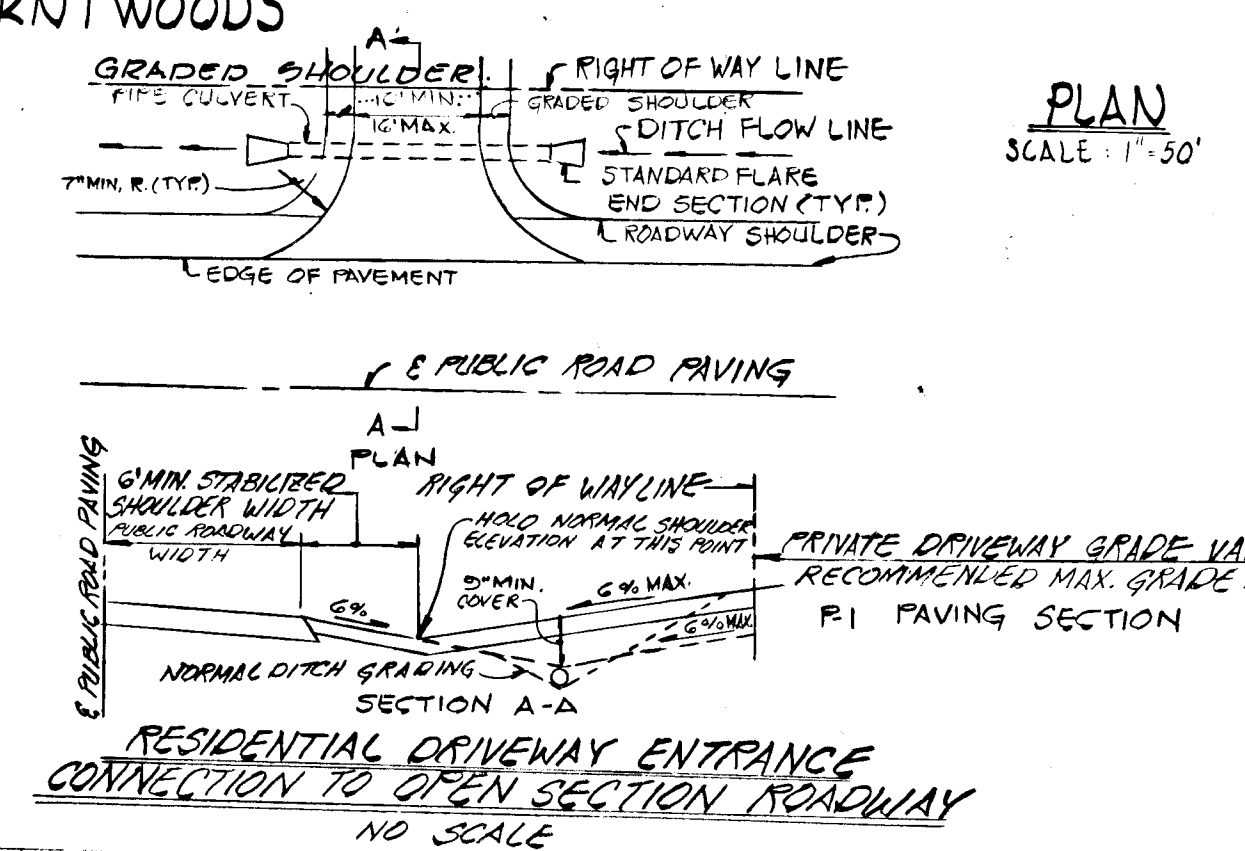
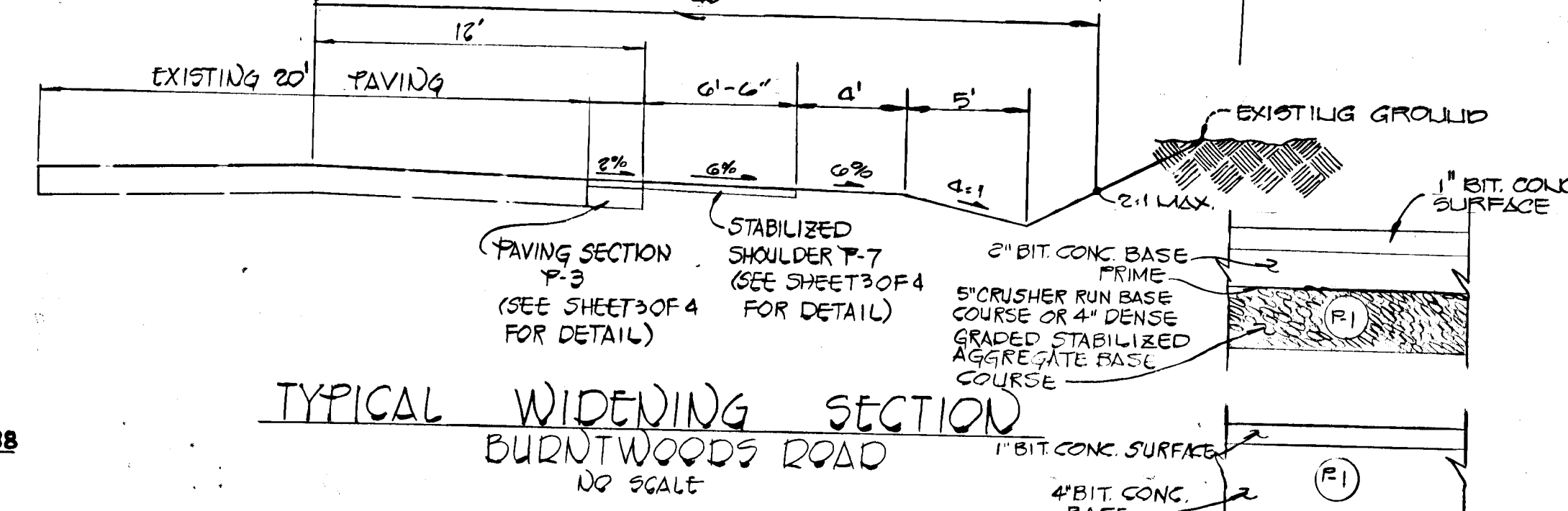


**BENCH MARKS**

B.M. STA. 3233002 ELEV. 502.174  
CONCRETE MONUMENT 0.3' BELOW SURFACE  
SEE HOWARD COUNTY RECOVERY CARD.

B.M. STA. 3333001 ELEV. 505.281  
CONCRETE MONUMENT 0.5' BELOW SURFACE  
SEE HOWARD COUNTY RECOVERY CARD.

FOR LOCATIONS OF BENCH MARKS SEE VICINITY MAP.



CHARLES J. CROVO, SR.  
DATE 9/1/88

APPROVED DEPARTMENT OF PUBLIC WORKS  
12-21-88

APPROVED OFFICE OF PLANNING AND ZONING  
12-23-88

APPROVED COMMUNITY PLANNING AND LAND DEVELOPMENT  
12/19/88

APPROVED DEPARTMENT OF PUBLIC WORKS  
12/19/88

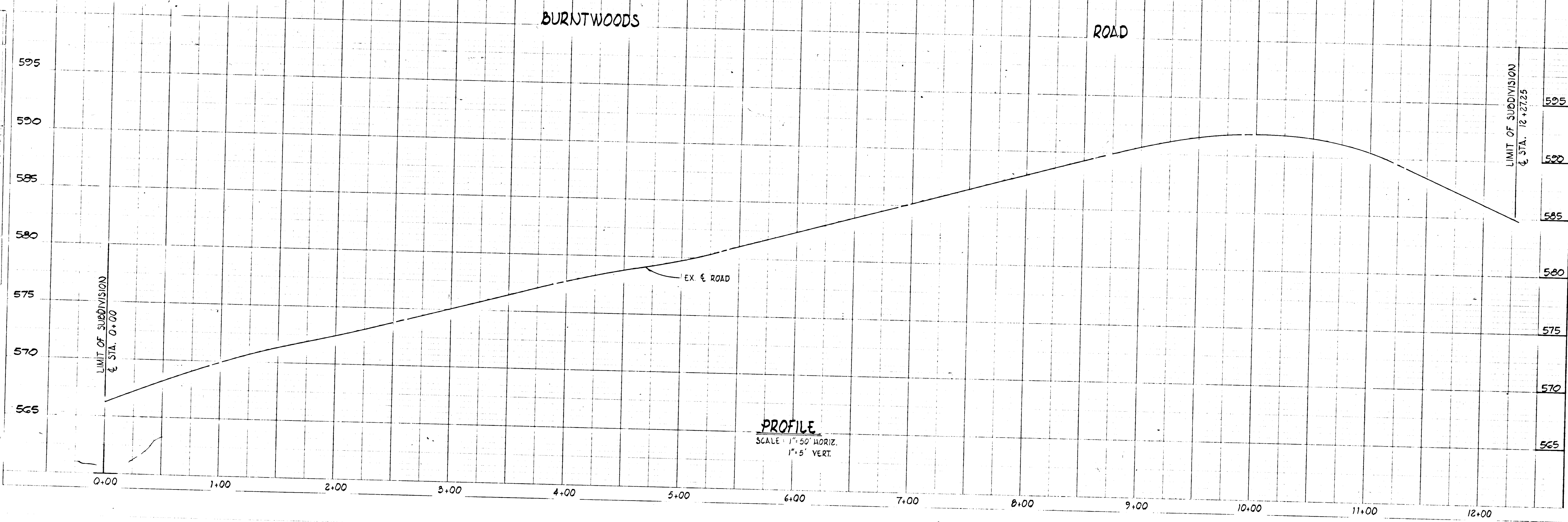
CHIEF, BUREAU OF HIGHWAYS

CHIEF, LAND DEVELOPMENT DIVISION

The Horizontal and Vertical Control is Based on the Following Stations:

