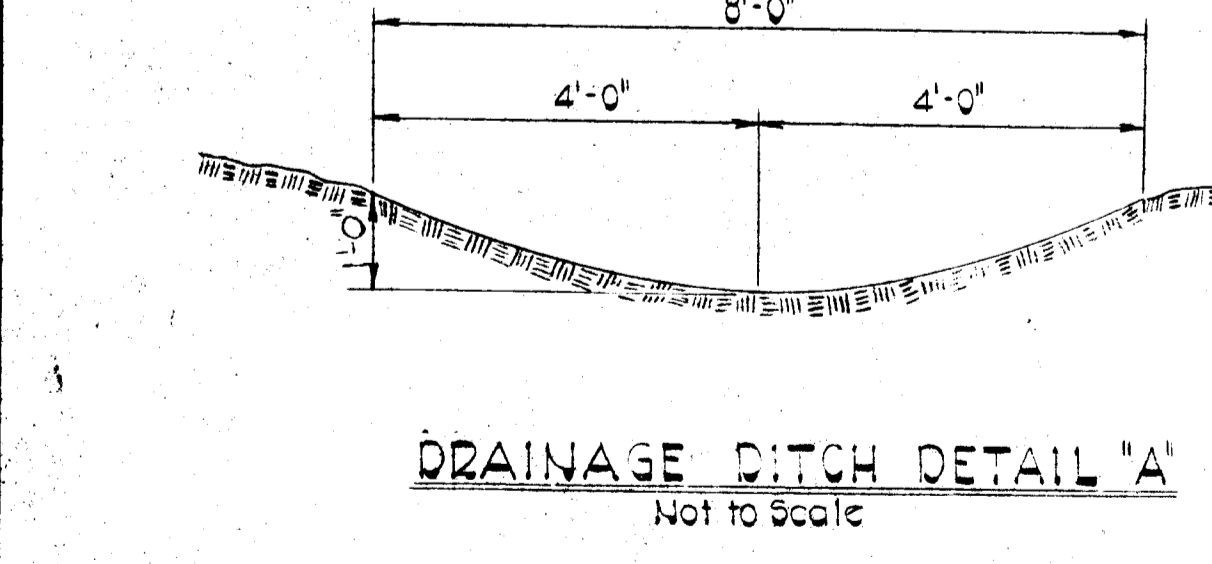


**BENCH MARKS**  
 D.M. G/E #100580 ELEV. 367.22  
 3 Nails in G/E Pole #100580 300'± N.E. of  
 Route 99 and High Ridge Road.

ITEM	ESTIMATED	"AS-BUILT"	SUPPLIER
15" R.C.P.	455 L.F.		
18" R.C.P.	571 L.F.		
21" R.C.P.	200 L.F.		
24" R.C.P.	35 L.F.		
30" R.C.P.	101 L.F.		
36" R.C.P.	335 L.F.		
42" R.C.P.	70 L.F.		
48" R.C.P.	610 L.F.		
54" R.C.P.	105 L.F.		
60" C.M.P.	75 L.F.		



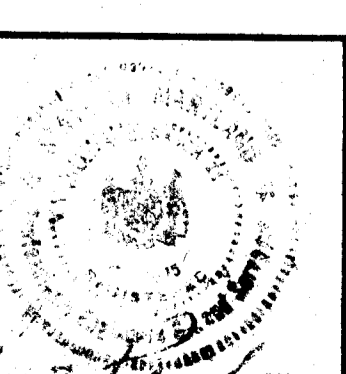
**PURDUM & JESCHKE**  
**CONSULTING ENGINEERS**  
**LAND SURVEYORS**  
 1823 North Calvert Street  
 Baltimore, Maryland 21202 301/837-0194

**DEPARTMENT OF PUBLIC WORKS**  
**HOWARD COUNTY, MARYLAND**  
 DATE: 10/30/81  
 SIGNATURE: [Signature]  
 CHIEF, ROADS, BRIDGES, STORM DRAINS DIVISION

**HOWARD SOIL CONSERVATION DISTRICT**  
 DATE: 7-23-81  
 SIGNATURE: [Signature]  
 CHIEF, SOIL CONSERVATION DISTRICT

**PROFESSIONAL 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, ACCORDING TO THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 WILLIAM G. RAGCH II REG. # 4515 DATE: 10/30/81

