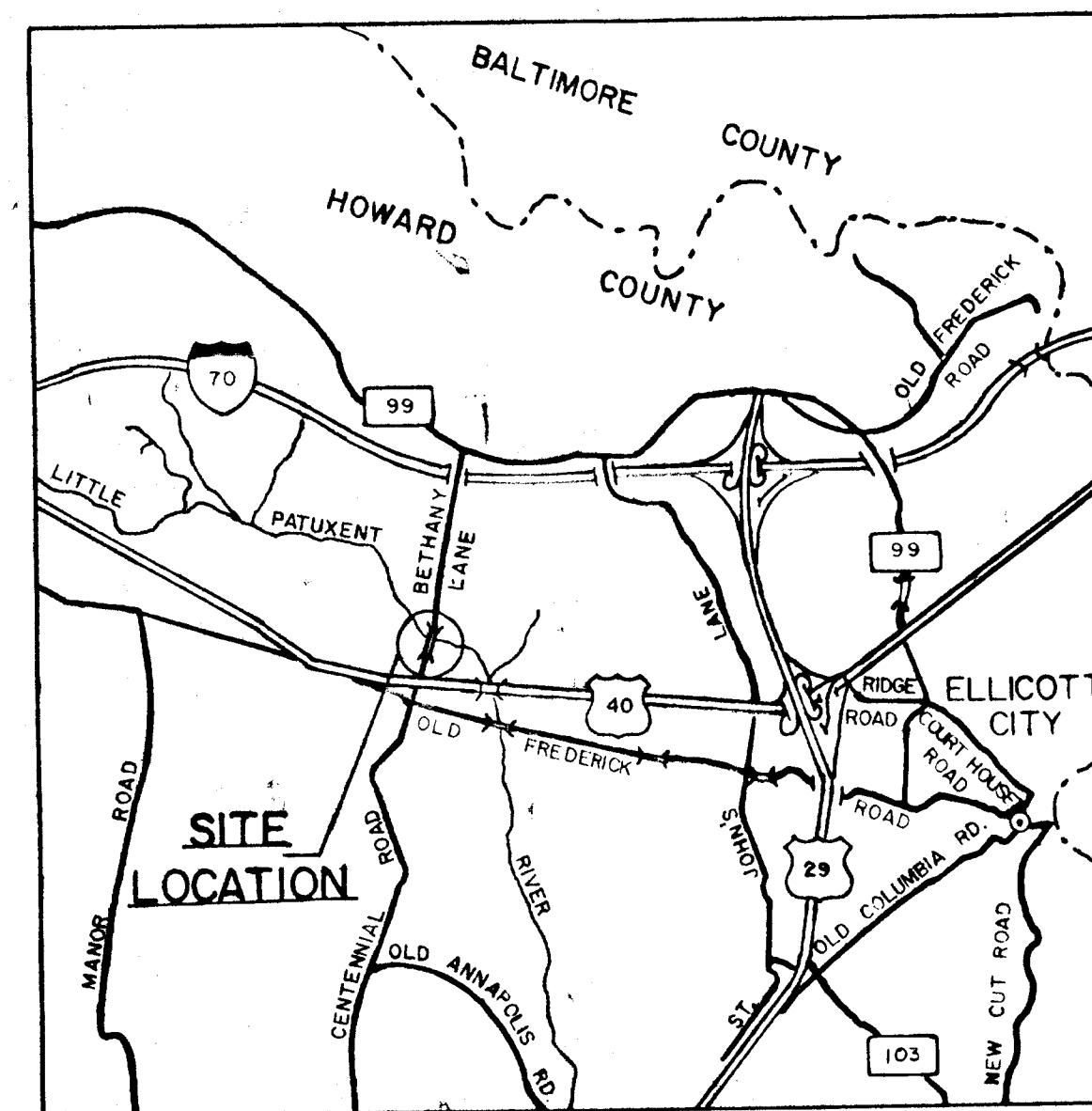


HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS

BETHANY LANE IMPROVEMENT

CAPITAL PROJECT NO. J - 4010

INDEX OF SHEETS	DESCRIPTION
NUMBER	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTIONS & DETAILS
3	DETAILS
4	PLAN & PROFILE
5	SEDIMENT AND EROSION CONTROL PLAN



LOCATION MAP
SCALE: 1" = 1 MILE

LENGTH OF PROJECT : 0.21 MILES
DESIGN SPEED : 40 MPH.

CONVENTIONAL SIGNS

STATE AND NATIONAL LINE	-----	CULVERTS	
COUNTY LINE	-----	RETAINING WALL	=====
CITY OR VILLAGE	-----	DROP INLET	□
GUARD RAIL } FENCE LINE }	-----	TROLLEY POLE	•
UNFENCED PROPERTY	-----	POWER POLE	•
RIGHT OF WAY LINE	-----	TELEPHONE OR TELEGRAPH POLE	•
TRAVELED WAY	-----	MARSH	
RAILROADS	+++++	HEDGE	-----
BASE OR SURVEY LINE	-----	GROUND ELEVATION	0.0'S
		GRADE ELEVATION	0.0'S

APPROVED _____
CHIEF, ROADS, BRIDGES & STORM DRAINS DIVISION

APPROVED _____
CHIEF, BUREAU OF ENGINEERING

APPROVED _____
DIRECTOR, DEPARTMENT OF PUBLIC WORKS

By the Developer:
"I certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project."

Signature _____ Date _____

By the Engineer:
"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature _____ Date _____

Reviewed for _____ S.C.D. and meets Technical Requirements.

U.S. Soil Conservation Service _____ Date _____

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

Howard S.C.D. _____ Date _____



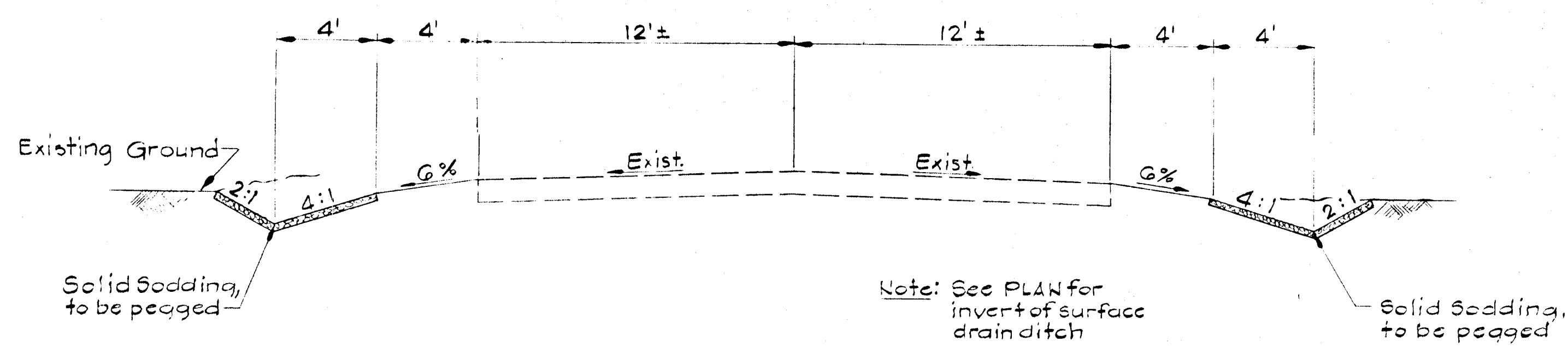
JAMES R. DUFFY, P.E. DATE

DUFFY, MONTGOMERY & ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND

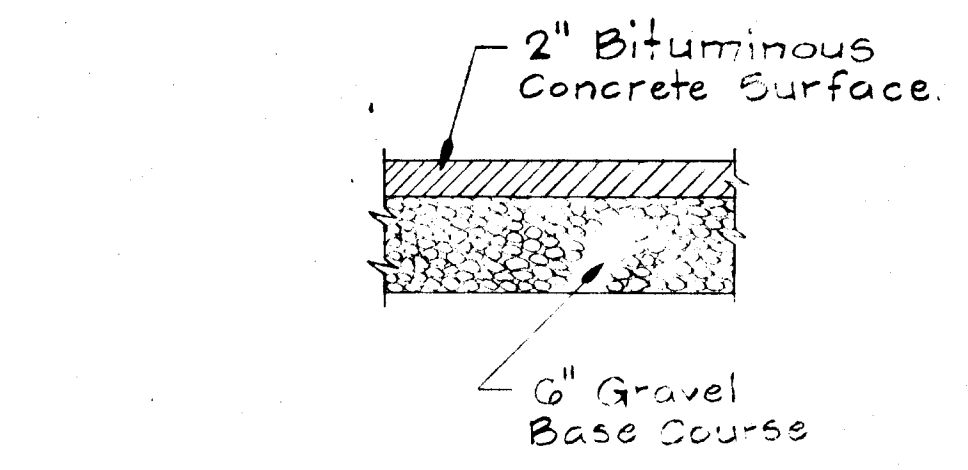
GENERAL NOTES

- 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 PLATS.
- EXISTING PRIVATE DRIVEWAYS, FENCES, MAILBOXES, SIGNS AND SHRUBS DISTURBED BY THE WORK SHALL BE RECONSTRUCTED OR REPLACED.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT \ominus ELEVATIONS.
- ALL SLOPES AND/OR DISTURBED AREAS SHALL RECEIVE 2" TOPSOIL, SEED AND MULCH EXCEPT WHERE OTHERWISE INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL TEMPORARY SEDIMENT CONTROL MEASURE AS SHOWN ON THE DRAWINGS. HOWEVER, ANY SEDIMENT CONTROL MEASURES NOT SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS, BUT REQUIRED AS A RESULT OF THE CONTRACTORS EXCAVATIONS OR ACTIVITIES SHALL NOT BE CAUSE FOR EXTRA PAYMENT.
- LOCATION POINTS FOR INLETS, MANHOLES AND STRUCTURES:

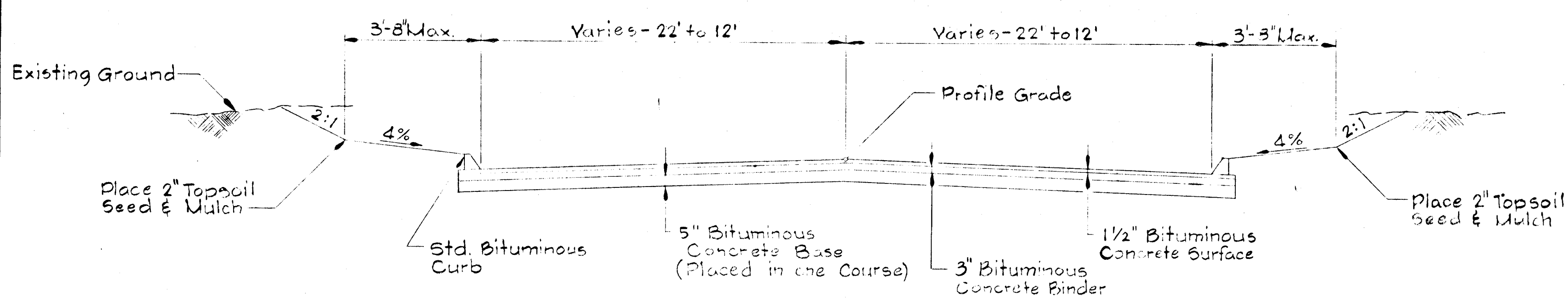
ITEM	HORIZONTAL LOC.	VERTICAL LOC.
CURB TYPE INLETS	CENTER FACE OF CURB	TOP OF CURB
GRATE TYPE INLETS	CENTER OF GRATE	TOP OF GRATE
MANHOLES	CENTER OF COVER	TOP OF COVER
ENDWALLS	CENTER OF WALL	TOP OF WALL
- APPROXIMATE LOCATION OF EXISTING UTILITIES IS SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS 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, COST SHALL BE INCLUDED IN THE PRICES BID FOR STORM DRAIN ITEMS.
- STANDARD DETAILS FOR THIS CONTRACT SHALL BE THE HOWARD COUNTY STANDARD DETAILS AS SUPPLEMENTED BY THE MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD DETAILS.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER.
- TREES ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- 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.
- HORIZONTAL AND VERTICAL CONTROLS ARE BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM, STATIONS 3241001, 3241004 AND 3240001.
- CLEARANCE BETWEEN EXISTING AND PROPOSED UTILITIES SHALL BE A MINIMUM OF SIX (6) INCHES. 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 ITEMS.
- FOR MATERIALS AND CONSTRUCTION METHODS USE HOWARD COUNTY STANDARD SPECIFICATIONS.
- WATER HOUSE CONNECTIONS TO BE ADJUSTED TO PROVIDE CLEARANCE FOR PROPOSED STORM DRAIN SYSTEMS, AS DIRECTED BY THE ENGINEER.
- ALL EXISTING STORM DRAIN PIPES, INLETS, HEADWALLS, ROOF DRAINS, SUMP PUMP OUTLETS, ETC. LOCATED WITHIN THE CONSTRUCTION LIMITS ARE TO BE REMOVED, PLUGGED OR CONNECTED TO THE NEW SYSTEM AS DIRECTED BY THE ENGINEER.



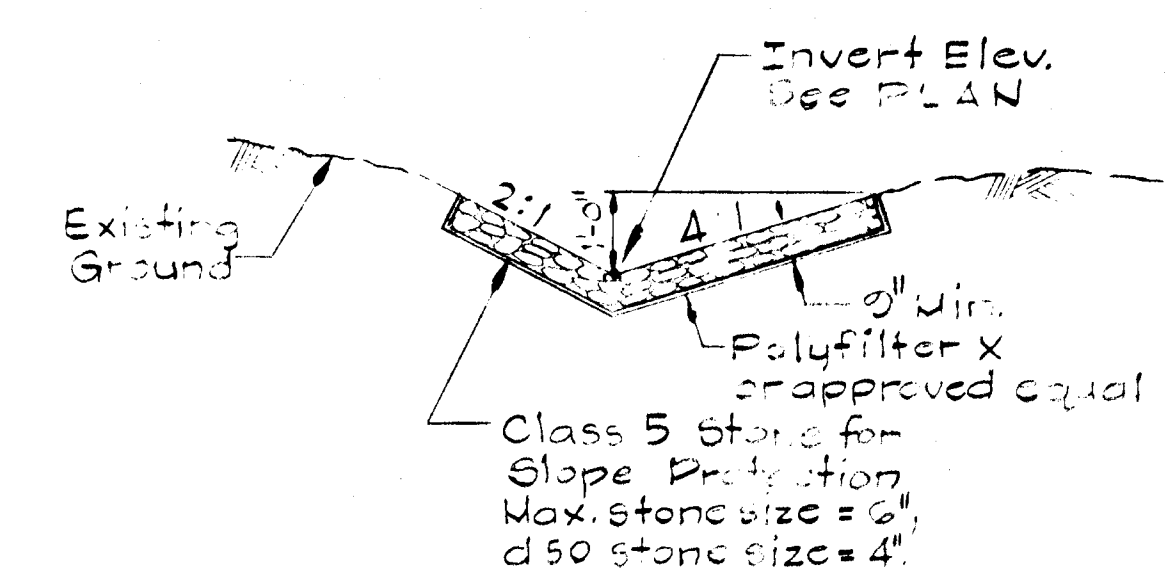
TYPICAL EXISTING SECTION
STA. 16+30 to STA. 21+
Scale: 1/4" = 1'-0"



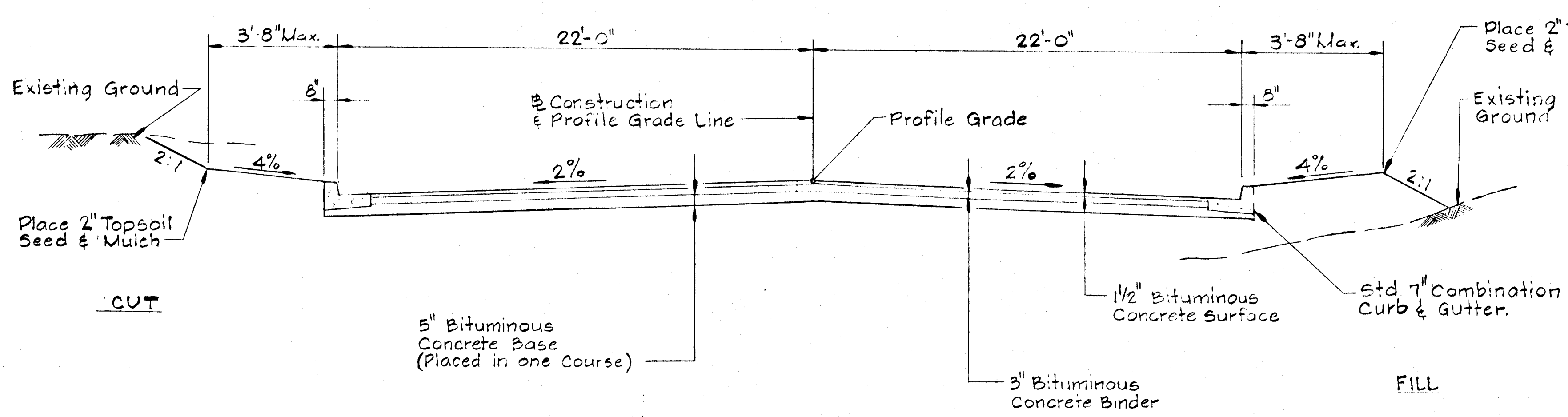
PARKING AREA PAVING DETAIL



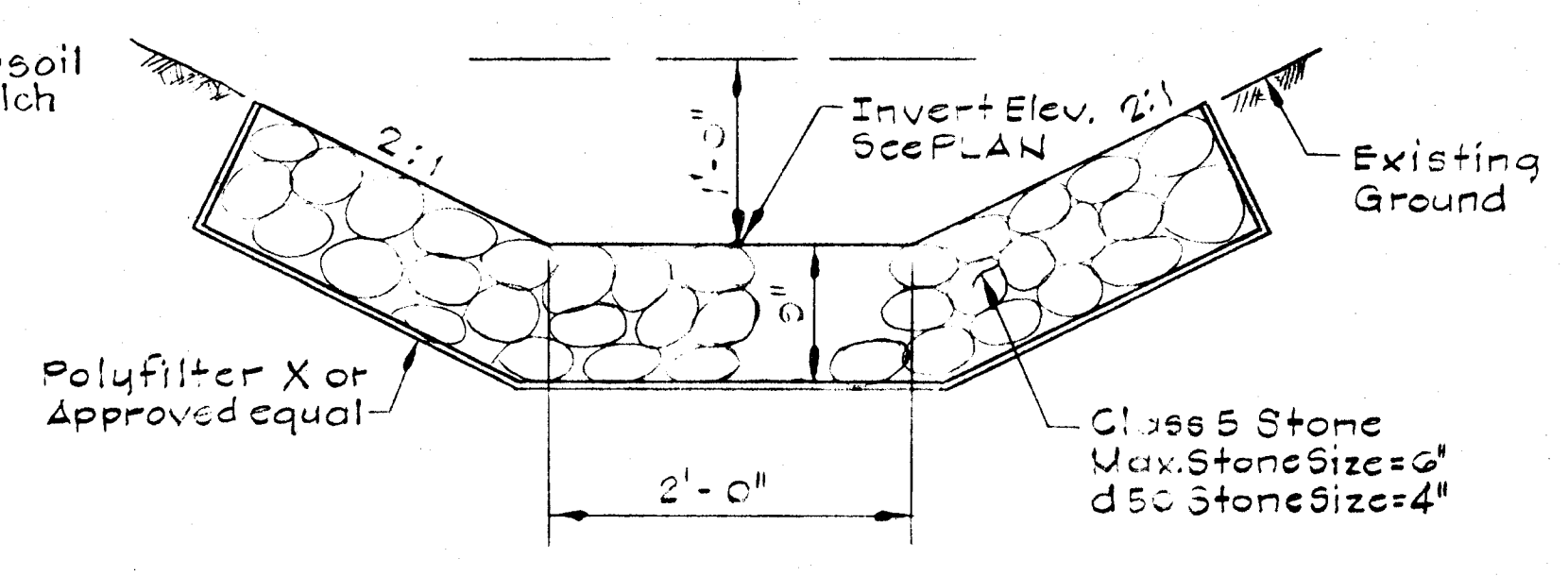
TRANSITION SECTION
STA. 15+25 to STA. 16+50
Scale: 1/4" = 1'-0"