STA. 3233002-R N 927457.476 E 794403.003

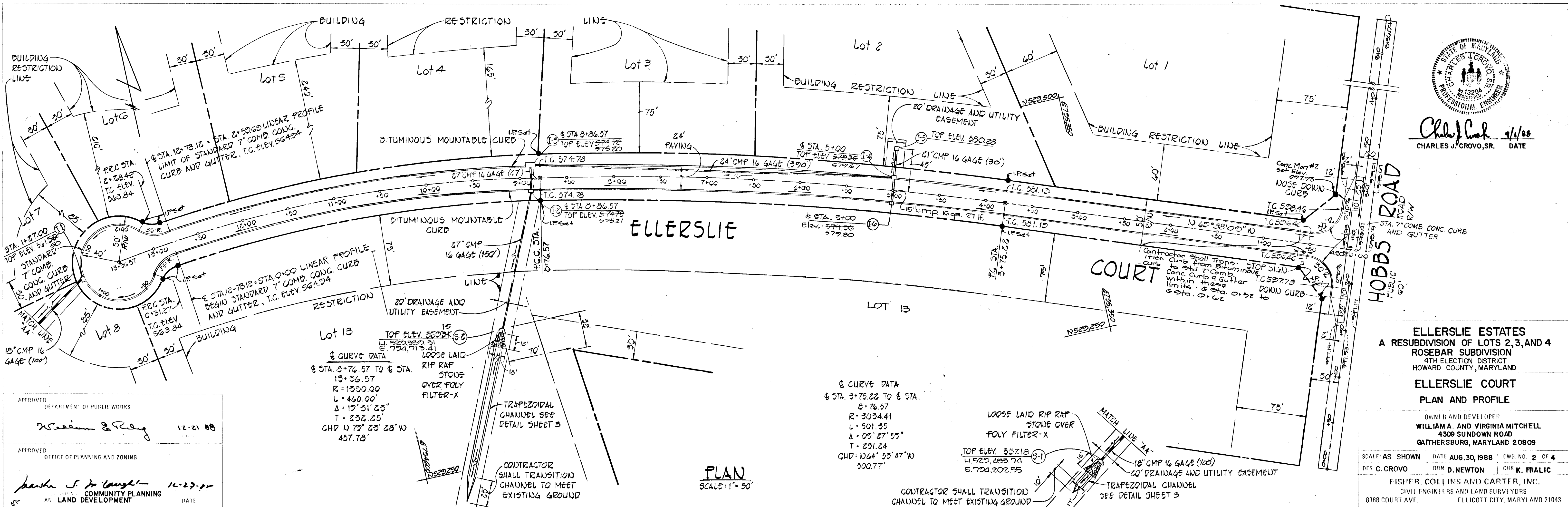
STA. 3333001-R N 928227.727 E 799210.140



- GENERAL NOTES**
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH HOWARD COUNTY STANDARDS, SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
  2. ALL UTILITY COMPANIES MUST BE NOTIFIED 30 DAYS IN ADVANCE OF ANY CONSTRUCTION.
  3. STORM DRAINAGE TRENCHES WITH IN ROAD RIGHT OF WAY SHALL BE ENCASED AND COMPLETED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
  4. ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
  5. CONTRACTOR TO NOTIFY THE HOWARD COUNTY INSPECTOR AND SURVEY DIVISION AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS TELEPHONE TO: 707-2.
  6. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THESE UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.
  7. ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES CURRENT REVISED EDITION.



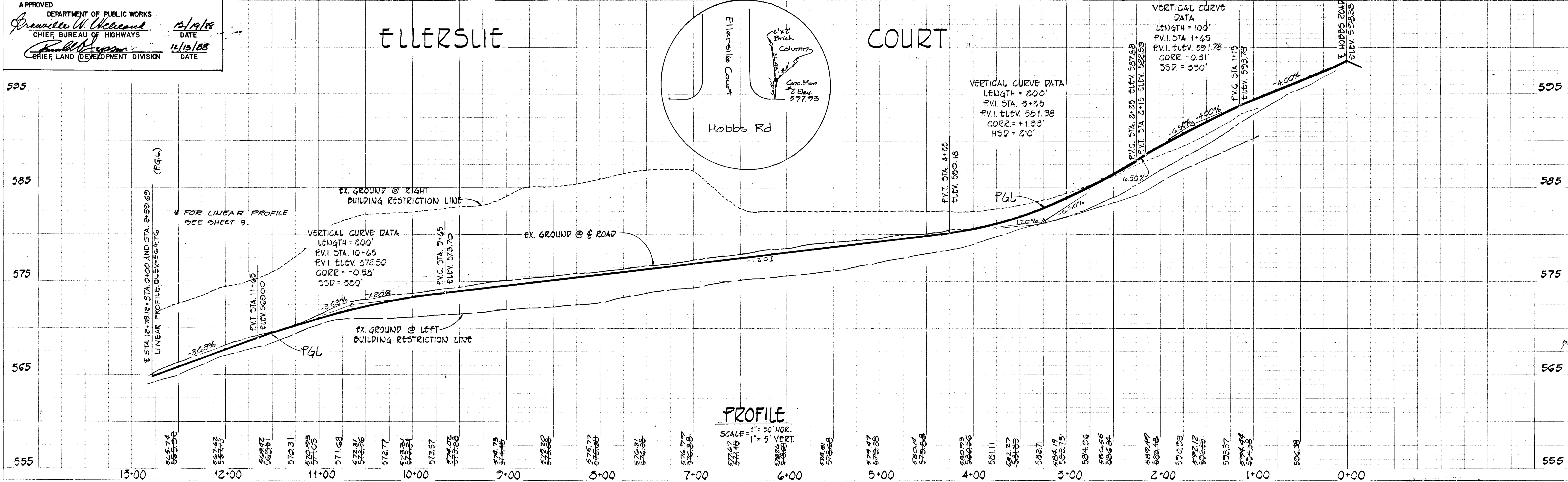
Charles J. Crovo, SR. 9/1/88  
DATE



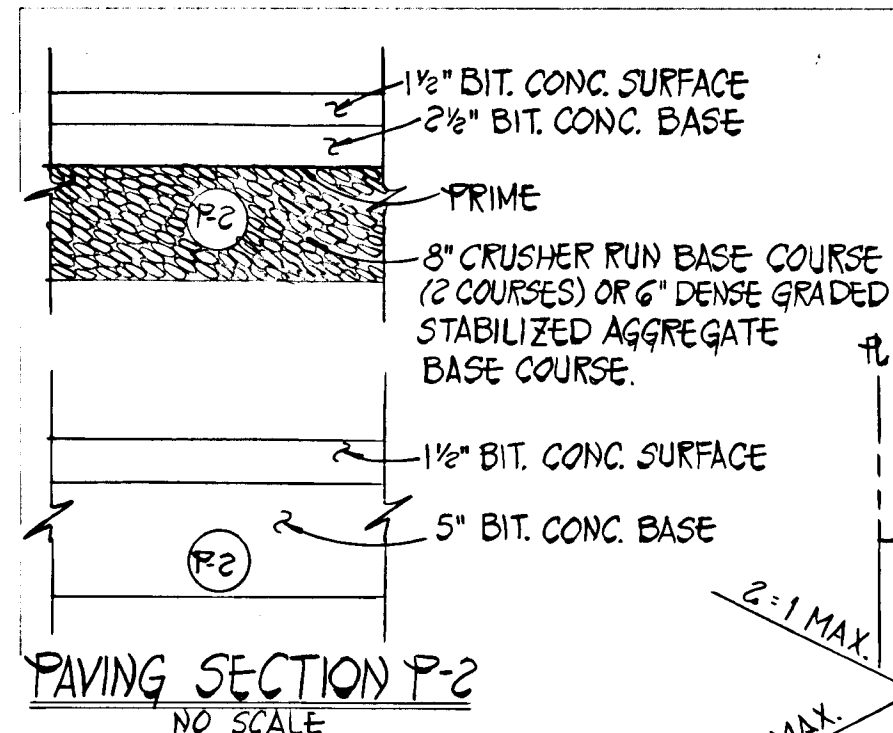
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*William E. Reilly* 12-21-88

