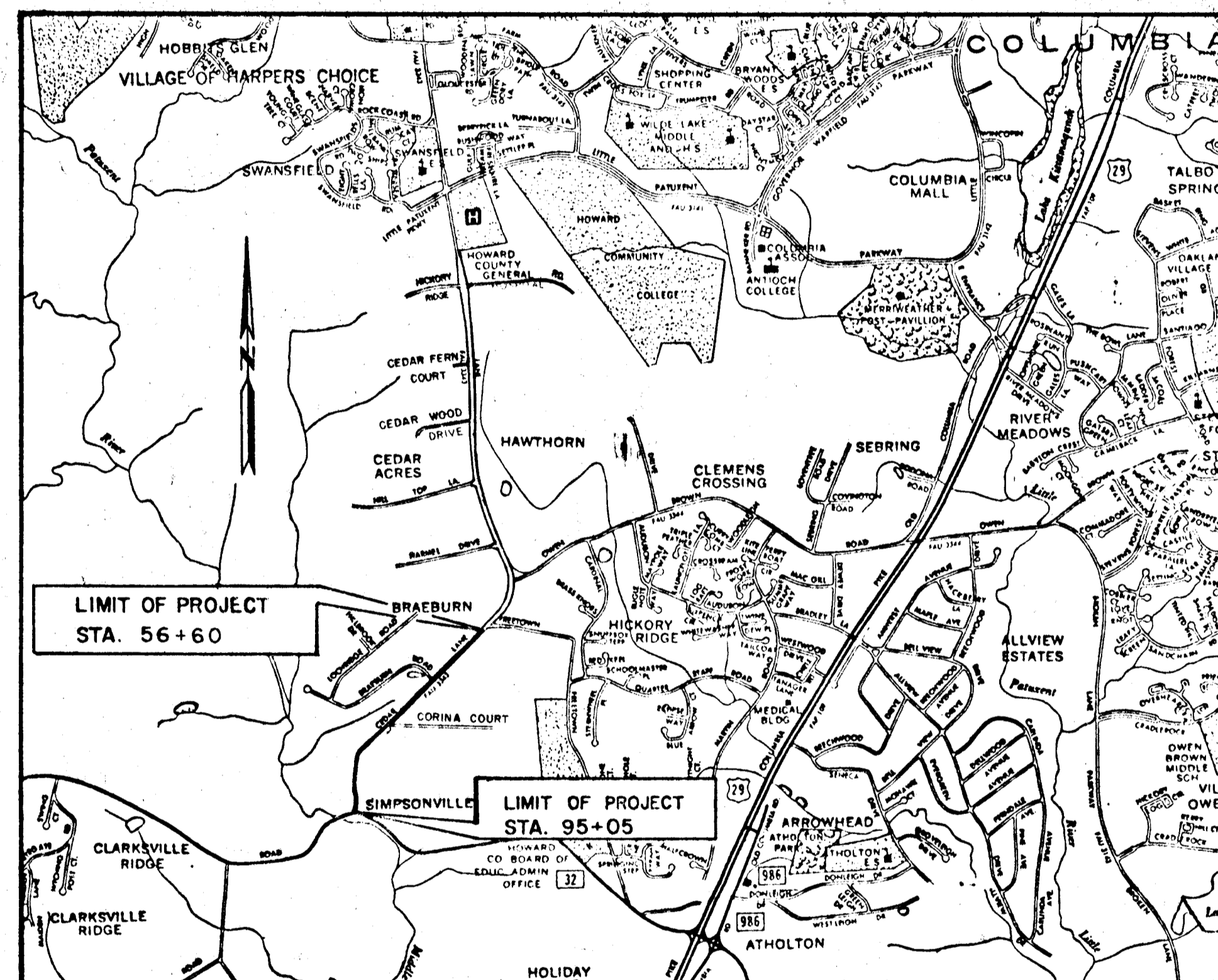




# HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS

INDEX OF SHEETS	
SHEET NOS.	DESCRIPTION
1	TITLE SHEET & LOCATION PLAN
2	TYPICAL SECTIONS & GENERAL NOTES
3	TYPICAL SECTIONS
4	TYPICAL SECTIONS & DETAILS
5	CONSTRUCTION - R/W LEGEND & DETAILS
6 & 7	SEDIMENT CONTROL DETAILS & EARTHWORK ANALYSIS
8	SEDIMENT & EROSION CONTROL DRAINAGE AREAS PLAN
9	PLAN & PROFILE STA. 54+00 TO STA. 67+00
10	PLAN & PROFILE STA. 67+00 TO STA. 80+00
11	PLAN & PROFILE STA. 80+00 TO STA. 89+20
12	PLAN & PROFILE STA. 89+20 TO STA. 95+05
13	CONNECTING ROAD PROFILES
14	STORM DRAIN PROFILES
15	STORM DRAIN PROFILES
16	STORM DRAIN PROFILES
17	TIMBER TIE RETAINING WALL & DETAILS FROM STA. 71+89 TO STA. 73+00
18	HORIZONTAL & VERTICAL CONTROLS
19	BORING DATA
20 - 22	SEDIMENT & EROSION CONTROL PLAN
23 - 26	LANDSCAPING PLANS
27 & 28	STRIPING & PERMANENT SIGNING PLANS



LOCATION MAP  
SCALE: 1" = 2000'

## CEDAR LANE PHASE 2 SOUTH OF FREETOWN RD. TO GUILFORD RD. CAPITAL PROJECT J-4086

**CERTIFICATION BY THE DEVELOPER**  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THIS CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

*[Signature]*      *[Date]*  
 SIGNATURE OF DEVELOPER      DATE

**CERTIFICATION 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.

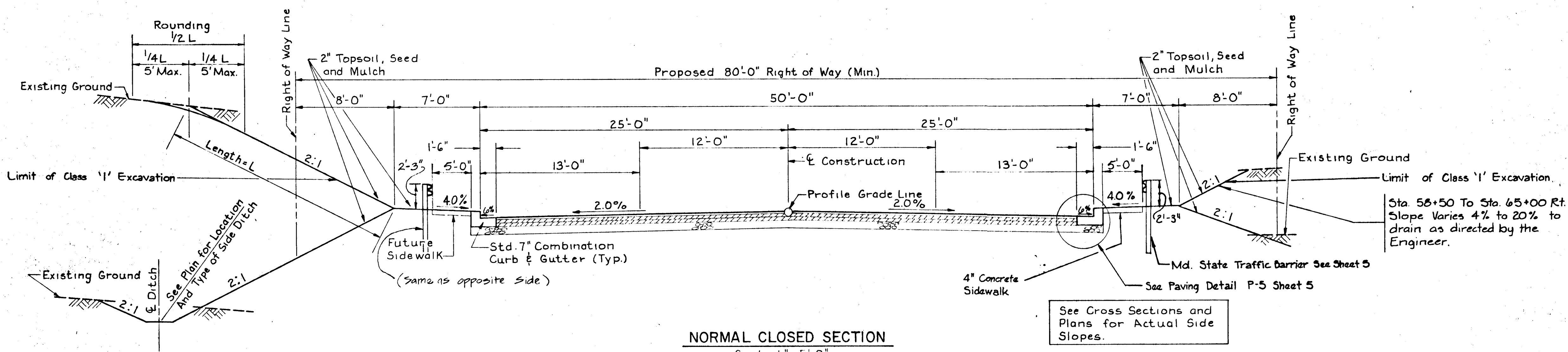
*[Signature]*      *[Date]*  
 SIGNATURE - FURDUM AND JESCHKE      DATE

HOWARD S.C.D.  
 REVIEWED FOR \_\_\_\_\_ NAME \_\_\_\_\_  
 AND MEETS TECHNICAL REQUIREMENTS

*[Signature]*      *[Date]*  
 SIGNATURE      DATE 7/12/90  
 U.S. SOIL CONSERVATION SERVICE

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

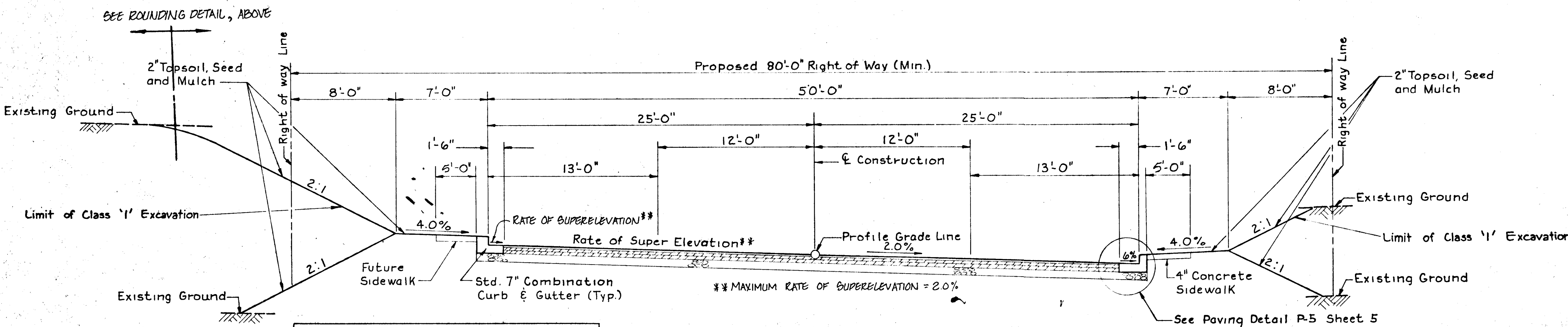
*[Signature]*      *[Date]*  
 APPROVED      DATE 7/12/90  
 HOWARD S.C.D.



**NORMAL CLOSED SECTION**

Scale: 1" = 5'-0"  
 STA 56+60 To STA 81+56.38

See Cross Sections and Plans for Actual Side Slopes.



**SUPERELEVATED CLOSED SECTION** \* (FOR ROADWAYS CURVED TO THE RIGHT)

Scale: 1" = 5'-0"  
 STA 81+56.38 To STA 85+00

See Cross Sections and Plans for Actual Side Slopes, and Roadway Cross Slopes.

\* FOR SUPERELEVATED ROADWAYS CURVED TO THE LEFT, THE ROADWAY TYPICAL SECTION WOULD BE THE MIRROR IMAGE OF THIS TYPICAL SECTION.

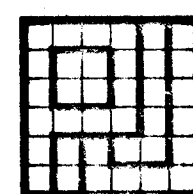
**GENERAL NOTES**

- Right of Way Lines shown on these Plans are shown for assistance in interpreting the Plans; for any Fee Right of Way and Easement Information see Right of Way Plans.
- Endwalls are not to be constructed until grading is completed. The types of endwalls are subject to modifications.
- Existing Private Sidewalks disturbed by the work shall be reconstructed. Steps shall be provided where necessary as a result of grading.
- All Pipes Elevation shown are Invert Elevations.
- All Slopes and/or Disturbed Areas shall receive Solid Sodding on lawn areas and Seeding and Mulching for areas around trees and bushes except where otherwise indicated on the plans or as directed by the Engineer.
- The Contractor shall install and maintain all Temporary Sediment Control Measures as shown on the drawings. However, any Sediment Control Measures not specifically indicated in the Contract Documents, but required as a result of the Contractor's Excavations or activities shall not be cause of Extra Payment.
- Location Points for Inlets, Manholes and Structures
 

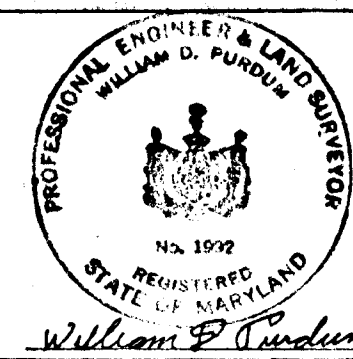
Item	Horizontal Location	Vertical Location
Curb Type Inlets	Center Face of Curb	Top of Curb
Grate Type Inlets	Center of Grate	Top of Grate
Manholes	Center of Cover	Top of Cover
Structures w/Stack	Center of Cover	Top of Cover
Endwalls	Center of Wall	Top of Wall
- Approximate location of existing utilities are shown. The Contractor shall take all necessary precautions to protect existing utilities and to maintain uninterrupted service. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer by the Contractor at the Contractor's expense.
- The Contractor shall locate Existing Utilities a minimum of two weeks in advance of Construction operations in vicinity of utilities. Costs for locating existing utilities and for adjusting utility appurtenances to meet finished grades will be included in other items of the Contract.
- Contractor shall notify the following utilities or agencies at least five (5) days before starting work shown on these plans:
  - Miss Utility (collect) - 257-7777
  - Baltimore Gas & Electric Company, Underground Electric Distribution Engineering "Damage Control" - 234-6313
  - Baltimore Gas & Electric Company, Underground Gas Distribution Engineering - 234-5533
  - Chesapeake and Potomac Telephone Company - 597-8585
  - State Highway Administration - 531-5533
  - Howard Cable TV - 461-1156
  - Howard County Division of Traffic Engineering - 992-2450
- All manholes shall be 4'-0" inside diameter.
- Standard Details for this Contract shall be the Howard County Standard Details as Supplemented by the Maryland State Highway Administration Standard Details, Maryland State Standards and Specifications for Soil Erosion and Sediment Control and Manual on Uniform Traffic Control Devices of the U. S. Department of Transportation.
- Trees are to be protected from damage to the maximum extent.
- Contractor shall remove trees, stumps and roots along line of excavation as directed by the Engineer. Payment for such removal shall be included in the lump sum price bid for Clearing and Grubbing.
- Place regulation "Men Working" and warning signs as required to comply with Maryland State Highway Administration Manual of Traffic Control for Highway Construction and Maintenance Operations.
- Top Elevations of structures shall be adjusted in the field to meet existing conditions as directed by the Engineer.
- Grading shall be done in such a manner so as to insure positive drainage to the proposed inlet Structures.
- Horizontal and Vertical controls are based on the Maryland State Grid Coordinate System.
- Clearance between existing and proposed utilities shall be a minimum of 6". Clearance between all utility poles and proposed utilities shall be a minimum of 2'-0". Cost of bracing at poles shall be included in the bid for Storm Drain Lines.
- Size and type of pipe utilized for through-wall connections between Double A-10 Inlet installations will be equivalent to the outlet pipe.
- See Sheet No. 4 for Maintenance of Traffic Notes.
- Proposed culverts under driveways will be with std. end sections.

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

Director of Public Works: [Signature]  
 Chief, Bureau of Engineering: [Signature]  
 DATE: [Date]



PURDUM & JESCHKE  
 CONSULTING ENGINEERS  
 LAND SURVEYORS  
 1029 North Calvert Street  
 Baltimore, Maryland 21202 301/837-0194



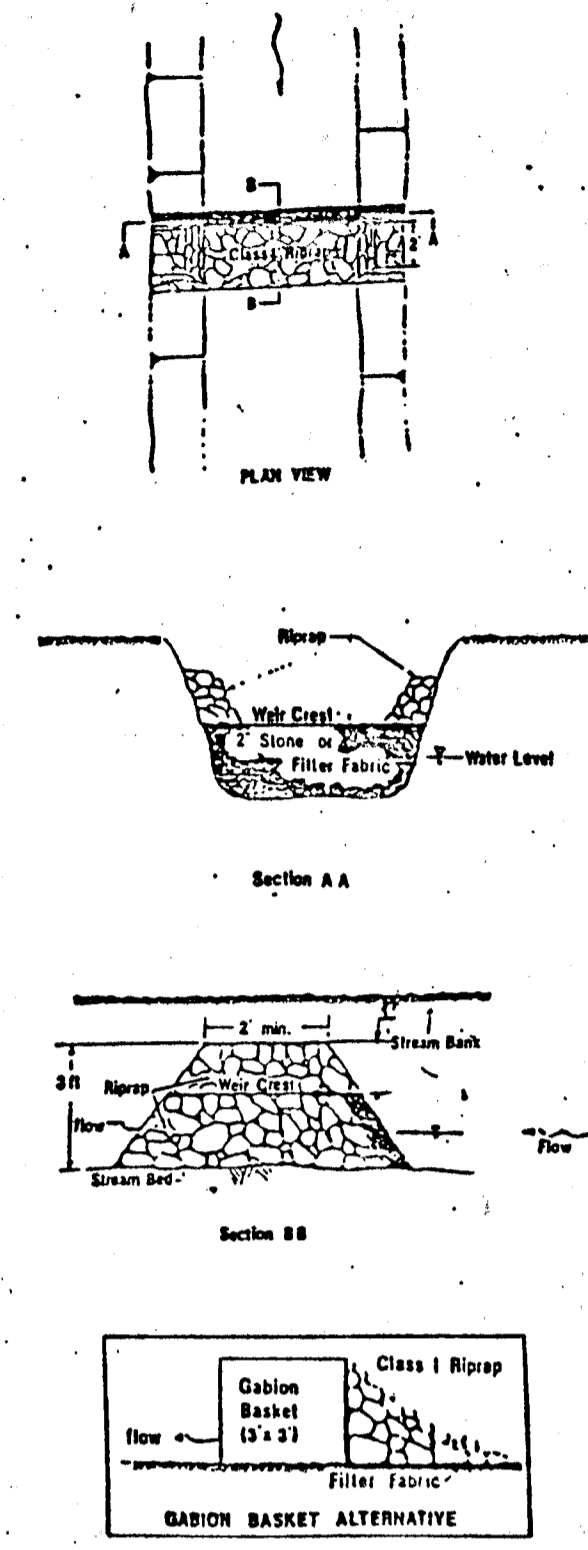
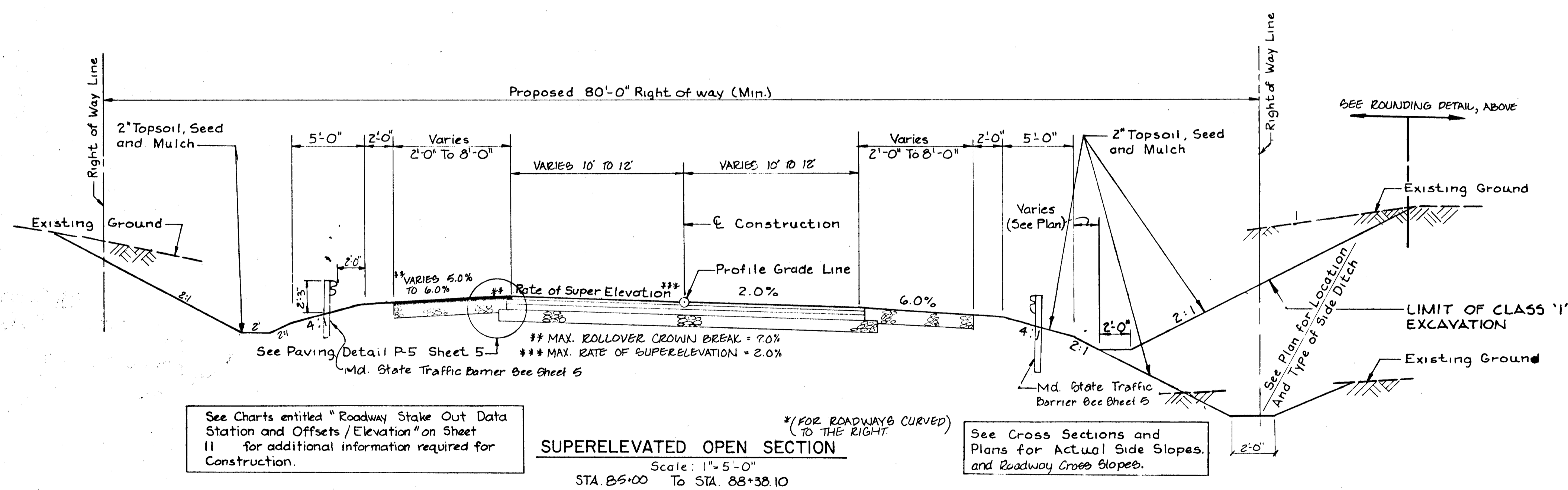
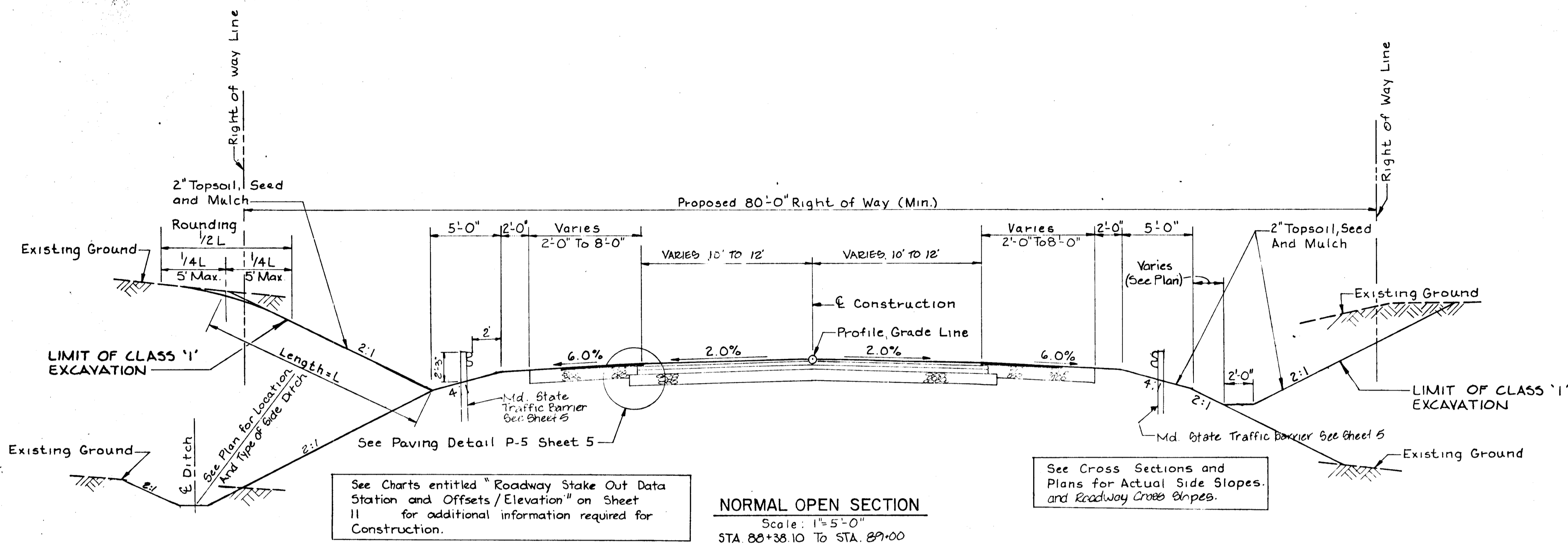
DES: JCT	
DRN: PVR	
CHK: WJF	
DATE: 6/90	
REVISION	
DATE	

TYPICAL SECTIONS &  
 GENERAL NOTES  
 CEDAR LANE - PHASE 2  
 600' SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
 CAPITAL PROJECT J-4086  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 SHEET 2 OF 28

FINAL



- I. Description
- The work encompasses the installation of an in-stream stone dike to be used as a sediment filtering device for streams that generally carry wet weather flow.
- II. Material Specifications
- Small Riprap - 8-12 inch washed stone and gravel shall be used.
  - Filter Fabric - The filter cloth shall be a woven or non-woven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydrocarbons, mildew, and rot resistant. A one foot layer of 2" washed stone may be used instead of filter fabric.
  - Gabion Baskets - Class 1 gabion baskets shall meet the requirements listed in MFD3.2.
- III. Construction Requirements
- Structure to be installed in-stream as first order of business to trap sediment generated during construction activities.
  - The top width of the dike is to be from 2-4 feet.
  - The distance between the dike and the disturbance is to be determined by flow rate of the waterway.
  - Gabion baskets may be used in lieu of small riprap as indicated by alternative section.
  - Structure is to remain in place until all disturbed areas have been stabilized in accordance with an approved sediment and erosion control plan.
  - Entrapped sediment is to be excavated periodically and disposed of in a SCD approved disposal area outside the 100-year floodplain unless otherwise approved on the plans by the MRA.
  - Structure can be removed once approved by inspecting authority.

**IN - STREAM STONE DIKE**  
NO SCALE

\* FOR SUPERELEVATED ROADWAYS CURVED TO THE LEFT, THE ROADWAY TYPICAL SECTION WOULD BE THE MIRROR IMAGE OF THIS TYPICAL SECTION.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

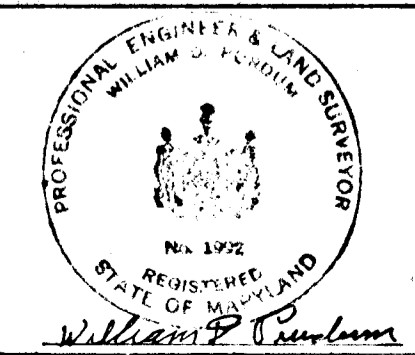
*James J. ...* 11-8-88  
DIRECTOR OF PUBLIC WORKS DATE

*William B. ...*  
CHIEF, BUREAU OF ENGINEERING DATE

CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE DATE

PURDUM & JESCHKE  
CONSULTING ENGINEERS  
LAND SURVEYORS

1029 North Calvert Street  
Baltimore, Maryland 21202 301/837-0194



DESIGN				
DRN: PWP				
CHK: WDP				
DATE: 6/90	BY	NO	REVISION	DATE

TYPICAL SECTIONS

**CEDAR LANE - PHASE 2**

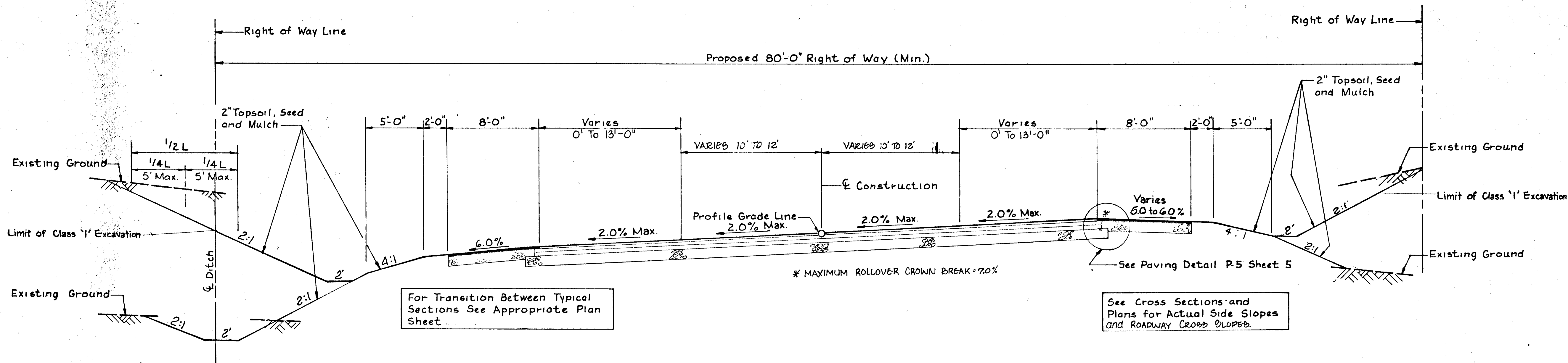
600' SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
CAPITAL PROJECT J-4086  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET  
3 OF 28

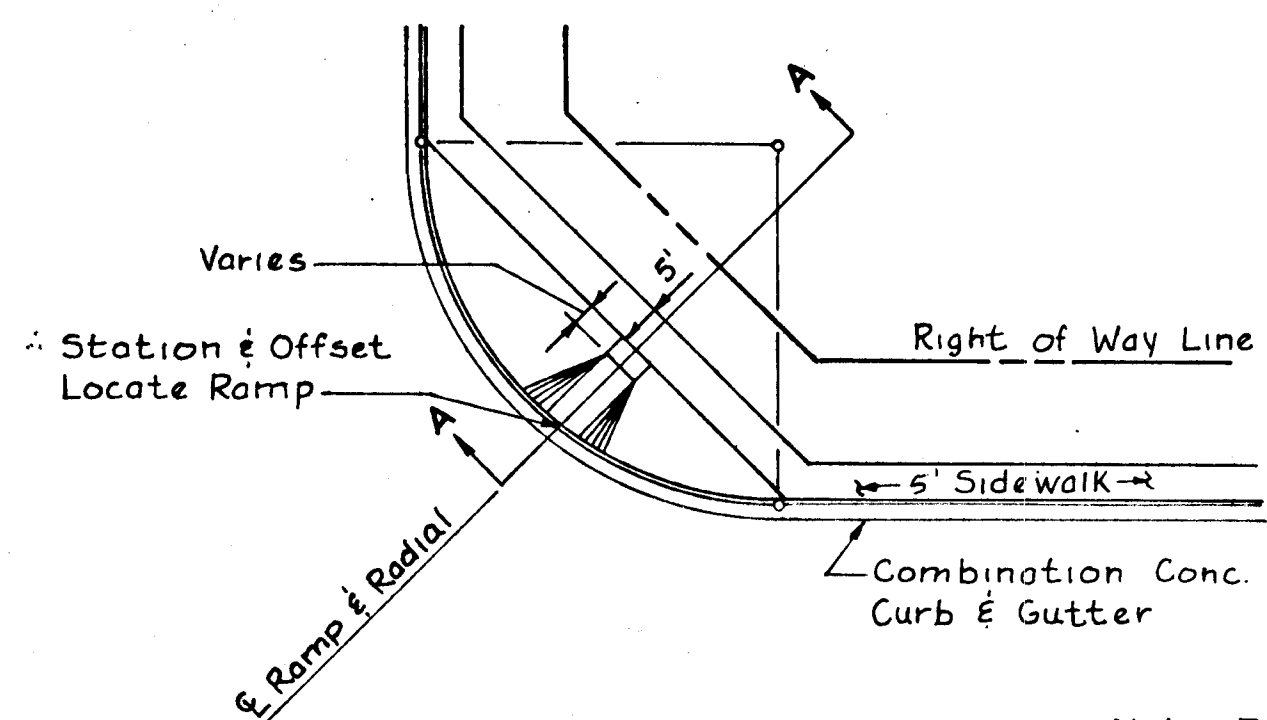
MAINTENANCE OF TRAFFIC

- All maintenance of traffic plans, materials, and devices shall be in accordance with the 1978 Manual on Uniform Traffic Control Devices, and any subsequent addenda.
  - Access to all private driveways shall be maintained at all times between the hours of 3:00 p.m. and 9:00 a.m. Between the hours of 9:00 a.m. and 3:00 p.m., access shall be maintained except when prohibited by an open trench. All affected residents shall be notified at least one (1) hour prior to closing of any driveway.
  - Access to cross streets shall be maintained at all times.
  - Road Construction Ahead signs (W20-1) shall be placed in advance of any construction areas as follows:
    - On Cedar Lane, at 1500, \_\_\_\_\_ feet in advance of construction.
    - On all other cross streets, minimum 250 feet in advance of construction.
    - Wherever else as directed by the Engineer.
- End Construction signs (G20-2) shall be placed on Cedar Lane minimum 250 feet beyond the end of any construction area.
- Where traffic is being maintained on one side of the road while construction takes place on the other, appropriate barriers, barricades, or drums shall be placed between the traveled way and the construction area. Approved Type A low intensity flashing warning lights shall be used during hours of darkness. Travel directions will be posted as shown on Traffic Control Plans (TCPS) in the Special Provisions.



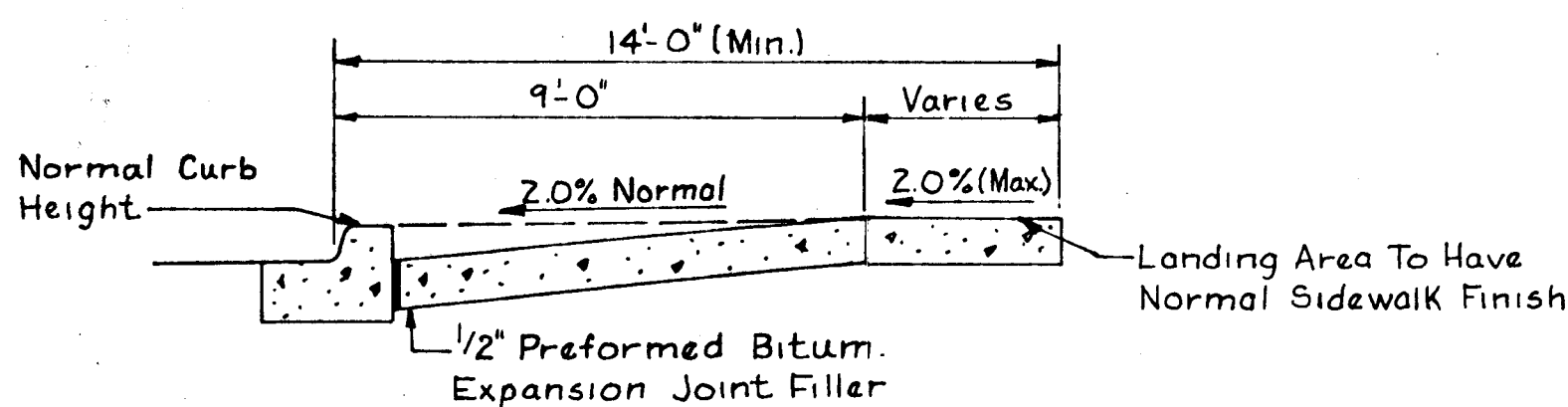
TRANSITION FROM 4-LANE (50'-0" WIDE)  
TO 2-LANE (24'-0" WIDE)  
Sta. 85+00 To Sta. 86+50

See Charts Entitled "Roadway Stake Out Data Station and Offsets/Elevations" on Sheet 11 for Additional Information Required for Construction.



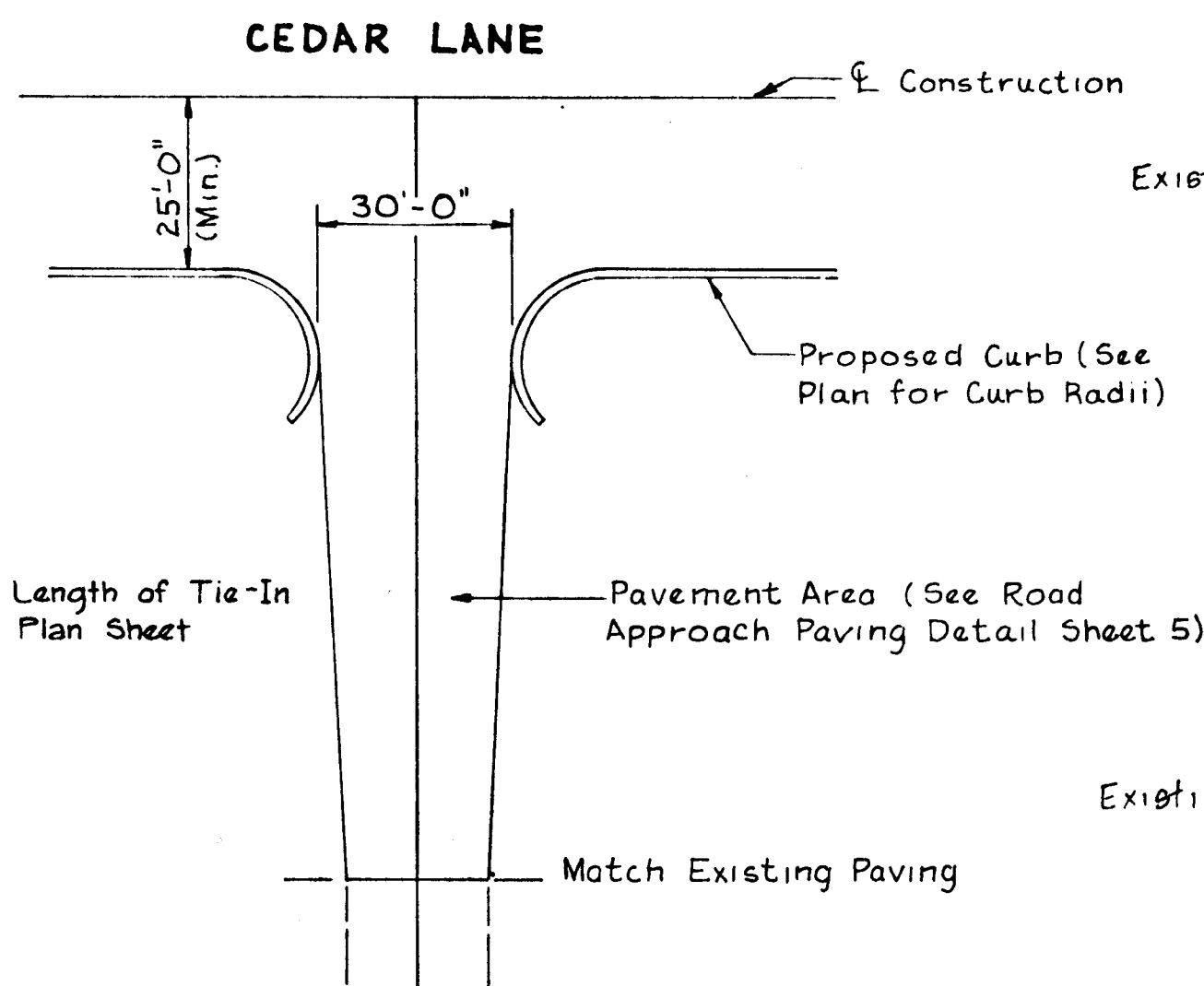
PLAN VIEW

Note: For All Other Construction Details See Standard Detail R-4.01

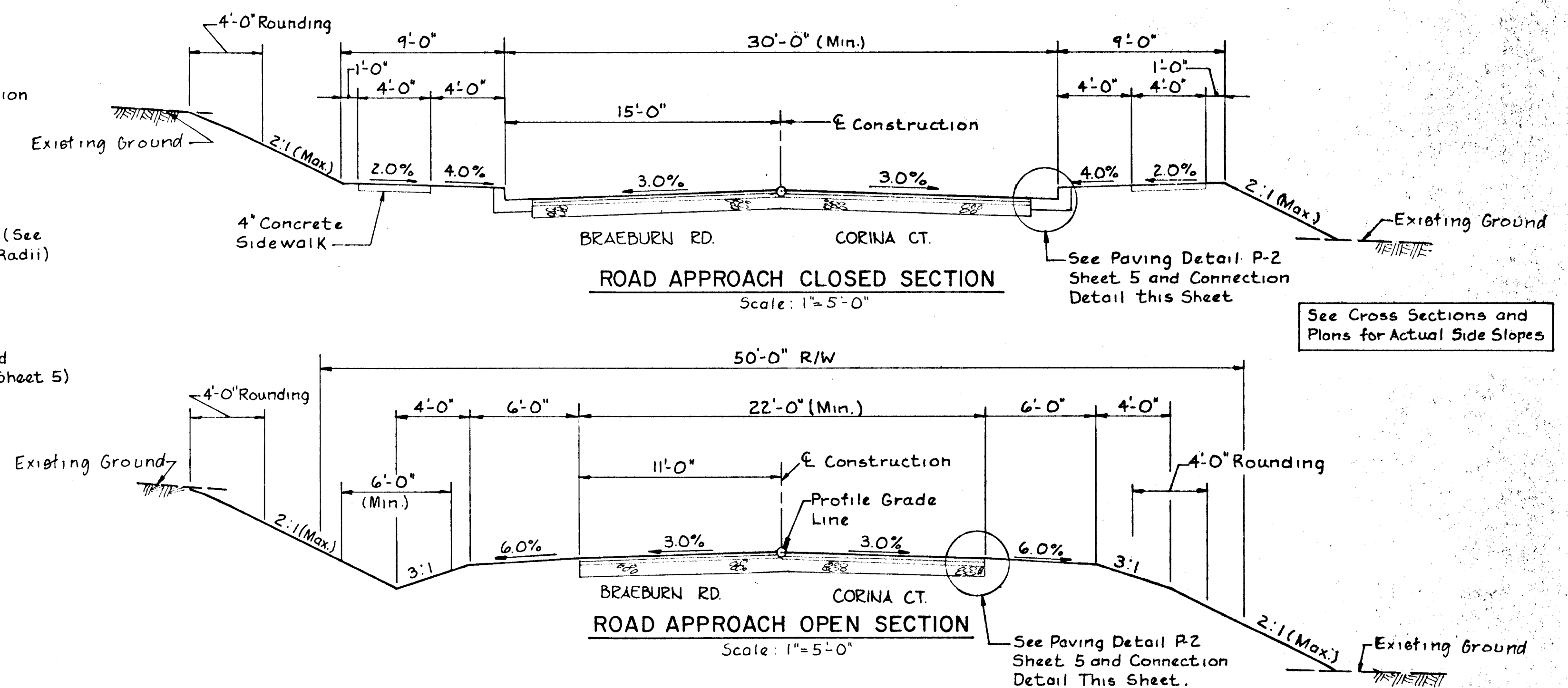


SECTION A-A

MODIFIED SIDEWALK RAMP  
Not To Scale

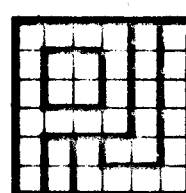


CONNECTION DETAIL  
FOR OPEN SECTION ROAD APPROACHES  
Not To Scale



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

James M. ... 11/2/82 ... 11-8-82  
DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE  
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE DATE



PURDUM & JESCHKE  
CONSULTING ENGINEERS  
LAND SURVEYORS  
1029 North Calvert Street  
Baltimore, Maryland 21202 301/837-0194



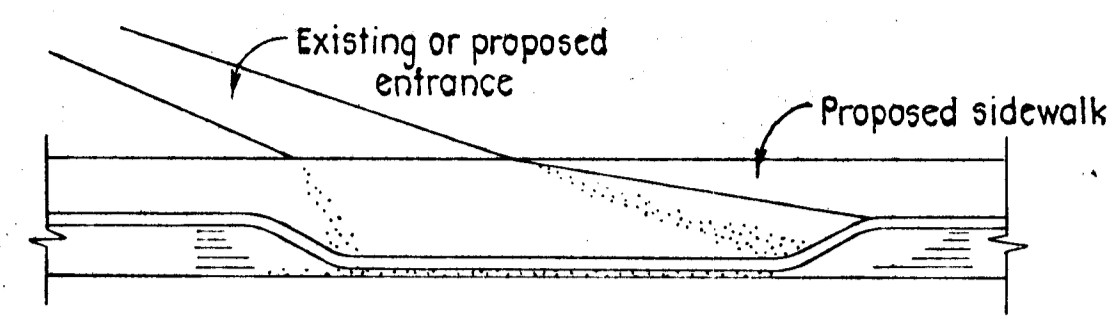
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DRN: PWR				
CHK: WDP				
DATE: 11/2/82	BY	NG	REVISION	DATE

TYPICAL SECTIONS &  
DETAILS  
CEDAR LANE - PHASE 2

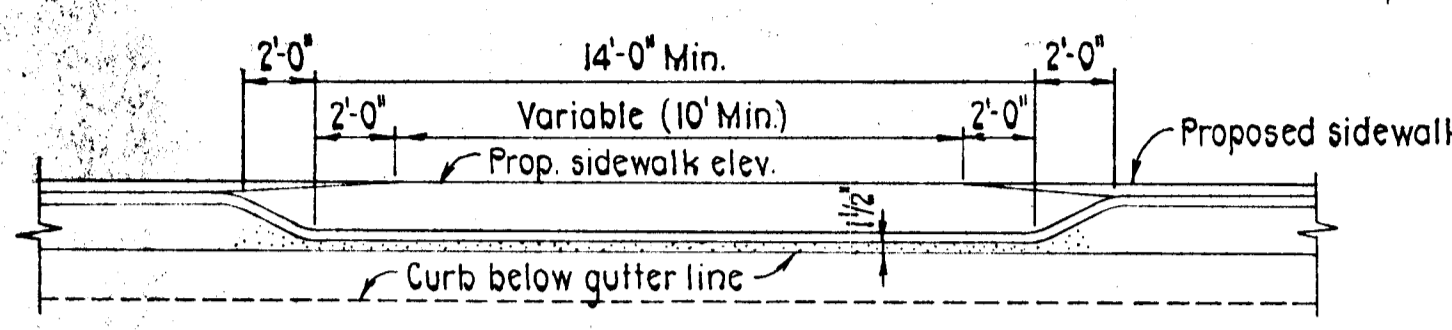
600' SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
CAPITAL PROJECT J-4086  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 4 OF 28