**LOCATION MAP AND PLAN OF HIGH RIDGE ROAD STORM DRAINAGE SYSTEM**

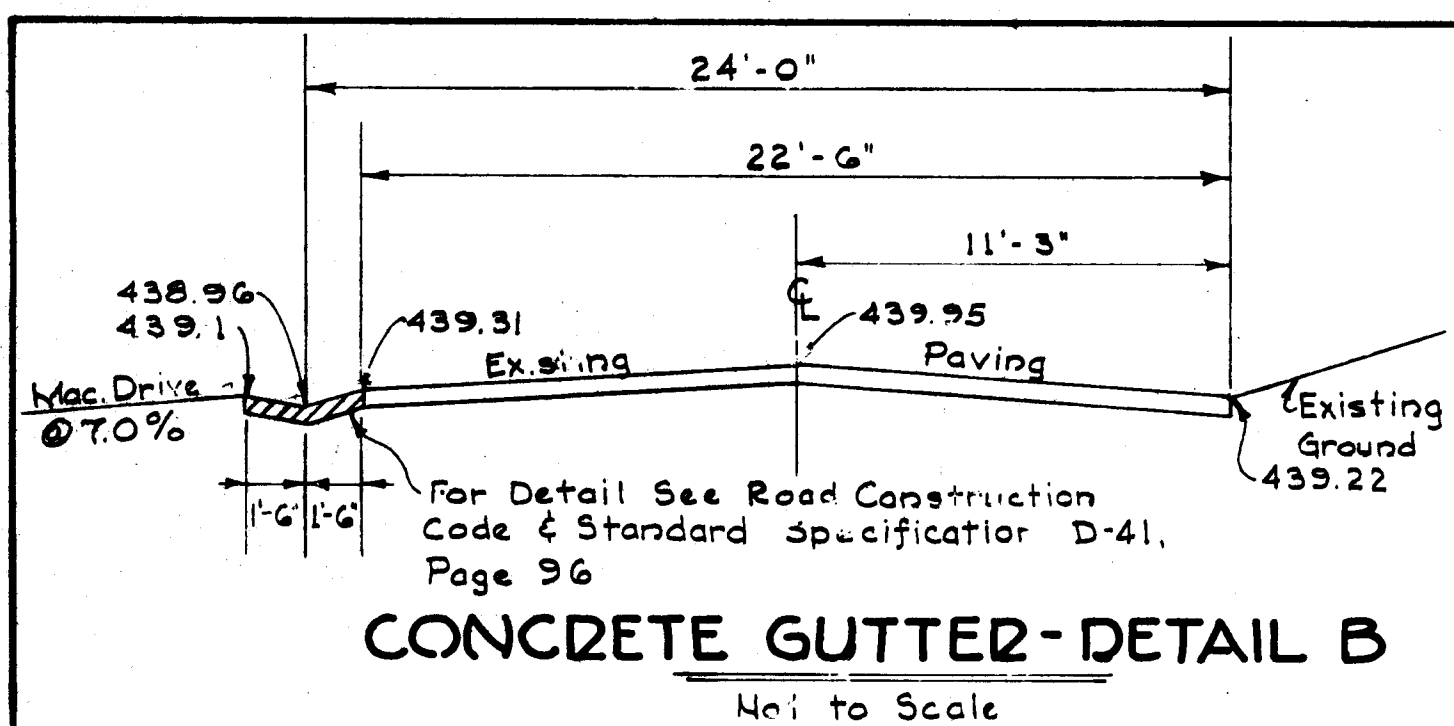


**HIGH RIDGE STORM DRAINS**  
 CAPITAL PROJECT D-1049  
 ELECTION DISTRICT NO. 2  
 HOWARD COUNTY, MARYLAND

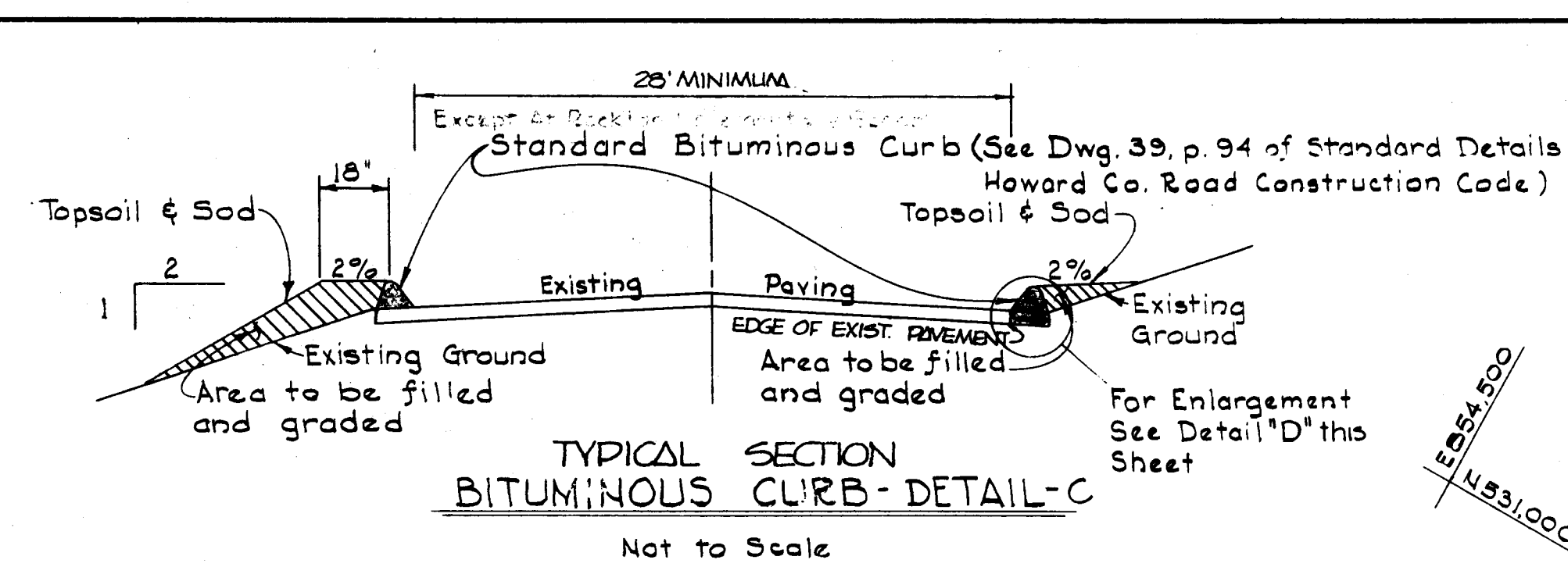
DESIGN BY L.K.G.  
 DRAWN BY A.R.Z.  
 CHECKED BY R.L.S.  
 SHEET 1 of 4  
 CONTRACT NO. D-1049

