

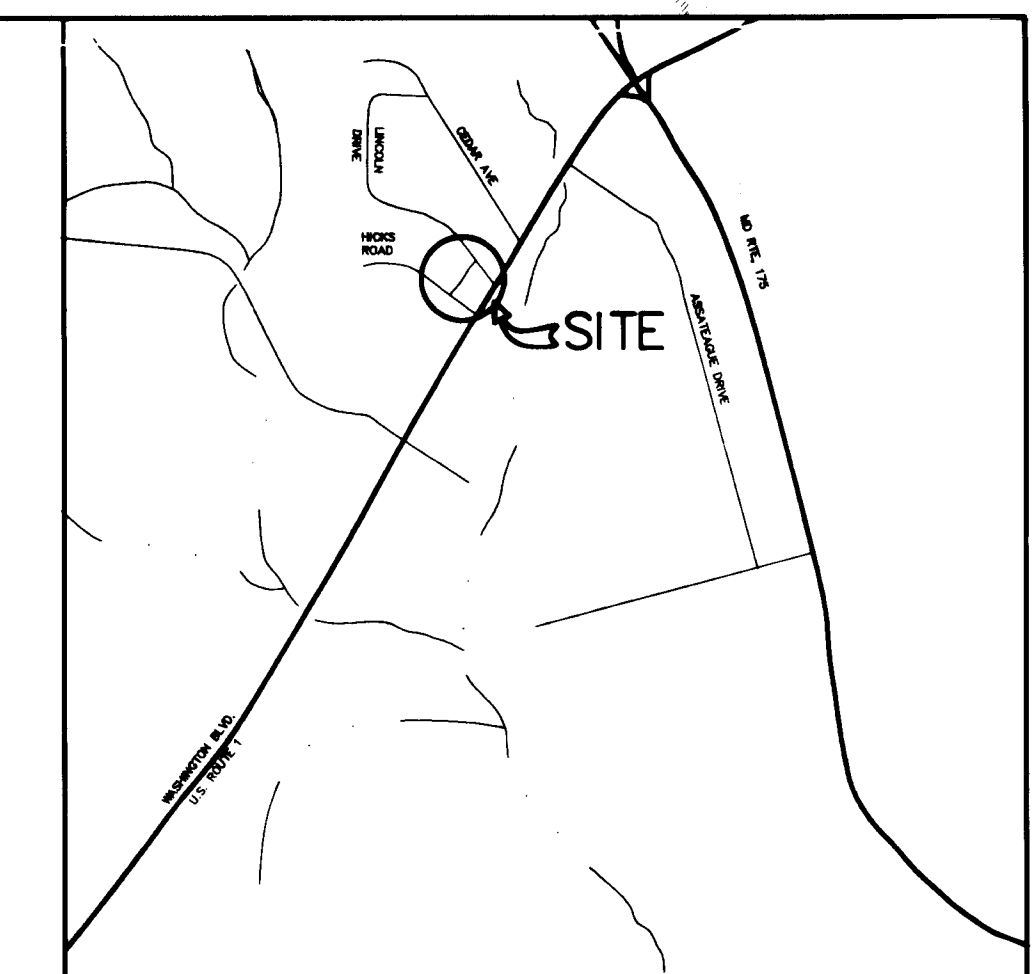
| SHEET INDEX |  |
|-------------|--|
| NO          | DESCRIPTION  |
| 1           | TITLE SHEET  |
| 2           | GRADING AND SEDIMENT CONTROL PLAN AND DETAILS          |
| 3           | ROAD PLANS AND PROFILES                                |
| 4           | STORM DRAIN PROFILES, ROAD CROSS SECTIONS, AND DETAILS |

# ROADWAY IMPROVEMENTS

## HICKS ROAD AND CHARLIE JOYNER DRIVE

### 6th ELECTION DISTRICT

### HOWARD COUNTY, MARYLAND

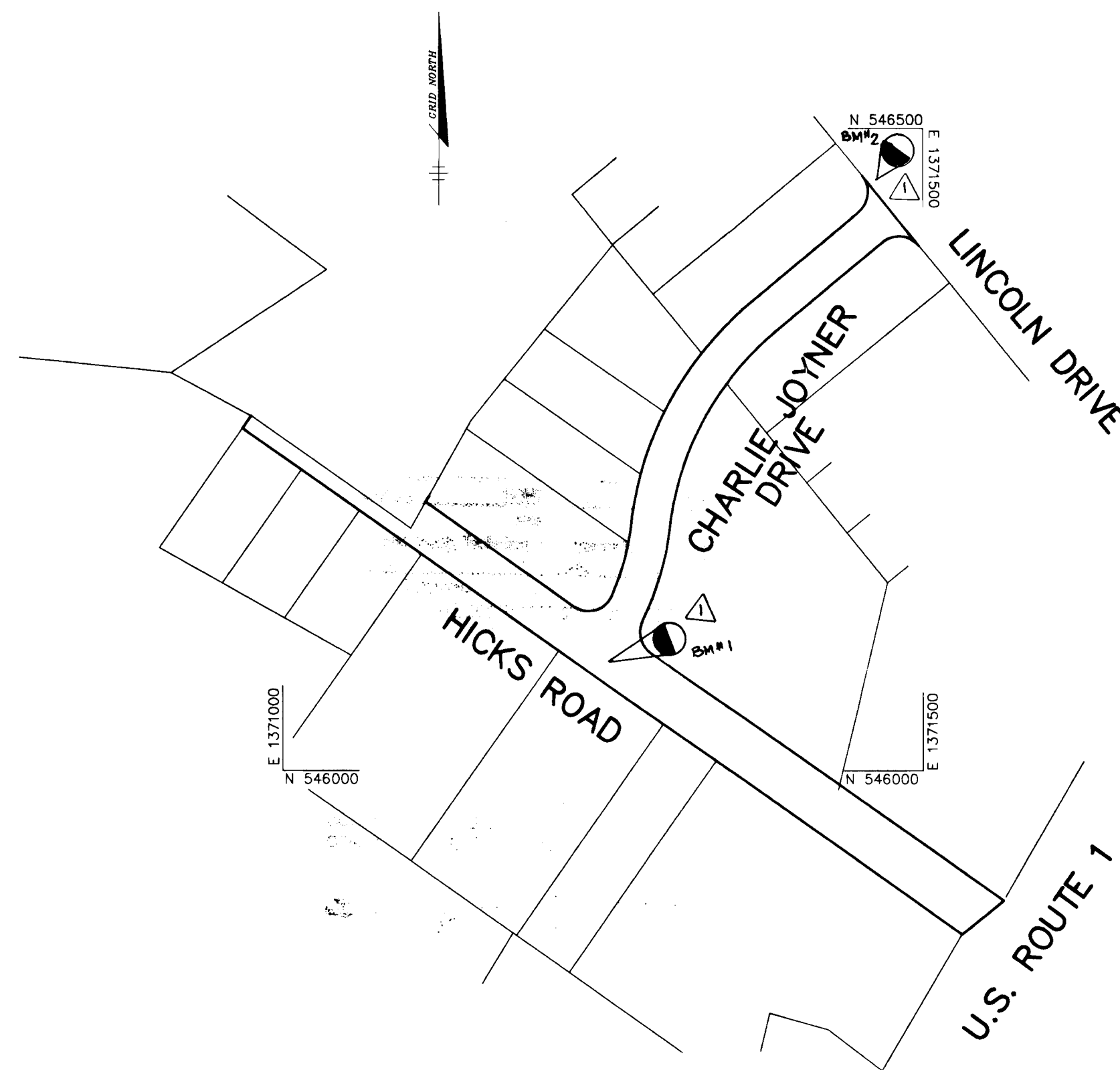


VICINITY MAP

#### BENCHMARKS

BM#1 - PIN & CAP  
 ELEVATION: 241.63  
 N 546,084.781  
 E 1,371,250.942

BM#2 - NAIL  
 ELEVATION: 226.86  
 N 546,457.323  
 E 1,371,463.093



PLAN  
 SCALE: 1" = 100'

#### GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. 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.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
5. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY RIEMER MUEGGE & ASSOC. DATED JANUARY, 1996 AND AUGUST, 1996.
6. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM.
7. THERE IS NO PROPOSED WATER FOR THIS PROJECT.
8. THERE IS NO PROPOSED SEWER FOR THIS PROJECT.
9. STORMWATER QUANTITY MANAGEMENT IS NOT PROVIDED FOR THIS PROJECT DUE TO INSIGNIFICANT INCREASE IN PAVED AREA. QUALITY MANAGEMENT IS PROVIDED VIA OVERLAND FLOW WITHIN ROADSIDE SWALES.
10. 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. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
11. THERE IS NO 100-YEAR FLOODPLAIN ON SITE.
12. RIGHT-OF-WAY AND LOT INFORMATION WAS OBTAINED BY FIELD SURVEY PERFORMED BY RIEMER MUEGGE & ASSOCIATES DATED JANUARY, 1996.
13. SUBJECT PROPERTY ZONED R-SC PER 10-18-93 COMPREHENSIVE ZONING PLAN.
14. ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
15. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
16. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
17. 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.
18. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
19. ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS 'C' AS SHOWN IN FIG. 11.4, VOLUME 1 OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
20. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
21. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
22. STORM DRAIN TRENCHES WITHIN ROAD RIGHT OF WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, LATEST AMENDMENTS.
23. PROFILES STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
24. ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T180.

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications

BY THE OWNER/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 THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Review for Howard Soil Conservation District and meets technical requirements.

*David Simmons* 4/20/97  
 NATURAL RESOURCES CONSERVATION SERVICE DATE

*Charles E. Gannon* 4/22/97  
 OWNER/DEVELOPER DATE

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

*John K. Robertson* 4/22/97  
 HOWARD SOIL CONSERVATION DISTRICT 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.