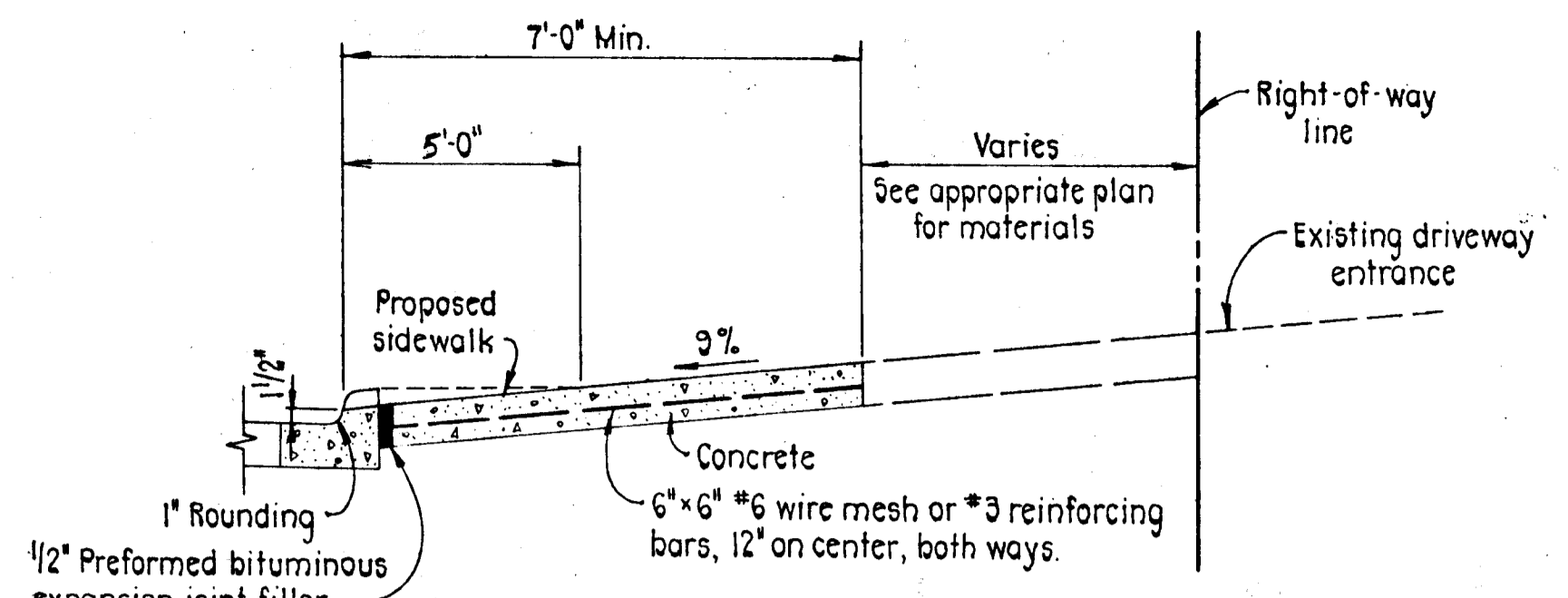
**DRIVEWAY ENTRANCE**



**FRONT VIEW**

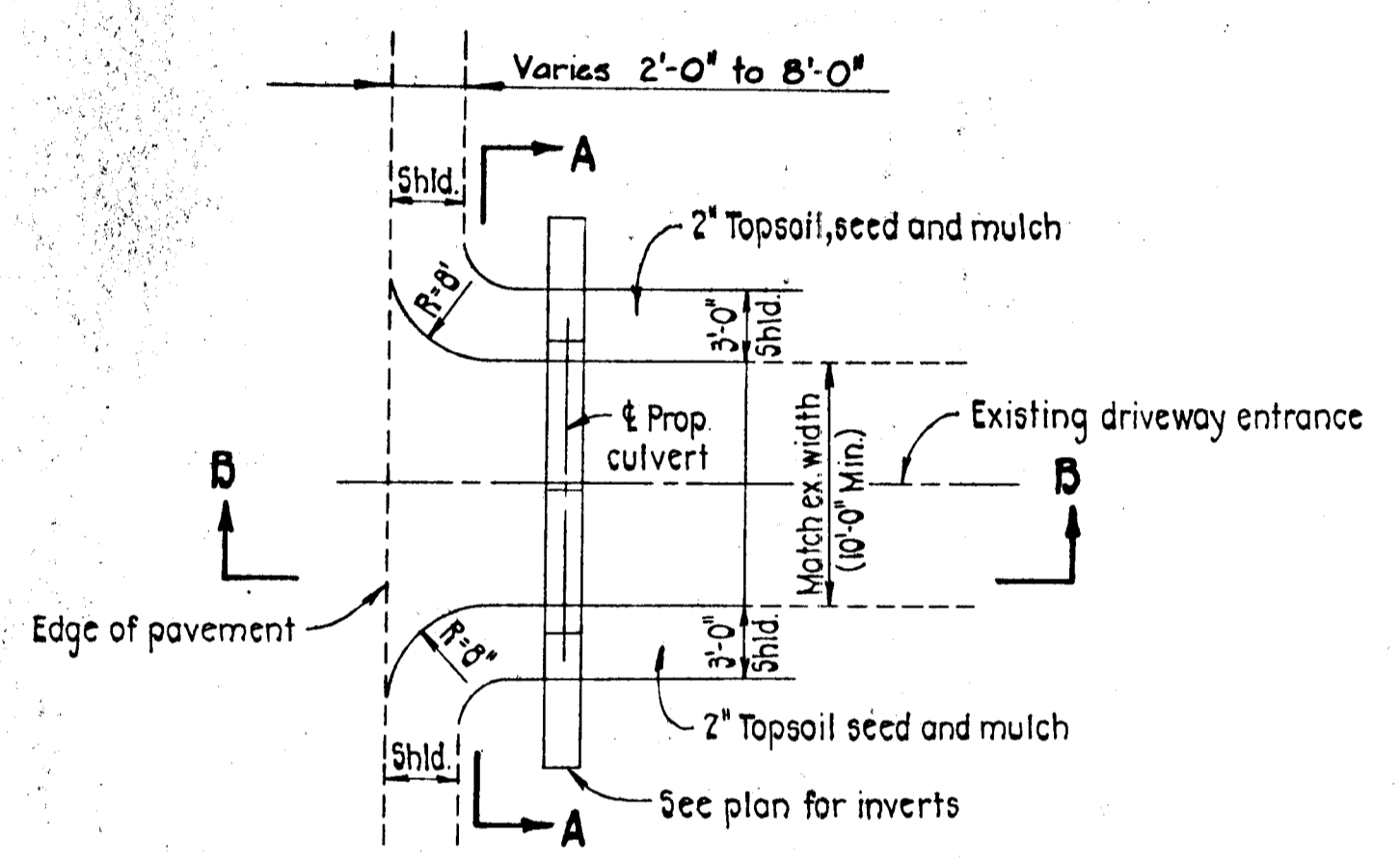
**MODIFIED CLOSED-SECTION DRIVEWAY ENTRANCE DETAIL**

Not to Scale

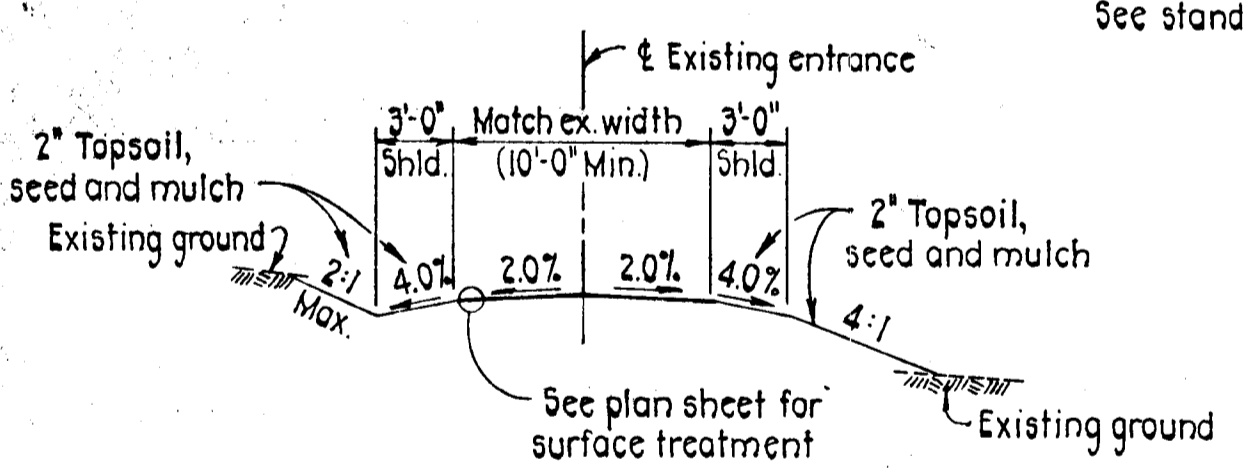


**SIDE VIEW**

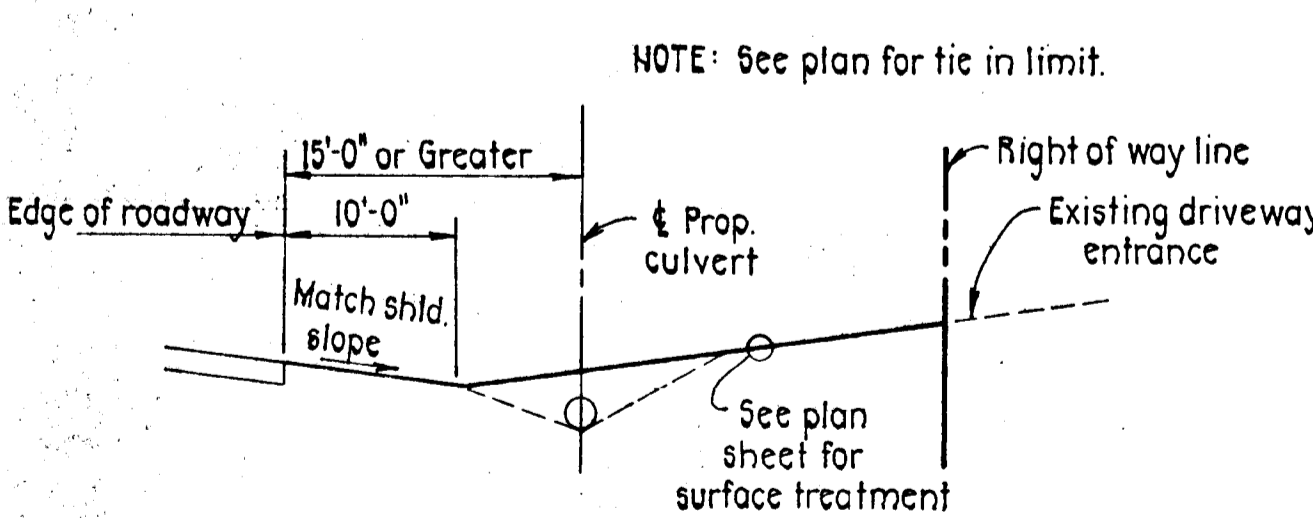
NOTE: See plan for tie in limit.



NOTE: For all other construction details. See standard detail R-6.06.



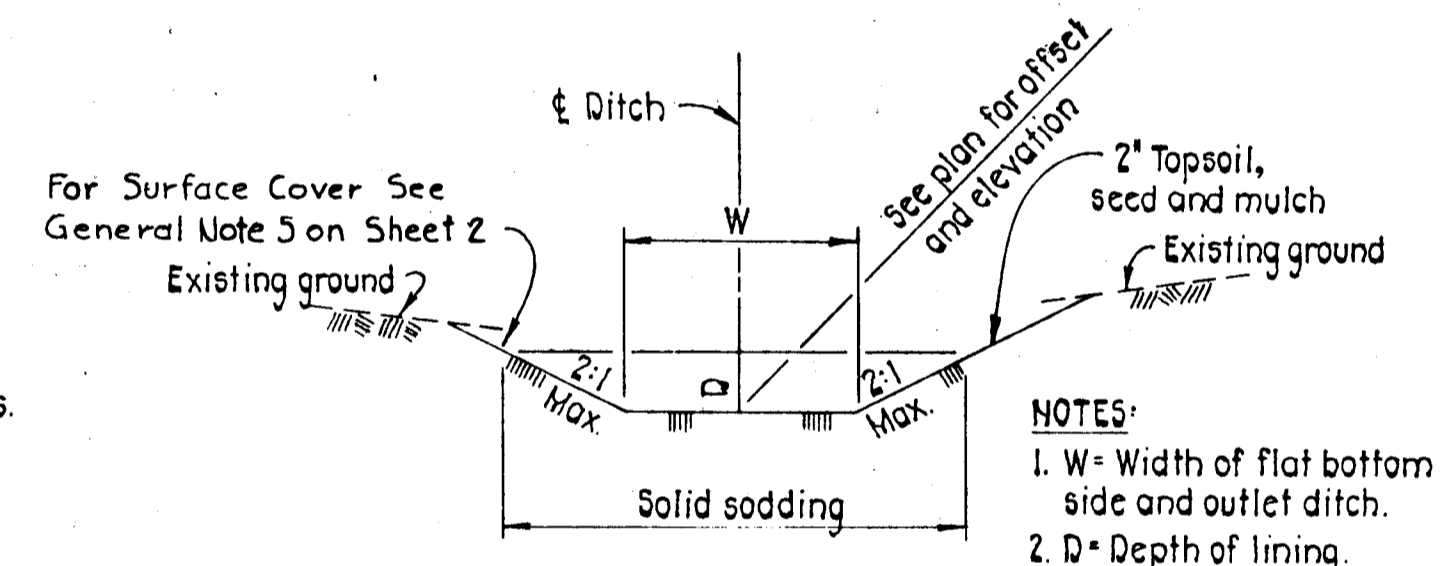
**SECTION A-A**



**SECTION B-B**

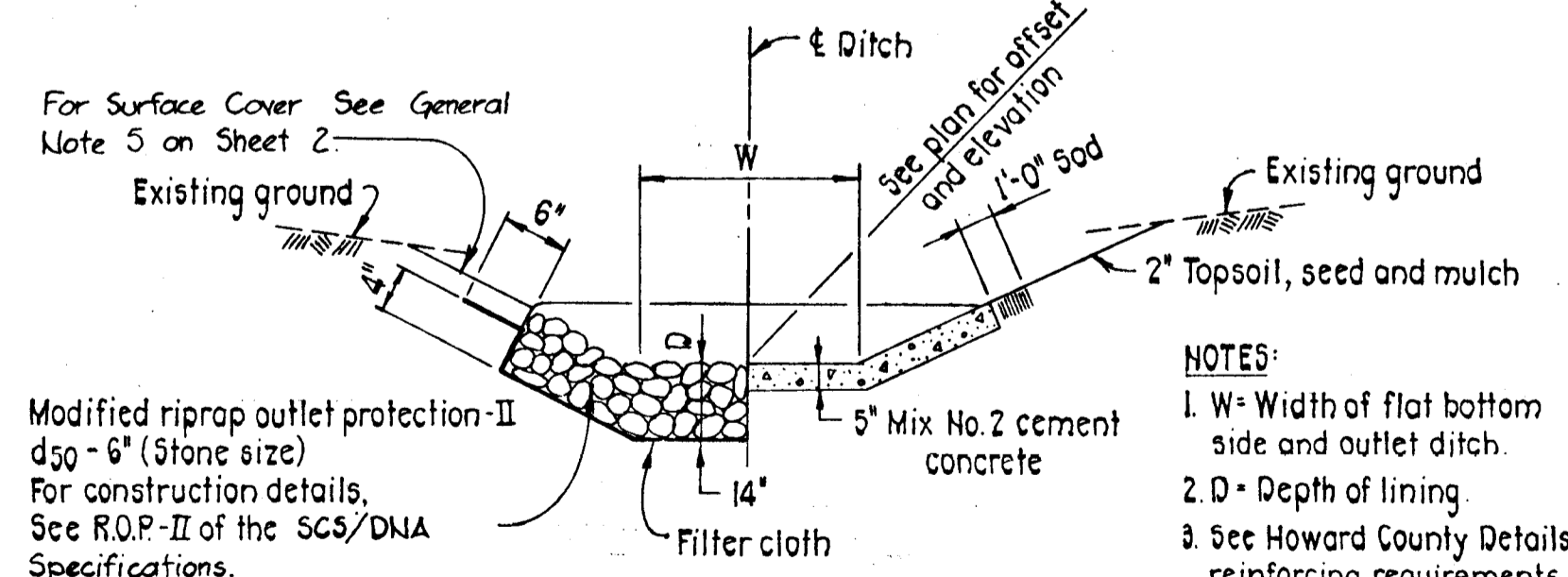
**TYPICAL OPEN-SECTION DRIVEWAY ENTRANCE DETAIL**

Not to Scale



**SOD SIDE DITCH**

Not to Scale



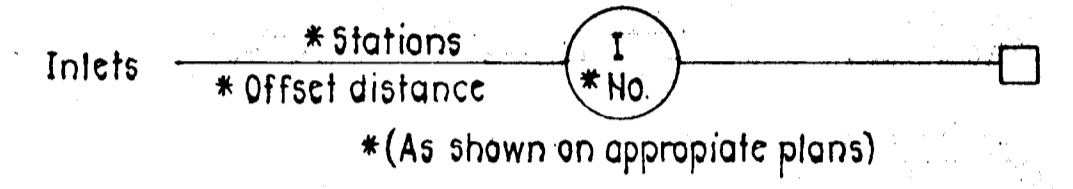
**CONCRETE & RIPRAP SIDE AND OUTLET DITCH**

Not to Scale

Construction code shown on plans

**PROPOSED ROADWAY CONSTRUCTION LEGEND**

- 1 Cedar Lane main line (See paving detail this sheet and typical section sheets 2, 3, & 4)
- 2 Road approach tie ins (See paving detail this sheet and typical section sheet 4)
- 3 Curb and gutter (See standard R-3.01)
- 4 Sidewalks (For materials see standard R-3.05)
- 5 Modified type "A" sidewalk ramp (See detail this sheet)
- 6 Storm drains
- 7 6" Base course, using graded aggregate base course (CR-6)
- 8 1" Bituminous concrete surface course, 4" Base course, using graded aggregate base course (CR-6)
- 9 7" Mix No. 2 plain cement concrete.

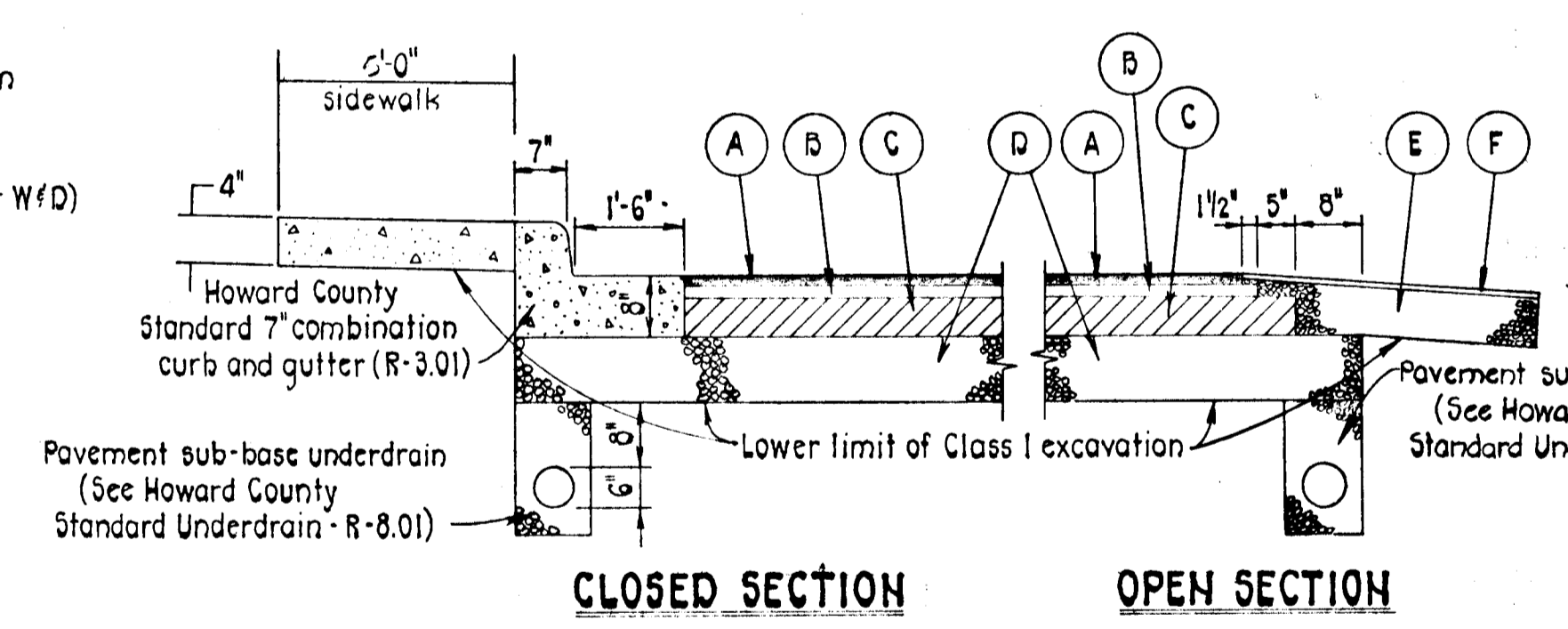


10

Md. State Traffic Barrier-W Beam (Std. Nos. 660.01, 660.02, 660.03, 660.31, 660.32, 660.33, 660.34) For Location See Normal Closed Section Sheet 2 and appropriate plan sheets.

**DRIVEWAY ENTRANCE TREATMENT LEGEND**

(See modified closed section driveway entrance detail this sheet)

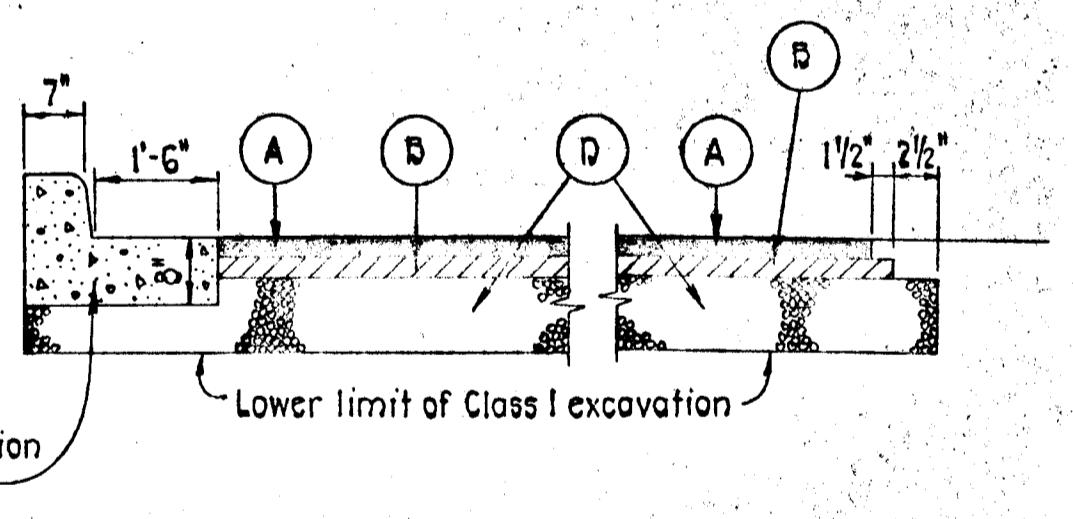


**CLOSED SECTION OPEN SECTION**

- A 1 1/2" Bituminous concrete surface (5N)
- B 1 1/2" Bituminous concrete base (BI)
- C 5" Bituminous concrete base (BI)
- D 8" Base course, using graded aggregate base course (CR-6)
- E 6" Base course, using graded aggregate base course (CR-6)
- F Double bituminous surface treatment.

**PROPOSED CEDAR LANE PAVING DETAIL P-5**

Not to Scale



**CLOSED SECTION OPEN SECTION**

- A 1 1/2" Bituminous concrete surface (5N)
- B 2 1/2" Bituminous concrete base (BI)
- D 8" Base course, using graded aggregate base course (CR-6)

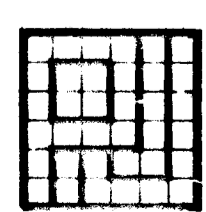
**PROPOSED ROAD APPROACHES PAVING DETAIL P-2**

Not to Scale

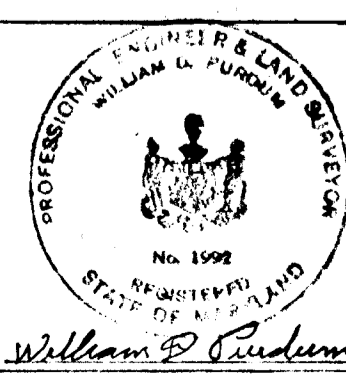
BRAEBURN ROAD CORINA COURT

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* 7/12/90 *[Signature]* 11-8-88  
DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE  
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE DATE



PURDUM & JESCHKE  
CONSULTING ENGINEERS  
LAND SURVEYORS  
1029 North Calvert Street  
Baltimore, Maryland 21202 301/837-0194



DES: JCT			
DRN: ARW			
CHK: WDP			
DATE: 7/2/90	BY: NO.	REVISION	DATE

CONSTRUCTION - R/W  
LEGEND & DETAILS  
CEDAR LANE - PHASE 2

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
CAPITAL PROJECT J-4086  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 5 of 24

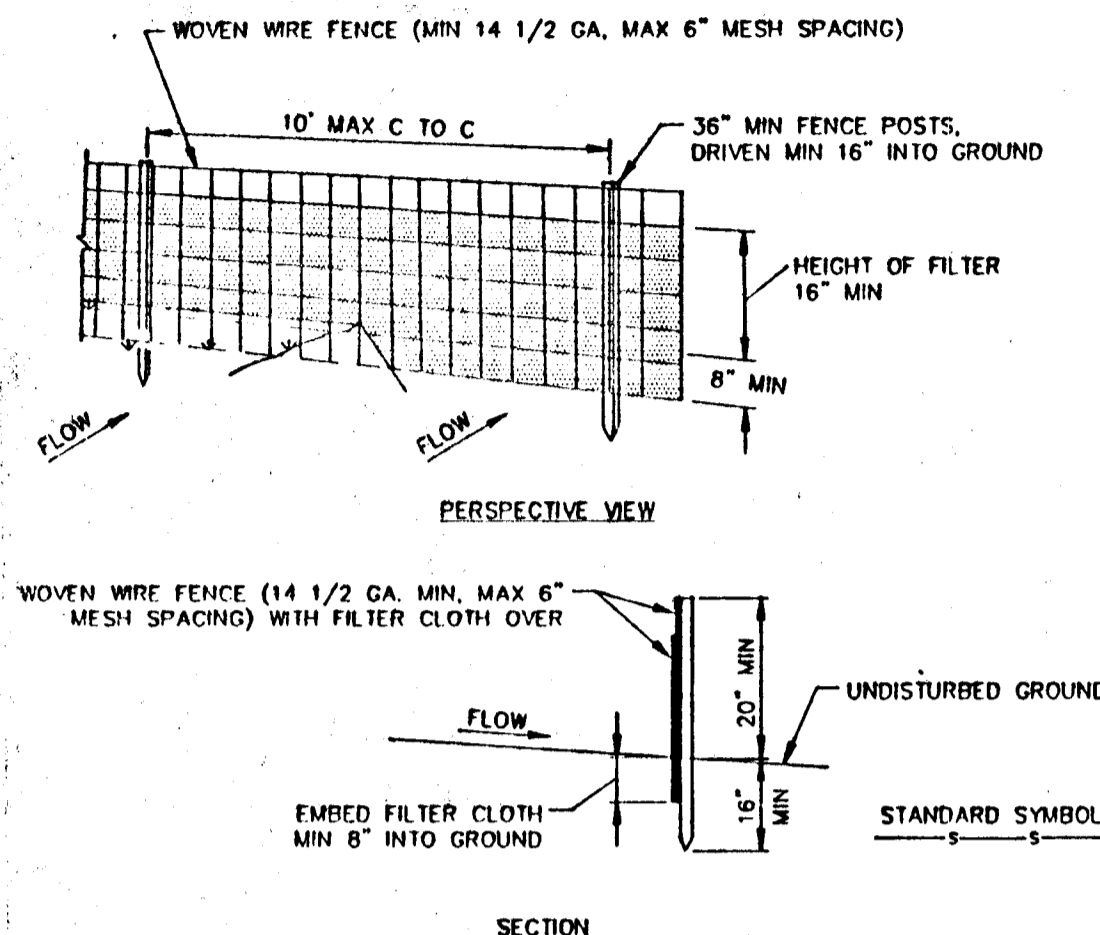
SEDIMENT CONTROL NOTES

All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

Additional sediment controls must be provided, if deemed necessary by the Howard County DPW sediment control inspector.

SILT FENCE

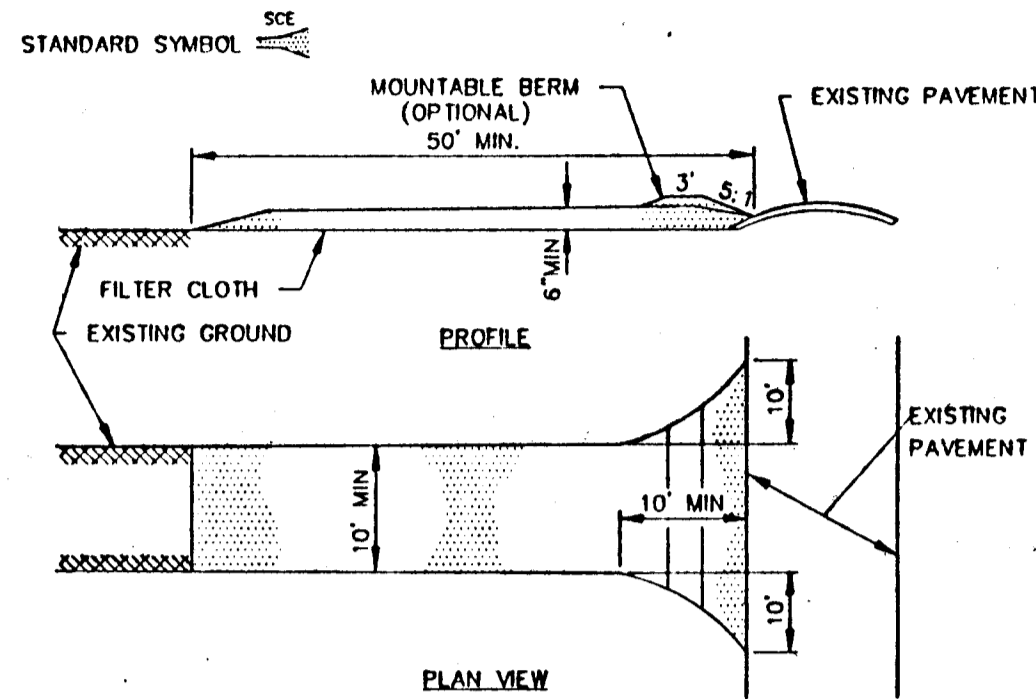


CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE

STABILIZED CONSTRUCTION ENTRANCE



Stone size - Use 2" stone, or reclaimed or recycled concrete equivalent. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply). Thickness - Not less than (5) inches. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs. Filter Cloth - Will be placed over the entire area prior to placing of stone. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted. 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. Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device. Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE

SEDIMENT CONTROL NOTES

- 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 (992-2437).
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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
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, dikes, perimeter slopes, and all slopes greater than 3:1, (b) 14 days as to all other disturbed or graded areas on the project site.
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, Storm Drainage, of the HOWARD COUNTY DESIGN MANUAL.
5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), and (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 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 permission for their removal has been obtained from the Howard County Sediment Control Inspector.
7. Site Analysis: Total area of site R/W and Easements 10.84 acres, Area disturbed 9.18 acres, Area to be roofed or paved 4.03 acres, Area to be vegetatively stabilized 5.15 acres, Total cut 18,640 cu.yds., Total fill 14,818 cu.yds., Offsite waste/borrow area location To be determined by Contractor.
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 DPW Sediment Control Inspector.
10. On all sites with disturbed areas in excess of 2 acres, approval of the Inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
11. See sheet Nos. 7 and 8 for additional Sediment and Erosion Control Notes and Details.

EARTHWORK SUMMARY

Table with columns for excavation types and quantities. Includes: TOTAL CLASS 1 EXCAVATION 10,716 CY, CLASS 2 EXCAVATION 6,376 CY, CLASS 5 EXCAVATION 335 CY.

Table showing excavation available for embankment and proposed quantities. Includes: EXCAVATION AVAILABLE FOR EMBANKMENT 6,036 CY, PROPOSAL QUANTITIES CLASS 1 EXCAVATION 11000 CY, CLASS 2 EXCAVATION 1200 CY.

GRADING TABLE

Large table with columns: STATION, CUT, EMBANKMENT, TOPSOIL, UNSUITABLE MATERIAL, CLASS 2, CLASS 5, CUT ADJUST., CUT DEN., REMARKS. Contains detailed stationing and grading data.

PERMANENT SEEDING NOTES

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

Seedbed Preparation: Loosen upper 3 inches of soil by raking, discing, or other acceptable means before seeding, if not previously loosened.

Soil Amendments: Use one of the following schedules:

- 1. Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq. ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq. ft.) before seeding.
2. Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq. ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs./1000 sq. ft.) before seeding.

Seeding: For the periods March 1 thru April 30 and August 1 thru October 15, seed with 85 lbs. per acre (1.4 lbs./1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 80 lbs. of Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1000 sq. ft.) of weeping lovegrass.

Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 210 gallons per acre (5 gal./1000 sq. ft.) of emulsified asphalt on flat areas.

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

TEMPORARY SEEDING NOTES

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

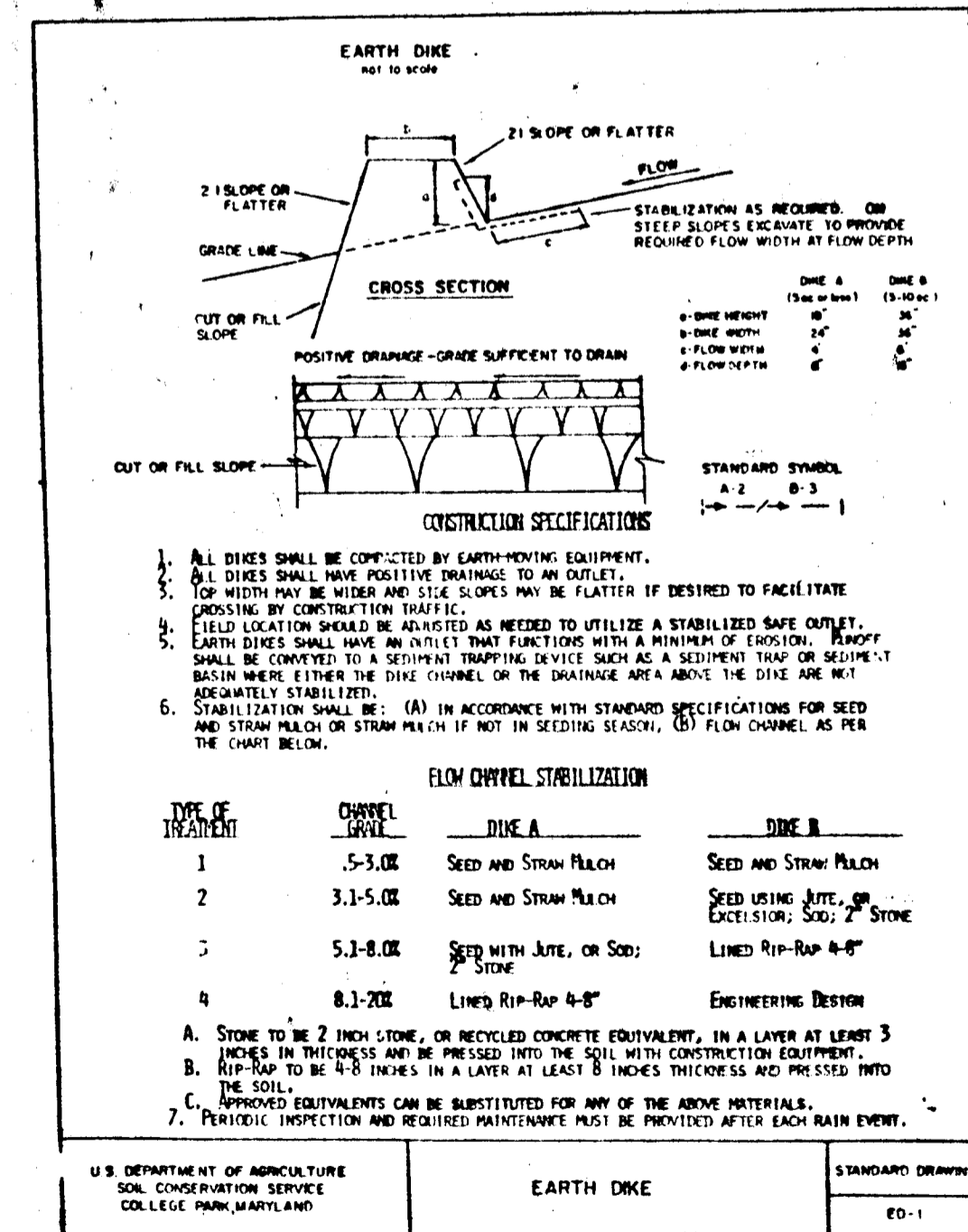
Seedbed Preparation: Loosen upper three inches of soil by raking, discing, or other acceptable means before seeding, if not previously loosened.

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

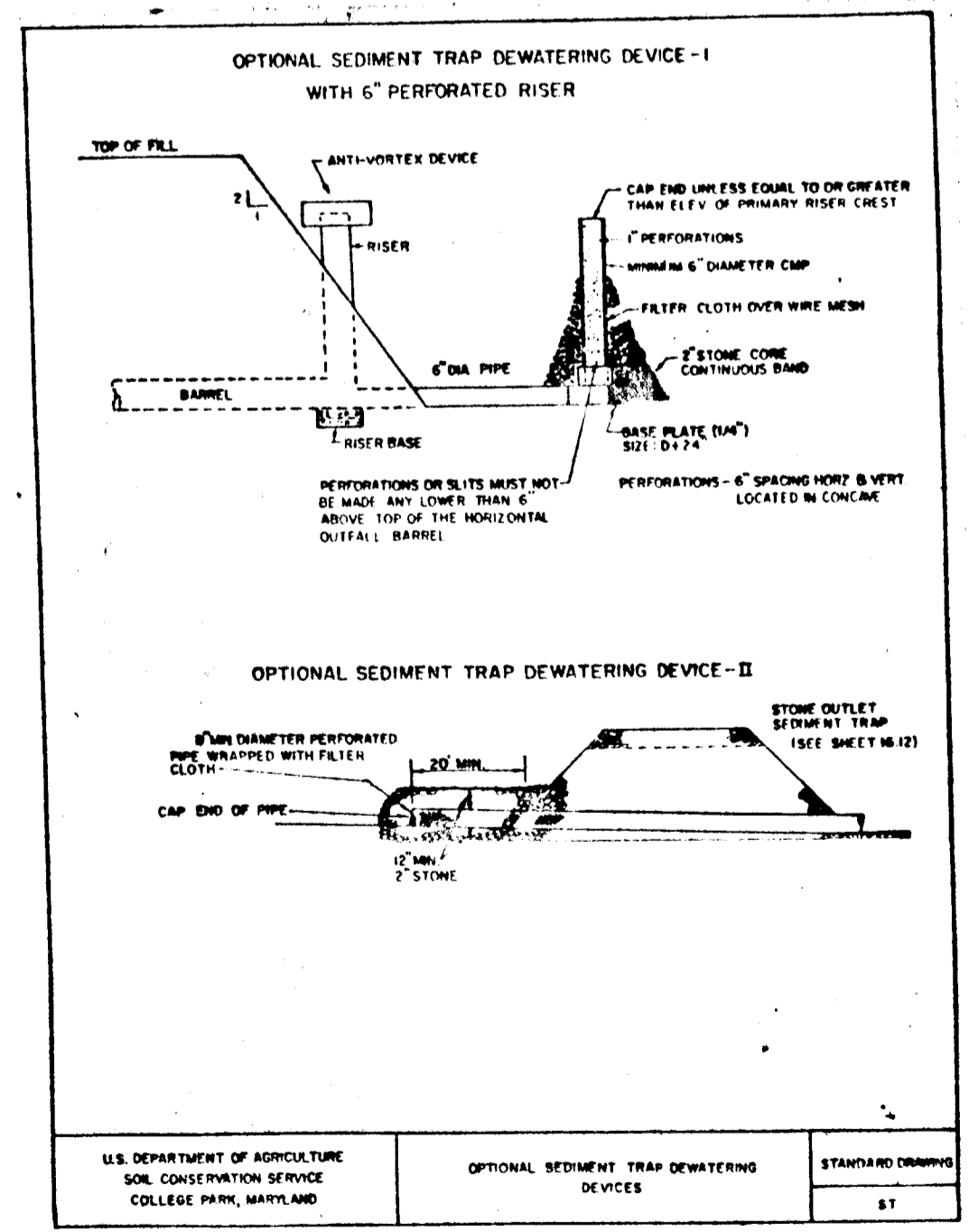
Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 bushels per acre of annual ryegrass (3.2 lbs./1000 sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./1000 sq. ft.).

Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 210 gal. per acre (5 gal./1000 sq. ft.) of emulsified asphalt on flat areas.

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



NOTE: ALL CHANNELS SHALL BE LINED WITH JUTE MATTING OR RIPRAP UNLESS OTHERWISE SPECIFIED ON PLANS.

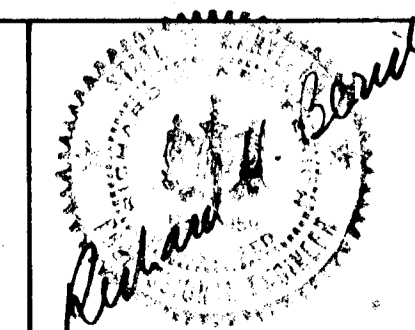


U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND. STANDARD DRAWING 16-15.

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

Director of Public Works and Chief, Bureau of Engineering signatures and dates.

PURDUM & JESCHKE CONSULTING ENGINEERS LAND SURVEYORS 1029 North Calvert Street Baltimore, Maryland 21202 301/837-0194

