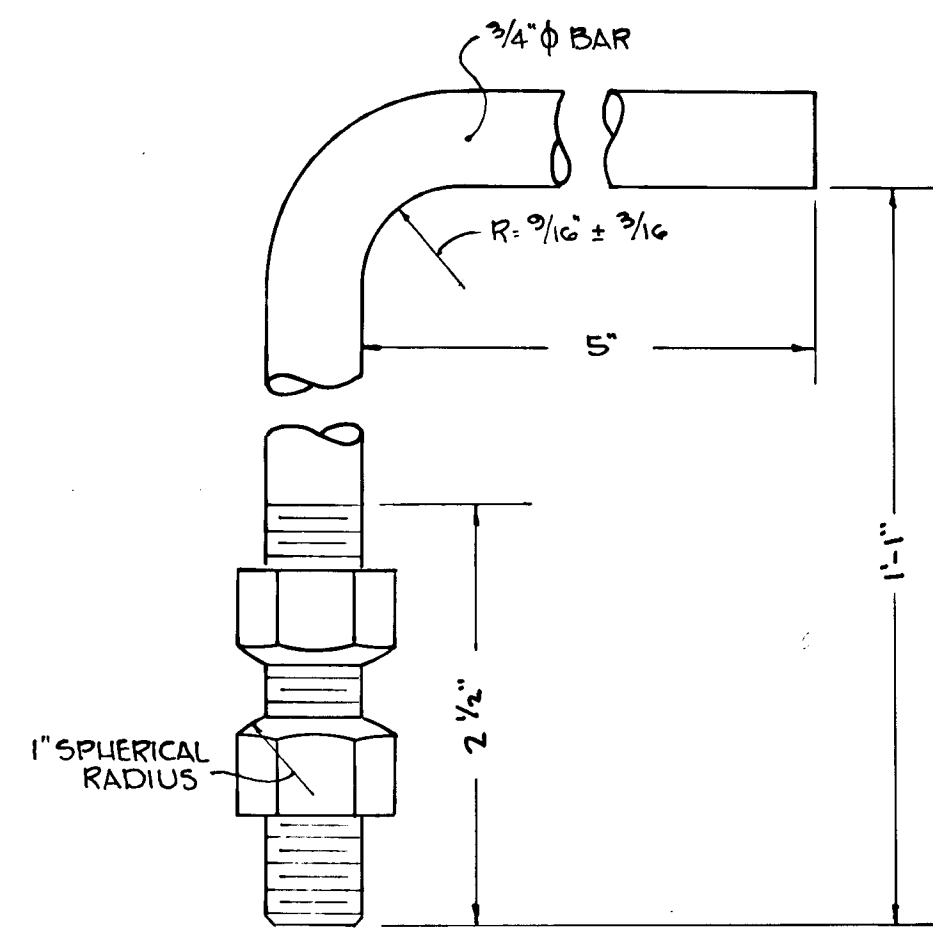
AREA RECORD PLAT RECORDING REF. NO. TAX MAP 42 43  
 6TH ELECTION DISTRICT  
 HOWARD COUNTY MARYLAND

TITLE: STORM DRAIN PROFILES

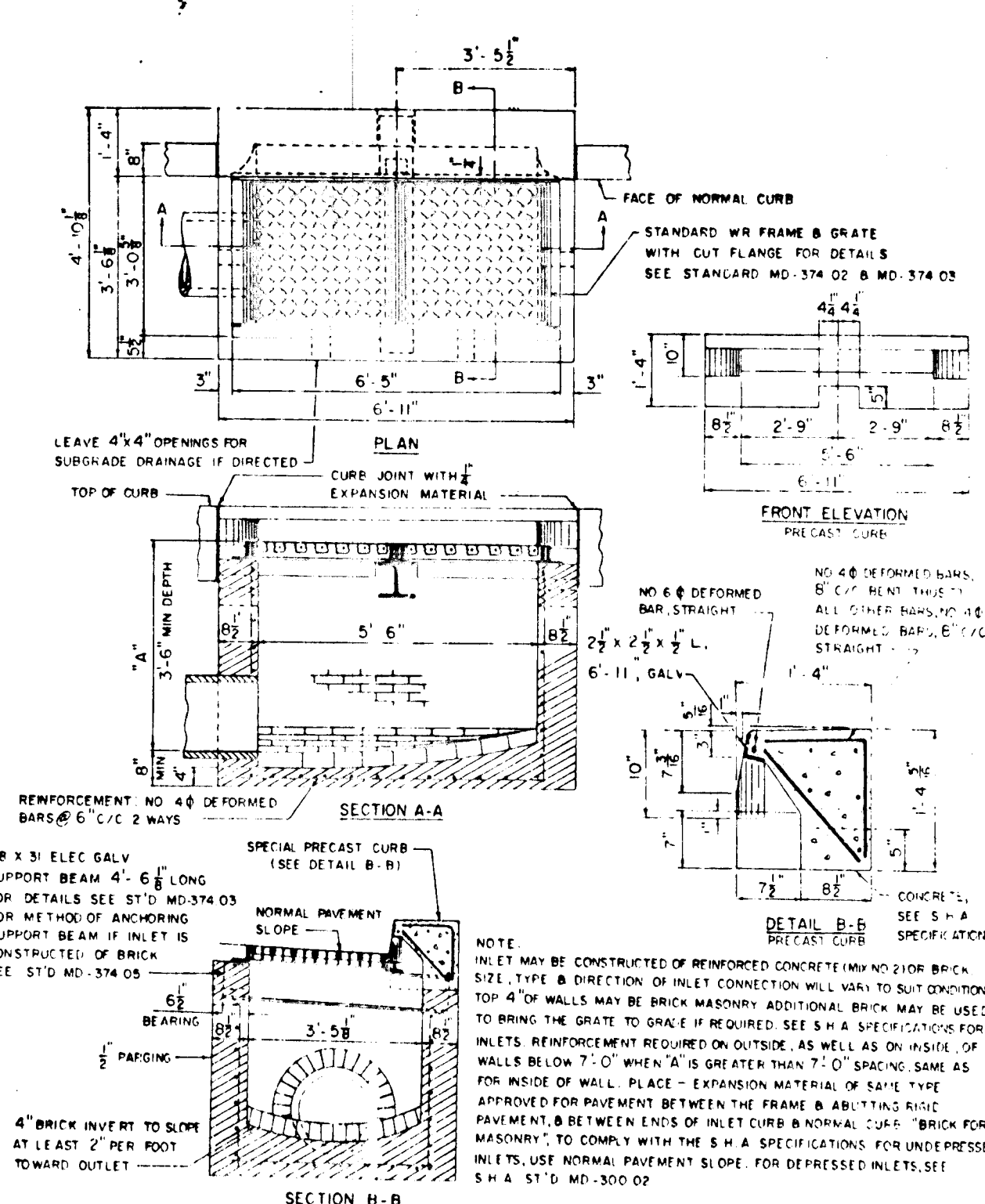
THE RIEMER GROUP, INC.  
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm  
 8659 Baltimore National Pike, Ellicott City, Maryland, 21043 301 461-2690