*J. Parekh* 4.18.97  
 ENGINEER DATE

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*John J. Lee* 4/22/97  
 DIRECTOR OF PUBLIC WORKS DATE

*Elizabeth Anderson-Lewis* 4/20/97  
 CHIEF, DIVISION OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

*Charles E. Gannon* 4/22/97  
 CHIEF, BUREAU OF ENGINEERING DATE

*Christine M. Kanelis* 4-22-97  
 CHIEF, BUREAU OF HIGHWAYS DATE

RIEMER MUEGGE & ASSOCIATES, INC.  
 ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING  
 8818 Centre Park Drive • Suite 200 • Columbia, MD 21045  
 410-997-8900 FAX: 410-997-9282  
 HOCO\113500 PRELIM1.DWG

*J. Parekh*  
 JAYKANTI D. PAREKH # 19148

|               |                    |         |  |
|---------------|--------------------|---------|--|
| DES: CJR      |                    |         |  |
| DRN: RPP      |                    |         |  |
| CHK: JDP      |                    |         |  |
| RJC           | Added BM's # 1 & 2 | 5/12/97 |  |
| DATE: 4/18/97 |                    |         |  |
| BY: NO.       | REVISION           | DATE    |  |

TITLE SHEET

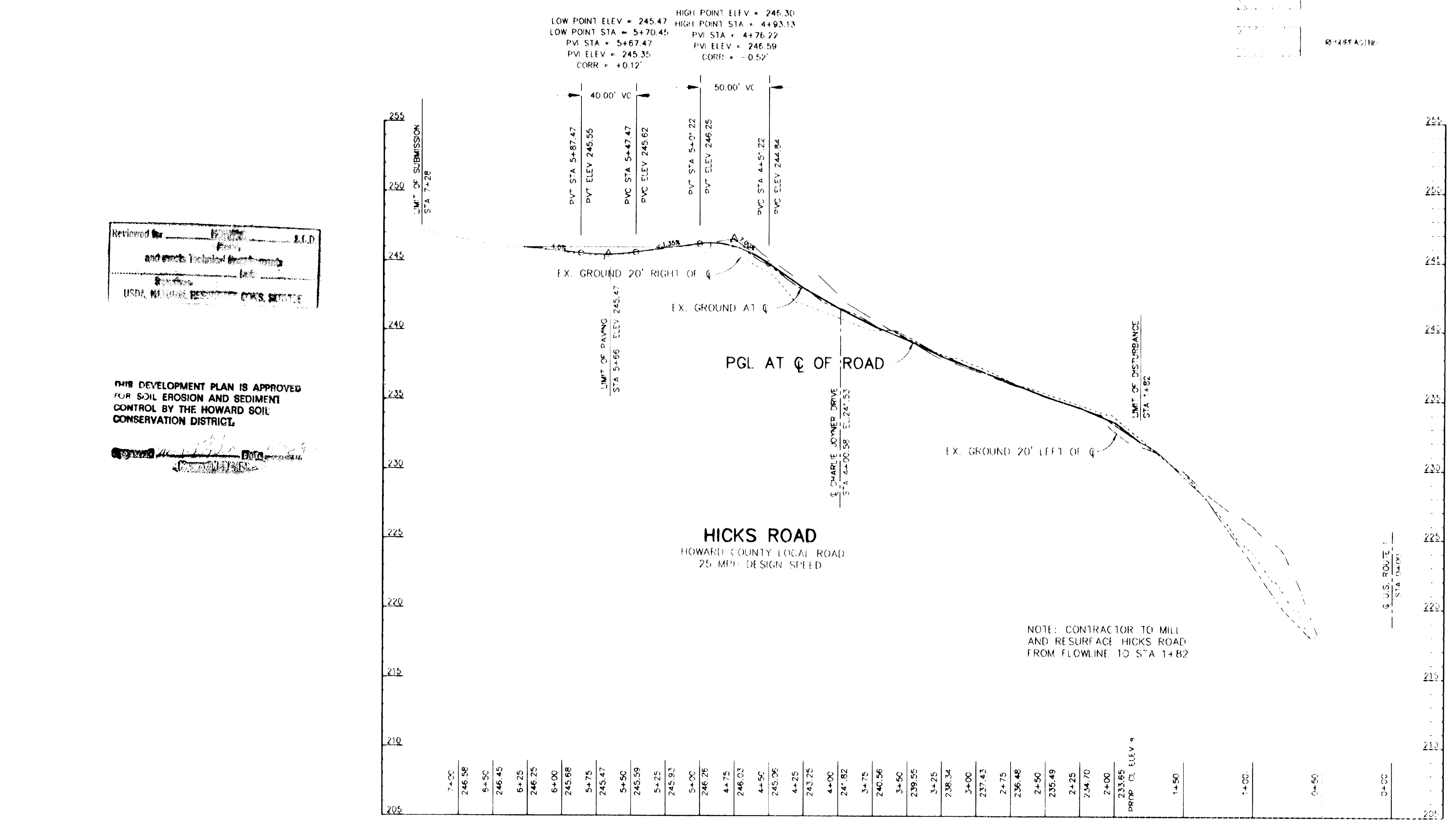
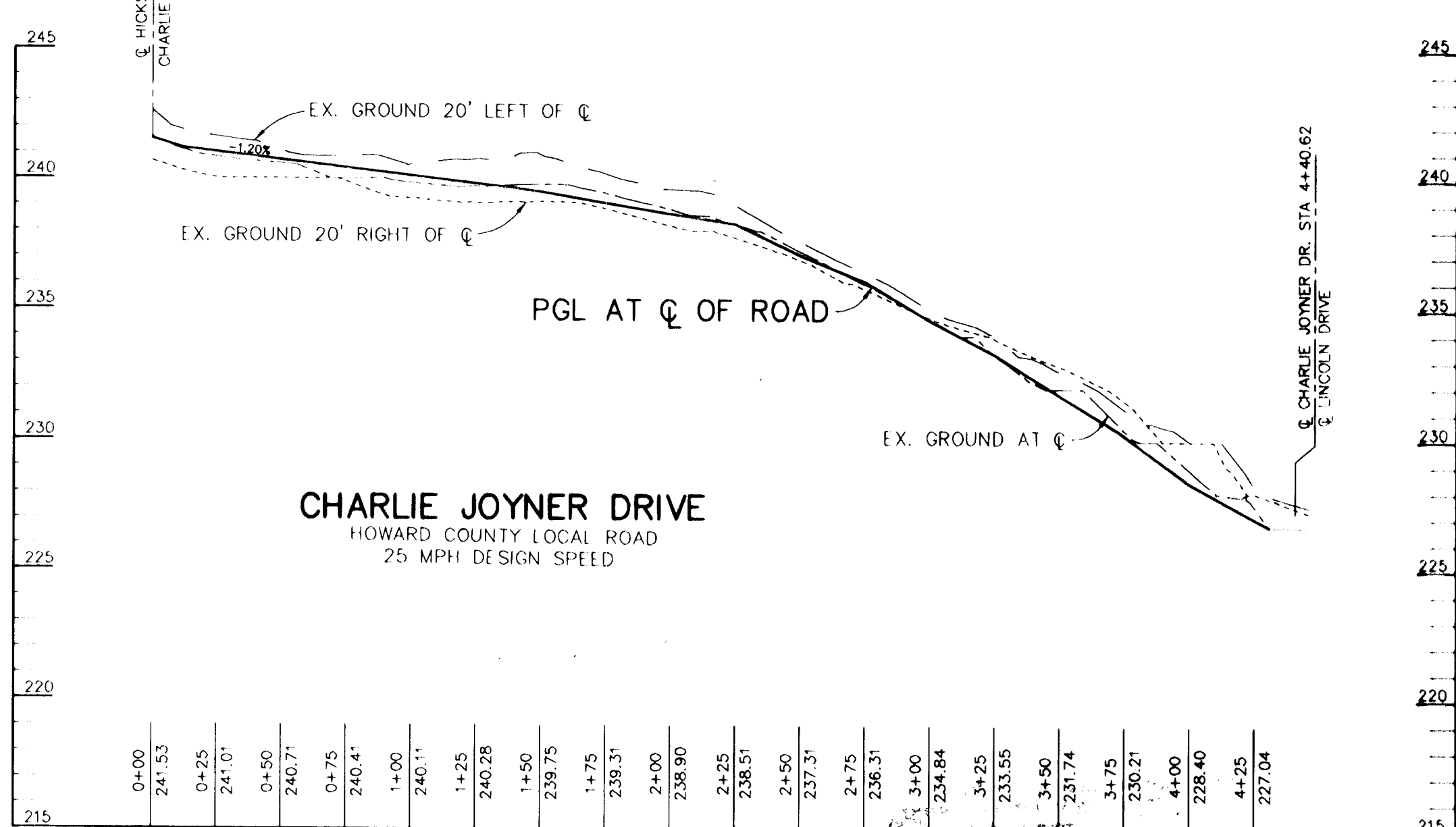
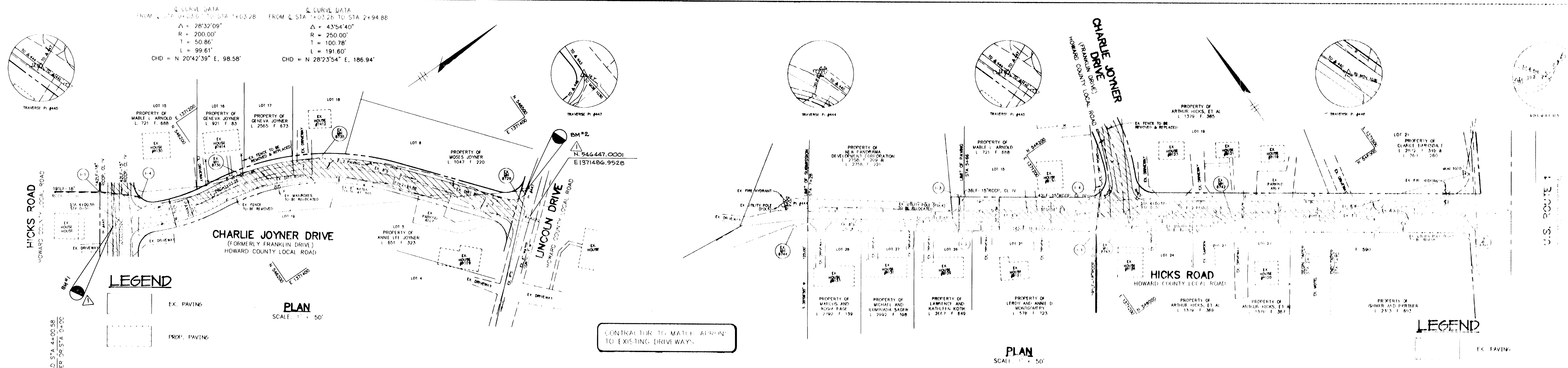
600' SCALE MAP NO. 43 BLOCK NO. 14