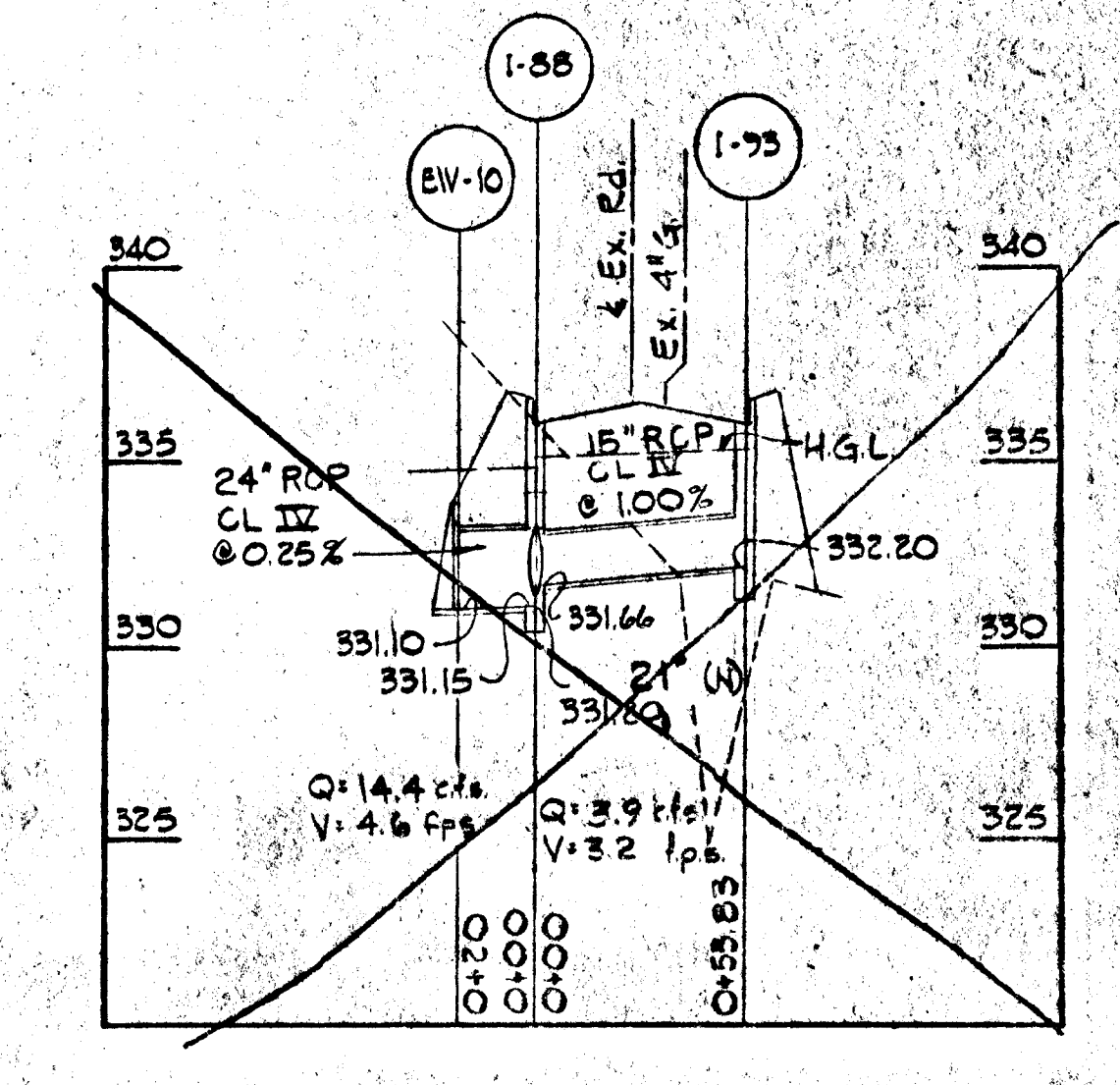
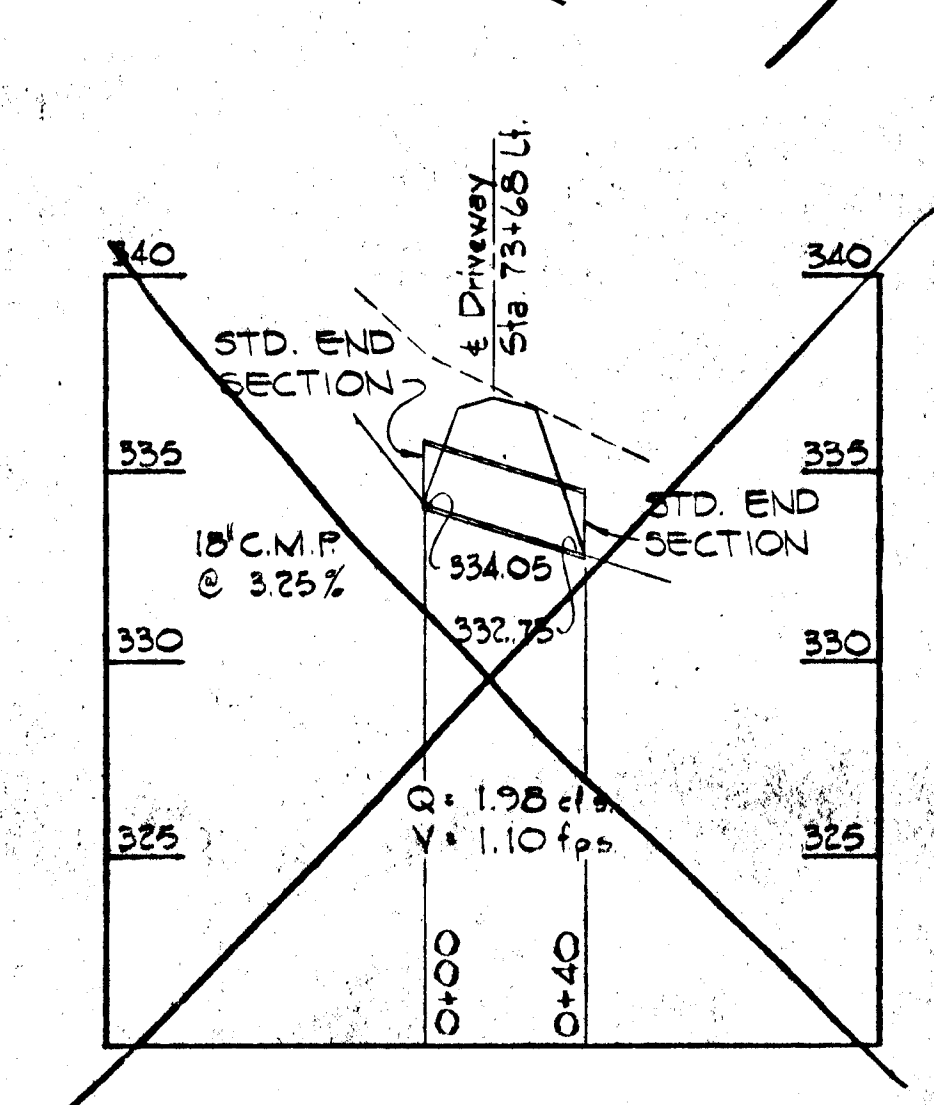
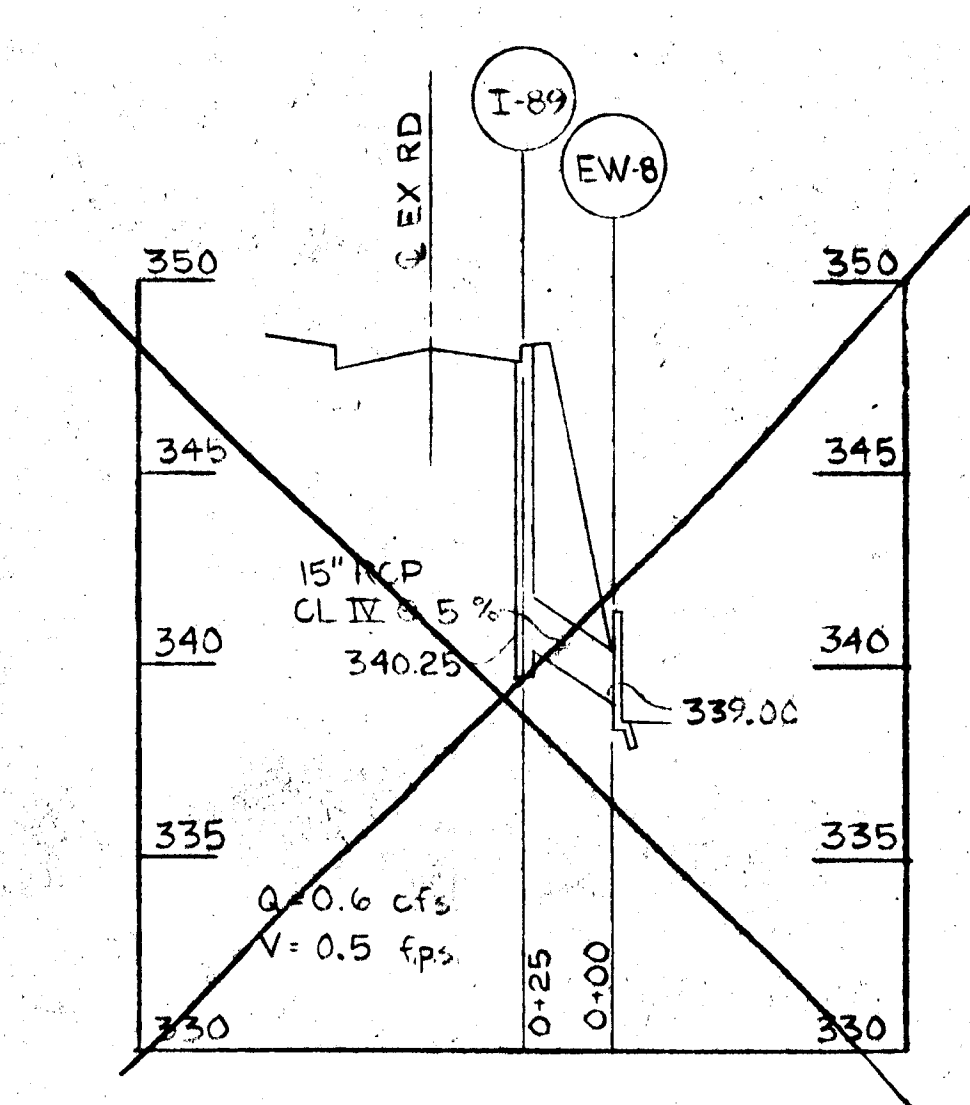
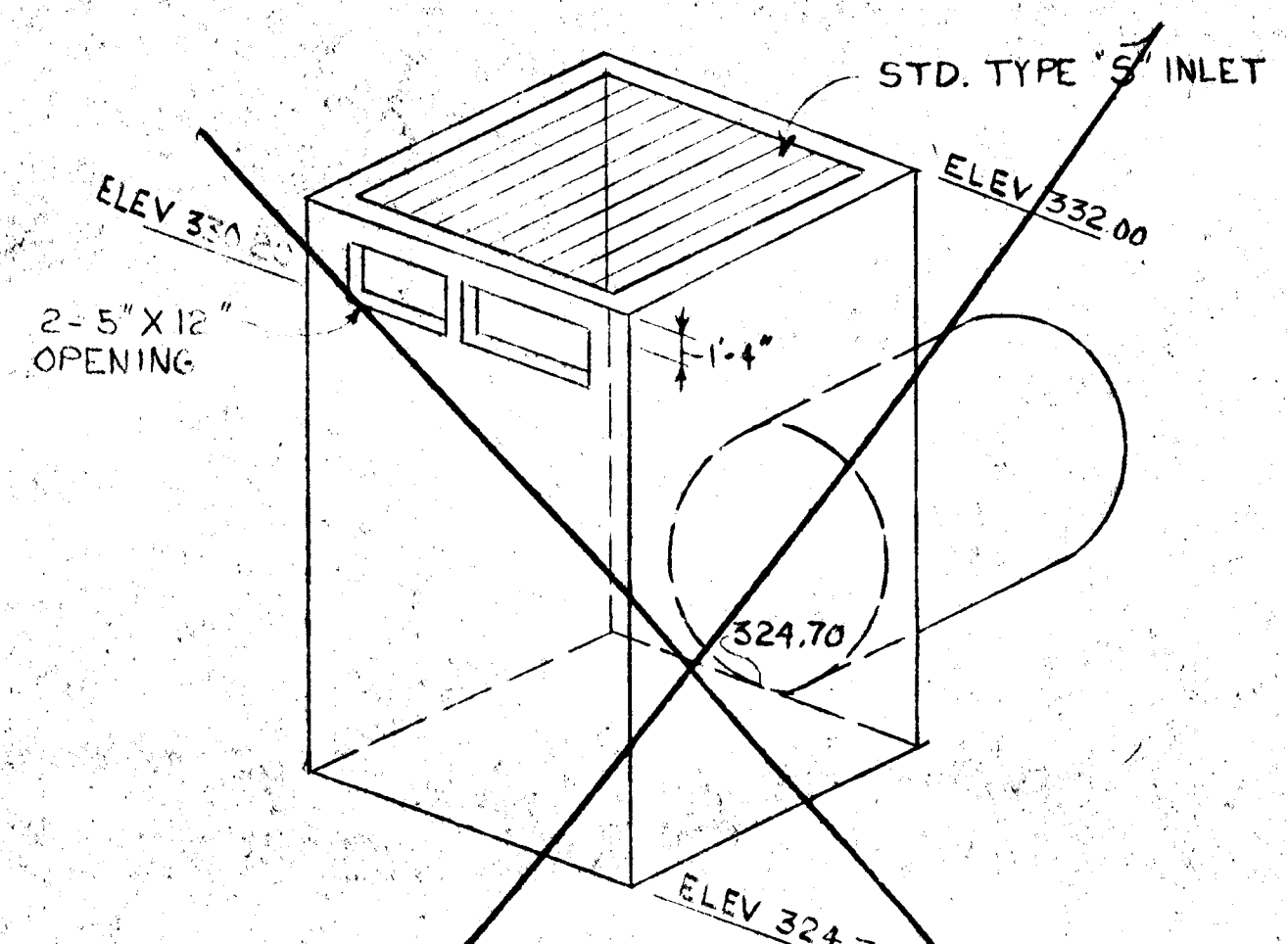
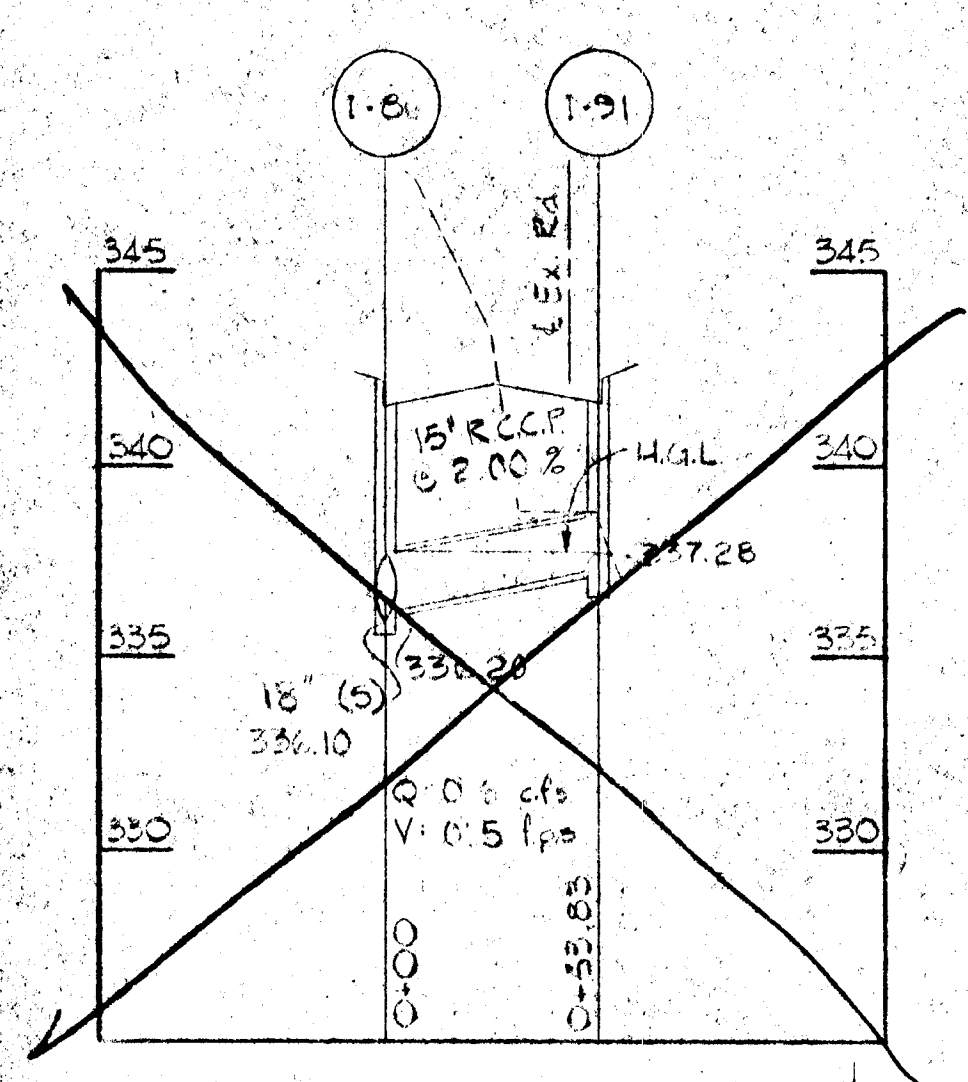
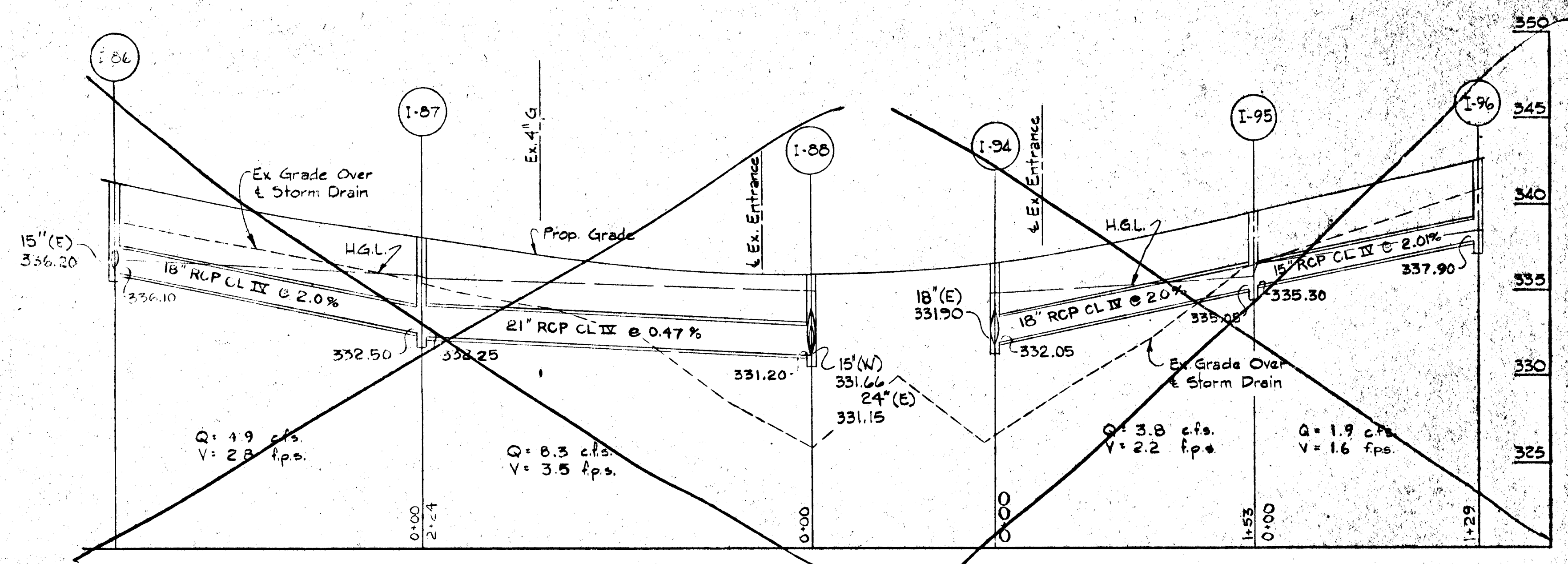
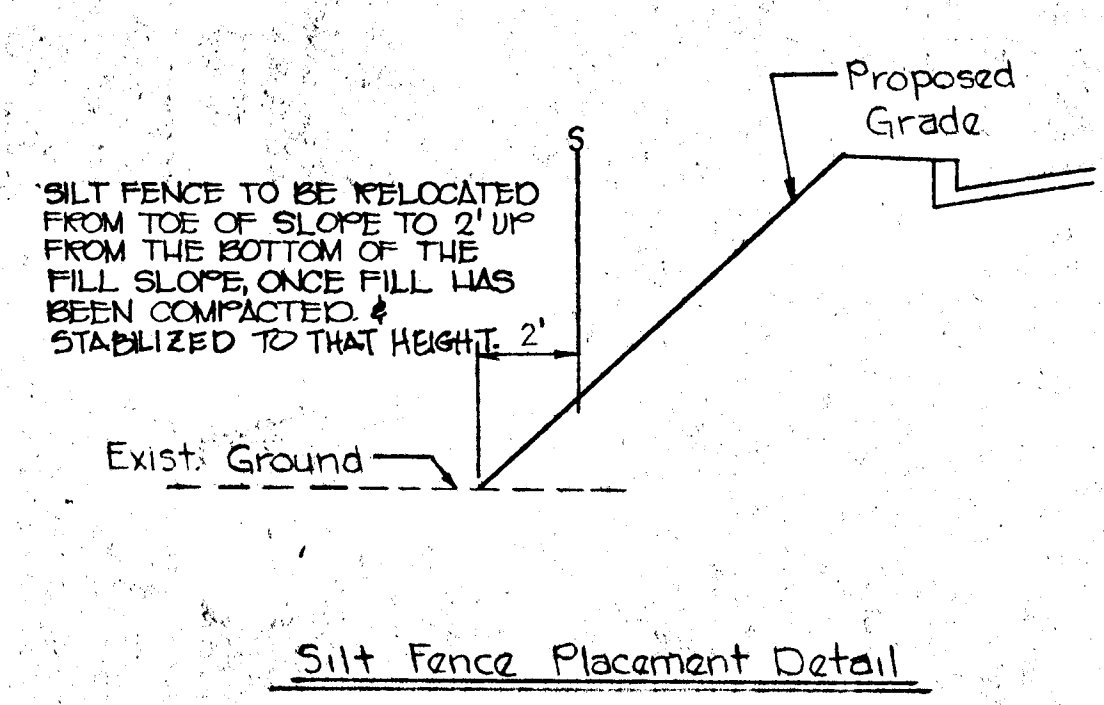
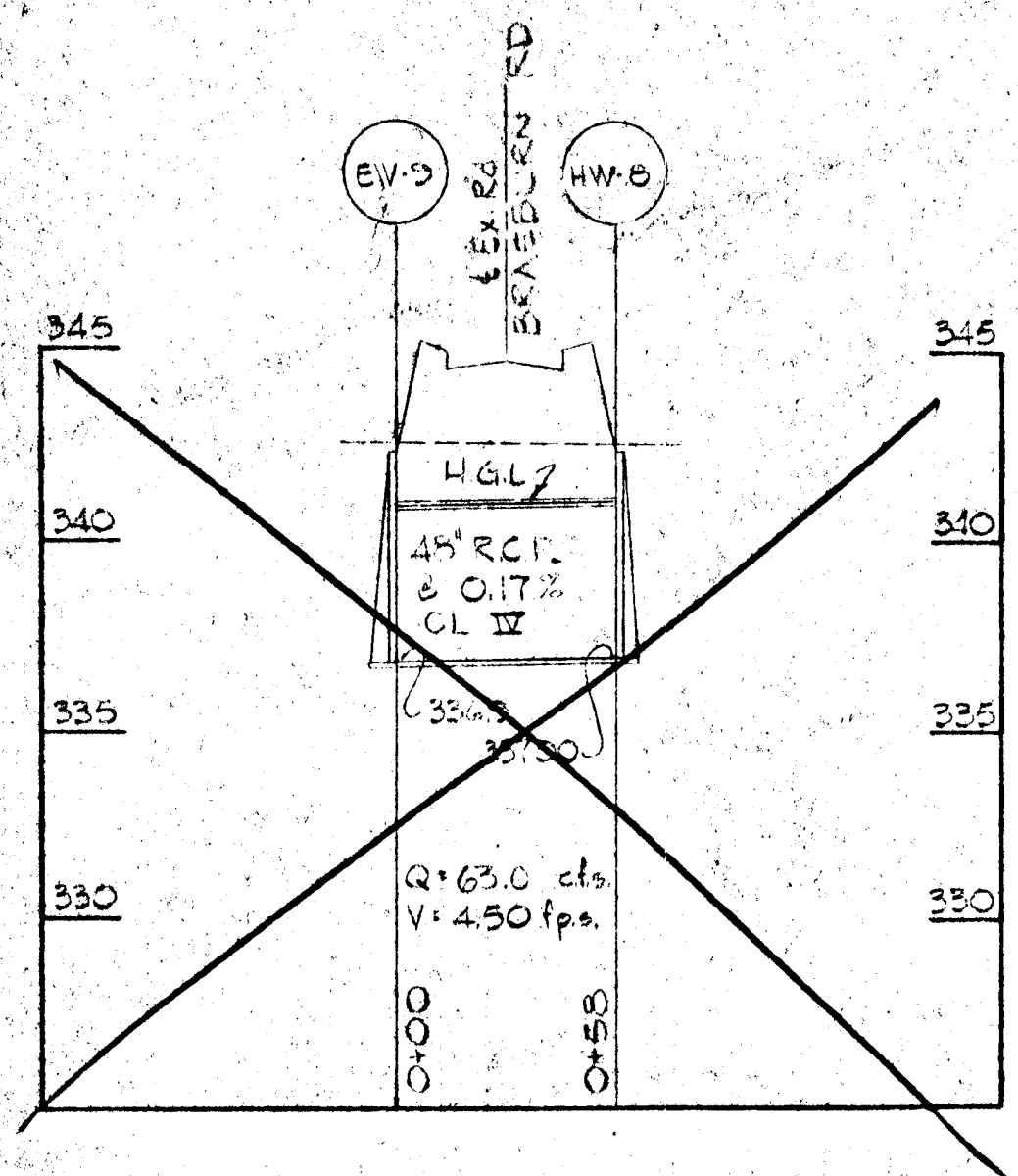


DES: JCT, DRN: PWR, CHK: WDP, DATE: 4/90, BY NO. REVISION DATE 600' SCALE MAP NO. BLOCK NO.

SEDIMENT CONTROL DETAILS & EARTHWORK ANALYSIS CEDAR LANE - PHASE 2

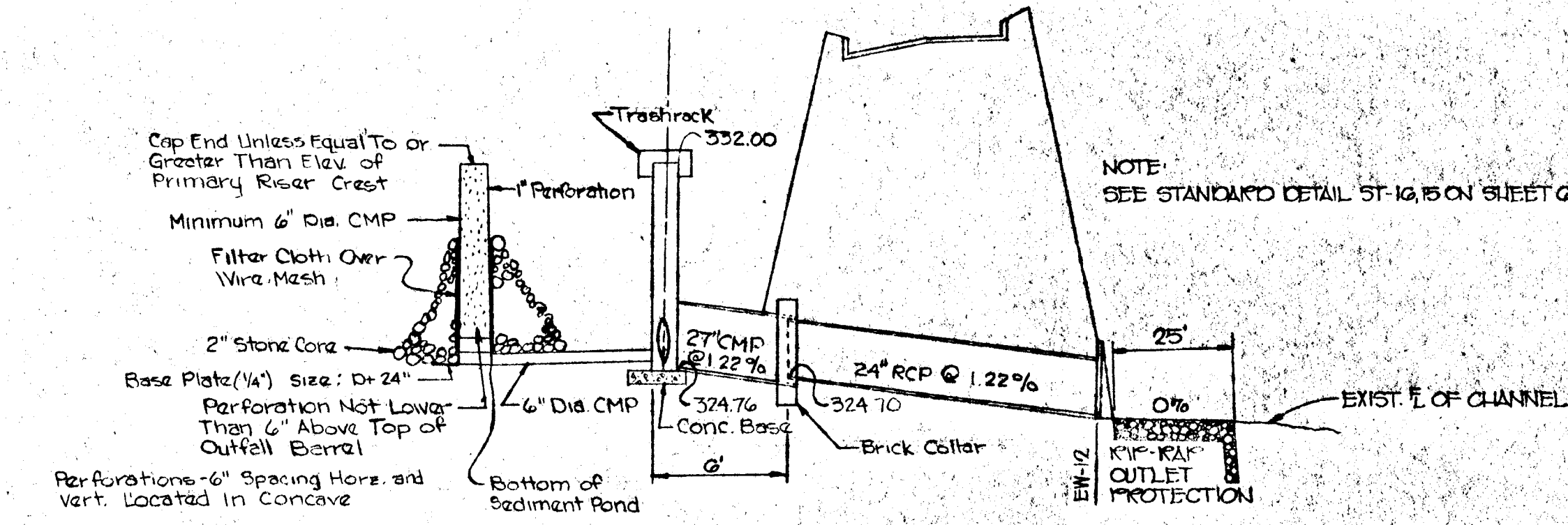
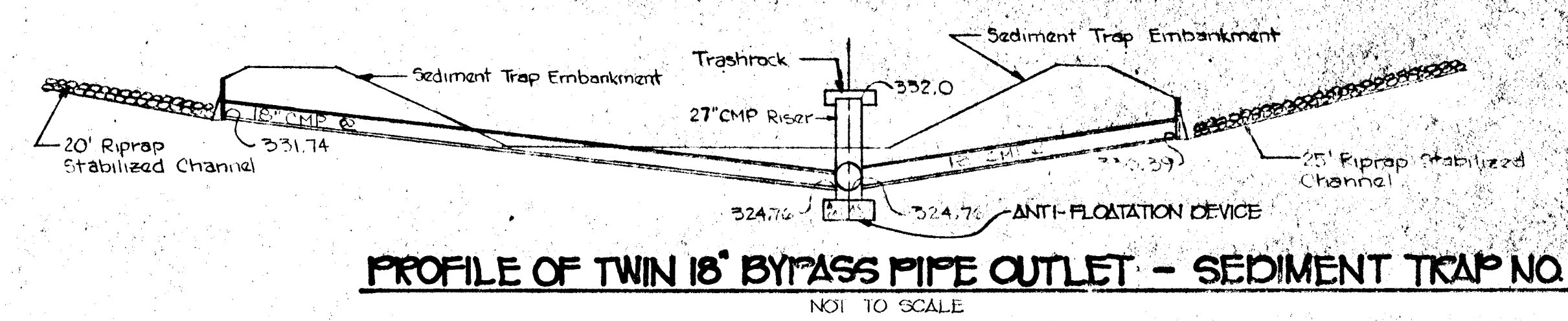
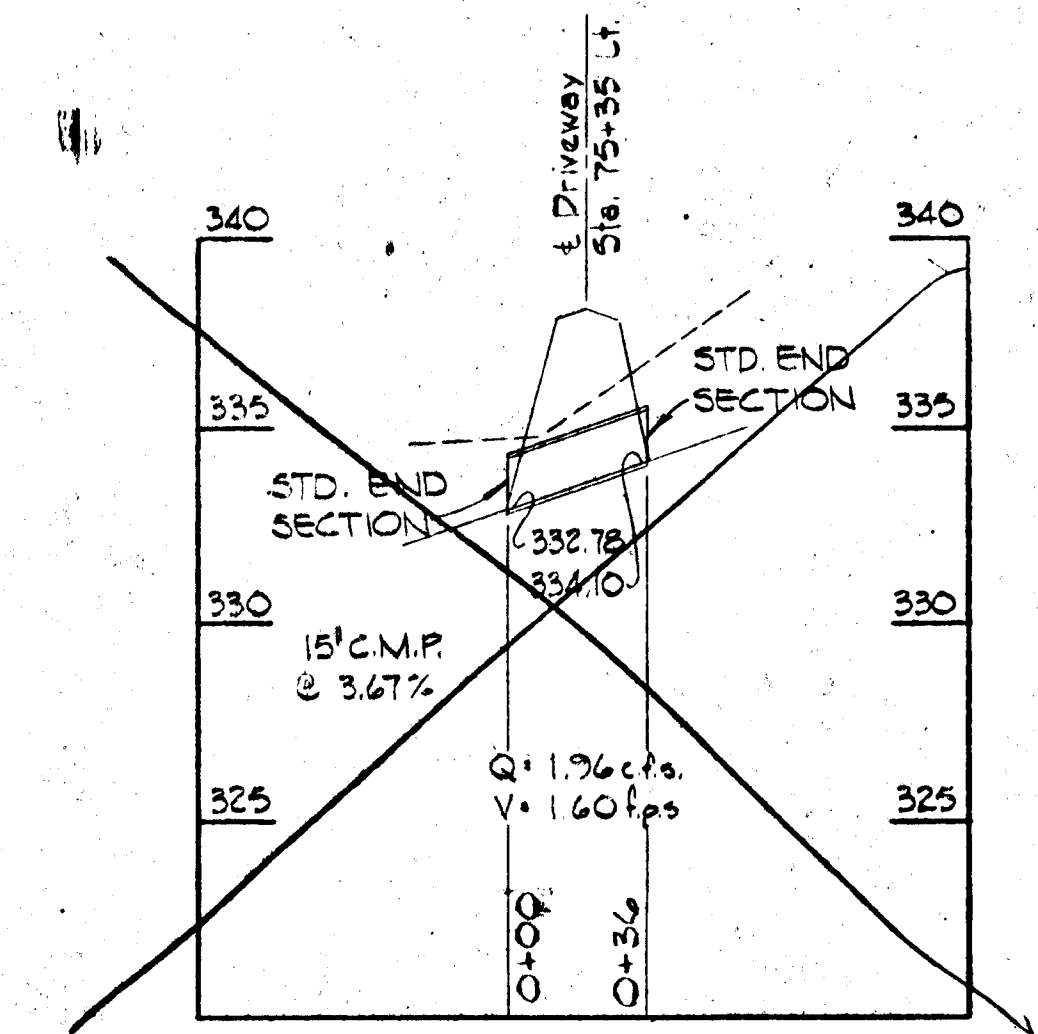
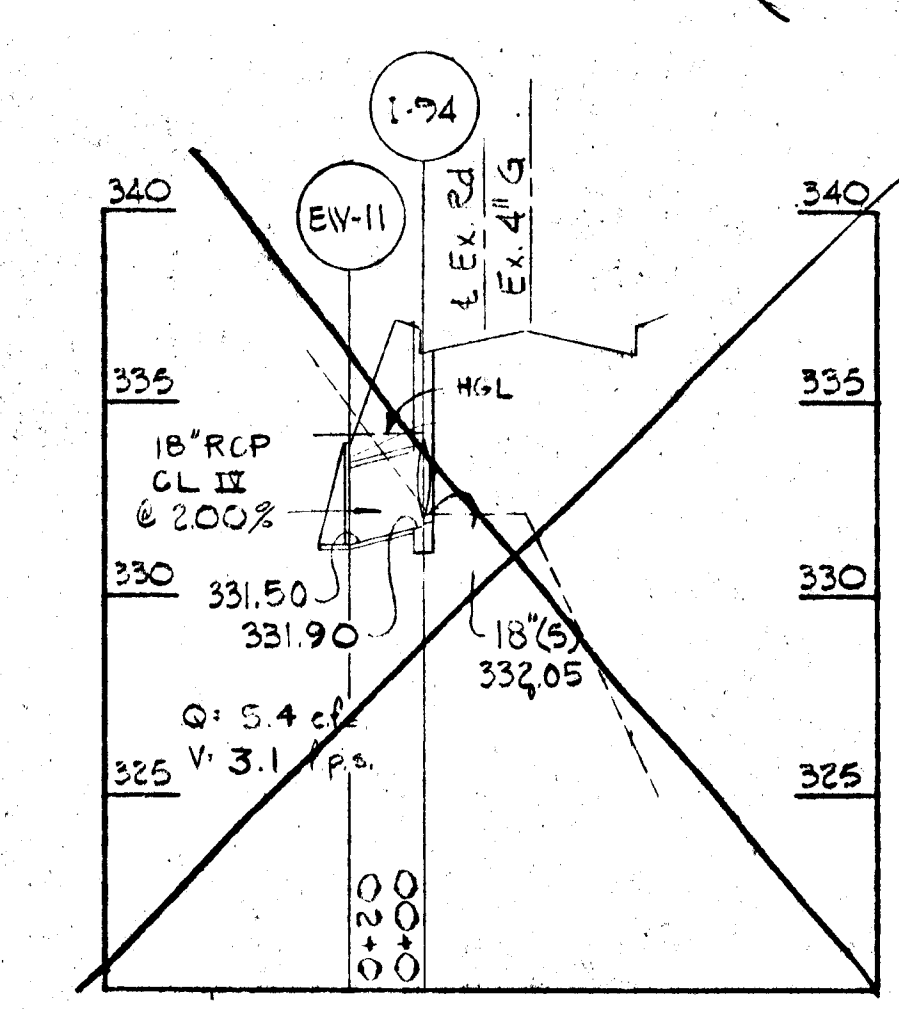
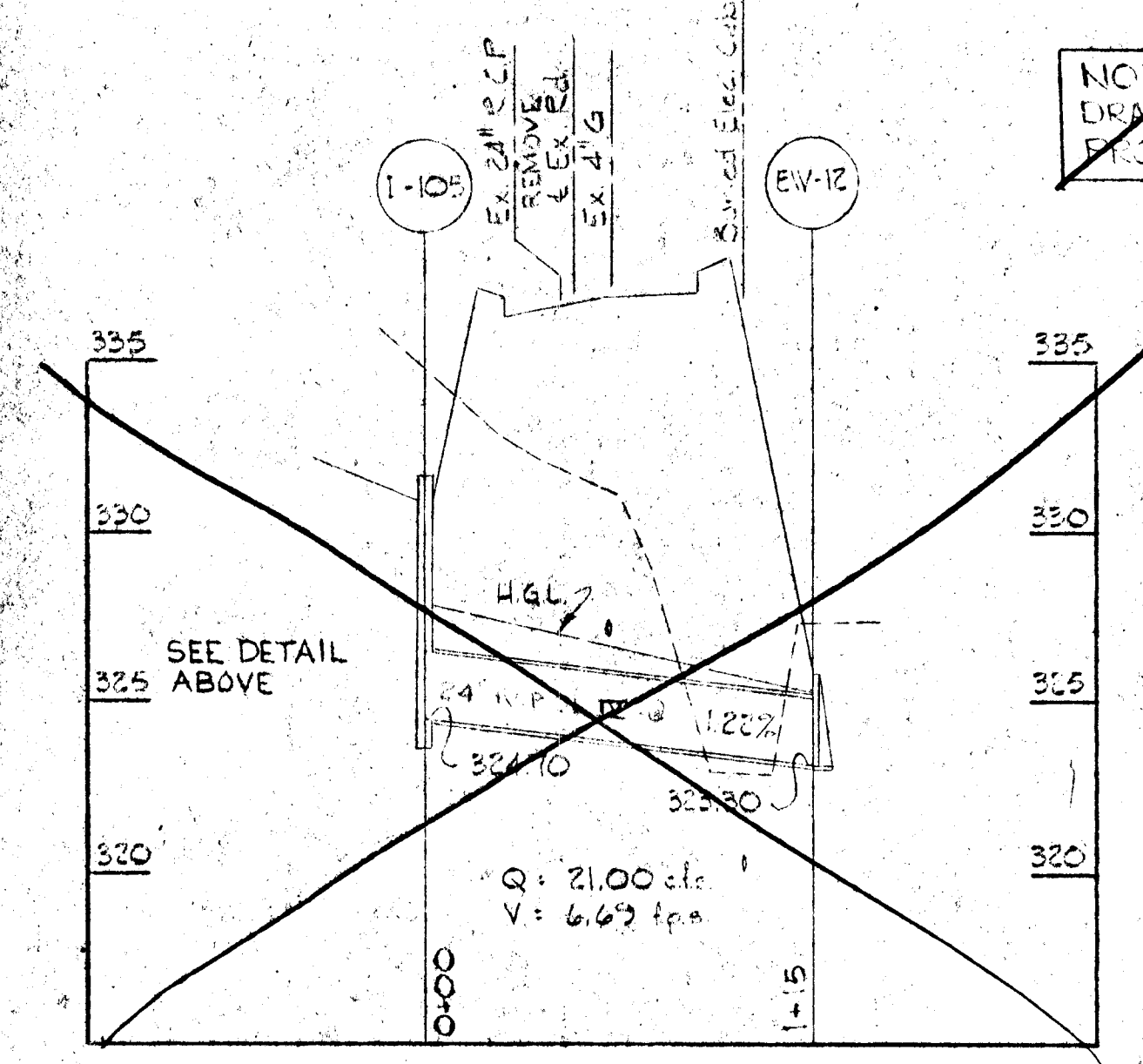
SOUTH OF FREETOWN RD. TO GUILFORD RD. CAPITAL PROJECT J-4086 ELECTION DISTRICT NO. 5 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN SHEET 6 OF 28

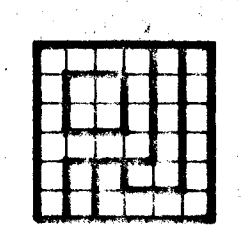


NOTE: INVERT ELEVATIONS SHOWN ON STORM DRAIN PROFILES ARE ON CULVERT GRADES PROJECT TO  $\phi$  OF PROP. INLETS.

NOTE: ALL STORM DRAIN PIPE TO BE CLASS 4 UNLESS OTHERWISE STATED.



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
DATE: 11-8-88  
CHIEF, BUREAU OF ENGINEERING



PURDUM & JESCHKE  
CONSULTING ENGINEERS  
LAND SURVEYORS  
1029 North Calvert Street  
Baltimore, Maryland 21202 301/837-0194



DES: JK			
DRN: RWV			
CHK: JCT			
DATE: 6/90	BY	NO.	REVISION

SEDIMENT & EROSION CONTROL PLAN  
CEDAR LANE - PHASE 2  
600' SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
CAPITAL PROJECT J-4086  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

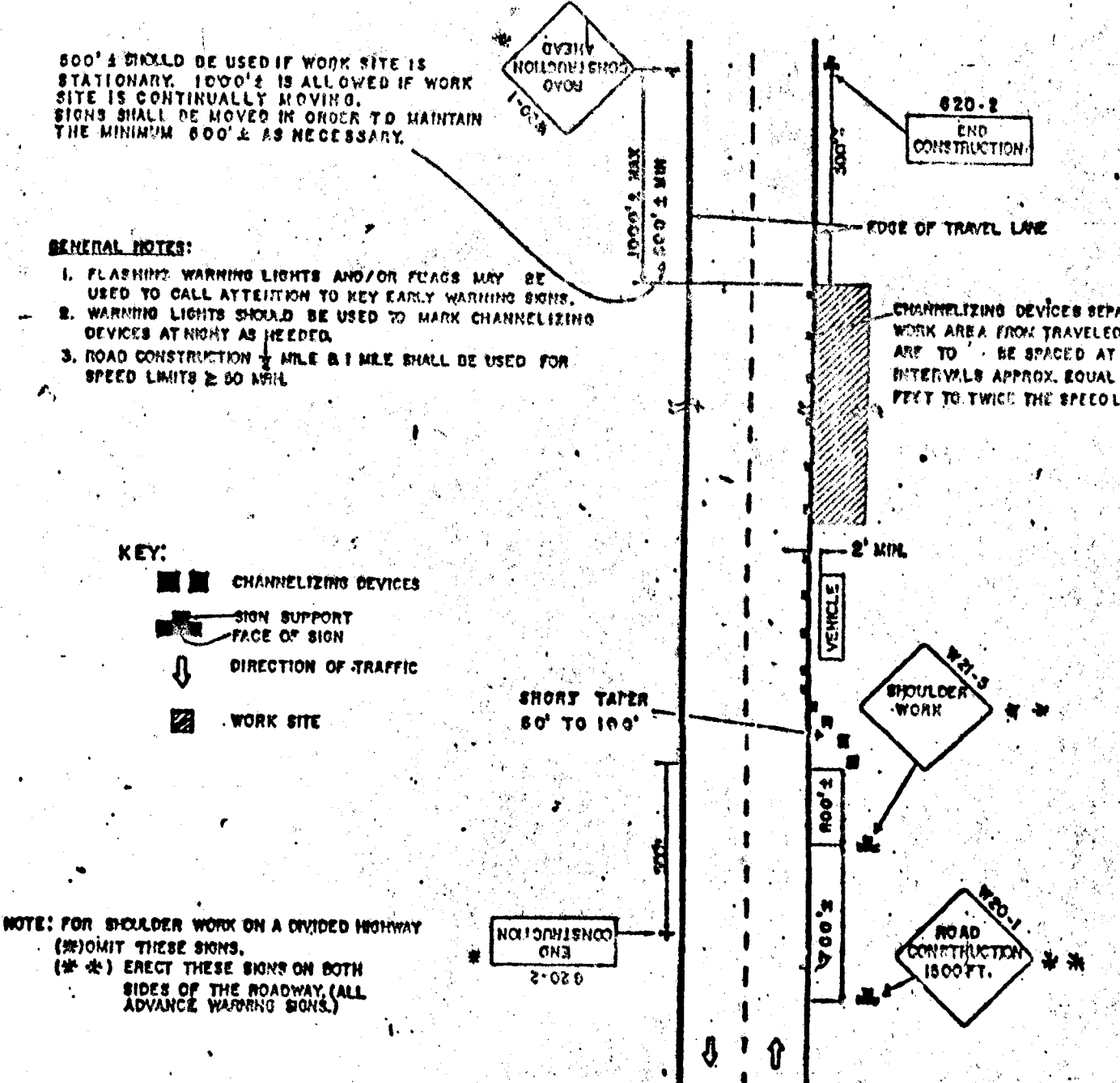
SCALE  
HORIZ. 1"=50'  
VERT. 1"=5'  
SHEET  
7 OF 28

985

FINAL

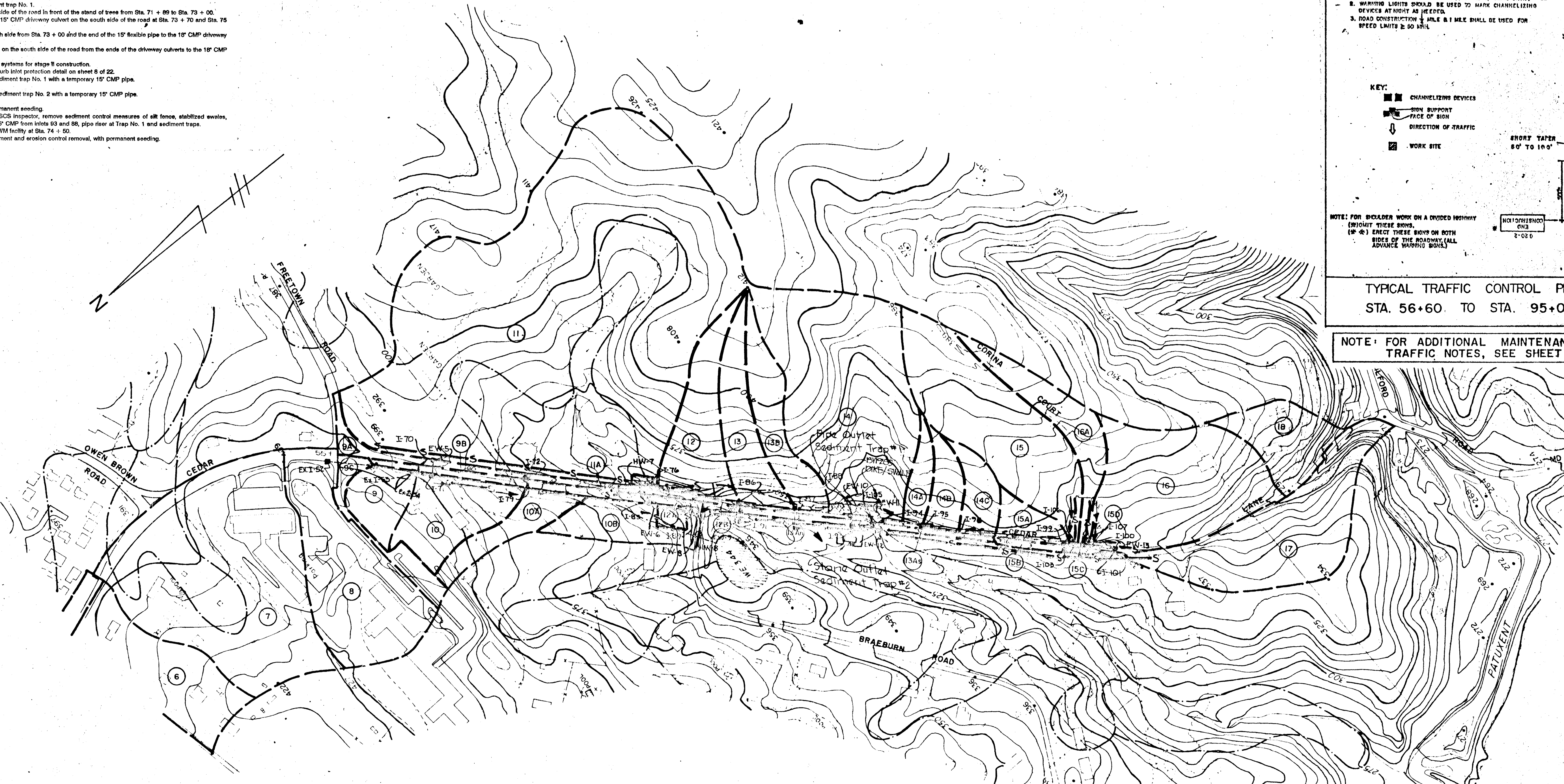
SEQUENCE OF CONSTRUCTION

- Obtain all proper permits.
- Notify Howard County SCS at least 48 hours prior to beginning installation of Sediment and Erosion Control facilities (phone: 301/880-3450, HOWARD COUNTY SEDIMENT CONTROL INSPECTION DIVISION.)
- Clear and grub area on the north and south sides of the road for installing lined waterway and other sediment control measures from Sta. 56 + 50 to Sta. 85 + 50.
- Install sediment and erosion control silt fence and diversion berms as per approved plans.
- Install sediment and erosion control berms.
- Stabilize all disturbed areas with 14-day stabilization.
- Install 24" RCP cross culvert and pipe outlet ditch for future SWM pond and pipe outlet sediment trap no. 1.
- Construct 27" CMP riser and 27" CMP extension with 2-18" CMP collectors in pipe outlet sediment trap No. 1 on the south side of the road at Sta. 74 + 50.
- Construct dike/wale around sediment trap No. 1.
- Install 15" flexible pipe on the south side of the road in front of the stand of trees from Sta. 71 + 89 to Sta. 73 + 00.
- Install 18" CMP driveway culvert and 15" CMP driveway culvert on the south side of the road at Sta. 73 + 70 and Sta. 75 + 34, respectively.
- Construct lined waterway on the south side from Sta. 73 + 00 and the end of the 15" flexible pipe to the 18" CMP driveway culvert.
- Construct temporary lined waterways on the south side of the road from the ends of the driveway culverts to the 18" CMP into the sediment trap no. 1.
- Install curbs and inlets and drainage systems for stage II construction.
- Install inlet sediment control as per curb inlet protection detail on sheet 6 of 22.
- Connect inlet 188 with pipe outlet sediment trap No. 1 with a temporary 15" CMP pipe.
- Connect inlet 183 with stone outlet sediment trap No. 2 with a temporary 15" CMP pipe.
- Construct roadway improvements.
- Stabilize all disturbed areas with permanent seeding.
- Upon approval by Howard County SCS Inspector, remove sediment control measures of silt fence, stabilized swales, temporary flexible pipe, temporary 15" CMP from inlets 83 and 88, pipe riser at Trap No. 1 and sediment traps.
- Construct yard inlet at 24" RCP in SWM facility at Sta. 74 + 50.
- Stabilize all areas, disturbed by sediment and erosion control removal, with permanent seeding.



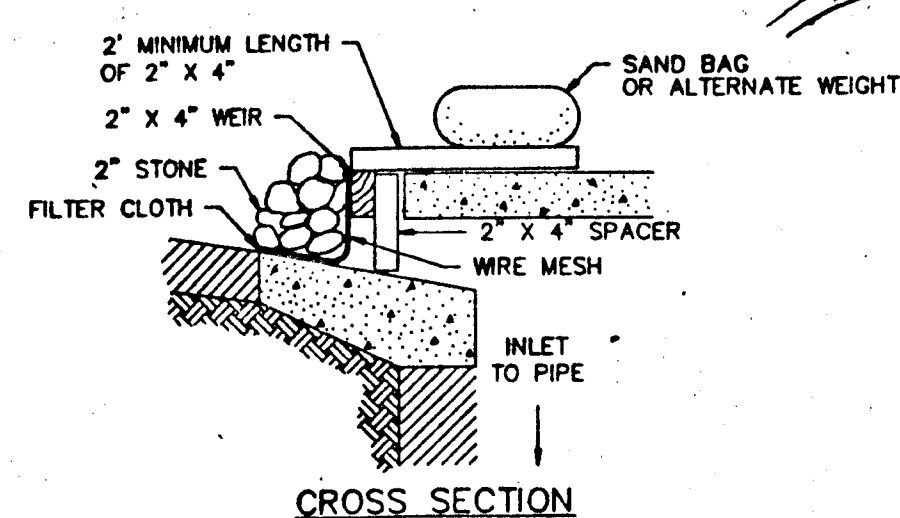
TYPICAL TRAFFIC CONTROL PLAN  
STA. 56+60 TO STA. 95+05

NOTE: FOR ADDITIONAL MAINTENANCE OF TRAFFIC NOTES, SEE SHEET NO. 4.