- GENERAL NOTES**
- Approximate locations of existing mains are shown. The contractor shall take all necessary precautions to protect existing services and maintain uninterrupted supply. Any damage incurred due to the contractor's operations shall be repaired immediately at the contractor's expense.
  - All pipe elevations shown are invert elevations.
  - The contractor shall locate existing utilities a minimum of two weeks in advance of construction operations in the vicinity of proposed utilities.
  - For standard details see Road Construction Code and Standard Specifications, Howard County, MD.
  - Clear all utilities by a minimum of 6". Clear all utility poles by 2'-0" minimum or tunnel as required. Any costs incurred to the contractor for tunneling or bracing at poles shall be included in unit price bid for excavation. Contractor shall notify the following utilities or agencies at least five (5) days before starting work shown on these plans:  
 Baltimore Gas and Electric Company - Underground Electrical Distribution Engineering 234-5691  
 Baltimore Gas and Electric Company - Underground Gas Distribution Engineering 234-7938  
 Chesapeake and Potomac Telephone Company 725-9976  
 Miss Utility 1-559-1130 (Call Collect)  
 State Highway Administration 531-5538
  - Horizontal control is based on the Maryland State Grid Coordinate System.
  - All vertical controls are based on U.S.G.S. Datum.
  - Trees are to be protected from damage to maximum extent. Trees located within the construction strip are not to be removed or damaged by the Contractor.
  - 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 unit price bid for excavation and backfill for storm drains.
  - 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.
  - Traffic control devices and their installation shall be in accordance with the Manual on Uniform Traffic Control Services, 1971 revised Edition.

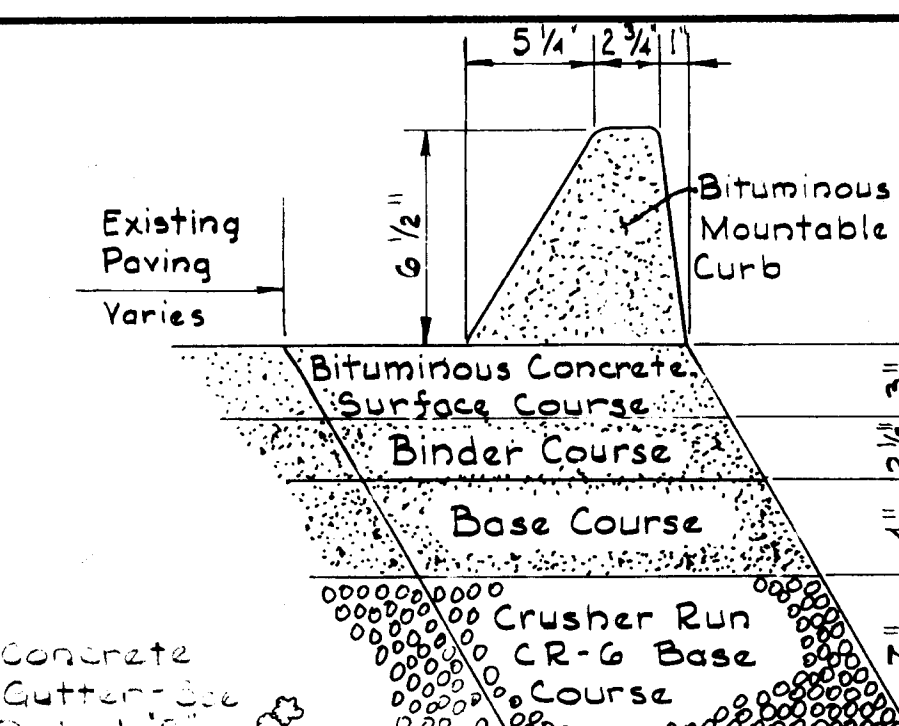
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THE PLAN AND SPECIFICATIONS SHOWN HEREON. WE WILL MAINTAIN THE DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEGINS BEGINNING THE PROJECT.  
 DATE: 11/2/81  
 SIGNATURE OF DEVELOPER: [Signature]