ROADWAY IMPROVEMENTS  
 HICKS ROAD AND CHARLIE JOYNER DRIVE  
 6th ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 CAPITAL PROJECT No. J-4129

SCALE AS SHOWN

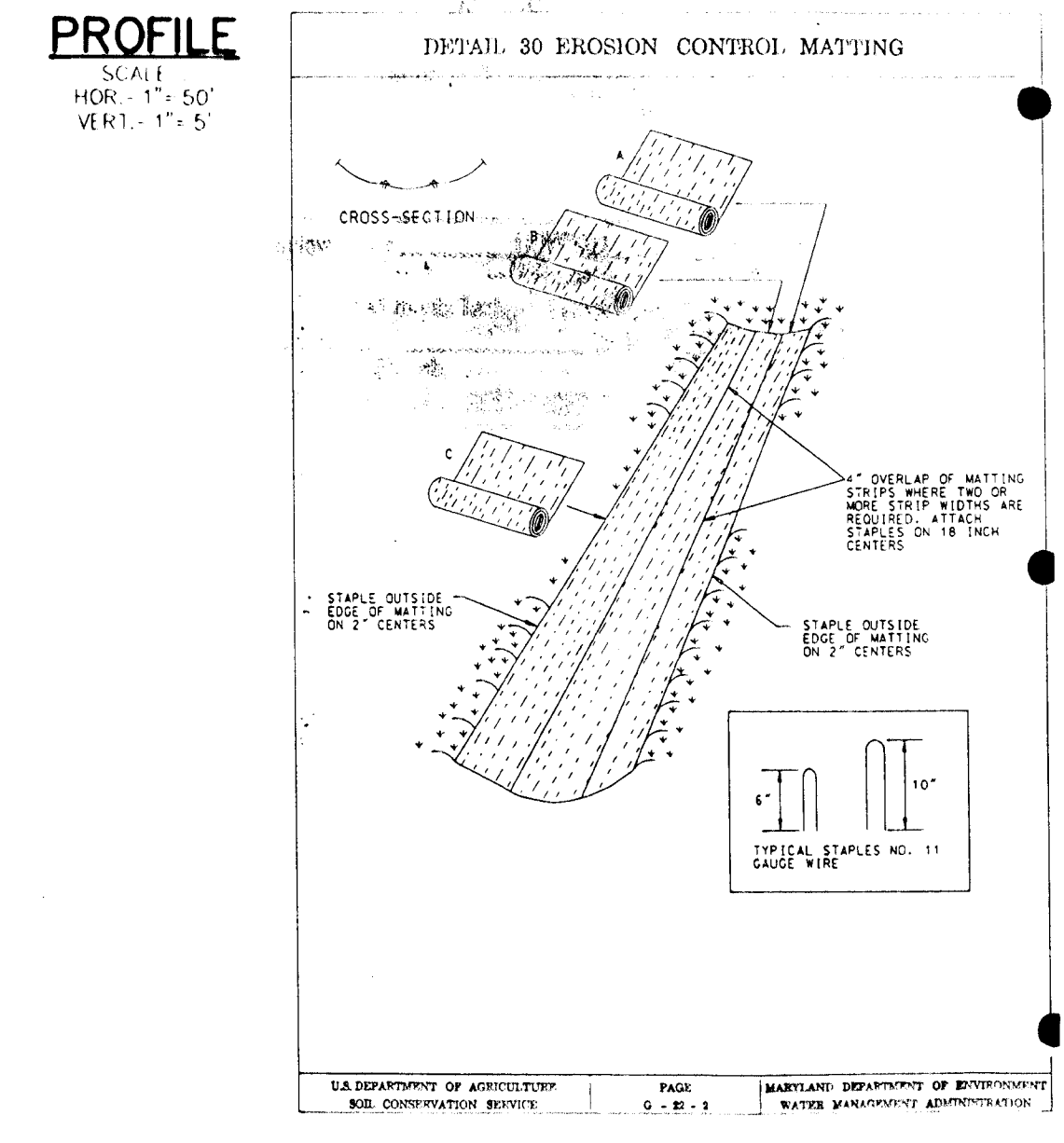
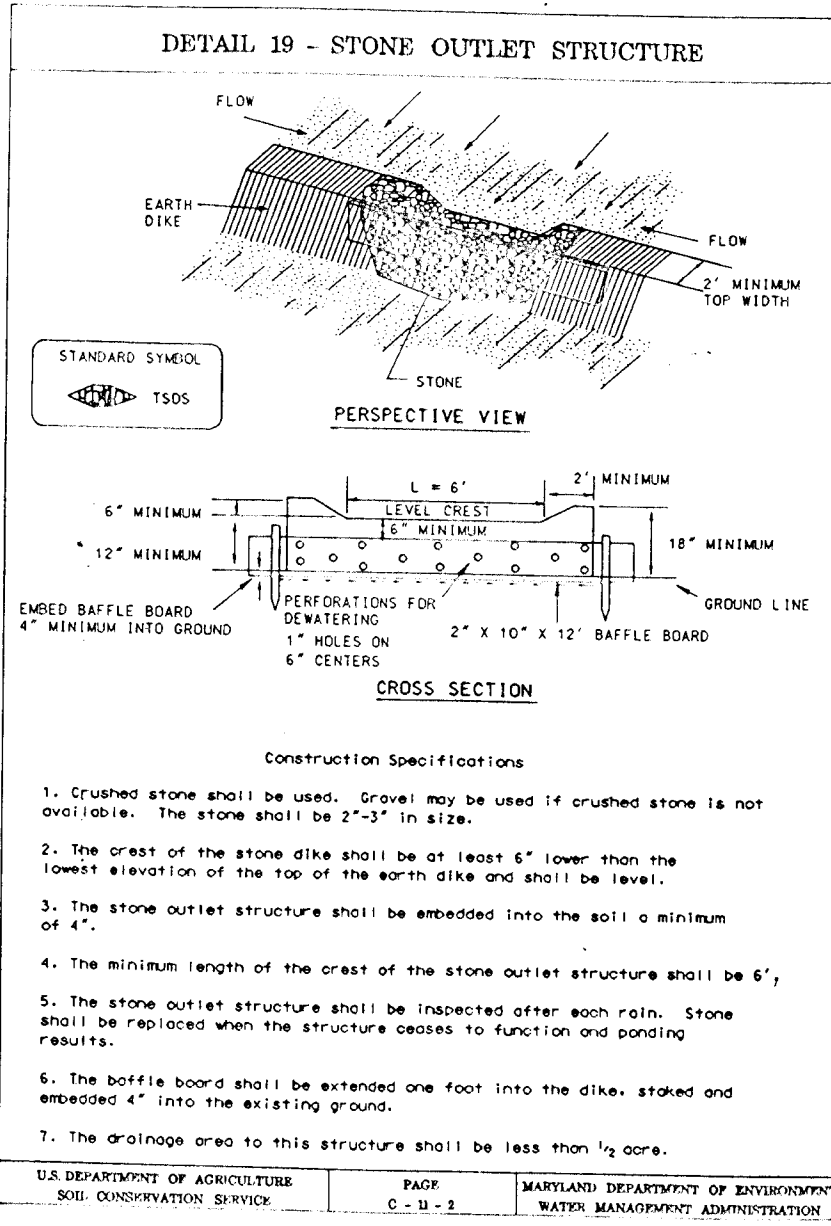
SHEET 1 OF 4

C313AZ01



Reviewed by: [Signature] J.C.D.  
 and sealed by: [Signature]  
 USDA, NATIONAL FORESTRY SERVICE

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



DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

Director of Public Works: [Signature] 4/22/97  
 Chief, Bureau of Highways: [Signature] 4-22-97

RIEMER MUEGGE & ASSOCIATES, INC.  
 Planners Engineers Surveyors  
 8816 Centre Park Drive • Suite 200 • Columbia, MD 21045  
 410-997-8900 FAX: 410-997-9282  
 HOCO/113500 P1R1M2.DWG

DES: CJR  
 DRN: RPP  
 CHK: JDP  
 DATE 4/18/97

JAYKANT D. PAREKH #19148

ROAD PLANS & PROFILES

Added B.M.s. 1 & 2 @ Coord. @ Lincoln Dr./Charlie J. Dr. 5/12/97

ROADWAY IMPROVEMENTS  
 HICKS ROAD AND CHARLIE JOYNER DRIVE  
 6th ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 CAPITAL PROJECT No. J-4129

SCALE: 1" = 50'  
 SHEET: 2 OF 4

**TEMPORARY SEEDING NOTES**

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

**Seeding Preparation:** Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

**Soil Amendments:** Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.).

**Seeding:** For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushels per acre of annual ryegrass (3.2 lbs. per 1000 sq.ft.). For the period May 1 thru August 14, seed with 3 bushels per acre of weeping lovegrass (0.07 lbs. per 1000 sq.ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use seed.