PLACED RIP RAP DITCH
Not to Scale

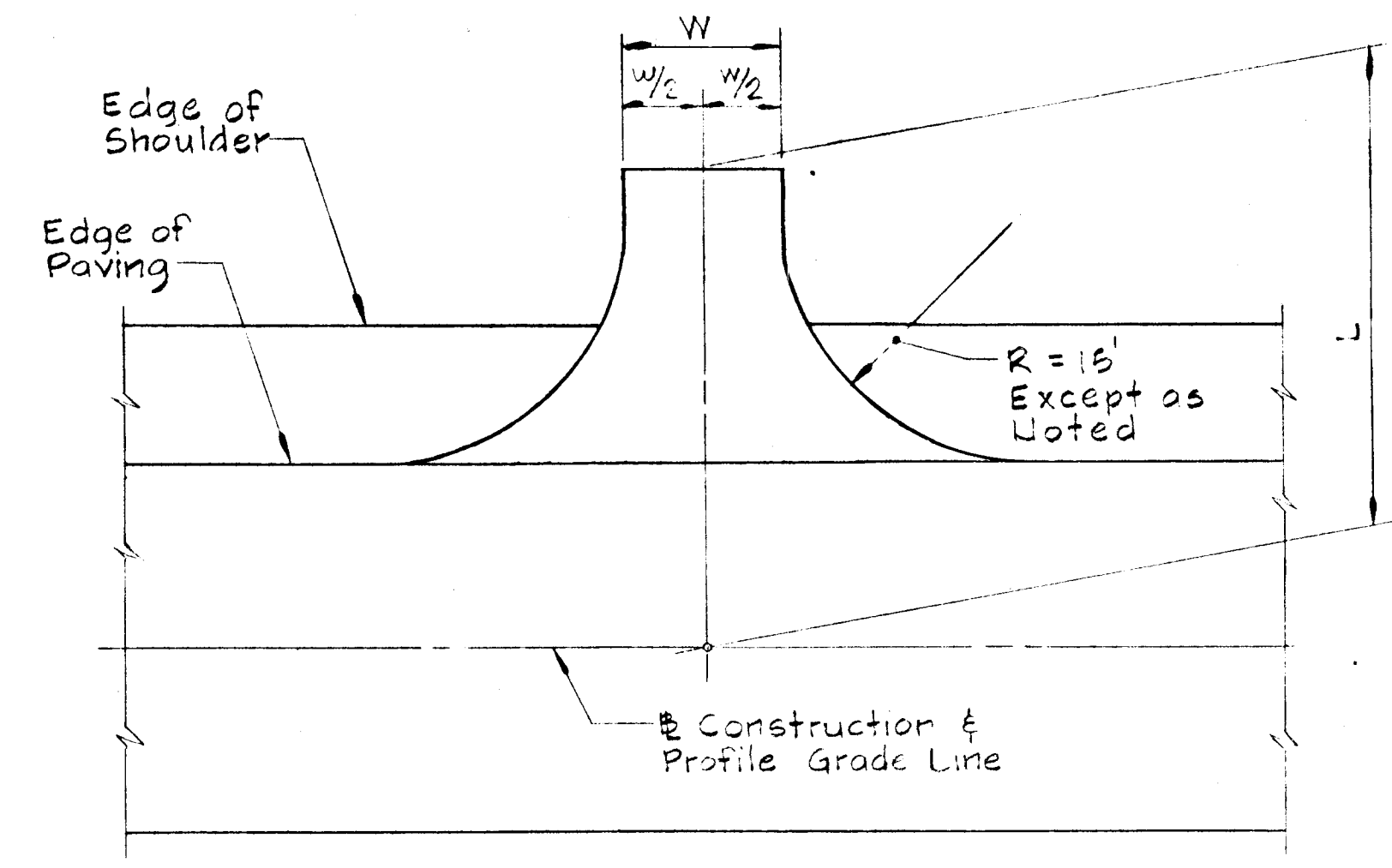


TYPICAL CLOSED SECTION
STA. 10+00 to STA. 15+25
Scale: 1/4" = 1'-0"



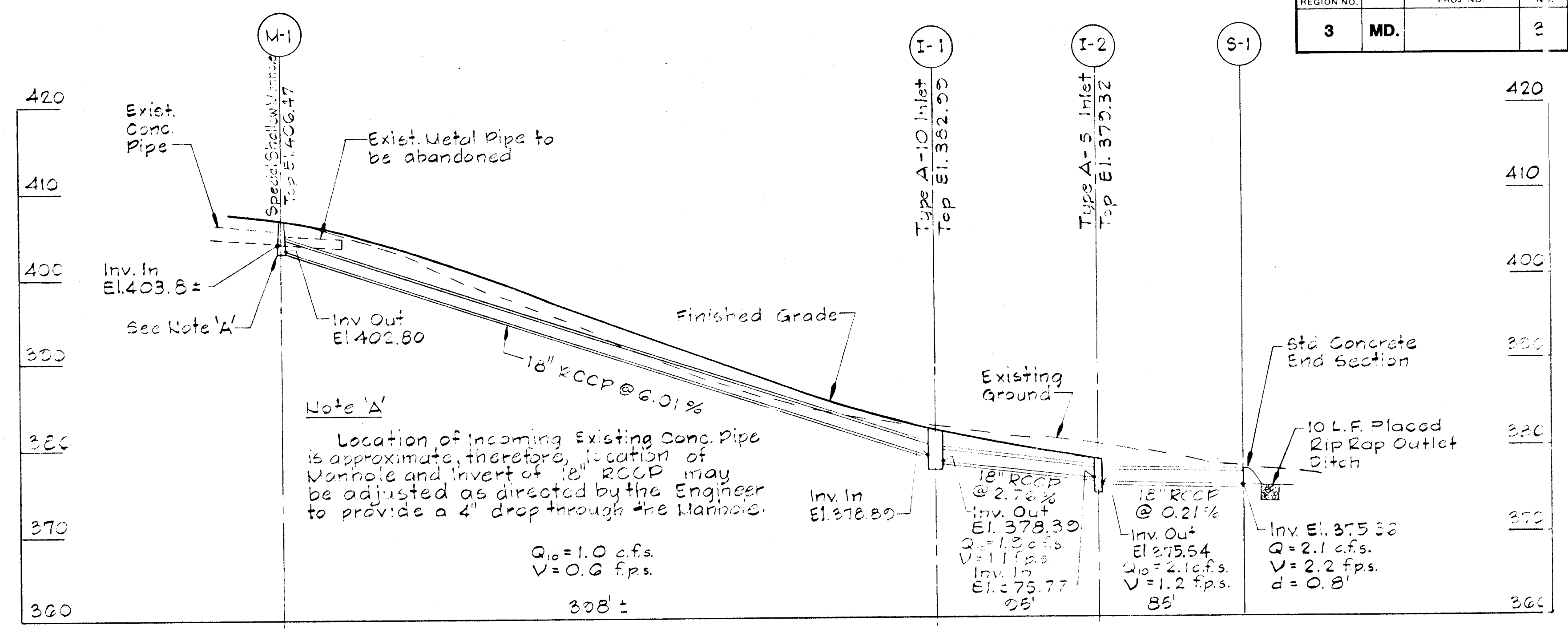
PLACED RIPRAP PIPE OUTLET DITCH
Not to Scale

REVISIONS	HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS BETHANY LANE IMPROVEMENT TYPICAL SECTIONS & DETAILS
CONT. NO. J-4010 F. A. P. NO. N.C.	SHEET NO. 2 of 5
PREL. TRAC. BY N.C.	FINAL TRAC. BY N.C.



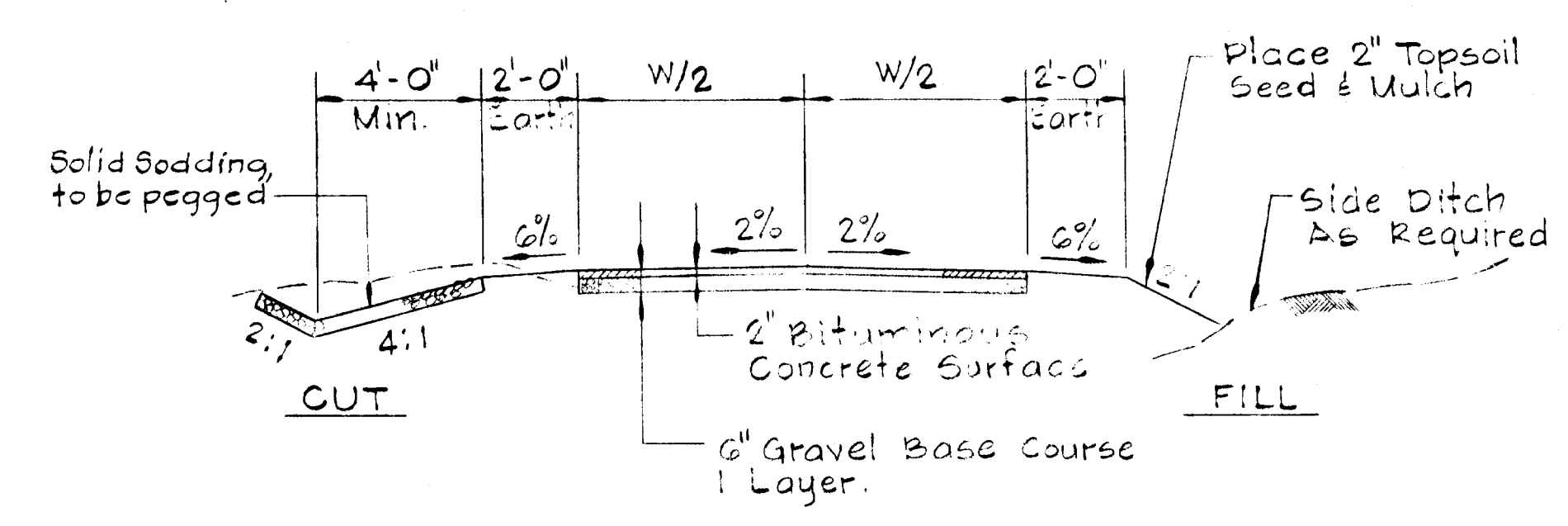
PLAN

- NOTES:**
1. Location and Alignment of Entrances as shown on the Plans are approximate and are to be adjusted to match existing entrance conditions.
 2. Dimensions L & W as shown on plans are approximate and are to be adjusted as required or as directed by the Engineer.

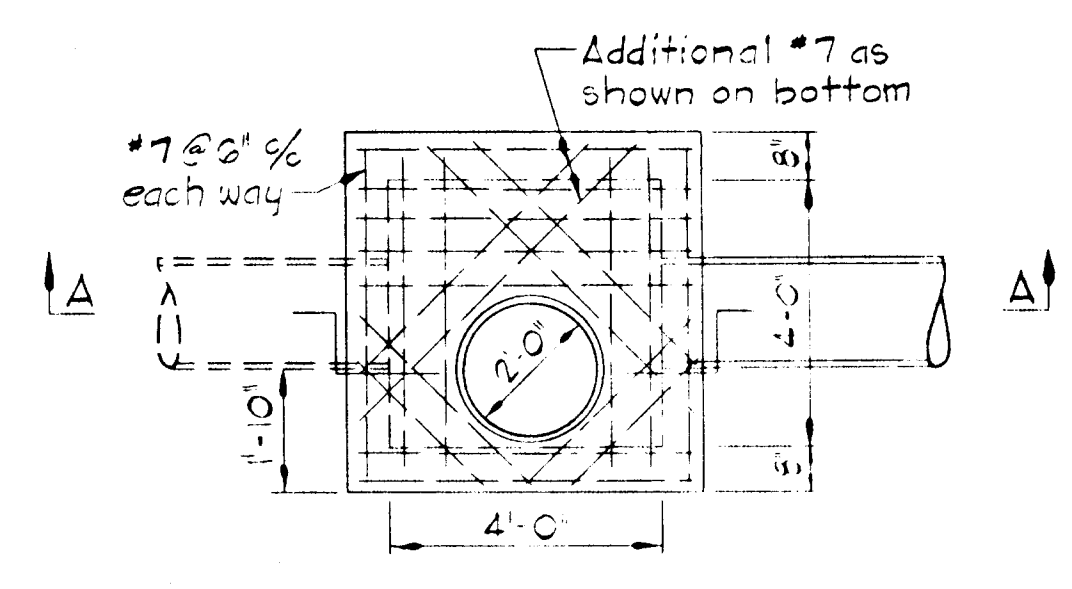


STORM DRAIN PROFILE

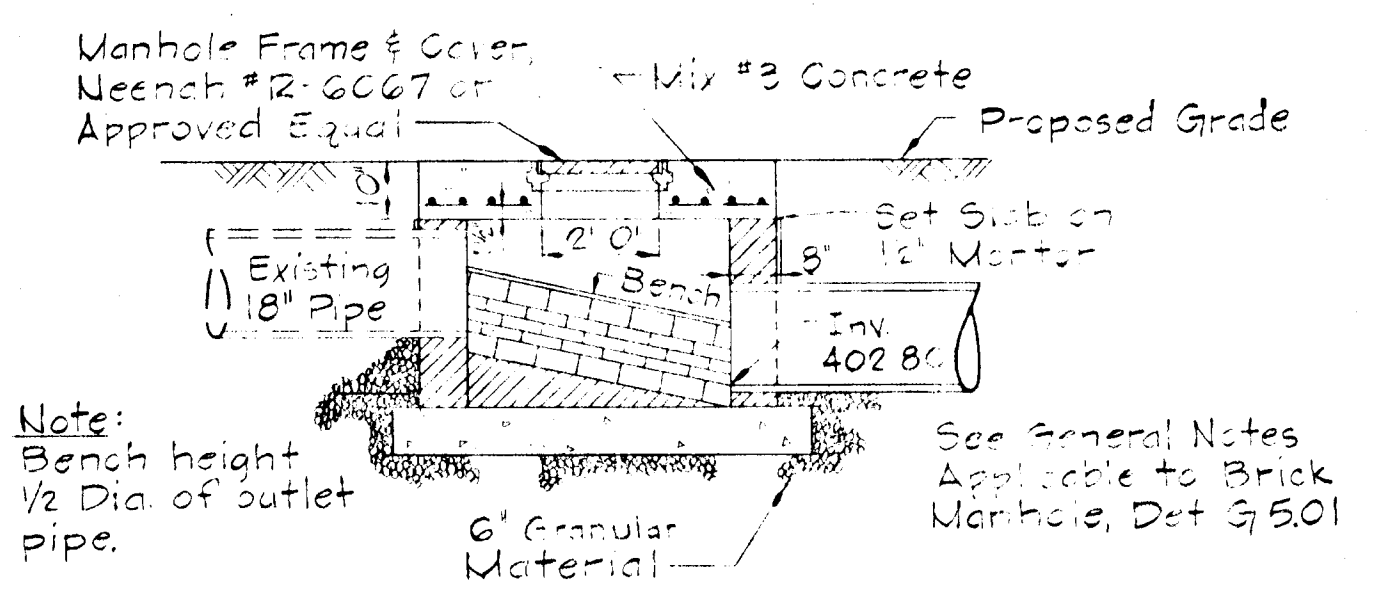
Scale: Horiz. 1" = 50'
Vert. 1" = 10'



TYPICAL SECTION

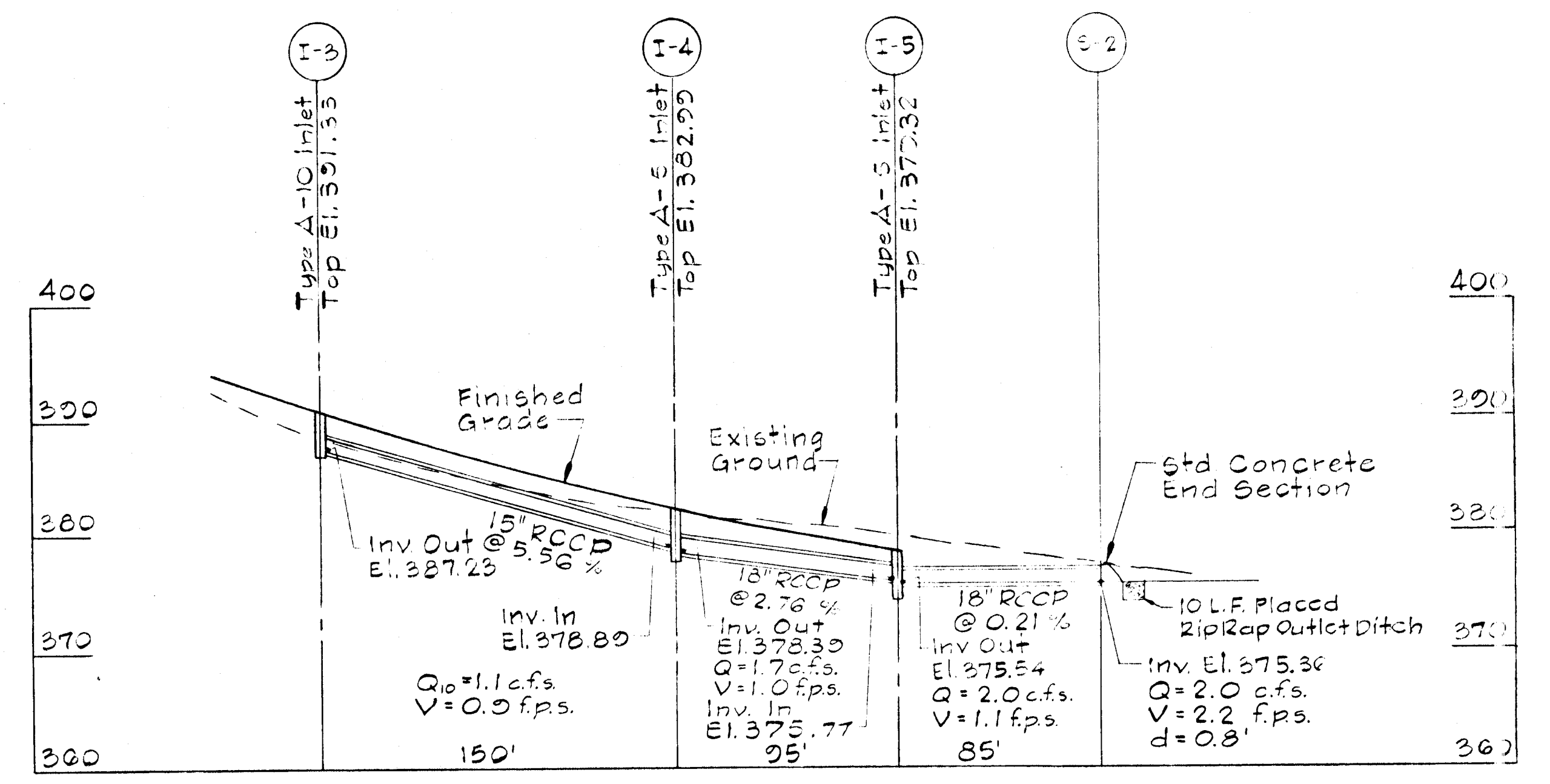


PLAN



SECTION A-A

SPECIAL SHALLOW MANHOLE, M-1



STORM DRAIN PROFILE

Scale: Horiz. 1" = 50'
Vert. 1" = 10'