**CONCRETE GUTTER-DETAIL B**  
Not to Scale

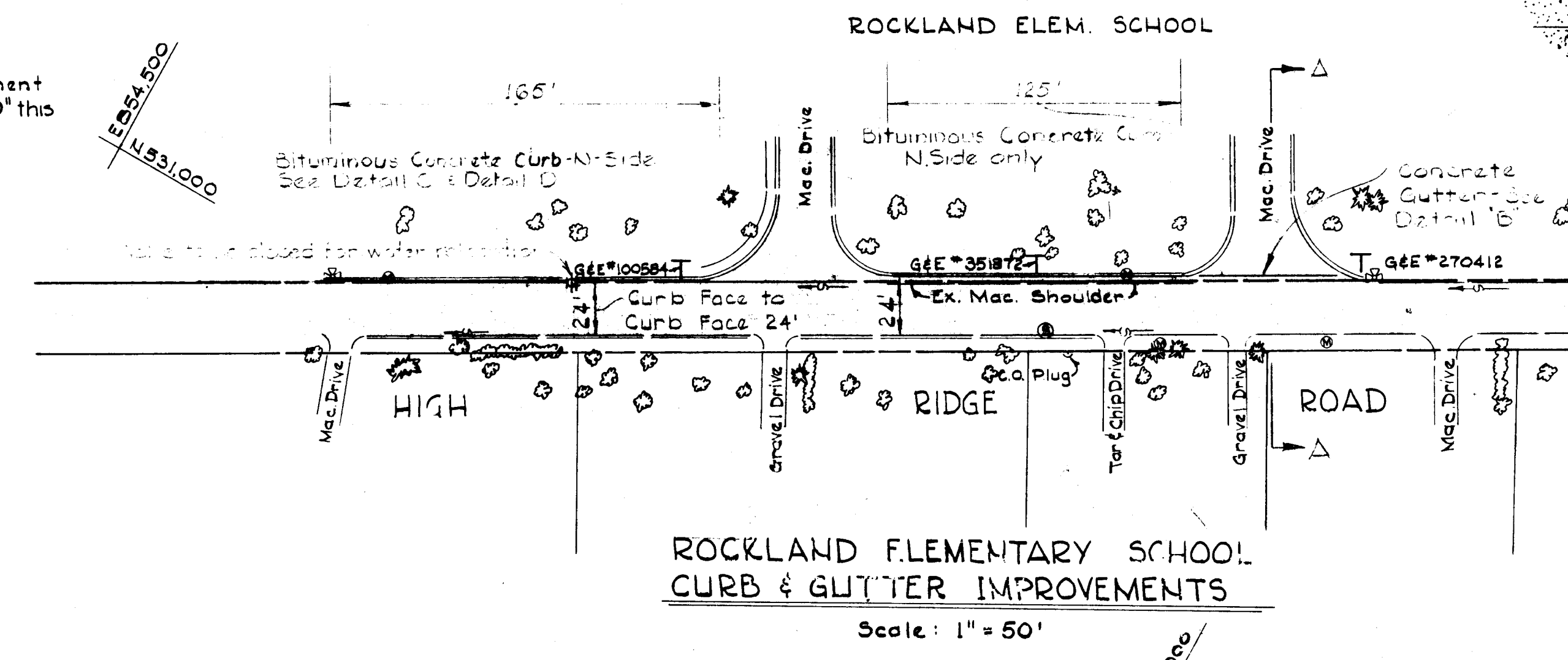


**TYPICAL SECTION BITUMINOUS CURB-DETAIL-C**  
Not to Scale

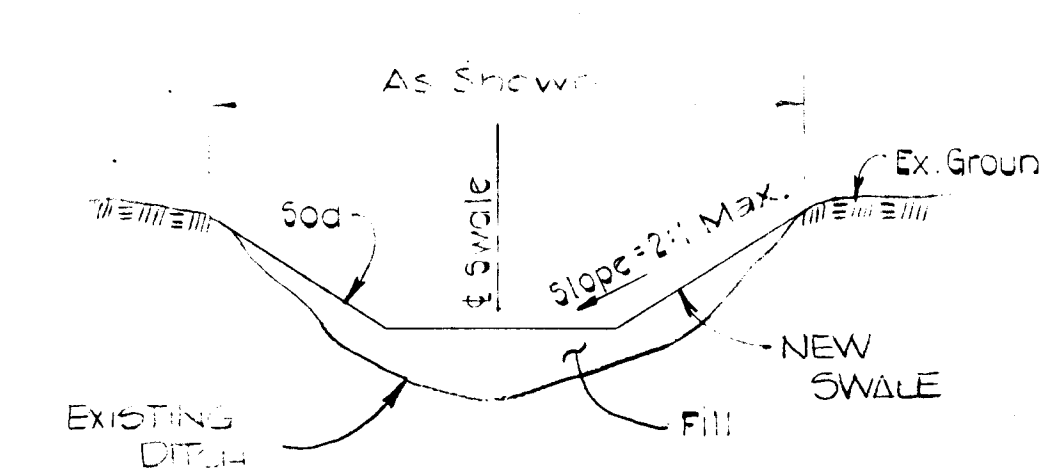


**STREET WIDENING & TRENCH PERMANENT REPAIR-DETAIL D**  
Scale 1/2" = 1'-0"

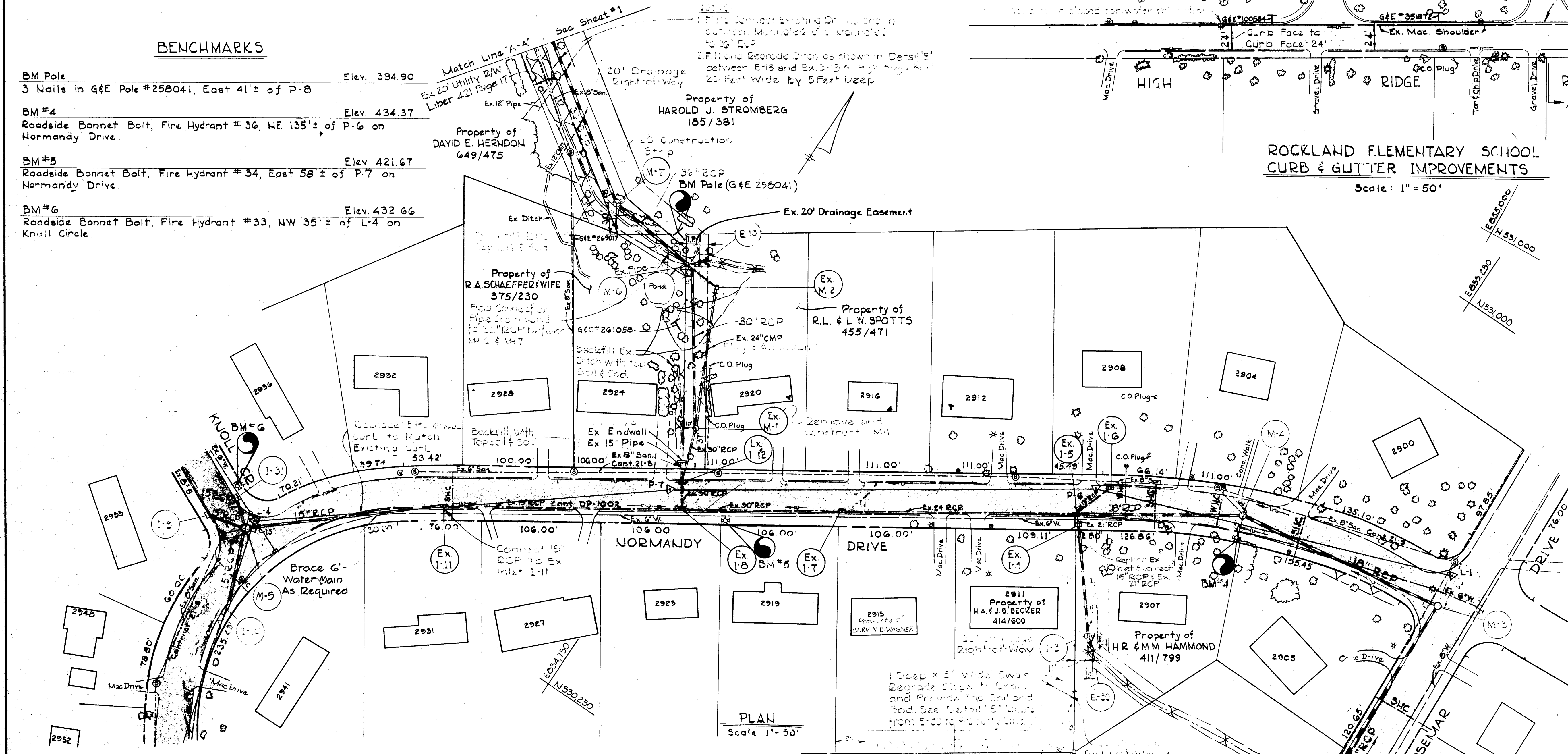
- BENCHMARKS**
- BM Pole: 3 Nails in G&E Pole #258041, East 41'± of P-8. Elev. 394.90
  - BM #4: Roadside Bonnet Bolt, Fire Hydrant #36, NE 135'± of P-6 on Normandy Drive. Elev. 434.37
  - BM #5: Roadside Bonnet Bolt, Fire Hydrant #34, East 58'± of P-7 on Normandy Drive. Elev. 421.67
  - BM #6: Roadside Bonnet Bolt, Fire Hydrant #33, NW 35'± of L-4 on Knoll Circle. Elev. 432.66