APPROVED OFFICE OF PLANNING AND ZONING  
*Franklin S. McCaughy* 12-23-88

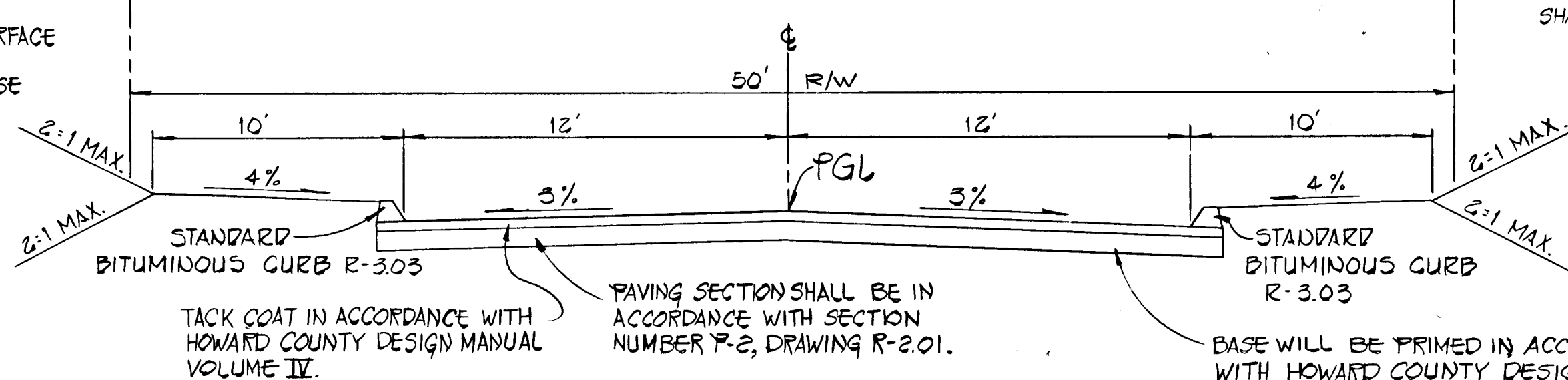
APPROVED DEPARTMENT OF PUBLIC WORKS  
*Francis W. McKeown* 12/19/88  
 CHIEF BUREAU OF HIGHWAYS  
*Paul H. ...* 12/13/88  
 CHIEF LAND DEVELOPMENT DIVISION



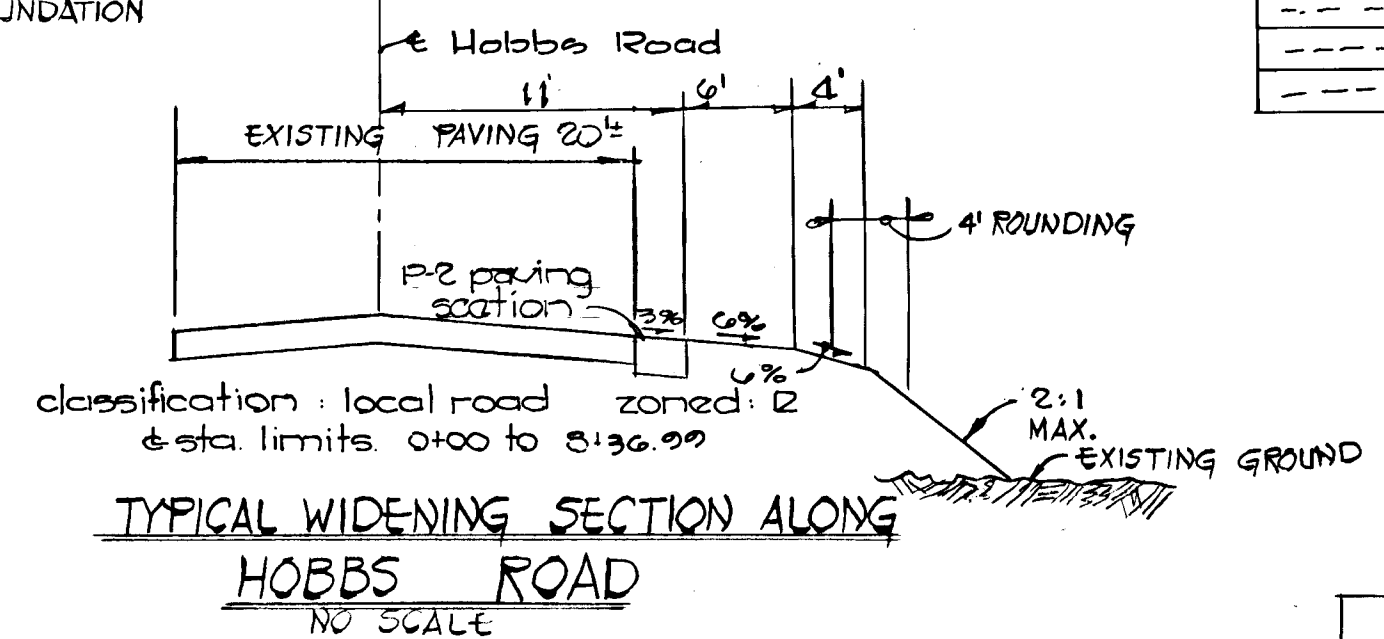
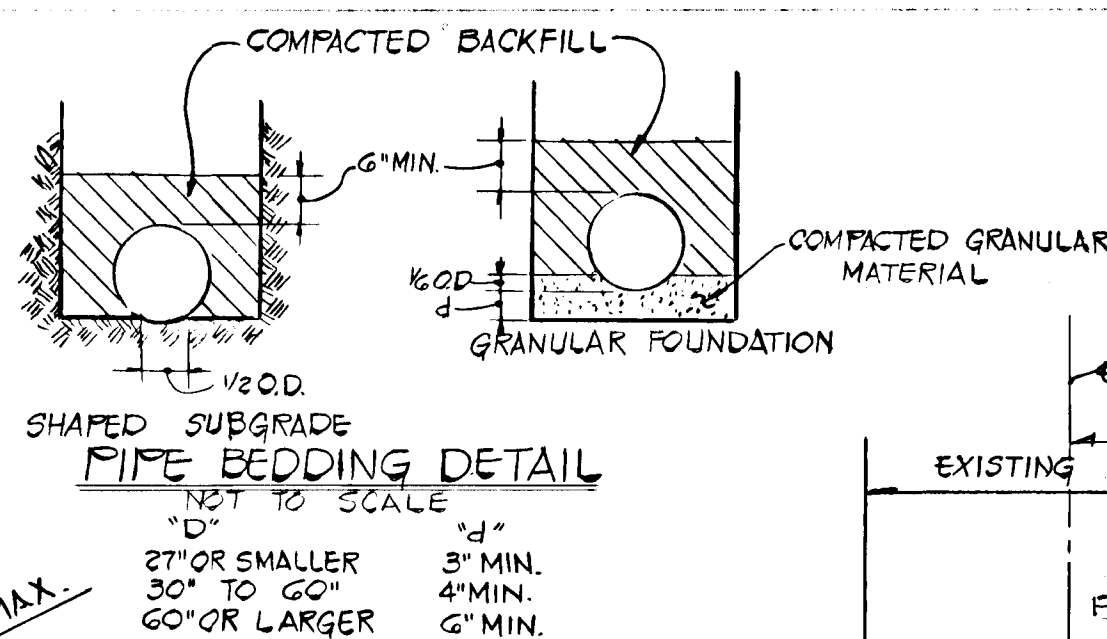
1397



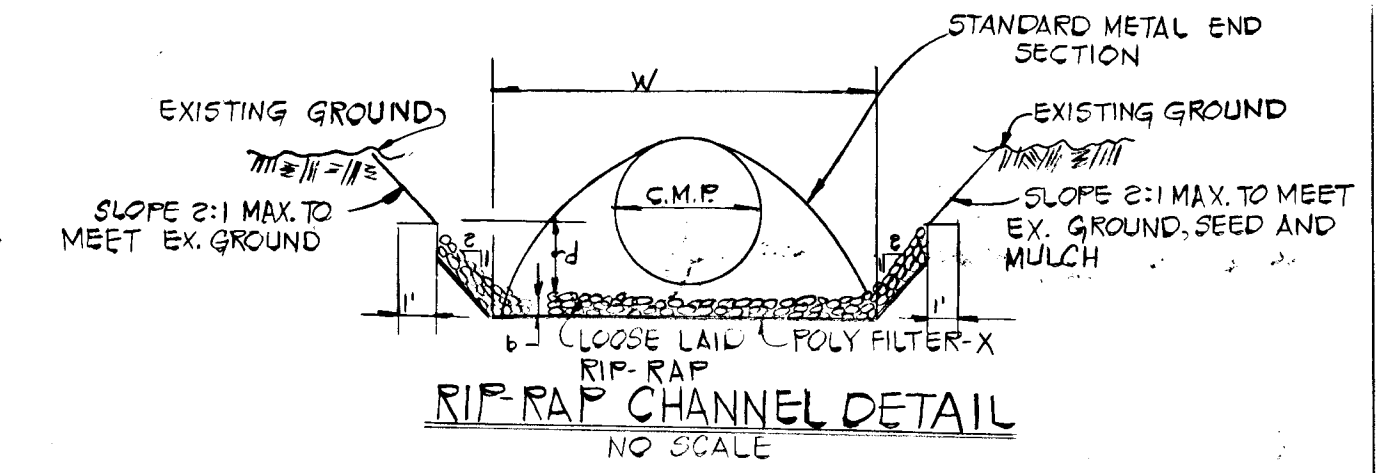
**ELLERSLIE COURT**  
 TYPE OF TRAFFICWAY - LOCAL RESIDENTIAL ZONED R DESIGN SPEED 30 M.P.H.  
 Sta. 0+00 to Sta. 12+78.12