DATE: 3-16-83  
 DESIGNED BY: V.L.S.  
 DRAWN BY: D.A.M.  
 PROJECT NO: 000400  
 DATE: 3-16-83  
 SCALE: HORIZ: 1"=50', VERT: 1"=5'  
 DRAWING NO. 3 OF 5

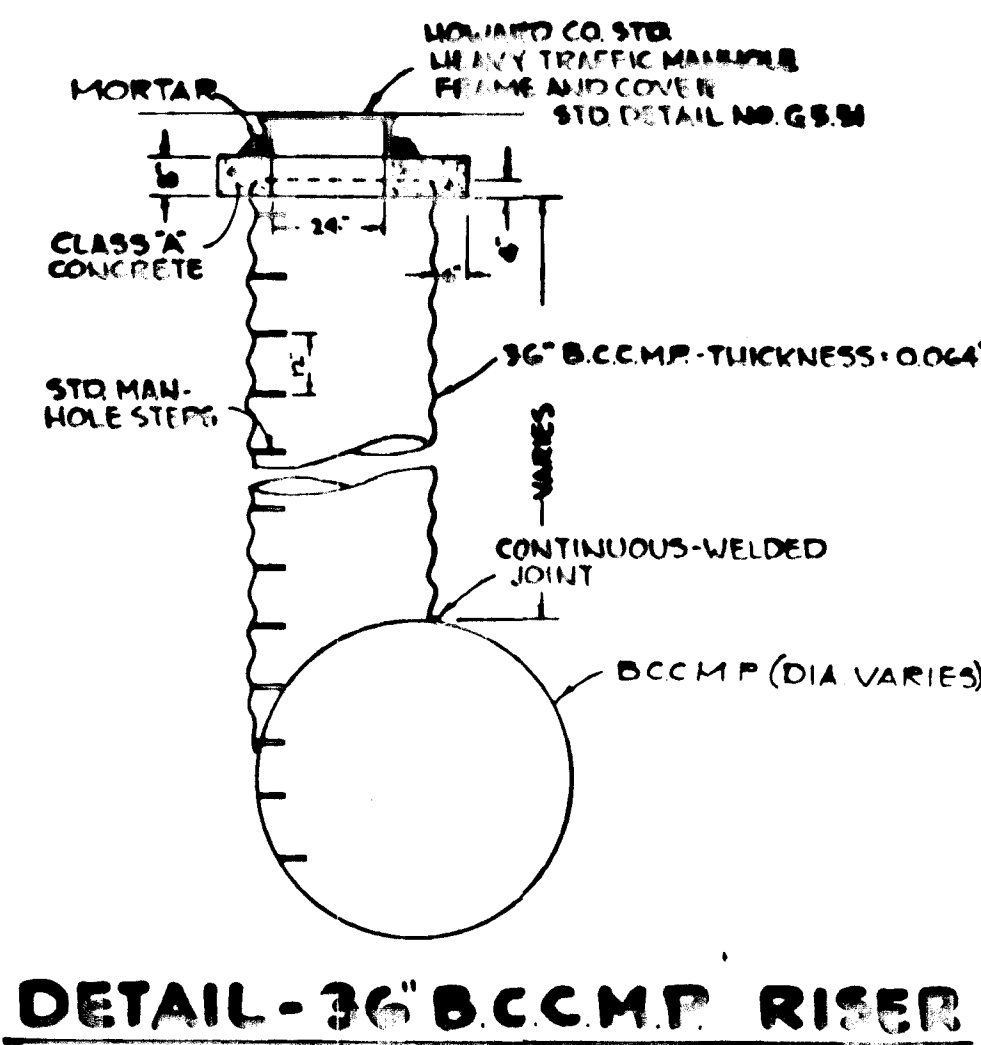