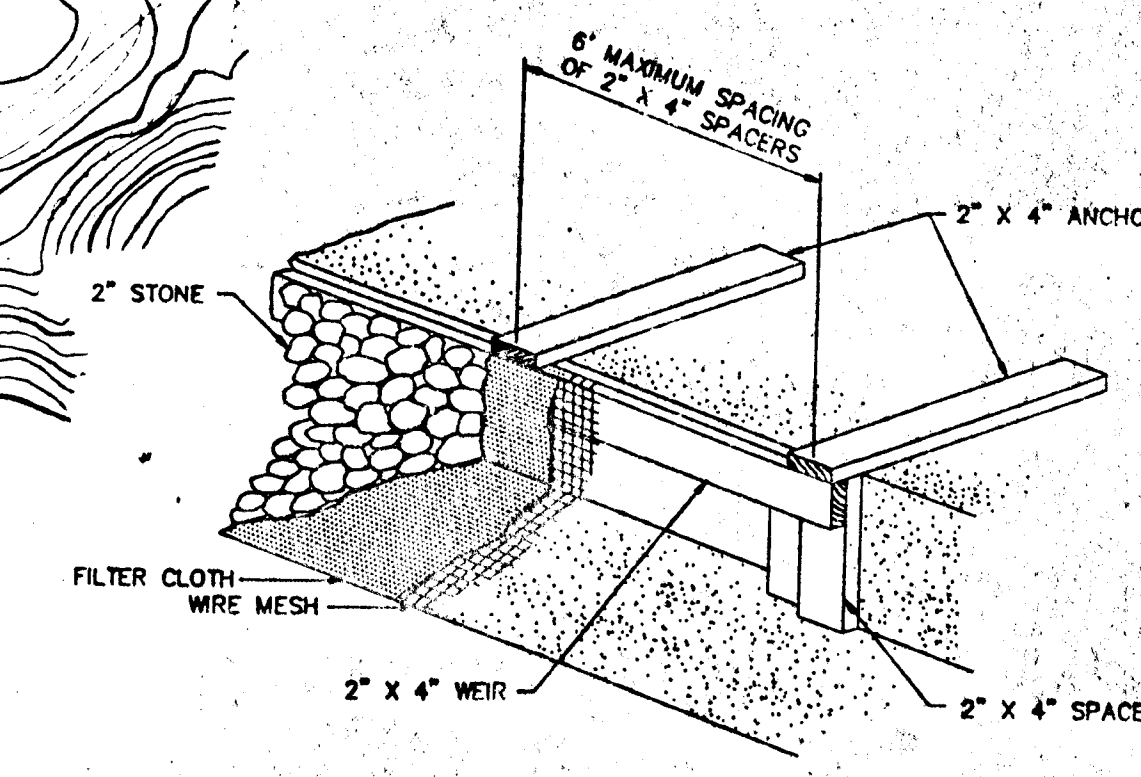


**LEGEND**

DRAINAGE AREA	---
HYDROLOGIC SOIL GROUP	---
SILT FENCE	S — S — S
LINED WATERWAY	→ → →
STONE OUTLET SEDIMENT TRAP	
PIPE OUTLET SEDIMENT TRAP	



4/S16 CURB INLET PROTECTION DETAIL



PERSPECTIVE VIEW

985

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James Ash* 7/12/90 DATE  
CHIEF, BUREAU OF ENGINEERING

*Richard W. Berni* 7/18/90 DATE  
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE

PURDUM & JESCHKE  
CONSULTING ENGINEERS  
LAND SURVEYORS

1029 North Calvert Street  
Baltimore, Maryland 21202 301/837-0194

DES					
DRN					
CHK					
DATE	6/90				
REVISION					

SEDIMENT & EROSION CONTROL  
DRAINAGE AREAS

CEDAR LANE — PHASE 2

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
CAPITAL PROJECT J-4086  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

SCALE:  
1" = 200'

SHEET  
8 OF 28



NOTE: SEE SHEETS 6, 7, 8, 20, 21 & 22 FOR SOIL EROSION AND SEDIMENT CONTROL REQUIREMENTS.

LIMIT OF PAVING STA. 56+70

STA. 55+70 LT. TO STA. 56+00 LT. 300' SIDE DITCH W=2' D=1' SEE DETAIL SHEET 5

STA. 66+00 TO STA. 67+00 LT. TRAFFIC BARRIER W/ BEAM INCLUDES TYPE I END FLARES (SEE SHEET 5)

STA. 66+56 45' LT. (HW-7)

STA. 65+00 LT. TO STA. 66+00 LT. RIPRAP SIDE DITCH W=2' D=2' SEE DETAIL SHEET 5

STA. 66+00 LT. TO STA. 67+00 LT. RIPRAP SIDE DITCH W=2' D=2' SEE DETAIL SHEET 5

CEDAR

LANE

CURVE DATA  
 $\Delta = 1^\circ 14' 57.1''$   
 $D_c = 1^\circ 00'$   
 $R = 5729.58'$   
 $T = 62.46'$   
 $L = 124.92'$   
 $TP \# 212$

CURVE DATA  
 $\Delta = 65^\circ 25' 03''$   
 $D_c = 6^\circ 30' 00''$   
 $R = 881.47'$   
 $T = 566.09'$   
 $L = 1006.42'$   
 $E = 166.12'$

STA. 56+70 TO 58+50 MILL EXIST. PAVEMENT TO RECEIVE PROPOSED 1 1/2" BITUMINOUS CONC SURFACE COURSE.

STA. 58+00 CONNECT NEW R/W TO EXISTING (N.I. 1)

STA. 55+70 TO 57+00 EXTEND EXISTING SIDEWALK SLOPE TO MEET EXISTING SIDE SLOPE AND DRAIN TO PROPOSED ROADWAY AS DIRECTED BY THE ENGINEER.

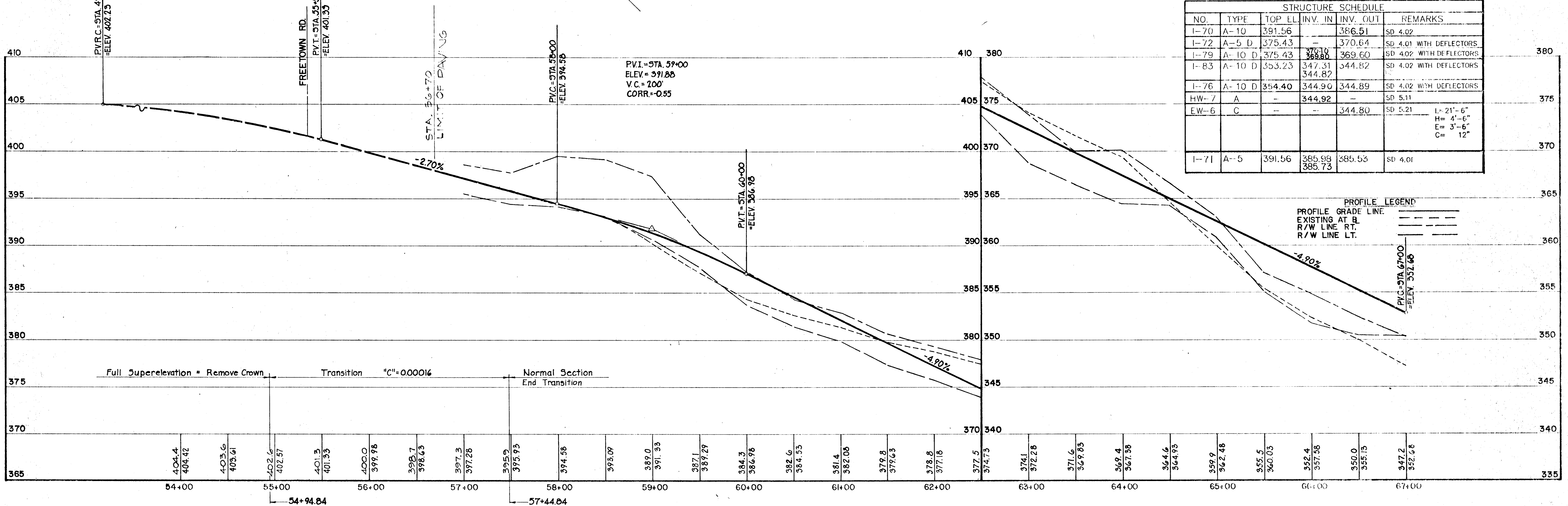
STA. 66+00 TO STA. 67+00 TRAFFIC BARRIER W/ BEAM INCLUDES TYPE I END FLARE (SEE SHEET 5)

LIMIT OF WORK STA. 55+70

FOR CURVE DRAIN PROFILES SEE SHEET 14

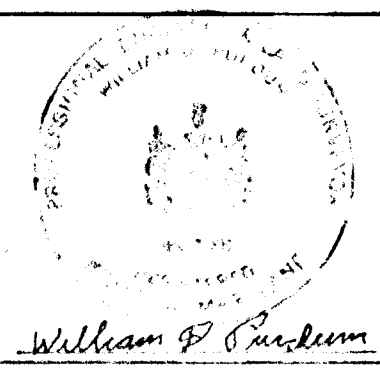
STRUCTURE SCHEDULE					
NO.	TYPE	TOP ELEV.	INV. IN	INV. OUT	REMARKS
I-70	A-10	391.56		386.51	SD 4.02
I-72	A-5 D	375.43		370.64	SD 4.01 WITH DEFLECTORS
I-79	A-10 D	375.43	370.10	369.60	SD 4.02 WITH DEFLECTORS
I-83	A-10 D	353.23	347.31	344.82	SD 4.02 WITH DEFLECTORS
I-76	A-10 D	354.40	344.90	344.89	SD 4.02 WITH DEFLECTORS
HW-7	A		344.92		SD 5.11
EW-6	C			344.80	SD 5.21
					L=21'-6" H=4'-6" E=3'-6" C=12"
I-71	A-5	391.56	385.98 385.73	385.53	SD 4.01

PROFILE LEGEND  
 PROFILE GRADE LINE  
 EXISTING AT BL  
 R/W LINE RT.  
 R/W LINE LT.



DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

PURDUM & JESCHKE  
 CONSULTING ENGINEERS  
 LAND SURVEYORS  
 1029 North Calvert Street  
 Baltimore, Maryland 21202 301/837-0194

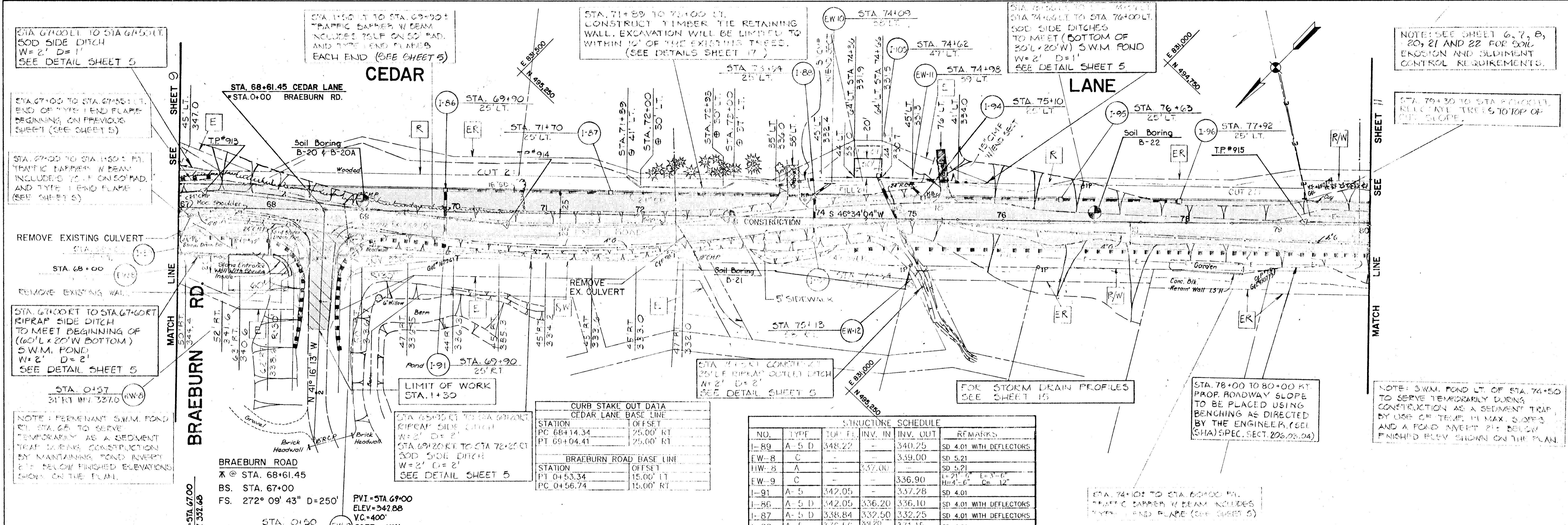


DES: JCT	
DRN: PWR	
CHK: WDP	
DATE:	
BY:	
NO:	
REVISION:	
DATE:	

PLAN & PROFILE  
 STA. 54+00 TO STA. 67+00  
 CEDAR LANE - PHASE 2

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
 CAPITAL PROJECT J-4086  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE  
 1"=50'  
 SHEET  
 9 of 28



**CURB STAKE OUT DATA**

**CEDAR LANE BASE LINE**

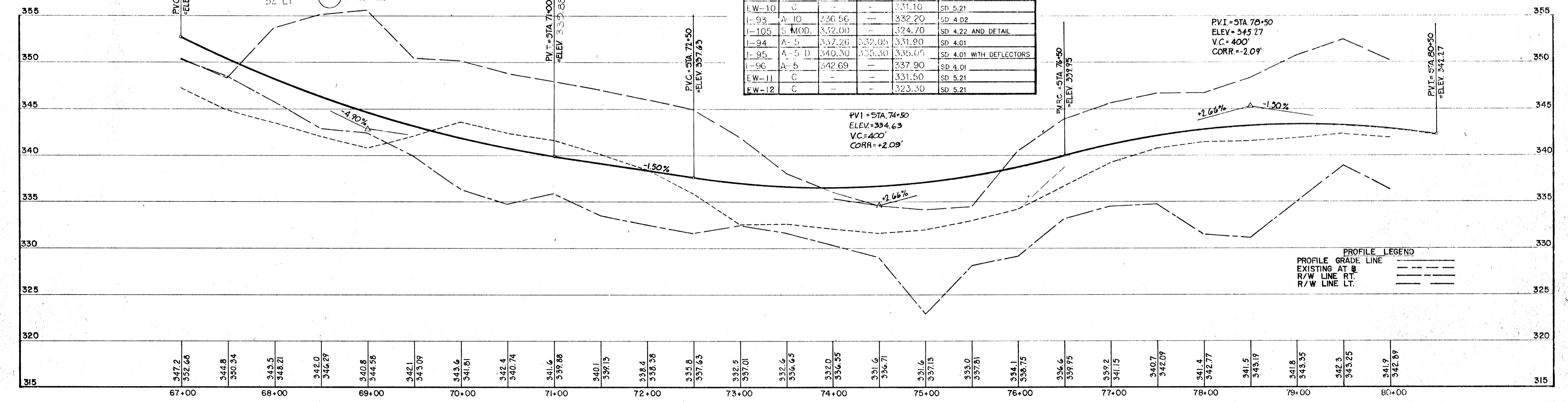
STATION	OFFSET
PC 68+14.34	25.00' RT
PT 69+04.41	25.00' RT

**BRAEBURN ROAD BASE LINE**

STATION	OFFSET
PT 0+53.34	15.00' LT
PC 0+56.74	15.00' RT

**STRUCTURE SCHEDULE**

NO.	TYPE	TOP FIN.	INV. IN.	INV. OUT.	REMARKS
I-89	A-5 D	348.22	-	340.25	SD 4.01 WITH DEFLECTORS
EW-8	C	-	-	339.00	SD 5.21
HW-8	A	-	337.00	-	SD 5.21
EW-9	C	-	-	336.90	SD 4.01
I-91	A-5	342.05	-	337.28	SD 4.01
I-86	A-5 D	342.05	336.20	336.10	SD 4.01 WITH DEFLECTORS
I-87	A-5 D	338.84	332.50	332.25	SD 4.01 WITH DEFLECTORS
I-88	A-5	336.56	331.80	331.15	SD 4.01
EW-10	C	-	-	331.10	SD 5.21
I-93	A-10	336.56	-	332.20	SD 4.02
I-105	S MOD.	332.00	-	324.70	SD 4.22 AND DETAIL
I-94	A-5	337.26	332.05	331.90	SD 4.01
I-95	A-5 D	340.30	335.30	335.05	SD 4.01 WITH DEFLECTORS
I-96	A-5	342.69	-	337.90	SD 4.01
EW-11	C	-	-	331.50	SD 5.21
EW-12	C	-	-	323.30	SD 5.21



**PROFILE LEGEND**

PROFILE GRADE LINE	---
EXISTING AT	---
R/W LINE RT.	---
R/W LINE LT.	---

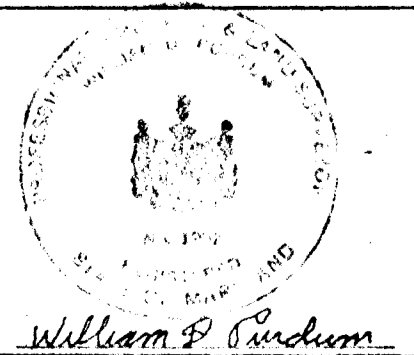
DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

Director of Public Works: \_\_\_\_\_ DATE: \_\_\_\_\_  
Chief, Bureau of Engineering: *William B. R... 11-8-88* DATE: \_\_\_\_\_

Chief, Division of Roads, Bridges and Storm Drainage: \_\_\_\_\_ DATE: \_\_\_\_\_

PURDUM & JESCHKE  
CONSULTING ENGINEERS  
LAND SURVEYORS

1029 North Calvert Street  
Baltimore, Maryland 21202 301/837-0194



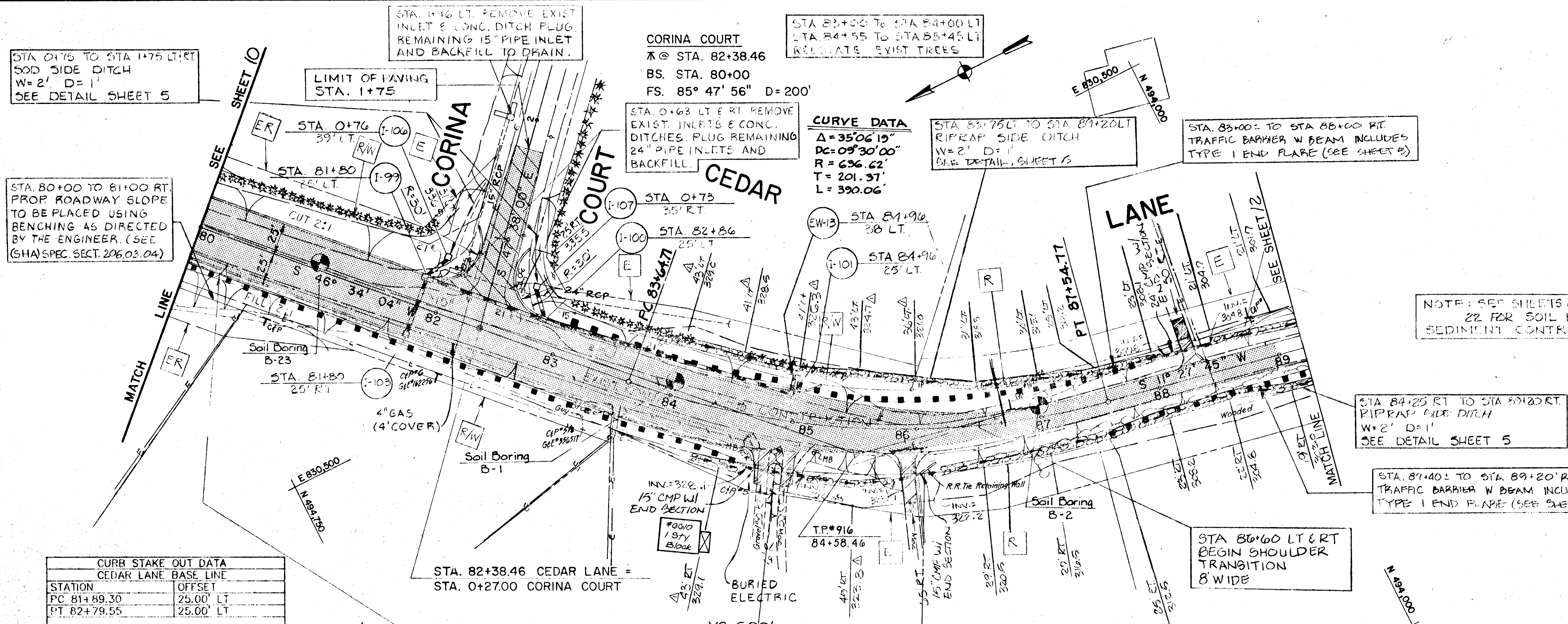
DRN PWR	_____
CHK: WDP	_____
DATE: (9/9)	BY: NO. REVISION DATE

PLAN & PROFILE  
STA. 67+00 TO STA. 80+00  
CEDAR LANE - PHASE 2

600' SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
CAPITAL PROJECT J--4086  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

SCALE 1" = 50'  
SHEET 10 OF 28



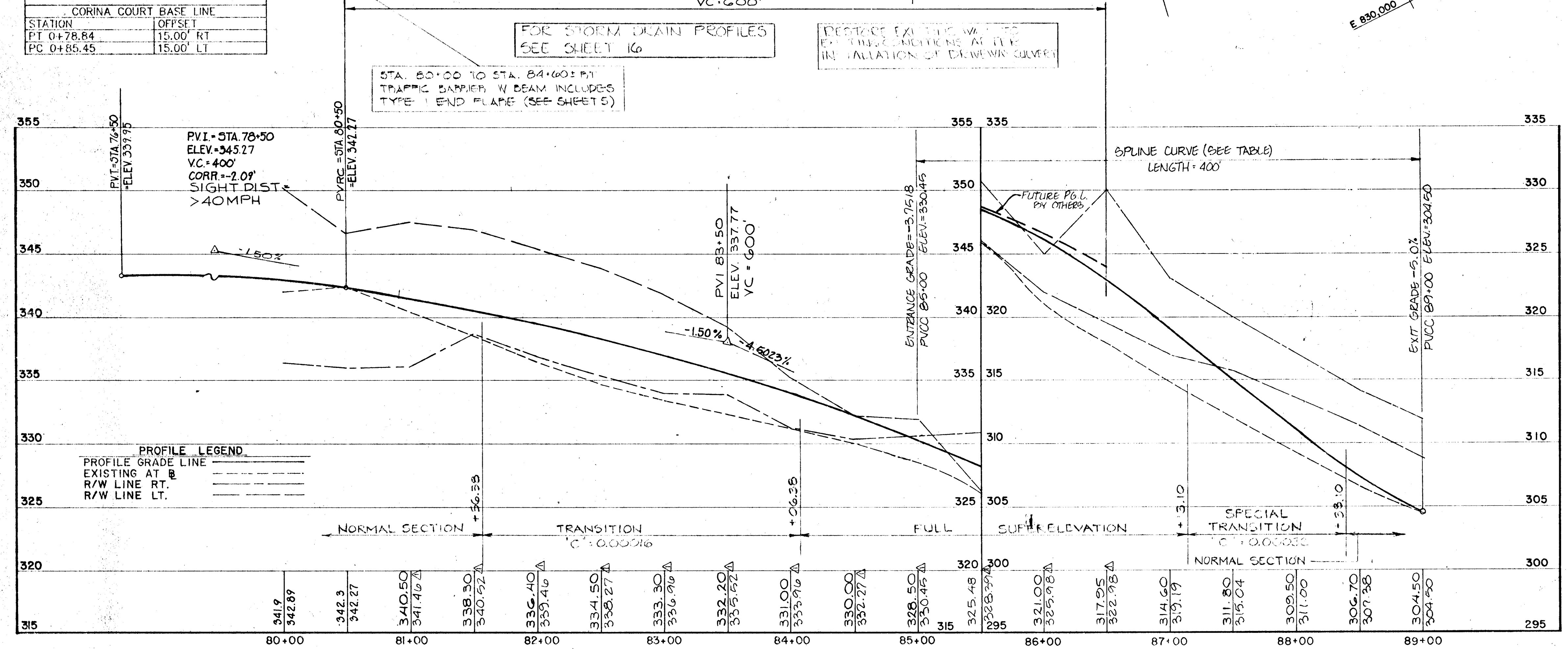
NOTE: SEE SHEETS 6, 7, 8, 20, 21 AND 22 FOR SOIL EROSION AND SEDIMENT CONTROL REQUIREMENTS.

STA. 84+25 RT TO STA. 89+20 RT. TRAFFIC BARRIER W/ BEAM INCLUDES TYPE I END FLARE (SEE SHEET 5)

STA. 80+00 TO STA. 81+00 RT. PROP. ROADWAY SLOPE TO BE PLACED USING BENCHING AS DIRECTED BY THE ENGINEER. (SEE (SHA) SPEC. SECT. 206.03.04)

STA. 80+00 TO STA. 81+00 RT. PROP. ROADWAY SLOPE TO BE PLACED USING BENCHING AS DIRECTED BY THE ENGINEER. (SEE (SHA) SPEC. SECT. 206.03.04)

STA. 80+00 TO STA. 81+00 RT. PROP. ROADWAY SLOPE TO BE PLACED USING BENCHING AS DIRECTED BY THE ENGINEER. (SEE (SHA) SPEC. SECT. 206.03.04)



ROADWAY STAKE OUT DATA  
 STATIONS AND OFFSETS / ELEVATION

REMARKS	SHOULDER WIDTH & ELEVATION	OFFSET TO EDGE & ELEVATION	BASELINE STATION & ELEVATION	OFFSET TO EDGE & ELEVATION	STRUCTURE WIDTH & ELEVATION	REMARKS
END NORMAL SECTION, BEGIN S/E TRANSITION		25.00	81+50.30	25.00		
		338.83	81+50.30	338.83		
		25.00	81+75.00	25.00		
		338.44	81+75.00	338.44		
		25.00	82+00.00	25.00		
		338.00	82+00.00	338.00		
		25.00	82+25.00	25.00		
		337.52	82+25.00	337.52		
		25.00	82+50.00	25.00		
		337.07	82+50.00	337.07		
		25.00	82+75.00	25.00		
		336.60	82+75.00	336.60		
		25.00	83+00.00	25.00		
		336.15	83+00.00	336.15		
		25.00	83+25.00	25.00		
		335.70	83+25.00	335.70		
		25.00	83+50.00	25.00		
		335.25	83+50.00	335.25		
		25.00	83+75.00	25.00		
		334.80	83+75.00	334.80		
		25.00	84+00.00	25.00		
		334.35	84+00.00	334.35		
		25.00	84+25.00	25.00		
		333.90	84+25.00	333.90		
		25.00	84+50.00	25.00		
		333.45	84+50.00	333.45		
		25.00	84+75.00	25.00		
		333.00	84+75.00	333.00		
		25.00	85+00.00	25.00		
		332.55	85+00.00	332.55		
		25.00	85+25.00	25.00		
		332.10	85+25.00	332.10		
		25.00	85+50.00	25.00		
		331.65	85+50.00	331.65		
		25.00	85+75.00	25.00		
		331.20	85+75.00	331.20		
		25.00	86+00.00	25.00		
		330.75	86+00.00	330.75		
		25.00	86+25.00	25.00		
		330.30	86+25.00	330.30		
		25.00	86+50.00	25.00		
		329.85	86+50.00	329.85		
		25.00	86+75.00	25.00		
		329.40	86+75.00	329.40		
		25.00	87+00.00	25.00		
		328.95	87+00.00	328.95		
		25.00	87+25.00	25.00		
		328.50	87+25.00	328.50		
		25.00	87+50.00	25.00		
		328.05	87+50.00	328.05		
		25.00	87+75.00	25.00		
		327.60	87+75.00	327.60		
		25.00	88+00.00	25.00		
		327.15	88+00.00	327.15		
		25.00	88+25.00	25.00		
		326.70	88+25.00	326.70		
		25.00	88+50.00	25.00		
		326.25	88+50.00	326.25		
		25.00	88+75.00	25.00		
		325.80	88+75.00	325.80		
		25.00	89+00.00	25.00		
		325.35	89+00.00	325.35		
		25.00	89+25.00	25.00		
		324.90	89+25.00	324.90		
		25.00	89+50.00	25.00		
		324.45	89+50.00	324.45		
		25.00	89+75.00	25.00		
		324.00	89+75.00	324.00		
		25.00	90+00.00	25.00		
		323.55	90+00.00	323.55		

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

DES: JSN  
 DRN: GMI  
 CHK:  
 DATE: 6/13

PLAN & PROFILE  
 STA. 80+00 TO STA. 89+20  
 CEDAR LANE - PHASE 2

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
 CAPITAL PROJECT J-4086  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

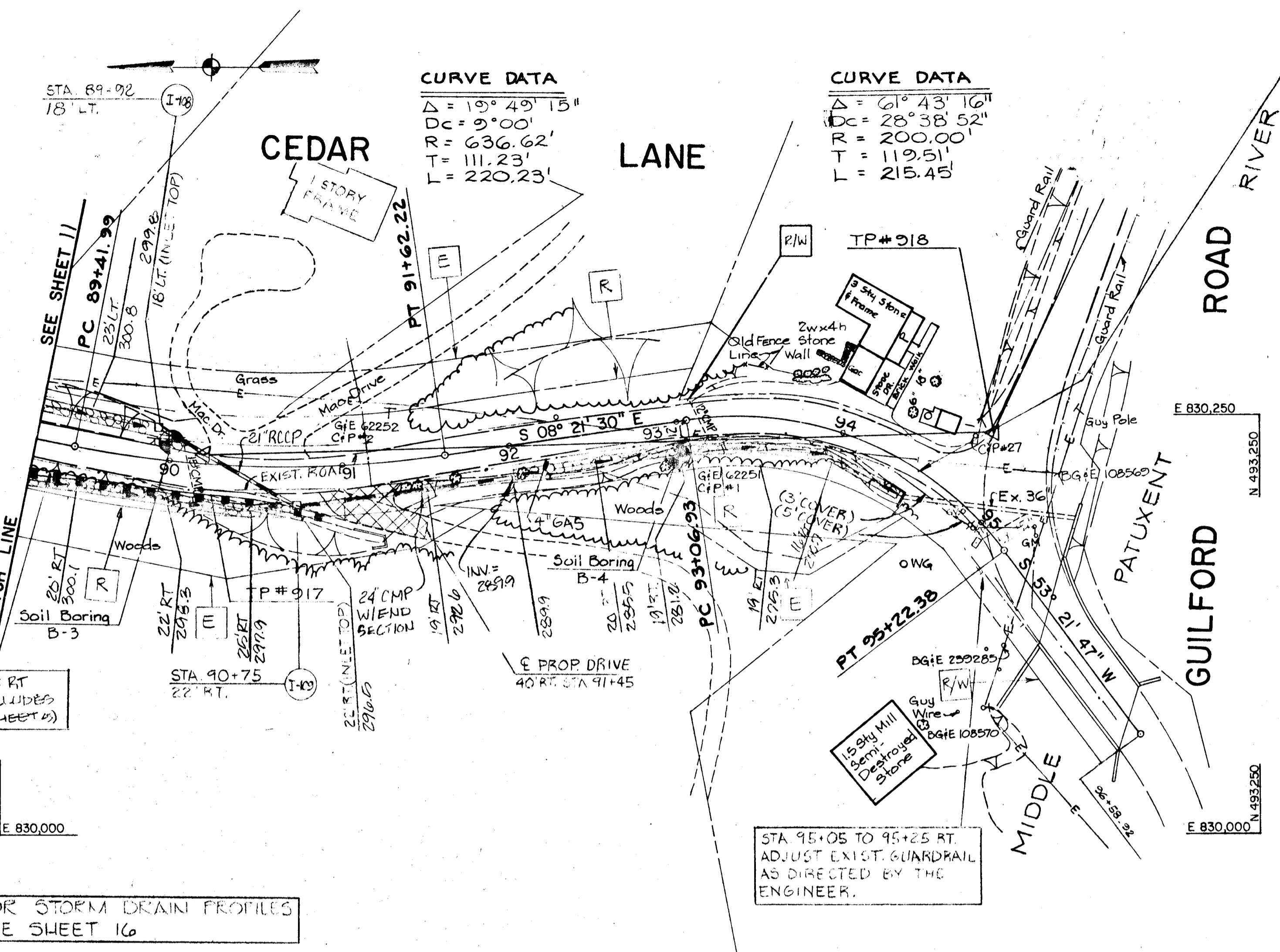
SCALE  
 1"=50'

SHEET  
 11 OF 23

**EXAMPLE:**  
 OFFSET LT. OR RT.  
 ELEVATION

**NOTES:**  
 OFFSETS AND ELEVATIONS SHOWN IN BLOCKS LOCATE PAVED SWALES ON PROPOSED DRIVEWAYS AT FINISHED GRADE

THE CONTRACTOR SHALL MODIFY STANDARD D'INLETS TO ACCOMMODATE PIPE REQUIRING WIDTHS GREATER THAN 30"



LIMIT OF WORK  
 STA. 94+50

STA. 90+10 Remove Ex. Culvert

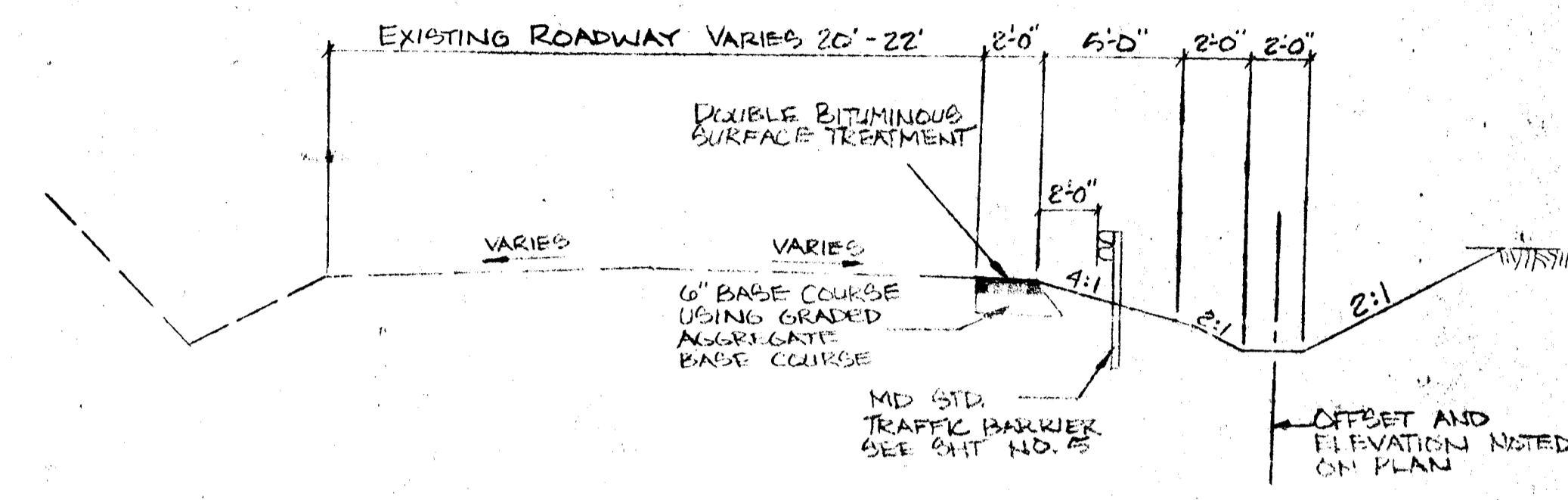
STA. 89+20 RT TO STA. 94+50 RT.  
 RIP RAP SIDE DITCH  
 W=2' D=1'  
 SEE DETAIL SHEET 5

STA. 89+20 LT TO STA. 89+20 LT  
 RIP RAP SIDE DITCH  
 W=2' D=1'  
 SEE DETAIL SHEET 5

STA. 89+20 TO STA. 90+80 RT  
 TRAFFIC BARRIER W BEAM INCLUDES  
 TYPE 1 END PLATE (SEE SHEET 2)

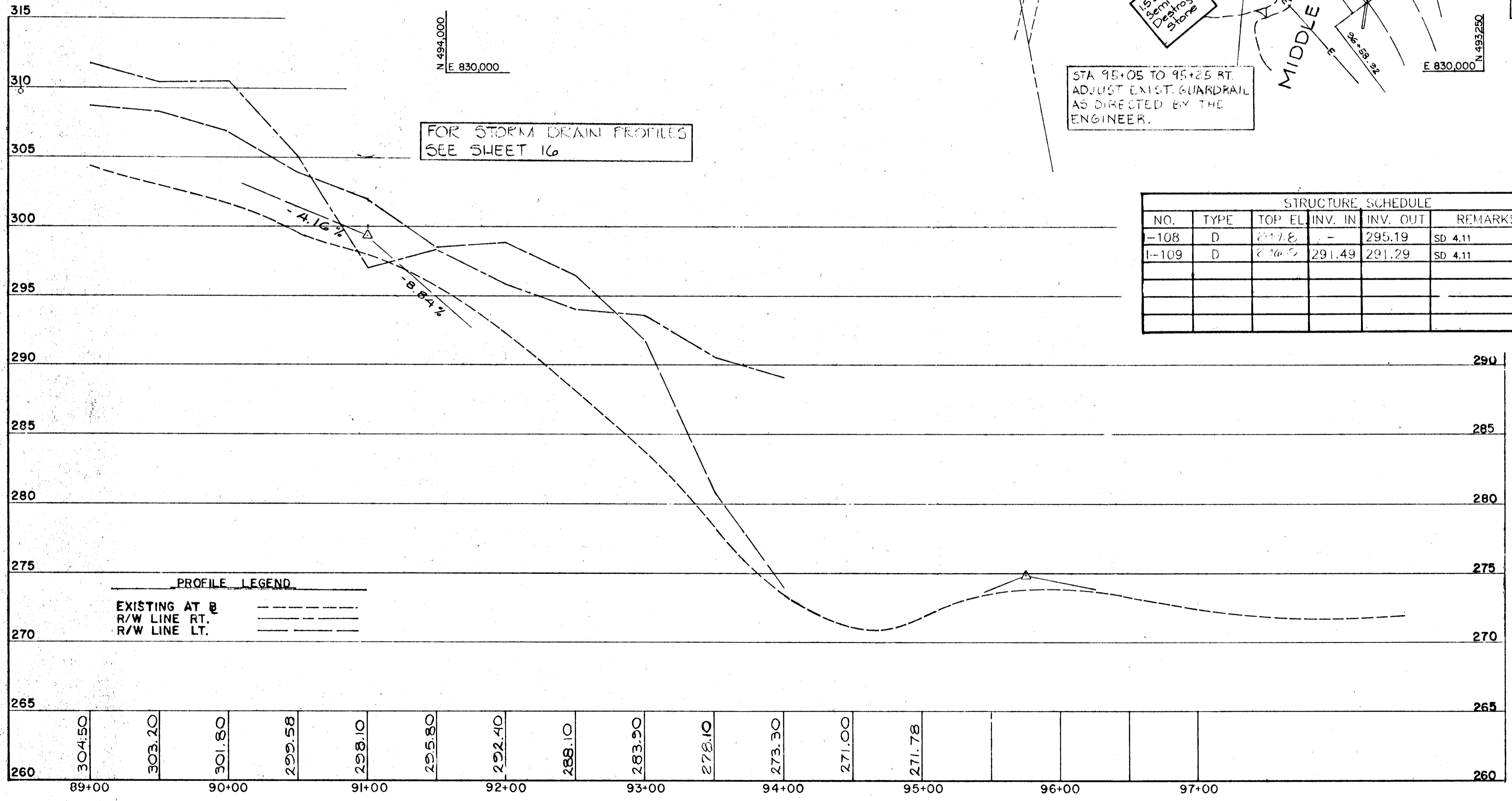
STA. 95+05 TO 95+25 RT.  
 ADJUST EXIST. GUARDRAIL  
 AS DIRECTED BY THE ENGINEER.

NOTE: SEE SHEETS 6, 7, 8, 20, 21  
 AND 22 FOR SOIL EROSION AND  
 SEDIMENT CONTROL  
 REQUIREMENTS.