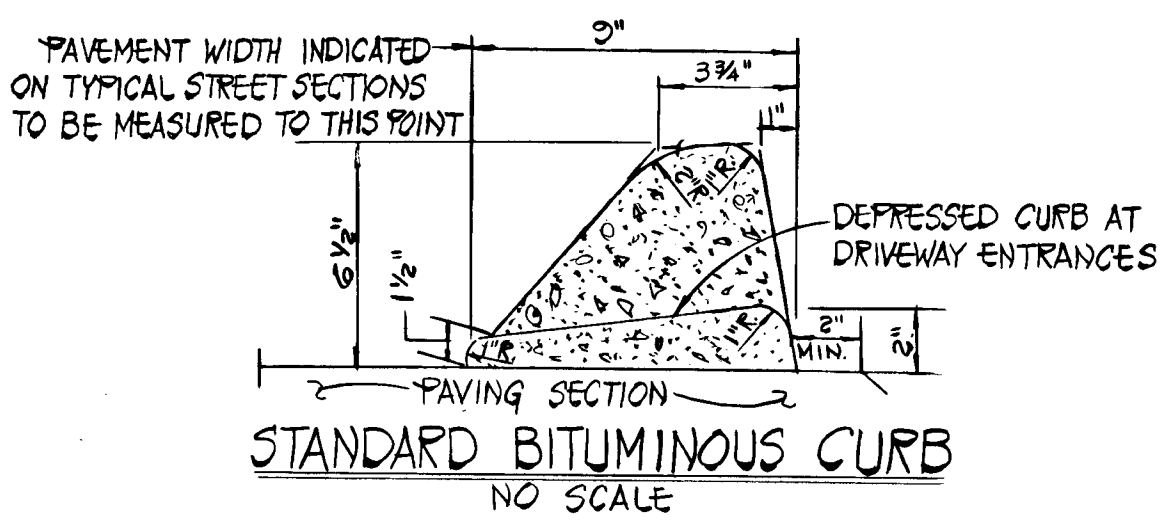
TACK COAT IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV.  
 PAVING SECTION SHALL BE IN ACCORDANCE WITH SECTION NUMBER P-2, DRAWING R-2.01.  
 BASE WILL BE PRIMED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV.



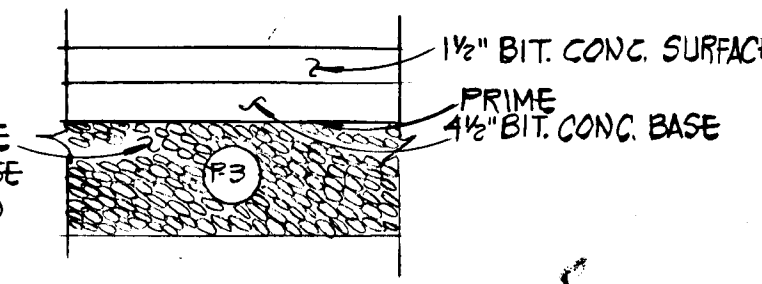
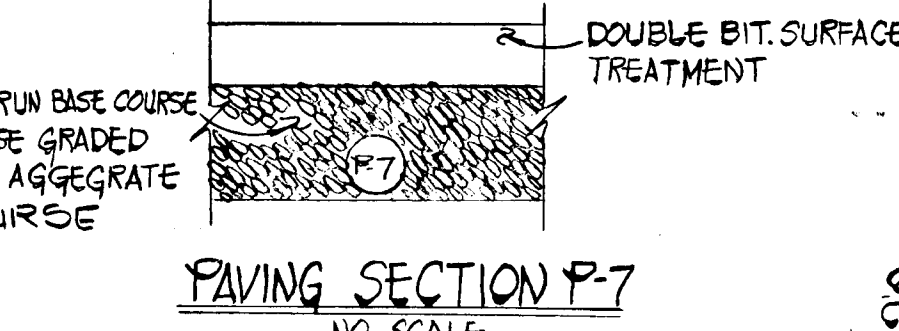
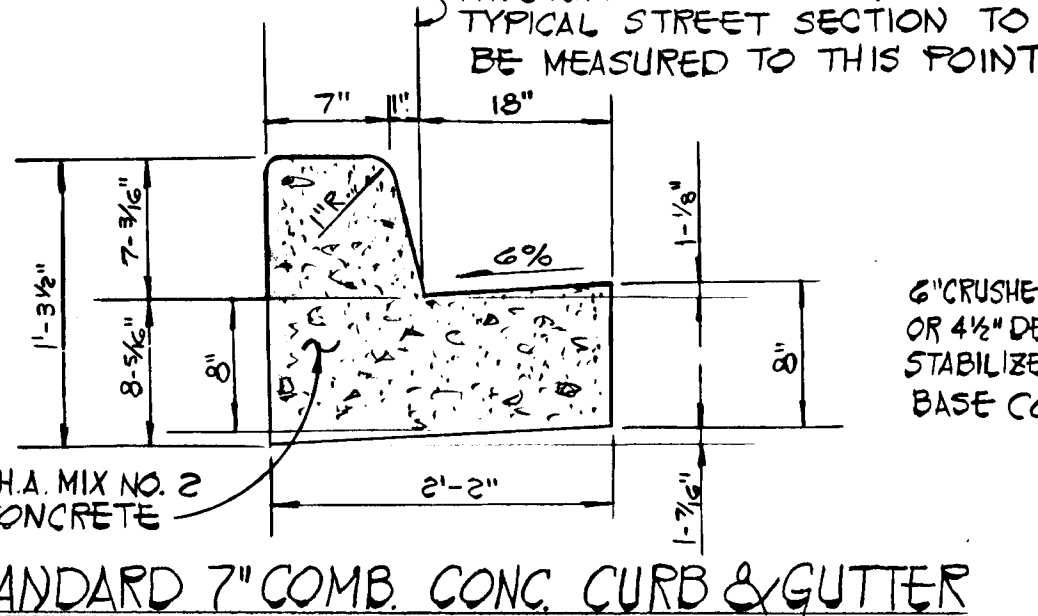
| STRUCTURE SCHEDULE |          |         |     |      |         |          |           |                 |  |
|--------------------|----------|---------|-----|------|---------|----------|-----------|-----------------|--|
| INV. IN            | INV. OUT | TOPELEV | NO. | TYPE | INV. IN | INV. OUT | TOP ELEV. | REMARKS         |  |
| ---                | 557.06   | 561.50  | I-1 | A-5  | ---     | 557.28   | 561.50    | DRAWING SD-4.01 |  |
| 567.25             | 567.00   | 575.71  | I-2 | A-5  | 569.18  | 569.43   | 574.78    | DRAWING SD-4.01 |  |
| 567.68             | 567.57   | 575.20  | I-3 | A-10 | 569.75  | 570.00   | 574.72    | DRAWING SD-4.01 |  |
| 574.90             | 574.17   | 579.67  | I-4 | A-5  | 574.41  | 574.66   | 579.36    | DRAWING SD-4.01 |  |
| ---                | 576.08   | 580.28  | I-5 | A-5  | ---     | 576.80   | 580.28    | DRAWING SD-4.14 |  |
| ---                | 555.76   | 556.01  | S-1 | ---  | ---     | 555.68   | 557.18    | DRAWING SD-5.61 |  |
| ---                | 566.70   | 567.15  | S-2 | ---  | ---     | 567.06   | 569.31    | DRAWING SD-5.61 |  |
| ---                | 574.25   | 579.80  | I-6 | A-6  | ---     | 574.66   | 579.36    | DRAWING SD-8.01 |  |



| RIP-RAP CHANNEL DESIGN DATA |     |     |     |                  |       |                  |     |      |      |     |     |              |
|-----------------------------|-----|-----|-----|------------------|-------|------------------|-----|------|------|-----|-----|--------------|
| STRUCTURE                   | A'  | P'  | R   | R <sup>2/3</sup> | S     | S <sup>1/2</sup> | n   | Qcfs | Vfps | d   | w   | RIP-RAP SIZE |
| S-1                         | 2.0 | 6.4 | 0.5 | 0.6              | 1.60% | 0.13             | 0.4 | 7.2  | 2.81 | 0.6 | 3.7 | 4 G          |
| S-2                         | 6.6 | 9.5 | 0.7 | 0.8              | 1.41% | 0.12             | 0.4 | 19.0 | 3.88 | 0.8 | 5.5 | 4 G          |



NOTE: ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME IV STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION



**ELLERSLIE ESTATES**  
 A RESUBDIVISION OF LOTS 2, 3, AND 4 ROSEBAR SUBDIVISION 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**PAVING SECTION DETAILS AND STORM DRAIN PROFILES**