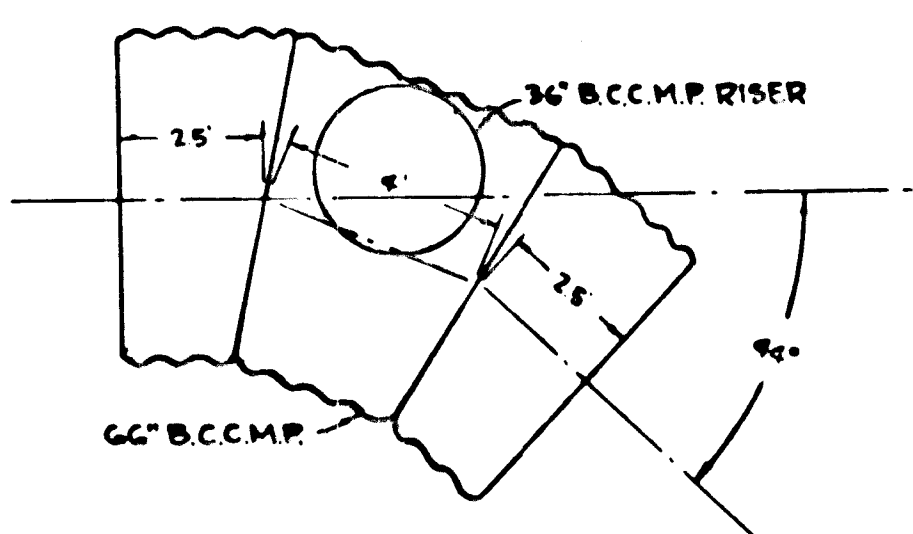
**HOOK BOLT DETAIL**  
S.H.A. STANDARD NO. MD.-402.01  
NO SCALE



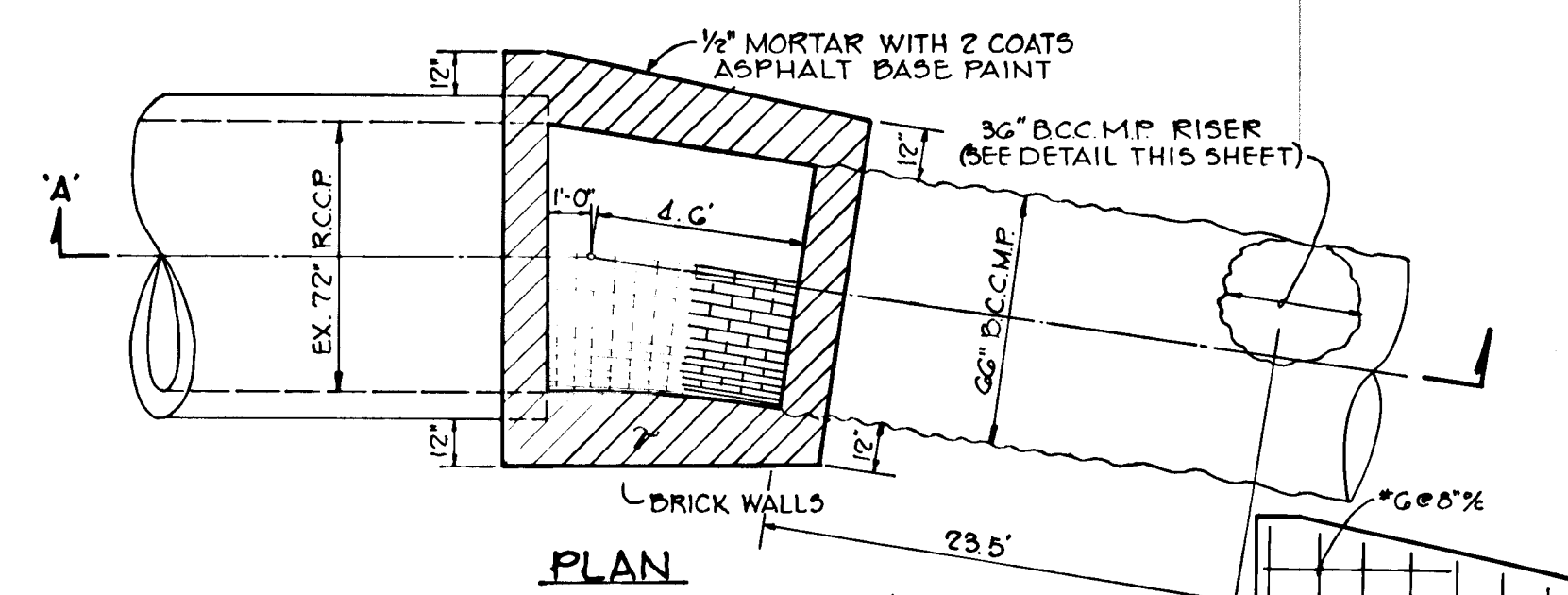
**STANDARD WR INLET**  
S.H.A. STANDARD NO. MD.-374.04  
NO SCALE