PROPOSED TYPICAL SECTION

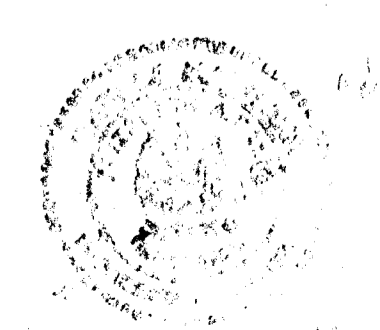
NO SCALE  
 STA. 89+00 TO 94+50



STRUCTURE SCHEDULE					
NO.	TYPE	TOP EL.	INV. IN	INV. OUT	REMARKS
-108	D	297.8	-	295.19	SD 4.11
I-109	D	296.5	291.49	291.29	SD 4.11

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS: \_\_\_\_\_ DATE: \_\_\_\_\_  
 CHIEF, BUREAU OF ENGINEERING: \_\_\_\_\_ DATE: 11-8-88  
 CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE: \_\_\_\_\_ DATE: \_\_\_\_\_



DES. JCT					
DRN. PWR					
CHK. WDP					
DATE	BY	NO.	REVISION	DATE	

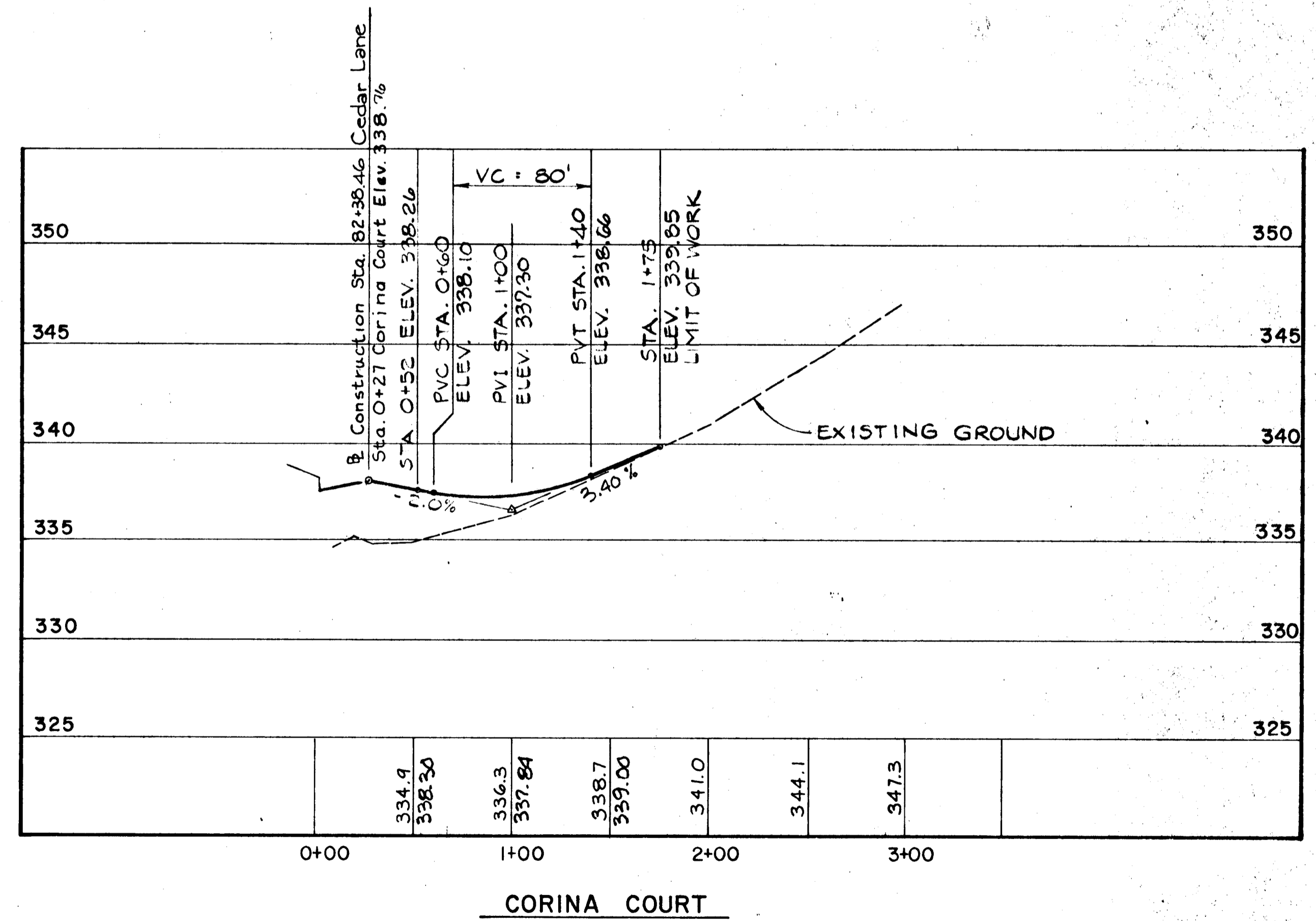
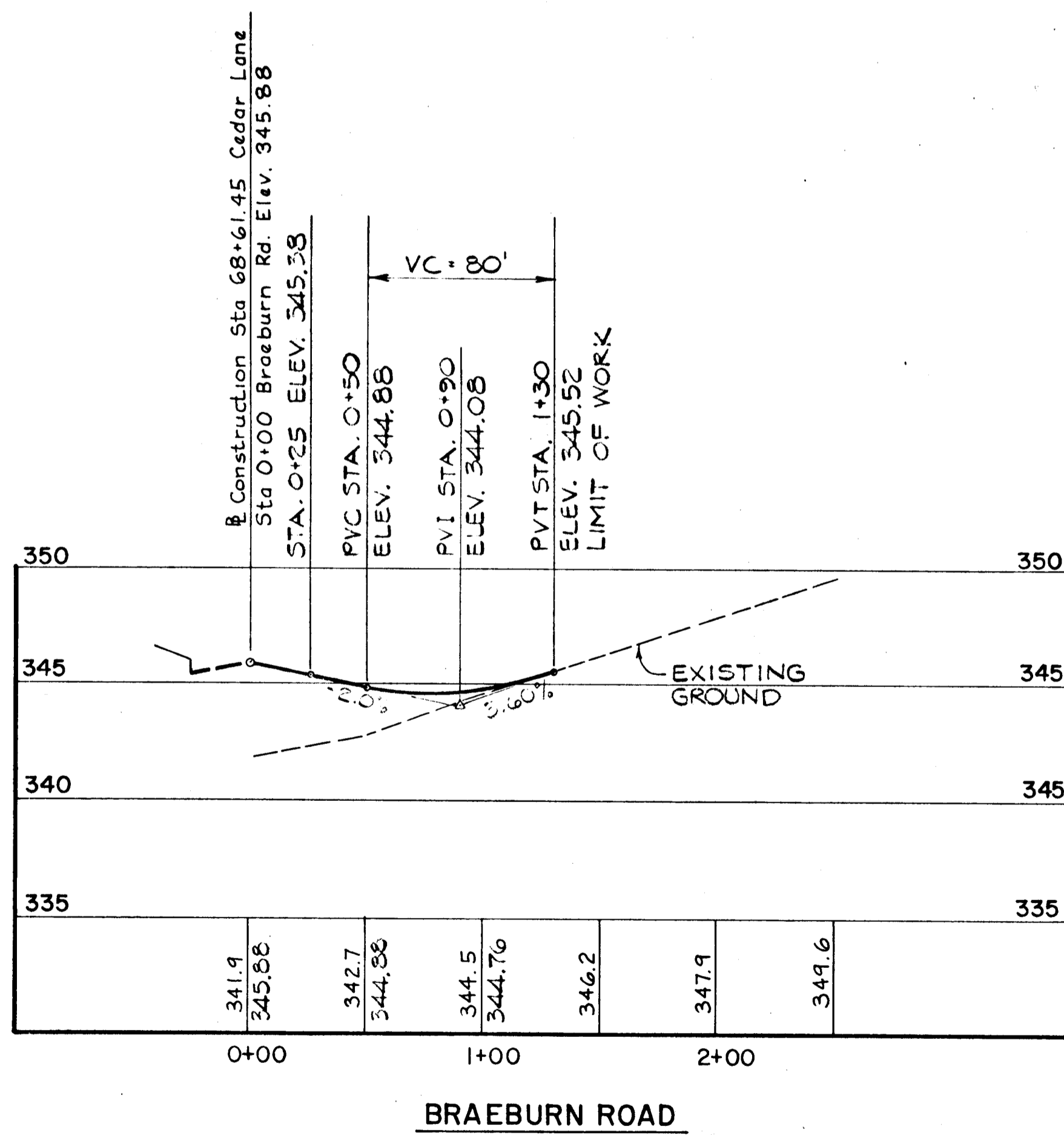
PLAN & PROFILE  
 STA. 89+20 TO STA. 94+50  
 CEDAR LANE - PHASE 2

600' SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
 CAPITAL PROJECT J-4086  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE  
 1"=50'  
 SHEET  
 12 OF 28

985

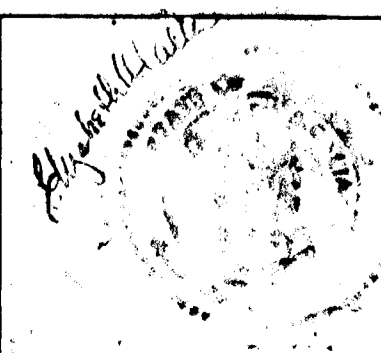


DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* 11/18/88  
DIRECTOR OF PUBLIC WORKS DATE

*[Signature]* 11/18/88  
CHIEF, BUREAU OF ENGINEERING DATE

*[Signature]* 11/18/88  
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE DATE



DES: JBN				
DRN: EMI				
CHK:				
DATE: 6/70				

CONNECTING ROAD PROFILES  
CEDAR LANE - PHASE 2

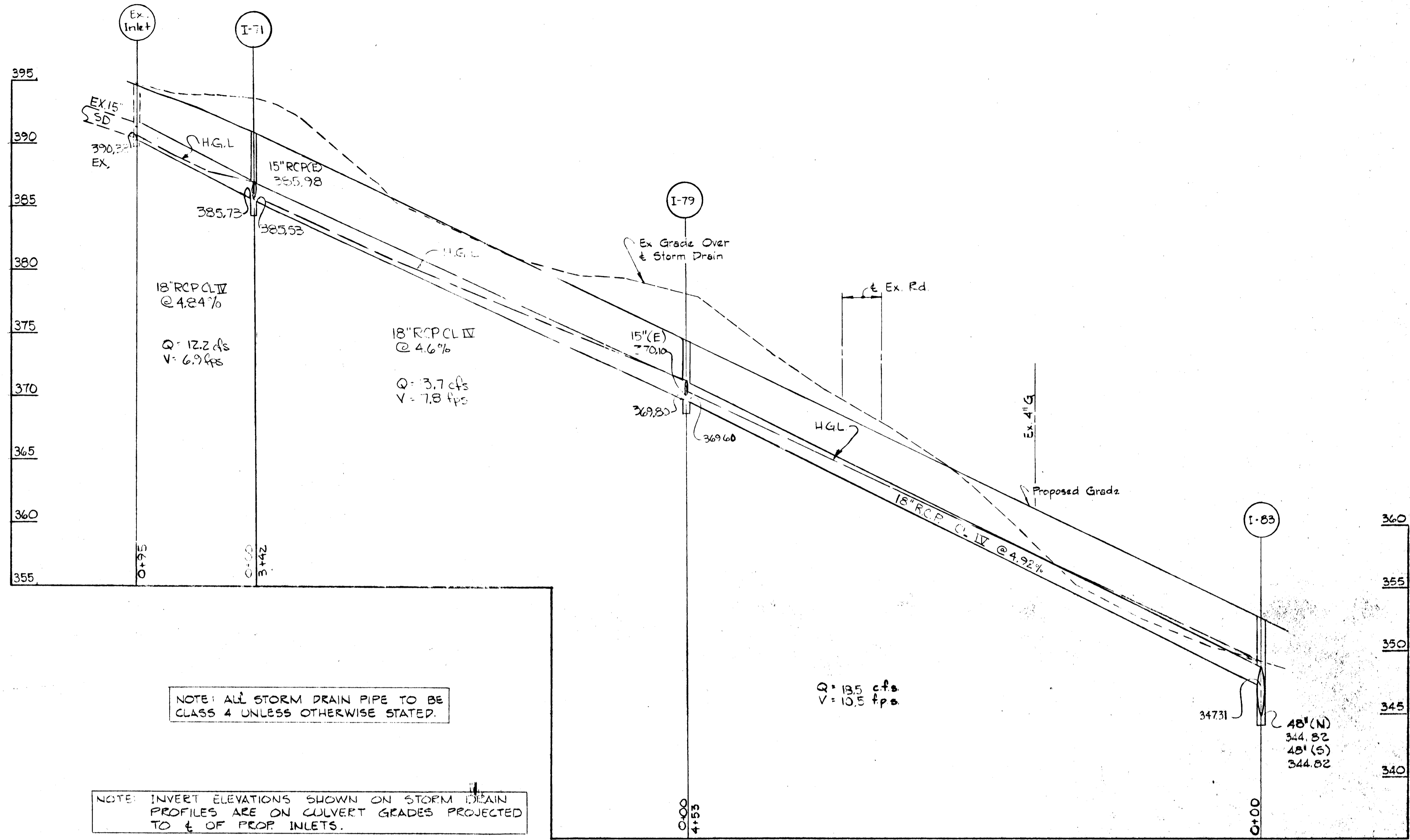
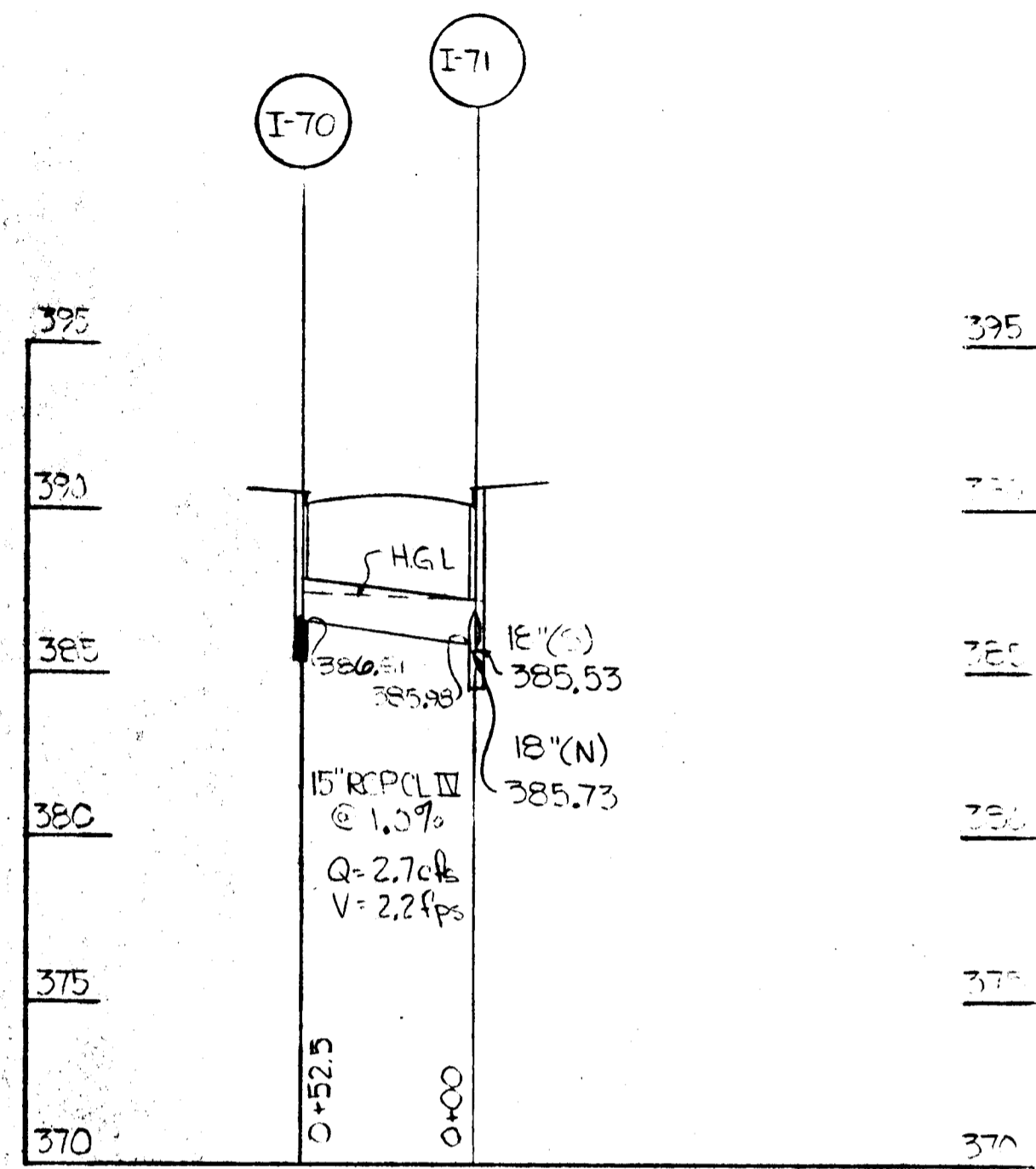
600' SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
CAPITAL PROJECT J-4086  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

SCALE  
HORIZ. 1"=50'  
VERT. 1"=5'

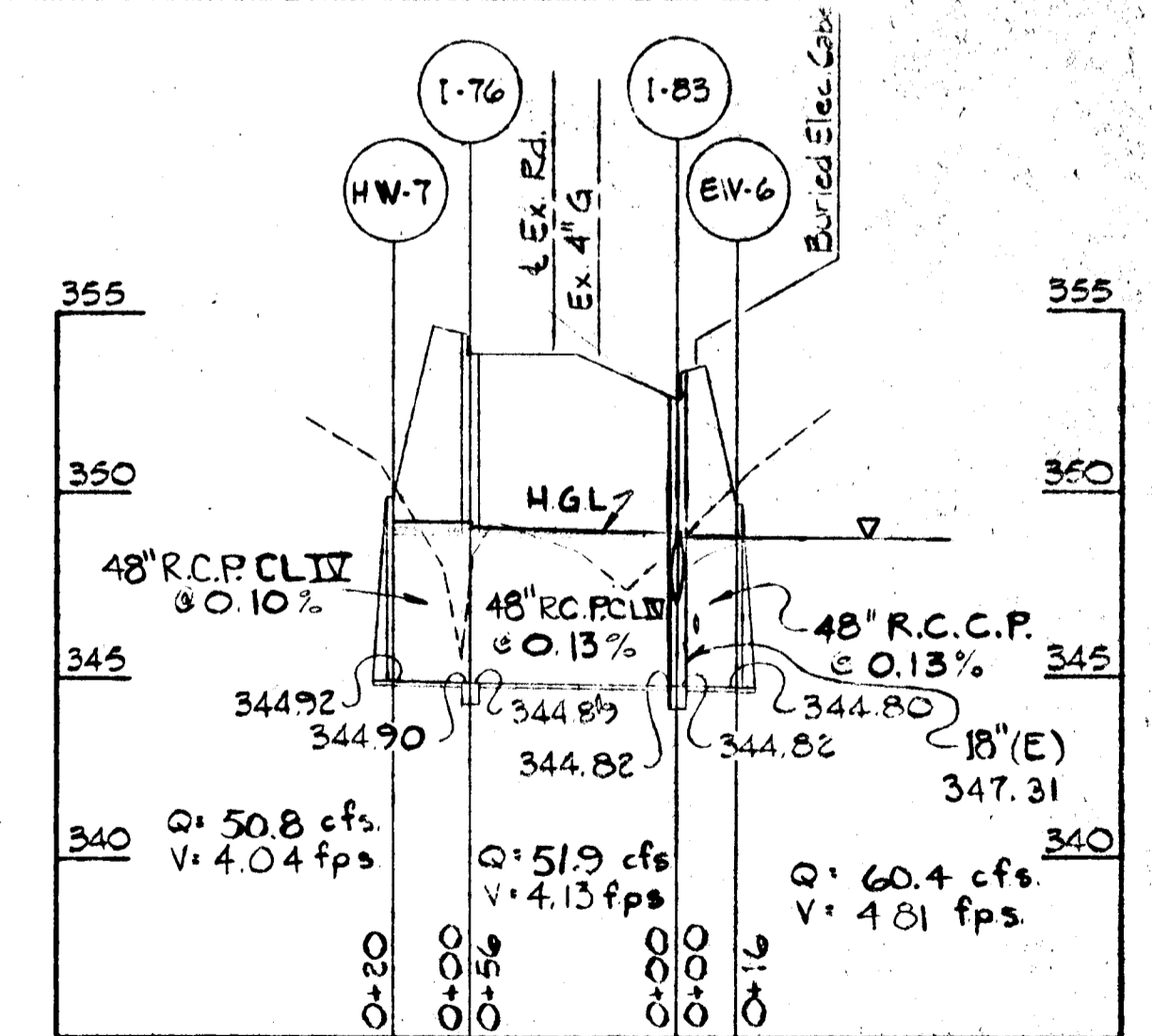
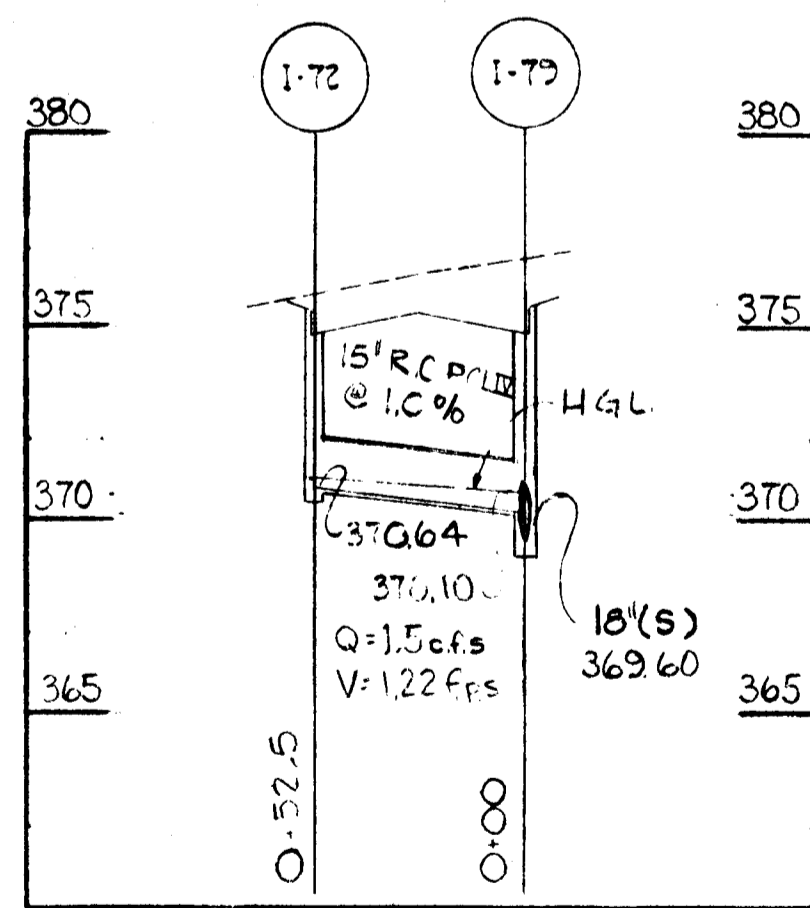
SHEET  
13 OF 28

FINAL



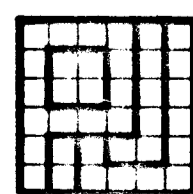
NOTE: ALL STORM DRAIN PIPE TO BE CLASS 4 UNLESS OTHERWISE STATED.

NOTE: INVERT ELEVATIONS SHOWN ON STORM DRAIN PROFILES ARE ON CULVERT GRADES PROJECTED TO  $\frac{1}{2}$  OF PROP INLETS.

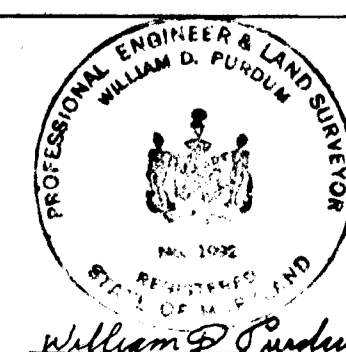


DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James W. ...* 11.8.88  
DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE  
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE DATE



PURDUM & JESCHKE  
CONSULTING ENGINEERS  
LAND SURVEYORS  
1029 North Calvert Street  
Baltimore, Maryland 21202 301/837-0194

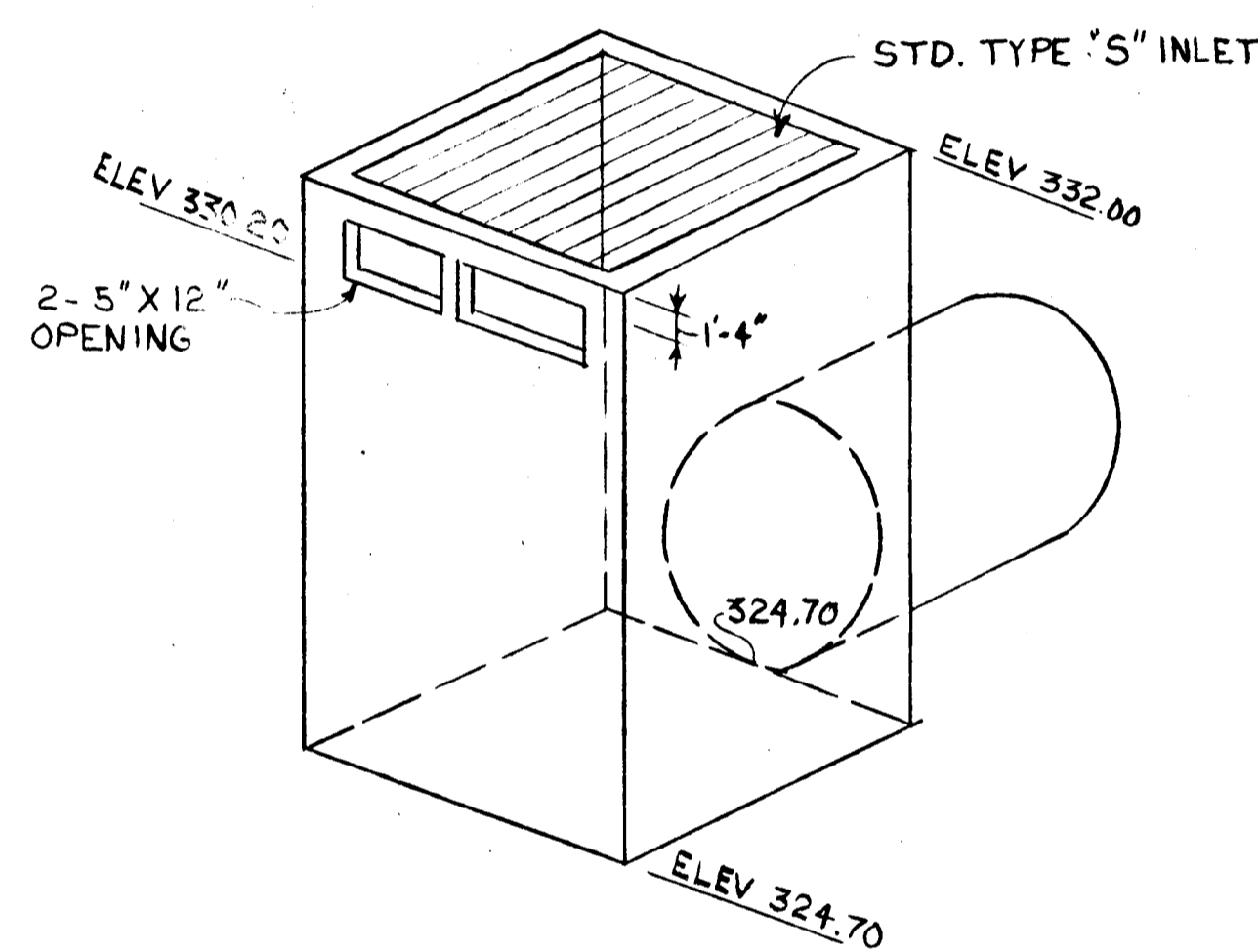
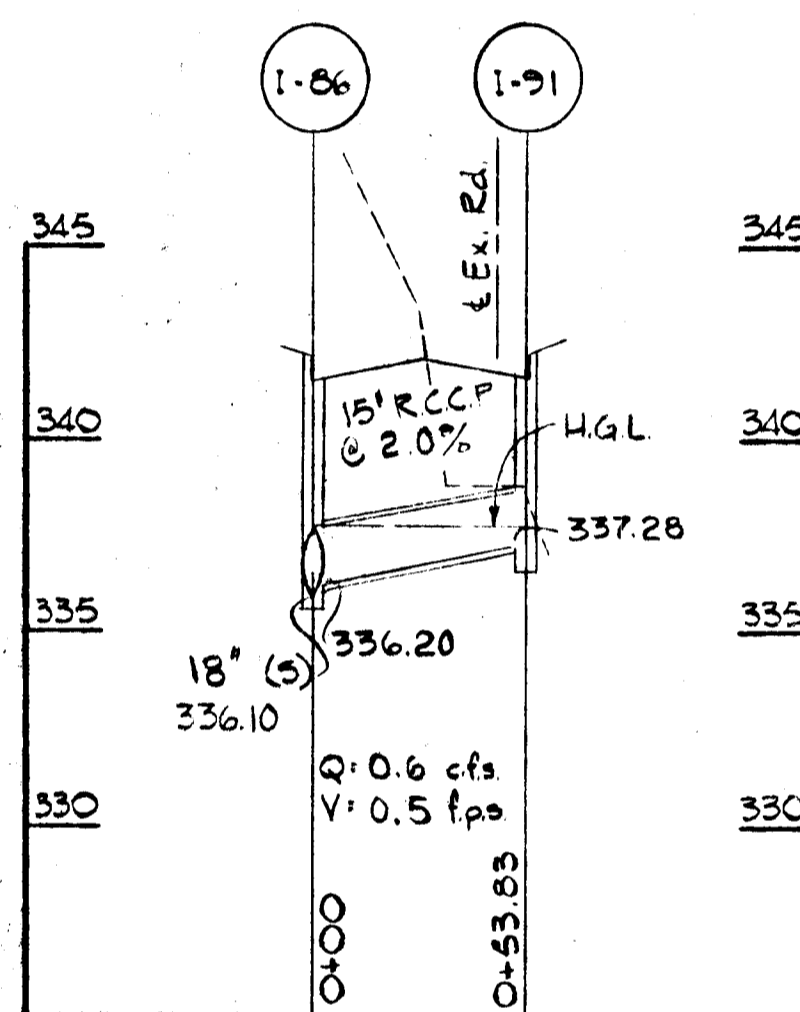
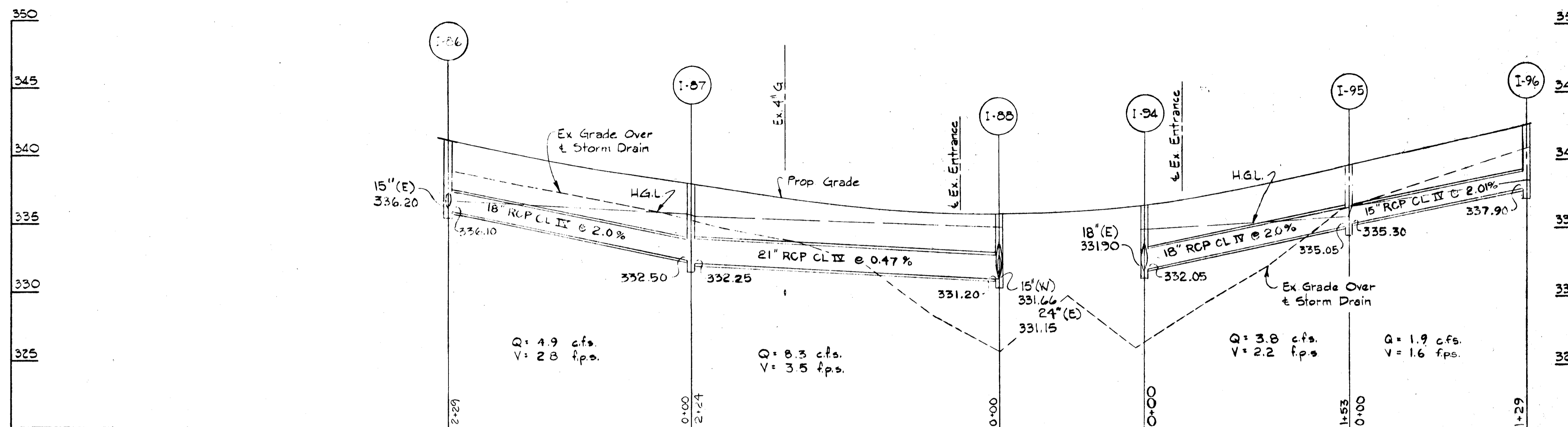
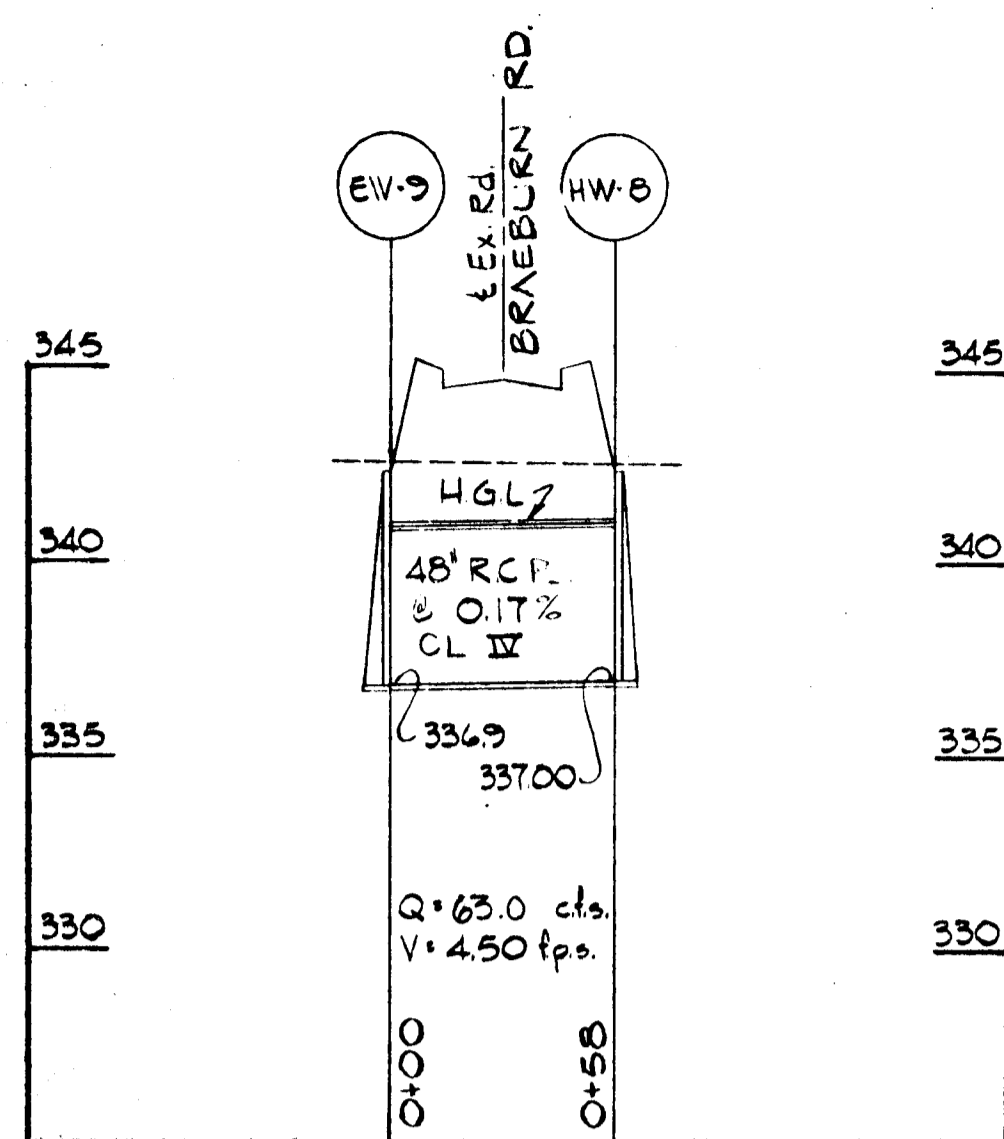


DES: JK  
DRN: PWR  
CHK: JCT  
DATE: 6/90  
BY NO. REVISION DATE

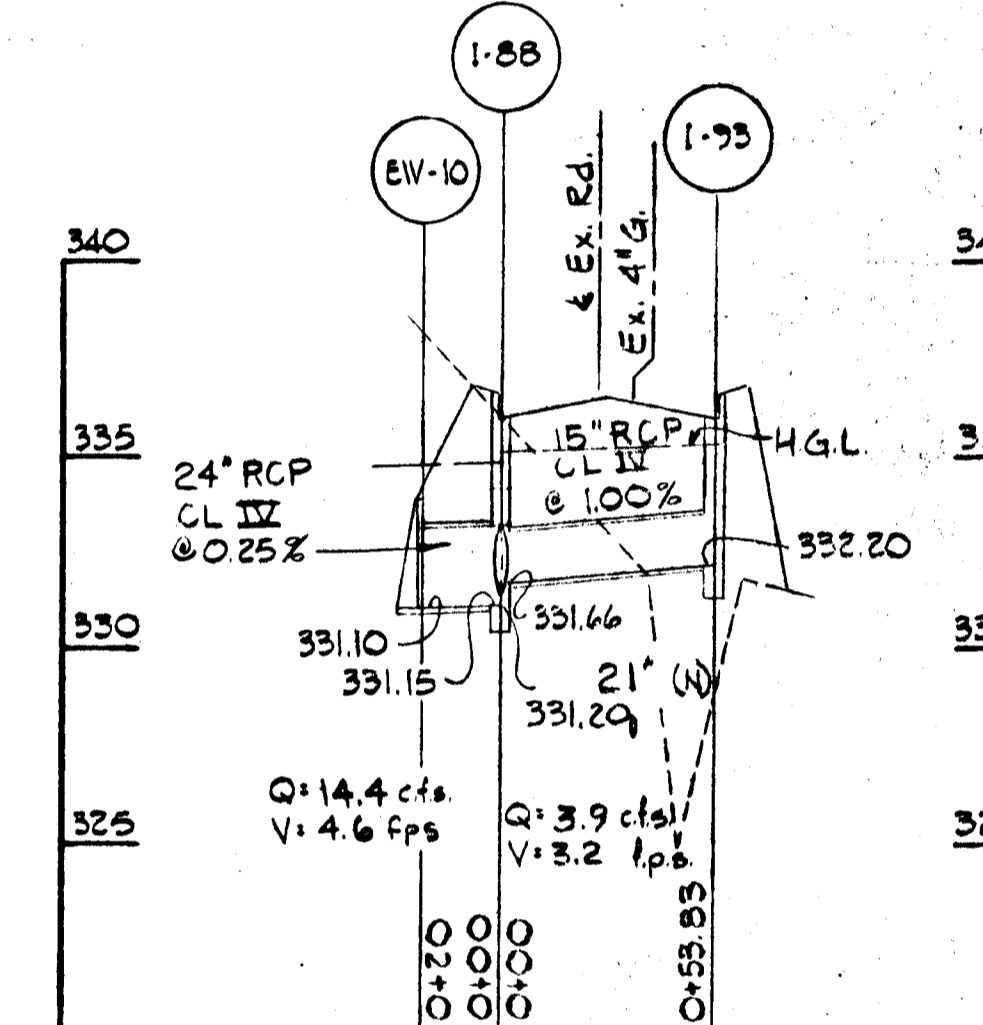
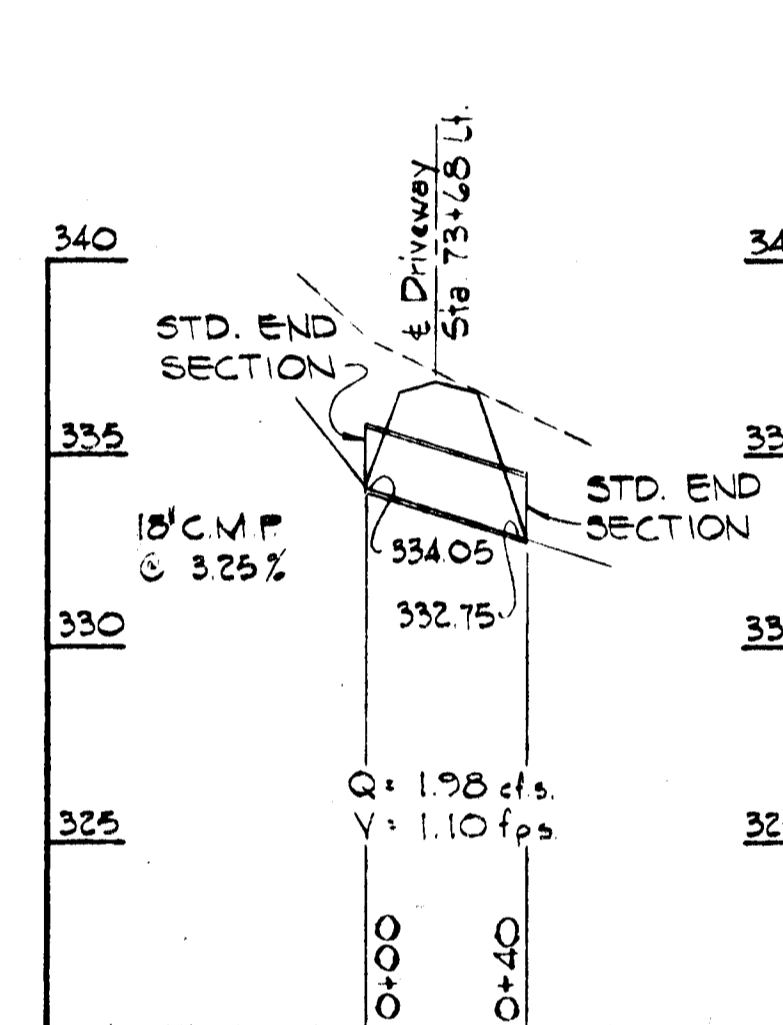
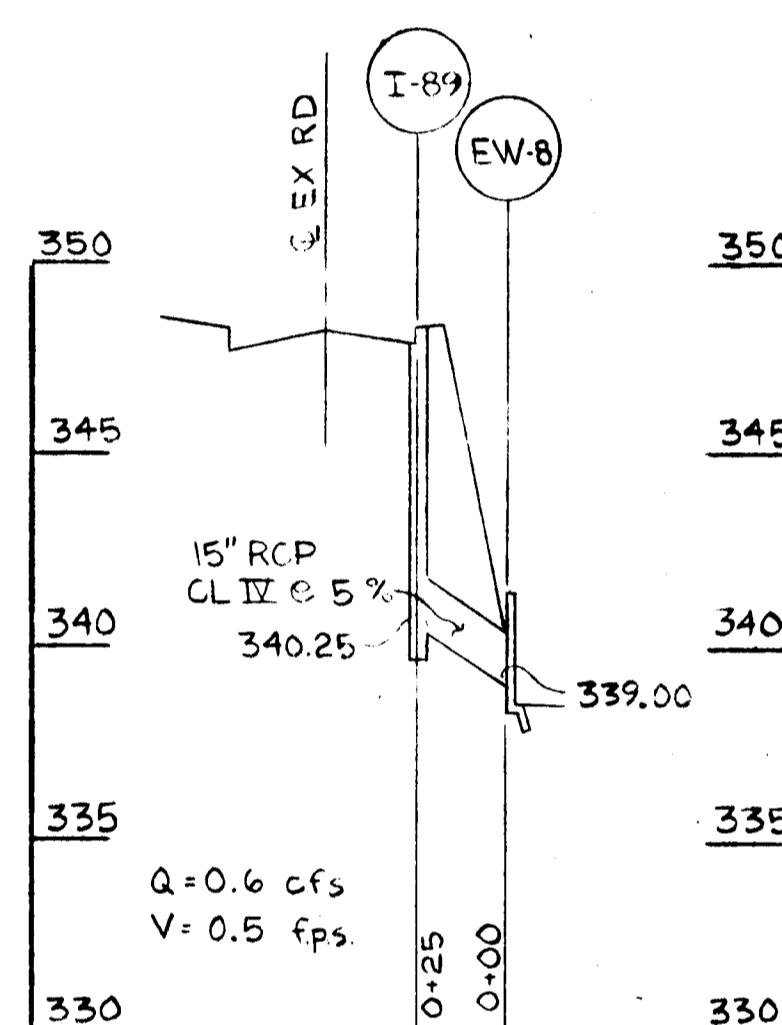
STORM DRAIN PROFILES  
CEDAR LANE - PHASE 2

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
CAPITAL PROJECT J-4086  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

SCALE  
HORIZ. 1"=50'  
VERT. 1"=5'  
SHEET  
14 OF 28

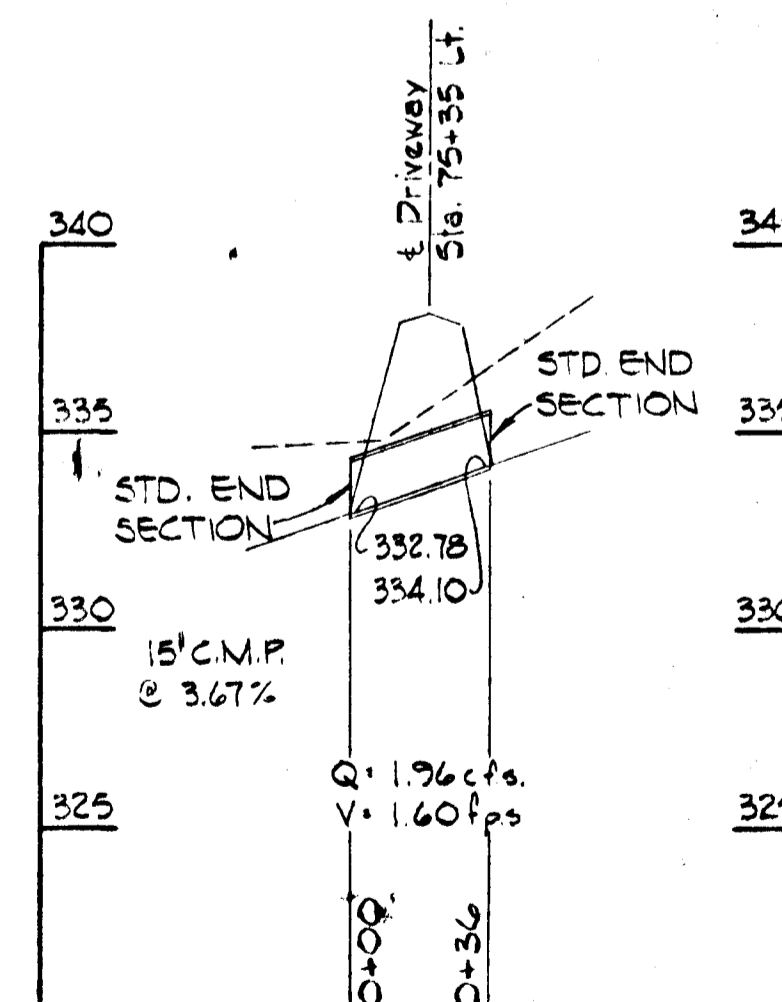
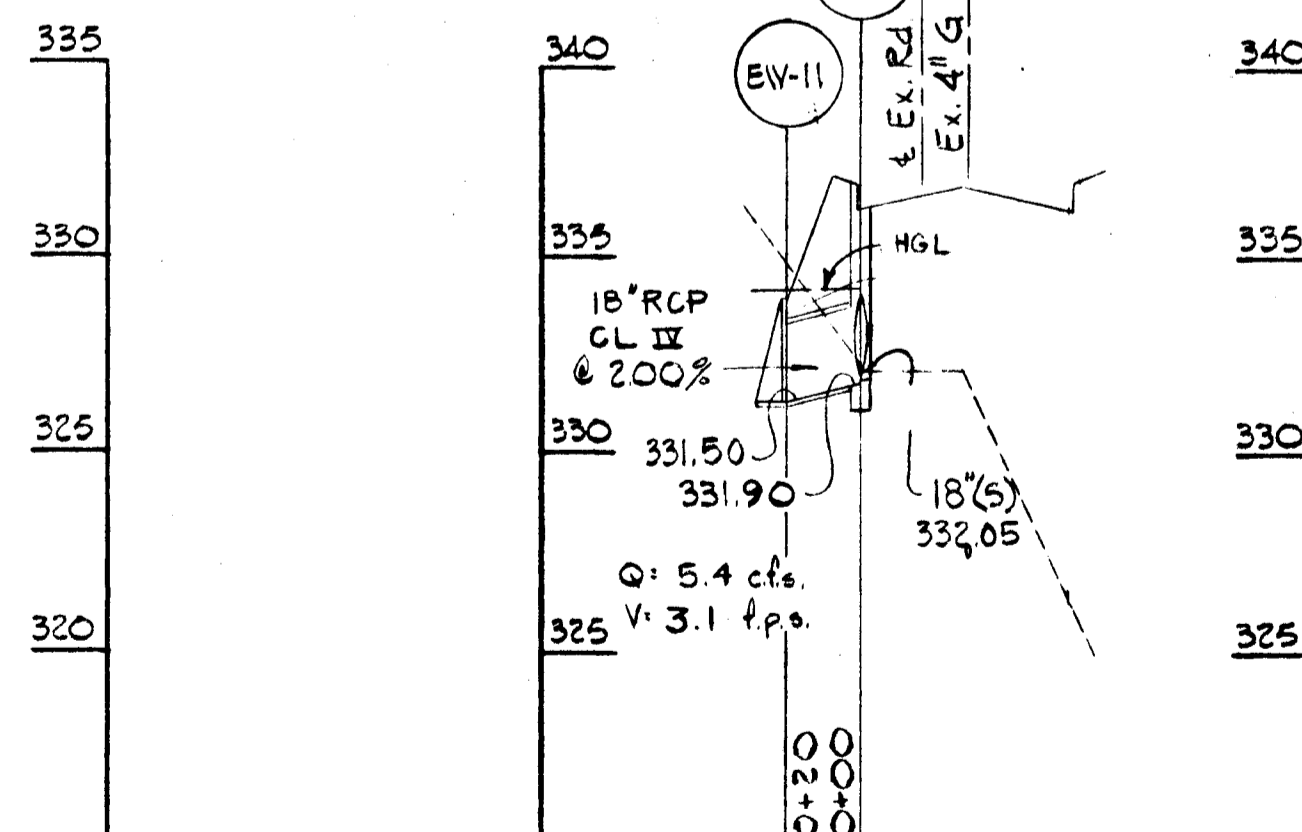
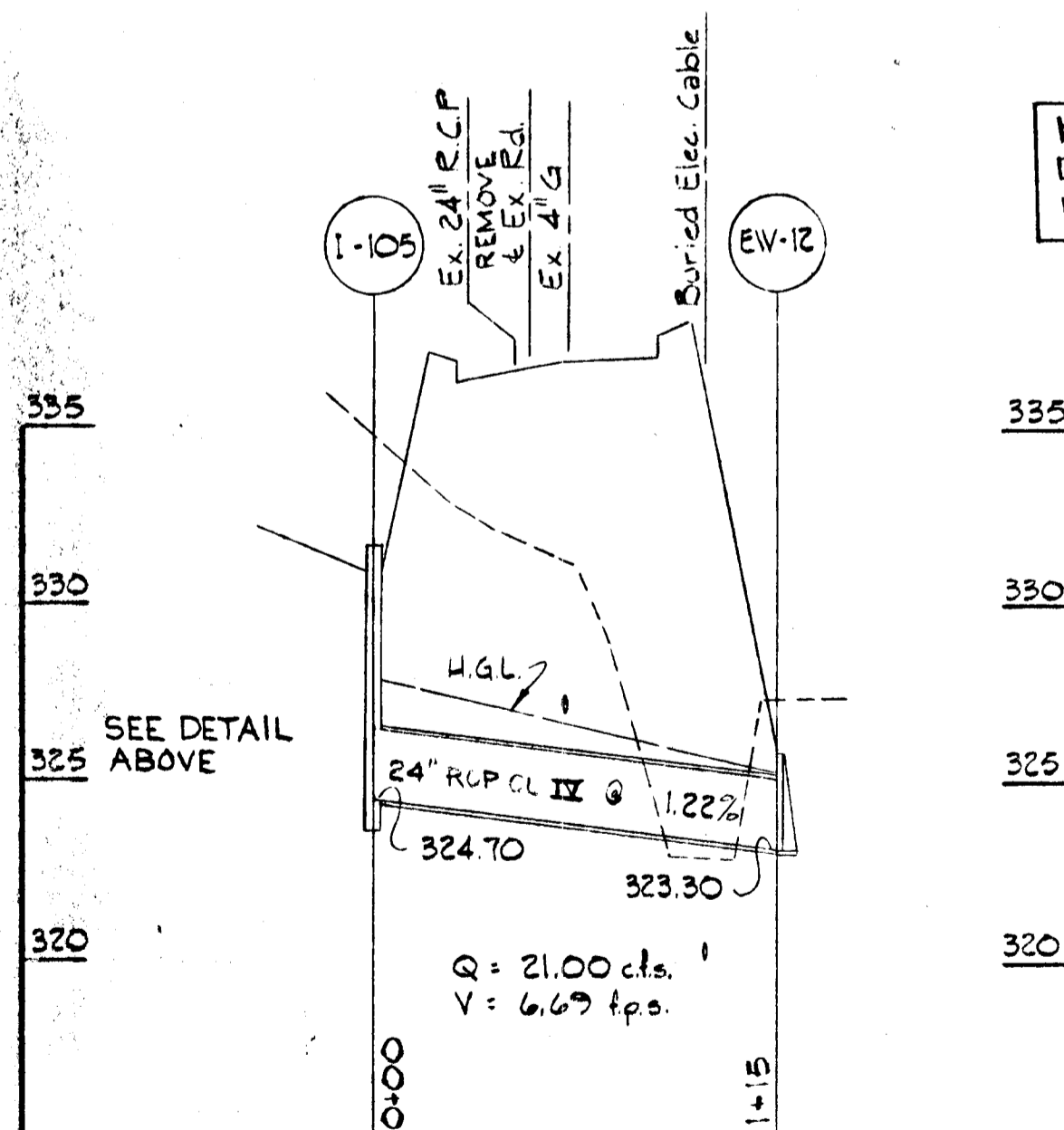


INLET NO. 105 DETAIL (MODIFIED TYPE 'S')  
NTS



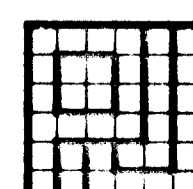
NOTE: INVERT ELEVATIONS SHOWN ON STORM DRAIN PROFILES ARE ON CULVERT GRADES PROJECT TO  $\epsilon$  OF PROP. INLETS.