OWNER AND DEVELOPER:  
 WILLIAM A. AND VIRGINIA MITCHELL  
 4309 SUNDOWN ROAD  
 GAITHERSBURG, MARYLAND 20808

SCALE AS SHOWN DATE: **AUG. 30, 1988** DWG. NO. **3 OF 4**

DES. C. CROVO DES. D. NEWTON CHK. K. FRALIC

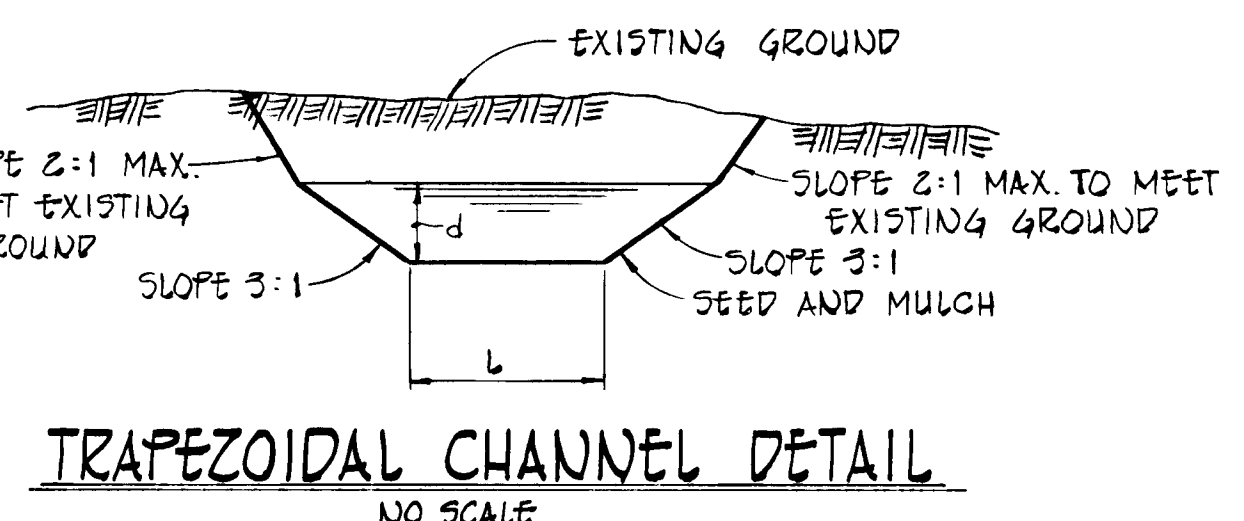
FISHER, COLLINS AND CARTER, INC.  
 CIVIL ENGINEERS AND LAND SURVEYORS  
 8388 COURT AVE. ELLICOTT CITY, MARYLAND 21043

APPROVED DEPARTMENT OF PUBLIC WORKS  
*William & Regina* 12-21-88

APPROVED OFFICE OF PLANNING AND ZONING  
*Frank J. Drayton* 12-27-88

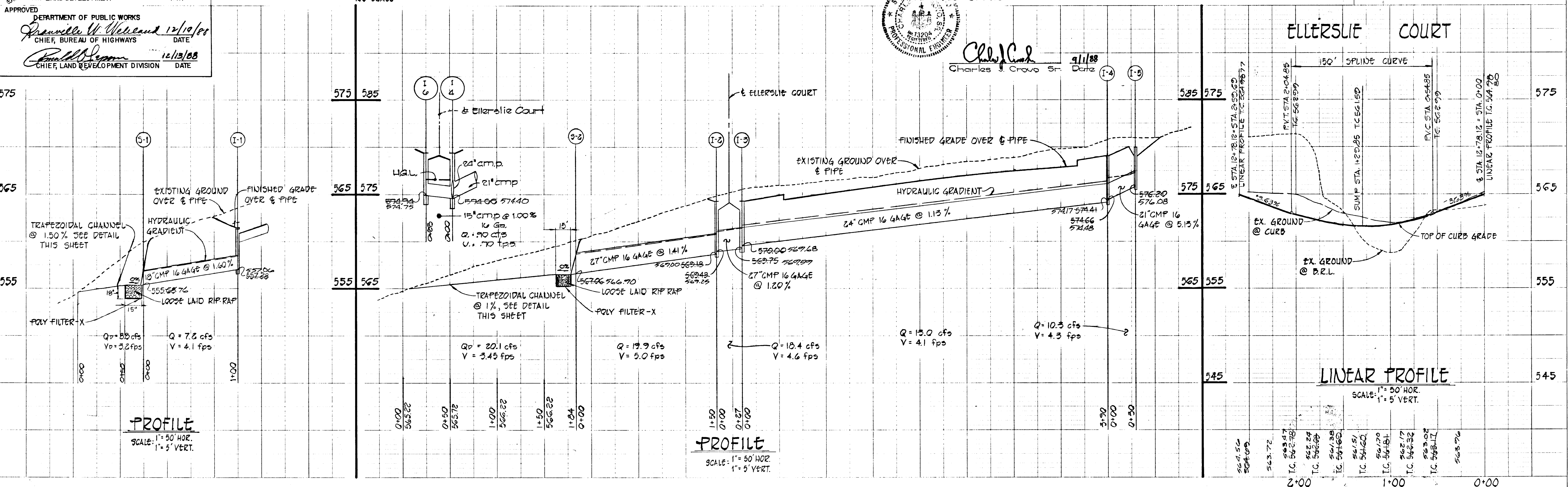
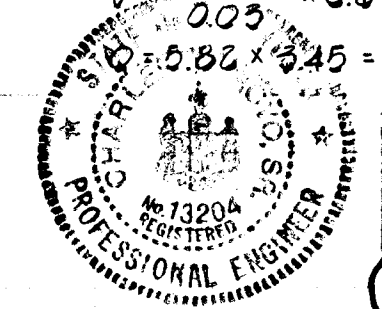
APPROVED DEPARTMENT OF PUBLIC WORKS  
*Francis W. McKeand* 12/10/88  
 CHIEF, BUREAU OF HIGHWAYS

*Donald Brown* 12/13/88  
 CHIEF, LAND DEVELOPMENT DIVISION



| TRAPEZOIDAL CHANNEL DESIGN DATA @ 5-1        |                           |  |  |
|--|---------------------------|--|--|
| A = 2.75'                                    | S = 1.5%                  |  |  |
| P = 7.16'                                    | S <sup>1/2</sup> = 0.1225 |  |  |
| R = 0.5841                                   | n = 0.03                  |  |  |
| R <sup>2/3</sup> = 0.5284                    | L = 4' d = 0.5'           |  |  |
| V = 1.425 / 0.03 x 0.5284 x 0.1225 = 3.2 fps |                           |  |  |
| Q = 2.75 x 3.2 = 8.8 cfs                     |                           |  |  |

| TRAPEZOIDAL CHANNEL DESIGN DATA @ 5-2         |                           |  |  |
|---|---------------------------|--|--|
| A = 5.82'                                     | S = 1.0%                  |  |  |
| P = 10.00'                                    | S <sup>1/2</sup> = 0.1000 |  |  |
| R = 0.5820                                    | n = 0.03                  |  |  |
| R <sup>2/3</sup> = 0.6771                     | L = 5' d = 0.79'          |  |  |
| V = 1.425 / 0.03 x 0.6771 x 0.1000 = 3.45 fps |                           |  |  |
| Q = 5.82 x 3.45 = 20.1 cfs                    |                           |  |  |