STRUCTURE SCHEDULE						
NO.	TYPE	INV. IN	INV. OUT	TOP ELEV.	LOCATION	REMARKS
I-1	A-10	378.89	378.39	382.99	22' Lt. Sta. 14+20	Dwg. SD 4.02
I-2	A-5	375.77	375.54	379.32	22' Lt. Sta. 15+15	Dwg. SD 4.01
I-3	A-10	-	387.23	391.33	22' Rt. Sta. 12+70	Dwg. SD 4.02
I-4	A-5	378.89	378.39	382.99	22' Rt. Sta. 14+20	Dwg. SD 4.01
I-5	A-5	375.77	375.54	379.32	22' Rt. Sta. 15+15	Dwg. SD 4.01
M-1	Special Shallow M.H. Conc.	403.8±	402.80	406.47	6' Lt. Sta. 10+25	See Detail Sheet 3 of 5 See Note 'A'
S-1	End Sect. Conc. End Sect.	-	375.36	-	16.5' Lt. Sta. 16+00	Dwg. SD 5.52
S-2	End Sect.	-	375.36	-	20' Rt. Sta. 16+00	Dwg. SD 5.52

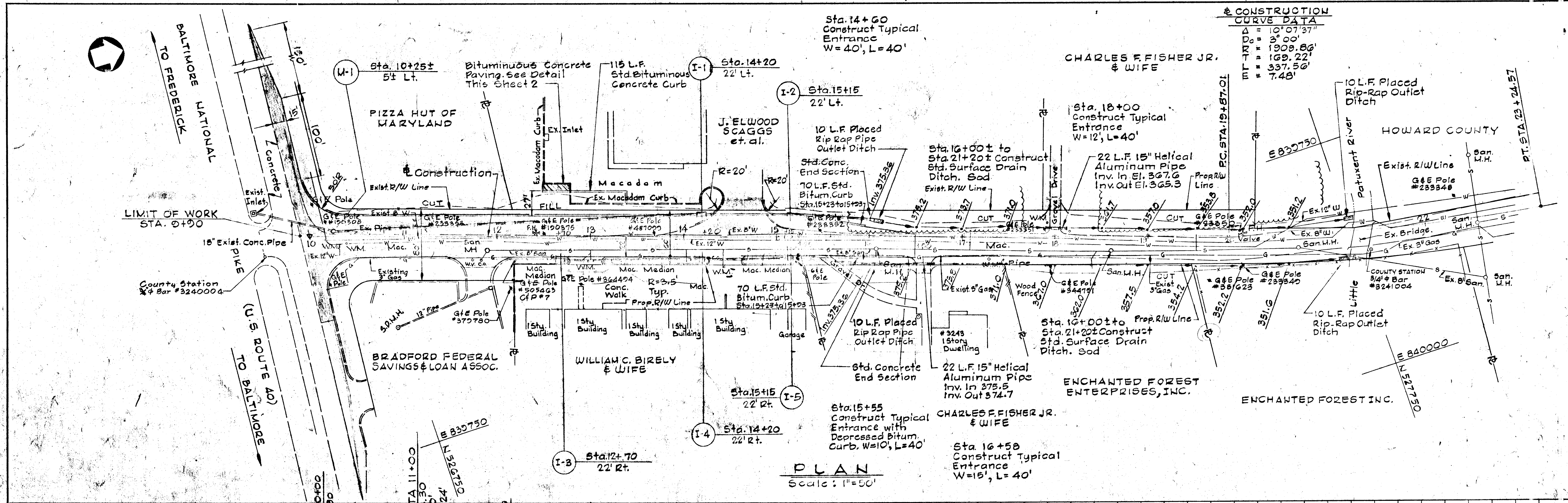
NOTE:
The Typical Entrance Profile is a general alignment and is to be adjusted to suit the individual entrance conditions encountered. The entrance grade is to be constructed so as to create a smooth transition from Bethany Lane to the limits of the entrance as directed by the Engineer. Maximum grade is 12%.

ENTRANCE DETAILS

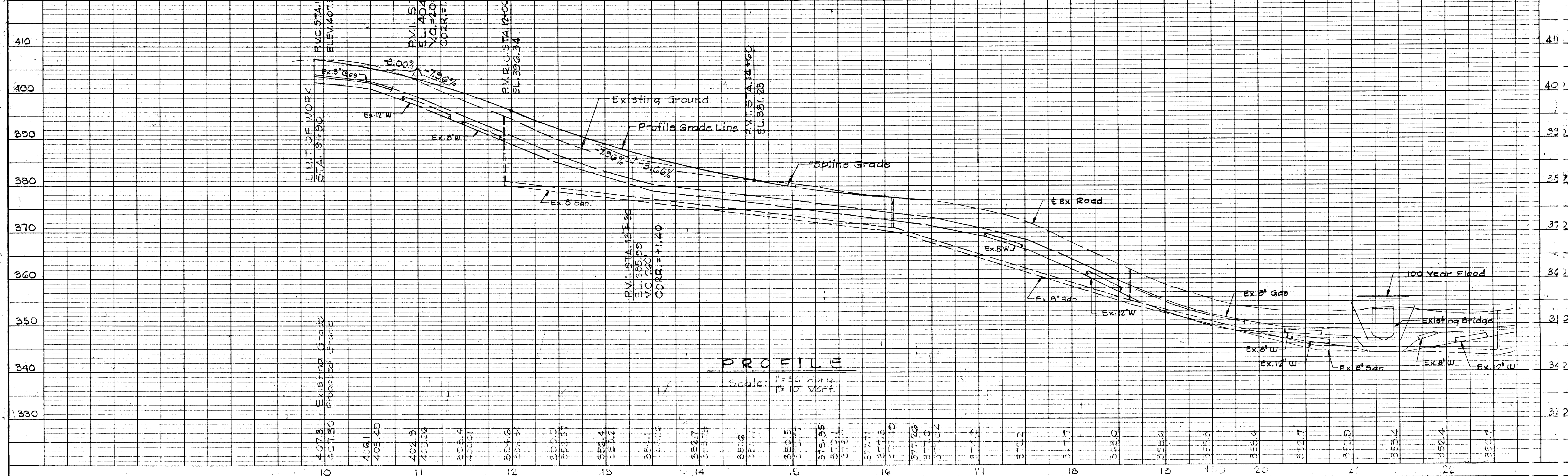
REVISIONS		HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS	
		BETHANY LANE IMPROVEMENT DETAILS	
CONT. NO. J-4010	F. A. P. NO.	SHEET NO. 2	OF 3
PREL. TRAC. BY NC	FINAL TRAC. BY NC		

DATE: _____ BY: _____
 PLAN
 SURVEYED, PLOTTED, ALIGNED, CHECKED, AND APPROVED FOR CONSTRUCTION.
 NOTE BOOK No. _____

DATE: _____ BY: _____
 PROFILE
 SURVEYED, PLOTTED, GRADES CHECKED, AND APPROVED FOR CONSTRUCTION.
 NOTE BOOK No. _____



PLAN
 Scale: 1"=50'

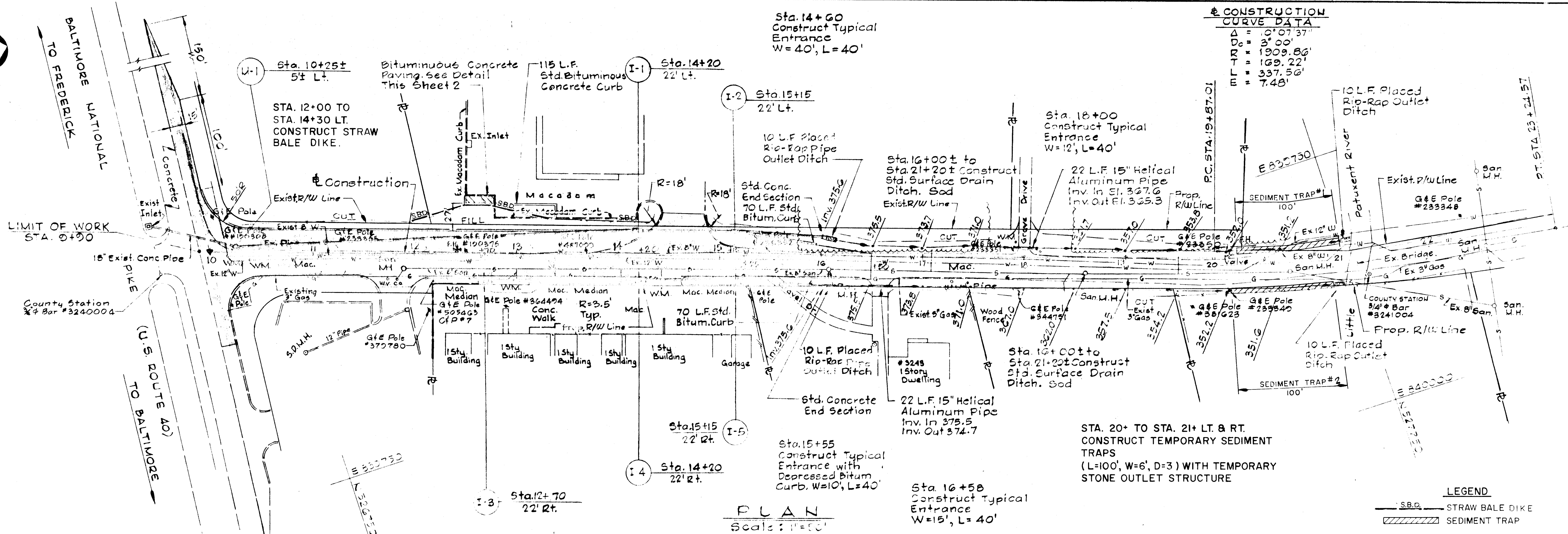


PROFILE
 Scale: 1"=50' Horiz.
 1"=10' Vert.

CONSTRUCTION CURVE DATA

Δ	= 10° 07' 37"
MD	= 3' 00"
ME	= 1909.86'
MT	= 169.22'
MF	= 337.56'
MG	= 7.48'

PLAN
 NOTE BOOK
 NO.



PLAN
 Scale: 1"=40'

CONSTRUCTION CURVE DATA

Δ	= 10° 07' 37"
D _c	= 3' 00"
R	= 1909.86'
T	= 169.22'
E	= 337.56'
M	= 7.48'

LEGEND
 S.B.D. STRAW BALE DIKE
 SEDIMENT TRAP

SEDIMENT CONTROL NOTES

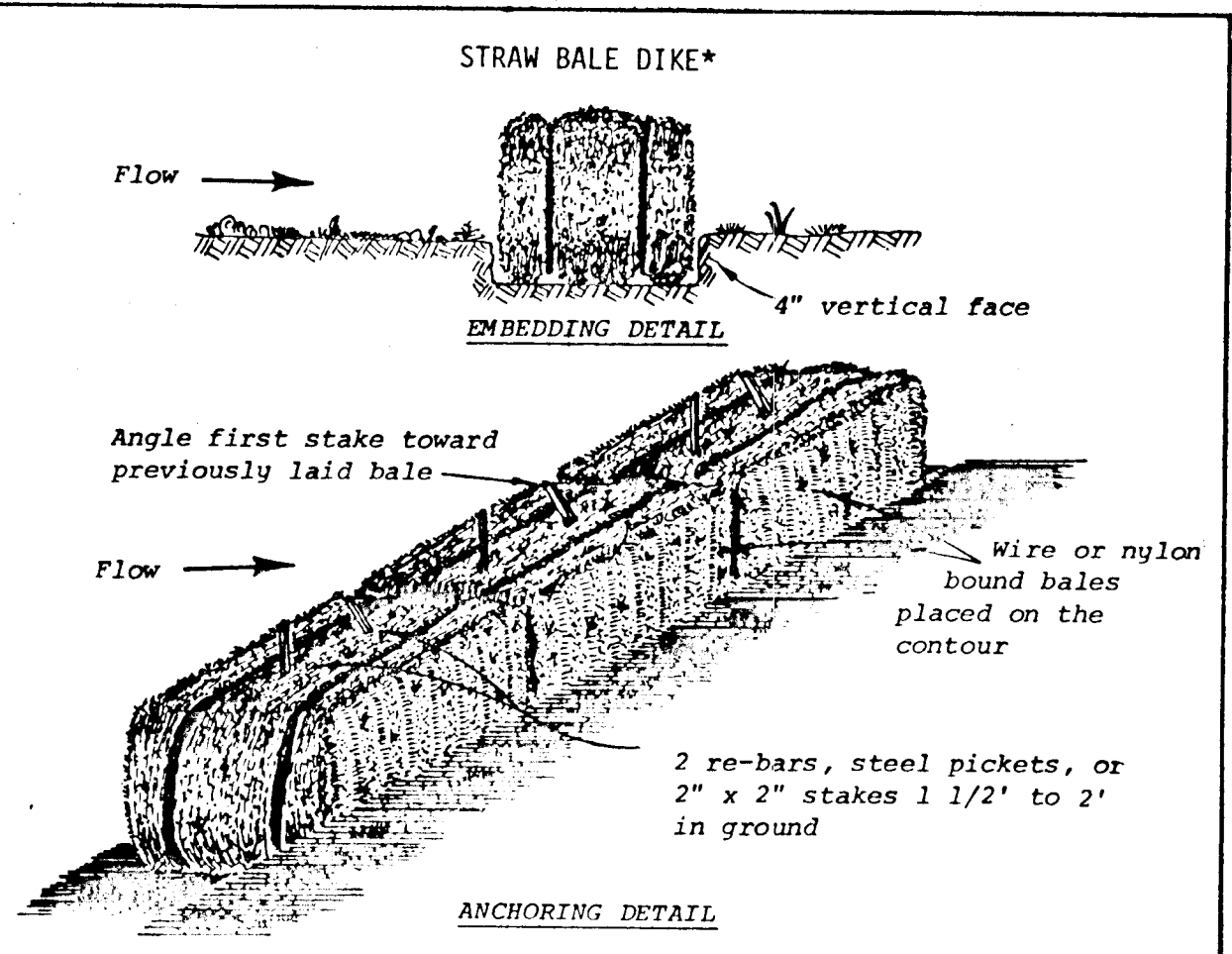
- DURING CONSTRUCTION OF THIS PROJECT EVERY POSSIBLE MEANS WILL BE TAKEN TO CONTROL SOIL EROSION AND SILTATION.
- ALL SEDIMENT CONTROL PRACTICES MUST BE INSTALLED PRIOR TO BEGINNING MAJOR GRADING, CLEARING OR CONSTRUCTION OPERATIONS. NO MAJOR OPERATIONS WILL BE CARRIED ON PRIOR TO THE COMPLETION OF THESE CONTROL MEASURES WITHOUT WRITTEN AUTHORIZATION FROM THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
- STRAW BALE STRUCTURES, TEMPORARY SEDIMENT TRAPS, ETC. WILL BE LOCATED AS CLOSELY AS POSSIBLE TO THE LOCATIONS SHOWN ON SEDIMENT CONTROL DRAWING. FIELD CHANGES AND MINOR ADJUSTMENTS ARE PERMISSIBLE AS LONG AS THE INSTALLATION IS FUNCTIONAL AND CONFORMS TO SPECIFICATIONS.
- SEEDING, MULCHING, SODDING, ETC. WHERE SPECIFIED ARE AN ESSENTIAL PART OF SEDIMENT CONTROL AND MUST BE COMPLETED ALONG WITH THE OTHER MEASURES.
- SEDIMENT TRAPS ARE TO BE CLEANED WHEN TRAPS ARE HALF FULL.
- A COPY OF THE SEDIMENT CONTROL PLAN SHALL BE AVAILABLE AT THE SITE.

CONSTRUCTION SEQUENCE

- INSTALLATION OF SEDIMENT CONTROL MEASURES.
- BEGIN EXCAVATION FOR ROADWAY AND SHOULDER.
- PLACEMENT OF ROADWAY EXCAVATION AND BORROW MATERIAL.
- PLACEMENT OF PERMANENT STABILIZATION.
- REMOVAL OF SEDIMENT CONTROL MEASURES WITH AUTHORIZATION OF THE SEDIMENT CONTROL INSPECTOR.

DESIGN DATA

No.	Sediment Trap			Stone Outlet		Drainage Area Acres
	Length	Width	Depth	Length	Elev.	
1	100	6	3	6	481.8	1.25
2	100	6	3	6	342.0	1.5

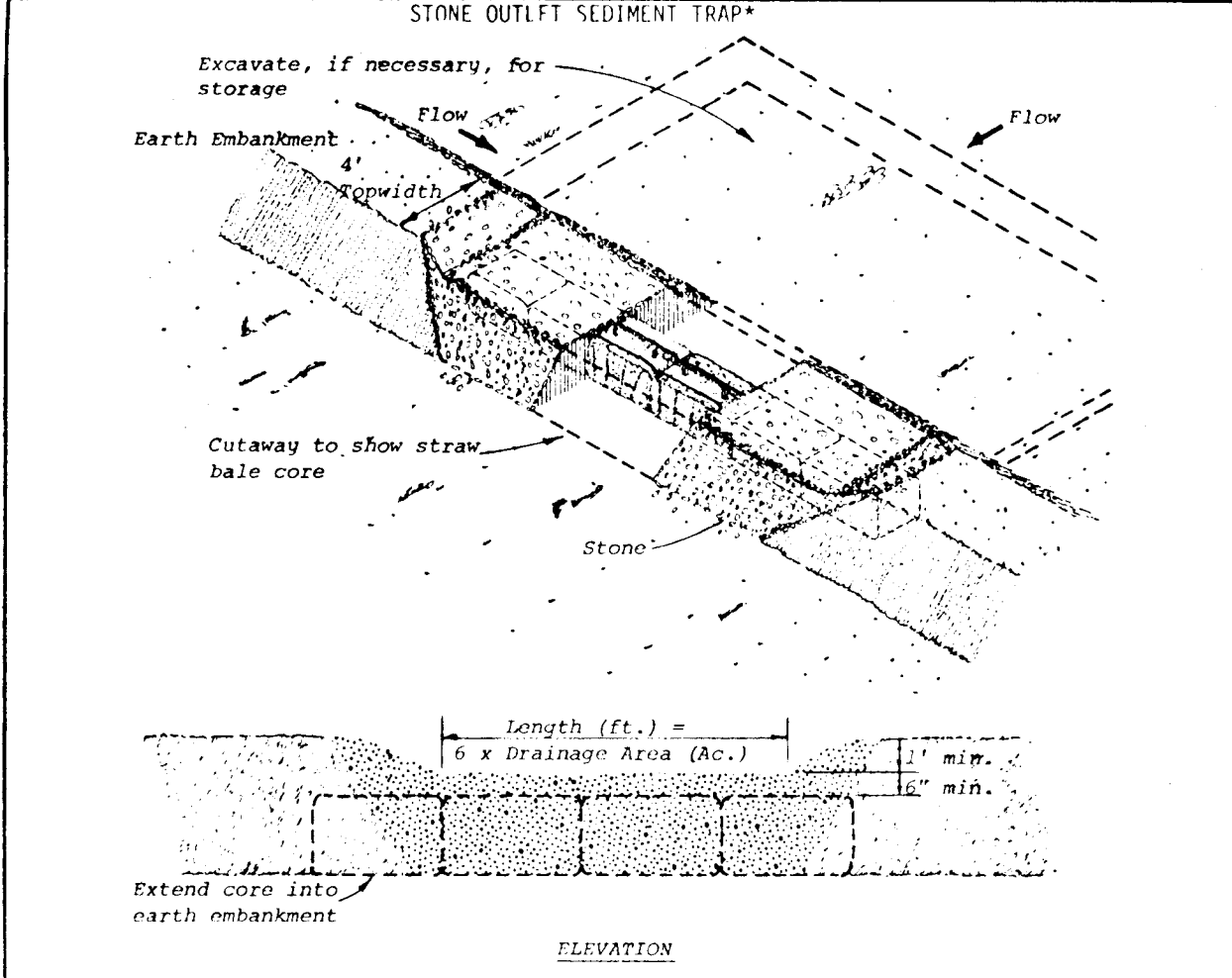


Construction Specifications

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

Standard Symbol SBD
 * Drainage area less than 1/2 acre.