**Mulching:** Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of untreated small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (0.9 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

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

**PERMANENT SEEDING NOTES**

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

**Seeding Preparation:** Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

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

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs. per 1000 sq.ft.).
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

**Seeding:** For the period March 1 thru April 30 and from August 1 thru October 15, seed with 2-1/2 bushels per acre of annual ryegrass (3.2 lbs. per 1000 sq.ft.) and 60 lbs. per acre Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.05 lbs. per 1000 sq.ft.) of seeding lovegrass. During the period October 16 thru February 28, protect site by one of the following options:

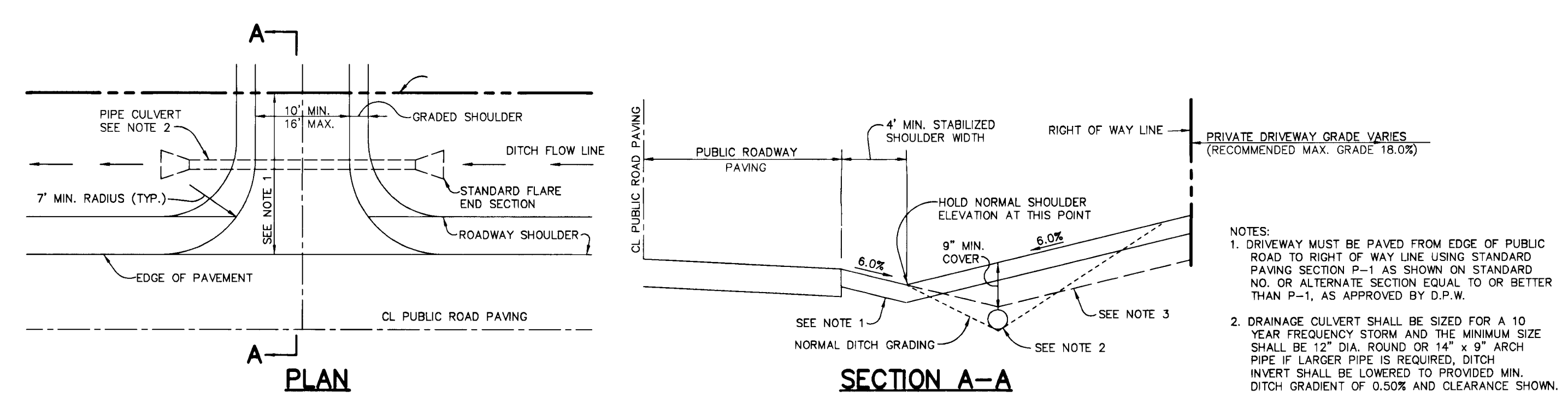
- 1) 2 tons per acre of well-anchored straw mulch and seed as soon as possible in the spring.
- 2) Use seed.
- 3) Seed with 80 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.

**Mulching:** Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of untreated small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (0.9 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