**ROCKLAND ELEMENTARY SCHOOL CURB & GUTTER IMPROVEMENTS**  
Scale: 1" = 50'



**DRAINAGE SWALE-DETAIL E**  
Not to Scale



**PLAN**  
Scale 1" = 50'

- CONSTRUCTION SEQUENCE**
1. Obtain grading permit.
  2. Clear and rough grade outlet channel site.
  3. Cut outlet channel, place 60" RCP, construct headwall, rip-rap channel and gabion toe wall.
  4. Construct storm sewer from outlet channel to High Ridge Road.
  5. Place straw bale dikes as shown on plans.
  6. Construct storm sewer from High Ridge Road to Normandy Drive.
  7. Fine grade slopes and sodded channels.
  8. Stabilize site with permanent seeding and mulching. See Sediment Control Notes.
  9. Remove temporary sediment control devices and stabilize disturbed area per Sediment Control Notes.

- SEDIMENT CONTROL NOTES**
1. Straw bales to be placed prior to any onsite grading or disturbance to any existing surface material and are to be stabilized as soon as placed.
  2. All sediment structures are to remain in place until permission for their removal has been obtained from the Howard County Office of Inspections and Permits at 932-2933.
  3. All graded areas not to be sodded shall be stabilized by seeding and mulching, in accordance with the following:
    - A. Site Preparation: Narrow or disc in areas proposed to be seeded with the following materials at the specified rate, to a depth of 3".
      1. Pulverized limestone at 1-1.2 tons per acre.
      2. Commercial fertilizer 10-10-10 at 3/4 tons per acre.
      3. Super phosphate at 600 lbs. per acre.
    - B. Seeding:
      1. Sow the following seed mixture at the rate of 200 lbs. per acre with a mechanical spreader.
        - a. Temporary: Italian or Perennial Ryegrass
        - b. Permanent: 40% Marlon Blue Grass

4. Mulching: Seeded areas shall be uniformly mulched immediately after seeding, with unweathered small grain straw at the rate of 1-1.5 to 2 tons per acre.
5. Soddings: Liquid Mulch Binder (Emulsified Asphalt) shall be applied at the rate of 8 gallons per 1000 sq. feet.
  - A. Apply 10-10-10 Fertilizer at 1000 lbs. per acre (25 lbs. per 1000 sq. ft.).
  - B. Apply Ground Agricultural Limestone at 2000 lbs. per acre (50 lbs. per 1000 sq. ft.).
  - C. Incorporate both lime and fertilizer into soil by discing. Firm up after incorporation.
  - D. Lay sod to a tight fit. Roll to ensure contact with underlying soil. Water as necessary for first two weeks (in summer) to ensure establishment.
6. Critical area (2:1 slope) stabilization shall be Common Kentucky K-31 (certified) at 40 lbs. per acre and Crownvetch certified and inoculated at 15 lbs. per acre.

**PURDUM & JESCHKE CONSULTING ENGINEERS LAND SURVEYORS**  
1023 North Calvert Street  
Baltimore, Maryland 21202 301/837-0194

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
DIRECTOR OF PUBLIC WORKS DATE: 10/30/81  
CHIEF-BUREAU OF ENGINEERING DATE: 10/30/81  
CHIEF ROADS, BRIDGES, STORM DRAINS DIVISION