U. S. DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 College Park, Md.



NOTE - Drawings show straw bales used for core. Bales are anchored as per Standard and Specifications for Straw Bale Dike. Other materials (e.g., timber or concrete block) may also be used for core. Firmly anchor all core material to ground.

- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
- The fill material for the embankment shall be free of roots or other woody vegetation as well as over sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
- Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
- The structure shall be inspected after each rain and repairs made as needed.
- Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
- The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
- All cut and fill slopes shall be 2:1 or flatter.
- The crushed stone used in the outlet shall meet AASHTO designation M43, Size No. 2 or 24 or its equivalent such as MSMA No. 2. Gravel, meeting the above gradation, may be used if crushed stone is not available. Crusher run is not acceptable.

U. S. DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 College Park, Md.

REVISIONS	HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS		
	BETHANY LANE IMPROVEMENT SEDIMENT AND EROSION CONTROL PLAN		
CONT. NO. J-4010	F. A. P. NO.	SHEET NO. 5 OF 5	
PREL. TRAC. BY UC	FINAL TRAC. BY S.W.S.		

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

PLAN AND PROFILE OF PROPOSED
COUNTY HIGHWAYS

BETHANY LANE

U.S. RTE. 40 TO MD. RTE. 99 (OLD FREDERICK ROAD)

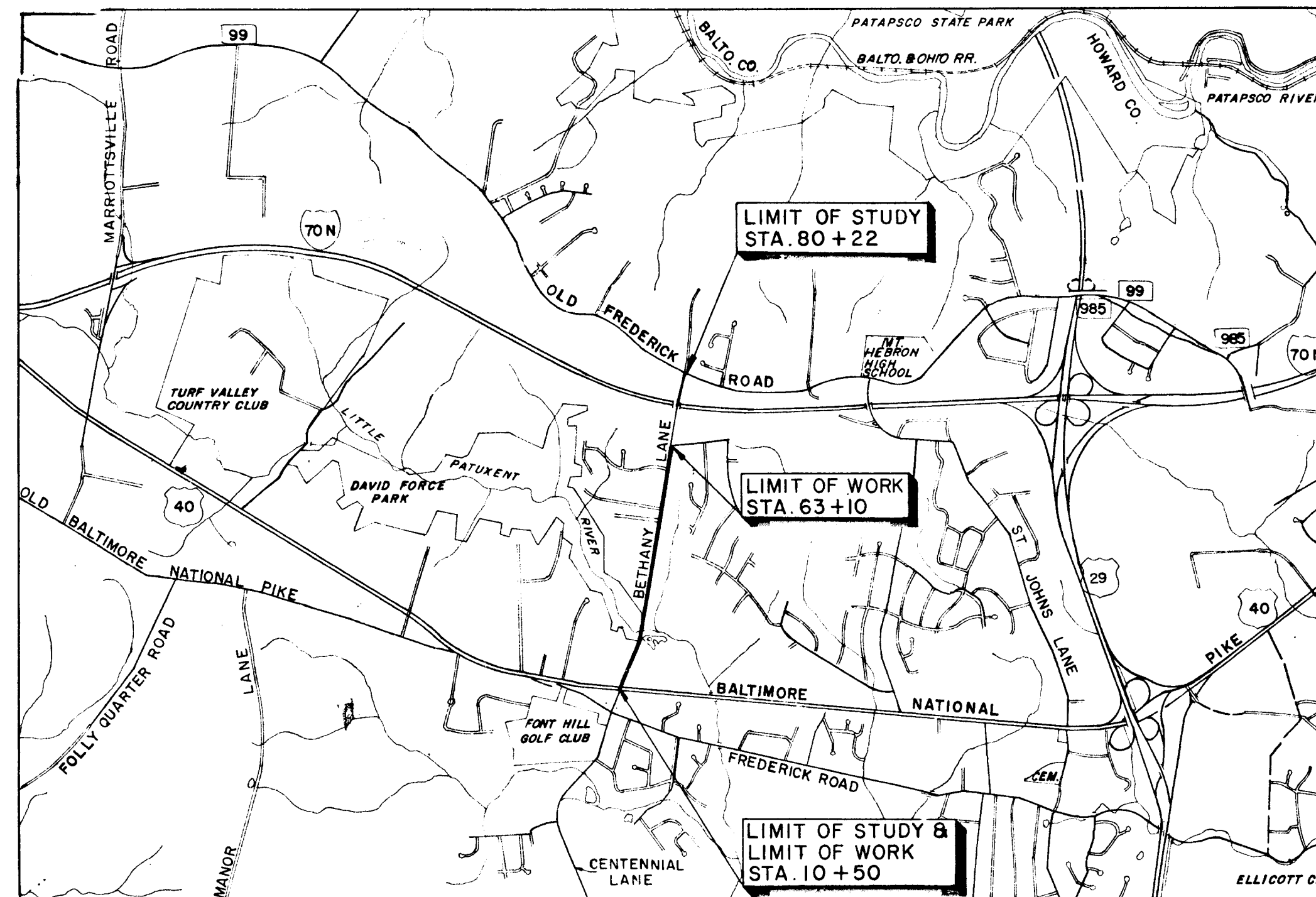
PRELIMINARY ENGINEERING REPORT

CAPITAL PROJECT NO. PW 4010

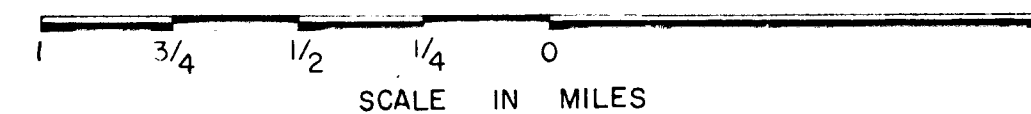
DRAWING NO.	INDEX OF SHEETS DESCRIPTION
1	TITLE SHEET
2	PLAN AND PROFILE - STA. 5+00 TO STA. 28+70
3	PLAN AND PROFILE - STA. 28+70 TO STA. 55+50
4	PLAN AND PROFILE - STA. 55+50 TO STA. 80+22

GENERAL NOTES

- The base plan sheets, including contours, for this project have been compiled from the Howard County 1"=200 feet photogrammetric mapping dated April 1971.
- The existing ground profiles and the proposed grade lines have been developed from the contract plans for the Water Main Extensions in Bethany Lane, Howard County Contract No. 71W and the State Highway Administration contract plans for the reconstruction of Bethany Lane over I-70N, S.H.A. Contract No. HO-305-5-742.
- The Flood Plain limits for the Little Patuxent River shown on the plans are in relation to the contours. The Flood Plain elevation shown on the profile are relative to the profile ground line from the Water Main construction plans.



LOCATION MAP



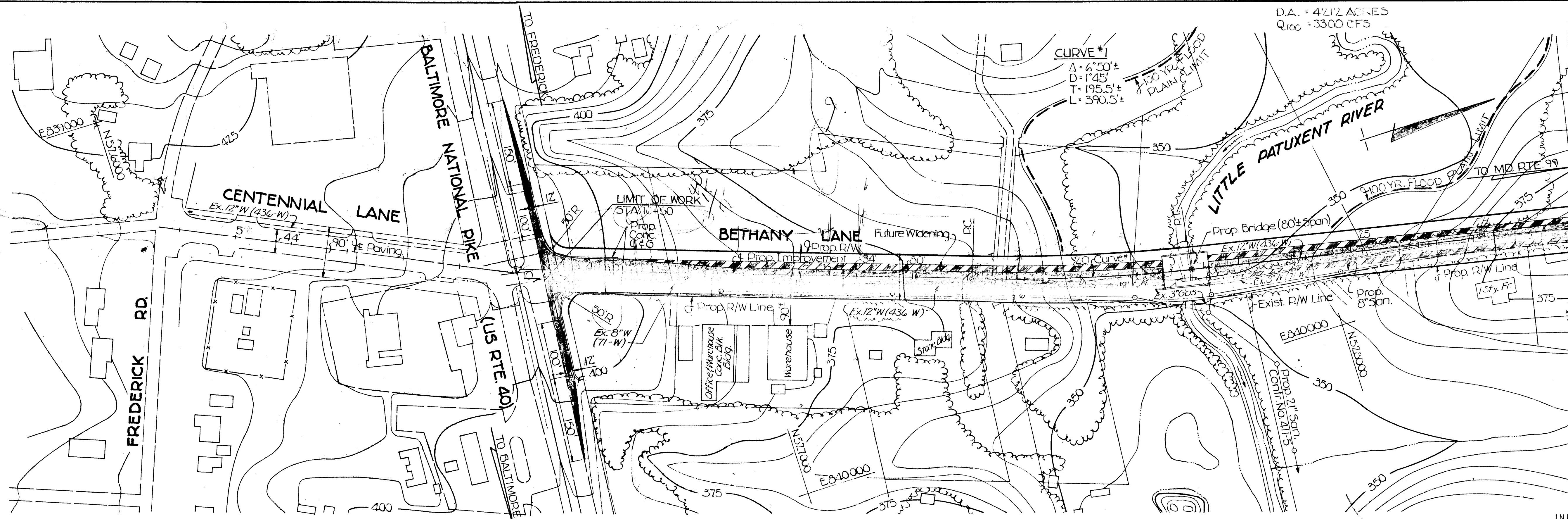
TRAFFIC DATA			
ITEM	1974	1984	
A. D. T.	2300	3900	
% D. H. V. OF A. D. T.	11.5%	10%	
% D. D. OF D. H. V.	56%	56%	
% TRUCKS OF A. D. T.	5%	5%	
% TRUCKS OF D. H. V.	5%	5%	

ITEM	BETHANY LANE
DESIGN SPEED	40 M.P.H.
LENGTH OF STUDY	1.32 MILES
LENGTH OF PROJECT	1.00 MILE
MAXIMUM GRADE	5%
MAXIMUM DEGREE OF CURVATURE	1° 45'

THE WILSON T. BALLARD COMPANY
CONSULTING ENGINEERS
OWINGS MILLS, MARYLAND
DATE PREPARED APRIL, 1975
REVISION - JULY 1975

*Approved Preliminary
Plan
Ho. Co. D. PW.
8/6/75*

C1063B01



PLAN
Scale: 1"=100'

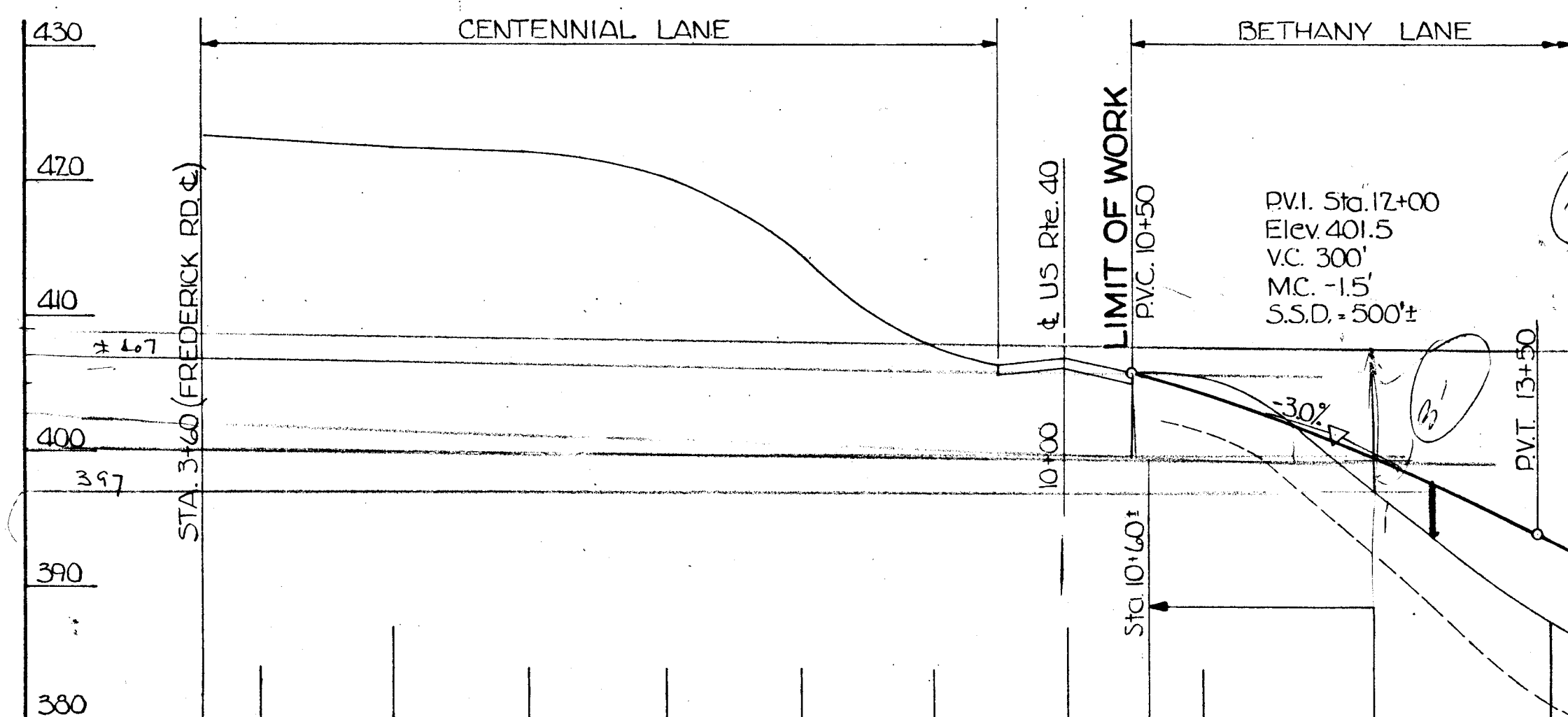
INITIAL CONSTRUCTION

(a) Construct full 44-ft. section with concrete curb and gutter from station 10+50 to station 11+80.

(b) Construct full 22-ft. half sect on with concrete curb and gutter from right station 11+80 to right station 21+50 and transition pavement width from 20.5-ft. at left station 11+80 to 12-ft. at left station 13+50

FINAL CONSTRUCTION

(a) Widen roadway to a total of 44-ft. with concrete curb and gutter from station 1+80 to station 21+50



TYPICAL SECTION
STA. 22+30 TO STA. 23+80
SCALE: 1"=8'
See Sheet 3 for Typical Section from Sta. 23+80 and

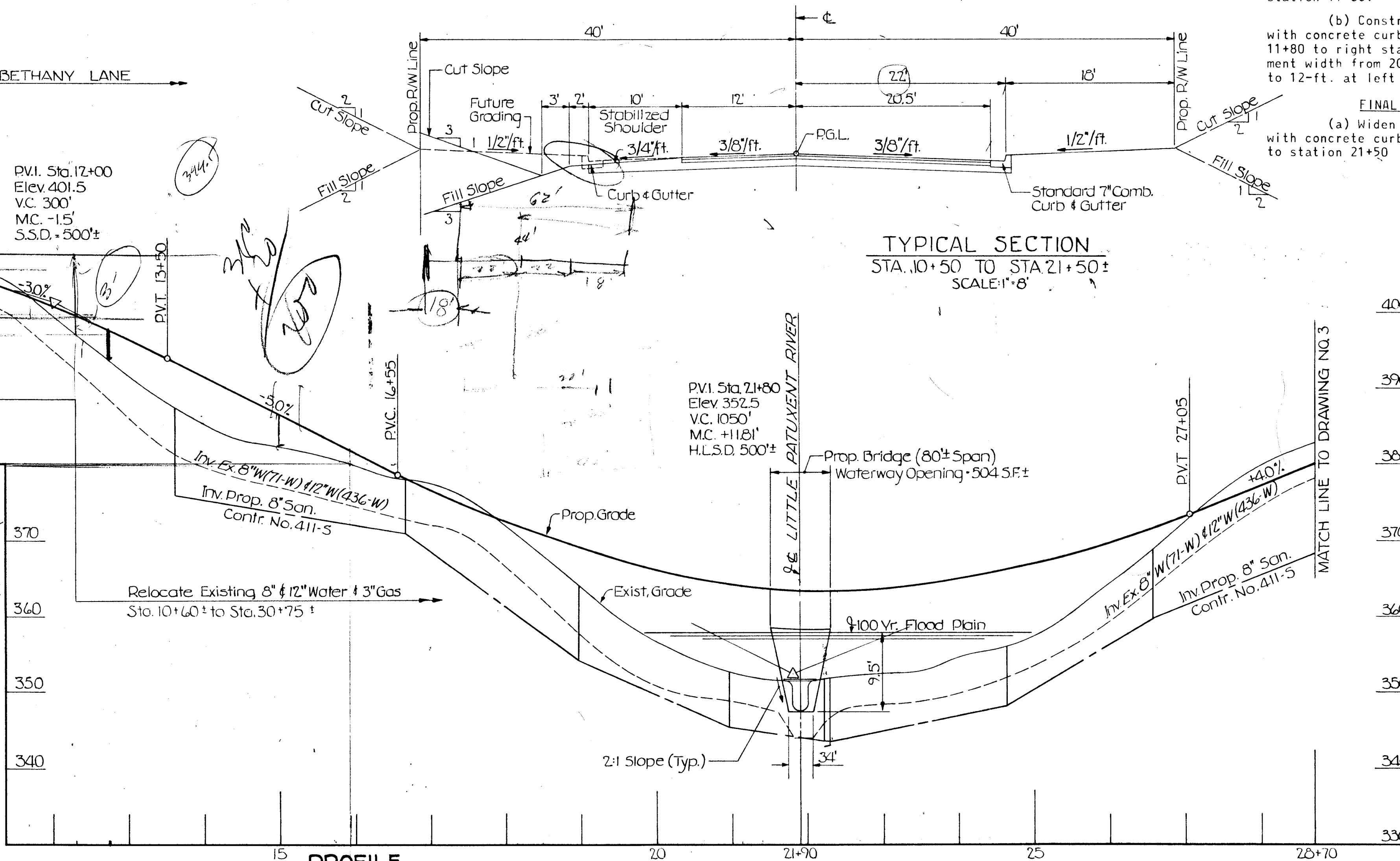
INITIAL CONSTRUCTION
Construct 12-ft. half section with 10' stabilized shoulder left centerline. Transition pavement width right centerline from 20.5-ft. at station 22+30 to 12-ft. at station 23+80.

FINAL CONSTRUCTION
Widen roadway to a total 44-ft. width with concrete curb and gutter from station 22+30 to station 23+80.