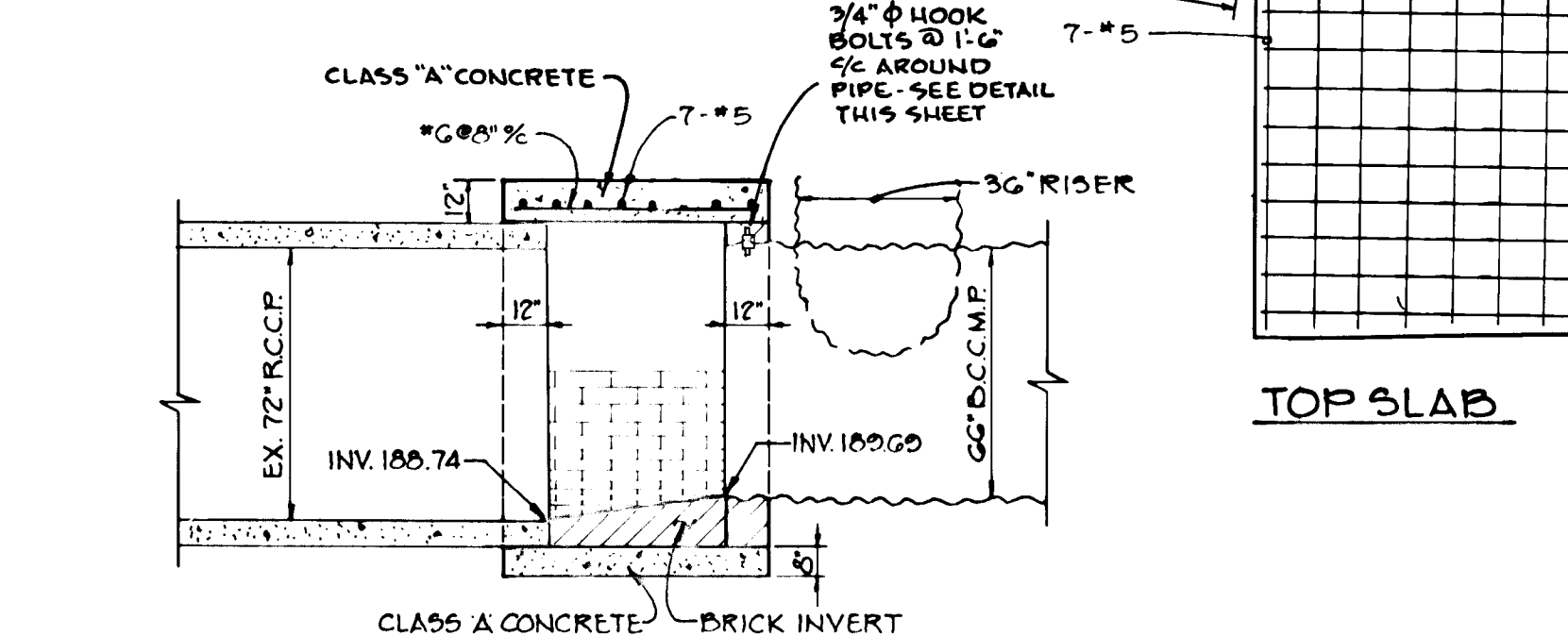
**DETAIL-36" B.C.C.M.P. RISER**  
NO SCALE