NOTE: ALL STORM DRAIN PIPE TO BE CLASS 4 UNLESS OTHERWISE STATED.



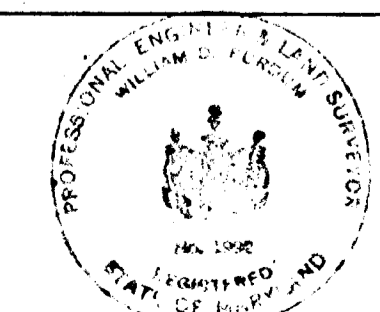
DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

Director of Public Works: *[Signature]* DATE: 11-8-88  
Chief, Bureau of Engineering: *[Signature]* DATE: *[Blank]*  
Chief, Division of Roads, Bridges and Storm Drainage: *[Signature]* DATE: *[Blank]*



PURDUM & JESCHKE  
CONSULTING ENGINEERS  
LAND SURVEYORS

1029 North Calvert Street  
Baltimore, Maryland 21202 301/837-0194



DES: JK			
DRN: RWW			
CHK: JCT			
DATE: 6/90	BY:	NO.	REVISION

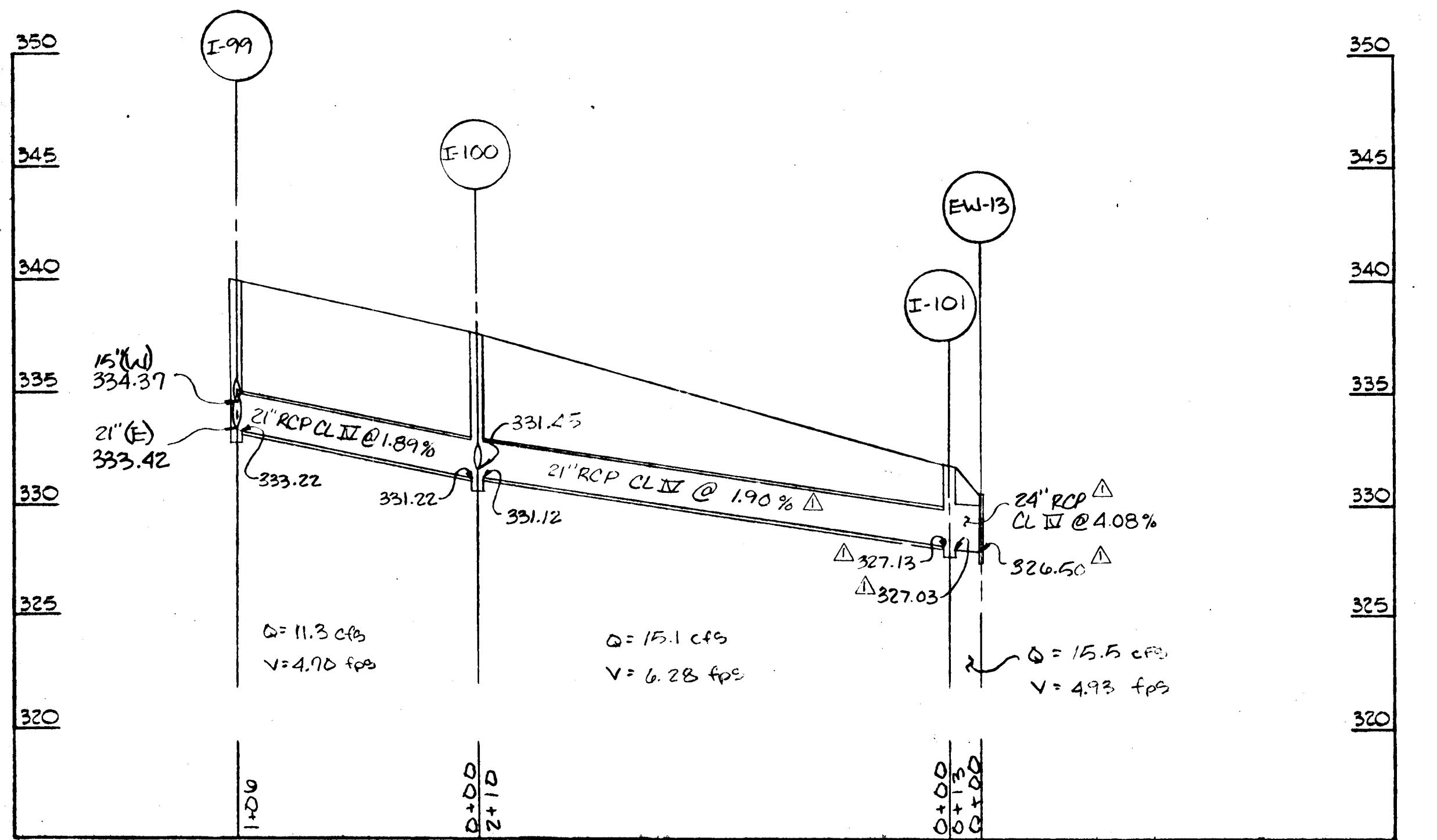
STORM DRAIN PROFILES  
CEDAR LANE - PHASE 2

600' SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

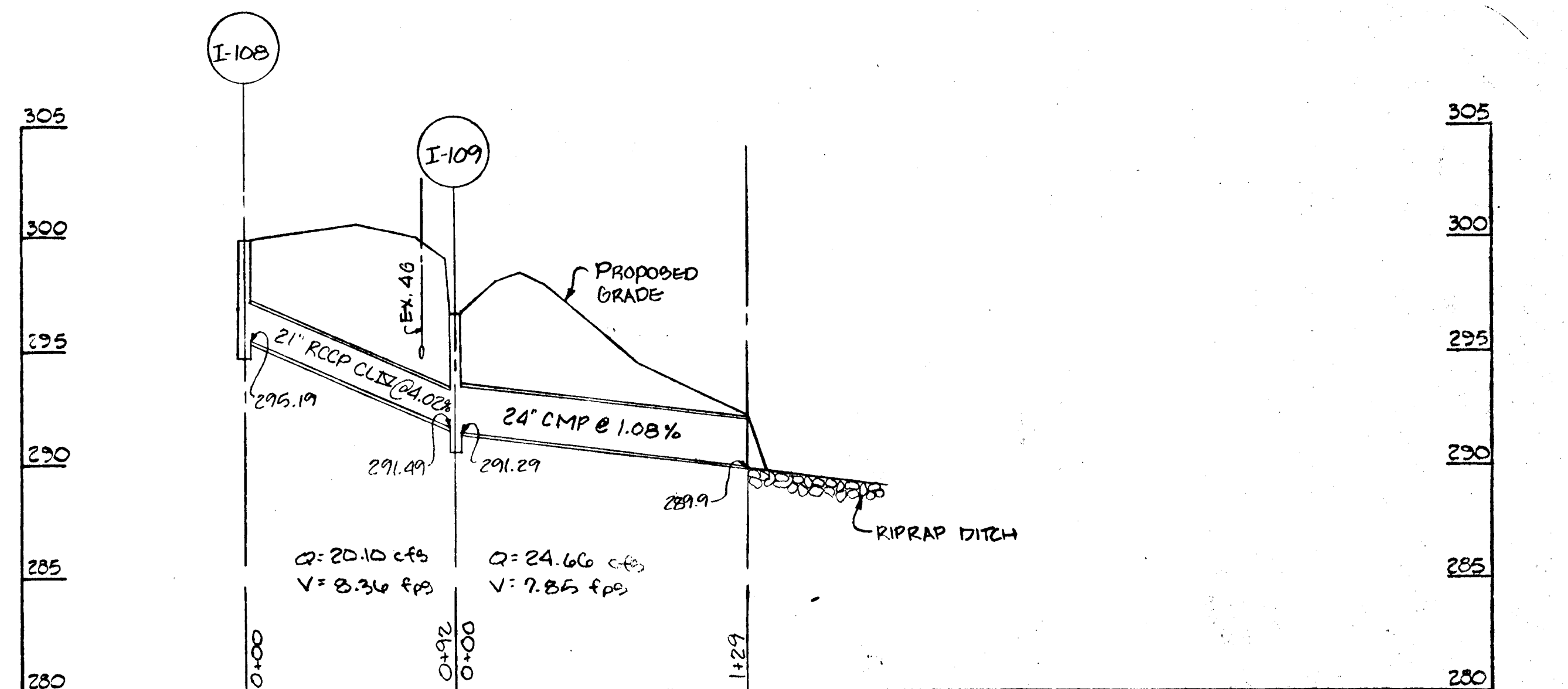
SOUTH OF FREETOWN RD. TO GUILFORD RD.  
CAPITAL PROJECT J-4086  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

SCALE  
HORIZ. 1"=50'  
VERT. 1"=5'  
SHEET  
15 OF 28

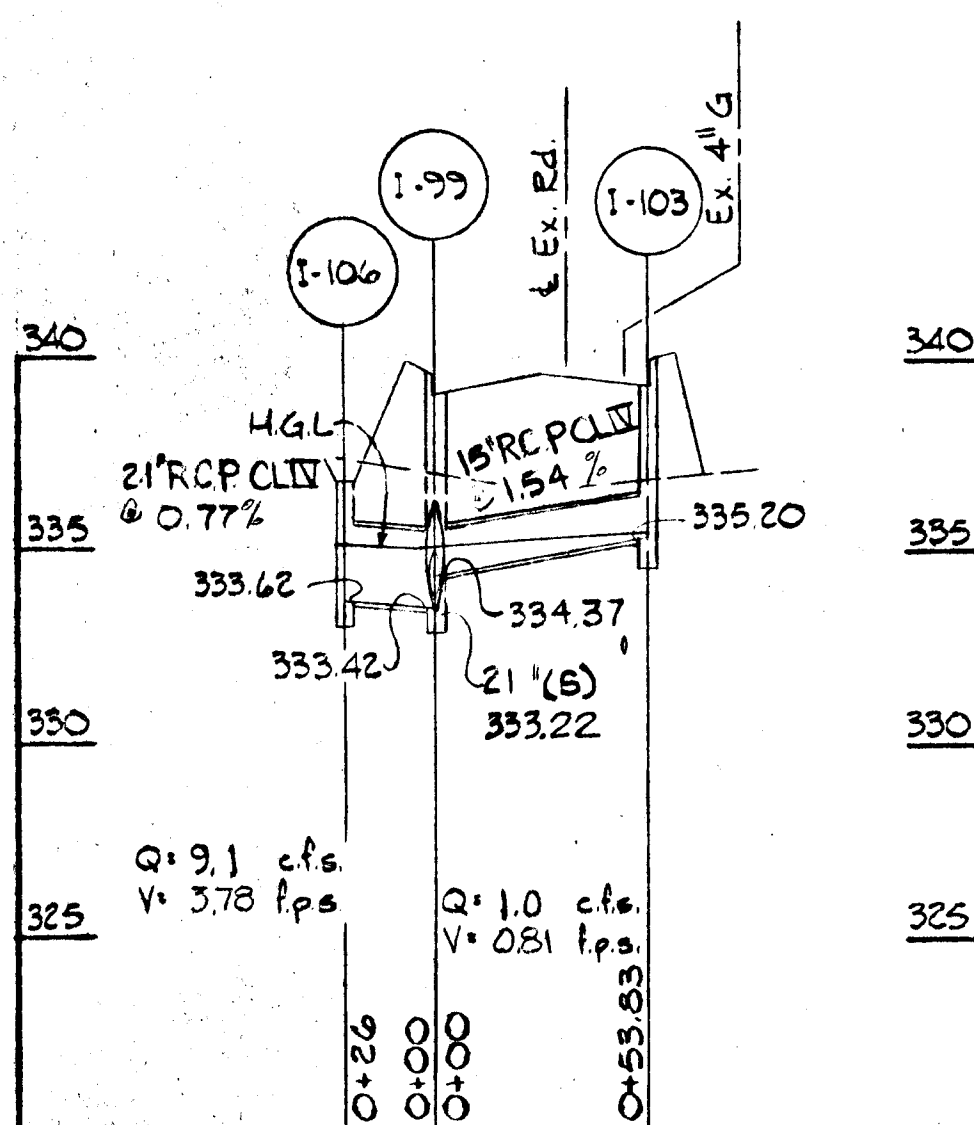
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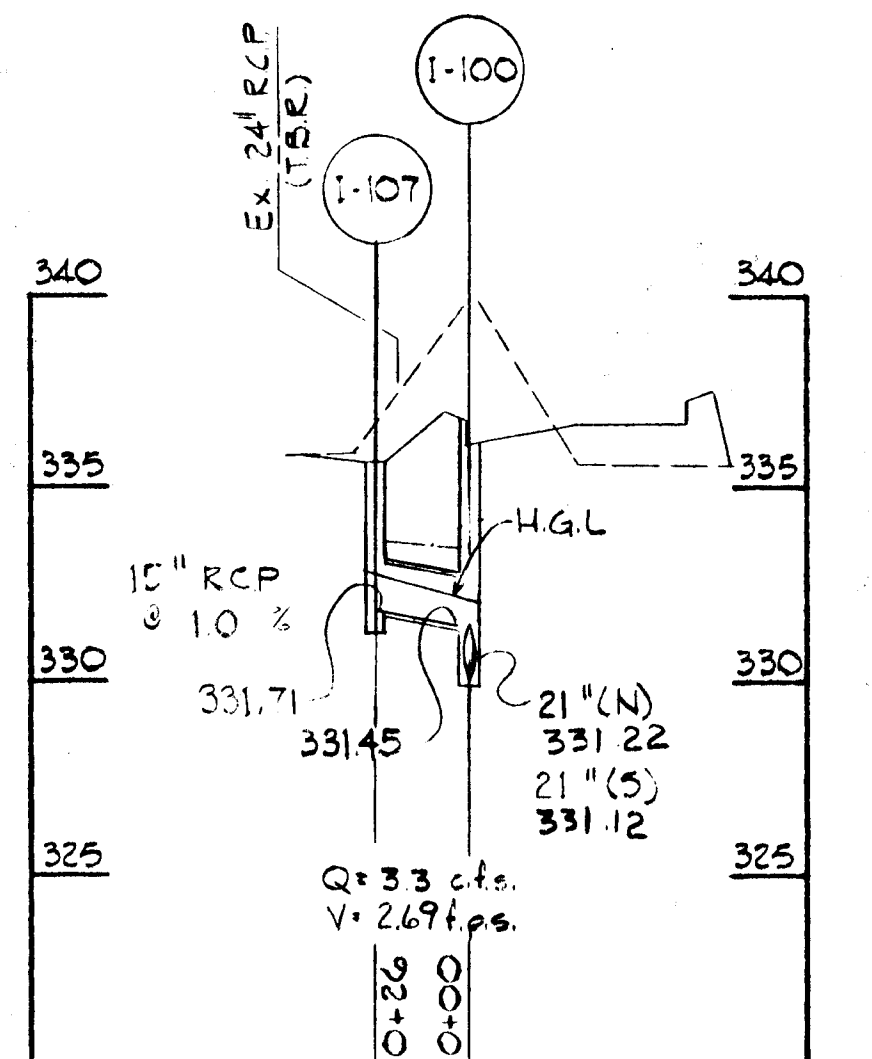
SCALE: HORIZ 1"=50'  
VERT 1"=5'



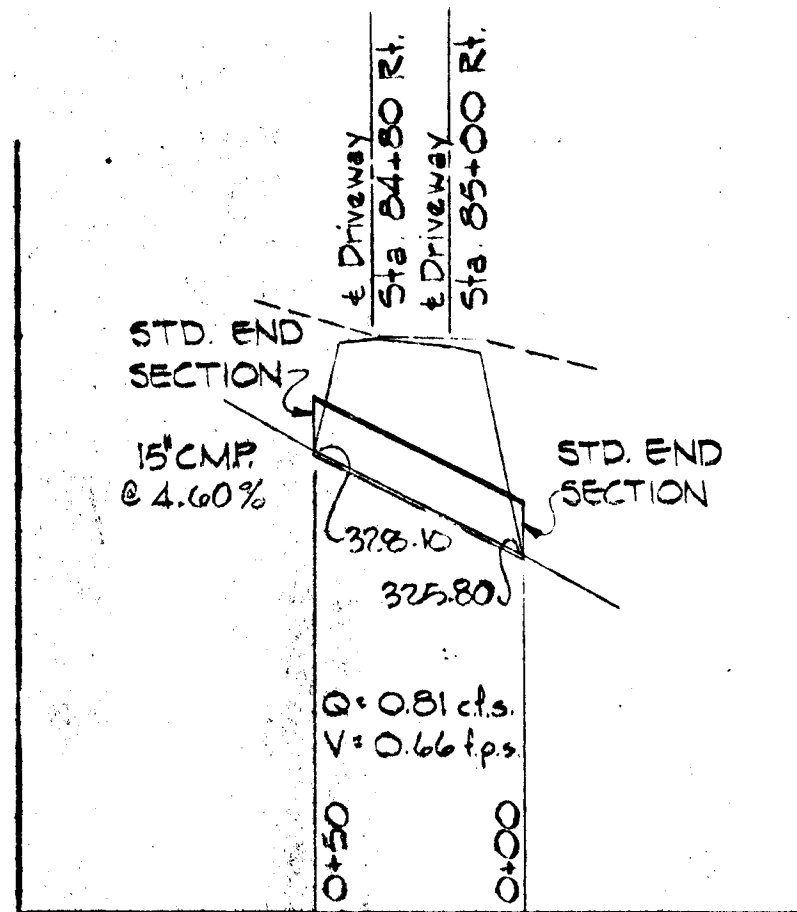
SCALE HORIZ 1"=50'  
VERT 1"=5'



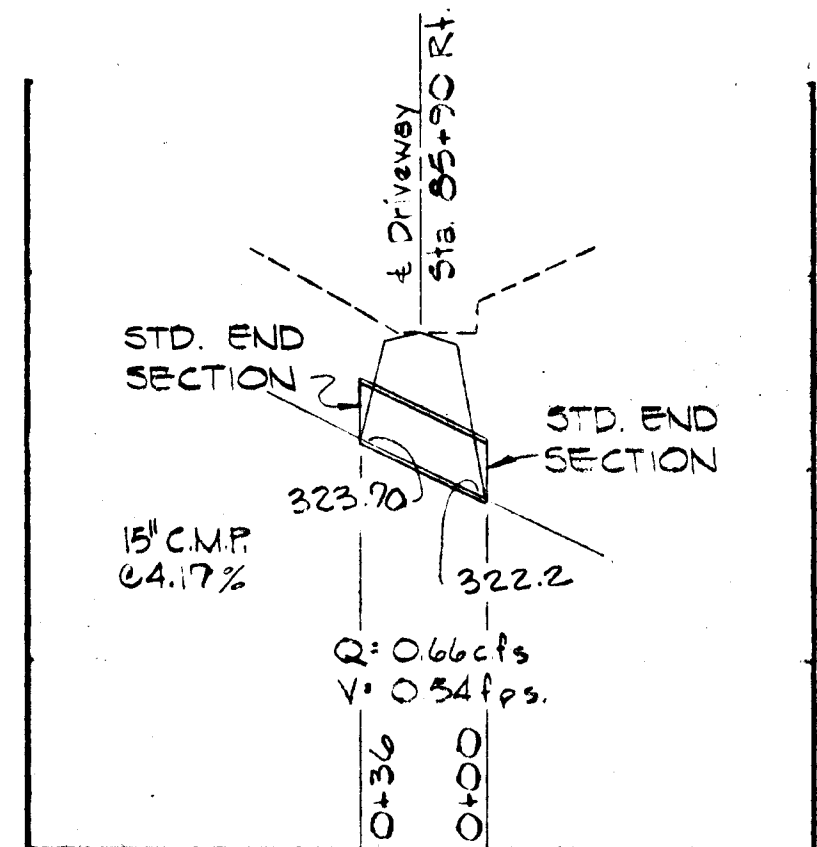
SCALE HORIZ 1"=50'  
VERT 1"=5'



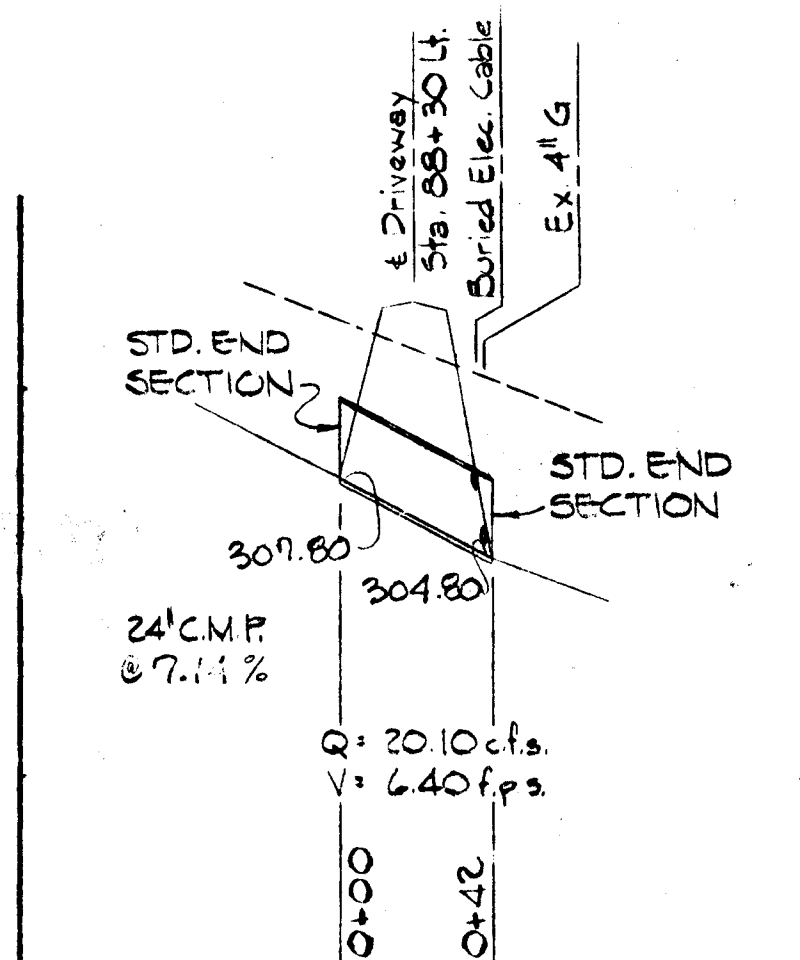
SCALE HORIZ 1"=50'  
VERT 1"=5'



N.T.S



N.T.S



N.T.S

SHEET 11 - STORM DRAINS

SHEET 12 - STORM DRAINS

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* DATE *[Signature]* DATE  
DIRECTOR OF PUBLIC WORKS CHIEF, BUREAU OF ENGINEERING  
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE DATE

DES: J6N	PROFILE CHANGE
DRN: 6MI	
CHK:	
DATE: 6/90	
BY	NO.
REVISION	DATE

STORM DRAIN PROFILES  
CEDAR LANE - PHASE 2

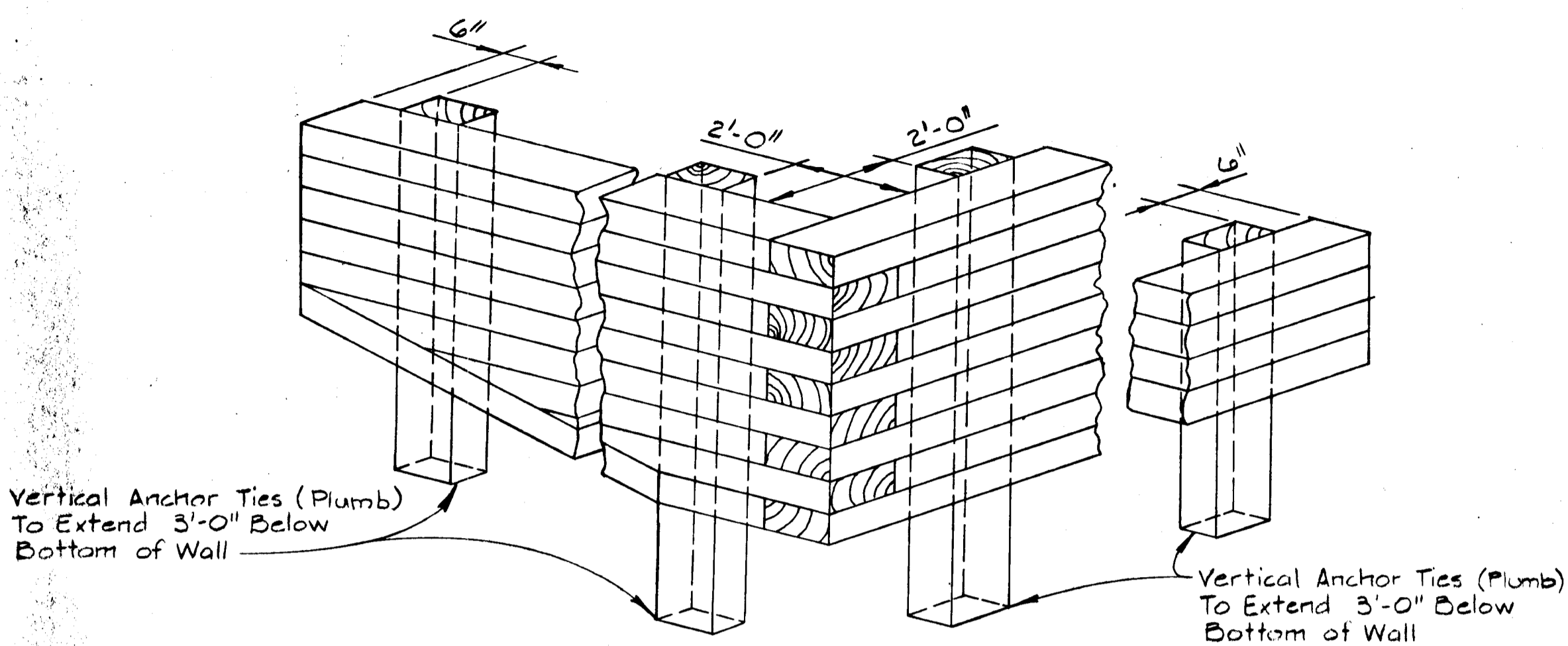
SOUTH OF FREETOWN RD. TO GUILFORD RD.  
CAPITAL PROJECT J-4086  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

SCALE  
AS SHOWN  
SHEET  
16 OF 28

FINAL

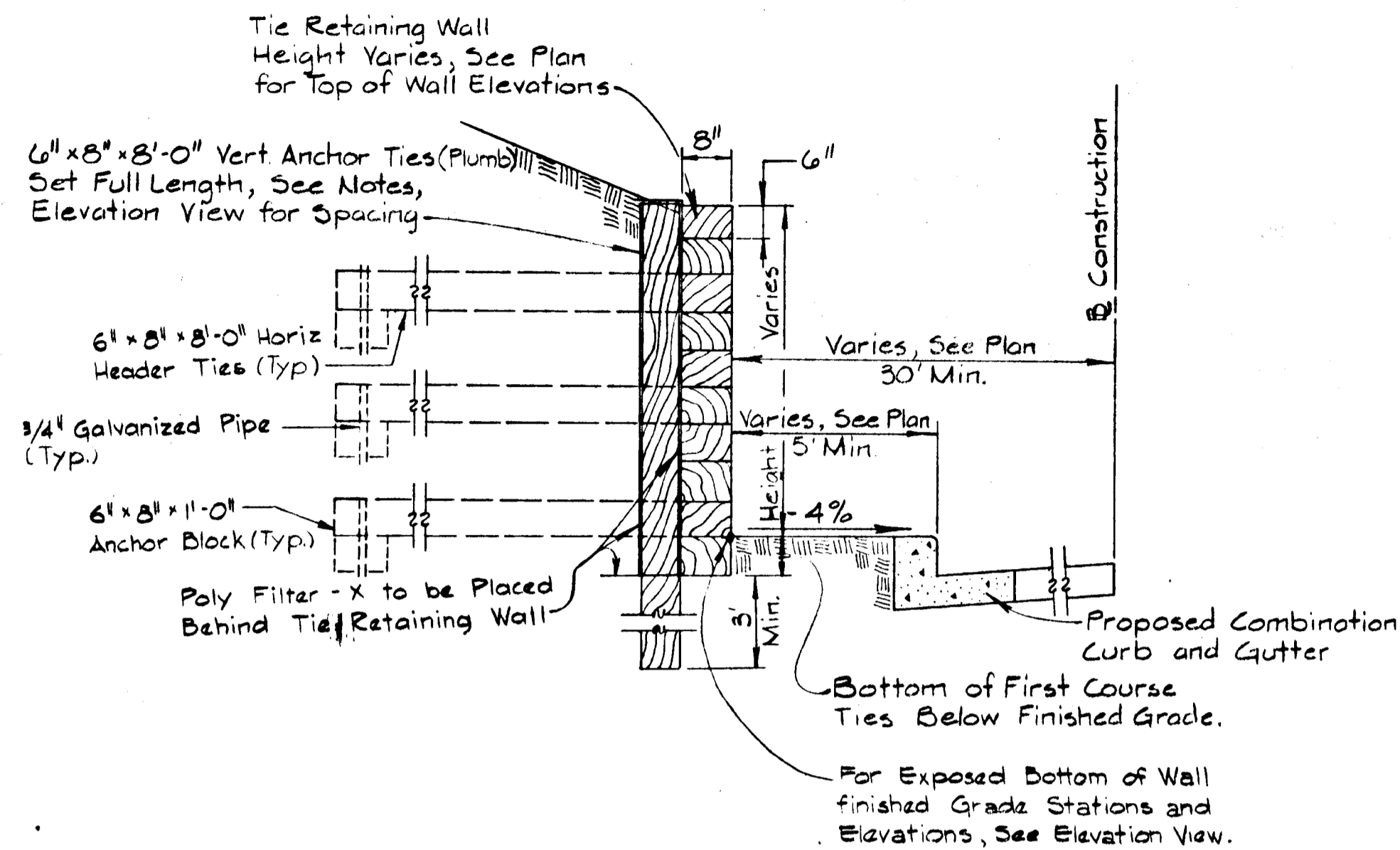
985





**CORNER AND END OF WALL DETAIL**

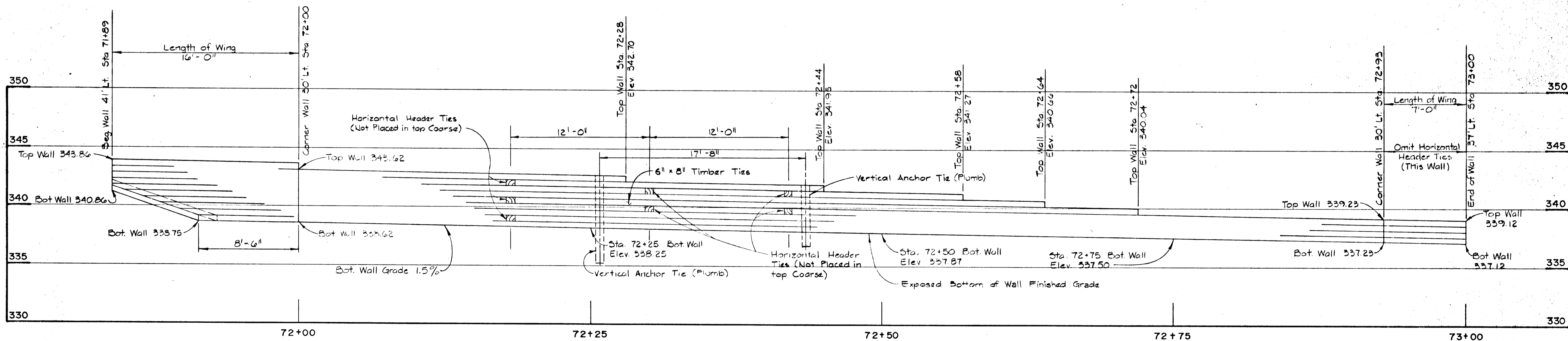
NOT TO SCALE



**TYPICAL TIE RETAINING WALL**

NOT TO SCALE

- NOTES:
1. Bottom of wall elevations are finished elevations.
  2. Top of wall elevations are approximate due to nominal sizes of ties and are furnished as a convenience to the Contractor.
  3. Horizontal header ties to be set approximately every third course, excepting the top course where they will be omitted. Spacing of horizontal header ties to be determined in the field to yield maximum clearance from existing trees using 8'-6" o/c minimum to 25'-6" o/c maximum except at corners and ends of wall. (see details this sheet). Toe nail ties minimum  $\mu$  per tie with 60 penny nails.
  4. Vertical anchor ties to be spaced 16'-0" o/c minimum to 24'-0" o/c maximum except at corners and ends of wall. (see details this sheet). Toe nail ties to vertical anchor ties with 60 penny nails.
  5. Ties to be treated and meet the requirements of No. 2 Southern Pine or better (see special provisions).



**TIMBER TIE RETAINING WALL**

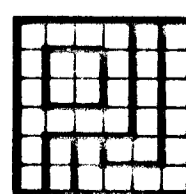
LT. STA. 71+89 TO STA. 73+00

ELEVATION

SCALE: 1/4" = 1'-0"

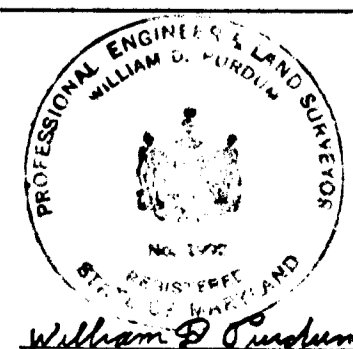
DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*Donald M. ...* 11/6/88 *William D. ...* 11-8-88  
DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE  
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE DATE



PURDUM & JESCHKE  
CONSULTING ENGINEERS  
LAND SURVEYORS

1029 North Calvert Street  
Baltimore, Maryland 21202 301/837-0194



DES: JCT				
DRN: PWR				
CHK: WDP				
DATE: 6/90	BY:	NO:	REVISION:	DATE:

TIMBER TIE RETAINING WALL  
& DETAILS  
LT. STA. 71+89 TO STA. 73+00  
CEDAR LANE - PHASE 2

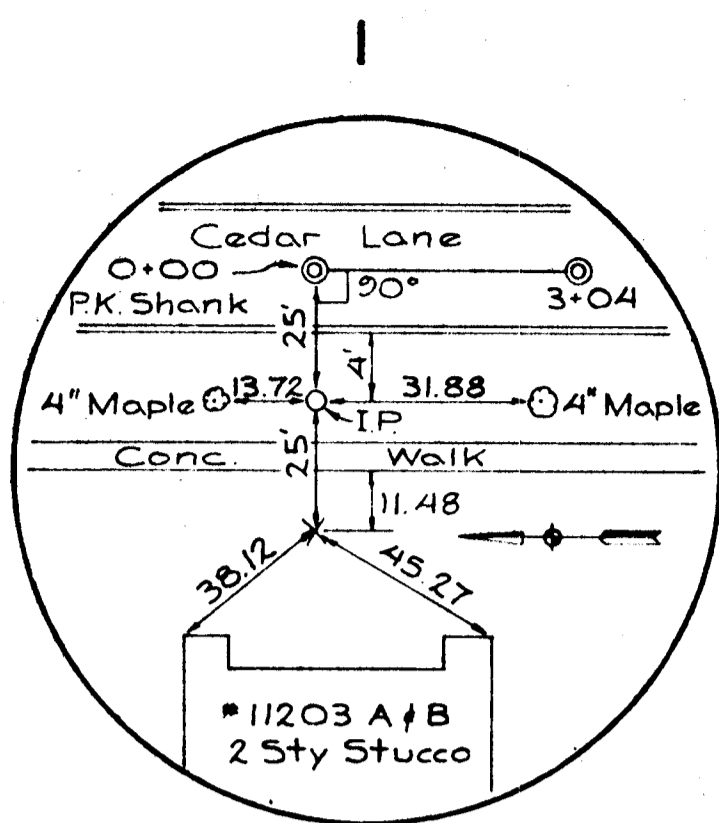
600' SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
CAPITAL PROJECT J-4086  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

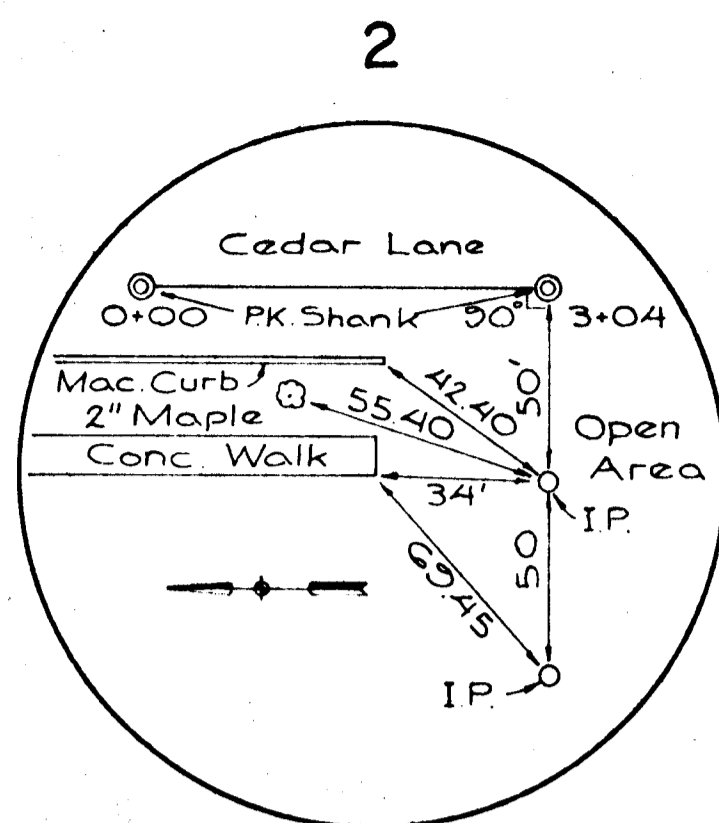
SCALE  
AS  
SHOWN  
SHEET  
17 OF 28

985

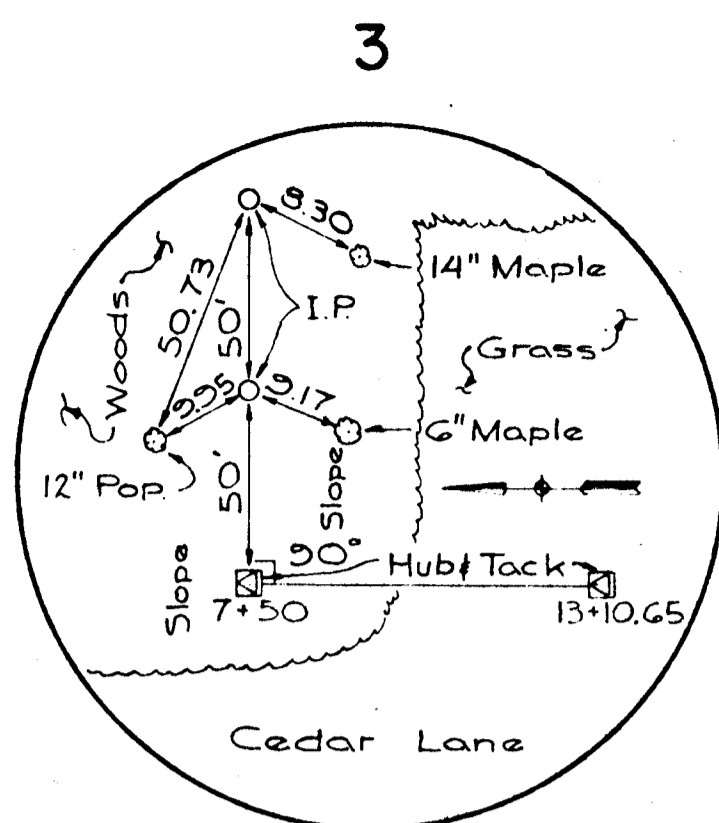
NOTE: CONTROL POINTS 1,2,3,4,5,6,7, & 8 SHOWN ON THIS SHEET ARE NOT PART OF THIS CONTRACT.