PLAN OF  
**NORMANDY DRIVE**  
STORM DRAINAGE SYSTEM

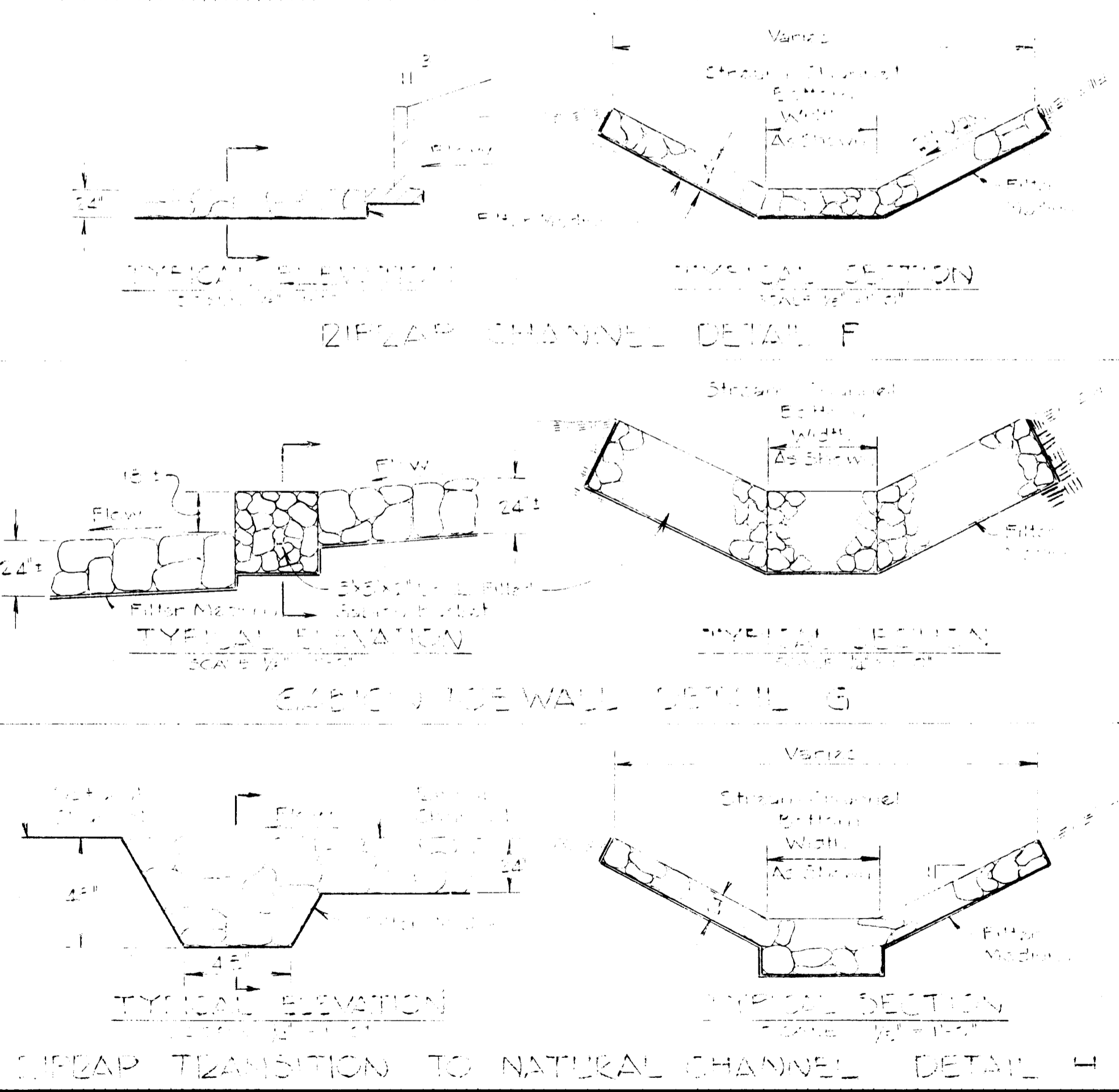
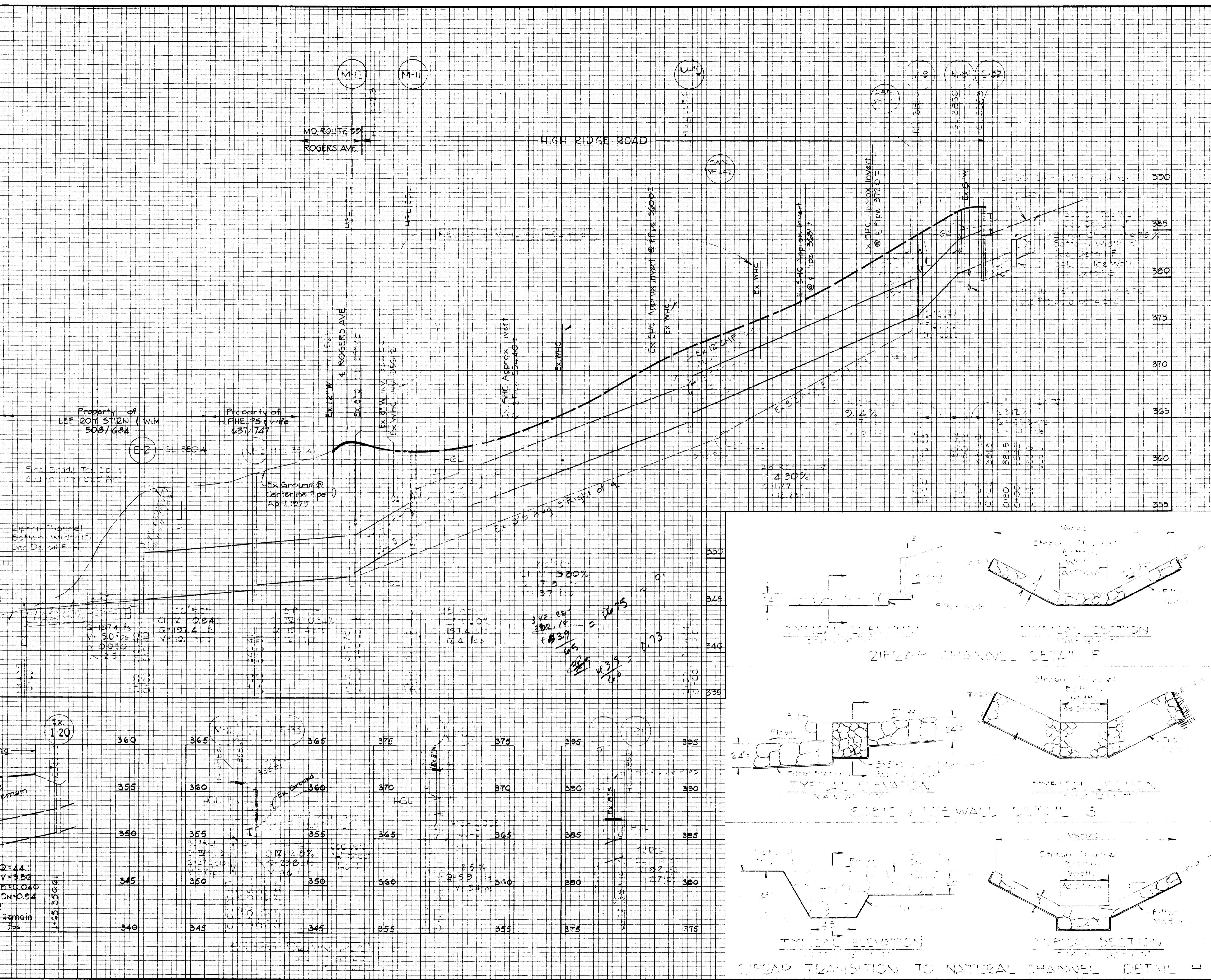
**HIGH RIDGE STORM DRAINS**  
CAPITAL PROJECT D-1049  
ELECTION DISTRICT NO.2  
HOWARD COUNTY, MARYLAND