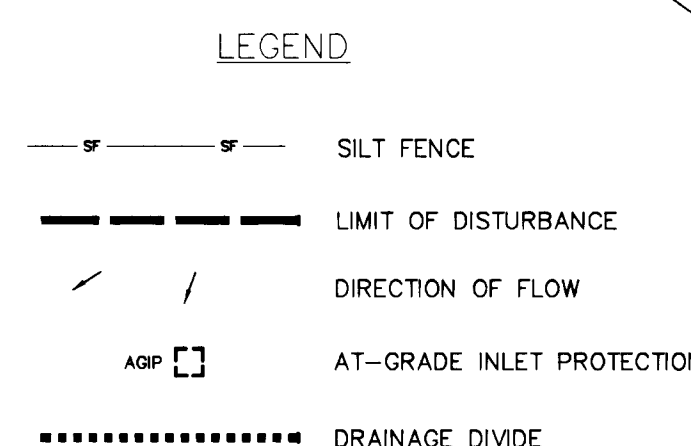
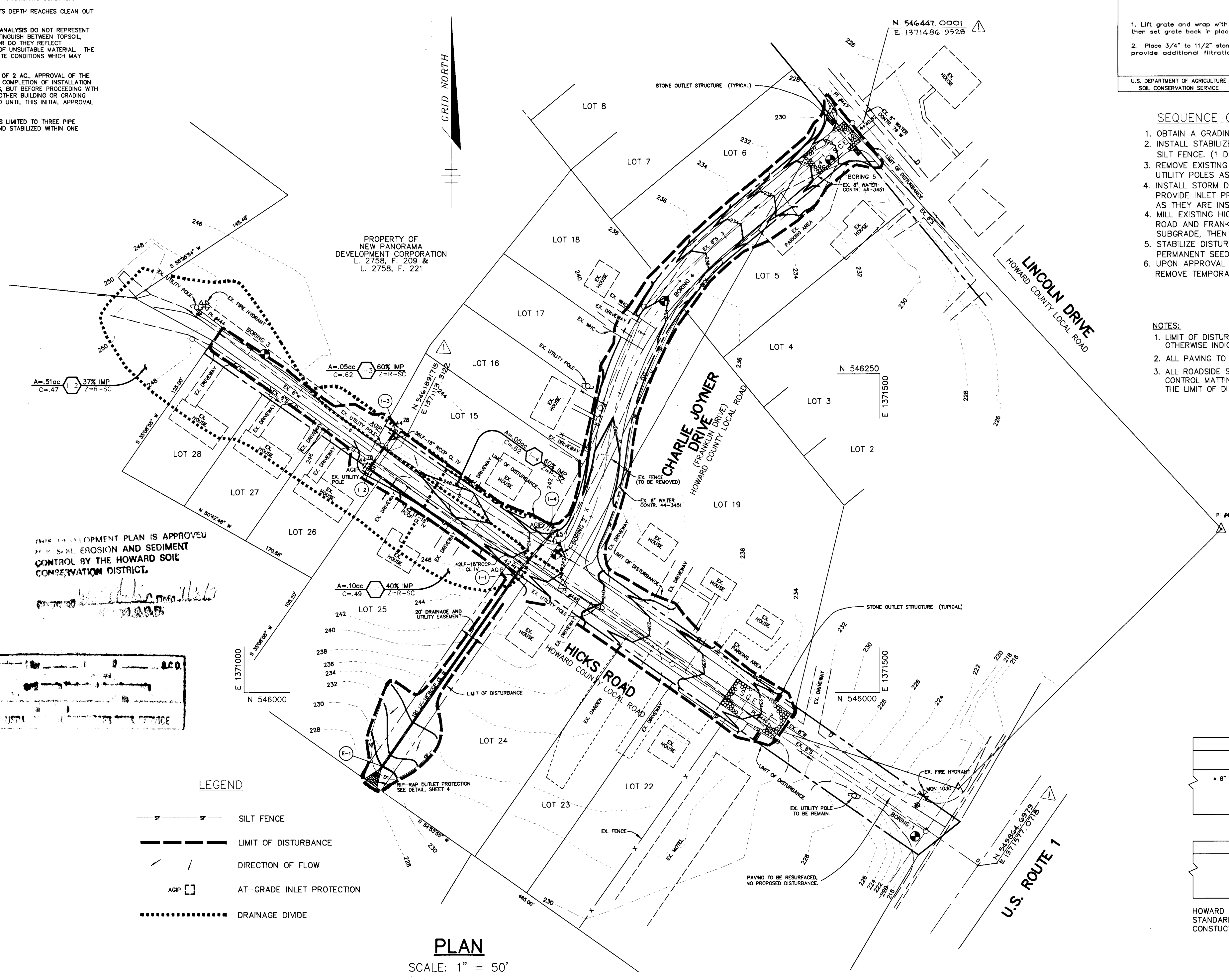
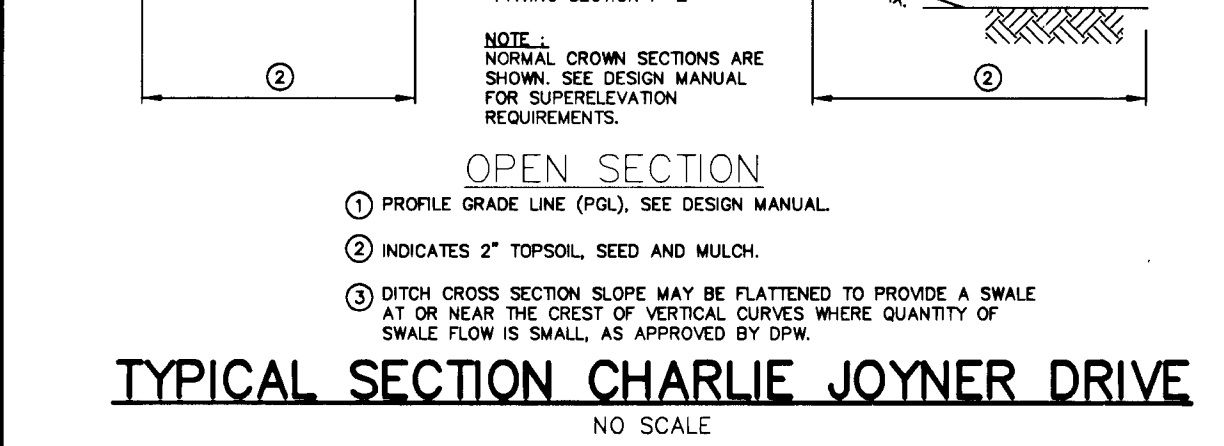
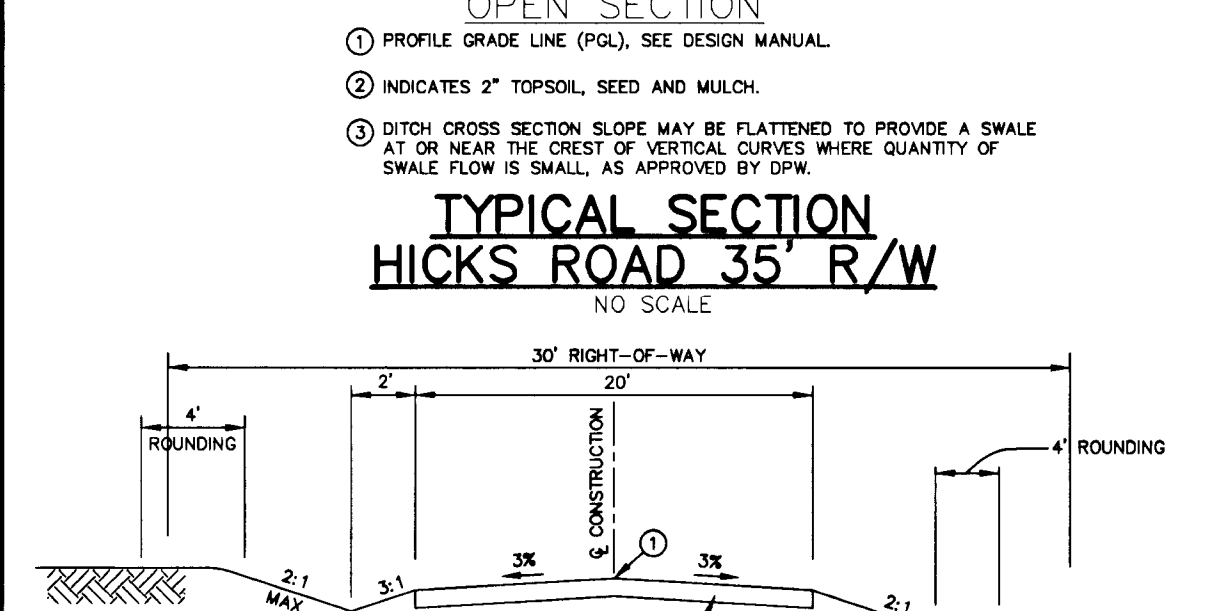
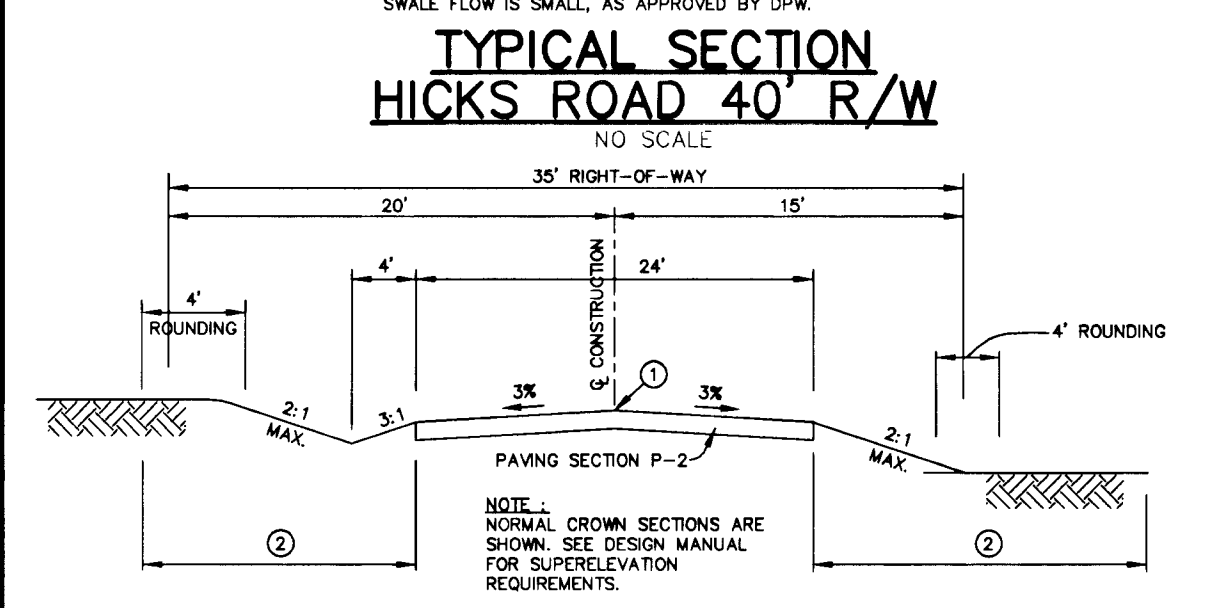
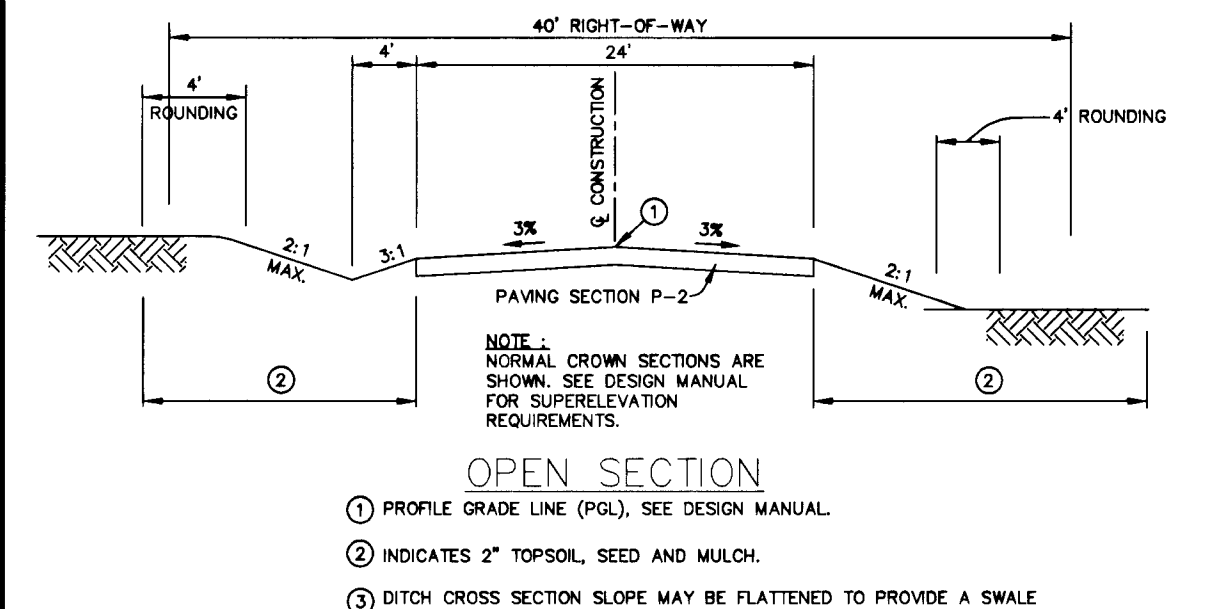
**Maintenance:** Inspect all seeded areas and make needed repairs, replacements and reseedings.

**SEDIMENT CONTROL NOTES**

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (316-1655).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL, AND REVISIONS THERE TO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, SLOPES, PERIMETER SLOPES AND ALL SLOPES AND ALL SLOPES GREATER THAN 3:1, 14 DAYS AS TO OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHALL BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL FOR PERMANENT SEEDINGS (SEC. 50), 500 (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONG CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:
  - TOTAL AREA OF SITE 1.09 ACRES
  - AREA DISTURBED 1.09 ACRES
  - AREA TO BE ROOFED OR PAVED 0.81 ACRES
  - AREA TO BE VEGETATIVELY STABILIZED 0.48 ACRES
  - TOTAL CUT 508 CU.YDS
  - TOTAL FILL 290 CU.YDS.
- NOTE: EXCESS MATERIAL TO BE DISPOSED OF ON A SITE WITHOUT A GRADING PERMIT.
8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10. SITE GRADING WILL BEGIN ONLY AFTER ALL PERMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
11. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
12. CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BIG QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.
13. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 AC., APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
14. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