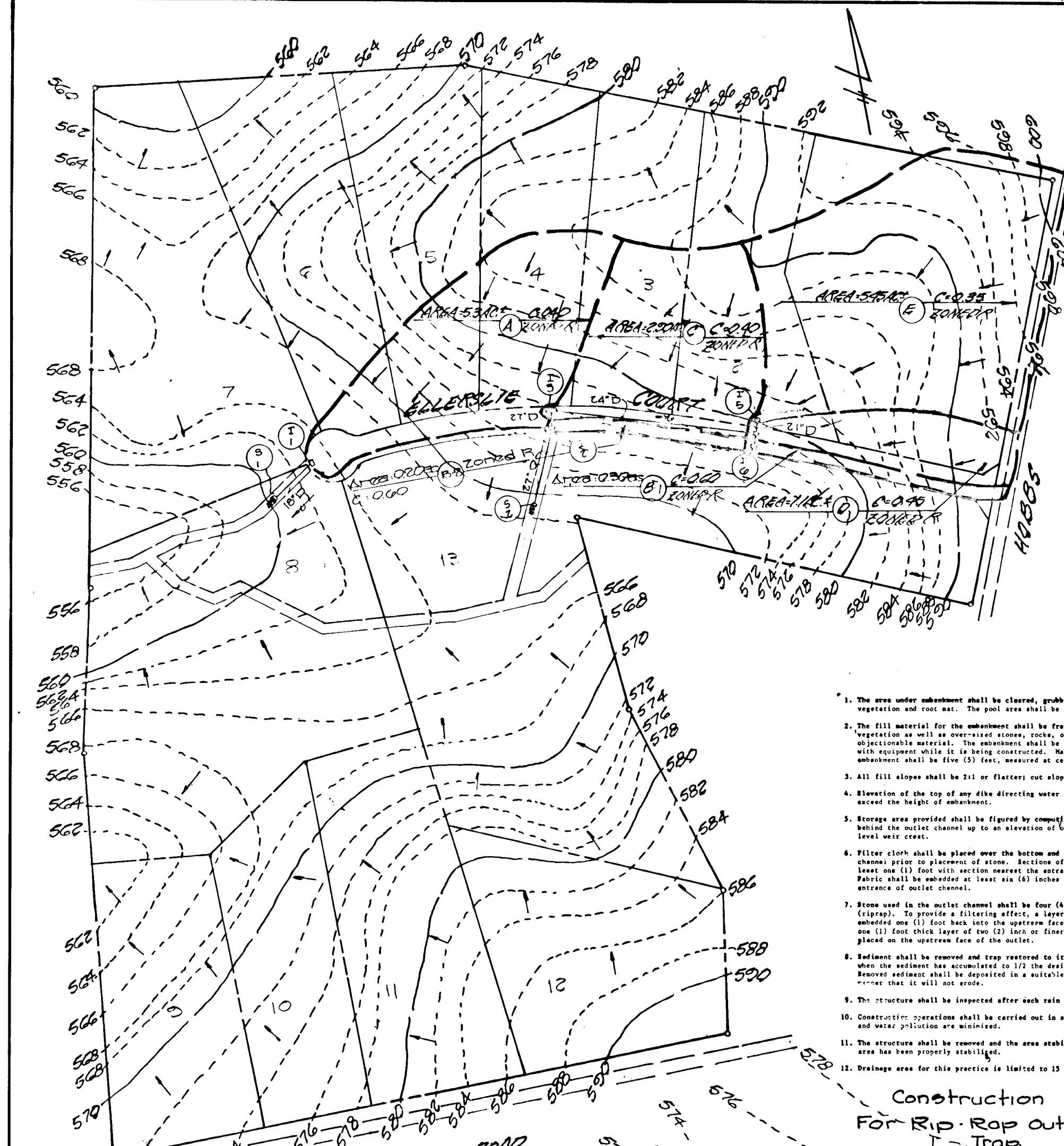


**PROFILE**  
 SCALE: 1" = 50' HOR.  
 1" = 5' VERT.

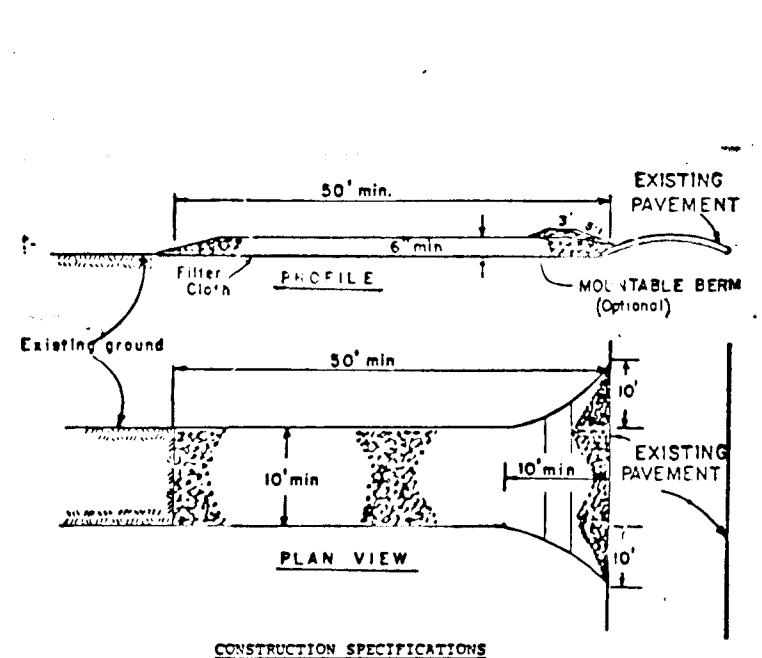
**PROFILE**  
 SCALE: 1" = 50' HOR.  
 1" = 5' VERT.