DESIGN BY: F.A.W.  
DRAWN BY: N.L.S.  
CHECKED BY: R.H.B.  
SHEET 2 of 4  
CONTRACT NO. D-1049

BRUNING AND IM2

STRUCTURE SCHEDULE			INV IN	INV OUT	TOP ELEV	REMARKS*
I-1	"A-10" Depressed	Rosemar Dr.	-	434.91	438.3	SD 4.02
I-2	"A-5" Depressed	Rosemar Dr.	434.36	435.80	438.3	SD 4.01
M-3	Standard Manhole 4' Dia. Type A	Rosemar Dr.	432.40	431.90	444.4	SD 3.01 or 3.02
M-4	Standard Manhole 4' Dia. Type A	Normandy Dr.	426.27	425.84	432.2	SD 3.01 or 3.02
E-30	"F" Masonry Endwall Slope 2:1 D=15"	Between Normandy and Rosemar Dr.	-	422.00	424.5	D-59 Pg. 113
I-3	"K" Inlet w/ grate No Conc. Gutter	Between Normandy and Rosemar Dr.	421.70	421.70	424.1	SD 4.13
I-4	"K" Inlet w/ grate No Conc. Gutter	Between Normandy and Rosemar Dr.	419.10	418.35	421.4	SD 4.13
I-9	"A-5" w/ Deflector	Knoll Cr.	-	428.51	431.5	SD 4.01 and SD 4.83
I-31	"A-5" w/ Deflector	Knoll Cr.	-	428.66	431.2	SD 4.01 and SD 4.83
I-10	"A-10" w/ Deflector	Normandy Dr.	-	433.07	438.0	SD 4.02 and SD 4.83
M-5	Standard Manhole 4' Dia. Type A	Normandy Dr.	428.00	427.50	432.5	SD 3.01 or 3.02
M-1	Standard Manhole 5' Dia. Bench=1/2 D	Between High Ridge Rd. and Normandy Dr.	410.16	405.50	414.6	SD 1.12
M-6	Standard Manhole 5' Dia. Bench=1/2 D	Between High Ridge Rd. and Normandy Dr.	387.50	386.75	394.0	SD 1.12
E-13	Standard "F" Masonry Endwall, Slope 1 1/2:1 D=18"	Between High Ridge Rd. and Normandy Dr.	-	392.60	395.7	D-59 Pg. 114
M-7	Standard Manhole 5' Dia. Bench=1/2 D	Between High Ridge Rd. and Normandy Dr.	385.00	384.00	390.0	SD 1.12
I-21	"A-10" w/ rear opening 2'-0" x 3'-8"	High Ridge Rd.	-	383.16	387.1	SD 4.02
E-32	Standard "C" Endwall D=42"	High Ridge Rd.	-	381.50	387.5	SD 5.21
M-8	Standard Manhole Type C 60" D	High Ridge Rd.	380.72	380.42	387.2	SD 3.04
M-9	Standard Manhole Type C 60" D	High Ridge Rd.	376.58	376.08	384.5	SD 3.04
M-10	Standard Manhole Type C 60" D	High Ridge Rd.	365.50	364.54	372.8	SD 3.04
I-23	"A-10"	High Ridge Rd.	-	367.83	372.5	SD 4.02
M-11	Standard Manhole Type C 72" D	High Ridge Rd.	355.25	352.18	361.5	SD 3.04
M-12	Standard Manhole Type C 72" D	Rogers Ave.	348.28	347.78	362.5	SD 3.04
E-33	Standard "F" Masonry Endwall Slope 2:1 D=30"	High Ridge Rd.	-	356.20	360.7	D-59 Pg. 113
M-13	Standard Manhole Type C 72" D	Rogers Ave.	346.91	346.41	359.0	SD 3.04
E-2	Standard Small "B-60" Headwall D=60"	High Ridge Rd.	345.40	345.4	356.4	D-48 Pg. 103
I-18	"A-10" Depressed With Rear Opening	High Ridge Rd.	336.25	336.10	361.0	SD 4.02
I-33	"A-5" w/ Deflectors	High Ridge Rd.	336.00	334.70	360.9	SD 4.01 and SD 4.83

\* Standard Details are reproduced in the Specifications.