- LEGEND**
- INITIAL CONSTRUCTION
 - FUTURE WIDENING

PROFILE

Scale: Horz. 1"=100'
Vert. 1"=10'



PREPARED BY:
THE WILSON T. BALLARD CO.
CONSULTING ENGINEERS
OWINGS MILLS, MARYLAND
Tel. No. 363-0150

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

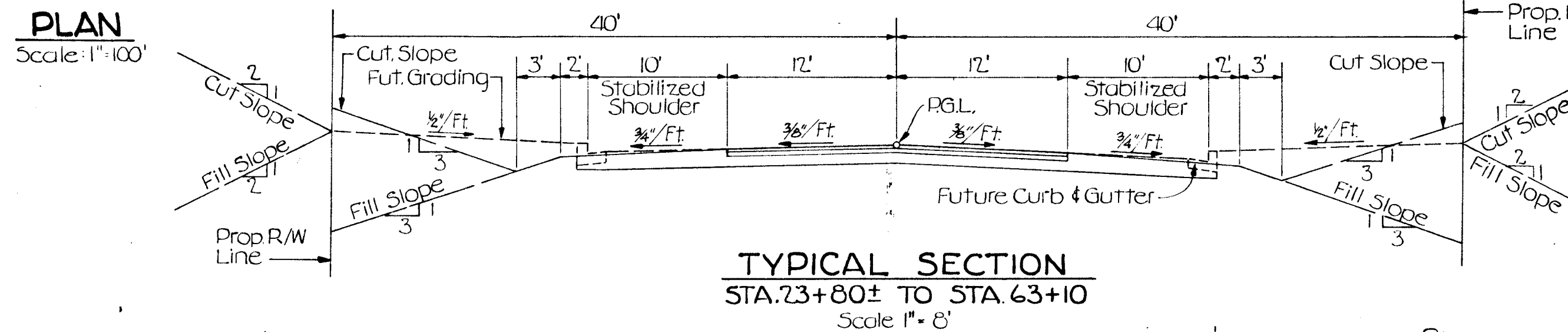
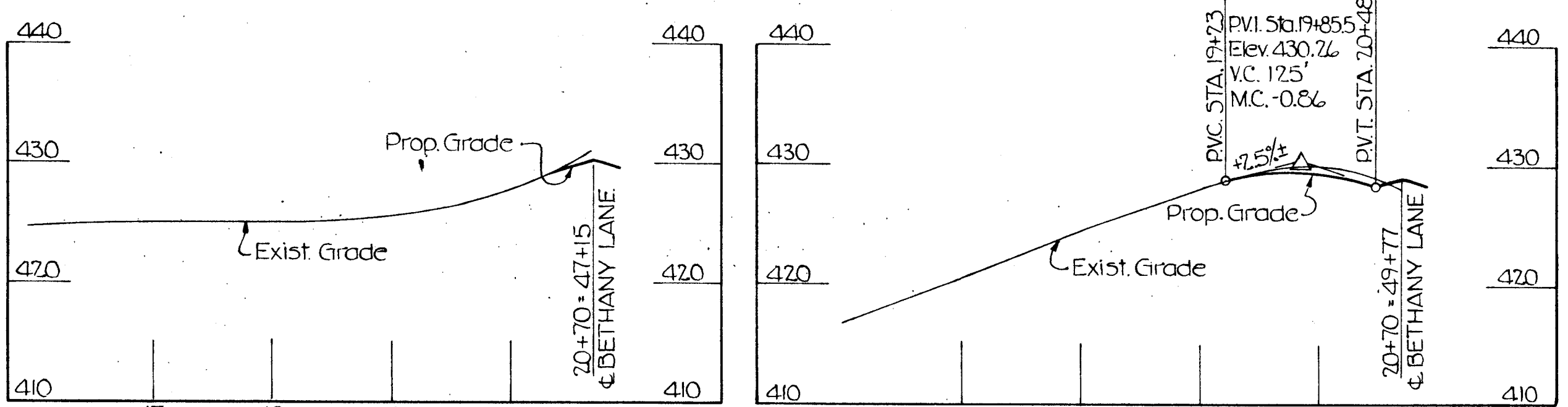
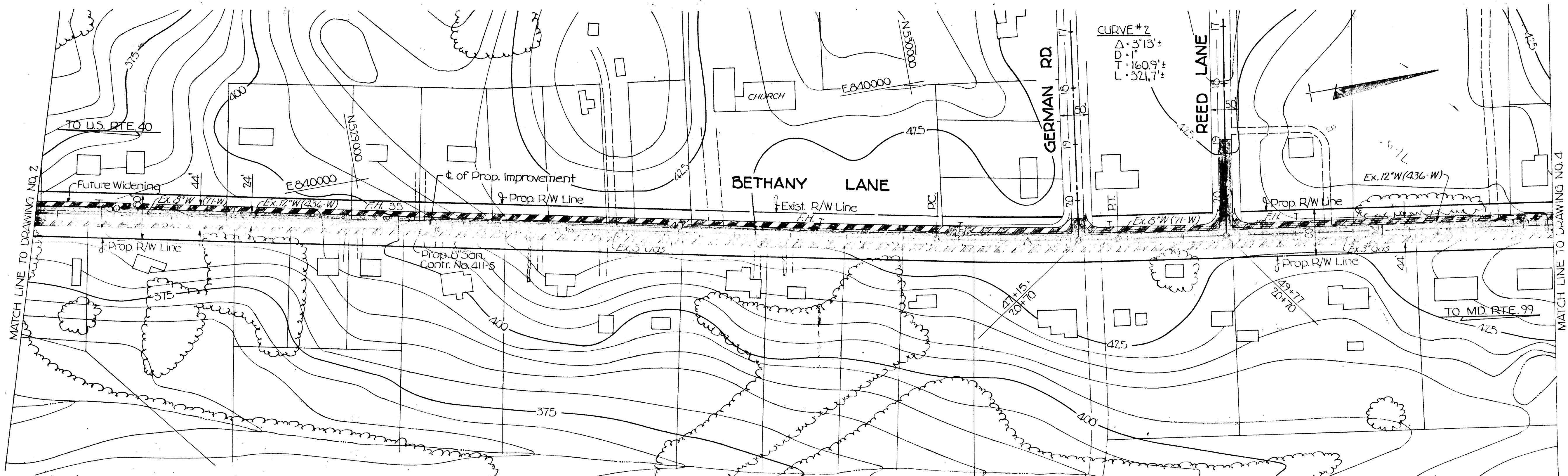
CONTRACT NO. PW 4010

BETHANY LANE
U.S. RTE. 40 TO MD. RTE. 99 (OLD FREDERICK RD.)
PLAN AND PROFILE
STATION 5 +00 TO STATION 28 +70

DRAWING
NO. 2
OF 4

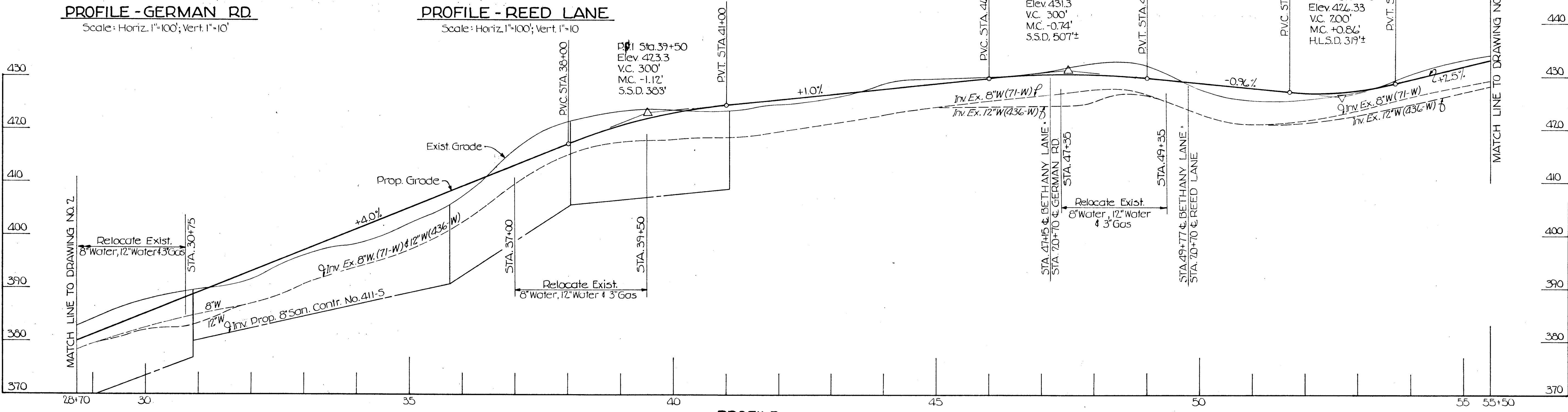
SCALE
AS SHOWN

Time
Tms.



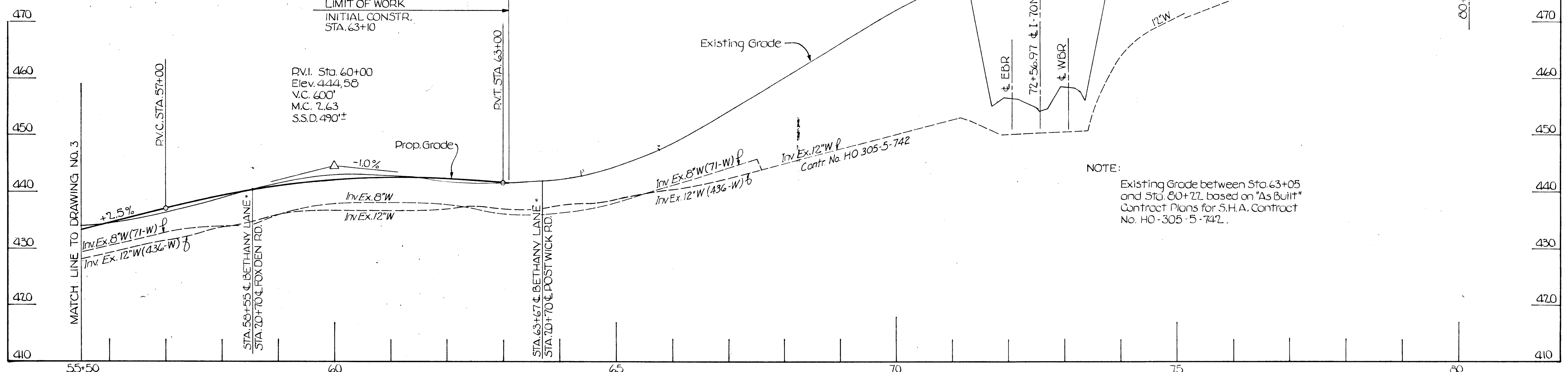
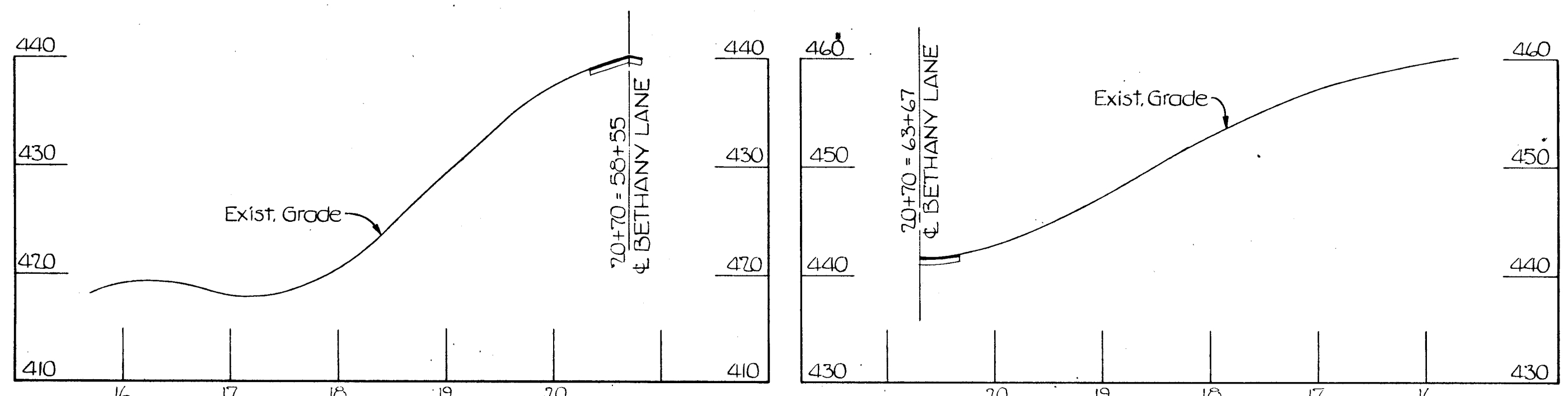
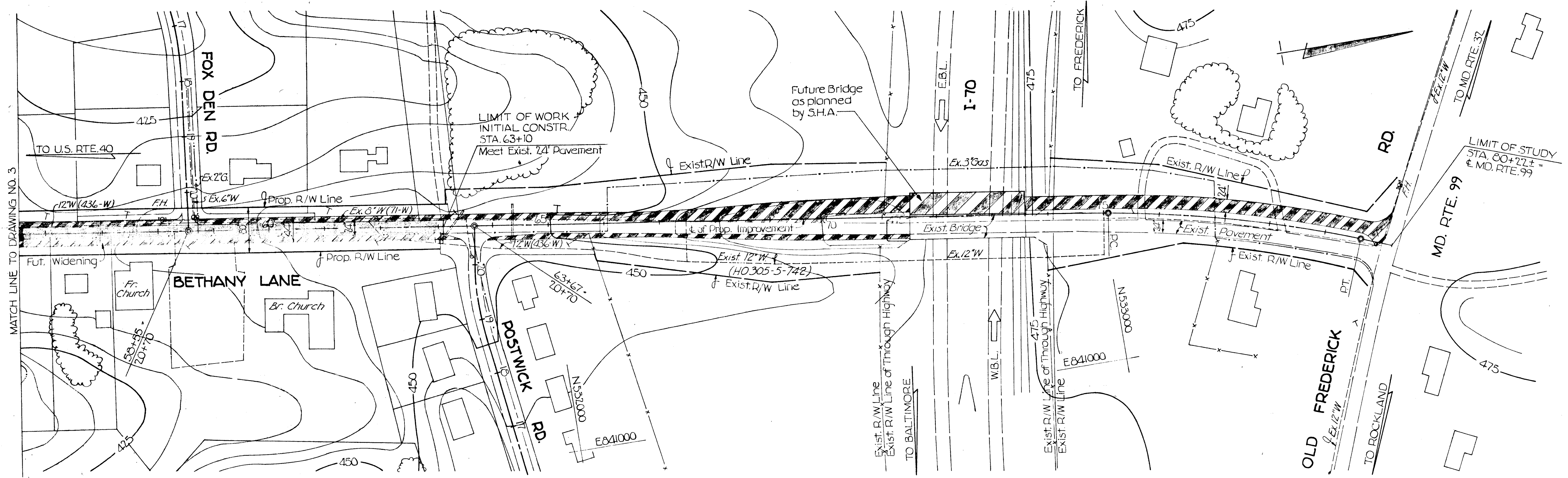
INITIAL CONSTRUCTION
Construct 24 ft. paved roadway with 10 ft stabilized shoulder on each side.

FINAL CONSTRUCTION
Widen roadway to a total of 44 ft. with concrete curb and gutter on each side.

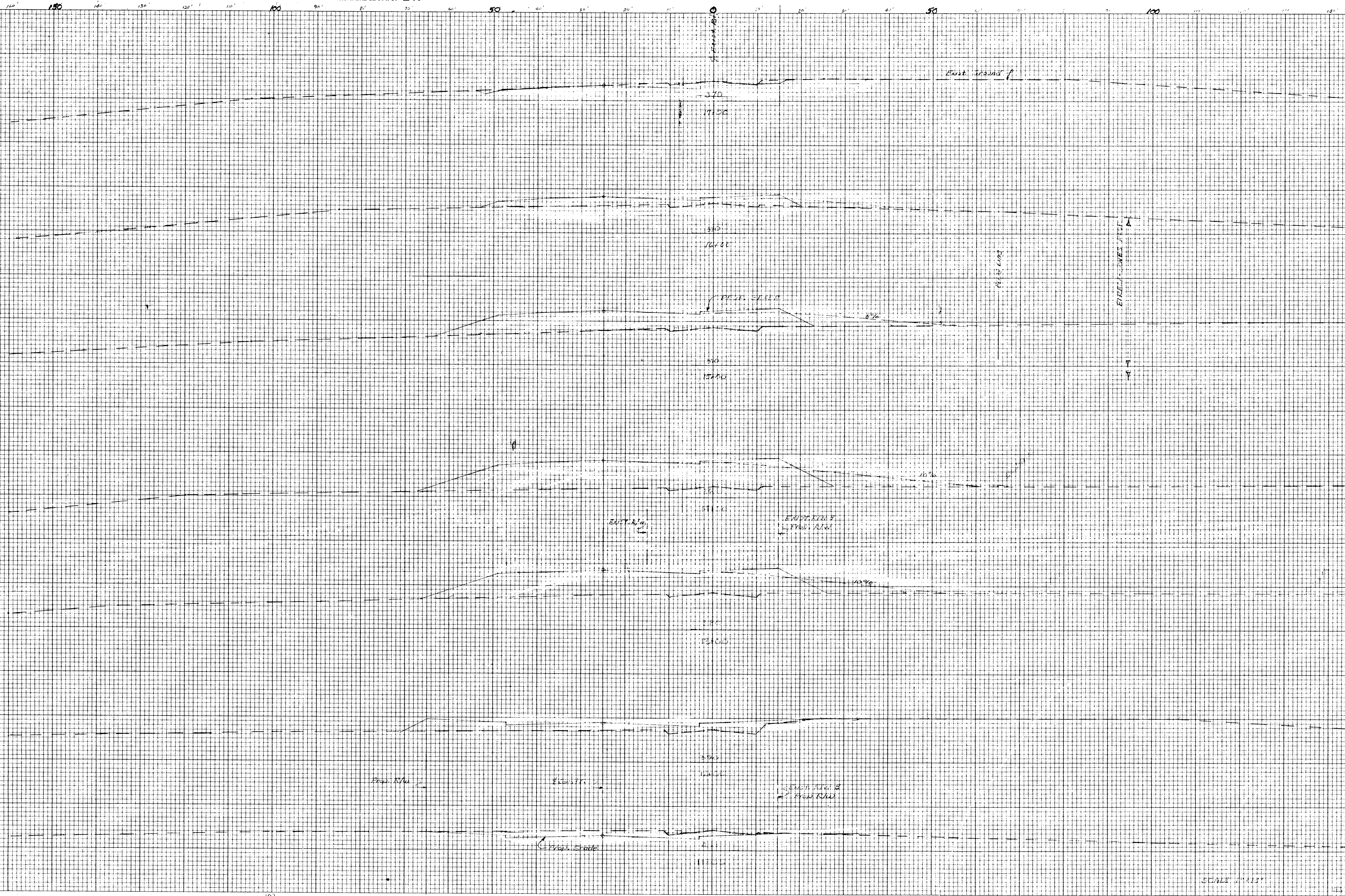


LEGEND

- INITIAL CONSTRUCTION
- FUTURE WIDENING



LEGEND
 INITIAL CONSTRUCTION [Symbol]
 FUTURE WIDENING [Symbol]



SCALE 1" = 10'
DATE 11-24-10
BY J. W. B. / J. W. B.
CHECKED BY J. W. B. / J. W. B.