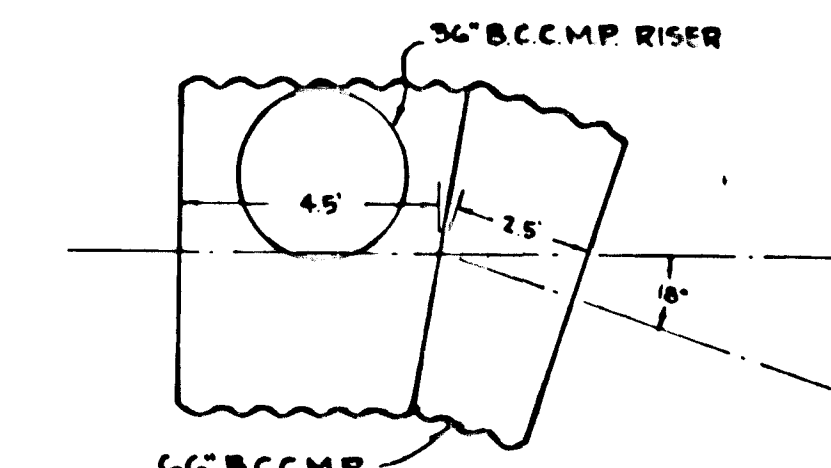
**MANHOLE M-2**  
NO SCALE



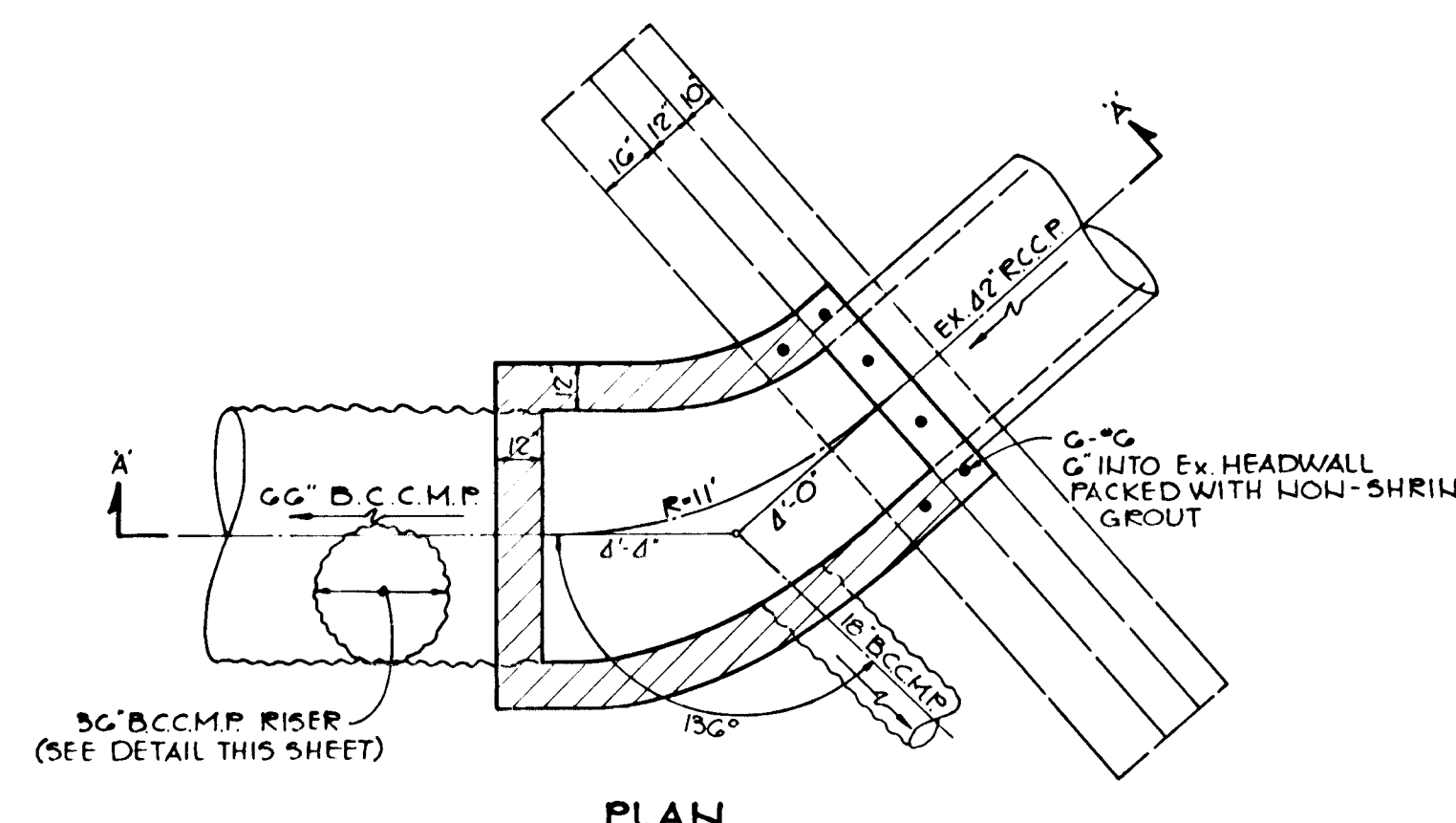
**DETAIL OF MANHOLE NO. 4**  
NO SCALE



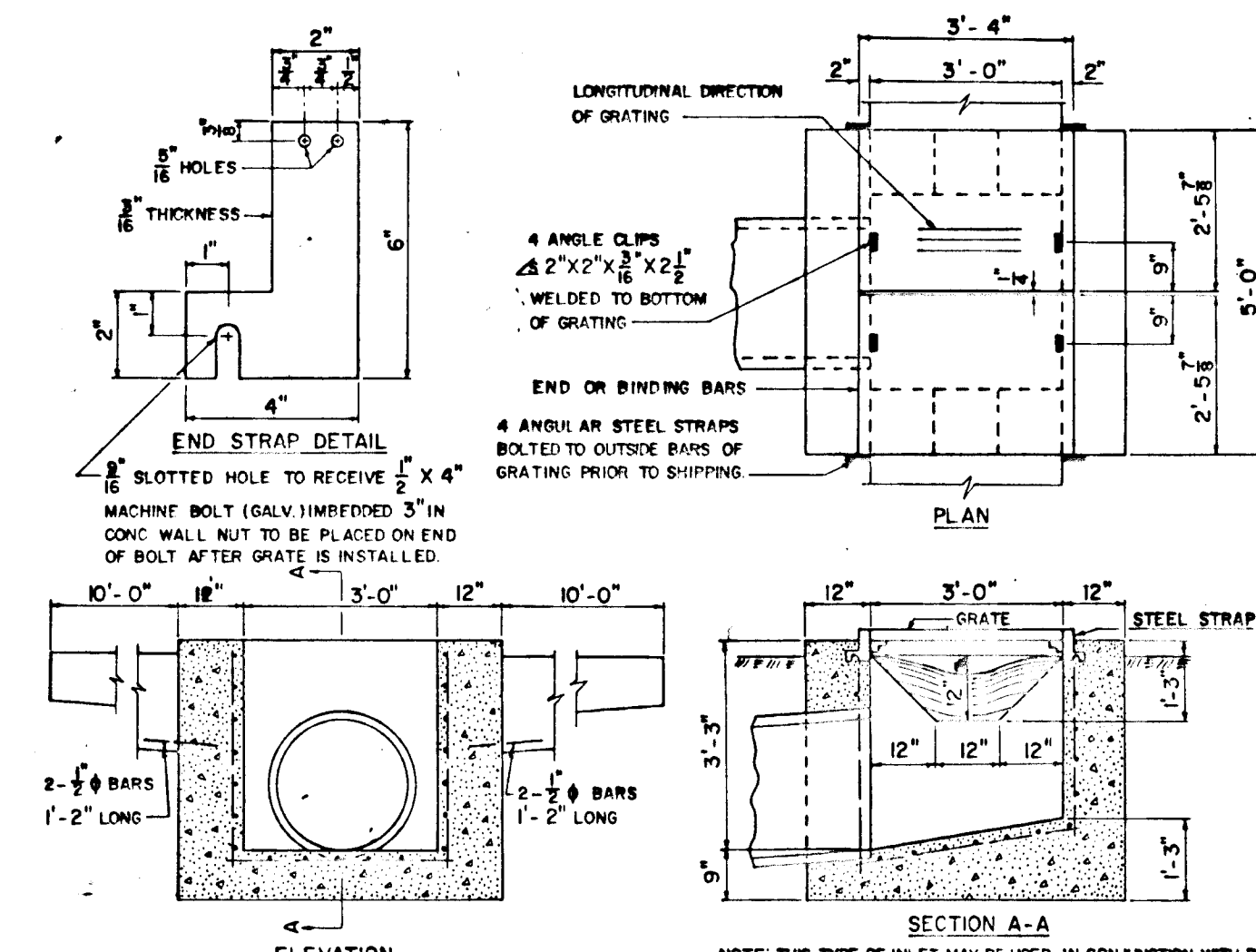
**SECTION A-A**



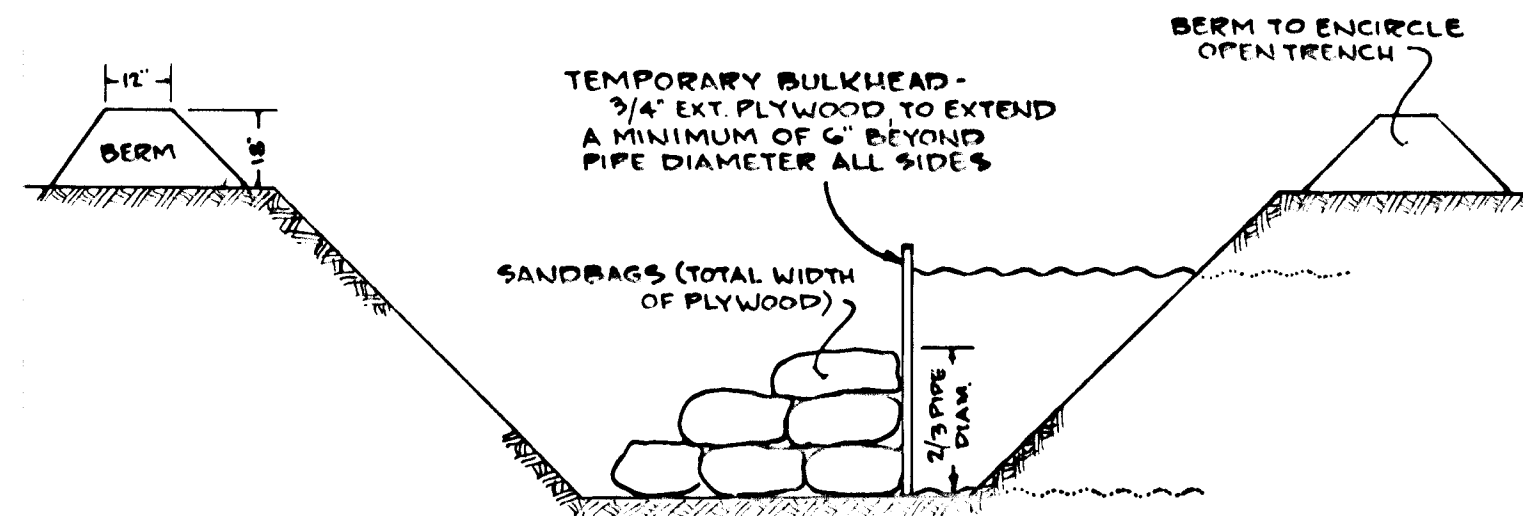
**MANHOLE M-3**  
NO SCALE



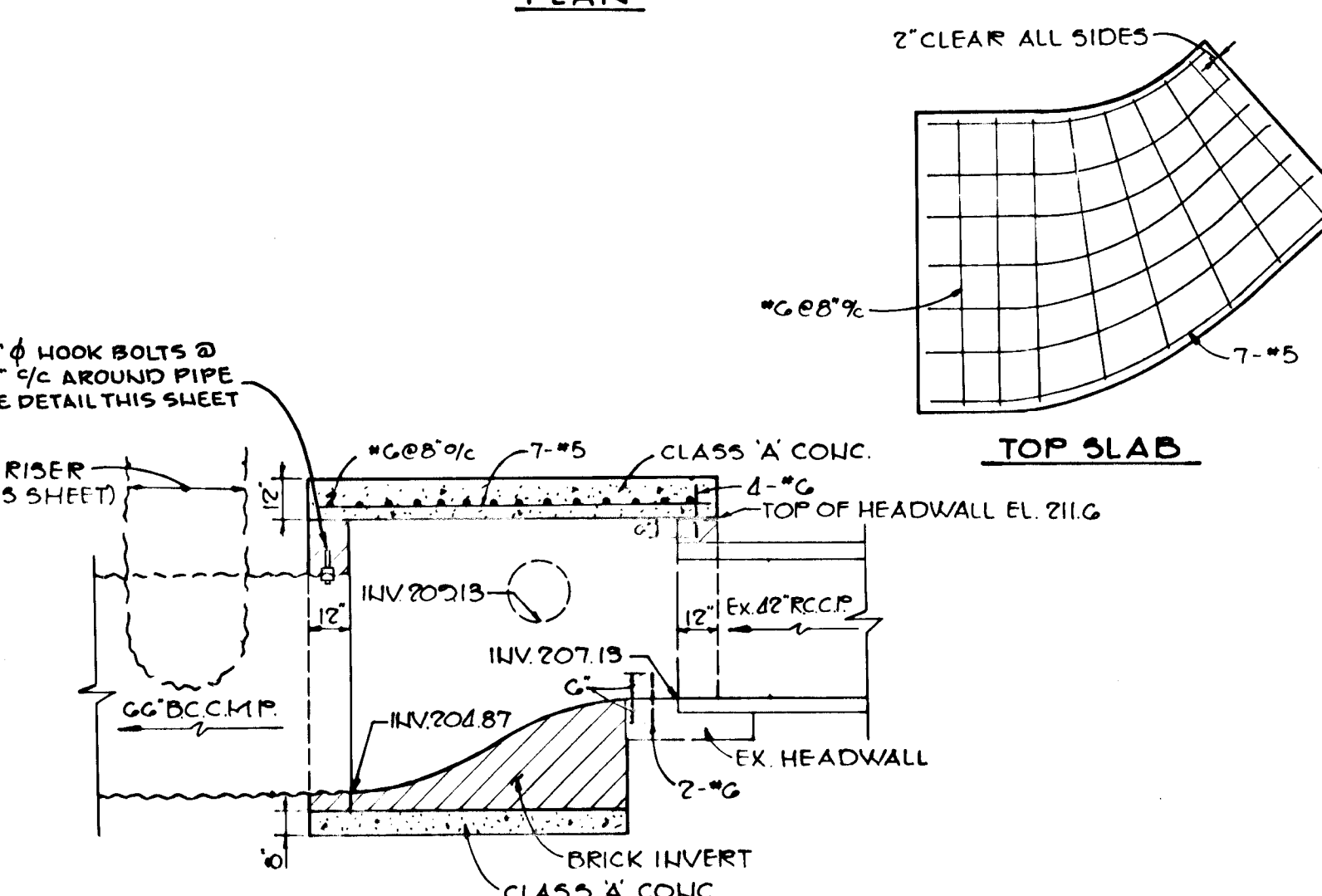
**DETAIL OF MANHOLE NO. 1**  
NO SCALE



**STANDARD TYPE K INLET**  
S.H.A. STANDARD NO. MD.-378.03  
NO SCALE



**TEMPORARY BULKHEAD DETAIL**  
SEE GENERAL NOTE # 18  
NO SCALE



**SECTION A-A**

**DETAIL OF MANHOLE NO. 1**  
NO SCALE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

*William M. ...* 4-29-83  
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*W. ...* 5-2-83  
CHIEF, BUREAU OF ENGINEERING

|         |         |         |         |
|---------|---------|---------|---------|
| 7/25/83 | REVISOR | REVISOR | REVISOR |
| 5/2/83  | REVISOR | REVISOR | REVISOR |

OWNER/DEVELOPER  
MARYLAND WHOLESALE CENTER ASSOCIATION  
LIMITED PARTNERSHIP  
1000 EQUITABLE BANK CENTER  
COLUMBIA, MARYLAND 21044