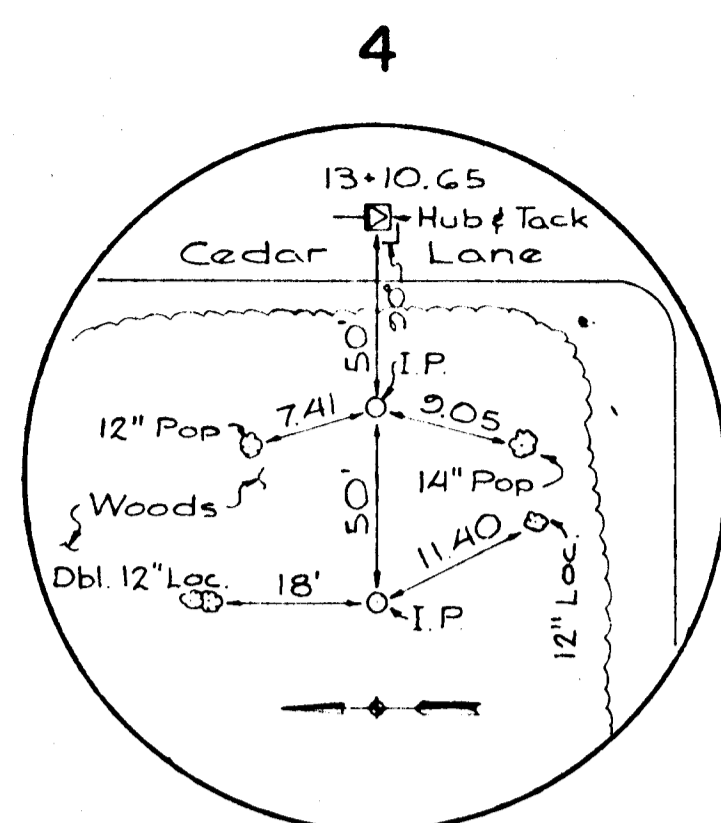
STA. 0+00  
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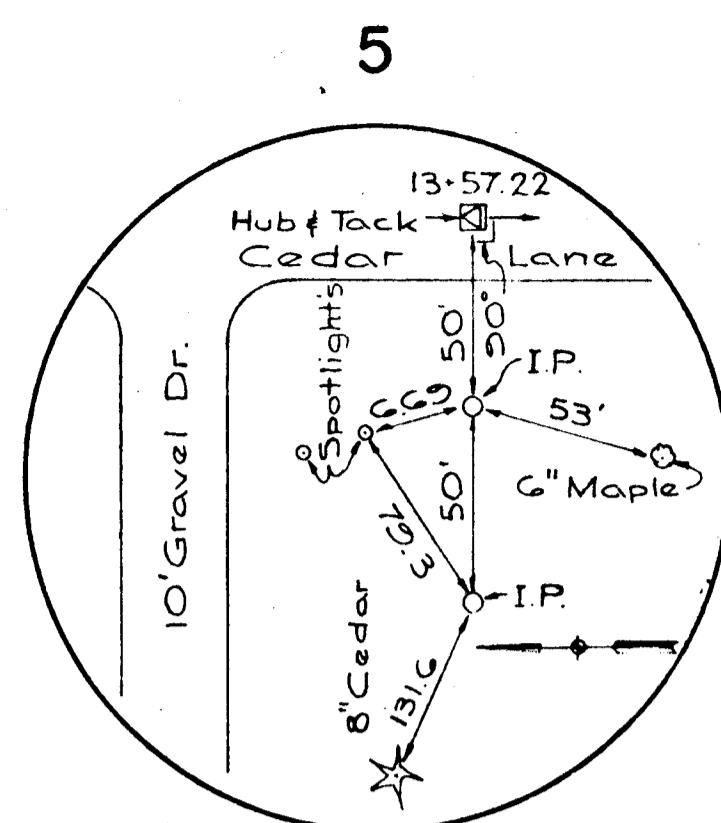
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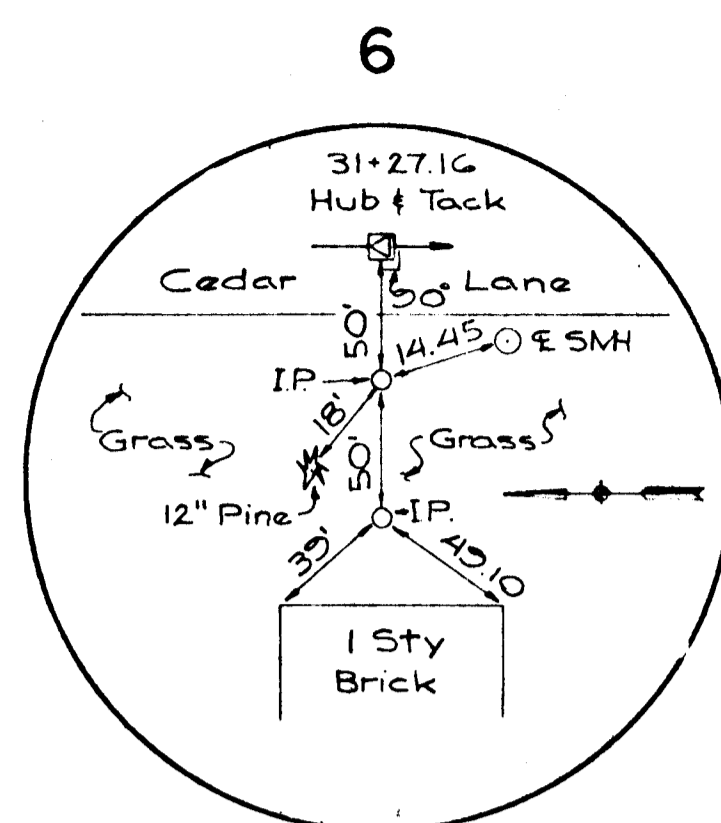
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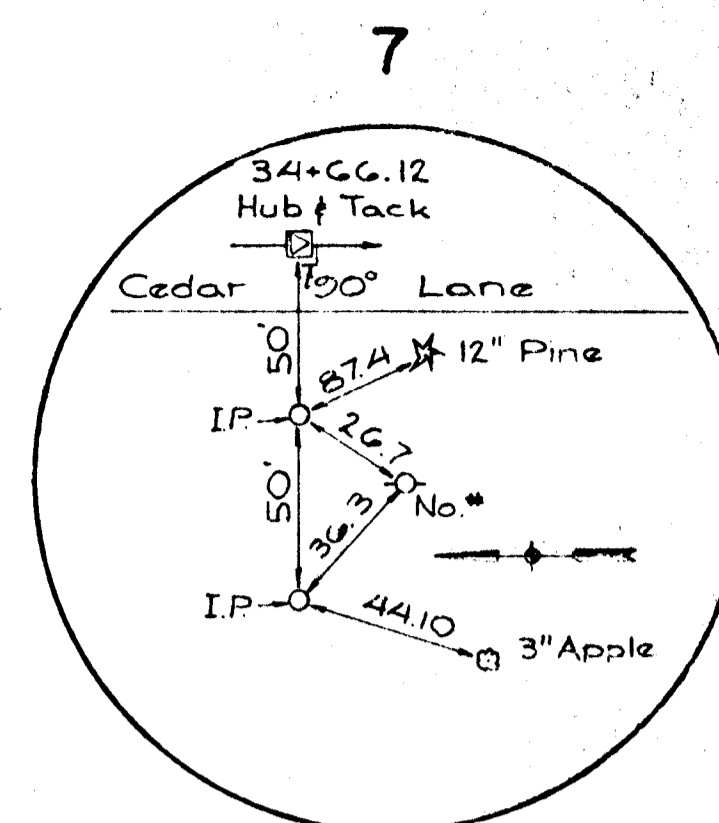
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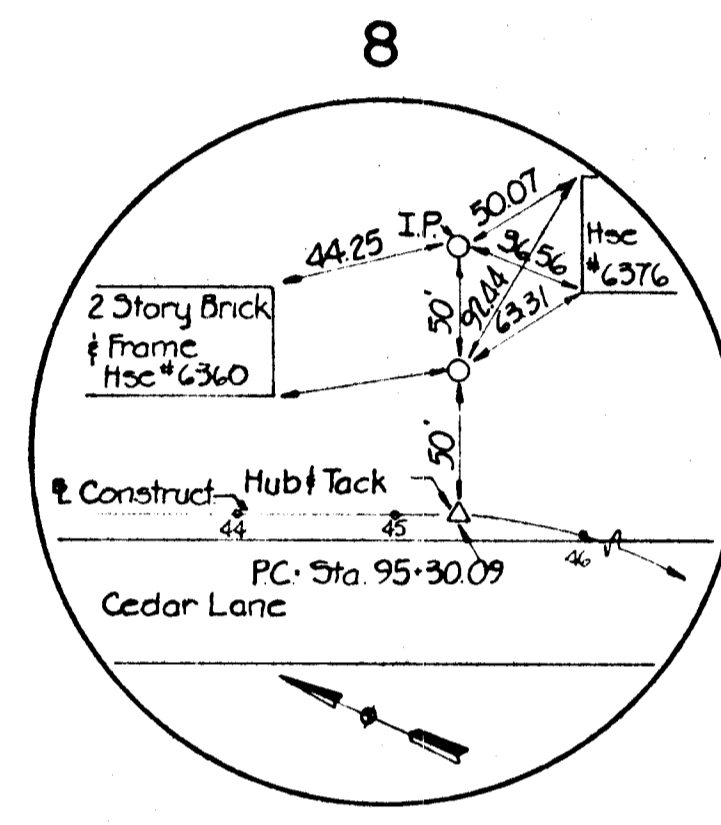
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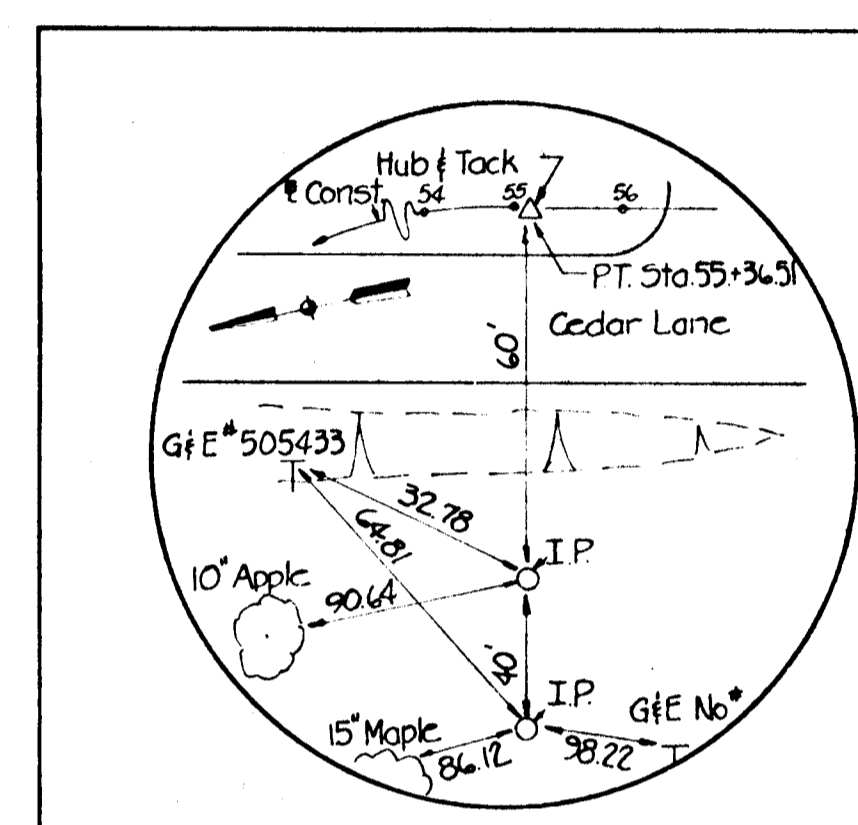
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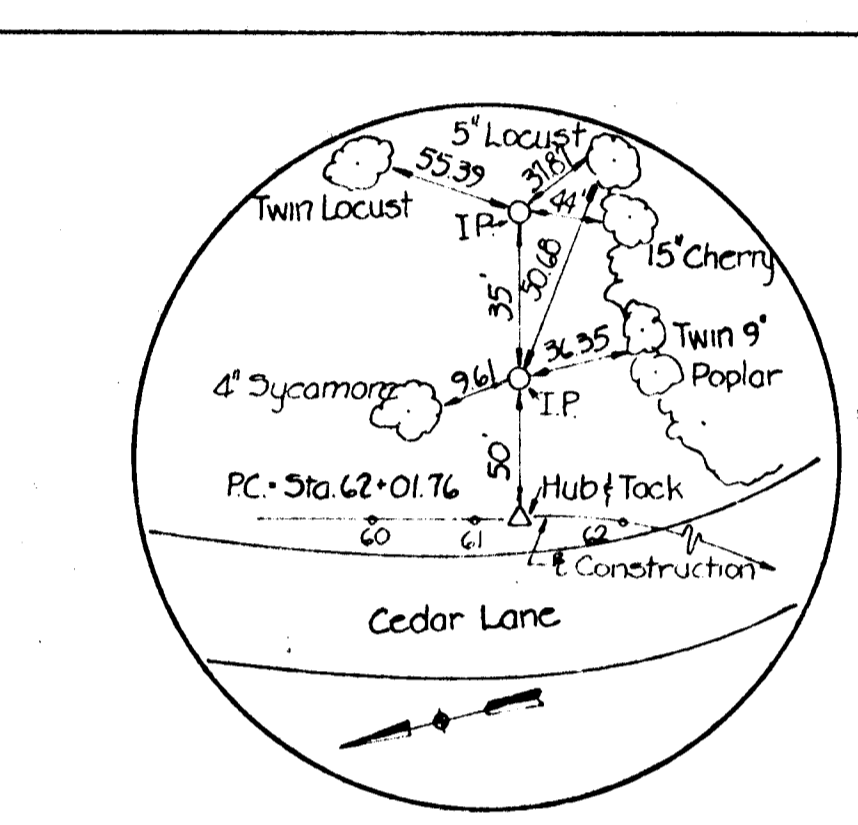
EQUALITY STATION  
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E 832341.355



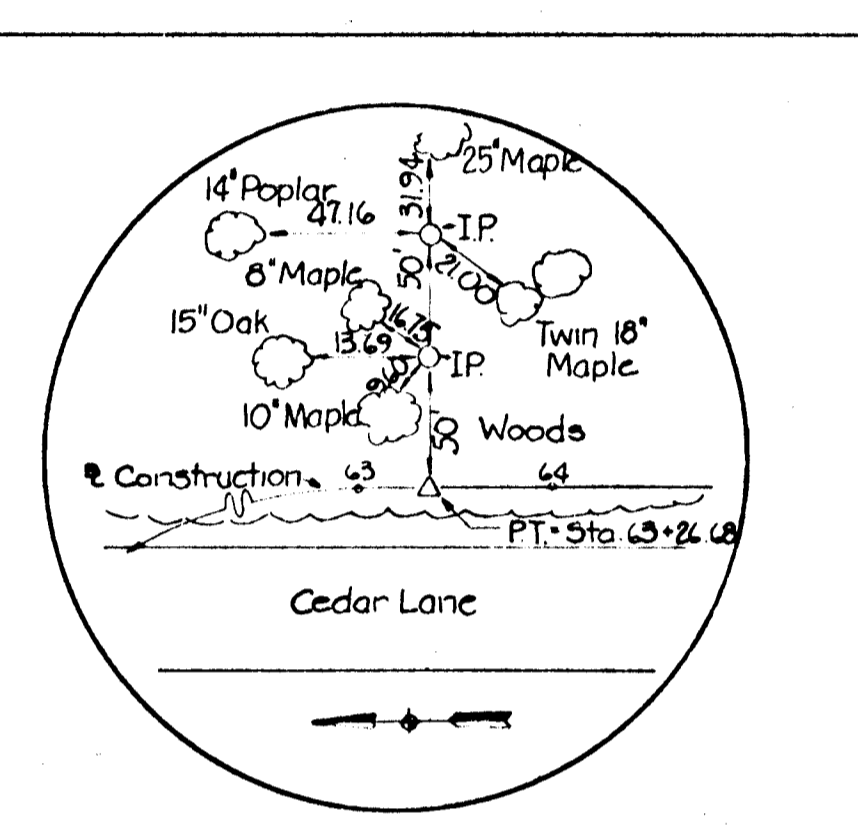
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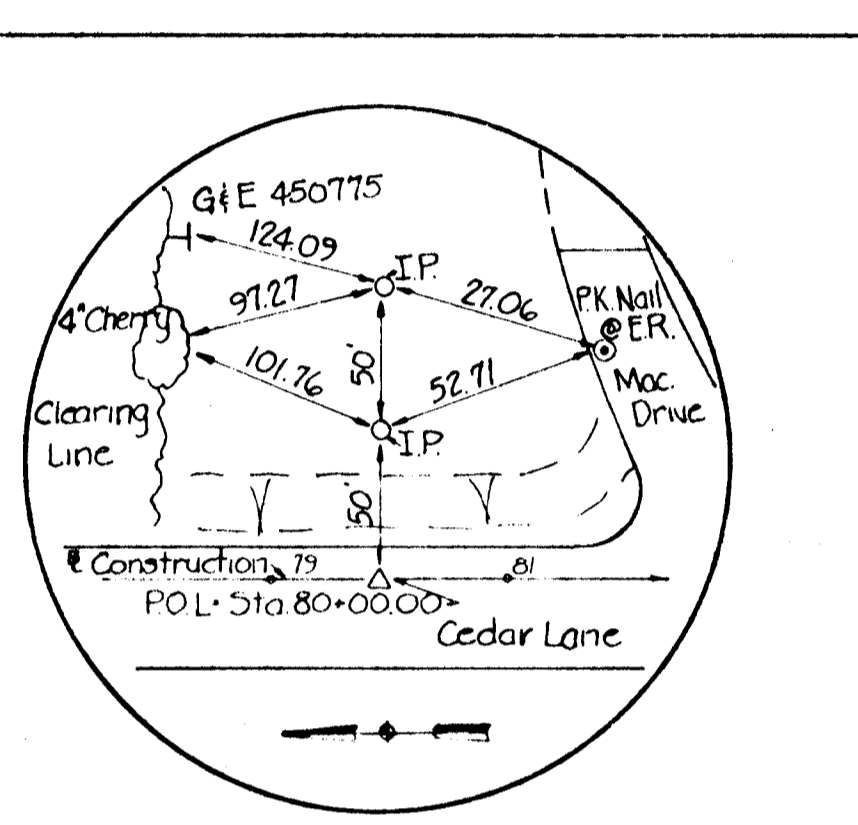
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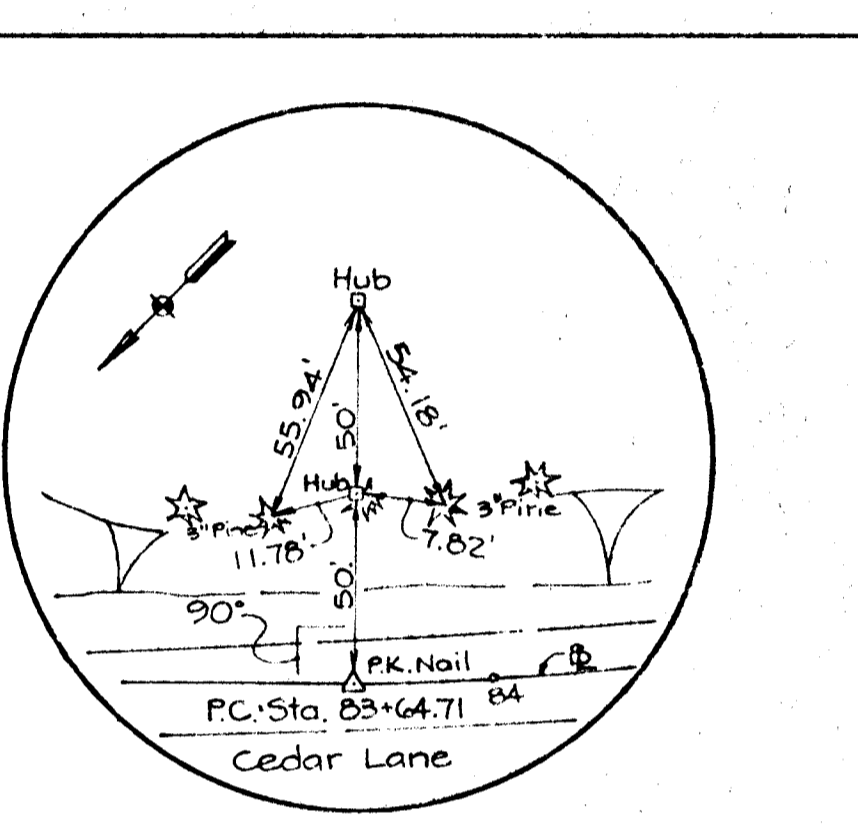
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E 832025.978



PT=STA. 63+26.68  
N 495874.530  
E 831936.205



POL=STA. 80+00.00  
N 494724.129  
E 830721.059



PC=STA. 83+64.71  
N 494473.396  
E 830456.215

BM#107 Elev. 457.36  
Cut 15/16 Southeast Corner Intersection of Cedar Lane & Hickory Ridge Rd. 30'± Southeast of Δ 907

BM#108 Elev. 427.21  
Cut nail East side of CIP#35, West side of Cedar Lane 70'± Northwest of Δ 908

BM#109 Elev. 404.69  
Cut nail East side of CIP#45, West side of Cedar Lane, 100'± South of Intersection of Hilltop Rd. 40'± Southwest of Δ 909

BM#110 Elev. 392.15  
Cut nail West side of GE#243871 Northwest Corner Intersection of Owen Brown & Cedar Lane 30'± North of Δ 910

BM#111 Elev. 410.51  
Cut nail, East Side of CIP#20 West Side Cedar Lane @ Entrance of Convalescent Home 40'± Northwest of Δ 911

BM#111-A Elev. 390.80  
Cut nail, East side of CIP#18, West side Intersection of Freetown Rd. & Cedar Lane.

BM#112 Elev. 381.74  
Cut nail set West side of 30 Locust tree, East side of Cedar Lane. 15'± Northeast of Δ 912

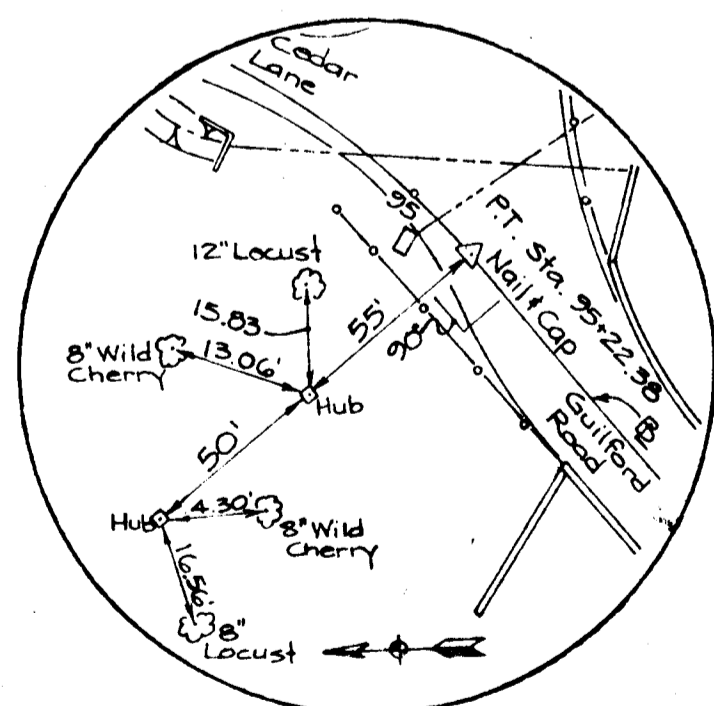
BM#113 Elev. 351.03  
Cut nail set in West side of GE#2262, West side of Cedar Lane, 100'± North of Intersection @ Braeburn Rd., 100'± West of Δ 913

BM#114 Elev. 337.46  
PK. nail @ Edge of Road - Δ 914.

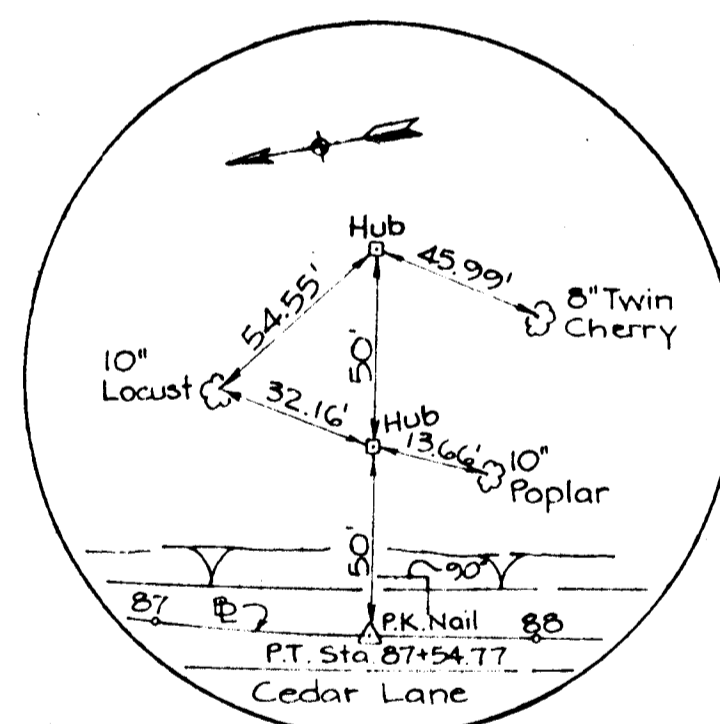
BM#115 Elev. 350.21  
Spike, West side of BGE#450774, 30'± East of Δ 915, East side of Cedar Lane.

BM#116 Elev. 317.15  
Cut nail West side of GE#132254, East side of Cedar Lane. 100'± Δ 916

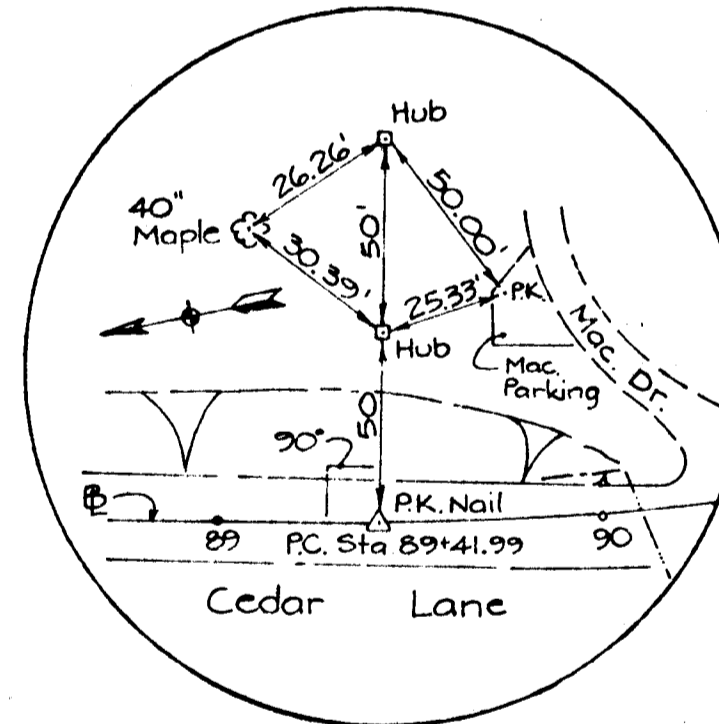
BM#117 Elev. 303.39  
Spike, West side of GE#12252, East side of Cedar Lane, 300'± North of Route 32. 100'± South of Δ 917.



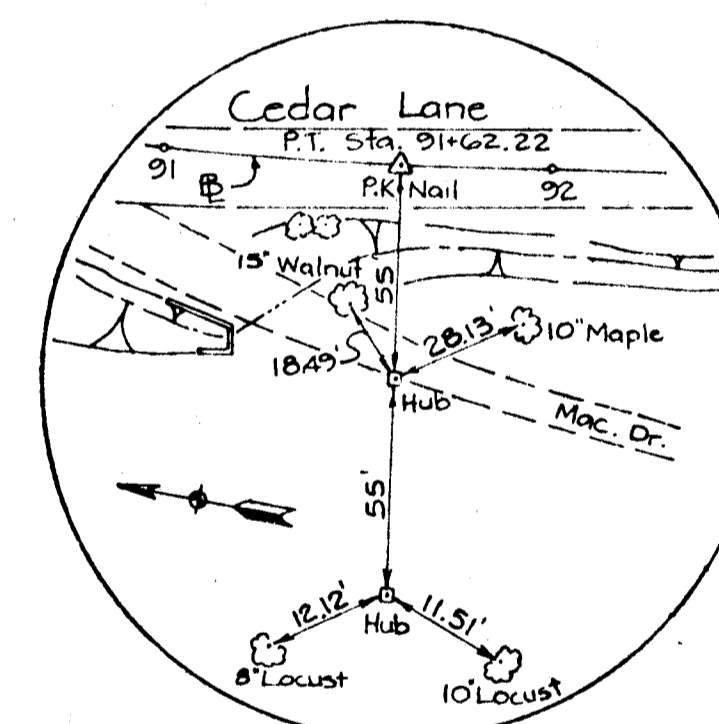
PT=STA. 95+22.38  
N 493402.334  
E 830169.333



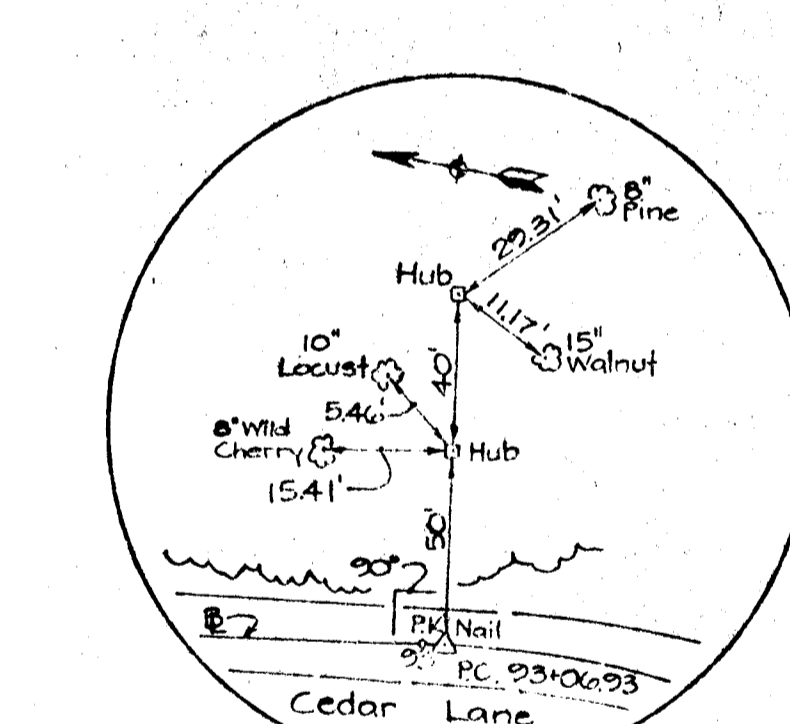
PT=STA. 87+54.77  
N 494137.604  
E 830269.966



P.C.=STA. 89+41.99  
N 493954.118  
E 830232.761



PT=STA. 91+62.22  
N 493735.062  
E 830226.825

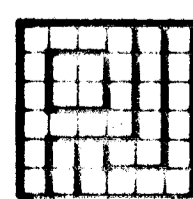


PC=STA. 93+06.93  
N 493591.892  
E 830247.660

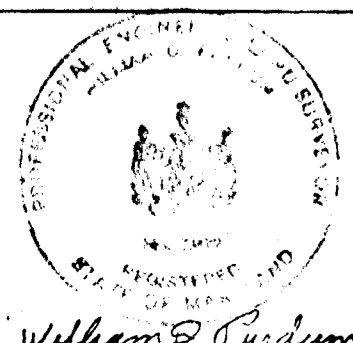
NOTE: BM NOS. 107, 108, 109, 110, & 111 ARE OUTSIDE THE LIMITS OF THIS CONTRACT.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE  
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE DATE



PURDUM & JESCHKE  
CONSULTING ENGINEERS  
LAND SURVEYORS  
1029 North Calvert Street  
Baltimore, Maryland 21202 301/837-0194



DES: JRL  
DRN: PWR  
CHK: WDP  
DATE: 4/1/11

REVISION DATE

HORIZONTAL & VERTICAL CONTROLS

CEDAR LANE - PHASE 2

60' SCALE MAP NO. BLOCK NO.

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
CAPITAL PROJECT J-4086  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

SCALE N/A  
SHEET  
18 OF 28

# BORING DATA

**HERBST & ASSOCIATES  
FOR  
JOHNSON, McCORDIC & THOMPSON  
FOR**

**HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS — JAN. 7, 1981**

FORM NO. 502  
**BORING LOG**



Report No. **068108**      DATE **November 25, 1987**  
 Made for: **Howard County Department of Public Works**  
 Project: **Cedar Lane Improvement, Howard County, Maryland**

Boring No.	Depth From	Depth To	Description and Remarks
B-16	0.0	1.5	Brown moist cf SAND, and silt, trace rock fragments
Sta. 57+00	1.5	4.5	Brown moist Clayey SILT, some mf sand, trace rock fragments
15'L	4.5	6.0	Brown moist CLAY & SILT, little f sand (Eight days after completion, hole dry and caved @ 2.2'.)
B-17	0.0	5.0	Dark gray to brown very moist CLAY & SILT, trace f sand and organic matter
Sta. 61+00	5.0	7.0	Tan moist micaceous mf SAND and clayey silt (Eight days after completion, water @ 2.0', hole caved @ 3.3'.)
10'R			
B-18	0.0	0.3	Topsoil and road stone
Sta. 65+00	0.3	2.0	Dark brown very moist Clayey SILT, little mf sand, trace rock fragments and mica
5'L	2.0	7.0	Brown wet micaceous Clayey SILT, little mf sand, trace rock fragments (Eight days after completion, water @ 3.5', hole caved @ 5.9'.)
B-19	0.0	1.0	Topsoil and root mat
FT Rd. Sta. 2+50	1.0	6.0	Brown wet CLAY & SILT, trace f sand (Eight days after completion, water @ 2.2', hole caved @ 2.3'.)
10'L			
B-20	0.0	0.2	Leaf mat and topsoil
Sta. 69+00	0.2	7.0	Brown moist cf SAND, some silt, trace to little rock fragments Auger Refusal @ 7.0'. (One day after completion, hole dry and caved @ 3.3'.)
10'L			
B-20A	0.0	0.2	Leaf mat and topsoil
Sta. 69+05	0.2	7.0	Brown moist cf SAND, some silt, trace to little rock fragments Auger Refusal @ 7.0'. (One day after completion, hole dry and caved @ 5.3'.)
10'L			
B-21	0.0	0.3	Crushed stone and topsoil
Sta. 73+00	0.3	1.5	Dark gray moist of SAND, and clayey silt, trace rock fragments
CL	1.5	6.0	Tan very moist cf SAND, some silt, trace rock fragments (Eight days after completion, water @ 3.0', hole caved @ 4.5'.)
B-22	0.0	0.2	Topsoil and road stone
Sta. 77+00	0.2	2.0	Brown very moist CLAY & SILT, little cf sand
10'L	2.0	3.0	Brown moist of SAND, and clay & silt, trace rock fragments
	3.0	6.0	Brown moist cf SAND, little silt, little rock fragments (One day after completion, hole dry and caved @ 4.3'.)
B-23	0.0	0.3	Topsoil and road stone
Sta. 81+00	0.3	6.0	Brown moist micaceous cf SAND, some silt, trace rock fragments (One day after completion, hole dry and caved @ 4.5'.)
5'L			

**TEST PIT DATA**

Test Pit	Description and Remarks
<del>TP-1</del>	<del>2' x 6' x 7' deep - No pipe encountered</del>
<del>TP-2</del>	<del>3' x 4' x 5' deep - 12" steel water main encountered at a depth of 4.6'. 35.5' from base line of new road.</del>
TP-3	3' x 3' x 3.5' deep - 4 1/2" steel gas line encountered at a depth of 3.2' under white line on edge of existing pavement.
<del>TP-4</del>	<del>3.5' x 4' x 6.5' deep - Tunnels under road 3' for gas line. 4 1/2" steel gas line encountered at a depth of 3.5' under white line on edge of existing pavement. Water line found at 11.5' from existing road edge.</del>

Boring No. 1		Total Depth 10.0 ft.	Elevation—Top of Hole	See Boring Location Plan
Type of Boring Hollow-stem auger		Started 10-23-87	Completed 10-28-87	Drawn A. Wilhelm, CME-45
Elevation	Depth	CLASSIFICATION OF MATERIALS (Description)	Sample Blows	Remarks
0.2		Topsoil	8	
		Orangish/reddish-brown micaceous fine to medium SAND with some clayey silt, moist to damp, medium dense	7 7 1.5	
			4 5 3.5	M/C - 15.24
			5 5 7.0	
4.7		Yellowish-tan micaceous clayey silty fine to medium SAND, damp to moist, medium dense	5 5 7.0	
			4 5 10.0	
10.0		BORING TERMINATED @ 10.0 FEET	7	Boring dry upon completion

Boring No. 2		Total Depth 10.0 ft.	Elevation—Top of Hole	See Boring Location Plan
Type of Boring Hollow-stem auger		Started 10-23-87	Completed 10-23-87	Drawn A. Wilhelm, CME-45
Elevation	Depth	CLASSIFICATION OF MATERIALS (Description)	Sample Blows	Remarks
0.2		Topsoil	4	
		Medium brown slightly micaceous clayey silty fine to medium SAND with a trace of organic matter, moist, loose to medium dense	5 5 1.5	
		Brown slightly micaceous silty clayey fine to coarse SAND with a little rock fragments/gravel, moist, medium dense	3 6 12 3.5	
			15 21 15 7.0	
5.0		Light brown to yellowish-white and brown micaceous fine to coarse SAND with some to a little rock fragments/gravel and a trace of silty clay, damp, dense (Weathered Rock)	15 21 15 7.0	
			15 22 26 10.0	
10.0		BORING TERMINATED @ 10.0 FEET	26	Boring dry upon completion

Boring No. 3		Total Depth 10.0 ft.	Elevation—Top of Hole	See Boring Location Plan
Type of Boring Hollow-stem auger		Started 10-23-87	Completed 10-23-87	Drawn A. Wilhelm, CME-45
Elevation	Depth	CLASSIFICATION OF MATERIALS (Description)	Sample Blows	Remarks
0.2		Topsoil	7	
		Light brown slightly micaceous silty clayey fine to medium SAND with a trace of rock fragments/gravel, moist, medium dense	7 7 1.5	
			5 5 3.5	
			5 5 7.0	
2.0		Light brown to yellowish-tan micaceous clayey silty fine to medium SAND, moist, medium dense	5 5 7.0	
			6 7 11 10.0	
10.0		BORING TERMINATED @ 10.0 FEET	11	Boring dry upon completion

Boring No. 4		Total Depth 18.7 ft.	Elevation—Top of Hole	See Boring Location Plan
Type of Boring Hollow-stem auger		Started 10-23-87	Completed 10-23-87	Drawn A. Wilhelm, CME-45
Elevation	Depth	CLASSIFICATION OF MATERIALS (Description)	Sample Blows	Remarks
0.2		Topsoil	7	
		Dark brown and black fine to medium SAND with a little gravel and organic material, moist, medium dense (Fill)	5 5 1.5	
		Reddish-brown micaceous fine to medium SAND with a little silty clay and a little gravel, moist, loose to medium dense	4 5 6 3.5	
			20 25 31 7.0	
5.5		Yellowish/reddish-brown to black, tan, olive brown and white speckled micaceous fine to coarse SAND with decomposed rock fragments and a little silt, damp to wet, very dense (Weathered Rock)	20 25 31 7.0	
			18 27 35 10.0	
			50 5 14.0	
			50, 2	18.7
				SPLIT-SPOON SAMPLE & AUGER REFUSAL @ 18.7 FEET
				Free water initially encountered in Sample No. 2 (13.5'-14.0')
				After one hour, groundwater at 9.5 feet.
				Cont. on next sheet

Boring No. 4, cont.		Total Depth 18.7 ft.	Elevation—Top of Hole	See Boring Location Plan
Type of Boring Hollow-stem auger		Started 10-23-87	Completed 11-18-87	Drawn A. Wilhelm, CME-45
Elevation	Depth	CLASSIFICATION OF MATERIALS (Description)	Sample Blows	Remarks
		Black, tan, olive brown and white speckled micaceous fine to coarse SAND with decomposed rock fragments and a little silt, damp to wet, very dense (Weathered Rock)	50, 2	18.7
				SPLIT-SPOON SAMPLE & AUGER REFUSAL @ 18.7 FEET
				Cont. from prior sheet

**NOTE:** Additional Boring data and Analysis is available from geotechnical investigations performed by Johnson, McCordic and Thompson and Herbst and Associates on January 7, 1981 and Froehling and Robertson, Inc. on November 25, 1987 for Howard County. Prospective Contractors shall avail themselves of additional information from the Howard County Department of Public Works, prior to submission of the proposal.

No. of Blows 140-lb. Hammer, 30-in. Fall, Required to Drive 2-in. O.D., 1.375 in I.D. Sample 6-in. The first 6 in. is considered to be a Seating Drive. The sum of the second and third 6 in. of penetration is termed the Penetration Resistance, N.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

PURDUM & JESCHKE  
CONSULTING ENGINEERS  
LAND SURVEYORS  
1029 North Colvert Street  
Baltimore, Maryland 21202 301/837-0194



DES: JCT	
DRN: PWR	
CHK: WDP	
DATE: 6/90	
BY NO.	REVISION
DATE	DATE

**BORING DATA**  
**CEDAR LANE — PHASE 2**

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
CAPITAL PROJECT J-4086  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

SCALE  
N/A  
SHEET  
19 OF 23

985

NOTE: SEE SHEETS 6, 7, & 8 FOR ADDITIONAL SOIL EROSION AND SEDIMENT CONTROL REQUIREMENTS.

LIMIT OF WORK STA. 56+60

CEDAR

CURVE DATA

LANE

STA. 65+00 TO STA. 67+00 LT. TRAFFIC BARRIER W/ BEAM INCLUDES TYPE I END FLARES (SEE SHEET 5)

STA. 66+56 45' LT. (HW-7)

STA. 65+00 LT. TO STA. 67+00 LT. SOD SIDE DITCH W=2' D=2' SEE DETAIL SHEET 5

PC=STA 43+50.60  
 $\Delta = 65^\circ 25' 03''$   
 $Dc = 6^\circ 30' 00''$   
 $R = 881.47'$   
 $T = 566.09'$   
 $L = 1006.42'$   
 $E = 166.12'$

NOTE: THIS SHEET IS INTENDED TO CONVEY INFORMATION PERTINANT TO PLACEMENT OF SEDIMENT AND EROSION CONTROLS ONLY. SEE ROAD CONSTRUCTION PLANS FOR ALL OTHER INFORMATION RELATED TO CONSTRUCTION OF CEDAR LANE.

STA. 56+70 TO 58+50 MILL EXIST. PAVEMENT TO RECEIVE PROPOSED 1 1/2" BITUMINOUS CONC. SURFACE COURSE.

STA. 59+85 RT. GRADING AROUND EXIST TREE TO BE MINIMIZED AS DIRECTED BY THE ENGINEER.

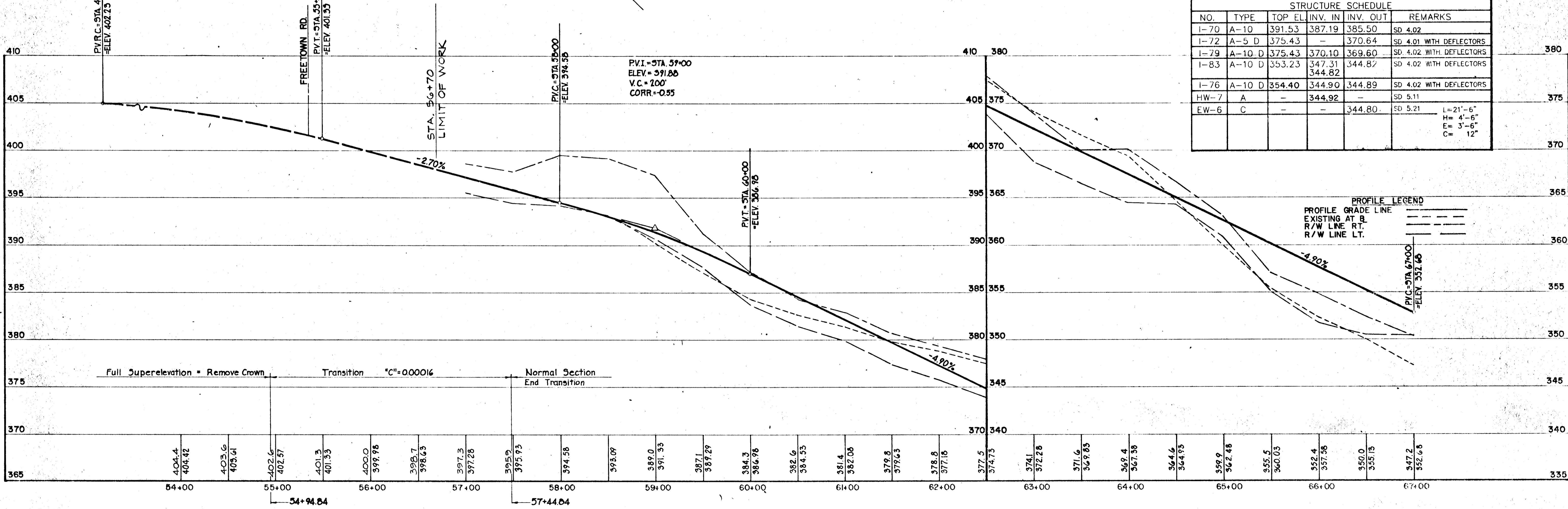
TEMP. RIPRAP LINED WATERWAY STA. 58+50 TO 65+00 RT. EXTEND PROPOSED SLOPE TO MEET EXISTING SIDE SLOPE AND DRAIN TO PROPOSED ROADWAY AS DIRECTED BY THE ENGINEER.

STA. 66+05 E TO STA. 67+00 RT. TRAFFIC BARRIER W/ BEAM INCLUDES TYPE I END FLARE (SEE SHEET 5)

STA. 66+00 RT. TO STA. 66+90 RT. SOD SIDE DITCH W=2' D=1'  
 STA. 66+90 RT. TO STA. 67+00 RT. RIPRAP SIDE DITCH W=2' D=2' SEE DETAIL SHEET 5

FOR STORM DRAIN PROFILES SEE SHEET 14

STRUCTURE SCHEDULE					
NO.	TYPE	TOP EL.	INV. IN.	INV. OUT.	REMARKS
I-70	A-10	391.53	387.19	385.50	SD 4.02
I-72	A-5 D	375.43	-	370.64	SD 4.01 WITH DEFLECTORS
I-79	A-10 D	375.43	370.10	369.60	SD 4.02 WITH DEFLECTORS
I-83	A-10 D	353.23	347.31	344.87	SD 4.02 WITH DEFLECTORS
I-76	A-10 D	354.40	344.90	344.89	SD 4.02 WITH DEFLECTORS
HW-7	A	-	344.92	-	SD 5.11
EW-6	C	-	-	344.80	SD 5.21 L=21'-6" H=4'-6" E=3'-8" C=12"



PROFILE LEGEND  
 PROFILE GRADE LINE  
 EXISTING AT B  
 R/W LINE RT.  
 R/W LINE LT.

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

PURDUM & JESCHKE  
 CONSULTING ENGINEERS  
 LAND SURVEYORS  
 1029 North Colver Street  
 Baltimore, Maryland 21202 301/837-0194



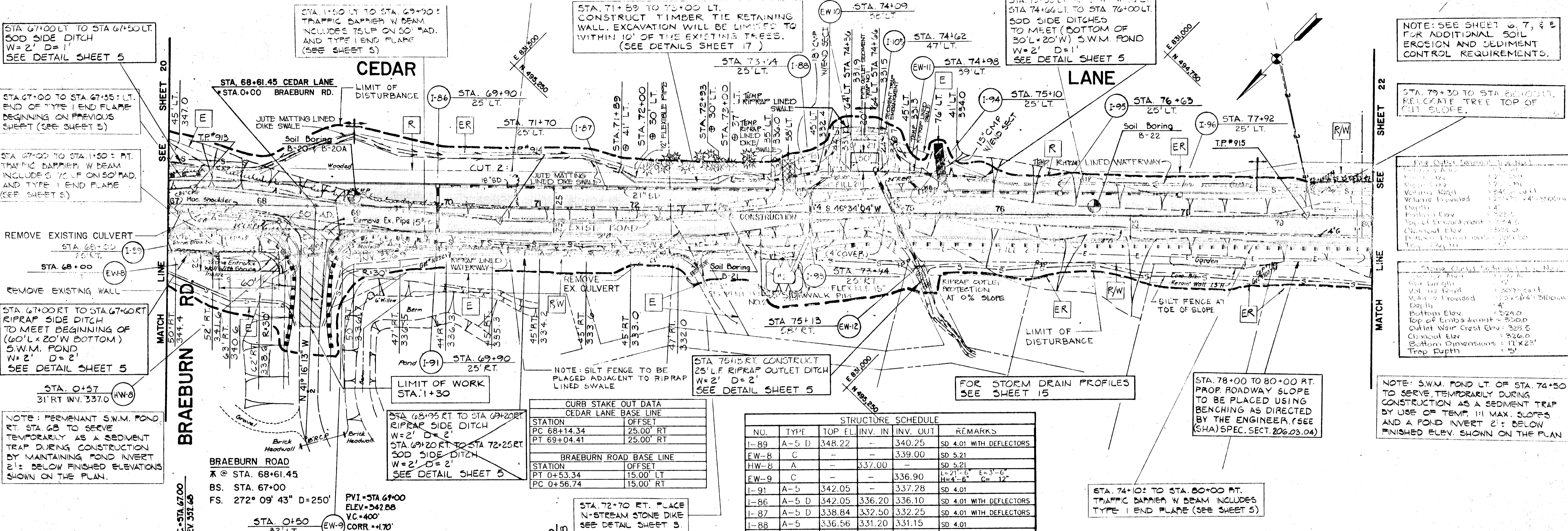
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DRN: PWR	
CHK: WDP	
DATE: 6/90	
BY	NO
REVISION	DATE

SEDIMENT & EROSION CONTROL PLAN  
 STA. 54+00 TO STA. 67+00  
 CEDAR LANE - PHASE 2

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
 CAPITAL PROJECT J-4086  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE  
 1"=50'  
 SHEET  
 20 OF 28

985

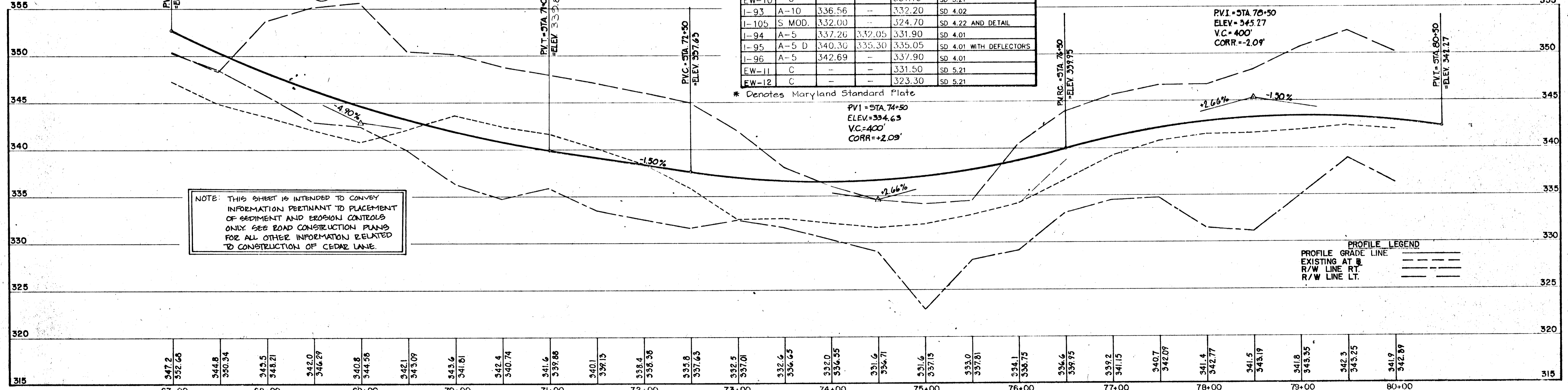


STRUCTURE SCHEDULE					
NO.	TYPE	TOP EL.	INV. IN	INV. OUT	REMARKS
I-89	A-5 D	348.22	-	340.25	SD 4.01 WITH DEFLECTORS
EW-8	C	-	-	339.00	SD 5.21
HW-8	A	-	337.00	-	SD 5.21
EW-9	C	-	-	336.90	SD 5.21
I-91	A-5	342.05	-	337.28	SD 4.01
I-86	A-5 D	342.05	336.20	336.10	SD 4.01 WITH DEFLECTORS
I-87	A-5 D	338.84	332.50	332.25	SD 4.01 WITH DEFLECTORS
I-88	A-5	336.56	331.20	331.15	SD 4.01
EW-10	C	-	-	331.10	SD 5.21
I-93	A-10	336.56	-	332.20	SD 4.02
I-105	S MOD.	332.00	-	324.70	SD 4.22 AND DETAIL
I-94	A-5	337.26	332.05	331.90	SD 4.01
I-95	A-5 D	340.30	335.30	335.05	SD 4.01 WITH DEFLECTORS
I-96	A-5	342.69	-	337.90	SD 4.01
EW-11	C	-	-	331.50	SD 5.21
EW-12	C	-	-	323.30	SD 5.21

CURB STAKE OUT DATA	
CEDAR LANE BASE LINE	
STATION	OFFSET
PC 68+14.34	25.00' RT
PT 69+04.41	25.00' RT

BRAEBURN ROAD BASE LINE	
STATION	OFFSET
PT 0+53.34	15.00' LT
PC 0+56.74	15.00' RT



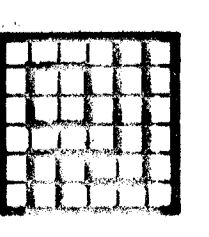
315	347.2	352.65	344.8	340.34	345.5	348.21	342.0	346.29	340.8	344.56	342.1	343.09	343.6	341.61	342.4	340.74	341.6	339.88	340.1	339.13	338.4	338.36	335.8	337.63	332.5	337.01	332.6	336.65	332.0	334.55	331.6	336.71	331.6	337.15	335.0	337.81	334.1	336.75	336.6	339.95	339.2	341.15	340.7	342.07	341.4	342.77	341.5	343.19	341.8	343.35	342.3	343.25	341.9	342.89	315
67+00		68+00		69+00		70+00		71+00		72+00		73+00		74+00		75+00		76+00		77+00		78+00		79+00		80+00																													

NOTE: THIS SHEET IS INTENDED TO CONVEY INFORMATION PERTINANT TO PLACEMENT OF SEDIMENT AND EROSION CONTROLS ONLY. SEE ROAD CONSTRUCTION PLANS FOR ALL OTHER INFORMATION RELATED TO CONSTRUCTION OF CEDAR LANE.