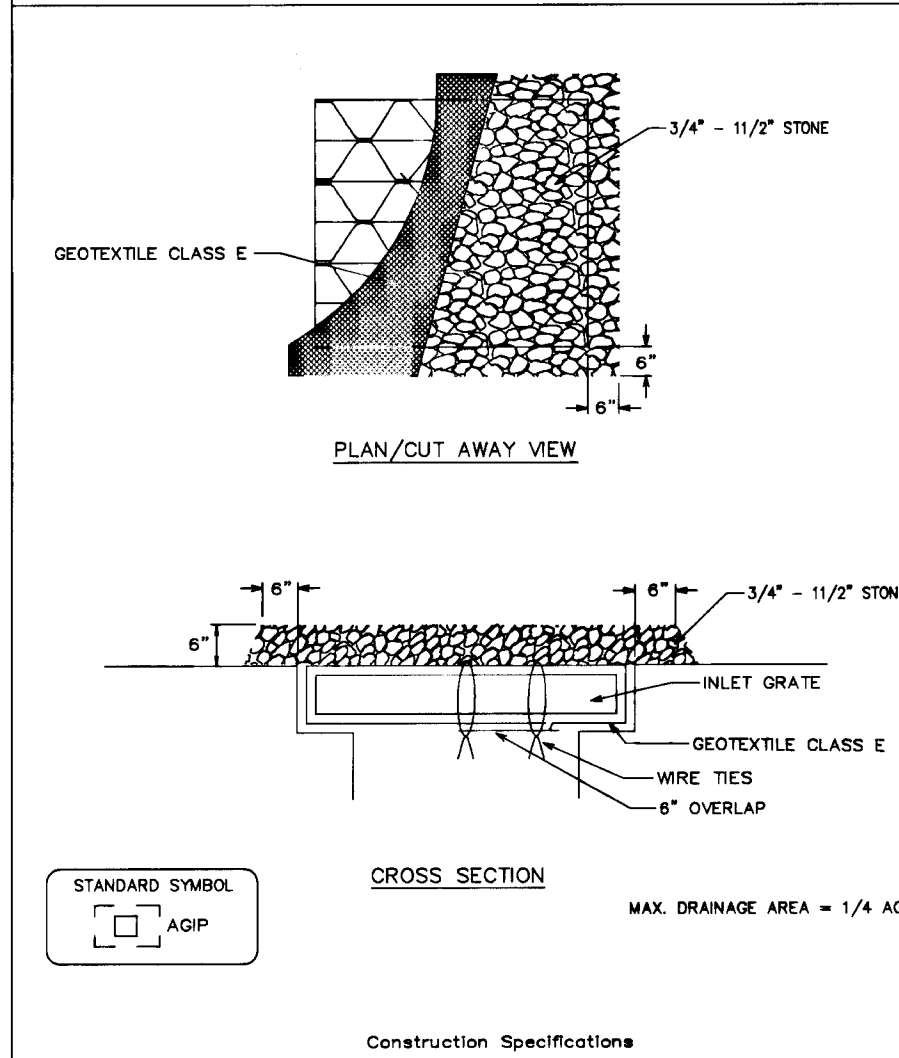


**RESIDENTIAL DRIVEWAY ENTRANCE SECTION TO OPEN SECTION ROADWAY**



**PLAN**  
SCALE: 1" = 50'

**DETAIL 23B - AT GRADE INLET PROTECTION**



**CONSTRUCTION SPECIFICATIONS**

1. Lift grate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.
2. Place 3/4\"/>

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E-18-34 MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION

**SEQUENCE OF CONSTRUCTION**

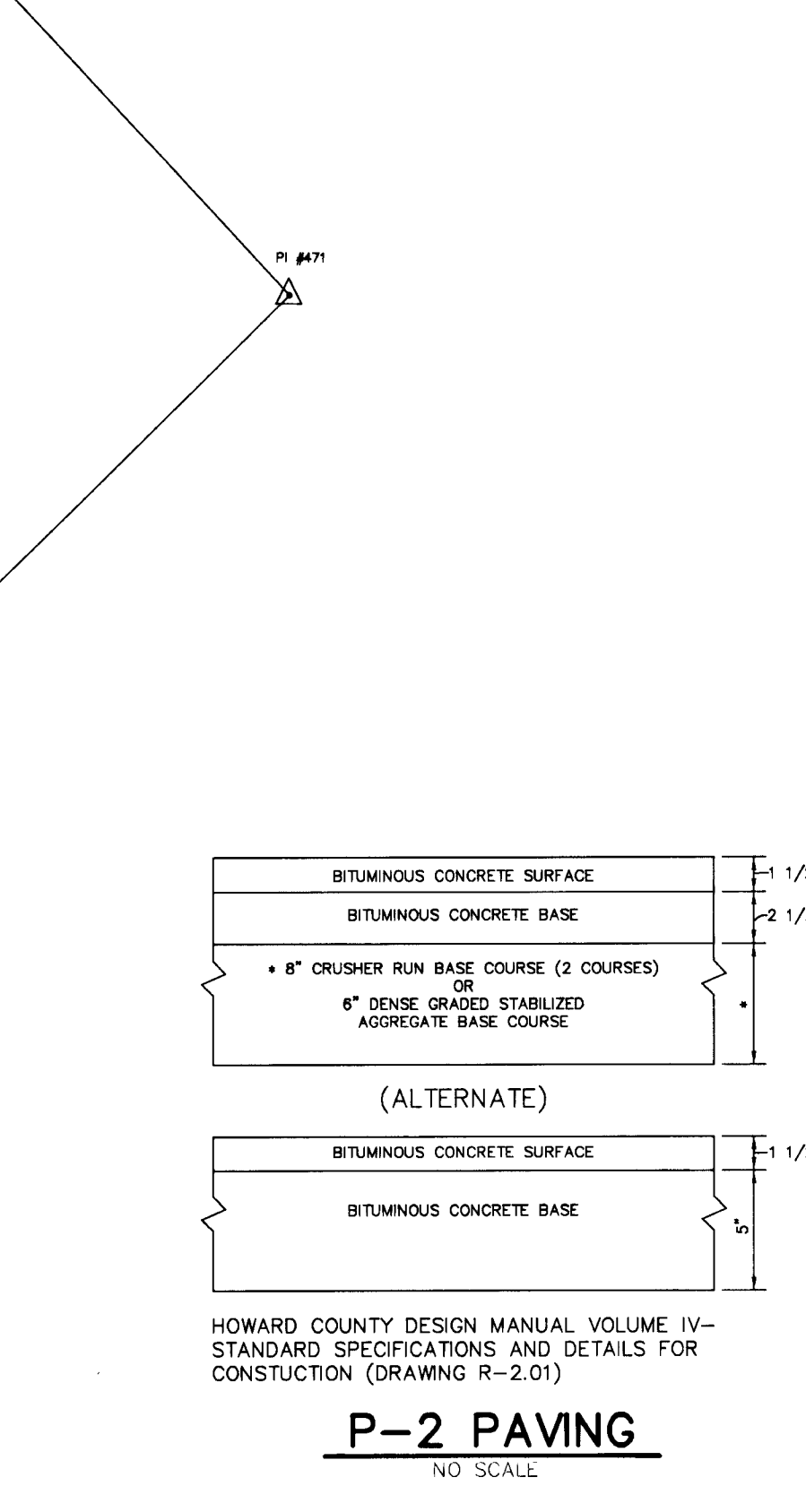
1. OBTAIN A GRADING PERMIT.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND SILT FENCE. (1 DAY)
3. REMOVE EXISTING FENCING AND RELOCATE UTILITY POLES AS NEEDED. (5 DAYS)
4. INSTALL STORM DRAIN INLETS AND PIPING. PROVIDE INLET PROTECTION FOR INLETS AS THEY ARE INSTALLED. (10 DAYS)
5. MILL EXISTING HICKS ROAD PAVING, GRADE HICKS ROAD AND FRANKLIN DRIVE TO MATCH PROPOSED SUBGRADE, THEN PAVE. (6 DAYS)
6. STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (1 DAY)
7. UPON APPROVAL OF HOWARD COUNTY DILP INSPECTOR, REMOVE TEMPORARY SEDIMENT CONTROL DEVICES. (1 DAY)

**NOTES:**

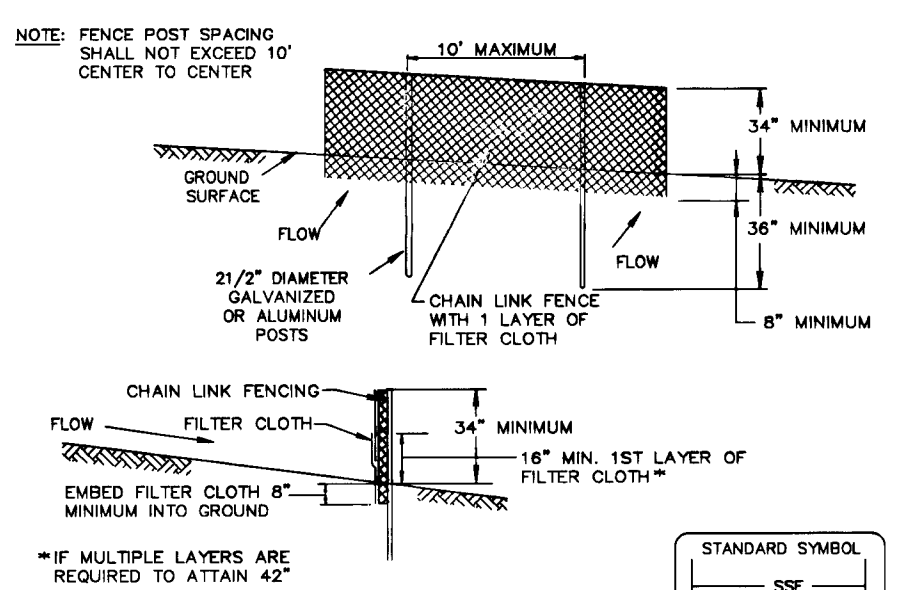
1. LIMIT OF DISTURBANCE IS AT RIGHT-OF-WAY UNLESS OTHERWISE INDICATED.
2. ALL PAVING TO BE P-2.
3. ALL ROADSIDE SWALES TO BE PROTECTED BY EROSION CONTROL MATTING WITH STONE OUTLET STRUCTURES AT THE LIMIT OF DISTURBANCE, AS PER DETAILS, SHEET 2.