C1063B05
11230-17+10

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS



BETHANY LANE
CAPITAL PROJECT NO. J-4010

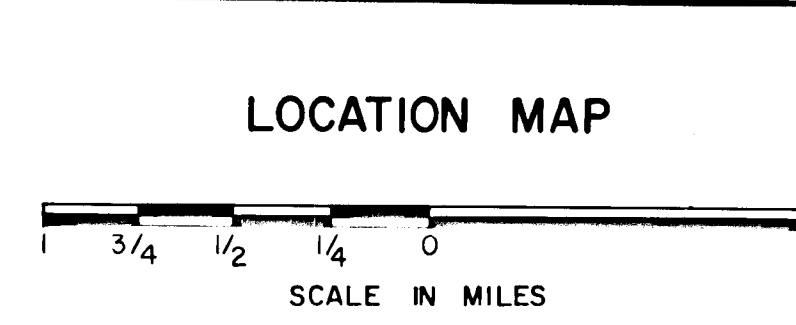
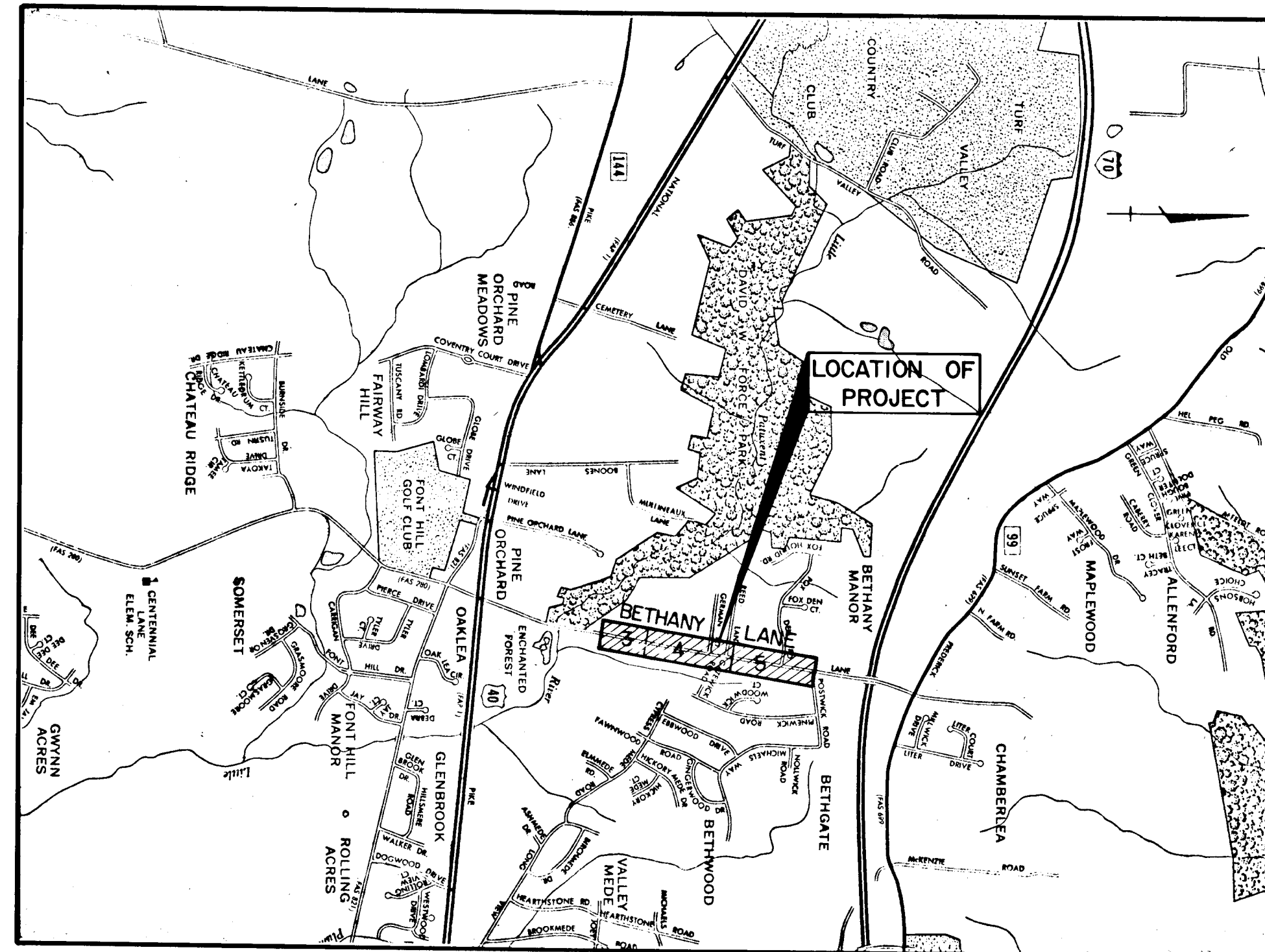
INDEX OF DRAWINGS

1. TITLE SHEET
2. TYPICAL SECTIONS AND DETAIL
3. PLAN AND PROFILE
4. PLAN AND PROFILE
5. PLAN AND PROFILE
6. EROSION AND SEDIMENT CONTROL PLAN
7. EROSION AND SEDIMENT CONTROL PLAN
8. EROSION AND SEDIMENT CONTROL PLAN

GENERAL NOTES

1. 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 PLATS.
2. ENDWALLS ARE NOT TO BE CONSTRUCTED UNTIL GRADING IS COMPLETED. THE TYPES OF ENDWALLS ARE SUBJECT TO MODIFICATIONS.
3. EXISTING PRIVATE SIDEWALKS DISTURBED BY THE WORK SHALL BE RECONSTRUCTED AND STEPS SHALL BE PROVIDED WHERE NECESSARY AS A RESULT OF GRADING.
4. CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES 2'-0" MINIMUM OR TUNNEL AS REQUIRED. COST FOR TUNNELING OR BRACING OF POLES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR STORM DRAINS.
5. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
6. ALL SLOPES AND/OR DISTURBED AREAS SHALL RECEIVE 2" TOPSOIL, SEED AND MULCH EXCEPT WHERE OTHERWISE INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
7. 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 CONTRACTORS EXCAVATIONS OR ACTIVITIES SHALL NOT BE CAUSE FOR EXTRA PAYMENT.
8. LOCATION POINTS FOR INLETS, MANHOLES AND STRUCTURES.

ITEM	HORIZONTAL LOCATION	VERTICAL LOCATION
CURB TYPE	CENTER FACE OF CURB	TOP OF CURB
INLETS	CENTER OF GRATE	TOP OF GRATE
MANHOLES	CENTER OF COVER	TOP OF COVER
STRUCTURES WITH STACK	CENTER OF COVER	TOP OF COVER
ENDWALLS	CENTER OF WALL	TOP OF WALL
9. APPROXIMATE LOCATION OF EXISTING UTILITIES IS 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.
10. THE CONTRACTOR SHALL LOCATE EXISTING UTILITIES A MINIMUM OF TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS IN VICINITY OF UTILITIES. COST SHALL BE INCLUDED IN THE UNIT PRICES BID FOR STORM DRAINS.
11. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - MISS UTILITY (COLLECT) 1-559-0100;
 - BALTIMORE GAS & ELECTRIC COMPANY - UNDERGROUND ELECTRIC DISTRIBUTION ENGINEERING 'DAMAGE CONTROL' 234-5691;
 - BALTIMORE GAS & ELECTRIC COMPANY - UNDERGROUND GAS DISTRIBUTION ENGINEERING 234-5533;
 - CHESAPEAKE & POTOMAC TELEPHONE COMPANY 725-9976;
 - STATE HIGHWAY ADMINISTRATION 531-5533.
12. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER.
13. STANDARD DETAILS FOR THIS CONTRACT SHALL BE THE HOWARD COUNTY STANDARD DETAILS AS SUPPLEMENTED BY THE MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD DETAILS.
14. TREES ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT.
15. 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 "CLEARING AND GRUBBING".
16. 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.
17. TOP ELEVATIONS OF STRUCTURES SHALL BE ADJUSTED IN THE FIELD TO MEET EXISTING CONDITIONS AS DIRECTED BY THE ENGINEER.
18. GRADING SHALL BE DONE IN SUCH A MANNER SO AS TO INSURE POSITIVE DRAINAGE TO THE PROPOSED INLET STRUCTURES.
19. HORIZONTAL AND VERTICAL CONTROLS ARE BASED ON THE MARYLAND STATE GRID COORDINATE SYSTEM.
20. CORRUGATED METAL PIPES SHALL BE BITUMINOUS COATED, TYPE A, #16 GAUGE.
21. FENCES ARE TO BE CAREFULLY REMOVED AND NEATLY PLACED ON THE OWNERS PROPERTY. IF DIRECTED BY ENGINEER, FENCES WILL BE RELOCATED OR ADJUSTED. ALL COST WILL BE INCIDENTAL TO OTHER CONTRACT ITEMS.



CERTIFICATION BY THE DEVELOPER

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

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 OF ENGINEER _____ DATE _____

REVIEWED FOR _____ NAME _____ S.C.D.
AND MEETS TECHNICAL REQUIREMENTS

DATE _____

SIGNATURE _____
U.S. SOIL CONSERVATION SERVICE

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

APPROVED _____ DATE _____
HOWARD S.C.D.

REVISIONS

NO.	DESCRIPTION

C1063D#1

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS DATE CHIEF-BUREAU OF ENGINEERING DATE

CHIEF ROADS, BRIDGES, STORM DRAINS DIVISION DATE

KIDDE CONSULTANTS, INC.
ENGINEERS • ARCHITECTS • PLANNERS
BALTIMORE, MARYLAND

TITLE SHEET

BETHANY LANE
CAPITAL PROJECT NO. J-4010
ELECTION DISTRICT NO. 2
HOWARD COUNTY MARYLAND

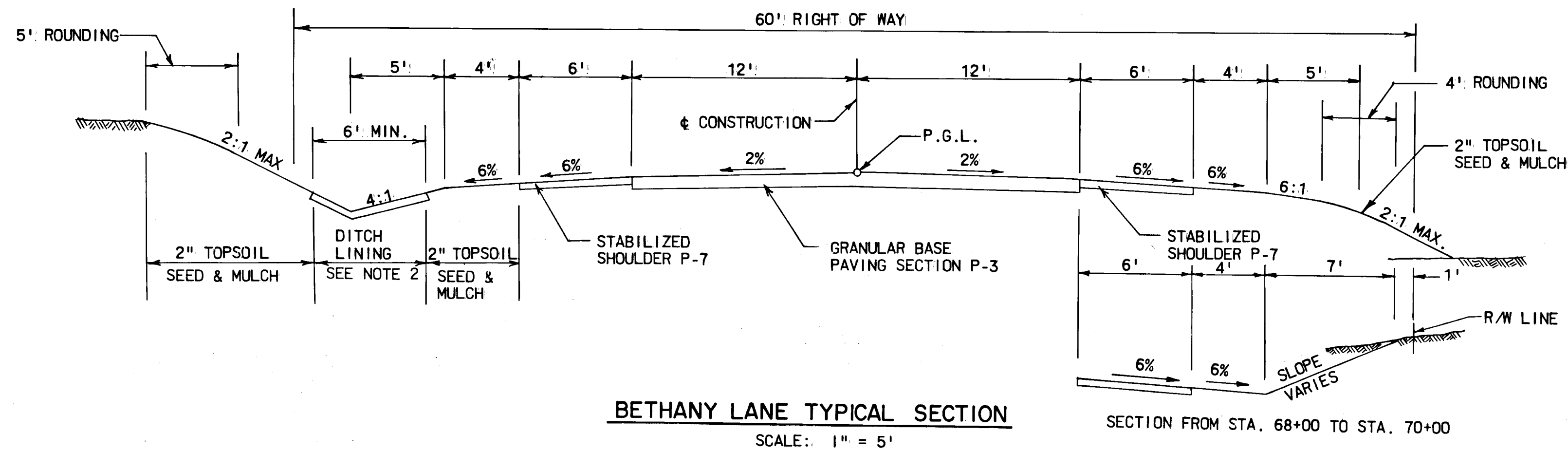
DRAWING NO. 1 OF 8

SCALE 1" = 1/2 MILE

J.K.D. DESIGNED BY:
V.Y. DRAFTED BY:
J.K.D. CHECKED BY:

GENERAL NOTES

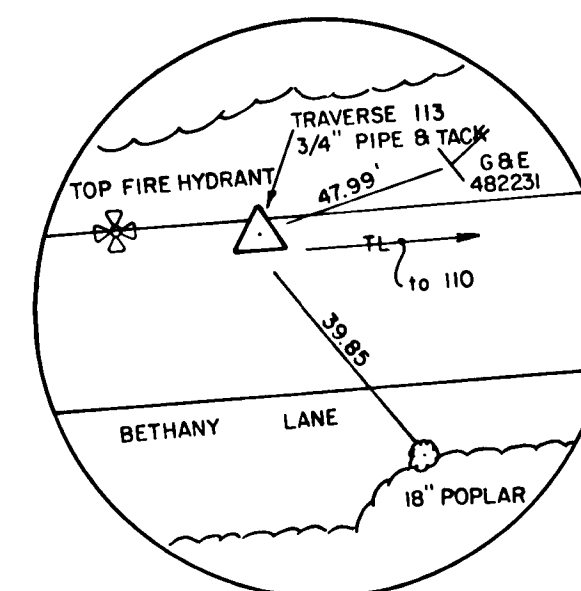
1. END SECTIONS WILL BE PROVIDED FOR ALL DRAIN PIPES UNDER DRIVES AND ENTRANCES UNLESS OTHERWISE SPECIFIED.
2. FOR DITCH LINING:
USE SEED AND MULCH, EXCEPT SOD AT STA. 37+50 TO STA. 45+00 LT.
3. ALL PAVEMENT RETURNS RADI I FOR CROSSROADS AND DRIVES WILL BE 15' UNLESS OTHERWISE SPECIFIED.
4. ALL DRIVES WILL BE A MINIMUM OF 10' WIDTH OR MATCH EXISTING WIDTH.



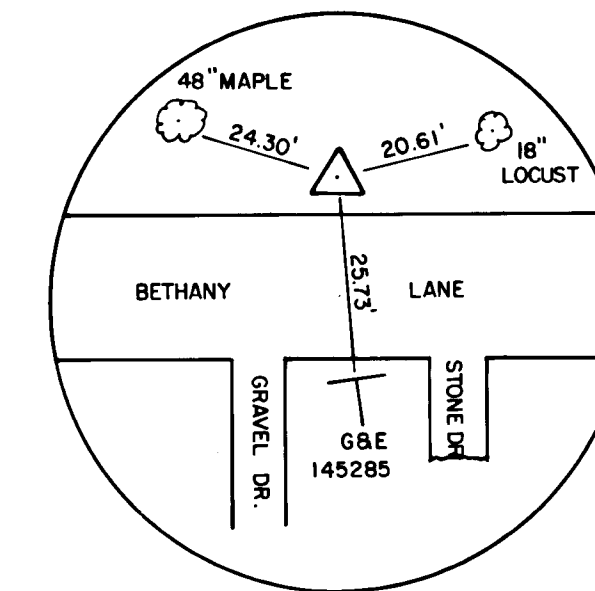
BETHANY LANE TYPICAL SECTION
SCALE: 1" = 5'

SECTION FROM STA. 68+00 TO STA. 70+00

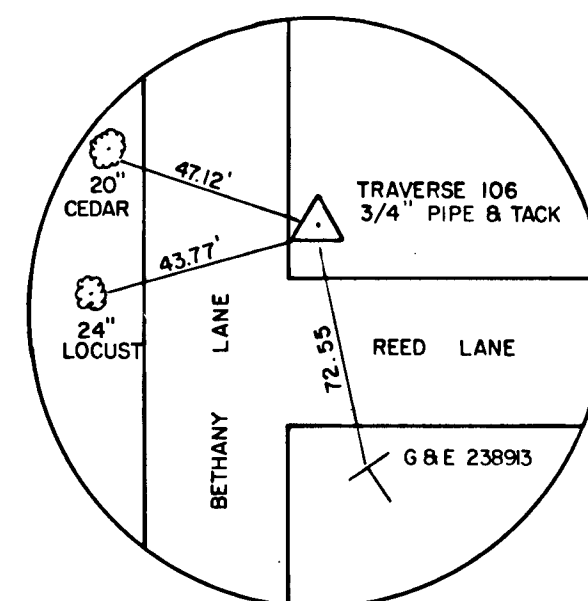
SCHEDULE OF COORDINATES BASE LINE OF CONSTRUCTION			
POINT	STATION	NORTH	EAST
P.O.T.	30+00.00	527616.25	839808.75
P.C.	56+12.19	530181.28	840302.87
P.I.		530402.50	840345.50
C.C.		532072.92	830483.43
P.T.	60+62.69	530625.41	840378.11
P.O.T.	79+51.91	532494.73	840651.58



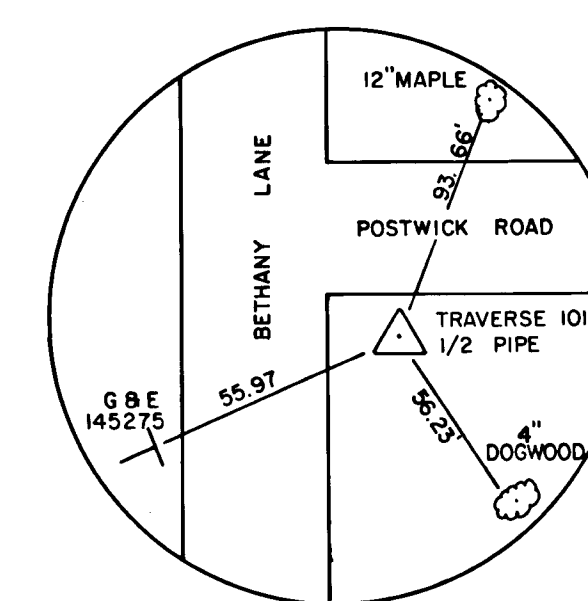
POINT #113 N 528,368.66
E 839,941.15



POINT #110 N 529,294.90
E 840,131.23



POINT #105 N 530,525.28
E 840,350.52



POINT #101 E 531,840.34
E 840,583.94

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DIRECTOR OF PUBLIC WORKS DATE CHIEF - BUREAU OF ENGINEERING DATE
CHIEF ROADS, BRIDGES, STORM DRAINS DIVISION DATE