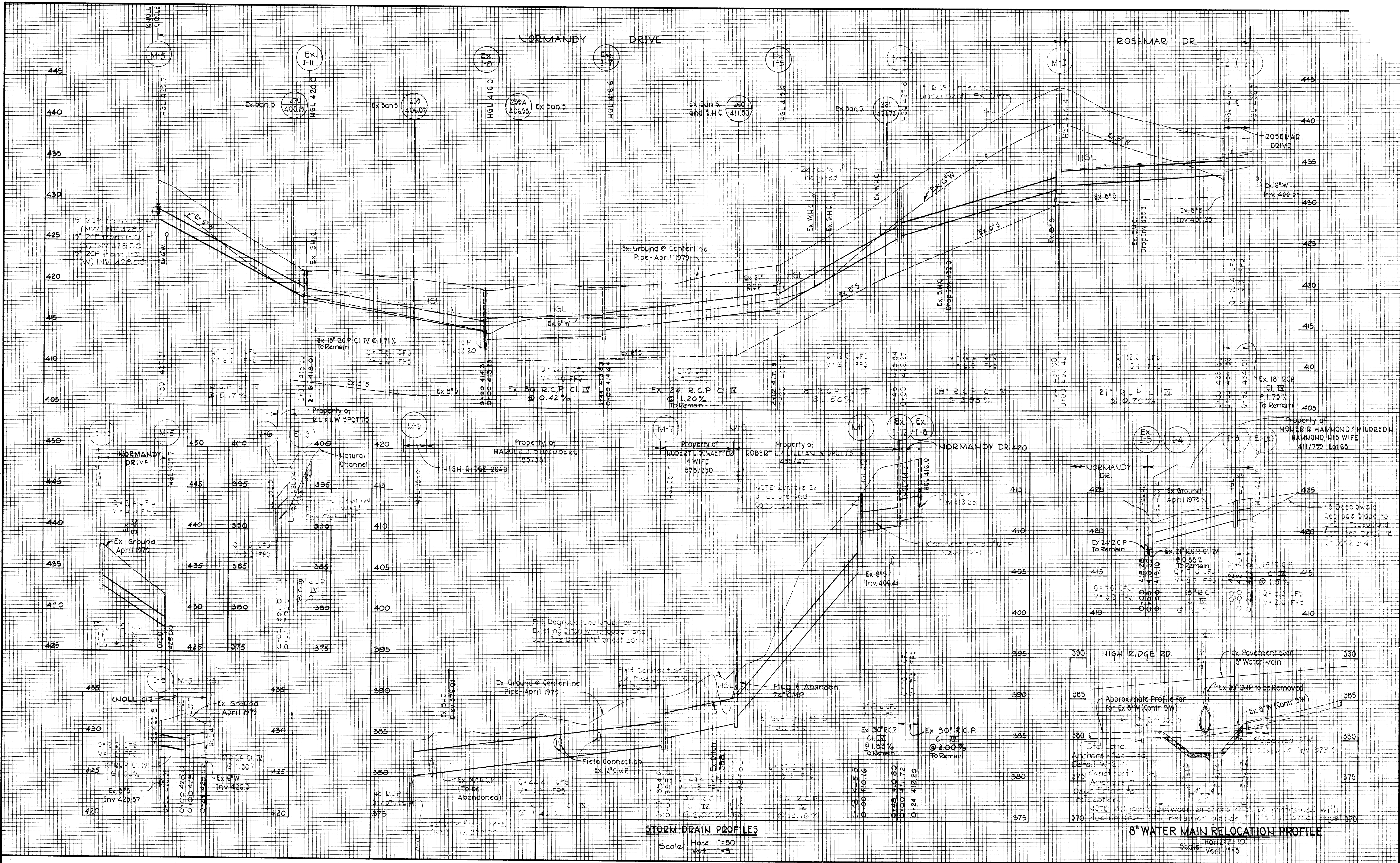


DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
DIRECTOR OF PUBLIC WORKS DATE CHIEF-BUREAU OF ENGINEERING DATE  
Elizabeth Anderson Pallas 10/30/82  
CHIEF ROADS, BRIDGES, STORM DRAINS DIVISION DATE

**PURDUM & JESCHKE**  
CONSULTING ENGINEERS  
LAND SURVEYORS  
1023 North Calvert Street  
Baltimore, Maryland 21202 301/837-0194

PROFILE OF  
HIGH RIDGE ROAD  
STORM DRAINAGE SYSTEM

**HIGH RIDGE STORM DRAINS**  
CAPITAL PROJECT D-1049  
ELECTION DISTRICT NO. 2  
HOWARD COUNTY, MARYLAND  
DESIGN BY L.K.G.  
DRAWN BY N.L.S.  
CHECKED BY F.A.W.  
SHEET 3 of 4  
CONTRACT NO. D-1049



**STORM DRAIN PROFILES**

Scale: Horiz: 1"=50'  
Vert: 1"=5'

**8" WATER MAIN RELOCATION PROFILE**

Scale: Horiz: 1"=10'  
Vert: 1"=5'

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS DATE  
 CHIEF-BUREAU OF ENGINEERING DATE  
 CHIEF ROADS, BRIDGES, STORM DRAINS DIVISION DATE

**PURDUM & JESCHKE**  
**CONSULTING ENGINEERS**  
**LAND SURVEYORS**

1023 North Calvert Street  
 Baltimore, Maryland 21202 301/837-0194

PROFILE OF  
**NORMANDY DRIVE**  
 STORM DRAINAGE SYSTEM

**HIGH RIDGE STORM DRAINS**  
 CAPITAL PROJECT D-1049  
 ELECTION DISTRICT NO.2  
 HOWARD COUNTY, MARYLAND

DESIGN BY L.K.G.  
 DRAWN BY N.L.S.  
 CHECKED BY F.A.W.

SHEET 4 of 4

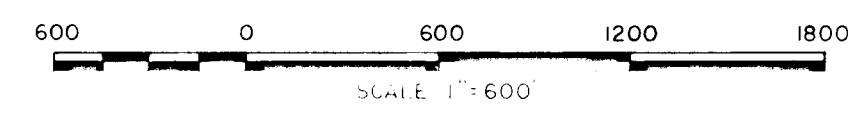
CONTRACT NO.  
 D-1049



836,000 E      839,000 E      842,000 E      845,000 E      848,000 E      851,000 E      854,000 E

**LEGEND**

- 12" — STORM DRAIN/PIPE SIZE
- INLET
- MANHOLE
- ▭ POND
- ▭ SEDIMENT CONTROL POND



45