**LINEAR PROFILE**  
 SCALE: 1" = 50' HOR.  
 1" = 5' VERT.

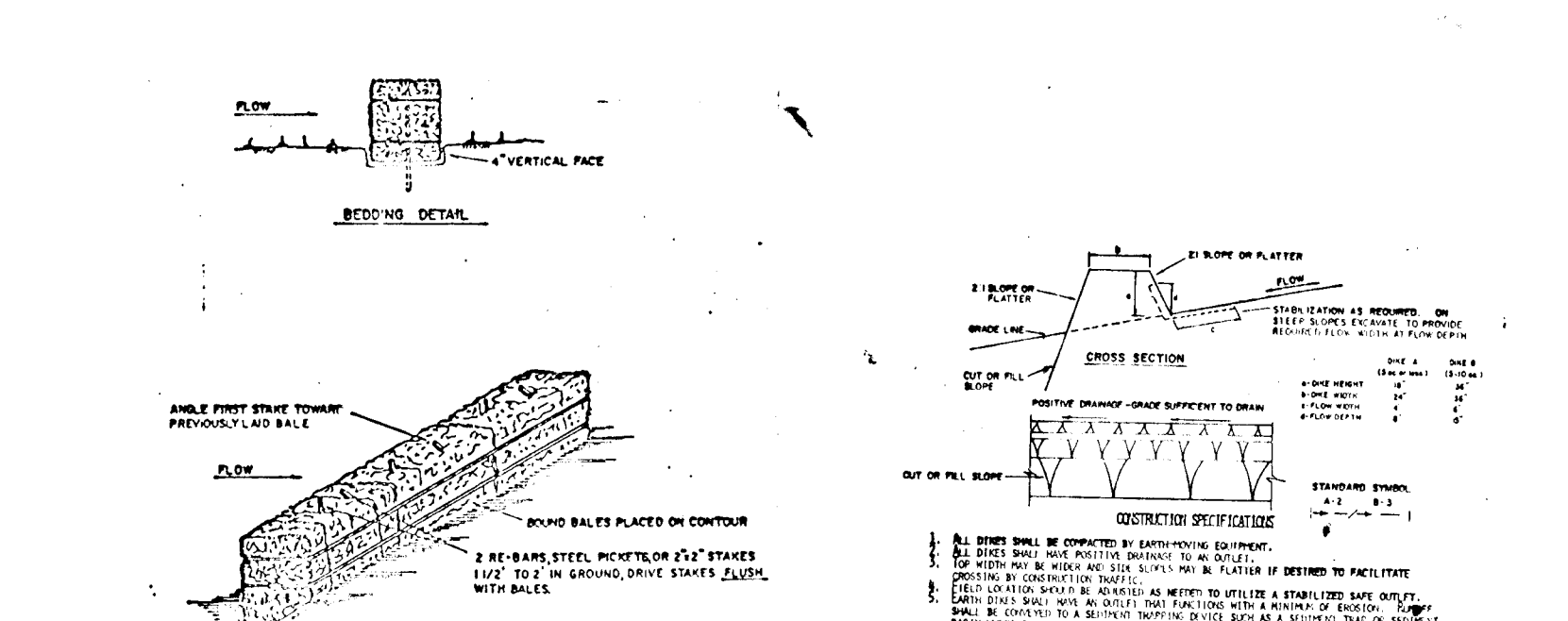
**AS-BUILT** 11/13/87



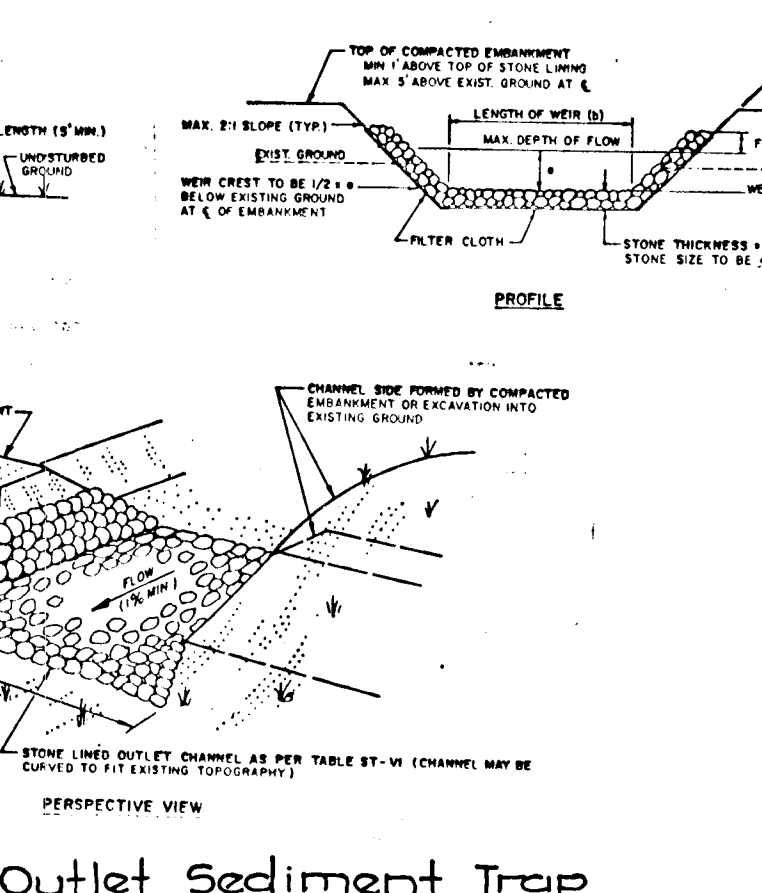
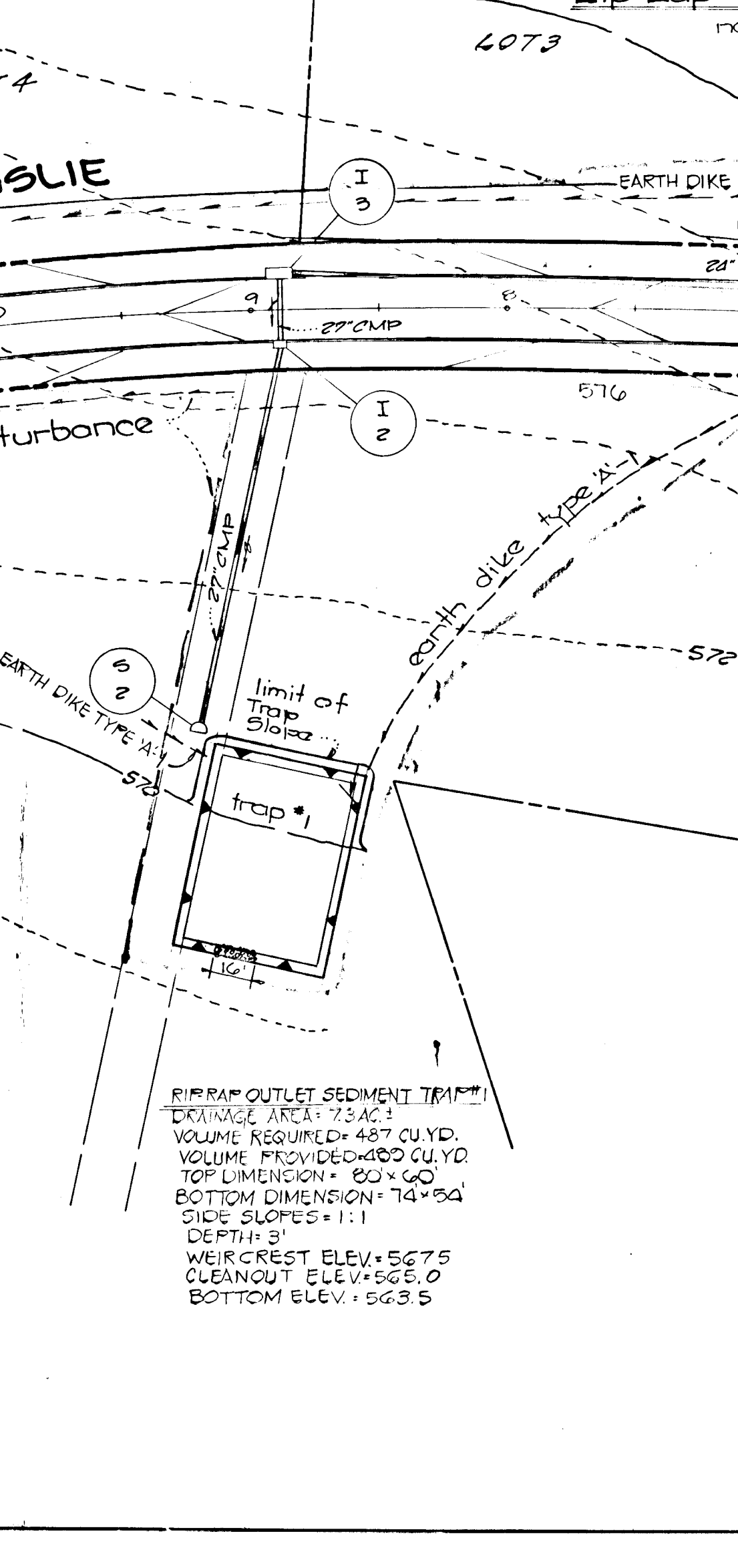
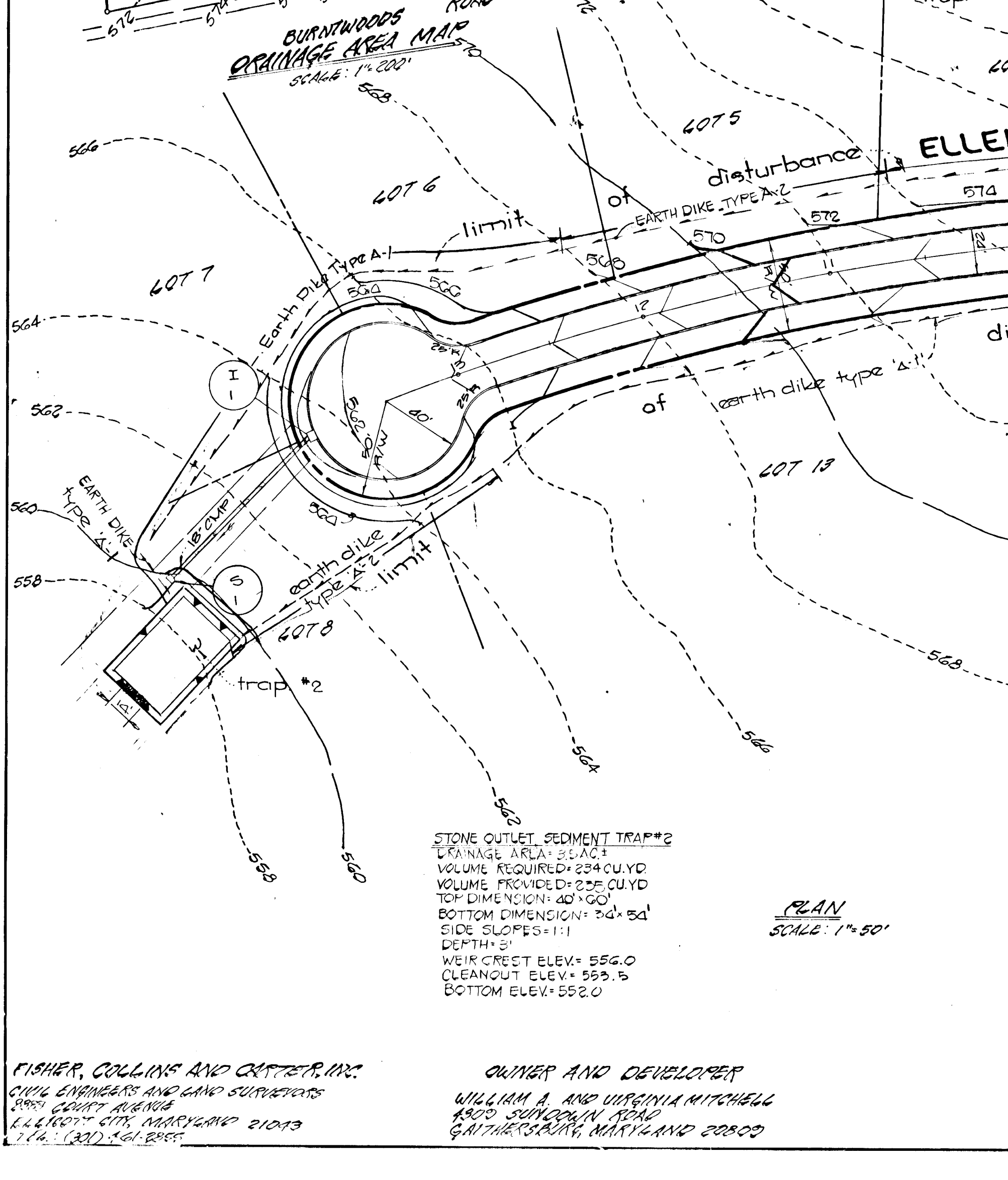
- ### CONSTRUCTION SEQUENCE
1. OBTAIN GRADING PERMIT.
  2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AND SEDIMENT TRAPS AS SHOWN ON PLAN. STABILIZE THE TRAPS WITH TEMPORARY SEEDING. INSTALL SILT FENCE AS SHOWN ON THE PLAN. CONSTRUCT EARTH DIKS AND STABILIZE WITH TEMPORARY SEEDING.
  3. CONSTRUCT STORM DRAIN PIPE FROM S-2 TO I-5 AND S-1 TO I-1.
  4. GRADE ROADS TO SUBGRADE.
  5. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON, AFTER EACH RAINFALL AND ON A DAILY BASIS.
  6. SEDIMENT SHALL BE REMOVED FROM THE TRAPS WHEN THE CLEANOUT ELEVATION HAS BEEN DEWATERED.
  7. THE SEDIMENT TRAPS SHALL BE DEWATERED BY PUMPING. REMOVE SEDIMENT FROM ROADWAYS AND DRESS STONE CONSTRUCTION ENTRANCE AS REQUIRED.
  8. FOLLOWING INITIAL SOIL DISTURANCE OR REDISTURBANCE PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, DITCH PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1 b) 10 DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
  9. ALL DISTURBED AREAS DUE TO REMOVAL OF SEDIMENT CONTROL MEASURES SHALL BE GRADED AND STABILIZED BY PERMANENT SEEDING.
  10. REMOVE STONE CONSTRUCTION ENTRANCE AND SILT FENCE. CLEAN BASE COURSE. APPLY TACK COAT TO BASE COURSE AND LAY SURFACE COURSE.
  11. COMPLETE STABILIZATION OF ALL DISTURBED AREAS SHALL BE DONE PRIOR TO REMOVAL OF ALL SEDIMENT CONTROLS.
  12. NOTIFY HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS FOR FINAL INSPECTION AT DURATION OF PROJECT.