KIDDE CONSULTANTS, INC
ENGINEERS • ARCHITECTS • PLANNERS
BALTIMORE, MARYLAND

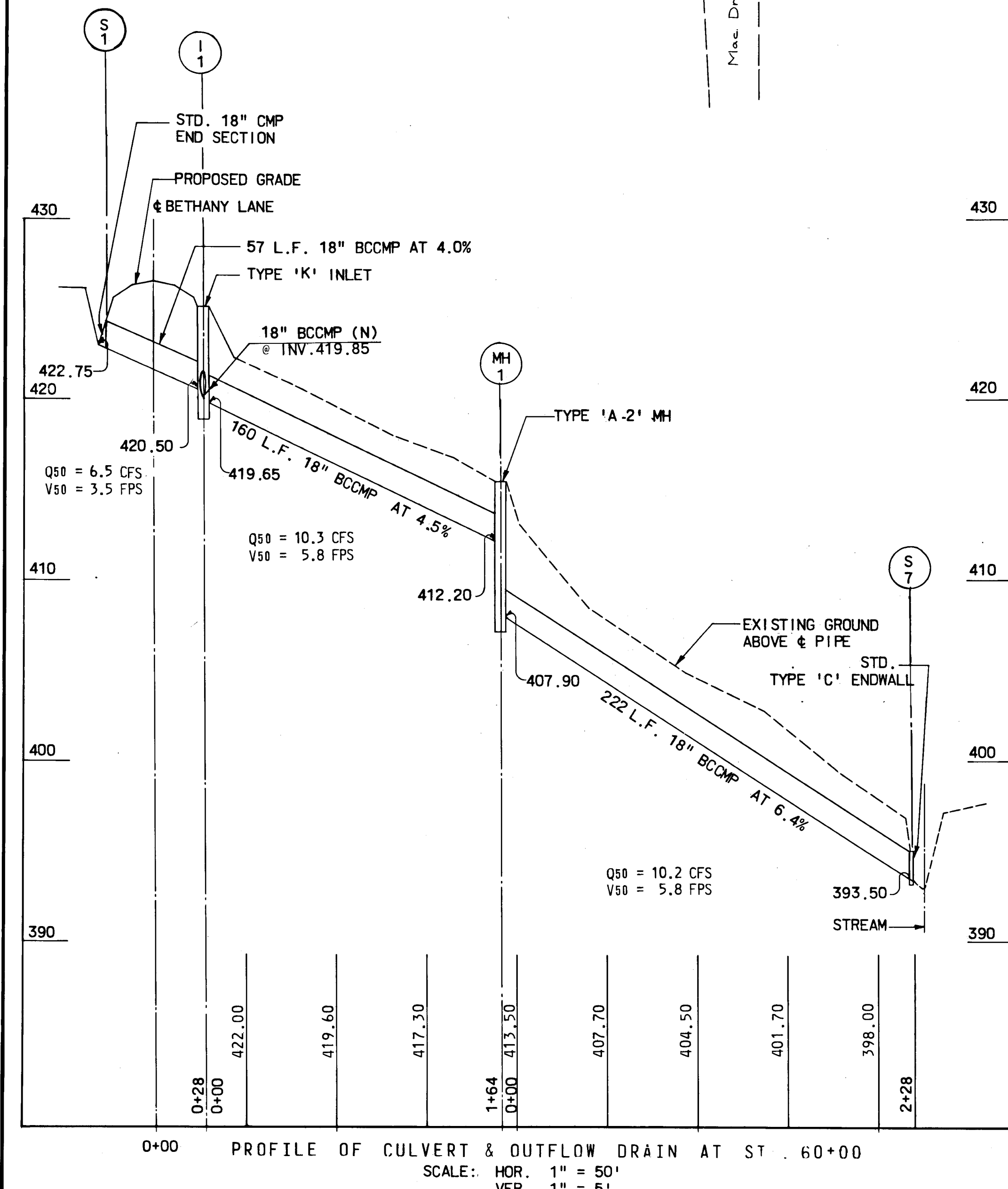
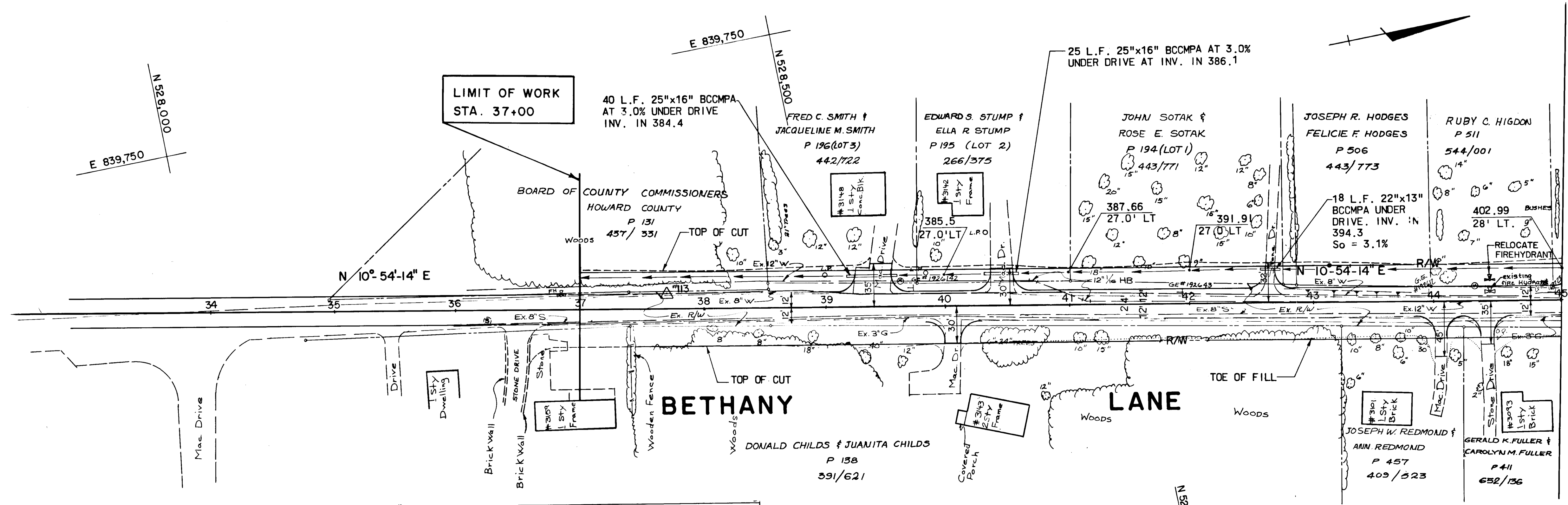
TYPICAL SECTION

BETHANY LANE
CAPITAL PROJECT NO. J-4010
ELECTION DISTRICT NO. 2
HOWARD COUNTY MARYLAND

DRAWING
NO. 2
OF 8

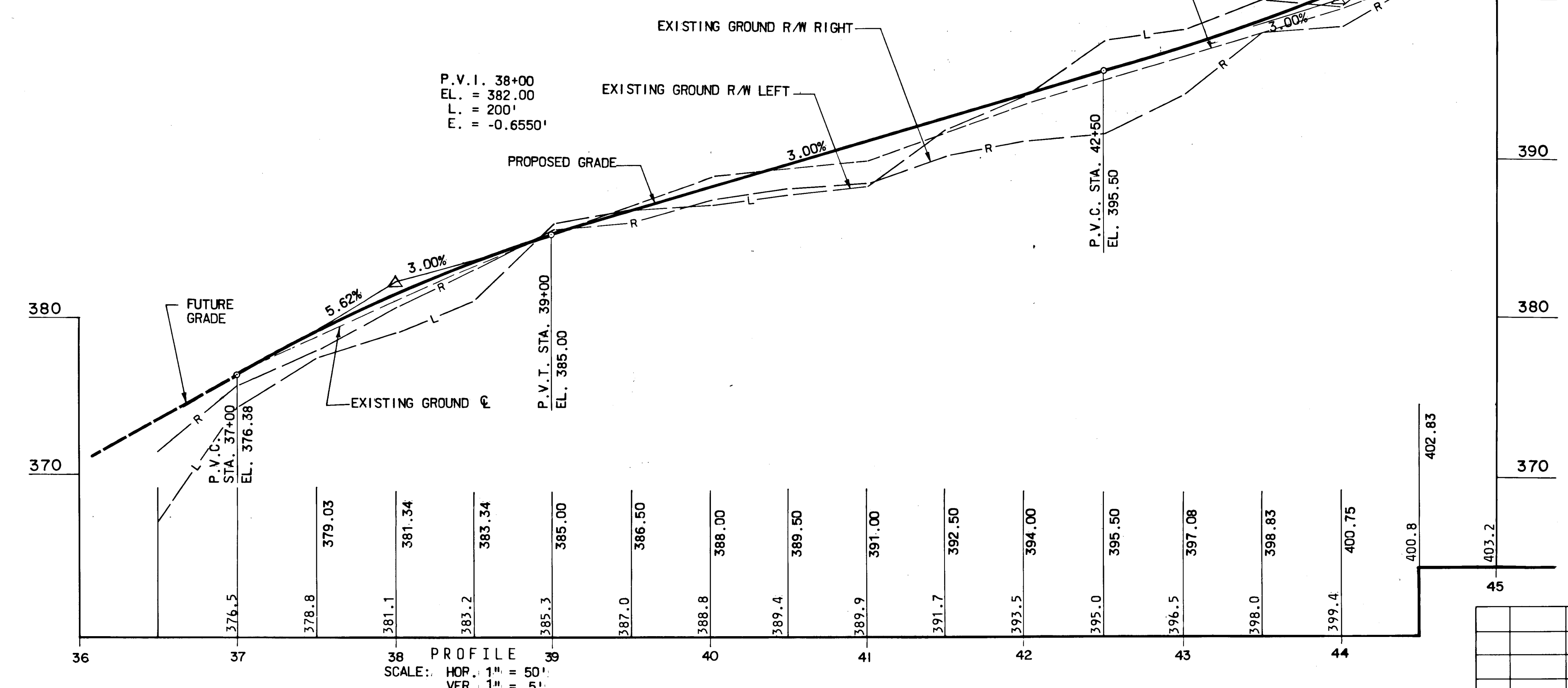
SCALE
AS SHOWN

J.K.D.
DESIGNED BY:
C.L.
DRAFTED BY:
J.K.D.
CHECKED BY:



INLET SCHEDULE								
NO.	TYPE	AC	I	C	Q	INV. OUT	TOP EL.	REMARKS
I-1	K	0.05	8.5	.56	0.2	422.00	423.91	
I-2	K	0.16	8.5	.59	0.8	419.65	424.00	

MANHOLE SCHEDULE					
NO.	TYPE	SIZE	INV. OUT	TOP EL.	REMARKS
MH-1	A-2	48	407.90	415.4	



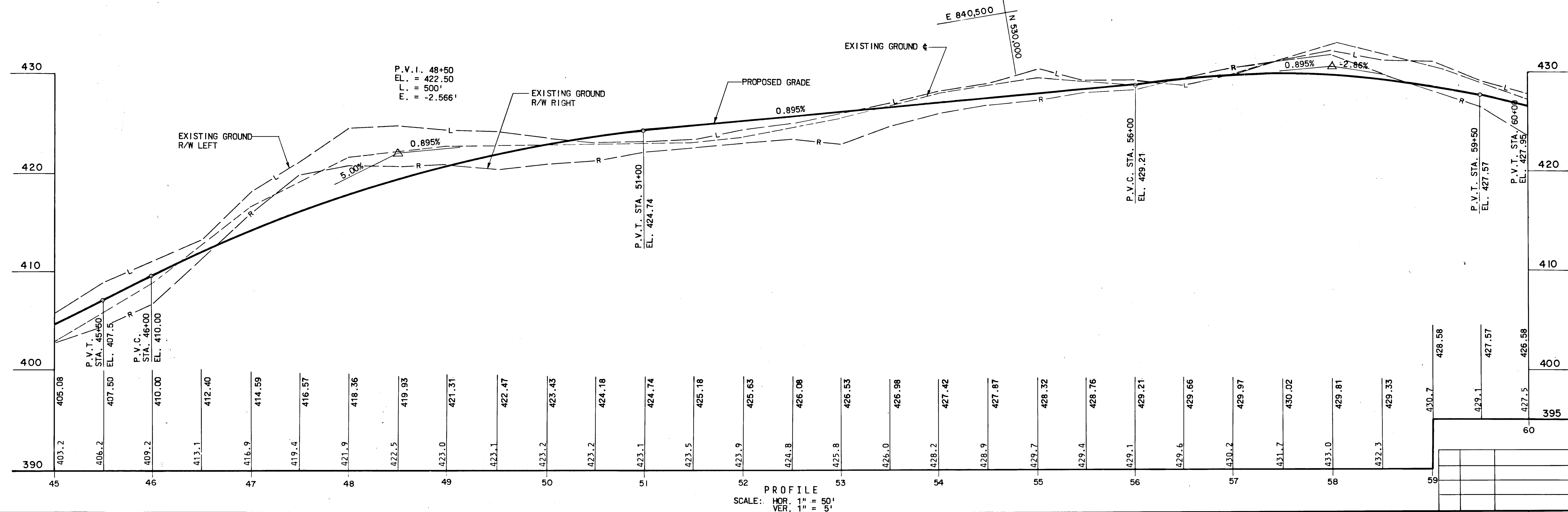
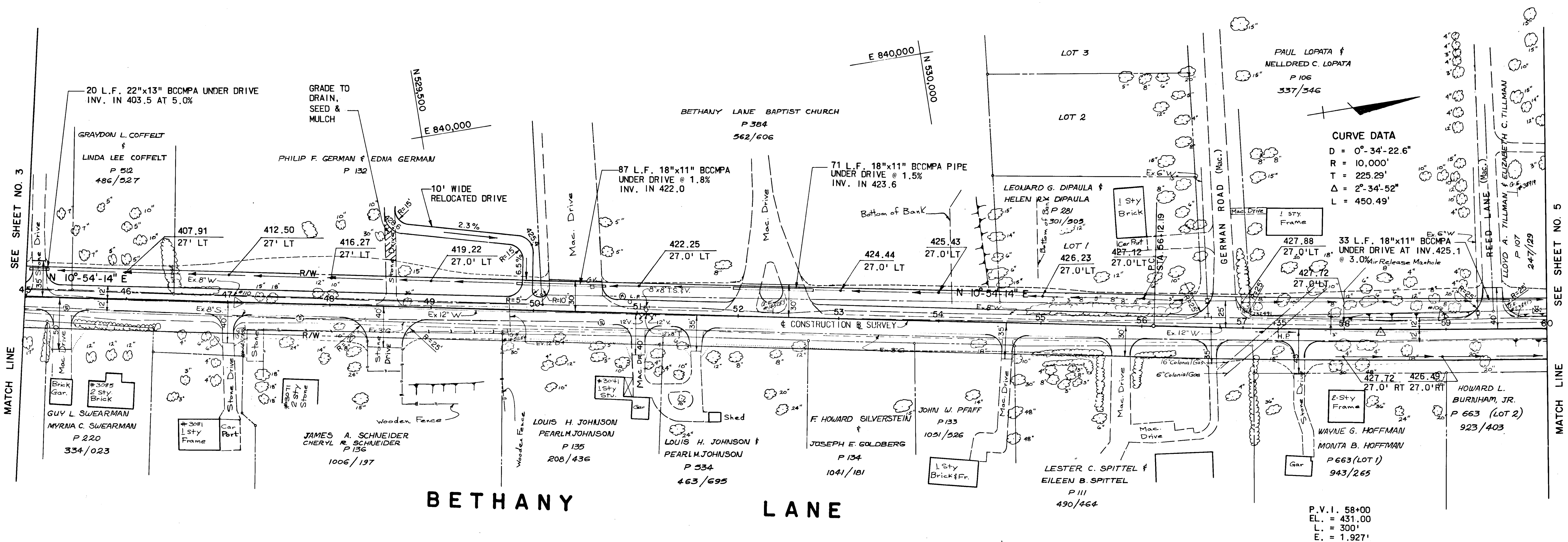
DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 DIRECTOR OF PUBLIC WORKS DATE _____ CHIEF-BUREAU OF ENGINEERING DATE _____
 CHIEF ROADS, BRIDGES, STORM DRAINS DIVISION DATE _____

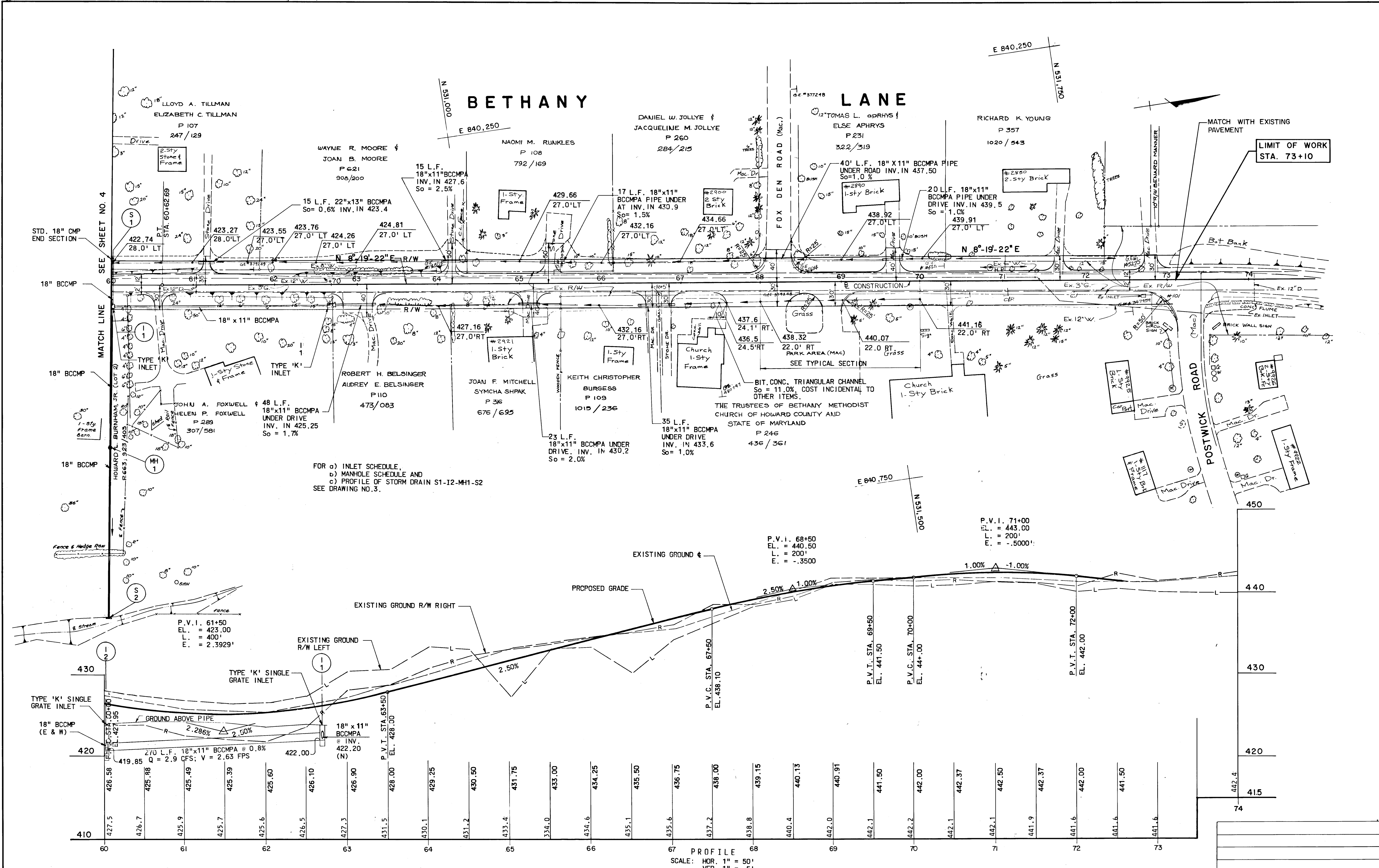
KIDDE CONSULTANTS, INC.
 ENGINEERS • ARCHITECTS • PLANNERS
 BALTIMORE, MARYLAND

PLAN AND PROFILE

BETHANY LANE
 CAPITAL PROJECT NO. J-4010
 ELECTION DISTRICT NO. 2
 HOWARD COUNTY MARYLAND

DRAWING NO. <u>3</u> OF <u>8</u>	SCALE 1" = 50'	J.K.D. DESIGNED BY: V.V. DRAFTED BY: J.K.D. CHECKED BY:
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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS DATE CHIEF-BUREAU OF ENGINEERING DATE

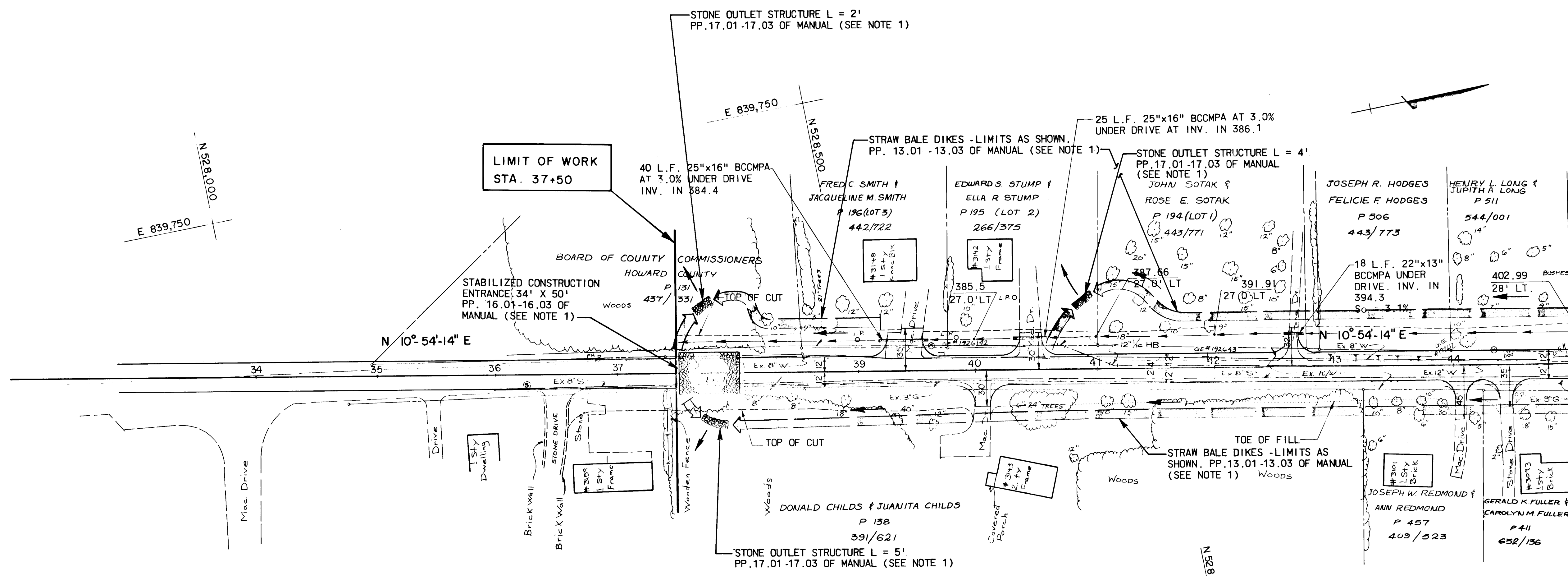
CHIEF ROADS, BRIDGES, STORM DRAINS DIVISION DATE