HOWARD COUNTY DESIGN MANUAL VOLUME IV - STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.01)

**P-2 PAVING**



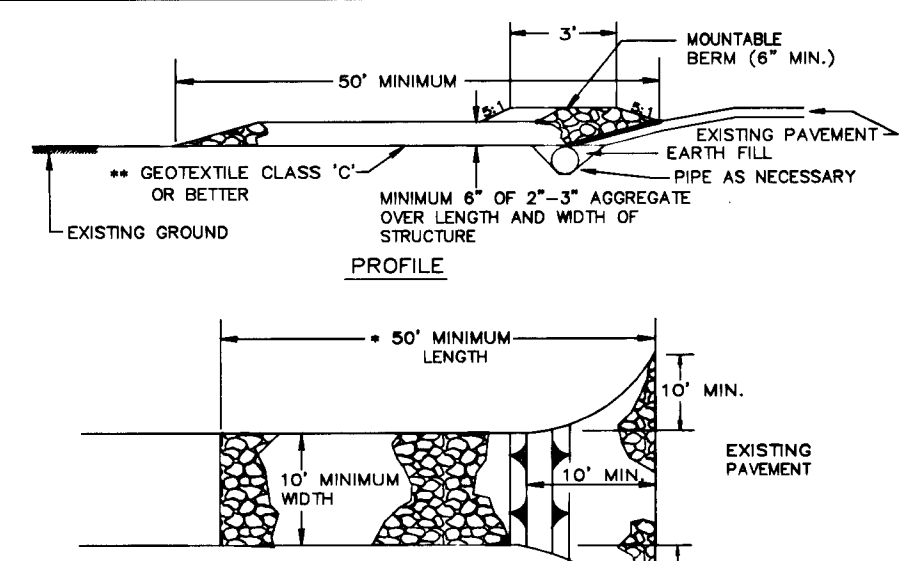
**DETAIL 33 - SUPER SILT FENCE**



**CONSTRUCTION SPECIFICATIONS**

1. Fencing shall be 42\"/>

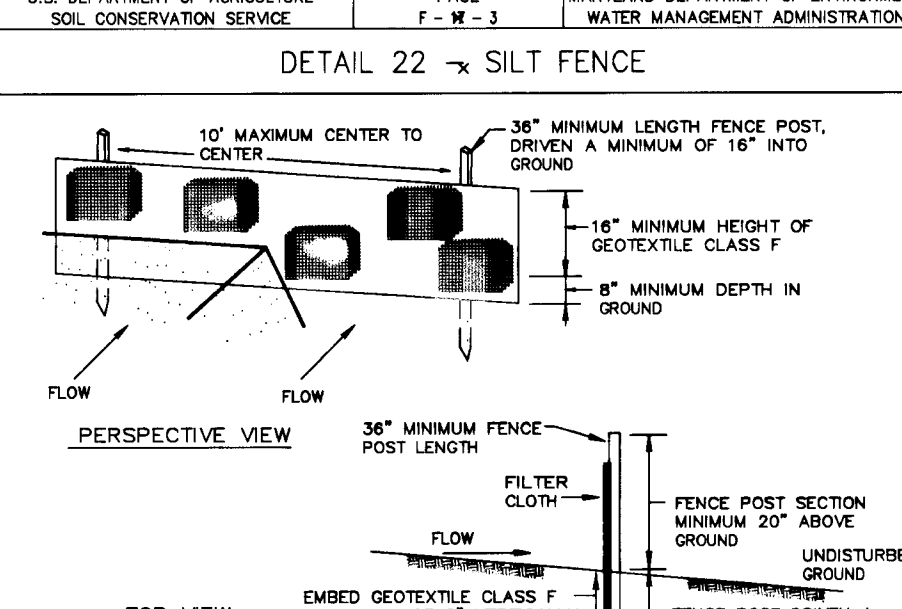
**DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE**



**CONSTRUCTION SPECIFICATION**

1. Length - minimum of 50' (+30' for single residence lot).
2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.
3. 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.
4. Stone - crushed aggregate (2\"/>

**DETAIL 22 - SILT FENCE**



**CONSTRUCTION SPECIFICATIONS**

1. Fence posts shall be a minimum of 36\"/>

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James J. ...* 4/23/97  
DIRECTOR OF PUBLIC WORKS DATE

*Charles ...* 4/22/97  
CHIEF, BUREAU OF ENGINEERING DATE

*Joseph ...* 4/18/97  
CHIEF DIVISION OF TRANSPORTATION DATE

*Conrad ...* 4-22-97  
CHIEF, BUREAU OF HIGHWAYS DATE

RIEMER MUEGGE & ASSOCIATES, INC.  
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R0C0,113500 PRELIMS.DWG

*J. Parekh*  
JAYKANT D. PAREKH # 19148

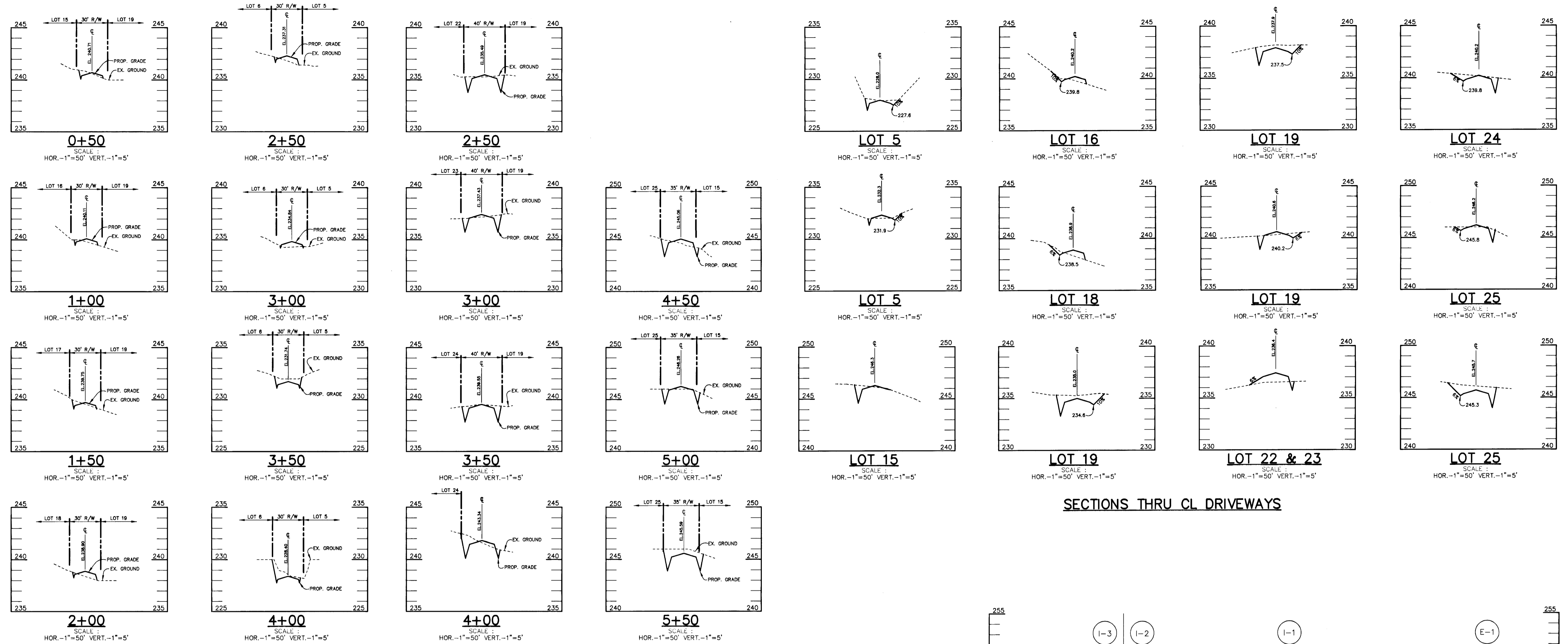
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| DES:  | CJR     |          |                   |        |
| DRN:  | RPP     |          |                   |        |
| CHK:  | JDP     |          |                   |        |
| DATE: | 4/18/97 | RJC      | Added COORDINATES | 5/1/97 |
| BY:   | NO.     | REVISION |                   |        |

GRADING AND SEDIMENT CONTROL  
PLAN AND DETAILS

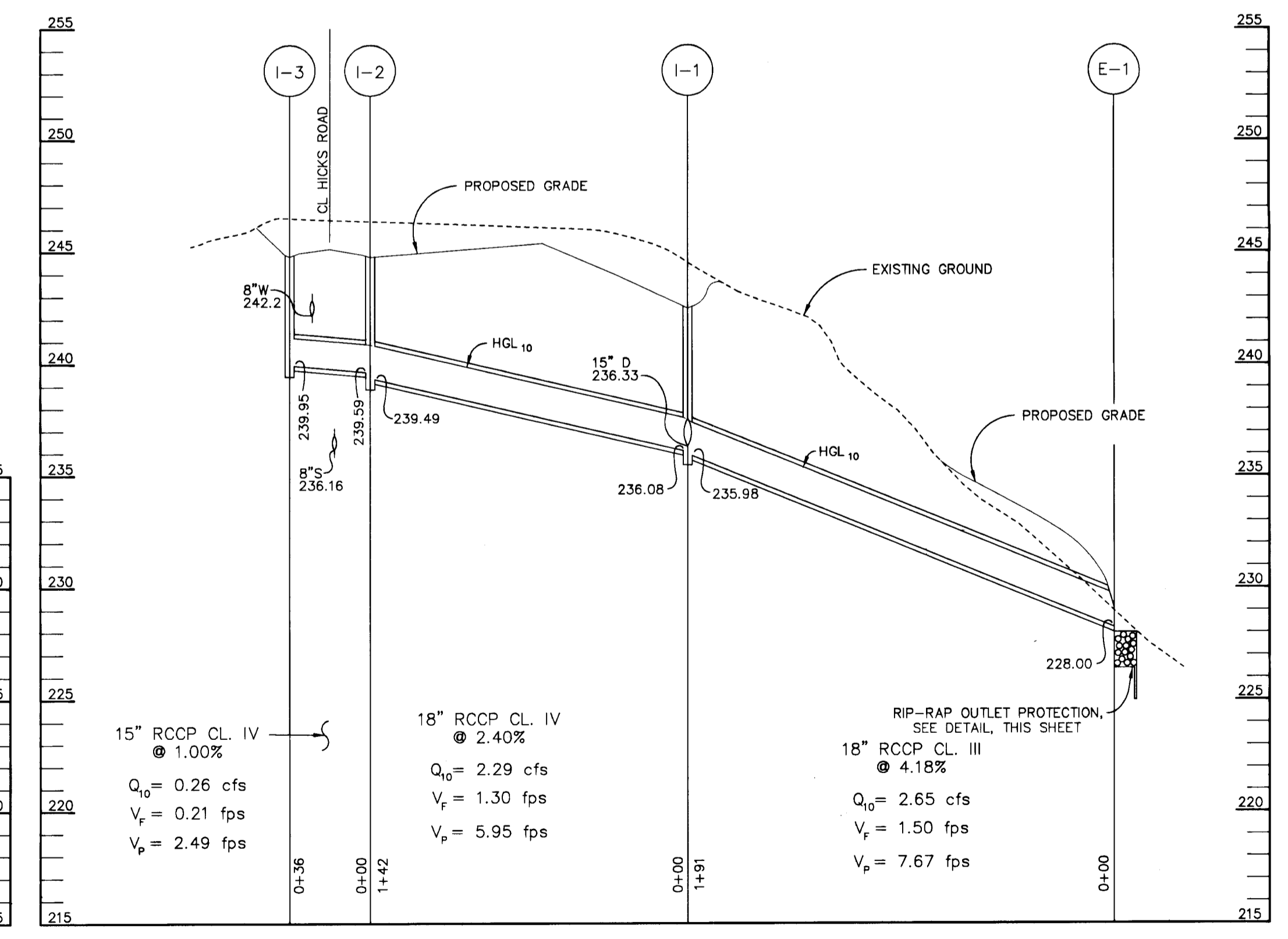
600' SCALE MAP NO. 43 BLOCK NO. 14

ROADWAY IMPROVEMENTS  
HICKS ROAD AND CHARLIE JOYNER DRIVE  
6th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CAPITAL PROJECT No. J-4129