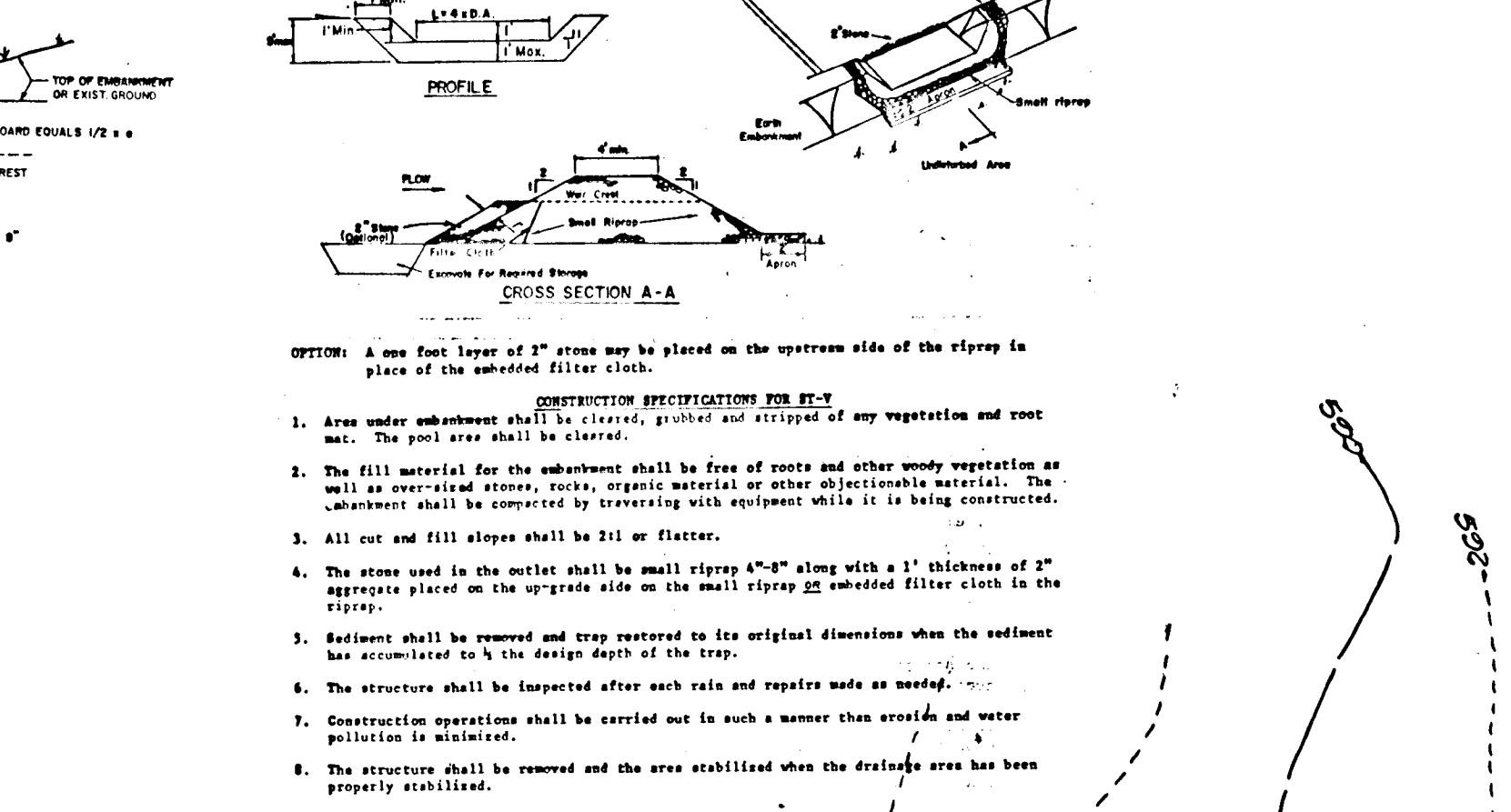
- ### CONSTRUCTION SPECIFICATIONS
1. Stone Size - Use 2" stone, or recycled or rejected concrete equivalent.
  2. Length - as specified, but not less than 30 feet (except on a single road, stone lot where a 30 foot minimum length would apply).
  3. Thickness - not less than six (6) inches.
  4. Width - Ten (10) foot minimum, but not less than the full width at points where slopes or grades occur.
  5. Filter Cloth - will be placed over the entire area prior to placing of stone. A minimum of four (4) layers will be provided.
  6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a minimum of four (4) layers will be provided.
  7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediments onto public right-of-way. This may require periodic top dressing with additional stone as a conditional demand and repair and/or cleaning of trap sediment. All sediment spilled, dropped, washed or tracked onto public right-of-way must be removed immediately.
  8. Washing - 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 stone and which drains into an approved sediment trapping device.
  9. Periodic inspection and needed maintenance shall be provided after each rain.



- ### CONSTRUCTION SPECIFICATIONS
1. Bales shall be placed at the top of a slope or in a row with feet tightly abutting the adjacent bales.
  2. End bales shall be driven in the soil a minimum of (4) inches, and placed so the bines are horizontal.
  3. Bales shall be securely anchored in place by either two strands of rebar driven through the bales, or by four (4) strands of rebar driven through the bales, or by four (4) strands of rebar driven through the bales, or by four (4) strands of rebar driven through the bales.
  4. Inspection shall be provided and repair replacement shall be made promptly as needed.
  5. Bales shall be removed when they have served their purpose so as not to block off the entrance to the drainage.



- ### CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTLET SEDIMENT TRAP
1. The area under sediment shall be cleared, graded and stripped of any vegetation and rock soil. The soil area shall be cleared.
  2. The fill material for the sediment shall be free of roots or other woody vegetation as well as oversized stones, rocks, organic material or other objectionable material. The sediment shall be compacted by traversing with equipment while it is being constructed. Maximum height of sediment shall be five (5) feet, measured at centerline of sediment.
  3. All fill slopes shall be 3:1 or flatter on slopes 1:1 or flatter.
  4. Elevation of the top of the area directing water into trap must equal or exceed the height of sediment.
  5. Storage area provided shall be figured by computing the volume available behind the outlet channel up to an elevation of five (5) feet above the level of outlet crest.
  6. Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least six (6) inch intervals with the overlap placed on the inside. Fabric shall be anchored at least six (6) inches into existing ground at intervals of eight (8) feet.
  7. Stone used in the outlet channel shall be four (4) to eight (8) inches (average). To provide a filtering effect, a layer of filter cloth shall be installed one (1) foot back into the upstream face of the outlet stone or one (1) foot thick layer of two (2) inch or finer aggregate shall be placed on the upstream face of the outlet.
  8. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to the design depth of the trap. Sediment removal shall be performed in a suitable area and in such a manner that it will not erode.
  9. The structure shall be inspected after each rain and repaired as needed.
  10. Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
  11. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
  12. Drainage area for this practice is limited to 15 acres or less.



- ### CONSTRUCTION SPECIFICATIONS FOR ST-2
1. Area under sediment shall be cleared, graded and stripped of any vegetation and rock soil. The soil area shall be cleared.
  2. The fill material for the sediment shall be free of roots or other woody vegetation as well as oversized stones, rocks, organic material or other objectionable material. The sediment shall be compacted by traversing with equipment while it is being constructed.
  3. All out and fill slopes shall be 3:1 or flatter.
  4. The stone used in the outlet shall be small riprap 4" to 12" in diameter and 2" aggregate placed on the upstream side of the outlet filter cloth in the trap.
  5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to the design depth of the trap.
  6. The structure shall be inspected after each rain and repairs made as needed.
  7. Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
  8. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

**ENGINEER'S CERTIFICATE**

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

*Charles C. Crow* 9/1/87

**DEVELOPER'S CERTIFICATE**

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT AT THE PROJECT SITES, AS ARE DEEMED NECESSARY.

*William A. Mitchell* 9/1/87

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

*James M. Helm* 12-5-87  
DISTRICT SOIL CONSERVATION DISTRICT

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

APPROVED: *Stephen L. Huber* 12-7-87  
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: OFFICE OF PLANNING AND ZONING  
*David J. Taylor* 12-29-87  
CHIEF, DIVISION OF PLANNING AND LAND DEVELOPMENT

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*William E. Bate* 12-21-87  
CHIEF, BUREAU OF UTILITIES

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*William E. Bate* 12/13/87  
CHIEF, BUREAU OF UTILITIES

**SEDIMENT CONTROL, DETAIL, AND GRADING PLAN**  
**ELLESLIE ESTATE**  
A RESUBDIVISION OF LOTS 4, 6, 7, 13 AND 15, SUBDIVISION 4, IN SECTION 03, TOWNSHIP 36 NORTH, RANGE 30 WEST, DISTRICT OF COLUMBIA, D.C. 20007.

*Charles C. Crow* 9/1/87  
AS-BUILT 11/3/87

1301