KIDDE CONSULTANTS, INC.
ENGINEERS • ARCHITECTS • PLANNERS
BALTIMORE, MARYLAND

PLAN AND PROFILE

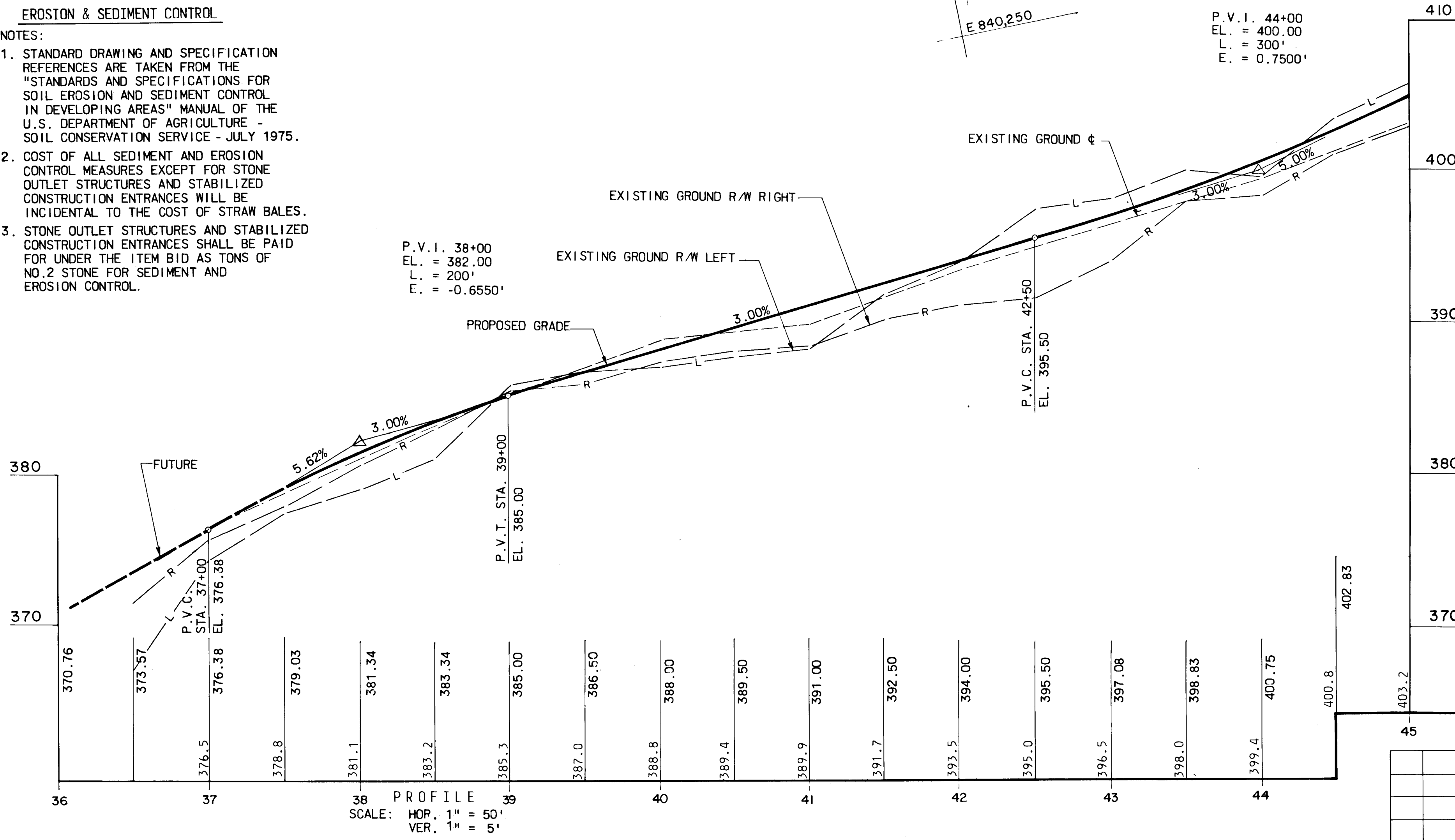
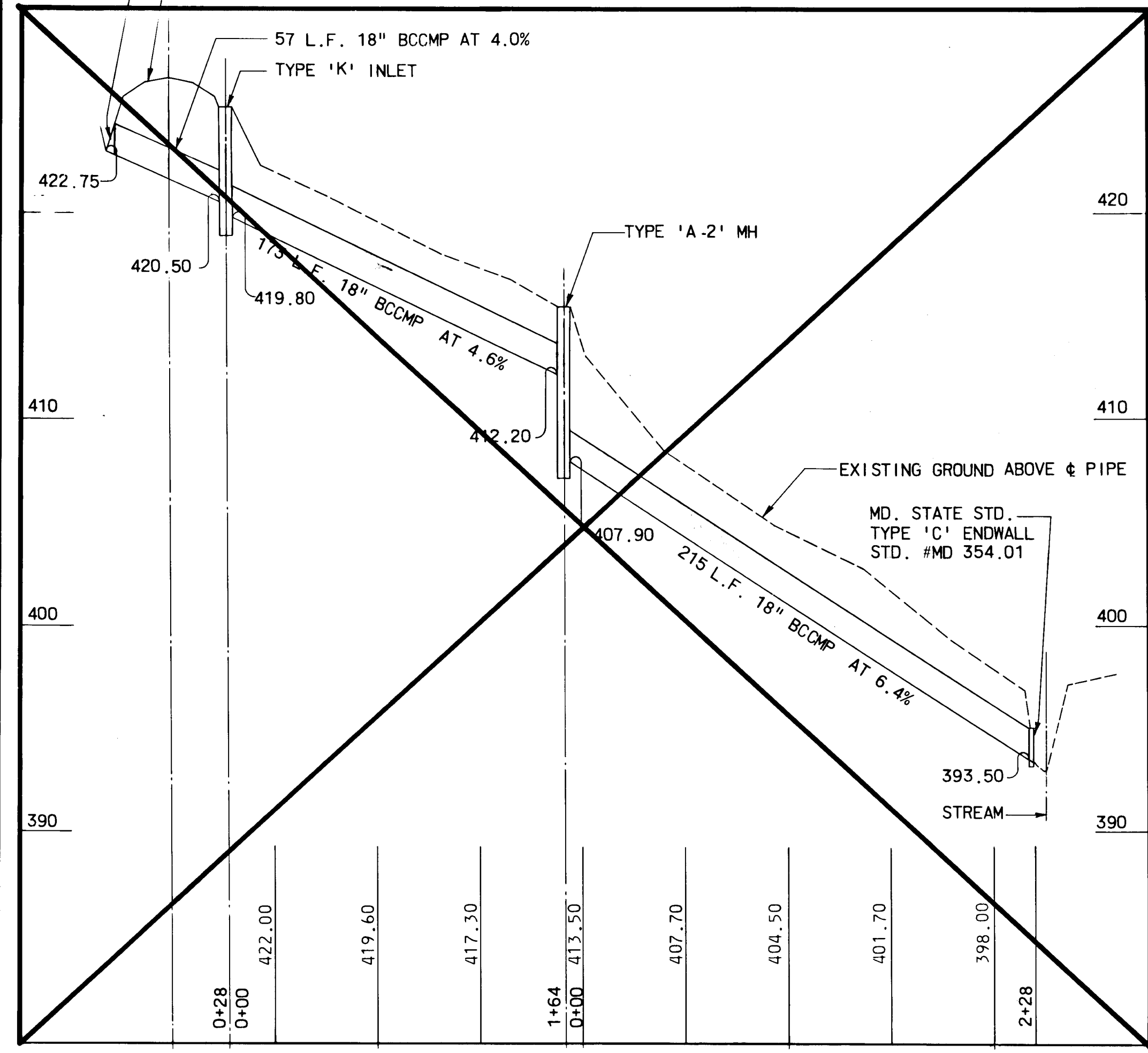
BETHANY LANE
CAPITAL PROJECT NO. J- 4010
ELECTION DISTRICT NO. 2
HOWARD COUNTY MARYLAND

DRAWING NO. 5 OF 8	SCALE 1" = 50'	J.K.D. DESIGNED BY: VY. DRAFTED BY: J.K.D. CHECKED BY:
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EROSION & SEDIMENT CONTROL

- NOTES:
- STANDARD DRAWING AND SPECIFICATION REFERENCES ARE TAKEN FROM THE "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS" MANUAL OF THE U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE - JULY 1975.
 - COST OF ALL SEDIMENT AND EROSION CONTROL MEASURES EXCEPT FOR STONE OUTLET STRUCTURES AND STABILIZED CONSTRUCTION ENTRANCES WILL BE INCIDENTAL TO THE COST OF STRAW BALES.
 - STONE OUTLET STRUCTURES AND STABILIZED CONSTRUCTION ENTRANCES SHALL BE PAID FOR UNDER THE ITEM BID AS TONS OF NO. 2 STONE FOR SEDIMENT AND EROSION CONTROL.



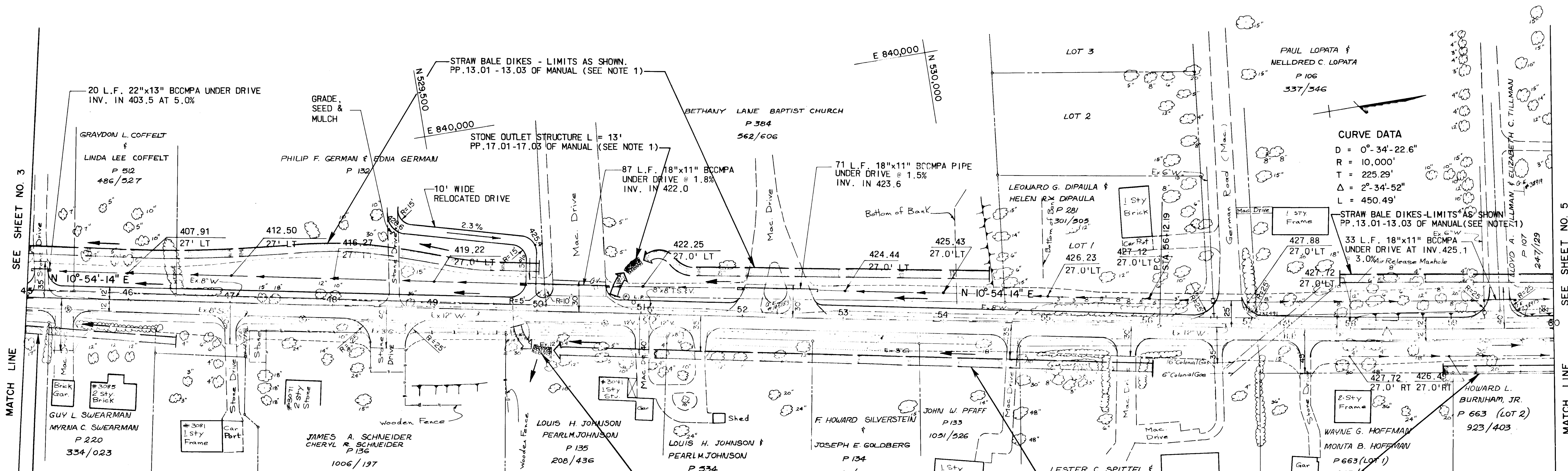
DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 DIRECTOR OF PUBLIC WORKS DATE CHIEF-BUREAU OF ENGINEERING DATE
 CHIEF ROADS, BRIDGES, STORM DRAINS DIVISION DATE

KIDDE CONSULTANTS, INC.
 ENGINEERS • ARCHITECTS • PLANNERS
 BALTIMORE, MARYLAND

EROSION AND SEDIMENT CONTROL PLAN

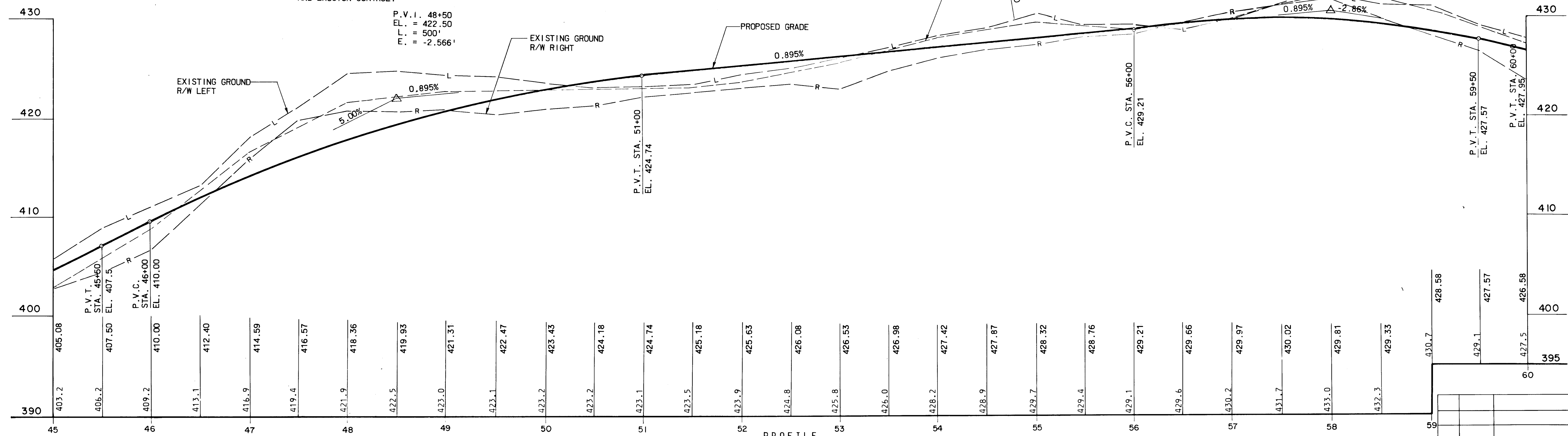
BETHANY LANE
 CAPITAL PROJECT NO. J-4010
 ELECTION DISTRICT NO. 2
 HOWARD COUNTY MARYLAND

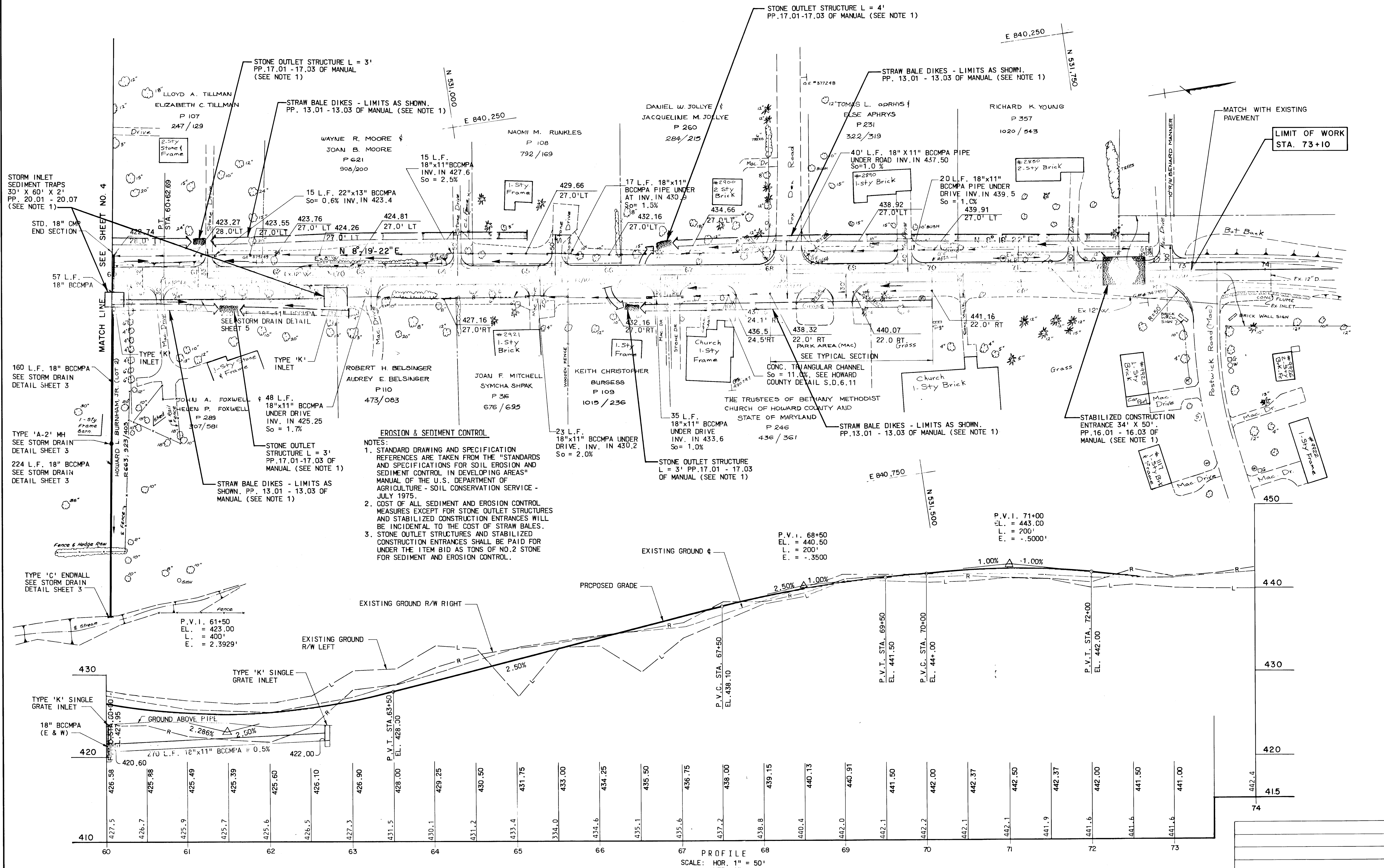
DRAWING NO. <u>6</u> OF <u>8</u>	SCALE 1" = 50'	DESIGNED BY: J.K.D. DRAWN BY: V.Y. CHECKED BY: J.K.D.
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CURVE DATA
 D = 0°-34'-22.6"
 R = 10,000'
 T = 225.29'
 Δ = 2°-34'-52"
 L = 450.49'

- EROSION & SEDIMENT CONTROL NOTES:**
- STANDARD DRAWING AND SPECIFICATION REFERENCES ARE TAKEN FROM THE "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS" MANUAL OF THE U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE - JULY 1975.
 - COST OF ALL SEDIMENT AND EROSION CONTROL MEASURES EXCEPT FOR STONE OUTLET STRUCTURES AND STABILIZED CONSTRUCTION ENTRANCES WILL BE INCIDENTAL TO THE COST OF STRAW BALES.
 - STONE OUTLET STRUCTURES AND STABILIZED CONSTRUCTION ENTRANCES SHALL BE PAID FOR UNDER THE ITEM BID AS TONS OF NO.2 STONE FOR SEDIMENT AND EROSION CONTROL.





DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DIRECTOR OF PUBLIC WORKS DATE CHIEF-BUREAU OF ENGINEERING DATE
CHIEF ROADS, BRIDGES, STORM DRAINS DIVISION DATE

KIDDE CONSULTANTS, INC.
ENGINEERS • ARCHITECTS • PLANNERS
BALTIMORE, MARYLAND

EROSION AND SEDIMENT CONTROL PLAN

BETHANY LANE
CAPITAL PROJECT NO. J- 4010
ELECTION DISTRICT NO. 2
HOWARD COUNTY MARYLAND

DRAWING NO. 8 OF 8	SCALE 1" = 50'	J.K.D. DESIGNED BY: VY. DRAFTED BY: J.K.D. CHECKED BY:
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