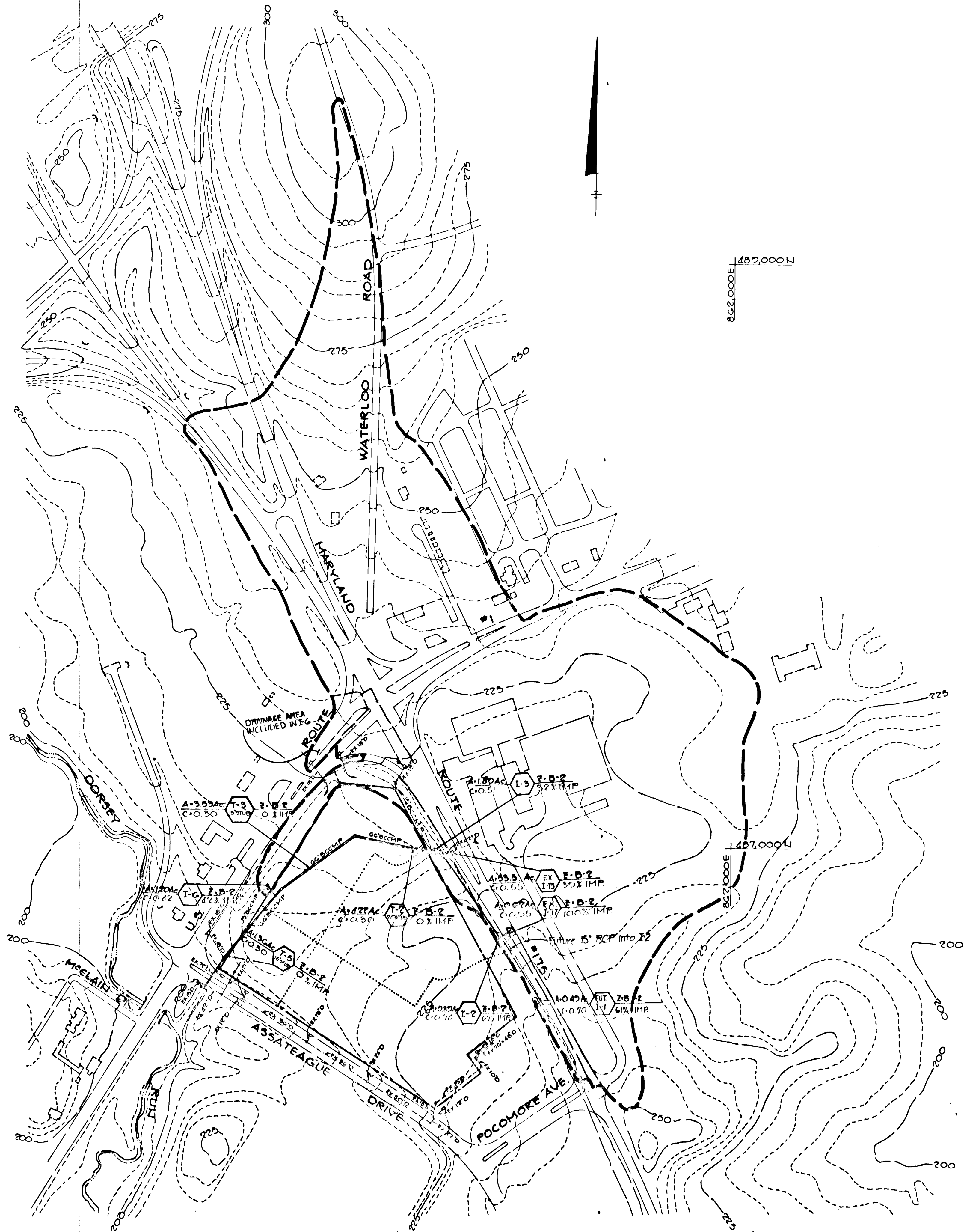
PROJECT: MARYLAND WHOLESALE FOOD CENTER

AREA RECORD PLAT RECORDING REF. NO. TAX MAP NO. 25  
G.T. ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: STORM DRAIN DETAILS

**THE RIEMER GROUP, INC.**  
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm  
8619 Baltimore National Pike, Ellicott City, Maryland, 21043 301 413-2700

|         |      |                     |
|---------|------|---------------------|
| 3-16-83 | DATE | DESIGNED BY: V.L.S. |
|         |      | DRAWN BY: L.J.D.    |
|         |      | PROJECT NO: 000400  |
|         |      | DATE: 3-16-83       |
|         |      | SCALE: AS SHOWN     |
|         |      | DRAWING NO. 4 OF 5  |



APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

*John M. ...* 4-29-83  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*William E. ...* 5-2-83  
 CHIEF, BUREAU OF ENGINEERING DATE

5/2/83 REVISOR'S PROJECT TITLE

DATE NO. REVISION

OWNER/DEVELOPER  
 MARYLAND WHOLESALE CENTER ASSOCIATION LIMITED PARTNERSHIP  
 1000 EQUITABLE BANK CENTER  
 COLUMBIA, MARYLAND 21044

PROJECT: MARYLAND WHOLESALE FOOD CENTER

AREA RECORD PLAT RECORDING REF NO. TAX MAP 48 49 6TH ELECTION DISTRICT HOWARD COUNTY MARYLAND

TITLE: DRAINAGE AREA MAP

**THE RIEMER GROUP, INC.**  
 The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm  
 8659 Baltimore National Pike, Ellicott City, Maryland, 21043 301-463-2700

3-16-83 DATE  
 DESIGNED BY: V.L.S.  
 DRAWN BY: D.A.M.  
 PROJECT NO: 000400  
 DATE: 3-16-83  
 SCALE: 1"=200'  
 DRAWING NO: 5 OF 5