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

Director of Public Works: [Signature]  
 Date: [Date]  
 Chief, Bureau of Engineering: [Signature]  
 Date: [Date]

CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE



PURDUM & JESCHKE  
 CONSULTING ENGINEERS  
 LAND SURVEYORS

1029 North Calvert Street  
 Baltimore, Maryland 21202 301/837-0194

[Signature]

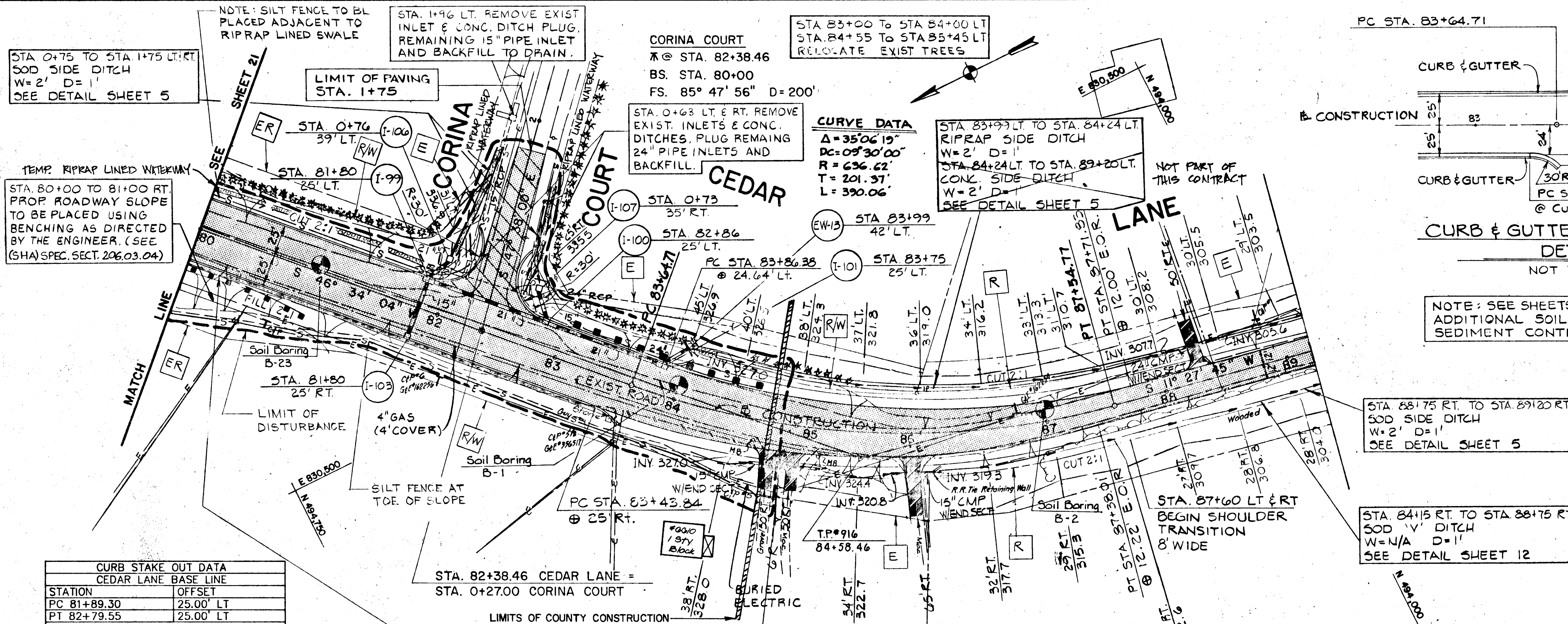
DES: JCT	
DRN: PWR	
CHK: WDP	
DATE: 6/90	
BY: NO.	REVISION
DATE	

SEDIMENT & EROSION CONTROL PLAN  
 STA. 67+00 TO STA. 80+00  
 CEDAR LANE - PHASE 2

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
 CAPITAL PROJECT J-4086  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE: 1"=50'  
 SHEET: 21 OF 28

985



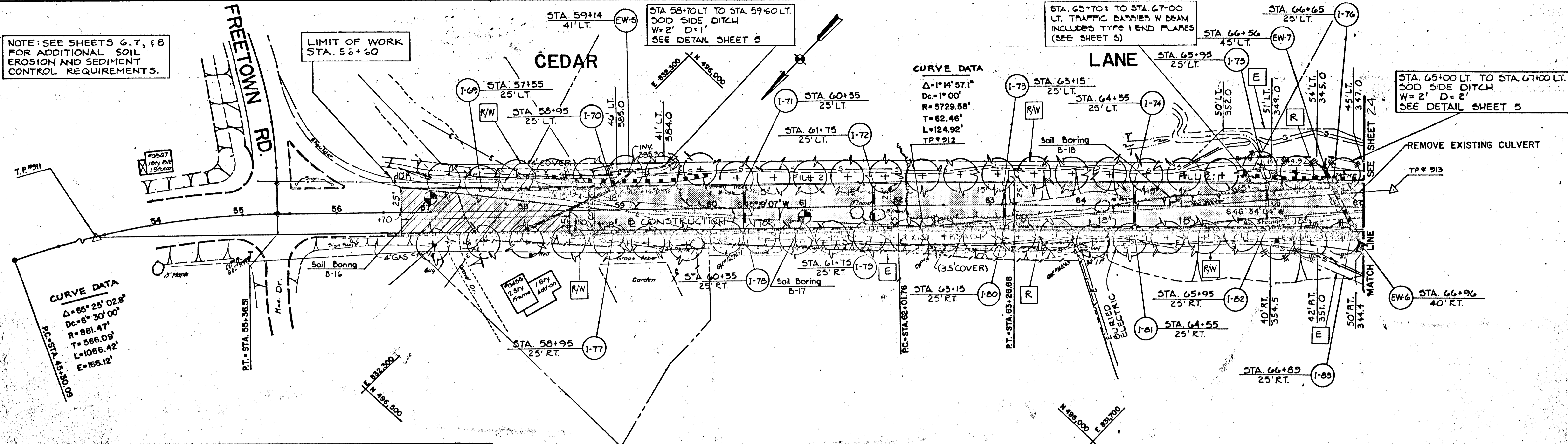
NOTE: SEE SHEETS 6, 7, & 8 FOR ADDITIONAL SOIL EROSION AND SEDIMENT CONTROL REQUIREMENTS.

LIMIT OF WORK STA. 56+50

STA 58+70 LT. TO STA. 59+60 LT. SOD SIDE DITCH W=2' D=1' SEE DETAIL SHEET 5

STA. 65+70± TO STA. 67+00 LT. TRAFFIC BARRIER W BEAM INCLUDES TYPE I END FLARES (SEE SHEET 5)

STA. 65+00 LT. TO STA. 67+00 LT. SOD SIDE DITCH W=2' D=2' SEE DETAIL SHEET 5

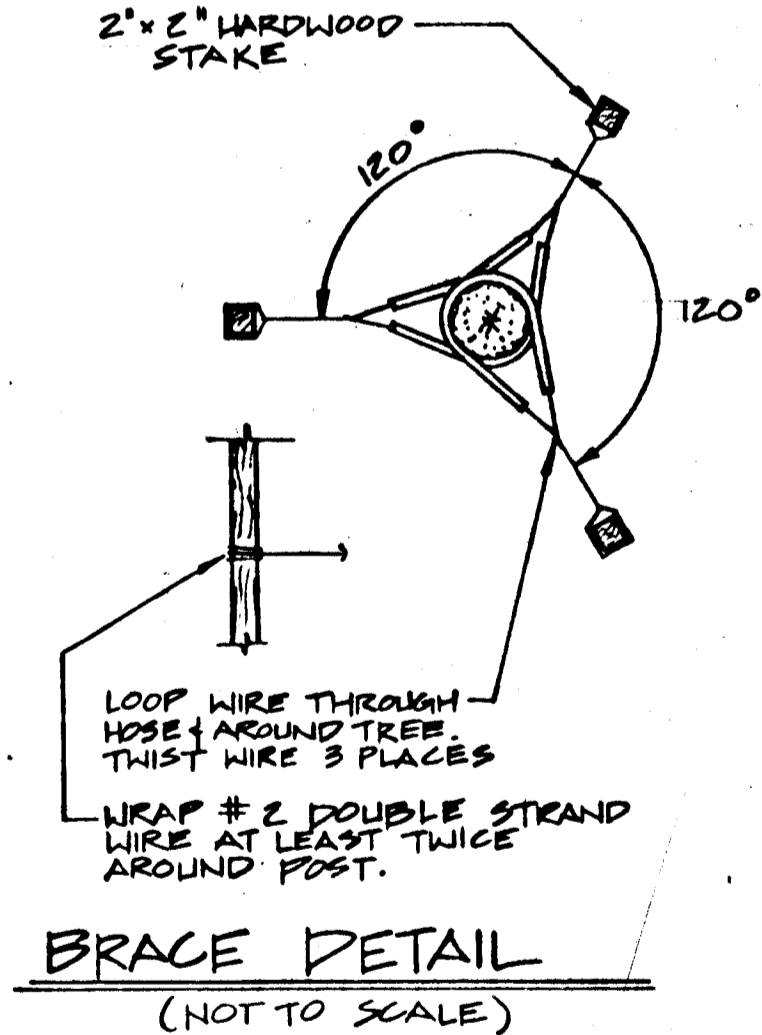
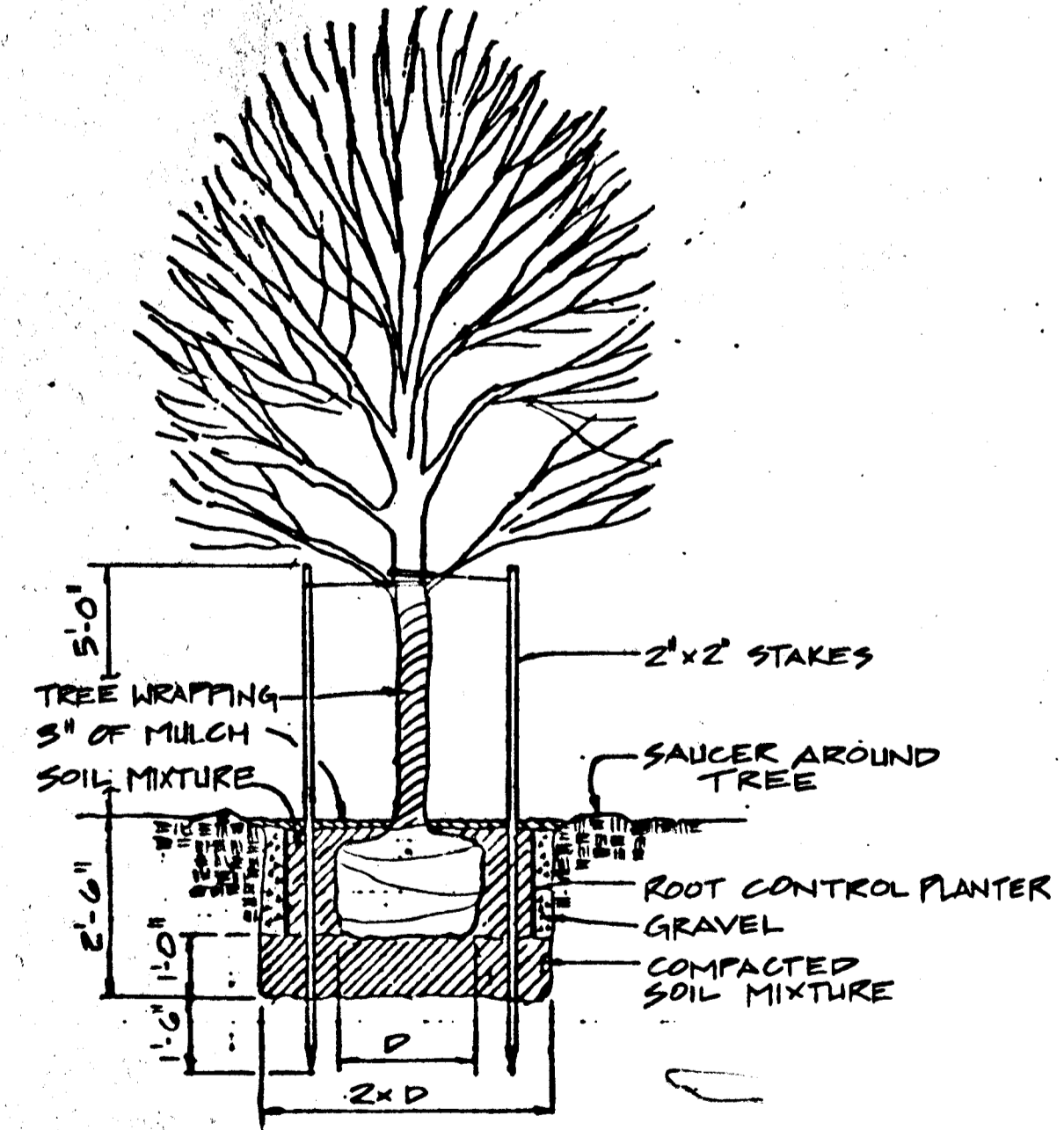


PLANT LIST				
QTY.	SYMBOL	NAME	SIZE	REMARKS
42	⊕	ACER RUBRUM RED MAPLE	2 1/2" - 3" CAL. 13' - 15' HGT.	B+B, FULL HEAD
44	⊕	GINKGO BILOBA [MALE ONLY] MAIDEN HAIR TREE	2 1/2" - 3" CAL. 10' - 12' HGT.	B+B, FULL HEAD
25	⊕	QUERCUS PALUSTRIS PIN OAK	2 1/2" - 3" CAL.	B+B, FULL HEAD
2	⊗	EUONYMUS ALATUS - BURNING BUSH	30" x 36"	B+B

**LANDSCAPING NOTES:**

NOTE: SHEET NO'S 23 THROUGH 26 ARE INTENDED TO CONVEY INFORMATION PERTINENT TO PLACEMENT OF STREET TREES AND LANDSCAPING DETAILS ONLY. SEE OTHER ROAD CONSTRUCTION PLANS FOR ALL OTHER INFORMATION RELATED TO CONSTRUCTION OF CEDAR LANE.

- CONTRACTOR SHALL FIELD VERIFY EXISTING UNDERGROUND UTILITIES BEFORE DIGGING.
- TREES SHALL BE PLANTED 7' BEHIND THE FACE OF CURB, HOWEVER ACTUAL LOCATIONS OF TREES MAY VARY TO ACCOMMODATE FIELD CONDITIONS.
- POLYETHYLENE ROOT CONTROL PLANTERS ARE REQUIRED FOR EACH TREE TO MINIMIZE ROOT SPREADING. ALL PLANTERS SHALL BE MANUFACTURED BY DEEP ROOT CORPORATION OF WESTMINSTER, CALIFORNIA (48" UNIVERSAL BARRIER STOCK UB-48-2) OR APPROVED EQUAL AND SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
- SEE SPECIFICATIONS FOR GENERAL PLANTING REQUIREMENTS.



TYPICAL TREE PLANTING DETAIL (NOT TO SCALE)

BRACE DETAIL (NOT TO SCALE)

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

Director of Public Works: [Signature] DATE: 7/11/90  
 Chief, Bureau of Engineering: [Signature] DATE: 7/12/90  
 Chief, Division of Roads, Bridges and Storm Drainage: [Signature] DATE: 7/12/90



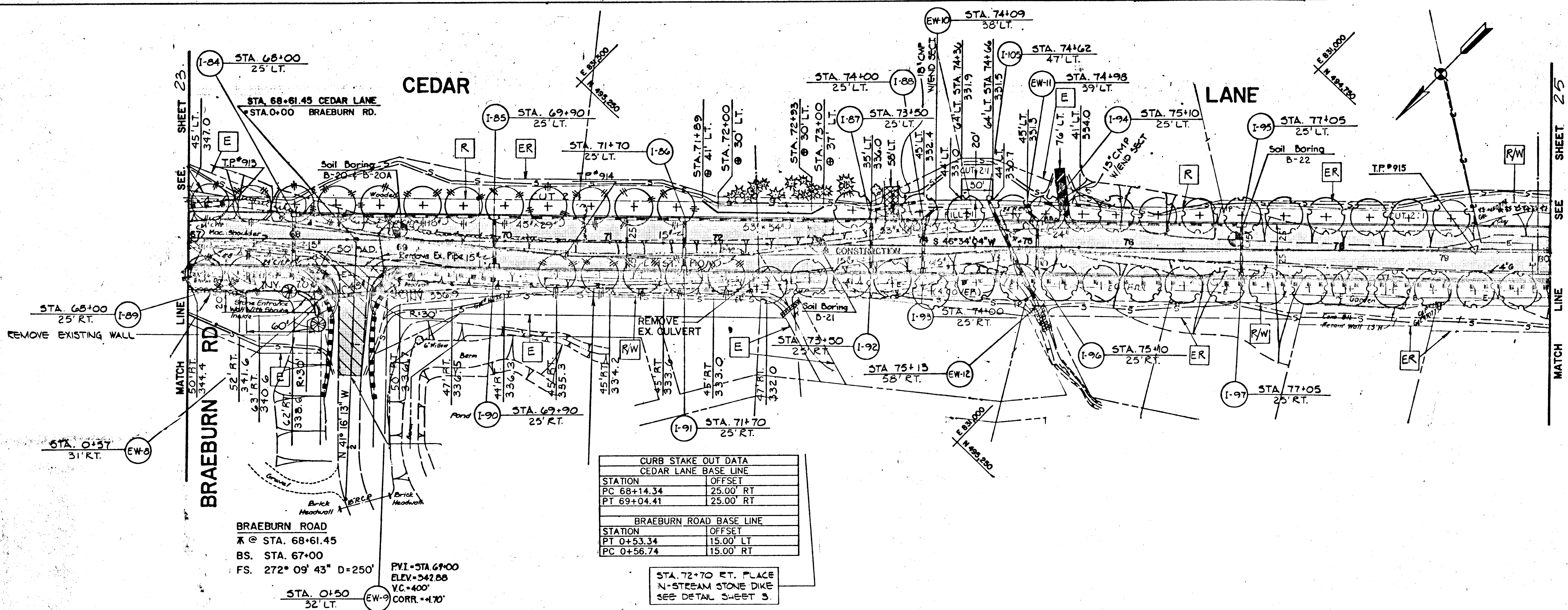
DES: JEN  
 DRN: GMI  
 DATE: 6/90

LANDSCAPING PLAN  
 STA. 54+00 TO STA. 67+00  
 CEDAR LANE - PHASE 2

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
 CAPITAL PROJECT J-4086  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE  
 1"=50'  
 SHEET  
 23 of 28

FINAL



**BRAEBURN ROAD**  
 X @ STA. 68+61.45  
 BS. STA. 67+00  
 FS. 272° 09' 43" D=250'  
 PVI=STA. 67+00  
 ELEV.=342.88  
 V.C.=400'  
 CORR.=+1.70'

CURB STAKE OUT DATA	
CEDAR LANE BASE LINE	
STATION	OFFSET
PC 68+14.34	25.00' RT
PT 69+04.41	25.00' RT
BRAEBURN ROAD BASE LINE	
STATION	OFFSET
PT 0+53.34	15.00' LT
PC 0+56.74	15.00' RT

STA. 72+70 RT. PLACE  
 N-STREAM STONE DIKE  
 SEE DETAIL SHEET 3

NOTE: SEE SHEET 23 FOR LANDSCAPING  
 GENERAL NOTES AND LANDSCAPING  
 DETAILS.

585

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 Director of Public Works: *[Signature]* DATE: 11/2/88  
 Chief, Bureau of Engineering: *[Signature]* DATE: 11/2/88  
 Chief, Division of Roads, Bridges and Storm Drainage: *[Signature]* DATE: 11/2/88



DES: JCT			
DRN: PWR			
CHK: WDP			
DATE: 8/90	BY:	NO.	REVISION

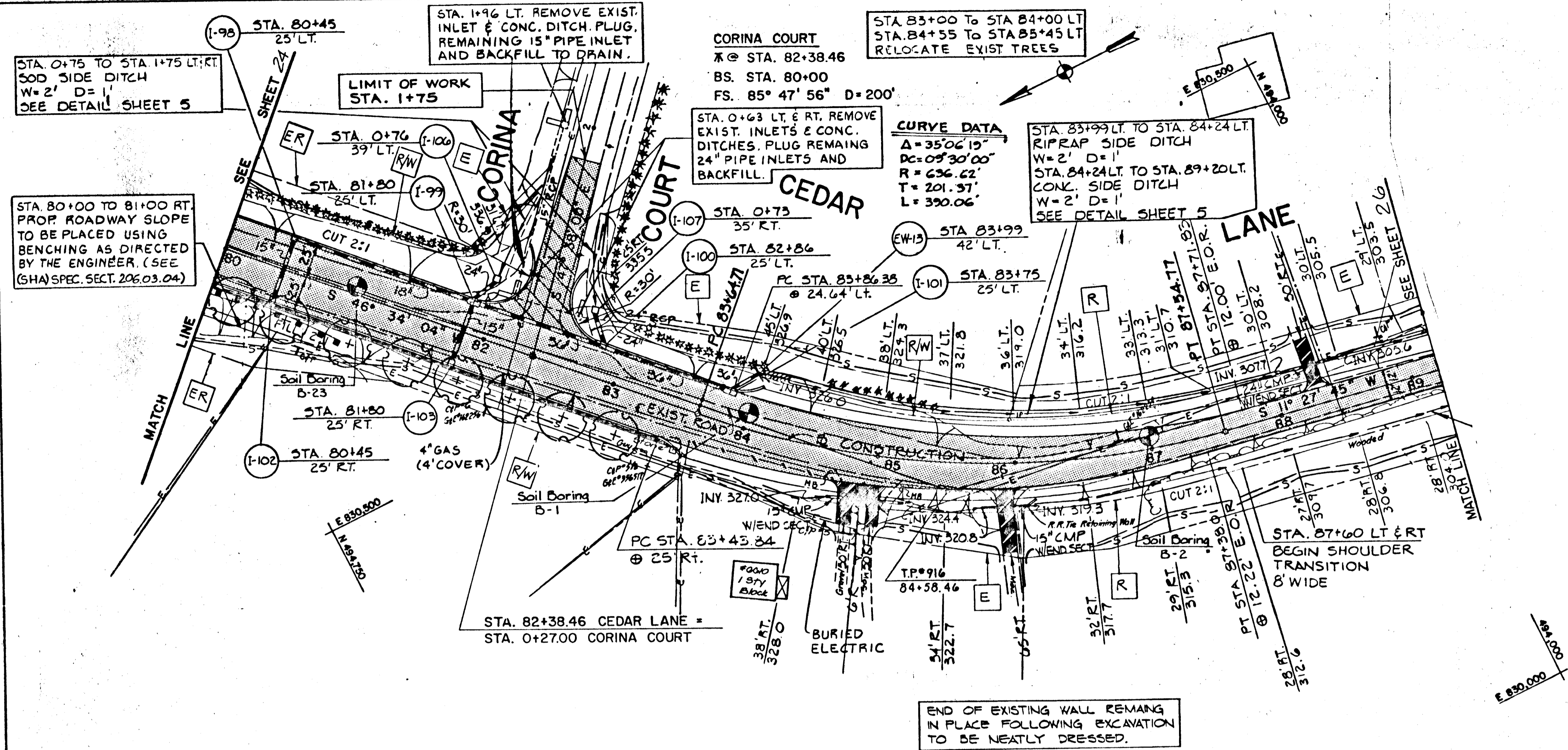
LANDSCAPING PLAN  
 STA. 67+00 TO STA. 80+00  
 CEDAR LANE - PHASE 2  
 600' SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
 CAPITAL PROJECT J-4086  
 ELECTION DISTRICT NO. 5  
 HOWARD COUNTY, MARYLAND

SCALE: 1"=50'  
 SHEET: 24 of 28

FINAL





NOTE: SEE SHEET 23 FOR LANDSCAPING GENERAL NOTES AND LANDSCAPING NOTES.

985

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James H. ...* DATE *11/20/00*  
DIRECTOR OF PUBLIC WORKS

*...* DATE *11/20/00*  
CHIEF, BUREAU OF ENGINEERING

*...* DATE *11/20/00*  
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE



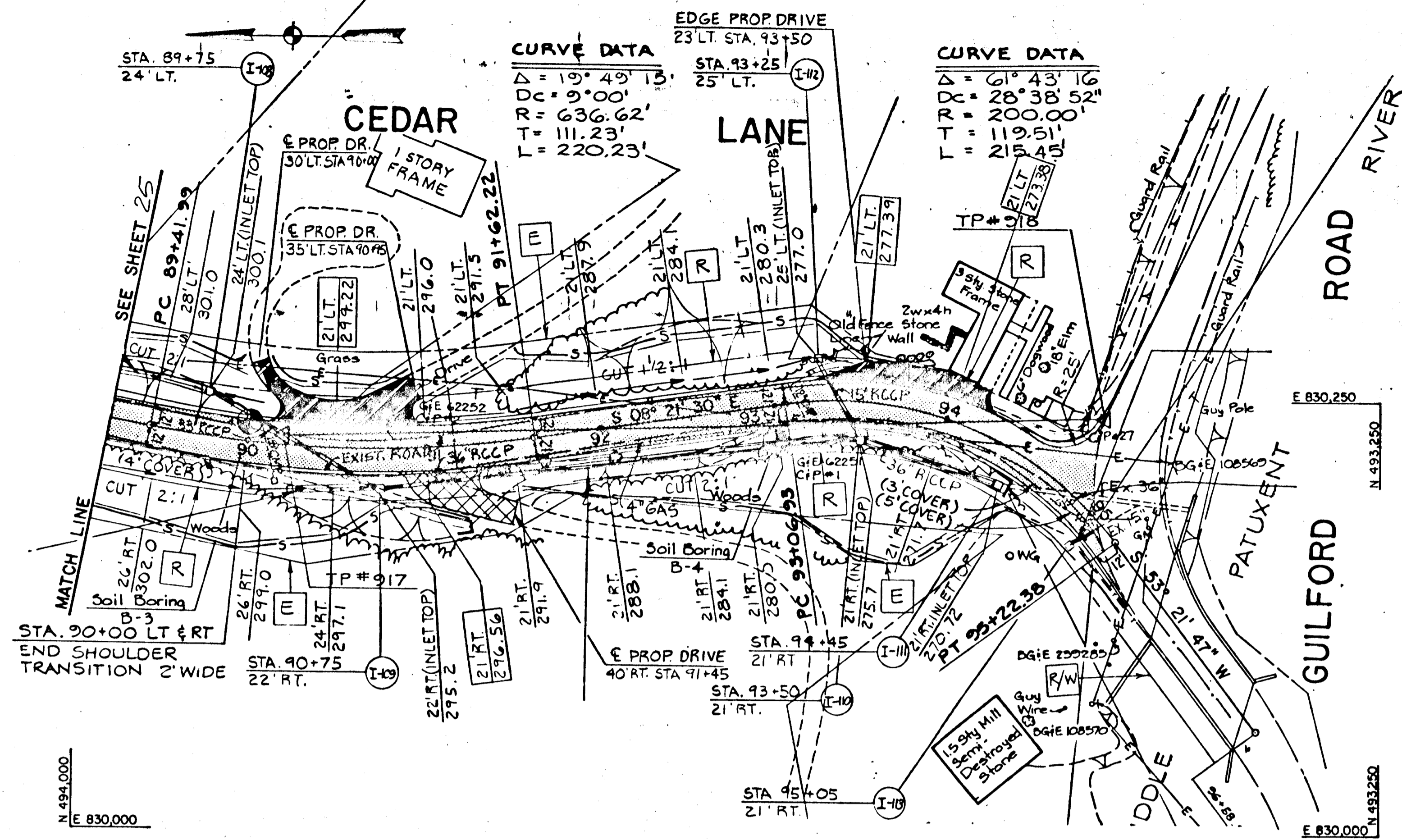
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DRN: PWR			
CHK: WDP			
DATE: 6/30	BY NO.	REVISION	DATE

LANDSCAPING PLAN  
STA. 80+00 TO STA. 89+20  
CEDAR LANE - PHASE 2

600' SCALE MAP NO. \_\_\_\_\_ BLOCK NO. \_\_\_\_\_

SOUTH OF FREETOWN RD. TO GUILFORD RD.  
CAPITAL PROJECT J-4086  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

SCALE  
1"=50'  
SHEET  
25 of 28



NOTE: SEE SHEET 23 FOR LANDSCAPING GENERAL NOTES AND LANDSCAPING DETAILS.

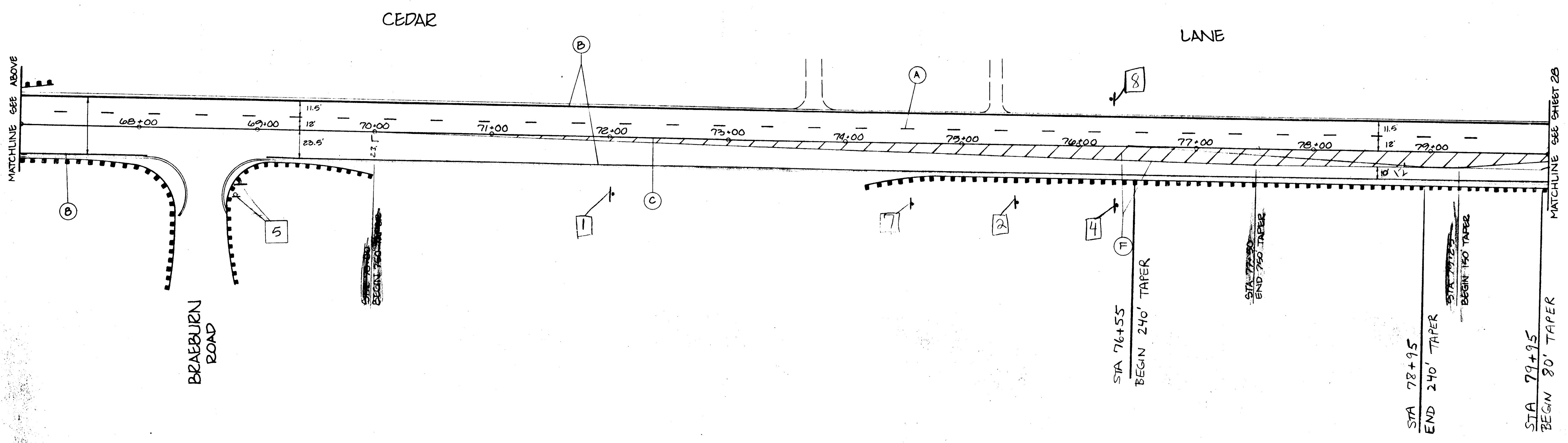
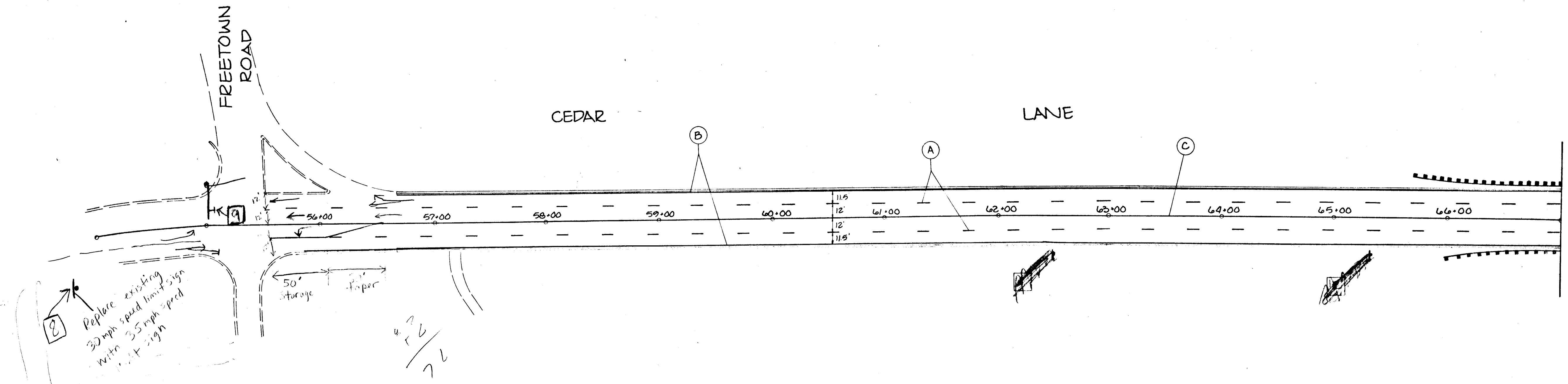
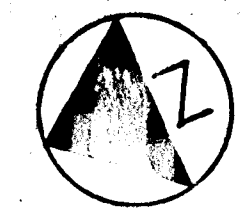
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND	
<i>James M. Shaw</i> DIRECTOR OF PUBLIC WORKS	<i>William E. Shaw</i> CHIEF, BUREAU OF ENGINEERING
DATE: 11-8-88	DATE: 11-8-88
<i>Harold R. Anderson</i> CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE	DATE: 11-8-88

DES: JCT					
DRN: PWR					
CHK: WDP					
DATE: 6/90	BY	NO.	REVISION	DATE	

LANDSCAPING PLAN  
STA. 89+20 TO STA. 95+05  
CEDAR LANE - PHASE 2

SOUTH OF FREETOWN RD TO GUILFORD RD.  
CAPITAL PROJECT J-4086  
ELECTION DISTRICT NO. 5  
HOWARD COUNTY, MARYLAND

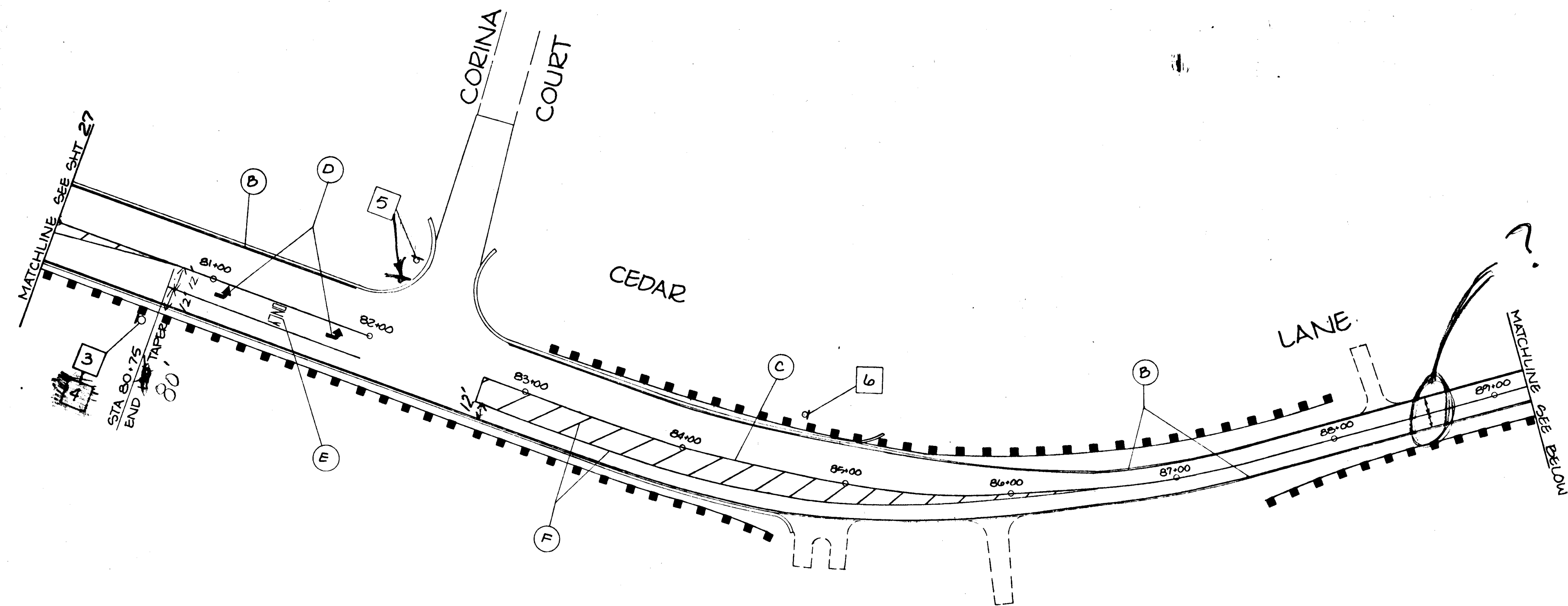
SCALE  
1"=50'  
SHEET  
20 of 28







Cedar Lane Trunks  
531-6959  
Dan Carlson  
Tom Ristel

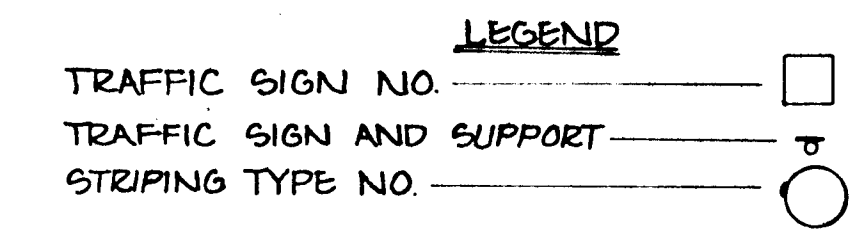
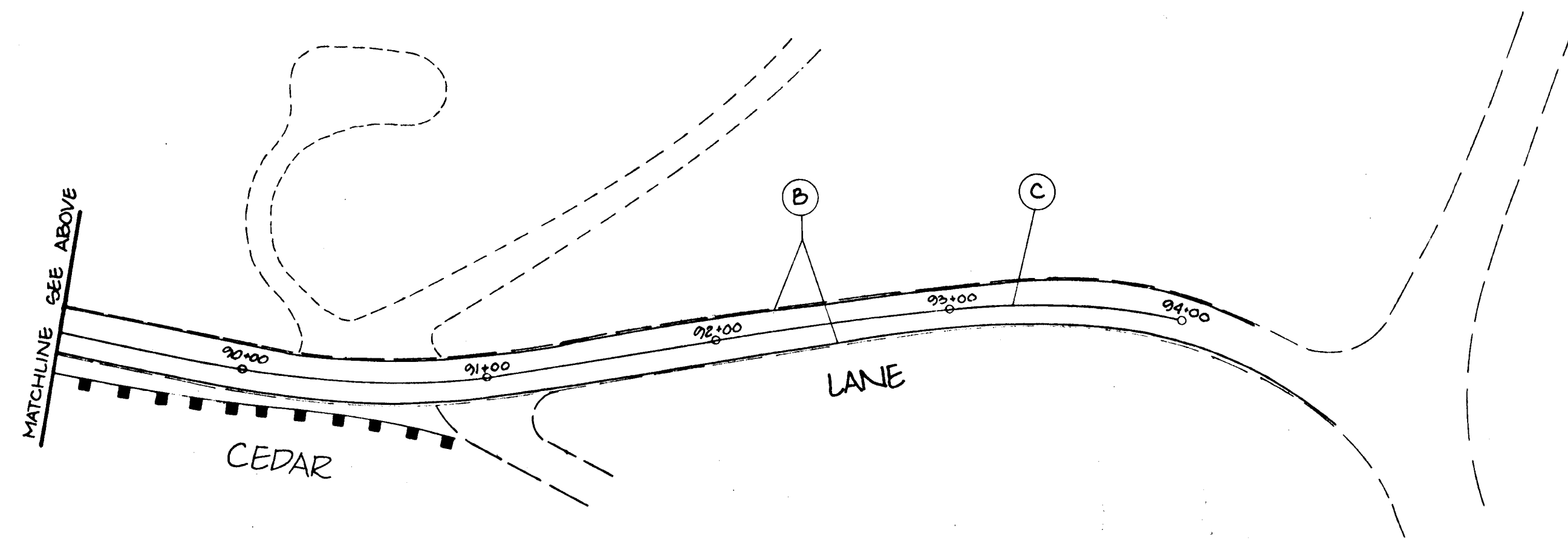
985

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>James J. ...</i> 7/12/90 DIRECTOR OF PUBLIC WORKS DATE <i>...</i> 7/12/90 CHIEF, BUREAU OF ENGINEERING DATE				DES: JBN DRN: GMI CHK: DATE: 6/90		STRIPING AND PERMANENT SIGNING PLAN CEDAR LANE — PHASE 2		SOUTH OF FREETOWN RD. TO GUILFORD RD. CAPITAL PROJECT J-4086 ELECTION DISTRICT NO. 5 HOWARD COUNTY, MARYLAND		SCALE AS SHOWN SHEET 27 OF 28	
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE DATE				BY NO REVISION DATE		600' SCALE MAP NO. BLOCK NO.					




SIGN SCHEDULE			
SIGN NO	MUTCD	SIZE	MESSAGE
1	W3-1 <del>W4-2</del>	36" x 36"	LEFT LANE ENDS LANE ENDS MERGE LEFT
2	W4-2	36" x 36"	 
3	W1-1L	30" x 30"	
<del>4</del>	<del>W5-1</del>	<del>18" x 18"</del>	<del>20 MPH</del>
5	R1-1	30" x 30"	STOP
6	W2-2	30" x 30"	
4	R2-1	24" x 30"	SPEED LIMIT 30
7	R2-5a	24" x 30"	REDUCED SPEED AHEAD
8	R2-1	24" x 30"	SPEED LIMIT 35
9	R10-12	24" x 30"	LEFT TURN YIELD ON GREEN PAVEMENT MARKING DETAILS

- A. INSTALL 10' STRIPE WITH 30' GAP PAINTED WHITE PAVEMENT MARKING (4" WIDTH) AS SHOWN.
- B. INSTALL PAINTED WHITE PAVEMENT MARKING (4" WIDTH) AS SHOWN. 1 1/2' FROM ~~EDGE~~<sup>FACE</sup> OF CURB.
- C. INSTALL PAINTED YELLOW PAVEMENT MARKINGS (4" WIDTH - CENTERLINES) AS SHOWN
- D. INSTALL CURVED ARROW (SYMBOL) PREFORMED PAVEMENT MARKING (LEFT). SEE MUTCD 3B-20
- E. INSTALL "ONLY" (WORD) PREFORMED PAVEMENT MARKING. SEE MUTCD 3B-20
- F. INSTALL MEDIAN ISLAND FORMED BY PAVEMENT MARKINGS. SEE MUTCD 3B-10



985

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works: <i>[Signature]</i> DATE: 2/12/70 Chief, Bureau of Engineering: <i>[Signature]</i> DATE: 7/11/70			DES: JGN																	
CHIEF, DIVISION OF ROADS, BRIDGES AND STORM DRAINAGE: <i>[Signature]</i> DATE:			DRN: BMI	CHK:	DATE: 6/70	BY: NO.	REVISION	DATE	STRIPING AND PERMANENT SIGNING PLAN CEDAR LANE - PHASE 2		SOUTH OF FREETOWN RD. TO GUILFORD RD. CAPITAL PROJECT J-4086 ELECTION DISTRICT NO. 5 HOWARD COUNTY, MARYLAND		SCALE AS SHOWN	SHEET 28 OF 28						