SCALE AS SHOWN  
SHEET 3 OF 4

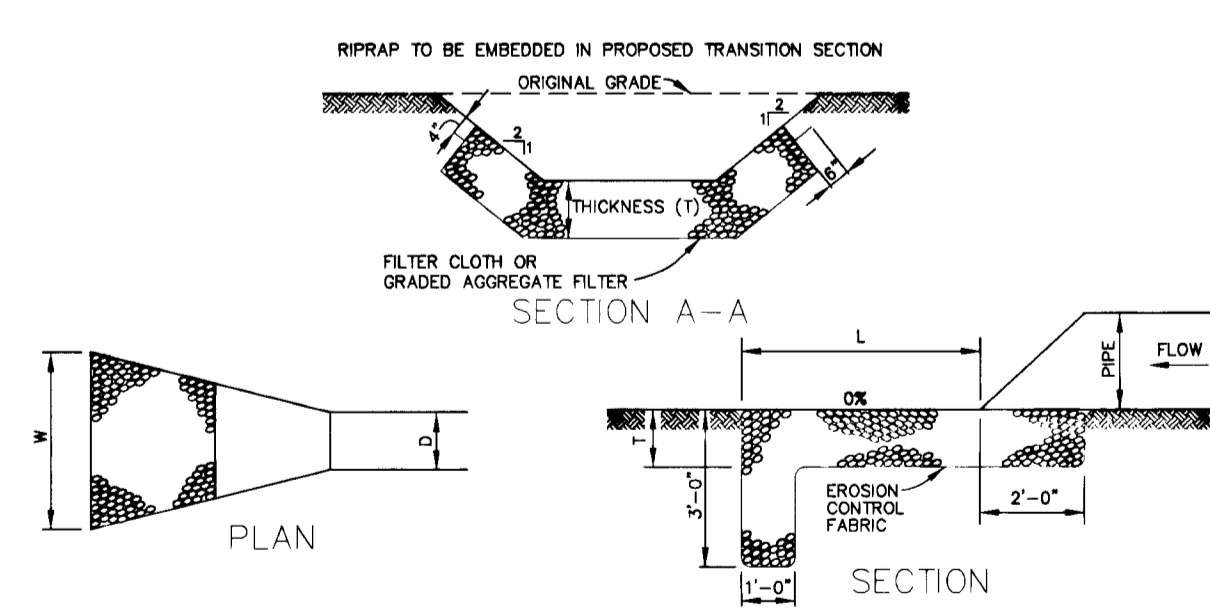


**SECTIONS THRU CL DRIVEWAYS**



**STORM DRAIN STRUCTURE SCHEDULE**

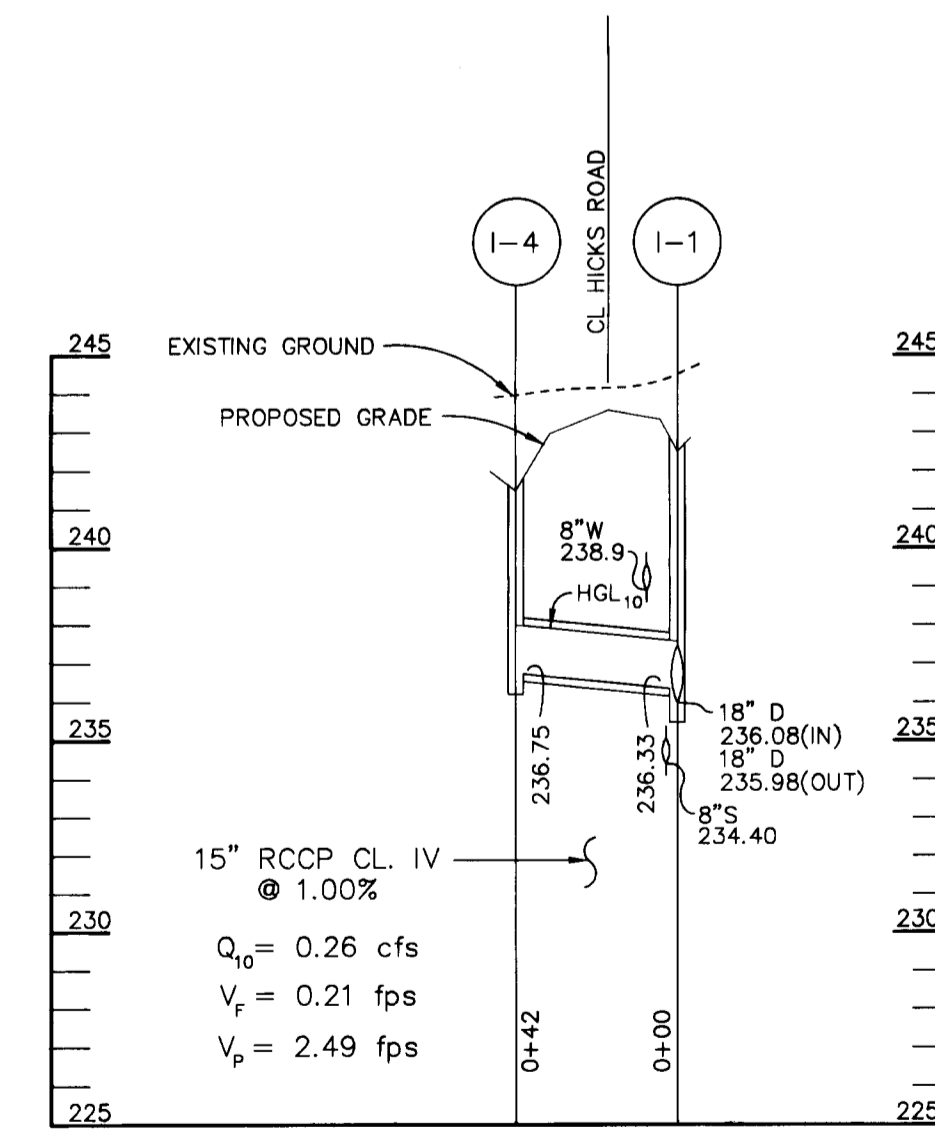
| INLET | TYPE               | LOCATION                           | INV. IN                    | INV. OUT | TOP    | HOWARD CO. STD. DETAIL |
|-------|--------------------|------------------------------------|----------------------------|----------|--------|------------------------|
| I-1   | S w/<br>RET. GRATE | HICKS ROAD, @ STA. 4+28, 20' LT    | 236.08(18")<br>236.33(15") | 235.98   | 242.5  | SD 4.22 & SD 4.93      |
| I-2   | S w/<br>RET. GRATE | HICKS ROAD, @ STA. 5+70.45, 20' LT | 239.59                     | 239.49   | 244.78 | SD 4.22 & SD 4.93      |
| I-3   | S w/<br>RET. GRATE | HICKS ROAD, @ STA. 5+70.45, 20' RT | -                          | 239.95   | 244.78 | SD 4.22 & SD 4.93      |
| I-4   | S w/<br>RET. GRATE | HICKS ROAD, @ STA. 4+24, 22' RT    | -                          | 236.75   | 241.5  | SD 4.22 & SD 4.93      |
| E-1   | 18" END<br>SECTION | HICKS ROAD, @ STA. 4+28, 211' LT   | 228.00                     | -        | -      | SD 5.51                |



NOTE: Q<sub>10</sub>, V & DEPTH CALCULATED AT END OF RIPRAP OUTLET CHANNEL.

| STRUCTURE | MEDIAN STONE DIA. | LENGTH (L) | WIDTH (W) | THICKNESS (T) | Q <sub>10</sub> | V        | DEPTH |
|-----------|-------------------|------------|-----------|---------------|-----------------|----------|-------|
| E-1       | 9.5'              | 10'        | 12'       | 18"           | 2.65 cfs        | 7.67 fps | .82'  |

**RIPRAP OUTLET PROTECTION DETAIL**  
NO SCALE



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

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

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
4/23/97  
4/22/97

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DES: CJR  
DRN: RPP  
CHK: JDP  
DATE: 4/18/97  
BY: NO. REVISION DATE

STORM DRAIN PROFILES,  
ROAD CROSS SECTIONS,  
AND DETAILS  
600' SCALE MAP NO. 43 BLOCK NO. 14

ROADWAY IMPROVEMENTS  
HICKS ROAD AND CHARLIE JOYNER DRIVE  
6th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CAPITAL PROJECT No. J-4129

SCALE AS SHOWN  
SHEET 4 OF 4